



Certification EMI TEST REPORT

Test Report No. : 25KE0040-YW-1

Applicant : Orion Electric Co., Ltd.
Type of equipment : DVD Recorder with Video Cassette Recorder
Model number : D-VR4XSU
FCC ID : A7RM2H5A
Test standard : FCC Part 15 Subpart B
ICES-003 Issue No.4 Class B
Test result : Complied

Similar model :

Model No.	Brand name	Model No.	Brand name
D-VR4XSC	TOSHIBA	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

1. This test report shall not be reproduced except in full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with above regulation. We hereby certify that the data contain a true representation of the EMC profile.
4. The test results in this test report are traceable to the national or international standards.
5. This test report does not constitute an endorsement by NIST/NVLAP or U.S. Government.

Date of test : June 7 to July 19, 2005

Tested by:

Tsubasa Takayama
Engineer of EMC Service

Seigo Kakehi
Engineer of EMC Service

Approved by:

Hiroya Tabata
Leader of EMC Service

UL Apex Co., Ltd.
Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Contents

	Page
Section 1 : Client information	3
Section 2 : Equipment under test (E.U.T.)	3
Section 3 : Test specification, procedures & results	4
Section 4 : Operation of E.U.T. during tests	6
Section 5 : Conducted emission	7
Section 6 : Radiated emission	10
Section 7 : Antenna terminal voltage	13
Section 8 : RF output level / spurious emission	14
Section 9 : Antenna transfer switch	16
Section 10 : Picture sensitivity	17
Section 11 : Noise figure	18
 <u>Contents of Appendixes</u>	 19
Appendix 1 : Photographs of test set up	20
Appendix 2 : Data of EMI tests	27
Appendix 3: Test instruments	129

Section 1 : Client information

Company name : Orion Electric Co., Ltd.
Address : 41-1 Iehisa-cho, Takefu-shi, Fukui-ken, 915-8555 JAPAN
Telephone number : +81 778 23 0019
Facsimile number : +81 778 23 7799
Contact person : Yoshimasa Tanikawa

Section 2 : Equipment under test (E.U.T.)**2.1 Identification of E.U.T.**

Type of equipment : DVD Recorder with Video Cassette Recorder
Brand Name : TOSHIBA
Model number : D-VR4XSU
FCC ID : A7RM2H5A
Rating : AC 120 V / 60 Hz
Manufacturer : 1. World Electric (Thailand) Ltd.
236 Moo 2 Nongchark, Banbung, Chonburi 20170, Thailand
2. Korat Denki Ltd.
149 Moo 10 Tambol Chokchai, Amphur Chokchai, Nakhonratchasima
30190, Thailand
228 Moo 3 Tambol Nongbuasala, Amphur Muang, Nakhonratchasima
30000, Thailand
3. Orion America, Inc.
Hwy 41 North, Orion Place, Princeton, Indiana 47670, U.S.A
Receipt Date of Sample : June 7 and July 19, 2005
Condition of EUT : Production Prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product description

Model: D-VR4XSU (referred to as the EUT in this report) is a DVD Recorder with Video Cassette Recorder.
The EUT specifications is as follows.

Tuner type : Quartz PLL frequency synthesized
I / F : 45.75 MHz (Picture), 41.25 MHz (Sound)
Receiving channel : VHF 2 – 13 ch / UHF 14 – 69 ch / CATV 1 – 125 ch
Antenna input : 75 ohm
Video signal : NTSC color
Power source : AC 120 V / 60 Hz, 29W
I / O terminal (Video) : RCA in 1Vp-p 75 ohm, RCA out 1 Vp-p 75 ohm
I / O terminal (Audio) : RCA in –8 dB 47 k ohm, RCA out –8 dB 1 k ohm

UL Apex Co., Ltd.**Yokowa EMC Lab.**

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Section 3 : Test specification, procedures and results

3.1 Test specification

Test specification: FCC Part 15 Subpart B
Title : FCC 47 CFR Part 15 Radio Frequency Device
Subpart B Unintentional Radiators

Test Specification : ICES-003 Issue No. 4
Title : Spectrum Management
Interference-Causing Equipment Standard
Digital Apparatus
*ICES-003 (Issue No. 4) is based on FCC Part 15.

3.2 Procedures & results

Item	Test procedure	Limits	Worst margin	Result
Conducted emission	ANSI C63.4:2003	CISPR 22	4.6 dB (3.5615 MHz, N, AV, DVD Play + Rec.)	Complied
Radiated emission	ANSI C63.4:2003 IEEE 187:1990	30–88 MHz: 100 uV/m 88–216 MHz: 150 uV/m 216–960 MHz: 200 uV/m above 960 MHz: 500 uV/m	3.8 dB (243.00 MHz, Horizontal, DVD Play + Rec.)	Complied
Antenna terminal voltage	ANSI C63.4:2003	2 nW (at 75 ohm)	21.4 dB (3669.95100 MHz, CATV tuning)	Complied
RF output level	ANSI C63.4:2003	Video signal: 3000 uV Aural signal: 671 uV	5.0 dB (61.25 MHz, 3ch, AV Input 1 + Rec. 1Vp-p)	Complied
Spurious emission		94.8 uV	14.0 dB (53.0000 MHz, 3ch AV Input 2 + Rec. 5Vp-p)	Complied
Transfer switch	ANSI C63.4:2003	9.5 dB	1.9 dB (67.2500 MHz, 4ch, AV Input 1 + Rec. 5Vp-p)	Complied
Picture sensitivity	ANSI C63.4:2003	8 dB	4.2 dB	Complied
Noise figure	FCC/OET MP:2:1986	14 dB	6.4 dB (133.25 MHz, 16ch)	Complied

For ICES-003, only the tests, which relate to the digital device of conducted emission and radiated emission, were performed.

3.3 Additions or deviations to standard

No addition, deviation or exclusion has been made from standards.

3.4 Confirmation

UL Apex Co., Ltd. hereby confirms that E.U.T., in the configuration tests, complies with the specifications FCC Part15 Subpart B and ICES-003 Issue No. 4.

UL Apex Co., Ltd.
Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN
Telephone: +81 596 39 1485
Facsimile: +81 596 39 0232

3.5 Uncertainty**Conducted emission (150 kHz – 30 MHz)**

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.74 dB.

The data listed in this test report has enough margin, more than site margin.

Radiated emission

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ± 4.4 dB.

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ± 4.8 dB.

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ± 5.8 dB.

The data listed in this test report meets the limits unless the uncertainty is taken into consideration.

Antenna terminal voltage

The measurement uncertainty (with a 95% confidence level) for this test was ± 3.48 dB.

The data listed in this test report has enough margin, more than site margin.

RF output level test / spurious emission test

The measurement uncertainty (with a 95% confidence level) for this test was ± 3.48 dB.

The data listed in this test report has enough margin, more than site margin.

Antenna transfer switch

The measurement uncertainty (with a 95% confidence level) for this test was ± 3.48 dB.

The data listed in this test report meets the limits unless the uncertainty is taken into consideration.

Picture sensitivity test

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.0 dB.

The data listed in this test report has enough margin, more than site margin.

Noise Figure Test

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.2 dB.

The data listed in this test report has enough margin, more than site margin.

3.7 Test location

UL Apex Co., Ltd. Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken, 516-1106 JAPAN

TEL : +81 596 39 1485

FAX : +81 596 39 0232

Test room	Width x Depth x Height (m)	Test room	Width x Depth x Height (m)
No.1 shielded room	5.5 x 6.4 x 2.7	No.7 shielded room	9.3 x 3.4 x 2.7
No.2 shielded room	4.5 x 3.6 x 2.7	No.1 EMS lab. (Full-anechoic chamber)	5.0 x 8.0 x 3.5
No.3 shielded room	3.6 x 7.2 x 2.4	No.2 EMS lab. (Full-anechoic chamber)	4.0 x 7.0 x 3.5
No.4 shielded room	5.5 x 5.0 x 2.4		
No.5 shielded room	5.5 x 4.3 x 2.5		
No.6 shielded room	5.2 x 3.2 x 2.9		

*NVLAP Lab. code : 200109-0

No.1 and No.3 sites have been fully described in a report submitted to FCC office, and listed on September 25, 2003.
(Registration number: 90412)

No.2 site has been fully described in a report submitted to FCC office, and listed on August 29, 2003.
(Registration number: 90411)

3.8 Test setup, Data of EMI & Test instruments

Please refer to Appendix 1 to 3.

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Section 4 : Operation of E.U.T. during tests

4.1 Operating modes

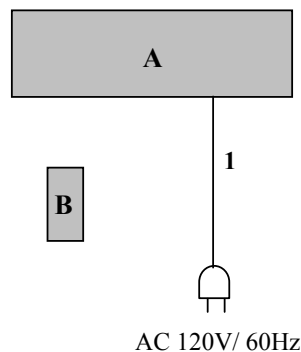
The EUT exercise program used during testing was designed exercise the various system components in a manner similar to typical use.

The sequence in used : * TV Reception + Rec. mode (0 dBmV input / 25 dBmV input)
 * AV Input 1 + Rec. mode / AV Input 2 + Rec. mode (1 Vp-p input / 5 Vp-p input)
 * VCR Play + Rec. mode
 * DVD Play + Rec. mode

Operation : The EUT was tested at above operation mode.

Justification : The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals



* Cabling was taken into consideration and test data was taken under worse case conditions.

Description of EUT and support equipment

Sign	Item	Model number	Serial number	Manufacturer	FCC ID	Remark
A	DVD Recorder with Video Cassette Recorder	D-VR4XSU	—	Orion Electric Co., Ltd.	A7RM2H5A	EUT
B	Remote Controller	—	—	Orion Electric Co., Ltd.	-	EUT

List of cable used

No.	Item	Length (m)	Shield	Backshell material
1	AC Power Cable	1.6	Unshielded	Polyvinyl chloride

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Section 5 : Conducted emission

5.1 Operation environment

The test was carried out No.3 shielded room.

Date : June 24, 2005

Temperature : See data

Humidity : See data

5.2 Test configuration

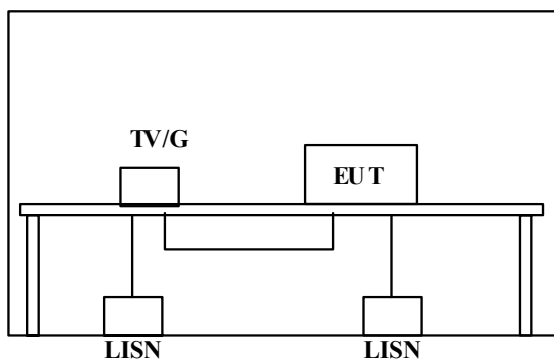
EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The rear of tabletop was located 40 cm to the vertical conducting plane. The rear of EUT was aligned and flushed with rear of tabletop. All other surfaces of tabletop was at least 80 cm from any other grounded conducting surface. I/O cables and AC cable were bundled in center. I/O cables were hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead, except the ground (safety) lead, were individually connected through a LISN to the input power source. All unused 50 ohm connectors of the LISN were resistively terminated in 50 ohm when not connected to the measuring equipment.

A drawing of the set up is shown in figure 1 and photographs in Appendix 1.

Figure 1. Conducted emission

TV Reception + Rec. mode (0 dBmV input / 25 dBmV input)

Shielded room



RF in: TV signal generator connected
 Front video in: 75 ohm terminated
 Front audio in: 47 k ohm terminated
 Rear video out: 75 ohm terminated with video cable
 Rear audio out: 1 k ohm terminated with audio cable
 S-video out: 75 ohm terminated with S-video output cable
 Component out (Y/P_B/P_R): 75 ohm terminated with component cable
 RF output: 75 ohm terminated with RF output cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Rear video in: 75 ohm terminated
 Rear audio in: 47 k ohm terminated

UL Apex Co., Ltd.

Yokowa EMC Lab.

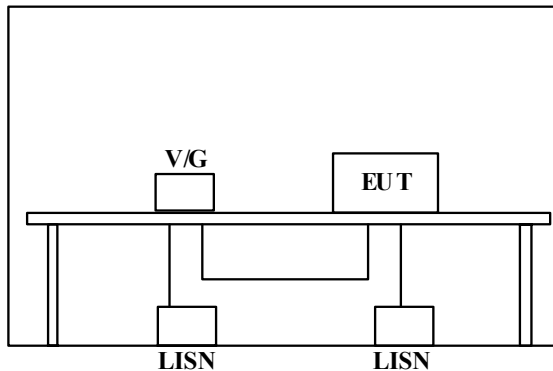
108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

AV Input 1 + Rec. mode/ AV Input 2 + Rec. mode (1 Vp-p input / 5 Vp-p input)

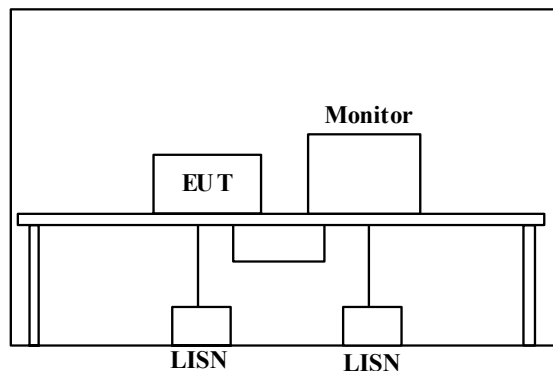
Shielded room



RF in: 75 ohm terminated
 Front video in: Video signal generator connected or 75 ohm terminated
 Front audio in: 47 k ohm terminated
 Rear video out: 75 ohm terminated with video cable
 Rear audio out: 1 k ohm terminated with audio cable
 S-video out: 75 ohm terminated with S-video output cable
 Component out (Y/P_B/P_R): 75 ohm terminated with component cable
 RF output: 75 ohm terminated with RF output cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Rear video in: video signal generator connected or 75 ohm terminated
 Rear audio in: 47 k ohm terminated

VCR Play + Rec. mode / DVD Play + Rec. mode

Shielded room



RF in: 75 ohm terminated with RF input cable
 Front video in: 75 ohm terminated with video cable
 Front audio in: 47 k ohm terminated with audio cable
 Rear video out: monitor connected
 Rear audio out: monitor connected
 S-video out: 75 ohm terminated with S-video output cable
 Component out (Y/P_B/P_R): 75 ohm terminated with component cable
 RF output: 75 ohm terminated with RF output cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Rear video in: 75 ohm terminated with video cable
 Rear audio in: 47 k ohm terminated with audio cable
 S-video in: 75 ohm terminated with S-video input cable

5.3 Test conditions

Frequency range : 0.15 MHz – 30 MHz
EUT position : Table top
EUT operation mode : TV Reception + Rec., AV Input 1+ Rec., AV Input 2 + Rec.,
VCR Play + Rec., DVD Play + Rec.

5.4 Test procedure

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT within a shielded room. The EUT was connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection has been performed. The measurements have been performed with a quasi-peak detector and if required, with an average detector.

The conducted emission measurements were made with the following detector function of the test receiver.

Detector Type : QP / AV
IF Bandwidth : 10 kHz / 10 kHz

5.5 Test result

Passed

Please refer to summary of the test results in Appendix 2.

Test engineer: Tsubasa Takayama

Section 6 : Radiated emission

6.1 Operation environment

The test was carried out in No.1 and No.3 open site.

Date : June 7, 22 and July 19, 2005

Temperature : See data

Humidity : See data

6.2 Test configuration

EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The rear of EUT was aligned and flushed with rear of tabletop. AC cable was bundled in center. I/O cables were hanged 40 cm height to the ground plane. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

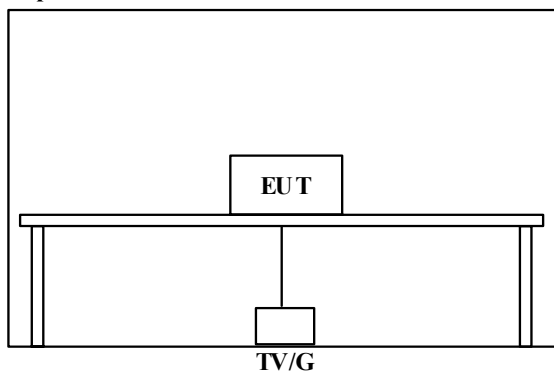
A drawing of the set up is shown in figure 2 and photographs in Appendix 1.

Figure 2. Radiated emission



TV Reception + Rec. mode (0 dBmV / 25 dBmV)

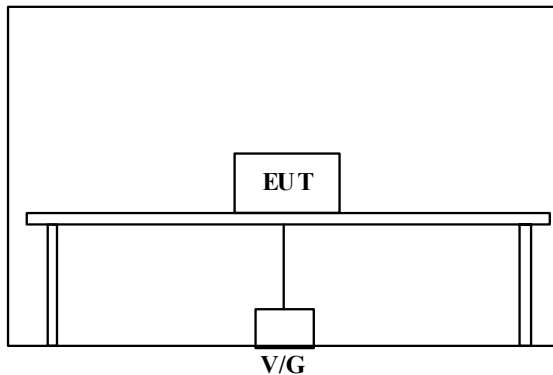
Open test site



RF in: TV signal generator connected or 75 ohm terminated
 Front video in: 75 ohm terminated
 Front audio in: 47 k ohm terminated
 Rear video out: 75 ohm terminated with video cable
 Rear audio out: 1 k ohm terminated with audio cable
 S-video out: 75 ohm terminated with S-video output cable
 Component (Y/P_B/P_R): 75 ohm terminated with component cable
 RF output: 75 ohm terminated with RF output cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Rear video in: 75 ohm terminated
 Rear audio in: 47 k ohm terminated

AV Input 1 + Rec. mode/ AV Input 2 + Rec. mode (1 Vp-p input / 5 Vp-p input)

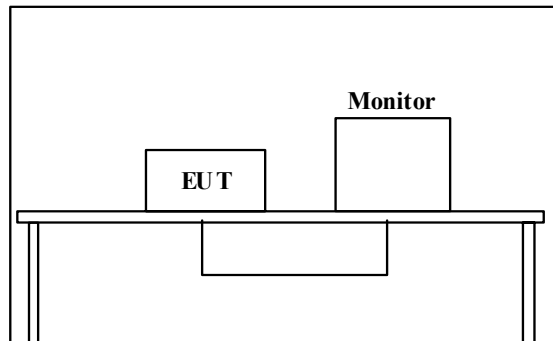
Open test site



RF in: 75 ohm terminated
 Front video in: Video signal generator connected or 75 ohm terminated
 Front audio in: 47 k ohm terminated
 Rear video out: 75 ohm terminated with video cable
 Rear audio out: 1 k ohm terminated with audio cable
 S-video out: 75 ohm terminated with S-video output cable
 Component out (Y/P_B/P_R): 75 ohm terminated with component cable
 RF output: 75 ohm terminated with RF output cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Rear video in: video signal generator connected or 75 ohm terminated
 Rear audio in: 47 k ohm terminated

VCR Play + Rec. mode / DVD Play + Rec. mode

Open test site



RF in: 75 ohm terminated with RF input cable
 Front video in: 75 ohm terminated with video cable
 Front audio in: 47 k ohm terminated with audio cable
 Rear video out: monitor connected
 Rear audio out: monitor connected
 S-video out: 75 ohm terminated with S-video output cable
 Component out (Y/P_B/P_R): 75 ohm terminated with component cable
 RF output: 75 ohm terminated with RF output cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Rear video in: 75 ohm terminated with video cable
 Rear audio in: 47 k ohm terminated with audio cable
 S-video in: 75 ohm terminated with S-video input cable

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

6.3 Test conditions

Frequency range : 30 MHz – 5000 MHz
Test distance : 3 m
EUT position : Table top
EUT operation mode : TV Reception + Rec., AV Input 1+ Rec., AV Input 2 + Rec.,
VCR Play + Rec., DVD Play + Rec.

6.4 Test procedure

The Radiated Electric Field Strength intensity has been measured on an open test site with a ground plane and at a distance of 3 m.

Pre check measurements were performed within a search coil at high level of 80MHz – 90MHz, 270MHz – 290MHz and 500MHz – 700MHz in a shielded room to distinguish disturbances of EUT from the ambient noise. The measuring antenna height was varied between 1 and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity. The measurements were performed for both vertical and horizontal antenna polarization.

The radiated emission measurements were made with the following detector function of the test receiver and spectrum analyzer.

	<u>30-1000 MHz (Test receiver)</u>	<u>1000-5000 MHz (Spectrum analyzer)</u>
Detector Type	: QP	: PK : AV
IF Bandwidth	: 120kHz	: RBW 1MHz / VBW 1MHz : RBW 1MHz/ VBW 10Hz

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

6.5 Test result

Passed

Please refer to summary of the test results in Appendix 2.

Test engineer: Tsubasa Takayama (June 7 and 22, 2005)
Seigo Kakehi (July 19, 2005)

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Section 7 : Antenna terminal voltage

7.1 Operation environment

The test was carried out in No.7 shielded room.

Date : June 9, 2005

Temperature : See data

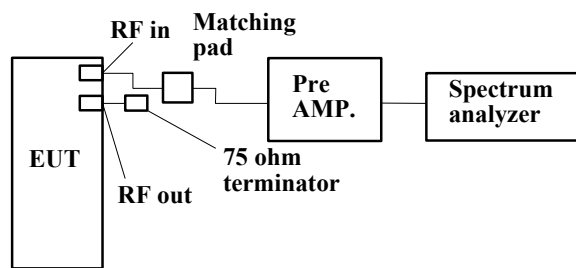
Humidity : See data

7.2 Test configuration

The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.

A drawing of the set up is shown in figure 3 and photographs in Appendix 1.

Figure 3. Antenna terminal voltage



7.3 Test conditions

Frequency range : 30 MHz – 5000 MHz

EUT position : Table top

EUT operation mode : Tuning (TV tuning / CATV tuning)

7.4 Test procedure

Connect EUT and spectrum analyzer through pre-amplifier. Set EUT to CH investigation mode then measure the voltage of local leakage from antenna terminal. Spectrum analyzer should be hold in maximum mode during the measurement.

Detector Type : Peak (30-5000 MHz)

At frequency between 2000 MHz and 5000 MHz, 75/50ohm conversion loss of impedance is used in speculation.

7.5 Test result

Passed

Please refer to summary of the test results in Appendix 2.

Test engineer: Tsubasa Takayama

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Section 8 : RF output level / spurious emission

8.1 Operation environment

The test was carried out in No.7 shielded room.

Date : June 21 and 23, 2005

Temperature : See data

Humidity : See data

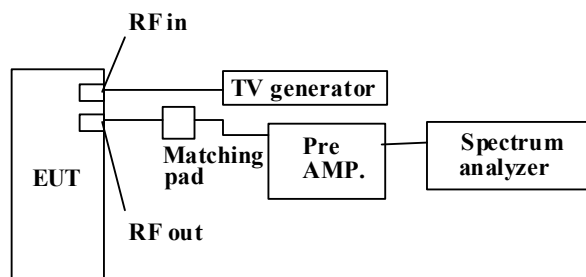
8.2 Test configuration

The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.

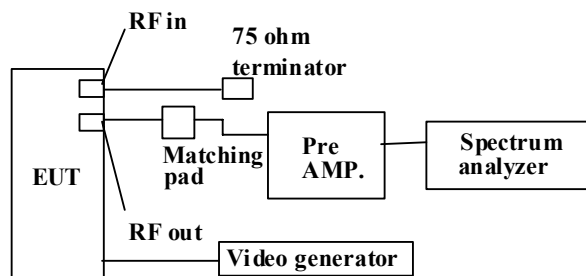
A drawing of the set up is shown in figure 4 and photographs in Appendix 1.

Figure 4. RF output level

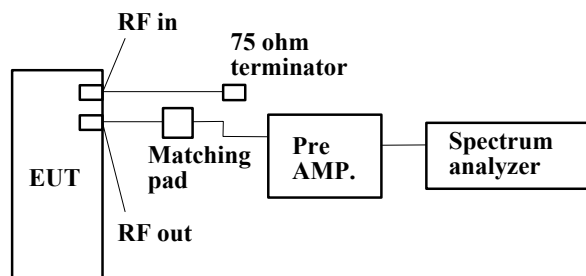
TV Reception + Rec. mode (0dBmV / 25dBmV)



AV Input 1 + Rec. mode / AV Input 2 + Rec. mode (1 Vp-p input / 5 Vp-p input)



VCR Play + Rec. mode and DVD Play + Rec. mode



UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

8.3 Test conditions

EUT position : Table top
EUT operation mode : TV Reception + Rec., AV Input 1+ Rec., AV Input 2 + Rec.,
VCR Play + Rec., DVD Play + Rec.

8.4 Test procedure

EUT was connected spectrum analyzer through matching pad by accessory cable. RF channel selected 3ch or 4ch. Picture carrier, sound carrier and spurious levels are measured. Both sound carrier levels (upper and lower side bands) of modulator output are measured.

Detector Type : Peak

8.5 Test result

Passed

Please refer to summary of the test results in Appendix 2.

Test engineer: Tsubasa Takayama

Section 9 : Antenna transfer switch

9.1 Operation environment

The test was carried out in No.7 shielded room.

Date : June 22, 2005

Temperature : See data

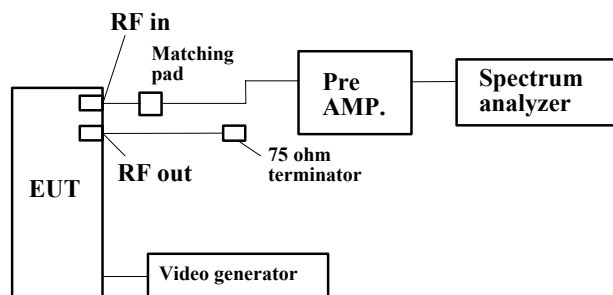
Humidity : See data

9.2 Test configuration

The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.

A drawing of the set up is shown in figure 5 and photographs in Appendix 1.

Figure 5. Transfer switch



9.3 Test conditions

EUT position : Table top

EUT operation mode : AV Input 1+ Rec., AV Input 2 + Rec., VCR Play + Rec., DVD Play + Rec.

9.4 Test procedure

EUT was connected spectrum analyzer through matching pad by accessory cable. RF channel selected 3ch or 4ch. Interference signals were measured from RF input terminal.

Detector Type : Peak

9.5 Test result

Passed

Please refer to summary of the test results in Appendix 2.

Test engineer: Tsubasa Takayama

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Section 10 : Picture sensitivity

10.1 Operation environment

The test was carried out in No.7 shielded room.

Date : June 9, 2005

Temperature : See data

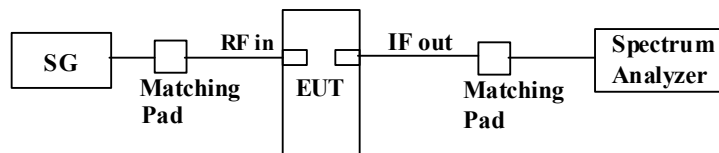
Humidity : See data

10.2 Test configuration

The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.

A drawing of the set up is shown in figure 6 and photographs in Appendix 1.

Figure 6. Picture sensitivity



10.3 Test conditions

EUT position : Table top

EUT operation mode : TV Reception

10.4 Test procedure

Signal generator setup is as follows, (Example: 2ch – 55.25 MHz, AM, 1 kHz, 30 %)

The EUT was tuned to appropriate channel.

Output level of signal generator was adjusted to near the frequency output level of EUT output.

EUT output level was adjusted to maximum output level by frequency adjustment of signal generator.

Signal generator output level was adjusted to reference output level of EUT and output level had read.

10.5 Test result

Passed

Please refer to summary of the test results in Appendix 2.

Test engineer: Tsubasa Takayama

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Section 11 : Noise figure

11.1 Operating environment

The test was carried out in No.7 shielded room.

Date : June 8, 2005

Temperature : See data

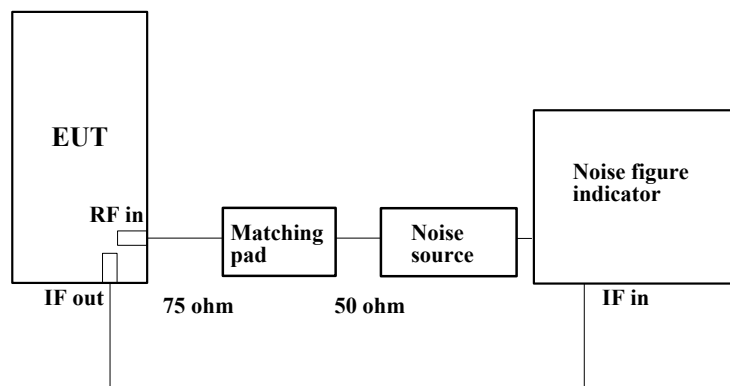
Humidity : See data

11.2 Test configuration

The EUT was placed on a non-metallic table.

A drawing of the set up is shown in figure 7 and photographs in Appendix 1.

Figure 7. Noise figure



11.3 Test condition

EUT position : Table top

EUT operation mode : TV Reception

11.4 Test procedure

This test should be performed in a shielded room or an low noise environment. Connect solid state noise source to antenna input terminal of EUT. Connect IF output terminal of EUT to noise meter. Measurement has been performed for VHF,UHF, Mid-band and Super-band receiver range.

11.5 Test result

Passed

Please refer to summary of the test results in Appendix 2.

Test engineer: Tsubasa Takayama

UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Appendix 1 : Photographs of test set up

Page 20 :	Test set up of conducted emission
Page 21 :	Test set up of radiated emission
Page 22 :	Test set up of antenna terminal voltage
Page 23 :	Test set up of RF output level / spurious emission
Page 24 :	Test set up of antenna transfer switch
Page 25 :	Test set up of picture sensitivity
Page 26 :	Test set up of noise figure

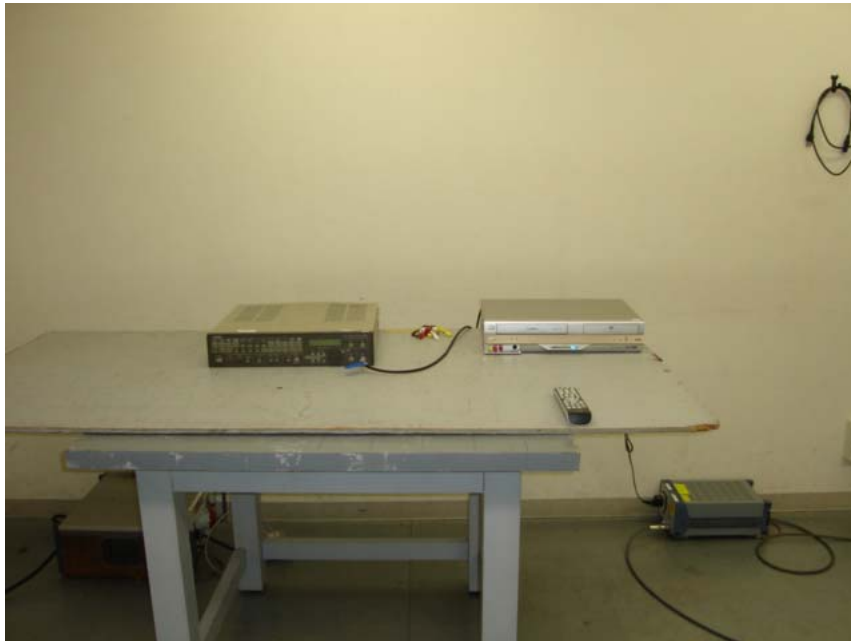
Appendix 2 : Data of EMI tests

Page 27 - 44 :	Conducted emission
Page 45 - 91 :	Radiated emission
Page 92- 93 :	Antenna terminal voltage
Page 94 - 114 :	RF output level / spurious emission
Page 115 - 126 :	Antenna transfer switch
Page 127 :	Picture sensitivity
Page 128 :	Noise figure

Appendix 3 : Test instruments

Page 129 :	Test instruments
------------	------------------

Conducted emission



UL Apex Co., Ltd.

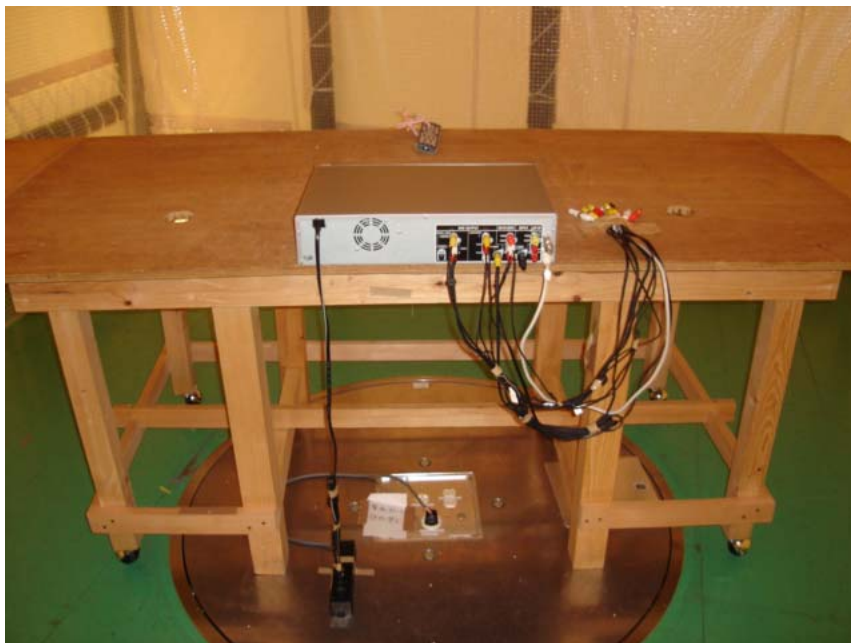
Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Radiated emission



UL Apex Co., Ltd.

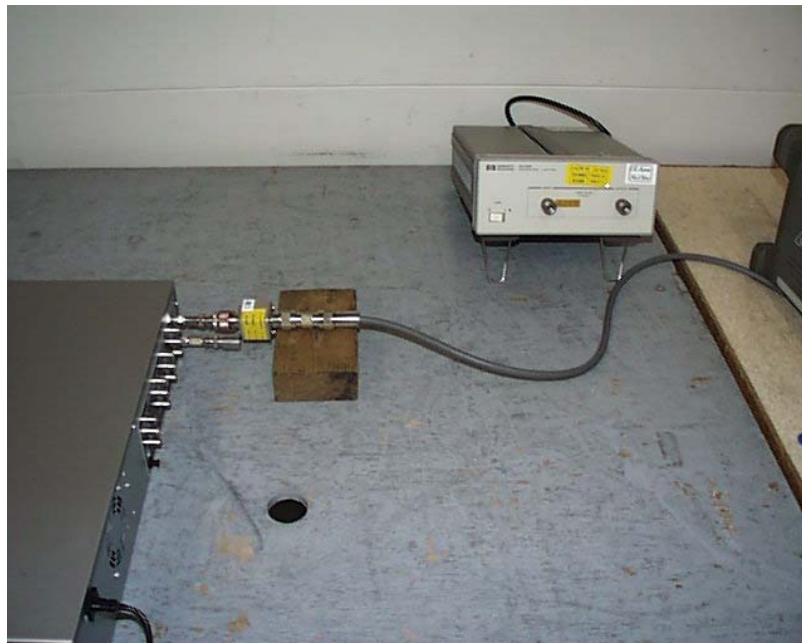
Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Antenna terminal voltage



UL Apex Co., Ltd.

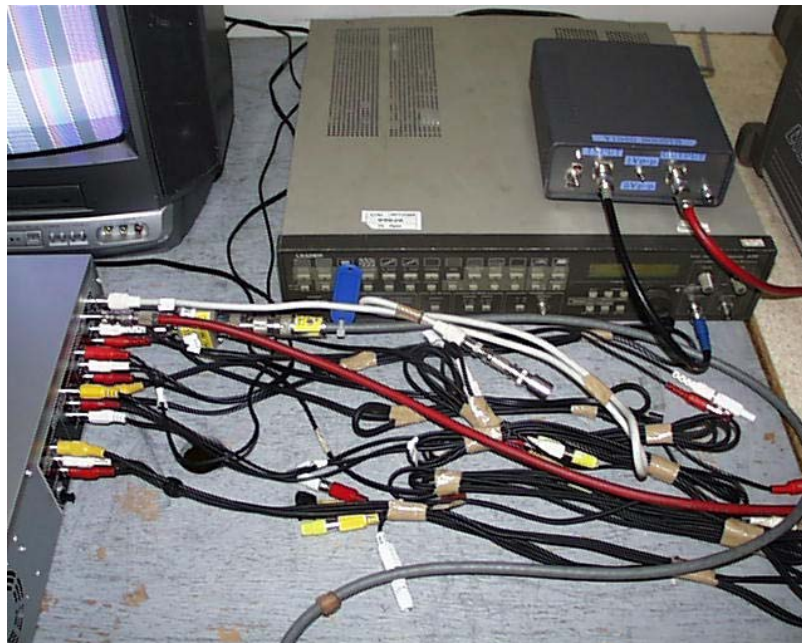
Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

RF output level / spurious emission



UL Apex Co., Ltd.

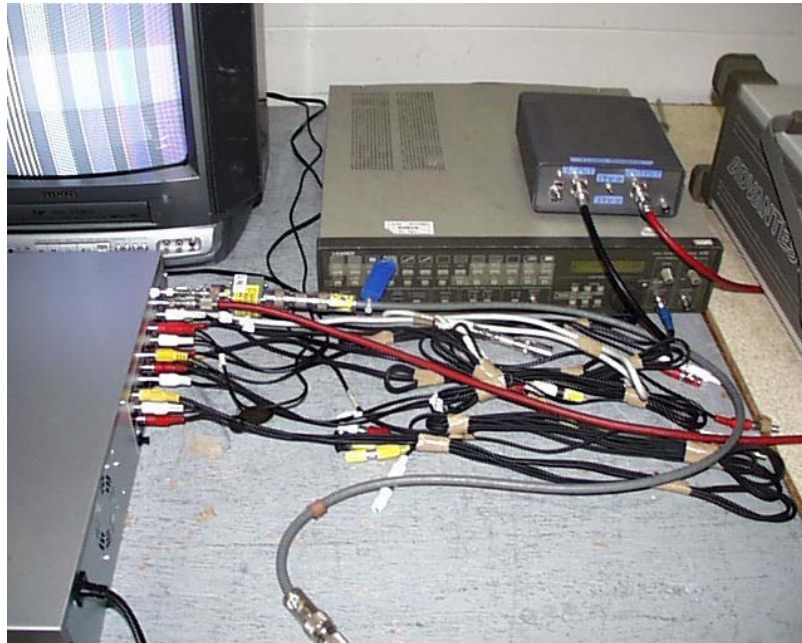
Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Antenna transfer switch



UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Picture sensitivity



UL Apex Co., Ltd.

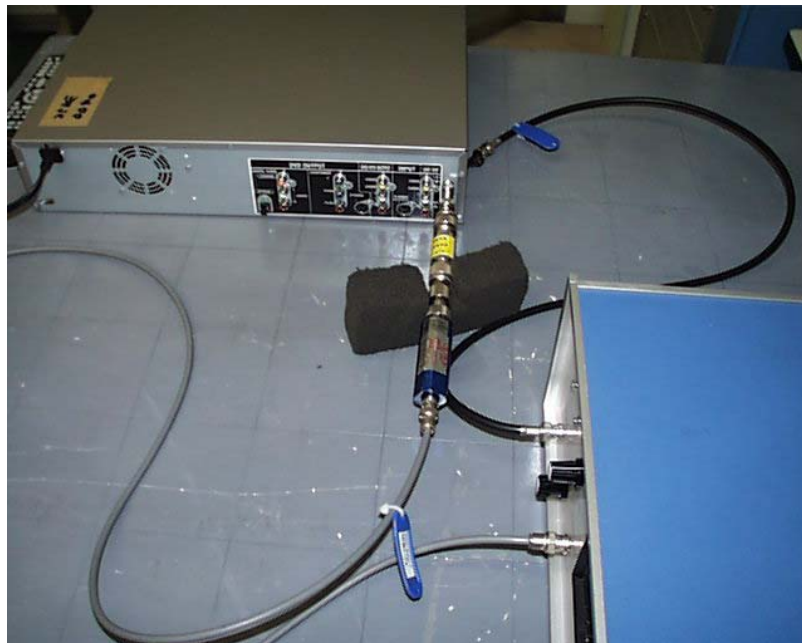
Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Noise figure



UL Apex Co., Ltd.

Yokowa EMC Lab.

108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.3 SHIELD TEST ROOM
Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB μV]				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB]
1.	0.1500	33.5	-	33.1	-	0.0	0.2	0.0	33.7	-	66.0	56.0	32.3	-
2.	0.2115	38.0	-	37.7	-	0.1	0.2	0.0	38.3	-	63.1	53.1	24.8	-
3.	0.4972	33.6	-	34.6	-	0.1	0.3	0.0	35.0	-	56.0	46.0	21.0	-
4.	0.8403	35.8	-	34.8	-	0.1	0.3	0.0	36.2	-	56.0	46.0	19.8	-
5.	2.3274	31.5	-	30.2	-	0.1	0.3	0.0	31.9	-	56.0	46.0	24.1	-
6.	4.7786	20.0	-	19.1	-	0.2	0.4	0.0	20.6	-	56.0	46.0	35.4	-
7.	28.6589	17.8	-	16.5	-	1.0	0.7	0.0	19.5	-	60.0	50.0	40.5	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

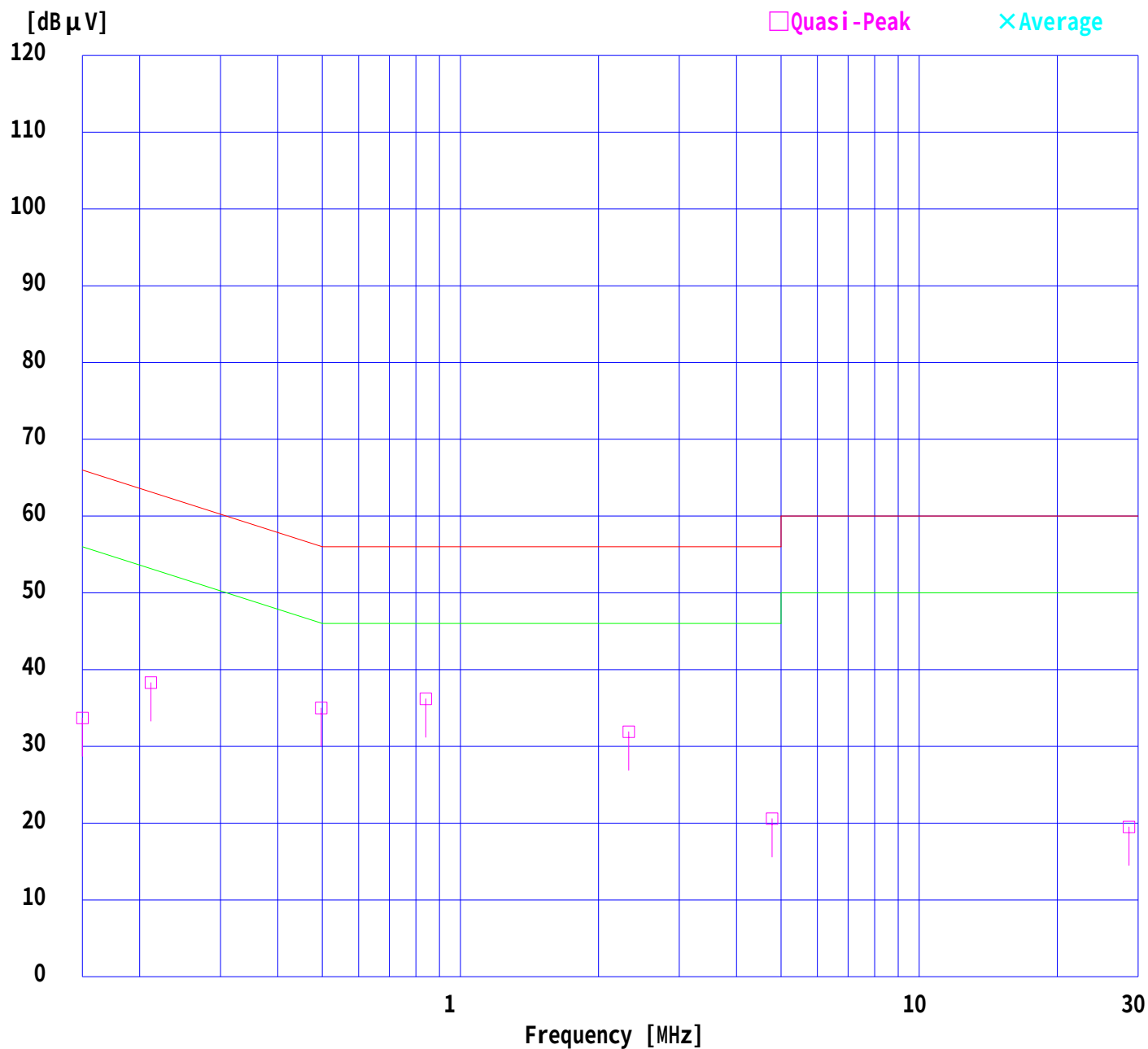
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.3 SHIELD TEST ROOM
Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

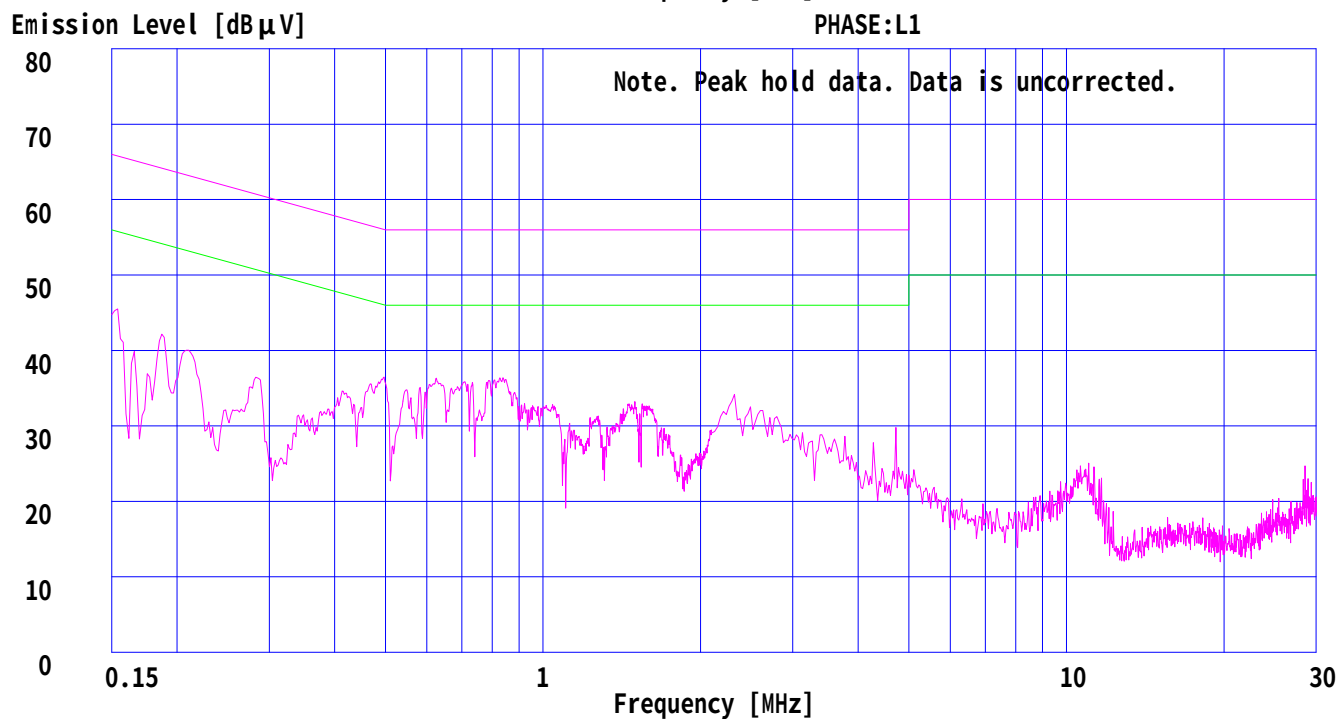
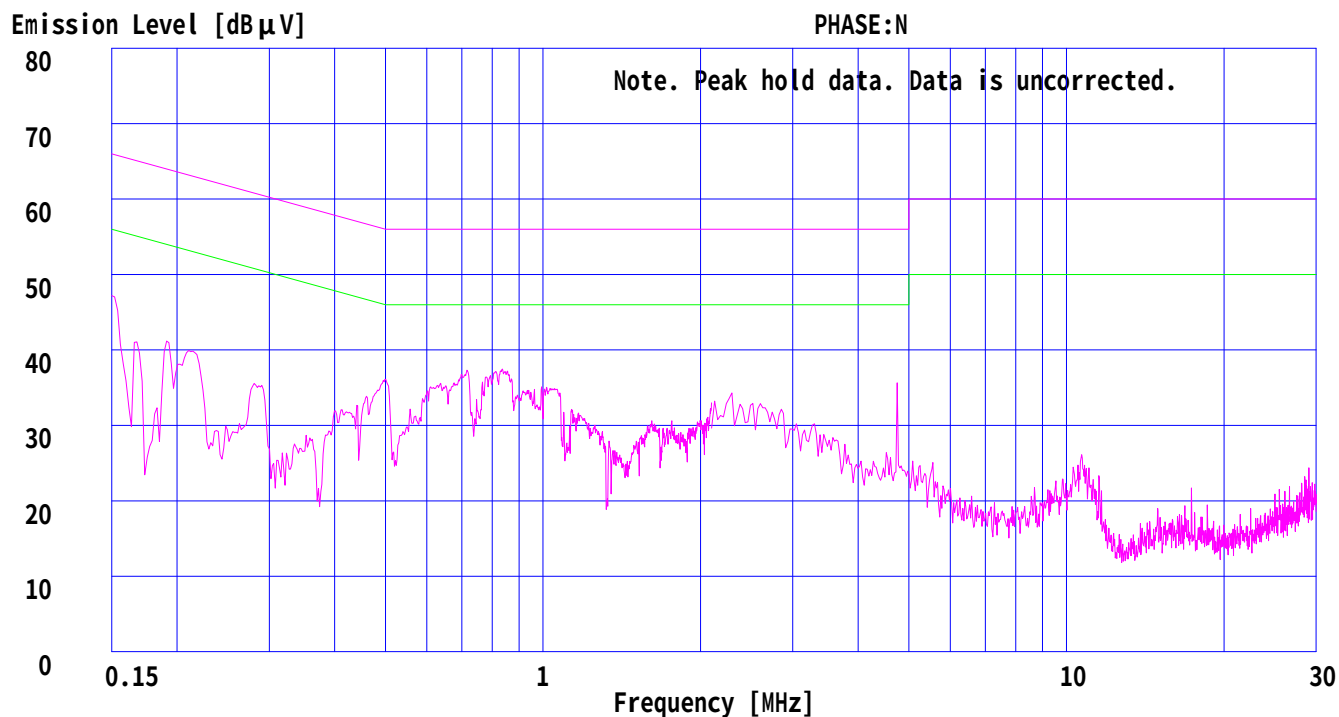
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

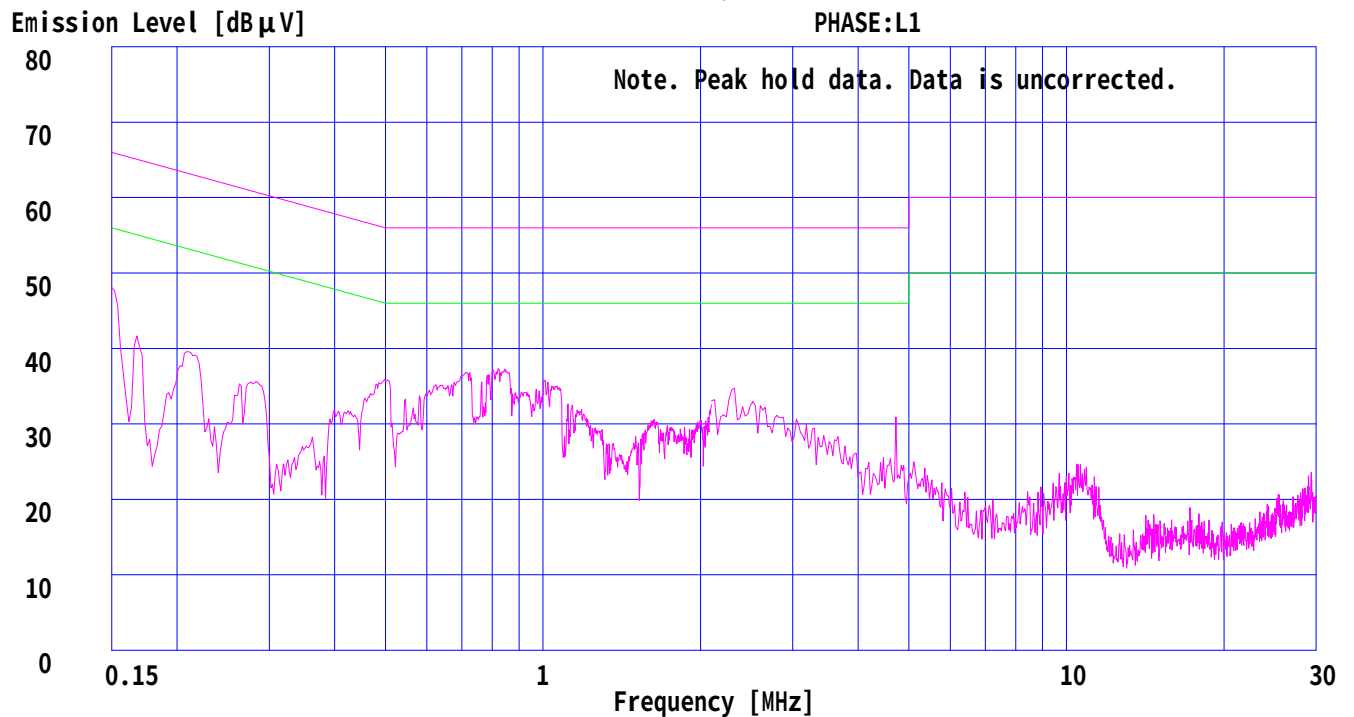
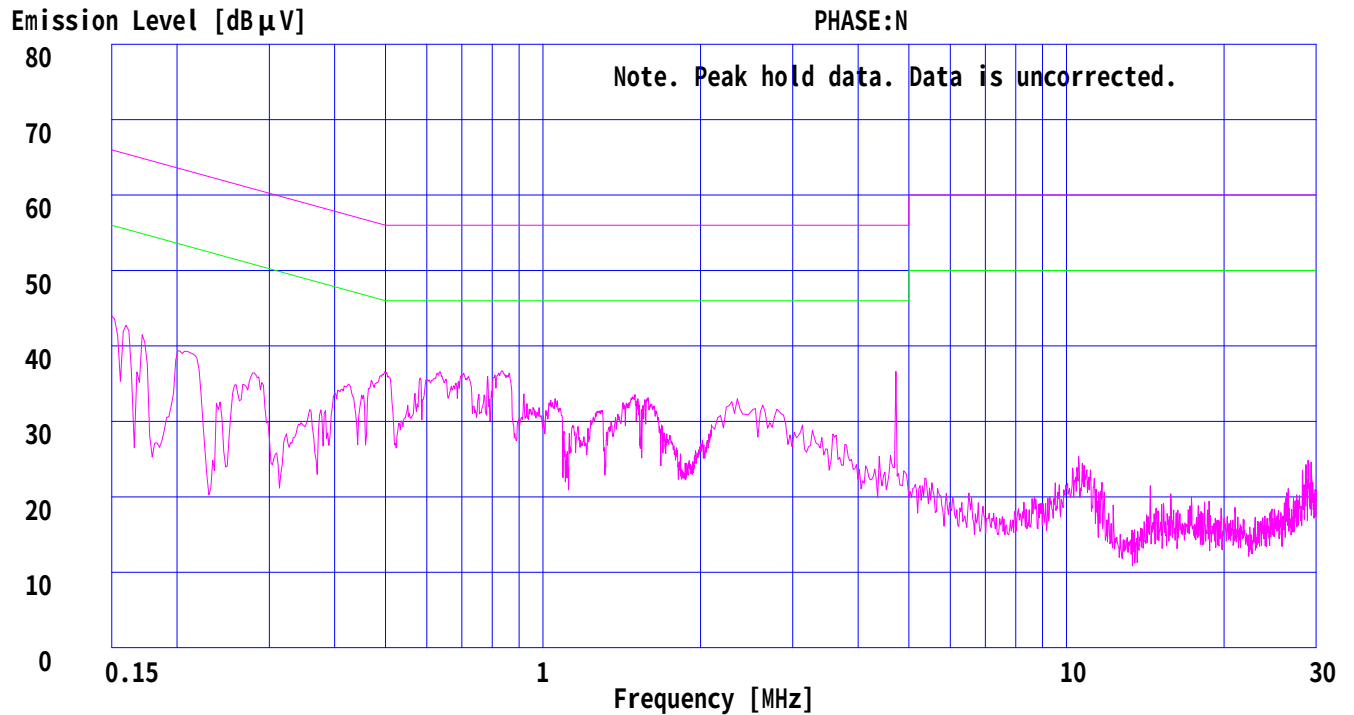
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 0dBmV
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV	QP [dB μV]	AV				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB]
1.	0.1500	33.0	-	32.1	-	0.0	0.2	0.0	33.2	-	66.0	56.0	32.8	-
2.	0.2100	37.7	-	37.0	-	0.1	0.2	0.0	38.0	-	63.2	53.2	25.2	-
3.	0.4954	34.7	-	35.0	-	0.1	0.3	0.0	35.4	-	56.1	46.1	20.7	-
4.	0.8409	36.0	-	35.0	-	0.1	0.3	0.0	36.4	-	56.0	46.0	19.6	-
5.	2.3273	31.7	-	30.3	-	0.1	0.3	0.0	32.1	-	56.0	46.0	23.9	-
6.	4.7786	20.0	-	19.3	-	0.2	0.4	0.0	20.6	-	56.0	46.0	35.4	-
7.	16.0384	16.2	-	16.5	-	0.7	0.5	0.0	17.7	-	60.0	50.0	42.3	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

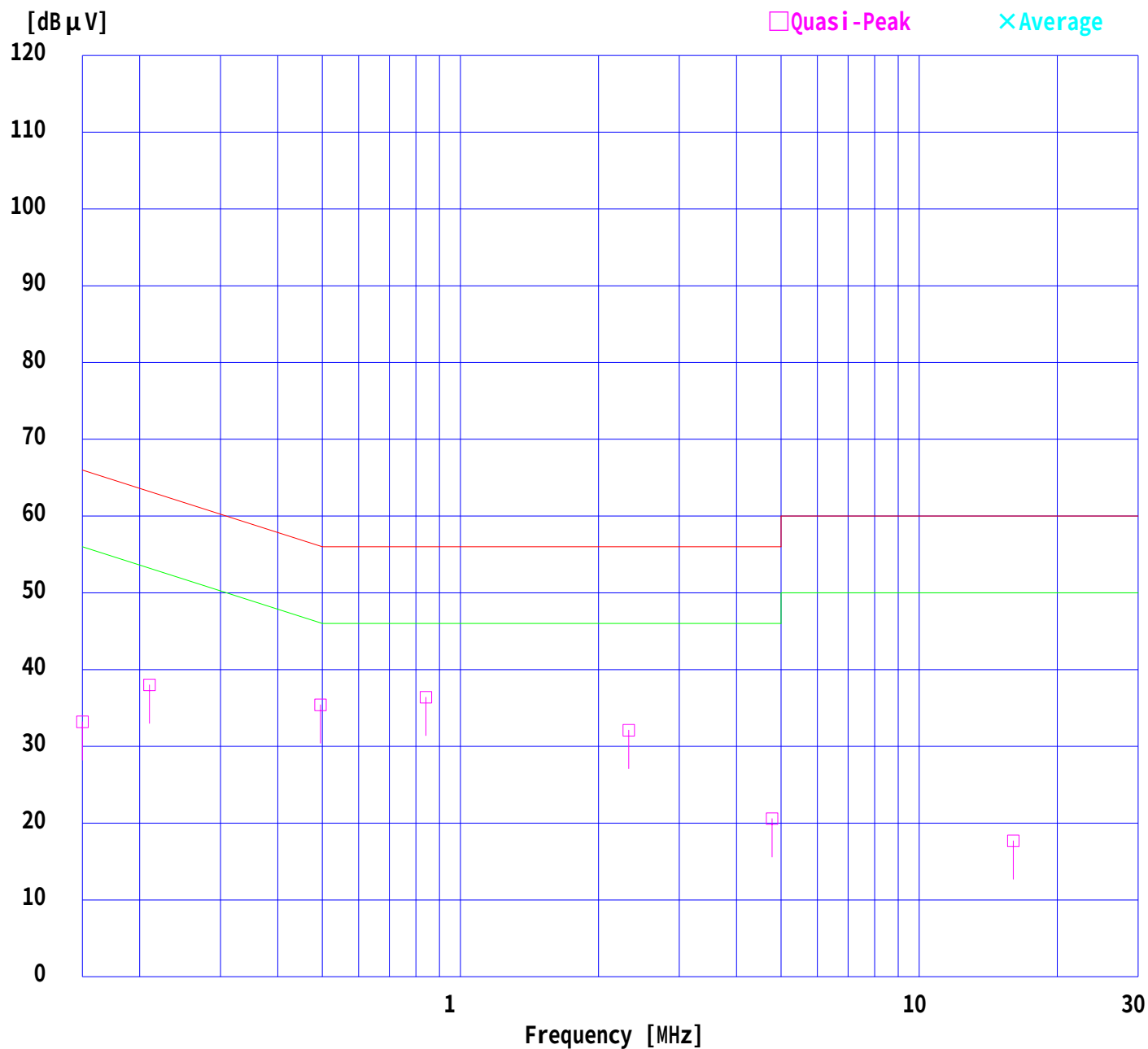
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

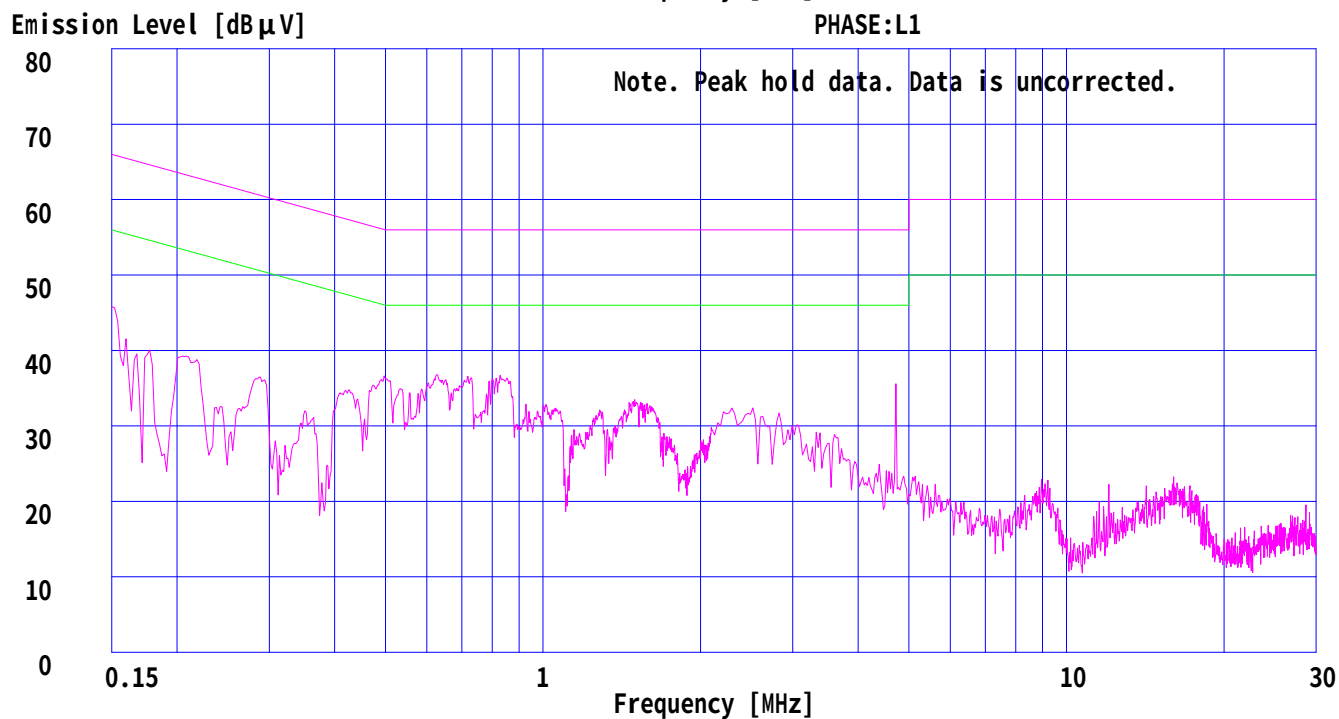
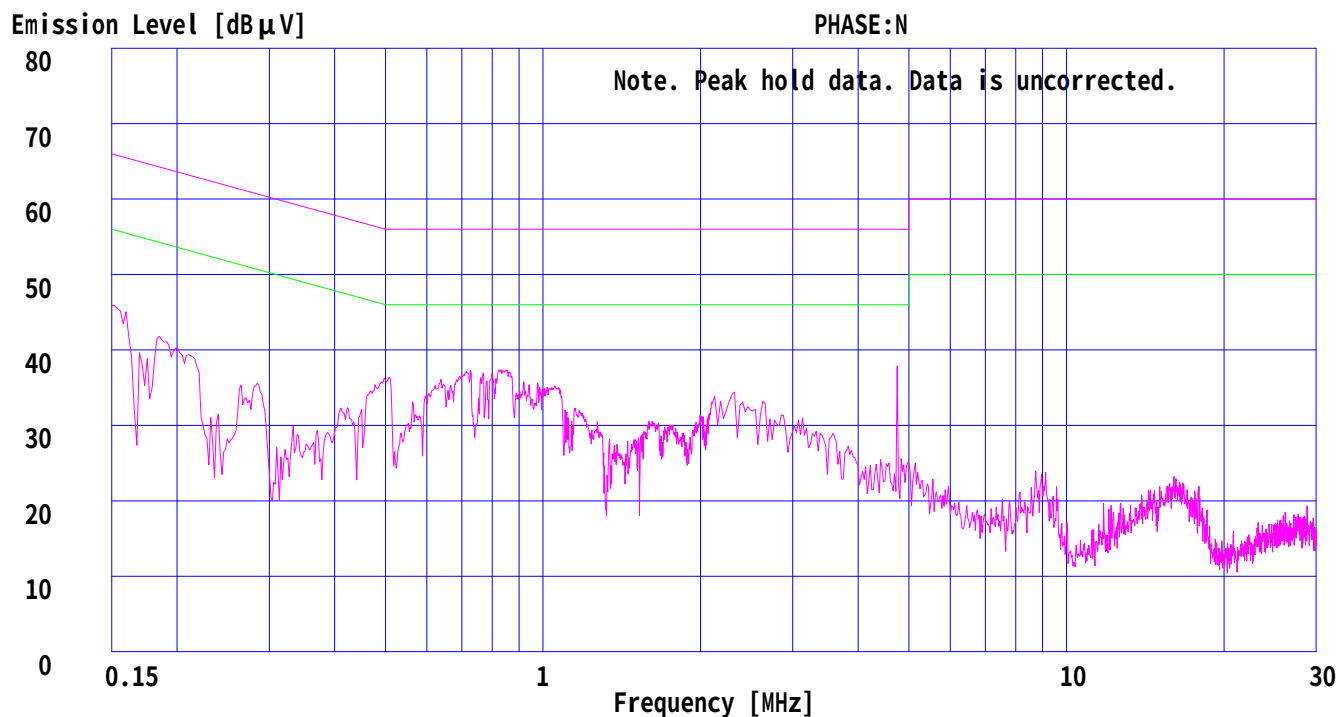
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

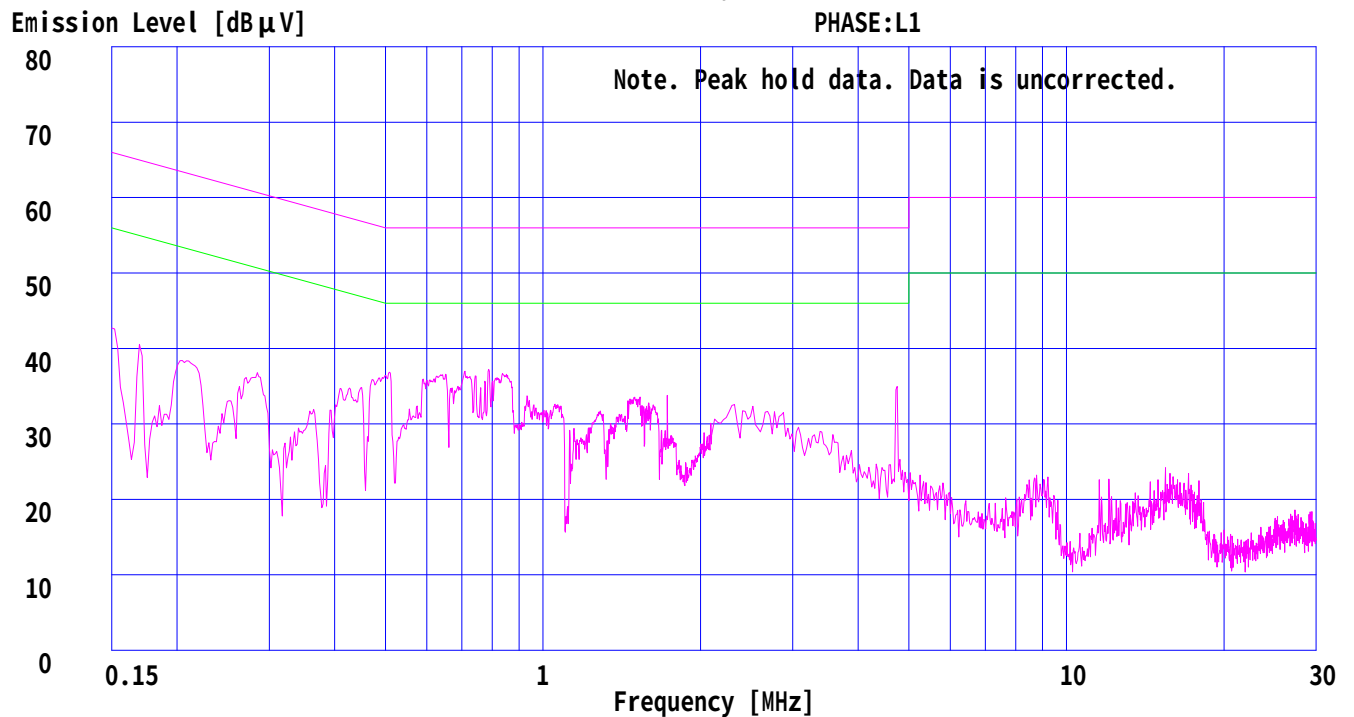
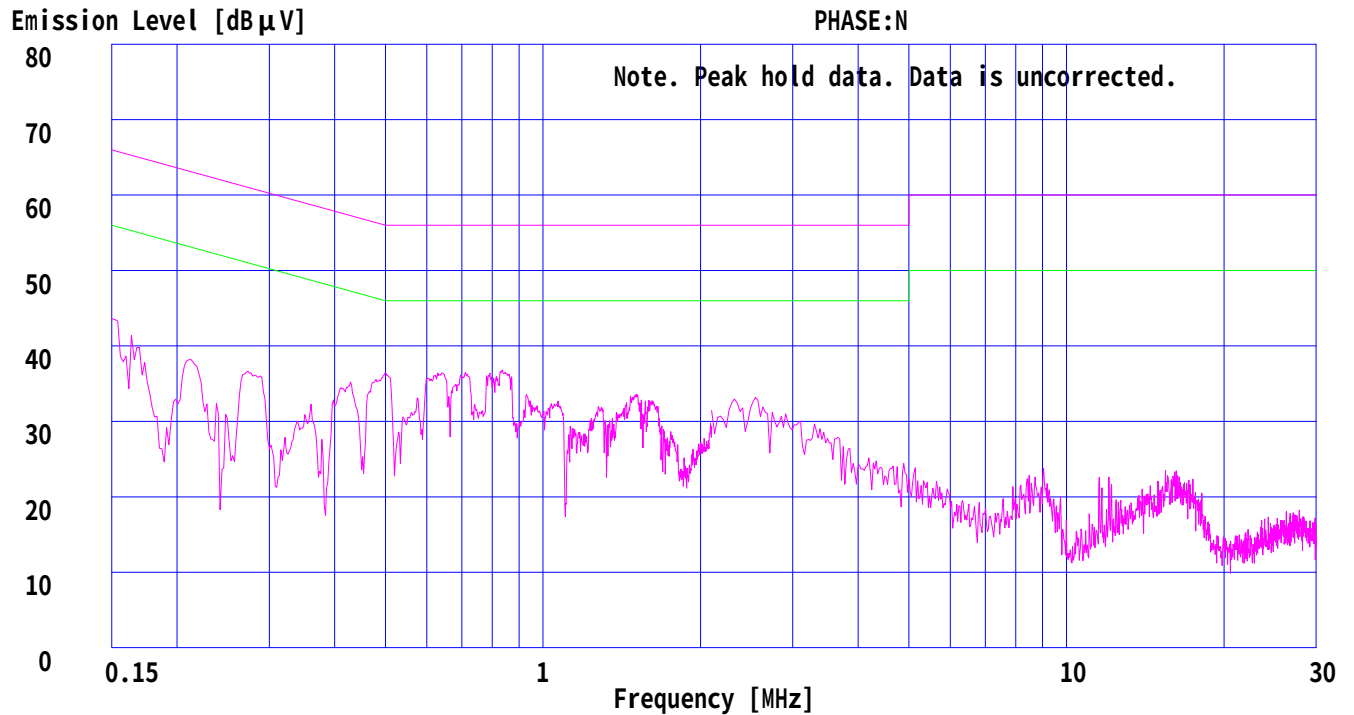
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 1Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV	QP [dB μV]	AV				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB]
1.	0.1500	29.7	-	32.9	-	0.0	0.2	0.0	33.1	-	66.0	56.0	32.9	-
2.	0.2086	37.3	-	36.3	-	0.1	0.2	0.0	37.6	-	63.3	53.3	25.7	-
3.	0.4884	34.7	-	34.7	-	0.1	0.3	0.0	35.1	-	56.2	46.2	21.1	-
4.	0.8427	36.2	-	35.0	-	0.1	0.3	0.0	36.6	-	56.0	46.0	19.4	-
5.	2.3157	31.9	-	29.4	-	0.1	0.3	0.0	32.3	-	56.0	46.0	23.7	-
6.	4.7786	20.4	-	19.3	-	0.2	0.4	0.0	21.0	-	56.0	46.0	35.0	-
7.	15.7840	16.3	-	16.5	-	0.7	0.5	0.0	17.7	-	60.0	50.0	42.3	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

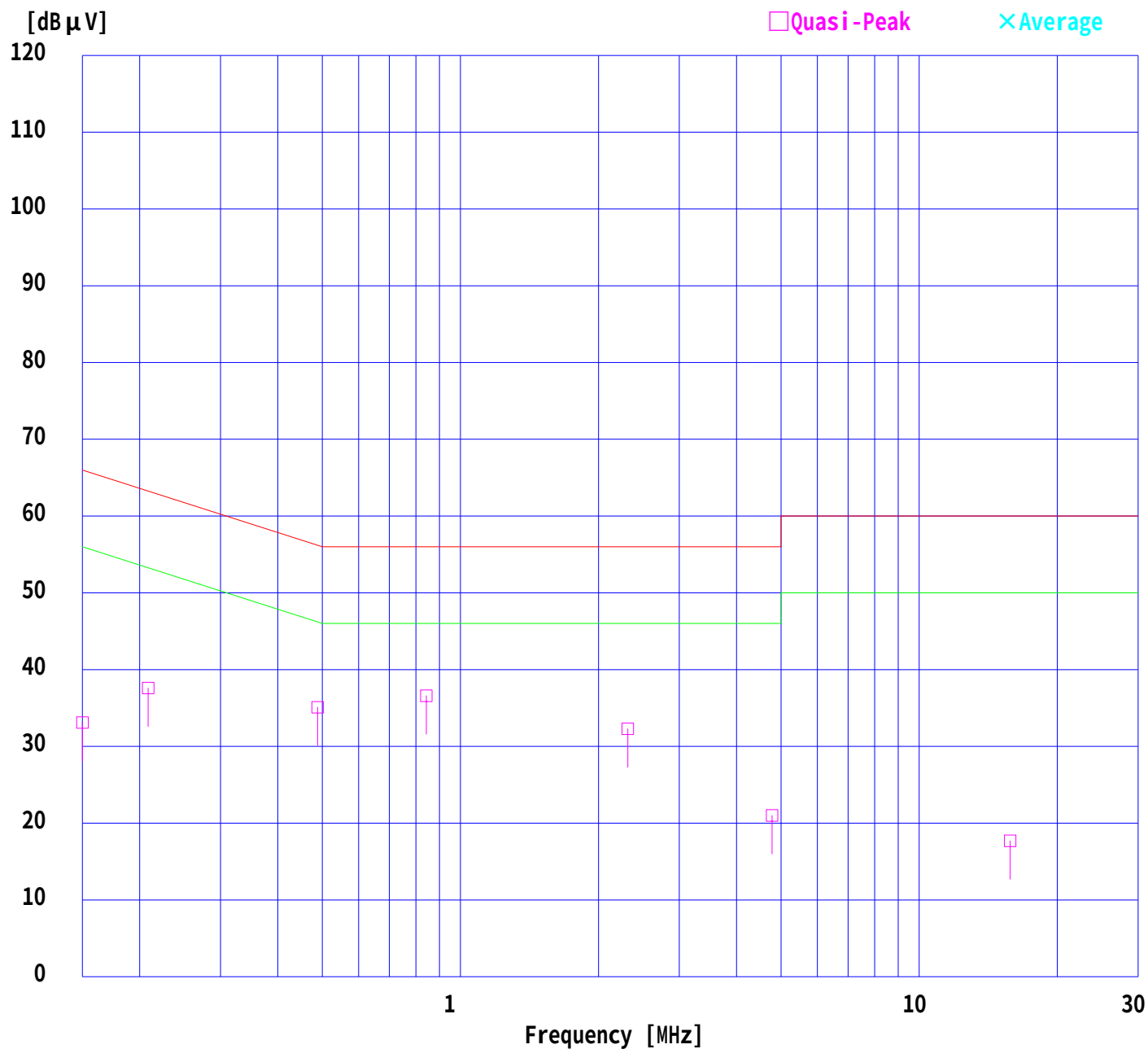
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

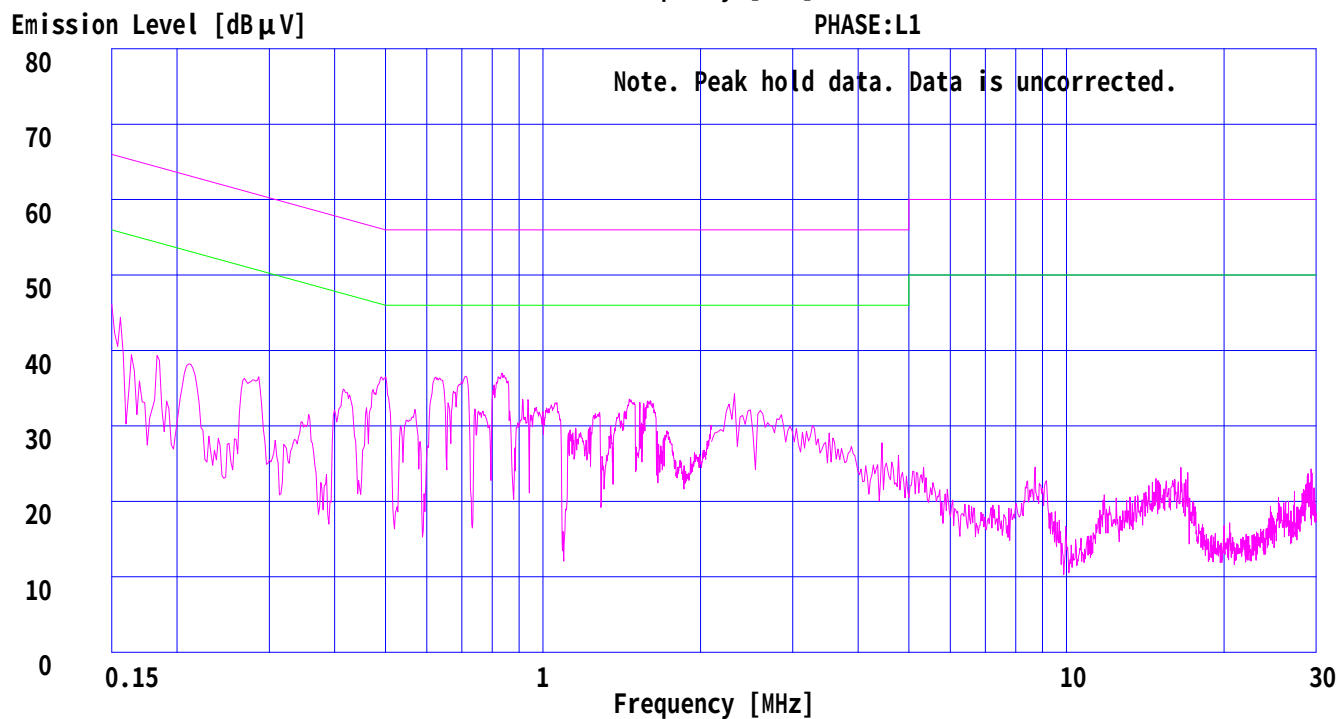
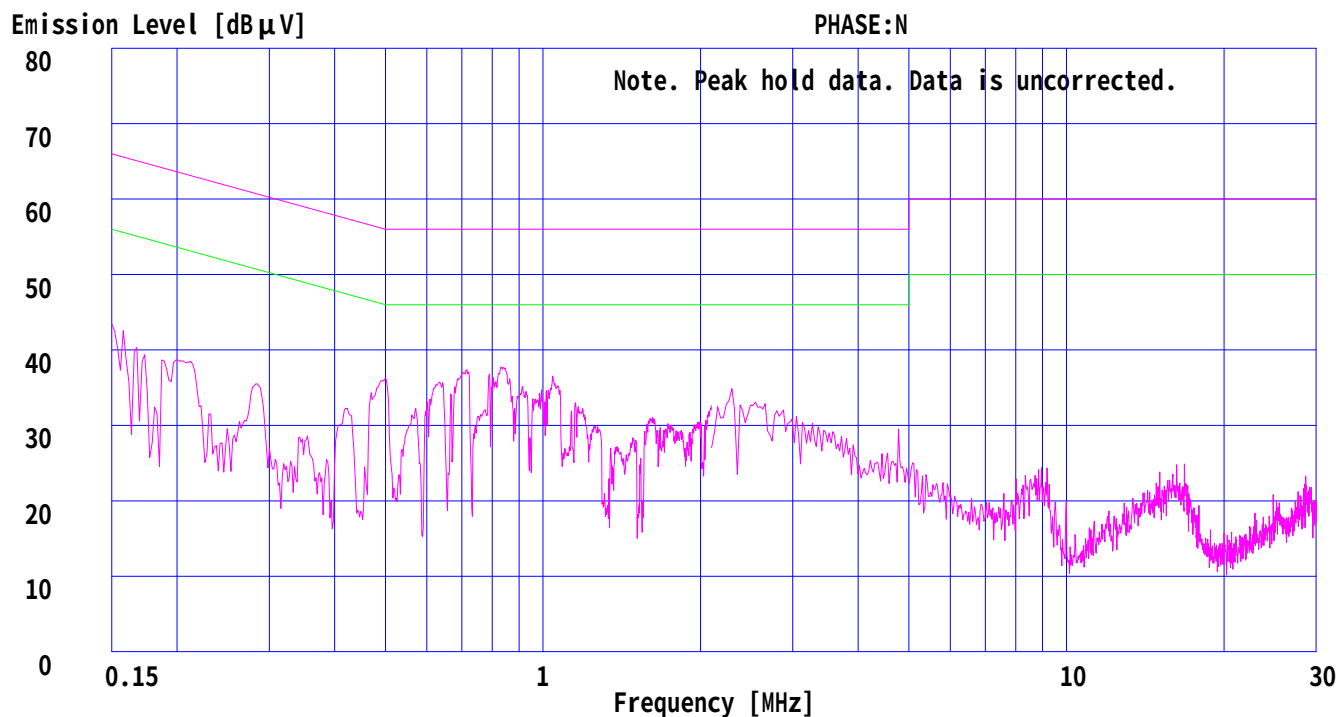
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

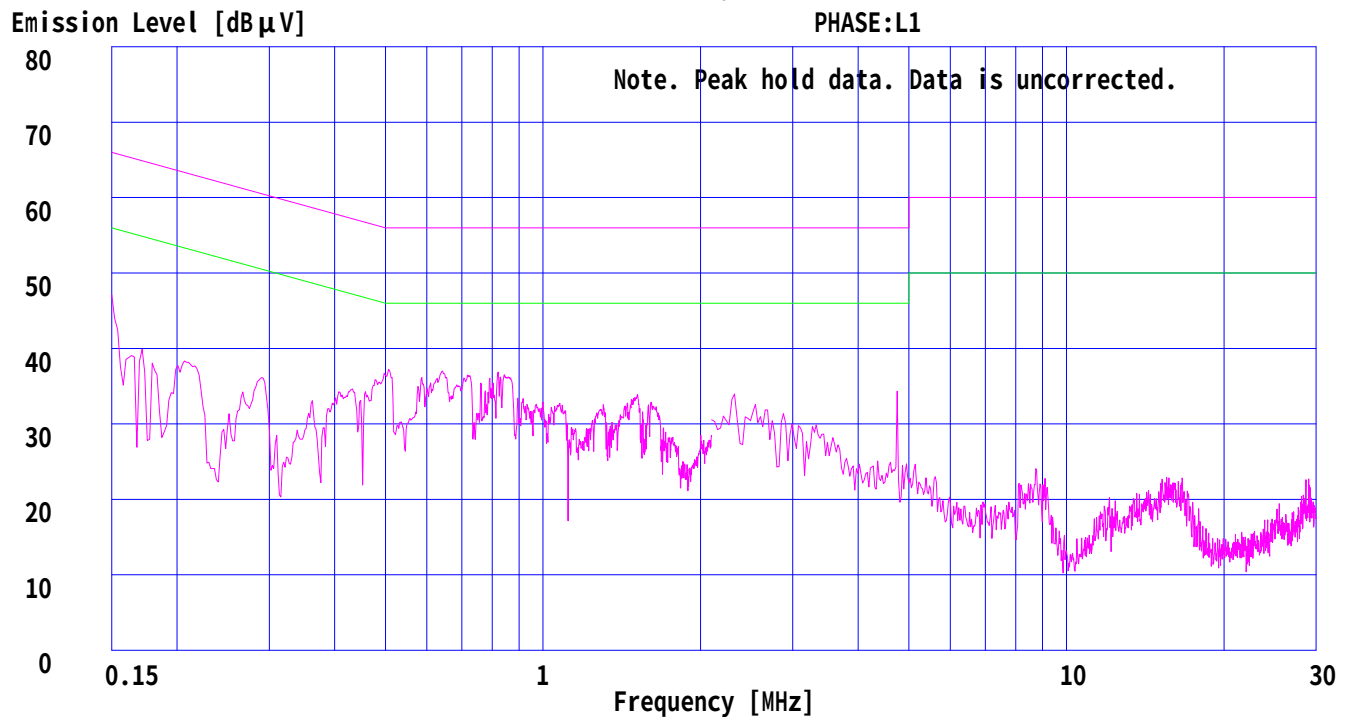
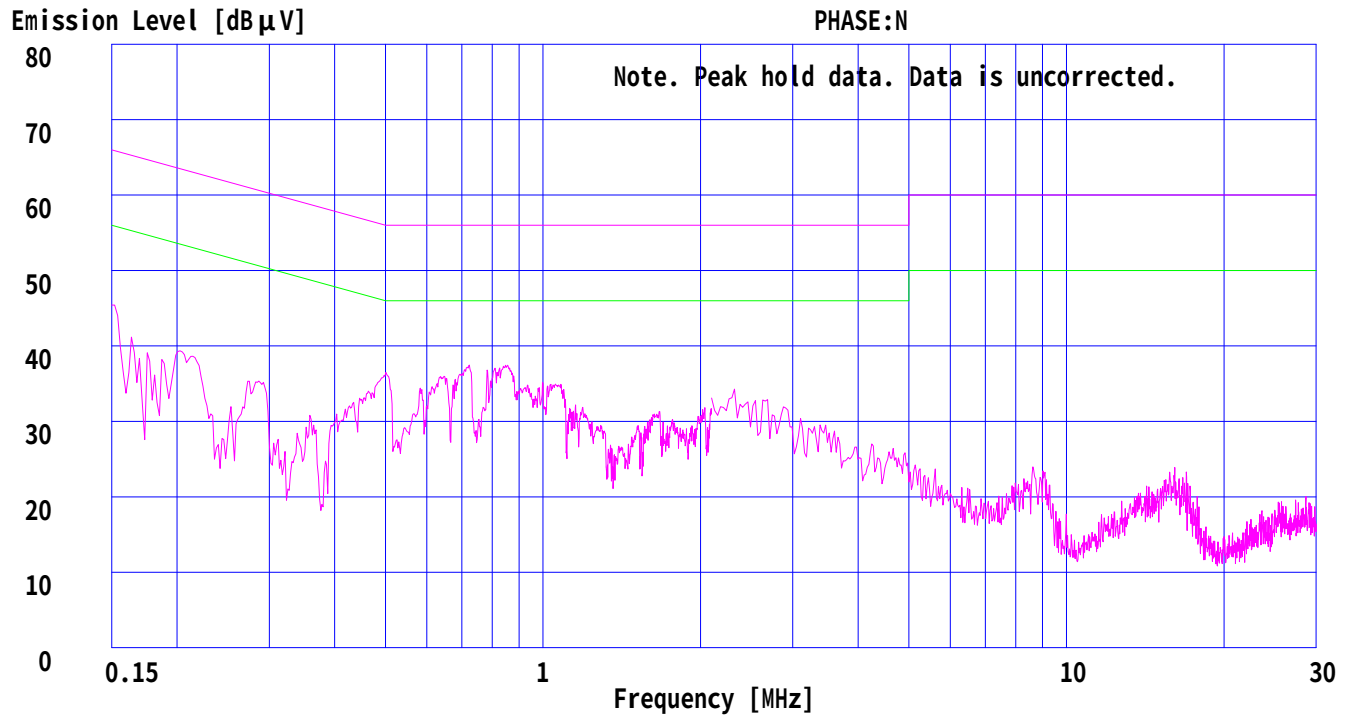
UL Apex Co., Ltd.

YOKOWA No.3 SHIELD TEST ROOM

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 1Vp-p
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback+Rec
Remarks : -
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV	QP [dB μV]	AV				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB]
1.	0.1500	42.5	-	41.9	-	0.0	0.2	0.0	42.7	-	66.0	56.0	23.3	-
2.	0.2145	36.2	-	35.4	-	0.1	0.2	0.0	36.5	-	63.0	53.0	26.5	-
3.	0.5032	35.8	-	35.9	-	0.1	0.3	0.0	36.3	-	56.0	46.0	19.7	-
4.	1.0021	36.1	-	35.6	-	0.1	0.3	0.0	36.5	-	56.0	46.0	19.5	-
5.	2.0400	37.5	-	37.1	-	0.1	0.3	0.0	37.9	-	56.0	46.0	18.1	-
6.	28.6341	38.8	-	38.0	-	1.0	0.7	0.0	40.5	-	60.0	50.0	19.5	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

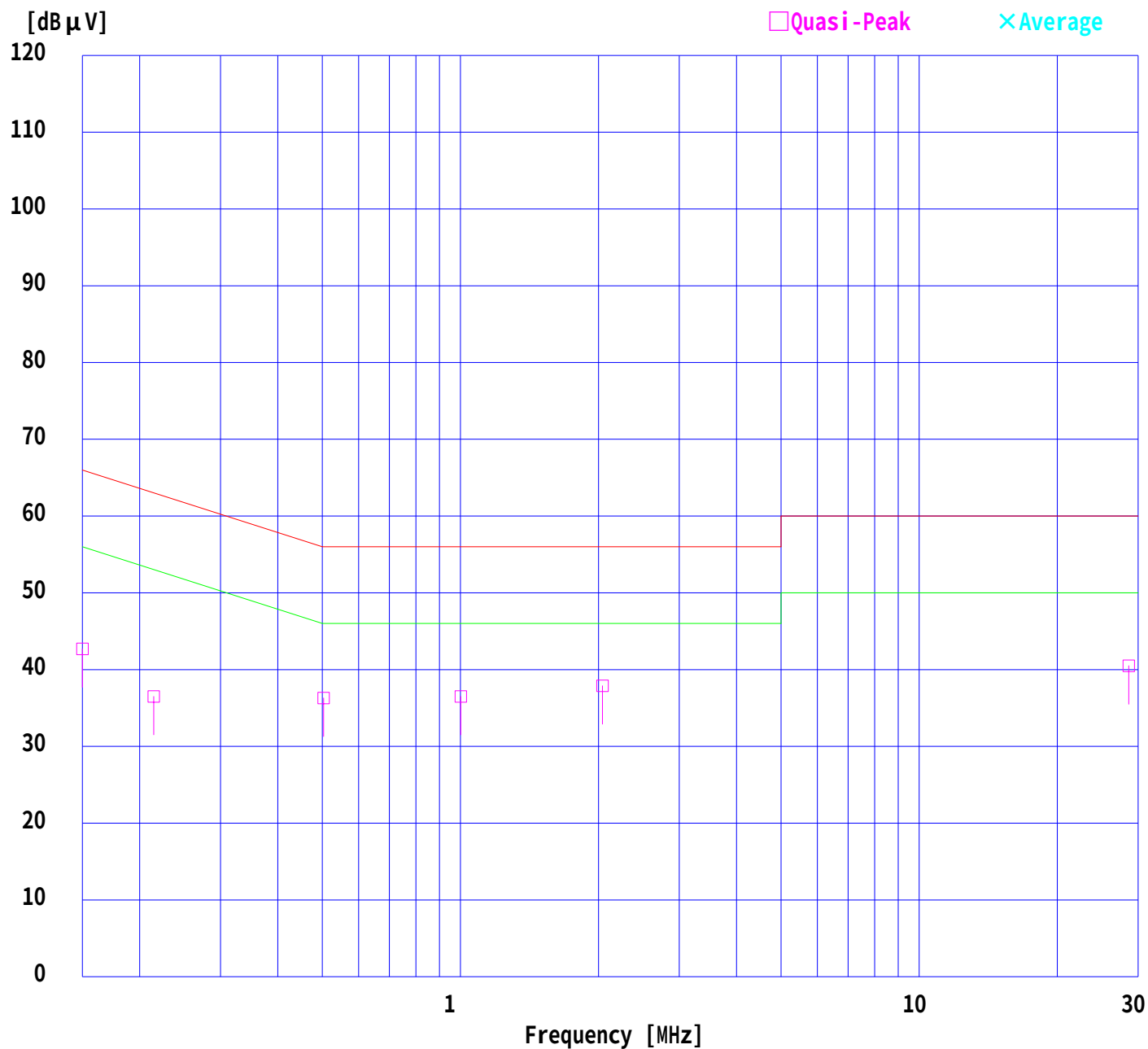
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback+Rec
Remarks : -
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

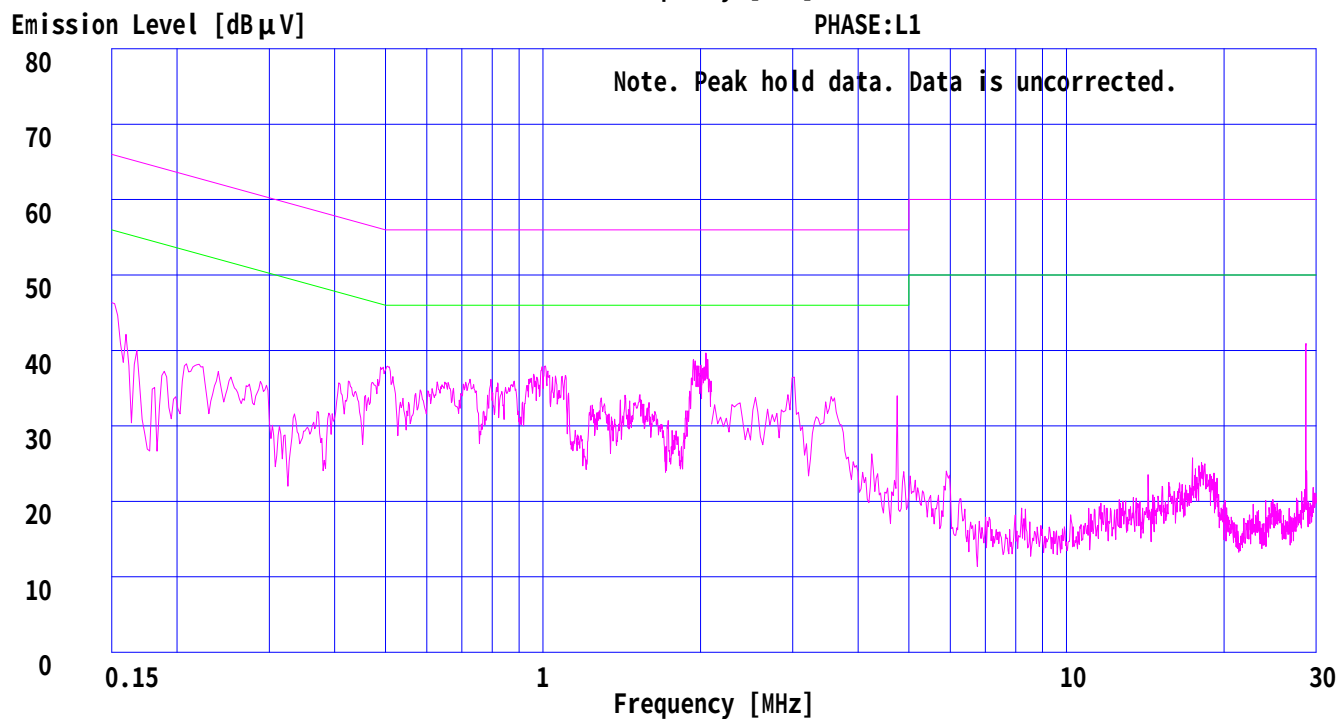
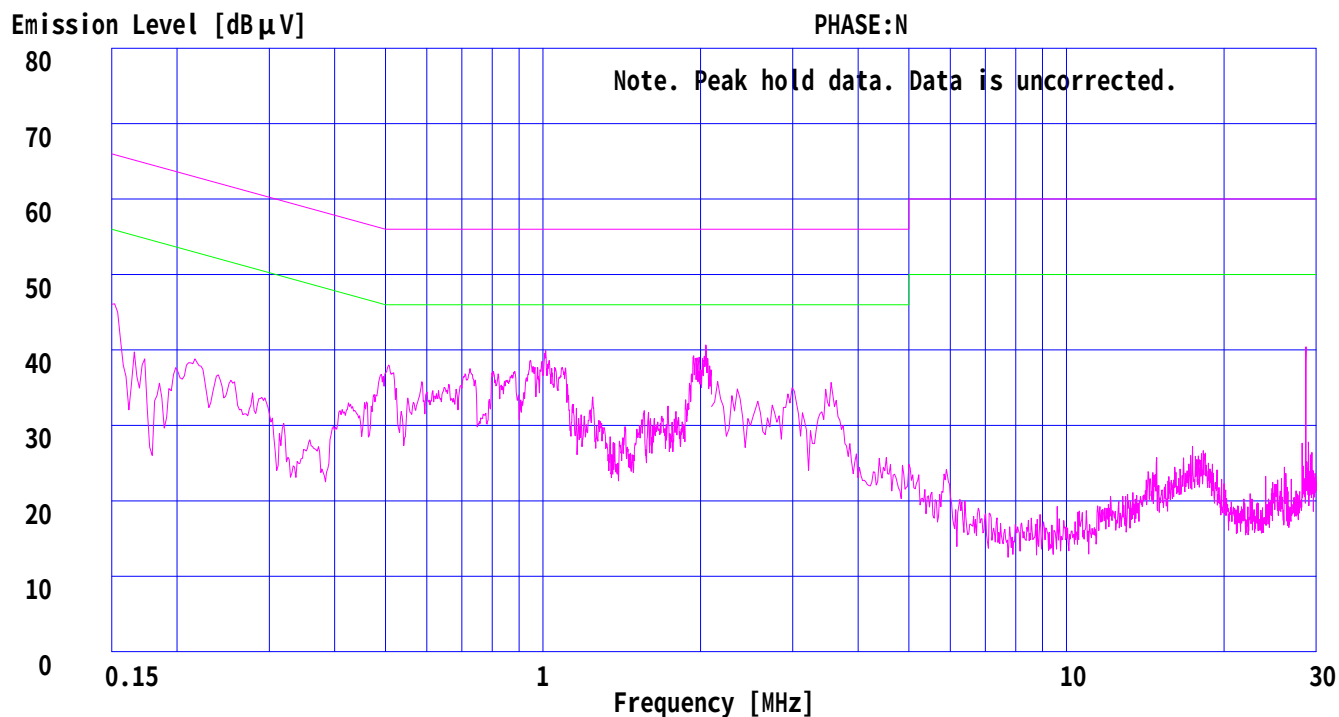
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback+Rec
Remarks : -
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play+Rec
Remarks : -
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV	QP [dB μV]	AV				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]
1.	0.1500	47.3	-	45.3	-	0.0	0.2	0.0	47.5	-	66.0	56.0	18.5	-
2.	0.2181	36.0	-	33.5	-	0.1	0.2	0.0	36.3	-	62.9	52.9	26.6	-
3.	0.5161	33.9	-	34.4	-	0.1	0.3	0.0	34.8	-	56.0	46.0	21.2	-
4.	0.7528	35.5	-	33.4	-	0.1	0.3	0.0	35.9	-	56.0	46.0	20.1	-
5.	3.5615	41.9	40.9	41.0	40.0	0.2	0.3	0.0	42.4	41.4	56.0	46.0	13.6	4.6
6.	28.9910	25.3	-	23.8	-	1.0	0.7	0.0	27.0	-	60.0	50.0	33.0	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

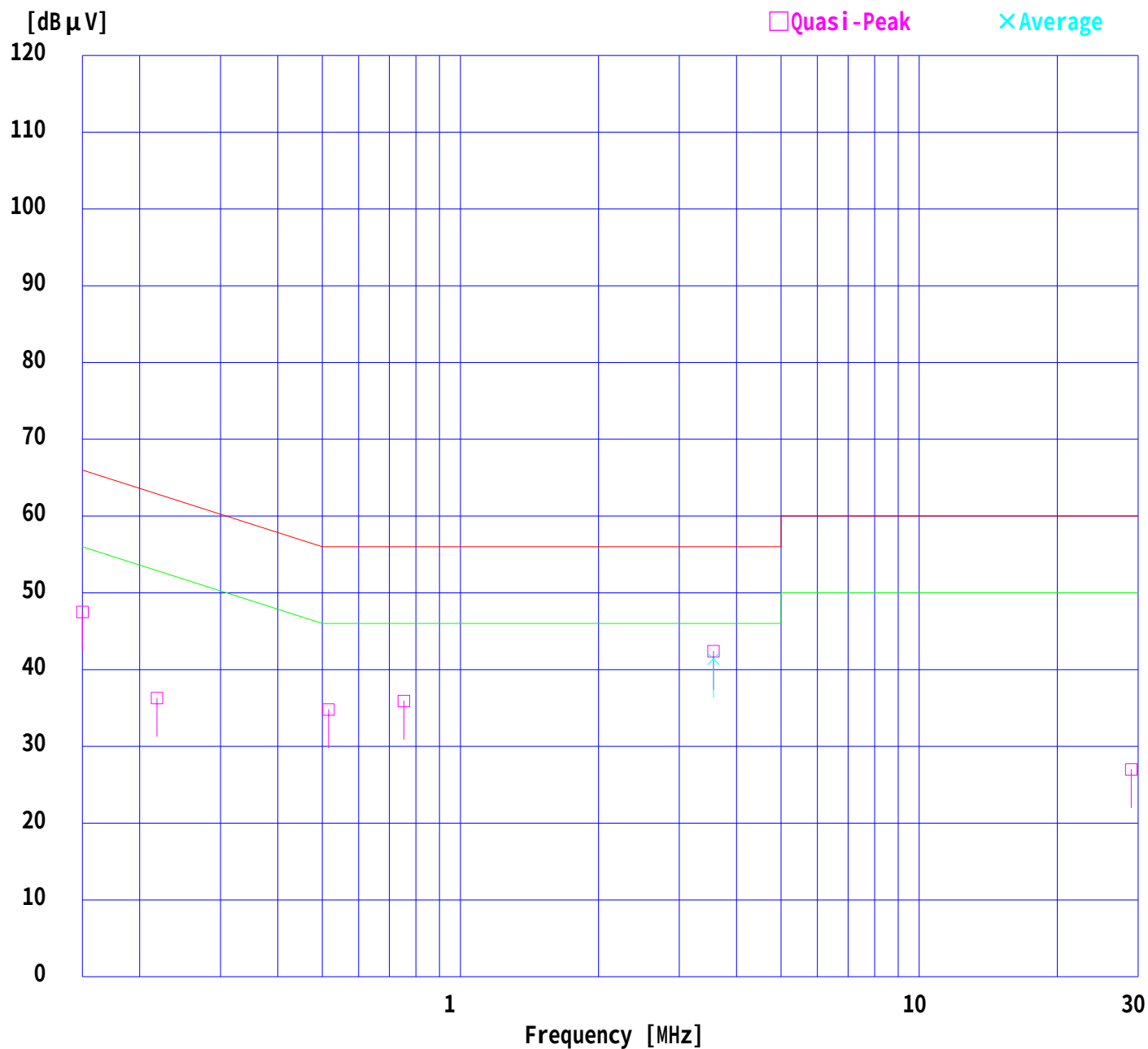
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play+Rec
Remarks : -
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

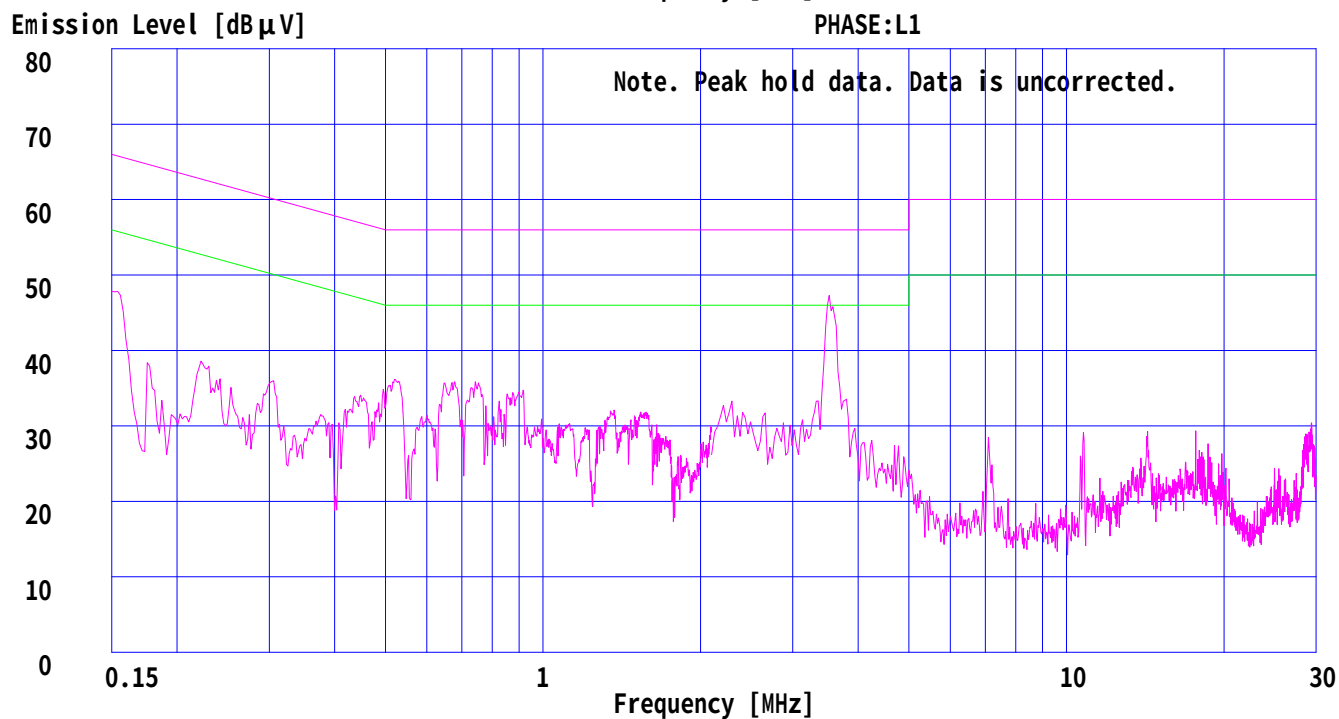
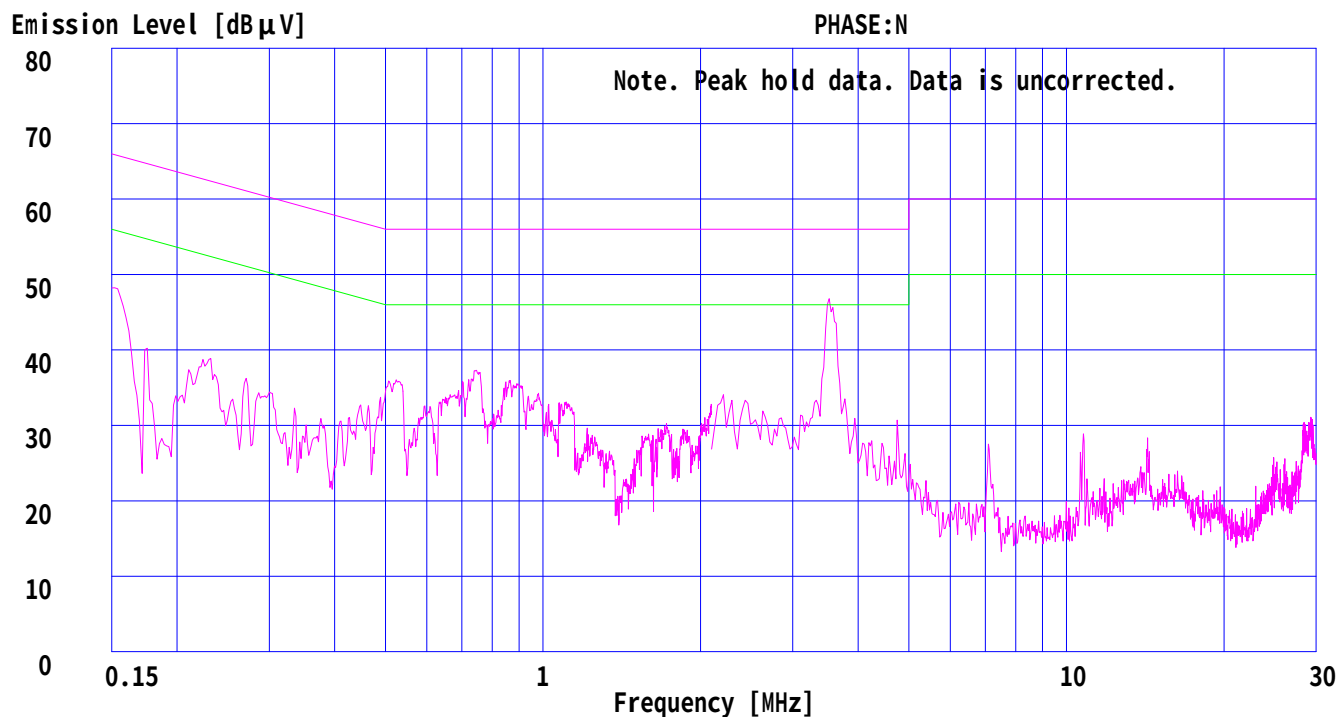
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play+Rec
Remarks : -
Date : 6/24/2005
Phase : Single Phase
Temperature : 22 °C
Humidity : 45 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.3 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL No. : D-VR4XSU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25KE0040-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/06/22
TEMP./HUMID. : 22deg.C / 63%
ENGINEER : Tsubasa Takayama

*C.Factor[dB]=ANT Factor + Cable Loss - Amp Gain

For the measurement above 1GHz, measurement of AV detector is performed only when the result of PK detector exceed the limit of AV.

CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT		MARGIN(QP)			
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]		[dB]			
VHF																	
2	101	26.3	25.8			BC	-9.8	16.5	16.0			43.5		27.0	27.5		
	202					BC						43.5		>15.0			
	303					LO						46.0					
	404					LO						46.0					
	505					LO						46.0					
	606					LO						46.0					
	707					LO						46.0					
	808					LO						46.0					
	909					LO						46.0					
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)	
		[dBuV]		[dBuV]		TYPE	[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB] [dB]	
	1010					HO						74.0	54.0	>27.0	>10.0		
	1111					HO						74.0	54.0				
	1212					HO						74.0	54.0				
	1313					HO						74.0	54.0				
	1414					HO						74.0	54.0				
	1515					HO						74.0	54.0				
	1616	HO	74.0	54.0													
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT		MARGIN(QP)			
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]		[dB]			
3	107	26.9	29.4			BC	-8.9	18.0	20.5			43.5		25.5	23.0		
	214					BC						43.5		>15.0			
	321					LO						46.0					
	428					LO						46.0					
	535					LO						46.0					
	642					LO						46.0					
	749					LO						46.0					
	856					LO						46.0					
	963					LO						54.0					
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)	
		[dBuV]		[dBuV]		TYPE	[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB] [dB]	
	1070					HO						74.0	54.0	>27.0	>10.0		
	1177					HO						74.0	54.0				
	1284					HO						74.0	54.0				
	1391					HO						74.0	54.0				
	1498					HO						74.0	54.0				
	1605					HO						74.0	54.0				
	CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT		MARGIN(QP)		
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]		[dB]			
4	113	26.4	29.1			BC	-7.9	18.5	21.2			43.5		25.0	22.3		
	226					BC						46.0		>15.0			
	339					LO						46.0					
	452					LO						46.0					
	565					LO						46.0					
	678					LO						46.0					
	791					LO						46.0					
	904					LO						46.0					
						READING(PK)						READING(AV)					
		[dBuV]		[dBuV]		TYPE	[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB] [dB]	
	1017					HO						74.0	54.0	>27.0	>10.0		
	1130					HO						74.0	54.0				
	1243					HO						74.0	54.0				
	1356					HO						74.0	54.0				
	1469					HO						74.0	54.0				
	1582					HO						74.0	54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.3 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL No. : D-VR4XSU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25KE0040-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/06/22
TEMP./HUMID. : 22deg.C / 63%
ENGINEER : Tsubasa Takayama

*C.Factor[dB]=ANT Factor + Cable Loss - Amp Gain

For the measurement above 1GHz, measurement of AV detector is performed only when the result of PK detector exceed the limit of AV.

CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]			ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB] [dB]					
VHF																	
5	123	22.7	24.4			BC	-6.5	16.2	17.9			43.5		27.3	25.6		
	246					BC						46.0		>15.0			
	369					LO						46.0					
	492					LO						46.0					
	615					LO						46.0					
	738					LO						46.0					
	861					LO						46.0					
	984					LO						54.0					
		READING(PK) HOR. VER. [dBuV]		READING(AV) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]		RESULT(AV) HOR. VER. [dBuV/m]		LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]		MARGIN(AV) HOR. VER. [dB] [dB]	
	1107					HO						74.0	54.0	>27.0		>10.0	
	1230					HO						74.0	54.0				
	1353					HO						74.0	54.0				
	1476					HO						74.0	54.0				
	1599					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]			ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB] [dB]					
6	129	24.5	25.4			BC	-6.2	18.3	19.2			43.5		25.2	24.3		
	258					BC						46.0		>15.0			
	387					LO						46.0					
	516					LO						46.0					
	645					LO						46.0					
	774					LO						46.0					
	903					LO						46.0					
		READING(PK) HOR. VER. [dBuV]		READING(AV) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]		RESULT(AV) HOR. VER. [dBuV/m]		LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]		MARGIN(AV) HOR. VER. [dB] [dB]	
	1032					HO						74.0	54.0	>27.0		>10.0	
	1161					HO						74.0	54.0				
	1290					HO						74.0	54.0				
	1419					HO						74.0	54.0				
	1548					HO						74.0	54.0				
	1677					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]			ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB] [dB]					
7	221	23.3	22.3			BC	-2.1	21.2	20.2			46.0		24.8	25.8		
	442					LO						46.0		>15.0			
	663					LO						46.0					
	884					LO						46.0					
		READING(PK) HOR. VER. [dBuV]				READING(AV) HOR. VER. [dBuV]						ANT TYPE					
	1105					HO						74.0	54.0	>27.0		>10.0	
	1326					HO						74.0	54.0				
	1547					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]										ANT TYPE	C.Factor [dBuV]				
8	227	22.5	22.1			BC	-2.1	20.4	20.0			46.0		25.6	26.0		
	454					LO						46.0		>15.0			
	681					LO						46.0					
	908					LO						46.0					
		READING(PK) HOR. VER. [dBuV]				READING(AV) HOR. VER. [dBuV]						ANT TYPE					
	1135					HO						74.0	54.0	>27.0		>10.0	
	1362					HO						74.0	54.0				
	1589					HO						74.0	54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.3 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL No. : D-VR4XSU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25KE0040-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/06/22
TEMP./HUMID. : 22deg.C / 63%
ENGINEER : Tsubasa Takayama

*C.Factor[dB]=ANT Factor + Cable Loss - Amp Gain

For the measurement above 1GHz, measurement of AV detector is performed only when the result of PK detector exceed the limit of AV.

CH.	FREQ	READING(QP) HOR. VER.				ANT TYPE	C.Factor	RESULT(QP) HOR. VER.				LIMIT [QP]	MARGIN(QP) HOR. VER.				
	[MHz]	[dBuV]					[dBuV]	[dBuV/m]				[dBuV/m]	[dB] [dB]				
VHF																	
9	233	22.4	22.0			BC	-1.9	20.5	20.1			46.0		25.5	25.9		
	466					LO						46.0		>15.0			
	699					LO					46.0						
	932					LO					46.0						
		READING(PK) HOR. VER.		READING(AV) HOR. VER.		ANT TYPE	C.Factor	RESULT(PK) HOR. VER.		RESULT(AV) HOR. VER.		LIMIT [PK]	LIMIT [AV]	MARGIN(PK) HOR. VER.		MARGIN(AV) HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB] [dB]		[dB] [dB]	
	1165					HO						74.0	54.0	>27.0		>10.0	
	1398					HO						74.0	54.0				
	1631					HO						74.0	54.0				
CH.	FREQ	READING(QP) HOR. VER.				ANT TYPE	C.Factor	RESULT(QP) HOR. VER.				LIMIT [QP]	MARGIN(QP) HOR. VER.				
	[MHz]	[dBuV]					[dBuV]	[dBuV/m]				[dBuV/m]	[dB] [dB]				
10	239	22.4	22.3			BC	-1.7	20.7	20.6			46.0		25.3	25.4		
	478					LO						46.0		>15.0			
	717					LO					46.0						
	956					LO					46.0						
		READING(PK) HOR. VER.		READING(AV) HOR. VER.		ANT TYPE	C.Factor	RESULT(PK) HOR. VER.		RESULT(AV) HOR. VER.		LIMIT [PK]	LIMIT [AV]	MARGIN(PK) HOR. VER.		MARGIN(AV) HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB] [dB]		[dB] [dB]	
	1195					HO						74.0	54.0	>27.0		>10.0	
	1434					HO						74.0	54.0				
	1673					HO						74.0	54.0				
CH.	FREQ	READING(QP) HOR. VER.				ANT TYPE	C.Factor	RESULT(QP) HOR. VER.				LIMIT [QP]	MARGIN(QP) HOR. VER.				
	[MHz]	[dBuV]					[dBuV]	[dBuV/m]				[dBuV/m]	[dB] [dB]				
11	245	22.5	22.4			BC	-1.6	20.9	20.8			46.0		25.1	25.2		
	490					LO						46.0		>15.0			
	735					LO					46.0						
	980					LO					54.0						
		READING(PK) HOR. VER.		READING(AV) HOR. VER.		ANT TYPE	C.Factor	RESULT(PK) HOR. VER.		RESULT(AV) HOR. VER.		LIMIT [PK]	LIMIT [AV]	MARGIN(PK) HOR. VER.		MARGIN(AV) HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB] [dB]		[dB] [dB]	
	1225					HO						74.0	54.0	>27.0		>10.0	
	1470					HO						74.0	54.0				
	CH.	FREQ	READING(QP) HOR. VER.				ANT TYPE	C.Factor	RESULT(QP) HOR. VER.				LIMIT [QP]	MARGIN(QP) HOR. VER.			
	[MHz]	[dBuV]					[dBuV]	[dBuV/m]				[dBuV/m]	[dB] [dB]				
12	251	21.9	22.1			BC	-1.4	20.5	20.7			46.0		25.5	25.3		
	502					LO						46.0		>15.0			
	753					LO					46.0						
		READING(PK) HOR. VER.		READING(AV) HOR. VER.		ANT TYPE	C.Factor	RESULT(PK) HOR. VER.		RESULT(AV) HOR. VER.		LIMIT [PK]	LIMIT [AV]	MARGIN(PK) HOR. VER.		MARGIN(AV) HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB] [dB]		[dB] [dB]	
	1004					HO						74.0	54.0	>27.0		>10.0	
	1255					HO						74.0	54.0				
	1506					HO						74.0	54.0				
	CH.	FREQ	READING(QP) HOR. VER.				ANT TYPE	C.Factor	RESULT(QP) HOR. VER.				LIMIT [QP]	MARGIN(QP) HOR. VER.			
	[MHz]	[dBuV]					[dBuV]	[dBuV/m]				[dBuV/m]	[dB] [dB]				
13	257	23.8	23.8			BC	-1.0	22.8	22.8			46.0		23.2	23.2		
	514					LO						46.0		>15.0			
	771					LO					46.0						
		READING(PK) HOR. VER.		READING(AV) HOR. VER.		ANT TYPE	C.Factor	RESULT(PK) HOR. VER.		RESULT(AV) HOR. VER.		LIMIT [PK]	LIMIT [AV]	MARGIN(PK) HOR. VER.		MARGIN(AV) HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB] [dB]		[dB] [dB]	
	1028					HO						74.0	54.0	>27.0		>10.0	
	1285					HO						74.0	54.0				
	1542					HO						74.0	54.0				
	CH.	FREQ	READING(QP) HOR. VER.				ANT TYPE	C.Factor	RESULT(QP) HOR. VER.				LIMIT [QP]	MARGIN(QP) HOR. VER.			

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.3 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL No. : D-VR4XSU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25KE0040-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/06/22
TEMP/HUMID. : 22deg.C / 63%
ENGINEER : Tsubasa Takayama

*C.Factor[dB]=ANT Factor + Cable Loss - Amp Gain

For the measurement above 1GHz, measurement of AV detector is performed only when the result of PK detector exceed the limit of AV.

CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
UHF											
14	517	26.4	24.7		LO	3.2	29.6	27.9		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1034			HO				74.0	54.0	>27.0	>10.0
	1551			HO				74.0	54.0		
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
19	547	24.2	25.0		LO	3.5	27.7	28.5		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1094			HO				74.0	54.0	>27.0	>10.0
	1641			HO				74.0	54.0		
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
28	601	25.0	26.7		LO	4.4	29.4	31.1		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1202			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
36	649	23.1	26.2		LO	5.2	28.3	31.4		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1298			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
44	697	21.6	24.2		LO	5.9	27.5	30.1		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1394			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
53	751	20.6	21.4		LO	7.6	28.2	29.0		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1502			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
61	799	20.3	21.2		LO	9.2	29.5	30.4		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1598			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB]	
69	847	20.5	21.5		LO	9.6	30.1	31.1		46.0	
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1694			HO				74.0	54.0	>27.0	>10.0

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.3 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL No. : D-VR4XSU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25KE0040-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/06/22
TEMP./HUMID. : 22deg.C / 63%
ENGINEER : Tsubasa Takayama

*C.Factor[dB]=ANT Factor + Cable Loss - Amp Gain

For the measurement above 1GHz, measurement of AV detector is performed only when the result of PK detector exceed the limit of AV.

CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT		MARGIN(QP)			
	[MHz]	HOR.	VER.	[dBuV]		TYPE	[dBuV]	HOR.	VER.	[dBuV/m]		[dBuV/m]		[dB]	VER.	[dB]	
CATV																	
1	119	23.7	27.2			BC	-7.0	16.7	20.2			43.5		26.8	23.3		
	238					BC						46.0		>15.0			
	357					LO						46.0					
	476					LO						46.0					
	595					LO						46.0					
	714					LO						46.0					
	833					LO						46.0					
	952	LO	46.0														
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)	
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.	
	[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]		
	1071					HO						74.0	54.0	>27.0	>10.0		
	1190					HO						74.0	54.0				
	1309					HO						74.0	54.0				
	1428					HO						74.0	54.0				
	1547					HO						74.0	54.0				
	1666					HO						74.0	54.0				
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT		MARGIN(QP)			
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]		[dB]			
95	137	24.0	24.4			BC	-5.5	18.5	18.9			43.5		25.0	24.6		
	274					BC						46.0		>15.0			
	411					LO						46.0					
	548					LO						46.0					
	685					LO						46.0					
	822					LO						46.0					
	959					LO						46.0					
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)	
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	
	1096					HO						74.0	54.0	>27.0	>10.0		
	1233					HO						74.0	54.0				
	1370					HO						74.0	54.0				
	1507					HO						74.0	54.0				
	1644					HO						74.0	54.0				
						HO						74.0	54.0				
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT		MARGIN(QP)			
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]		[dB]			
97	149	24.8	24.6			BC	-4.8	20.0	19.8			43.5		23.5	23.7		
	298					BC						46.0		>15.0			
	447					LO						46.0					
	596					LO						46.0					
	745					LO						46.0					
	894					LO						46.0					
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)	
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	
		1043					HO						-	-	>27.0	>10.0	
1192		HO					-						-				
1341		HO					-						-				
1490		HO					-						-				
1639		HO					-						-				
		HO					74.0						54.0				
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT		MARGIN(QP)			
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]		[dB]			
99	161	24.5	23.1			BC	-4.2	20.3	18.9			43.5		23.2	24.6		
	322					LO						46.0		>15.0			
	483					LO						46.0					
	644					LO						46.0					
	805					LO						46.0					
	966					LO						46.0					
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)	
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.	
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	
		1127					HO						74.0	54.0	>27.0	>10.0	
1288		HO					74.0						54.0				
1449		HO					74.0						54.0				
1610		HO					74.0						54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.3 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL No. : D-VR4XSU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25KE0040-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/06/22
TEMP./HUMID. : 22deg.C / 63%
ENGINEER : Tsubasa Takayama

*C.Factor[dB]=ANT Factor + Cable Loss - Amp Gain

For the measurement above 1GHz, measurement of AV detector is performed only when the result of PK detector exceed the limit of AV.

For the measurement above 1GHz, measurement of TV detector is performed only when the result of FR detector exceeds the limit of TV.																		
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)					
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[QP]	HOR.	VER.				
		[dBuV]						[dBuV/m]				[dBuV/m]	[dB]	[dB]				
CATV																		
14	167	27.4	24.9			BC	-3.8	23.6	21.1			43.5	19.9	22.4				
	334					LO						46.0	>15.0					
	501					LO						46.0						
	668					LO						46.0						
	835					LO						46.0						
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)		
		HOR.	VER.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[dBuV]				[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	[dB]	[dB]
	1002					HO						74.0	54.0	>27.0	>10.0			
	1169					HO						74.0	54.0					
	1336					HO						74.0	54.0					
	1503					HO						74.0	54.0					
	1670					HO						74.0	54.0					
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)					
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[QP]	[dB]		[dB]			
18	191	33.1	26.1			BC	-2.8	30.3	23.3			43.5	13.2	20.2				
	382					LO						46.0	>15.0					
	573					LO						46.0						
	764					LO						46.0						
	955					LO						46.0						
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)		
		HOR.	VER.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[dBuV]				[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	[dB]	[dB]
	1146					HO						74.0	54.0	>27.0	>10.0			
	1337					HO						74.0	54.0					
	1528					HO						74.0	54.0					
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)					
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[QP]	[dB]		[dB]			
22	215	26.3	23.1			BC	-2.4	23.9	20.7			43.5	19.6	22.8				
	430					LO						46.0	>15.0					
	645					LO						46.0						
	860					LO						46.0						
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)		
		HOR.	VER.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[dBuV]				[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	[dB]	[dB]
	1075					HO						74.0	54.0	>27.0	>10.0			
	1290					HO						74.0	54.0					
	1505					HO						74.0	54.0					
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)					
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[QP]	[dB]		[dB]			
23	263	22.3	22.2			BC	-0.6	21.7	21.6			46.0	24.3	24.4				
	526					LO						46.0	>15.0					
	789					LO						46.0						
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)		
		HOR.	VER.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[dBuV]				[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	[dB]	[dB]
	1052					HO						74.0	54.0	>27.0	>10.0			
	1315					HO						74.0	54.0					
	1578					HO						74.0	54.0					
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)					
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[QP]	[dB]		[dB]			
29	299	22.2	22.3			BC	1.9	24.1	24.2			46.0	21.9	21.8				
	598					LO						46.0	>15.0					
	897					LO						46.0						
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)		
		HOR.	VER.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[dBuV]				[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]	[dB]	[dB]
	1196					HO						74.0	54.0	>27.0	>10.0			
	1495					HO						74.0	54.0					

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.3 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL No. : D-VR4XSU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25KE0040-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/06/22
TEMP./HUMID. : 22deg.C / 63%
ENGINEER : Tsubasa Takayama

*C.Factor[dB]=ANT Factor + Cable Loss - Amp Gain

For the measurement above 1GHz, measurement of AV detector is performed only when the result of PK detector exceed the limit of AV.

CH.	FREQ	READING(QP)			ANT	C.Factor	RESULT(QP)			LIMIT		MARGIN(QP)		
	[MHz]	HOR.	VER.		TYPE	[dBuV]	HOR.	VER.		[QP]		HOR.	VER.	
		[dBuV]					[dBuV/m]			[dBuV/m]		[dB]		
CATV														
36	341	31.1	25.2		LO	-0.2	30.9	25.0		46.0	46.0	15.1	21.0	
	682				LO					46.0	46.0	>15.0		
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)			
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.	[dB]	[dB]	[dB]
		[dBuV]	[dBuV]		[dBuV]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]	[dB]
	1023			HO					74.0	54.0	>27.0		>10.0	
	1364			HO					74.0	54.0				
CH.	FREQ	READING(QP)			ANT	C.Factor	RESULT(QP)			LIMIT		MARGIN(QP)		
	[MHz]	HOR. VER.			TYPE	[dBuV]	HOR. VER.			[QP]		HOR. VER.		
		[dBuV]				[dBuV]	[dBuV/m]			[dBuV/m]		[dB]		
37	347	29.3	22.8		LO	-0.1	29.2	22.7		46.0	46.0	16.8	23.3	
	694				LO					46.0	46.0	>15.0		
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)			
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.	[dB]	[dB]	[dB]
		[dBuV]	[dBuV]		[dBuV]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]	[dB]
	1041			HO					74.0	54.0	>27.0		>10.0	
	1388			HO					74.0	54.0				
CH.	FREQ	READING(QP)			ANT	C.Factor	RESULT(QP)			LIMIT		MARGIN(QP)		
	[MHz]	HOR. VER.			TYPE	[dBuV]	HOR. VER.			[QP]		HOR. VER.		
		[dBuV]				[dBuV]	[dBuV/m]			[dBuV/m]		[dB]		
65	515	24.0	24.6		LO	3.1	27.1	27.7		46.0	46.0	18.9	18.3	
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)			
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.	[dB]	[dB]	[dB]
		[dBuV]	[dBuV]		[dBuV]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]	[dB]
	1030			HO					74.0	54.0	>27.0		>10.0	
	1545			HO					74.0	54.0				
CH.	FREQ	READING(QP)			ANT	C.Factor	RESULT(QP)			LIMIT		MARGIN(QP)		
	[MHz]	HOR. VER.			TYPE	[dBuV]	HOR. VER.			[QP]		HOR. VER.		
		[dBuV]				[dBuV]	[dBuV/m]			[dBuV/m]		[dB]		
94	689	22.1	24.4		LO	5.8	27.9	30.2		46.0	46.0	18.1	15.8	
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)			
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.	[dB]	[dB]	[dB]
	1378			HO					74.0	54.0	>27.0		>10.0	
CH.	FREQ	READING(QP)			ANT	C.Factor	RESULT(QP)			LIMIT		MARGIN(QP)		
	[MHz]	HOR. VER.			TYPE	[dBuV]	HOR. VER.			[QP]		HOR. VER.		
		[dBuV]				[dBuV]	[dBuV/m]			[dBuV/m]		[dB]		
100	695	21.3	24.3		LO	5.9	27.2	30.2		46.0	46.0	18.8	15.8	
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)			
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.	[dB]	[dB]	[dB]
	1390			HO					74.0	54.0	>27.0		>10.0	
CH.	FREQ	READING(QP)			ANT	C.Factor	RESULT(QP)			LIMIT		MARGIN(QP)		
	[MHz]	HOR. VER.			TYPE	[dBuV]	HOR. VER.			[QP]		HOR. VER.		
		[dBuV]				[dBuV]	[dBuV/m]			[dBuV/m]		[dB]		
113	773	20.9	21.9		LO	8.3	29.2	30.2		46.0	46.0	16.8	15.8	
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)			
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.	[dB]	[dB]	[dB]
	1546			HO					74.0	54.0	>27.0		>10.0	
CH.	FREQ	READING(QP)			ANT	C.Factor	RESULT(QP)			LIMIT		MARGIN(QP)		
	[MHz]	HOR. VER.			TYPE	[dBuV]	HOR. VER.			[QP]		HOR. VER.		
		[dBuV]				[dBuV]	[dBuV/m]			[dBuV/m]		[dB]		
125	845	23.1	29.7		LO	9.6	32.7	39.3		46.0	46.0	13.3	6.7	
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)			
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.	[dB]	[dB]	[dB]
	1690			HO					74.0	54.0	>27.0		>10.0	

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 0dBmV
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	675.00	BB	28.1	35.0	20.9	30.2	7.5	5.8	32.1	39.0	46.0	13.9	7.0

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

ANT.TYPE : 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

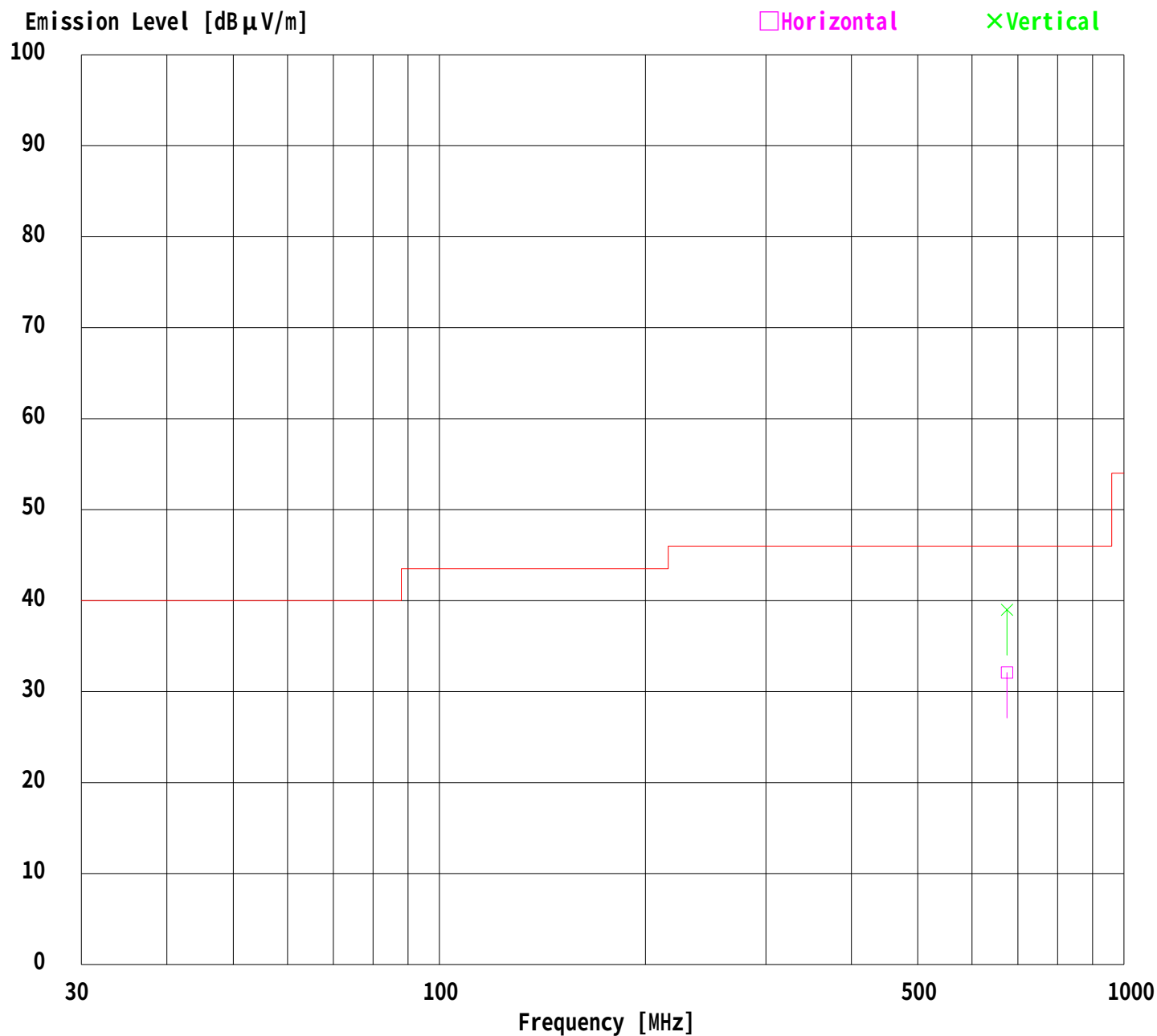
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 0dBmV
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	125.30	BB	37.5	38.3	13.2	29.9	2.7	5.8	29.3	30.1	43.5	14.2	13.4
2.	162.00	BB	30.3	33.5	14.9	29.9	3.1	5.8	24.2	27.4	43.5	19.3	16.1
3.	189.00	BB	32.5	27.9	16.4	29.9	3.4	5.8	28.2	23.6	43.5	15.3	19.9
4.	200.00	BB	31.9	27.2	16.7	29.9	3.6	5.8	28.1	23.4	43.5	15.4	20.1
5.	216.00	BB	39.5	28.5	16.5	29.9	3.7	5.8	35.6	24.6	43.5	7.9	18.9
6.	220.00	BB	33.6	25.6	16.4	29.9	3.8	5.8	29.7	21.7	46.0	16.3	24.3
7.	243.00	BB	40.6	31.5	16.1	29.9	4.1	5.8	36.7	27.6	46.0	9.3	18.4
8.	324.00	BB	40.4	27.5	16.3	30.0	4.9	5.8	37.4	24.5	46.0	8.6	21.5
9.	364.51	BB	37.3	32.6	16.9	30.1	5.2	5.8	35.1	30.4	46.0	10.9	15.6
10.	675.00	BB	31.3	36.0	20.9	30.2	7.5	5.8	35.3	40.0	46.0	10.7	6.0
11.	729.00	BB	29.2	32.0	21.6	30.1	7.8	5.8	34.3	37.1	46.0	11.7	8.9

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

ANT.TYPE : 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

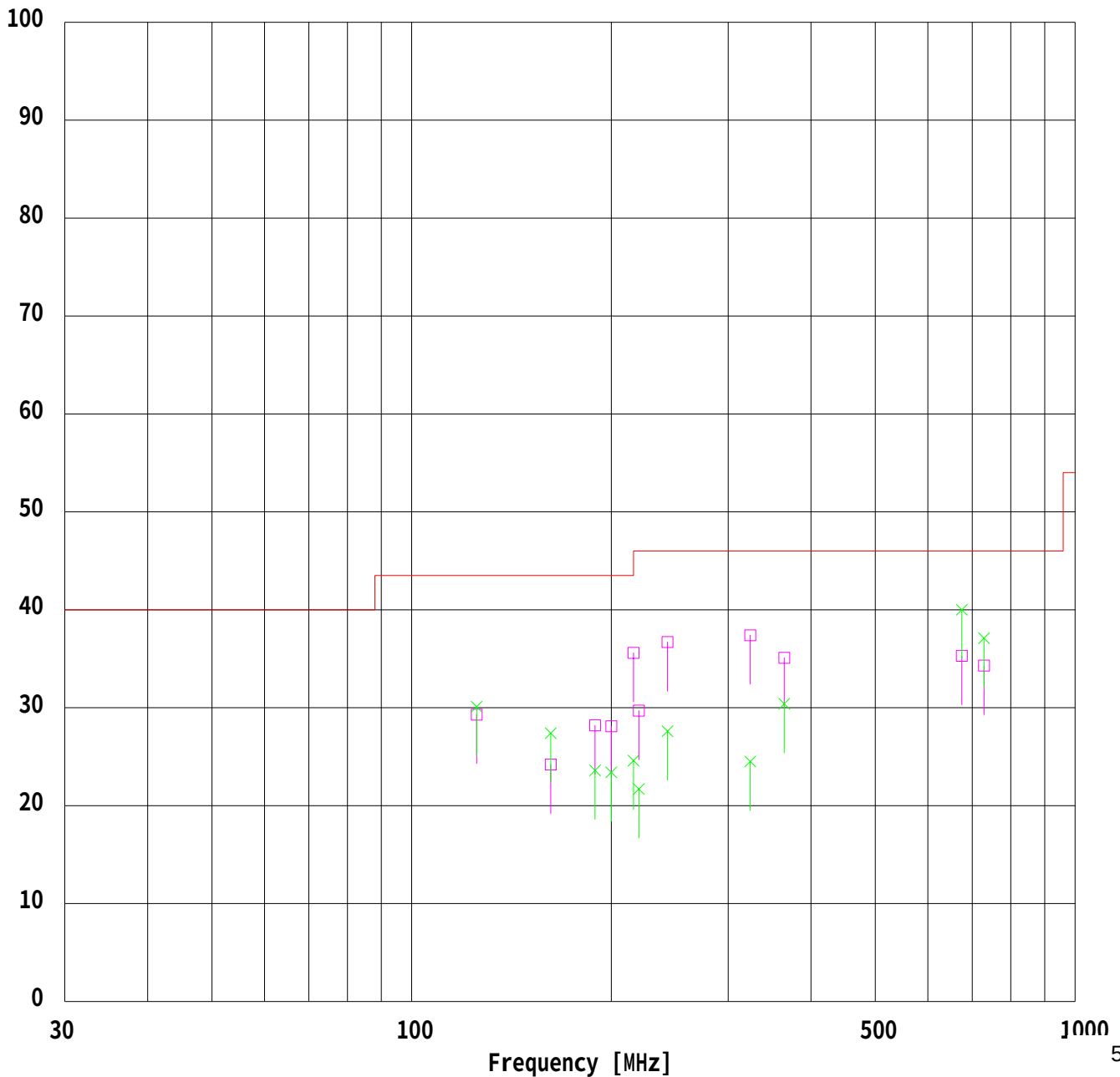
Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

Emission Level [dBμV/m]

□ Horizontal

× Vertical



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.98	BB	36.7	43.3	24.1	39.8	3.5	0.0	24.5	31.1	54.0	29.5	22.9
2.	1404.01	BB	36.8	44.7	24.2	39.5	3.9	0.0	25.4	33.3	54.0	28.6	20.7
3.	1457.96	BB	36.2	46.4	24.3	39.4	4.0	0.0	25.1	35.3	54.0	28.9	18.7

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

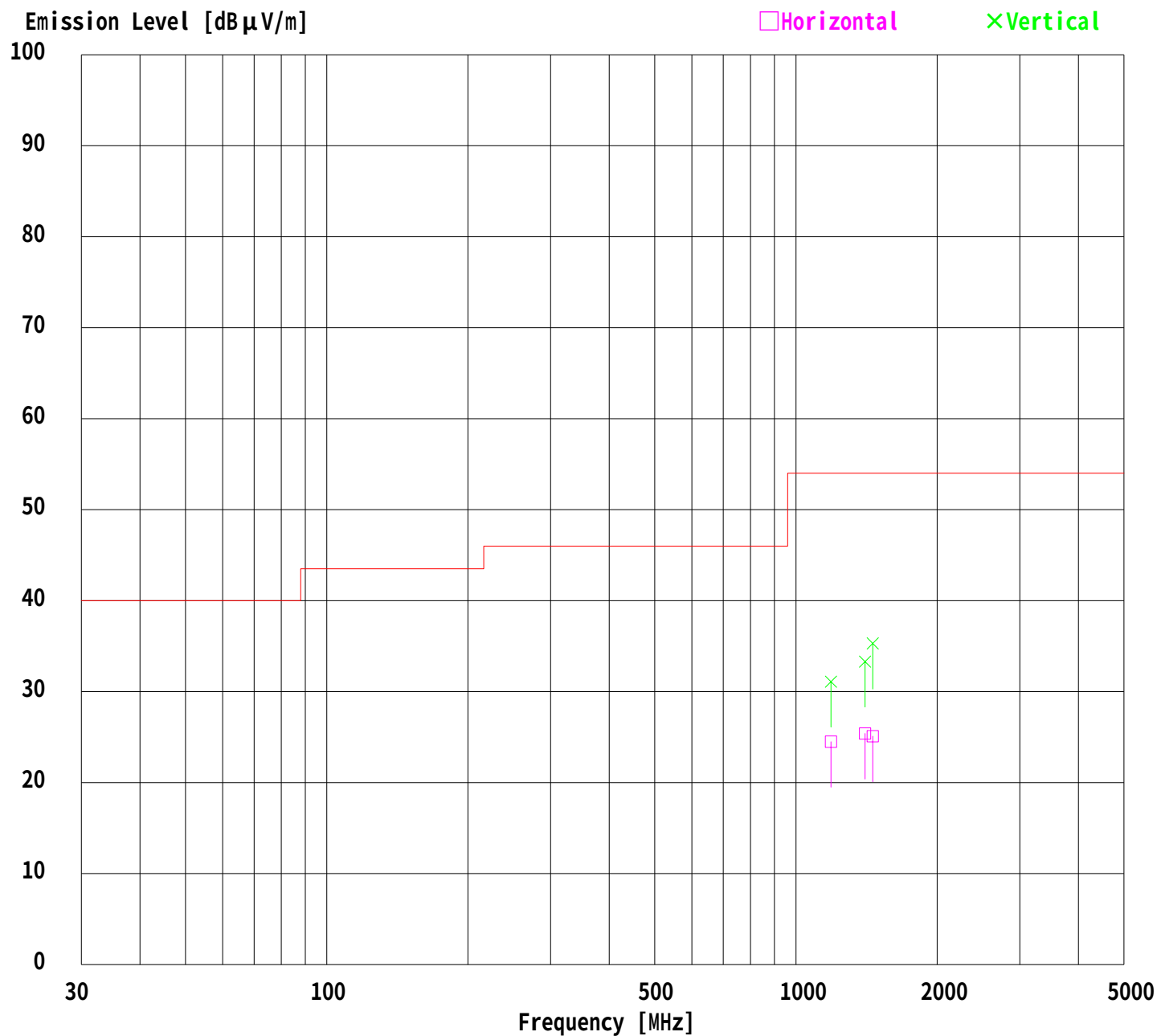
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C Engineer : Tsubasa Takayama
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.98	BB	48.5	55.2	24.1	39.8	3.5	0.0	36.3	43.0	74.0	37.7	31.0
2.	1404.01	BB	49.2	55.9	24.2	39.5	3.9	0.0	37.8	44.5	74.0	36.2	29.5
3.	1457.96	BB	48.1	53.1	24.3	39.4	4.0	0.0	37.0	42.0	74.0	37.0	32.0

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

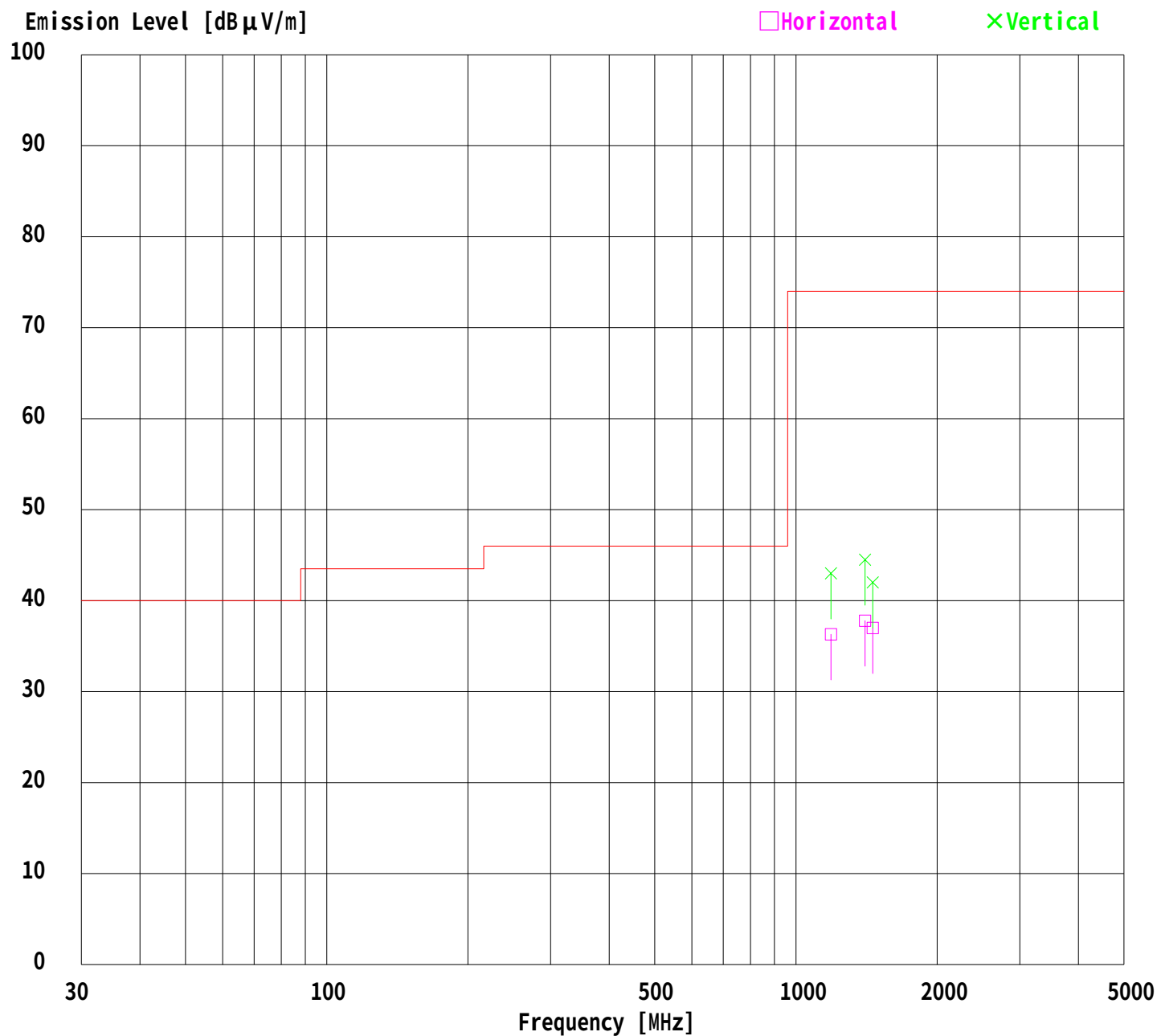
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+Rec
Remarks : 25dBmV
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 1Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	675.00	BB	27.6	35.0	20.9	30.2	7.5	5.8	31.6	39.0	46.0	14.4	7.0

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

ANT.TYPE : 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

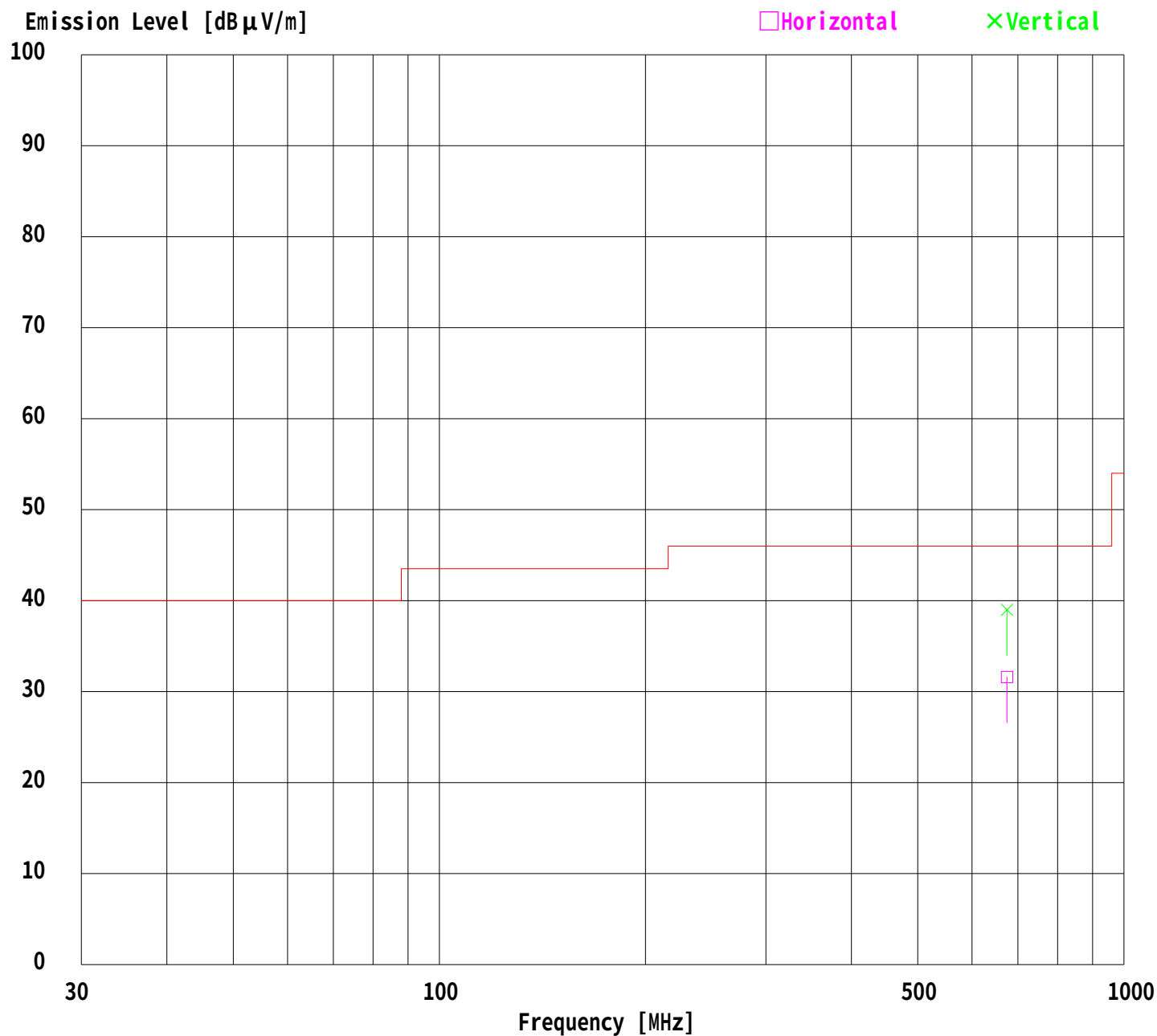
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 1Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	125.30	BB	26.2	32.5	13.2	29.9	2.7	5.8	18.0	24.3	43.5	25.5	19.2
2.	162.00	BB	29.1	34.9	14.9	29.9	3.1	5.8	23.0	28.8	43.5	20.5	14.7
3.	189.00	BB	30.7	26.1	16.4	29.9	3.4	5.8	26.4	21.8	43.5	17.1	21.7
4.	200.00	BB	32.9	27.5	16.7	29.9	3.6	5.8	29.1	23.7	43.5	14.4	19.8
5.	216.00	BB	38.9	28.6	16.5	29.9	3.7	5.8	35.0	24.7	43.5	8.5	18.8
6.	220.00	BB	33.9	32.8	16.4	29.9	3.8	5.8	30.0	28.9	46.0	16.0	17.1
7.	243.00	BB	43.8	29.7	16.1	29.9	4.1	5.8	39.9	25.8	46.0	6.1	20.2
8.	324.00	BB	37.7	28.1	16.3	30.0	4.9	5.8	34.7	25.1	46.0	11.3	20.9
9.	364.50	BB	38.5	35.5	16.9	30.1	5.2	5.8	36.3	33.3	46.0	9.7	12.7
10.	675.00	BB	28.1	36.9	20.9	30.2	7.5	5.8	32.1	40.9	46.0	13.9	5.1
11.	729.00	BB	29.7	33.3	21.6	30.1	7.8	5.8	34.8	38.4	46.0	11.2	7.6

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.
ANT.TYPE : 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

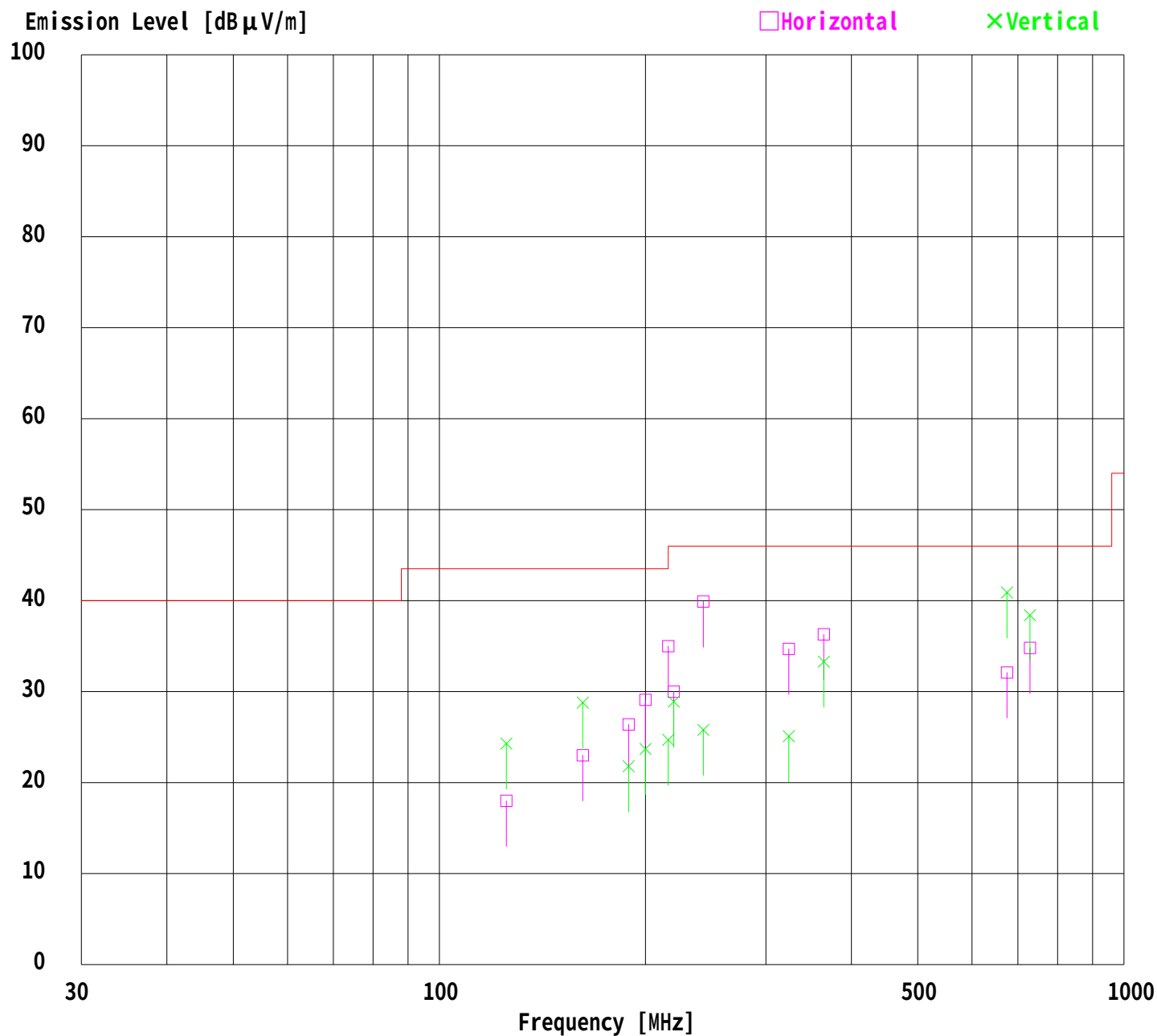
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C Engineer : Tsubasa Takayama
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.99	BB	36.3	43.2	24.1	39.8	3.5	0.0	24.1	31.0	54.0	29.9	23.0
2.	1404.02	BB	36.9	44.7	24.2	39.5	3.9	0.0	25.5	33.3	54.0	28.5	20.7
3.	1457.98	BB	36.4	46.8	24.3	39.4	4.0	0.0	25.3	35.7	54.0	28.7	18.3

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

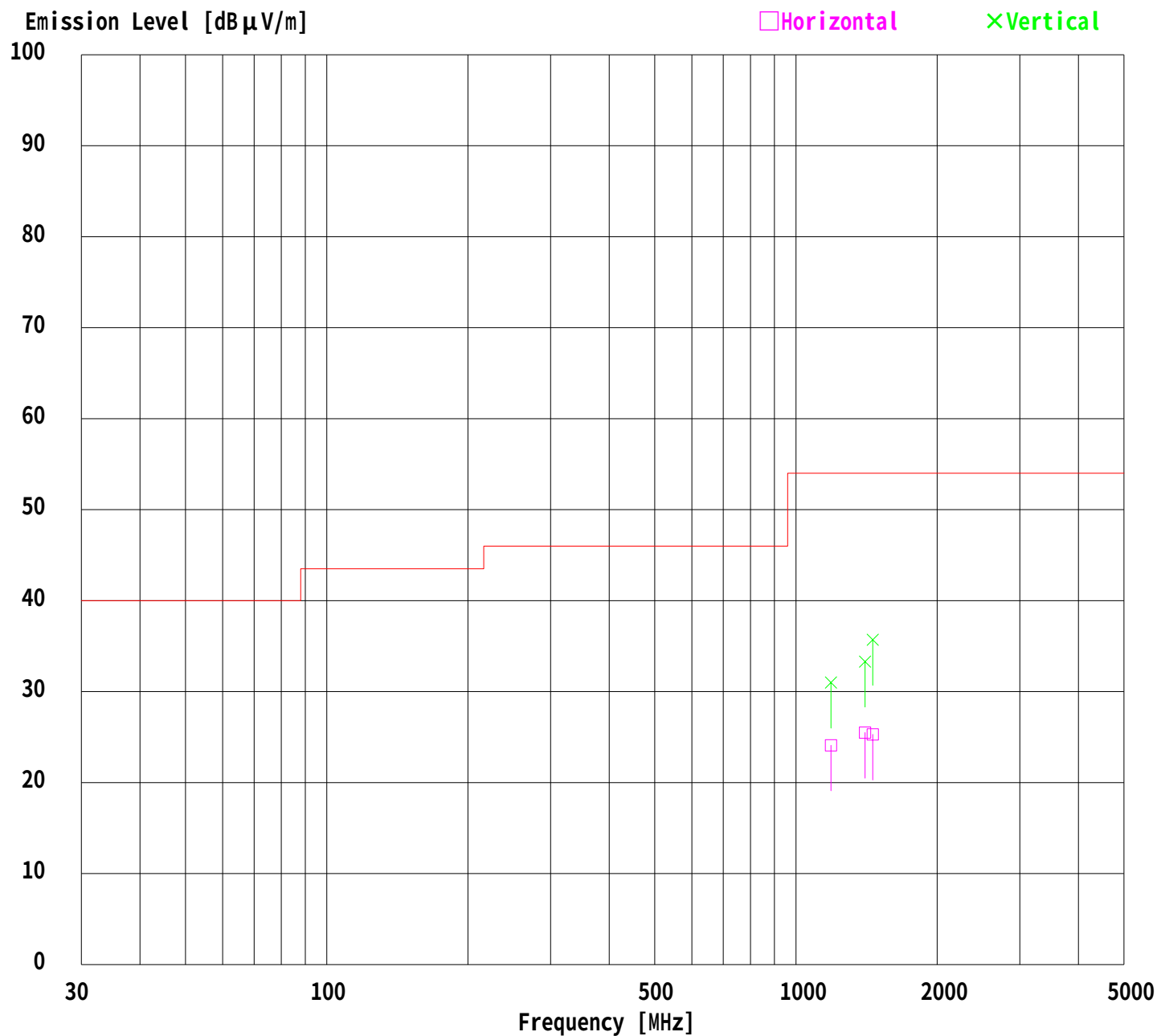
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.99	BB	48.6	55.2	24.1	39.8	3.5	0.0	36.4	43.0	74.0	37.6	31.0
2.	1404.02	BB	49.5	56.7	24.2	39.5	3.9	0.0	38.1	45.3	74.0	35.9	28.7
3.	1457.98	BB	48.3	52.7	24.3	39.4	4.0	0.0	37.2	41.6	74.0	36.8	32.4

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

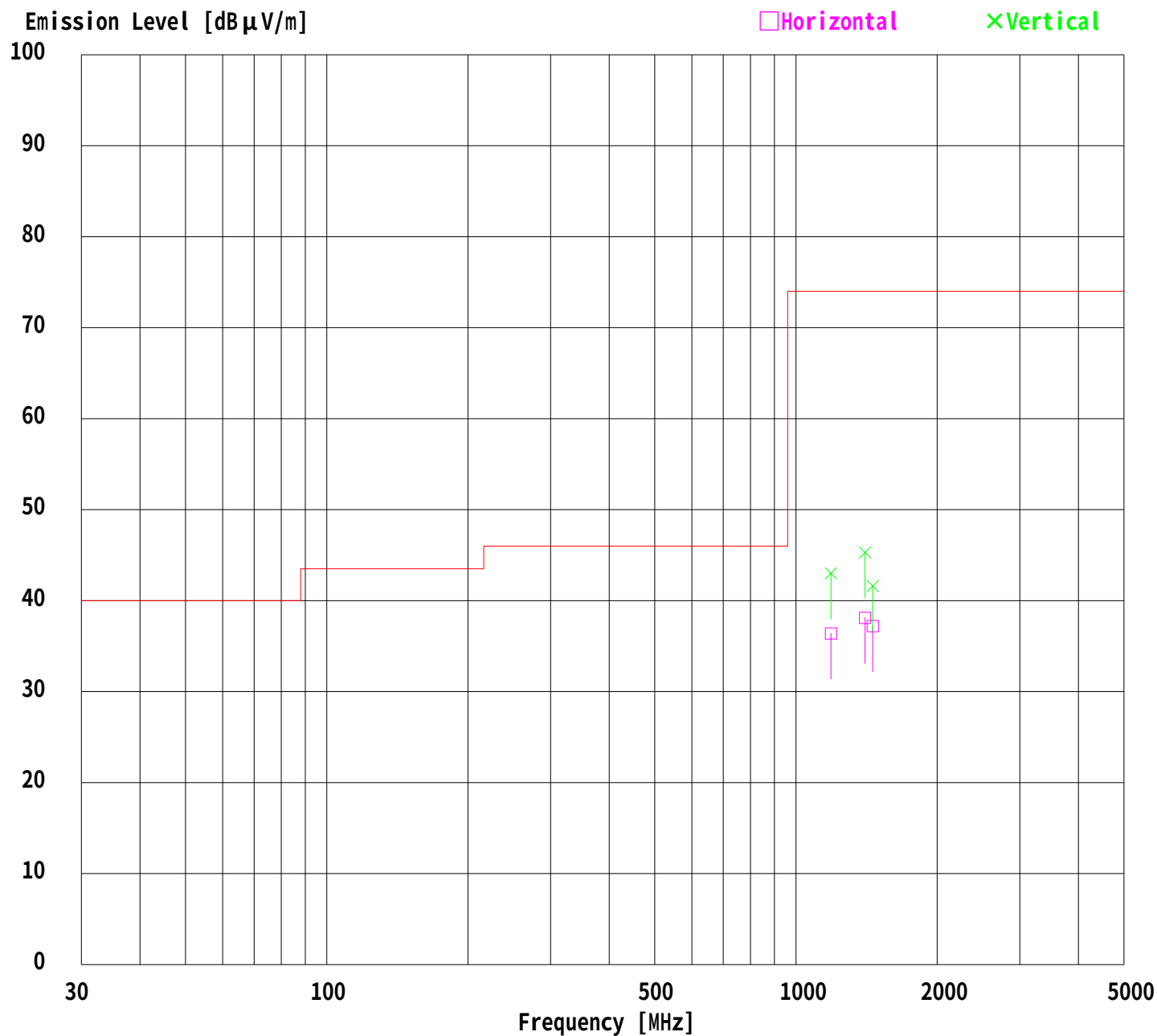
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 1Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	243.00	BB	43.9	29.4	16.1	29.9	4.1	5.8	40.0	25.5	46.0	6.0	20.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

ANT.TYPE : 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

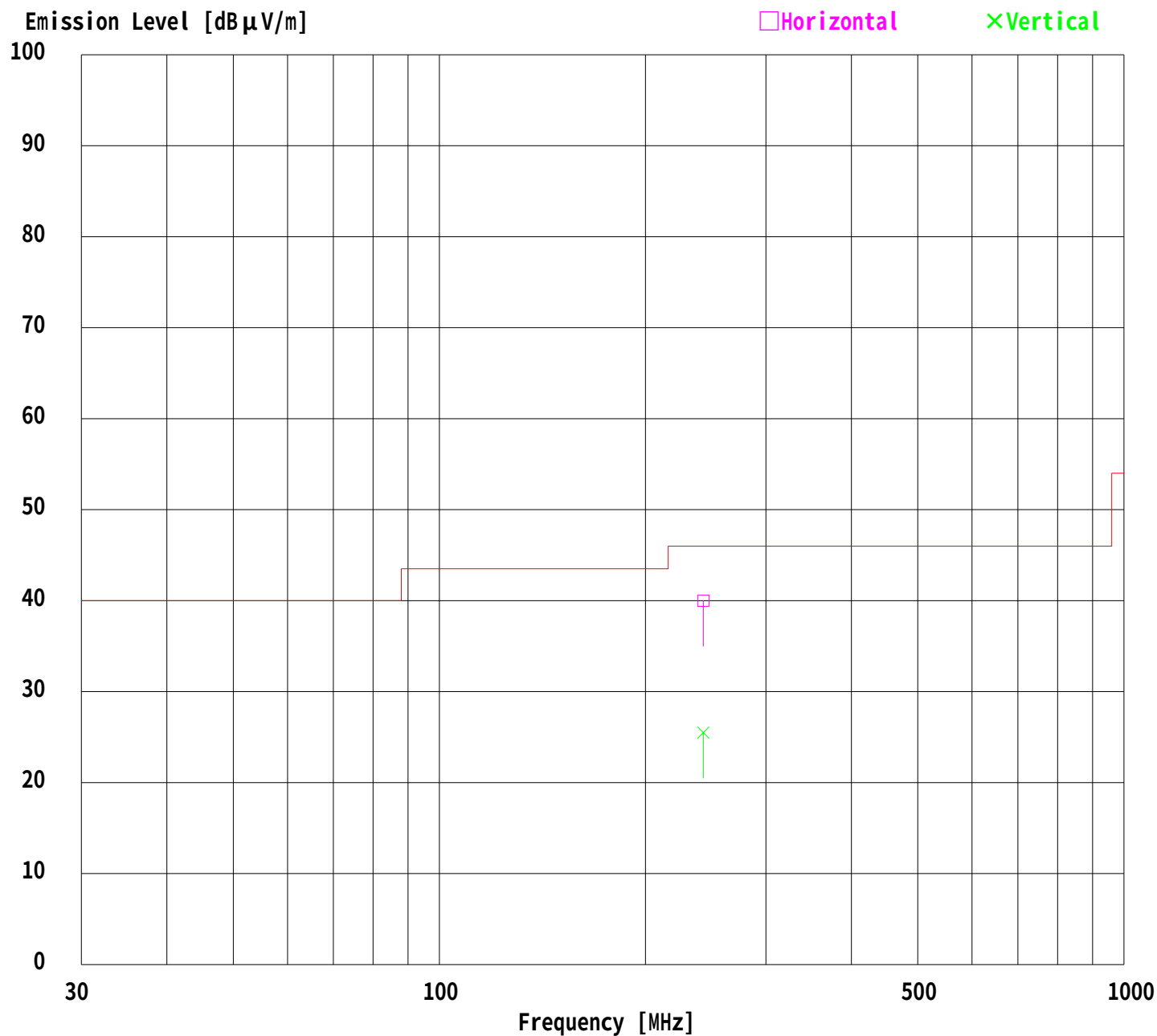
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 1Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	125.30	BB	30.7	31.4	13.2	29.9	2.7	5.8	22.5	23.2	43.5	21.0	20.3
2.	162.00	BB	27.5	34.0	14.9	29.9	3.1	5.8	21.4	27.9	43.5	22.1	15.6
3.	189.00	BB	32.0	25.9	16.4	29.9	3.4	5.8	27.7	21.6	43.5	15.8	21.9
4.	200.00	BB	33.1	28.8	16.7	29.9	3.6	5.8	29.3	25.0	43.5	14.2	18.5
5.	216.00	BB	39.9	29.3	16.5	29.9	3.7	5.8	36.0	25.4	43.5	7.5	18.1
6.	220.00	BB	33.7	30.6	16.4	29.9	3.8	5.8	29.8	26.7	46.0	16.2	19.3
7.	243.00	BB	43.9	29.4	16.1	29.9	4.1	5.8	40.0	25.5	46.0	6.0	20.5
8.	324.00	BB	38.1	34.1	16.3	30.0	4.9	5.8	35.1	31.1	46.0	10.9	14.9
9.	364.50	BB	37.4	30.4	16.9	30.1	5.2	5.8	35.2	28.2	46.0	10.8	17.8
10.	675.00	BB	29.1	35.3	20.9	30.2	7.5	5.8	33.1	39.3	46.0	12.9	6.7
11.	729.00	BB	29.7	31.1	21.6	30.1	7.8	5.8	34.8	36.2	46.0	11.2	9.8

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.
ANT.TYPE : 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

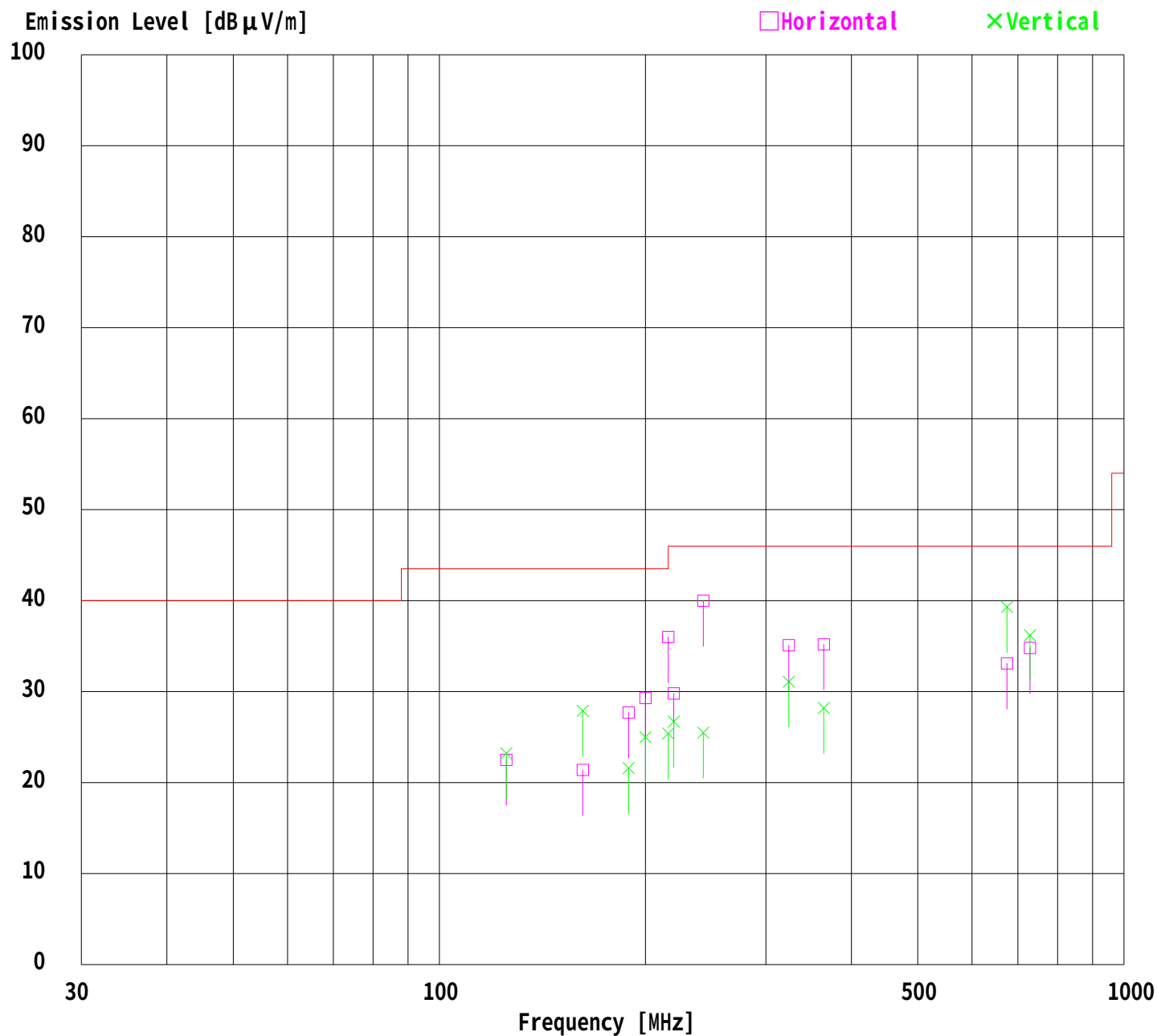
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C Engineer : Tsubasa Takayama
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.99	BB	36.6	43.5	24.1	39.8	3.5	0.0	24.4	31.3	54.0	29.6	22.7
2.	1404.02	BB	36.9	44.3	24.2	39.5	3.9	0.0	25.5	32.9	54.0	28.5	21.1
3.	1457.98	BB	37.0	46.8	24.3	39.4	4.0	0.0	25.9	35.7	54.0	28.1	18.3

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

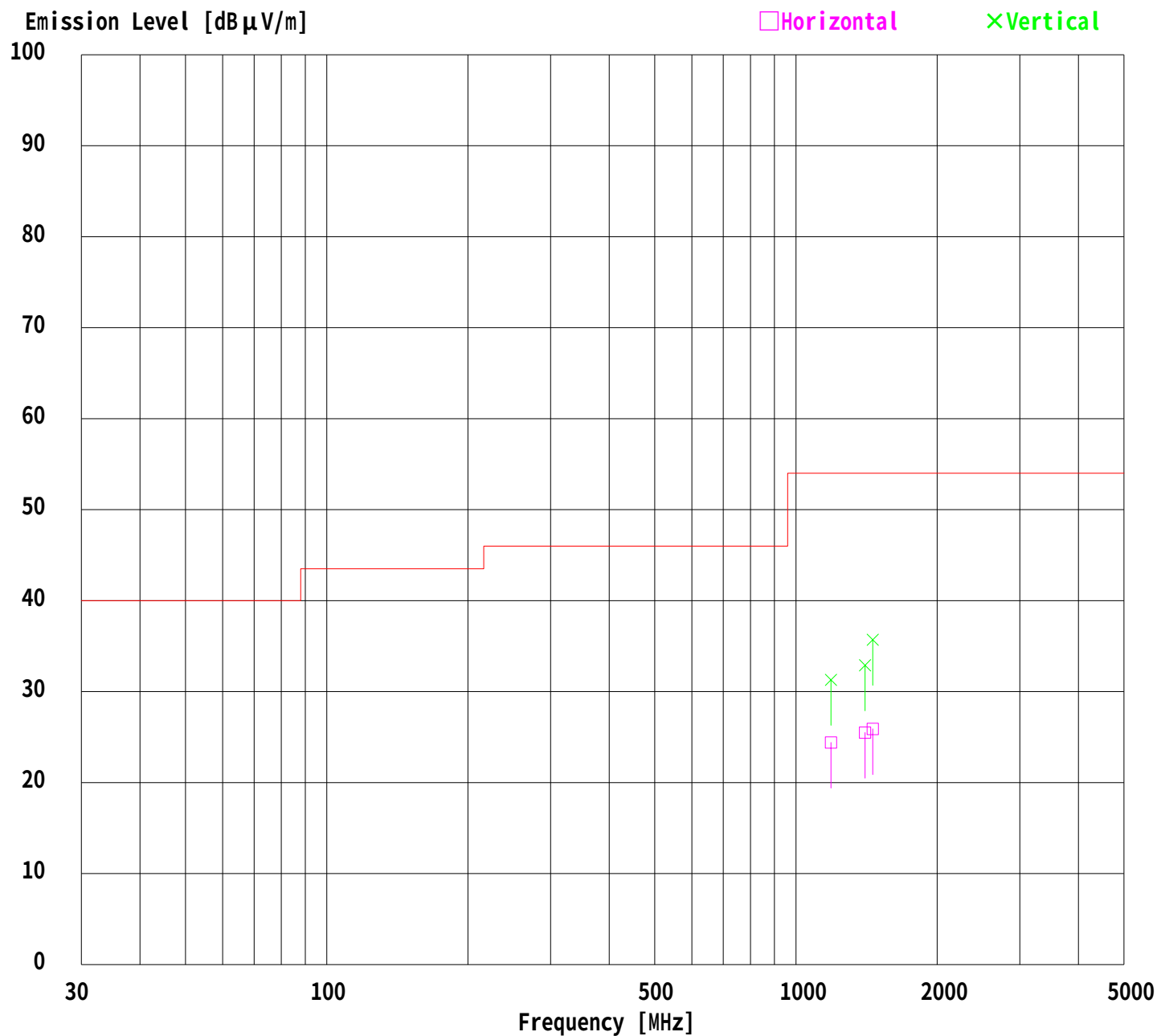
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.99	BB	48.3	55.1	24.1	39.8	3.5	0.0	36.1	42.9	74.0	37.9	31.1
2.	1404.02	BB	49.6	56.3	24.2	39.5	3.9	0.0	38.2	44.9	74.0	35.8	29.1
3.	1457.98	BB	48.8	52.7	24.3	39.4	4.0	0.0	37.7	41.6	74.0	36.3	32.4

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

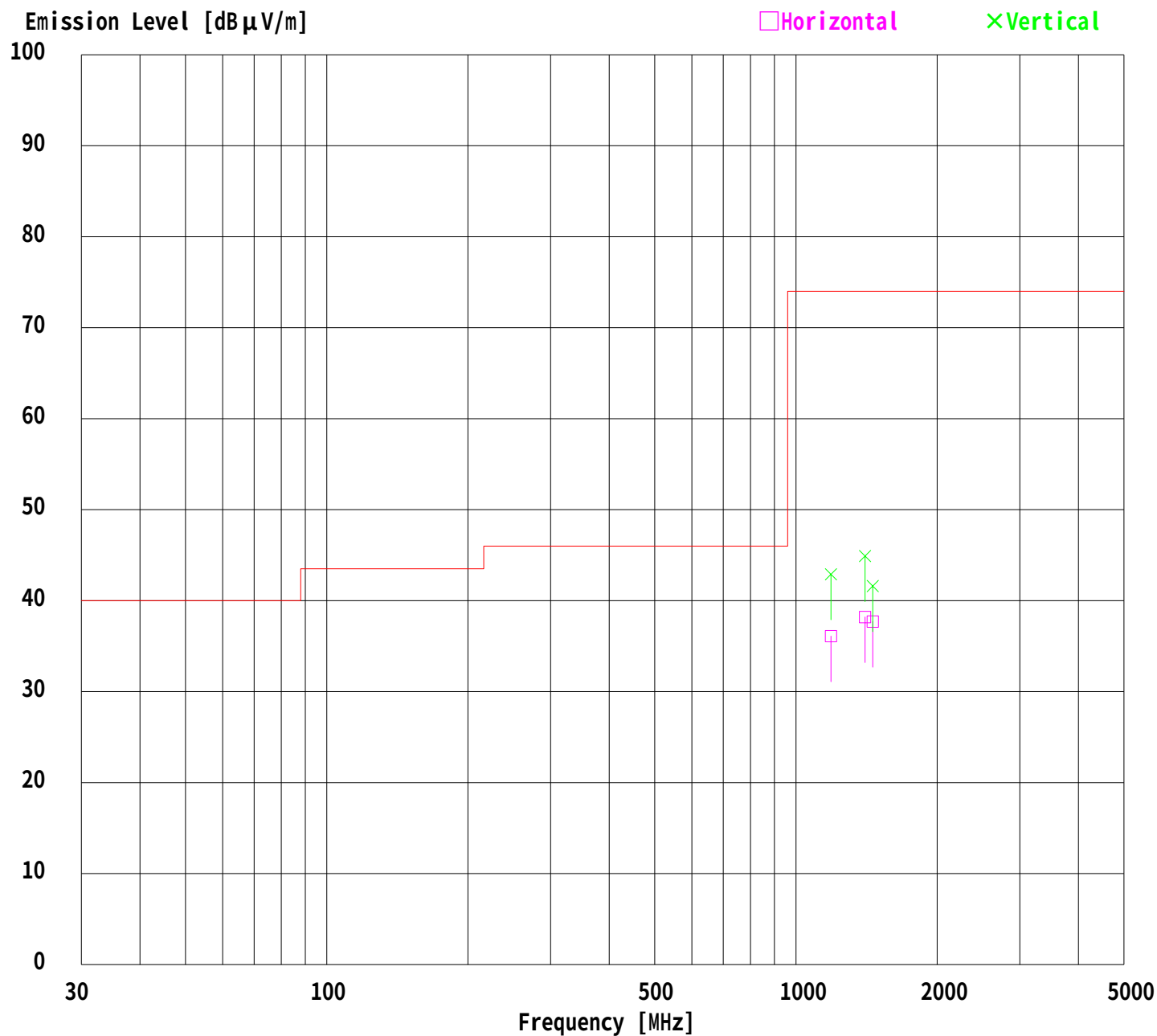
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2+Rec
Remarks : 5Vp-p
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback+Rec
Remarks :
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	66.00	BB	44.4	39.8	7.1	30.0	1.9	5.8	29.2	24.6	40.0	10.8	15.4
2.	184.32	BB	34.1	31.0	16.2	29.9	3.4	5.8	29.6	26.5	43.5	13.9	17.0
3.	243.00	BB	42.9	31.7	16.1	29.9	4.1	5.8	39.0	27.8	46.0	7.0	18.2
4.	270.01	BB	36.0	25.4	17.7	29.9	4.4	5.8	34.0	23.4	46.0	12.0	22.6
5.	324.00	BB	37.2	35.0	16.3	30.0	4.9	5.8	34.2	32.0	46.0	11.8	14.0
6.	351.00	BB	38.0	32.6	16.7	30.1	5.1	5.8	35.5	30.1	46.0	10.5	15.9
7.	486.00	BB	25.1	37.0	18.6	30.5	6.2	5.8	25.2	37.1	46.0	20.8	8.9
8.	513.02	BB	29.0	34.3	18.9	30.5	6.4	5.8	29.6	34.9	46.0	16.4	11.1
9.	621.00	BB	28.6	32.3	20.2	30.3	7.1	5.8	31.4	35.1	46.0	14.6	10.9
10.	675.00	BB	29.4	32.0	20.9	30.2	7.5	5.8	33.4	36.0	46.0	12.6	10.0
11.	729.00	BB	32.0	29.4	21.6	30.1	7.8	5.8	37.1	34.5	46.0	8.9	11.5
12.	891.00	BB	28.6	33.5	23.3	29.6	8.9	5.8	37.0	41.9	46.0	9.0	4.1

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

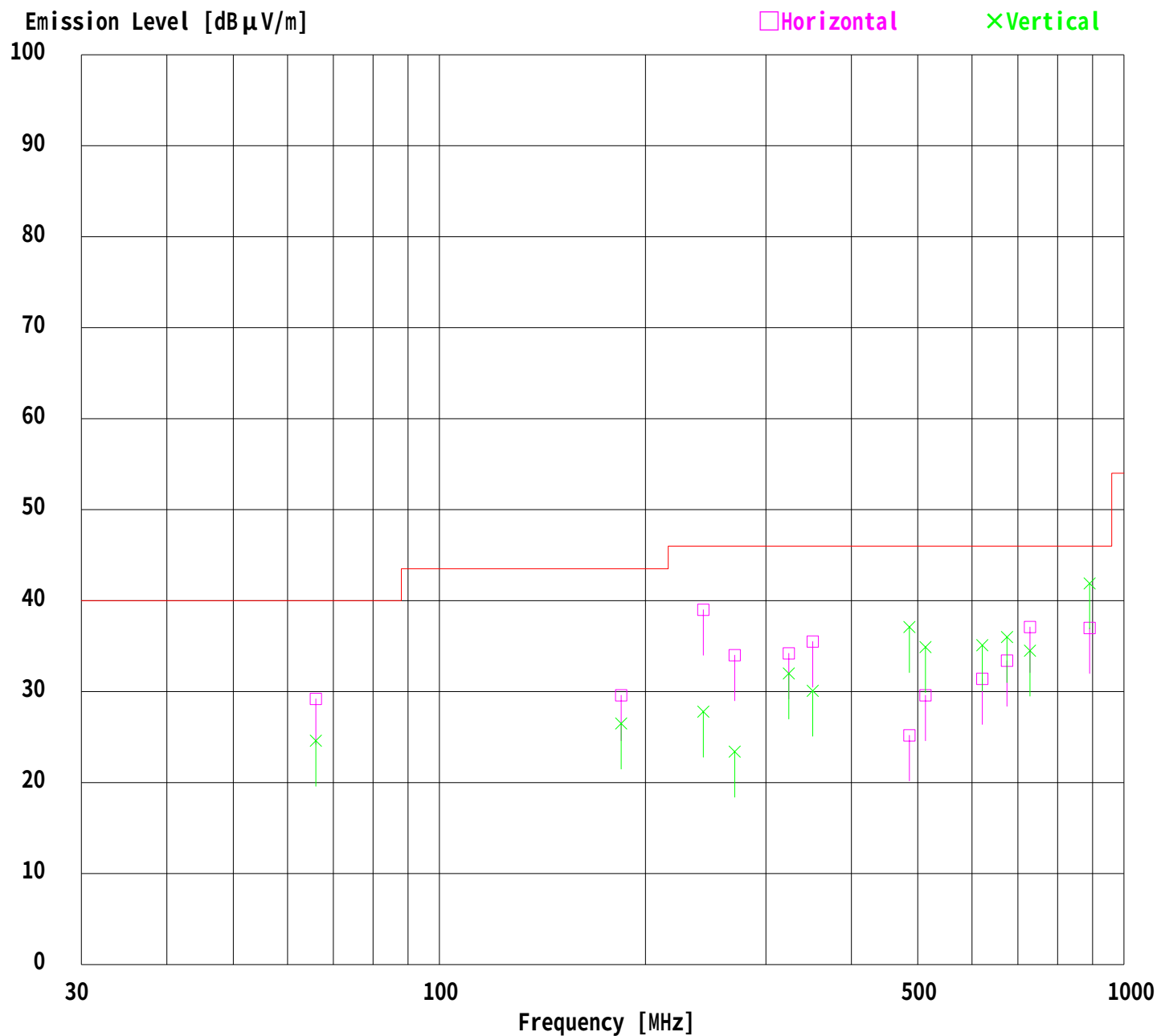
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback+Rec
Remarks :
Date : 7/19/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 39 %
Regulation : FCC Part15B CLASS B

Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C Engineer : Tsubasa Takayama
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1214.89	BB	38.7	41.9	24.1	39.8	3.6	0.0	26.6	29.8	54.0	27.4	24.2
2.	1404.03	BB	41.9	47.3	24.2	39.5	3.9	0.0	30.5	35.9	54.0	23.5	18.1
3.	1457.98	BB	36.7	46.9	24.3	39.4	4.0	0.0	25.6	35.8	54.0	28.4	18.2

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

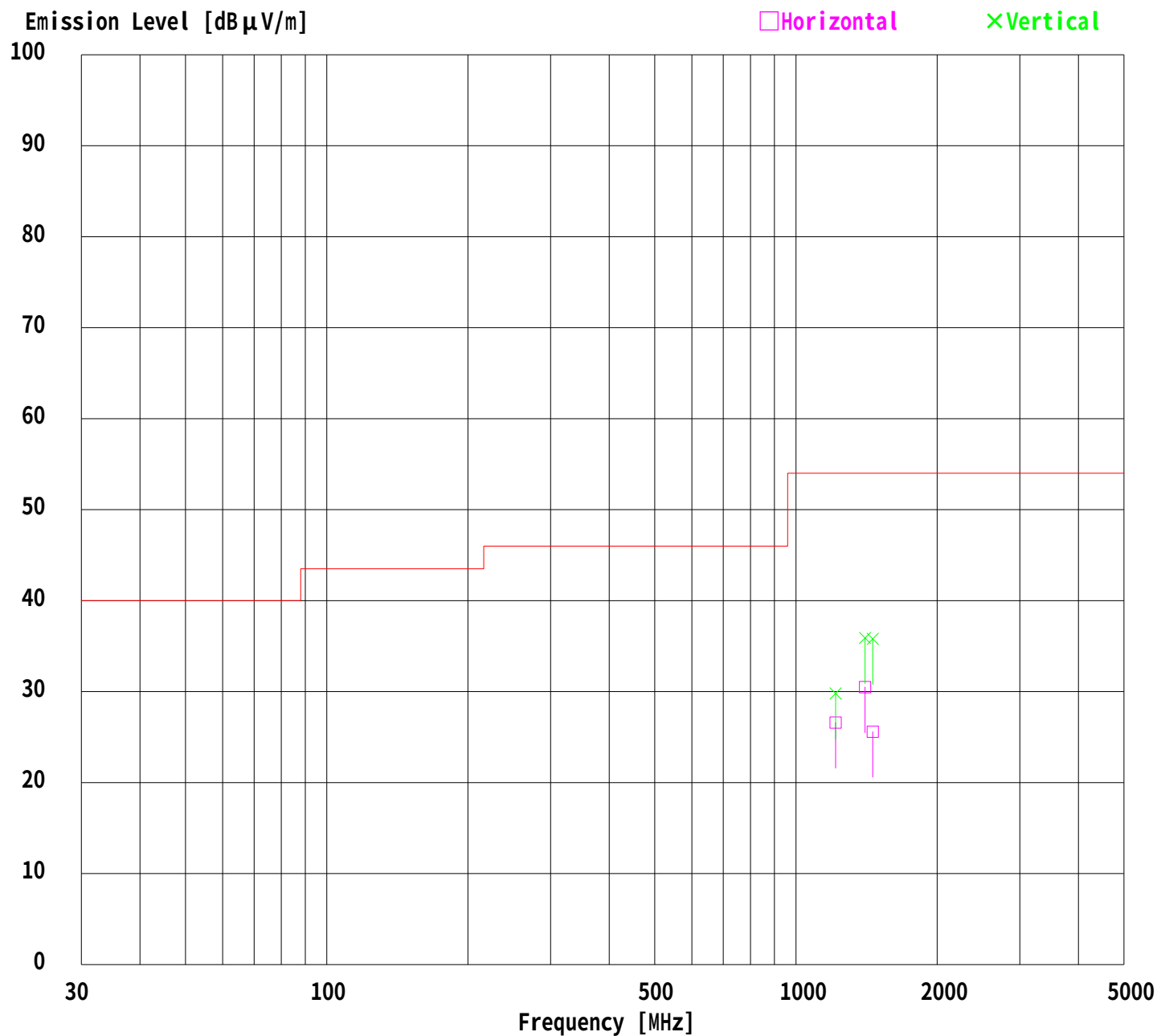
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C Engineer : Tsubasa Takayama
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1214.89	BB	49.2	52.6	24.1	39.8	3.6	0.0	37.1	40.5	74.0	36.9	33.5
2.	1404.03	BB	51.3	58.2	24.2	39.5	3.9	0.0	39.9	46.8	74.0	34.1	27.2
3.	1457.98	BB	48.2	54.2	24.3	39.4	4.0	0.0	37.1	43.1	74.0	36.9	30.9

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

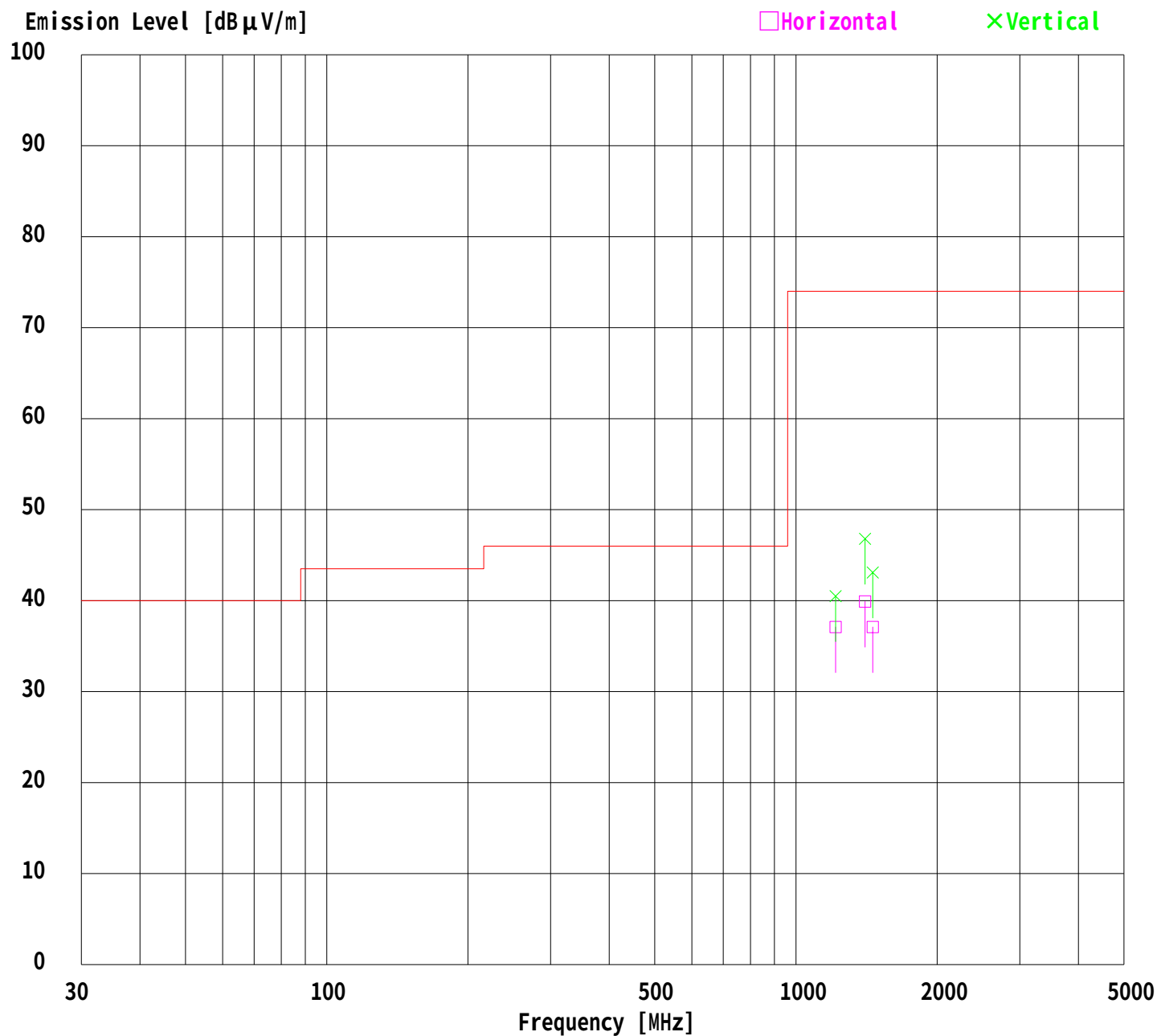
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 25KE0040-YW-1

Applicant : Orion Electric Co., Ltd.
 Kind of Equipment : DVD-RW/VCR
 Model No. : D-VR4XSU
 Serial No. : -
 Power : AC120V/60Hz
 Mode : DVD Play+Rec
 Remarks :
 Date : 6/7/2005
 Test Distance : 3 m
 Temperature : 27 °C
 Humidity : 44 %
 Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	70.67	BB	51.1	48.9	6.5	30.0	2.0	5.8	35.4	33.2	40.0	4.6	6.8
2.	162.00	BB	38.1	34.7	14.9	29.9	3.1	5.8	32.0	28.6	43.5	11.5	14.9
3.	189.00	BB	39.6	32.2	16.4	29.9	3.4	5.8	35.3	27.9	43.5	8.2	15.6
4.	243.00	BB	46.1	36.2	16.1	29.9	4.1	5.8	42.2	32.3	46.0	3.8	13.7
5.	297.00	BB	32.8	35.5	20.0	29.9	4.7	5.8	33.4	36.1	46.0	12.6	9.9
6.	405.00	BB	37.7	41.6	17.5	30.2	5.5	5.8	36.3	40.2	46.0	9.7	5.8
7.	459.00	BB	35.4	37.2	18.2	30.4	6.0	5.8	35.0	36.8	46.0	11.0	9.2
8.	526.50	BB	32.6	40.8	19.1	30.5	6.5	5.8	33.5	41.7	46.0	12.5	4.3
9.	567.00	BB	29.4	34.3	19.5	30.4	6.7	5.8	31.0	35.9	46.0	15.0	10.1
10.	621.00	BB	37.4	35.8	20.2	30.3	7.1	5.8	40.2	38.6	46.0	5.8	7.4
11.	729.00	BB	27.4	29.2	21.6	30.1	7.8	5.8	32.5	34.3	46.0	13.5	11.7
12.	891.00	BB	25.7	30.2	23.3	29.6	8.9	5.8	34.1	38.6	46.0	11.9	7.4

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.
 ANT. TYPE: 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

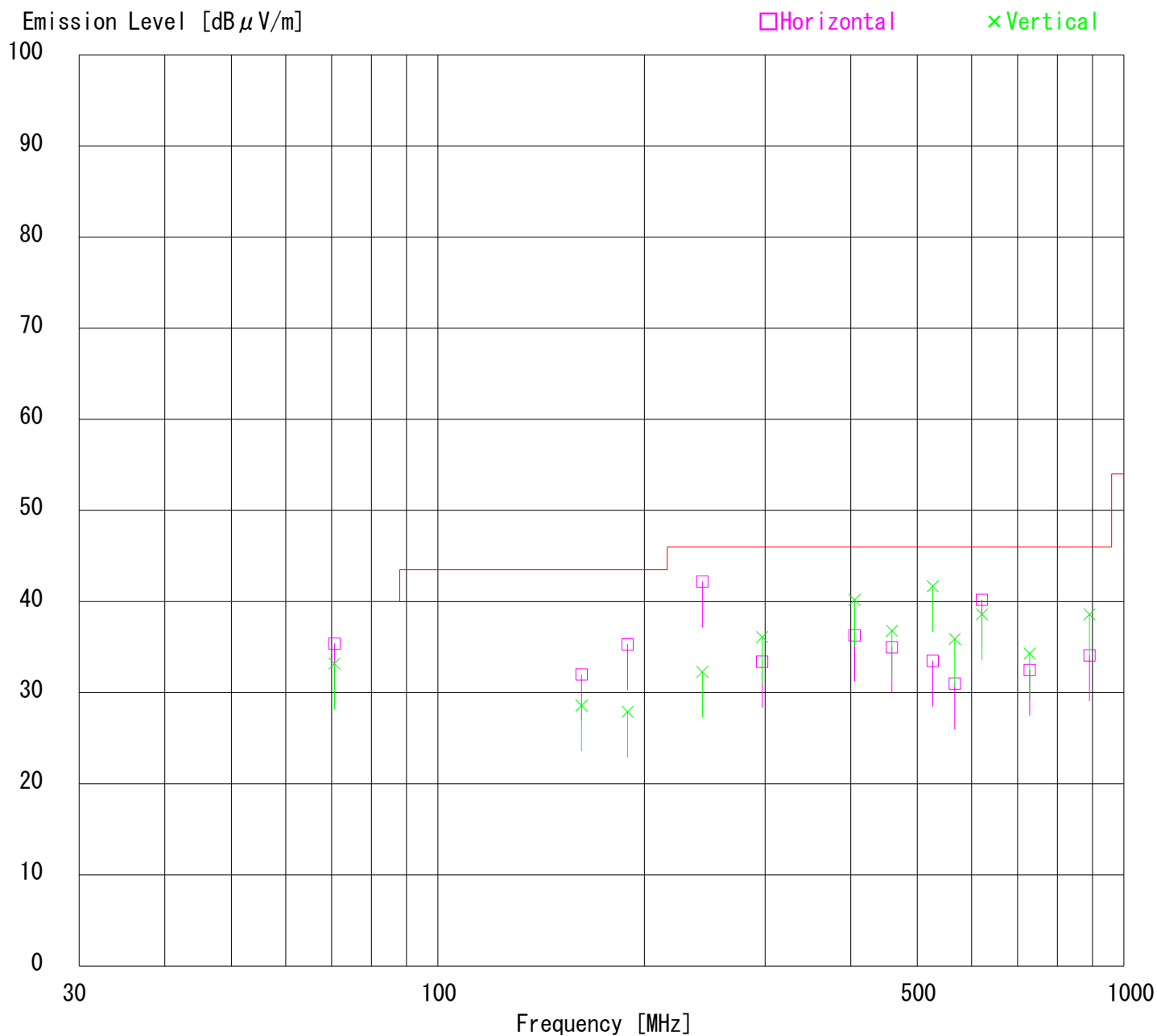
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 25KE0040-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play+Rec
Remarks :
Date : 6/7/2005
Test Distance : 3 m
Temperature : 27 °C
Humidity : 44 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play + Rec
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C Engineer : Tsubasa Takayama
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.98	BB	38.0	43.8	24.1	39.8	3.5	0.0	25.8	31.6	54.0	28.2	22.4
2.	1404.03	BB	41.6	47.3	24.2	39.5	3.9	0.0	30.2	35.9	54.0	23.8	18.1
3.	1457.98	BB	36.7	47.6	24.3	39.4	4.0	0.0	25.6	36.5	54.0	28.4	17.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

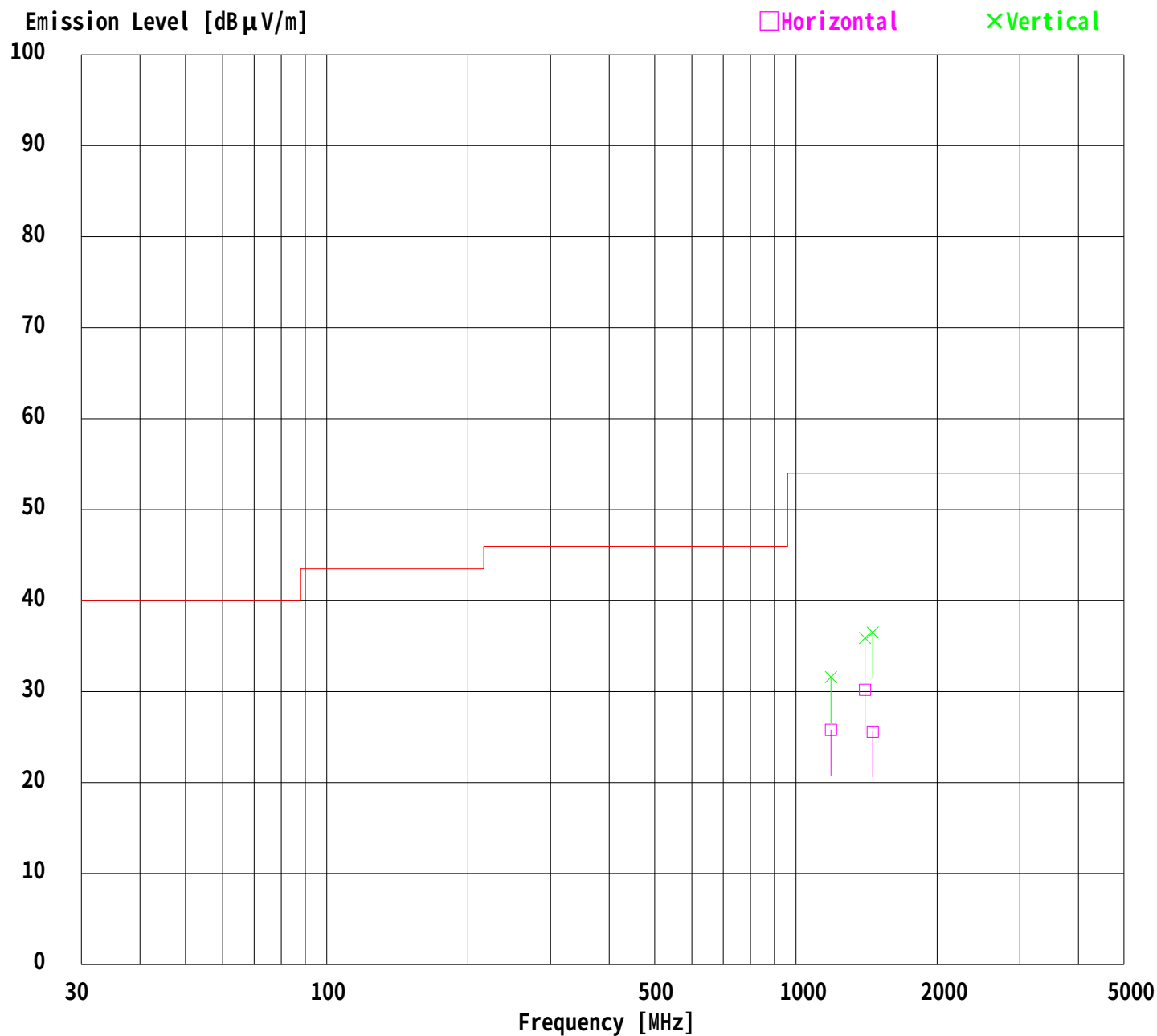
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play + Rec
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play + Rec
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1187.98	BB	49.2	56.2	24.1	39.8	3.5	0.0	37.0	44.0	74.0	37.0	30.0
2.	1404.03	BB	50.8	57.9	24.2	39.5	3.9	0.0	39.4	46.5	74.0	34.6	27.5
3.	1457.98	BB	48.3	55.3	24.3	39.4	4.0	0.0	37.2	44.2	74.0	36.8	29.8

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

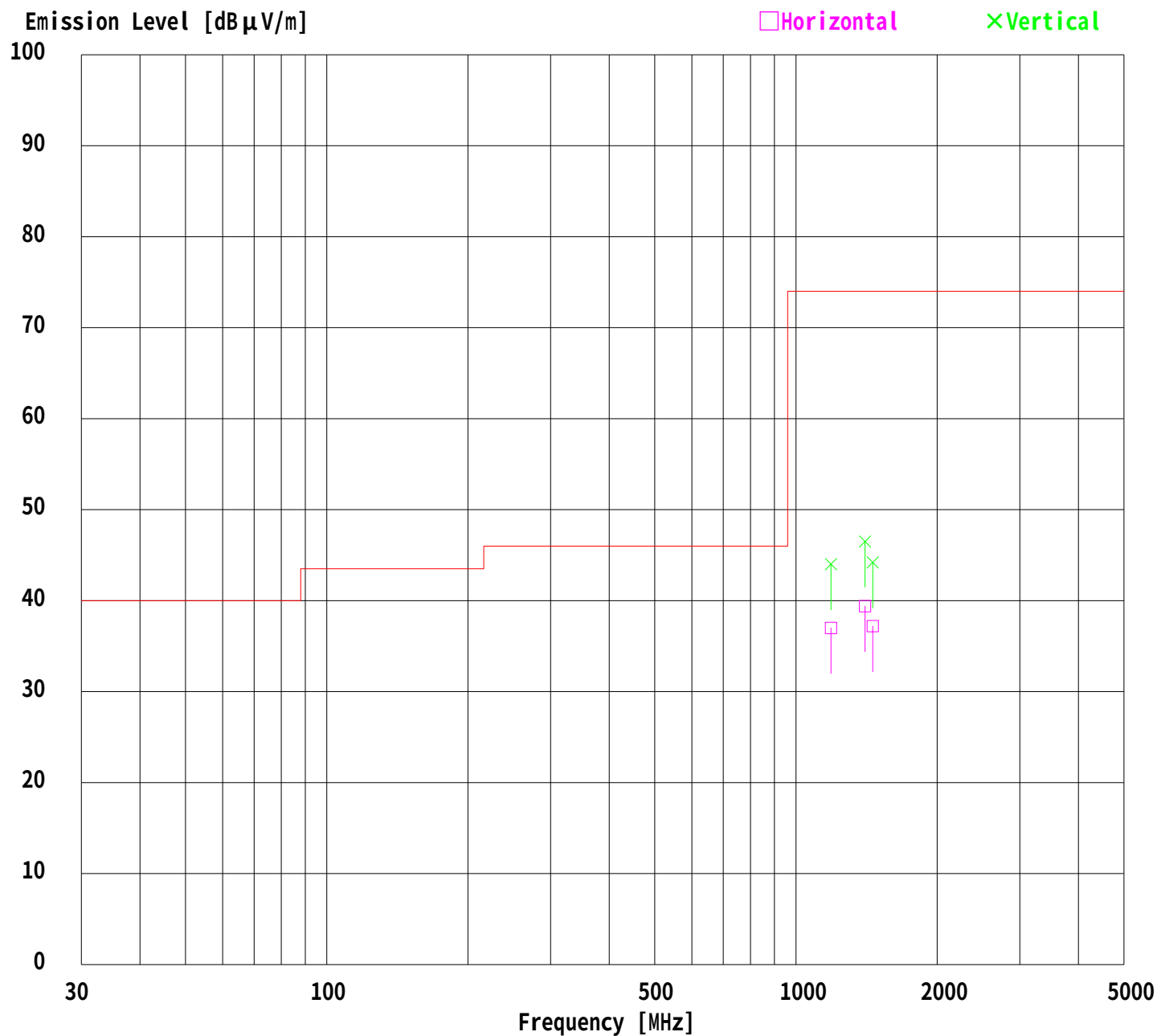
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play + Rec
Remarks : -
Date : 6/22/2005
Test Distance : 3 m
Temperature : 22 °C
Humidity : 63 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : Test Channel #3
Date : 6/22/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 53 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	61.25	BB	23.1	24.4	8.2	28.1	1.6	5.9	10.7	12.0	40.0	29.3	28.0
2.	65.75	BB	23.2	23.8	7.3	28.1	1.7	5.9	10.0	10.6	40.0	30.0	29.4
3.	122.50	BB	22.8	23.5	13.7	27.9	2.3	5.9	16.8	17.5	43.5	26.7	26.0
4.	245.00	BB	23.0	22.1	17.3	27.8	3.5	5.9	21.9	21.0	46.0	24.1	25.0

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

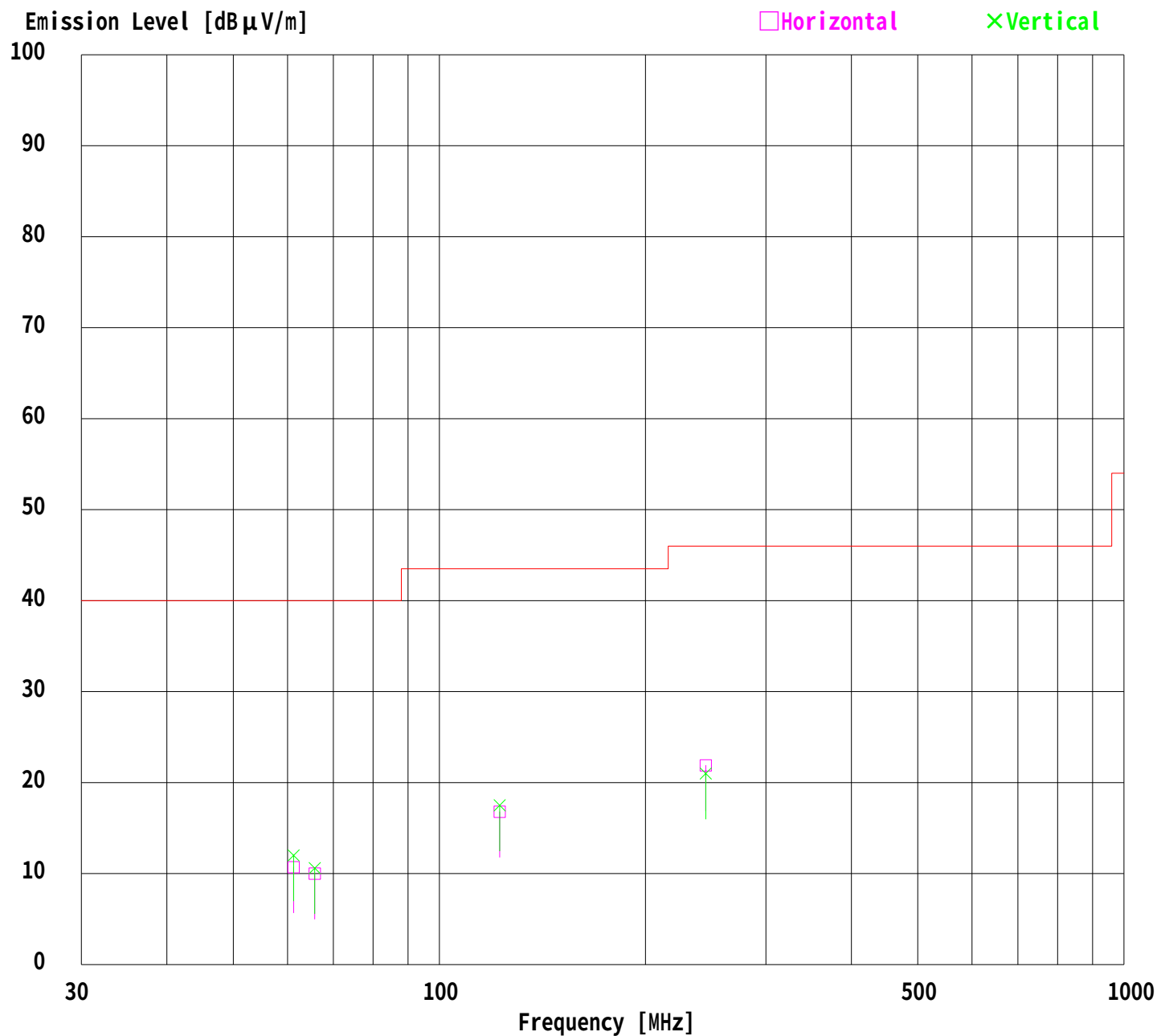
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : Test Channel #3
Date : 6/22/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 53 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : Test Channel #4
Date : 6/22/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 53 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	67.25	BB	23.4	24.7	7.0	28.1	1.7	5.9	9.9	11.2	40.0	30.1	28.8
2.	71.75	BB	23.4	22.9	6.5	28.1	1.8	5.9	9.5	9.0	40.0	30.5	31.0
3.	134.50	BB	22.1	22.1	14.4	27.9	2.4	5.9	16.9	16.9	43.5	26.6	26.6
4.	201.75	BB	21.9	23.0	17.1	27.8	3.1	5.9	20.2	21.3	43.5	23.3	22.2

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

Except for the above table: adequate margin data below the limits.

DATA OF RADIATION TEST

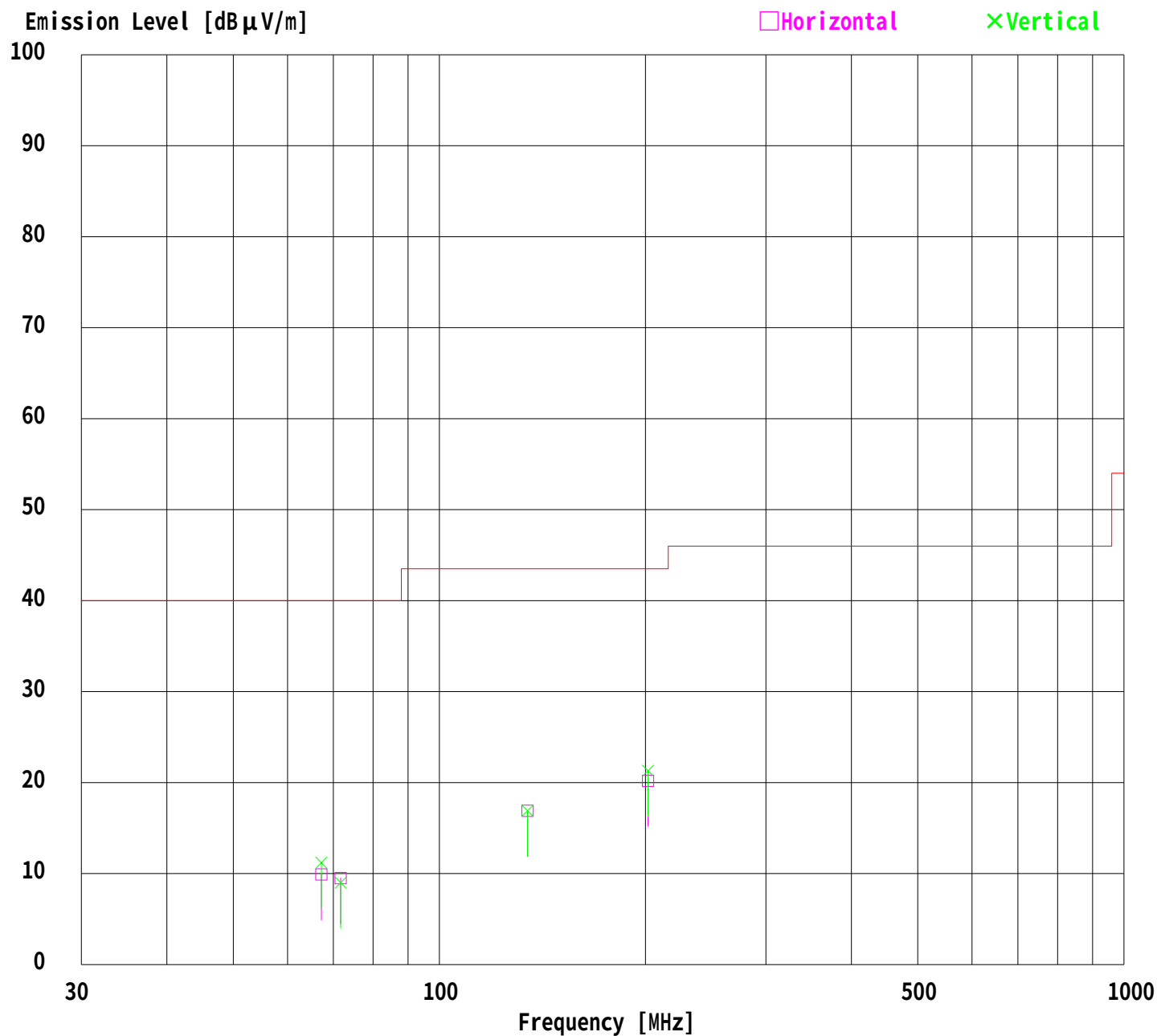
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25KE0040-YW-1

Applicant : Orion Electric Co.,Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VR4XSU
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1+Rec
Remarks : Test Channel #4
Date : 6/22/2005
Test Distance : 3 m
Temperature : 25 °C
Humidity : 53 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF ANTENNA TERMINAL TEST

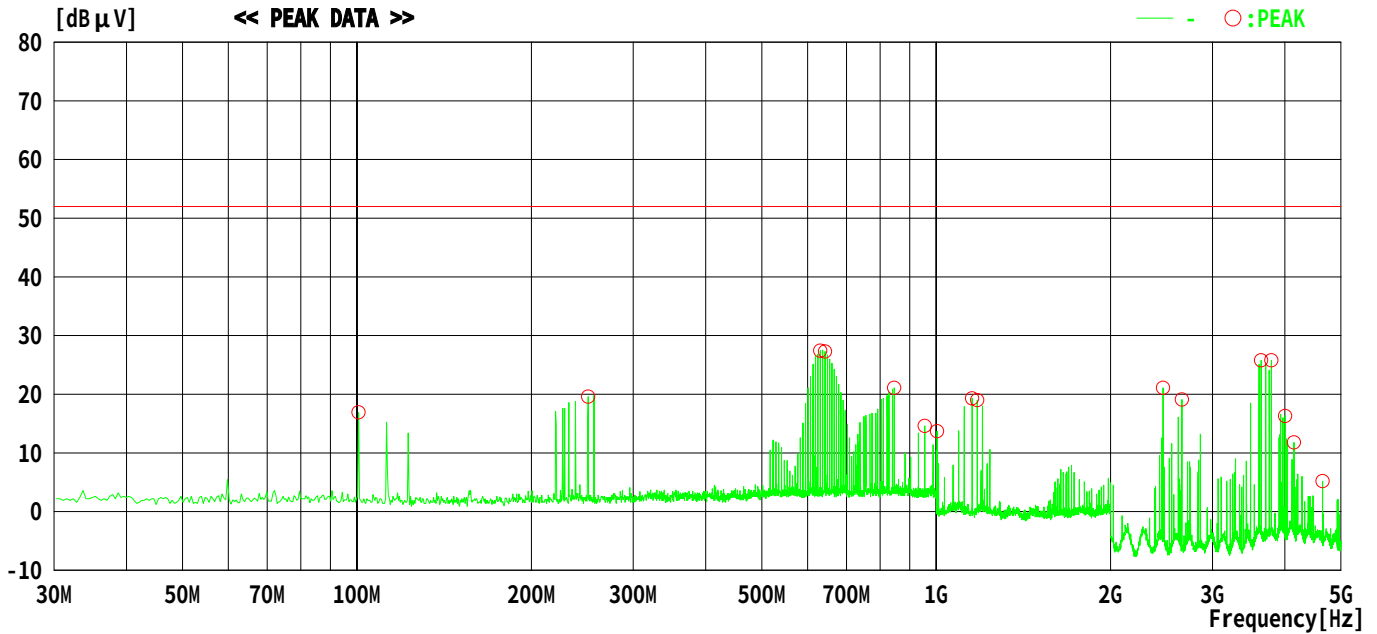
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
OPERATION MODE : TV Tuning Mode

REPORT NO : 25KE0040-YW-2
DATE : June 09,2005
REGULATION : FCC part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 24°C/39%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING Peak [dB μV]	C.F [dB]	RESULT Peak [dB μV]	LIMIT Peak [dB μV]	MARGIN - [dB μV]	MARGIN [dB]	PHASE
1	100.66400	37.5	-20.6	16.9	52.0	----	35.1	----
2	250.69350	40.0	-20.4	19.6	52.0	----	32.4	----
3	630.85310	47.8	-20.4	27.4	52.0	----	24.6	----
4	642.85280	47.8	-20.5	27.3	52.0	----	24.7	----
5	846.57740	41.8	-20.7	21.1	52.0	----	30.9	----
6	955.86760	35.2	-20.6	14.6	52.0	----	37.4	----
7	1003.57100	44.0	-30.3	13.7	52.0	----	38.3	----
8	1153.56200	49.5	-30.2	19.3	52.0	----	32.7	----
9	1177.84600	49.2	-30.2	19.0	52.0	----	33.0	----
10	2464.25600	55.0	-33.9	21.1	52.0	----	30.9	----
11	2655.67000	53.0	-33.9	19.1	52.0	----	32.9	----
12	3638.52500	58.5	-32.7	25.8	52.0	----	26.2	----
13	3789.94200	58.0	-32.2	25.8	52.0	----	26.2	----
14	4004.28500	48.0	-31.7	16.3	52.0	----	35.7	----
15	4148.56900	43.8	-32.0	11.8	52.0	----	40.2	----
16	4645.76100	38.0	-32.8	5.2	52.0	----	46.8	----

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TERMINAL TEST

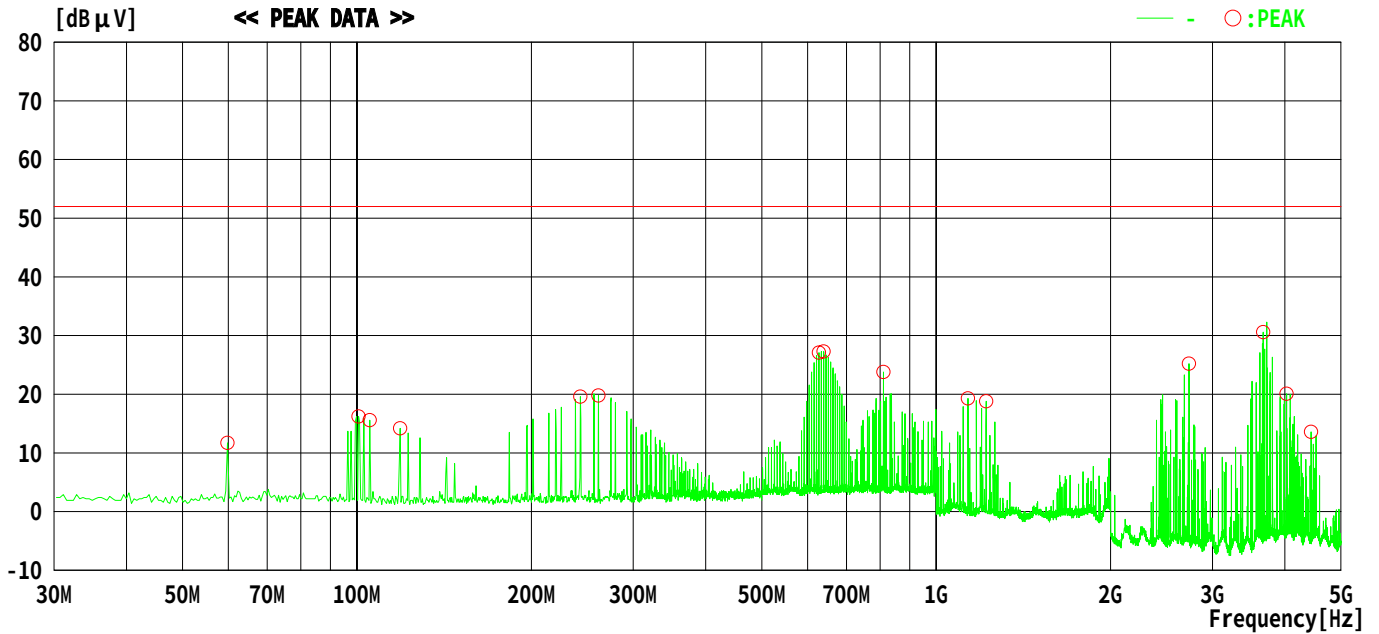
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
OPERATION MODE : CATV Tuning Mode

REPORT NO : 25KE0040-YW-1
DATE : June 09,2005
REGULATION : FCC part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 24°C/39%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING Peak [dB μV]	C.F [dB]	RESULT Peak [dB μV]	LIMIT Peak [dB μV]	MARGIN - [dB μV]	MARGIN [dB]	PHASE
1	59.78573	32.2	-20.5	11.7	52.0	----	40.3	-
2	100.66400	36.8	-20.6	16.2	52.0	----	35.8	-
3	105.29970	36.2	-20.6	15.6	52.0	----	36.4	-
4	118.78520	34.8	-20.6	14.2	52.0	----	37.8	-
5	243.10770	40.0	-20.4	19.6	52.0	----	32.4	-
6	261.22910	40.2	-20.4	19.8	52.0	----	32.2	-
7	627.71040	47.5	-20.4	27.1	52.0	----	24.9	-
8	639.42430	47.8	-20.5	27.3	52.0	----	24.7	-
9	811.00450	44.5	-20.7	23.8	52.0	----	28.2	-
10	1134.99200	49.5	-30.2	19.3	52.0	----	32.7	-
11	1219.98600	49.0	-30.2	18.8	52.0	----	33.2	-
12	2731.37900	59.2	-34.0	25.2	52.0	----	26.8	-
13	3669.95100	63.2	-32.6	30.6	52.0	----	21.4	-
14	4025.71200	51.8	-31.7	20.1	52.0	----	31.9	-
15	4440.02600	46.0	-32.4	13.6	52.0	----	38.4	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD/VCR
Model Number : D-VR4XSU
Power : 120V/60Hz
Description : TV Reception + REC
Remarks : -

Report Number : 25KE0040-YW-1
Regulation : FCC15B SubpartB
Date : June 21, 2005
Temp / Humid : 24deg.C / 39%
Engineer : Tsubasa Takayama

TV Reception + REC (0dBmV)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	82.7	19.8	62.9	69.5	6.6
4	67.25	83.0	19.7	63.3	69.5	6.2
Audio Signal						
3	56.75	68.6	19.8	48.8	56.5	7.7
	65.75	67.4	19.7	47.7	56.5	8.8
4	62.75	68.0	19.7	48.3	56.5	8.2
	71.75	66.8	19.6	47.2	56.5	9.3

TV Reception + REC (25dBmV)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	82.9	19.8	63.1	69.5	6.4
4	67.25	82.2	19.7	62.5	69.5	7.0
Audio Signal						
3	56.75	68.5	19.8	48.7	56.5	7.8
	65.75	67.3	19.7	47.6	56.5	8.9
4	62.75	67.9	19.7	48.2	56.5	8.3
	71.75	66.7	19.6	47.1	56.5	9.4

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD/VCR
Model Number : D-VR4XSU
Power : 120V/60Hz
Description : AV INPUT 1 + REC
Remarks : -

Report Number : 25KE0040-YW-1
Regulation : FCC15B SubpartB
Date : June 21, 2005
Temp / Humid : 24deg.C / 39%
Engineer : Tsubasa Takayama

AV Input1 + REC (1Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	84.3	19.8	64.5	69.5	5.0
4	67.25	82.0	19.7	62.3	69.5	7.2
Audio Signal						
3	56.75	69.1	19.8	49.3	56.5	7.2
	65.75	68.1	19.7	48.4	56.5	8.1
4	62.75	68.0	19.7	48.3	56.5	8.2
	71.75	66.8	19.6	47.2	56.5	9.3

AV Input1 + REC (5Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	83.5	19.8	63.7	69.5	5.8
4	67.25	83.0	19.7	63.3	69.5	6.2
Audio Signal						
3	56.75	69.0	19.8	49.2	56.5	7.3
	65.75	67.8	19.7	48.1	56.5	8.4
4	62.75	68.1	19.7	48.4	56.5	8.1
	71.75	66.7	19.6	47.1	56.5	9.4

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD/VCR
Model Number : D-VR4XSU
Power : 120V/60Hz
Description : AV INPUT 2 + REC
Remarks : -

Report Number : 25KE0040-YW-1
Regulation : FCC15B SubpartB
Date : June 21, 2005
Temp / Humid : 24deg.C / 39%
Engineer : Tsubasa Takayama

AV Input2 + REC (1Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	83.9	19.8	64.1	69.5	5.4
4	67.25	82.1	19.7	62.4	69.5	7.1
Audio Signal						
3	56.75	69.1	19.8	49.3	56.5	7.2
	65.75	68.2	19.7	48.5	56.5	8.0
4	62.75	66.8	19.7	47.1	56.5	9.5
	71.75	68.0	19.6	48.4	56.5	8.1

AV Input2 + REC (5Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	83.8	19.8	64.0	69.5	5.6
4	67.25	82.2	19.7	62.5	69.5	7.0
Audio Signal						
3	56.75	69.0	19.8	49.2	56.5	7.3
	65.75	67.7	19.7	48.0	56.5	8.5
4	62.75	68.0	19.7	48.3	56.5	8.2
	71.75	67.0	19.6	47.4	56.5	9.1

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD/VCR
Model Number : D-VR4XSU
Power : 120V/60Hz
Description : VCR PLAYBACK + REC
Remarks : -

Report Number : 25KE0040-YW-1
Regulation : FCC15B SubpartB
Date : June 21, 2005
Temp / Humid : 24deg.C / 39%
Engineer : Tsubasa Takayama

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	83.0	19.8	63.2	69.5	6.3
4	67.25	82.2	19.7	62.5	69.5	7.0
Audio Signal						
3	56.75	68.9	19.8	49.1	56.5	7.4
	65.75	67.6	19.7	47.9	56.5	8.6
4	62.75	68.1	19.7	48.4	56.5	8.1
	71.75	66.8	19.6	47.2	56.5	9.3

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD/VCR
Model Number : D-VR4XSU
Power : 120V/60Hz
Description : DVD PLAY + REC
Remarks : -

Report Number : 25KE0040-YW-1
Regulation : FCC15B SubpartB
Date : June 21, 2005
Temp / Humid : 24deg.C / 39%
Engineer : Tsubasa Takayama

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	82.8	19.8	63.0	69.5	6.5
4	67.25	83.2	19.7	63.5	69.5	6.0
Audio Signal						
3	56.75	68.7	19.8	48.9	56.5	7.6
	65.75	67.7	19.7	48.0	56.5	8.5
4	62.75	67.9	19.7	48.2	56.5	8.3
	71.75	66.7	19.6	47.1	56.5	9.4

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

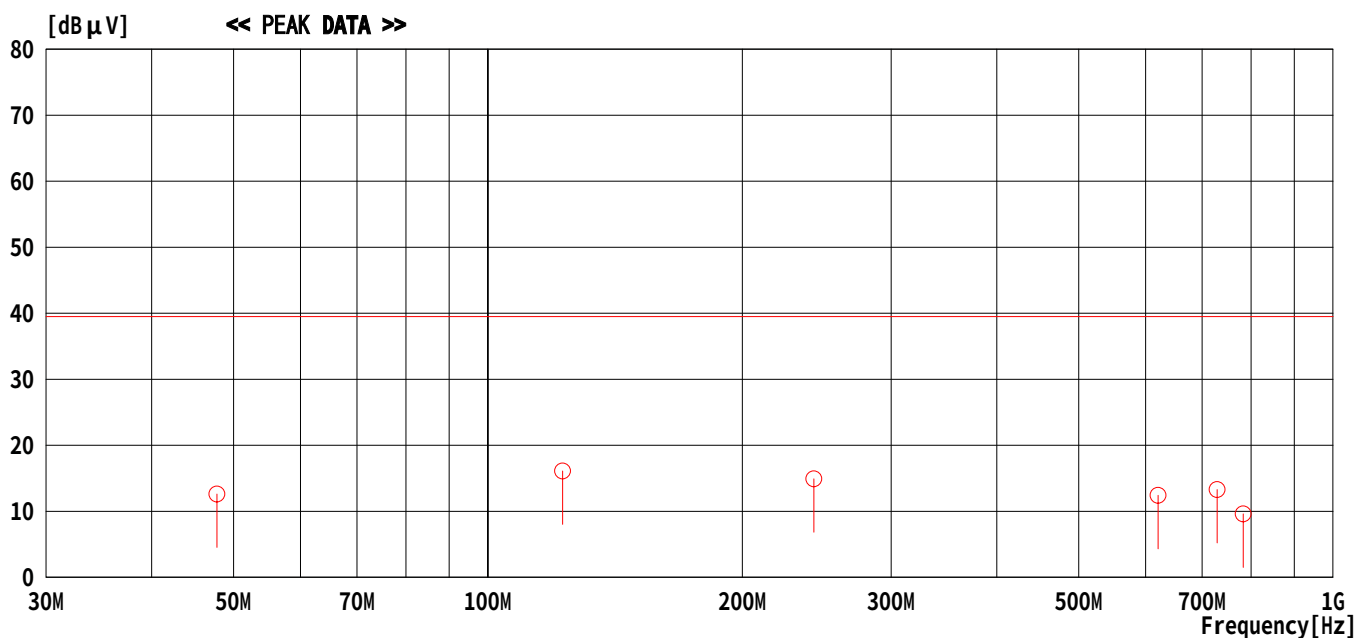
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : TV Reception + Rec (0dBmV : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

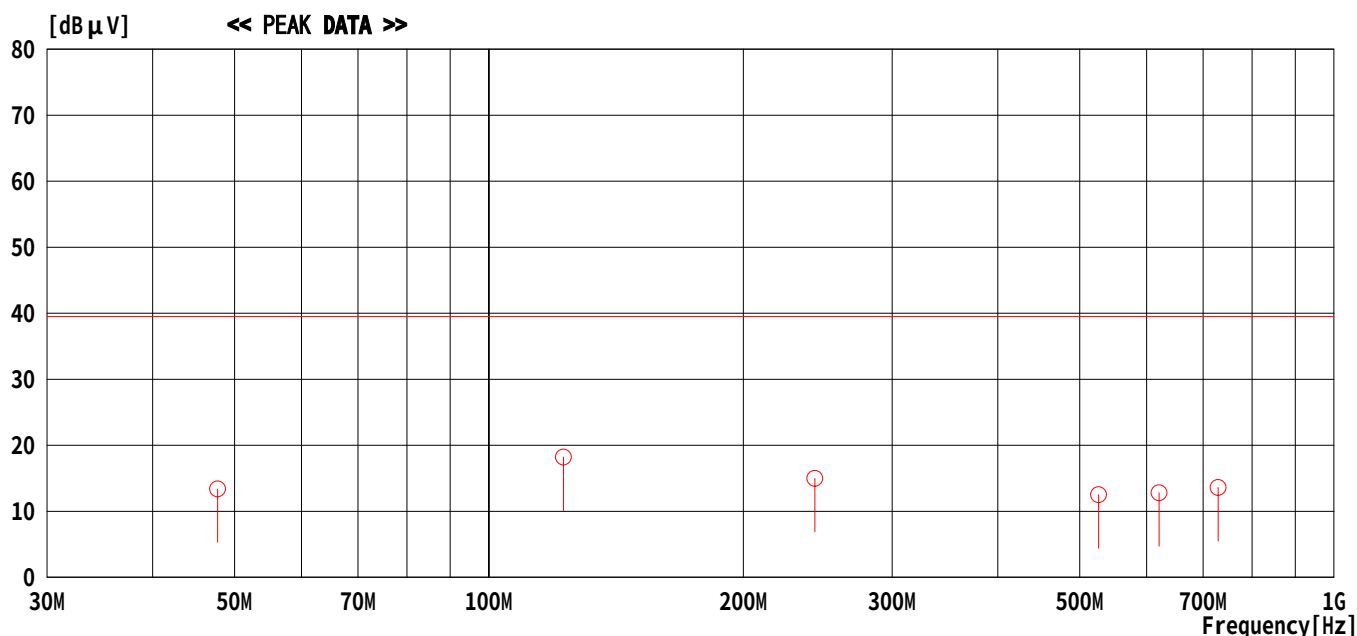
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : TV Reception + Rec (25dBmV : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

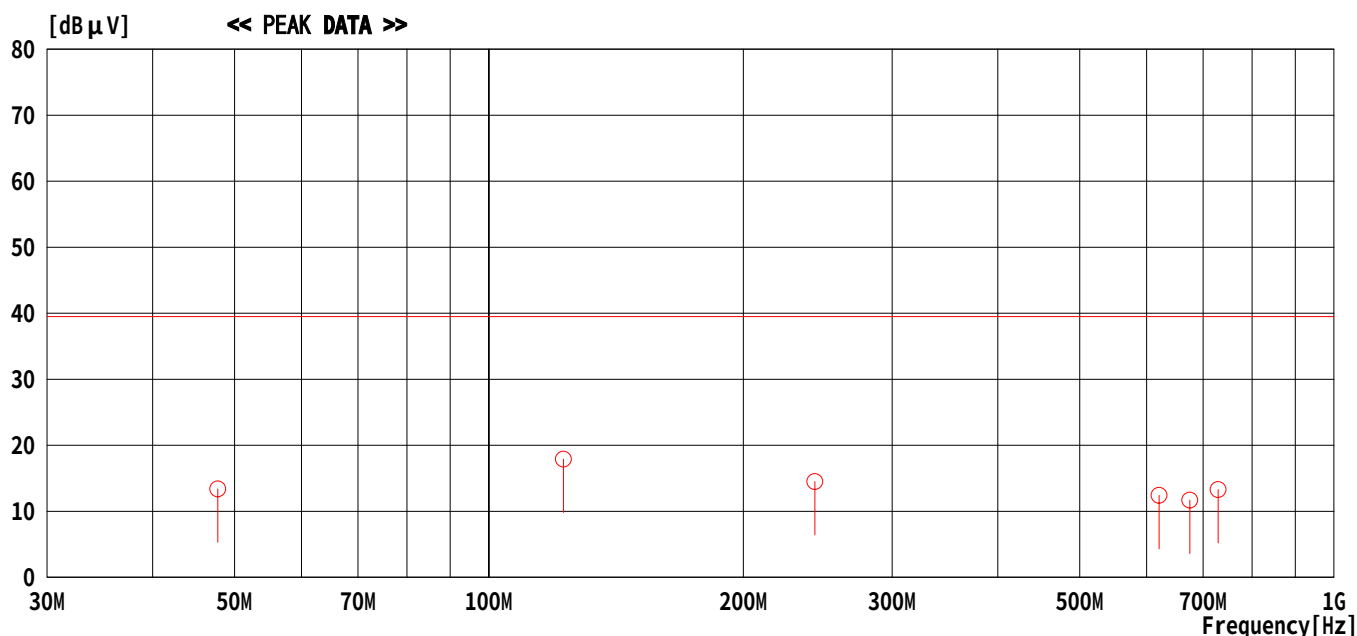
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1 + Rec (1Vp-p : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

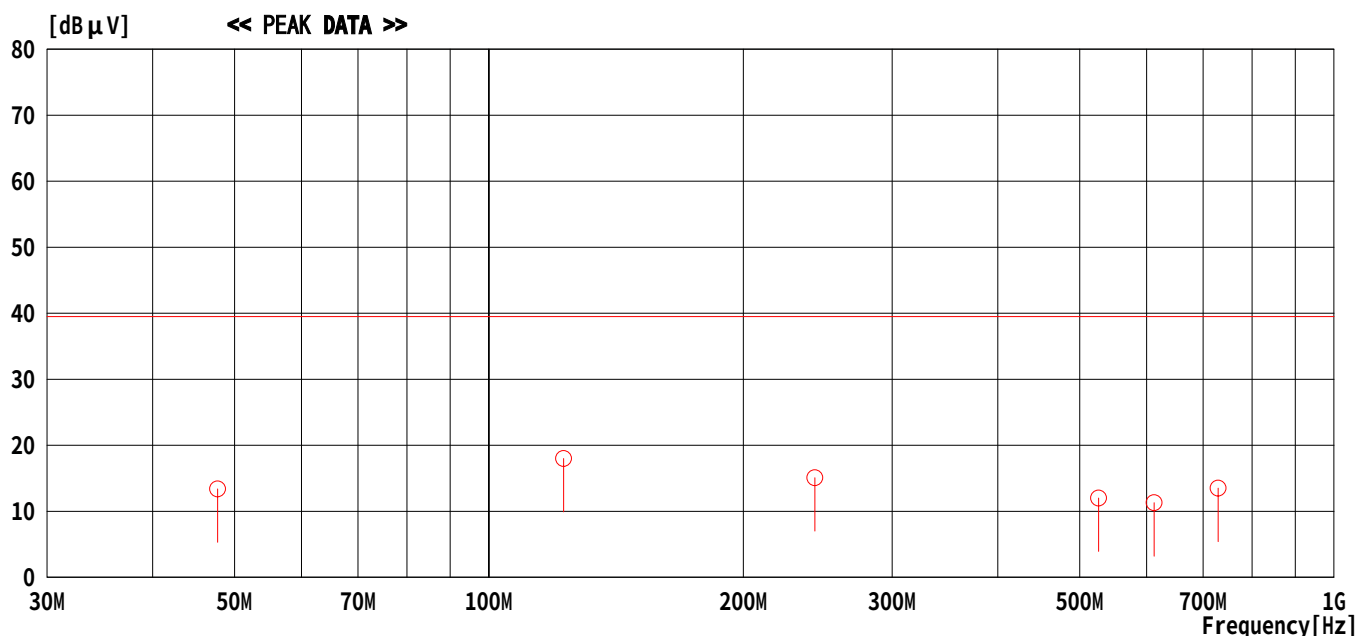
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1 + Rec (5Vp-p : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

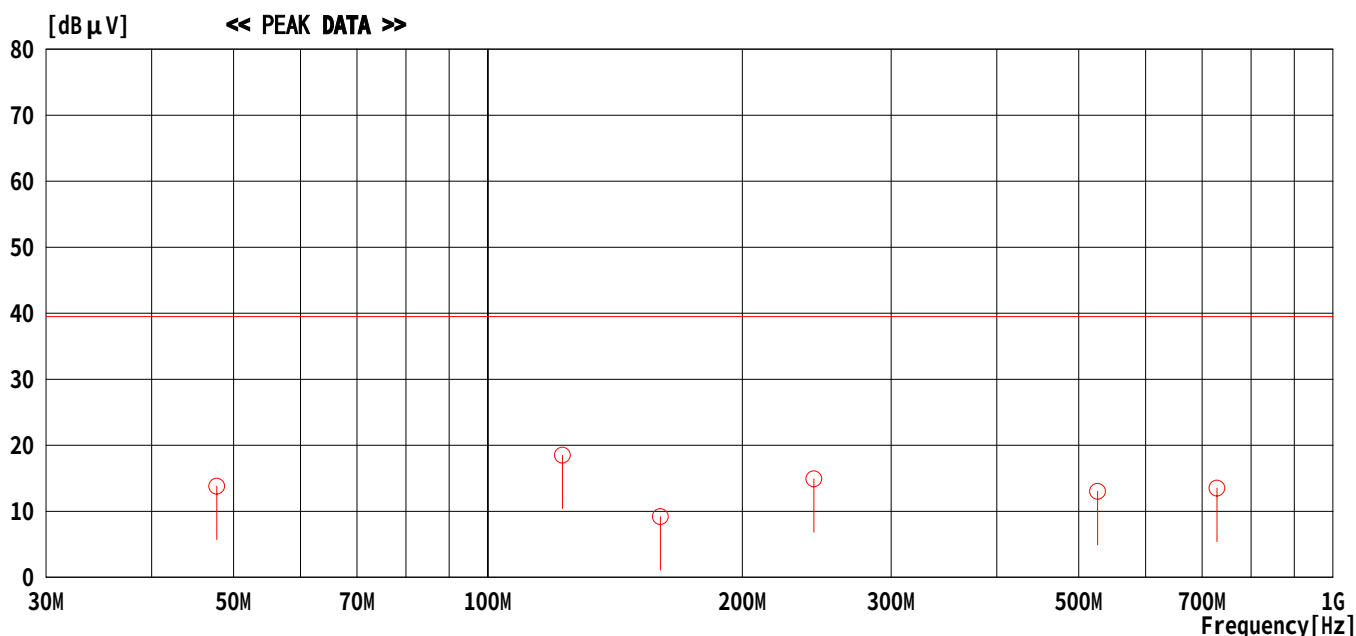
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 2 + Rec (1Vp-p : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

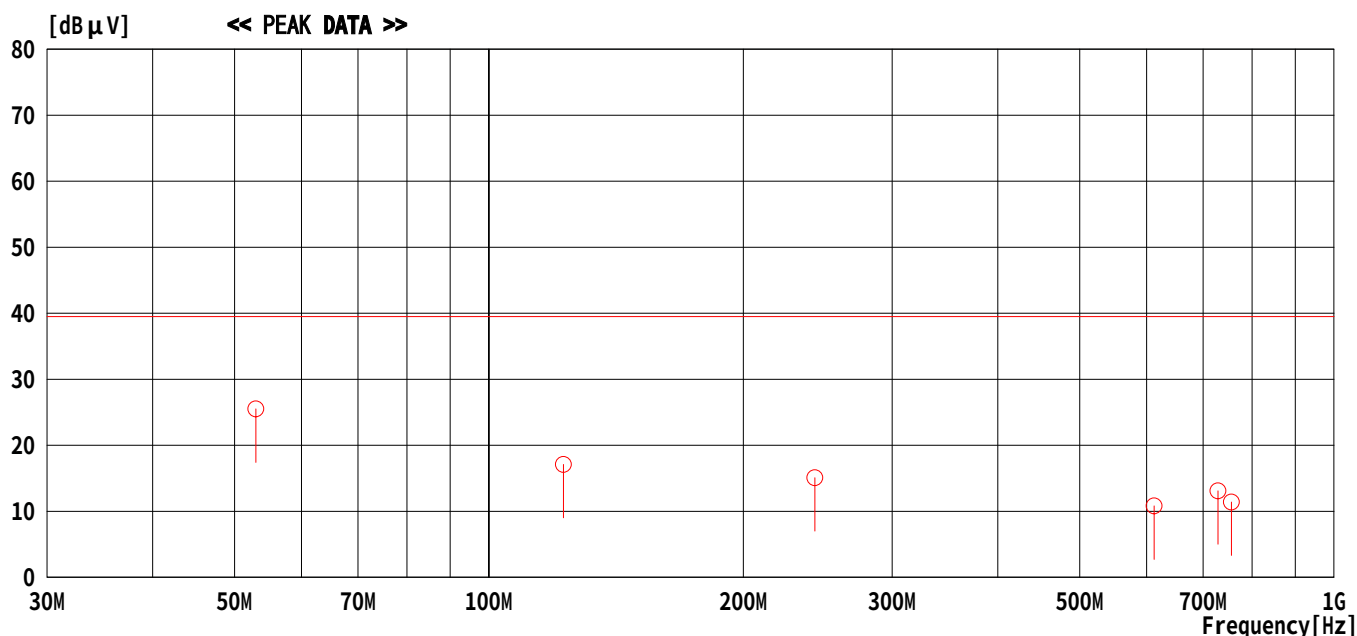
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 2 + Rec (5Vp-p : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

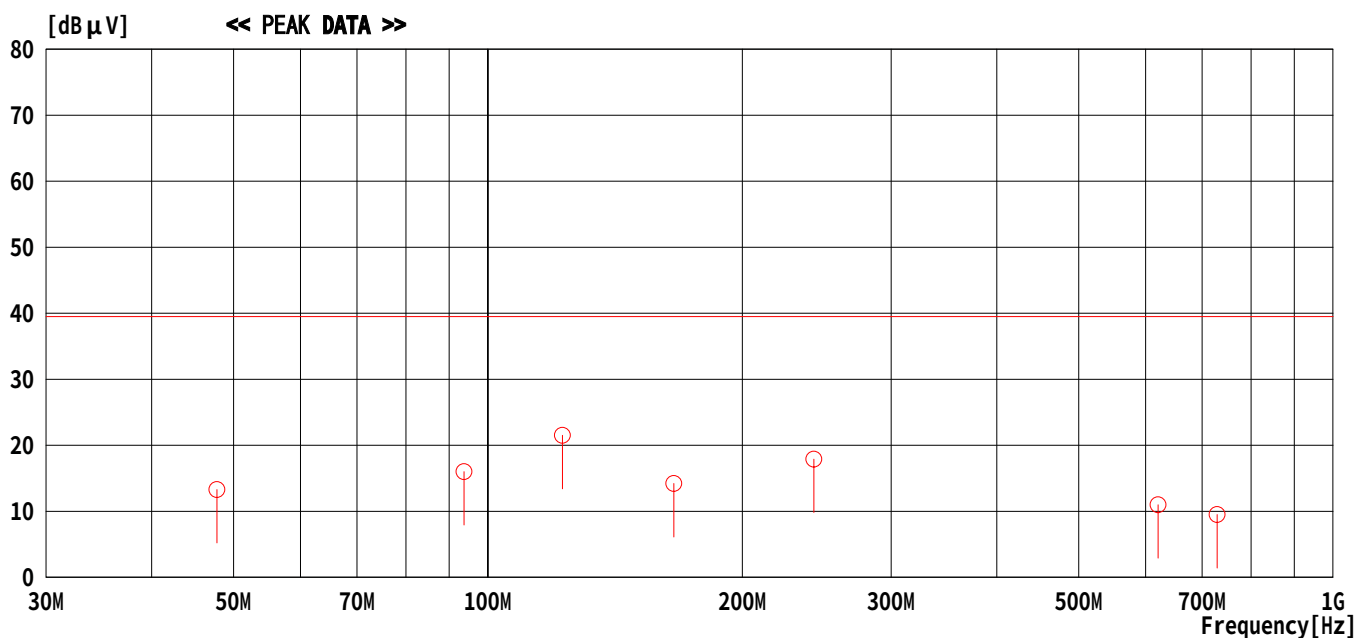
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK + Rec (3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

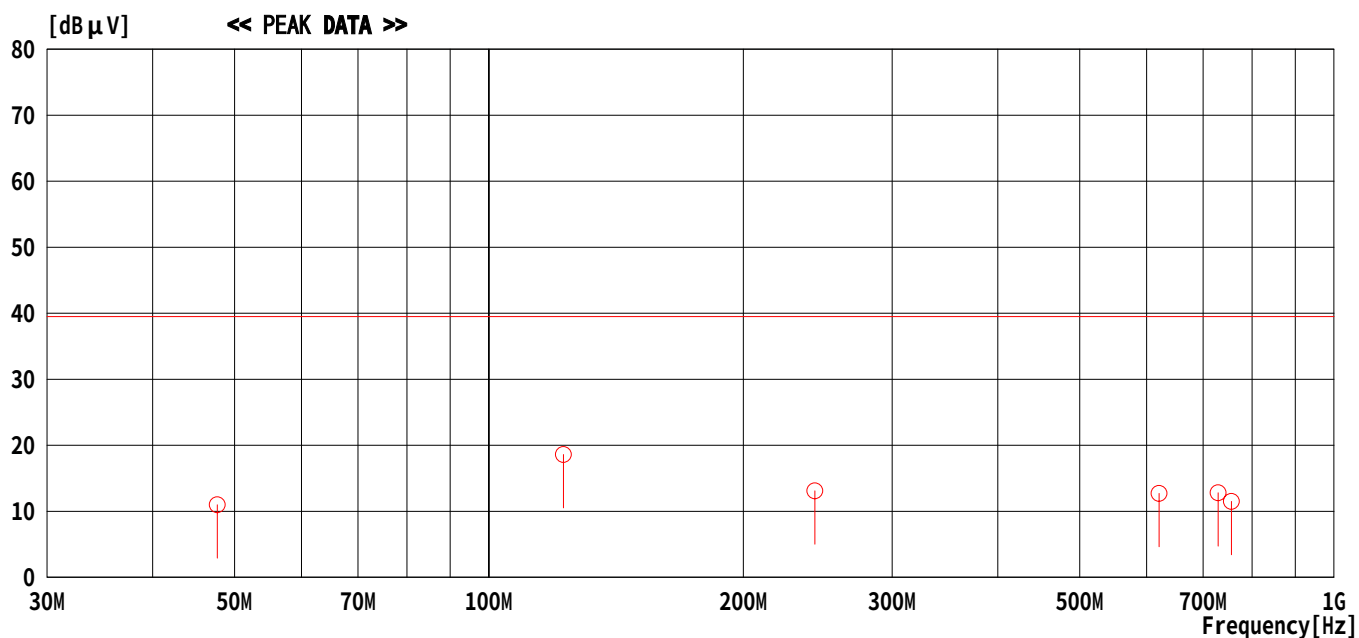
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD PLAY + Rec (3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

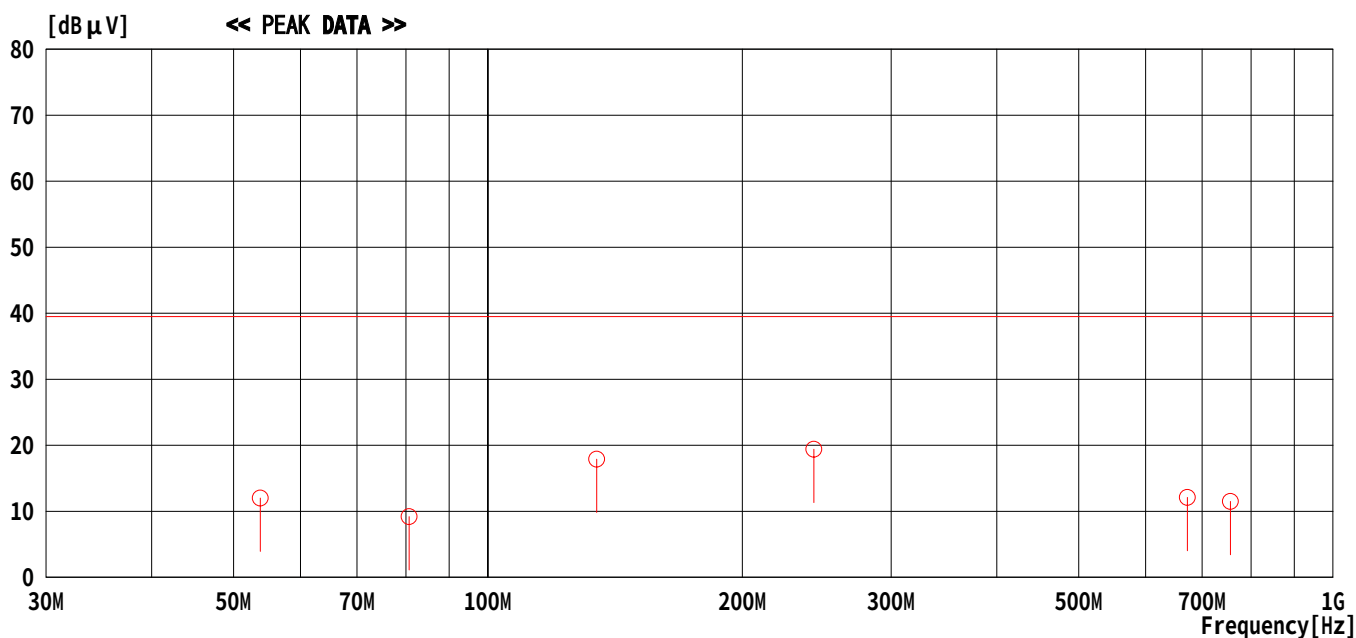
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : TV Reception + Rec (0dBmV: 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

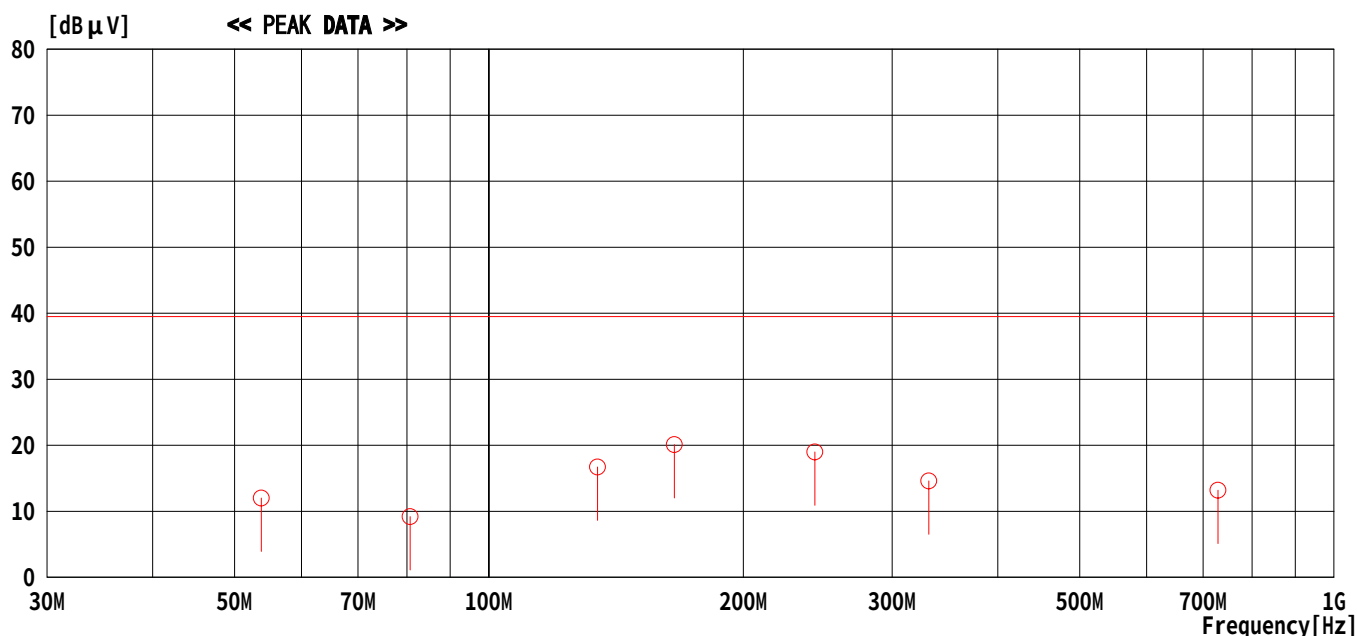
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : TV Reception + Rec (25dBmV: 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

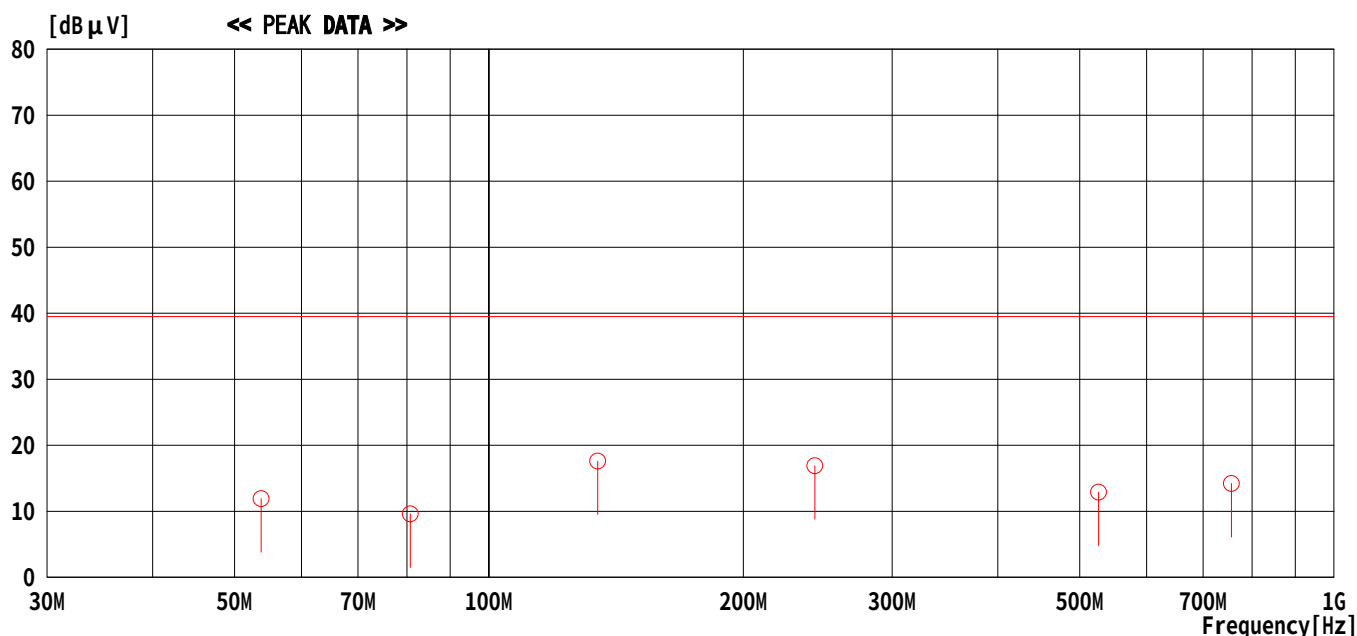
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV INPUT 1 + Rec (1Vp-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

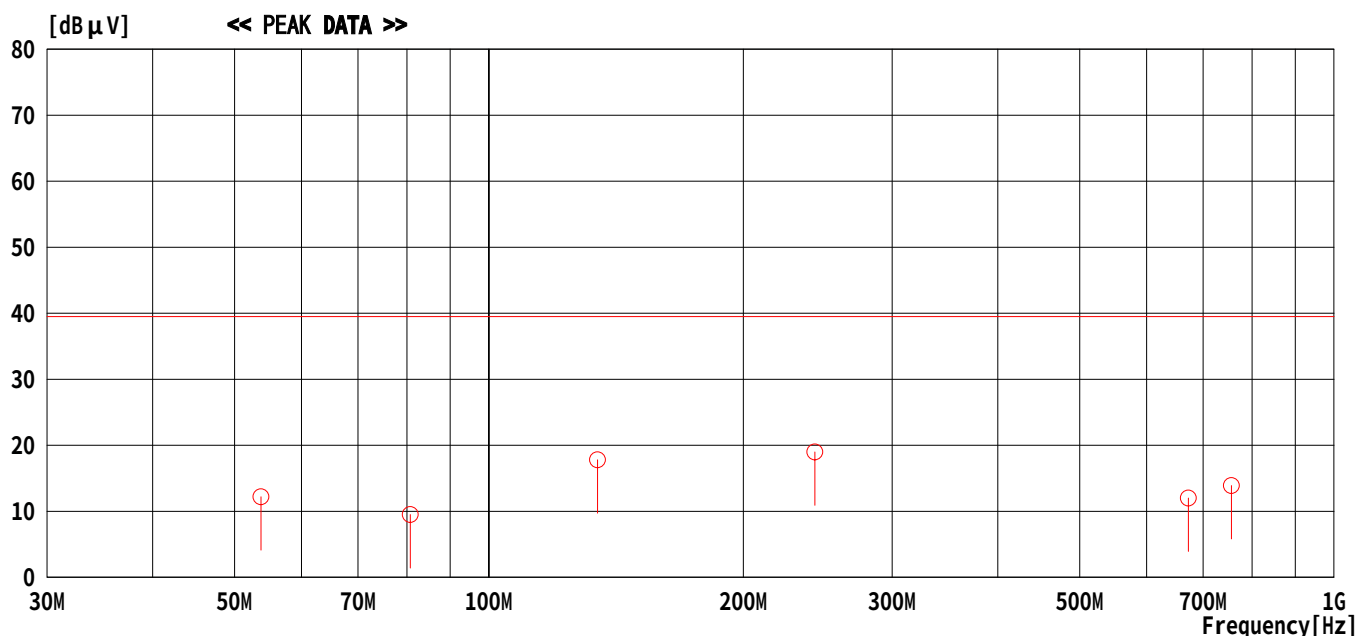
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV INPUT 1 + Rec (5Vp-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

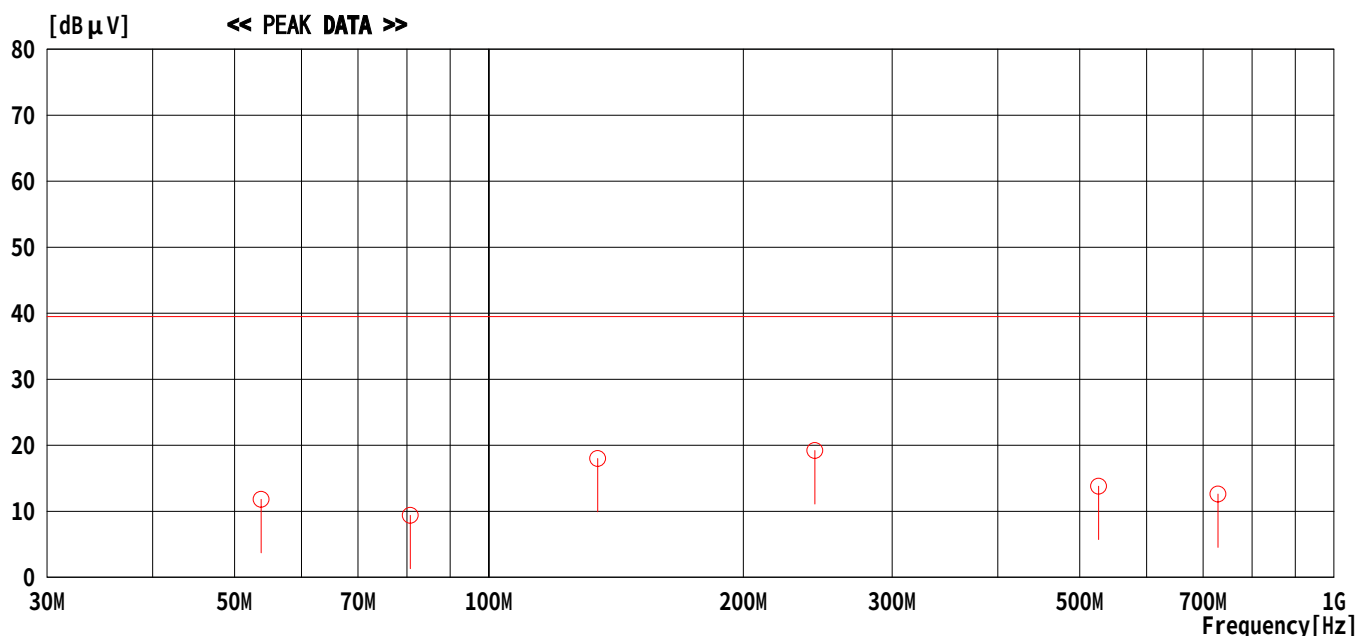
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV INPUT 2 + Rec (1Vp-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

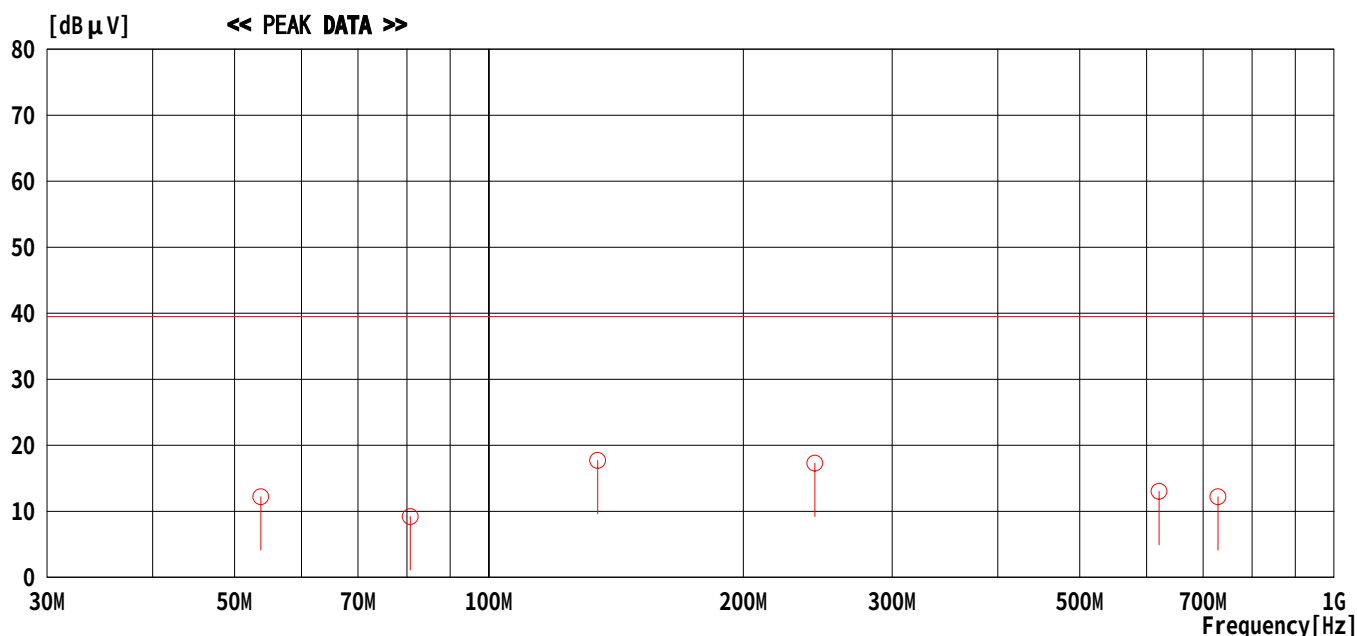
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV INPUT 2 + Rec (5Vp-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

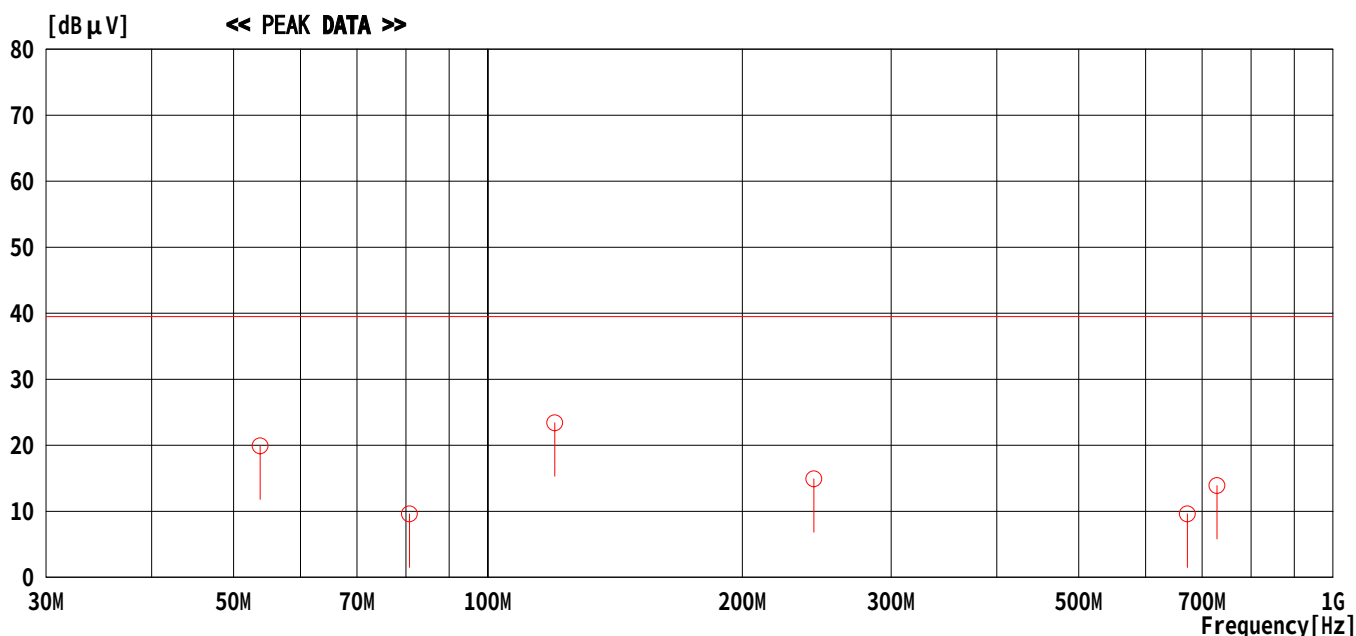
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK + Rec (4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF RF SPURIOUS TEST

UL Apex Co.,Ltd.

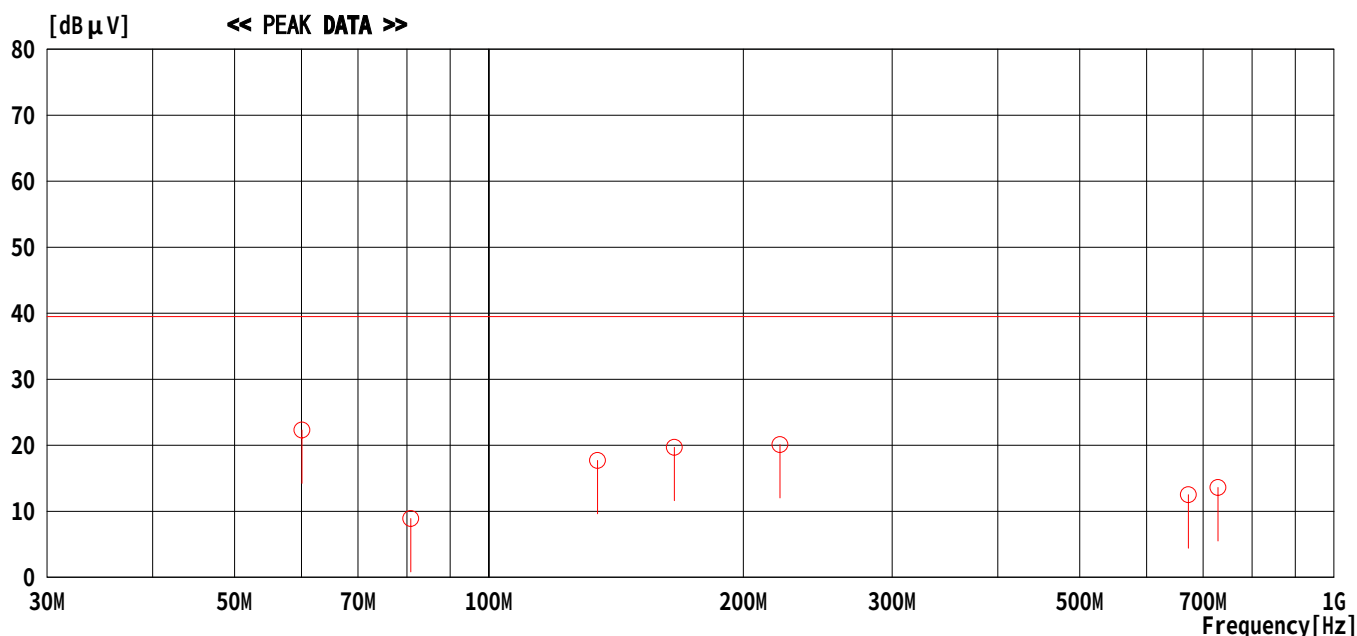
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 23°C/39%

REPORT NO : 25KE0040-YW-1
DATE : June 23 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD PLAY + Rec (4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

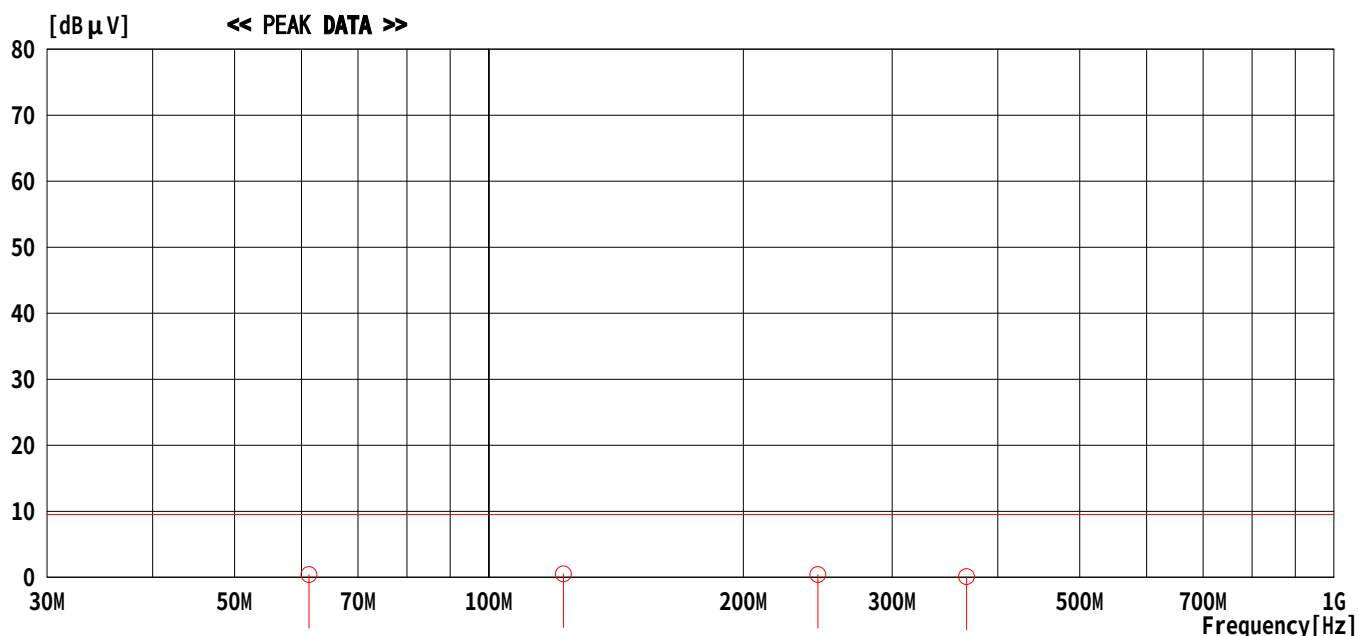
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input1 + Rec (1Vp-p : 3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	61.2500	20.9	----	-20.5	0.4	----	9.5	----	9.1	----	-
2	122.5000	21.1	----	-20.6	0.5	----	9.5	----	9.0	----	-
3	183.7500	20.1	----	-20.5	-0.4	----	9.5	----	9.9	----	-
4	245.0000	20.8	----	-20.4	0.4	----	9.5	----	9.1	----	-
5	306.2500	19.8	----	-20.4	-0.6	----	9.5	----	10.1	----	-
6	367.5000	20.4	----	-20.3	0.1	----	9.5	----	9.4	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

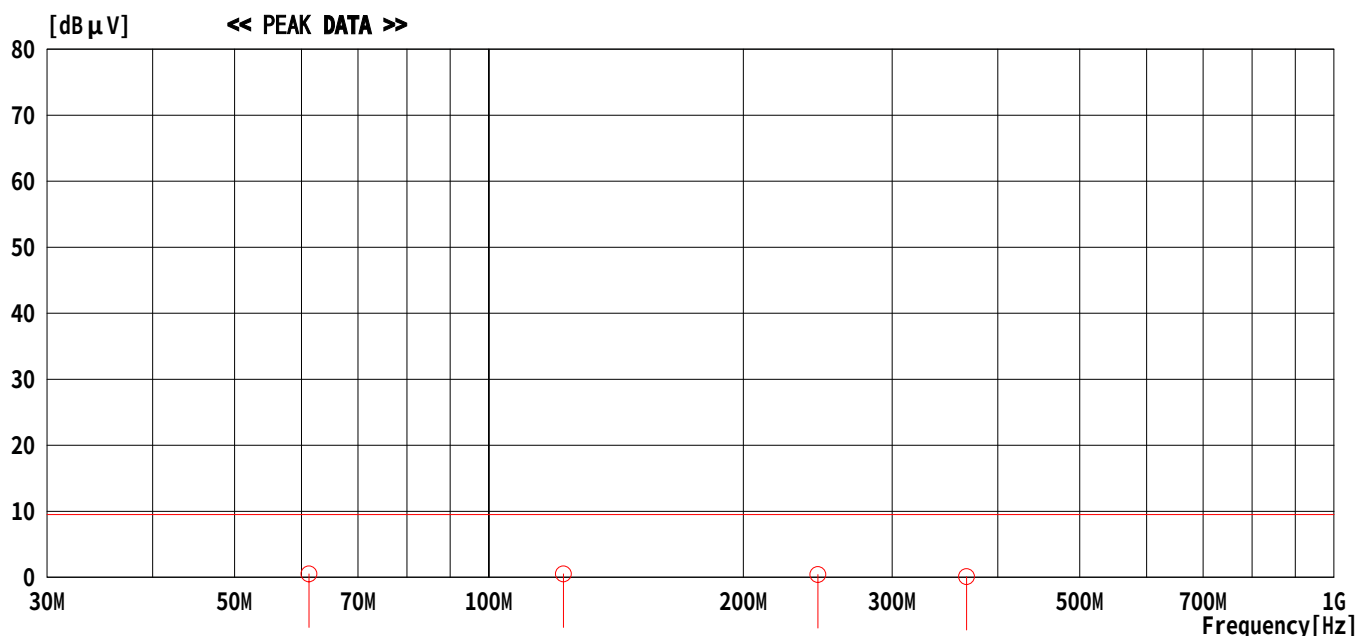
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input1 + Rec (5Vp-p : 3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	61.2500	21.0	----	-20.5	0.5	----	9.5	----	9.0	----	-
2	122.5000	21.1	----	-20.6	0.5	----	9.5	----	9.0	----	-
3	183.7500	20.2	----	-20.5	-0.3	----	9.5	----	9.8	----	-
4	245.0000	20.8	----	-20.4	0.4	----	9.5	----	9.1	----	-
5	306.2500	19.8	----	-20.4	-0.6	----	9.5	----	10.1	----	-
6	367.5000	20.4	----	-20.3	0.1	----	9.5	----	9.4	----	-

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

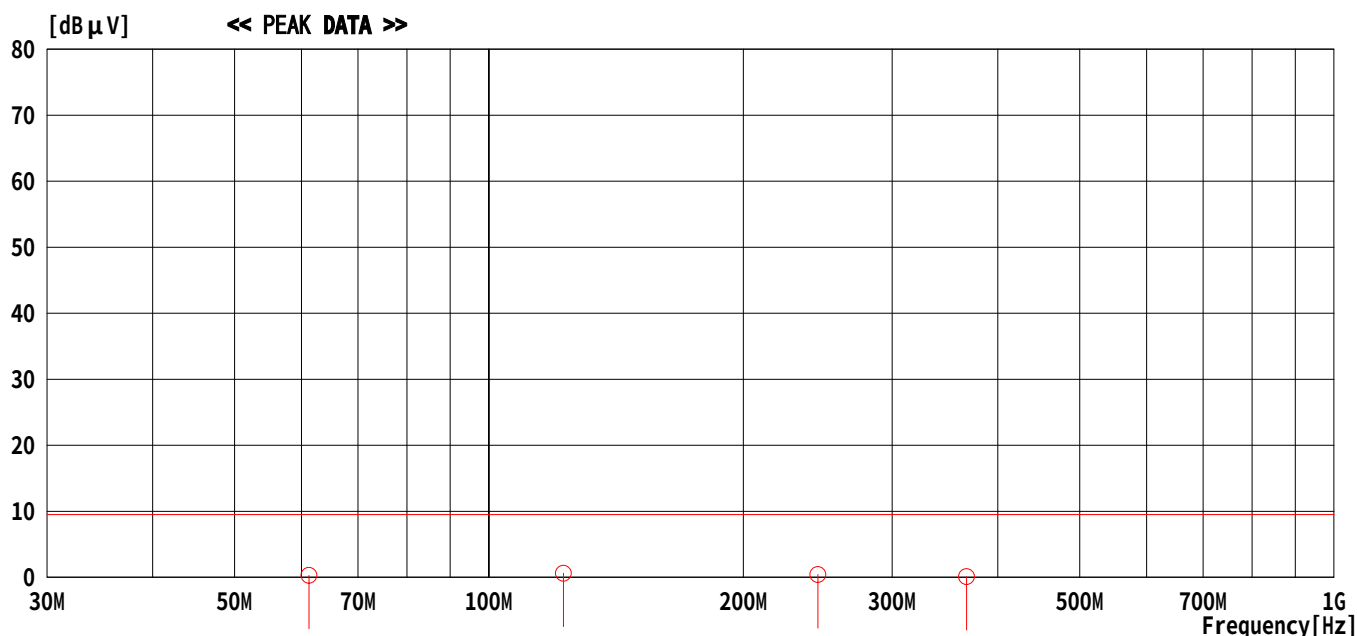
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input2 + Rec (1Vp-p : 3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	61.2500	20.8	----	-20.5	0.3	----	9.5	----	9.2	----	-
2	122.5000	21.2	----	-20.6	0.6	----	9.5	----	8.9	----	-
3	183.7500	20.3	----	-20.5	-0.2	----	9.5	----	9.7	----	-
4	245.0000	20.8	----	-20.4	0.4	----	9.5	----	9.1	----	-
5	306.2500	19.8	----	-20.4	-0.6	----	9.5	----	10.1	----	-
6	367.5000	20.4	----	-20.3	0.1	----	9.5	----	9.4	----	-

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

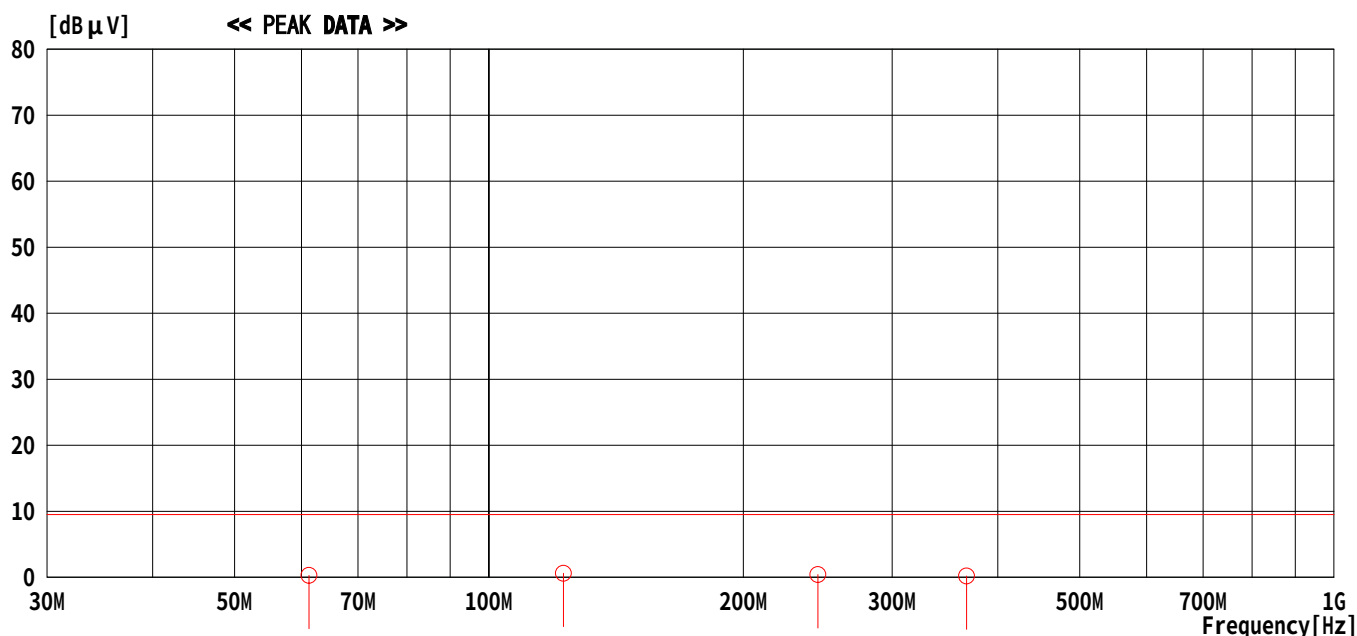
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input2 + Rec (5Vp-p : 3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	61.2500	20.8	----	-20.5	0.3	----	9.5	----	9.2	----	-
2	122.5000	21.2	----	-20.6	0.6	----	9.5	----	8.9	----	-
3	183.7500	20.3	----	-20.5	-0.2	----	9.5	----	9.7	----	-
4	245.0000	20.8	----	-20.4	0.4	----	9.5	----	9.1	----	-
5	306.2500	19.8	----	-20.4	-0.6	----	9.5	----	10.1	----	-
6	367.5000	20.5	----	-20.3	0.2	----	9.5	----	9.3	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

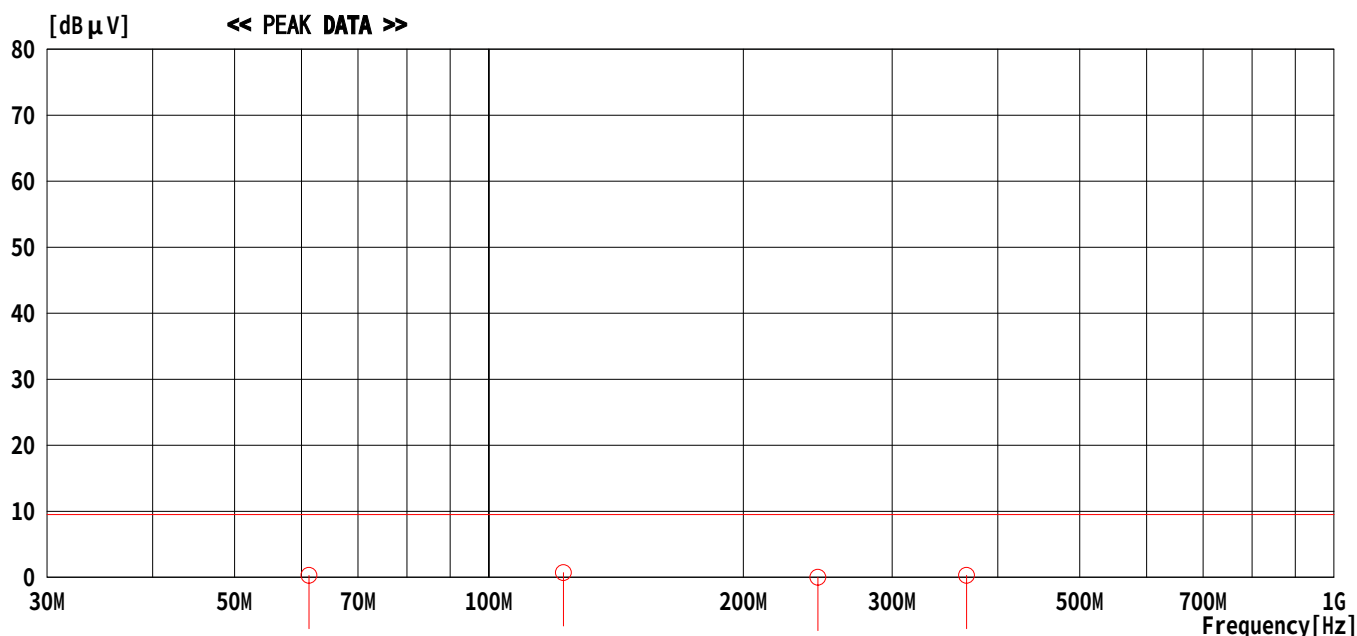
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK + Rec (3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	61.2500	20.8	----	-20.5	0.3	----	9.5	----	9.2	----	-
2	122.5000	21.3	----	-20.6	0.7	----	9.5	----	8.8	----	-
3	183.7500	20.3	----	-20.5	-0.2	----	9.5	----	9.7	----	-
4	245.0000	20.4	----	-20.4	0.0	----	9.5	----	9.5	----	-
5	306.2500	19.7	----	-20.4	-0.7	----	9.5	----	10.2	----	-
6	367.5000	20.6	----	-20.3	0.3	----	9.5	----	9.2	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

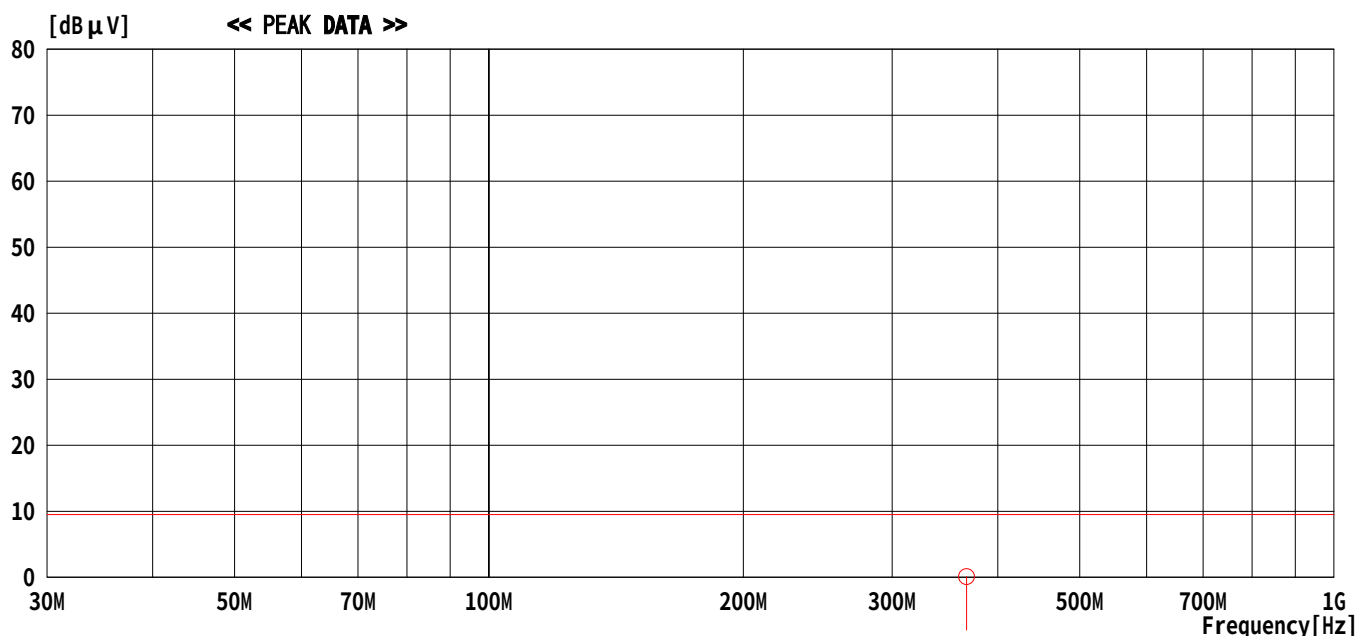
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD PLAY + Rec (3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	61.2500	20.0	----	-20.5	-0.5	----	9.5	----	10.0	----	-
2	122.5000	20.1	----	-20.6	-0.5	----	9.5	----	10.0	----	-
3	183.7500	20.0	----	-20.5	-0.5	----	9.5	----	10.0	----	-
4	245.0000	20.1	----	-20.4	-0.3	----	9.5	----	9.8	----	-
5	306.2500	19.7	----	-20.4	-0.7	----	9.5	----	10.2	----	-
6	367.5000	20.4	----	-20.3	0.1	----	9.5	----	9.4	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

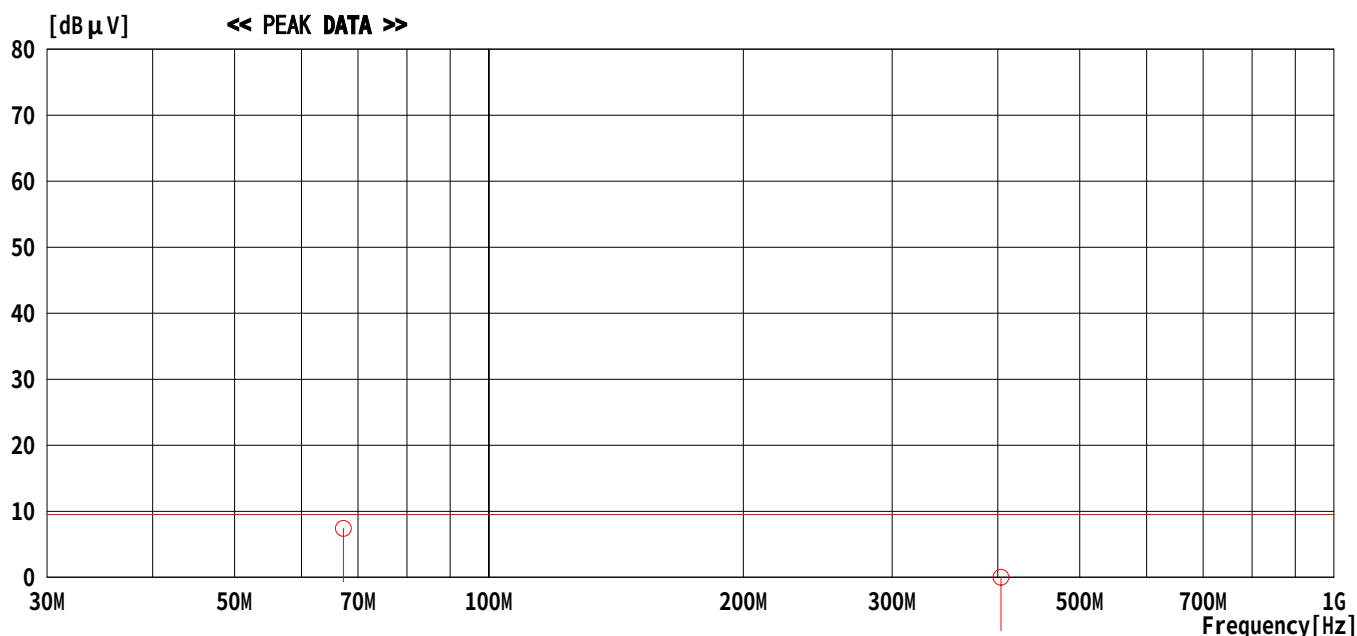
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input1 + Rec (1Vp-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

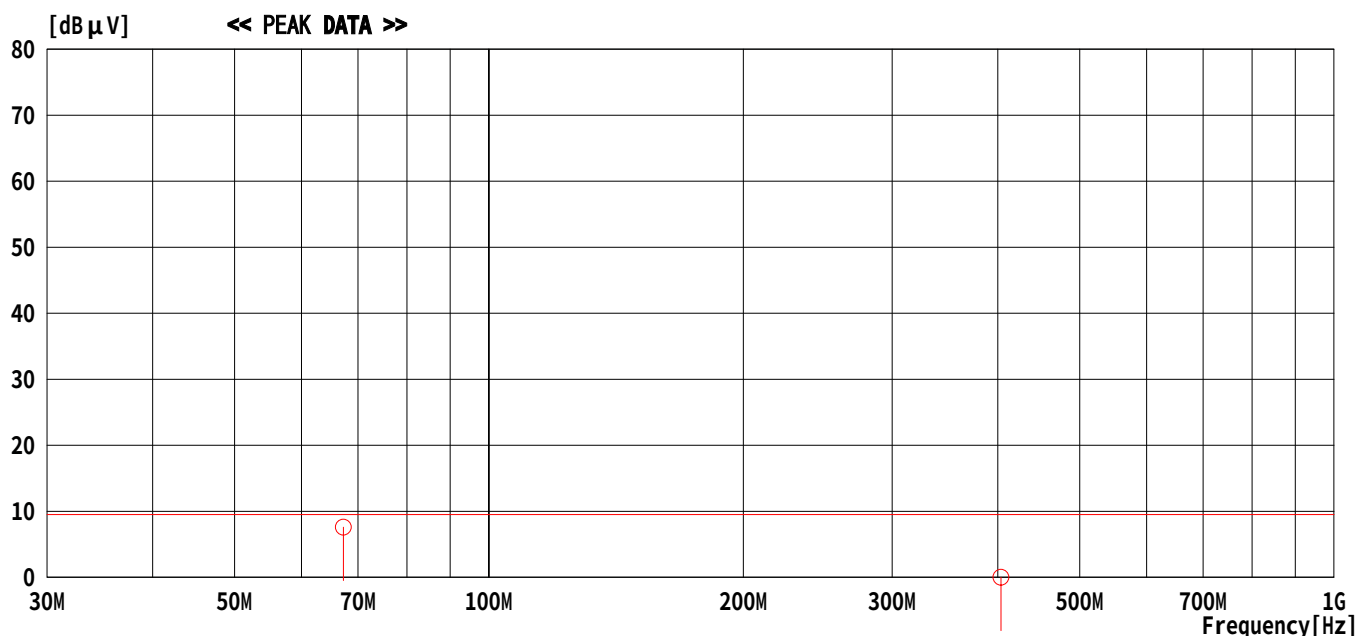
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input1 + Rec (5Vp-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	67.2500	28.0	----	-20.4	7.6	----	9.5	----	1.9	----	-
2	134.5000	19.9	----	-20.6	-0.7	----	9.5	----	10.2	----	-
3	201.7500	19.7	----	-20.4	-0.7	----	9.5	----	10.2	----	-
4	269.0000	20.3	----	-20.4	-0.1	----	9.5	----	9.6	----	-
5	336.2500	19.9	----	-20.3	-0.4	----	9.5	----	9.9	----	-
6	403.5000	20.3	----	-20.3	0.0	----	9.5	----	9.5	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

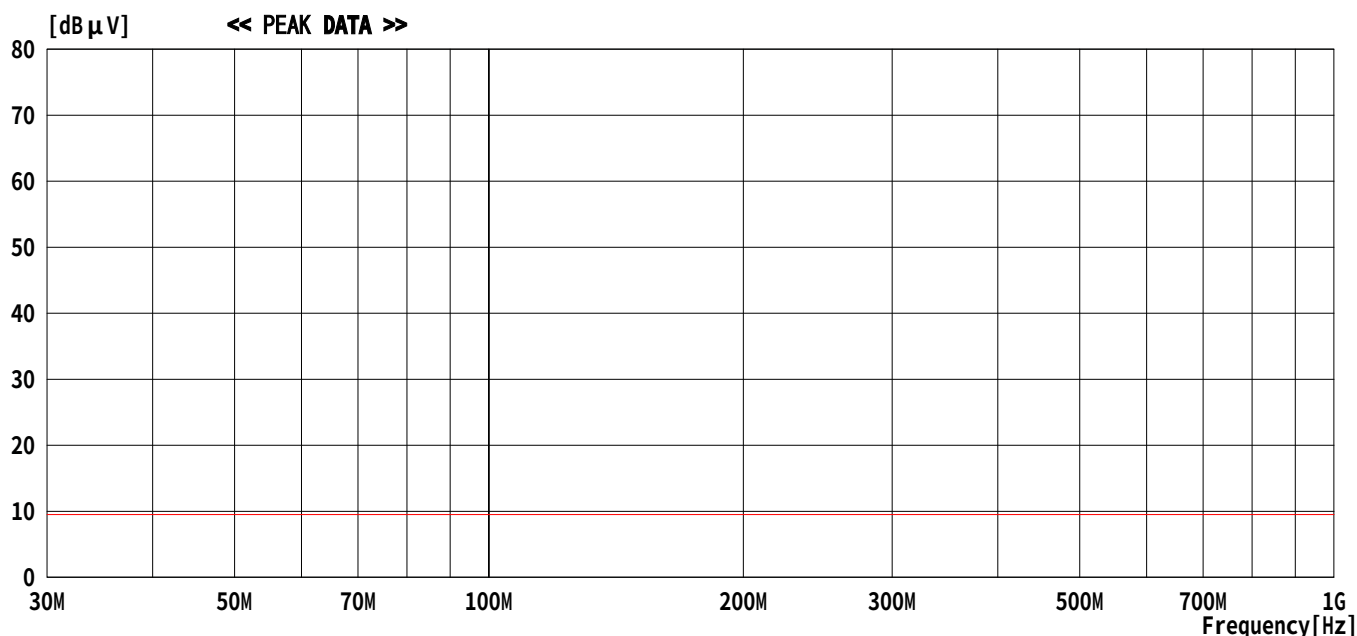
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input2 + Rec (1Vp-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	67.2500	20.1	----	-20.4	-0.3	----	9.5	----	9.8	----	-
2	134.5000	19.8	----	-20.6	-0.8	----	9.5	----	10.3	----	-
3	201.7500	19.7	----	-20.4	-0.7	----	9.5	----	10.2	----	-
4	269.0000	20.1	----	-20.4	-0.3	----	9.5	----	9.8	----	-
5	336.2500	20.0	----	-20.3	-0.3	----	9.5	----	9.8	----	-
6	403.5000	20.2	----	-20.3	-0.1	----	9.5	----	9.6	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

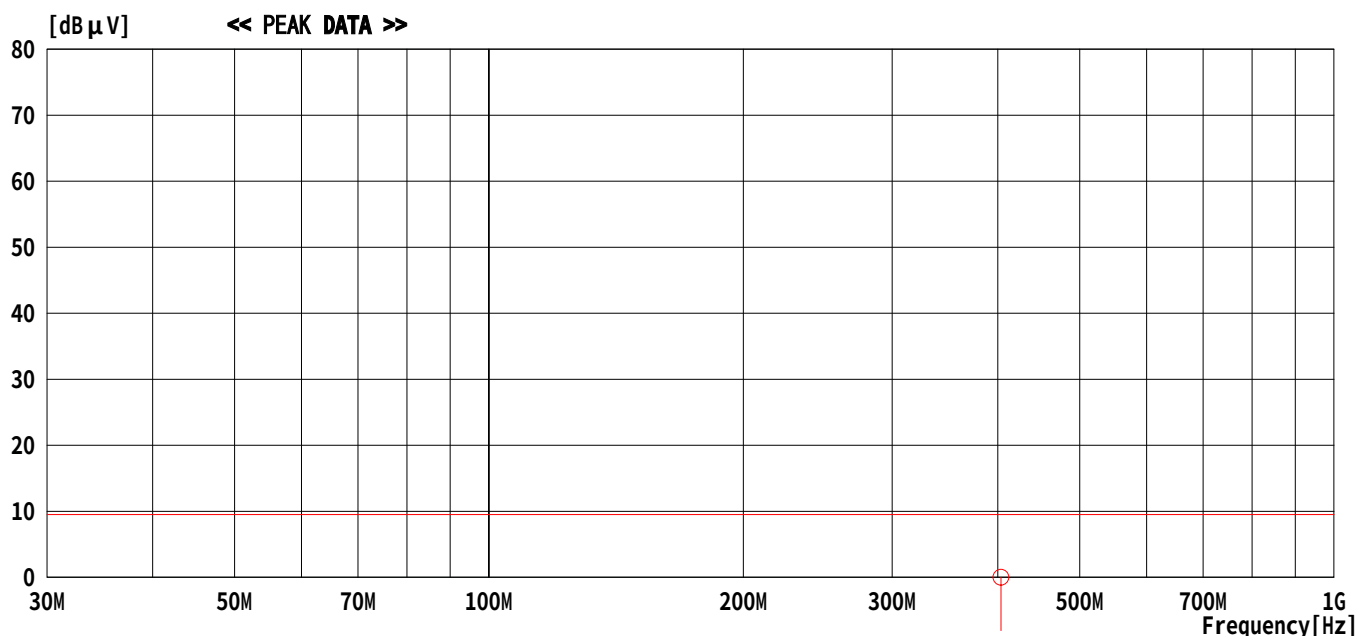
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22 ,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input2 + Rec (5Vp-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	67.2500	20.1	----	-20.4	-0.3	----	9.5	----	9.8	----	-
2	134.5000	19.8	----	-20.6	-0.8	----	9.5	----	10.3	----	-
3	201.7500	19.7	----	-20.4	-0.7	----	9.5	----	10.2	----	-
4	269.0000	20.1	----	-20.4	-0.3	----	9.5	----	9.8	----	-
5	336.2500	19.8	----	-20.3	-0.5	----	9.5	----	10.0	----	-
6	403.5000	20.3	----	-20.3	0.0	----	9.5	----	9.5	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

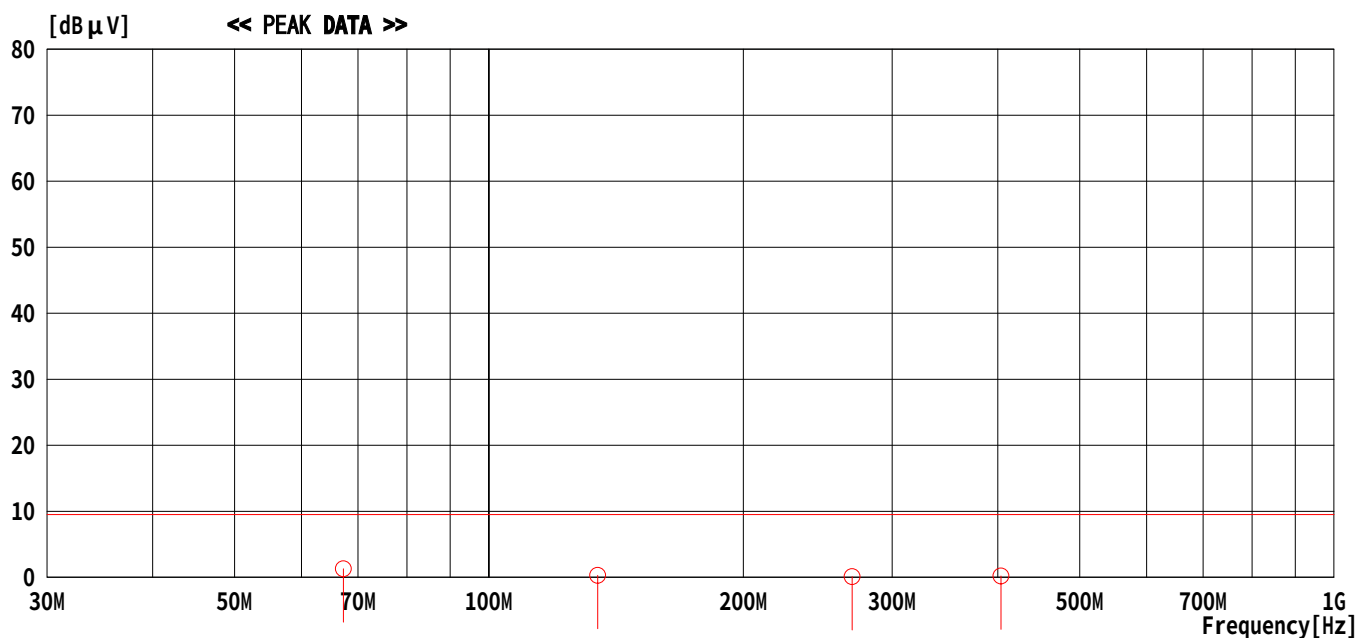
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK + Rec (4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	67.2500	21.7	----	-20.4	1.3	----	9.5	----	8.2	----	-
2	134.5000	20.9	----	-20.6	0.3	----	9.5	----	9.2	----	-
3	201.7500	19.7	----	-20.4	-0.7	----	9.5	----	10.2	----	-
4	269.0000	20.5	----	-20.4	0.1	----	9.5	----	9.4	----	-
5	336.2500	19.7	----	-20.3	-0.6	----	9.5	----	10.1	----	-
6	403.5000	20.5	----	-20.3	0.2	----	9.5	----	9.3	----	-

CALCULATION:READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

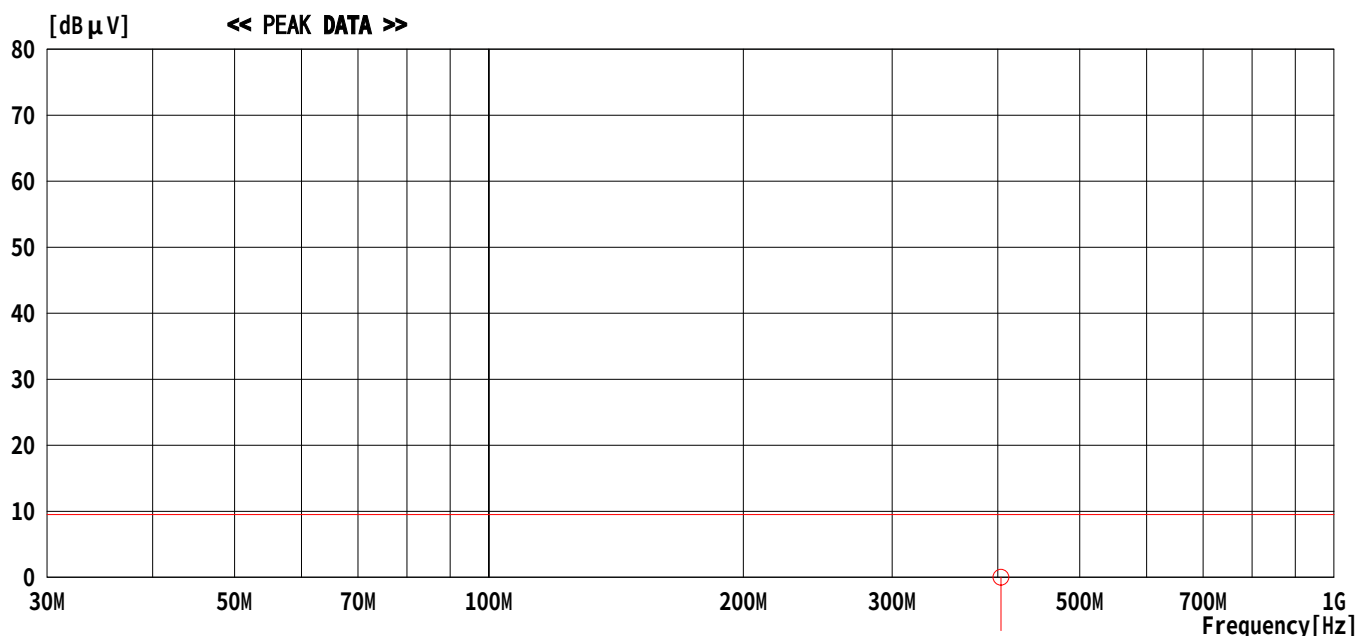
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VR4XSU
TEMP./HUMID. : 24°C/41%

REPORT NO : 25KE0040-YW-1
DATE : June 22,2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD PLAY + Rec (4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:PEAK



NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μV]	- [dB μV]		Peak [dB μV]	- [dB μV]	Peak [dB μV]	- [dB μV]	[dB]	[dB]	
1	67.2500	20.1	----	-20.4	-0.3	----	9.5	----	9.8	----	-
2	134.5000	19.9	----	-20.6	-0.7	----	9.5	----	10.2	----	-
3	201.7500	19.7	----	-20.4	-0.7	----	9.5	----	10.2	----	-
4	269.0000	20.1	----	-20.4	-0.3	----	9.5	----	9.8	----	-
5	336.2500	19.9	----	-20.3	-0.4	----	9.5	----	9.9	----	-
6	403.5000	20.3	----	-20.3	0.0	----	9.5	----	9.5	----	-

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP.GAIN

Picture Sensitivity Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD/VCR
Model Number : D-VR4XSU
Power : 120V/60Hz
Description : TV Reception
Remarks : -

Report Number : 25KE0040-YW-1
Regulation : FCC Part15 SubpartB
Date : June 9, 2005
Temp / Humid : 23deg.C / 41%
Engineer : Tsubasa Takayama

Ch [VHF]	Frequency [MHz]	Sensitivity [MHz]		Ch [UHF]	Frequency [MHz]	Sensitivity [MHz]	
		[dBμV]	[μV]			[dB μ V]	[μ V]
2	55.25	20.0	10.0	14	471.25	21.2	11.5
3	61.25	19.6	9.5	20	507.25	21.7	12.2
4	67.25	18.5	8.4	26	543.25	22.5	13.3
5	77.25	18.9	8.8	32	579.25	23.2	14.5
6	83.25	18.4	8.3	38	615.25	24.0	15.8
7	175.25	20.6	10.7	44	651.25	24.6	17.0
8	181.25	20.5	10.6	50	687.25	24.6	17.0
9	187.25	20.0	10.0	56	723.25	24.8	17.4
10	193.25	20.0	10.0	62	759.25	24.7	17.2
11	199.25	20.0	10.0	69	801.25	23.8	15.5
12	205.25	20.0	10.0	-	-	-	-
13	211.25	20.3	10.4	-	-	-	-
Average VHF			9.7	Average UHF			15.1
Average UHF/VHF : $20 \log \text{UHF}[\mu\text{V}] / \text{VHF}[\mu\text{V}] =$				3.8 [Limit : 8.0dB]			

Noise Figure Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD/VCR
Model Number : D-VR4XSU
Power : 120V/60Hz
Description : TV Reception
Remarks : -

Report Number : 25KE0040-YW-1
Regulation : FCC Part15 Subpart B
Date : June 8, 2005
Temp / Humid : 24deg.C / 39%
Engineer : Tsubasa Takayama

Ch	Frequency [MHz]	Meter Reading [dB]	Correction Factor [dB]	Noise Figure [dB]	Limits [dB]	Margin [dB]
TV VHF Fundamental						
2	55.25	6.4	0.2	6.2	14.0	7.8
3	61.25	4.8	0.2	4.6	14.0	9.4
4	67.25	4.9	0.2	4.7	14.0	9.3
5	77.25	3.6	0.2	3.4	14.0	10.6
6	83.25	3.5	0.2	3.3	14.0	10.7
7	175.25	4.9	0.2	4.7	14.0	9.3
8	181.25	5.0	0.2	4.8	14.0	9.2
9	187.25	4.9	0.2	4.7	14.0	9.3
10	193.25	4.8	0.2	4.6	14.0	9.4
11	199.25	4.6	0.2	4.4	14.0	9.6
12	205.25	4.2	0.2	4.0	14.0	10.0
13	211.25	4.1	0.2	3.9	14.0	10.1
TV UHF Fundamental						
14	471.25	5.2	0.3	4.9	14.0	9.1
20	507.25	5.3	0.3	5.0	14.0	9.0
26	543.25	5.6	0.3	5.3	14.0	8.7
32	579.25	7.2	0.3	6.9	14.0	7.1
38	615.25	7.3	0.3	7.0	14.0	7.0
44	651.25	7.8	0.3	7.5	14.0	6.5
50	687.25	7.4	0.3	7.1	14.0	6.9
56	723.25	7.4	0.4	7.0	14.0	7.0
62	759.25	7.3	0.4	6.9	14.0	7.1
69	801.25	6.8	0.4	6.4	14.0	7.6
Mid band						
14	121.25	3.8	0.2	3.6	14.0	10.4
16	133.25	7.8	0.2	7.6	14.0	6.4
18	145.25	6.3	0.2	6.1	14.0	7.9
20	157.25	5.8	0.2	5.6	14.0	8.4
22	169.25	5.3	0.2	5.1	14.0	8.9
Super band						
23	217.25	4.0	0.2	3.8	14.0	10.2
26	235.25	4.3	0.2	4.1	14.0	9.9
29	253.25	4.6	0.2	4.4	14.0	9.6
32	271.25	4.8	0.2	4.6	14.0	9.4
36	295.25	5.0	0.2	4.8	14.0	9.2

Test Report No : 25KE0040-YW-1

APPENDIX 3

Test Instruments

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
APVBT01	VIDEO BOOSTER	UL Apex	-	RF, ATS	-
APTVG01	TV Generator	Leader	408NPS	RE, RF, ATS	Pre Check
APSPA04	Spectrum Analyzer	Advantest	R3265	AT, RF, ATS, PS	2005/05/06 * 12
IP-06	Matching Pad	TME	ZT-301	PS, NF	2005/05/17 * 12
IP-03	Matching Pad	TME	ZT-130	AT, RF, ATS, PS	2004/09/10 * 12
APNFM01	Noise Figure Indicator	Elena	ENF-2005	NF	2004/10/04 * 12
APNFS01	Noise Source	Elena	MC1100	NF	-
AV01-01	Signal Generator	Rohde & Schwarz	SMY01	PS	2005/02/23 * 12
AF-05	Pre Amplifier	Hewlett Packard	8447D	AT, RF, ATS	2005/07/12 * 12
AF-06	Pre Amplifier	Agilent	HP8449B	AT	2005/07/14 * 12
APCBL-01	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2004/12/27 * 12
APCBL-02	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2004/12/27 * 12
OS-02	Digital Humidity Indicator	SATO	PC-5000TRH- II	RF, ATS, PS, NF	2004/04/06 * 24
AF-02	Pre Amplifier	Anritsu	MH648A	RE	2005/03/25 * 12
AT-03	Attenuator	Anritsu	MP721B	RE	2005/07/11 * 12
BA-10	Biconical Antenna	Schwarzbeck	BBA9106	RE	2004/11/16 * 12
APANT12	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2005/05/16 * 12
SA-07	Spectrum Analyzer	Advantest	R3273	RE	2005/07/11 * 12
TR-02	Test Receiver	Rohde & Schwarz	ESVS30	RE	2005/05/10 * 12
CC-10RC	Yokowa No.1 open coaxial(0.01-1000MHz)	UL Apex	CC-11,CC-12,CC-14, CC-15,CC-16,,SW-11 ,SW-12	RE	2005/03/25 * 12
YOATS-01	Open Test Site	JSE	3m, 10m	RE	2005/04/30 * 12
OS-06	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2004/04/01 * 24
AF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2005/03/25 * 12
AT-06	Attenuator	Anritsu	MP721B	RE	2005/07/11 * 12
BA-06	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/01/29 * 12
LA-07	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2005/01/29 * 12
SA-06	Spectrum Analyzer	Advantest	R3273	RE	2004/11/02 * 12
TR-06	Test Receiver	Rohde & Schwarz	ESVS10	RE	2004/10/29 * 12
CC-30RC	Yokowa No.3 open coaxial(0.01-1000MHz)	UL Apex	CC-31,CC-32,CC-33, CC-34,CC-35,CC-36, CC-37,SW-31,SW-32	RE	2005/03/25 * 12
YOATS-03	Open Test Site	JSE	3m, 10m	RE	2005/05/04 * 12
OS-16	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2004/05/07 * 24
APTVG04	TV Generator	Leader	408	RE	Pre Check
TR-05	Test Receiver	Rohde & Schwarz	ESHS10	CE	2004/10/21 * 12
CC-3S	Yokowa No.3 shield coaxial(0.01-1000MHz)	UL Apex	CC-34,CC-35,CC-36, CC-38,SW-31,SW-32	CE	2005/03/25 * 12
OS-11	Digital Humidity Indicator	SATO	PC-5000TRH	CE	2004/04/20 * 24
HA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2005/04/06 * 12
CC-C3	Microwave Cable	-	-	RE	2004/12/16 * 12
LS-04	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE (EUT)	2004/10/29 * 12
LS-07	LISN(AMN)	Schwarzbeck	NSLK8126	CE	2004/10/29 * 12

All equipment is calibrated with traceable calibrations . Each calibration is traceable to the national or international standards .

Test Item :

CE: Conducted emission
 RE: Radiated emission
 AT: Antenna terminal disturbance voltage
 RF: RF output level & spurious
 ATS: Antenna transfer switch
 PS: Picture sensitivity
 NF: Noise figure