



Certification EMI TEST REPORT

Test Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Type of equipment : DVD Player with Video Cassette Recorder
Model number : MVD4541
FCC ID : A7RM2F3A
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
VRDVD4100C	SANSUI	-	-
DVCR-810A	BROKSONIC	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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 : January 26 to 31, 2005

Tested by:

Tsubasa Takayama
Engineer of EMC Service

Seigo Kekehi
Engineer of EMC Service

Approved by:

Hiroya Tabata
Leader of EMC Service

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Contents

	Page
Section 1 : Client information	3
Section 2 : Equipment under test (E.U.T.)	3
Section 3 : Test specification, procedures & results	4
Section 4 : Operation of E.U.T. during tests	6
Section 5 : Conducted emission	7
Section 6 : Radiated emission	10
Section 7 : Antenna terminal voltage	13
Section 8 : RF output level / spurious emission	14
Section 9 : Antenna transfer switch	16
Section 10 : Picture sensitivity	17
Section 11 : Noise figure	18
 <u>Contents of Appendixes</u>	 19
Appendix 1 : Photographs of test set up	20
Appendix 2 : Data of EMI tests	27
Appendix 3: Test instruments	114

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 Player with Video Cassette Recorder
Brand Name : MEMOREX
Model number : MVD4541
FCC ID : A7RM2F3A
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 : January 22, 2005
Condition of EUT : Production Prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product description

Model: MVD4541 (referred to as the EUT in this report) is a DVD Player 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, 18W
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	17.9 dB (8.4495 MHz, L1, AV Input + 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	2.1 dB (945.00 MHz, Vertical, DVD Play)	Complied
Antenna terminal voltage	ANSI C63.4:2003	2 nW (at 75 ohm)	23.5 dB (645.70980 MHz, CATV tuning)	Complied
RF output level	ANSI C63.4:2003	Video signal: 3000 uV Aural signal: 671 uV	5.8 dB (67.25 MHz, AV Input + Rec. 5Vp-p)	Complied
Spurious emission		94.8 uV	16.6 dB (846.1000 MHz, 4ch, AV Input + Rec. 1Vp-p/ 5Vp-p)	Complied
Transfer switch	ANSI C63.4:2003	9.5 dB	4.9 dB (367.5000 MHz, 3ch, DVD Play)	Complied
Picture sensitivity	ANSI C63.4:2003	8 dB	5.7 dB	Complied
Noise figure	FCC/OET MP:2:1986	14 dB	6.2 dB (16ch, 133.25 MHz)	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 meets the limits unless the uncertainty is taken into consideration.

Antenna terminal voltage

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

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

RF output level test / spurious emission test

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

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

Antenna transfer switch

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

The data listed in this test report 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.2 open site

This site has been fully described in a report submitted to FCC office, and listed on August 29, 2003.

(Registration number: 90411)

*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

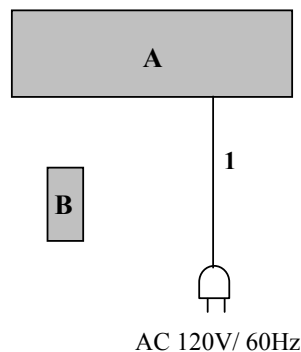
The EUT exercise program used during testing was designed exercise the various system components in a manner similar to typical use.

The sequence in used :
* TV Reception + Rec. mode (0 dBmV input / 25 dBmV input)
* AV Input + Rec. mode (1 Vp-p input / 5 Vp-p input)
* VCR Play mode
* DVD Play 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 Player with Video Cassette Recorder	MVD4541	—	Orion Electric Co., Ltd.	A7RM2F3A	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.1 shielded room.

Date : January 30, 2005
Temperature : See data
Humidity : See data

5.2 Test configuration

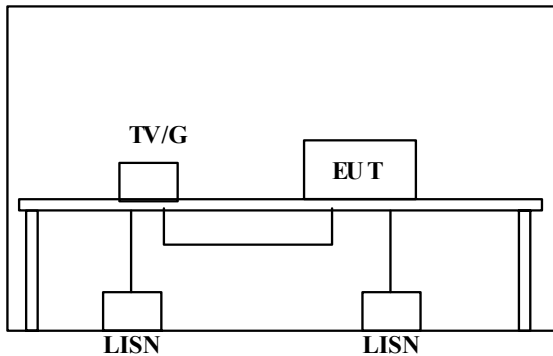
EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The rear of tabletop was located 40 cm to the vertical conducting plane. The rear of EUT was aligned and flushed with rear of tabletop. All other surfaces of tabletop was at least 80 cm from any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

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

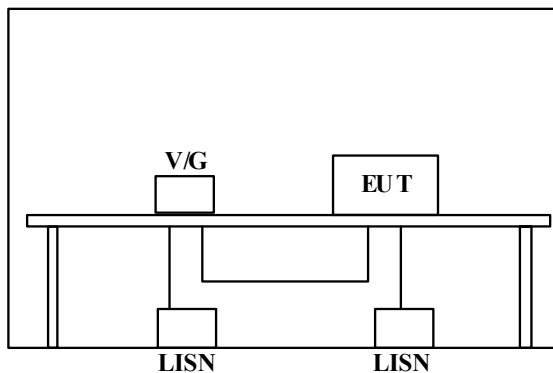
Figure 1. Conducted emission

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

Shielded room



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

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

RF in: 75 ohm terminated

Front video in: Video signal generator connected or
75 ohm terminated

Front audio in: 47 k ohm terminated

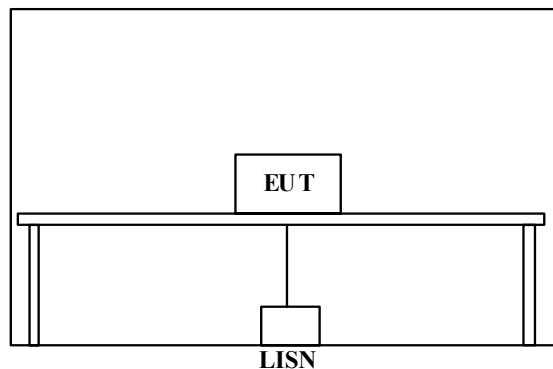
Rear video out: 75 ohm terminated with video cable

Rear audio out: 1 k ohm terminated with audio cable

S-Video out: 75 ohm terminated with S-Video cable
Component out (Y/P_B/P_R): 75 ohm terminated with
component cable

RF output: 75 ohm terminated with RF output cable

Coaxial out: 75 ohm terminated with coaxial cable

VCR Play mode**Shielded room**

RF in: 75 ohm terminated with RF input cable

Front video in: 75 ohm terminated with video cable

Front audio in: 47 k ohm terminated with audio cable

Rear video out: 75 ohm terminated with video cable

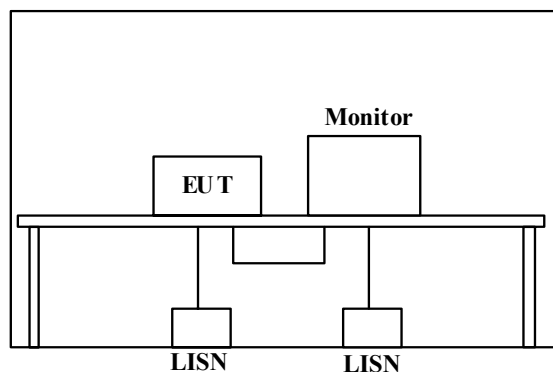
Rear audio out: 1 k ohm terminated with audio cable

S-Video out: 75 ohm terminated with S-Video cable

Component out (Y/P_B/P_R): 75 ohm terminated with
component cable

RF output: 75 ohm terminated with RF output cable

Coaxial out: 75 ohm terminated with coaxial cable

DVD Play mode**Shielded room**

RF in: 75 ohm terminated with RF input cable

Front video in: 75 ohm terminated with video cable

Front audio in: 47 k ohm terminated with audio cable

Rear video out: monitor connected

Rear audio out: monitor connected

S-Video out: 75 ohm terminated with S-Video cable

Component out (Y/P_B/P_R): 75 ohm terminated with
component cable

RF output: 75 ohm terminated with RF output cable

Coaxial out: 75 ohm terminated with coaxial cable

5.3 Test conditions

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

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.

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Section 6 : Radiated emission

6.1 Operation environment

The test was carried out in No.2 open site.

Date : January 26 and 31, 2005

Temperature : See data

Humidity : See data

6.2 Test configuration

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

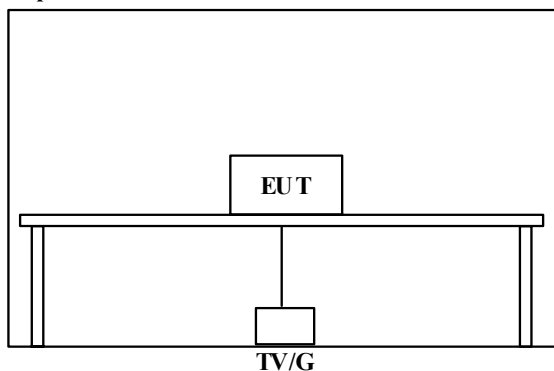
A drawing of the set up is shown in figure 2 and photographs in Appendix 1.

Figure 2. Radiated emission



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

Open test site



RF in: TV signal generator connected or 75 ohm terminated

Front video in: 75 ohm terminated

Front audio in: 47 k ohm terminated

Rear video out: 75 ohm terminated with video cable

Rear audio out: 1 k ohm terminated with audio cable

S-Video out: 75 ohm terminated with S-Video cable

Component (Y/P_B/P_R): 75 ohm terminated with component cable

RF output: 75 ohm terminated with RF output cable

Coaxial out: 75 ohm terminated with coaxial cable

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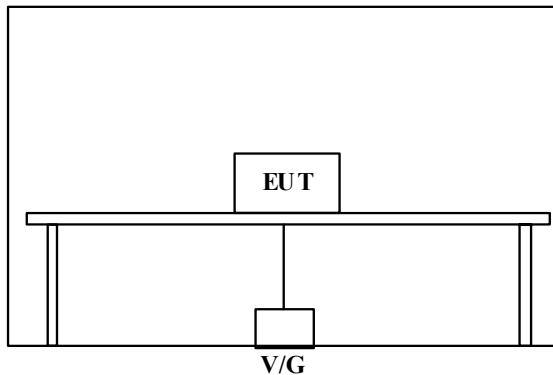
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AV Input + Rec. mode (1 Vp-p input / 5 Vp-p input)

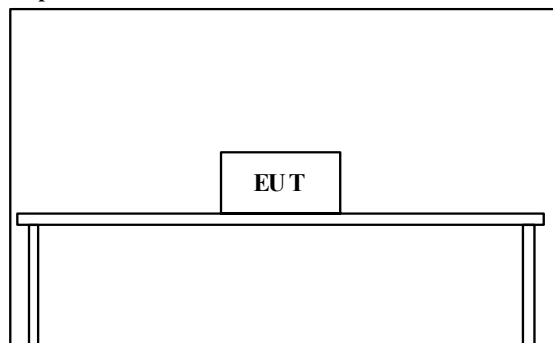
Open test site



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

VCR Play mode

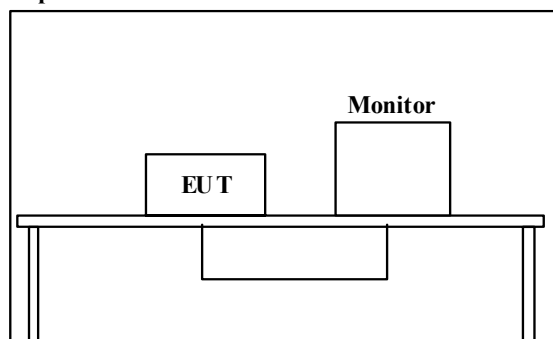
Open test site



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

DVD Play mode

Open test site



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

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 + Rec., VCR Play, DVD Play

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 : January 28, 2005

Temperature : See data

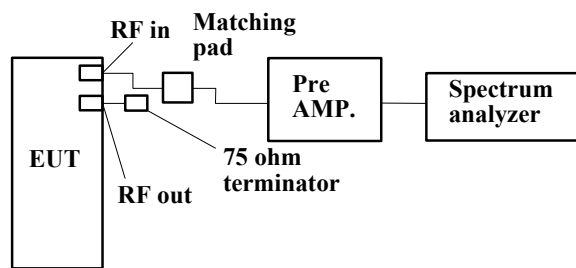
Humidity : See data

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

Section 8 : RF output level / spurious emission

8.1 Operation environment

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

Date : January 29, 2005

Temperature : See data

Humidity : See data

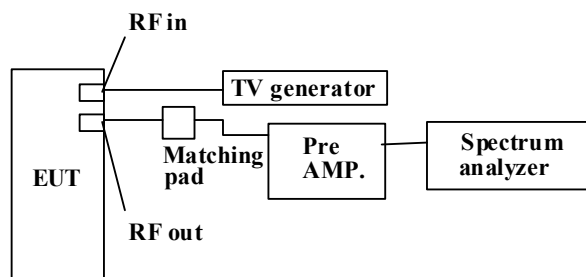
8.2 Test configuration

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

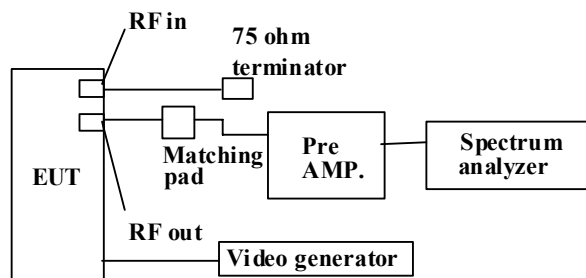
A drawing of the set up is shown in figure 4 and photographs in Appendix 1.

Figure 4. RF output level

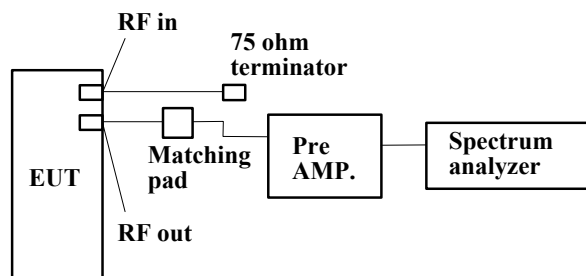
TV Reception + Rec. mode



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



VCR Play mode and DVD Play mode



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8.3 Test conditions

EUT position : Table top

EUT operation mode : TV Reception + Rec., AV Input + Rec., VCR Play, DVD Play

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 : January 29, 2005

Temperature : See data

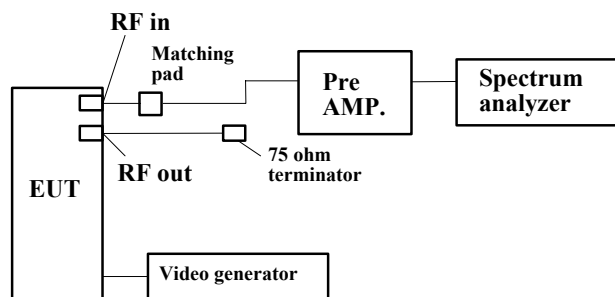
Humidity : See data

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 + Rec., VCR Play, DVD Play

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

Section 10 : Picture sensitivity

10.1 Operation environment

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

Date : January 29, 2005

Temperature : See data

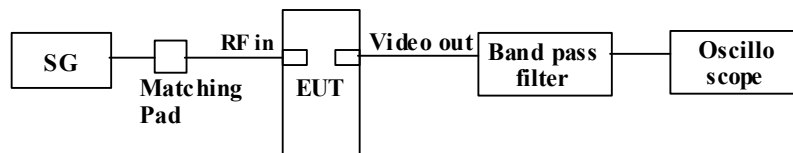
Humidity : See data

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.

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Section 11 : Noise figure

11.1 Operating environment

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

Date : January 29, 2005

Temperature : See data

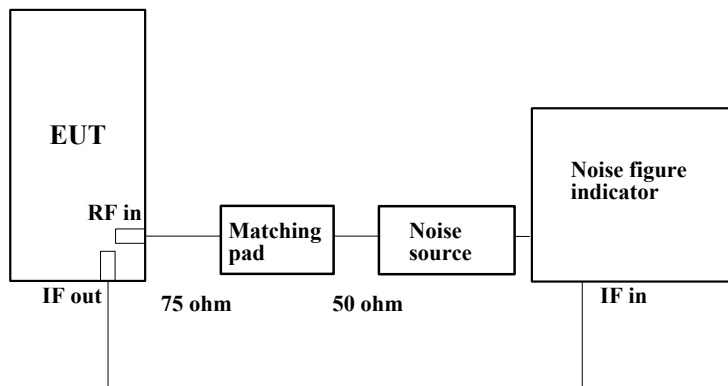
Humidity : See data

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

Appendix 1 : Photographs of test set up

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

Appendix 2 : Data of EMI tests

Page 27 - 44 :	Conducted emission
Page 45 - 83 :	Radiated emission
Page 84 - 85 :	Antenna terminal voltage
Page 86 - 103 :	RF output level / spurious emission
Page 104 - 111 :	Antenna transfer switch
Page 112 :	Picture sensitivity
Page 113 :	Noise figure

Appendix 3 : Test instruments

Page 114 :	Test instruments
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Conducted emission



UL Apex Co., Ltd.

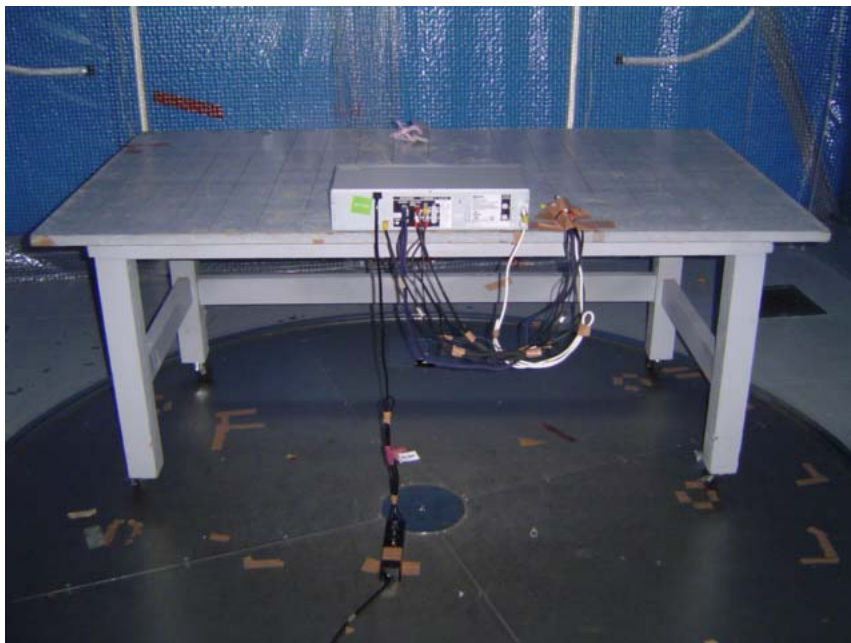
Yokowa EMC Lab.

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.

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

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Picture sensitivity



UL Apex Co., Ltd.
Yokowa EMC Lab.

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

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Noise figure



UL Apex Co., Ltd.

Yokowa EMC Lab.

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

Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 0dBmV
Date : 1/30/2005
Phase : Single Phase
Temperature : 25 Engineer : Seigo Kakehi
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB μV]				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]
1.	0.1500	44.6	-	44.8	-	0.0	0.1	0.0	44.9	-	66.0	56.0	21.1	-
2.	0.1669	42.9	-	43.3	-	0.0	0.1	0.0	43.4	-	65.1	55.1	21.7	-
3.	1.2908	29.7	-	29.0	-	0.1	0.2	0.0	30.0	-	56.0	46.0	26.0	-
4.	3.5785	23.1	-	23.6	-	0.2	0.3	0.0	24.1	-	56.0	46.0	31.9	-
5.	10.7512	23.8	-	23.1	-	0.6	0.5	0.0	24.9	-	60.0	50.0	35.1	-
6.	18.4319	20.8	-	20.7	-	1.0	0.7	0.0	22.5	-	60.0	50.0	37.5	-
7.	28.6348	18.7	-	18.5	-	1.2	0.9	0.0	20.8	-	60.0	50.0	39.2	-

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

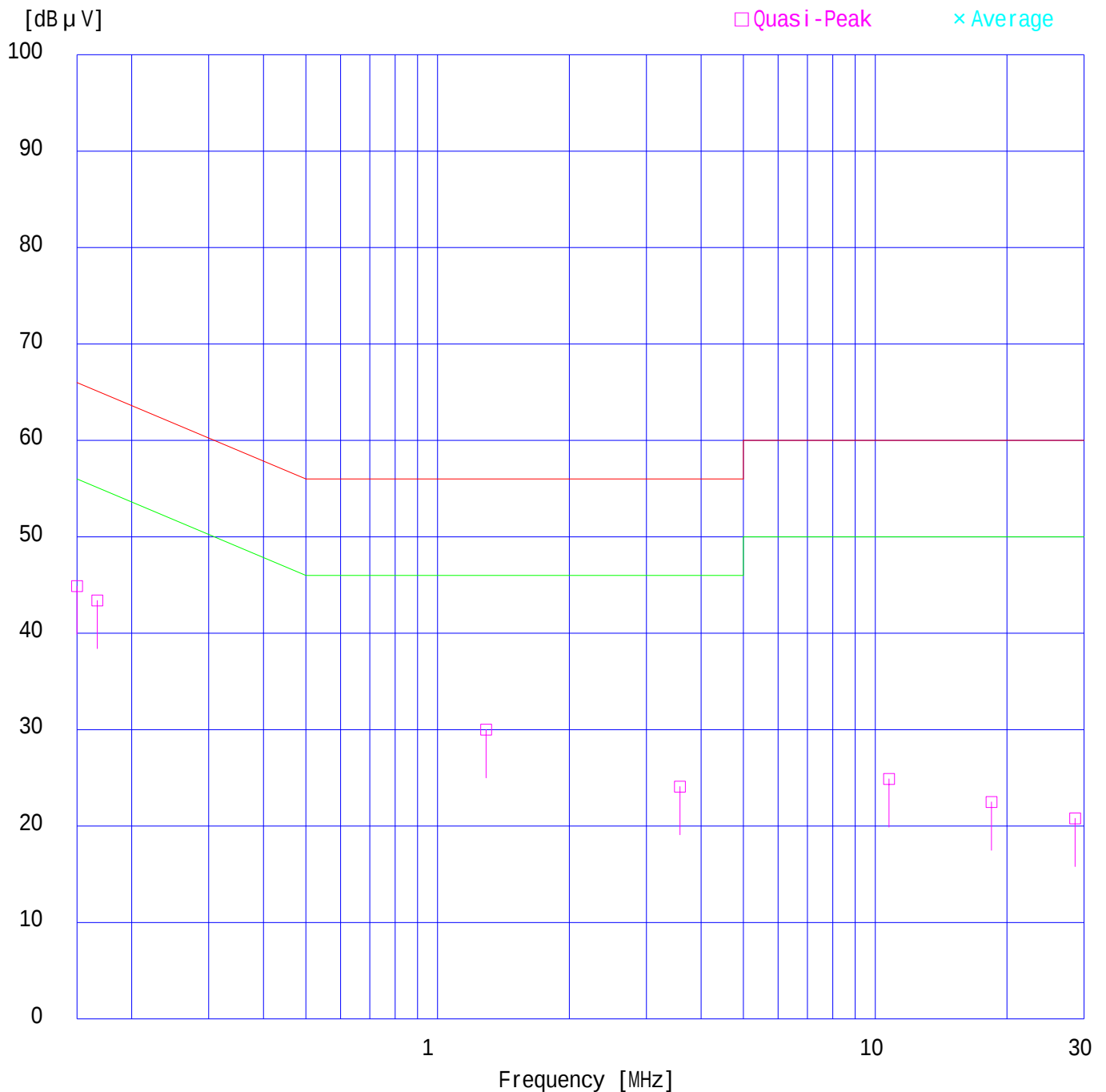
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 0dBmV
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

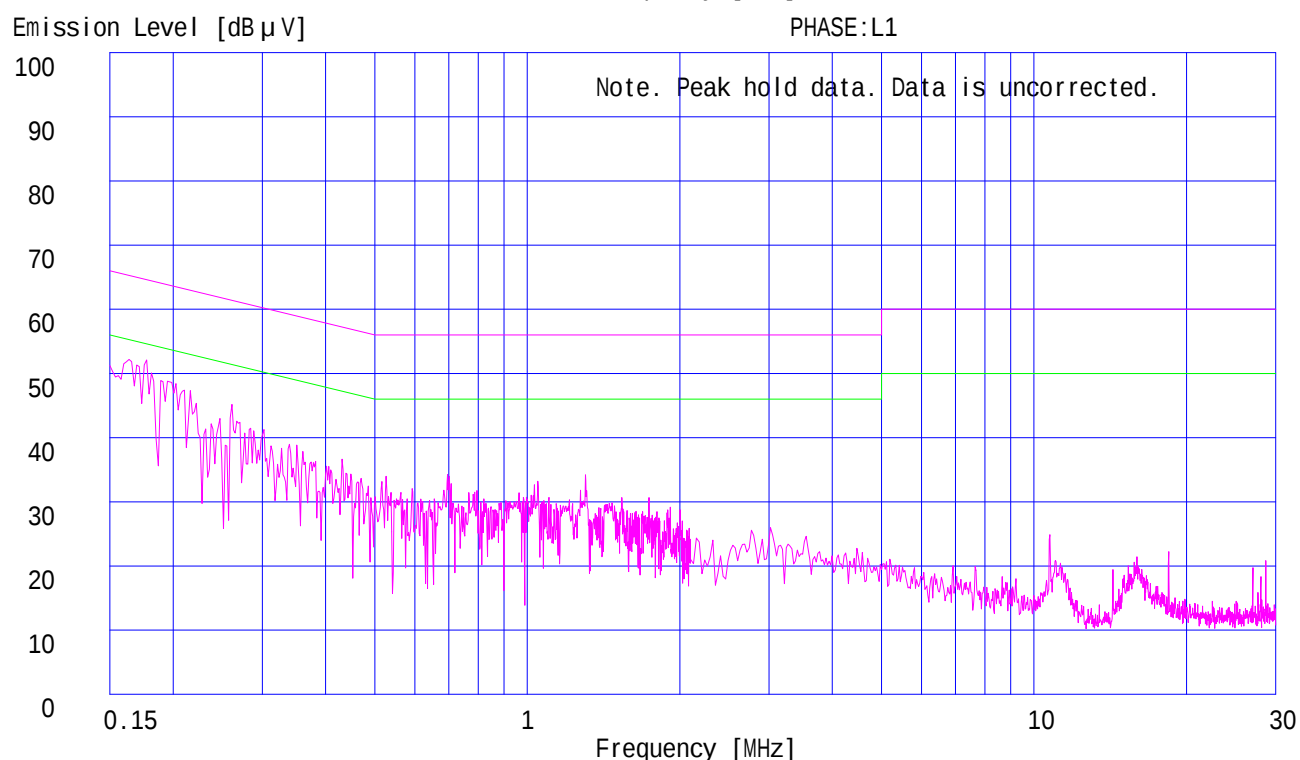
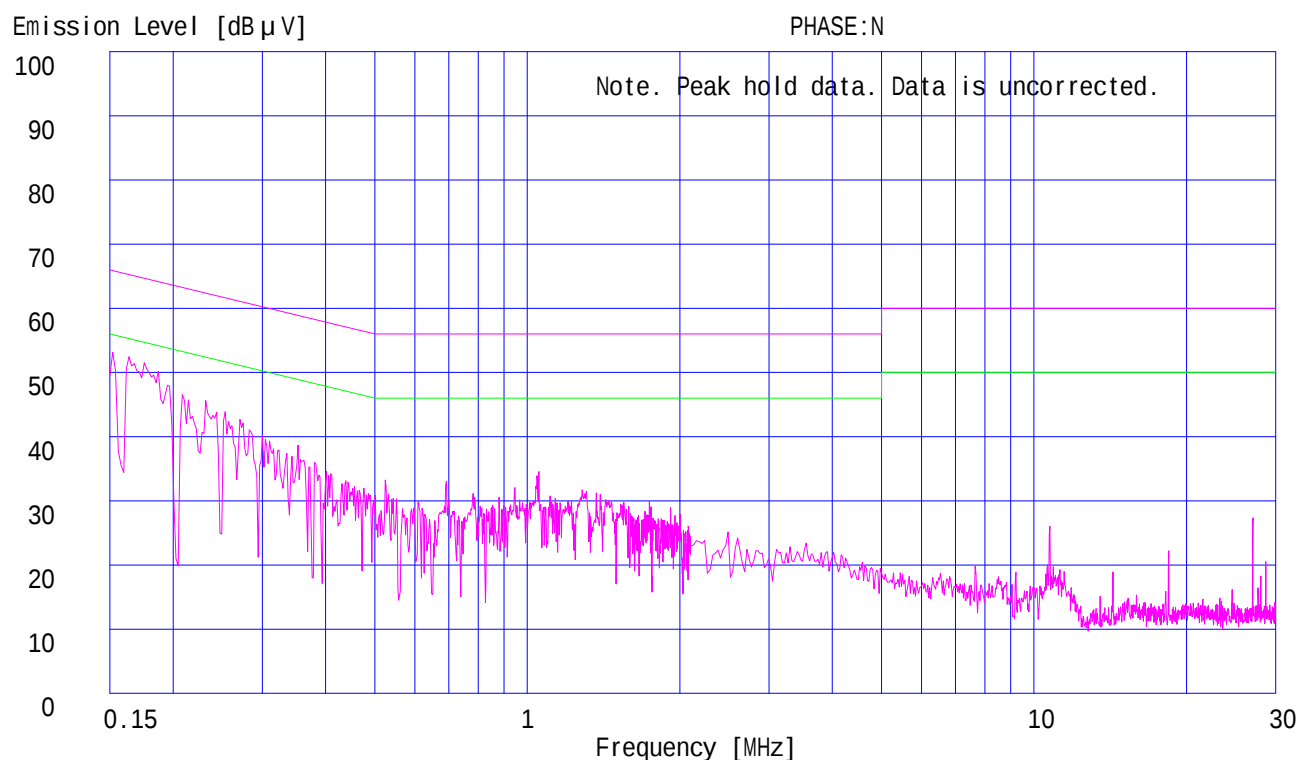
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 0dBmV
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/30/2005
Phase : Single Phase
Temperature : 25 Engineer : Seigo Kakehi
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB μV]				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]
1.	0.1500	44.6	-	44.3	-	0.0	0.1	0.0	44.7	-	66.0	56.0	21.3	-
2.	0.1691	42.6	-	43.0	-	0.0	0.1	0.0	43.1	-	65.0	55.0	21.9	-
3.	1.2908	29.7	-	28.5	-	0.1	0.2	0.0	30.0	-	56.0	46.0	26.0	-
4.	3.5776	22.0	-	23.5	-	0.2	0.3	0.0	24.0	-	56.0	46.0	32.0	-
5.	10.7502	23.2	-	22.7	-	0.6	0.5	0.0	24.3	-	60.0	50.0	35.7	-
6.	18.4320	20.2	-	20.2	-	1.0	0.7	0.0	21.9	-	60.0	50.0	38.1	-
7.	28.6348	18.6	-	18.3	-	1.2	0.9	0.0	20.7	-	60.0	50.0	39.3	-

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

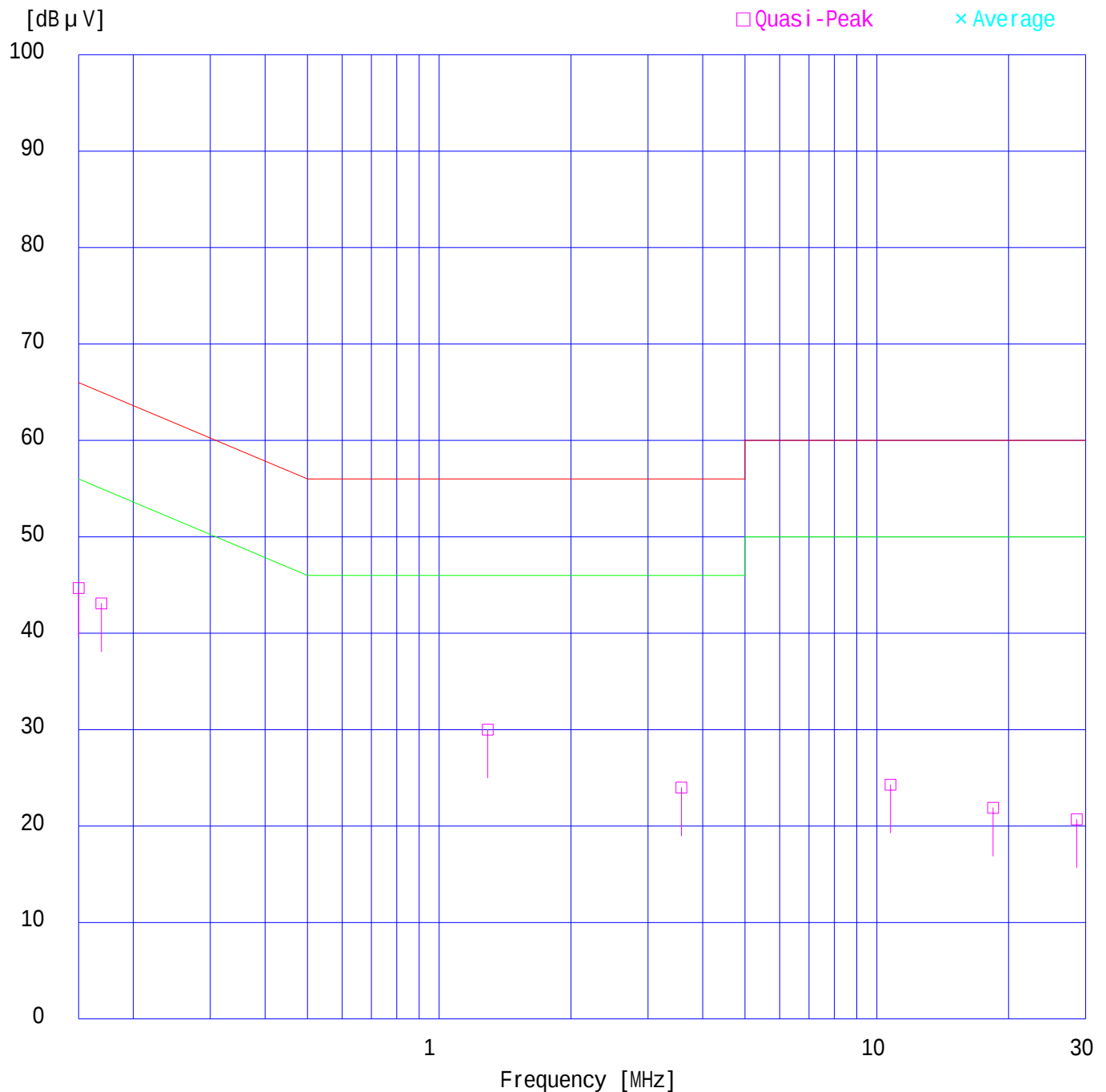
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

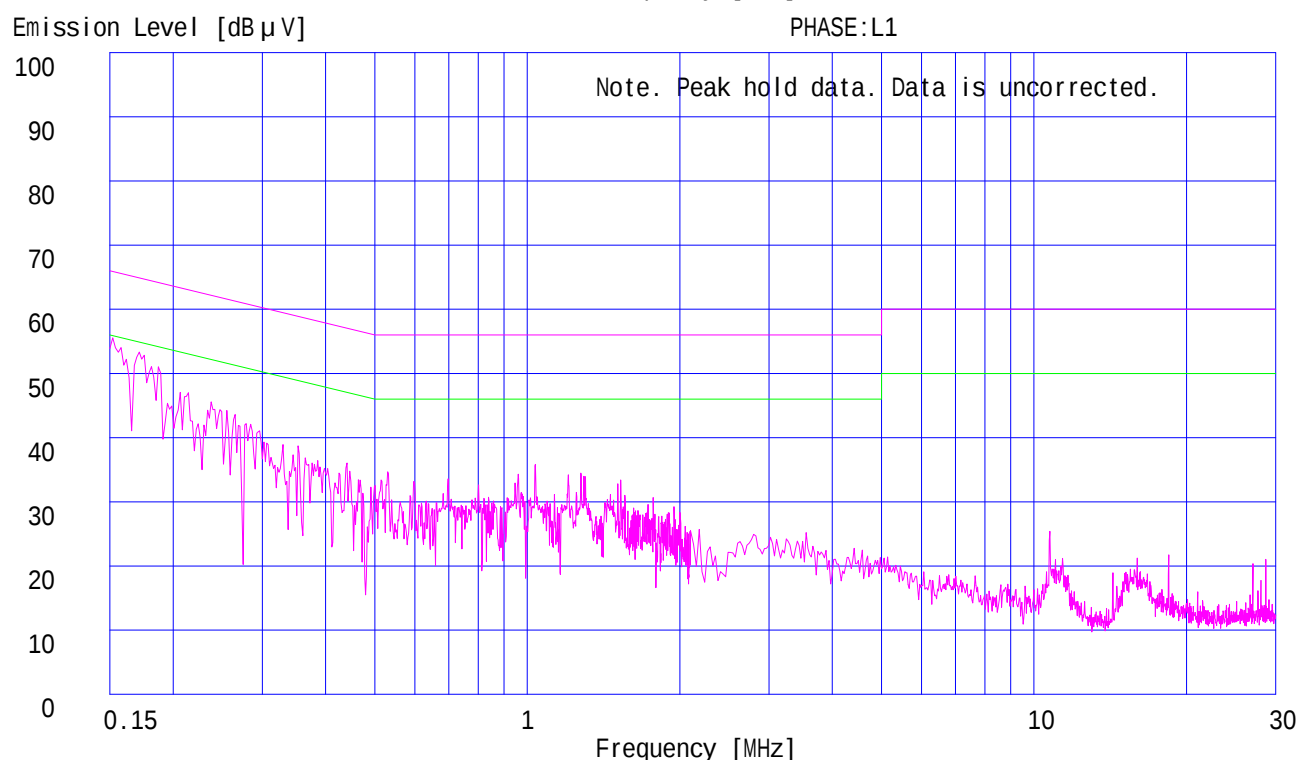
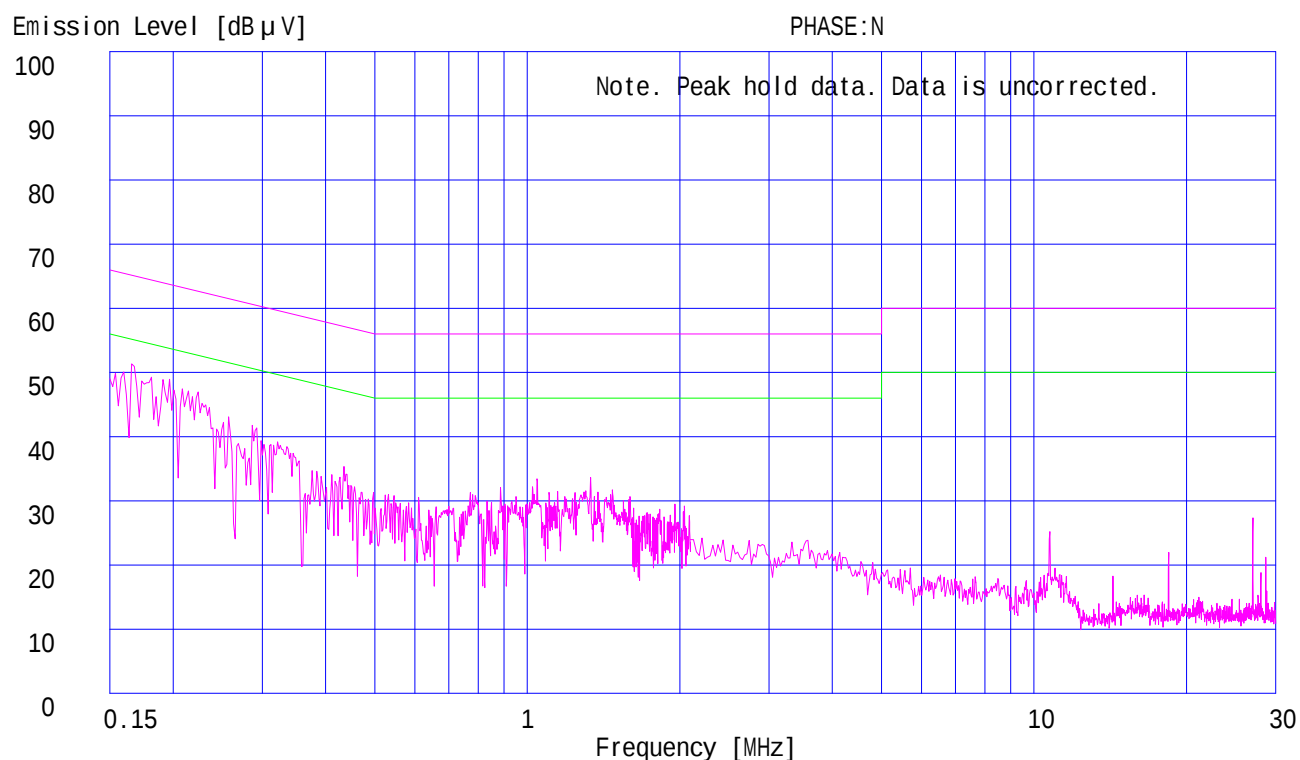
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 1Vp-p
Date : 1/30/2005
Phase : Single Phase
Temperature : 25 Engineer : Seigo Kakehi
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB μV]				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]
1.	0.1500	44.5	-	44.9	-	0.0	0.1	0.0	45.0	-	66.0	56.0	21.0	-
2.	0.1666	42.8	-	43.4	-	0.0	0.1	0.0	43.5	-	65.1	55.1	21.6	-
3.	1.2752	29.2	-	27.9	-	0.1	0.2	0.0	29.5	-	56.0	46.0	26.5	-
4.	5.1081	16.7	-	16.9	-	0.3	0.3	0.0	17.5	-	60.0	50.0	42.5	-
5.	8.4480	39.9	-	39.5	-	0.5	0.4	0.0	40.8	-	60.0	50.0	19.2	-
6.	16.8693	27.2	-	27.0	-	0.9	0.6	0.0	28.7	-	60.0	50.0	31.3	-
7.	18.4315	35.3	-	35.0	-	1.0	0.7	0.0	37.0	-	60.0	50.0	23.0	-

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

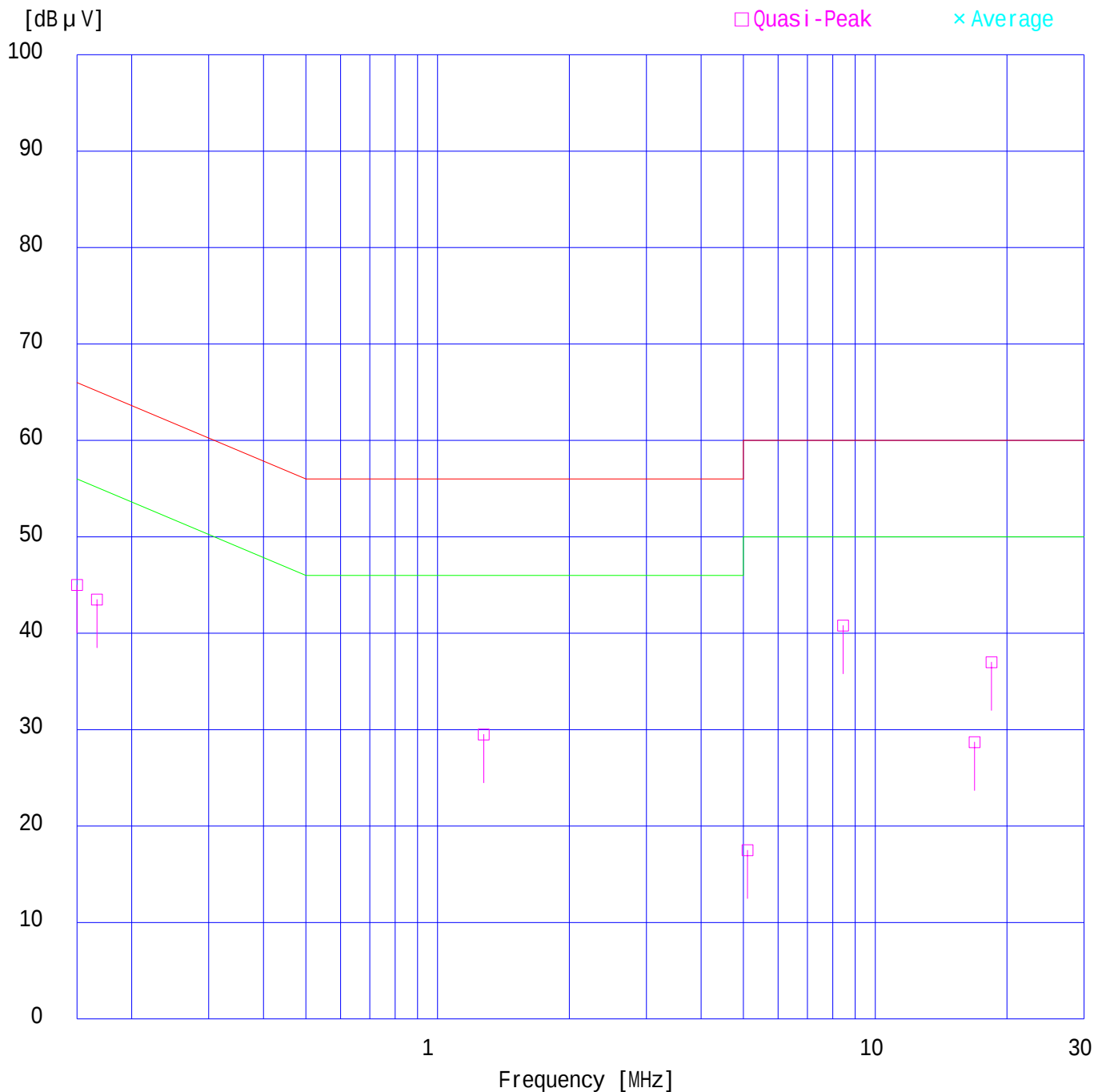
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 1Vp-p
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

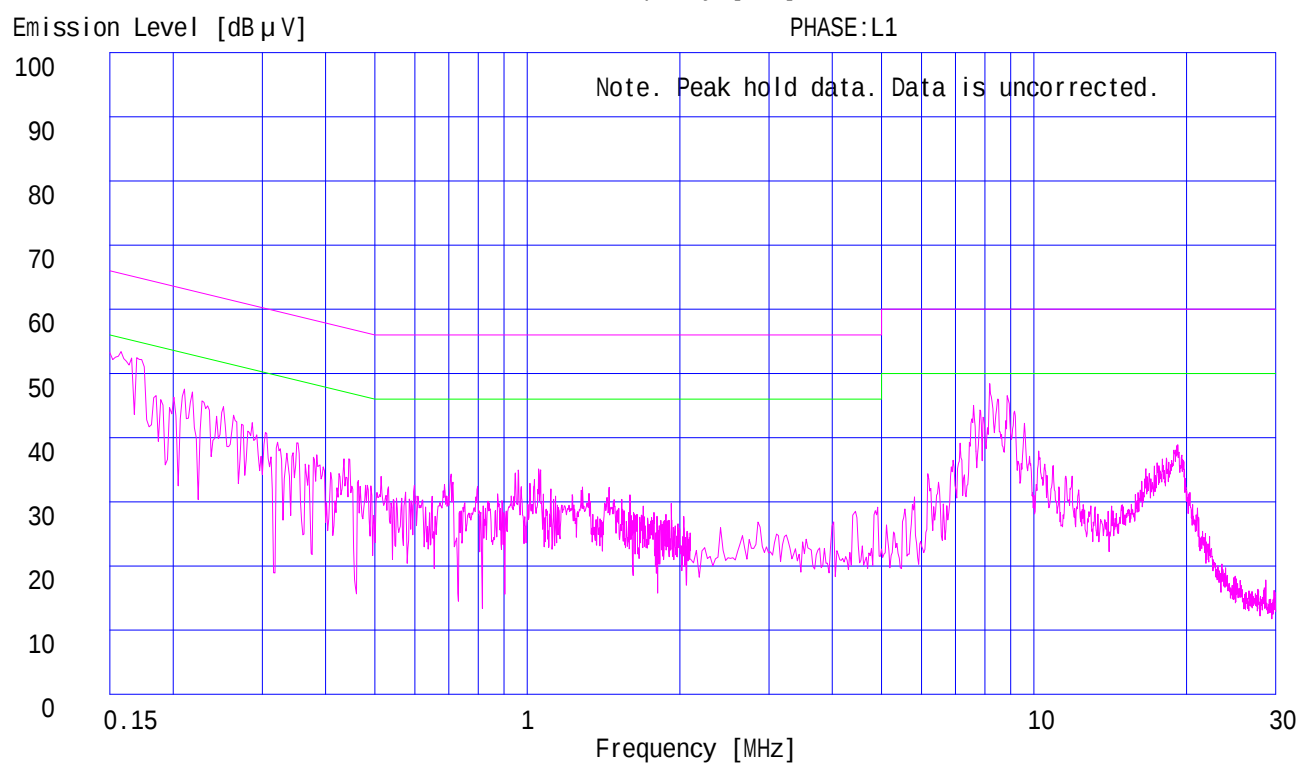
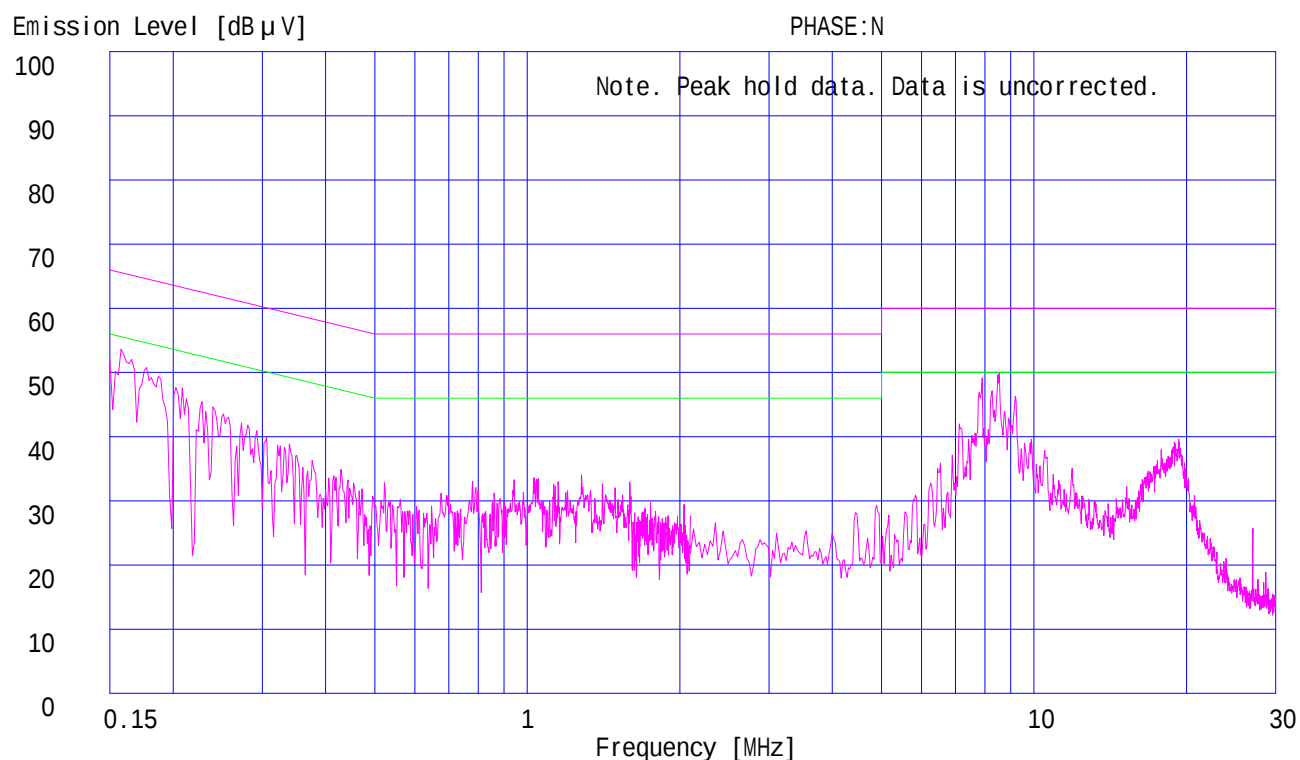
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 1Vp-p
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 5Vp-p
Date : 1/30/2005
Phase : Single Phase
Temperature : 25 Engineer : Seigo Kakehi
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

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]	AV [dB]
1.	0.1500	44.5	-	44.7	-	0.0	0.1	0.0	44.8	-	66.0	56.0	21.2	-
2.	0.1666	42.9	-	43.4	-	0.0	0.1	0.0	43.5	-	65.1	55.1	21.6	-
3.	1.2752	29.4	-	27.7	-	0.1	0.2	0.0	29.7	-	56.0	46.0	26.3	-
4.	5.1081	17.3	-	18.8	-	0.3	0.3	0.0	19.4	-	60.0	50.0	40.6	-
5.	8.4495	40.6	-	41.1	-	0.5	0.5	0.0	42.1	-	60.0	50.0	17.9	-
6.	16.8726	30.4	-	28.1	-	0.9	0.6	0.0	31.9	-	60.0	50.0	28.1	-
7.	18.4312	36.2	-	36.1	-	1.0	0.7	0.0	37.9	-	60.0	50.0	22.1	-

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

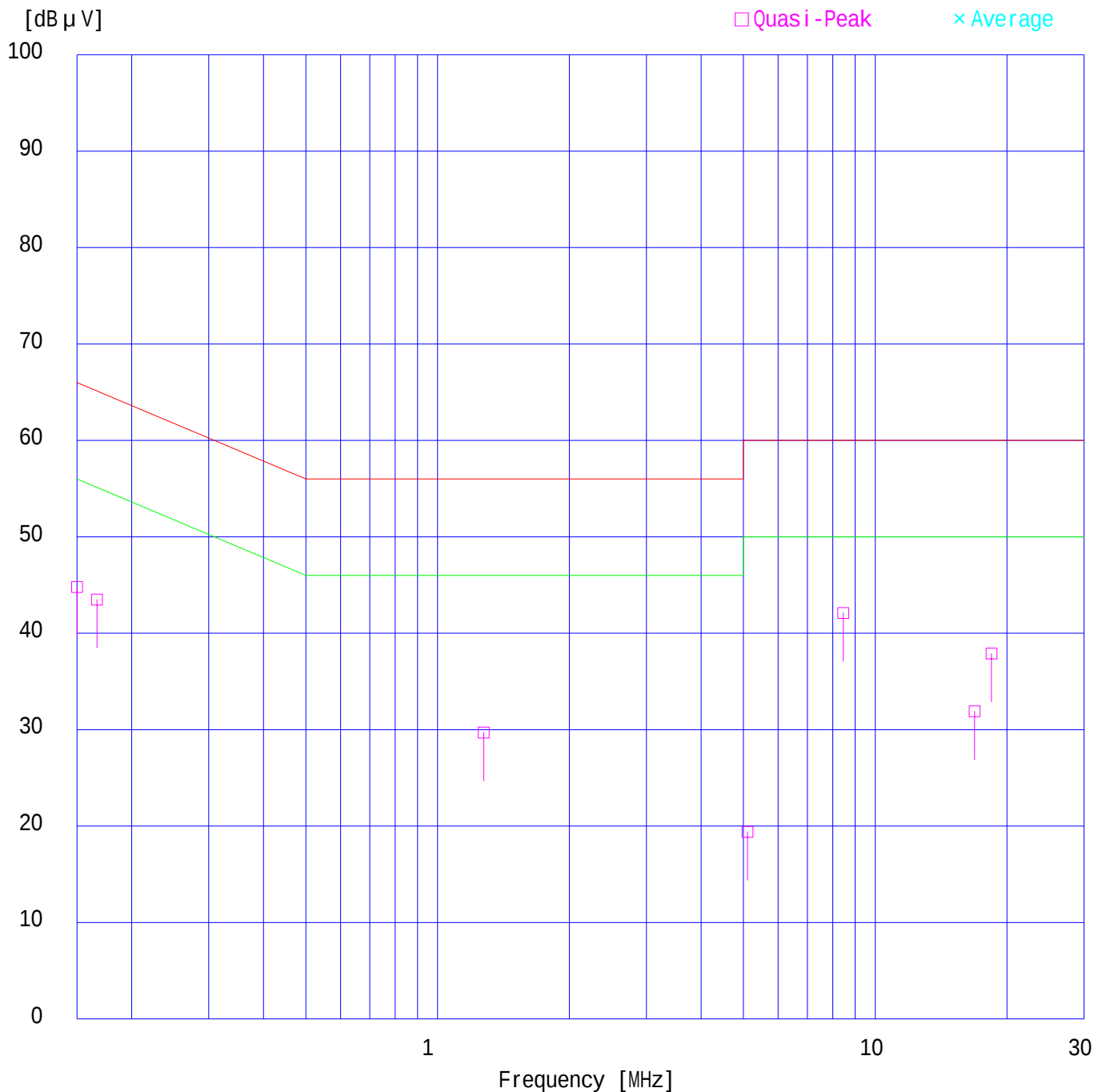
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 5Vp-p
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

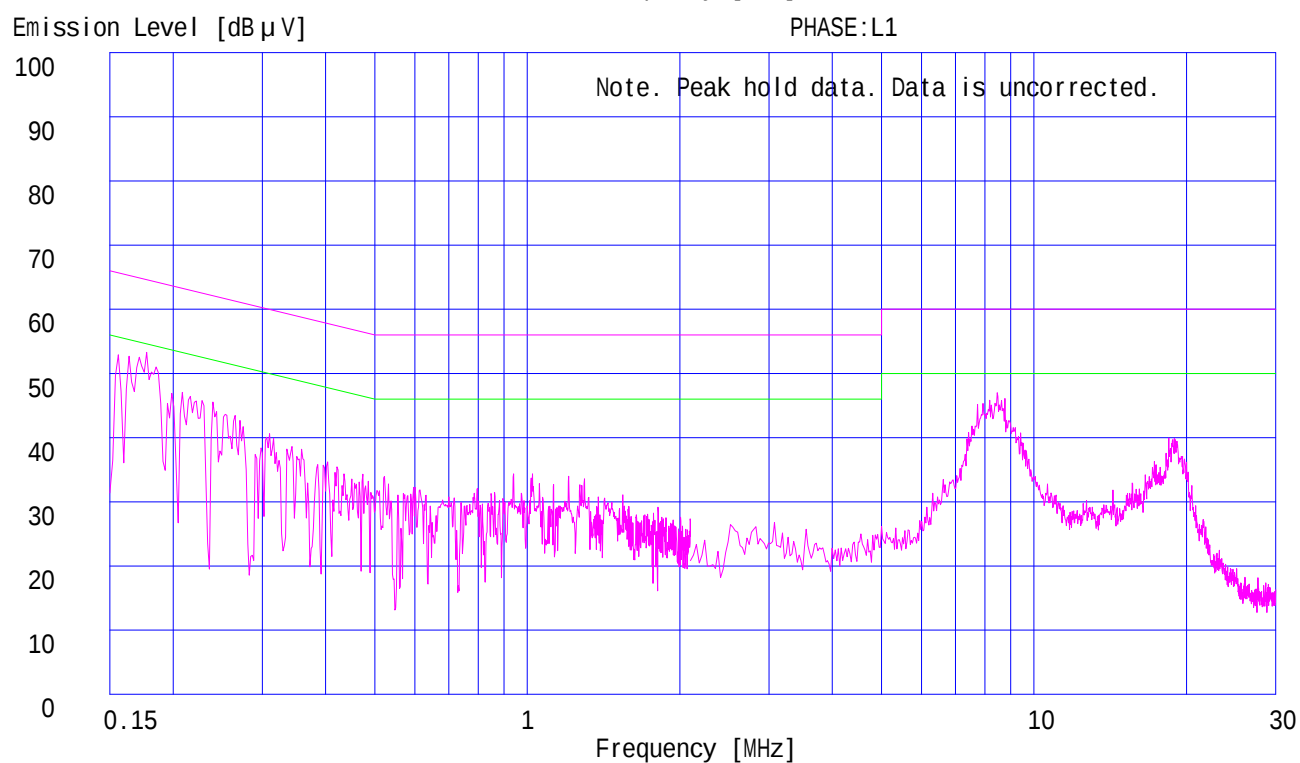
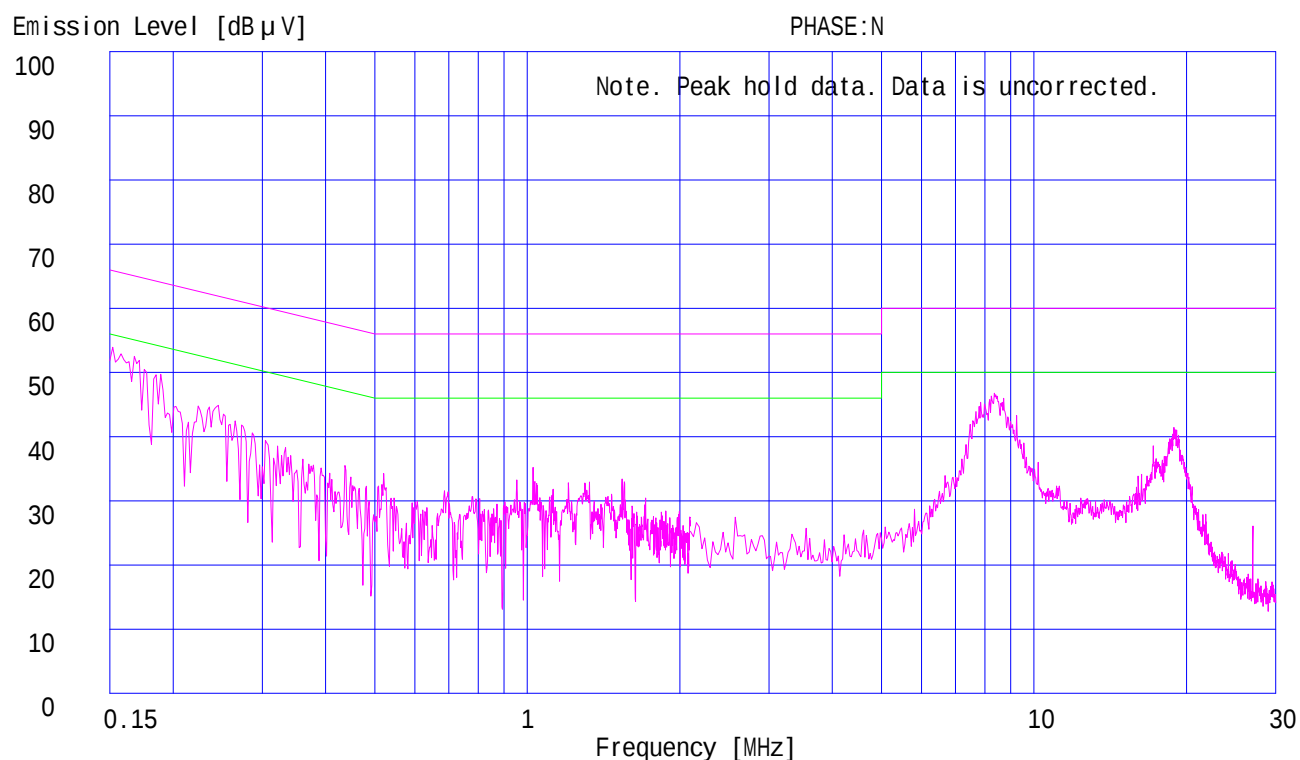
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 5Vp-p
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks :
Date : 1/30/2005
Phase : Single Phase
Temperature : 25 Engineer : Seigo Kakehi
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

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]	AV [dB]
1.	0.1500	44.2	-	44.5	-	0.0	0.1	0.0	44.6	-	66.0	56.0	21.4	-
2.	0.1805	40.9	-	41.2	-	0.0	0.1	0.0	41.3	-	64.5	54.5	23.2	-
3.	1.0874	25.8	-	24.7	-	0.1	0.2	0.0	26.1	-	56.0	46.0	29.9	-
4.	2.9291	17.7	-	19.3	-	0.2	0.3	0.0	19.8	-	56.0	46.0	36.2	-
5.	6.8606	10.9	-	11.6	-	0.4	0.4	0.0	12.4	-	60.0	50.0	47.6	-
6.	16.0101	10.7	-	14.5	-	0.9	0.6	0.0	16.0	-	60.0	50.0	44.0	-
7.	18.4315	22.5	-	22.2	-	1.0	0.7	0.0	24.2	-	60.0	50.0	35.8	-

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

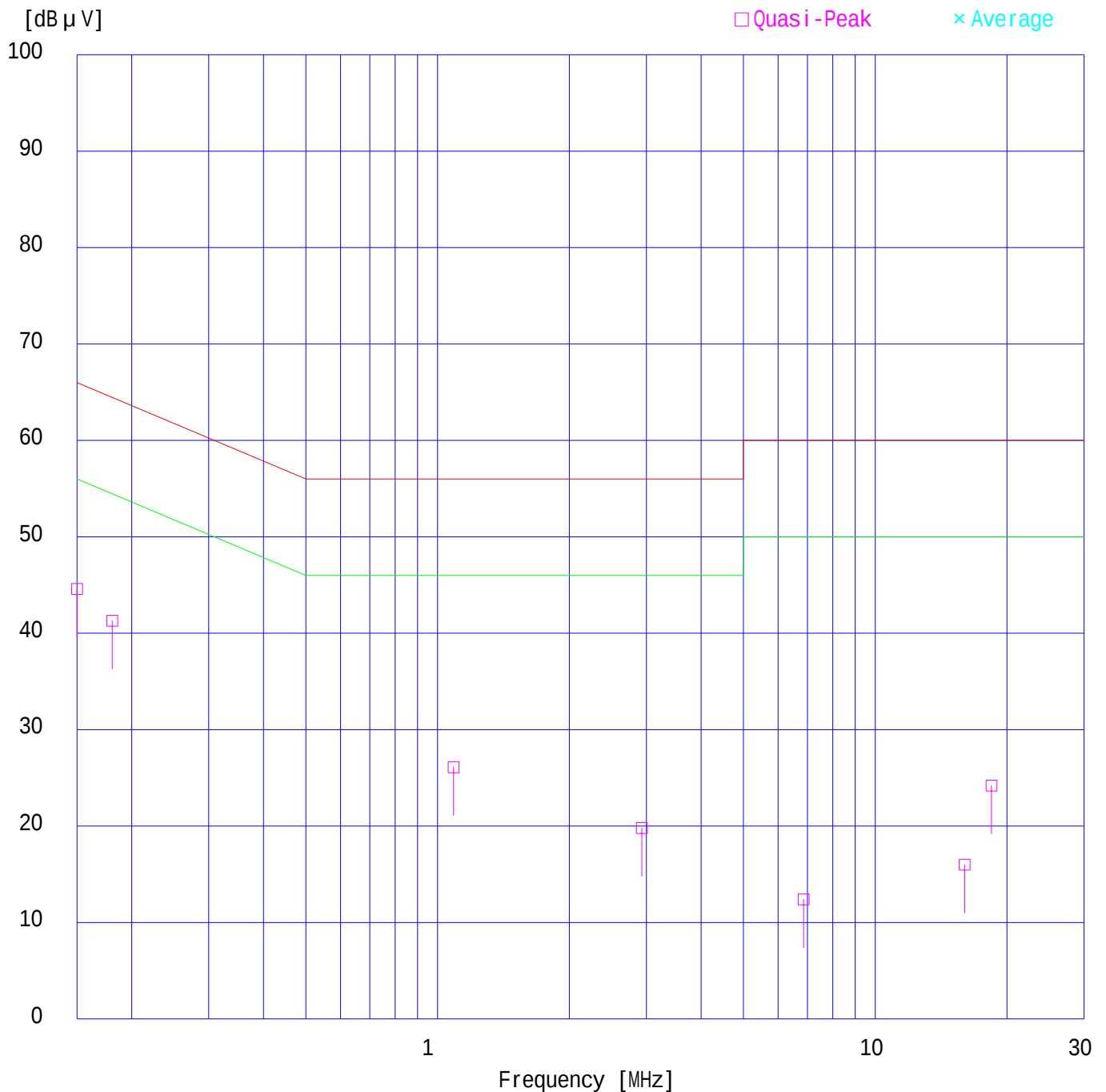
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks :
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

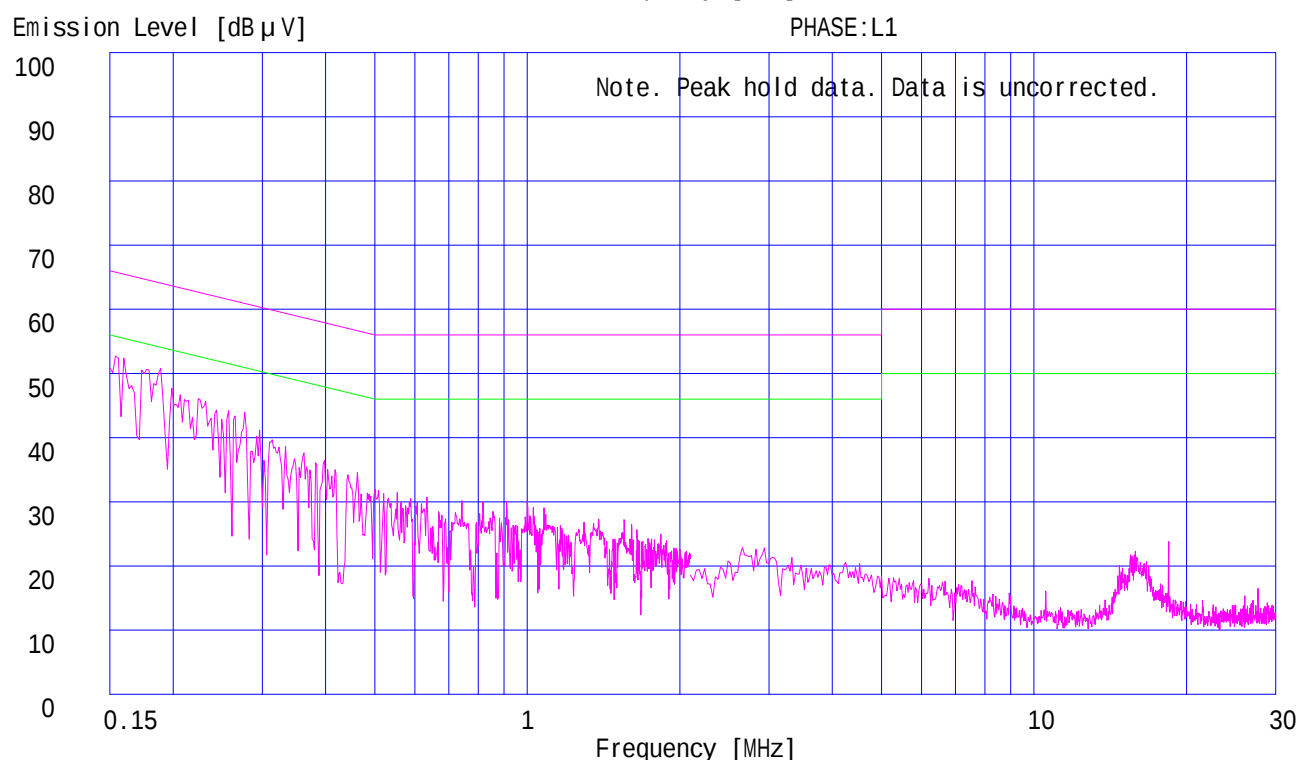
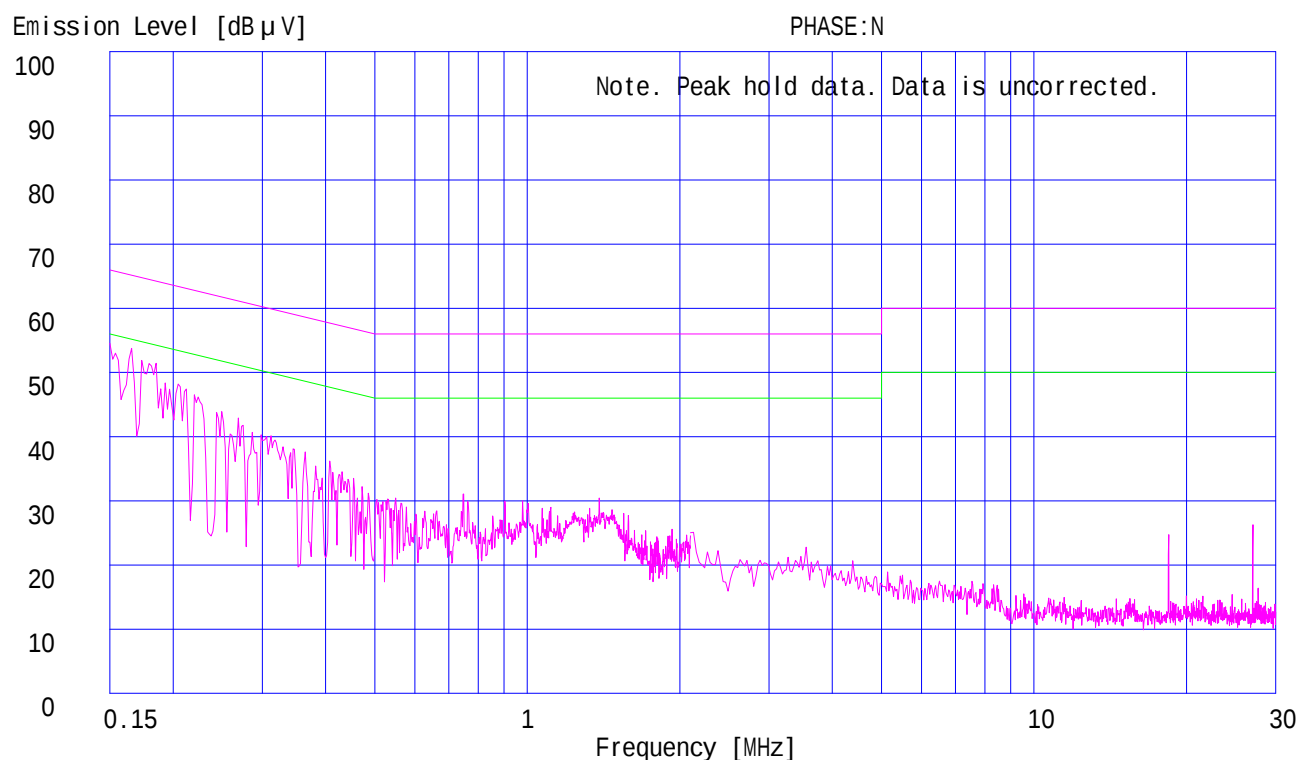
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks :
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 1/30/2005
Phase : Single Phase
Temperature : 25 Engineer : Seigo Kakehi
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB μV]				QP [dB]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB]
1.	0.1500	44.5	-	44.2	-	0.0	0.1	0.0	44.6	-	66.0	56.0	21.4	-
2.	0.1681	43.4	-	42.9	-	0.0	0.1	0.0	43.5	-	65.1	55.1	21.6	-
3.	1.2780	27.5	-	28.5	-	0.1	0.2	0.0	28.8	-	56.0	46.0	27.2	-
4.	3.5464	25.9	-	27.2	-	0.2	0.3	0.0	27.7	-	56.0	46.0	28.3	-
5.	6.3884	18.4	-	18.3	-	0.3	0.4	0.0	19.1	-	60.0	50.0	40.9	-
6.	17.7332	34.8	-	35.5	-	1.0	0.7	0.0	37.2	-	60.0	50.0	22.8	-
7.	25.8116	26.4	-	26.9	-	1.2	0.8	0.0	28.9	-	60.0	50.0	31.1	-

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

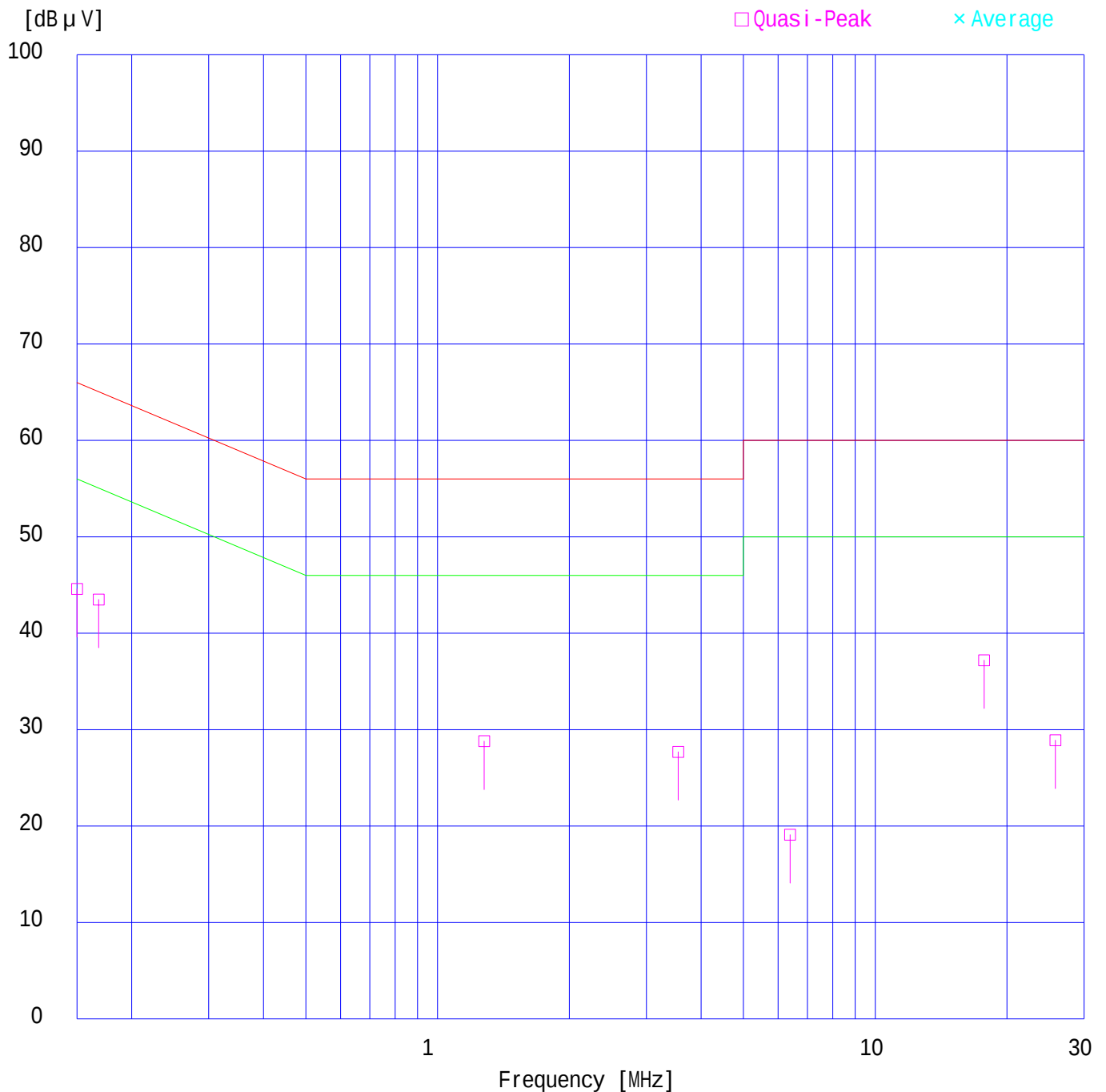
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

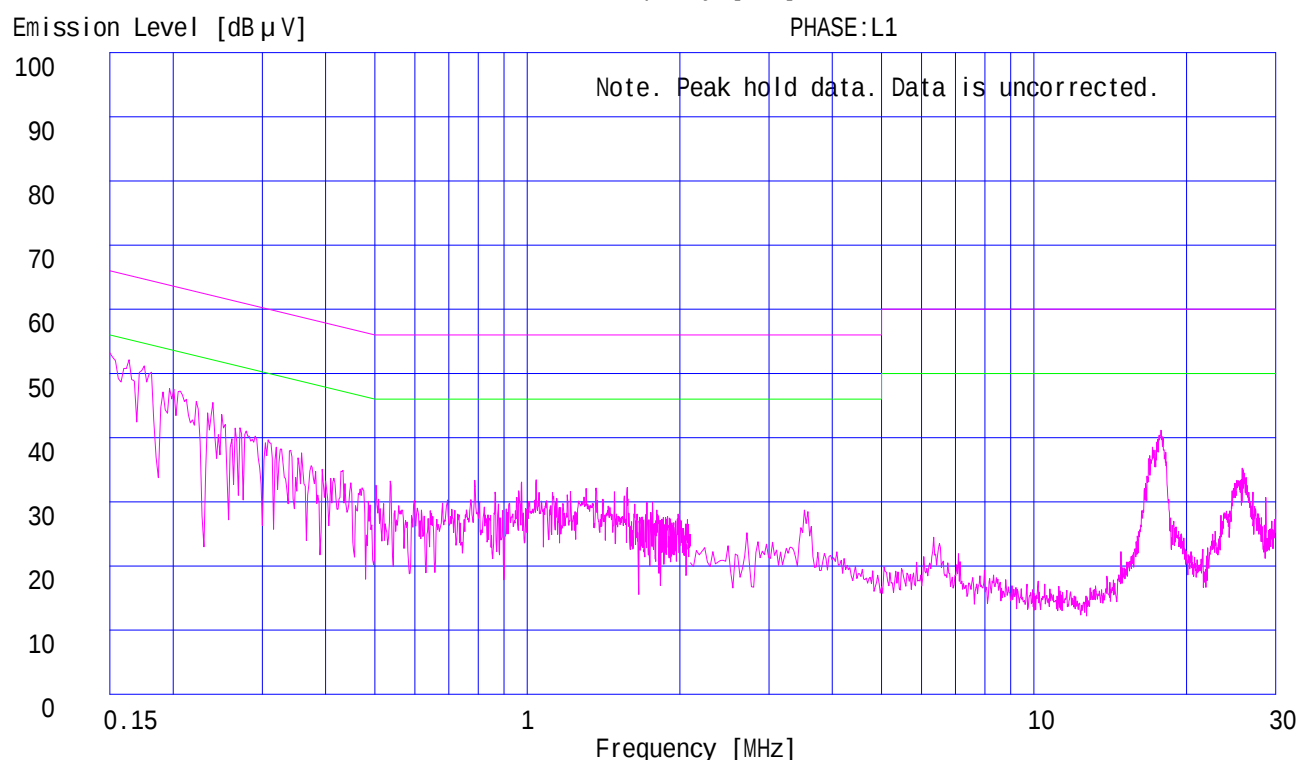
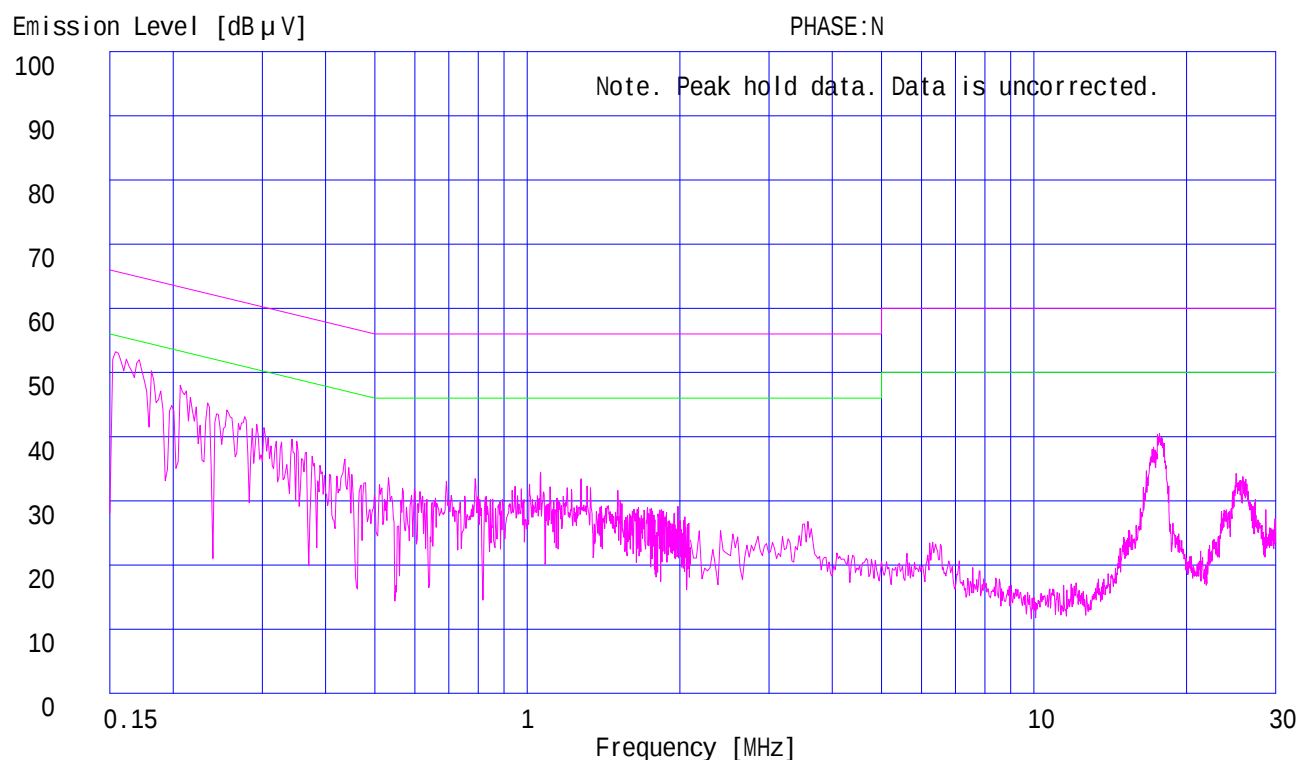
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 1/30/2005
Phase : Single Phase
Temperature : 25
Humidity : 30 %
Regulation 1 : FCC Part15B CLASS B(2003)
Regulation 2 : None

Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.2 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD Player with Video Cassette Recorder
MODEL No. : MVD4541
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 25FE0207-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/01/31
TEMP./HUMID. : 15deg.C / 34%
ENGINEER : Tsubasa Takayama

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

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

CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]			[dB]			
VHF																		
2	101	31.2	36.1			BC	-10.8	20.4	25.3			43.5			23.1	18.2		
	202					BC						43.5			>15.0			
	303					LO						46.0						
	404					LO						46.0						
	505					LO						46.0						
	606					LO						46.0						
	707					LO						46.0						
	808					LO						46.0						
	909					LO						46.0						
		READING(PK)		READING(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)		
		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]		
	1010					HO						74.0	54.0	>27.0	>10.0			
	1111					HO						74.0	54.0					
	1212					HO						74.0	54.0					
	1313					HO						74.0	54.0					
	1414					HO						74.0	54.0					
	1515					HO						74.0	54.0					
	1616	HO	74.0	54.0														
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]			[dB]			
3	107	26.6	29.0			BC	-9.8	16.8	19.2			43.5			26.7	24.3		
	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)		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]		
	1070					HO						74.0	54.0	>27.0	>10.0			
	1177					HO						74.0	54.0					
	1284					HO						74.0	54.0					
	1391					HO						74.0	54.0					
	1498					HO						74.0	54.0					
	1605					HO						74.0	54.0					
	CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)		
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[dBuV/m]			[dB]			
4	113	28.6	32.8			BC	-9.0	19.6	23.8			43.5			23.9	19.7		
	226					BC						46.0			>15.0			
	339					LO						46.0						
	452					LO						46.0						
	565					LO						46.0						
	678					LO						46.0						
	791					LO						46.0						
	904					LO						46.0						
						READING(PK)						READING(AV)						
		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]		
	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.2 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD Player with Video Cassette Recorder
MODEL No. : MVD4541
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 25FE0207-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/01/31
TEMP./HUMID. : 15deg.C / 34%
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																		
5	123	26.7	29.8			BC	-7.7	19.0	22.1			43.5			24.5	21.4		
	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]	MARGIN(AV) HOR. VER. [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]			
6	129	25.7	27.4			BC	-7.2	18.5	20.2			43.5			25.0	23.3		
	258					BC						46.0			> 15.0			
	387					LO						46.0						
	516					LO						46.0						
	645					LO						46.0						
	774					LO						46.0						
	903					LO						46.0						
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [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]			
7	221	22.6	25.3			BC	-3.5	19.1	21.8			46.0			26.9	24.2		
	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]	MARGIN(AV) HOR. VER. [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]			
8	227	23.1	23.3			BC	-3.3	19.8	20.0			46.0			26.2	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]	MARGIN(AV) HOR. VER. [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.2 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD Player with Video Cassette Recorder
MODEL No. : MVD4541
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 25FE0207-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/01/31
TEMP./HUMID. : 15deg.C / 34%
ENGINEER : Tsubasa Takayama

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

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

CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[QP]	HOR.	VER.		
		[dBuV]						[dBuV/m]				[dBuV/m]	[dB]	[dB]		
VHF																
9	233	23.2	24.3			BC	-3.3	19.9	21.0			46.0		26.1	25.0	
	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.
							[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]
	1165					HO						74.0	54.0	>27.0		>10.0
	1398					HO						74.0	54.0			
	1631					HO						74.0	54.0			
10	239	23.0	25.7			BC	-3.2	19.8	22.5			46.0		26.2	23.5	
	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.
							[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]
	1195					HO						74.0	54.0	>27.0		>10.0
	1434					HO						74.0	54.0			
	1673					HO						74.0	54.0			
11	245	23.7	23.2			BC	-3.2	20.5	20.0			46.0		25.5	26.0	
	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.
							[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]
	1225					HO						74.0	54.0	>27.0		>10.0
	1470					HO						74.0	54.0			
12	251	23.3	22.9			BC	-3.0	20.3	19.9			46.0		25.7	26.1	
	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.
							[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]
	1004					HO						74.0	54.0	>27.0		>10.0
	1255					HO						74.0	54.0			
	1506					HO						74.0	54.0			
13	257	23.3	24.3			BC	-2.7	20.6	21.6			46.0		25.4	24.4	
	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.
							[dBuV]					[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]
	1028					HO						74.0	54.0	>27.0		>10.0
	1285					HO						74.0	54.0			
	1542					HO						74.0	54.0			

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.2 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD Player with Video Cassette Recorder
MODEL No. : MVD4541
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 25FE0207-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/01/31
TEMP./HUMID. : 15deg.C / 34%
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]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(QP) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
UHF											
14	517	28.2	32.5	LO	-0.5	27.7	32.0	46.0		18.3	14.0
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1034			HO				74.0	54.0	>27.0	>10.0
	1551			HO				74.0	54.0		
19	547	25.2	32.0	LO	0.3	25.5	32.3	46.0		20.5	13.7
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1094			HO				74.0	54.0	>27.0	>10.0
	1641			HO				74.0	54.0		
28	601	30.5	35.7	LO	1.8	32.3	37.5	46.0	-	13.7	8.5
		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]
	1202			HO				74.0	54.0	>27.0	>10.0
36	649	28.2	32.3	LO	3.0	31.2	35.3	46.0	-	14.8	10.7
		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
44	697	24.4	29.2	LO	4.1	28.5	33.3	46.0	-	17.5	12.7
		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
53	751	28.9	28.8	LO	4.8	33.7	33.6	46.0	-	12.3	12.4
		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]
	1502			HO				74.0	54.0	>27.0	>10.0
61	799	30.8	29.7	LO	5.1	35.9	34.8	46.0	-	10.1	11.2
		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]
	1598			HO				74.0	54.0	>27.0	>10.0
69	847	27.1	32.2	LO	5.8	32.9	38.0	46.0	-	13.1	8.0
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]	MARGIN(AV) HOR. VER. [dB]
	1694			HO				74.0	54.0	>27.0	>10.0

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.2 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD Player with Video Cassette Recorder
MODEL No. : MVD4541
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 25FE0207-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/01/31
TEMP./HUMID. : 15deg.C / 34%
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.	[dB]	[dB]
CATV																
1	119	29.8	38.5			BC	-8.0	21.8	30.5			43.5		21.7	13.0	
	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/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]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[QP]	[dB]		[dB]	
95	137	24.5	25.1			BC	-6.5	18.0	18.6			43.5		25.5	24.9	
	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/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)				LIMIT	MARGIN(QP)		
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[QP]	[dB]		[dB]	
97	149	25.8	28.7			BC	-5.7	20.1	23.0			43.5		23.4	20.5	
	298					BC						46.0		>15.0		
	447					LO						46.0				
	596					LO						46.0				
	745					LO						46.0				
	894					LO						46.0				
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)					
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.					
		[dBuV]	[dBuV]			[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]			
	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)				LIMIT	MARGIN(QP)		
	[MHz]	[dBuV]				TYPE	[dBuV]	[dBuV/m]				[QP]	[dB]		[dB]	
99	161	25.9	28.5			BC	-5.0	20.9	23.5			43.5		22.6	20.0	
	322					LO						46.0		>15.0		
	483					LO						46.0				
	644					LO						46.0				
	805					LO						46.0				
	966					LO						46.0				
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)					
		HOR. VER.	HOR. VER.	TYPE	[dBuV]	HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.					
		[dBuV]	[dBuV]			[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]			
	1127			HO				74.0	54.0	>27.0	>10.0					
	1288			HO				74.0	54.0							
	1449			HO				74.0	54.0							
	1610			HO				74.0	54.0							

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.2 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD Player with Video Cassette Recorder
MODEL No. : MVD4541
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 25FE0207-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/01/31
TEMP./HUMID. : 15deg.C / 34%
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]				
CATV																			
14	167	23.6	24.1			BC	-4.6	19.0	19.5			43.5			24.5	24.0			
	334					LO						46.0		>15.0					
	501					LO						46.0							
	668					LO						46.0							
	835					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]				
	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 [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]				
18	191	24.7	25.3			BC	-3.9	20.8	21.4			43.5			22.7	22.1			
	382					LO						46.0		>15.0					
	573					LO						46.0							
	764					LO						46.0							
	955					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]				
	1146				HO						74.0	54.0	>27.0		>10.0				
	1337				HO						74.0	54.0							
	1528				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]			
22	215	24.1	24.6			BC	-3.6	20.5	21.0			43.5			23.0	22.5			
	430					LO						46.0		>15.0					
	645					LO						46.0							
	860					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] [dB]				
	1075				HO						74.0	54.0	>27.0		>10.0				
	1290				HO						74.0	54.0							
	1505				HO						74.0	54.0							
	CH.	FREQ [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]			
	23	263	25.4	26.3			BC	-2.3	23.1	24.0			46.0	46.0		22.9	22.0		
526						LO						46.0	46.0						
789						LO						46.0	46.0						
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]		RESULT(AV) HOR. VER. [dBuV/m]		LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]		MARGIN(AV) HOR. VER. [dB] [dB]				
1052					HO						74.0	54.0	>27.0		>10.0				
1315					HO						74.0	54.0							
1578					HO						74.0	54.0							
CH.		FREQ [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]			
29		299	24.6	25.4			BC	-0.1	24.5	25.3			46.0	46.0		21.5	20.7		
		598					LO						46.0	46.0	>15.0				
	897	LO					46.0						46.0						
		READING(PK) HOR. VER. [dBuV]	READING(AV) HOR. VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. VER. [dBuV/m]		RESULT(AV) HOR. VER. [dBuV/m]		LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. VER. [dB]		MARGIN(AV) HOR. VER. [dB] [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.2 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD Player with Video Cassette Recorder
MODEL No. : MVD4541
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 25FE0207-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : 2005/01/31
TEMP./HUMID. : 15deg.C / 34%
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	23.8	25.4		LO	-4.3	19.5	21.1	46.0	46.0	26.5 24.9
	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	23.1	24.8		LO	-4.3	18.8	20.5	46.0	46.0	27.2 25.5
	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	23.8	26.4		LO	-0.5	23.3	25.9	46.0	46.0	22.7 20.1
		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]
	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	22.7	22.3		LO	3.9	26.6	26.2	46.0	46.0	19.4 19.8
		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]
	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	25.0	29.8		LO	4.1	29.1	33.9	46.0	46.0	16.9 12.1
		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]
	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	30.5	26.3		LO	5.0	35.5	31.3	46.0	46.0	10.5 14.7
		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	28.7	32.0		LO	5.7	34.4	37.7	46.0	46.0	11.6 8.3
		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
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]	

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 0dBmV
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
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.	337.53	BB	46.0	40.6	14.9	29.9	4.6	6.0	41.6	36.2	46.0	4.4	9.8

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

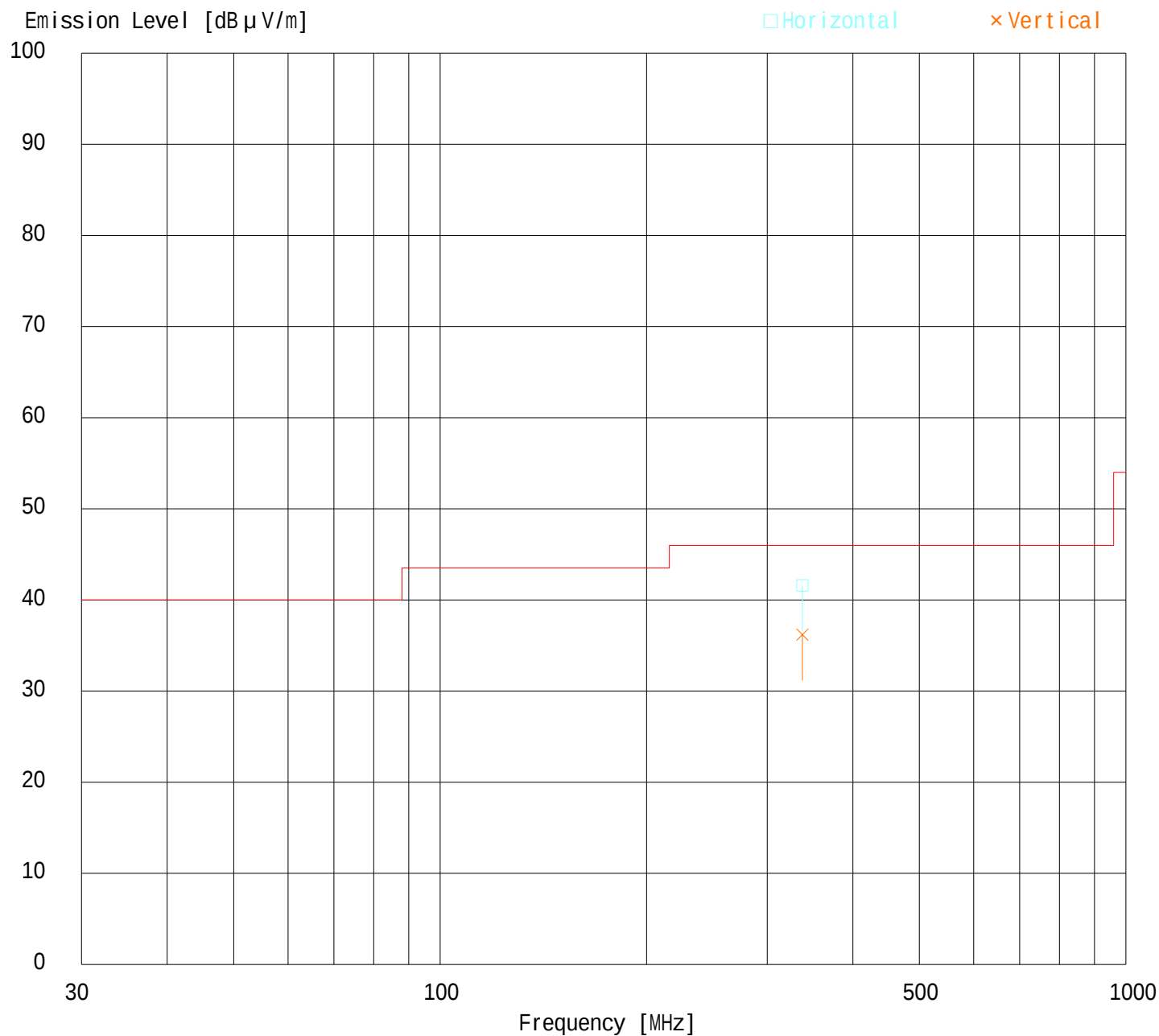
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 0dBmV
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
 Kind of Equipment : DVD/VCR
 Model No. : MVD4541
 Serial No. : -
 Power : AC120V/60Hz
 Mode : TV Reception + Rec
 Remarks : 25dBmV
 Date : 1/26/2005
 Test Distance : 3 m
 Temperature : 21
 Humidity : 41 %
 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.	73.71	BB	38.0	43.6	6.8	29.8	2.0	5.9	22.9	28.5	40.0	17.1	11.5
2.	108.00	BB	48.6	46.5	11.7	29.7	2.4	5.9	38.9	36.8	43.5	4.6	6.7
3.	120.00	BB	35.4	33.9	13.4	29.7	2.5	5.9	27.5	26.0	43.5	16.0	17.5
4.	135.00	BB	32.3	31.7	14.5	29.8	2.6	5.9	25.5	24.9	43.5	18.0	18.6
5.	189.00	BB	31.2	34.8	16.9	29.9	3.2	5.9	27.3	30.9	43.5	16.2	12.6
6.	202.48	BB	39.4	41.5	17.0	29.9	3.3	5.9	35.7	37.8	43.5	7.8	5.7
7.	216.00	BB	32.9	34.5	17.0	29.9	3.5	5.9	29.4	31.0	43.5	14.1	12.5
8.	270.00	BB	36.7	36.9	18.1	29.9	4.0	6.0	34.9	35.1	46.0	11.1	10.9
9.	337.53	BB	46.2	41.0	14.9	29.9	4.6	6.0	41.8	36.6	46.0	4.2	9.4
10.	405.00	BB	40.0	42.0	16.2	30.0	5.1	6.0	37.3	39.3	46.0	8.7	6.7
11.	674.98	BB	33.3	36.0	20.6	29.9	6.9	6.0	36.9	39.6	46.0	9.1	6.4
12.	810.03	BB	32.3	33.8	20.8	29.9	7.7	6.0	36.9	38.4	46.0	9.1	7.6
13.	945.00	BB	29.9	31.2	22.5	28.9	8.6	6.0	38.1	39.4	46.0	7.9	6.6

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.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

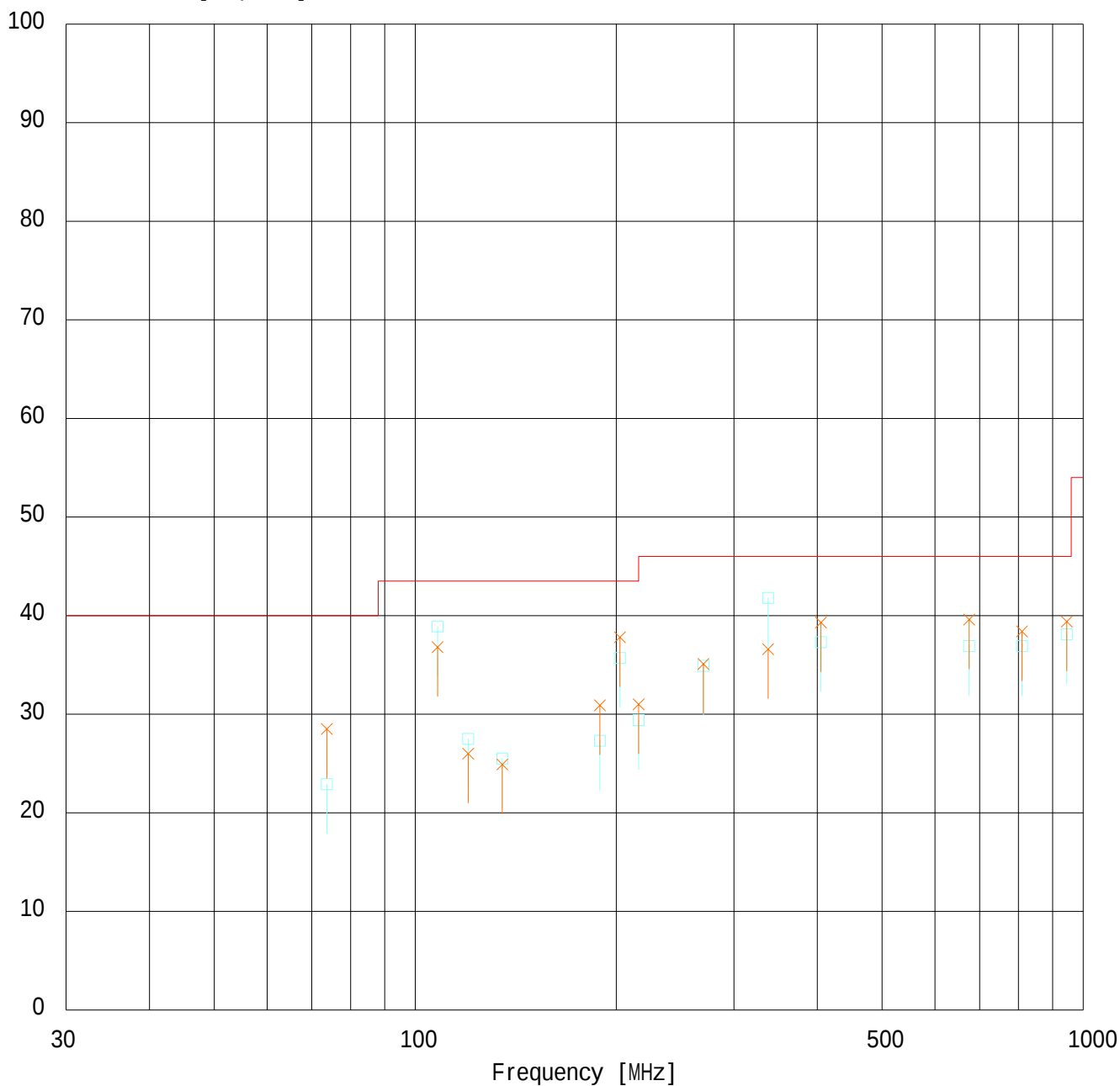
Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

Emission Level [dB μ V/m]

□ Horizontal

× Vertical



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21 Engineer : Tsubasa Takayama
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]		[dB/m]	[dB]	[dB]	[dB]	[dB μ V/m]		[dB μ V/m]	[dB]	
1.	1080.02	BB	45.7	47.5	25.3	35.6	2.5	0.0	37.9	39.7	54.0	16.1	14.3
2.	1620.02	BB	41.1	42.8	28.2	35.0	3.0	0.0	37.3	39.0	54.0	16.7	15.0

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

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

DATA OF RADIATION TEST

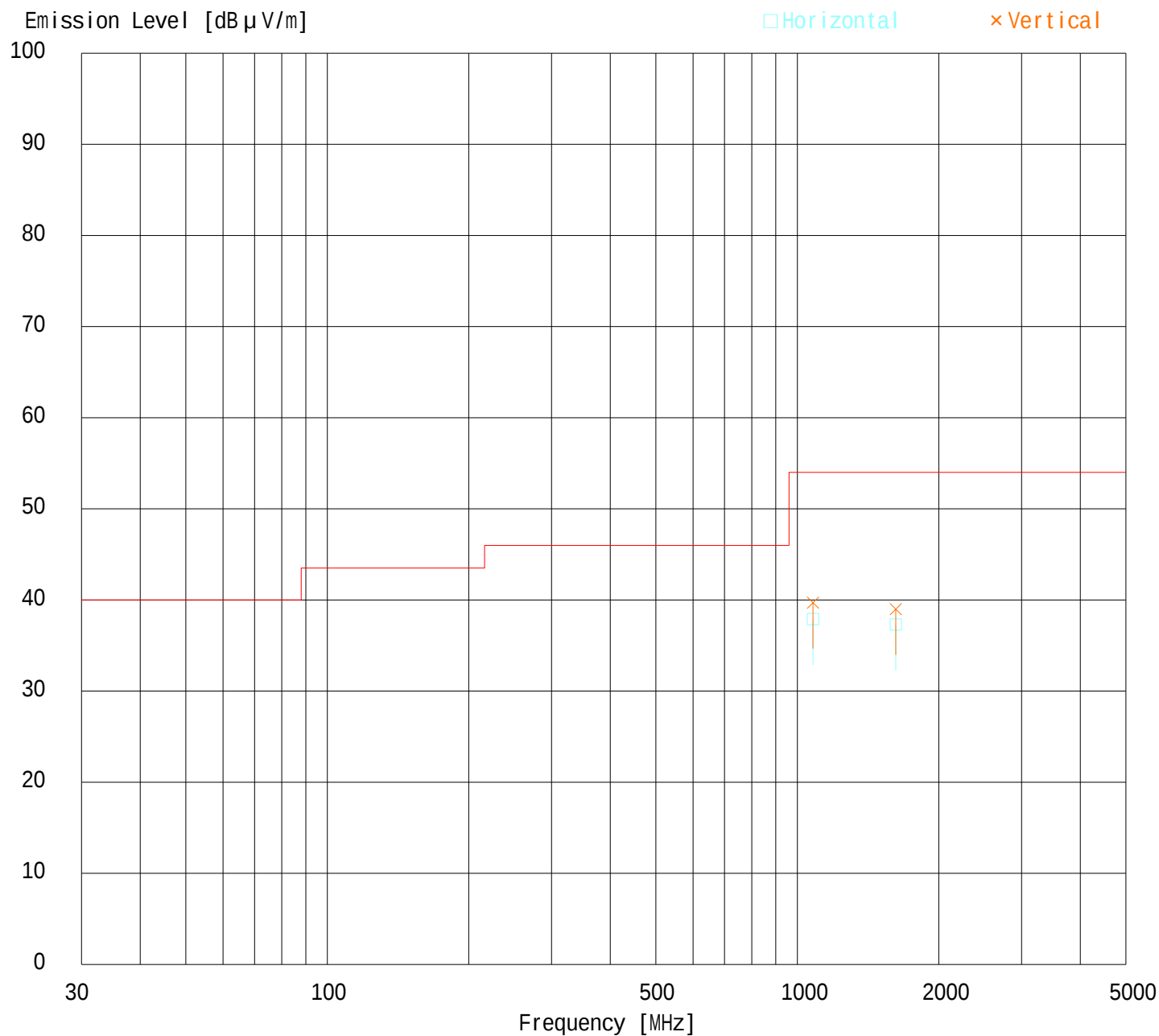
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1080.02	BB	51.9	52.5	25.3	35.6	2.5	0.0	44.1	44.7	74.0	29.9	29.3
2.	1620.02	BB	49.7	50.5	28.2	35.0	3.0	0.0	45.9	46.7	74.0	28.1	27.3

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

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

DATA OF RADIATION TEST

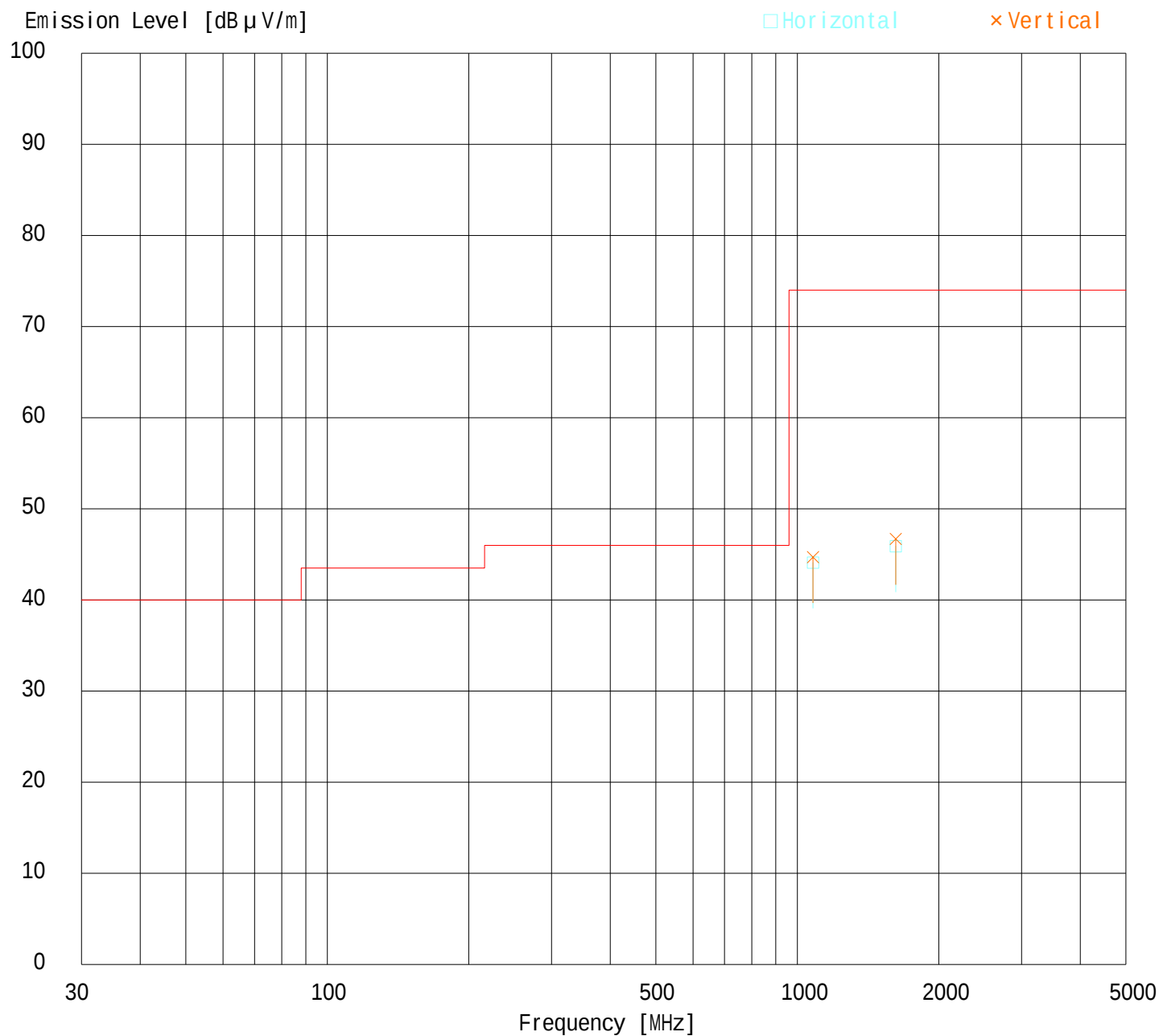
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 1Vp-p
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
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.	108.00	BB	47.8	49.7	11.7	29.7	2.4	5.9	38.1	40.0	43.5	5.4	3.5

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

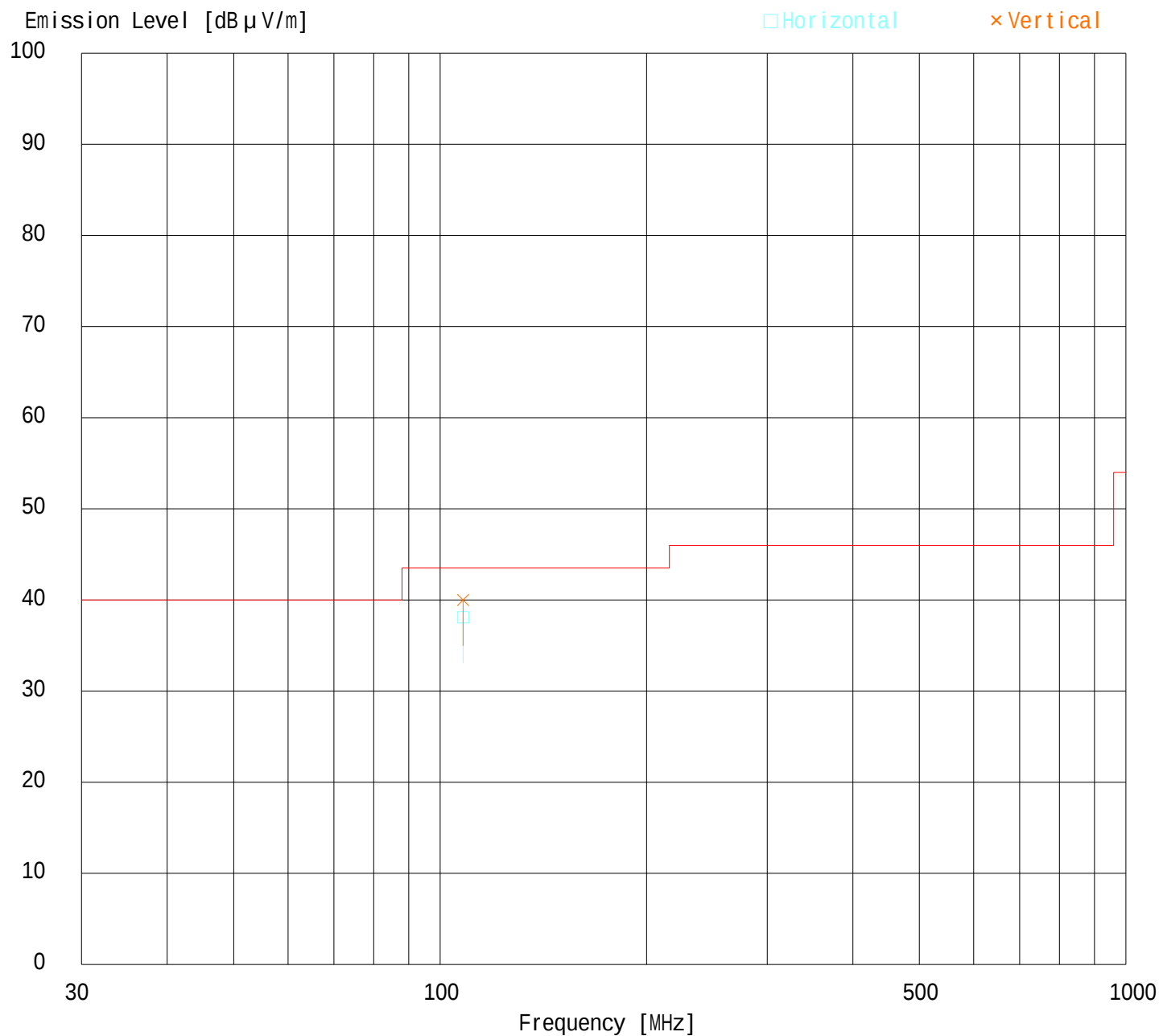
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 1Vp-p
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
 Kind of Equipment : DVD/VCR
 Model No. : MVD4541
 Serial No. : -
 Power : AC120V/60Hz
 Mode : AV Input + Rec
 Remarks : 5Vp-p
 Date : 1/26/2005
 Test Distance : 3 m
 Temperature : 21
 Humidity : 41 %
 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.	108.00	BB	48.0	50.0	11.7	29.7	2.4	5.9	38.3	40.3	43.5	5.2	3.2
2.	120.00	BB	34.2	34.0	13.4	29.7	2.5	5.9	26.3	26.1	43.5	17.2	17.4
3.	135.00	BB	31.8	32.2	14.5	29.8	2.6	5.9	25.0	25.4	43.5	18.5	18.1
4.	189.00	BB	31.2	31.8	16.9	29.9	3.2	5.9	27.3	27.9	43.5	16.2	15.6
5.	202.48	BB	38.0	36.7	17.0	29.9	3.3	5.9	34.3	33.0	43.5	9.2	10.5
6.	216.00	BB	32.0	31.9	17.0	29.9	3.5	5.9	28.5	28.4	43.5	15.0	15.1
7.	270.00	BB	36.5	36.8	18.1	29.9	4.0	6.0	34.7	35.0	46.0	11.3	11.0
8.	337.53	BB	44.9	41.3	14.9	29.9	4.6	6.0	40.5	36.9	46.0	5.5	9.1
9.	405.00	BB	38.7	39.7	16.2	30.0	5.1	6.0	36.0	37.0	46.0	10.0	9.0
10.	674.98	BB	35.6	35.6	20.6	29.9	6.9	6.0	39.2	39.2	46.0	6.8	6.8
11.	810.03	BB	31.1	33.9	20.8	29.9	7.7	6.0	35.7	38.5	46.0	10.3	7.5
12.	945.00	BB	29.9	31.3	22.5	28.9	8.6	6.0	38.1	39.5	46.0	7.9	6.5

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

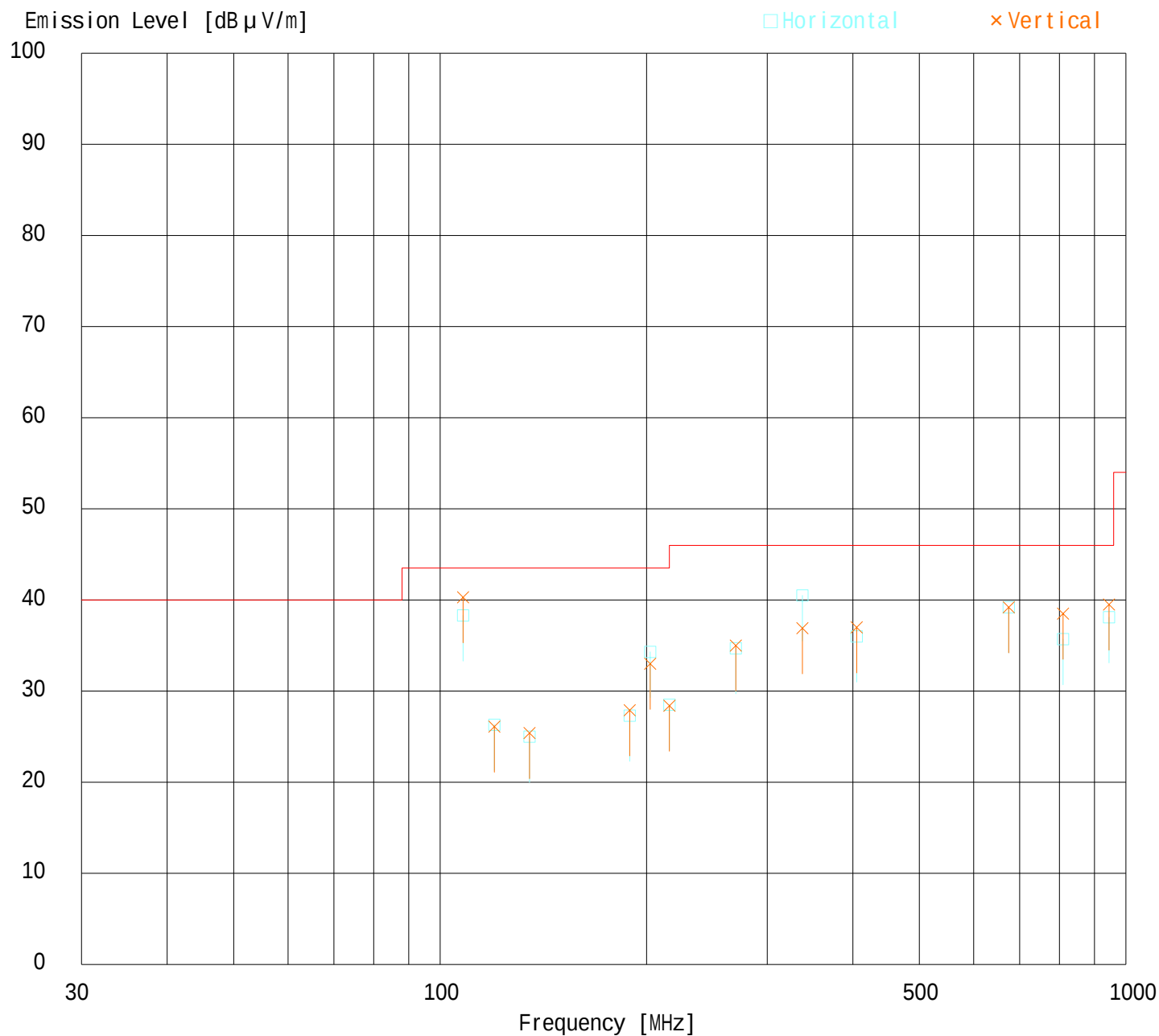
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 5Vp-p
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 5V p-p
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21 Engineer : Tsubasa Takayama
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB μ V]	[dB/m]	[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]	[dB μ V/m]	[dB]	[dB]
1.	1080.12	BB	44.7	46.7	25.3	35.6	2.5	0.0	36.9	38.9	54.0	17.1	15.1
2.	1620.02	BB	41.0	41.8	28.2	35.0	3.0	0.0	37.2	38.0	54.0	16.8	16.0

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

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

DATA OF RADIATION TEST

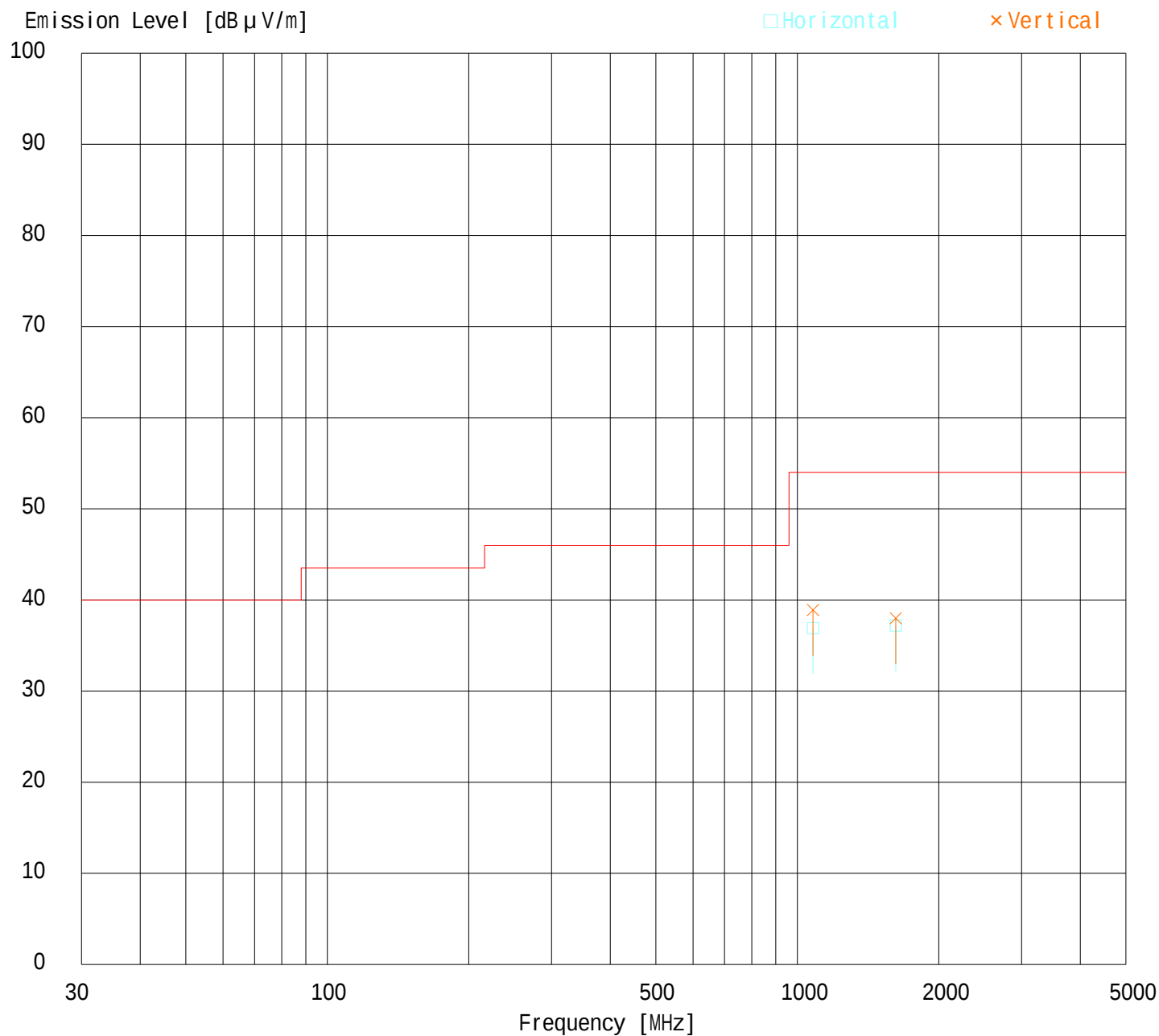
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 5V p-p
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input + Rec
Remarks : 5Vp-p
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21 Engineer : Tsubasa Takayama
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	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.	1080.01	BB	50.1	51.1	25.3	35.6	2.5	0.0	42.3	43.3	74.0	31.7	30.7
2.	1620.02	BB	49.2	50.3	28.2	35.0	3.0	0.0	45.4	46.5	74.0	28.6	27.5

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

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.

Kind of Equipment : DVD/VCR

Model No. : MVD4541

Serial No. : -

Power : AC120V/60Hz

Mode : AV Input + Rec

Remarks : 5Vp-p

Date : 1/26/2005

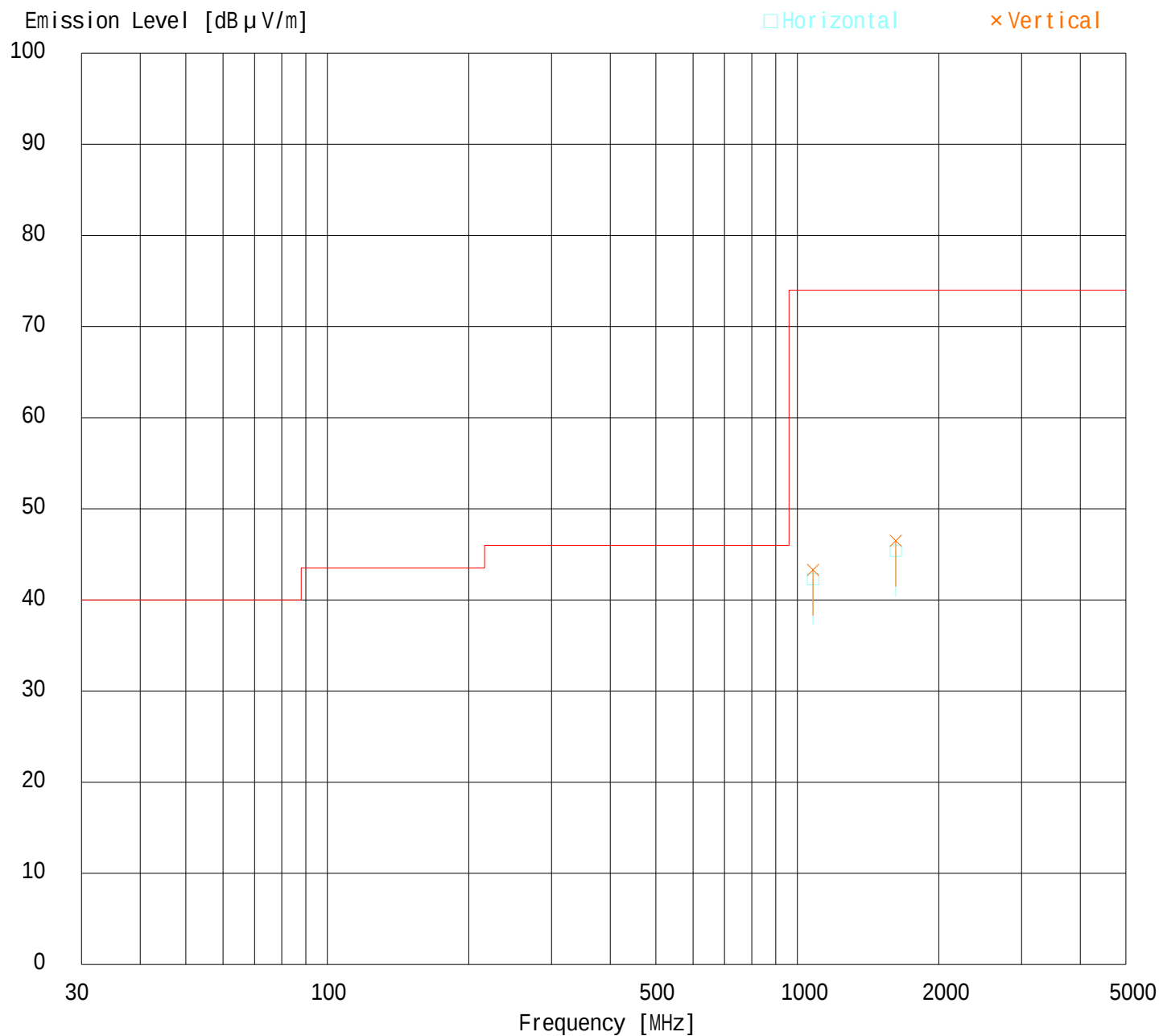
Test Distance : 3 m

Temperature : 21

Engineer : Tsubasa Takayama

Humidity : 41 %

Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
 Kind of Equipment : DVD/VCR
 Model No. : MVD4541
 Serial No. : -
 Power : AC120V/60Hz
 Mode : VCR Playback
 Remarks : -
 Date : 1/26/2005
 Test Distance : 3 m
 Temperature : 21
 Humidity : 41 %
 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.	108.00	BB	42.0	43.8	11.7	29.7	2.4	5.9	32.3	34.1	43.5	11.2	9.4
2.	110.57	BB	33.6	36.6	12.1	29.7	2.4	5.9	24.3	27.3	43.5	19.2	16.2
3.	135.00	BB	30.0	31.6	14.5	29.8	2.6	5.9	23.2	24.8	43.5	20.3	18.7
4.	202.50	BB	33.0	32.0	17.0	29.9	3.3	5.9	29.3	28.3	43.5	14.2	15.2
5.	216.00	BB	34.0	30.0	17.0	29.9	3.5	5.9	30.5	26.5	43.5	13.0	17.0
6.	270.00	BB	39.0	37.9	18.1	29.9	4.0	6.0	37.2	36.1	46.0	8.8	9.9
7.	337.53	BB	40.0	36.7	14.9	29.9	4.6	6.0	35.6	32.3	46.0	10.4	13.7
8.	405.00	BB	38.4	36.0	16.2	30.0	5.1	6.0	35.7	33.3	46.0	10.3	12.7
9.	675.00	BB	34.4	36.1	20.7	29.9	6.9	6.0	38.1	39.8	46.0	7.9	6.2
10.	810.00	BB	29.7	35.1	20.8	29.9	7.7	6.0	34.3	39.7	46.0	11.7	6.3
11.	945.00	BB	29.6	34.5	22.5	28.9	8.6	6.0	37.8	42.7	46.0	8.2	3.3

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

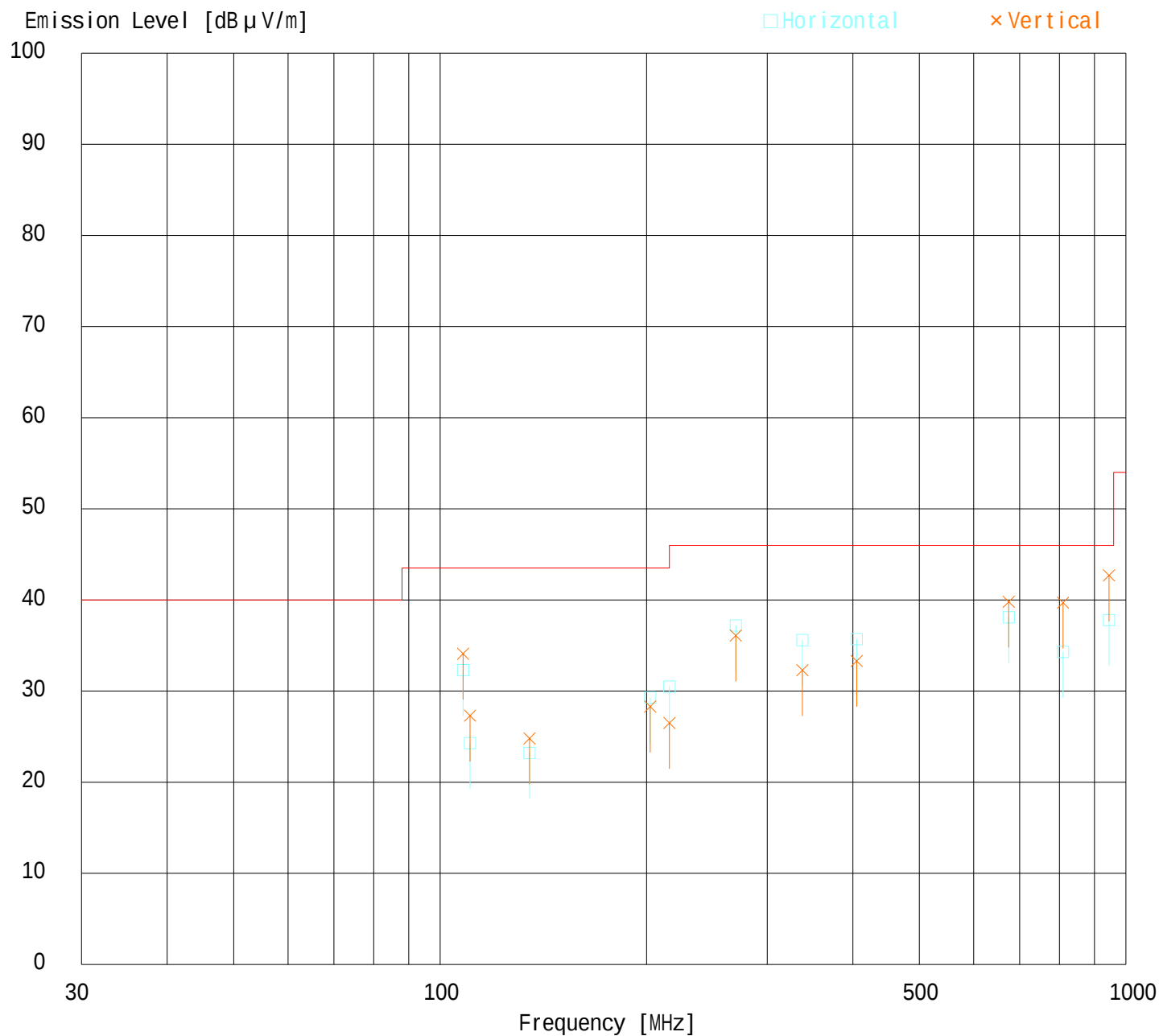
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 1/26/2005
Test Distance : m
Temperature : 21 Engineer : Tsubasa Takayama
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1080.02	BB	45.7	47.3	25.3	35.6	2.5	0.0	37.9	39.5	54.0	16.1	14.5
2.	1620.02	BB	41.1	41.8	28.2	35.0	3.0	0.0	37.3	38.0	54.0	16.7	16.0

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

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.

Kind of Equipment : DVD/VCR

Model No. : MVD4541

Serial No. : -

Power : AC120V/60Hz

Mode : VCR Playback

Remarks : -

Date : 1/26/2005

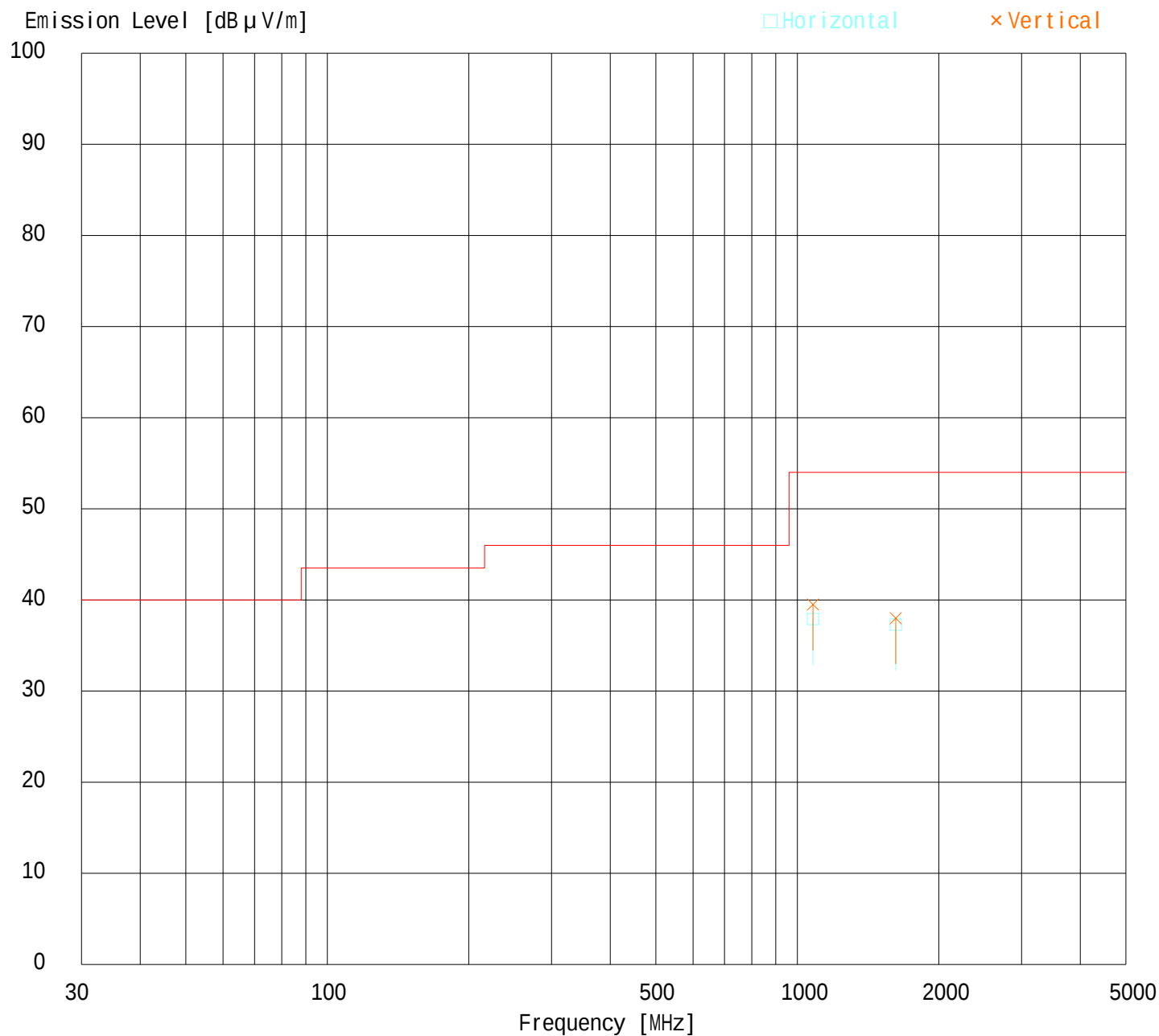
Test Distance : m

Temperature : 21

Engineer : Tsubasa Takayama

Humidity : 41 %

Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 1/26/2005
Test Distance : m
Temperature : 21 Engineer : Tsubasa Takayama
Humidity : 41 %
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.	1080.02	BB	51.2	51.5	25.3	35.6	2.5	0.0	43.4	43.7	74.0	30.6	30.3
2.	1620.02	BB	49.3	51.2	28.2	35.0	3.0	0.0	45.5	47.4	74.0	28.5	26.6

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

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

DATA OF RADIATION TEST

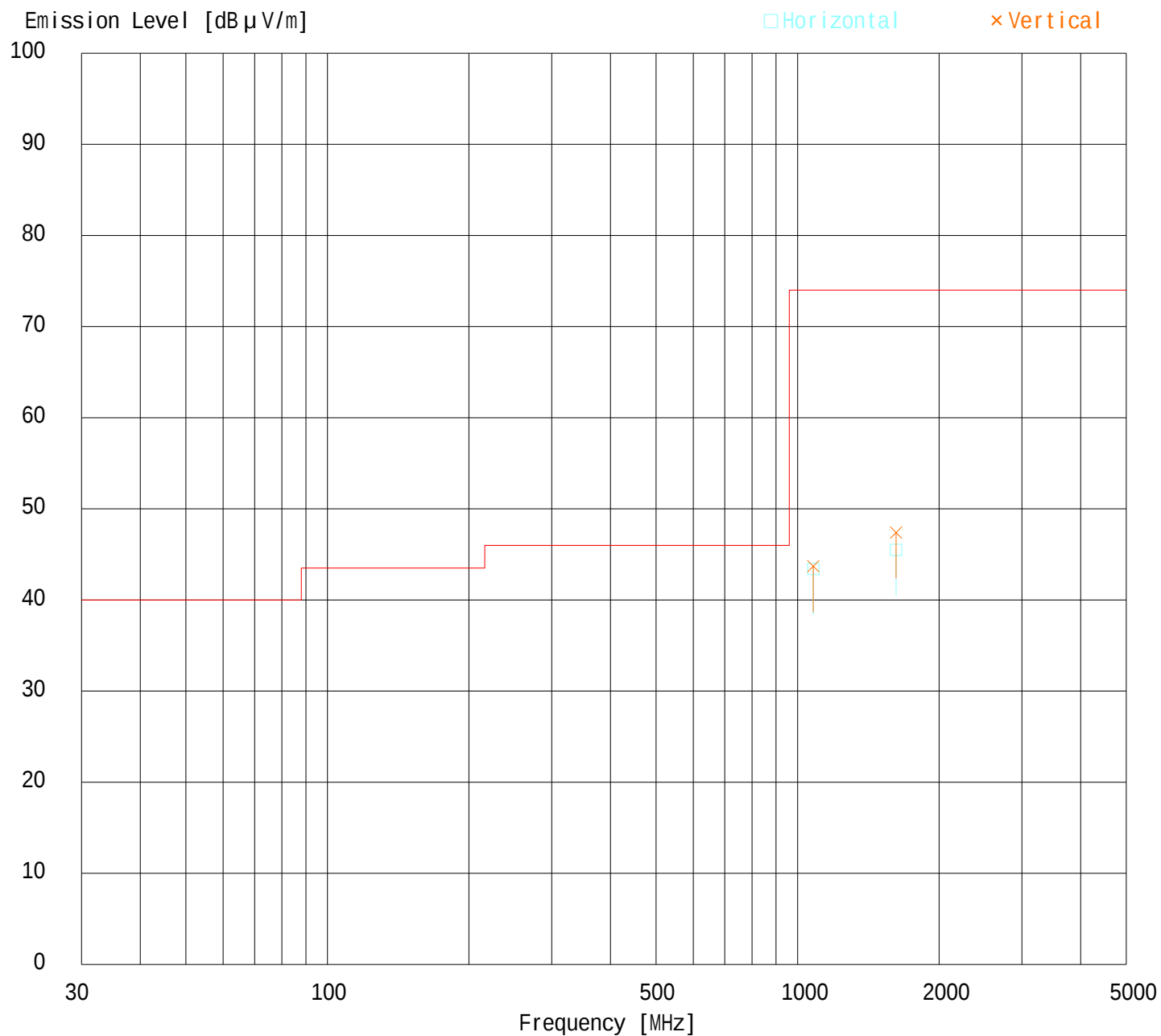
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 1/26/2005
Test Distance : m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
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.	98.32	BB	37.7	34.5	10.3	29.7	2.3	5.9	26.5	23.3	43.5	17.0	20.2
2.	108.00	BB	38.4	46.4	11.7	29.7	2.4	5.9	28.7	36.7	43.5	14.8	6.8
3.	110.64	BB	32.6	38.8	12.1	29.7	2.4	5.9	23.3	29.5	43.5	20.2	14.0
4.	135.00	BB	28.0	35.6	14.5	29.8	2.6	5.9	21.2	28.8	43.5	22.3	14.7
5.	180.00	BB	29.8	33.0	16.8	29.9	3.1	5.9	25.7	28.9	43.5	17.8	14.6
6.	202.50	BB	38.7	33.3	17.0	29.9	3.3	5.9	35.0	29.6	43.5	8.5	13.9
7.	216.00	BB	32.6	31.9	17.0	29.9	3.5	5.9	29.1	28.4	43.5	14.4	15.1
8.	270.00	BB	42.3	40.0	18.1	29.9	4.0	6.0	40.5	38.2	46.0	5.5	7.8
9.	337.50	BB	42.2	45.1	14.9	29.9	4.6	6.0	37.8	40.7	46.0	8.2	5.3
10.	405.00	BB	37.6	37.8	16.2	30.0	5.1	6.0	34.9	35.1	46.0	11.1	10.9
11.	675.03	BB	32.7	35.4	20.7	29.9	6.9	6.0	36.4	39.1	46.0	9.6	6.9
12.	810.00	BB	31.1	36.5	20.8	29.9	7.7	6.0	35.7	41.1	46.0	10.3	4.9
13.	945.00	BB	30.1	35.7	22.5	28.9	8.6	6.0	38.3	43.9	46.0	7.7	2.1

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.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

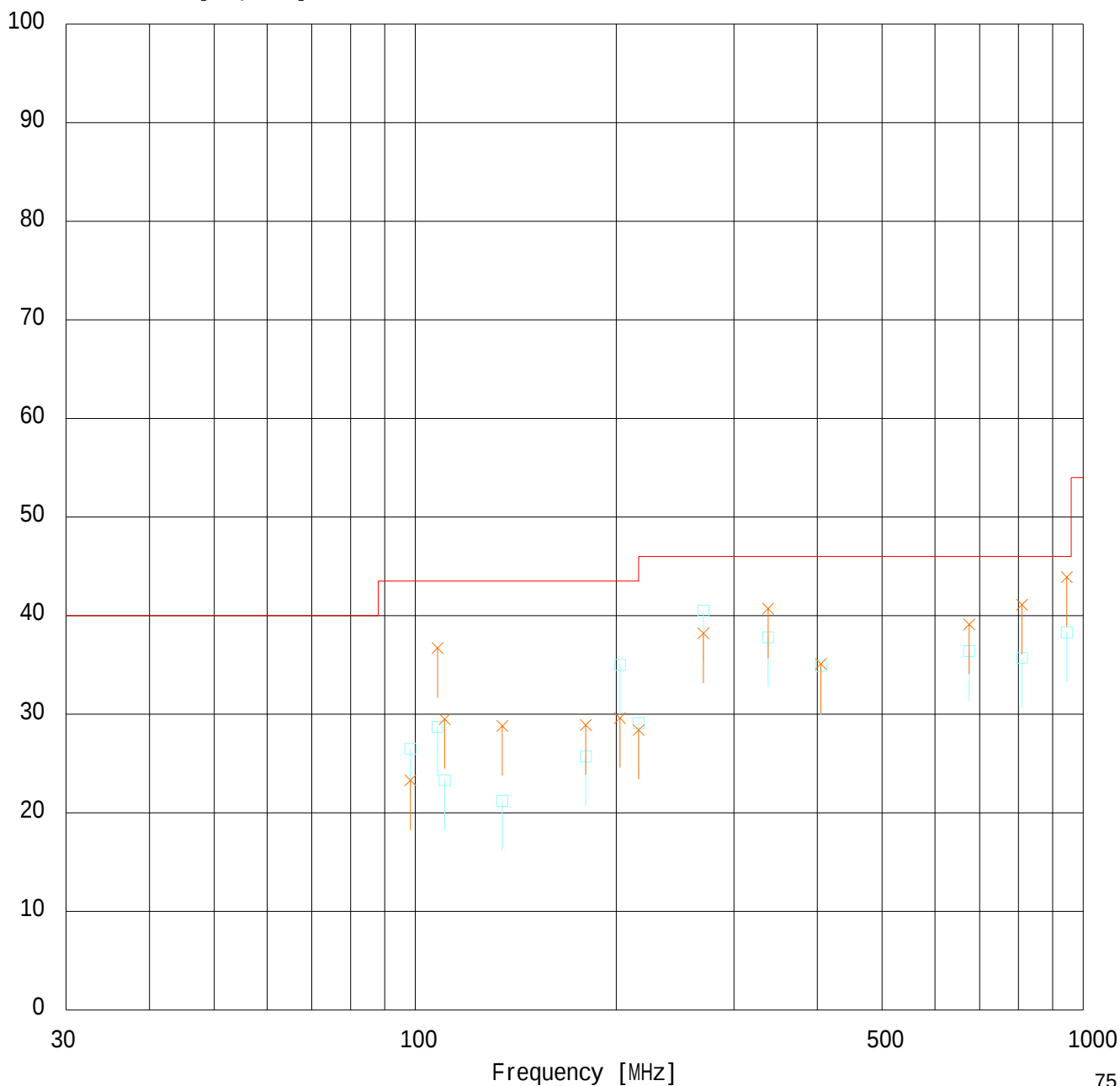
Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

Emission Level [dB μ V/m]

□ Horizontal

× Vertical



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21 Engineer : Tsubasa Takayama
Humidity : 41 %
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.	1080.00	BB	46.7	48.4	25.3	35.6	2.5	0.0	38.9	40.6	54.0	15.1	13.4
2.	1215.11	BB	45.7	45.6	26.0	35.5	2.6	0.0	38.8	38.7	54.0	15.2	15.3
3.	1755.01	BB	43.7	45.7	29.1	34.9	3.1	0.0	41.0	43.0	54.0	13.0	11.0

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

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

DATA OF RADIATION TEST

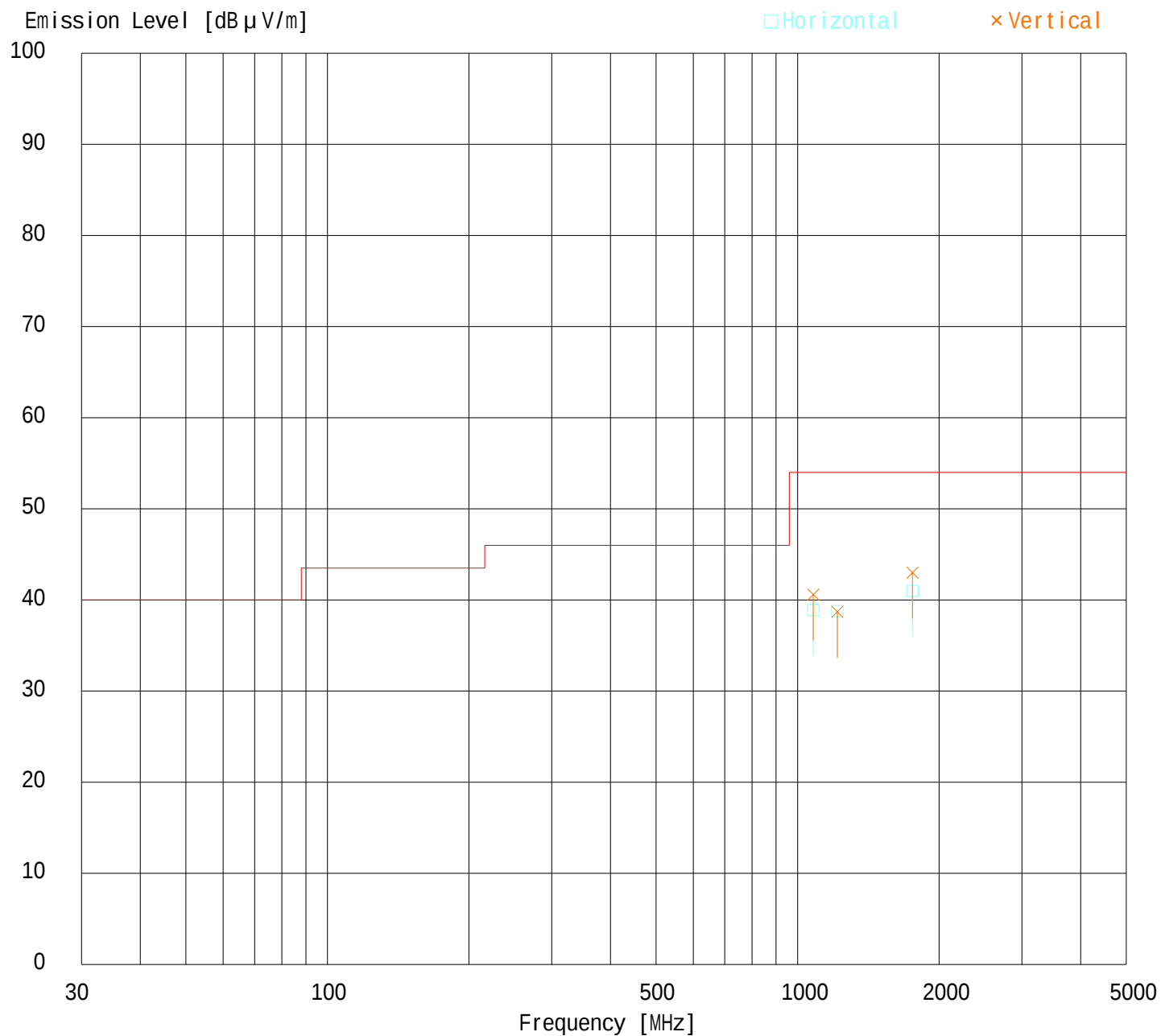
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21 Engineer : Tsubasa Takayama
Humidity : 41 %
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.	1080.00	BB	52.0	53.2	25.3	35.6	2.5	0.0	44.2	45.4	74.0	29.8	28.6
2.	1215.11	BB	53.6	54.3	26.0	35.5	2.6	0.0	46.7	47.4	74.0	27.3	26.6
3.	1755.01	BB	50.5	50.6	29.1	34.9	3.1	0.0	47.8	47.9	74.0	26.2	26.1

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

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

DATA OF RADIATION TEST

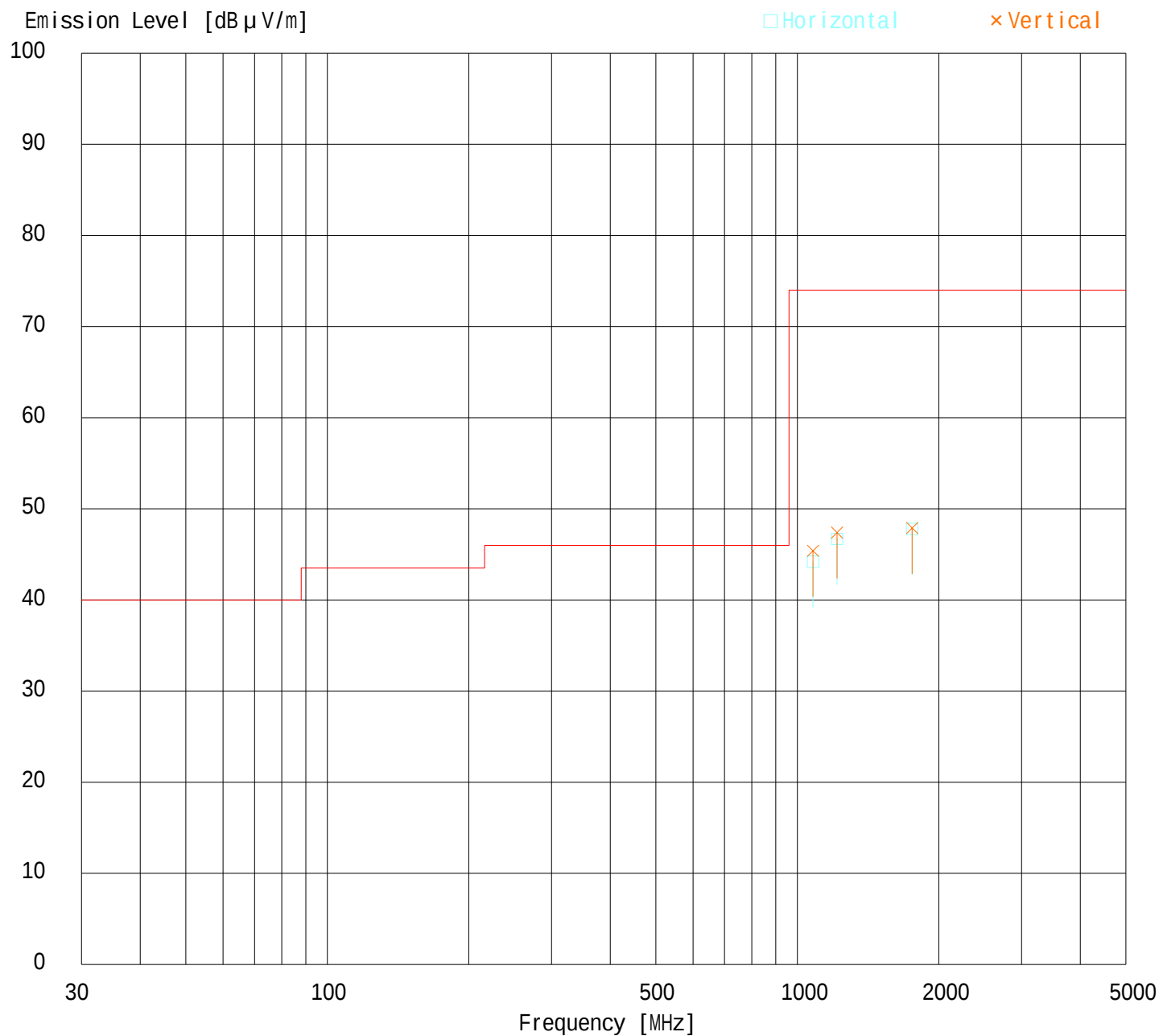
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120/60Hz
Mode : DVD Play
Remarks : Test Channel #3
Date : 1/26/2005
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	61.25	BB	26.7	28.3	8.4	29.8	1.8	5.9	13.0	14.6	40.0	27.0	25.4
2.	65.75	BB	27.0	25.1	7.6	29.8	1.9	5.9	12.6	10.7	40.0	27.4	29.3
3.	122.50	BB	24.1	24.4	13.6	29.7	2.5	5.9	16.4	16.7	43.5	27.1	26.8
4.	245.00	BB	23.0	23.0	17.1	29.9	3.7	5.9	19.8	19.8	46.0	26.2	26.2

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

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

DATA OF RADIATION TEST

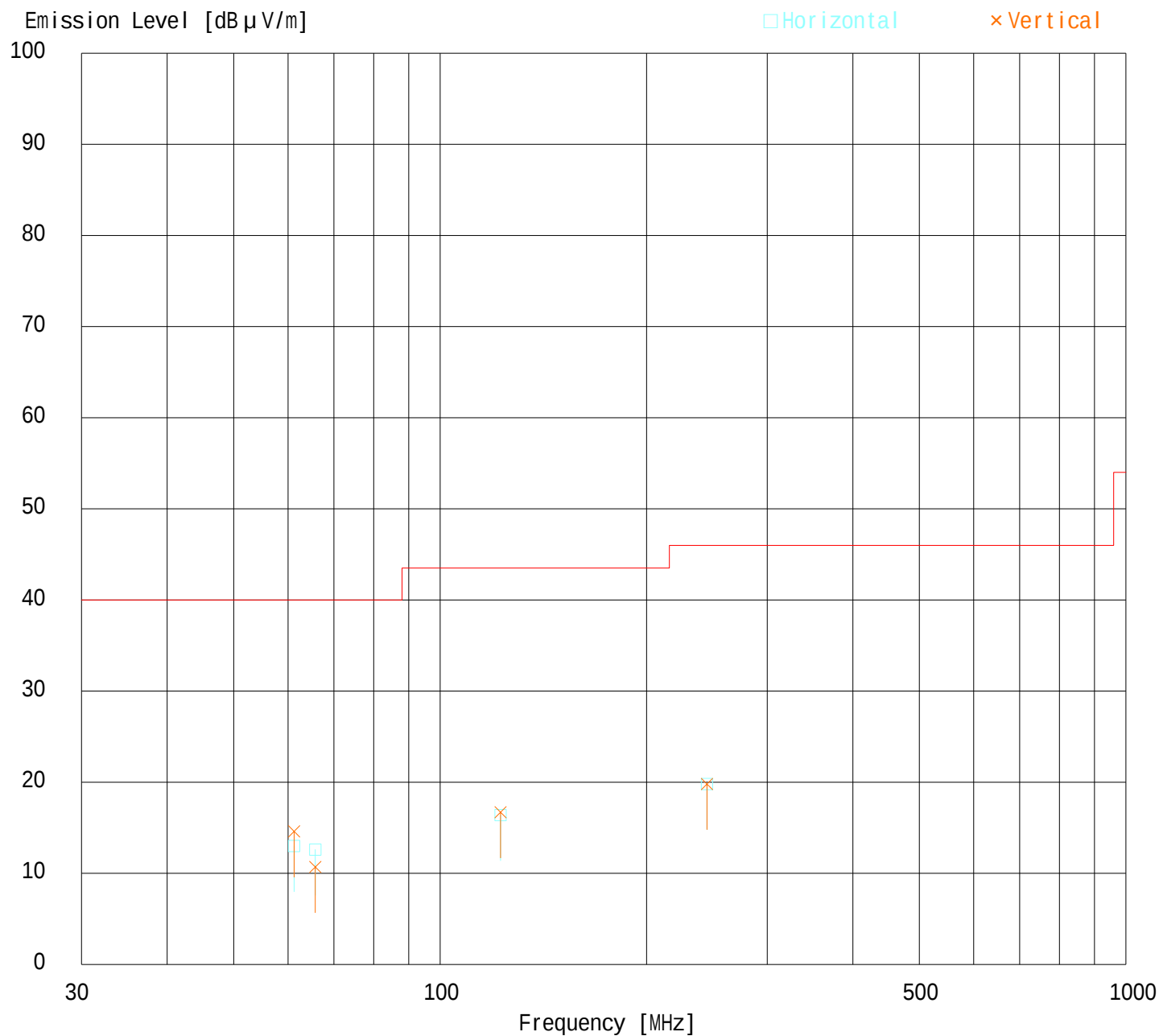
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120/60Hz
Mode : DVD Play
Remarks : Test Channel #3
Date : 1/26/2004
Test Distance : 3 m
Temperature : 21
Humidity : 41 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120/60Hz
Mode : DVD Play
Remarks : Test Channel #4
Date : 1/26/2005
Test Distance : 3 m
Temperature : 23
Humidity : 58 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	67.25	BB	26.1	26.0	7.4	29.8	1.9	5.9	11.5	11.4	40.0	28.5	28.6
2.	71.75	BB	24.5	24.1	6.9	29.8	2.0	5.9	9.5	9.1	40.0	30.5	30.9
3.	134.50	BB	22.8	24.5	14.5	29.8	2.6	5.9	16.0	17.7	43.5	27.5	25.8
4.	201.75	BB	23.0	22.8	17.0	29.9	3.3	5.9	19.3	19.1	43.5	24.2	24.4

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

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

DATA OF RADIATION TEST

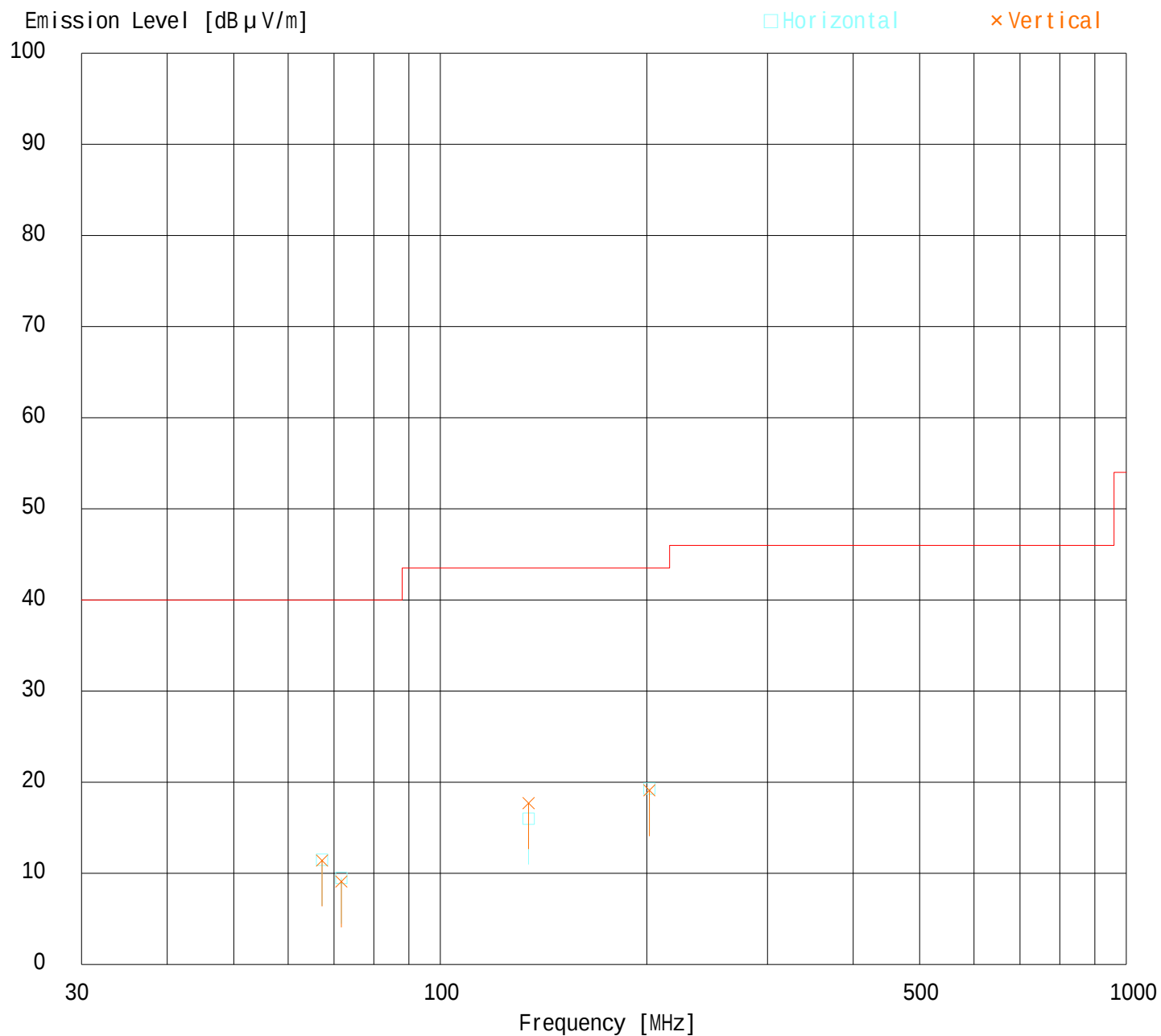
UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No.: 25FE0207-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : MVD4541
Serial No. : -
Power : AC120/60Hz
Mode : DVD Play
Remarks : Test Channel #4
Date : 1/26/2005
Test Distance : 3 m
Temperature : 23
Humidity : 58 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF ANTENNA TERMINAL TEST

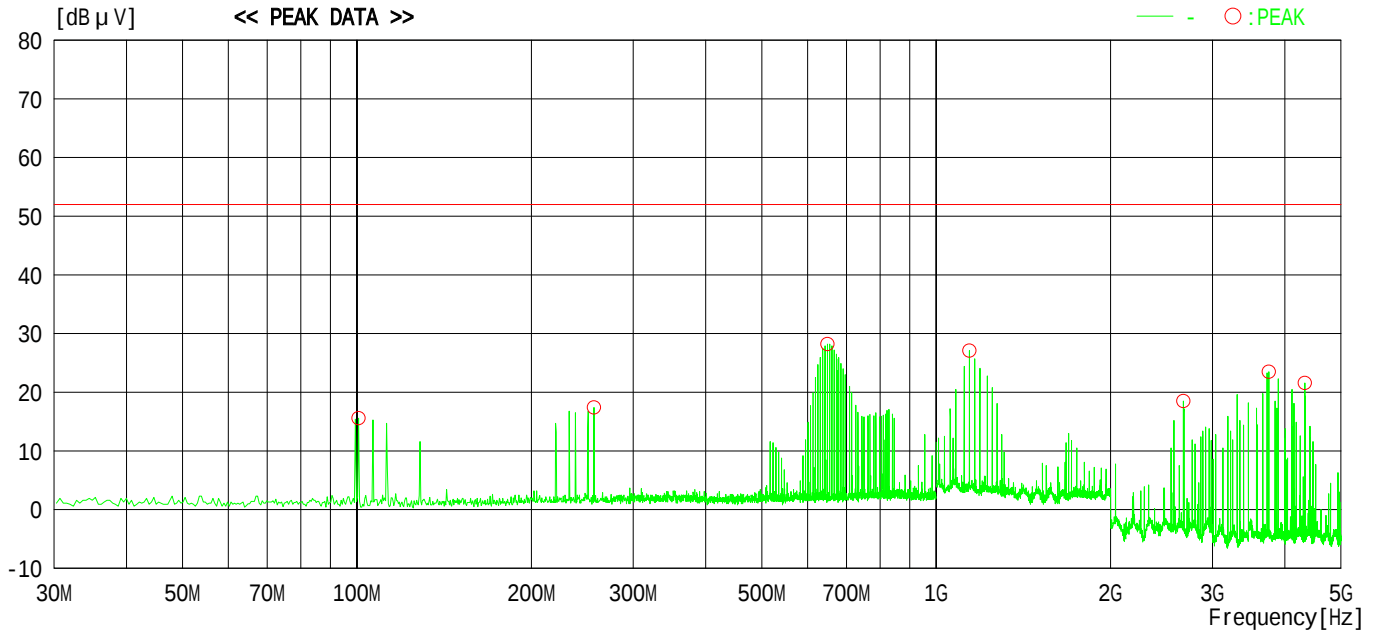
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
OPERATION MODE : TV Tuning mode

REPORT NO : 25FE0207-YW-1
DATE : January 28,2005
REGULATION : FCC 15B SubpartB
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 26 /68%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING Peak [dB μ V]	C.F [dB]	RESULT Peak [dB μ V]	LIMIT Peak [dB μ V]	MARGIN - [dB μ V]	MARGIN [dB]	PHASE
1	100.66400	36.2	-20.6	15.6	52.0	----	36.4	----
2	256.59350	37.0	-19.6	17.4	52.0	----	34.6	----
3	648.85260	48.5	-20.3	28.2	52.0	----	23.8	----
4	1141.42000	53.2	-26.1	27.1	52.0	----	24.9	----
5	2671.38400	50.8	-32.3	18.5	52.0	----	33.5	----
6	3752.80200	56.2	-32.7	23.5	52.0	----	28.5	----
7	4330.01600	54.2	-32.6	21.6	52.0	----	30.4	----

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

DATA OF ANTENNA TERMINAL TEST

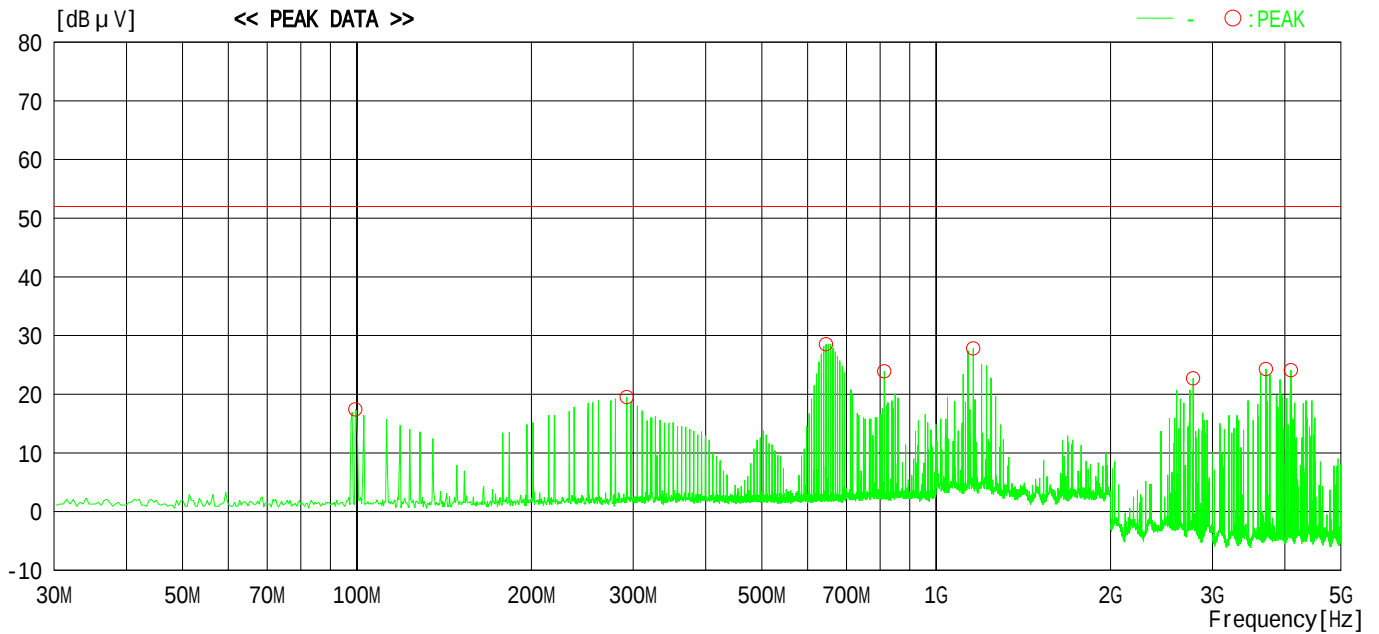
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
OPERATION MODE : CATV Tuning mode

REPORT NO : 25FE0207-YW-1
DATE : January 28,2005
REGULATION : FCC 15B SubpartB
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 26 /68%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING Peak [dB μ V]	C.F [dB]	RESULT Peak [dB μ V]	LIMIT Peak [dB μ V]	- [dB μ V]	MARGIN [dB]	PHASE
1	99.39970	38.0	-20.6	17.4	52.0	----	34.6	----
2	292.41390	39.0	-19.5	19.5	52.0	----	32.5	----
3	645.70980	48.8	-20.3	28.5	52.0	----	23.5	----
4	813.57600	43.8	-19.9	23.9	52.0	----	28.1	----
5	1159.27600	53.8	-26.0	27.8	52.0	----	24.2	----
6	2778.51900	55.0	-32.3	22.7	52.0	----	29.3	----
7	3711.37600	57.0	-32.7	24.3	52.0	----	27.7	----
8	4097.13600	56.8	-32.7	24.1	52.0	----	27.9	----

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

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 25FE0207-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: MVD4541	Date	: January 29, 2005
Power	: AC 120 V / 60 Hz	Temp./Humid	: 22 /51%
Description	: TV Reception + Rec(0dBmV)	Engineer	: Tsubasa Takayama

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	84.3	20.9	63.4	69.5	6.2
4	67.25	83.5	20.7	62.8	69.5	6.7

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.7	20.9	48.8	56.5	7.7
	65.75	68.5	20.8	47.7	56.5	8.8
4	62.75	69.3	20.9	48.4	56.5	8.1
	71.75	68.0	20.7	47.3	56.5	9.2

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 25FE0207-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: MVD4541	Date	: January 29, 2005
Power	: AC 120 V / 60 Hz	Temp./Humid	: 22 /51%
Description	: TV Reception + Rec(25dBmV)	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	84.5	20.9	63.6	69.5	5.9
4	67.25	83.6	20.7	62.9	69.5	6.6

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.7	20.9	48.8	56.5	7.7
	65.75	68.5	20.8	47.7	56.5	8.8
4	62.75	69.2	20.9	48.3	56.5	8.2
	71.75	67.9	20.7	47.2	56.5	9.3

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 25FE0207-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: MVD4541	Date	: January 29, 2005
Power	: AC 120 V / 60 Hz	Temp./Humid	: 22 /51%
Description	: AV Input + Rec(1Vp-p)	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	84.3	20.9	63.4	69.5	6.1
4	67.25	83.7	20.7	63.0	69.5	6.5

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	70.4	20.9	49.5	56.5	7.0
	65.75	69.1	20.8	48.3	56.5	8.2
4	62.75	68.9	20.9	48.0	56.5	8.5
	71.75	67.6	20.7	46.9	56.5	9.6

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 25FE0207-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: MVD4541	Date	: January 29, 2005
Power	: AC 120 V / 60 Hz	Temp./Humid	: 22 /51%
Description	: AV Input + Rec(5Vp-p)	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	84.1	20.9	63.2	69.5	6.3
4	67.25	84.4	20.7	63.7	69.5	5.8

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.8	20.9	48.9	56.5	7.6
	65.75	68.5	20.8	47.7	56.5	8.8
4	62.75	68.7	20.9	47.8	56.5	8.7
	71.75	67.4	20.7	46.7	56.5	9.8

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 25FE0207-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: MVD4541	Date	: January 29, 2005
Power	: AC 120 V / 60 Hz	Temp./Humid	: 22 /51%
Description	: VCR Playback	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	84.5	20.9	63.6	69.5	5.9
4	67.25	83.0	20.7	62.3	69.5	7.2

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.5	20.9	48.6	56.5	7.9
	65.75	68.3	20.8	47.5	56.5	9.0
4	62.75	68.3	20.9	47.4	56.5	9.1
	71.75	67.2	20.7	46.5	56.5	10.0

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 25FE0207-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Prat15B Subpart B
Model number	: MVD4541	Date	: January 29, 2005
Power	: AC 120 V / 60 Hz	Temp./Humid	: 22 /51%
Description	: DVD Play	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	84.3	20.9	63.4	69.5	6.1
4	67.25	83.6	20.7	62.9	69.5	6.6

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	70.5	20.9	49.6	56.5	6.9
	65.75	69.2	20.8	48.4	56.5	8.1
4	62.75	69.5	20.9	48.6	56.5	7.9
	71.75	68.7	20.7	48.0	56.5	8.5

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	47.8600	32.2	----	-20.9	11.3	----	39.5	----	28.2	----	-
2	74.8400	29.8	----	-20.7	9.1	----	39.5	----	30.4	----	-
3	122.6400	35.9	----	-20.5	15.4	----	39.5	----	24.1	----	-
4	489.7000	27.5	----	-20.3	7.2	----	39.5	----	32.3	----	-
5	612.3000	31.8	----	-20.3	11.5	----	39.5	----	28.0	----	-
6	944.7000	36.5	----	-19.5	17.0	----	39.5	----	22.5	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	47.8600	32.5	----	-20.9	11.6	----	39.5	----	27.9	----	-
2	74.8400	30.1	----	-20.7	9.4	----	39.5	----	30.1	----	-
3	122.6400	36.5	----	-20.5	16.0	----	39.5	----	23.5	----	-
4	489.7000	28.9	----	-20.3	8.6	----	39.5	----	30.9	----	-
5	612.3000	31.3	----	-20.3	11.0	----	39.5	----	28.5	----	-
6	944.7000	36.7	----	-19.5	17.2	----	39.5	----	22.3	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	47.8600	32.5	----	-20.9	11.6	----	39.5	----	27.9	----	-
2	74.8400	29.8	----	-20.7	9.1	----	39.5	----	30.4	----	-
3	122.6400	35.5	----	-20.5	15.0	----	39.5	----	24.5	----	-
4	489.7000	27.8	----	-20.3	7.5	----	39.5	----	32.0	----	-
5	612.3000	31.4	----	-20.3	11.1	----	39.5	----	28.4	----	-
6	809.7000	35.8	----	-19.9	15.9	----	39.5	----	23.6	----	-
7	944.7000	36.6	----	-19.5	17.1	----	39.5	----	22.4	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	47.8600	32.7	----	-20.9	11.8	----	39.5	----	27.7	----	-
2	74.8400	29.6	----	-20.7	8.9	----	39.5	----	30.6	----	-
3	122.6400	35.8	----	-20.5	15.3	----	39.5	----	24.2	----	-
4	489.7000	28.6	----	-20.3	8.3	----	39.5	----	31.2	----	-
5	612.3000	30.8	----	-20.3	10.5	----	39.5	----	29.0	----	-
6	809.7000	34.3	----	-19.9	14.4	----	39.5	----	25.1	----	-
7	944.7000	36.8	----	-19.5	17.3	----	39.5	----	22.2	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback : 3ch

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	47.8600	32.0	----	-20.9	11.1	----	39.5	----	28.4	----	-
2	74.8400	29.8	----	-20.7	9.1	----	39.5	----	30.4	----	-
3	122.6400	35.9	----	-20.5	15.4	----	39.5	----	24.1	----	-
4	489.7000	28.3	----	-20.3	8.0	----	39.5	----	31.5	----	-
5	612.3000	31.0	----	-20.3	10.7	----	39.5	----	28.8	----	-
6	809.7000	35.0	----	-19.9	15.1	----	39.5	----	24.4	----	-
7	944.7000	36.1	----	-19.5	16.6	----	39.5	----	22.9	----	-

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

DATA OF RF SUPRIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD Play : 3ch

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	47.8600	32.4	----	-20.9	11.5	----	39.5	----	28.0	----	-
2	74.8400	29.2	----	-20.7	8.5	----	39.5	----	31.0	----	-
3	122.6400	35.9	----	-20.5	15.4	----	39.5	----	24.1	----	-
4	489.7000	28.7	----	-20.3	8.4	----	39.5	----	31.1	----	-
5	612.3000	31.0	----	-20.3	10.7	----	39.5	----	28.8	----	-
6	809.7000	36.3	----	-19.9	16.4	----	39.5	----	23.1	----	-
7	944.7000	36.0	----	-19.5	16.5	----	39.5	----	23.0	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	53.7900	32.3	----	-20.9	11.4	----	39.5	----	28.1	----	-
2	80.7400	28.4	----	-20.6	7.8	----	39.5	----	31.7	----	-
3	134.6400	33.2	----	-20.4	12.8	----	39.5	----	26.7	----	-
4	403.1000	26.7	----	-20.0	6.7	----	39.5	----	32.8	----	-
5	672.3000	31.3	----	-20.3	11.0	----	39.5	----	28.5	----	-
6	809.7000	33.6	----	-19.9	13.7	----	39.5	----	25.8	----	-
7	944.7000	34.4	----	-19.5	14.9	----	39.5	----	24.6	----	-

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

DATA OF RF SUPRIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	53.7900	31.7	----	-20.9	10.8	----	39.5	----	28.7	----	-
2	80.7400	28.1	----	-20.6	7.5	----	39.5	----	32.0	----	-
3	134.6400	32.6	----	-20.4	12.2	----	39.5	----	27.3	----	-
4	403.1000	25.7	----	-20.0	5.7	----	39.5	----	33.8	----	-
5	672.3000	31.5	----	-20.3	11.2	----	39.5	----	28.3	----	-
6	809.7000	35.4	----	-19.9	15.5	----	39.5	----	24.0	----	-
7	944.7000	34.0	----	-19.5	14.5	----	39.5	----	25.0	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	53.7900	32.0	----	-20.9	11.1	----	39.5	----	28.4	----	-
2	80.7400	28.5	----	-20.6	7.9	----	39.5	----	31.6	----	-
3	134.6400	32.5	----	-20.4	12.1	----	39.5	----	27.4	----	-
4	459.7000	26.0	----	-20.1	5.9	----	39.5	----	33.6	----	-
5	672.3000	31.2	----	-20.3	10.9	----	39.5	----	28.6	----	-
6	846.1000	42.8	----	-19.9	22.9	----	39.5	----	16.6	----	-
7	944.7000	34.3	----	-19.5	14.8	----	39.5	----	24.7	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	53.7900	32.2	----	-20.9	11.3	----	39.5	----	28.2	----	-
2	80.7400	28.1	----	-20.6	7.5	----	39.5	----	32.0	----	-
3	134.6400	32.6	----	-20.4	12.2	----	39.5	----	27.3	----	-
4	403.1000	26.3	----	-20.0	6.3	----	39.5	----	33.2	----	-
5	672.3000	31.3	----	-20.3	11.0	----	39.5	----	28.5	----	-
6	846.1000	42.8	----	-19.9	22.9	----	39.5	----	16.6	----	-
7	944.7000	34.2	----	-19.5	14.7	----	39.5	----	24.8	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback : 4ch

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	53.7900	32.1	----	-20.9	11.2	----	39.5	----	28.3	----	-
2	80.7400	28.2	----	-20.6	7.6	----	39.5	----	31.9	----	-
3	134.6400	33.0	----	-20.4	12.6	----	39.5	----	26.9	----	-
4	459.7000	26.5	----	-20.1	6.4	----	39.5	----	33.1	----	-
5	672.3000	31.8	----	-20.3	11.5	----	39.5	----	28.0	----	-
6	809.7000	35.2	----	-19.9	15.3	----	39.5	----	24.2	----	-
7	944.7000	34.3	----	-19.5	14.8	----	39.5	----	24.7	----	-

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

DATA OF RF SUPRIIOUS TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 22 /51%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD Play : 4ch

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	53.7900	32.2	----	-20.9	11.3	----	39.5	----	28.2	----	-
2	80.7400	28.0	----	-20.6	7.4	----	39.5	----	32.1	----	-
3	134.6400	33.3	----	-20.4	12.9	----	39.5	----	26.6	----	-
4	479.7000	25.3	----	-20.3	5.0	----	39.5	----	34.5	----	-
5	672.3000	31.0	----	-20.3	10.7	----	39.5	----	28.8	----	-
6	809.7000	35.4	----	-19.9	15.5	----	39.5	----	24.0	----	-
7	944.7000	35.3	----	-19.5	15.8	----	39.5	----	23.7	----	-

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 : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1Vp-p: 3ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	61.2500	23.7	----	-20.9	2.8	----	9.5	----	6.7	----	-
2	122.5000	21.9	----	-20.5	1.4	----	9.5	----	8.1	----	-
3	183.7500	20.0	----	-20.0	0.0	----	9.5	----	9.5	----	-
4	245.0000	20.0	----	-19.7	0.3	----	9.5	----	9.2	----	-
5	306.2500	19.5	----	-19.5	0.0	----	9.5	----	9.5	----	-
6	367.5000	19.6	----	-19.7	-0.1	----	9.5	----	9.6	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 5Vp-p: 3ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	61.2500	23.7	----	-20.9	2.8	----	9.5	----	6.7	----	-
2	122.5000	22.5	----	-20.5	2.0	----	9.5	----	7.5	----	-
3	183.7500	20.5	----	-20.0	0.5	----	9.5	----	9.0	----	-
4	245.0000	19.9	----	-19.7	0.2	----	9.5	----	9.3	----	-
5	306.2500	21.0	----	-19.5	1.5	----	9.5	----	8.0	----	-
6	367.5000	20.9	----	-19.7	1.2	----	9.5	----	8.3	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback : 3ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	61.2500	21.0	----	-20.9	0.1	----	9.5	----	9.4	----	-
2	122.5000	21.5	----	-20.5	1.0	----	9.5	----	8.5	----	-
3	183.7500	21.3	----	-20.0	1.3	----	9.5	----	8.2	----	-
4	245.0000	20.8	----	-19.7	1.1	----	9.5	----	8.4	----	-
5	306.2500	20.8	----	-19.5	1.3	----	9.5	----	8.2	----	-
6	367.5000	20.6	----	-19.7	0.9	----	9.5	----	8.6	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : DVD Play : 3ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	61.2500	23.1	----	-20.9	2.2	----	9.5	----	7.3	----	-
2	122.5000	23.4	----	-20.5	2.9	----	9.5	----	6.6	----	-
3	183.7500	24.4	----	-20.0	4.4	----	9.5	----	5.1	----	-
4	245.0000	23.8	----	-19.7	4.1	----	9.5	----	5.4	----	-
5	306.2500	23.9	----	-19.5	4.4	----	9.5	----	5.1	----	-
6	367.5000	24.3	----	-19.7	4.6	----	9.5	----	4.9	----	-

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 : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 1Vp-p: 4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	67.2500	21.6	----	-20.7	0.9	----	9.5	----	8.6	----	-
2	134.5000	21.6	----	-20.4	1.2	----	9.5	----	8.3	----	-
3	201.7500	20.0	----	-19.8	0.2	----	9.5	----	9.3	----	-
4	269.0000	20.4	----	-19.6	0.8	----	9.5	----	8.7	----	-
5	336.2500	20.2	----	-19.6	0.6	----	9.5	----	8.9	----	-
6	403.5000	20.1	----	-20.0	0.1	----	9.5	----	9.4	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : AV Input 5Vp-p: 4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	67.2500	21.8	----	-20.7	1.1	----	9.5	----	8.4	----	-
2	134.5000	21.5	----	-20.4	1.1	----	9.5	----	8.4	----	-
3	201.7500	20.3	----	-19.8	0.5	----	9.5	----	9.0	----	-
4	269.0000	20.3	----	-19.6	0.7	----	9.5	----	8.8	----	-
5	336.2500	19.6	----	-19.6	0.0	----	9.5	----	9.5	----	-
6	403.5000	19.8	----	-20.0	-0.2	----	9.5	----	9.7	----	-

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 : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback: 4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	67.2500	21.4	----	-20.7	0.7	----	9.5	----	8.8	----	-
2	134.5000	22.1	----	-20.4	1.7	----	9.5	----	7.8	----	-
3	201.7500	20.4	----	-19.8	0.6	----	9.5	----	8.9	----	-
4	269.0000	19.3	----	-19.6	-0.3	----	9.5	----	9.8	----	-
5	336.2500	19.9	----	-19.6	0.3	----	9.5	----	9.2	----	-
6	403.5000	20.8	----	-20.0	0.8	----	9.5	----	8.7	----	-

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 : MVD4541
TEMP./HUMID. : 23 /43%

REPORT NO : 25FE0207-YW-1
DATE : January 29, 2005
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

OPERATION MODE : VCR Playback: 4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		Peak [dB μ V]	- [dB μ V]		Peak [dB μ V]	- [dB μ V]	Peak [dB μ V]	- [dB μ V]	[dB]	[dB]	
1	67.2500	20.7	----	-20.7	0.0	----	9.5	----	9.5	----	-
2	134.5000	21.6	----	-20.4	1.2	----	9.5	----	8.3	----	-
3	201.7500	19.8	----	-19.8	0.0	----	9.5	----	9.5	----	-
4	269.0000	19.9	----	-19.6	0.3	----	9.5	----	9.2	----	-
5	336.2500	19.9	----	-19.6	0.3	----	9.5	----	9.2	----	-
6	403.5000	20.0	----	-20.0	0.0	----	9.5	----	9.5	----	-

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

Picture Sensitivity Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co.,Ltd.
Equipment : DVD/VCR
Model Number : MVD4541
Power : 120V/60Hz
Description : TV Reception
Remarks : -

Report Number : 25FE0207-YW-1
Regulation : FCC Part15 SubpartB
Date : January 29, 2005
Temp / Humid : 25deg.C / 31%
Engineer : Tsubasa Takayama

Ch [VHF]	Frequency [MHz]	Sensitivity [MHz]		Ch [UHF]	Frequency [MHz]	Sensitivity [MHz]	
		[dBμV]	[μV]			[dB μ V]	[μ V]
2	55.25	20.0	10.0	14	471.25	21.3	11.6
3	61.25	18.9	8.8	20	507.25	21.8	12.3
4	67.25	18.4	8.3	26	543.25	21.9	12.4
5	77.25	18.1	8.0	32	579.25	23.1	14.3
6	83.25	18.0	7.9	38	615.25	22.0	12.6
7	175.25	21.2	11.5	44	651.25	23.6	15.1
8	181.25	21.1	11.4	50	687.25	22.3	13.0
9	187.25	20.7	10.8	56	723.25	20.9	11.1
10	193.25	20.2	10.2	62	759.25	22.3	13.0
11	199.25	20.0	10.0	69	801.25	22.1	12.7
12	205.25	20.5	10.6	-	-	-	-
13	211.25	20.5	10.6	-	-	-	-
Average VHF			9.8	Average UHF			12.8
Average UHF/VHF : $20 \log \text{UHF}[\mu\text{V}] / \text{VHF}[\mu\text{V}] =$				2.3 [Limit : 8.0dB]			

Noise Figure Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co.,Ltd.
Equipment : DVD/VCR
Model Number : MVD4541
Power : 120V/60Hz
Description : TV Reception
Remarks : -

Report Number : 25FE0207-YW-1
Regulation : FCC Part15 SubpartB
Date : January 29, 2005
Temp / Humid : 25deg.C / 31%
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	4.6	0.2	4.4	14.0	9.6
4	67.25	3.7	0.2	3.5	14.0	10.5
5	77.25	3.1	0.2	2.9	14.0	11.1
6	83.25	2.9	0.2	2.7	14.0	11.3
7	175.25	5.5	0.2	5.3	14.0	8.7
8	181.25	4.9	0.2	4.7	14.0	9.3
9	187.25	4.8	0.2	4.6	14.0	9.4
10	193.25	4.6	0.2	4.4	14.0	9.6
11	199.25	4.8	0.2	4.6	14.0	9.4
12	205.25	4.6	0.2	4.4	14.0	9.6
13	211.25	4.6	0.2	4.4	14.0	9.6
TV UHF Fundamental						
14	471.25	5.3	0.3	5.0	14.0	9.0
20	507.25	5.7	0.3	5.4	14.0	8.6
26	543.25	5.7	0.3	5.4	14.0	8.6
32	579.25	5.7	0.3	5.4	14.0	8.6
38	615.25	6.0	0.3	5.7	14.0	8.3
44	651.25	6.8	0.3	6.5	14.0	7.5
50	687.25	5.6	0.3	5.3	14.0	8.7
56	723.25	5.2	0.4	4.8	14.0	9.2
62	759.25	5.3	0.4	4.9	14.0	9.1
69	801.25	5.6	0.4	5.2	14.0	8.8
Mid band						
14	121.25	3.7	0.2	3.5	14.0	10.5
16	133.25	8.0	0.2	7.8	14.0	6.2
18	145.25	6.5	0.2	6.3	14.0	7.7
20	157.25	5.7	0.2	5.5	14.0	8.5
22	169.25	5.6	0.2	5.4	14.0	8.6
Super band						
23	217.25	4.5	0.2	4.3	14.0	9.7
26	235.25	4.7	0.2	4.5	14.0	9.5
29	253.25	4.9	0.2	4.7	14.0	9.3
32	271.25	5.0	0.2	4.8	14.0	9.2
36	295.25	5.0	0.2	4.8	14.0	9.2

Test Report No : 25FE0207-YW-1

APPENDIX 3

Test Instruments

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
APVBT01	VIDEO BOOSTER	UL Apex	-	CE, RE, RF, ATS	-
APTVG01	TV Generator	Leader	408NPS	CE, RE, RF, ATS	Pre Check
APSPA04	Spectrum Analyzer	Advantest	R3265	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	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	2004/02/19 * 12
SS-05	Digitizing Oscilloscope	Sony Tektronix	2221	PS	2005/01/11 * 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-15	Digital Humidity Indicator	SATO	PC-5000TRH	RF, ATS, PS, NF	2004/05/06 * 12
LS-04	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE	2004/10/29 * 12
LS-01	LISN(AMN)	Rohde & Schwarz	ESH2-Z5	CE	2005/01/17 * 12
SA-07	Spectrum Analyzer	Advantest	R3273	CE	2004/07/26 * 12
TA-03	Terminator	TME	CT-01	CE	2004/05/02 * 12
TR-01	Test Receiver	Rohde & Schwarz	ESHS20	CE	2004/12/24 * 12
CC-1S	Yokowa No.1 shield coaxial(0.01MHz-1000MHz)	UL Apex	CC-14,CC-15,CC-16,, CC-18,CC-19,SW-11, SW-12	CE	2004/03/28 * 12
OS-05	Digital Humidity Indicator	SATO	PC-5000TRH	CE	2004/04/22 * 12
AF-03	Pre Amplifier	Anritsu	MH648A	RE	2004/03/28 * 12
AF-04	Pre Amplifier	Hewlett Packard	8449B	RE	2005/01/18 * 12
BA-04	Biconical Antenna	Schwarzbeck	BBA9106	RE	2004/04/10 * 12
HA-01	Horn Antenna	A.H.Systems	SAS-200/571	RE	2004/04/10 * 12
LA-05	Logperiodic Antenna	Schwarzbeck	UHALP9108-A	RE	2004/10/18 * 12
TR-04	Test Receiver	Rohde & Schwarz	ESVS10	RE	2004/12/22 * 12
CC-2ORC	Yokowa No.2 open coaxial(0.01-1000MHz)	UL Apex	CC-21,CC-22,CC-23, CC-24,CC-25,CC-26, CC-27,SW-21,SW-22	RE	2004/03/28 * 12
YOATS-02	Open Test Site	JSE	3m, 10m	RE	2004/08/15 * 12
CC-C1	Microwave Cable	Suhner/storm	-	RE	2004/12/15 * 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