



FUJI PHOTO FILM CO.,LTD.

26-30, NISHIAZABU 2-CHOME,  
MINATO-KU, TOKYO 106, JAPAN

Telephone: (03) 3406-2934

Facsimile : (03) 3406-9967

FCC ID : F5GSM-R2  
Part 15 Subpart B Class B Digital Device

## 7. TEST RESULTS

### 7.1 Conducted Radio Noise Measurement

#### 7.1.1 Measurement Instrumentation Used:

*(Model / Serial No. / Manufacturer)*

Test Receiver ----- (ESS / 842886-010 / Rohde & Schwarz)

L. I. S. N ----- (ESH2-Z5 / 879675-046 / Rohde & Schwarz)

#### 7.1.2 Measurement Procedure:

The power line conducted interference measurements were performed in a shield enclosure with peripherals placed on a table, 80cm high over a metal floor.

It was located more than required distance away from the shielded enclosure wall.

The EUT was plugged into the L.I.S.N. and the frequency range of interest scanned.

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### 7.1.3 Test Data

**Table 7.1-1 Conducted Radio Noise Measurement Results:**

Operating mode: Read/Write

Date of measurement: October 13, 1999

Test Procedure: ANSI C63.4-1992

Temperature: 24 degree C

Humidity: 37.0 %

<i>Frequency</i>	<i>Results</i>		<i>Results</i>	<i>Limit</i>	<i>Margin</i>
	<i>Meter Reading.</i>		<i>Emission Level</i>		
	<i>VA.</i>	<i>VB.</i>			
<i>(MHz)</i>	<i>(dBuV/m)</i>		<i>(dBuV/m)</i>	<i>(dBuV/m)</i>	<i>(dBuV/m)</i>
0.4500	32.1	32.4	32.4	48.0	15.6
1.6586	25.7	25.6	25.7	48.0	22.3
12.3700	34.3	34.1	34.3	48.0	13.7
17.1780	33.9	34.3	34.3	48.0	13.7
21.1802	33.5	33.6	33.6	48.0	14.4
27.9750	27.4	27.5	27.5	48.0	20.5

Note:

- 1) Emission Levels are higher levels of VA or VB of Meter Readings + Correction Factor.
- 2) VA: Between one end of the power cable and the grounded.  
VB: Between the other end of power cable and the grounded.

### 7.1.4 Conducted Radio Noise Calculation

The conducted radio noise is calculated by adding the calibration factor to the measured reading. The basic equation and a sample calculation are as follows:

$$CRN = TRM + CF$$

$$Margin = Limit - CRN$$

where CRN = Conducted Radio Noise (dBuV)

TRM = Test Receiver Reading (dBuV)

CF : Correction Factor (dB/m)

The Correction factor includes cable loss and LISN factor.



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## 7.2 Radiated Radio Noise Measurement

### 7.2.1 Measurement Instrumentation Used :

*(Model / Serial No. / Manufacturer)*

Test Receiver ----- (ESS / 842886-010 / Rohde & Schwarz)

Amplifier----- (8447D / 2727A05056 / Hewlett Packard)

Broad Band Antenna ----- (LPB-2513-A / 1038 / A.R.A.)

### 7.2.2 Measurement Procedure:

The EUT was placed in a 80cm high table along with the peripherals.

The turn table was separated from the antenna at a distance of 3 meter. Cables were placed in a position to produce maximum emission as determined by experimentation, and operation mode was selected for maximum.

The frequencies and amplitudes of maximum emission were measured at varying azimuths, antenna heights and antenna polarities.

### 7.2.3 Test Data

**Table 7.2-1 Radiated Radio Noise Measurement Results:**

Operating mode: Read/Writer

Date of measurement: October 13, 1999

Test Procedure: ANSI C63.4-1992

Temperature: 24 degree C

Humidity: 37 %

Frequency (Mhz)	Correction Factor (dB)	Results Meter Reading.		Results	Limit (dBuV/m)	Margin (dBuV/m)
		(dBuV/m)		Emission Level		
		Hori.	Vert.	(dBuV/m)		
48.00	-5.5	-	24.8	24.8	40.0	15.2
57.03	-8.0	-	29.2	29.2	40.0	10.8
60.00	-9.0	-	31.3	31.3	40.0	8.7
84.00	-11.8	-	28.9	28.9	40.0	11.1
96.01	-9.5	-	30.7	30.7	43.5	12.8
108.01	-8.1	-	29.9	29.9	43.5	13.6
130.44	-8.8	-	27.5	27.5	43.5	16.0
144.01	-9.9	-	30.0	30.0	43.5	13.5
156.01	-10.2	-	27.2	27.2	43.5	16.3
162.02	-9.0	-	33.1	33.1	43.5	10.4
180.01	-8.6	-	28.3	28.3	43.5	15.2
195.66	-8.2	30.2	30.9	30.9	43.5	12.6
211.82	-7.2	29.2	29.1	29.2	43.5	14.3
456.55	-0.4	33.6	42.0	42.0	46.0	4.0

Note: 1) Meter Readings are corrected by all Correction Factors.

2) Emission Levels are higher levels of Hori. or Vert. of Meter Readings.

3) Margin = Limit - Emission Level.



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## 7.2.4 Radiated Radio Noise Calculation

The radiated radio noise is calculated by adding the correction factor to the measured reading. The basic equation and a sample of calculation are as follows;

$$\text{RRN} = \text{TRM} + \text{CF}$$

$$\text{Margin} = \text{Limit} - \text{RRN}$$

where RRN = Radiated Radio Noise (dBuV)

TRM = Test Receiver Reading (dBuV)

CF : Correction Factor (dB/m), The correction factor includes pre-amplifier gain, cable loss and antenna factor.

## 6. TESTED SYSTEM DETAILS

### 6.1 Peripherals and Others :

<i>Description</i>	<i>Model Name</i>	<i>Serial No.</i>	<i>Manufacturer</i>	<i>FCC ID</i>
Personal Computer	2635-HGJ	97-01D9K	IBM	DoC
AC Adapter	2635-HYJ(98)	J14HC5031HV	IBM	N. A.
Serial Mouse	155086-01	3476343	ARTEC	ITEUEC19604966

**Note:**

\*DoC: Device was tested and authorized under a Declaration of Conformity to the applicable FCC rules.

### 6.2 List of Cables :

<i>Description</i>	<i>Length</i>	<i>Type of shield</i>	<i>Ferrite Core</i>
EUT / Personal Computer	1.0 m	Shielded	Add
Mouse / Personal Computer	1.4 m	Non-shielded	N/A
DC Power Cord for PC	1.8 m	Non-shielded	Provided
AC Power Cord for AC Adapter	1.0 m	Non-shielded	N/A

**Note:**

\*Add: One ferrite core is permanently attached to USB cable between the EUT and a personal computer to be supplied with the device.

\*Provided: The cable is an accessory for Personal Computer.

**Figure 6-1 System Configuration Diagram :**
