

**Matsushita Kotobuki
Electronics Industries, Ltd.**

Visual Products Business Unit
Address: 247 Fukutake, Saijo, Ehime 793 - 8510 Japan
Tel: 0897 - 56 - 1216 / Fax: 0897 - 56 - 6720

Date: Nov. 26, 2003

**REPORT OF MEASUREMENTS-(Part I)
REQUIRED IN (X) SUBPART B (TV INTERFACE DEVICE)**

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F006
MODEL NO. : PV-D4744S
Sheet 1 of 30 Sheets

Name of Manufacturer : Matsushita Kotobuki Electronics Industries, Ltd.

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

Device Under Measurement

FCC ID : ACJ927148AHV
Model No. : PV-D4744S
Trade Name : Panasonic
Applicant : Matsushita Electric Ind. Co., Ltd.
This device is a representative model of KG-24WHGD chassis group.

Data Also Applied To

FCC ID	Model No.(Trade Name)
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Device Description

Name of Device	: <u>Video Cassette Recorder with DVD Player</u>
Frequency	: <u>VHF 3 or 4 ch.</u>
Video Line Terminals	: <u>(X) Provided, () Not Provided</u>
	: <u>RF Out Cable (0.9 m), Video/Audio out Cable (1.5 m)</u>
	: <u>Component out Cable (1.5 m), S-Video Cable (1.5 m)</u>
	: <u>Audio out Cable (1.5 m)</u>

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
Coordinator

Matsushita Kotobuki Electronics Industries, Ltd.

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EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F006
MODEL NO. : PV-D4744S
Sheet 2 of 30 Sheets

Tuner: ENG56D01G1

Part 15 Subpart B, (TV Interface Device)- Part

1) 15.107 Power Line Conducted Voltage

Freq. (MHz)	Limits (dBuV)	Interference (dBuV)	
		V _A	V _B
0.45	48.0	35.5	40.7
0.59	48.0	33.7	38.0
0.66	48.0	30.6	38.6
0.75	48.0	35.9	37.1
0.85	48.0	35.9	32.9
0.95	48.0	39.3	32.9

Refer to Sheet 5, 24, 27 of 30 Sheets)

2) 15.109 Radiated Emission(Including Tuner)

Freq. (MHz)	Limits (dBuV/m)	Emission (dBuV/m)	
		Horiz.	Vert.
108.00	43.5	33.4	34.8
121.52	43.5	34.7	34.8
162.00	43.5	38.4	27.4
243.00	46.0	36.2	33.0
324.00	46.0	34.7	40.5
405.50	46.0	41.0	38.2

(Refer to Sheet 6, 25, 26, 28, 29, 30 of 30 Sheets)

Note: Without Laurel Antenna
With accessories

3) 15.111(a) Antenna Power Conducted Voltage

Freq. (MHz)	Limits (dBuV)	Conducted Voltage (dBuV)
833.0	51.8	24.3
835.0	51.8	24.5
839.0	51.8	24.7
841.0	51.8	25.0
845.0	51.8	25.6
847.0	51.8	25.8

(Refer to Sheet 7 of 30 Sheets)

4) 15.115(b)(1) Output Signal Level

Ch	Limits (dBuV)		Level (dBuV)	
	Visual	Aural	Visual	Aural
3	69.5	56.5	66.8	51.2
4	69.5	56.5	65.9	50.7

(Refer to Sheet 8 of 30 Sheets)

5) 15.115(b)(2) Output Terminal
Conducted Interference

Ch	Freq. (MHz)	Limits (dBuV)	Interference (dBuV)
3	36.20	39.5	24.2
	43.34	39.5	30.8
	50.50	39.5	37.9
	72.00	39.5	35.2
	122.50	39.5	31.2
	183.75	39.5	31.3
4	42.17	39.5	25.3
	49.39	39.5	31.2
	56.50	39.5	37.0
	78.00	39.5	34.9
	134.50	39.5	31.2
	201.75	39.5	28.6

(Refer to Sheet 9, 10 of 30 Sheets)

6) 15.115(c) Transfer SW Isolation

Ch	Limits (dBuV)	Level (dBuV)
3	9.5	<3.9
4	9.5	<3.9

(Refer to Sheet 11 of 30 Sheets)

MEASUERMENT SITE : MKS Site

MEASUERMENT 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

Matsushita Kotobuki Electronics Industries, Ltd.

Visual Products Business Unit
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EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F006
MODEL NO. : PV-D4744S
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Tuner: TMZH2-005

Part 15 Subpart B, (TV Interface Device)- Part

2) 15.109 Radiated Emission(Including Tuner)

Freq. (MHz)	Limits (dBuV/m)	Emission (dBuV/m)	
		Horiz.	Vert.
108.00	43.5	33.5	33.9
121.52	43.5	34.6	35.2
162.00	43.5	38.2	27.4
243.00	46.0	35.6	33.2
324.00	46.0	34.2	40.0
405.50	46.0	40.3	38.0

(Refer to Sheet 12, 25, 26, 28, 29, 30 of 30 Sheets)

Note: Without Laurel Antenna
With accessories

3) 15.111 Antenna Power Conducted Voltage

Freq. (MHz)	Limits (dBuV)	Conducted Voltage (dBuV)
1006.0	51.8	40.3
1018.0	51.8	41.1
1030.0	51.8	42.2
1042.0	51.8	42.7
1046.0	51.8	42.5
1054.0	51.8	41.3

(Refer to Sheet 13 of 27 Sheets)

4) 15.115(b)(1) Output Signal Level

Ch	Limits (dBuV)		Level (dBuV)	
	Visual	Aural	Visual	Aural
3	69.5	56.5	65.8	51.2
4	69.5	56.5	65.6	50.7

(Refer to Sheet 14 of 30 Sheets)

5) 15.115(b)(2) Output Terminal Conducted Interference

Ch	Freq. (MHz)	Limits (dBuV)	Interference (dBuV)
3	36.20	39.5	20.9
	43.40	39.5	28.2
	50.50	39.5	34.3
	72.00	39.5	34.1
	79.13	39.5	27.1
	122.50	39.5	27.1
4	42.17	39.5	22.9
	49.39	39.5	28.3
	56.50	39.5	25.3
	78.00	39.5	33.6
	85.14	39.5	25.7
	134.50	39.5	26.2

(Refer to Sheet 15, 16 of 30 Sheets)

6) 15.115© Transfer SW Isolation

Ch	Limits (dBuV)	Level (dBuV)
3	9.5	<3.9
4	9.5	<3.9

(Refer to Sheet 17 of 30 Sheets)

MEASUERMENT SITE : MKS Site

MEASUERMENT 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

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EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F006
MODEL NO. : PV-D4744S
Sheet 4 of 30 Sheets

Tuner: 115-V-H015AK

Part 15 Subpart B, (TV Interface Device)- Part

2) 15.109 Radiated Emission(Including Tuner)

Freq. (MHz)	Limits (dBuV/m)	Emission (dBuV/m)	
		Horiz.	Vert.
108.00	43.5	34.3	35.1
121.52	43.5	35.2	35.2
162.00	43.5	38.2	27.9
243.00	46.0	36.6	32.7
324.00	46.0	35.2	40.7
405.50	46.0	40.9	38.1

(Refer to Sheet 18, 25, 26, 28, 29, 30 of 30 Sheets)

Note: Without Laurel Antenna
With accessories

3) 15.111 Antenna Power Conducted Voltage

Freq. (MHz)	Limits (dBuV)	Conducted Voltage (dBuV)
1522.0	51.8	37.6
1526.0	51.8	38.2
1534.0	51.8	39.5
1538.0	51.8	38.4
1546.0	51.8	38.0
1550.0	51.8	37.7

(Refer to Sheet 19 of 30 Sheets)

4) 15.115(b)(1) Output Signal Level

Ch	Limits (dBuV)		Level (dBuV)	
	Visual	Aural	Visual	Aural
3	69.5	56.5	66.0	50.9
4	69.5	56.5	65.7	50.1

(Refer to Sheet 20 of 30 Sheets)

5) 15.115(b)(2) Output Terminal Conducted Interference

Ch	Freq. (MHz)	Limits (dBuV)	Interference (dBuV)
3	36.20	39.5	22.7
	43.34	39.5	30.5
	50.50	39.5	36.7
	72.00	39.5	34.2
	79.13	39.5	25.6
	610.00	39.5	27.8
4	42.17	39.5	23.5
	49.40	39.5	30.3
	56.50	39.5	34.9
	78.00	39.5	33.3
	85.14	39.5	24.9
	608.60	39.5	28.8

(Refer to Sheet 21, 22 of 30 Sheets)

6) 15.115© Transfer SW Isolation

Ch	Limits (dBuV)	Level (dBuV)
3	9.5	<3.9
4	9.5	<3.9

(Refer to Sheet 23 of 30 Sheets)

MEASUERMENT SITE : MKS Site

MEASUERMENT 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

Part 15 Subpart B, (TV Interface Device)

1) 15.107 Power Line Conducted Voltage

Video Signal	Freq. (MHz)	Mode	Meter Reading (dBuV)		LISN Factor (dB)		Interference (dBuV)		Limits (dBuV)	Margin (dB)	
			V _A	V _B	V _A	V _B	V _A	V _B		V _A	V _B
Multi Burst 1 V p-p	0.45	Q-Peak	35.5	40.6	0.0	0.1	35.5	40.7	48.0	12.5	7.3
	0.59	Q-Peak	33.7	38.0	0.0	0.0	33.7	38.0	48.0	14.3	10.0
	0.66	Q-Peak	30.6	38.6	0.0	0.0	30.6	38.6	48.0	17.4	9.4
	0.75	Q-Peak	35.9	37.1	0.0	0.0	35.9	37.1	48.0	12.1	10.9
	0.85	Q-Peak	35.9	32.9	0.0	0.0	35.9	32.9	48.0	12.1	15.1
	0.95	Q-Peak	39.3	32.9	0.0	0.0	39.3	32.9	48.0	8.7	15.1
Multi Burst 5 V p-p	0.45	Q-Peak	36.1	40.2	0.0	0.1	36.1	40.3	48.0	11.9	7.7
	0.59	Q-Peak	33.8	38.1	0.0	0.0	33.8	38.1	48.0	14.2	9.9
	0.66	Q-Peak	31.9	38.6	0.0	0.0	31.9	38.6	48.0	16.1	9.4
	0.75	Q-Peak	36.3	36.4	0.0	0.0	36.3	36.4	48.0	11.7	11.6
	0.85	Q-Peak	36.4	36.0	0.0	0.0	36.4	36.0	48.0	11.6	12.0
	0.95	Q-Peak	39.2	34.1	0.0	0.0	39.2	34.1	48.0	8.8	13.9
Internal Signal (DVD Playback)	0.59	Q-Peak	33.0	38.3	0.0	0.0	33.0	38.3	48.0	15.0	9.7
	0.66	Q-Peak	33.2	38.5	0.0	0.0	33.2	38.5	48.0	14.8	9.5
	0.75	Q-Peak	37.5	38.0	0.0	0.0	37.5	38.0	48.0	10.5	10.0
	0.85	Q-Peak	36.9	37.0	0.0	0.0	36.9	37.0	48.0	11.1	11.0
	0.95	Q-Peak	39.4	34.6	0.0	0.0	39.4	34.6	48.0	8.6	13.4
	1.60	Q-Peak	37.0	34.0	0.0	0.0	37.0	34.0	48.0	11.0	14.0
RF/CATV Signal Input	0.45	Q-Peak	35.9	40.1	0.0	0.1	35.9	40.2	48.0	12.1	7.8
	0.59	Q-Peak	33.8	38.3	0.0	0.0	33.8	38.3	48.0	14.2	9.7
	0.66	Q-Peak	32.4	38.7	0.0	0.0	32.4	38.7	48.0	15.6	9.3
	0.75	Q-Peak	36.7	37.0	0.0	0.0	36.7	37.0	48.0	11.3	11.0
	0.85	Q-Peak	36.8	35.0	0.0	0.0	36.8	35.0	48.0	11.2	13.0
	0.95	Q-Peak	39.0	34.3	0.0	0.0	39.0	34.3	48.0	9.0	13.7

Note:

1. Sample calculation at

M.B., 1 V p-p, V_B, 0.45 MHz ; $40.6 + 0.1 = 40.7$ (dBuV)

2. Measuring Instruments:

a) Field strength meter

- Kyoritsu Electric Work Co., Ltd.

Model : KNM-2403

(1) Detector function : CISPR Q-Peak

(2) IF band width : 9 kHz

(3) Input impedance : 50 ohms

b) Line impedance stabilized network (LISN)

- Kyoritsu Electric Work Co., Ltd.

Model : KNW-406

50 ohms / 50 uH network

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

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.

Tuner: ENG56D01G1

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Part 15 Subpart B. (TV Interface Device)

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2) 15.109 Radiated Emission (Including Tuner)

Video Signal	Frequency (MHz)	Meter Reading Open Volt. (dBuV)		Correction Factor (dB) Open Vol.	Emission & 3 meters(dBuV)	
		Horiz.	Vert.		Horiz.	Vert.
Multi Burst 1 V p-p	108.00	17.7	19.4	13.5	31.2	32.9
	121.52	17.4	16.2	15.3	32.7	31.5
	162.00	16.5	6.9	20.1	36.6	27.0
	243.00	14.2	9.2	20.8	35.0	30.0
	324.00	15.6	20.5	17.7	33.3	38.2
	405.50	19.4	16.0	20.3	39.7	36.3
Multi Burst 5 V p-p	108.00	17.8	19.7	13.5	31.3	33.2
	121.52	17.1	15.6	15.3	32.4	30.9
	162.00	16.7	7.0	20.1	36.8	27.1
	243.00	14.1	9.2	20.8	34.9	30.0
	324.00	15.5	21.4	17.7	33.2	39.1
	405.50	18.3	16.1	20.3	38.6	36.4
Internal Signal (DVD Playback)	108.00	19.9	21.3	13.5	33.4	34.8
	121.52	19.4	19.5	15.3	34.7	34.8
	162.00	18.3	7.3	20.1	38.4	27.4
	243.00	15.4	12.2	20.8	36.2	33.0
	324.00	17.0	22.8	17.7	34.7	40.5
	405.50	20.7	17.9	20.3	41.0	38.2
RF/CATV Signal Input	108.00	17.3	19.3	13.5	30.8	32.8
	121.52	17.8	16.2	15.3	33.1	31.5
	162.00	16.1	6.4	20.1	36.2	26.5
	243.00	13.1	9.8	20.8	33.9	30.6
	324.00	15.3	20.2	17.7	33.0	37.9
	405.50	19.5	15.8	20.3	39.8	36.1

Note: 1. Sample calculation at
M.B., 1 V p-p, Horiz. 108.00 MHz ; 17.7 + 13.5 = 31.2 (dBuV/m)

2. Measuring Instruments:

- a) Field strength meter - Hewlett Packard company
Model: HP 8546A
(1) Frequency range : 9 kHz to 6.5 GHz
(2) RF Input : 50 ohm
(3) IF band width : 200 Hz/ 9 kHz/ 120 kHz/ 1MHz
(4) Detector function : Average/CISPR Q-Peak/Peak
- b) Test Signal Generator (Multi Burst) - Shibasoku Co., Ltd.
Model: TG-5, 2U2
- c) Receiving antenna - Schwarzbeck
Model: VHA9103 30 - 300 MHz
Model: UHALP9108A 300 - 1000 MHz
- The Electro-Mechanics Company
Model: 3115 1 - 18 GHz

3. The spectrum was checked from 30 MHz to 1694 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

Tuner: ENG56D01G1

EXHIBIT # : 3
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Part 15 Subpart B, (TV Interface Device)

3) 15.111 (a) Antenna Power Conducted Voltage

Frequency (MHz)	Meter Reading (dBuV)	Matc. Pad Loss (dB)	Interference (dBuV)
833.0	15.5	8.8	24.3
835.0	15.7	8.8	24.5
839.0	15.9	8.8	24.7
841.0	16.2	8.8	25.0
845.0	16.8	8.8	25.6
847.0	17.0	8.8	25.8

Antenna Input Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at 833.0 MHz; $15.5 + 8.8 = 24.3$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- ADVANTEST Co., Ltd.

Model : R3261A

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MB-009

(1) Frequency range : DC – 2 GHz

3. The spectrum was checked from 30 MHz to 1694 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

Tuner: ENG56D01G1

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S

Part 15 Subpart B.

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4) 15.115 (b) (1) Output Signal Level

Video Signal	Ch	Measured Frequency(MHz)		Meter Reading (dBuV)		Pad Loss (dB)	Output Signal Level (dBuV)	
		Visual	Aural	Visual	Aural		Visual	Aural
Multi Burst 1 V p-p	3	61.25	65.75	64.5	48.9	2.3	66.8	51.2
	4	67.25	71.75	63.6	48.4	2.3	65.9	50.7
Multi Burst 5 V p-p	3	61.25	65.75	64.5	48.9	2.3	66.8	51.2
	4	67.25	71.75	63.6	48.4	2.3	65.9	50.7
Internal Signal	3	61.25	65.75	64.5	48.9	2.3	66.8	51.2
	4	67.25	71.75	63.6	48.4	2.3	65.9	50.7
RF/CATV Signal	3	61.25	65.75	64.5	48.9	2.3	66.8	51.2
	4	67.25	71.75	63.6	48.4	2.3	65.9	50.7

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, Visual, 3 Ch ; 64.5 + 2.3 = 66.8 (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

Part 15 Subpart B, (TV Interface Device)

5) 15.115 (b) (2) Output Terminal Conducted Interference

Video Signal	Ch	Freq. (MHz)	Meter Read. (dBuV)	Matc. Pad Loss (dB)	Att. Pad Loss(dB)	Gain of Amp.(dB)	Interference (dBuV)
Multi Burst 1 V p-p	3	36.20	46.2	2.3	N/A	24.3	24.2
		43.34	52.8	2.3	N/A	24.3	30.8
		50.50	59.9	2.3	N/A	24.3	37.9
		72.00	57.3	2.3	N/A	24.4	35.2
		122.50	53.2	2.3	N/A	24.3	31.2
		183.75	53.3	2.3	N/A	24.3	31.3
	4	42.17	47.3	2.3	N/A	24.3	25.3
		49.39	53.2	2.3	N/A	24.3	31.2
		56.50	59.0	2.3	N/A	24.3	37.0
		78.00	57.0	2.3	N/A	24.4	34.9
		134.50	53.2	2.3	N/A	24.3	31.2
		201.75	50.6	2.3	N/A	24.3	28.6
Multi Burst 5 V p-p	3	36.20	46.2	2.3	N/A	24.3	24.2
		43.34	52.8	2.3	N/A	24.3	30.8
		50.50	59.9	2.3	N/A	24.3	37.9
		72.00	57.3	2.3	N/A	24.4	35.2
		122.50	53.2	2.3	N/A	24.3	31.2
		183.75	53.3	2.3	N/A	24.3	31.3
	4	42.17	47.3	2.3	N/A	24.3	25.3
		49.39	53.2	2.3	N/A	24.3	31.2
		56.50	59.0	2.3	N/A	24.3	37.0
		78.00	57.0	2.3	N/A	24.4	34.9
		134.50	53.2	2.3	N/A	24.3	31.2
		201.75	50.6	2.3	N/A	24.3	28.6
Internal Signal	3	36.20	46.2	2.3	N/A	24.3	24.2
		43.34	52.8	2.3	N/A	24.3	30.8
		50.50	59.9	2.3	N/A	24.3	37.9
		72.00	57.3	2.3	N/A	24.4	35.2
		122.50	53.2	2.3	N/A	24.3	31.2
		183.75	53.3	2.3	N/A	24.3	31.3
	4	42.17	47.3	2.3	N/A	24.3	25.3
		49.39	53.2	2.3	N/A	24.3	31.2
		56.50	59.0	2.3	N/A	24.3	37.0
		78.00	57.0	2.3	N/A	24.4	34.9
		134.50	53.2	2.3	N/A	24.3	31.2
		201.75	50.6	2.3	N/A	24.3	28.6
RF/CATV Signal Input	3	36.20	46.2	2.3	N/A	24.3	24.2
		43.34	52.8	2.3	N/A	24.3	30.8
		50.50	59.9	2.3	N/A	24.3	37.9
		72.00	57.3	2.3	N/A	24.4	35.2
		122.50	53.2	2.3	N/A	24.3	31.2
		183.75	53.3	2.3	N/A	24.3	31.3
	4	42.17	47.3	2.3	N/A	24.3	25.3
		49.39	53.2	2.3	N/A	24.3	31.2
		56.50	59.0	2.3	N/A	24.3	37.0
		78.00	57.0	2.3	N/A	24.4	34.9
		134.50	53.2	2.3	N/A	24.3	31.2
		201.75	50.6	2.3	N/A	24.3	28.6

Tuner: ENG56D01G1

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
Sheet 10 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, 3 Ch., 36.20 MHz ; $46.2 + 2.3 - 24.3 = 24.2$ (dBuV)

2. Measuring Instrument:

- | | |
|---|---|
| a) Spectrum Analyzer | - Anritsu Electric Co., Ltd.
Model : MS62B
(1) Detector function : Peak
(2) Band width : 100 kHz |
| b) Matching Pad | - Anritsu Electric Co., Ltd.
Model : MP614A
(1) Frequency range : 10 - 1200 MHz |
| c) Test Signal Generator
(Multi Burst) | - Shibasoku Co., Ltd.
Model : 205 |
| d) Amplifier | - Hewlett Packard
Model : 8447F |

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.

Tuner: ENG56D01G1

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
Sheet 11 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

6) 15.115 (c) Transfer Switch Isolation

Video Signal	Ch	Meter Read.(dBuV)	Matching Pad Loss(dB)	Gain of Amp.(dB)	Pad Loss (dB)	Level (dBuV)
Multi Burst 1 V p-p	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9
Multi Burst 5 V p-p	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9
Internal Signal	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, Visual, 3 Ch ; $<26.0 + 2.3 - 24.4 = <3.9$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

d) Amplifier

- Hewlett Packard

Model : 8447F

Tuner: TMZH2-005

EXHIBIT # : 3
 FCC ID : ACJ927148AHV
 OUR REF. : MKES03-F008
 MODEL NO. : PV-D4744S
 Sheet 12 of 30 Sheets

Part 15 Subpart B. (TV Interface Device)

2) 15.109 Radiated Emission (Including Tuner)

Video Signal	Frequency (MHz)	Meter Reading Open Volt. (dBuV)		Correction Factor (dB) Open Vol.	Emission & 3 meters(dBuV)	
		Horiz.	Vert.		Horiz.	Vert.
Multi Burst 1 V p-p	108.00	17.1	18.0	13.5	30.6	31.5
	121.52	17.2	15.6	15.3	32.5	30.9
	162.00	16.1	7.4	20.1	36.2	27.5
	243.00	15.7	10.0	20.8	36.5	30.8
	324.00	16.5	20.3	17.7	34.2	38.0
	405.50	18.3	15.3	20.3	38.6	35.6
Multi Burst 5 V p-p	108.00	17.3	19.5	13.5	30.8	33.0
	121.52	17.1	15.9	15.3	32.4	31.2
	162.00	16.2	7.1	20.1	36.3	27.2
	243.00	15.2	10.0	20.8	36.0	30.8
	324.00	16.1	19.7	17.7	33.8	37.4
	405.50	17.7	15.1	20.3	38.0	35.4
Internal Signal (DVD Playback)	108.00	20.0	20.4	13.5	33.5	33.9
	121.52	19.3	19.9	15.3	34.6	35.2
	162.00	18.1	7.3	20.1	38.2	27.4
	243.00	14.8	12.4	20.8	35.6	33.2
	324.00	16.5	22.3	17.7	34.2	40.0
	405.50	20.0	17.7	20.3	40.3	38.0
RF/CATV Signal Input	108.00	16.9	17.6	13.5	30.4	31.1
	121.52	16.8	14.7	15.3	32.1	30.0
	162.00	15.9	5.8	20.1	36.0	25.9
	243.00	15.4	9.7	20.8	36.2	30.5
	324.00	17.6	20.5	17.7	35.3	38.2
	405.50	18.4	15.2	20.3	38.7	35.5

Note: 1. Sample calculation at
M.B., 1 V p-p, Horiz. 108.00 MHz ; 17.1 + 13.5 = 30.6 (dBuV/m)

2. Measuring Instruments:

- a) Field strength meter - Hewlett Packard company
 Model: HP 8546A
 (1) Frequency range : 9 kHz to 6.5 GHz
 (2) RF Input : 50 ohm
 (3) IF band width : 200 Hz/ 9 kHz/ 120 kHz/ 1MHz
 (4) Detector function : Average/CISPR Q-Peak/Peak
- b) Test Signal Generator (Multi Burst) - Shibasoku Co., Ltd.
 Model: TG-5, 2U2
- c) Receiving antenna - Schwarzbeck
 Model: VHA9103 30 - 300 MHz
 Model: UHALP9108A 300 - 1000 MHz
 - The Electro-Mechanics Company
 Model: 3115 1 - 18 GHz

3. The spectrum was checked from 30 MHz to 1694 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

Tuner: TMZH2-005

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
Sheet 13 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

3) 15.111 (a) Antenna Power Conducted Voltage

Frequency (MHz)	Meter Reading (dBuV)	Matc. Pad Loss (dB)	Interference (dBuV)
1006.0	31.5	8.8	40.3
1018.0	32.3	8.8	41.1
1030.0	33.4	8.8	42.2
1042.0	33.9	8.8	42.7
1046.0	33.7	8.8	42.5
1054.0	32.5	8.8	41.3

Antenna Input Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at 1006.0 MHz ; $31.5 + 8.8 = 40.3$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- ADVANTEST Co., Ltd.

Model : R3261A

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MB-009

(1) Frequency range : DC – 2 GHz

3. The spectrum was checked from 30 MHz to 1694 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

Tuner: TMZH2-005

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
Sheet 14 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

4) 15.115 (b) (1) Output Signal Level

Video Signal	Ch	Measured Frequency(MHz)		Meter Reading (dBuV)		Pad Loss (dB)	Output Signal Level (dBuV)	
		Visual	Aural	Visual	Aural		Visual	Aural
Multi Burst 1 V p-p	3	61.25	65.75	63.5	48.9	2.3	65.8	51.2
	4	67.25	71.75	63.3	48.4	2.3	65.6	50.7
Multi Burst 5 V p-p	3	61.25	65.75	63.5	48.9	2.3	65.8	51.2
	4	67.25	71.75	63.3	48.4	2.3	65.6	50.7
Internal Signal	3	61.25	65.75	63.5	48.9	2.3	65.8	51.2
	4	67.25	71.75	63.3	48.4	2.3	65.6	50.7
RF/CATV Signal	3	61.25	65.75	63.5	48.9	2.3	65.8	51.2
	4	67.25	71.75	63.3	48.4	2.3	65.6	50.7

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, Visual, 3 Ch ; 63.5 + 2.3 = 65.8 (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

Part 15 Subpart B. (TV Interface Device)

5) 15.115 (b) (2) Output Terminal Conducted Interference

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Video Signal	Ch	Freq. (MHz)	Meter Read. (dBuV)	Matc. Pad Loss (dB)	Att. Pad Loss(dB)	Gain of Amp.(dB)	Interference (dBuV)
Multi Burst 1 V p-p	3	36.20	42.9	2.3	N/A	24.3	20.9
		43.40	50.2	2.3	N/A	24.3	28.2
		50.50	56.3	2.3	N/A	24.3	34.3
		72.00	56.2	2.3	N/A	24.4	34.1
		79.13	49.2	2.3	N/A	24.4	27.1
		122.50	49.1	2.3	N/A	24.3	27.1
	4	42.17	44.9	2.3	N/A	24.3	22.9
		49.39	50.3	2.3	N/A	24.3	28.3
		56.50	47.3	2.3	N/A	24.3	25.3
		78.00	55.7	2.3	N/A	24.4	33.6
		85.14	47.8	2.3	N/A	24.4	25.7
		134.50	48.2	2.3	N/A	24.3	26.2
Multi Burst 5 V p-p	3	36.20	42.9	2.3	N/A	24.3	20.9
		43.40	50.2	2.3	N/A	24.3	28.2
		50.50	56.3	2.3	N/A	24.3	34.3
		72.00	56.2	2.3	N/A	24.4	34.1
		79.13	49.2	2.3	N/A	24.4	27.1
		122.50	49.1	2.3	N/A	24.3	27.1
	4	42.17	44.9	2.3	N/A	24.3	22.9
		49.39	50.3	2.3	N/A	24.3	28.3
		56.50	47.3	2.3	N/A	24.3	25.3
		78.00	55.7	2.3	N/A	24.4	33.6
		85.14	47.8	2.3	N/A	24.4	25.7
		134.50	48.2	2.3	N/A	24.3	26.2
Internal Signal	3	36.20	42.9	2.3	N/A	24.3	20.9
		43.40	50.2	2.3	N/A	24.3	28.2
		50.50	56.3	2.3	N/A	24.3	34.3
		72.00	56.2	2.3	N/A	24.4	34.1
		79.13	49.2	2.3	N/A	24.4	27.1
		122.50	49.1	2.3	N/A	24.3	27.1
	4	42.17	44.9	2.3	N/A	24.3	22.9
		49.39	50.3	2.3	N/A	24.3	28.3
		56.50	47.3	2.3	N/A	24.3	25.3
		78.00	55.7	2.3	N/A	24.4	33.6
		85.14	47.8	2.3	N/A	24.4	25.7
		134.50	48.2	2.3	N/A	24.3	26.2
RF/CATV Signal Input	3	36.20	42.9	2.3	N/A	24.3	20.9
		43.40	50.2	2.3	N/A	24.3	28.2
		50.50	56.3	2.3	N/A	24.3	34.3
		72.00	56.2	2.3	N/A	24.4	34.1
		79.13	49.2	2.3	N/A	24.4	27.1
		122.50	49.1	2.3	N/A	24.3	27.1
	4	42.17	44.9	2.3	N/A	24.3	22.9
		49.39	50.3	2.3	N/A	24.3	28.3
		56.50	47.3	2.3	N/A	24.3	25.3
		78.00	55.7	2.3	N/A	24.4	33.6
		85.14	47.8	2.3	N/A	24.4	25.7
		134.50	48.2	2.3	N/A	24.3	26.2

Tuner: TMZH2-005

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
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Part 15 Subpart B, (TV Interface Device)

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, 3 Ch., 36.20 MHz ; $42.9 + 2.3 - 24.3 = 20.9$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

d) Amplifier

- Hewlett Packard

Model : 8447F

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.

Tuner: TMZH2-005

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
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Part 15 Subpart B, (TV Interface Device)

6) 15.115 (c) Transfer Switch Isolation

Video Signal	Ch	Meter Read.(dBuV)	Matching Pad Loss(dB)	Gain of Amp.(dB)	Pad Loss (dB)	Level (dBuV)
Multi Burst 1 V p-p	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9
Multi Burst 5 V p-p	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9
Internal Signal	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, Visual, 3 Ch ; $<26.0 + 2.3 - 24.4 = <3.9$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

d) Amplifier

- Hewlett Packard

Model : 8447F

Tuner: 115-V-H015AK

EXHIBIT # : 3
 FCC ID : ACJ927148AHV
 OUR REF. : MKES03-F008
 MODEL NO. : PV-D4744S

Part 15 Subpart B. (TV Interface Device)

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2) 15.109 Radiated Emission (Including Tuner)

Video Signal	Frequency (MHz)	Meter Reading Open Volt. (dBuV)		Correction Factor (dB) Open Vol.	Emission & 3 meters(dBuV)	
		Horiz.	Vert.		Horiz.	Vert.
Multi Burst 1 V p-p	108.00	17.6	19.9	13.5	31.1	33.4
	121.52	18.2	16.4	15.3	33.5	31.7
	162.00	16.8	9.5	20.1	36.9	29.6
	243.00	15.4	10.3	20.8	36.2	31.1
	324.00	16.0	20.3	17.7	33.7	38.0
	405.50	17.9	15.6	20.3	38.2	35.9
Multi Burst 5 V p-p	108.00	17.4	19.5	13.5	30.9	33.0
	121.52	17.5	16.9	15.3	32.8	32.2
	162.00	16.6	9.9	20.1	36.7	30.0
	243.00	14.7	8.9	20.8	35.5	29.7
	324.00	16.5	22.2	17.7	34.2	39.9
	405.50	18.4	16.3	20.3	38.7	36.6
Internal Signal (DVD Playback)	108.00	20.8	21.6	13.5	34.3	35.1
	121.52	19.9	19.9	15.3	35.2	35.2
	162.00	18.1	7.8	20.1	38.2	27.9
	243.00	15.8	11.9	20.8	36.6	32.7
	324.00	17.5	23.0	17.7	35.2	40.7
	405.50	20.6	17.8	20.3	40.9	38.1
RF/CATV Signal Input	108.00	17.3	19.2	13.5	30.8	32.7
	121.52	17.4	15.6	15.3	32.7	30.9
	162.00	16.5	10.1	20.1	36.6	30.2
	243.00	14.4	9.2	20.8	35.2	30.0
	324.00	16.7	21.5	17.7	34.4	39.2
	405.50	18.7	15.7	20.3	39.0	36.0

Note: 1. Sample calculation at
M.B., 1 V p-p, Horiz. 108.00 MHz ; 17.6 + 13.5 = 31.1 (dBuV/m)

2. Measuring Instruments:

- a) Field strength meter - Hewlett Packard company
 Model: HP 8546A
 (1) Frequency range : 9 kHz to 6.5 GHz
 (2) RF Input : 50 ohm
 (3) IF band width : 200 Hz/ 9 kHz/ 120 kHz/ 1MHz
 (4) Detector function : Average/CISPR Q-Peak/Peak
- b) Test Signal Generator (Multi Burst) - Shibasoku Co., Ltd.
 Model: TG-5, 2U2
- c) Receiving antenna - Schwarzbeck
 Model: VHA9103 30 - 300 MHz
 Model: UHALP9108A 300 - 1000 MHz
 - The Electro-Mechanics Company
 Model: 3115 1 - 18 GHz

3. The spectrum was checked from 30 MHz to 1694 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

Tuner: 115-V-H015AK

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
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Part 15 Subpart B, (TV Interface Device)

3) 15.111 (a) Antenna Power Conducted Voltage

Frequency (MHz)	Meter Reading (dBuV)	Matc. Pad Loss (dB)	Interference (dBuV)
1522.0	28.8	8.8	37.6
1526.0	29.4	8.8	38.2
1534.0	30.7	8.8	39.5
1538.0	29.6	8.8	38.4
1546.0	29.2	8.8	38.0
1550.0	28.9	8.8	37.7

Antenna Input Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at 1522.0 MHz ; $28.8 + 8.8 = 37.6$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- ADVANTEST Co., Ltd.

Model : R3261A

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MB-009

(1) Frequency range : DC – 2 GHz

3. The spectrum was checked from 30 MHz to 1694 MHz and the six highest emissions relative to the appropriate limit were measured and reported.

Tuner: 115-V-H015AK

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
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Part 15 Subpart B, (TV Interface Device)

4) 15.115 (b) (1) Output Signal Level

Video Signal	Ch	Measured Frequency(MHz)		Meter Reading (dBuV)		Pad Loss (dB)	Output Signal Level (dBuV)	
		Visual	Aural	Visual	Aural		Visual	Aural
Multi Burst 1 V p-p	3	61.25	65.75	63.7	48.6	2.3	66.0	50.9
	4	67.25	71.75	63.4	47.8	2.3	65.7	50.1
Multi Burst 5 V p-p	3	61.25	65.75	63.7	48.6	2.3	66.0	50.9
	4	67.25	71.75	63.4	47.8	2.3	65.7	50.1
Internal Signal	3	61.25	65.75	63.7	48.6	2.3	66.0	50.9
	4	67.25	71.75	63.4	47.8	2.3	65.7	50.1
RF/CATV Signal	3	61.25	65.75	63.7	48.6	2.3	66.0	50.9
	4	67.25	71.75	63.4	47.8	2.3	65.7	50.1

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, Visual, 3 Ch ; 63.7 + 2.3 = 66.0 (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

Part 15 Subpart B. (TV Interface Device)

5) 15.115 (b) (2) Output Terminal Conducted Interference

Video Signal	Ch	Freq. (MHz)	Meter Read. (dBuV)	Matc. Pad Loss (dB)	Att. Pad Loss(dB)	Gain of Amp.(dB)	Interference (dBuV)
Multi Burst 1 V p-p	3	36.20	44.7	2.3	N/A	24.3	22.7
		43.34	52.5	2.3	N/A	24.3	30.5
		50.50	58.7	2.3	N/A	24.3	36.7
		72.00	56.3	2.3	N/A	24.4	34.2
		79.13	47.7	2.3	N/A	24.4	25.6
		610.00	48.4	2.3	N/A	22.9	27.8
	4	42.17	45.5	2.3	N/A	24.3	23.5
		49.40	52.3	2.3	N/A	24.3	30.3
		56.50	56.9	2.3	N/A	24.3	34.9
		78.00	55.4	2.3	N/A	24.4	33.3
		85.14	47.0	2.3	N/A	24.4	24.9
		608.60	49.4	2.3	N/A	22.9	28.8
Multi Burst 5 V p-p	3	36.20	44.7	2.3	N/A	24.3	22.7
		43.34	52.5	2.3	N/A	24.3	30.5
		50.50	58.7	2.3	N/A	24.3	36.7
		72.00	56.3	2.3	N/A	24.4	34.2
		79.13	47.7	2.3	N/A	24.4	25.6
		610.00	48.4	2.3	N/A	22.9	27.8
	4	42.17	45.5	2.3	N/A	24.3	23.5
		49.40	52.3	2.3	N/A	24.3	30.3
		56.50	56.9	2.3	N/A	24.3	34.9
		78.00	55.4	2.3	N/A	24.4	33.3
		85.14	47.0	2.3	N/A	24.4	24.9
		608.60	49.4	2.3	N/A	22.9	28.8
Internal Signal	3	36.20	44.7	2.3	N/A	24.3	22.7
		43.34	52.5	2.3	N/A	24.3	30.5
		50.50	58.7	2.3	N/A	24.3	36.7
		72.00	56.3	2.3	N/A	24.4	34.2
		79.13	47.7	2.3	N/A	24.4	25.6
		610.00	48.4	2.3	N/A	22.9	27.8
	4	42.17	45.5	2.3	N/A	24.3	23.5
		49.40	52.3	2.3	N/A	24.3	30.3
		56.50	56.9	2.3	N/A	24.3	34.9
		78.00	55.4	2.3	N/A	24.4	33.3
		85.14	47.0	2.3	N/A	24.4	24.9
		608.60	49.4	2.3	N/A	22.9	28.8
RF/CATV Signal Input	3	36.20	44.7	2.3	N/A	24.3	22.7
		43.34	52.5	2.3	N/A	24.3	30.5
		50.50	58.7	2.3	N/A	24.3	36.7
		72.00	56.3	2.3	N/A	24.4	34.2
		79.13	47.7	2.3	N/A	24.4	25.6
		610.00	48.4	2.3	N/A	22.9	27.8
	4	42.17	45.5	2.3	N/A	24.3	23.5
		49.40	52.3	2.3	N/A	24.3	30.3
		56.50	56.9	2.3	N/A	24.3	34.9
		78.00	55.4	2.3	N/A	24.4	33.3
		85.14	47.0	2.3	N/A	24.4	24.9
		608.60	49.4	2.3	N/A	22.9	28.8

Tuner: 115-V-H015AK

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
Sheet 22 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, 3 Ch., 36.30 MHz ; $44.7 + 2.3 - 24.3 = 22.7$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

d) Amplifier

- Hewlett Packard

Model : 8447F

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.

Tuner: 115-V-H015AK

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
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Part 15 Subpart B, (TV Interface Device)

6) 15.115 (c) Transfer Switch Isolation

Video Signal	Ch	Meter Read.(dBuV)	Matching Pad Loss(dB)	Gain of Amp.(dB)	Pad Loss (dB)	Level (dBuV)
Multi Burst 1 V p-p	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9
Multi Burst 5 V p-p	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9
Internal Signal	3	<26.0	2.3	24.4	N/A	<3.9
	4	<26.0	2.3	24.4	N/A	<3.9

RF Output Impedance: 75 ohms (Unbalanced)

Note:

1. Sample calculation at

M.B., 1 V p-p, Visual, 3 Ch ; $<26.0 + 2.3 - 24.4 = <3.9$ (dBuV)

2. Measuring Instrument:

a) Spectrum Analyzer

- Anritsu Electric Co., Ltd.

Model : MS62B

(1) Detector function : Peak

(2) Band width : 100 kHz

b) Matching Pad

- Anritsu Electric Co., Ltd.

Model : MP614A

(1) Frequency range : 10 - 1200 MHz

c) Test Signal Generator
(Multi Burst)

- Shibasoku Co., Ltd.

Model : 205

d) Amplifier

- Hewlett Packard

Model : 8447F

EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
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Sheet 24 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

15.107 POWER LINE CONDUCTED VOLTAGE

- CONFIGURATION OF THE EQUIPMENT UNDER TEST -

(Arrangement of interface cable on the test table)



EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
Sheet 25 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

15.109 RADIATED EMISSION

- CONFIGURATION OF THE EQUIPMENT UNDER TEST -

(Arrangement of interface cable on the test table)

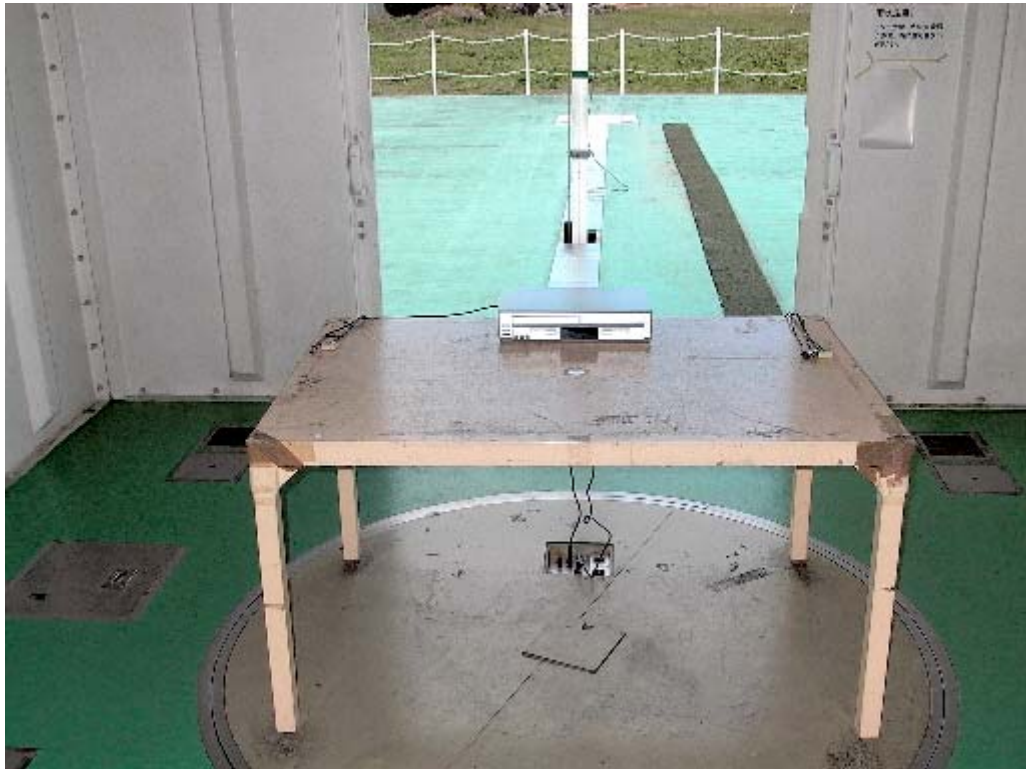


EXHIBIT # : 3
FCC ID : ACJ927148AHV
OUR REF. : MKES03-F008
MODEL NO. : PV-D4744S
Sheet 26 of 30 Sheets

Part 15 Subpart B, (TV Interface Device)

15.109 RADIATED EMISSION

- CONFIGURATION OF THE EQUIPMENT UNDER TEST -

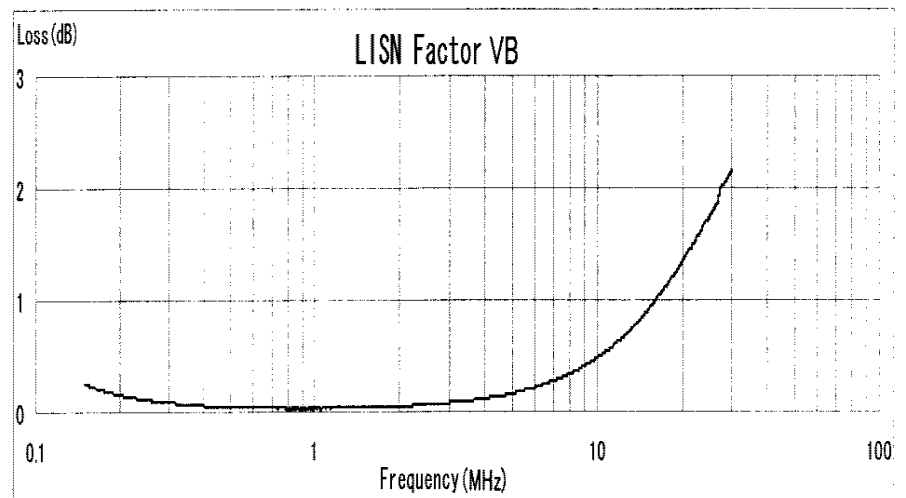
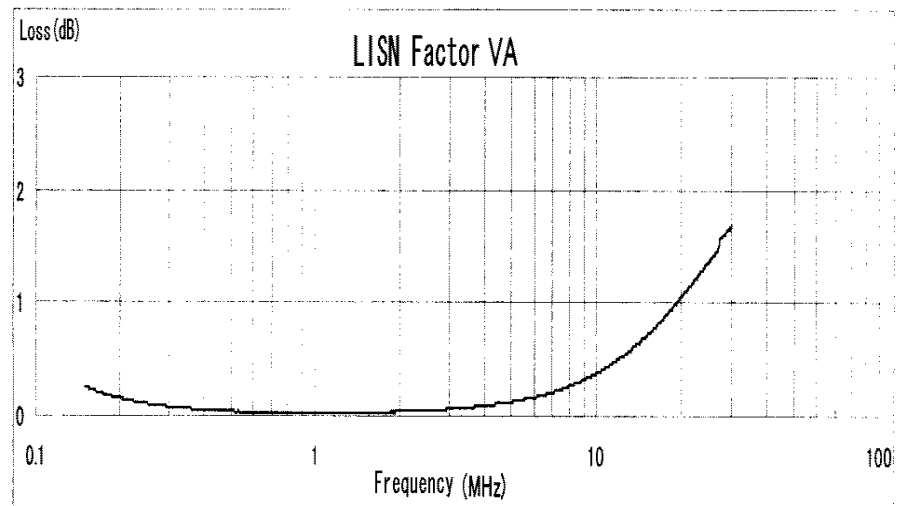
(Arrangement of interface cable on the test table)



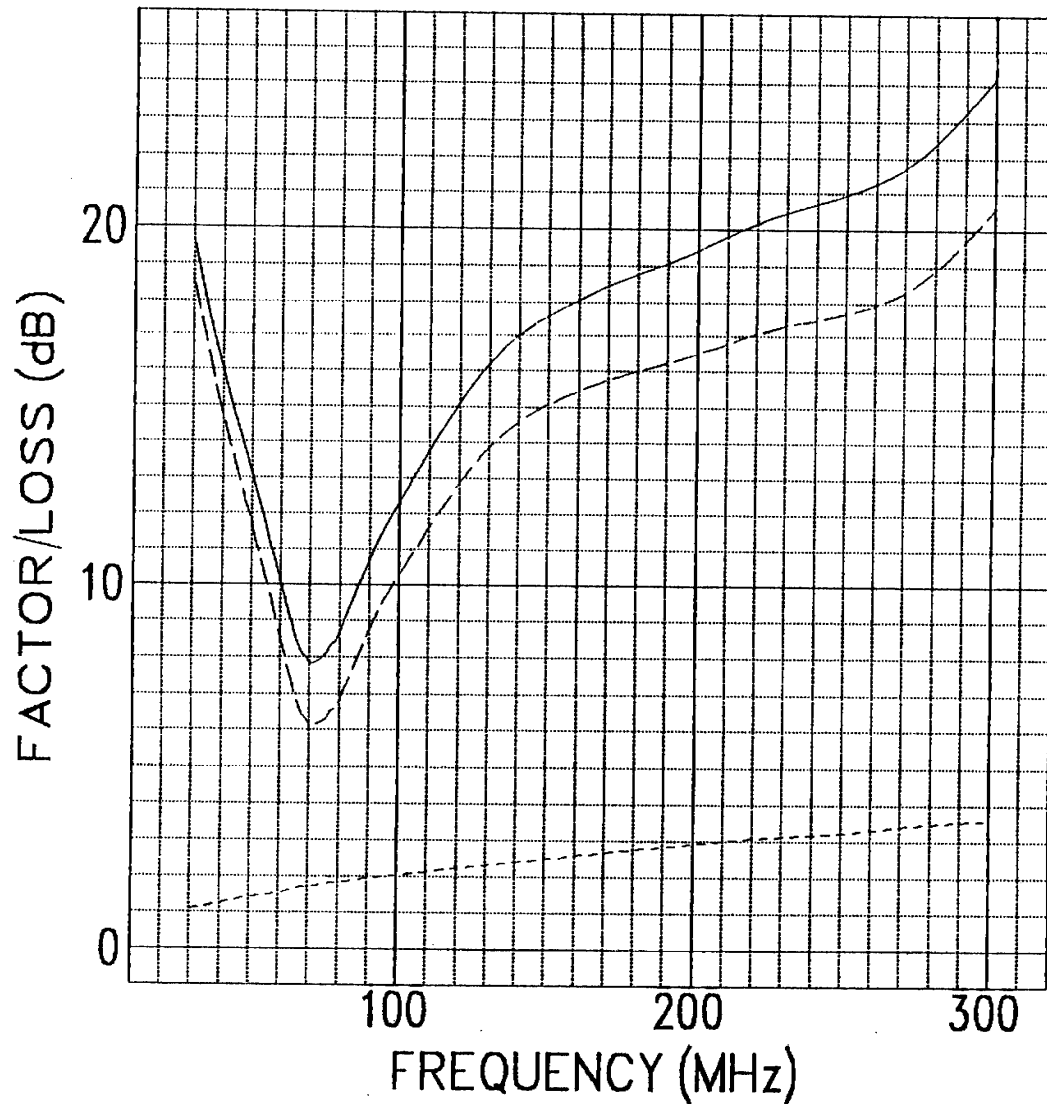
EXHIBIT # : 3
 FCC ID : ACJ927148AHV
 OUR REF. : MKES03-F008
 MODEL NO. : PV-D4744S
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Object: LISN
 Model: KNW-406
 Serial No. 8-323-5
 Manufacturer: Kyoritsu Electric Work Co.,
 Calibration Date: 2003/3/18
 Calibration Facility: JQA

Frequency (MHz)	LISN Factor (dB)	
	VA	VB
0.15	0.26	0.25
0.40	0.05	0.06
0.50	0.04	0.05
0.60	0.03	0.04
0.80	0.03	0.03
1.00	0.02	0.03
2.00	0.04	0.05
4.00	0.09	0.12
5.00	0.13	0.16
6.00	0.17	0.21
8.00	0.26	0.34
10.00	0.38	0.48
12.00	0.50	0.64
14.00	0.64	0.81
15.00	0.71	0.89
16.00	0.77	0.98
18.00	0.91	1.16
20.00	1.05	1.33
25.00	1.37	1.75
30.00	1.68	2.16



CORRECTION FACTOR OF BBA9106



$$E = V + K$$

E : Field Strength

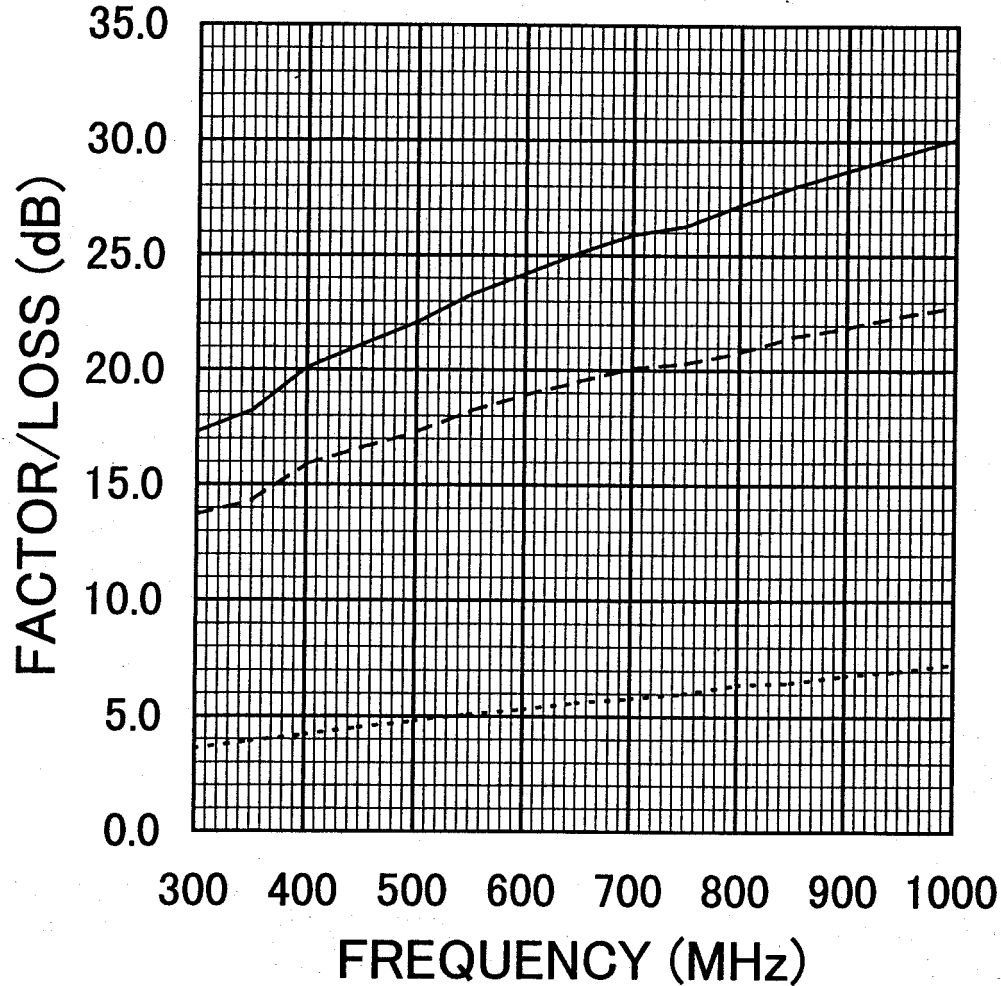
V : Correction Factor (dB)

———— : Correction Factor

----- : Antenna Factor

..... : Cable Loss

CORRECTION FACTOR OF UHALP9108A



$$E = V + K$$

E : Field Strength

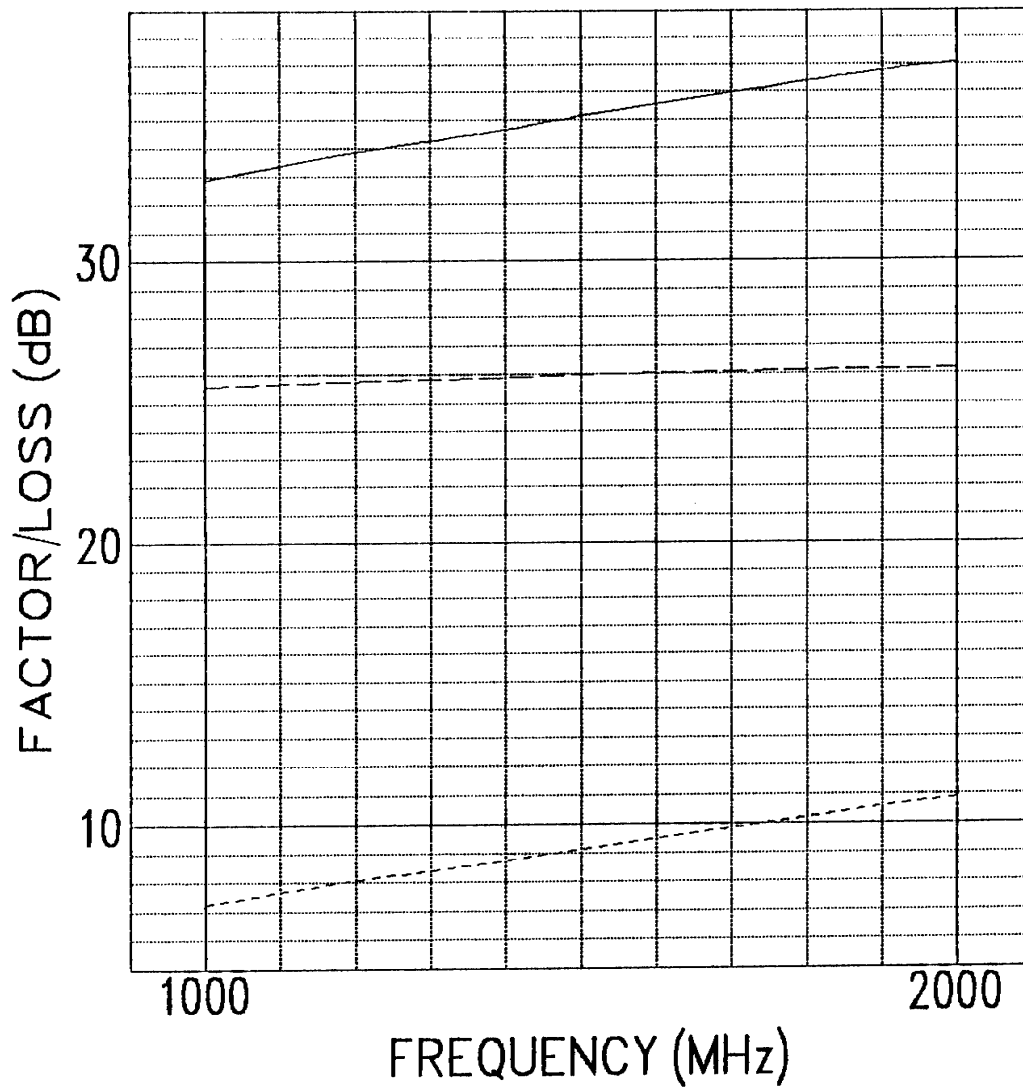
V : Correction Factor (dB)

———— : Correction Factor

----- : Antenna Factor

..... : Cable Loss

CORRECTION FACTOR OF 3115



$$E = V + K$$

E : Field Strength

V : Correction Factor (dB)

— : Correction Factor

--- : Antenna Factor

..... : Cable Loss