



Test Report

FCC Part15 Subpart B

Product Name : WIRELESS-ABGN 3X3 NETWORK
MINI PCIE ADAPTER
Model No. : WLE350NX
FCC ID : TK4WLE350NX

Applicant : Compex Systems Pte Ltd
Address : 135 Joo Seng Road, #08-01 PM Industrial Building
Singapore 368363

Date of Receipt : 04/02/2013
Test Date : 05/02/2013~30/04/2013
Issued Date : 13/05/2013
Report No. : 132S008R-RF-US-P01V02
Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, CNAS or any agency of the Government.

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Test Report Certification

Issued Date : 13/05/2013
 Report No. : 132S008R-RF-US-P01V02



Product Name : WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER
 Applicant : Compex Systems Pte Ltd
 Address : 135 Joo Seng Road, #08-01 PM Industrial Building Singapore
 368363
 Manufacturer : Compex Systems Pte Ltd
 Address : 135 Joo Seng Road, #08-01 PM Industrial Building Singapore
 368363
 Model No. : WLE350NX
 FCC ID : TK4WLE350NX
 EUT Voltage : DC: 3.3V
 Brand Name : COMPEX
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart B: 2012 Class B
 ANSI C63.4: 2009
 Test Result : Complied
 Performed Location : Suzhou EMC Laboratory
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 Development Zone., Suzhou, China
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 FCC Registration Number: 800392

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Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	:	BSMI, NCC, TAF
Germany	:	TUV Rheinland
Norway	:	Nemko, DNV
USA	:	FCC, NVLAP
Japan	:	VCCI
China	:	CNAS

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/>

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1. General Information

1.1. EUT Description

Product Name	WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER
Brand Name	COMPEX
Model No.	WLE350NX
EUT Voltage	DC 3.3V
Frequency Range	<p>For 2.4GHz Band 802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz): 2422~2452MHz</p> <p>For 5.0GHz Band 802.11a/n(20MHz): 5180~5320MHz, 5500~5580, 5680~5700MHz, 5745~5825MHz 802.11n(40MHz): 5190~5310MHz, 5510~5550MHz, 5755~5795MHz</p>
Channel Number	<p>For 2.4GHz Band 802.11b/g/n(20MHz): 11 802.11n(40MHz): 7</p> <p>For 5.0GHz Band 802.11a/n(20MHz): 20 802.11n(40MHz): 8</p>
Type of Modulation	802.11b: DSSS 802.11a/g/n: OFDM
Data Rate	802.11a/g: 6/9/12/18/24/36/48/54 Mbps 802.11b: 1/2/5.5/11 Mbps 802.11n: up to 450 Mbps
Channel Control	Auto
Antenna Delivery	3*Tx + 3*Rx
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List

For 2.4GHz Band

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

For 5.0GHz Band

802.11a/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
52	5260 MHz	56	5280 MHz	60	5300 MHz	64	5320 MHz
100	5500 MHz	104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz	165	5825 MHz

802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz	62	5310 MHz
102	5510 MHz	110	5550 MHz	118	5590 MHz	126	5630 MHz
134	5670 MHz	151	5755 MHz	159	5795 MHz	N/A	N/A

Note: This Wireless Module can't operate in 5600~5650 MHz band in Canada/US.

802.11a/b/g/n Antenna List

Antenna	Manufacturer	Peak Gain
Panel Antenna	A*STAR Institute for Infocomm Research	3dBi for 2.4GHz, 5dBi for 5GHz
Dipole Antenna 1#	SmartAnt Telecom Co., Ltd.	4.5dBi for 2.4GHz, 7dBi for 5GHz
Dipole Antenna 2#	Kunshan Wavelink Electronic Co., Ltd.	2dBi for 2.4GHz and 5GHz

1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

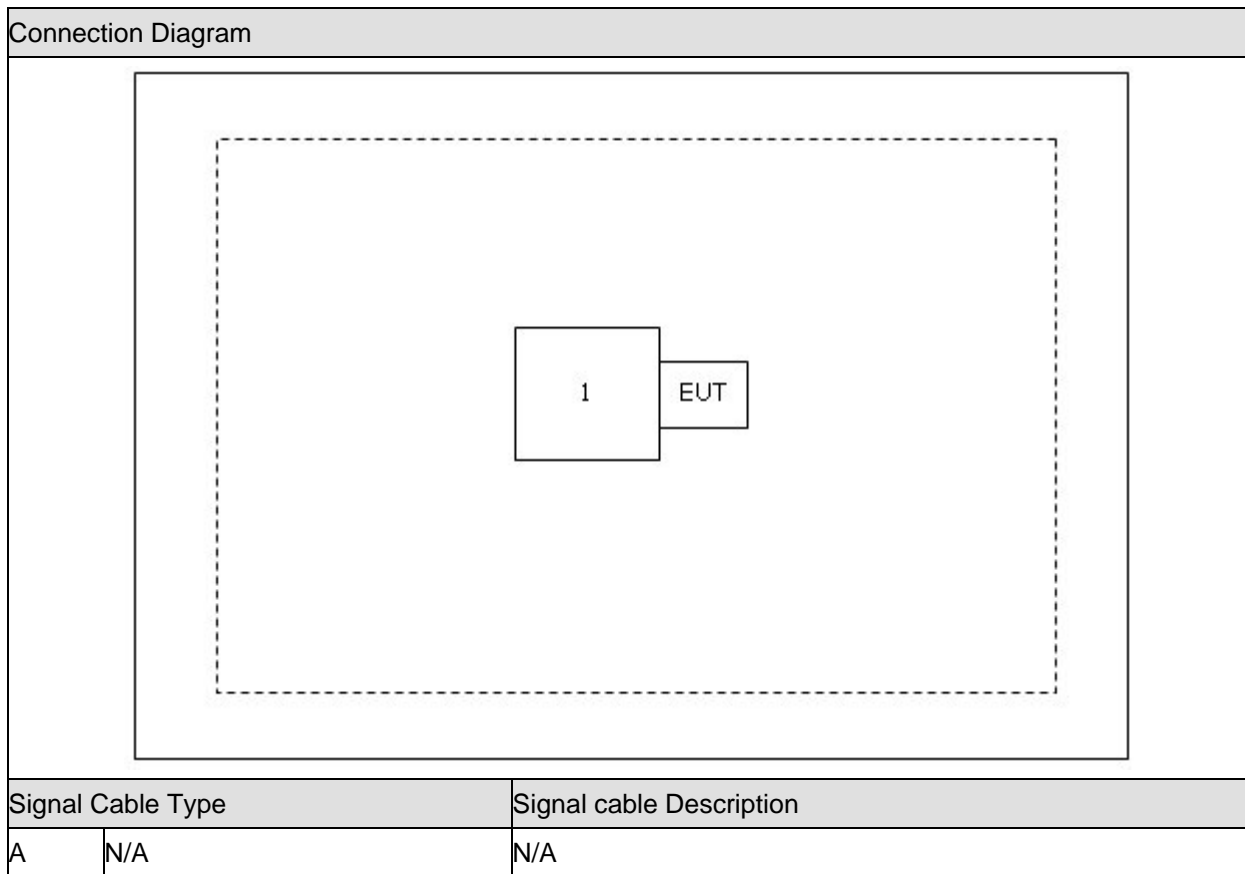
Test Mode
Mode 1: Receive by 802.11n(20MHz)
Mode 2: Receive by 802.11n(40MHz)

1.3. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	DELL	E520	N/A	Non-Shielded, 1.8m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Run the RF test software "Art2", and set the test mode and channel, then press OK to start continue Transmit or receive.

2. Technical Test

2.1. Summary of Test Result

- No deviations from the test standards
- Deviations from the test standards as below description:

Emission			
Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart B: 2012 Class B ANSI C63.4: 2009	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart B: 2012 Class B ANSI C63.4: 2009	Yes	No

2.2. List of Test Equipment

Conducted Emission / TR-1

Instrument	Manufacturer	Type No.	Serial No	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100906	2014/01/07
Two-Line V-Network	R&S	ENV216	101043	2014/03/30
Two-Line V-Network	R&S	ENV216	101044	2013/09/17
Impedance Stabilization Network	Teseq GmbH	ISN T800	30306	2014/02/20
Impedance Stabilization Network	Teseq GmbH	ISN T8-Cat6	29680	2014/02/20
Impedance Stabilization Network	Teseq GmbH	ISN ST08	31281	2014/02/20
Current Probe	R&S	EZ-17	100255	2014/03/30
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2014/03/01
50ohm Termination	SHX	TF2	07081401	2013/09/17
50ohm Termination	SHX	TF2	07081402	2013/09/17
50ohm Termination	SHX	TF2	07081403	2013/09/17
Temperature/Humidity Meter	zhicheng	ZC1-2	TR1-TH	2014/01/10

Radiated Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100573	2014/03/30
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2013/10/15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2014/03/01
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC2-TH	2014/01/10

Radiated Emission / AC-5

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2014/03/30
Preamplifier	Miteq	NSP1800-25	1364185	2014/05/04
Preamplifier	QuieTek	AP-040G	CHM-0906001	2014/05/04
Bilog Antenna	Teseq GmbH	CBL6112D	27612	2013/10/15
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2014/06/08
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2013/11/24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2014/03/01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2014/03/01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2014/03/01
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC5-TH	2014/01/10

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

2.4. Test Environment

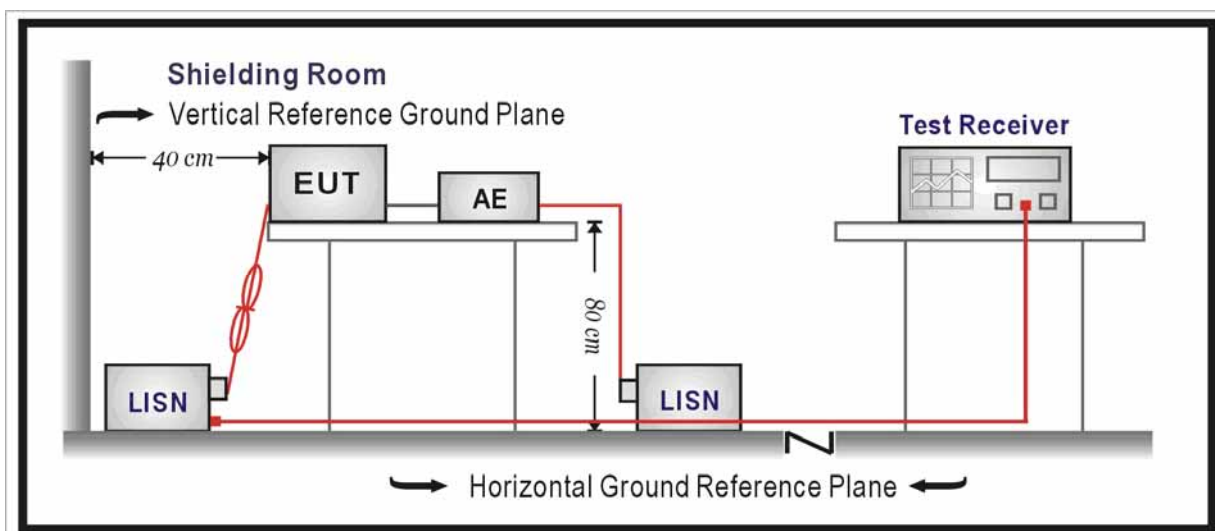
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	47
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	28
	Humidity (%RH)	25-75	46
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission

3.1. Test Specification

According to EMC Standard: FCC Part 15 Subpart B Class B, ANSI C63.4

3.2. Test Setup



3.3. Limit

FCC Part 15 Subpart B Paragraph 15.107 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the

EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

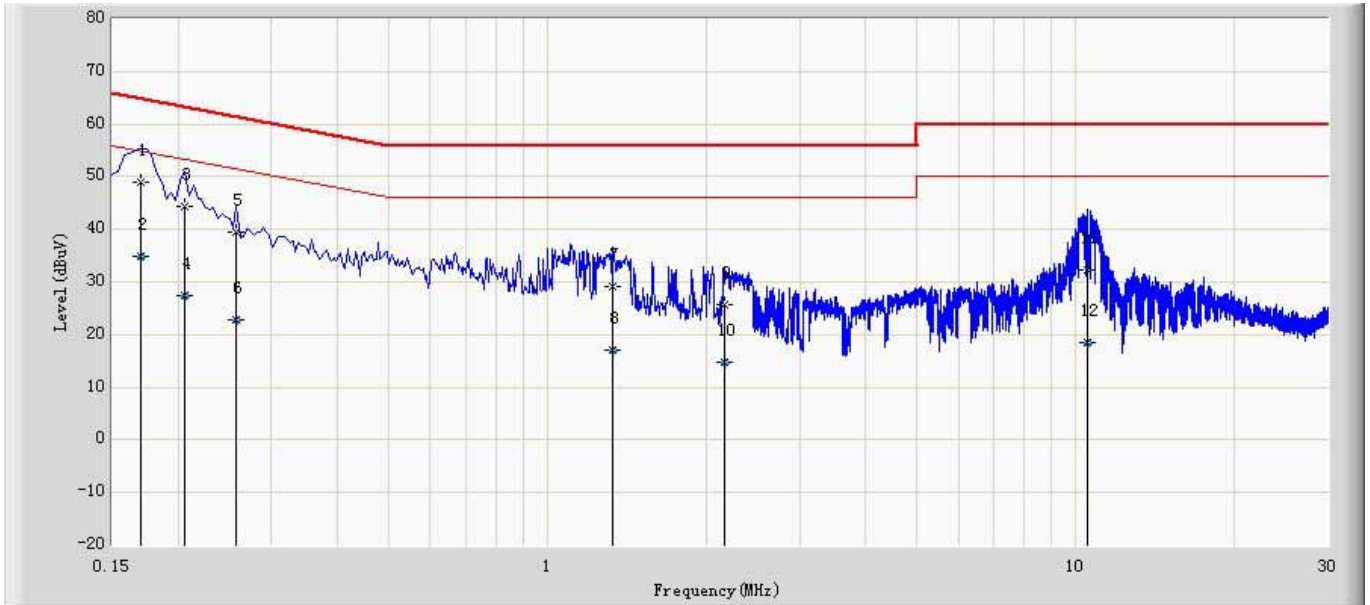
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Deviation from Test Standard

No deviation.

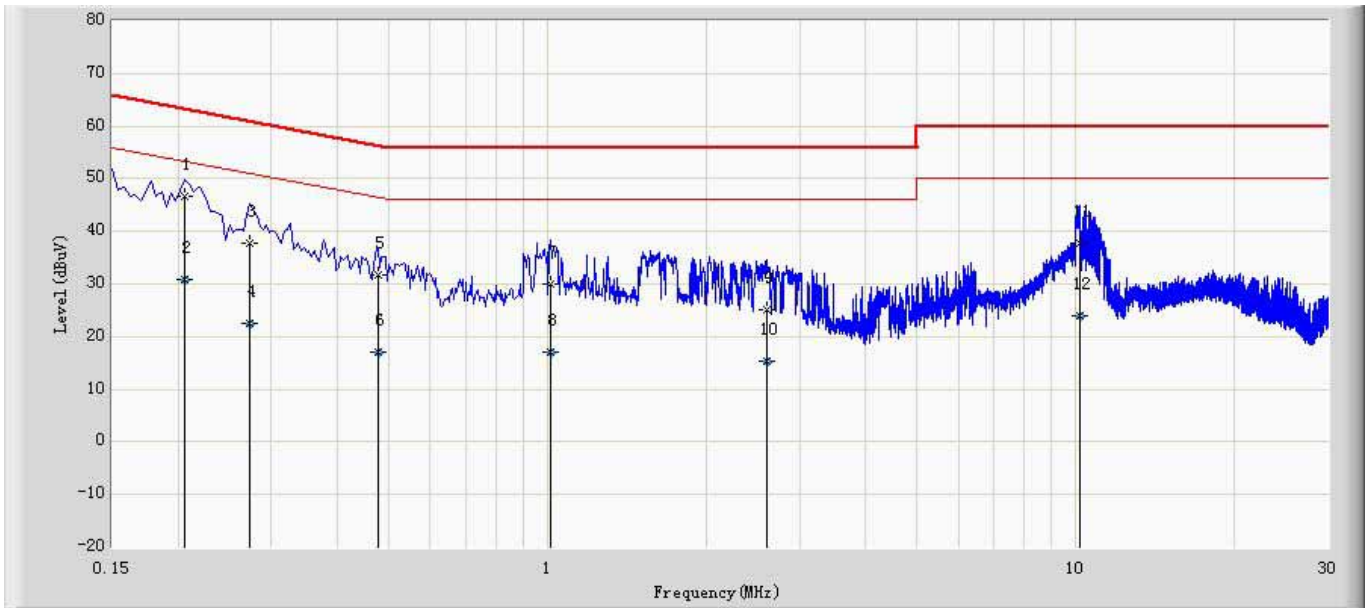
3.6. Test Result

Site: TR1	Time: 2013/04/22 - 19:56
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101044(0.009-30MHz)	Polarity: Line
EUT: WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.170	48.908	39.057	-16.052	64.960	9.851	QP
2		0.170	34.793	24.942	-20.168	54.960	9.851	AV
3		0.206	44.485	34.624	-18.880	63.365	9.861	QP
4		0.206	27.307	17.446	-26.058	53.365	9.861	AV
5		0.258	39.513	29.645	-21.983	61.496	9.868	QP
6		0.258	22.788	12.920	-28.707	51.496	9.868	AV
7		1.330	29.245	19.448	-26.755	56.000	9.797	QP
8		1.330	17.182	7.385	-28.818	46.000	9.797	AV
9		2.158	25.803	16.012	-30.197	56.000	9.791	QP
10		2.158	14.717	4.926	-31.283	46.000	9.791	AV
11		10.534	32.287	22.272	-27.713	60.000	10.015	QP
12		10.534	18.507	8.492	-31.493	50.000	10.015	AV

Site: TR1	Time: 2013/04/22 - 20:01
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101044(0.009-30MHz)	Polarity: Neutral
EUT: WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.206	46.688	36.771	-16.677	63.365	9.917	QP
2		0.206	30.816	20.900	-22.549	53.365	9.917	AV
3		0.274	37.702	27.766	-23.293	60.996	9.937	QP
4		0.274	22.516	12.579	-28.480	50.996	9.937	AV
5		0.478	31.638	21.589	-24.736	56.374	10.049	QP
6		0.478	16.934	6.885	-29.440	46.374	10.049	AV
7		1.014	30.041	20.004	-25.959	56.000	10.038	QP
8		1.014	17.184	7.146	-28.816	46.000	10.038	AV
9		2.594	25.154	15.175	-30.846	56.000	9.978	QP
10		2.594	15.481	5.503	-30.519	46.000	9.978	AV
11		10.170	37.698	27.319	-22.302	60.000	10.379	QP
12		10.170	23.943	13.564	-26.057	50.000	10.379	AV

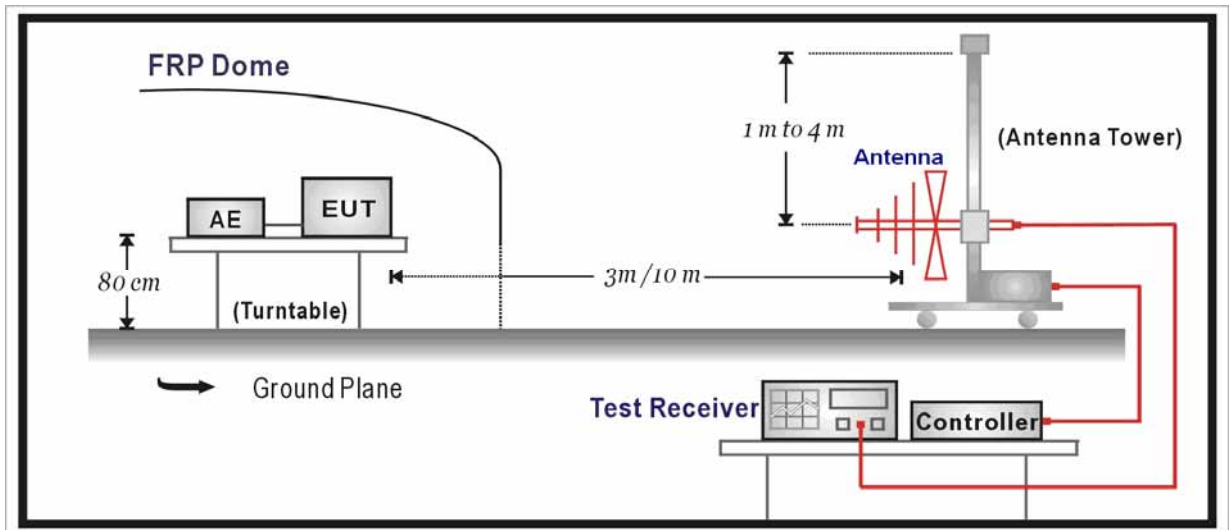
4. Radiated Emission

4.1. Test Specification

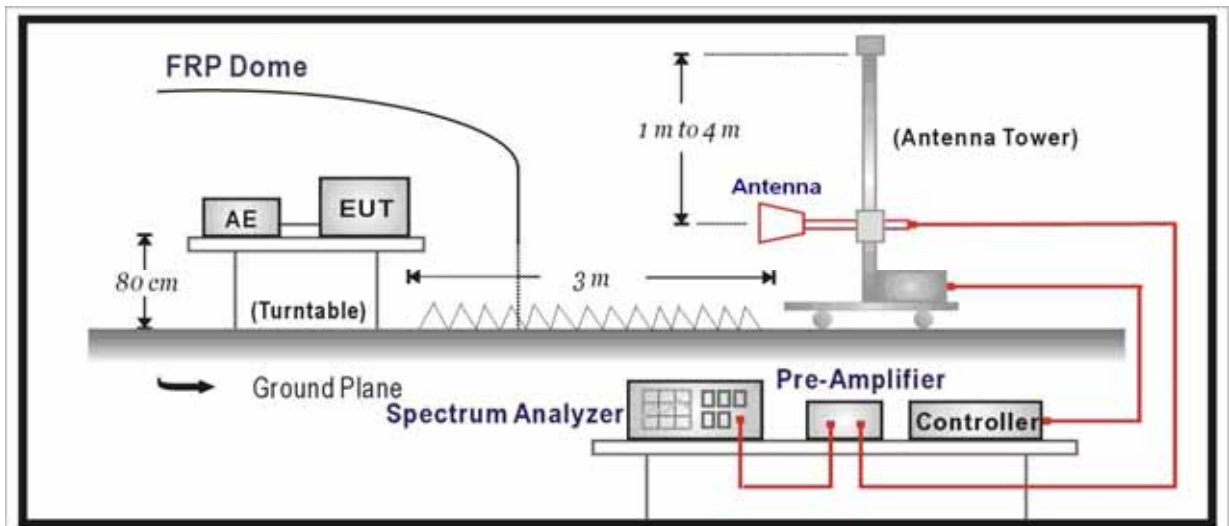
According to EMC Standard: FCC Part 15 Subpart B Class B, ANSI C63.4

4.2. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

FCC Part 15 Subpart B Paragraph 15.109		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 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 10 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

For an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000

500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

On any frequency or frequencies below or equal to 1000 MHz, the radiated limits shown are based on measuring equipment employing a quasi-peak detector function and above 1000 MHz, the radiated limits shown are based measuring equipment employing an average detector function.

When average radiated emission measurement are included emission measurement Above 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

For class B, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and 3 meters for above 1GHz.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCI) is 120 kHz and above 1GHz is 1MHz.

Note: When measurement above 1GHz, the horn antenna will bend down a little (as horn antenna have the narrow beamwidth) in order to find the maximum emission of EUT.

4.5. Deviation from Test Standard

No deviation.

4.6. Test Result

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamplifier Gain

Test for panel antenna

Mode 1: Receive by 802.11n (20MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain0 +1+2	1	H	1552.5	56.9	-17.1	39.8	54(Note1)	-14.2	PK
		V	2130.5	52.4	-13.3	39.2	54(Note1)	-14.8	PK
		H	1901.0	55.6	-14.1	41.5	54(Note1)	-12.5	PK
		V	2394.0	54.4	-12.4	42.0	54(Note1)	-12.0	PK
	6	H	2496.0	54.2	-10.8	43.4	54(Note1)	-10.6	PK
		V	3286.5	51.0	-10.6	40.5	54(Note1)	-13.5	PK
		H	4094.0	48.1	-9.5	38.6	54(Note1)	-15.4	PK
		V	5700.5	47.2	-7.2	39.9	54(Note1)	-14.1	PK
	11	H	1901.0	55.4	-14.1	41.3	54(Note1)	-12.7	PK
		V	2394.0	54.9	-12.4	42.5	54(Note1)	-11.5	PK
		H	2496.0	53.9	-10.8	43.2	54(Note1)	-10.8	PK
		V	2666.0	51.6	-11.5	40.1	54(Note1)	-13.9	PK
	36	H	1484.5	59.8	-18.1	41.7	54(Note1)	-12.3	PK
		V	1850.0	52.1	-14.5	37.6	54(Note1)	-16.4	PK
		H	1901.0	56.0	-14.1	41.9	54(Note1)	-12.1	PK
		V	2394.0	55.3	-12.4	42.9	54(Note1)	-11.1	PK
	40	H	2504.5	55.6	-10.8	44.9	54(Note1)	-9.1	PK
		V	3286.5	51.4	-10.6	40.8	54(Note1)	-13.2	PK
		H	4689.0	48.0	-8.4	39.6	54(Note1)	-14.4	PK
		V	5335.0	47.1	-7.8	39.2	54(Note1)	-14.8	PK
	48	H	1484.5	58.8	-18.1	40.7	54(Note1)	-13.3	PK
		V	1892.5	51.1	-14.2	36.9	54(Note1)	-17.1	PK
		H	1901.0	56.1	-14.1	42.0	54(Note1)	-12.0	PK
		V	2394.0	55.0	-12.4	42.6	54(Note1)	-11.4	PK
52	H	2504.5	55.1	-10.8	44.3	54(Note1)	-9.7	PK	

		V	3269.5	50.9	-10.6	40.3	54(Note1)	-13.7	PK
		H	4502.0	48.2	-8.7	39.5	54(Note1)	-14.5	PK
		V	5428.5	46.7	-7.7	39.0	54(Note1)	-15.0	PK
	60	H	1484.5	58.1	-18.1	40.0	54(Note1)	-14.0	PK
		V	2130.5	51.8	-13.3	38.5	54(Note1)	-15.5	PK
		H	1901.0	56.0	-14.1	41.8	54(Note1)	-12.2	PK
		V	2394.0	54.2	-12.4	41.8	54(Note1)	-12.2	PK
	64	H	2496.0	54.4	-10.8	43.6	54(Note1)	-10.4	PK
		V	3278.0	51.4	-10.6	40.8	54(Note1)	-13.2	PK
		H	3992.0	47.7	-9.7	38.0	54(Note1)	-16.0	PK
		V	5573.0	46.7	-7.4	39.3	54(Note1)	-14.7	PK
	100	H	1901.0	55.4	-14.1	41.3	54(Note1)	-12.7	PK
V		2130.5	52.2	-13.3	38.9	54(Note1)	-15.1	PK	
		H	2496.0	54.5	-10.8	43.7	54(Note1)	-10.3	PK
		V	2394.0	55.5	-12.4	43.2	54(Note1)	-10.8	PK
	116	H	3278.0	50.2	-10.4	39.7	54(Note1)	-14.3	PK
		V	3261.0	51.5	-10.6	40.9	54(Note1)	-13.1	PK
		H	6083.0	46.8	-6.1	40.8	54(Note1)	-13.2	PK
		V	6032.0	46.3	-6.2	40.1	54(Note1)	-13.9	PK
	140	H	1484.5	58.2	-18.1	40.1	54(Note1)	-13.9	PK
		V	1994.5	52.3	-13.5	38.8	54(Note1)	-15.2	PK
		H	1892.5	55.6	-14.1	41.5	54(Note1)	-12.5	PK
		V	2394.0	54.6	-12.4	42.2	54(Note1)	-11.8	PK

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode 2: Receive by 802.11n (40MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 0+1+2	3	H	1901.0	55.5	-14.1	41.4	54(Note1)	-12.6	PK
		V	2130.5	52.8	-13.3	39.6	54(Note1)	-14.4	PK
		H	2496.0	53.9	-10.8	43.1	54(Note1)	-10.9	PK
		V	2394.0	54.2	-12.4	41.8	54(Note1)	-12.2	PK
	6	H	3269.5	50.2	-10.4	39.8	54(Note1)	-14.2	PK
		V	3295.0	51.5	-10.5	40.9	54(Note1)	-13.1	PK
		H	5394.5	47.3	-7.6	39.7	54(Note1)	-14.3	PK

	V	5462.5	47.0	-7.6	39.4	54(Note1)	-14.6	PK
9	H	1901.0	55.9	-14.1	41.7	54(Note1)	-12.3	PK
	V	2130.5	52.5	-13.3	39.2	54(Note1)	-14.8	PK
	H	2504.5	54.3	-10.8	43.5	54(Note1)	-10.5	PK
	V	2394.0	53.2	-12.4	40.8	54(Note1)	-13.2	PK
	H	2496.0	54.3	-10.8	43.5	54(Note1)	-10.5	PK
38	V	3295.0	51.1	-10.5	40.6	54(Note1)	-13.4	PK
	H	4612.5	46.9	-8.5	38.4	54(Note1)	-15.6	PK
	V	5870.5	47.0	-6.7	40.3	54(Note1)	-13.7	PK
	H	1901.0	55.5	-14.1	41.3	54(Note1)	-12.7	PK
46	V	1960.5	52.3	-13.7	38.7	54(Note1)	-15.3	PK
	H	2504.5	54.5	-10.8	43.8	54(Note1)	-10.2	PK
	V	2394.0	55.2	-12.4	42.8	54(Note1)	-11.2	PK
	H	3235.5	49.2	-10.4	38.7	54(Note1)	-15.3	PK
54	V	3286.5	51.0	-10.6	40.4	54(Note1)	-13.6	PK
	H	5471.0	46.5	-7.5	39.0	54(Note1)	-15.0	PK
	V	5794.0	46.5	-7.0	39.6	54(Note1)	-14.4	PK
	H	1892.5	56.0	-14.1	41.9	54(Note1)	-12.1	PK
62	V	1867.0	53.4	-14.4	39.0	54(Note1)	-15.0	PK
	H	2496.0	54.0	-10.8	43.2	54(Note1)	-10.8	PK
	V	2394.0	54.9	-12.4	42.5	54(Note1)	-11.5	PK
	H	3269.5	50.4	-10.4	40.0	54(Note1)	-14.0	PK
102	V	3261.0	51.0	-10.6	40.4	54(Note1)	-13.6	PK
	H	5590.0	46.3	-7.4	39.0	54(Note1)	-15.0	PK
	V	5437.0	46.7	-7.7	39.1	54(Note1)	-14.9	PK
	H	1552.5	56.7	-17.1	39.6	54(Note1)	-14.4	PK
110	V	2130.5	52.9	-13.3	39.7	54(Note1)	-14.3	PK
	H	1901.0	56.6	-14.1	42.5	54(Note1)	-11.6	PK
	V	2394.0	54.0	-12.4	41.6	54(Note1)	-12.4	PK

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Test for dipole antenna 1#

Mode 1: Receive by 802.11n (20MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain0 +1+2	1	H	3346.0	49.4	-10.5	38.9	54(Note1)	-15.1	PK
		V	3286.5	50.8	-10.6	40.3	54(Note1)	-13.7	PK
		H	4774.0	46.8	-8.3	38.5	54(Note1)	-15.5	PK
		V	4995.0	48.3	-8.2	40.1	54(Note1)	-13.9	PK
	6	H	1901.0	55.7	-14.1	41.6	54(Note1)	-12.4	PK
		V	1867.0	53.1	-14.4	38.7	54(Note1)	-15.3	PK
		H	2496.0	54.0	-10.8	43.2	54(Note1)	-10.8	PK
		V	2394.0	53.5	-12.4	41.1	54(Note1)	-12.9	PK
	11	H	3261.0	48.8	-10.4	38.4	54(Note1)	-15.6	PK
		V	3286.5	50.9	-10.6	40.4	54(Note1)	-13.6	PK
		H	5352.0	46.1	-7.6	38.5	54(Note1)	-15.5	PK
		V	5114.0	46.3	-8.2	38.2	54(Note1)	-15.8	PK
	36	H	1552.5	56.9	-17.1	39.8	54(Note1)	-14.2	PK
		V	2130.5	52.4	-13.3	39.2	54(Note1)	-14.8	PK
		H	1901.0	55.6	-14.1	41.5	54(Note1)	-12.5	PK
		V	2394.0	54.4	-12.4	42.0	54(Note1)	-12.0	PK
	40	H	2496.0	54.2	-10.8	43.4	54(Note1)	-10.6	PK
		V	3286.5	51.0	-10.6	40.5	54(Note1)	-13.5	PK
		H	4094.0	48.1	-9.5	38.6	54(Note1)	-15.4	PK
		V	5700.5	47.2	-7.2	39.9	54(Note1)	-14.1	PK
	48	H	1901.0	55.4	-14.1	41.3	54(Note1)	-12.7	PK
		V	2394.0	54.9	-12.4	42.5	54(Note1)	-11.5	PK
		H	2496.0	53.9	-10.8	43.2	54(Note1)	-10.8	PK
		V	2666.0	51.6	-11.5	40.1	54(Note1)	-13.9	PK
	52	H	3269.5	50.2	-10.4	39.7	54(Note1)	-14.3	PK
		V	3286.5	51.2	-10.6	40.6	54(Note1)	-13.4	PK
		H	5352.0	46.4	-7.6	38.8	54(Note1)	-15.2	PK
		V	4850.5	47.6	-8.3	39.2	54(Note1)	-14.8	PK
	60	H	1901.0	55.5	-14.1	41.4	54(Note1)	-12.6	PK
		V	2130.5	52.8	-13.3	39.6	54(Note1)	-14.4	PK
		H	2496.0	53.9	-10.8	43.1	54(Note1)	-10.9	PK
		V	2394.0	54.2	-12.4	41.8	54(Note1)	-12.2	PK

	64	H	3269.5	50.2	-10.4	39.8	54(Note1)	-14.2	PK
		V	3295.0	51.5	-10.5	40.9	54(Note1)	-13.1	PK
		H	5394.5	47.3	-7.6	39.7	54(Note1)	-14.3	PK
		V	5462.5	47.0	-7.6	39.4	54(Note1)	-14.6	PK
	100	H	1901.0	55.9	-14.1	41.7	54(Note1)	-12.3	PK
		V	2130.5	52.5	-13.3	39.2	54(Note1)	-14.8	PK
		H	2504.5	54.3	-10.8	43.5	54(Note1)	-10.5	PK
		V	2394.0	53.2	-12.4	40.8	54(Note1)	-13.2	PK
	116	H	3346.0	49.4	-10.5	38.9	54(Note1)	-15.1	PK
		V	3286.5	50.8	-10.6	40.3	54(Note1)	-13.7	PK
		H	4774.0	46.8	-8.3	38.5	54(Note1)	-15.5	PK
		V	4995.0	48.3	-8.2	40.1	54(Note1)	-13.9	PK
	140	H	1901.0	55.7	-14.1	41.6	54(Note1)	-12.4	PK
		V	1867.0	53.1	-14.4	38.7	54(Note1)	-15.3	PK
		H	2496.0	54.0	-10.8	43.2	54(Note1)	-10.8	PK
		V	2394.0	53.5	-12.4	41.1	54(Note1)	-12.9	PK

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode 2: Receive by 802.11n (40MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Chain 0+1+2	3	H	1484.5	58.5	-18.1	40.4	54(Note1)	-13.6	PK
		V	2130.5	52.6	-13.3	39.3	54(Note1)	-14.7	PK
		H	1901.0	56.9	-14.1	42.7	54(Note1)	-11.3	PK
		V	2394.0	54.9	-12.4	42.5	54(Note1)	-11.5	PK
	6	H	2598.0	49.7	-11.2	38.5	54(Note1)	-15.5	PK
		V	3295.0	50.7	-10.5	40.2	54(Note1)	-13.8	PK
		H	4570.0	46.6	-8.6	38.0	54(Note1)	-16.0	PK
		V	4995.0	46.6	-8.2	38.4	54(Note1)	-15.6	PK
	9	H	1901.0	55.1	-14.1	40.9	54(Note1)	-13.1	PK
		V	1850.0	52.6	-14.5	38.2	54(Note1)	-15.8	PK
		H	2496.0	54.1	-10.8	43.4	54(Note1)	-10.6	PK
		V	2402.5	53.1	-12.3	40.8	54(Note1)	-13.2	PK
		H	2496.0	54.3	-10.8	43.5	54(Note1)	-10.5	PK
		V	3295.0	51.1	-10.5	40.6	54(Note1)	-13.4	PK

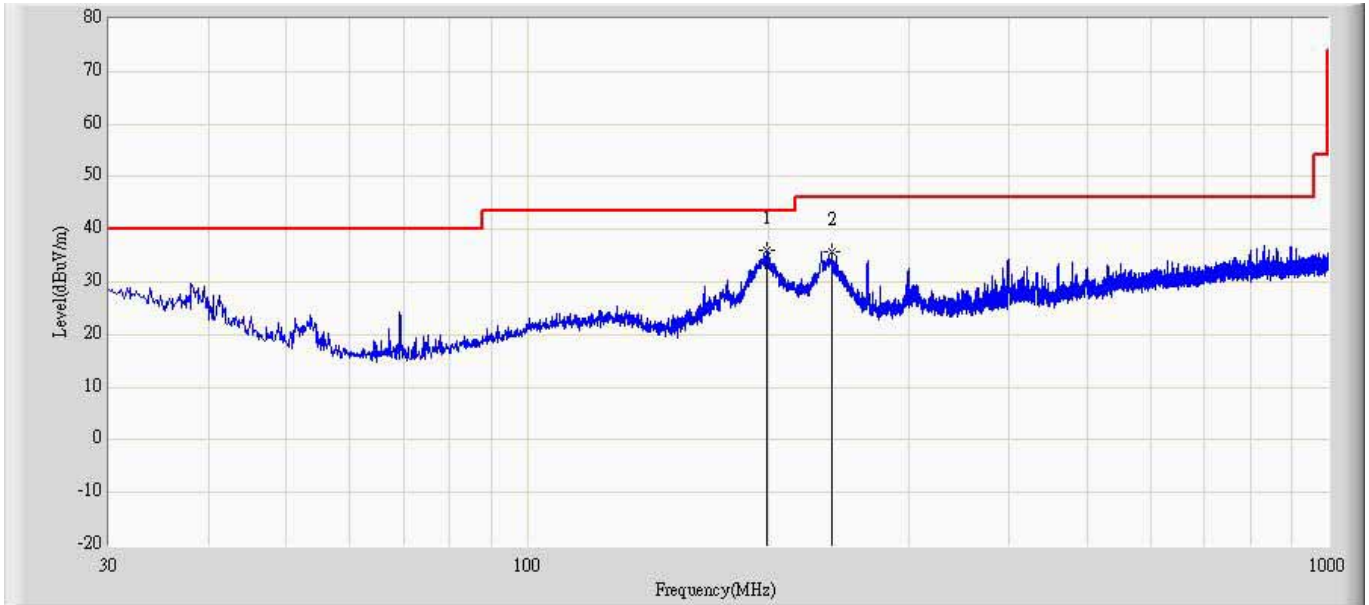
		H	4612.5	46.9	-8.5	38.4	54(Note1)	-15.6	PK
		V	5870.5	47.0	-6.7	40.3	54(Note1)	-13.7	PK
	46	H	3261.0	48.8	-10.4	38.4	54(Note1)	-15.6	PK
		V	3286.5	50.9	-10.6	40.4	54(Note1)	-13.6	PK
		H	5352.0	46.1	-7.6	38.5	54(Note1)	-15.5	PK
		V	5114.0	46.3	-8.2	38.2	54(Note1)	-15.8	PK
	54	H	1484.5	58.5	-18.1	40.4	54(Note1)	-13.6	PK
		V	2130.5	52.6	-13.3	39.3	54(Note1)	-14.7	PK
		H	1901.0	56.9	-14.1	42.7	54(Note1)	-11.3	PK
		V	2394.0	54.9	-12.4	42.5	54(Note1)	-11.5	PK
	62	H	2598.0	49.7	-11.2	38.5	54(Note1)	-15.5	PK
		V	3295.0	50.7	-10.5	40.2	54(Note1)	-13.8	PK
		H	4570.0	46.6	-8.6	38.0	54(Note1)	-16.0	PK
		V	4995.0	46.6	-8.2	38.4	54(Note1)	-15.6	PK
	102	H	1901.0	55.1	-14.1	40.9	54(Note1)	-13.1	PK
		V	1850.0	52.6	-14.5	38.2	54(Note1)	-15.8	PK
H		2496.0	54.1	-10.8	43.4	54(Note1)	-10.6	PK	
V		2402.5	53.1	-12.3	40.8	54(Note1)	-13.2	PK	
110	H	3261.0	49.6	-10.4	39.2	54(Note1)	-14.8	PK	
	V	2870.0	49.2	-11.2	37.9	54(Note1)	-16.1	PK	
	H	5275.5	46.9	-7.7	39.2	54(Note1)	-14.8	PK	
	V	4893.0	46.7	-8.3	38.4	54(Note1)	-15.6	PK	

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

The worst case of Radiated Emission below 1GHz:

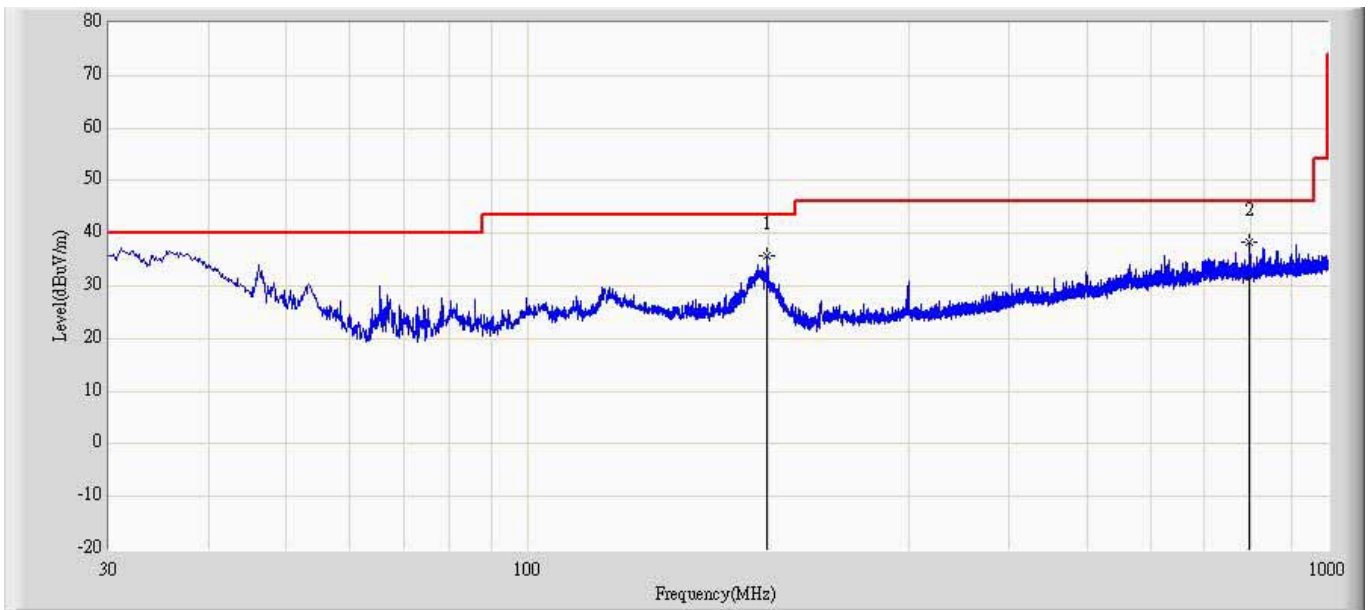
Test for dipole antenna 1#

Site: AC2	Time: 2013/04/20 - 10:41
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27611(30-1000MHz)	Polarity: Horizontal
EUT: WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode1 : Receive by 802.11n(20MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	199.265	36.136	20.041	-7.364	43.500	16.095	QP
2		240.005	35.873	17.702	-10.127	46.000	18.171	QP

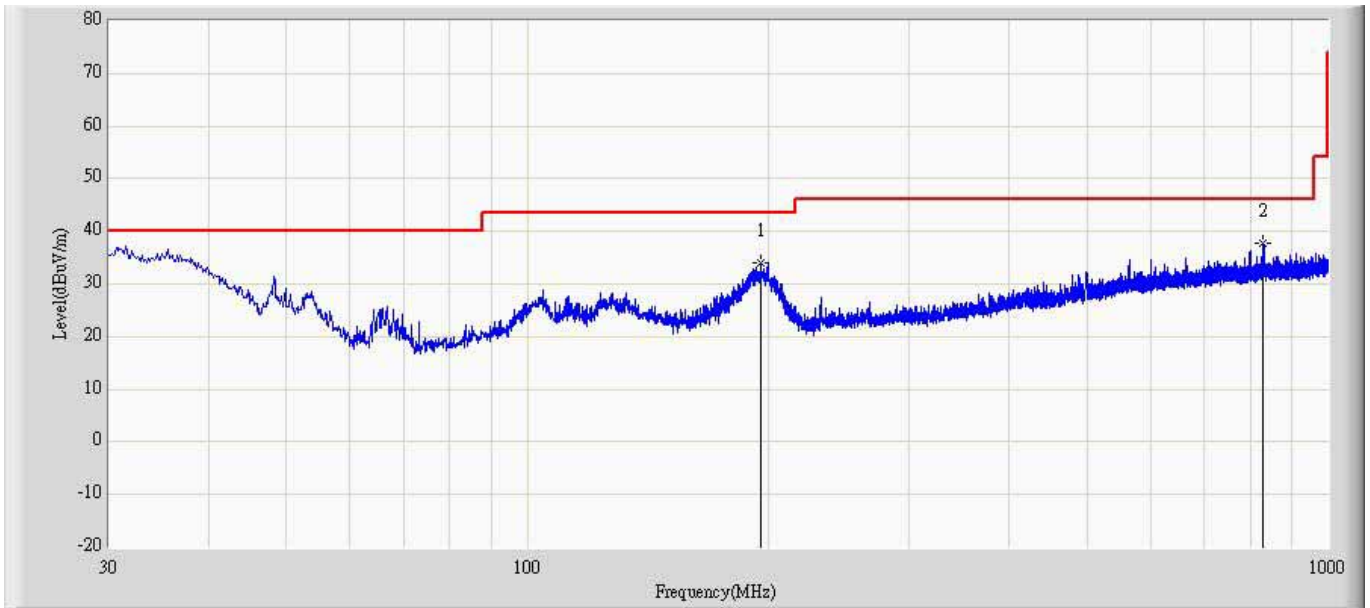
Site: AC2	Time: 2013/04/20 - 10:41
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27611(30-1000MHz)	Polarity: Vertical
EUT: WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode1 : Receive by 802.11n(20MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		199.144	35.729	19.639	-7.771	43.500	16.090	QP
2	*	796.421	38.417	9.897	-7.583	46.000	28.520	QP

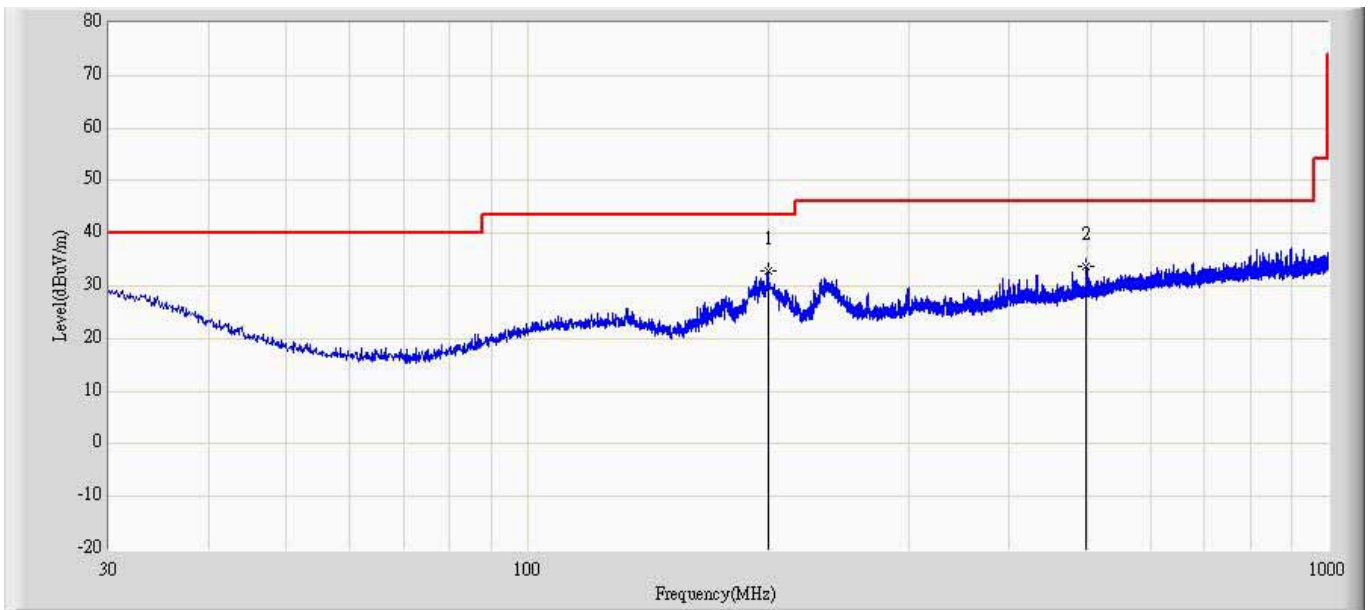
Test for panel antenna

Site: AC2	Time: 2013/04/20 - 10:57
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27611(30-1000MHz)	Polarity: Horizontal
EUT: WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode1 : Receive by 802.11n(20MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		195.506	34.008	18.018	-9.492	43.500	15.991	QP
2	*	829.644	37.695	8.627	-8.305	46.000	29.068	QP

Site: AC2	Time: 2013/04/20 - 10:57
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27611(30-1000MHz)	Polarity: Vertical
EUT: WIRELESS-ABGN 3X3 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode1 : Receive by 802.11n(20MHz)	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	199.629	32.996	16.889	-10.504	43.500	16.107	QP
2		497.661	33.606	8.311	-12.394	46.000	25.295	QP

The End