

**JAPAN QUALITY ASSURANCE ORGANIZATION**

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JQA File No. : 441-50477
Issue Date : August 12, 2005
Page 1 of 18

EMI TEST REPORT

JQA File No. : **441-50477**

Model No. : UCA-301

Type of Equipment : USB ADAPTER

Regulations Applied : CFR 47 FCC Rules and Regulations Part 15 Subpart B

FCC ID : TI4-UCA-301

Applicant : PHOENIX ENGINEERING CORP..

Address : 466-3, Fujikubo, Miyoshi-machi, Iruma-gun, Saitama
354-0041 Japan

Manufacturer : Dong Guan My Phone Electronics Co.,Ltd.

Address : 6th Ind. Development Zone Li-Wu, Wu-Sha, Chang-An
DongGuan City, Guan Dong, China

Received date of EUT : July 27, 2005

Final Judgment : Passed

TEST RESULTS IN THIS REPORT are obtained in use of equipment that is traceable to National Institute of Advanced Industrial Science and Technology (AIST) of Japan and National Institute of Information and Communications Technology (NICT) of Japan.

The test results only responds to the tested sample.

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This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

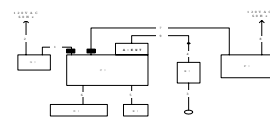
**NVLAP LAB CODE: 200192-0**

TABLE OF CONTENTS

	Page
1 Documentation	
1.1 Test Regulation	<u>3</u>
1.2 General Information	<u>3</u>
1.3 Test Condition	<u>4 - 5</u>
1.4 EUT Modifications	<u>6</u>
1.5 Test results / Uncertainty	<u>7</u>
1.6 Summary	<u>8</u>
1.7 Test Configuration / Operation of EUT	<u>9</u>
1.8 EUT Arrangement (Drawings)	<u>10</u>
1.9 Preliminary Test and Test-setup (Drawings)	<u>11 - 12</u>
1.10 EUT Arrangement (Photographs)	<u>13 - 14</u>
2 Test Data	
2.1 AC Power Line Conducted Emission 0.15 MHz - 30 MHz	<u>15 - 16</u>
2.2 Radiated Emission (Electric Field) 30 MHz - 1000 MHz	<u>17 - 18</u>
2.3 Radiated Emission (Electric Field) Above 1 GHz	<u>N/A</u>

1. DOCUMENTATION

1.1 TEST REGULATION

International Electrotechnical Commission ("IEC"), International Special Committee on Radio Interference(CISPR) Pub. 22 (1997), "Information Technology Equipment - Radio Disturbance Characteristics -Limits and Methods of Measurement."

Test procedure :

AC powerline conducted emissions and radiated emissions tests were performed according to the procedures in CISPR Pub. 22 (1997).

1.2 GENERAL INFORMATION

1.2.1 Test facility :

1) Test Facility located at JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch:

Open Site No.1, No.2, An Anechoic Chamber (3 m and 10 m, on common plane)and a Shielded Room

FCC Registration Number: 342182 (Date of Listing : March 30, 2005)

2) JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance established in title 15, Part 285 Code of Federal Regulations.

NVLAP Lab Code : 200192-0 (Effective through : June 30, 2006)

1.2.2 Description of the Equipment Under Test (EUT) :

- | | |
|--|---------------------------|
| 1) Type of Equipment | : USB ADAPTER |
| 2) Product Type | : Prototype |
| 3) Category | : Class B |
| 4) EUT Authorization | : Certification |
| 5) FCC ID | : TI4-UCA-301 |
| 6) Trade Name | : PAN COMMUNICATIONS. INC |
| 7) Model No. | : UCA-301 |
| 8) Serial No. | : - |
| 9) Fundamental Frequency Generated/Operated In the EUT | : 12 MHz |
| 10) Highest Frequency Used in the EUT | : 12 MHz |
| 11) Date of Manufacture | : - |
| 12) Power Rating | : * 5.0 VDC |
| 13) EUT Grounding | : None |

* The EUT was rated power from Notebook computer. (Model :nx9000)

1.2.3 Definitions for symbols used in this test report :

- X - indicates that the listed condition, standard or equipment is applicable for this report.
- indicates that the listed condition, standard or equipment is not applicable for this report.

1.3 TEST CONDITION

1.3.1 The measurement of the AC Power Line Conducted Emission

X - was performed in the following test site.
 ___ - was not applicable.

Test location :

JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch
 2096 Ohata, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

X - Shielded Room A
 ___ - Shielded Room B
 ___ - Anechoic Chamber
 ___ - Open Site No.1
 ___ - Open Site No.2

Used test instruments :

	<u>Type</u>	<u>Model No.</u>	<u>Manufacturer</u>	<u>Serial No.</u>	<u>Last Cal.</u>	<u>Interval</u>
___	Test Receiver (R-3)	ESI7	Rohde & Schwarz	100059	2004/11	1 Year
<u>X</u>	Test Receiver (R-4)	ESHS30	Rohde & Schwarz	842053/001	2005/2	1 Year
___	Test Receiver (R-5)	ESCS30	Rohde & Schwarz	100203	2005/2	1 Year
<u>X</u>	AMN (L-1) for AE	KNW-407	Kyoritsu Electrical	8-833-5	2004/10	1 Year
<u>X</u>	AMN (L-2) for EUT	KNW-407	Kyoritsu Electrical	8-680-14	2004/10	1 Year
___	AMN (L-3)	KNW-407	Kyoritsu Electrical	8-757-1	2005/6	1 Year
___	AMN (L-4)	KNW-242	Kyoritsu Electrical	8-755-1	2005/6	1 Year
___	AMN (L-5)	KNW-242C	Kyoritsu Electrical	8-837-14	2005/6	1 Year
___	AMN (L-6)	KNW-243C	Kyoritsu Electrical	8-692-5	2004/9	1 Year
___	AMN (L-7)	KNW-243C	Kyoritsu Electrical	8-831-3	2005/6	1 Year
___	AMN (L-8)	KNW-243C	Kyoritsu Electrical	8-831-4	2005/6	1 Year
___	AMN (L-9)	KNW-243C	Kyoritsu Electrical	8-831-2	2004/9	1 Year
___	ISN (L-10)	ENY41	Rohde & Schwarz	0830663/046	2005/2	1 Year
___	ISN (L-11)	ENY22	Rohde & Schwarz	0830661/029	2005/2	1 Year
___	RF Cable (CB-3)	3D-2W	Fujikura	-	2005/5	1 Year
<u>X</u>	RF Cable (CB-4)	3D-2W	Fujikura	-	2005/5	1 Year
___	RF Cable (CB-5)	3D-2W	Fujikura	-	2005/5	1 Year
___	Pulse Limiter (PL-3)	ESH3-Z2	Rohde & Schwarz	-	2004/11	1 Year
<u>X</u>	Pulse Limiter (PL-4)	ESH3-Z2	Rohde & Schwarz	-	2005/2	1 Year
___	Pulse Limiter (PL-5)	ESH3-Z2	Rohde & Schwarz	-	2005/2	1 Year
<u>X</u>	50ohm Termination (TM-1)	BNC-P-1.5	TDC	-	2005/3	1 Year
___	50ohm Termination (TM-2)	-	Y&R	-	2005/3	1 Year

1.3.2 The measurement of the Radiated Emission(30 MHz - 1000 MHz)

X - was performed in the following test site.

___ - was not applicable.

Test location :

JQA Safety & EMC Center EMC Engineering Department TSURU EMC Branch
2096 Ohata, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

X - Anechoic Chamber

___ - 3 meters

___ - Open Site No.1

X - 10 meters

___ - Open Site No.2

___ - 30 meters

Validation of Site Attenuation :

1) Last Confirmed Date : 2005/5

2) Interval : 1 year

Used test instruments :

	<u>Type</u>	<u>Model No.</u>	<u>Manufacturer</u>	<u>Serial No.</u>	<u>Last Cal.</u>	<u>Interval</u>
___	Test Receiver(R-1)	ESVS10	Rohde & Schwarz	84231/004	2005/3	1 Year
___	Test Receiver(R-2)	ESVS10	Rohde & Schwarz	843744/018	2005/7	1 Year
<u>X</u>	Test Receiver(R-3)	ESI7	Rohde & Schwarz	100059	2004/11	1 Year
___	Test Receiver(R-5)	ESCS30	Rohde & Schwarz	100203	2005/2	1 Year
___	Biconical Antenna(AB-1)	BBA9106	Schwarzbeck	VHA91031741	2005/5	1 Year
___	Biconical Antenna(AB-2)	BBA9106	Schwarzbeck	VHA91032349	2005/5	1 Year
<u>X</u>	Biconical Antenna(AB-3)	BBA9106	Schwarzbeck	VHA11905516	2005/5	1 Year
___	Log-Periodic Antenna(AL-1)	UHALP9108A	Schwarzbeck	0678	2005/5	1 Year
___	Log-Periodic Antenna(AL-2)	UHALP9108A	Schwarzbeck	0679	2005/5	1 Year
<u>X</u>	Log-Periodic Antenna(AL-3)	UHALP9108	Schwarzbeck	0278	2005/5	1 Year
___	Log-Periodic Antenna(AL-4)	USLP9143	Schwarzbeck	140	2005/6	1 Year
___	Dipole Antenna(AD-1)	KBA-511A	Kyoritsu Electrical	0-195-5	2004/9	1 Year
___	Dipole Antenna(AD-2)	KBA-511A	Kyoritsu Electrical	0-228-13	2004/9	1 Year
___	Dipole Antenna(AD-3)	KBA-611	Kyoritsu Electrical	0-196-8	2004/9	1 Year
___	Dipole Antenna(AD-4)	KBA-611	Kyoritsu Electrical	0-230-6	2004/9	1 Year
___	RF Cable(CN-1)	20D/5D-2W	Fujikura	-	2005/5	1 Year
___	RF Cable(CN-2)	20D/5D-2W	Fujikura	-	2005/5	1 Year
<u>X</u>	RF Cable(CN-3)	20D/5D-2W	Fujikura	-	2005/5	1 Year



JQA File No.

:441-50477

FCC ID

:TI4-UCA-301

Model No.

:UCA-301

Issue Date

:August 12, 2005

Standard

:CFR 47 FCC Rules Part 15

Page 6 of 18

1.4 EUT MODIFICATION / Deviation from Standard

1.4.1 EUT MODIFICATION

- X - No modifications were conducted by JQA to achieve compliance to the limitations.
___ - To achieve compliance to the limitations, the following changes were made by JQA during the compliance test.

The modifications will be implemented in all production models of this equipment.

Applicant : _____ Date : _____

Typed Name : _____ Position : _____

1.4.2 Deviation from Standard:

- X - No deviations from the standard described in clause 1.1.
___ - The following deviations were employed from the standard described in clause 1.1:

1.5 TEST RESULTS / UNCERTAINTY

AC Powerline Conducted Emissions:

X - Applicable

___ - NOT Applicable

___ - NOT Tested

The requirements are

X - PASSED

___ - NOT PASSED

Min. Limit Margin(Q.P.)

16.3 dB at 13.84 MHz

Min. Limit Margin(AVE.)

dB at MHz

Max. Limit Exceeding

dB at MHz

Uncertainty of Measurement Results

± 2.4 dB (2σ)

Remarks :

Radiated Emission:

X - Applicable

___ - NOT Applicable

___ - NOT Tested

The requirements are

X - PASSED

___ - NOT PASSED

Min. Limit Margin

2.9 dB at 137.2 MHz

Max. Limit Exceeding

dB at MHz

Uncertainty of Measurement Results

X - Anechoic Chamber

___ - 3 meters

30-300 MHz

± 3.8 dB (2σ)

300 - 9000 MHz

± 4.7 dB (2σ)

X - 10 meters

30-300 MHz

± 3.7 dB (2σ)

300 - 1000 MHz

± 3.6 dB (2σ)

___ - Open Site

___ - 3 meters

30-300 MHz

± 4.0 dB (2σ)

300 - 6000 MHz

± 4.8 dB (2σ)

___ - 10 meters

30-300 MHz

± 4.0 dB (2σ)

300 - 1000 MHz

± 3.7 dB (2σ)

Remarks : The measurement results is below the specification limit by a margin less than the measurement uncertainty; it is therefore not possible to state compliance based on the 95 % level of confidence. However, the result indicates that compliance is more probable than non-compliance with the specification limit.

1.6 SUMMARY**General Remarks :**

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and B (CISPR Pub. 22, 1997) under the test configuration, as shown in clause 1.7 to 1.10.

The conclusion for the test items of which are required by the applied regulation is indicated under the final judgment.

Final Judgment :

The "as received" sample;

- X - fulfill the test requirements of the regulation mentioned on clause 1.1.
- fulfill the test requirements of the regulation mentioned on clause 1.1, but with certain qualifications.
- doesn't fulfill the test regulation mentioned on clause 1.1.

Begin of testing : July 27, 2005

End of testing : August 2, 2005

Tested by:



Kazuyuki Makimoto
Engineer
TSURU EMC Branch
JQA EMC Engineering Dept.

- JAPAN QUALITY ASSURANCE ORGANIZATION -

Approved by:



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1.7 TEST CONFIGURATION / OPERATION OF EUT

1.7.1 Test Configuration

The equipment under test (EUT) consists of :

Symbol	Item	Manufacturer	Model No.	Serial No.	FCC ID
A	USB ADAPTER	Dong Guan My Phone Electronics Co.,Ltd.	UCA-301	-	TI4-UCA-301
B	Ubiquiti Chat	SHENZHEN DAXIAN DIGITAL TELECOMMUNICATION LTD.	UC-30	-	N/A (DoC)

The measurement was carried out with the following support equipment connected :

Symbol	Item	Manufacturer	Model No.	Serial No.	FCC ID
C	Notebook Computer	HP Compaq	nx9000	CNF3500TZN	N/A (DoC)
D	Keyboard	HP Compaq	KB-0316	B77760AGAQQ15Q	N/A (DoC)
E	Mouse	ELECOM	M-N2URGY	-	N/A (DoC)
F	LCD Monitor	DELL	E15FPb	CN-04W569-46633-36C-18VT	N/A (DoC)
G	AC Adapter	HP Compaq	Series PPP014S	565C50AU4PL2Zk	N/A (DoC)

Type of Cable :

No.	Description	Identification (Manu.e.t.c)	Shielded YES / NO	Ferrite Core YES / NO	Connector Type Shielded YES / NO	Length (m)
1	DC cable	-	NO	YES	NO	1.8
2	AC cable	-	NO	NO	NO	1.7
3	Ear Phone cable	-	NO	NO	NO	1.0
4	Audio cable	-	YES	NO	YES	0.55
6	Keyboard cable	-	YES	NO	YES	1.8
5	Mouse cable	-	YES	NO	YES	1.8
7	RGB cable	-	YES	YES	YES	1.7
8	AC cable	-	NO	NO	NO	1.8
9	Extended Audio cable	-	YES	NO	YES	2.0

1.7.2 Operating condition

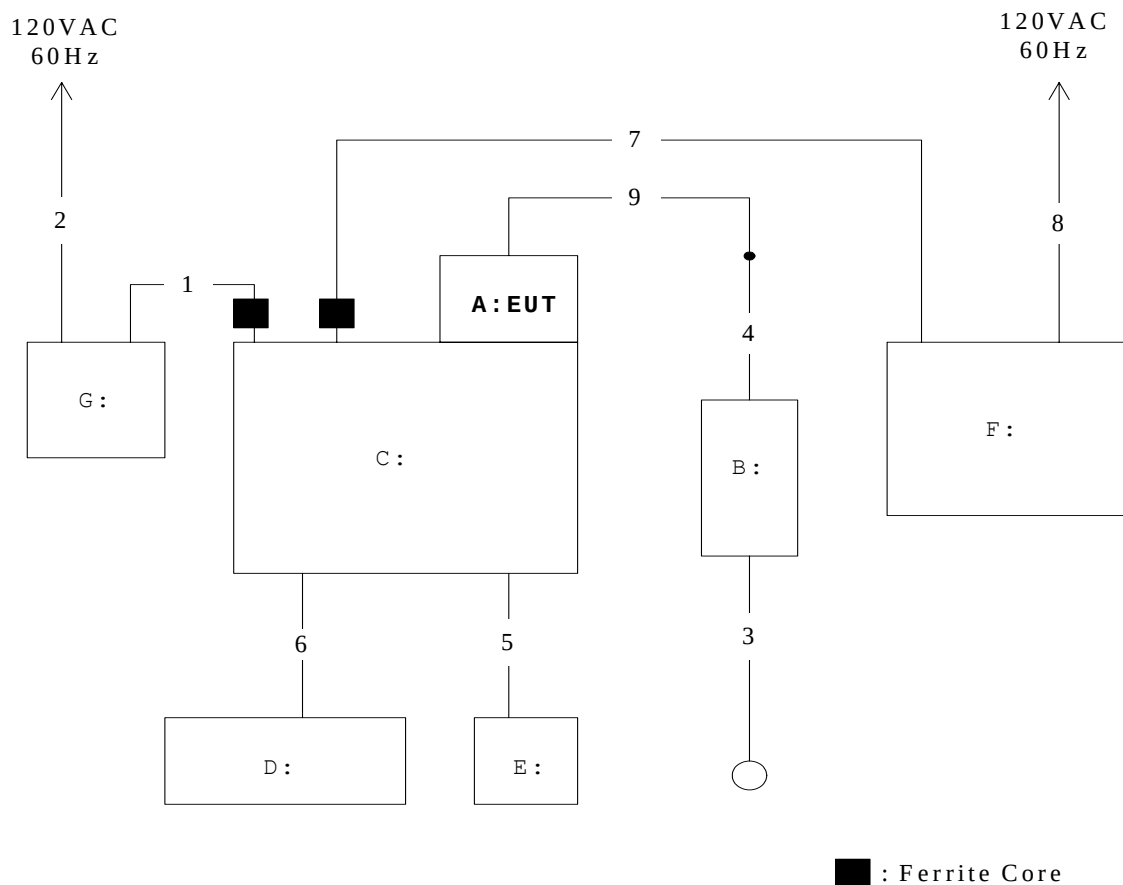
Power Supply Voltage : 5.0 VDC

(The EUT was rated power from Notebook computer.)

Operation Mode : Communicating with Notebook Computer

(1kHz signal wave inputting from Notebook Computer)

1.8 EUT ARRANGEMENT (DRAWINGS)



1.9 PRELIMINARY TEST AND TEST-SETUP (DRAWINGS)

1.9.1 AC Power Line Conducted Emission (150 kHz - 30 MHz) :

According to description of ANSI C63.4-2003 sec.7.2.3, the exploratory AC powerline conducted emissions measurements were carried out.

The exploratory conducted measurements were performed using the spectrum analyzer to observe the emissions characteristics of the EUT.

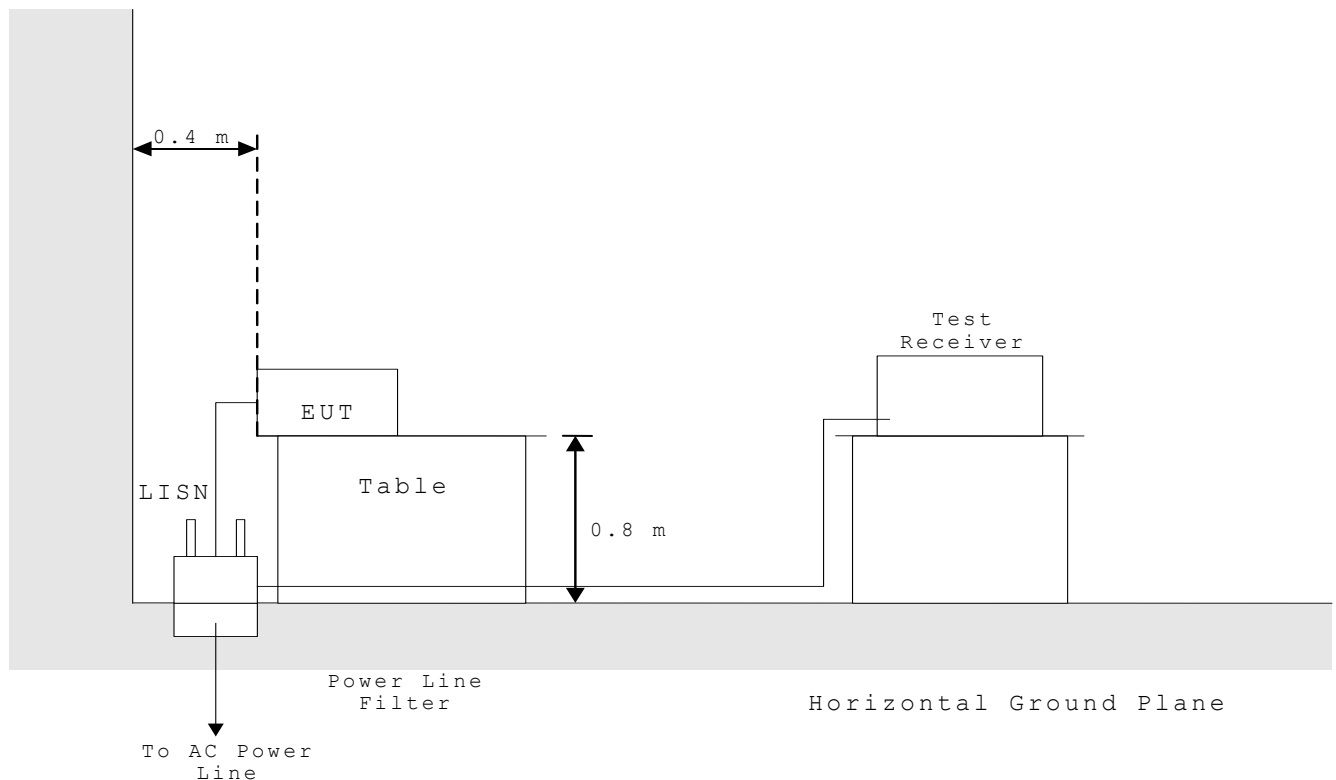
The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.

This configuration were used for final AC powerline conducted emissions measurements.

Shielded Enclosure

- Side View -

Vertical
Ground
Plane



1.9.2 Radiated Emission (30 MHz - 1000 MHz) :

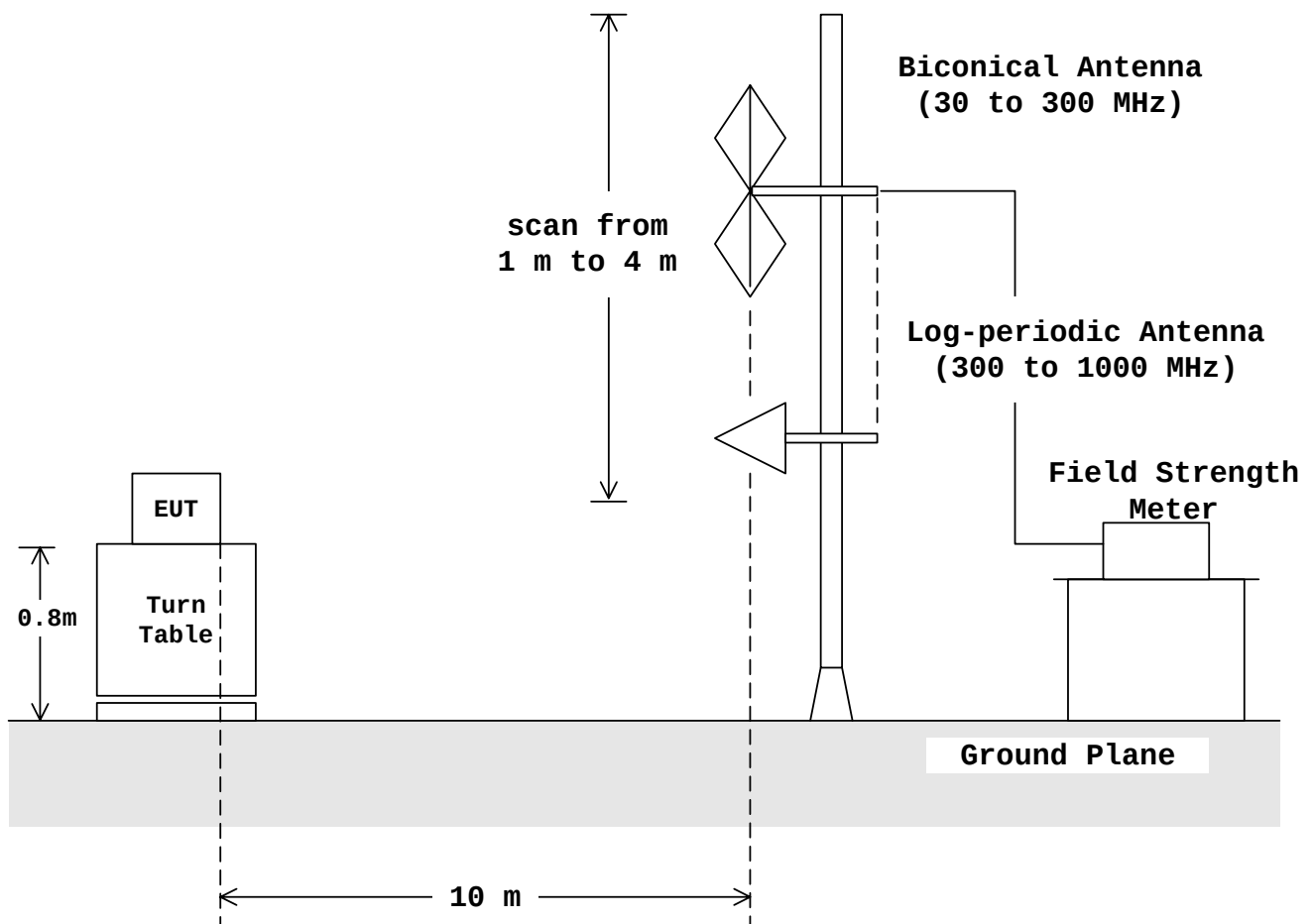
According to description of ANSI C63.4-2003 sec.8.3.1.1, the exploratory radiated emissions measurements were carried out. The exploratory radiated measurements were performed at the measurement distance that specified for compliance to determine the emissions characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.

This configuration was used for the final radiated emissions measurements.

Anechoic Chamber

- Side View -



1.10 TEST ARRANGEMENT (PHOTOGRAPHS)

PHOTOGRAPHS OF EUT CONFIGURATION FOR CONDUCTED EMISSION MEASUREMENT

Photograph present configuration with maximum emission

- Front View -



- Side View -



PHOTOGRAPHS OF EUT CONFIGURATION FOR RADIATED EMISSION MEASUREMENT

Photograph present configuration with maximum emission

- Front View -



- Rear View -



2. TEST DATA

2.1. AC Powerline Conducted Emission Measurements (0.15 MHz - 30 MHz)

Date : August 2, 2005

Temp. : 23°C Humi.: 52% Atom.:953hPa

Frequency (MHz)	AMN	Meter Reading (dBμV)				Limits		Emission Level		Margin		Comment
	Factor	V-A		V-B		(dBμV)		(dBμV)		(dB)		
	(dB)	Q.P	AVE	Q.P	AVE	Q.P	AVE	Q.P	AVE	Q.P	AVE	
0.15	0.1	46.1	-	46.9	-	66.0	56.0	47.0	-	19.0	-	
0.20	0.1	43.7	-	43.3	-	63.6	53.6	43.8	-	19.8	-	
0.33	0.1	34.0	-	34.0	-	59.5	49.5	34.1	-	25.4	-	
0.40	0.1	35.0	-	38.8	-	57.9	47.9	38.9	-	19.0	-	
0.60	0.1	29.3	-	37.7	-	56.0	46.0	37.8	-	18.2	-	
0.73	0.1	31.4	-	38.2	-	56.0	46.0	38.3	-	17.7	-	
1.12	0.1	31.7	-	38.6	-	56.0	46.0	38.7	-	17.3	-	
2.38	0.1	34.2	-	37.1	-	56.0	46.0	37.2	-	18.8	-	
4.04	0.1	32.9	-	35.0	-	56.0	46.0	35.1	-	20.9	-	
6.29	0.1	31.5	-	31.9	-	60.0	50.0	32.0	-	28.0	-	
13.84	0.3	42.6	-	43.4	-	60.0	50.0	43.7	-	16.3	-	
16.75	0.3	36.6	-	38.5	-	60.0	50.0	38.8	-	21.2	-	
26.21	0.5	25.0	-	28.6	-	60.0	50.0	29.1	-	30.9	-	

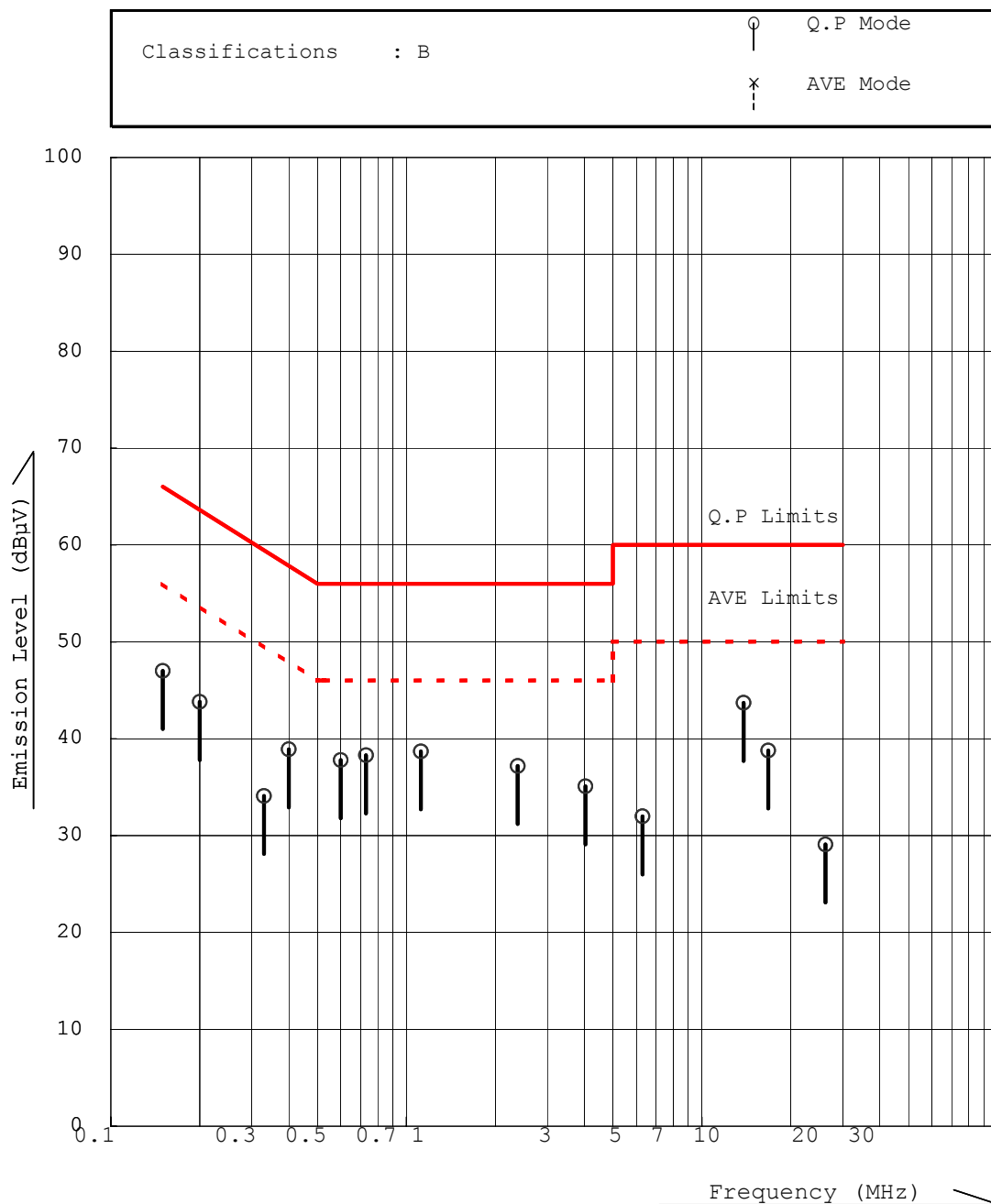
- Notes:
- 1) Test Location : Shielded Room
 - 2) The spectrum was checked from 0.15 MHz to 30 MHz
 - 3) AMN(Artificial Mains Network) factor includes the cable loss for 5 meter.
 - 4) The symbol of "<" means "or less".
 - 5) The symbol of ">" means "more than".
 - 6) The symbol of "-" means "Not applicable".
 - 7) V-A : One end & Ground V-B : The other end & Ground
 - 8) Q.P : Quasi-Peak Detector AVE : Average Detector
 - 9) A sample calculation was made at 0.15 MHz

$$\text{Amn} + \text{Mr} = 0.1 + 46.9 = 47.0 \text{ dB}\mu\text{V}$$

Amn : AMN Factor Mr : Meter Reading
 - 10) Setting of measuring instrument :

Detector Function : CISPR Quasi-Peak / Average
IF Bandwidth : 9 kHz / 10 kHz (0.15 MHz - 30 MHz)

AC Powerline Conducted Emissions Measurements (0.15 MHz - 30 MHz)



2.2. Radiated Emissions Measurements (30 MHz - 1000 MHz)

Date : July 27, 2005
Temp. : 25°C Humi.: 54% Atmo.: 949hPa

Frequency (MHz)	Antenna Factor (dB/m)	Meter Reading (dBμV)		Limits (dBμV/m)	Emission Level (dBμV/m)		Margin (dB)		Comment
		Horiz.	Ver.		Horiz.	Ver.	Horiz.	Ver.	
30.3	18.0	< -2.0	2.3	30.0	< 16.0	20.3	> 14.0		9.7
36.4	16.8	< -2.0	3.2	30.0	< 14.8	20.0	> 15.2		10.0
43.2	14.6	< -2.0	5.9	30.0	< 12.6	20.5	> 17.4		9.5
56.8	10.0	< -2.0	9.4	30.0	< 8.0	19.4	> 22.0		10.6
66.7	7.8	8.7	7.6	30.0	16.5	15.4	13.5		14.6
78.8	7.3	14.4	7.8	30.0	21.7	15.1	8.3		14.9
90.8	9.0	10.4	12.0	30.0	19.4	21.0	10.6		9.0
137.2	15.7	3.7	11.4	30.0	19.4	27.1	10.6		2.9
184.3	18.0	7.0	7.2	30.0	25.0	25.2	5.0		4.8
200.0	18.4	3.3	7.0	30.0	21.7	25.4	8.3		4.6
260.6	20.0	4.4	8.8	37.0	24.4	28.8	12.6		8.2
299.6	21.6	8.4	9.0	37.0	30.0	30.6	7.0		6.4
325.7	16.7	4.0	8.4	37.0	20.7	25.1	16.3		11.9
431.8	19.6	9.9	3.2	37.0	29.5	22.8	7.5		14.2
498.6	20.9	8.7	4.2	37.0	29.6	25.1	7.4		11.9
570.6	22.2	9.0	4.6	37.0	31.2	26.8	5.8		10.2
711.9	24.3	8.1	4.8	37.0	32.4	29.1	4.6		7.9
783.9	25.4	7.2	3.7	37.0	32.6	29.1	4.4		7.9
1000.0	28.5	< -2.0	< -2.0	37.0	< 26.5	< 26.5	> 10.5	> 10.5	

- Notes: 1) Test Location : Anechoic Chamber
2) Test Distance : 10 m
3) The spectrum was checked from 30 MHz to 1000 MHz.
4) Antenna factor includes cable for 23 meter
5) The symbol of "<" means "or less".
6) The symbol of ">" means "more than".
7) A sample calculation was made at 30.3 MHz
 $Af + Mr = 18.0 + 2.3 = 20.3 \text{ dB}\mu\text{V/m}$
Af : Antenna Factor Mr : Meter Reading
8) Setting of measuring instrument :
Detector Function : CISPR Quasi-Peak
IF Bandwidth : 120 kHz

Radiated Emissions Measurements (30 MHz - 1000 MHz)

Measuring Distance : 10 m	○ Horizontal
Classifications : B	x Vertical

