

List of Attachment
(Class B Peripherals)

FCC ID : ACJ927127K

OUR REF. : MKES99-F020

MODEL NO. : PV-L850D

FCC CERTIFICATION APPLICATION
MODEL: PV-L850D
FCC ID: ACJ927127K

1. FCC Form 731
2. Photograph of Application Model(s)
3. Description of Application Model(s)
4. List of Exhibit
 - #1. Sample of FCC Identifier & FCC Statements for compliance with FCC Rules Part 15
 - #2. Location of FCC Identifier and FCC Statements for compliance with FCC Rules Part 15
 - #3. #3-1. Report of Measurements for Peripherals

#3-2. Block Diagram of System for measurements
 - #4. #4-1. Description of Peripherals

#4-2. Block Diagram of Peripherals
 - #5. Draft of Operating Instructions

Description of Application Model

FCC ID : ACJ927127K
OUR REF. : MKES99-F020
MODEL NO.: PV-L850D

Application model is as below.

FCC ID: ACJ927127K
Application name: Video Camera
Grantee name: Matsushita Electric Industrial Co., Ltd.
Manufacturer: Matsushita-Kotobuki Electronics Ind. Ltd.
Model No.: PV-L850D
Brand name: Panasonic
Cabinet Material: Plastics

EXHIBIT # : 1
FCC ID : ACJ927127K
OUR REF. : MKES99-F020
MODEL NO.: PV-L850D

Sample of FCC Identifier

Panasonic

Model No. **PV-L850D**
DC 6V, 8.5W (11.5W MAX)

THIS DEVICE COMPLIES WITH PART 15
OF THE FCC RULES.

PRODUCT COMPLIES WITH DHHS RULES 21 CFR
SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE.

Distributed by Matsushita Electric Corporation of America, Secaucus, NJ 07094
Made in Japan



CAUTION RISK OF ELECTRIC SHOCK
DO NOT OPEN



FCC ID : ACJ927127K

VIDEO PRODUCT
LISTED 3C38
E150940



BATTERY
REPLACEMENT
SEE MANUAL

DEPT. 130SEJ.MANUFACTURED

FCC Statements for compliance with FCC Rules Part 15 in User's Manual

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device and a RF Lighting device, pursuant to part 15 and Part 18 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

EXHIBIT # : 2
FCC ID : ACJ927127K
OUR REF. : MKES99-F020
MODEL NO.: PV-L850D

FCC IDENTIFIER



MATSUSHITA-KOTOBUKI ELECTRONICS INDUSTRIES LTD.

SAIJO DIVISION

ADDRESS: 〒793-8510 247 FUKUTAKE, SAIJO, EHIME, JAPAN

TELEPHONE: +81-897-56-1111

FAX: +81-897-56-8142

Date: Sept. 30, 1999

Report of Measurements (Part I)

REQUIRED IN () SUBPART B (TV INTERFACE DEVICE)

(X) SUBPART B (CLASS B PERIPHERALS)

EXHIBIT # : 3-1

FCC ID : ACJ927127K

OUR REF. : MKES99-F020

MODEL NO. : PV-L850D

Sheet 1 of 10 Sheets

Name of Manufacturer: Matsushita-Kotobuki Electronics Industries Ltd.

Address of Manufacturer: 247 Fukutake, Saijo, Ehime, Japan.

Device Under Measurement

FCC ID : ACJ927127K

Model No. : PV-L850D

Trade Name : Panasonic

Applicant : Matsushita Electric Ind. Co., Ltd.

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

MATSUSHITA-KOTOBUKI ELECTRONICS INDUSTRIES LTD.

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EXHIBIT # : 3-1

FCC ID : ACJ927127K

OUR REF. : MKES99-F020

MODEL NO. : PV-DV1L850D

Sheet 2 of 10 Sheets

Part 15 Subpart B. (Class B Peripherals) - Part II

1) 15.107 Power Line Conducted Voltage

Freq. (MHz)	Limits (dBuV)	Interference (dBuV)	
		1-end & Grounded	The other- End & Gro.
0.51	48.0	30.6	33.1
0.58	48.0	27.5	29.7
0.67	48.0	26.5	29.6
0.75	48.0	22.8	26.6
2.55	48.0	21.5	24.9
5.73	48.0	21.4	24.1

(Refer to Sheet 3, 5, 8 of 10 Sheets)

2) 15.109 Radiated Emission

Freq. (MHz)	Limits (dBuV/m)	Emission (dBuV/m)	
		Horiz.	Vert.
85.91	40.0	35.0	29.6
100.23	43.5	37.0	31.9
114.55	43.5	36.5	24.7
128.86	43.5	37.8	24.7
257.73	46.0	39.9	33.8
329.32	46.0	41.0	34.3

(Refer to Sheet 4, 6, 7, 9, 10 of 10 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.



T. Watanabe
Engineer

1) 15.107 Power Line Conducted Voltage

Freq. (MHz)	Meter Reading (dBuV)		LISN Factor (dB)	Matching Pad Loss (dB)	Interference (dBuV)	
	1-end & Grounded	The other-End & Gro.			1-end & Grounded	The other-End & Gro
0.51	24.3	26.8	0.1	6.2	30.6	33.1
0.58	21.2	23.4	0.1	6.2	27.5	29.7
0.67	20.2	23.3	0.1	6.2	26.5	29.6
0.75	16.5	20.3	0.1	6.2	22.8	26.6
2.55	15.0	18.4	0.3	6.2	21.5	24.9
5.73	14.8	17.5	0.4	6.2	21.4	24.1

Note:

1. Sample calculation at

1-end & Gro., 0.51 MHz ; $24.3 + 0.1 + 6.2 = 30.6$ (dBuV)

2. Measuring Instruments:

- a) Field strength meter - Kyoritsu Electric Work Co., Ltd.
 Model : KNM-402C
 (1) Detector function : CISPR Q-PEAK
 (2) IF band width : 9 kHz
 (3) Input impedance : 75 ohms
- b) Line impedance stabilized network (LISN)
 - Kyoritsu Electric Work Co., Ltd.
 Model : KNW-406, KNW-407
 50 ohms / 50 uH network
- c) Matching pad - 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.
85.91	25.7	20.3	9.3	35.0	29.6
100.23	24.6	19.5	12.4	37.0	31.9
114.55	22.2	10.4	14.3	36.5	24.7
128.86	21.8	8.7	16.0	37.8	24.7
257.73	18.8	12.7	21.1	39.9	33.8
329.32	20.9	14.2	20.1	41.0	34.3

Note:

1. Sample calculation at

Horiz., 85.91 MHz ; $25.7 + 9.3 = 35.0$ (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-Mechanics Company
 Model : 3115 1 - 18 GHz

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.

EXHIBIT # : 3-1

FCC ID : ACJ927127K

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MODEL NO. : PV-L850D

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15.107 POWER LINE CONDUCTED VOLTAGE

- CONFIGURATION OF THE EQUIPMENT UNDER TEST -

(Arrangement of interface cable on the test table)



EXHIBIT # : 3-1

FCC ID : ACJ927127K

OUR REF. : MKES99-F020

MODEL NO. : PV-L850D

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15.109 RADIATED EMISSION

- CONFIGURATION OF THE EQUIPMENT UNDER TEST -
(Arrangement of interface cable on the test table)



EXHIBIT # : 3-1

FCC ID : ACJ927127K

OUR REF. : MKES99-F020

MODEL NO. : PV-L850D

Sheet 7 of 10 Sheets

15.109 RADIATED EMISSION

- CONFIGURATION OF THE EQUIPMENT UNDER TEST -

(Arrangement of interface cable on the test table)

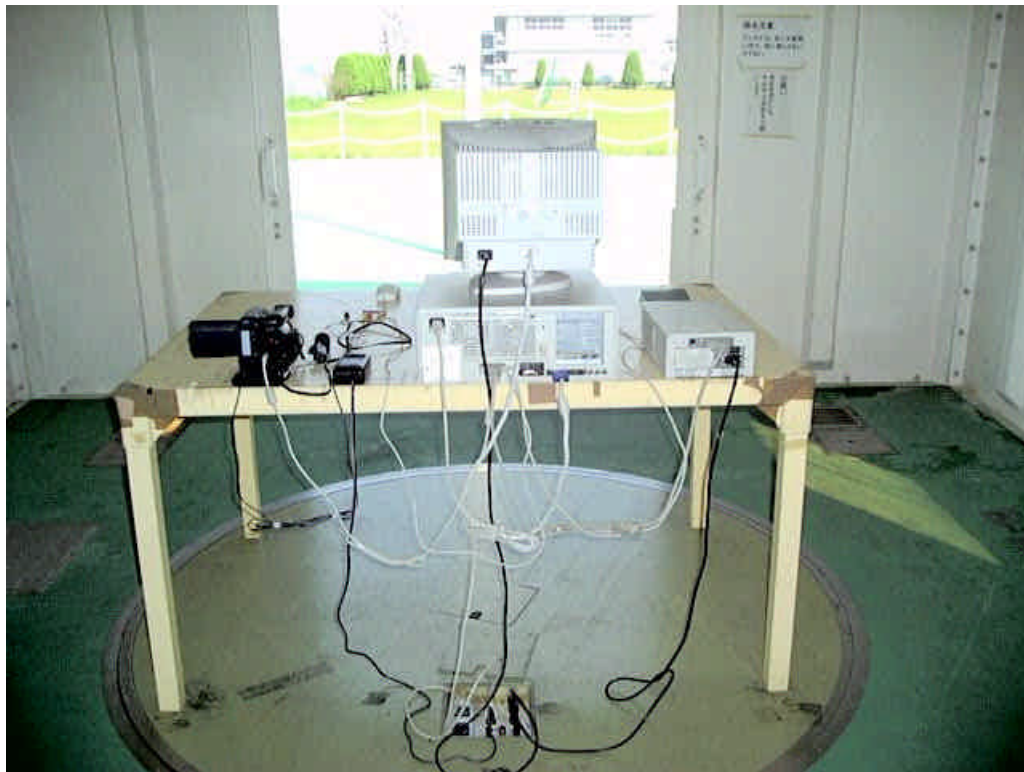


EXHIBIT # : 3-1
 FCC ID : ACJ927127K
 OUR REF. : MKES99-F020
 MODEL NO. : PV-L850D
 Sheet 8 of 10 Sheets

JIS A4 190 × 250mm

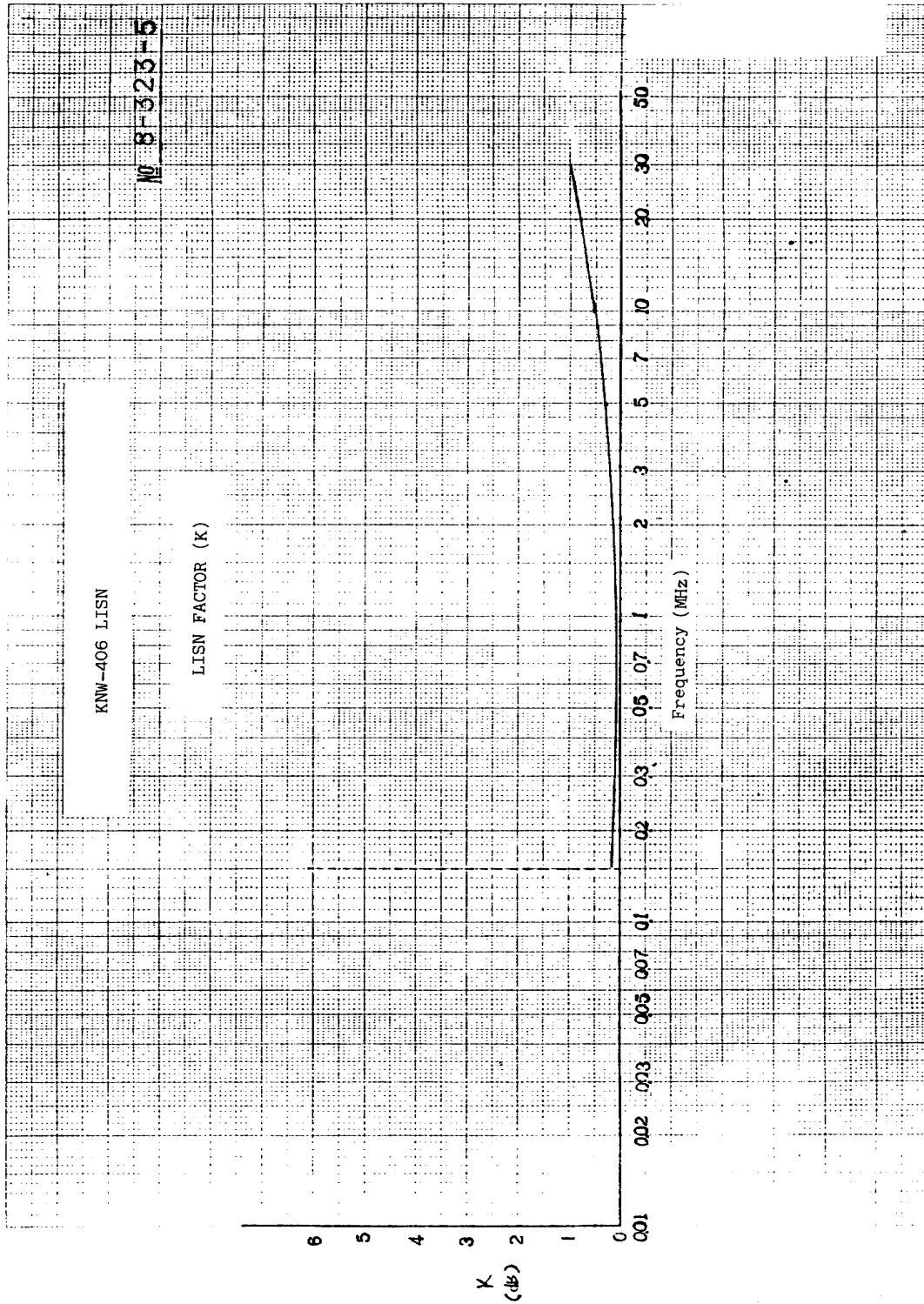


EXHIBIT # : 3-1

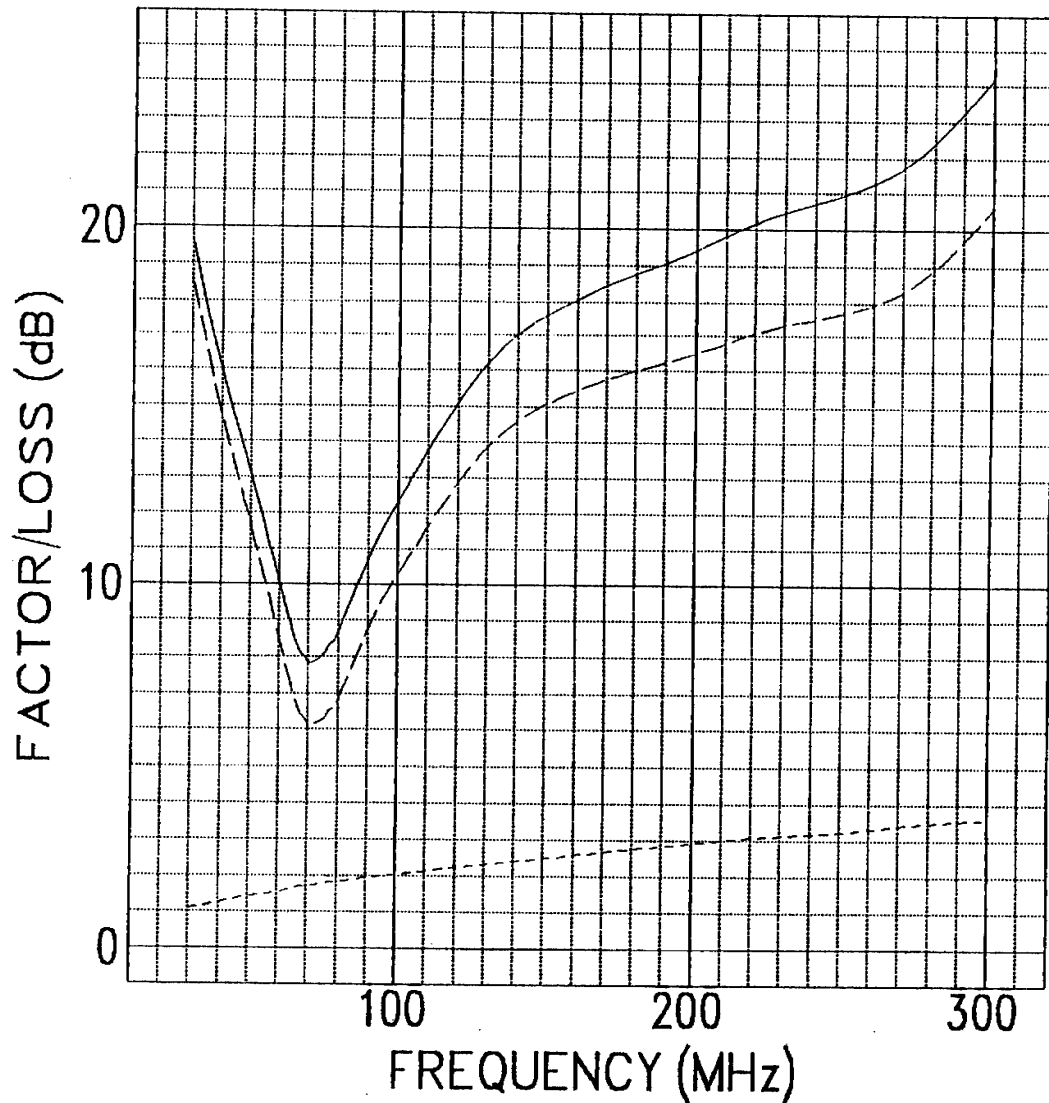
FCC ID : ACJ927127K

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CORRECTION FACTOR OF BBA9106



$E = V + K$

E : Field Strength

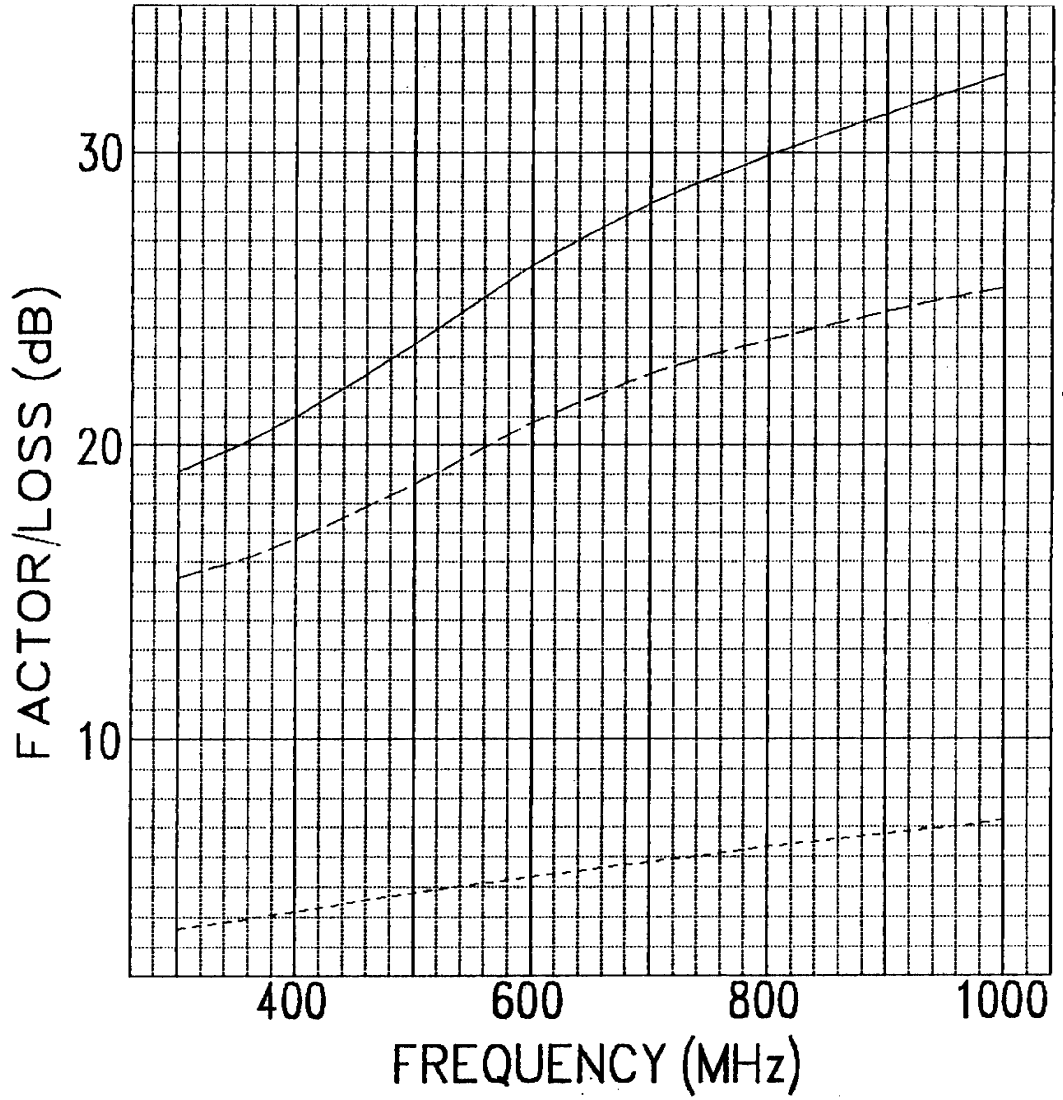
V : Correction Factor (dB)

———— : Correction Factor

----- : Antenna Factor

..... : Cable Loss

CORRECTION FACTOR OF UHALP9107



$$E = V + K$$

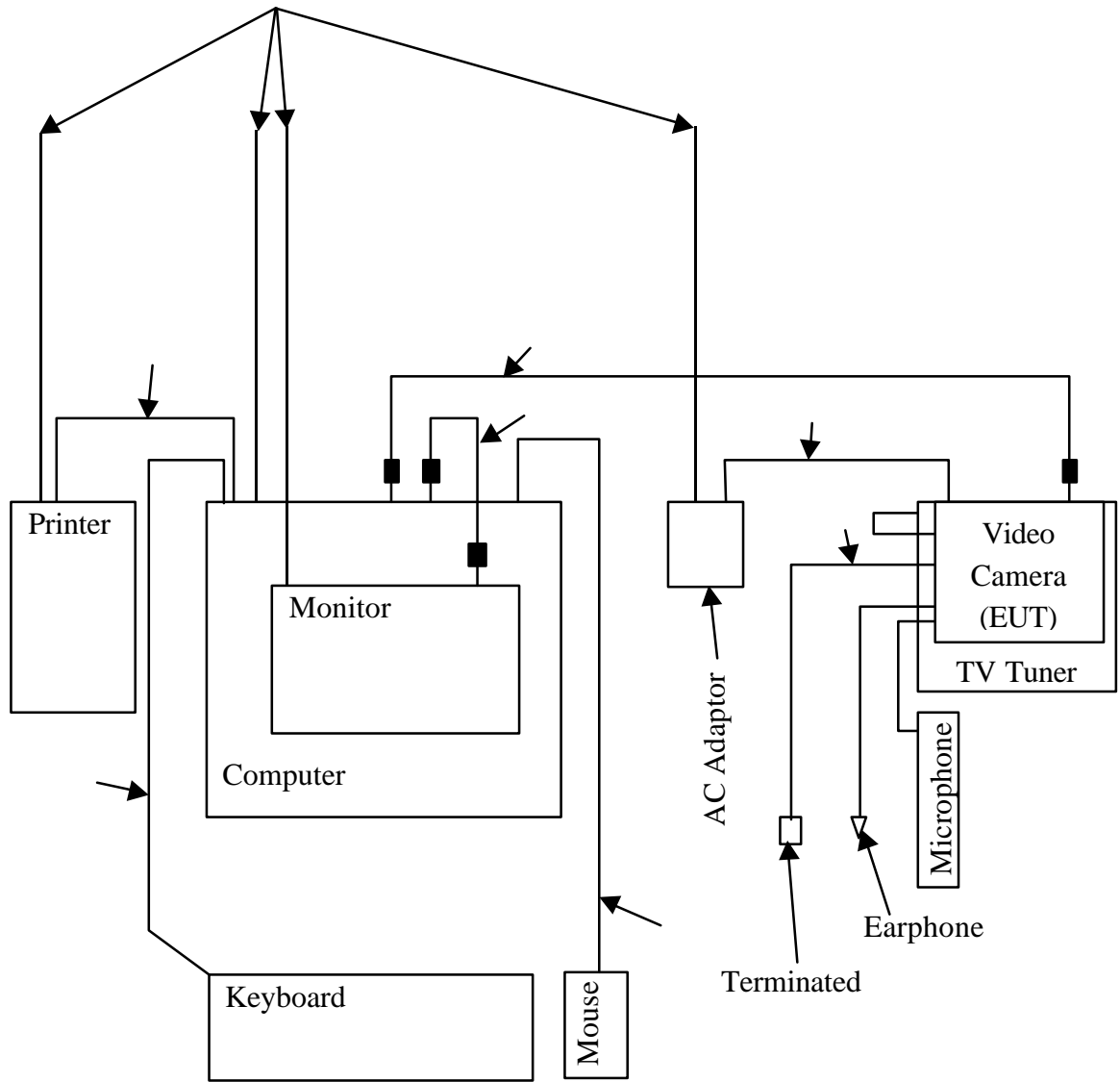
E : Field Strength

V : Correction Factor (dB)

———— : Correction Factor

----- : Antenna Factor

..... : Cable Loss



Type of Interface Cable

1. Power Cord
2. Audio/Video Cable (1.5 m) : Shielded Cable ; Circular Cable
3. DC Cable (2.0 m) : Circular Cable
4. PC Interface cable (2.0 m) : Shielded Cable with Ferrite Cores ; Circular Cable
(Serial Cable)
5. Monitor Cable (1.5 m) : Shielded Cable with Ferrite Cores ; Circular Cable
(Permanently attached to the Monitor)
6. Printer Cable (1.5 m) : Shielded Cable ; Circular Cable
(Parallel Cable)
7. Keyboard Cable (1.7 m) : Shielded Cable ; Circular Cable
(Permanently attached to the Keyboard)
8. Mouse Cable (1.8 m) : Shielded Cable ; Circular Cable
(Permanently attached to the Mouse)

EXHIBIT # : 3-2
FCC ID : ACJ927127K
OUR REF. : MKES99-F020
MODEL NO. : PV-L850D
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Description

Video Camera (Application Device)	Model No. : PV-L850D Trade Name : Panasonic FCC ID : ACJ927127K
TV tuner Adaptor (For Video Camera. Verified Device)	Model No. : LSSQ0184 Trade Name : Panasonic
AC Adaptor (For Video Camera)	Model No. : PV-A18 Trade Name : Panasonic
Microphone	Model No. : ECM-K57 Trade Name : SONY
Monitor (Certified Device)	Model No. : 500-069EV Trade Name : Gateway FCC ID : BEJCS592
Computer (DoC Device)	Model No. : DCM Trade Name : DELL Computer Corporation
Keyboard (Certified Device)	Model No. : SK-1000REW Trade Name : DELL Computer Corporation FCC ID : GYUR36SK
Mouse (Certified Device)	Model No. : 90741 Trade Name : Microsoft Corporation FCC ID : C3KKMP3
Printer (Certified Device)	Model No. : P-200JD Trade Name : Panasonic FCC ID : IUO5LU0002

Description of Class B Peripherals

EXHIBIT # : 4-1
FCC ID : ACJ927127K
OUR REF. : MKES99-F020
MODEL NO. : PV-L850D

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Technical Specification

Power Source	: DC 6V
Power Consumption	: 8.5W
Video Recording System	: EIA Standard (525 lines, 60 fields) NTSC color signal
Frequency generated or used	: 10 Hz - 28.6 MHz
Operating Temperature	: 0 - 40
Operating Humidity	: 10 % - 75 %

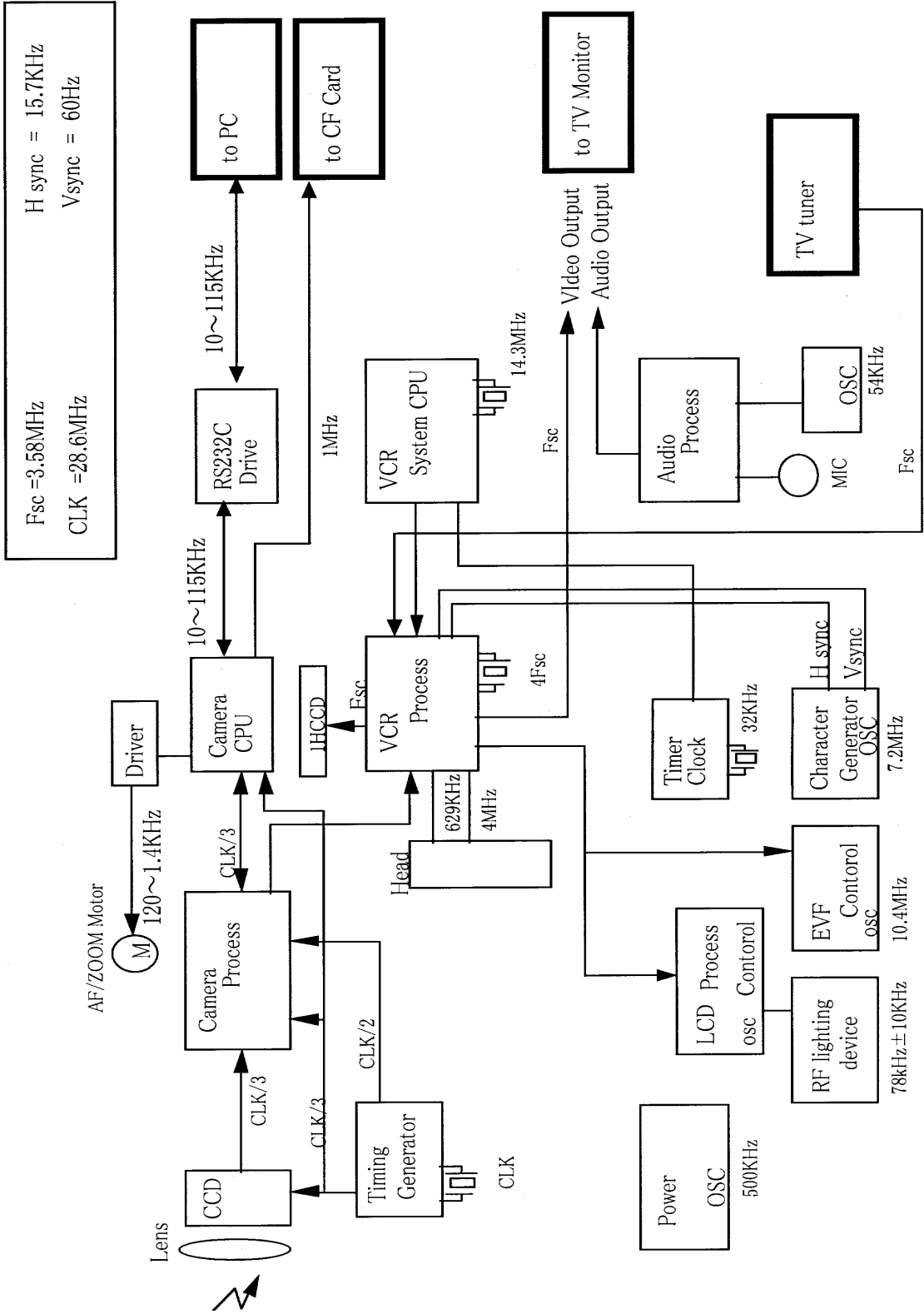
Performance Explanation of Video Camera

Light on CCD through the lens is converted into the electric analog signal, and it goes to the Camera Process. Through the Camera Process, such analog signal is converted into the digital signal via built-in A/D Converter. And its digital signal is converted into NTSC signal, then it is converted again into analog signal to VCR Process. It is output through VCR Process to TV Monitor.

The route of signal from Camcorder to PC: CCD Output signal which was input to Camera Process is A/D converted. It is divided prior to NTSC Process and is led, via digital output of Camera Process, to Camera CPU. Then it is converted in the CPU into RS232C signal and output to RS232C Driver. It is voltage-converted by RS232C Driver and goes to PC through RS232C Cable. Like, Control signal and Frozen Image Picture goes from PC to Camcorder. And the image data through Camera CPU is stored in the CF Card. On the other hand, the data stored in the CF Card is output on the Monitor TV through the same BUS line via Camera CPU, Camera Process and VCR Process. This CF Card is a removable data storage media. Through this data transmission system, playback picture data cannot be transmitted because this system is just for transmitting the image data interactively between Camera Signal Process IC and PC.

Through this data transmission system, playback picture data cannot be transmitted because this system is just for transmitting the image data interactively between Camera Signal Process IC and PC.

MOVIE BLOCK DIAGRAM



List of Frequency

CLOCK of Video Camera

CIRCUIT Name	CLOCK
Timing Generator	28.6 MHz
CCD	14.3 MHz
Camera Process	14.3 MHz
Camera I/F	14.3 MHz
VCR Process	14.3 MHz
CYL Head	629 KHz - 4 MHz
RS-232C	10 – 115 KHz
CF Card	1 MHz
Power	500 KHz
Timer Clock	32.0 KHz
Character Generator OSC	7.2 MHz
VCR System CPU	14.3 MHz
EVF Process (PLL)	10.38 MHz