[REPORT OF MEASUREMENTS ON TV INTERFACE DEVICE]

Date : January 25, 1999
Issued at : Kanagawa Japan

REPORT No. : JYT99001

1. Applicant	:	Victor Company of Japan, Ltd. 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa 221-8528, JAPAN
2. Description of the Equipment Under Test (EUT)	:	Videocassette Recorder
2.1 FCC ID	:	ASTP9K045
2.2 Tuner/RF conv.type	:	QAU0142-x
2.3 Brand (Trade Name)	:	JVC
2.4 Model No.	:	HR-VP674U
2.5 Serial No.	:	ES200026 with QAU0142-X
2.6 Designes for RF Output Channels	:	Channel #3 and Channel #4
2.7 Number of RF Output Terminals	:	1 (F-type Connector)
2.8 RF Output Impedance	:	75 ohms (Unbalanced)
2.9 Power Supply	:	AC 120 V, 60Hz
2.10 Date of Manufacturer	:	January, 1999
3. The Highest Frequency generated in the EUT	:	71.75MHz
4. External Connectors	:	·A/V Input/Output ports, RCA type ·Cable box port, 3.5ϕmini jack type ·Pause control port, 3.5ϕmini jack type
5. Connected Accessories for the EUT	:	·Coaxial Cable with F-Type plug ·Audio/Video Cables with RCA Plugs ·Cable box controller with mini plug ·Pause control cable with mini plug
6. Measuring Method	:	FCC Rules and Regulations Part 15 (B)
7. Measurement Procedure	:	ANSI C63.4-1992
8. Date of Measurement	:	Jan 22, 1999
9. Place of Measurement	:	Victor Company of Japan Ltd. JVC YOKOHAMA TEST SITE
10. Measurement Results	:	The results obtained from the measuring of the above-mentioned device are as shown in the attached sheets.

Victor Company of Japan Ltd.

T. Wakabayashi, General Manager
Engineering Support Center
Engineering Department
Video Division

Section.15.107
POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEAUSREMENT

Video source connected to the EUT : Internal(Recorded Tape) 'PLAY Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Va	Vb	LISN factor [dB]	Limits [dBuV]	Radio noise voltage [dBuV] Va	Vb
0.45	37.8	37.3	0.6	48.0	38.4	37.9
0.75	27.7	28.1	0.8	48.0	28.5	28.9
1.07	19.1	20.5	0.8	48.0	19.9	21.3
1.32	19.1	20.4	0.8	48.0	19.9	21.2
2.56	23.7	23.7	0.7	48.0	24.4	24.4
11.37	19.7	20.4	0.5	48.0	20.2	20.9
19.00	17.4	20.7	0.6	48.0	18.0	21.3
28.90	21.1	24.2	1.0	48.0	22.1	25.2

NOTES: 1) Sample calculation at 0.45 MHz (Va) :
37.8 (dBuV) + 0.6 (dB) = 38.4 (dBuV/m)
LISN factor [dB] = 0.6 [dB]
Limits :250[uV] = 20 log (250 [uV]) = 48 [dBuV]

2) The spectrum was checked from 0.45 at 30 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Va : One-end & Grounded , Vb : The other-end & grounded

Section.15.107
Results of Conducted Power Line Measurements.

Measurement Method : FCC Rules and Regulations Part 15 (B)

EUT : Videocassette Recorder
Model No. : HR-VP674U
Serial No. : ES200026 with QAU0142-X

Report No. : JYT99001
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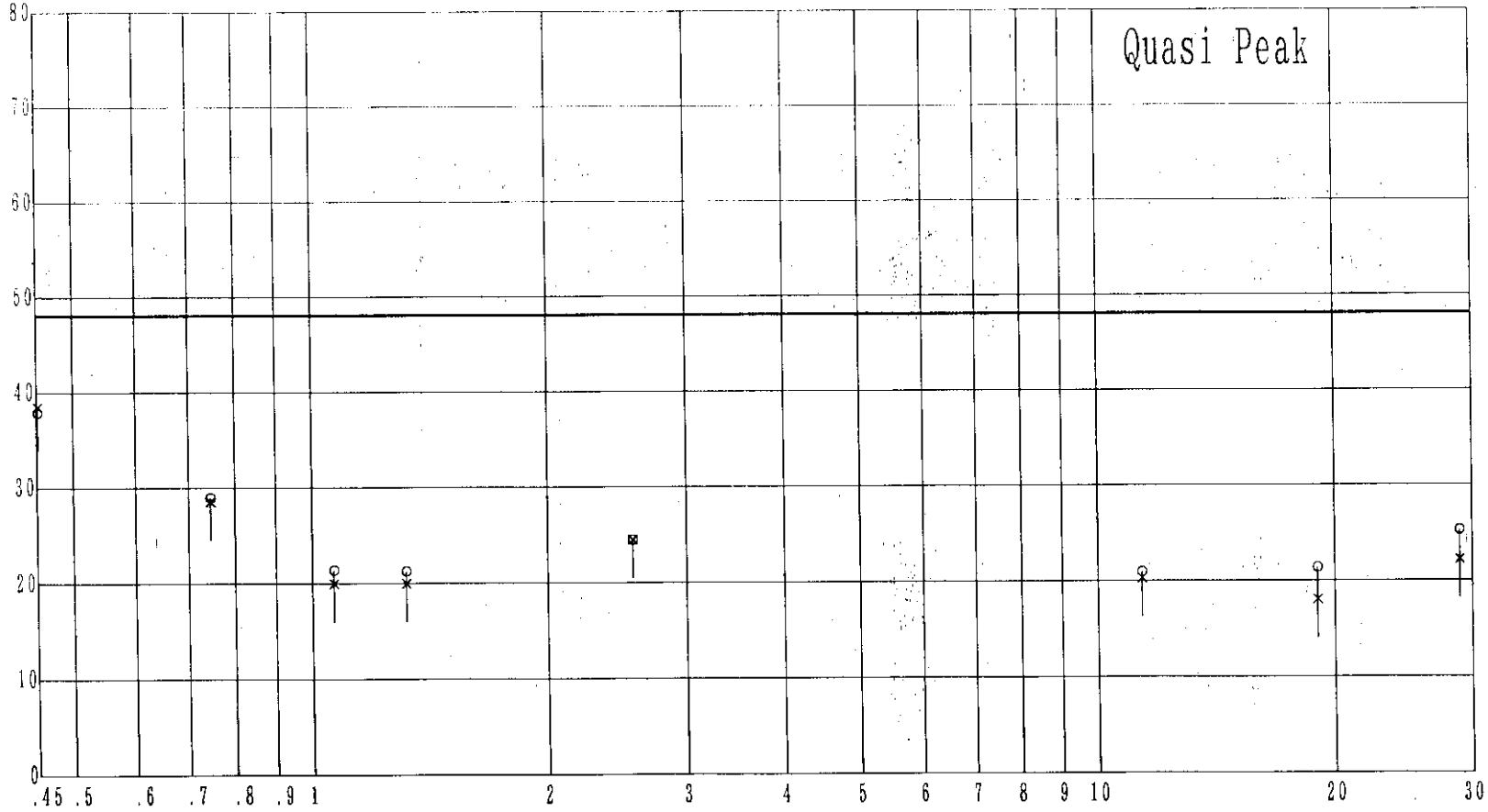
Video source connected to the EUT
: Internal(Recorded Tape) 'PLAY Mode'
RF Output Channels : #3 and #4

—— Limit Line
x : Measured Value one end (Va)
o : Measured Value other end (Vb)



RF Voltage (dBuV)

Section.15.107
POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEAUSREMENT

Video source connected to the EUT : External(VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Va	Vb	LISN factor [dB]	Limits [dBuV]	Radio noise voltage [dBuV] Va	Vb
0.45	38.4	39.1	0.6	48.0	39.0	39.7
0.78	27.9	28.2	0.8	48.0	28.7	29.0
1.17	24.1	25.1	0.8	48.0	24.9	25.9
1.66	25.6	26.2	0.8	48.0	26.4	27.0
2.32	23.7	26.7	0.7	48.0	24.4	27.4
6.50	18.5	19.6	0.6	48.0	19.1	20.2
10.06	26.4	28.7	0.4	48.0	26.8	29.1
11.53	26.9	28.9	0.5	48.0	27.4	29.4
18.18	25.9	28.8	0.6	48.0	26.5	29.4
27.20	20.1	24.4	0.9	48.0	21.0	25.3

NOTES: 1) Sample calculation at 0.45 MHz (Va) :
38.4 (dBuV) + 0.6 (dB) = 39.0 (dBuV/m)
LISN factor [dB] = 0.6 [dB]
Limits :250[uV] = 20 log (250 [uV]) = 48 [dBuV]

2) The spectrum was checked from 0.45 at 30 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Va : One-end & Grounded . Vb : The other-end & grounded

Section.15.107
Results of Conducted Power Line Measurements.

Measurement Method : FCC Rules and Regulations Part 15 (B)

EUT : Videocassette Recorder
Model No. : HR-VP674U
Serial No. : ES200026 with QAU0142-X

Report No. : JYT99001
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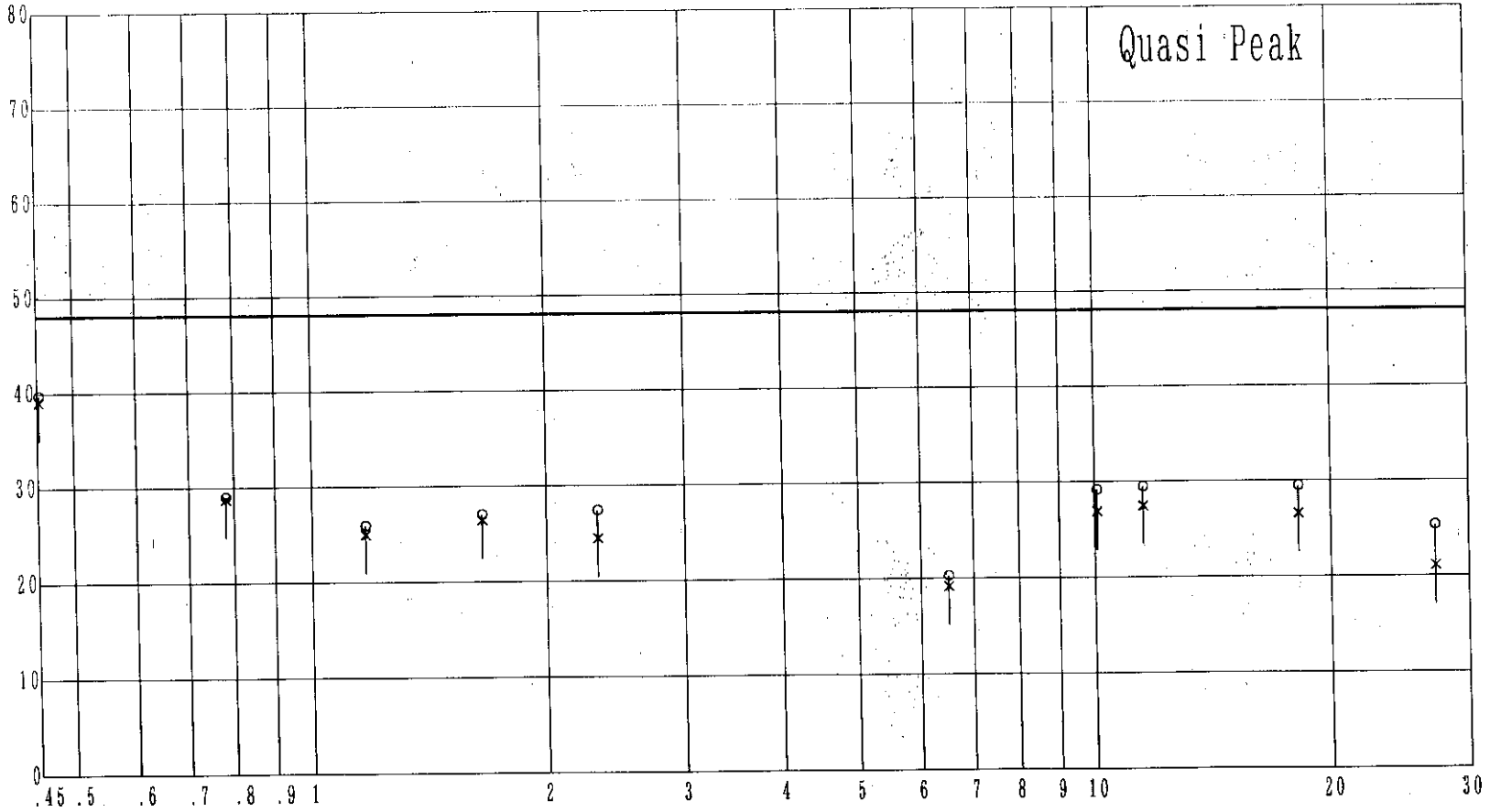
Video source connected to the EUT
: External(VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

—— Limit Line
x : Measured Value one end (Va)
o : Measured Value other end (Vb)



Section.15.107
POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEAUSREMENT

Video source connected to the EUT : External(VITS at 5Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Va	Vb	LISN factor [dB]	Limits [dBuV]	Radio noise voltage [dBuV] Va	Vb
0.45	38.6	38.4	0.6	48.0	39.2	39.0
0.76	28.3	28.6	0.8	48.0	29.1	29.4
1.00	22.2	25.9	0.8	48.0	23.0	26.7
1.32	24.9	26.3	0.8	48.0	25.7	27.1
2.33	24.8	26.2	0.7	48.0	25.5	26.9
6.48	19.1	19.5	0.6	48.0	19.7	20.1
9.94	27.7	29.8	0.4	48.0	28.1	30.2
11.45	28.0	28.6	0.5	48.0	28.5	29.1
18.02	28.1	28.8	0.6	48.0	28.7	29.4
28.76	18.9	23.3	1.0	48.0	19.9	24.3

NOTES: 1) Sample calculation at 0.45 MHz (Va) :
38.6 (dBuV) + 0.6 (dB) = 39.2 (dBuV/m)
LISN factor [dB] = 0.6 [dB]
Limits :250[uV] = 20 log (250 [uV]) = 48 [dBuV]

2) The spectrum was checked from 0.45 at 30 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'.

4) Va : One-end & Grounded , Vb : The other-end & grounded

Section.15.107
Results of Conducted Power Line Measurements.

Measurement Method : FCC Rules and Regulations Part 15 (B)

EUT : Videocassette Recorder
Model No. : HR-VP674U
Serial No. : ES200026 with QAU0142-X

Report No. : JYT99001
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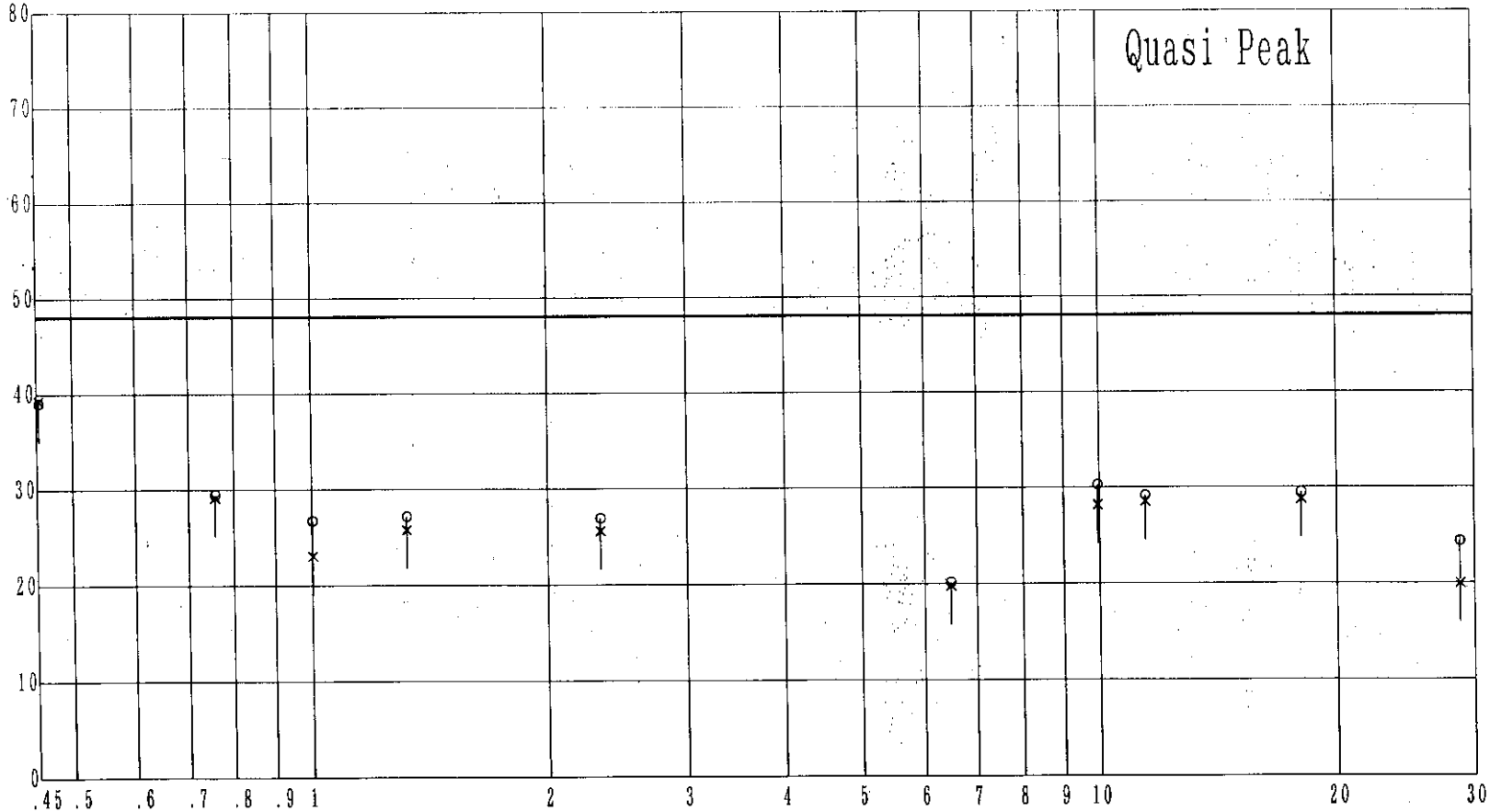
Video source connected to the EUT
: External(VITS at 5Vp-p) 'REC Mode'
RF Output Channels : #3 and #4

—— Limit Line
x : Measured Value one end (Va)
o : Measured Value other end (Vb)



Section.15.115 (b)(1) OUTPUT SIGNAL LEVEL

Video source connected to the EUT : Internal(Recorded Tape) 'PLAY Mode'

RF Output channel	Measured carrier freq. [MHz] Visual	Aural	Meter reading [dBuV] Visual	Aural	Matching pad loss [dB]	RF Output signal level [dB] Limits	Visual	Limits	Aural
3	61.25	65.70	59.7	43.3	6.0	69.5	67.5	56.5	51.1
4	67.28	71.73	59.7	43.0	6.0	69.5	67.5	56.5	50.8

Video source connected to the EUT : External(VITS at 1Vp-p) 'REC Mode'

RF Output channel	Measured carrier freq. [MHz] Visual	Aural	Meter reading [dBuV] Visual	Aural	Matching pad loss [dB]	RF Output signal level [dB] Limits	Visual	Limits	Aural
3	61.28	51.23	58.7	43.4	6.0	69.5	66.5	56.5	51.2
4	67.28	71.73	58.3	43.4	6.0	69.5	66.1	56.5	51.2

Video source connected to the EUT : External(VITS at 5Vp-p) 'REC Mode'

RF Output channel	Measured carrier freq. [MHz] Visual	Aural	Meter reading [dBuV] Visual	Aural	Matching pad loss [dB]	RF Output signal level [dB] Limits	Visual	Limits	Aural
3	61.25	65.73	59.8	43.4	6.0	69.5	67.6	56.5	51.2
4	67.28	71.73	58.6	43.0	6.0	69.5	66.4	56.5	50.8

NOTES: 1) Sample calculation at 61.25 MHz :
59.7 (dBuV) + 6.0 (dB) + 1.76 (dB) = 67.5 (dBuV)
(50ohm->75ohm)

2) The symbol of '<' means 'or less'

3) Spectrum Analyzer : SPAN : 10MHz SWP : 50ms
RES BW : 100kHz VBW : 300kHz

4) Impedance at the output terminal : 75 ohm (Unbalanced)

Section.15.115 (b)(2)
OUTPUT TERMINAL CONDUCTED SPURIOUS EMISSION MEASUREMENT

Video source connected to the EUT : Internal(Recorded Tape) 'PLAY Mode'

RF Output Channels : #3

Frequency of the emission [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
38.7	40.1	6.0	29.4	39.5	18.5
47.7	45.0	6.0	29.4	39.5	23.4
55.1	40.2	6.0	29.3	39.5	18.7
67.3	39.6	6.0	29.3	39.5	18.1
74.8	43.8	6.0	29.2	39.5	22.4
83.8	37.9	6.0	29.2	39.5	16.5
122.5	45.9	6.0	29.0	39.5	24.7
179.2	37.4	6.0	28.9	39.5	16.3
183.7	43.5	6.0	28.9	39.5	22.4
188.2	36.7	6.0	28.8	39.5	15.7
306.1	36.7	6.0	28.7	39.5	15.8
367.3	38.0	6.0	28.9	39.5	16.9

Video source connected to the EUT : Internal(Recorded Tape) 'PLAY Mode'

RF Output Channels : #4

Frequency of the emission [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
36.0	38.1	6.0	29.4	39.5	16.5
44.8	39.3	6.0	29.4	39.5	17.7
53.8	44.3	6.0	29.3	39.5	22.8
61.2	39.8	6.0	29.3	39.5	18.3
73.4	39.1	6.0	29.2	39.5	17.7
80.9	42.4	6.0	29.2	39.5	21.0
134.5	42.6	6.0	29.0	39.5	21.4
201.7	42.2	6.0	28.8	39.5	21.2
336.1	38.0	6.0	28.8	39.5	17.0
403.4	37.5	6.0	29.0	39.5	16.3

NOTES: 1) Sample calculation at 36.0 MHz :
38.1 (dBuV) + 6.0 (dB) - 29.4 (dB) + 1.76 (dB) = 16.5 (dBuV)
(50ohm->75ohm)

2) The spectrum was checked from 30 at 1000 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Spectrum Analyzer : SPAN : 10MHz SWP : 50ms
RES BW : 100kHz VBW : 800kHz

5) Impedance at the output terminal : 75 ohm (Unbalanced)

Section.15.115 (b)(2)
Output Terminal Conducted Spurious Emission Measurements.

Measurement Method : FCC Rules and Regulations Part 15 (B)

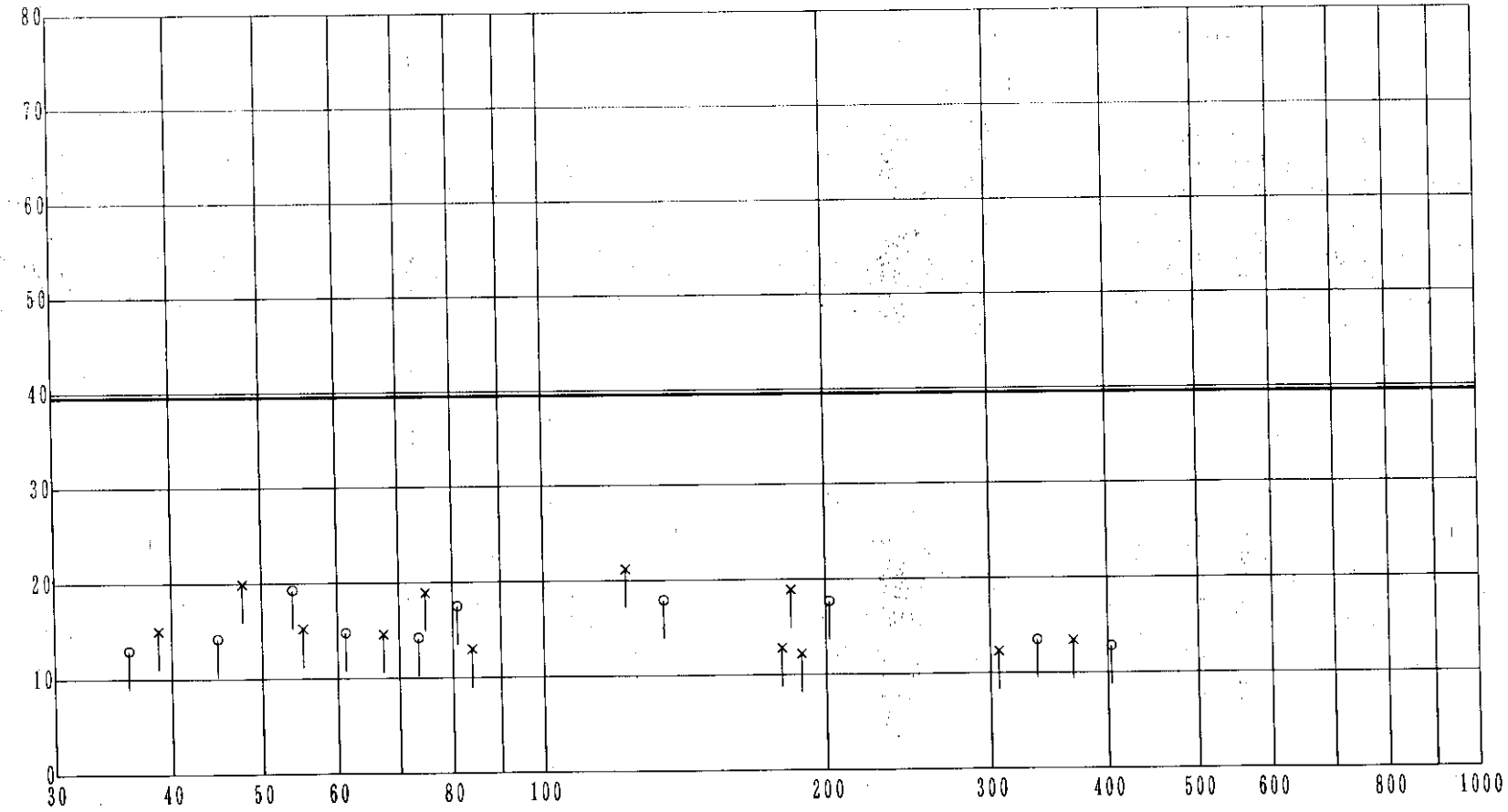
EUT : Videocassette Recorder
Model No. : HR-VP674U
Serial No. : ES200026 with QAU0142-X

Report No. : JYT99001
Date. : Jan 22, 1999

Video source connected to the EUT
: Internal(Recorded Tape) 'PLAY Mode'

RF Output Channels : #3 and #4

—— Limit Line
x : Channel 3
o : Channel 4



Section.15.115 (b)(2)
OUTPUT TERMINAL CONDUCTED SPURIOUS EMISSION MEASUREMENT

Video source connected to the EUT : External(VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #3

Frequency of the emission [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
38.7	40.2	6.0	29.4	39.5	18.6
47.8	45.2	6.0	29.4	39.5	23.6
74.7	43.9	6.0	29.2	39.5	22.5
83.8	37.6	6.0	29.2	39.5	16.2
122.8	45.6	6.0	29.0	39.5	24.4
183.7	42.7	6.0	28.9	39.5	21.6
367.3	36.7	6.0	28.9	39.5	15.6

Video source connected to the EUT : External(VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #4

Frequency of the emission [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
36.0	37.6	6.0	29.4	39.5	16.0
44.7	39.3	6.0	29.4	39.5	17.7
53.8	44.4	6.0	29.3	39.5	22.9
80.8	42.2	6.0	29.2	39.5	20.8
134.5	41.9	6.0	29.0	39.5	20.7
201.7	41.3	6.0	28.8	39.5	20.3
336.1	38.7	6.0	28.8	39.5	17.7
403.4	37.0	6.0	29.0	39.5	15.8

NOTES: 1) Sample calculation at 36.0 MHz :
37.6 (dBuV) + 6.0 (dB) - 29.4 (dB) + 1.76 (dB) = 16.0 (dBuV)
(50ohm->75ohm)

2) The spectrum was checked from 30 at 1000 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Spectrum Analyzer : SPAN : 10MHz SWP : 50ms
RES BW : 100kHz VBW : 800kHz

5) Impedance at the output terminal : 75 ohm (Unbalanced)

Section.15.115 (b)(2)
Output Terminal Conducted Spurious Emission Measurements.

Measurement Method : FCC Rules and Regulations Part 15 (B)

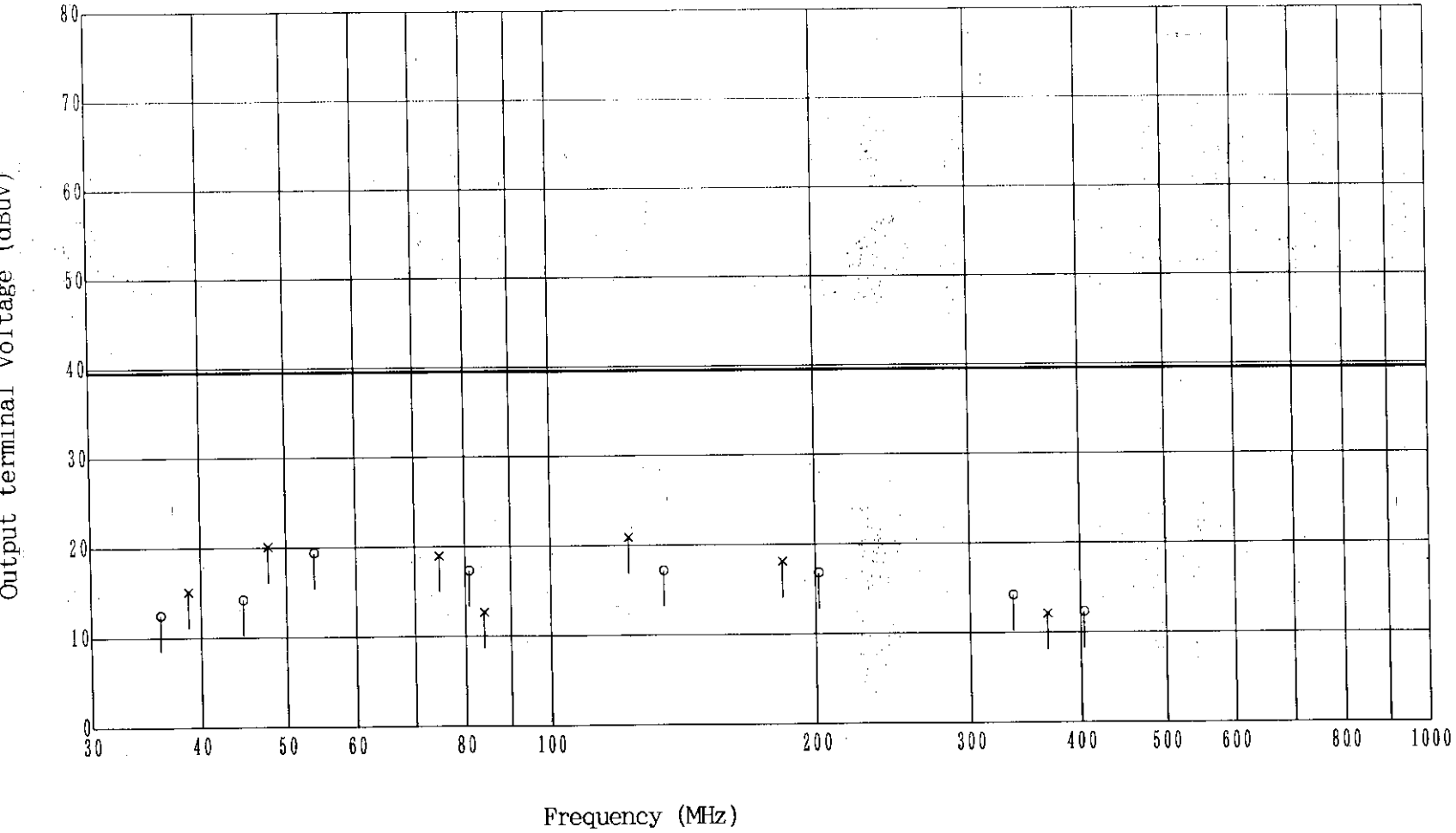
EUT : Videocassette Recorder
Model No. : HR-VP674U
Serial No. : ES200026 with QAU0142-X

Report No. : JYT99001
Date. : Jan 22, 1999

Video source connected to the EUT
: External(VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

—— Limit Line
x : Channel 3
o : Channel 4



Section.15.115 (b)(2)
OUTPUT TERMINAL CONDUCTED SPURIOUS EMISSION MEASUREMENT

Video source connected to the EUT : External(VITS at 5Vp-p) 'REC Mode'

RF Output Channels : #3

Frequency of the emission [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
38.7	39.6	6.0	29.4	39.5	18.0
47.7	44.7	6.0	29.4	39.5	23.1
74.7	43.4	6.0	29.2	39.5	22.0
83.8	36.8	6.0	29.2	39.5	15.4
122.5	45.5	6.0	29.0	39.5	24.3
183.7	42.6	6.0	28.9	39.5	21.5
367.3	37.1	6.0	28.9	39.5	16.0

Video source connected to the EUT : External(VITS at 5Vp-p) 'REC Mode'

RF Output Channels : #4

Frequency of the emission [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
36.0	37.7	6.0	29.4	39.5	16.1
44.8	40.0	6.0	29.4	39.5	18.4
53.8	44.5	6.0	29.3	39.5	23.0
80.8	42.5	6.0	29.2	39.5	21.1
134.5	42.2	6.0	29.0	39.5	21.0
201.7	41.7	6.0	28.8	39.5	20.7
336.2	38.1	6.0	28.8	39.5	17.1
403.4	36.8	6.0	29.0	39.5	15.6

NOTES: 1) Sample calculation at 36.0 MHz :
37.7 (dBuV) + 6.0 (dB) - 29.4 (dB) + 1.76 (dB) = 16.1 (dBuV)
(50ohm->75ohm)

2) The spectrum was checked from 30 at 1000 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Spectrum Analyzer : SPAN : 10MHz SWP : 50ms
RES BW : 100kHz VBW : 800kHz

5) Impedance at the output terminal : 75 ohm (Unbalanced)

Section.15.115 (b)(2)
Output Terminal Conducted Spurious Emission Measurements.

Measurement Method : FCC Rules and Regulations Part 15 (B)

EUT : Videocassette Recorder
Model No. : HR-VP674U
Serial No. : ES200026 with QAU0142-X

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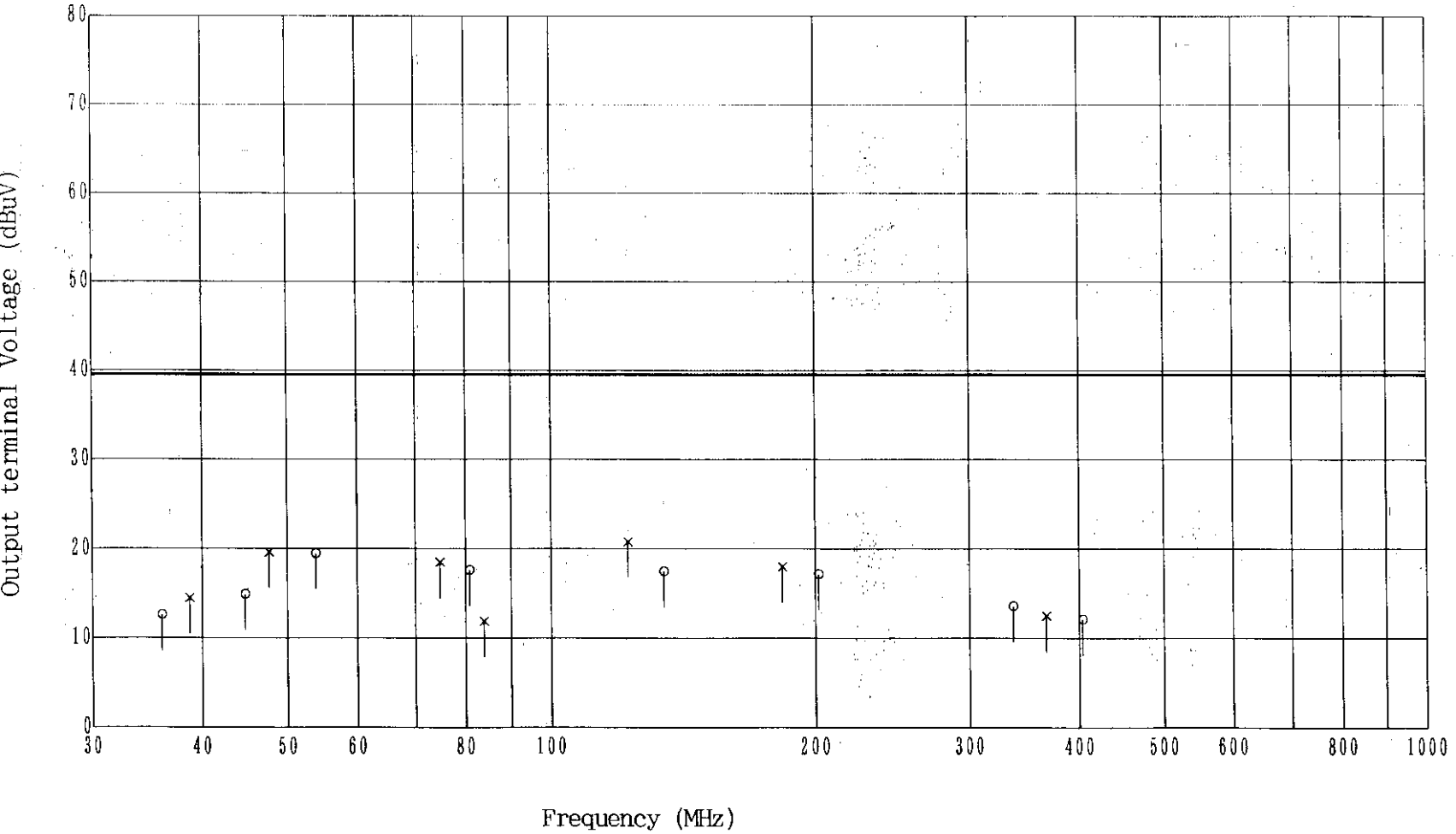
Video source connected to the EUT
: External(VITS at 5Vp-p) 'REC Mode'
RF Output Channels : #3 and #4

—— Limit Line
x : Channel 3
o : Channel 4



Section.15.115 (b)(c) TRANSFER SWITCH ISOLATION MEASUREMENT

Video source connected to the EUT : Internal(Recorded Tape) 'PLAY Mode'

RF Output channel	Measured carrier freq. [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
3	61.22	28.5	6.0	29.3	9.5	7.0
4	67.22	23.8	6.0	29.3	9.5	2.3

Video source connected to the EUT : External(VITS at 1Vp-p) 'REC Mode'

RF Output channel	Measured carrier freq. [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
3	61.22	28.3	6.0	29.3	9.5	6.8
4	67.22	23.9	6.0	29.3	9.5	2.4

Video source connected to the EUT : External(VITS at 5Vp-p) 'REC Mode'

RF Output channel	Measured carrier freq. [MHz]	Meter reading [dBuV]	Matching pad loss [dB]	Gain of pre amp. [dB]	Limits [dBuV]	Results [dBuV]
3	61.22	28.3	6.0	29.3	9.5	6.8
4	67.22	23.7	6.0	29.3	9.5	2.2

NOTES: 1) Sample calculation at 61.22 MHz :
28.5 (dBuV) + 6.0 (dB) - 29.3 (dB) + 1.76 (dB) = 7.0 (dBuV)
(50ohm->75ohm)

2) The symbol of '<' means 'or less'

3) Spectrum Analyzer : SPAN : 10MHz SWP : 50ms
RES BW : 100kHz VBW : 300kHz

4) Impedance at the output terminal : 75 ohm (Unbalanced)

<Radiated Emission>

Caused by the local oscillator

Channel	Freq [MHz]	Meter reading [dBuV]	Ant fact [dB]	C. fact [dB]	Matching pad [dB]	Corrected reading [dBuV/m]	Polarization	Limit [dBuV/m]
2	101	< 38.7	10.84	25.49	6.0	< 30.0	Vertical	43.5
	202	< 31.2	16.82	24.03		< 30.0		46.0
	303	< 30.6	16.43	22.98		< 30.0		54.0
	1010	< 34.7	26.71	27.38		< 40.0		
	1616	< 31.8	29.41	27.23		< 40.0		
4	113	< 36.9	12.46	25.31	6.0	< 30.0	Horizontal	43.5
	226	< 30.1	17.11	23.21		< 30.0		46.0
	339	< 29.6	16.79	22.35		< 30.0		
	1017	< 34.7	26.71	27.37		< 40.0		54.0
	1695	< 32.8	28.55	27.39		< 40.0		
6	129	< 34.9	14.07	24.93	6.0	< 30.0	Horizontal	43.5
	258	< 29.5	17.74	23.24		< 30.0		46.0
	387	< 28.5	17.27	21.81		< 30.0		
	1032	< 34.6	26.72	27.34		< 40.0		54.0
	1677	< 32.6	28.74	27.35		< 40.0		
8	227	< 30.1	17.12	23.22	6.0	< 30.0	Horizontal	46.0
	454	< 36.5	18.53	31.07		< 30.0		
	681	25.2	22.56	18.28		35.5		
	1135	< 33.8	27.31	27.13		< 40.0		54.0
	1589	< 31.5	29.70	27.18		< 40.0		
10	239	< 30.1	17.27	23.37	6.0	< 30.0	Horizontal	46.0
	478	< 25.3	19.04	20.33		< 30.0		
	717	< 24.0	22.72	17.70		< 35.0		54.0
	1195	< 32.7	28.28	27.01		< 40.0		
	1673	< 32.6	28.79	27.35		< 40.0		
12	251	< 30.0	17.44	23.47	6.0	< 30.0	Vertical	46.0
	502	< 24.2	19.56	19.80		< 30.0		
	753	< 23.3	22.97	17.30		< 35.0		
	1004	< 34.7	26.70	27.39		< 40.0		54.0
	1506	< 30.5	30.54	27.01		< 40.0		
14	517	32.4	19.99	19.80	6.0	38.6	Vertical	46.0
	1034	< 35.6	26.72	27.33		< 41.0		54.0
	1551	< 36.0	30.08	27.10		< 45.0		
20	553	33.8	21.04	19.79	6.0	41.1	Vertical	46.0
	1106	< 34.3	26.85	27.19		< 40.0		54.0
	1659	< 37.4	28.94	27.32		< 45.0		
28	601	30.2	22.40	19.59	6.0	39.0	Vertical	46.0
	1202	< 37.6	28.36	27.00		< 45.0		54.0
35	643	31.8	22.49	19.00	6.0	41.3	Horizontal	46.0
	1286	< 37.4	28.56	27.00		< 45.0		54.0

C.fact = Correction factor (Pre amp. + Cable loss)

Corrected reading = Meter reading + Ant Fact + Matching pad 6dB - C.fact

<Radiated Emission>

Caused by the local oscillator

Channel	Freq [MHz]	Meter reading [dBuV]	Ant fact [dB]	C. fact [dB]	Matching pad [dB]	Corrected reading [dBuV/m]	Polarization	Limit [dBuV/m]
36	649	33.2	22.50	18.91	6.0	42.8	Horizontal	46.0
	1298	< 37.4	28.59	27.00		< 45.0		54.0
37	655	32.4	22.51	18.80	6.0	42.1	Horizontal	46.0
	1310	< 37.2	28.74	26.98		< 45.0		54.0
45	703	24.4	22.62	17.86	6.0	35.2	Vertical	46.0
	1406	< 35.7	30.12	26.81		< 45.0		54.0
53	751	22.1	22.96	17.30	6.0	33.8	Horizontal	46.0
	1502	< 35.4	30.58	27.00		< 45.0		54.0
61	799	24.4	23.29	17.30	6.0	36.4	Vertical	46.0
	1598	36.5	29.61	27.20		44.9		54.0
64	817	28.0	23.61	17.13	6.0	40.5	Vertical	46.0
	1634	37.2	29.22	27.27		45.2		54.0
65	823	29.1	23.71	17.07	6.0	41.8	Vertical	46.0
	1646	37.1	29.08	27.29		44.9		54.0
66	829	28.4	23.82	17.01	6.0	41.2	Horizontal	46.0
	1658	38.6	28.95	27.32		46.3		54.0
67	835	27.4	23.93	16.95	6.0	40.4	Horizontal	46.0
	1670	38.3	28.82	27.34		45.8		54.0
68	841	27.2	24.04	16.89	6.0	40.4	Horizontal	46.0
	1682	38.8	28.69	27.36		46.1	Vertical	54.0
69	847	25.7	24.15	16.83	6.0	39.0	Vertical	46.0
	1694	38.7	29.05	27.39		46.3		54.0

C.fact = Correction factor (Pre amp. + Cable loss)

Corrected reading = Meter reading + Ant Fact + Matching pad 6dB - C.fact

<Antenna power conduction for receivers>

Section 15.111(a)

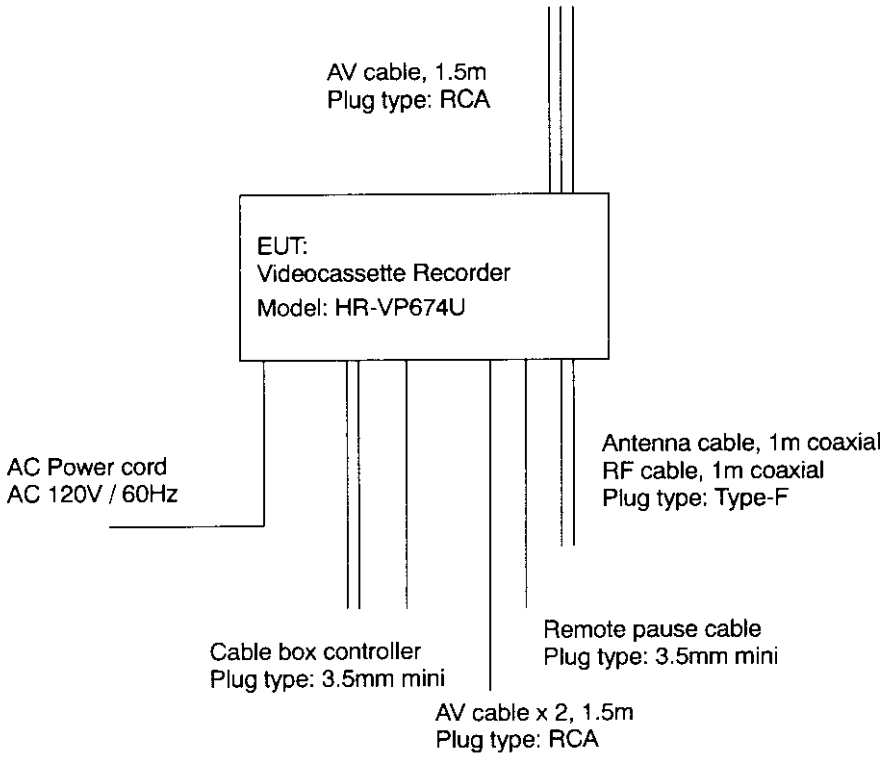
Channel	Freq [MHz]	Meter reading [dBuV]	C. fact [dB]	Corrected reading [dBuV/m]	Limit [dBuV/m]
2	101	< 51.0	28.80	< 30.0	52.0
	202	< 51.6	29.39	< 30.0	
	303	< 52.4	30.12	< 30.0	
	1010	< 49.5	27.24	< 30.0	
	1616	< 49.7	27.45	< 30.0	
4	113	< 51.0	28.75	< 30.0	52.0
	226	< 51.7	29.46	< 30.0	
	339	< 52.4	30.12	< 30.0	
	1017	< 49.5	27.24	< 30.0	
	1695	< 48.8	26.52	< 30.0	
6	129	< 51.4	29.11	< 30.0	52.0
	258	< 51.9	29.63	< 30.0	
	387	< 52.4	30.12	< 30.0	
	1161	< 49.3	27.10	< 30.0	
	1290	< 48.7	26.48	< 30.0	
	1419	< 49.0	26.78	< 30.0	
	1677	< 49.0	26.73	< 30.0	
7	221	< 51.7	29.45	< 30.0	52.0
	442	54.3	30.19	31.9	
	663	< 51.6	29.37	< 30.0	
	1105	< 49.5	27.24	< 30.0	
	1326	< 48.8	26.54	< 30.0	
	1547	< 49.2	26.91	< 30.0	
8	227	< 51.7	29.47	< 30.0	52.0
	454	< 52.5	30.21	< 30.0	
	681	56.1	29.33	34.5	
	1135	< 49.4	27.16	< 30.0	
	1362	< 49.0	26.72	< 30.0	
	1589	< 49.7	27.49	< 30.0	
9	233	< 51.7	29.49	< 30.0	52.0
	466	< 52.5	30.23	< 30.0	
	699	56.7	29.29	35.1	
	1165	< 49.3	27.09	< 30.0	
	1398	< 49.1	26.89	< 30.0	
	1631	< 49.5	27.27	< 30.0	
10	239	< 51.7	29.50	< 30.0	52.0
	478	< 52.5	30.24	< 30.0	
	717	57.3	29.08	36.0	
	1195	< 49.3	27.01	< 30.0	
	1434	< 48.9	26.68	< 30.0	
	1673	< 49.0	26.78	< 30.0	

Channel	Freq [MHz]	Meter reading [dBuV]	C. fact [dB]	Corrected reading [dBuV/m]	Limit [dBuV/m]
11	245	< 51.8	29.52	< 30.0	52.0
	490	< 52.5	30.26	< 30.0	
	735	58.2	28.86	37.1	
	980	< 49.6	27.40	< 30.0	
	1225	< 49.1	26.86	< 30.0	
	1470	< 48.7	26.45	< 30.0	
12	251	< 51.8	29.55	< 30.0	52.0
	502	< 52.5	30.26	< 30.0	
	753	56.9	28.64	36.0	
	1004	< 49.5	27.24	< 30.0	
	1506	< 48.6	26.34	< 30.0	
13	257	< 51.9	29.62	< 30.0	52.0
	514	< 52.4	30.17	< 30.0	
	771	52.1	27.24	32.6	
	1028	< 49.0	26.71	< 30.0	
	1542	< 49.1	26.84	< 30.0	
14	517	< 52.4	30.15	< 30.0	52.0
	1034	< 49.5	27.24	< 30.0	
	1551	< 49.2	26.96	< 30.0	
20	553	< 52.1	29.87	< 30.0	52.0
	1106	< 49.5	27.24	< 30.0	
	1659	< 49.2	26.94	< 30.0	
28	601	< 51.8	29.51	< 30.0	52.0
	1202	< 49.2	26.99	< 30.0	
36	649	56.6	29.40	35.0	52.0
	1298	< 48.7	26.43	< 30.0	
45	703	64.6	29.25	43.1	52.0
	1406	< 49.1	26.86	< 30.0	
46	709	64.6	29.18	43.2	52.0
	1418	< 49.0	26.78	< 30.0	
47	715	64.7	29.11	43.3	52.0
	1430	< 49.0	26.71	< 30.0	
48	721	64.5	29.03	43.2	52.0
	1442	< 48.9	26.63	< 30.0	
49	727	64.1	28.96	42.9	52.0
	1454	< 48.8	26.55	< 30.0	
53	751	60.3	28.66	39.4	52.0
	1502	< 48.5	26.29	< 30.0	
61	799	< 50.3	28.07	< 30.0	52.0
	1598	< 49.9	27.61	< 30.0	
69	847	53.4	28.06	33.1	52.0
	1694	50.6	26.53	31.9	

C.fact = Correction factor (Pre amp. + Cable loss)

Corrected reading = Meter reading + Matching pad 6dB - C.fact + 1.76 (50->75 ohms conversion)

Configuration of Tested System



Victor Company of Japan Limited
Video division
12, 3-chome, Moriya-cho, Kanagawa-ku
Yokohama 221-8528 Japan

FCC ID: ASIP9K045
Model : HR-S4600U
Date : December 21, 1998

LIST OF SCHEMATIC DIAGRAMS

Name of Schematic Diagrams	Schematic number
1. Schematic Diagram of Over All	LPS10182-001
2. Schematic Diagram of Sw.Reg.	LPS10177-001
3. Schematic Diagram of Video / Audio	LPS10179-001
4. Schematic Diagram of Syscon	LPS10176-001
5. Schematic Diagram of Tuner	LPS10178-001
6. Schematic Diagram of Demod	PU97596
7. Schematic Diagram of FMA	LPS20116-001
8. Schematic Diagram of On Screen	LPS30048-001
9. Schematic Diagram of Front	LPS10181-001
10. Schematic Diagram of CM / MV Advance	LPS30029-002
11. Schematic Diagram of Terminal	LPS20122-001
12. Schematic Diagram of 2D-SVHS (Video)	LPS10180-001
13. Schematic Diagram of 2D-SVHS (Y/C)	LPS20123-001
14. Schematic Diagram of C-Box CTL	LPS20121-001
15. Schematic Diagram of Tuner unit, QAU0113-x	BZ022481
16. Schematic Diagram of Tuner unit, QAU0115-x as alternative use of QAU0113-x	BZ022483

Since the schematic diagrams of tuner unit QAU0113-x and QAU0115-x are common use with the original model HR-VP674U, we did not enclose them. Please refer to the schematics of HR-J674U.

[REPORT OF MEASUREMENTS ON TV INTERFACE DEVICE]

Date : December 17, 1998
Issued at : Kanagawa Japan

REPORT No. : JYT98017

1. Applicant	:	Victor Company of Japan, Ltd. 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa 221-8528, JAPAN
2. Description of the Equipment Under Test (EUT)	:	Videocassette recorder
2.1 FCC ID	:	ASIP9K045
2.2 Tuner/RF conv.type	:	QAU0113-x
2.3 Brand (Trade Name)	:	JVC
2.4 Model No.	:	HR-S4600U
2.5 Serial No.	:	ES200006
2.6 Designes for RF Output Channels	:	Channel #3 and Channel #4
2.7 Number of RF Output Terminals	:	1 (F-type Connector)
2.8 RF Output Impedance	:	75 ohms (Unbalanced)
2.9 Power Supply	:	AC 120 V, 60Hz
2.10 Date of Manufacturer	:	December, 1998
3. The Highest Frequency generated in the EUT	:	71.75MHz
4. External Connectors	:	·A/V Input/Output ports, RCA type ·S Video Input/Output ports, mini-DIN type ·Cable box port, 3.5ϕmini jack type ·Pause control port, 3.5ϕmini jack type
5. Connected Accessories for the EUT	:	·Coaxial Cable with F-Type plug ·Audio/Video Cables with RCA Plugs ·S Video cables with mini-DIN plug ·Cable box controller with mini plug ·Pause control cable with mini plug
6. Measuring Method	:	Fcc Rules and Regulations Part 15 (B)
7. Measurement Procedure	:	ANSI C63.4-1992
8. Date of Measurement	:	Dec 15, 1998
9. Place of Measurement	:	Victor Company of Japan Ltd. JVC YOKOHAMA TEST SITE
10. Measurement Results	:	The results obtained from the measuring of the above-mentioned device are as shown in the attached sheets.

Victor Company of Japan Ltd.

T. Wakabayashi, General Manager
Engineering Support Center
Engineering Department
Video Division

Section.15.109 RADIATED RADIO EMISSION MEAUSREMENT

Video source connected to the EUT : Internal(Recorded Tape) 'PLAY Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Horizontal	Vertical	Correction factor [dB] Ant.Fac.	Gain/Loss	Limits	Field strength at 0m [dBuV/m] Horizontal	Vertical
87.1	52.2	53.5	7.7	-27.0	40.0	32.9	34.2
91.0	52.0	53.8	8.4	-26.9	43.5	33.5	35.3
94.7	50.7	53.2	9.3	-26.8	43.5	33.2	35.7
98.5	<47.0	51.0	10.1	-26.6	43.5	<30.4	34.4
110.3	<45.0	47.4	11.8	-26.3	43.5	<30.5	32.9
113.6	<44.0	48.4	12.2	-26.2	43.5	<30.0	34.4
117.4	<44.0	47.4	12.7	-26.1	43.5	<30.5	33.9
529.7	35.6	<30.0	19.8	-20.8	46.0	34.6	<29.0

NOTES: 1) Sample calculation at 87.1 MHz :
Field strength : Meter Reading + Antenna Fac. + Gain/Loss *
32.9 [dBuV/m] : 52.2 [dBuV] + 7.7 [dB] + (-27.0) [dB]
* Gain/Loss [dB] = Cable loss - Amp.Gain + Att.Pad loss, 6dB
Limits :100[uV/m] = 20 log (100 [uV/m]) = 40 [dBuV/m]

2) The spectrum was checked from 30 at 1000 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Arrangement of the Interface Cables : Refer to the photographs.

Section.15.109
Results of Radiated Emission Measurements.

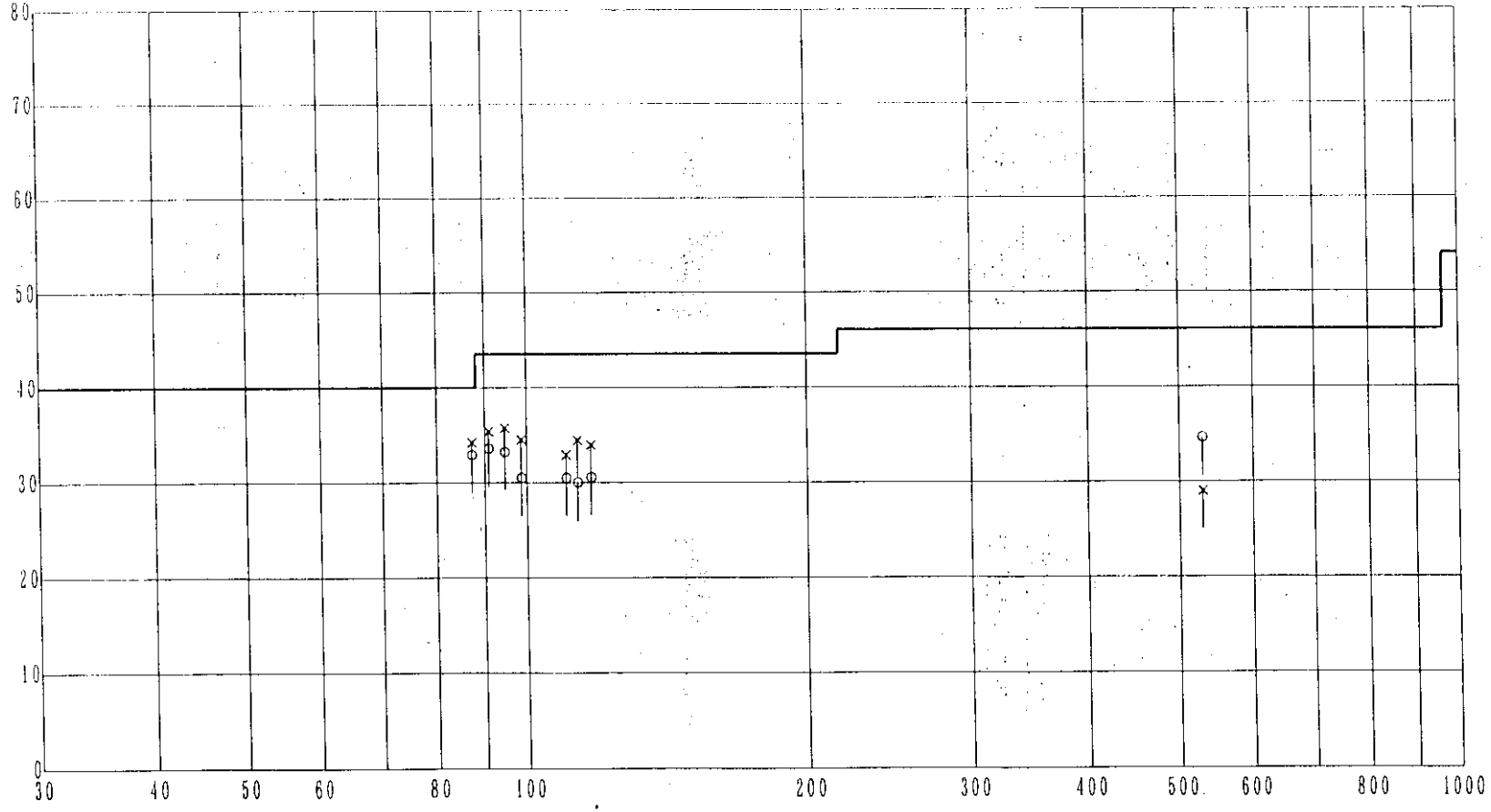
Measurement Method : Rules and Regulations, Part 15 (B)
Measurement Distance : 3 m

EUT : Videocassette recorder
Model No. : HR-S4600U
Serial No. : ES200006

Report No. : JYT98017
Date. : Dec 15, 1998

Video source connected to the EUT
: Internal(Recorded Tape) 'PLAY Mode'
RF Output Channels : #3 and #4

— Limit Line
o : Vertical
x : Horizontal



Section.15.109 RADIATED RADIO EMISSION MEAUSREMENT

Video source connected to the EUT : External(VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Horizontal	Vertical	Correction factor [dB] Ant.Fac.	Gain/Loss	Limits	Field strength at 3m [dBuV/m] Horizontal	Vertical
80.0	<50.0	56.9	6.4	-27.3	40.0	<29.2	36.1
87.5	<50.0	54.8	7.8	-27.0	40.0	<30.8	35.6
91.3	52.4	53.1	8.5	-26.9	43.5	34.0	34.7
95.1	53.4	54.7	9.4	-26.7	43.5	36.0	37.3
98.8	50.4	50.4	10.1	-26.6	43.5	33.9	33.9
110.4	49.1	<45.0	11.8	-26.3	43.5	34.6	<30.5
114.2	48.5	<44.0	12.3	-26.2	43.5	34.6	<30.1
171.9	39.1	<35.0	15.8	-25.0	43.5	29.9	<25.8
243.4	41.5	<37.0	17.1	-24.1	46.0	34.4	<29.9
345.9	37.8	<30.0	18.0	-22.8	46.0	33.0	<25.2
395.5	40.0	<35.0	17.3	-22.4	46.0	34.9	<29.9
414.4	<35.0	37.0	17.5	-22.1	46.0	<30.4	32.4

NOTES: 1) Sample calculation at 80.0 MHz :
Field strength : Meter Reading + Antenna Fac. + Gain/Loss *
29.2 [dBuV/m] : 50.0 [dBuV] + 6.4 [dB] + (-27.3) [dB]
* Gain/Loss [dB] = Cable loss - Amp.Gain + Att.Pad loss, 6dB
Limits :100[uV/m] = 20 log (100 [uV/m]) = 40 [dBuV/m]

2) The spectrum was checked from 30 at 1000 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Arrangement of the Interface Cables : Refer to the photographs.

Section.15.109

Results of Radiated Emission Measurements.

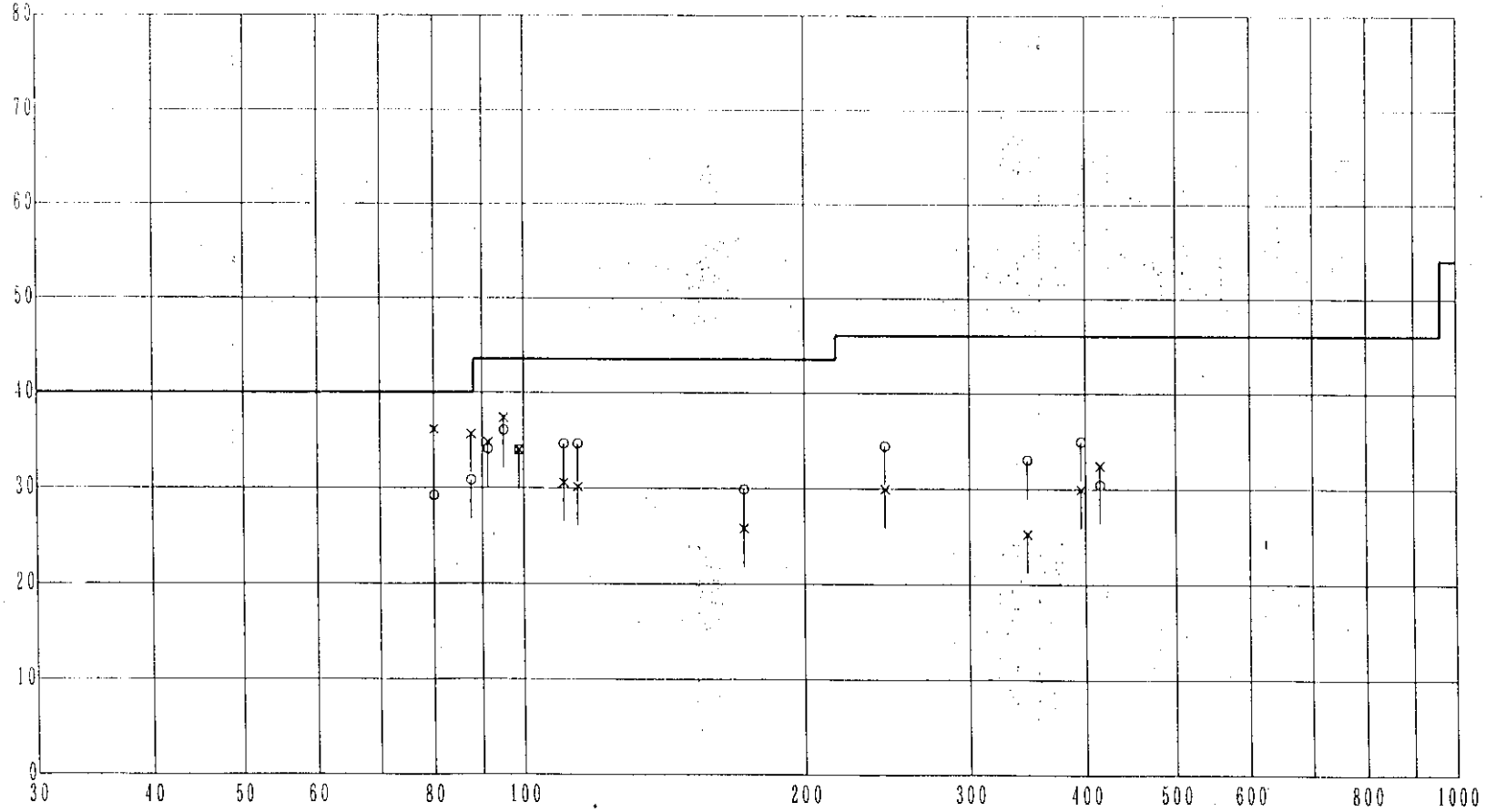
Measurement Method : Rules and Regulations, Part 15 (B)
Measurement Distance : 3 m

EUT : Videocassette recorder
Model No. : HR-S4600U
Serial No. : ES200006

Report No. : JYT98017
Date. : Dec 15, 1998

Video source connected to the EUT
: External(VITS at 1Vp-p) 'REC Mode'
RF Output Channels : #3 and #4

—— Limit Line
o : Vertical
x : Horizontal



Section.15.109 RADIATED RADIO EMISSION MEAUSREMENT

Video source connected to the EUT : External(VITS at 5Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV]		Correction factor [dB]		Limits	Field strength at 3m [dBuV/m]	
	Horizontal	Vertical	Ant.Fac.	Gain/Loss		Horizontal	Vertical
80.0	<50.0	56.1	6.4	-27.3	40.0	<29.2	35.3
87.4	52.6	52.9	7.8	-27.0	40.0	33.4	33.7
91.1	51.8	50.3	8.5	-26.9	43.5	33.4	31.9
94.8	51.0	52.0	9.3	-26.8	43.5	33.5	34.5
98.6	49.3	51.2	10.1	-26.6	43.5	32.8	34.7
109.9	48.8	<46.0	11.7	-26.3	43.5	34.2	<31.4
113.7	49.9	<44.0	12.2	-26.2	43.5	35.9	<30.0
345.9	38.1	<35.0	18.0	-22.8	46.0	33.3	<30.2
418.3	38.8	36.4	17.6	-22.1	46.0	34.3	31.9
551.0	31.9	<30.0	20.3	-20.5	46.0	31.7	<29.8

NOTES: 1) Sample calculation at 80.0 MHz :
Field strength : Meter Reading + Antenna Fac. + Gain/Loss *
29.2 [dBuV/m] : 50.0 [dBuV] + 6.4 [dB] + (-27.3) [dB]
* Gain/Loss [dB] = Cable loss - Amp.Gain + Att.Pad loss, 6dB
Limits :100[uV/m] = 20 log (100 [uV/m]) = 40 [dBuV/m]

2) The spectrum was checked from 30 at 1000 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Arrangement of the Interface Cables : Refer to the photographs.

Section.15.109
Results of Radiated Emission Measurements.

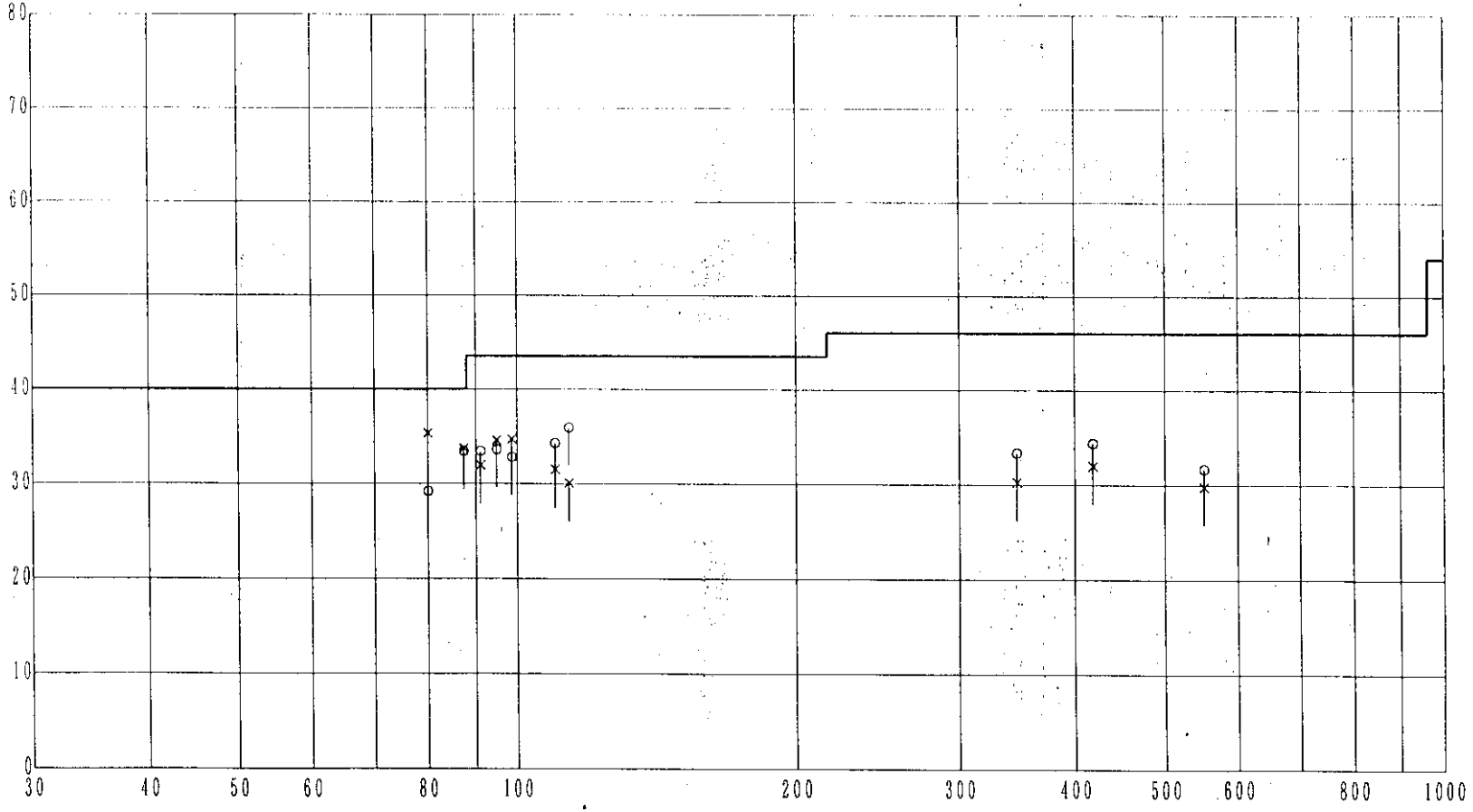
Measurement Method : Rules and Regulations, Part 15 (B)
Measurement Distance : 3 m

EUT : Videocassette recorder
Model No. : HR-S4600U
Serial No. : ES200006

Report No. : JYI98017
Date. : Dec 15, 1998

Video source connected to the EUT
: External(VITS at 5Vp-p) 'REC Mode'
RF Output Channels : #3 and #4

—— Limit Line
o : Vertical
x : Horizontal



Section.15.107
POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEAUSREMENT

Video source connected to the EUT : Internal(Recorded Tape) 'PLAY Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Va	Meter reading [dBuV] Vb	LISN factor [dB]	Limits [dBuV]	Radio noise voltage [dBuV] Va	Radio noise voltage [dBuV] Vb
0.45	35.0	35.3	0.6	48.0	35.6	35.9
0.64	28.1	28.6	0.7	48.0	28.8	29.3
1.03	17.9	18.7	0.8	48.0	18.7	19.5
1.50	19.9	18.7	0.8	48.0	20.7	19.5
2.29	18.7	17.0	0.7	48.0	19.4	17.7
21.43	14.6	14.1	0.7	48.0	15.3	14.8
29.82	22.3	23.7	1.0	48.0	23.3	24.7

NOTES: 1) Sample calculation at 0.45 MHz (Va) :
35.0 (dBuV) + 0.6 (dB) = 35.6 (dBuV/m)
LISN factor [dB] = 0.6 [dB]
Limits :250[uV] = 20 log (250 [uV]) = 48 [dBuV]

2) The spectrum was checked from 0.45 at 30 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Va : One-end & Grounded . Vb : The other-end & grounded

Section.15.107
Results of Conducted Power Line Measurements.

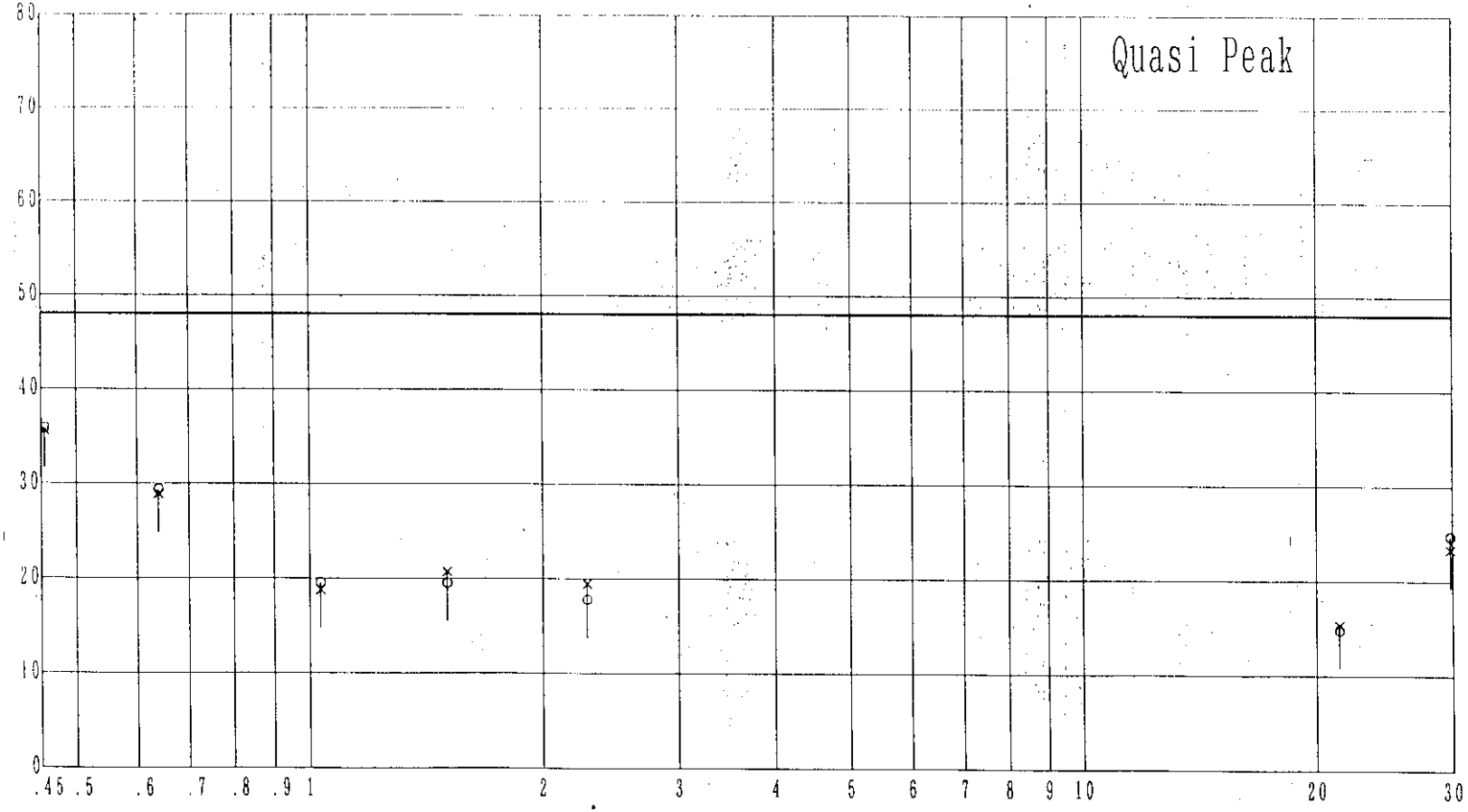
Measurement Method : Rules and Regulations, Part 15 (B)

EUT : Videocassette recorder
Model No. : HR-S4600U
Serial No. : ES200006

Report No. : JYT98017
Date. : Dec 15, 1998

Video source connected to the EUT
: Internal(Recorded Tape) 'PLAY Mode'
RF Output Channels : #3 and #4

—— Limit Line
x : Measured Value one end (Va)
o : Measured Value other end (Vb)



Section.15.107
POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEAUSREMENT

Video source connected to the EUT : External(VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Va	Meter reading [dBuV] Vb	LISN factor [dB]	Limits [dBuV]	Radio noise voltage [dBuV] Va	Radio noise voltage [dBuV] Vb
0.45	35.0	35.4	0.6	48.0	35.6	36.0
0.63	28.3	28.8	0.7	48.0	29.0	29.5
1.04	17.6	19.7	0.8	48.0	18.4	20.5
1.51	22.3	22.3	0.8	48.0	23.1	23.1
9.72	20.8	20.5	0.4	48.0	21.2	20.9
29.95	16.0	15.7	1.0	48.0	17.0	16.7

NOTES: 1) Sample calculation at 0.45 MHz (Va) :
35.0 (dBuV) + 0.6 (dB) = 35.6 (dBuV/m)
LISN factor [dB] = 0.6 [dB]
Limits :250[uV] = 20 log (250 [uV]) = 48 [dBuV]

2) The spectrum was checked from 0.45 at 30 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Va : One-end & Grounded , Vb : The other-end & grounded

Section.15.107
Results of Conducted Power Line Measurements.

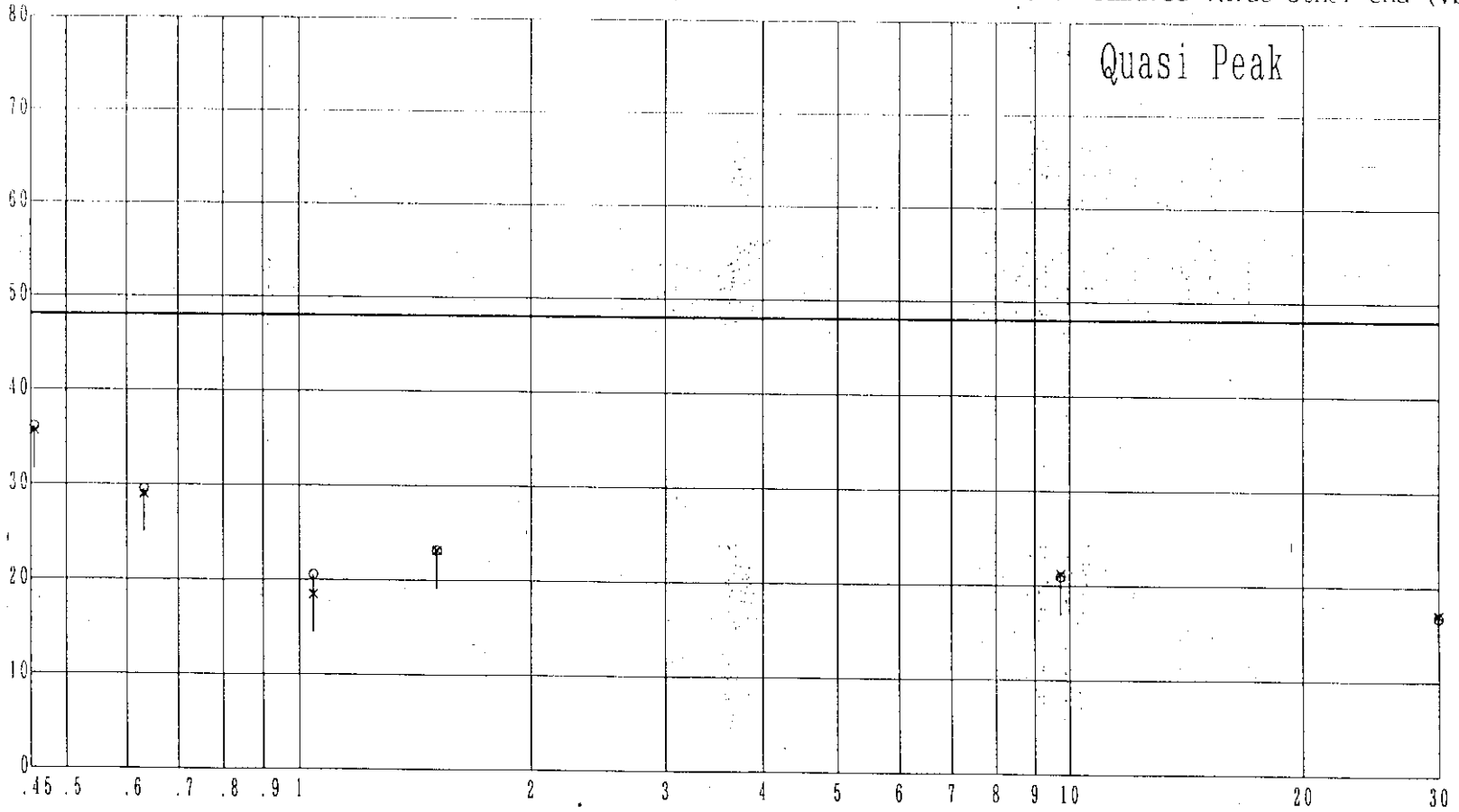
Measurement Method : Rules and Regulations, Part 15 (B)

EUT : Videocassette recorder
Model No. : HR-S4600U
Serial No. : ES200006

Report No. : JYT98017
Date. : Dec 15, 1998

Video source connected to the EUT
: External(VITS at 1Vp-p) 'REC Mode'
RF Output Channels : #3 and #4

— Limit Line
x : Measured Value one end (Va)
o : Measured Value other end (Vb)



Section.15.107
POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEAUSREMENT

Video source connected to the EUT : External(VITS at 5Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

Frequency of the emission [MHz]	Meter reading [dBuV] Va	Vb	LISN factor [dB]	Limits - Radio noise voltage [dBuV]	Va [dBuV]	Vb
0.45	35.1	34.3	0.6	48.0	35.7	34.9
0.63	28.1	27.8	0.7	48.0	28.8	28.5
1.16	18.6	18.1	0.8	48.0	19.4	18.9
1.59	22.1	22.7	0.8	48.0	22.9	23.5
9.64	21.8	19.9	0.4	48.0	22.2	20.3
27.56	13.3	16.1	0.9	48.0	14.2	17.0

NOTES: 1) Sample calculation at 0.45 MHz (Va) :
35.1 (dBuV) + 0.6 (dB) = 35.7 (dBuV/m)
LISN factor [dB] = 0.6 [dB]
Limits :250[uV] = 20 log (250 [uV]) = 48 [dBuV]

2) The spectrum was checked from 0.45 at 30 MHz and all emissions not listed above were found to be more than 20 dB below the limits specified the commissions.

3) The symbol of '<' means 'or less'

4) Va : One-end & Grounded . Vb : The other-end & grounded

Section.15.107
Results of Conducted Power Line Measurements.

Measurement Method : Rules and Regulations, Part 15 (B)

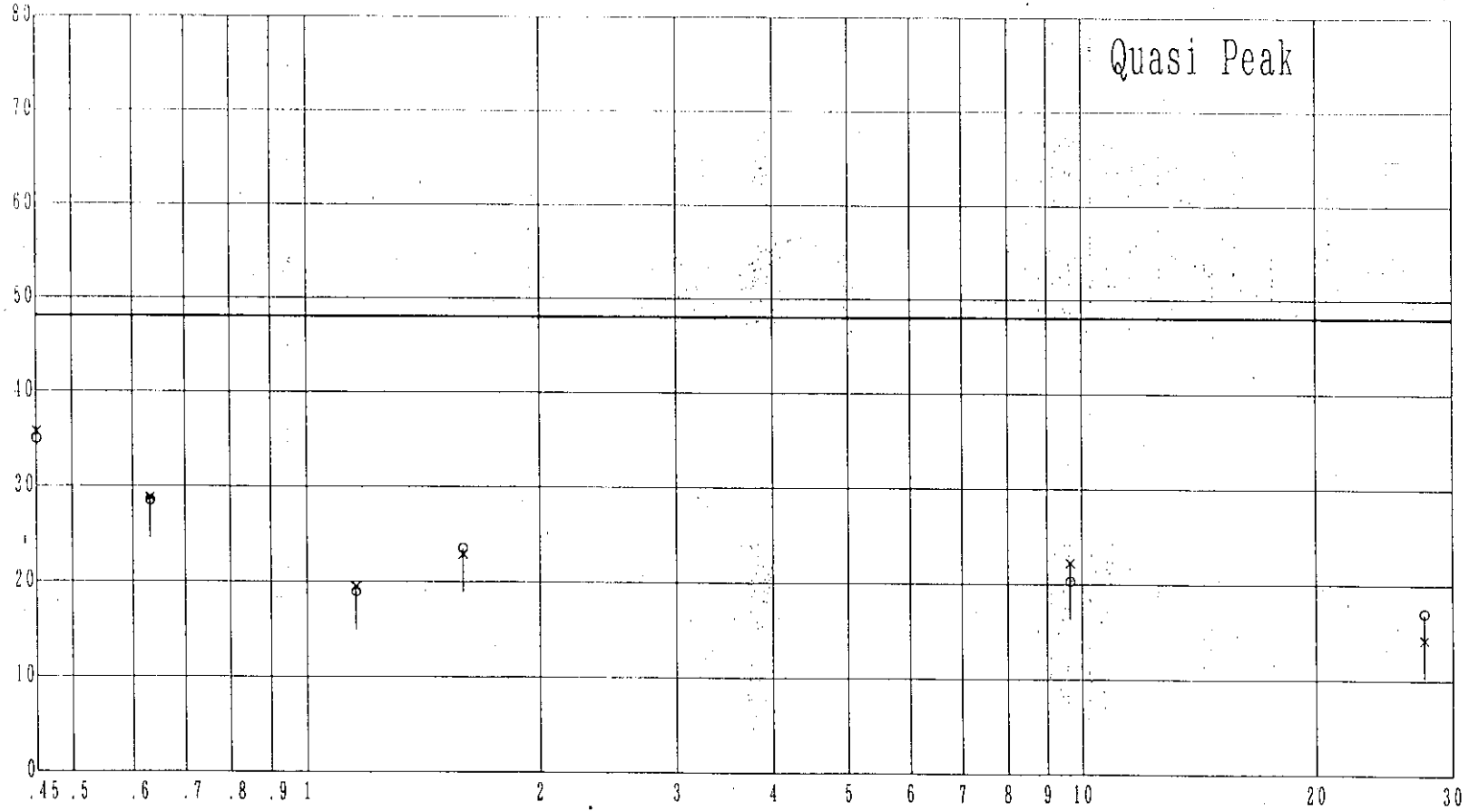
EUT : Videocassette recorder
Model No. : HR-S4600U
Serial No. : ES200006

Report No. : JYT98017
Date. : Dec 15, 1998

Video source connected to the EUT
: External(VITS at 5Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

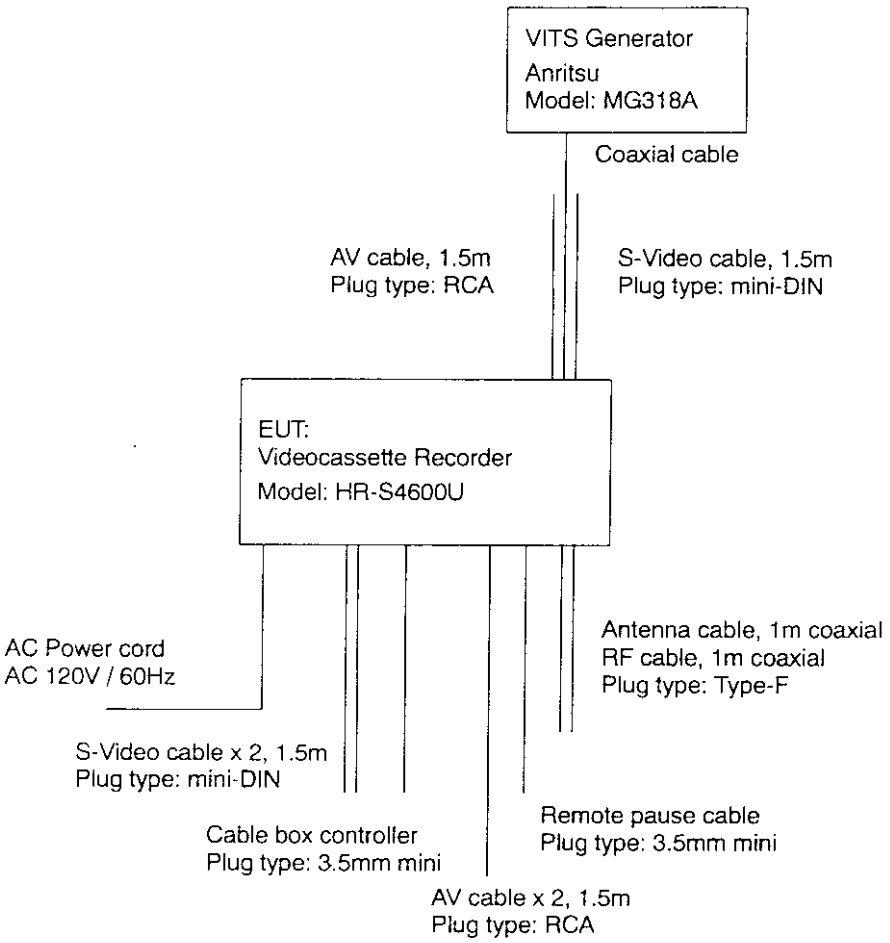
— Limit Line
x : Measured Value one end (Va)
o : Measured Value other end (Vb)



RFI Voltage (dBuV)

Frequency (MHz)

Configuration of Tested System



Note: The VITS generator was connected under recording mode only.

Test Instrumentation Used

Used	No.	Contet	Manufacturer	Type	Last cal.
x	1	EMI test receiver	R/S	ESVS10	Sep.98
	2	EMI test receiver	Chase	UHR4000	Jan.97
x	3	EMI test receiver	R/S	ESHS30	Sep.98
	4	Spectrum analyzer	HP	8568B	Jan.98
	5	Spectrum analyzer	Anritsu	MS2601A	Jan.98
x	6	Spectrum analyzer	HP	8591A	Jan.98
x	10	Biconical antenna	Schwarzbeck	BBA9106	Mar.98
x	11	Log periodic antenna	Schwarzbeck	UHALP9107	Mar.98
	12	Log periodic antenna	Schwarzbeck	UKLP9104	Mar.98
x	13	RF pre-amplifire	EMC Japan	RFP226	Apr.98
	14	RF pre-amplifire	HP	8447D	Apr.96
	15	VITS generator	Anritsu	MG318A	Apr.98
x	16	LISN 50Ω/50uH	Kyoritsu	KNW-407	Sep.98
	17	LISN 50Ω/50uH	Chase	MN-2053	Sep.96

Test Instrumentation Used

Used	No.	Contet	Manufacturer	Type	Last cal.
x	1	EMI test receiver	R/S	ESVS10	Sep.98
x	2	EMI test receiver	R/S	ESHS30	Sep.98
	3	Spectrum analyzer	HP	8568B	Jan.99
	4	Spectrum analyzer	Anritsu	MS2601A	Jan.99
x	5	Spectrum analyzer	HP	8591A	Jan.99
x	6	Biconical antenna	Schwarzbeck	BBA9106	Mar.98
x	10	Log periodic antenna	Schwarzbeck	UHALP9107	Mar.98
x	11	Log periodic antenna	Schwarzbeck	UKLP9104	Mar.98
x	12	RF pre-amplifire	EMC Japan	RFP226	Apr.98
x	13	LISN 50Ω/50uH	Kyoritsu	KNW-407	Sep.98
	14	VITS generator	Anritsu	MG318A	Apr.98
	15				
	16				
	17				