Test Report

Product Name	：	USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.
Model No.	：	UE-100TX-G3
FCC ID	：	SJ9UE-100TX-G3

Applicant	：	PLANEX COMMUNICATIONS INC
Address	：	F Nissei Ebisu Bldg 2F 16-3 Higashi 3-chome ,Shibuya-ku, Tokyo 150-0011 Japan

Date of Receipt	：	2011/02/08
Issued Date	：	2011/02/25
Report No.	：	112068R-ITUSP01V02
Report Version	：	V1.0

Test Report Certification

Issued Date : 2011/02/25
Report No. : 112068R-ITUSP01V02

Product Name	:	USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.
Applicant	:	PLANEX COMMUNICATIONS INC
Address	:	F Nissei Ebisu Bldg 2F 16-3 Higashi 3-chome ,Shibuya-ku, Tokyo 150-0011 Japan
Manufacturer	:	Yonville Electronic(ShenZhen)Ltd.
Model No.	:	UE-100TX-G3
EUT Rated Voltage	:	DC 5V
EUT Test Voltage	:	AC 120 V / 60 Hz
Trade Name	:	PLANEX
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart B: 2009 Class B CISPR 22: 2008, ANSI C63.4: 2009
Test Result	:	Complied
Performed Location	:	Quietek Corporation (Linkou Laboratory) No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C. TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789
FCC Accreditation Number	:	TW1014

Documented By : Leven Huang
(Senior Adm. Specialist / Leven Huang)

Reviewed By : Harrison Chen
(Engineer / Harrison Chen)

Approved By :
(Manager / Vincent Lin)

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://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/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0

Testing Laboratory 1313

LinKou Testing Laboratory :

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

NVLAP Lab Code: 200533-0

Testing Laboratory 0914

Suzhou (China) Testing Laboratory :

No. 99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., Suzhou,China.
TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : service@quietek.com

NVLAP Lab Code : 200743-0

Testing Laboratory 1596

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1. General Information

1.1. EUT Description

Product Name	USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.
Trade Name	PLANEX
Model No.	UE-100TX-G3

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	
Final Test Mode	
Emission	Mode 1: Normal Operation

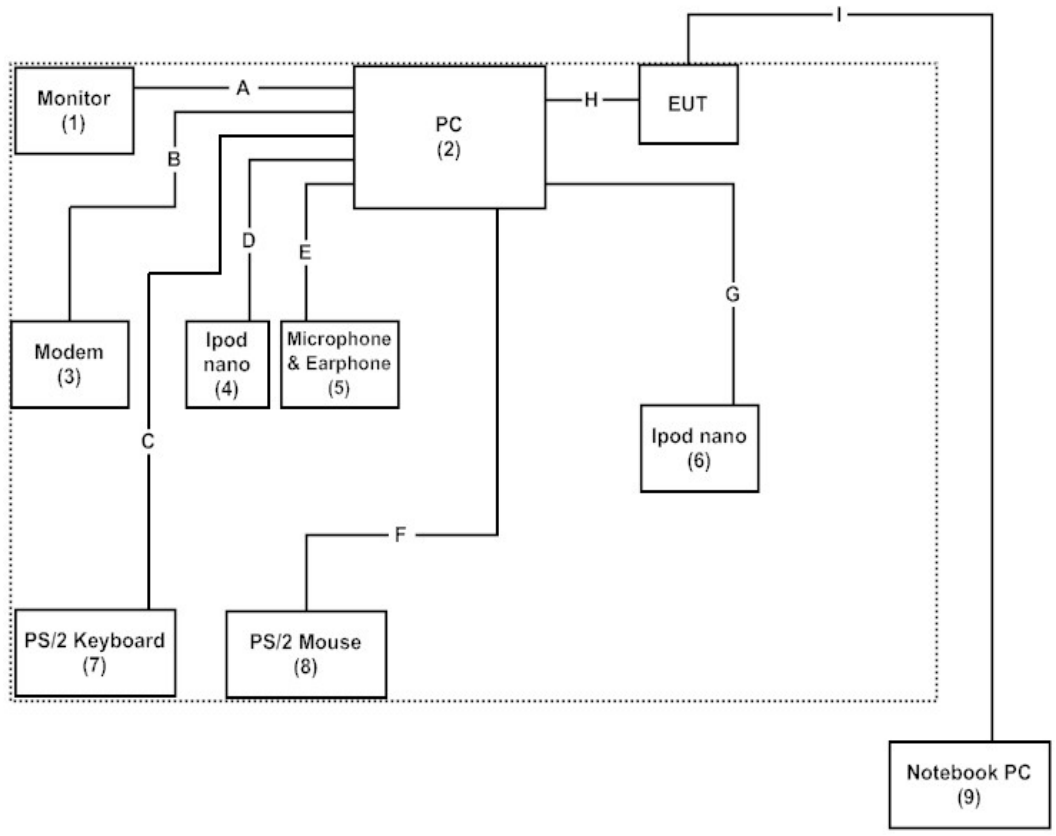
1.3. Tested System Details

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	Monitor	Dell	2407WFPb	CN-0YY528-46633-796-12RS	Non-Shielded, 1.8m
2	PC	DELL	Vostro230	1R7Z62S	Non-Shielded, 1.8m
3	Modem	ACEEX	DM-1414	0102027554	Non-Shielded, 1.8m
4	Ipod nano	Apple	A1236	YM823SZAY0P	N/A
5	Microphone & Earphone	Ergotech	ET-E201	N/A	N/A
6	Ipod nano	Apple	A1236	YM823SY8Y0P	N/A
7	PS/2 Keyboard	Logitech	Y-SAH83	867893-0121	N/A
8	PS/2 Mouse	Logitech	M-SBM96B	810-000439	N/A
9	Notebook PC	DELL	PP04X	C8YYM1S	Non-Shielded, 0.8m

1.4. Configuration of Tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	D-SUB Cable	Shielded, 1.8m, with two ferrite cores bonded, two PCS.
B	RS-232 Cable	Shielded, 1.8m
C	PS/2 Keyboard Cable	Shielded, 1.8m
D	Audio Cable	Non-Shielded, 1.8m
E	Microphone & Earphone Cable	Non-Shielded, 2m
F	PS/2 Mouse Cable	Shielded, 1.8m
G	Ipod nano Cable	Shielded, 1.2m
H	USB Cable	Shielded, 0.2m
I	LAN Cable	Non-Shielded, 7m

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 multi 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: 2009 Class B, ANSI C63.4: 2009	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart B: 2009 Class B, ANSI C63.4: 2009	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	2010/11/10
LISN	R&S	ENV4200	833209/007	2010/09/06
LISN	R&S	ENV216	100085	2011/02/10
Pulse Limiter	R&S	ESH3-Z2	357.88.10.52	2010/09/02

Radiated Emission / Site2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2921	2010/08/02
Broadband Horn Antenna	Schwarzbeck	BBHA9170	209	2010/10/27
EMI Test Receiver	R&S	ESCS 30	100123	2010/05/27
Horn Antenna	Schwarzbeck	BBHA9120D	305	2010/08/26
Pre-Amplifier	QTK	N/A	N/A	2010/08/01
Spectrum Analyzer	Advantest	R3162	01700040	2010/11/18

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

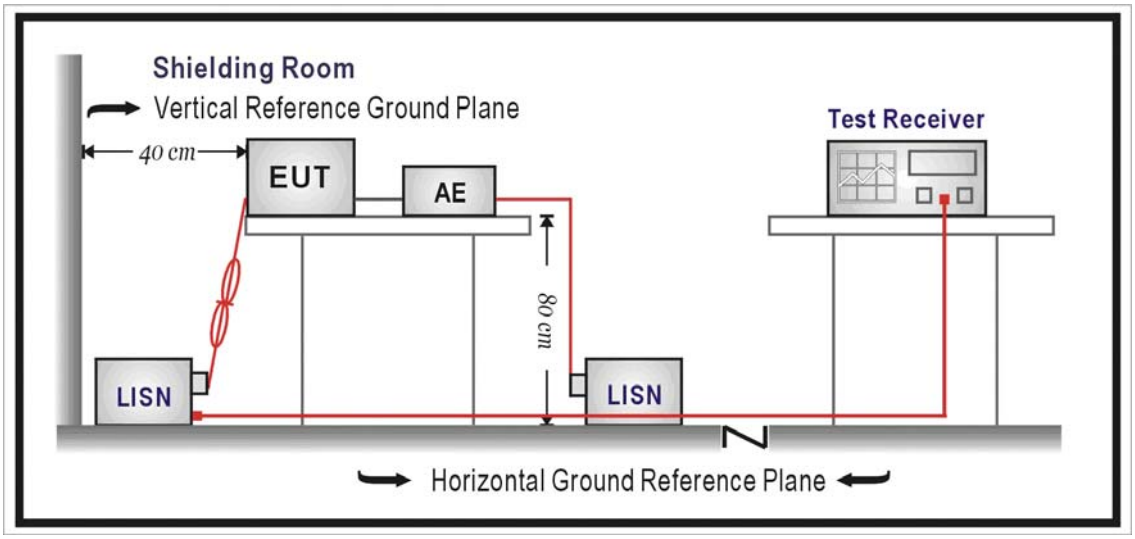
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000

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

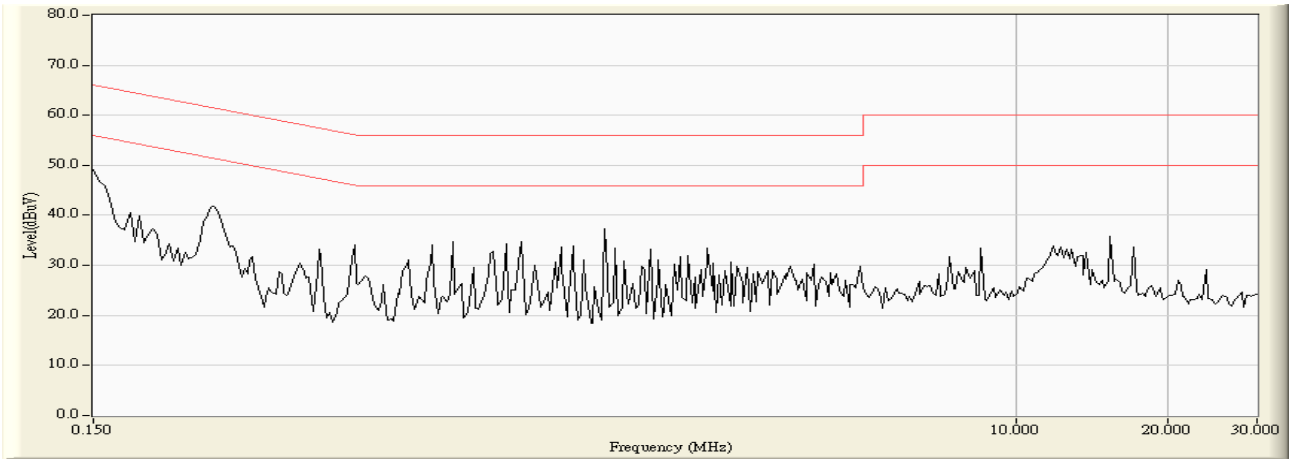
Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

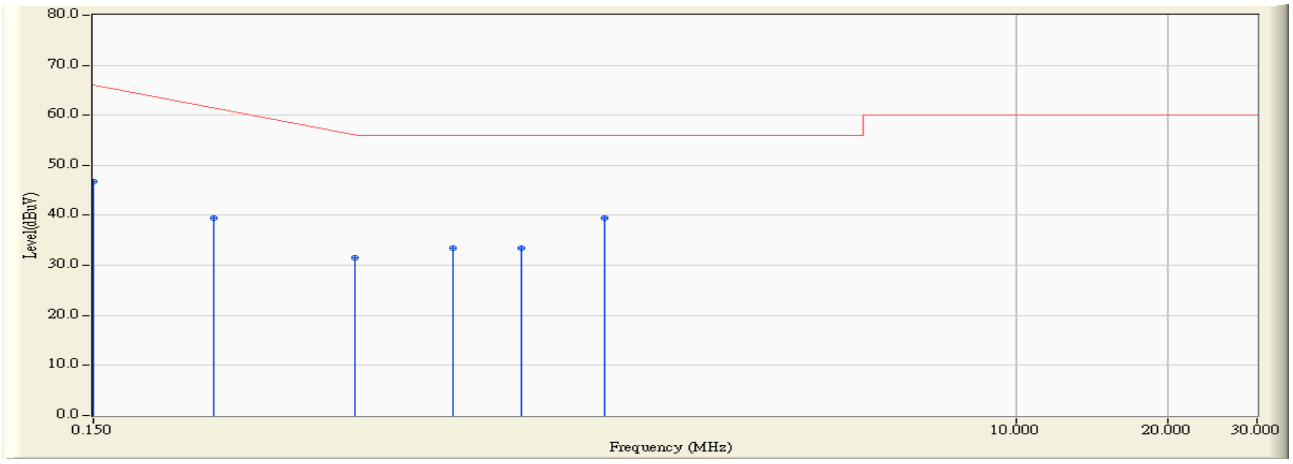
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling 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 : SR_1	**Time : 2011/02/16 - 01:13**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**Probe : ENV_216_L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**



Site : SR_1	**Time : 2011/02/16 - 01:14**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**Probe : ENV_216_L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**

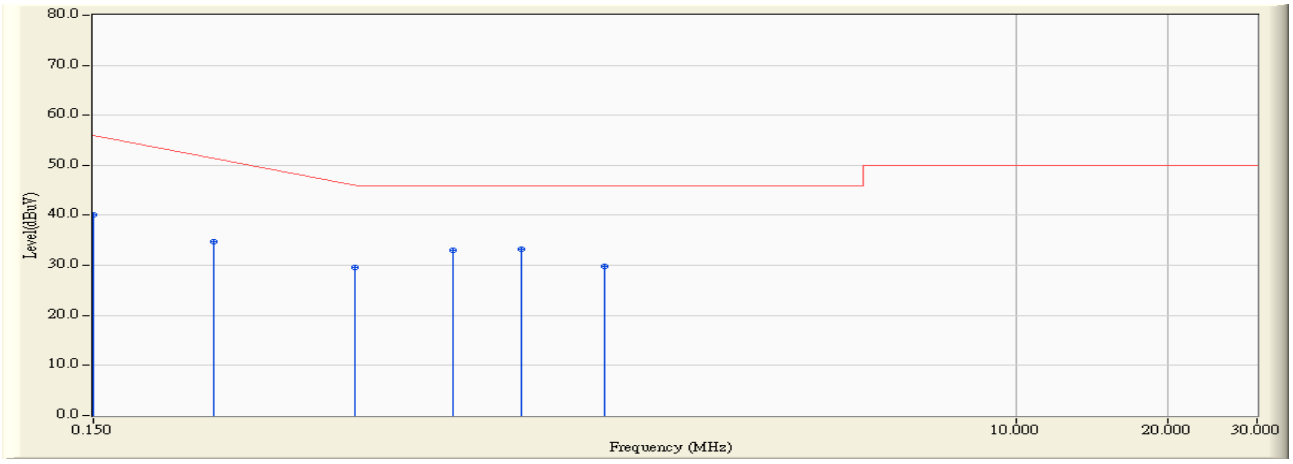


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.150	9.790	37.070	46.860	-19.140	66.000	QUASIPEAK
2		0.259	9.790	29.770	39.560	-23.326	62.886	QUASIPEAK
3		0.494	9.790	21.750	31.540	-24.631	56.171	QUASIPEAK
4		0.771	9.800	23.580	33.380	-22.620	56.000	QUASIPEAK
5		1.052	9.800	23.740	33.540	-22.460	56.000	QUASIPEAK
6	*	1.541	9.810	29.750	39.560	-16.440	56.000	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 : SR_1	**Time : 2011/02/16 - 01:14**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**Probe : ENV_216_L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**

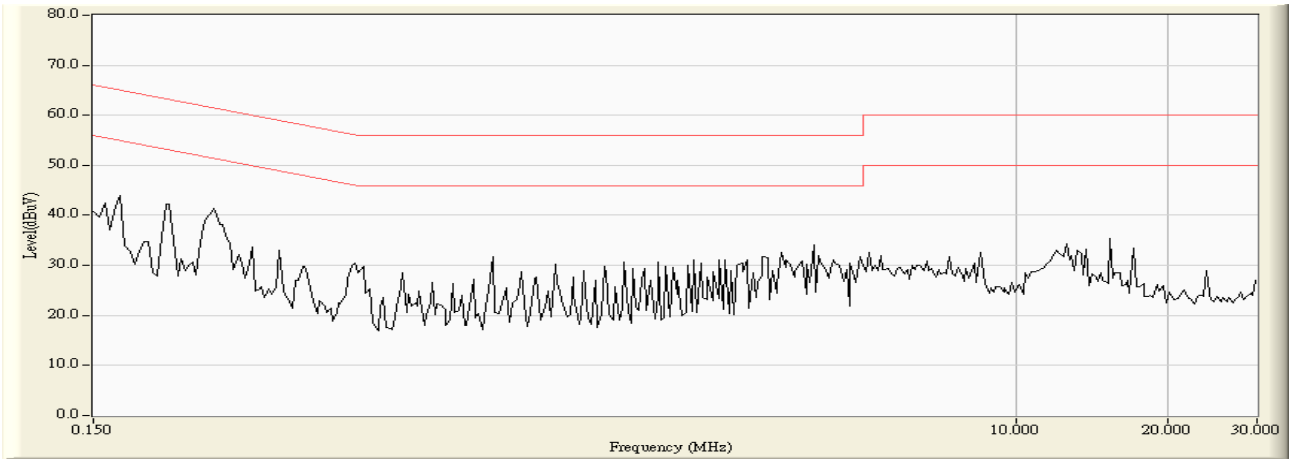


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.150	9.790	30.340	40.130	-15.870	56.000	AVERAGE
2		0.259	9.790	24.930	34.720	-18.166	52.886	AVERAGE
3		0.494	9.790	19.790	29.580	-16.591	46.171	AVERAGE
4		0.771	9.800	23.310	33.110	-12.890	46.000	AVERAGE
5	*	1.052	9.800	23.380	33.180	-12.820	46.000	AVERAGE
6		1.541	9.810	19.920	29.730	-16.270	46.000	AVERAGE

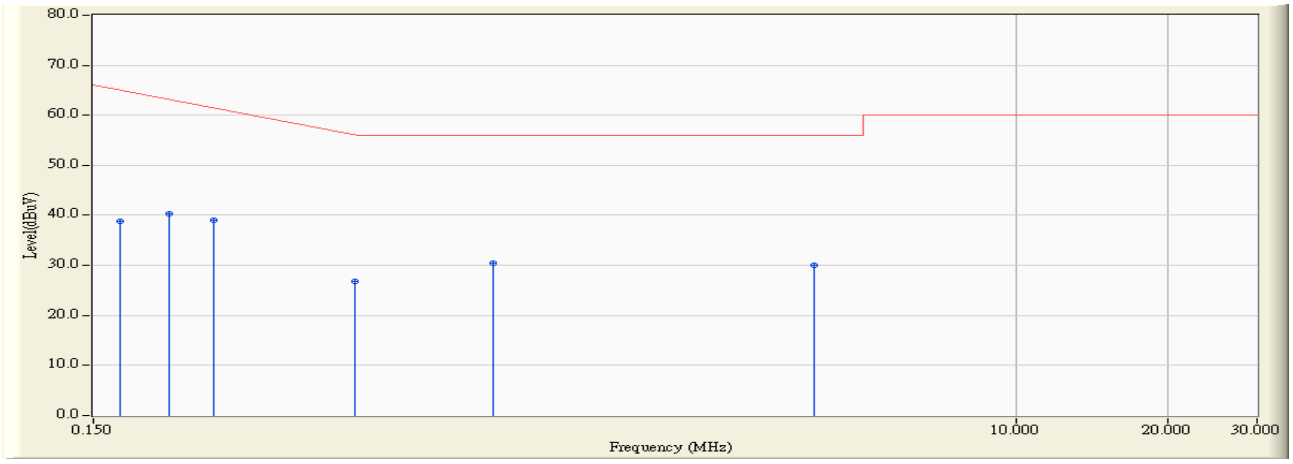
Note:

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 : SR_1	**Time : 2011/02/16 - 01:15**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**Probe : ENV_216_N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**



Site : SR_1	**Time : 2011/02/16 - 01:16**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**Probe : ENV_216_N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**

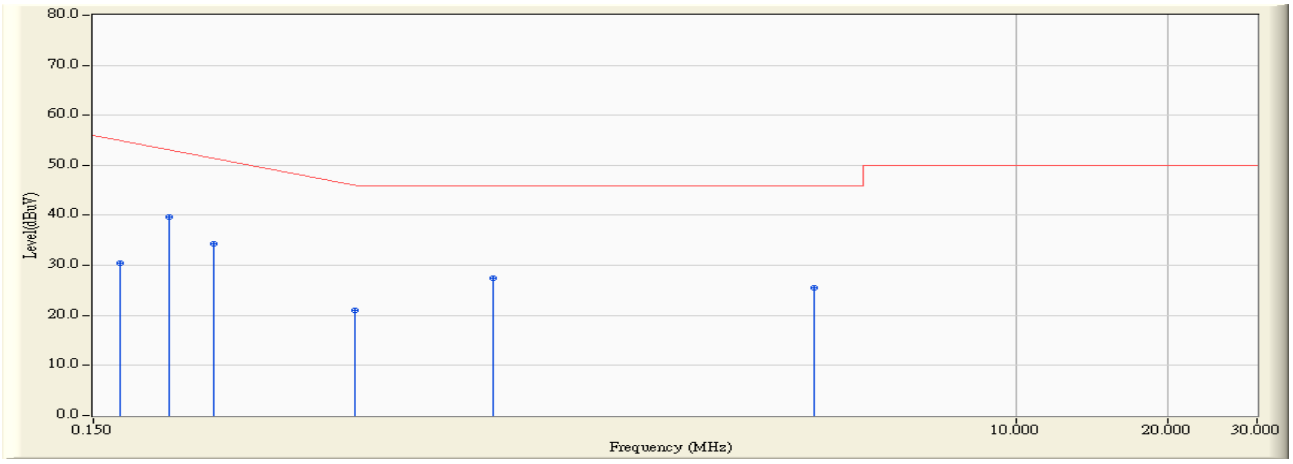


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.780	29.090	38.870	-26.559	65.429	QUASIPEAK
2		0.212	9.780	30.570	40.350	-23.879	64.229	QUASIPEAK
3	*	0.259	9.780	29.300	39.080	-23.806	62.886	QUASIPEAK
4		0.494	9.790	17.030	26.820	-29.351	56.171	QUASIPEAK
5		0.923	9.790	20.630	30.420	-25.580	56.000	QUASIPEAK
6		3.998	9.820	20.110	29.930	-26.070	56.000	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 : SR_1	**Time : 2011/02/16 - 01:16**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**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	9.780	20.760	30.540	-24.889	55.429	AVERAGE
2	*	0.212	9.780	29.820	39.600	-14.629	54.229	AVERAGE
3		0.259	9.780	24.510	34.290	-18.596	52.886	AVERAGE
4		0.494	9.790	11.310	21.100	-25.071	46.171	AVERAGE
5		0.923	9.790	17.670	27.460	-18.540	46.000	AVERAGE
6		3.998	9.820	15.800	25.620	-20.380	46.000	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

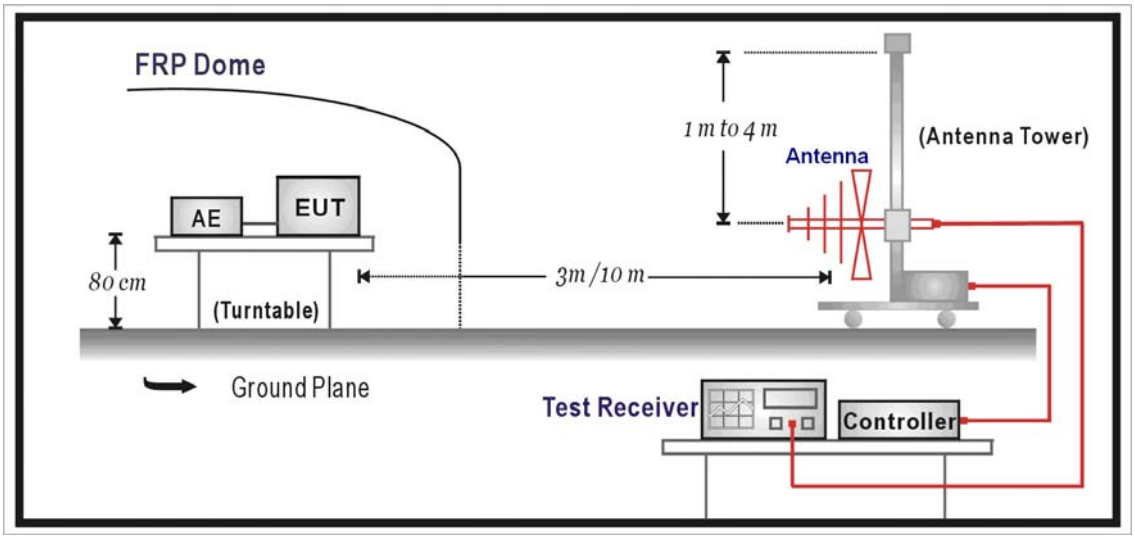
4. Radiated Emission

4.1. Test Specification

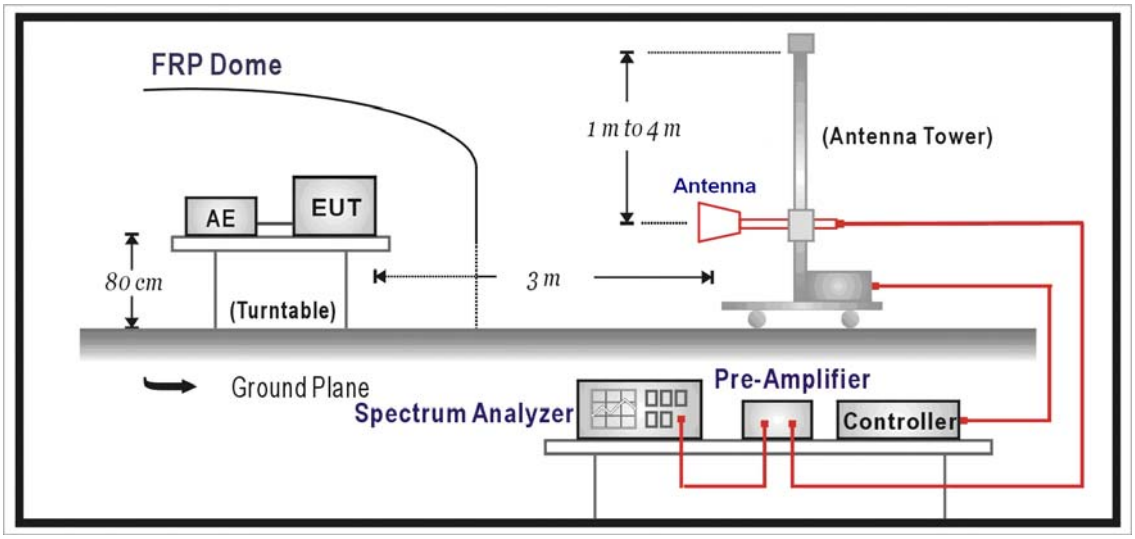
According to EMC Standard : FCC Part 15 Subpart B, ANSI C63.4

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 folowing 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.

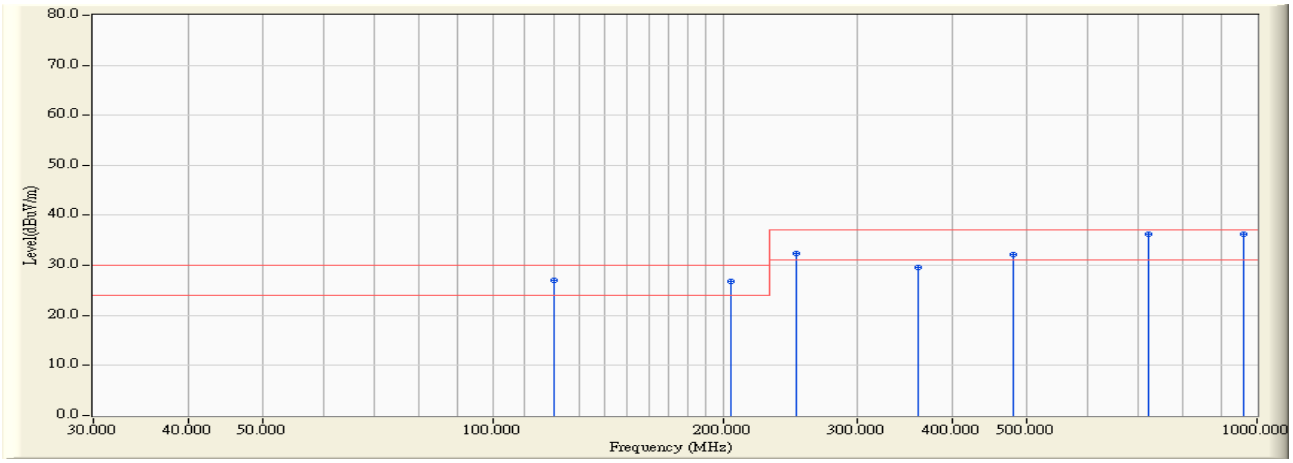
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

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-2	**Time : 2011/02/15 - 06:05**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**Probe : Site2_CBL6112_10M_0811 - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1**

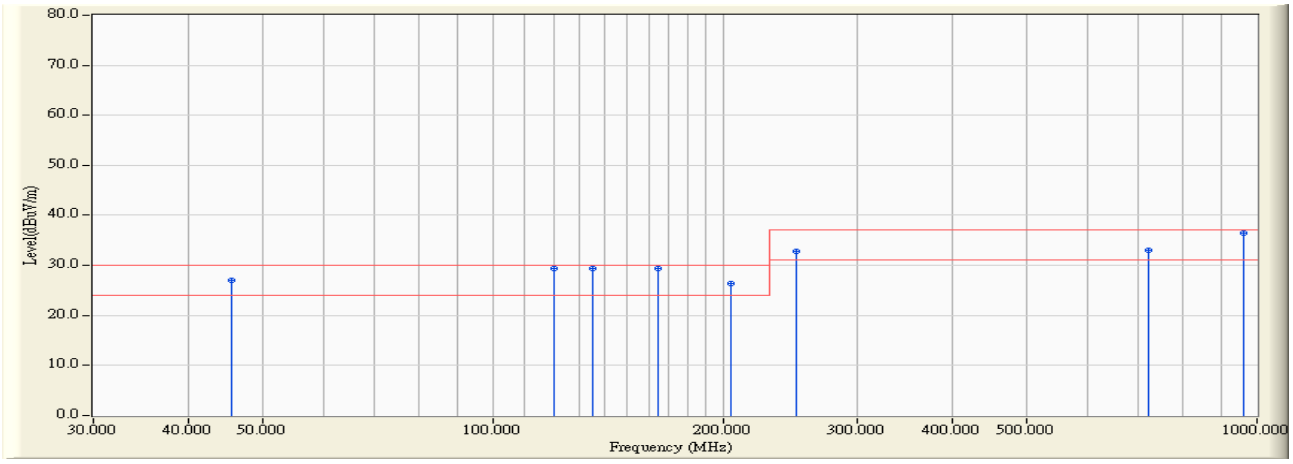


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		120.000	14.848	12.100	26.948	-3.052	30.000	QUASIPEAK
2		204.950	12.592	14.200	26.792	-3.208	30.000	QUASIPEAK
3		250.000	15.948	16.400	32.348	-4.652	37.000	QUASIPEAK
4		360.000	18.796	10.800	29.596	-7.404	37.000	QUASIPEAK
5		480.000	21.507	10.600	32.108	-4.892	37.000	QUASIPEAK
6		720.000	24.803	11.500	36.303	-0.697	37.000	QUASIPEAK
7	*	960.030	28.348	8.000	36.348	-0.652	37.000	QUASIPEAK

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-2	**Time : 2011/02/15 - 05:57**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : USB 2.0/1.1 Correspondence 10/100 Mbps Small LAN Adaptor.	**Probe : Site2_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		45.600	13.133	13.800	26.933	-3.067	30.000	QUASIPEAK
2		120.000	14.848	14.600	29.448	-0.552	30.000	QUASIPEAK
3	*	134.900	14.455	15.000	29.456	-0.544	30.000	QUASIPEAK
4		164.400	12.644	16.800	29.443	-0.557	30.000	QUASIPEAK
5		205.300	12.613	13.700	26.313	-3.687	30.000	QUASIPEAK
6		250.000	15.948	16.800	32.748	-4.252	37.000	QUASIPEAK
7		720.000	24.803	8.300	33.103	-3.897	37.000	QUASIPEAK
8		960.030	28.348	8.100	36.448	-0.552	37.000	QUASIPEAK

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