

# FCC RF Test Report

**APPLICANT** : ZTE CORPORATION  
**EQUIPMENT** : WCDMA Digital Mobile Handset  
**BRAND NAME** : ZTE  
**MODEL NAME** : V8200+  
**FCC ID** : Q78-V8200PLUS  
**STANDARD** : FCC Part 15 Subpart C §15.247  
**CLASSIFICATION** : (DTS) Digital Transmission System

The product was received on Oct. 11, 2012 and completely tested on Nov. 03, 2012. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures 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:



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Jones Tsai / Manager



**SPORTON INTERNATIONAL (KUNSHAN) INC.**  
**No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.**



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## SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.2	15.247(b)	A8.4	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	A8.5	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
			Conducted Spurious Emission		Pass	-
3.5	15.247(d)	A8.5	Radiated Band Edges	15.209(a) & 15.247(d)	Pass	-
			Radiated Spurious Emission		Pass	Under limit 1.75 dB at 2483.500 MHz
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 7.94 dB at 0.680 MHz
3.7	15.203 & 15.247(b)	A8.4	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, P.R.China

## 1.2 Manufacturer

**ZTE CORPORATION**

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

## 1.3 Feature of Equipment Under Test

Product Feature	
Equipment	WCDMA Digital Mobile Handset
Brand Name	ZTE
Model Name	V8200+
FCC ID	Q78-V8200PLUS
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/WLAN 11bgn/ Bluetooth
HW Version	QB7227_02A_V1BMB_D
SW Version	V8200P_Z40_ES_VSDOI1A5401A02
EUT Stage	Identical Prototype

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Product Specification subjective to this standard	
Tx/Rx Frequency Range	2412 MHz ~ 2462 MHz
Number of Channels	11
Carrier Frequency of Each Channel	2412+(n-1)*5 MHz; n=1~11
Maximum Output Power to Antenna	802.11b : 13.42 dBm (0.022 W) 802.11g : 16.47 dBm (0.044 W) 802.11n HT20 : 15.91 dBm (0.039 W)
Antenna Type	PIFA Antenna with gain 0 dBi
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

## 1.4 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL (KUNSHAN) INC.			
<b>Test Site Location</b>	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958			
<b>Test Site No.</b>	<b>Sporton Site No.</b>			<b>FCC/IC Registration No.</b>
	TH01-KS	CO01-KS	03CH01-KS	149928/4086E-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 D01 DTS Meas. Guidance v02
- ♦ ANSI C63.4-2003 and ANSI C63.10-2009
- ♦ IC RSS-210 Issue 8
- ♦ IC RSS-Gen Issue 3

**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, 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.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	VOSTRO1450	PPD-AR5B195	N/A	AC I/P: Unshielded, 0.9 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-106	QTLBH-106	N/A	N/A

## 2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals 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) and radiated emission (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

### 2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

## 2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and antenna configurations as following table and the highest power data rates were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

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	11.74	11.81	11.85	11.55
CH 06	2437 MHz	13.01	13.01	12.95	12.71
CH 11	2462 MHz	12.77	13.08	13.11	<b>13.42</b>

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	14.51	13.46	13.81	13.16	14.79	14.36	14.78	14.73
CH 06	2437 MHz	14.63	14.21	14.67	14.28	15.22	15.05	15.12	15.04
CH 11	2462 MHz	15.68	15.21	15.54	15.03	<b>16.47</b>	16.16	16.22	16.38

Channel	Frequency	2.4GHz 802.11n HT20 RF Power (dBm)							
		OFDM Data Rate							
		MCS=0	MCS=1	MCS=2	MCS=3	MCS=4	MCS=5	MCS=6	MCS=7
CH 01	2412 MHz	13.48	13.51	13.49	13.92	13.78	13.84	14.53	13.63
CH 06	2437 MHz	14.22	13.96	14.28	14.52	14.12	14.12	14.76	14.05
CH 11	2462 MHz	14.56	14.51	14.73	14.82	14.88	14.96	<b>15.91</b>	14.26

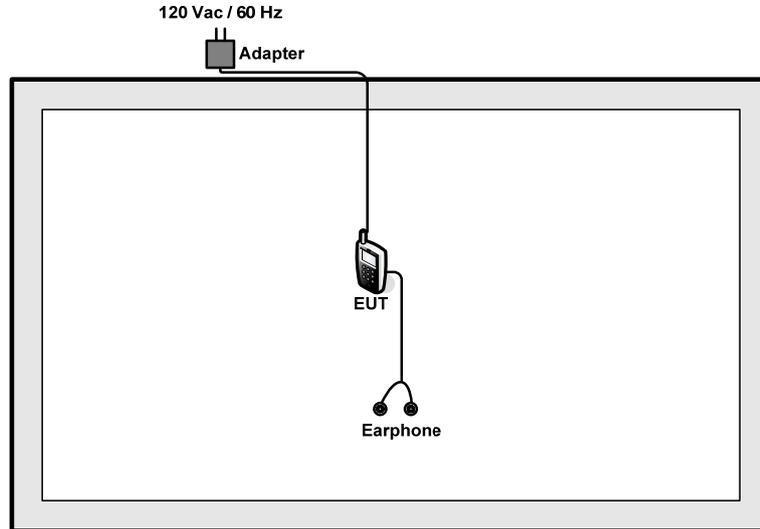
## 2.3 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

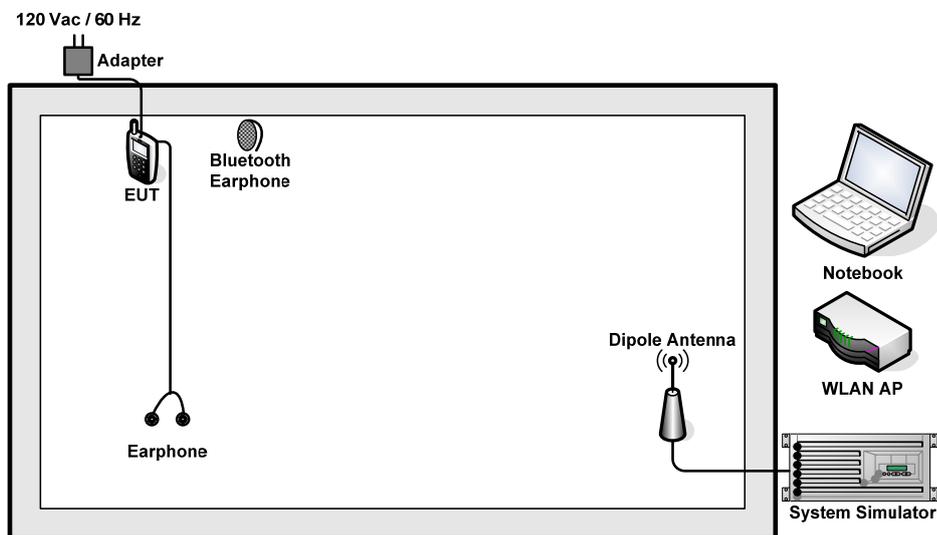
Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Conducted TCs	6dB BW Power Spectral Density	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
	Conducted Band EDGE	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	6.5 Mbps	1/11
Conducted Spurious Emission	802.11b	1 Mbps	1/6/11	
	802.11g	6 Mbps	1/6/11	
	802.11n HT20	6.5 Mbps	1/6/11	
Radiated TCs	Radiated Band EDGE	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	6.5 Mbps	1/11
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone			

## 2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



## 2.5 RF Utility

For WLAN function, key in "ADB" on the EUT directly. Then, the EUT will get into the engineering modes to contact with WLAN AP for continuous transmitting and receiving signals.

### 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.

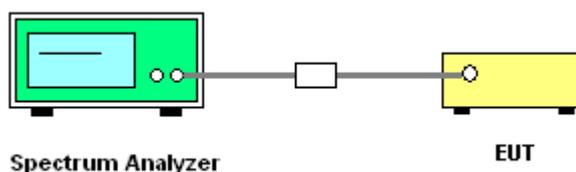
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1-5% of the emission bandwidth (EBW). Set the Video bandwidth (VBW)  $\geq 3 * RBW$ . In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 KHz.

##### 3.1.4 Test Setup



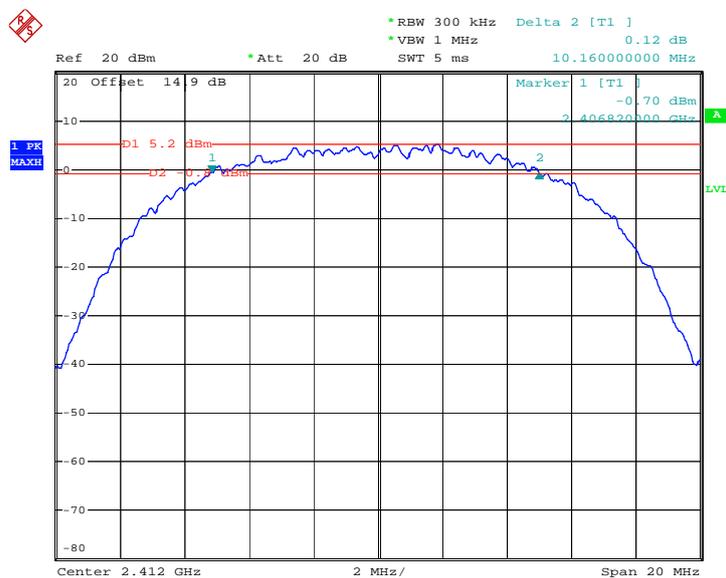


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	802.11b	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	10.16	0.5	Pass
06	2437	10.40	0.5	Pass
11	2462	10.60	0.5	Pass

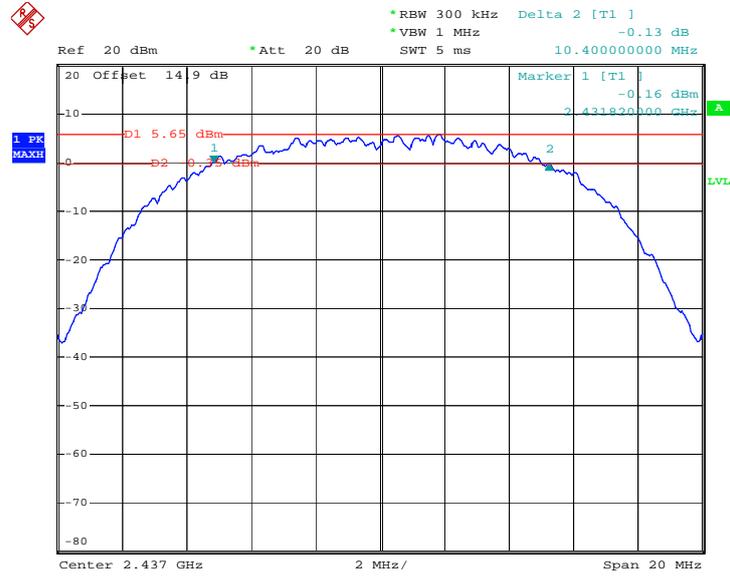
6 dB Bandwidth Plot on 802.11b Channel 01



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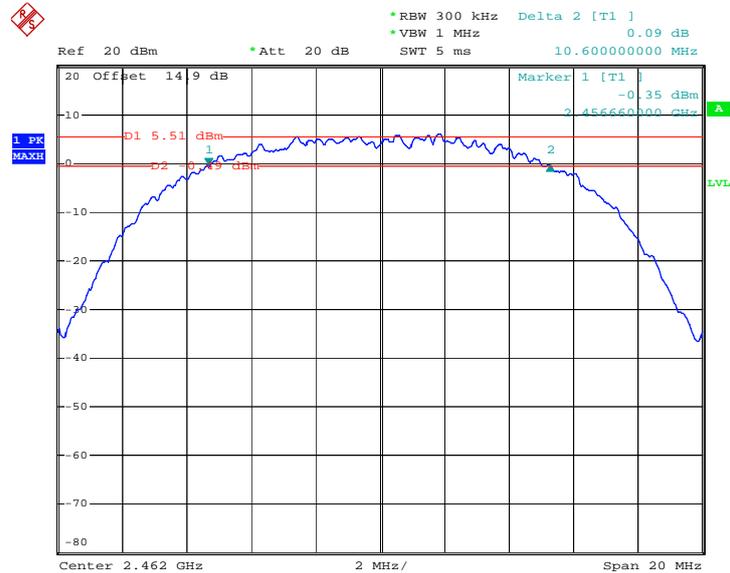


6 dB Bandwidth Plot on 802.11b Channel 06



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6 dB Bandwidth Plot on 802.11b Channel 11



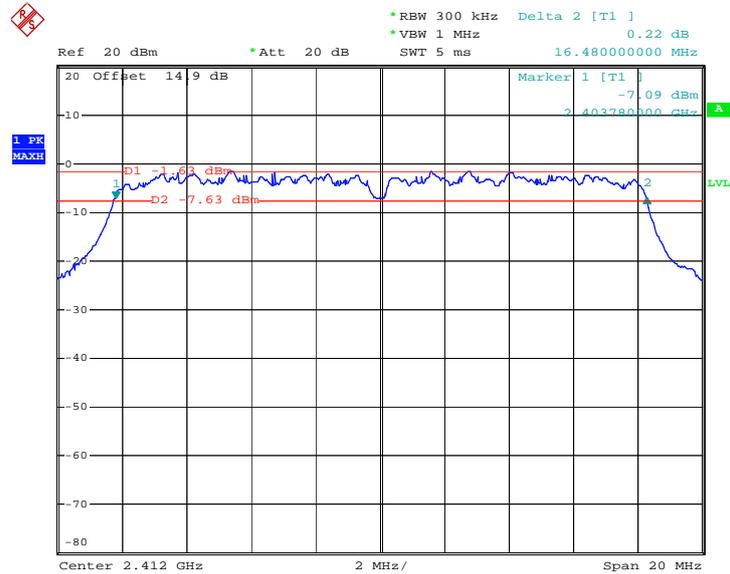
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Test Mode :	802.11g	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.48	0.5	Pass
06	2437	16.48	0.5	Pass
11	2462	16.52	0.5	Pass

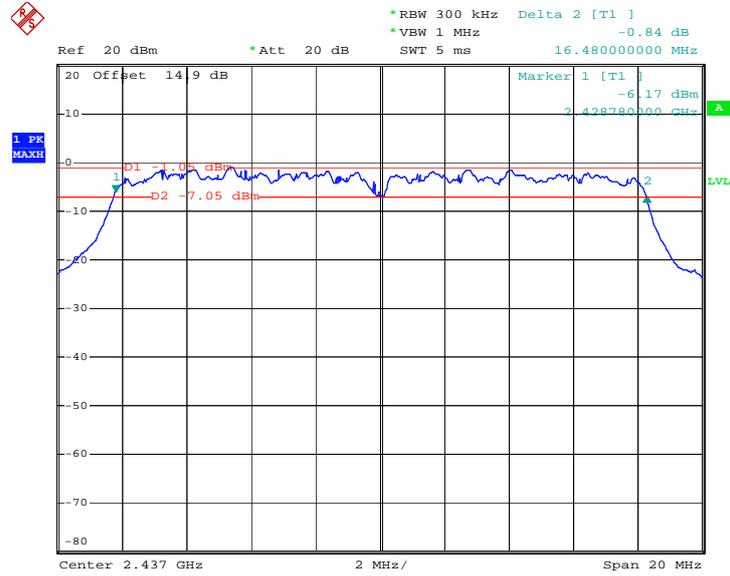
6 dB Bandwidth Plot on 802.11g Channel 01



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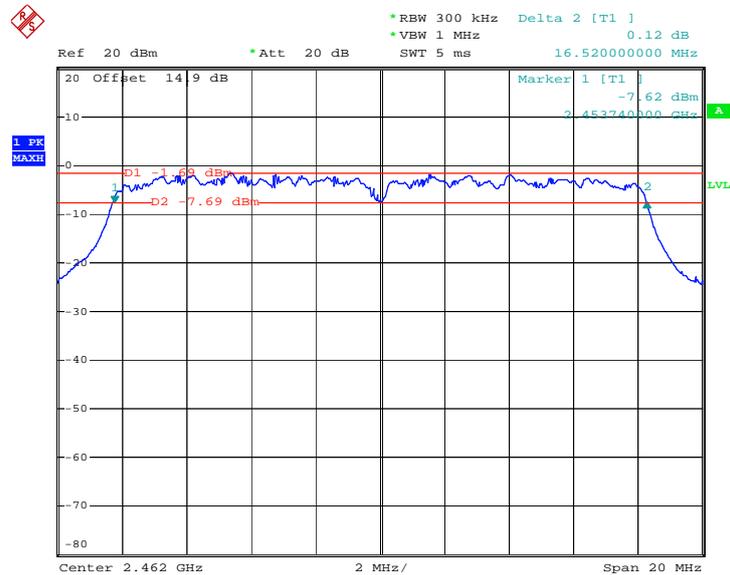


### 6 dB Bandwidth Plot on 802.11g Channel 06



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### 6 dB Bandwidth Plot on 802.11g Channel 11



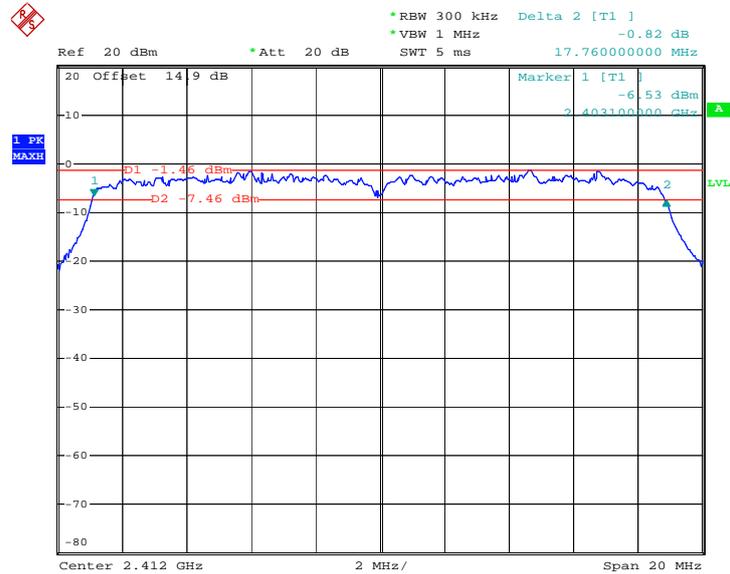
Date: 2.NOV.2012 16:26:37



Test Mode :	802.11n HT20	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	2.4GHz 802.11n HT20 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	17.76	0.5	Pass
06	2437	17.80	0.5	Pass
11	2462	17.82	0.5	Pass

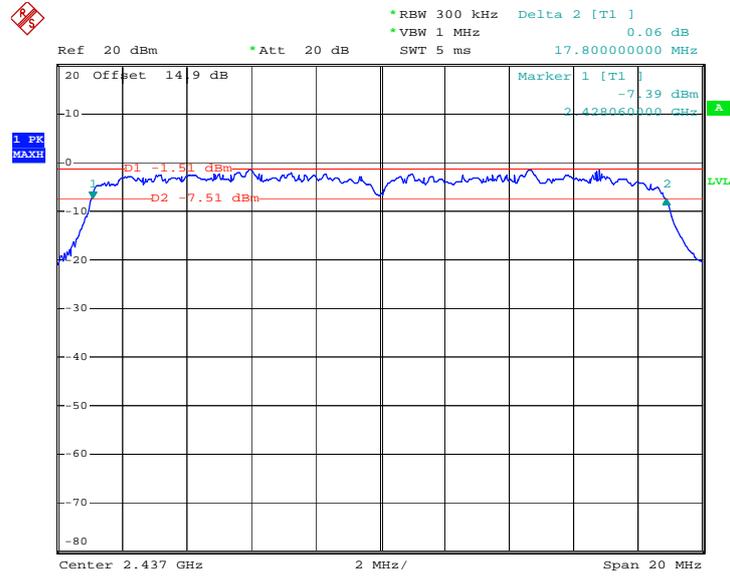
6 dB Bandwidth Plot on 802.11n HT20 Channel 01



Date: 3.NOV.2012 20:31:47

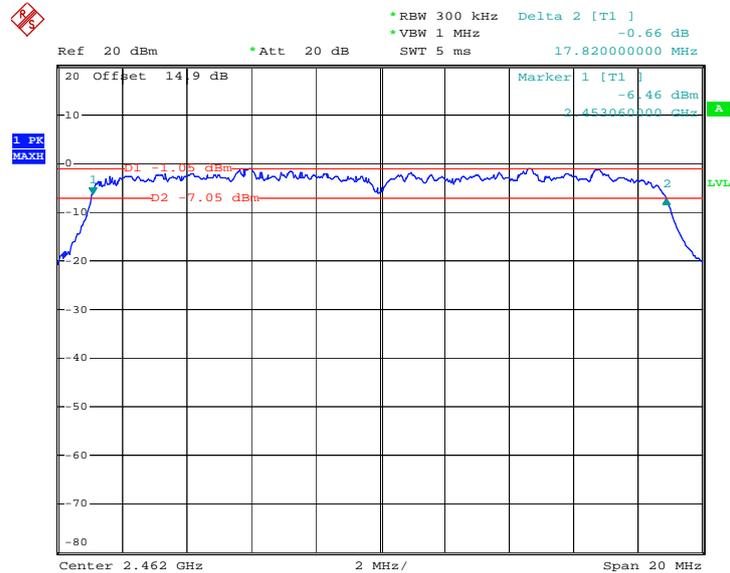


6 dB Bandwidth Plot on 802.11n HT20 Channel 06



Date: 3.NOV.2012 20:35:56

6 dB Bandwidth Plot on 802.11n HT20 Channel 11



Date: 3.NOV.2012 21:07:40

## 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.

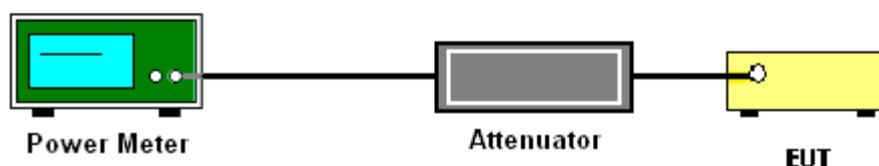
### 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v02.
2. The RF output of EUT was connected to the power meter by a low loss cable
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

### 3.2.4 Test Setup





3.2.5 Test Result of Peak Output Power

Test Mode :	802.11b	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	11.55	30	Pass
06	2437	12.71	30	Pass
11	2462	13.42	30	Pass

Test Mode :	802.11g	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	14.79	30	Pass
06	2437	15.22	30	Pass
11	2462	16.47	30	Pass

Test Mode :	802.11n HT20	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	2.4GHz 802.11n HT20 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	14.53	30	Pass
06	2437	14.76	30	Pass
11	2462	15.91	30	Pass



3.2.6 Test Result of Average output Power (Reporting Only)

Test Mode :	802.11b	Temperature :	21~22
Test Engineer :	Lizy Li	Relative Humidity :	41~42
Duty Cycle:	97.74%	Duty Factor:	0.10dB

Channel	Frequency (MHz)	802.11b Average Output Power (dBm)
01	2412	9.58
06	2437	10.82
11	2462	11.48

Test Mode :	802.11g	Temperature :	21~22
Test Engineer :	Lizy Li	Relative Humidity :	41~42
Duty Cycle:	56.54%	Duty Factor:	2.48dB

Channel	Frequency (MHz)	802.11g Average Output Power (dBm)
01	2412	9.20
06	2437	9.07
11	2462	8.86

Test Mode :	802.11n HT20	Temperature :	21~22
Test Engineer :	Lizy Li	Relative Humidity :	41~42
Duty Cycle:	93.31%	Duty Factor:	0.30dB

Channel	Frequency (MHz)	802.11n HT20 Average Output Power (dBm)
01	2412	5.71
06	2437	6.68
11	2462	5.89

### 3.3 Power Spectral Density Measurement

#### 3.3.1 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.

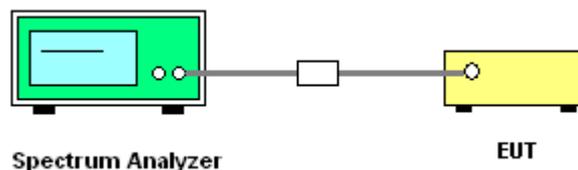
#### 3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.3.3 Test Procedures

1. The testing follows Measurement Procedure 9.1 Option 1 of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v02
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Record the measurement data derived from spectrum analyzer.

#### 3.3.4 Test Setup



### 3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11b	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11b Power Density		Max. Limits (dBm)	Pass/Fail
		PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	1.77	-12.48	8	Pass
06	2437	2.14	-11.61	8	Pass
11	2462	2.53	-11.66	8	Pass

Test Mode :	802.11g	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11g Power Density		Max. Limits (dBm)	Pass/Fail
		PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	-5.04	-19.86	8	Pass
06	2437	-4.67	-19.36	8	Pass
11	2462	-5.52	-20.59	8	Pass

Test Mode :	802.11n HT20	Temperature :	21~22°C
Test Engineer :	Lizy Li	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11n HT20 Power Density		Max. Limits (dBm)	Pass/Fail
		PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	-4.73	-19.94	8	Pass
06	2437	-4.56	-19.29	8	Pass
11	2462	-4.51	-18.95	8	Pass

**Note:**

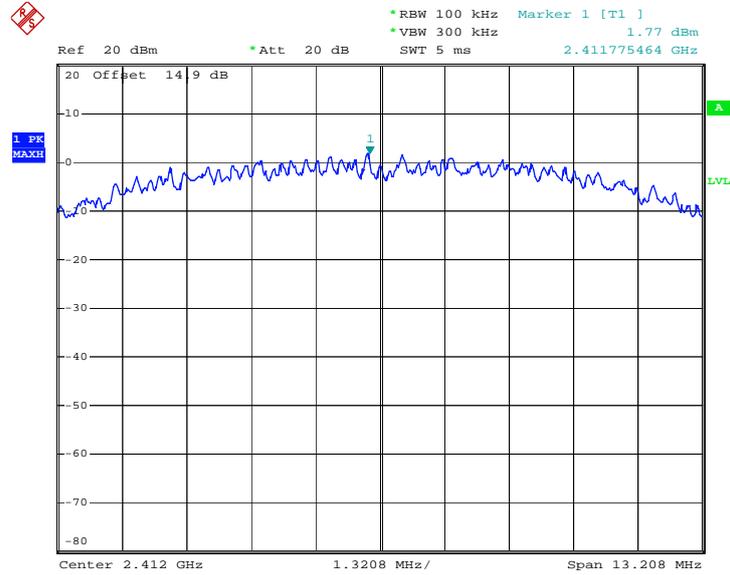
1. Measured power density (dBm) has offset with cable loss.
2. Measured power density (dBm)/ 100KHz is for 20dBc reference only



### 3.3.6 Test Result of Power Spectral Density Plots (100KHz)

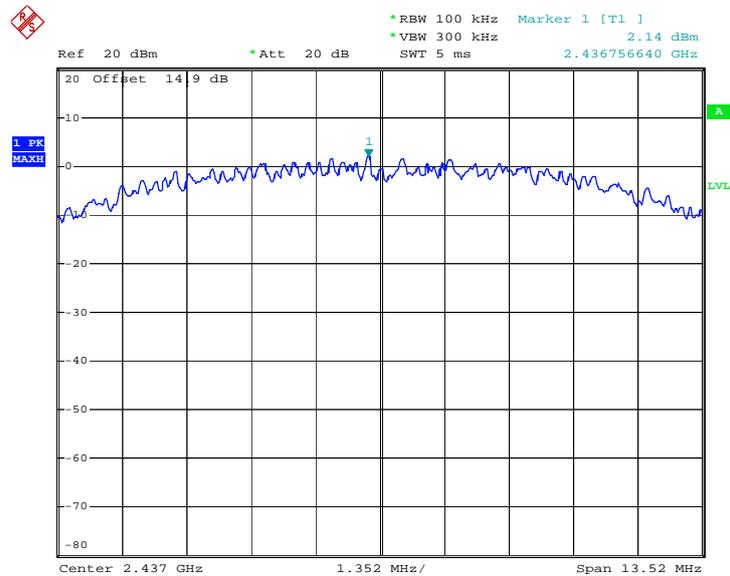
<802.11b>

PSD 100KHz Plot on 802.11b Channel 01



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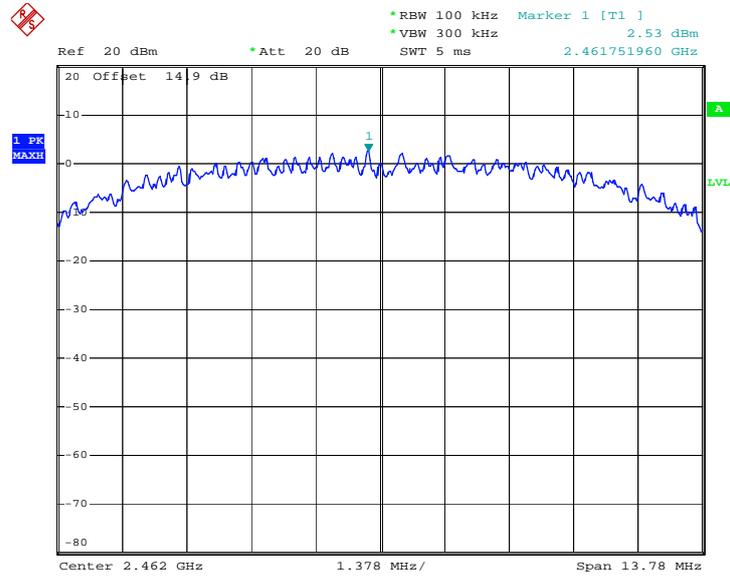
PSD 100KHz Plot on 802.11b Channel 06



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PSD 100KHz Plot on 802.11b Channel 11

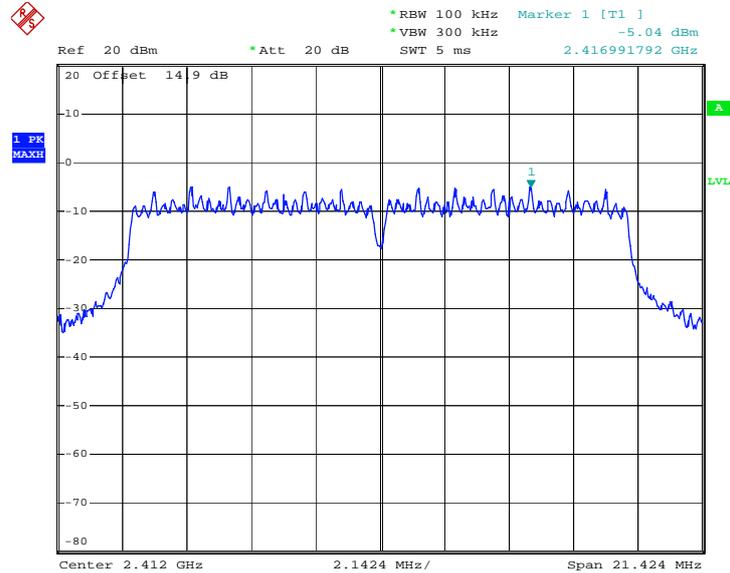


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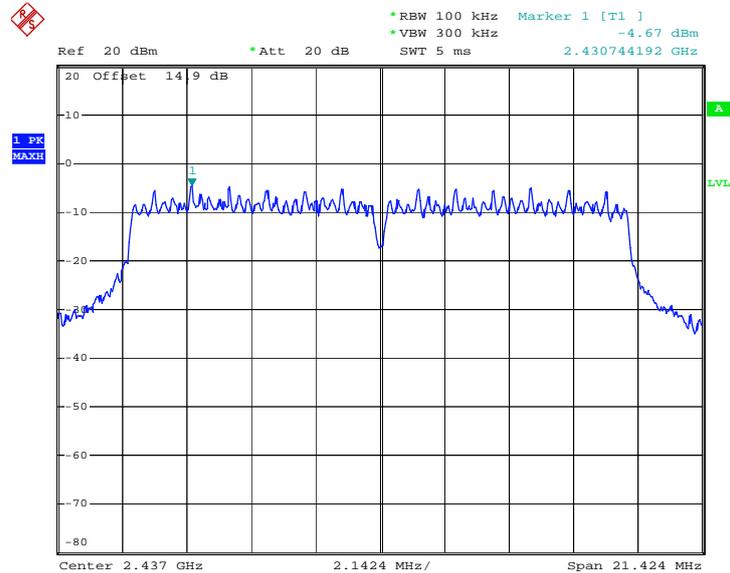
<802.11g>

PSD 100KHz Plot on 802.11g Channel 01



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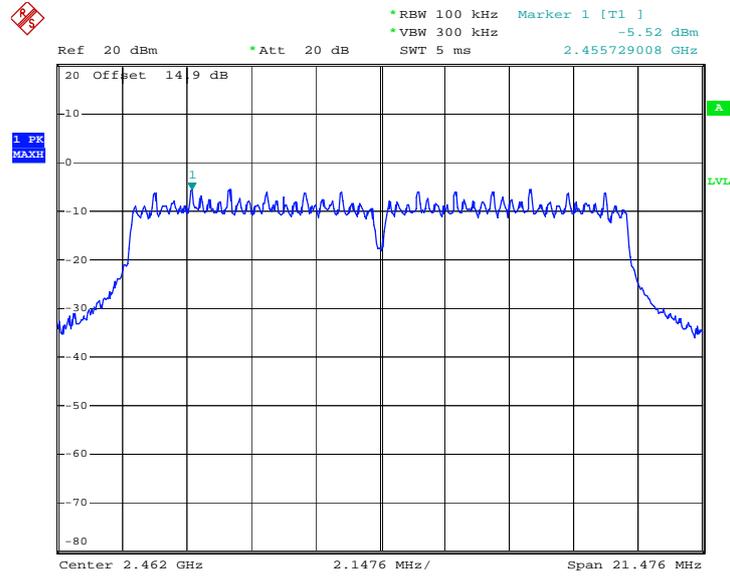
PSD 100KHz Plot on 802.11g Channel 06



Date: 2.NOV.2012 16:17:21



PSD 100KHz Plot on 802.11g Channel 11

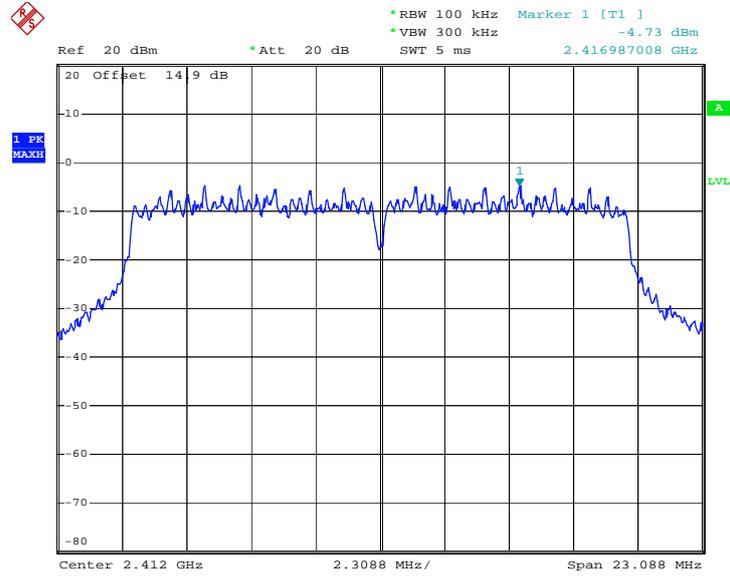


Date: 2.NOV.2012 16:27:01



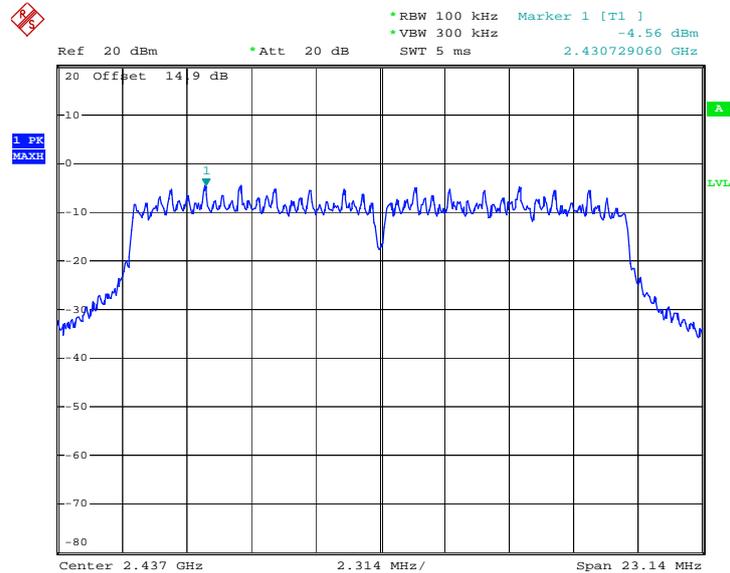
<2.4GHz 802.11n HT-20>

PSD 100KHz Plot on 2.4G 802.11n HT20 Channel 01



Date: 3.NOV.2012 20:32:10

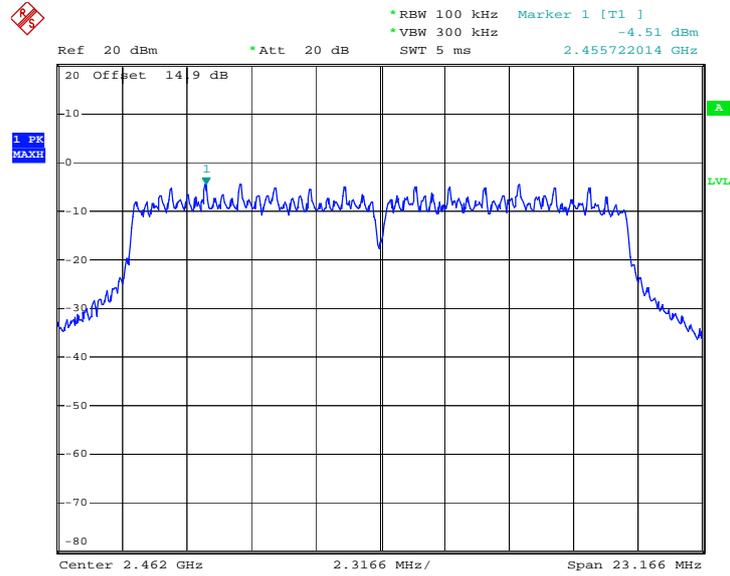
PSD 100KHz Plot on 2.4G 802.11n HT20 Channel 06



Date: 3.NOV.2012 20:36:15



PSD 100KHz Plot on 2.4G 802.11n HT20 Channel 11



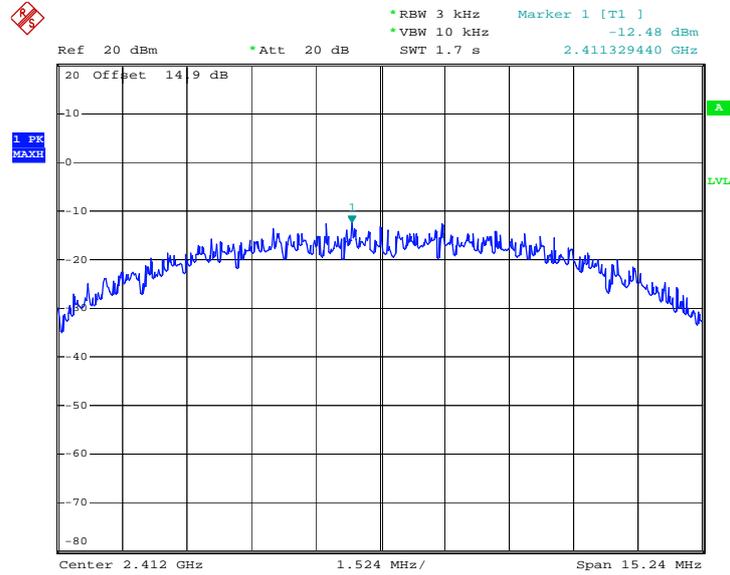
Date: 3.NOV.2012 21:08:00



### 3.3.7 Test Result of Power Spectral Density Plots (3KHz)

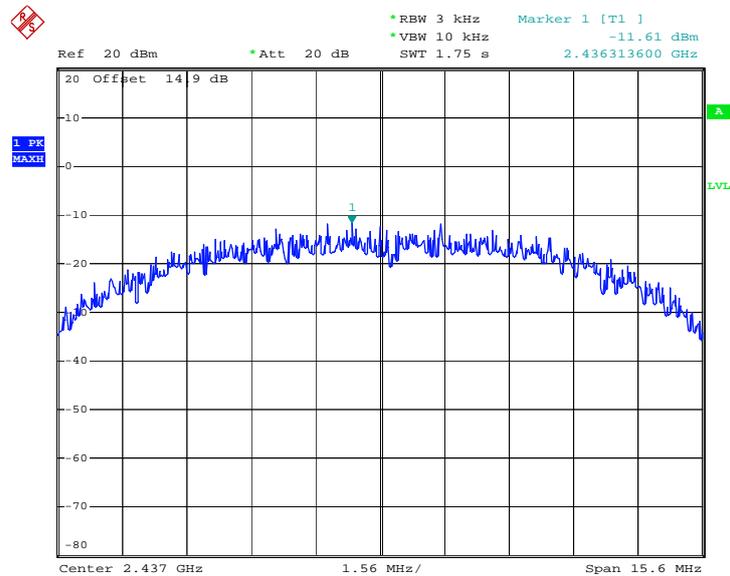
<802.11b>

PSD 3KHz Plot on 802.11b Channel 01



Date: 24.OCT.2012 10:19:36

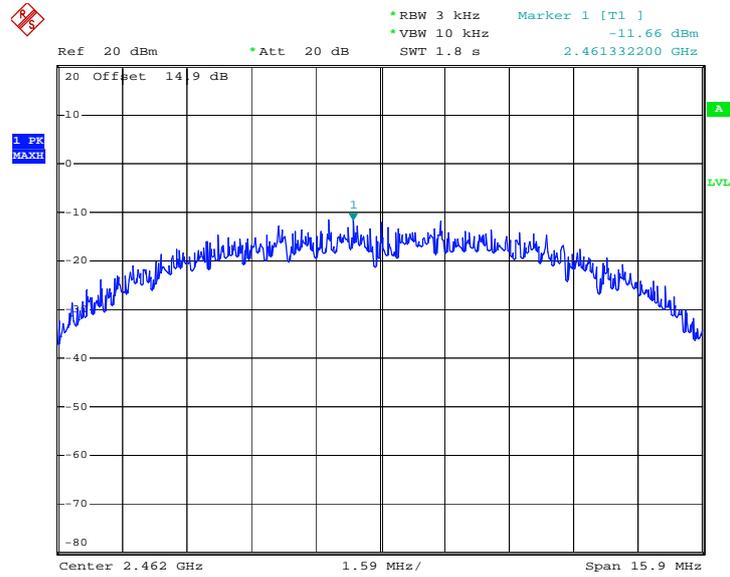
PSD 3KHz Plot on 802.11b Channel 06



Date: 24.OCT.2012 10:21:40



PSD 3KHz Plot on 802.11b Channel 11

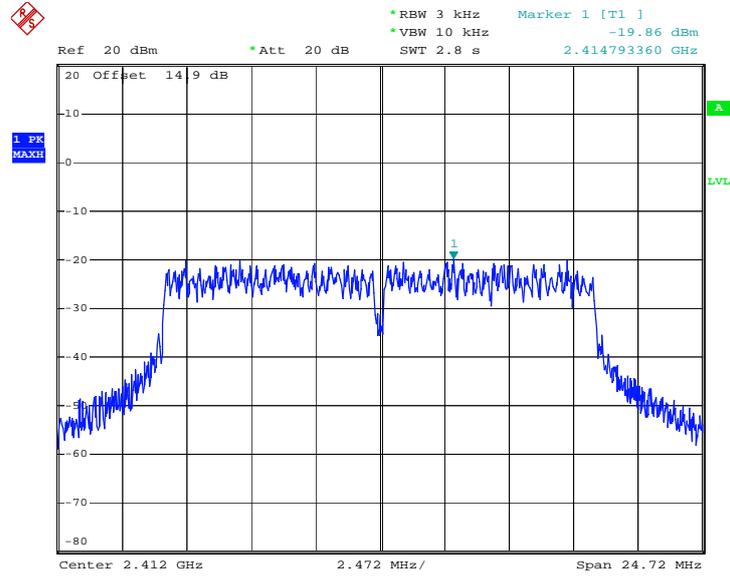


Date: 24.OCT.2012 10:23:26



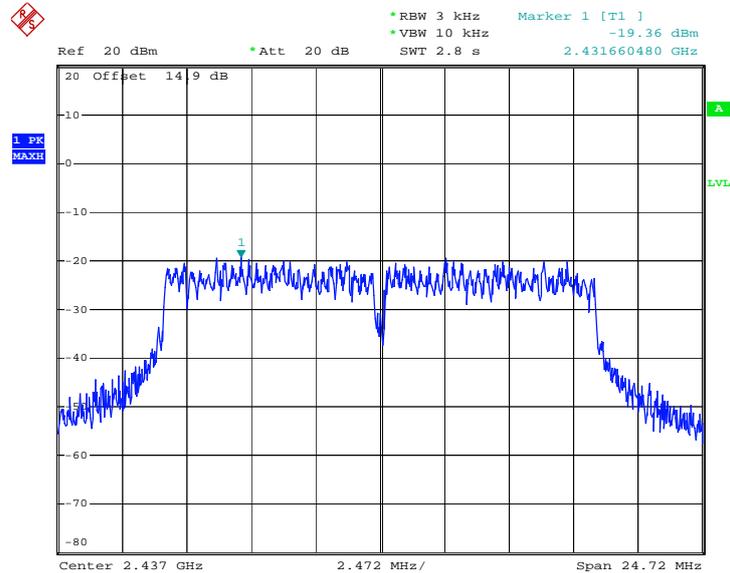
<802.11g>

PSD 3KHz Plot on 802.11g Channel 01



Date: 2.NOV.2012 16:35:13

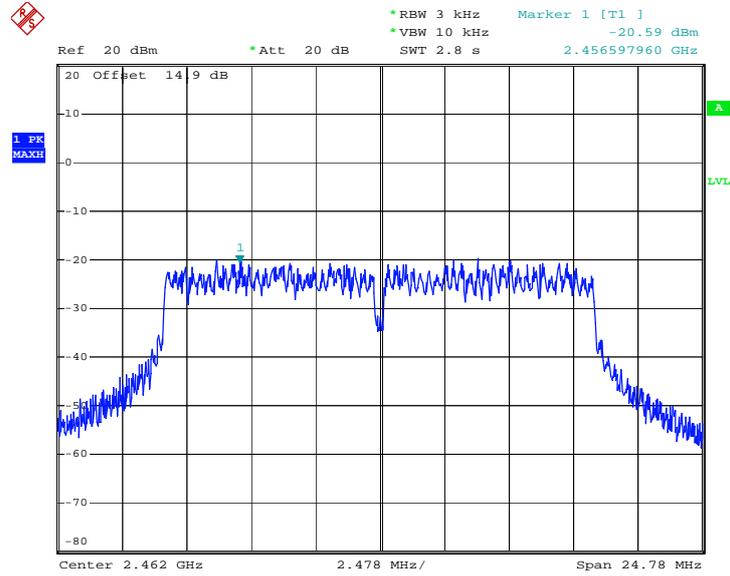
PSD 3KHz Plot on 802.11g Channel 06



Date: 2.NOV.2012 16:34:34



PSD 3KHz Plot on 802.11g Channel 11

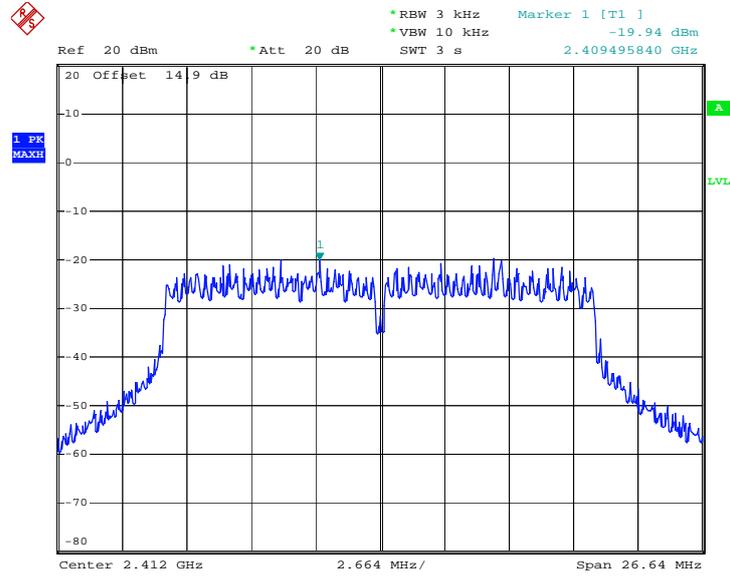


Date: 2.NOV.2012 16:33:49



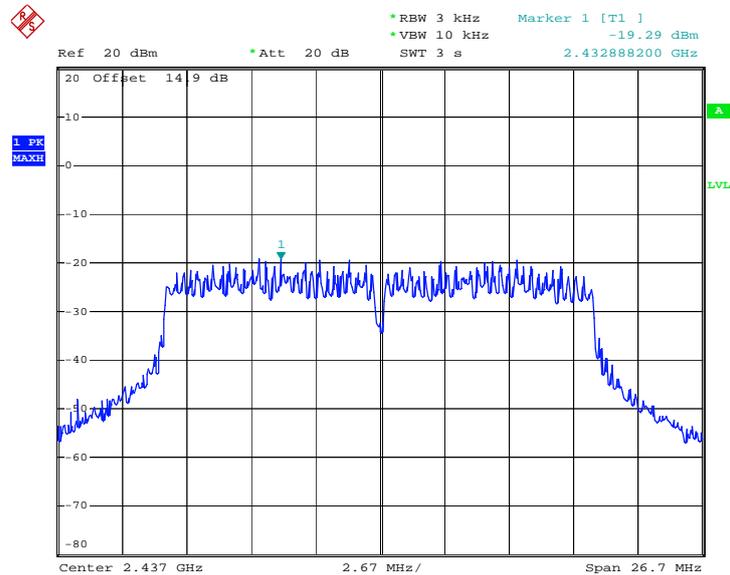
<2.4GHz 802.11n HT-20>

PSD 3KHz Plot on 2.4G 802.11n HT20 Channel 01



Date: 3.NOV.2012 21:20:18

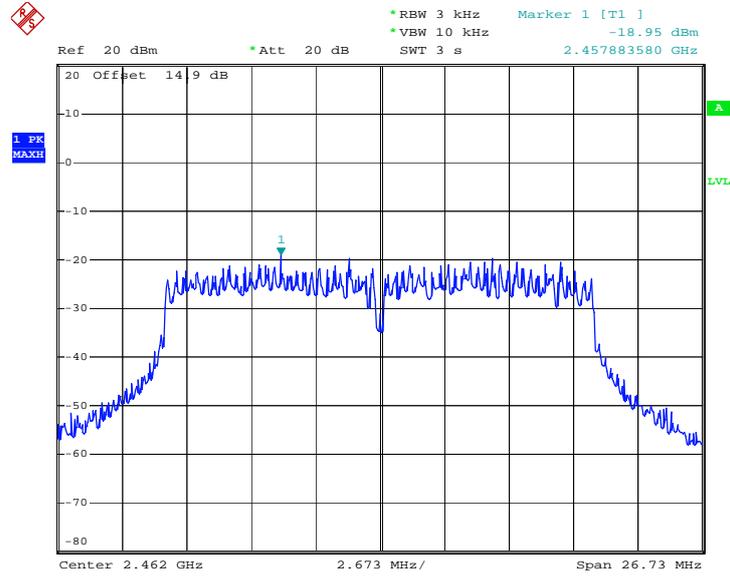
PSD 3KHz Plot on 2.4G 802.11n HT20 Channel 06



Date: 3.NOV.2012 21:19:46



PSD 3KHz Plot on 2.4G 802.11n HT20 Channel 11



Date: 3.NOV.2012 21:21:00

## 3.4 Conducted Band Edges and Spurious Emission Measurement

### 3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

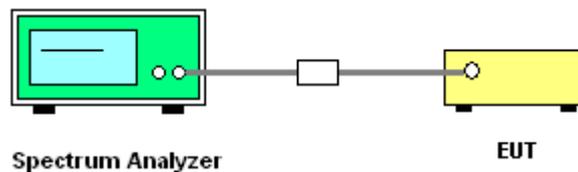
### 3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.4.3 Test Procedures

1. The testing follows the guidelines in the Measurement Procedure of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100 KHz, VBW=300 KHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz, when maximum peak conducted output power procedure is used. The attenuation is set to 30dB, when maximum conducted output power procedure is used.
4. Measure and record the results in the test report.

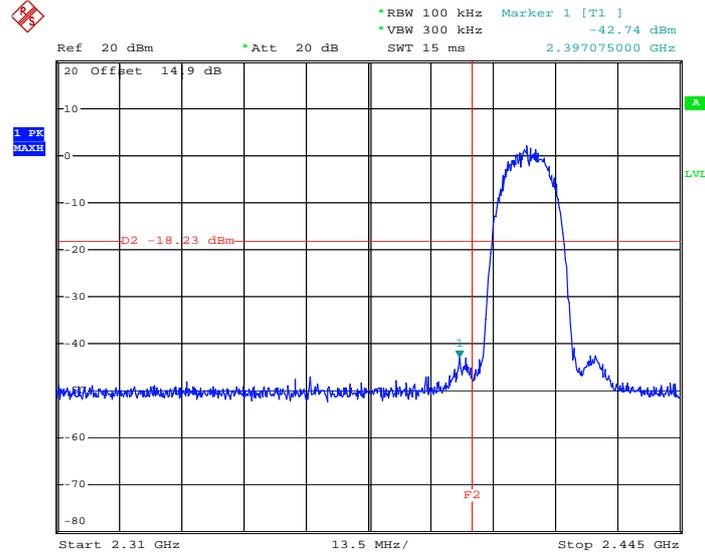
### 3.4.4 Test Setup



### 3.4.5 Test Plots of Conducted Band Edges

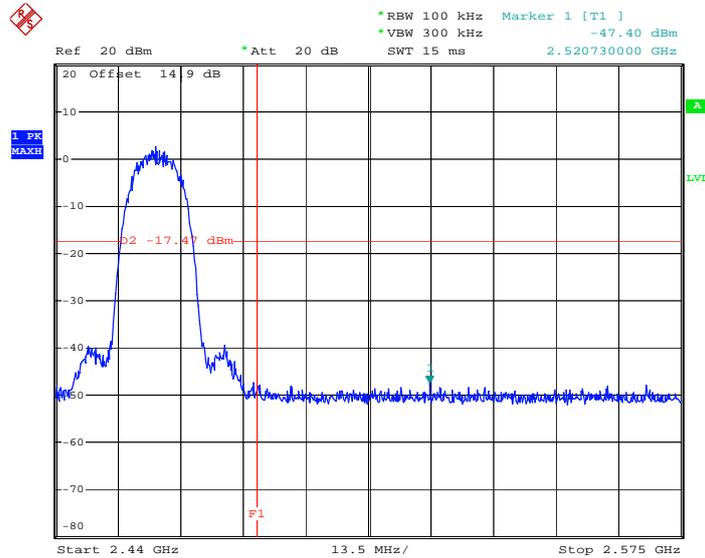
Test Mode :	802.11b	Temperature :	21~22°C
Test Band :	Low and High	Relative Humidity :	41~42%
Test Channel :	01 and 11	Test Engineer :	Lizy Li

Low Band Edge Plot on 802.11b Channel 01



Date: 24.OCT.2012 09:35:04

High Band Edge Plot on 802.11b Channel 11

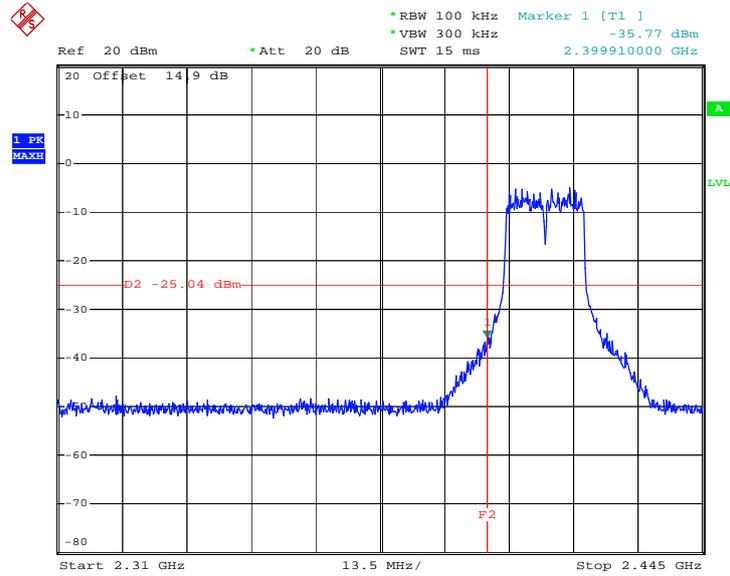


Date: 24.OCT.2012 09:40:54



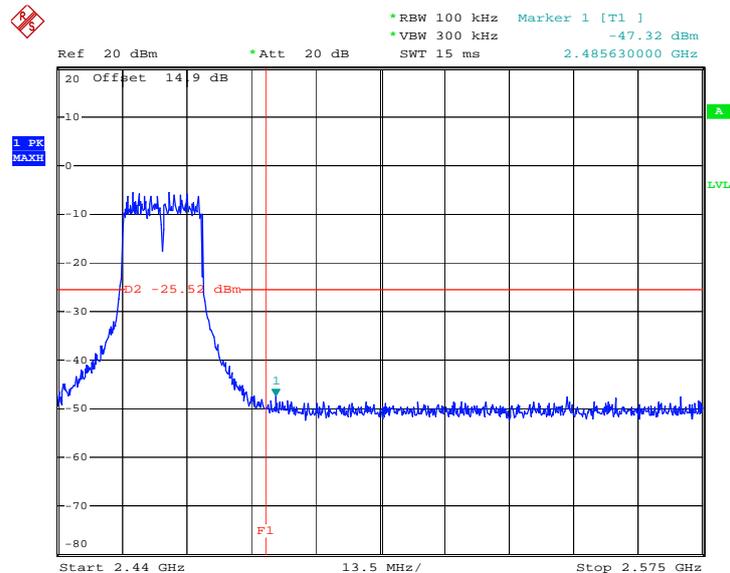
Test Mode :	802.11g	Temperature :	21~22°C
Test Band :	Low and High	Relative Humidity :	41~42%
Test Channel :	01 and 11	Test Engineer :	Lizy Li

Low Band Edge Plot on 802.11g Channel 01



Date: 2.NOV.2012 16:14:59

High Band Edge Plot on 802.11g Channel 11

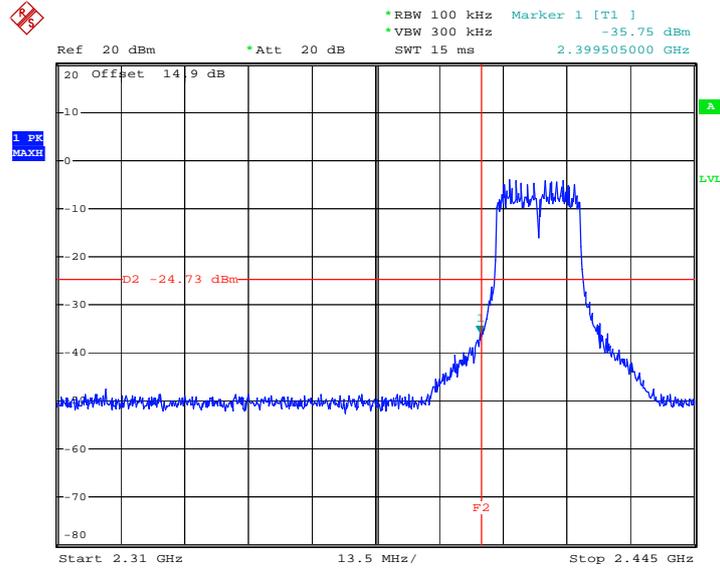


Date: 2.NOV.2012 16:27:18



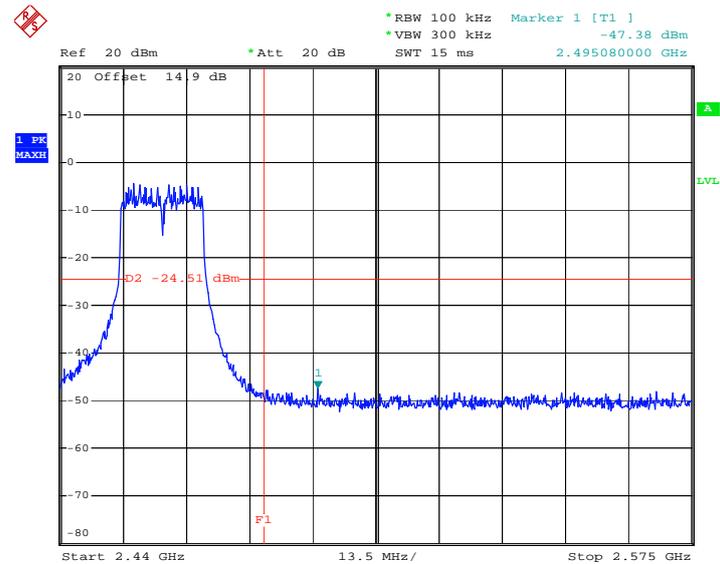
Test Mode :	802.11n HT20	Temperature :	21~22°C
Test Band :	Low and High	Relative Humidity :	41~42%
Test Channel :	01 and 11	Test Engineer :	Lizy Li

Low Band Edge Plot on 802.11n HT20 Channel 01



Date: 3.NOV.2012 20:33:23

High Band Edge Plot on 802.11n HT20 Channel 11



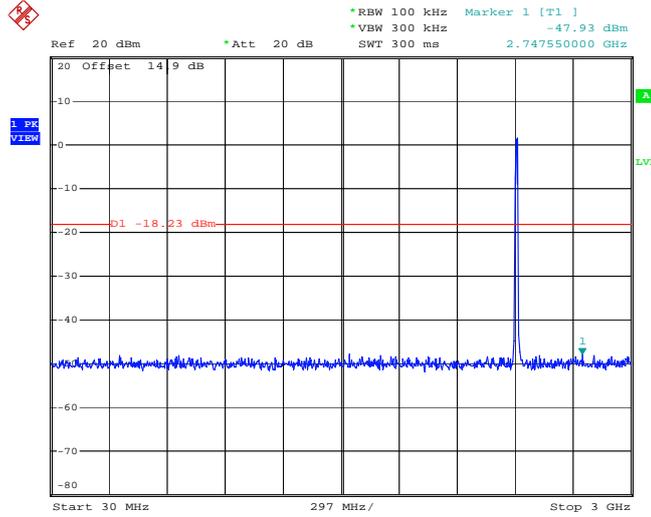
Date: 3.NOV.2012 21:08:17

### 3.4.6 Test Plots of Spurious Emission

Test Mode :	802.11b	Temperature :	21~22°C
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	41~42%
Test Channel :	01, 06, 11	Test Engineer :	Lizy Li

#### 802.11b 30 MHz~3 GHz

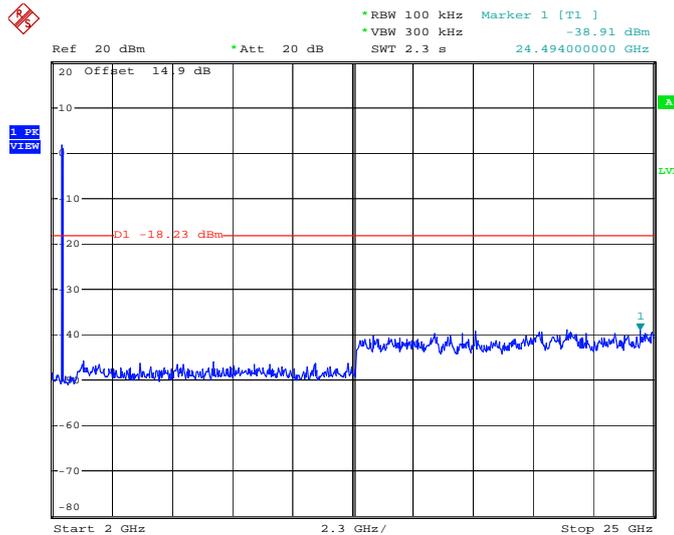
##### Conducted Spurious Emission Plot on Channel 01



Date: 24.OCT.2012 09:35:25

#### 802.11b 2 GHz~25 GHz

##### Conducted Spurious Emission Plot on Channel 01

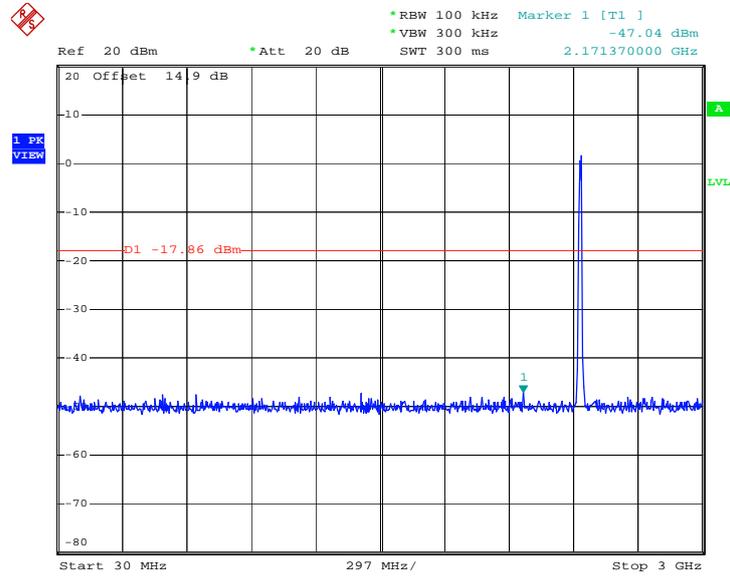


Date: 24.OCT.2012 09:35:43



802.11b 30 MHz~3 GHz

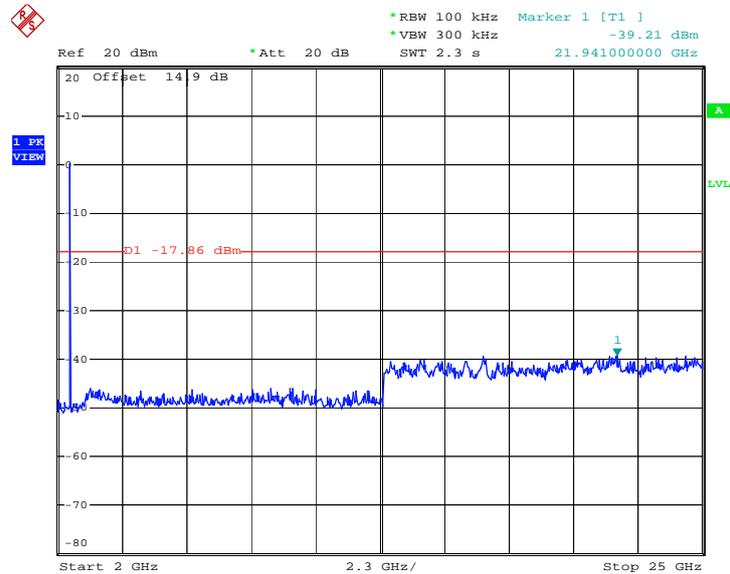
Conducted Spurious Emission Plot on Channel 06



Date: 24.OCT.2012 09:38:31

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

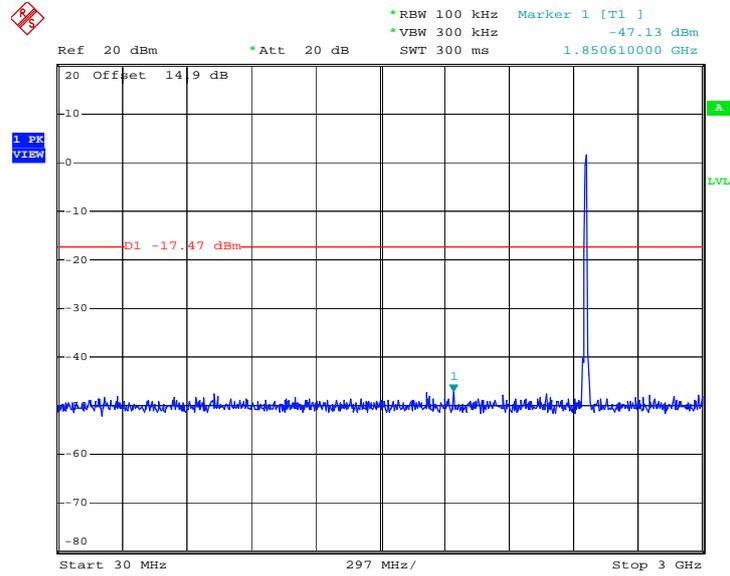


Date: 24.OCT.2012 09:38:49



802.11b 30 MHz~3 GHz

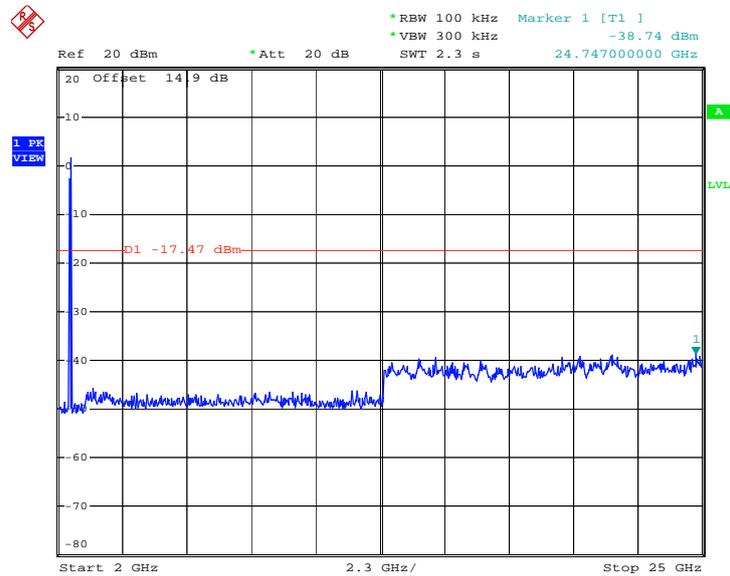
Conducted Spurious Emission Plot on Channel 11



Date: 24.OCT.2012 09:41:17

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



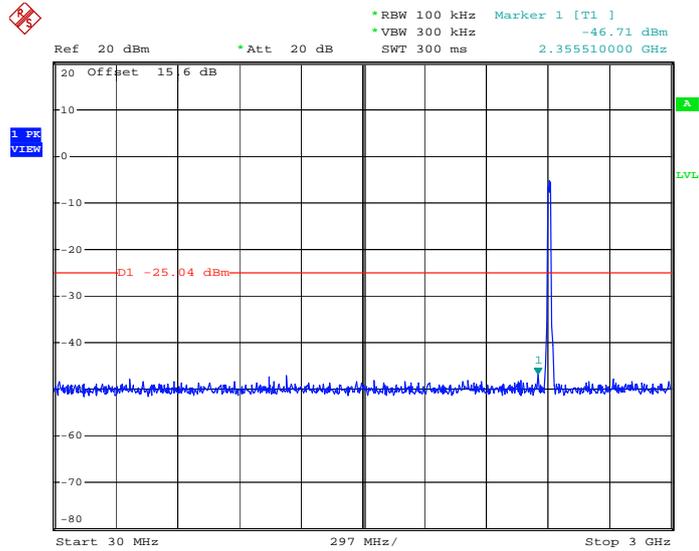
Date: 24.OCT.2012 09:41:36



Test Mode :	802.11g	Temperature :	21~22°C
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	41~42%
Test Channel :	01, 06, 11	Test Engineer :	Lizy Li

802.11g 30 MHz~3 GHz

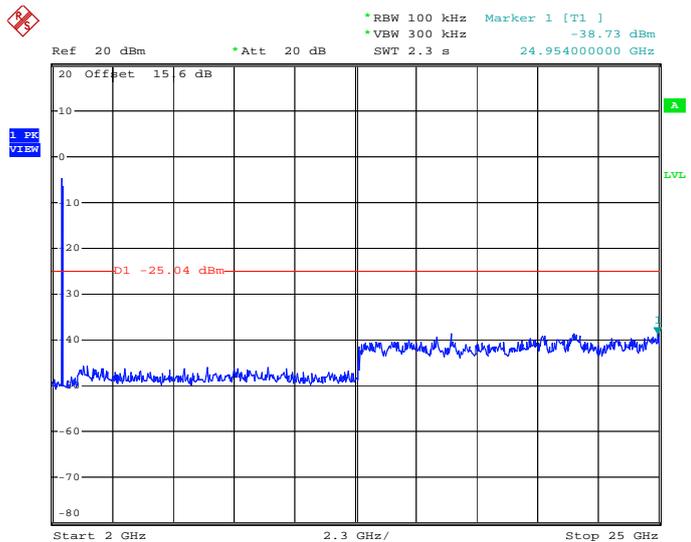
Conducted Spurious Emission Plot on Channel 01



Date: 2.NOV.2012 16:15:24

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

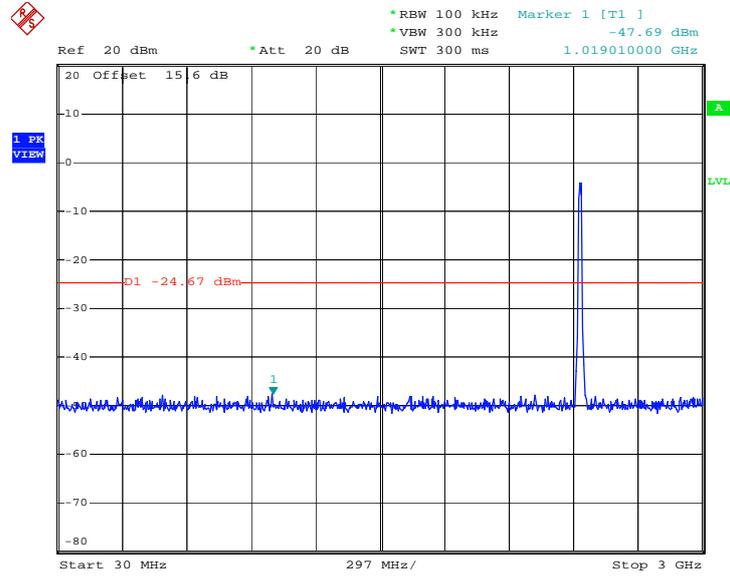


Date: 2.NOV.2012 16:15:42



802.11g 30 MHz~3 GHz

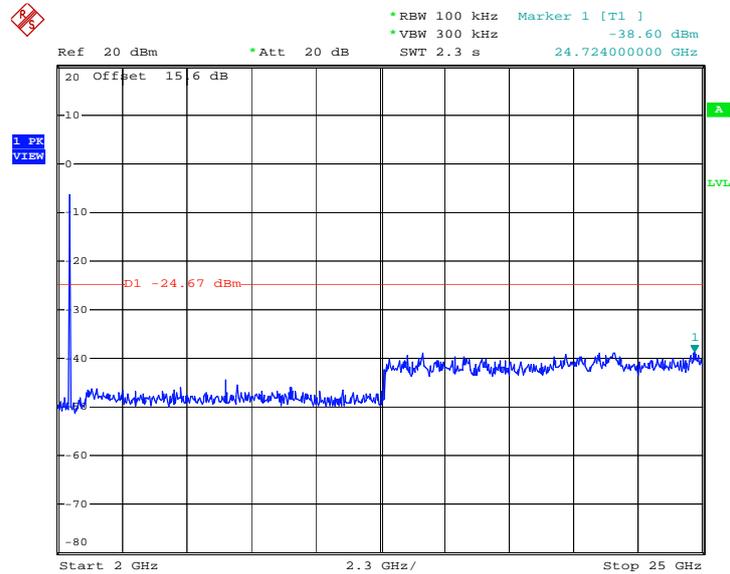
Conducted Spurious Emission Plot on Channel 06



Date: 2.NOV.2012 16:17:52

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

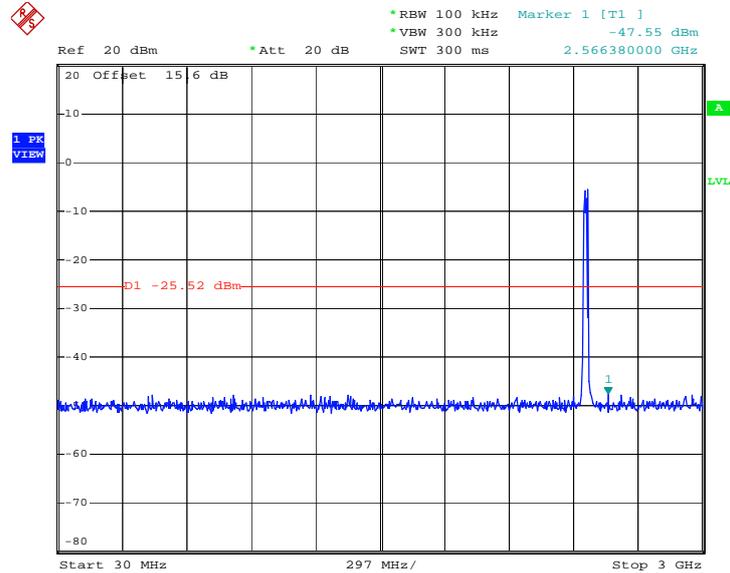


Date: 2.NOV.2012 16:18:10



802.11g 30 MHz~3 GHz

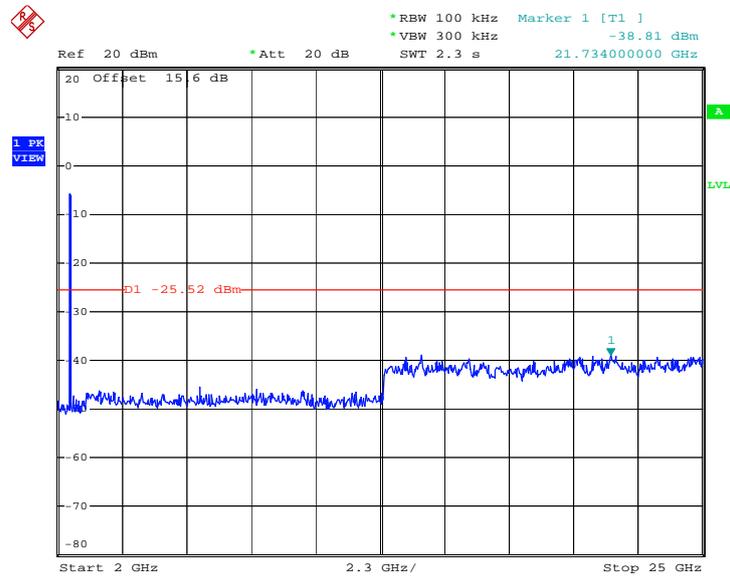
Conducted Spurious Emission Plot on Channel 11



Date: 2.NOV.2012 16:27:40

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



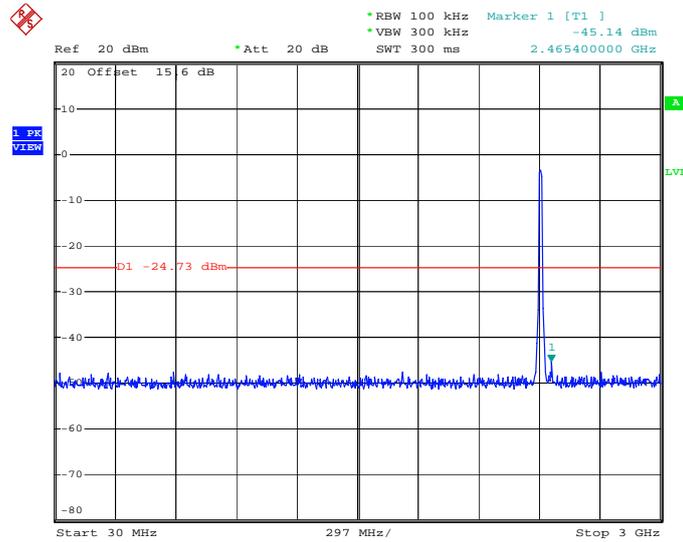
Date: 2.NOV.2012 16:27:58



Test Mode :	802.11n HT20	Temperature :	21~22°C
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	41~42%
Test Channel :	01, 06, 11	Test Engineer :	Lizy Li

802.11n HT20 30 MHz~3 GHz

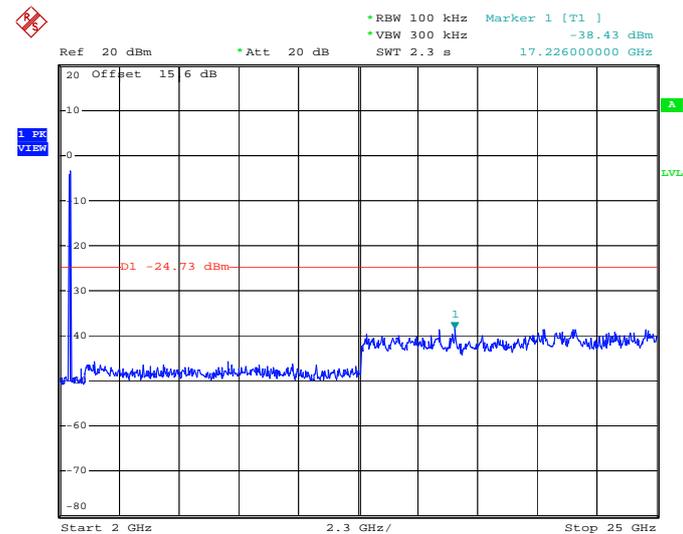
Conducted Spurious Emission Plot on Channel 01



Date: 3.NOV.2012 20:34:05

802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

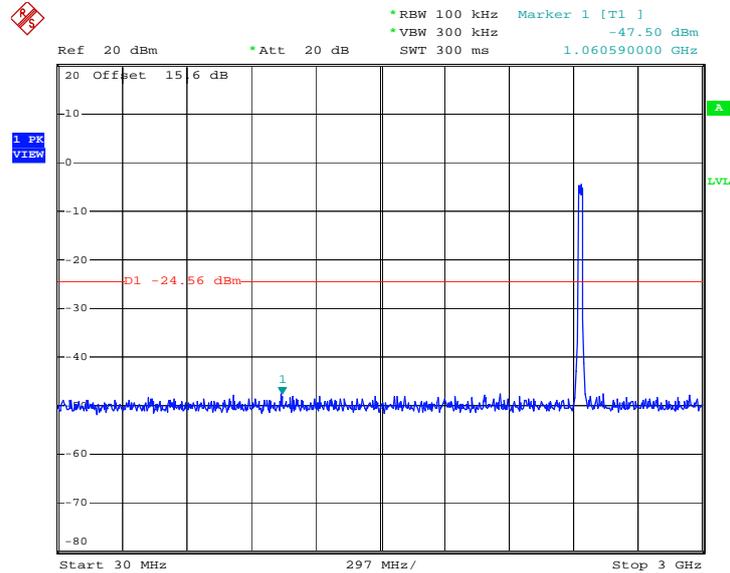


Date: 3.NOV.2012 20:34:23



802.11n HT20 30 MHz~3 GHz

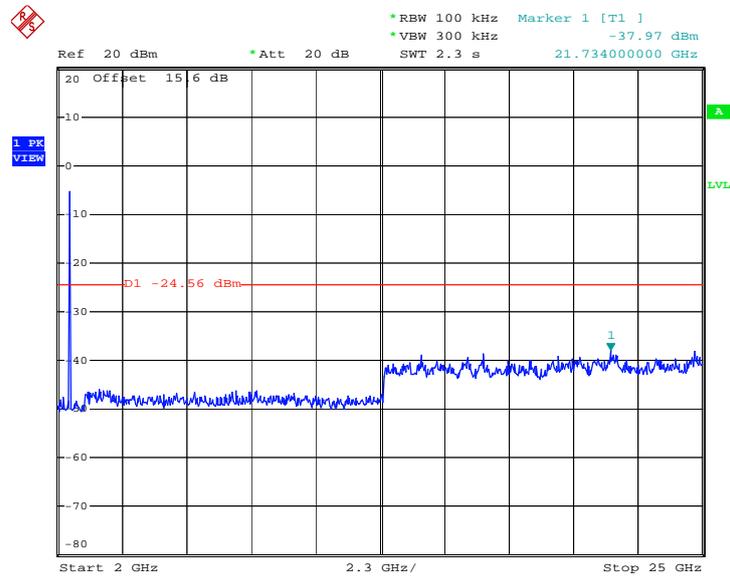
Conducted Spurious Emission Plot on Channel 06



Date: 3.NOV.2012 20:39:22

802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

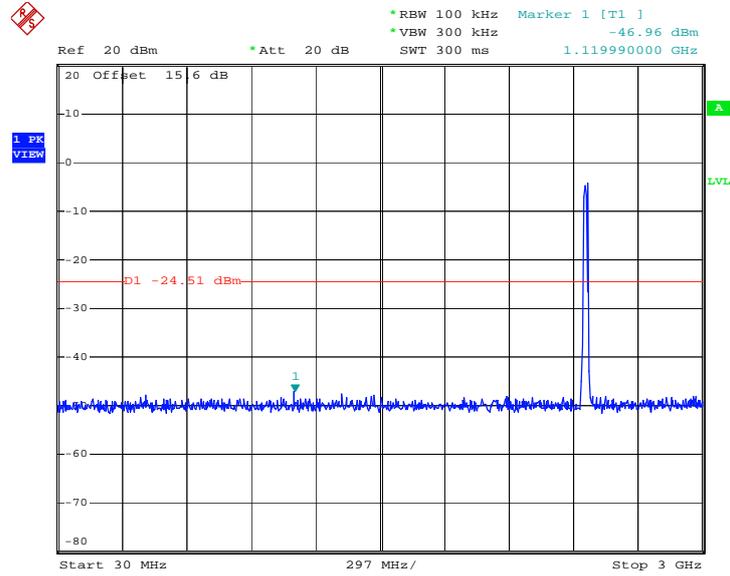


Date: 3.NOV.2012 20:39:41



802.11n HT20 30 MHz~3 GHz

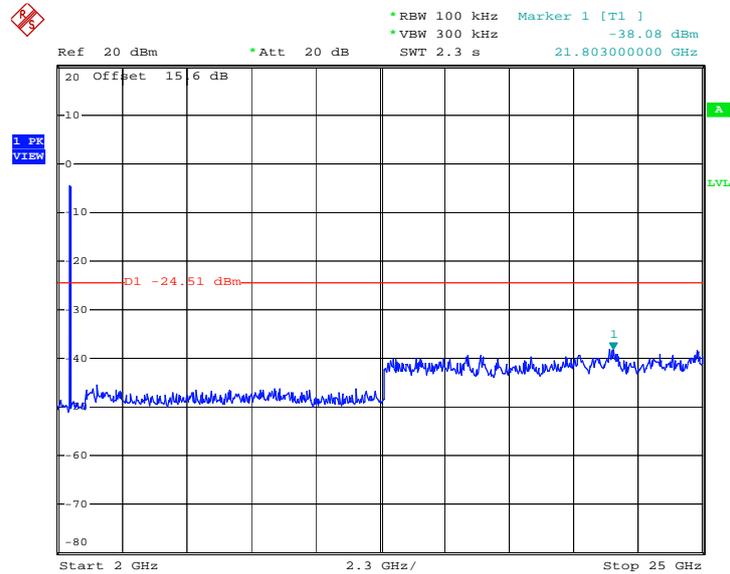
Conducted Spurious Emission Plot on Channel 11



Date: 3.NOV.2012 21:08:54

802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



Date: 3.NOV.2012 21:09:13

### 3.5 Radiated Emission Measurement

#### 3.5.1 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

#### 3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

**3.5.3 Test Procedures**

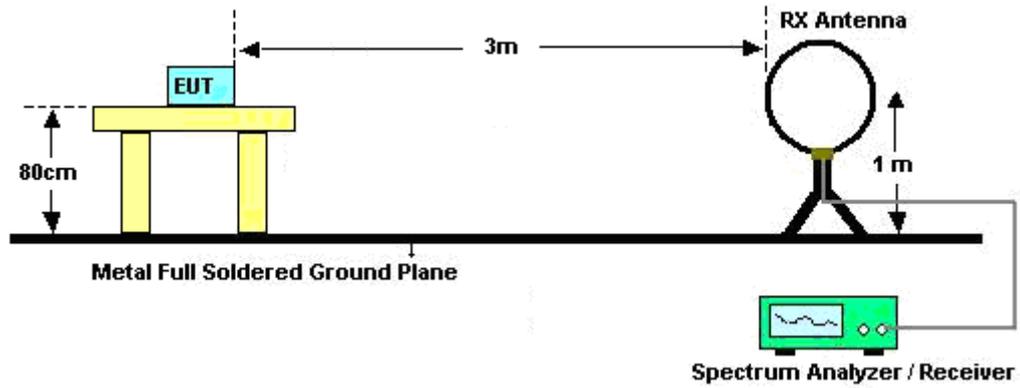
1. The testing follows TCB Workshop 2012, April and fulfills ANSI C63.4-2003 and the guidelines in ANSI C63.10-2009 test site requirement. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
2. The EUT was placed on a turntable with 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving Antenna, which was mounted on the top of a variable height Antenna tower.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 KHz for  $f < 1$  GHz;  $VBW \geq RBW$ ; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for Peak measurement:
    - $VBW = 10$  Hz, when duty cycle is no less than 98 percent.
    - $VBW \geq 1/T$ , when duty cycle is less than 98 percent while maintaining all of the other instrument settings for Average measurement.

Band	Duty Cycle(%)	T(ms)	1/T(KHz)	VBW Setting
802.11b	98.20	-	-	10 Hz
802.11g	94.37	0.536	1.87	3 KHz
2.4G 802.11n HT20	86.01	0.246	4.07	10 KHz

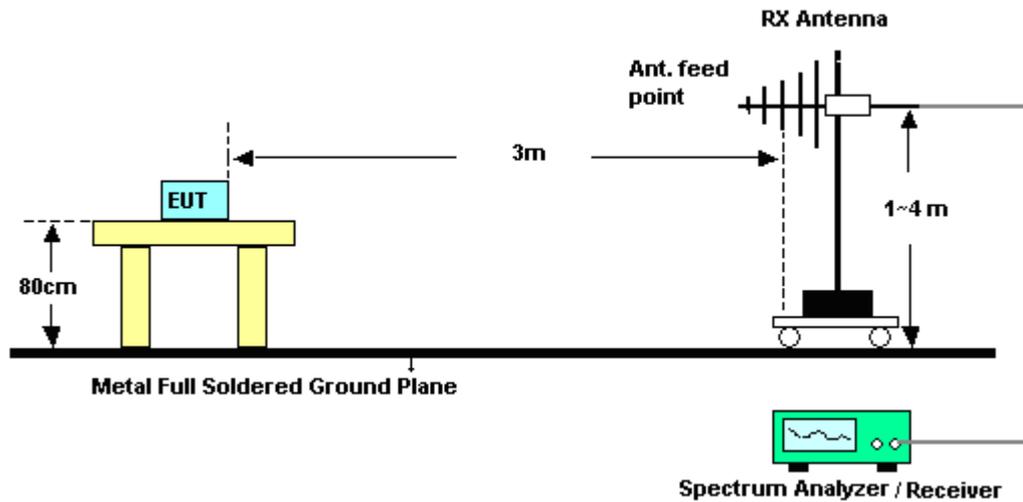
6. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
7. If the emission level of the EUT measured by the peak detector is more than 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be reported by using the quasi-peak detector.

### 3.5.4 Test Setup

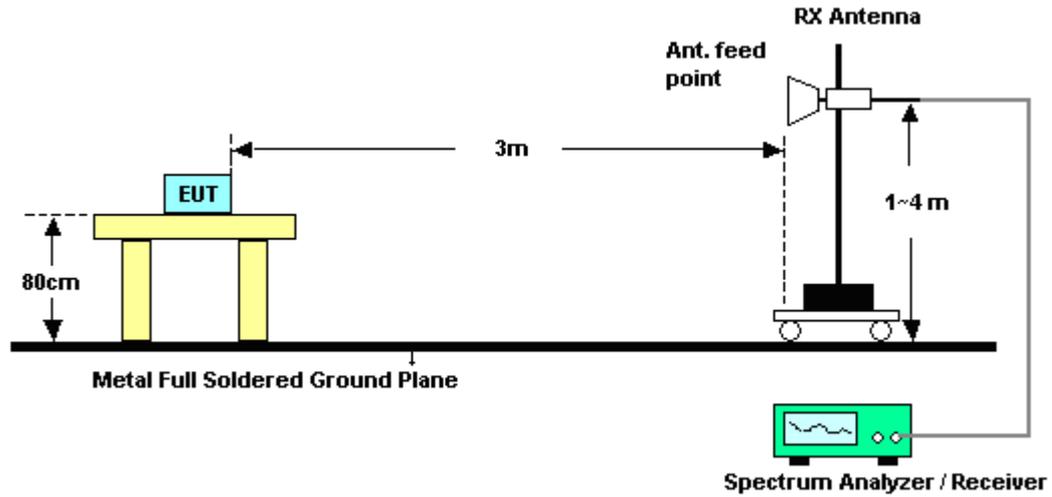
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.5.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



3.5.6 Test Result of Radiated Band Edges

Test Mode :	802.11b	Temperature :	21~22°C
Test Band :	Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Chenmy Cheng

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2388.84	54.42	-19.58	74	50.96	32.86	2.11	31.51	102	91	Peak
2390	44.21	-9.79	54	40.75	32.86	2.11	31.51	104	94	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2373.45	49.8	-24.2	74	46.39	32.83	2.09	31.51	147	234	Peak
2390	39.42	-14.58	54	35.96	32.86	2.11	31.51	112	320	Average

Test Mode :	802.11b	Temperature :	21~22°C
Test Band :	High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Chenmy Cheng

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2487.8	60.97	-13.03	74	57.26	33.05	2.17	31.51	127	280	Peak
2483.5	49.5	-4.5	54	45.84	33.01	2.16	31.51	128	278	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2488.22	54.08	-19.92	74	50.37	33.05	2.17	31.51	200	142	Peak
2483.5	41.58	-12.42	54	37.92	33.01	2.16	31.51	200	139	Average



Test Mode :	802.11g	Temperature :	21~22°C
Test Band :	Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Chenmy Cheng

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	55.11	-18.89	74	51.65	32.86	2.11	31.51	110	275	Peak
2390	39.26	-14.74	54	35.8	32.86	2.11	31.51	110	288	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	54.41	-19.59	74	50.95	32.86	2.11	31.51	109	294	Peak
2390	38.52	-15.48	54	35.06	32.86	2.11	31.51	101	296	Average

Test Mode :	802.11g	Temperature :	21~22°C
Test Band :	High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Chenmy Cheng

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	65.39	-8.61	74	61.73	33.01	2.16	31.51	110	266	Peak
2483.5	50.39	-3.61	54	46.73	33.01	2.16	31.51	109	273	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.62	58.86	-15.14	74	55.2	33.01	2.16	31.51	142	314	Peak
2483.5	43.04	-10.96	54	39.38	33.01	2.16	31.51	200	249	Average



Test Mode :	802.11n HT20	Temperature :	21~22°C
Test Band :	Low	Relative Humidity :	47~48%
Test Channel :	01	Test Engineer :	Chenmy Cheng

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2390	65.82	-8.18	74	62.36	32.86	2.11	31.51	100	21	Peak
2390	47.2	-6.8	54	43.74	32.86	2.11	31.51	100	21	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2389.56	61.32	-12.68	74	57.86	32.86	2.11	31.51	100	288	Peak
2390	46.98	-7.02	54	43.52	32.86	2.11	31.51	100	288	Average

Test Mode :	802.11n HT20	Temperature :	21~22°C
Test Band :	High	Relative Humidity :	47~48%
Test Channel :	11	Test Engineer :	Chenmy Cheng

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.52	69.7	-4.3	74	66.04	33.01	2.16	31.51	100	21	Peak
2483.5	52.25	-1.75	54	48.59	33.01	2.16	31.51	100	26	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	67.59	-6.41	74	63.93	33.01	2.16	31.51	100	162	Peak
2483.5	50.97	-3.03	54	47.31	33.01	2.16	31.51	100	91	Average

3.5.7 Test Result of Radiated Emission (30 MHz ~ 10<sup>th</sup> Harmonic)

Test Mode :	802.11b	Temperature :	21~22°C
Test Channel :	01	Relative Humidity :	47~48%
Test Engineer :	Chenmy Cheng	Polarization :	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.84	35.27	-4.73	40	51.95	16.55	0.35	33.58	200	34	Peak
37.68	33.68	-6.32	40	53.23	13.7	0.38	33.63	-	-	Peak
287.99	28.51	-17.49	46	48.1	12.82	0.98	33.39	-	-	Peak
369.4	34	-12	46	51.21	15.01	1.12	33.34	-	-	Peak
400.43	30.24	-15.76	46	46.4	16	1.15	33.31	-	-	Peak
884.5	26.28	-19.72	46	36.58	20.47	1.73	32.5	-	-	Peak
2412	99.98	-	-	96.48	32.89	2.12	31.51	103	89	Average
2412	109.44	-	-	105.94	32.89	2.12	31.51	103	89	Peak

Test Mode :	802.11b	Temperature :	21~22°C
Test Channel :	01	Relative Humidity :	47~48%
Test Engineer :	Chenmy Cheng	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.07	32.56	-7.44	40	49.24	16.55	0.35	33.58	-	-	Peak
37.94	32.7	-7.3	40	52.25	13.7	0.38	33.63	142	318	Peak
189.74	19.02	-24.48	43.5	43.27	8.5	0.81	33.56	-	-	Peak
400.43	28.98	-17.02	46	45.14	16	1.15	33.31	-	-	Peak
719.2	28.04	-17.96	46	39.83	19.52	1.53	32.84	-	-	Peak
993.01	29.05	-24.95	54	38.57	21.06	1.85	32.43	-	-	Peak
2412	92.13	-	-	88.63	32.89	2.12	31.51	162	314	Average
2412	101.61	-	-	98.11	32.89	2.12	31.51	162	314	Peak



<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.4	33.03	-6.97	40	48.98	17.29	0.34	33.58	-	-	Peak
32.75	33.87	-6.13	40	51.07	16.04	0.35	33.59	200	24	Peak
37.94	33.9	-6.1	40	53.45	13.7	0.38	33.63	-	-	Peak
369.4	24.87	-21.13	46	42.08	15.01	1.12	33.34	-	-	Peak
672.84	25.41	-20.59	46	37.77	19.08	1.48	32.92	-	-	Peak
948.76	27.19	-18.81	46	37.15	20.73	1.75	32.44	-	-	Peak
2437	89.66	-	-	86.08	32.95	2.14	31.51	109	124	Average
2437	101.89	-	-	98.31	32.95	2.14	31.51	109	124	Peak

<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.95	33.55	-6.45	40	50.23	16.55	0.35	33.58	-	-	Peak
37.94	36.7	-3.3	40	56.25	13.7	0.38	33.63	109	277	Peak
44.12	26.58	-13.42	40	50.19	9.6	0.41	33.62	-	-	Peak
145.86	21.57	-21.93	43.5	44.06	10.37	0.72	33.58	-	-	Peak
636.13	26.21	-19.79	46	38.88	18.83	1.45	32.95	-	-	Peak
721.73	28.17	-17.83	46	39.92	19.55	1.54	32.84	-	-	Peak
2437	89.29	-	-	85.71	32.95	2.14	31.51	155	314	Average
2437	100.69	-	-	97.11	32.95	2.14	31.51	155	314	Peak



<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.4	34.41	-5.59	40	50.36	17.29	0.34	33.58	-	-	Peak
37.94	34.53	-5.47	40	54.08	13.7	0.38	33.63	114	206	Peak
58.41	26.04	-13.96	40	53.56	5.59	0.47	33.58	-	-	Peak
148.96	23.22	-20.28	43.5	46	10.07	0.73	33.58	-	-	Peak
668.14	25.89	-20.11	46	38.32	19.03	1.47	32.93	-	-	Peak
935.55	28.68	-17.32	46	38.7	20.67	1.75	32.44	-	-	Peak
2462	100.99	-	-	97.37	32.98	2.15	31.51	128	96	Average
2462	110.79	-	-	107.17	32.98	2.15	31.51	128	96	Peak

<b>Test Mode :</b>	802.11b	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.07	34.48	-5.52	40	50.43	17.29	0.34	33.58	-	-	Peak
33.21	34.33	-5.67	40	51.53	16.04	0.35	33.59	-	-	Peak
37.94	35.28	-4.72	40	54.83	13.7	0.38	33.63	100	24	Peak
211.53	25.28	-18.22	43.5	48.44	9.54	0.84	33.54	-	-	Peak
369.4	33	-13	46	50.21	15.01	1.12	33.34	-	-	Peak
721.73	28.2	-17.8	46	39.95	19.55	1.54	32.84	-	-	Peak
2462	92.53	-	-	88.91	32.98	2.15	31.51	102	314	Average
2462	101.99	-	-	98.37	32.98	2.15	31.51	102	314	Peak



<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2412 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.84	36.2	-3.8	40	52.88	16.55	0.35	33.58	142	307	Peak
37.94	35.36	-4.64	40	54.91	13.7	0.38	33.63	-	-	Peak
300.37	27.37	-18.63	46	46.73	13.02	0.99	33.37	-	-	Peak
369.4	31.52	-14.48	46	48.73	15.01	1.12	33.34	-	-	Peak
400.43	29.27	-16.73	46	45.43	16	1.15	33.31	-	-	Peak
848.06	25.59	-20.41	46	36.2	20.49	1.63	32.73	-	-	Peak
2412	93.65	-	-	90.15	32.89	2.12	31.51	110	313	Average
2412	105.44	-	-	101.94	32.89	2.12	31.51	110	313	Peak

<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2412 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.63	34.98	-5.02	40	52.18	16.04	0.35	33.59	200	241	Peak
34.04	34.91	-5.09	40	52.59	15.56	0.36	33.6	-	-	Peak
37.94	35.87	-4.13	40	55.42	13.7	0.38	33.63	-	-	Peak
642.86	26.65	-19.35	46	39.28	18.87	1.45	32.95	-	-	Peak
719.2	28.78	-17.22	46	40.57	19.52	1.53	32.84	-	-	Peak
948.76	29.28	-16.72	46	39.24	20.73	1.75	32.44	-	-	Peak
2412	85.61	-	-	82.11	32.89	2.12	31.51	100	279	Average
2412	97.62	-	-	94.12	32.89	2.12	31.51	100	279	Peak



<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.86	35.23	-4.77	40	52.43	16.04	0.35	33.59	102	318	Peak
37.94	35.06	-4.94	40	54.61	13.7	0.38	33.63	-	-	Peak
46.83	27.11	-12.89	40	51.42	8.88	0.42	33.61	-	-	Peak
59.44	25.36	-14.64	40	53.02	5.44	0.48	33.58	-	-	Peak
287.99	25.92	-20.08	46	45.51	12.82	0.98	33.39	-	-	Peak
369.4	33.62	-12.38	46	50.83	15.01	1.12	33.34	-	-	Peak
2437	94.95	-	-	91.37	32.95	2.14	31.51	109	307	Average
2437	105.86	-	-	102.28	32.95	2.14	31.51	109	307	Peak

<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
35.51	35.17	-4.83	40	53.77	14.65	0.37	33.62	200	39	Peak
36.77	33.74	-6.26	40	52.79	14.19	0.38	33.62	-	-	Peak
37.94	34.86	-5.14	40	54.41	13.7	0.38	33.63	-	-	Peak
400.43	23.79	-22.21	46	39.95	16	1.15	33.31	-	-	Peak
636.13	25.6	-20.4	46	38.27	18.83	1.45	32.95	-	-	Peak
721.73	28.64	-17.36	46	40.39	19.55	1.54	32.84	-	-	Peak
2437	87.1	-	-	83.52	32.95	2.14	31.51	122	76	Average
2437	98.49	-	-	94.91	32.95	2.14	31.51	122	76	Peak



<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2462 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.07	35.13	-4.87	40	51.81	16.55	0.35	33.58	-	-	Peak
37.94	36.61	-3.39	40	56.16	13.7	0.38	33.63	112	309	Peak
59.23	25.71	-14.29	40	53.37	5.44	0.48	33.58	-	-	Peak
287.99	27.31	-18.69	46	46.9	12.82	0.98	33.39	-	-	Peak
369.4	34.32	-11.68	46	51.53	15.01	1.12	33.34	-	-	Peak
400.43	31.03	-14.97	46	47.19	16	1.15	33.31	-	-	Peak
2462	93.55	-	-	89.93	32.98	2.15	31.51	109	172	Average
2462	108.64	-	-	105.02	32.98	2.15	31.51	109	172	Peak

<b>Test Mode :</b>	802.11g	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	11	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2462 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.29	35.44	-4.56	40	52.12	16.55	0.35	33.58	-	-	Peak
35.62	35.52	-4.48	40	54.12	14.65	0.37	33.62	200	57	Peak
37.94	35.12	-4.88	40	54.67	13.7	0.38	33.63	-	-	Peak
369.4	23.05	-22.95	46	40.26	15.01	1.12	33.34	-	-	Peak
636.13	25.41	-20.59	46	38.08	18.83	1.45	32.95	-	-	Peak
721.73	29.08	-16.92	46	40.83	19.55	1.54	32.84	-	-	Peak
2462	85.26	-	-	81.64	32.98	2.15	31.51	100	331	Average
2462	99.01	-	-	95.39	32.98	2.15	31.51	100	331	Peak



<b>Test Mode :</b>	802.11n-HT20	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2412 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.62	35.23	-4.77	40	51.91	16.55	0.35	33.58	-	-	Peak
35.75	35.56	-4.44	40	54.16	14.65	0.37	33.62	200	244	Peak
37.94	35.08	-4.92	40	54.63	13.7	0.38	33.63	-	-	Peak
369.4	32.62	-13.38	46	49.83	15.01	1.12	33.34	-	-	Peak
400.43	30.03	-15.97	46	46.19	16	1.15	33.31	-	-	Peak
842.13	25.66	-20.34	46	36.32	20.43	1.63	32.72	-	-	Peak
2412	95.02	-	-	91.52	32.89	2.12	31.51	100	21	Average
2412	105.31	-	-	101.81	32.89	2.12	31.51	100	21	Peak

<b>Test Mode :</b>	802.11n-HT20	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	01	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2412 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.18	35.33	-4.67	40	52.01	16.55	0.35	33.58	-	-	Peak
37.94	35.41	-4.59	40	54.96	13.7	0.38	33.63	111	247	Peak
369.4	23.98	-22.02	46	41.19	15.01	1.12	33.34	-	-	Peak
601.43	26.64	-19.36	46	39.59	18.6	1.4	32.95	-	-	Peak
721.73	28.02	-17.98	46	39.77	19.55	1.54	32.84	-	-	Peak
952.09	29.19	-16.81	46	39.14	20.74	1.75	32.44	-	-	Peak
2412	86.11	-	-	82.61	32.89	2.12	31.51	100	21	Average
2412	96.87	-	-	93.37	32.89	2.12	31.51	100	21	Peak



<b>Test Mode :</b>	802.11n-HT20	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2437 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.29	35.75	-4.25	40	51.7	17.29	0.34	33.58	154	283	Peak
37.68	34.82	-5.18	40	54.37	13.7	0.38	33.63	-	-	Peak
143.33	21.16	-22.34	43.5	43.47	10.55	0.72	33.58	-	-	Peak
287.99	25.98	-20.02	46	45.57	12.82	0.98	33.39	-	-	Peak
369.4	32.22	-13.78	46	49.43	15.01	1.12	33.34	-	-	Peak
842.13	25.5	-20.5	46	36.16	20.43	1.63	32.72	-	-	Peak
2437	89.13	-	-	85.55	32.95	2.14	31.51	183	48	Average
2437	101.71	-	-	98.13	32.95	2.14	31.51	183	48	Peak

<b>Test Mode :</b>	802.11n-HT20	<b>Temperature :</b>	21~22°C
<b>Test Channel :</b>	06	<b>Relative Humidity :</b>	47~48%
<b>Test Engineer :</b>	Chenmy Cheng	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2437 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.95	36.03	-3.97	40	52.71	16.55	0.35	33.58	-	-	Peak
37.68	36.39	-3.61	40	55.94	13.7	0.38	33.63	103	106	Peak
369.4	24.2	-21.8	46	41.41	15.01	1.12	33.34	-	-	Peak
645.12	25.87	-20.13	46	38.48	18.88	1.46	32.95	-	-	Peak
721.73	28.32	-17.68	46	40.07	19.55	1.54	32.84	-	-	Peak
952.09	28.33	-17.67	46	38.28	20.74	1.75	32.44	-	-	Peak
2437	88.33	-	-	84.75	32.95	2.14	31.51	127	294	Average
2437	99.61	-	-	96.03	32.95	2.14	31.51	127	294	Peak



Test Mode :	802.11n-HT20	Temperature :	21~22°C
Test Channel :	11	Relative Humidity :	47~48%
Test Engineer :	Chenmy Cheng	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
31.95	36.99	-3.01	40	53.67	16.55	0.35	33.58	189	334	Peak
37.94	36.07	-3.93	40	55.62	13.7	0.38	33.63	-	-	Peak
287.99	22.62	-23.38	46	42.21	12.82	0.98	33.39	-	-	Peak
369.4	24.61	-21.39	46	41.82	15.01	1.12	33.34	-	-	Peak
670.49	25	-21	46	37.4	19.05	1.47	32.92	-	-	Peak
952.09	26.37	-19.63	46	36.32	20.74	1.75	32.44	-	-	Peak
2462	89.82	-	-	86.2	32.98	2.15	31.51	200	281	Average
2462	101.28	-	-	97.66	32.98	2.15	31.51	200	281	Peak

Test Mode :	802.11n-HT20	Temperature :	21~22°C
Test Channel :	11	Relative Humidity :	47~48%
Test Engineer :	Chenmy Cheng	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
32.18	33.59	-6.41	40	50.27	16.55	0.35	33.58	-	-	Peak
37.81	35.08	-4.92	40	54.63	13.7	0.38	33.63	112	245	Peak
369.4	25.2	-20.8	46	42.41	15.01	1.12	33.34	-	-	Peak
636.13	25.4	-20.6	46	38.07	18.83	1.45	32.95	-	-	Peak
719.2	28.68	-17.32	46	40.47	19.52	1.53	32.84	-	-	Peak
952.09	28.43	-17.57	46	38.38	20.74	1.75	32.44	-	-	Peak
2462	88.02	-	-	84.4	32.98	2.15	31.51	100	283	Average
2462	100.12	-	-	96.5	32.98	2.15	31.51	100	283	Peak

### 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.

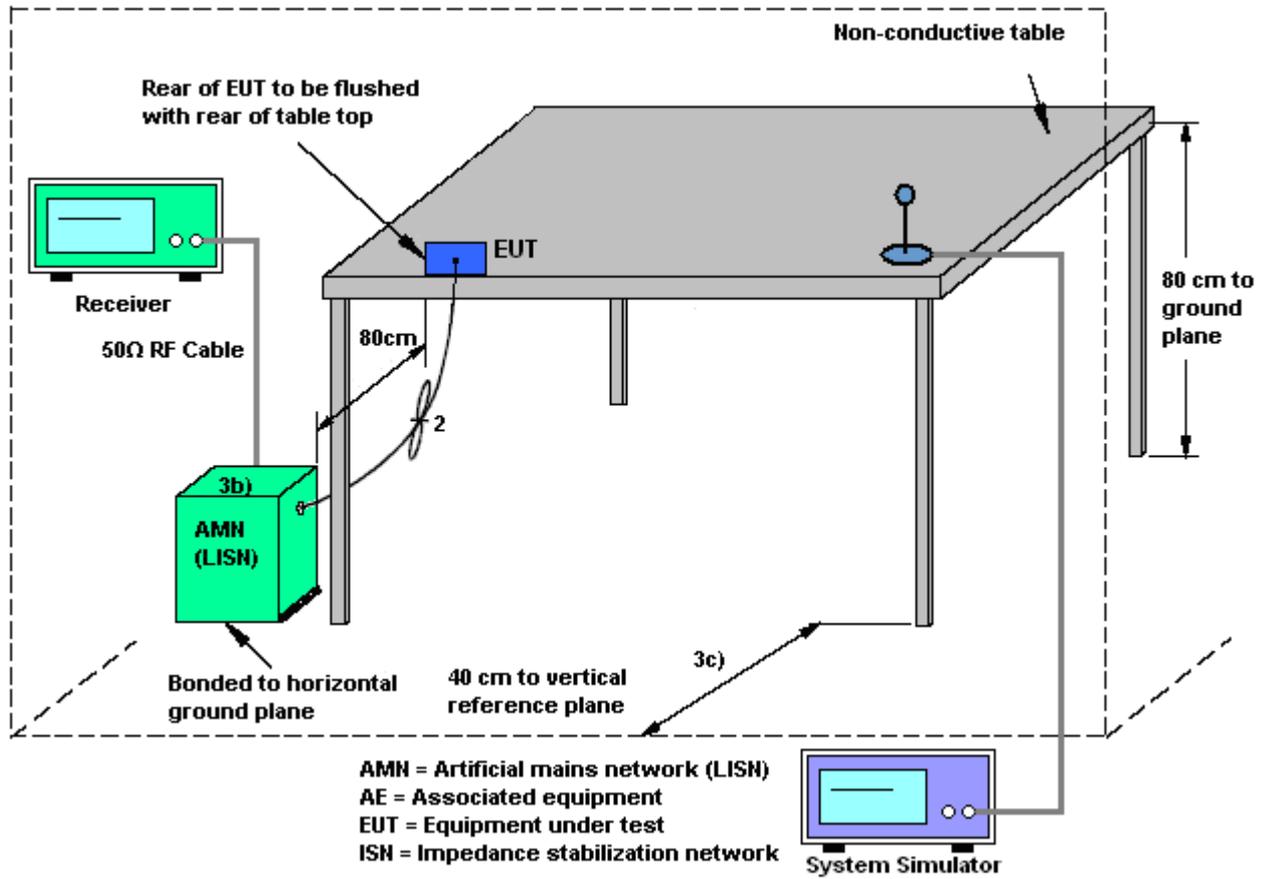
#### 3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.6.3 Test Procedures

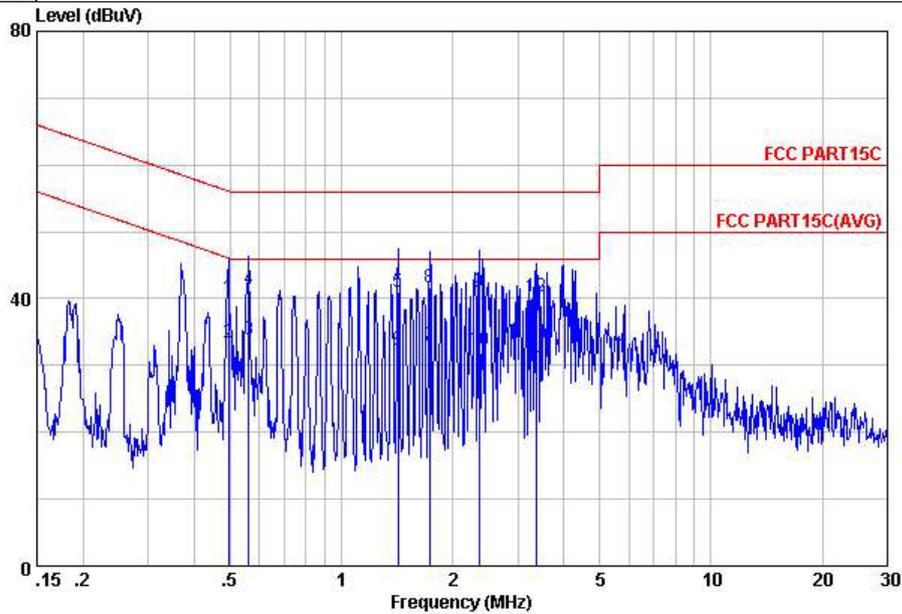
1. The testing follows the guidelines in FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v02
2. ANSI C63.4-2003 and ANSI C63.10-2009.
3. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
4. Connect EUT to the power mains through a line impedance stabilization network (LISN).
5. All the support units are connecting to the other LISN.
6. The LISN provides 50 ohm coupling impedance for the measuring instrument.
7. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
8. Both sides of AC line were checked for maximum conducted interference.
9. The frequency range from 150 KHz to 30 MHz was searched.
10. 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 :	19~20°C
Test Engineer :	Tom Wang	Relative Humidity :	39~40%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



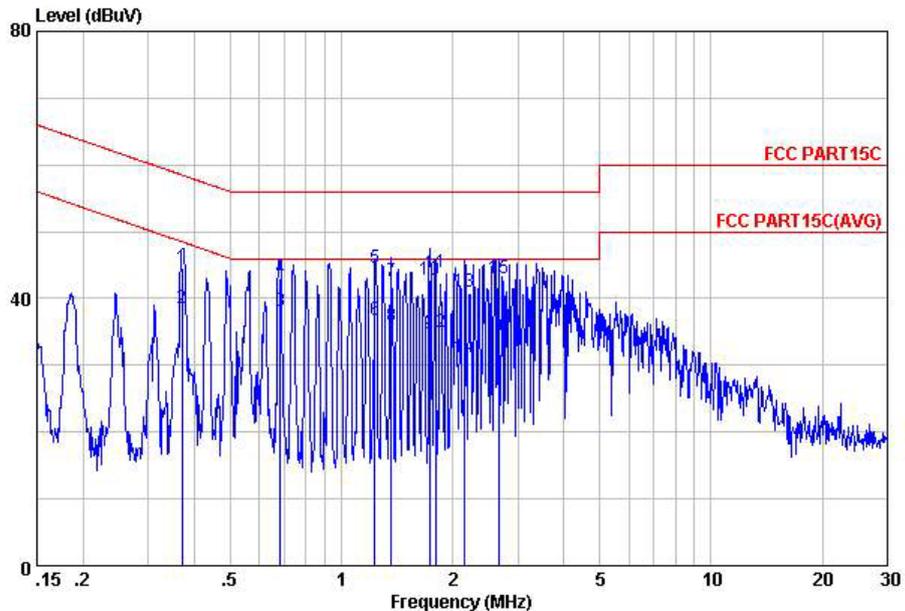
Site : C001-KS  
 Condition: FCC PART15C LISN-111230 LINE

mode : Mode 1

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.49	40.14	-15.96	56.10	29.60	-0.08	10.62	QP
2	0.49	33.44	-12.66	46.10	22.90	-0.08	10.62	Average
3	0.56	33.95	-12.05	46.00	23.40	-0.08	10.63	Average
4	0.56	41.55	-14.45	56.00	31.00	-0.08	10.63	QP
5	1.43	40.97	-15.03	56.00	30.40	-0.11	10.68	QP
6	1.43	32.27	-13.73	46.00	21.70	-0.11	10.68	Average
7	1.73	33.08	-12.92	46.00	22.50	-0.11	10.69	Average
8	1.73	41.58	-14.42	56.00	31.00	-0.11	10.69	QP
9	2.36	41.01	-14.99	56.00	30.40	-0.11	10.72	QP
10	2.36	32.21	-13.79	46.00	21.60	-0.11	10.72	Average
11	3.36	29.79	-16.21	46.00	19.10	-0.12	10.81	Average
12	3.36	40.29	-15.71	56.00	29.60	-0.12	10.81	QP



Test Mode :	Mode 1	Temperature :	19~20°C
Test Engineer :	Tom Wang	Relative Humidity :	39~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter) + Earphone		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : C001-KS  
 Condition: FCC PART15C LISN-111230 NEUTRAL  
 mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.37	44.63	-13.84	58.47	34.10	-0.08	10.61	QP
2	0.37	38.63	-9.84	48.47	28.10	-0.08	10.61	Average
3	0.68	38.06	-7.94	46.00	27.50	-0.08	10.64	Average
4	0.68	42.96	-13.04	56.00	32.40	-0.08	10.64	QP
5	1.23	44.57	-11.43	56.00	34.00	-0.09	10.66	QP
6	1.23	36.87	-9.13	46.00	26.30	-0.09	10.66	Average
7	1.37	42.67	-13.33	56.00	32.10	-0.10	10.67	QP
8	1.37	35.87	-10.13	46.00	25.30	-0.10	10.67	Average
9	1.73	34.69	-11.31	46.00	24.11	-0.11	10.69	Average
10	1.73	42.89	-13.11	56.00	32.31	-0.11	10.69	QP
11	1.80	43.99	-12.01	56.00	33.40	-0.11	10.70	QP
12	1.80	34.99	-11.01	46.00	24.40	-0.11	10.70	Average
13	2.16	41.10	-14.90	56.00	30.50	-0.11	10.71	QP
14	2.16	31.10	-14.90	46.00	20.50	-0.11	10.71	Average
15	2.66	43.03	-12.97	56.00	32.39	-0.11	10.75	QP
16	2.66	34.33	-11.67	46.00	23.69	-0.11	10.75	Average



## **3.7 Antenna Requirements**

### **3.7.1 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.

### **3.7.2 Antenna Connected Construction**

Non-standard connector used.

### **3.7.3 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	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 30, 2011	Oct.24, 2012~ Nov. 03, 2012	Dec. 29, 2012	Conducted (TH01-KS)
Power Meter	Agilent	E4416A	MY451015 55	N/A	Aug. 22, 2012	Oct.24, 2012~ Nov. 03, 2012	Aug. 21, 2013	Conducted (TH01-KS)
Power Sensor	Agilent	E9327A	MY444211 98	N/A	Aug. 22, 2012	Oct.24, 2012~ Nov. 03, 2012	Aug. 21, 2013	Conducted (TH01-KS)
DC Power Supply	GWINSTEK	GPS-3030D	E1884515	N/A	Aug. 22, 2012	Oct.24, 2012~ Nov. 03, 2012	Aug. 21, 2013	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-9605 02	N/A	Dec. 30, 2011	Oct.24, 2012~ Nov. 03, 2012	Dec. 29, 2012	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 09, 2011	Nov. 03, 2012	Nov. 08, 2012	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 30, 2011	Nov. 03, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 08, 2011	Nov. 03, 2012	Dec. 07, 2012	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	860004/ 001	9 kHz~30 MHz	Jul. 03, 2012	Nov. 03, 2012	Jul. 02, 2013	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1GHz~18GHz	Jan. 06, 2012	Nov. 03, 2012	Jan. 05, 2013	Radiation (03CH01-KS)
Amplifier	Wireless	FPA-6592G	060004	30MHz~2GHz	Dec. 30, 2011	Nov. 03, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A023 70	1GHz~26.5GHz	Dec. 30, 2011	Nov. 03, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701023	1GHz~18GHz	Nov. 07, 2011	Nov. 03, 2012	Nov. 06, 2012	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA1702 49	15GHz~40GHz	Oct. 12, 2012	Nov. 03, 2012	Oct. 11, 2013	Radiation (03CH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	Jun. 01, 2012	Nov. 01, 2012	May 31, 2013	Conduction (CO01-KS)
LISN	MessTec	AN3016	60103	9kHz~30MHz	Dec. 30, 2011	Nov. 01, 2012	Dec. 29, 2012	Conduction (CO01-KS)
LISN	MessTec	AN3016	60105	9kHz~30MHz	Dec. 30, 2011	Nov. 01, 2012	Dec. 29, 2012	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000 0811	N/A	Nov. 16, 2011	Nov. 01, 2012	Nov. 15, 2012	Conduction (CO01-KS)
System Simulator	R&S	CMU200	837587/06 6	2G Full-Band	Dec. 30, 2011	Nov. 01, 2012	Dec. 29, 2012	Conduction (CO01-KS)



## 5 Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150 KHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.26
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.54
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.72
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## **Appendix A. Photographs of EUT**

Please refer to Sporton report number EP2O1102 as below.