Certification EMI TEST REPORT

Test Report No. : 25LE0078-YW-1

Applicant : Orion Electric Co., Ltd.

Type of equipment : DVD Player with Video Cassette Recorder

Model number : DVD2100-CA-A

FCC ID : A7RM2F3B

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
DVD2100-PA-A	DISNEY	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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 : July 7 to 9, 2005

Tested by:

Tsubasa Takayama
Engineer of EMC Service

Approved by:

Hiroya Tabata
Leader of EMC Service

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

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Section 1 : Client information

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

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

2.1 Identification of E.U.T.

Type of equipment	:	DVD Player with Video Cassette Recorder
Brand Name	:	DISNEY
Model number	:	DVD2100-CA-A
FCC ID	:	A7RM2F3B
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	:	July 6, 2005
Condition of EUT	:	Production Prototype (Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product description

Model: DVD2100-CA-A (referred to as the EUT in this report) is a DVD Player with Video Cassette Recorder. The EUT specifications is as follows.

Tuner type	:	Quartz PLL frequency synthesized
I / F	:	45.75 MHz (Picture), 41.25 MHz (Sound)
Receiving channel	:	VHF 2 – 13 ch / UHF 14 – 69 ch / CATV 1 – 125 ch
Antenna input	:	75 ohm
Video signal	:	NTSC color
Power source	:	AC 120 V / 60 Hz, 18W
I / O terminal (Video)	:	RCA in 1Vp-p 75 ohm, RCA out 1 Vp-p 75 ohm
I / O terminal (Audio)	:	RCA in –8 dB 47 k ohm, RCA out –8 dB 1 k ohm

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	16.2 dB (0.1503 MHz, N, DVD Play)	Complied
Radiated emission	ANSI C63.4:2003 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	1.4 dB (675.00 MHz, Vertical, DVD Play)	Complied
Antenna terminal voltage	ANSI C63.4:2003	2 nW (at 75 ohm)	19.0 dB (3824.22500 MHz, TV tuning)	Complied
RF output level	ANSI C63.4:2003	Video signal: 3000 uV Aural signal: 671 uV	6.2 dB (4ch, 67.25 MHz, TV Reception + Rec. 25dBmV)	Complied
Spurious emission		94.8 uV	14.2 dB (276.2500 MHz, 4ch, TV Reception + Rec. 25dBmV)	Complied
Transfer switch	ANSI C63.4:2003	9.5 dB	3.6 dB (367.5000 MHz, 3ch, DVD Play)	Complied
Picture sensitivity	ANSI C63.4:2003	8 dB	4.7 dB	Complied
Noise figure	FCC/OET MP:2:1986	14 dB	5.4 dB (38ch, 615.25 MHz)	Complied

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

3.3 Additions or deviations to standard

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

3.4 Confirmation

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

3.5 Uncertainty

Conducted emission (150 kHz – 30 MHz)

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

Radiated emission

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ±4.4 dB.
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ±4.8 dB.
The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ±5.8 dB.
The data listed in this test report meets the limits unless the uncertainty is taken into consideration.

Antenna terminal voltage

The measurement uncertainty (with a 95% confidence level) for this test was ± 3.48 dB.
The data listed in this test report has enough margin, more than site margin.

RF output level test / spurious emission test

The measurement uncertainty (with a 95% confidence level) for this test was ± 3.48 dB.
The data listed in this test report has enough margin, more than site margin.

Antenna transfer switch

The measurement uncertainty (with a 95% confidence level) for this test was ± 3.48 dB.
The data listed in this test report has enough margin, more than site margin.

Picture sensitivity test

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

Noise Figure Test

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

3.7 Test location

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

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

*NVLAP Lab. code : 200109-0
No.1 and No.3 sites have been fully described in a report submitted to FCC office, and listed on September 25, 2003.
(Registration number: 90412)
No.2 site has been fully described in a report submitted to FCC office, and listed on August 29, 2003.
(Registration number: 90411)

3.8 Test setup, Data of EMI & Test instruments

Please refer to Appendix 1 to 3.

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

4.1 Operating modes

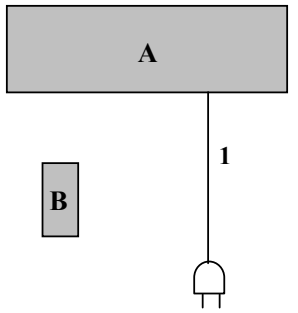
The EUT exercise program used during testing was designed exercise the various system components in a manner similar to typical use.

The sequence in used : * TV Reception + Rec. mode (0 dBmV input / 25 dBmV input)
* VCR Play mode
* DVD Play mode

Operation : The EUT was tested at above operation mode.

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

4.2 Configuration and peripherals



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

Description of EUT and support equipment

Sign	Item	Model number	Serial number	Manufacturer	FCC ID	Remark
A	DVD Player with Video Cassette Recorder	DVD2100-CA-A	–	Orion Electric Co., Ltd.	A7RM2F3B	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 No.2 shielded room.

Date : July 9, 2005
Temperature : See data
Humidity : See data

5.2 Test configuration

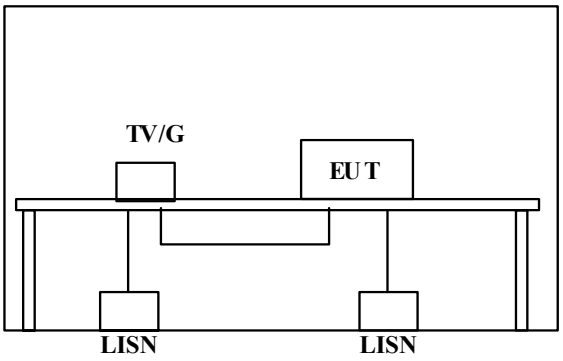
EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The rear of tabletop was located 40 cm to the vertical conducting plane. The rear of EUT was aligned and flushed with rear of tabletop. All other surfaces of tabletop was at least 80 cm from any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

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

Figure 1. Conducted emission

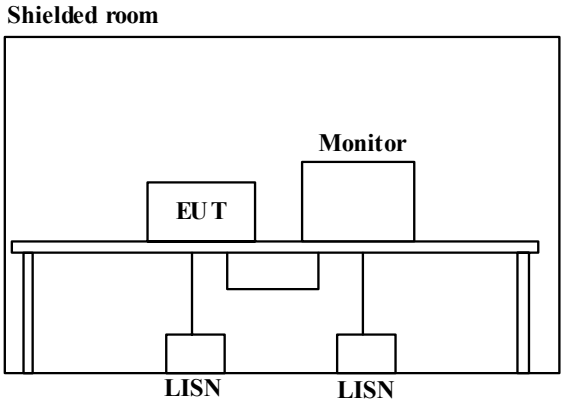
TV Reception + Rec. mode (0 dBmV input / 25 dBmV input)

Shielded room



RF in: TV signal generator connected
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
RF output: 75 ohm terminated with RF output cable
Coaxial out: 75 ohm terminated with coaxial cable

VCR Play mode / DVD Play mode



RF in: 75 ohm terminated with RF input cable
Rear video out: monitor connected
Rear audio out: monitor connected
S-Video out: 75 ohm terminated with S-Video cable
RF output: 75 ohm terminated with RF output cable
Coaxial out: 75 ohm terminated with coaxial cable

5.3 Test conditions

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

5.4 Test procedure

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT within a shielded room. The EUT was connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection has been performed. The measurements have been performed with a quasi-peak detector and if required, with an average detector.
The conducted emission measurements were made with the following detector function of the test receiver.
Detector Type : QP
IF Bandwidth : 10 kHz

5.5 Test result

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

Test engineer: Tsubasa Takayama

Section 6 : Radiated emission

6.1 Operation environment

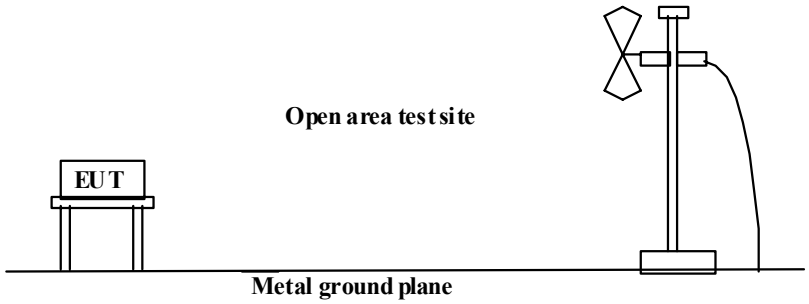
The test was carried out in No.1 and No.3 open site.

Date : July 7 and 8, 2005
Temperature : See data
Humidity : See data

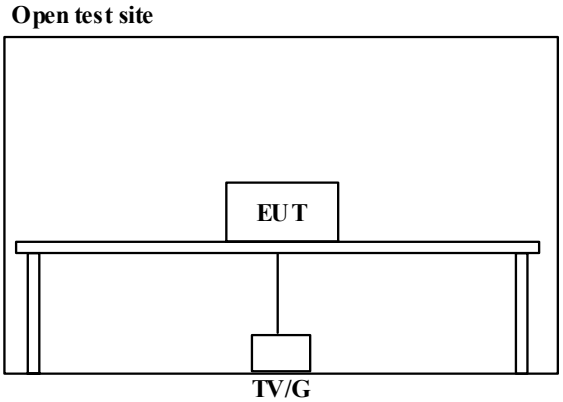
6.2 Test configuration

EUT was placed on a platform of nominal size, 1 m by 1.5m or 1.8 m, raised 80 cm above the conducting ground plane. The rear of EUT was aligned and flushed with rear of tabletop. AC cable was bundled in center. I/O cables were hanged 40 cm height to the ground plane. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.
A drawing of the set up is shown in figure 2 and photographs in Appendix 1.

Figure 2. Radiated emission



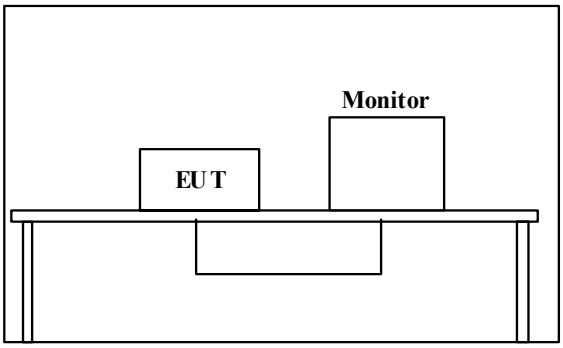
TV Reception + Rec. mode (0 dBmV / 25 dBmV)



RF in: TV signal generator connected
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
RF output: 75 ohm terminated with RF output cable
Coaxial out: 75 ohm terminated with coaxial cable

VCR Play mode / DVD Play mode

Open test site



RF in: 75 ohm terminated with RF input cable
Rear video out: monitor connected
Rear audio out: monitor connected
S-Video out: 75 ohm terminated with S-Video cable
RF output: 75 ohm terminated with RF output cable
Coaxial out: 75 ohm terminated with coaxial cable

6.3 Test conditions

Frequency range	:	30 MHz – 5000 MHz
Test distance	:	3 m
EUT position	:	Table top
EUT operation mode	:	TV Reception + Rec., 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. 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.

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

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

6.5 Test result

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

Test engineer: Tsubasa Takayama

Section 7 : Antenna terminal voltage

7.1 Operation environment

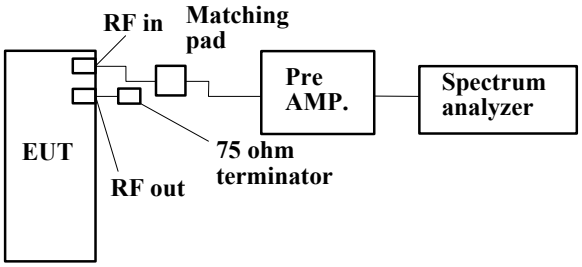
The test was carried out in No.7 shielded room.

Date : July 7, 2005
Temperature : See data
Humidity : See data

7.2 Test configuration

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

Figure 3. Antenna terminal voltage



7.3 Test conditions

Frequency range : 30 MHz – 5000 MHz
EUT position : Table top
EUT operation mode : Tuning (TV tuning / CATV tuning)

7.4 Test procedure

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

Detector Type : Peak (30-5000 MHz)

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

7.5 Test result

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

Test engineer: Tsubasa Takayama

Section 8 : RF output level / spurious emission

8.1 Operation environment

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

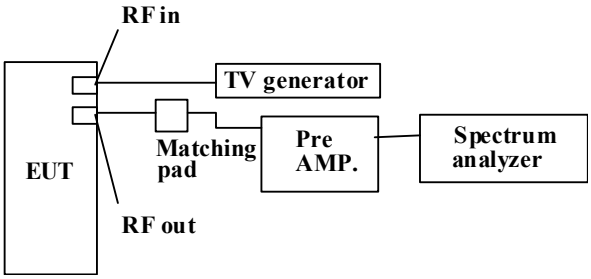
Date : July 7, 2005
Temperature : See data
Humidity : See data

8.2 Test configuration

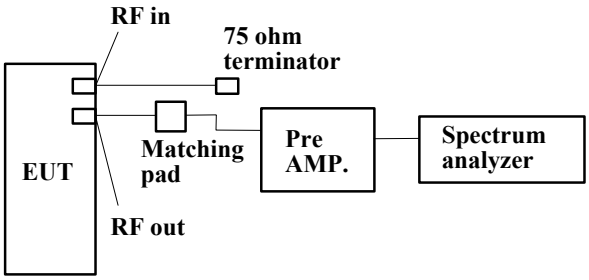
The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.
A drawing of the set up is shown in figure 4 and photographs in Appendix 1.

Figure 4. RF output level

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



VCR Play mode and DVD Play mode



8.3 Test conditions

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

8.4 Test procedure

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

Detector Type : Peak

8.5 Test result

Passed

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

Test engineer: Tsubasa Takayama

Section 9 : Antenna transfer switch

9.1 Operation environment

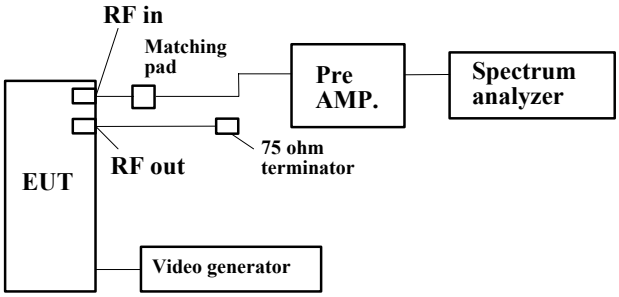
The test was carried out in No.7 shielded room.

Date : July 7, 2005
Temperature : See data
Humidity : See data

9.2 Test configuration

The EUT was placed on a non-metallic platform 0.8 m above a reference ground plane.
A drawing of the set up is shown in figure 5 and photographs in Appendix 1.

Figure 5. Transfer switch



9.3 Test conditions

EUT position : Table top
EUT operation mode : 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. Interference signals were measured from RF input terminal.

Detector Type : Peak

9.5 Test result

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

Test engineer: Tsubasa Takayama

Section 10 : Picture sensitivity

10.1 Operation environment

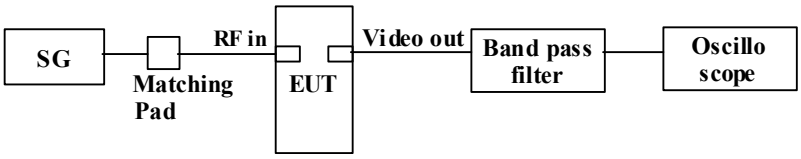
The test was carried out in No.7 shielded room.

Date : July 7, 2005
Temperature : See data
Humidity : See data

10.2 Test configuration

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

Figure 6. Picture sensitivity



10.3 Test conditions

EUT position : Table top
EUT operation mode : TV Reception

10.4 Test procedure

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

10.5 Test result

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

Test engineer: Tsubasa Takayama

Section 11 : Noise figure

11.1 Operating environment

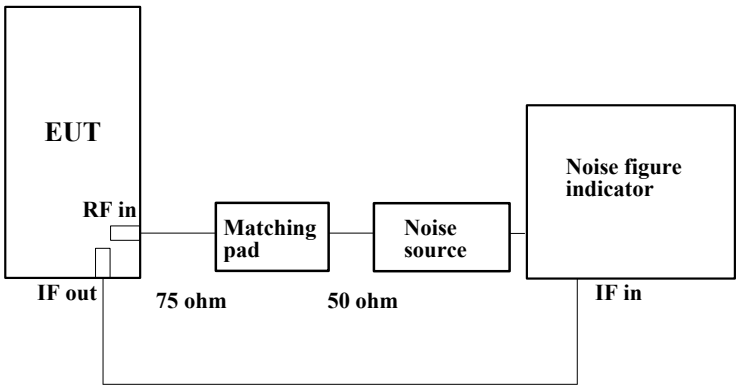
The test was carried out in No.7 shielded room.

Date : July 7, 2005
Temperature : See data
Humidity : See data

11.2 Test configuration

The EUT was placed on a non-metallic table.
A drawing of the set up is shown in figure 7 and photographs in Appendix 1.

Figure 7. Noise figure



11.3 Test condition

EUT position : Table top
EUT operation mode : TV Reception

11.4 Test procedure

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

11.5 Test result

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

Test engineer: Tsubasa Takayama

Appendix 1 : Photographs of test set up

Page 18 : Test set up of conducted emission

Page 19 : Test set up of radiated emission

Page 20 : Test set up of antenna terminal voltage

Page 21 : Test set up of RF output level / spurious emission

Page 22 : Test set up of antenna transfer switch

Page 23 : Test set up of picture sensitivity

Page 24 : Test set up of noise figure

Appendix 2 : Data of EMI tests

Page 25 - 34 : Conducted emission

Page 35 - 65 : Radiated emission

Page 66- 67 : Antenna terminal voltage

Page 68- 78 : RF output level / spurious emission

Page 79- 82 : Antenna transfer switch

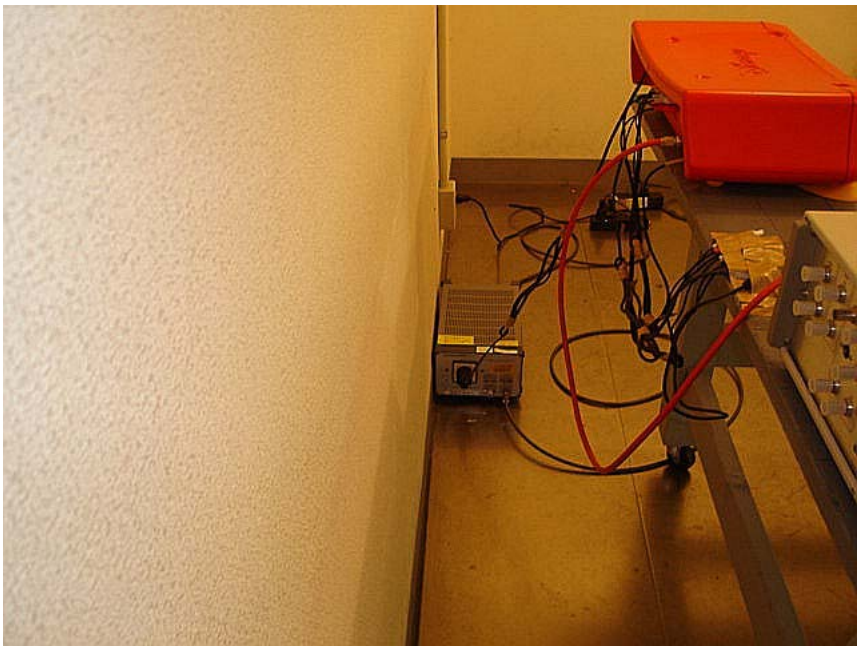
Page 83 : Picture sensitivity

Page 84 : Noise figure

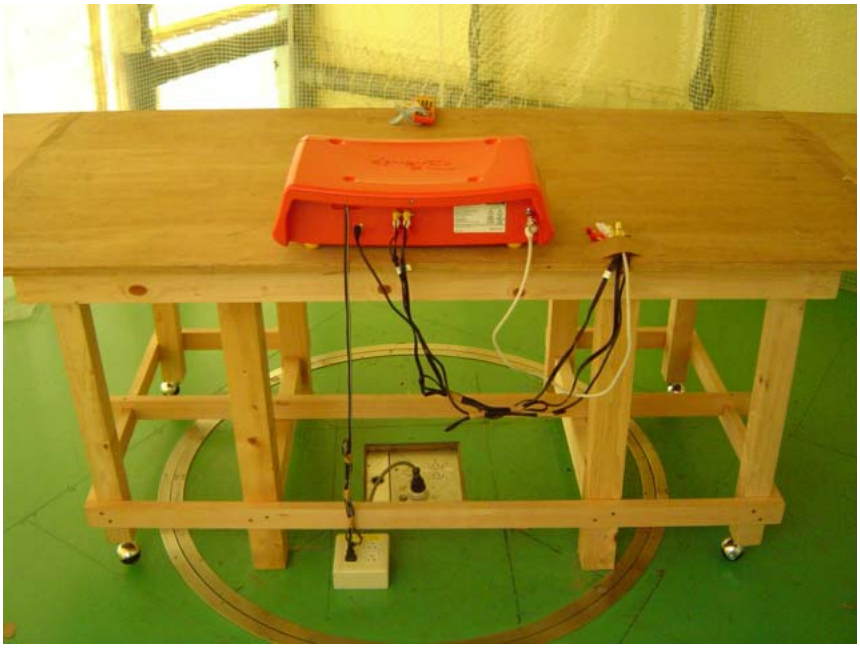
Appendix 3 : Test instruments

Page 85 : Test instruments

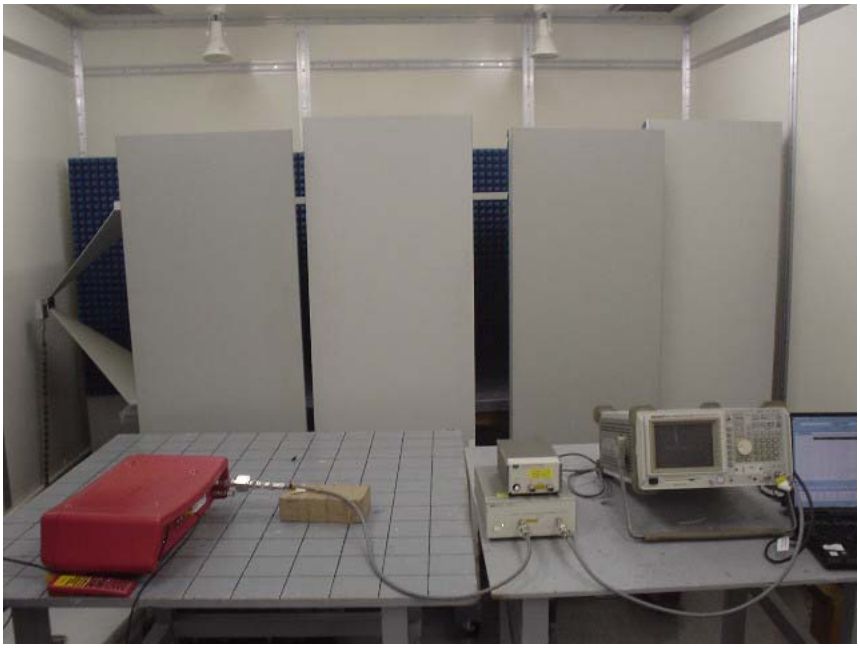
Conducted emission

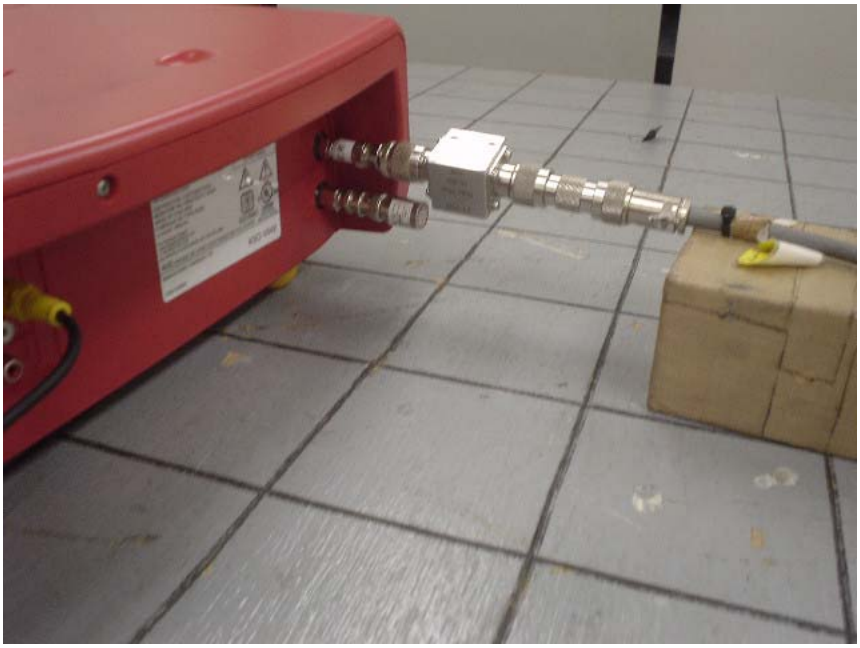


Radiated emission

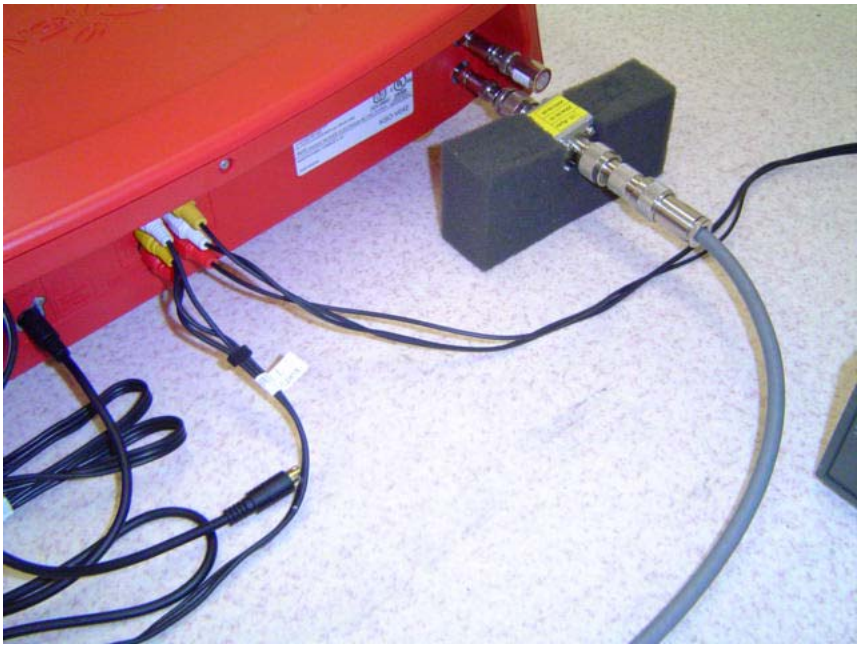


Antenna terminal voltage

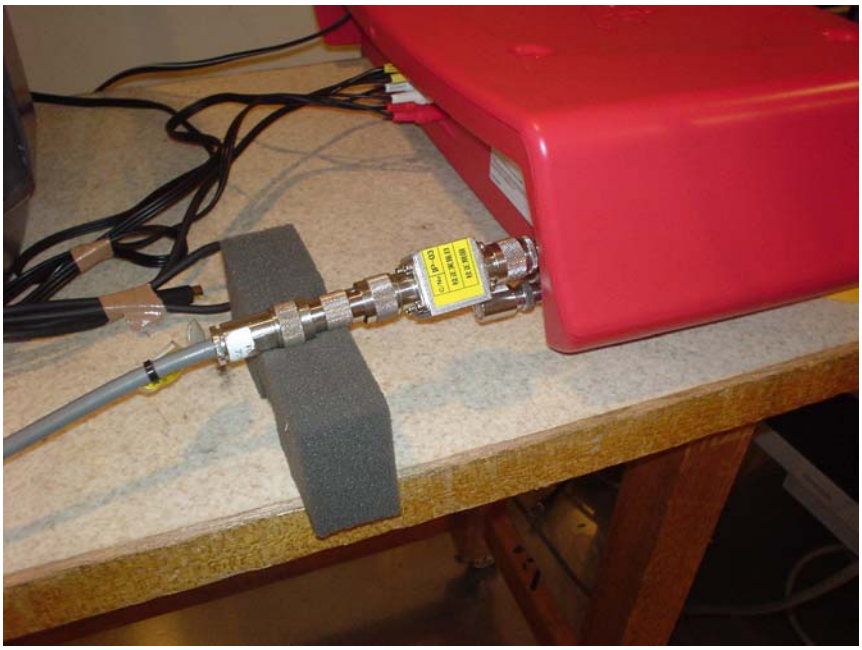




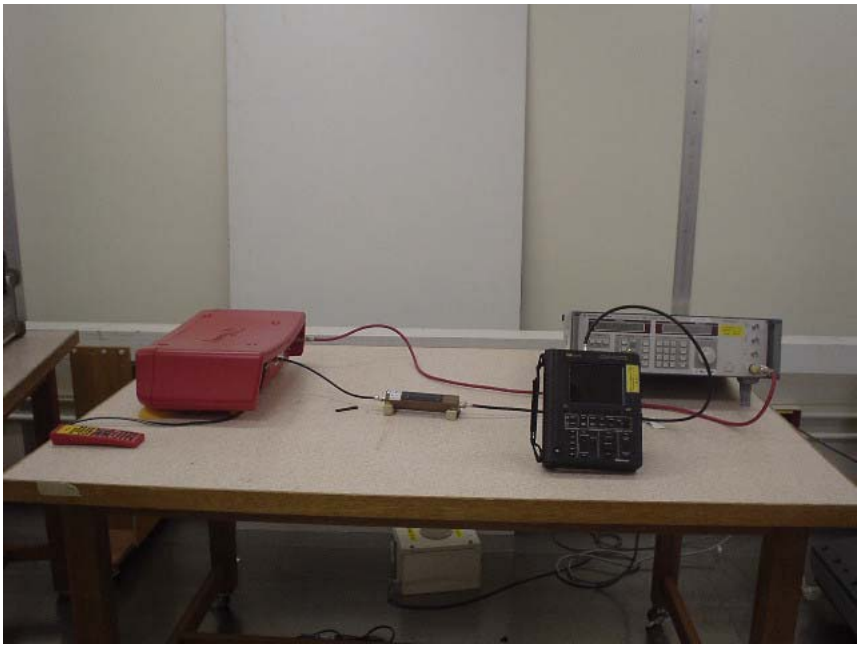
RF output level / spurious emission



Antenna transfer switch

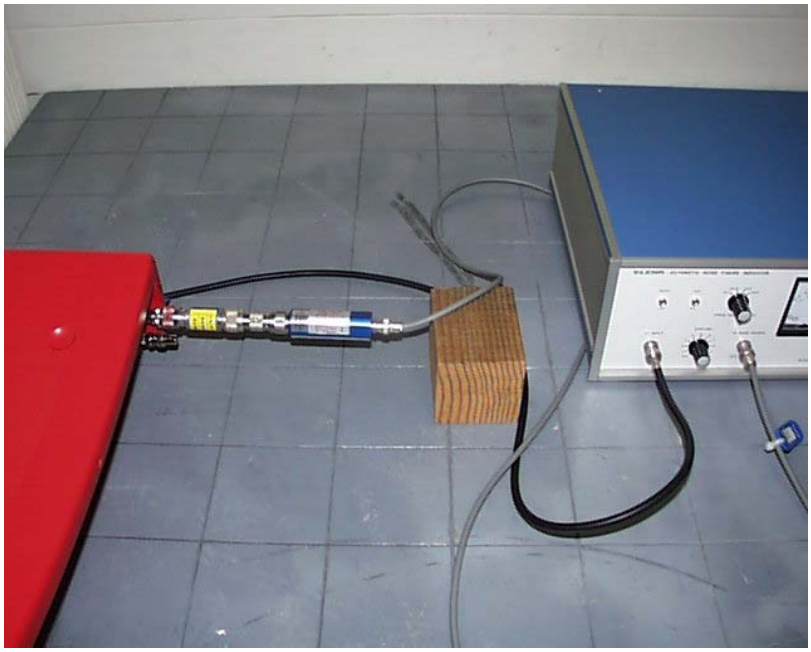


Picture sensitivity



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

Noise figure



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 25dBmV		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation	: FCC Part15B CLASS B(2003)		

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]		[dB]	
1.	0.1638	47.7	-	48.0	-	0.0	0.3	0.0	48.3	-	65.3	55.3	17.0	-
2.	0.2006	40.5	-	40.4	-	0.0	0.3	0.0	40.8	-	63.6	53.6	22.8	-
3.	0.4188	27.5	-	28.4	-	0.1	0.3	0.0	28.8	-	57.5	47.5	28.7	-
4.	1.0048	28.8	-	28.6	-	0.1	0.2	0.0	29.1	-	56.0	46.0	26.9	-
5.	1.2550	29.5	-	28.2	-	0.1	0.2	0.0	29.8	-	56.0	46.0	26.2	-
6.	7.6804	24.9	-	25.1	-	0.4	0.4	0.0	25.9	-	60.0	50.0	34.1	-

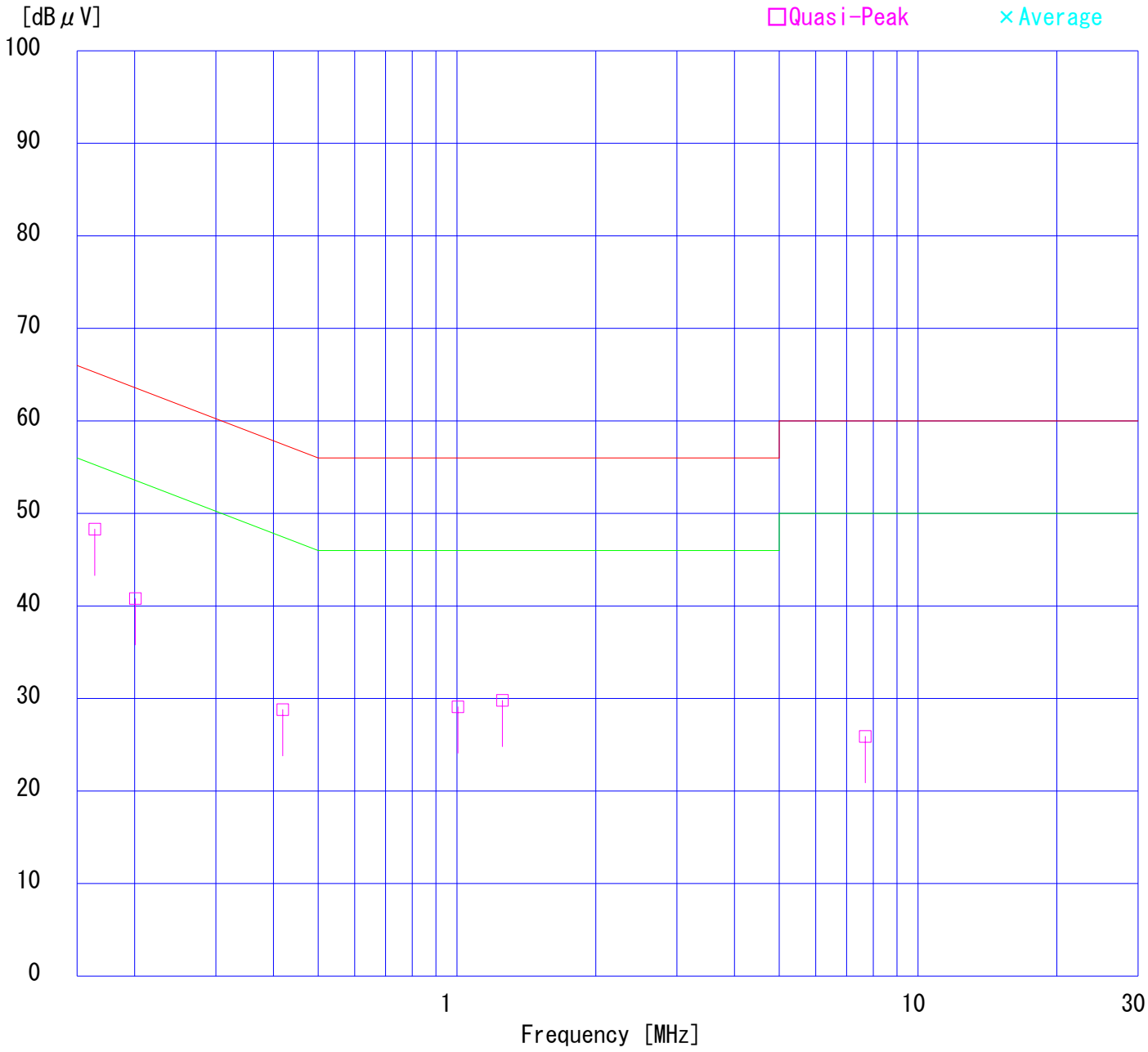
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

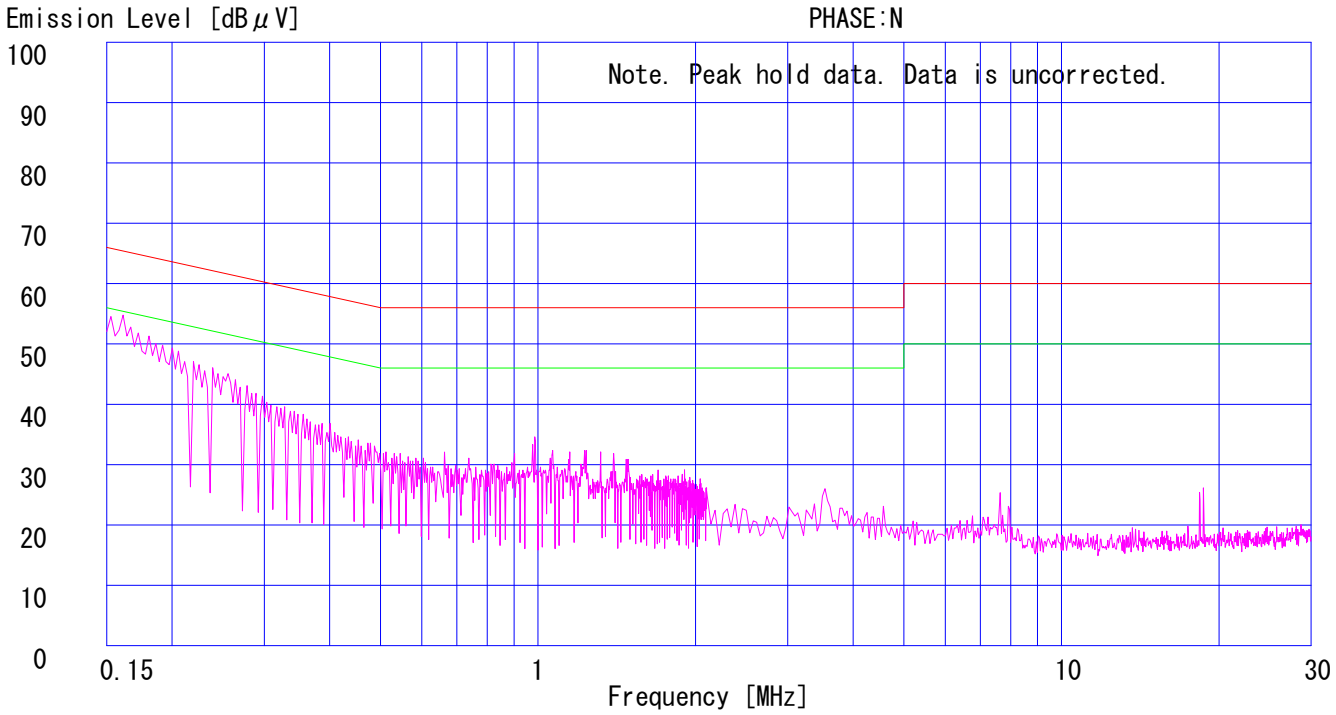
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 25dBmV		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation	: FCC Part15B CLASS B(2003)		

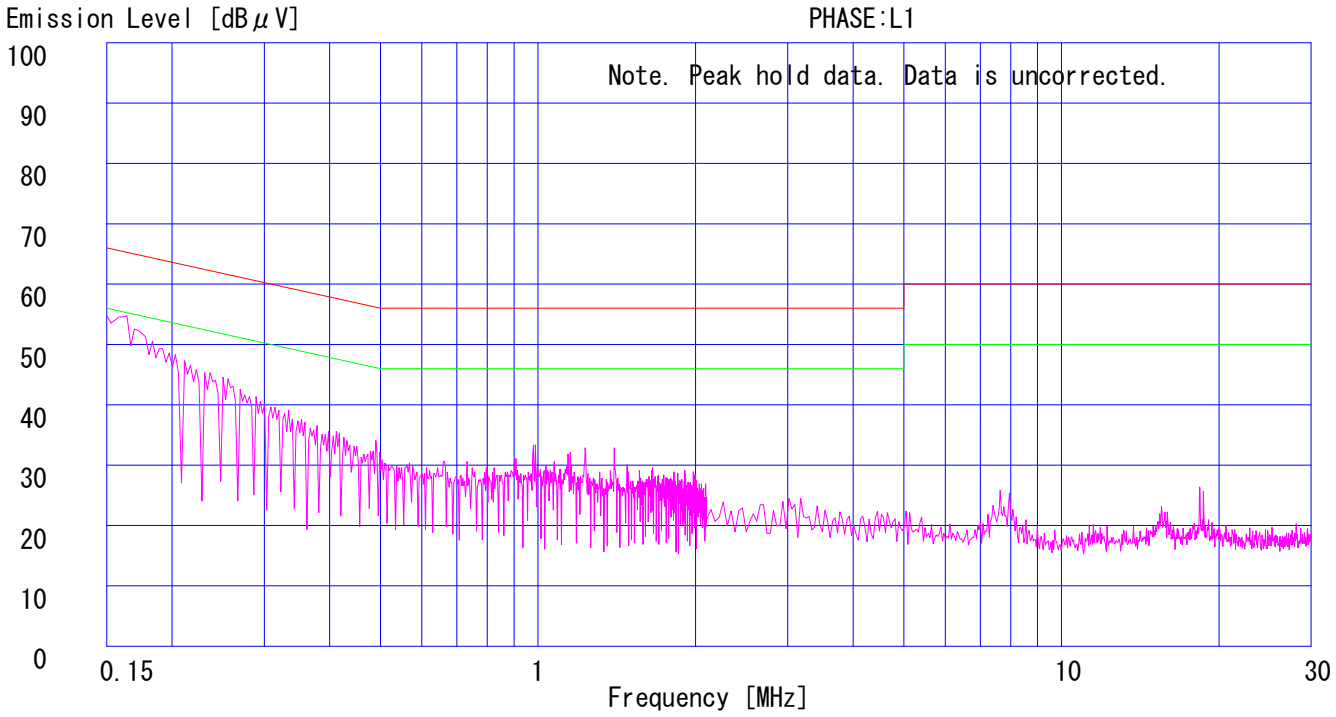


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 25dBmV		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation 1	: FCC Part15B CLASS B(2003)		
Regulation 2	: None		

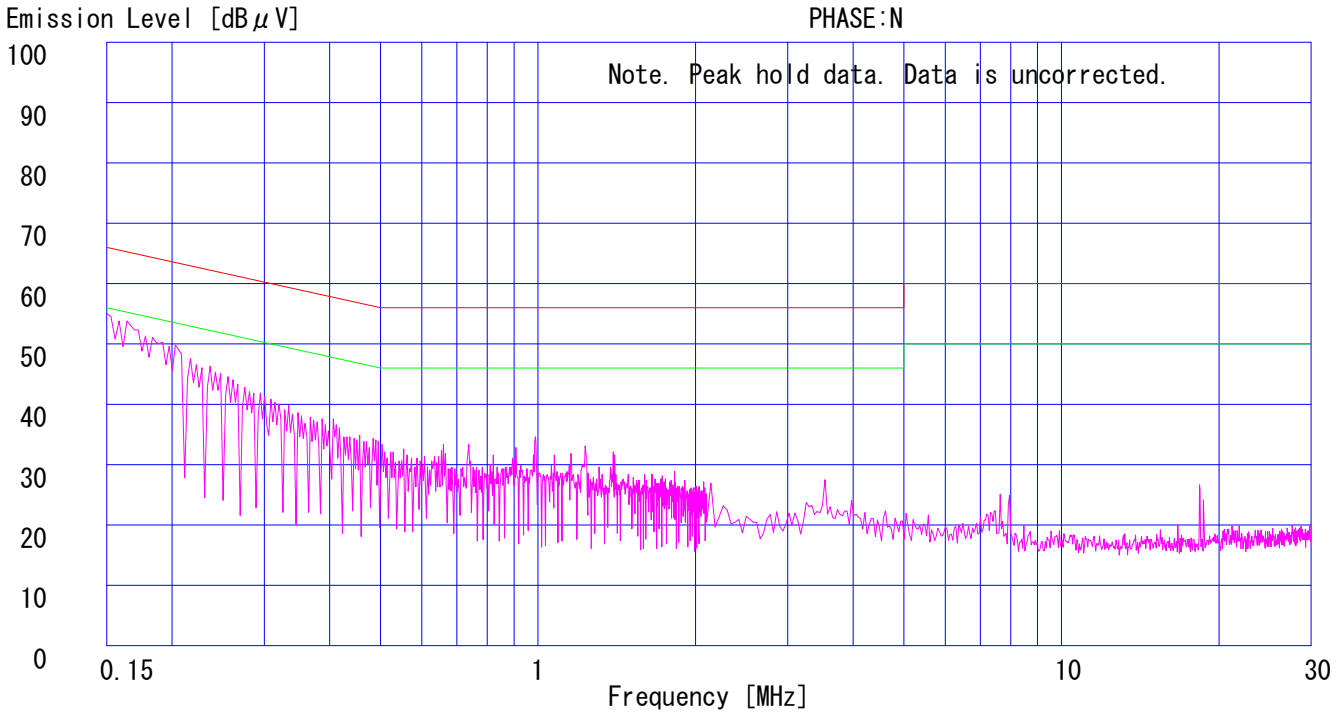


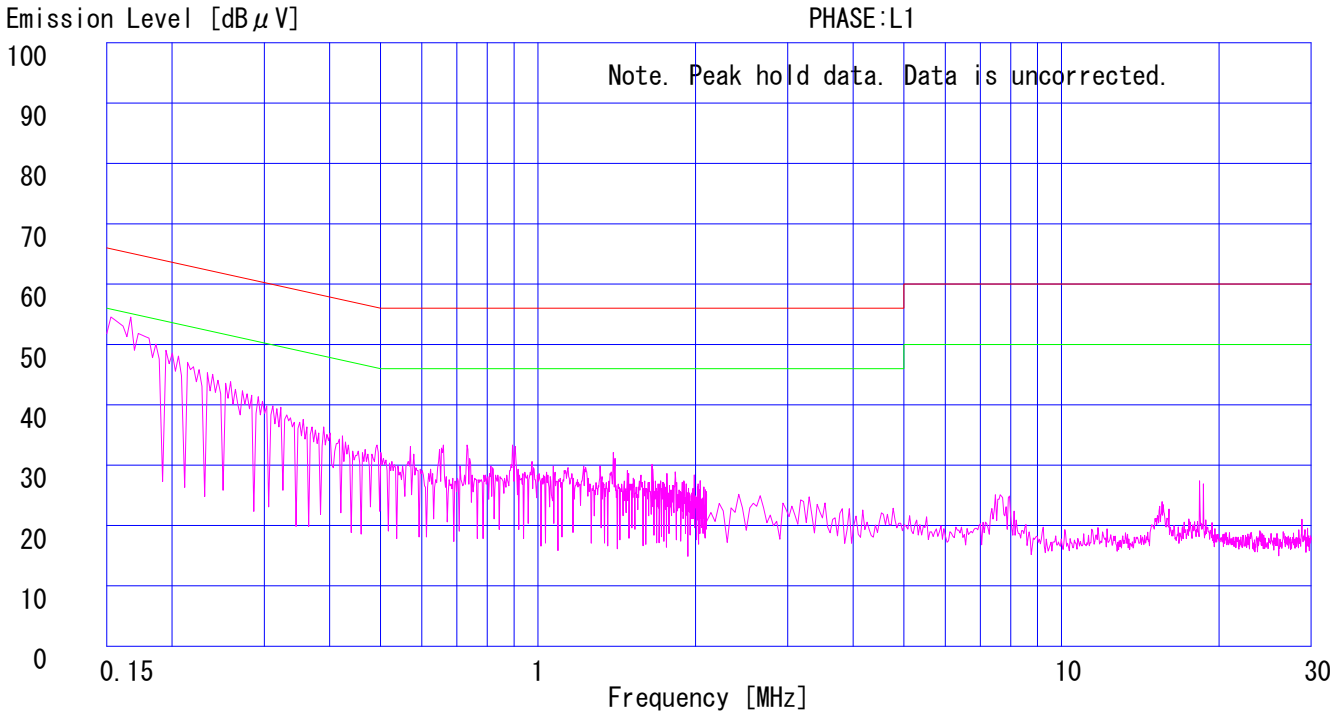


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 0dBmV		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation 1	: FCC Part15B CLASS B(2003)		
Regulation 2	: None		





DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	:		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation	: FCC Part15B CLASS B(2003)		

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]		[dB]	
1.	0.1763	45.7	-	46.0	-	0.0	0.3	0.0	46.3	-	64.7	54.7	18.4	-
2.	0.2104	40.0	-	39.3	-	0.1	0.3	0.0	40.4	-	63.2	53.2	22.8	-
3.	0.3010	32.8	-	32.6	-	0.1	0.3	0.0	33.2	-	60.2	50.2	27.0	-
4.	0.9736	27.8	-	29.5	-	0.1	0.2	0.0	29.8	-	56.0	46.0	26.2	-
5.	1.7734	28.9	-	28.3	-	0.1	0.3	0.0	29.3	-	56.0	46.0	26.7	-
6.	28.6364	35.9	-	35.1	-	1.2	0.8	0.0	37.9	-	60.0	50.0	22.1	-

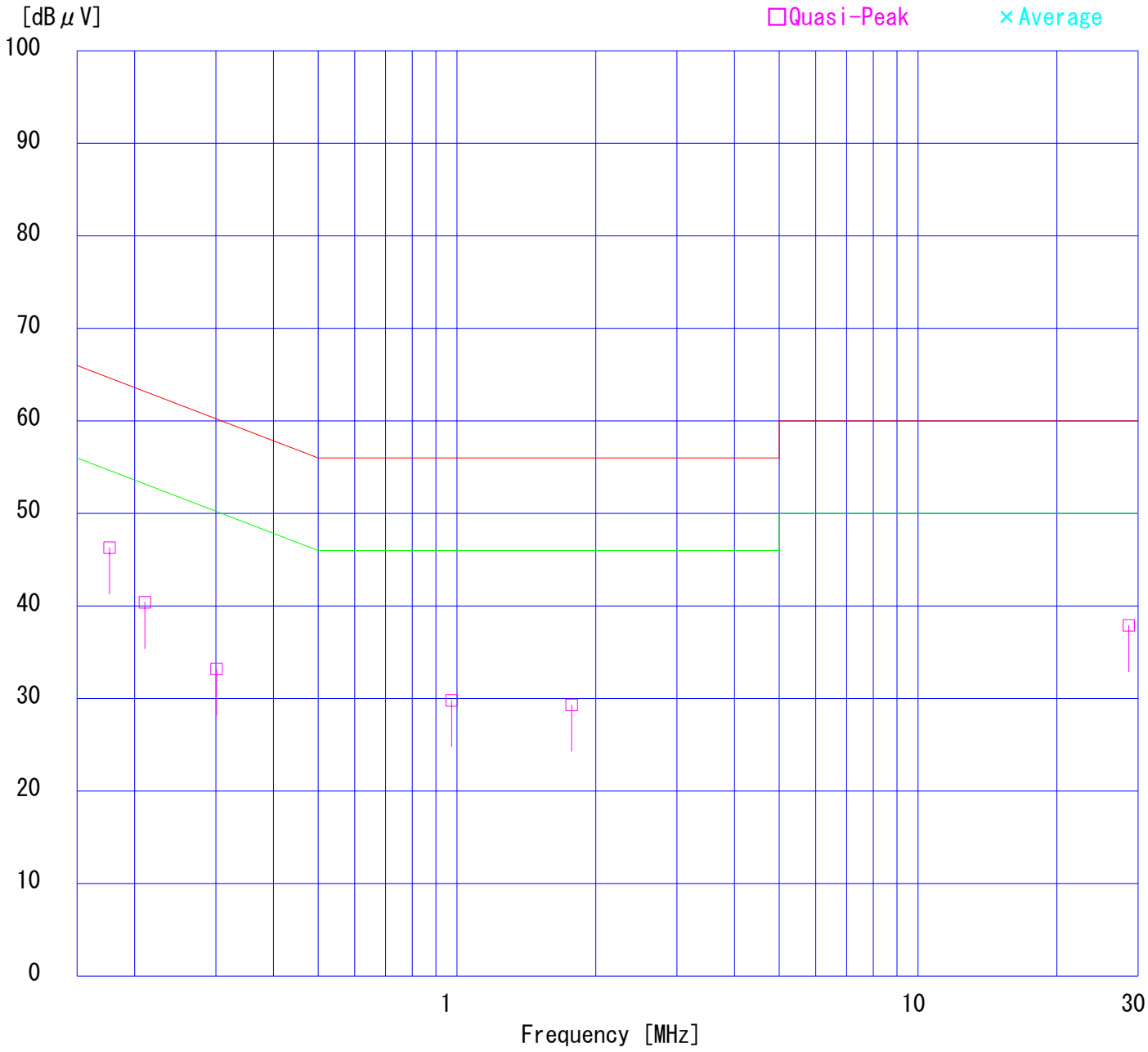
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

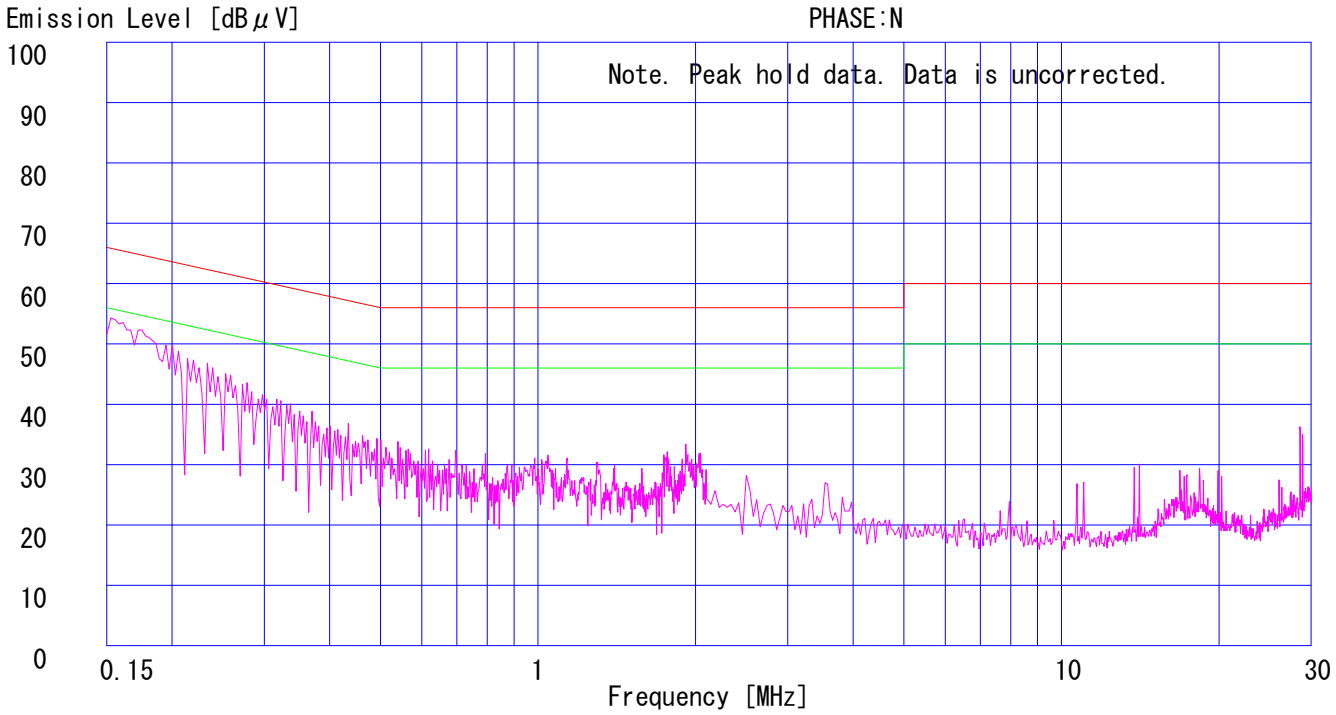
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	:		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation	: FCC Part15B CLASS B(2003)		

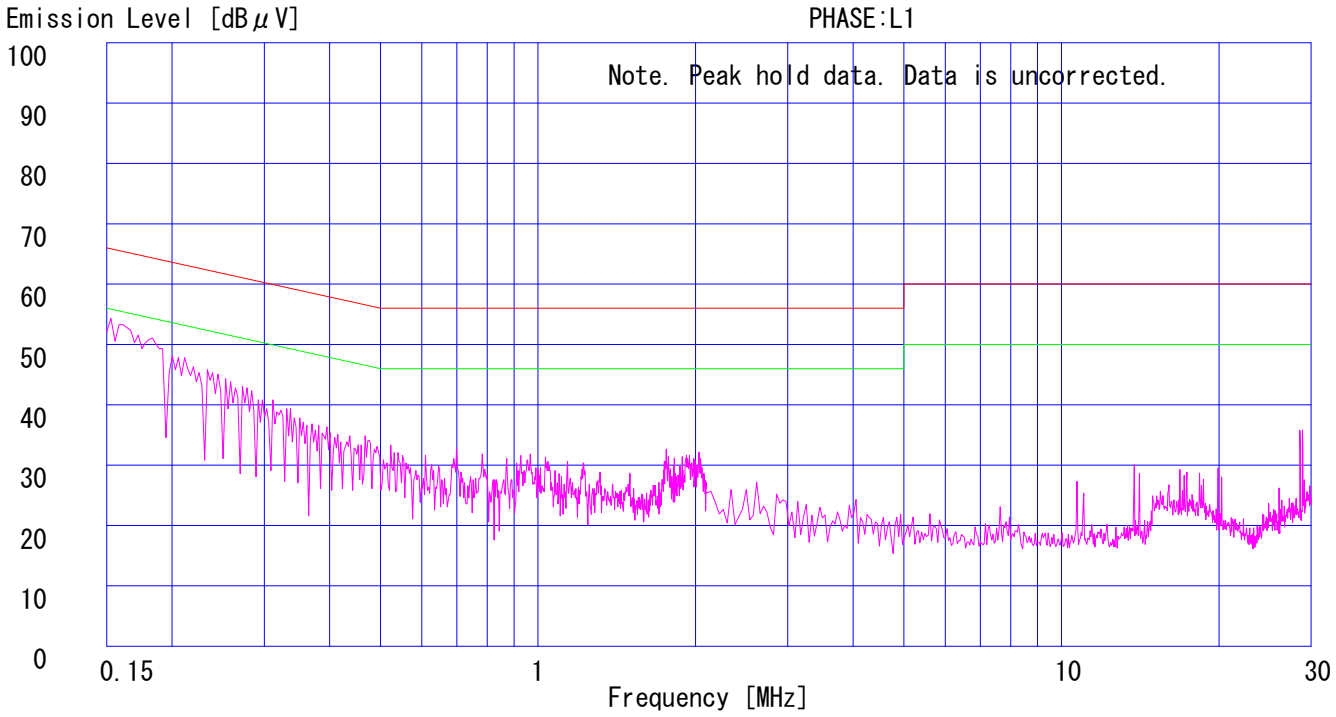


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	:		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation 1	: FCC Part15B CLASS B(2003)		
Regulation 2	: None		





DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	:		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation	: FCC Part15B CLASS B(2003)		

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]		[dB]	
1.	0.1503	49.5	-	49.3	-	0.0	0.3	0.0	49.8	-	66.0	56.0	16.2	-
2.	0.2006	41.2	-	40.8	-	0.0	0.3	0.0	41.5	-	63.6	53.6	22.1	-
3.	0.6031	24.9	-	27.0	-	0.1	0.3	0.0	27.4	-	56.0	46.0	28.6	-
4.	1.1501	27.9	-	26.7	-	0.1	0.2	0.0	28.2	-	56.0	46.0	27.8	-
5.	3.5949	27.7	-	26.0	-	0.2	0.3	0.0	28.2	-	56.0	46.0	27.8	-
6.	28.6362	35.8	-	35.4	-	1.2	0.8	0.0	37.8	-	60.0	50.0	22.2	-

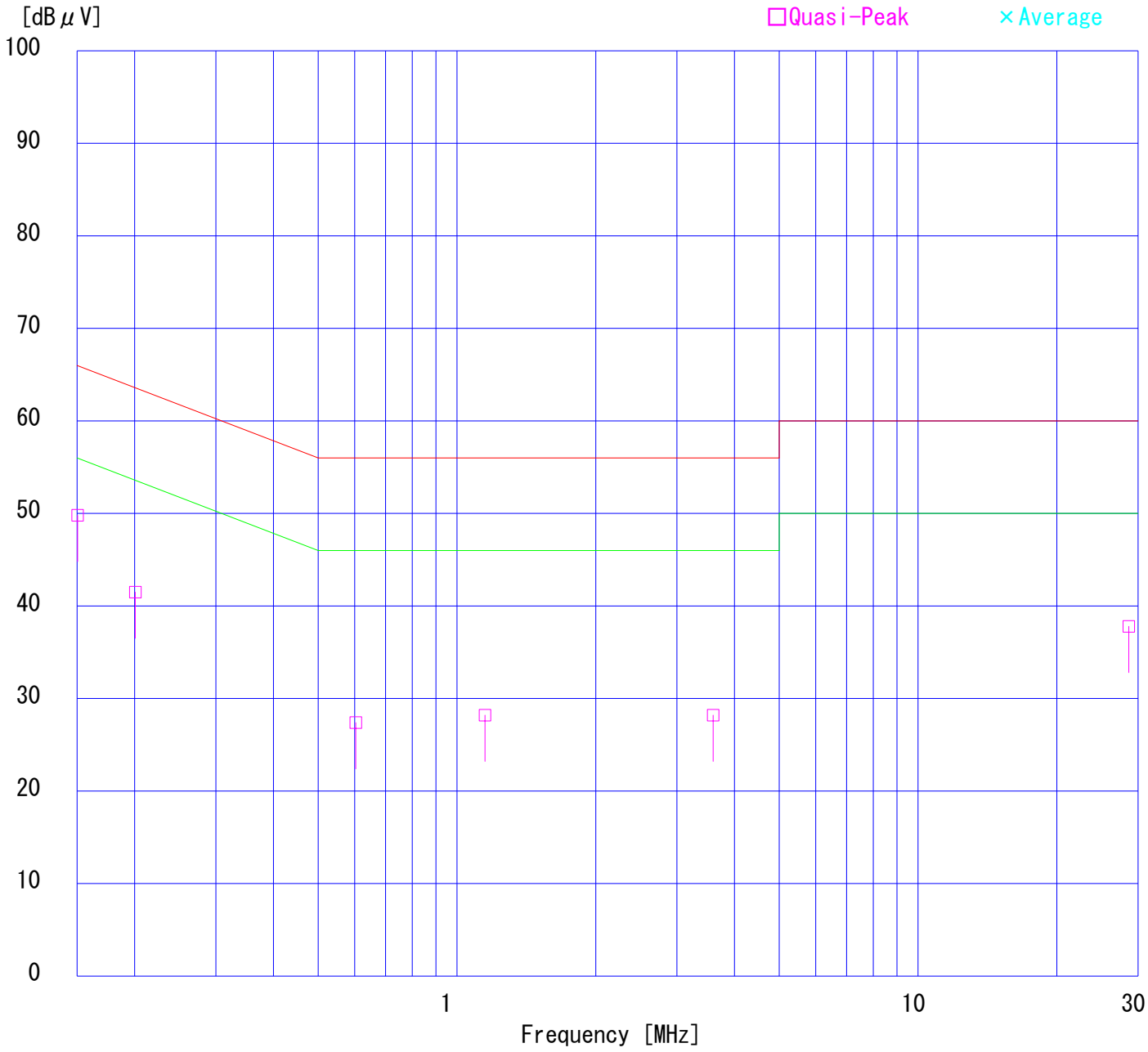
CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

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.: 25LE0078-YW-1

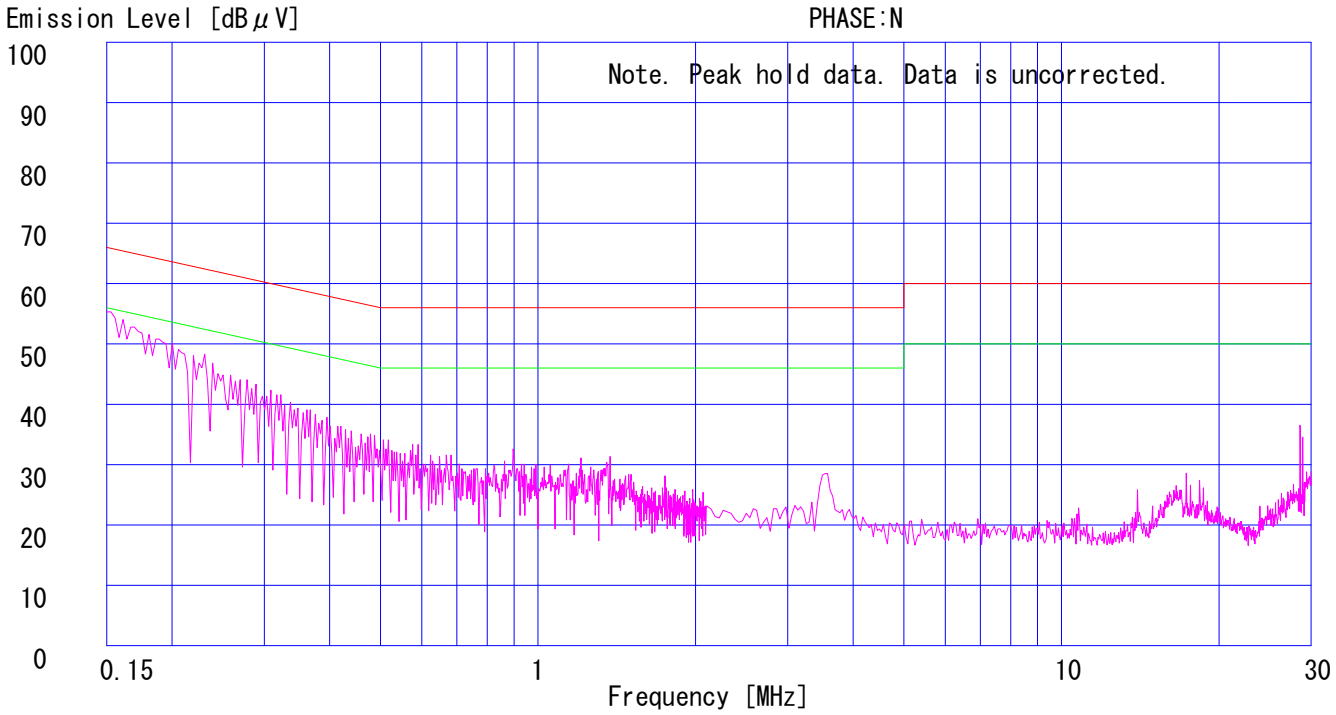
Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	:		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation	: FCC Part15B CLASS B(2003)		

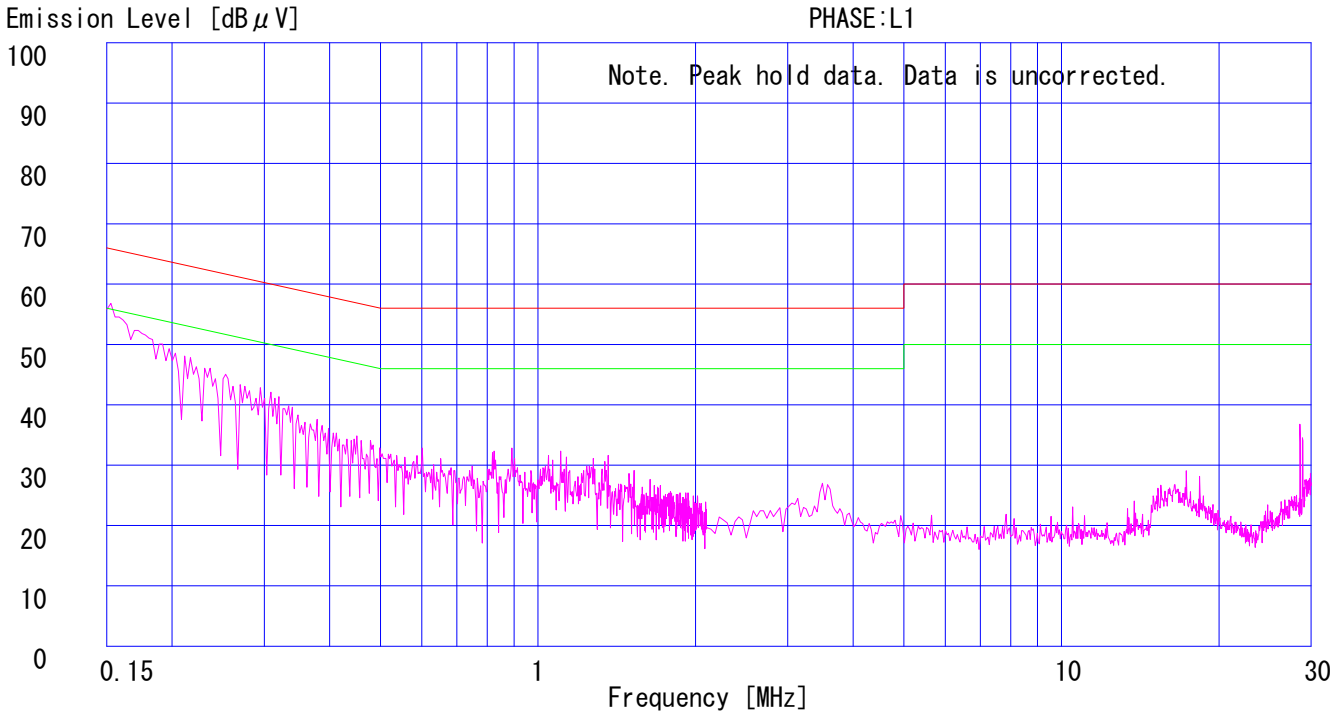


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.2 SHIELD TEST ROOM
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	:		
Date	: 7/9/2005		
Phase	: Single Phase		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 56 %		
Regulation 1	: FCC Part15B CLASS B(2003)		
Regulation 2	: None		





DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.1 Open Test Site

COMPANY	: Orion Electric Co.,Ltd.	REPORT No.	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	REGULATION	: FCC PART15 B
MODEL No.	: DVD2100-CA-A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: 2006/07/08
		TEMP./HUMID.	: 29deg.C / 46%
		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]	READING(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]
VHF										
2	101	24.1	24.2	BC	-11.5	12.6	12.7	43.5	30.9	30.8
	202			BC				43.5		
	303			LO				46.0		
	404			LO				46.0		
	505			LO				46.0	>15.0	
	606			LO				46.0		
	707			LO				46.0		
	808			LO				46.0		
	909			LO				46.0		

		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1010					HO						74.0	54.0				
	1111					HO						74.0	54.0				
	1212					HO						74.0	54.0				
	1313					HO						74.0	54.0	>27.0		>10.0	
	1414					HO						74.0	54.0				
	1515					HO						74.0	54.0				
	1616					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
3	107	24.3	26.7	BC	-10.5	13.8	16.2	43.5	29.7	27.3
	214			BC				43.5		
	321			LO				46.0		
	428			LO				46.0		
	535			LO				46.0	＞15.0	
	642			LO				46.0		
	749			LO				46.0		
	856			LO				46.0		
	963			LO				54.0		

		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1070					HO						74.0	54.0				
	1177					HO						74.0	54.0				
	1284					HO						74.0	54.0				
	1391					HO						74.0	54.0	>27.0		>10.0	
	1498					HO						74.0	54.0				
	1605					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
4	113	23.5	25.1	BC	-9.4	14.1	15.7	43.5	29.4	27.8
	226			BC				46.0		
	339			LO				46.0		
	452			LO				46.0		
	565			LO				46.0	＞15.0	
	678			LO				46.0		
	791			LO				46.0		
	904			LO				46.0		

		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1017					HO						74.0	54.0				
	1130					HO						74.0	54.0				
	1243					HO						74.0	54.0				
	1356					HO						74.0	54.0	>27.0		>10.0	
	1469					HO						74.0	54.0				
	1582					HO						74.0	54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.1 Open Test Site

COMPANY	: Orion Electric Co.,Ltd.	REPORT No.	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	REGULATION	: FCC PART15 B
MODEL No.	: DVD2100-CA-A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: 2006/07/08
		TEMP./HUMID.	: 29deg.C / 46%
		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]	READING(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]		
VHF																	
5	123	23.2	24.8			BC	-8.0	15.2	16.8			43.5		28.3	26.7		
	246					BC						46.0					
	369					LO						46.0					
	492					LO						46.0					
	615					LO						46.0		>15.0			
	738					LO						46.0					
	861					LO						46.0					
	984					LO						54.0					
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1107					HO						74.0	54.0				
	1230					HO						74.0	54.0				
	1353					HO						74.0	54.0	>27.0		>10.0	
	1476					HO						74.0	54.0				
	1599					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]		
6	129	23.3	23.3			BC	-7.7	15.6	15.6			43.5		27.9	27.9		
	258					BC						46.0					
	387					LO						46.0					
	516					LO						46.0		>15.0			
	645					LO						46.0					
	774					LO						46.0					
	903					LO						46.0					
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1032					HO						74.0	54.0				
	1161					HO						74.0	54.0				
	1290					HO						74.0	54.0	>27.0		>10.0	
	1419					HO						74.0	54.0				
	1548					HO						74.0	54.0				
	1677					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]		
7	221	22.4	22.4			BC	-3.3	19.1	19.1			46.0		26.9	26.9		
	442					LO						46.0					
	663					LO						46.0		>15.0			
	884					LO						46.0					
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1105					HO						74.0	54.0				
	1326					HO						74.0	54.0	>27.0		>10.0	
	1547					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]		
8	227	22.1	22.2			BC	-3.2	18.9	19.0			46.0		27.1	27.0		
	454					LO						46.0					
	681					LO						46.0		>15.0			
	908					LO						46.0					
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1135					HO						74.0	54.0				
	1362					HO						74.0	54.0	>27.0		>10.0	
	1589					HO						74.0	54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.1 Open Test Site

COMPANY	: Orion Electric Co.,Ltd.	REPORT No.	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	REGULATION	: FCC PART15 B
MODEL No.	: DVD2100-CA-A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: 2006/07/08
		TEMP./HUMID.	: 29deg.C / 46%
		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]	READING(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]
VHF										
9	233	22.3	22.3	BC	-3.1	19.2	19.2	46.0	26.8	26.8
	466			LO				46.0	>15.0	
	699			LO				46.0		
	932			LO				46.0		

	FREQ [MHz]	READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1165					HO						74.0	54.0	>27.0		>10.0	
	1398					HO						74.0	54.0				
	1631					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
10	239	23.9	23.1	BC	-3.0	20.9	20.1	46.0	25.1	25.9
	478			LO				46.0	>15.0	
	717			LO				46.0		
	956			LO				46.0		

	FREQ [MHz]	READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1195					HO						74.0	54.0	>27.0		>10.0	
	1434					HO						74.0	54.0				
	1673					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
11	245	29.8	25.8	BC	-2.9	26.9	22.9	46.0	19.1	23.1
	490			LO				46.0	>15.0	
	735			LO				46.0		
	980			LO				54.0		

	FREQ [MHz]	READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1225					HO						74.0	54.0	>27.0		>10.0	
	1470					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
12	251	25.5	25.1	BC	-2.8	22.7	22.3	46.0	23.3	23.7
	502			LO				46.0	>15.0	
	753			LO				46.0		

	FREQ [MHz]	READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1004					HO						74.0	54.0	>27.0		>10.0	
	1255					HO						74.0	54.0				
	1506					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
13	257	24.8	24.5	BC	-2.4	22.4	22.1	46.0	23.6	23.9
	514			LO				46.0	>15.0	
	771			LO				46.0		

	FREQ [MHz]	READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1028					HO						74.0	54.0	>27.0		>10.0	
	1285					HO						74.0	54.0				
	1542					HO						74.0	54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.1 Open Test Site

COMPANY	: Orion Electric Co.,Ltd.	REPORT No.	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	REGULATION	: FCC PART15 B
MODEL No.	: DVD2100-CA-A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: 2006/07/08
		TEMP./HUMID.	: 29deg.C / 46%
		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]	READING(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]
UHF											
14	517	26.5	30.1	LO	-0.1	26.4	30.0	46.0		19.6	16.0
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1034			HO				74.0	54.0	>27.0	>10.0
	1551			HO				74.0	54.0		
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
19	547	24.5	30.3	LO	0.7	25.2	31.0	46.0		20.8	15.0
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1094			HO				74.0	54.0	>27.0	>10.0
	1641			HO				74.0	54.0		
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
28	601	26.3	26.7	LO	1.9	28.2	28.6	46.0		17.8	17.4
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1202			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
36	649	27.3	29.5	LO	3.2	30.5	32.7	46.0		15.5	13.3
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1298			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
44	697	27.2	31.1	LO	4.3	31.5	35.4	46.0		14.5	10.6
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1394			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
53	751	25.8	29.7	LO	4.7	30.5	34.4	46.0		15.5	11.6
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1502			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
61	799	25.1	28.8	LO	5.0	30.1	33.8	46.0		15.9	12.2
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1598			HO				74.0	54.0	>27.0	>10.0
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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]
69	847	25.1	27.9	LO	6.4	31.5	34.3	46.0		14.5	11.7
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(PK) HOR. [dBuV/m]	RESULT(PK) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(PK) HOR. [dB]	MARGIN(PK) VER. [dB]
		READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [PK] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1694			HO				74.0	54.0	>27.0	>10.0

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.1 Open Test Site

COMPANY	: Orion Electric Co.,Ltd.	REPORT No.	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	REGULATION	: FCC PART15 B
MODEL No.	: DVD2100-CA-A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: 2006/07/08
		TEMP./HUMID.	: 29deg.C / 46%
		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]	READING(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	23.1	24.1	BC	-8.5	14.6	15.6	43.5	28.9	27.9
	238			BC				46.0		
	357			LO				46.0		
	476			LO				46.0		
	595			LO				46.0	>15.0	
	714			LO				46.0		
	833			LO				46.0		
	952			LO				46.0		

		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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						74.0	54.0				
	1190					HO						74.0	54.0				
	1309					HO						74.0	54.0	>27.0		>10.0	
	1428					HO						74.0	54.0				
	1547					HO						74.0	54.0				
	1666					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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	22.7	23.1	BC	-7.1	15.6	16.0	43.5	27.9	27.5
	274			BC				46.0		
	411			LO				46.0		
	548			LO				46.0		
	685			LO				46.0	>15.0	
	822			LO				46.0		
	959			LO				46.0		

		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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						74.0	54.0				
	1233					HO						74.0	54.0				
	1370					HO						74.0	54.0	>27.0		>10.0	
	1507					HO						74.0	54.0				
	1644					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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	22.9	23.1	BC	-6.4	16.5	16.7	43.5	27.0	26.8
	298			BC				46.0		
	447			LO				46.0		
	596			LO				46.0	>15.0	
	745			LO				46.0		
	894			LO				46.0		

		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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						74.0	54.0				
	1192					HO						74.0	54.0				
	1341					HO						74.0	54.0	>27.0		>10.0	
	1490					HO						74.0	54.0				
	1639					HO						74.0	54.0				

CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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	22.7	22.9	BC	-5.9	16.8	17.0	43.5	26.7	26.5
	322			LO				46.0		
	483			LO				46.0		
	644			LO				46.0	>15.0	
	805			LO				46.0		
	966			LO				46.0		

		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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						74.0	54.0				
	1288					HO						74.0	54.0				
	1449					HO						74.0	54.0	>27.0		>10.0	
	1610					HO						74.0	54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.1 Open Test Site

COMPANY	: Orion Electric Co.,Ltd.	REPORT No.	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	REGULATION	: FCC PART15 B
MODEL No.	: DVD2100-CA-A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: 2006/07/08
		TEMP./HUMID.	: 29deg.C / 46%
		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]	READING(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										
14	167	22.8	23.1	BC	-5.5	17.3	17.6	43.5	26.2	25.9
	334			LO				46.0	>15.0	
	501			LO				46.0		
	668			LO				46.0		
	835			LO				46.0		
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1002					HO						74.0	54.0	>27.0		>10.0	
	1169					HO						74.0	54.0				
	1336					HO						74.0	54.0				
	1503					HO						74.0	54.0				
	1670					HO						74.0	54.0				
CH.	FREQ [MHz]	READINNG(QP) HOR. [dBuV]	READING(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]
18	191	22.9	23.1	BC	-3.9	19.0	19.2	43.5	24.5	24.3
	382			LO				46.0	>15.0	
	573			LO				46.0		
	764			LO				46.0		
	955			LO				46.0		
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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]
	1146					HO						74.0	54.0	>27.0		>10.0	
	1337					HO						74.0	54.0				
	1528					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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.
22	215	23.9	22.6	BC	-3.3	20.6	19.3	43.5	22.9	24.2
	430			LO				46.0	>15.0	
	645			LO				46.0		
	860			LO				46.0		
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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.	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1075					HO						74.0	54.0	>27.0		>10.0	
	1290					HO						74.0	54.0				
	1505					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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.
23	263	22.6	22.8	BC	-1.9	20.7	20.9	46.0	46.0	25.3	25.1
	526			LO				46.0	46.0		
	789			LO				46.0	46.0		
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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.	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1052					HO						74.0	54.0	>27.0		>10.0	
	1315					HO						74.0	54.0				
	1578					HO						74.0	54.0				
CH.	FREQ [MHz]	READING(QP) HOR. [dBuV]	READING(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.
29	299	22.4	22.5	BC	0.5	22.9	23.0	46.0	46.0	23.1	23.0
	598			LO				46.0	46.0	>15.0	
	897			LO				46.0	46.0		
		READING(PK) HOR. [dBuV]	READING(PK) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(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.	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
	1196					HO						74.0	54.0	>27.0		>10.0	
	1495					HO						74.0	54.0				

DATA OF RADIATION TEST

UL Apex Co., Ltd.
Yokowa EMC No.1 Open Test Site

COMPANY	: Orion Electric Co.,Ltd.	REPORT No.	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	REGULATION	: FCC PART15 B
MODEL No.	: DVD2100-CA-A	TEST DISTANCE	: 3m
POWER	: AC120V/60Hz	ATTENUATION	: 101-847MHz 6dB
DESCRIPTION	: TV Reception + Rec		1030-1694MHz 0dB
		DATE	: 2006/07/08
		TEMP./HUMID.	: 29deg.C / 46%
		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]	READING(QP) VER. [dBuV]	READING(AV) HOR. [dBuV]	READING(AV) VER. [dBuV]	ANT TYPE	C.Factor [dBuV]	RESULT(QP) HOR. [dBuV/m]	RESULT(QP) VER. [dBuV/m]	RESULT(AV) HOR. [dBuV/m]	RESULT(AV) VER. [dBuV/m]	LIMIT [QP] [dBuV/m]	LIMIT [AV] [dBuV/m]	MARGIN(QP) HOR. [dB]	MARGIN(QP) VER. [dB]	MARGIN(AV) HOR. [dB]	MARGIN(AV) VER. [dB]
CATV																	
36	341	22.6	23.1			LO	-4.4	18.2	18.7			46.0	46.0	27.8	27.3		
	682					LO						46.0	46.0	>15.0			
	1023					HO						74.0	54.0	>27.0		>10.0	
	1364					HO						74.0	54.0				
37	347	24.2	24.1			LO	-4.2	20.0	19.9			46.0	46.0	26.0	26.1		
	694					LO						46.0	46.0	>15.0			
	1041					HO						74.0	54.0	>27.0		>10.0	
	1388					HO						74.0	54.0				
65	515	25.1	27.4			LO	-0.2	24.9	27.2			46.0	46.0	21.1	18.8		
	1030					HO						74.0	54.0	>27.0		>10.0	
	1545					HO						74.0	54.0				
94	689	27.1	30.8			LO	4.1	31.2	34.9			46.0	46.0	14.8	11.1		
	1378					HO						74.0	54.0	>27.0		>10.0	
100	695	25.8	28.1			LO	4.2	30.0	32.3			46.0	46.0	16.0	13.7		
	1390					HO						74.0	54.0	>27.0		>10.0	
113	773	25.1	29.2			LO	4.9	30.0	34.1			46.0	46.0	16.0	11.9		
	1546					HO						74.0	54.0	>27.0		>10.0	
125	845	27.3	29.4			LO	6.4	33.7	35.8			46.0	46.0	12.3	10.2		
	1690					HO						74.0	54.0	>27.0		>10.0	

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : **Orion Electric Co., Ltd.**
Kind of Equipment : **DVD/VCR**
Model No. : **DVD2100-CA-A**
Serial No. : **-**
Power : **AC120V/60Hz**
Mode : **TV Reception + Rec**
Remarks : **0dBmV Input**
Date : **7/7/2005**
Test Distance : **3 m**
Temperature : **21 ℃** **Engineer : Tsubasa Takayama**
Humidity : **43 %**
Regulation : **FCC Part15B CLASS B**

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	202.51	BB	39.1	35.7	17.1	27.8	3.1	5.9	37.4	34.0	43.5	6.1	9.5

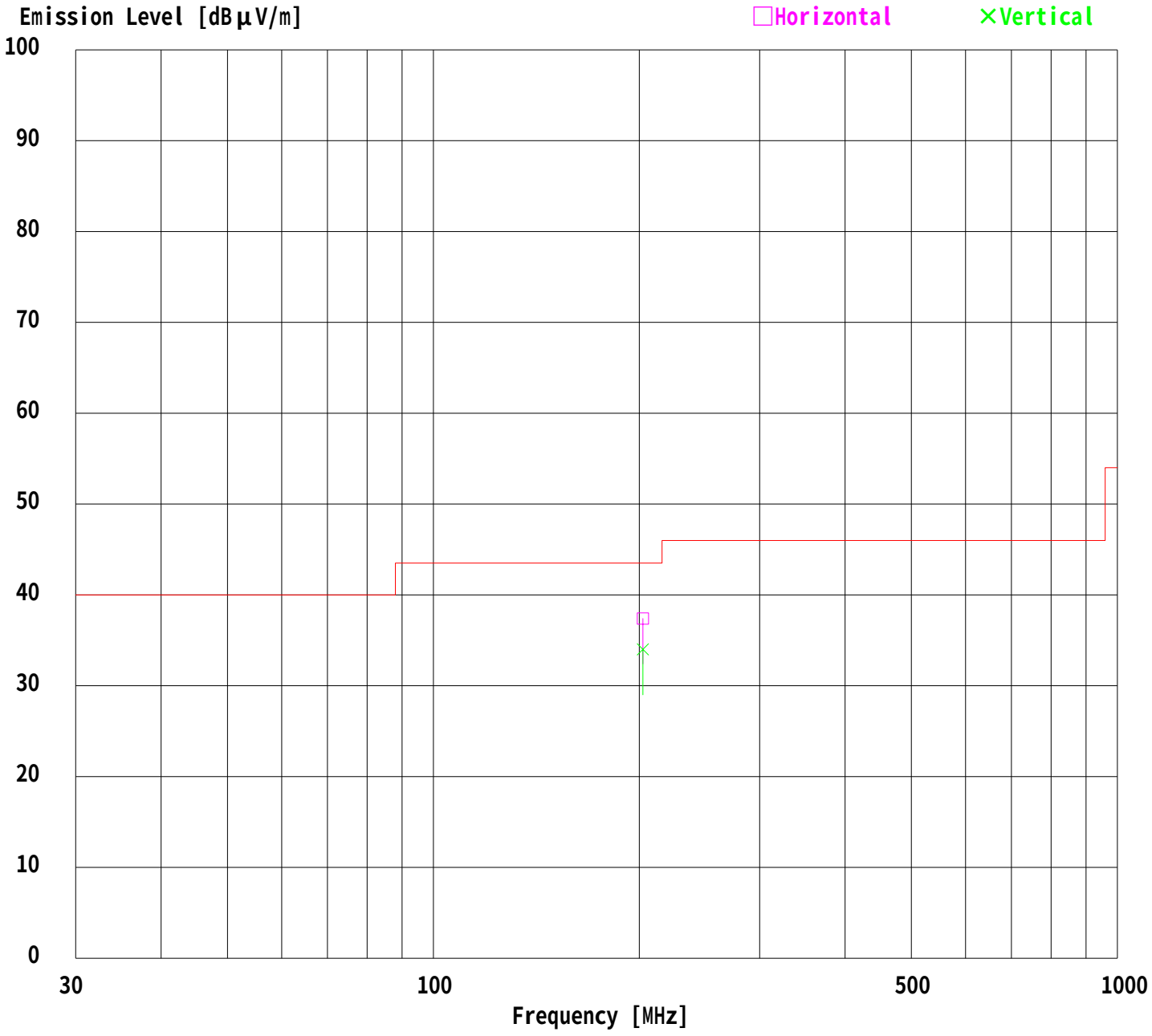
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 0dBmV Input		
Date	: 7/7/2005		
Test Distance	: 3 m		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 43 %		
Regulation	: FCC Part15B CLASS B		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVD2100-CA-A
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV Input
Date : 7/7/2005
Test Distance : 3 m
Temperature : 21 ℃ **Engineer : Tsubasa Takayama**
Humidity : 43 %
Regulation : FCC Part15B CLASS B

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	40.62	BB	24.3	31.2	14.6	28.2	1.3	5.9	17.9	24.8	40.0	22.1	15.2
2.	108.00	BB	34.0	36.7	11.4	28.0	2.2	5.9	25.5	28.2	43.5	18.0	15.3
3.	189.02	BB	31.2	28.1	16.7	27.9	3.0	5.9	28.9	25.8	43.5	14.6	17.7
4.	202.51	BB	39.2	35.7	17.1	27.8	3.1	5.9	37.5	34.0	43.5	6.0	9.5
5.	270.00	BB	35.8	31.9	18.5	27.8	3.7	6.0	36.2	32.3	46.0	9.8	13.7
6.	297.00	BB	33.5	32.5	20.2	27.8	3.9	6.0	35.8	34.8	46.0	10.2	11.2
7.	337.51	BB	35.5	35.7	17.1	27.9	4.2	6.0	34.9	35.1	46.0	11.1	10.9
8.	405.00	BB	33.4	29.3	17.9	28.0	4.7	5.9	33.9	29.8	46.0	12.1	16.2
9.	674.98	BB	27.0	30.0	22.0	27.3	6.3	5.9	33.9	36.9	46.0	12.1	9.1
10.	810.00	BB	28.4	30.8	23.3	27.1	7.0	5.9	37.5	39.9	46.0	8.5	6.1
11.	945.00	BB	25.8	24.9	26.1	27.1	7.8	6.0	38.6	37.7	46.0	7.4	8.3

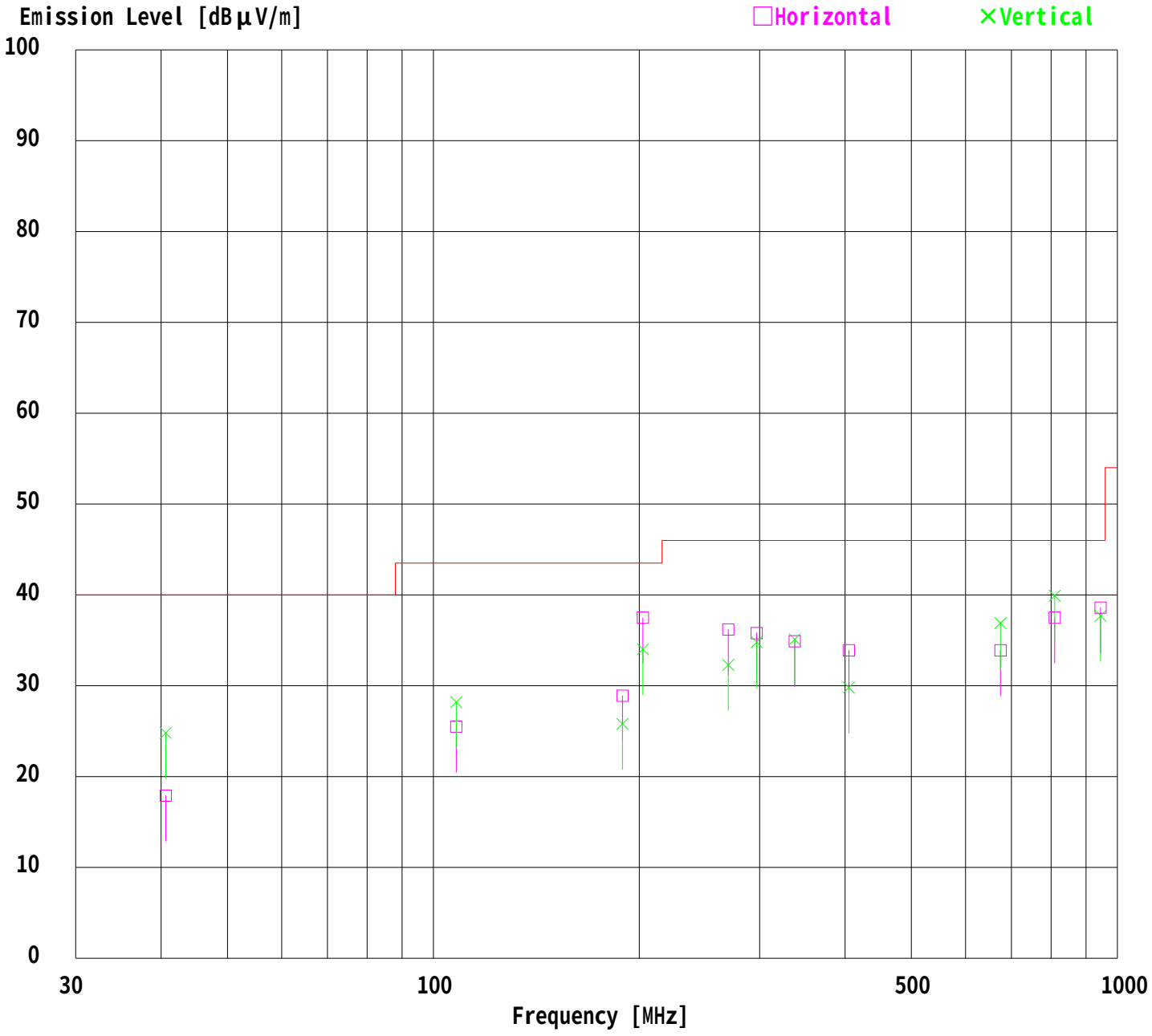
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 25dBmV Input		
Date	: 7/7/2005		
Test Distance	: 3 m		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 43 %		
Regulation	: FCC Part15B CLASS B		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVD2100-CA-A
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV Input
Date : 7/8/2005
Test Distance : 3 m
Temperature : 22 ℃ Engineer : Tsubasa Takayama
Humidity : 46 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1079.99	BB	49.6	47.3	24.2	35.6	2.5	0.0	40.7	38.4	54.0	13.3	15.6
2.	1754.98	BB	46.3	46.3	27.0	34.9	3.1	0.0	41.5	41.5	54.0	12.5	12.5

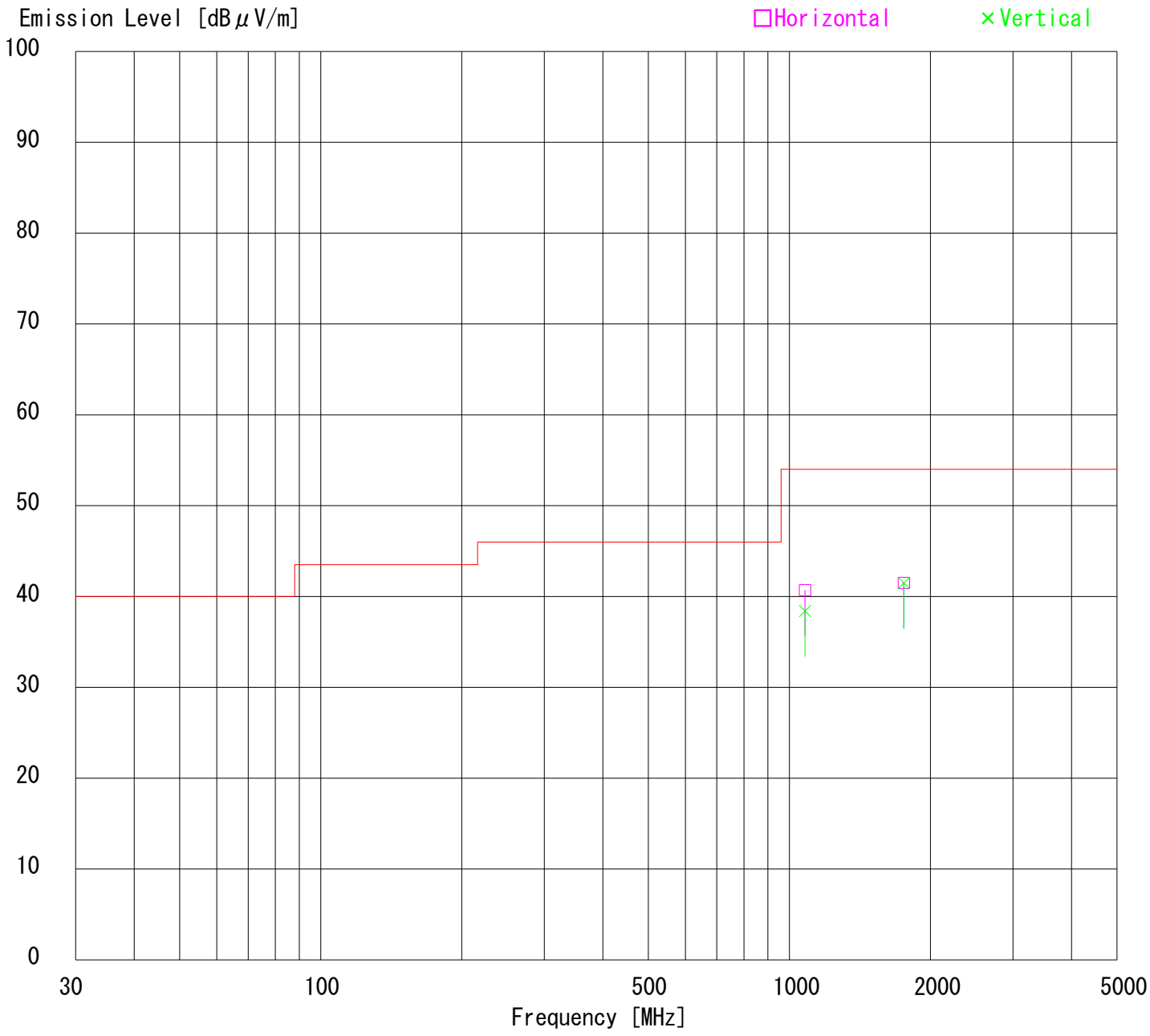
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 25dBmV Input		
Date	: 7/8/2005		
Test Distance	: 3 m		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 46 %		
Regulation	: FCC Part15B CLASS B(Average Limit / Upper1GHz)		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVD2100-CA-A
Serial No. : -
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBmV Input
Date : 7/8/2005
Test Distance : 3 m
Temperature : 22 ℃ Engineer : Tsubasa Takayama
Humidity : 46 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1079.99	BB	58.3	56.0	24.2	35.6	2.5	0.0	49.4	47.1	74.0	24.6	26.9
2.	1754.98	BB	52.3	52.2	27.0	34.9	3.1	0.0	47.5	47.4	74.0	26.5	26.6

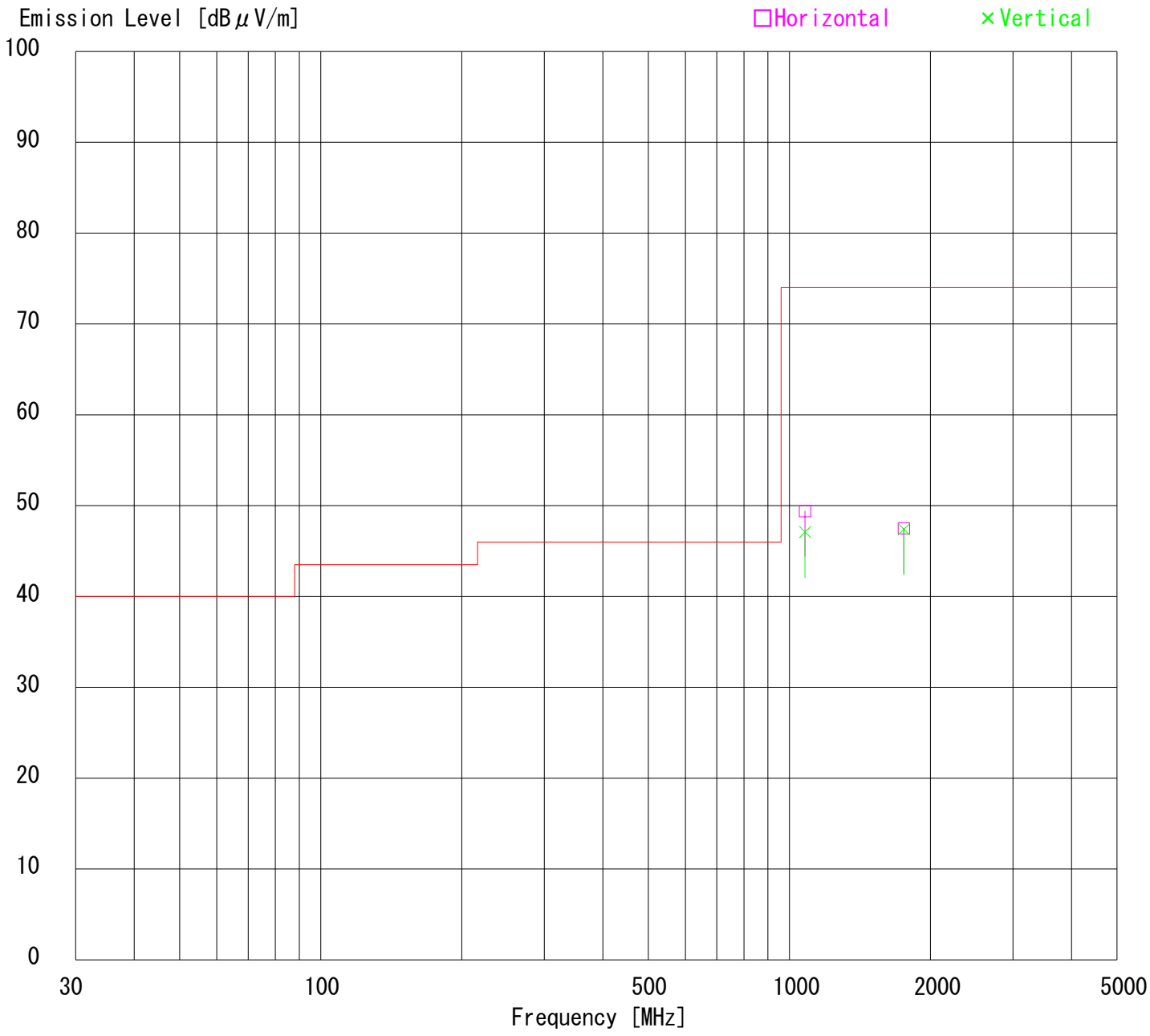
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: TV Reception + Rec		
Remarks	: 25dBmV Input		
Date	: 7/8/2005		
Test Distance	: 3 m		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 46 %		
Regulation	: FCC Part15B CLASS B(Peak Limit / Upper1GHz)		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : **Orion Electric Co., Ltd.**
Kind of Equipment : **DVD/VCR**
Model No. : **DVD2100-CA-A**
Serial No. : **-**
Power : **AC120V/60Hz**
Mode : **VCR Playback**
Remarks : **-**
Date : **7/7/2005**
Test Distance : **3 m**
Temperature : **21 ℃** **Engineer : Tsubasa Takayama**
Humidity : **43 %**
Regulation : **FCC Part15B CLASS B**

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	40.56	BB	24.1	29.5	14.6	28.2	1.3	5.9	17.7	23.1	40.0	22.3	16.9
2.	108.00	BB	26.9	31.0	11.4	28.0	2.2	5.9	18.4	22.5	43.5	25.1	21.0
3.	135.00	BB	32.6	38.1	14.4	27.9	2.4	5.9	27.4	32.9	43.5	16.1	10.6
4.	189.02	BB	32.7	29.0	16.7	27.9	3.0	5.9	30.4	26.7	43.5	13.1	16.8
5.	202.51	BB	37.9	32.3	17.1	27.8	3.1	5.9	36.2	30.6	43.5	7.3	12.9
6.	270.00	BB	38.5	35.2	18.5	27.8	3.7	6.0	38.9	35.6	46.0	7.1	10.4
7.	297.00	BB	32.7	32.7	20.2	27.8	3.9	6.0	35.0	35.0	46.0	11.0	11.0
8.	337.51	BB	35.5	37.8	17.1	27.9	4.2	6.0	34.9	37.2	46.0	11.1	8.8
9.	675.00	BB	29.1	28.7	22.0	27.3	6.3	5.9	36.0	35.6	46.0	10.0	10.4
10.	810.00	BB	28.4	33.0	23.3	27.1	7.0	5.9	37.5	42.1	46.0	8.5	3.9
11.	945.00	BB	25.9	27.1	26.1	27.1	7.8	6.0	38.7	39.9	46.0	7.3	6.1

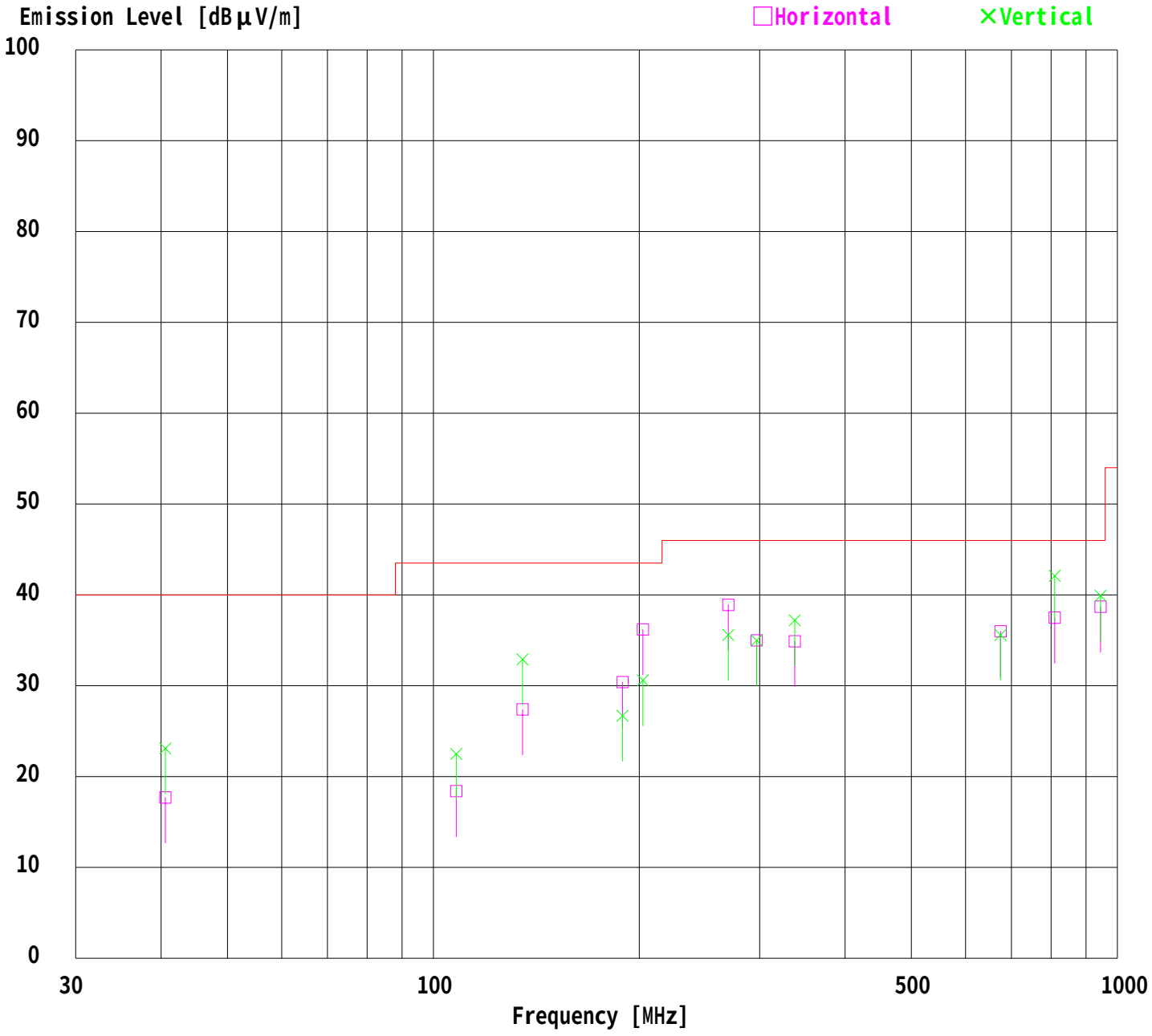
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	: -		
Date	: 7/7/2005		
Test Distance	: 3 m		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 43 %		
Regulation	: FCC Part15B CLASS B		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVD2100-CA-A
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 7/8/2005
Test Distance : 3 m
Temperature : 22 ℃ Engineer : Tsubasa Takayama
Humidity : 46 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1079.98	BB	49.3	52.3	24.2	35.6	2.5	0.0	40.4	43.4	54.0	13.6	10.6
2.	1754.98	BB	45.4	46.5	27.0	34.9	3.1	0.0	40.6	41.7	54.0	13.4	12.3

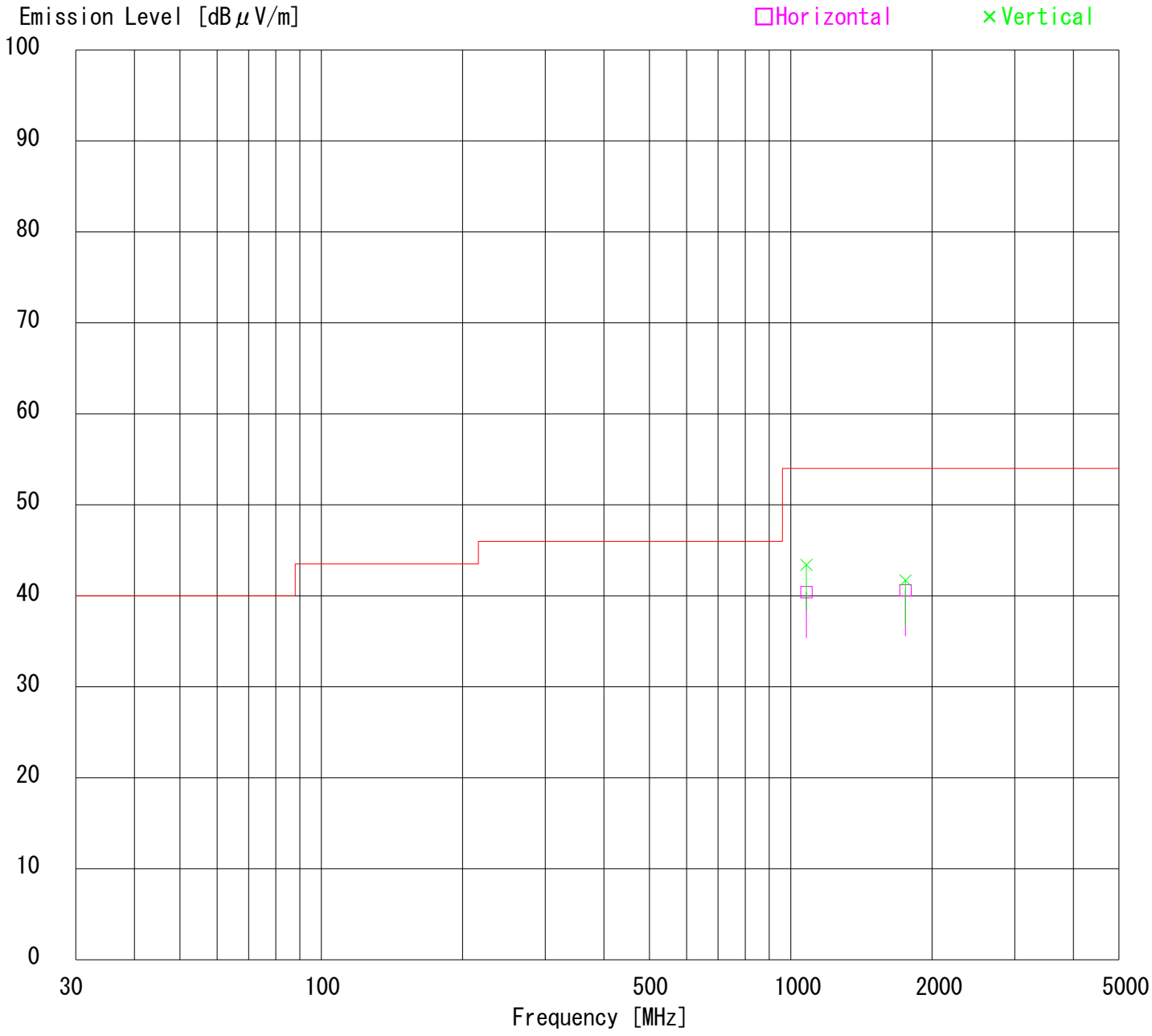
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	: -		
Date	: 7/8/2005		
Test Distance	: 3 m		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 46 %		
Regulation	: FCC Part15B CLASS B(Average Limit / Upper1GHz)		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVD2100-CA-A
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Playback
Remarks : -
Date : 7/8/2005
Test Distance : 3 m
Temperature : 22 ℃ Engineer : Tsubasa Takayama
Humidity : 46 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1079.98	BB	59.6	59.1	24.2	35.6	2.5	0.0	50.7	50.2	74.0	23.3	23.8
2.	1754.98	BB	52.9	52.5	27.0	34.9	3.1	0.0	48.1	47.7	74.0	25.9	26.3

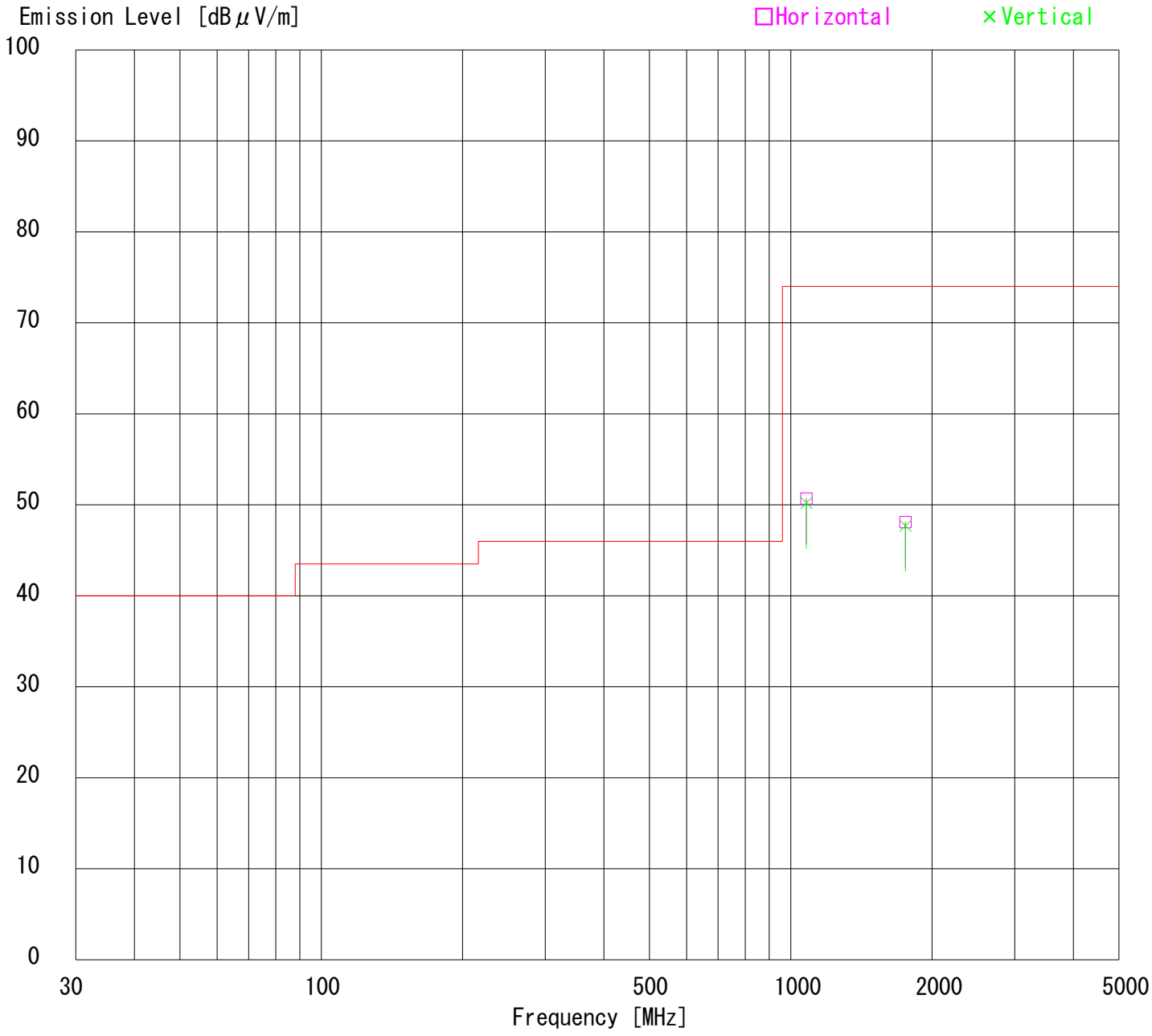
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: VCR Playback		
Remarks	: -		
Date	: 7/8/2005		
Test Distance	: 3 m		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 46 %		
Regulation	: FCC Part15B CLASS B(Peak Limit / Upper1GHz)		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : **Orion Electric Co., Ltd.**
Kind of Equipment : **DVD/VCR**
Model No. : **DVD2100-CA-A**
Serial No. : **-**
Power : **AC120V/60Hz**
Mode : **DVD Play**
Remarks : **-**
Date : **7/7/2005**
Test Distance : **3 m**
Temperature : **21 ℃** **Engineer : Tsubasa Takayama**
Humidity : **43 %**
Regulation : **FCC Part15B CLASS B**

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	40.08	BB	24.5	29.1	14.8	28.2	1.3	5.9	18.3	22.9	40.0	21.7	17.1
2.	108.00	BB	26.9	31.7	11.4	28.0	2.2	5.9	18.4	23.2	43.5	25.1	20.3
3.	135.00	BB	31.6	35.9	14.4	27.9	2.4	5.9	26.4	30.7	43.5	17.1	12.8
4.	189.02	BB	32.7	29.0	16.7	27.9	3.0	5.9	30.4	26.7	43.5	13.1	16.8
5.	202.51	BB	42.3	34.2	17.1	27.8	3.1	5.9	40.6	32.5	43.5	2.9	11.0
6.	270.00	BB	37.1	34.2	18.5	27.8	3.7	6.0	37.5	34.6	46.0	8.5	11.4
7.	297.00	BB	32.4	31.4	20.2	27.8	3.9	6.0	34.7	33.7	46.0	11.3	12.3
8.	337.51	BB	35.0	36.8	17.1	27.9	4.2	6.0	34.4	36.2	46.0	11.6	9.8
9.	675.00	BB	28.6	37.7	22.0	27.3	6.3	5.9	35.5	44.6	46.0	10.5	1.4
10.	810.00	BB	27.8	32.1	23.3	27.1	7.0	5.9	36.9	41.2	46.0	9.1	4.8
11.	945.00	BB	26.7	28.4	26.1	27.1	7.8	6.0	39.5	41.2	46.0	6.5	4.8

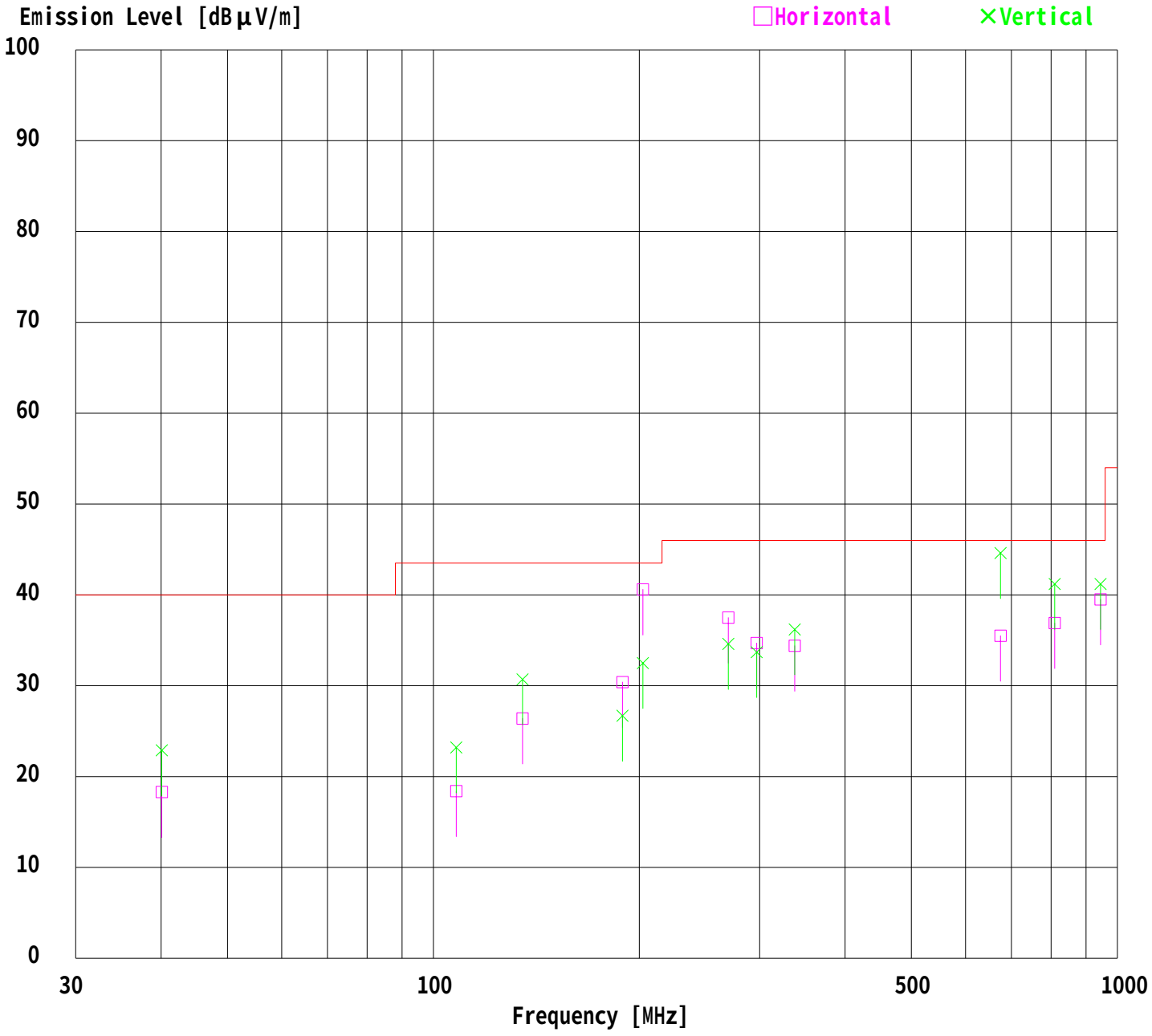
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	: -		
Date	: 7/7/2005		
Test Distance	: 3 m		
Temperature	: 21 ℃	Engineer	: Tsubasa Takayama
Humidity	: 43 %		
Regulation	: FCC Part15B CLASS B		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVD2100-CA-A
Serial No. : -
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 7/8/2005
Test Distance : 3 m
Temperature : 22 ℃ Engineer : Tsubasa Takayama
Humidity : 46 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1079.99	BB	50.5	51.9	24.2	35.6	2.5	0.0	41.6	43.0	54.0	12.4	11.0
2.	1754.98	BB	46.8	46.5	27.0	34.9	3.1	0.0	42.0	41.7	54.0	12.0	12.3

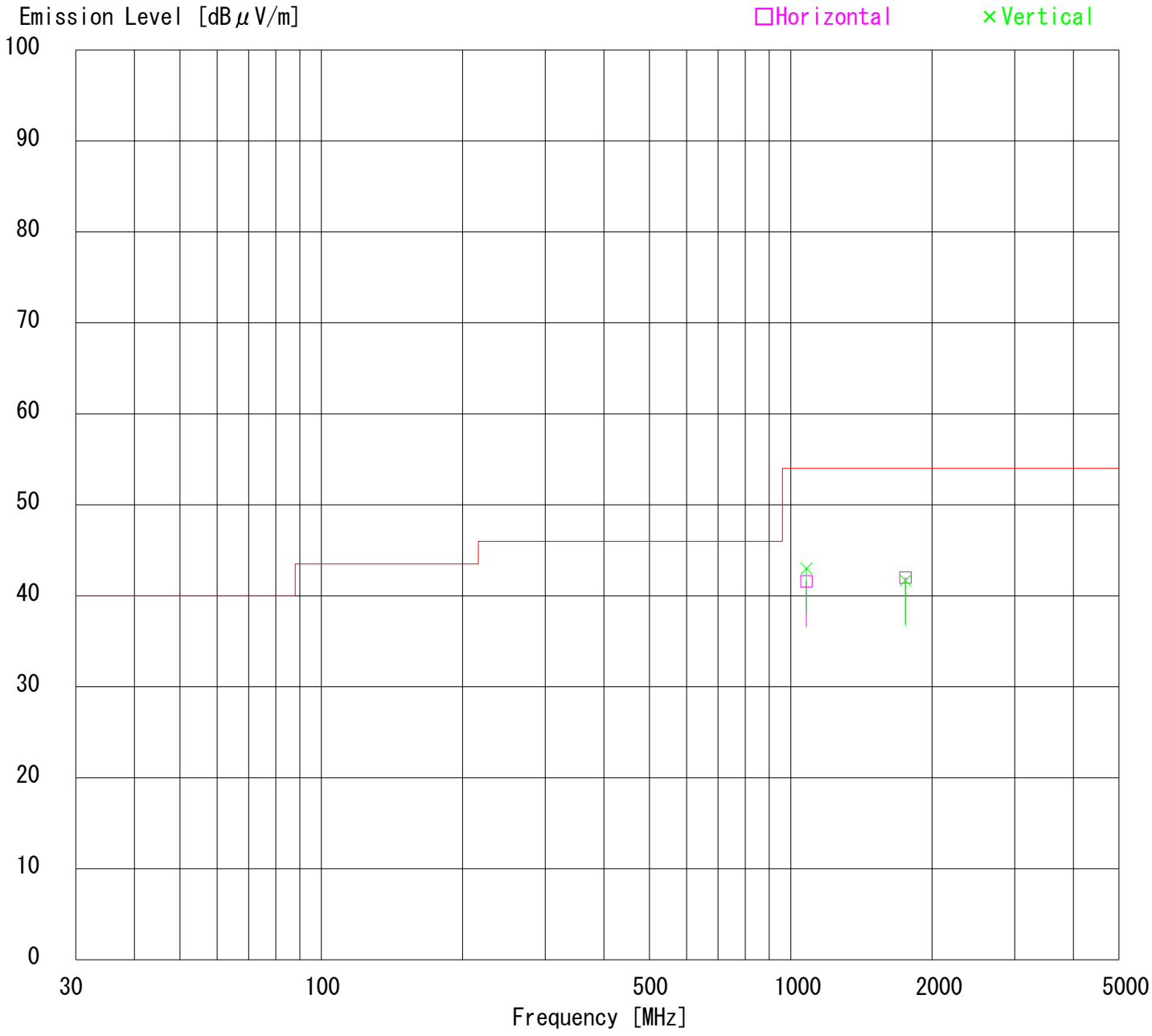
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	: -		
Date	: 7/8/2005		
Test Distance	: 3 m		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 46 %		
Regulation	: FCC Part15B CLASS B(Average Limit / Upper1GHz)		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	: -		
Date	: 7/8/2005		
Test Distance	: 3 m		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 46 %		
Regulation	: FCC Part15B CLASS B(Peak Limit / Upper1GHz)		

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	1079.99	BB	64.7	65.8	24.2	35.6	2.5	0.0	55.8	56.9	74.0	18.2	17.1
2.	1754.98	BB	53.8	52.8	27.0	34.9	3.1	0.0	49.0	48.0	74.0	25.0	26.0

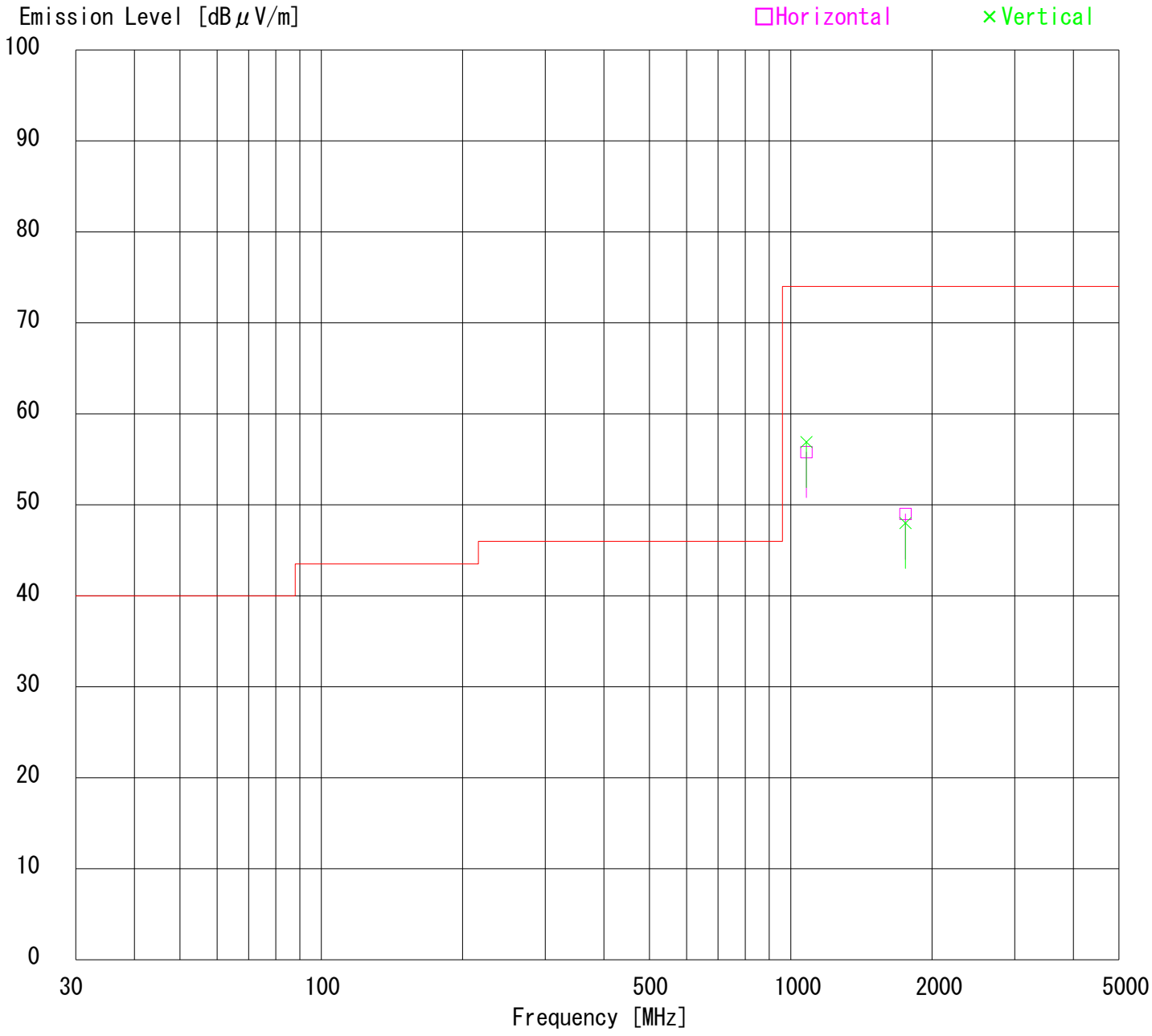
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No.: 25LE0078-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	: -		
Date	: 7/8/2005		
Test Distance	: 3 m		
Temperature	: 22 ℃	Engineer	: Tsubasa Takayama
Humidity	: 46 %		
Regulation	: FCC Part15B CLASS B(Peak Limit / Upper1GHz)		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-YW-1

Applicant : **Orion Electric Co., Ltd.**
Kind of Equipment : **DVD/VCR**
Model No. : **DVD2100-CA-A**
Serial No. : **-**
Power : **AC120V/60Hz**
Mode : **DVD Play**
Remarks : **Test Channel #3**
Date : **7/7/2005**
Test Distance : **3 m**
Temperature : **25 ℃** **Engineer : Tsubasa Takayama**
Humidity : **53 %**
Regulation : **FCC Part15B CLASS B**

No.	FREQ.	ANT TYPE	READING HOR	READING VER	ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT HOR	RESULT VER	LIMITS	MARGIN HOR	MARGIN VER
	[MHz]		[dBμV]		[dB/m]	[dB]	[dB]	[dB]	[dBμV/m]		[dBμV/m]	[dB]	
1.	61.25	BB	22.6	25.4	8.2	28.1	1.6	5.9	10.2	13.0	40.0	29.8	27.0
2.	65.75	BB	23.7	22.9	7.3	28.1	1.7	5.9	10.5	9.7	40.0	29.5	30.3
3.	122.50	BB	22.1	21.8	13.7	27.9	2.3	5.9	16.1	15.8	43.5	27.4	27.7
4.	245.00	BB	22.0	22.1	17.3	27.8	3.5	5.9	20.9	21.0	46.0	25.1	25.0

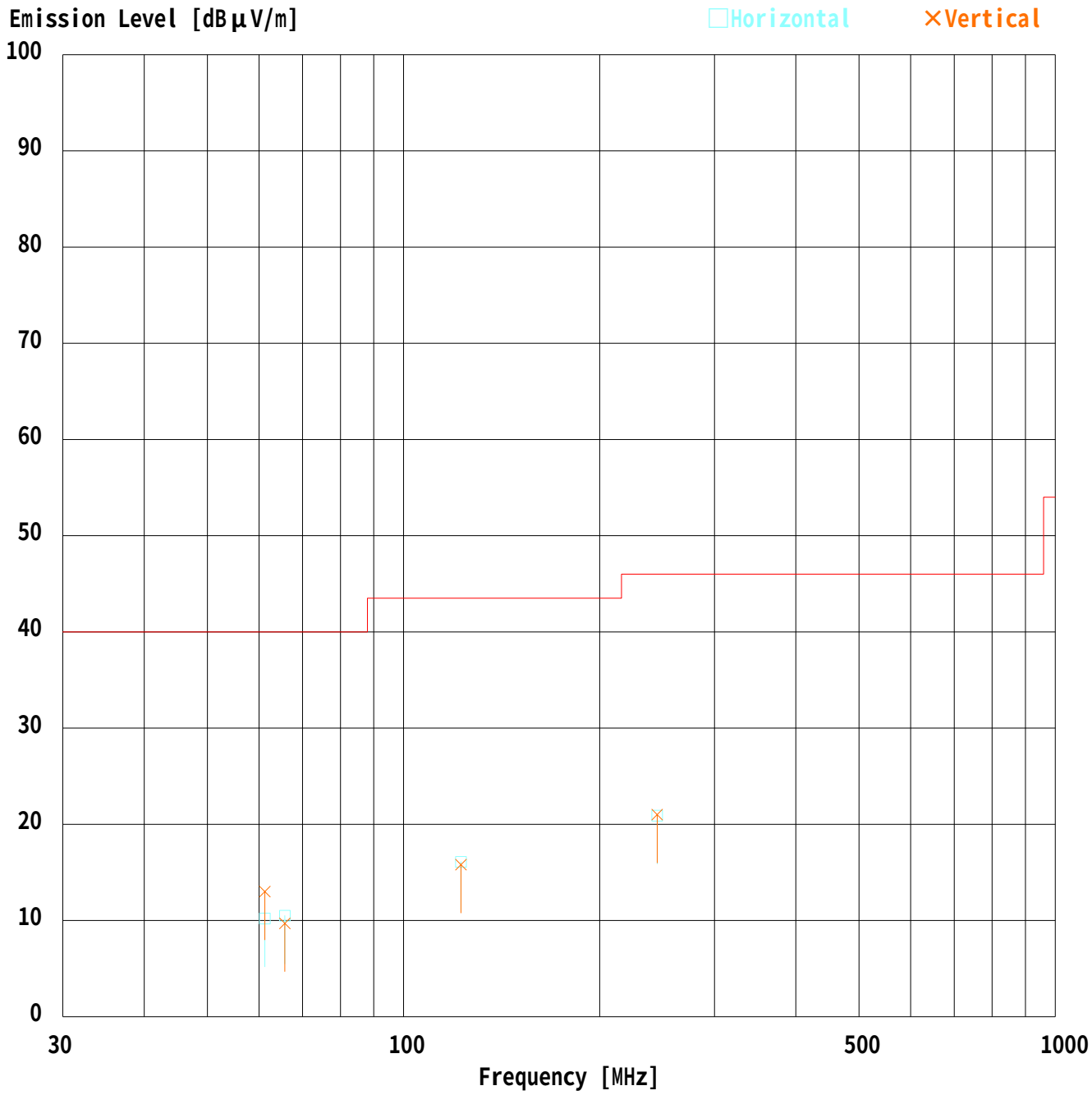
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	: Test Channel #3		
Date	: 7/7/2005		
Test Distance	: 3 m		
Temperature	: 25 °C	Engineer	: Tsubasa Takayama
Humidity	: 53 %		
Regulation	: FCC Part15B CLASS B		



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-YW-1

Applicant : **Orion Electric Co., Ltd.**
Kind of Equipment : **DVD/VCR**
Model No. : **DVD2100-CA-A**
Serial No. : **-**
Power : **AC120V/60Hz**
Mode : **DVD Play**
Remarks : **Test Channel #4**
Date : **7/7/2005**
Test Distance : **3 m**
Temperature : **25 ℃** **Engineer : Tsubasa Takayama**
Humidity : **53 %**
Regulation : **FCC Part15B CLASS B**

No.	FREQ.	ANT TYPE	READING HOR	READING VER	ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT HOR	RESULT VER	LIMITS	MARGIN HOR	MARGIN VER
	[MHz]		[dBμV]		[dB/m]	[dB]	[dB]	[dB]	[dBμV/m]		[dBμV/m]	[dB]	
1.	67.25	BB	24.5	25.1	7.0	28.1	1.7	5.9	11.0	11.6	40.0	29.0	28.4
2.	71.75	BB	23.6	22.7	6.5	28.1	1.8	5.9	9.7	8.8	40.0	30.3	31.2
3.	134.50	BB	22.3	23.0	14.4	27.9	2.4	5.9	17.1	17.8	43.5	26.4	25.7
4.	201.75	BB	21.2	21.1	17.1	27.8	3.1	5.9	19.5	19.4	43.5	24.0	24.1

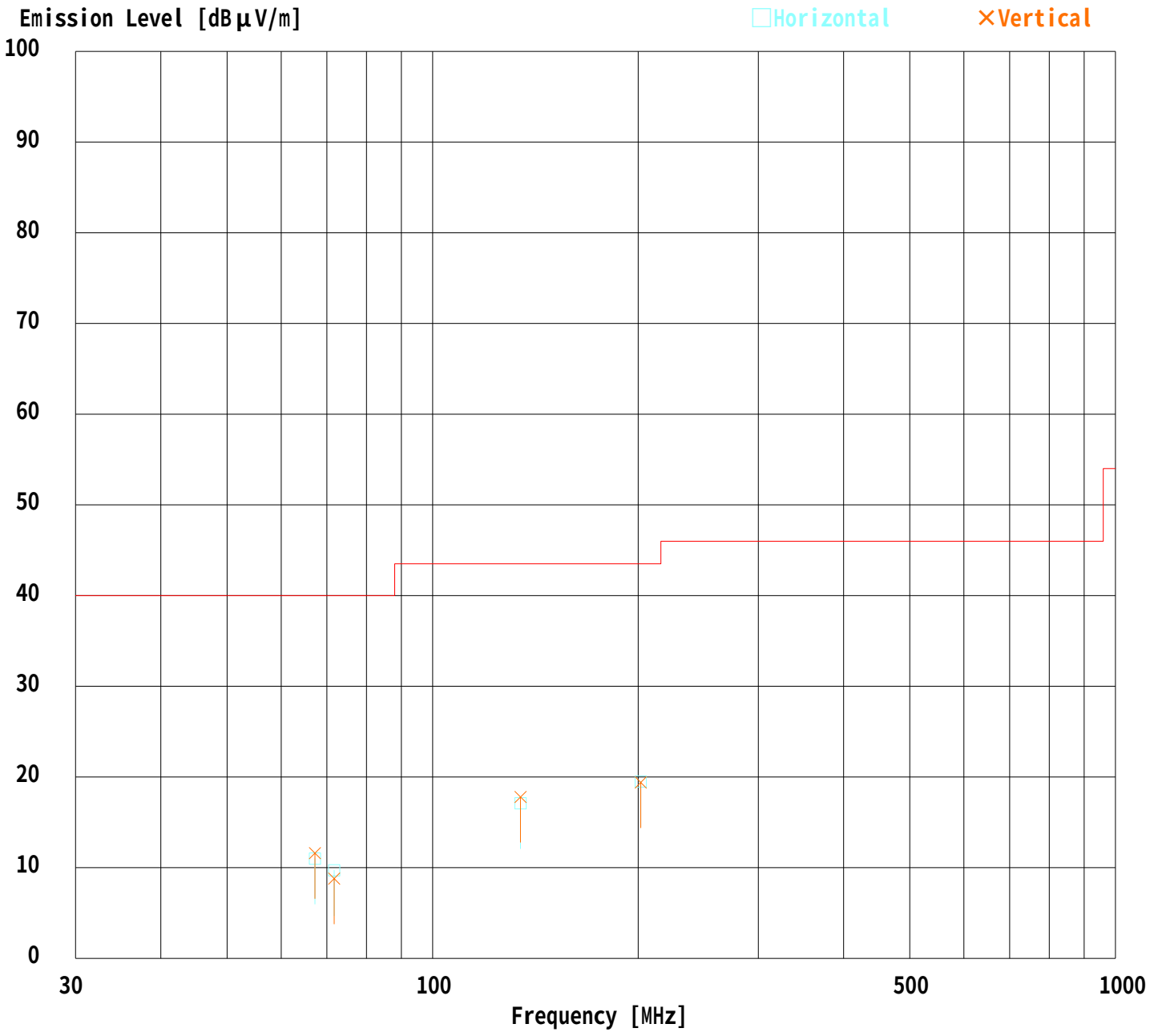
CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

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

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No.: 25LE0078-YW-YW-1

Applicant	: Orion Electric Co., Ltd.		
Kind of Equipment	: DVD/VCR		
Model No.	: DVD2100-CA-A		
Serial No.	: -		
Power	: AC120V/60Hz		
Mode	: DVD Play		
Remarks	: Test Channel #4		
Date	: 7/7/2005		
Test Distance	: 3 m		
Temperature	: 25 °C	Engineer	: Tsubasa Takayama
Humidity	: 53 %		
Regulation	: FCC Part15B CLASS B		



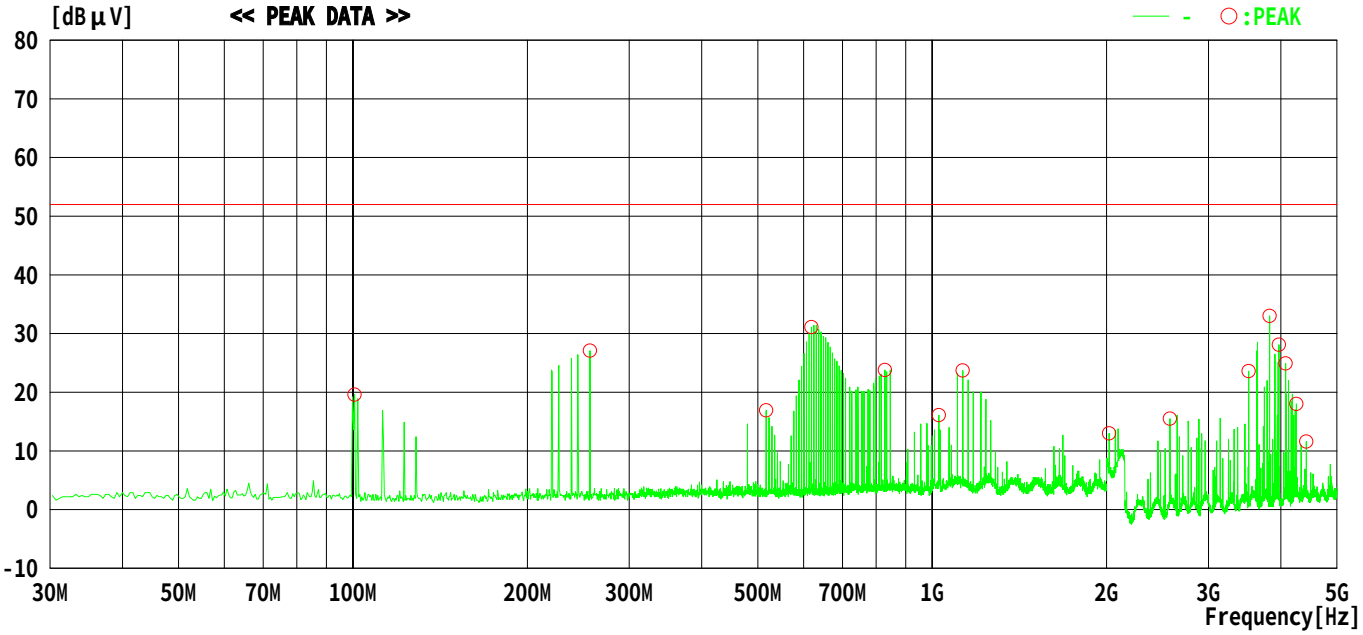
DATA OF ANTENNA TERMINAL TEST

UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part 15 Subpart B
OPERATION MODE	: TV Tuning Mode	TEST ENGINEER	: Tsubasa Takayama

TEMP./HUMID. : 23°C/39%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING Peak [dBµV]	C.F [dB]	RESULT Peak [dBµV]	LIMIT Peak [dBµV]	LIMIT – [dBµV]	MARGIN [dB]	MARGIN [dB]	PHASE
1	100.66400	40.2	-20.6	19.6	52.0	----	32.4	----	-
2	256.59350	47.5	-20.4	27.1	52.0	----	24.9	----	-
3	516.85660	37.2	-20.3	16.9	52.0	----	35.1	----	-
4	618.85350	51.5	-20.4	31.1	52.0	----	20.9	----	-
5	828.57670	44.5	-20.7	23.8	52.0	----	28.2	----	-
6	1027.14300	43.0	-26.9	16.1	52.0	----	35.9	----	-
7	1129.27800	50.5	-26.8	23.7	52.0	----	28.3	----	-
8	2021.42900	34.8	-21.8	13.0	52.0	----	39.0	----	-
9	2574.24800	44.5	-29.0	15.5	52.0	----	36.5	----	-
10	3519.96200	51.5	-27.9	23.6	52.0	----	28.4	----	-
11	3824.22500	60.5	-27.5	33.0	52.0	----	19.0	----	-
12	3968.50000	55.5	-27.4	28.1	52.0	----	23.9	----	-
13	4075.70900	52.2	-27.3	24.9	52.0	----	27.1	----	-
14	4255.72300	45.0	-27.0	18.0	52.0	----	34.0	----	-
15	4425.73900	38.5	-26.9	11.6	52.0	----	40.4	----	-

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

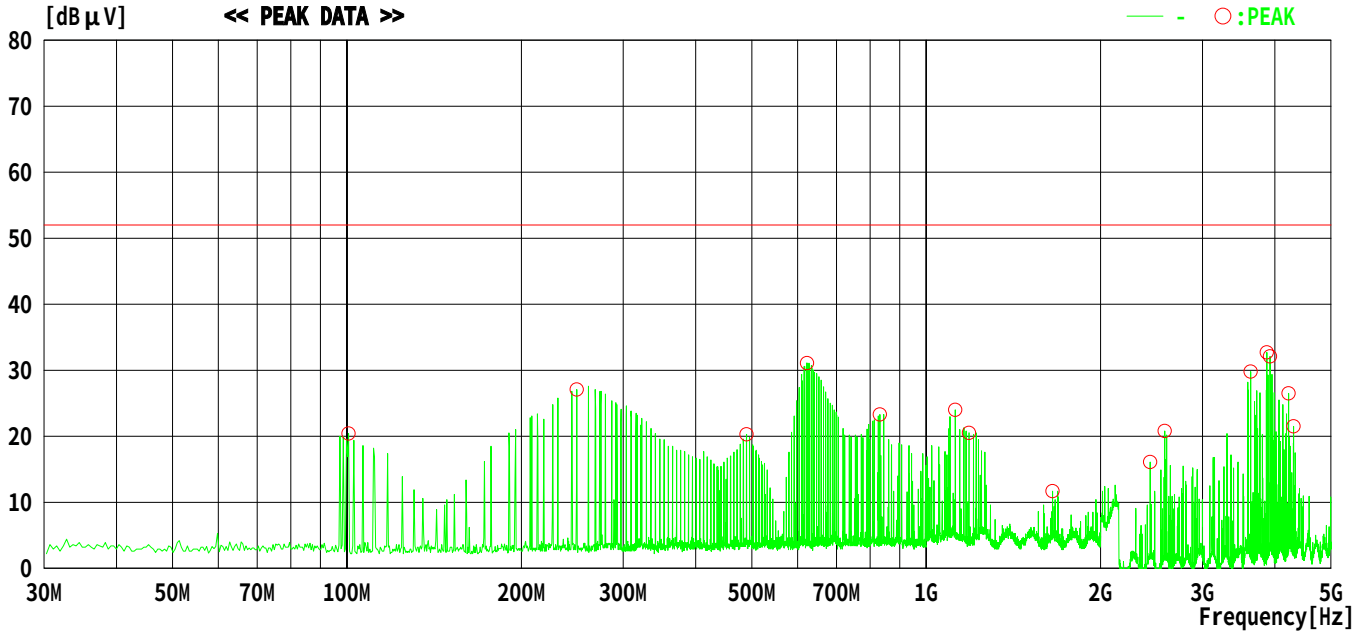
DATA OF ANTENNA TERMINAL TEST

UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part 15 Subpart B
OPERATION MODE	: CATV Tuning Mode	TEST ENGINEER	: Tsubasa Takayama

TEMP./HUMID. : 23°C/39%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING Peak [dBµV]	C.F [dB]	RESULT Peak [dBµV]	LIMIT Peak [dBµV]	LIMIT – [dBµV]	MARGIN [dB]	MARGIN [dB]	PHASE
1	100.66400	41.0	-20.6	20.4	52.0	----	31.6	----	-
2	249.42920	47.5	-20.4	27.1	52.0	----	24.9	----	-
3	489.70850	40.5	-20.2	20.3	52.0	----	31.7	----	-
4	622.85340	51.5	-20.4	31.1	52.0	----	20.9	----	-
5	831.57680	44.0	-20.7	23.3	52.0	----	28.7	----	-
6	1122.85000	50.8	-26.8	24.0	52.0	----	28.0	----	-
7	1185.70300	47.2	-26.7	20.5	52.0	----	31.5	----	-
8	1652.84600	37.8	-26.1	11.7	52.0	----	40.3	----	-
9	2435.68700	45.2	-29.1	16.1	52.0	----	35.9	----	-
10	2581.39000	49.8	-29.0	20.8	52.0	----	31.2	----	-
11	3632.81100	57.5	-27.7	29.8	52.0	----	22.2	----	-
12	3872.79300	60.2	-27.5	32.7	52.0	----	19.3	----	-
13	3924.21800	59.5	-27.4	32.1	52.0	----	19.9	----	-
14	4222.86200	53.5	-27.0	26.5	52.0	----	25.5	----	-
15	4310.01400	48.5	-27.0	21.5	52.0	----	30.5	----	-

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

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 25LE0078-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15 SubpartB
Model Number	: DVD2100-CA-A	Date	: June 07, 2005
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: TV Reception + Rec	Engineer	: Tsubasa Takayama
Remarks	: -		

TV Reception + Rec (0dBmV)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	88.0	25.7	62.3	69.5	7.2
4	67.25	87.3	25.7	61.6	69.5	8.0
Audio Signal						
3	56.75	75.7	25.7	50.0	56.5	6.5
	65.75	74.2	25.7	48.5	56.5	8.0
4	62.75	74.7	25.7	49.0	56.5	7.5
	71.75	73.6	25.7	47.9	56.5	8.6

TV Reception + Rec (25dBmV)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	88.0	25.7	62.3	69.5	7.2
4	67.25	89.0	25.7	63.3	69.5	6.2
Audio Signal						
3	56.75	75.8	25.7	50.1	56.5	6.4
	65.75	74.2	25.7	48.5	56.5	8.0
4	62.75	74.8	25.7	49.1	56.5	7.4
	71.75	73.8	25.7	48.1	56.5	8.4

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 25LE0078-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15 SubpartB
Model Number	: DVD2100-CA-A	Date	: June 07, 2005
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: VCR PLAYBACK	Engineer	: Tsubasa Takayama
Remarks	: -		

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	88.3	25.7	62.6	69.5	6.9
4	67.25	87.9	25.7	62.2	69.5	7.3
Audio Signal						
3	56.75	75.8	25.7	50.1	56.5	6.4
	65.75	74.4	25.7	48.7	56.5	7.8
4	62.75	74.8	25.7	49.1	56.5	7.4
	71.75	73.5	25.7	47.8	56.5	8.7

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 25LE0078-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15 SubpartB
Model Number	: DVD2100-CA-A	Date	: June 07, 2005
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: DVD PLAY	Engineer	: Tsubasa Takayama
Remarks	: -		

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	88.8	25.7	63.1	69.5	6.4
4	67.25	87.3	25.7	61.6	69.5	7.9
Audio Signal						
3	56.75	75.7	25.7	50.0	56.5	6.5
	65.75	74.1	25.7	48.4	56.5	8.1
4	62.75	74.7	25.7	49.0	56.5	7.5
	71.75	73.5	25.7	47.8	56.5	8.7

DATA OF RF SPURIOUS TEST

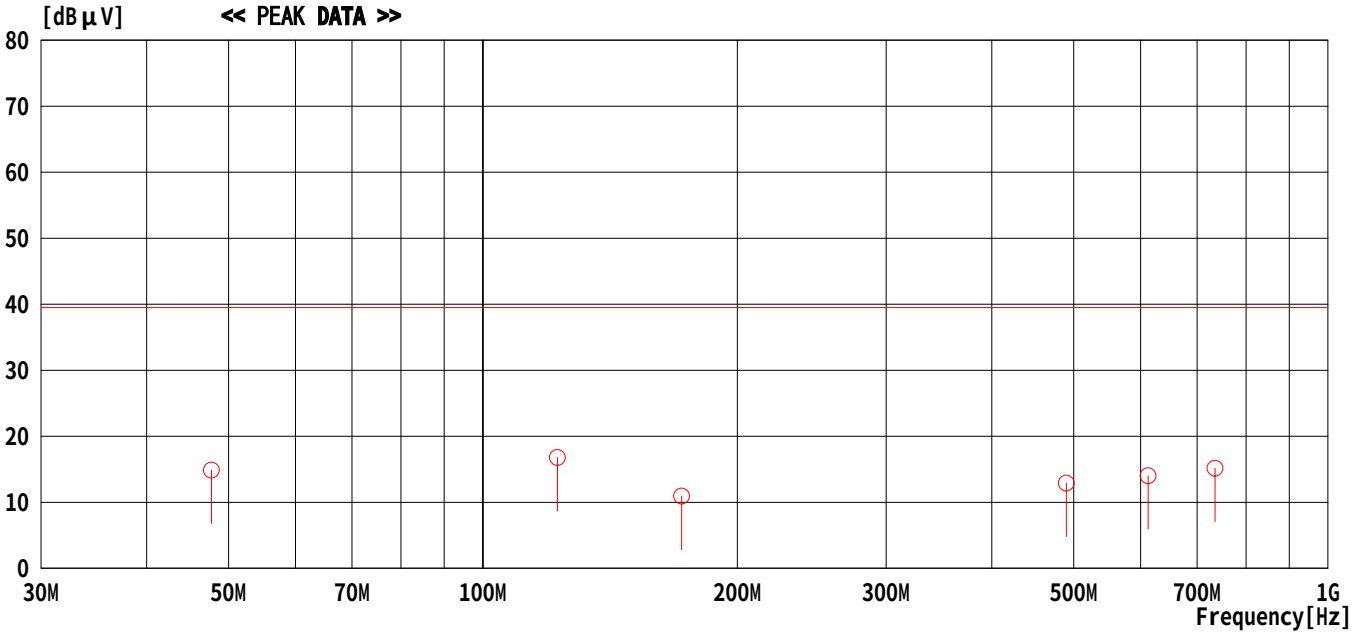
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	47.7300	41.0	----	-26.1	14.9	----	39.5	----	24.6	----	-
2	122.4900	42.5	----	-25.7	16.8	----	39.5	----	22.7	----	-
3	171.7900	36.3	----	-25.4	10.9	----	39.5	----	28.6	----	-
4	490.0700	37.8	----	-24.9	12.9	----	39.5	----	26.6	----	-
5	612.5300	39.4	----	-25.4	14.0	----	39.5	----	25.5	----	-
6	735.0200	40.8	----	-25.6	15.2	----	39.5	----	24.4	----	-

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

DATA OF RF SPURIOUS TEST

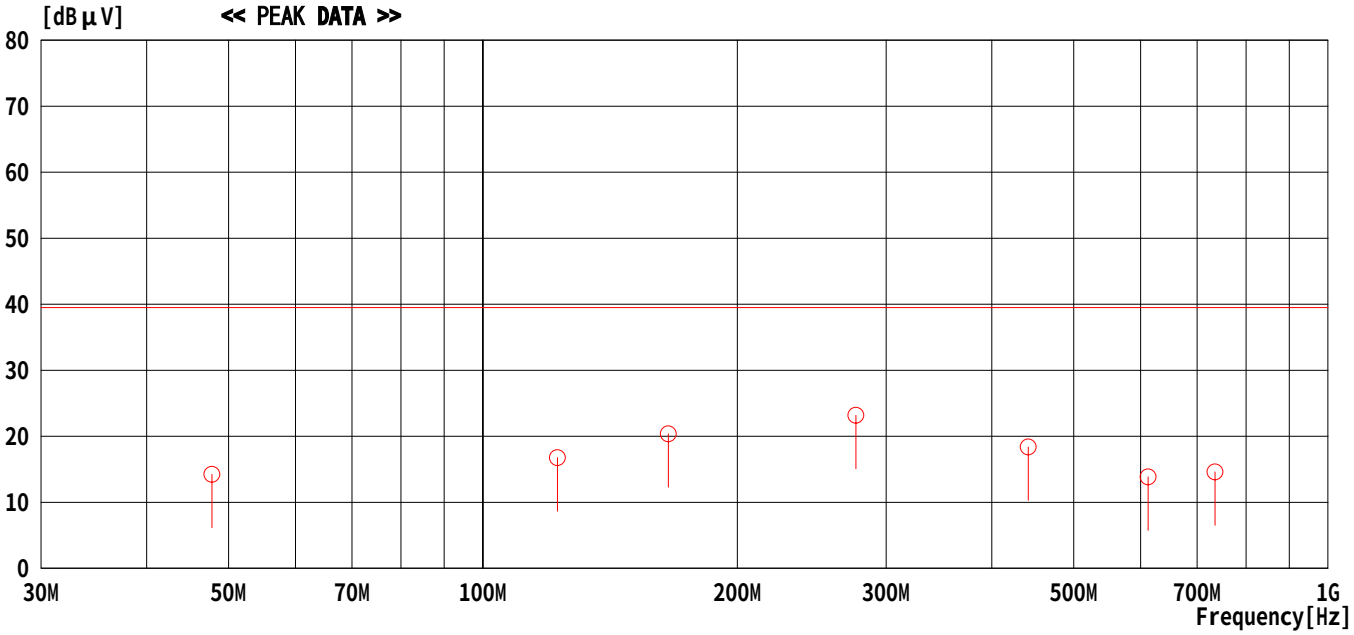
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	47.7900	40.4	----	-26.1	14.3	----	39.5	----	25.3	----	-
2	122.4900	42.5	----	-25.7	16.8	----	39.5	----	22.8	----	-
3	165.7600	45.8	----	-25.4	20.4	----	39.5	----	19.1	----	-
4	276.2200	48.4	----	-25.2	23.2	----	39.5	----	16.3	----	-
5	441.9900	43.5	----	-25.1	18.4	----	39.5	----	21.1	----	-
6	612.5500	39.2	----	-25.4	13.8	----	39.5	----	25.7	----	-
7	735.0400	40.2	----	-25.6	14.6	----	39.5	----	24.9	----	-

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

DATA OF RF SPURIOUS TEST

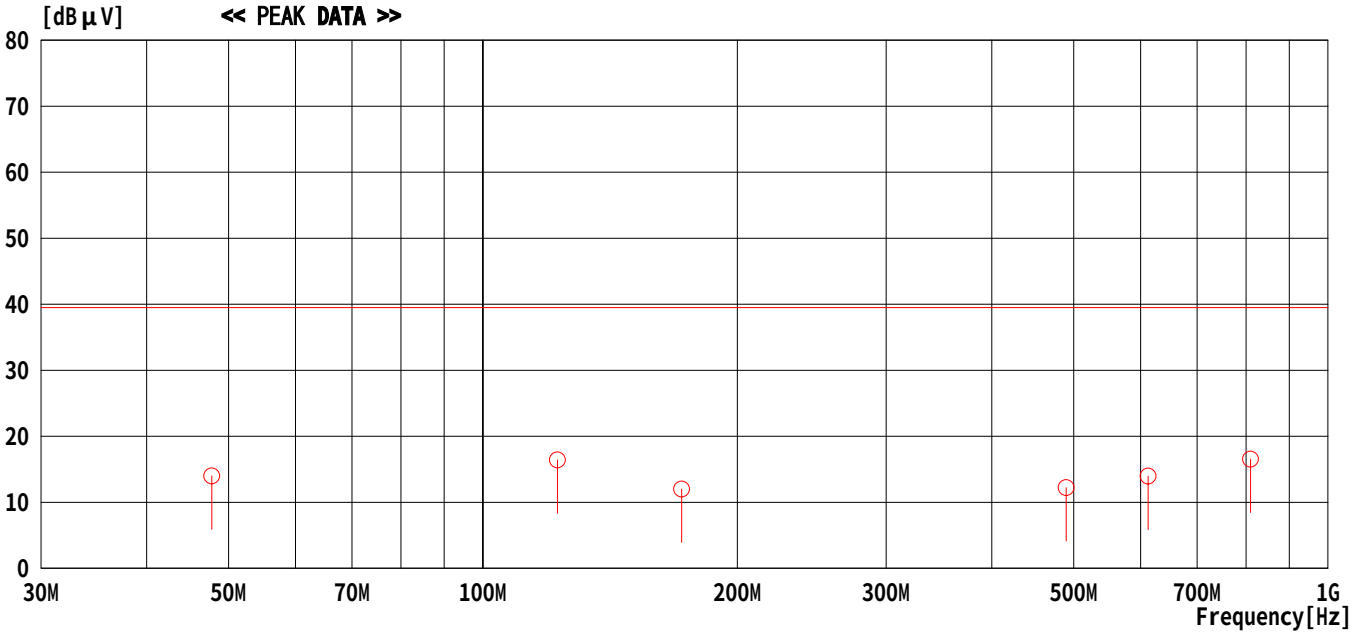
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK (3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	47.7600	40.1	----	-26.1	14.0	----	39.5	----	25.5	----	-
2	122.4900	42.1	----	-25.7	16.4	----	39.5	----	23.1	----	-
3	171.8200	37.4	----	-25.4	12.0	----	39.5	----	27.5	----	-
4	490.0400	37.1	----	-24.9	12.2	----	39.5	----	27.3	----	-
5	612.5400	39.4	----	-25.4	14.0	----	39.5	----	25.6	----	-
6	810.0000	42.0	----	-25.4	16.6	----	39.5	----	23.0	----	-

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

DATA OF RF SPURIOUS TEST

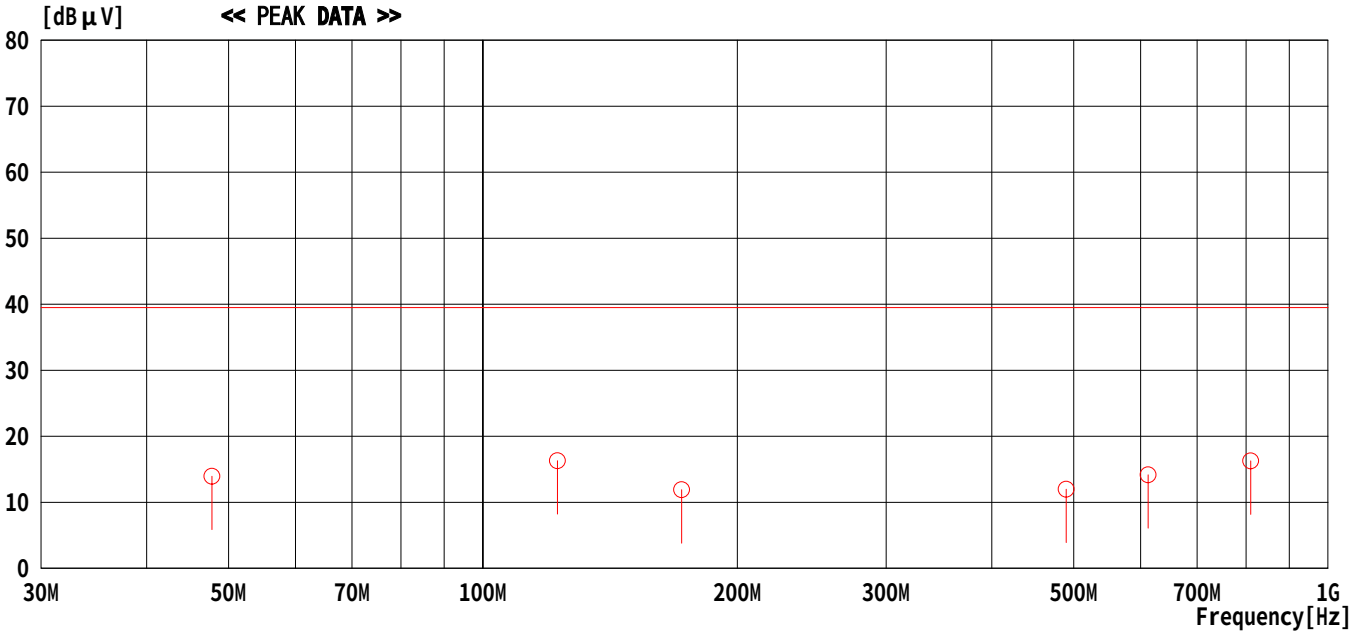
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : DVD PLAY (3ch)

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	47.7900	40.0	----	-26.1	13.9	----	39.5	----	25.6	----	-
2	122.5000	42.0	----	-25.7	16.3	----	39.5	----	23.2	----	-
3	171.8000	37.3	----	-25.4	11.9	----	39.5	----	27.6	----	-
4	490.0200	36.9	----	-24.9	12.0	----	39.5	----	27.5	----	-
5	612.5400	39.6	----	-25.4	14.2	----	39.5	----	25.3	----	-
6	810.0100	41.7	----	-25.4	16.3	----	39.5	----	23.2	----	-

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

DATA OF RF SPURIOUS TEST

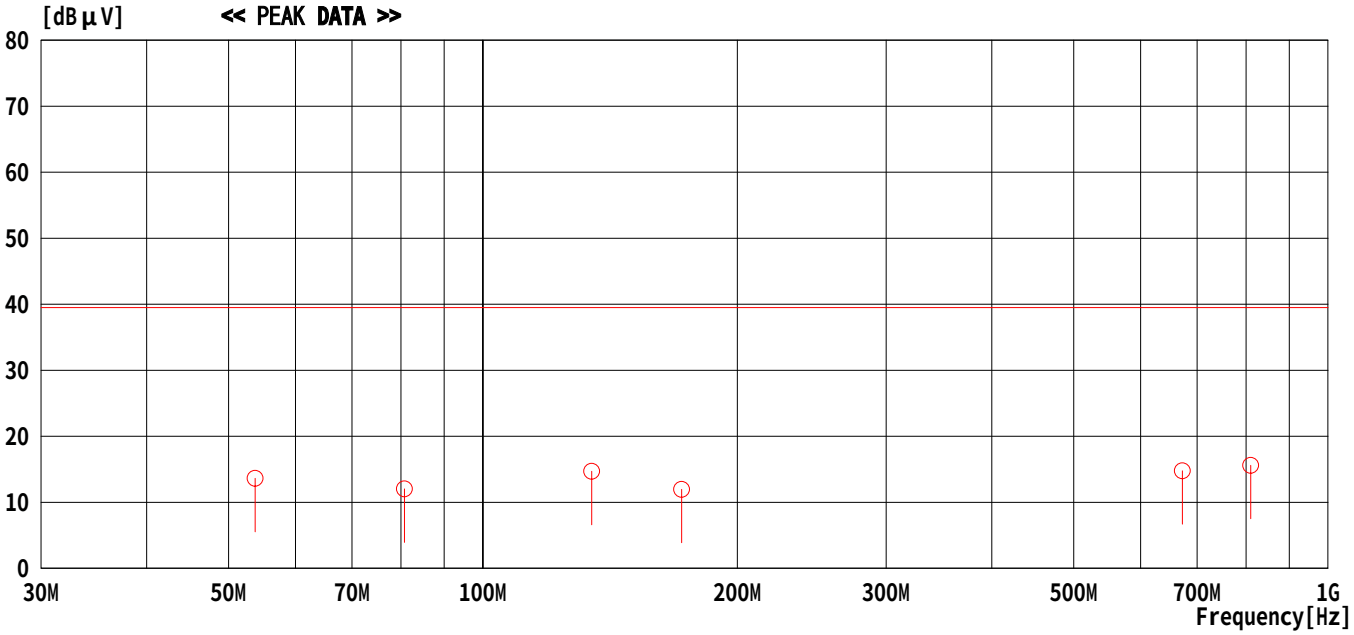
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	53.7700	39.7	----	-26.1	13.6	----	39.5	----	25.9	----	-
2	80.7400	37.9	----	-25.9	12.0	----	39.5	----	27.5	----	-
3	134.4700	40.4	----	-25.7	14.7	----	39.5	----	24.8	----	-
4	171.8100	37.4	----	-25.4	12.0	----	39.5	----	27.6	----	-
5	672.3900	40.5	----	-25.7	14.8	----	39.5	----	24.7	----	-
6	810.0200	41.0	----	-25.4	15.6	----	39.5	----	23.9	----	-

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

DATA OF RF SPURIOUS TEST

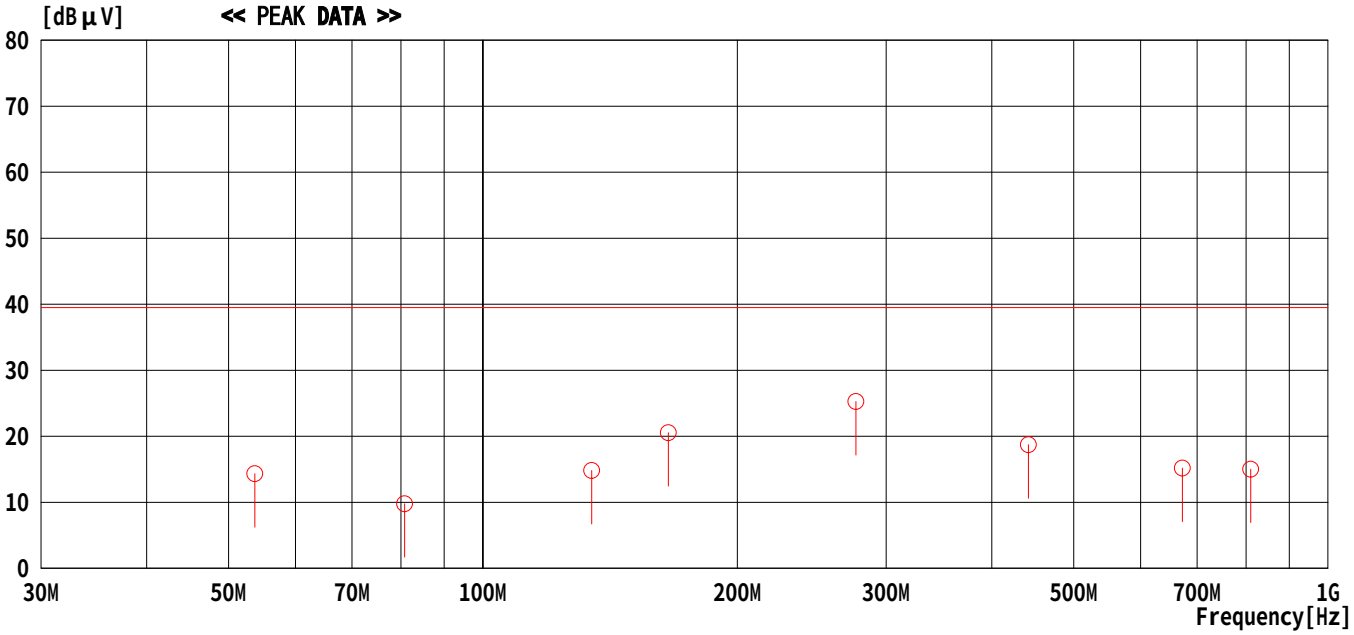
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

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

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	53.7200	40.4	----	-26.1	14.3	----	39.5	----	25.2	----	-
2	80.7700	35.7	----	-25.9	9.8	----	39.5	----	29.7	----	-
3	134.4800	40.5	----	-25.7	14.8	----	39.5	----	24.7	----	-
4	165.7700	46.0	----	-25.4	20.6	----	39.5	----	19.0	----	-
5	276.2500	50.5	----	-25.2	25.3	----	39.5	----	14.2	----	-
6	442.0100	43.8	----	-25.1	18.7	----	39.5	----	20.8	----	-
7	672.3900	40.9	----	-25.7	15.2	----	39.5	----	24.3	----	-
8	810.0200	40.4	----	-25.4	15.0	----	39.5	----	24.5	----	-

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

DATA OF RF SPURIOUS TEST

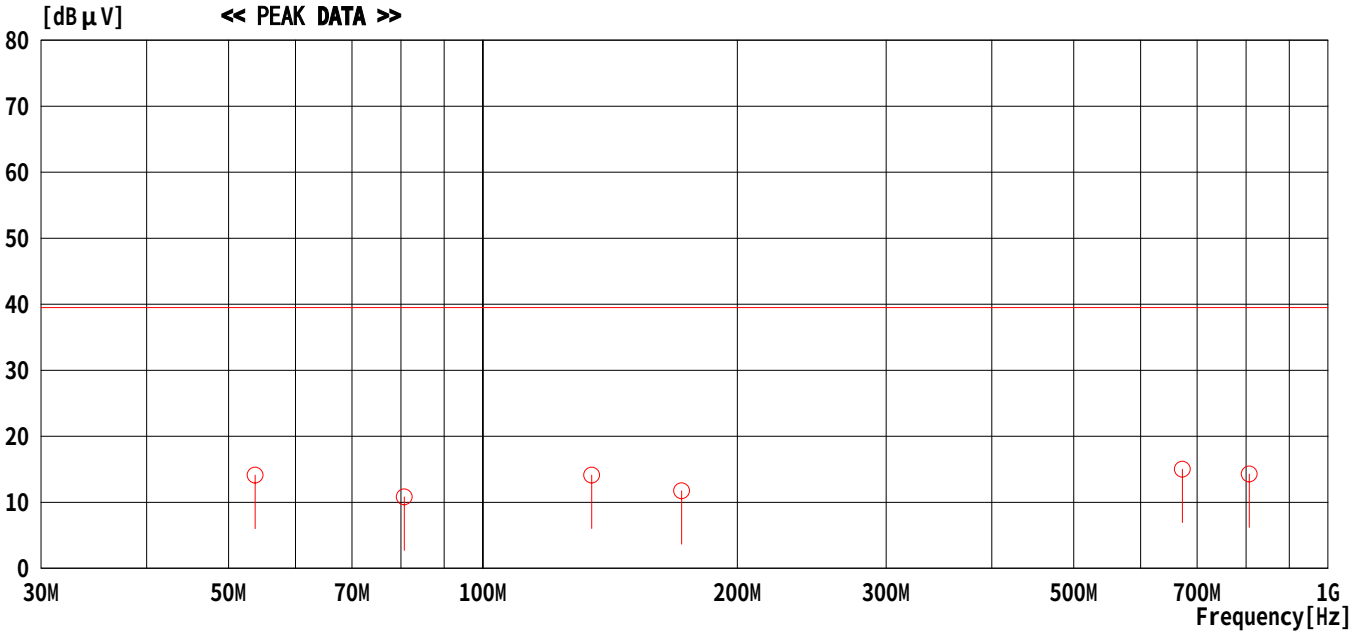
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK (4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	53.7600	40.2	----	-26.1	14.1	----	39.5	----	25.4	----	-
2	80.7300	36.7	----	-25.9	10.8	----	39.5	----	28.7	----	-
3	134.5100	39.8	----	-25.7	14.1	----	39.5	----	25.4	----	-
4	171.8300	37.1	----	-25.4	11.7	----	39.5	----	27.8	----	-
5	672.4100	40.7	----	-25.7	15.0	----	39.5	----	24.5	----	-
6	806.8700	39.7	----	-25.4	14.3	----	39.5	----	25.2	----	-

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

DATA OF RF SPURIOUS TEST

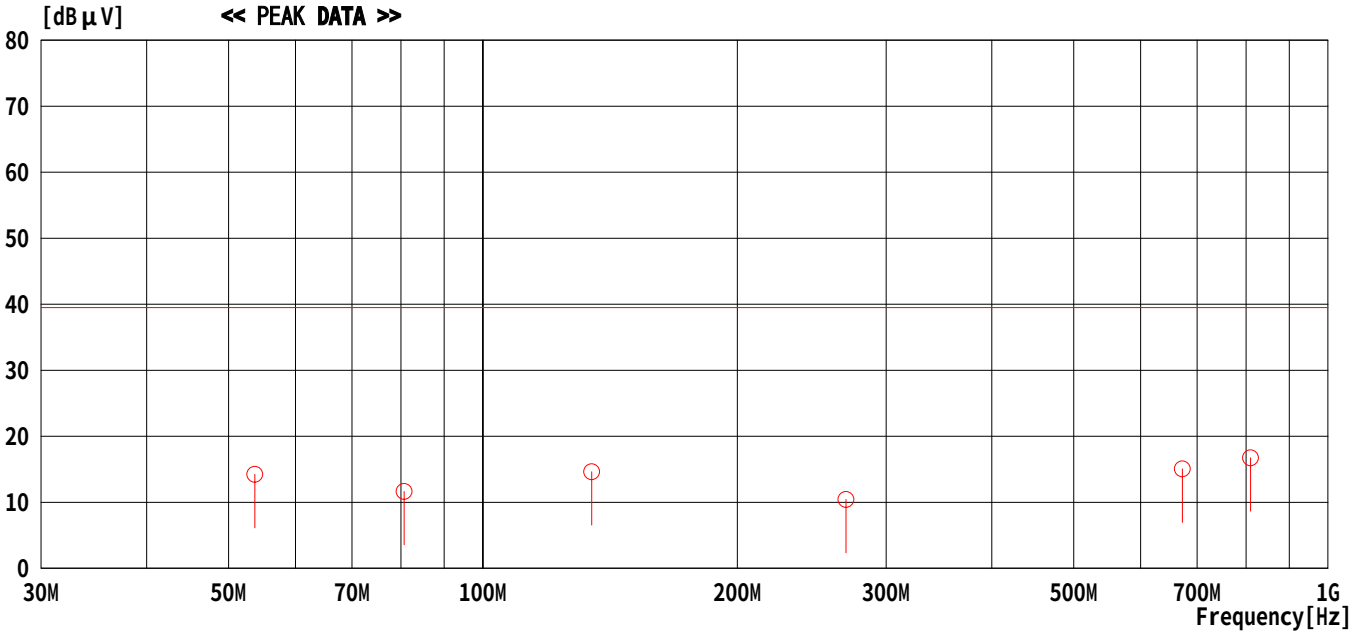
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07 ,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : DVD PLAY (4ch)

LIMIT : FCC 15B RF OUT SPURIOUS

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	53.7100	40.3	----	-26.1	14.2	----	39.5	----	25.3	----	-
2	80.6800	37.5	----	-25.9	11.6	----	39.5	----	27.9	----	-
3	134.4900	40.3	----	-25.7	14.6	----	39.5	----	24.9	----	-
4	268.9400	35.5	----	-25.1	10.4	----	39.5	----	29.1	----	-
5	672.4000	40.8	----	-25.7	15.1	----	39.5	----	24.5	----	-
6	809.9700	42.1	----	-25.4	16.7	----	39.5	----	22.8	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

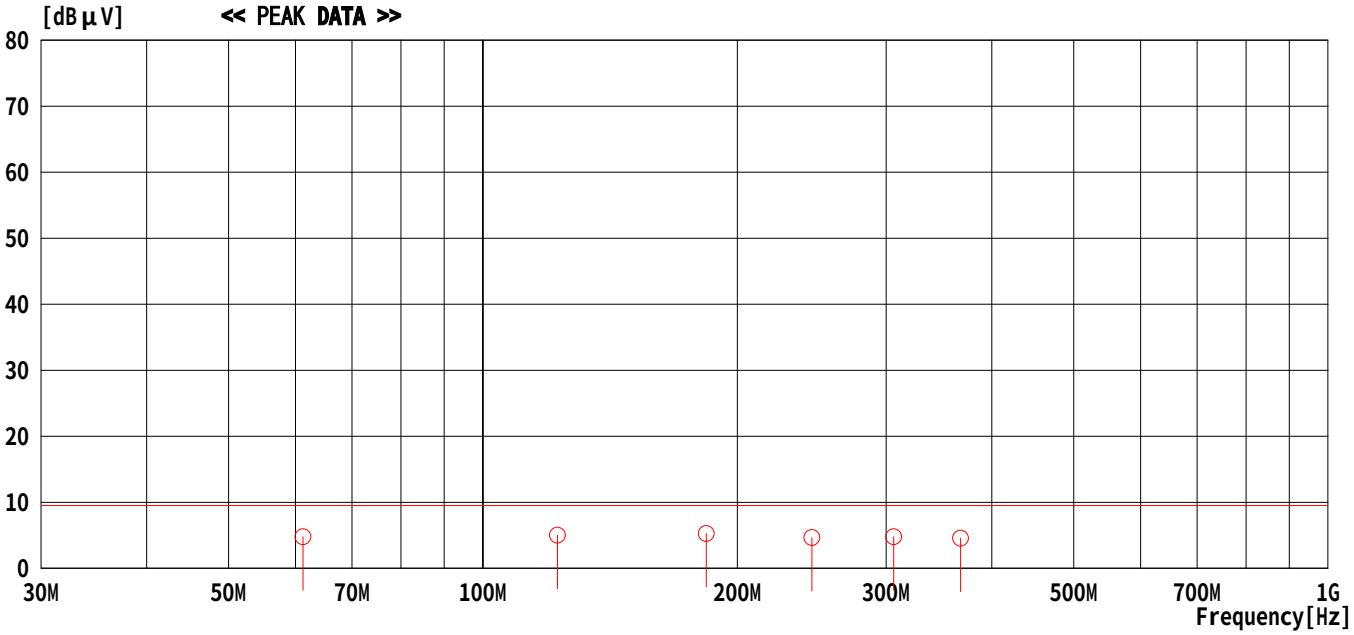
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK (3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	61.2500	30.9	----	-26.1	4.8	----	9.5	----	4.7	----	-
2	122.5000	30.7	----	-25.7	5.0	----	9.5	----	4.5	----	-
3	183.7500	30.5	----	-25.2	5.3	----	9.5	----	4.2	----	-
4	245.0000	29.8	----	-25.1	4.7	----	9.5	----	4.8	----	-
5	306.2500	30.0	----	-25.2	4.8	----	9.5	----	4.7	----	-
6	367.5000	29.6	----	-25.0	4.6	----	9.5	----	4.9	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

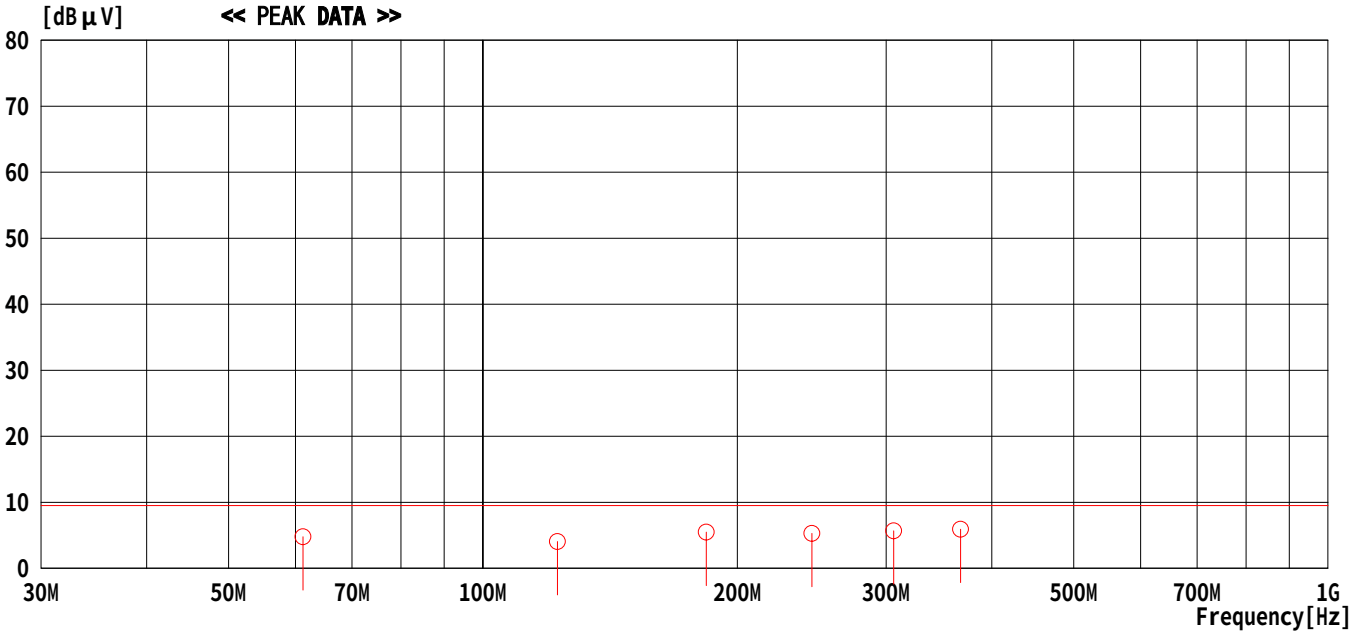
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : DVD PLAY (3ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	61.2500	30.9	----	-26.1	4.8	----	9.5	----	4.7	----	-
2	122.5000	29.8	----	-25.7	4.1	----	9.5	----	5.4	----	-
3	183.7500	30.7	----	-25.2	5.5	----	9.5	----	4.0	----	-
4	245.0000	30.4	----	-25.1	5.3	----	9.5	----	4.2	----	-
5	306.2500	30.9	----	-25.2	5.7	----	9.5	----	3.8	----	-
6	367.5000	30.9	----	-25.0	5.9	----	9.5	----	3.6	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

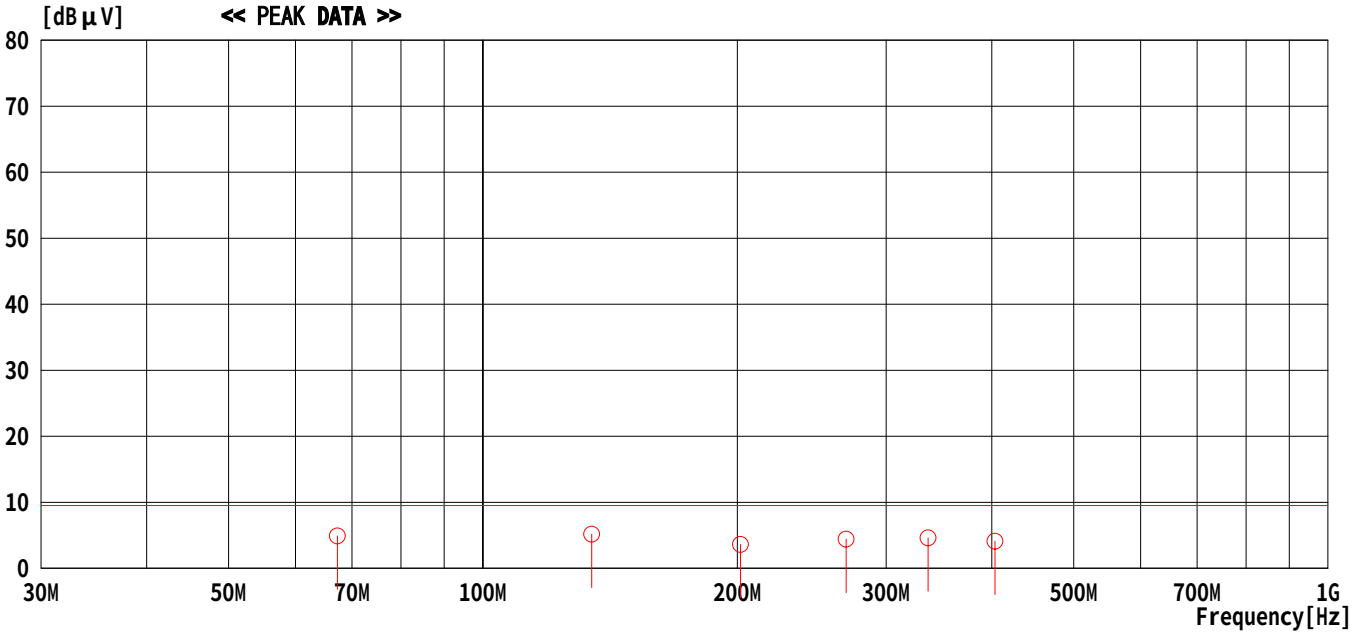
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : VCR PLAYBACK (4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	67.2500	30.9	----	-26.0	4.9	----	9.5	----	4.6	----	-
2	134.5000	30.9	----	-25.7	5.2	----	9.5	----	4.3	----	-
3	201.7500	28.6	----	-25.0	3.6	----	9.5	----	5.9	----	-
4	269.0000	29.5	----	-25.1	4.4	----	9.5	----	5.1	----	-
5	336.2500	29.7	----	-25.1	4.6	----	9.5	----	4.9	----	-
6	403.5000	29.2	----	-25.1	4.1	----	9.5	----	5.4	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

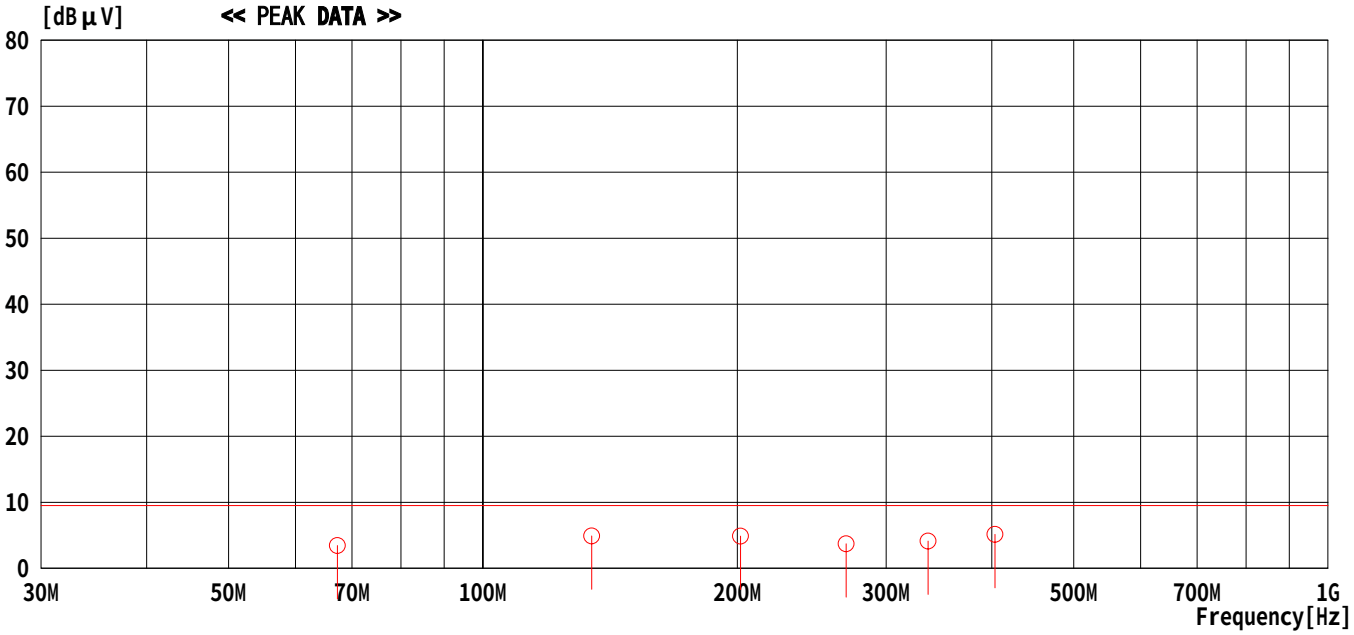
UL Apex Co.,Ltd.

COMPANY	: Orion Electric Co., Ltd.	REPORT NO	: 25LE0078-YW-1
EQUIPMENT	: DVD/VCR	DATE	: July 07,2005
MODEL	: DVD2100-CA-A	REGULATION	: FCC Part15 Subpart B
TEMP./HUMID.	: 23°C/39%	TEST ENGINEER	: Tsubasa Takayama

OPERATION MODE : DVD PLAY (4ch)

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

—— - ○:PEAK



NO	FREQ	READING Peak	READING –	C.F	RESULT Peak	RESULT –	LIMIT Peak	LIMIT –	MARGIN		PHASE
	[MHz]	[dBµV]	[dBµV]	[dB]	[dBµV]	[dBµV]	[dBµV]	[dBµV]	[dB]	[dB]	
1	67.2500	29.5	----	-26.0	3.5	----	9.5	----	6.0	----	-
2	134.5000	30.6	----	-25.7	4.9	----	9.5	----	4.6	----	-
3	201.7500	29.9	----	-25.0	4.9	----	9.5	----	4.6	----	-
4	269.0000	28.8	----	-25.1	3.7	----	9.5	----	5.8	----	-
5	336.2500	29.2	----	-25.1	4.1	----	9.5	----	5.4	----	-
6	403.5000	30.2	----	-25.1	5.1	----	9.5	----	4.4	----	-

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

Picture Sensitvity Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 25LE0078-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15 Subart B
Model Number	: DVD2100-CA-A	Date	: July 07, 2005
Power	: 120V/60Hz	Temp / Humid	: 24deg.C / 39%
Description	: TV Reception	Engineer	: Tsubasa Takayama
Remarks	: -		

Ch [VHF]	Frequency [MHz]	Sensitivity [MHz] [dBμV]	[μV]	Ch [UHF]	Frequency [MHz]	Sensitivity [MHz] [dB μ V]	[μ V]
2	55.25	20.0	10.0	14	471.25	21.7	12.2
3	61.25	19.4	9.3	20	507.25	21.9	12.4
4	67.25	18.0	7.9	26	543.25	22.2	12.9
5	77.25	19.1	9.0	32	579.25	22.5	13.3
6	83.25	18.2	8.1	38	615.25	23.0	14.1
7	175.25	20.0	10.0	44	651.25	23.2	14.5
8	181.25	20.0	10.0	50	687.25	23.1	14.3
9	187.25	19.6	9.5	56	723.25	23.1	14.3
10	193.25	19.3	9.2	62	759.25	23.0	14.1
11	199.25	19.5	9.4	69	801.25	23.5	15.0
12	205.25	20.0	10.0	-	-	-	
13	211.25	20.0	10.0	-	-	-	-
Average VHF			9.4	Average UHF			13.7
Average UHF/VHF : 20 log UHF[μV] / VHF[μV]=			3.3			[Limit : 8.0dB]	

Noise Figure Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 25LE0078-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15 Subart B
Model Number	: DVD2100-CA-A	Date	: July, 11 2005
Power	: 120V/60Hz	Temp / Humid	: 25deg.C / 61%
Description	: TV Reception	Engineer	: Tsubasa Takayama
Remarks	: -		

Ch	Frequency [MHz]	Meter Reading [dB]	Correction Factor [dB]	Noise Figure [dB]	Limits [dB]	Margin [dB]
TV VHF Fundamental						
2	55.25	6.1	0.2	5.9	14.0	8.1
3	61.25	5.0	0.2	4.8	14.0	9.2
4	67.25	4.0	0.2	3.8	14.0	10.2
5	77.25	3.2	0.2	3.0	14.0	11.0
6	83.25	3.1	0.2	2.9	14.0	11.1
7	175.25	5.3	0.2	5.1	14.0	8.9
8	181.25	5.1	0.2	4.9	14.0	9.1
9	187.25	5.0	0.2	4.8	14.0	9.2
10	193.25	5.0	0.2	4.8	14.0	9.2
11	199.25	5.1	0.2	4.9	14.0	9.1
12	205.25	4.9	0.2	4.7	14.0	9.3
13	211.25	5.0	0.2	4.8	14.0	9.2
TV UHF Fundamental						
14	471.25	5.8	0.3	5.5	14.0	8.5
20	507.25	6.1	0.3	5.8	14.0	8.2
26	543.25	6.4	0.3	6.1	14.0	7.9
32	579.25	7.1	0.3	6.8	14.0	7.2
38	615.25	8.9	0.3	8.6	14.0	5.4
44	651.25	8.3	0.3	8.0	14.0	6.0
50	687.25	7.8	0.3	7.5	14.0	6.5
56	723.25	7.8	0.4	7.4	14.0	6.6
62	759.25	8.0	0.4	7.6	14.0	6.4
69	801.25	8.6	0.4	8.2	14.0	5.8
Mid band						
14	121.25	3.6	0.2	3.4	14.0	10.6
16	133.25	8.4	0.2	8.2	14.0	5.8
18	145.25	7.0	0.2	6.8	14.0	7.2
20	157.25	6.2	0.2	6.0	14.0	8.0
22	169.25	6.3	0.2	6.1	14.0	7.9
Super band						
23	217.25	5.0	0.2	4.8	14.0	9.2
26	235.25	5.1	0.2	4.9	14.0	9.1
29	253.25	5.2	0.2	5.0	14.0	9.0
32	271.25	5.2	0.2	5.0	14.0	9.0
36	295.25	5.1	0.2	4.9	14.0	9.1

APPENDIX 3
Test Instruments

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
APVBT01	VIDEO BOOSTER	UL Apex	-	RF, ATS	-
APTVG01	TV Generator	Leader	408NPS	RF, ATS	Pre Check
APSPA04	Spectrum Analyzer	Advantest	R3265	AT, RF, ATS	2005/05/06 * 12
IP-06	Matching Pad	TME	ZT-301	PS, NF	2005/05/17 * 12
IP-03	Matching Pad	TME	ZT-130	AT, RF, ATS	2004/09/10 * 12
APNFM01	Noise Figure Indicator	Elena	ENF-2005	NF	2004/10/04 * 12
APNFS01	Noise Source	Elena	MC1100	NF	-
AV01-01	Signal Generator	Rohde & Schwarz	SMY01	PS	2005/02/23 * 12
AF-05	Pre Amplifier	Hewlett Packard	8447D	AT, RF, ATS	2005/07/12 * 12
AF-06	Pre Amplifier	Agilent	HP8449B	AT	2005/07/14 * 12
APCBL-01	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2004/12/27 * 12
APCBL-02	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2004/12/27 * 12
OS-02	Digital Humidity Indicator	SATO	PC-5000TRH-Ⅱ	AT, RF, ATS, PS, NF	2004/04/06 * 24
AF-02	Pre Amplifier	Anritsu	MH648A	RE	2005/03/25 * 12
AF-04	Pre Amplifier	Hewlett Packard	8449B	RE	2005/01/18 * 12
AT-03	Attenuator	Anritsu	MP721B	RE	2005/07/11 * 12
BA-10	Biconical Antenna	Schwarzbeck	BBA9106	RE	2004/11/16 * 12
HA-01	Horn Antenna	A.H.Systems	SAS-200/571	RE	2005/04/06 * 12
APANT12	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2005/05/16 * 12
SA-07	Spectrum Analyzer	Advantest	R3273	RE	2005/07/11 * 12
TR-02	Test Receiver	Rohde & Schwarz	ESVS30	RE	2005/05/10 * 12
CC-1ORC	Yokowa No.1 open coaxial(0.01-1000MHz)	UL Apex	CC-11,CC-12,CC-14, CC-15,CC-16,,SW-11 ,SW-12	RE	2005/03/25 * 12
YOATS-01	Open Test Site	JSE	3m、10m	RE	2005/04/30 * 12
OS-06	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2004/04/01 * 24
CC-C1	Microwave Cable	Suhner/storm	-	RE	2004/12/15 * 12
LS-02	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE	2004/10/29 * 12
AF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2005/03/25 * 12
AT-06	Attenuator	Anritsu	MP721B	RE	2005/07/11 * 12
BA-06	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/01/29 * 12
LA-07	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2005/01/29 * 12
LS-04	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE (EUT)	2004/10/29 * 12
SA-06	Spectrum Analyzer	Advantest	R3273	CE, RE	2004/11/02 * 12
TR-05	Test Receiver	Rohde & Schwarz	ESHS10	CE	2004/10/21 * 12
TR-06	Test Receiver	Rohde & Schwarz	ESVS10	RE	2004/10/29 * 12
CC-3ORC	Yokowa No.3 open coaxial(0.01-1000MHz)	UL Apex	CC-31,CC-32,CC-33, CC-34,CC-35,CC-36, CC-37,SW-31,SW-32	RE	2005/03/25 * 12
YOATS-03	Open Test Site	JSE	3m、10m	RE	2005/05/04 * 12
OS-11	Digital Humidity Indicator	SATO	PC-5000TRH	CE	2004/04/20 * 24
OS-16	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2004/05/07 * 24
SS-05	Digitizing Oscilloscope	Sony Tektronix	2221	PS	2005/01/11 * 12
APBPF01	Band pass filter	Erika Fiedler	BP	PS	2005/04/22 * 12

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

Test Item :

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