



CERTIFICATE

Issued Date: July 05, 2010
Report No.: 106030R-ITUSP01V02

This is to certify that the following designated product

Product : Industrial Power Supply
Trade name : SURE STAR
Model Number : SS-400R8P, SS-300R8P
Company Name : SURE STAR COMPUTER CO., LTD.

This product, which has been issued the test report listed as above in QuietTek 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: 2009 Class B, CISPR 22: 2008
ANSI C63.4: 2003

TEST LABORATORY

Vincent Lin / Manager



Test Report

Product Name : Industrial Power Supply

Model No. : SS-400R8P, SS-300R8P

Applicant : SURE STAR COMPUTER CO., LTD.

Address : No.2-1 Daan Road Shulin City, Taipei, 238 Taiwan.

Date of Receipt : 2010/05/27

Issued Date : 2010/07/05

Report No. : 106030R-ITUSP01V02

Report Version : V2.0

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.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2. 1077(a)



The following equipment:

Product Name : Industrial Power Supply
Trade Name : SURE STAR
Model Number : SS-400R8P, SS-300R8P

It's herewith confirmed to comply with the requirements of FCC Part 15 Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

The result of electromagnetic emission has been evaluated by QuieTek EMC laboratory (NVLAP Lab. Code : 200533-0) and showed in the test report.

(Report No. : 106030R-ITUSP01V02)

It is understood that each unit marketed is identical to the device as tested, and any changes to the device that could adversely affect the emission characteristics will require retest.

The following importer / manufacturer is responsible for this declaration:

Company Name _____

Company Address _____

Telephone _____ Facsimile : _____

Person is responsible for marking this declaration:

Name (Full name)

Position / Title

Date

Legal Signature

Test Report Certification

Issued Date : 2010/07/05
 Report No. : 106030R-ITUSP01V02



Product Name : Industrial Power Supply
 Applicant : SURE STAR COMPUTER CO., LTD.
 Address : No.2-1 Daan Road Shulin City, Taipei, 238 Taiwan.
 Manufacturer : SURE STAR COMPUTER CO., LTD.
 Model No. : SS-400R8P, SS-300R8P
 EUT Rated Voltage : AC 100-240V, 50/60Hz
 EUT Test Voltage : AC 120V / 60Hz
 Trade Name : SURE STAR
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart B: 2009, Class B
 CISPR 22: 2008, ANSI C63.4: 2003
 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 : Genie Chang
 (Senior Adm. Specialist / Genie Chang)

Reviewed By : Jim Sun
 (Engineer / Jim Sun)

Approved By : Vincent Lin
 (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.

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E-Mail : service@quietek.com



LinKou Testing Laboratory :

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TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789

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Suzhou (China) Testing Laboratory :

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E-Mail : service@quietek.com



TABLE OF CONTENTS

Description	Page
1. General Information	5
1.1. EUT Description.....	5
1.2. Mode of Operation	5
1.3. Tested System Details	6
1.4. Configuration of Tested System	6
1.5. EUT Exercise Software.....	7
2. Technical Test	8
2.1. Summary of Test Result.....	8
2.2. List of Test Equipment	9
2.3. Measurement Uncertainty.....	10
2.4. Test Environment	11
3. Conducted Emission	12
3.1. Test Specification	12
3.2. Test Setup.....	12
3.3. Limit	12
3.4. Test Procedure	13
3.5. Test Result	14
3.6. Test Photograph	20
4. Radiated Emission	21
4.1. Test Specification	21
4.2. Test Setup.....	21
4.3. Limit	22
4.4. Test Procedure	23
4.5. Test Result	24
4.6. Test Photograph	26
5. Attachment.....	27
EUT Photograph	27

1. General Information

1.1. EUT Description

Product Name	Industrial Power Supply
Trade Name	SURE STAR
Model No.	SS-400R8P, SS-300R8P

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:

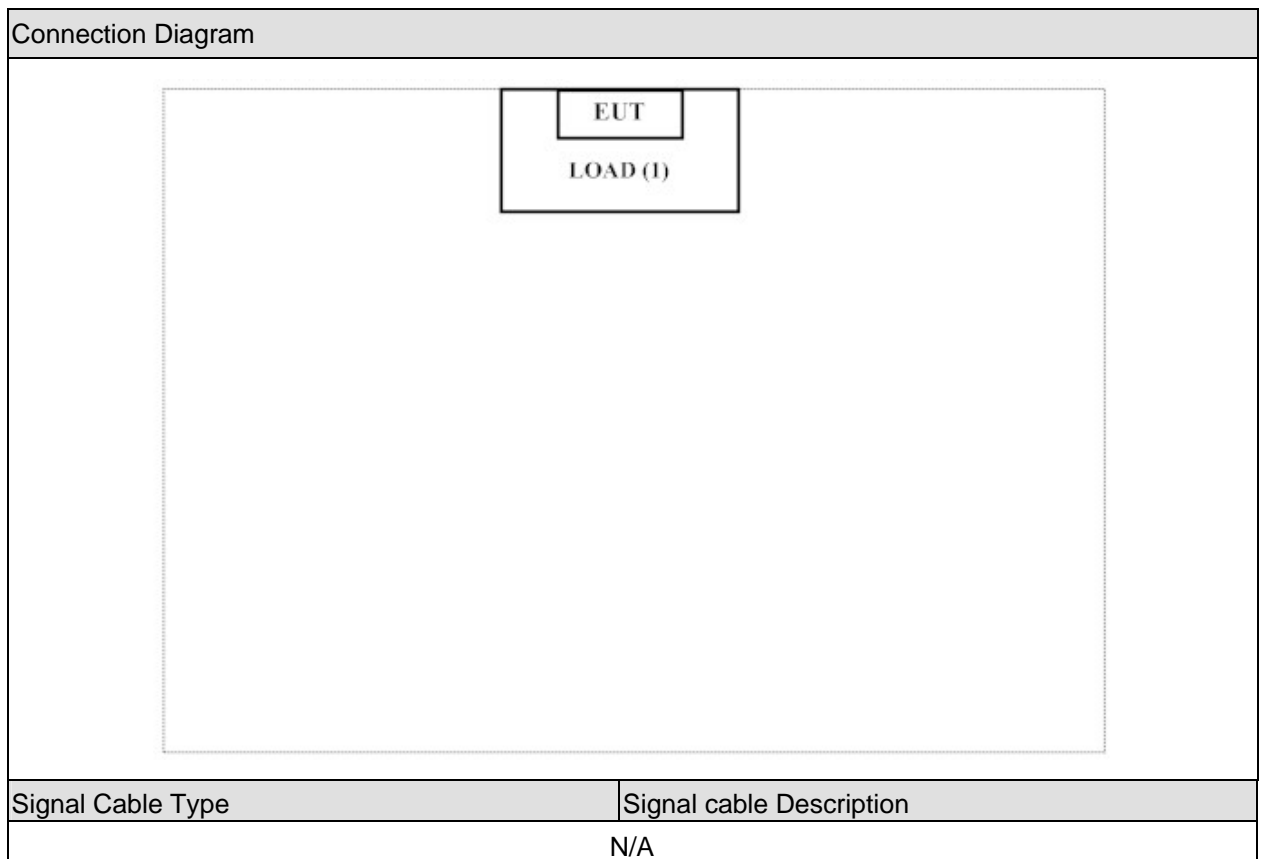
Pre-Test Mode	
Mode 1: Full Load	
Final Test Mode	
Emission	Mode 1: Full Load

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 Power test Fixture	D-RAM	DBS-2200	N/A	Non-Shielded 0.8m

1.4. Configuration of Tested System



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: 2003	Yes	No
Radiated Emission	FCC CFR Title 47 Part 15 Subpart B: 2009 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	2009/10/29
LISN	R&S	ENV4200	833209/007	2009/08/14
LISN	R&S	ENV216	100085	2010/02/17
Pulse Limiter	R&S	ESH3-Z2	357.88.10.52	2009/09/10

Radiated Emission / Site6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2909	2009/08/01
Broadband Horn Antenna	Schwarzbeck	BBHA9170	209	2009/07/25
EMI Test Receiver	R&S	ESCS 30	100368	2009/08/22
Horn Antenna	Schwarzbeck	BBHA9120D	305	2009/08/26
Pre-Amplifier	QTK	AP-025C	0506002	2009/08/01
Spectrum Analyzer	Advantest	R3162	120300652	2010/06/25

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

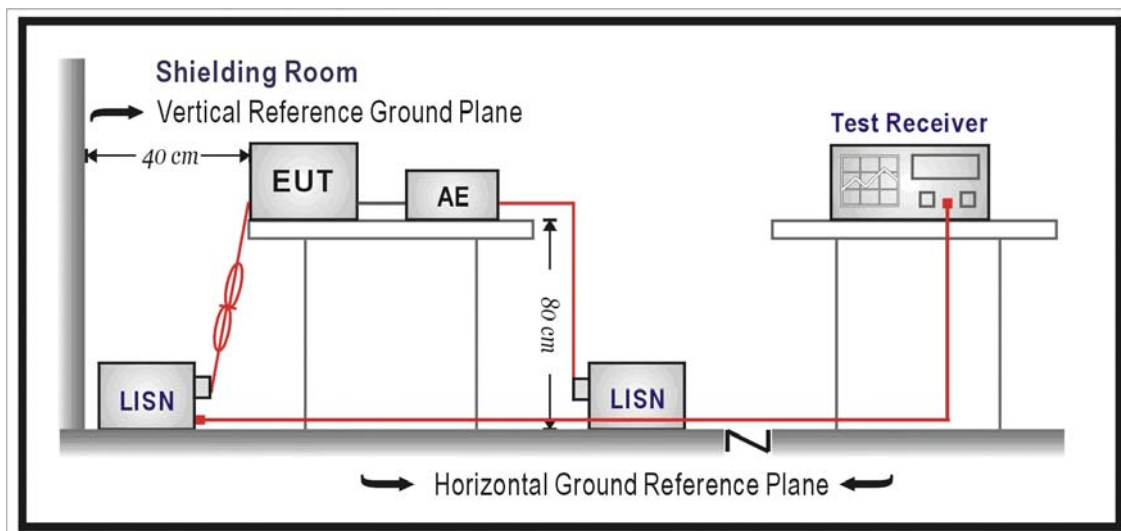
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000

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.

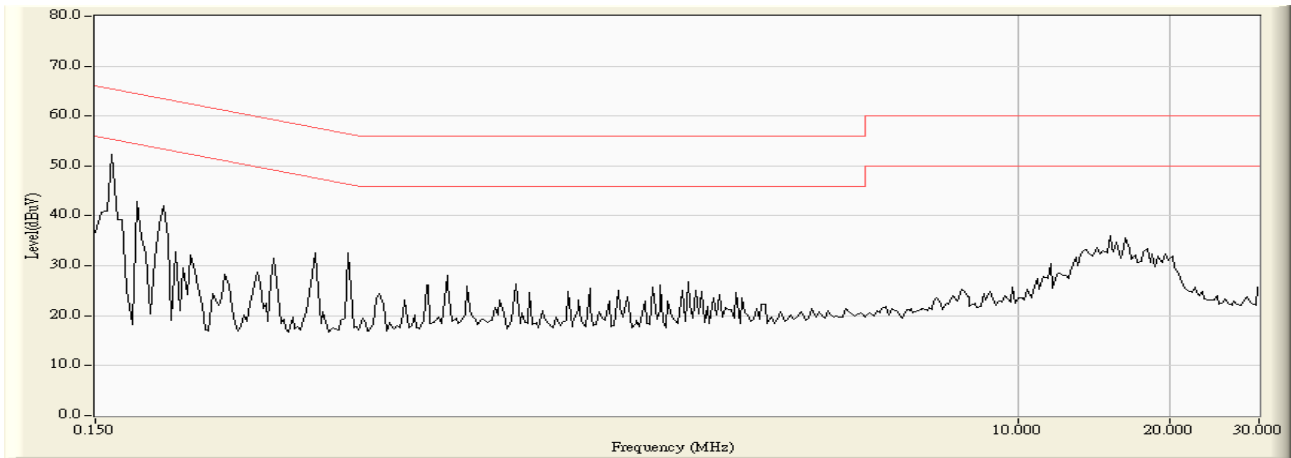
(Please refers to the block diagram of the test setup and photographs.)

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.

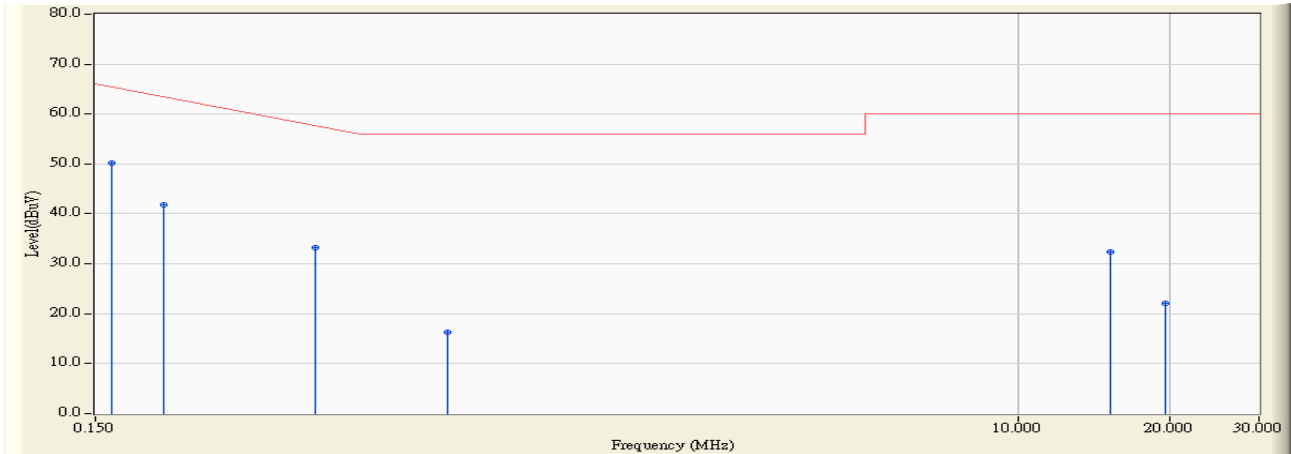
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Test Result

Site : SR1	Time : 2010/06/04 - 16:00
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Industrial Power Supply	Probe : ENV_216_L1 - Line1
Power : AC 120V/60Hz	Note : Mode 1



Site : SR1	Time : 2010/06/04 - 16:03
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Industrial Power Supply	Probe : ENV_216_L1 - Line1
Power : AC 120V/60Hz	Note : Mode 1

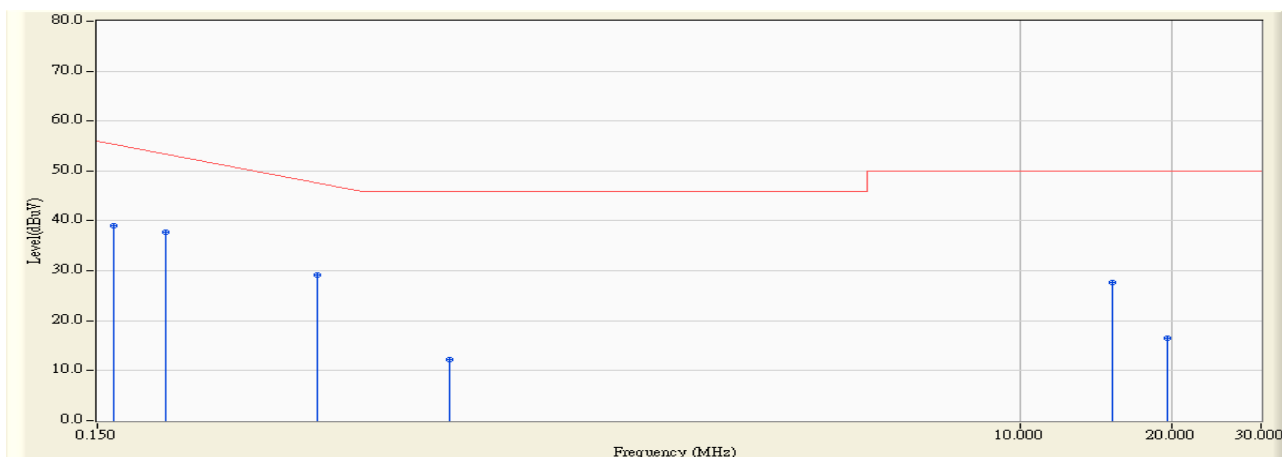


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.790	40.390	50.180	-15.477	65.657	QUASIPeAK
2		0.205	9.790	32.070	41.860	-22.569	64.429	QUASIPeAK
3		0.408	9.790	23.510	33.300	-25.329	58.629	QUASIPeAK
4		0.744	9.800	6.510	16.310	-39.690	56.000	QUASIPeAK
5		15.250	10.110	22.200	32.310	-27.690	60.000	QUASIPeAK
6		19.537	10.110	11.890	22.000	-38.000	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 : 2010/06/04 - 16:03
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Industrial Power Supply	Probe : ENV_216_L1 - Line1
Power : AC 120V/60Hz	Note : Mode 1

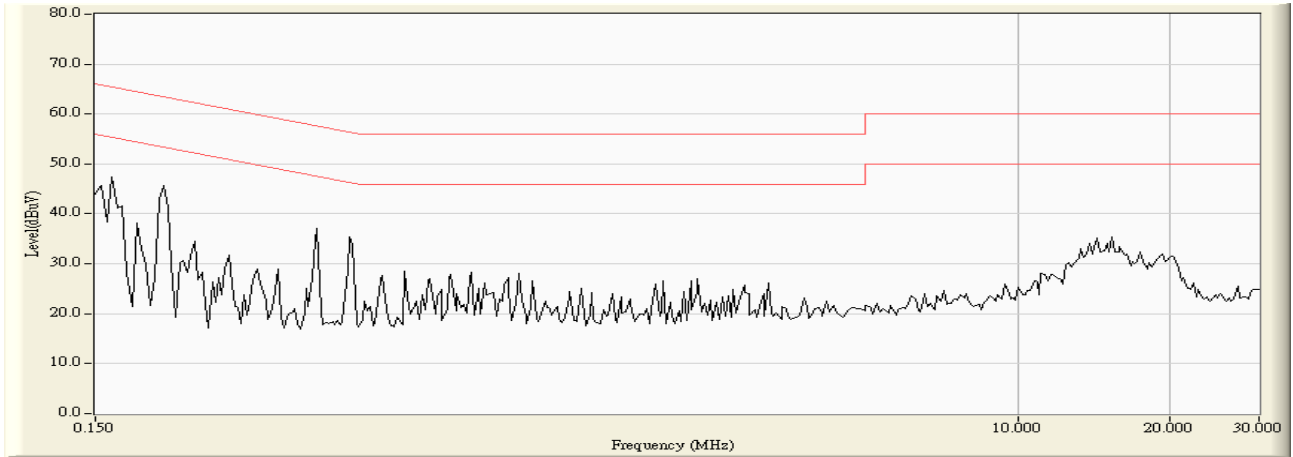


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.790	29.280	39.070	-16.587	55.657	AVERAGE
2		0.205	9.790	27.990	37.780	-16.649	54.429	AVERAGE
3		0.408	9.790	19.440	29.230	-19.399	48.629	AVERAGE
4		0.744	9.800	2.460	12.260	-33.740	46.000	AVERAGE
5		15.250	10.110	17.590	27.700	-22.300	50.000	AVERAGE
6		19.537	10.110	6.390	16.500	-33.500	50.000	AVERAGE

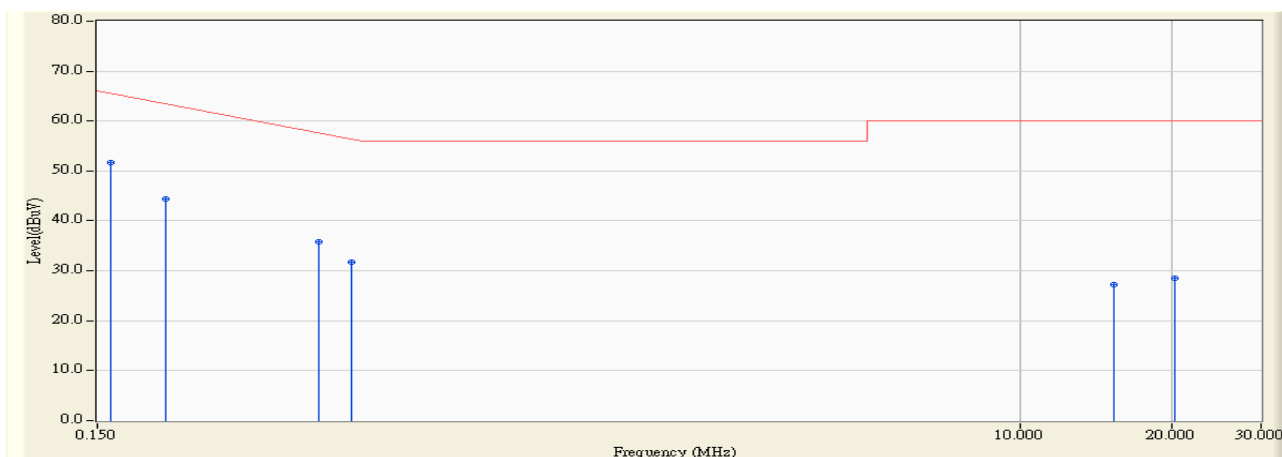
Note:

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 : 2010/06/04 - 16:04
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Industrial Power Supply	Probe : ENV_216_N - Line2
Power : AC 120V/60Hz	Note : Mode 1



Site : SR1	Time : 2010/06/04 - 16:06
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Industrial Power Supply	Probe : ENV_216_N - Line2
Power : AC 120V/60Hz	Note : Mode 1

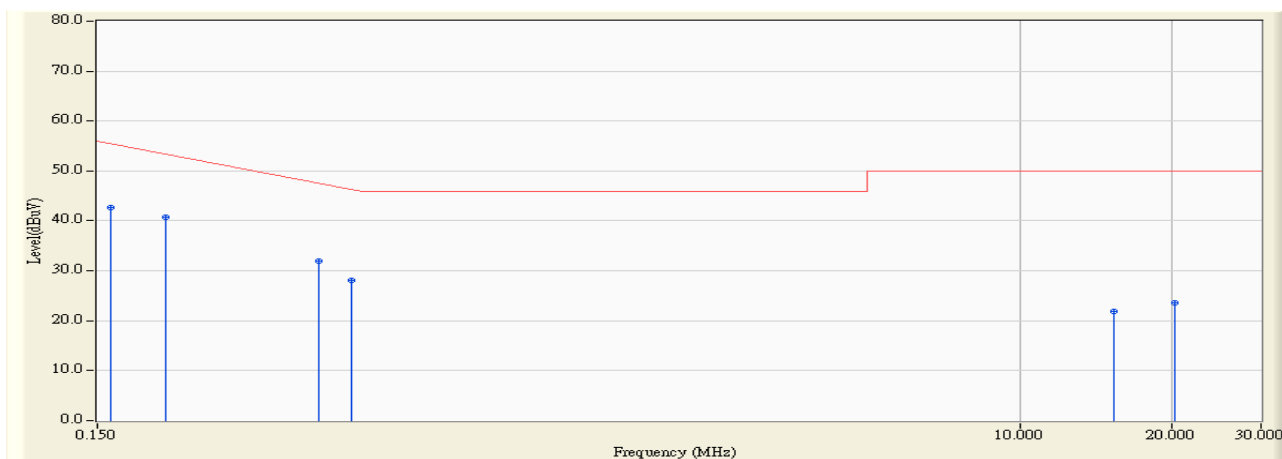


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.159	9.780	41.980	51.760	-13.983	65.743	QUASPEAK
2		0.205	9.780	34.630	44.410	-20.019	64.429	QUASPEAK
3		0.412	9.790	26.080	35.870	-22.644	58.514	QUASPEAK
4		0.478	9.790	21.910	31.700	-24.929	56.629	QUASPEAK
5		15.349	10.170	16.970	27.140	-32.860	60.000	QUASPEAK
6		20.265	10.230	18.300	28.530	-31.470	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 : 2010/06/04 - 16:06
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Industrial Power Supply	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	*	0.159	9.780	32.800	42.580	-13.163	55.743	AVERAGE
2		0.205	9.780	30.890	40.670	-13.759	54.429	AVERAGE
3		0.412	9.790	22.220	32.010	-16.504	48.514	AVERAGE
4		0.478	9.790	18.330	28.120	-18.509	46.629	AVERAGE
5		15.349	10.170	11.640	21.810	-28.190	50.000	AVERAGE
6		20.265	10.230	13.430	23.660	-26.340	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: Full Load

Description : Front View of Conducted Test



Test Mode : Mode 1: Full Load

Description : Back View of Conducted Test



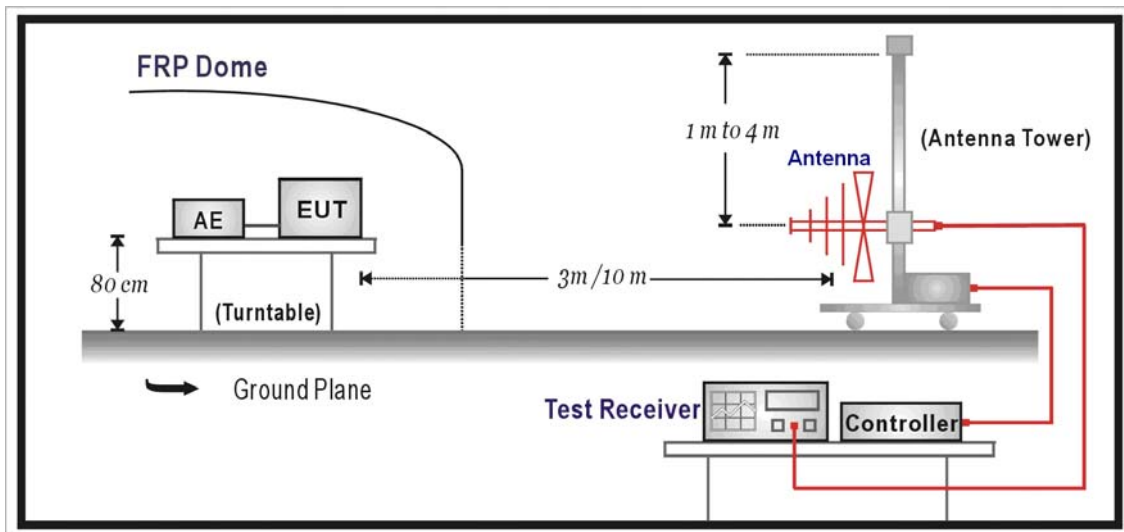
4. Radiated Emission

4.1. Test Specification

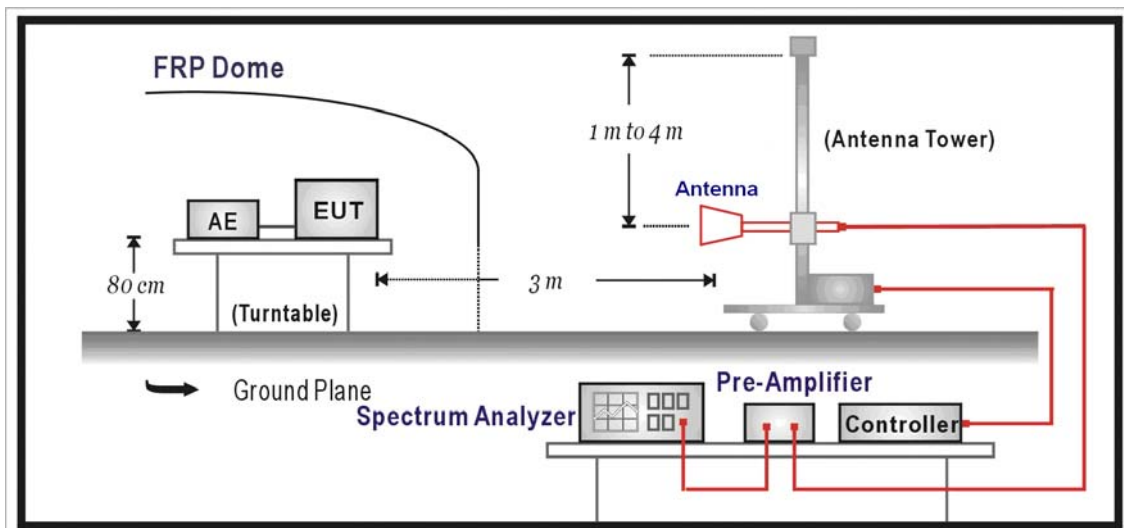
According to EMC Standard : FCC Part 15 Subpart B, ANSI C63.4

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.

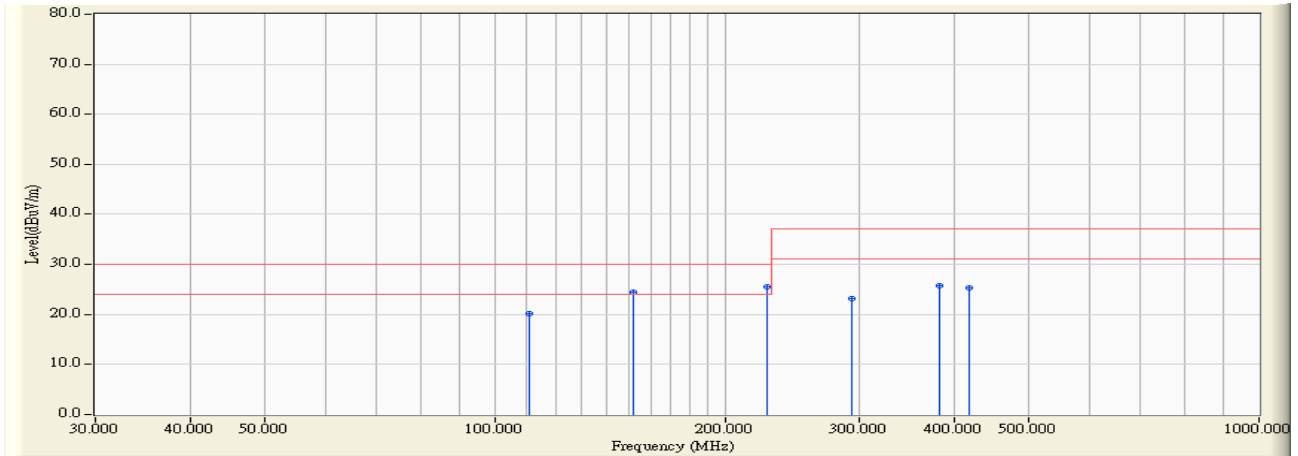
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

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-6	Time : 2010/06/08 - 20:15
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Industrial Power Supply	Probe : Site6_CBL6112_0811_10m - HORIZONTAL
Power : AC 120/60Hz	Note : Mode 1

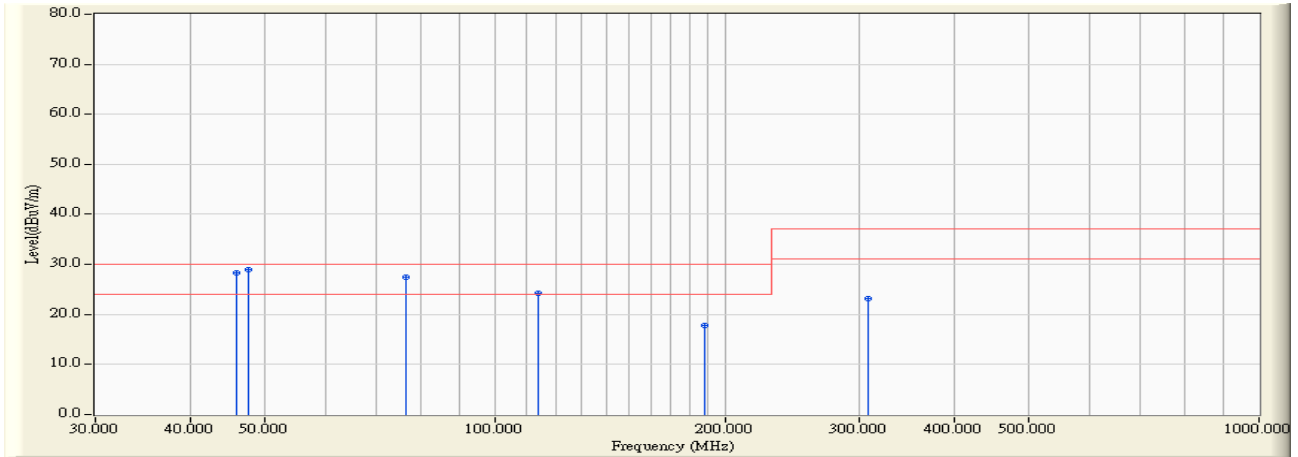


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	110.977	14.311	5.900	20.210	-9.790	30.000	QUASPEAK
2	151.805	13.550	10.800	24.350	-5.650	30.000	QUASPEAK
3	* 227.169	15.927	9.600	25.527	-4.473	30.000	QUASPEAK
4	293.608	19.241	3.900	23.140	-13.860	37.000	QUASPEAK
5	382.362	20.506	5.200	25.706	-11.294	37.000	QUASPEAK
6	417.470	22.591	2.700	25.291	-11.709	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-6	Time : 2010/06/08 - 20:13
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Industrial Power Supply	Probe : Site6_CBL6112_0811_10m - VERTICAL
Power : AC 120/60Hz	Note : Mode 1



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		45.817	15.312	12.900	28.212	-1.788	30.000	QUASPEAK
2	*	47.582	11.577	17.300	28.877	-1.123	30.000	QUASPEAK
3		76.472	10.829	16.600	27.429	-2.571	30.000	QUASPEAK
4		113.847	16.972	7.300	24.272	-5.728	30.000	QUASPEAK
5		188.424	12.634	5.100	17.734	-12.266	30.000	QUASPEAK
6		307.941	18.184	5.000	23.185	-13.815	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

4.6. Test Photograph

Test Mode : Mode 1: Full Load

Description : Front View of Radiated Test



Test Mode : Mode 1: Full Load

Description : Back View of Radiated Test



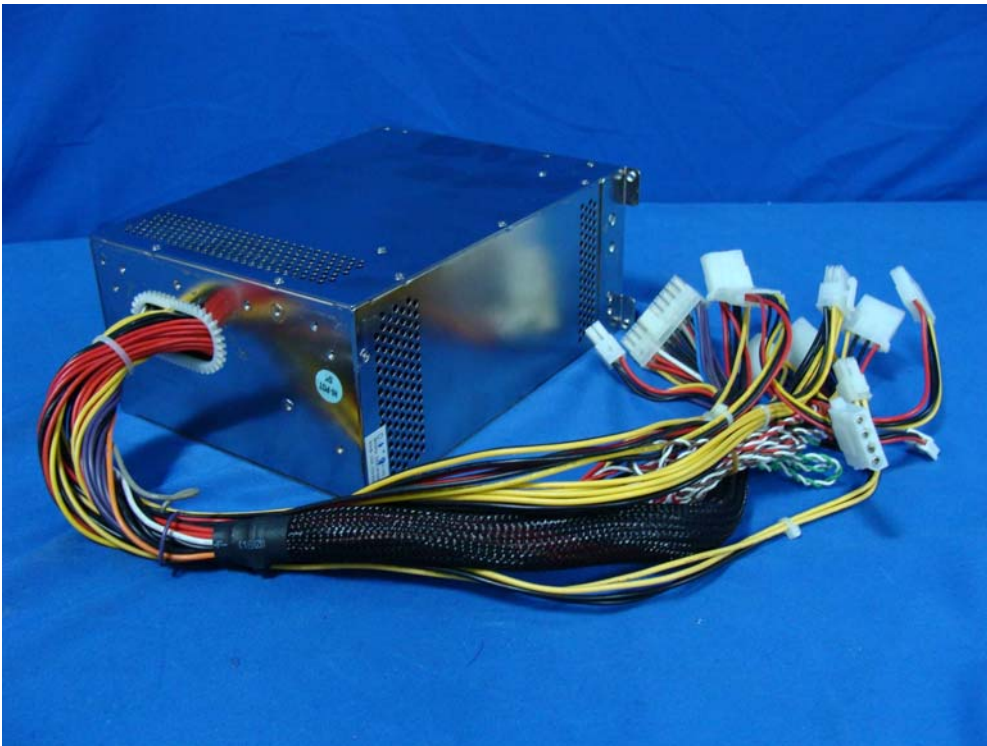
5. Attachment

➤ EUT Photograph

(1) EUT Photo



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo



(5) EUT Photo



(6) EUT Photo



(7) EUT Photo

