FCC RF Test Report

APPLICANT	:	ZTE CORPORATION
EQUIPMENT	:	WCDMA GSM (GPRS) Dual-Mode Digital Mobile Phone
BRAND NAME	:	ZTE
MODEL NAME	:	ZTE-U V875m
FCC ID	:	Q78-UV875M
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	Digital Transmission System (DTS)

The product was received on Sep. 09, 2011 and completely tested on Sep. 26, 2011. We, SPORTON INTERNATIONAL (KUNSHAN) 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 (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai

Jones Tsai / Manager

Testing Laboratory 1190

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No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR190901B	Rev. 01	Initial issue of report	Sep. 30, 2011

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.2	15.247(b)	Power Output	≤ 30dBm	Pass	-
3.3	15.247(d)	Frequency Band Edges	≤ 20dBc	Pass	-
3.4	15.247(d)	Spurious Emission	< 20 dBc	Pass	-
3.5	15.247(e)	Power Spectral Density	≤ 8dBm	Pass	-
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 11.69 dB at 1.88 MHz
3.7	15.247(d)	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 4.56 dB at 824.3 MHz
3.8	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	WCDMA GSM (GPRS) Dual-Mode Digital Mobile Phone
Brand Name	ZTE
Model Name	ZTE-U V875m
FCC ID	Q78-UV875M
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 : 16.57 dBm (0.045 W) 802.11g : 17.12 dBm (0.052 W) 802.11n (BW 20MHz) : 17.25 dBm (0.053 W)
Antenna Type	PIFA Antenna with gain -1 dBi
HW Version	w7bA
SW Version	AM_V875mV1.0.0B01
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 (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		
	TH01-KS	CO01-KS	03CH01-KS

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

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 (Certification), 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.	Signal Generator	R&S	SMR40	N/A	N/A	Unshielded, 1.8 m
3.	Router	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
4.	Notebook	Acer	Trave Imate 2413Lci	QDS-BRCM1016	N/A	AC I/P: Unshielded, 1.8 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)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	**16.57**	16.54	16.49	16.55
CH 06	2437 MHz	16.25	16.22	16.11	16.24
CH 11	2462 MHz	15.27	15.24	15.13	15.21

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	**17.12**	16.24	16.65	16.18	17.05	16.96	16.68	16.87
CH 06	2437 MHz	16.84	16.02	16.54	15.96	16.92	16.71	16.37	16.21
CH 11	2462 MHz	16.46	15.52	15.91	15.39	16.35	16.14	15.81	15.89

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS=0	MCS=1	MCS=2	MCS=3	MCS=4	MCS=5	MCS=6	MCS=7
		6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
CH 01	2412 MHz	**17.25**	17.21	17.19	17.17	17.13	17.16	17.19	17.21
CH 06	2437 MHz	16.72	16.79	16.81	16.89	16.91	16.65	17.01	16.68
CH 11	2462 MHz	16.33	16.44	16.65	16.46	16.21	16.18	16.32	16.39

Remark:

1. The data rates of WLAN 802.11b/g/n were set in 1Mbps for 802.11b, 6Mbps for 802.11g, and 6.5Mbps 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, X, Y, Z in three orthogonal panels, were conducted to determine the final configuration from all possible combinations.

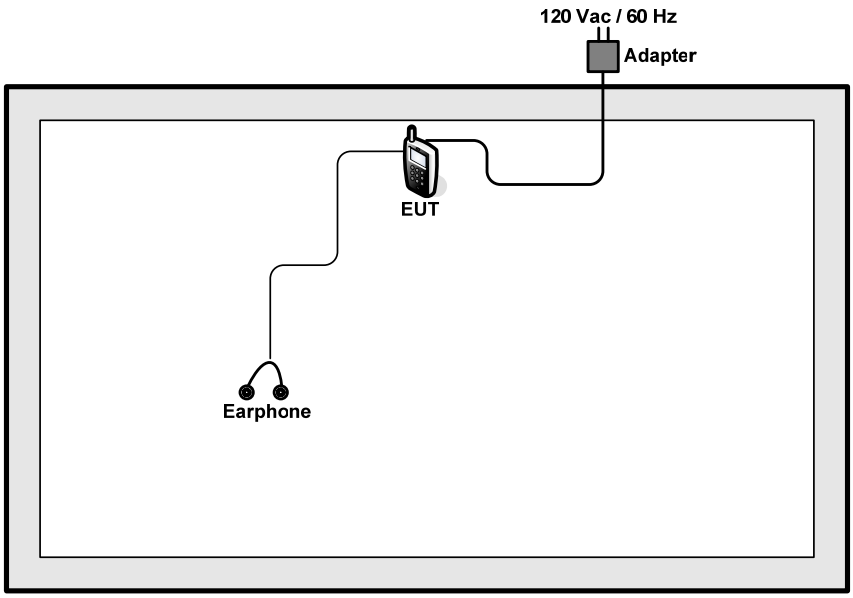
The following tables are showing the test modes as the worst cases (H, E1, E2 plane) and recorded in this report.

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

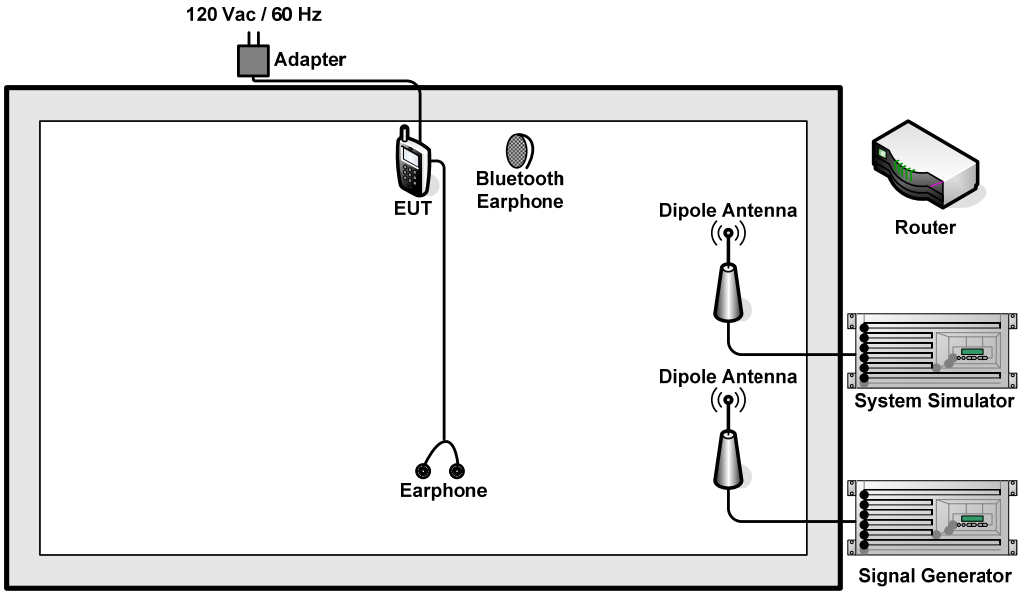
Test Cases		
Test Item	**802.11b (Modulation : DSSS)**	**802.11g/n (Modulation : OFDM)**
Conducted TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n (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 ： GSM 850 Idle + Bluetooth Link + WIFI Link + Adapter + Earphone + FM Rx	

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 RF Utility

The programmed RF utility "*983*28#" is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

3 Test Result

3.1 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

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

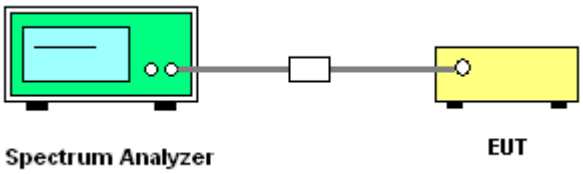
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

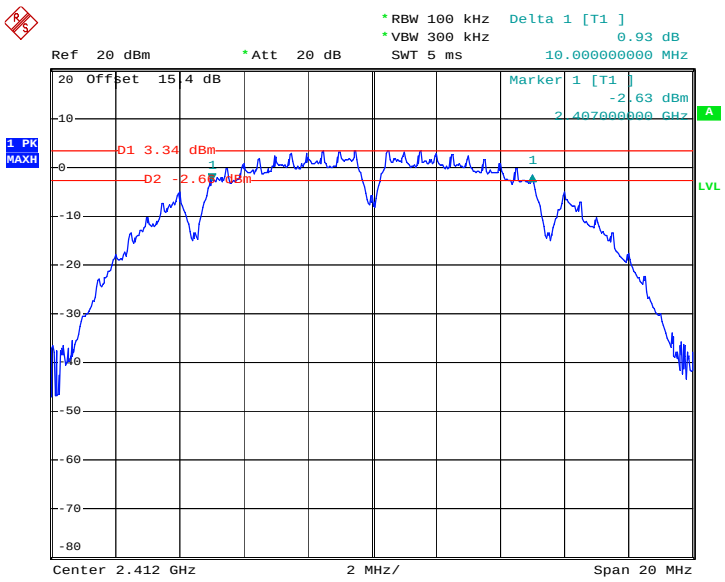


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

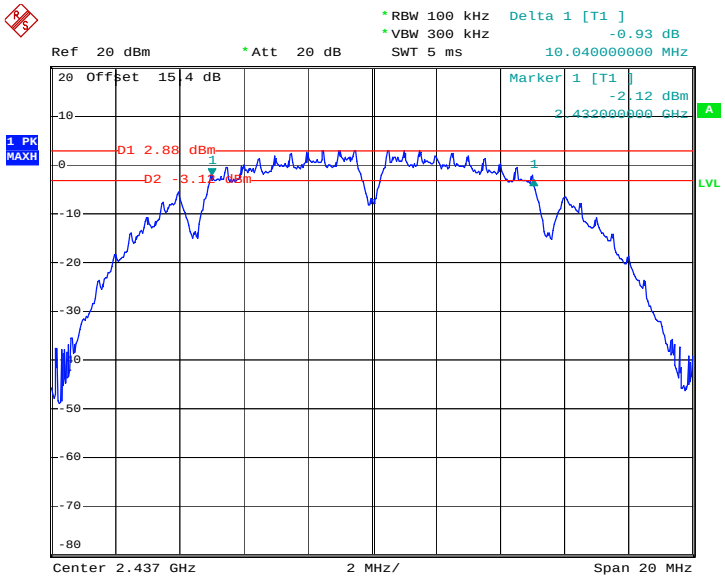
Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	10.00	0.5	Pass
06	2437	10.04	0.5	Pass
11	2462	10.00	0.5	Pass

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



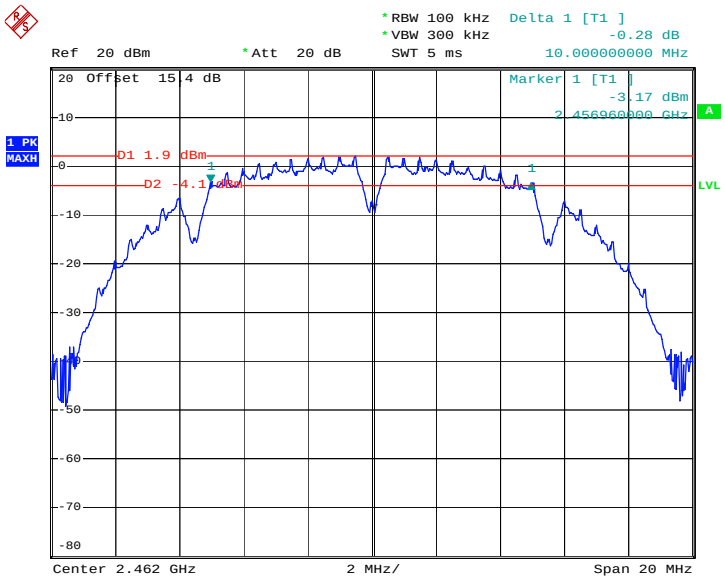
Date: 21.SEP.2011 18:23:52

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



Date: 21.SEP.2011 18:42:42

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

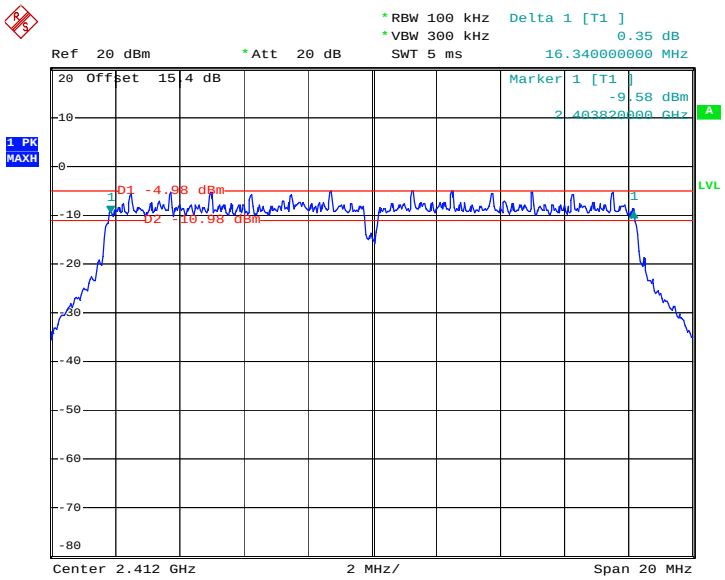


Date: 21.SEP.2011 18:55:53

Test Mode :	Mode 4, 5, 6	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

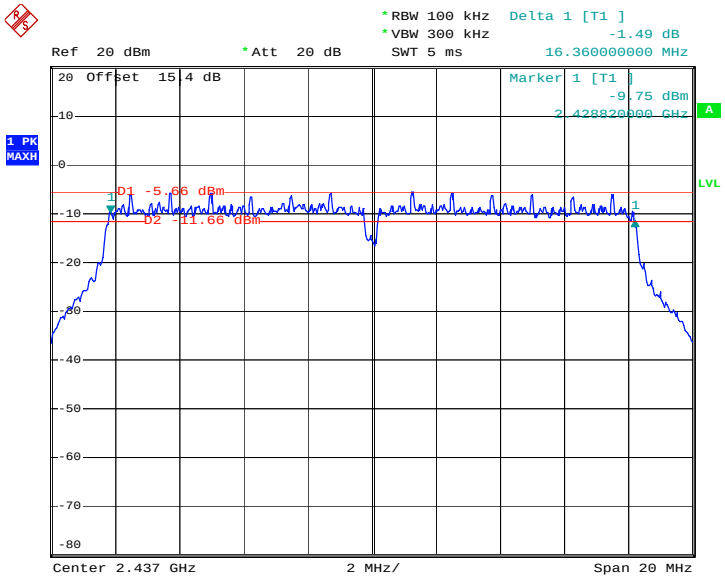
Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.34	0.5	Pass
06	2437	16.36	0.5	Pass
11	2462	16.36	0.5	Pass

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



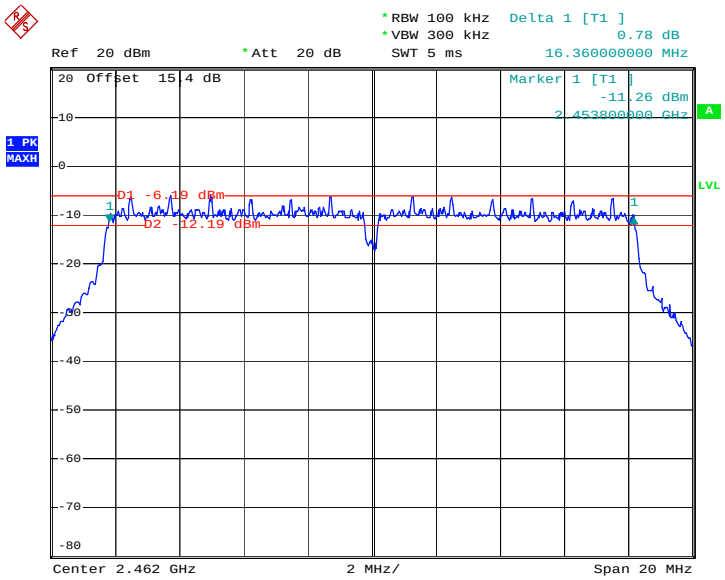
Date: 21.SEP.2011 19:15:38

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



Date: 21.SEP.2011 19:31:43

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

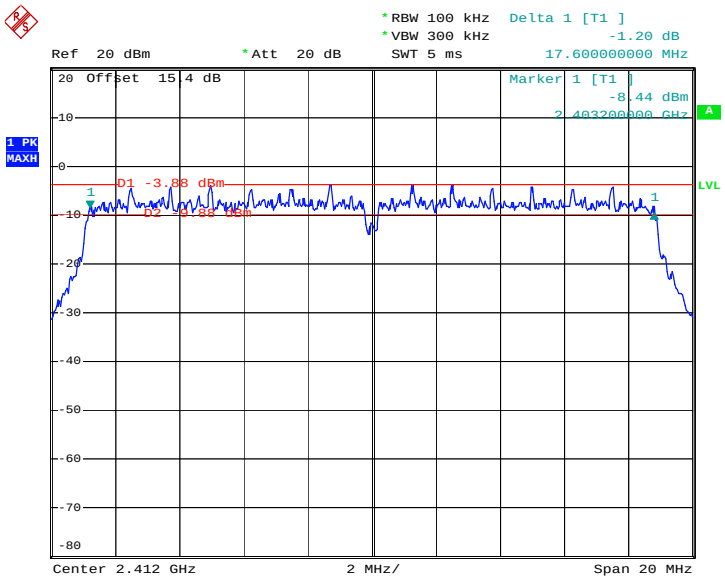


Date: 21.SEP.2011 19:45:22

Test Mode :	Mode 7, 8, 9	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

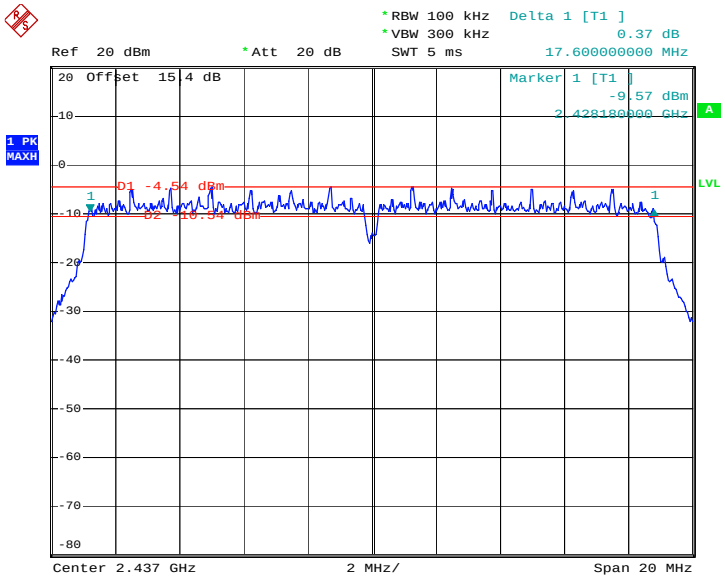
Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	17.60	0.5	Pass
06	2437	17.60	0.5	Pass
11	2462	17.60	0.5	Pass

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



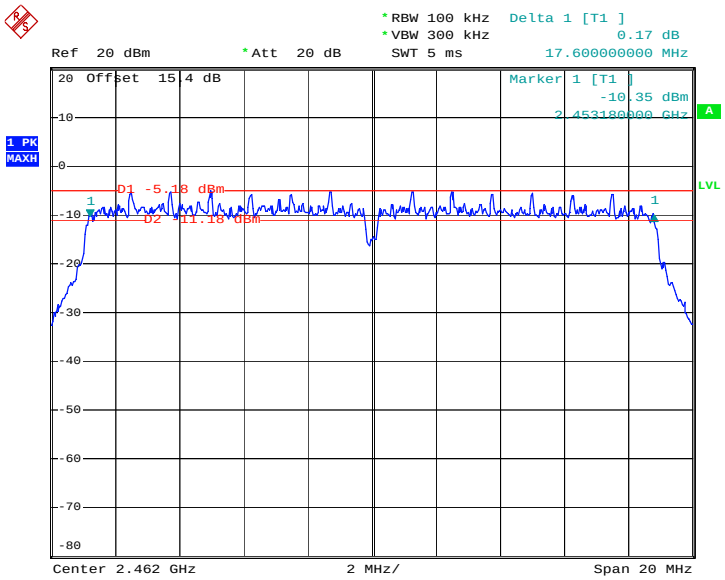
Date: 21.SEP.2011 20:06:16

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



Date: 21.SEP.2011 20:19:43

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



Date: 21.SEP.2011 20:32:12

3.2 Output Power Measurement

3.2.1 Limit of Output Power

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

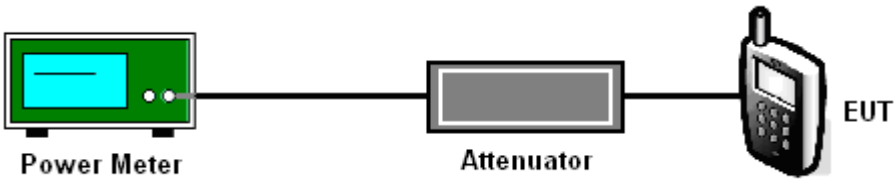
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Output Power

Test Mode :	Mode 1, 2, 3	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	16.57	30	Pass
06	2437	16.25	30	Pass
11	2462	15.27	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	17.12	30	Pass
06	2437	16.84	30	Pass
11	2462	16.46	30	Pass

Test Mode :	Mode 7, 8, 9	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	17.25	30	Pass
06	2437	16.72	30	Pass
11	2462	16.33	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

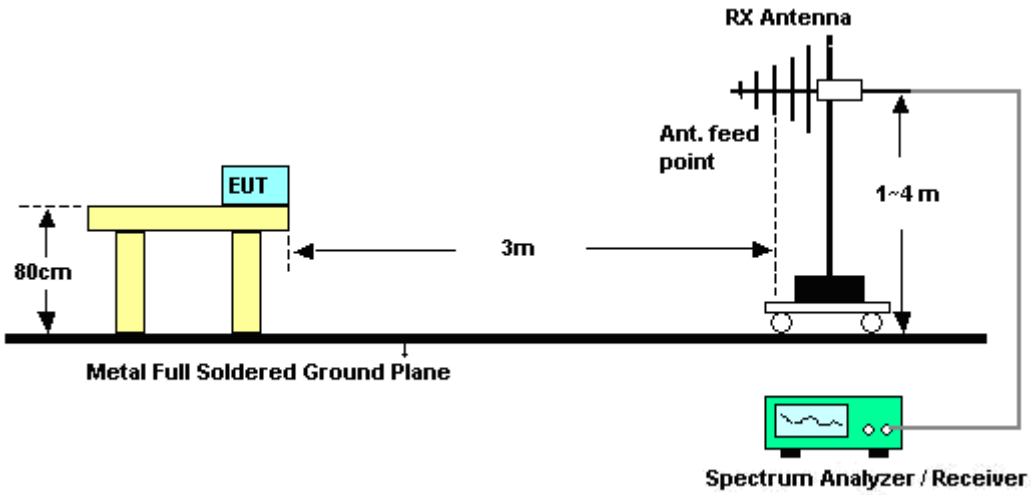
See list of measuring instruments of this test report.

3.3.3 Test Procedures

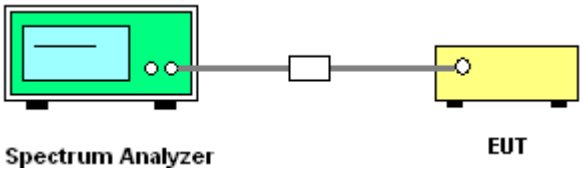
1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) ≥ RBW. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized 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 :	21~22℃
Test Band :	802.11b	Relative Humidity :	41~42%
Test Channel :	01	Test Engineer :	Cloud Peng

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	48.71	-25.29	74	46.43	32.86	3.47	34.05	100	0	Peak
2390	37.36	-16.64	54	35.08	32.86	3.47	34.05	100	0	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	48.88	-25.12	74	46.6	32.86	3.47	34.05	100	200	Peak
2390	38.48	-15.52	54	36.2	32.86	3.47	34.05	100	200	Average

Test Mode :	Mode 3	Temperature :	21~22℃
Test Band :	802.11b	Relative Humidity :	41~42%
Test Channel :	11	Test Engineer :	Cloud Peng

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	48.69	-25.31	74	46.2	33.01	3.68	34.2	100	298	Peak
2483.5	38.99	-15.01	54	36.5	33.01	3.68	34.2	100	298	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	49.3	-24.7	74	46.81	33.01	3.68	34.2	100	290	Peak
2483.5	40.39	-13.61	54	37.9	33.01	3.68	34.2	100	290	Average

Test Mode :	Mode 4	Temperature :	21~22℃
Test Band :	802.11g	Relative Humidity :	41~42%
Test Channel :	01	Test Engineer :	Cloud Peng

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	49.18	-24.82	74	46.9	32.86	3.47	34.05	100	360	Peak
2390	37.95	-16.05	54	35.67	32.86	3.47	34.05	100	360	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	47.99	-26.01	74	45.71	32.86	3.47	34.05	100	120	Peak
2390	38.08	-15.92	54	35.8	32.86	3.47	34.05	100	120	Average

Test Mode :	Mode 6	Temperature :	21~22℃
Test Band :	802.11g	Relative Humidity :	41~42%
Test Channel :	11	Test Engineer :	Cloud Peng

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	48.7	-25.3	74	46.21	33.01	3.68	34.2	100	200	Peak
2483.5	37.36	-16.64	54	34.87	33.01	3.68	34.2	100	200	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	48.5	-25.5	74	46.01	33.01	3.68	34.2	100	0	Peak
2483.5	36.59	-17.41	54	34.1	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 7	Temperature :	21~22℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	41~42%
Test Channel :	01	Test Engineer :	Cloud Peng

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	49.12	-24.88	74	46.84	32.86	3.47	34.05	100	360	Peak
2390	38.97	-15.03	54	36.69	32.86	3.47	34.05	100	360	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
2389.23	51.83	-22.17	74	49.55	32.86	3.47	34.05	100	260	Peak
2389.23	40.8	-13.2	54	38.52	32.86	3.47	34.05	100	260	Average

Test Mode :	Mode 9	Temperature :	21~22℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	41~42%
Test Channel :	11	Test Engineer :	Cloud Peng

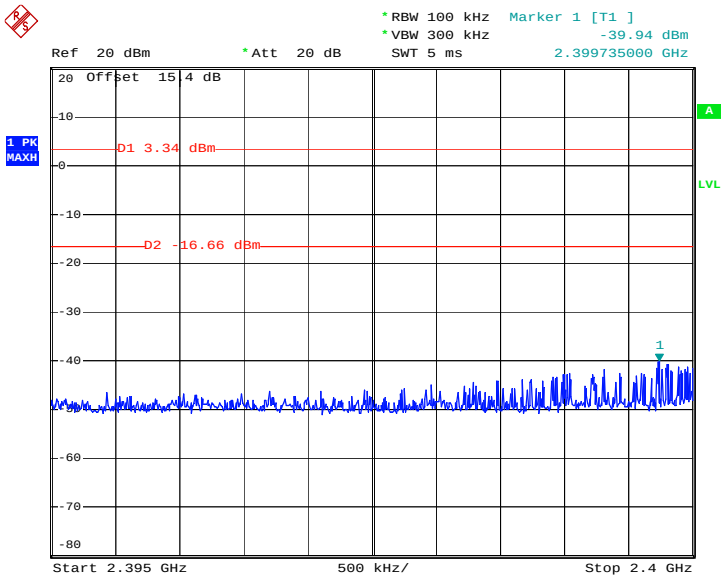
ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	50.03	-23.97	74	47.54	33.01	3.68	34.2	100	0	Peak
2483.5	37.5	-16.5	54	35.01	33.01	3.68	34.2	100	0	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	51.25	-22.75	74	48.76	33.01	3.68	34.2	100	0	Peak
2483.5	37.67	-16.33	54	35.18	33.01	3.68	34.2	100	0	Average

3.3.6 Test Plots of Conducted Band Edges

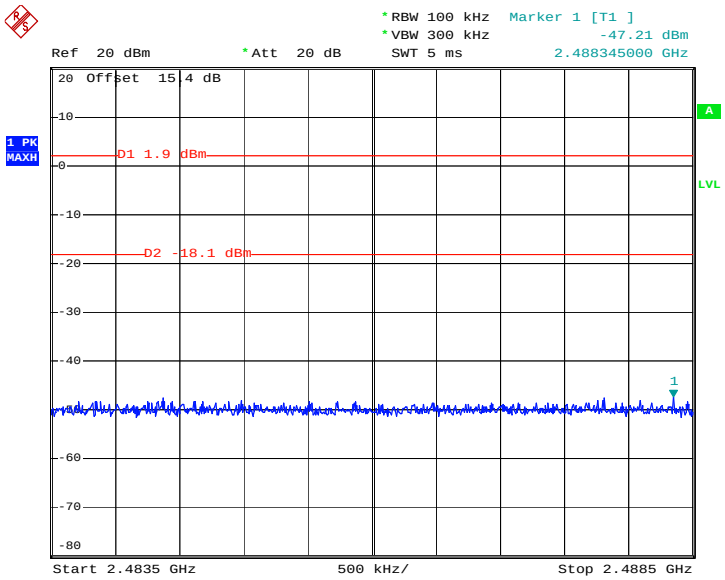
Test Mode :	Mode 1 and 3	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	45~47%
Test Channel :	01 and 11	Test Engineer :	Jun Liu

Low Band Edge Plot on 802.11b Channel 01



Date: 21.SEP.2011 18:27:03

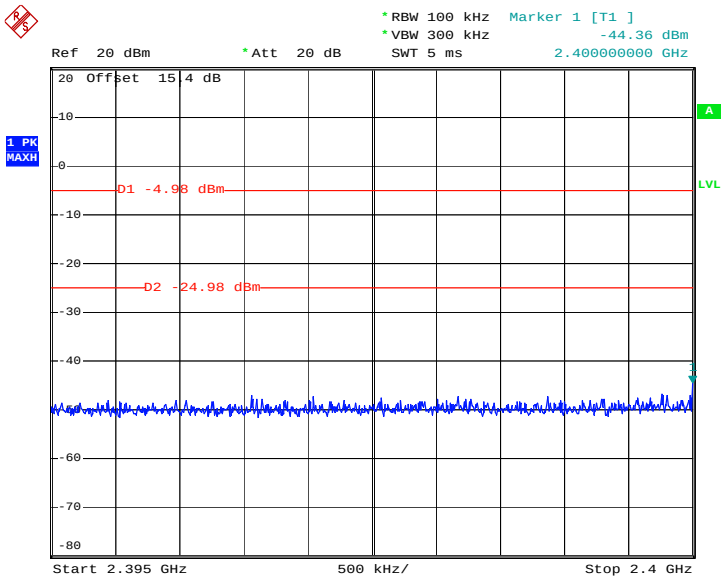
High Band Edge Plot on 802.11b Channel 11



Date: 21.SEP.2011 18:56:53

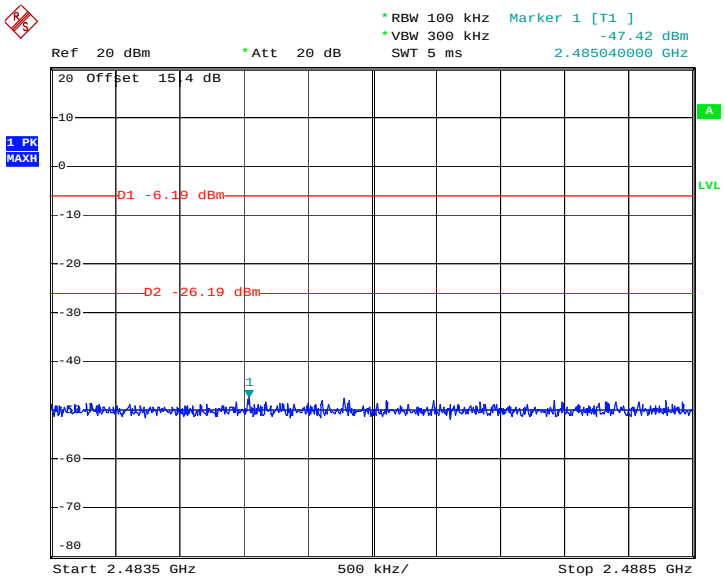
Test Mode :	Mode 4 and 6	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	45~47%
Test Channel :	01 and 11	Test Engineer :	Jun Liu

Low Band Edge Plot on 802.11g Channel 01



Date: 21.SEP.2011 19:17:31

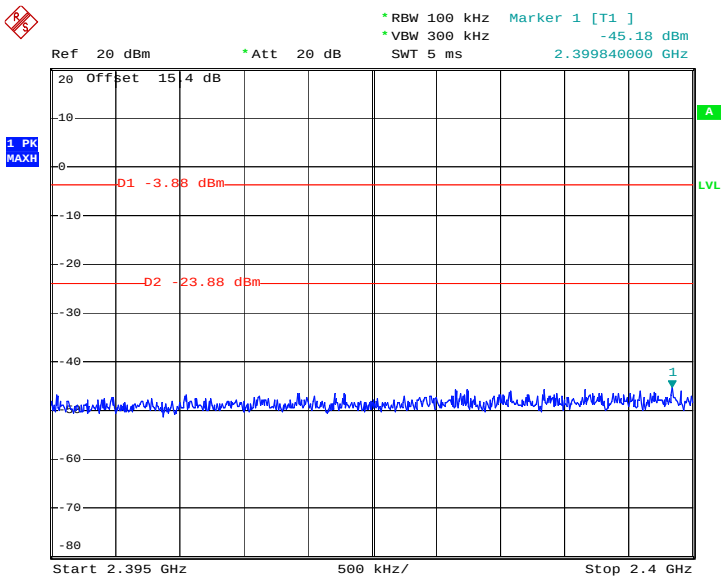
High Band Edge Plot on 802.11g Channel 11



Date: 21.SEP.2011 19:46:17

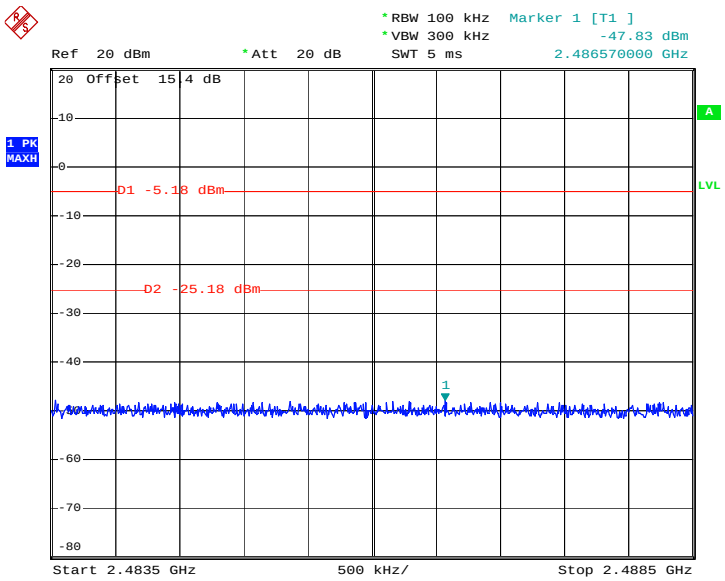
Test Mode :	Mode 7 and 9	Temperature :	23~24℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	45~47%
Test Channel :	01 and 11	Test Engineer :	Jun Liu

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



Date: 21.SEP.2011 20:07:32

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



Date: 21.SEP.2011 20:33:10

3.4 Spurious Emission Measurement

3.4.1 Limit of Spurious Emission Measurement

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

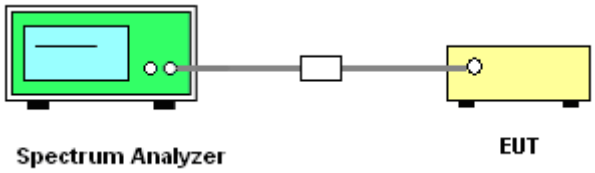
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedure

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

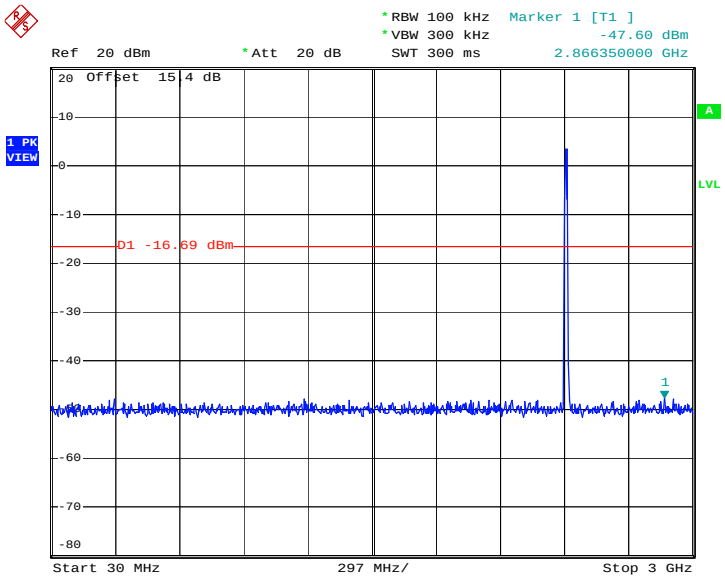
3.4.4 Test Setup



3.4.5 Test Plots of Spurious Emission

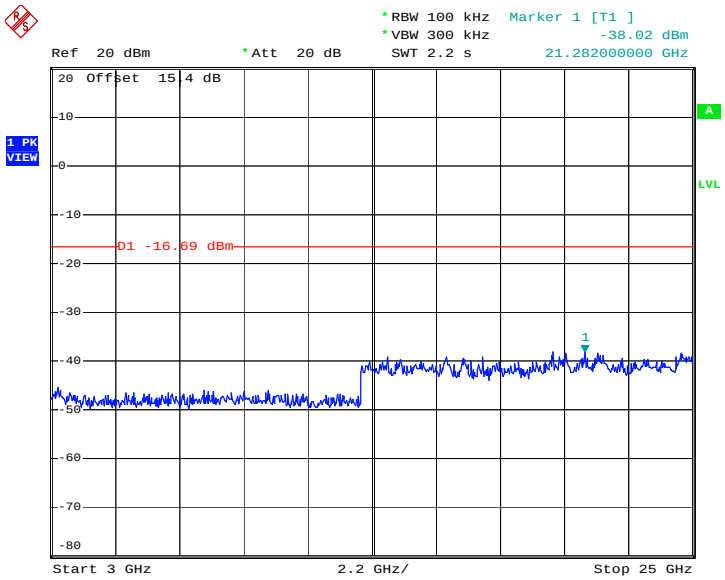
Test Mode :	Mode 1	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	45~47%
Test Channel :	01	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 18:28:42

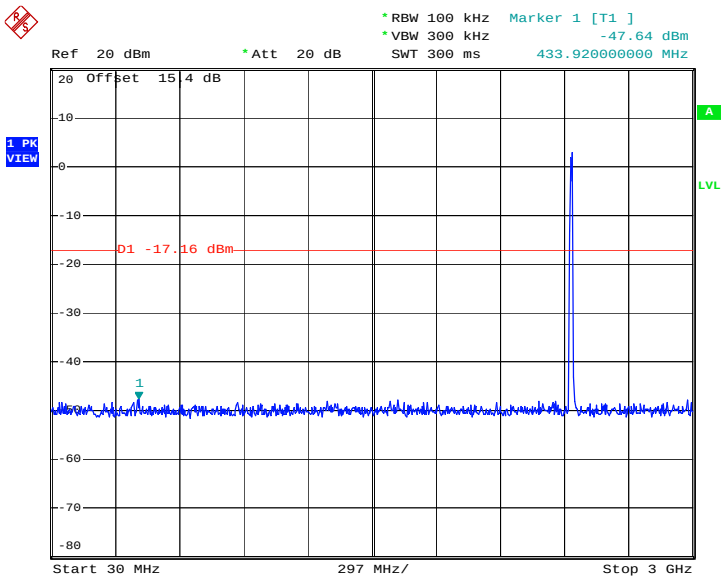
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 18:28:59

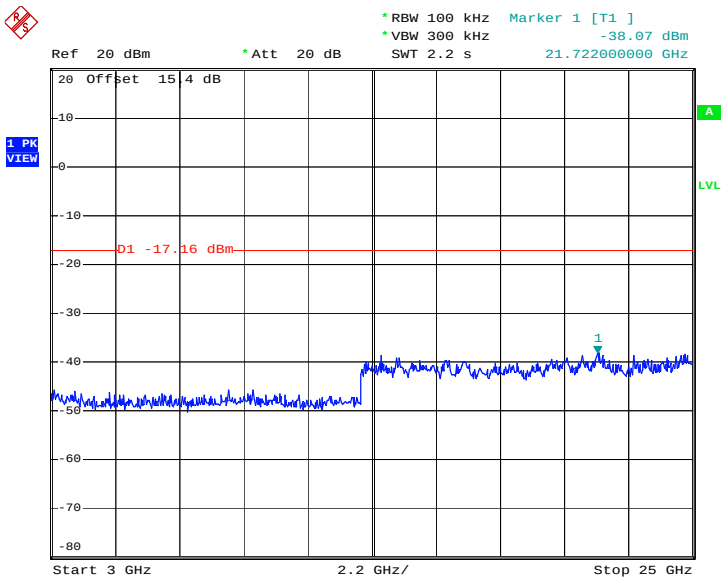
Test Mode :	Mode 2	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	45~47%
Test Channel :	06	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 18:43:49

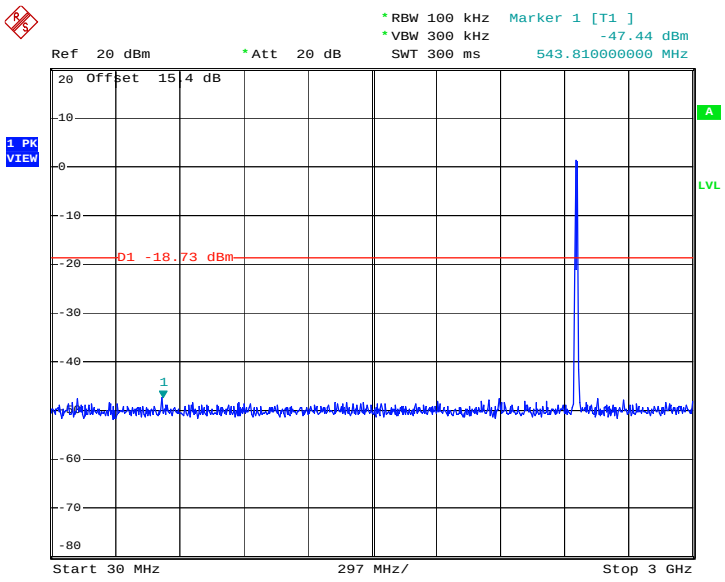
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 18:44:06

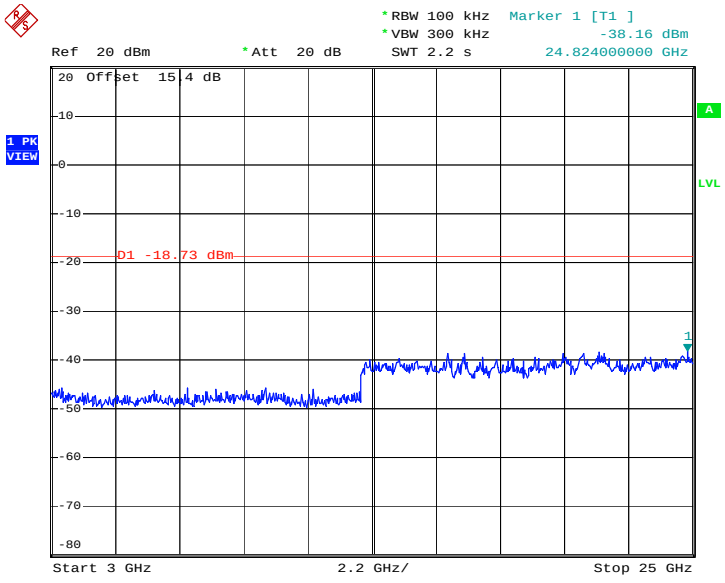
Test Mode :	Mode 3	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	45~47%
Test Channel :	11	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 18:58:11

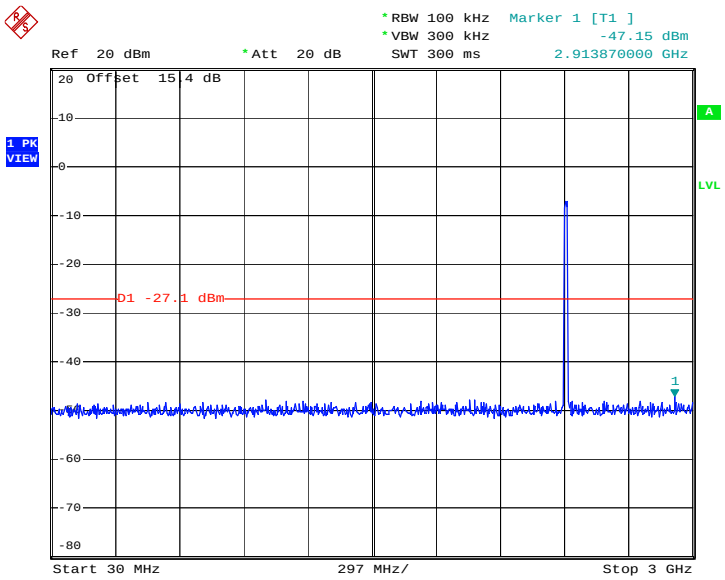
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 18:58:27

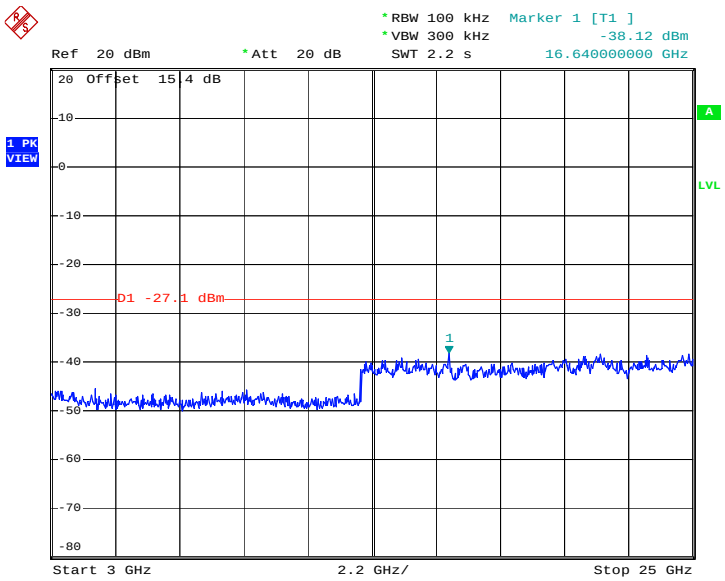
Test Mode :	Mode 4	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	45~47%
Test Channel :	01	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 19:19:26

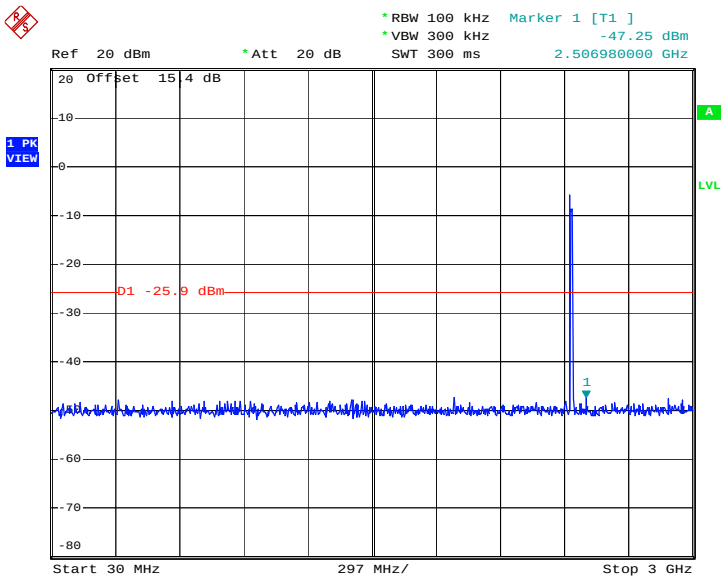
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 19:19:43

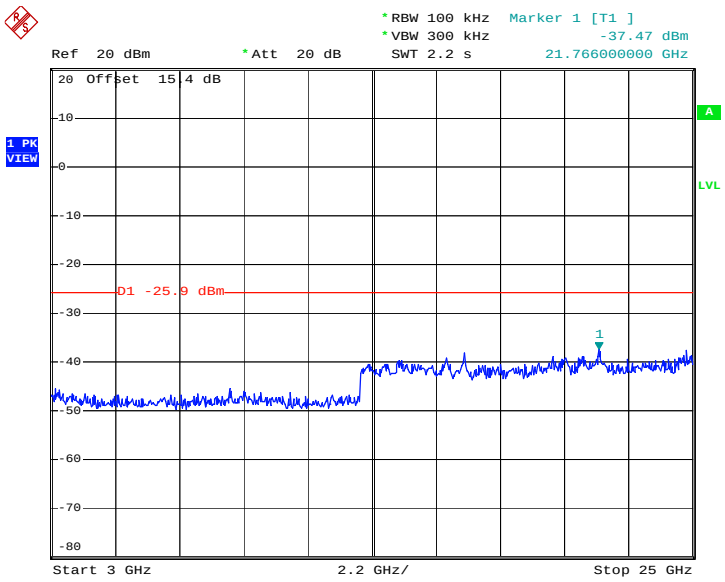
Test Mode :	Mode 5	Temperature :	23~24
Test Band :	802.11g	Relative Humidity :	45~47
Test Channel :	06	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 19:32:49

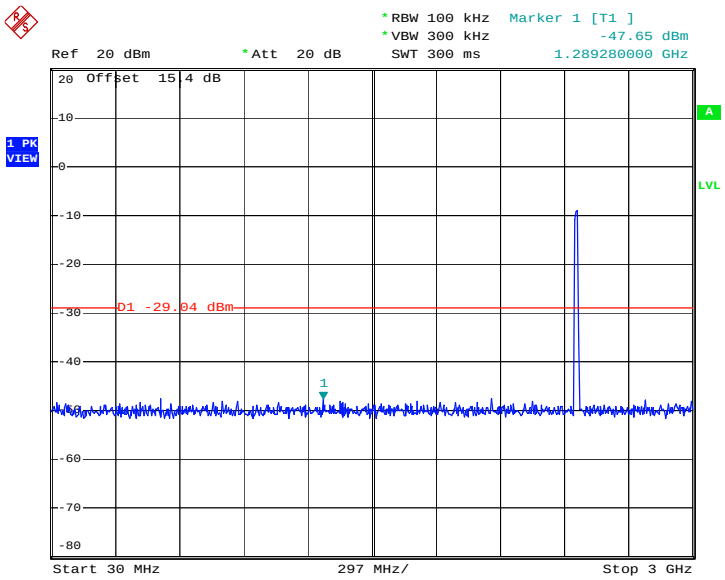
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 19:33:06

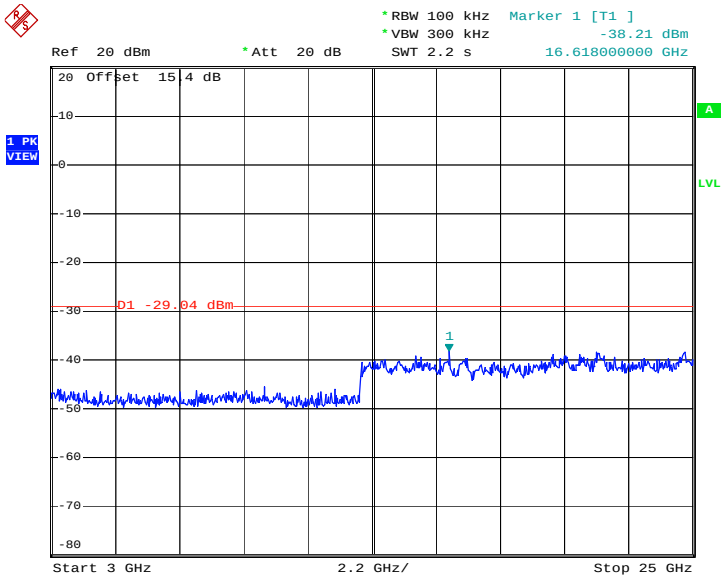
Test Mode :	Mode 6	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	45~47%
Test Channel :	11	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 19:47:06

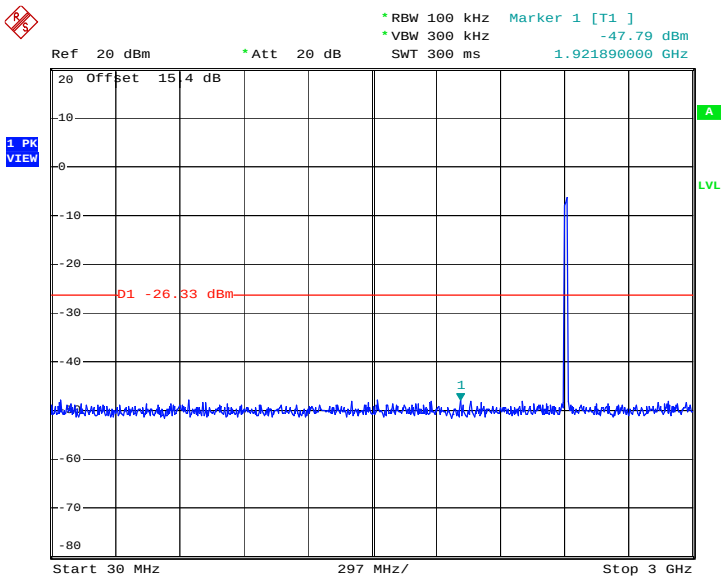
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 19:47:23

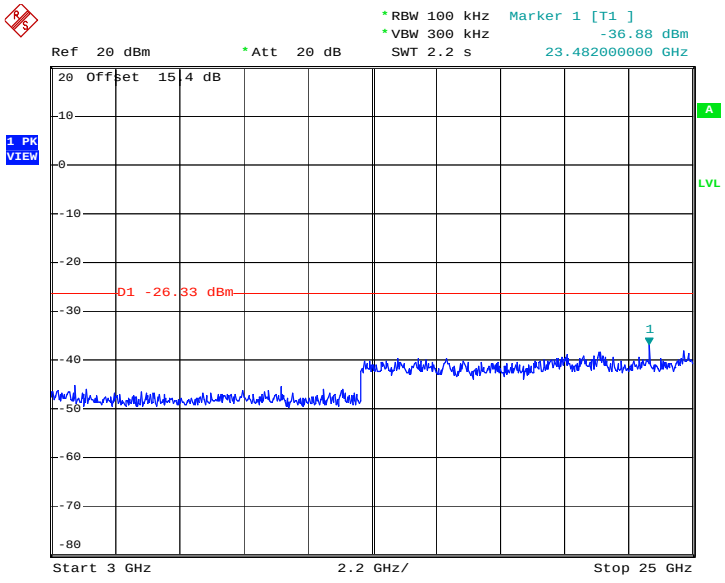
Test Mode :	Mode 7	Temperature :	23~24℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	45~47%
Test Channel :	01	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 20:08:46

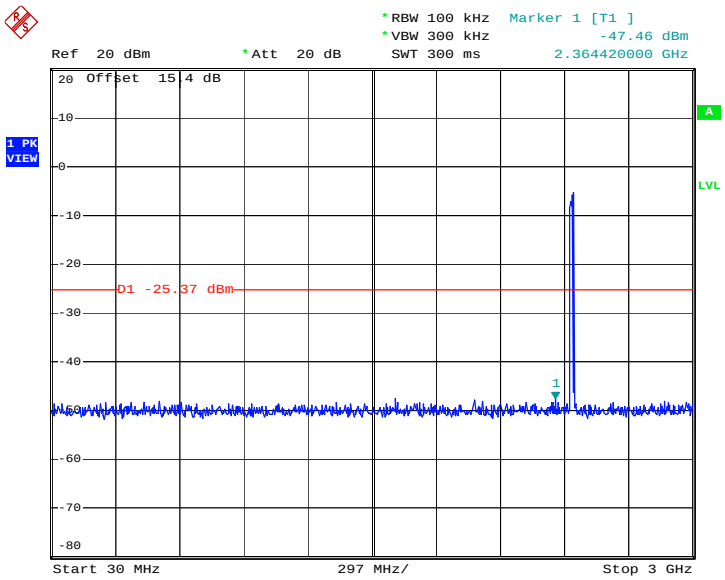
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 20:09:03

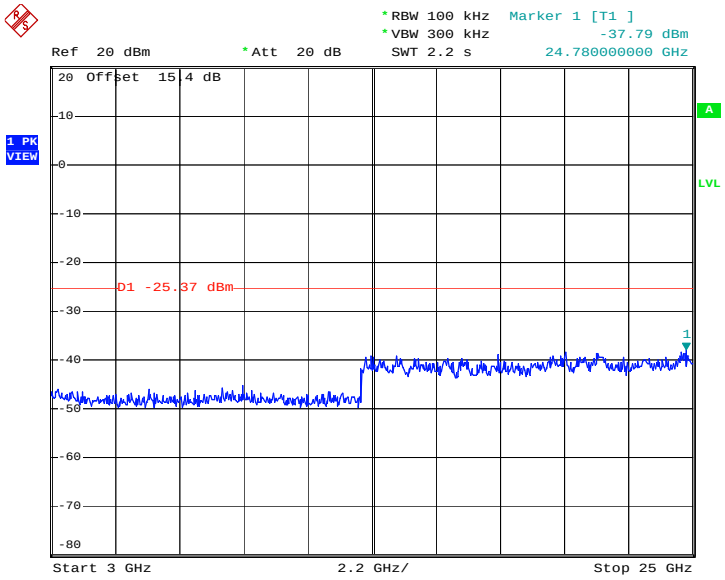
Test Mode :	Mode 8	Temperature :	23~24℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	45~47%
Test Channel :	06	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 20:20:41

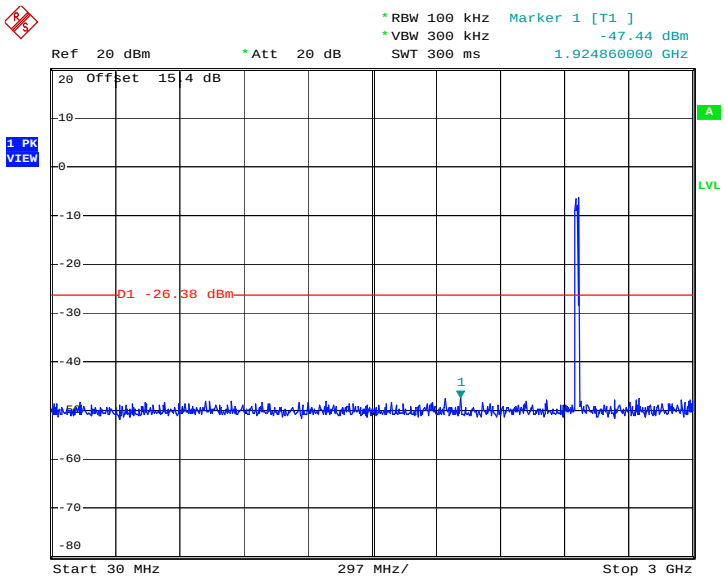
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 20:20:58

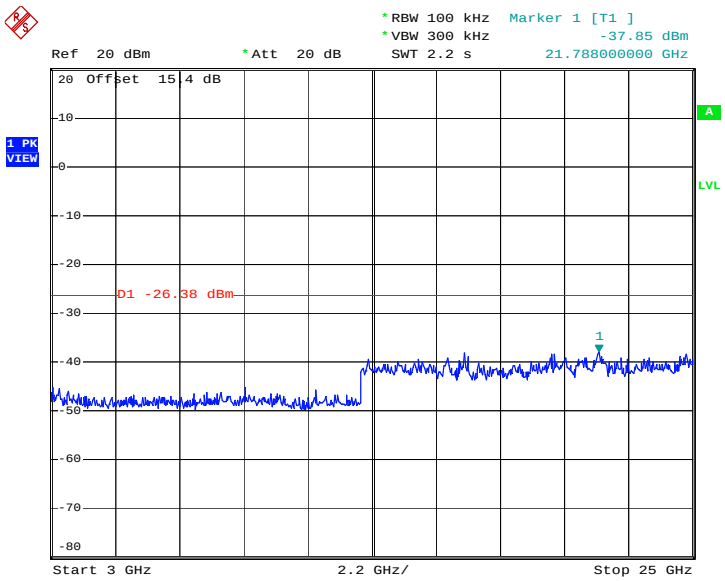
Test Mode :	Mode 9	Temperature :	23~24℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	45~47%
Test Channel :	11	Test Engineer :	Jun Liu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 21.SEP.2011 20:34:00

Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 21.SEP.2011 20:34:17

3.5 Power Spectral Density Measurement

3.5.1 Limit of Power Spectral Density

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

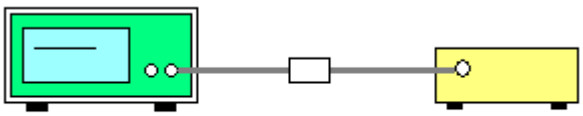
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

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

3.5.4 Test Setup

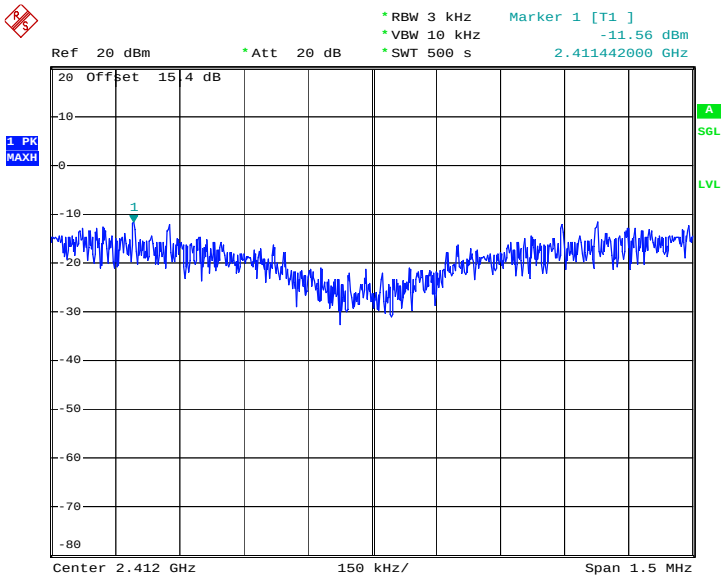


3.5.5 Test Result of Power Spectral Density

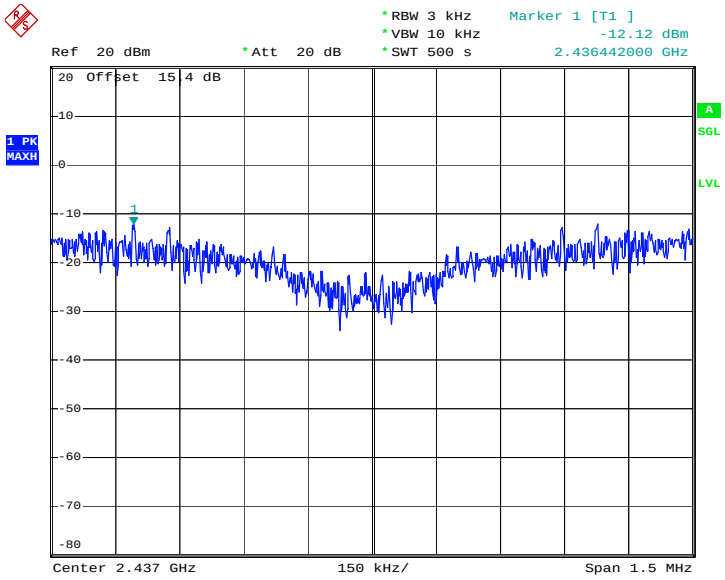
Test Mode :	Mode 1, 2, 3	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-11.56	8	Pass
06	2437	-12.12	8	Pass
11	2462	-13.10	8	Pass

Mode 1 : PSD Plot on 802.11b Channel 01

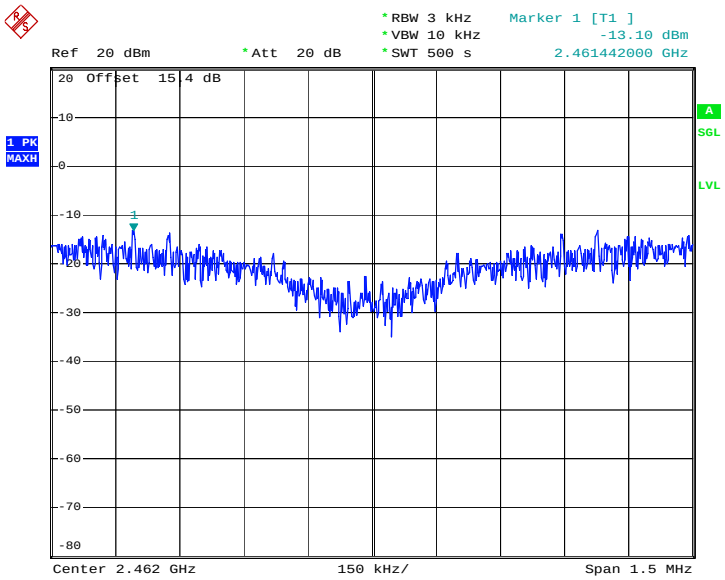


Mode 2 : PSD Plot on 802.11b Channel 06



Date: 21.SEP.2011 18:53:26

Mode 3 : PSD Plot on 802.11b Channel 11

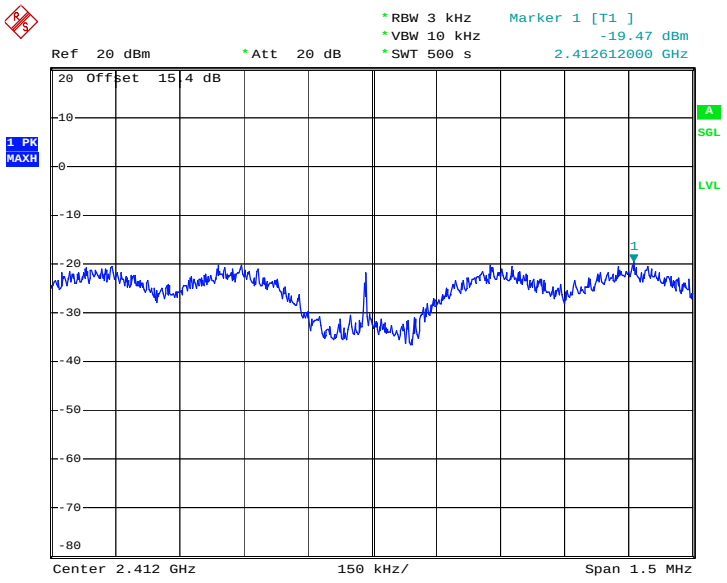


Date: 21.SEP.2011 19:07:40

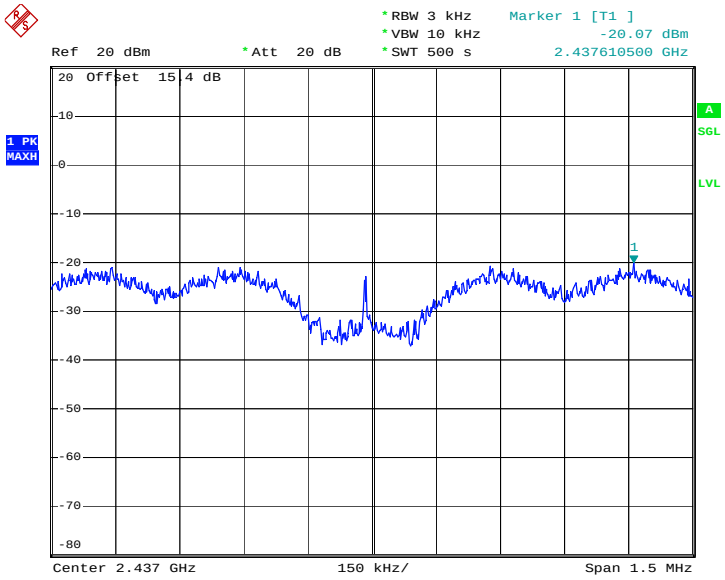
Test Mode :	Mode 4, 5, 6	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-19.47	8	Pass
06	2437	-20.07	8	Pass
11	2462	-21.02	8	Pass

Mode 4 : PSD Plot on 802.11g Channel 01

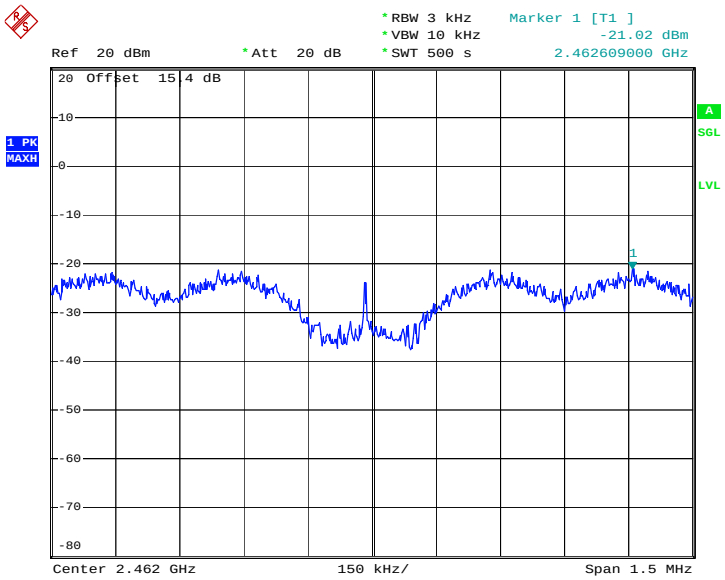


Mode 5 : PSD Plot on 802.11g Channel 06



Date: 21.SEP.2011 19:42:19

Mode 6 : PSD Plot on 802.11g Channel 11

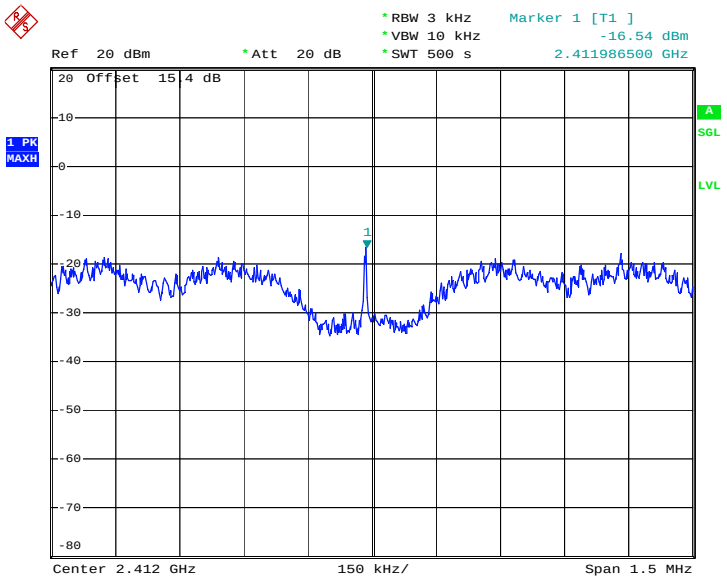


Date: 21.SEP.2011 19:56:38

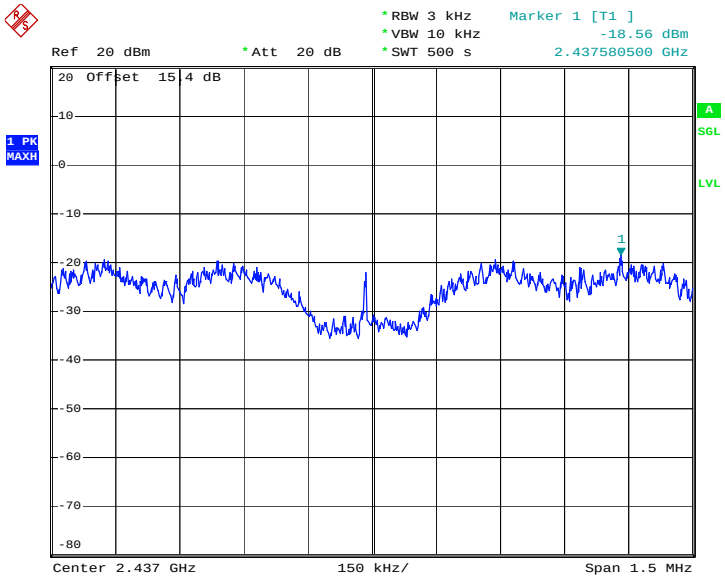
Test Mode :	Mode 7, 8, 9	Temperature :	23~24℃
Test Engineer :	Jun Liu	Relative Humidity :	45~47%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-16.54	8	Pass
06	2437	-18.56	8	Pass
11	2462	-19.36	8	Pass

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



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



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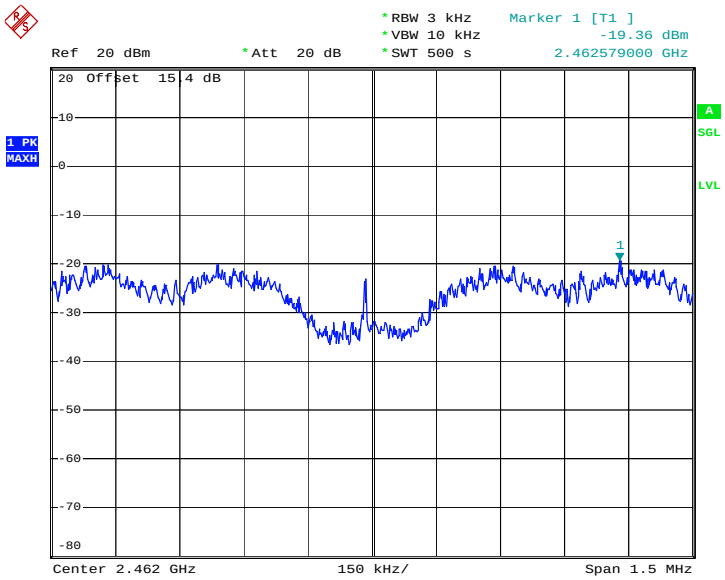
Mode 9 : PSD Plot on 802.11n (BW 20MHz) Channel 11



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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.

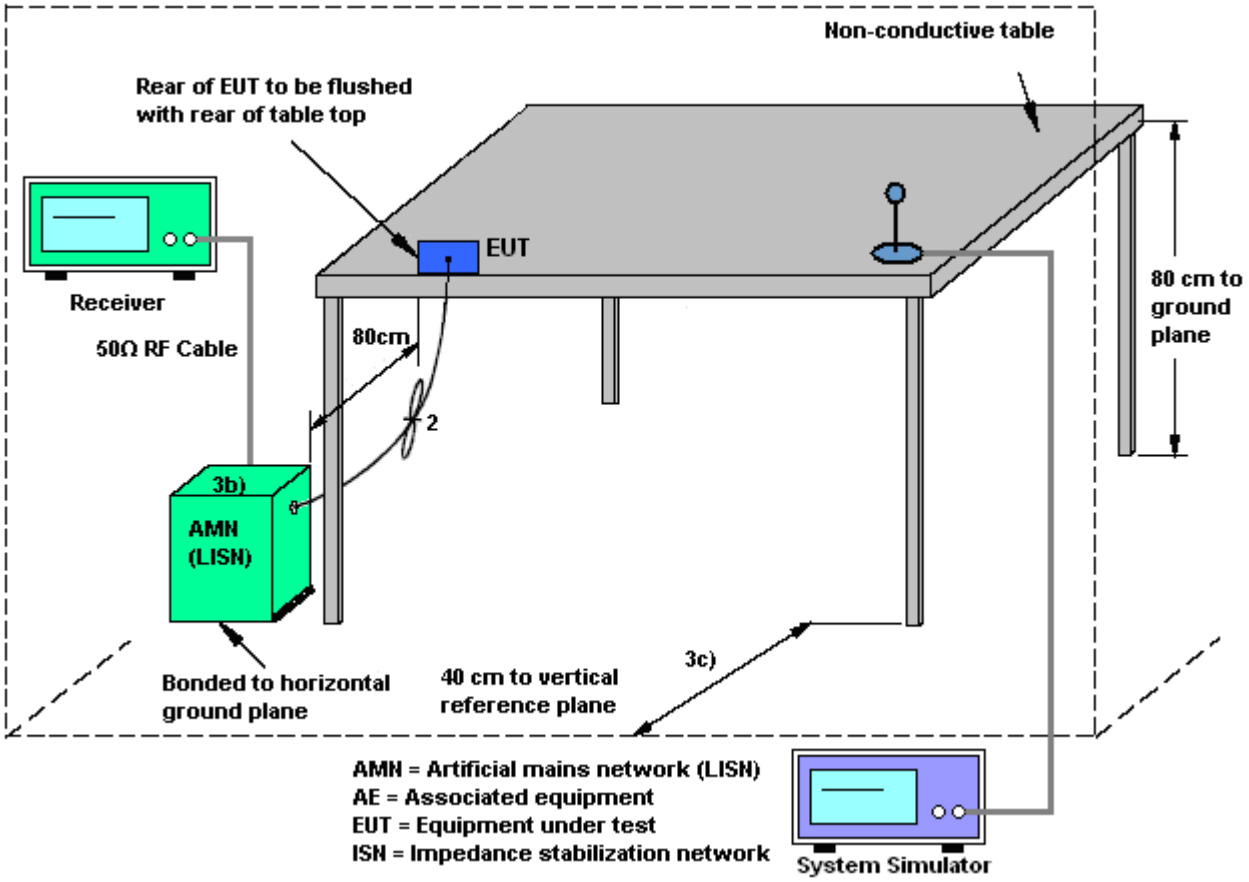
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

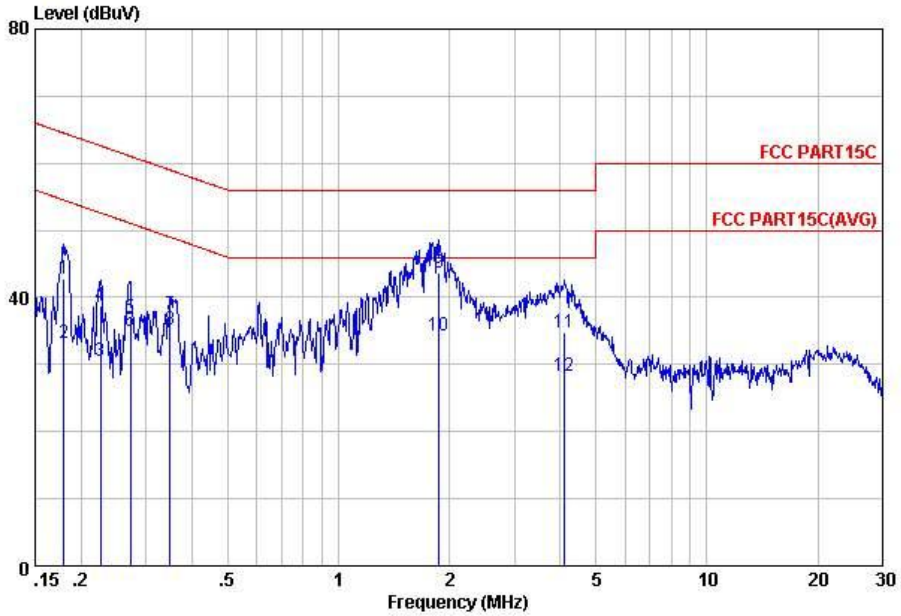
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (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

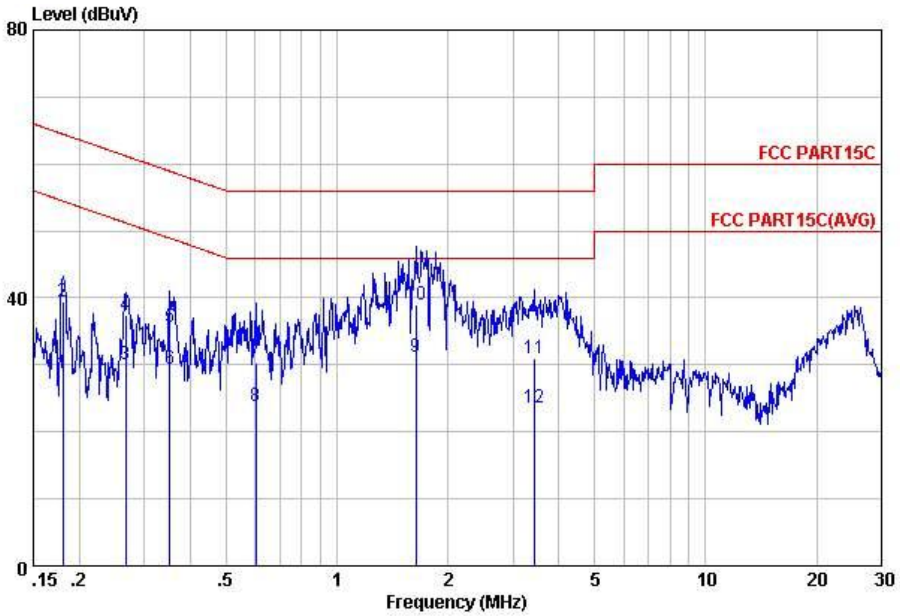
Test Mode :	Mode 1	Temperature :	21~22℃
Test Engineer :	Infi Li	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM 850 Idle + Bluetooth Link + WIFI Link + Adapter + Earphone + FM Rx		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : C001-KS
Condition: FCC PART15C LISN-100807 LINE
Project : (FR) 190901
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.18	42.78	-21.72	64.50	32.70	-0.07	10.15	QP
2	0.18	33.28	-21.22	54.50	23.20	-0.07	10.15	Average
3	0.23	30.48	-22.13	52.61	20.39	-0.07	10.16	Average
4	0.23	38.88	-23.73	62.61	28.79	-0.07	10.16	QP
5	0.27	36.89	-24.18	61.07	26.80	-0.07	10.16	QP
6	0.27	35.09	-15.98	51.07	25.00	-0.07	10.16	Average
7	0.35	37.50	-21.50	59.00	27.40	-0.08	10.18	QP
8	0.35	35.20	-13.80	49.00	25.10	-0.08	10.18	Average
9	1.88	43.61	-12.39	56.00	33.40	-0.11	10.32	QP
10	1.88	34.31	-11.69	46.00	24.10	-0.11	10.32	Average
11	4.11	34.76	-21.24	56.00	24.50	-0.13	10.39	QP
12	4.11	28.36	-17.64	46.00	18.10	-0.13	10.39	Average

Test Mode :	Mode 1	Temperature :	21~22℃
Test Engineer :	Infi Li	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM 850 Idle + Bluetooth Link + WIFI Link + Adapter + Earphone + FM Rx		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : C001-KS
Condition: FCC PART15C LISN-100807 NEUTRAL
Project : (FR) 190901
mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.18	28.77	-25.69	54.46	18.70	-0.08	10.15	Average
2	0.18	39.47	-24.99	64.46	29.40	-0.08	10.15	QP
3	0.27	30.19	-21.01	51.20	20.10	-0.07	10.16	Average
4	0.27	37.49	-23.71	61.20	27.40	-0.07	10.16	QP
5	0.35	35.60	-23.31	58.91	25.50	-0.08	10.18	QP
6	0.35	29.30	-19.61	48.91	19.20	-0.08	10.18	Average
7	0.60	30.24	-25.76	56.00	20.10	-0.08	10.22	QP
8	0.60	23.84	-22.16	46.00	13.70	-0.08	10.22	Average
9	1.64	31.30	-14.70	46.00	21.10	-0.11	10.31	Average
10	1.64	38.90	-17.10	56.00	28.70	-0.11	10.31	QP
11	3.42	30.96	-25.04	56.00	20.70	-0.12	10.38	QP
12	3.42	23.66	-22.34	46.00	13.40	-0.12	10.38	Average

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

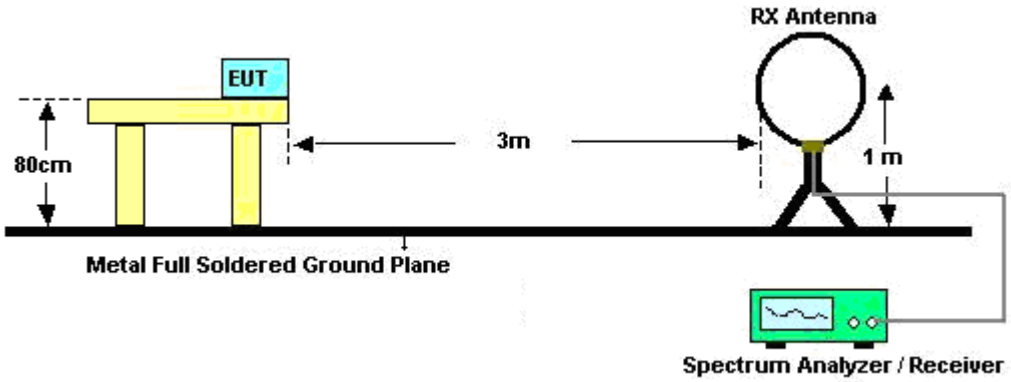
See list of measuring instruments of this test report.

3.7.3 Test Procedures

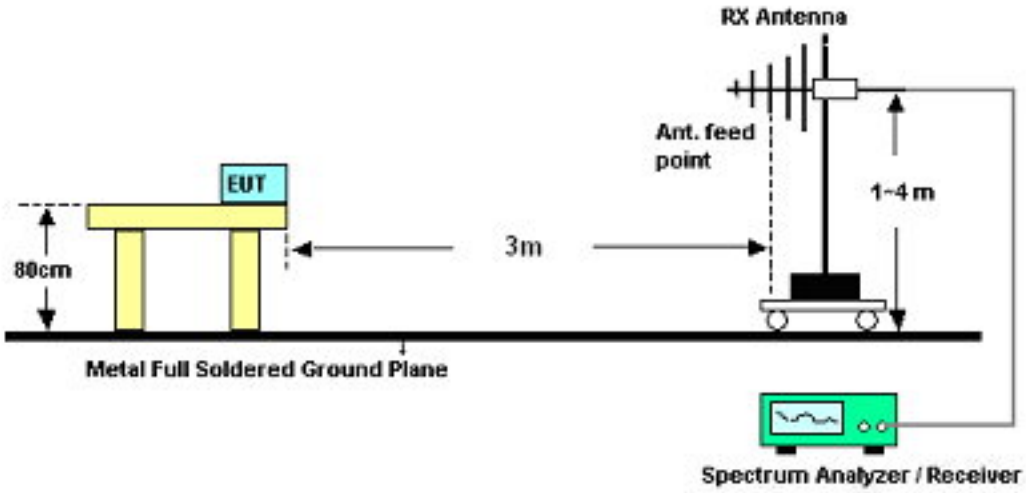
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
   (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto;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

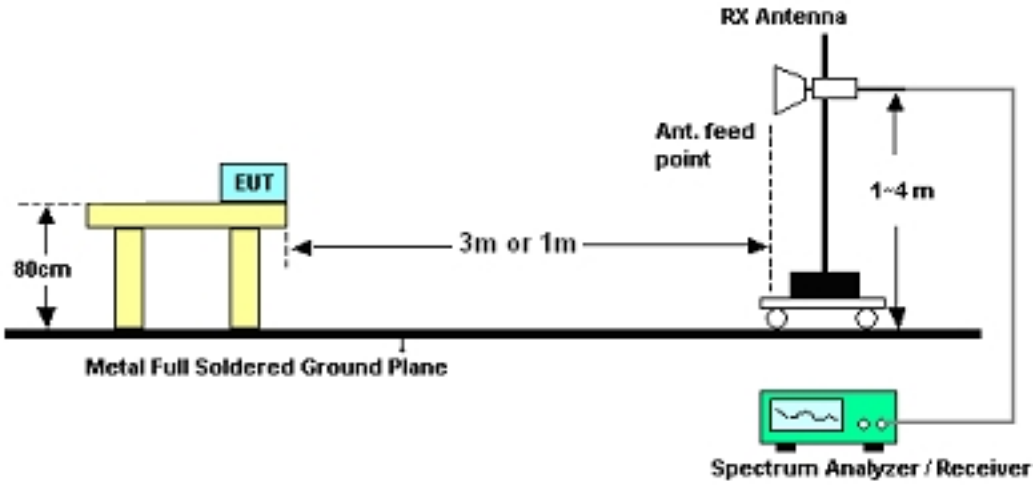
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

Test Engineer :	Cloud Peng	Temperature :	21~22℃
		Relative Humidity :	41~42%

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 :	21~22℃
Test Channel :	01	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
31.35	22.43	-17.57	40	34.97	17.29	0.25	30.08	-	-	Peak
143.67	21.02	-22.48	43.5	39.96	10.55	0.5	29.99	-	-	Peak
267.6	25.84	-20.16	46	42.73	12.31	0.69	29.89	-	-	Peak
360.2	37.8	-8.2	46	52.18	14.72	0.82	29.92	100	0	Peak
783	29.78	-16.22	46	38.27	19.86	1.23	29.58	-	-	Peak
960.1	33.84	-20.16	54	41.25	20.79	1.34	29.54	-	-	Peak
2390	48.71	-25.29	74	46.43	32.86	3.47	34.05	100	0	Peak
2390	37.36	-16.64	54	35.08	32.86	3.47	34.05	100	0	Average
2412	76.62	-	-	74.29	32.89	3.52	34.08	156	0	Average
2412	101.92	-	-	99.59	32.89	3.52	34.08	156	0	Peak
2483.5	49.32	-24.68	74	46.83	33.01	3.68	34.2	100	360	Peak
2483.5	36.62	-17.38	54	34.13	33.01	3.68	34.2	100	360	Average

Test Mode :	Mode 1	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
38.64	31.83	-8.17	40	48.64	12.98	0.25	30.04	-	-	Peak
100.2	24.47	-19.03	43.5	43.52	10.5	0.41	29.96	-	-	Peak
223.05	24.2	-21.8	46	43.2	10.33	0.63	29.96	-	-	Peak
360.2	31.8	-14.2	46	46.18	14.72	0.82	29.92	-	-	Peak
468	31.7	-14.3	46	43.96	16.59	0.92	29.77	-	-	Peak
902.7	37.89	-8.11	46	45.61	20.46	1.3	29.48	100	0	Peak
2390	48.88	-25.12	74	46.6	32.86	3.47	34.05	100	200	Peak
2390	38.48	-15.52	54	36.2	32.86	3.47	34.05	100	200	Average
2412	78.15	-	-	75.82	32.89	3.52	34.08	100	195	Average
2412	104.87	-	-	102.54	32.89	3.52	34.08	100	195	Peak
2483.5	48.9	-25.1	74	46.41	33.01	3.68	34.2	100	210	Peak
2483.5	37.65	-36.35	74	35.16	33.01	3.68	34.2	100	210	Peak

Test Mode :	Mode 2	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	22.29	-17.71	40	34.11	18	0.26	30.08	-	-	Peak
217.65	22.61	-23.39	46	42.09	9.89	0.61	29.98	-	-	Peak
267.6	25.17	-20.83	46	42.06	12.31	0.69	29.89	-	-	Peak
360.2	38.5	-7.5	46	52.88	14.72	0.82	29.92	100	0	Peak
720	29.19	-16.81	46	38.18	19.52	1.15	29.66	-	-	Peak
960.1	33.49	-20.51	54	40.9	20.79	1.34	29.54	-	-	Peak
2390	48.54	-25.46	74	46.26	32.86	3.47	34.05	100	300	Peak
2390	37.17	-16.83	54	34.89	32.86	3.47	34.05	100	300	Average
2437	74.22	-	-	71.82	32.95	3.6	34.15	100	320	Average
2437	100.66	-	-	98.26	32.95	3.6	34.15	100	320	Peak
2483.5	48.3	-25.7	74	45.81	33.01	3.68	34.2	100	89	Peak
2483.5	37.16	-16.84	54	34.67	33.01	3.68	34.2	100	89	Average

Test Mode :	Mode 2	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
38.64	33.97	-6.03	40	50.78	12.98	0.25	30.04	-	-	Peak
82.65	27.97	-12.03	40	50.49	7.15	0.36	30.03	-	-	Peak
209.55	24.98	-18.52	43.5	44.94	9.44	0.6	30	-	-	Peak
479.9	29.24	-16.76	46	41.18	16.87	0.94	29.75	-	-	Peak
720	31.91	-14.09	46	40.9	19.52	1.15	29.66	-	-	Peak
824.3	41.44	-4.56	46	49.64	20.16	1.26	29.62	100	0	Peak
2390	47.9	-26.1	74	45.62	32.86	3.47	34.05	100	179	Peak
2390	37.3	-16.7	54	35.02	32.86	3.47	34.05	100	179	Average
2437	78.03	-	-	75.63	32.95	3.6	34.15	185	183	Average
2437	103.38	-	-	100.98	32.95	3.6	34.15	185	183	Peak
2483.5	49	-25	74	46.51	33.01	3.68	34.2	100	360	Peak
2483.5	37.35	-16.65	54	34.86	33.01	3.68	34.2	100	360	Average

Test Mode :	Mode 3	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
36.21	19.74	-20.26	40	34.94	14.65	0.23	30.08	-	-	Peak
117.75	17.53	-25.97	43.5	35.25	11.8	0.45	29.97	-	-	Peak
267.6	22.82	-23.18	46	39.71	12.31	0.69	29.89	-	-	Peak
360.2	33.19	-12.81	46	47.57	14.72	0.82	29.92	100	0	Peak
825	29.81	-16.19	46	37.99	20.18	1.26	29.62	-	-	Peak
960.1	32.39	-21.61	54	39.8	20.79	1.34	29.54	-	-	Peak
2390	48.65	-25.35	74	46.37	32.86	3.47	34.05	100	360	Peak
2390	35.68	-18.32	54	33.4	32.86	3.47	34.05	100	360	Average
2462	73.05	-	-	70.6	32.98	3.64	34.17	156	311	Average
2462	98.5	-	-	96.05	32.98	3.64	34.17	156	311	Peak
2483.5	48.69	-25.31	74	46.2	33.01	3.68	34.2	100	298	Peak
2483.5	38.99	-15.01	54	36.5	33.01	3.68	34.2	100	298	Average

Test Mode :	Mode 3	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
40.26	31.22	-8.78	40	49.38	11.64	0.25	30.05	100	0	Peak
68.88	26.08	-13.92	40	50.55	5.28	0.34	30.09	-	-	Peak
211.17	20.55	-22.95	43.5	40.4	9.54	0.6	29.99	-	-	Peak
360.2	30.83	-15.17	46	45.21	14.72	0.82	29.92	-	-	Peak
600.3	24.76	-21.24	46	34.71	18.6	1.07	29.62	-	-	Peak
825	35.15	-10.85	46	43.33	20.18	1.26	29.62	-	-	Peak
2390	48.87	-25.13	74	46.59	32.86	3.47	34.05	100	360	Peak
2390	37.22	-16.78	54	34.94	32.86	3.47	34.05	100	360	Average
2462	74.99	-	-	72.54	32.98	3.64	34.17	119	271	Average
2462	101.76	-	-	99.31	32.98	3.64	34.17	119	271	Peak
2483.5	49.3	-24.7	74	46.81	33.01	3.68	34.2	100	290	Peak
2483.5	40.39	-13.61	54	37.9	33.01	3.68	34.2	100	290	Average

Test Mode :	Mode 4	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	Polarization :	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	21.2	-18.8	40	33.74	17.29	0.25	30.08	-	-	Peak
124.5	20.64	-22.86	43.5	38.4	11.76	0.46	29.98	-	-	Peak
267.6	26.63	-19.37	46	43.52	12.31	0.69	29.89	-	-	Peak
360.2	37.11	-8.89	46	51.49	14.72	0.82	29.92	100	0	Peak
479.9	26.75	-19.25	46	38.69	16.87	0.94	29.75	-	-	Peak
960.1	30.28	-23.72	54	37.69	20.79	1.34	29.54	-	-	Peak
2390	49.18	-24.82	74	46.9	32.86	3.47	34.05	100	360	Peak
2390	37.95	-16.05	54	35.67	32.86	3.47	34.05	100	360	Average
2412	58.9	-	-	56.57	32.89	3.52	34.08	128	34	Average
2412	97.6	-	-	95.27	32.89	3.52	34.08	128	34	Peak
2483.5	48.62	-25.38	74	46.13	33.01	3.68	34.2	100	0	Peak
2483.5	36.05	-17.95	54	33.56	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 4	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
37.02	31.63	-8.37	40	47.27	14.19	0.24	30.07	100	0	Peak
82.65	26.79	-13.21	40	49.31	7.15	0.36	30.03	-	-	Peak
223.05	24.57	-21.43	46	43.57	10.33	0.63	29.96	-	-	Peak
360.2	31.53	-14.47	46	45.91	14.72	0.82	29.92	-	-	Peak
479.9	25.91	-20.09	46	37.85	16.87	0.94	29.75	-	-	Peak
960.1	29.68	-24.32	54	37.09	20.79	1.34	29.54	-	-	Peak
2390	47.99	-26.01	74	45.71	32.86	3.47	34.05	100	120	Peak
2390	38.08	-15.92	54	35.8	32.86	3.47	34.05	100	120	Average
2412	58.47	-	-	56.14	32.89	3.52	34.08	100	64	Average
2412	97.15	-	-	94.82	32.89	3.52	34.08	100	64	Peak
2483.5	48.17	-25.83	74	45.68	33.01	3.68	34.2	100	0	Peak
2483.5	36.59	-17.41	54	34.1	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 5	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
37.56	18.17	-21.83	40	34.29	13.7	0.24	30.06	-	-	Peak
93.99	17.98	-25.52	43.5	37.9	9.66	0.4	29.98	-	-	Peak
267.6	25.17	-20.83	46	42.06	12.31	0.69	29.89	-	-	Peak
360.2	34.87	-11.13	46	49.25	14.72	0.82	29.92	100	0	Peak
479.9	23.24	-22.76	46	35.18	16.87	0.94	29.75	-	-	Peak
871.9	28.73	-17.27	46	36.54	20.49	1.29	29.59	-	-	Peak
2390	48.73	-25.27	74	46.45	32.86	3.47	34.05	100	0	Peak
2390	35.78	-18.22	54	33.5	32.86	3.47	34.05	100	0	Average
2437	58.82	-	-	56.42	32.95	3.6	34.15	167	357	Average
2437	98.19	-	-	95.79	32.95	3.6	34.15	167	357	Peak
2483.5	48.36	-25.64	74	45.87	33.01	3.68	34.2	100	360	Peak
2483.5	36.79	-17.21	54	34.3	33.01	3.68	34.2	100	360	Average

Test Mode :	Mode 5	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
39.18	32.19	-7.81	40	49	12.98	0.25	30.04	100	0	Peak
81.57	25.7	-14.3	40	48.52	6.87	0.35	30.04	-	-	Peak
206.31	21.32	-22.18	43.5	41.42	9.3	0.6	30	-	-	Peak
359.5	28.28	-17.72	46	42.66	14.72	0.82	29.92	-	-	Peak
479.9	28.97	-17.03	46	40.91	16.87	0.94	29.75	-	-	Peak
872.6	27.78	-18.22	46	35.59	20.48	1.29	29.58	-	-	Peak
2390	49.39	-24.61	74	47.11	32.86	3.47	34.05	100	16	Peak
2390	35.26	-18.74	54	32.98	32.86	3.47	34.05	100	16	Average
2437	57.59	-	-	55.19	32.95	3.6	34.15	100	297	Average
2437	93.9	-	-	91.5	32.95	3.6	34.15	100	297	Peak
2483.5	48.61	-25.39	74	46.12	33.01	3.68	34.2	100	0	Peak
2483.5	36.18	-17.82	54	33.69	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 6	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	Polarization :	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
39.99	19.23	-20.77	40	36.7	12.3	0.25	30.02	-	-	Peak
94.26	17.6	-25.9	43.5	37.52	9.66	0.4	29.98	-	-	Peak
267.6	26.12	-19.88	46	43.01	12.31	0.69	29.89	-	-	Peak
360.2	37.66	-8.34	46	52.04	14.72	0.82	29.92	100	0	Peak
479.9	25.56	-20.44	46	37.5	16.87	0.94	29.75	-	-	Peak
871.9	28.48	-17.52	46	36.29	20.49	1.29	29.59	-	-	Peak
2390	49.35	-24.65	74	47.07	32.86	3.47	34.05	100	0	Peak
2390	34.44	-19.56	54	32.16	32.86	3.47	34.05	100	0	Average
2462	58.67	-	-	56.22	32.98	3.64	34.17	159	323	Average
2462	97	-	-	94.55	32.98	3.64	34.17	159	323	Peak
2483.5	48.7	-25.3	74	46.21	33.01	3.68	34.2	100	200	Peak
2483.5	37.36	-16.64	54	34.87	33.01	3.68	34.2	100	200	Average

Test Mode :	Mode 6	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
38.91	31.23	-8.77	40	48.04	12.98	0.25	30.04	100	0	Peak
83.73	25.66	-14.34	40	47.99	7.34	0.36	30.03	-	-	Peak
267.6	24.32	-21.68	46	41.21	12.31	0.69	29.89	-	-	Peak
359.5	30.58	-15.42	46	44.96	14.72	0.82	29.92	-	-	Peak
872.6	27.53	-18.47	46	35.34	20.48	1.29	29.58	-	-	Peak
960.1	31.42	-22.58	54	38.83	20.79	1.34	29.54	-	-	Peak
2390	48.64	-25.36	74	46.36	32.86	3.47	34.05	100	0	Peak
2390	35.42	-18.58	54	33.14	32.86	3.47	34.05	100	0	Average
2462	56.5	-	-	54.05	32.98	3.64	34.17	158	0	Average
2462	92.82	-	-	90.37	32.98	3.64	34.17	158	0	Peak
2483.5	48.5	-25.5	74	46.01	33.01	3.68	34.2	100	0	Peak
2483.5	36.59	-17.41	54	34.1	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 7	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
32.7	19.37	-20.63	40	33.18	16.04	0.24	30.09	-	-	Peak
92.64	16.69	-26.81	43.5	36.76	9.51	0.4	29.98	-	-	Peak
267.6	25.01	-20.99	46	41.9	12.31	0.69	29.89	-	-	Peak
360.2	32.78	-13.22	46	47.16	14.72	0.82	29.92	100	0	Peak
872.6	28.08	-17.92	46	35.89	20.48	1.29	29.58	-	-	Peak
939.8	28.41	-17.59	46	35.92	20.69	1.33	29.53	-	-	Peak
2390	49.12	-24.88	74	46.84	32.86	3.47	34.05	100	360	Peak
2390	38.97	-15.03	54	36.69	32.86	3.47	34.05	100	360	Average
2412	55.62	-	-	53.29	32.89	3.52	34.08	100	86	Average
2412	100.77	-	-	98.44	32.89	3.52	34.08	100	86	Peak
2483.5	48.5	-25.5	74	46.01	33.01	3.68	34.2	100	0	Peak
2483.5	36.09	-17.91	54	33.6	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 7	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
38.64	31.05	-8.95	40	47.86	12.98	0.25	30.04	-	-	Peak
82.65	25.29	-14.71	40	47.81	7.15	0.36	30.03	-	-	Peak
223.05	22.75	-23.25	46	41.75	10.33	0.63	29.96	-	-	Peak
360.2	29.19	-16.81	46	43.57	14.72	0.82	29.92	-	-	Peak
872.6	27.72	-18.28	46	35.53	20.48	1.29	29.58	-	-	Peak
944.7	29.26	-24.74	54	36.76	20.71	1.33	29.54	-	-	Peak
2389.23	51.83	-22.17	74	49.55	32.86	3.47	34.05	100	260	Peak
2389.23	40.8	-13.2	54	38.52	32.86	3.47	34.05	100	260	Average
2412	57.25	-	-	54.92	32.89	3.52	34.08	100	297	Average
2412	97.7	-	-	95.37	32.89	3.52	34.08	100	297	Peak
2483.5	48.52	-25.48	74	46.03	33.01	3.68	34.2	100	0	Peak
2483.5	38.07	-15.93	54	35.58	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 8	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	Polarization :	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.62	20.71	-19.29	40	34.01	16.55	0.24	30.09	-	-	Peak
92.91	17.69	-25.81	43.5	37.76	9.51	0.4	29.98	-	-	Peak
267.6	23.98	-22.02	46	40.87	12.31	0.69	29.89	-	-	Peak
360.2	32.72	-13.28	46	47.1	14.72	0.82	29.92	100	0	Peak
871.2	27.26	-18.74	46	35.07	20.49	1.29	29.59	-	-	Peak
960.1	29.28	-24.72	54	36.69	20.79	1.34	29.54	-	-	Peak
2390	49.02	-24.98	74	46.74	32.86	3.47	34.05	100	0	Peak
2390	35.88	-18.12	54	33.6	32.86	3.47	34.05	100	0	Average
2437	57.26	-	-	54.86	32.95	3.6	34.15	172	85	Average
2437	99.67	-	-	97.27	32.95	3.6	34.15	172	85	Peak
2483.5	48.51	-25.49	74	46.02	33.01	3.68	34.2	100	0	Peak
2483.5	36.19	-17.81	54	33.7	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 8	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
39.18	30.67	-9.33	40	47.48	12.98	0.25	30.04	100	0	Peak
85.89	23.6	-16.4	40	45.35	7.89	0.37	30.01	-	-	Peak
240.06	20.21	-25.79	46	37.81	11.56	0.66	29.82	-	-	Peak
360.2	31.72	-14.28	46	46.1	14.72	0.82	29.92	-	-	Peak
479.9	26.23	-19.77	46	38.17	16.87	0.94	29.75	-	-	Peak
876.1	32.33	-13.67	46	40.12	20.48	1.29	29.56	-	-	Peak
2390	48.03	-25.97	74	45.75	32.86	3.47	34.05	100	0	Peak
2390	35.26	-18.74	54	32.98	32.86	3.47	34.05	100	0	Average
2437	57.3	-	-	54.9	32.95	3.6	34.15	123	279	Average
2437	96.08	-	-	93.68	32.95	3.6	34.15	123	279	Peak
2483.5	48.93	-25.07	74	46.44	33.01	3.68	34.2	100	0	Peak
2483.5	35.89	-18.11	54	33.4	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 9	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
31.35	21.97	-18.03	40	34.51	17.29	0.25	30.08	-	-	Peak
134.49	17.43	-26.07	43.5	35.64	11.3	0.48	29.99	-	-	Peak
267.6	25.78	-20.22	46	42.67	12.31	0.69	29.89	-	-	Peak
360.2	37.35	-8.65	46	51.73	14.72	0.82	29.92	100	0	Peak
479.9	25.83	-20.17	46	37.77	16.87	0.94	29.75	-	-	Peak
960.1	31.57	-22.43	54	38.98	20.79	1.34	29.54	-	-	Peak
2390	48.45	-25.55	74	46.17	32.86	3.47	34.05	100	0	Peak
2390	35.88	-18.12	54	33.6	32.86	3.47	34.05	100	0	Average
2462	55.43	-	-	52.98	32.98	3.64	34.17	100	360	Average
2462	99.73	-	-	97.28	32.98	3.64	34.17	100	360	Peak
2483.5	50.03	-23.97	74	47.54	33.01	3.68	34.2	100	0	Peak
2483.5	37.5	-16.5	54	35.01	33.01	3.68	34.2	100	0	Average

Test Mode :	Mode 9	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	41~42%
Test Engineer :	Cloud Peng	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
38.64	30.77	-9.23	40	47.58	12.98	0.25	30.04	100	0	Peak
84	25.63	-14.37	40	47.75	7.53	0.37	30.02	-	-	Peak
223.05	23.96	-22.04	46	42.96	10.33	0.63	29.96	-	-	Peak
479.9	29.48	-16.52	46	41.42	16.87	0.94	29.75	-	-	Peak
720	31.09	-14.91	46	40.08	19.52	1.15	29.66	-	-	Peak
871.2	29.92	-16.08	46	37.73	20.49	1.29	29.59	-	-	Peak
2390	48.47	-25.53	74	46.19	32.86	3.47	34.05	100	0	Peak
2390	36.17	-17.83	54	33.89	32.86	3.47	34.05	100	0	Average
2462	56.01	-	-	53.56	32.98	3.64	34.17	120	360	Average
2462	95.46	-	-	93.01	32.98	3.64	34.17	120	360	Peak
2483.5	51.25	-22.75	74	48.76	33.01	3.68	34.2	100	0	Peak
2483.5	37.67	-16.33	54	35.18	33.01	3.68	34.2	100	0	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	FSP40	100319	9kHz~40GHz	Jan. 07, 2011	Jan. 06, 2012	Conducted (TH01-KS)
System Simulator	R&S	CMU200	837587/066	Full-Band	Jan. 07, 2011	Jan. 06, 2012	Conducted (TH01-KS)
DC Power Supply	TOPWARD	GPS-3030D	E1884515	N/A	Aug. 23, 2011	Aug. 22, 2012	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	N/A	Jan. 17, 2011	Jan. 16, 2012	Conducted (TH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	Jun. 02, 2011	Jun. 01, 2012	Conduction (CO01-KS)
LISN	MessTec	AN3016	60103	9kHz~30MHz	Jan. 07, 2011	Jan. 06, 2012	Conduction (CO01-KS)
LISN	MessTec	AN3016	60105	9kHz~30MHz	Jan. 07, 2011	Jan. 06, 2012	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	N/A	Nov. 10, 2010	Nov. 09, 2011	Conduction (CO01-KS)
System Simulator	R&S	CMU200	837587/066	Full-Band	Jan. 07, 2011	Jan. 06, 2012	Conduction (CO01-KS)
Signal Generator	R&S	SMR40	100455	10MHz~40GHz	Jan. 06, 2011	Jan. 05, 2012	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 16, 2010	Nov. 15, 2011	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Jan. 07, 2011	Jan. 06, 2012	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 07, 2010	Dec. 06, 2011	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1GHz~18GHz	Jan. 07, 2011	Jan. 06, 2012	Radiation (03CH01-KS)
Amplifier	Wireless	FPA-6592G	060004	30MHz~2GHz	Dec. 09, 2010	Dec. 08, 2011	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Jan. 07, 2011	Jan. 06, 2012	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701023	1GHz -18GHz	Nov. 09, 2010	Nov. 08, 2011	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz -40GHz	Oct. 15, 2010	Oct.14, 2011	Radiation (03CH01-KS)

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**				

Appendix A. Photographs of EUT

Please refer to Sporton report number EP190901 as below.