



Certification EMI TEST REPORT

Test Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Type of equipment : DVD Recorder with Video Cassette Recorder
Model number : DVR-RT502-S
FCC ID : A7RM2J4B
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
DVR-RT402-S	Pioneer	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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.

Date of test:

April 20 to May 8, 2006

Tested by:

Masanori Nishiyama
Engineer of EMC Service

Tsubasa Takayama
Engineer of EMC Service

Approved by:

Go Ishiwata
Engineer of EMC Service

Hiroya Tabata
Leader of EMC Service

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Section 1 : Client information

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

Section 2 : Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of equipment : DVD Recorder with Video Cassette Recorder
Model number : DVR-RT502-S
Brand name : Pioneer
Rating : AC 120V / 60Hz
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 : April 20, 2006
Condition of EUT : Production model

2.2 Product description

Model: DVR-RT502-S (referred to as the EUT in this report) is a DVD Recorder with Video Cassette Recorder.
The EUT specifications is as follows.

Tuner type	:	Quartz PLL frequency synthesized
I / F	:	45.75 MHz (Picture), 41.25 MHz (Sound)
Receiving channel	:	VHF 2 – 13 ch / UHF 14 – 69 ch / CATV 1 – 125 ch
Antenna input	:	75 ohm
Video signal	:	NTSC color
Power source	:	AC 120 V / 60 Hz, 29 W
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

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	19.0 dB (0.1500 MHz, QP, N, TV reception +VCR Rec. +DVD Rec.)	Complied
Radiated emission	ANSI C63.4:2003 IEEE 187:1990	30–88 MHz: 100 uV/m 88–216 MHz: 150 uV/m 216–960 MHz: 200 uV/m above 960 MHz: 500 uV/m	5.0 dB (945.00 MHz, Vertical, DVD Play +VCR +Rec.)	Complied
Antenna terminal voltage	ANSI C63.4:2003	2 nW (at 75 ohm)	22.4 dB (3641.429 MHz, Air)	Complied
RF output level	ANSI C63.4:2003	Video signal: 3000 uV Aural signal: 671 uV	5.9 dB (61.25 MHz, 3ch, VCR Playback +DVD Rec.)	Complied
Spurious emission		94.8 uV	17.9 dB (54.1200 MHz, 3ch, DVD Play +VCR Rec.)	Complied
Transfer switch	ANSI C63.4:2003	9.5 dB	3.9 dB (67.2500 MHz, 4ch, AV Input 1 +VCR Rec. +DVD Rec.(1Vp-p))	Complied
Picture sensitivity	ANSI C63.4:2003	8 dB	4.8 dB	Complied
Noise figure	FCC/OET MP:2:1986	14 dB	7.4 dB (801.25 MHz, 69ch / 295.325 MHz, 36ch)	Complied

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

3.3 Additions or deviations to standard

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

3.4 Confirmation

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

UL Apex Co., Ltd.
Yokowa EMC Lab.

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

3.5 Uncertainty

Conducted emission (150 kHz – 30 MHz)

The measurement uncertainty (with a 95% confidence level) for this test is ± 2.8 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 ± 4.5 dB.

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ± 4.2 dB.

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ± 5.6 dB.

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

Antenna terminal voltage

The measurement uncertainty (with a 95% confidence level) for this test is ± 2.3 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 is ± 2.3 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 is ± 2.3 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 is ± 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 is ± 1.2 dB.

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

3.7 Test location

UL Apex Co., Ltd. Yamakita EMC Lab

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken 258-0124 JAPAN

Telephone : +81 465 77 1011

Facsimile : +81 465 77 2112

No.1 site IC Registration No.: IC3489

Test room	Width x Depth x Height (m)	Test room	Width x Depth x Height (m)
No.1 shielded room	8.0 x 5.0 x 2.5	No.1 EMS lab.	10.0 x 7.5 x 5.7
No.2 shielded room	5.0 x 4.0 x 2.5	(Semi-anechoic chamber)	

UL Apex Co., Ltd. Yokowa EMC Lab.

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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

*NVLAP Lab. code : 200109-0

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

IC Registration No.: No.1 site: IC 2973-1

3.8 Test setup, Data of EMI & Test instruments

Please refer to Appendix 1 to 3.

UL Apex Co., Ltd.

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

4.1 Operating modes

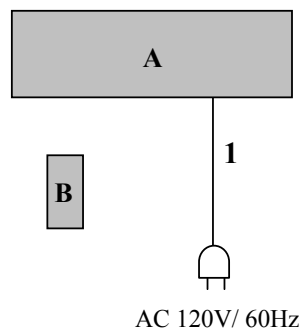
The EUT exercise program used during testing was designed exercise the various system components in a manner similar to typical use.

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

Operation : The EUT was tested at above operation mode.

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

4.2 Configuration and peripherals



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

Description of EUT and support equipment

Sign	Item	Model number	Serial number	Manufacturer	FCC ID	Remark
A	DVD Recorder with Video Cassette Recorder	DVR-RT502-S	-	Orion Electric Co., Ltd.	A7RM2J4B	EUT
B	Remote Controller	-	-	Orion Electric Co., Ltd.	-	EUT

List of cable used

No.	Item	Length (m)	Shield	Remark
1	AC Power Cable	1.6	Unshielded	2 wire

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Section 5 : Conducted emission

5.1 Operation environment

The test was carried out No.1 shielded room at Yokowa EMC lab.

Date : April 28, 2006
Temperature : See data
Humidity : See data

5.2 Test configuration

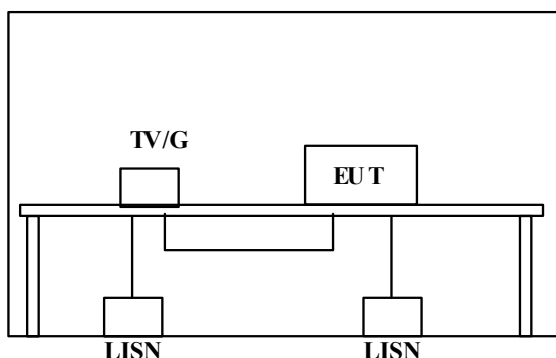
EUT was placed on a platform of nominal size, 1 m by 1.8 m, raised 80 cm above the conducting ground plane. The rear of tabletop was located 40 cm to the vertical conducting plane. The rear of EUT was aligned and flushed with rear of tabletop. All other surfaces of tabletop was at least 80 cm from any other grounded conducting surface. I/O cables and AC cable were bundled in center. I/O cables were hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead, except the ground (safety) lead, were individually connected through a LISN to the input power source. All unused 50 ohm connectors of the LISN were resistively terminated in 50 ohm when not connected to the measuring equipment.

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

Figure 1. Conducted emission

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

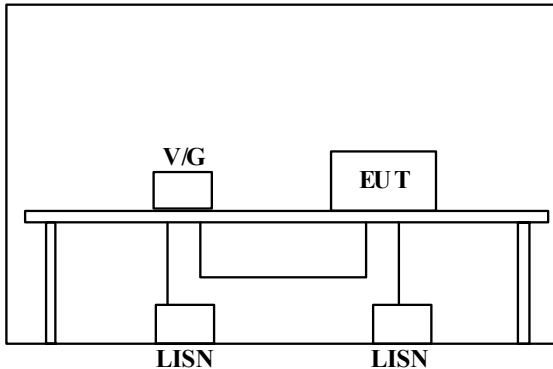
Shielded room



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

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

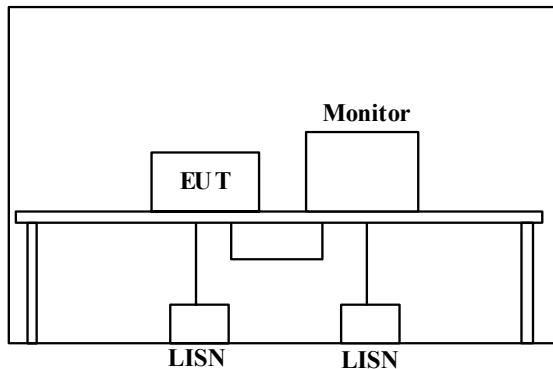
Shielded room



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

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

Shielded room



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

5.3 Test conditions

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

5.4 Test procedure

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

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

Detector Type : QP
IF Bandwidth : 10 kHz

5.5 Test result

Passed

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

Test engineer: Masanori Nishiyama

Section 6 : Radiated emission

6.1 Operation environment

The test was carried out in No.1 open site at Yamakita EMC lab.

Date : April 20 and 21, 2006
Temperature : See data
Humidity : See data

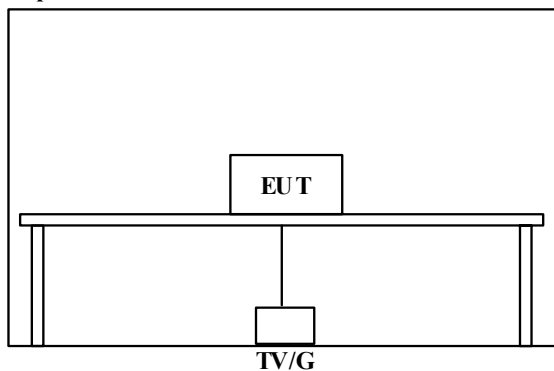
6.2 Test configuration

EUT was placed on a platform of nominal size, 1 m by 1.8 m, raised 80 cm above the conducting ground plane. The rear of EUT was aligned and flushed with rear of tabletop. AC cable was bundled in center. I/O cables were hanged 40 cm height to the ground plane. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

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

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

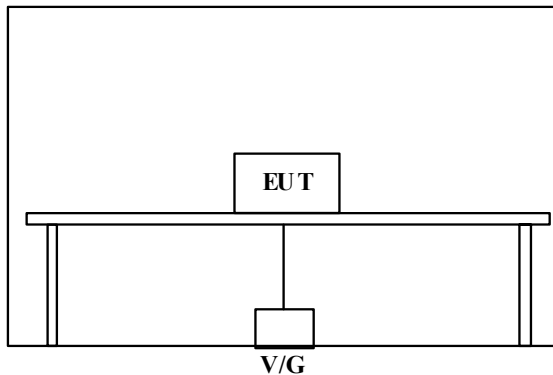
Open test site



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

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

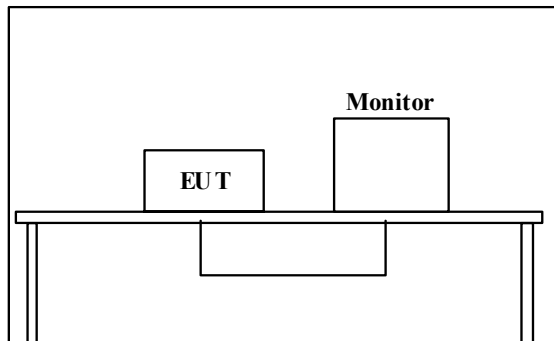
Open test site



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

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

Open test site



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

6.3 Test conditions

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

6.4 Test procedure

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

Pre check measurements were performed within a search coil at high level of 30MHz – 1000MHz in a shielded room to distinguish disturbances of EUT from the ambient noise. The measuring antenna height was varied between 1 and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity. The measurements were performed for both vertical and horizontal antenna polarization.

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

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

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

6.5 Test result

Passed

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

Test engineer: Go Ishiwata

Section 7 : Antenna terminal voltage

7.1 Operation environment

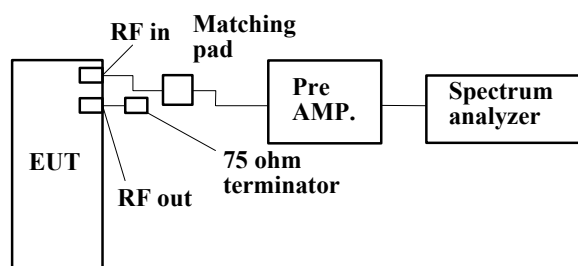
The test was carried out in No.7 shielded room at Yokowa EMC lab.

Date : April 27, 2006
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 2 and photographs in Appendix 1.

Figure 2. Antenna terminal voltage



7.3 Test conditions

Frequency range : 30 MHz – 5000 MHz
EUT position : Table top
EUT operation mode : Tuning (Air / Cable)

7.4 Test procedure

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

Detector Type : Peak (30-5000 MHz)

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

7.5 Test result

Passed

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

Test engineer: Tsubasa Takayama

Section 8 : RF output level / spurious emission

8.1 Operation environment

The test was carried out in No.7 shielded room at Yokowa EMC lab.

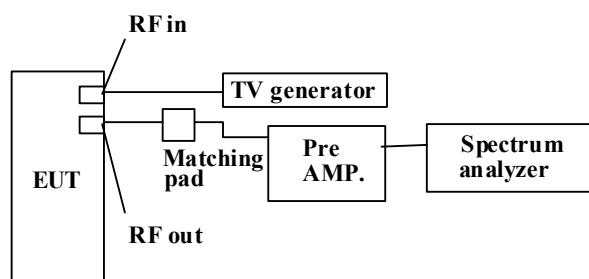
Date : May 8, 2006
Temperature : See data
Humidity : See data

8.2 Test configuration

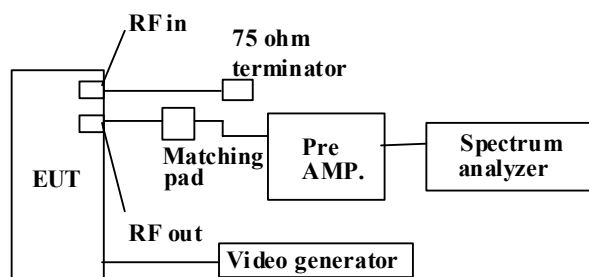
The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.
A drawing of the set up is shown in figure 3 and photographs in Appendix 1.

Figure 3. RF output level

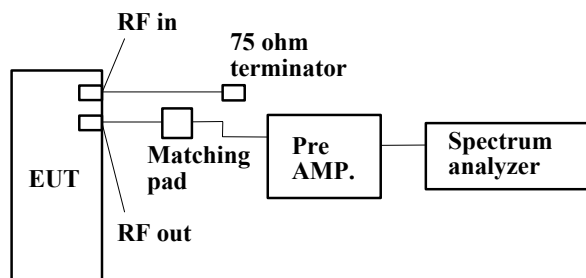
TV Reception + Rec. mode (0dBmV / 25dBmV)



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



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



8.3 Test conditions

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

8.4 Test procedure

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

Detector Type : Peak

8.5 Test result

Passed

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

Test engineer: Masanori Nishiyama

Section 9 : Antenna transfer switch

9.1 Operation environment

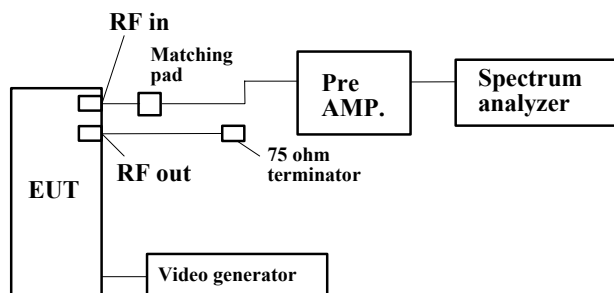
The test was carried out in No.7 shielded room at Yokowa EMC lab.

Date : May 8, 2006
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 4 and photographs in Appendix 1.

Figure 4. Transfer switch



9.3 Test conditions

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

9.4 Test procedure

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

Detector Type : Peak

9.5 Test result

Passed

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

Test engineer: Masanori Nishiyama

Section 10 : Picture sensitivity

10.1 Operation environment

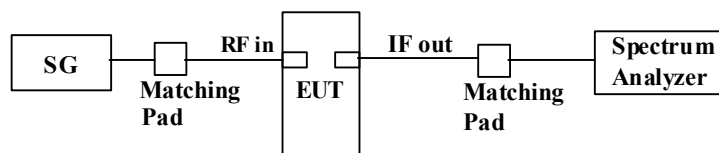
The test was carried out in No.7 shielded room at Yokowa EMC lab.

Date : May 8, 2006
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 5 and photographs in Appendix 1.

Figure 5. Picture sensitivity



10.3 Test conditions

EUT position : Table top
EUT operation mode : TV Reception

10.4 Test procedure

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

The EUT was tuned to appropriate channel.

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

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

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

10.5 Test result

Passed

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

Test engineer: Masanori Nishiyama

Section 11 : Noise figure

11.1 Operating environment

The test was carried out in No.7 shielded room at Yokowa EMC lab.

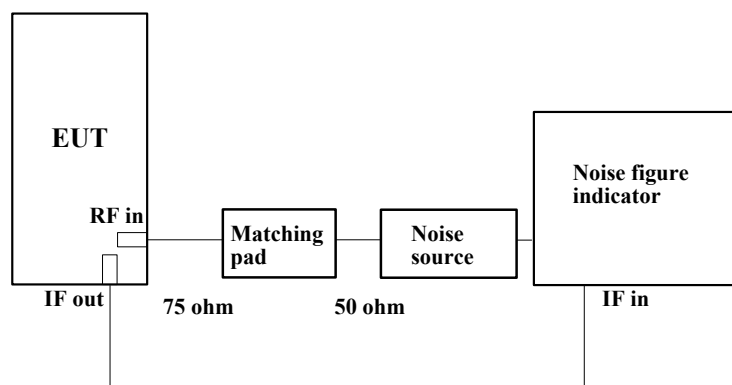
Date : May 8, 2006
Temperature : See data
Humidity : See data

11.2 Test configuration

The EUT was placed on a non-metallic table.

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

Figure 6. 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: Masanori Nishiyama

Appendix 1 : Photographs of test set up

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

Appendix 2 : Data of EMI tests

Page 27 - 50 :	Conducted emission
Page 51 - 105 :	Radiated emission
Page 106 - 107:	Antenna terminal voltage
Page 108 - 128:	RF output level / spurious emission
Page 129 - 140 :	Antenna transfer switch
Page 141 :	Picture sensitivity
Page 142 :	Noise figure

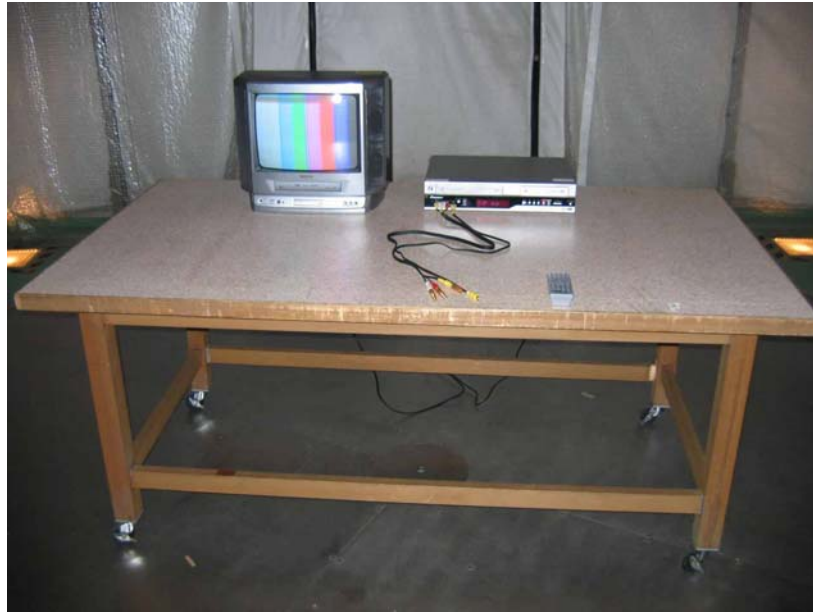
Appendix 3 : Test instruments

Page 143 :	Test instruments
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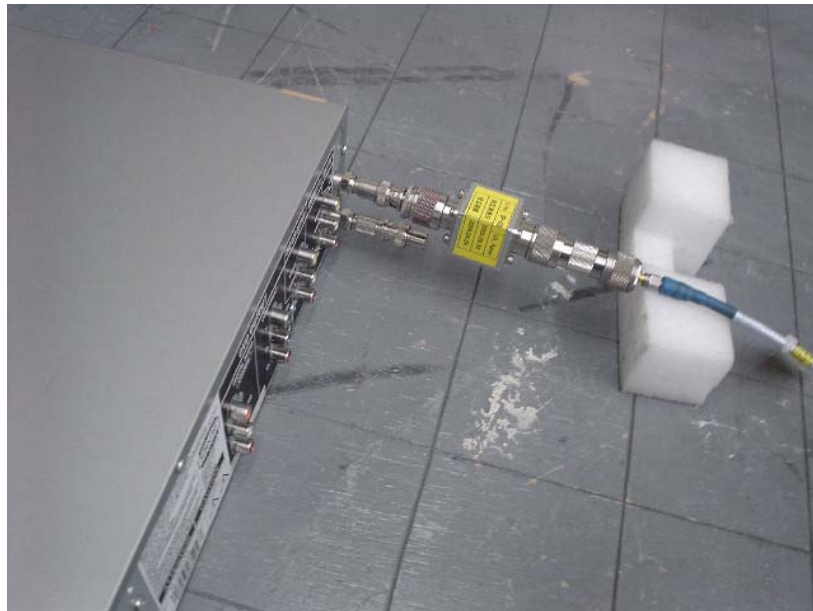
Conducted emission



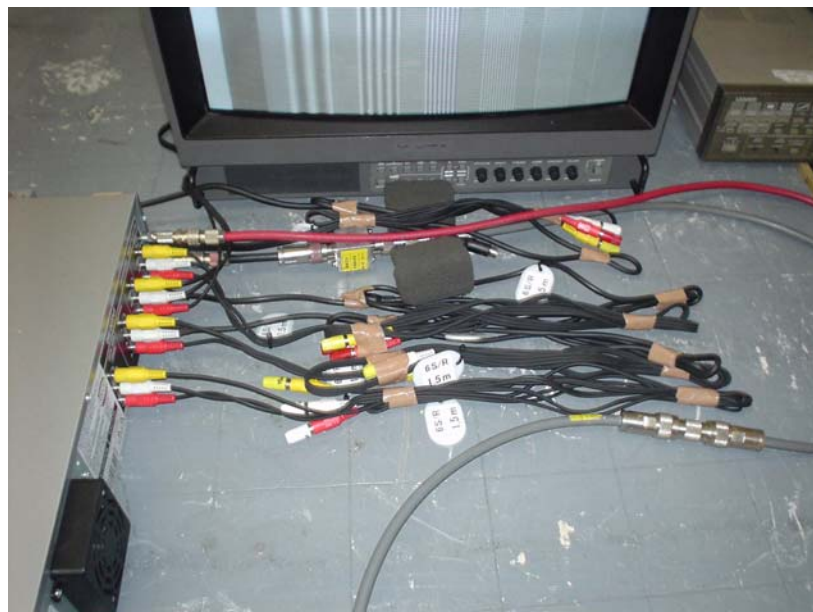
Radiated emission



Antenna terminal voltage



RF output level / spurious emission



UL Apex Co., Ltd.
Yokowa EMC Lab.

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

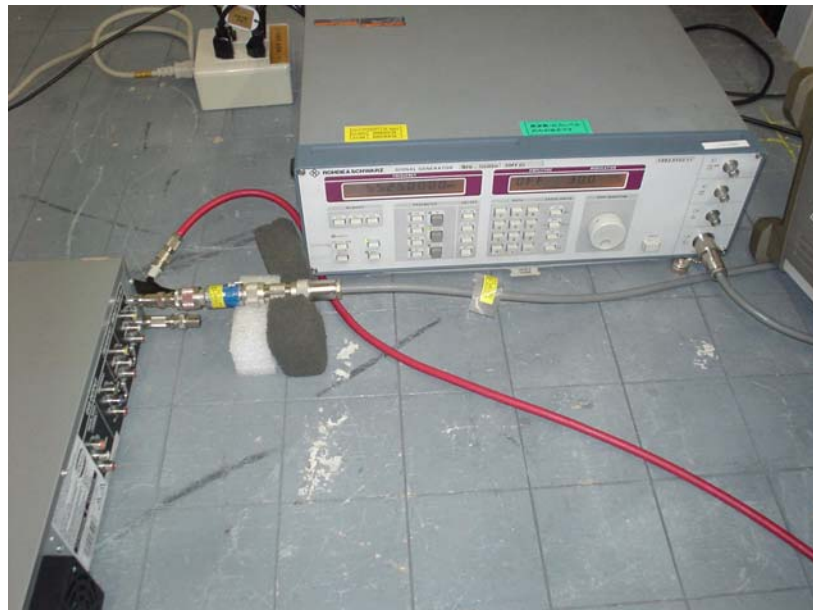
Telephone: +81 596 39 1485

Facsimile: +81 596 39 0232

Antenna transfer switch



Picture sensitivity



Noise figure



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+VCR Rec+DVD Rec
Remarks : 0dBmV
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)
Engineer : Masanori Nishiyama

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	46.6	-	46.3	-	0.1	0.1	0.0	46.8	-	66.0	56.0	19.2	-
2.	0.2181	38.9	-	37.5	-	0.1	0.1	0.0	39.1	-	62.9	52.9	23.8	-
3.	0.4752	35.3	-	36.0	-	0.1	0.2	0.0	36.3	-	56.4	46.4	20.1	-
4.	0.7628	35.9	-	34.6	-	0.1	0.2	0.0	36.2	-	56.0	46.0	19.8	-
5.	1.3604	34.7	-	34.7	-	0.1	0.3	0.0	35.1	-	56.0	46.0	20.9	-
6.	8.9454	22.6	-	22.4	-	0.5	0.6	0.0	23.7	-	60.0	50.0	36.3	-
7.	23.5993	12.0	-	13.2	-	1.1	1.0	0.0	15.3	-	60.0	50.0	44.7	-

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

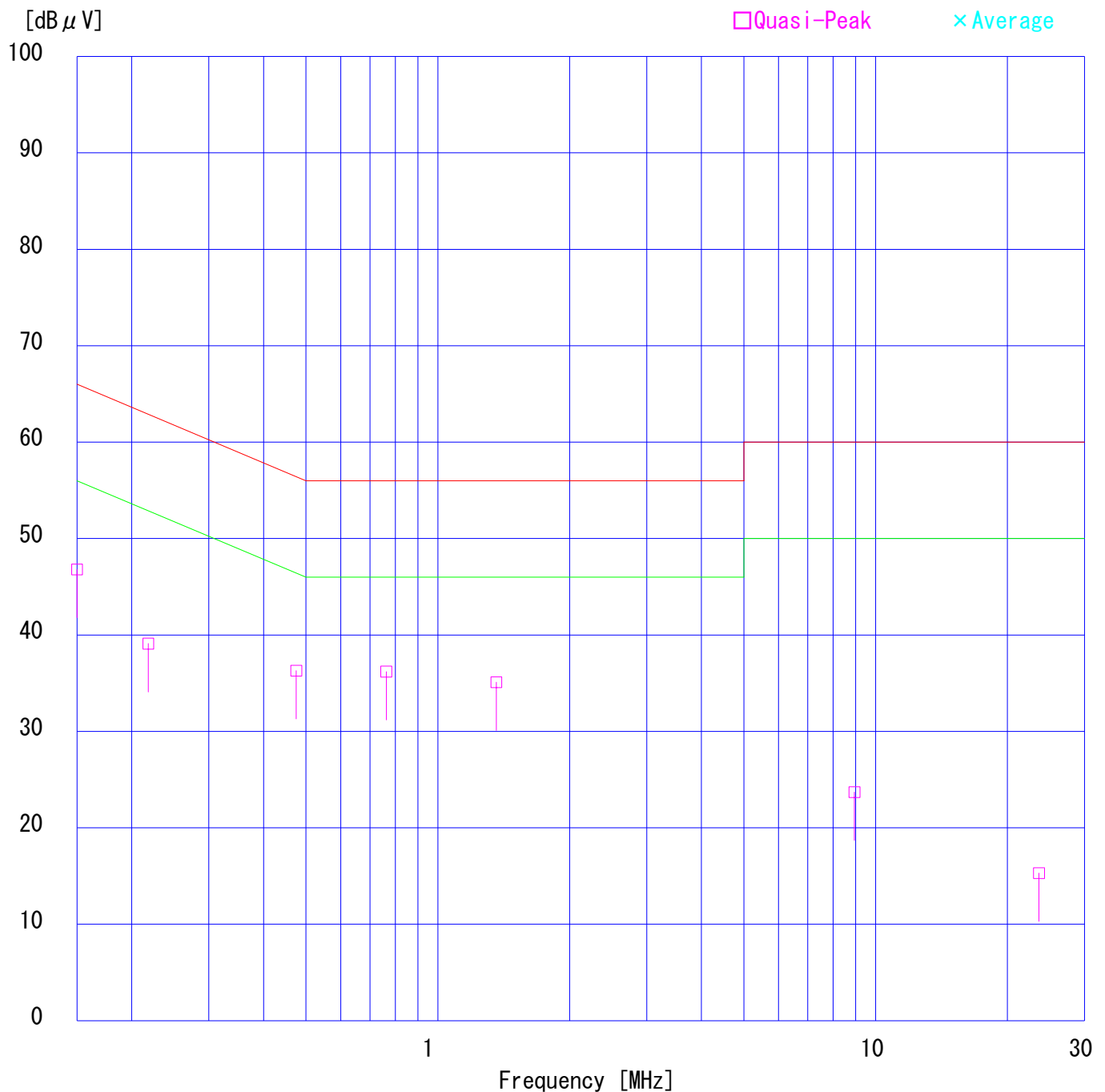
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+VCR Rec+DVD Rec
Remarks : 0dBmV
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

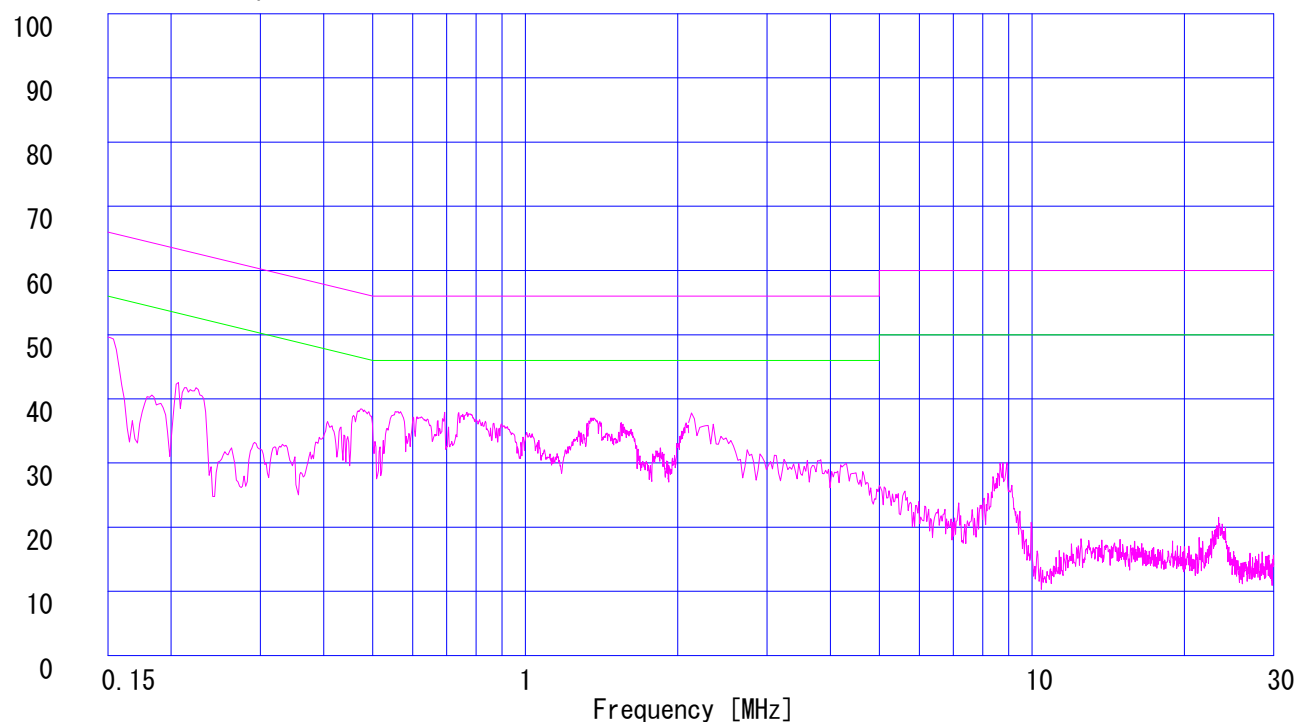
Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+VCR Rec+DVD Rec
Remarks : 0dBmV
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama

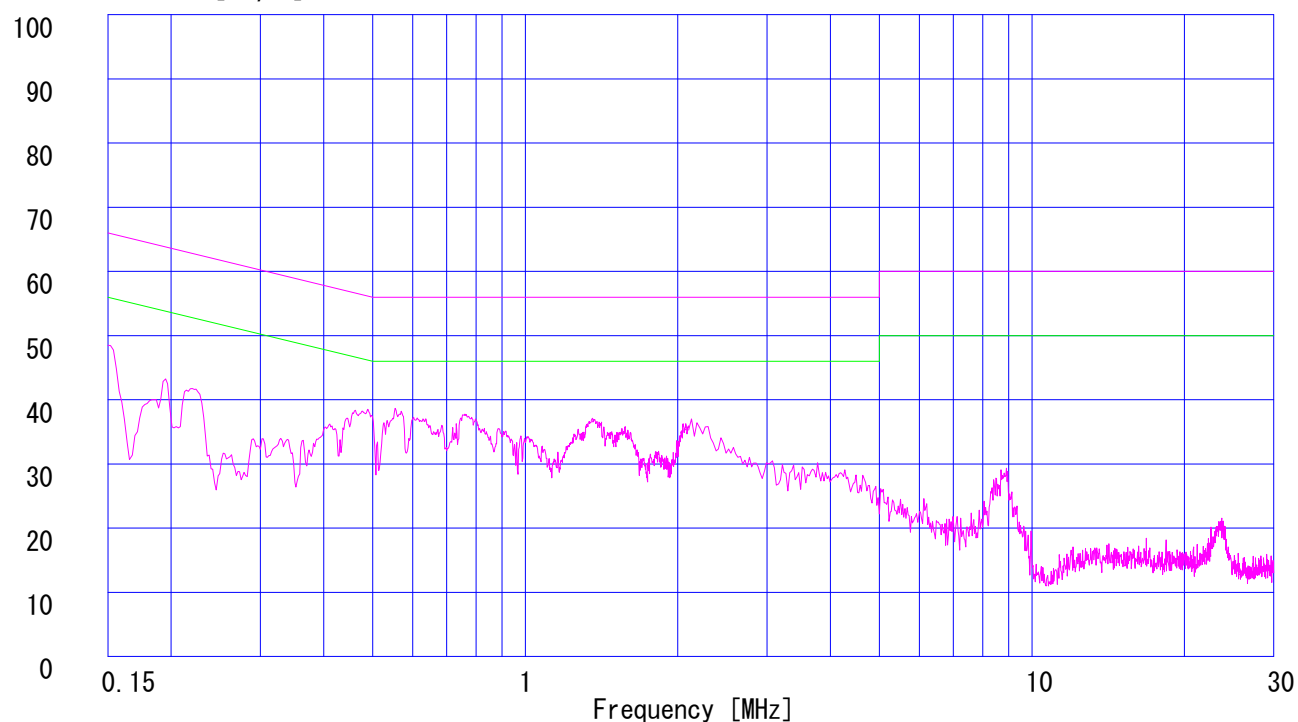
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+VCR Rec+DVD Rec
Remarks : 25dBmV
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)
Engineer : Masanori Nishiyama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB]
1.	0.1500	46.8	-	45.6	-	0.1	0.1	0.0	47.0	-	66.0	56.0	19.0	-
2.	0.2255	37.2	-	37.7	-	0.1	0.1	0.0	37.9	-	62.6	52.6	24.7	-
3.	0.4666	35.0	-	33.5	-	0.1	0.2	0.0	35.3	-	56.6	46.6	21.3	-
4.	0.7724	35.8	-	35.6	-	0.1	0.2	0.0	36.1	-	56.0	46.0	19.9	-
5.	1.4171	29.7	-	30.0	-	0.1	0.3	0.0	30.4	-	56.0	46.0	25.6	-
6.	8.8136	23.9	-	22.0	-	0.5	0.6	0.0	25.0	-	60.0	50.0	35.0	-
7.	23.3582	12.3	-	12.9	-	1.1	1.0	0.0	15.0	-	60.0	50.0	45.0	-

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

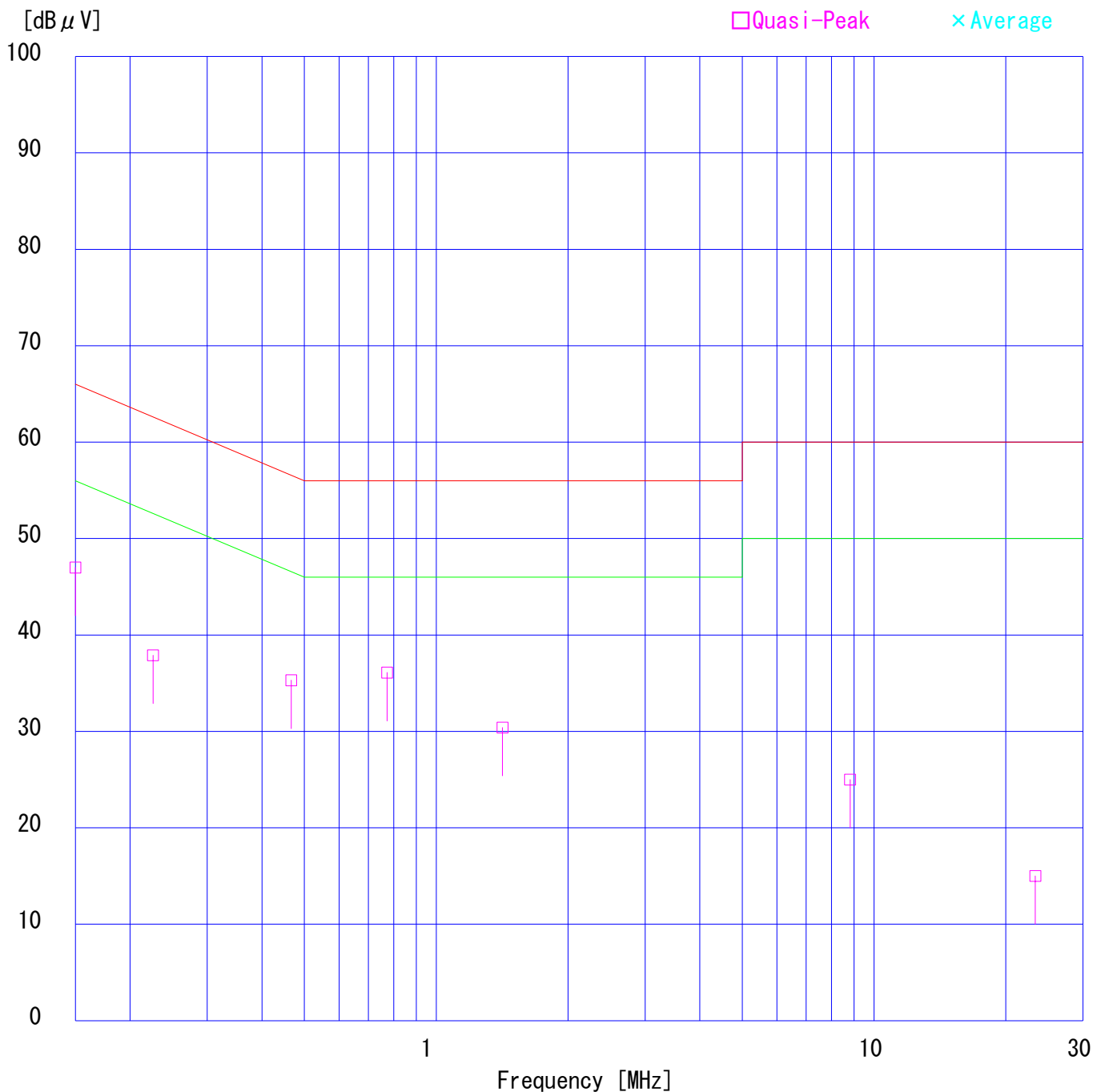
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+VCR Rec+DVD Rec
Remarks : 25dBmV
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

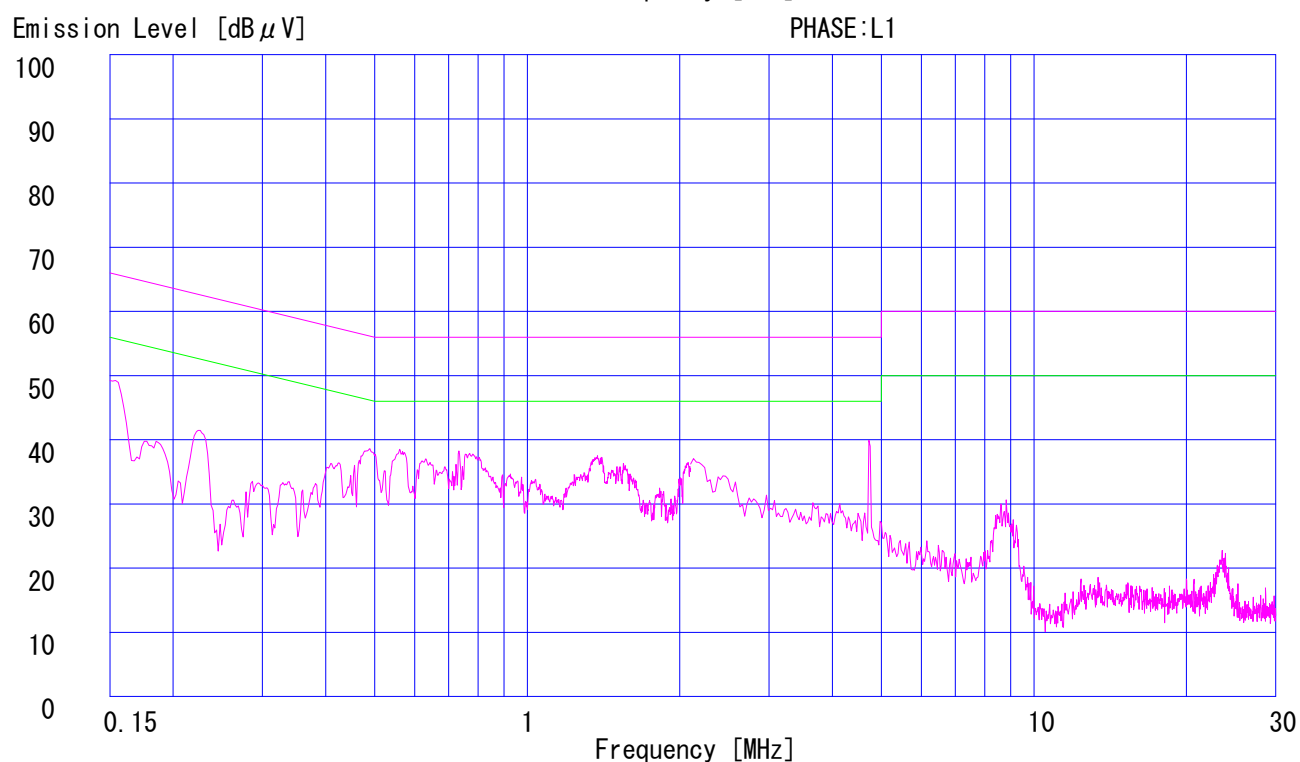
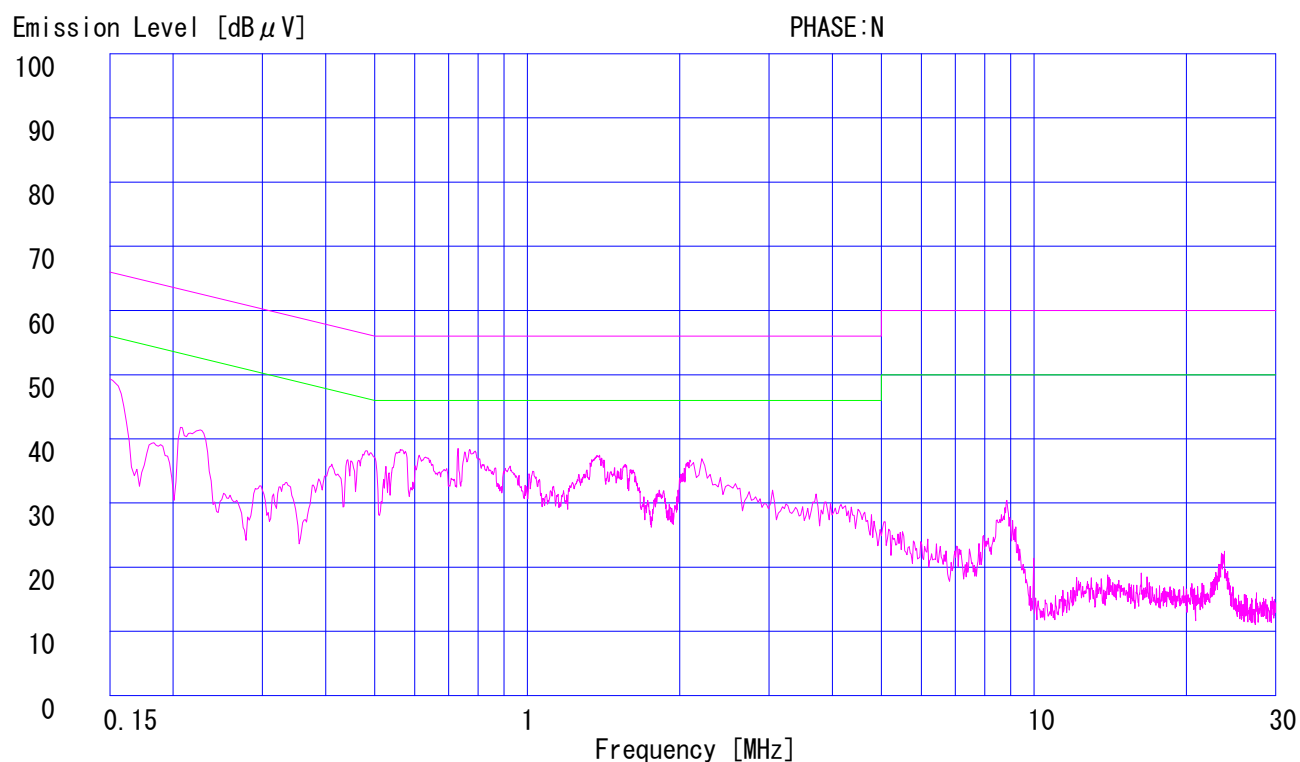
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception+VCR Rec+DVD Rec
Remarks : 25dBmV
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 1+VCR Rec+DVD Rec
Remarks : 1Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Masanori Nishiyama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dB μ V]		[dB μ V]					[dB]	[dB μ V]	[dB μ V]		[dB]	
1.	0.1500	44.4	-	45.3	-	0.1	0.1	0.0	45.5	-	66.0	56.0	20.5	-
2.	0.2209	37.7	-	36.4	-	0.1	0.1	0.0	37.9	-	62.8	52.8	24.9	-
3.	0.4809	33.6	-	33.8	-	0.1	0.2	0.0	34.1	-	56.3	46.3	22.2	-
4.	0.7599	36.4	-	36.2	-	0.1	0.2	0.0	36.7	-	56.0	46.0	19.3	-
5.	1.3458	34.7	-	34.5	-	0.1	0.3	0.0	35.1	-	56.0	46.0	20.9	-
6.	6.5172	18.8	-	19.9	-	0.4	0.5	0.0	20.8	-	60.0	50.0	39.2	-
7.	12.6172	15.6	-	15.8	-	0.6	0.7	0.0	17.1	-	60.0	50.0	42.9	-

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

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

DATA OF CONDUCTION TEST

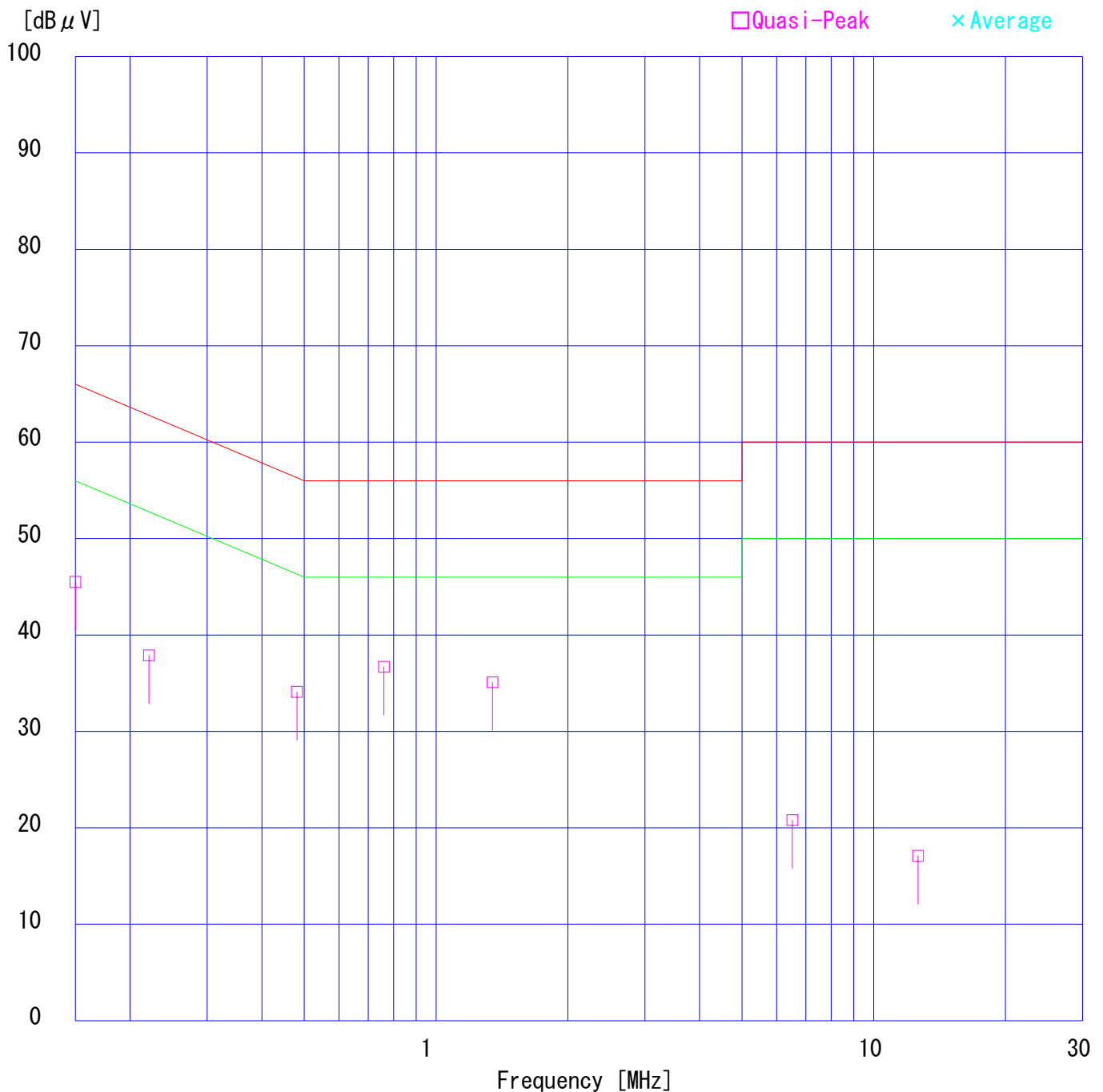
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 1+VCR Rec+DVD Rec
Remarks : 1Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

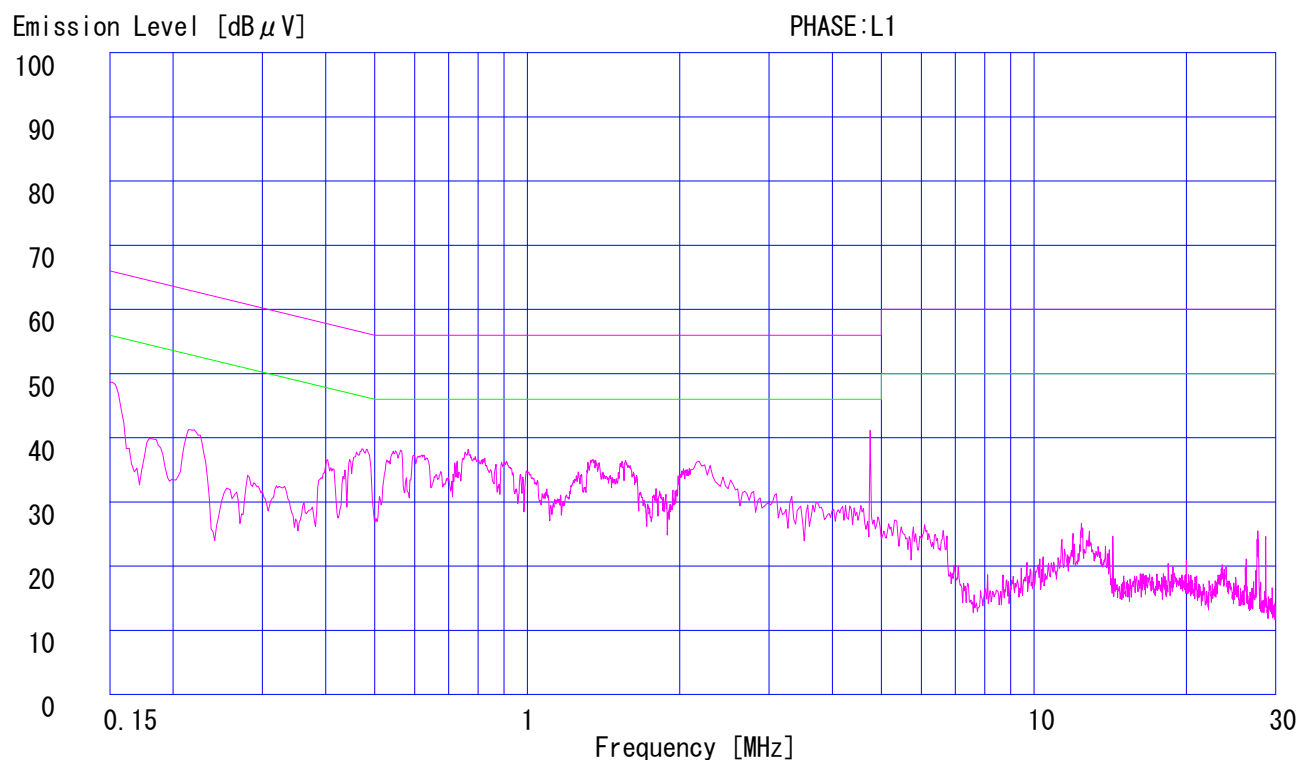
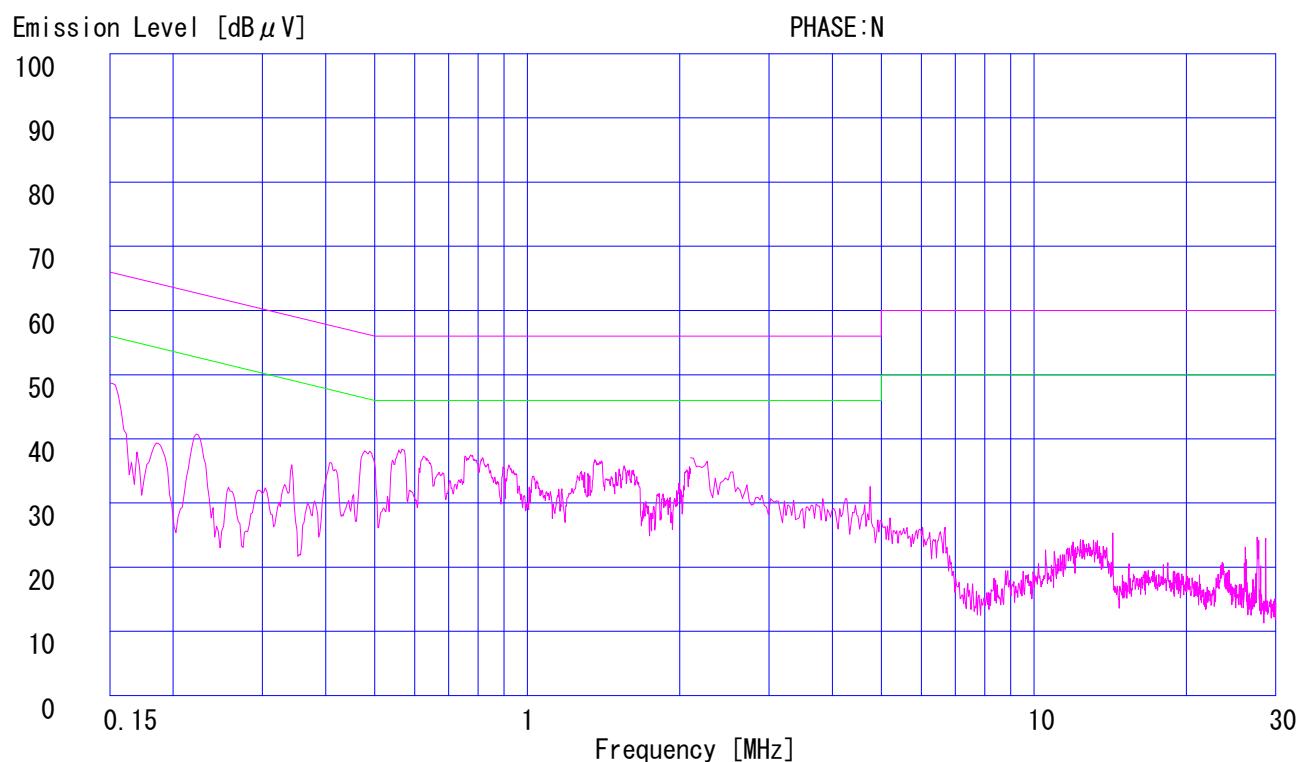
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 1+VCR Rec+DVD Rec
Remarks : 1Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 1+VCR Rec+DVD Rec
Remarks : 5Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Masanori Nishiyama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]
1.	0.1500	44.5	-	41.9	-	0.1	0.1	0.0	44.7	-	66.0	56.0	21.3	-
2.	0.2183	38.7	-	38.8	-	0.1	0.1	0.0	39.0	-	62.9	52.9	23.9	-
3.	0.4731	35.5	-	35.7	-	0.1	0.2	0.0	36.0	-	56.5	46.5	20.5	-
4.	0.7634	36.6	-	35.9	-	0.1	0.2	0.0	36.9	-	56.0	46.0	19.1	-
5.	2.2063	33.8	-	33.8	-	0.2	0.3	0.0	34.3	-	56.0	46.0	21.7	-
6.	5.9434	18.9	-	17.7	-	0.3	0.5	0.0	19.7	-	60.0	50.0	40.3	-
7.	12.6370	15.9	-	15.2	-	0.6	0.7	0.0	17.2	-	60.0	50.0	42.8	-

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

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

DATA OF CONDUCTION TEST

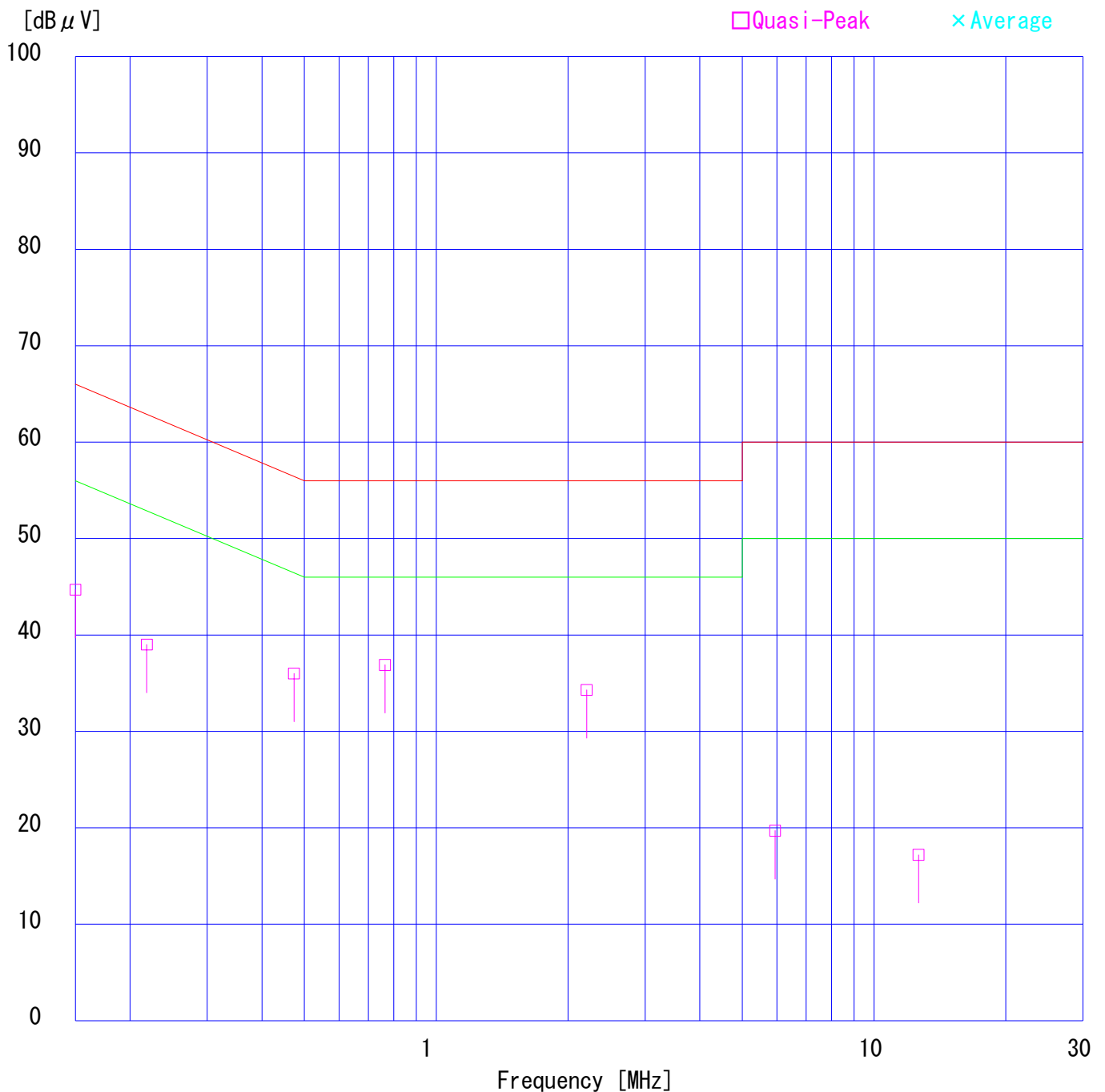
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 1+VCR Rec+DVD Rec
Remarks : 5Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

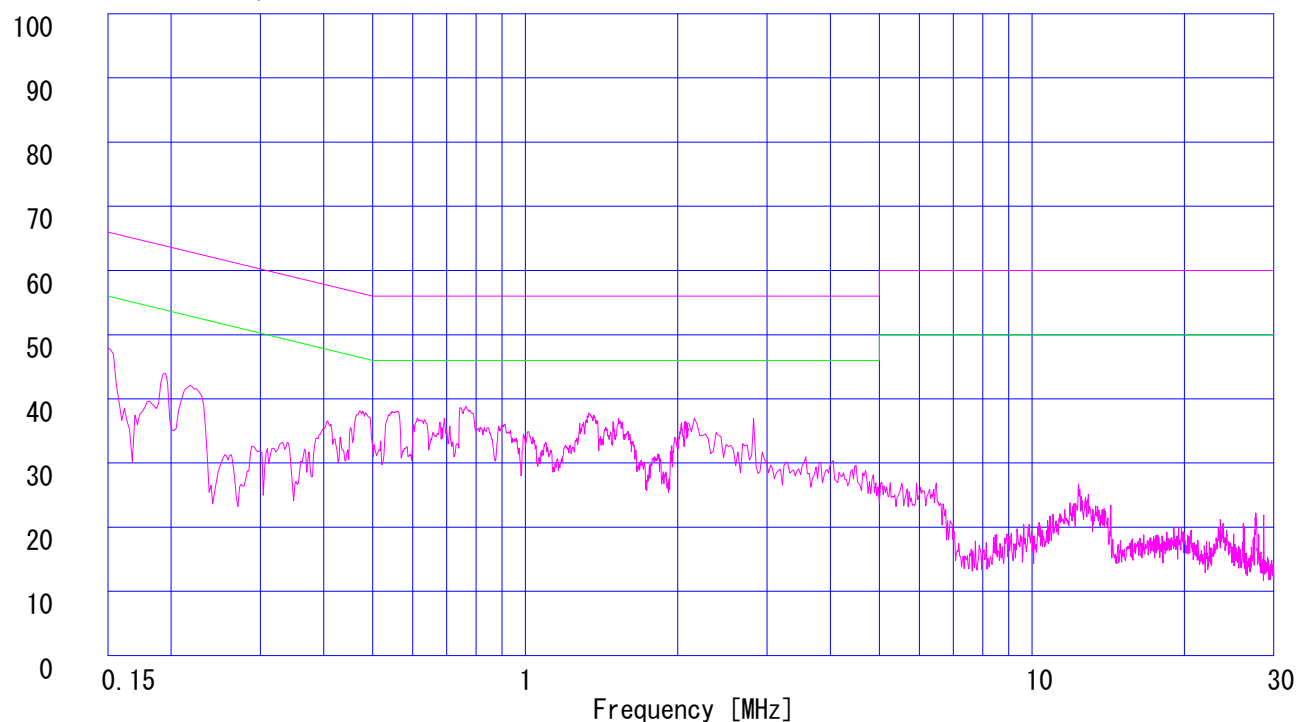
Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 1+VCR Rec+DVD Rec
Remarks : 5Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama

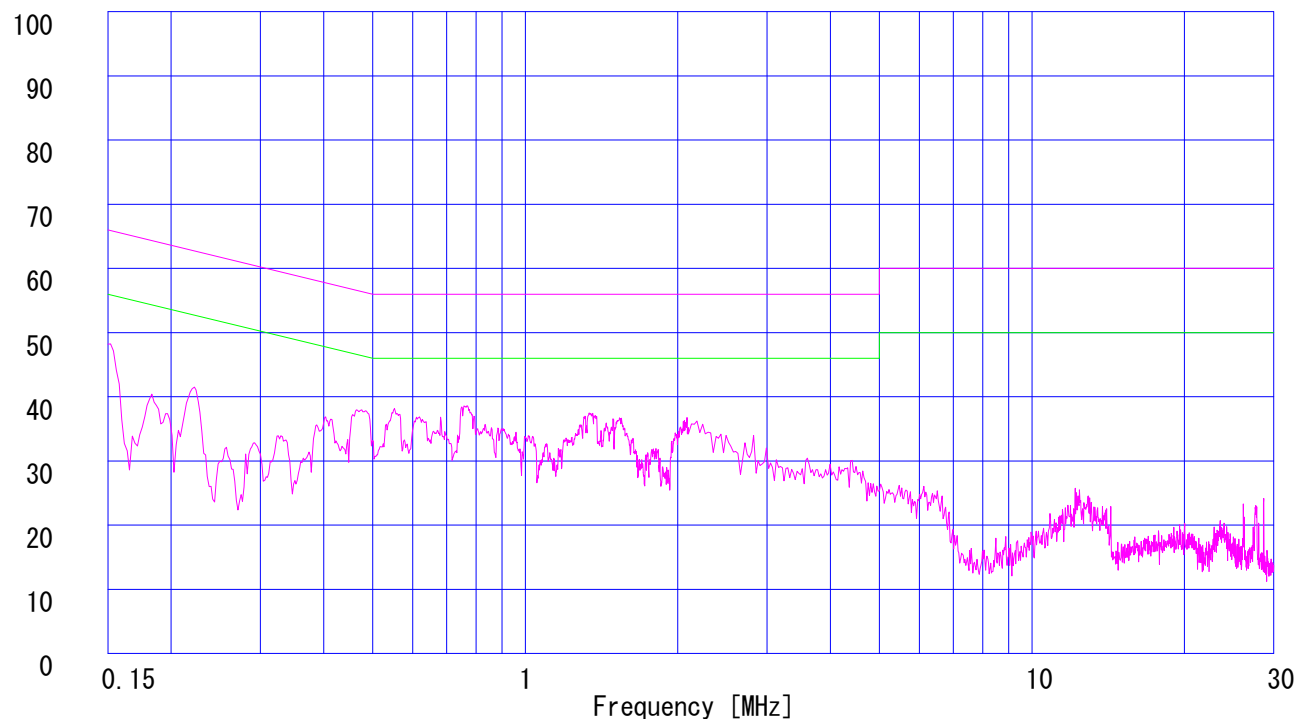
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 2+VCR Rec+DVD Rec
Remarks : 1Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Masanori Nishiyama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB]
1.	0.1500	44.5	-	44.5	-	0.1	0.1	0.0	44.7	-	66.0	56.0	21.3	-
2.	0.2151	37.4	-	37.7	-	0.1	0.1	0.0	37.9	-	63.0	53.0	25.1	-
3.	0.4694	35.5	-	35.5	-	0.1	0.2	0.0	35.8	-	56.5	46.5	20.7	-
4.	0.7368	33.1	-	32.4	-	0.1	0.2	0.0	33.4	-	56.0	46.0	22.6	-
5.	1.3656	33.5	-	33.4	-	0.1	0.3	0.0	33.9	-	56.0	46.0	22.1	-
6.	5.2231	18.5	-	19.6	-	0.3	0.5	0.0	20.4	-	60.0	50.0	39.6	-
7.	13.6989	18.6	-	18.6	-	0.7	0.8	0.0	20.1	-	60.0	50.0	39.9	-

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

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

DATA OF CONDUCTION TEST

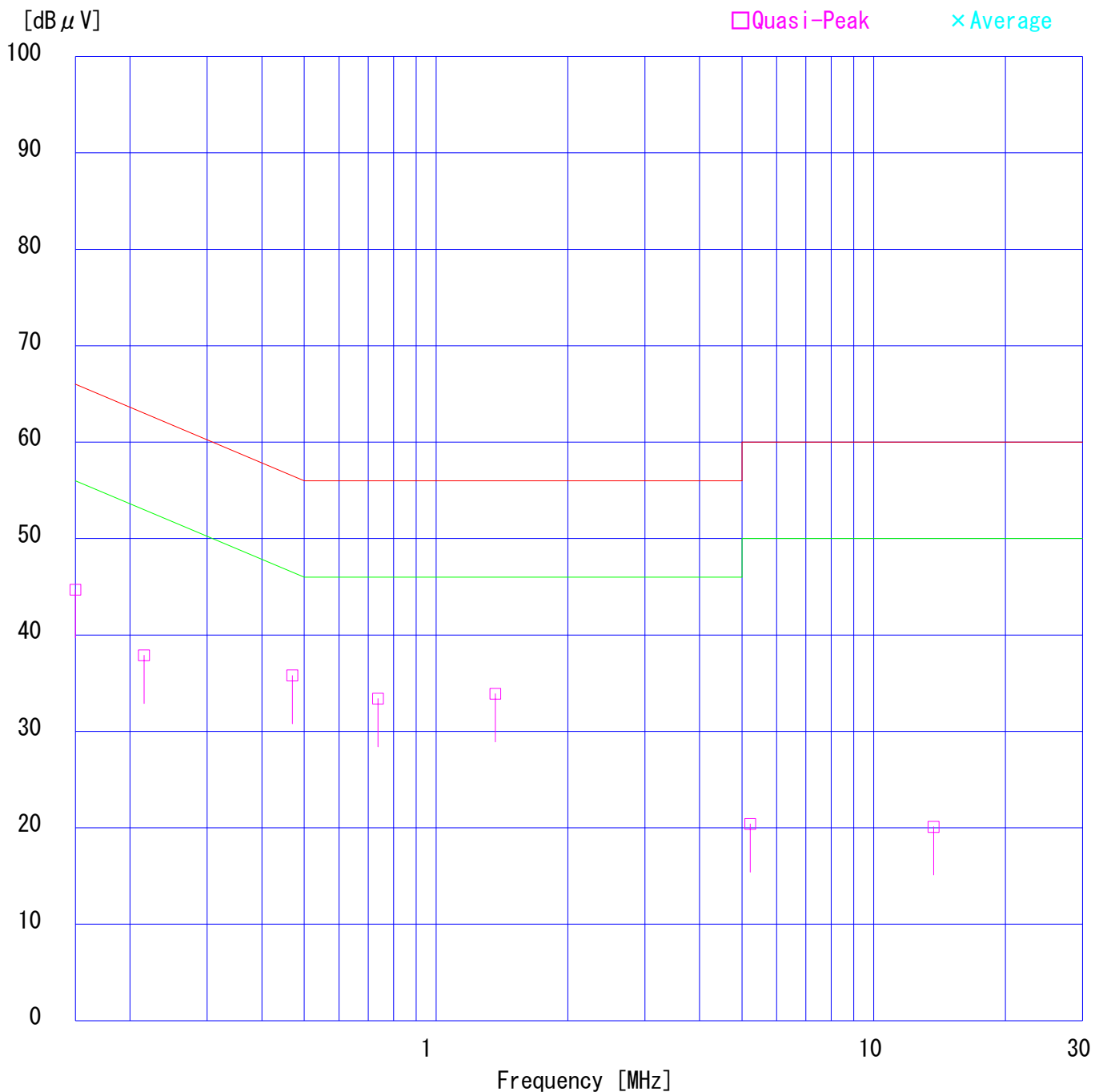
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 2+VCR Rec+DVD Rec
Remarks : 1Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

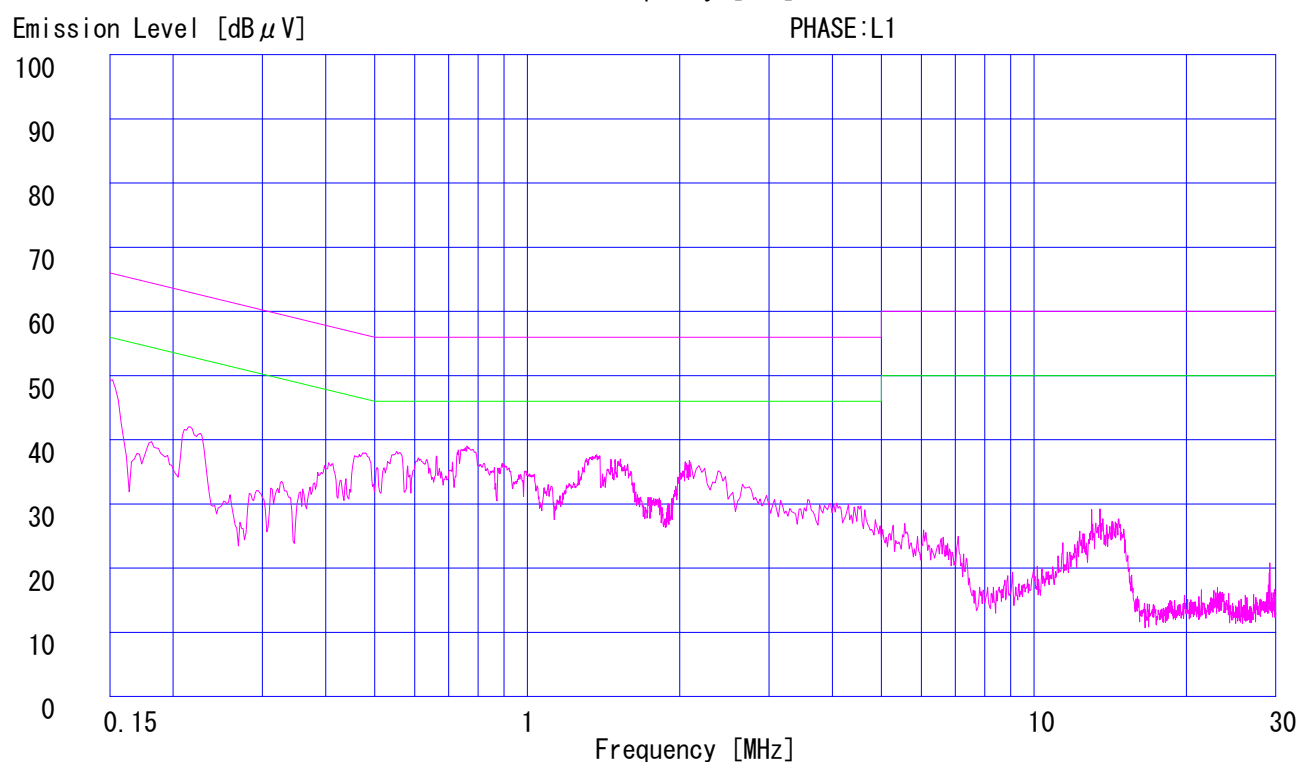
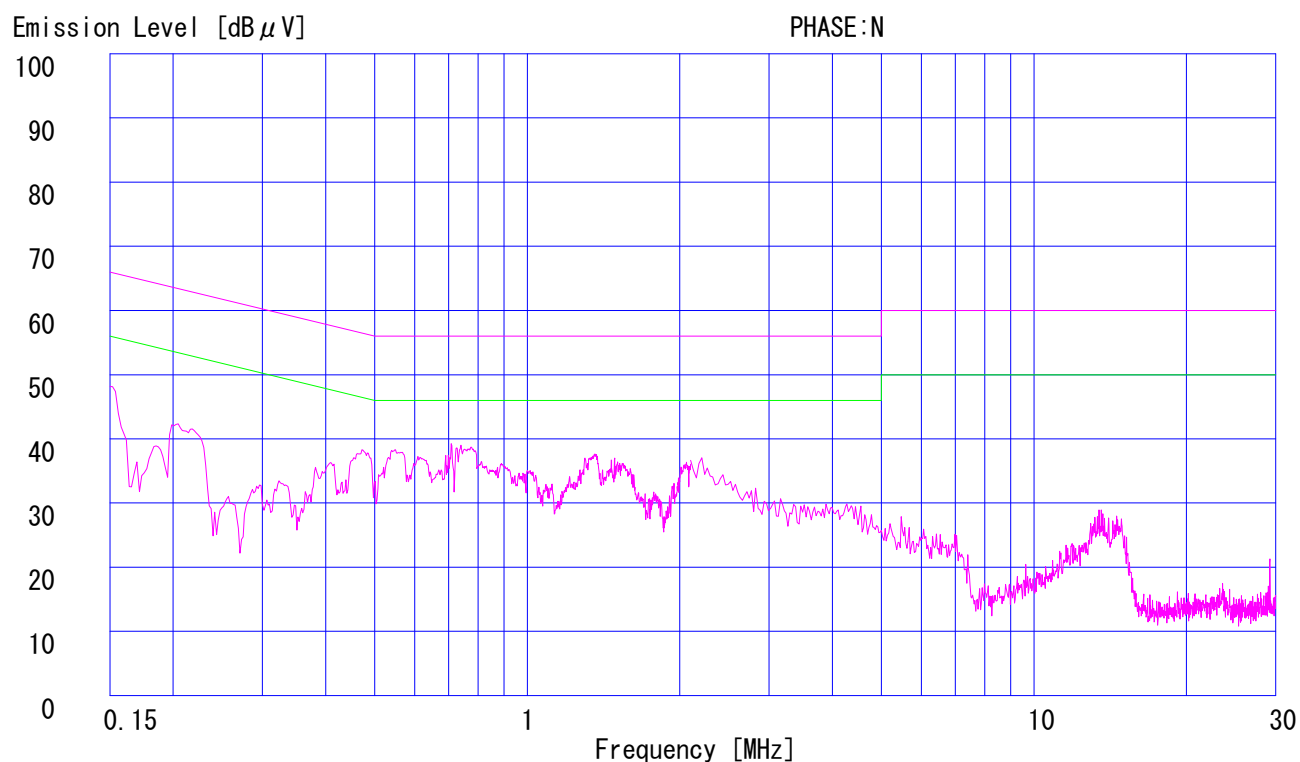
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 2+VCR Rec+DVD Rec
Remarks : 1Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 2+VCR Rec+DVD Rec
Remarks : 5Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Masanori Nishiyama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR	CABLE LOSS	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dB μ V]		[dB μ V]		[dB]	[dB]		[dB]	[dB μ V]	[dB μ V]		[dB]	
1.	0.1500	45.8	-	44.6	-	0.1	0.1	0.0	46.0	-	66.0	56.0	20.0	-
2.	0.2212	38.2	-	38.2	-	0.1	0.1	0.0	38.4	-	62.8	52.8	24.4	-
3.	0.4745	35.6	-	35.8	-	0.1	0.2	0.0	36.1	-	56.4	46.4	20.3	-
4.	0.7672	36.5	-	36.2	-	0.1	0.2	0.0	36.8	-	56.0	46.0	19.2	-
5.	1.3750	31.9	-	33.1	-	0.1	0.3	0.0	33.5	-	56.0	46.0	22.5	-
6.	5.2028	20.3	-	18.6	-	0.3	0.5	0.0	21.1	-	60.0	50.0	38.9	-
7.	13.5980	19.7	-	19.3	-	0.7	0.8	0.0	21.2	-	60.0	50.0	38.8	-

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

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

DATA OF CONDUCTION TEST

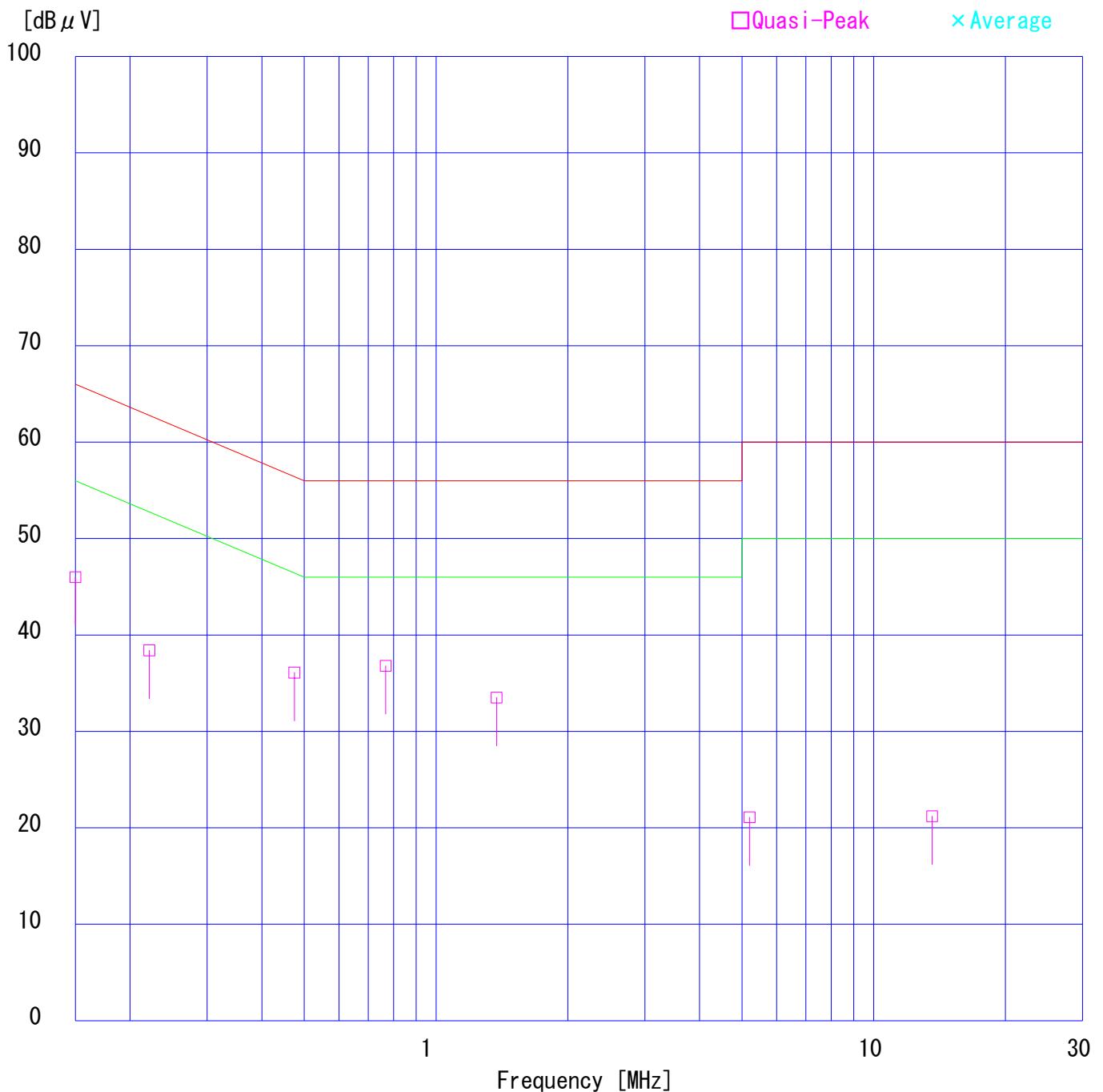
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 2+VCR Rec+DVD Rec
Remarks : 5Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

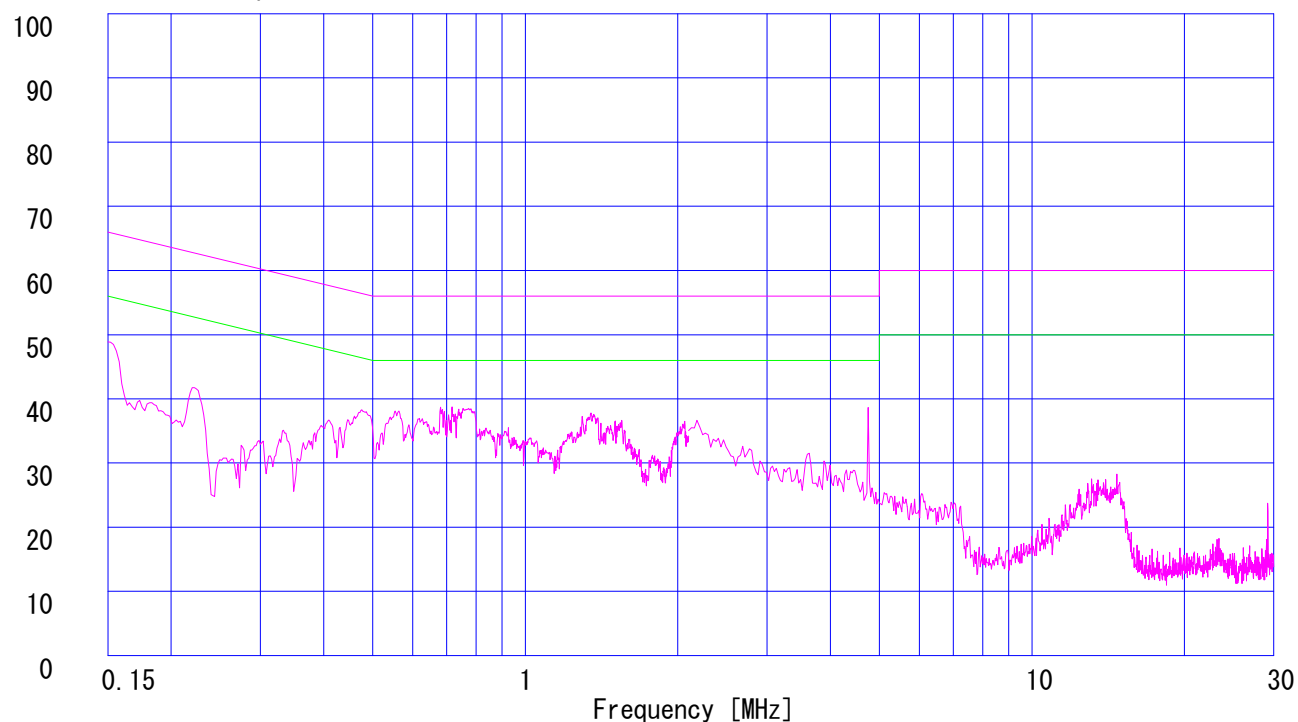
Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input 2+VCR Rec+DVD Rec
Remarks : 5Vp-p
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama

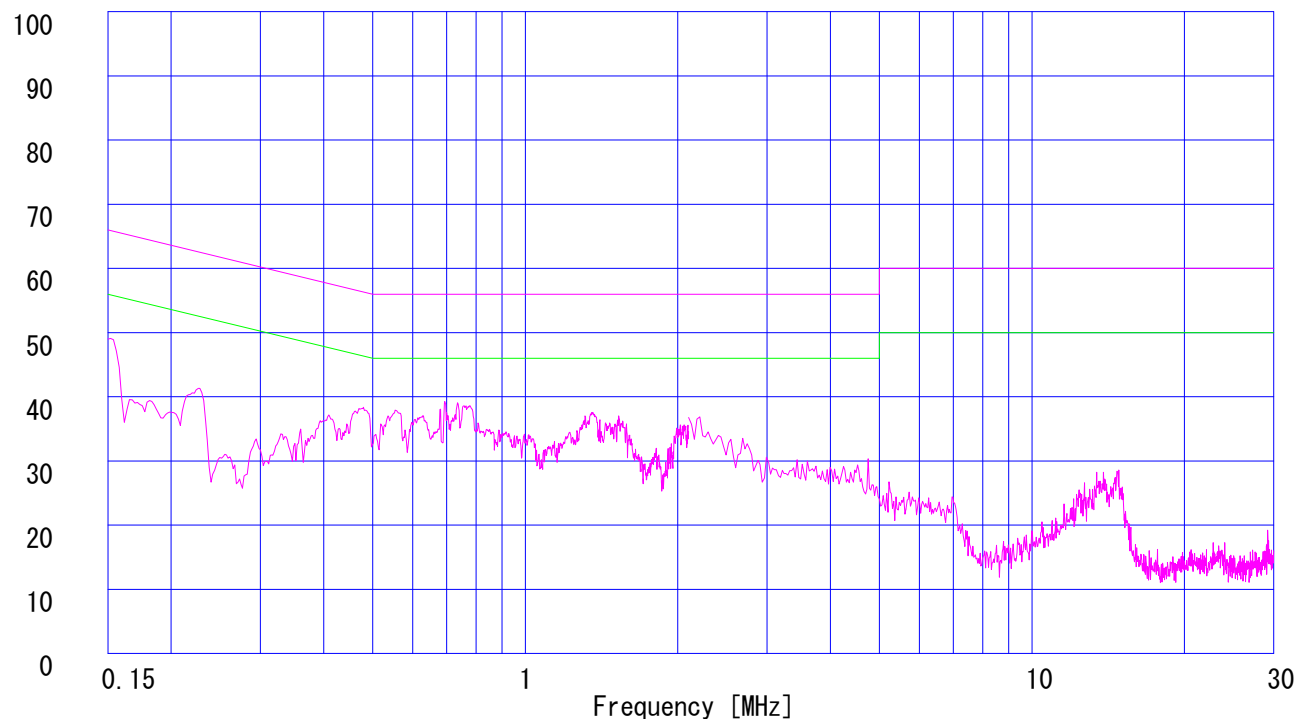
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : VCR PLAYBACK+DVD Rec
Remarks :
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Masanori Nishiyama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dB μ V]		[dB μ V]					[dB]	[dB μ V]	[dB μ V]		[dB]	
1.	0.1500	46.2	-	44.3	-	0.1	0.1	0.0	46.4	-	66.0	56.0	19.6	-
2.	0.2209	39.3	-	40.1	-	0.1	0.1	0.0	40.3	-	62.8	52.8	22.5	-
3.	0.4685	34.8	-	34.2	-	0.1	0.2	0.0	35.1	-	56.5	46.5	21.4	-
4.	0.7321	31.3	-	32.3	-	0.1	0.2	0.0	32.6	-	56.0	46.0	23.4	-
5.	2.1785	30.3	-	29.2	-	0.2	0.3	0.0	30.8	-	56.0	46.0	25.2	-
6.	5.1329	15.8	-	16.8	-	0.3	0.4	0.0	17.5	-	60.0	50.0	42.5	-
7.	16.5467	22.3	-	22.9	-	0.8	0.8	0.0	24.5	-	60.0	50.0	35.5	-

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

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

DATA OF CONDUCTION TEST

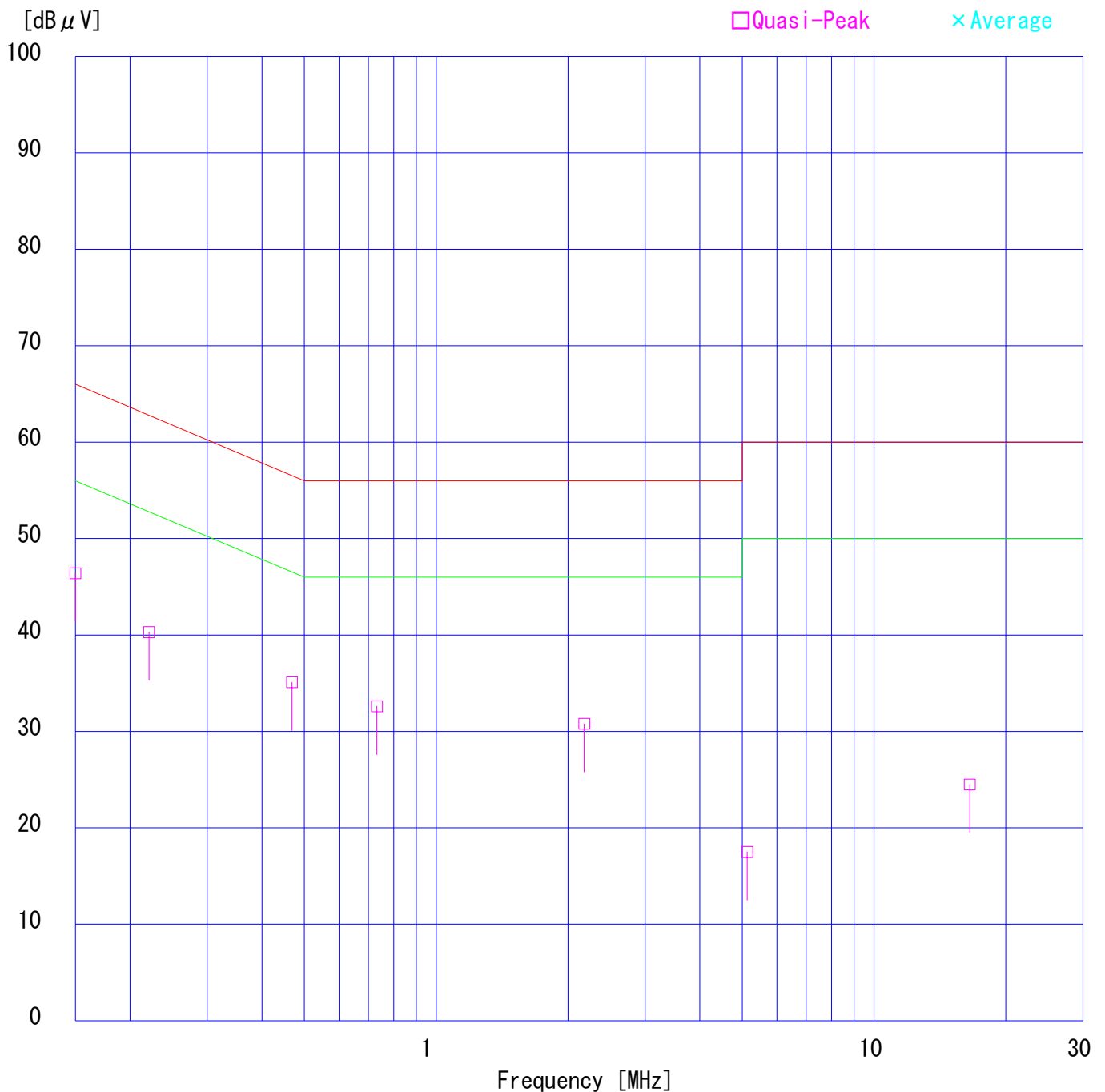
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : VCR PLAYBACK+DVD Rec
Remarks :
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

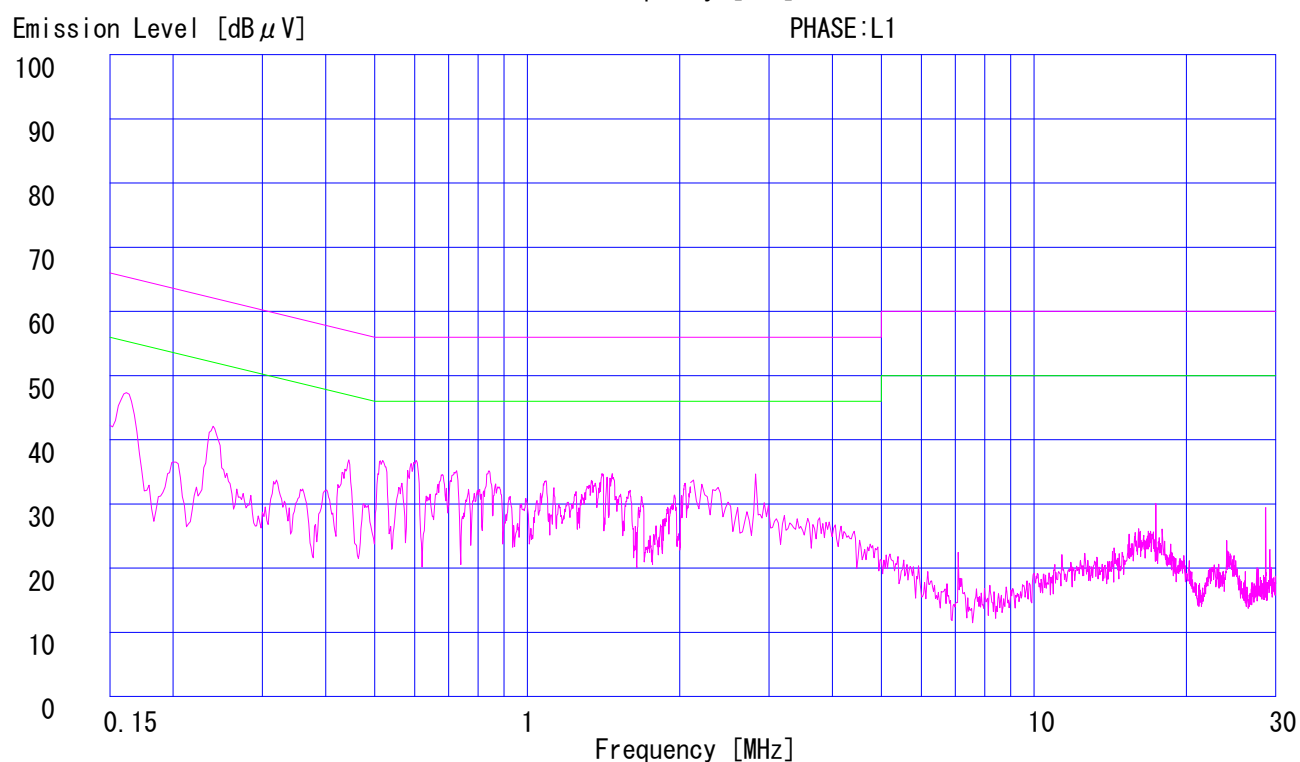
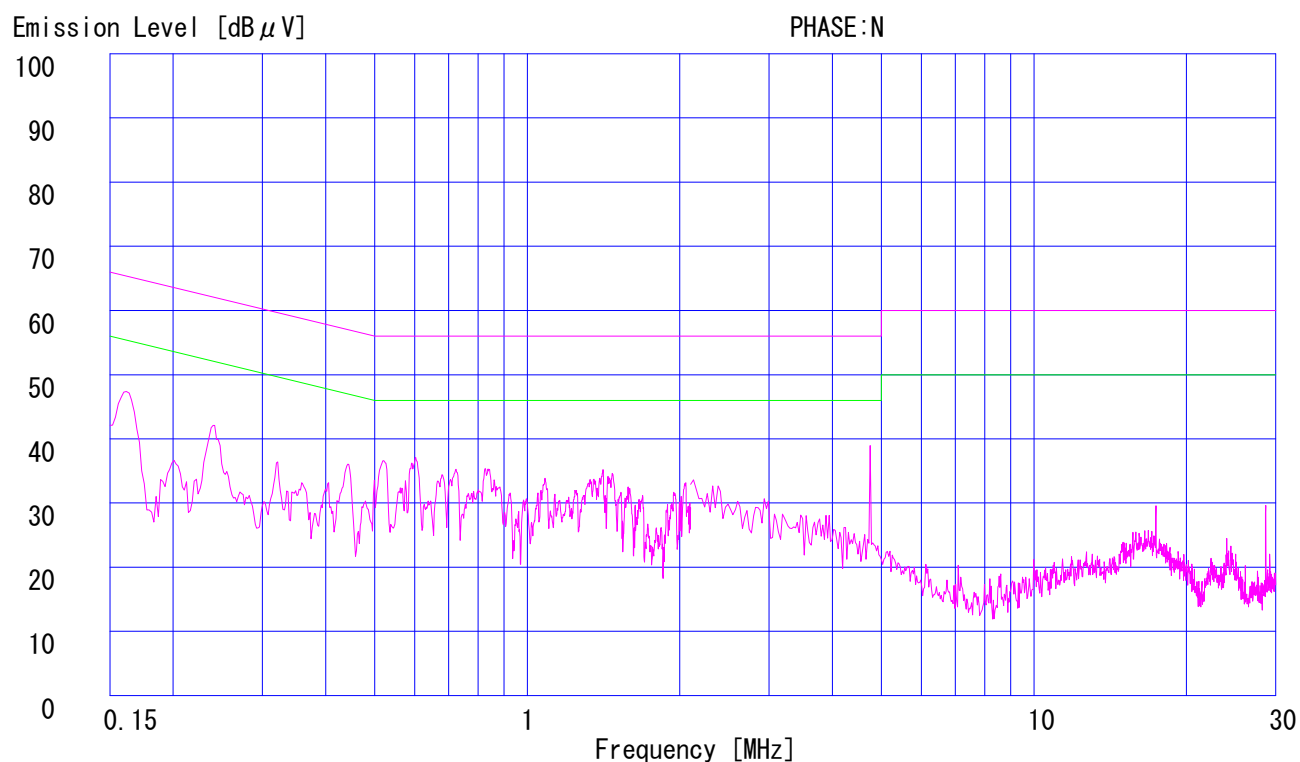
UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : VCR PLAYBACK+DVD Rec
Remarks :
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : DVD PLAY+VCR Rec
Remarks :
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(2003)

Engineer : Masanori Nishiyama

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR	CABLE LOSS	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dB μ V]		[dB μ V]		[dB]	[dB]		[dB]	[dB μ V]	[dB μ V]		[dB]	
1.	0.1500	45.4	-	45.7	-	0.1	0.1	0.0	45.9	-	66.0	56.0	20.1	-
2.	0.2211	39.5	-	39.1	-	0.1	0.1	0.0	39.7	-	62.8	52.8	23.1	-
3.	0.4693	33.4	-	33.8	-	0.1	0.2	0.0	34.1	-	56.5	46.5	22.4	-
4.	0.7305	30.4	-	30.7	-	0.1	0.2	0.0	31.0	-	56.0	46.0	25.0	-
5.	2.1937	29.3	-	28.9	-	0.2	0.3	0.0	29.8	-	56.0	46.0	26.2	-
6.	5.1427	14.3	-	16.2	-	0.3	0.4	0.0	16.9	-	60.0	50.0	43.1	-
7.	16.5377	22.8	-	23.3	-	0.8	0.8	0.0	24.9	-	60.0	50.0	35.1	-

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

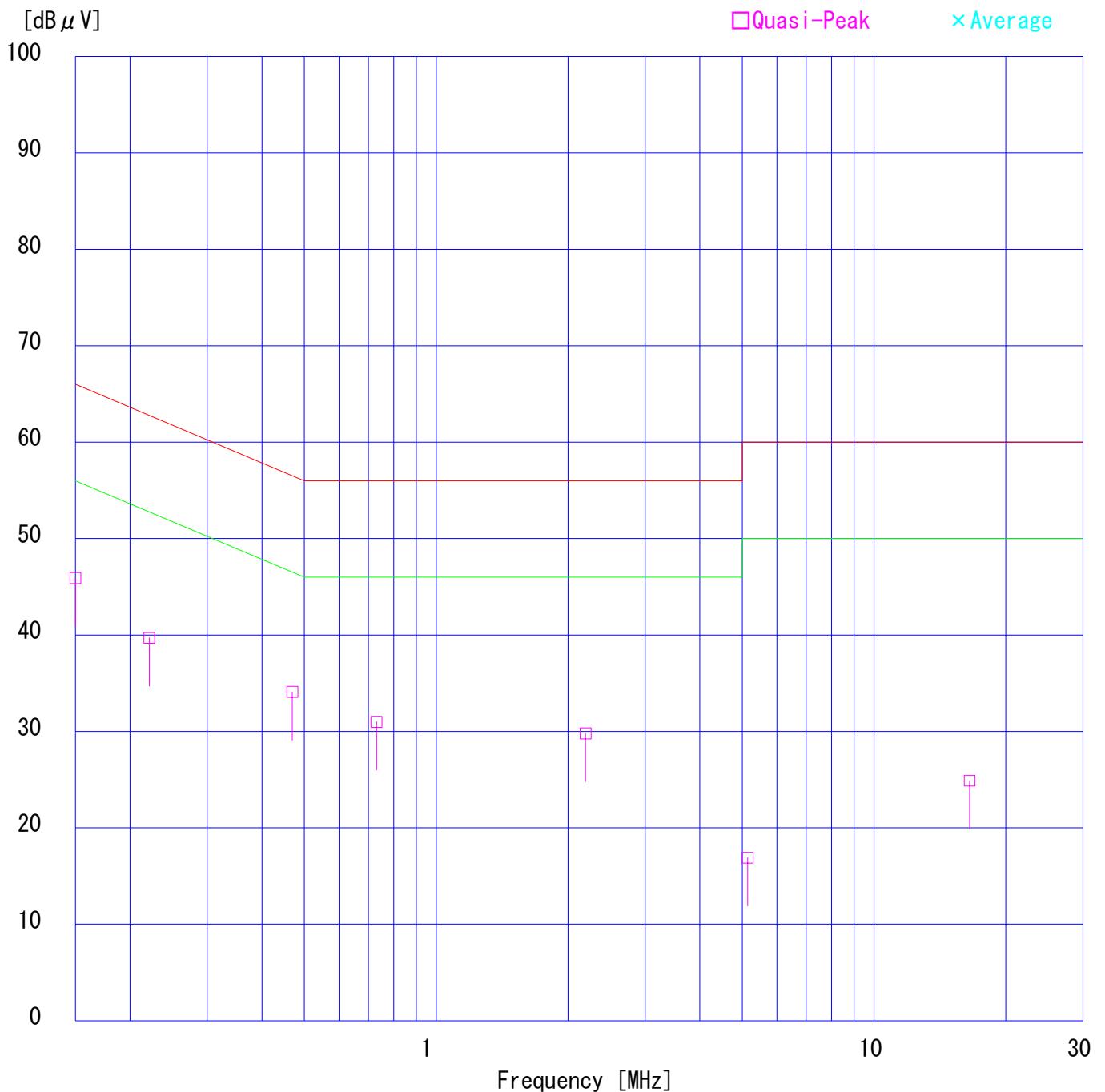
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 SHIELD TEST ROOM
Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : DVD PLAY+VCR Rec
Remarks :
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (2003)

Engineer : Masanori Nishiyama



DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.

YOKOWA No.1 SHIELD TEST ROOM

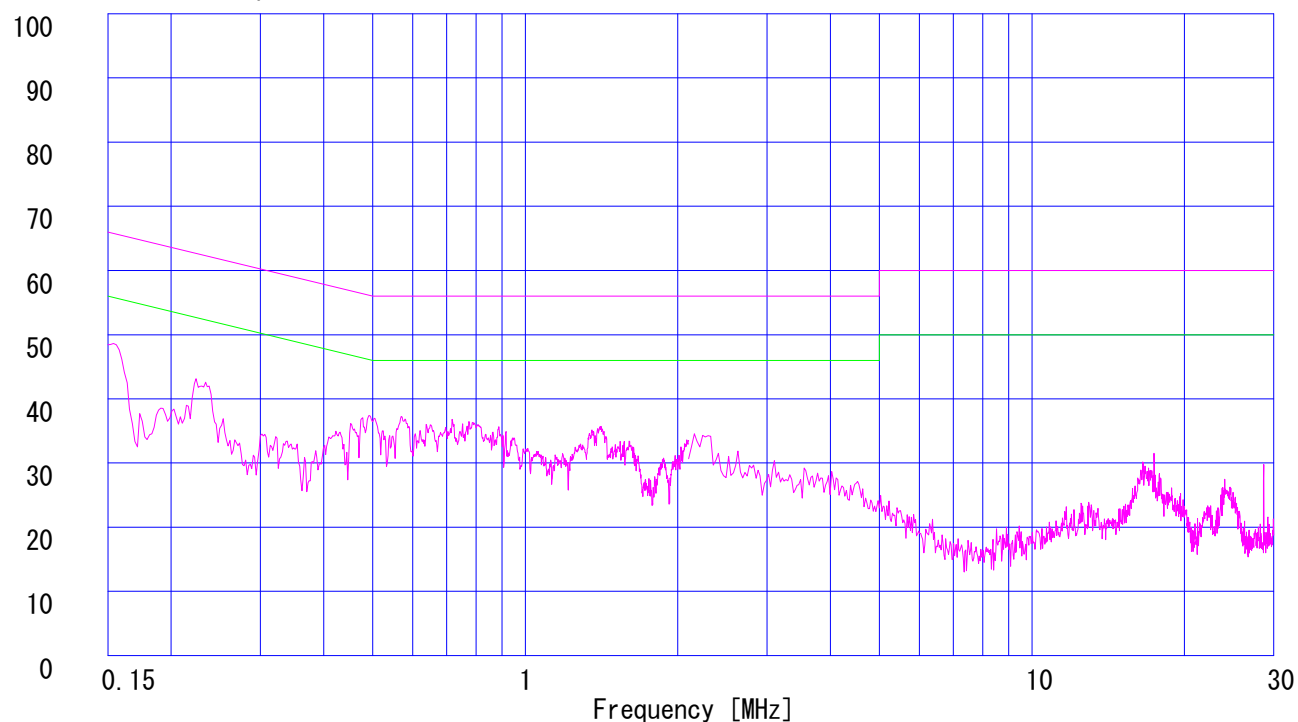
Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : DVD PLAY+VCR Rec
Remarks :
Date : 4/28/2006
Phase : Single Phase
Temperature : 21 °C
Humidity : 38 %
Regulation 1 : FCC Part15B CLASS B (2003)
Regulation 2 : None

Engineer : Masanori Nishiyama

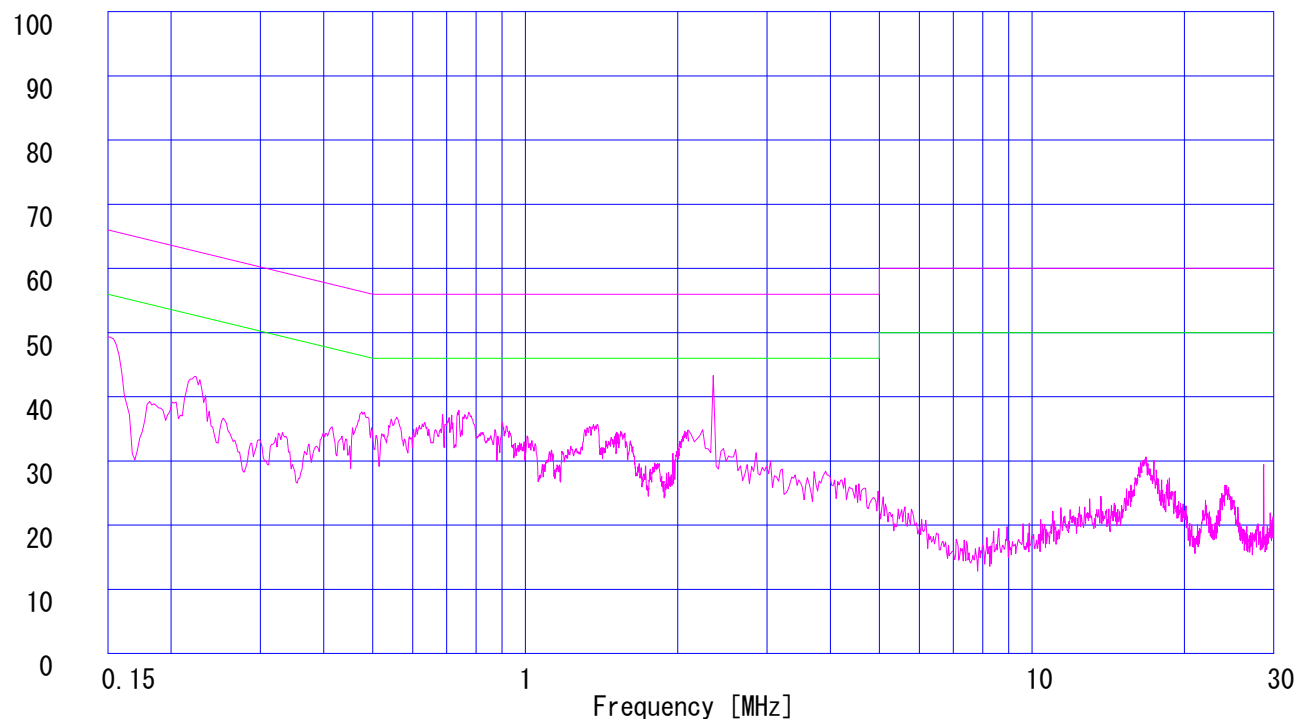
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL No. : DVR-RT502-S
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 26IE0251-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : April 21, 2006
TEMP./HUMID. : 17°C / 75%
ENGINEER : Go Ishiwata

*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.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[dBuV/m]	HOR.	VER.	HOR.	VER.	
		[dBuV]						[dBuV/m]					[dB]				
VHF																	
2	101	24.7	27.3			BC	-9.2	15.5	18.1			43.5		28.0	25.4		
	202					BC	-1.5					43.5		>10.0			
	303					LO	-1.3					46.0					
	404					LO	0.6					46.0					
	505					LO	2.4					46.0					
	606					LO	4.5					46.0					
	707					LO	5.8					46.0					
	808					LO	6.2					46.0					
	909					LO	8.5					46.0					
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)						
		HOR.	HOR.	TYPE	[dBuV]	HOR.	HOR.	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]					
		[dBuV]	[dBuV]			[dBuV/m]	[dBuV/m]										
	1010			HO	-11.2			74.0	54.0	>10.0	>10.0						
	1111			HO	-10.2			74.0	54.0								
	1212			HO	-9.3			74.0	54.0								
	1313			HO	-8.5			74.0	54.0								
	1414			HO	-7.6			74.0	54.0								
1515	HO			-6.7	74.0			54.0									
1616	HO			-5.7	74.0			54.0									
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)				
	[MHz]	HOR.	VER.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[dBuV/m]	HOR.	VER.	HOR.	VER.	
		[dBuV]						[dBuV/m]				[dBuV/m]	[dBuV/m]	[dB]			
3	107	24.2	25.2			BC	-8.2	16.0	17.0			43.5		27.5	26.5		
	214					BC	-1.2					43.5		>10.0			
	321					LO	-0.8					46.0					
	428					LO	0.8					46.0					
	535					LO	3.0					46.0					
	642					LO	5.1					46.0					
	749					LO	6.0					46.0					
	856					LO	7.3					46.0					
	963					LO	9.5					54.0					
		READING(PK)	READING(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)						
		HOR.	HOR.	TYPE	[dBuV]	HOR.	HOR.	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]					
		[dBuV]	[dBuV]			[dBuV/m]	[dBuV/m]										
	1070			HO	-10.6			74.0	54.0	>10.0	>10.0						
	1177			HO	-9.7			74.0	54.0								
	1284			HO	-8.8			74.0	54.0								
	1391			HO	-7.8			74.0	54.0								
	1498			HO	-6.8			74.0	54.0								
1605	HO			-5.9	74.0			54.0									
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT	MARGIN(QP)				
	[MHz]	HOR.	VER.	HOR.	VER.	TYPE	[dBuV]	HOR.	VER.	HOR.	VER.	[dBuV/m]	HOR.	VER.	HOR.	VER.	
		[dBuV]						[dBuV/m]				[dBuV/m]	[dBuV/m]	[dB]			
4	113	24.2	26.4			BC	-7.5	16.7	18.9			43.5		26.8	24.6		
	226					BC	-1.0					46.0		>10.0			
	339					LO	-0.6					46.0					
	452					LO	1.2					46.0					
	565					LO	3.8					46.0					
	678					LO	5.4					46.0					
	791					LO	6.0					46.0					
	904					LO	8.4					46.0					
						READING(PK)	READING(AV)					ANT					C.Factor
		HOR.	HOR.	TYPE	[dBuV]	HOR.	HOR.	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]					
		[dBuV]	[dBuV]			[dBuV/m]	[dBuV/m]										
	1017			HO	-11.1			74.0	54.0	>10.0	>10.0						
	1130			HO	-10.2			74.0	54.0								
	1243			HO	-9.1			74.0	54.0								
	1356			HO	-8.1			74.0	54.0								
	1469			HO	-7.1			74.0	54.0								
	1582			HO	-6.1			74.0	54.0								

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL No. : DVR-RT502-S
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 26IE0251-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : April 21, 2006
TEMP./HUMID. : 17°C / 75 %
ENGINEER : Go Ishiwata

*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	READINNG(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[QP]			HOR.	VER.		
VHF																		
5	123	22.5	23.9			BC	-6.3	16.2	17.6			43.5			27.3	25.9		
	246					BC	-0.3					46.0			>10.0			
	369					LO	-0.1					46.0						
	492					LO	2.0					46.0						
	615					LO	4.7					46.0						
	738					LO	5.9					46.0						
	861					LO	7.5					46.0						
	984					LO	10.0					54.0						
		READING(PK)	READINNG(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]								
1107					HO	-10.3					74.0	54.0	>10.0		>10.0			
1230					HO	-9.2					74.0	54.0						
1353					HO	-8.1					74.0	54.0						
1476					HO	-7.1					74.0	54.0						
1599					HO	-5.9					74.0	54.0						
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[QP]			HOR.	VER.		
		[dBuV]						[dBuV/m]				[dBuV/m]			[dB]	[dB]		
6	129	26.9	25.2			BC	-5.7	21.2	19.5			43.5			22.3	24.0		
	258					BC	0.3					46.0			>10.0			
	387					LO	0.2					46.0						
	516					LO	2.6					46.0						
	645					LO	5.1					46.0						
	774					LO	5.9					46.0						
	903					LO	8.3					46.0						
						READING(PK)	READINNG(AV)					ANT						C.Factor
		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]							
1032					HO	-11.0					74.0	54.0	>10.0		>10.0			
1161					HO	-9.8					74.0	54.0						
1290					HO	-8.6					74.0	54.0						
1419					HO	-7.5					74.0	54.0						
1548					HO	-6.4					74.0	54.0						
1677					HO	-5.3					74.0	54.0						
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[QP]			HOR.	VER.		
		[dBuV]						[dBuV/m]				[dBuV/m]			[dB]	[dB]		
7	221	25.6	22.2			BC	-1.0	24.6	21.2			46.0			21.4	24.8		
	442					LO	1.1	>10.0				46.0			>10.0			
	663					LO	5.2					46.0						
	884					LO	7.9					46.0						
		READING(PK)	READINNG(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]							
1105					HO	-10.3					74.0	54.0	>10.0		>10.0			
1326					HO	-8.3					74.0	54.0						
1547					HO	-6.4					74.0	54.0						
CH.	FREQ	READINNG(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]		
8	227	24.5	21.6			BC	-1.0	23.5	20.6			46.0			22.5	25.4		
	454					LO	1.3					46.0			>10.0			
	681					LO	5.4					46.0						
	908					LO	8.5					46.0						
		READINNG(PK)	READINNG(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]							
1135					HO	-10.0					74.0	54.0	>10.0		>10.0			
1362					HO	-8.1					74.0	54.0						
1589					HO	-6.0					74.0	54.0						

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL No. : DVR-RT502-S
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 26IE0251-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : April 21, 2006
TEMP./HUMID. : 17°C / 75%
ENGINEER : Go Ishiwata

*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.			[dBuV/m]			HOR.	VER.		
		[dBuV]						[dBuV/m]				[dB]			[dB]	[dB]		
VHF																		
9	233	24.1	21.9			BC	-0.7	23.4	21.2			46.0			22.6	24.8		
	466					LO	1.5					46.0			>10.0			
	699					LO	5.6					46.0						
	932					LO	8.8					46.0						
		READING(PK)		READINNG(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)						
		HOR. VER.	HOR. VER.	TYPE		HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.							
		[dBuV]	[dBuV]		[dBuV]		[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]				
	1165					HO	-9.8					74.0	54.0	>10.0		>10.0		
	1398					HO	-7.7					74.0	54.0					
1631					HO	-5.6					74.0	54.0						
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[dBuV/m]			HOR.	VER.		
		[dBuV]						[dBuV/m]				[dB]			[dB]	[dB]		
10	239	23.6	23.4			BC	-0.5	23.1	22.9			46.0			22.9	23.1		
	478					LO	1.7					46.0			>10.0			
	717					LO	5.8					46.0						
	956					LO	9.4					46.0						
		READING(PK)		READINNG(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)						
		HOR. VER.	HOR. VER.	TYPE		HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.							
		[dBuV]	[dBuV]		[dBuV]		[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]				
	1195					HO	-9.5					74.0	54.0	>10.0		>10.0		
	1434					HO	-7.4					74.0	54.0					
1673					HO	-5.4					74.0	54.0						
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[dBuV/m]			HOR.	VER.		
		[dBuV]						[dBuV/m]				[dB]			[dB]	[dB]		
11	245	27.9	26.2			BC	-0.4	27.5	25.8			46.0			18.5	20.2		
	490					LO	1.9					46.0			>10.0			
	735					LO	5.9					46.0						
	980					LO	9.9					54.0						
		READING(PK)		READINNG(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)						
		HOR. VER.	HOR. VER.	TYPE		HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.							
		[dBuV]	[dBuV]		[dBuV]		[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]				
	1225					HO	-9.3					74.0	54.0	>10.0		>10.0		
	1470					HO	-7.1					74.0	54.0					
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[dBuV/m]			HOR.	VER.		
		[dBuV]						[dBuV/m]				[dB]			[dB]	[dB]		
12	251	25.1	22.0			BC	-0.1	25.0	21.9			46.0			21.0	24.1		
	502					LO	2.3					46.0			>10.0			
	753					LO	5.9					46.0						
		READING(PK)		READINNG(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)						
		HOR. VER.	HOR. VER.	TYPE		HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.							
		[dBuV]	[dBuV]		[dBuV]		[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]				
	1004					HO	-11.3					74.0	54.0	>10.0		>10.0		
	1255					HO	-8.9					74.0	54.0					
	1506					HO	-6.8					74.0	54.0					
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)			
	[MHz]	HOR.	VER.			TYPE	[dBuV]	HOR.	VER.			[dBuV/m]			HOR.	VER.		
		[dBuV]						[dBuV/m]				[dB]			[dB]	[dB]		
13	257	24.7	23.1			BC	0.2	24.9	23.3			46.0			21.1	22.7		
	514					LO	2.6					46.0			>10.0			
	771					LO	5.9					46.0						
		READING(PK)		READINNG(AV)	ANT	C.Factor	RESULT(PK)	RESULT(AV)	LIMIT	LIMIT	MARGIN(PK)	MARGIN(AV)						
		HOR. VER.	HOR. VER.	TYPE		HOR. VER.	HOR. VER.	[PK]	[AV]	HOR. VER.	HOR. VER.							
		[dBuV]	[dBuV]		[dBuV]		[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]	[dB]				
	1028					HO	-11.0					74.0	54.0	>10.0		>10.0		
	1285					HO	-8.8					74.0	54.0					
	1542					HO	-6.4					74.0	54.0					

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL No. : DVR-RT502-S
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 26IE0251-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : April 21, 2006
TEMP./HUMID. : 17°C / 75 %
ENGINEER : Go Ishiwata

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

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

CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
UHF							
14	517	24.6 28.8	LO	2.7	27.3 31.5	46.0	18.7 14.5
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1034		HO	-11.0	-11.0 -11.0	74.0	85.0 85.0
	1551		HO	-6.4		74.0	>10.0
CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
19	547	23.2 23.2	LO	3.3	26.5 26.5	46.0	19.5 19.5
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1094		HO	-10.5	-10.5 -10.5	74.0	84.5 84.5
	1641		HO	-5.6		74.0	>10.0
CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
28	601	23.9 22.9	LO	4.4	28.3 27.3	46.0	17.7 18.7
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1202		HO	-9.5	-9.5 -9.5	74.0	83.5 83.5
							>10.0
CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
36	649	30.6 26.1	LO	5.1	35.7 31.2	46.0	10.3 14.8
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1298		HO	-8.5	-8.5 -8.5	74.0	82.5 82.5
							>10.0
CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
44	697	29.2 28.1	LO	5.6	34.8 33.7	46.0	11.2 12.3
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1394		HO	-7.7	-7.7 -7.7	74.0	81.7 81.7
							>10.0
CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
53	751	23.7 23.0	LO	5.9	29.6 28.9	46.0	16.4 17.1
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1502		HO	-6.8	-6.8 -6.8	74.0	80.8 80.8
							>10.0
CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
61	799	23.0 22.1	LO	6.1	29.1 28.2	46.0	16.9 17.8
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1598		HO	-6.0	-6.0 -6.0	74.0	80.0 80.0
							>10.0
CH.	FREQ	READING(QP)	ANT	C.Factor	RESULT(QP)	LIMIT	MARGIN(QP)
	[MHz]	HOR. VER. [dBuV]	TYPE	[dBuV]	HOR. VER. [dBuV/m]	[QP] [dBuV/m]	HOR. VER. [dB] [dB]
69	847	22.9 22.3	LO	7.2	30.1 29.5	46.0	15.9 16.5
		READING(PK) HOR. VER. [dBuV]	READING(NG) HOR. VER. [dBuV]	ANT TYPE	RESULT(PK) HOR. VER. [dBuV/m]	RESULT(AV) HOR. VER. [dBuV/m]	MARGIN(PK) HOR. VER. [dB] [dB]
	1694		HO	-5.1	-5.1 -5.1	74.0	79.1 79.1
							>10.0

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL No. : DVR-RT502-S
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 26IE0251-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : April 21, 2006
TEMP/HUMID. : 17°C / 75 %
ENGINEER : Go Ishiwata

*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]												
CATV																												
1	119	24.6	24.7			BC	-6.6	18.0	18.1			43.5			25.5	25.4												
	238					BC	-0.5					46.0			>10.0													
	357					LO	-0.3					46.0																
	476					LO	1.7					46.0																
	595					LO	4.3					46.0																
	714					LO	5.7					46.0																
	833					LO	6.8					46.0																
	952	LO	9.3	46.0																								
		READING(PK)		READINNG(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)												
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.												
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]												
	1071					HO	-10.6					74.0	54.0	>10.0		>10.0												
	1190					HO	-9.6					74.0	54.0															
	1309					HO	-8.5					74.0	54.0															
	1428					HO	-7.5					74.0	54.0															
	1547					HO	-6.4					74.0	54.0															
1666	HO					-5.4	74.0					54.0																
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)													
	[MHz]	HOR. VER.				TYPE	[dBuV]	HOR. VER.				[QP]			HOR. VER.													
		[dBuV]						[dBuV/m]			[dBuV/m]			[dB]	[dB]													
95	137	23.4	22.6			BC	-5.1	18.3	17.5			43.5			25.2	26.0												
	274					BC	1.3					46.0			>10.0													
	411					LO	0.6					46.0																
	548					LO	3.3					46.0																
	685					LO	5.5					46.0																
	822					LO	6.5					46.0																
	959					LO	9.4					46.0																
		READING(PK)		READINNG(AV)		ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)		MARGIN(AV)												
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.												
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]												
	1096					HO	-10.4					74.0	54.0	>10.0		>10.0												
	1233					HO	-9.2					74.0	54.0															
	1370					HO	-7.9					74.0	54.0															
	1507					HO	-6.8					74.0	54.0															
	1644					HO	-5.5					74.0	54.0															
CH.	FREQ	READING(QP)				ANT	C.Factor	RESULT(QP)				LIMIT			MARGIN(QP)													
	[MHz]	HOR. VER.				TYPE	[dBuV]	HOR. VER.				[QP]			HOR. VER.													
		[dBuV]						[dBuV/m]			[dBuV/m]			[dB]	[dB]													
97	149	28.0	23.9			BC	-4.3	23.7	19.6			43.5			19.8	23.9												
	298					BC	2.9					46.0			>10.0													
	447					LO	1.2					46.0																
	596					LO	4.3					46.0																
	745					LO	5.9					46.0																
	894					LO	8.2					46.0																
						READINNG(PK)						READINNG(AV)							ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)	
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.												
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]												
	1043					HO	-10.9					74.0	54.0	>10.0		>10.0												
	1192					HO	-9.6					74.0	54.0															
	1341					HO	-8.2					74.0	54.0															
	1490					HO	-6.8					74.0	54.0															
	1639					HO	-5.6					74.0	54.0															
	CH.	FREQ	READINNG(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]													
99	161	26.3	24.5			BC	-3.3	23.0	21.2			43.5			20.5	22.3												
	322					LO	-0.8					46.0			>10.0													
	483					LO	1.8					46.0																
	644					LO	5.1					46.0																
	805					LO	6.2					46.0																
	966					LO	9.7					46.0																
						READINNG(PK)						READINNG(AV)							ANT	C.Factor	RESULT(PK)		RESULT(AV)		LIMIT	LIMIT	MARGIN(PK)	
		HOR. VER.		HOR. VER.		TYPE		HOR. VER.		HOR. VER.		[PK]	[AV]	HOR. VER.		HOR. VER.												
		[dBuV]		[dBuV]			[dBuV]	[dBuV/m]		[dBuV/m]		[dBuV/m]	[dBuV/m]	[dB]		[dB]												
	1127					HO	-10.2					74.0	54.0	>10.0		>10.0												
	1288					HO	-8.6					74.0	54.0															
	1449					HO	-7.2					74.0	54.0															
	1610					HO	-5.9					74.0	54.0															

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site

REPORT No. : 261E0251-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : April 21, 2006
TEMP./HUMID. : 17°C / 75%
ENGINEER : Go Ishiwata

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

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DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yamakita No.1 Open Test Site

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD/VCR
MODEL No. : DVR-RT502-S
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 26IE0251-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
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DATE : April 21, 2006
TEMP./HUMID. : 17°C / 75 %
ENGINEER : Go Ishiwata

*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	25.7	25.2			LO	-0.6	25.1	24.6			46.0	46.0	20.9	21.4		
	682					LO	5.4					46.0	46.0	>10.0			
	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	-11.0	-11.0	-11.0	-11.0	-11.0	74.0	54.0	>10.0		>10.0	
	1364					HO	-8.0	-8.0	-8.0	-8.0	-8.0	74.0	54.0	>10.0		>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]				
37	347	24.8	25.7			LO	-0.5	24.3	25.2			46.0	46.0	21.7	20.8		
	694					LO	5.6					46.0	46.0	>10.0			
	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	-10.9					74.0	54.0	>10.0		>10.0	
	1388					HO	-7.8					74.0	54.0	>10.0		>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]				
65	515	22.9	23.7			LO	2.6	25.5	26.3			46.0	46.0	20.5	19.7		
	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]		
	1030					HO	-11.0	-11.0	-11.0	-11.0	-11.0	74.0	54.0	85.0	85.0	>10.0	
	1545					HO	-6.4					74.0	54.0	>10.0		>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]				
94	689	25.1	24.2			LO	5.5	30.6	29.7			46.0	46.0	15.4	16.3		
	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]		
	1378					HO	-7.9	-7.9	-7.9	-7.9	74.0	54.0	81.9	81.9	>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	27.4	28.9			LO	5.6	33.0	34.5			46.0	46.0	13.0	11.5		
	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]		
	1390					HO	-7.8	-7.8	-7.8	-7.8	-7.8	74.0	54.0	81.8	81.8	>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	25.4	24.0			LO	5.9	31.3	29.9			46.0	46.0	14.7	16.1		
	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]		
	1546					HO	-6.4	-6.4	-6.4	-6.4	-6.4	74.0	54.0	80.4	80.4	>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	24.3	25.1			LO	7.1	31.4	32.2			46.0	46.0	14.6	13.8		
	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]		
	1690					HO	-5.1	-5.1	-5.1	-5.1	-5.1	74.0	54.0	79.1	79.1	>10.0	

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (0dBmV)
Remarks :
Date : 4/20/2006
Test Distance : 3 m
Temperature : 17 °C
Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

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.	945.01	BB	28.1	30.9	22.8	28.6	9.4	6.0	37.7	40.5	46.0	8.3	5.5

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

■ ANTENNA: KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■ CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

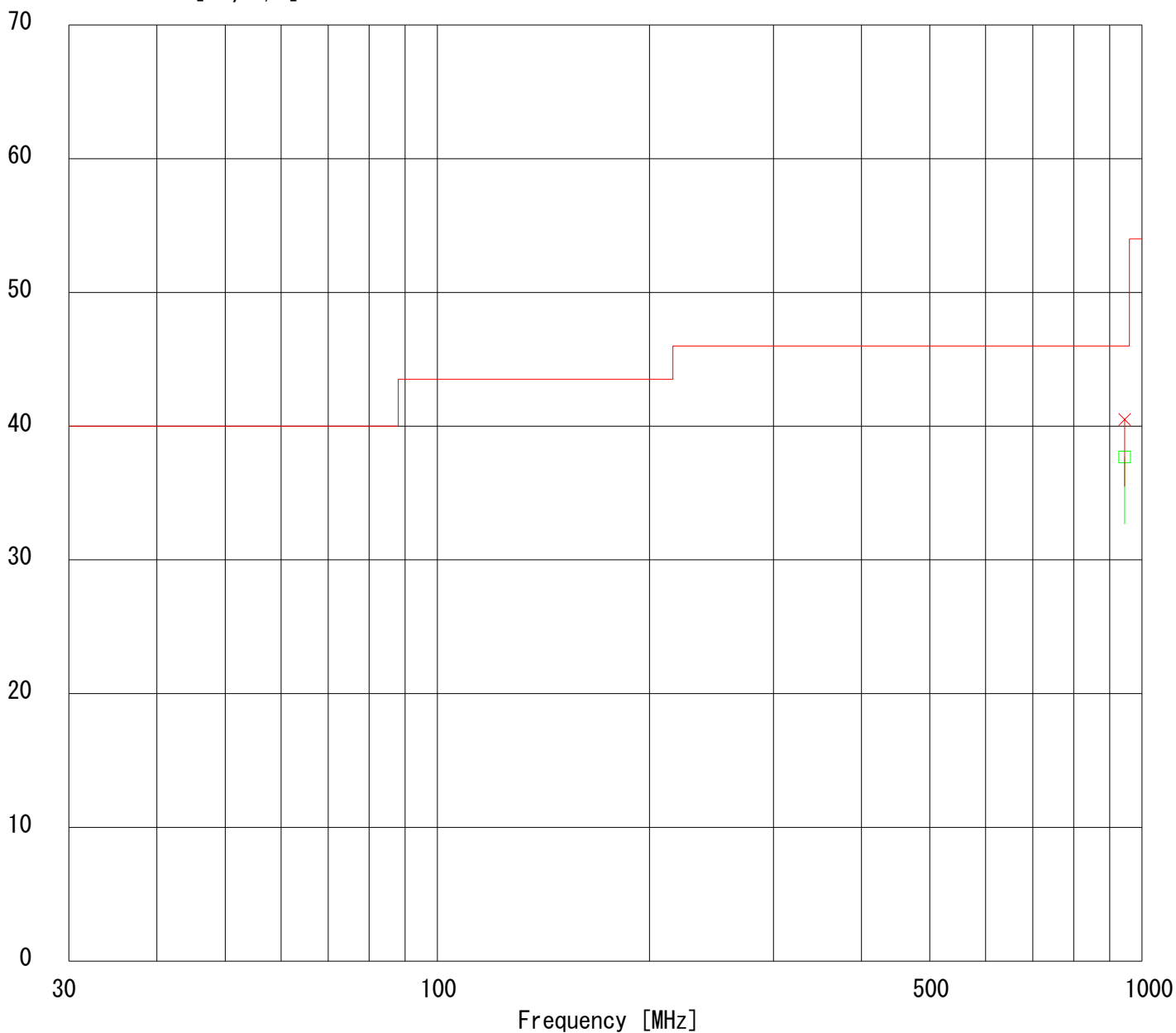
Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (0dBmV)
Remarks :
Date : 4/20/2006
Test Distance : 3 m
Temperature : 17 °C
Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

Emission Level [dB μ V/m]

□ Horizontal

× Vertical



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (0dBmV)
Remarks : AV (RBW: 1MHz, VBW: 10Hz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

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.	1350.01	BB	40.7	44.8	24.7	37.8	4.8	0.0	32.4	36.5	54.0	21.6	17.5

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

■ ANTENNA: KHA-01 (SAS-200 571)

■ CABLE: KCC-D11/D12 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: KSA-04 (R3271A)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

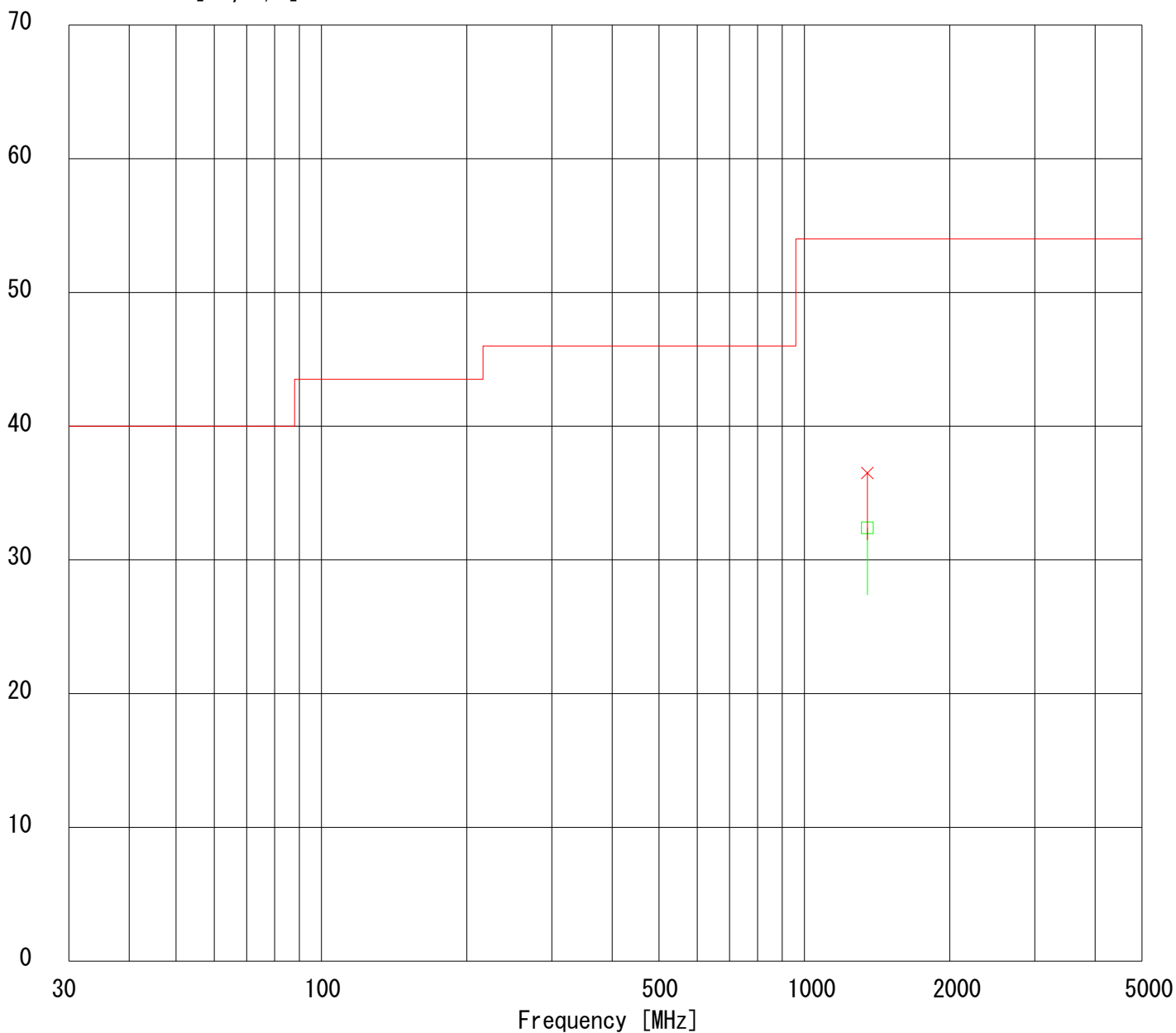
Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (0dBmV)
Remarks : AV (RBW: 1MHz, VBW: 10Hz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

Emission Level [dB μ V/m]

□ Horizontal

× Vertical



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (0dBmV)
Remarks : PK (RBW: 1MHz, VBW: 1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(PK)

Engineer : Go Ishiwata

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.	1350.01	BB	49.7	53.8	24.7	37.8	4.8	0.0	41.4	45.5	74.0	32.6	28.5

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

■ ANTENNA: KHA-01 (SAS-200 571)

■ CABLE: KCC-D11/D12 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: KSA-04 (R3271A)

DATA OF RADIATION TEST

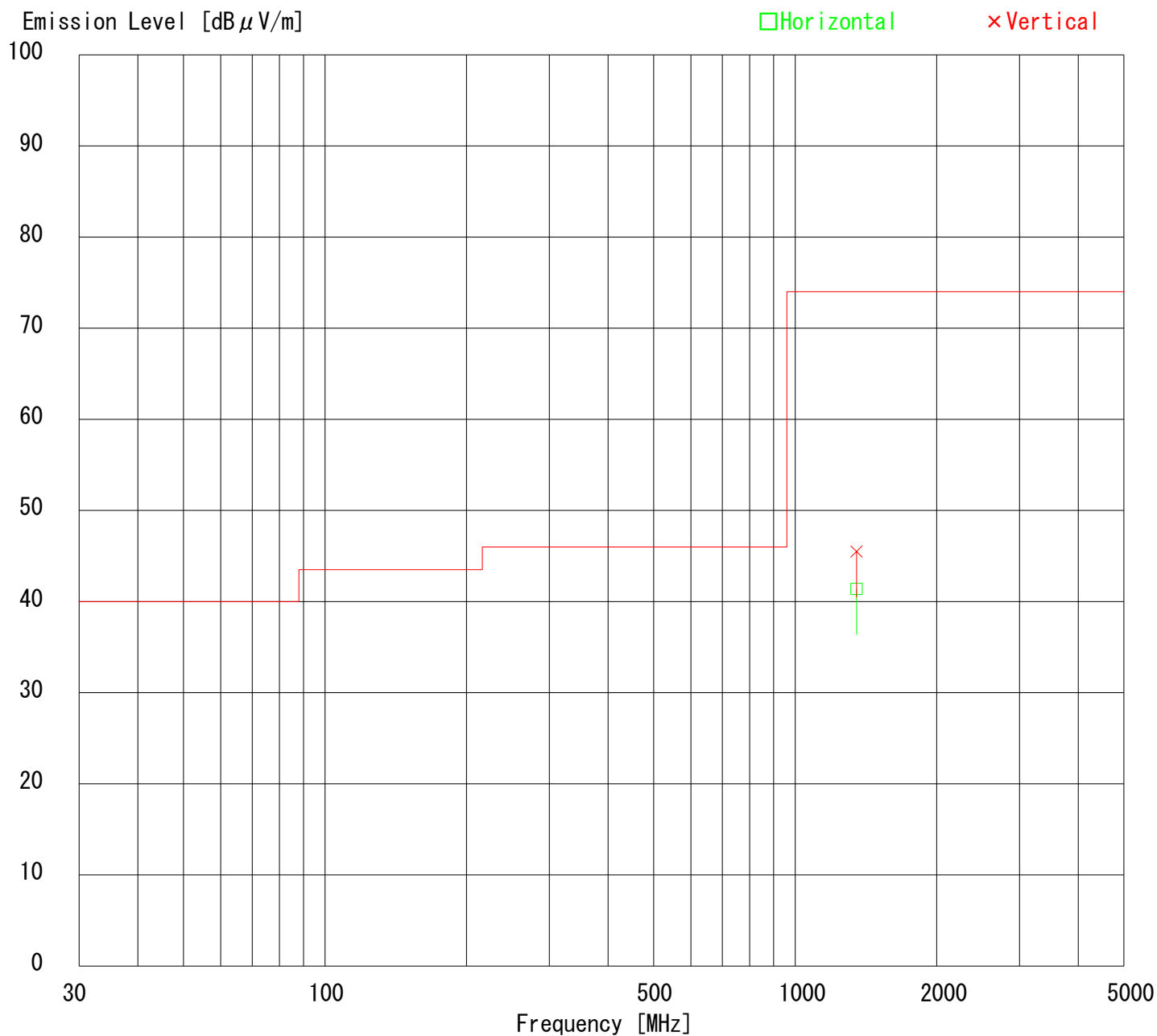
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (0dBmV)
Remarks : PK (RBW: 1MHz, VBW: 1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (PK)

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (25dBmV)
Remarks :
Date : 4/20/2006
Test Distance : 3 m
Temperature : 17 °C
Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

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.	48.01	BB	29.6	36.8	10.8	28.4	1.8	6.0	19.8	27.0	40.0	20.2	13.0
2.	85.92	BB	36.0	44.4	7.1	28.3	2.4	6.0	23.2	31.6	40.0	16.8	8.4
3.	161.09	BB	31.9	36.5	15.7	28.1	3.3	6.0	28.8	33.4	43.5	14.7	10.1
4.	176.81	BB	30.7	30.5	16.2	28.0	3.5	6.0	28.4	28.2	43.5	15.1	15.3
5.	216.00	BB	30.2	26.2	17.2	27.8	3.9	6.0	29.5	25.5	43.5	14.0	18.0
6.	419.15	BB	38.1	37.9	17.7	28.6	5.8	6.0	39.0	38.8	46.0	7.0	7.2
7.	732.83	BB	27.8	25.4	20.9	29.1	8.0	6.0	33.6	31.2	46.0	12.4	14.8
8.	945.02	BB	28.2	31.0	22.8	28.6	9.4	6.0	37.8	40.6	46.0	8.2	5.4

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

■ ANTENNA: KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■ CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

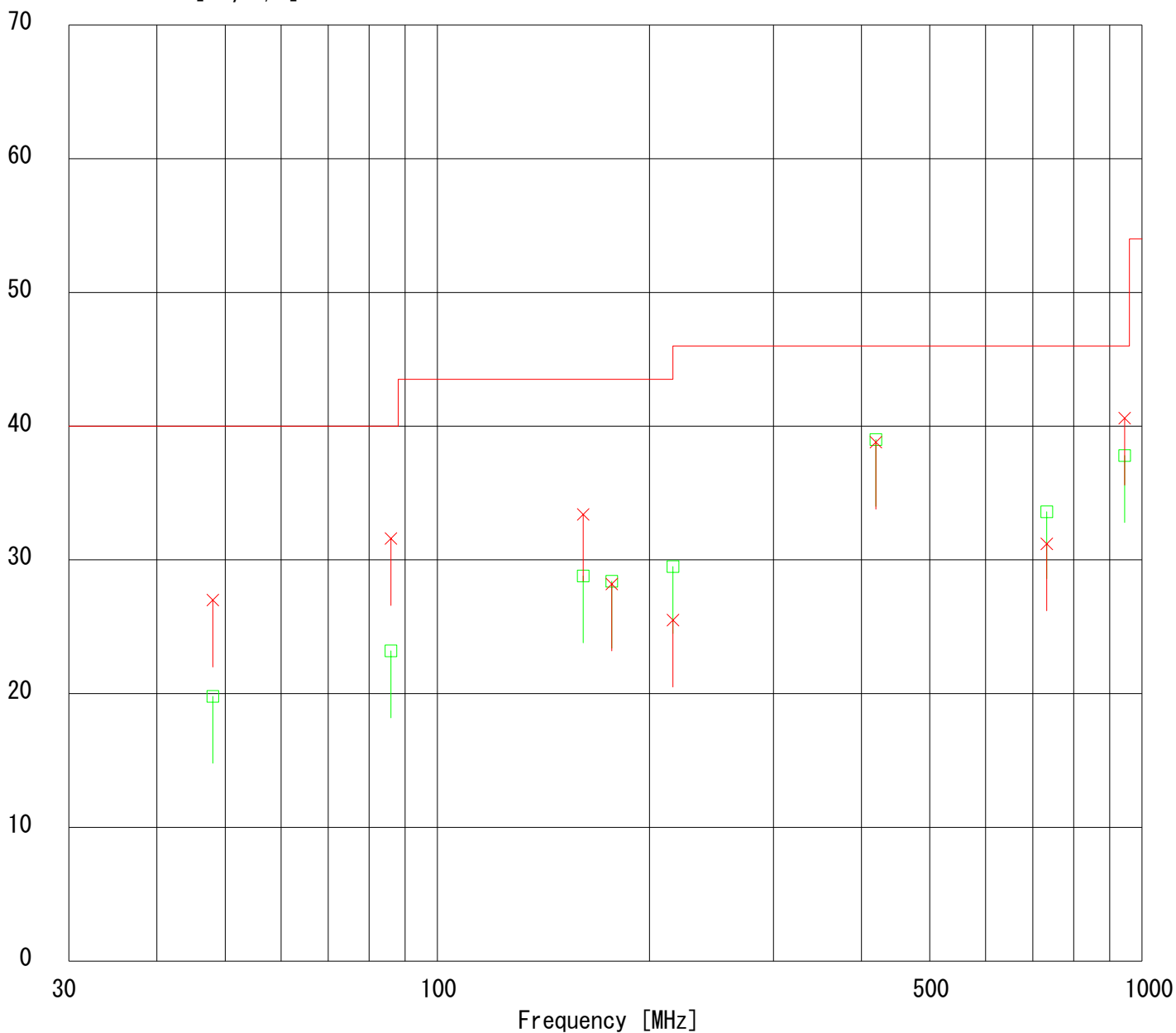
Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (25dBmV)
Remarks :
Date : 4/20/2006
Test Distance : 3 m
Temperature : 17 °C
Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

Emission Level [dB μ V/m]

□ Horizontal

× Vertical



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (25dBmV)
Remarks : AV (RBW: 1MHz, VBW: 10Hz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

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.	1038.69	BB	37.9	39.3	24.3	38.5	4.3	0.0	28.0	29.4	54.0	26.0	24.6
2.	1080.34	BB	41.1	43.1	24.4	38.4	4.3	0.0	31.4	33.4	54.0	22.6	20.6
3.	1350.02	BB	40.9	45.1	24.7	37.8	4.8	0.0	32.6	36.8	54.0	21.4	17.2

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

■ ANTENNA: KHA-01 (SAS-200 571)

■ CABLE: KCC-D11/D12 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: KSA-04 (R3271A)

DATA OF RADIATION TEST

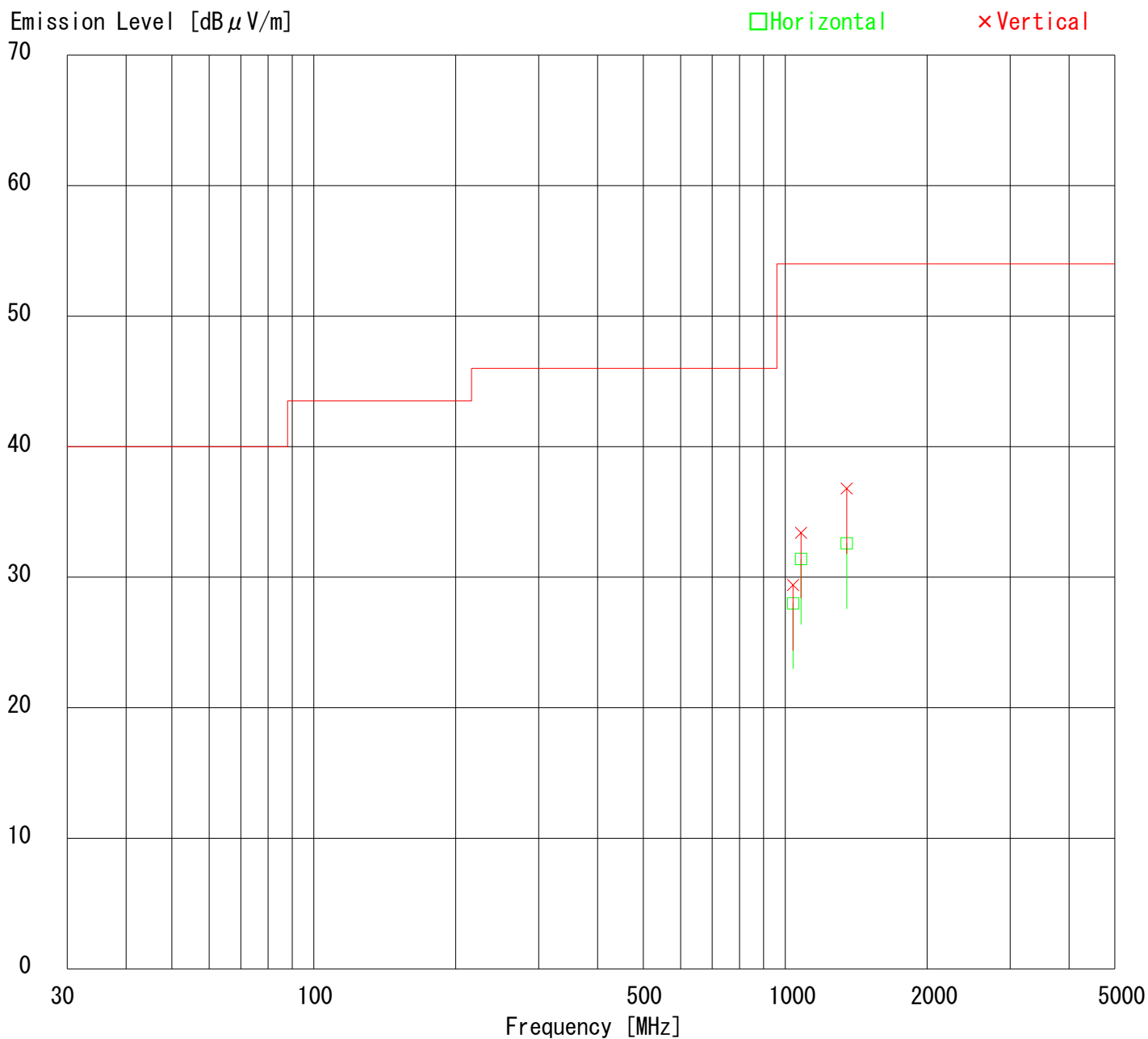
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (25dBmV)
Remarks : AV (RBW: 1MHz, VBW: 10Hz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (25dBmV)
Remarks : PK (RBW: 1MHz, VBW: 1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(PK)

Engineer : Go Ishiwata

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.	1038.69	BB	50.9	53.6	24.3	38.5	4.3	0.0	41.0	43.7	74.0	33.0	30.3
2.	1080.34	BB	50.0	54.9	24.4	38.4	4.3	0.0	40.3	45.2	74.0	33.7	28.8
3.	1350.02	BB	50.1	54.0	24.7	37.8	4.8	0.0	41.8	45.7	74.0	32.2	28.3

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

■ ANTENNA: KHA-01 (SAS-200 571)

■ CABLE: KCC-D11/D12 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: KSA-04 (R3271A)

DATA OF RADIATION TEST

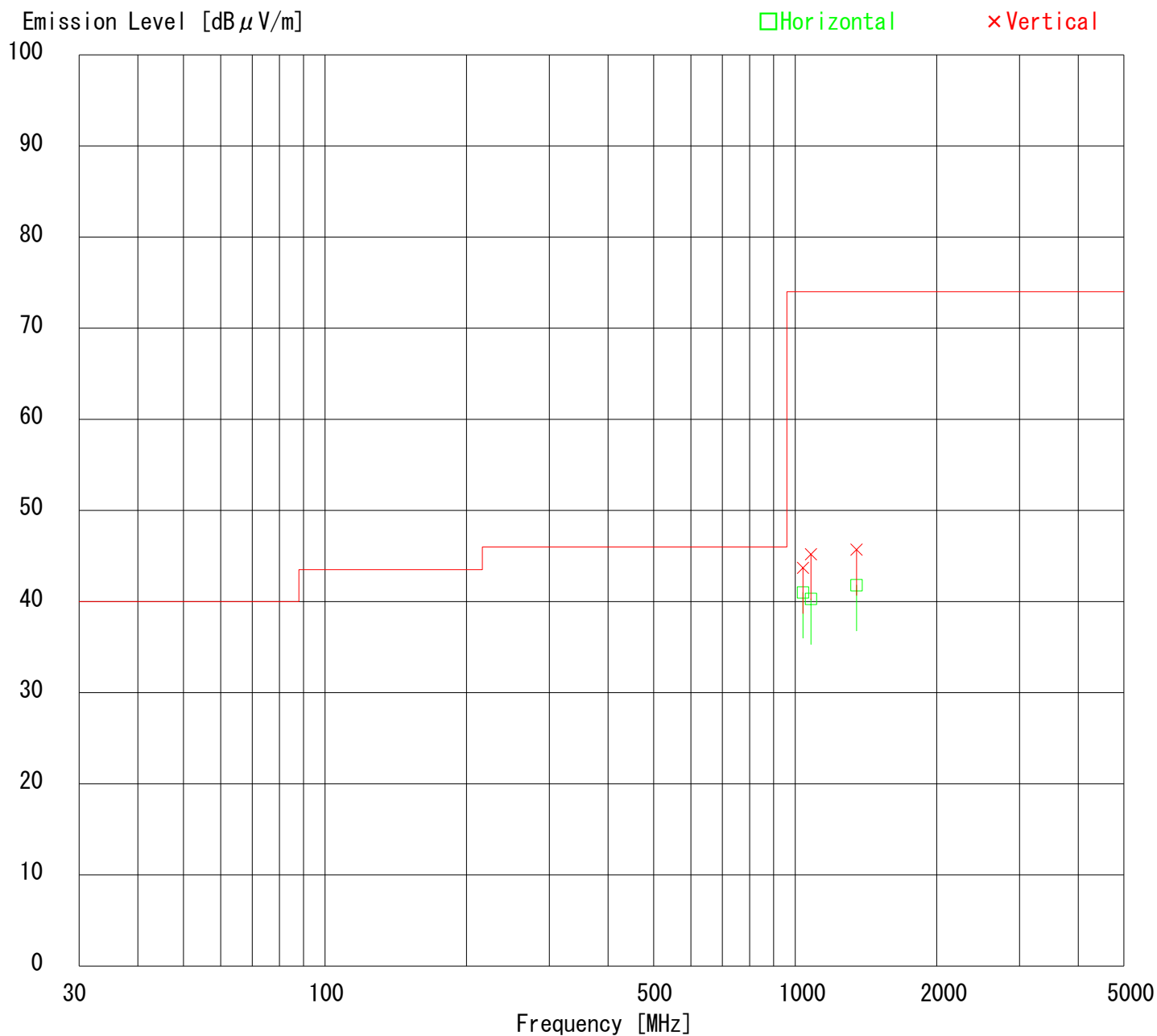
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec (25dBmV)
Remarks : PK (RBW: 1MHz, VBW: 1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(PK)

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1 + DVD/VCR Rec(1Vp-p)
Remarks :
Date : 4/20/2006
Test Distance : 3 m
Temperature : 17 °C
Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

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.	945.02	BB	30.5	30.6	22.8	28.6	9.4	6.0	40.1	40.2	46.0	5.9	5.8

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

■ ANTENNA: KBA-01 (BBA9106) 30-299.99MHz/KLA-01 (USLP9143) 300-1000MHz

■ CABLE: KCC-10/11/12/13/18 ■ PREAMP: KAF-01 (8447D) ■ EMI RECEIVER: KTR-02 (ESCS30)