



Certification EMI TEST REPORT

Test Report No. : 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Type of equipment : DVD Recorder with Video Cassette Recorder
Model number : D-VRW1SU
FCC ID : A7RM2G0B
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-VRW1SC	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 : February 25 to March 3, 2005

Tested by:

Tsubasa Takayama
Engineer of EMC Service

Approved by:

Hiroya Tabata
Leader of EMC Service

UL Apex Co., Ltd.

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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 : Hiroshi Tsujimoto

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-VRW1SU
FCC ID : A7RM2G0B
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 : February 20, 2005
Condition of EUT : Production Prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product description

Model: D-VRW1SU (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, 27W
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

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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	21.0 dB (0.7843 MHz, L1, AV Input 1 + Rec. 5Vp-p)	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	4.8 dB (945.00 MHz, Vertical, DVD Play + Rec.)	Complied
Antenna terminal voltage	ANSI C63.4:2003	2 nW (at 75 ohm)	23.8 dB (628.85320 MHz, CATV tuning)	Complied
RF output level	ANSI C63.4:2003	Video signal: 3000 uV Aural signal: 671 uV	5.4 dB (61.25 MHz, 3ch, TV Reception + Rec.)	Complied
Spurious emission		94.8 uV	22.8 dB (122.5000 MHz, TV Reception + Rec.)	Complied
Transfer switch	ANSI C63.4:2003	9.5 dB	6.4 dB (67.2500 MHz, 4ch, DVD Play + Rec.)	Complied
Picture sensitivity	ANSI C63.4:2003	8 dB	6.2 dB	Complied
Noise figure	FCC/OET MP:2:1986	14 dB	5.0 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.

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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 has enough margin, more than site margin.

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 has enough margin, more than site margin.

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

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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		

No.3 open site

This site has been fully described in a report submitted to FCC office, and listed on September 25, 2003.

(Registration number: 90412)

*NVLAP Lab. Code : 200109-0

3.8 Test setup, Data of EMI & Test instruments

Please refer to Appendix 1 to 3.

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

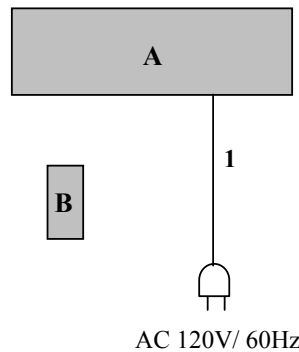
* VCR Play + Rec. mode

* 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-VRW1SU	—	Orion Electric Co., Ltd.	A7RM2G0B	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

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Section 5 : Conducted emission

5.1 Operation environment

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

Date : February 25, 2005

Temperature : See data

Humidity : See data

5.2 Test configuration

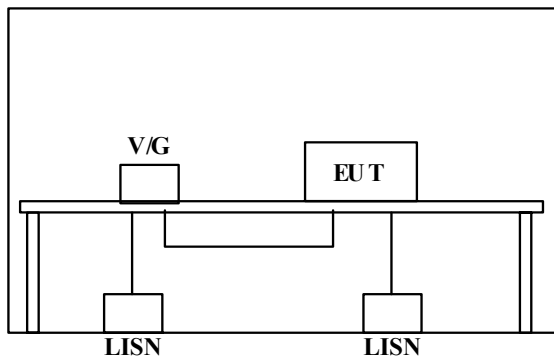
EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The rear of tabletop was located 40 cm to the vertical conducting plane. The rear of EUT was aligned and flushed with rear of tabletop. All other surfaces of tabletop was at least 80 cm from any 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: video generator connected with RF input cable
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated
 Front video in: 75 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 cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated
 Rear audio in: 47k ohm terminated
 Component out: 75 ohm terminated with component cable

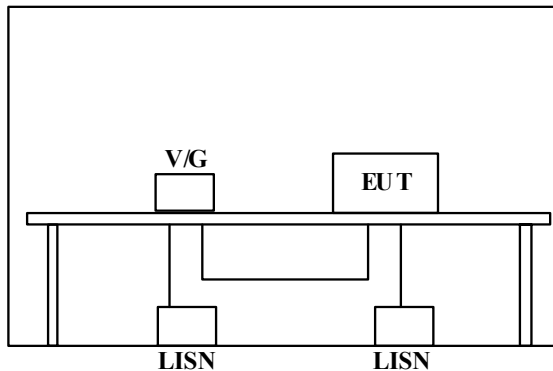
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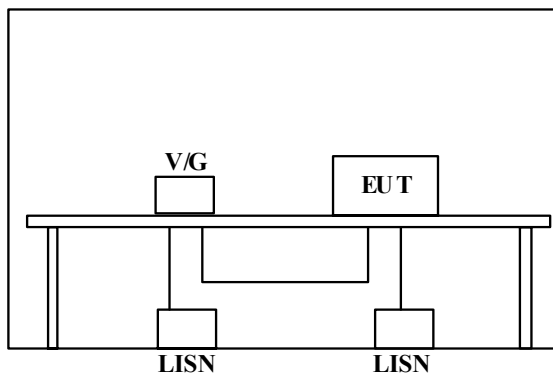
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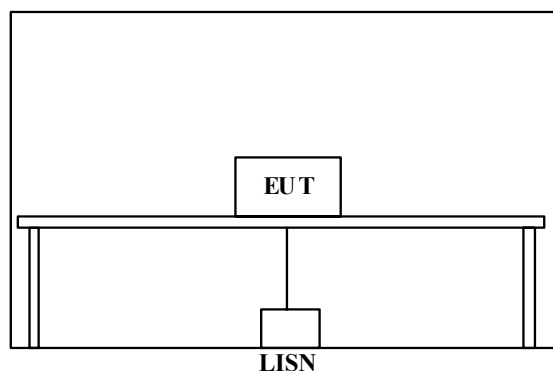
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AV Input 1 + Rec. mode (1 Vp-p input / 5 Vp-p input)**Shielded room**

RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated
 Front video in: video generator connected with video cable
 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 cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated
 Rear audio in: 47k ohm terminated
 Component out: 75 ohm terminated with component cable

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

RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: video generator connected with video cable
 Front video in: 75 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 cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated
 Rear audio in: 47k ohm terminated
 Component out: 75 ohm terminated with component cable

VCR Play + Rec. mode**Shielded room**

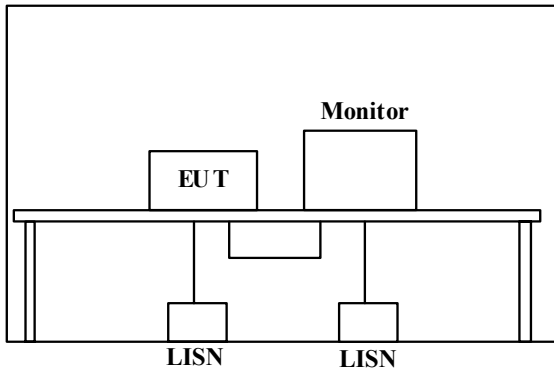
RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated with video cable
 Front video in: 75 ohm terminated with video cable
 Rear video out: 75 ohm terminated with video cable
 Rear audio out: 1 k ohm terminated with audio cable
 S-Video out: 75 ohm terminated with S-Video cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated with audio cable
 Rear audio in: 47k ohm terminated audio cable
 Front S-video in: 75 ohm terminated with S-video cable
 Rear S-video in: 75 ohm terminated with S-video cable
 Component out: 75 ohm terminated with component cable

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DVD Play + Rec. mode**Shielded room**

RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated with video cable
 Front video in: 75 ohm terminated with video cable
 Rear video out: monitor connected with video cable
 Rear audio out: monitor connected with audio cable
 S-Video out: 75 ohm terminated with S-Video cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated with audio cable
 Rear audio in: 47k ohm terminated audio cable
 Front S-video in: 75 ohm terminated with S-video cable
 Rear S-video in: 75 ohm terminated with S-video cable
 Component out: 75 ohm terminated with component 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
 IF Bandwidth : 10 kHz

5.5 Test result**Passed**

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

Test engineer: Tsubasa Takayama

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Section 6 : Radiated emission

6.1 Operation environment

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

Date : March 2, 2005

Temperature : See data

Humidity : See data

6.2 Test configuration

EUT was placed on a platform of nominal size, 1 m by 1.8 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.

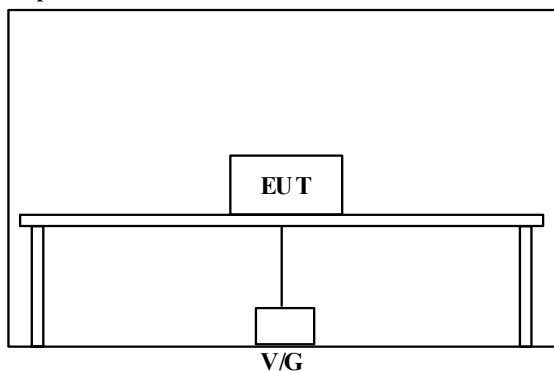
A drawing of the set up is shown in figure 2 and photographs in Appendix 1.

Figure 2. Radiated emission



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

Open test site



RF in: video generator connected with RF input cable
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated
 Front video in: 75 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 cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated
 Rear audio in: 47k ohm terminated
 Component out: 75 ohm terminated with component cable

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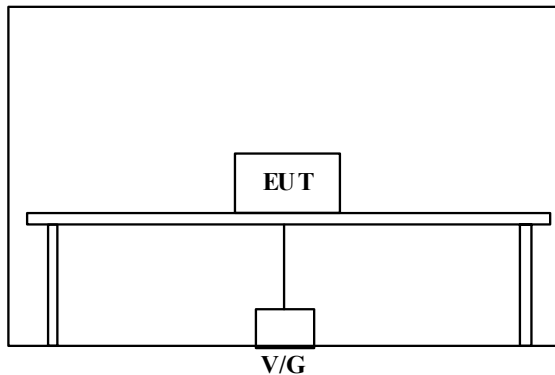
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AV Input 1 + Rec. mode (1 Vp-p input / 5 Vp-p input)

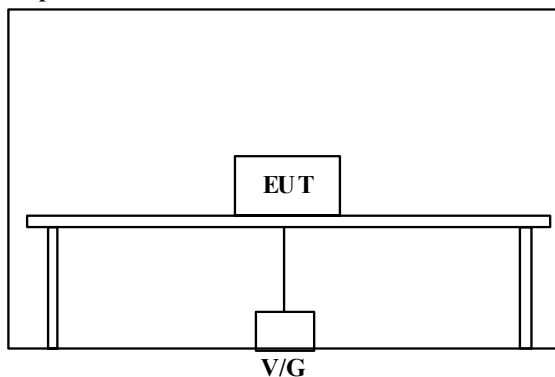
Open test site



RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated
 Front video in: video generator connected with video cable
 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 cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated
 Rear audio in: 47k ohm terminated
 Component out: 75 ohm terminated with component cable

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

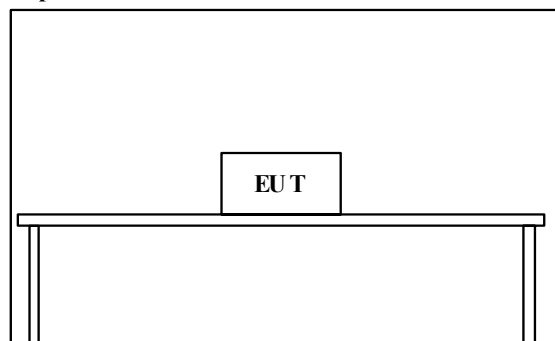
Open test site



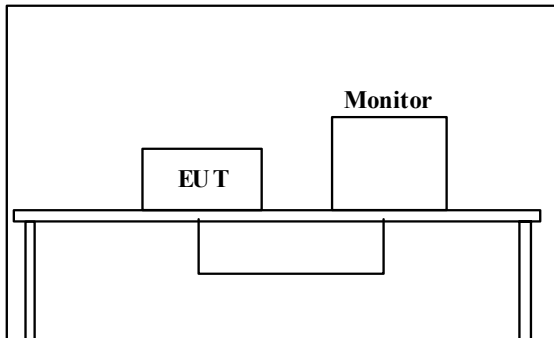
RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: video generator connected with video cable
 Front video in: 75 ohm terminated
 Rear video out: 75 ohm terminated with video cable
 Rear audio out: 1 k ohm terminated with audio cable
 S-Video out: 75 ohm terminated with S-Video cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated
 Rear audio in: 47k ohm terminated
 Component out: 75 ohm terminated with component cable

VCR Play + Rec. mode

Open test site



RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated with video cable
 Front video in: 75 ohm terminated with video cable
 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 cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated with audio cable
 Rear audio in: 47k ohm terminated audio cable
 Front S-video in: 75 ohm terminated with S-video cable
 Rear S-video in: 75 ohm terminated with S-video cable
 Component out: 75 ohm terminated with component cable

DVD Play + Rec. mode**Open test site**

RF in: 75 ohm terminated
 RF out: 75ohm terminated with RF output cable
 Rear video in: 75 ohm terminated with video cable
 Front video in: 75 ohm terminated with video cable
 Rear video out: monitor connected with video cable
 Rear audio out: monitor connected with audio cable
 S-Video out: 75 ohm terminated with S-Video cable
 Coaxial out: 75 ohm terminated with coaxial cable
 Front audio in: 47k ohm terminated with audio cable
 Rear audio in: 47k ohm terminated audio cable
 Front S-video in: 75 ohm terminated with S-video cable
 Rear S-video in: 75 ohm terminated with S-video cable
 Component out: 75 ohm terminated with component cable

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. Measurements were performed with quasi-peak detector, peak detector and average detector. 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>30-1000MHz (Test receiver)</u>	<u>1000-5000MHz (Spectrum analyzer)</u>
Detector Type	: QP	: PK : AV
IF Bandwidth	: 120kHz	: RBW 1MHz / VBW 1MHz : RBW 1MHz/ VBW 10Hz

6.5 Test result**Passed**

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

Test engineer: Tsubasa Takayama

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Section 7 : Antenna terminal voltage

7.1 Operation environment

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

Date : March 3, 2005

Temperature : See data

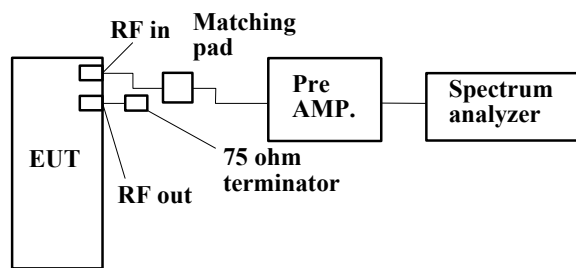
Humidity : See data

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 receiver / CATV receiver)

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 2000MHz 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

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Section 8 : RF output level / spurious emission

8.1 Operation environment

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

Date : March 3, 2005

Temperature : See data

Humidity : See data

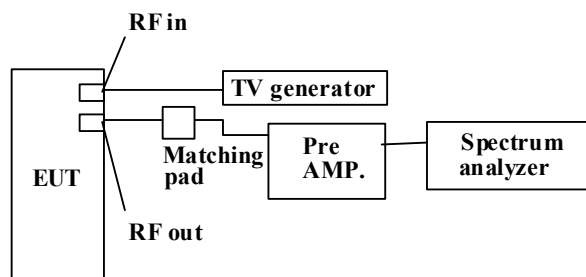
8.2 Test configuration

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

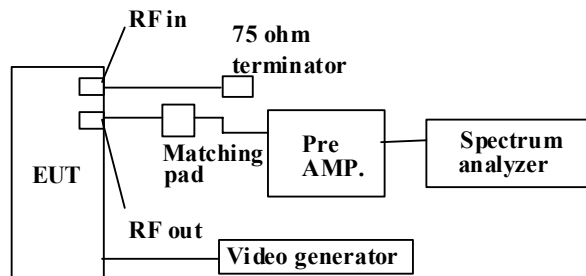
A drawing of the set up is shown in figure 4 and photographs in Appendix 1.

Figure 4. RF output level

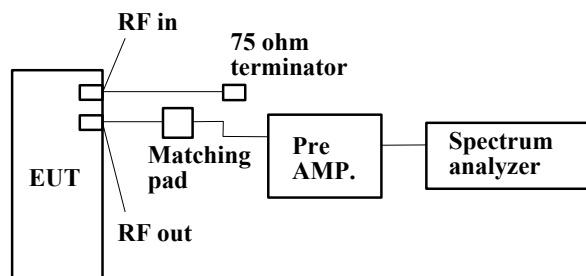
TV Reception + Rec. mode



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



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



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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 : March 3, 2005

Temperature : See data

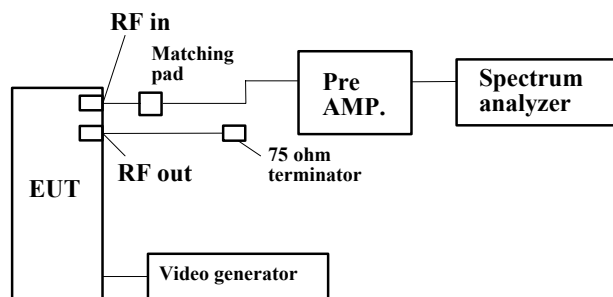
Humidity : See data

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. The EUT exercised AV input + Rec. mode and Playback mode during the test, and 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 : March 3, 2005

Temperature : See data

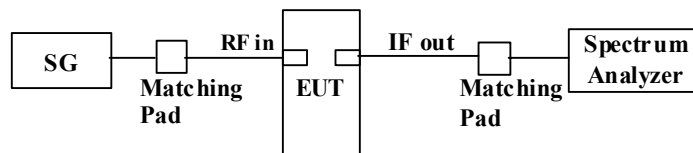
Humidity : See data

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 : March 3, 2005

Temperature : See data

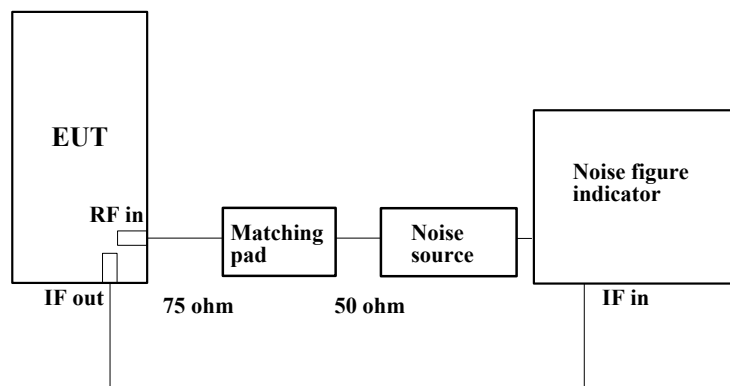
Humidity : See data

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 - 50 :	Conducted emission
Page 51 - 97 :	Radiated emission
Page 98 - 99 :	Antenna terminal voltage
Page 100 - 120 :	RF output level / spurious emission
Page 121 - 132 :	Antenna transfer switch
Page 133 :	Picture sensitivity
Page 134 :	Noise figure

Appendix 3 : Test instruments

Page 135 :	Test instruments
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Conducted emission



UL Apex Co., Ltd.

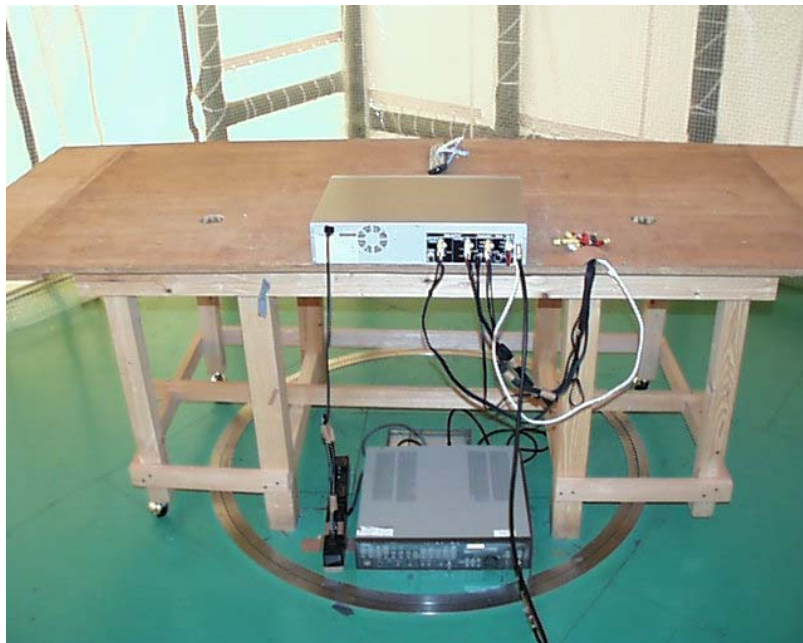
Yokowa EMC Lab.

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.

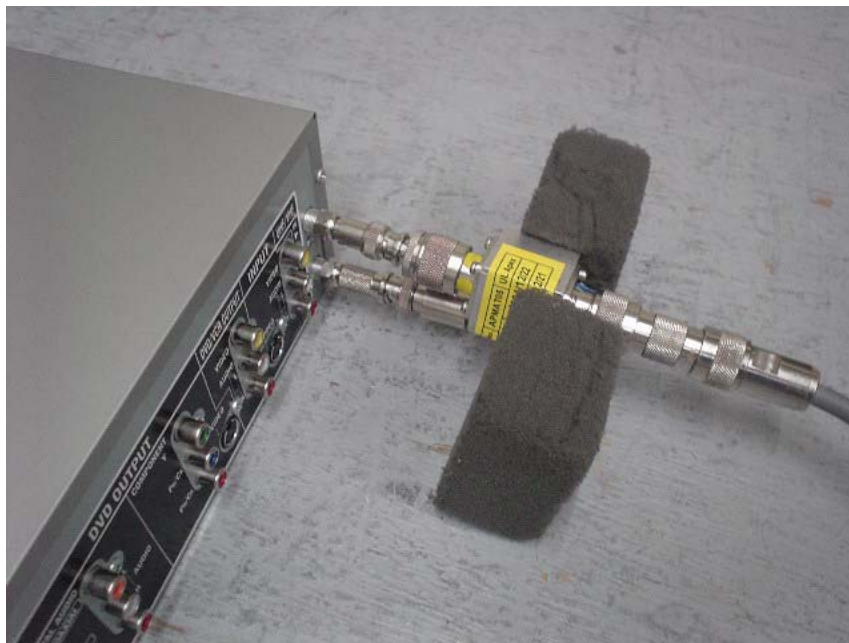
Yokowa EMC Lab.

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.

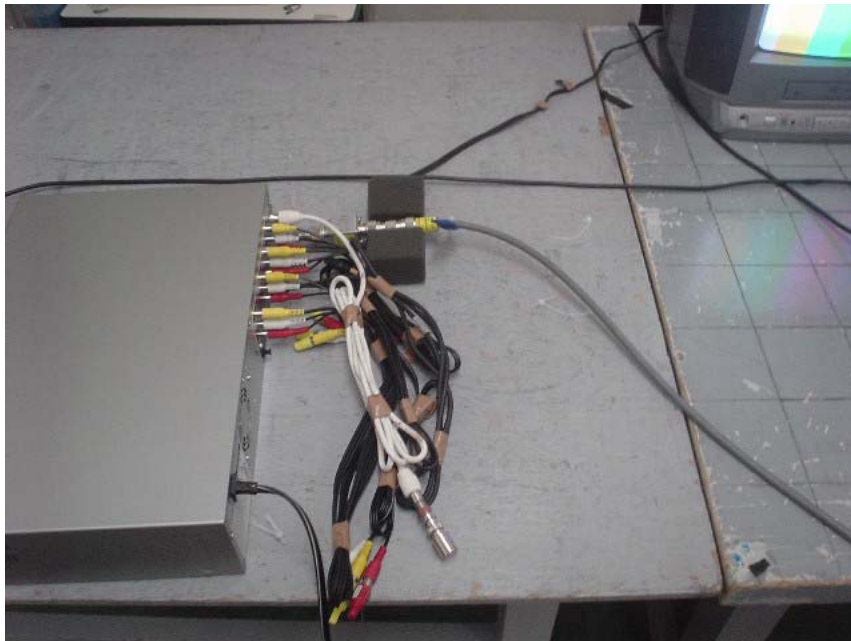
Yokowa EMC Lab.

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.

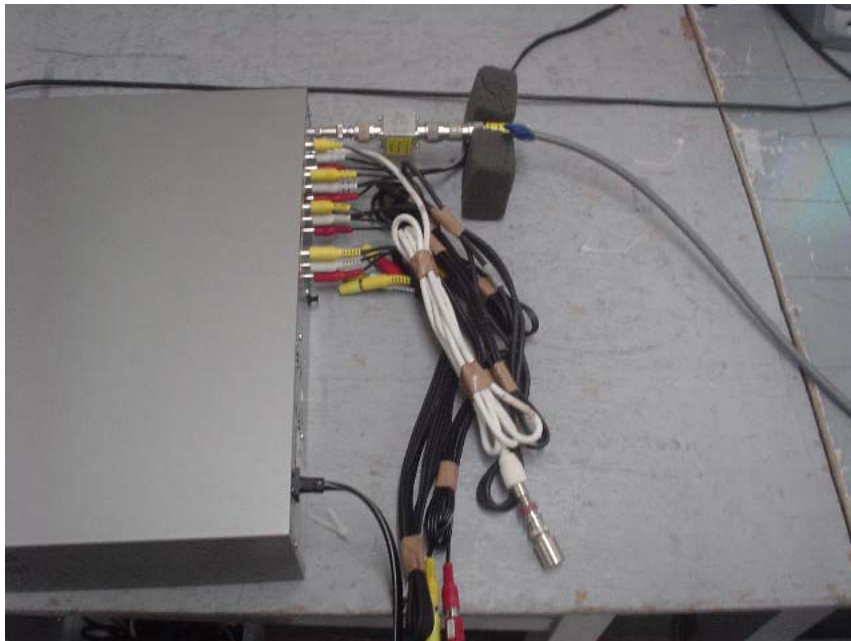
Yokowa EMC Lab.

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.

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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.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 0dBmV
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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.	0.1911	39.3	-	41.0	-	0.1	0.3	0.0	41.4	-	64.0	54.0	22.6	-
2.	0.2534	34.5	-	33.1	-	0.1	0.3	0.0	34.9	-	61.6	51.6	26.7	-
3.	0.3924	30.4	-	26.1	-	0.1	0.3	0.0	30.8	-	58.0	48.0	27.2	-
4.	0.7712	28.9	-	33.8	-	0.1	0.3	0.0	34.2	-	56.0	46.0	21.8	-
5.	1.3052	28.8	-	23.1	-	0.2	0.3	0.0	29.3	-	56.0	46.0	26.7	-
6.	2.1887	25.5	-	29.5	-	0.2	0.4	0.0	30.1	-	56.0	46.0	25.9	-
7.	20.0000	17.7	-	17.0	-	0.8	0.6	0.0	19.1	-	60.0	50.0	40.9	-

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

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

DATA OF CONDUCTION TEST

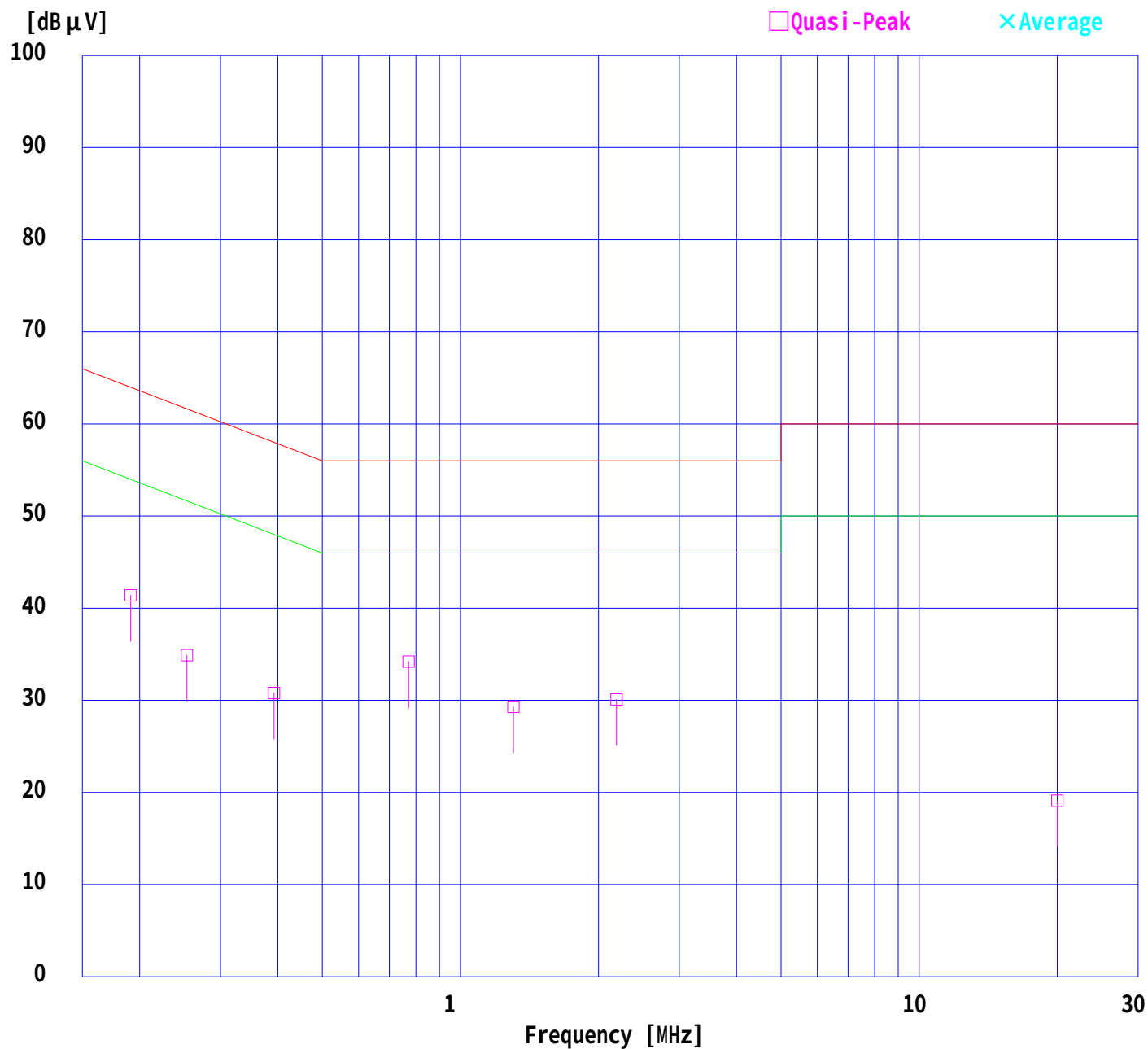
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 0dBmV
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

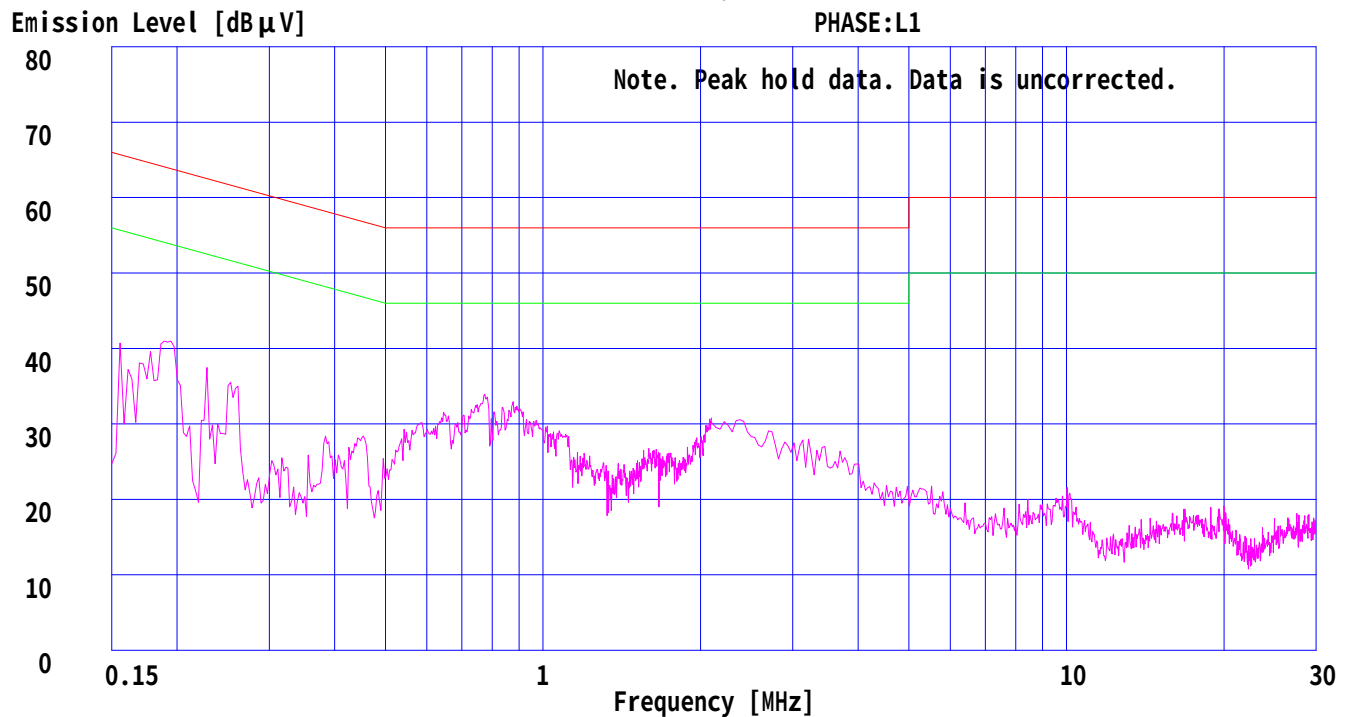
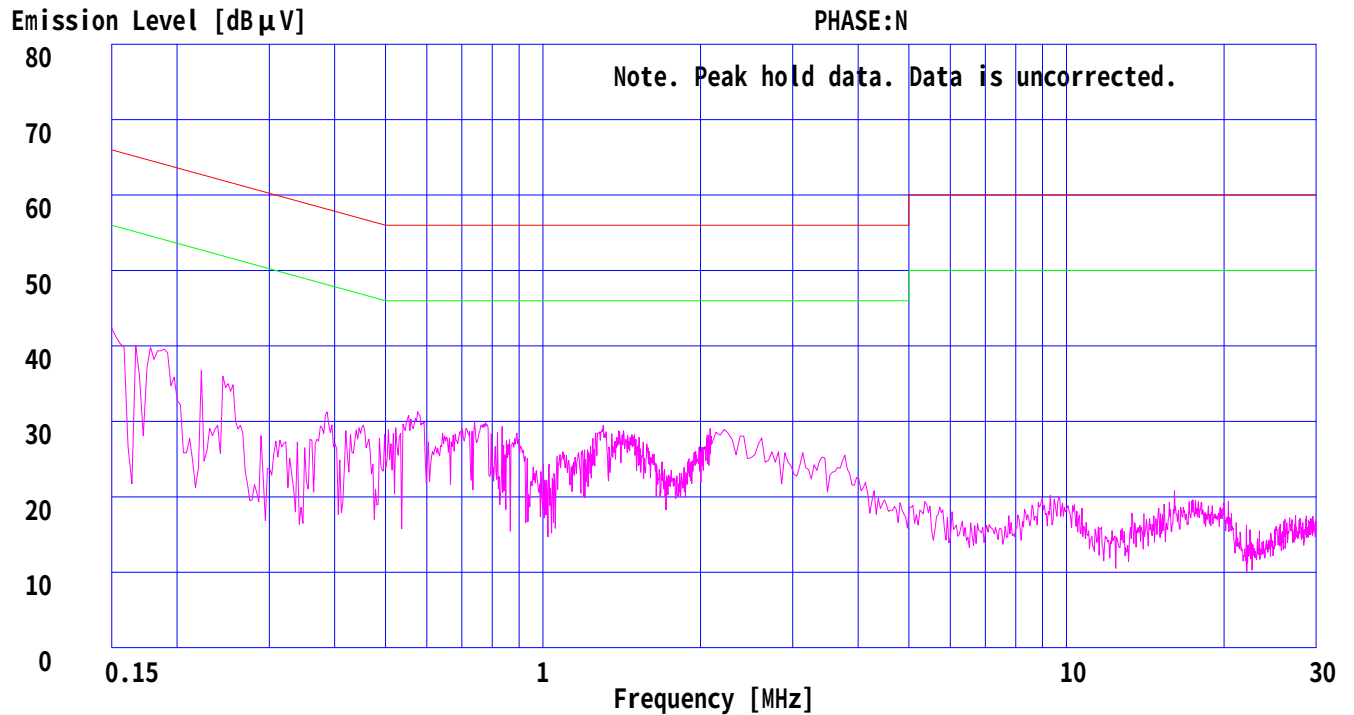
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 0dBmV
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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 μ V]	AV	QP [dB μ V]	AV				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB]
1.	0.1744	38.6	-	38.5	-	0.1	0.3	0.0	39.0	-	64.7	54.7	25.7	-
2.	0.2498	36.3	-	33.3	-	0.1	0.3	0.0	36.7	-	61.8	51.8	25.1	-
3.	0.3911	31.0	-	24.2	-	0.1	0.3	0.0	31.4	-	58.0	48.0	26.6	-
4.	0.7707	29.0	-	33.6	-	0.1	0.3	0.0	34.0	-	56.0	46.0	22.0	-
5.	1.3012	28.1	-	22.3	-	0.2	0.3	0.0	28.6	-	56.0	46.0	27.4	-
6.	2.2500	26.6	-	29.4	-	0.2	0.4	0.0	30.0	-	56.0	46.0	26.0	-
7.	20.0000	17.5	-	17.0	-	0.8	0.6	0.0	18.9	-	60.0	50.0	41.1	-

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

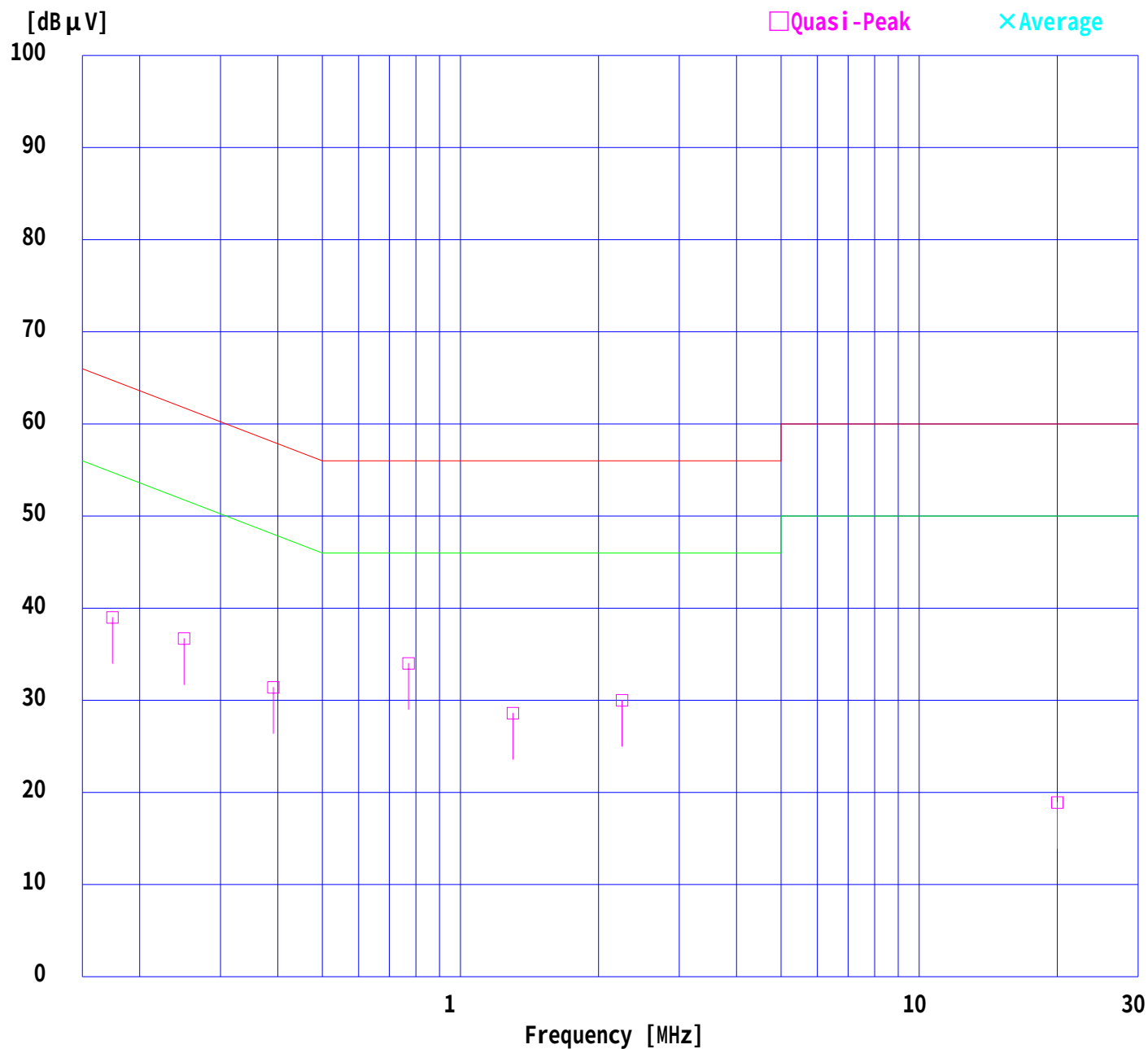
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.7 SHIELD TEST ROOM
Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

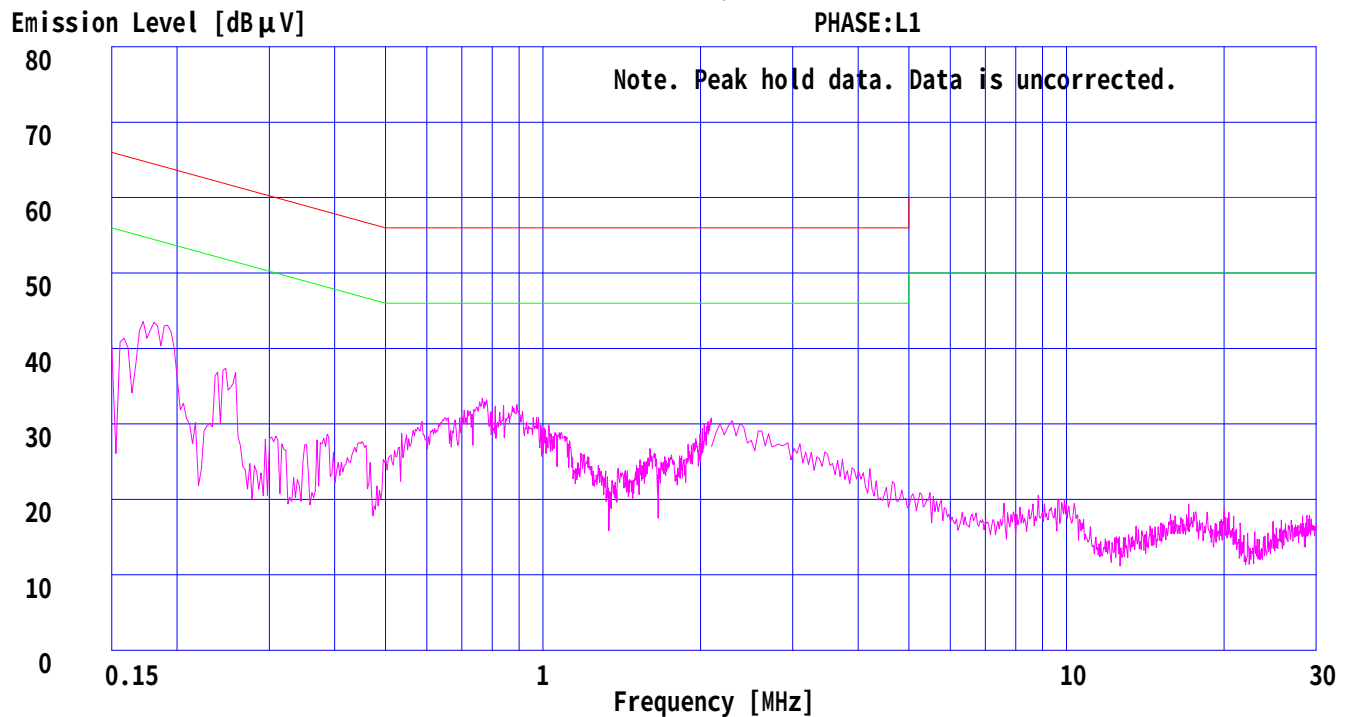
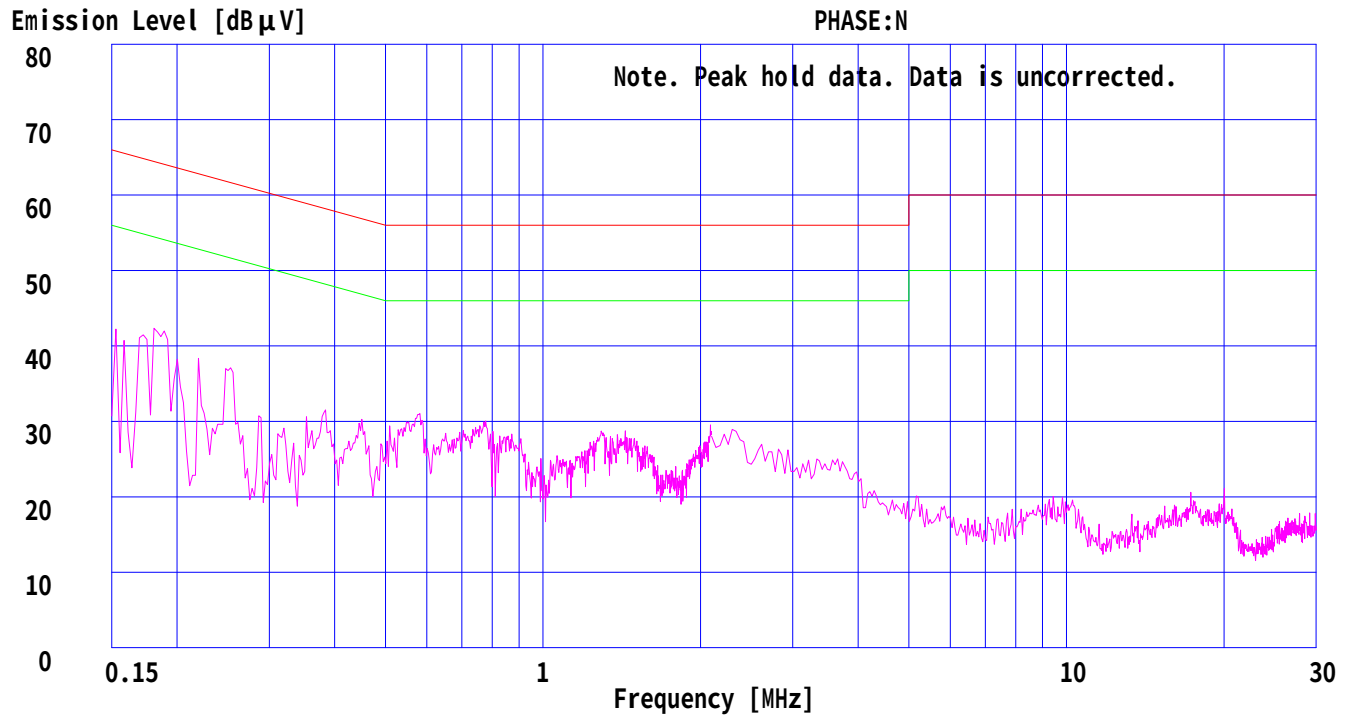
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 1V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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.	0.1970	37.5	-	39.4	-	0.1	0.3	0.0	39.8	-	63.7	53.7	23.9	-
2.	0.2596	35.4	-	34.1	-	0.1	0.3	0.0	35.8	-	61.4	51.4	25.6	-
3.	0.4587	29.2	-	28.9	-	0.1	0.3	0.0	29.6	-	56.7	46.7	27.1	-
4.	0.7789	30.4	-	33.9	-	0.1	0.3	0.0	34.3	-	56.0	46.0	21.7	-
5.	2.1383	26.9	-	28.6	-	0.2	0.4	0.0	29.2	-	56.0	46.0	26.8	-
6.	7.9120	31.8	-	37.6	-	0.4	0.5	0.0	38.5	-	60.0	50.0	21.5	-
7.	19.4923	24.5	-	23.3	-	0.7	0.6	0.0	25.8	-	60.0	50.0	34.2	-

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

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

DATA OF CONDUCTION TEST

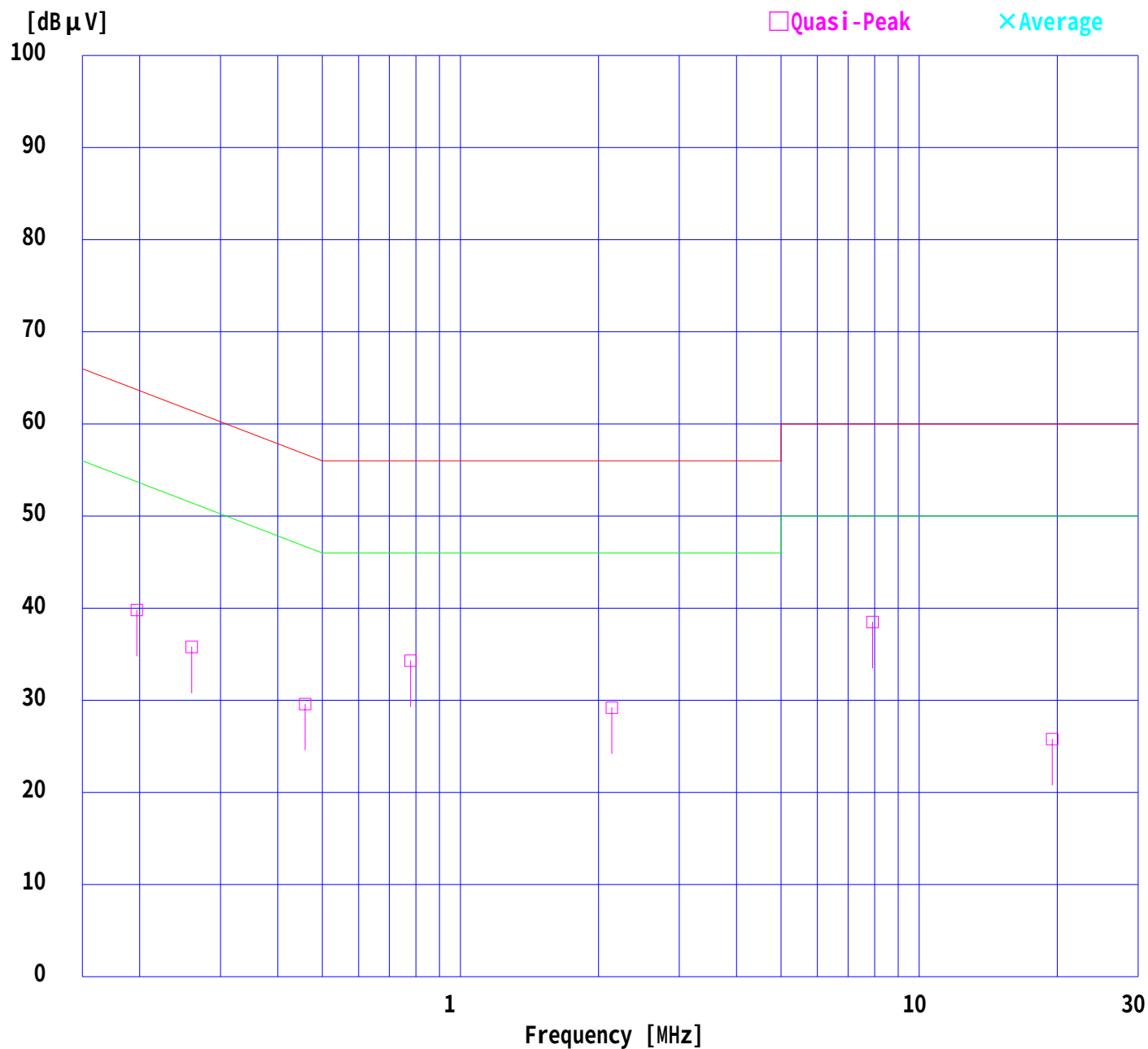
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 1V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

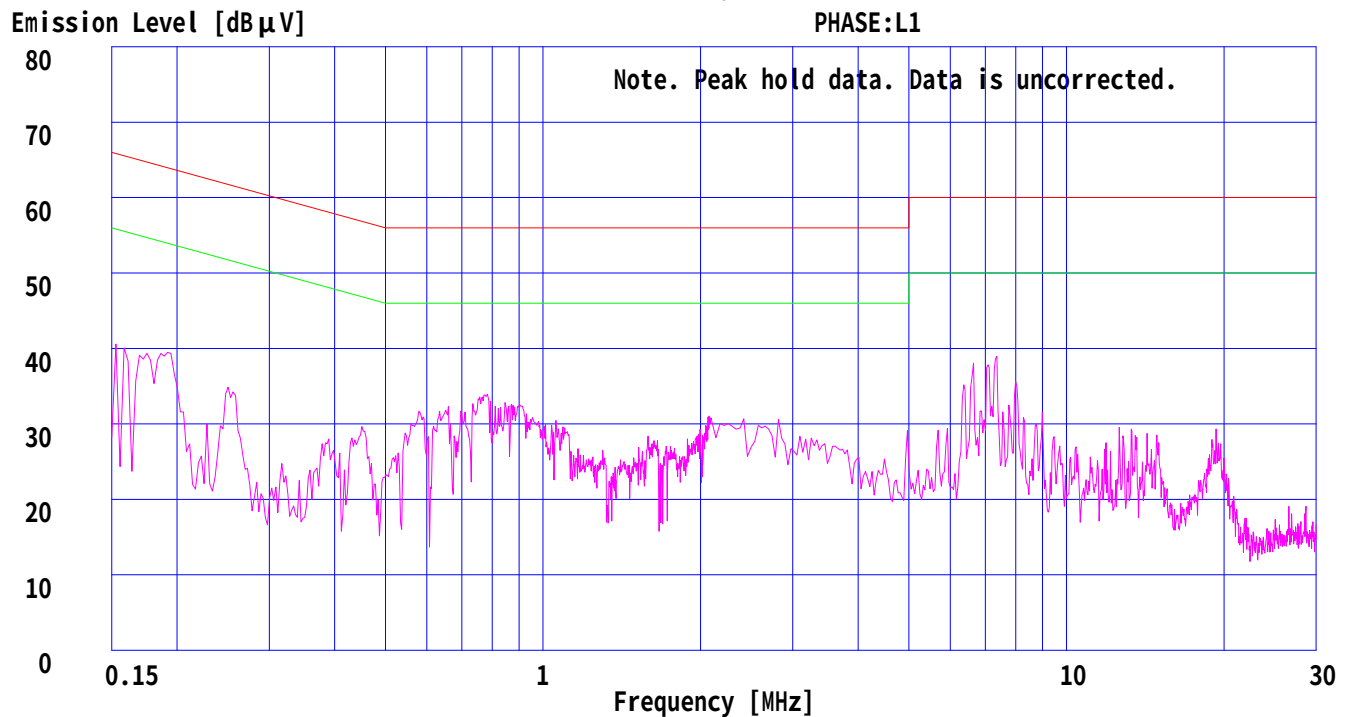
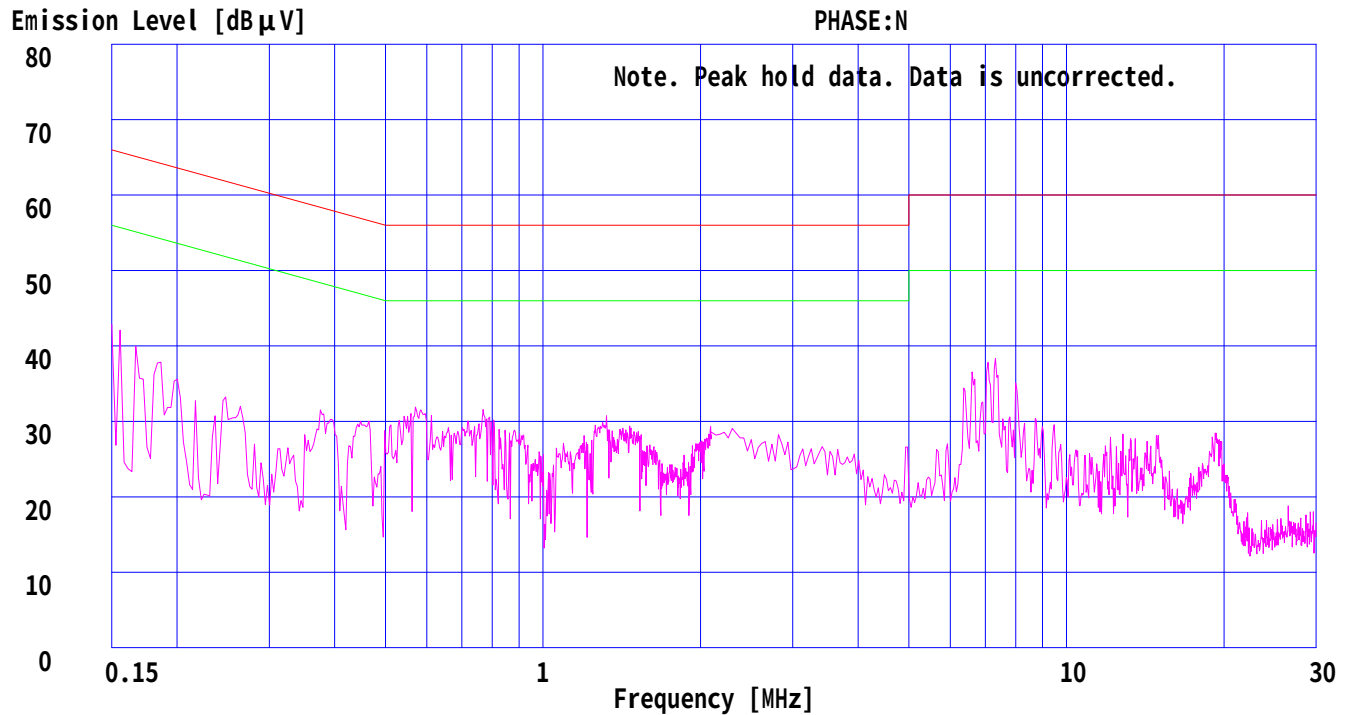
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 1V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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.	0.1970	37.9	-	39.6	-	0.1	0.3	0.0	40.0	-	63.7	53.7	23.7	-
2.	0.2609	35.8	-	34.5	-	0.1	0.3	0.0	36.2	-	61.4	51.4	25.2	-
3.	0.4587	29.9	-	28.9	-	0.1	0.3	0.0	30.3	-	56.7	46.7	26.4	-
4.	0.7843	30.7	-	34.6	-	0.1	0.3	0.0	35.0	-	56.0	46.0	21.0	-
5.	2.1334	27.1	-	28.6	-	0.2	0.4	0.0	29.2	-	56.0	46.0	26.8	-
6.	7.0120	33.0	-	33.4	-	0.4	0.4	0.0	34.2	-	60.0	50.0	25.8	-
7.	19.3712	24.1	-	24.5	-	0.7	0.6	0.0	25.8	-	60.0	50.0	34.2	-

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

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

DATA OF CONDUCTION TEST

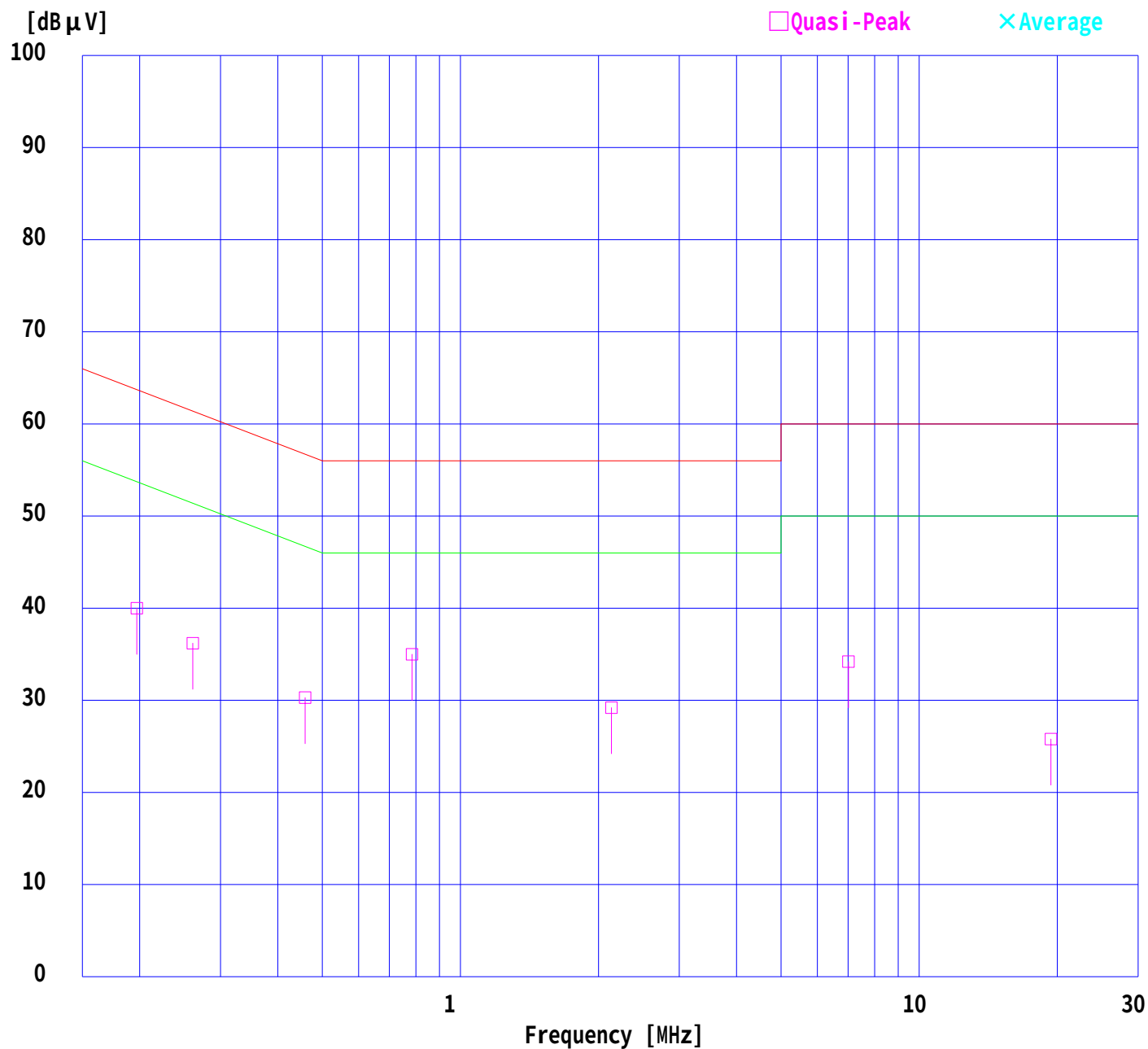
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

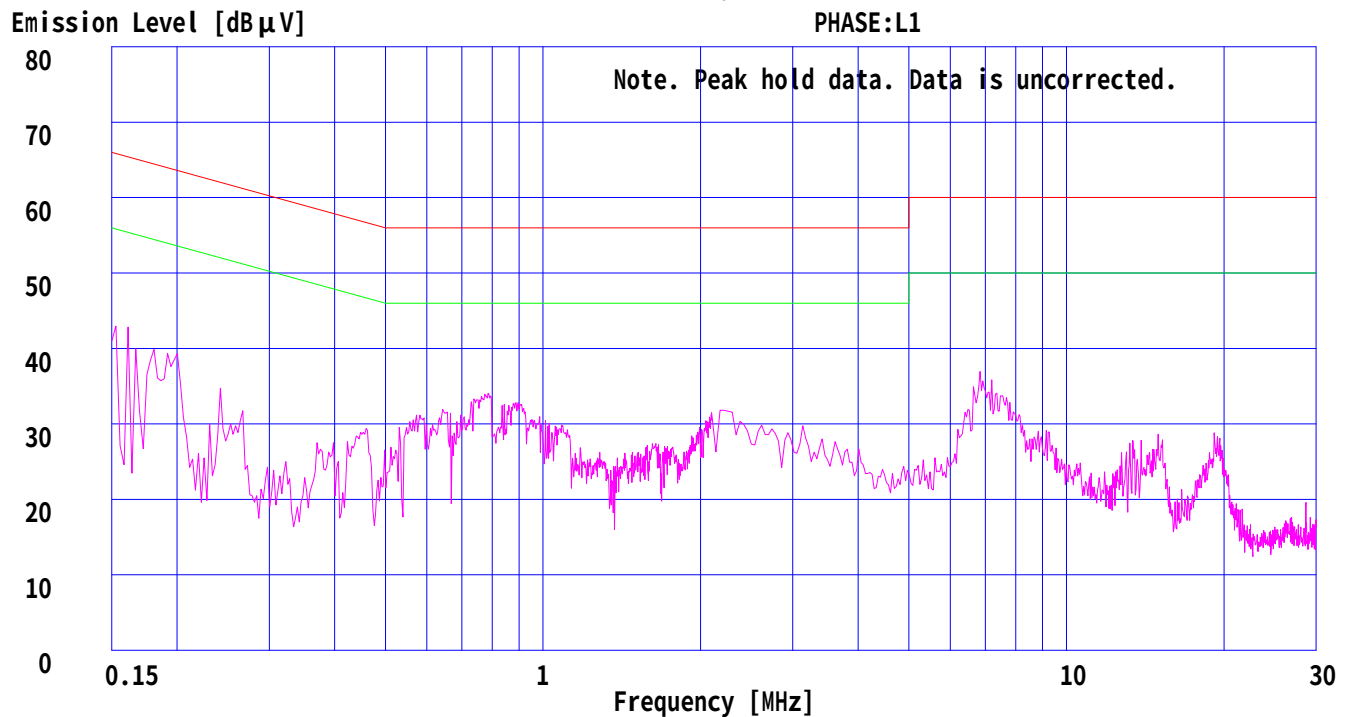
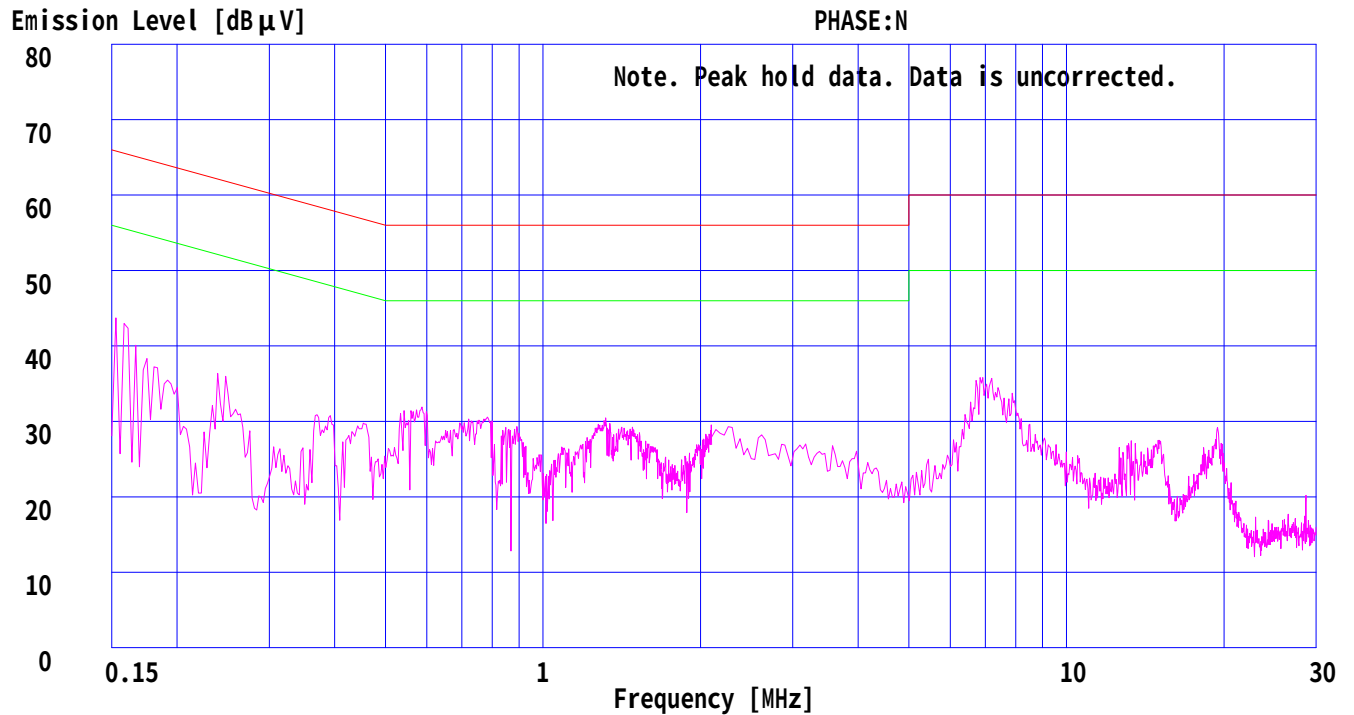
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 1V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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.	0.1971	37.2	-	38.9	-	0.1	0.3	0.0	39.3	-	63.7	53.7	24.4	-
2.	0.2583	34.7	-	34.1	-	0.1	0.3	0.0	35.1	-	61.5	51.5	26.4	-
3.	0.3954	30.5	-	25.9	-	0.1	0.3	0.0	30.9	-	57.9	47.9	27.0	-
4.	0.7789	30.6	-	34.1	-	0.1	0.3	0.0	34.5	-	56.0	46.0	21.5	-
5.	2.1723	26.0	-	30.0	-	0.2	0.4	0.0	30.6	-	56.0	46.0	25.4	-
6.	6.8799	30.3	-	29.9	-	0.4	0.4	0.0	31.1	-	60.0	50.0	28.9	-
7.	15.0623	24.7	-	24.7	-	0.6	0.5	0.0	25.8	-	60.0	50.0	34.2	-

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

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

DATA OF CONDUCTION TEST

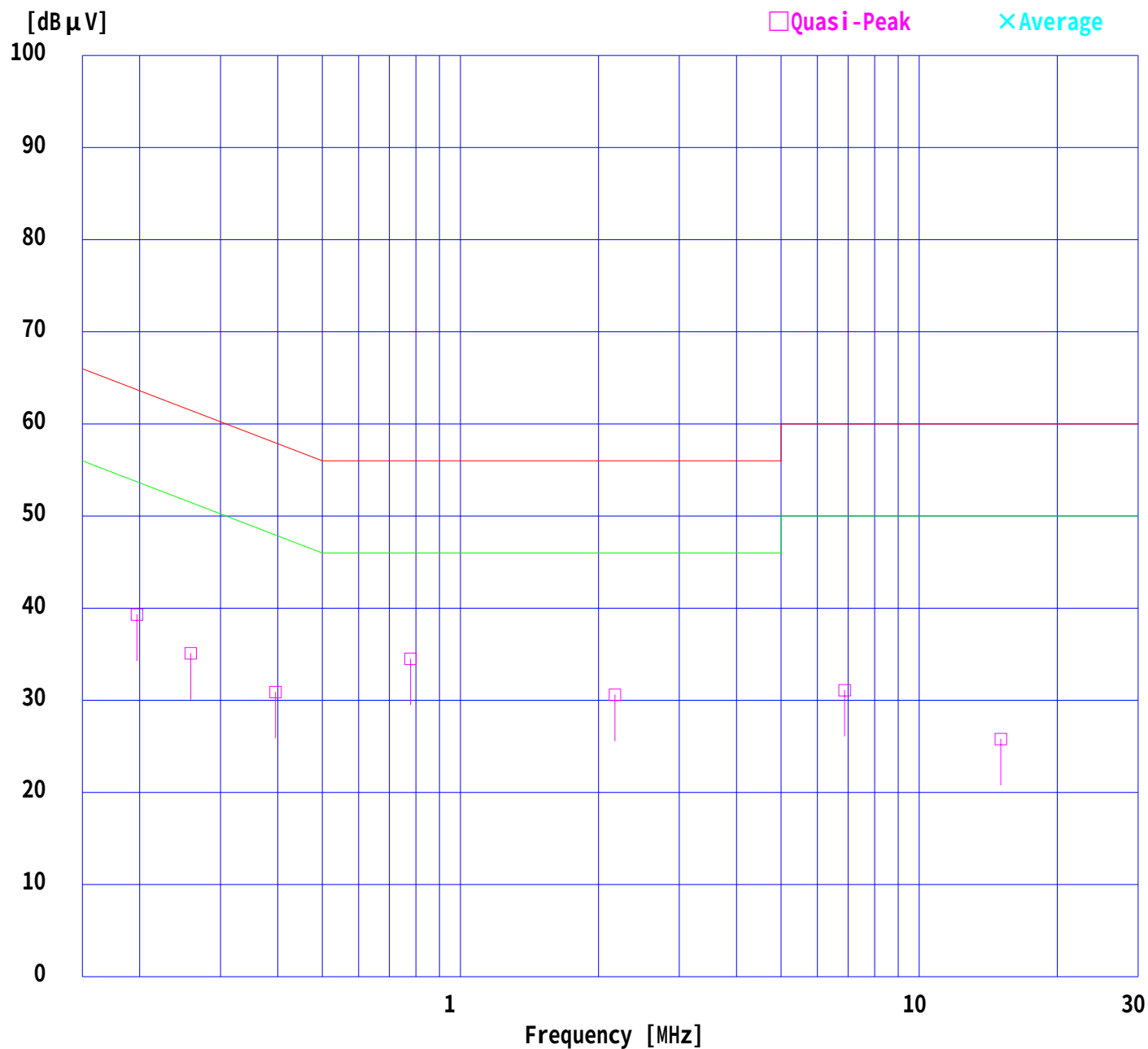
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 1V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

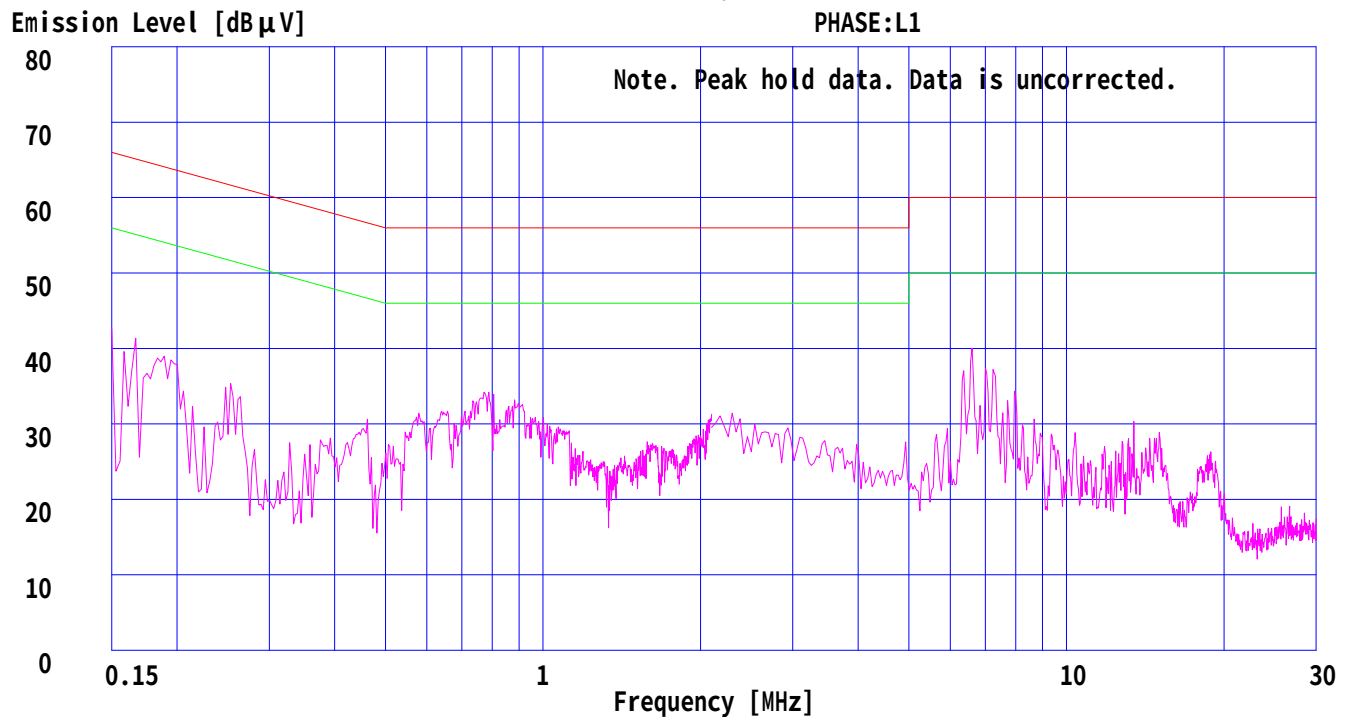
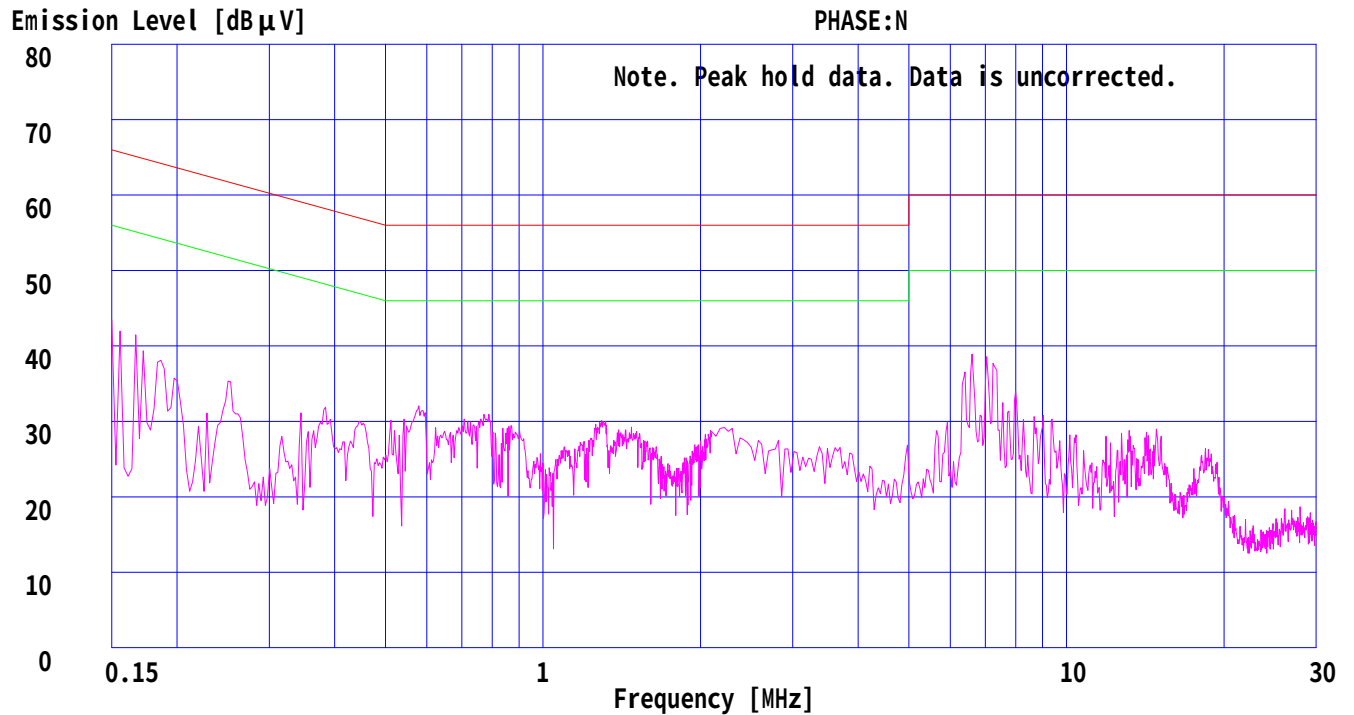
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 1V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.7 SHIELD TEST ROOM
Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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.	0.1971	38.4	-	39.6	-	0.1	0.3	0.0	40.0	-	63.7	53.7	23.7	-
2.	0.2583	35.2	-	33.9	-	0.1	0.3	0.0	35.6	-	61.5	51.5	25.9	-
3.	0.3963	30.5	-	26.1	-	0.1	0.3	0.0	30.9	-	57.9	47.9	27.0	-
4.	0.7803	30.3	-	34.0	-	0.1	0.3	0.0	34.4	-	56.0	46.0	21.6	-
5.	2.3223	27.7	-	29.9	-	0.2	0.4	0.0	30.5	-	56.0	46.0	25.5	-
6.	6.8230	32.5	-	32.2	-	0.4	0.4	0.0	33.3	-	60.0	50.0	26.7	-
7.	15.1623	26.6	-	26.2	-	0.6	0.5	0.0	27.7	-	60.0	50.0	32.3	-

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

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

DATA OF CONDUCTION TEST

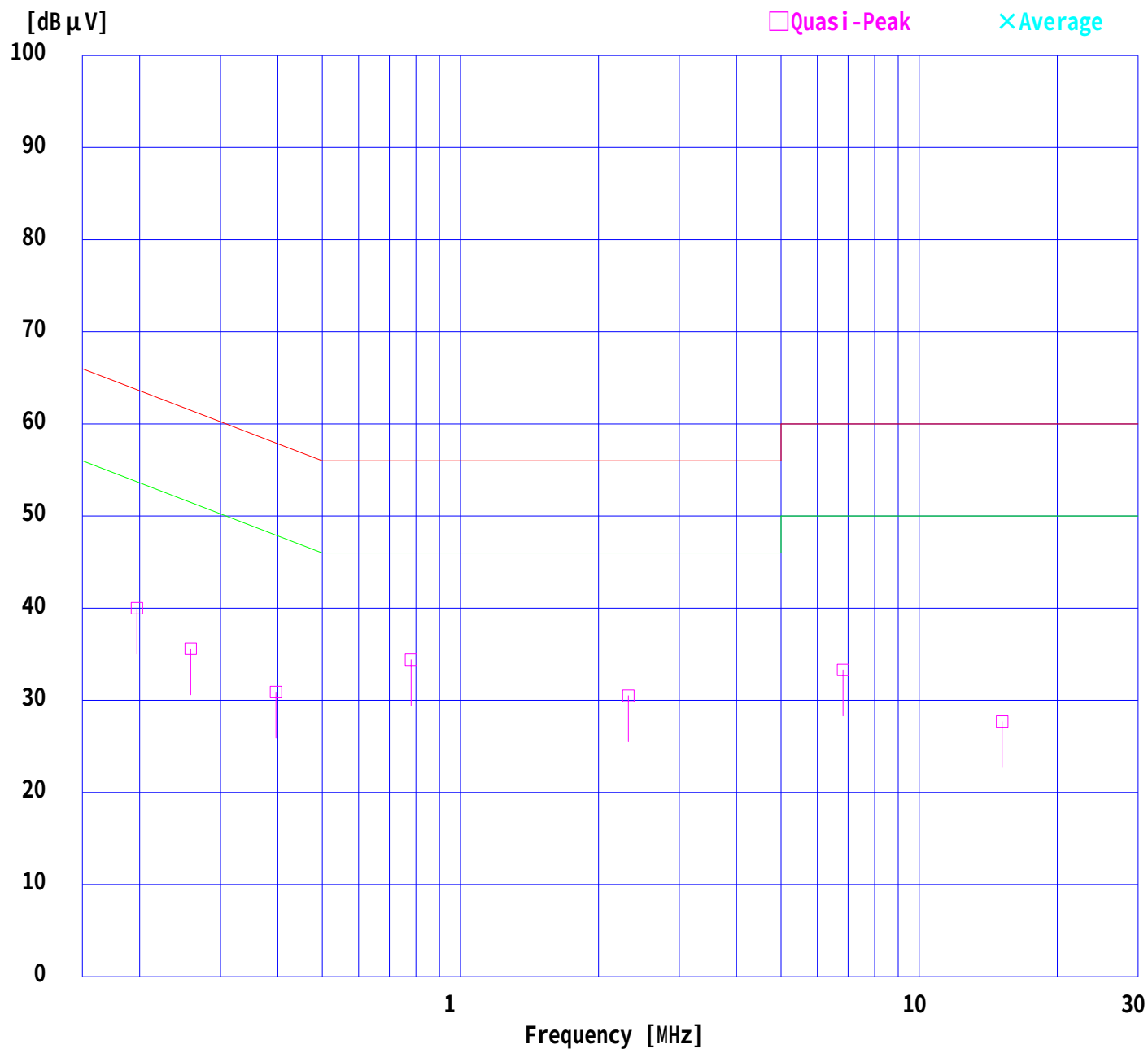
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

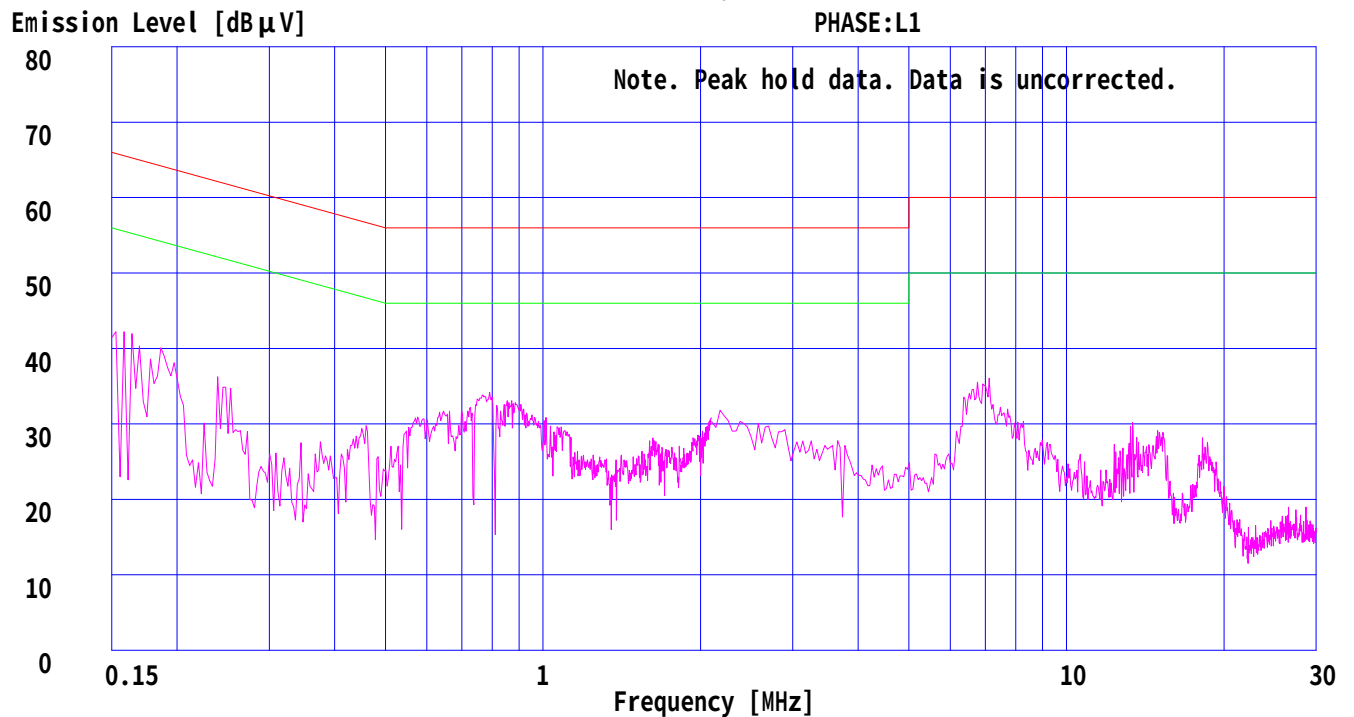
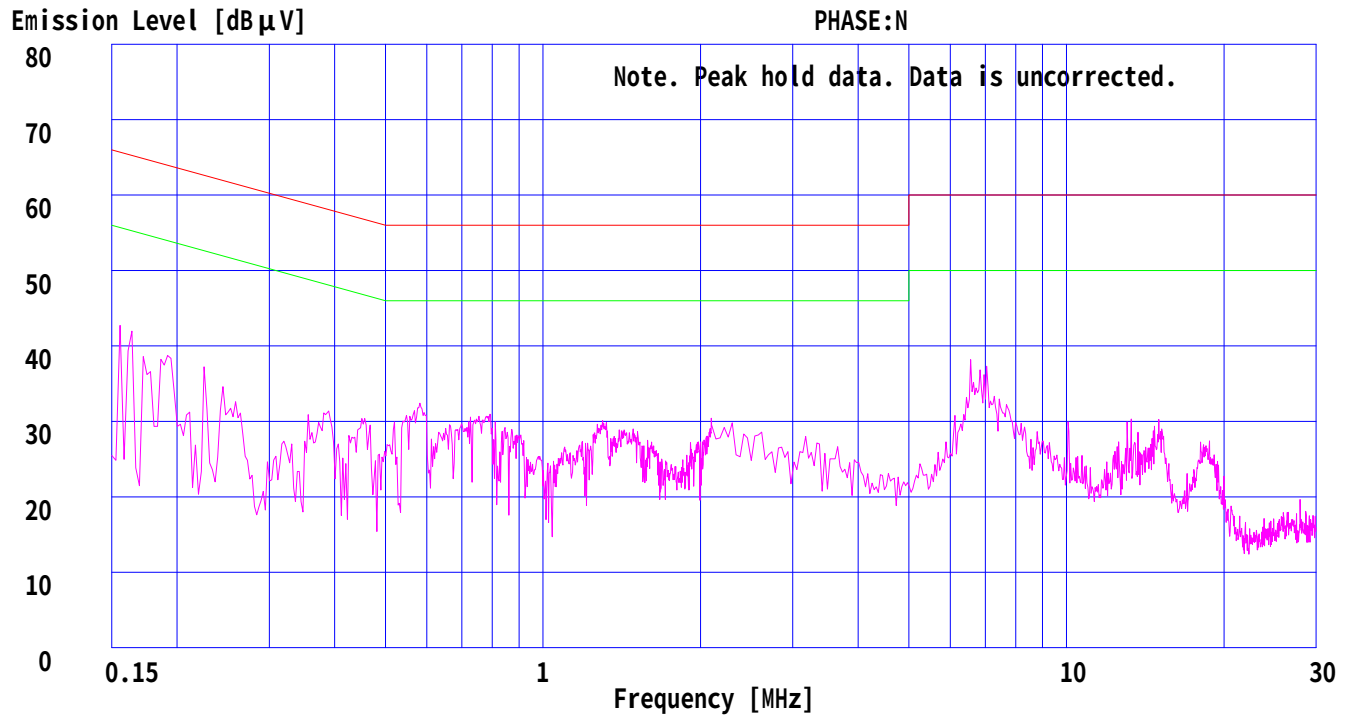
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5V p-p
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks : -
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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.	0.2051	36.9	-	38.6	-	0.1	0.3	0.0	39.0	-	63.4	53.4	24.4	-
2.	0.2700	33.4	-	31.9	-	0.1	0.3	0.0	33.8	-	61.1	51.1	27.3	-
3.	0.4038	28.3	-	24.4	-	0.1	0.3	0.0	28.7	-	57.8	47.8	29.1	-
4.	0.7780	25.1	-	32.0	-	0.1	0.3	0.0	32.4	-	56.0	46.0	23.6	-
5.	2.2030	24.5	-	28.9	-	0.2	0.4	0.0	29.5	-	56.0	46.0	26.5	-
6.	29.8270	23.2	-	23.0	-	1.4	0.7	0.0	25.3	-	60.0	50.0	34.7	-

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

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

DATA OF CONDUCTION TEST

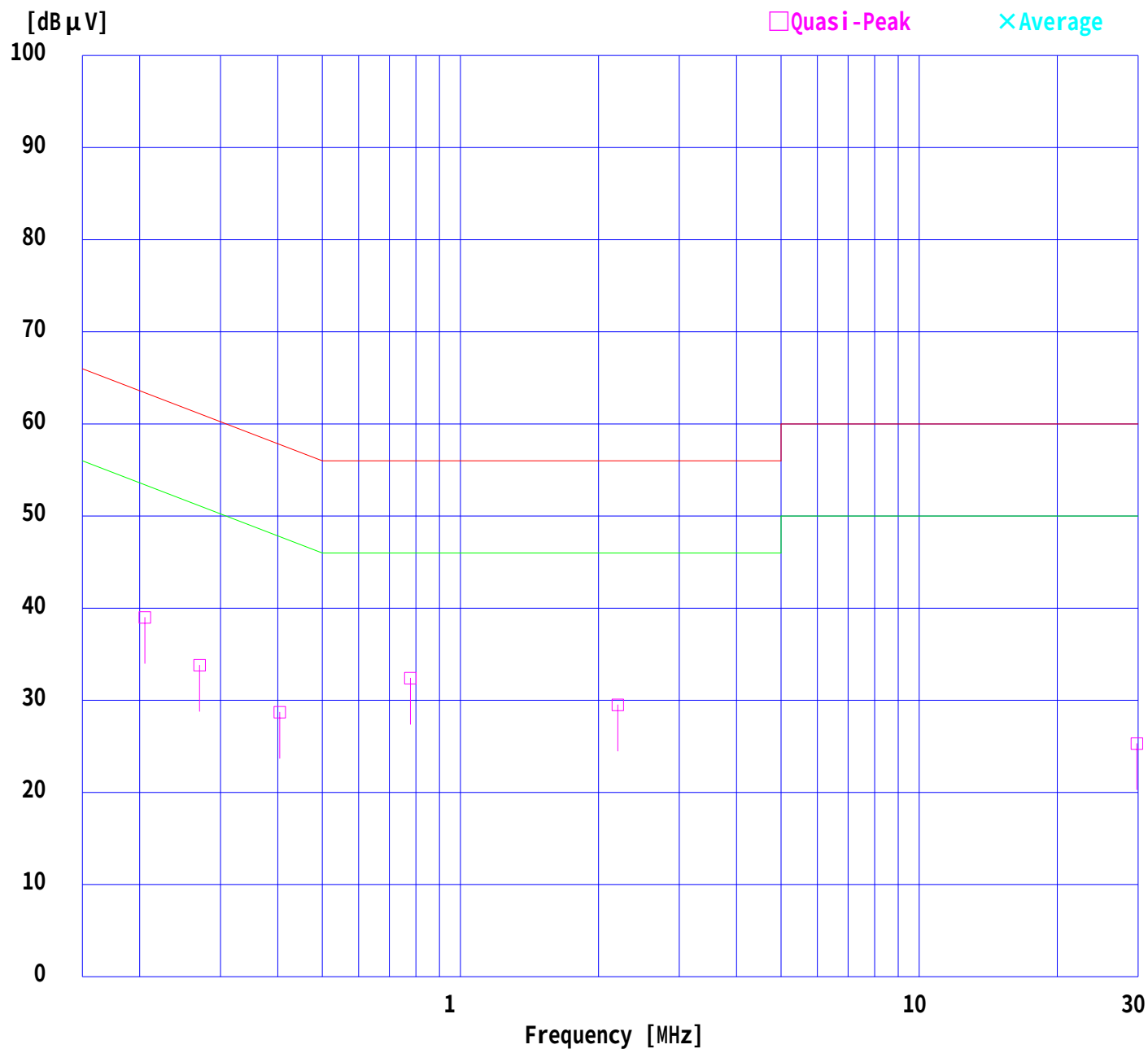
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks : -
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

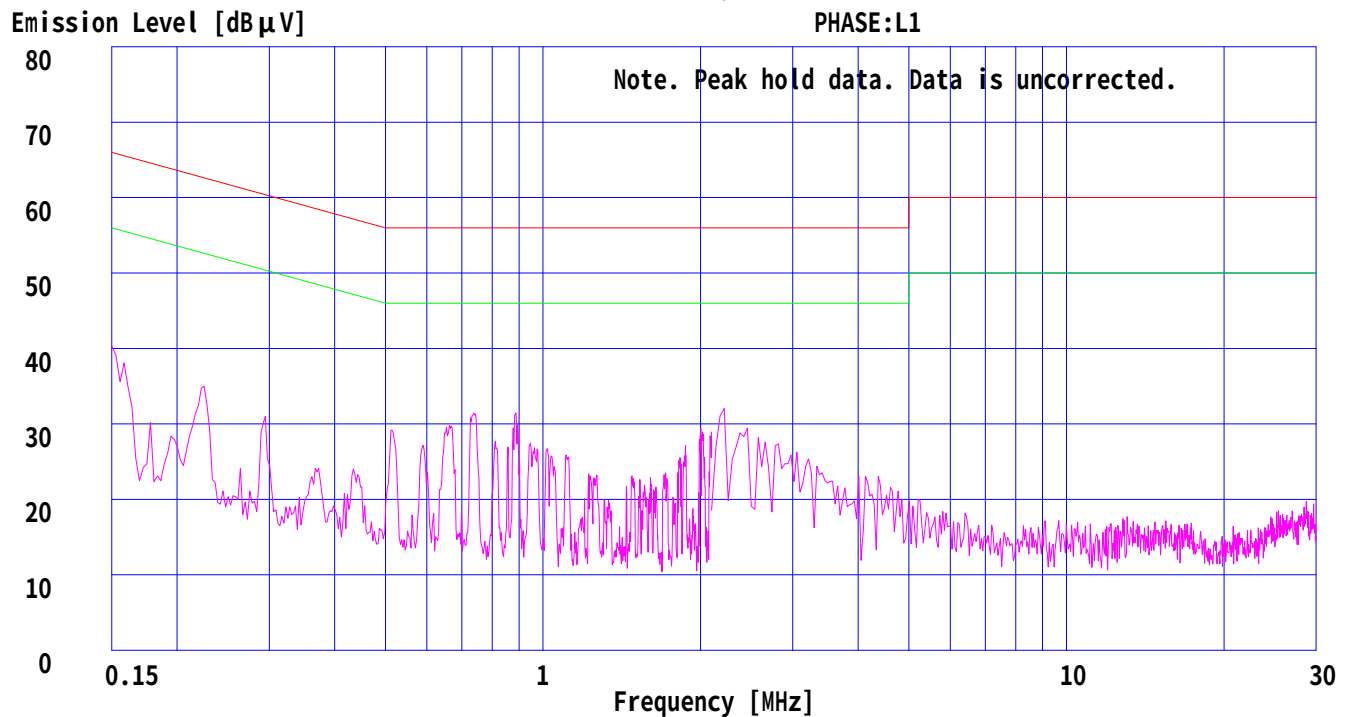
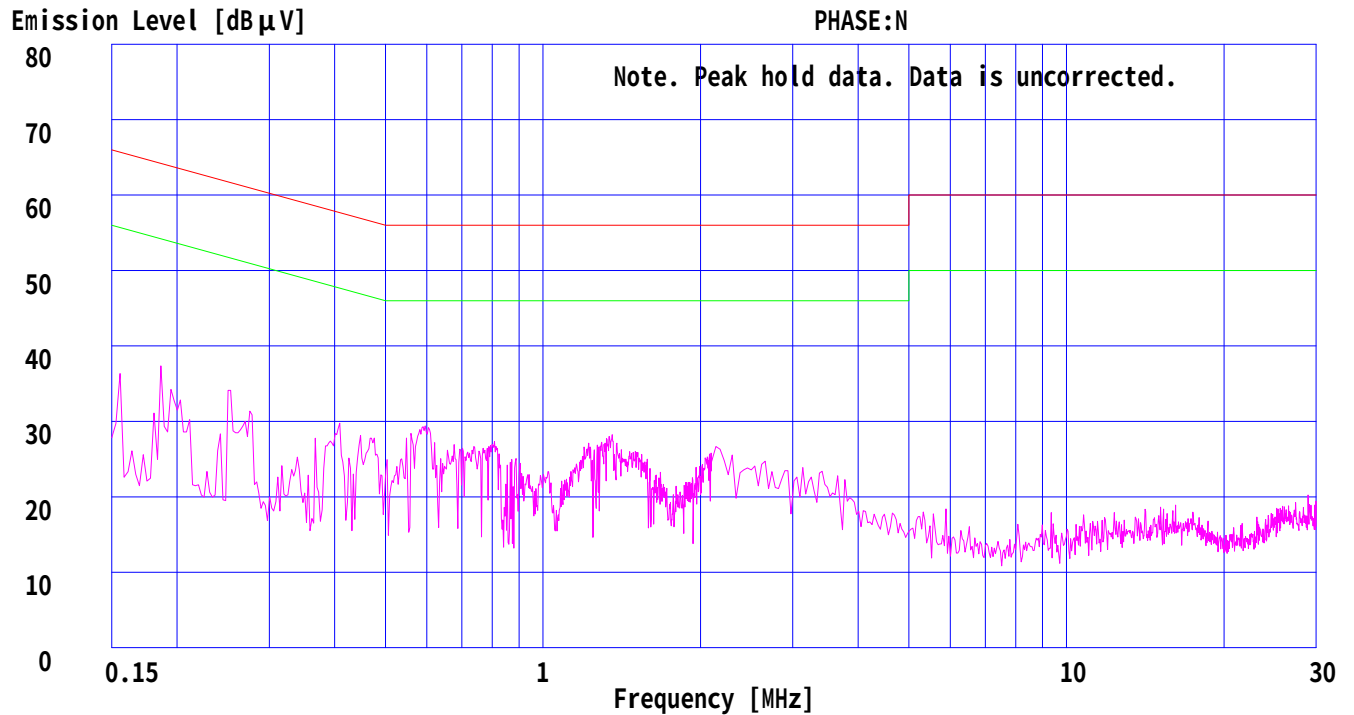
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks : -
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks : -
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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.	0.1938	37.9	-	40.0	-	0.1	0.3	0.0	40.4	-	63.9	53.9	23.5	-
2.	0.2500	35.1	-	35.3	-	0.1	0.3	0.0	35.7	-	61.8	51.8	26.1	-
3.	0.3848	29.1	-	23.4	-	0.1	0.3	0.0	29.5	-	58.2	48.2	28.7	-
4.	0.7742	28.8	-	32.9	-	0.1	0.3	0.0	33.3	-	56.0	46.0	22.7	-
5.	2.1912	24.8	-	27.4	-	0.2	0.4	0.0	28.0	-	56.0	46.0	28.0	-
6.	24.2771	27.4	-	28.0	-	1.0	0.6	0.0	29.6	-	60.0	50.0	30.4	-
7.	28.6344	32.1	-	32.9	-	1.3	0.7	0.0	34.9	-	60.0	50.0	25.1	-

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

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

DATA OF CONDUCTION TEST

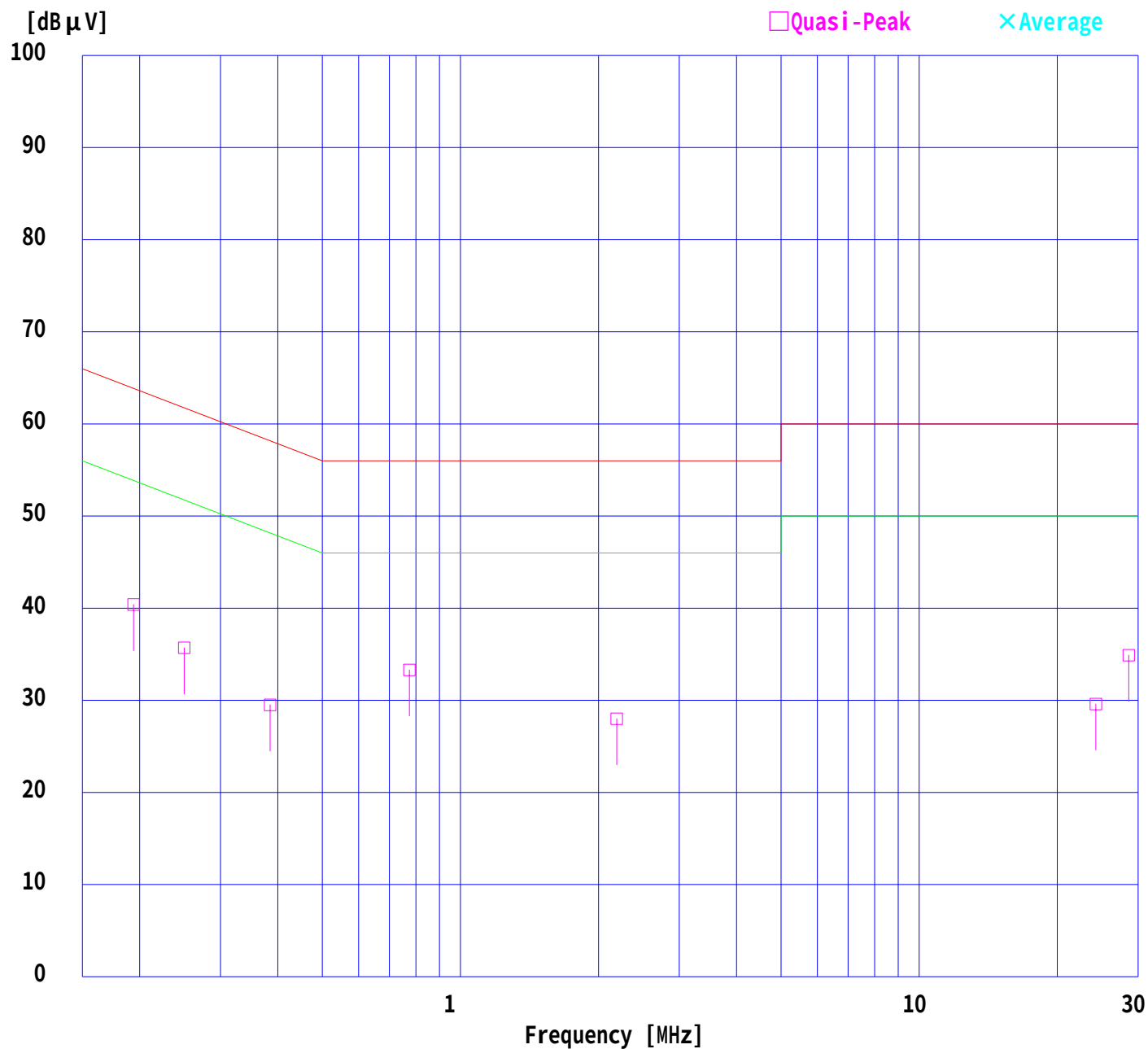
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks : -
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Tsubasa Takayama



DATA OF CONDUCTION TEST CHART

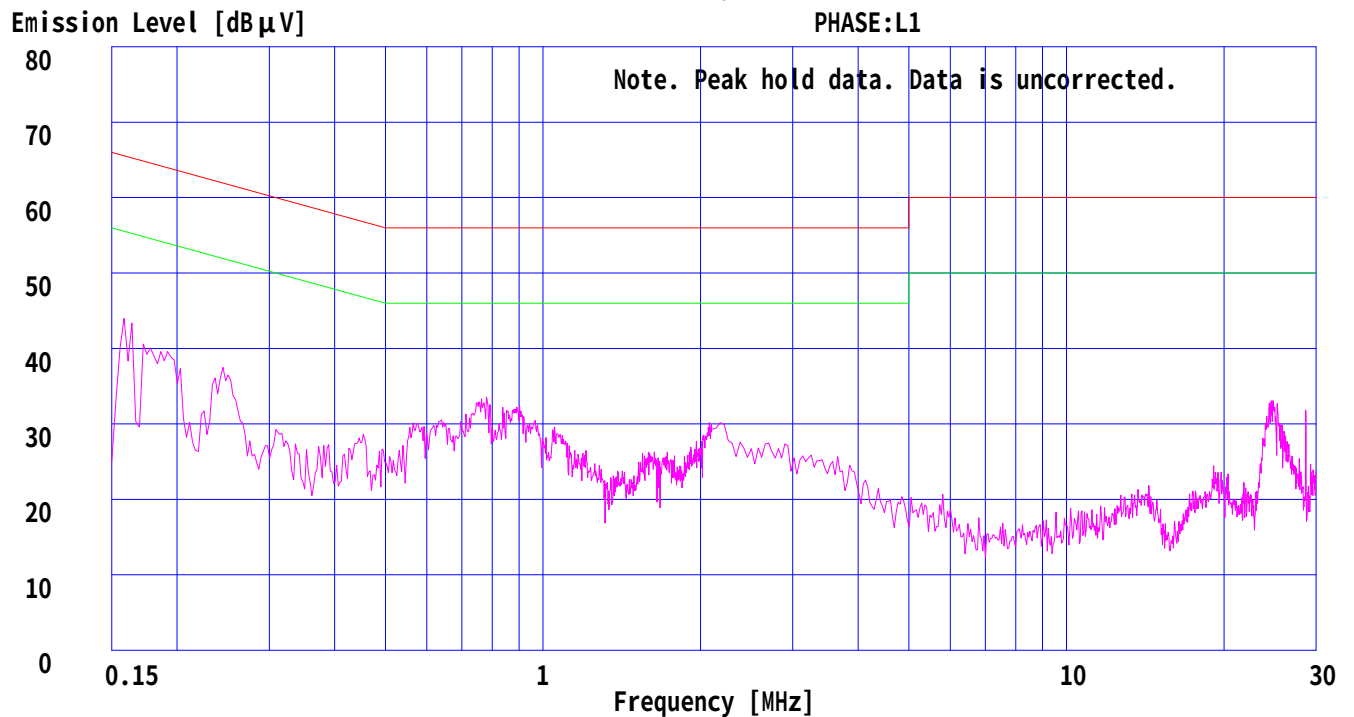
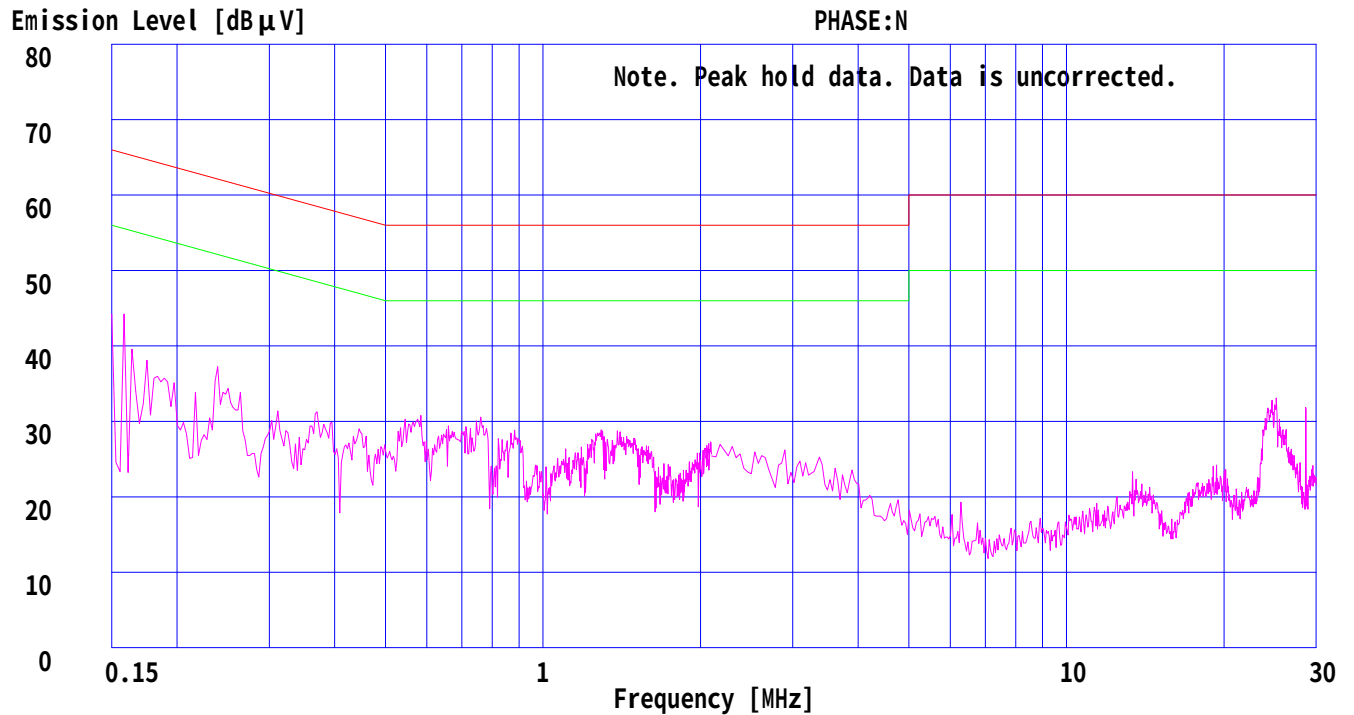
UL Apex Co., Ltd.

YOKOWA No.7 SHIELD TEST ROOM

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. : -
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks : -
Date : 2/25/2005
Phase : Single Phase
Temperature : 21 °C
Humidity : 43 %
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/VCR
MODEL No. : D-VRW1SU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25GE0229-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/03/02
TEMP./HUMID. : 23deg.C / 36%
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]			
VHF															
2	101	23.9	24.3		BC	-9.8	14.1	14.5		43.5		29.4	29.0		
	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) 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]				
	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 [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]			
3	107	23.4	27.1		BC	-8.9	14.5	18.2		43.5		29.0	25.3		
	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) 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]				
	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 [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]		
4	113	23.2	26.3		BC	-7.9	15.3	18.4		43.5		28.2	25.1		
	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) 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]				
	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/VCR
MODEL No. : D-VRW1SU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25GE0229-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/03/02
TEMP./HUMID. : 23deg.C / 36%
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	23.6			BC	-6.5	16.2	17.1			43.5		27.3	26.4		
	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	22.6	22.6			BC	-6.2	16.4	16.4			43.5		27.1	27.1		
	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	26.8	22.4			BC	-2.1	24.7	20.3			46.0		21.3	25.7		
	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	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]	
	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]	RESULT(QP) HOR. VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. VER. [dB] [dB]					
8	227	24.8	22.1			BC	-2.1	22.7	20.0			46.0		23.3	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	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]	
	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/VCR
MODEL No. : D-VRW1SU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25GE0229-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/03/02
TEMP./HUMID. : 23deg.C / 36%
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.

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]		
VHF																	
9	233	23.8	22.0			BC	-1.9	21.9	20.1			46.0		24.1	25.9		
	466					LO						46.0		>15.0			
	699					LO					46.0						
	932					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]	
	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)				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]		
10	239	23.2	22.0			BC	-1.7	21.5	20.3			46.0		24.5	25.7		
	478					LO						46.0		>15.0			
	717					LO					46.0						
	956					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]	
	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)				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]		
11	245	22.3	22.1			BC	-1.6	20.7	20.5			46.0		25.3	25.5		
	490					LO						46.0		>15.0			
	735					LO					46.0						
	980					LO					54.0						
		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]	
	1225					HO						74.0	54.0	>27.0		>10.0	
	1470					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/m]				[dBuV/m]	[dB]		[dB]		
12	251	21.8	21.8			BC	-1.4	20.4	20.4			46.0		25.6	25.6		
	502					LO						46.0		>15.0			
	753					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]	
	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)				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]		
13	257	24.7	22.8			BC	-1.0	23.7	21.8			46.0		22.3	24.2		
	514					LO						46.0		>15.0			
	771					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]	
	1028					HO						74.0	54.0	>27.0		>10.0	
	1285					HO						74.0	54.0				
	1542					HO						74.0	54.0				

DATA OF RADIATION TEST

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POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25GE0229-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/03/02
TEMP/HUMID. : 23deg.C / 36%
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	25.5 28.3		LO	3.2	28.7 31.5		46.0		17.3 14.5	
		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 1551			HO HO				74.0 74.0	54.0 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]	
19	547	24.7 27.1		LO	3.5	28.2 30.6		46.0		17.8 15.4	
		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 1641			HO HO				74.0 74.0	54.0 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]	
28	601	23.0 26.3		LO	4.4	27.4 30.7		46.0	-	18.6 15.3	
		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	22.6 27.3		LO	5.2	27.8 32.5		46.0	-	18.2 13.5	
		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	23.1 26.6		LO	5.9	29.0 32.5		46.0	-	17.0 13.5	
		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	21.6 23.1		LO	7.6	29.2 30.7		46.0	-	16.8 15.3	
		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	21.1 21.7		LO	9.2	30.3 30.9		46.0	-	15.7 15.1	
		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	20.3 20.6		LO	9.6	29.9 30.2		46.0	-	16.1 15.8	
		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

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EQUIPMENT : DVD/VCR
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POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25GE0229-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
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DATE : 2005/03/02
TEMP./HUMID. : 23deg.C / 36%
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.	
CATV														
1	119	23.1	24.3		BC	-7.0	16.1	17.3		43.5		27.4	26.2	
	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	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.		
		[dBuV]	[dBuV]		[dBuV]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[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]	HOR. VER.		TYPE	[dBuV]	HOR. VER.		[QP]		HOR. VER.				
		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dB]	[dB]			
95	137	22.5	22.6		BC	-5.5	17.0	17.1		43.5		26.5	26.4	
	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	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.		
			[dBuV]	[dBuV]		[dBuV]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[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					
	CH.			FREQ	READING(QP)				ANT			C.Factor	RESULT(QP)	
		[MHz]	HOR. VER.		TYPE	[dBuV]	HOR. VER.		[QP]		HOR. VER.			
		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dB]	[dB]			
97	149	22.5	22.4		BC	-4.8	17.7	17.6		43.5		25.8	25.9	
	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)
			HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.		
			[dBuV]	[dBuV]		[dBuV]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]
		1043			HO				-	-	74.0	54.0	>27.0	>10.0
1192		HO				-			-	74.0	54.0			
1341		HO				-			-	74.0	54.0			
1490		HO				-			-	74.0	54.0			
1639		HO				-			-	74.0	54.0			
CH.		FREQ			READING(QP)				ANT	C.Factor	RESULT(QP)			
		[MHz]	HOR. VER.		TYPE	[dBuV]	HOR. VER.		[QP]		HOR. VER.			
		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dB]	[dB]			
99	161	22.7	23.6		BC	-4.2	18.5	19.4		43.5		25.0	24.1	
	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)
			HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.		
			[dBuV]	[dBuV]		[dBuV]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[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

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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	22.8	22.5			BC	-3.8	19.0	18.7			43.5		24.5	24.8			
	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		HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[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]				[dBuV/m]		[dB]				
18	191	24.5	22.2			BC	-2.8	21.7	19.4			43.5		21.8	24.1			
	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		HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[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						
	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]				
22	215	26.8	22.7			BC	-2.4	24.4	20.3			43.5		19.1	23.2			
	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		HOR.	VER.	HOR.	VER.	[PK]	[AV]	HOR.	VER.	HOR.	VER.	
		[dBuV]		[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					
	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]				
23	263	21.9	22.0			BC	-0.6	21.3	21.4			46.0	46.0	24.7	24.6			
	526					LO						46.0	46.0					
	789					LO						46.0	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]	[dB]	[dB]
	1052					HO						74.0	54.0	>27.0	>10.0			
	1315					HO						74.0	54.0					
	1578					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]				
29	299	21.4	21.4			BC	1.9	23.3	23.3			46.0	46.0	22.7	22.7			
	598					LO						46.0	46.0	>15.0				
	897					LO						46.0	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]	[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/VCR
MODEL No. : D-VRW1SU
POWER : AC120V/60Hz
DESCRIPTION : TV Reception + Rec

REPORT No. : 25GE0229-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/03/02
TEMP./HUMID. : 23deg.C / 36%
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]		
CATV														
36	341	24.5	21.7		LO	-0.2	24.3	21.5		46.0	46.0	21.7	24.5	
	682				LO					46.0	46.0	>15.0		
		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]			
	1023			HO					74.0	54.0	>27.0		>10.0	
	1364			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]		
37	347	28.6	23.6		LO	-0.1	28.5	23.5		46.0	46.0	17.5	22.5	
	694				LO					46.0	46.0	>15.0		
		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]			
	1041			HO					74.0	54.0	>27.0		>10.0	
	1388			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]		
65	515	24.2	26.7		LO	3.1	27.3	29.8		46.0	46.0	18.7	16.2	
		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]			
	1030			HO					74.0	54.0	>27.0		>10.0	
	1545			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]		
94	689	20.5	20.6		LO	5.8	26.3	26.4		46.0	46.0	19.7	19.6	
		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]			
	1378			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]		
100	695	20.6	20.5		LO	5.9	26.5	26.4		46.0	46.0	19.5	19.6	
		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]			
	1390			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]		
113	773	19.8	19.9		LO	8.3	28.1	28.2		46.0	46.0	17.9	17.8	
		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]			
	1546			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]		
125	845	21.3	27.1		LO	9.6	30.9	36.7		46.0	46.0	15.1	9.3	
		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]			
	1690			HO					74.0	54.0	>27.0		>10.0	

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 0dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	945.00	BB	27.2	26.0	26.1	27.1	7.5	6.0	39.7	38.5	46.0	6.3	7.5

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

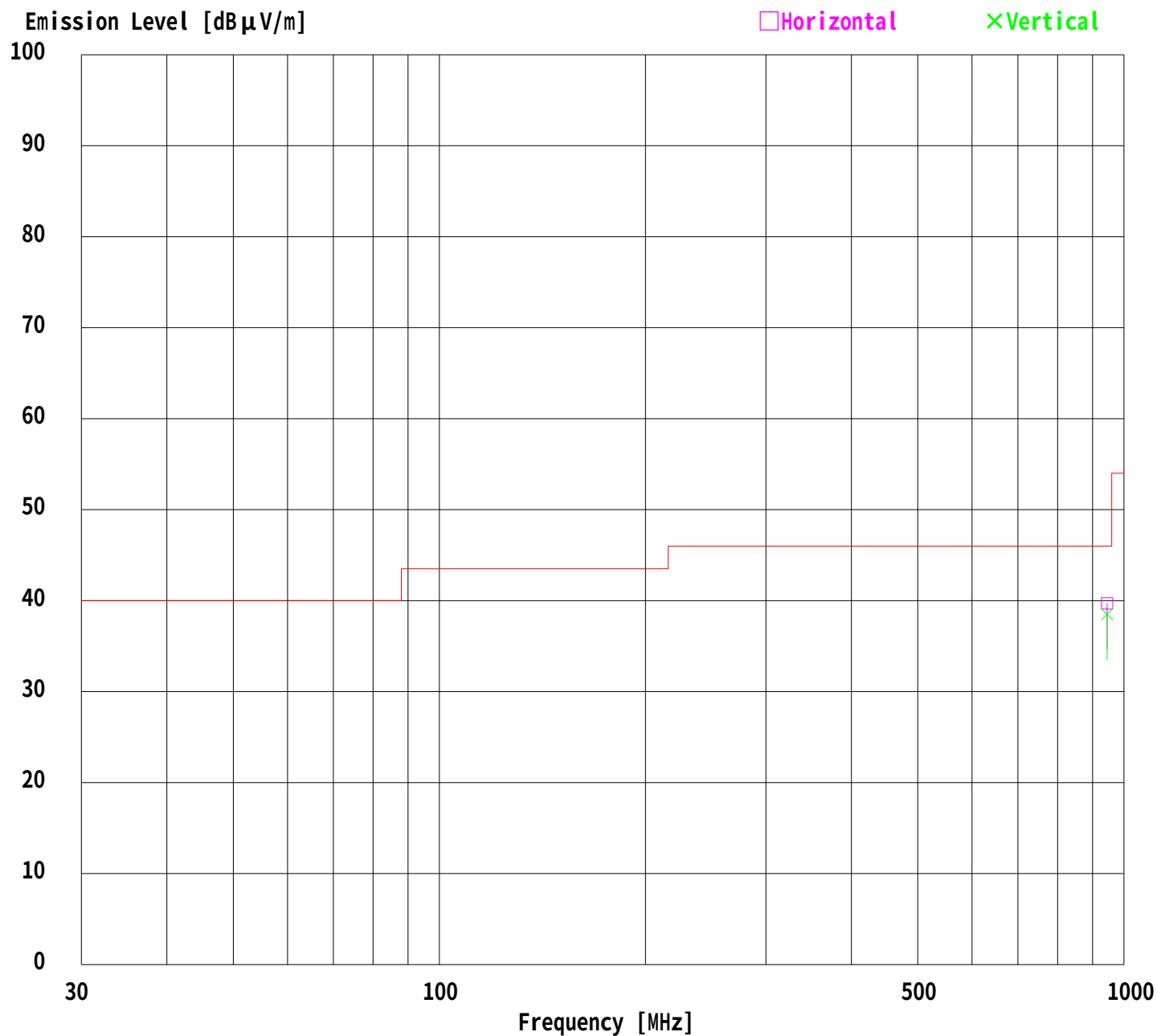
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 0dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	58.77	BB	27.5	27.3	8.7	28.4	1.4	5.9	15.1	14.9	40.0	24.9	25.1
2.	112.00	BB	26.7	32.4	12.1	28.2	2.1	5.9	18.6	24.3	43.5	24.9	19.2
3.	231.43	BB	32.2	23.6	17.2	28.0	3.1	6.0	30.5	21.9	46.0	15.5	24.1
4.	270.00	BB	32.7	30.0	18.5	27.9	3.5	6.0	32.8	30.1	46.0	13.2	15.9
5.	304.98	BB	27.3	28.6	16.7	27.9	3.7	6.0	25.8	27.1	46.0	20.2	18.9
6.	508.29	BB	28.1	33.3	19.5	27.9	5.2	6.0	30.9	36.1	46.0	15.1	9.9
7.	655.73	BB	28.8	31.0	21.6	27.5	6.0	6.0	34.9	37.1	46.0	11.1	8.9
8.	945.00	BB	27.3	25.9	26.1	27.1	7.5	6.0	39.8	38.4	46.0	6.2	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

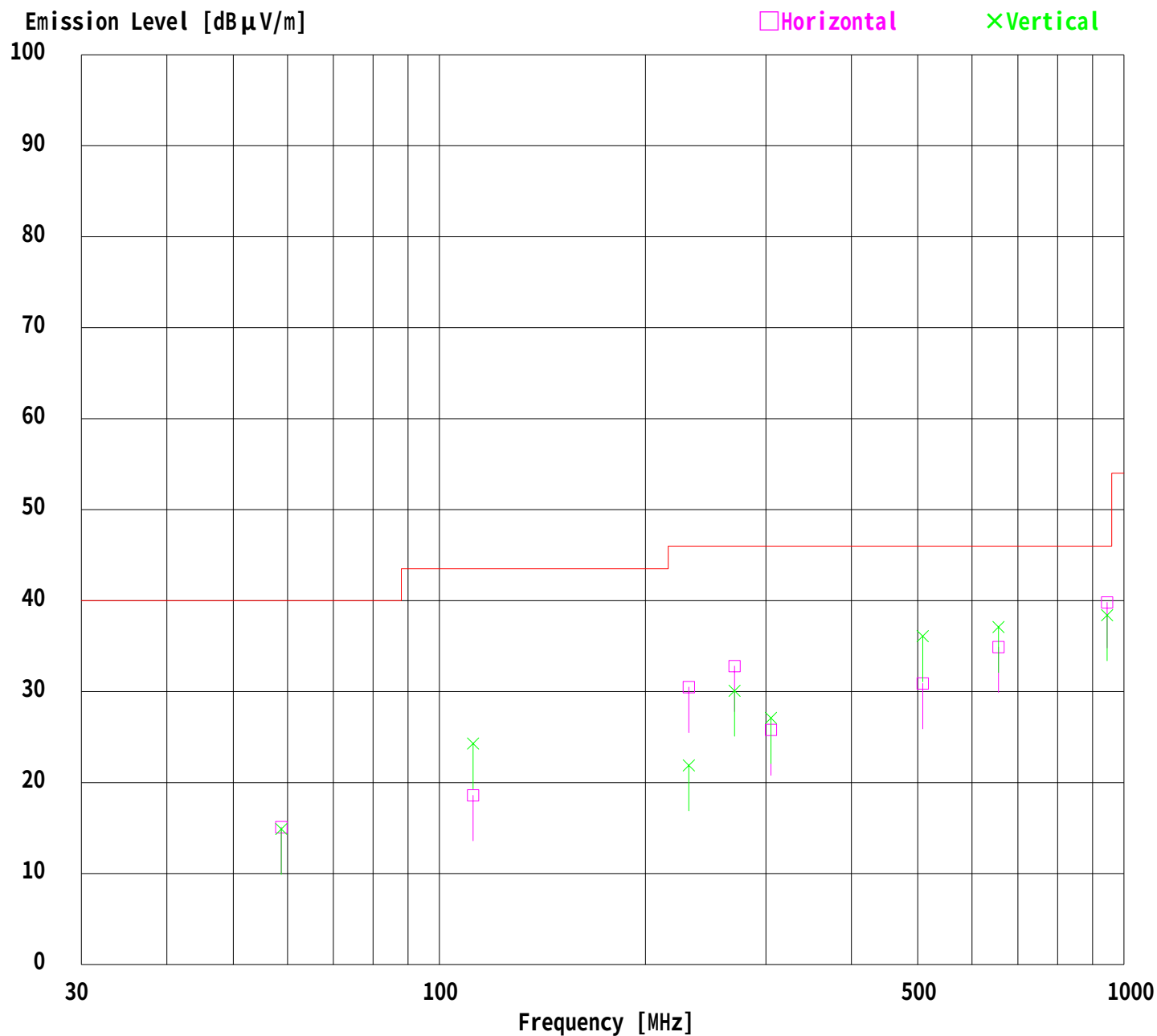
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1079.54	BB	37.7	48.9	25.3	40.0	3.4	0.0	26.4	37.6	54.0	27.6	16.4
2.	1349.71	BB	38.2	50.2	26.6	39.6	3.8	0.0	29.0	41.0	54.0	25.0	13.0
3.	2295.36	BB	35.2	37.3	31.2	38.5	5.4	0.0	33.3	35.4	54.0	20.7	18.6

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

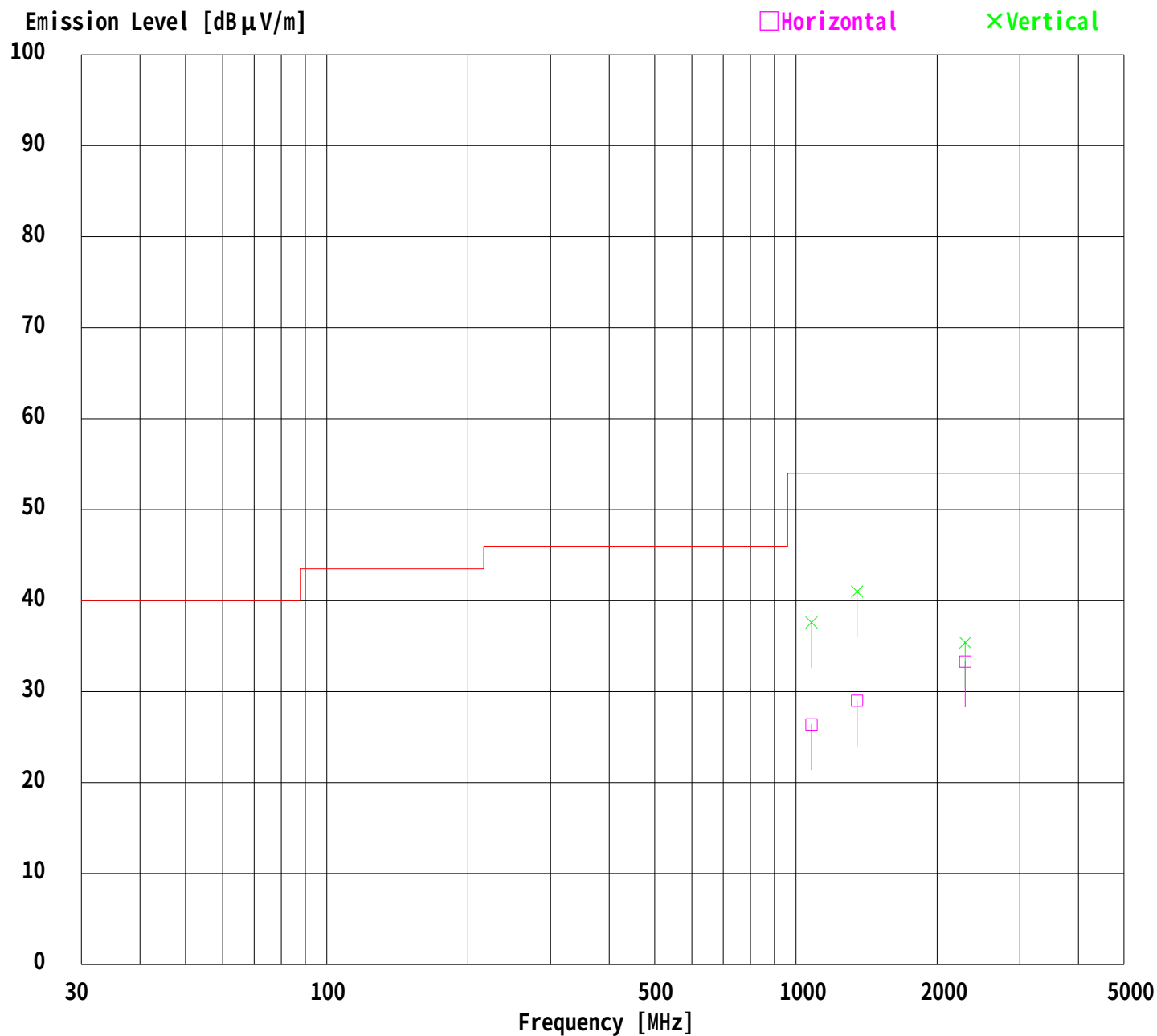
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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.	1079.54	BB	50.1	54.8	25.3	40.0	3.4	0.0	38.8	43.5	74.0	35.2	30.5
2.	1349.71	BB	49.2	56.7	26.6	39.6	3.8	0.0	40.0	47.5	74.0	34.0	26.5
3.	2295.36	BB	46.7	47.9	31.2	38.5	5.4	0.0	44.8	46.0	74.0	29.2	28.0

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

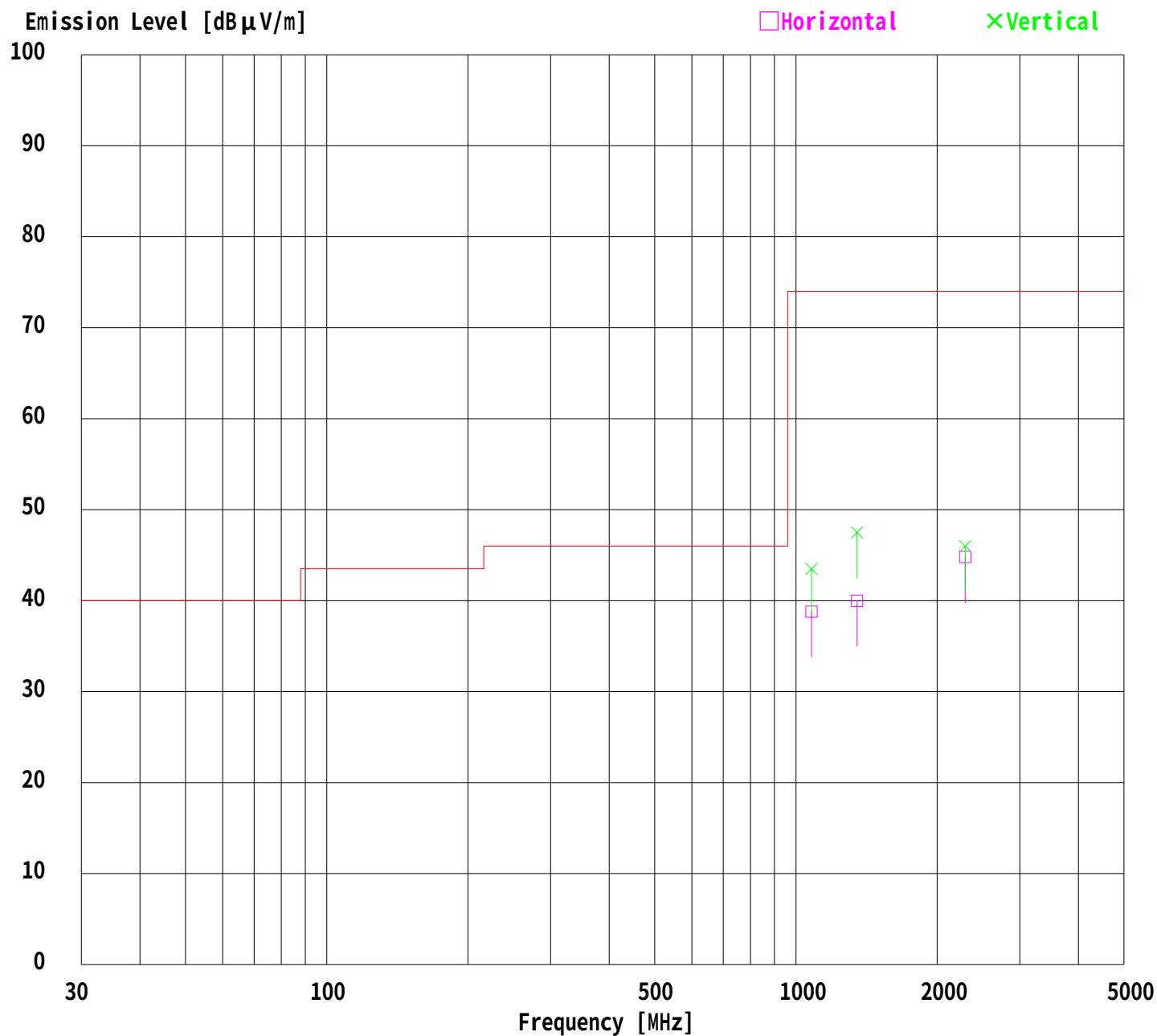
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION + REC
Remarks : 25dBmV
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 1Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	944.98	BB	28.5	26.1	26.1	27.1	7.5	6.0	41.0	38.6	46.0	5.0	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

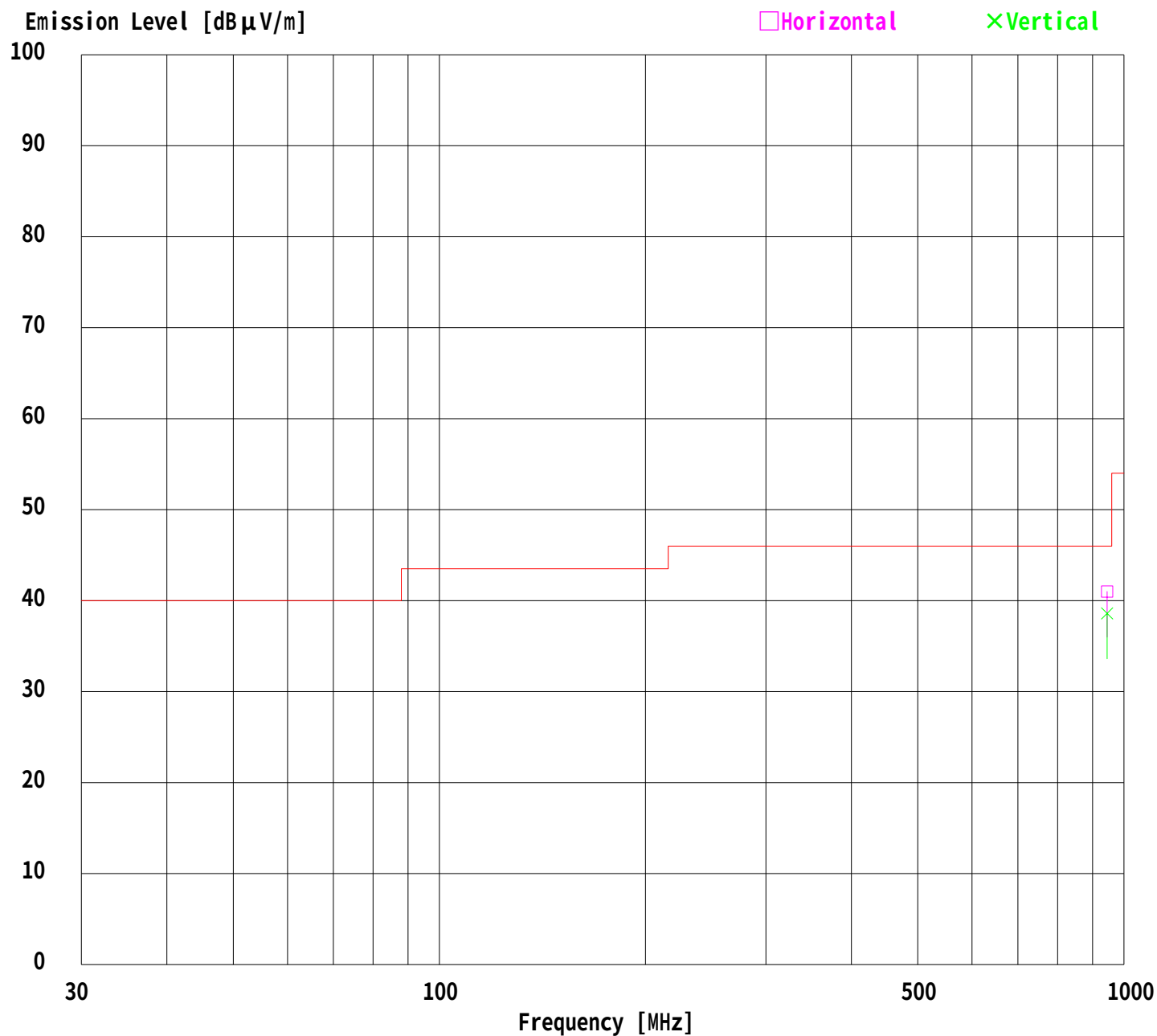
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 1Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	58.77	BB	27.8	31.1	8.7	28.4	1.4	5.9	15.4	18.7	40.0	24.6	21.3
2.	112.00	BB	26.2	33.4	12.1	28.2	2.1	5.9	18.1	25.3	43.5	25.4	18.2
3.	231.43	BB	31.4	24.5	17.2	28.0	3.1	6.0	29.7	22.8	46.0	16.3	23.2
4.	270.00	BB	31.2	28.3	18.5	27.9	3.5	6.0	31.3	28.4	46.0	14.7	17.6
5.	304.95	BB	27.7	28.2	16.7	27.9	3.7	6.0	26.2	26.7	46.0	19.8	19.3
6.	508.28	BB	28.8	31.0	19.5	27.9	5.2	6.0	31.6	33.8	46.0	14.4	12.2
7.	655.71	BB	28.3	28.7	21.6	27.5	6.0	6.0	34.4	34.8	46.0	11.6	11.2
8.	944.98	BB	28.5	26.8	26.1	27.1	7.5	6.0	41.0	39.3	46.0	5.0	6.7

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

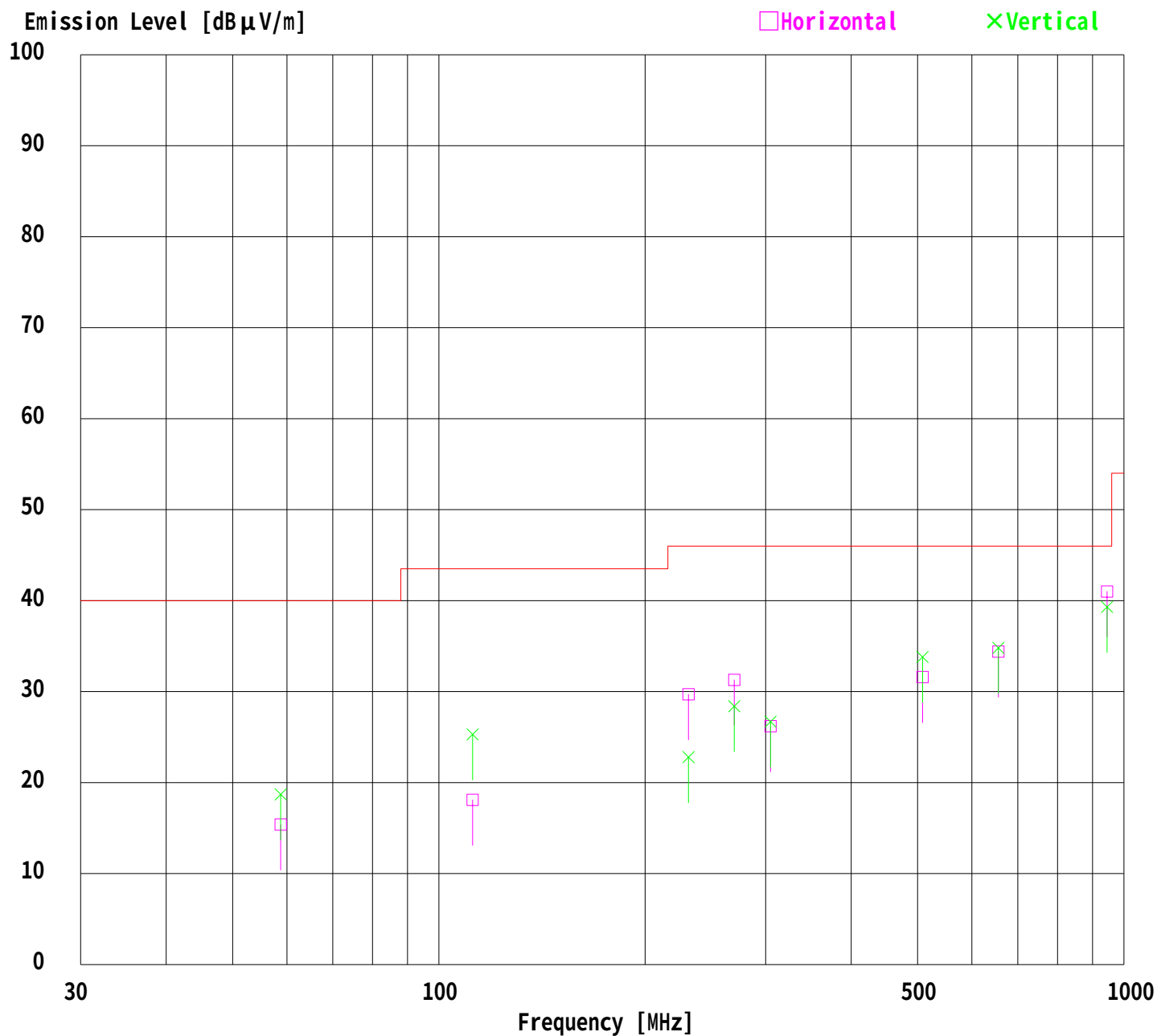
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.

Kind of Equipment : DVD-RW/VCR

Model No. : D-VRW1SU

Serial No. :

Power : AC120V/60Hz

Mode : AV INPUT 1 + REC

Remarks : 5Vp-p

Date : 3/2/2005

Test Distance : 3 m

Temperature : 23 °C

Engineer : Tsubasa Takayama

Humidity : 36 %

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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1079.79	BB	40.3	46.5	25.3	40.0	3.4	0.0	29.0	35.2	54.0	25.0	18.8
2.	1350.03	BB	39.0	50.2	26.7	39.6	3.8	0.0	29.9	41.1	54.0	24.1	12.9
3.	2295.26	BB	34.7	36.7	31.2	38.5	5.4	0.0	32.8	34.8	54.0	21.2	19.2

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

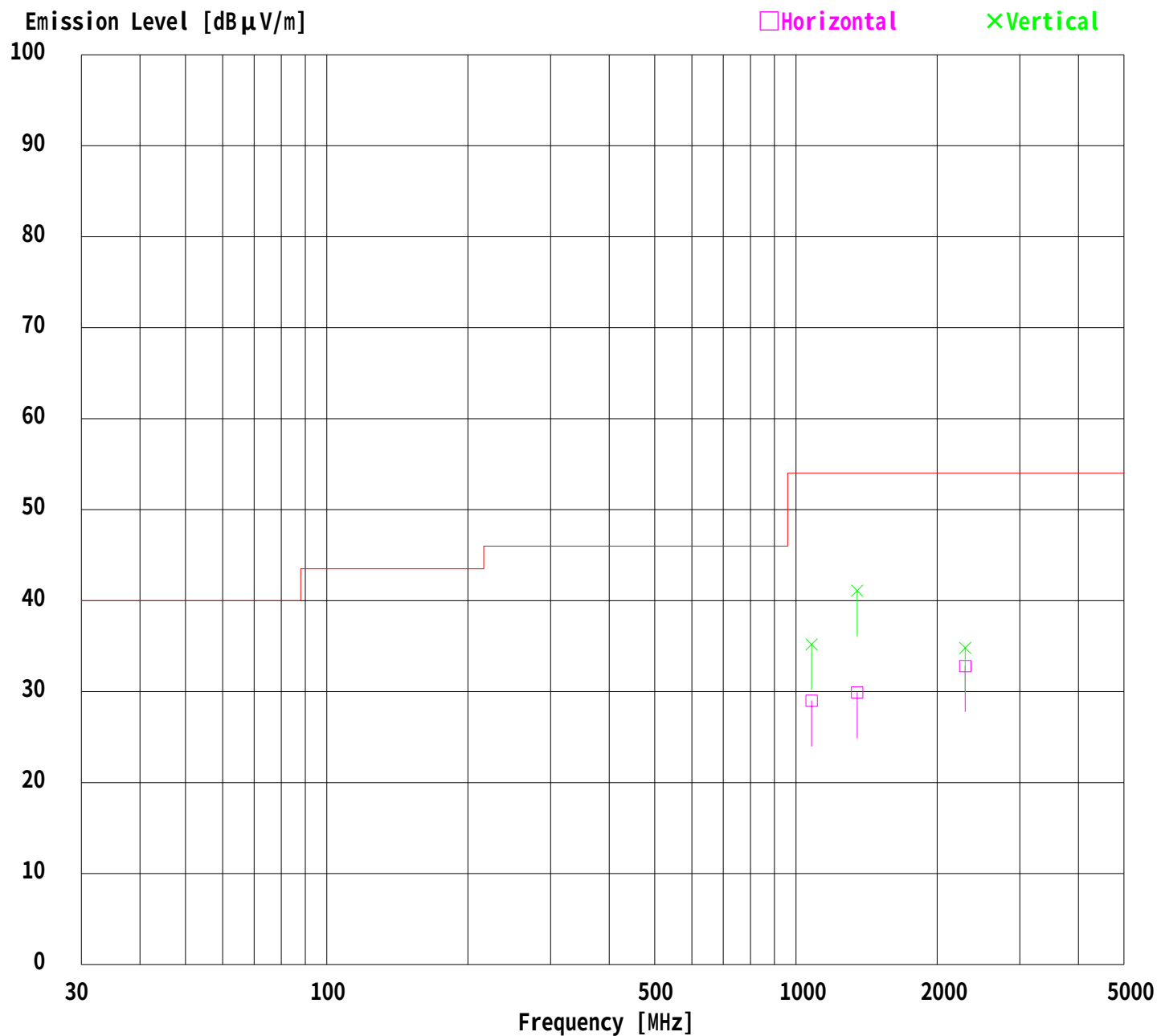
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1079.79	BB	50.4	53.8	25.3	40.0	3.4	0.0	39.1	42.5	74.0	34.9	31.5
2.	1350.03	BB	49.7	57.4	26.7	39.6	3.8	0.0	40.6	48.3	74.0	33.4	25.7
3.	2295.26	BB	46.9	48.7	31.2	38.5	5.4	0.0	45.0	46.8	74.0	29.0	27.2

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

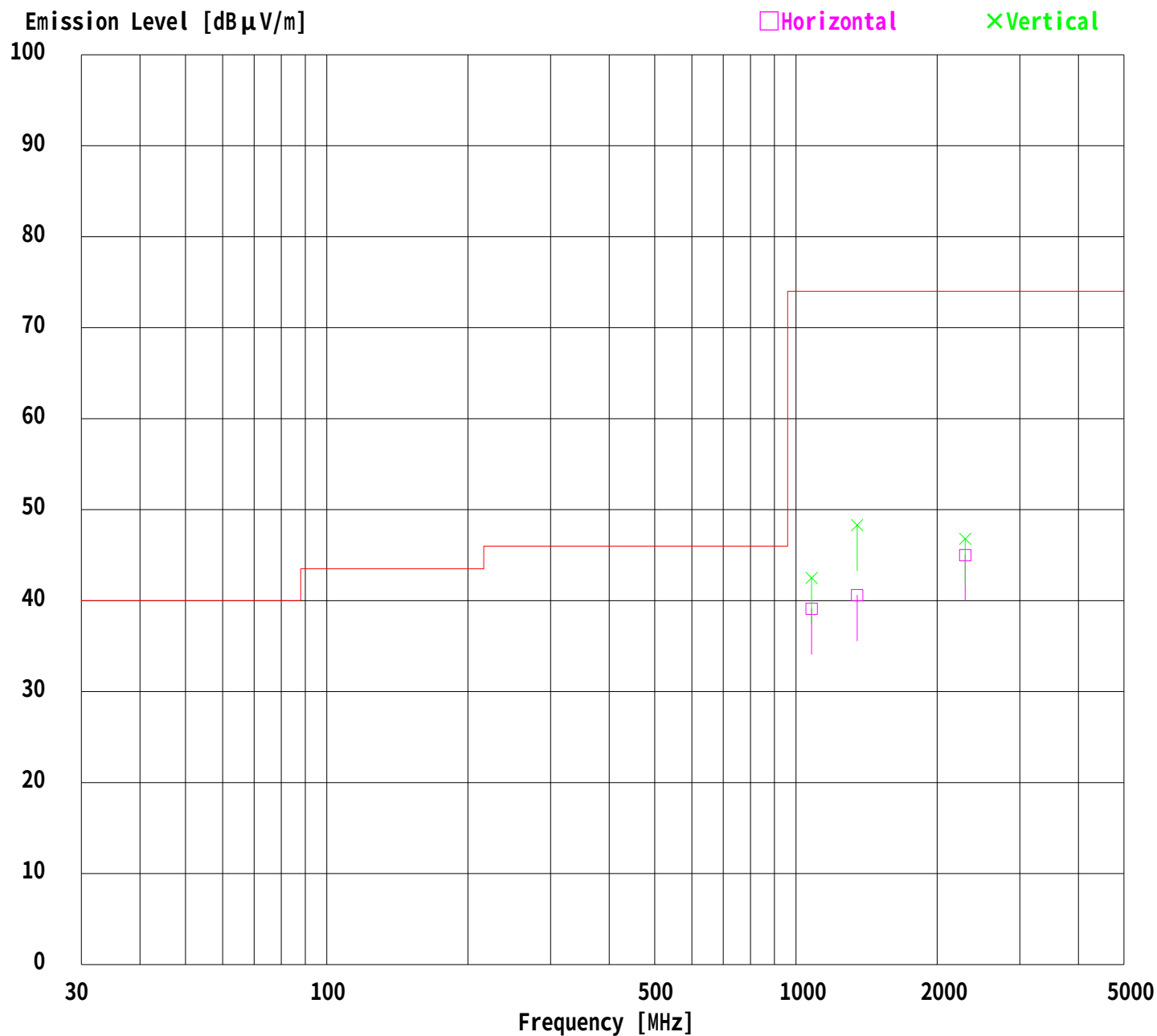
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 1 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 1Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	944.98	BB	28.2	27.1	26.1	27.1	7.5	6.0	40.7	39.6	46.0	5.3	6.4

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

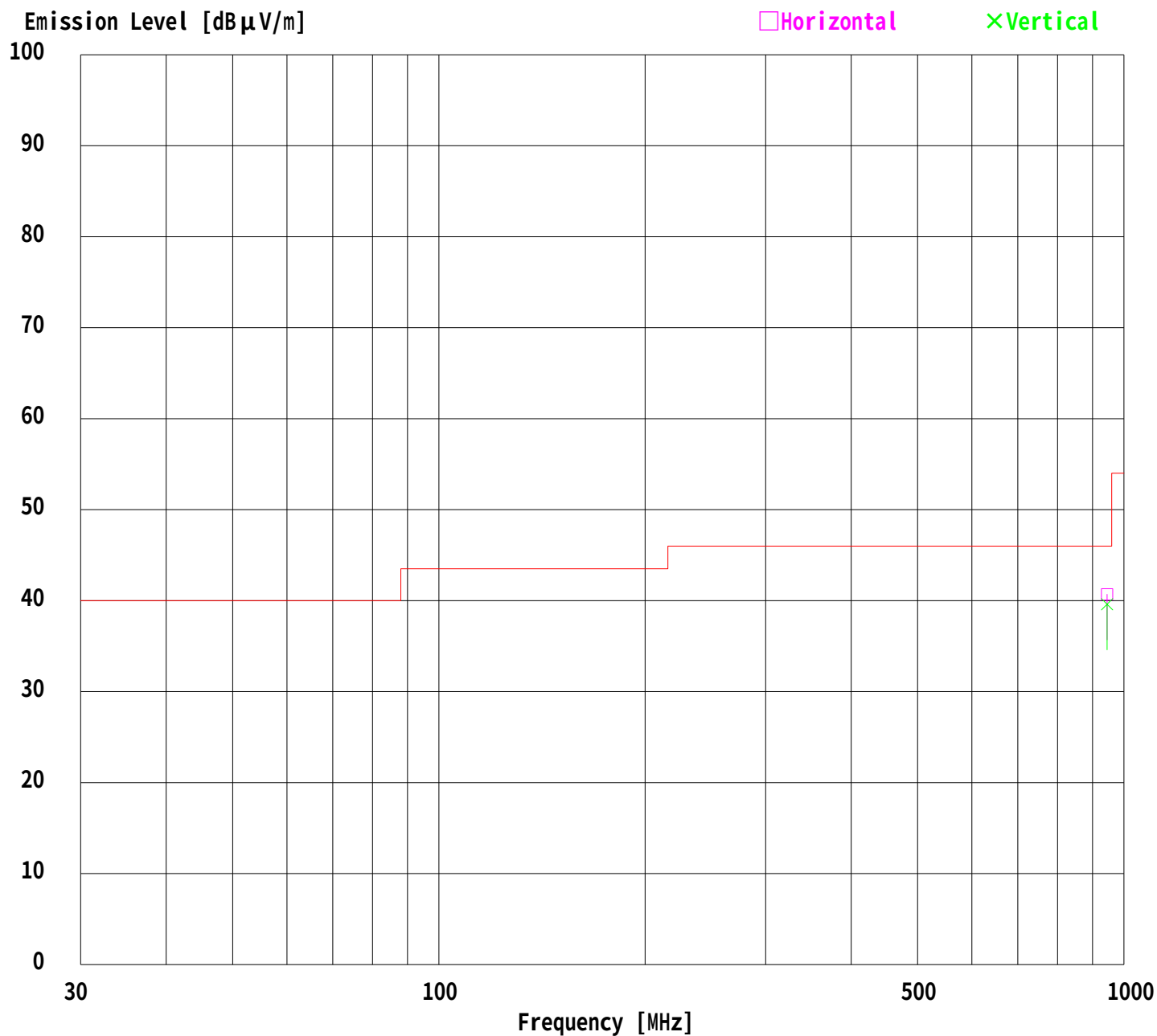
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 1Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	58.77	BB	26.3	28.8	8.7	28.4	1.4	5.9	13.9	16.4	40.0	26.1	23.6
2.	112.00	BB	28.3	33.2	12.1	28.2	2.1	5.9	20.2	25.1	43.5	23.3	18.4
3.	231.43	BB	32.5	24.8	17.2	28.0	3.1	6.0	30.8	23.1	46.0	15.2	22.9
4.	270.00	BB	30.8	27.9	18.5	27.9	3.5	6.0	30.9	28.0	46.0	15.1	18.0
5.	304.98	BB	28.5	29.0	16.7	27.9	3.7	6.0	27.0	27.5	46.0	19.0	18.5
6.	508.29	BB	29.7	33.2	19.5	27.9	5.2	6.0	32.5	36.0	46.0	13.5	10.0
7.	655.72	BB	27.7	32.4	21.6	27.5	6.0	6.0	33.8	38.5	46.0	12.2	7.5
8.	944.98	BB	28.2	27.3	26.1	27.1	7.5	6.0	40.7	39.8	46.0	5.3	6.2

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

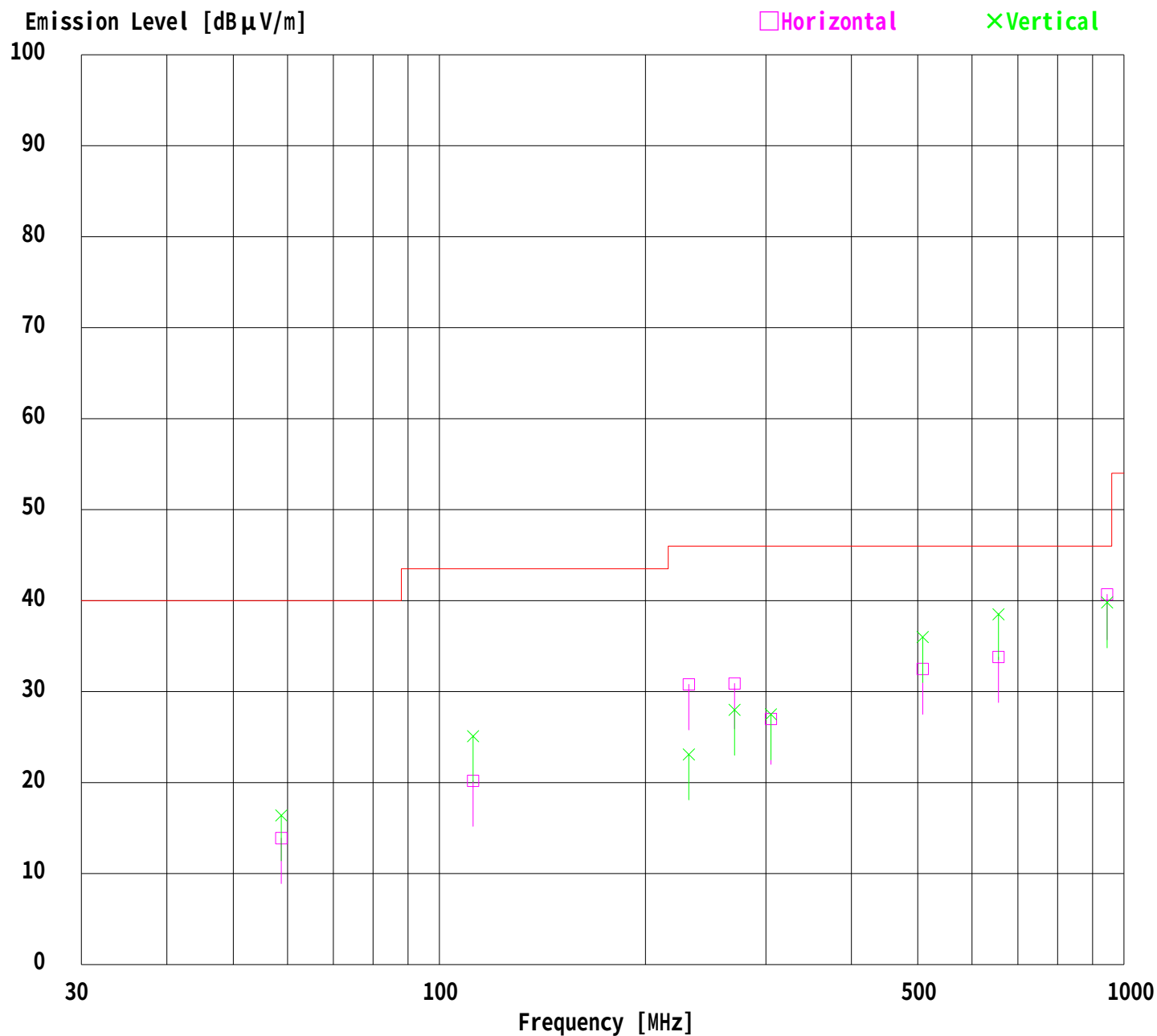
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1079.87	BB	39.4	49.3	25.3	40.0	3.4	0.0	28.1	38.0	54.0	25.9	16.0
2.	1350.00	BB	36.9	50.3	26.7	39.6	3.8	0.0	27.8	41.2	54.0	26.2	12.8
3.	2295.40	BB	34.5	35.6	31.2	38.5	5.4	0.0	32.6	33.7	54.0	21.4	20.3

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

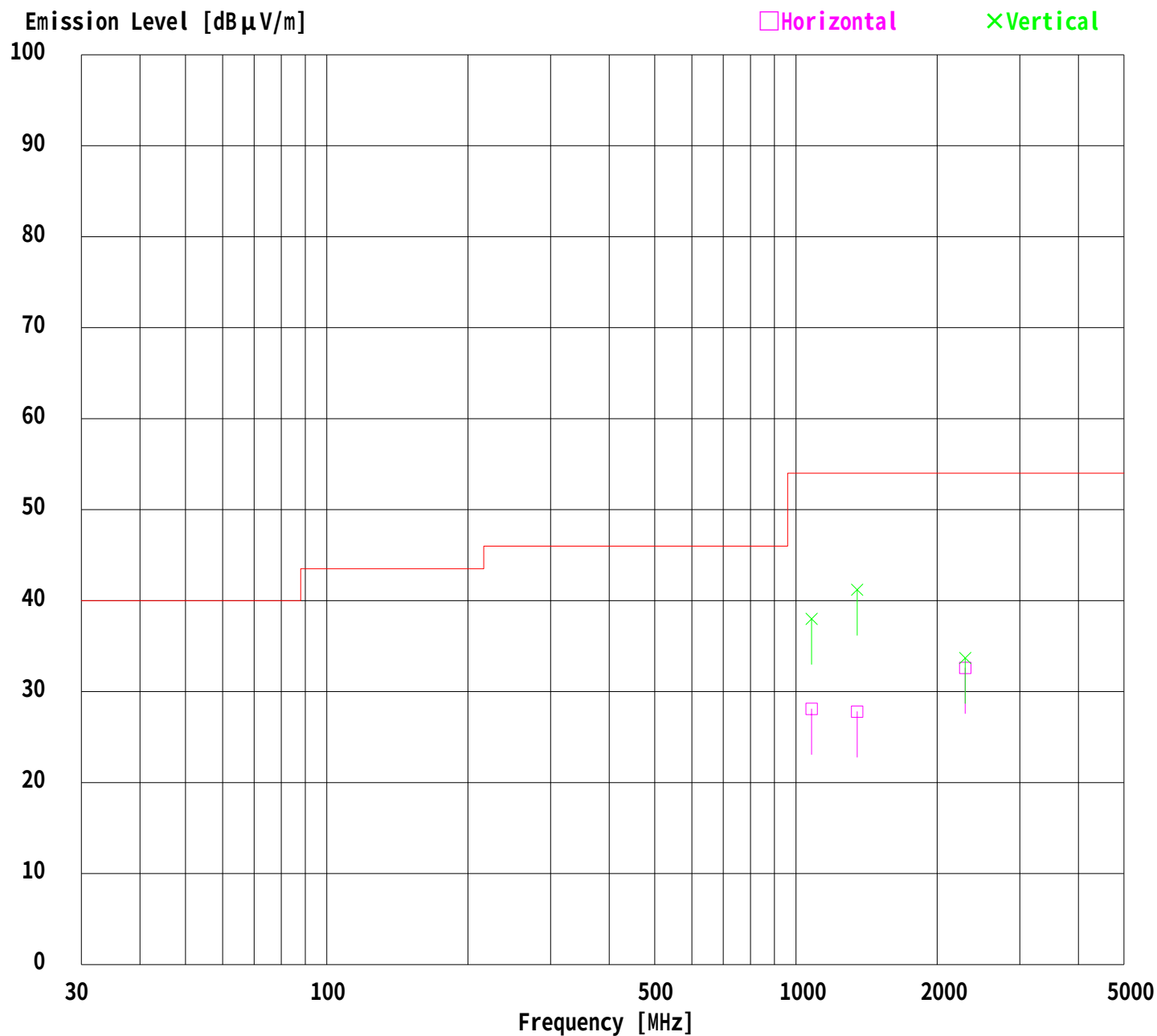
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1079.87	BB	49.7	55.2	25.3	40.0	3.4	0.0	38.4	43.9	74.0	35.6	30.1
2.	1350.00	BB	50.5	56.5	26.7	39.6	3.8	0.0	41.4	47.4	74.0	32.6	26.6
3.	2295.40	BB	46.2	47.3	31.2	38.5	5.4	0.0	44.3	45.4	74.0	29.7	28.6

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

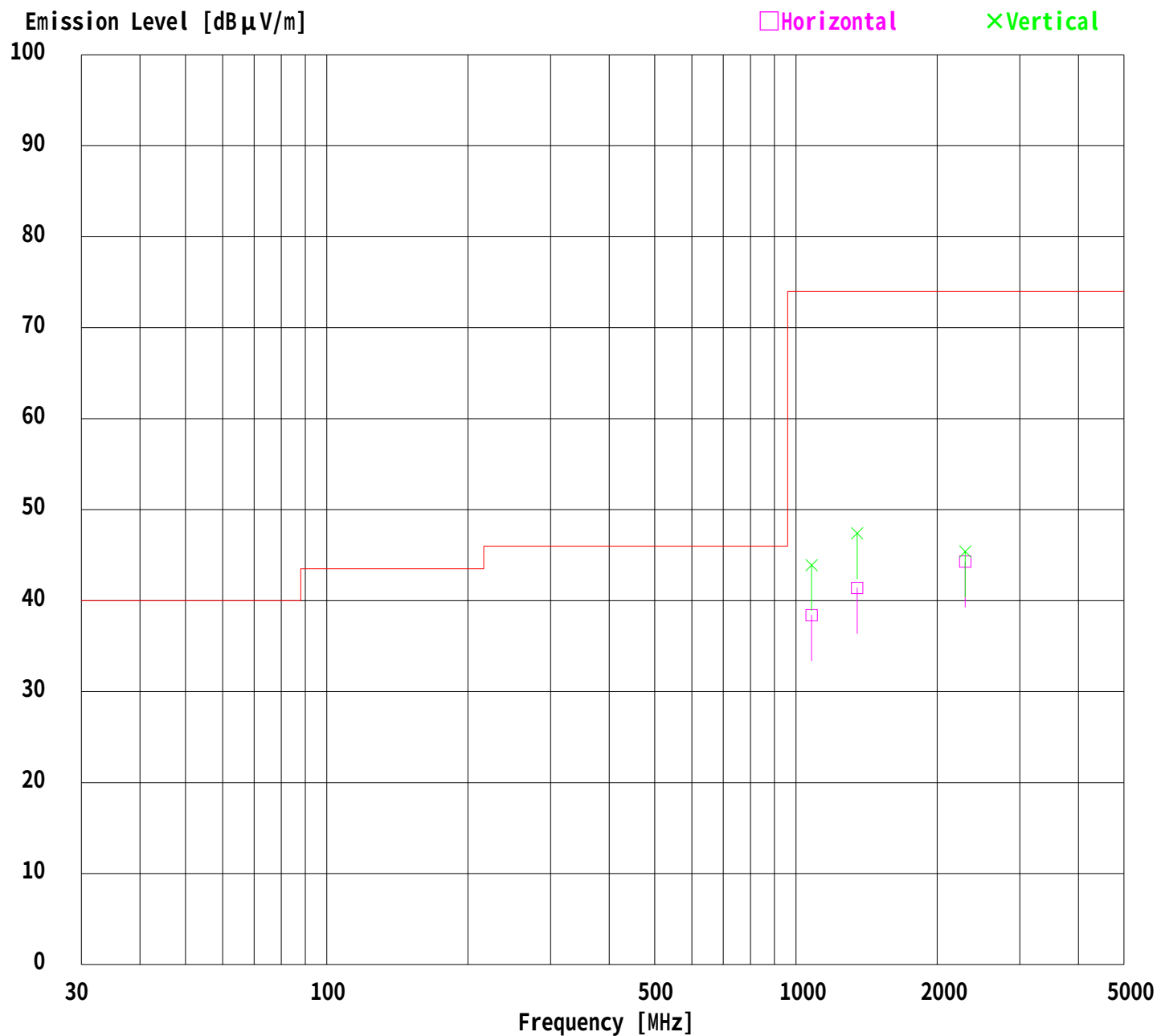
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : AV INPUT 2 + REC
Remarks : 5Vp-p
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
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.	57.27	BB	42.1	37.7	8.8	30.0	1.7	5.8	28.4	24.0	40.0	11.6	16.0
2.	114.54	BB	41.7	35.2	12.1	29.9	2.6	5.8	32.3	25.8	43.5	11.2	17.7
3.	134.99	BB	36.2	30.9	13.8	29.9	2.8	5.8	28.7	23.4	43.5	14.8	20.1
4.	143.18	BB	38.6	32.6	14.2	29.9	2.9	5.8	31.6	25.6	43.5	11.9	17.9
5.	270.00	BB	31.7	25.4	17.7	30.0	4.5	5.8	29.7	23.4	46.0	16.3	22.6
6.	304.96	BB	30.4	29.4	13.6	30.0	4.9	5.8	24.7	23.7	46.0	21.3	22.3
7.	385.71	BB	35.7	30.8	16.0	30.1	5.5	5.9	33.0	28.1	46.0	13.0	17.9
8.	508.28	BB	30.5	29.4	17.6	30.3	6.5	5.9	30.2	29.1	46.0	15.8	16.9
9.	945.00	BB	27.4	27.4	26.1	27.1	7.5	6.0	39.9	39.9	46.0	6.1	6.1

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

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

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

DATA OF RADIATION TEST

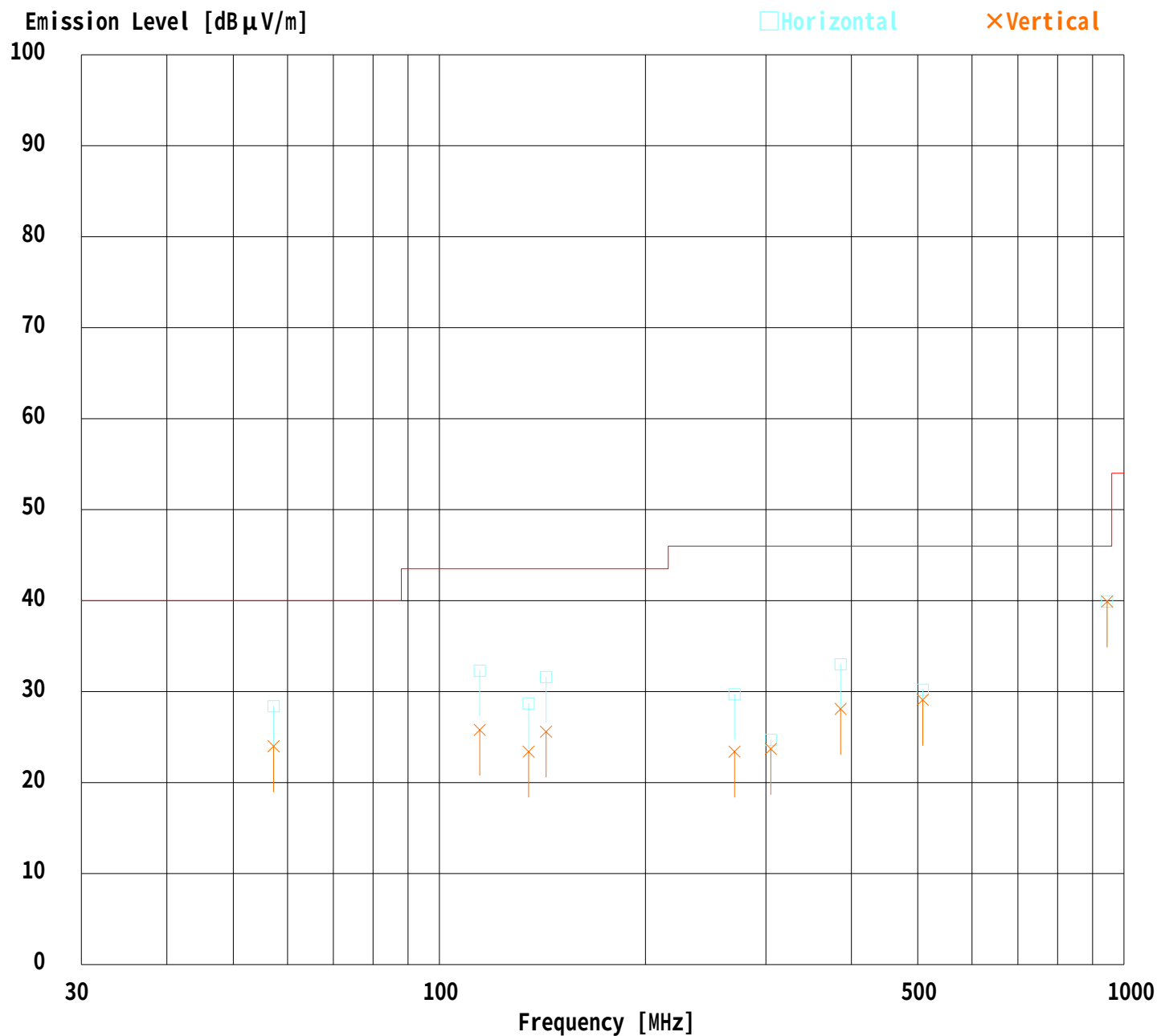
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1080.02	BB	38.4	43.6	25.3	40.0	3.4	0.0	27.1	32.3	54.0	26.9	21.7
2.	1350.03	BB	40.3	43.9	26.7	39.6	3.8	0.0	31.2	34.8	54.0	22.8	19.2
3.	2296.26	BB	34.5	35.8	31.2	38.5	5.4	0.0	32.6	33.9	54.0	21.4	20.1

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

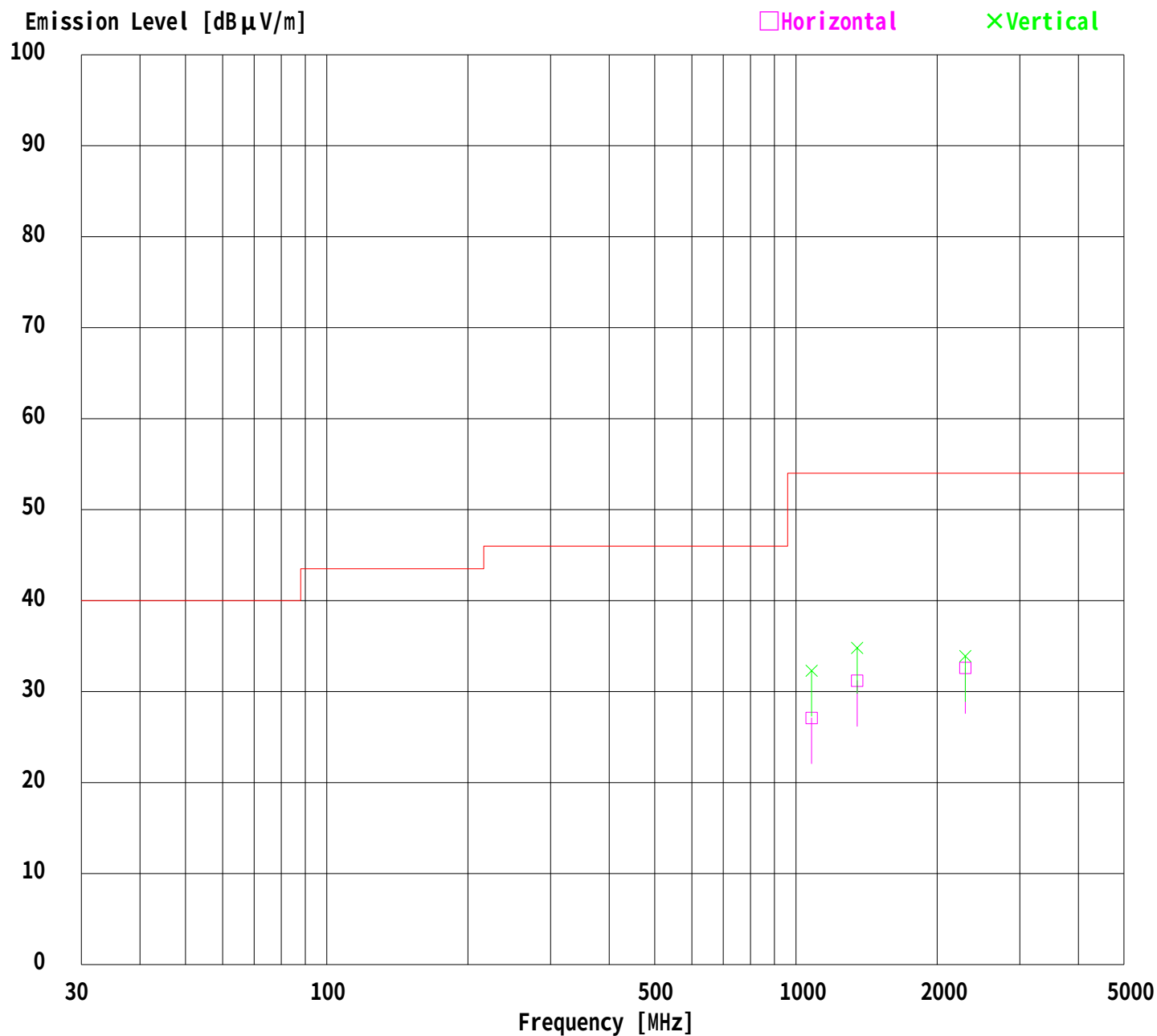
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1080.02	BB	48.5	51.6	25.3	40.0	3.4	0.0	37.2	40.3	74.0	36.8	33.7
2.	1350.03	BB	51.4	54.0	26.7	39.6	3.8	0.0	42.3	44.9	74.0	31.7	29.1
3.	2296.26	BB	46.6	48.0	31.2	38.5	5.4	0.0	44.7	46.1	74.0	29.3	27.9

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

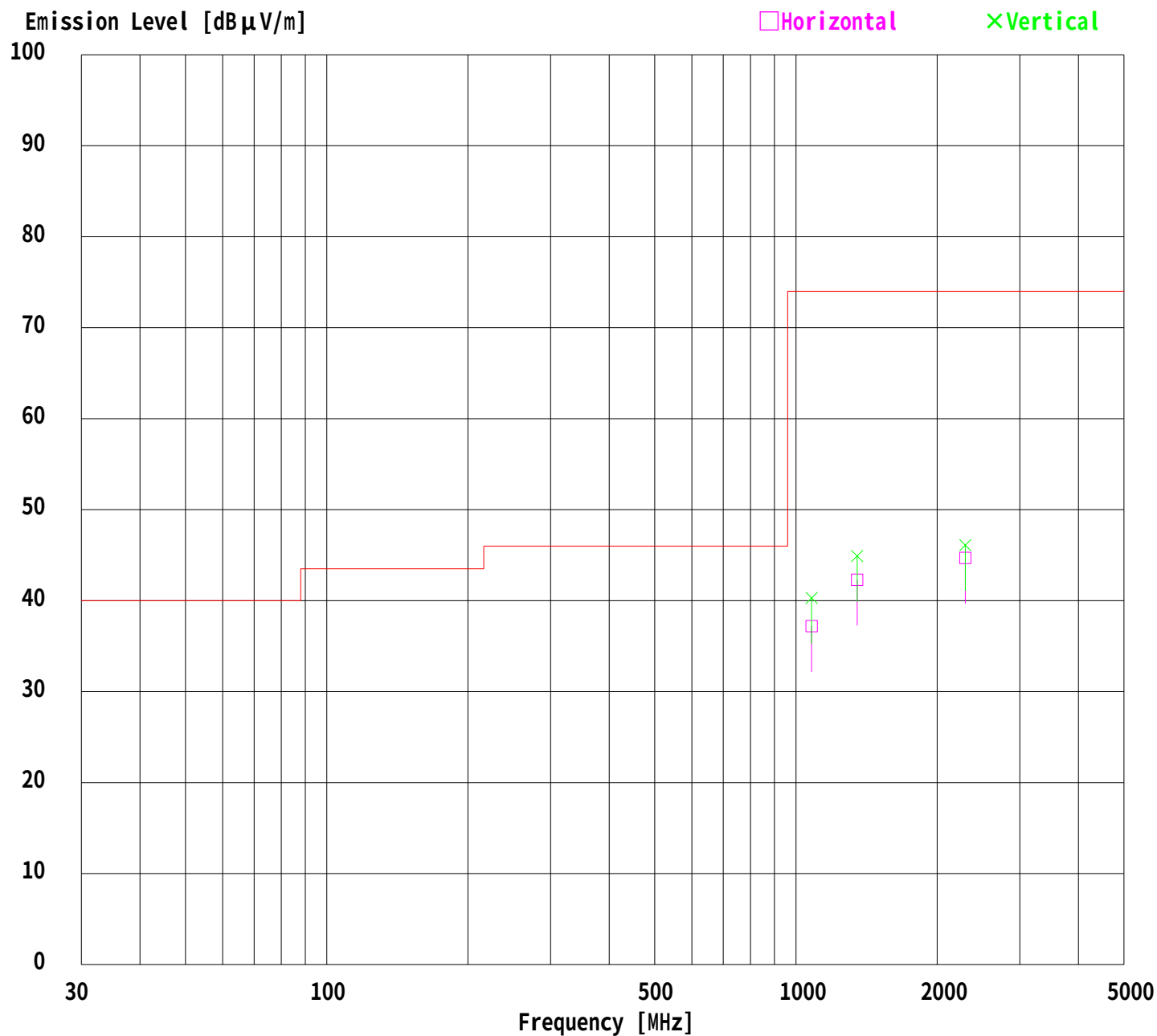
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : VCR PLAYBACK + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
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.	57.26	BB	41.1	39.2	8.8	30.0	1.7	5.8	27.4	25.5	40.0	12.6	14.5
2.	134.99	BB	38.2	33.4	13.8	29.9	2.8	5.8	30.7	25.9	43.5	12.8	17.6
3.	143.19	BB	37.6	31.8	14.2	29.9	2.9	5.8	30.6	24.8	43.5	12.9	18.7
4.	269.99	BB	30.7	27.9	17.7	30.0	4.5	5.8	28.7	25.9	46.0	17.3	20.1
5.	304.96	BB	33.2	29.6	13.6	30.0	4.9	5.8	27.5	23.9	46.0	18.5	22.1
6.	385.70	BB	36.7	33.4	16.0	30.1	5.5	5.9	34.0	30.7	46.0	12.0	15.3
7.	508.29	BB	28.8	30.5	17.6	30.3	6.5	5.9	28.5	30.2	46.0	17.5	15.8
8.	945.00	BB	26.1	28.7	26.1	27.1	7.5	6.0	38.6	41.2	46.0	7.4	4.8

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

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

DATA OF RADIATION TEST

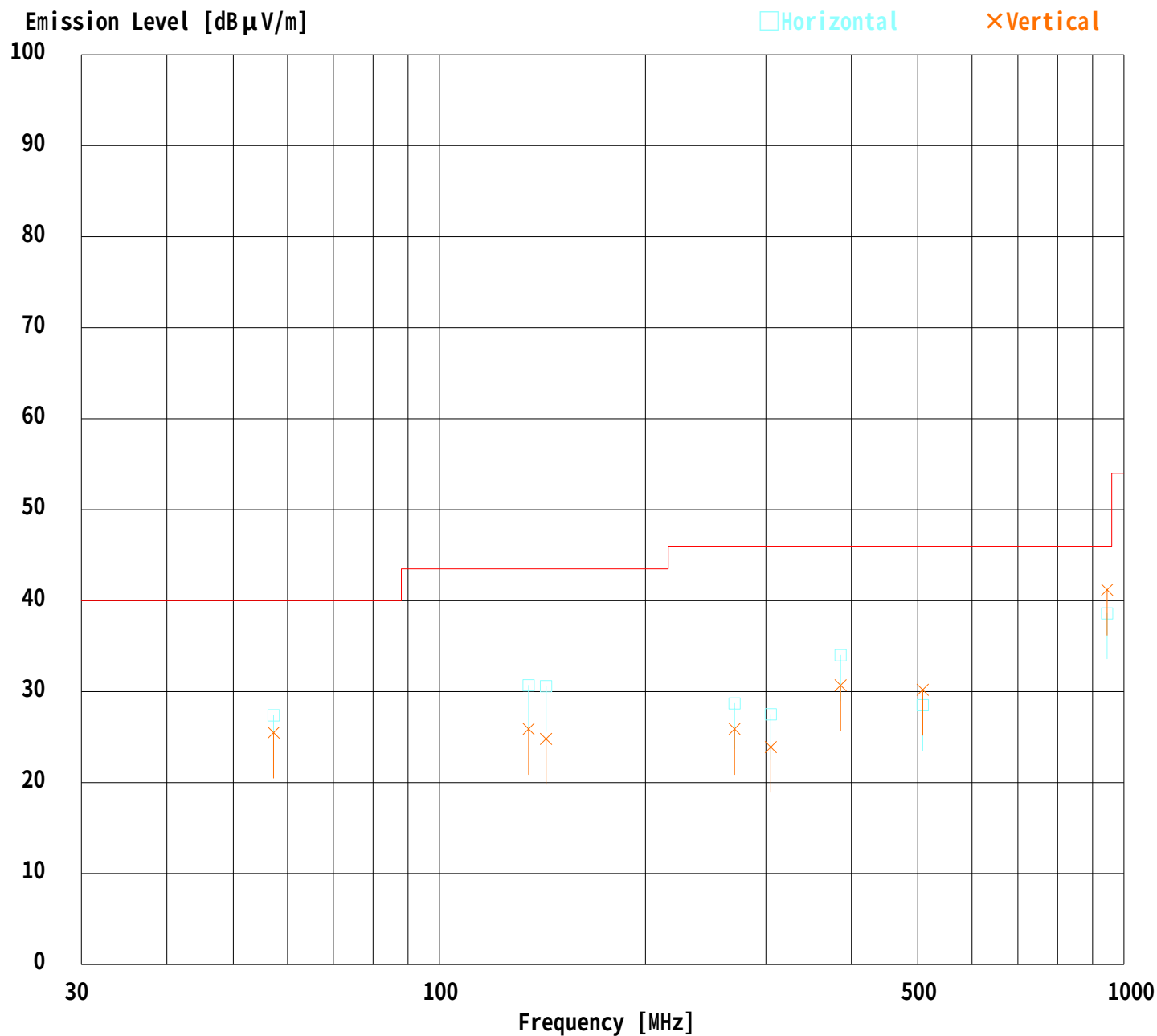
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1051.10	BB	38.0	41.2	25.2	40.0	3.3	0.0	26.5	29.7	54.0	27.5	24.3
2.	1350.09	BB	37.9	48.0	26.7	39.6	3.8	0.0	28.8	38.9	54.0	25.2	15.1
3.	2500.20	BB	42.5	47.1	31.5	38.6	5.8	0.0	41.2	45.8	54.0	12.8	8.2

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

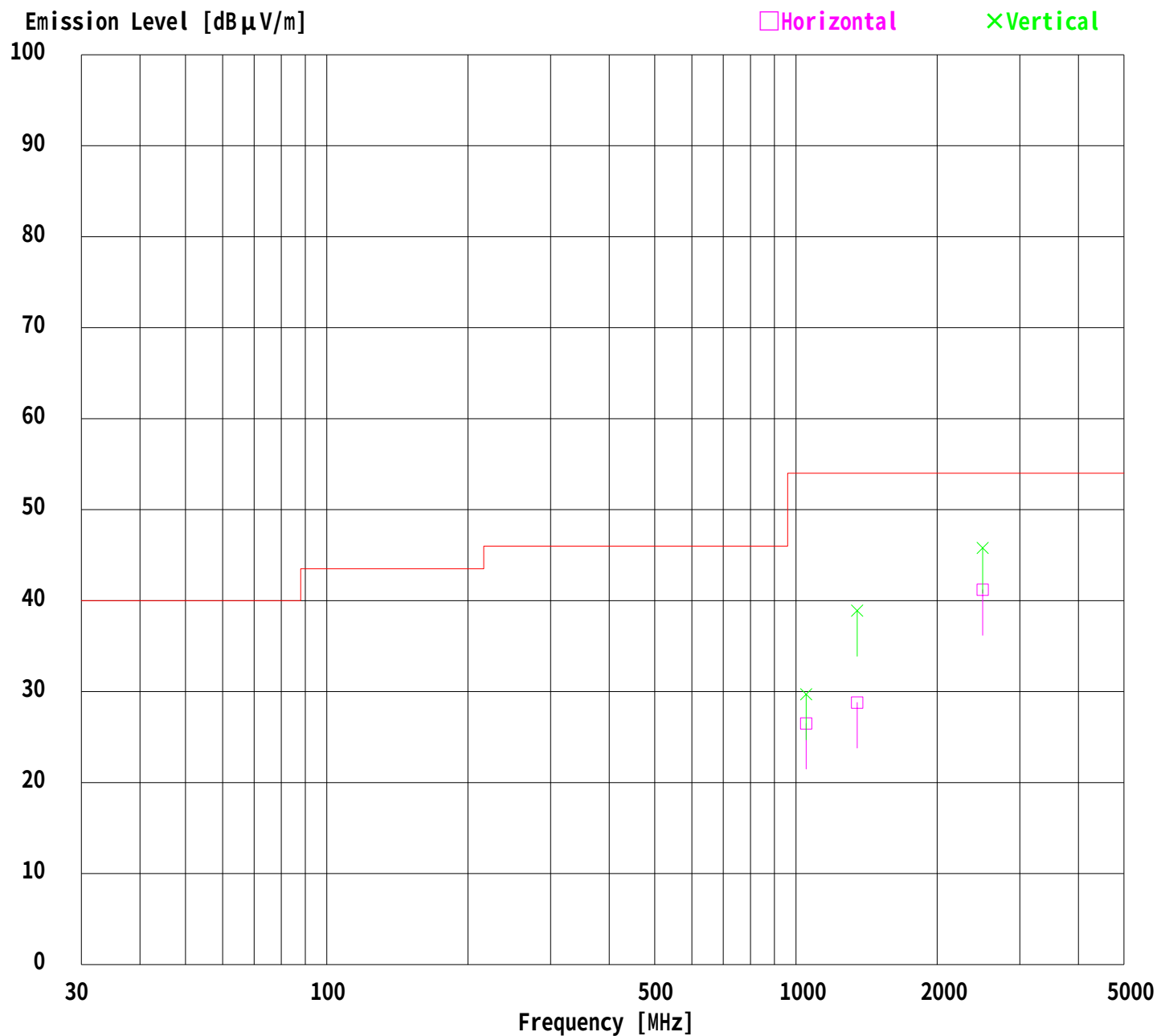
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C Engineer : Tsubasa Takayama
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	1051.10	BB	51.3	57.8	25.2	40.0	3.3	0.0	39.8	46.3	74.0	34.2	27.7
2.	1350.09	BB	49.2	55.3	26.7	39.6	3.8	0.0	40.1	46.2	74.0	33.9	27.8
3.	2500.20	BB	53.6	52.6	31.5	38.6	5.8	0.0	52.3	51.3	74.0	21.7	22.7

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

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

ANT.TYPE: 1-5GHz Horn

DATA OF RADIATION TEST

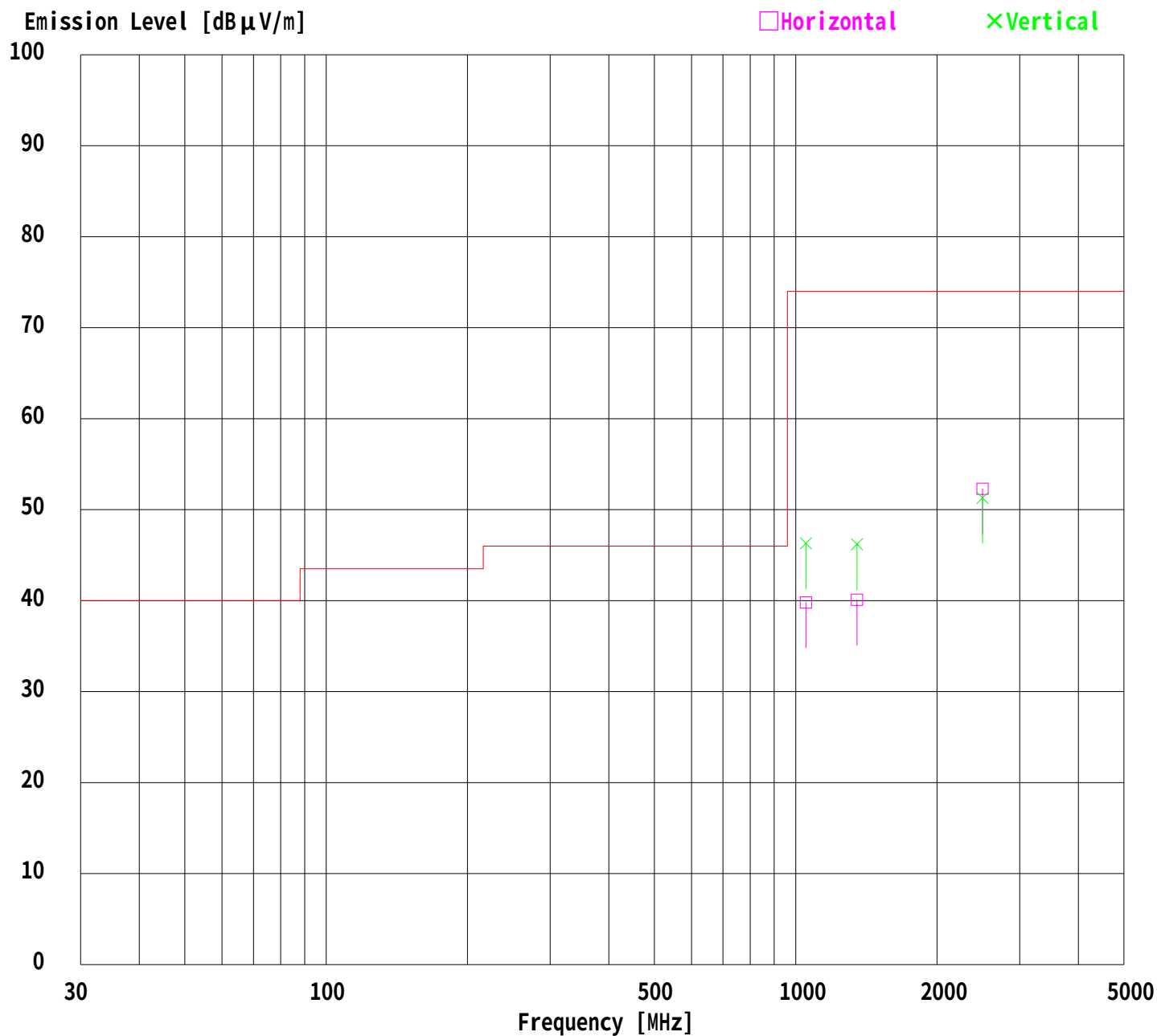
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY + REC
Remarks :
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120/60Hz
Mode : DVD Play + REC
Remarks : Test Channel #3
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	61.25	BB	23.9	24.7	8.2	28.4	1.5	5.9	11.1	11.9	40.0	28.9	28.1
2.	65.75	BB	27.2	26.2	7.3	28.3	1.5	5.9	13.6	12.6	40.0	26.4	27.4
3.	122.50	BB	22.3	24.4	13.7	28.2	2.2	5.9	15.9	18.0	43.5	27.6	25.5
4.	183.75	BB	22.5	22.1	16.5	28.0	2.7	5.9	19.6	19.2	43.5	23.9	24.3

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

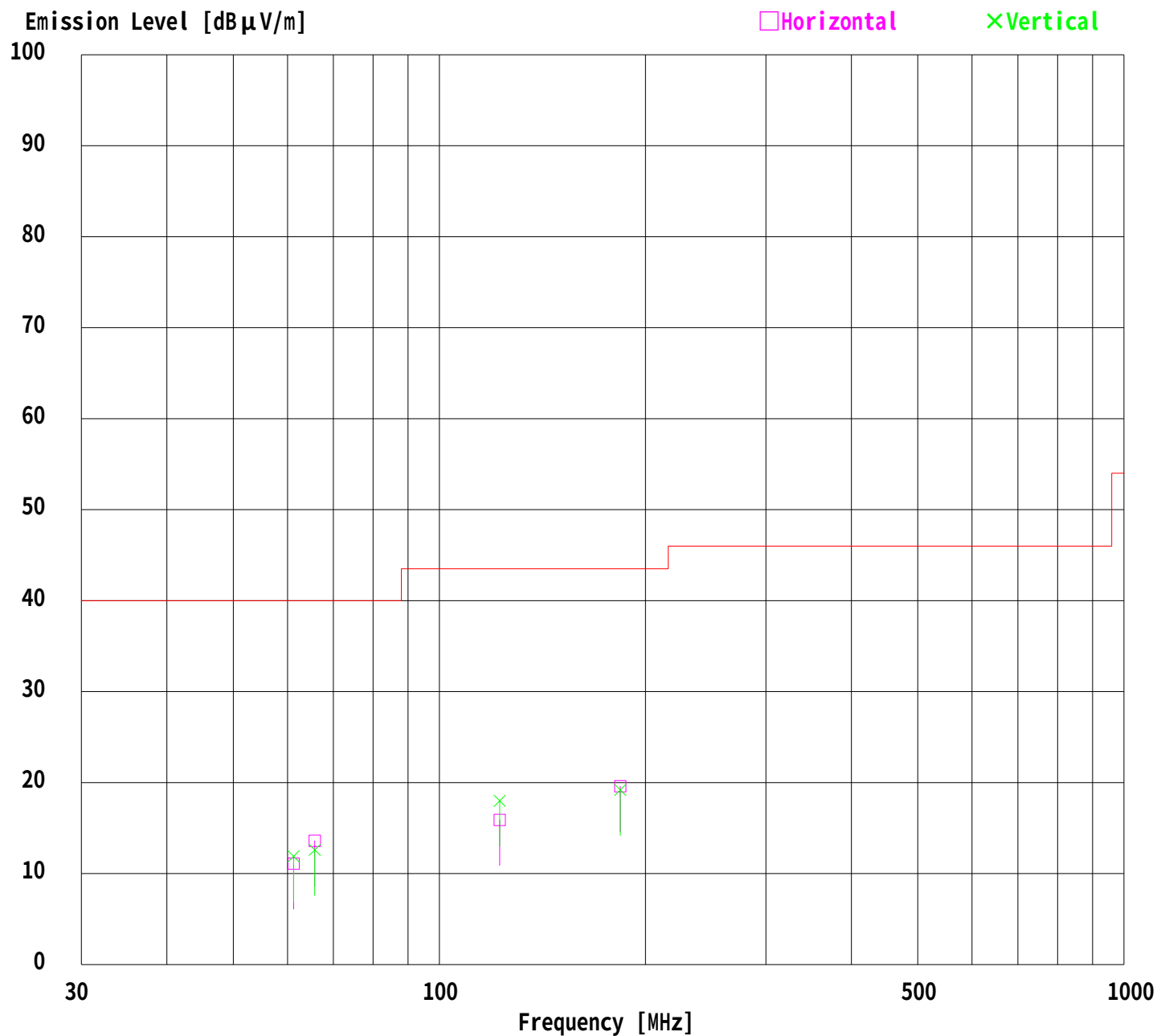
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120/60Hz
Mode : DVD Play + REC
Remarks : Test Channel #3
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120/60Hz
Mode : DVD Play + REC
Remarks : Test Channel #4
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
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 μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	67.25	BB	25.2	25.5	7.0	28.3	1.6	5.9	11.4	11.7	40.0	28.6	28.3
2.	71.25	BB	24.8	25.7	6.5	28.3	1.6	5.9	10.5	11.4	40.0	29.5	28.6
3.	134.50	BB	22.1	24.2	14.4	28.2	2.3	5.9	16.5	18.6	43.5	27.0	24.9
4.	201.75	BB	22.5	22.5	17.1	28.0	2.9	5.9	20.4	20.4	43.5	23.1	23.1

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

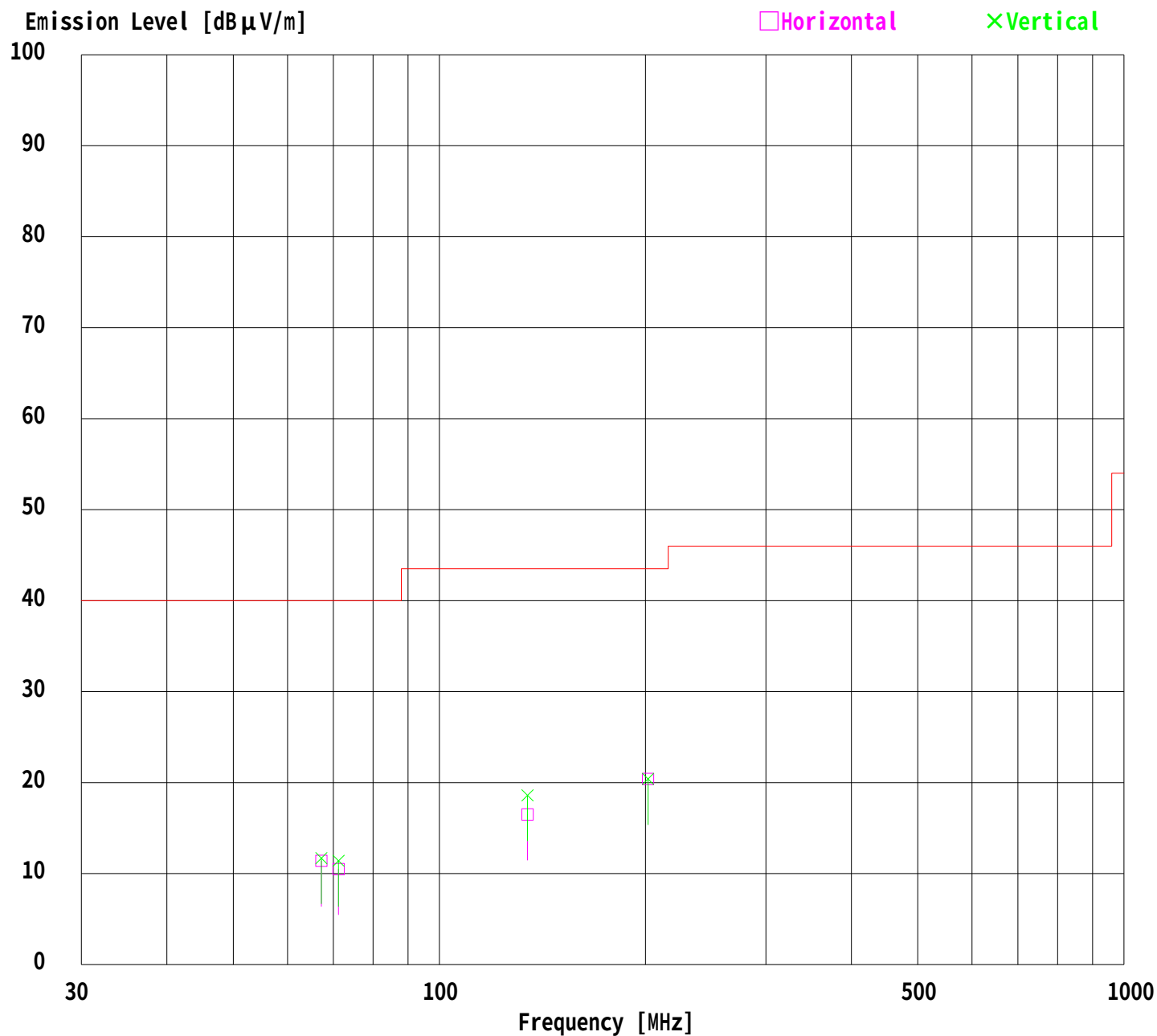
UL Apex Co., Ltd.

YOKOWA No.3 OPEN TEST SITE

Report No.: 25GE0229-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : D-VRW1SU
Serial No. :
Power : AC120/60Hz
Mode : DVD Play + REC
Remarks : Test Channel #4
Date : 3/2/2005
Test Distance : 3 m
Temperature : 23 °C
Humidity : 36 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF ANTENNA TERMINAL TEST

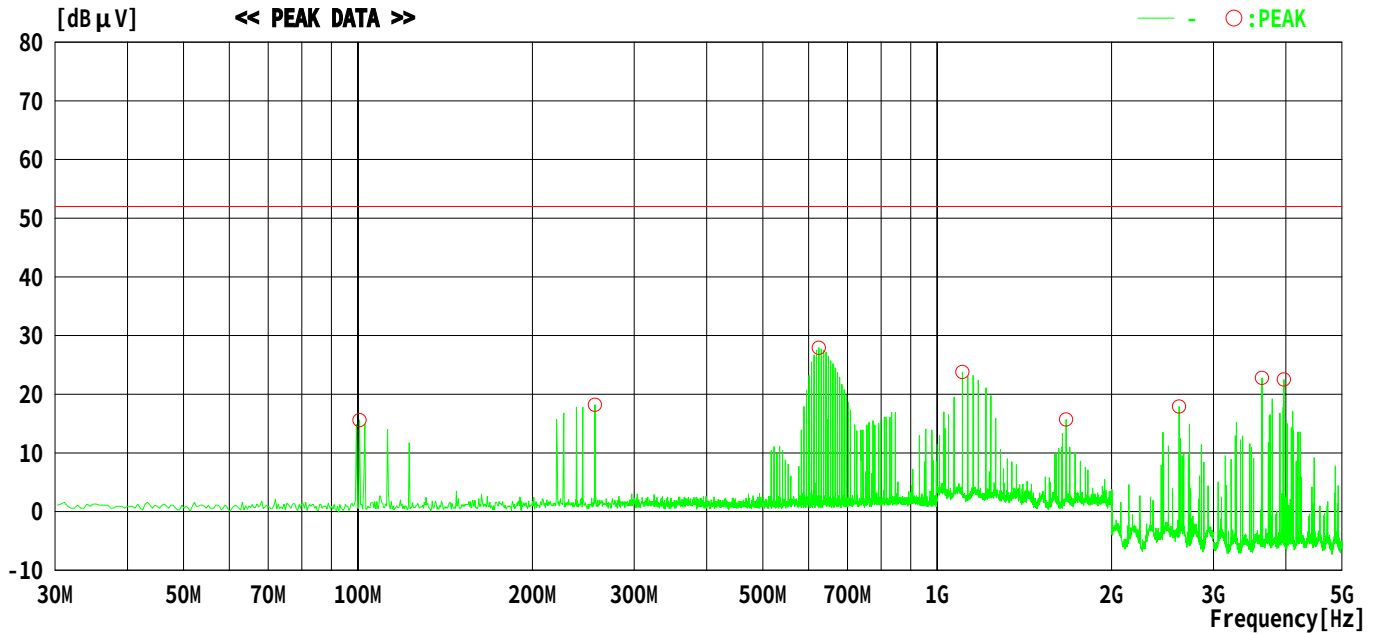
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
OPERATION MODE : TV Tuning mode

REPORT NO : 25GE0229-YW-1
DATE : March 03,2005
REGULATION : FCC Part15 SubpartB
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 26°C/68%

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	36.2	-20.6	15.6	52.0	----	36.4	----
2	256.59350	37.8	-19.6	18.2	52.0	----	33.8	----
3	624.85330	48.2	-20.3	27.9	52.0	----	24.1	----
4	1105.70900	49.8	-26.0	23.8	52.0	----	28.2	----
5	1669.27300	41.8	-26.1	15.7	52.0	----	36.3	----
6	2617.10200	50.2	-32.3	17.9	52.0	----	34.1	----
7	3637.09600	55.5	-32.7	22.8	52.0	----	29.2	----
8	3968.50000	55.2	-32.7	22.5	52.0	----	29.5	----

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

DATA OF ANTENNA TERMINAL TEST

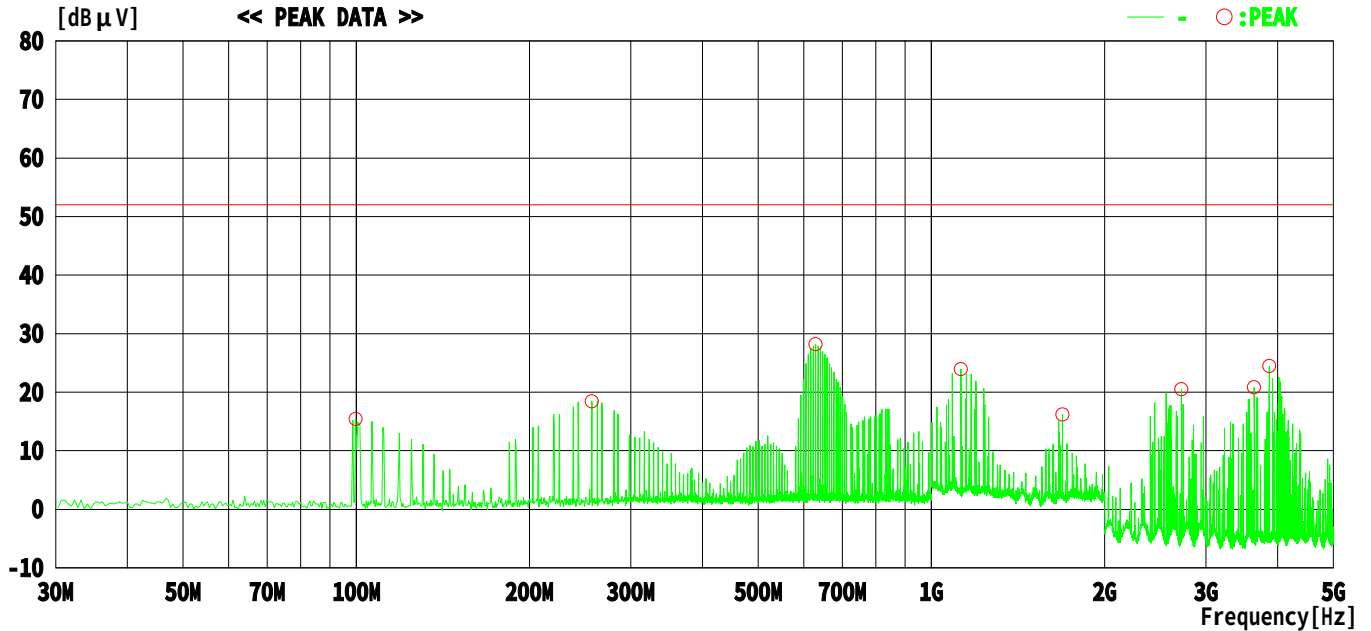
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
OPERATION MODE : CATV Tuning mode

REPORT NO : 25GE0229-YW-1
DATE : March 03,2005
REGULATION : FCC Part15 SubpartB
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 26°C/68%

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]	PHASE
1	99.82113	36.0	-20.6	15.4	52.0	36.6	-
2	256.59350	38.0	-19.6	18.4	52.0	33.6	-
3	628.85320	48.5	-20.3	28.2	52.0	23.8	-
4	1125.70700	50.0	-26.1	23.9	52.0	28.1	-
5	1689.27200	42.2	-26.0	16.2	52.0	35.8	-
6	2721.38000	52.8	-32.3	20.5	52.0	31.5	-
7	3639.95300	53.5	-32.7	20.8	52.0	31.2	-
8	3869.93600	57.2	-32.7	24.5	52.0	27.5	-

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

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.	Report Number : 25GE0229-YW-1
Equipment : DVD-RW/VCR	Regulation : FCC15B SubpartB
Model Number : D-VRW1SU	Date : March 03, 2005
Power : 120V/60Hz	Temp / Humid : 24deg.C/39%
Description : TV Reception + Rec	Engineer : Tsubasa Takayama
Remarks : -	

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	95.8	31.7	64.1	69.5	5.4
4	67.25	94.5	31.6	62.9	69.5	6.6
Audio Signal						
3	56.75	80.5	31.7	48.8	56.5	7.7
	65.75	79.3	31.6	47.7	56.5	8.8
4	62.75	79.6	31.7	47.9	56.5	8.6
	71.75	78.5	31.6	46.9	56.5	9.6

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	94.8	31.7	63.1	69.5	6.4
4	67.25	94.5	31.6	62.9	69.5	6.6
Audio Signal						
3	56.75	80.2	31.7	48.5	56.5	8.0
	65.75	79.4	31.6	47.8	56.5	8.7
4	62.75	79.4	31.7	47.7	56.5	8.8
	71.75	78.3	31.6	46.7	56.5	9.8

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD-RW/VCR
Model Number : D-VRW1SU
Power : 120V/60Hz
Description : AV Input 1 + Rec
Remarks : -

Report Number : 25GE0229-YW-1
Regulation : FCC15B SubpartB
Date : March 03, 2005
Temp / Humid : 24deg.C/39%
Engineer : Tsubasa Takayama

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	95.4	31.7	63.7	69.5	5.8
4	67.25	95.0	31.6	63.4	69.5	6.1
Audio Signal						
3	56.75	80.3	31.7	48.6	56.5	7.9
	65.75	79.5	31.6	47.9	56.5	8.6
4	62.75	79.8	31.7	48.1	56.5	8.4
	71.75	78.5	31.6	46.9	56.5	9.6

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	94.8	31.7	63.1	69.5	6.4
4	67.25	94.7	31.6	63.1	69.5	6.4
Audio Signal						
3	56.75	80.1	31.7	48.4	56.5	8.1
	65.75	79.4	31.6	47.8	56.5	8.7
4	62.75	79.6	31.7	47.9	56.5	8.6
	71.75	78.5	31.6	46.9	56.5	9.6

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD-RW/VCR
Model Number : D-VRW1SU
Power : 120V/60Hz
Description : AV Input 2 + Rec
Remarks : -

Report Number : 25GE0229-YW-1
Regulation : FCC15B SubpartB
Date : March 03, 2005
Temp / Humid : 24deg.C/39%
Engineer : Tsubasa Takayama

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	95.4	31.7	63.7	69.5	5.8
4	67.25	94.1	31.6	62.5	69.5	7.0
Audio Signal						
3	56.75	80.1	31.7	48.4	56.5	8.1
	65.75	79.6	31.6	48.0	56.5	8.5
4	62.75	79.7	31.7	48.0	56.5	8.5
	71.75	78.5	31.6	46.9	56.5	9.6

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	95.4	31.7	63.7	69.5	5.8
4	67.25	94.2	31.6	62.6	69.5	6.9
Audio Signal						
3	56.75	80.3	31.7	48.6	56.5	7.9
	65.75	79.3	31.6	47.7	56.5	8.8
4	62.75	79.7	31.7	48.0	56.5	8.5
	71.75	78.3	31.6	46.7	56.5	9.8

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD-RW/VCR
Model Number : D-VRW1SU
Power : 120V/60Hz
Description : VCR Playback + Rec
Remarks : -

Report Number : 25GE0229-YW-1
Regulation : FCC15B SubpartB
Date : March 03, 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	95.2	31.7	63.5	69.5	6.0
4	67.25	94.5	31.6	62.9	69.5	6.6
Audio Signal						
3	56.75	80.4	31.7	48.7	56.5	7.8
	65.75	79.2	31.6	47.6	56.5	8.9
4	62.75	79.6	31.7	47.9	56.5	8.6
	71.75	78.5	31.6	46.9	56.5	9.6

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 25GE0229-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC15B SubpartB
Model Number	: D-VRW1SU	Date	: March 03, 2005
Power	: 120V/60Hz	Temp / Humid	: 24deg.C/39%
Description	: DVD Play + Rec	Engineer	: Tsubasa Takayama
Remarks	: -		

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	95.6	31.7	63.9	69.5	5.6
4	67.25	94.5	31.6	62.9	69.5	6.6
Audio Signal						
3	56.75	80.5	31.7	48.8	56.5	7.7
	65.75	79.3	31.6	47.7	56.5	8.8
4	62.75	79.7	31.7	48.0	56.5	8.5
	71.75	78.4	31.6	46.8	56.5	9.7

DATA OF RF SPURIOUS TEST

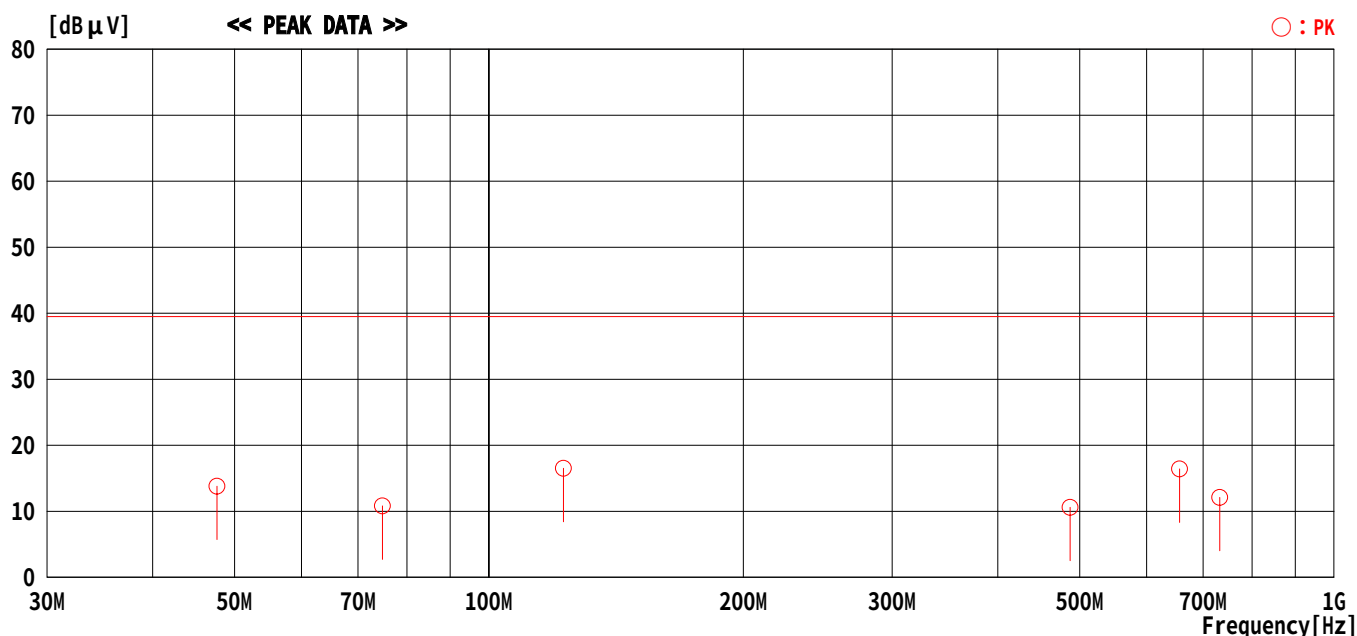
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : TV Reception 1 + Rec (0dBmV : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

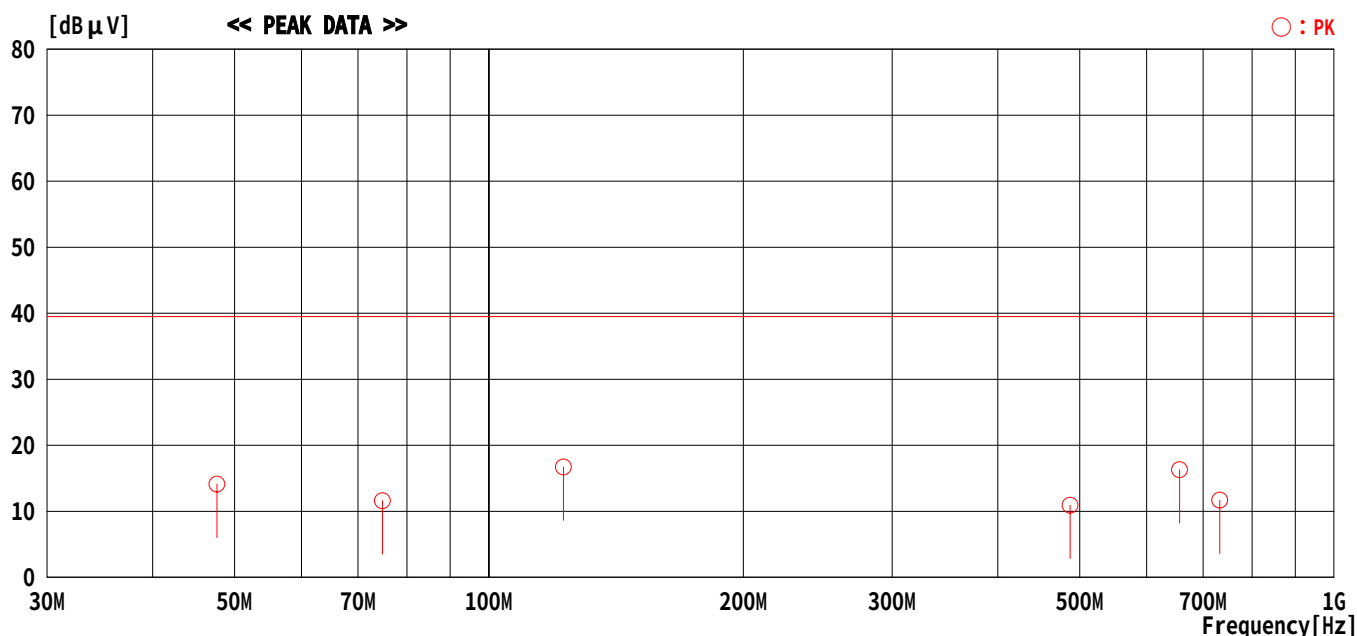
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : TV Reception 1 + Rec (25dBmV : 3ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

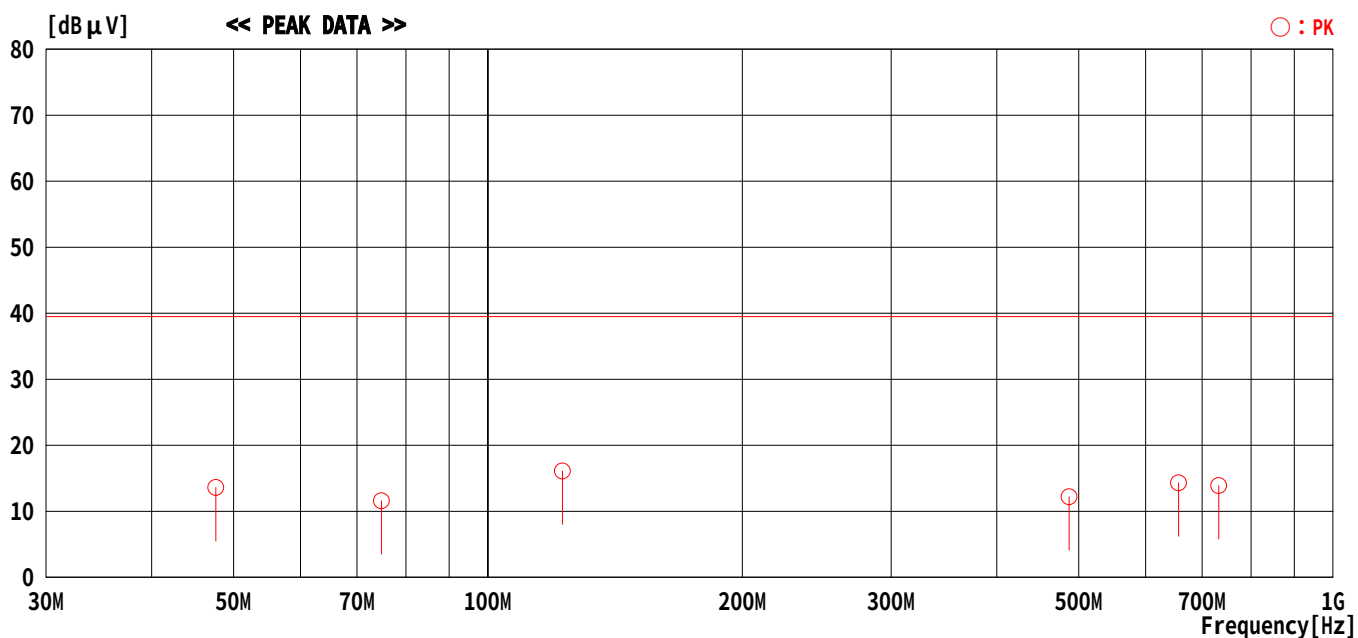
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

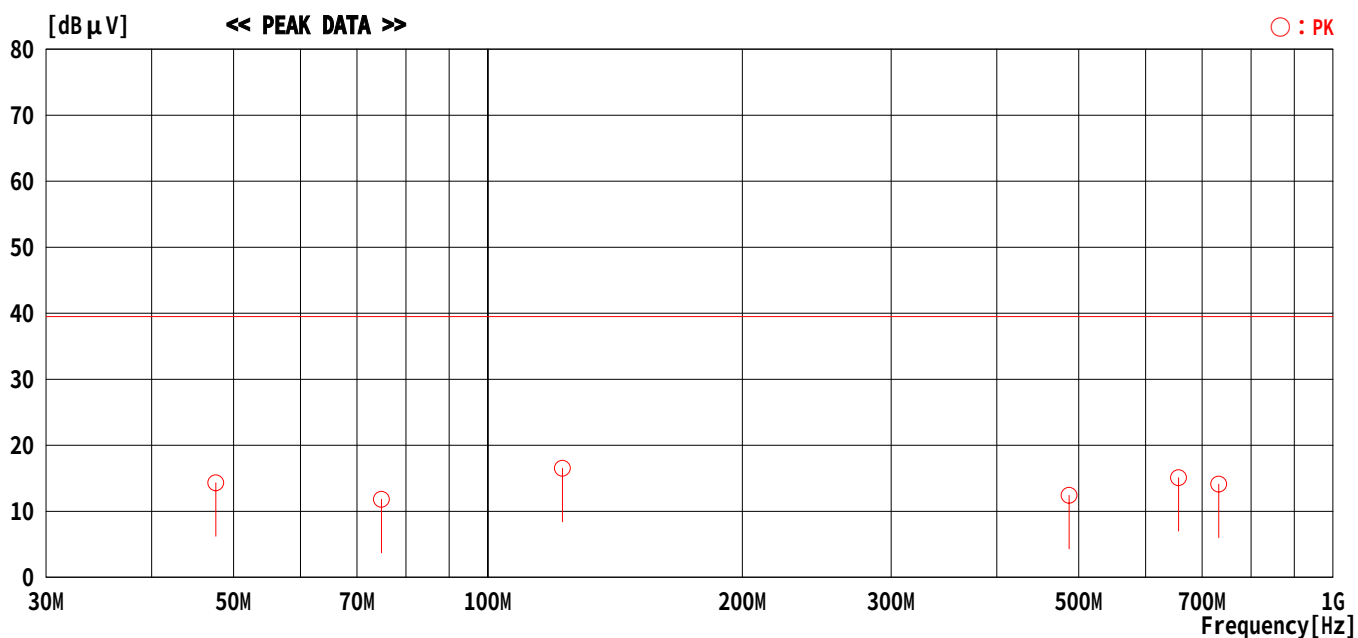
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

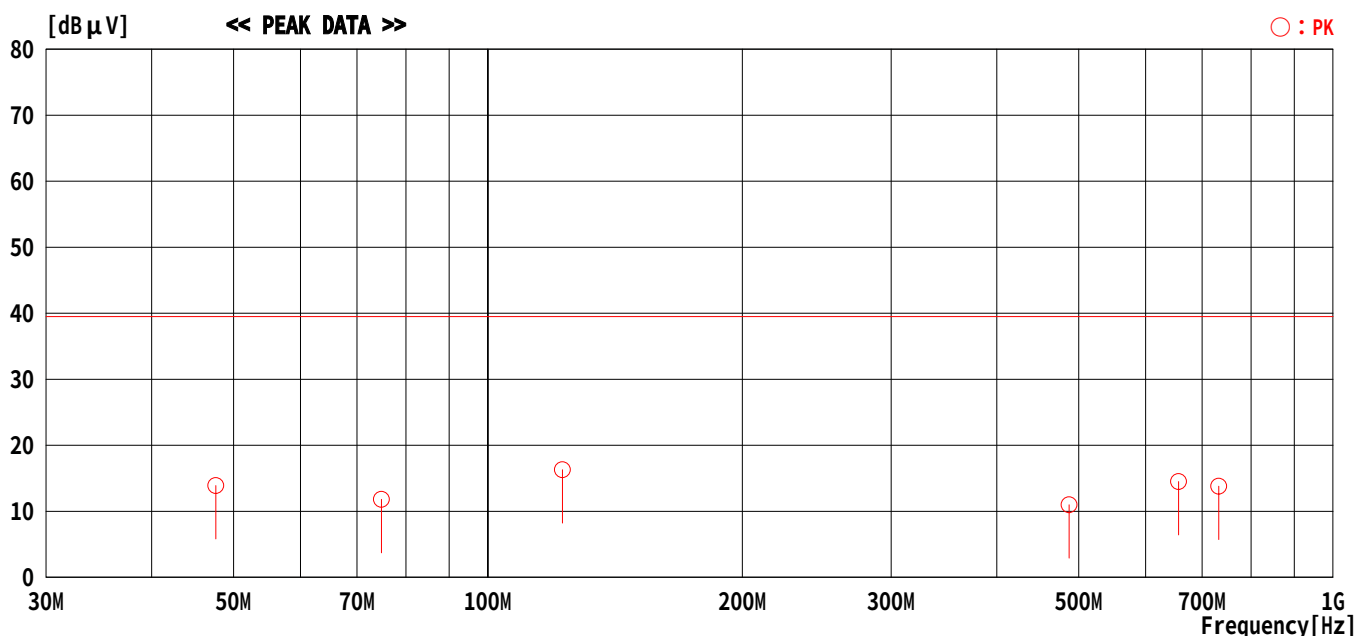
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

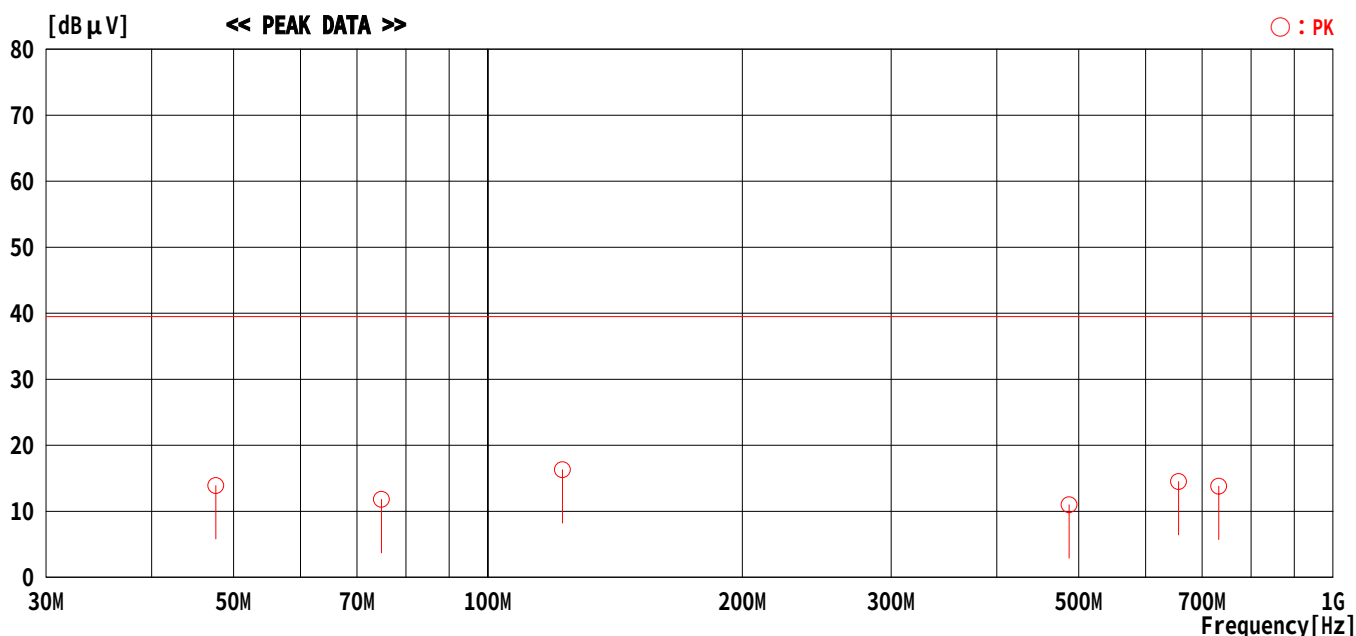
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

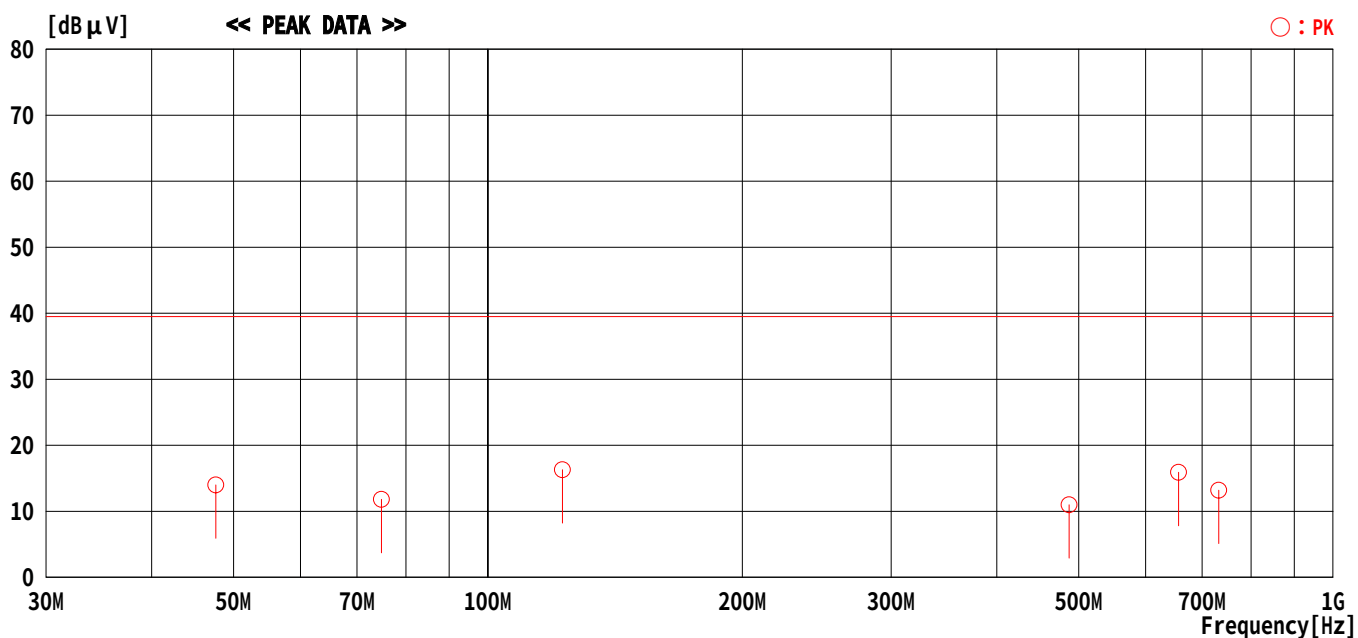
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback + Rec (3ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

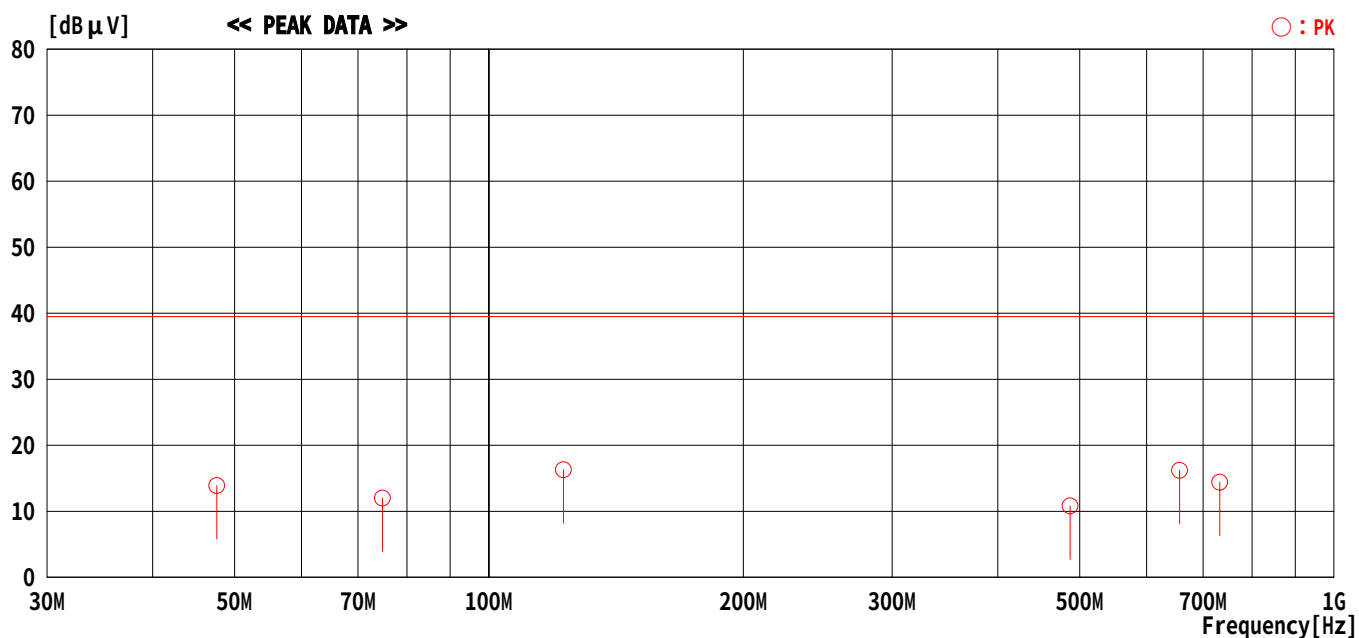
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD Play + Rec (3ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

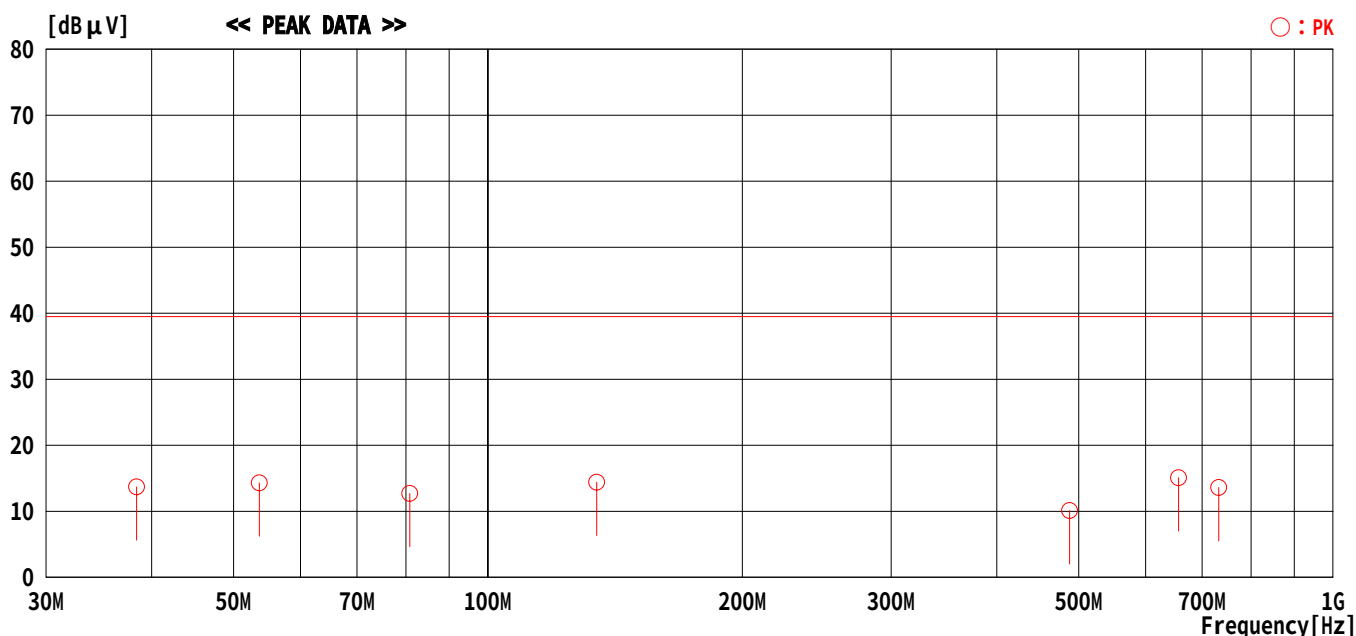
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

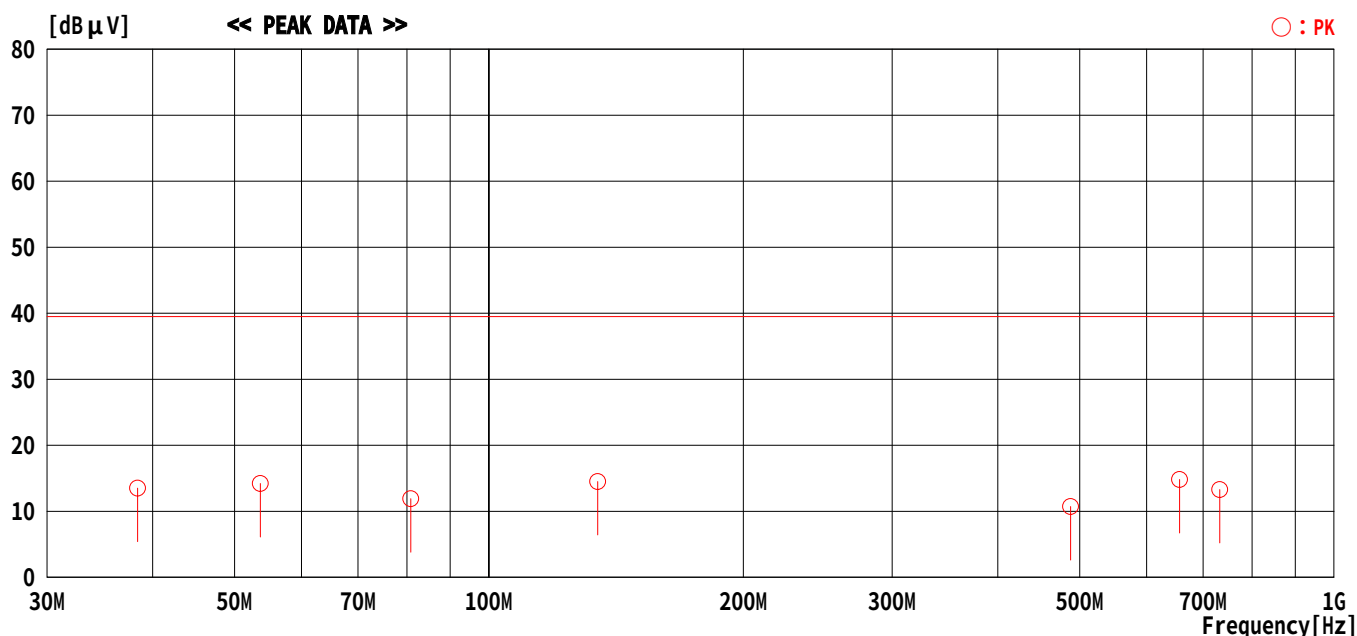
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

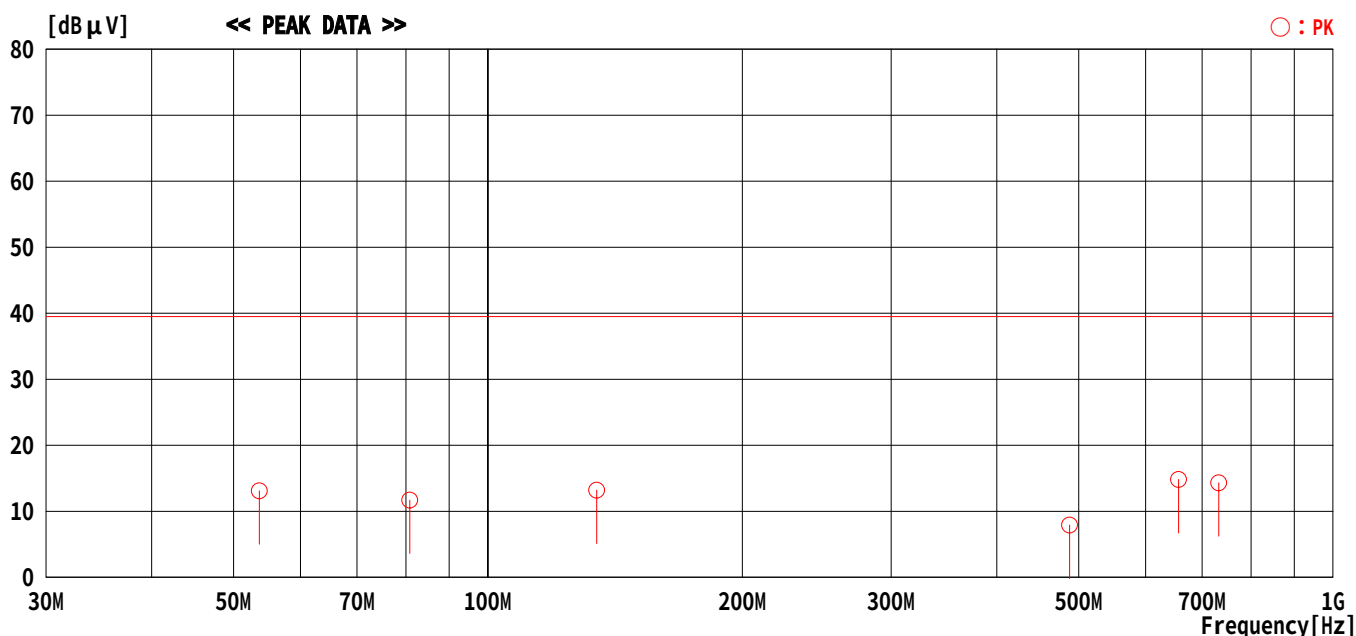
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1 + Rec (1V p-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

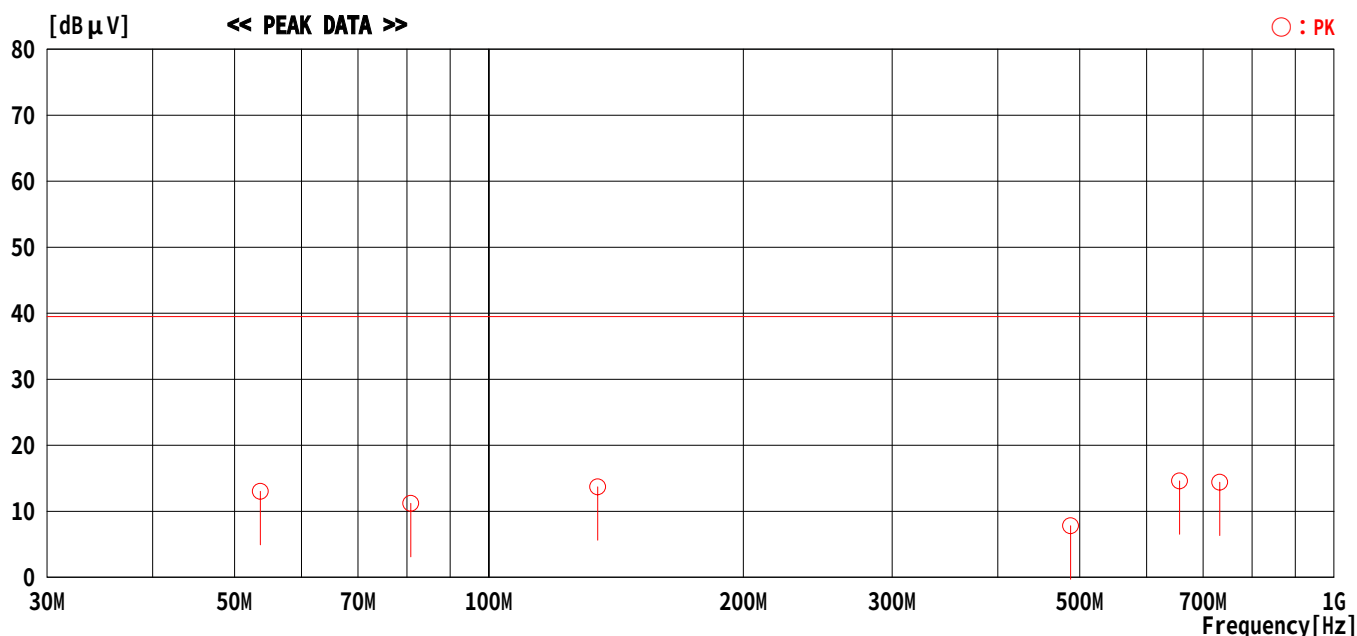
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1 + Rec (5V p-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

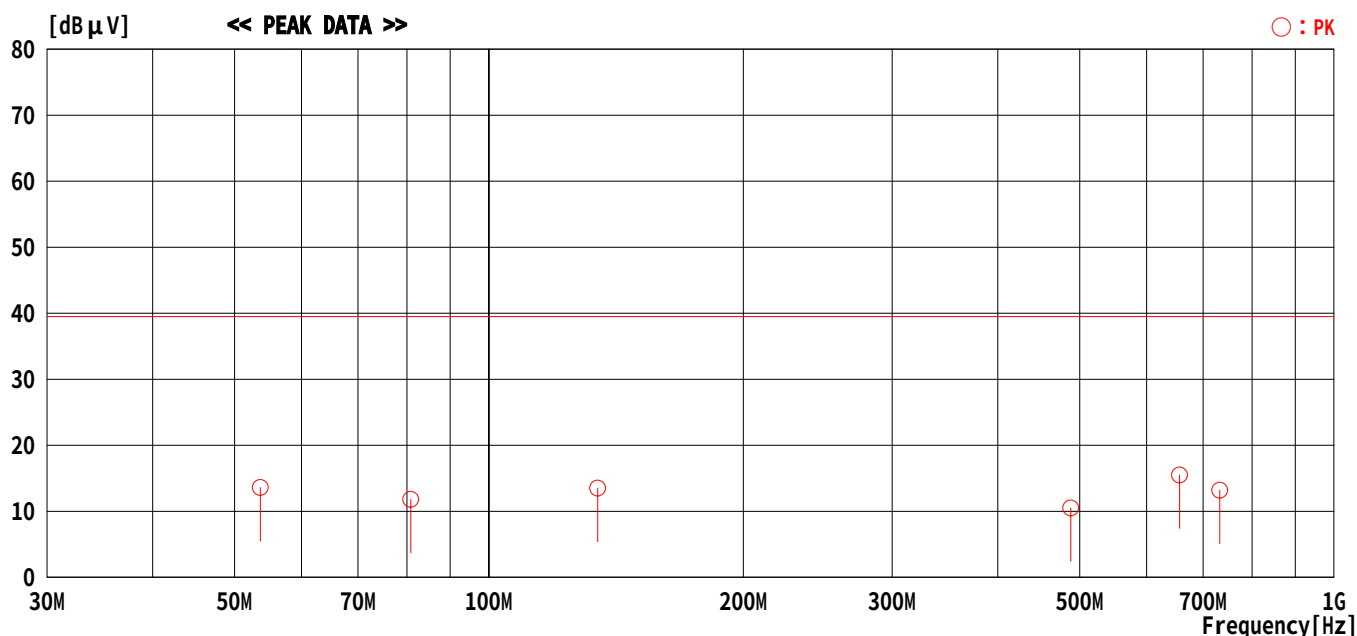
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 2 + Rec (1V p-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

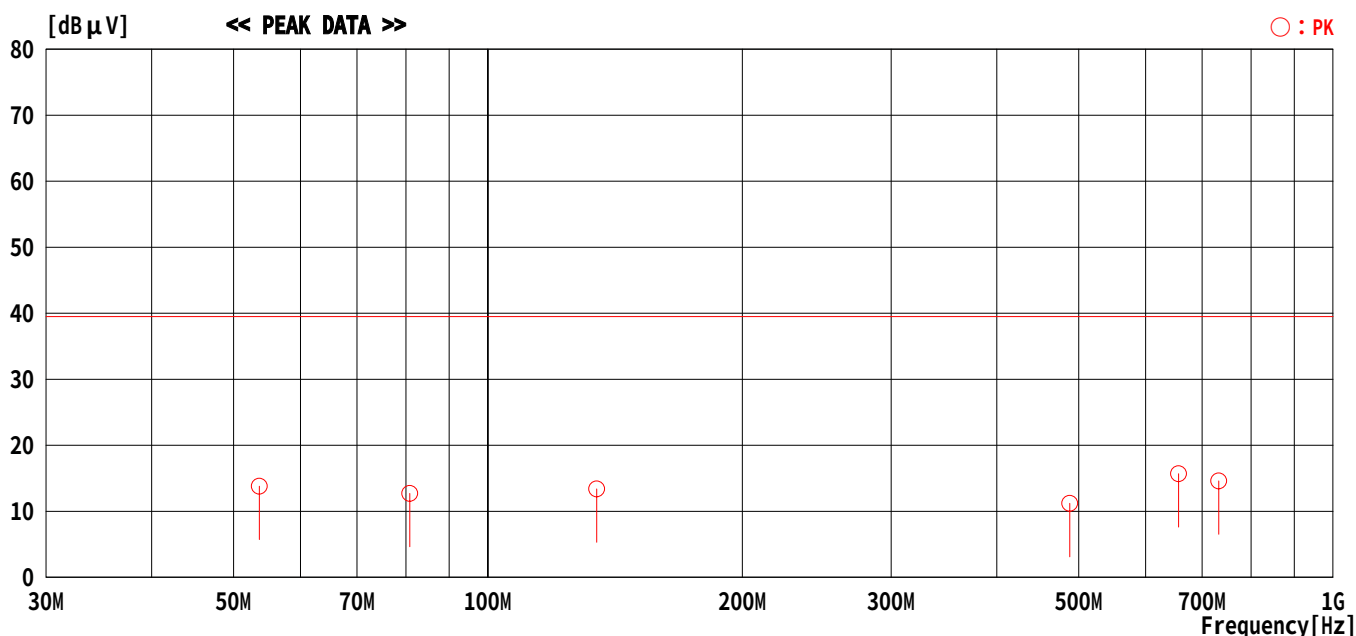
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 2 + Rec (5V p-p : 4ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

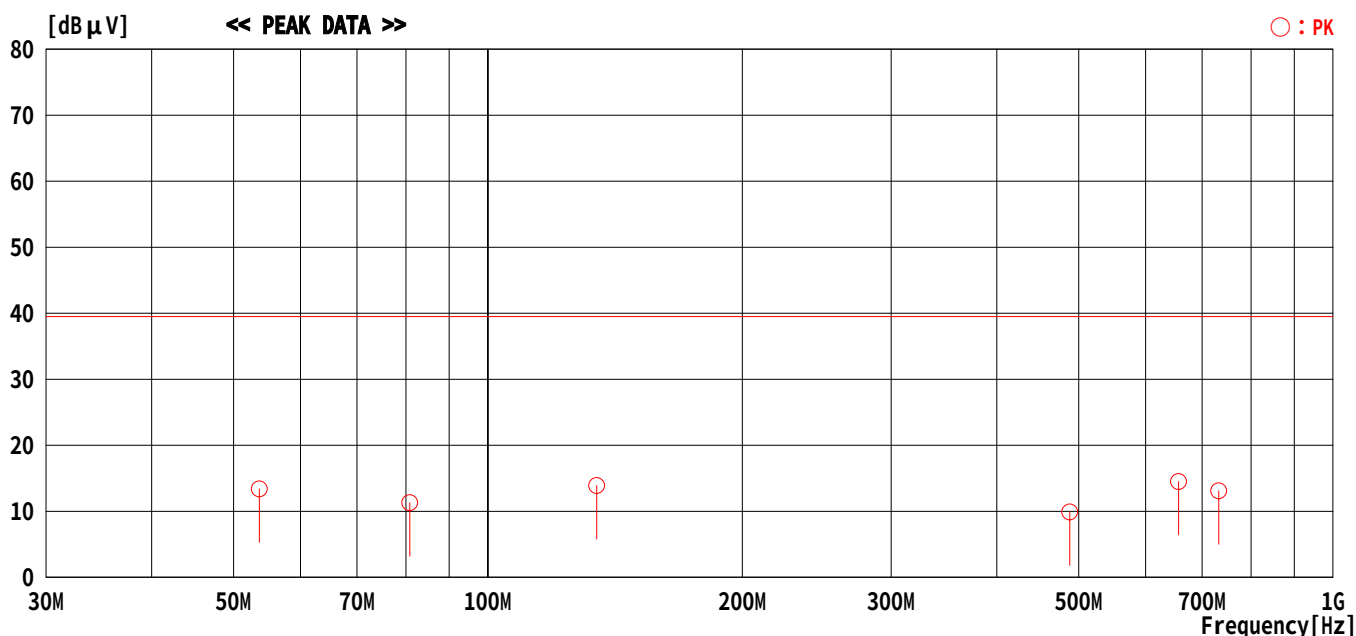
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback + Rec (4ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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	53.6600	45.1	----	-31.7	13.4	----	39.5	----	26.1	----	-
2	80.8100	42.7	----	-31.4	11.3	----	39.5	----	28.2	----	-
3	134.5000	45.2	----	-31.3	13.9	----	39.5	----	25.6	----	-
4	487.9300	41.0	----	-31.1	9.9	----	39.5	----	29.6	----	-
5	656.5200	45.5	----	-31.0	14.5	----	39.5	----	25.0	----	-
6	732.4200	44.0	----	-30.9	13.1	----	39.5	----	26.4	----	-

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

DATA OF RF SPURIOUS TEST

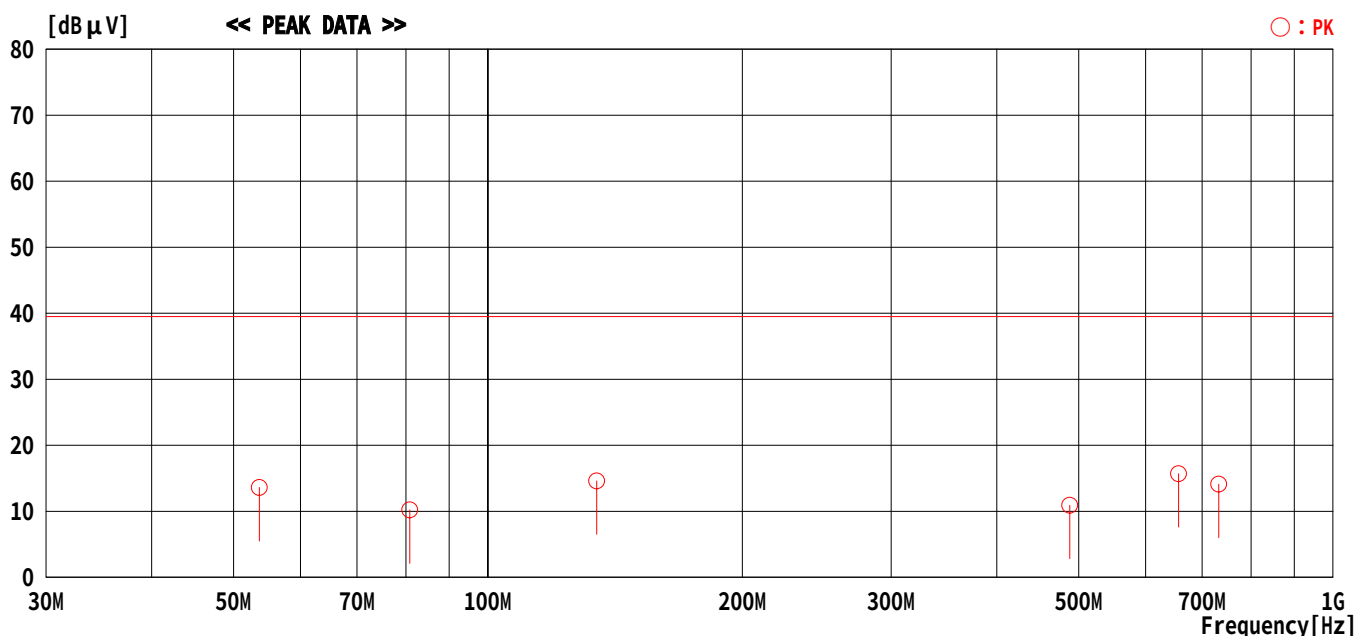
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD Play + Rec (4ch)

LIMIT : FCC 15B RF OUT SPURIOUS



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	53.6600	45.3	----	-31.7	13.6	----	39.5	----	25.9	----	-
2	80.8100	41.6	----	-31.4	10.2	----	39.5	----	29.3	----	-
3	134.5000	45.9	----	-31.3	14.6	----	39.5	----	24.9	----	-
4	487.9300	42.0	----	-31.1	10.9	----	39.5	----	28.6	----	-
5	656.5200	46.7	----	-31.0	15.7	----	39.5	----	23.8	----	-
6	732.4200	45.0	----	-30.9	14.1	----	39.5	----	25.4	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

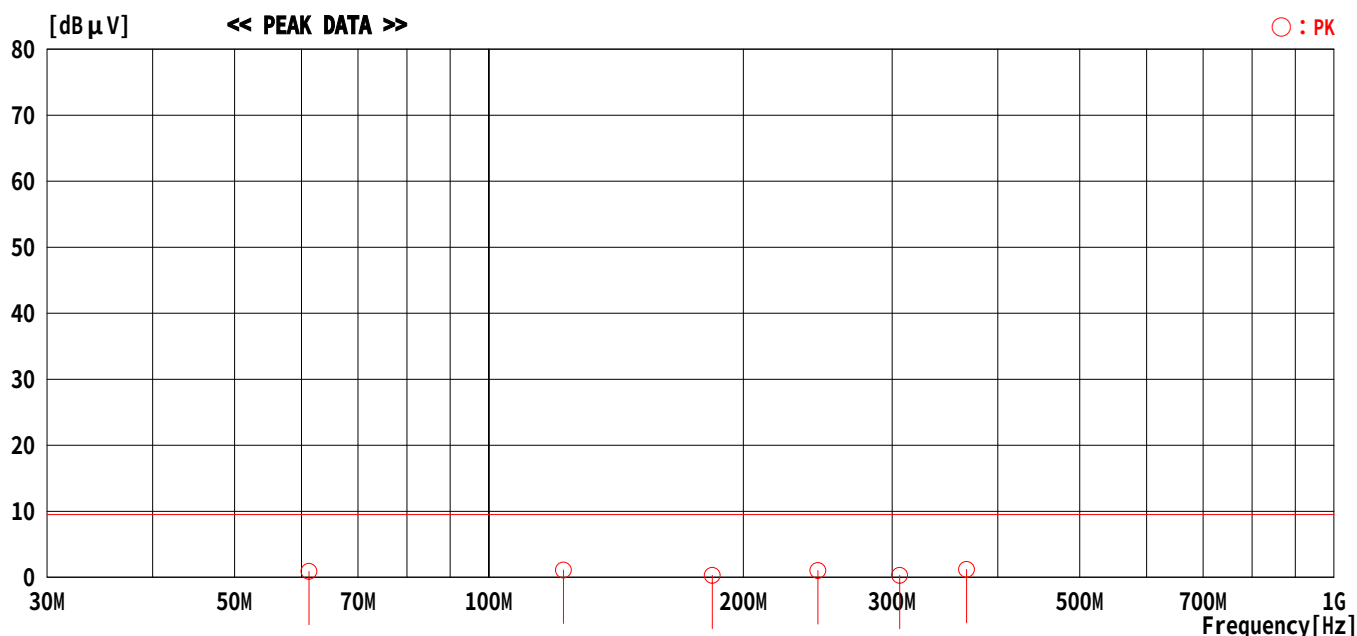
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

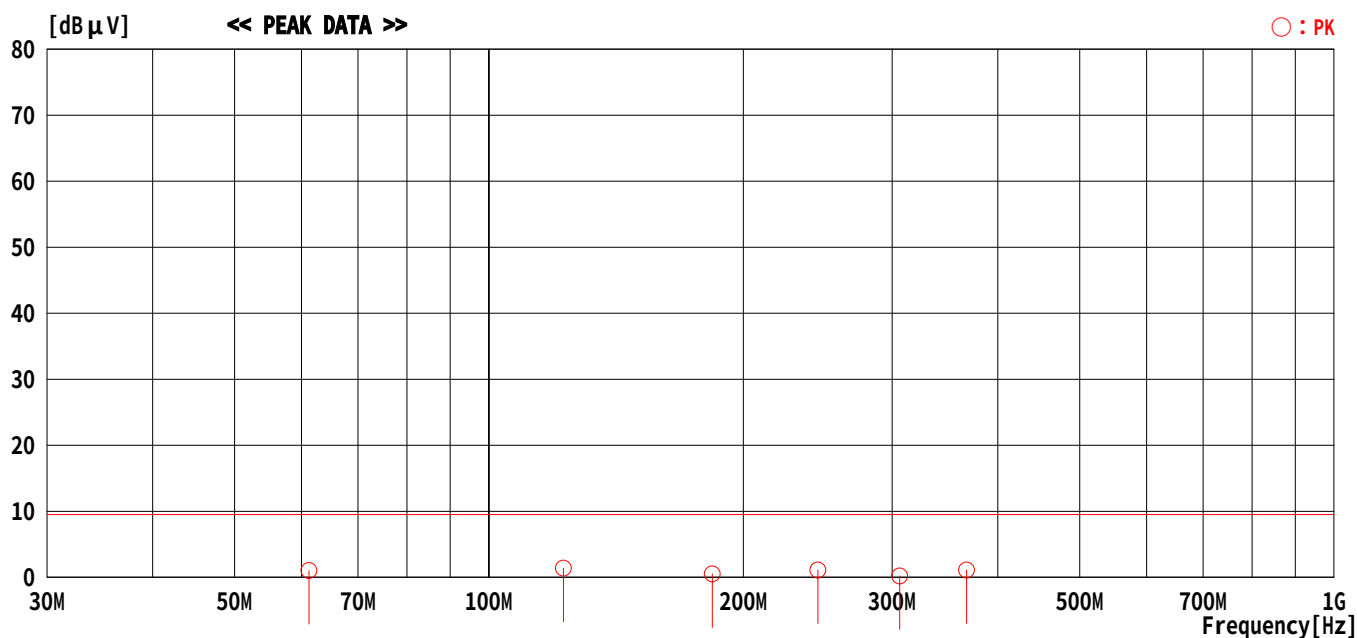
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

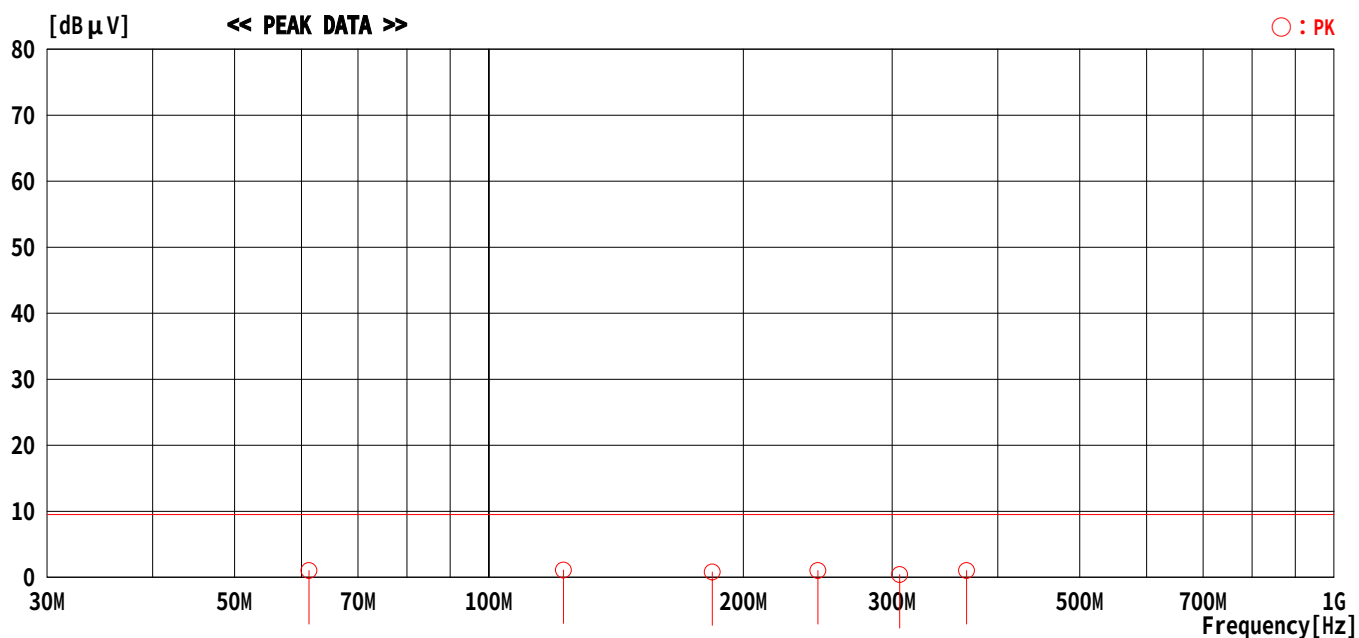
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

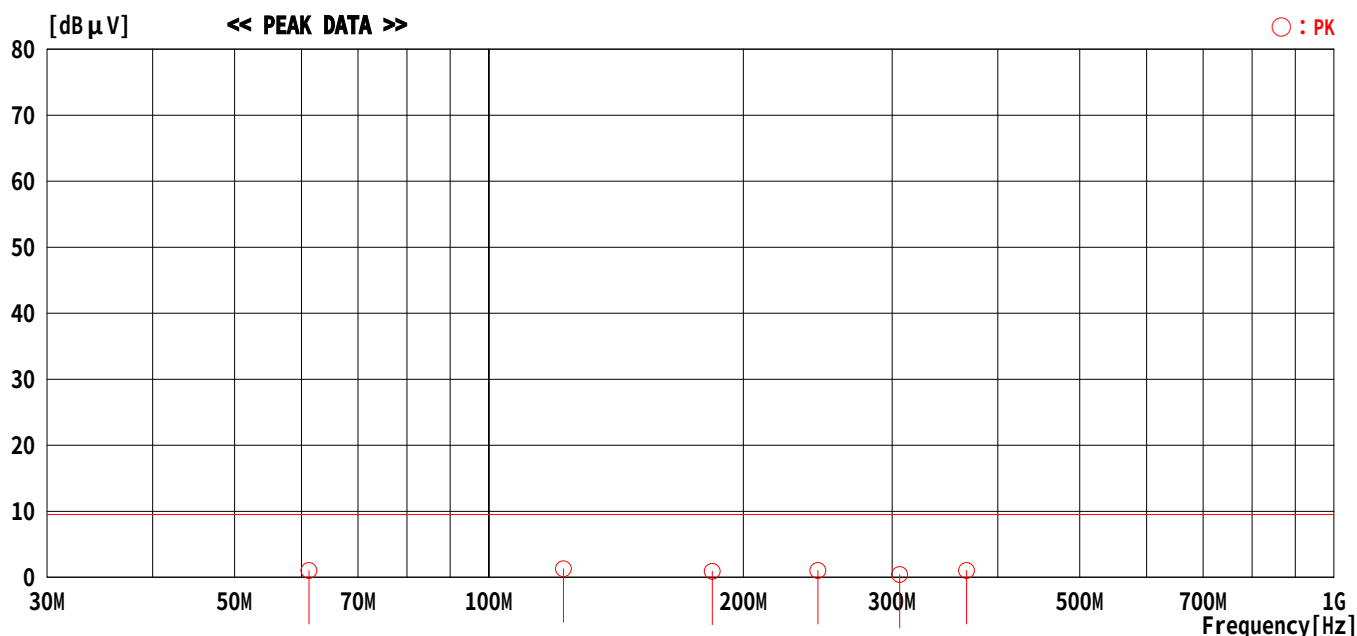
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

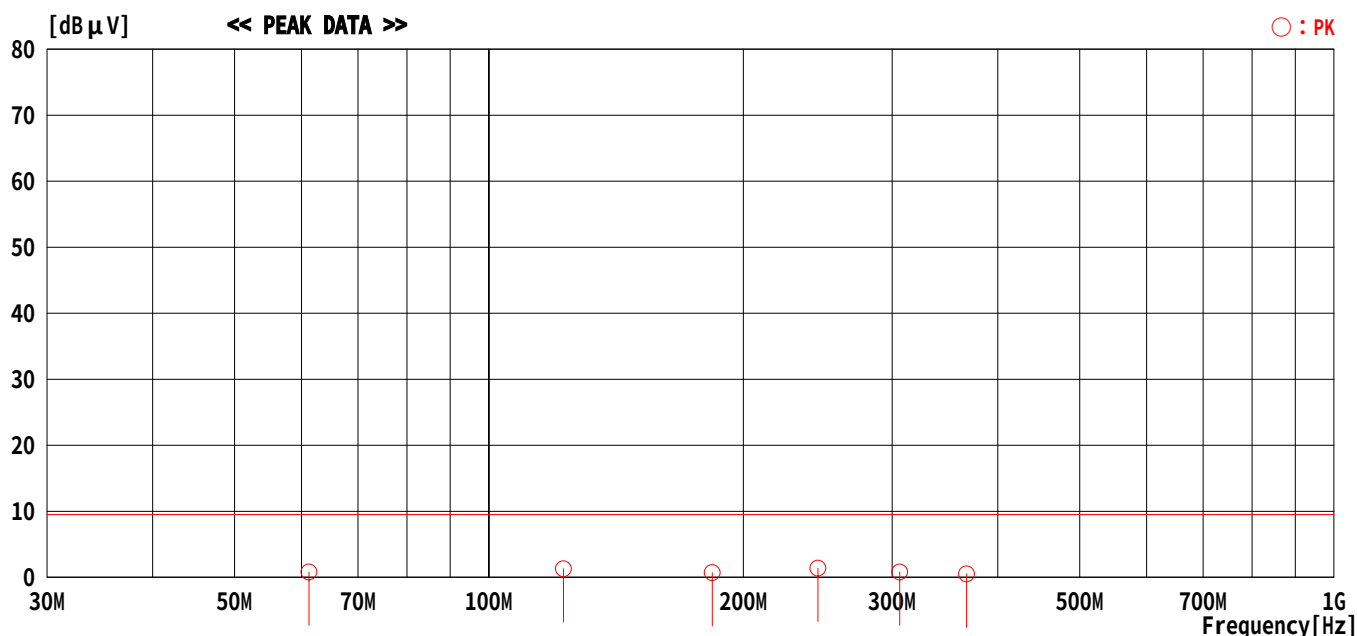
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback + Rec (3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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	32.5	----	-31.7	0.8	----	9.5	----	8.7	----	-
2	122.5000	32.6	----	-31.3	1.3	----	9.5	----	8.2	----	-
3	183.7500	31.8	----	-31.1	0.7	----	9.5	----	8.8	----	-
4	245.0000	32.4	----	-31.0	1.4	----	9.5	----	8.1	----	-
5	306.2500	32.0	----	-31.2	0.8	----	9.5	----	8.7	----	-
6	367.5000	31.6	----	-31.1	0.5	----	9.5	----	9.0	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

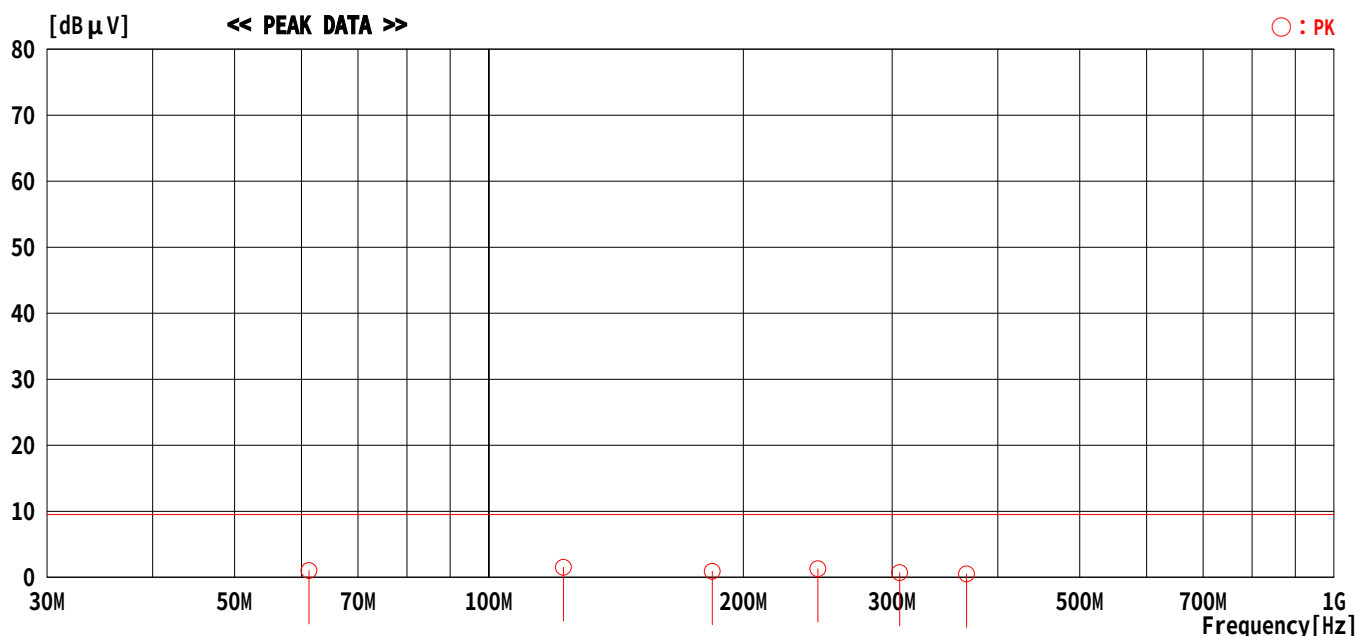
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD Play + Rec (3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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	32.7	----	-31.7	1.0	----	9.5	----	8.5	----	-
2	122.5000	32.8	----	-31.3	1.5	----	9.5	----	8.0	----	-
3	183.7500	32.0	----	-31.1	0.9	----	9.5	----	8.6	----	-
4	245.0000	32.3	----	-31.0	1.3	----	9.5	----	8.2	----	-
5	306.2500	31.9	----	-31.2	0.7	----	9.5	----	8.8	----	-
6	367.5000	31.6	----	-31.1	0.5	----	9.5	----	9.0	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

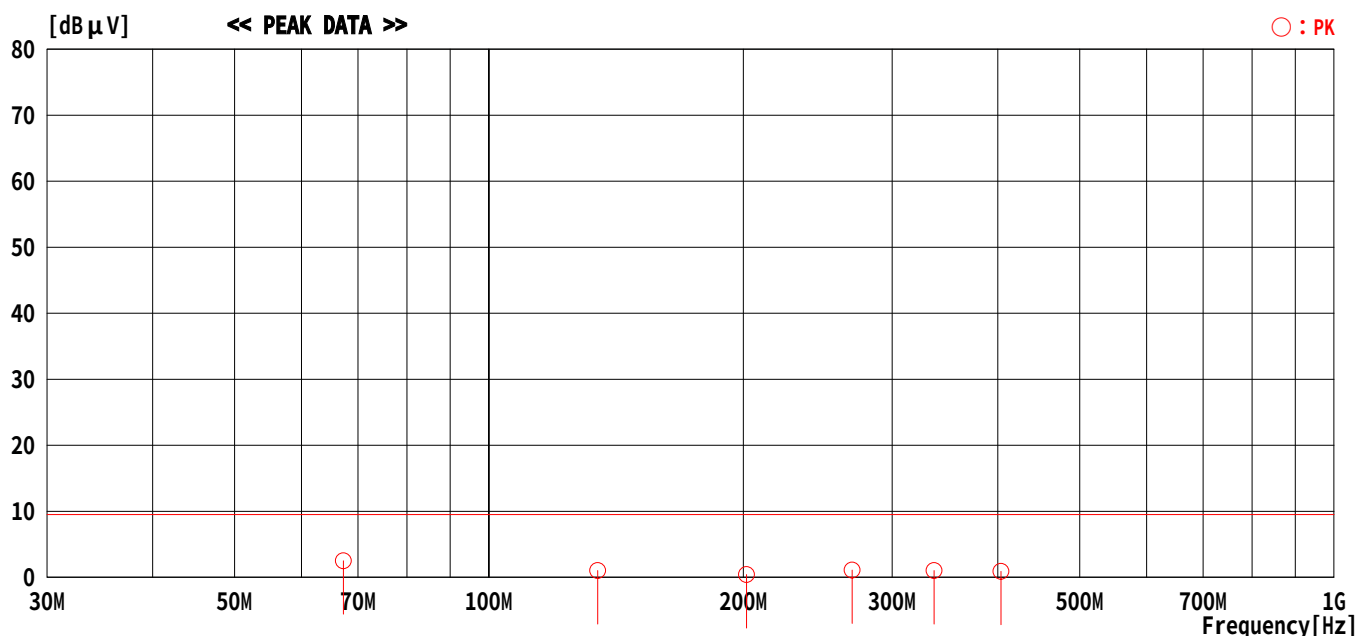
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1 + Rec (1V p-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

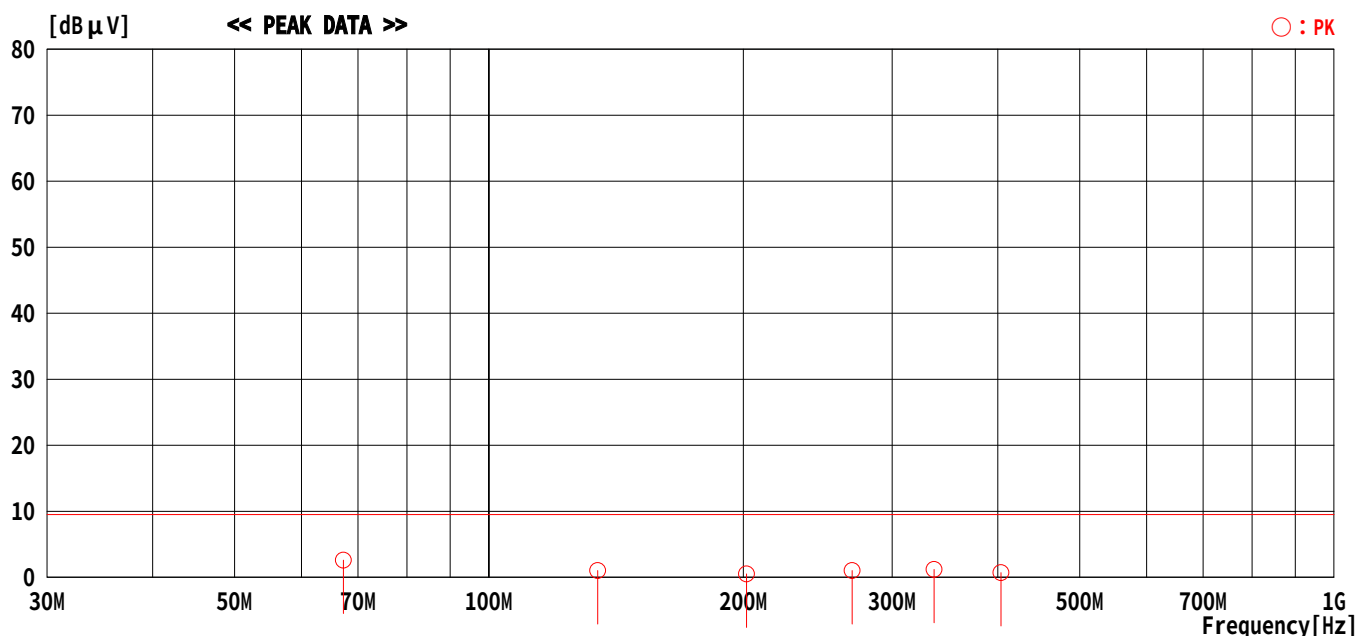
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1 + Rec (5V p-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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	34.2	----	-31.6	2.6	----	9.5	----	6.9	----	-
2	134.5000	32.3	----	-31.3	1.0	----	9.5	----	8.5	----	-
3	201.7500	31.5	----	-31.0	0.5	----	9.5	----	9.0	----	-
4	269.0000	32.1	----	-31.1	1.0	----	9.5	----	8.5	----	-
5	336.2500	32.3	----	-31.1	1.2	----	9.5	----	8.3	----	-
6	403.5000	31.8	----	-31.1	0.7	----	9.5	----	8.8	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

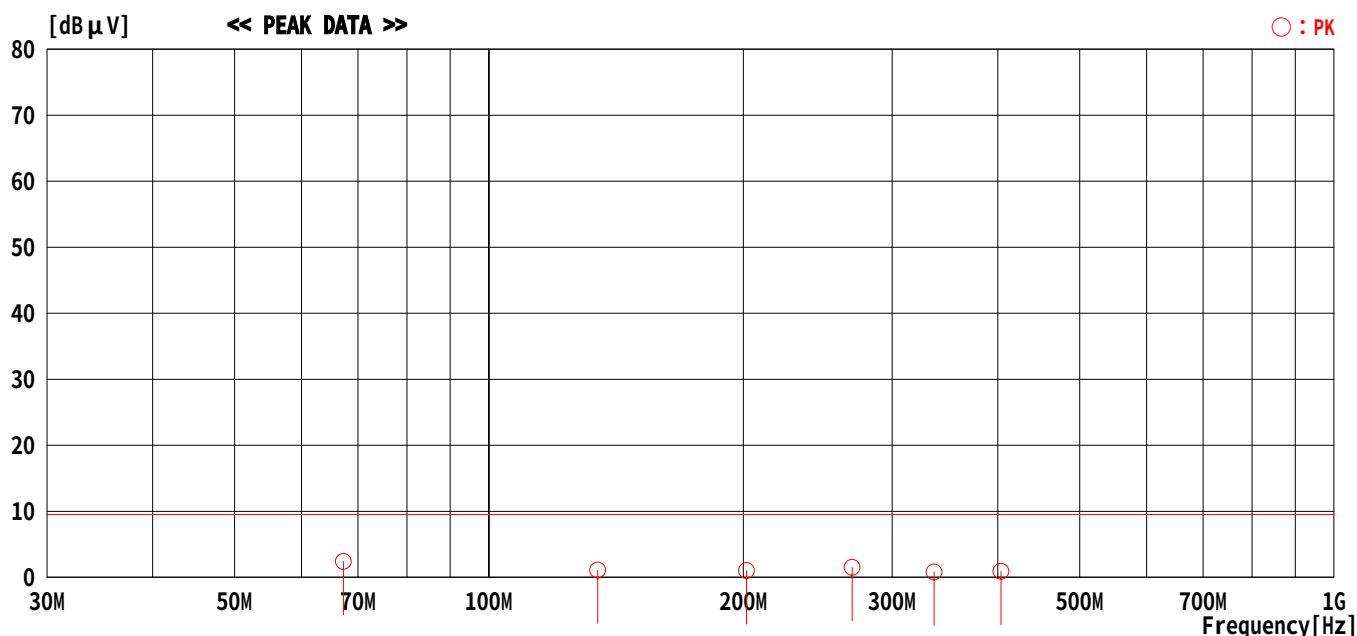
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 2 + Rec (1V p-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

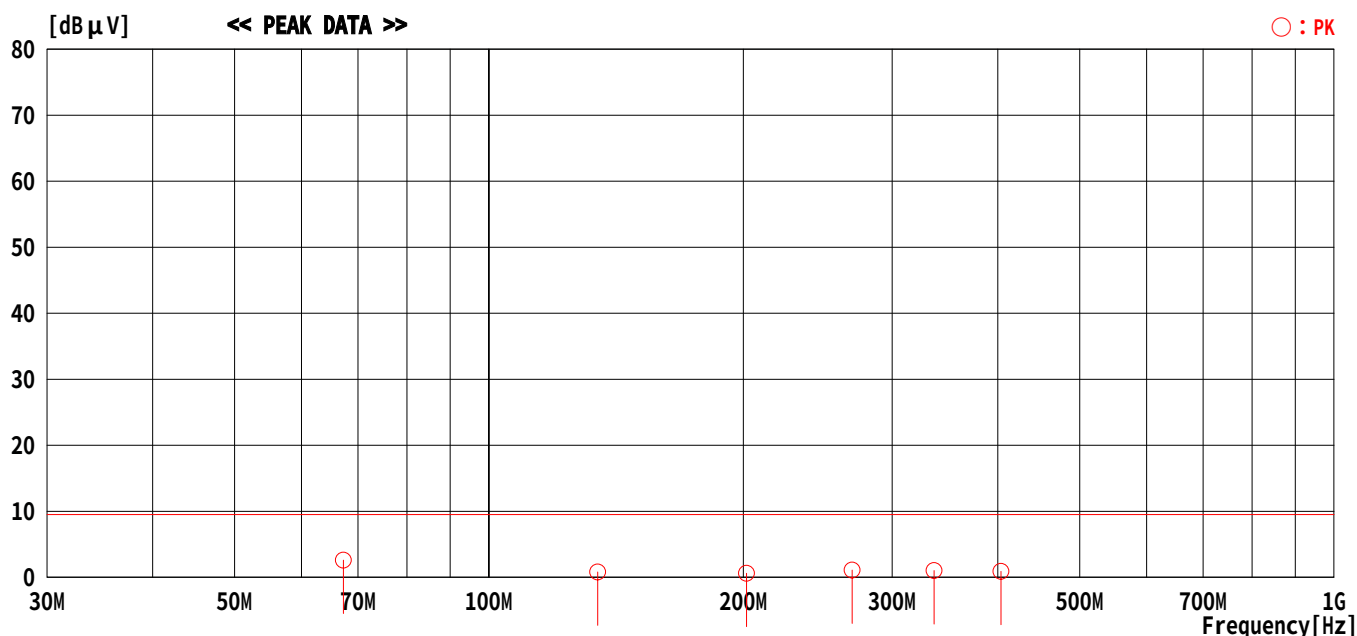
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 2 + Rec (5V p-p : 4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

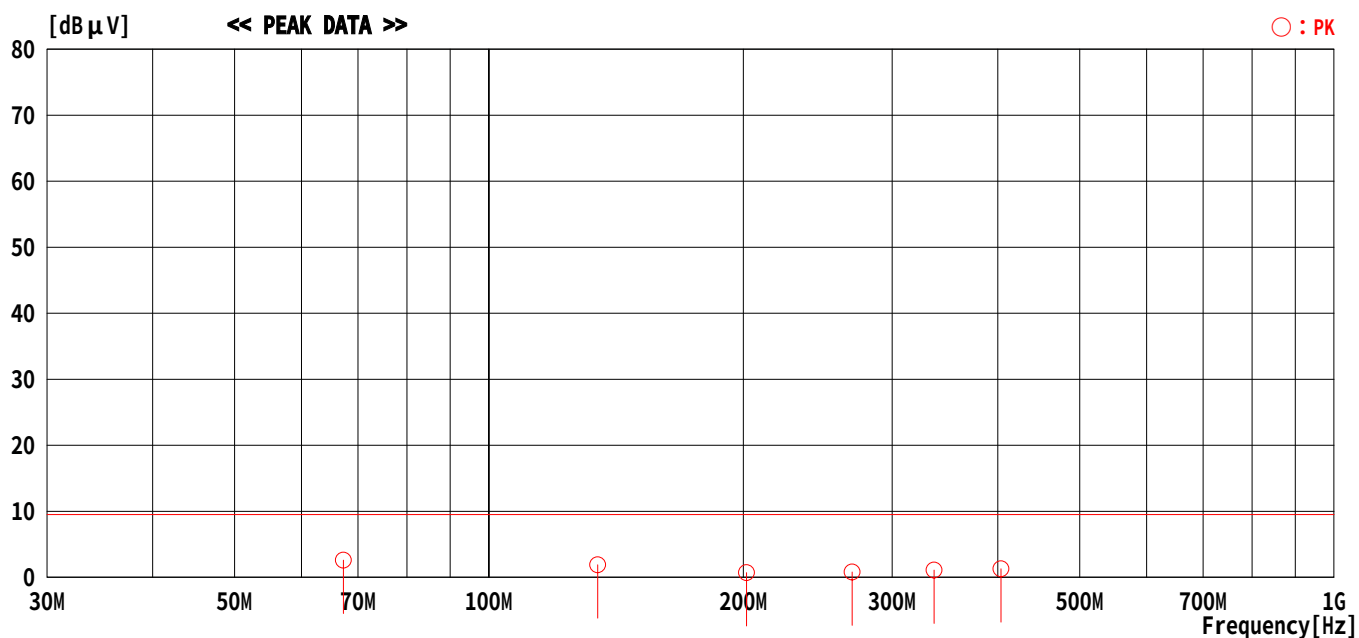
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback + Rec (4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

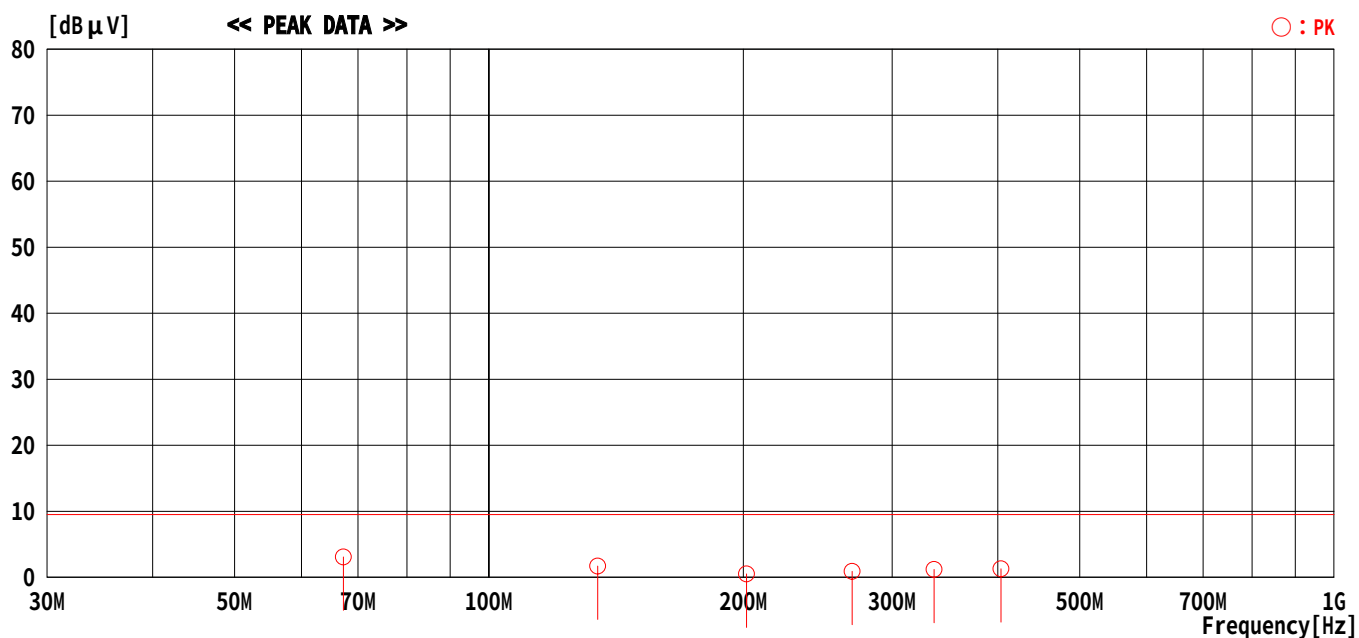
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : D-VRW1SU
TEMP./HUMID. : 26°C/68%

REPORT NO : 25GE0229-YW-1
DATE : March 3, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD Play + Rec (4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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	34.7	----	-31.6	3.1	----	9.5	----	6.4	----	-
2	134.5000	33.0	----	-31.3	1.7	----	9.5	----	7.8	----	-
3	201.7500	31.5	----	-31.0	0.5	----	9.5	----	9.0	----	-
4	269.0000	32.0	----	-31.1	0.9	----	9.5	----	8.6	----	-
5	336.2500	32.3	----	-31.1	1.2	----	9.5	----	8.3	----	-
6	403.5000	32.4	----	-31.1	1.3	----	9.5	----	8.2	----	-

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-RW/VCR
Model Number : D-VRW1SU
Power : 120V/60Hz
Description : TV Reception
Remarks : -

Report Number : 25GE0229-YW-1
Regulation : FCC Part15 SubpartB
Date : March 3, 2005
Temp / Humid : 23deg.C / 45%
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	20.0	10.0
3	61.25	17.6	7.6	20	507.25	20.0	10.0
4	67.25	16.2	6.5	26	543.25	20.6	10.7
5	77.25	16.0	6.3	32	579.25	21.0	11.2
6	83.25	15.7	6.1	38	615.25	21.1	11.4
7	175.25	21.5	11.9	44	651.25	21.2	11.5
8	181.25	21.2	11.5	50	687.25	21.2	11.5
9	187.25	20.4	10.5	56	723.25	21.3	11.6
10	193.25	20.0	10.0	62	759.25	21.9	12.4
11	199.25	20.0	10.0	69	801.25	22.4	13.2
12	205.25	20.0	10.0	-	-	-	-
13	211.25	20.0	10.0	-	-	-	-
Average VHF			9.2	Average UHF			11.3
Average UHF/VHF : $20 \log \text{UHF}[\mu\text{V}] / \text{VHF}[\mu\text{V}] =$				1.8 [Limit : 8.0dB]			

Noise Figure Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co.,Ltd.
Equipment : DVD-RW/VCR
Model Number : D-VRW1SU
Power : 120V/60Hz
Description : TV Reception
Remarks : -

Report Number : 25GE0299-YW-1
Regulation : FCC Part15 SubpartB
Date : March 3, 2005
Temp / Humid : 23deg.C / 32%
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	6.2	0.2	6.0	14.0	8.0
3	61.25	4.8	0.2	4.6	14.0	9.4
4	67.25	4.0	0.2	3.8	14.0	10.2
5	77.25	3.6	0.2	3.4	14.0	10.6
6	83.25	3.4	0.2	3.2	14.0	10.8
7	175.25	5.9	0.2	5.7	14.0	8.3
8	181.25	5.3	0.2	5.1	14.0	8.9
9	187.25	5.1	0.2	4.9	14.0	9.1
10	193.25	5.1	0.2	4.9	14.0	9.1
11	199.25	5.0	0.2	4.8	14.0	9.2
12	205.25	5.0	0.2	4.8	14.0	9.2
13	211.25	4.9	0.2	4.7	14.0	9.3
TV UHF Fundamental						
14	471.25	6.1	0.3	5.8	14.0	8.2
20	507.25	6.0	0.3	5.7	14.0	8.3
26	543.25	6.1	0.3	5.8	14.0	8.2
32	579.25	6.3	0.3	6.0	14.0	8.0
38	615.25	7.5	0.3	7.2	14.0	6.8
44	651.25	6.8	0.3	6.5	14.0	7.5
50	687.25	6.4	0.3	6.1	14.0	7.9
56	723.25	6.3	0.4	5.9	14.0	8.1
62	759.25	6.4	0.4	6.0	14.0	8.0
69	801.25	7.0	0.4	6.6	14.0	7.4
Mid band						
14	121.25	3.4	0.2	3.2	14.0	10.8
16	133.25	9.2	0.2	9.0	14.0	5.0
18	145.25	7.3	0.2	7.1	14.0	6.9
20	157.25	6.3	0.2	6.1	14.0	7.9
22	169.25	6.4	0.2	6.2	14.0	7.8
Super band						
23	217.25	5.0	0.2	4.8	14.0	9.2
26	235.25	5.1	0.2	4.9	14.0	9.1
29	253.25	5.2	0.2	5.0	14.0	9.0
32	271.25	5.3	0.2	5.1	14.0	8.9
36	295.25	5.1	0.2	4.9	14.0	9.1

Test Report No : 25GE0229-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	RF, ATS	Pre Check
APSPA04	Spectrum Analyzer	Advantest	R3265	CE, AT, RF, ATS	2004/05/14 * 12
IP-06	Matching Pad	TME	ZT-301	PS, NF	2004/05/06 * 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
SA-04	Spectrum Analyzer	Hewlett Packard	8567A	PS	2004/03/28 * 12
APBPF01	Band pass filter	Erika Fiedler	BP	PS	Pre Check
AF-05	Pre Amplifier	Hewlett Packard	8447D	AT, RF, ATS	2004/05/31 * 12
AF-04	Pre Amplifier	Hewlett Packard	8449B	AT	2005/01/18 * 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	CE, AT, RF, ATS, PS, NF	2004/04/06 * 12
AF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2004/03/28 * 12
AF-06	Pre Amplifier	Agilent	HP8449B	RE	2005/01/18 * 12
AT-06	Attenuator	Anritsu	MP721B	RE	2004/03/27 * 12
BA-06	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/01/29 * 12
HA-02	Horn Antenna	A.H.Systems	SAS-200/571	RE	2004/04/10 * 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	2004/03/28 * 12
CC-C3	Microwave Cable	-	-	RE	2004/12/16 * 12
YOATS-03	Open Test Site	JSE	3m, 10m	RE	2004/08/15 * 12
OS-16	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2004/05/07 * 12
CC-7S	Yokowa No7 Shielded room(CE)	UL Apex	CC-71,CC-72,CC-73, CC-75,SW-71,SW-72	CE	2004/09/09 * 12
APRCV05	Test Receiver	Rohde & Schwarz	ESS	CE	2004/06/10 * 12
LS-04	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE (EUT)	2004/10/29 * 12
LS-10	LISN(AMN)	Schwarzbeck	NSLK8127	CE	2004/05/02 * 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