

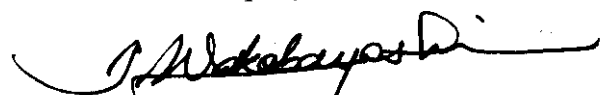
[REPORT OF MEASUREMENTS ON TV INTERFACE DEVICE]

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 MEASUREMENT

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

RF Output Channels : #3 and #4

| Frequency of the emission [MHz] | Meter reading | | LISN factor [dB] | Limits [dBuV] | Radio noise voltage | |
|---------------------------------------|---------------|------|------------------------|------------------|---------------------|------|
| | Va [dBuV] | Vb | | | Va [dBuV] | 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) :
 $37.8 \text{ (dBuV)} + 0.6 \text{ (dB)} = 38.4 \text{ (dBuV/m)}$
 LISN factor [dB] = 0.6 [dB]
 Limits : $250 \text{ [uV]} = 20 \log (250 \text{ [uV]}) = 48 \text{ [dBuV]}$

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

Vidco source connected to the EUT

: Internal (Recorded Tape) 'PLAY Mode'

RF Output Channels : #3 and #4

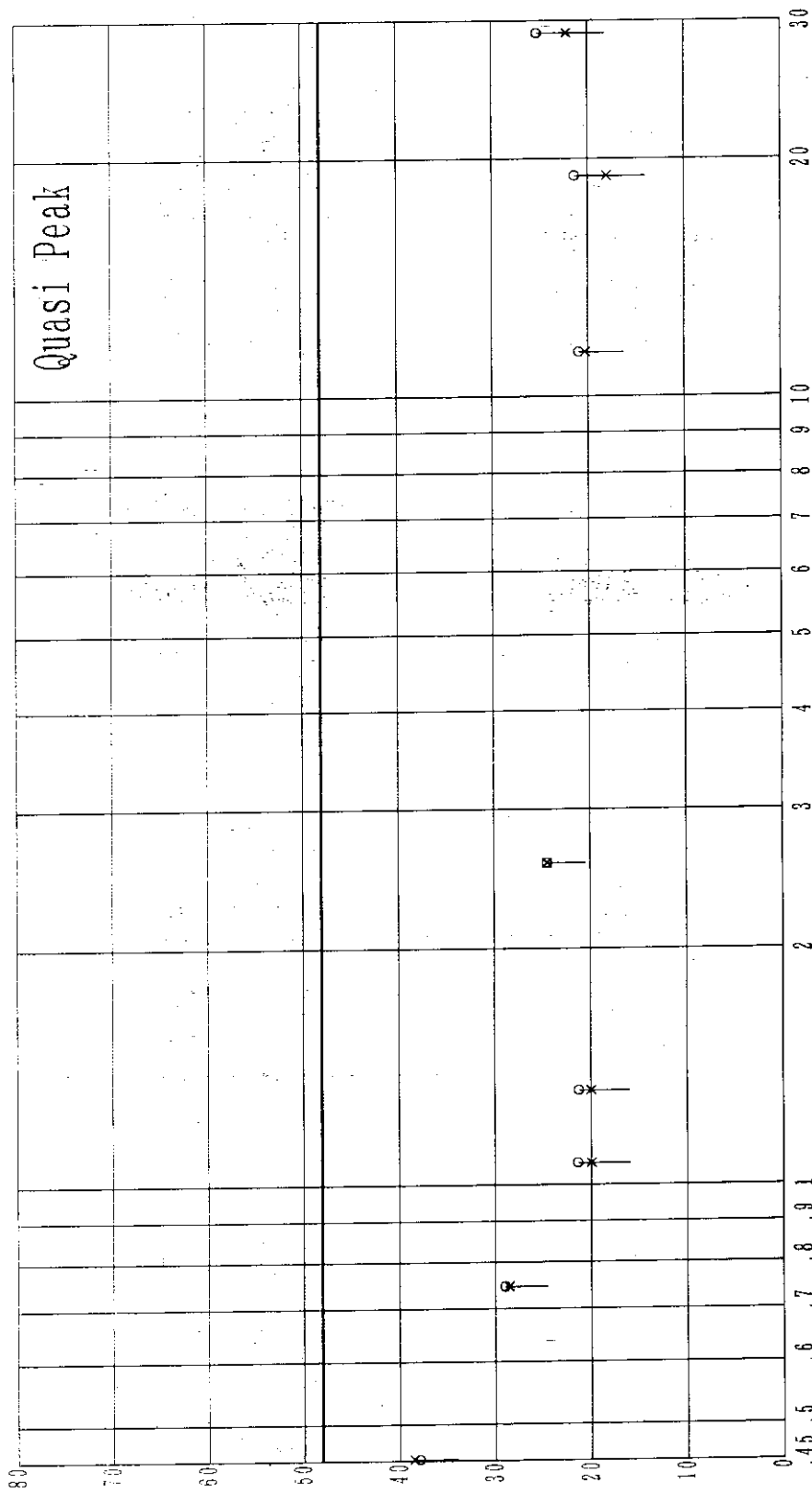
Report No. : JYI99001

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— Limit Line

x : Measured Value one end (Va)

o : Measured Value other end (Vb)



Frequency (MHz)

Section.15.107

POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEASUREMENT

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 | | LISN factor [dB] | Limits [dBuV] | Radio noise voltage | |
|---------------------------------------|---------------|------|------------------------|------------------|---------------------|------|
| | Va [dBuV] | Vb | | | Va [dBuV] | 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) :
 $38.4 \text{ (dBuV)} + 0.6 \text{ (dB)} = 39.0 \text{ (dBuV/m)}$
 LISN factor [dB] = 0.6 [dB]
 Limits : $250[\text{uV}] = 20 \log (250 [\text{uV}]) = 48 \text{ [dBuV]}$

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.

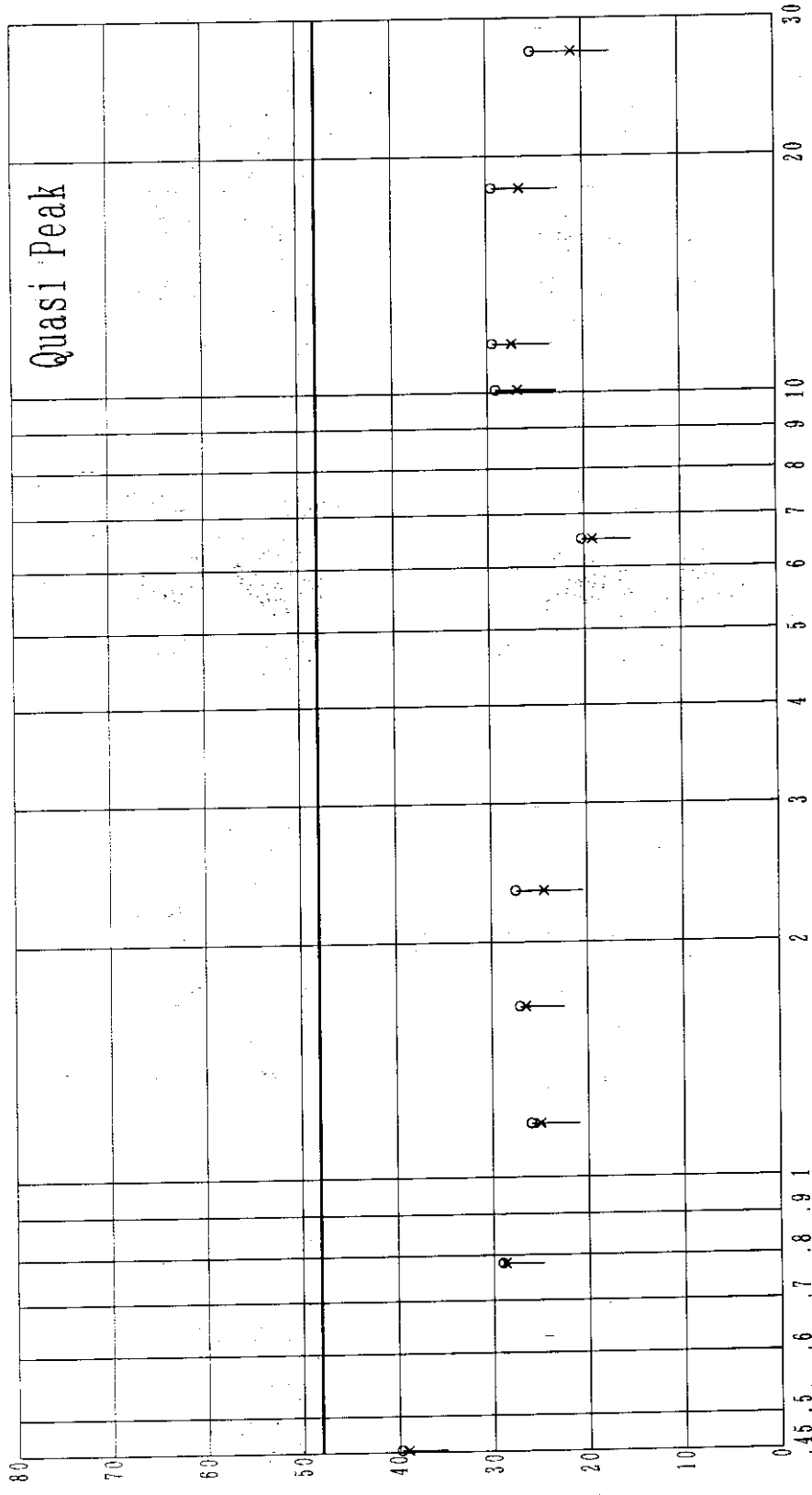
Measurement Method : FCC Rules and Regulations Part 15 (B)

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

Report No. : JYI99001
 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 : Measured Value one end (Va)
 o : Measured Value other end (Vb)



RFI Voltage (dBV)

Frequency (MHz)

Section.15.107

POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEASUREMENT

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] | | LISN factor [dB] | Limits [dBuV] | Radio noise voltage [dBuV] | |
|---------------------------------------|-------------------------|------|------------------------|------------------|-------------------------------|------|
| | Va | Vb | | | 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) :
 $38.6 \text{ (dBuV)} + 0.6 \text{ (dB)} = 39.2 \text{ (dBuV/m)}$
 LISN factor [dB] = 0.6 [dB]
 Limits : $250[\mu\text{V}] = 20 \log (250 [\mu\text{V}]) = 48 \text{ [dBuV]}$

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

Vidco source connected to the EUT

: External(VITS at 5Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

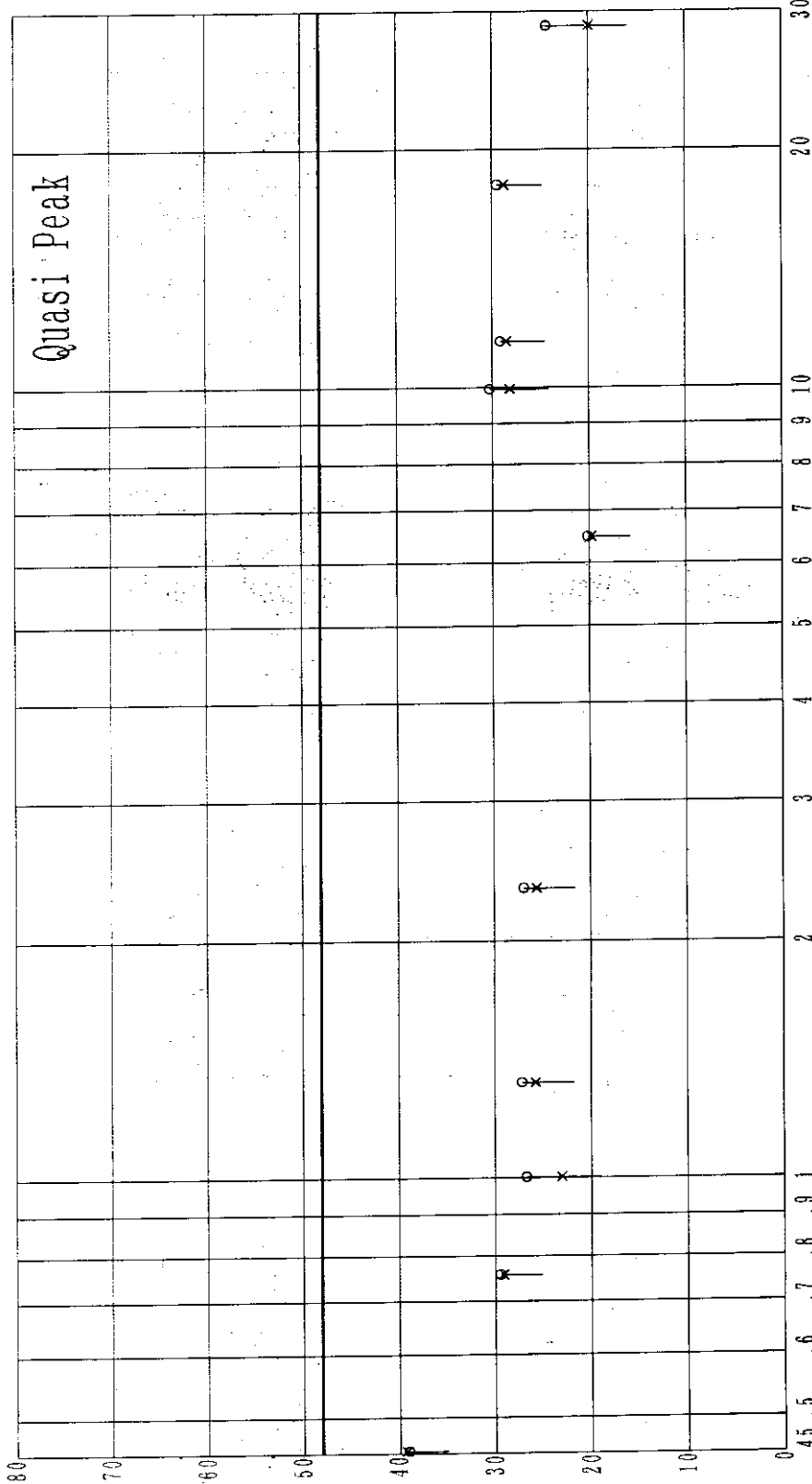
Report No. : JYI99001

Date. : Jan 22, 1999

— Limit Line

x : Measured Value one end (Va)

o : Measured Value other end (Vb)



Frequency (MHz)

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] | | Meter reading [dBuV] | | Matching pad loss [dB] | RF Output signal level [dB] | | | |
|-------------------|------------------------------|-------|----------------------|-------|------------------------|-----------------------------|--------|--------|-------|
| | Visual | Aural | Visual | Aural | | 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] | | Meter reading [dBuV] | | Matching pad loss [dB] | RF Output signal level [dB] | | | |
|-------------------|------------------------------|-------|----------------------|-------|------------------------|-----------------------------|--------|--------|-------|
| | Visual | Aural | Visual | Aural | | 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] | | Meter reading [dBuV] | | Matching pad loss [dB] | RF Output signal level [dB] | | | |
|-------------------|------------------------------|-------|----------------------|-------|------------------------|-----------------------------|--------|--------|-------|
| | Visual | Aural | Visual | Aural | | 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 :
 $59.7 \text{ (dBuV)} + 6.0 \text{ (dB)} + 1.76 \text{ (dB)} = 67.5 \text{ (dBuV)}$
 (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 :
 $38.1 \text{ (dBuV)} + 6.0 \text{ (dB)} - 29.4 \text{ (dB)} + 1.76 \text{ (dB)} = 16.5 \text{ (dBuV)}$
 (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.

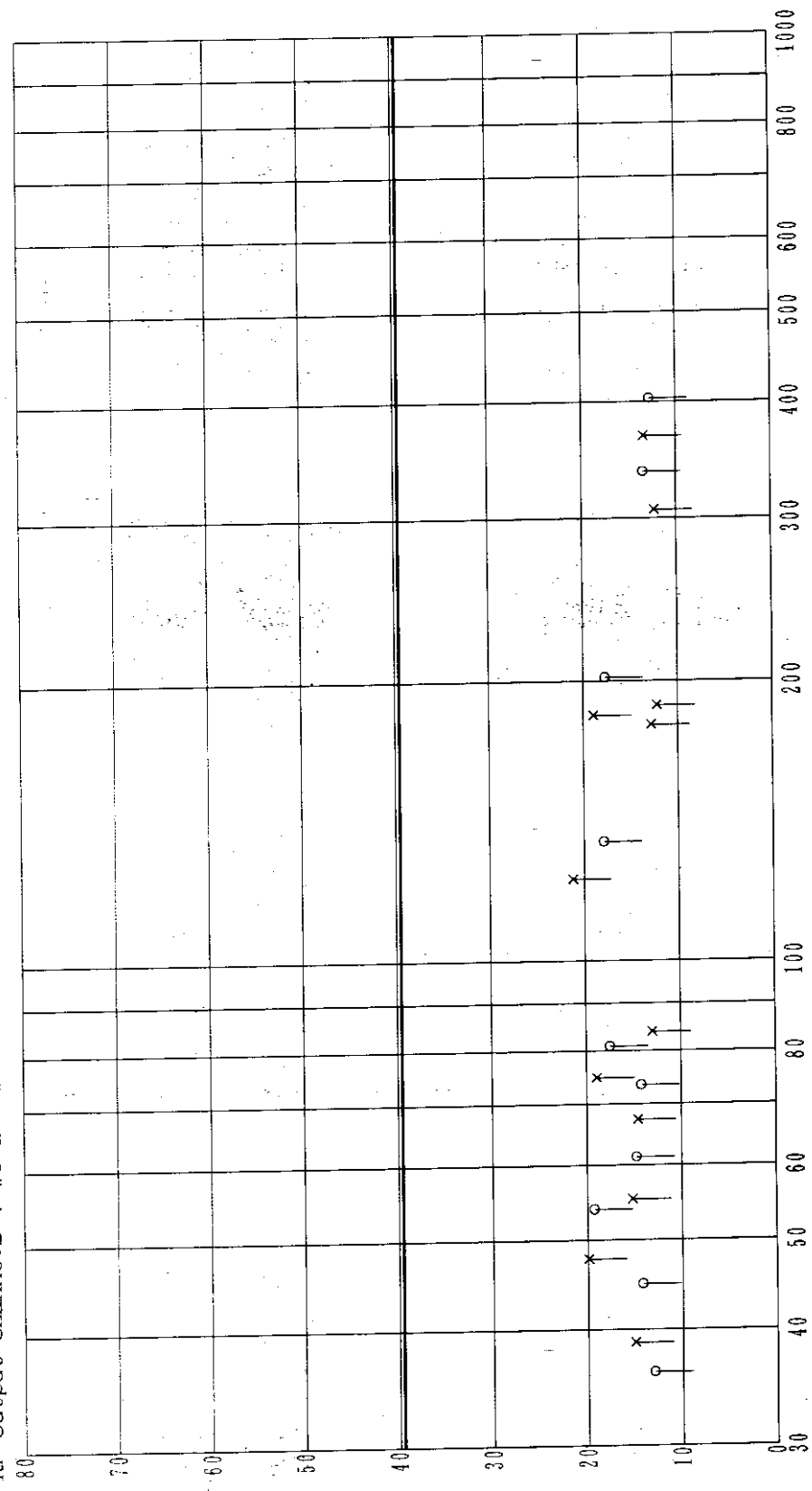
Measurement Method : FCC Rules and Regulations Part 15 (B)

Report No. : JY199001
Date. : Jan 22, 1999

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

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



Frequency (MHz)

Output terminal voltage (uV)

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 :
 $37.6 \text{ (dBuV)} + 6.0 \text{ (dB)} - 29.4 \text{ (dB)} + 1.76 \text{ (dB)} = 16.0 \text{ (dBuV)}$
 (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

Video source connected to the EUT

: External (VITS at 1Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

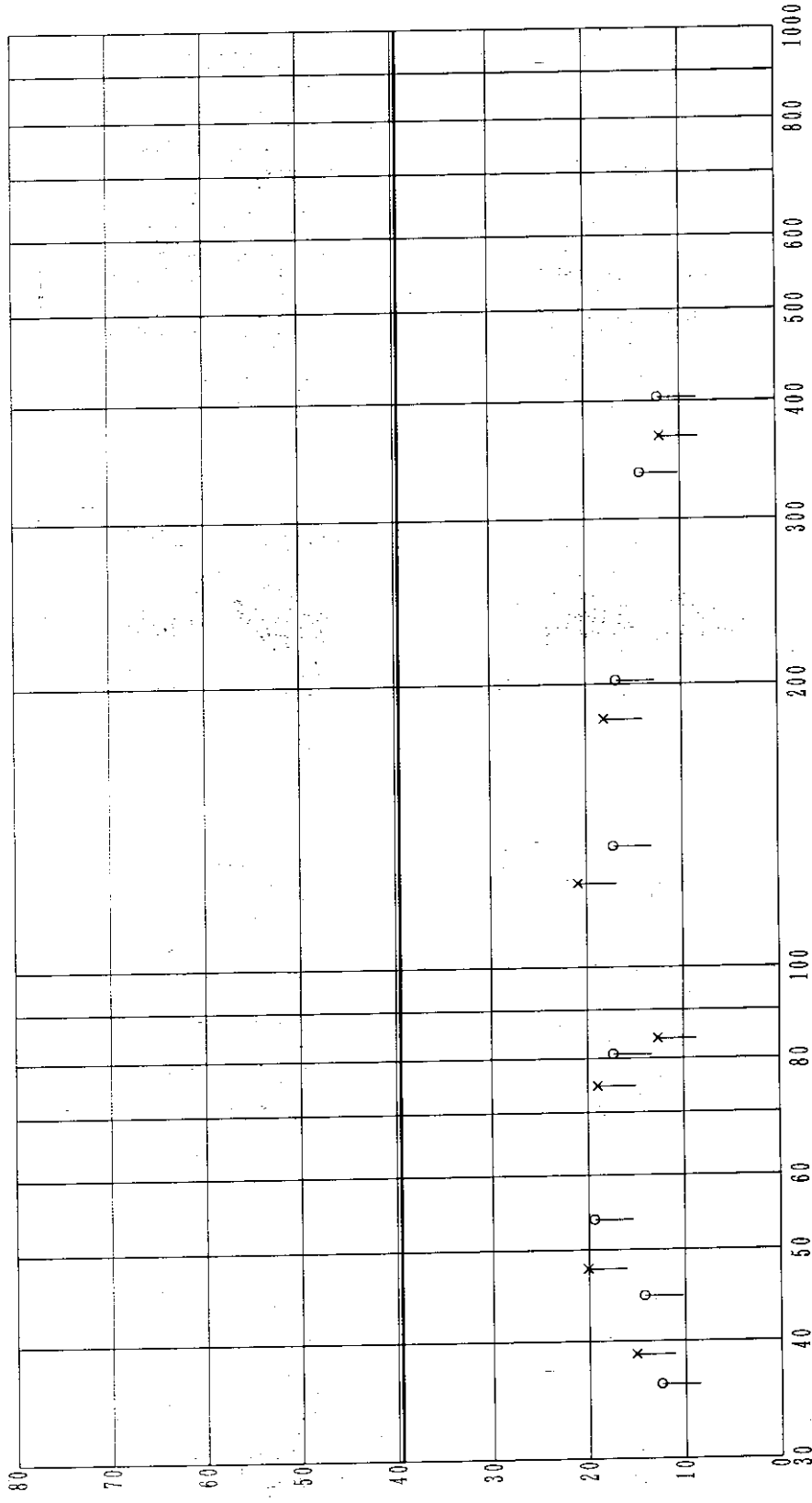
Report No. : JYT99001

Date. : Jan 22, 1999

— Limit Line

x : Channel 3

o : Channel 4



Frequency (MHz)

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 :
 $37.7 \text{ (dBuV)} + 6.0 \text{ (dB)} - 29.4 \text{ (dB)} + 1.76 \text{ (dB)} = 16.1 \text{ (dBuV)}$
 (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 GAU0142-X

Video source connected to the EUT

: External (VIIS at 5Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

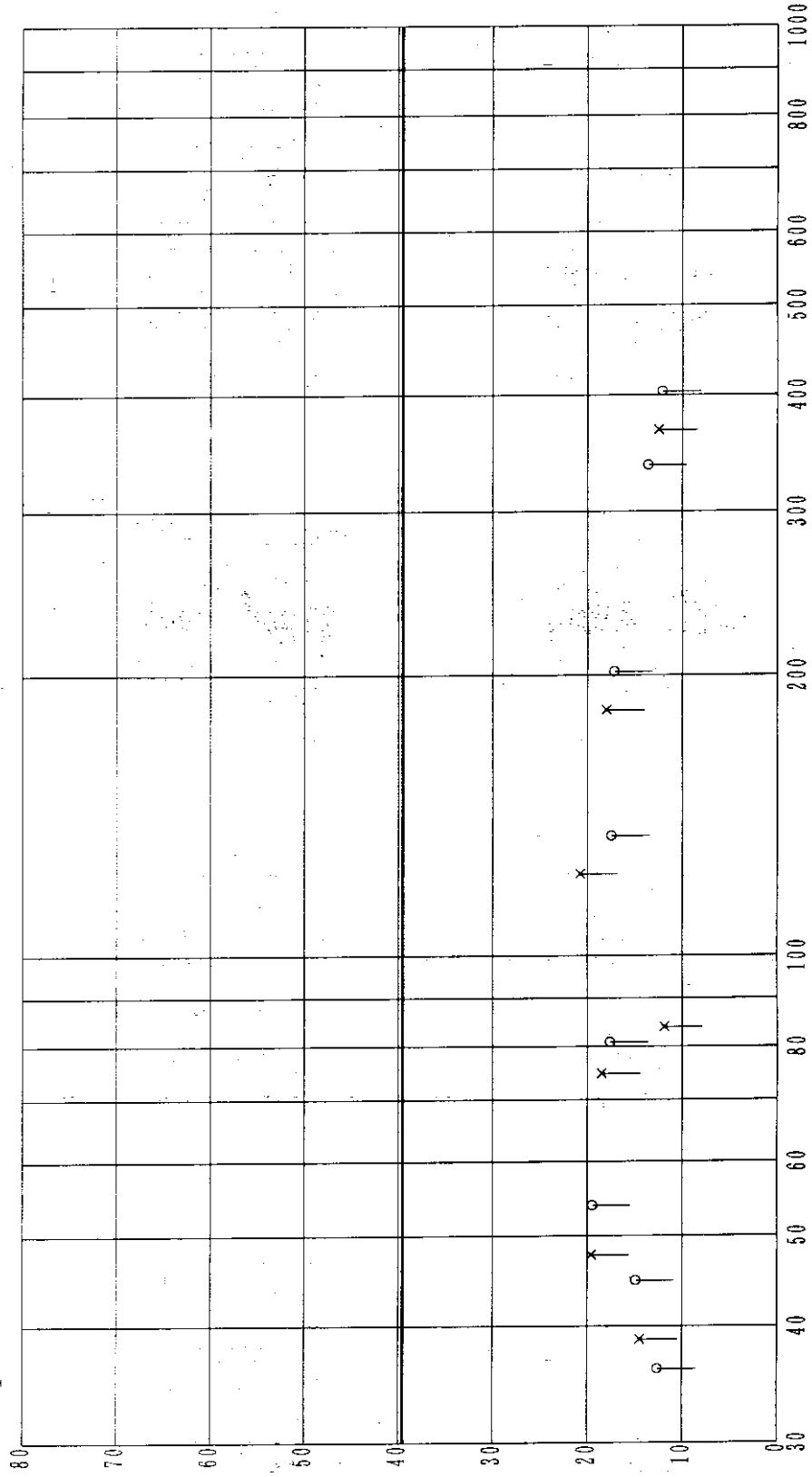
Report No. : JYT99001

Date. : Jan 22, 1999

— Limit Line

x : Channel 3

o : Channel 4



Frequency (MHz)

Output terminal Voltage (dBV)

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 :
 $28.5 \text{ (dBuV)} + 6.0 \text{ (dB)} - 29.3 \text{ (dB)} + 1.76 \text{ (dB)} = 7.0 \text{ (dBuV)}$
 (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 | | |
| | 303 | < 30.6 | 16.43 | 22.98 | | < 30.0 | | 46.0 |
| | 1010 | < 34.7 | 26.71 | 27.38 | | < 40.0 | | 54.0 |
| | 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 | 54.0 | |
| | 1017 | < 34.7 | 26.71 | 27.37 | | < 40.0 | | |
| | 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 | 54.0 | |
| | 1032 | < 34.6 | 26.72 | 27.34 | | < 40.0 | | |
| | 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 | 54.0 | |
| | 1135 | < 33.8 | 27.31 | 27.13 | | < 40.0 | | |
| | 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 | 54.0 | |
| | 1004 | < 34.7 | 26.70 | 27.39 | | < 40.0 | | |
| | 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)

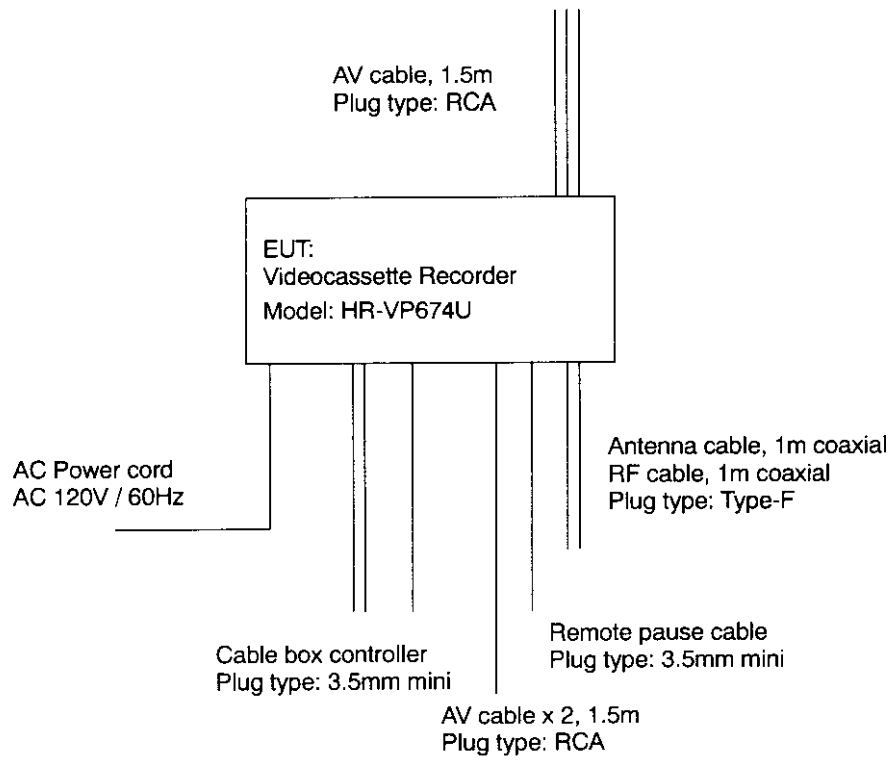
| Channel | Freq [MHz] | Meter reading [dBuV] | C. fact [dB] | Corrected reading [dBuV/m] | Limit [dBuV/m] |
|---------|------------|----------------------|--------------|----------------------------|----------------|
| 2 | 101 | < 51.0 | 28.80 | < 30.0 | 52.0 |
| | 202 | < 51.6 | 29.39 | < 30.0 | |
| | 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 | |
| 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 | |
| 7 | 1677 | < 49.0 | 26.73 | < 30.0 | 52.0 |
| | 221 | < 51.7 | 29.45 | < 30.0 | |
| | 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 | |
| 8 | 1547 | < 49.2 | 26.91 | < 30.0 | 52.0 |
| | 227 | < 51.7 | 29.47 | < 30.0 | |
| | 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 | |
| 9 | 1589 | < 49.7 | 27.49 | < 30.0 | 52.0 |
| | 233 | < 51.7 | 29.49 | < 30.0 | |
| | 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 | |
| 10 | 1631 | < 49.5 | 27.27 | < 30.0 | 52.0 |
| | 239 | < 51.7 | 29.50 | < 30.0 | |
| | 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 | |
| 10 | 1673 | < 49.0 | 26.78 | < 30.0 | 52.0 |

| 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 | |
| 28 | 1659 | < 49.2 | 26.94 | < 30.0 | 52.0 |
| | 601 | < 51.8 | 29.51 | < 30.0 | |
| 36 | 1202 | < 49.2 | 26.99 | < 30.0 | 52.0 |
| | 649 | 56.6 | 29.40 | 35.0 | |
| 45 | 1298 | < 48.7 | 26.43 | < 30.0 | 52.0 |
| | 703 | 64.6 | 29.25 | 43.1 | |
| 46 | 1406 | < 49.1 | 26.86 | < 30.0 | 52.0 |
| | 709 | 64.6 | 29.18 | 43.2 | |
| 47 | 1418 | < 49.0 | 26.78 | < 30.0 | 52.0 |
| | 715 | 64.7 | 29.11 | 43.3 | |
| 48 | 1430 | < 49.0 | 26.71 | < 30.0 | 52.0 |
| | 721 | 64.5 | 29.03 | 43.2 | |
| 49 | 1442 | < 48.9 | 26.63 | < 30.0 | 52.0 |
| | 727 | 64.1 | 28.96 | 42.9 | |
| 53 | 1454 | < 48.8 | 26.55 | < 30.0 | 52.0 |
| | 751 | 60.3 | 28.66 | 39.4 | |
| 61 | 1502 | < 48.5 | 26.29 | < 30.0 | 52.0 |
| | 799 | < 50.3 | 28.07 | < 30.0 | |
| 69 | 1598 | < 49.9 | 27.61 | < 30.0 | 52.0 |
| | 847 | 53.4 | 28.06 | 33.1 | |
| 69 | 1694 | 50.6 | 26.53 | 31.9 | 52.0 |

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



LIST OF SCHEMATIC DIAGRAMS

| <u>Name of Schematic Diagrams</u> | <u>Schematic number</u> |
|---|-------------------------|
| 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.

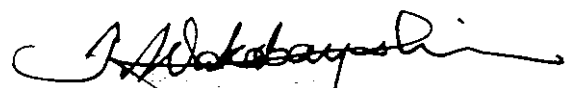
[REPORT OF MEASUREMENTS ON TV INTERFACE DEVICE]

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 Designed 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, 3.5 ϕ mini jack type
 - Pause control port, 3.5 ϕ mini 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 MEASUREMENT

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] | | Correction factor [dB] | | | Field strength at 0m [dBuV/m] | |
|---------------------------------------|-------------------------|----------|---------------------------|-----------|--------|----------------------------------|----------|
| | Horizontal | Vertical | Ant.Fac. | Gain/Loss | Limits | 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 *
 $32.9 \text{ [dBuV/m]} : 52.2 \text{ [dBuV]} + 7.7 \text{ [dB]} + (-27.0) \text{ [dB]}$
 * Gain/Loss [dB] = Cable loss - Amp.Gain + Att.Pad loss, 6dB
 Limits : $100 \text{ [uV/m]} = 20 \log (100 \text{ [uV/m]}) = 40 \text{ [dBuV/m]}$
- 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

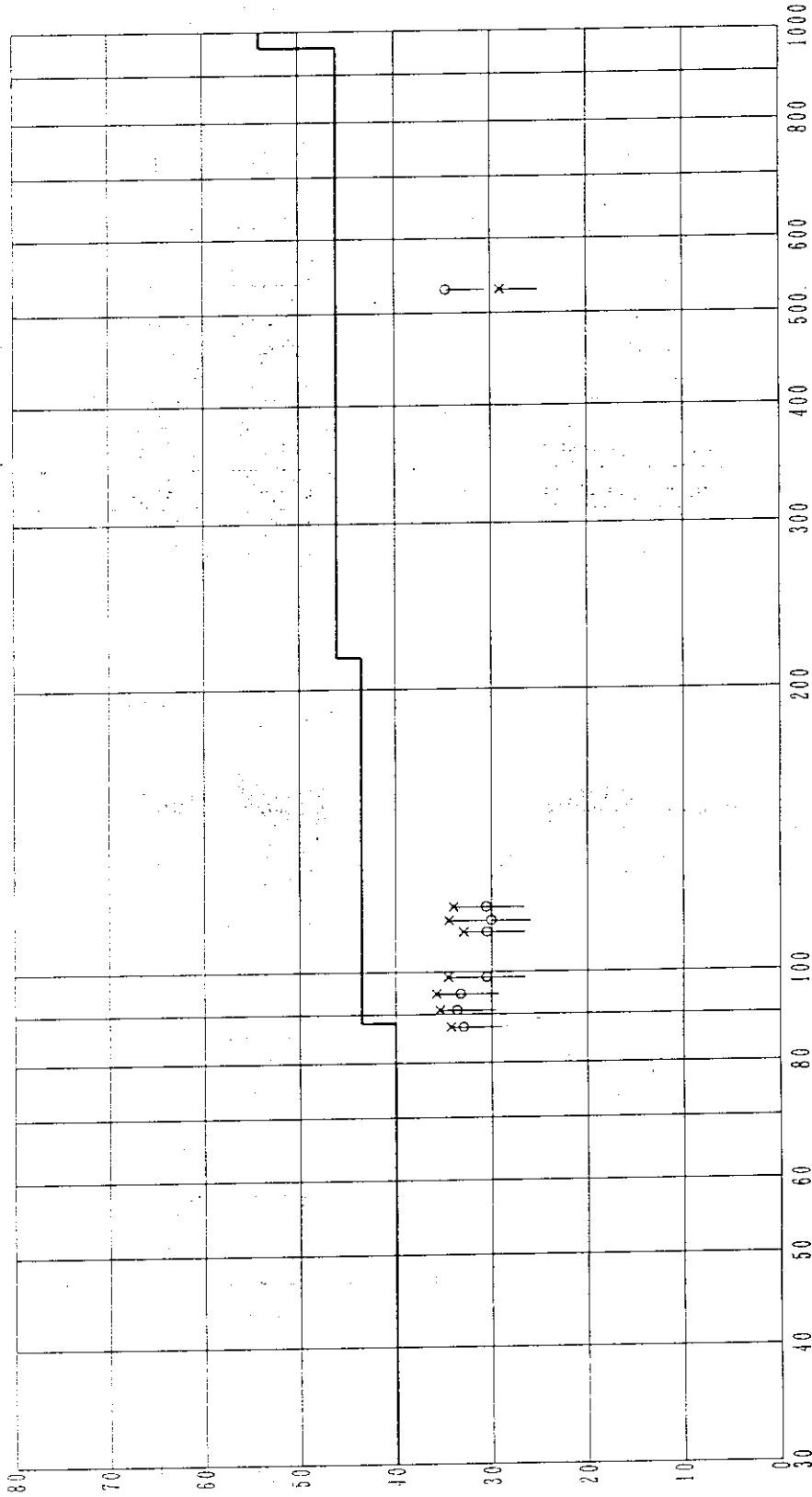
EUT : Videocassette recorder
Model No. : HR-S4600U
Serial No. : PS200006

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

Report No. : JY198017
Date. : Dec 15, 1998

— Limit Line
o : Vertical
x : Horizontal

RFI Field Strength (dBuV/m)



Frequency (MHz)

Section.15.109 RADIATED RADIO-EMISSION MEASUREMENT

Video source connected to the EUT : External(VITS at IVp-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 | 56.9 | 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

IUT : Videocassette recorder

Model No. : HR-S4600U

Serial No. : FS200006

Report No. : JY198017

Date. : Dec 15, 1998

Video source connected to the IUT

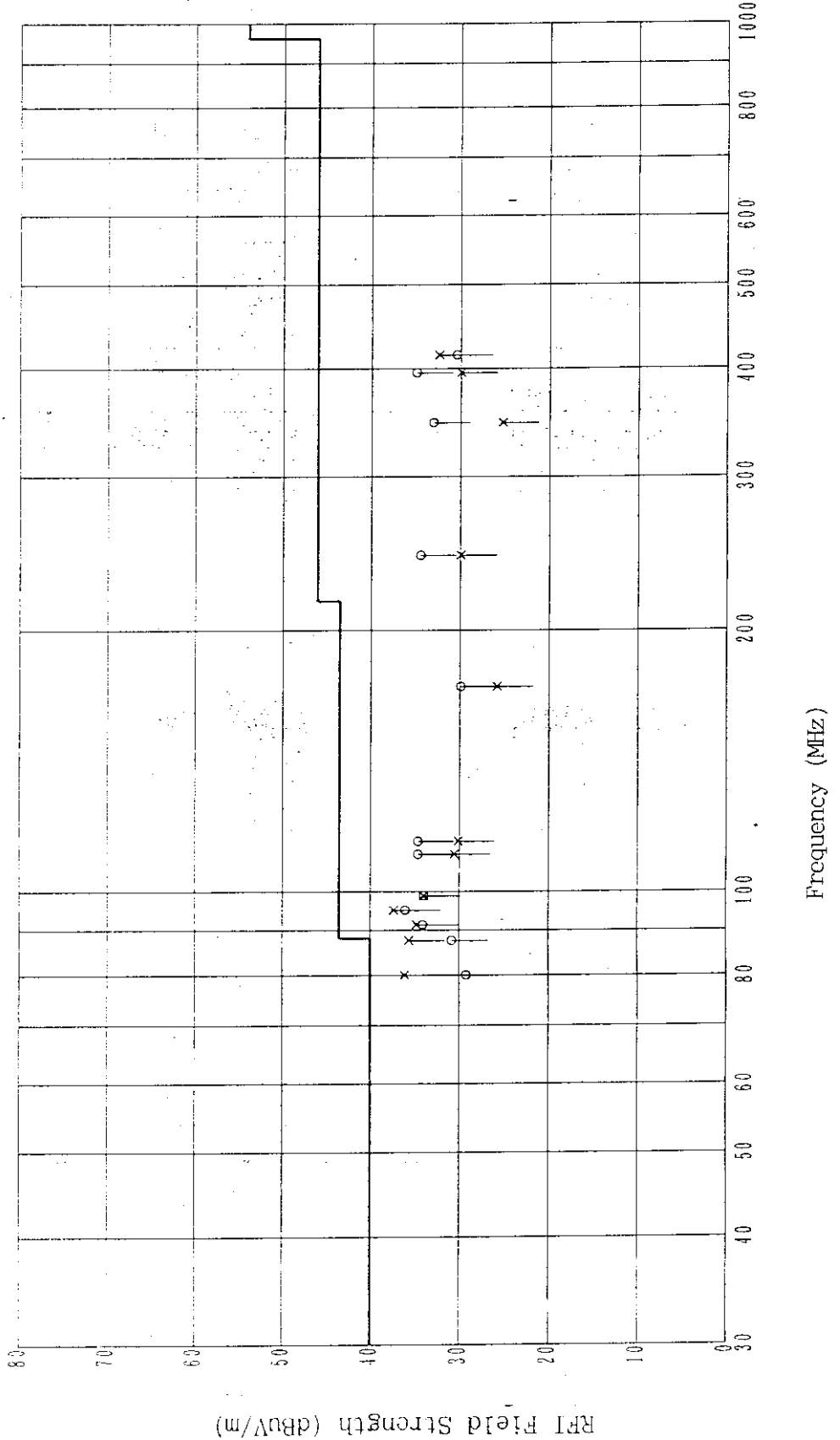
: External(VITS at IVp-p) 'RXC Mode'

RF Output Channels : #3 and #4

— Limit Line

o : Vertical

x : Horizontal



Section.15.109 RADIATED RADIO EMISSION MEASUREMENT

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. : ES2000006

Report No. : JYI98017

Date : Dec 15, 1998

Video source connected to the EUT

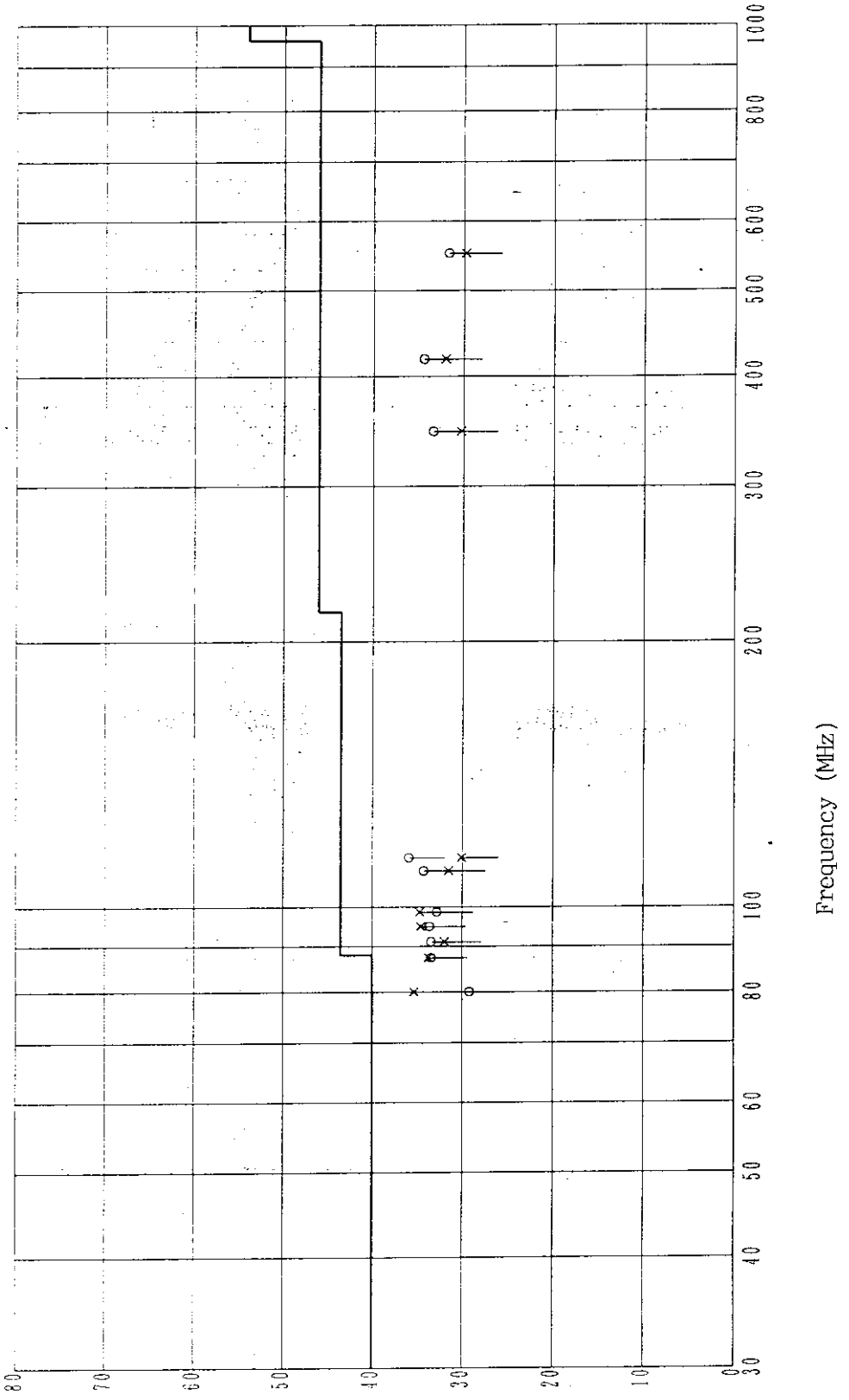
: External (VHS at 5Vp-p) 'REC Mode'

RF Output Channels : #3 and #4

— Limit Line

o : Vertical

x : Horizontal



Section.15.107

POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEASUREMENT

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

RF Output Channels : #3 and #4

| Frequency of the emission [MHz] | Meter reading | | LISN factor [dB] | Limits [dBuV] | Radio noise voltage | |
|---------------------------------------|---------------|------|------------------------|------------------|---------------------|------|
| | Va | Vb | | | Va | 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) :
 $35.0 \text{ (dBuV)} + 0.6 \text{ (dB)} = 35.6 \text{ (dBuV/m)}$
 LISN factor [dB] = 0.6 [dB]
 Limits : $250[\mu\text{V}] = 20 \log (250 [\mu\text{V}]) = 48 \text{ [dBuV]}$

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. : IIR-S1600U

Serial No. : FS200006

Report No. : JYI98017

Date. : Dec 15, 1998

Vidco source connected to the EUT

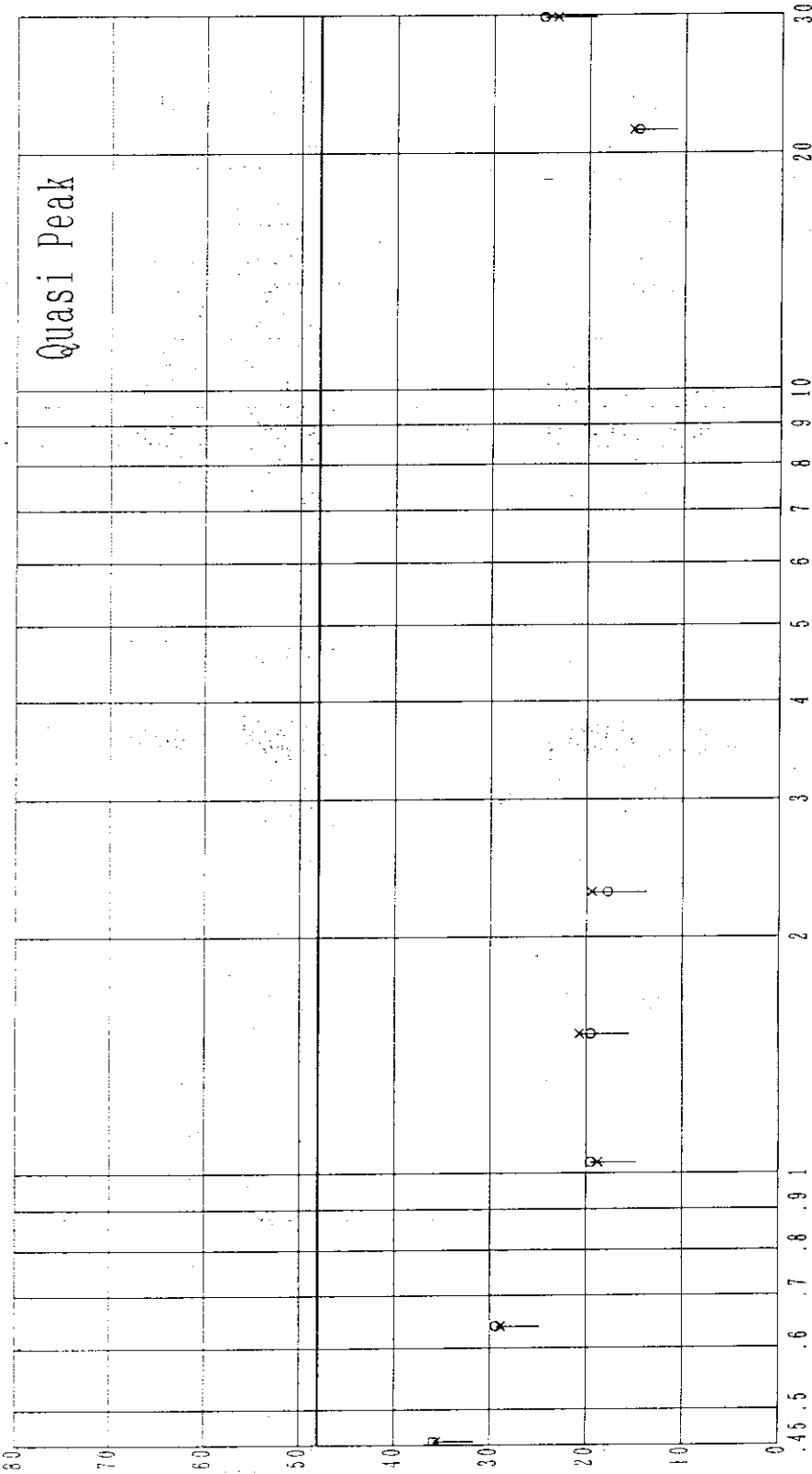
Internal(Recorded Tape) 'PLAY Mode'

RF Output Channels : #3 and #4

— Limit Line

x : Measured Value one end (Va)

o : Measured Value other end (Vb)



Frequency (MHz)

RFI Voltage (dBuV)

Section.15.107

POWER LINE CONDUCTED INTERFERENCE VOLTAGE MEASUREMENT

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] | | LISN factor [dB] | Limits [dBuV] | Radio noise voltage [dBuV] | |
|---------------------------------------|-------------------------|------|------------------------|------------------|-------------------------------|------|
| | Va | Vb | | | Va | 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) :
 $35.0 \text{ (dBuV)} + 0.6 \text{ (dB)} = 35.6 \text{ (dBuV/m)}$
 LISN factor [dB] = 0.6 [dB]
 Limits : $250[\text{uV}] = 20 \log (250 [\text{uV}]) = 48 \text{ [dBuV]}$

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.

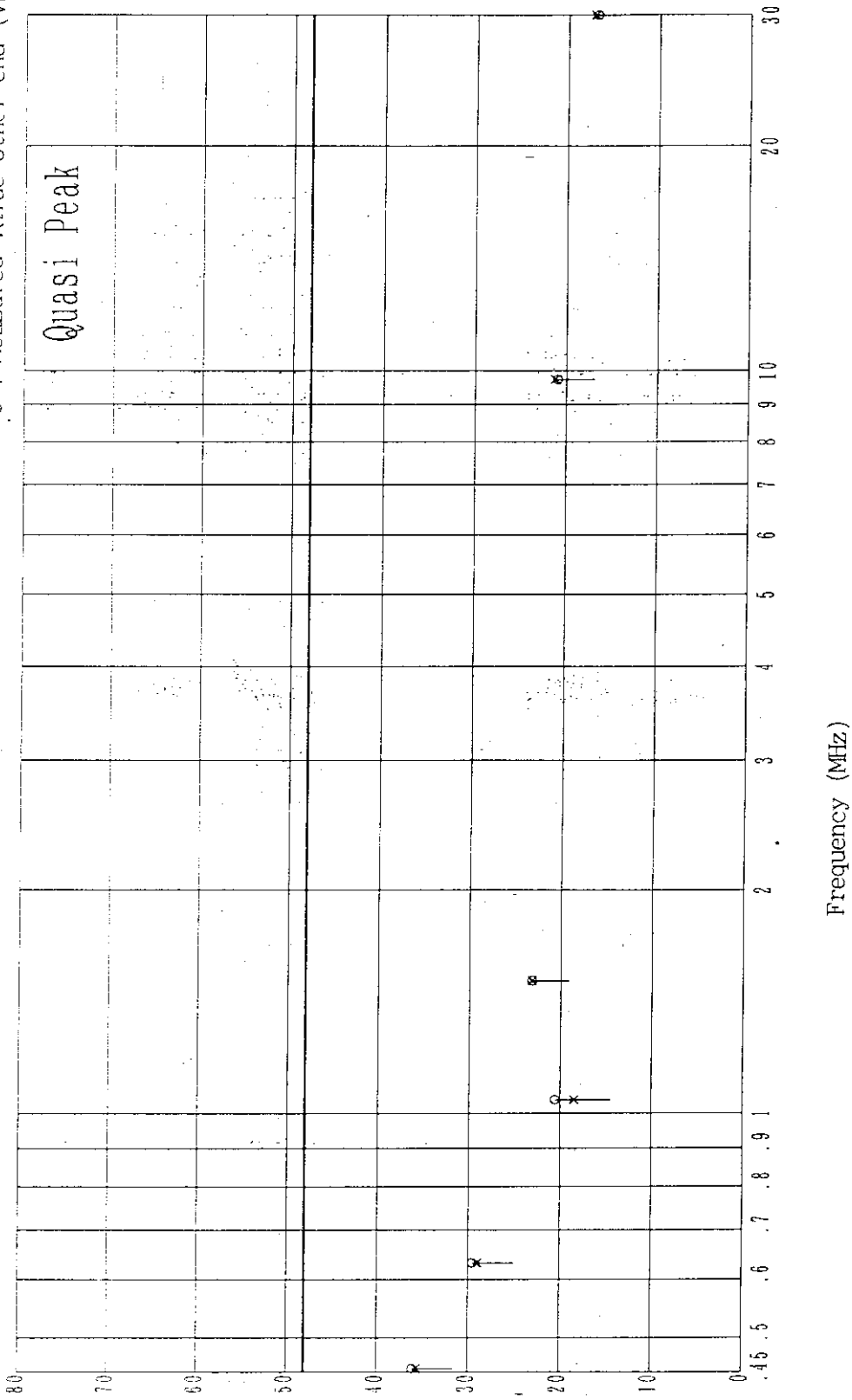
Measurement Method : Rules and Regulations, Part 15 (B)

EUT : Videocassette recorder
Model No. : IIR-S1600U
Serial No. : FS200006

Report No. : JYF98017
Date. : Dec 15, 1998

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

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 | | LISN factor [dB] | Limits [dBuV] | Radio noise voltage | |
|---------------------------------------|---------------|------|------------------------|------------------|---------------------|------|
| | Va | Vb | | | [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) :
 $35.1 \text{ (dBuV)} + 0.6 \text{ (dB)} = 35.7 \text{ (dBuV/m)}$
 LISN factor [dB] = 0.6 [dB]
 Limits : $250 \text{ [uV]} = 20 \log (250 \text{ [uV]}) = 48 \text{ [dBuV]}$

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.

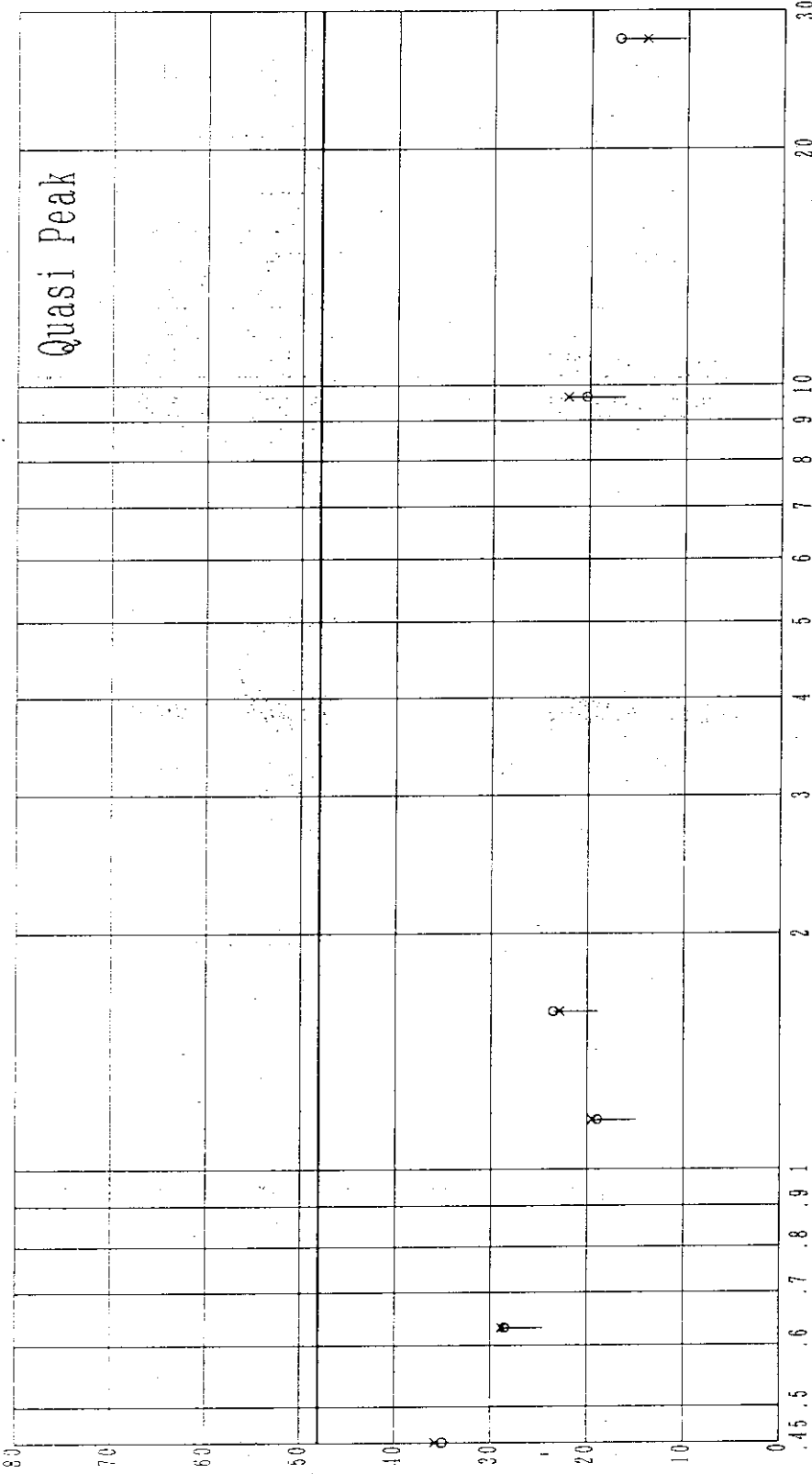
Measurement Method : Rules and Regulations, Part 15 (B)

EUT : Videocassette recorder
 Model No. : HR-S1600U
 Serial No. : FS200006

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

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

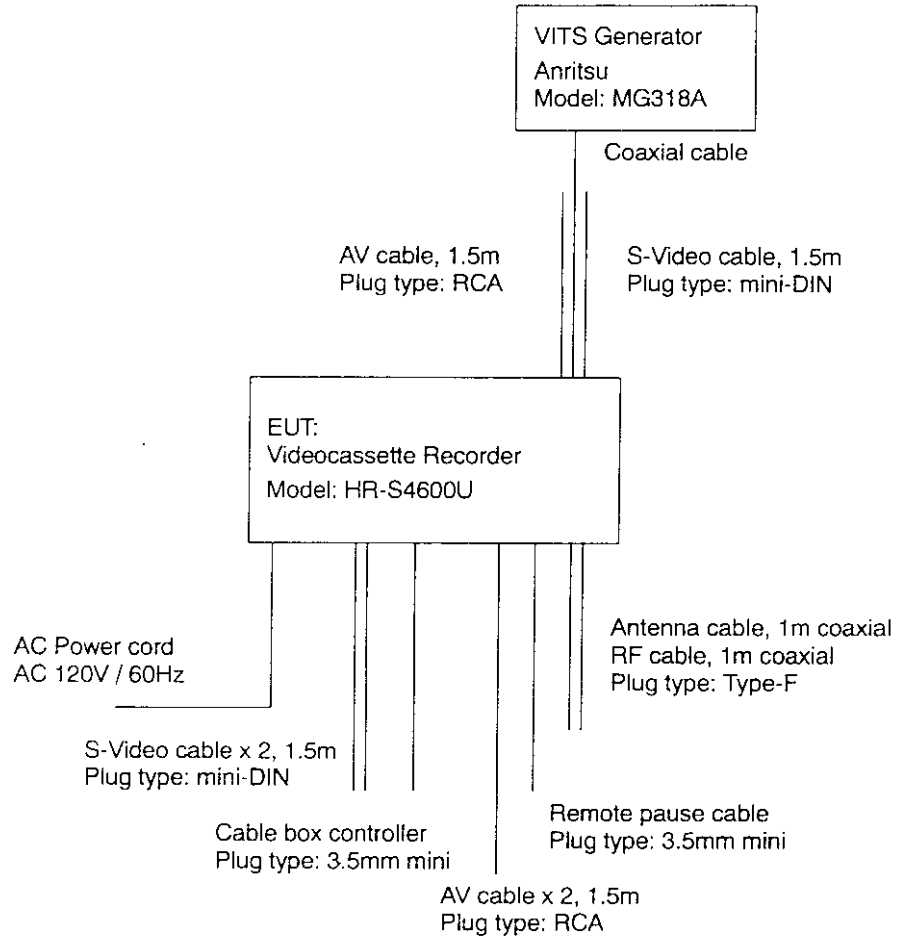
— Limit Line
 x : Measured Value one end (Va)
 o : Measured Value other end (Vb)



RFI Voltage (dBuV)

Frequency (MHz)

Configuration of Tested System



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

