

MATSUSHITA-KOTOBUKI ELECTRONICS INDUSTRIES LTD.

SAIJO DIVISION

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Date: July 31, 1998

Report of Measurements (Part I)

REQUIRED IN () SUBPART B (TV INTERFACE DEVICE)

(X) SUBPART B (DIGITAL DEVICE)

EXHIBIT # : 3-1

FCC ID : ACJ5LU0033

OUR REF. : MKS98-F010

MODEL NO. : PV-DV910D

Sheet 1 of 9 Sheets

Name of Manufacturer: Matsushita-Kotobuki Electronics Industries Ltd.

Address of Manufacturer: 110 Wakimachi, Mima, Tokushima, Japan.

Device Under Measurement

FCC ID : ACJ5LU0033

Model No. : PV-DV910D

Trade Name : Panasonic

Applicant : Matsushita Electric Ind. Co., Ltd.

This device is a representative model of KDV-99 chassis group.

Certification

On the basis of the measurement data contained in Part II, all devices bearing the aforementioned FCC ID (model No., chassis No., and trade names) are stated by the undersigned to be capable of complying with the applicable sections of Part 15 of the FCC rules governing restricted radiation devices at the time of manufacture and may be expected to continue to comply under normal conditions and with usual maintenance. The undersigned also states that the device measured was an engineering prototype, pre-production, or production unit. If changes are applied to future units and such changes adversely alter spurious radiation, an amended report of measurements will be supplied to the FCC.



K. Ishikawa

Sr. Engineer

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Part 15 Subpart B. (Digital Device) – Part II

Sheet 2 of 9 Sheets

1) 15.107 Power Line Conducted Voltage

Freq. (MHz)	Limits (dBuV)	Interference (dBuV)	
		1-end & Grounded	The other- End & Gro.
1.32	48.0	31.4	31.0
1.83	48.0	30.2	28.7
6.92	48.0	31.4	29.9
7.48	48.0	31.2	31.6
15.8	48.0	28.7	27.8
27.0	48.0	37.3	37.3

(Refer to Sheet 3, 5, 7 of 9 Sheets)

2) 15.109 Radiated Emission

Freq. (MHz)	Limits (dBuV/m)	Emission (dBuV/m)	
		Horiz.	Vert.
135.00	43.5	39.9	24.3
148.50	43.5	35.9	26.4
162.00	43.5	38.1	25.1
189.00	43.5	35.8	27.1
216.00	43.5	37.2	27.0
256.50	46.0	38.2	35.3

(Refer to Sheet 4, 6, 8, 9 of 9 Sheets)

MEASUREMENT SITE : MKS SITE

MEASUREMENT PROCEDURE : ANSI C63.4-1992

Note:

(1) Detailed report: Refer to attached sheets.

I HEREBY STATE THAT: The measurements shown in Part II of this form were made in accordance with The procedures indicated and the energy emitted by this equipment was found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements and vouch for the Qualifications of all persons taking them.

I FURTHER STATE THAT: On the basis of the measurements made, the device tested is capable of operation in compliance with the requirements of Part 15 of the FCC Rules under normal use and maintenance.


K. Ishikawa
Sr. Engineer

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1. Sample calculation at

2. Measuring Instruments:

Model : KNM-402C

(2) IF band width : 9 kHz

(3) Input impedance : 75 ohms

— Kyoritsu Electric Work Co., Ltd.

Model : KNW-406, KNW-407

50 ohms / 50 uh network

— Kyoritsu Electric Work Co., Ltd.

Model : KPD-401

3. The spectrum was checked from 0.45 MHz to 30 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

2) 15.109 Radiated Emission

Freq. (MHz)	Meter Reading Open Volt. (dBuV)		Correction Factor (dB) Open Vol.	Emission at 3 meters (dBuV)	
	Horiz.	Vert.		Horiz.	Vert.
135.00	23.4	7.8	16.5	39.9	24.3
148.50	18.4	8.9	17.5	35.9	26.4
162.00	20.0	7.0	18.1	38.1	25.1
189.00	16.8	8.1	19.0	35.8	27.1
216.00	17.2	7.0	20.0	37.2	27.0
256.50	17.0	14.1	21.2	38.2	35.3

Note:

1. Sample calculation at

Horiz., 135.00 MHz ; 23.4 + 16.5 = 39.9 (dBuV/m)

2. Measuring Instruments:

a) Field strength meter – Rohde & Schwarz

(for 30 MHz to 1 G Hz) Model : ESVP

(1) Frequency range : 20 MHz to 1300 MHz

(2) RF Input : 50 ohms

(3) IF band width : 7.5 kHz / 12 kHz/
120 kHz / 1 MHz(4) Detector function: Average/
CISPR Q-PERK/PERK

c) Receiving antenna – Schwarzbeck

Model : VHA9103 30 – 300 MHz

Model : UHALP9107 300 – 1000 MHz

– The Electro-Machanics Company

Model : 3115 1 – 18G Hz

3. The Spectrum was checked from 30 MHz to 1000 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

Sheet 7 of 9 Sheets

KNW-406 LISN

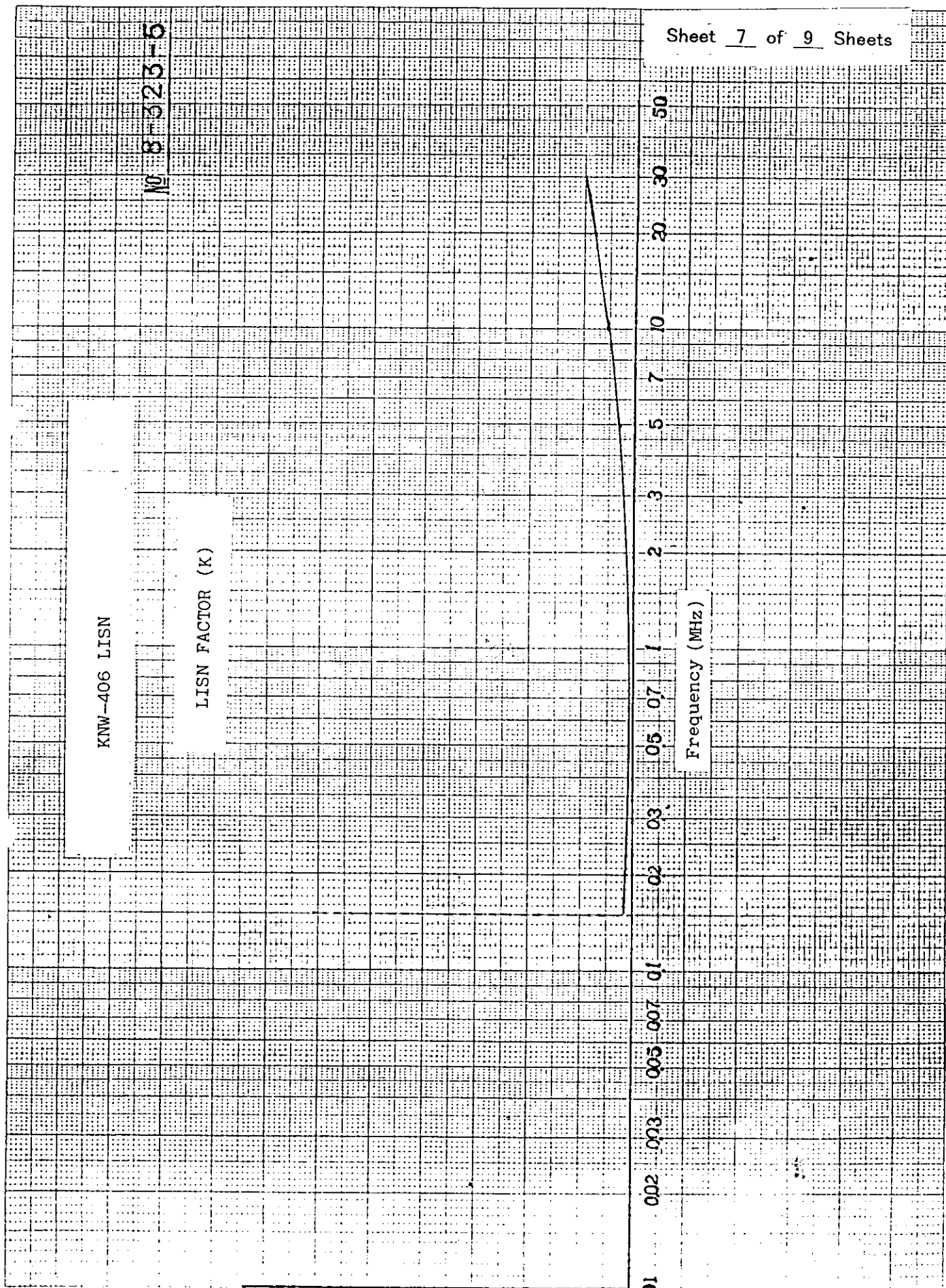
10 8-323-6

LISN FACTOR (K)

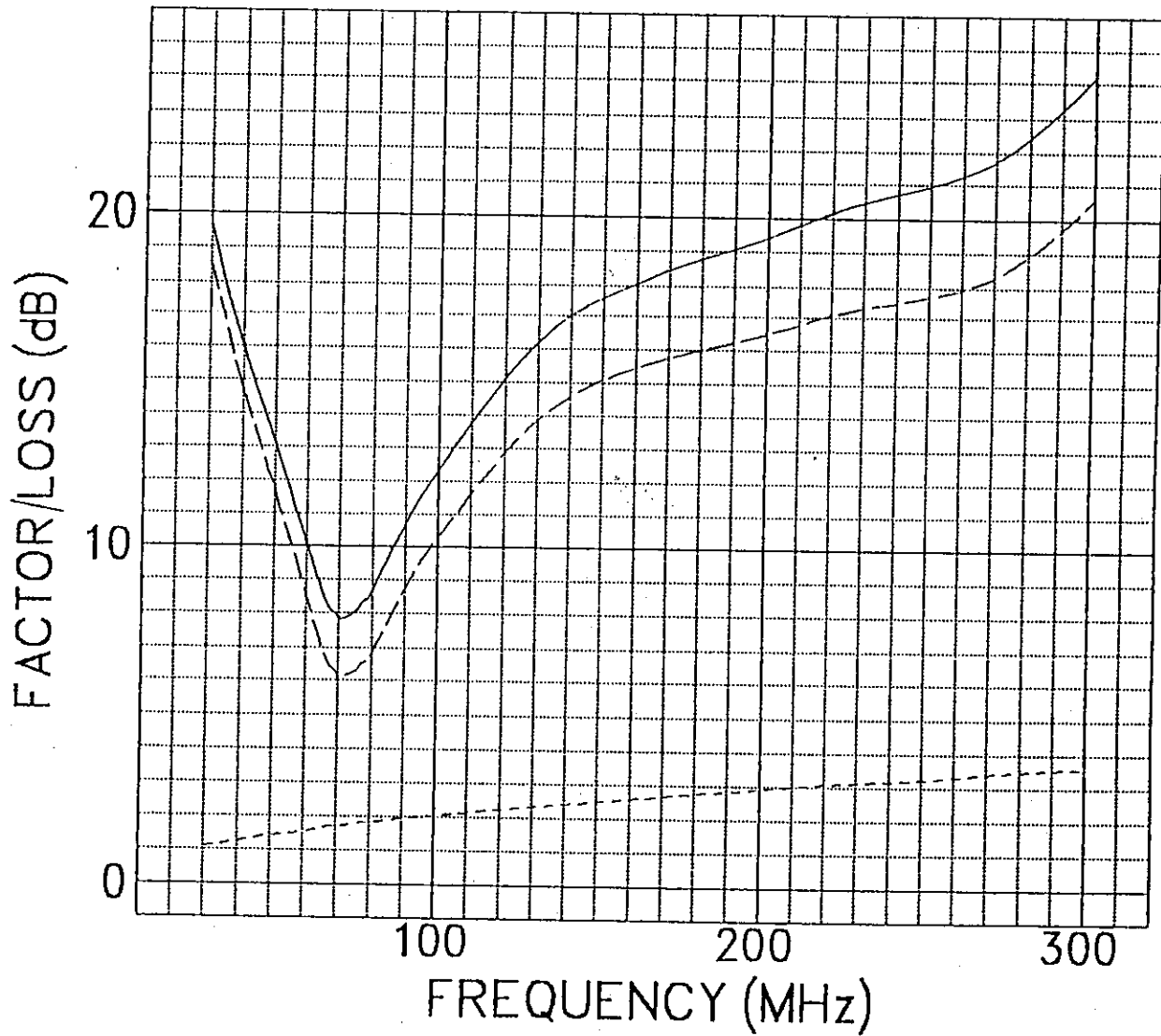
Frequency (MHz)

6
5
4
3
2
1
0

0.01 0.02 0.03 0.05 0.07 0.1 0.2 0.3 0.5 0.7 1 2 3 5 7 10 20 30 50



CORRECTION FACTOR OF BBA9106



$$E = V + K$$

E : Field Strength

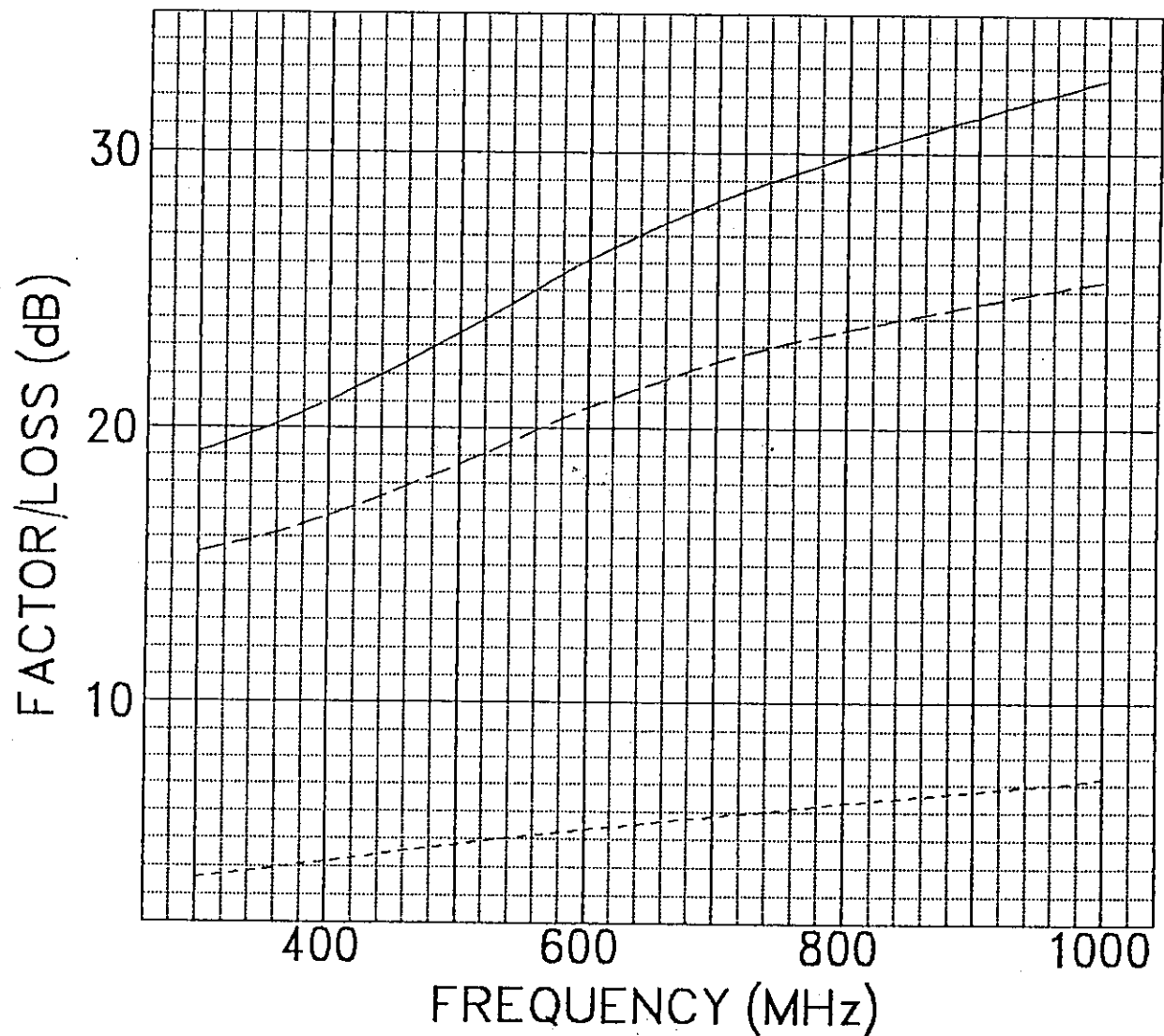
V : Correction Factor (dB)

———— : Correction Factor

----- : Antenna Factor

..... : Cable Loss

CORRECTION FACTOR OF UHALP9107



$$E = V + K$$

E : Field Strength

V : Correction Factor (dB)

———— : Correction Factor

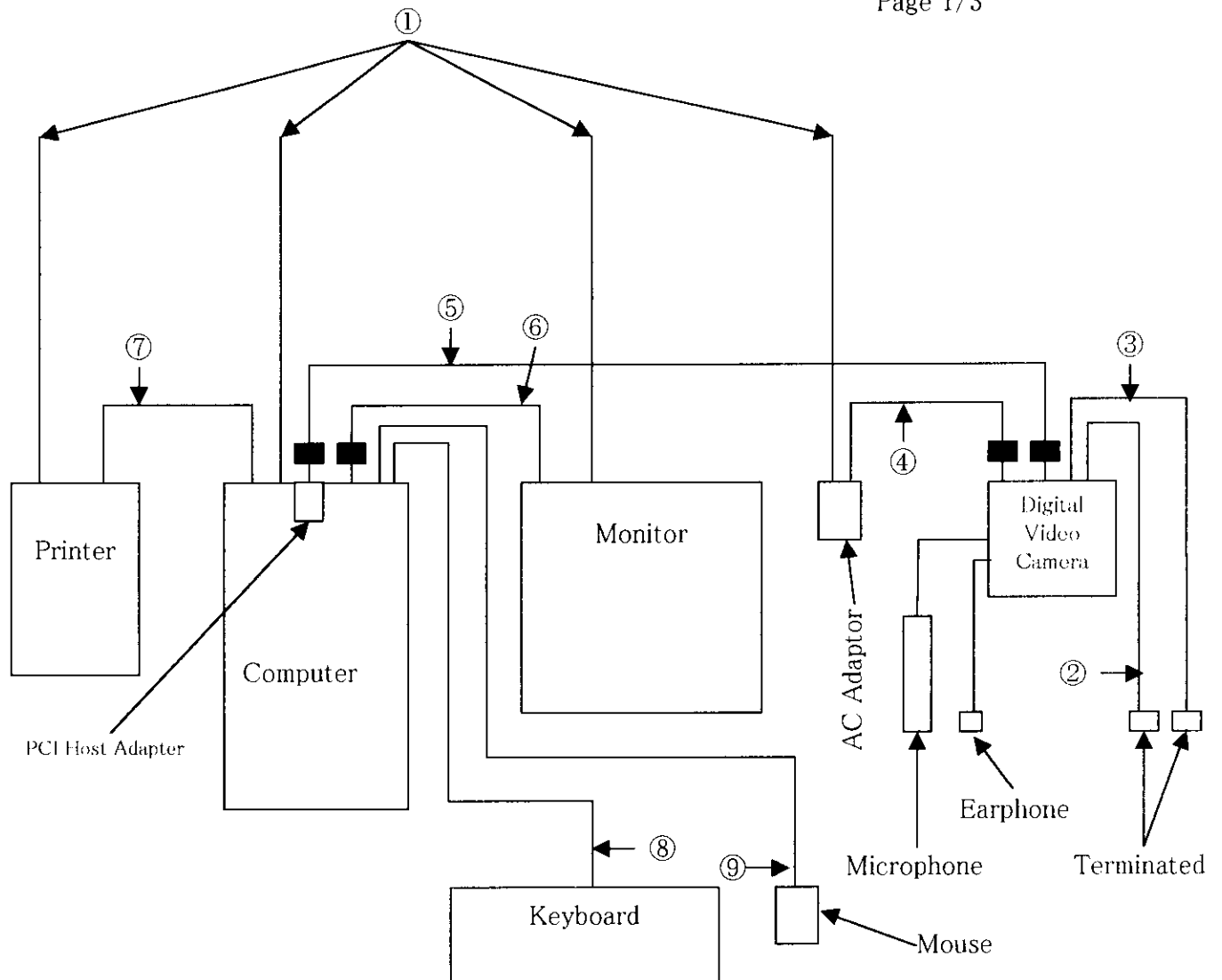
----- : Antenna Factor

..... : Cable Loss

Block Diagram of System for Measurements

EXHIBIT # : 3-2
FCC ID : ACJ5LU0033
OUR REF. : MKS98-F010
MODEL NO. : PV-DV910D

Page 1/3



Type of Interface Cable

1. Power Cord
2. Audio/Video Cable (1.5 m) : Shielded Cable ; Circular Cable
3. S-Video Cable (1.5 m) : Shielded Cable ; Circular Cable
4. DC Cable (2.0 m) : Circular Cable with Ferrite Core
5. PC Interface cable (2.0 m) : Shielded Cable with Ferrite Cores ; Circular Cable
6. Monitor Cable (1.5 m) : Shielded Cable with a Ferrite Core ; Circular Cable
(Permanently attached to the Monitor)
7. Printer Cable (1.6 m) : Shielded Cable ; Circular Cable
8. Keyboard Cable (1.9 m) : Shielded Cable ; Circular Cable
(Permanently attached to the Keyboard)
9. Mouse Cable (1.9 m) : Shielded Cable ; Circular Cable
(Permanently attached to the Mouse)

Description

Digital Video Camera (Application Device)	Model No. : PV-DV910D Trade Name : Panasonic FCC ID : ACJ5LU0033
Microphone	Model No. : PV-MK40 Trade Name : Panasonic
AC Adaptor	Model No. : PV-DAC9 Trade Name : Panasonic
Monitor (Certified Device)	Model No. : D1526T-HS Trade Name : DELL Computer Corporation FCC ID : AK8CPD15SF
Computer (DoC Device)	Model No. : MMP Trade Name : DELL Computer Corporation
1394-to-PCI Host Adapter (DoC Device)	Model No. : AHA-8940 Trade Name : Adaptec, Inc.
Keyboard (Certified Device)	Model No. : SK-1000REW Trade Name : DELL Computer Corporation FCC ID : GYUR36SK
Mouse (Certified Device)	Model No. : 58269 Trade Name : Microsoft Corporation FCC ID : C3KKMP1
Printer (Certified Device)	Model No. : P-200JD Trade Name : Panasonic FCC ID : IUO5LU0002