

# **EMISSION TEST REPORT**

**Test Report No. : 17A0020-02I**  
**Hitachi, LTD. Model: MP-EG10W**  
**FCC Part 15 Subpart B**

1. This test report shall not be reproduced except in full, without the written approval of A-Pex International Co., Ltd.
2. This test report does not constitute an endorsement by NIST/NVLAP or U.S. Government.
3. This equipment is in compliance with above regulation. We hereby certify that the data are contain a true representation of the emission profile.
4. The results in this report apply only to the sample tested.
5. This test report clearly shows that EUT, MP-EG10W, MPEG Digital Camera is in compliance with FCC Part 15 Subpart B Class B, specification.

Date of test: January 16, 17, 18, 1998

Issued date: March 12, 1998

Tested by: *K. Nakamura*

Koei Nakamura  
Engineer, EMC Dept.

Approved by: *K. Nakanishi*

Kazutoyo Nakanishi  
Group Leader EMC Dept.



This laboratory is registered by NIST/NVLAP, U.S.A. The tests report have been performed in accordance with its terms of registration.

Testing Laboratory

**A-pex International Co., Ltd.**

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FCC ID : ABL045  
Our reference : 17A0020-02I  
Page : 3 of 19  
Issued date : 98/03/12

### 3.1 GENERAL INFORMATION

APPLICANT : Hitachi Ltd.

Regulation(S) : FCC Part 15 Subpart B, Class B

FCC ID : ABL 045

MODEL NUMBER : MP-EG10W

KIND OF EQUIPMENT : MPEG DIGITAL CAMERA

TESTED DATE : January 13, 19, 21, 1998

REPORT FILE NUMBER : 17A0020-02I

TEST SITE : A-PEX Yokowa NO.2 Open Test Site  
: A-PEX Yokowa NO.3 Open Test Site

FCC ID : ABL045  
Our reference : 17A0020-02I  
Page : 4 of 19  
Issued date : 98/03/12

### **3.1.1 Tested Methodology**

Both conducted and radiated testing were performed according to the procedures in FCC/ANSI C63.4(1992). Radiated testing was performed by the distance of 3 meters from the antenna to EUT .

### **3.1.2 Test Facility**

The open area site measurement facility used to collect the radiated data is located on 108, Yokowa-cho, Ise-shi, Mie-ken, 516-1106 Japan.

This site has been fully described in a report dated on May 27, 1997(No.2) / August 1, 1997(No. 3) submitted to FCC office, and accepted in a letter dated on August 18, 1997 (No.2) / September 16, 1997(No.3) (31040/SIT 1300F2).

## 3.2 SYSTEM TEST CONFIGURATION

### 3.2.1 Justification

The system was configured for testing in typical fashion (as a customer would normally use it).

### 3.2.2 EUTexercise software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

The sequence used is:

(1) MODE 1

- Output digital data (MP-EG10W→MP-ADI1A).
- MP-ADI1A receives digital data and recording to HDD in PC.

(2) MODE 2

- Output digital data (MP-ADI1A → MP-EG10W).
- MP-EG10W receives digital data and recording to HDD in MP-EG10W.

(3) MODE 3

- Recording Motion Pictures.

(4) Mode 4

- Standby

(5) Mode 5

- Output digital data (VIHS → MP-EG10W)  
MP-EG10W receives digital data and recording to HDD in MP-EG10W

### 3.2.3 Test Procedure

#### Tabletop Equipment Conducted Emissions

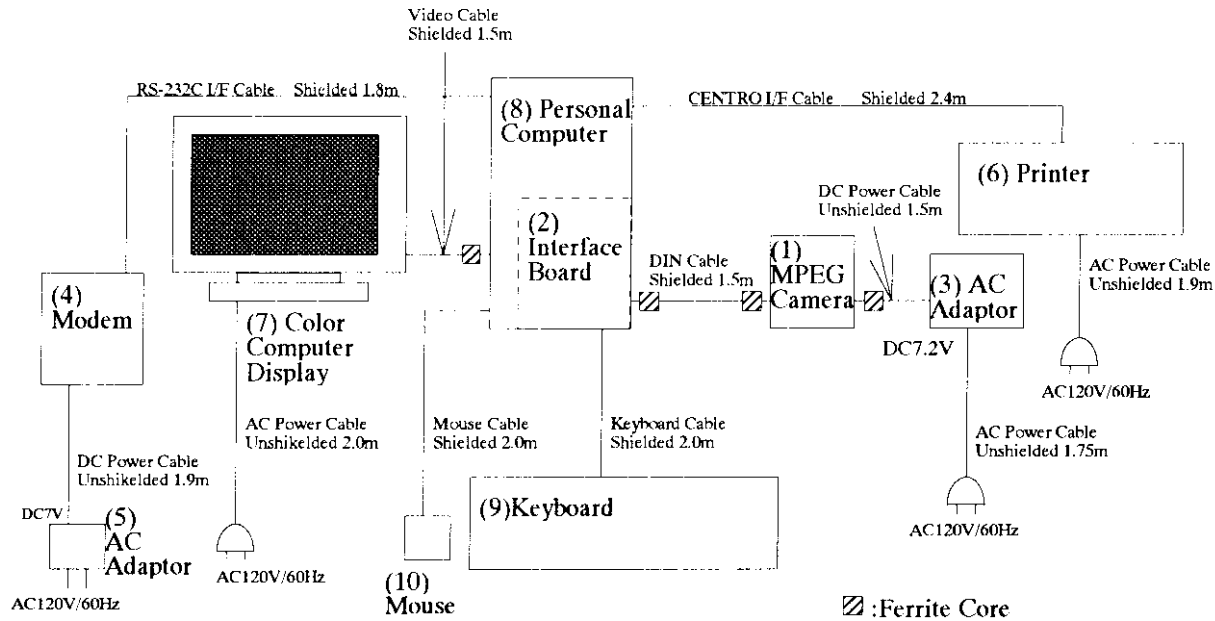
EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.  
The rear of tabletop was located 40cm to the vertical conducting plane.  
The rear of EUT, including peripherals aligned and flush with rear of tabletop.  
All other surfaces of tabletop was at least 80cm from any other grounded conducting surface.  
I/O cables and AC cables that were connected to the peripherals were bundled in center.  
They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane.  
Each EUT current-carrying power lead, except the ground (safety) lead, were individually connected through a LISN to the input power source.  
All unused 50  $\Omega$  connectors of the LISN were resistively terminated in 50  $\Omega$  when not connected to the measuring equipment.

#### Tabletop Equipment Radiated Emissions

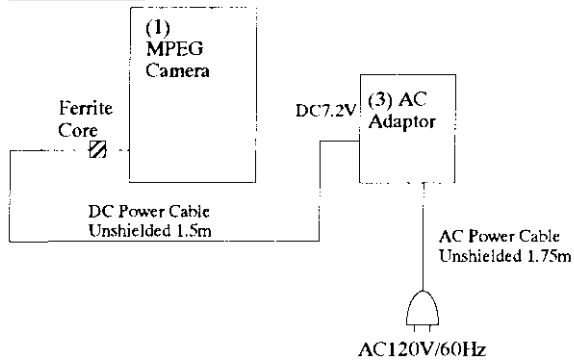
EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.  
The rear of EUT, including peripherals was aligned and flush with rear of tabletop.  
I/O cables and AC cables that were connected to the peripherals were bundled in center.  
They were folded back and forth forming a bundle 30cm to 40cm long and were hanged 40cm height to the ground plane.  
Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.  
The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.  
The measurement distance was 3m.

### Figure 3.2. Configuration of Tested System

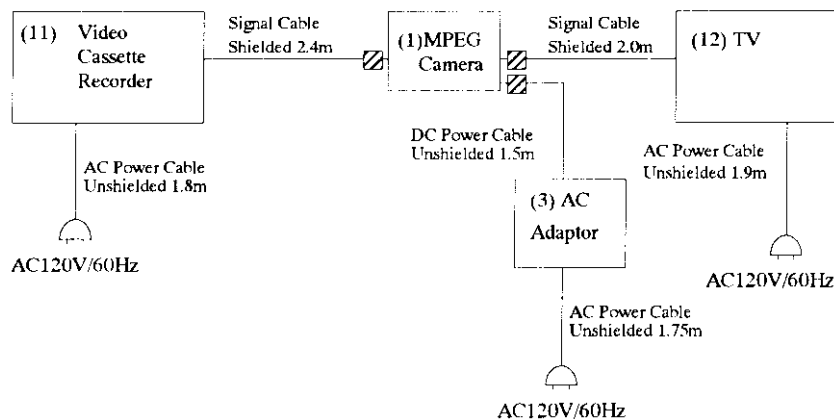
MODE 1, 2, 4



### MODE 3



## MODE 5



\* Cabling was taken into consideration and test data was taken under worst case conditions.

### 3.3.7 Measurement Uncertainty

#### Radiated Emission Test

The measurement uncertainty (with a 95% confidence level) for this test was  $\pm 3.3\text{dB}$ .

- ☐ The data listed in this test report may exceed the test limit because it does not have enough margin (more than 3.3dB).
- ☒ The data listed in this test report has enough margin, more than 3.3dB.

#### Conducted Emission Test

The measurement uncertainty (with a 95% confidence level) for this test was  $\pm 2.0\text{dB}$ .

- ☒ The data listed in this test report may exceed the test limit because it does not have enough margin (more than 2.0dB).
- ☐ The data listed in this test report has enough margin, more than 2.0dB.

### 3.4 CONDUCTED EMISSION DATA

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range(450KHz-30MHz).  
 The final data represents worst-case emissions. (MODE 1)  
 The minimum margin to the limit is as follows :

| Frequency<br>(MHz) | Line<br>(N/L) | Measured<br>(dB $\mu$ V) | LISN<br>Factor<br>(dB) | Result<br>(dB $\mu$ V) | Limit<br>(dB $\mu$ V) | Margin<br>(dB $\mu$ V) |
|--------------------|---------------|--------------------------|------------------------|------------------------|-----------------------|------------------------|
| 1.0467             | N             | 45.9                     | 0.5                    | 46.4                   | 48.0                  | 1.6                    |

\* Result = Reading + LISN Factor (include cable loss )

\* All readings are quasi-peak mode.

### 3.5 RADIATED EMISSION DATA

The initial step in collecting radiated data was a spectrum analyzer peak scan of the measurement range (30MHz-1,000MHz).

The final data was reported in the worst-case emissions. (MODE 5)

The minimum margin to the limit is as follows :

| Frequency<br>MHz) | Receiver<br>Reading<br>dB $\mu$ V) | Correction<br>Factor<br>(dB $\mu$ V) | Field<br>Strength<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB $\mu$ V) |
|-------------------|------------------------------------|--------------------------------------|-------------------------------------|-------------------------|------------------------|
| 47.16             | 45.4                               | -9.0                                 | 36.4                                | 40.0                    | 3.6                    |

\* All readings are quasi-peak mode.

### 3.5.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor, Cable Factor and Antenna Pad, and subtracting the Amplifier Gain from the measured reading. The sample calculation is as follows :

$$FS = RA + AF + CF + AT - AG$$

where FS = Field Strength  
RA = Receiver Amplitude  
AF = Antenna Factor  
CF = Cable Factor  
AT = Antenna Pad  
AG = Amplifier Gain

Assume a receiver reading of 52.0 dB $\mu$ V is obtained. The antenna Factor of 5.35 dB, Cable Factor of 1.77 dB and Antenna Pad of 6.0 dB is added. The Amplifier Gain of 27.34 dB is subtracted, giving a field strength of 37.78 dB $\mu$ V/m.

$$FS = 52.0 + 5.35 + 1.77 + 6.0 - 27.34 = 37.78 \text{ dB}\mu\text{V/m}$$

### 3.6 TEST EQUIPMENT USED

| INSTRUMENTS                                                                   | Mfr.                         | MODEL       | C/N    | Calibrated Until   |
|-------------------------------------------------------------------------------|------------------------------|-------------|--------|--------------------|
| <input checked="" type="checkbox"/> Pre Amplifier                             | Hewlett Packard              | 8447D       | AP1    | July 6, 1998       |
| <input type="checkbox"/> Pre Amplifier                                        | Anritsu                      | MII648A     | AP2    | July 6, 1998       |
| <input type="checkbox"/> Pre Amplifier                                        | Anritsu                      | MII648A     | AP3    | July 6, 1998       |
| <input type="checkbox"/> Pre Amplifier                                        | Hewlett Packard              | 8449B       | -      | September 2, 1998  |
| <input checked="" type="checkbox"/> Biconical Antenna                         | Schwarzbeck                  | BBA9106     | BA1    | April 23, 1998     |
| <input type="checkbox"/> Biconical Antenna                                    | Schwarzbeck                  | BBA9106     | BA2    | July 19, 1998      |
| <input type="checkbox"/> Biconical Antenna                                    | Schwarzbeck                  | BBA9106     | BA3    | May 10, 1998       |
| <input type="checkbox"/> Logperiodic Antenna                                  | Schwarzbeck                  | UHALP9108A  | LA5    | July 19, 1998      |
| <input type="checkbox"/> Logperiodic Antenna                                  | Schwarzbeck                  | UHALP9108A  | LA6    | July 19, 1998      |
| <input checked="" type="checkbox"/> Logperiodic Antenna                       | Schwarzbeck                  | UKLP9104-A  | LA7    | May 3, 1998        |
| <input type="checkbox"/> Double Ridge Guide<br>Horn Antenna                   | A.H. SYSTEM                  | SAS-200/571 | APANT4 | July 24, 1998      |
| <input type="checkbox"/> LISN                                                 | Rohde & Schwarz              | ESH2-Z5     | LS1    | July 6, 1998       |
| <input checked="" type="checkbox"/> LISN                                      | Rohde & Schwarz              | ESH3-Z5     | LS2    | July 6, 1998       |
| <input checked="" type="checkbox"/> LISN                                      | Schwarzbeck                  | NSLK8127    | LS3    | July 6, 1998       |
| <input type="checkbox"/> LISN                                                 | Rohde & Schwarz              | ESIB-Z5     | LS4    | July 6, 1998       |
| <input type="checkbox"/> LISN                                                 | Schwarzbeck                  | NNLK8121    | LS5    | July 6, 1998       |
| <input type="checkbox"/> LISN                                                 | Rolf Heine                   | NNB-4/200   | LS6    | October 24, 1998   |
| <input type="checkbox"/> LISN                                                 | Schwarzbeck                  | NNLK8126    | LS7    | July 6, 1998       |
| <input checked="" type="checkbox"/> Spectrum Analyzer                         | Hewlett Packard              | 8567A       | SA4    | July 6, 1998       |
| <input type="checkbox"/> Spectrum Analyzer                                    | Hewlett Packard              | R3271       | YTSA1  | August 19, 1998    |
| <input type="checkbox"/> Test Receiver                                        | Rohde & Schwarz              | ESHS-20     | TR1    | April 24, 1998     |
| <input type="checkbox"/> Test Receiver                                        | Rohde & Schwarz              | ESVS-30     | TR2    | July 8, 1998       |
| <input checked="" type="checkbox"/> Electro Magnetic<br>Interference Receiver | Meb Messelektronik<br>Berlin | SMV41       | -      | September 14, 1998 |

\* ☒ indicates EMI Test Equipment used.

\*All measurement equipment is traceable to national standard.

Testing Laboratory

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## **APPENDIX**

### **Test Data**

Conducted emissions:

MODE 1 : A 1 - A 3  
MODE 2 : A 4 - A 6  
MODE 3 : A 7 - A 9  
MODE 4 : A 10 - A 12  
MODE 5 : A 13 - A 15

Radiated emissions:

MODE 1 : A 16 - A 17  
MODE 2 : A 18 - A 19  
MODE 3 : A 20 - A 21  
MODE 4 : A 22 - A 23  
MODE 5 : A 24 - A 25

# DATA OF CONDUCTION TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.2 OPEN SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : COMMUNICATION(MODE1)  
REMARKS : SERIAL

REPORT NO. : 17A0020-02I  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
DATE : 02/13/1998  
LISN TYPE : LISN(C/N:LS-02)  
FCC ID : ABL045

  
ENGINEER : KOEI, NAKAMURA

| No | FREQ<br>[MHz] | N            |      | L            |      | LISN<br>FACTOR<br>[dB] | RESULT       |    | LIMITS       |    | MARGIN |    |
|----|---------------|--------------|------|--------------|------|------------------------|--------------|----|--------------|----|--------|----|
|    |               | QP           | AV   | QP           | AV   |                        | QP           | AV | QP           | AV | QP     | AV |
|    |               | [dB $\mu$ V] |      | [dB $\mu$ V] |      |                        | [dB $\mu$ V] |    | [dB $\mu$ V] |    | [dB]   |    |
| 1  | 0.5228        | 40.3         | -    | 40.9         | -    | 0.6                    | 41.5         | -  | 48.0         | -  | 6.5    | -  |
| 2  | 0.6539        | 41.1         | -    | 41.6         | -    | 0.5                    | 42.1         | -  | 48.0         | -  | 5.9    | -  |
| 3  | 0.9334        | 40.9         | -    | 38.9         | -    | 0.5                    | 41.4         | -  | 48.0         | -  | 6.6    | -  |
| 4  | 1.0467        | 45.9         | -    | 45.4         | -    | 0.5                    | 46.4         | -  | 48.0         | -  | 1.6    | -  |
| 5  | 1.1807        | 44.3         | -    | 43.9         | -    | 0.5                    | 44.8         | -  | 48.0         | -  | 3.2    | -  |
| 6  | 1.8388        | 42.2         | -    | 36.6         | -    | 0.4                    | 42.6         | -  | 48.0         | -  | 5.4    | -  |
| 7  | 5.5097        | 29.6         | -    | 26.2         | -    | 0.8                    | 30.4         | -  | 48.0         | -  | 17.6   | -  |
| 8  | 14.3111       | 55.3         | 40.1 | 51.1         | 36.3 | 1.6                    | 43.9         | -  | 48.0         | -  | 4.1    | -  |
| 9  | 28.6241       | 40.0         | -    | 39.7         | -    | 2.4                    | 42.4         | -  | 48.0         | -  | 5.6    | -  |

## SAMPLE CALCULATION :

RESULT = READING(higher data of N/L) + LISN FACTOR(include cable loss)

Except for the above table : adequate margin data below the limits.

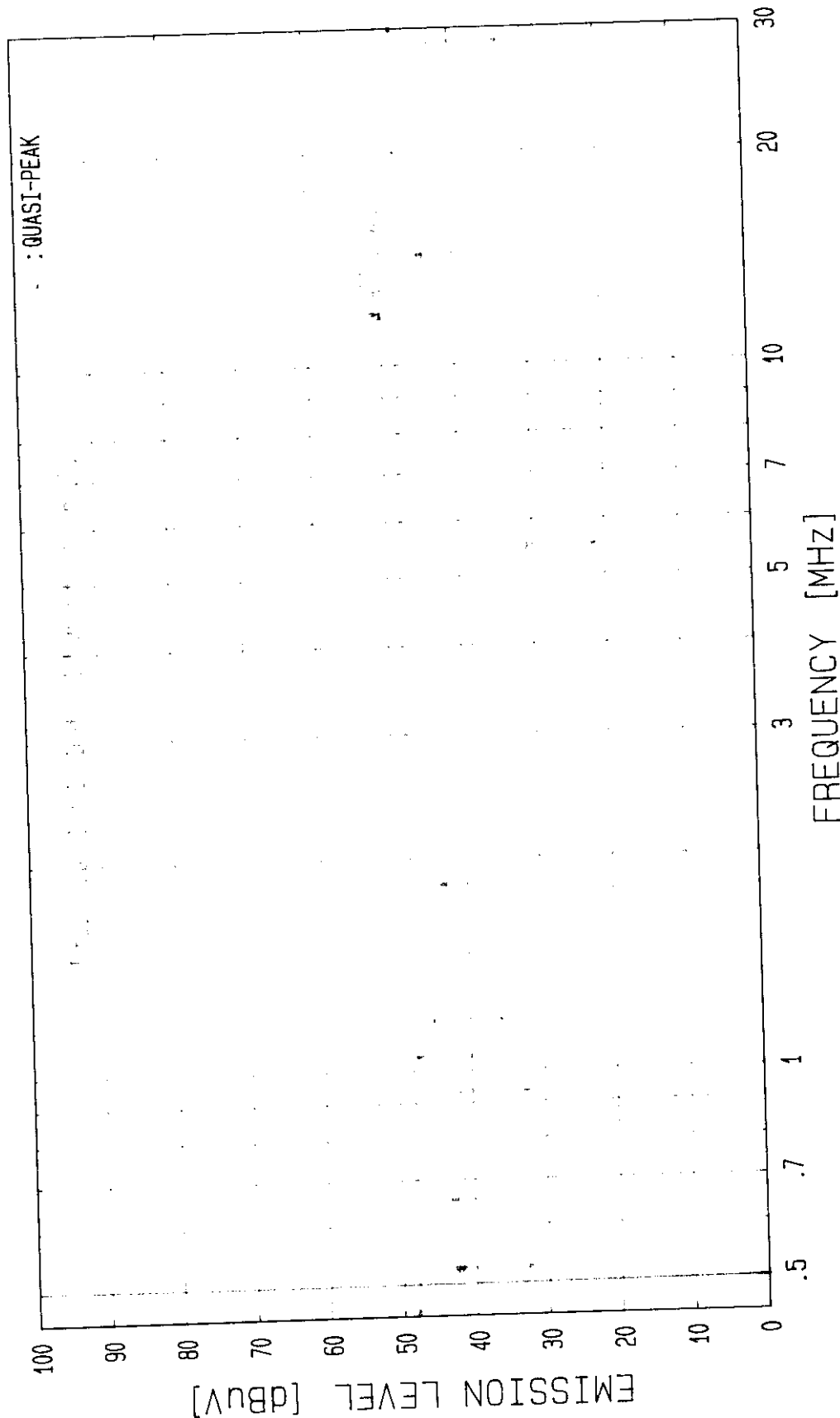
# CONDUCTION TEST

COMPANY  
TRADE NAME  
EQUIPMENT  
MODEL  
POWER  
DESCRIPTION  
REMARKS

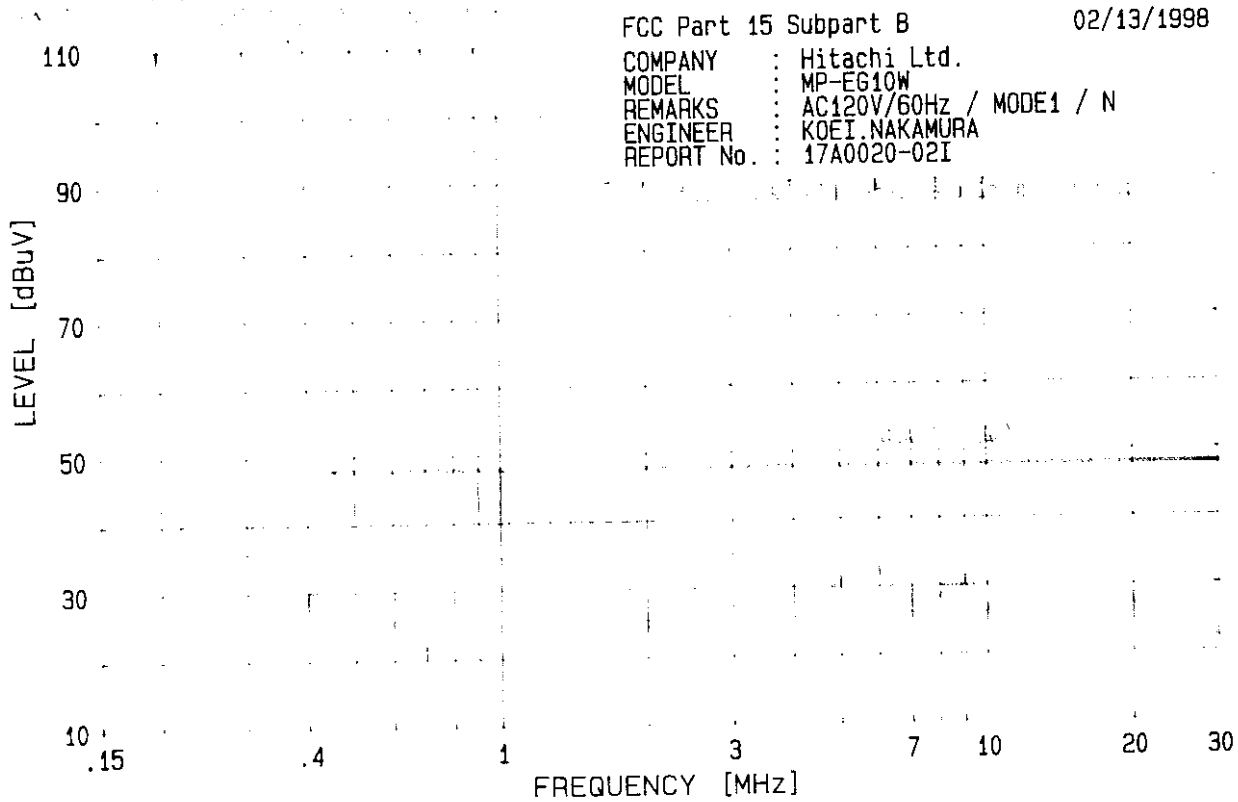
: Hitachi, Ltd.  
: HITACHI  
: MPEG Digital Camera  
: MP-EG10W  
: AC120V/60Hz  
: COMMUNICATION (MODE1)  
: SERIAL

REPORT No. : 17A0020-02I  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
DATE : 02/13/1998  
FCC ID : ABL045

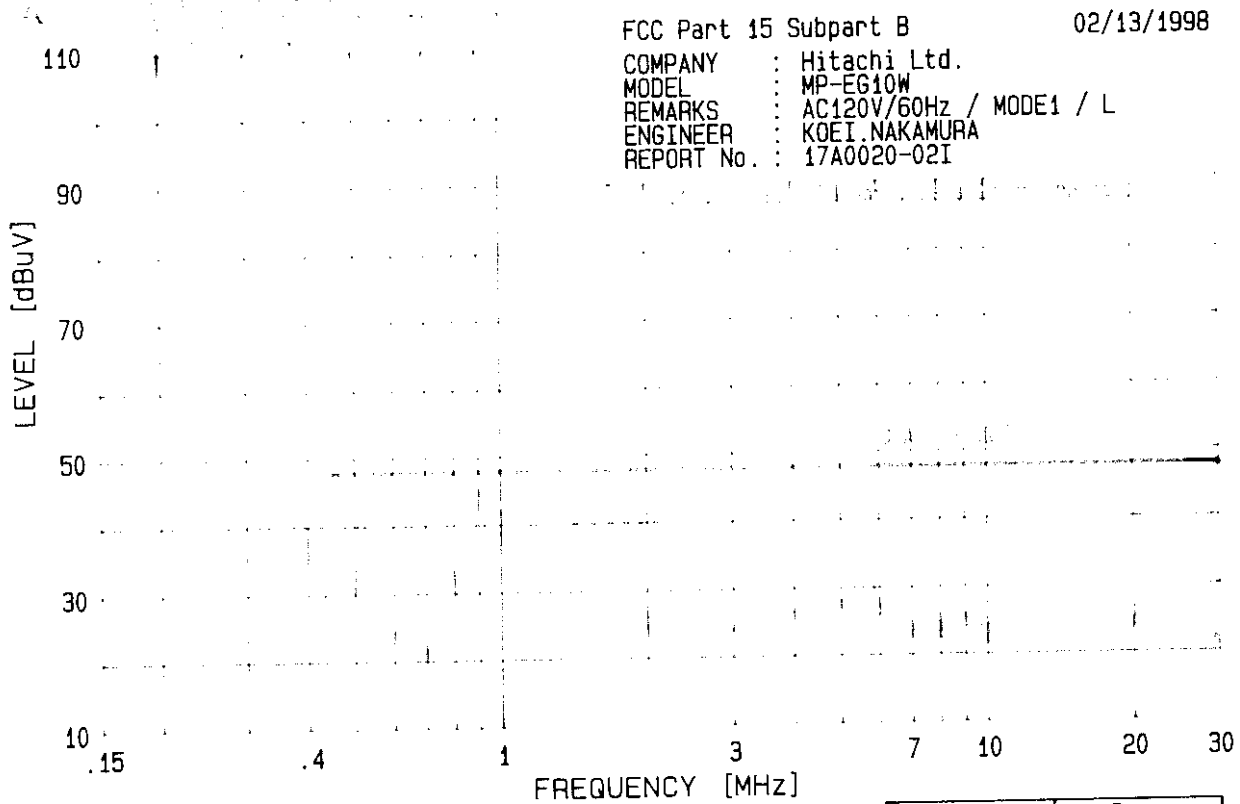
ENGINEER : KOEI.NAKAMURA



# INTERFERENCE VOLTAGE TEST



# INTERFERENCE VOLTAGE TEST



# DATA OF CONDUCTION TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.2 OPEN SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : COMMUNICATION(MODE2)  
REMARKS : SERIAL

REPORT NO. : 17A0020-02I  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
DATE : 02/13/1998  
LISN TYPE : LISN(C/N:LS-02)  
FCC ID : ABL045

  
ENGINEER : KOEI.NAKAMURA

| No | FREQ<br>[MHz] | N            |      | L            |      | LISN<br>FACTOR<br>[dB] | RESULT       |    | LIMITS       |    | MARGIN |    |
|----|---------------|--------------|------|--------------|------|------------------------|--------------|----|--------------|----|--------|----|
|    |               | QP           | AV   | QP           | AV   |                        | QP           | AV | QP           | AV | QP     | AV |
|    |               | [dB $\mu$ V] |      | [dB $\mu$ V] |      |                        | [dB $\mu$ V] |    | [dB $\mu$ V] |    | [dB]   |    |
| 1  | 0.5253        | 40.3         | -    | 40.2         | -    | 0.6                    | 40.9         | -  | 48.0         | -  | 7.1    | -  |
| 2  | 0.9246        | 36.9         | -    | 32.5         | -    | 0.5                    | 37.4         | -  | 48.0         | -  | 10.6   | -  |
| 3  | 1.0512        | 45.8         | -    | 45.7         | -    | 0.5                    | 46.3         | -  | 48.0         | -  | 1.7    | -  |
| 4  | 1.7138        | 43.2         | -    | 42.5         | -    | 0.4                    | 43.6         | -  | 48.0         | -  | 4.4    | -  |
| 5  | 2.8963        | 29.1         | -    | 26.6         | -    | 0.5                    | 29.6         | -  | 48.0         | -  | 18.4   | -  |
| 6  | 5.6579        | 29.4         | -    | 23.7         | -    | 0.8                    | 30.2         | -  | 48.0         | -  | 17.8   | -  |
| 7  | 8.8397        | 23.8         | -    | 20.0         | -    | 1.0                    | 24.8         | -  | 48.0         | -  | 23.2   | -  |
| 8  | 13.5000       | 49.9         | 35.1 | 45.0         | 31.5 | 1.5                    | 38.4         | -  | 48.0         | -  | 9.6    | -  |
| 9  | 27.0000       | 39.0         | -    | 39.1         | -    | 2.4                    | 41.5         | -  | 48.0         | -  | 6.5    | -  |

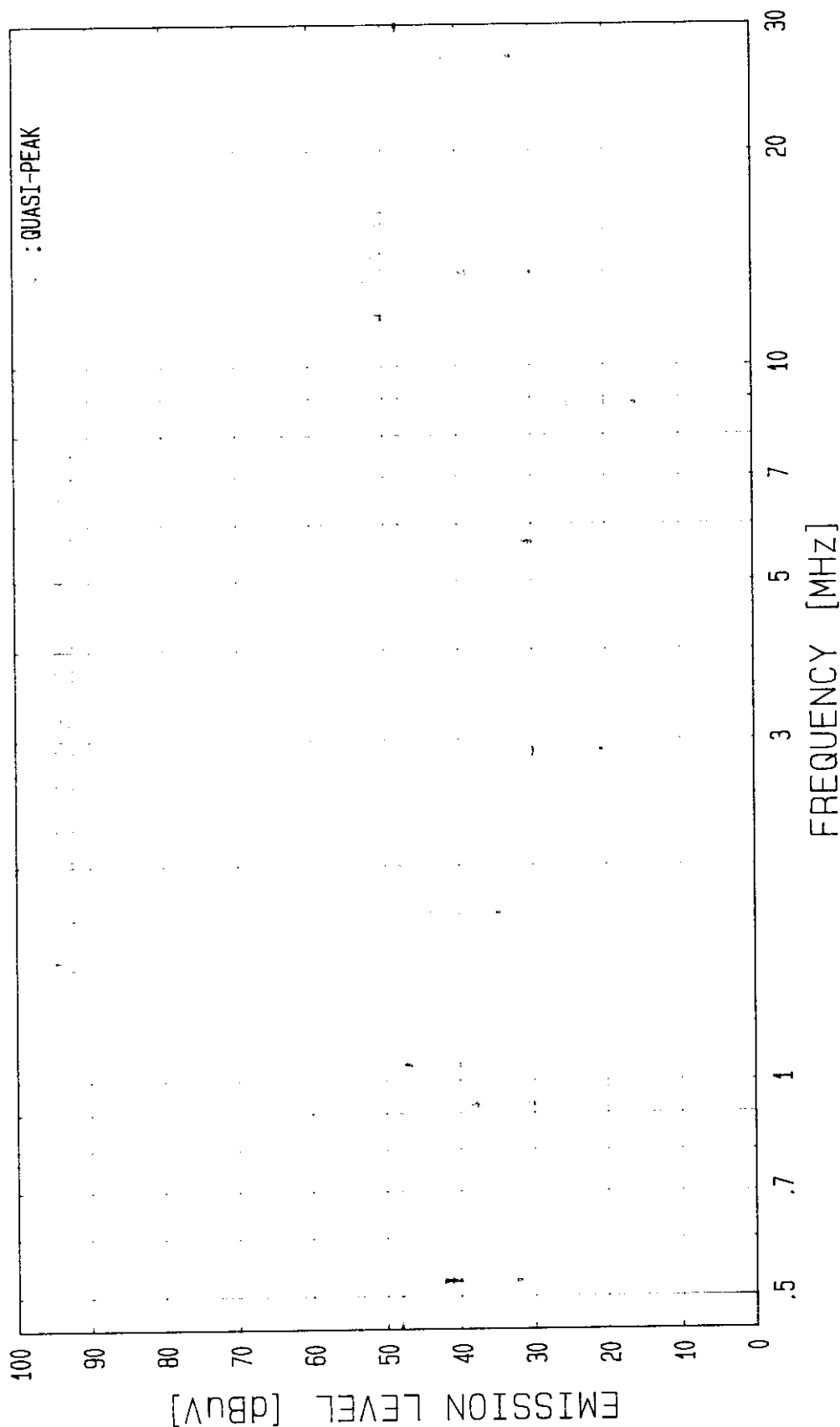
SAMPLE CALCULATION :

RESULT = READING(higher data of N/L) + LISN FACTOR(include cable loss)

Except for the above table : adequate margin data below the limits.

# CONDUCTION TEST

|             |                         |            |                         |
|-------------|-------------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.         | REPORT No. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI               | REGULATION | : FCC Part 15 Subpart B |
| EQUIPMENT   | : MPEG Digital Camera   | CLASS      | : CLASS B               |
| MODEL       | : MP-EG10W              | DATE       | : 02/13/1998            |
| POWER       | : AC120V/60Hz           | FCC ID     | : ABL045                |
| DESCRIPTION | : COMMUNICATION (MODE2) |            |                         |
| REMARKS     | : SERIAL                | ENGINEER   | : KOEI.NAKAMURA         |



# INTERFERENCE VOLTAGE TEST

FCC Part 15 Subpart B

02/13/1998

COMPANY : Hitachi Ltd.  
MODEL : MP-EG10W  
REMARKS : AC120V/60Hz / MODE2 / N  
ENGINEER : KOEI.NAKAMURA  
REPORT No. : 17A0020-02I

LEVEL [dBuV]

110  
90  
70  
50  
30  
10

FREQUENCY [MHz]

.15 .4 1 3 7 10 20 30

# INTERFERENCE VOLTAGE TEST

FCC Part 15 Subpart B

02/13/1998

COMPANY : Hitachi Ltd.  
MODEL : MP-EG10W  
REMARKS : AC120V/60Hz / MODE2 / L  
ENGINEER : KOEI.NAKAMURA  
REPORT No. : 17A0020-02I

LEVEL [dBuV]

110  
90  
70  
50  
30  
10

FREQUENCY [MHz]

.15 .4 1 3 7 10 20 30

*K. Nakamura* A6

# DATA OF CONDUCTIVE TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : RUNNING(MODE3)  
REMARKS : Motion Pictures

REPORT NO. : 17A0020-021  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
DATE : 02/19/1998  
LISN TYPE : LISN(C/N:LS-02)  
FCC ID : ABL045

ENGINEER : KOEI.NAKAMURA

| No | FREQ<br>[MHz] | N            |    | L            |    | LISN<br>FACTOR<br>[dB] | RESULT       |    | LIMITS       |    | MARGIN |    |
|----|---------------|--------------|----|--------------|----|------------------------|--------------|----|--------------|----|--------|----|
|    |               | QP           | AV | QP           | AV |                        | QP           | AV | QP           | AV | QP     | AV |
|    |               | [dB $\mu$ V] |    | [dB $\mu$ V] |    |                        | [dB $\mu$ V] |    | [dB $\mu$ V] |    | [dB]   |    |
| 1  | 0.5254        | 42.4         | -  | 41.1         | -  | -3.5                   | 38.9         | -  | 48.0         | -  | 9.1    | -  |
| 2  | 0.6565        | 40.8         | -  | 41.1         | -  | -3.5                   | 37.6         | -  | 48.0         | -  | 10.4   | -  |
| 3  | 1.0454        | 45.2         | -  | 46.4         | -  | -3.2                   | 43.2         | -  | 48.0         | -  | 4.8    | -  |
| 4  | 1.1812        | 41.8         | -  | 40.6         | -  | -3.2                   | 38.6         | -  | 48.0         | -  | 9.4    | -  |
| 5  | 2.6265        | 36.5         | -  | 37.2         | -  | -3.4                   | 33.8         | -  | 48.0         | -  | 14.2   | -  |
| 6  | 5.5192        | 28.3         | -  | 33.7         | -  | -3.1                   | 30.6         | -  | 48.0         | -  | 17.4   | -  |
| 7  | 8.4084        | 25.3         | -  | 27.5         | -  | -2.6                   | 24.9         | -  | 48.0         | -  | 23.1   | -  |
| 8  | 25.1677       | 19.1         | -  | 19.9         | -  | -1.4                   | 18.5         | -  | 48.0         | -  | 29.5   | -  |

SAMPLE CALCULATION :

RESULT = READING(higher data of N/L) + LISN FACTOR(include cable loss)

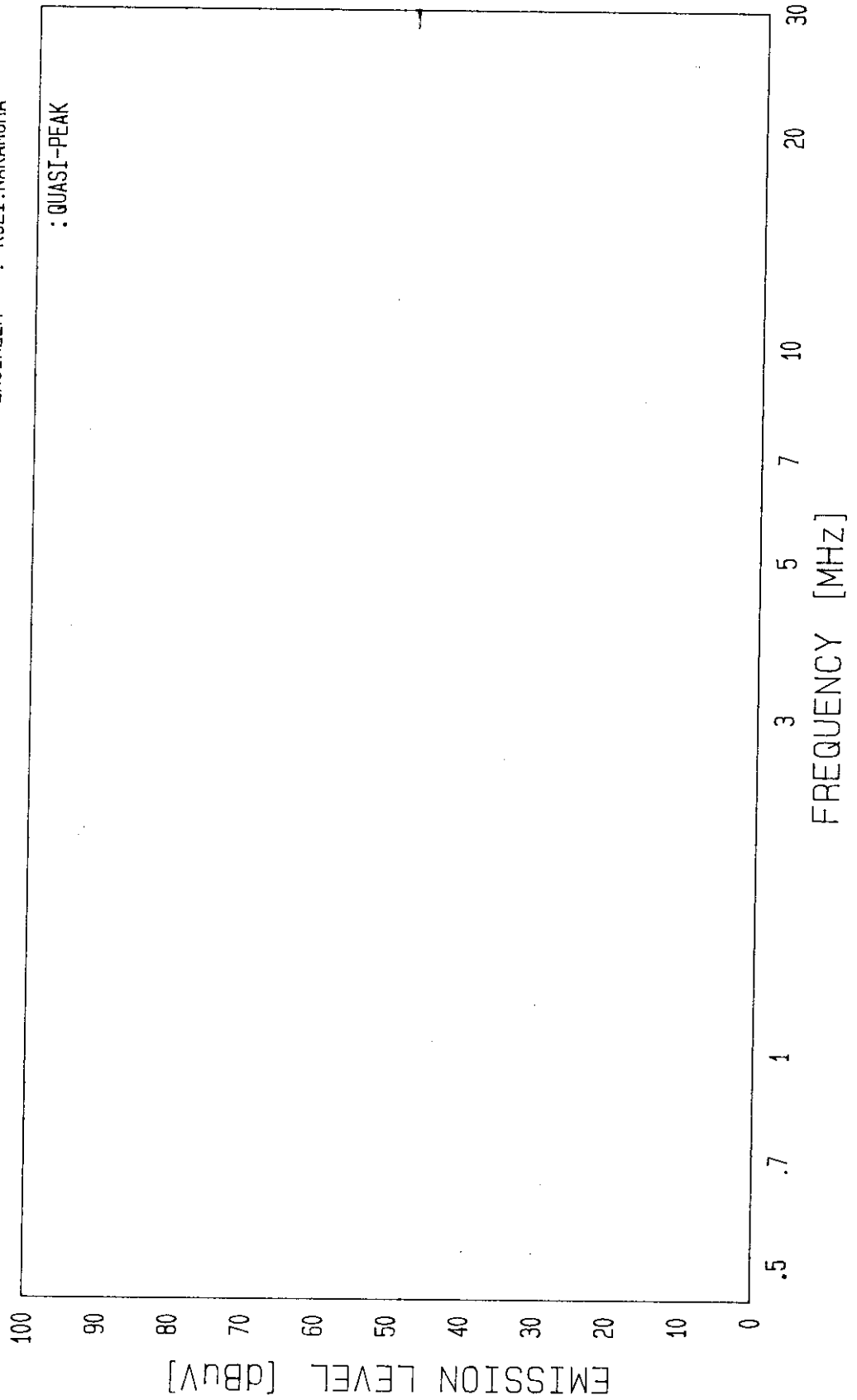
Except for the above table : adequate margin data below the limits.

# CONDUCTION TEST

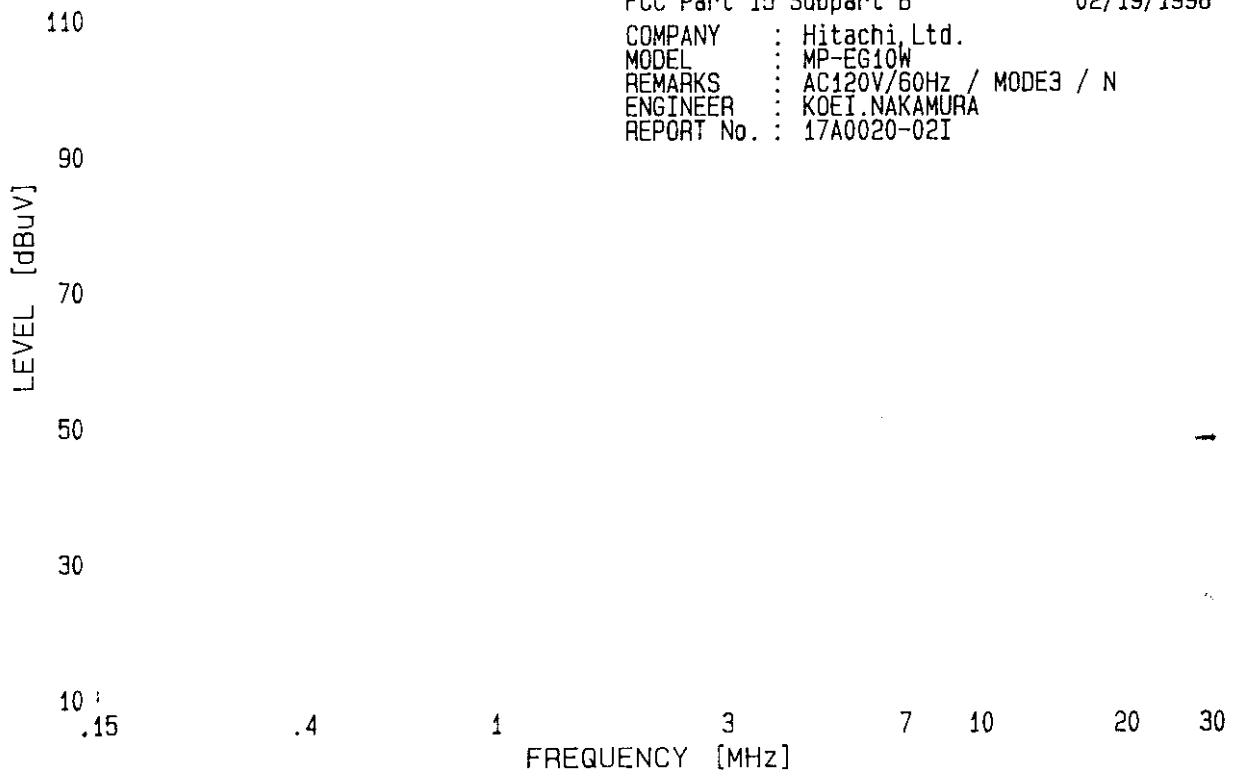
COMPANY : Hitachi, Ltd.  
 TRADE NAME : HITACHI  
 EQUIPMENT : MPEG Digital Camera  
 MODEL : MP-EG10W  
 POWER : AC120V/60Hz  
 DESCRIPTION : RUNNING (MODE3)  
 REMARKS : Motion Pictures

REPORT No. : 17A0020-02I  
 REGULATION : FCC Part 15 Subpart B  
 CLASS : CLASS B  
 DATE : 02/19/1998  
 FCC ID : ABL045

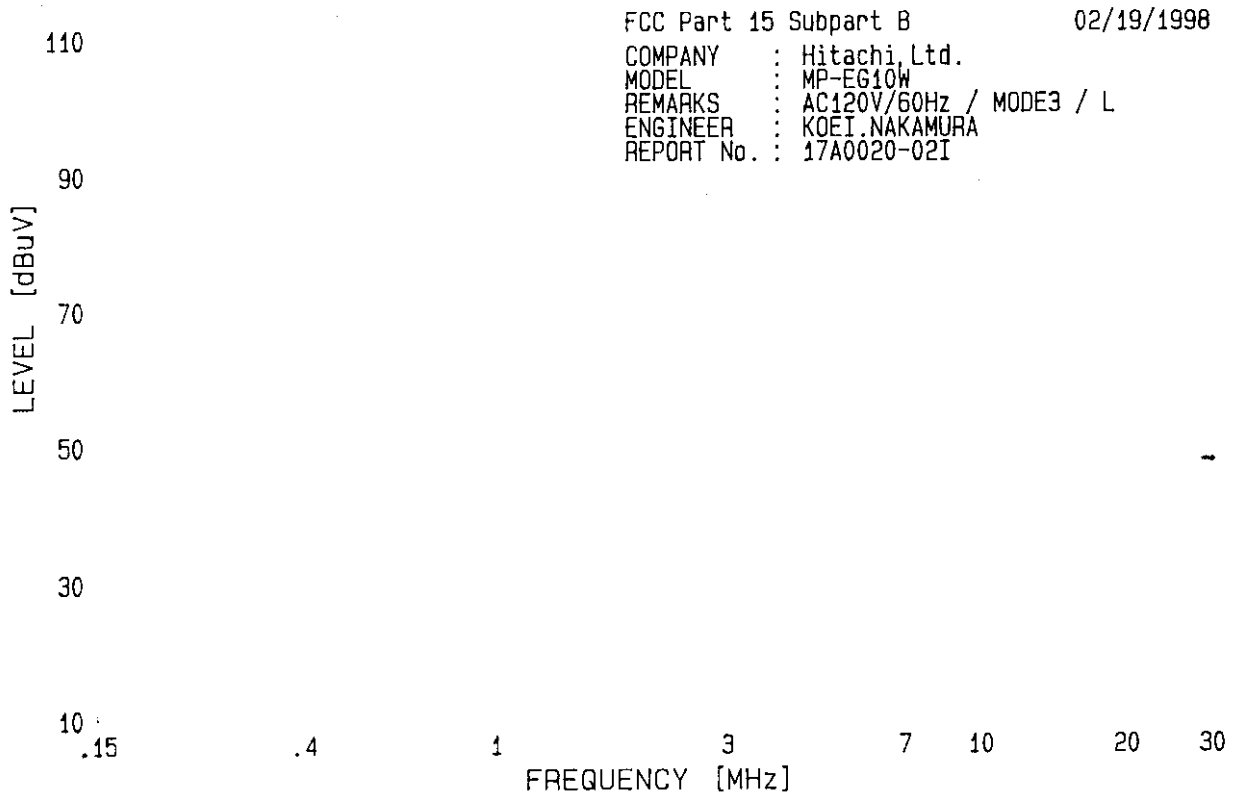
ENGINEER : *H. Nakamura*  
 : KOEI.NAKAMURA



# INTERFERENCE VOLTAGE TEST



# INTERFERENCE VOLTAGE TEST



# DATA OF CONDUCTIVITY TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : STANDBY  
REMARKS :

REPORT NO. : 17A0020-021  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
DATE : 02/19/1998  
LISN TYPE : LISN(C/N:LS-02)  
FCC ID : ABL045

ENGINEER :  KOEI.NAKAMURA

| No | FREQ<br>[MHz] | N        |    | L        |    | LISN<br>FACTOR<br>[dB] | RESULT   |    | LIMITS   |    | MARGIN |    |
|----|---------------|----------|----|----------|----|------------------------|----------|----|----------|----|--------|----|
|    |               | QP       | AV | QP       | AV |                        | QP       | AV | QP       | AV | QP     | AV |
|    |               | [dB μ V] |    | [dB μ V] |    |                        | [dB μ V] |    | [dB μ V] |    | [dB]   |    |
| 1  | 0.5238        | 42.6     | -  | 42.0     | -  | -3.5                   | 39.1     | -  | 48.0     | -  | 8.9    | -  |
| 2  | 0.6551        | 43.3     | -  | 42.9     | -  | -3.5                   | 39.8     | -  | 48.0     | -  | 8.2    | -  |
| 3  | 1.0452        | 49.1     | -  | 49.0     | -  | -3.2                   | 45.9     | -  | 48.0     | -  | 2.1    | -  |
| 4  | 1.1780        | 44.4     | -  | 44.3     | -  | -3.2                   | 41.2     | -  | 48.0     | -  | 6.8    | -  |
| 5  | 2.6170        | 30.2     | -  | 31.3     | -  | -3.4                   | 27.9     | -  | 48.0     | -  | 20.1   | -  |
| 6  | 5.5118        | 28.2     | -  | 31.4     | -  | -3.1                   | 28.2     | -  | 48.0     | -  | 19.8   | -  |
| 7  | 8.3822        | 22.6     | -  | 27.9     | -  | -2.6                   | 25.3     | -  | 48.0     | -  | 22.7   | -  |
| 8  | 25.1765       | 20.5     | -  | 24.1     | -  | -1.4                   | 22.7     | -  | 48.0     | -  | 25.3   | -  |

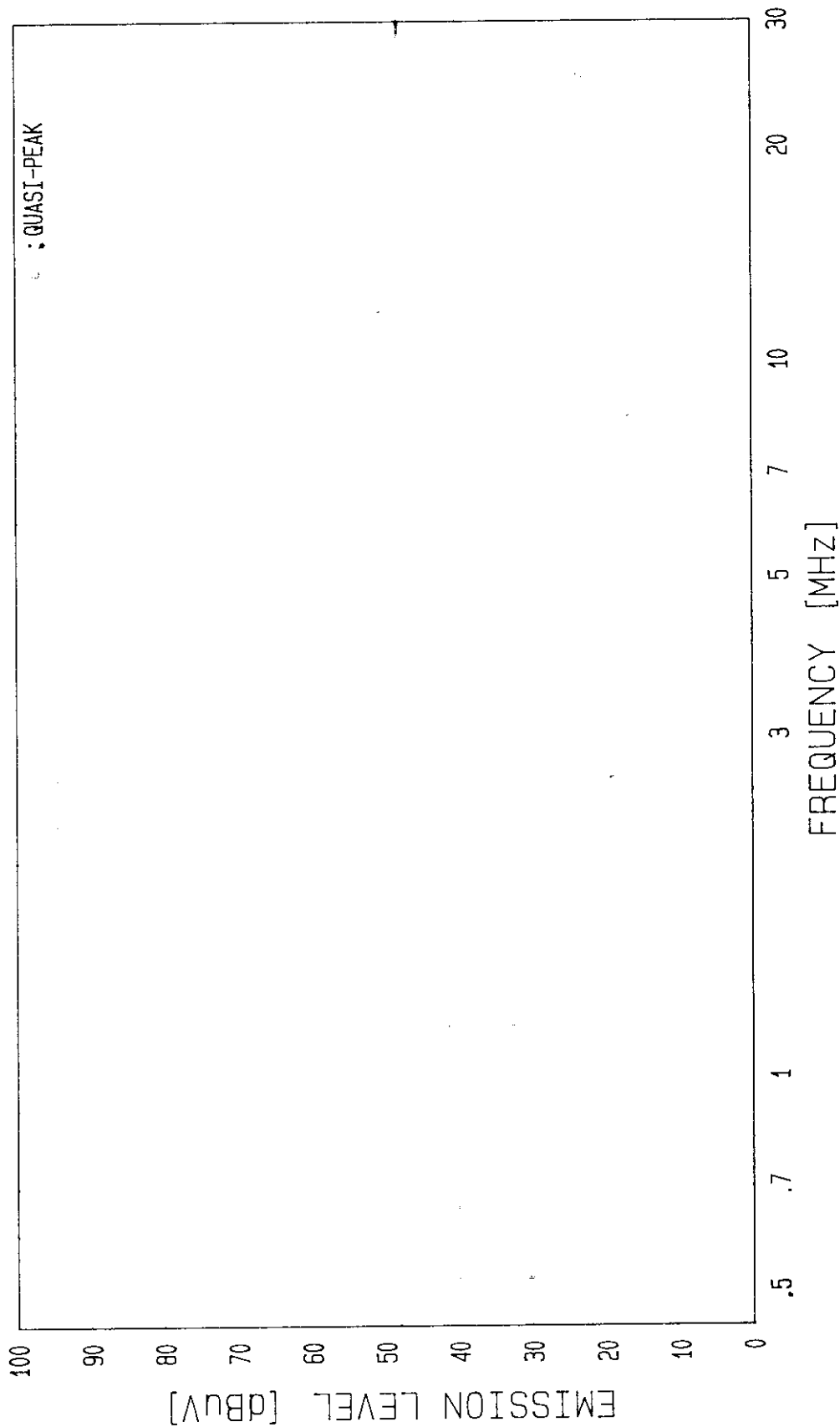
## SAMPLE CALCULATION :

RESULT = READING(higher data of N/L) + LISN FACTOR(include cable loss)

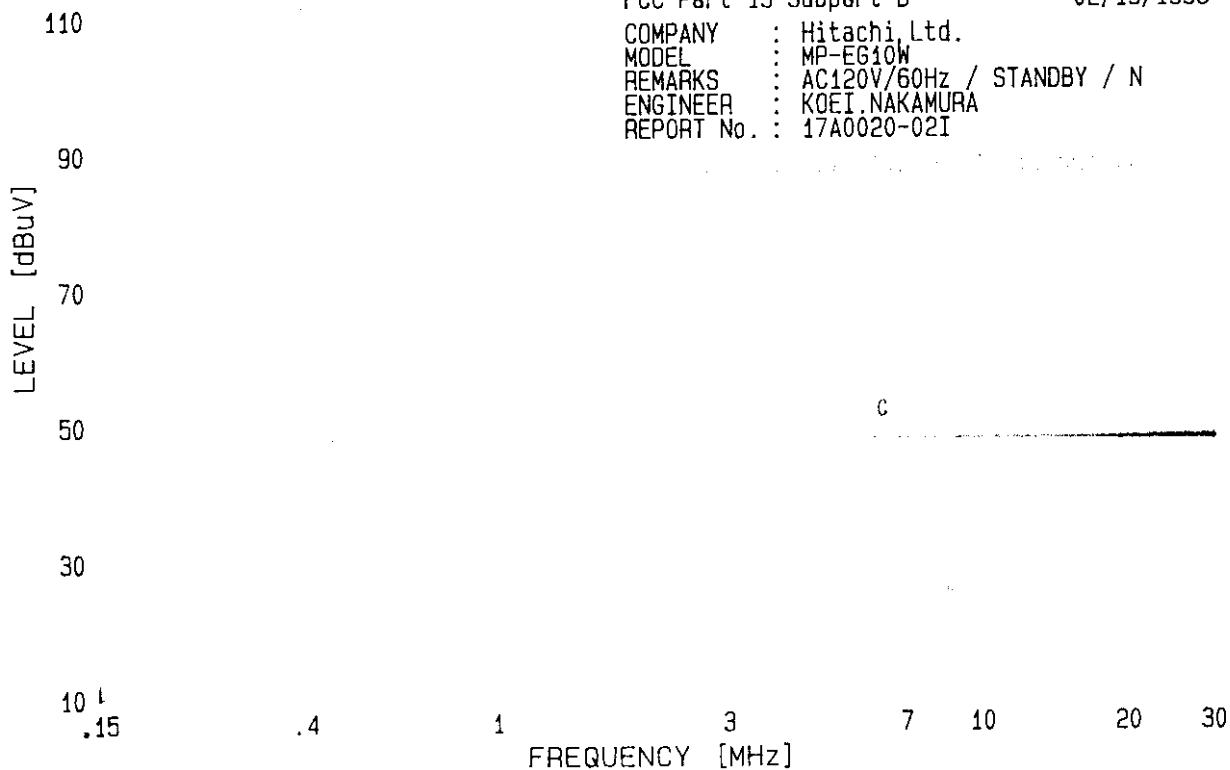
Except for the above table : adequate margin data below the limits.

# CONDUCTION TEST

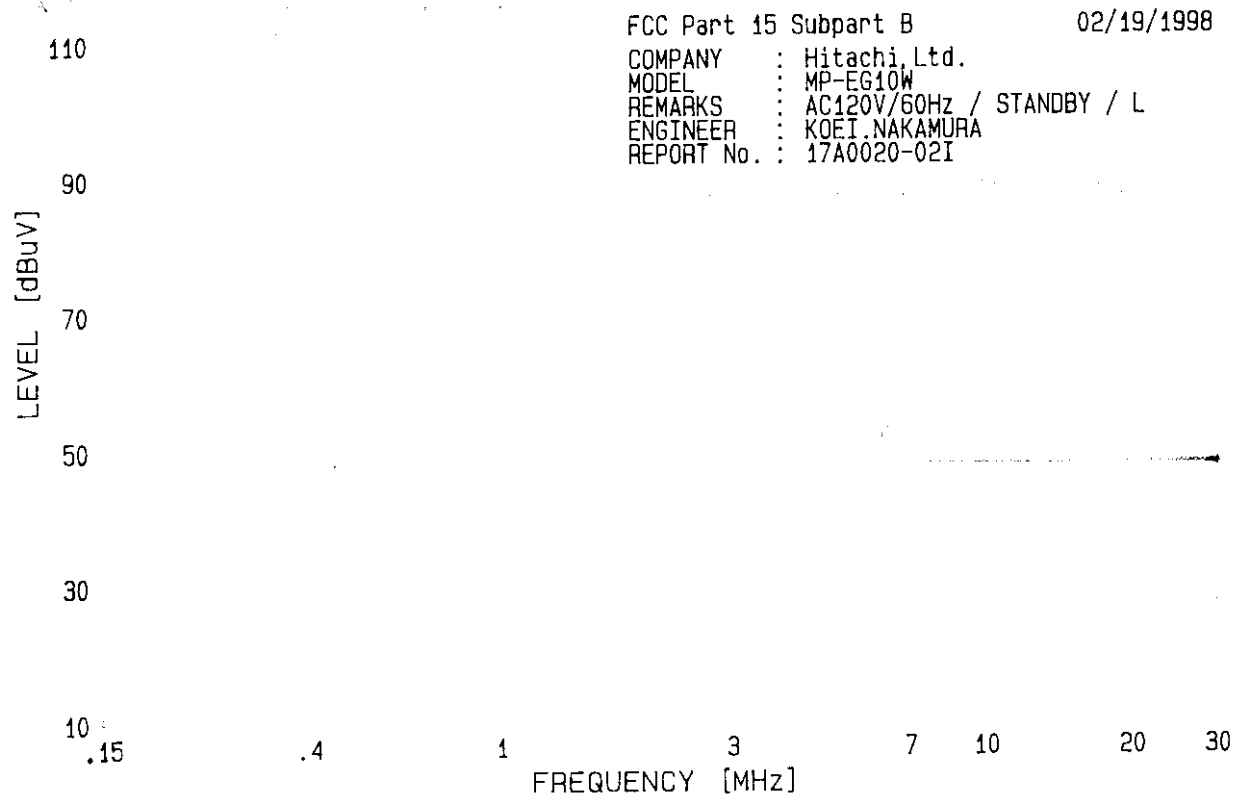
|             |                       |            |                         |
|-------------|-----------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.       | REPORT No. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI             | REGULATION | : FCC Part 15 Subpart B |
| EQUIPMENT   | : MPEG Digital Camera | CLASS      | : CLASS B               |
| MODEL       | : MP-EG10W            | DATE       | : 02/19/1998            |
| POWER       | : AC120V/60Hz         | FCC ID     | : ABL045                |
| DESCRIPTION | : STANDBY             |            |                         |
| REMARKS     | :                     | ENGINEER   | : KOEI.NAKAMURA         |



# INTERFERENCE VOLTAGE TEST



# INTERFERENCE VOLTAGE TEST



Name

Page

*K. Nakamura* A12

A -- P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

|             |                        |            |                         |
|-------------|------------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.        | REPORT NO. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI              | REGULATION | : FCC Part 15 Subpart B |
| EQUIPMENT   | : MPEG Digital Camera  | CLASS      | : CLASS B               |
| MODEL       | : MP-EG10W             | DATE       | : 02/19/1998            |
| POWER       | : AC120V/60Hz          | LISN TYPE  | : LISN(C/N:LS-02)       |
| DESCRIPTION | : COMMUNICATION(MODE5) | FCC ID     | : ABL045                |
| REMARKS     | : LINE IN RECORDING    |            |                         |

*K. Nakamura*  
ENGINEER : KOEI.NAKAMURA

| No | FREQ<br>[MHz] | N            |    | L            |    | LISN<br>FACTOR<br>[dB] | RESULT       |    | LIMITS       |    | MARGIN |    |
|----|---------------|--------------|----|--------------|----|------------------------|--------------|----|--------------|----|--------|----|
|    |               | QP           | AV | QP           | AV |                        | QP           | AV | QP           | AV | QP     | AV |
|    |               | [dB $\mu$ V] |    | [dB $\mu$ V] |    |                        | [dB $\mu$ V] |    | [dB $\mu$ V] |    | [dB]   |    |
| 1  | 0.5240        | 45.0         | -  | 44.3         | -  | -3.5                   | 41.5         | -  | 48.0         | -  | 6.5    | -  |
| 2  | 0.6571        | 44.2         | -  | 43.7         | -  | -3.5                   | 40.7         | -  | 48.0         | -  | 7.3    | -  |
| 3  | 1.0442        | 47.7         | -  | 47.3         | -  | -3.2                   | 44.5         | -  | 48.0         | -  | 3.5    | -  |
| 4  | 1.1818        | 45.4         | -  | 45.1         | -  | -3.2                   | 42.2         | -  | 48.0         | -  | 5.8    | -  |
| 5  | 2.6393        | 40.1         | -  | 43.6         | -  | -3.4                   | 40.2         | -  | 48.0         | -  | 7.8    | -  |
| 6  | 5.5070        | 38.7         | -  | 42.5         | -  | -3.1                   | 39.4         | -  | 48.0         | -  | 8.7    | -  |
| 7  | 8.3880        | 29.1         | -  | 31.1         | -  | -2.6                   | 28.5         | -  | 48.0         | -  | 19.5   | -  |
| 8  | 20.9714       | 27.3         | -  | 31.2         | -  | -1.6                   | 29.6         | -  | 48.0         | -  | 18.4   | -  |
| 9  | 25.1661       | 25.8         | -  | 28.5         | -  | -1.4                   | 27.1         | -  | 48.0         | -  | 20.9   | -  |

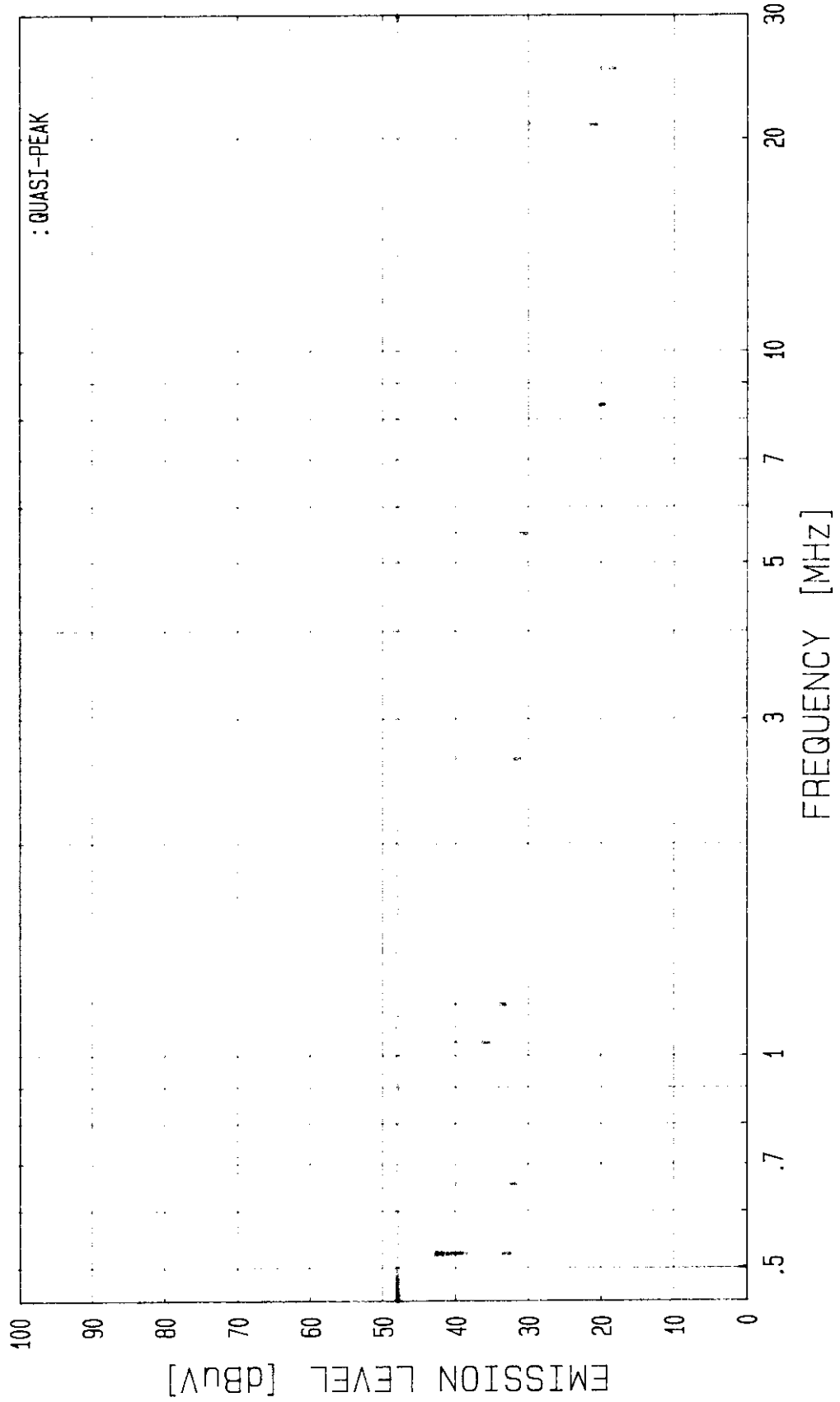
## SAMPLE CALCULATION :

RESULT = READING(higher data of N/L) + LISN FACTOR(include cable loss)

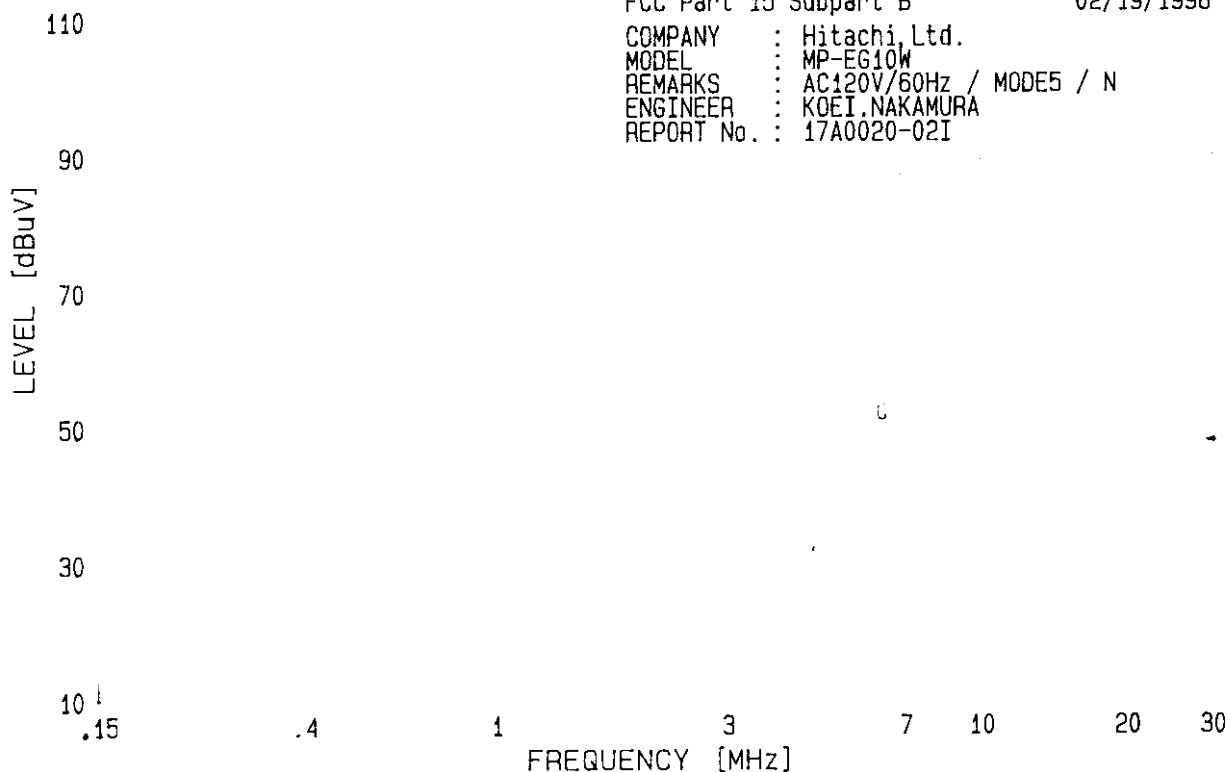
Except for the above table : adequate margin data below the limits.

# CONDUCTION TEST

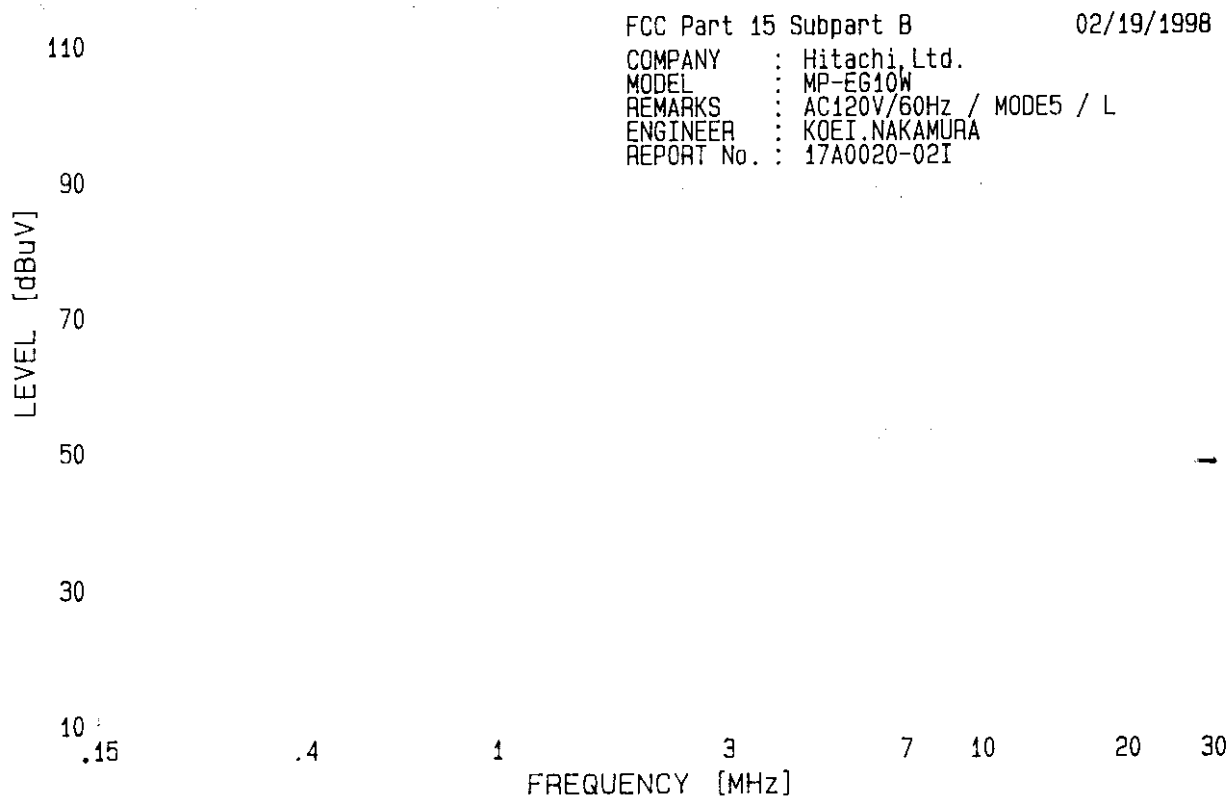
|             |                         |            |                         |
|-------------|-------------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.         | REPORT No. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI               | REGULATION | : FCC Part 15 Subpart B |
| EQUIPMENT   | : MPEG Digital Camera   | CLASS      | : CLASS B               |
| MODEL       | : MP-EG10W              | DATE       | : 02/19/1998            |
| POWER       | : AC120V/60Hz           | FCC ID     | : ABL045                |
| DESCRIPTION | : COMMUNICATION (MODE5) |            |                         |
| REMARKS     | : LINE IN RECORDING     | ENGINEER   | : KOEI.NAKAMURA         |



# INTERFERENCE VOLTAGE TEST



# INTERFERENCE VOLTAGE TEST



# DATA OF RADIATION TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : COMMUNICATION(MODE1)  
REMARKS : SERIAL  
DATE : 02/21/1998

REPORT NO. : 17A0020-021  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
TEST DISTANCE : 3m  
ATTENUATOR : 6dB  
FCC ID : ABL045

  
ENGINEER : KOEI, NAKAMURA

| No | FREQ<br>[MHz] | ANT<br>TYPE | READING                   |                           | ANT<br>FACTOR<br>[dB] | CABLE<br>LOSS<br>[dB] | AMP<br>GAIN<br>[dB] | RESULT                      |                             | FCC<br>LIMITS<br>[dB $\mu$ V/m]<br>3m | MARGIN      |             |
|----|---------------|-------------|---------------------------|---------------------------|-----------------------|-----------------------|---------------------|-----------------------------|-----------------------------|---------------------------------------|-------------|-------------|
|    |               |             | HOR<br>[dB $\mu$ V]<br>3m | VER<br>[dB $\mu$ V]<br>3m |                       |                       |                     | HOR<br>[dB $\mu$ V/m]<br>3m | VER<br>[dB $\mu$ V/m]<br>3m |                                       | HOR<br>[dB] | VER<br>[dB] |
| 1  | 46.38         | BC          | 27.2                      | 38.1                      | 11.8                  | 1.5                   | 28.1                | 18.4                        | 29.3                        | 40.0                                  | 21.6        | 10.7        |
| 2  | 76.37         | BC          | 37.2                      | 41.2                      | 5.6                   | 1.8                   | 28.1                | 22.5                        | 26.5                        | 40.0                                  | 17.5        | 13.5        |
| 3  | 92.97         | BC          | 37.0                      | 40.9                      | 8.3                   | 2.0                   | 28.1                | 25.2                        | 29.1                        | 43.5                                  | 18.3        | 14.4        |
| 4  | 135.95        | BC          | 39.1                      | 36.8                      | 13.3                  | 2.4                   | 28.0                | 32.8                        | 30.5                        | 43.5                                  | 10.7        | 13.0        |
| 5  | 157.44        | BC          | 30.4                      | 29.9                      | 15.0                  | 2.6                   | 28.0                | 26.0                        | 25.5                        | 43.5                                  | 17.5        | 18.0        |
| 6  | 215.12        | BC          | 39.6                      | 29.1                      | 17.3                  | 3.1                   | 27.8                | 38.2                        | 27.7                        | 43.5                                  | 5.3         | 15.8        |
| 7  | 324.01        | LP          | 34.4                      | 29.7                      | 16.3                  | 3.8                   | 27.8                | 32.7                        | 28.0                        | 46.0                                  | 13.3        | 18.0        |
| 8  | 486.00        | LP          | 38.1                      | 36.2                      | 18.8                  | 4.8                   | 27.7                | 40.0                        | 38.1                        | 46.0                                  | 6.0         | 7.9         |
| 9  | 702.01        | LP          | 25.9                      | 33.5                      | 21.6                  | 6.0                   | 27.3                | 32.2                        | 39.8                        | 46.0                                  | 13.8        | 6.2         |

## SAMPLE CALCULATION :

RESULT = READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table : adequate margin data below the limits.

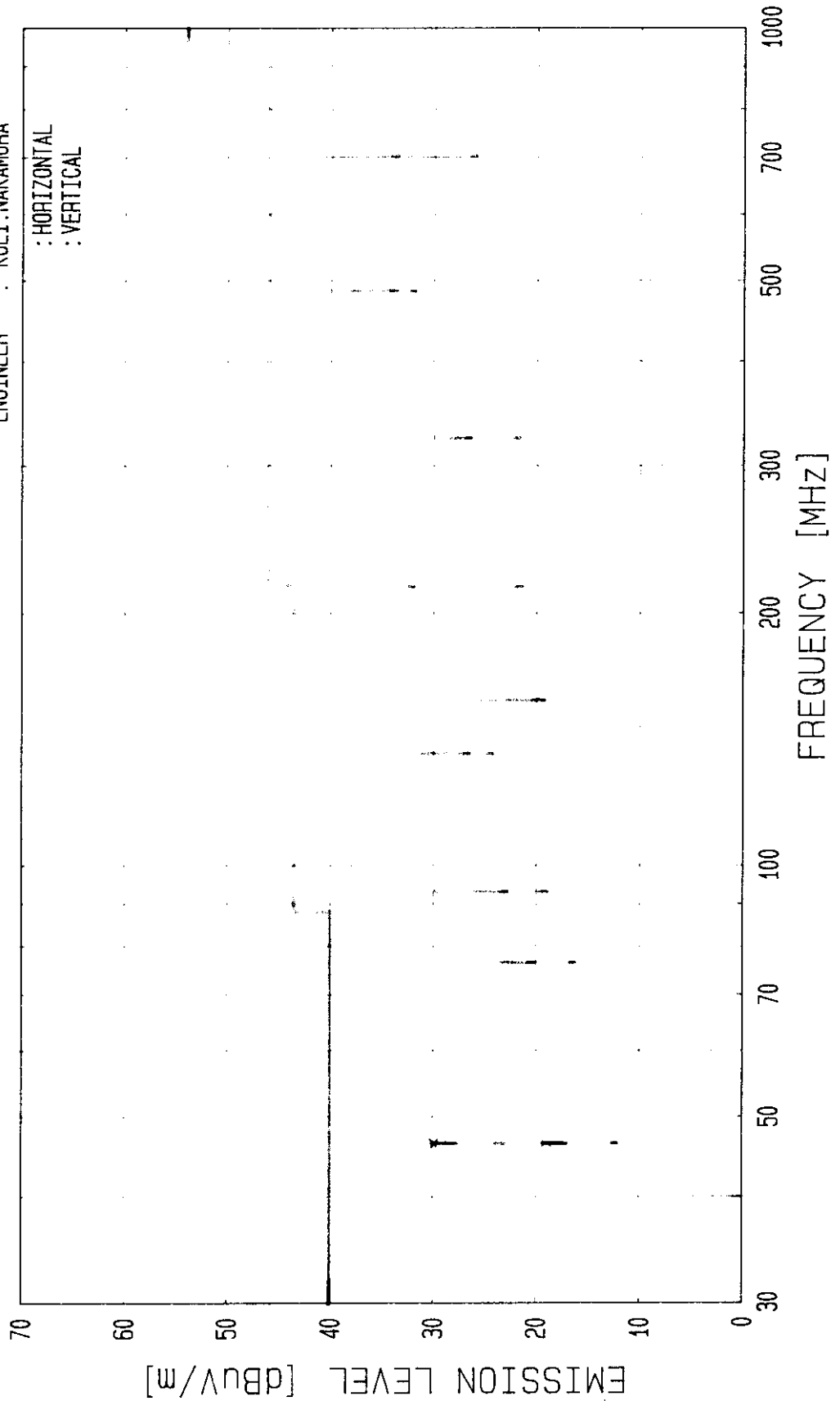
# RADIATION TEST

COMPANY : Hitachi, Ltd.  
 TRADE NAME : HITACHI  
 EQUIPMENT : MPEG Digital Camera  
 MODEL : MP-EG10W  
 POWER : AC120V/60Hz  
 DESCRIPTION : COMMUNICATION (MODE1)  
 REMARKS : SERIAL

REPORT No. : 17A0020-02I  
 DATE : 02/21/1998  
 REGULATION : FCC Part 15 Subpart B  
 CLASS : CLASS B  
 DISTANCE : 3m  
 FCC ID : ABL045

ENGINEER : KOEI.NAKAMURA

: HORIZONTAL  
 : VERTICAL



# DATA OF RADIATION TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : COMMUNICATION(MODE2)  
REMARKS : SERIAL  
DATE : 02/21/1998

REPORT NO. : 17A0020-02I  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
TEST DISTANCE : 3m  
ATTENUATOR : 6dB  
FCC ID : ABL045

  
ENGINEER : KOEI.NAKAMURA

| No | FREQ<br>[MHz] | ANT<br>TYPE | READING            |      | ANT<br>FACTOR<br>[dB] | CABLE<br>LOSS<br>[dB] | AMP<br>GAIN<br>[dB] | RESULT               |      | FCC<br>LIMITS<br>[dB $\mu$ V/m]<br>3m | MARGIN |      |
|----|---------------|-------------|--------------------|------|-----------------------|-----------------------|---------------------|----------------------|------|---------------------------------------|--------|------|
|    |               |             | HOR                | VER  |                       |                       |                     | HOR                  | VER  |                                       | HOR    | VER  |
|    |               |             | [dB $\mu$ V]<br>3m |      |                       |                       |                     | [dB $\mu$ V/m]<br>3m |      |                                       | [dB]   |      |
| 1  | 47.47         | BC          | 26.7               | 34.7 | 11.5                  | 1.5                   | 28.1                | 17.6                 | 25.6 | 40.0                                  | 22.4   | 14.4 |
| 2  | 80.30         | BC          | 36.8               | 40.5 | 6.2                   | 1.8                   | 28.1                | 22.7                 | 26.4 | 40.0                                  | 17.3   | 13.6 |
| 3  | 94.51         | BC          | 36.3               | 38.6 | 8.5                   | 2.0                   | 28.1                | 24.7                 | 27.0 | 43.5                                  | 18.8   | 16.5 |
| 4  | 135.91        | BC          | 38.5               | 36.8 | 13.3                  | 2.4                   | 28.0                | 32.2                 | 30.5 | 43.5                                  | 11.3   | 13.0 |
| 5  | 161.43        | BC          | 28.4               | 24.9 | 15.2                  | 2.7                   | 28.0                | 24.3                 | 20.8 | 43.5                                  | 19.2   | 22.7 |
| 6  | 216.00        | BC          | 30.5               | 31.0 | 17.3                  | 3.1                   | 27.8                | 29.1                 | 29.6 | 43.5                                  | 14.4   | 13.9 |
| 7  | 324.01        | LP          | 34.5               | 29.2 | 16.3                  | 3.8                   | 27.8                | 32.8                 | 27.5 | 46.0                                  | 13.2   | 18.5 |
| 8  | 486.01        | LP          | 36.8               | 37.6 | 18.8                  | 4.8                   | 27.7                | 38.7                 | 39.5 | 46.0                                  | 7.3    | 6.5  |
| 9  | 702.00        | LP          | 26.8               | 33.0 | 21.6                  | 6.0                   | 27.3                | 33.1                 | 39.3 | 46.0                                  | 12.9   | 6.7  |

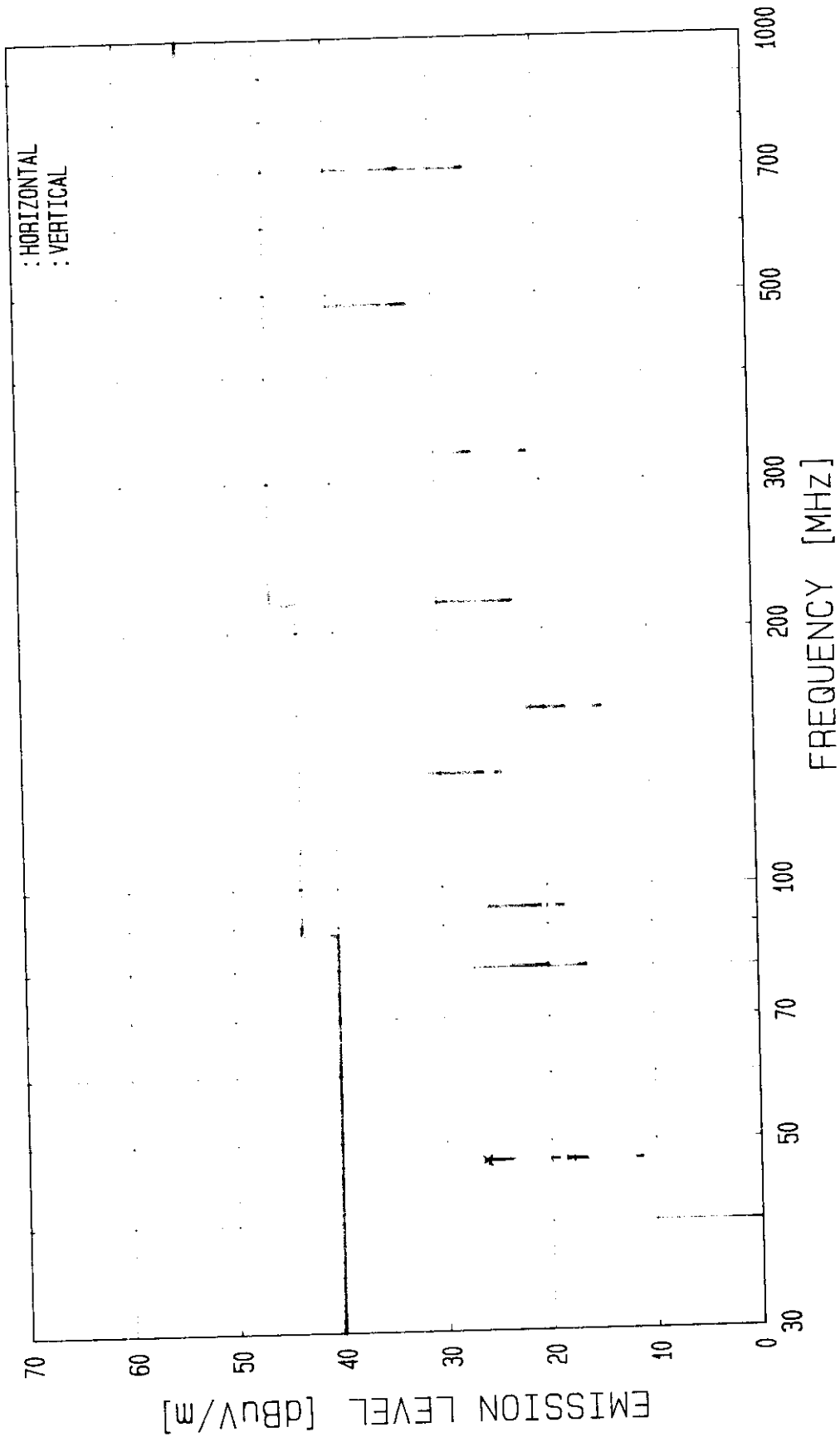
SAMPLE CALCULATION :

RESULT = READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table : adequate margin data below the limits.

# RADIATION TEST

|             |                         |            |                         |
|-------------|-------------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.         | REPORT No. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI               | DATE       | : 02/21/1998            |
| EQUIPMENT   | : MPEG Digital Camera   | REGULATION | : FCC Part 15 Subpart B |
| MODEL       | : MP-EG10W              | CLASS      | : CLASS B               |
| POWER       | : AC120V/60Hz           | DISTANCE   | : 3m                    |
| DESCRIPTION | : COMMUNICATION (MODE2) | FCC ID     | : ABL045                |
| REMARKS     | : SERIAL                | ENGINEER   | : KOEI.NAKAMURA         |



A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

|             |                       |               |                         |
|-------------|-----------------------|---------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.       | REPORT NO.    | : 17A0020-021           |
| TRADE NAME  | : HITACHI             | REGULATION    | : FCC Part 15 Subpart B |
| EQUIPMENT   | : MPEG Digital Camera | CLASS         | : CLASS B               |
| MODEL       | : MP-EG10W            | TEST DISTANCE | : 3m                    |
| POWER       | : AC120V/60Hz         | ATTENUATOR    | : 6dB                   |
| DESCRIPTION | : RUNNING (MODE3)     | FCC ID        | : ABL045                |
| REMARKS     | : Motion Pictures     |               |                         |
| DATE        | : 02/21/1998          |               |                         |

*K. Nakamura*  
ENGINEER : KOEI.NAKAMURA

| No | FREQ<br>[MHz] | ANT<br>TYPE | READING                   |                           | ANT<br>FACTOR<br>[dB] | CABLE<br>LOSS<br>[dB] | AMP<br>GAIN<br>[dB] | RESULT                      |                             | FCC<br>LIMITS<br>[dB $\mu$ V/m]<br>3m | MARGIN      |             |
|----|---------------|-------------|---------------------------|---------------------------|-----------------------|-----------------------|---------------------|-----------------------------|-----------------------------|---------------------------------------|-------------|-------------|
|    |               |             | HOR<br>[dB $\mu$ V]<br>3m | VER<br>[dB $\mu$ V]<br>3m |                       |                       |                     | HOR<br>[dB $\mu$ V/m]<br>3m | VER<br>[dB $\mu$ V/m]<br>3m |                                       | HOR<br>[dB] | VER<br>[dB] |
| 1  | 47.74         | BC          | 31.7                      | 41.0                      | 11.4                  | 1.5                   | 28.1                | 22.5                        | 31.8                        | 40.0                                  | 17.5        | 8.2         |
| 2  | 53.85         | BC          | 25.4                      | 32.8                      | 9.6                   | 1.5                   | 28.1                | 14.4                        | 21.8                        | 40.0                                  | 25.6        | 18.2        |
| 3  | 80.19         | BC          | 37.0                      | 38.2                      | 6.2                   | 1.8                   | 28.1                | 22.9                        | 24.1                        | 40.0                                  | 17.1        | 15.9        |
| 4  | 94.53         | BC          | 36.3                      | 39.8                      | 8.5                   | 2.0                   | 28.1                | 24.7                        | 28.2                        | 43.5                                  | 18.8        | 15.3        |
| 5  | 136.00        | BC          | 28.2                      | 29.1                      | 13.3                  | 2.4                   | 28.0                | 21.9                        | 22.8                        | 43.5                                  | 21.6        | 20.7        |
| 6  | 161.40        | BC          | 33.2                      | 27.7                      | 15.2                  | 2.7                   | 28.0                | 29.1                        | 23.6                        | 43.5                                  | 14.4        | 19.9        |
| 7  | 216.00        | BC          | 33.2                      | 26.3                      | 17.3                  | 3.1                   | 27.8                | 31.8                        | 24.9                        | 43.5                                  | 11.7        | 18.6        |
| 8  | 324.00        | LP          | 29.4                      | 25.8                      | 16.3                  | 3.8                   | 27.8                | 27.7                        | 24.1                        | 46.0                                  | 18.3        | 21.9        |
| 9  | 486.01        | LP          | 26.8                      | 29.5                      | 18.8                  | 4.8                   | 27.7                | 28.7                        | 31.4                        | 46.0                                  | 17.3        | 14.6        |
| 10 | 648.01        | LP          | 22.6                      | 34.4                      | 20.7                  | 5.6                   | 27.3                | 27.6                        | 39.4                        | 46.0                                  | 18.4        | 6.6         |

SAMPLE CALCULATION :

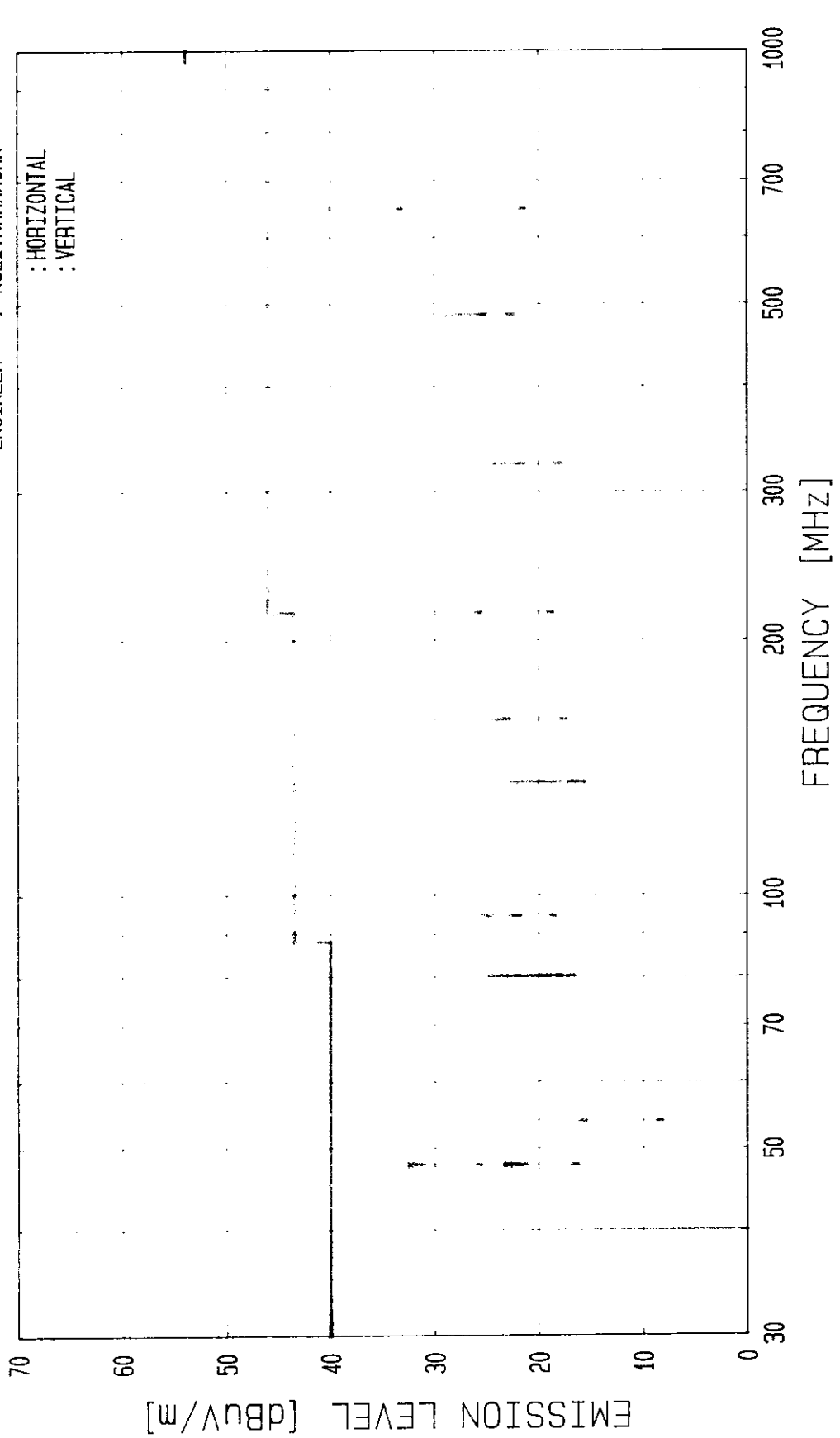
RESULT = READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table : adequate margin data below the limits.

# RADIATION TEST

|             |                       |            |                         |
|-------------|-----------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.       | REPORT No. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI             | DATE       | : 02/21/1998            |
| EQUIPMENT   | : MPEG Digital Camera | REGULATION | : FCC Part 15 Subpart B |
| MODEL       | : MP-EG10W            | CLASS      | : CLASS B               |
| POWER       | : AC120V/60Hz         | DISTANCE   | : 3m                    |
| DESCRIPTION | : RUNNING (MODE3)     | FCC ID     | : ABL045                |
| REMARKS     | : Motion Pictures     |            |                         |

ENGINEER : KOEI NAKAMURA



# DATA OF RADIATION TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : STANDBY  
REMARKS :  
DATE : 02/21/1998

REPORT NO. : 17A0020-02I  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
TEST DISTANCE : 3m  
ATTENUATOR : 6dB  
FCC ID : ABL045

ENGINEER :   
KOEI.NAKAMURA

| No | FREQ<br>[MHz] | ANT<br>TYPE | READING              |                      | ANT<br>FACTOR<br>[dB] | CABLE<br>LOSS<br>[dB] | AMP<br>GAIN<br>[dB] | RESULT                 |                        | FCC<br>LIMITS<br>[dB μV/m]<br>3m | MARGIN      |             |
|----|---------------|-------------|----------------------|----------------------|-----------------------|-----------------------|---------------------|------------------------|------------------------|----------------------------------|-------------|-------------|
|    |               |             | HOR<br>[dB μV]<br>3m | VER<br>[dB μV]<br>3m |                       |                       |                     | HOR<br>[dB μV/m]<br>3m | VER<br>[dB μV/m]<br>3m |                                  | HOR<br>[dB] | VER<br>[dB] |
| 1  | 46.11         | BC          | 26.6                 | 36.0                 | 11.9                  | 1.5                   | 28.1                | 17.9                   | 27.3                   | 40.0                             | 22.1        | 12.7        |
| 2  | 52.98         | BC          | 26.7                 | 31.7                 | 9.8                   | 1.5                   | 28.1                | 15.9                   | 20.9                   | 40.0                             | 24.1        | 19.1        |
| 3  | 78.56         | BC          | 35.4                 | 40.1                 | 6.0                   | 1.8                   | 28.1                | 21.1                   | 25.8                   | 40.0                             | 18.9        | 14.2        |
| 4  | 94.46         | BC          | 40.6                 | 36.6                 | 8.5                   | 2.0                   | 28.1                | 29.0                   | 25.0                   | 43.5                             | 14.5        | 18.5        |
| 5  | 135.99        | BC          | 28.9                 | 27.5                 | 13.3                  | 2.4                   | 28.0                | 22.6                   | 21.2                   | 43.5                             | 20.9        | 22.3        |
| 6  | 162.00        | BC          | 30.0                 | 28.8                 | 15.3                  | 2.7                   | 28.0                | 26.0                   | 24.8                   | 43.5                             | 17.5        | 18.7        |
| 7  | 229.50        | BC          | 29.5                 | 29.2                 | 17.4                  | 3.3                   | 27.9                | 28.3                   | 28.0                   | 46.0                             | 17.7        | 18.0        |
| 8  | 324.00        | LP          | 36.4                 | 29.9                 | 16.3                  | 3.8                   | 27.8                | 34.7                   | 28.2                   | 46.0                             | 11.3        | 17.8        |
| 9  | 486.00        | LP          | 35.6                 | 35.8                 | 18.8                  | 4.8                   | 27.7                | 37.5                   | 37.7                   | 46.0                             | 8.5         | 8.3         |
| 10 | 702.01        | LP          | 26.6                 | 32.5                 | 21.6                  | 6.0                   | 27.3                | 32.9                   | 38.8                   | 46.0                             | 13.1        | 7.2         |

SAMPLE CALCULATION :

RESULT = READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

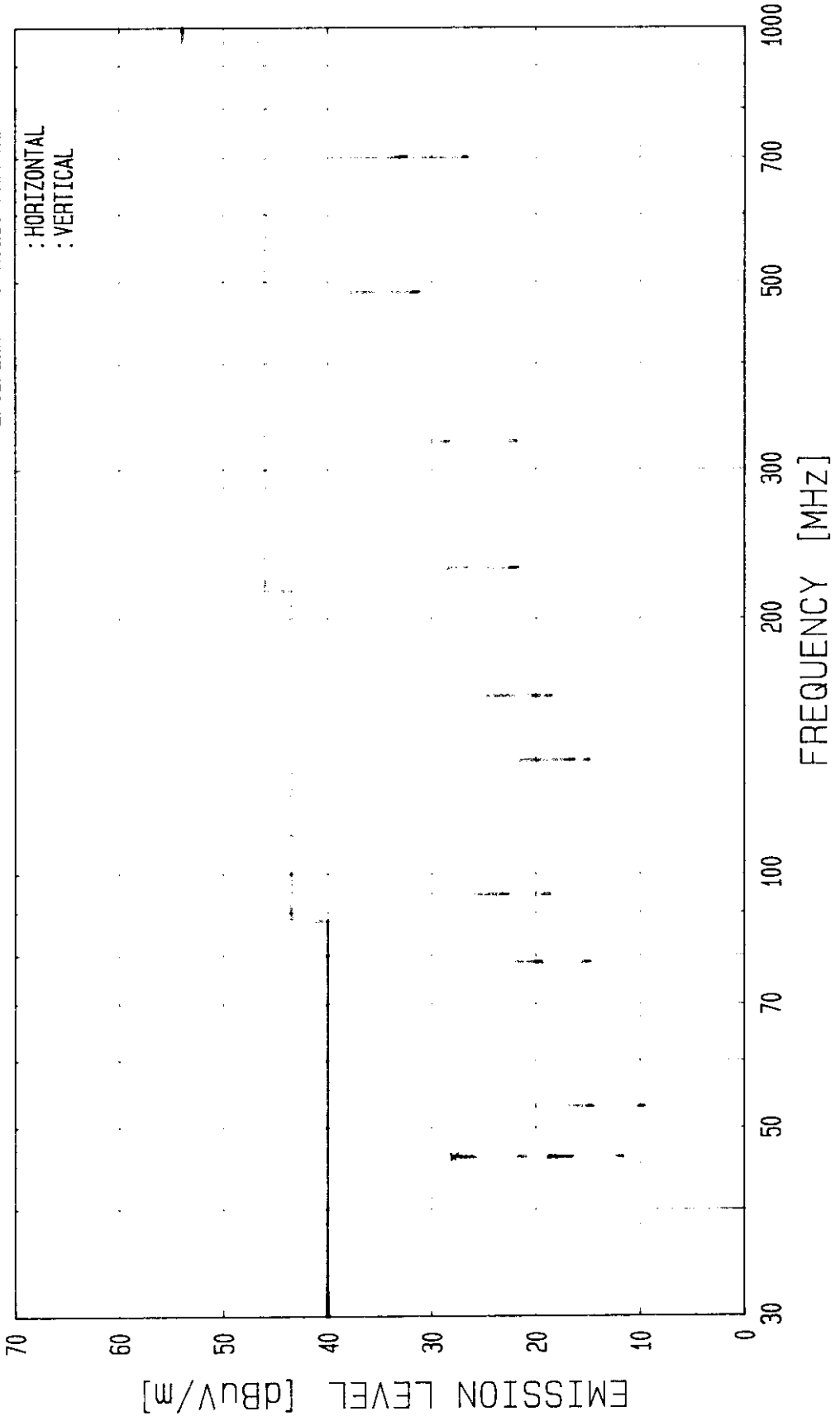
Except for the above table : adequate margin data below the limits.

# RADIATION TEST

|             |                       |            |                         |
|-------------|-----------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.       | REPORT No. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI             | DATE       | : 02/21/1998            |
| EQUIPMENT   | : MPEG Digital Camera | REGULATION | : FCC Part 15 Subpart B |
| MODEL       | : MP-EG10W            | CLASS      | : CLASS B               |
| POWER       | : AC120V/60Hz         | DISTANCE   | : 3m                    |
| DESCRIPTION | : STANDBY             | FCC ID     | : ABL045                |
| REMARKS     | :                     |            |                         |

ENGINEER : KOEI.NAKAMURA

*K. Nakamura*



# DATA OF RADIATION TEST

A - P E X INTERNATIONAL CO., LTD.  
YOKOWA NO.3 SITE

COMPANY : Hitachi, Ltd.  
TRADE NAME : HITACHI  
EQUIPMENT : MPEG Digital Camera  
MODEL : MP-EG10W  
POWER : AC120V/60Hz  
DESCRIPTION : COMMUNICATION(MODE5)  
REMARKS : LINE IN RECORDING  
DATE : 02/21/1998

REPORT NO. : 17A0020-021  
REGULATION : FCC Part 15 Subpart B  
CLASS : CLASS B  
TEST DISTANCE : 3m  
ATTENUATOR : 6dB  
FCC ID : ABL045

  
ENGINEER : KOEI.NAKAMURA

| No | FREQ<br>[MHz] | ANT<br>TYPE | READING            |      | ANT<br>FACTOR<br>[dB] | CABLE<br>LOSS<br>[dB] | AMP<br>GAIN<br>[dB] | RESULT               |      | FCC<br>LIMITS<br>[dB $\mu$ V/m]<br>3m | MARGIN |      |
|----|---------------|-------------|--------------------|------|-----------------------|-----------------------|---------------------|----------------------|------|---------------------------------------|--------|------|
|    |               |             | HOR                | VER  |                       |                       |                     | HOR                  | VER  |                                       | HOR    | VER  |
|    |               |             | [dB $\mu$ V]<br>3m |      |                       |                       |                     | [dB $\mu$ V/m]<br>3m |      |                                       | [dB]   |      |
| 1  | 47.16         | BC          | 35.6               | 45.4 | 11.6                  | 1.5                   | 28.1                | 26.6                 | 36.4 | 40.0                                  | 13.4   | 3.6  |
| 2  | 55.67         | BC          | 26.3               | 35.0 | 9.0                   | 1.5                   | 28.1                | 14.7                 | 23.4 | 40.0                                  | 25.3   | 16.6 |
| 3  | 83.61         | BC          | 36.7               | 38.9 | 6.7                   | 1.8                   | 28.1                | 23.1                 | 25.3 | 40.0                                  | 16.9   | 14.7 |
| 4  | 99.87         | BC          | 37.1               | 43.4 | 9.1                   | 2.0                   | 28.1                | 26.1                 | 32.4 | 43.5                                  | 17.4   | 11.1 |
| 5  | 121.49        | BC          | 30.8               | 31.2 | 12.0                  | 2.3                   | 28.0                | 23.1                 | 23.5 | 43.5                                  | 20.4   | 20.0 |
| 6  | 168.62        | BC          | 30.4               | 29.4 | 15.6                  | 2.7                   | 28.0                | 26.7                 | 25.7 | 43.5                                  | 16.8   | 17.8 |
| 7  | 189.01        | BC          | 31.3               | 27.6 | 16.7                  | 2.8                   | 28.0                | 28.8                 | 25.1 | 43.5                                  | 14.7   | 18.4 |
| 8  | 229.51        | BC          | 31.1               | 26.6 | 17.4                  | 3.3                   | 27.9                | 29.9                 | 25.4 | 46.0                                  | 16.1   | 20.6 |
| 9  | 323.98        | LP          | 29.1               | 29.1 | 16.3                  | 3.8                   | 27.8                | 27.4                 | 27.4 | 46.0                                  | 18.6   | 18.6 |
| 10 | 443.85        | LP          | 31.3               | 29.6 | 17.9                  | 4.5                   | 27.8                | 31.9                 | 30.2 | 46.0                                  | 14.1   | 15.8 |
| 11 | 702.01        | LP          | 28.7               | 33.7 | 21.6                  | 6.0                   | 27.3                | 35.0                 | 40.0 | 46.0                                  | 11.0   | 6.0  |

SAMPLE CALCULATION :

RESULT = READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table : adequate margin data below the limits.

# RADIATION TEST

|             |                         |            |                         |
|-------------|-------------------------|------------|-------------------------|
| COMPANY     | : Hitachi, Ltd.         | REPORT No. | : 17A0020-02I           |
| TRADE NAME  | : HITACHI               | DATE       | : 02/21/1998            |
| EQUIPMENT   | : MPEG Digital Camera   | REGULATION | : FCC Part 15 Subpart B |
| MODEL       | : MP-EG10W              | CLASS      | : CLASS B               |
| POWER       | : AC120V/60Hz           | DISTANCE   | : 3m                    |
| DESCRIPTION | : COMMUNICATION (MODE5) | FCC ID     | : ABL045                |
| REMARKS     | : LINE IN RECORDING     | ENGINEER   | : KOEI.NAKAMURA         |

*K. Nakamura*

