



**JAPAN QUALITY ASSURANCE ORGANIZATION**

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JQA APPLICATION NO.: 441-20841

Issue Date : January 24, 2003

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**EMI TEST REPORT**

JQA APPLICATION NO. : 441-20841

Model No. : IMB122-01

Type of Equipment : Immobilizer ECU

Regulations Applied : CFR 47 FCC Rules and Regulations Part 15

FCC ID : BGBX1T143IMB12201

Applicant : Mitsubishi Electric Corp. Himeji Works

Address : 840 Chiyoda-machi Himeji,  
Hyogo 670-8677, Japan

Manufacture : Mitsubishi Electric Corp. Himeji Works

Address : 840 Chiyoda-machi Himeji,  
Hyogo 670-8677, Japan

Received date of EUT : December 15, 2002

**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 Communication Research Laboratory (CRL) of Japan.

**The test results** only responds to the tested sample.

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## 1 DOCUMENTATION

### 1.1 TEST REGULATION

FCC Rules and Regulations Part 15 Subpart A and C (June 23, 1989) Intentional Radiators

#### Test procedure :

AC power line conducted emission, radiated emission, frequency stability and occupied bandwidth tests were performed according to the procedures in ANSI C63.4-1992.

### 1.2 GENERAL INFORMATION

#### 1.2.1 Test facility :

- 1) Test Facility located at JQA SAFETY & EMC CENTER EMC ENGINEERING DEPT.  
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: 90728 (Date of Listing : April 2, 2002)**
- 2) JQA SAFETY & EMC CENTER EMC ENGINEERING DEPT. 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, 2003)**

#### 1.2.2 Description of the Equipment Under Test (EUT) :

- |                                      |  |
|--------------------------------------|--|
| 1) Type of Equipment                 | : Immobilizer ECU                            |
| 2) Product Type                      | : Prototype                                  |
| 3) Category                          | : Low Power Communication Device Transmitter |
| 4) EUT Authorization                 | : Certification                              |
| 5) FCC ID                            | : BGBX1T143IMB12201                          |
| 6) Trade Name                        | : -  |
| 7) Model No.                         | : IMB122-01                                  |
| 8) Operating Frequency Range         | : 125 kHz                                    |
| 9) Highest Frequency Used in the EUT | : 125 kHz                                    |
| 10) Serial No.                       | : 1  |
| 11) Date of Manufacture              | : -  |
| 12) Power Rating                     | : 12.0 VDC                                   |
| 13) EUT Grounding                    | : None                                       |

#### 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

- ☐ - was performed in the following test site.  
☒ - was not applicable.

#### Test location :

Safety Testing Center EMC Engineering Dept. Tsuru EMC Branch  
 2096 Ohhata, Tanbozawa, Tsuru-shi Yamanashi-ken 402-0045, JAPAN

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

#### Used test instruments :

Type	Model No.	Manufacturer	Serial No.	Last Cal.	Interval
<input type="checkbox"/> - Test Receiver	ESI7	Rohde & Schwarz	100059	Oct. 2002	1 Year
<input type="checkbox"/> - Test Receiver	ESH-3	Rohde & Schwarz	881460/016	May. 2002	1 Year
<input type="checkbox"/> - LISN(for Peripheral)	KNW-407	Kyoritsu Electrical	8-833-5	May. 2002	1 Year
<input type="checkbox"/> - LISN(for EUT)	KNW-407	Kyoritsu Electrical	8-680-14	May. 2002	1 Year
<input type="checkbox"/> - LISN	KNW-243C	Kyoritsu Electrical	8-831-1	May. 2002	1 Year
<input type="checkbox"/> - LISN	KNW-243C	Kyoritsu Electrical	8-831-2	May. 2002	1 Year
<input type="checkbox"/> - LISN	KNW-243C	Kyoritsu Electrical	8-831-3	May. 2002	1 Year
<input type="checkbox"/> - LISN	KNW-243C	Kyoritsu Electrical	8-831-4	May. 2002	1 Year
<input type="checkbox"/> - LISN	ESH-2-Z5	Rohde & Schwarz	879341/007	May. 2002	1 Year
<input type="checkbox"/> - RF Cable	3D-2W	Fujikura	No.1	May. 2002	1 Year
<input type="checkbox"/> - RF Cable	3D-2W	Fujikura	No.2	May. 2002	1 Year
<input type="checkbox"/> - RF Cable	3D-2W	Fujikura	No.3	May. 2002	1 Year
<input type="checkbox"/> - 50ohm Termination	-	TDC	15406501E1	Feb. 2002	1 Year
<input type="checkbox"/> - 50ohm Termination	-	-	15406502E1	Feb. 2002	1 Year

**1.3.2 The measurement of the Radiated Emission(9 kHz - 30 MHz)**

  X   - was performed in the following test site.

       - was not applicable.

**Test location :**

Safety Testing Center EMC Engineering Dept. Tsuru EMC Branch  
2096 Ohhata, Tsuru-shi, Yamanashi-ken 402-0045, JAPAN

       - Open Site No. 1 (3, 10 or 30 meters)

       - Open Site No. 2 (3, 10 or 30 meters)

  X   - Anechoic Chamber(3 or 10 meters)

**Validation of Site Attenuation :**

1) Last Confirmed Date : N/A

2) Interval : N/A

**Used test instruments :**

Type	Model No.	Manufacturer	Serial No.	Last Cal.	Interval
<u>  X  </u> - Test Receiver	ESI7	Rohde & Schwarz	100059	Oct. 2002	1 Year
<u>      </u> - Test Receiver	ESH-3	Rohde & Schwarz	881460/016	May. 2002	1 Year
<u>  X  </u> - Loop Antenna	HFH2-Z2	Rohde & Schwarz	872994/043	May. 2002	1 Year
<u>      </u> - Loop Antenna	6502	EMCO	8905-2347	May. 2002	1 Year
<u>  X  </u> - RF Cable	5D-2W	Fujikura	155-21-002E0	May. 2002	1 Year

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

X - was performed in the following test site.

     - was not applicable.

#### Test location :

Safety Testing Center EMC Engineering Dept. Tsuru EMC Branch  
2096 Ohhata, Tsuru-shi, Yamanashi-ken 402-0045, JAPAN

     - Open Site No. 1 (3, 10 or 30 meters)

     - Open Site No. 2 (3, 10 or 30 meters)

X - Anechoic Chamber(3 or 10 meters)

#### Validation of Site Attenuation :

1) Last Confirmed Date :May, 2002

2) Interval :1 year

#### Used test instruments :

Type	Model No.	Manufacturer	Serial No.	Last Cal.	Interval
<u>X</u> - Test Receiver	ESI7	Rohde & Schwarz	100059	Oct. 2002	1 Year
<u>    </u> - Test Receiver	ESVS10	Rohde & Schwarz	843744/018	May. 2002	1 Year
<u>    </u> - Test Receiver	ESVS10	Rohde & Schwarz	84231/004	May. 2002	1 Year
<u>    </u> - Biconical Antenna	BBA9106	Schwarzbeck	11905065-2	May. 2002	1 Year
<u>    </u> - Biconical Antenna	BBA9106	Schwarzbeck	11905065-3	May. 2002	1 Year
<u>X</u> - Biconical Antenna	BBA9106	Schwarzbeck	G4397001	May. 2002	1 Year
<u>    </u> - Log-Periodic Antenna	UHALP9107	Schwarzbeck	91071212	May. 2002	1 Year
<u>    </u> - Log-Periodic Antenna	UHALP9107	Schwarzbeck	9107915	May. 2002	1 Year
<u>X</u> - Log-Periodic Antenna	UHALP9108	Schwarzbeck	G43599003	May. 2002	1 Year
<u>    </u> - Dipole Antenna	KBA-511A	Kyoritsu Electrical	0-195-5	May. 2002	1 Year
<u>    </u> - Dipole Antenna	KBA-511A	Kyoritsu Electrical	0-230-6	May. 2002	1 Year
<u>    </u> - Dipole Antenna	KBA-611	Kyoritsu Electrical	0-196-8	May. 2002	1 Year
<u>    </u> - Dipole Antenna	KBA-611	Kyoritsu Electrical	0-228-13	May. 2002	1 Year
<u>    </u> - RF Cable	20D/5D-2W	Fujikura	No.1	May. 2002	1 Year
<u>    </u> - RF Cable	20D/5D-2W	Fujikura	No.2	May. 2002	1 Year
<u>X</u> - RF Cable	20D/5D-2W	Fujikura	No.3	May. 2002	1 Year

**1.3.4 The measurement of the Radiated Emission(Above 1000 MHz)**

- ☐ - was performed in the following test site.  
☒ - was not applicable.

**Test location :**

Safety Testing Center EMC Engineering Dept. Tsuru EMC Branch  
2096 Ohhata, Tsuru-shi, Yamanashi-ken 402-0045, JAPAN

- ☐ - Open Site No. 1 (3, 10 or 30 meters)  
☐ - Open Site No. 2 (3, 10 or 30 meters)  
☐ - Anechoic Chamber(3 or 10 meters)

**Validation of Site Attenuation :**

- 1) Last Confirmed Date : N/A  
2) Interval : N/A

**Used test instruments :**

Type	Model No.	Manufacturer	Serial No.	Last Cal.	Interval
<input type="checkbox"/> - Spectrum Analyzer	8563E	Hewlett Packard	3438A00756	May. 2002	1 Year
<input type="checkbox"/> - Spectrum Analyzer	R4131C	Advantest	717201249	May. 2002	1 Year
<input type="checkbox"/> - Log-Periodic Antenna	94612-1	Rohde & Schwarz	97062301	May. 2002	1 Year
<input type="checkbox"/> - RF Amplifier	WJ-6611-513	Watkins-Johnson	0288	May. 2002	1 Year
<input type="checkbox"/> - RF Amplifier	WJ-6682-834	Watkins-Johnson	0052	May. 2002	1 Year
<input type="checkbox"/> - RF Amplifier	WJ-6870-506	Watkins-Johnson	0018	May. 2002	1 Year
<input type="checkbox"/> - RF Cable(7m)	SUCOFLEX 104	Suhner	52146/4	May. 2002	1 Year
<input type="checkbox"/> - RF Cable(3m)	SUCOFLEX 104	Suhner	52053/4	May. 2002	1 Year
<input type="checkbox"/> - RF Cable(2m)	SUCOFLEX 104	Suhner	39934/4	May. 2002	1 Year
<input type="checkbox"/> - RF Cable(1m)	SUCOFLEX 104	Suhner	35687/4	May. 2002	1 Year

**1.3.5 The measurement of the Frequency Stability**☐ - was performed.☒ - was not applicable.**Used test instruments :**

Type	Model No.	Manufacturer	Serial No.	Last Cal.	Interval
<input type="checkbox"/> - Frequency Counter	53131A	Hewlett Packard	3546A11807	May 2002	1 Year
<input type="checkbox"/> - Oven	-	Ohnishi Co. Ltd.	-	Aug. 2002	1 Year
<input type="checkbox"/> - DC Power Supply	6628A	Hewlett Packard	3224A00284	July 2002	1 Year

**1.3.6 The measurement of the Occupied Bandwidth**☐ - was performed.☒ - was not applicable.**Used test instruments :**

Type	Model No.	Manufacturer	Serial No.	Last Cal.	Interval
<input type="checkbox"/> - Spectrum Analyzer	8560E	Hewlett Packard	3240A00189	Sep. 2002	1 Year
<input type="checkbox"/> - Spectrum Analyzer	8563E	Hewlett Packard	3221A00201	May. 2002	1 Year
<input type="checkbox"/> - Spectrum Analyzer	8566B	Hewlett Packard	2140A01091	Apr. 2002	1 Year
<input type="checkbox"/> - Spectrum Analyzer	8566B	Hewlett Packard	2747A05855	May. 2002	1 Year
<input type="checkbox"/> - Function Generator	3325A	Hewlett Packard	2512A21776	May. 2002	1 Year
<input type="checkbox"/> - FM Linear Detector	MS61A	Anritsu Corp.	M77486	Sep. 2002	1 Year
<input type="checkbox"/> - Level Meter	ML422C	Anritsu Corp.	M87571	June 2002	1 Year





#### 1.4 EUT MODIFICATION / Deviation from Standard

##### 1.4.1 EUT MODIFICATION

- ☒ -No modifications were conducted by JQA to achieve compliance to Class B levels.  
☐ -To achieve compliance to Class B levels, 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:

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

\_\_\_\_\_  
\_\_\_\_\_



JQA Application No.:441-20841  
Model No. :IMB122-01  
Standard :CFR 47 FCC Rules Part 15

FCC ID : BGBX1T143IMB12201  
Issue Date :January 24, 2003  
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## 1.5 TEST RESULTS

AC Power Line Conducted Emission                   \_\_\_ - Applicable    x - NOT Applicable

The requirements are                                   \_\_\_ - PASSED                   \_\_\_ - NOT PASSED

Remarks :

Radiated Emission [§15.209(a)(b)]                   x - Applicable    \_\_\_ - NOT Applicable

The requirements are                                   x - PASSED                   \_\_\_ - NOT PASSED

Remarks:

Frequency Stability                                   \_\_\_ - Applicable    x - NOT Applicable

The requirements are                                   \_\_\_ - PASSED                   \_\_\_ - NOT PASSED

Remarks:

Occupied Bandwidth                                   \_\_\_ - Applicable    x - NOT Applicable

The requirements are                                   \_\_\_ - PASSED                   \_\_\_ - NOT PASSED

Remarks:

## 1.6 SUMMARY

### General Remarks :

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and C (June 23, 1989) 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;

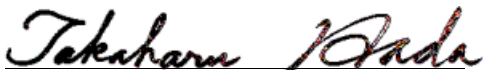
- x   - fulfill the test requirements of the regulation mentioned on clause 1.1.
- fulfill the test requirements of the regulation mentioned on clause 1.1, but with certain qualifications.
- doesn't fulfill the test regulation mentioned on clause 1.1.

Begin of testing : January 16, 2003

End of testing : January 16, 2003

- JAPAN QUALITY ASSURANCE ORGANIZATION -  
Approved by:

Signatories:  
Issued by:



Takaharu Hada  
Director  
Tsuru EMC Branch  
JQA EMC Engineering Dept.



Yuichi Fukumoto  
Manager  
Tsuru EMC Branch  
JQA EMC Engineering Dept.

## 1.7 TEST CONFIGURATION / OPERATION OF EUT

### 1.7.1 Test Configuration

The equipment under test (EUT) consists of :

Symbol	Item	Manufacturer	Model No.	FCC ID	Serial No.
A	Immobilizer ECU	Mitsubishi Electric Corp.	IMB122-01	BGBX1T143IMB12201	1

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

None.

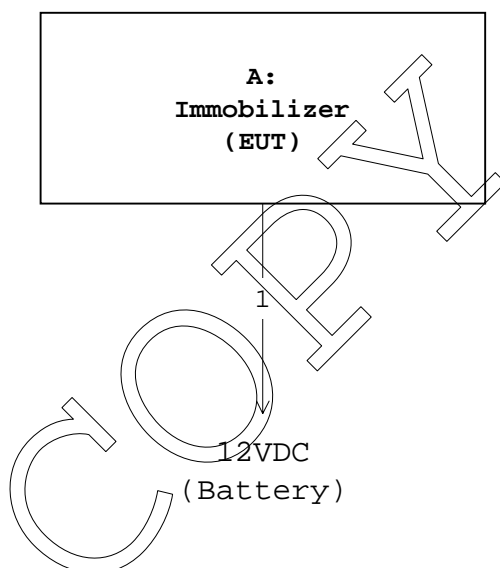
Type of Cable :

Symbol	Description	Identification (Manufacturer etc.)	Shielded YES / NO	Ferrite Core	Connector type Shielded YES / NO	Length (m)
1	DC Power Cable(for EUT)	-	NO	NO	NO	2.0

### 1.7.2 Operating condition

Power supply Voltage : 12.0 VDC(from Battery)

The tests have been carried out under the transmitting condition.

**1.8 EUT ARRANGEMENT (DRAWINGS)**

## 1.9 PRELIMINARY TEST AND TEST-SETUP (DRAWINGS)

### 1.9.1 AC Power Line Conducted Emission ( 450 kHz - 30 MHz ) :

According to description of ANSI C63.4-1992 sec.13.1.3.1, the AC power line preliminary conducted emissions measurements were carried out.

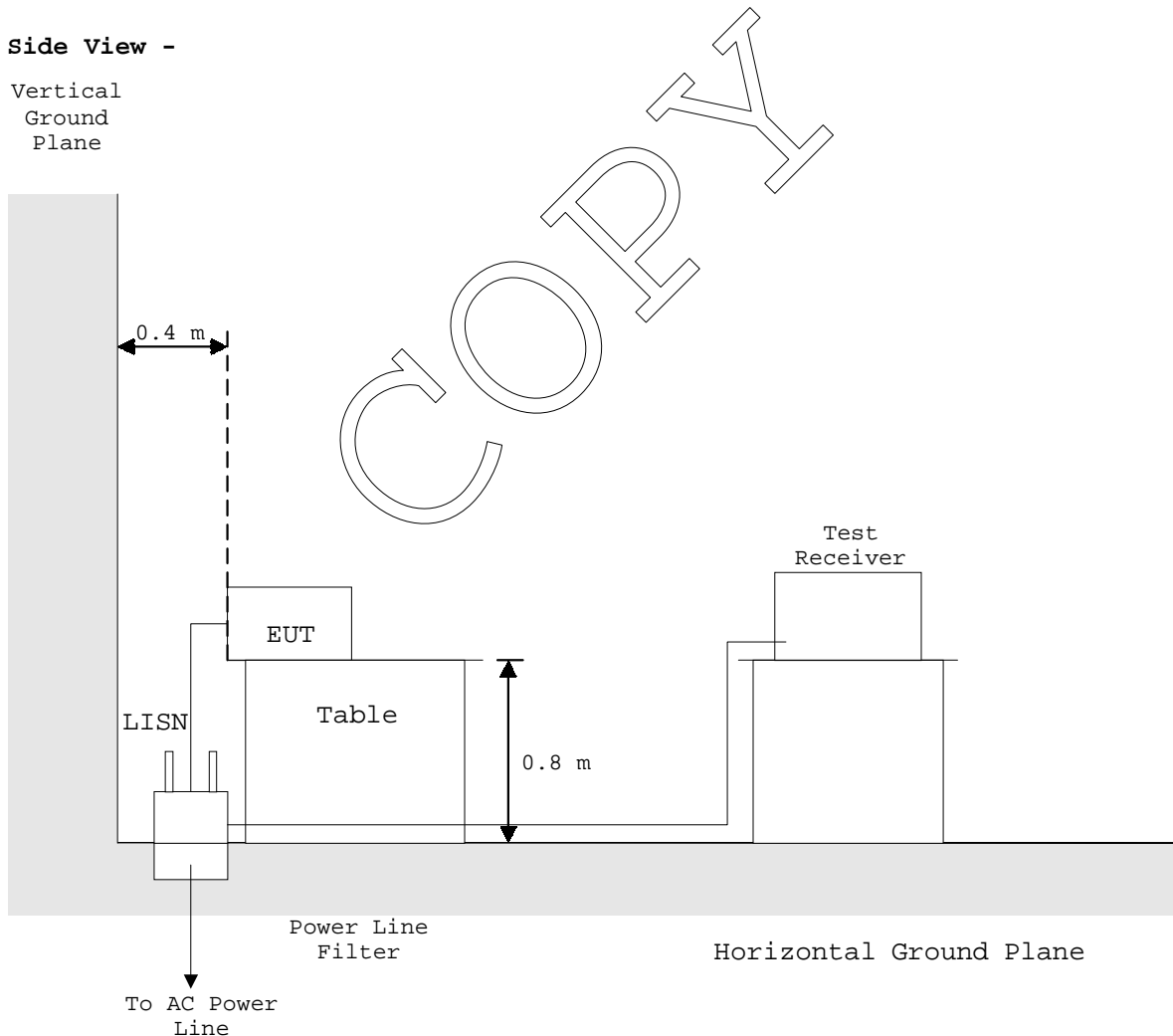
The preliminary conducted measurements were performed using the spectrum analyzer to observe the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for final AC power line conducted emissions measurements.

#### Shielded Enclosure

##### - Side View -

Vertical  
Ground  
Plane

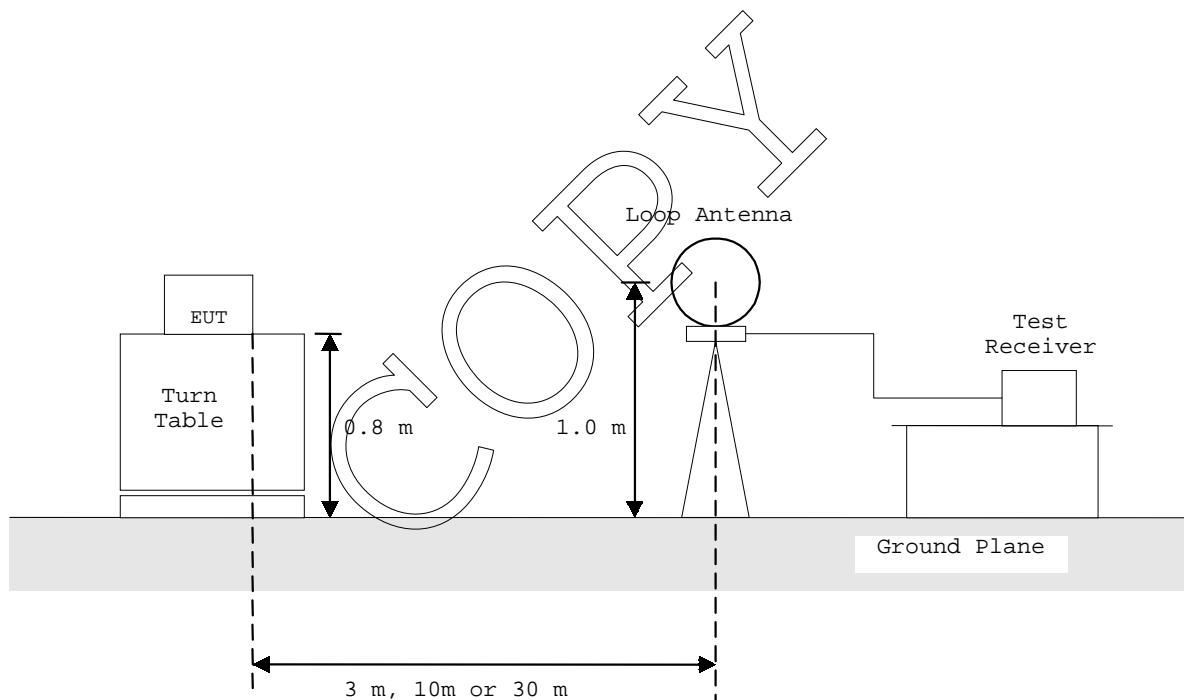


**1.9.2 Radiated Emission ( 9 kHz - 30 MHz ) :**

According to description of ANSI C63.4-1992 sec.13.1.4.1, the preliminary radiated emissions measurement were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

- Side View -



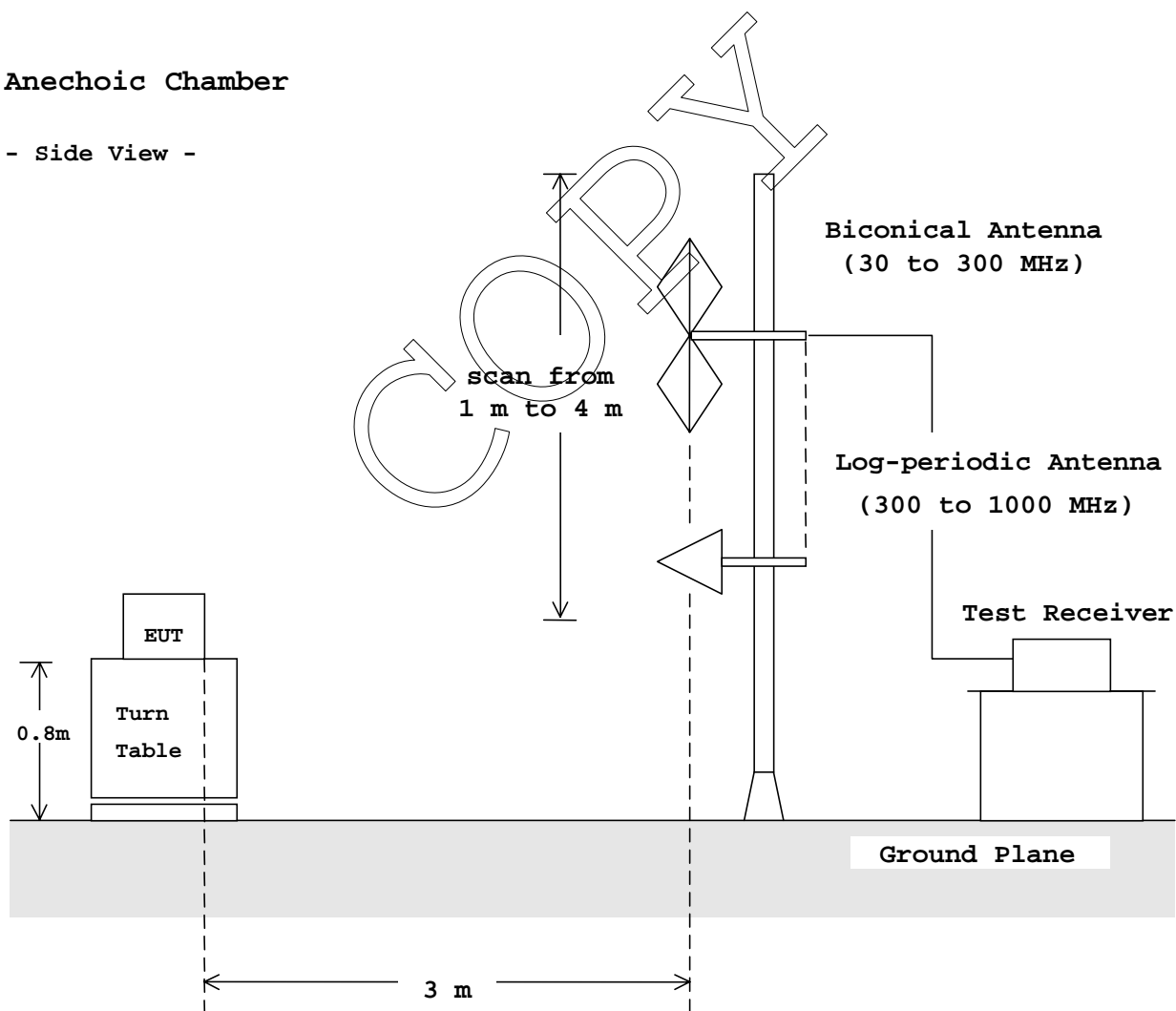
### 1.9.3 Radiated Emission ( 30 MHz - 1000 MHz ) :

According to description of ANSI C63.4-1992 sec.13.1.4.1, the preliminary radiated emissions measurement were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

#### Anechoic Chamber

- Side View -





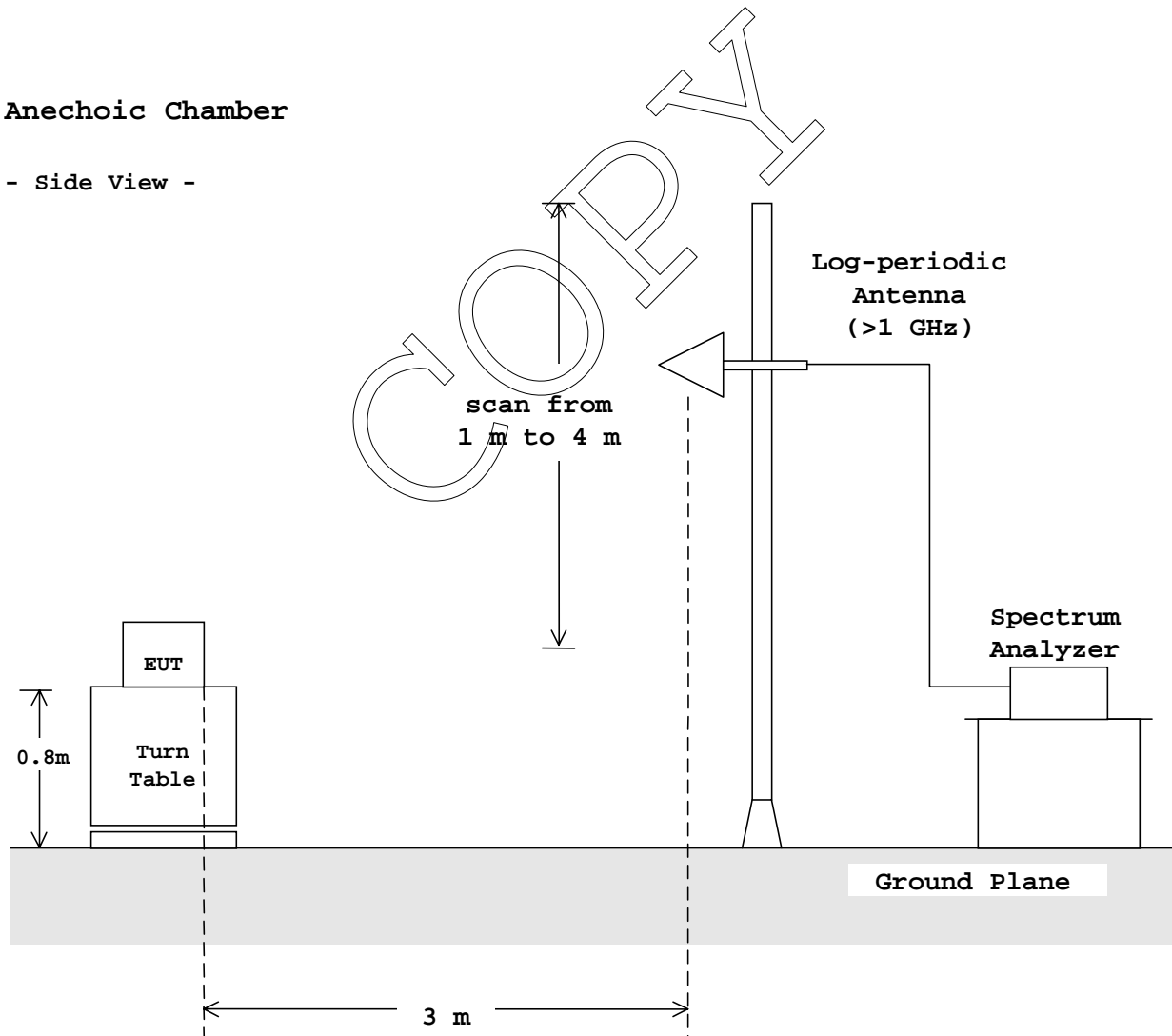
#### 1.9.4 Radiated Emission (Above 1 GHz) :

According to description of ANSI C63.4-1992 sec.13.1.4.1, the preliminary radiated emissions measurements were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

#### Anechoic Chamber

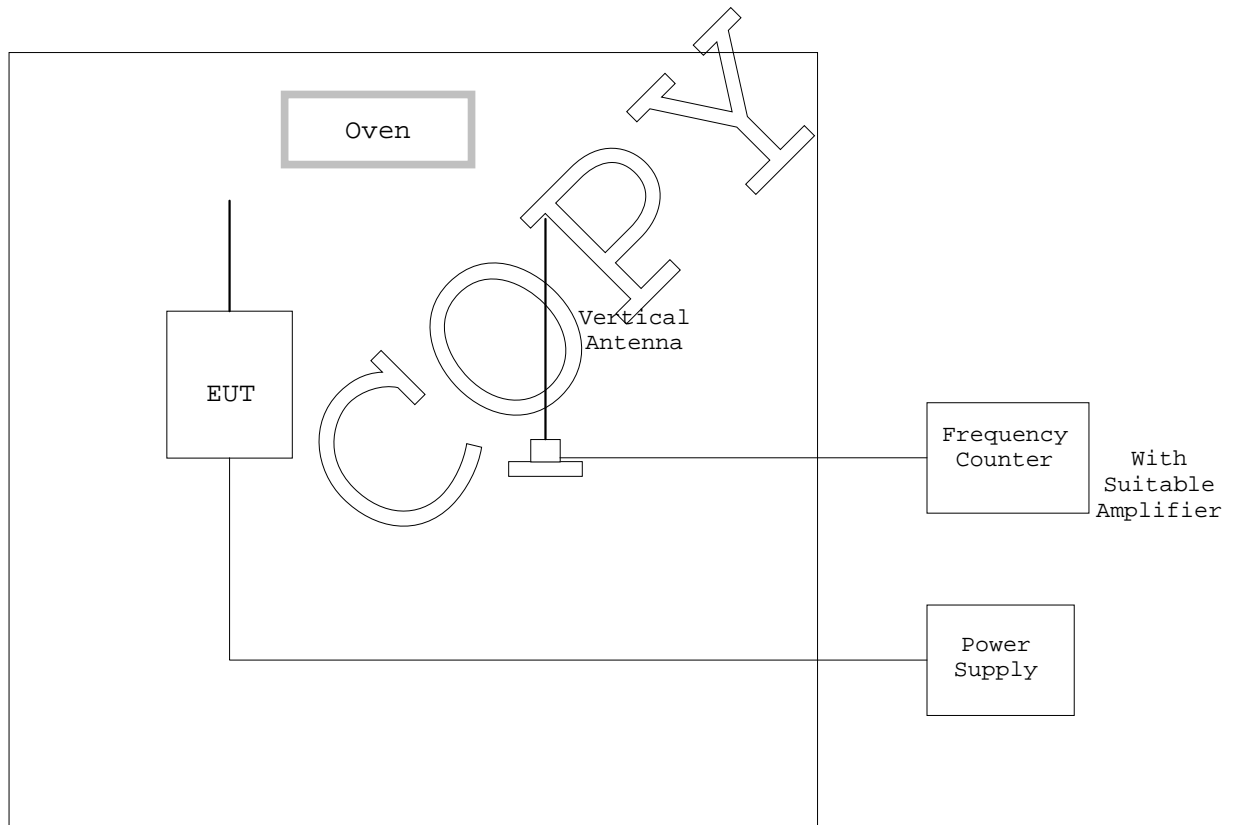
- Side View -



#### 1.9.5 Frequency Stability :

According to description of ANSI C63.4-1992 sec.13.1.5 and sec.13.1.6, the frequency stability measurements were carried out. By using frequency counter with suitable RF amplifier, the carrier frequency of the transmitter under test was measured with a temperature variation of  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  at the normal supply voltage, and if required , with a variation in the primary voltage from 85 % to 115 % the rated supply voltage at the temperature of  $+20^{\circ}\text{C}$ .

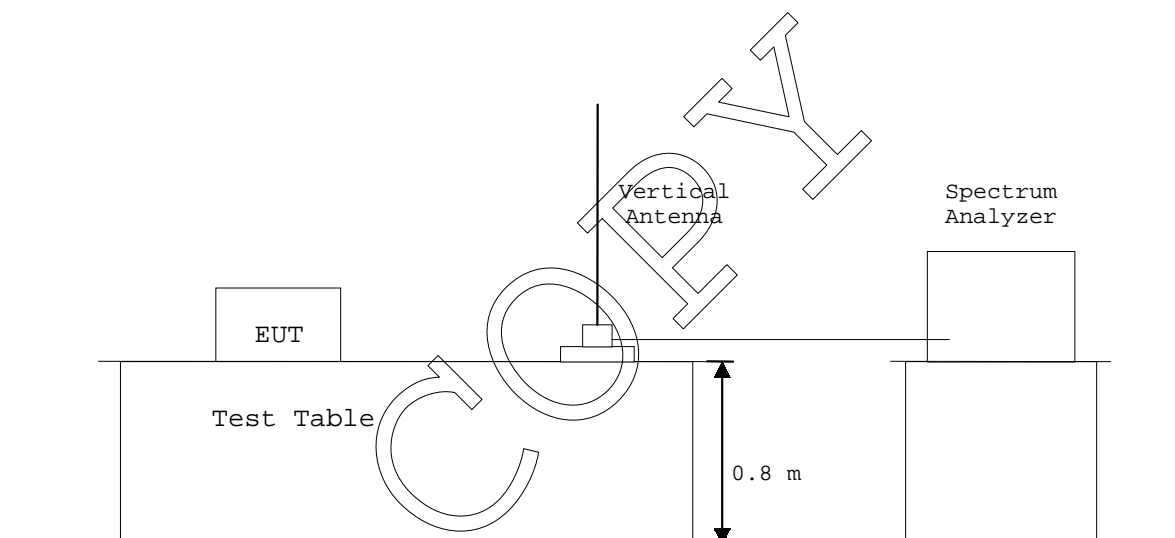
These measurements were carried out after allow sufficient time (approximately 1 hour) for the temperature of the chamber to stabilize.



**1.9.6 Occupied Bandwidth :**

According to description of ANSI C63.4-1992 sec.13.1.7, the occupied bandwidth measurements were carried out. By using a spectrum analyzer with a vertical antenna for picking up the signal, the measurements of the emission were made under the transmitting modes of the EUT.

The resolution bandwidth of spectrum analyzer was set to the value specified in sec.13.1.7.

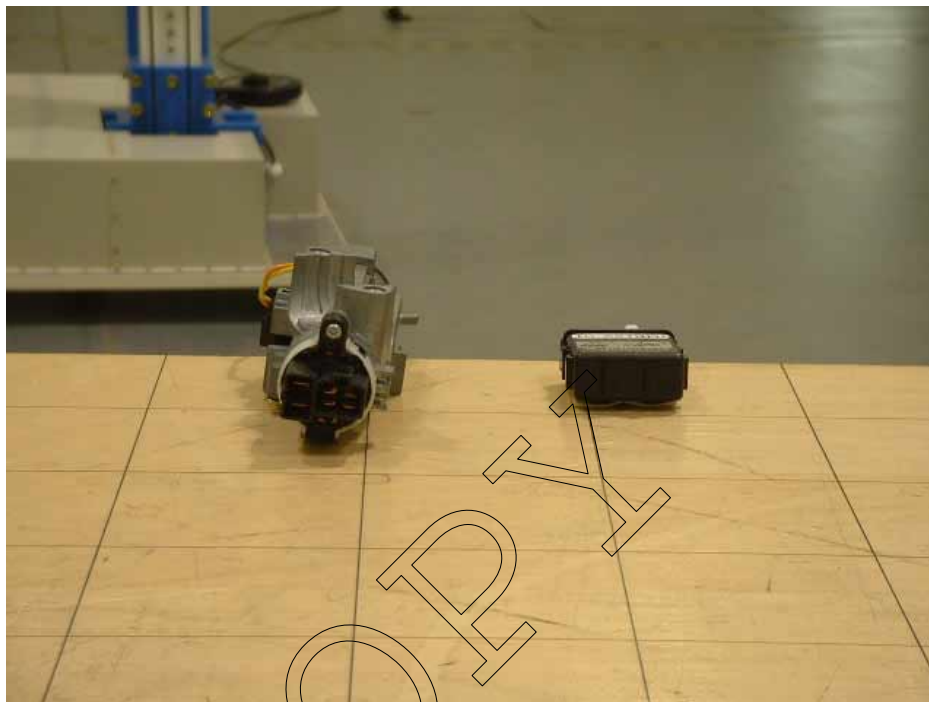


## 1.10 TEST ARRANGEMENT (PHOTOGRAPHS)

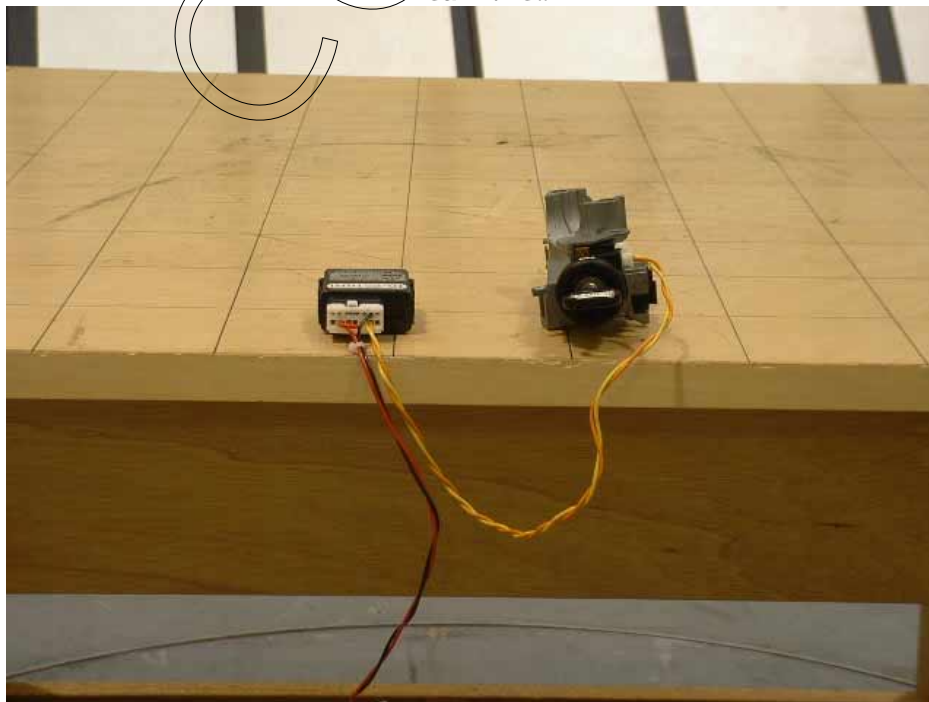
### PHOTOGRAPHS OF EUT CONFIGURATION FOR RADIATED EMISSIONS MEASUREMENT

Photograph present configuration with maximum emission

- Front View -



Rear View -



## TEST DATA

### 2.1 AC Power Line Conducted Emission Measurement( 0.45 MHz - 30 MHz )

Note : This test was not applicable.

### 2.2 Radiated Emissions Measurement( 9 kHz - 30 MHz )

Date : January 16, 2003  
 Temp.: 23 °C Humi.: 23 %

Operating Frequency : 125.0 kHz  
 Distance of Measurement : 30 meters

Frequency (MHz)	Meter Reading (dBμV/m)	Field Strength (dBμV/m)
Fundamental		
0.125	< 30.0	30.0
Harmonic Frequency		
0.250	< 33.2	< 33.2
0.375	< 31.4	< 31.4
0.500	< 30.1	< 30.1
0.625	< 29.0	< 29.0
0.750	< 28.1	< 28.1
0.875	< 27.3	< 27.3
1.000	< 27.0	< 27.0
1.125	< 27.0	< 27.0
1.250	< 27.0	< 27.0

Note : The fundamental field strength was found undetectable weak of the field strength meter.

Tested by :



Kazuhisa Fukagawa  
 Testing Engineer

The distance of measurements was reduced to 10 meters.

Date : January 16, 2003

Temp.: 23 °C Humi.: 23 %

Operating Frequency : 125.0 kHz

Distance of Measurement : 10 meters

Frequency (MHz)	Meter Reading (dBμV/m)	Field Strength (dBμV/m)
Fundamental		
0.125	39.2	39.2(Average)
0.125	45.1	45.1(Peak)
Harmonic Frequency		
0.250	< 33.2	< 33.2(Average)
0.250	< 39.4	< 39.4(Peak)
0.375	< 31.4	< 31.4(Average)
0.375	< 36.6	< 36.6(Peak)
0.500	< 30.1	< 30.1
0.625	< 29.0	< 29.0
0.750	< 28.1	< 28.1
0.875	< 27.3	< 27.3
1.000	< 27.0	< 27.0
1.125	< 27.0	< 27.0
1.250	< 27.0	< 27.0

Note: 1. Meter reading value shows field strength, because the value includes antenna factor.

2. The symbol of "<" means "or less".

3. Measuring Instrument Setting:

Frequency Range : 110 kHz to 490 kHz

Detector Function : Average/Peak, IF Band width : 10 kHz

Frequency Range : 536.8 kHz to 1345 kHz

Detector Function : CISPR Quasi-peak Peak, IF Band width : 9 kHz

For fundamental, the measured field strength was extrapolated to distance 300 meters, using the formula that field strength varies as the inverse distance square(40 dB per decade of distance).

Calculation :

Average:  $39.2 \text{ dB}\mu\text{V/m} - 20\log_{10}((300/10)^2) = 39.2 - 59.1 = -19.9 \text{ dB}\mu\text{V/m}$  at 300 meters

Limits for fundamental(§15.209(a)) =  $20\log_{10}(2400/125) = 25.7 \text{ dB}\mu\text{V/m}$

Peak:  $45.1 \text{ dB}\mu\text{V/m} - 20\log_{10}((300/10)^2) = 45.1 - 59.1 = -14.0 \text{ dB}\mu\text{V/m}$  at 300 meters

Limits for fundamental(§15.209(a)) =  $20\log_{10}(2400/125)+20 = 45.7 \text{ dB}\mu\text{V/m}$

Tested by :



Kazuhisa Fukagawa

Testing Engineer

### 2.3. Radiated Emissions Measurements (30 MHz - 1000 MHz)

Date :January 16, 2003

Temp. : 23°C Humi.: 23%

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.	
30.0	19.3	< -2.0	< -2.0	40.0	< 17.3	< 17.3	> 22.7	> 22.7	
40.0	16.6	< -2.0	< -2.0	40.0	< 14.6	< 14.6	> 25.4	> 25.4	
64.2	9.2	< -2.0	1.3	40.0	< 7.2	10.5	> 32.8	29.5	
72.0	8.2	< -2.0	0.2	40.0	< 6.2	8.4	> 33.8	31.6	
100.0	12.0	< -2.0	< -2.0	43.5	< 10.0	< 10.0	> 33.5	> 33.5	
120.0	14.3	< -2.0	< -2.0	43.5	< 12.3	< 12.3	> 31.2	> 31.2	
140.0	16.1	< -2.0	< -2.0	43.5	< 14.1	< 14.1	> 29.4	> 29.4	
160.0	17.1	< -2.0	< -2.0	43.5	< 15.1	< 15.1	> 28.4	> 28.4	
180.0	18.0	< -2.0	< -2.0	43.5	< 16.0	< 16.0	> 27.5	> 27.5	
200.0	18.3	< -2.0	< -2.0	43.5	< 16.3	< 16.3	> 27.2	> 27.2	
240.0	19.4	< -2.0	< -2.0	46.0	< 17.4	< 17.4	> 28.6	> 28.6	
250.6	19.7	-0.2	-0.3	46.0	< 19.5	19.4	26.5	26.6	
300.0	21.7	< -2.0	< -2.0	46.0	< 19.7	< 19.7	> 26.3	> 26.3	
400.0	20.3	< -2.0	< -2.0	46.0	< 18.3	< 18.3	> 27.7	> 27.7	
500.0	22.7	< -2.0	< -2.0	46.0	< 20.7	< 20.7	> 25.3	> 25.3	
700.0	26.2	< -2.0	< -2.0	46.0	< 24.2	< 24.2	> 21.8	> 21.8	
1000.0	29.9	< -2.0	< -2.0	54.0	< 27.9	< 27.9	> 26.1	> 26.1	

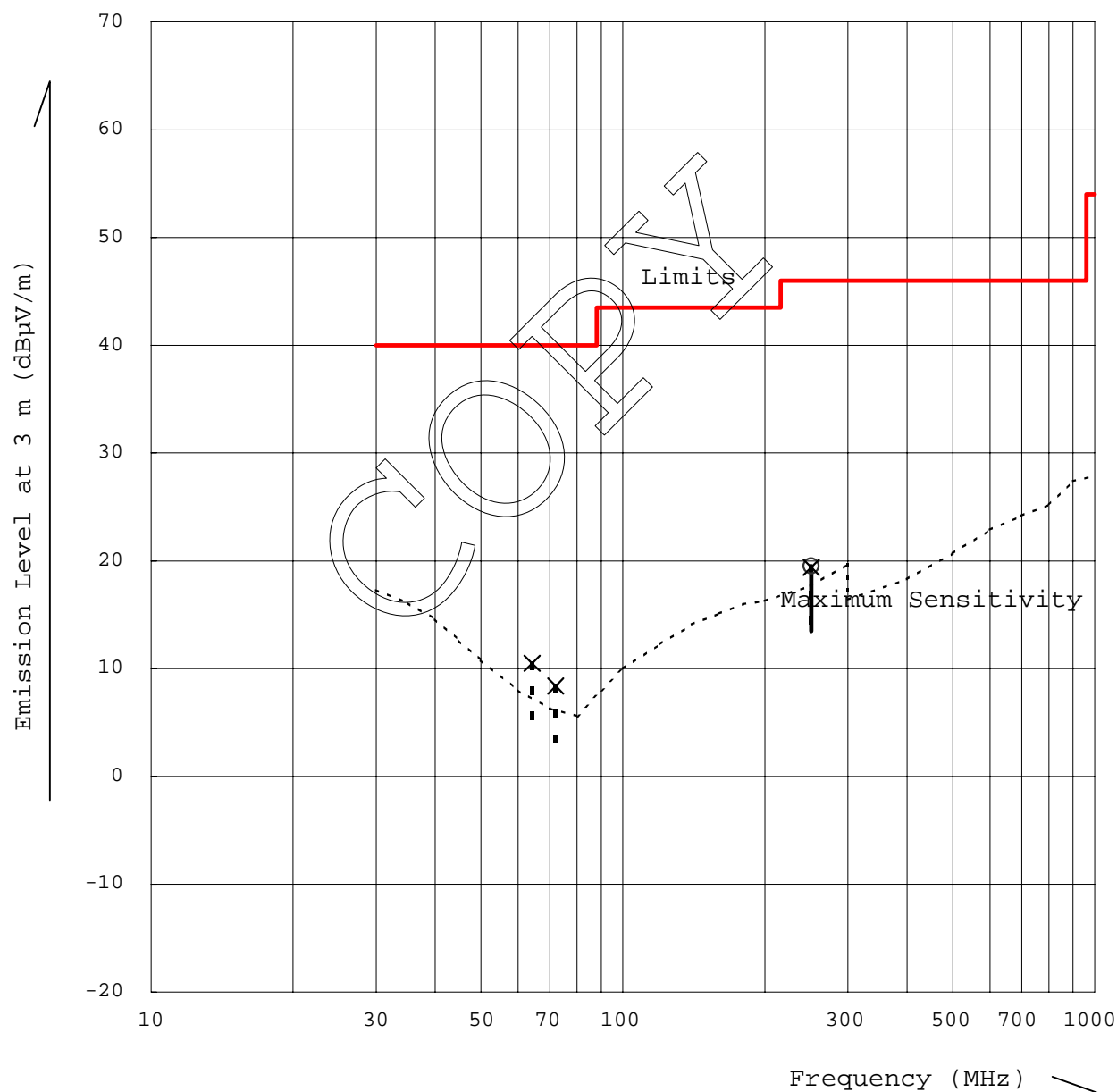
- Notes: 1) Test Location : Anechoic Chamber  
 2) Test Distance : 3 m  
 3) The spectrum was checked from 30 MHz to 1000 MHz.  
 4) Antenna factor includes the cable loss for 33 meter.  
 5) The symbol of "<" means "or less".  
 6) The symbol of ">" means "more than".  
 7) A sample calculation was made at 30.0 MHz  
 $Af + Mr = 19.3 + -2.0 = 17.3 \text{ dB}\mu\text{V/m}$   
 Af : Antenna Factor Mr : Meter Reading  
 8) Setting of measuring instrument :  
 Detector Function : CISPR Quasi-Peak  
 IF Bandwidth : 120 kHz

Tested by :

Kazuhisa Fukagawa

## Radiated Emissions Measurements (30 MHz - 1000 MHz)

Measuring Distance : 3 m	○ Horizontal
Classifications : B	× Vertical





#### **2.4 Radiated Emissions Measurement( Above 1 GHz )**

Note : This test was not applicable.

#### **2.5 Frequency Stability Measurement**

Note : This test was not applicable.

#### **2.6 Occupied Bandwidth Measurement**

Note : This test was not applicable.

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