CERTIFICATE

Issued Date: Jul. 22, 2009
Report No. : 093252R-ITUSP02V02

This is to certify that the following designated product

Product	**: RISC-based GSM/GPRS/EDGE Embedded Computers**
Trade name	**: Moxa**
Model Number	**: W406, W406-LX, W406-CE, W406-T-LX, W406-T-CE**
Company Name	**: Moxa Inc.**

This product, which has been issued the test report listed as above in QuieTek Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

FCC CFR Title 47 Part 15 Subpart B: 2008 Class B, CISPR 22: 2005
ANSI C63.4: 2003 **ICES-003 Issue 4: 2004 Class B**

TEST LABORATORY

Vincent Lin / Manager

QuieTek No.5-22, Ruei-Shu Valley, Ruei-Ping Tsuen Lin Kou Shiang, Taipei 244 Taiwan, R.O.C.
TEL:+886-2-8601-3788 FAX:+886-2-8601-3789 Email:service@quietek.com http://www.quietek.com

Test Report

Compliance with Industry Canada Interference-Causing Equipment Standard ICES-003

Product Name ： RISC-based GSM/GPRS/EDGE Embedded Computers

Model No. ： W406, W406-LX, W406-CE, W406-T-LX, W406-T-CE

Applicant ： Moxa Inc.

Address ： F1.4, No. 135, Lane 235, Pao-Chiao Rd., Shing Tien City, Taipei, Taiwan, R.O.C.

Date of Receipt ： 2009/03/17

Issued Date ： 2009/07/22

Report No. ： 093252R-ITUSP02V02

Report Version ： V1.2-Draft

Test Report Certification

Issued Date : 2009/07/22
Report No. : 093252R-ITUSP02V02

QuieTek

Product Name	:	RISC-based GSM/GPRS/EDGE Embedded Computers
Applicant	:	Moxa Inc.
Address	:	F1.4, No. 135, Lane 235, Pao-Chiao Rd., Shing Tien City, Taipei, Taiwan, R.O.C.
Manufacturer	:	Moxa Inc.
Model No.	:	W406, W406-LX, W406-CE, W406-T-LX, W406-T-CE
Rated Voltage	:	AC 120 V / 60 Hz
EUT Voltage	:	DC12V~48V
Trade Name	:	Moxa
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart B: 2008 Class B CISPR 22: 2005,ANSI C63.4: 2003 ICES-003 Issue 4: 2004 Class B
Test Result	:	Complied
Performed Location	:	Quietek Corporation (Linkou Laboratory) No.5-22,Ruei-Shu Valley, Ruei-Ping Tsuen Lin Kuo Shiang, Taipei, 244 Taiwan, R.O.C. TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789

Documented By : Jinn Chen
(Adm. Specialist / Jinn Chen)

Reviewed By : Jim Sun
(Engineer / Jim Sun)

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://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/
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

LinKou Testing Laboratory :
No. 5, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0

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

TABLE OF CONTENTS

1. General Information

1.1. EUT Description

Product Name	RISC-based GSM/GPRS/EDGE Embedded Computers
Trade Name	Moxa
Model No.	W406, W406-LX, W406-CE, W406-T-LX, W406-T-CE

Component	
Power Adapter (1) (Option)	MFR: Unbranded, M/N: 3A-161DA12 Input: 100-240VAC, 50-60Hz, 0.6A Output: 12VDC, 1.25A Cable Out: Non-shielded, 1.8m, with one ferrite core bonded. Power Cord: Non-shielded, 1.8m
Power Adapter (2) (Option)	MFR: Unbranded, M/N: 3A-302DA20 Input: 100-240VAC, 50-60Hz, 0.8A Output: 21-24VDC, 1.4-1.25A, max 30W 24VDC, 1.25A Cable Out: Non-shielded, 1.8m, with one ferrite core bonded. Power Cord: Non-shielded, 1.8m

Note:

1.The EUT is including five models.

2.The different of each model is shown as below:

Model Number	Description
W406, W406-LX, W406-CE	Without Wide Temperature
W406-T-LX, W406-T-CE	Wide Temperature
LX and CE	different software

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 (Unbranded, 3A-161DA12) Mode 2: Normal Operation (Unbranded, 3A-302DA20)	
Final Test Mode	
Emission	Mode 1: Normal Operation (Unbranded, 3A-161DA12) Mode 2: Normal Operation (Unbranded, 3A-302DA20)

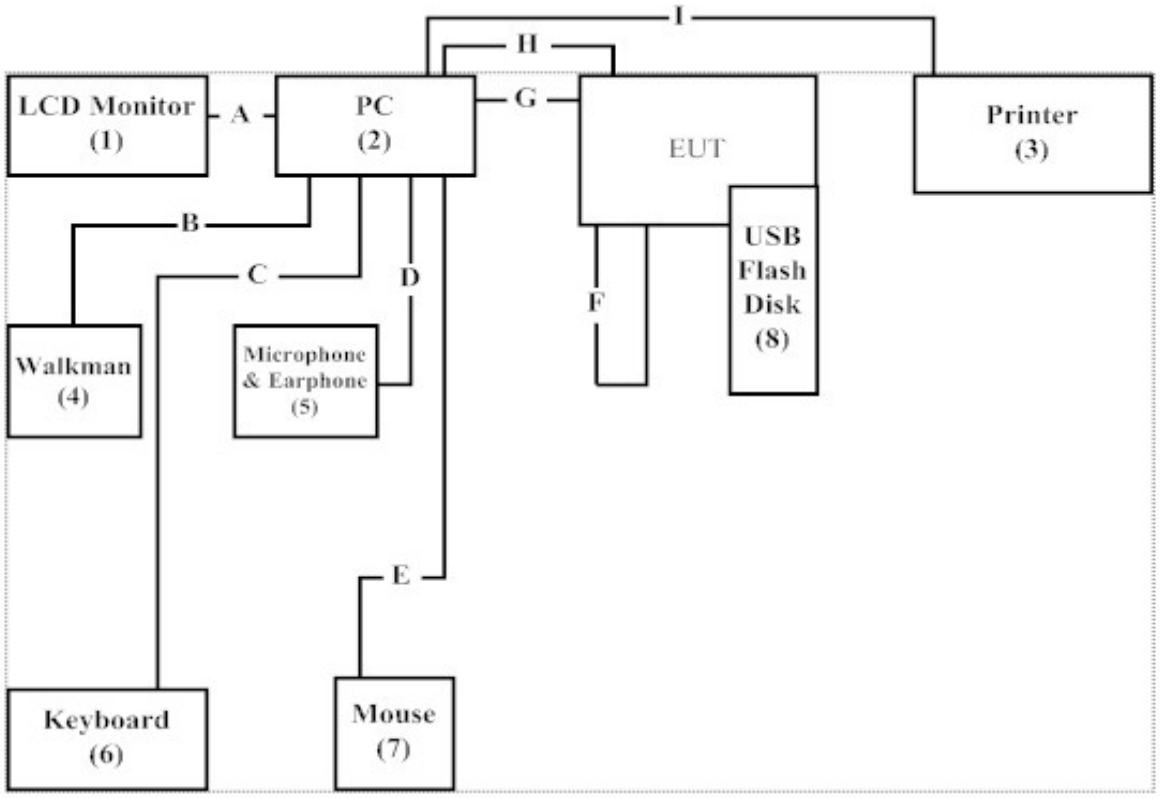
1.3. Tested System Details

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	FNC122F57BA1638	Non-Shielded, 1.8m
2	PC	CPU	INTEL	E2200	N/A	Non-Shielded, 1.8m
		M/B	ASUS	P5KPL-E	N/A	
		VGA Card	ASUS	EN8500GT/256M	N/A	
		HDD	WD	160G SATA2/3G(1600AAJS/8MB)	N/A	
		S.P.S	SevenTeam	350W/12CM/V2.0	N/A	
		DDR	Transcend	DDR2 1G-800	N/A	
3	Printer		EPSON	StyLus C63	FAPY094321	Non-Shielded, 1.9m
4	Walkman		AIWA	HS-TA164	N/A	N/A
5	Microphone & Earphone		PCHOME	N/A	N/A	N/A
6	Keyboard		COMPAQ	KB-0133	B55940MGAPN04Y	N/A
7	Mouse		HP	M-S69	N/A	N/A
8	USB Flash Disk		PQI	Traveling Disk U230	N/A	N/A

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.
B	Audio Cable	Non-Shielded, 1.8m
C	PS/2 Keyboard Cable	Shielded, 1.8m
D	Microphone & Earphone Cable	Non-Shielded, 2.0m
E	PS/2 Mouse Cable	Shielded, 1.8m
F	Communication Cable	Shielded, 0.4m
G	Communication to 4 Pin Cable	Shielded, 1.0m
H	LAN Cable	Non-Shielded, 7.0m
I	Printer Cable	Shielded, 1.5m

1.5. EUT Exercise Software

(1)	Setup the EUT and simulators as shown on 1.3.
(2)	Turn on the power of all equipment.
(3)	The EUT will start to operate function.

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 / Site2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2921	2008/09/15
Broadband Horn Antenna	Schwarzbeck	BBHA9170	208	2008/07/25
EMI Test Receiver	R&S	ESCS 30	100123	2009/03/23
Horn Antenna	Schwarzbeck	BBHA9120D	305	2008/08/10
Pre-Amplifier	QTK	N/A	N/A	2009/01/03
Spectrum Analyzer	Advantest	R3162	120300652	2009/04/06

Radiated Emission / Site3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2704	2008/08/04
Broadband Horn Antenna	Schwarzbeck	BBHA9170	208	2008/07/30
EMI Test Receiver	R&S	ESCS 30	838251/001	2009/04/15
Horn Antenna	Schwarzbeck	BBHA9120D	305	2008/08/13
Pre-Amplifier	QTK	N/A	N/A	2009/01/03
Spectrum Analyzer	Advantest	R3162	100803470	2008/11/25
EMI Test Receiver	R&S	ESI 26	838786/004	2009/07/22
Pre-Amplifier	MITEQ	QMF-4D-180400-45-6P	925974	2009/01/03

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

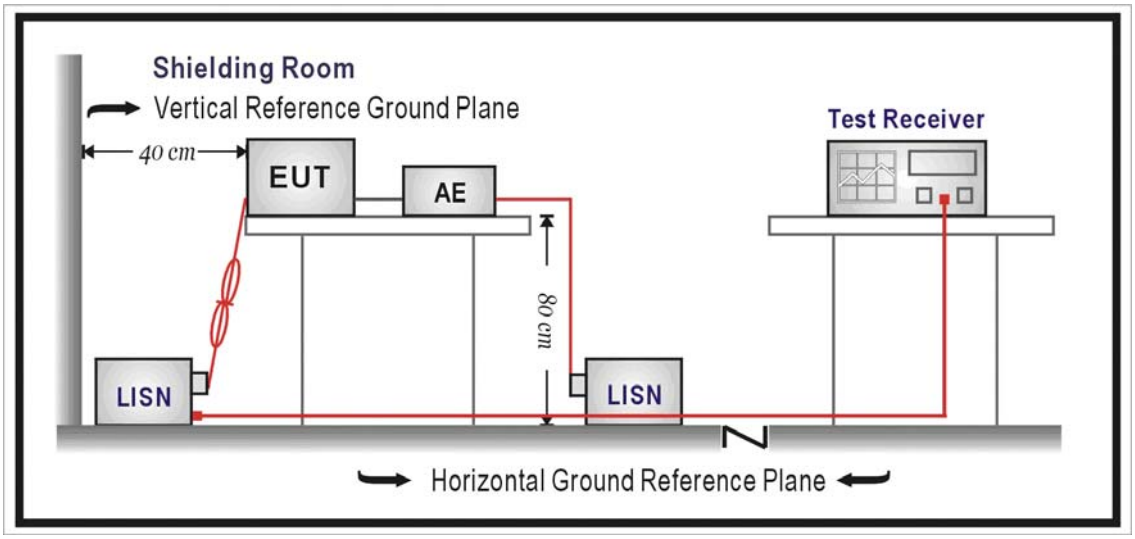
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000

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

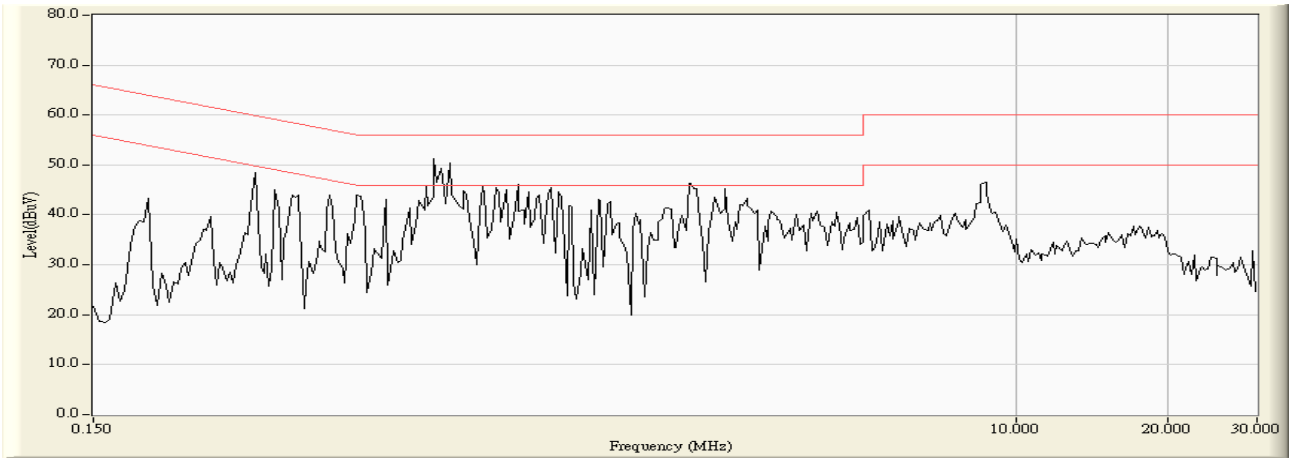
Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

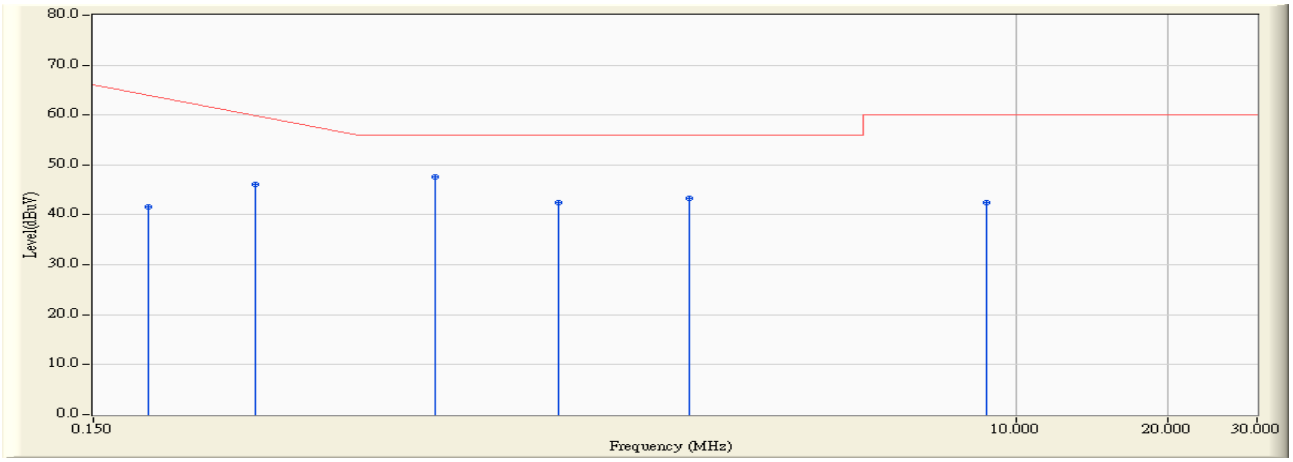
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling 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 : 2009/03/21 - 00:14**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**



Site : SR1	**Time : 2009/03/21 - 00:15**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**

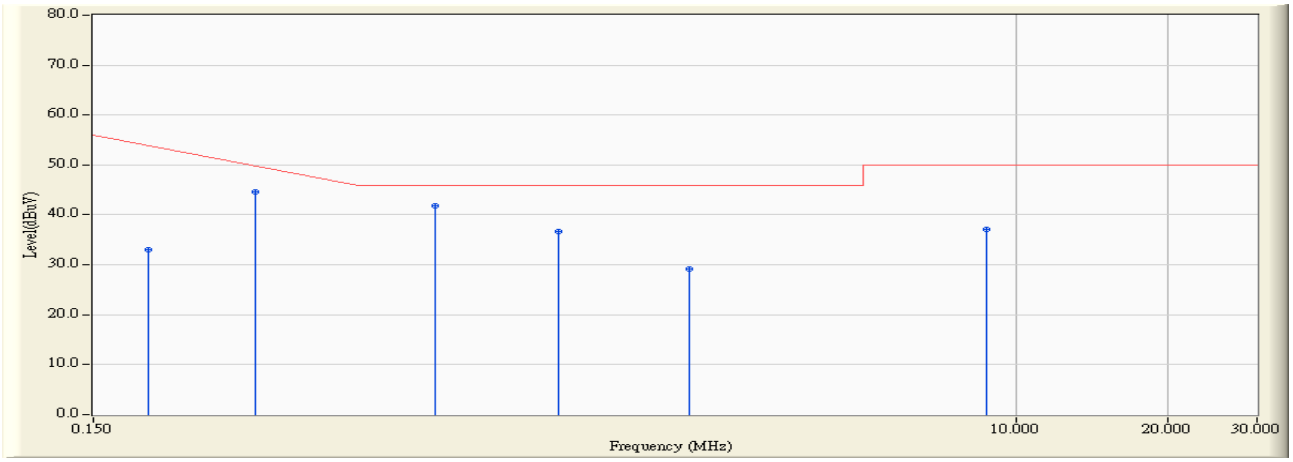


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.193	9.821	31.840	41.661	-23.110	64.771	QUASIPEAK
2		0.314	9.830	36.240	46.070	-15.244	61.314	QUASIPEAK
3	*	0.709	9.830	37.840	47.670	-8.330	56.000	QUASIPEAK
4		1.248	9.833	32.680	42.513	-13.487	56.000	QUASIPEAK
5		2.255	9.850	33.440	43.290	-12.710	56.000	QUASIPEAK
6		8.744	9.910	32.470	42.380	-17.620	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 : 2009/03/21 - 00:15**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 1**

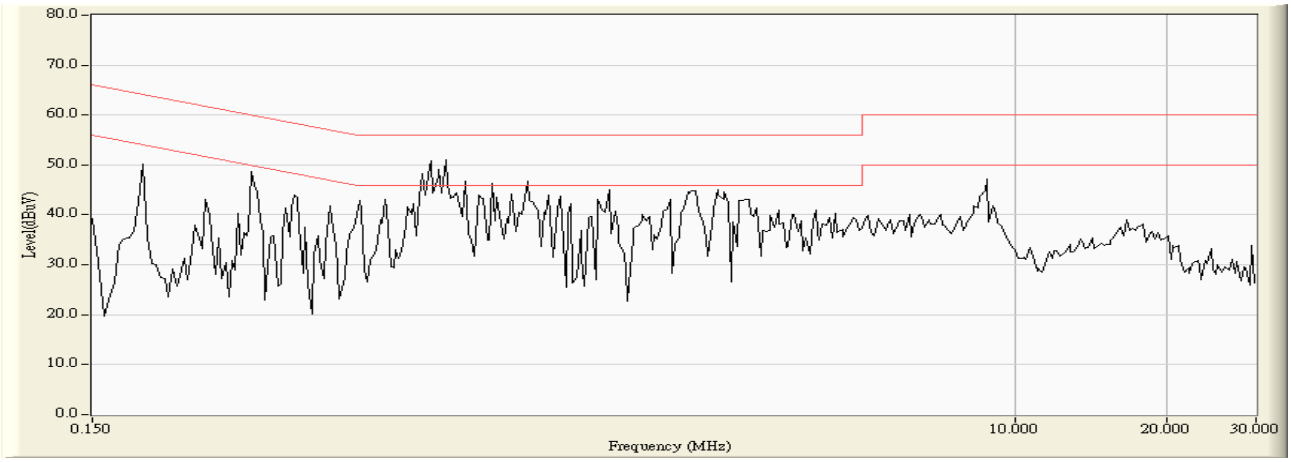


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.193	9.821	23.290	33.111	-21.660	54.771	AVERAGE
2		0.314	9.830	34.830	44.660	-6.654	51.314	AVERAGE
3	*	0.709	9.830	31.910	41.740	-4.260	46.000	AVERAGE
4		1.248	9.833	26.890	36.723	-9.277	46.000	AVERAGE
5		2.255	9.850	19.370	29.220	-16.780	46.000	AVERAGE
6		8.744	9.910	27.280	37.190	-12.810	50.000	AVERAGE

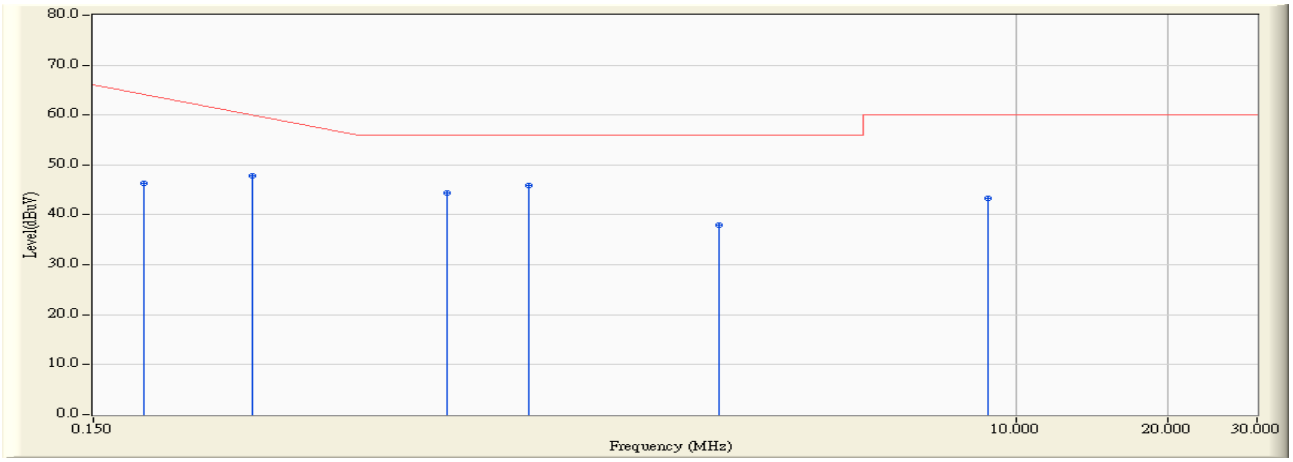
Note:

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 : 2009/03/21 - 00:15**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**



Site : SR1	**Time : 2009/03/21 - 00:16**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**

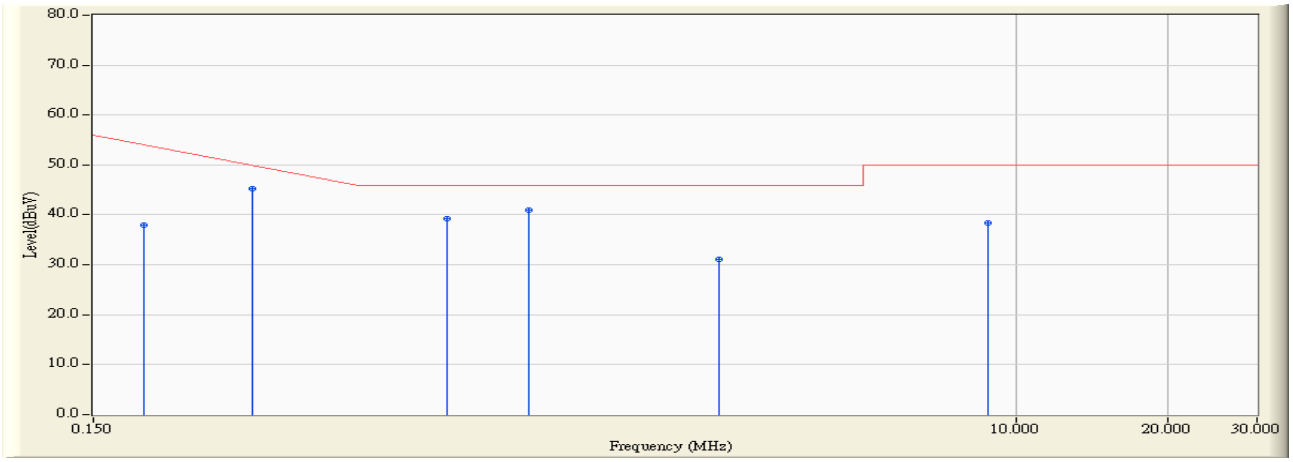


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.189	9.860	36.520	46.380	-18.506	64.886	QUASIPEAK
2		0.310	9.850	37.910	47.760	-13.669	61.429	QUASIPEAK
3		0.752	9.830	34.520	44.350	-11.650	56.000	QUASIPEAK
4	*	1.087	9.830	36.110	45.940	-10.060	56.000	QUASIPEAK
5		2.584	9.850	28.190	38.040	-17.960	56.000	QUASIPEAK
6		8.791	9.920	33.330	43.250	-16.750	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 : 2009/03/21 - 00:16**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-N - Line2**
Power : AC 120V/60Hz	**Note : Mode 1**

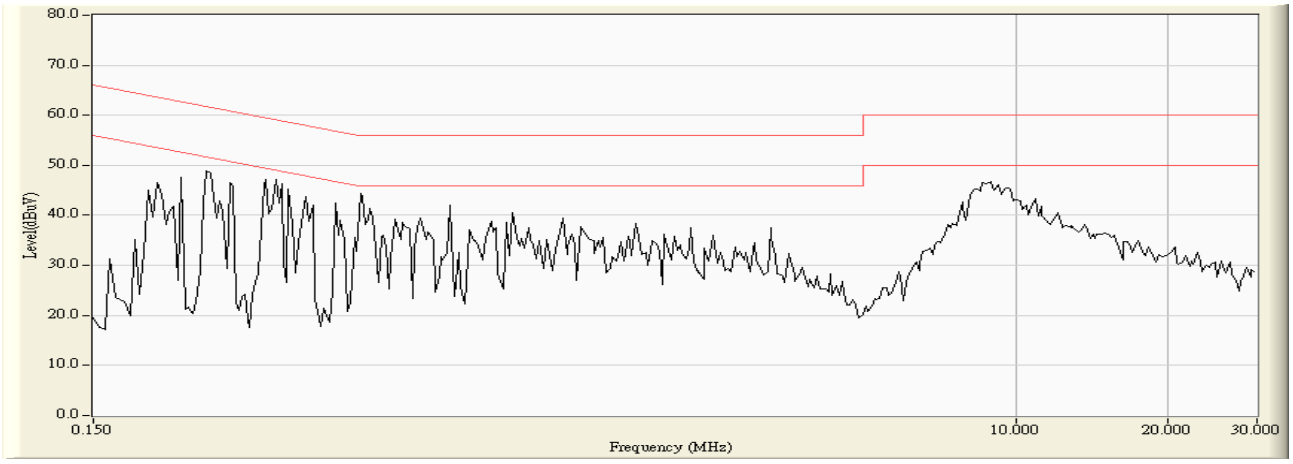


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.189	9.860	28.180	38.040	-16.846	54.886	AVERAGE
2		0.310	9.850	35.340	45.190	-6.239	51.429	AVERAGE
3		0.752	9.830	29.450	39.280	-6.720	46.000	AVERAGE
4	*	1.087	9.830	31.050	40.880	-5.120	46.000	AVERAGE
5		2.584	9.850	21.290	31.140	-14.860	46.000	AVERAGE
6		8.791	9.920	28.470	38.390	-11.610	50.000	AVERAGE

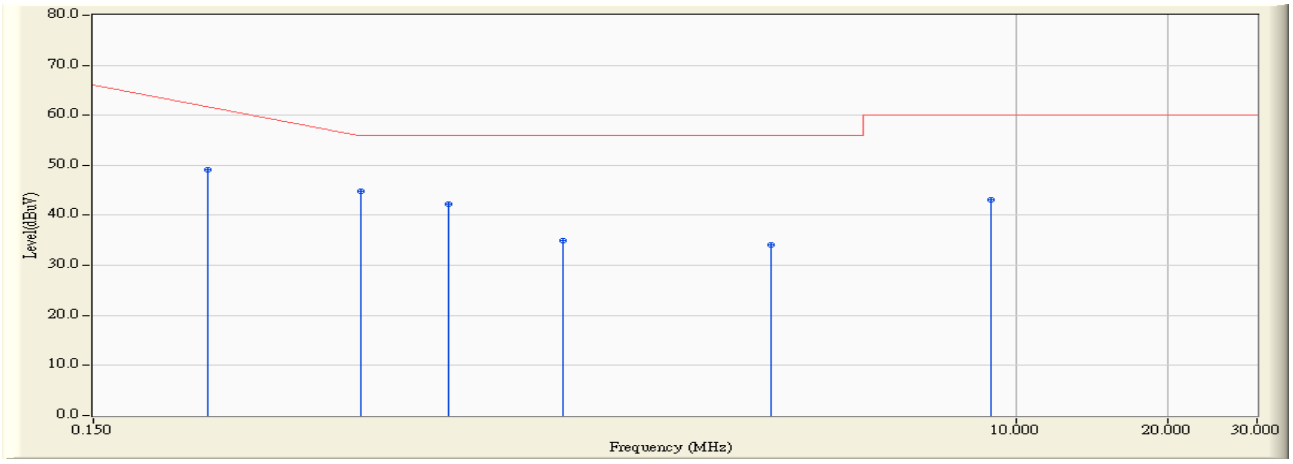
Note:

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 : 2009/07/20 - 18:31**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2**



Site : SR1	**Time : 2009/07/20 - 18:32**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2**

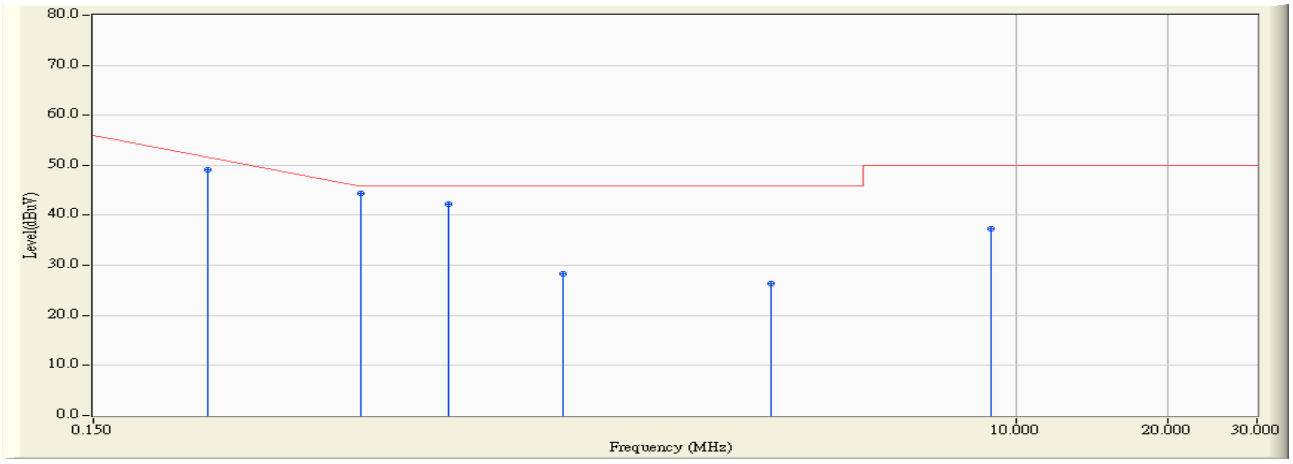


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.253	9.830	39.290	49.120	-13.937	63.057	QUASIPEAK
2	*	0.506	9.820	35.090	44.910	-11.090	56.000	QUASIPEAK
3		0.757	9.830	32.430	42.260	-13.740	56.000	QUASIPEAK
4		1.271	9.840	25.190	35.030	-20.970	56.000	QUASIPEAK
5		3.283	9.860	24.140	34.000	-22.000	56.000	QUASIPEAK
6		8.939	9.910	33.180	43.090	-16.910	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 : 2009/07/20 - 18:32**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-L1 - Line1**
Power : AC 120V/60Hz	**Note : Mode 2**

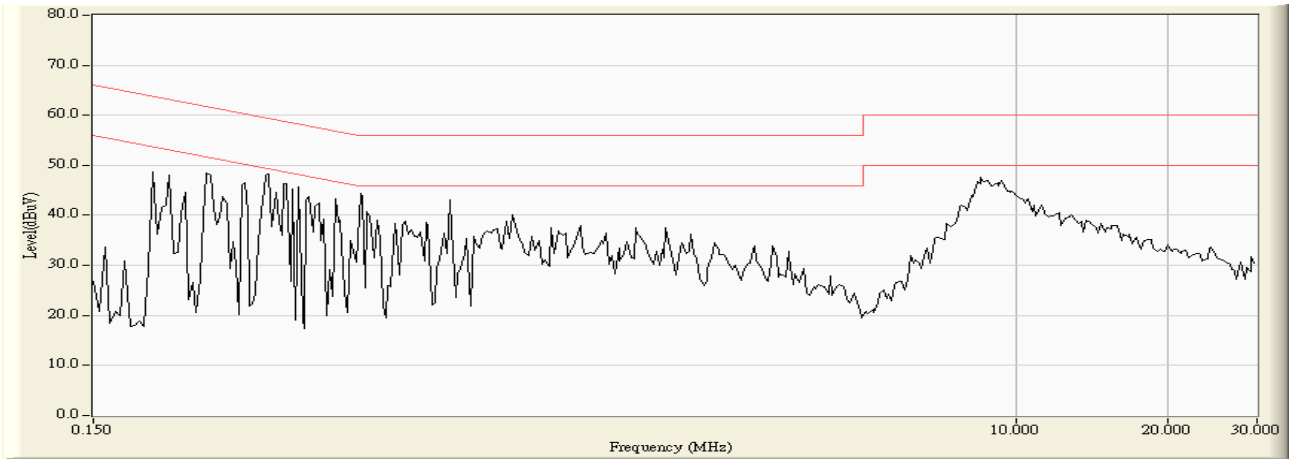


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.253	9.830	39.280	49.110	-3.947	53.057	AVERAGE
2	*	0.506	9.820	34.490	44.310	-1.690	46.000	AVERAGE
3		0.757	9.830	32.420	42.250	-3.750	46.000	AVERAGE
4		1.271	9.840	18.450	28.290	-17.710	46.000	AVERAGE
5		3.283	9.860	16.540	26.400	-19.600	46.000	AVERAGE
6		8.939	9.910	27.390	37.300	-12.700	50.000	AVERAGE

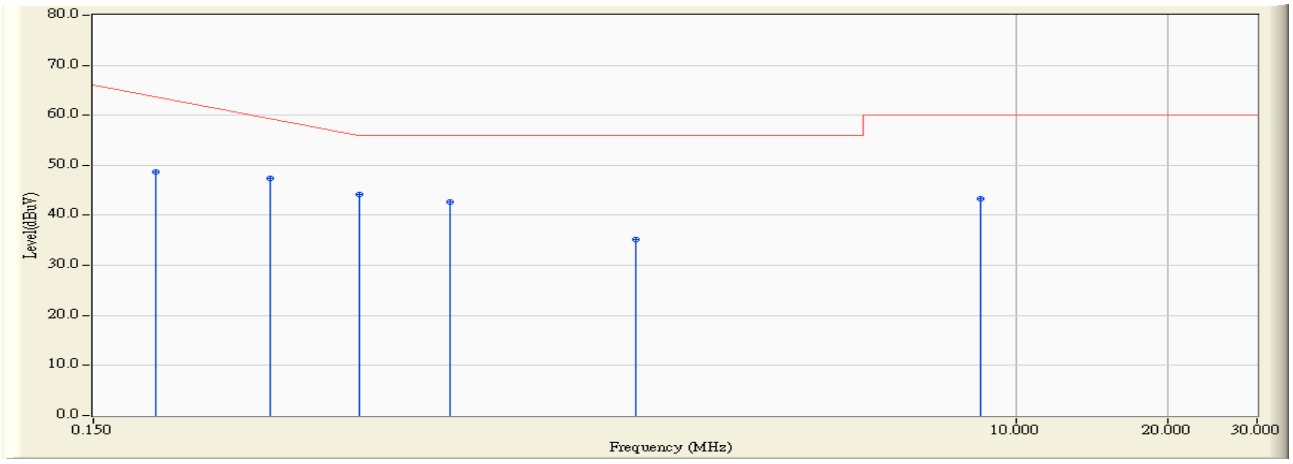
Note:

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 : 2009/07/20 - 18:33**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-N - Line2**
Power : AC 120V/60Hz	**Note : Mode 2**



Site : SR1	**Time : 2009/07/20 - 18:35**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : ENV-216-N - Line2**
Power : AC 120V/60Hz	**Note : Mode 2**

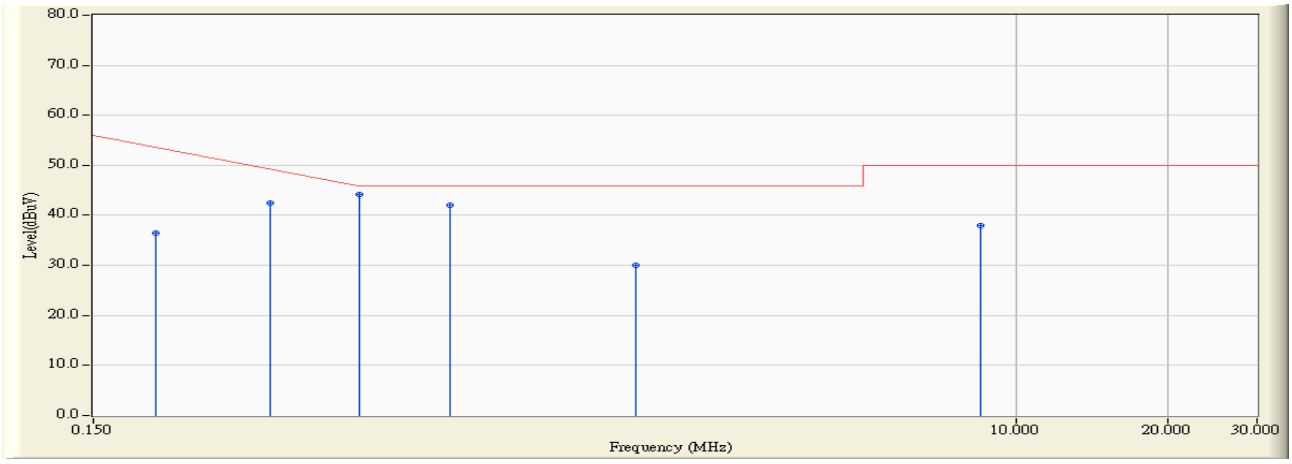


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.199	9.860	38.800	48.660	-15.940	64.600	QUASIPEAK
2		0.336	9.850	37.530	47.380	-13.306	60.686	QUASIPEAK
3	*	0.504	9.830	34.430	44.260	-11.740	56.000	QUASIPEAK
4		0.760	9.830	32.930	42.760	-13.240	56.000	QUASIPEAK
5		1.775	9.849	25.310	35.159	-20.841	56.000	QUASIPEAK
6		8.525	9.920	33.300	43.220	-16.780	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 : 2009/07/20 - 18:35**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**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		0.199	9.860	26.580	36.440	-18.160	54.600	AVERAGE
2		0.336	9.850	32.590	42.440	-8.246	50.686	AVERAGE
3	*	0.504	9.830	34.420	44.250	-1.750	46.000	AVERAGE
4		0.760	9.830	32.160	41.990	-4.010	46.000	AVERAGE
5		1.775	9.849	20.190	30.039	-15.961	46.000	AVERAGE
6		8.525	9.920	27.990	37.910	-12.090	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

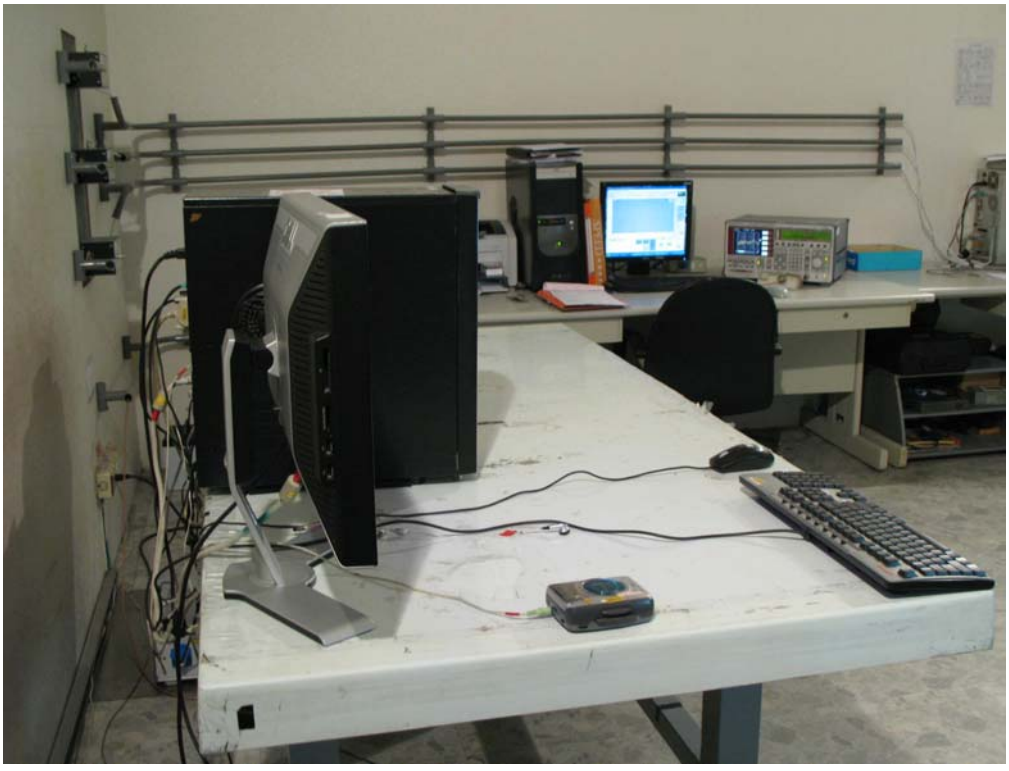
3.6. Test Photograph

Test Mode : Mode 1: Normal Operation (Unbranded, 3A-161DA12)

Description : Front View of Conducted Test

Test Mode : Mode 1: Normal Operation (Unbranded, 3A-161DA12)

Description : Back View of Conducted Test

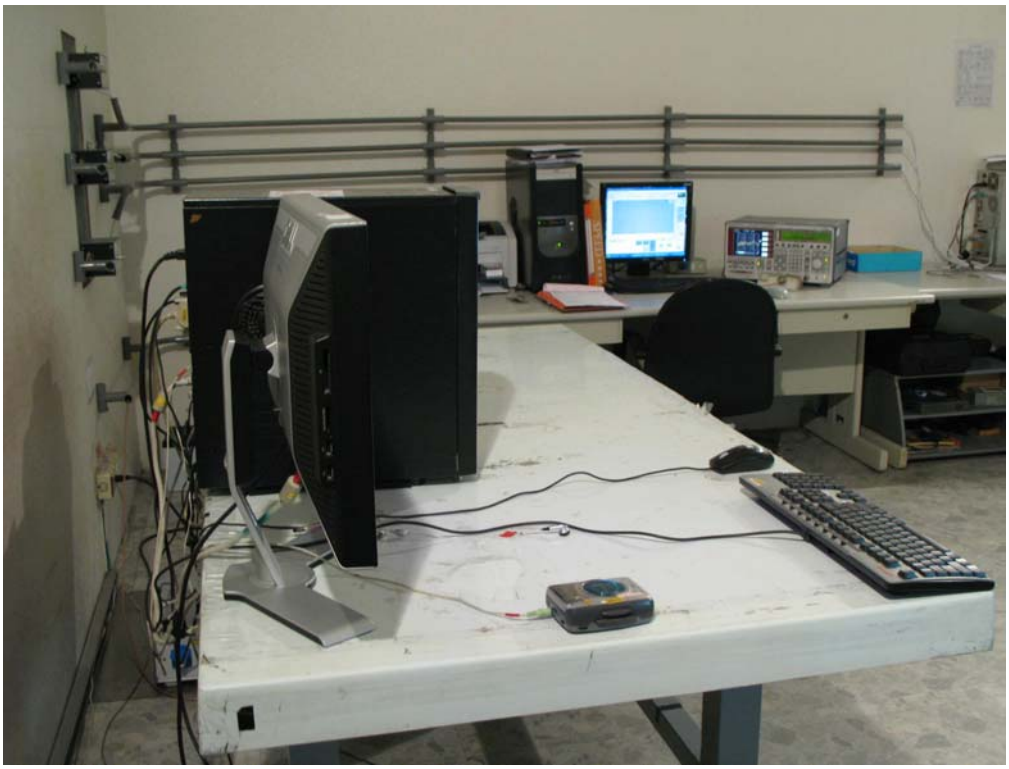


Test Mode : Mode 2: Normal Operation (Unbranded, 3A-302DA20)

Description : Front View of Conducted Test

Test Mode : Mode 2: Normal Operation (Unbranded, 3A-302DA20)

Description : Back View of Conducted Test



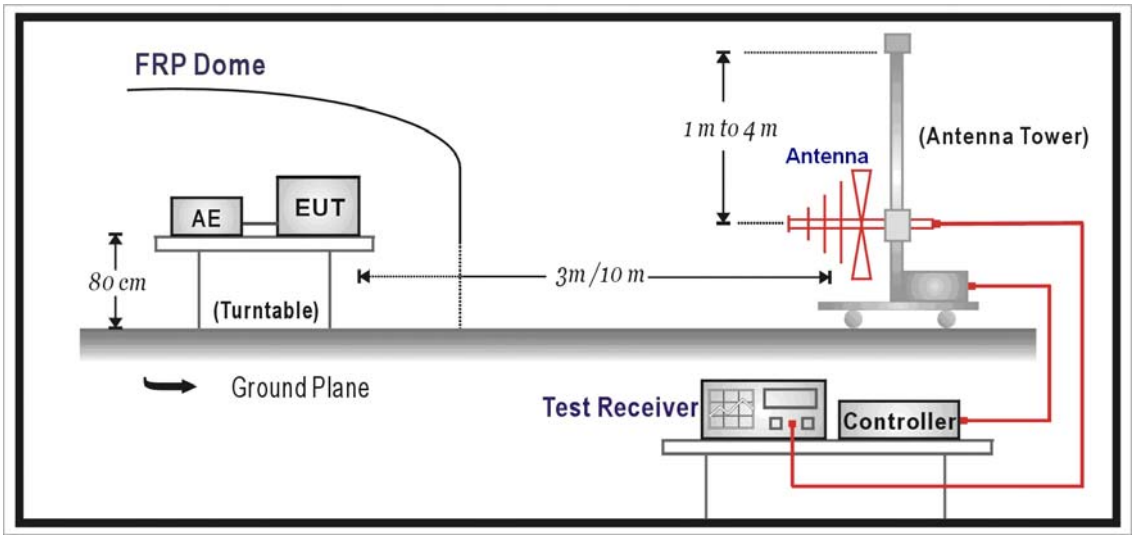
4. Radiated Emission

4.1. Test Specification

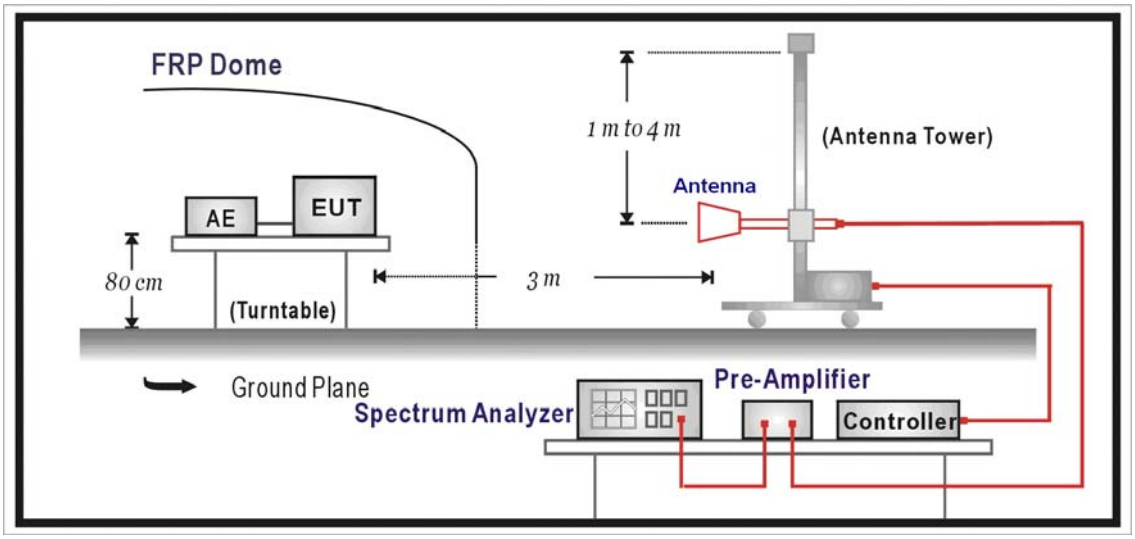
According to EMC Standard : FCC Part 15 Subpart B, ANSI C63.4

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 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.

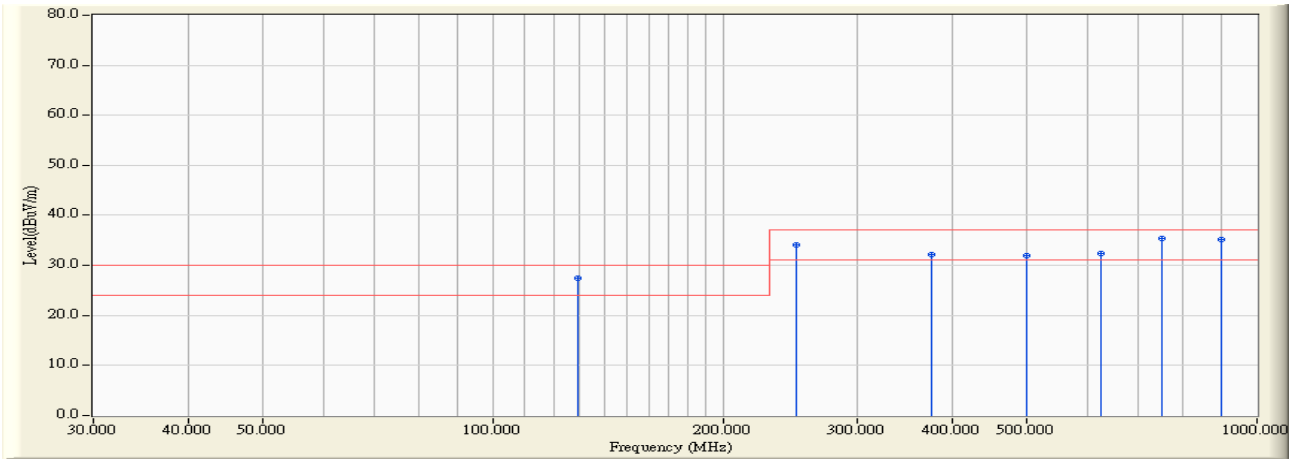
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

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-3	**Time : 2009/03/21 - 01:50**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : Site3_CBL6112_10M_0811 - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1**

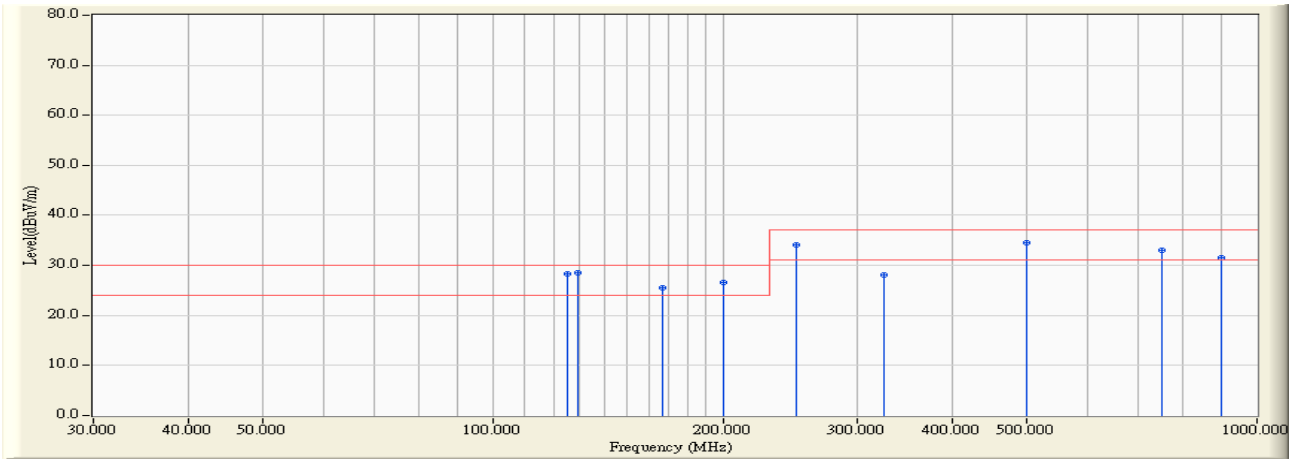


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		129.080	14.854	12.700	27.554	-2.446	30.000	QUASIPEAK
2		250.007	16.299	17.800	34.099	-2.901	37.000	QUASIPEAK
3		375.008	19.411	12.800	32.210	-4.790	37.000	QUASIPEAK
4		500.013	22.065	9.800	31.865	-5.135	37.000	QUASIPEAK
5		625.020	24.054	8.400	32.454	-4.546	37.000	QUASIPEAK
6	*	750.022	25.603	9.700	35.303	-1.697	37.000	QUASIPEAK
7		899.932	27.658	7.600	35.258	-1.742	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-3	**Time : 2009/03/21 - 01:26**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : Site3_CBL6112_10M_0811 - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1**

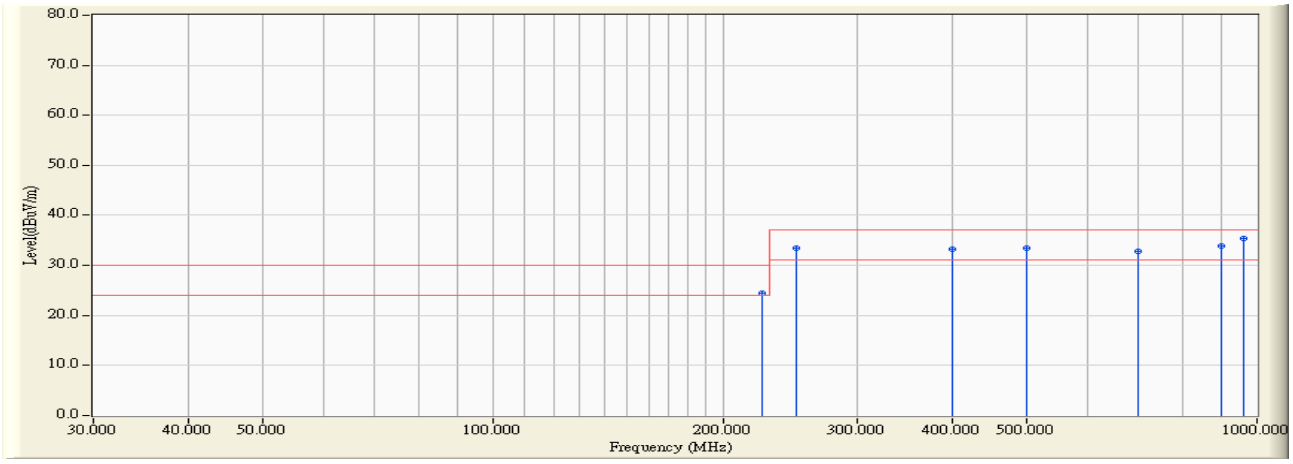


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		125.002	15.012	13.400	28.412	-1.588	30.000	QUASIPEAK
2	*	129.080	14.854	13.600	28.454	-1.546	30.000	QUASIPEAK
3		167.071	12.927	12.500	25.428	-4.572	30.000	QUASIPEAK
4		199.985	12.742	13.800	26.542	-3.458	30.000	QUASIPEAK
5		250.000	16.298	17.800	34.098	-2.902	37.000	QUASIPEAK
6		325.008	18.074	10.000	28.074	-8.926	37.000	QUASIPEAK
7		500.012	22.065	12.400	34.465	-2.535	37.000	QUASIPEAK
8		750.020	25.603	7.500	33.103	-3.897	37.000	QUASIPEAK
9		899.932	27.658	3.800	31.458	-5.542	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 : 2009/07/20 - 11:54**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : Site2_CBL6112_10M_0811 - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2**

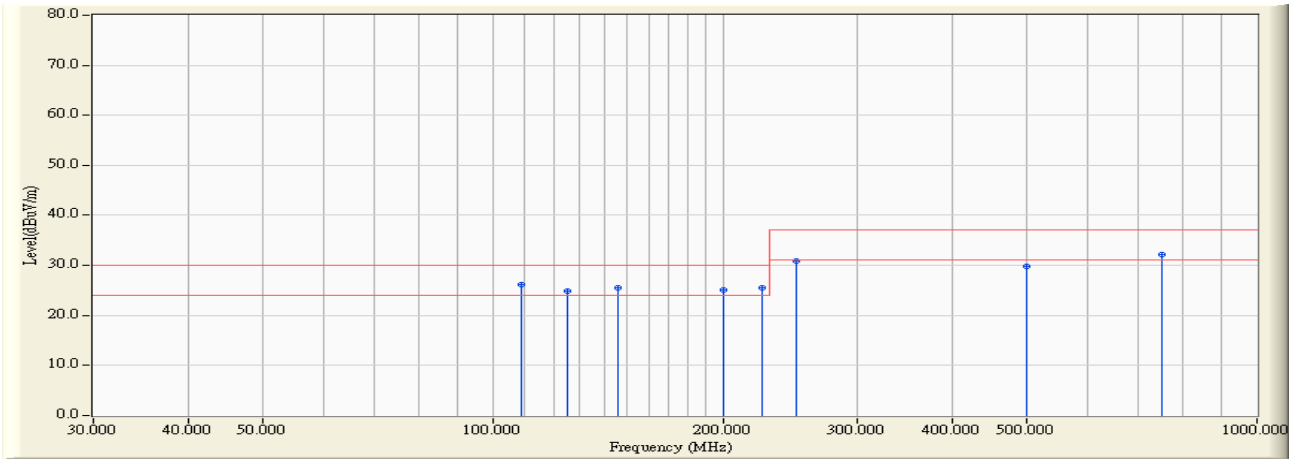


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		225.000	14.092	10.400	24.492	-5.508	30.000	QUASIPEAK
2		250.000	15.948	17.460	33.408	-3.592	37.000	QUASIPEAK
3		400.000	19.889	13.300	33.189	-3.811	37.000	QUASIPEAK
4		500.010	21.905	11.520	33.425	-3.575	37.000	QUASIPEAK
5		700.000	24.550	8.200	32.750	-4.250	37.000	QUASIPEAK
6		899.934	27.288	6.550	33.838	-3.162	37.000	QUASIPEAK
7	*	960.070	28.348	7.100	35.448	-1.552	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

Site : OATS-2	**Time : 2009/07/20 - 11:44**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : Site2_CBL6112_10M_0811 - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 2**

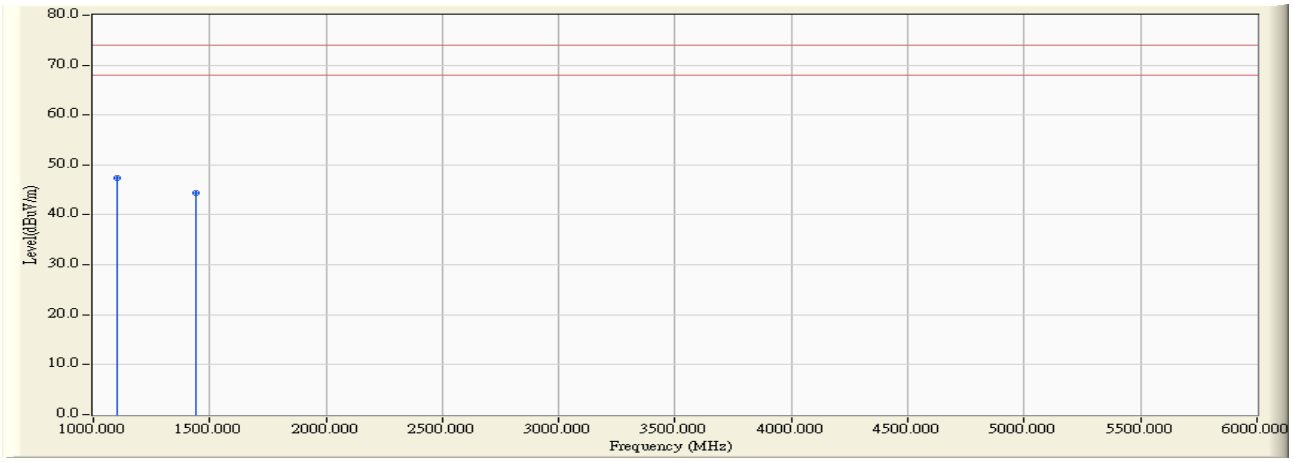


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	108.772	14.516	11.660	26.176	-3.824	30.000	QUASIPEAK
2		125.000	14.741	10.100	24.841	-5.159	30.000	QUASIPEAK
3		145.670	13.880	11.610	25.490	-4.510	30.000	QUASIPEAK
4		200.000	12.261	12.810	25.070	-4.930	30.000	QUASIPEAK
5		225.000	14.092	11.530	25.622	-4.378	30.000	QUASIPEAK
6		250.000	15.948	15.000	30.948	-6.052	37.000	QUASIPEAK
7		500.011	21.905	7.960	29.865	-7.135	37.000	QUASIPEAK
8		750.030	25.180	6.940	32.120	-4.880	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-3	**Time : 2009/03/21 - 04:48**
Limit : FCC_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : 9120D_1-18G_Horn - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 1**

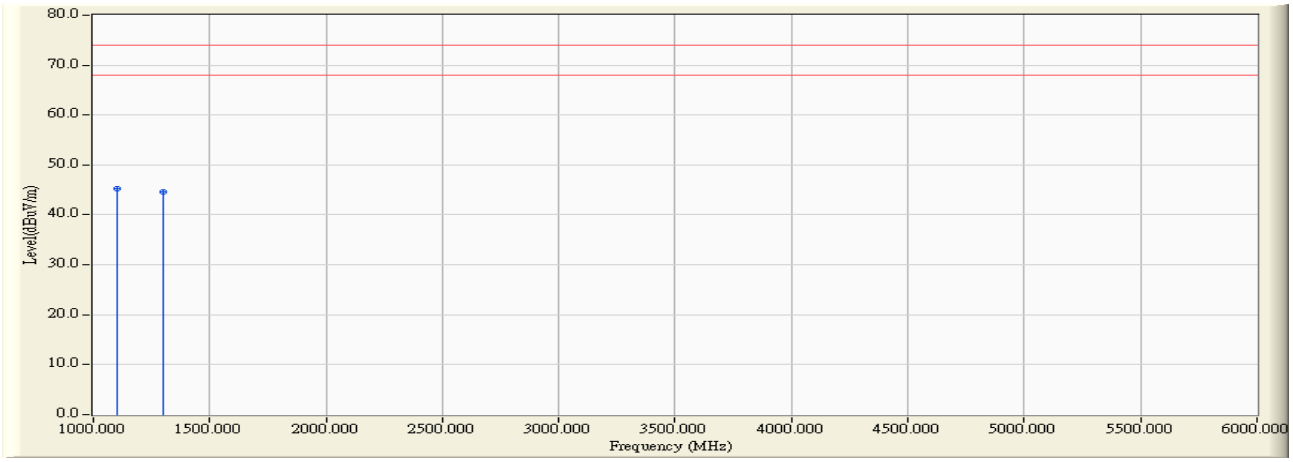


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1100.000	-4.411	51.760	47.349	-26.651	74.000	PEAK
2		1440.000	-3.688	48.080	44.392	-29.608	74.000	PEAK

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-3	**Time : 2009/03/21 - 04:53**
Limit : FCC_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : 9120D_1-18G_Horn - VERTICAL**
Power : AC 120V/60Hz	**Note : Mode 1**

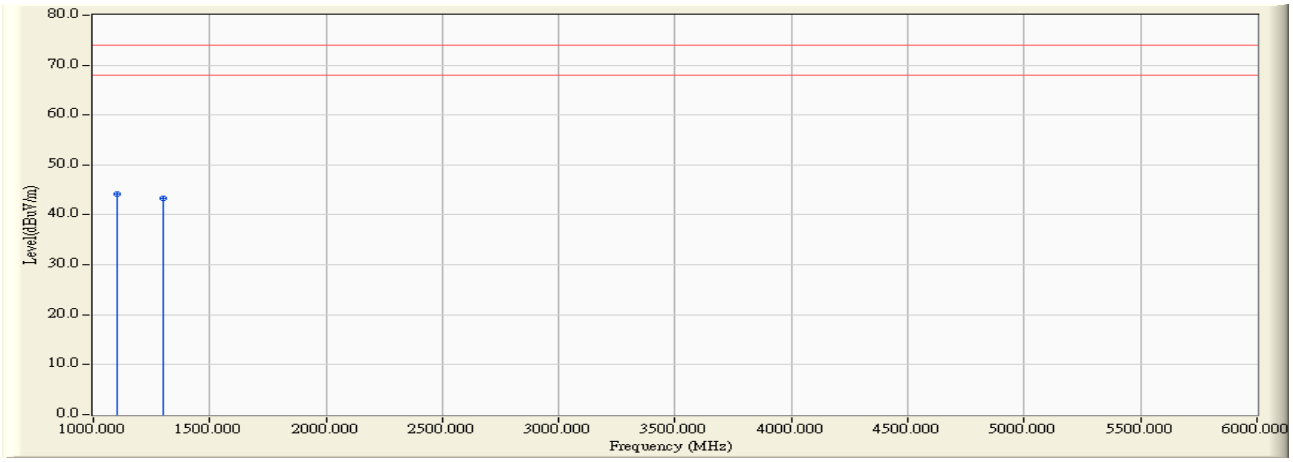


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1100.000	-4.411	49.620	45.209	-28.791	74.000	PEAK
2		1300.000	-4.001	48.650	44.649	-29.351	74.000	PEAK

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-2	**Time : 2009/07/21 - 09:43**
Limit : FCC_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**Probe : 9120D_1-18G_Horn - HORIZONTAL**
Power : AC 120V/60Hz	**Note : Mode 2**

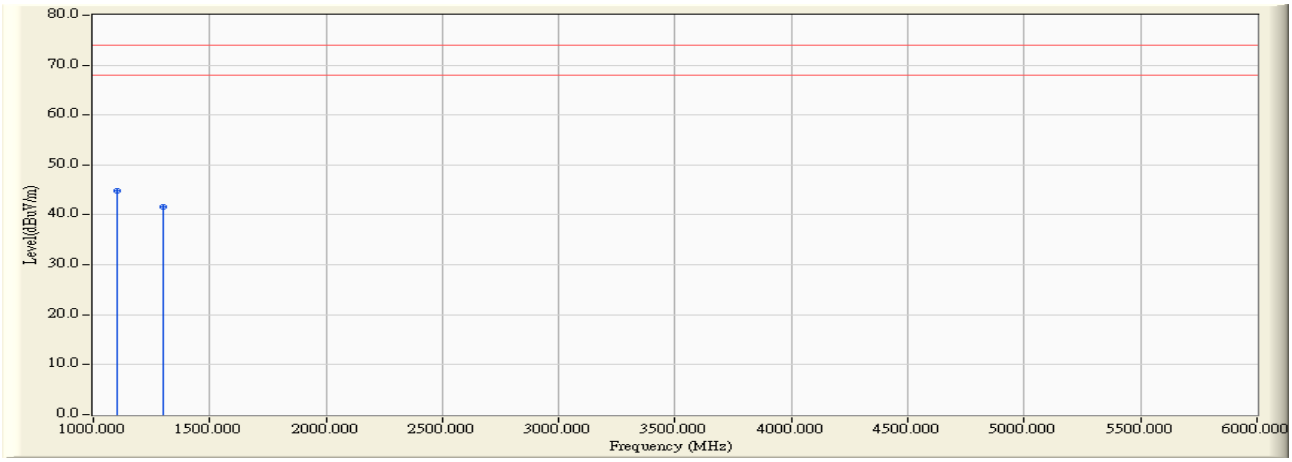


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1101.000	-6.382	50.661	44.280	-29.720	74.000	PEAK
2		1300.000	-5.637	48.887	43.250	-30.750	74.000	PEAK

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-2	**Time : 2009/07/21 - 09:48**
Limit : FCC_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : RISC-based GSM/GPRS/EDGE Embedded Computers	**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	*	1100.000	-6.383	51.153	44.770	-29.230	74.000	PEAK
2		1300.000	-5.637	47.217	41.580	-32.420	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 (Unbranded, 3A-161DA12)

Description : Front View of Radiated Test

Test Mode : Mode 1: Normal Operation (Unbranded, 3A-161DA12)

Description : Back View of Radiated Test

Test Mode : Mode 1: Normal Operation (Unbranded, 3A-161DA12)
Description : Front View of High Frequency Radiated Test

Test Mode : Mode 2: Normal Operation (Unbranded, 3A-302DA20)
Description : Front View of Radiated Test

Test Mode : Mode 2: Normal Operation (Unbranded, 3A-302DA20)
Description : Back View of Radiated Test

Test Mode : Mode 2: Normal Operation (Unbranded, 3A-302DA20)
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

(10) EUT Photo

(11) EUT Photo

(12) EUT Photo