EMI TEST REPORT

Test Report No. : 24IE0174-YW-1

Applicant :	**Orion Electric Co., Ltd.**
Type of equipment :	**DVD/VCR**
Model number :	**VRDVD4001A**
Test standard :	**FCC Part 15 Subpart B** **ICES-003 Issue No.4 Class B**
Test result :	**Complied**

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 : April 23 to 30, 2004

Tested by:

Tsubasa Takayama
EMC Service

Approved by:

Hiroya Tabata
Leader of EMC Service

UL Apex Co., Ltd.
Yokowa EMC Lab.
108 Yokowa-cho, Ise-shi, Mie-ken 516-1106 JAPAN
Telephone: +81 596 39 1485
Facsimile: +81 596 39 0232

Contents

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/VCR
Brand Name	:	SANSUI
Model number	:	VRDVD4001A
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	:	April 16, 2004
Condition of EUT	:	Production Prototype (Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product description

Model: VRDVD4001A (referred to as the EUT in this report) is a DVD/VCR.
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

2.3 Similar apparatus

There are similar apparatuses as follows;
VRDVD4100A (SANSUI), DVCR-810 (BROKSONIC), EH8008PB (ELECTROHOME), JDVD3825PB (CITIZEN), MVD4540C (MEMOREX)

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 C63.4:2001 IEEE 213:1987	CISPR 22	19.1 dB (0.1500 MHz, DVD Play)	Complied
Radiated emission	ANSI C63.4:2001 IEEE 187:1990	30–88 MH: 100 uV/m 88–216 MHz: 150 uV/m 216–960 MHz: 200 uV/m above 960 MHz: 500 uV/m	4.9 dB (675.00 MHz, Vertical, AV Input + Rec. 5Vp-p)	Complied
Antenna terminal voltage	ANSI C63.4:2001	2 nW (at 75 ohm)	28.7 dB (810.57590 MHz, CATV Tuning)	Complied
RF output level	ANSI C63.4:2001	Video signal: 3000 uV Aural signal: 671 uV	4.6 dB (61.25 MHz, AV Input + Rec. 1Vp-p)	Complied
Spurious emission		94.8 uV	19.8 dB (743.3000 MHz, DVD Play)	Complied
Transfer switch	ANSI C63.4:2001	9.5 dB	3.1 dB (306.2500 MHz, DVD Play)	Complied
Picture sensitivity	ANSI C63.4:2001	8 dB	5.1 dB	Complied
Noise figure	FCC/OET MP:2:1986	14 dB	6.7 dB (579.25 MHz, 32ch)	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.

3.5 Uncertainty

Conducted emission (150 kHz – 30 MHz)

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.74 dB.
The data listed in this test report has enough margin, more than site margin.

Radiated emission

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ±4.4 dB.
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ±4.8 dB.
The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ±5.8 dB.
The data listed in this test report has enough margin, more than site margin.

Antenna terminal voltage

The measurement uncertainty (with a 95% confidence level) for this test was ± 3.48 dB.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.

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 report meets the limits unless the uncertainty is taken into consideration.

Picture sensitivity test

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.0 dB.
The data listed in this test report has enough margin, more than site margin.

Noise Figure Test

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.2 dB.
The data listed in this test report has enough margin, more than site margin.

3.7 Test location

UL Apex Co., Ltd. Yokowa EMC Lab. No.2 shielded room, No.1 and No.2 open site
108 Yokowa-cho, Ise-shi, Mie-ken, 516-1106 JAPAN
TEL : +81 596 39 1485
FAX : +81 596 39 0232

No.1 open site
This site has been fully described in a report submitted to FCC office, and listed on September 25, 2003.
(Registration number: 90412)
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.

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

4.1 Operating modes

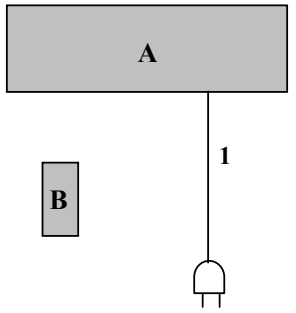
The EUT exercise program used during testing was designed exercise the various system components in a manner similar to typical use.

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



AC 120V/ 60Hz

* 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	Remark
A	DVD/VCR	VRDVD4001A	–	Orion Electric Co., Ltd.	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

Section 5 : Conducted emission

5.1 Operation environment

The test was carried out in a shielded room the size of 4.5 x 3.6 x 2.7m.

Date : April 25, 2004
Temperature : See data
Humidity : See data

5.2 Test configuration

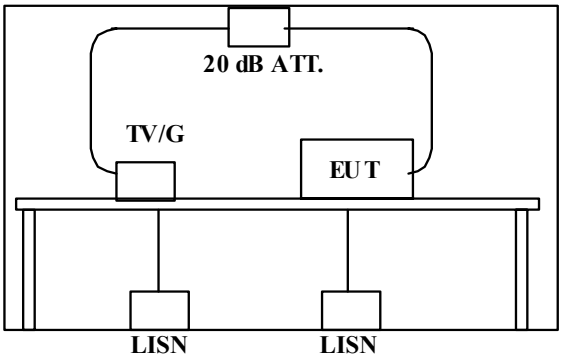
EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The rear of tabletop was located 40 cm to the vertical conducting plane. The rear of EUT was aligned and flushed with rear of tabletop. All other surfaces of tabletop was at least 80 cm from any 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)

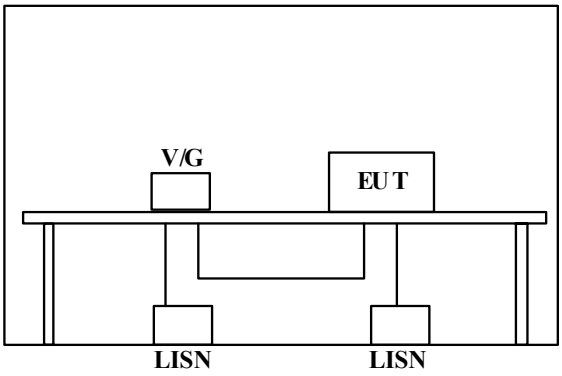
Shielded room



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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output cable

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

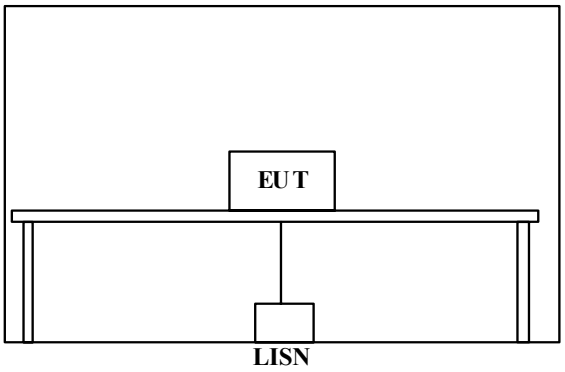
Shielded room



RF in: 75 ohm terminated
Front video in: Video signal generator connected
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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output cable

VCR play mode

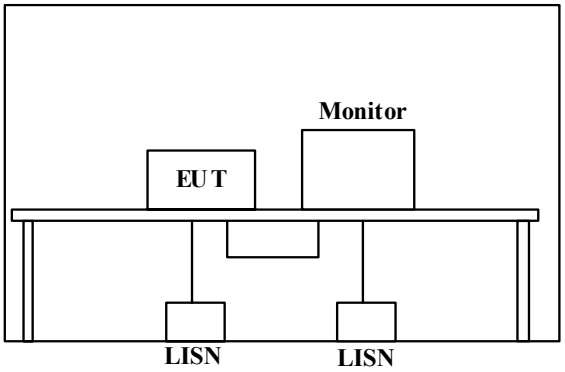
Shielded room



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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output 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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output 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.
EUT and desired signal generator should connect through 20 dB attenuator.
The conducted emission measurements were made with the following detector function of the test receiver.
Detector Type : QP
IF Bandwidth : 10 kHz

5.5 Test result

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

Test engineer: Tsubasa Takayama

Section 6 : Radiated emission

6.1 Operation environment

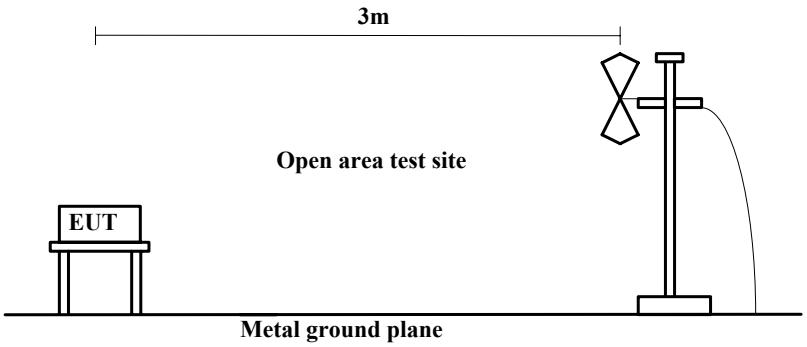
The test was carried out in an open site.

Date : April 23, 28 and 29, 2004
Temperature : See data
Humidity : See data

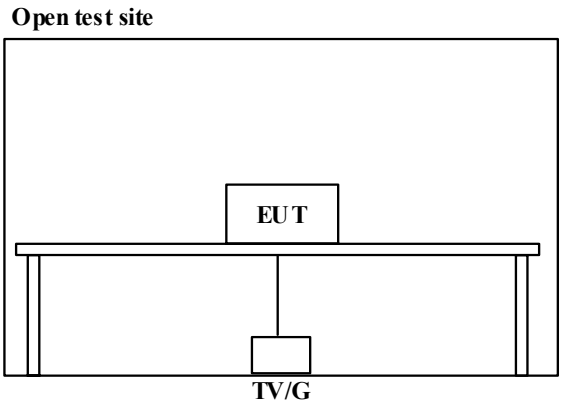
6.2 Test configuration

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



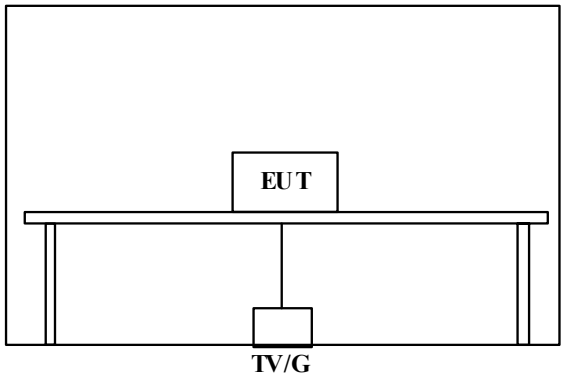
TV reception + Rec. mode (0 dBmV / 25 dBmV)



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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output cable

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

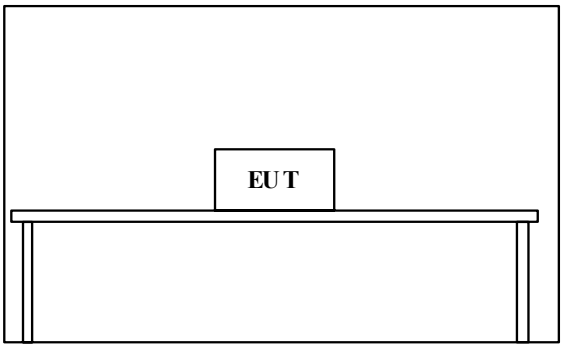
Open test site



RF in: 75 ohm terminated
Front video in: Video signal generator connected
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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output cable

VCR play mode

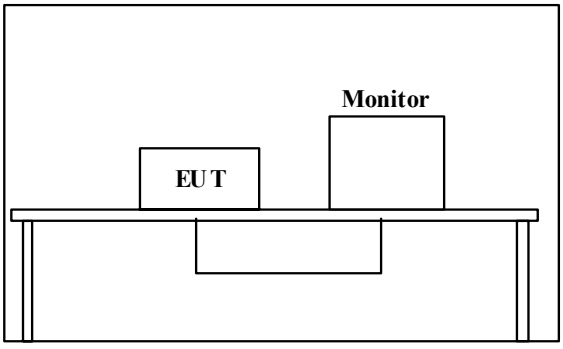
Open test site



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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output 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 ($Y/C_B/C_R$): 75 ohm terminated with component cable
RF output: 75 ohm terminated with RF output cable

6.3 Test conditions

Frequency range : 30 MHz – 2000 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.

	30-1000MHz (Test receiver)	1000-2000MHz (Spectrum analyzer)	
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

Section 7 : Antenna terminal voltage

7.1 Operation environment

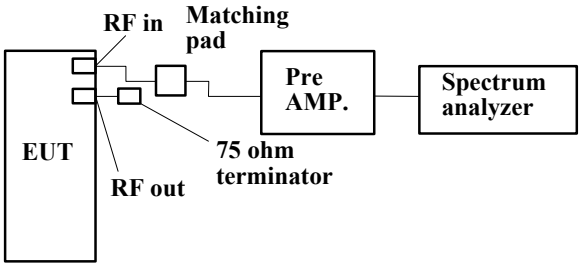
The test was carried out in a shielded room the size of 4.5 x 3.6 x 2.7 m.

Date : April 30, 2004
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 – 2000 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 (30-2000 MHz)

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

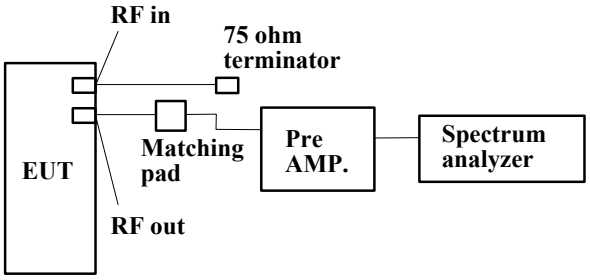
The test was carried out in a shielded room the size of 4.5 x 3.6 x 2.7 m.

Date : April 30, 2004
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



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

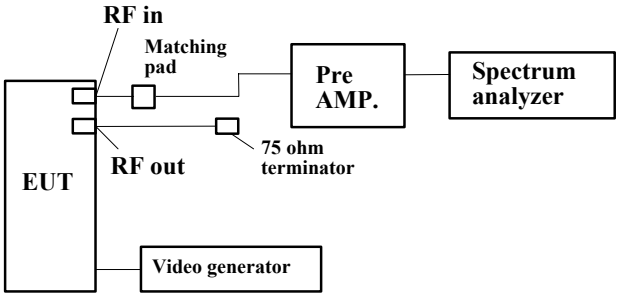
The test was carried out in a shielded room the size of 4.5 x 3.6 x 2.7 m.

Date : April 30, 2004
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

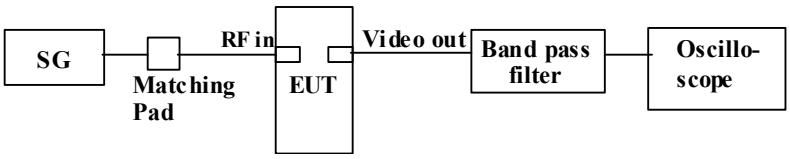
The test was carried out in a shielded room the size of 4.5 x 3.6 x 2.7 m.

Date : April 27, 2004
Temperature : See data
Humidity : See data

10.2 Test configuration

The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.
A drawing of the set up is shown in figure 6 and photographs in Appendix 1.

Figure 6. Picture sensitivity



10.3 Test conditions

EUT position : Table top
EUT operation mode: TV reception

10.4 Test procedure

Signal generator setup is as follows, (Example: 2ch – 55.25 MHz, AM, 1 kHz, 30 %)
The EUT was tuned to appropriate channel.
Output level of signal generator was adjusted to near the frequency output level of EUT output.
EUT output level was adjusted to maximum output level by frequency adjustment of signal generator.
Signal generator output level was adjusted to reference output level of EUT and output level had read.

10.5 Test result

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

Test engineer: Seigo Kakehi

Section 11 : Noise figure

11.1 Operating environment

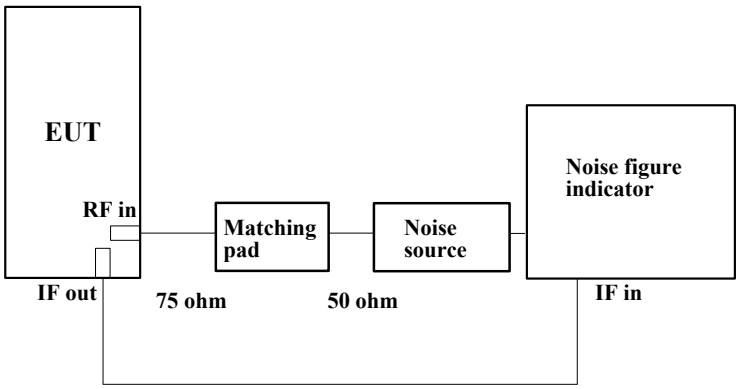
The test was carried out in a shielded room the size of 4.5 x 3.6 x 2.7 m.

Date : April 27, 2004
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 through ceramic condenser. 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: Seigo Kakehi

Appendix 1 : Photographs of test set up

Appendix 2 : Data of EMI tests

Appendix 3 : Test instruments

Conducted emission

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

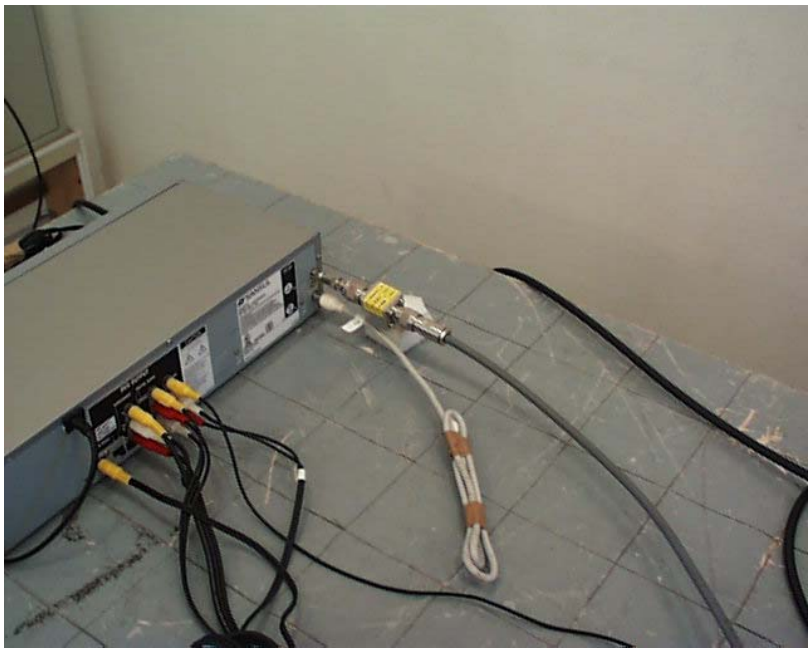
Antenna terminal voltage

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

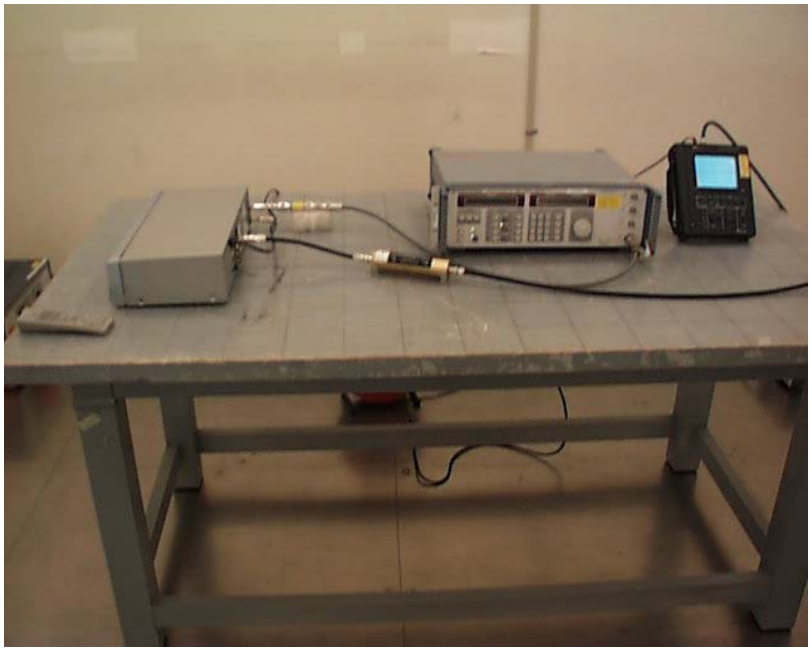
RF output level / spurious emission

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

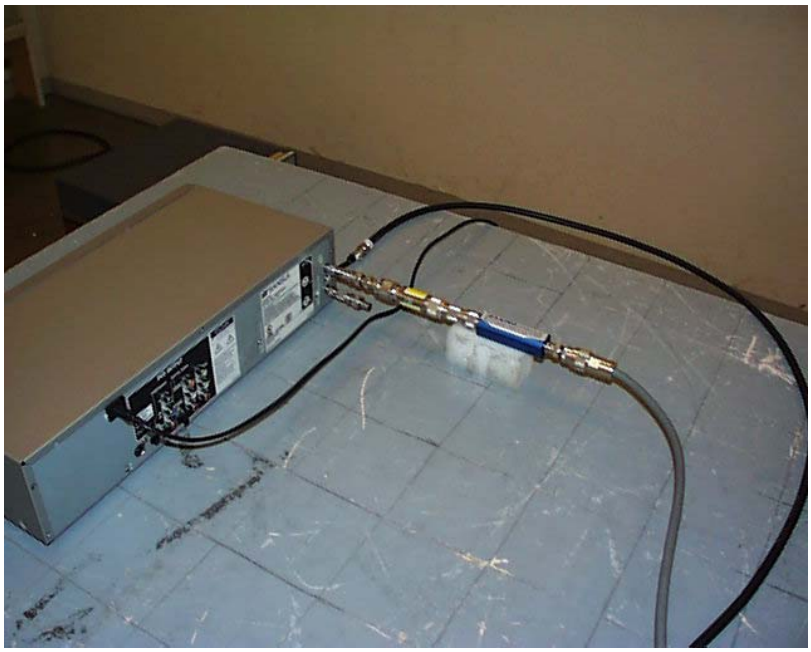
Antenna transfer switch



Picture sensitivity



Noise figure



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: TV Reception+REC		
Remarks	: 0dBmV		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

No.	FREQ.	READING(N) QP	READING(N) AV	READING(L1) QP	READING(L1) AV	LISN FACTOR	CABLE LOSS	ATTEN.	RESULT QP	RESULT AV	LIMITS QP	LIMITS AV	MARGIN QP	MARGIN AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]		[dBμV]		[dB]	
1.	0.1500	43.8	-	43.3	-	0.0	0.0	0.0	43.8	-	66.0	56.0	22.2	-
2.	0.2150	37.6	-	38.5	-	0.0	0.0	0.0	38.5	-	63.0	53.0	24.5	-
3.	0.3060	29.6	-	30.2	-	0.0	0.0	0.0	30.2	-	60.1	50.1	29.9	-
4.	0.8170	17.3	-	16.9	-	0.1	0.1	0.0	17.5	-	56.0	46.0	38.5	-
5.	1.0200	23.7	-	23.9	-	0.1	0.2	0.0	24.2	-	56.0	46.0	31.8	-
6.	18.4330	32.0	-	32.4	-	1.0	0.4	0.0	33.8	-	60.0	50.0	26.2	-

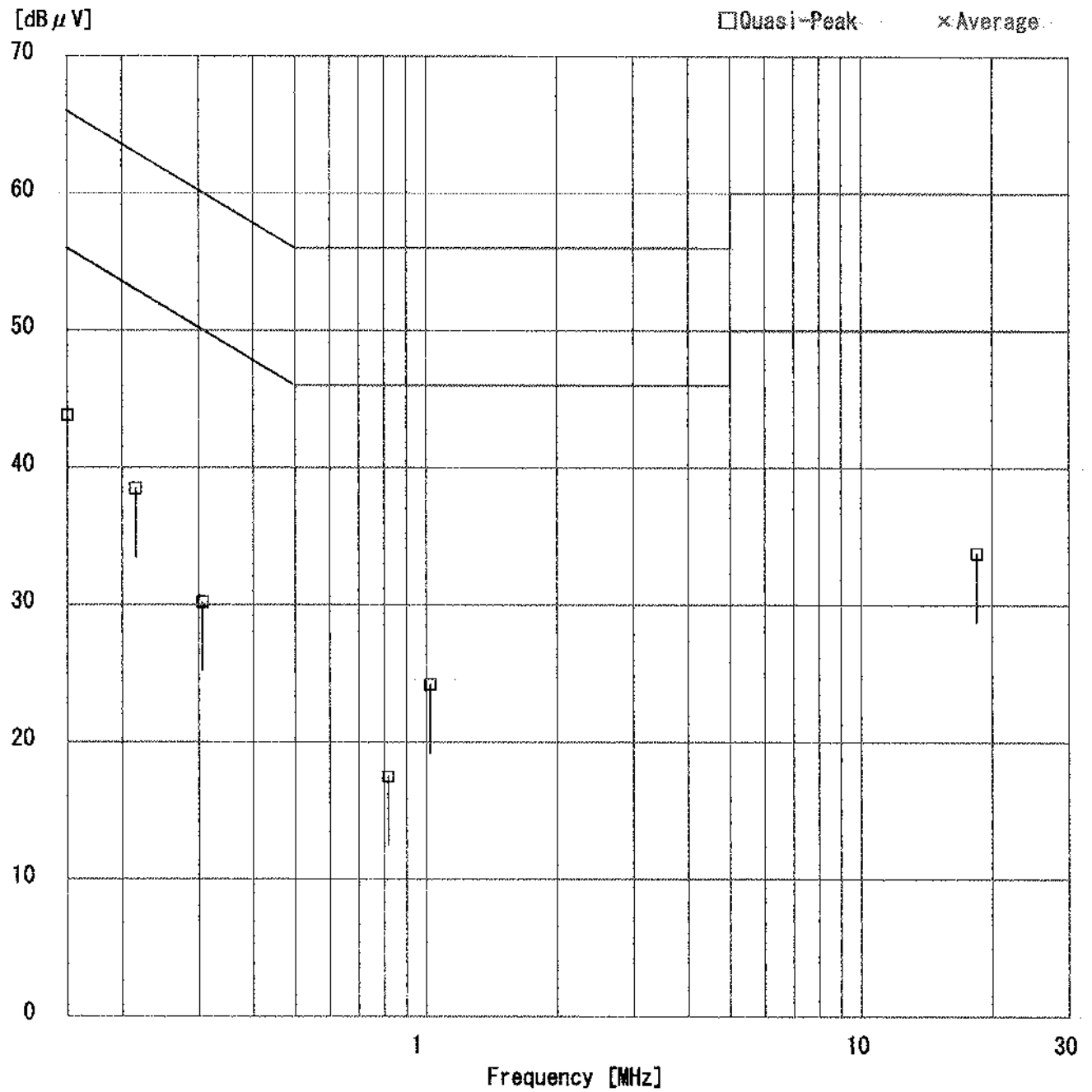
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 241E0174-YW-1

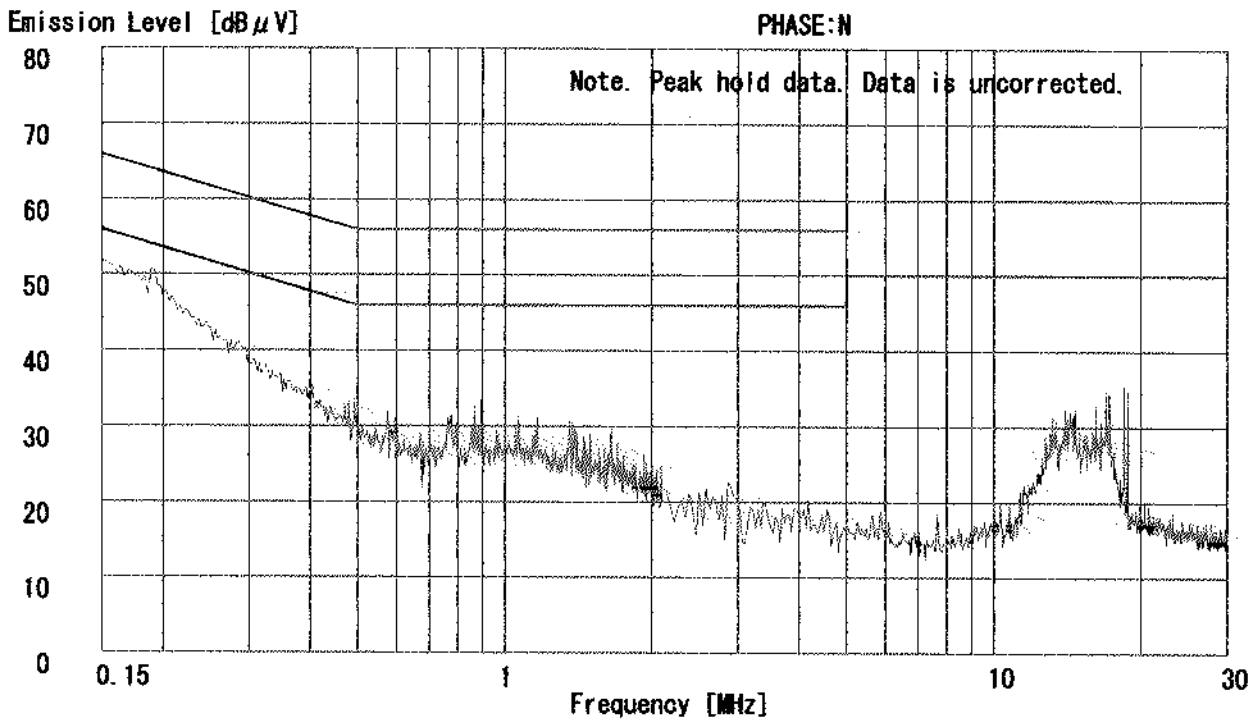
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: TV Reception+REC		
Remarks	: 0dBmV		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

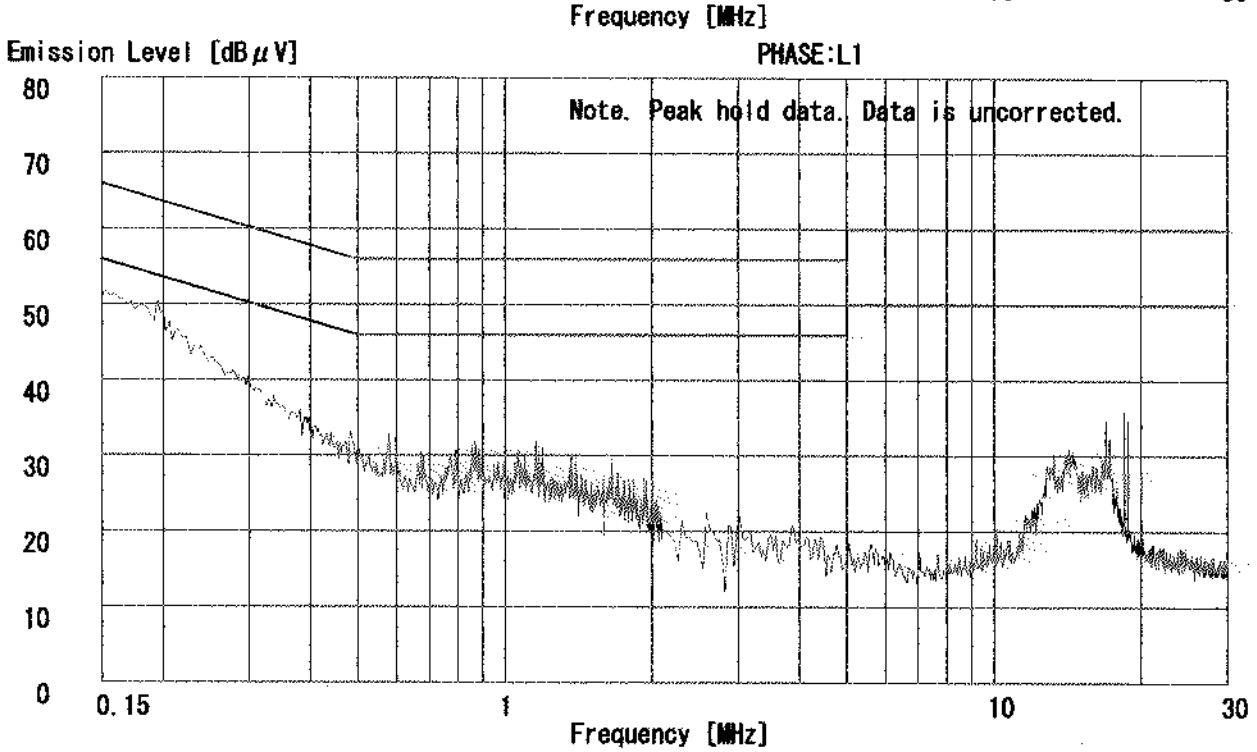


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No. : 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: TV Reception+REC		
Remarks	: 0dBmV		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation 1	: FCC Part15 CLASS B(02-157)		
Regulation 2	: None		





DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.
Kind of Equipment	: DVD/VCR
Model No.	: VRDVD4001A
Serial No.	:
Power	: AC120V/60Hz
Mode	: TV Reception+REC
Remarks	: 25dBmV
Date	: 4/25/2004
Phase	: Single Phase
Temperature	: 22 ℃
Humidity	: 31 %
Regulation	: FCC Part15 CLASS B(02-157)

Engineer : Tsubasa Takayama

No.	FREQ.	READING(N)		READING(L1)		LISN	CABLE	ATTEN.	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV	FACTOR	LOSS		QP	AV	QP	AV	QP	AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]		[dBμV]		[dBμV]		[dB]
1.	0.1500	43.7	-	43.3	-	0.1	0.0	0.0	43.8	-	66.0	56.0	22.2	-
2.	0.2150	37.2	-	38.8	-	0.1	0.0	0.0	38.9	-	63.0	53.0	24.1	-
3.	0.3060	29.5	-	30.5	-	0.1	0.0	0.0	30.6	-	60.1	50.1	29.5	-
4.	0.8170	17.2	-	17.0	-	0.2	0.1	0.0	17.5	-	56.0	46.0	38.5	-
5.	1.0200	23.8	-	24.5	-	0.2	0.2	0.0	24.9	-	56.0	46.0	31.1	-
6.	18.4330	32.8	-	32.5	-	1.1	0.4	0.0	34.3	-	60.0	50.0	25.7	-

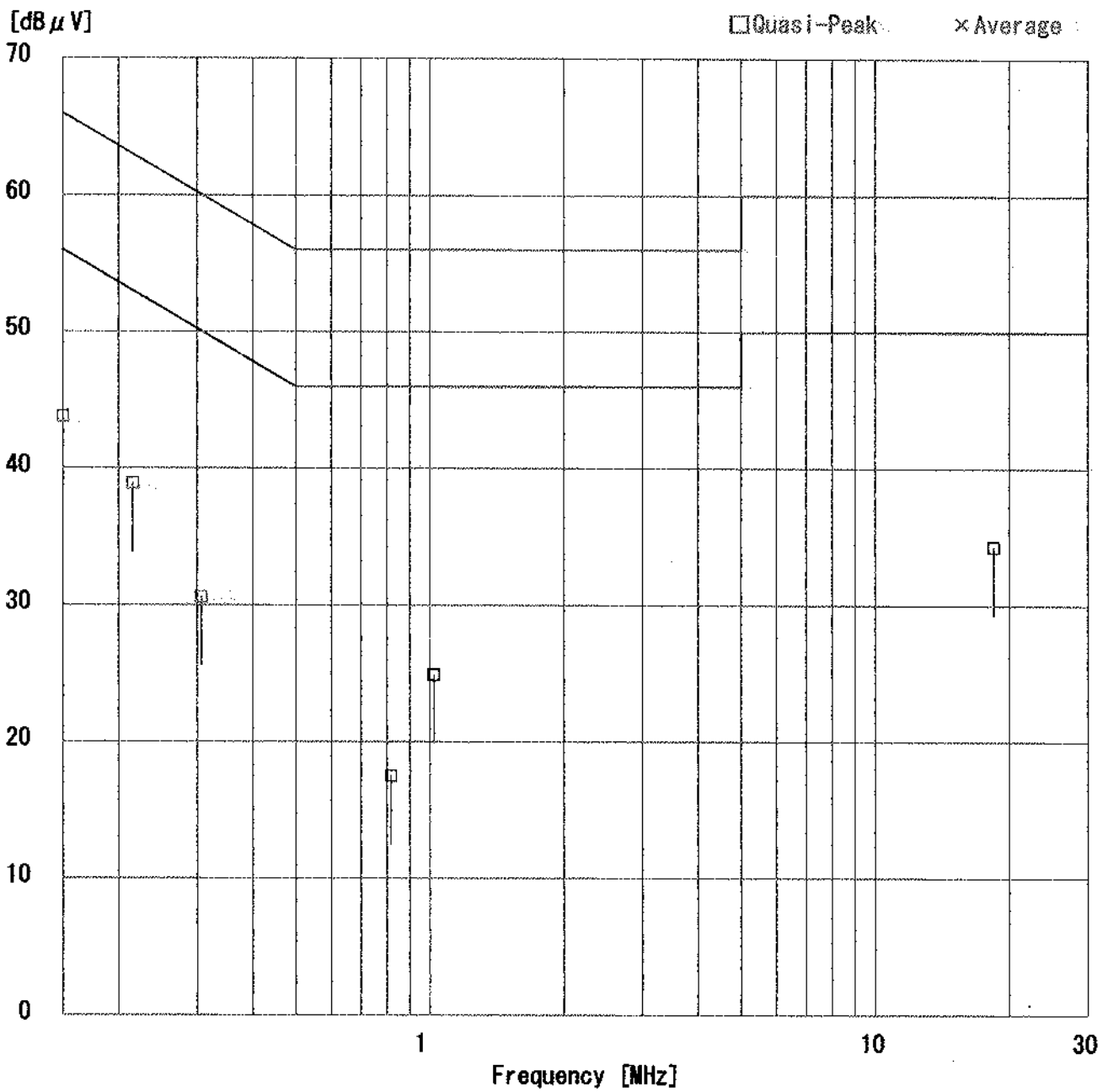
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No. : 24IE0174-YW-1

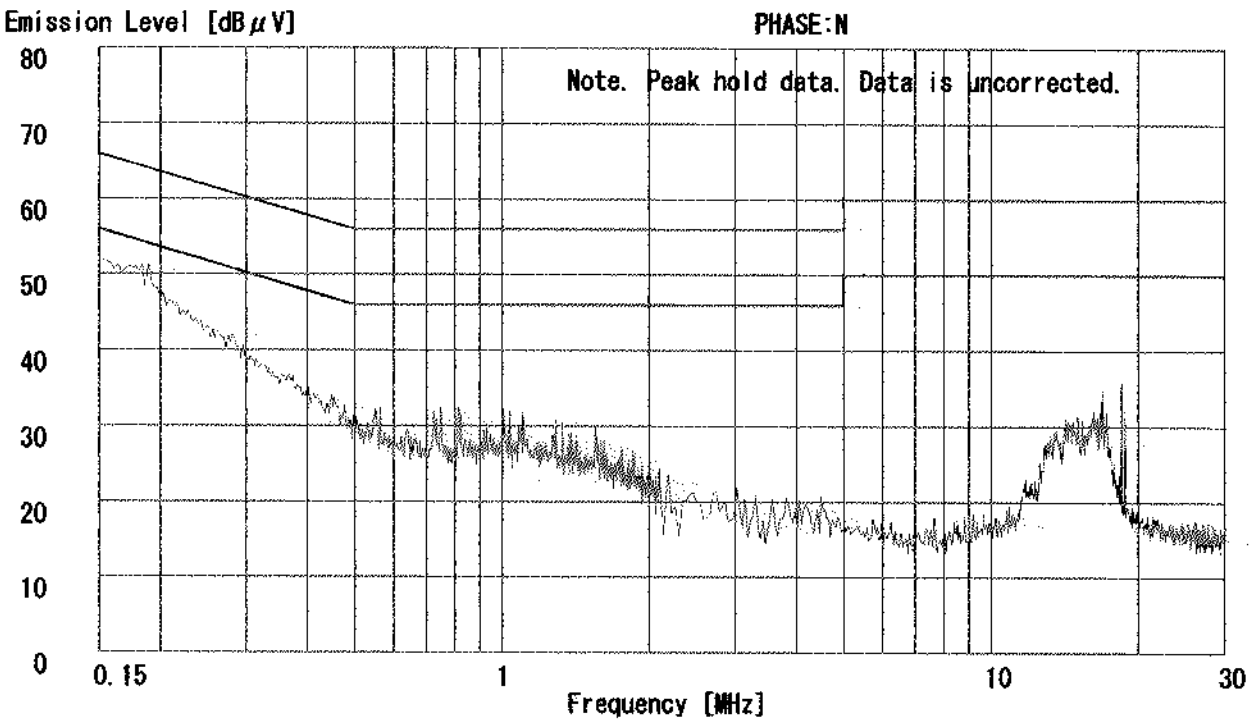
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: TV Reception+REC		
Remarks	: 25dBmV		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

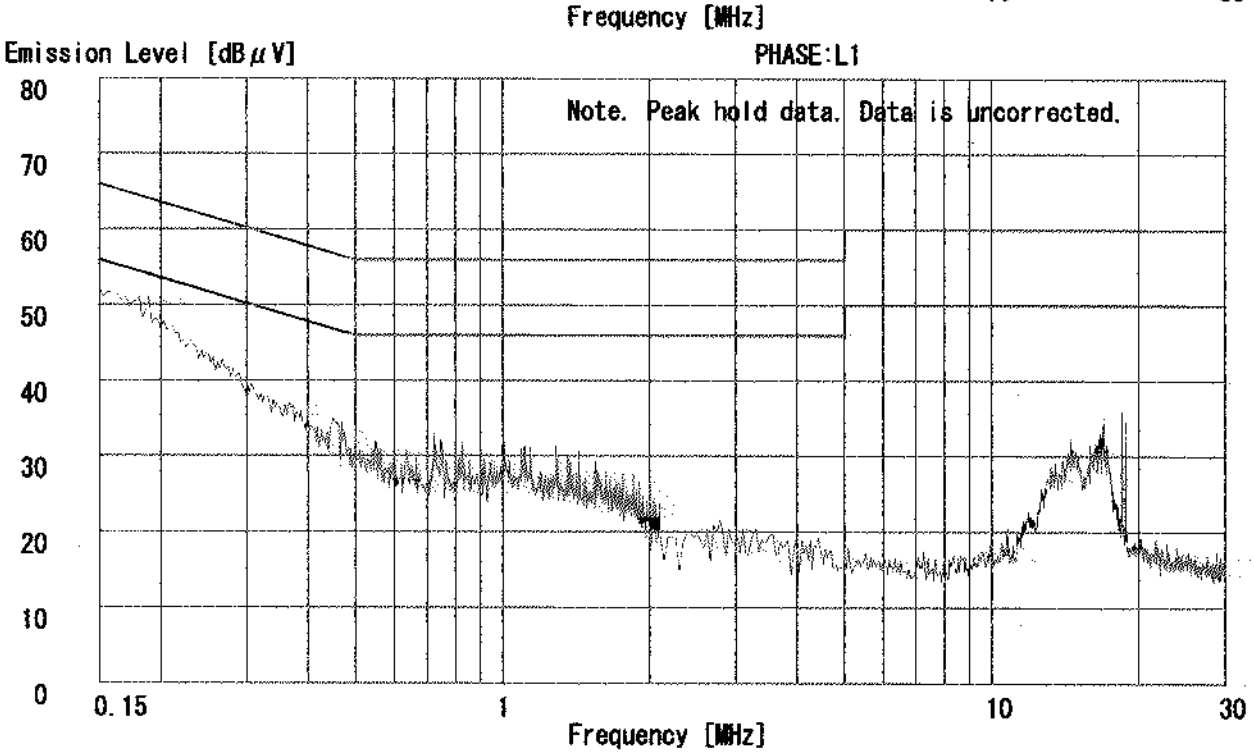


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 241E0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: TV Reception+REC		
Remarks	: 25dBmV		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation 1	: FCC Part15 CLASS B(02-157)		
Regulation 2	: None		





DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No. : 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: AV Input+REC		
Remarks	: 1Vp-p		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

No.	FREQ.	READING(N) QP	READING(N) AV	READING(L1) QP	READING(L1) AV	LISN FACTOR	CABLE LOSS	ATTEN.	RESULT QP	RESULT AV	LIMITS QP	LIMITS AV	MARGIN QP	MARGIN AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]		[dBμV]		[dBμV]	[dB]
1.	0.1500	43.7	-	43.9	-	0.0	0.0	0.0	43.9	-	66.0	56.0	22.1	-
2.	0.2018	39.2	-	39.1	-	0.0	0.0	0.0	39.2	-	63.5	53.5	24.3	-
3.	1.0270	23.5	-	23.0	-	0.1	0.2	0.0	23.8	-	56.0	46.0	32.2	-
4.	6.2138	31.6	-	31.5	-	0.3	0.3	0.0	32.2	-	60.0	50.0	27.8	-
5.	8.0888	36.2	-	35.8	-	0.4	0.3	0.0	36.9	-	60.0	50.0	23.1	-
6.	18.4322	35.2	-	33.2	-	1.0	0.4	0.0	36.6	-	60.0	50.0	23.4	-

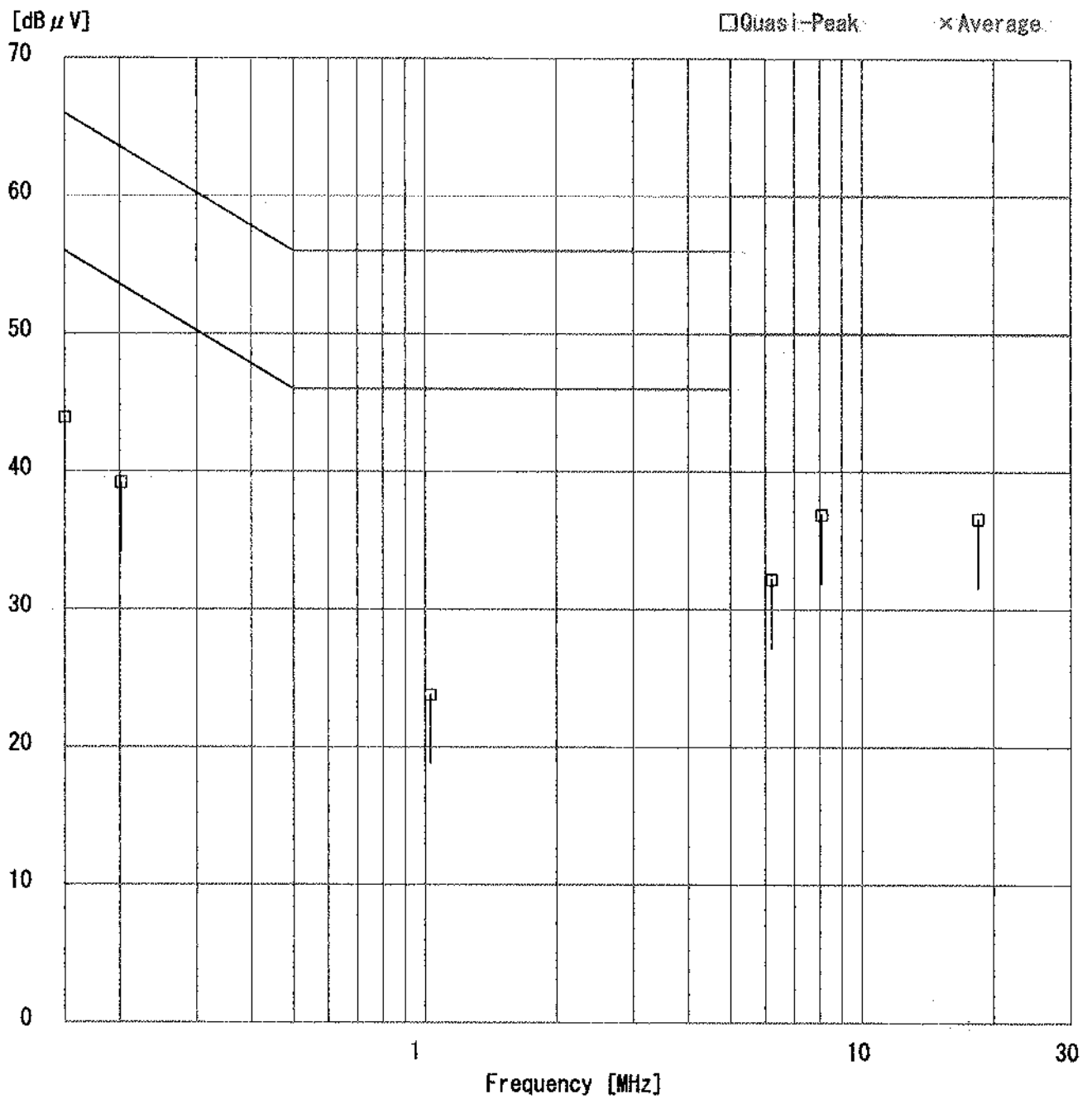
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

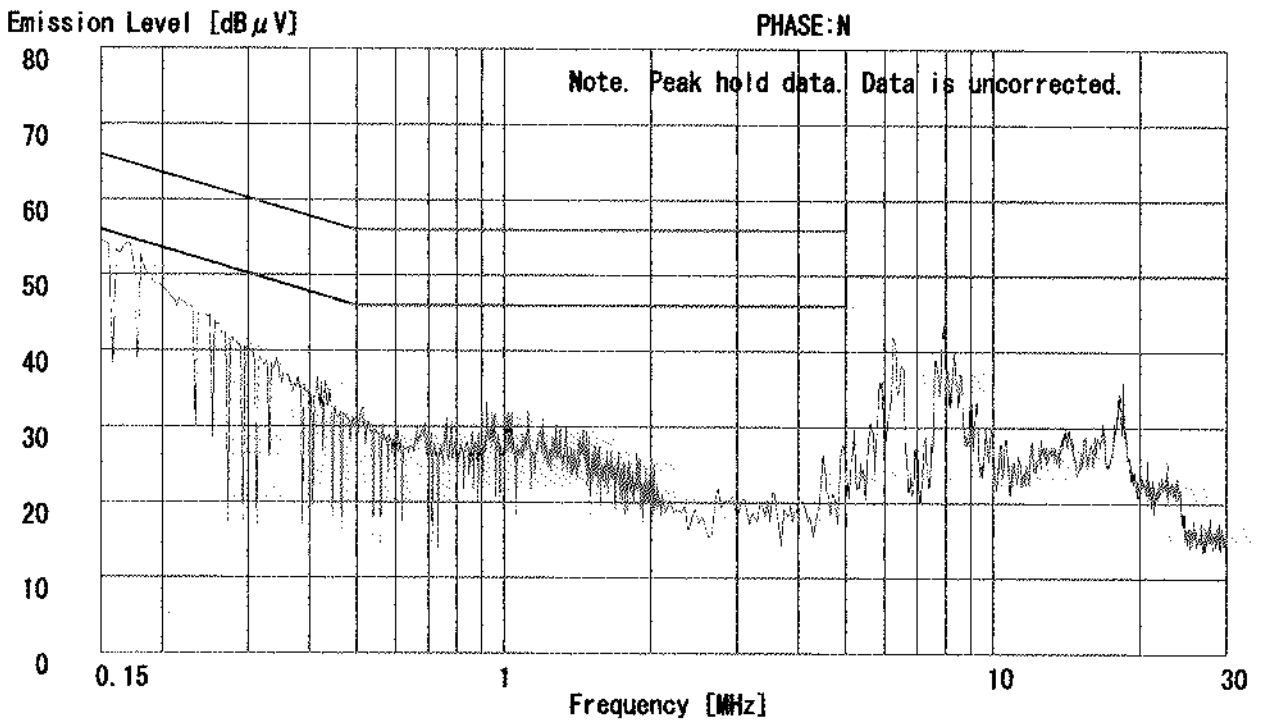
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: AV Input+REC		
Remarks	: 1Vp-p		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

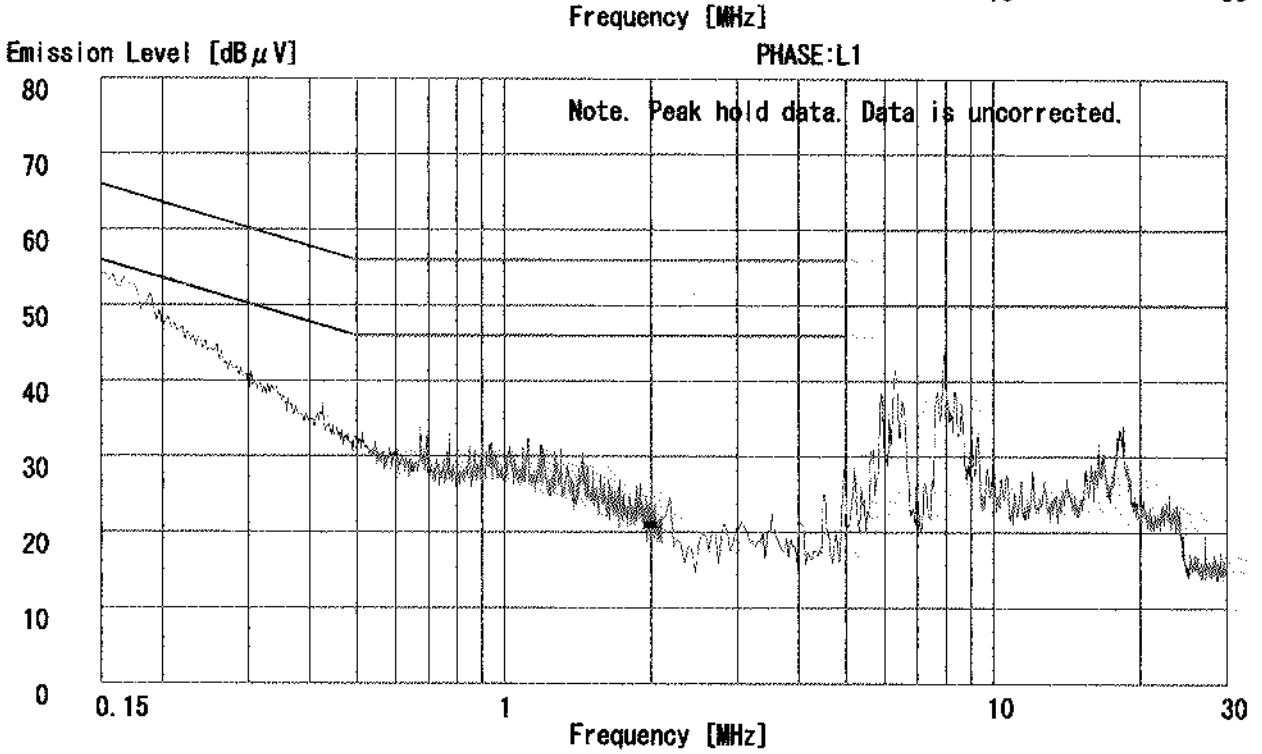


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No. : 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: AV Input+REC		
Remarks	: 1Vp-p		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation 1	: FCC Part15 CLASS B(02-157)		
Regulation 2	: None		





DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: AV Input+REC		
Remarks	: 5Vp-p		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

No.	FREQ.	READING(N) QP	READING(N) AV	READING(L1) QP	READING(L1) AV	LISN FACTOR	CABLE LOSS	ATTEN.	RESULT QP	RESULT AV	LIMITS QP	LIMITS AV	MARGIN QP	MARGIN AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]		[dBμV]		[dBμV]	[dB]
1.	0.1500	44.1	-	44.3	-	0.1	0.0	0.0	44.4	-	66.0	56.0	21.6	-
2.	0.2018	39.2	-	39.3	-	0.1	0.0	0.0	39.4	-	63.5	53.5	24.1	-
3.	1.0270	23.6	-	22.9	-	0.2	0.2	0.0	24.0	-	56.0	46.0	32.0	-
4.	6.2138	31.6	-	31.8	-	0.4	0.3	0.0	32.5	-	60.0	50.0	27.5	-
5.	8.0888	36.1	-	35.5	-	0.5	0.3	0.0	36.9	-	60.0	50.0	23.1	-
6.	18.4322	35.5	-	33.3	-	1.1	0.4	0.0	37.0	-	60.0	50.0	23.0	-

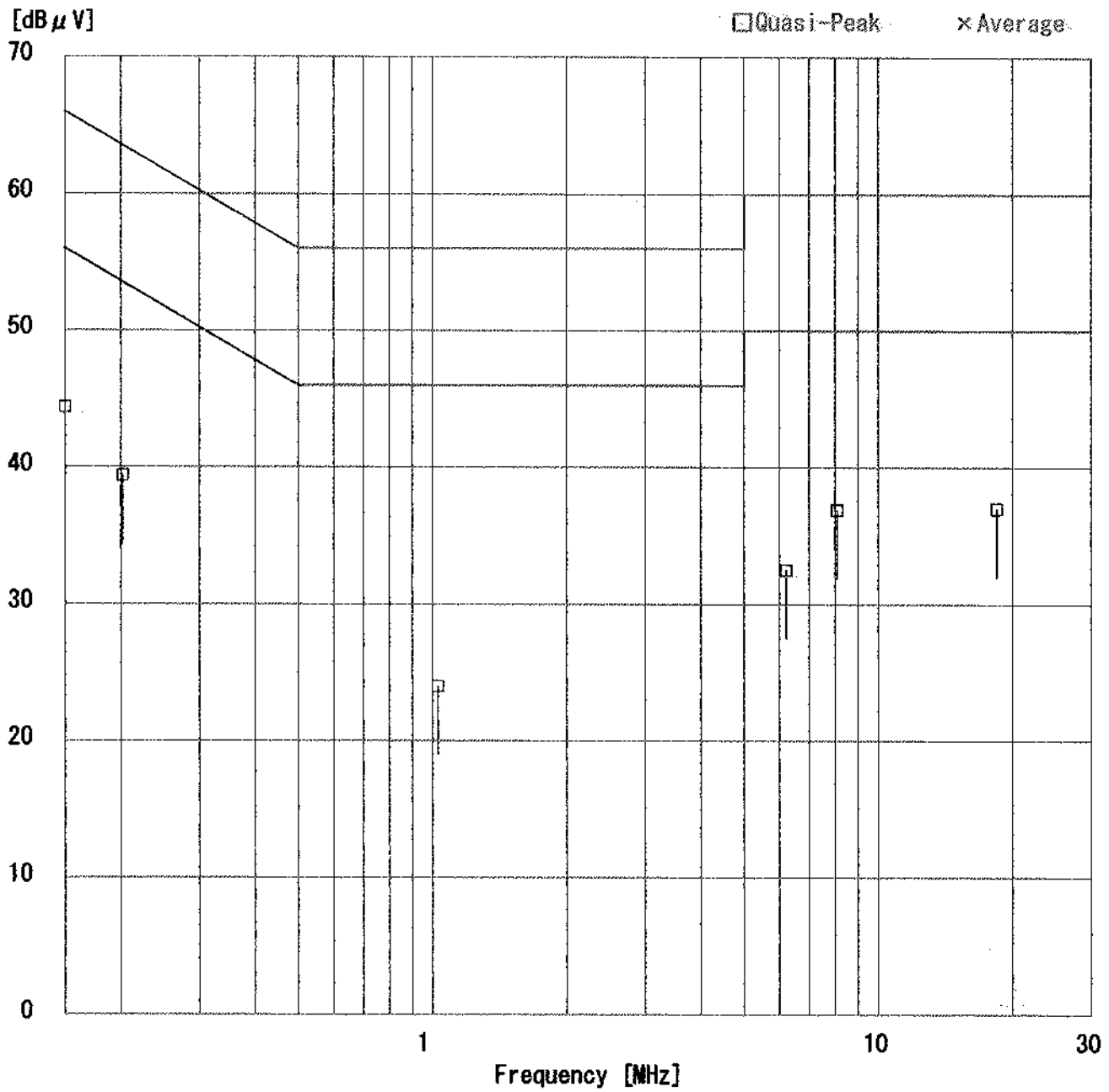
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

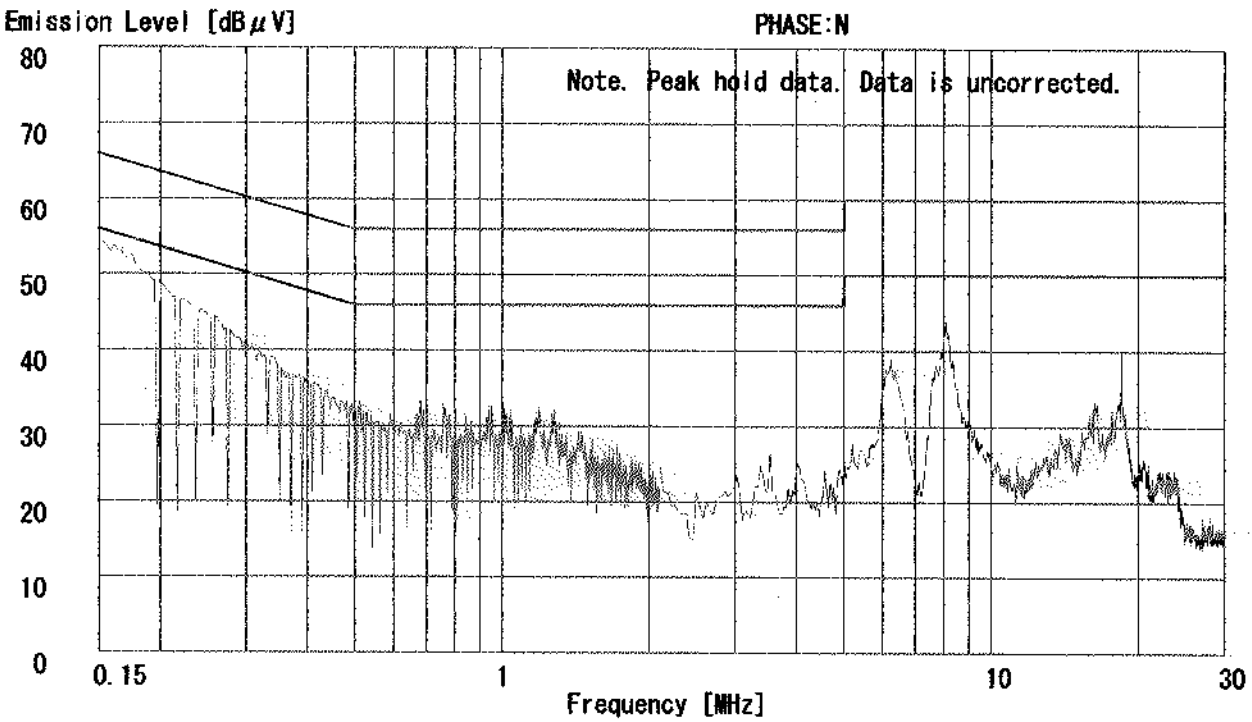
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: AV Input+REC		
Remarks	: 5Vp-p		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

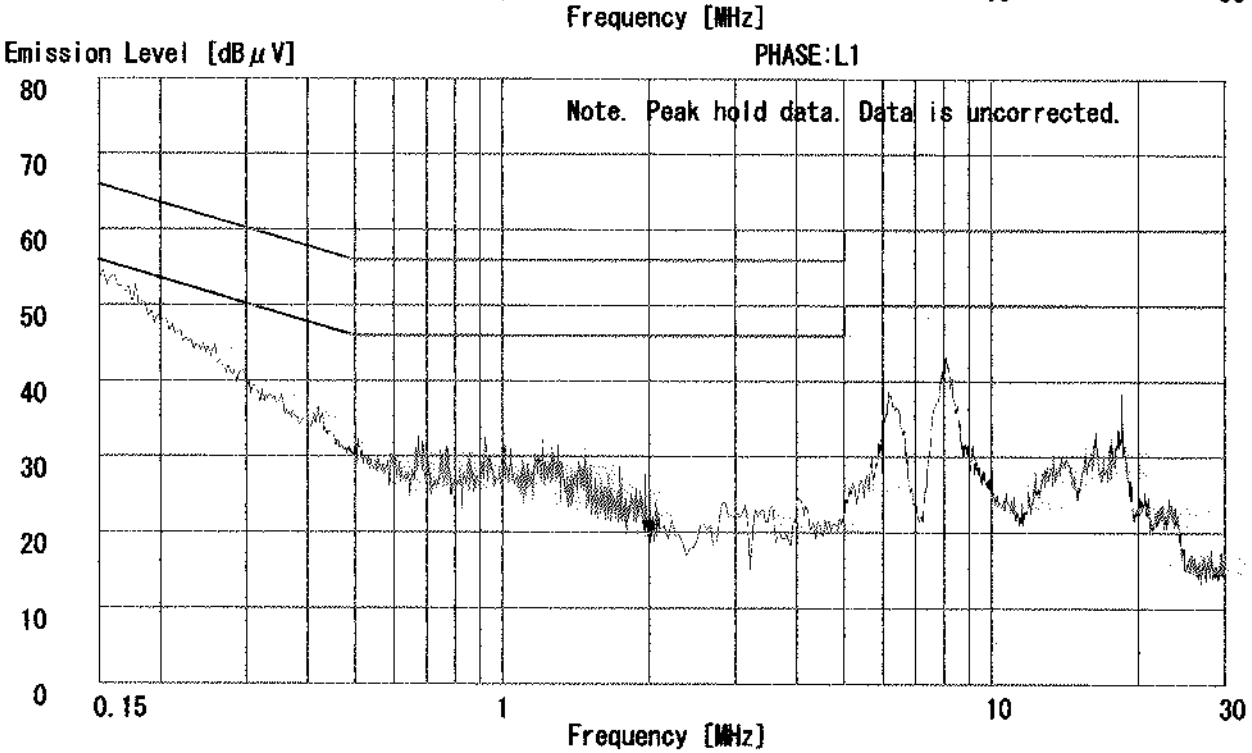


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: AV Input+REC		
Remarks	: 5Vp-p		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation 1	: FCC Part15 CLASS B(02-157)		
Regulation 2	: None		





DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No. : 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	:		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

No.	FREQ.	READING(N) QP	READING(N) AV	READING(L1) QP	READING(L1) AV	LISN FACTOR	CABLE LOSS	ATTEN.	RESULT QP	RESULT AV	LIMITS QP	LIMITS AV	MARGIN QP	MARGIN AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]		[dBμV]		[dBμV]	[dB]
1.	0.1500	44.4	-	44.1	-	0.1	0.0	0.0	44.5	-	66.0	56.0	21.5	-
2.	0.2010	39.0	-	39.1	-	0.1	0.0	0.0	39.2	-	63.6	53.6	24.4	-
3.	0.9970	18.9	-	20.2	-	0.2	0.2	0.0	20.6	-	56.0	46.0	35.4	-
4.	13.1600	4.1	-	16.5	-	0.8	0.4	0.0	17.7	-	60.0	50.0	42.3	-
5.	18.4320	23.1	-	22.2	-	1.1	0.4	0.0	24.6	-	60.0	50.0	35.4	-
6.	27.6475	14.9	-	14.1	-	0.9	0.5	0.0	16.3	-	60.0	50.0	43.7	-

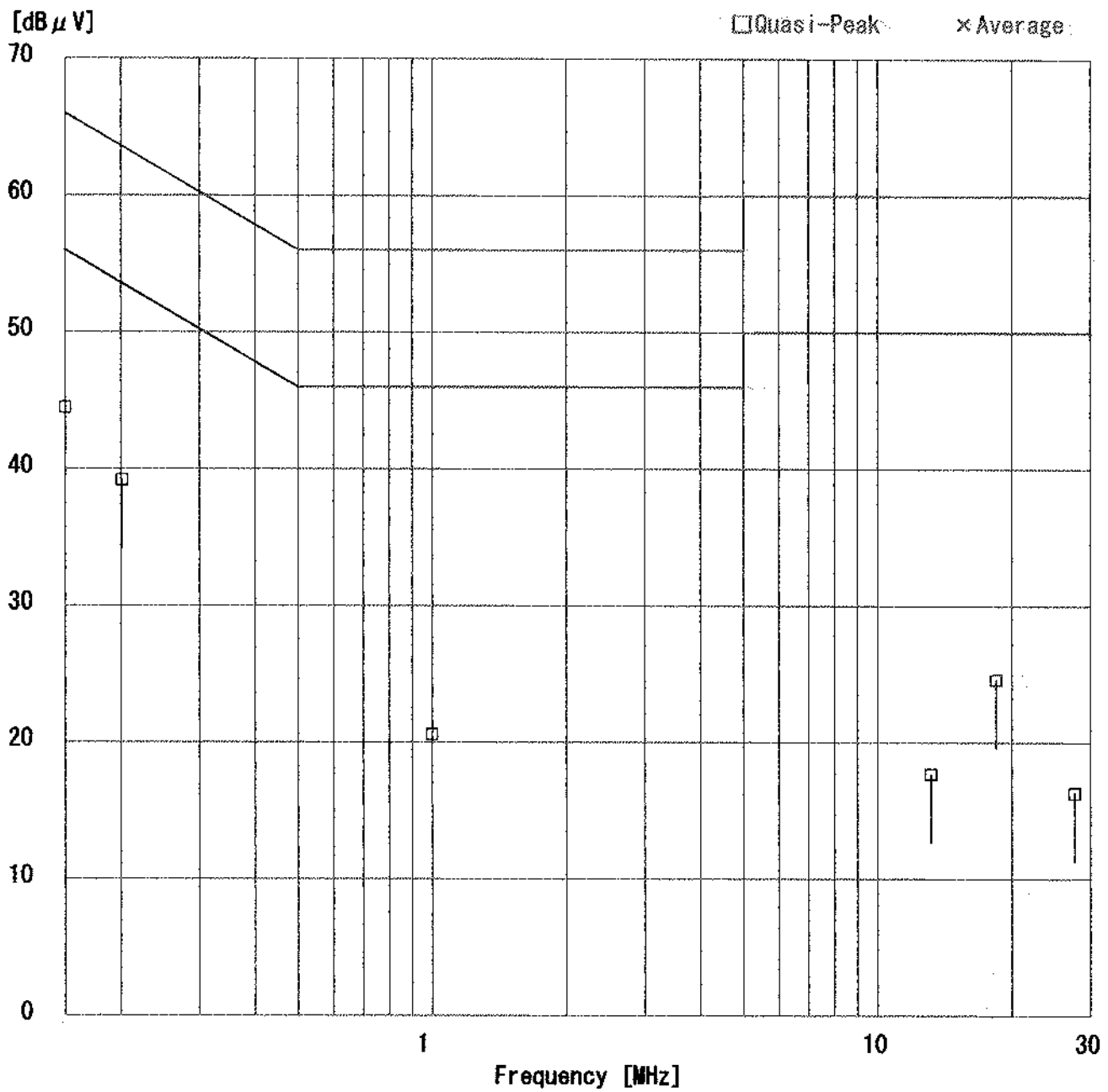
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No. : 24IE0174-YW-1

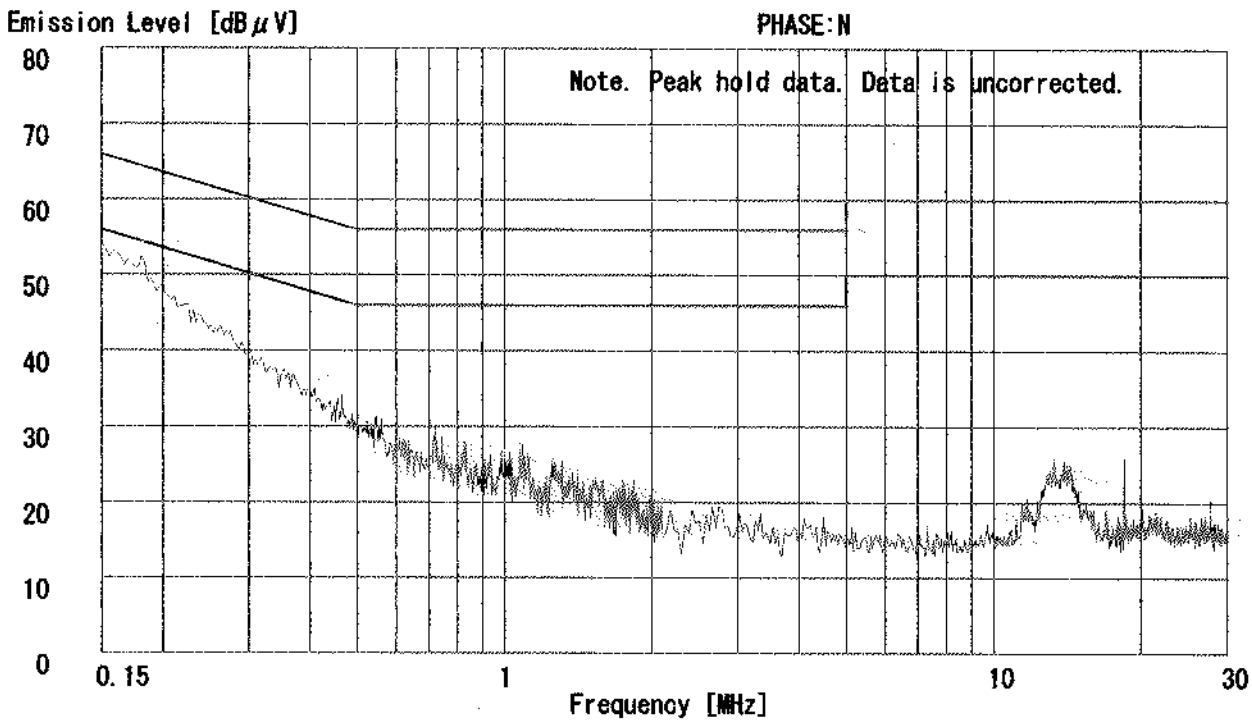
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	:		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 °C	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

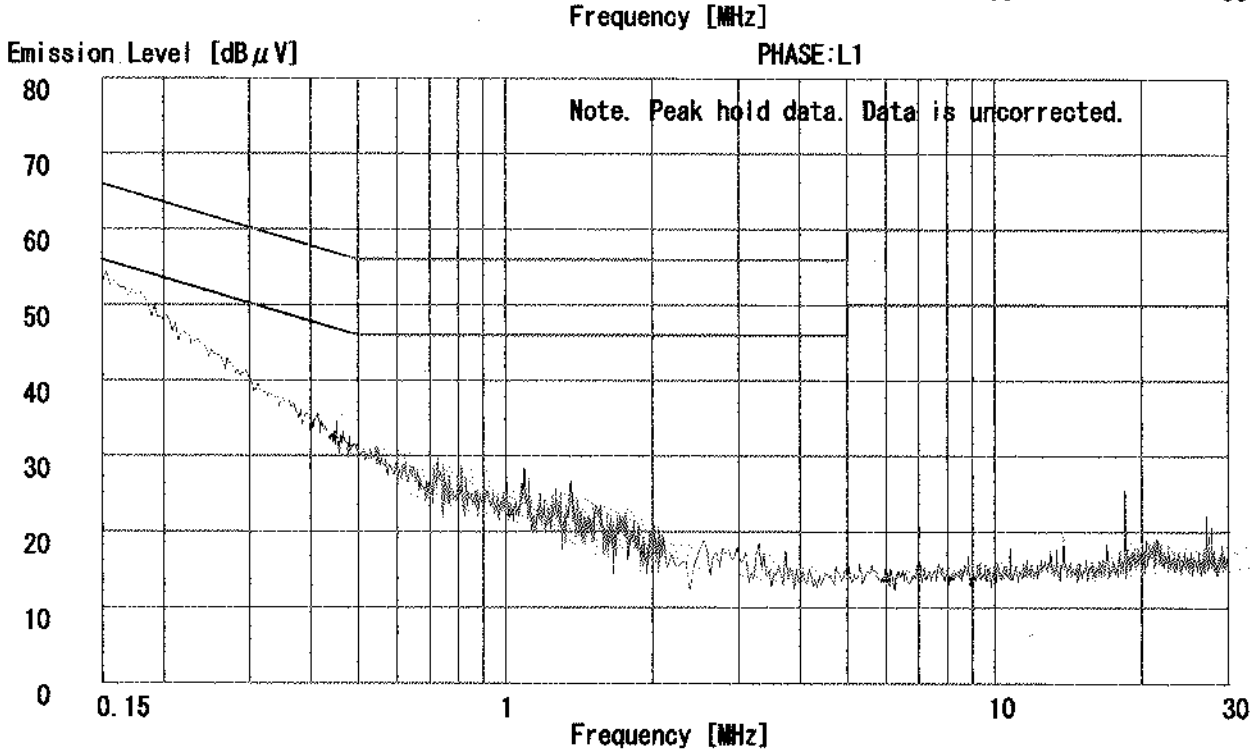


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No. : 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	:		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation 1	: FCC Part15 CLASS B(02-157)		
Regulation 2	: None		





DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	:		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

No.	FREQ.	READING(N)		READING(L1)		LISN	CABLE	ATTEN.	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV	FACTOR	LOSS		QP	AV	QP	AV	QP	AV
	[MHz]	[dBμV]		[dBμV]		[dB]	[dB]	[dB]	[dB]		[dBμV]		[dBμV]		[dB]
1.	0.1500	46.5	-	46.8	-	0.1	0.0	0.0	46.9	-	66.0	56.0	19.1	-
2.	0.1997	41.8	-	42.0	-	0.1	0.0	0.0	42.1	-	63.6	53.6	21.5	-
3.	0.3017	33.3	-	33.7	-	0.1	0.0	0.0	33.8	-	60.2	50.2	26.4	-
4.	0.8985	24.7	-	23.8	-	0.2	0.2	0.0	25.1	-	56.0	46.0	30.9	-
5.	14.4226	24.8	-	24.3	-	0.9	0.4	0.0	26.1	-	60.0	50.0	33.9	-
6.	20.9887	28.0	-	28.6	-	1.1	0.4	0.0	30.1	-	60.0	50.0	29.9	-

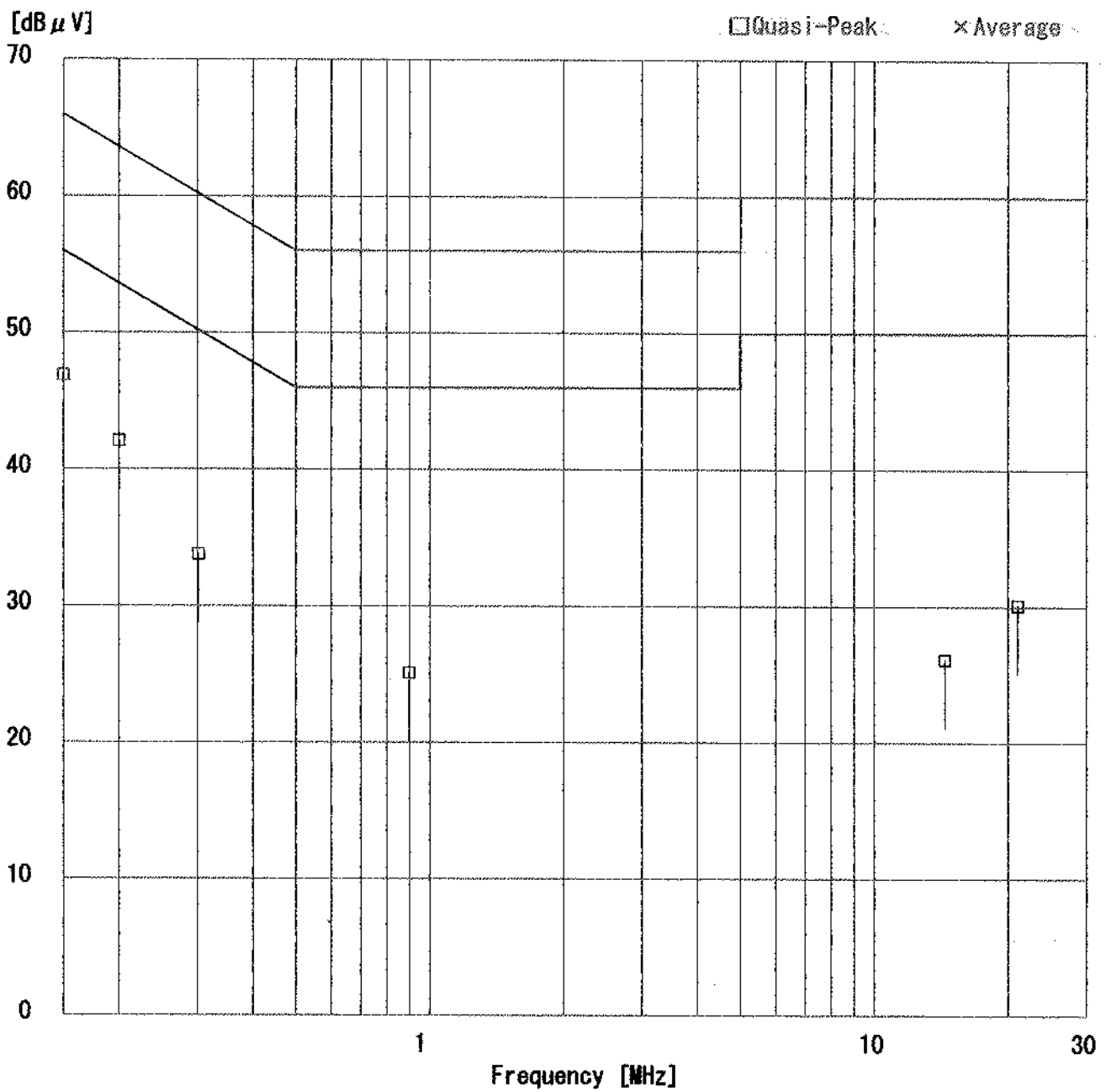
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

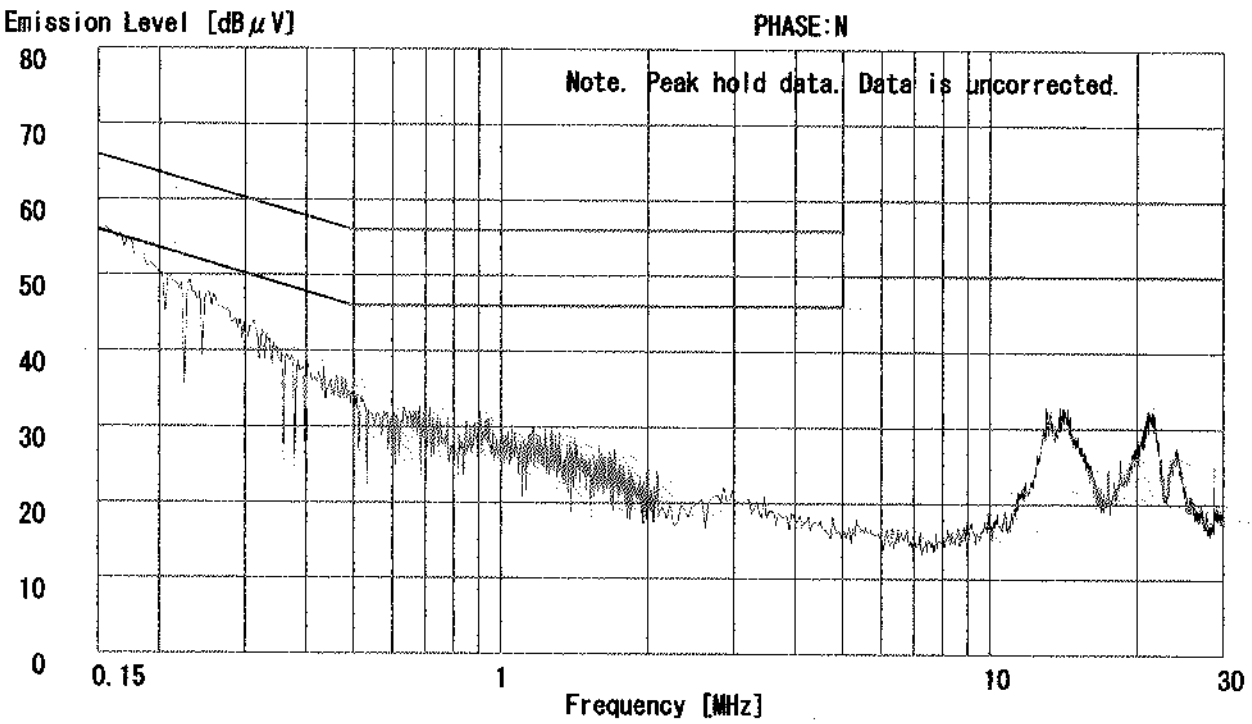
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	:		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation	: FCC Part15 CLASS B(02-157)		

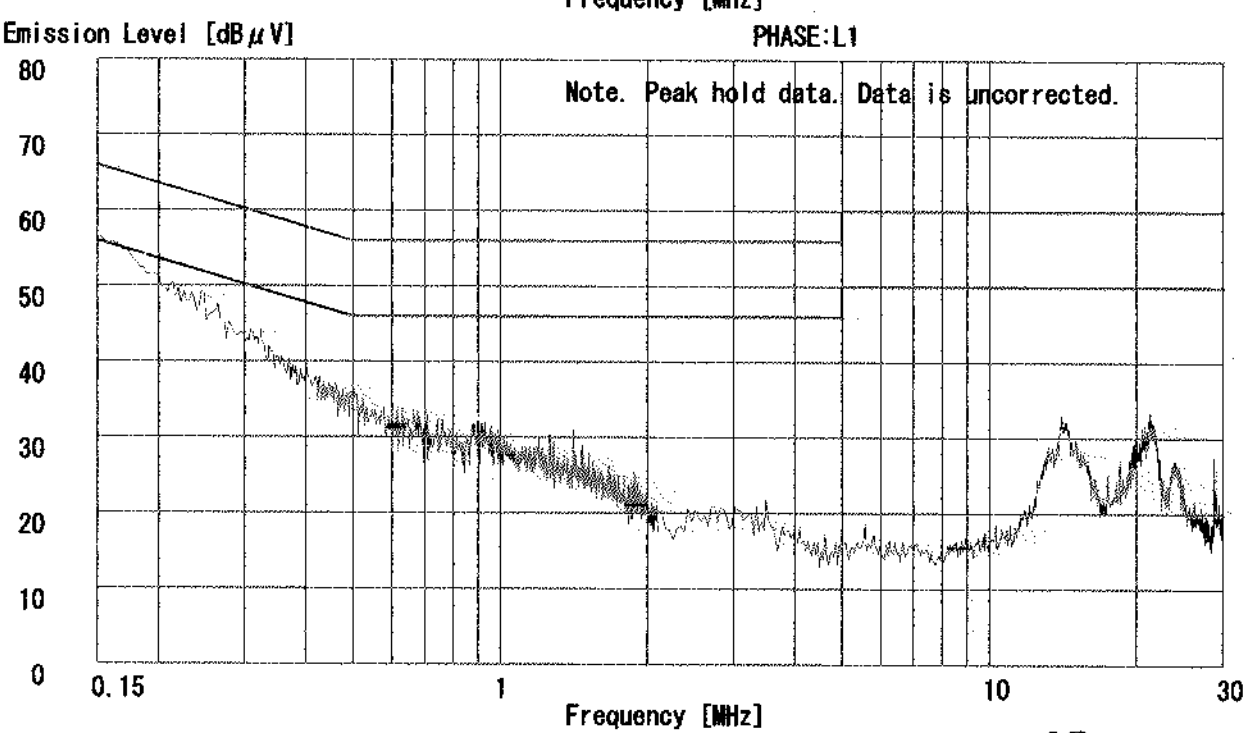


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 24IE0174-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: VRDVD4001A		
Serial No.	:		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	:		
Date	: 4/25/2004		
Phase	: Single Phase		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 31 %		
Regulation 1	: FCC Part15 CLASS B(02-157)		
Regulation 2	: None		





DATA OF RADIATION TEST

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

COMPANY	: Orion Electric Co., Ltd.	REPORT No.	: 24IE0174-YW-1
EQUIPMENT	: DVD / VCR	REGULATION	: FCC PART15 B
MODEL No.	: VRDVD4001A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz.	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: April 28, 2004
		TEMP./HUMID.	:22℃/35%
		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. [dBuV]	VER. [dBuV]			ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]		
VHF																	
2	101	26.7	27.5			BC	-11.0	15.7	16.5			43.5		27.8	27.0		
	202	27.1	29.2			BC	-4.0	23.1	25.2			43.5		20.4	18.3		
	303					LO	-5.9					46.0					
	404					LO	-4.2					46.0					
	505					LO	-1.1					46.0					
	606					LO	0.9					46.0		>15.0			
	707					LO	2.7					46.0					
	808					LO	4.2					46.0					
	909					LO	5.8					46.0					
		READING(PK) HOR. [dBuV]	VER. [dBuV]	READING(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1010					HO	-12.0					74.0	54.0				
	1111					HO	-11.4					74.0	54.0				
	1212					HO	-10.9					74.0	54.0				
	1313					HO	-10.4					74.0	54.0	>27.0		-	
	1414					HO	-9.8					74.0	54.0				
	1515					HO	-9.2					74.0	54.0				
	1616					HO	-8.3					74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	VER. [dBuV]			ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]		
3	107	26.9	27.5			BC	-10.0	16.9	17.5			43.5		26.6	26.0		
	214	27.5	27.2			BC	-3.8	23.7	23.4			43.5		19.8	20.1		
	321					LO	-5.6					46.0					
	428					LO	-3.5					46.0					
	535					LO	-0.5					46.0					
	642					LO	1.5					46.0		>15.0			
	749					LO	3.3					46.0					
	856					LO	4.7					46.0					
	963					LO	7.8					54.0					
		READING(PK) HOR. [dBuV]	VER. [dBuV]	READING(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1070					HO	-11.7					74.0	54.0				
	1177					HO	-11.1					74.0	54.0				
	1284					HO	-10.5					74.0	54.0				
	1391					HO	-9.9					74.0	54.0	>27.0		-	
	1498					HO	-9.4					74.0	54.0				
	1605					HO	-8.4					74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	VER. [dBuV]			ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]		
4	113	27.1	25.5			BC	-8.8	18.3	16.7			43.5		25.2	26.8		
	226					BC	-3.7					46.0					
	339					LO	-5.4					46.0					
	452					LO	-2.7					46.0					
	565					LO	0.0					46.0		>15.0			
	678					LO	2.2					46.0					
	791					LO	4.0					46.0					
	904					LO	5.6					46.0					
		READING(PK) HOR. [dBuV]	VER. [dBuV]	READING(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1017					HO	-11.9					74.0	54.0				
	1130					HO	-11.3					74.0	54.0				
	1243					HO	-10.7					74.0	54.0				
	1356					HO	-10.1					74.0	54.0	>27.0		-	
	1469					HO	-9.5					74.0	54.0				
	1582					HO	-8.6					74.0	54.0				

DATA OF RADIATION TEST

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

COMPANY	: Orion Electric Co., Ltd.	REPORT No.	: 24IE0174-YW-1
EQUIPMENT	: DVD / VCR	REGULATION	: FCC PART15 B
MODEL No.	: VRDVD4001A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: April 28, 2004
		TEMP./HUMID.	:22℃/35%
		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]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
VHF										
5	123	25.5	27.9	BC	-7.5	18.0	20.4	43.5	25.5	23.1
	246			BC	-3.5			46.0	>15.0	
	369			LO	-4.7			46.0		
	492			LO	-1.5			46.0		
	615			LO	0.9			46.0		
	738			LO	3.2			46.0		
	861			LO	5.0			46.0		
	984			LO	8.5			54.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1107					HO	-11.4					74.0	54.0	>27.0		-	
	1230					HO	-10.8					74.0	54.0				
	1353					HO	-10.2					74.0	54.0				
	1476					HO	-9.5					74.0	54.0				
	1599					HO	-8.4					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
6	129	23.1	23.1	BC	-7.0	16.1	16.1	43.5	27.4	27.4
	258			BC	-3.1			46.0	>15.0	
	387			LO	-4.4			46.0		
	516			LO	-1.0			46.0		
	645			LO	1.5			46.0		
	774			LO	3.7			46.0		
	903			LO	5.6			46.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1032					HO	-11.9					74.0	54.0	>27.0		-	
	1161					HO	-11.2					74.0	54.0				
	1290					HO	-10.5					74.0	54.0				
	1419					HO	-9.8					74.0	54.0				
	1548					HO	-8.9					74.0	54.0				
	1677					HO	-7.7					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
7	221	24.9	24.5	BC	-3.8	21.1	20.7	46.0	24.9	25.3
	442			LO	-3.1			46.0	>15.0	
	663			LO	1.9			46.0		
	884			LO	5.5			46.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1105					HO	-11.5					74.0	54.0	>27.0		-	
	1326					HO	-10.3					74.0	54.0				
	1547					HO	-8.9					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
8	227	23.9	24.1	BC	-3.7	20.2	20.4	46.0	25.8	25.6
	454			LO	-2.6			46.0	>15.0	
	681			LO	2.2			46.0		
	908			LO	5.8			46.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1135					HO	-11.3					74.0	54.0	>27.0		-	
	1362					HO	-10.1					74.0	54.0				
	1589					HO	-8.5					74.0	54.0				

DATA OF RADIATION TEST

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

COMPANY	: Orion Electric Co., Ltd.	REPORT No.	: 24IE0174-YW-1
EQUIPMENT	: DVD / VCR	REGULATION	: FCC PART15 B
MODEL No.	: VRDVD4001A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: April 28, 2004
		TEMP./HUMID.	:22℃/35%
		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]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
VHF										
9	233	26.4	25.7	BC	-3.6	22.8	22.1	46.0	23.2	23.9
	466			LO	-2.3			46.0	>15.0	
	699			LO	2.6			46.0		
	932			LO	6.7			46.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1165					HO	-11.2					74.0	54.0	>27.0		-	
	1398					HO	-9.9					74.0	54.0				
	1631					HO	-8.1					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
10	239	22.6	22.7	BC	-3.5	19.1	19.2	46.0	26.9	26.8
	478			LO	-2.0			46.0	>15.0	
	717			LO	2.8			46.0		
	956			LO	7.5			46.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1195					HO	-11.1					74.0	54.0	>27.0		-	
	1434					HO	-9.8					74.0	54.0				
	1673					HO	-7.8					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
11	245	22.9	23.0	BC	-3.5	19.4	19.5	46.0	26.6	26.5
	490			LO	-1.5			46.0	>15.0	
	735			LO	3.2			46.0		
	980			LO	8.4			54.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1225					HO	-10.8					74.0	54.0	>27.0		-	
	1470					HO	-9.5					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
12	251	23.1	23.2	BC	-3.5	19.6	19.7	46.0	26.4	26.3
	502			LO	-1.2			46.0	>15.0	
	753			LO	3.5			46.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1004					HO	-12.0					74.0	54.0	>27.0		-	
	1255					HO	-10.6					74.0	54.0				
	1506					HO	-9.3					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	VER. [dB]
13	257	27.6	27.1	BC	-3.1	24.5	24.0	46.0	21.5	22.0
	514			LO	-1.0			46.0	>15.0	
	771			LO	3.7			46.0		

		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB]	VER. [dB]
	1028					HO	-11.9					74.0	54.0	>27.0		-	
	1285					HO	-10.5					74.0	54.0				
	1542					HO	-9.0					74.0	54.0				

DATA OF RADIATION TEST

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

COMPANY	: Orion Electric Co., Ltd.	REPORT No.	: 24IE0174-YW-1
EQUIPMENT	: DVD / VCR	REGULATION	: FCC PART15 B
MODEL No.	: VRDVD4001A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB 1030-1694MHz 0dB
DESCRIPTION	: TV Reception + Rec	DATE	: April 28, 2004
		TEMP./HUMID.	:22℃/35%
		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]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
UHF														
14	517	25.9	27.0		LO	-1.0	24.9	26.0		46.0		21.1	20.0	
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1034				HO	-11.9				74.0	54.0	>27.0		-
	1551				HO	-8.9				74.0	54.0			
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
19	547	27.5	27.7		LO	-0.3	27.2	27.4		46.0		18.8	18.6	
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1094				HO	-11.5				74.0	54.0	>27.0		-
	1641				HO	-8.0				74.0	54.0			
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
28	601	23.4	23.6		LO	0.7	24.1	24.3		46.0	-	21.9	21.7	
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1202				HO	-10.9				74.0	54.0	>27.0		-
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
36	649	26.7	27.7		LO	1.6	28.3	29.3		46.0	-	17.7	16.7	
		READINNG(PK) HOR. #NAME? [dBuV]		READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1298				HO	-10.5				74.0	54.0	>27.0		-
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
44	697	24.3	25.5		LO	2.6	26.9	28.1		46.0	-	19.1	17.9	
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1394				HO	-9.9				74.0	54.0	>27.0		-
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
53	751	26.0	25.9		LO	3.4	29.4	29.3		46.0	-	16.6	16.7	
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1502				HO	-9.3				74.0	54.0	>27.0		-
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
61	799	23.2	22.6		LO	4.1	27.3	26.7		46.0	-	18.7	19.3	
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1598				HO	-8.4				74.0	54.0	>27.0		-
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]		ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]		LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]	
69	847	25.6	23.4		LO	4.5	30.1	27.9		46.0	-	15.9	18.1	
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV] VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m] VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	VER. [dB]	MARGIN(AV) HOR. [dB] VER. [dB]
	1694				HO	-7.6				74.0	54.0	>27.0		-

DATA OF RADIATION TEST

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

COMPANY	: Orion Electric Co., Ltd.	REPORT No.	: 24IE0174-YW-1
EQUIPMENT	: DVD / VCR	REGULATION	: FCC PART15 B
MODEL No.	: VRDVD4001A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: April 28, 2004
		TEMP./HUMID.	:22℃/35%
		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]	READINNG(QP) HOR. [dBuV]	READINNG(QP) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	RESULT(QP) VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	MARGIN(QP) VER. [dB]
CATV										
1	119	29.4	30.6	BC	-7.7	21.7	22.9	43.5	21.8	20.6
	238			BC	-3.5			46.0		
	357			LO	-5.0			46.0		
	476			LO	-2.1			46.0		
	595			LO	0.6			46.0	>15.0	
	714			LO	2.9			46.0		
	833			LO	4.6			46.0		
	952			LO	7.4			46.0		

		READINNG(PK) HOR. [dBuV]	READINNG(PK) VER. [dBuV]	READINNG(AV) HOR. [dBuV]	READINNG(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1071					HO	-11.7					74.0	54.0				
	1190					HO	-11.1					74.0	54.0				
	1309					HO	-10.4					74.0	54.0	>27.0		-	
	1428					HO	-9.8					74.0	54.0				
	1547					HO	-8.9					74.0	54.0				
	1666					HO	-7.8					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	READINNG(QP) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	RESULT(QP) VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	MARGIN(QP) VER. [dB]
95	137	23.1	25.1	BC	-6.4	16.7	18.7	43.5	26.8	24.8
	274			BC	-2.2			46.0		
	411			LO	-4.0			46.0		
	548			LO	-0.3			46.0	>15.0	
	685			LO	2.3			46.0		
	822			LO	4.4			46.0		
	959			LO	7.5			46.0		

		READINNG(PK) HOR. [dBuV]	READINNG(PK) VER. [dBuV]	READINNG(AV) HOR. [dBuV]	READINNG(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1096					HO	-11.5					74.0	54.0				
	1233					HO	-10.8					74.0	54.0				
	1370					HO	-10.0					74.0	54.0	>27.0		-	
	1507					HO	-9.2					74.0	54.0				
	1644					HO	-8.0					74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	READINNG(QP) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	RESULT(QP) VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	MARGIN(QP) VER. [dB]
97	149	23.7	23.7	BC	-6.0	17.7	17.7	43.5	25.8	25.8
	298			BC	-1.0			46.0		
	447			LO	-2.8			46.0		
	596			LO	0.6			46.0	>15.0	
	745			LO	3.3			46.0		
	894			LO	5.5			46.0		

		READINNG(PK) HOR. [dBuV]	READINNG(PK) VER. [dBuV]	READINNG(AV) HOR. [dBuV]	READINNG(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1043					HO	-11.8			-	-	74.0	54.0				
	1192					HO	-11.1			-	-	74.0	54.0				
	1341					HO	-10.2			-	-	74.0	54.0	>27.0		-	
	1490					HO	-9.4			-	-	74.0	54.0				
	1639					HO	-8.0			-	-	74.0	54.0				

CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	READINNG(QP) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	RESULT(QP) VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	MARGIN(QP) HOR. [dB]	MARGIN(QP) VER. [dB]
99	161	26.4	27.5	BC	-5.6	20.8	21.9	43.5	22.7	21.6
	322			LO	-5.6			46.0		
	483			LO	-1.7			46.0		
	644			LO	1.5			46.0	>15.0	
	805			LO	4.2			46.0		
	966			LO	7.9			46.0		

		READINNG(PK) HOR. [dBuV]	READINNG(PK) VER. [dBuV]	READINNG(AV) HOR. [dBuV]	READINNG(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1127					HO	-11.3					74.0	54.0				
	1288					HO	-10.5					74.0	54.0	>27.0		-	
	1449					HO	-9.7					74.0	54.0				
	1610					HO	-8.3					74.0	54.0				

DATA OF RADIATION TEST

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

COMPANY	: Orion Electric Co., Ltd.	REPORT No.	: 24IE0174-YW-1
EQUIPMENT	: DVD / VCR	REGULATION	: FCC PART15 B
MODEL No.	: VRDVD4001A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: April 28, 2004
		TEMP./HUMID.	:22℃/35%
		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]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]
CATV											
14	167	22.7	24.1	BC	-5.1	17.6	19.0	43.5		25.9	24.5
	334			LO	-5.4			46.0		>15.0	
	501			LO	-1.2			46.0			
	668			LO	2.1			46.0			
	835			LO	4.6			46.0			
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]
	1002					HO	-12.0			74.0	54.0
	1169					HO	-11.2			74.0	54.0
	1336					HO	-10.2			74.0	54.0
	1503					HO	-9.3			74.0	54.0
	1670					HO	-7.8			74.0	54.0
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]
18	191	24.2	25.6	BC	-3.8	20.4	21.8	43.5		23.1	21.7
	382			LO	-4.4			46.0		>15.0	
	573			LO	0.2			46.0			
	764			LO	3.5			46.0			
	955			LO	7.5			46.0			
		READINNG(PK) HOR. [dBuV]	VER. [dBuV]	READINNG(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]
	1146					HO	-11.2			74.0	54.0
	1337					HO	-10.2			74.0	54.0
	1528					HO	-9.1			74.0	54.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]
22	215	23.8	23.5	BC	-3.8	20.0	19.7	43.5		23.5	23.8
	430			LO	-3.4			46.0		>15.0	
	645			LO	1.5			46.0			
	860			LO	4.9			46.0			
		READING(PK) HOR. [dBuV]	VER. [dBuV]	READING(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]
	1075					HO	-11.6			74.0	54.0
	1290					HO	-10.5			74.0	54.0
	1505					HO	-9.3			74.0	54.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]
23	263	23.0	22.8	BC	-2.8	20.2	20.0	46.0	46.0	25.8	26.0
	526			LO	-0.7			46.0	46.0		
	789			LO	3.8			46.0	46.0		
		READING(PK) HOR. [dBuV]	VER. [dBuV]	READING(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]
	1052					HO	-11.8			74.0	54.0
	1315					HO	-10.4			74.0	54.0
	1578					HO	-8.6			74.0	54.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	VER. [dBuV/m]	LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR. [dB]	VER. [dB]
29	299	21.5	21.5	BC	-0.9	20.6	20.6	46.0	46.0	25.4	25.4
	598			LO	0.7			46.0	46.0	>15.0	
	897			LO	5.5			46.0	46.0		
		READING(PK) HOR. [dBuV]	VER. [dBuV]	READING(AV) HOR. [dBuV]	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	VER. [dBuV/m]
	1196					HO	-11.1			74.0	54.0
	1495					HO	-9.4			74.0	54.0

DATA OF RADIATION TEST

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

COMPANY	: Orion Electric Co., Ltd.	REPORT No.	: 24IE0174-YW-1
EQUIPMENT	: DVD / VCR	REGULATION	: FCC PART15 B
MODEL No.	: VRDVD4001A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: April 28, 2004
		TEMP./HUMID.	:22℃/35%
		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	22.9	22.9			LO	-5.4	17.5	17.5			46.0	46.0	28.5	28.5	
	682					LO	2.2					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] [dB]
	1023					HO	-11.9					74.0	54.0	>27.0		-
	1364					HO	-10.1					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	22.5	22.5			LO	-5.2	17.3	17.3			46.0	46.0	28.7	28.7	
	694					LO	2.5					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] [dB]
	1041					HO	-11.8					74.0	54.0	>27.0		-
	1388					HO	-9.9					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	22.9	22.9			LO	-1.0	21.9	21.9			46.0	46.0	24.1	24.1	
		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] [dB]
	1030					HO	-11.9					74.0	54.0	>27.0		-
	1545					HO	-8.9					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	22.9	27.2			LO	2.4	25.3	29.6			46.0	46.0	20.7	16.4	
		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] [dB]
	1378					HO	-10.0					74.0	54.0	>27.0		-
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	24.7	27.5			LO	2.5	27.2	30.0			46.0	46.0	18.8	16.0	
		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]
	1390					HO	-9.9					74.0	54.0	>27.0		-
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	22.9	22.9			LO	3.7	26.6	26.6			46.0	46.0	19.4	19.4	
		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] [dB]
	1546					HO	-8.9					74.0	54.0	>27.0		-
CH.	FREQ [MHz]	READING(QP) HOR.	VER. [dBuV]			ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR.	VER. [dBuV/m]			LIMIT [QP] [dBuV/m]		MARGIN(QP) HOR.	VER. [dB]	
125	845	21.8	21.9			LO	4.5	26.3	26.4			46.0	46.0	19.7	19.6	
		READING(PK) HOR.	VER. [dBuV]	READING(AV) HOR.	VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR.	VER. [dBuV/m]	RESULT(AV) HOR.	VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR.	VER. [dB]	MARGIN(AV) HOR. VER. [dB] [dB]
	1690					HO	-7.6					74.0	54.0	>27.0		-