



Test Report

Product Name	IPC
Model No	AR-V5403FLxxxx (x=0~9,A~Z or Space)
FCC ID.	ZJD-ARV5403FL

Applicant	Acrosser Technology Co., Ltd
Address	10F., No.12, Lane 609, Sec. 5, Chongsin Rd., Sanchong District, New Taipei City 241, Taiwan, R.O.C.

Date of Receipt	May 10, 2011
Issue Date	May 16, 2011
Report No.	115211R-RFUSP28V01
Report Version	V1.0

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Test Report Certification

Issue Date: May 16, 2011
Report No.: 115211R-RFUSP28V01



Accredited by NIST (NVLAP)
NVLAP Lab Code: 200533-0

Product Name	IPC
Applicant	Acrosser Technology Co., Ltd
Address	10F., No.12, Lane 609, Sec. 5, Chongsin Rd., Sanchong District, New Taipei City 241, Taiwan, R.O.C.
Manufacturer	Acrosser Technology Co., Ltd
Model No.	AR-V5403FLxxxx (x=0~9,A~Z or Space)
FCC ID.	ZJD-ARV5403FL
EUT Rated Voltage	AC 100-240 V, 50-60 Hz
EUT Test Voltage	AC 120V/ 60Hz
Trade Name	Acrosser
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2010 ANSI C63.4: 2009
Test Result	Complied



The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By :

(Senior Adm. Specialist / Rita Huang)



Tested By :

(Engineer / Vincent Chu)



Testing Laboratory
0914

Approved By :

(Manager / Vincent Lin)

TABLE OF CONTENTS

Description	Page
1. GENERAL INFORMATION	5
1.1. EUT Description.....	5
1.2. Operational Description	7
1.3. Tested System Details.....	8
1.4. Configuration of Tested System	9
1.5. EUT Exercise Software	9
1.6. Test Facility	10
2. Conducted Emission.....	11
2.1. Test Equipment.....	11
2.2. Test Setup	11
2.3. Limits	12
2.4. Test Procedure	12
2.5. Uncertainty	12
2.6. Test Result of Conducted Emission.....	13
3. Peak Power Output	15
3.1. Test Equipment.....	15
3.2. Test Setup	15
3.3. Limits	15
3.4. Test Procedure	15
3.5. Uncertainty	15
3.6. Test Result of Peak Power Output.....	16
4. Radiated Emission.....	20
4.1. Test Equipment.....	20
4.2. Test Setup	21
4.3. Limits	22
4.4. Test Procedure	23
4.5. Uncertainty	23
4.6. Test Result of Radiated Emission.....	24
5. RF antenna conducted test.....	40
5.1. Test Equipment.....	40
5.2. Test Setup	40
5.3. Limits	40
5.4. Test Procedure	41
5.5. Uncertainty	41
5.6. Test Result of RF antenna conducted test.....	42
6. Band Edge	62
6.1. Test Equipment.....	62
6.2. Test Setup	63
6.3. Limits	63
6.4. Test Procedure	64
6.5. Uncertainty	64
6.6. Test Result of Band Edge	65

7.	Occupied Bandwidth	81
7.1.	Test Equipment.....	81
7.2.	Test Setup	81
7.3.	Limits	81
7.4.	Test Procedure	81
7.5.	Uncertainty	81
7.6.	Test Result of Occupied Bandwidth	82
8.	Power Density	94
8.1.	Test Equipment.....	94
8.2.	Test Setup	94
8.3.	Limits	94
8.4.	Test Procedure	94
8.5.	Uncertainty	94
8.6.	Test Result of Power Density	95
9.	EMI Reduction Method During Compliance Testing	107

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	IPC
Trade Name	Acrosser
Model No.	AR-V5403FLxxxx (x=0~9,A~Z or Space)
FCC ID.	ZJD-ARV5403FL
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW, 2422-2452MHz for 802.11n-40BW
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 150Mbps
Type of Modulation	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	Dipole
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
Power Adapter	MFR: FSP, M/N: FSP096AHB Input: AC 100-240V, 50-60Hz, 2.0A Output: DC 12V-8A Cable out: Non-Shielded, 2.5m, with one ferrite core bonded. Power Cord: Non-Shielded, 0.8m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	KINSUN	6603803081-000	Dipole	2.89 dBi for 2.4 GHz

Note: The antenna of EUT is conform to FCC 15.203

802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

802.11n-40MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2422 MHz	Channel 02:	2427 MHz	Channel 03:	2432 MHz	Channel 04:	2437 MHz
Channel 05:	2442 MHz	Channel 06:	2447 MHz	Channel 07:	2452 MHz		

Note:

1. The EUT is a IPC, contains functions and so on WLAN 、Bluetooth , This report for WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps 、802.11g is 6Mbps 、802.11n(20M-BW) is 7.2Mbps and 、802.11n(40M-BW) is 15Mbps)
4. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

1.2. Operational Description

The EUT is a IPC, This device provided four kinds of transmitting speed 1, 2, 5.5 and 11Mbps and the device of RF carrier is DBPSK, DQPSK and CCK (IEEE 802.11b). The device provided of eight kinds of transmitting speed 6, 9, 12, 18, 24, 36, 48 and 54Mbps the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11g).

The device provided of eight kinds of transmitting speed 7.2,14.4,21.7,28.9,43.3,57.8,65 and 72.2Mbps in 802.11n(20M-BW) mode and 15,30,45,60,90,120,135 and 150 Mbps(40M-BW) the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11n), The IEEE 802.11n is "Single In, Single Out" (SISO) technology and two antennas to support 1(Transmit) * 1(Receive) SISO technology.

This IPC, compliant with IEEE 802.11b and IEEE 802.11g/n, is a high-efficiency Wireless LAN adapter. It allows your computer to connect to a wireless network and to share resources, such as files or printers without being bound to the network wires. Operation in 2.4GHz Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM) radio transmission, the IPC Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11b and IEEE 802.11g/n network.

This equipment includes WLAN and Bluetooth, which can transmit signals simultaneously, the antenna distance small than 5 cm.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)
	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

NOTE: In n-20 and n-40 mode the power combiner is used, the factor of combiner is 10dB and offset it in test instrument.

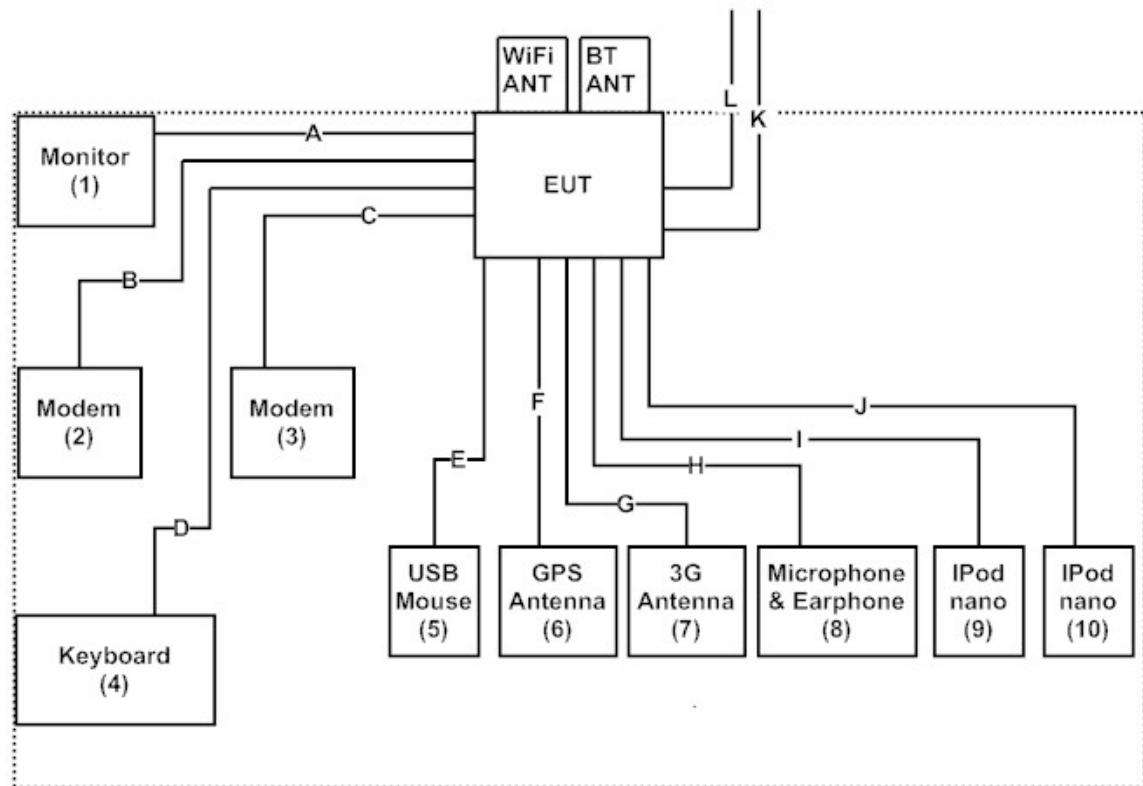
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1 Monitor	LG	W2261VT	907YHZK07373	DoC	Non-Shielded, 1.8m
2 Modem	ACEEX	DM-1414	0102027541	IFAXDM1414	Non-Shielded, 1.8m
3 Modem	ACEEX	DM-1414	0102027559	IFAXDM1414	Non-Shielded, 1.8m
4 Keyboard	DELL	SK-8115	MY-0DJ325-71619-6A 3-1917	DoC	N/A
5 USB Mouse	DELL	M056U0A	F0Y01YEF	DoC8	N/A
6 GPS Antenna	N/A	DAM1575A4	N/A	N/A	N/A
7 3G Antenna	Mobile mark	N/A	N/A	N/A	N/A
8 Microphone & Earphone	Ergotech	ET-E201	N/A	N/A	N/A
9 iPod nano	Apple	A1199	5U704829VQ5	N/A	N/A
10 iPod nano	Apple	A1199	5U705F6YVQ5	N/A	N/A

Signal Cable Type		Signal cable Description
A	VGA Cable	
B	RS-232 Cable	
C	RS-232 Cable	
D	USB Cable	
E	USB Cable	
F	GPS Antenna Cable	
G	3G Antenna Cable	
H	Microphone & Earphone Cable	
I	USB Cable	
J	USB Cable	
K	RJ45 Cable	
L	RJ45 Cable	

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4.
- (2) Execute “RT3x7xQA” on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start the continuous transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site: <http://www.quietek.com/tw/ctg/cts/accreditations.htm>
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <http://www.quietek.com/>

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195



Accreditation on NVLAP
NVLAP Lab Code: 200533-0



Site Name: Quietek Corporation
Site Address: No.5-22, Ruishukeng,
Linkou Dist. New Taipei City 24451,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014



2. Conducted Emission

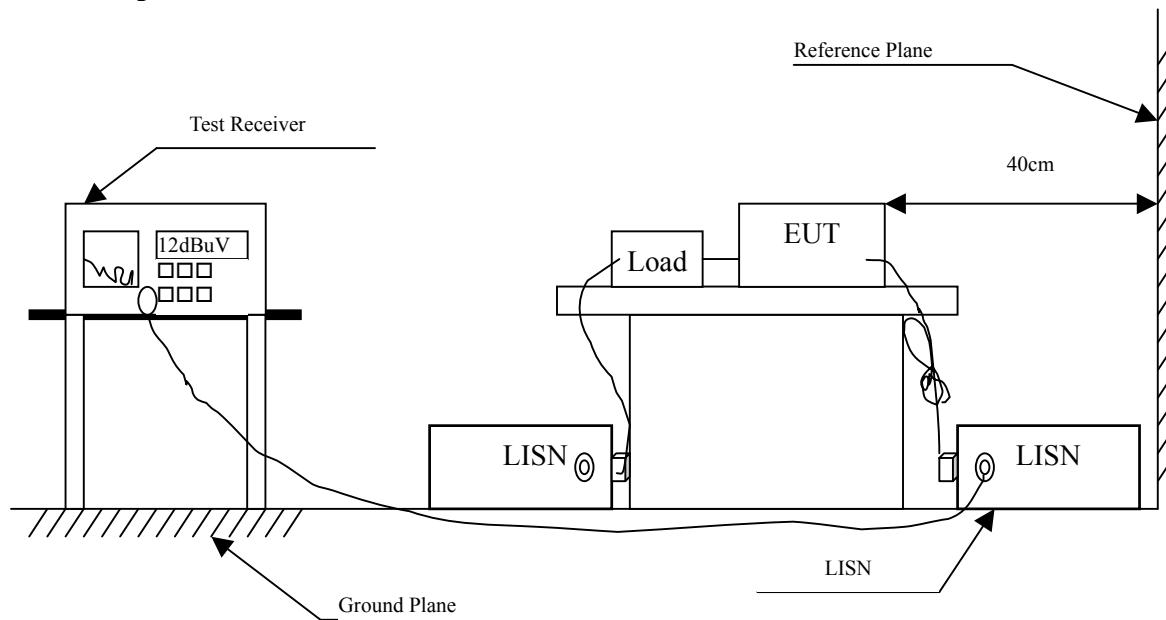
2.1. Test Equipment

The following test equipment are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2011	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2011	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2011	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2011	
5	No.1 Shielded Room			N/A	

Note: All instruments are calibrated every one year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2009 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : IPC
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.209	9.701	40.170	49.871	-14.443	64.314
0.291	9.653	40.140	49.793	-12.178	61.971
0.568	9.640	29.530	39.170	-16.830	56.000
0.841	9.652	25.210	34.862	-21.138	56.000
3.697	9.700	19.320	29.020	-26.980	56.000
13.584	9.940	22.240	32.180	-27.820	60.000
Average					
0.209	9.701	29.470	39.171	-15.143	54.314
0.291	9.653	30.730	40.383	-11.588	51.971
0.568	9.640	16.730	26.370	-19.630	46.000
0.841	9.652	15.860	25.512	-20.488	46.000
3.697	9.700	10.550	20.250	-25.750	46.000
13.584	9.940	11.970	21.910	-28.090	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ ” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : IPC
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.209	9.711	36.680	46.391	-17.923	64.314
0.287	9.664	40.130	49.794	-12.292	62.086
0.427	9.650	27.940	37.590	-20.496	58.086
0.713	9.650	23.510	33.160	-22.840	56.000
3.420	9.690	20.250	29.940	-26.060	56.000
12.783	9.910	23.600	33.510	-26.490	60.000
Average					
0.209	9.711	26.640	36.351	-17.963	54.314
0.287	9.664	32.420	42.084	-10.002	52.086
0.427	9.650	20.860	30.510	-17.576	48.086
0.713	9.650	16.140	25.790	-20.210	46.000
3.420	9.690	11.770	21.460	-24.540	46.000
12.783	9.910	12.490	22.400	-27.600	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ ” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

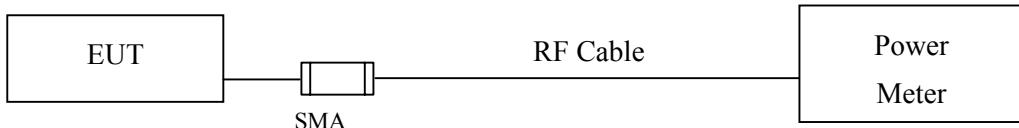
Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X Power Meter	Anritsu	ML2495A/6K00003357	May, 2011
X Power Sensor	Anritsu	MA2411B/0738448	Jun, 2010
8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2011

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.
3. The power combiner is used for measure 11n mode.

3.2. Test Setup

Conducted Measurement



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : IPC
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11			
		Measurement Level (dBm)						
01	2412	12.25	--	--	--	15.10	<30dBm	Pass
06	2437	15.20	15.17	15.13	15.10	17.90	<30dBm	Pass
11	2462	15.90	--	--	--	18.20	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Product : IPC
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54			
		Measurement Level (dBm)										
01	2412	6.08	--	--	--	--	--	--	--	16.77	<30dBm	Pass
06	2437	6.80	6.79	6.78	6.77	6.76	6.74	6.72	6.70	17.23	<30dBm	Pass
11	2462	6.06	--	--	--	--	--	--	--	16.94	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Product : IPC
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2			
		Measurement Level (dBm)										
01	2412	6.12	--	--	--	--	--	--	--	16.41	<30dBm	Pass
06	2437	7.60	7.59	7.58	7.57	7.55	7.53	7.52	7.50	17.92	<30dBm	Pass
11	2462	7.92	--	--	--	--	--	--	--	17.23	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

Product : IPC
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		15	30	45	60	90	120	135	150			
		Measurement Level (dBm)										
01	2422	5.23	--	--	--	--	--	--	--	14.78	<30dBm	Pass
04	2437	5.2	5.19	5.19	5.18	5.16	5.14	5.12	5.1	14.82	<30dBm	Pass
07	2452	5.6	--	--	--	--	--	--	--	15.11	<30dBm	Pass

Note: Peak Power Output Value =Reading value on peak power meter + cable loss

4. Radiated Emission

4.1. Test Equipment

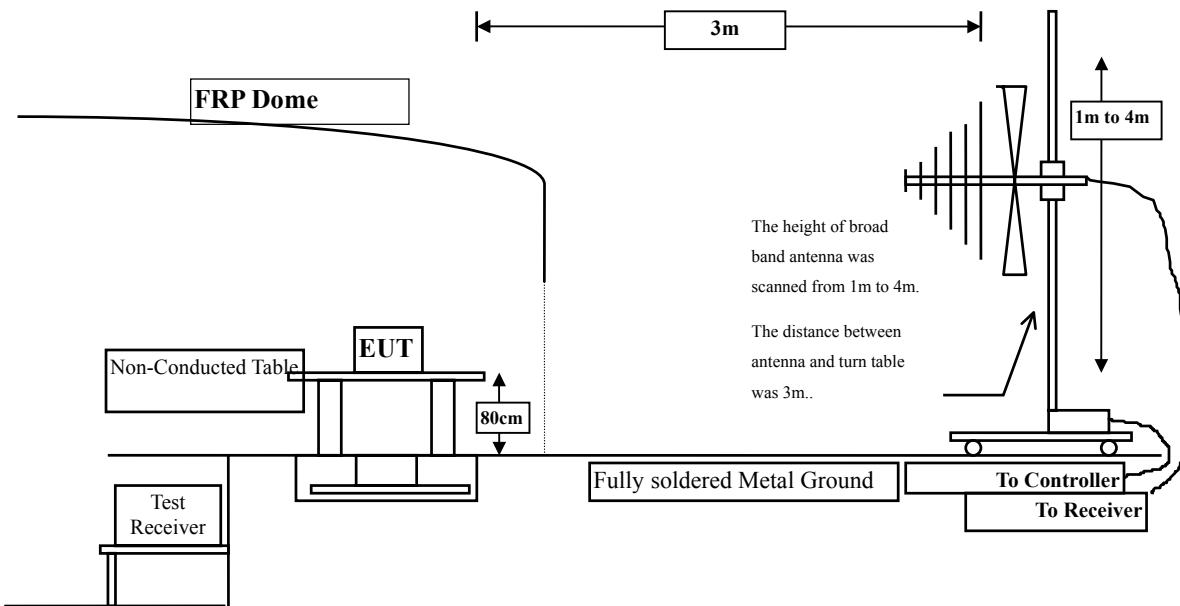
The following test equipment are used during the radiated emission test:

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2010
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2010
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2010
	X	Coaxial Cable	QuiTek	QTK-CABLE/ CAB5	Feb., 2011
	X	Controller	QuiTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

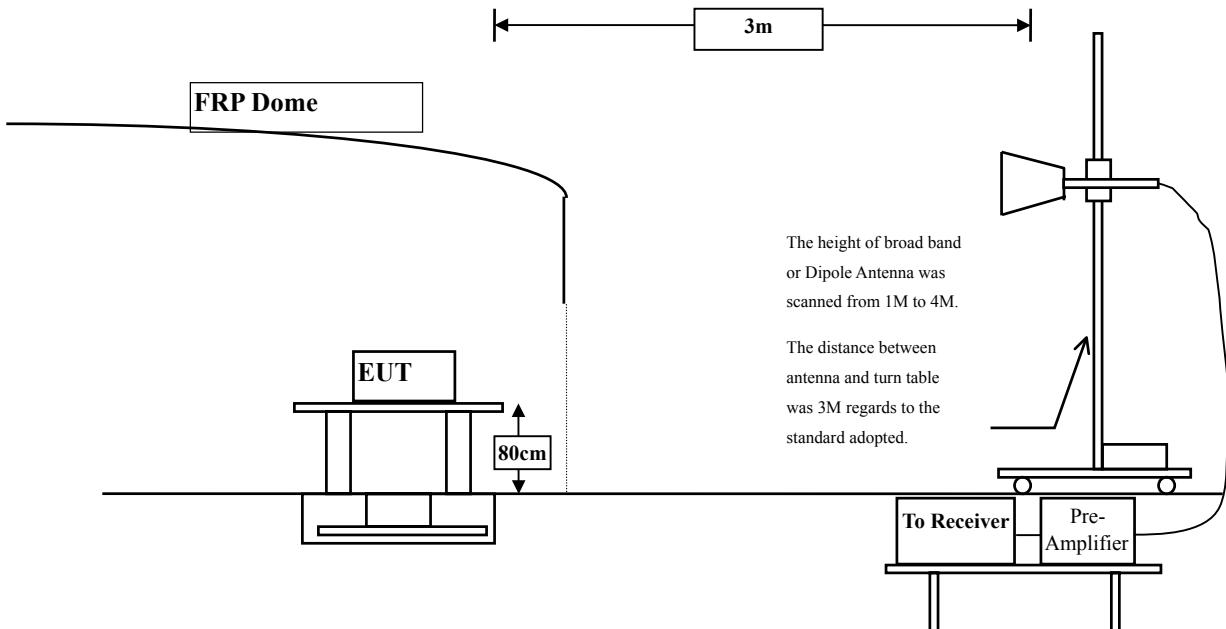
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The frequency range from 30MHz to 10th harmonics is checked.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	37.800	41.061	-32.939	74.000
7236.000	10.650	36.880	47.530	-26.470	74.000
9648.000	13.337	36.750	50.086	-23.914	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	41.860	48.281	-25.719	74.000
7236.000	11.495	37.580	49.075	-24.925	74.000
9648.000	13.807	36.680	50.486	-23.514	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	38.050	41.087	-32.913	74.000
7311.000	11.795	35.060	46.854	-27.146	74.000
9748.000	12.635	36.260	48.895	-25.105	74.000
 Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	37.350	43.161	-30.839	74.000
7311.000	12.630	35.200	47.829	-26.171	74.000
9748.000	13.126	36.450	49.576	-24.424	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	39.750	42.607	-31.393	74.000
7386.000	12.127	35.780	47.908	-26.092	74.000
9848.000	12.852	36.860	49.713	-24.287	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	45.000	50.520	-23.480	74.000
7386.000	13.254	36.250	49.504	-24.496	74.000
9848.000	13.367	36.750	50.117	-23.883	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-----------------

Horizontal

Peak Detector:

4824.000	3.261	37.780	41.041	-32.959	74.000
7236.000	10.650	37.150	47.800	-26.200	74.000
9648.000	13.337	36.880	50.216	-23.784	74.000

Average Detector:

--

Vertical

Peak Detector:

4824.000	6.421	38.860	45.281	-28.719	74.000
7236.000	11.495	37.110	48.605	-25.395	74.000
9648.000	13.807	36.900	50.706	-23.294	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m

Horizontal

Peak Detector:

4874.000	3.038	36.580	39.617	-34.383	74.000
7311.000	11.795	36.150	47.944	-26.056	74.000
9748.000	12.635	37.200	49.835	-24.165	74.000

Average Detector:

--

Peak Detector:

4874.000	5.812	39.130	44.941	-29.059	74.000
7311.000	12.630	38.100	50.729	-23.271	74.000
9748.000	13.126	36.750	49.876	-24.124	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------	--------------------------	--------------------------------	--------------	-----------------

Horizontal

Peak Detector:

4924.000	2.858	37.680	40.537	-33.463	74.000
7386.000	12.127	36.030	48.158	-25.842	74.000
9848.000	12.852	36.430	49.283	-24.717	74.000

Average Detector:

--

Vertical

Peak Detector:

4924.000	5.521	40.240	45.760	-28.240	74.000
7386.000	13.254	35.100	48.354	-25.646	74.000
9848.000	13.367	36.430	49.797	-24.203	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4804.000	3.327	46.420	49.747	-24.253	74.000
4824.000	3.261	37.240	40.501	-33.499	74.000
7206.000	10.136	38.940	49.076	-24.924	74.000
7236.000	10.650	35.010	45.660	-28.340	74.000
9608.000	13.706	37.120	50.826	-23.174	74.000
9648.000	13.337	36.780	50.116	-23.884	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4804.000	6.638	54.300	60.937	-13.063	74.000
4824.000	6.421	36.680	43.101	-30.899	74.000
7206.000	11.005	42.980	53.985	-20.015	74.000
7236.000	11.495	35.210	46.705	-27.295	74.000
9608.000	14.103	36.800	50.903	-23.097	74.000
9648.000	13.807	36.420	50.226	-23.774	74.000
Average Detector:					
4804.000	6.638	44.400	51.037	-2.963	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	36.420	39.457	-34.543	74.000
4882.000	3.001	43.610	46.611	-27.389	74.000
7311.000	11.795	35.620	47.414	-26.586	74.000
7323.000	11.846	34.420	46.267	-27.733	74.000
9748.000	12.635	37.130	49.765	-24.235	74.000
9764.000	12.563	37.300	49.863	-24.137	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	37.960	43.771	-30.229	74.000
4882.000	5.713	55.410	61.124	-12.876	74.000
7311.000	12.630	36.020	48.649	-25.351	74.000
7323.000	12.727	36.110	48.838	-25.162	74.000
9748.000	13.126	36.610	49.736	-24.264	74.000
9764.000	13.028	36.720	49.748	-24.252	74.000
Average Detector:					
4882.000	5.713	37.680	43.394	-10.606	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	37.500	40.357	-33.643	74.000
4960.000	2.760	43.510	46.270	-27.730	74.000
7386.000	12.127	34.880	47.008	-26.992	74.000
7440.000	12.567	34.950	47.516	-26.484	74.000
9848.000	12.852	37.280	50.133	-23.867	74.000
9920.000	13.456	36.350	49.806	-24.194	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	37.450	42.970	-31.030	74.000
4960.000	5.557	55.100	60.657	-13.343	74.000
7386.000	13.254	34.920	48.174	-25.826	74.000
7440.000	13.426	35.350	48.775	-25.225	74.000
9848.000	13.367	36.220	49.587	-24.413	74.000
9920.000	13.958	36.050	50.008	-23.992	74.000
Average Detector:					
4960.000	5.557	37.600	43.157	-10.843	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2422MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-----------------

Horizontal

Peak Detector:

4804.000	3.327	39.630	42.957	-31.043	74.000
4844.000	3.171	38.130	41.301	-32.699	74.000
7206.000	10.136	36.250	46.386	-27.614	74.000
7266.000	11.162	36.020	47.182	-26.818	74.000
9608.000	13.706	36.050	49.756	-24.244	74.000
9688.000	12.964	36.810	49.775	-24.225	74.000

Average Detector:

--

Vertical

Peak Detector:

4804.000	6.638	52.550	59.187	-14.813	74.000
4844.000	6.178	37.450	43.628	-30.372	74.000
7206.000	11.005	37.140	48.145	-25.855	74.000
7266.000	11.982	36.010	47.992	-26.008	74.000
9608.000	14.103	35.880	49.983	-24.017	74.000
9688.000	13.507	36.450	49.958	-24.042	74.000

Average Detector:

4804.000	6.638	29.250	35.887	-18.113	54.000
----------	-------	--------	--------	---------	--------

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	37.430	40.467	-33.533	74.000
4882.000	5.713	44.820	50.534	-23.466	74.000
7311.000	11.795	35.130	46.924	-27.076	74.000
7323.000	12.727	35.420	48.148	-25.852	74.000
9748.000	12.635	36.450	49.085	-24.915	74.000
9764.000	13.028	36.250	49.278	-24.722	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.812	38.060	43.871	-30.129	74.000
4882.000	5.713	56.920	62.634	-11.366	74.000
7311.000	12.630	35.760	48.389	-25.611	74.000
7323.000	12.727	35.580	48.308	-25.692	74.000
9748.000	13.126	37.420	50.546	-23.454	74.000
9764.000	13.028	37.350	50.378	-23.622	74.000
4874.000	5.812	38.060	43.871	-30.129	74.000
Average Detector:					
4882.000	5.713	32.570	38.284	-15.716	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2452 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4904.000	2.914	37.210	40.125	-33.875	74.000
4960.000	2.760	37.450	40.210	-33.790	74.000
7356.000	11.995	35.070	47.064	-26.936	74.000
7440.000	12.567	34.790	47.356	-26.644	74.000
9808.000	12.475	36.160	48.635	-25.365	74.000
9920.000	13.456	35.850	49.306	-24.694	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4904.000	5.530	37.380	42.911	-31.089	74.000
4960.000	5.557	47.500	53.057	-20.943	74.000
7356.000	13.005	35.060	48.064	-25.936	74.000
7440.000	13.426	34.570	47.995	-26.005	74.000
9808.000	12.901	36.210	49.111	-24.889	74.000
9920.000	13.958	36.120	50.078	-23.922	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
47.460	-9.151	44.516	35.366	-4.634	40.000
80.440	-12.510	42.781	30.271	-9.729	40.000
299.660	-3.585	37.581	33.996	-12.004	46.000
600.360	3.977	30.632	34.609	-11.391	46.000
699.300	2.875	39.670	42.545	-3.455	46.000
817.640	5.532	33.451	38.983	-7.017	46.000
Vertical					
84.320	-4.484	40.003	35.519	-4.481	40.000
103.720	-0.151	36.150	35.998	-7.502	43.500
202.660	-7.739	35.308	27.569	-15.931	43.500
699.300	0.695	35.008	35.703	-10.297	46.000
813.760	3.168	35.847	39.015	-6.985	46.000
968.960	8.191	29.810	38.001	-15.999	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
84.320	-10.564	40.531	29.967	-10.033	40.000
175.500	-10.017	38.543	28.525	-14.975	43.500
266.680	-4.963	32.629	27.666	-18.334	46.000
367.560	-1.205	32.645	31.440	-14.560	46.000
633.340	1.880	31.640	33.520	-12.480	46.000
1000.000	9.119	34.795	43.914	-10.086	54.000
Vertical					
82.380	-5.215	38.107	32.892	-7.108	40.000
109.540	-0.418	33.014	32.596	-10.904	43.500
691.540	2.421	30.043	32.464	-13.536	46.000
825.400	3.430	31.063	34.493	-11.507	46.000
949.560	6.615	30.567	37.182	-8.818	46.000
1000.000	4.329	37.361	41.690	-12.310	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
84.320	-10.564	41.045	30.481	-9.519	40.000
270.560	-5.007	36.403	31.396	-14.604	46.000
499.480	0.048	32.614	32.662	-13.338	46.000
633.340	1.880	32.793	34.673	-11.327	46.000
792.420	5.209	30.310	35.519	-10.481	46.000
1000.000	9.119	35.046	44.165	-9.835	54.000
Vertical					
35.820	-2.159	39.047	36.888	-3.112	40.000
84.320	-4.484	41.404	36.920	-3.080	40.000
202.660	-7.739	46.678	38.939	-4.561	43.500
759.440	2.532	31.290	33.822	-12.178	46.000
967.020	8.071	29.443	37.514	-16.486	54.000
1000.000	4.329	38.449	42.778	-11.222	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : IPC
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
41.640	-3.949	37.640	33.691	-6.309	40.000
90.140	-9.449	41.144	31.695	-11.805	43.500
299.660	-3.585	36.857	33.272	-12.728	46.000
367.560	-1.205	33.687	32.482	-13.518	46.000
633.340	1.880	33.099	34.979	-11.021	46.000
1000.000	9.119	36.091	45.210	-8.790	54.000
Vertical					
84.320	-4.484	38.831	34.347	-5.653	40.000
132.820	-4.440	35.919	31.479	-12.021	43.500
499.480	-0.852	32.045	31.193	-14.807	46.000
823.460	3.462	30.964	34.427	-11.573	46.000
968.960	8.191	30.263	38.454	-15.546	54.000
1000.000	4.329	38.482	42.811	-11.189	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss -Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

5. RF antenna conducted test

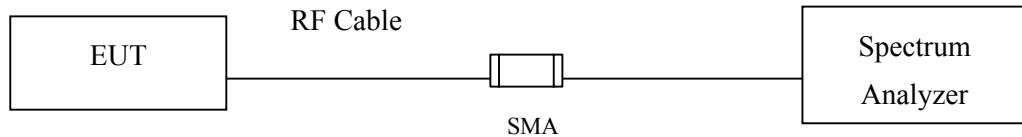
5.1. Test Equipment

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2010
Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2010
X Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011
8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2011

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.
3. The power combiner is used for measure 11n mode.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, 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) (see Section 15.205(c)).