



Test Report

Product Name : ADSL2/2 + VoIP Wireless Router

Model No. : AVS920WA+, AVS920WB+

Applicant : CastleNet Technology Inc.

Address : No.64, Chung-Shan Rd. Tu-Cheng City, Taipei 236 Taiwan

Date of Receipt : 2009/06/30

Issued Date : 2009/07/10

Report No. : 097040R-ITUSP01V02

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, NVLAP, NIST or any agency of the Government.

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Test Report Certification

Issued Date : 2009/07/10

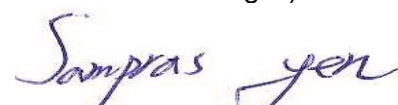
Report No. : 097040R-ITUSP01V02

Quietek


Product Name : ADSL2/2 + VoIP Wireless Router
Applicant : CastleNet Technology Inc.
Address : No.64, Chung-Shan Rd. Tu-Cheng City, Taipei 236 Taiwan
Manufacturer : CastleNet Technology Inc.
Model No. : AVS920WA+, AVS920WB+
Rated Voltage : AC 120 V / 60 Hz
EUT Voltage : AC 100-240V, 50-60Hz
Trade Name : CastleNet
Applicable Standard : FCC CFR Title 47 Part 15 Subpart B: 2008 Class B
CISPR 22: 2005
ANSI C63.4: 2003
Test Result : Complied
Performed Location : Quietek Corporation (Linkou Laboratory)
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Approved By : 

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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 scopes:

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

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://tw.quietek.com/modules/enterprise/services.php?item=100>
 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	ADSL2/2 + VoIP Wireless Router
Trade Name	CastleNet
Model No.	AVS920WA+, AVS920WB+

Component	
USB Cable	Shielded, 1.8m
LAN Cable	Non-Shielded, 2.0m
Power Adapter (1)	MFR: OEM, M/N: ADS18B-W 120150 Input: 100-240V ~ 50-60Hz 0.5A Output: 12V – 1.5A Cable Out: Non-Shielded, 1.8m
Power Adapter (2)	MFR: UMEC, M/N: UP0181A-12PA Input: 100-240V ~ 50-60Hz 0.4A MAX. Output: +12V – 1.5A, 18W MAX Cable Out: Non-Shielded, 1.8m

Note:

The EUT is including two models for different marketing requirement.

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:

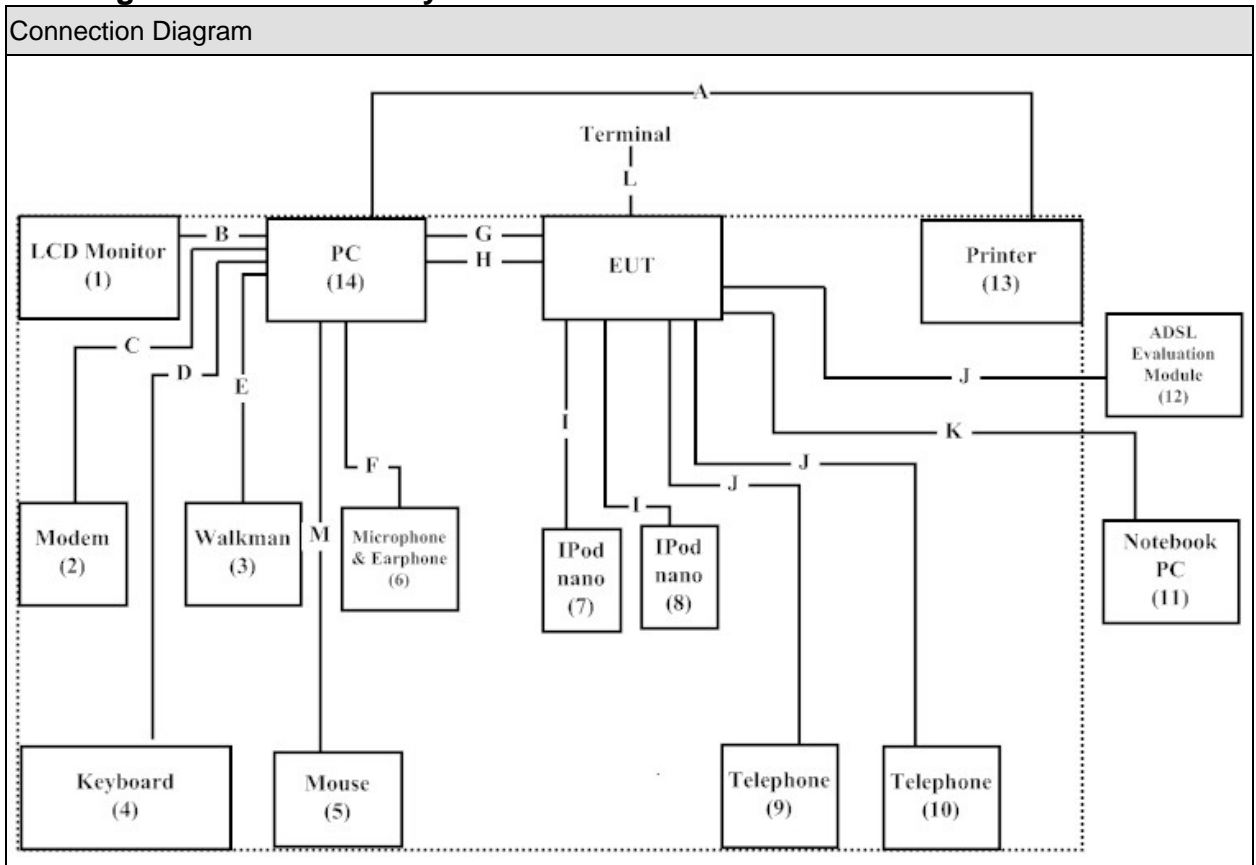
Pre-Test Mode	
Mode 1: Normal Operation with UMEC Adapter	
Mode 2: Normal Operation with OEM Adapter	
Final Test Mode	
Emission	Mode 1: Normal Operation with UMEC Adapter Mode 2: Normal Operation with OEM Adapter

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 LCD Monitor	CMV	CT-730D	FNC122F57CA1072	Non-Shielded, 1.8m
2 Modem	ACEEX	DM-1414	0102027547	Non-Shielded, 1.8m
3 Walkman	AIWA	HS-TA164	N/A	N/A
4 Keyboard	COMPAQ	KB-0133	B55940MGAPK00K	N/A
5 Mouse	HP	M-S69	N/A	N/A
6 Microphone & Earphone	PCHOME	N/A	N/A	N/A
7 iPod nano	Apple	A1236	YM823SY8Y0P	N/A
8 iPod nano	Apple	A1236	7K818WQRY0P	N/A
9 Telephone	TENDEL	K-302	50721005000630	N/A
10 Telephone	TENDEL	K-302	50721005000655	N/A
11 Notebook PC	DELL	PP04X	2D2ZM1S	Non-Shielded, 0.8m
12 ADSL Evaluation Module	Texas Instruments	N/A	N/A	Non-Shielded, 1.8m
13 Printer	EPSON	StyLus C63	FAPY094255	Non-Shielded, 1.9m
14 PC	COMPAQ	Evo D310	SG30801008	Non-Shielded, 1.8m

1.4. Configuration of Tested System



Signal Cable Type		Signal cable Description
A	Printer Cable	Shielded, 1.2m
B	D-SUB Cable	Shielded, 1.8m with two ferrite cores bonded
C	RS-232 Cable	Shielded, 1.5m
D	Keyboard Cable	Shielded, 1.8m
E	Audio Cable	Non-Shielded, 1.6m
F	Earphone & Microphone Cable	Non-Shielded, 1.6m
G	USB Cable	Shielded, 1.8m
H	LAN Cable	Non-Shielded, 2.0m
I	USB Cable	Shielded, 1.2m, two PCS
J	Telecom Cable	Non-Shielded, 5.0m, three PCS
K	LAN Cable	Non-Shielded, 5.0m
L	Terminal Cable	Non-Shielded, 1.0m, two PCS
M	Mouse Cable	Shielded, 1.8m

1.5. EUT Exercise Software

(1)	Setup the EUT and simulators as shown on 1.4.
(2)	Turn on the power of all equipment.
(3)	A mufti meter was used to verify the model operation before the measurement.

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 Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart B: 2008 Class B ANSI C63.4: 2003	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart B: 2008 Class B ANSI C63.4: 2003	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	100366	2008/10/18
LISN	R&S	ENV4200	833209/007	2008/08/12
LISN	R&S	ENV216	100085	2009/02/14
Pulse Limiter	R&S	ESH3-Z2	357.88.10.52	2008/09/04

Radiated Emission / Site1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2918	2008/09/25
Broadband Horn Antenna	Schwarzbeck	BBHA9170	208	2008/07/25
EMI Test Receiver	R&S	ESCS 30	100122	2009/02/03
Horn Antenna	Schwarzbeck	BBHA9120D	305	2008/08/10
Pre-Amplifier	QTK	N/A	N/A	2009/01/03
Spectrum Analyzer	Advantest	R3162	100803470	2008/11/10

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

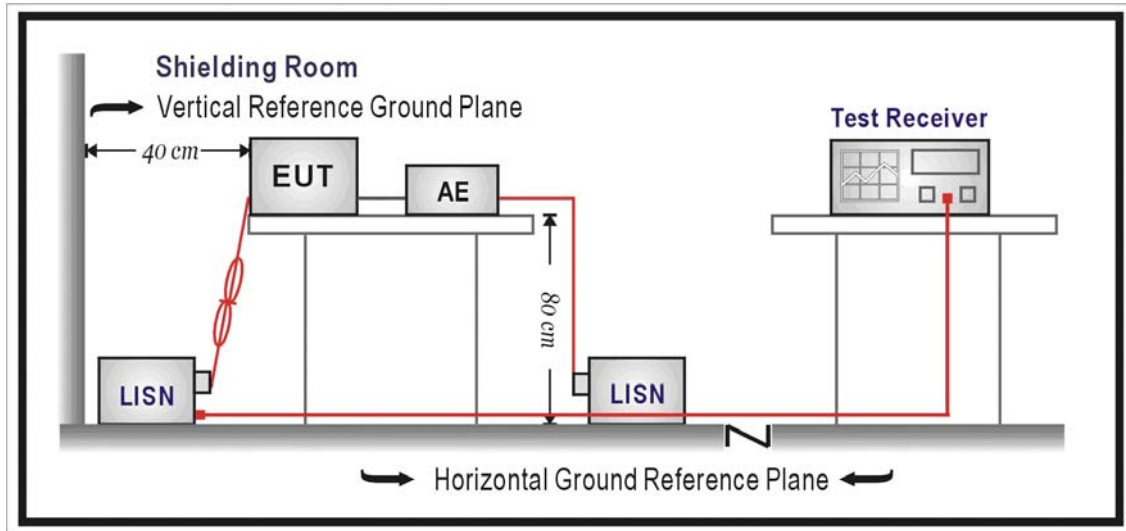
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission

3.1. Test Specification

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

3.2. Test Setup



3.3. Limit

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

Remarks: In the above table, the tighter limit applies at the band edges.

3.4. 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.

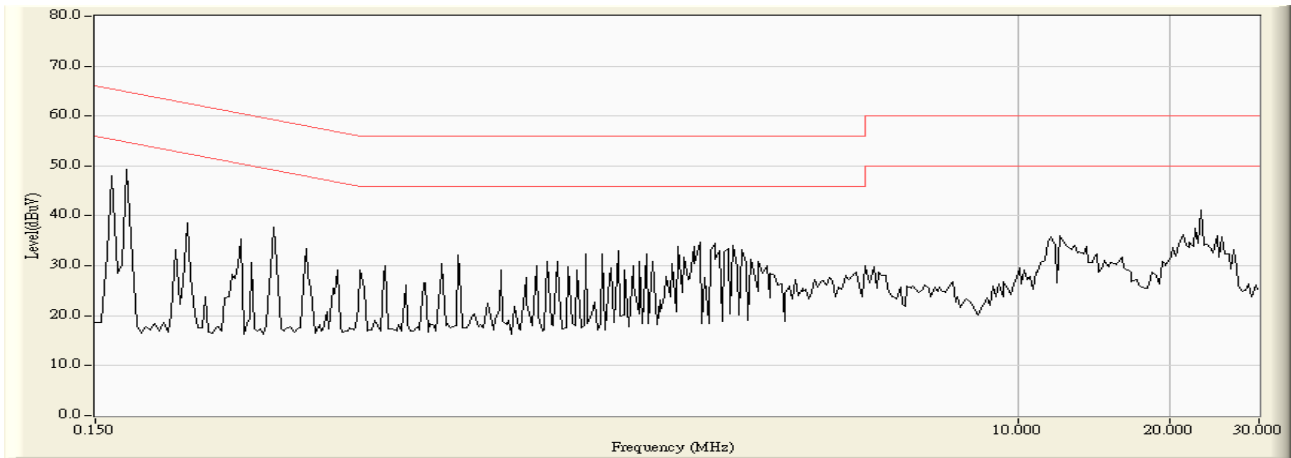
(Please refers to the block diagram of the test setup and photographs.)

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 on conducted measurement.

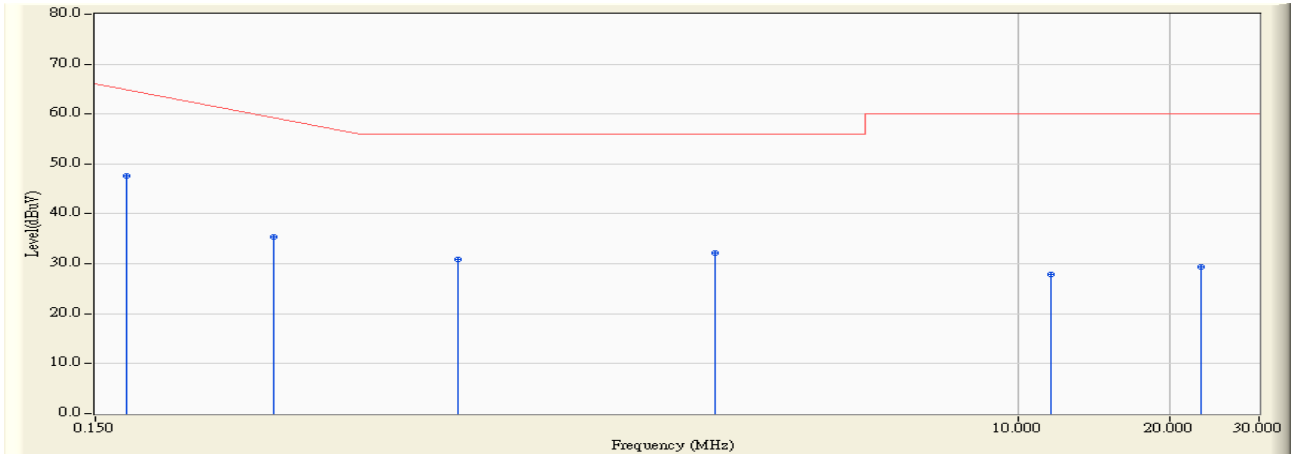
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Test Result

Site : SR1	Time : 2009/07/02 - 23:22
Limit : CISPR_B_00M_QP	Margin : 10
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-L1 - Line1
Power : AC 120V/60Hz	Note : Mode 1



Site : SR1	Time : 2009/07/02 - 23:23
Limit : CISPR_B_00M_QP	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-L1 - Line1
Power : AC 120V/60Hz	Note : Mode 1

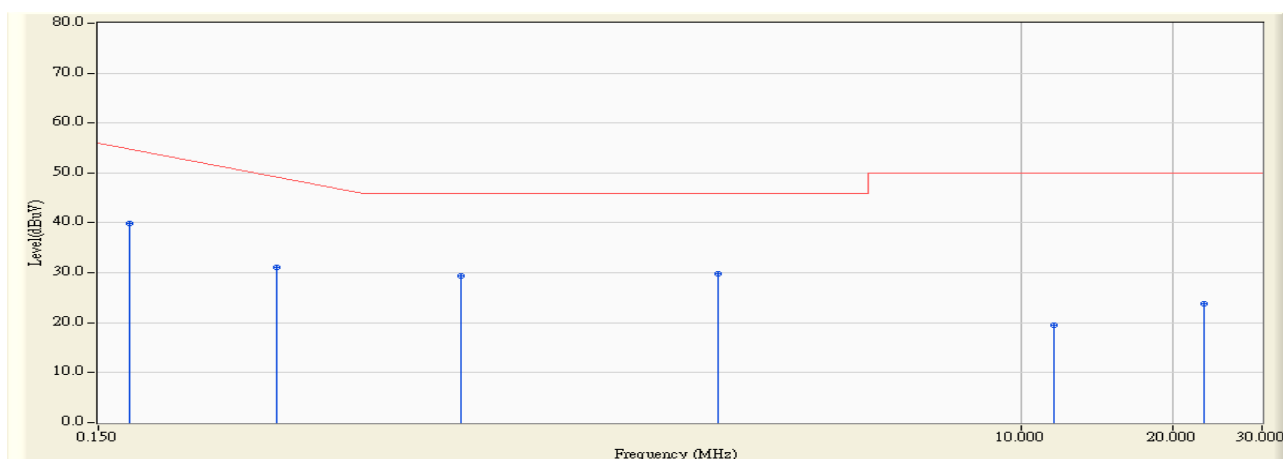


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.173	9.815	37.740	47.555	-17.788	65.343	QUASPEAK
2		0.338	9.830	25.650	35.480	-25.149	60.629	QUASPEAK
3		0.783	9.830	21.140	30.970	-25.030	56.000	QUASPEAK
4		2.517	9.850	22.390	32.240	-23.760	56.000	QUASPEAK
5		11.634	9.984	17.800	27.784	-32.216	60.000	QUASPEAK
6		23.056	10.210	19.190	29.400	-30.600	60.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2009/07/02 - 23:23
Limit : CISPR_B_00M_AV	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-L1 - Line1
Power : AC 120V/60Hz	Note : Mode 1

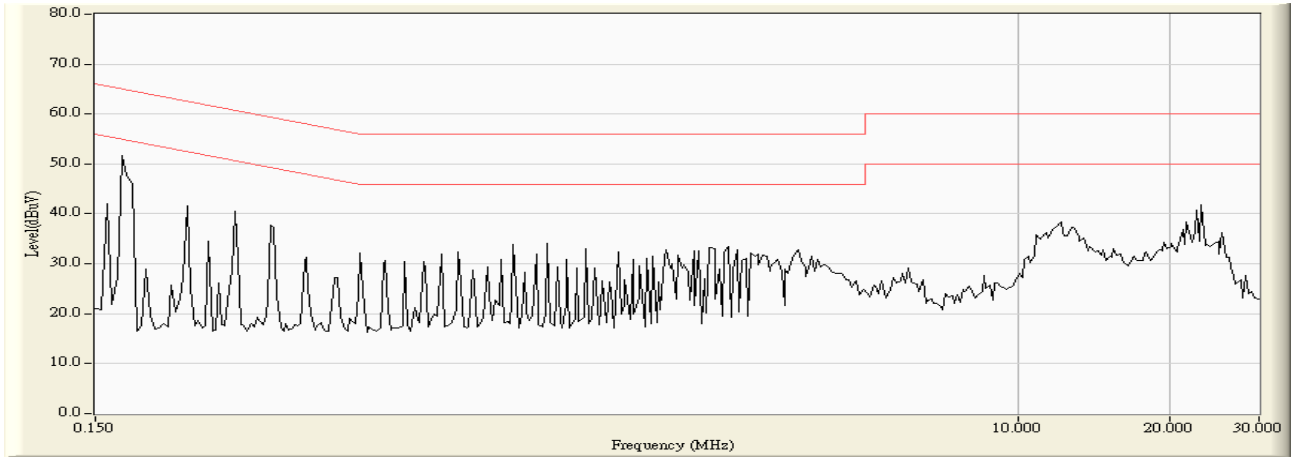


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.173	9.815	30.020	39.835	-15.508	55.343	AVERAGE
2		0.338	9.830	21.270	31.100	-19.529	50.629	AVERAGE
3		0.783	9.830	19.530	29.360	-16.640	46.000	AVERAGE
4		2.517	9.850	20.050	29.900	-16.100	46.000	AVERAGE
5		11.634	9.984	9.450	19.434	-30.566	50.000	AVERAGE
6		23.056	10.210	13.510	23.720	-26.280	50.000	AVERAGE

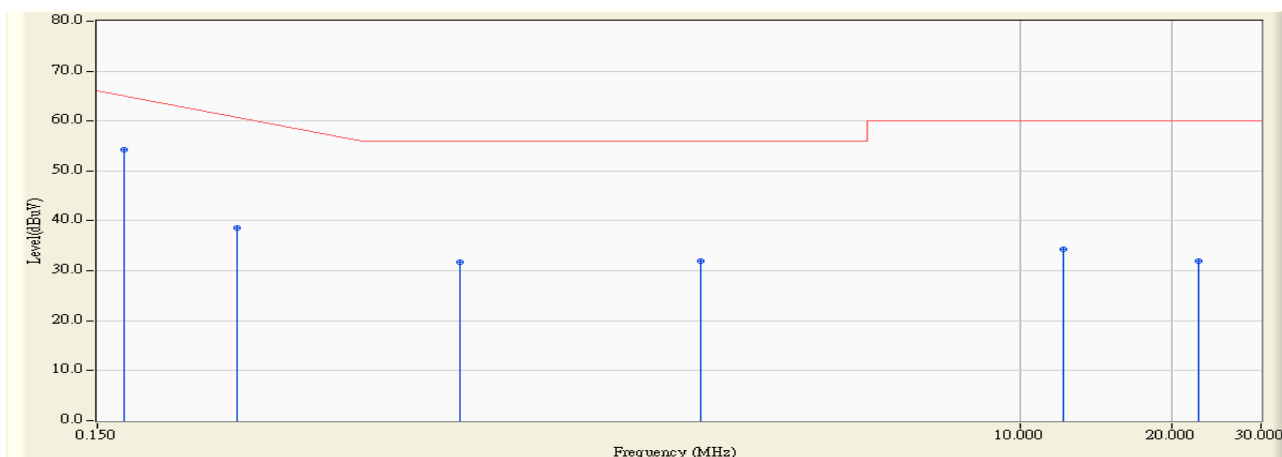
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2009/07/02 - 23:23
Limit : CISPR_B_00M_QP	Margin : 10
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-N - Line2
Power : AC 120V/60Hz	Note : Mode 1



Site : SR1	Time : 2009/07/02 - 23:24
Limit : CISPR_B_00M_QP	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-N - Line2
Power : AC 120V/60Hz	Note : Mode 1

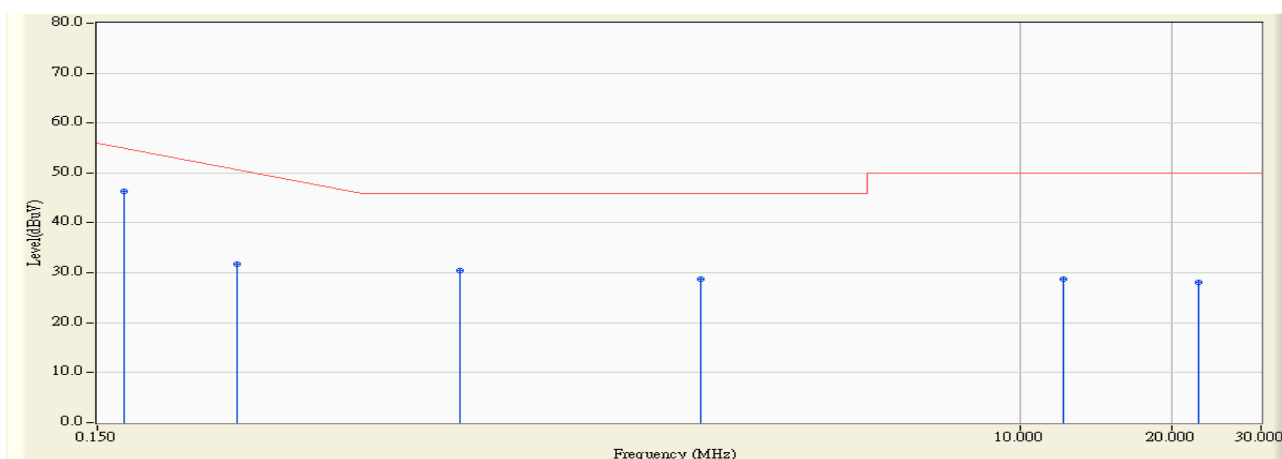


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.170	9.866	44.380	54.246	-11.183	65.429	QUASIPeAK
2		0.283	9.850	28.680	38.530	-23.670	62.200	QUASIPeAK
3		0.783	9.830	21.910	31.740	-24.260	56.000	QUASIPeAK
4		2.345	9.850	22.050	31.900	-24.100	56.000	QUASIPeAK
5		12.185	10.044	24.340	34.384	-25.616	60.000	QUASIPeAK
6		22.517	10.075	21.830	31.905	-28.095	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2009/07/02 - 23:24
Limit : CISPR_B_00M_AV	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-N - Line2
Power : AC 120V/60Hz	Note : Mode 1

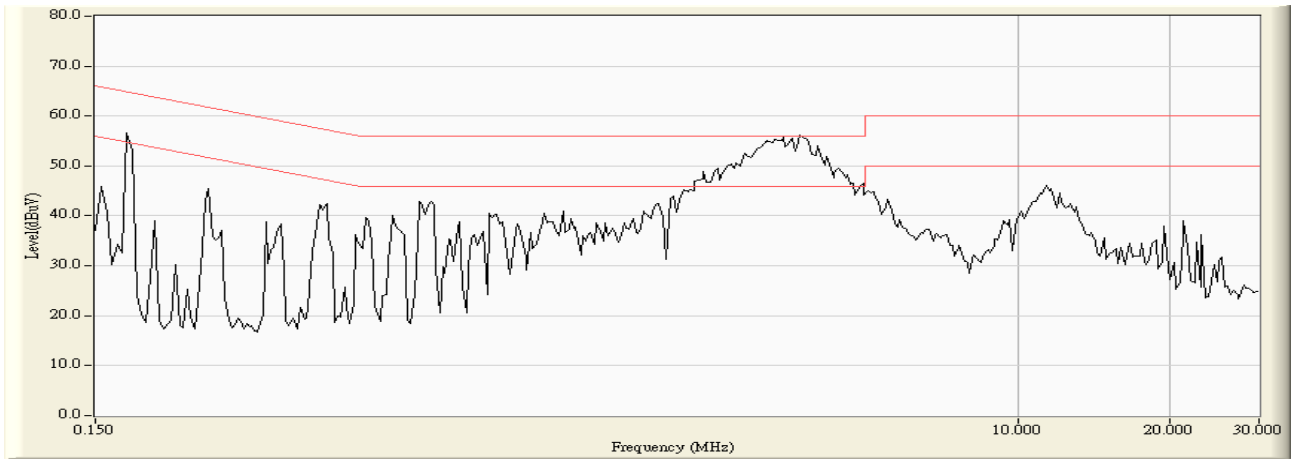


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.170	9.866	36.550	46.416	-9.013	55.429	AVERAGE
2		0.283	9.850	21.940	31.790	-20.410	52.200	AVERAGE
3		0.783	9.830	20.610	30.440	-15.560	46.000	AVERAGE
4		2.345	9.850	18.980	28.830	-17.170	46.000	AVERAGE
5		12.185	10.044	18.740	28.784	-21.216	50.000	AVERAGE
6		22.517	10.075	18.120	28.195	-21.805	50.000	AVERAGE

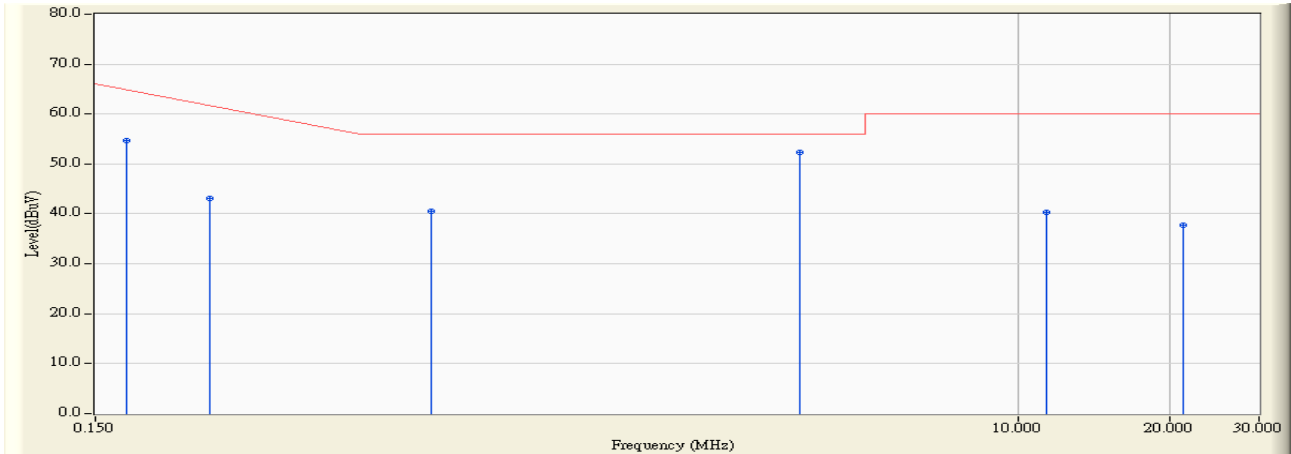
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2009/07/02 - 23:51
Limit : CISPR_B_00M_QP	Margin : 10
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-L1 - Line1
Power : AC 120V/60Hz	Note : Mode 2



Site : SR1	Time : 2009/07/02 - 23:52
Limit : CISPR_B_00M_QP	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-L1 - Line1
Power : AC 120V/60Hz	Note : Mode 2

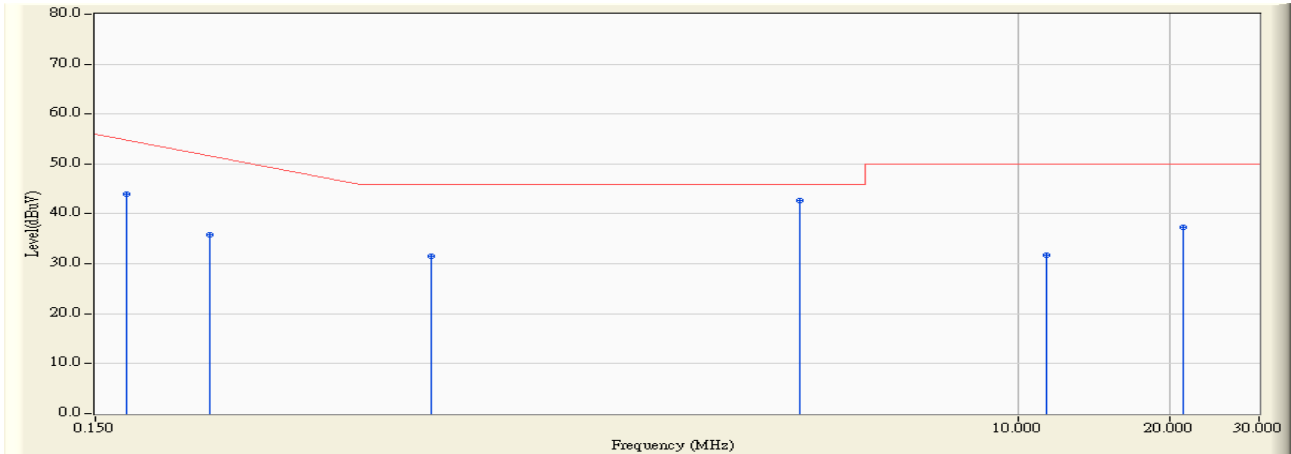


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.173	9.815	44.830	54.645	-10.698	65.343	QUASPEAK
2		0.252	9.830	33.310	43.140	-19.946	63.086	QUASPEAK
3		0.693	9.830	30.620	40.450	-15.550	56.000	QUASPEAK
4	*	3.705	9.860	42.510	52.370	-3.630	56.000	QUASPEAK
5		11.404	9.953	30.390	40.343	-19.657	60.000	QUASPEAK
6		21.263	10.200	27.560	37.760	-22.240	60.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2009/07/02 - 23:52
Limit : CISPR_B_00M_AV	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-L1 - Line1
Power : AC 120V/60Hz	Note : Mode 2

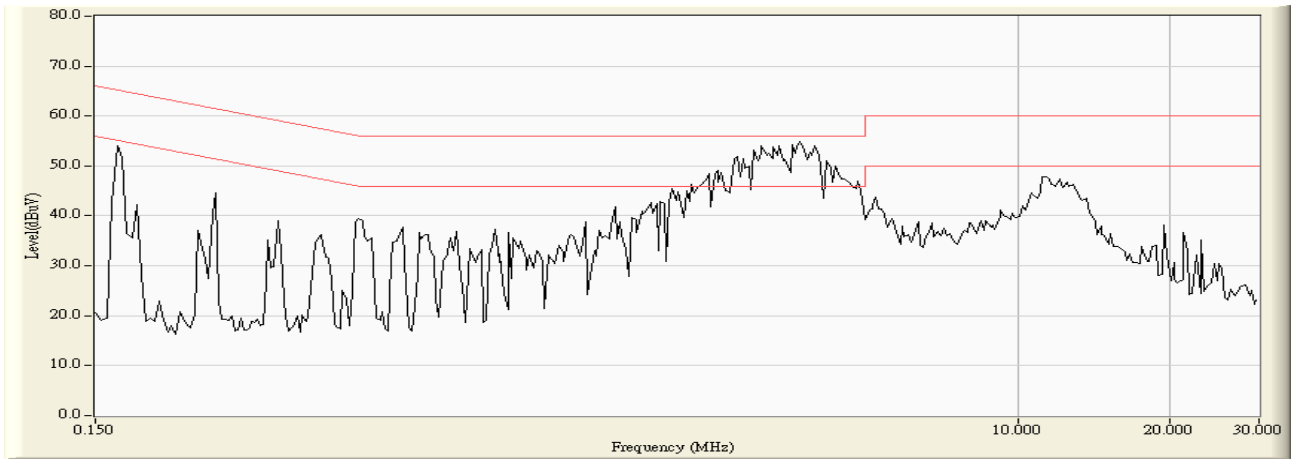


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.173	9.815	34.200	44.015	-11.328	55.343	AVERAGE
2		0.252	9.830	26.020	35.850	-17.236	53.086	AVERAGE
3		0.693	9.830	21.620	31.450	-14.550	46.000	AVERAGE
4	*	3.705	9.860	32.720	42.580	-3.420	46.000	AVERAGE
5		11.404	9.953	21.790	31.743	-18.257	50.000	AVERAGE
6		21.263	10.200	27.070	37.270	-12.730	50.000	AVERAGE

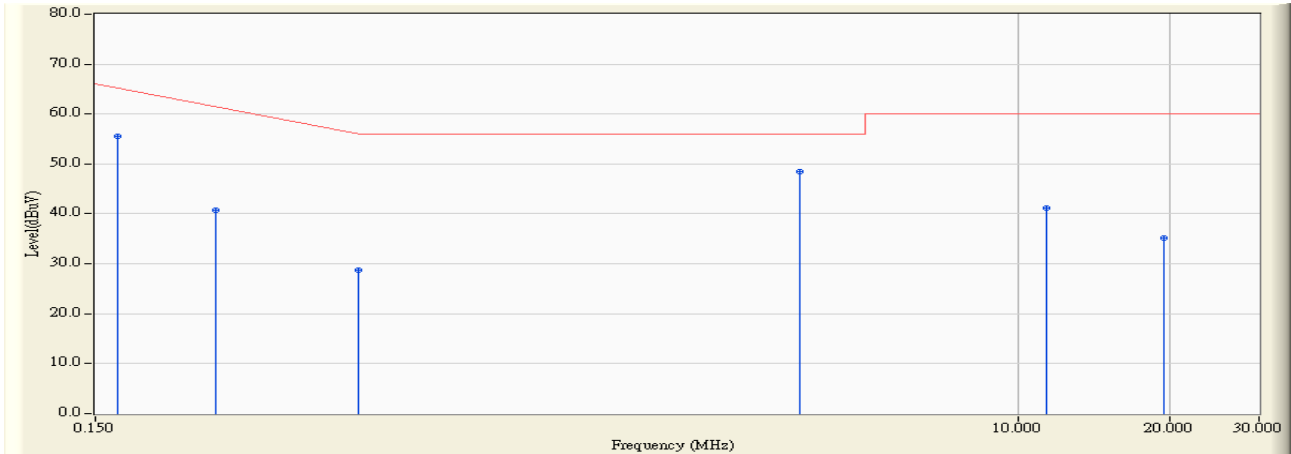
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2009/07/02 - 23:53
Limit : CISPR_B_00M_QP	Margin : 10
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-N - Line2
Power : AC 120V/60Hz	Note : Mode 2



Site : SR1	Time : 2009/07/02 - 23:54
Limit : CISPR_B_00M_QP	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-N - Line2
Power : AC 120V/60Hz	Note : Mode 2

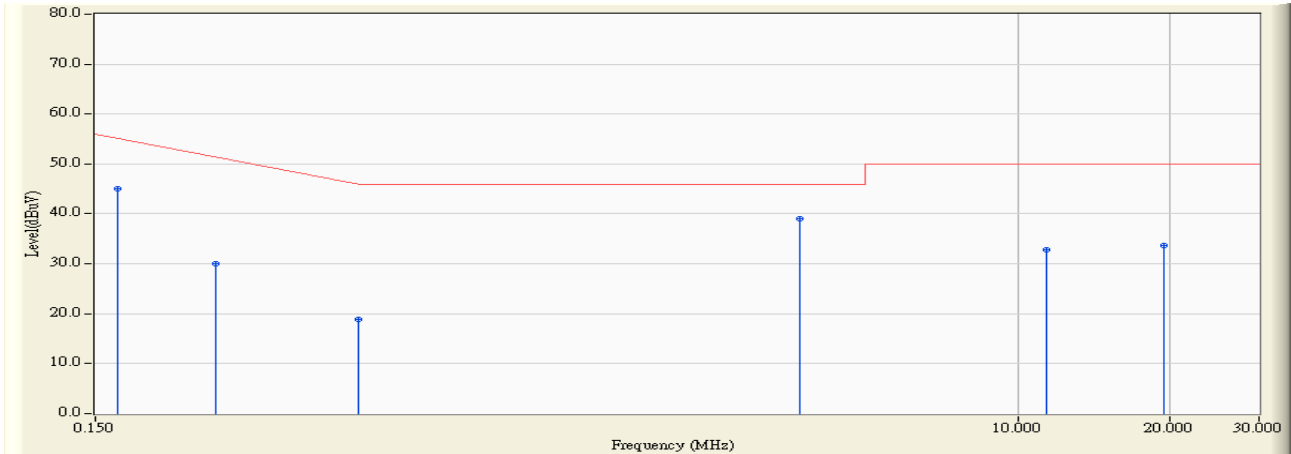


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.868	45.620	55.488	-10.055	65.543	QUASPEAK
2		0.259	9.857	30.910	40.767	-22.119	62.886	QUASPEAK
3		0.498	9.830	18.860	28.690	-27.367	56.057	QUASPEAK
4	*	3.716	9.860	38.570	48.430	-7.570	56.000	QUASPEAK
5		11.396	9.962	31.260	41.222	-18.778	60.000	QUASPEAK
6		19.416	10.230	24.870	35.100	-24.900	60.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2009/07/02 - 23:54
Limit : CISPR_B_00M_AV	Margin : 0
EUT : ADSL2/2 + VoIP Wireless Router	Probe : ENV-216-N - Line2
Power : AC 120V/60Hz	Note : Mode 2



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.868	35.260	45.128	-10.415	55.543	AVERAGE
2		0.259	9.857	20.260	30.117	-22.769	52.886	AVERAGE
3		0.498	9.830	9.150	18.980	-27.077	46.057	AVERAGE
4	*	3.716	9.860	29.270	39.130	-6.870	46.000	AVERAGE
5		11.396	9.962	22.920	32.882	-17.118	50.000	AVERAGE
6		19.416	10.230	23.410	33.640	-16.360	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3.6. Test Photograph

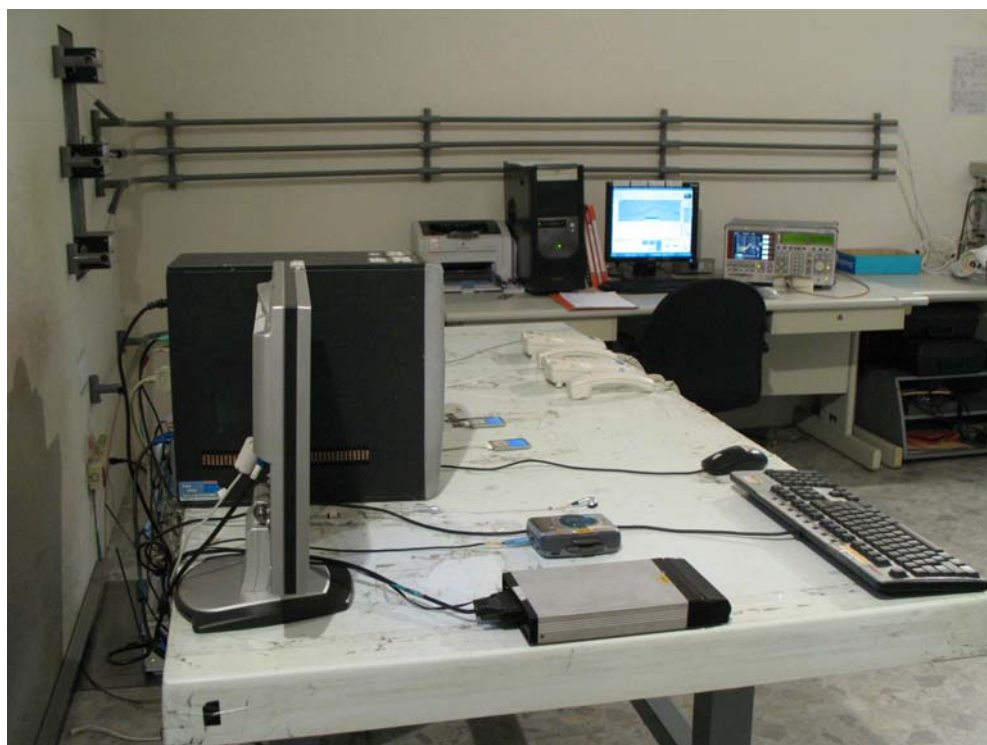
Test Mode : Mode 1: Normal Operation with UMEC Adapter

Description : Front View of Conducted Test



Test Mode : Mode 1: Normal Operation with UMEC Adapter

Description : Back View of Conducted Test



Test Mode : Mode 2: Normal Operation with OEM Adapter

Description : Front View of Conducted Test



Test Mode : Mode 2: Normal Operation with OEM Adapter

Description : Back View of Conducted Test



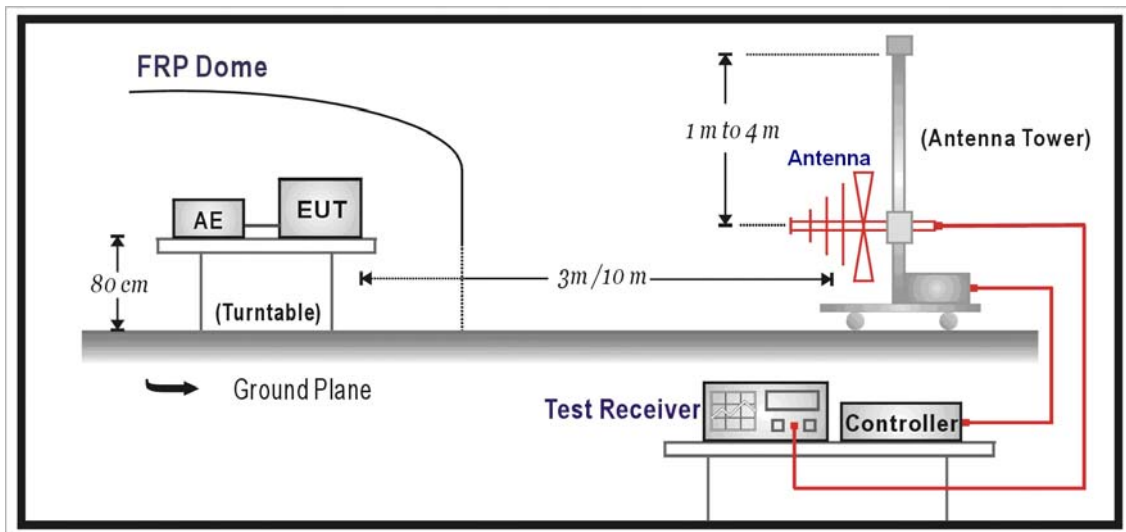
4. Radiated Emission

4.1. Test Specification

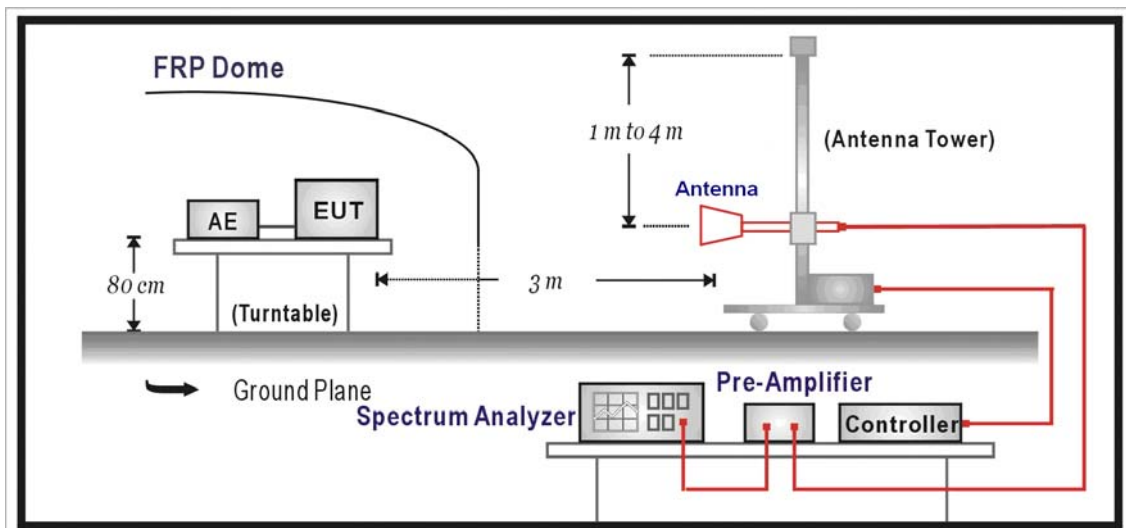
According to EMC Standard : FCC Part 15 Subpart B, ANSI C63.4

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

Under 1GHz test shall not exceed the following value:

Limits		
Frequency (MHz)	Distance (m)	dBuV/m
30 – 230	10	30
230 – 1000	10	37

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
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.

Above 1GHz test shall not exceed the following value:

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

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
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.
3. RF Voltage (dBuV/m) = 20 log RF Voltage (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 and 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	5 th 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.

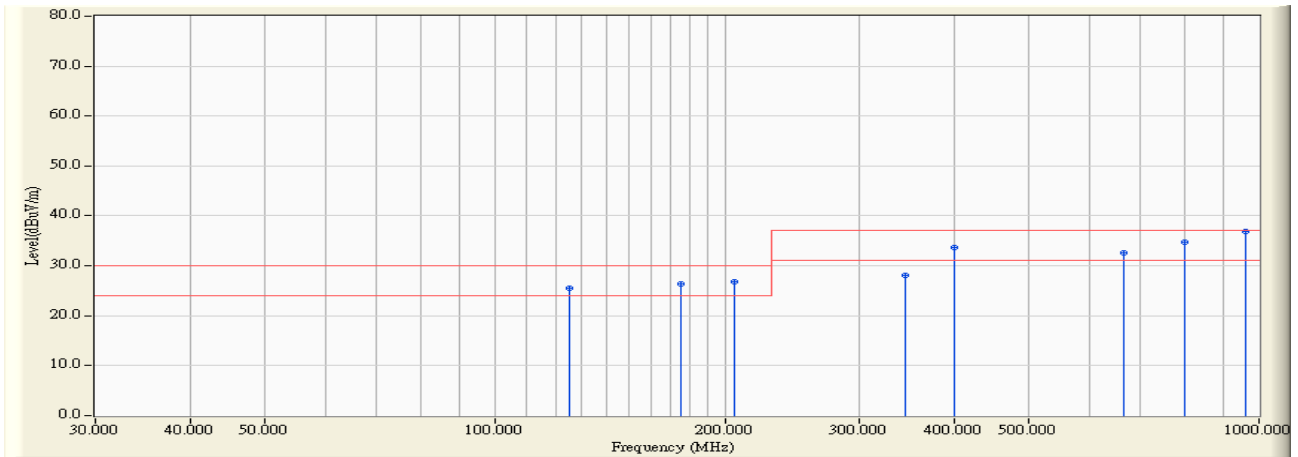
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

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 ESCS 30) is 120 kHz and above 1GHz is 1MHz.

4.5. Test Result

Site : OATS-1	Time : 2009/07/02
Limit : CISPR_B_10M_QP	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : Site1_CBL6112_10M_0811 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1

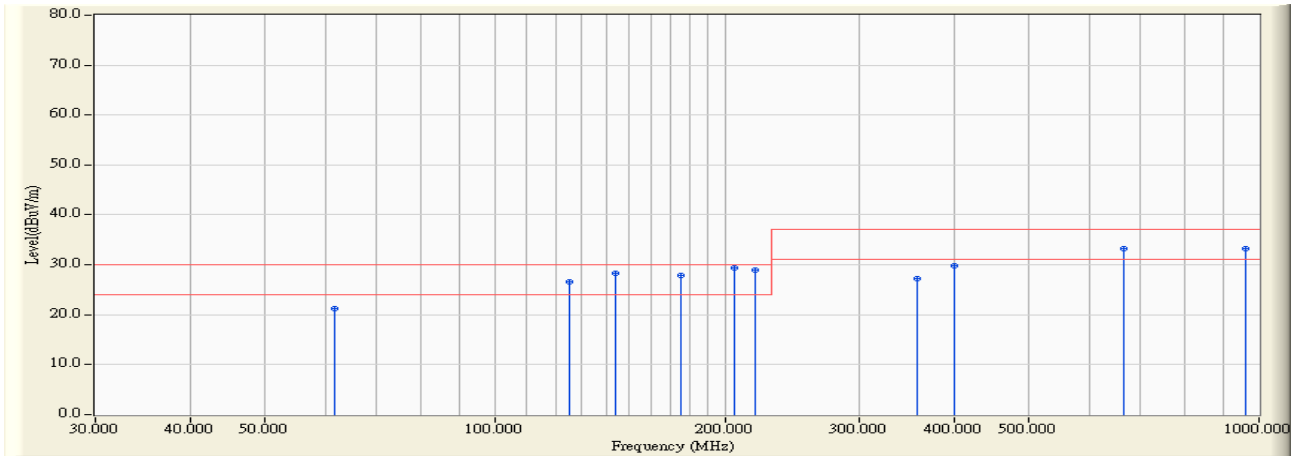


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	125.000	13.570	11.962	25.532	-4.468	30.000	QUASPEAK
2	175.000	10.803	15.513	26.316	-3.684	30.000	QUASPEAK
3	206.251	10.907	15.889	26.796	-3.204	30.000	QUASPEAK
4	343.750	17.302	10.771	28.074	-8.926	37.000	QUASPEAK
5	400.000	19.005	14.634	33.639	-3.361	37.000	QUASPEAK
6	666.670	22.898	9.659	32.557	-4.443	37.000	QUASPEAK
7	800.000	24.596	10.180	34.776	-2.224	37.000	QUASPEAK
8	* 960.000	26.202	10.641	36.843	-0.157	37.000	QUASPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-1	Time : 2009/07/02
Limit : CISPR_B_10M_QP	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : Site1_CBL6112_10M_0811 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1

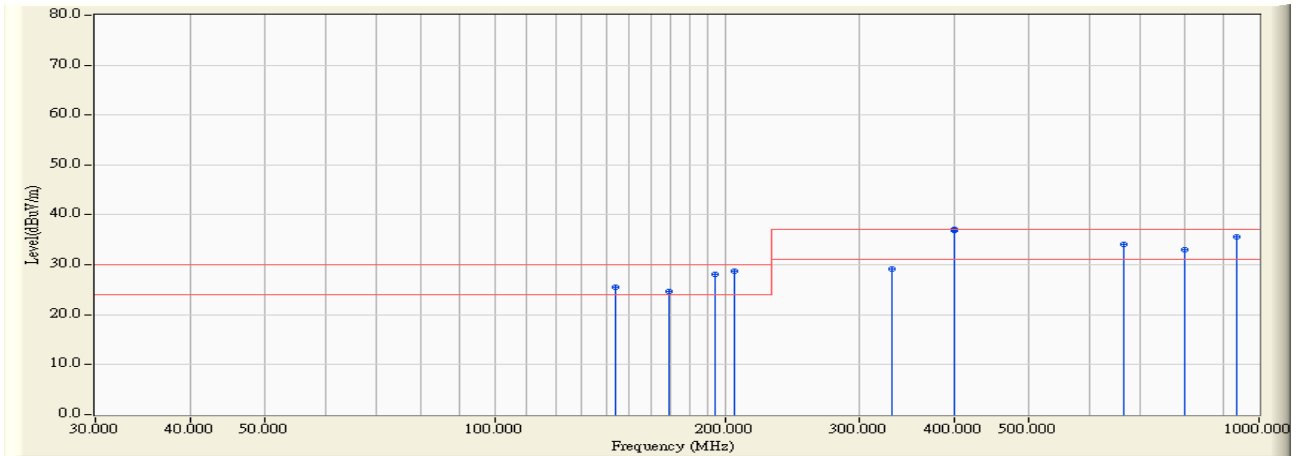


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		61.661	6.346	14.908	21.254	-8.746	30.000	QUASPEAK
2		125.000	13.570	13.102	26.672	-3.328	30.000	QUASPEAK
3		143.749	12.568	15.650	28.217	-1.783	30.000	QUASPEAK
4		175.000	10.803	16.993	27.796	-2.204	30.000	QUASPEAK
5	*	206.250	10.907	18.569	29.476	-0.524	30.000	QUASPEAK
6		218.750	10.746	18.244	28.991	-1.009	30.000	QUASPEAK
7		356.251	17.730	9.560	27.290	-9.710	37.000	QUASPEAK
8		400.000	19.005	10.914	29.919	-7.081	37.000	QUASPEAK
9		666.670	22.898	10.239	33.137	-3.863	37.000	QUASPEAK
10		960.000	26.202	7.141	33.343	-3.657	37.000	QUASPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-1	Time : 2009/06/22
Limit : CISPR_B_10M_QP	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : Site1_CBL6112_10M_0811 - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 2

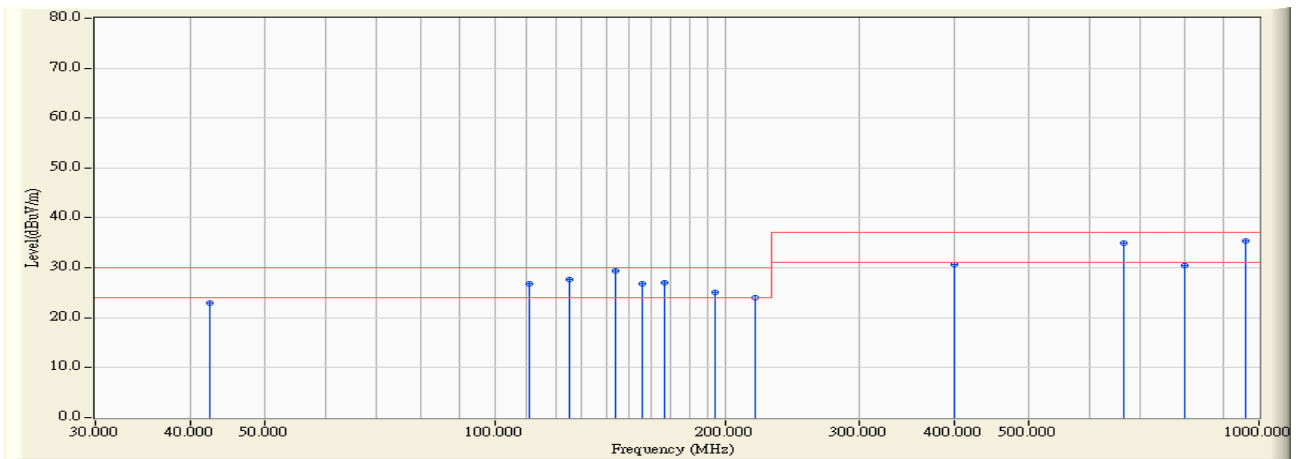


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	143.750	12.566	13.000	25.567	-4.433	30.000	QUASPEAK
2	168.750	11.261	13.500	24.761	-5.239	30.000	QUASPEAK
3	193.750	10.851	17.200	28.051	-1.949	30.000	QUASPEAK
4	206.250	10.907	17.800	28.707	-1.293	30.000	QUASPEAK
5	331.250	16.868	12.200	29.068	-7.932	37.000	QUASPEAK
6	400.000	19.005	17.800	36.805	-0.195	37.000	QUASPEAK
7	* 666.670	22.898	11.200	34.098	-2.902	37.000	QUASPEAK
8	800.000	24.596	8.500	33.096	-3.904	37.000	QUASPEAK
9	933.330	25.902	9.600	35.503	-1.497	37.000	QUASPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-1	Time : 2009/06/22
Limit : CISPR_B_10M_QP	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : Site1_CBL6112_10M_0811 - VERTICAL
Power : AC 120V/60Hz	Note : Mode 2

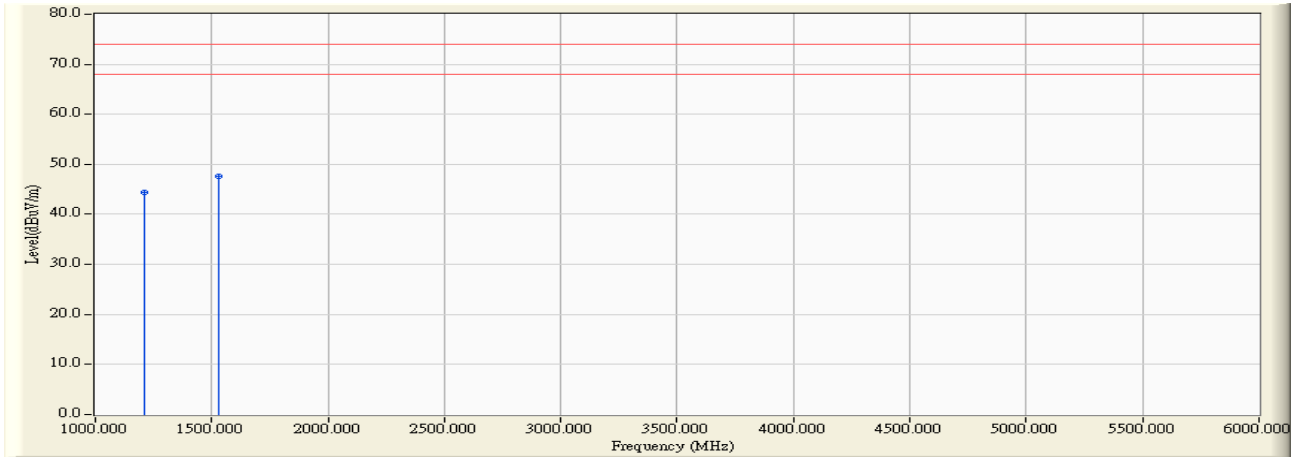


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		42.360	12.584	10.300	22.883	-7.117	30.000	QUASPEAK
2		110.780	13.020	13.700	26.720	-3.280	30.000	QUASPEAK
3		125.000	13.570	14.100	27.670	-2.330	30.000	QUASPEAK
4	*	143.750	12.566	16.800	29.367	-0.633	30.000	QUASPEAK
5		156.250	11.615	15.300	26.915	-3.085	30.000	QUASPEAK
6		166.660	11.363	15.700	27.063	-2.937	30.000	QUASPEAK
7		193.750	10.851	14.200	25.051	-4.949	30.000	QUASPEAK
8		218.750	10.746	13.200	23.947	-6.053	30.000	QUASPEAK
9		400.000	19.005	11.600	30.605	-6.395	37.000	QUASPEAK
10		666.660	22.898	12.000	34.898	-2.102	37.000	QUASPEAK
11		800.000	24.596	5.800	30.396	-6.604	37.000	QUASPEAK
12		960.000	26.202	9.100	35.302	-1.698	37.000	QUASPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-1	Time : 2009/07/02 - 02:36
Limit : FCC_B (Above 1G)_03M_PK	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : 9120D_1-18G_Horn - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 1

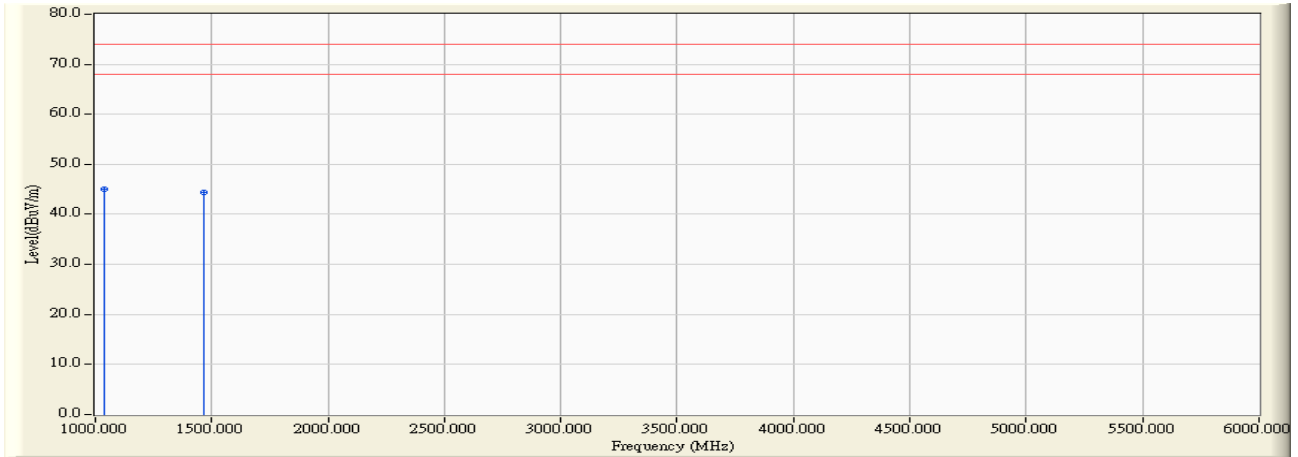


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1208.000	-6.118	50.530	44.413	-29.587	74.000	PEAK
2	*	1530.000	-5.035	52.746	47.711	-26.289	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-1	Time : 2009/07/02 - 02:41
Limit : FCC_B_(Above_1G)_03M_PK	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 120V/60Hz	Note : Mode 1

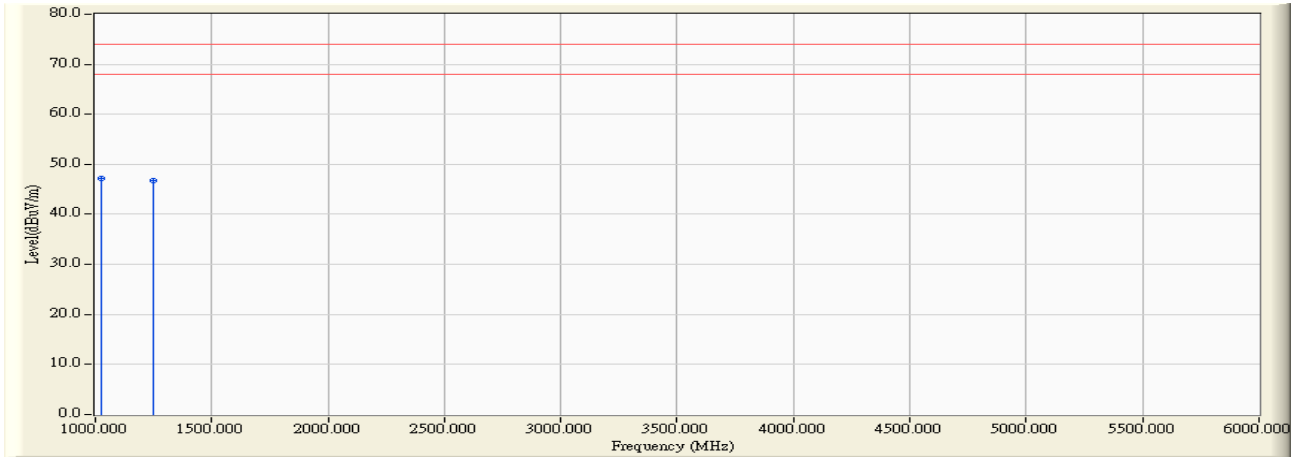


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1036.000	-6.522	51.648	45.126	-28.874	74.000	PEAK
2		1469.000	-5.071	49.457	44.386	-29.614	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-1	Time : 2009/07/02 - 02:20
Limit : FCC_B_(Above_1G)_03M_PK	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : 9120D_1-18G_Horn - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode 2

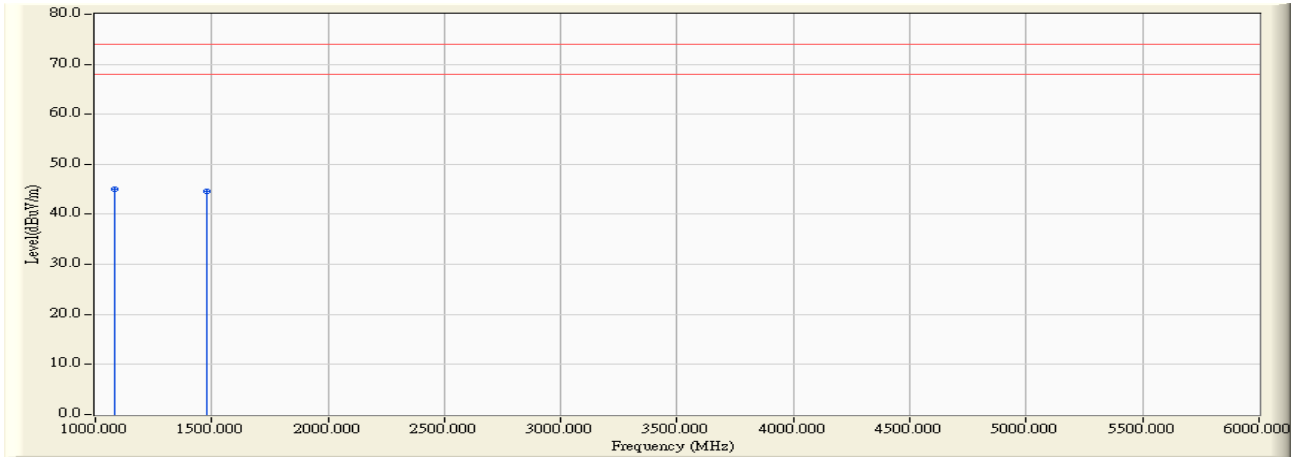


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1025.000	-6.546	53.778	47.232	-26.768	74.000	PEAK
2		1250.000	-5.902	52.709	46.808	-27.192	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-1	Time : 2009/07/02 - 02:26
Limit : FCC_B_(Above_1G)_03M_PK	Margin : 6
EUT : ADSL2/2 + VoIP Wireless Router	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 120V/60Hz	Note : Mode 2



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1084.000	-6.418	51.548	45.130	-28.870	74.000	PEAK
2		1480.000	-5.064	49.583	44.519	-29.481	74.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

4.6. Test Photograph

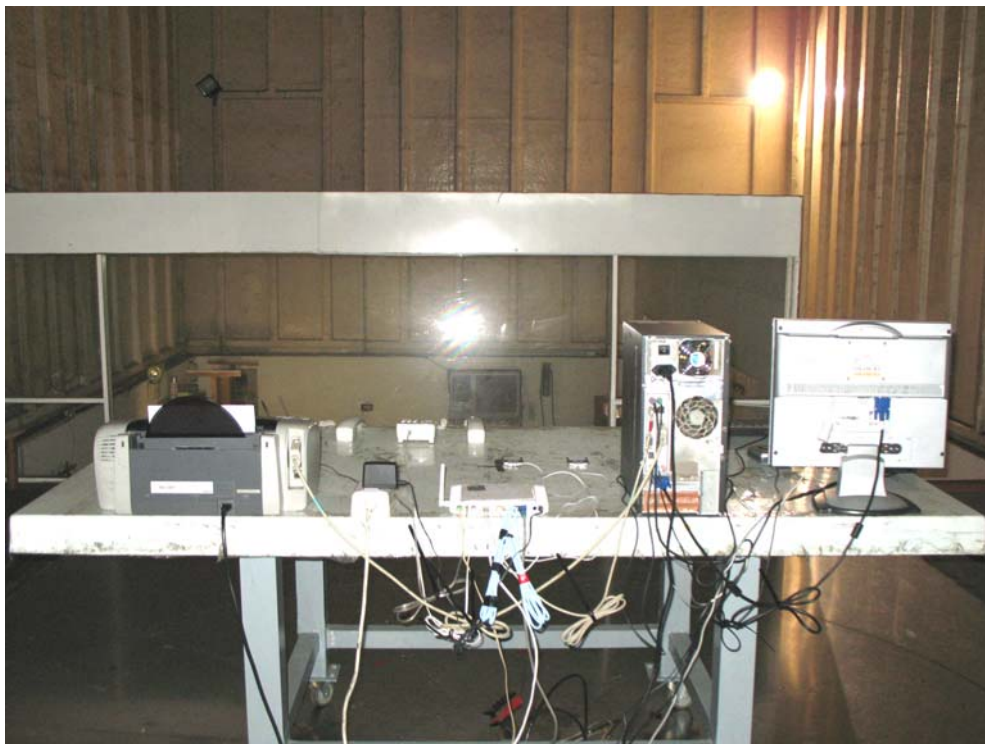
Test Mode : Mode 1: Normal Operation with UMEC Adapter

Description : Front View of Radiated Test



Test Mode : Mode 1: Normal Operation with UMEC Adapter

Description : Back View of Radiated Test



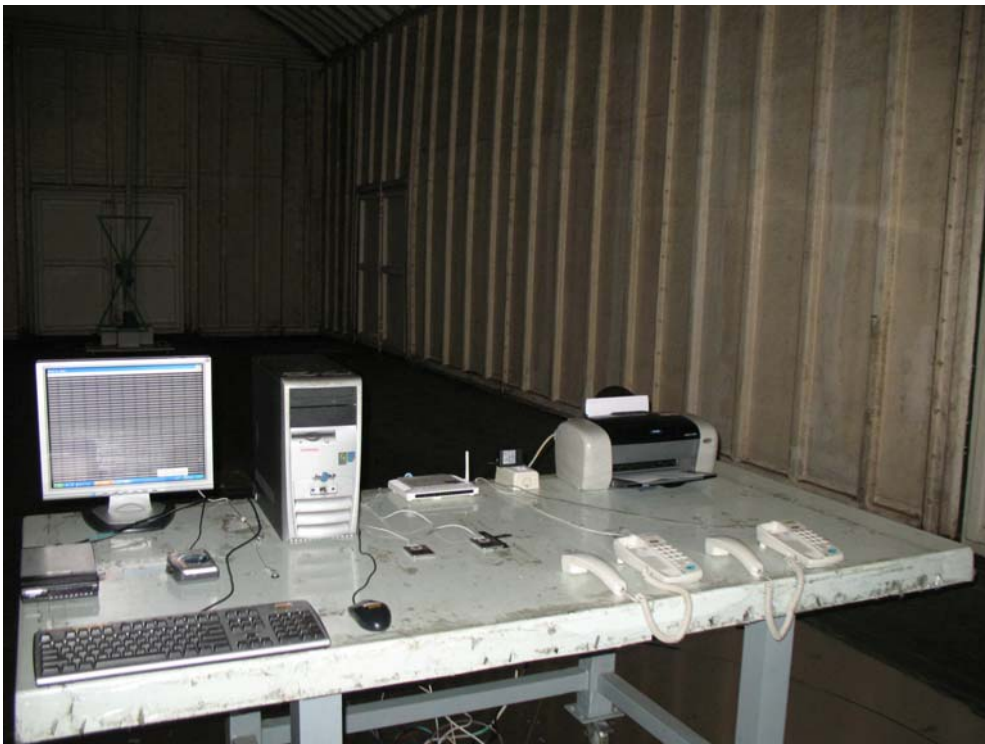
Test Mode : Mode 1: Normal Operation with UMEC Adapter

Description : Front View of High Frequency Radiated Test



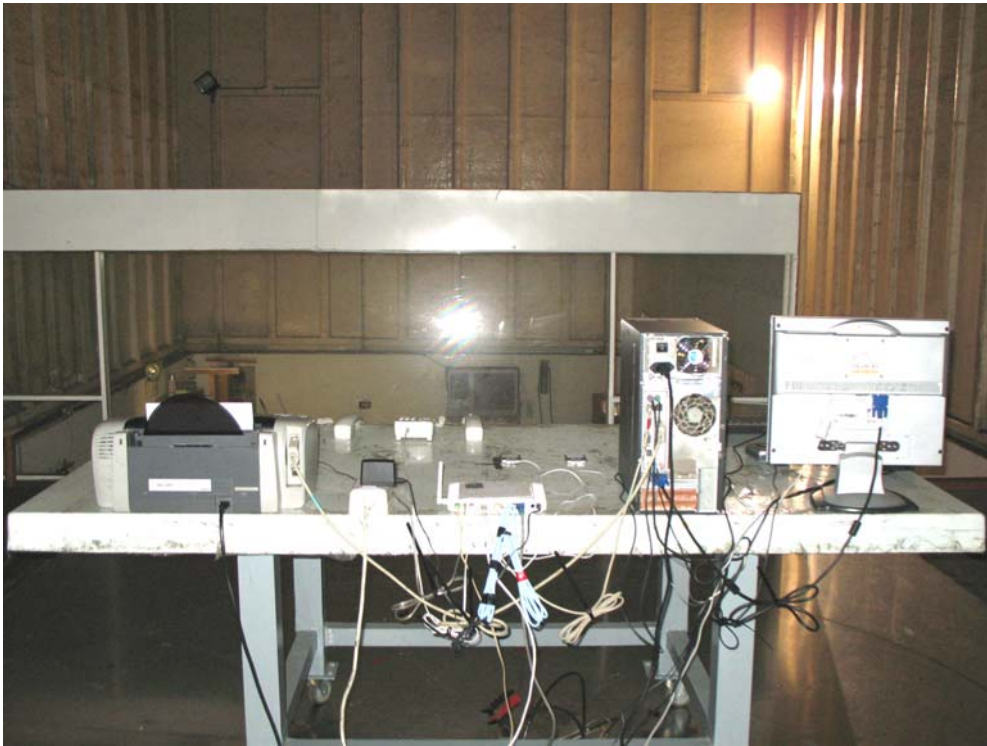
Test Mode : Mode 2: Normal Operation with OEM Adapter

Description : Front View of Radiated Test



Test Mode : Mode 2: Normal Operation with OEM Adapter

Description : Back View of Radiated Test



Test Mode : Mode 2: Normal Operation with OEM Adapter

Description : Front View of High Frequency Radiated Test



5. Attachment

➤ EUT Photograph

(1) EUT Photo



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo



(5) EUT Photo



(6) EUT Photo



(7) EUT Photo



(8) EUT Photo



(9) EUT Photo

