FCC RF Test Report

APPLICANT	:	CT Asia
EQUIPMENT	:	GSM / WCDMA mobile phone
BRAND NAME	:	BLU
MODEL NAME	:	VIVO 4.3
FCC ID	:	YHLBLUVIVO43
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Aug. 15, 2012 and completely tested on Aug. 28, 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:

Jones Tsai

Jones Tsai / Manager

Testing Laboratory 1190

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR281501B	Rev. 01	Initial issue of report	Aug. 29, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.2	15.247(b)	A8.4	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	A8.2(b)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	A8.5	Conducted Band Edges	≤ 20dBc	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 3.44 dB at 2488.790 MHz
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 15.26 dB at 26.000 MHz
3.7	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

CT Asia
RMA2011, 20/F, GOLDEN CENTRAL TOWER, NO.3037# JINTIAN ROAD, FUTIAN DISTRICT

1.2 Manufacturer

Gionee Communication Equipment Co., Ltd.
32F, Tower A, East Pacific International Center, No.7888, Shennan Avenue, Futian District, Shenzhen-518040, China

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	GSM / WCDMA mobile phone
Brand Name	BLU
Model Name	VIVO 4.3
FCC ID	YHLBLUVIVO43
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/WLAN 11bg/Bluetooth
HW Version	GN868H_Mainboard_P3
SW Version	GN868H_0301_v1014
EUT Stage	Production Unit

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 : 18.87 dBm (0.0771 W) 802.11g : 19.11 dBm (0.0815 W)
Antenna Type	PIFA Antenna with gain 1.60 dBi
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g : OFDM (BPSK / QPSK / 16QAM / 64QAM)

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.			FCC/IC Registration No.
	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 v01
- FCC TCB Workshop 2012, April
- 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.	WLAN AP	D-link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	P08S	QDS-BRCM1030	N/A	AC I/P: Unshielded, 0.9 DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Nokia	BH-106	QTLBH-106	N/A	N/A
5.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m

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 (Y / 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 mode			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	18.87	18.8	18.45	18.51
CH 06	2437 MHz	18.48	18.53	18.18	18.28
CH 11	2462 MHz	18.32	18.28	17.85	18.02

Channel	Frequency	2.4GHz 802.11g mode							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	19.11	19.02	18.95	18.94	18.9	18.87	18.85	18.76
CH 06	2437 MHz	18.96	18.91	18.51	18.44	18.36	18.27	18.18	18.14
CH 11	2462 MHz	18.87	18.66	16.58	18.48	18.43	18.26	18.13	18.05

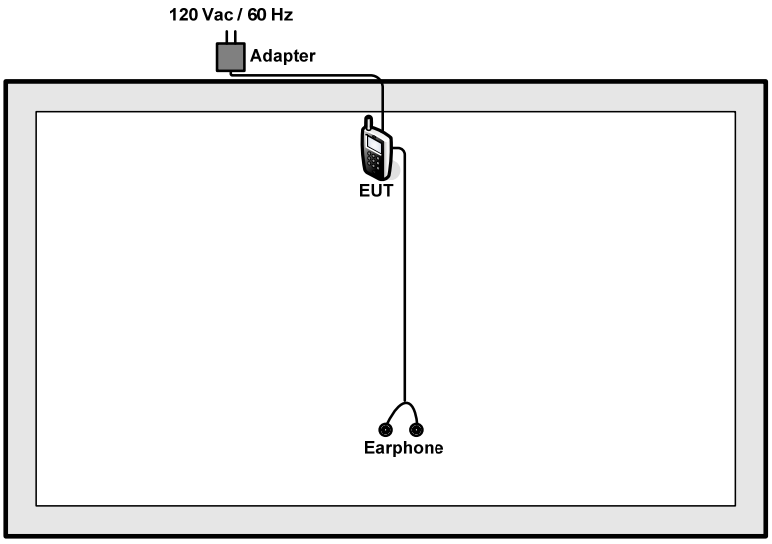
2.3 Test Mode

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

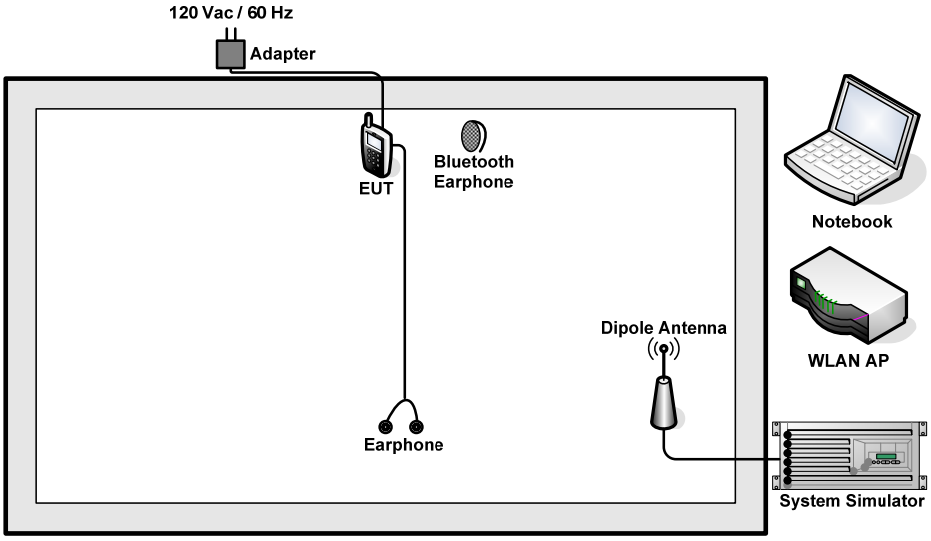
Test Cases				
	Test Items	**Mode**	**Data Rate**	**Test Channel**
Conducted TCs	**6dB BW** **Power Spectral Density**	**802.11b**	**1 Mbps**	**1/6/11**
		802.11g	**6 Mbps**	**1/6/11**
	Output Power	**802.11b**	**1 Mbps**	**1/6/11**
		802.11g	**6 Mbps**	**1/6/11**
	Conducted Band EDGE	**802.11b**	**1 Mbps**	**1/11**
		802.11g	**6 Mbps**	**1/11**
	Conducted Spurious Emission	**802.11b**	**1 Mbps**	**1/6/11**
		802.11g	**6 Mbps**	**1/6/11**
Radiated TCs	**Radiated Band EDGE**	**802.11b**	**1 Mbps**	**1/11**
		802.11g	**6 Mbps**	**1/11**
	Radiated Spurious Emission	**802.11b**	**1 Mbps**	**1/6/11**
		802.11g	**6 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 "＊＃446633＃" 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.

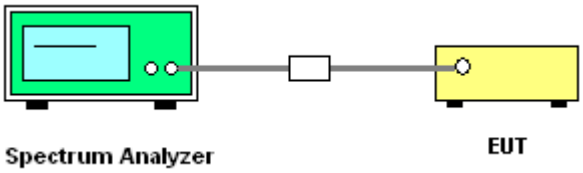
3.1.2 Measuring Instruments

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) ≥ 3 * RBW. In order to make an accurate measurement.

3.1.4 Test Setup

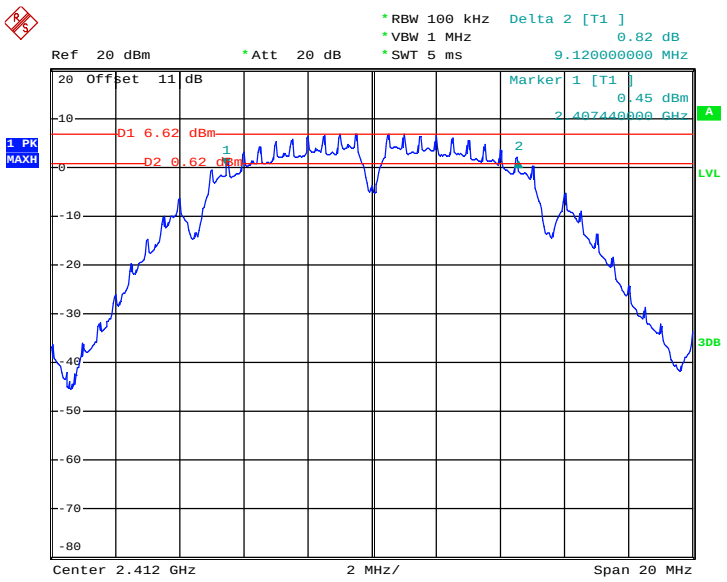


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	802.11b	Temperature :	21~22℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	9.12	0.5	Pass
06	2437	9.12	0.5	Pass
11	2462	8.64	0.5	Pass

6 dB Bandwidth Plot on 802.11b Channel 01



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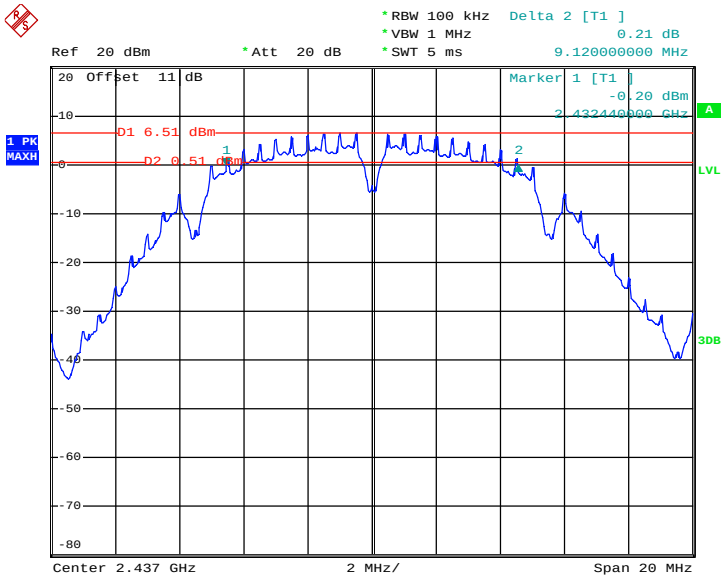
6 dB Bandwidth Plot on 802.11b Channel 06



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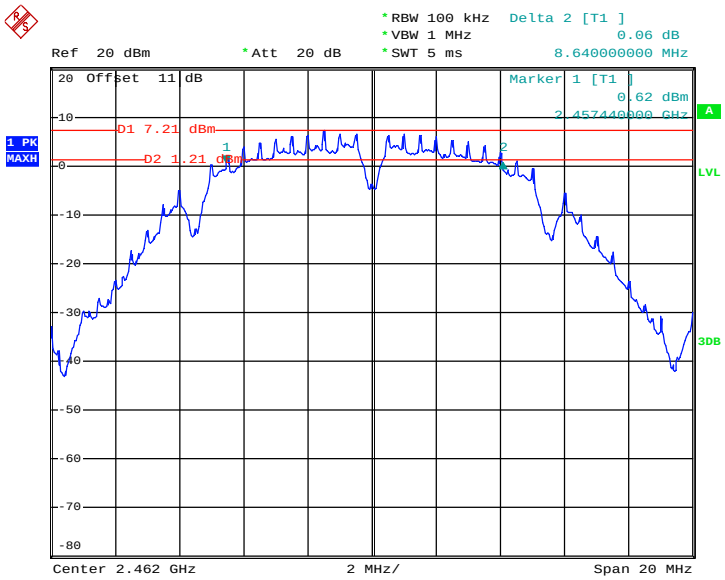
6 dB Bandwidth Plot on 802.11b Channel 11



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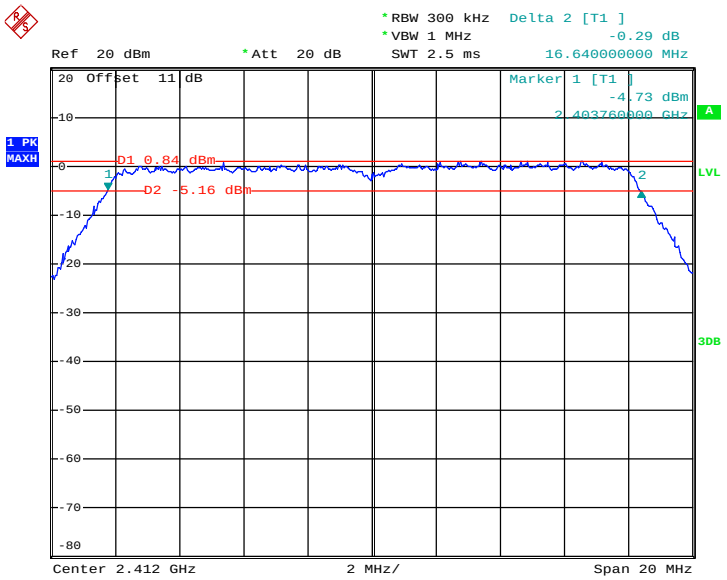
Test Mode :	802.11g	Temperature :	21~22℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.64	0.5	Pass
06	2437	16.68	0.5	Pass
11	2462	16.68	0.5	Pass

6 dB Bandwidth Plot on 802.11g Channel 01



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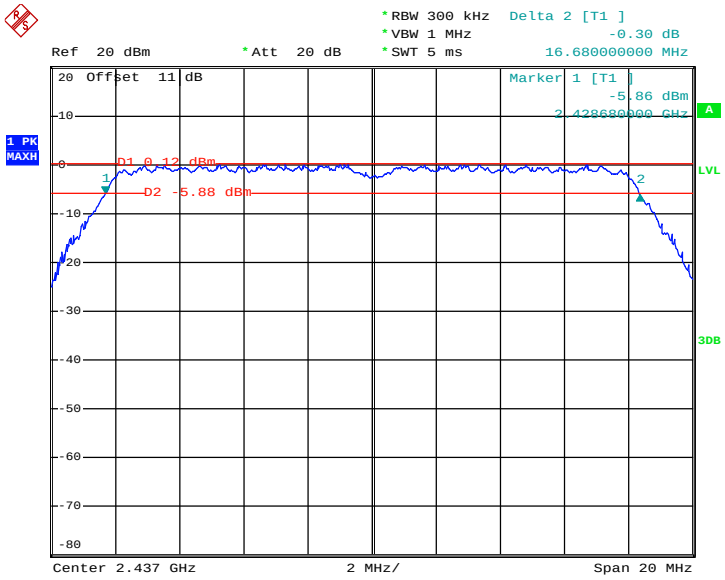
6 dB Bandwidth Plot on 802.11g Channel 06



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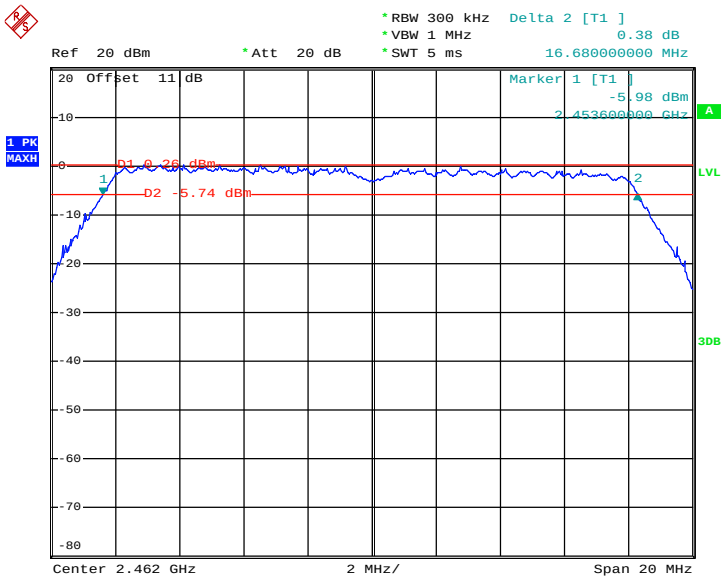
6 dB Bandwidth Plot on 802.11g Channel 11



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3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, 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.

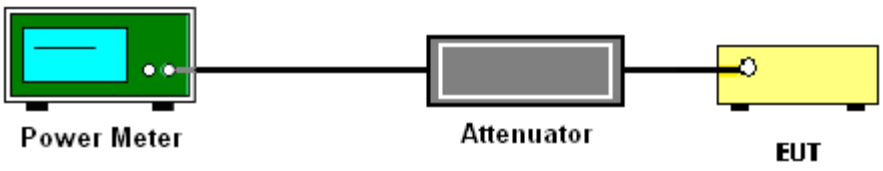
3.2.2 Measuring Instruments

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 and TCB Workshop 2012, April.
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℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	18.87	30	Pass
06	2437	18.48	30	Pass
11	2462	18.32	30	Pass

Test Mode :	802.11g	Temperature :	21~22℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	19.11	30	Pass
06	2437	18.96	30	Pass
11	2462	18.87	30	Pass

3.2.6 Test Result of Average output Power (Reporting Only)

Test Mode :	802.11b	Temperature :	21~22℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%
Duty Cycle:	89.66%	Duty Factor:	0.47dB

Channel	Frequency (MHz)	802.11b Average Output Power (dBm)
01	2412	15.97
06	2437	15.69
11	2462	15.40

Test Mode :	802.11g	Temperature :	21~22℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%
Duty Cycle:	60.93%	Duty Factor:	2.15dB

Channel	Frequency (MHz)	802.11g Average Output Power (dBm)
01	2412	9.23
06	2437	8.77
11	2462	8.58

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.

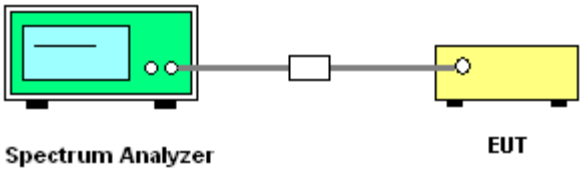
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 5.3.1 (Peak PSD) of 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) = 100 KHz. Video bandwidth (VBW) >= 300 KHz In order to make an accurate measurement, set the span to 5-30% greater than Emission Bandwidth (EBW)
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 in any 100 kHz band segment within the fundamental EBW.
6. Record the measurement data derived from spectrum analyzer.
7. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (3 kHz/100 kHz = -15.2 dB).

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

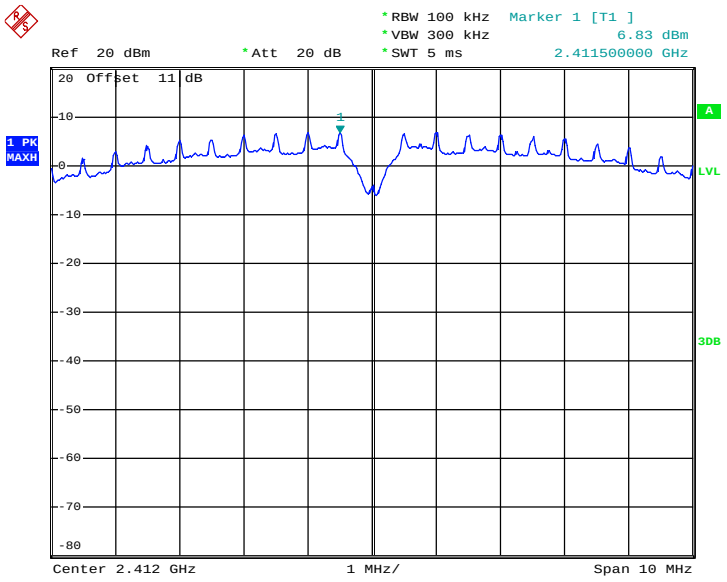
Test Mode :	802.11b	Temperature :	21~22℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11b Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	6.83	-8.37	8	Pass
06	2437	6.22	-8.98	8	Pass
11	2462	6.19	-9.01	8	Pass

Note:

1. *Measured power density (dBm) has offset with cable loss.*
2. *BWCF (dB) = 10 log (3k/100k) = -15.2 dB*
3. *Power Density/ 3kHz (dBm)= Measured power density/ 100KHz (dBm) + BWCF (dB)*

PSD Plot on 802.11b Channel 01



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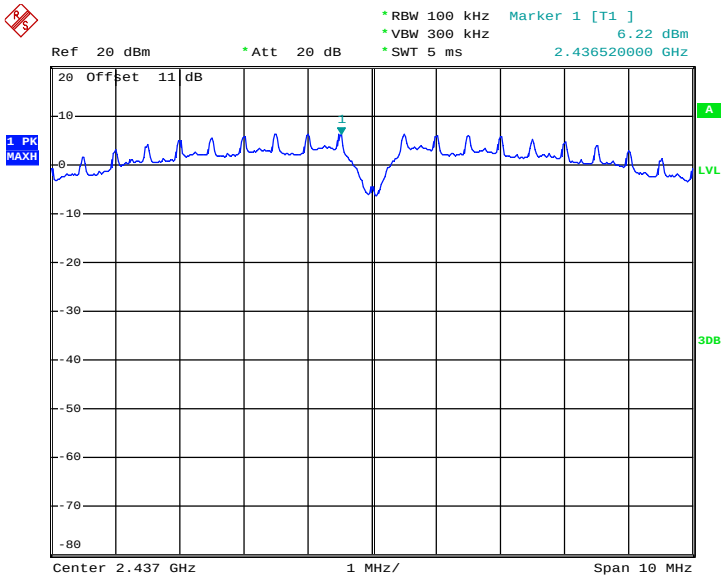
PSD Plot on 802.11b Channel 06



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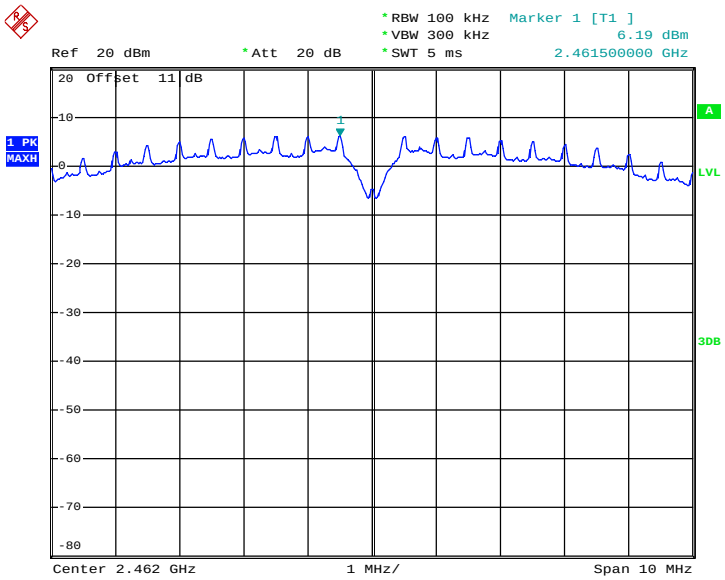
PSD Plot on 802.11b Channel 11



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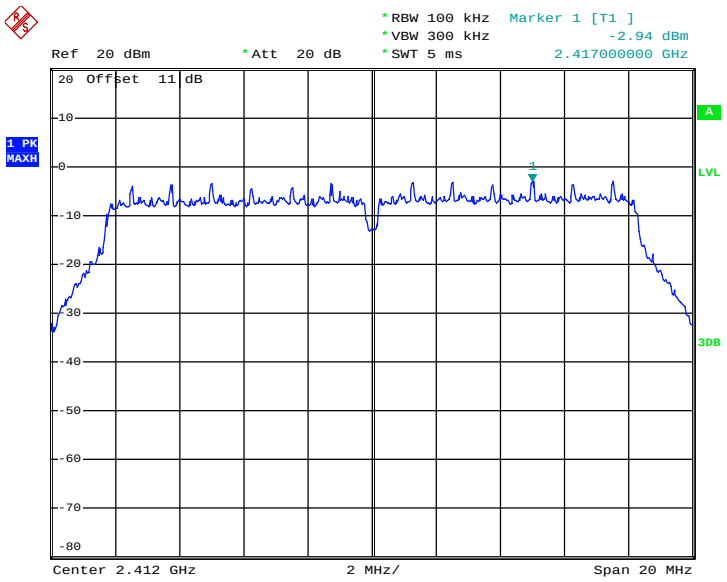
Test Mode :	802.11g	Temperature :	21~22℃
Test Engineer :	Zhi Lu	Relative Humidity :	41~42%

Channel	Frequency (MHz)	802.11g Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	-2.94	-18.14	8	Pass
06	2437	-3.37	-18.57	8	Pass
11	2462	-3.35	-18.55	8	Pass

Note:

1. *Measured power density (dBm) has offset with cable loss.*
2. *BWCF (dB) = 10 log (3k/100k) = -15.2 dB*
3. *Power Density/ 3KHz (dBm)= Measured power density/ 100KHz (dBm) + BWCF (dB)*

PSD Plot on 802.11g Channel 01



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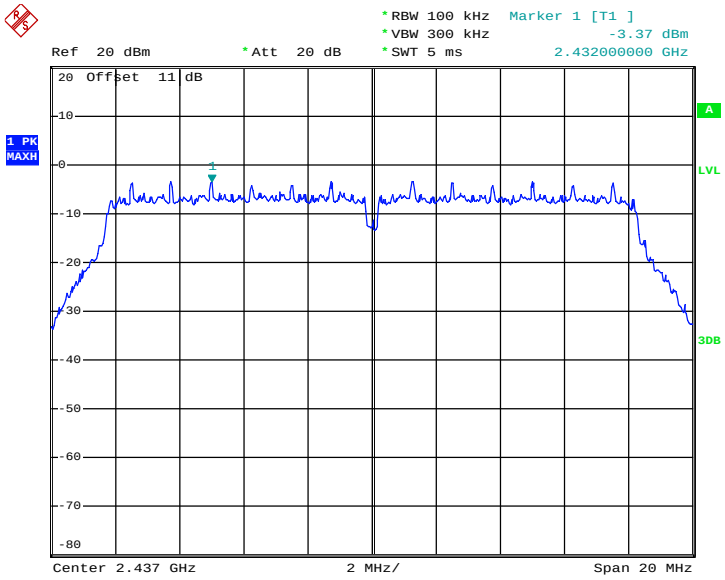
PSD Plot on 802.11g Channel 06



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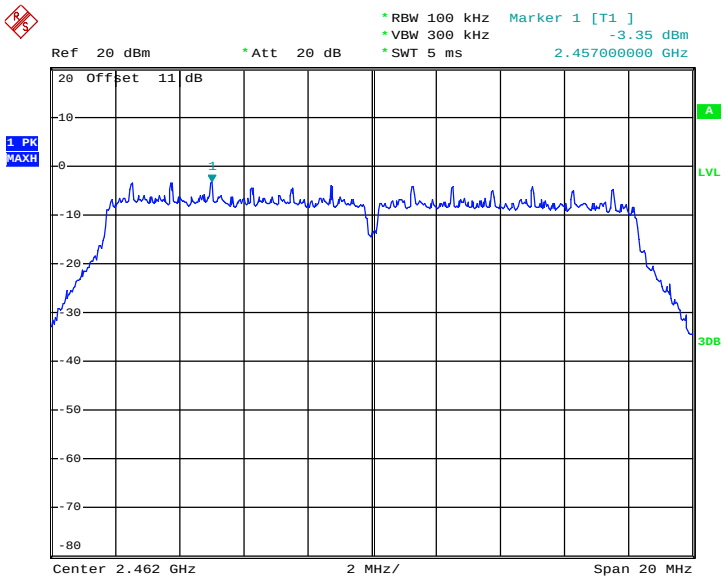
PSD Plot on 802.11g Channel 11



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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

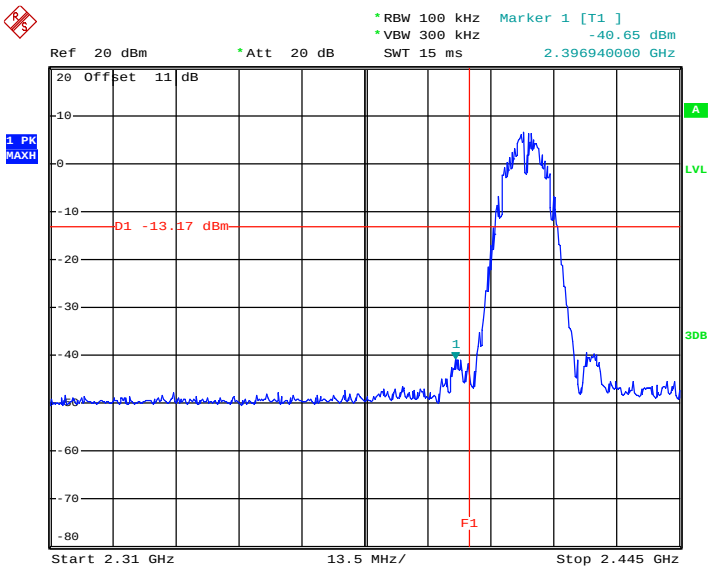
1. The testing follows the guidelines in the Measurement Procedure of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100 KHz, VBW=300 KHz, Peak Detector. Unwanted Emissions 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℃
Test Band :	Low and High	Relative Humidity :	41~42%
Test Channel :	01 and 11	Test Engineer :	Zhi Lu

Low Band Edge Plot on 802.11b Channel 01



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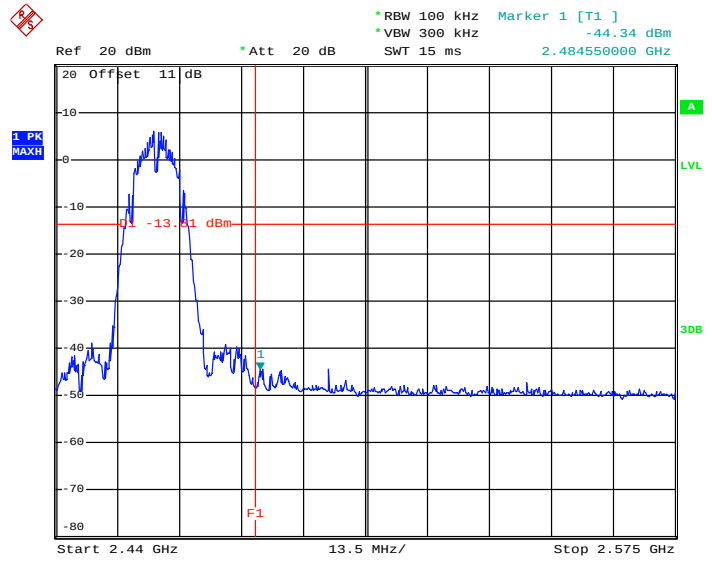
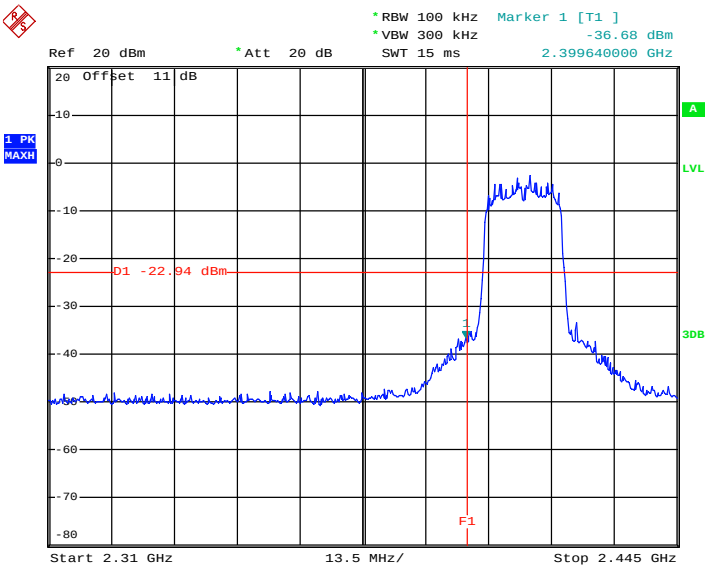
High Band Edge Plot on 802.11b Channel 11



Date: 28.AUG.2012 23:23:57

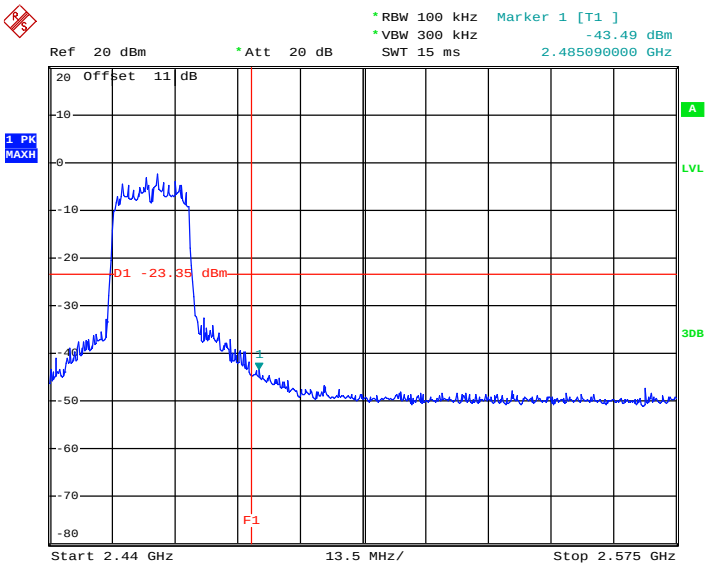
Test Mode :	802.11g	Temperature :	21~22℃
Test Band :	Low and High	Relative Humidity :	41~42%
Test Channel :	01 and 11	Test Engineer :	Zhi Lu

Low Band Edge Plot on 802.11g Channel 01



Date: 28.AUG.2012 23:33:27

High Band Edge Plot on 802.11g Channel 11



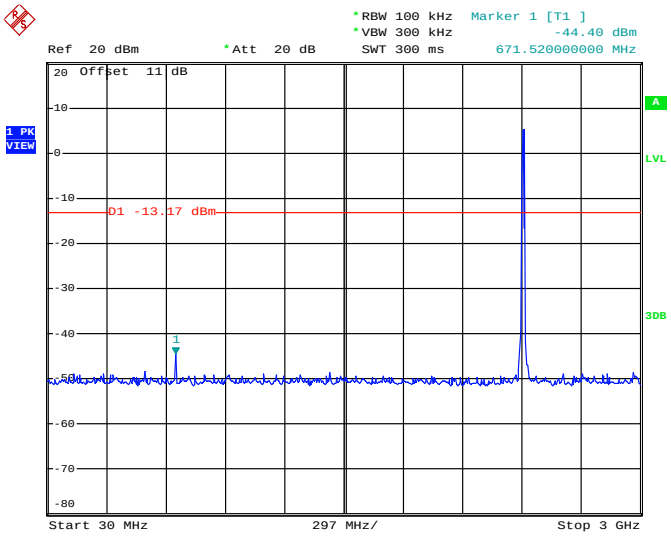
Date: 28.AUG.2012 23:31:16

3.4.6 Test Plots of Spurious Emission

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

802.11b 30 MHz~3 GHz

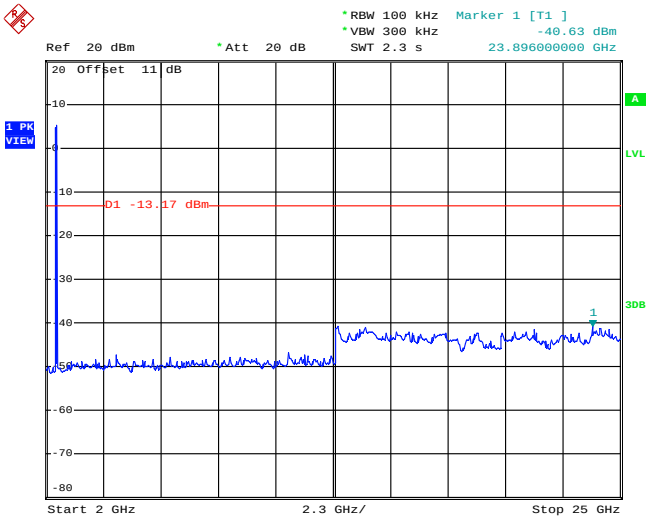
Conducted Spurious Emission Plot on Channel 01



Date: 22.AUG.2012 03:50:20

802.11b 2 GHz~25 GHz

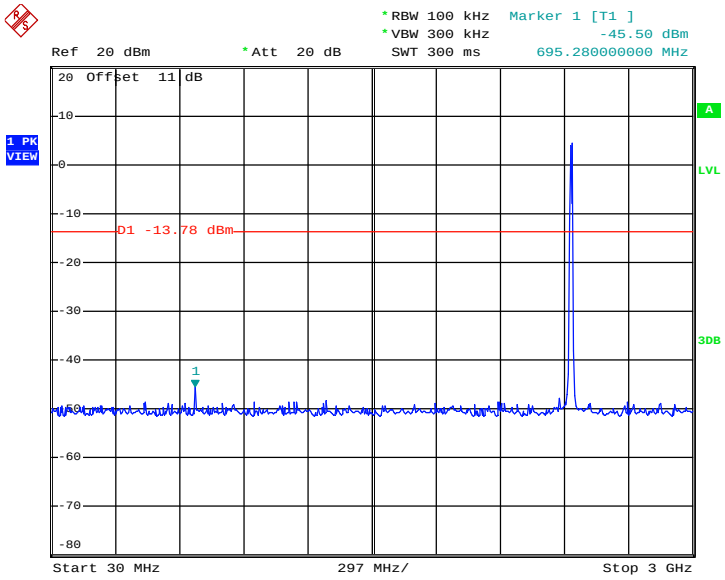
Conducted Spurious Emission Plot on Channel 01



Date: 22.AUG.2012 03:56:40

802.11b 30 MHz~3 GHz

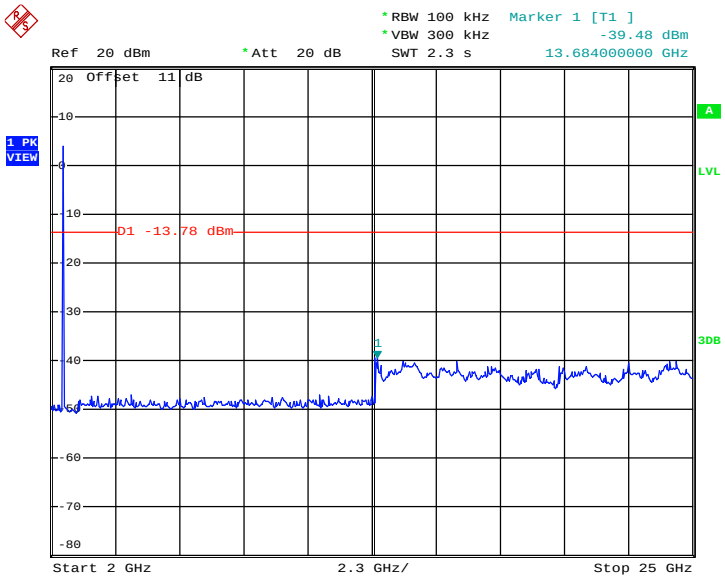
Conducted Spurious Emission Plot on Channel 06



Date: 22.AUG.2012 03:58:44

802.11b 2 GHz~25 GHz

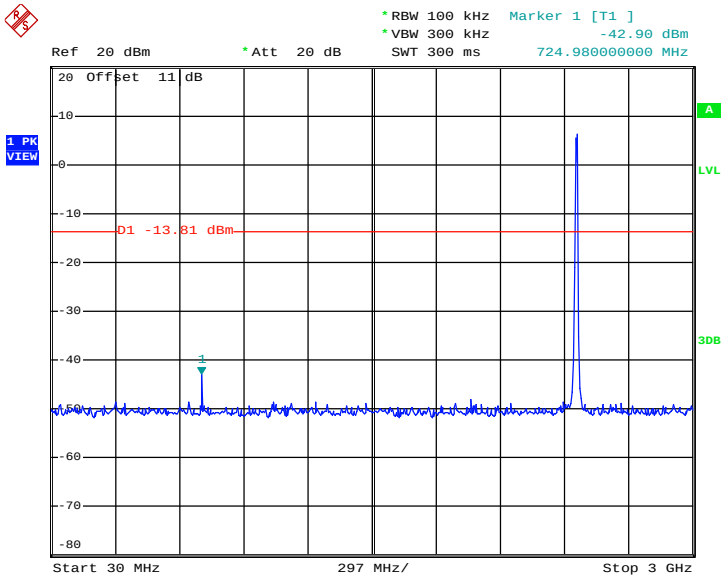
Conducted Spurious Emission Plot on Channel 06



Date: 22.AUG.2012 03:57:53

802.11b 30 MHz~3 GHz

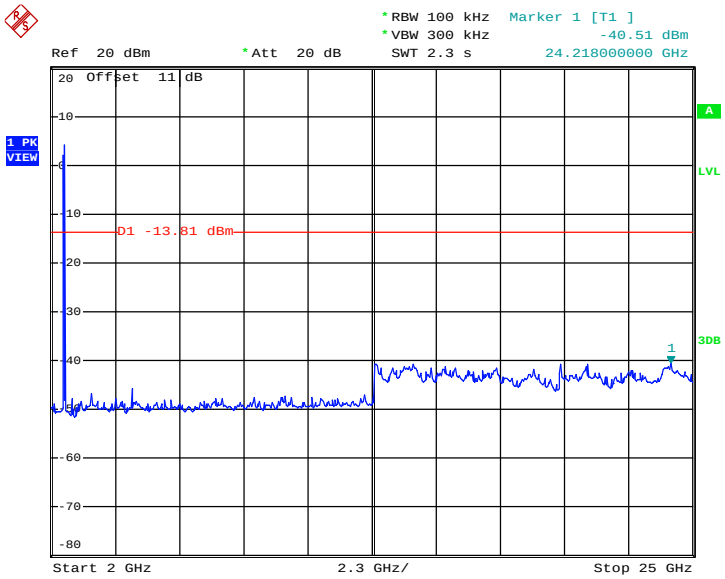
Conducted Spurious Emission Plot on Channel 11



Date: 22.AUG.2012 03:59:34

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11

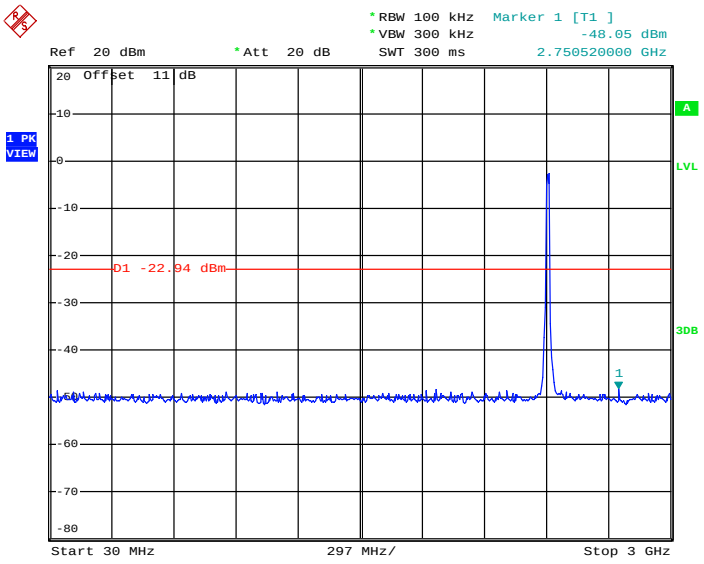


Date: 22.AUG.2012 04:00:17

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

802.11g 30 MHz~3 GHz

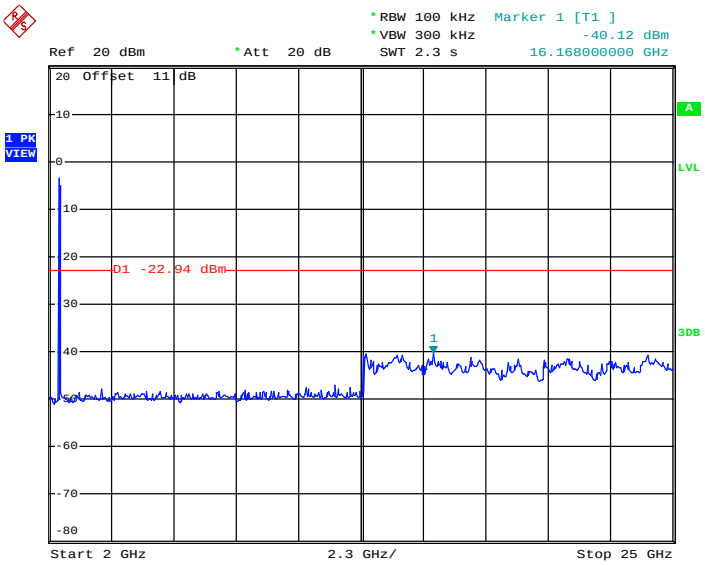
Conducted Spurious Emission Plot on Channel 01



Date: 28.AUG.2012 23:39:11

802.11g 2 GHz~25 GHz

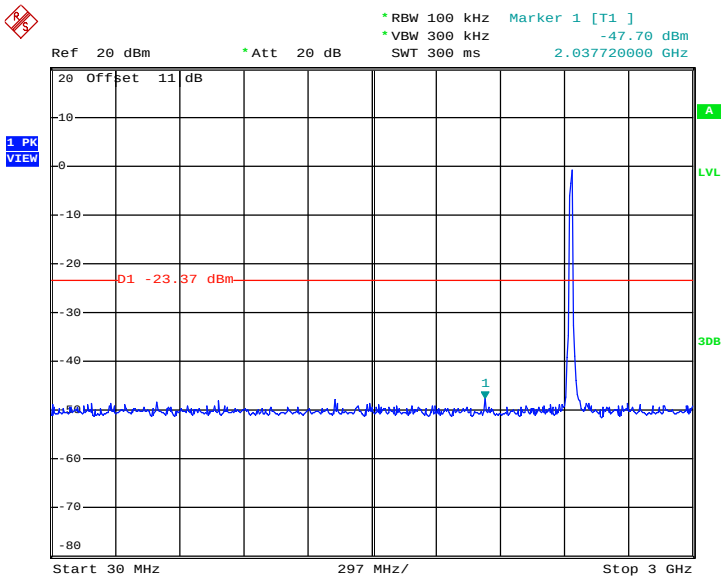
Conducted Spurious Emission Plot on Channel 01



Date: 28.AUG.2012 23:40:17

802.11g 30 MHz~3 GHz

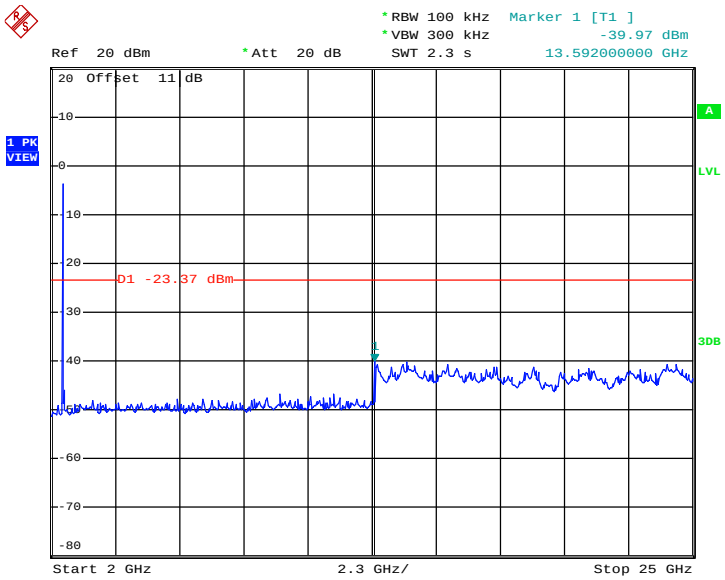
Conducted Spurious Emission Plot on Channel 06



Date: 28.AUG.2012 23:42:37

802.11g 2 GHz~25 GHz

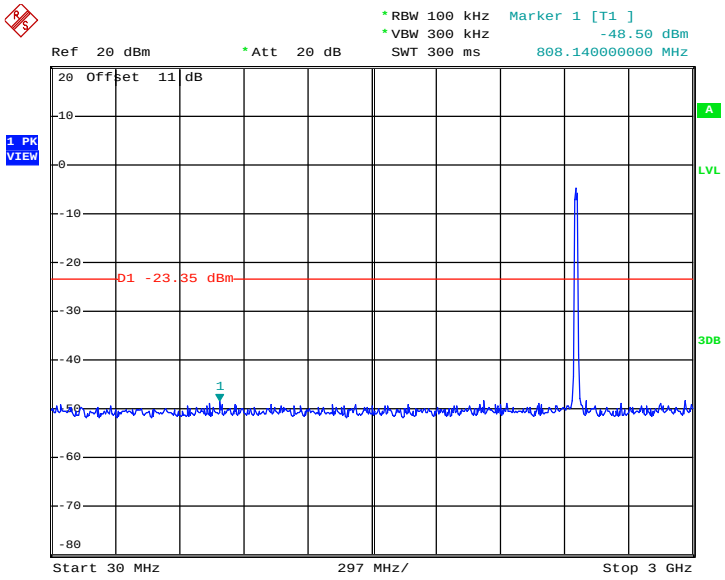
Conducted Spurious Emission Plot on Channel 06



Date: 28.AUG.2012 23:41:32

802.11g 30 MHz~3 GHz

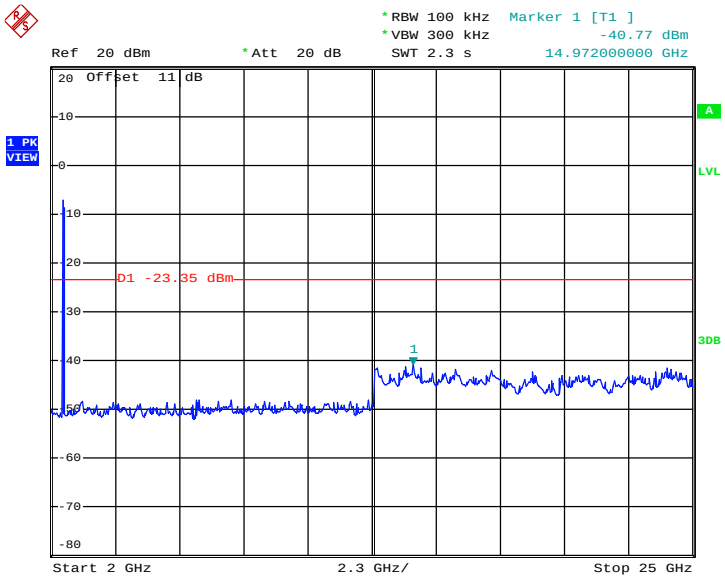
Conducted Spurious Emission Plot on Channel 11



Date: 22.AUG.2012 04:35:00

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



Date: 22.AUG.2012 04:32:53

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

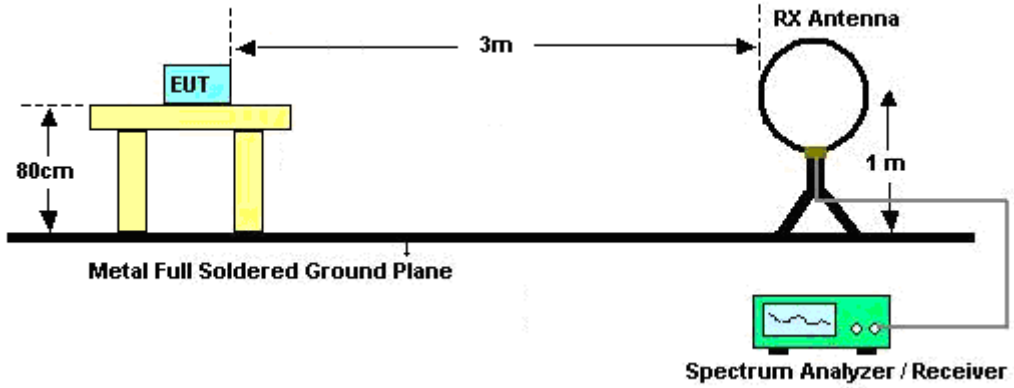
See list of measuring instruments of this test report.

3.5.3 Test Procedures

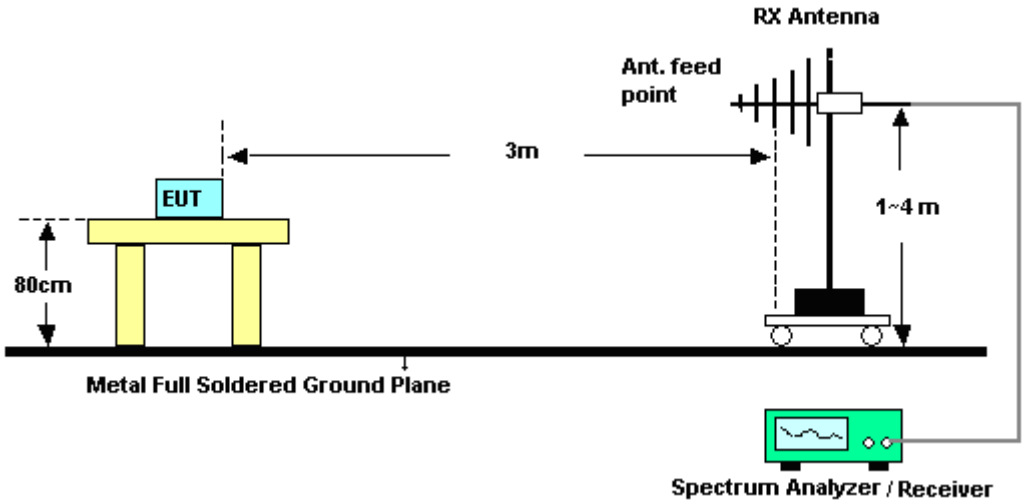
1. The testing follows TCB Workshop 2012, April and fulfills ANSI C63.4-2003 and the guidelines in ANSI C63.10-2009 test site requirement. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) 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. The table was rotated 360 degrees to determine the position of the highest radiation.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. 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 ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for Peak measurement, and then set VBW=10Hz, while maintaining all of the other instrument settings for Average measurement.
7. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
8. 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 repeated using the quasi-peak detector and reported

3.5.4 Test Setup

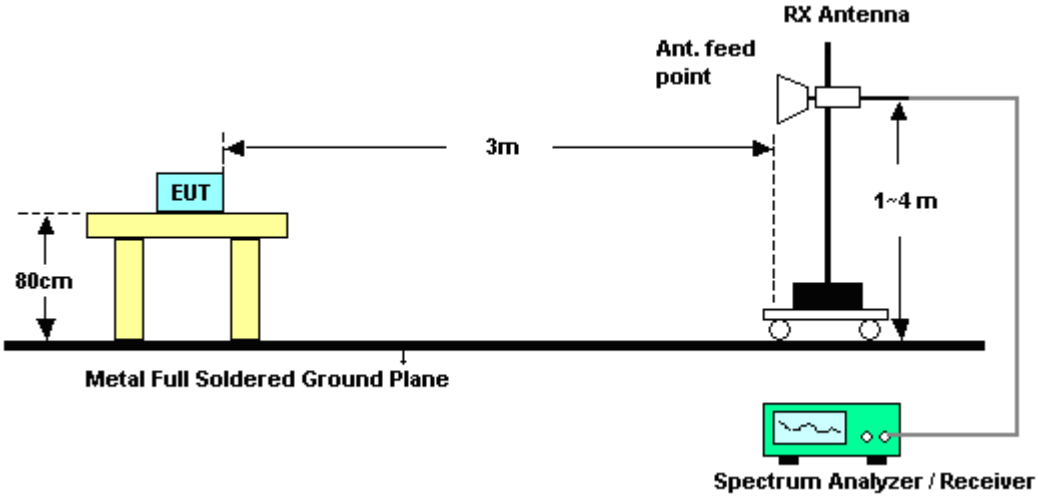
For radiated emissions below 30MHz



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 :	46~47%
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
2388.09	58.65	-15.35	74	56.37	32.86	3.47	34.05	158	100	Peak
2388.09	46.24	-7.76	54	43.96	32.86	3.47	34.05	158	100	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
2386.76	53.62	-20.38	74	51.34	32.86	3.47	34.05	100	340	Peak
2386.76	40.63	-13.37	54	38.35	32.86	3.47	34.05	100	340	Average

Test Mode :	802.11b	Temperature :	21~22°C
Test Band :	High	Relative Humidity :	46~47%
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
2488.79	66.84	-7.16	74	64.3	33.05	3.72	34.23	120	280	Peak
2488.79	50.56	-3.44	54	48.02	33.05	3.72	34.23	120	280	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
2488.03	54.79	-19.21	74	52.25	33.05	3.72	34.23	124	78	Peak
2488.03	42.24	-11.76	54	39.7	33.05	3.72	34.23	124	78	Average

Test Mode :	802.11g	Temperature :	21~22°C
Test Band :	Low	Relative Humidity :	46~47%
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
2389.99	60.57	-13.43	74	58.29	32.86	3.47	34.05	100	80	Peak
2389.99	45.42	-8.58	54	43.14	32.86	3.47	34.05	100	80	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
2389.8	54.56	-19.44	74	52.28	32.86	3.47	34.05	108	56	Peak
2389.8	39.04	-14.96	54	36.76	32.86	3.47	34.05	108	56	Average

Test Mode :	802.11g	Temperature :	21~22°C
Test Band :	High	Relative Humidity :	46~47%
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
2485.75	65.4	-8.6	74	62.91	33.01	3.68	34.2	100	324	Peak
2485.75	44.89	-9.11	54	42.4	33.01	3.68	34.2	100	324	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
2483.85	55.83	-18.17	74	53.34	33.01	3.68	34.2	120	78	Peak
2483.85	38.34	-15.66	54	35.85	33.01	3.68	34.2	120	78	Average

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

Test Mode :	802.11b	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	46~47%
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
36.38	30.32	-9.68	40	45.96	14.19	0.24	30.07	105	25	Peak
56.99	25.49	-14.51	40	49.58	5.75	0.3	30.14	-	-	Peak
166.65	22.65	-20.85	43.5	42.72	9.31	0.54	29.92	-	-	Peak
251.18	27.11	-18.89	46	44.27	12.01	0.67	29.84	-	-	Peak
499.42	22.45	-23.55	46	34.03	17.19	0.96	29.73	-	-	Peak
672.84	25.4	-20.6	46	34.9	19.08	1.11	29.69	-	-	Peak
2388.09	46.24	-7.76	54	43.96	32.86	3.47	34.05	158	100	Average
2388.09	58.65	-15.35	74	56.37	32.86	3.47	34.05	158	100	Peak
2412	100.15	-	-	97.82	32.89	3.52	34.08	163	109	Average
2412	115.4	-	-	113.07	32.89	3.52	34.08	163	109	Peak
2487.65	39.49	-14.51	54	36.95	33.05	3.72	34.23	150	320	Average
2487.65	53.57	-20.43	74	51.03	33.05	3.72	34.23	150	320	Peak
4824	44.17	-9.83	54	36.3	35.17	4.97	32.27	100	360	Average
4824	56.52	-17.48	74	48.65	35.17	4.97	32.27	100	360	Peak

Test Mode :	802.11b	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	46~47%
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
35.75	31.89	-8.11	40	47.09	14.65	0.23	30.08	100	280	Peak
116.95	21.44	-22.06	43.5	39.16	11.8	0.45	29.97	-	-	Peak
252.06	28.38	-17.62	46	45.53	12.03	0.67	29.85	-	-	Peak
307.83	26.55	-19.45	46	42.6	13.17	0.73	29.95	-	-	Peak
721.73	28.16	-17.84	46	37.11	19.55	1.15	29.65	-	-	Peak
955.44	30.32	-15.68	46	37.76	20.76	1.34	29.54	-	-	Peak
2386.76	40.63	-13.37	54	38.35	32.86	3.47	34.05	100	340	Average
2386.76	53.62	-20.38	74	51.34	32.86	3.47	34.05	100	340	Peak
2412	90.51	-	-	88.18	32.89	3.52	34.08	100	321	Average
2412	106.78	-	-	104.45	32.89	3.52	34.08	100	321	Peak
2486.13	37.02	-16.98	54	34.53	33.01	3.68	34.2	100	315	Average
2486.13	51.45	-22.55	74	48.96	33.01	3.68	34.2	100	315	Peak
4824	41.37	-12.63	54	33.5	35.17	4.97	32.27	118	360	Average
4824	53.18	-20.82	74	45.31	35.17	4.97	32.27	118	360	Peak

Test Mode :	802.11b	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	46~47%
Test Engineer :	Chenmy Cheng	Polarization :	Horizontal
Remark :	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
36.38	34.25	-5.75	40	49.89	14.19	0.24	30.07	124	360	Peak
61.56	24.88	-15.12	40	49.42	5.27	0.32	30.13	-	-	Peak
163.18	23.44	-20.06	43.5	43.35	9.49	0.53	29.93	-	-	Peak
250.3	26.63	-19.37	46	43.8	12	0.67	29.84	-	-	Peak
513.63	23.34	-22.66	46	34.59	17.5	0.97	29.72	-	-	Peak
675.21	24.93	-21.07	46	34.41	19.1	1.11	29.69	-	-	Peak
2389.23	40.57	-13.43	54	38.29	32.86	3.47	34.05	100	246	Average
2389.23	53.15	-20.85	74	50.87	32.86	3.47	34.05	100	246	Peak
2437	99.38	-	-	96.98	32.95	3.6	34.15	100	115	Average
2437	113.93	-	-	111.53	32.95	3.6	34.15	100	115	Peak
2492.4	41.88	-12.12	54	39.34	33.05	3.72	34.23	100	128	Average
2492.4	54.34	-19.66	74	51.8	33.05	3.72	34.23	100	128	Peak
4875	45.41	-8.59	54	37.52	35.18	4.98	32.27	111	44	Average
4875	56.01	-17.99	74	48.12	35.18	4.98	32.27	111	44	Peak

Test Mode :	802.11b	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	46~47%
Test Engineer :	Chenmy Cheng	Polarization :	Vertical
Remark :	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
36.77	29	-11	40	44.64	14.19	0.24	30.07	115	120	Peak
42.6	27.09	-12.91	40	46.44	10.48	0.26	30.09	-	-	Peak
117.77	20.77	-22.73	43.5	38.49	11.8	0.45	29.97	-	-	Peak
239.15	25.61	-20.39	46	43.26	11.51	0.66	29.82	-	-	Peak
578.67	26.74	-19.26	46	36.78	18.56	1.04	29.64	-	-	Peak
721.73	28.44	-17.56	46	37.39	19.55	1.15	29.65	-	-	Peak
2347.05	37.06	-16.94	54	34.89	32.78	3.33	33.94	108	50	Average
2347.05	51.46	-22.54	74	49.29	32.78	3.33	33.94	108	50	Peak
2437	91.78	-	-	89.38	32.95	3.6	34.15	113	45	Average
2437	105.38	-	-	102.98	32.95	3.6	34.15	113	45	Peak
2494.49	38.04	-15.96	54	35.5	33.05	3.72	34.23	115	327	Average
2494.49	51.05	-22.95	74	48.51	33.05	3.72	34.23	115	327	Peak
4875	41.11	-12.89	54	33.22	35.18	4.98	32.27	109	360	Average
4875	54.04	-19.96	74	46.15	35.18	4.98	32.27	109	360	Peak

Test Mode :	802.11b	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	46~47%
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
35.5	36.23	-3.77	40	51.43	14.65	0.23	30.08	126	73	Peak
59.65	25.74	-14.26	40	50.27	5.3	0.31	30.14	-	-	Peak
163.18	22.96	-20.54	43.5	42.87	9.49	0.53	29.93	-	-	Peak
252.06	25.49	-20.51	46	42.64	12.03	0.67	29.85	-	-	Peak
508.26	23.01	-22.99	46	34.41	17.36	0.96	29.72	-	-	Peak
670.49	25.91	-20.09	46	35.44	19.05	1.1	29.68	-	-	Peak
2372.51	38.37	-15.63	54	36.13	32.83	3.42	34.01	115	314	Average
2372.51	55.25	-18.75	74	53.01	32.83	3.42	34.01	115	314	Peak
2462	102	-	-	99.55	32.98	3.64	34.17	127	289	Average
2462	116.78	-	-	114.33	32.98	3.64	34.17	127	289	Peak
2488.79	50.56	-3.44	54	48.02	33.05	3.72	34.23	120	280	Average
2488.79	66.84	-7.16	74	64.3	33.05	3.72	34.23	120	280	Peak
4926	41.17	-12.83	54	33.25	35.19	4.99	32.26	100	261	Average
4926	56.25	-17.75	74	48.33	35.19	4.99	32.26	100	261	Peak

Test Mode :	802.11b	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	46~47%
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
36.25	30.42	-9.58	40	45.62	14.65	0.23	30.08	112	287	Peak
42.45	28.62	-11.38	40	47.97	10.48	0.26	30.09	-	-	Peak
121.55	19.47	-24.03	43.5	37.2	11.79	0.45	29.97	-	-	Peak
239.99	24.03	-21.97	46	41.68	11.51	0.66	29.82	-	-	Peak
580.7	26.01	-19.99	46	36.03	18.57	1.05	29.64	-	-	Peak
721.73	29.2	-16.8	46	38.15	19.55	1.15	29.65	-	-	Peak
2376.5	38.24	-15.76	54	36	32.83	3.42	34.01	105	67	Average
2376.5	51.17	-22.83	74	48.93	32.83	3.42	34.01	105	67	Peak
2462	94.21	-	-	91.76	32.98	3.64	34.17	122	324	Average
2462	106.99	-	-	104.54	32.98	3.64	34.17	122	324	Peak
2488.03	42.24	-11.76	54	39.7	33.05	3.72	34.23	124	78	Average
2488.03	54.79	-19.21	74	52.25	33.05	3.72	34.23	124	78	Peak
4923	43.16	-10.84	54	35.24	35.19	4.99	32.26	111	48	Average
4923	57.2	-16.8	74	49.28	35.19	4.99	32.26	111	48	Peak

Test Mode :	802.11g	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	46~47%
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
37.29	35.62	-4.38	40	51.74	13.7	0.24	30.06	100	325	Peak
58.41	25.72	-14.28	40	49.97	5.59	0.3	30.14	-	-	Peak
195.82	35.77	-7.73	43.5	56.38	8.8	0.58	29.99	-	-	Peak
223.73	35.47	-10.53	46	54.38	10.41	0.63	29.95	-	-	Peak
307.83	36.15	-9.85	46	52.2	13.17	0.73	29.95	-	-	Peak
672.84	26.14	-19.86	46	35.64	19.08	1.11	29.69	-	-	Peak
2389.99	45.42	-8.58	54	43.14	32.86	3.47	34.05	100	80	Average
2389.99	60.57	-13.43	74	58.29	32.86	3.47	34.05	100	80	Peak
2412	76.41	-	-	74.08	32.89	3.52	34.08	100	48	Average
2412	109.25	-	-	106.92	32.89	3.52	34.08	100	48	Peak
2488.6	39.06	-14.94	54	36.52	33.05	3.72	34.23	100	327	Average
2488.6	52.69	-21.31	74	50.15	33.05	3.72	34.23	100	327	Peak

Test Mode :	802.11g	Temperature :	21~22℃
Test Channel :	01	Relative Humidity :	46~47%
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
37.02	32.01	-7.99	40	47.65	14.19	0.24	30.07	116	87	Peak
125.89	18.43	-25.07	43.5	36.21	11.74	0.46	29.98	-	-	Peak
226.89	20.85	-25.15	46	39.48	10.67	0.63	29.93	-	-	Peak
475.5	23.48	-22.52	46	35.56	16.75	0.93	29.76	-	-	Peak
580.7	27.03	-18.97	46	37.05	18.57	1.05	29.64	-	-	Peak
719.2	29.06	-16.94	46	38.05	19.52	1.15	29.66	-	-	Peak
2389.8	39.04	-14.96	54	36.76	32.86	3.47	34.05	108	56	Average
2389.8	54.56	-19.44	74	52.28	32.86	3.47	34.05	108	56	Peak
2412	72.08	-	-	69.75	32.89	3.52	34.08	113	48	Average
2412	101.2	-	-	98.87	32.89	3.52	34.08	113	48	Peak
2493.92	37.77	-16.23	54	35.23	33.05	3.72	34.23	100	320	Average
2493.92	50.78	-23.22	74	48.24	33.05	3.72	34.23	100	320	Peak

Test Mode :	802.11g	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	46~47%
Test Engineer :	Chenmy Cheng	Polarization :	Horizontal
Remark :	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
38.48	33.56	-6.44	40	50.37	12.98	0.25	30.04	108	96	Peak
59.23	26.25	-13.75	40	50.64	5.44	0.31	30.14	-	-	Peak
129.47	20.46	-23.04	43.5	38.28	11.7	0.47	29.99	-	-	Peak
237.48	24.14	-21.86	46	41.92	11.4	0.65	29.83	-	-	Peak
504.71	23.47	-22.53	46	34.97	17.27	0.96	29.73	-	-	Peak
670.49	26.14	-19.86	46	35.67	19.05	1.1	29.68	-	-	Peak
2388.28	38.59	-15.41	54	36.31	32.86	3.47	34.05	125	89	Average
2388.28	51.8	-22.2	74	49.52	32.86	3.47	34.05	125	89	Peak
2437	75.74	-	-	73.34	32.95	3.6	34.15	132	287	Average
2437	107.98	-	-	105.58	32.95	3.6	34.15	132	287	Peak
2492.59	39.09	-14.91	54	36.55	33.05	3.72	34.23	115	324	Average
2492.59	53.1	-20.9	74	50.56	33.05	3.72	34.23	115	324	Peak

Test Mode :	802.11g	Temperature :	21~22℃
Test Channel :	06	Relative Humidity :	46~47%
Test Engineer :	Chenmy Cheng	Polarization :	Vertical
Remark :	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
36.51	32.1	-7.9	40	47.74	14.19	0.24	30.07	152	39	Peak
128.56	17.73	-25.77	43.5	35.53	11.71	0.47	29.98	-	-	Peak
223.73	28.34	-17.66	46	47.25	10.41	0.63	29.95	-	-	Peak
307.83	22.24	-23.76	46	38.29	13.17	0.73	29.95	-	-	Peak
580.7	26.03	-19.97	46	36.05	18.57	1.05	29.64	-	-	Peak
721.73	28.23	-17.77	46	37.18	19.55	1.15	29.65	-	-	Peak
2328.43	37.13	-16.87	54	35	32.76	3.27	33.9	100	326	Average
2328.43	50.85	-23.15	74	48.72	32.76	3.27	33.9	100	326	Peak
2437	68.74	-	-	66.34	32.95	3.6	34.15	115	89	Average
2437	98.34	-	-	95.94	32.95	3.6	34.15	115	89	Peak
2492.47	37.65	-16.35	54	35.11	33.05	3.72	34.23	100	340	Average
2492.47	50.92	-23.08	74	48.38	33.05	3.72	34.23	100	340	Peak

Test Mode :	802.11g	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	46~47%
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
36.77	32.93	-7.07	40	48.57	14.19	0.24	30.07	100	324	Peak
60.07	25.82	-14.18	40	50.35	5.3	0.31	30.14	-	-	Peak
129.92	18.91	-24.59	43.5	36.73	11.7	0.47	29.99	-	-	Peak
239.15	23.89	-22.11	46	41.54	11.51	0.66	29.82	-	-	Peak
513.63	23.22	-22.78	46	34.47	17.5	0.97	29.72	-	-	Peak
668.14	25.46	-20.54	46	35.01	19.03	1.1	29.68	-	-	Peak
2311.52	37.3	-16.7	54	35.21	32.73	3.22	33.86	100	78	Average
2311.52	51.24	-22.76	74	49.15	32.73	3.22	33.86	100	78	Peak
2462	77.14	-	-	74.69	32.98	3.64	34.17	100	80	Average
2462	110.14	-	-	107.69	32.98	3.64	34.17	100	80	Peak
2485.75	44.89	-9.11	54	42.4	33.01	3.68	34.2	100	324	Average
2485.75	65.4	-8.6	74	62.91	33.01	3.68	34.2	100	324	Peak

Test Mode :	802.11g	Temperature :	21~22℃
Test Channel :	11	Relative Humidity :	46~47%
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
36	32.15	-7.85	40	47.35	14.65	0.23	30.08	114	78	Peak
43.51	28.16	-11.84	40	47.97	10.03	0.27	30.11	-	-	Peak
120.7	17.76	-25.74	43.5	35.49	11.79	0.45	29.97	-	-	Peak
229.29	23.87	-22.13	46	42.31	10.83	0.64	29.91	-	-	Peak
578.67	26.18	-19.82	46	36.22	18.56	1.04	29.64	-	-	Peak
721.73	28.54	-17.46	46	37.49	19.55	1.15	29.65	-	-	Peak
2380.87	37.1	-16.9	54	34.86	32.83	3.42	34.01	128	320	Average
2380.87	51.16	-22.84	74	48.92	32.83	3.42	34.01	128	320	Peak
2462	69.02	-	-	66.57	32.98	3.64	34.17	146	360	Average
2462	99.48	-	-	97.03	32.98	3.64	34.17	146	360	Peak
2483.85	38.34	-15.66	54	35.85	33.01	3.68	34.2	120	78	Average
2483.85	55.83	-18.17	74	53.34	33.01	3.68	34.2	120	78	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.

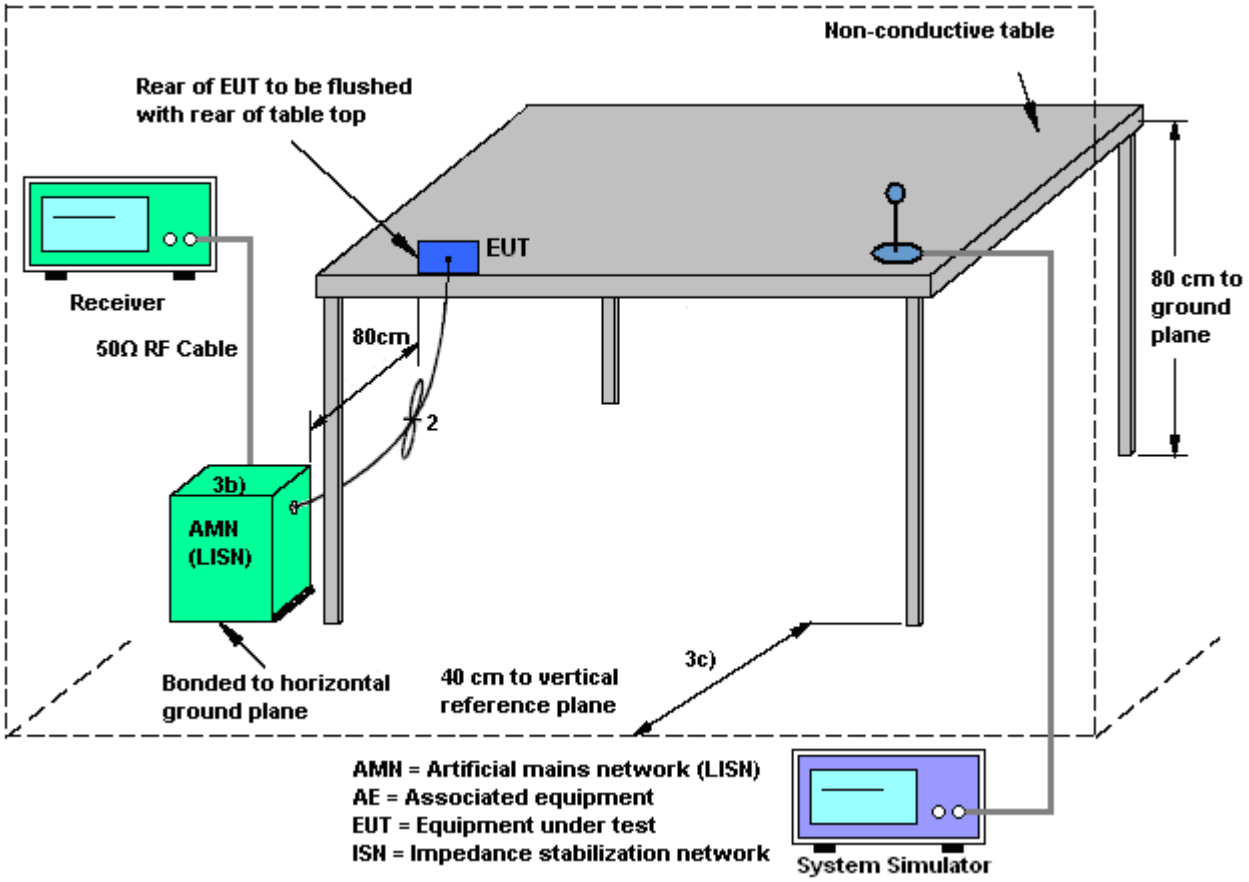
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

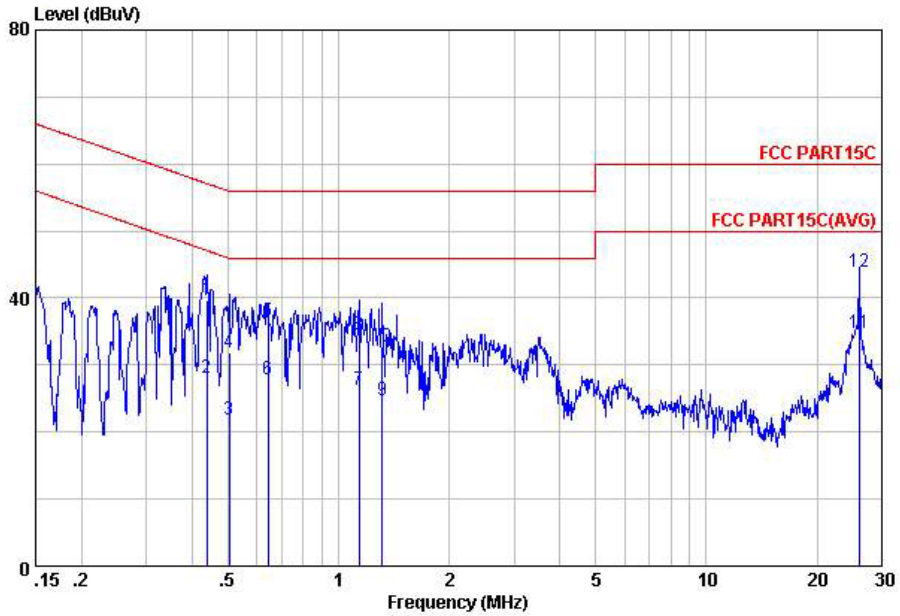
1. The testing follows the guidelines in ANSI C63.4-2003 and ANSI C63.10-2009.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance 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 :	19~20℃
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.		

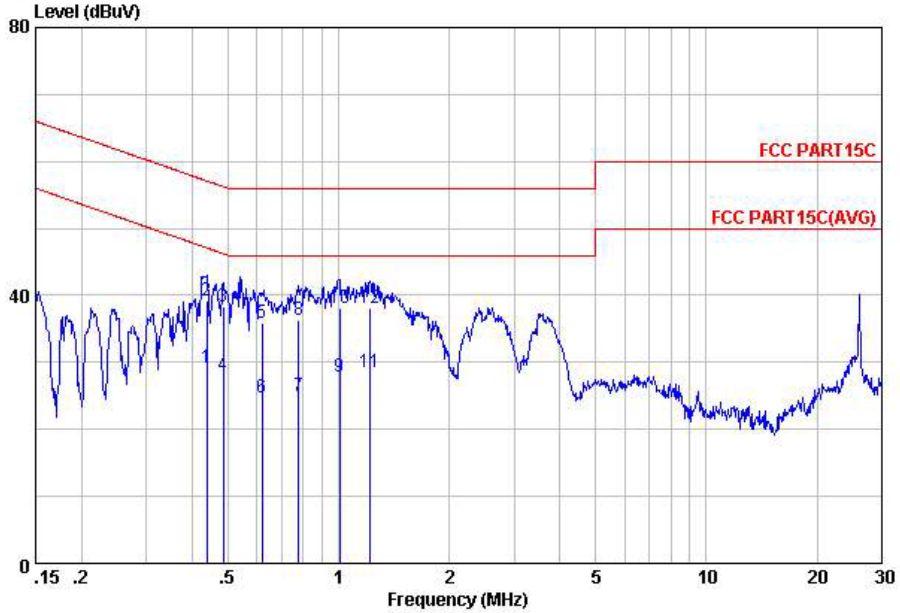


Site : C001-KS
Condition: FCC PART15C LISN-111230 LINE

mode : Mode 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.44	39.74	-17.37	57.11	29.20	-0.08	10.62	QP
2	0.44	28.14	-18.97	47.11	17.60	-0.08	10.62	Average
3	0.50	21.94	-24.06	46.00	11.40	-0.08	10.62	Average
4	0.50	31.84	-24.16	56.00	21.30	-0.08	10.62	QP
5	0.64	36.45	-19.55	56.00	25.90	-0.09	10.64	QP
6	0.64	27.95	-18.05	46.00	17.40	-0.09	10.64	Average
7	1.14	26.35	-19.65	46.00	15.79	-0.10	10.66	Average
8	1.14	34.55	-21.45	56.00	23.99	-0.10	10.66	QP
9	1.32	24.76	-21.24	46.00	14.19	-0.10	10.67	Average
10	1.32	32.76	-23.24	56.00	22.19	-0.10	10.67	QP
11	26.00	34.74	-15.26	50.00	23.40	0.20	11.14	Average
12	26.00	43.94	-16.06	60.00	32.60	0.20	11.14	QP

Test Mode :	Mode 1	Temperature :	19~20℃
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	0.44	29.24	-17.87	47.11	18.70	-0.08	10.62	Average
2	0.44	39.14	-17.97	57.11	28.60	-0.08	10.62	QP
3	0.49	38.34	-17.89	56.23	27.80	-0.08	10.62	QP
4	0.49	28.04	-18.19	46.23	17.50	-0.08	10.62	Average
5	0.62	35.95	-20.05	56.00	25.40	-0.08	10.63	QP
6	0.62	24.75	-21.25	46.00	14.20	-0.08	10.63	Average
7	0.78	25.06	-20.94	46.00	14.50	-0.08	10.64	Average
8	0.78	36.26	-19.74	56.00	25.70	-0.08	10.64	QP
9	1.00	27.96	-18.04	46.00	17.40	-0.09	10.65	Average
10	1.00	38.16	-17.84	56.00	27.60	-0.09	10.65	QP
11	1.22	28.57	-17.43	46.00	18.00	-0.09	10.66	Average
12	1.22	38.17	-17.83	56.00	27.60	-0.09	10.66	QP

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	Aug. 22, 2012/ Aug. 28, 2012	Dec. 29, 2012	Conducted (TH01-KS)
Power Meter	Agilent	E4416A	MY45101555	N/A	Aug. 22, 2012	Aug. 22, 2012/ Aug. 28, 2012	Aug. 21, 2013	Conducted (TH01-KS)
Power Sensor	Agilent	E9327A	MY44421198	N/A	Aug. 22, 2012	Aug. 22, 2012/ Aug. 28, 2012	Aug. 21, 2013	Conducted (TH01-KS)
DC Power Supply	GWINSTEK	GPS-3030D	E1884515	N/A	Aug. 22, 2012	Aug. 22, 2012/ Aug. 28, 2012	Aug. 21, 2013	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	N/A	Dec. 30, 2011	Aug. 22, 2012/ Aug. 28, 2012	Dec. 29, 2012	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 09, 2011	Aug. 28, 2012	Nov. 08, 2012	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 30, 2011	Aug. 28, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 08, 2011	Aug. 28, 2012	Dec. 07, 2012	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	860004/ 001	9 kHz~30 MHz	Jul. 03, 2012	Aug. 28, 2012	Jul. 02, 2013	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1GHz~18GHz	Jan. 06, 2012	Aug. 28, 2012	Jan. 05, 2013	Radiation (03CH01-KS)
Amplifier	Wireless	FPA-6592G	060004	30MHz~2GHz	Dec. 30, 2011	Aug. 28, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Dec. 30, 2011	Aug. 28, 2012	Dec. 29, 2012	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701023	1GHz~18GHz	Nov. 07, 2011	Aug. 28, 2012	Nov. 06, 2012	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Oct. 11, 2011	Aug. 28, 2012	Oct.10, 2012	Radiation (03CH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	Jun. 01, 2012	Aug. 20, 2012	May 31, 2013	Conduction (CO01-KS)
LISN	MessTec	AN3016	60103	9kHz~30MHz	Dec. 30, 2011	Aug. 20, 2012	Dec. 29, 2012	Conduction (CO01-KS)
LISN	MessTec	AN3016	60105	9kHz~30MHz	Dec. 30, 2011	Aug. 20, 2012	Dec. 29, 2012	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	N/A	Nov. 16, 2011	Aug. 20, 2012	Nov. 15, 2012	Conduction (CO01-KS)
System Simulator	R&S	CMU200	837587/066	2G Full-Band	Dec. 30, 2011	Aug. 20, 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

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.54

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

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 EP281501 as below.