

FCC Test Report

for

Wii Contactless Charger

Trade Name : PowerHouse
Model No. : Wi08
FCC ID. : VXDWI08
Report Number : RF- F160-0809-156
Date of Receipt : Sept. 24, 2008
Date of Report : Oct. 6, 2008

Prepared for

Fu Da Tong Technology Co., Ltd.

14F-5, No. 872, Zhongzheng Rd., Zhonghe City, Taipei County 235, Taiwan R.O.C.

Prepared by



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NVLAP LAB CODE 200575-0

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Verification of Compliance

Equipment under Test : Wii Contactless Charger
Trade Name : PowerHouse
Model No. : Wi08
FCC ID : VXDWI08
Manufacturer : Fu Da Tong Technology Co., Ltd.
Applicant : Fu Da Tong Technology Co., Ltd.
Address : 14F-5, No. 872, Zhongzheng Rd., Zhonghe City, Taipei
County 235, Taiwan R.O.C.
Applicable Standards : 47 CFR part 15, Subpart C
Date of Testing : Sept. 25, 2008
Deviation : N/A
Condition of Test Sample : Engineering Sample

We, **Central Research Technology Co.**, hereby certify that one sample of the designated product was tested in our facility during the period mentioned above. The test records, data evaluation and Equipment Under Test (EUT) configurations shown in the present report are true and accurate representation of the measurements of the sample's RF characteristics under the conditions herein specified.

The test results show that the EUT as described in the present report is in compliance with the requirements set forth in the standards mentioned above and apply to the tested sample identified in the present report only. The test report shall not be reproduced, except in its entirety, without the written approval of Central Research Technology Co.

PREPARED BY : Cathy Chen , DATE : Oct. 6, 2008
(Cathy Chen/Technical Manager)
APPROVED BY : J. Y. Shih , DATE : Oct. 6, 2008
(Tsun-Yu Shih/Laboratory Head)

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Attachment 1 – Photographs of the Test Configurations

Attachment 2 –External Photographs of EUT

Attachment 3 –Internal Photographs of EUT

1 General Description

1.1 General Description of EUT

Equipment underTest : Wii Contactless Charger
Model No. : Wi08
Power in : 100~240Vac,50Hz/60Hz
Test Voltage : 120Vac/50Hz
Manufacturer : Fu Da Tong Technology Co., Ltd.
Channel Numbers : 1
Frequency Range : 250 kHz
Function Modulation : ASK
Function Description :

The EUT is used to transmit control command only. Please refer to the user's manual for the details.

1.2 Test Methodology

For this E.U.T., the radiated emissions measurement performed according to the procedures illustrated in ANSI C63.4:2003 and other required were illustrated in separate sections of this test report for detail.

1.3 Applied standards

(1) Radiated Emission Requirement

According to §15.209(a), the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

(2) Conduction Emission Requirement

For intentional device, according to §15.207(a) line conduction emission limit is as below table.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency.

(3) Restricted Band

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
² 1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)
13.36 - 13.41			

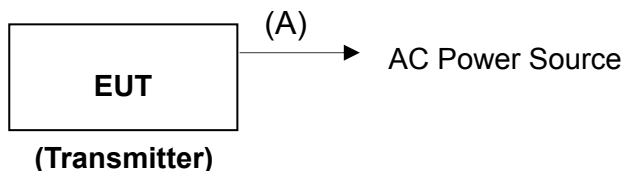
¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

1.4 The Support Units

No.	Unit	Model No./ Serial No.	Teade Name	PowerCode	Supported by lab.
NA	*	*	*	*	*

1.5 Layout of Setup



Connecting Cables :

No.	Cable	Length	Shielded	Core	Shielded Backshell	Supported by lab.	Note
A	Power cord	1.5m					

Justification:

For both conducted and radiated emission below 1GHz, the system was configured for typical fashion as a customer could normal use it.

For radiated emission, measurement of radiated emission from digital circuit is performed with normal transmitting.

1.6 Test Capability

Test Facility

The test facility used for evaluating the conformance of the EUT with each standard in the present report meets what required in CISPR16-1-4, CISPR16-2-3 and ANSI C63.4.

Test Room	Type of Test Room	Descriptions
TR1	10m semi-anechoic chamber (23m×14m×9m)	Complying with the NSA requirements in documents CISPR 22 and ANSI C63.4. For the radiated emission measurement.
TR10	3m semi-anechoic chamber (9m × 6m × 6m)	
TR11	3m semi-anechoic chamber (9m × 6m × 6m)	
TR4	Shielding Room (5m×3m×3m)	For the RF conducted emission measurement.
TR5	Shielding Room (8m×5m×4m)	For the conducted emission measurement.

Test Laboratory Competence Information

Central Research Technology Co. has been accredited/filed/authorized by the agencies listed in the following table.

Certificate	Nation	Agency	Code	Mark
Accreditation Certificate	USA	NVLAP	200575-0	ISO/IEC 17025
	R.O.C. (Taiwan)	TAF	0905	ISO/IEC 17025
	R.O.C. (Taiwan)	BSMI	SL2-IN-E-0033, SL2-IS-E-0033, SL2-R1/R2-E-0033, SL2-A1-E-0033	ISO/IEC 17025
Site Filing Document	USA	FCC	474046, TW-1021	Test facility list & NSA Data
	Canada	IC	4699A-1,-2,-3	Test facility list & NSA Data
	Japan	VCCI	R-1527,C-1609,T-131,T-1441	Test facility list & NSA Data
Authorization Certificate	Germany	TUV	10021687-2007	ISO/IEC 17025
	Norway	Nemko	ELA212	ISO/IEC 17025

The copy of each certificate can be downloaded from our web site: www.crc-lab.com

1.7 Measurement Uncertainty

The assessed measurement uncertainty with a suitable coverage factor K to ensure 95% confidence level for the normal distribution are shown as below, the values are less than U_{cispr} in table 1 of CISPR 16-4-2.

Test Item	Measurement Uncertainty	
Radiated Emission: (30MHz~200MHz)	Horizontal: 2.8dB ; Vertical: 3.5dB	
Radiated Emission: (200MHz~1GHz)	Horizontal: 3.4dB ; Vertical: 2.8dB	
Radiated Emission: (1GHz~18GHz)	Horizontal: 2.5dB ; Vertical: 2.4dB	
Line Conducted Emission	ESH2-Z5	3.1 dB
	ENV 4200	3.8 dB

2 Radiated Emission

Test Result: Pass

2.1 Applied standard

According to §15.209(a), the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

2.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No./ Serial No.	Last Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESI26/837491/015	2008/5/5	2009/5/4
Spectrum Analyzer	Agilent	E4407B/ MY45106706	2008/3/19	2009/3/18
Antenna	EMCO	6502/20558	2008/8/4	2011/8/3
Broadband Antenna	EMCO	3142C/ 52088	2008/7/27	2009/7/26
Horn Antenna*	EMCO	3117/ 57408	2008/2/25	2009/2/24
Horn Antenna*	EMCO	3116/ 58959	2008/2/14	2009/2/13
Pre-Amplifier*	MITEQ	AFS6-02001800-35 -10P-6/866643	2007/12/19	2008/12/18
Pre-Amplifier	Mini Circuit	ZKL-2/ 004	2008/8/14	2009/8/13
Semi - anechoic Chamber	ETS. LINDGREN	TR11/ 906-A	2008/6/30	2009/6/29

Note:

1. The calibrations are traceable to NML/ROC.
2. NCR : No Calibration Required.
3. The calibration date of the semi-anechoic chamber listed above is the date of NSA measurement.
4. * Use over 1GHz measurement.

Instrument Setting

RBW	VBW	Detector	Trace	Comment
10kHz	10kHz/10Hz	Peak/ Average	Maxhold	Field Strength of Fundament
9kHz	N/A	Quasi-Peak	Maxhold	Below 30MHz
120kHz	N/A	Quasi-Peak	Maxhold	Below 1GHz

Climatic Condition

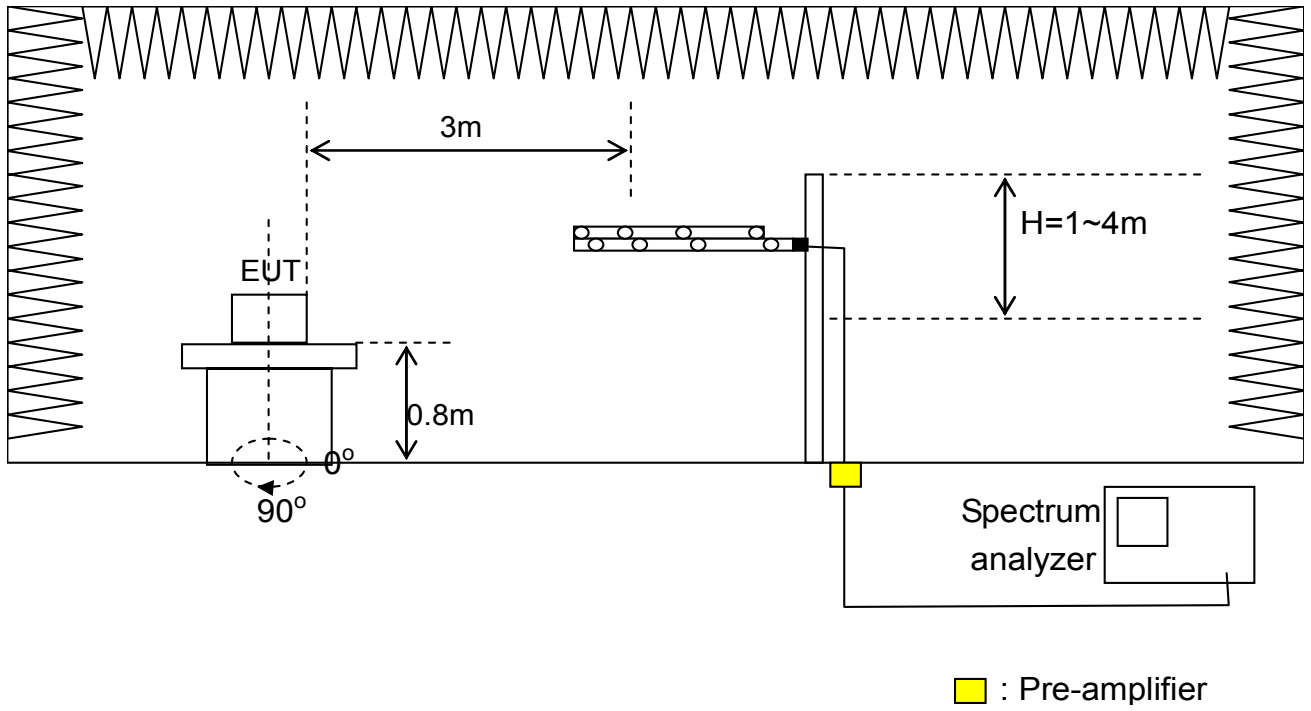
Ambient Temperature : 27°C;

Relative Humidity : 65%

2.3 Measurement Procedure

- a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.
- b. A software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.
- c. If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 meters above the reference ground plane in the semi-anechoic chamber. If the EUT is floor-standing equipment, it was placed on a non-conducted support with a height of 12 millimeters above the reference ground plane in the semi-anechoic chamber.
- d. The EUT was set 3m away from the interference receiving antenna.
- e. Rapidly sweep the signal in the test frequency range by using the spectrum through the Maximum-peak detector.
- f. Rotate the EUT from 0° to 360° and position the receiving antenna at heights from 1 to 4 meters above the reference ground plane continuously to determine at least six frequencies associated with higher emission levels and record them.
- g. Then measure each frequency found from step f. by using the spectrum with rotating the EUT and positioning the receiving antenna height to determine the maximum level.
- h. For measurement of frequency above 1000MHz, the beamwidth of receiving horn antenna should keep covering EUT when the receiving horn antenna height varied.
- i. For measurement of frequency above 1000MHz, set the spectrum detector to be Peak or Average to find out the maximum level occurred, if any.
- j. Record frequency, azimuth angle of the turntable, height, and polarization of the receiving antenna and compare the maximum level with the required limit.
- k. Change the receiving antenna to another polarization to measure radiated emission by following step e. to j. again.
- l. If the peak emission level below 1000MHz measured from step f. is 4dB lower than the limit specified, then the emission values presented will be the peak value only. Otherwise, accurate Q.P. value will be measured and presented.
- m. If the peak emission level above 1000MHz measured from step f. is 20dB lower than the limit specified, then the emission values presented will be the peak value only. Otherwise, accurate A.V. value will be measured and presented.

2.4 Test configuration



2.5 Test Data

Field Strength of Fundament

Operating Frequency : 250 KHz **Test Mode** : Transmitting
Test Distance : 3m **Tester** : Jacky

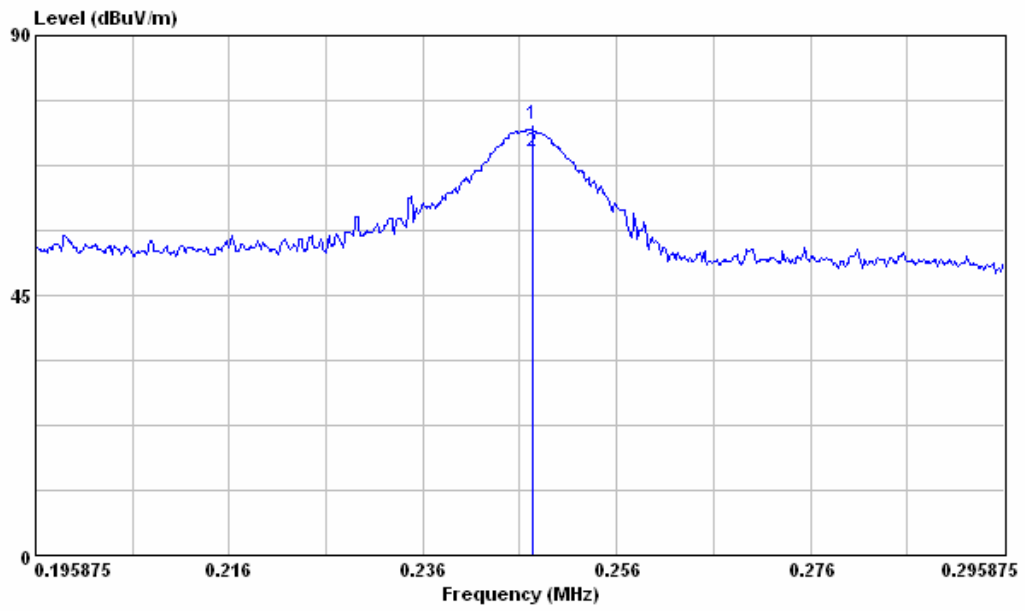
Frequency (MHz)	Polarization	Reading Data (dBuV)		Correction Factor (dB/m)	Field Strength (dB μ V/m)		Limit (dB μ V/m)		Margin (dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
0.247	V	59.97	55.01	14.78	74.75	69.79	119.6	99.6	44.85	29.81
0.247	H	58.12	53.87	14.78	72.90	68.65	119.6	99.6	46.70	30.95

Note :

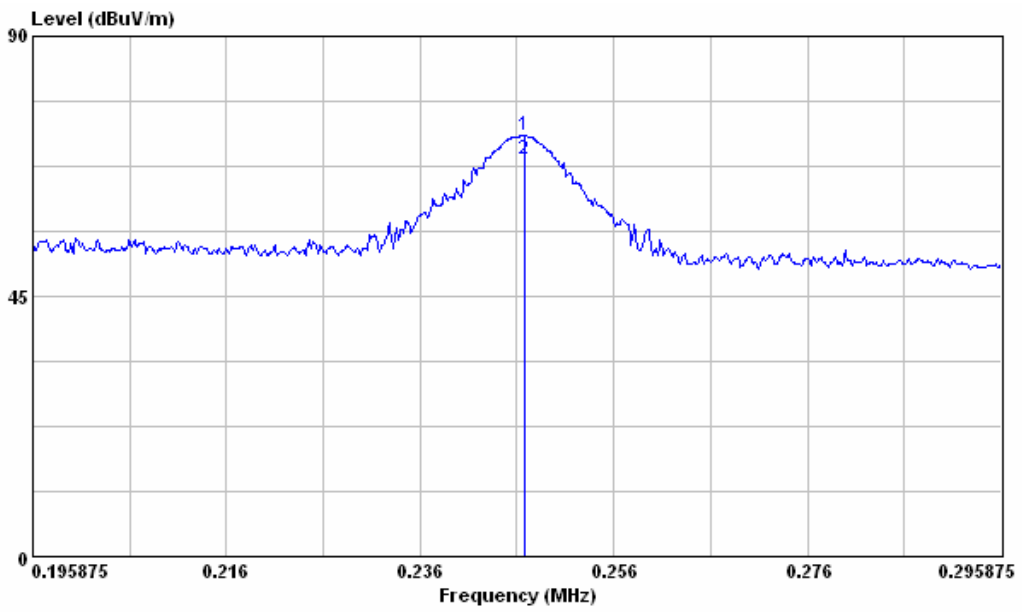
- Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Preamplifier
- Field Strength (dBuV/m) = Reading Data + Correction Factor
- The limit is 2400/250=9.6 (uV/m) @ 300 m , The formular transfers the limit at 300 m to 3m is

$$L_3 = L_{300} \times (d_{300} / d_3)^2 = 99.6 \text{ dBuV/m}$$
- Margin (dB) = Limit – Field Strength

V Polarization



H Polarization



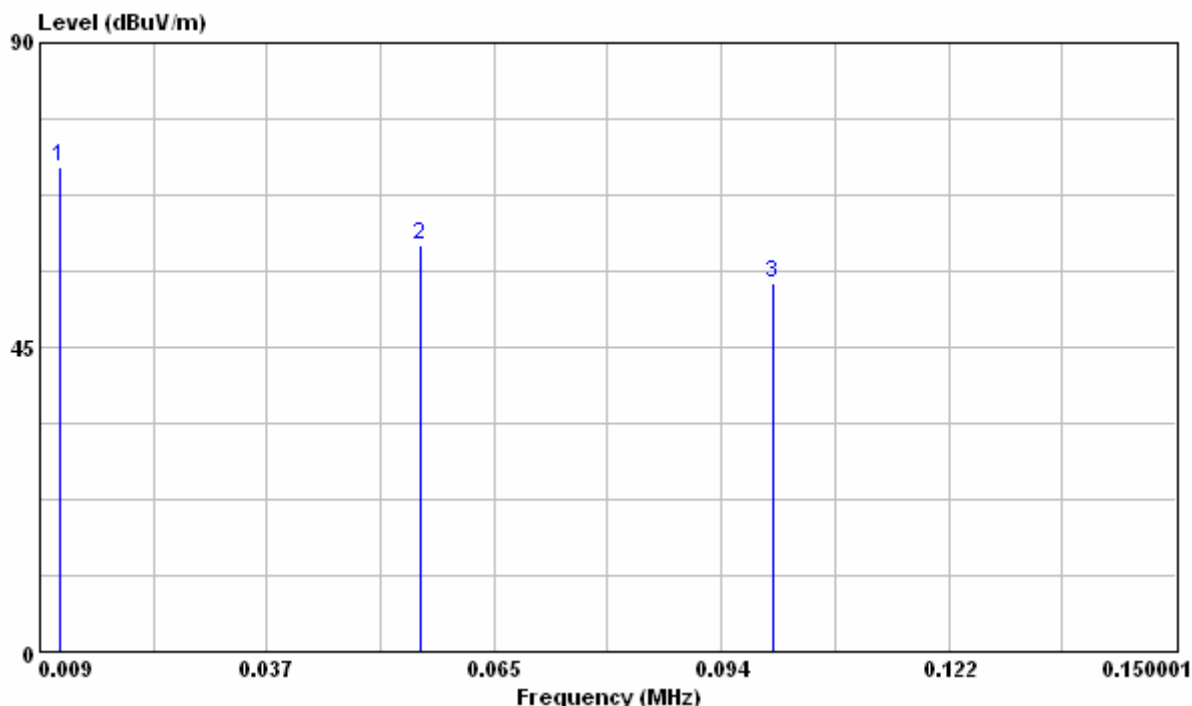
Radiated Emission Measurement below 1000MHz

Operating Frequency : 250 KHz **Test Mode** : Transmitting
Test Distance : 3m **Tester** : Jacky
Polarization : Vertical **Frequency Range** : 9 kHz~150 kHz

	Freq. (kHz)	Reading Data (dBuV)	Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	11.40	50.58	21.06	71.64	126.47	54.83
2	56.23	44.58	15.41	59.99	112.60	52.61
3	100.09	39.28	15.10	54.38	107.60	53.22

Note:

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Pre-amplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level
4. The formular transfor the limit at 300 m to 3m is $L_3 = L_{300} \times (d_{300} / d_3)^2$

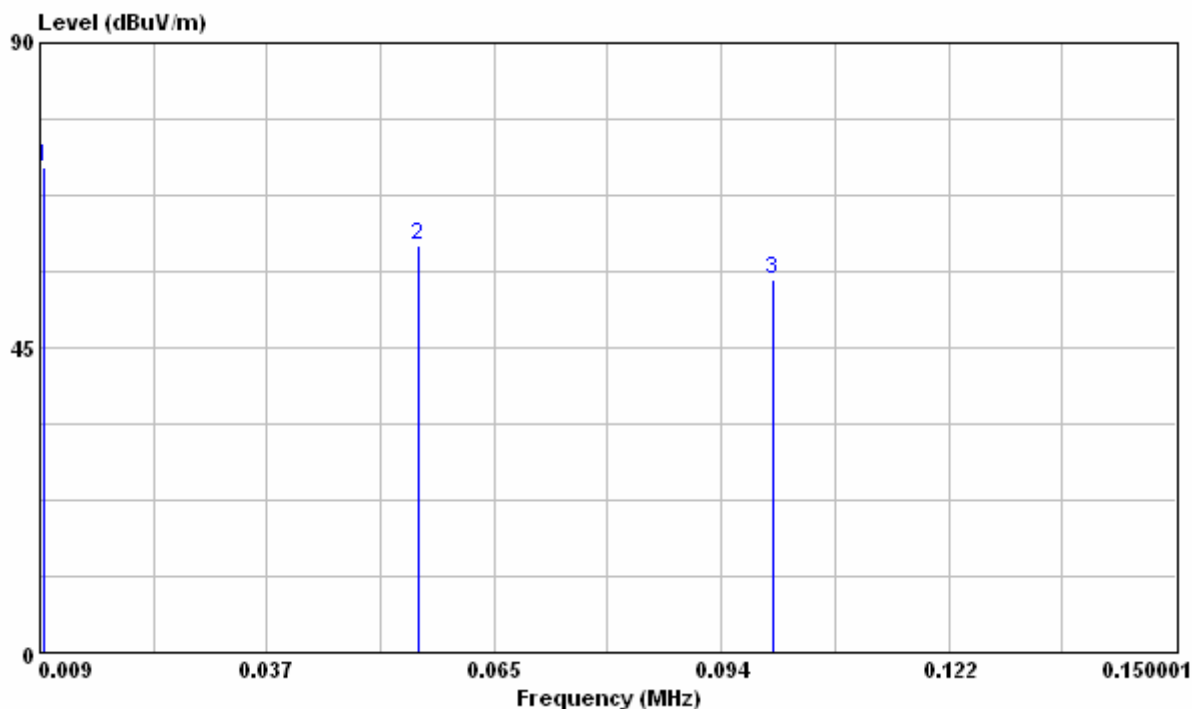


Operating Frequency : 250 KHz **Test Mode** : Transmitting
Test Distance : 3m **Tester** : Jacky
Polarization : Horizontal **Frequency Range** : 9 kHz~150 kHz

	Freq. (kHz)	Reading Data (dBuV)	Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	9.56	49.67	21.96	71.63	128.00	56.37
2	55.95	44.73	15.42	60.15	112.65	52.50
3	100.07	39.83	15.10	54.93	107.60	52.67

Note:

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Pre-amplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level
4. The formular transfor the limit at 300 m to 3m is $L_3 = L_{300} \times (d_{300} / d_3)^2$



Operating Frequency : 250 kHz

Test Mode : Transmitting

Test Distance : 3m

Tester : Jacky

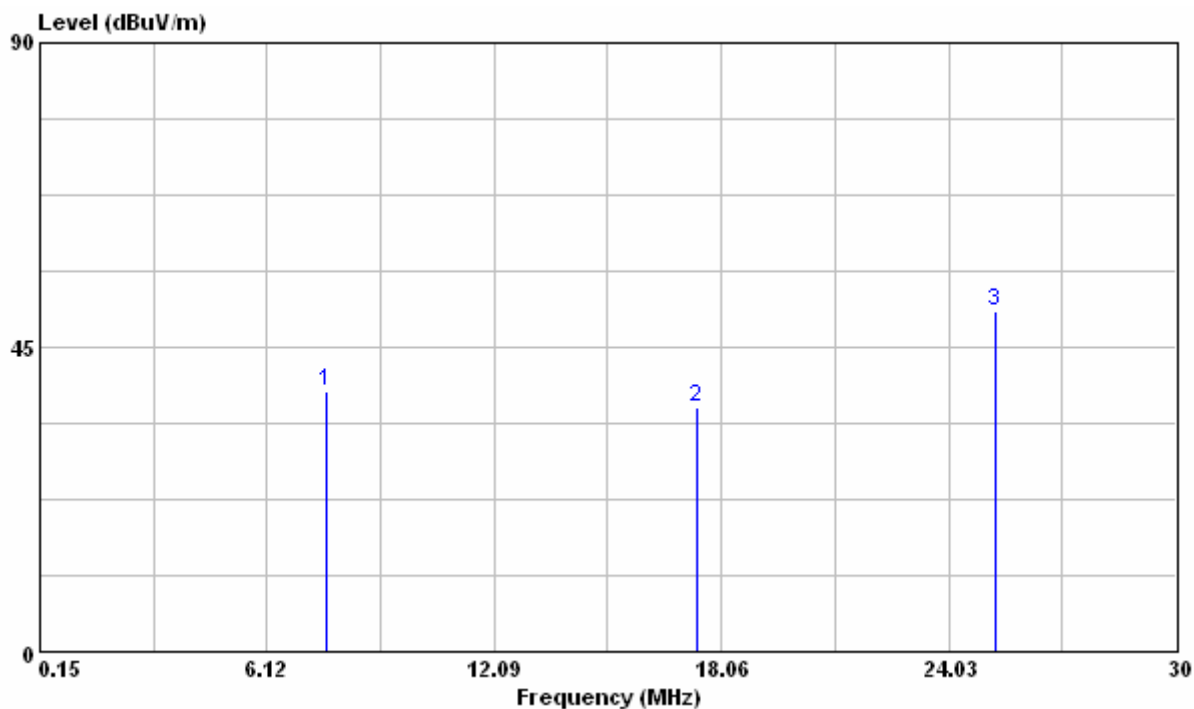
Polarization : Vertical

Frequency Range : 150kHz~30MHz

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	7.67	24.45	14.13	38.58	69.54	30.96
2	17.40	22.31	13.83	36.14	69.54	33.40
3	25.25	37.32	13.11	50.43	69.54	19.11

Note:

1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Pre-amplifier
2. Emission Level (dBuV/m) = Reading Data + Correction Factor
3. Margin (dB) = Limit – Emission Level
4. The formular transfor the limit at 30 m to 3m is $L_3 = L_{30} \times (d_{30} / d_3)^2$



Operating Frequency : 250 kHz

Test Mode : Transmitting

Test Distance : 3m

Tester : Jacky

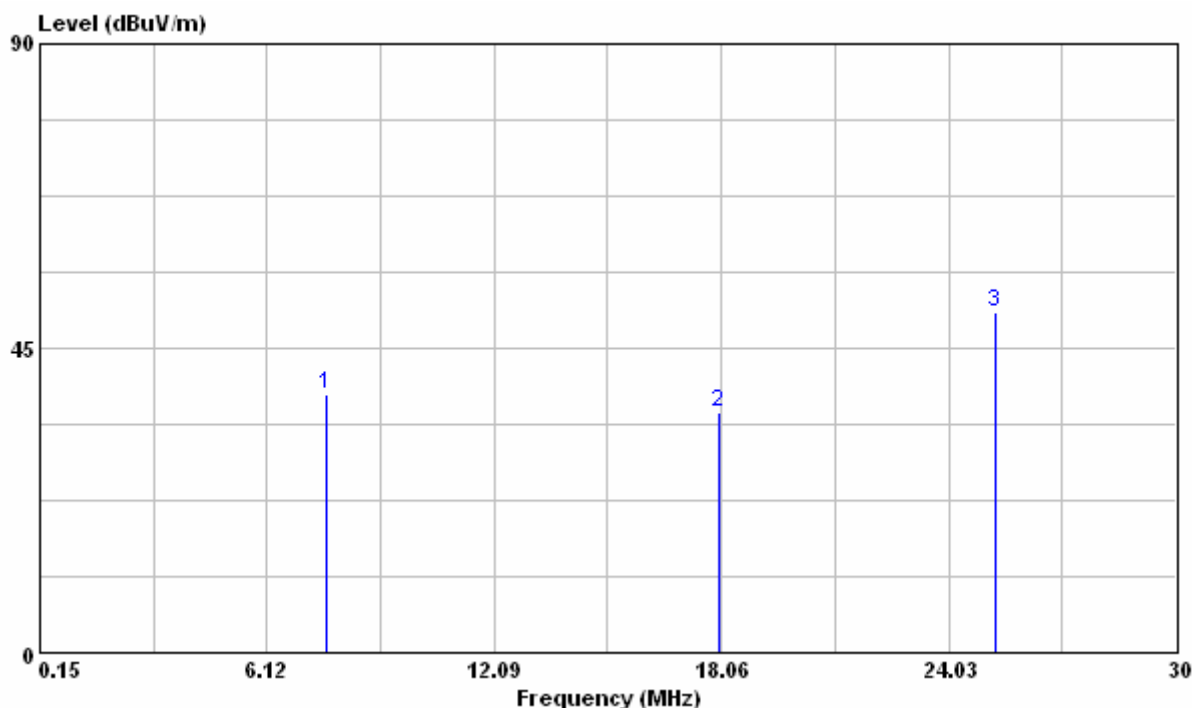
Polarization : Horizontal

Frequency Range : 150kHz~30MHz

	Freq. (MHz)	Reading Data (dBuV)	Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	7.67	23.99	14.13	38.12	69.54	31.42
2	18.00	21.67	13.82	35.49	69.54	34.05
3	25.25	37.32	13.11	50.43	69.54	19.11

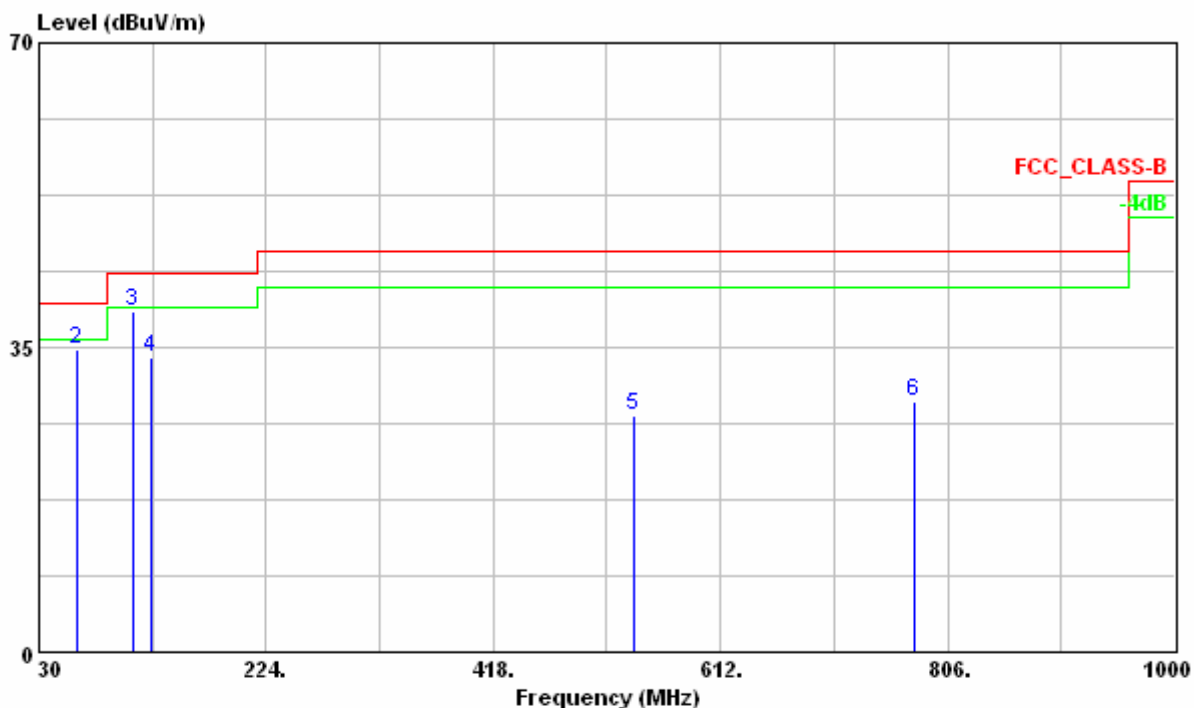
Note:

- 1. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Pre-amplifier
- 2. Emission Level (dBuV/m) = Reading Data + Correction Factor
- 3. Margin (dB) = Limit – Emission Level
- 4. The formular transfor the limit at 30 m to 3m is $L_3 = L_{30} \times (d_{30} / d_3)^2$



Operating Frequency : 250 kHz
 Test Distance : 3m
 Polarization : Vertical

Test Mode : Transmitting
 Tester : Jacky
 Frequency Range : 30MHz~1000MHz



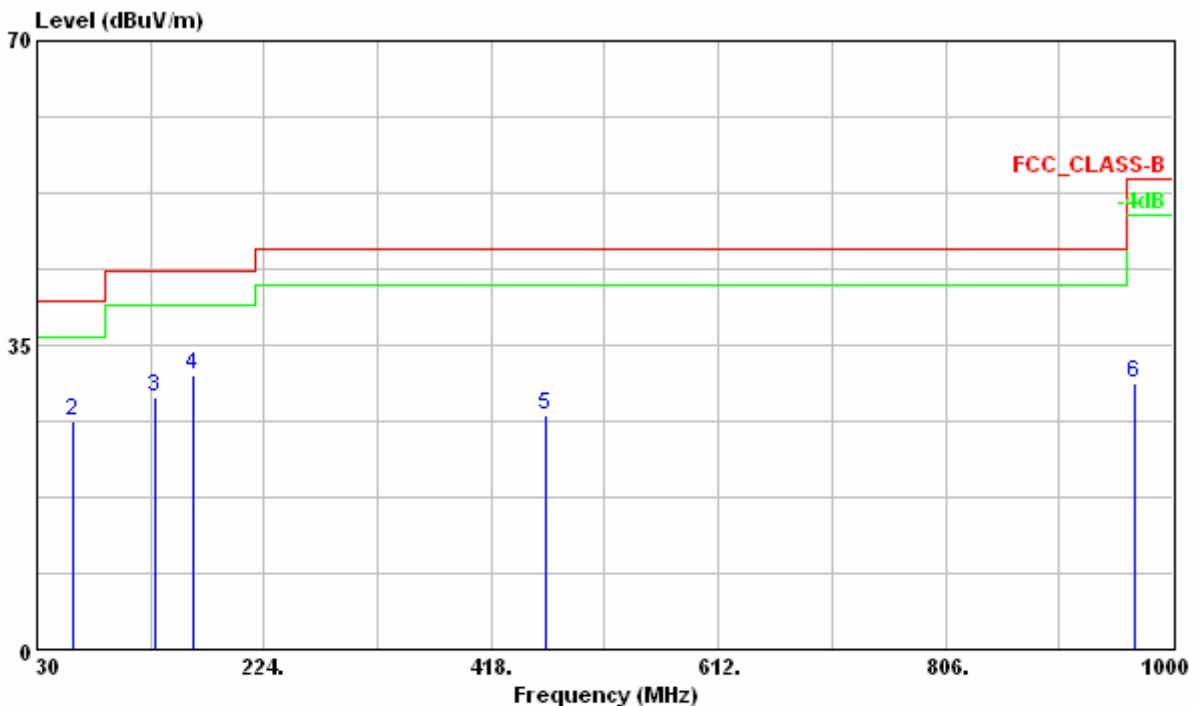
	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	30.830	39.45	48.50	-9.05	40.00	-0.55	101	184	VERTICAL	QP
2	62.278	34.76	54.45	-19.69	40.00	-5.24	124	0	VERTICAL	QP
3	111.000	39.22	58.42	-19.20	43.50	-4.28	101	0	VERTICAL	QP
4	125.850	33.90	53.60	-19.70	43.50	-9.60	100	0	VERTICAL	QP
5	538.000	27.21	33.24	-6.03	46.00	-18.79	---	---	VERTICAL	Peak
6	778.100	28.86	31.55	-2.69	46.00	-17.14	---	---	VERTICAL	Peak

Note:

1. Emission Level (dBuV/m) = Reading Value + Correction Factor.
2. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Pre-amplifier.

Operating Frequency : 250 kHz
Test Distance : 3m
Polarization : Horizontal

Test Mode : Transmitting
Tester : Jacky
Frequency Range : 30MHz~1000MHz



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Ant Pos	Table Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	30.000	28.83	37.36	-8.53	40.00	-11.17	---	---	HORIZONTAL	Peak
2	61.590	26.30	45.94	-19.64	40.00	-13.70	---	---	HORIZONTAL	Peak
3	131.250	29.04	48.66	-19.62	43.50	-14.46	---	---	HORIZONTAL	Peak
4	163.110	31.65	48.66	-17.01	43.50	-11.85	---	---	HORIZONTAL	Peak
5	464.500	26.86	34.92	-8.06	46.00	-19.14	---	---	HORIZONTAL	Peak
6	967.800	30.67	31.08	-0.41	54.00	-23.33	---	---	HORIZONTAL	Peak

Note:

1. Emission Level (dBuV/m) = Reading Value + Correction Factor.
2. Correction Factor (dB/m) = Cable Loss + Antenna Factor – Gain of Pre-amplifier.

3 Conducted Emission Measurement

Test Result: Pass

3.1 Limits for Emission Measurement

For intentional device, according to §15.207(a) line conduction emission limit is as below table.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency.

3.2 Test Instruments

Test Site and Equipment	Manufacturer	Model No./ Serial No.	Last Calibration Date	Calibration Due Date
Test Receiver	R&S	ESCI 30/ 836858/021	2008/1/11	2009/1/10
LISN	R&S	ESH2-Z5/ 836613/001	2008/1/7	2009/1/6
2 nd LISN	R&S	ENV4200/ 833209/010	2008/1/14	2009/1/13
50Ω terminator	N/A	N/A/ 001	2008/8/26	2009/8/25
RF Switch	N/A	RSU28/ 338965/002	2008/3/3	2009/3/2
RF Cable	N/A	N/A/ C0052 ~ 56	2008/3/3	2009/3/2
Test Software	Audix	e3/ Ver. 5.4.219.f	NCR	NCR
TR5 shielded room	ETS LINDGREN	TR5/ 15353-F	NCR	NCR

Note:

1. The calibrations are traceable to NML/ROC.
2. NCR : No Calibration Required.

Instrument Setting

IF BW	Measurement Time	Detector	Trace	Comment
9kHz	1 second	Quasi-Peak / Average	Maxhold	

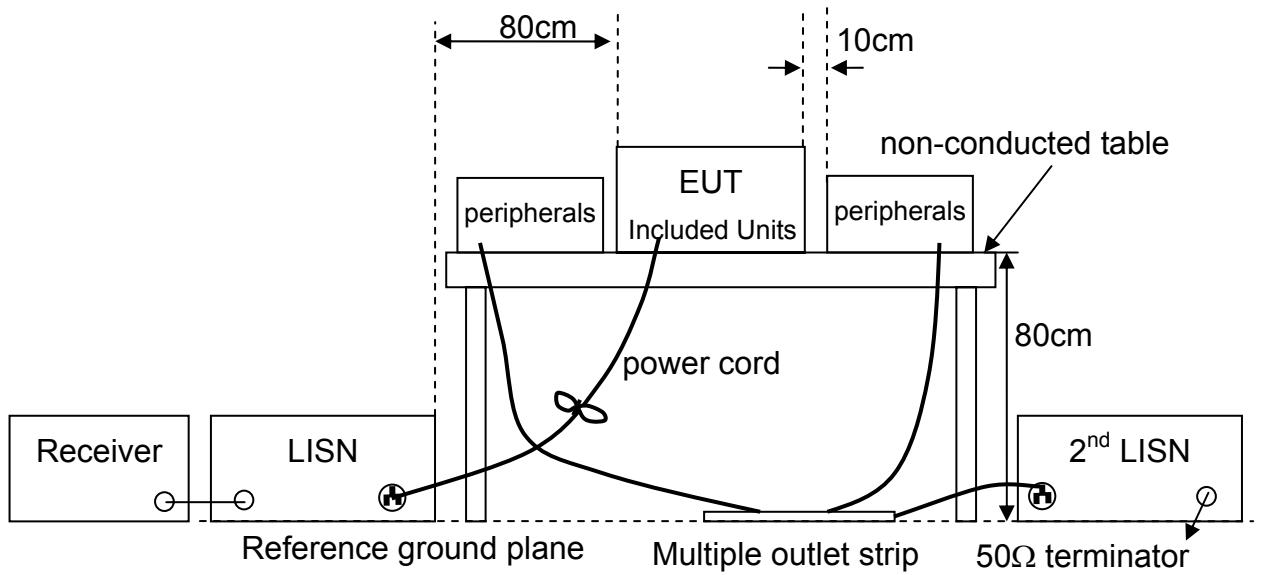
Climatic Condition

Ambient Temperature : 27°C; Relative Humidity : 65%

3.3 Test Procedures

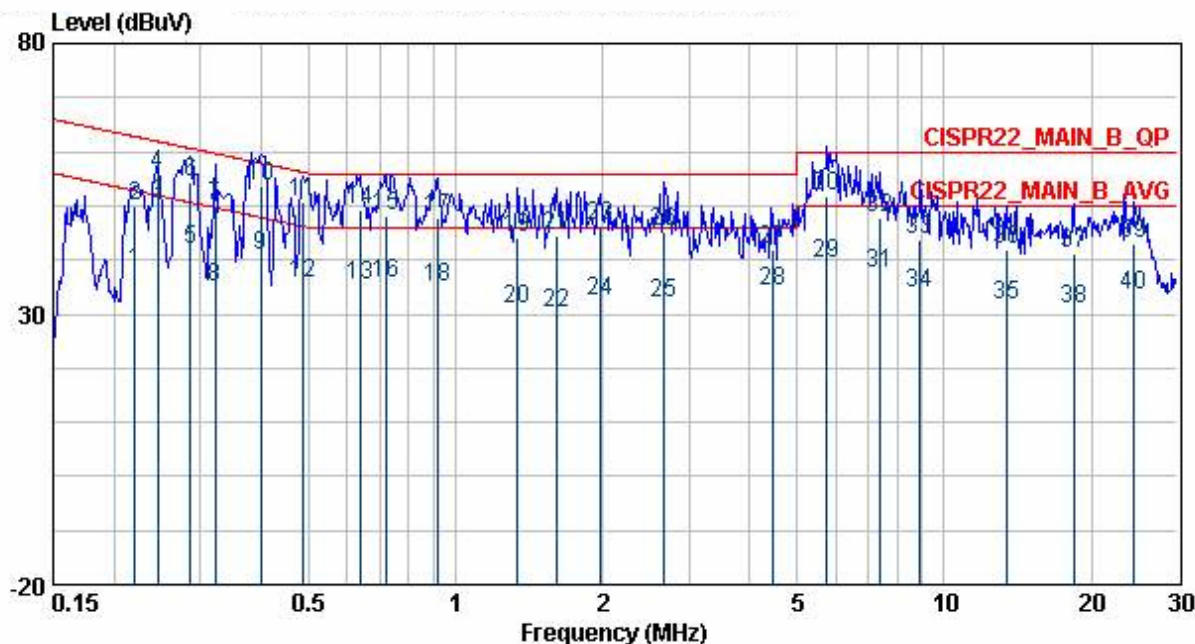
- a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.
- b. If the EUT is tabletop equipment, it was placed on a non-conducted table with a height of 0.8 meters above the reference ground plane and 0.4 meters from the conducting wall of the shielded room. Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height of 12 millimeters above the reference ground plane.
- c. Connect the EUT's power source to the appropriate power mains through the LISN.
- d. All the other peripherals are connected to the 2nd LISN, if any.
- e. The LISN was placed 0.8 meters from the EUT and at least 0.8 meters from other units and other metal planes.
- f. Measure the conducted emissions on each power line (Neutral Line and Line 1 – Hot side) of the EUT's power source by using the test receiver connected to the coupling RF output port of LISN.
- g. Rapidly scan the signal from 150kHz to 30MHz by using the receiver through the Maximum-Peak detector to determine those frequencies associated with higher emission levels for each measured line.
- h. Then measure the maximum level of conducted disturbance for each frequency found from step g. by using the receiver through the Quasi-Peak and Average detectors per CISPR 16-1.
- i. Record the level for each frequency and compare with the required limit.

3.4 Test Configurations



3.5 Test Results

Test Mode : Charge Mode
 Tester : CDC Frequency Range : 150kHz~30MHz
 Phase : Line



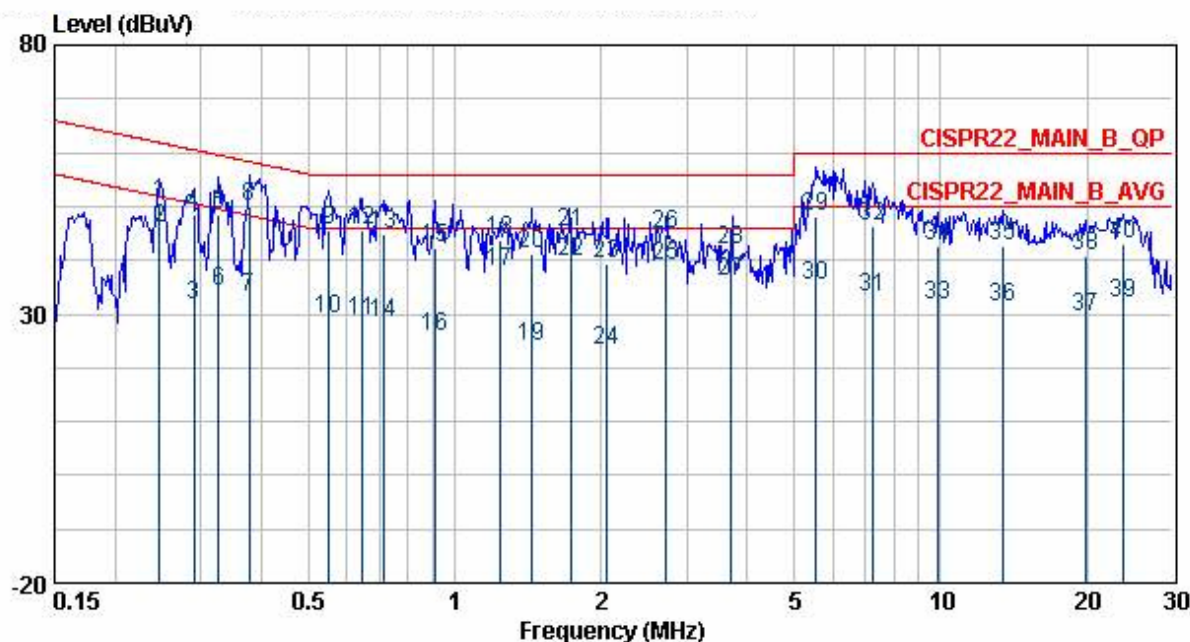
	Freq	Level	Factor	Read Level	Limit Line	Over Limit	Ant Pos	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	cm		
1	0.22	37.84	0.15	37.69	52.79	-14.95	---	LINE	AVERAGE
2	0.22	49.81	0.15	49.66	62.79	-12.98	---	LINE	QP
3 @	0.25	50.42	0.15	50.27	51.91	-1.48	---	LINE	AVERAGE
4 @	0.25	55.82	0.15	55.67	61.91	-6.08	---	LINE	QP
5 @	0.29	41.99	0.16	41.83	50.63	-8.65	---	LINE	AVERAGE
6 @	0.29	54.34	0.16	54.18	60.63	-6.30	---	LINE	QP
7 @	0.32	49.82	0.15	49.67	59.66	-9.84	---	LINE	QP
8	0.32	34.99	0.15	34.84	49.66	-14.67	---	LINE	AVERAGE
9 @	0.40	40.85	0.15	40.70	47.86	-7.01	---	LINE	AVERAGE
10 @	0.40	53.70	0.15	53.55	57.86	-4.16	---	LINE	QP
11 @	0.49	50.70	0.16	50.54	56.23	-5.53	---	LINE	QP
12 @	0.49	35.86	0.16	35.70	46.23	-10.37	---	LINE	AVERAGE
13	0.64	35.24	0.17	35.07	46.00	-10.76	---	LINE	AVERAGE
14 @	0.64	49.14	0.17	48.97	56.00	-6.86	---	LINE	QP
15 @	0.72	48.00	0.17	47.83	56.00	-8.00	---	LINE	QP
16 @	0.72	35.85	0.17	35.68	46.00	-10.15	---	LINE	AVERAGE
17 @	0.92	47.66	0.18	47.48	56.00	-8.34	---	LINE	QP
18	0.92	34.90	0.18	34.72	46.00	-11.10	---	LINE	AVERAGE
19	1.34	44.17	0.22	43.95	56.00	-11.83	---	LINE	QP
20	1.34	30.83	0.22	30.61	46.00	-15.17	---	LINE	AVERAGE
21	1.61	44.43	0.23	44.20	56.00	-11.57	---	LINE	QP
22	1.61	30.33	0.23	30.10	46.00	-15.67	---	LINE	AVERAGE

	Freq	Level	Factor	Read Level	Limit Line	Over Limit	Ant Pos	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	cm		
23 ☉	1.98	46.38	0.24	46.14	56.00	-9.62	---	LINE	QP
24	1.98	32.25	0.24	32.01	46.00	-13.75	---	LINE	AVERAGE
25	2.68	31.98	0.29	31.69	46.00	-14.02	---	LINE	AVERAGE
26	2.68	45.35	0.29	45.06	56.00	-10.65	---	LINE	QP
27	4.44	41.89	0.40	41.49	56.00	-14.11	---	LINE	QP
28	4.44	34.26	0.40	33.86	46.00	-11.74	---	LINE	AVERAGE
29 ☉	5.74	39.50	0.46	39.04	50.00	-10.50	---	LINE	AVERAGE
30 ☉	5.74	51.87	0.46	51.41	60.00	-8.13	---	LINE	QP
31	7.37	37.65	0.55	37.10	50.00	-12.35	---	LINE	AVERAGE
32	7.37	47.79	0.55	47.24	60.00	-12.21	---	LINE	QP
33	8.92	43.89	0.63	43.26	60.00	-16.11	---	LINE	QP
34	8.92	33.71	0.63	33.08	50.00	-16.29	---	LINE	AVERAGE
35	13.41	31.67	0.62	31.05	50.00	-18.33	---	LINE	AVERAGE
36	13.41	41.96	0.62	41.34	60.00	-18.04	---	LINE	QP
37	18.43	41.28	0.64	40.64	60.00	-18.72	---	LINE	QP
38	18.43	30.99	0.64	30.35	50.00	-19.01	---	LINE	AVERAGE
39	24.53	43.01	0.48	42.53	60.00	-16.99	---	LINE	QP
40	24.53	33.41	0.48	32.93	50.00	-16.59	---	LINE	AVERAGE

Note:

1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + insertion loss of LISN.
3. Q.P. is abbreviation of quasi-peak.

Test Mode : Charge Mode
 Tester : CDC Frequency Range : 150kHz~30MHz
 Phase : Neutral



	Freq	Level	Factor	Read Level	Limit Line	Over Limit	Ant Pos	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	cm		
1	0.25	50.57	0.16	50.41	61.86	-11.29	---	NEUTRAL	QP
2	0.25	45.91	0.16	45.75	51.86	-5.95	---	NEUTRAL	AVERAGE
3	0.29	31.68	0.17	31.51	50.50	-18.82	---	NEUTRAL	AVERAGE
4	0.29	48.63	0.17	48.46	60.50	-11.87	---	NEUTRAL	QP
5	0.33	48.52	0.16	48.36	59.53	-11.01	---	NEUTRAL	QP
6	0.33	34.05	0.16	33.89	49.53	-15.48	---	NEUTRAL	AVERAGE
7	0.38	33.01	0.16	32.85	48.34	-15.33	---	NEUTRAL	AVERAGE
8	0.38	49.81	0.16	49.65	58.34	-8.53	---	NEUTRAL	QP
9	0.55	45.48	0.17	45.31	56.00	-10.52	---	NEUTRAL	QP
10	0.55	29.12	0.17	28.95	46.00	-16.88	---	NEUTRAL	AVERAGE
11	0.64	28.90	0.18	28.72	46.00	-17.10	---	NEUTRAL	AVERAGE
12	0.64	45.43	0.18	45.25	56.00	-10.57	---	NEUTRAL	QP
13	0.71	44.87	0.18	44.69	56.00	-11.13	---	NEUTRAL	QP
14	0.71	28.48	0.18	28.30	46.00	-17.52	---	NEUTRAL	AVERAGE
15	0.91	42.11	0.19	41.92	56.00	-13.89	---	NEUTRAL	QP
16	0.91	25.84	0.19	25.65	46.00	-20.16	---	NEUTRAL	AVERAGE
17	1.24	37.72	0.22	37.50	46.00	-8.28	---	NEUTRAL	AVERAGE
18	1.24	43.85	0.22	43.63	56.00	-12.15	---	NEUTRAL	QP
19	1.44	23.94	0.23	23.71	46.00	-22.06	---	NEUTRAL	AVERAGE
20	1.44	41.35	0.23	41.12	56.00	-14.65	---	NEUTRAL	QP
21	1.73	45.06	0.24	44.82	56.00	-10.94	---	NEUTRAL	QP
22	1.73	39.72	0.24	39.48	46.00	-6.28	---	NEUTRAL	AVERAGE

	Freq	Level	Factor	Read Level	Limit Line	Over Limit	Ant Pos	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	cm		
23	2.05	39.17	0.26	38.91	56.00	-16.83	---	NEUTRAL	QP
24	2.05	23.39	0.26	23.13	46.00	-22.61	---	NEUTRAL	AVERAGE
25 @	2.72	39.15	0.31	38.84	46.00	-6.85	---	NEUTRAL	AVERAGE
26	2.72	44.76	0.31	44.45	56.00	-11.24	---	NEUTRAL	QP
27 @	3.71	36.20	0.38	35.82	46.00	-9.80	---	NEUTRAL	AVERAGE
28	3.71	41.92	0.38	41.54	56.00	-14.08	---	NEUTRAL	QP
29	5.53	47.97	0.49	47.48	60.00	-12.03	---	NEUTRAL	QP
30	5.53	35.25	0.49	34.76	50.00	-14.75	---	NEUTRAL	AVERAGE
31	7.25	33.22	0.60	32.62	50.00	-16.78	---	NEUTRAL	AVERAGE
32	7.25	46.16	0.60	45.56	60.00	-13.84	---	NEUTRAL	QP
33	9.91	31.50	0.76	30.74	50.00	-18.50	---	NEUTRAL	AVERAGE
34	9.91	42.72	0.76	41.96	60.00	-17.28	---	NEUTRAL	QP
35	13.48	42.51	0.95	41.56	60.00	-17.49	---	NEUTRAL	QP
36	13.48	31.24	0.95	30.29	50.00	-18.76	---	NEUTRAL	AVERAGE
37	19.84	29.60	1.32	28.28	50.00	-20.40	---	NEUTRAL	AVERAGE
38	19.84	40.75	1.32	39.43	60.00	-19.25	---	NEUTRAL	QP
39	23.76	32.03	1.30	30.73	50.00	-17.97	---	NEUTRAL	AVERAGE
40	23.76	42.98	1.30	41.68	60.00	-17.02	---	NEUTRAL	QP

Note:

1. Emission Level = reading value + correction factor.
2. Correction factor = cable loss + insertion loss of LISN.
3. Q.P. is abbreviation of quasi-peak.