

DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : TV Reception+REC
Remarks : 0dBmV
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB/m]		[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]		[dB]	
1.	135.00	BB	33.9	43.5	14.1	29.9	2.8	5.8	26.7	36.3	43.5	16.8	7.2
2.	202.50	BB	35.5	32.8	17.1	30.0	3.6	5.8	32.0	29.3	43.5	11.5	14.2
3.	270.00	BB	34.9	35.6	18.3	30.0	4.5	5.8	33.5	34.2	46.0	12.5	11.8
4.	405.00	BB	33.4	36.0	16.1	30.2	5.7	5.9	30.9	32.5	46.0	15.1	13.5
5.	540.00	BB	29.9	31.8	18.1	30.3	6.8	5.9	30.4	32.3	46.0	15.6	13.7
6.	675.00	BB	28.3	35.8	20.4	30.2	8.1	5.9	32.5	40.0	46.0	13.5	6.0
7.	742.51	BB	29.8	32.7	20.9	30.1	8.6	5.9	35.1	38.0	46.0	10.9	8.0

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

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

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

DATA OF RADIATION TEST

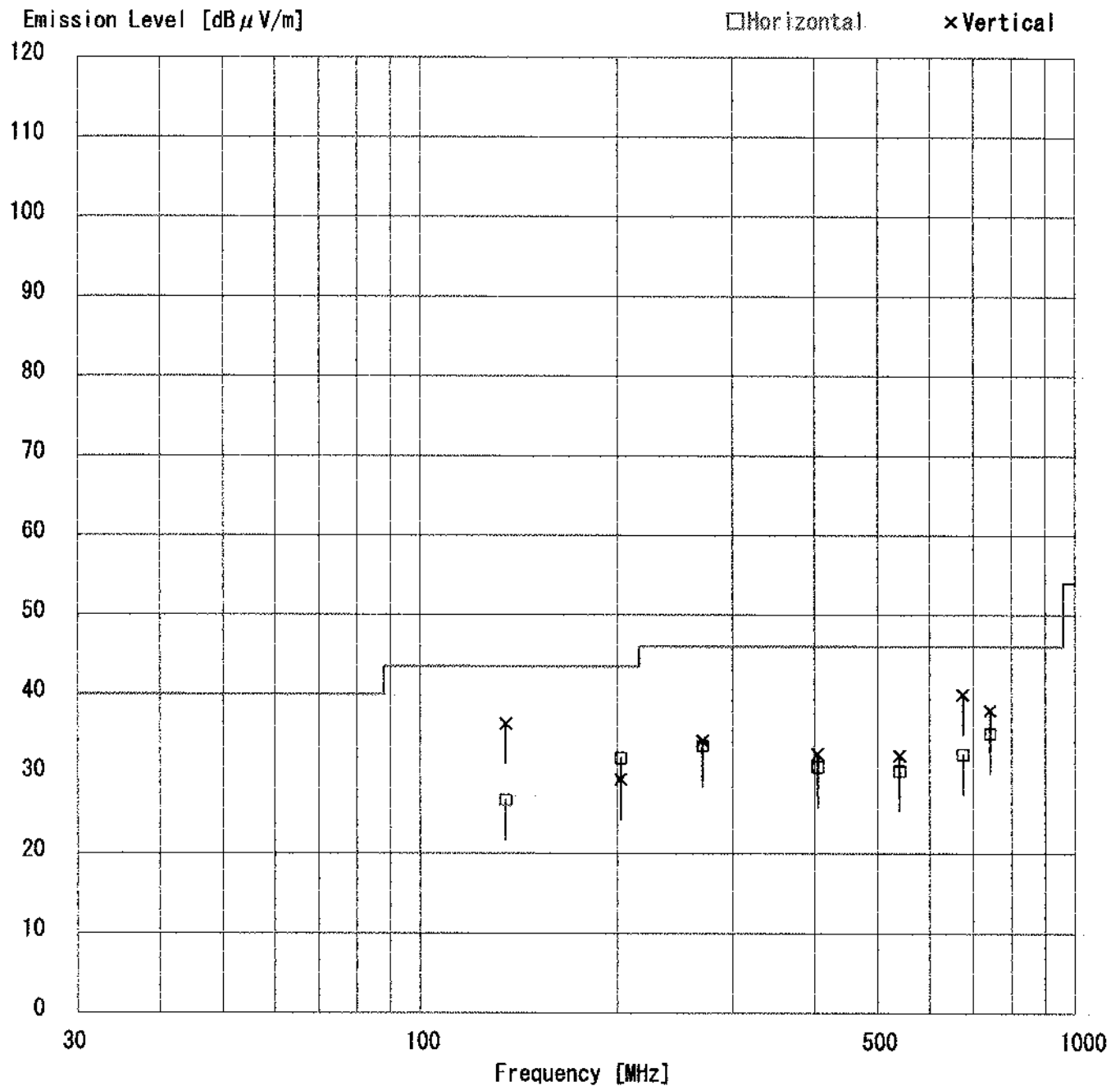
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : TV Reception+REC
Remarks : 0dBmV
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : TV Reception+REC
Remarks : 25dBmV
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB/m]		[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]		[dB]	[dB]
1.	675.00	BB	28.3	35.1	20.4	30.2	8.1	5.9	32.5	39.3	46.0	13.5	6.7

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

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

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

DATA OF RADIATION TEST

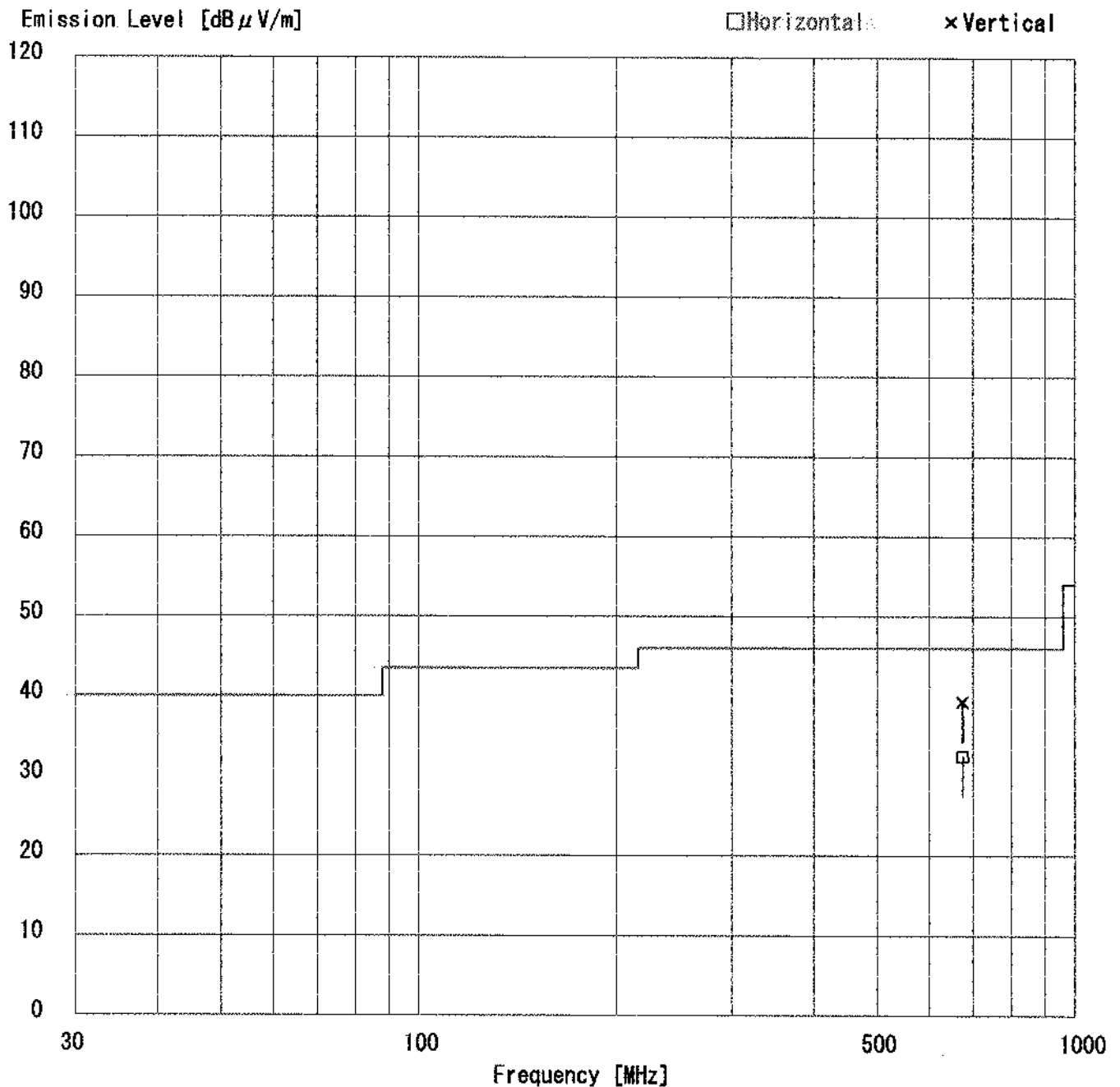
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : TV Reception+REC
Remarks : 25dBmV
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : AV Input+REC
Remarks : 1Vp-p
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	675.00	BB	30.4	35.8	20.4	30.2	8.1	5.9	34.6	40.0	46.0	11.4	6.0

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

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

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

DATA OF RADIATION TEST

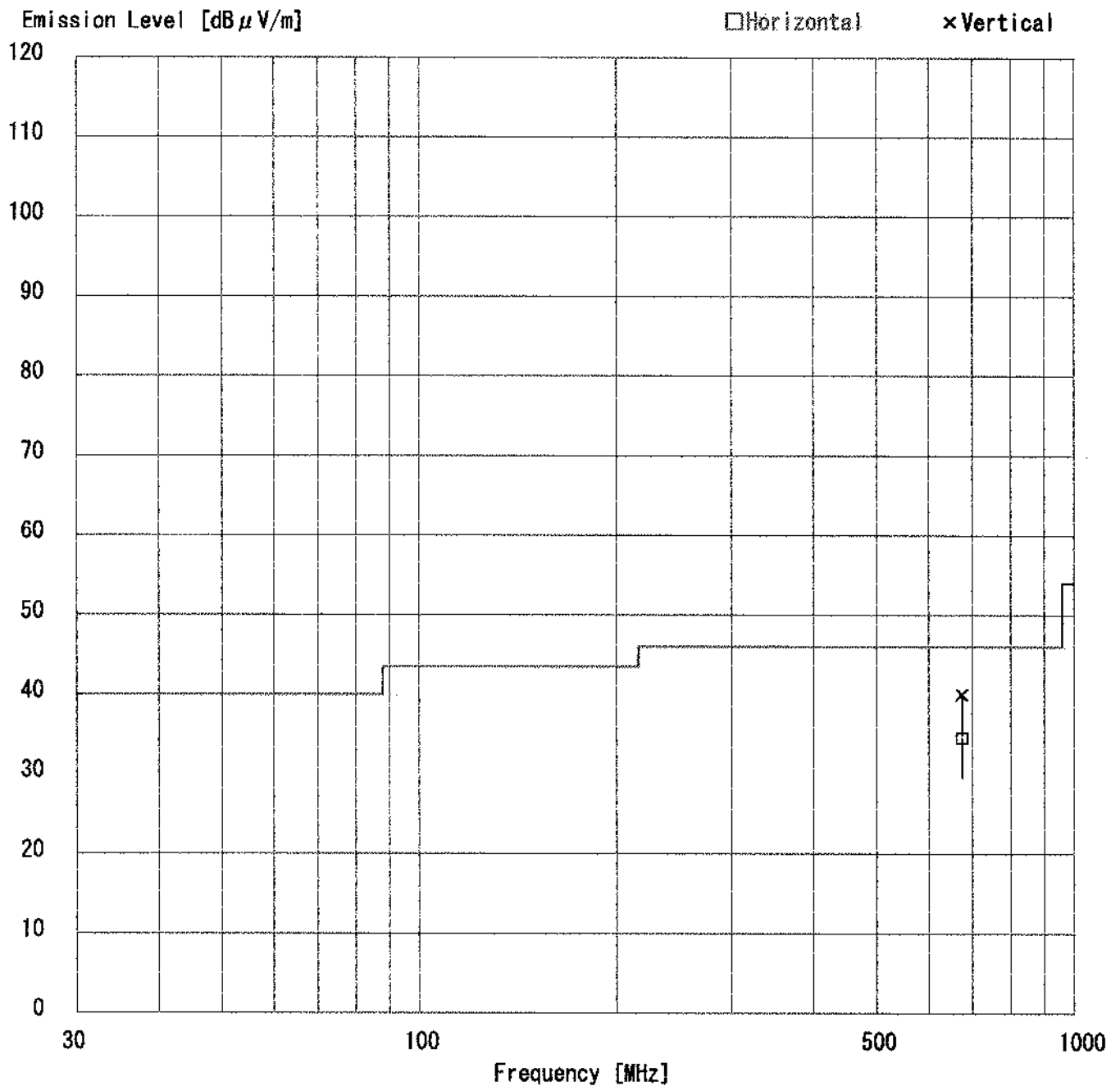
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : AV Input+REC
Remarks : 1Vp-p
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 241E0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : AV Input+REC
Remarks : 5Vp-p
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB/m]		[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]		[dB]	[dB]
1.	135.00	BB	34.4	45.0	14.1	29.9	2.8	5.8	27.2	37.8	43.5	16.3	5.7
2.	202.50	BB	35.5	30.1	17.1	30.0	3.6	5.8	32.0	26.6	43.5	11.5	16.9
3.	270.00	BB	34.3	34.2	18.3	30.0	4.5	5.8	32.9	32.8	46.0	13.1	13.2
4.	540.00	BB	26.9	30.5	18.1	30.3	6.8	5.9	27.4	31.0	46.0	18.6	15.0
5.	675.00	BB	29.8	36.9	20.4	30.2	8.1	5.9	34.0	41.1	46.0	12.0	4.9
6.	742.50	BB	30.0	30.0	20.9	30.1	8.6	5.9	35.3	35.3	46.0	10.7	10.7

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

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

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

DATA OF RADIATION TEST

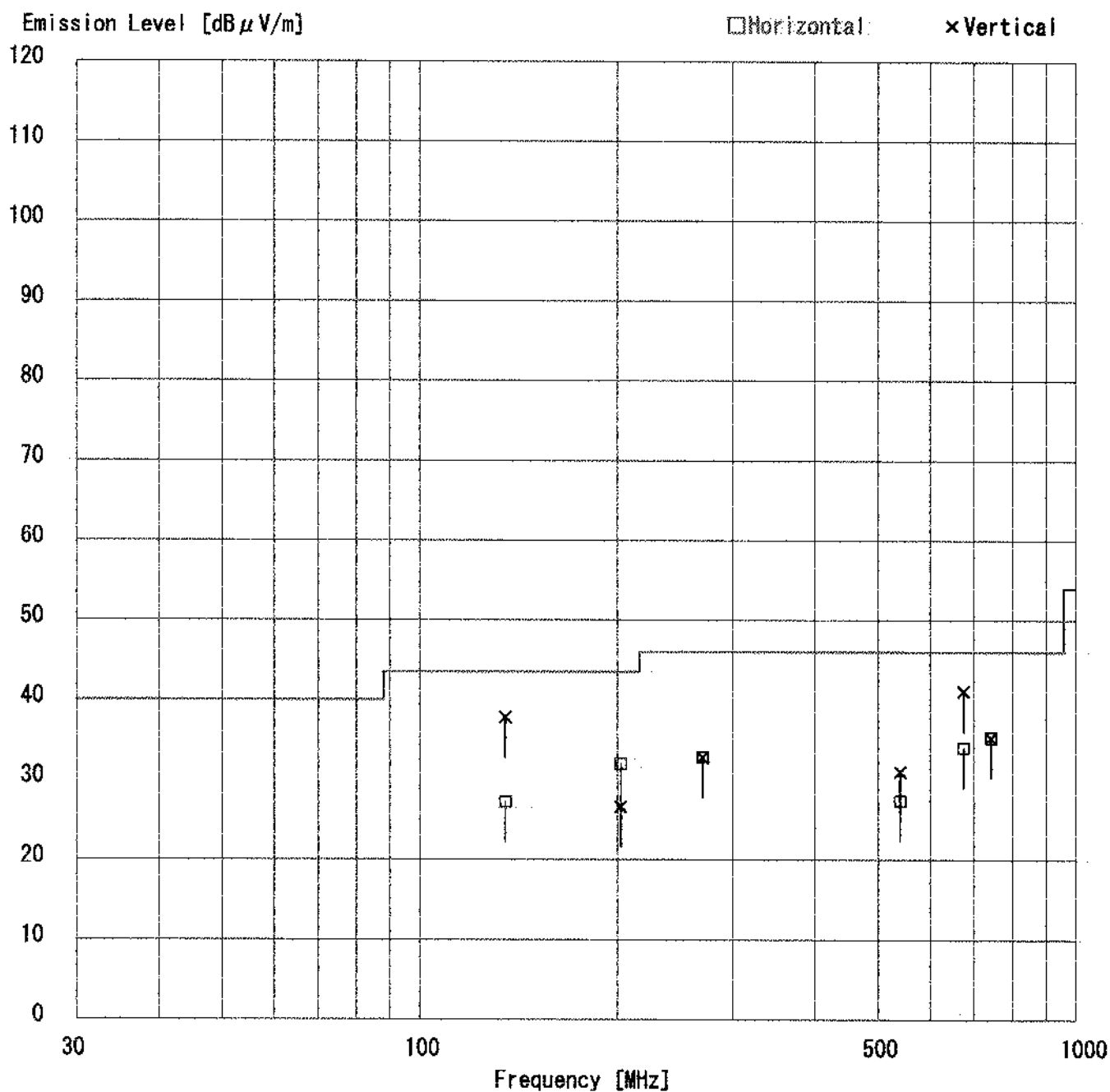
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 241E0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : AV Input+REC
Remarks : 5Vp-p
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : AV Input+REC
Remarks : Test Channel : #3
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	61.25	BB	24.6	25.3	8.0	29.9	1.8	5.8	10.3	11.0	40.0	29.7	29.0
2.	65.75	BB	23.6	24.5	7.2	29.9	1.9	5.8	8.6	9.5	40.0	31.4	30.5
3.	122.50	BB	25.3	24.1	13.4	29.9	2.7	5.8	17.3	16.1	43.5	26.2	27.4
4.	245.00	BB	23.5	23.1	17.1	30.0	4.2	5.8	20.6	20.2	46.0	25.4	25.8

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

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

DATA OF RADIATION TEST

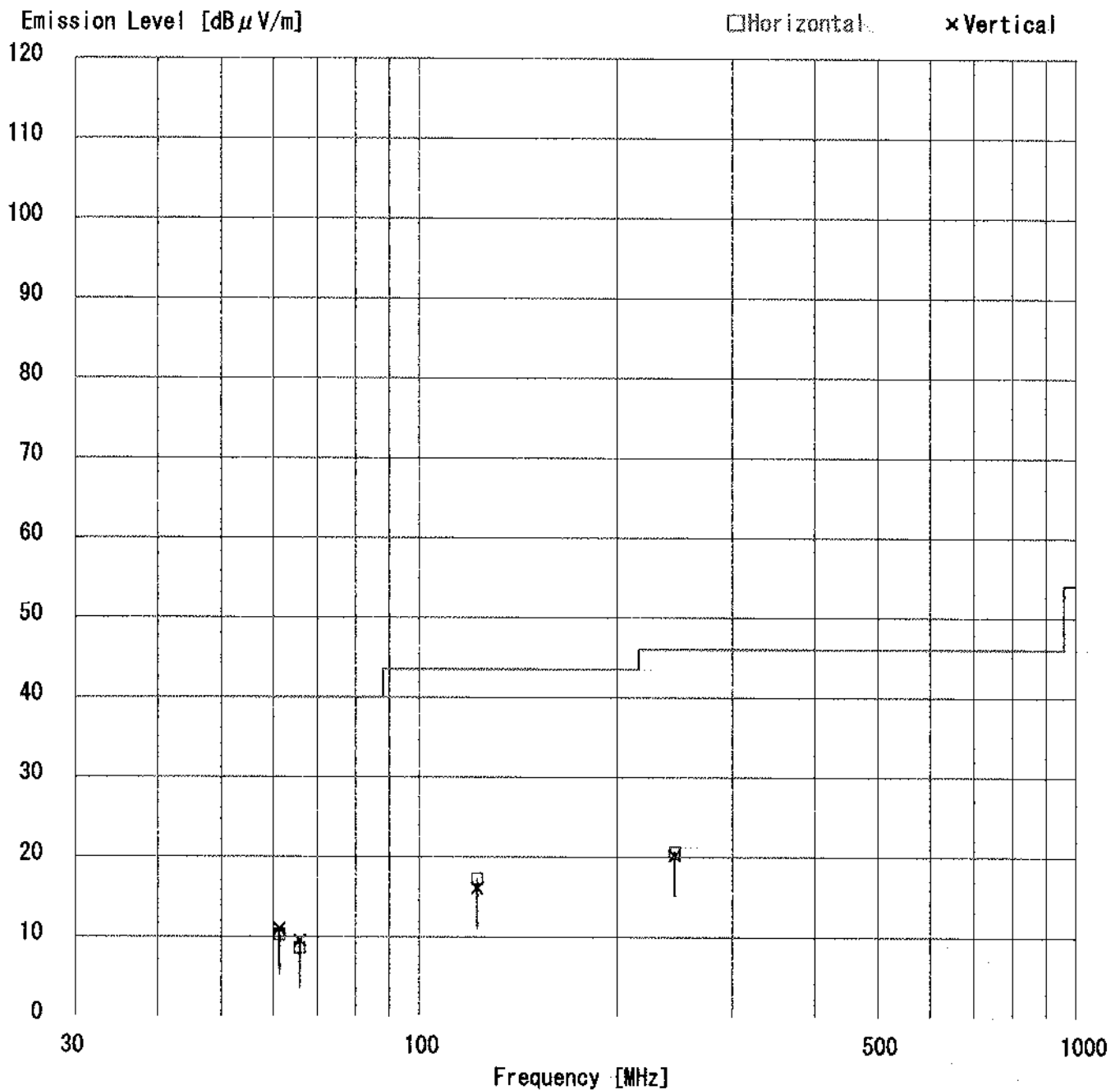
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : AV Input+REC
Remarks : Test Channel : #3
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 241E0174-YW-1

Applicant : Orion Electric Co., Ltd.
 Kind of Equipment : DVD Player and VCR
 Model No. : VRDVD4001A
 Serial No. :
 Power : AC120V/60Hz
 Mode : AV Input+REC
 Remarks : Test Channel : #4
 Date : 4/23/2004
 Test Distance : 3 m
 Temperature : 20 °C
 Humidity : 40 %
 Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB/m]		[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]		[dB]	[dB]
1.	67.25	BB	24.3	25.6	6.9	29.9	1.9	5.8	9.0	10.3	40.0	31.0	29.7
2.	71.75	BB	24.1	23.9	6.3	29.9	2.0	5.8	8.3	8.1	40.0	31.7	31.9
3.	134.50	BB	25.0	24.0	14.1	29.9	2.8	5.8	17.8	16.8	43.5	25.7	26.7
4.	201.75	BB	24.1	23.6	17.1	30.0	3.6	5.8	20.6	20.1	43.5	22.9	23.4

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

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

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

DATA OF RADIATION TEST

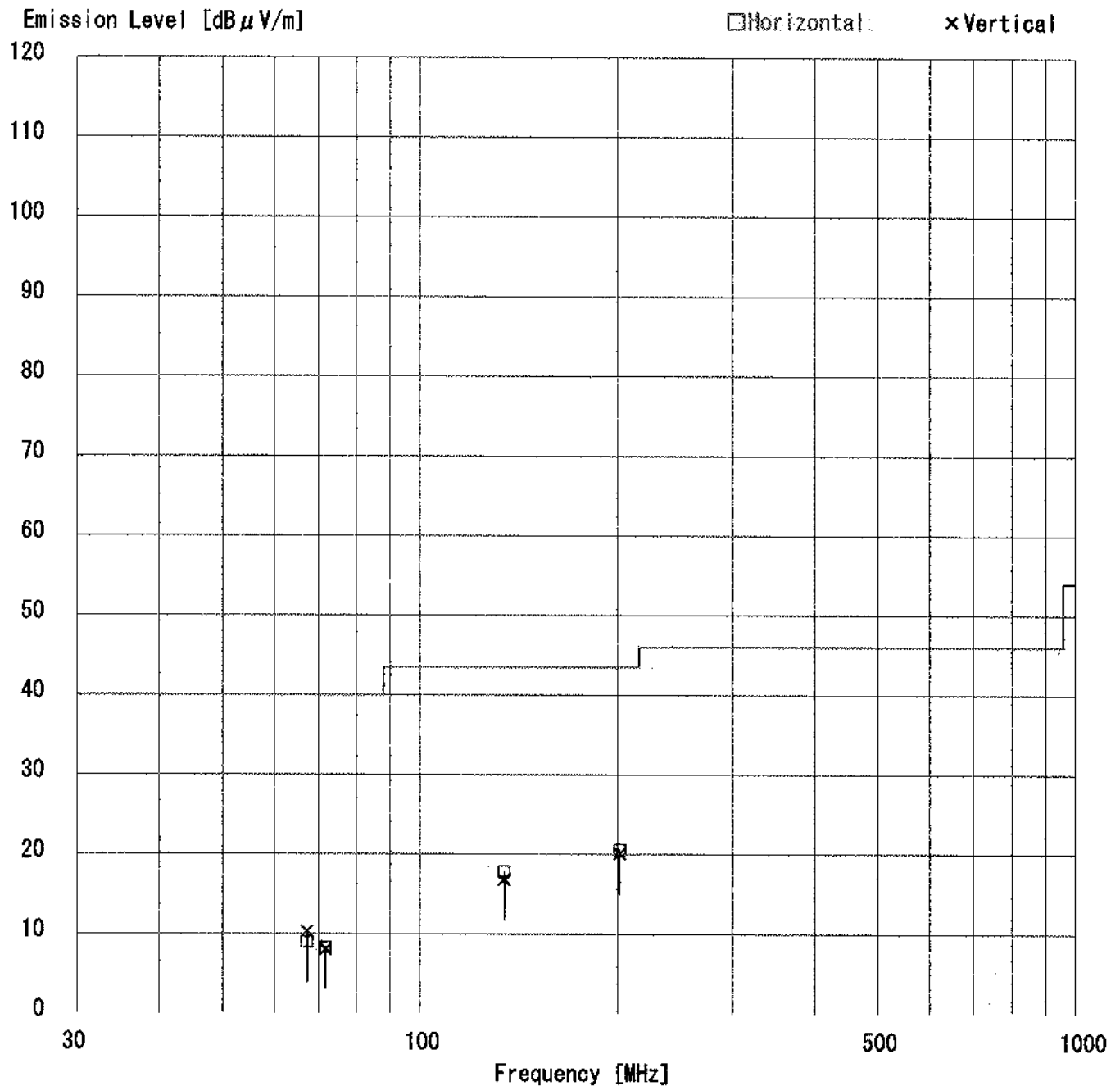
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 241E0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : AV Input+REC
Remarks : Test Channel : #4
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 241E0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : VCR Play
Remarks :
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μV]	[dB μV]	[dB/m]	[dB]	[dB]	[dB]	[dB μV/m]	[dB μV/m]	[dB μV/m]	[dB]	[dB]
1.	135.00	BB	38.6	44.4	14.1	29.9	2.8	5.8	31.4	37.2	43.5	12.1	6.3
2.	202.50	BB	35.3	32.5	17.1	30.0	3.6	5.8	31.8	29.0	43.5	11.7	14.5
3.	270.00	BB	35.0	34.4	18.3	30.0	4.5	5.8	33.6	33.0	46.0	12.4	13.0
4.	540.00	BB	30.6	33.6	18.1	30.3	6.8	5.9	31.1	34.1	46.0	14.9	11.9
5.	573.75	BB	25.2	32.6	18.7	30.3	7.1	5.9	26.6	34.0	46.0	19.4	12.0
6.	675.01	BB	29.3	36.7	20.4	30.2	8.1	5.9	33.5	40.9	46.0	12.5	5.1
7.	742.50	BB	30.0	31.3	20.9	30.1	8.6	5.9	35.3	36.6	46.0	10.7	9.4

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

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

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

DATA OF RADIATION TEST

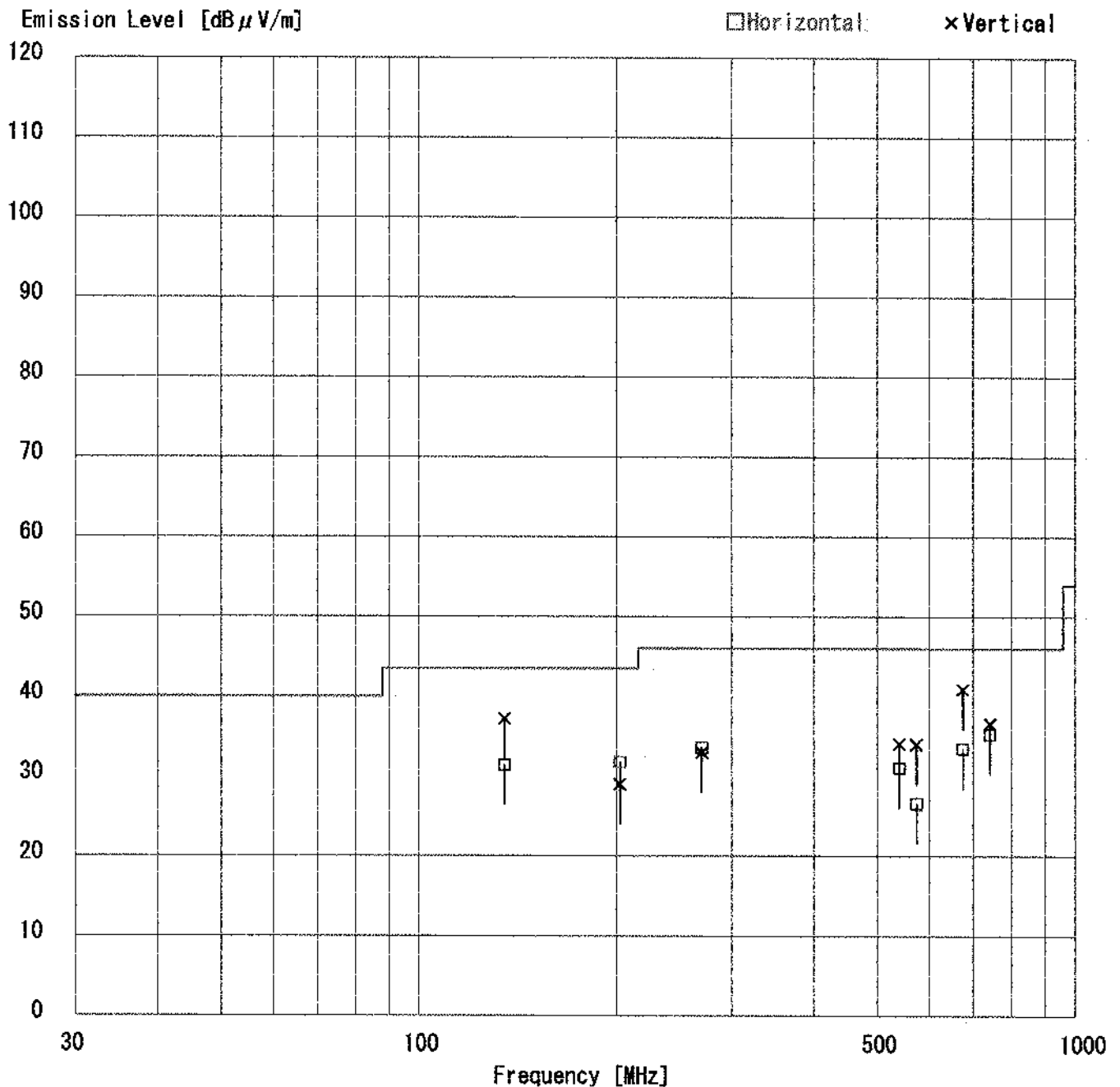
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : VCR Play
Remarks :
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	135.00	BB	37.2	44.7	14.1	29.9	2.8	5.8	30.0	37.5	43.5	13.5	6.0
2.	220.00	BB	30.7	25.8	17.1	30.0	3.8	5.8	27.4	22.5	46.0	18.6	23.5
3.	270.00	BB	33.7	34.2	18.3	30.0	4.5	5.8	32.3	32.8	46.0	13.7	13.2
4.	479.25	BB	30.3	33.0	17.2	30.3	6.2	5.9	29.3	32.0	46.0	16.7	14.0
5.	675.04	BB	30.6	34.3	20.4	30.2	8.1	5.9	34.8	38.5	46.0	11.2	7.5
6.	742.53	BB	29.9	29.2	20.9	30.1	8.6	5.9	35.2	34.5	46.0	10.8	11.5
7.	945.00	BB	23.2	24.7	22.7	29.3	10.2	5.9	32.7	34.2	46.0	13.3	11.8

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

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

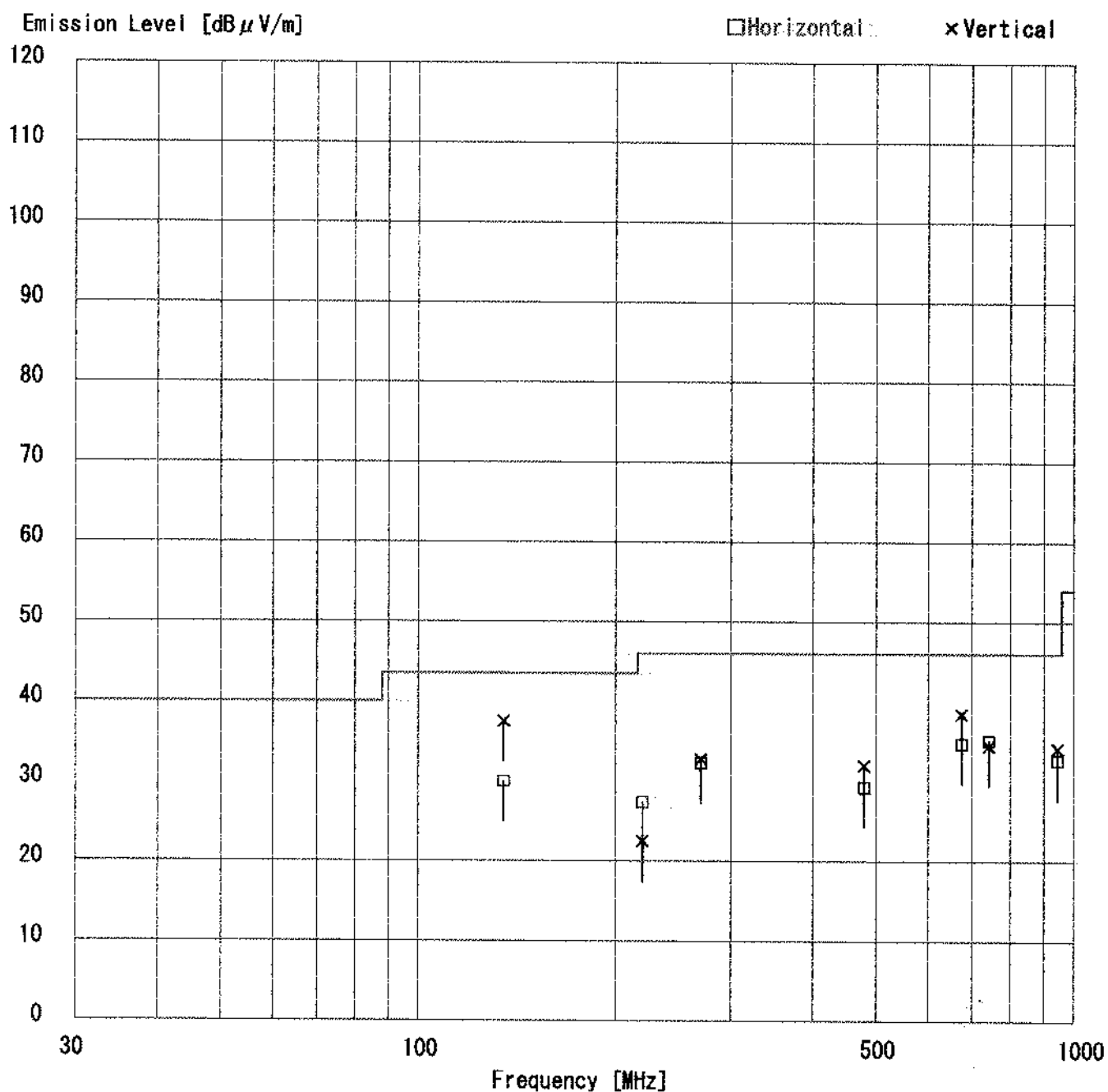
ANT. TYPE: 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD Player and VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 4/23/2004
Test Distance : 3 m
Temperature : 20 °C
Humidity : 40 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

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

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 4/29/2004
Test Distance : 3 m
Temperature : 21 °C Engineer : Tsubasa Takayama
Humidity : 31 %
Regulation : FCC Part15B CLASS B (Peak Limit / Upper1GHz)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB μ V]	[dB/m]	[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]		[dB]	[dB]
1.	1096.00	BB	57.0	47.9	25.3	38.7	2.2	0.0	45.8	36.7	74.0	28.2	37.3
2.	1371.00	BB	56.8	56.5	26.3	38.4	2.4	0.0	47.1	46.8	74.0	26.9	27.2
3.	1947.00	BB	43.7	33.8	30.3	36.1	2.8	0.0	40.7	30.8	74.0	33.3	43.2

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

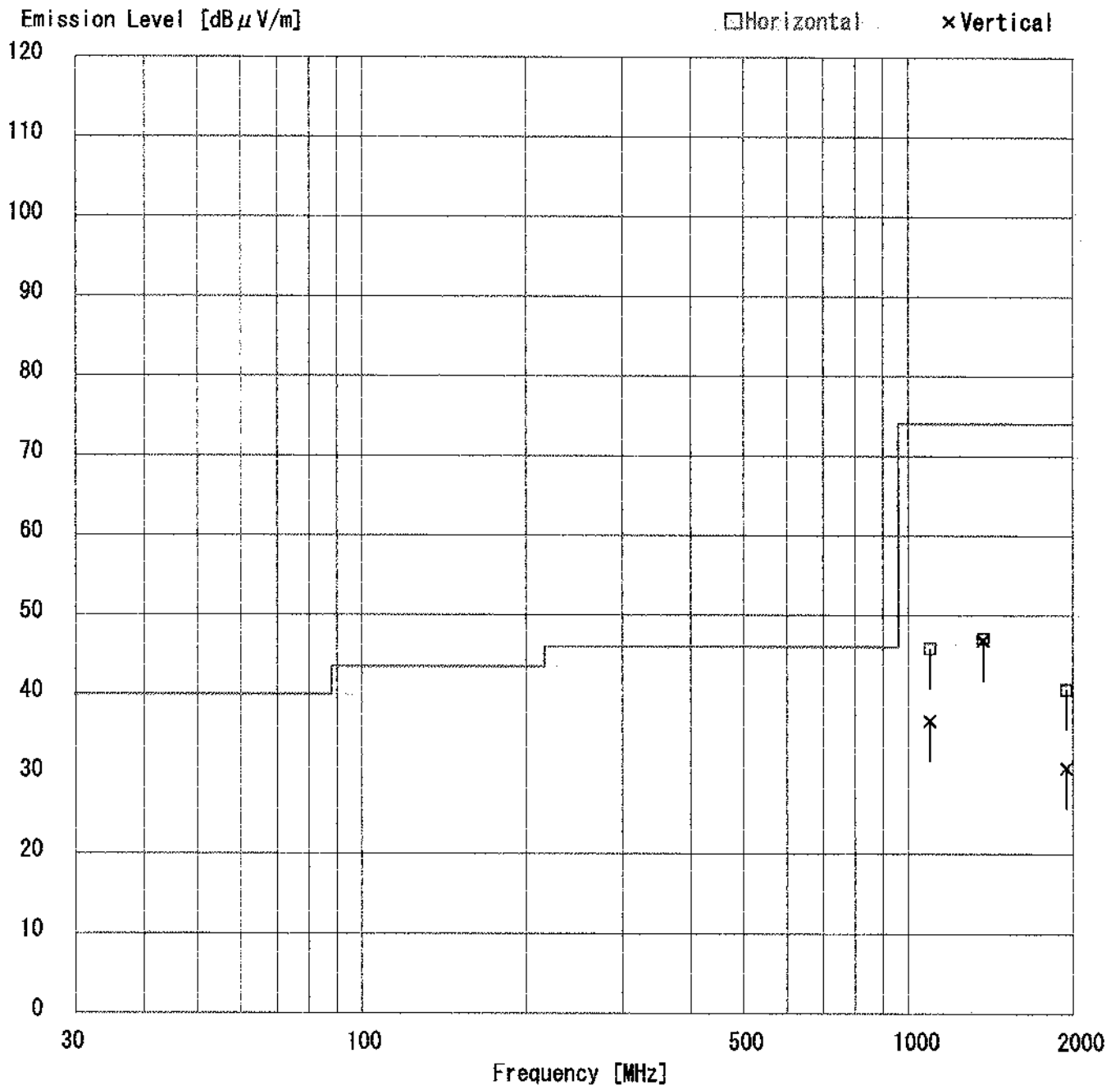
Except for the above table: adequate margin data below the limits.
ANT. TYPE: 1-2GHz Horn

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24IE0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 4/29/2004
Test Distance : 3 m
Temperature : 21 °C
Humidity : 31 %
Regulation : FCC Part15B CLASS B(Peak Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.

YOKOWA No.2 OPEN TEST SITE

Report No. : 241E0174-YW-1

Applicant : Orion Electric Co., Ltd.
 Kind of Equipment : DVD/VCR
 Model No. : VRDVD4001A
 Serial No. :
 Power : AC120V/60Hz
 Mode : DVD Play
 Remarks :
 Date : 4/29/2004
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 31 %
 Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN.	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB/m]		[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]		[dB]	[dB]
1.	1096.00	BB	35.1	38.6	25.3	38.7	2.2	0.0	23.9	27.4	54.0	30.1	26.6
2.	1371.00	BB	33.7	40.9	26.3	38.4	2.4	0.0	24.0	31.2	54.0	30.0	22.8
3.	1947.00	BB	33.8	33.9	30.3	36.1	2.8	0.0	30.8	30.9	54.0	23.2	23.1

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

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

ANT. TYPE: 1-2GHz Horn

DATA OF RADIATION TEST

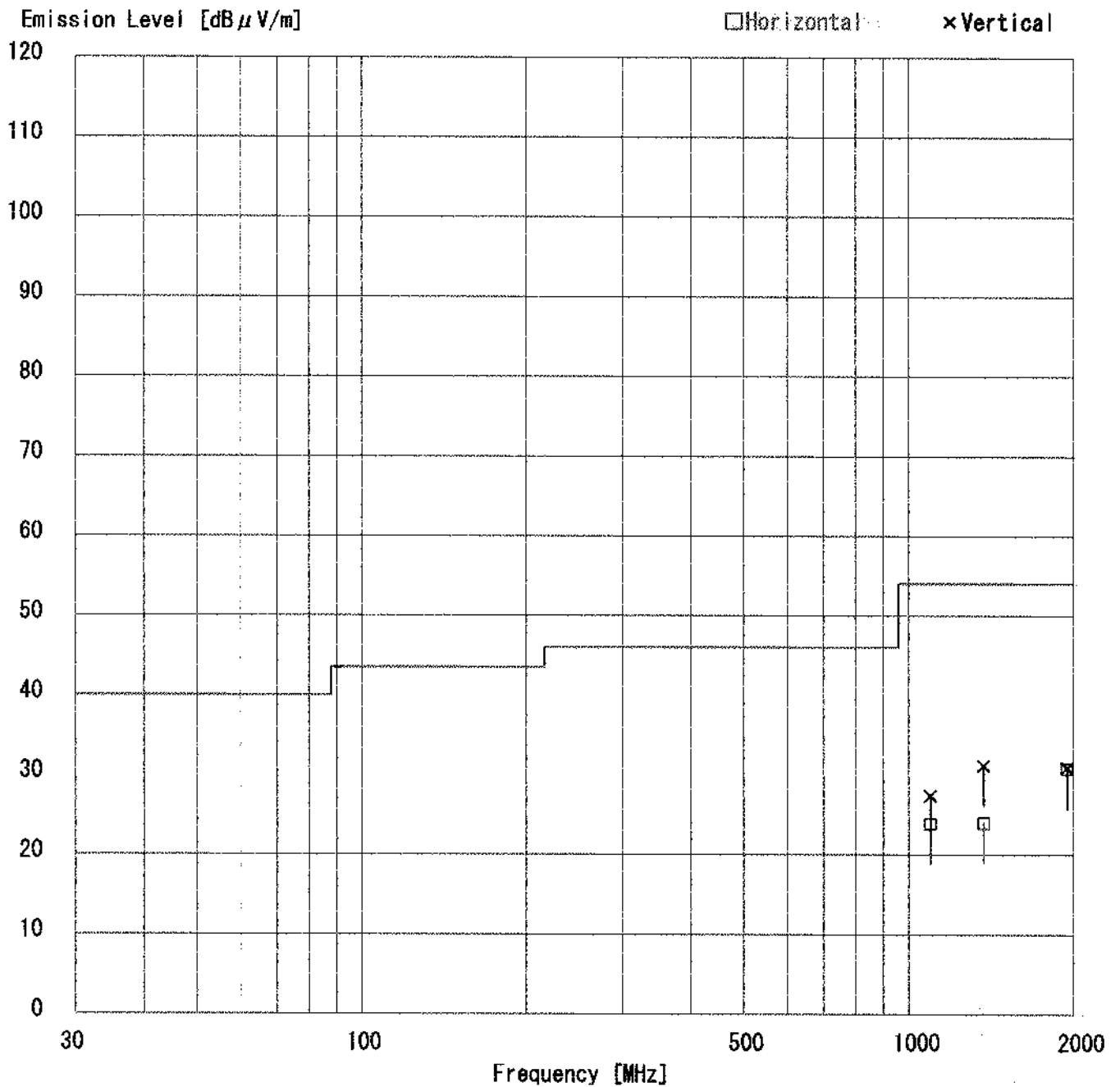
UL Apex Co., Ltd.

YOKOWA No.1 OPEN TEST SITE

Report No. : 241E0174-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4001A
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 4/29/2004
Test Distance : 3 m
Temperature : 21 °C
Humidity : 31 %
Regulation : FCC Part15B CLASS B(Average Limit / Upper1GHz)

Engineer : Tsubasa Takayama



DATA OF ANTENNA TERMINAL TEST

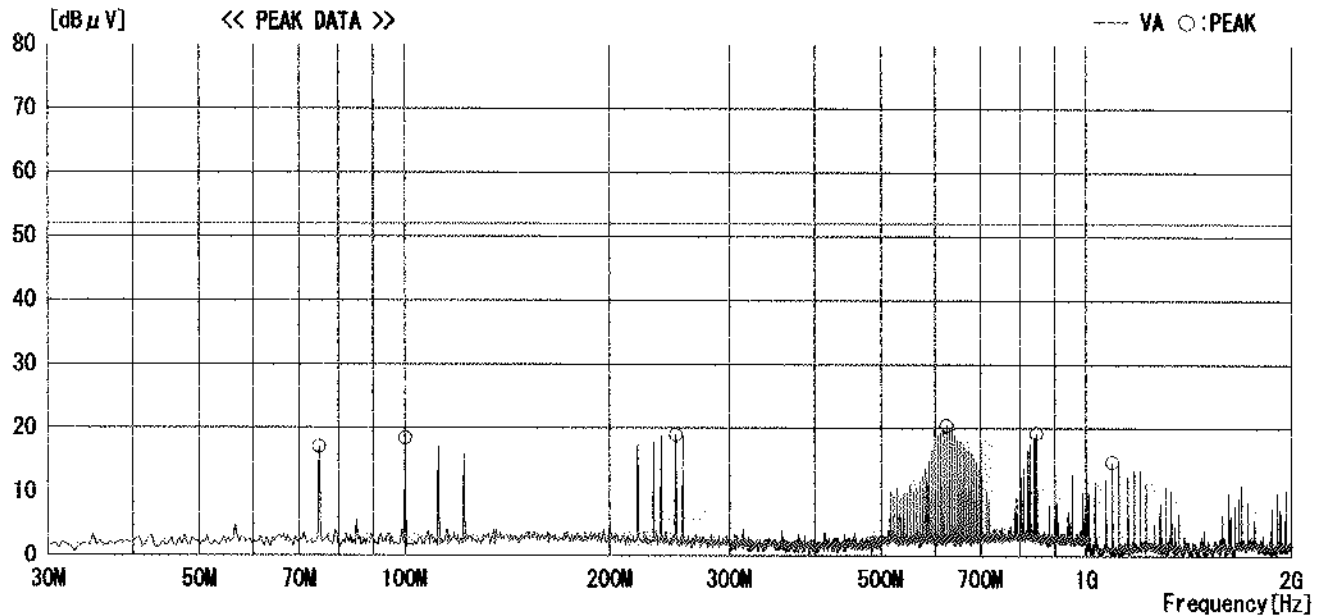
UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : TV Tuning mode

REPORT NO : 24IE0174-YW-1
DATE : April 30, 2004
REGULATION : FCC15B
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING PEAK [dB μ V]	C.F [dB]	RESULT [dB μ V]	LIMIT		MARGIN		PHASE
					QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	74.95706	36.0	-18.9	17.1	52.0	—	34.9	—	VA
2	100.24260	37.5	-19.1	18.4	52.0	—	33.6	—	VA
3	250.27200	38.0	-19.1	18.9	52.0	—	33.1	—	VA
4	624.56760	40.2	-19.8	20.4	52.0	—	31.6	—	VA
5	846.14880	39.0	-19.8	19.2	52.0	—	32.8	—	VA
6	1092.85200	44.5	-29.8	14.7	52.0	—	37.3	—	VA

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

DATA OF ANTENNA TERMINAL TEST

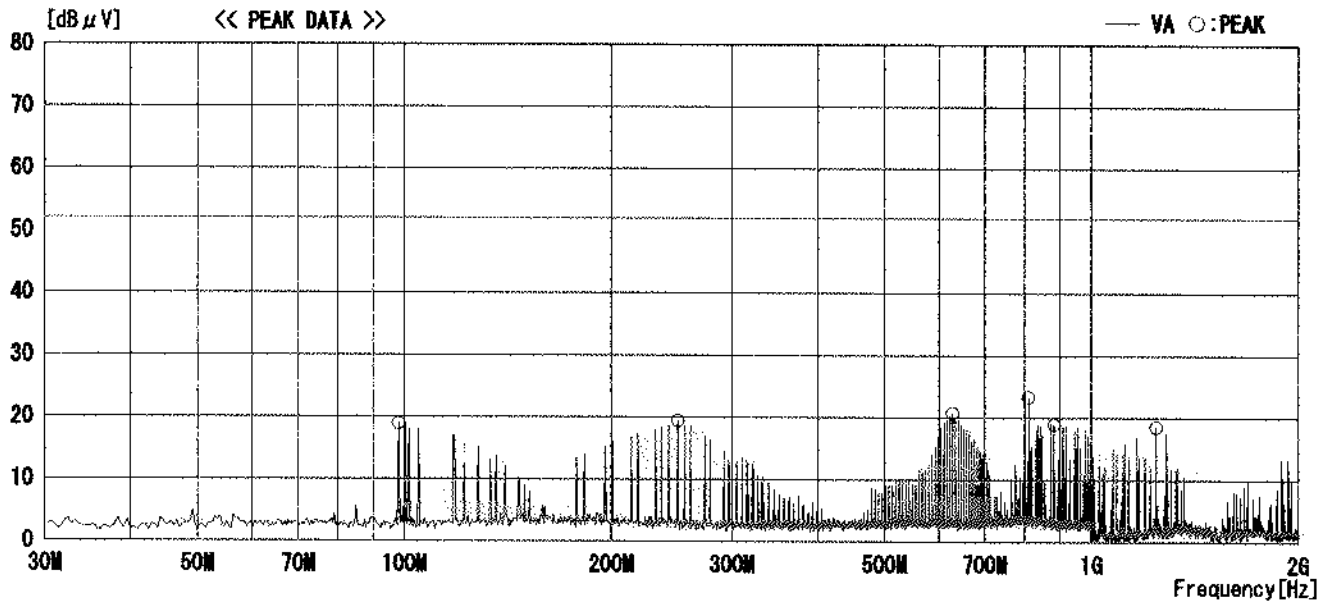
UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : CATV Tuning mode

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC15B
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING PEAK [dB μ V]	C. F [dB]	RESULT [dB μ V]	LIMIT		MARGIN		PHASE
					QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	98.13543	38.0	-19.1	18.9	52.0	—	33.1	—	VA
2	250.27200	38.5	-19.1	19.4	52.0	—	32.6	—	VA
3	628.56750	40.5	-19.8	20.7	52.0	—	31.3	—	VA
4	810.57590	43.0	-19.7	23.3	52.0	—	28.7	—	VA
5	883.00740	38.8	-19.9	18.9	52.0	—	33.1	—	VA
6	1242.84100	48.0	-29.5	18.5	52.0	—	33.5	—	VA

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

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 24IE0174-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: VRDVD4001A	Date	: April 30,2004
Power	: AC 120 V / 60 Hz	temp./humid	: 24°C/34%
Description	: TV Reception + Rec(0dBm)	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	82.8	19.0	63.8	69.5	5.7
4	67.25	81.9	19.0	62.9	69.5	6.6

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.2	19.0	50.2	56.5	6.3
	65.75	68.1	19.0	49.1	56.5	7.4
4	62.75	69.1	19.0	50.1	56.5	6.4
	71.75	67.6	19.0	48.6	56.5	7.9

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 24IE0174-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: VRDVD4001A	Date	: April 30,2004
Power	: AC 120 V / 60 Hz	temp./humid	: 24°C/34%
Description	: TV Reception + Rec(25dBm)	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	83.1	19.0	64.1	69.5	5.4
4	67.25	82.2	19.0	63.2	69.5	6.3

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.2	19.0	50.2	56.5	6.3
	65.75	68.0	19.0	49.0	56.5	7.5
4	62.75	68.6	19.0	49.6	56.5	6.9
	71.75	67.3	19.0	48.3	56.5	8.2

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 24IE0174-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part 15B Subpart B
Model number	: VRDVD4001A	Date	: April 30,2004
Power	: AC 120 V / 60 Hz	Temp./Humid	: 24°C/34%
Description	: AV Input1 + Rec(1Vp-p)	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	83.9	19.0	64.9	69.5	4.6
4	67.25	83.3	19.0	64.3	69.5	5.2

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.4	19.0	50.4	56.5	6.1
	65.75	68.2	19.0	49.2	56.5	7.3
4	62.75	68.9	19.0	49.9	56.5	6.6
	71.75	67.6	19.0	48.6	56.5	7.9

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 24IE0174-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part 15B Subpart B
Model number	: VRDVD4001A	Date	: April 30,2004
Power	: AC 120 V / 60 Hz	Temp./Humid	: 24°C/34%
Description	: AV Input1 + Rec(5Vp-p)	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	82.5	19.0	63.5	69.5	6.0
4	67.25	83.4	19.0	64.4	69.5	5.1

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.2	19.0	50.2	56.5	6.3
	65.75	68.1	19.0	49.1	56.5	7.4
4	62.75	68.9	19.0	49.9	56.5	6.6
	71.75	67.7	19.0	48.7	56.5	7.8

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 24IE0174-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part15B Subpart B
Model number	: VRDVD4001A	Date	: April 30,2004
Power	: AC 120 V / 60 Hz	temp./humid	: 24°C/34%
Description	: VCR Playback	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	82.0	19.0	63.0	69.5	6.5
4	67.25	81.3	19.0	62.3	69.5	7.2

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.1	19.0	50.1	56.5	6.4
	65.75	68.3	19.0	49.3	56.5	7.2
4	62.75	68.3	19.0	49.3	56.5	7.2
	71.75	67.3	19.0	48.3	56.5	8.2

RF output level

UL Apex Co., LTD.
YOKOWA EMC LAB.

Company	: Orion Electric Co.,Ltd.	Report Number	: 24IE0174-YW-1
Equipment	: DVD/VCR	Regulation	: FCC Part 15B Subpart B
Model number	: VRDVD4001A	Date	: April 30,2004
Power	: AC 120 V / 60 Hz	temp./humid	: 24°C/34%
Description	: DVD Play	Engineer	: Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	82.0	19.0	63.0	69.5	6.5
4	67.25	82.4	19.0	63.4	69.5	6.1

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	69.1	19.0	50.1	56.5	6.4
	65.75	68.3	19.0	49.3	56.5	7.2
4	62.75	68.6	19.0	49.6	56.5	6.9
	71.75	67.3	19.0	48.3	56.5	8.2

DATA OF RF SPURIOUS

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : TV Reception + Rec(0dBm)

REPORT NO : 24IE0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	32.7000	36.6	—	-19.6	17.0	—	39.5	—	22.5	—	VA
2	48.0000	35.0	—	-19.2	15.8	—	39.5	—	23.7	—	VA
3	90.1200	32.0	—	-19.1	12.9	—	39.5	—	26.6	—	VA
4	122.5000	34.3	—	-18.8	15.5	—	39.5	—	24.0	—	VA
5	489.7000	33.3	—	-19.9	13.4	—	39.5	—	26.1	—	VA
6	607.4000	38.1	—	-19.8	18.3	—	39.5	—	21.2	—	VA
7	944.7300	34.1	—	-19.9	14.2	—	39.5	—	25.3	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF RF SPURIOUS

UIL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : AV Input + Rec(1Vp-p)

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	40.1200	30.1	—	-19.4	10.7	—	39.5	—	28.8	—	VA
2	47.8000	34.2	—	-19.2	15.0	—	39.5	—	24.5	—	VA
3	122.5000	34.2	—	-18.8	15.4	—	39.5	—	24.1	—	VA
4	489.7300	33.0	—	-19.9	13.1	—	39.5	—	26.4	—	VA
5	607.4300	36.7	—	-19.8	16.9	—	39.5	—	22.6	—	VA
6	728.3000	33.4	—	-19.7	13.7	—	39.5	—	25.8	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF RF SPURIOUS

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : AV Input + Rec(5Vp-p)

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3GH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	40.1200	29.8	—	-19.4	10.4	—	39.5	—	29.1	—	VA
2	47.8000	33.5	—	-19.2	14.3	—	39.5	—	25.2	—	VA
3	122.5000	34.5	—	-18.8	15.7	—	39.5	—	23.8	—	VA
4	489.7300	32.7	—	-19.9	12.8	—	39.5	—	26.7	—	VA
5	607.4300	36.3	—	-19.8	16.5	—	39.5	—	23.0	—	VA
6	728.3000	32.3	—	-19.7	12.6	—	39.5	—	26.9	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : VCR Playback

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	32.7200	32.7	—	-19.6	13.1	—	39.5	—	26.4	—	VA
2	48.0000	33.8	—	-19.2	14.6	—	39.5	—	24.9	—	VA
3	122.5000	33.1	—	-18.8	14.3	—	39.5	—	25.2	—	VA
4	487.7300	33.4	—	-19.9	13.5	—	39.5	—	26.0	—	VA
5	607.4300	36.7	—	-19.8	16.9	—	39.5	—	22.6	—	VA
6	740.7800	32.1	—	-19.7	12.4	—	39.5	—	27.1	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF RF SPURIOUS

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRD4001A
OPERATION MODE : TV Reception + Rec(0dBm)

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	38.7000	38.7	—	-19.5	19.2	—	39.5	—	20.3	—	VA
2	53.9000	34.0	—	-19.1	14.9	—	39.5	—	24.6	—	VA
3	96.1300	31.0	—	-19.1	11.9	—	39.5	—	27.6	—	VA
4	134.2500	34.4	—	-18.7	15.7	—	39.5	—	23.8	—	VA
5	489.7500	31.0	—	-19.9	11.1	—	39.5	—	28.4	—	VA
6	539.7400	36.0	—	-19.7	16.3	—	39.5	—	23.2	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF RF SPURIOUS

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRD4001A
OPERATION MODE : AV Input + Rec(1Vp-p)

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	38.8200	33.7	—	-19.5	14.2	—	39.5	—	25.3	—	VA
2	53.9100	33.7	—	-19.1	14.6	—	39.5	—	24.9	—	VA
3	96.1200	28.9	—	-19.1	9.8	—	39.5	—	29.7	—	VA
4	134.2500	33.7	—	-18.7	15.0	—	39.5	—	24.5	—	VA
5	489.7300	30.9	—	-19.9	11.0	—	39.5	—	28.5	—	VA
6	573.4500	35.9	—	-19.8	16.1	—	39.5	—	23.4	—	VA
7	944.7300	33.8	—	-19.9	13.9	—	39.5	—	25.6	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF RF SPURIOUS

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : VCR Playback

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	38.1000	32.0	----	-19.5	12.5	----	39.5	----	27.0	----	VA
2	53.1000	33.5	----	-19.2	14.3	----	39.5	----	25.2	----	VA
3	134.2500	34.8	----	-18.7	16.1	----	39.5	----	23.4	----	VA
4	489.7000	33.3	----	-19.9	13.4	----	39.5	----	26.1	----	VA
5	540.0000	35.8	----	-19.7	16.1	----	39.5	----	23.4	----	VA
6	607.4100	35.8	----	-19.8	16.0	----	39.5	----	23.5	----	VA
7	944.7200	32.0	----	-19.9	12.1	----	39.5	----	27.4	----	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF RF SPURIOUS

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : DVD Play

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B RF OUT SPURIOUS

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	53.8200	33.4	—	-19.1	14.3	—	39.5	—	25.2	—	VA
2	60.3600	36.4	—	-19.0	17.4	—	39.5	—	22.1	—	VA
3	81.0400	30.6	—	-19.1	11.5	—	39.5	—	28.0	—	VA
4	104.3000	37.2	—	-19.0	18.2	—	39.5	—	21.3	—	VA
5	134.3000	34.2	—	-18.7	15.5	—	39.5	—	24.0	—	VA
6	269.0000	28.9	—	-19.2	9.7	—	39.5	—	29.8	—	VA
7	489.3000	31.4	—	-19.9	11.5	—	39.5	—	28.0	—	VA
8	539.7000	38.0	—	-19.7	18.3	—	39.5	—	21.2	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : AV Input + Rec(1Vp-p)

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	61.2500	22.1	—	-19.0	3.1	—	9.5	—	6.4	—	VA
2	122.5000	21.5	—	-18.8	2.7	—	9.5	—	6.8	—	VA
3	183.7500	19.9	—	-18.6	1.3	—	9.5	—	8.2	—	VA
4	245.0000	22.9	—	-19.1	3.8	—	9.5	—	5.7	—	VA
5	306.2500	19.9	—	-19.4	0.5	—	9.5	—	9.0	—	VA
6	367.5000	19.9	—	-19.6	0.3	—	9.5	—	9.2	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : AV Input + Rec(5Vp-p)

REPORT NO : 24IE0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	61.2500	19.8	—	-19.0	0.8	—	9.5	—	8.7	—	VA
2	122.5000	23.0	—	-18.8	4.2	—	9.5	—	5.3	—	VA
3	183.7500	19.9	—	-18.6	1.3	—	9.5	—	8.2	—	VA
4	245.0000	22.9	—	-19.1	3.8	—	9.5	—	5.7	—	VA
5	306.2500	19.9	—	-19.4	0.5	—	9.5	—	9.0	—	VA
6	367.5000	19.9	—	-19.6	0.3	—	9.5	—	9.2	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : VCR Playback

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3ch Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	61.2500	24.8	-----	-19.0	5.8	-----	9.5	-----	3.7	-----	VA
2	122.5000	24.1	-----	-18.8	5.3	-----	9.5	-----	4.2	-----	VA
3	183.7500	24.8	-----	-18.6	6.2	-----	9.5	-----	3.3	-----	VA
4	245.0000	24.7	-----	-19.1	5.6	-----	9.5	-----	3.9	-----	VA
5	306.2500	25.3	-----	-19.4	5.9	-----	9.5	-----	3.6	-----	VA
6	367.2500	25.0	-----	-19.6	5.4	-----	9.5	-----	4.1	-----	VA

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

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : DVD Play

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 3ch Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μV]	AV [dB μV]		QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]	
1	61.2500	23.2	----	-19.0	4.2	----	9.5	----	5.3	----	VA
2	122.5000	23.4	----	-18.8	4.6	----	9.5	----	4.9	----	VA
3	183.7500	24.0	----	-18.6	5.4	----	9.5	----	4.1	----	VA
4	245.0000	22.3	----	-19.1	3.2	----	9.5	----	6.3	----	VA
5	306.2500	25.8	----	-19.4	6.4	----	9.5	----	3.1	----	VA
6	367.2500	25.2	----	-19.6	5.6	----	9.5	----	3.9	----	VA

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

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : AV Input + Rec(1Vp-p)

REPORT NO : 24IE0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	67.2500	22.9	—	-18.8	4.1	—	9.5	—	5.4	—	VA
2	134.5000	21.9	—	-18.7	3.2	—	9.5	—	6.3	—	VA
3	201.7500	22.0	—	-18.7	3.3	—	9.5	—	6.2	—	VA
4	269.0000	20.3	—	-19.2	1.1	—	9.5	—	8.4	—	VA
5	336.2500	20.0	—	-19.5	0.5	—	9.5	—	9.0	—	VA
6	403.5000	20.1	—	-19.7	0.4	—	9.5	—	9.1	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : AV Input + Rec(5Vp-p)

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	67.2500	23.4	—	-18.8	4.6	—	9.5	—	4.9	—	VA
2	134.5000	23.3	—	-18.7	4.6	—	9.5	—	4.9	—	VA
3	201.7500	19.3	—	-18.7	0.6	—	9.5	—	8.9	—	VA
4	269.0000	20.3	—	-19.2	1.1	—	9.5	—	8.4	—	VA
5	336.2500	20.0	—	-19.5	0.5	—	9.5	—	9.0	—	VA
6	403.5000	20.1	—	-19.7	0.4	—	9.5	—	9.1	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : VCR Playback

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C.F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
1	67.2500	23.5	—	-18.8	4.7	—	9.5	—	4.8	—	VA
2	134.5000	20.3	—	-18.7	1.6	—	9.5	—	7.9	—	VA
3	201.7500	19.7	—	-18.7	1.0	—	9.5	—	8.5	—	VA
4	269.0000	19.3	—	-19.2	0.1	—	9.5	—	9.4	—	VA
5	336.2500	19.6	—	-19.5	0.1	—	9.5	—	9.4	—	VA
6	403.5000	20.6	—	-19.7	0.9	—	9.5	—	8.6	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD/VCR
MODEL : VRDVD4001A
OPERATION MODE : DVD Play

REPORT NO : 241E0174-YW-1
DATE : April 30, 2004
REGULATION : FCC 15B SubpartB
Remarks : 4CH Output

TEMP./HUMID. : 24°C/61%

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μV]	AV [dB μV]		QP [dB μV]	AV [dB μV]	QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]	
1	67.2500	23.0	—	-18.8	4.2	—	9.5	—	5.3	—	VA
2	134.5000	22.4	—	-18.7	3.7	—	9.5	—	5.8	—	VA
3	201.7500	20.7	—	-18.7	2.0	—	9.5	—	7.5	—	VA
4	269.0000	20.0	—	-19.2	0.8	—	9.5	—	8.7	—	VA
5	336.2500	20.7	—	-19.5	1.2	—	9.5	—	8.3	—	VA
6	403.5000	20.5	—	-19.7	0.8	—	9.5	—	8.7	—	VA

CALCULATION: READING+MATCHING PAD LOSS+CABLE LOSS-AMP. GAIN
Test Enginner : Tsubasa Takayama

Picture Sensitivity Test

Company : Orion Electric Co., Ltd. Report Number : 24IE0174-YW-1
 Equipment : DVD/VCR Reguration : FCC Part 15 Subpart B
 Model Number: : VRDVD4001A Date : April 27, 2004
 Power : AC120V/60Hz Temp./Humid. : 24deg.C / 45%
 Description : TV Reception Engineer : Tsubasa Takayama

Ch.	Frequency	Sensitivity		Ch.	Frequency	Sensitivity	
[VHF]	[MHz]	[dBuV]	[uV]	[UHF]	[MHz]	[dBuV]	[uV]
2	55.25	20.0	10.0	14	471.25	20.6	10.7
3	61.25	17.8	7.8	20	507.25	20.3	10.4
4	67.25	16.9	7.0	26	543.25	21.2	11.5
5	77.25	16.9	7.0	32	579.25	22.0	12.6
6	83.25	17.7	7.7	38	615.25	22.4	13.2
7	175.25	18.9	8.8	44	651.25	22.6	13.5
8	181.25	20.1	10.1	50	687.25	21.5	11.9
9	187.25	19.2	9.1	56	723.25	21.3	11.6
10	193.25	18.8	8.7	62	759.25	21.3	11.6
11	199.25	18.6	8.5	69	801.25	21.7	12.2
12	205.25	18.6	8.5	-	-	-	-
13	211.25	18.8	8.7	-	-	-	-
Average VHF			8.5	Average UHF			11.9
Average UHF/VHF : $20 \log \text{UHF}[\mu\text{V}]/\text{VHF}[\mu\text{V}] =$				2.9	dB		
[Limit : 8.0 dB]							

Noise Figure Test

Company : Orion Electric Co., Ltd. Report Number : 24IE0174-YW-1
 Equipment : DVD/VCR Reguration : FCC Part 15 Subpart B
 Model Number: : VRDVD4001A Date : April 27, 2004
 Power : AC120V/60Hz Temp./Humid. : 23deg.C / 40%
 Description : TV Reception Engineer : Tsubasa Takayama

Ch.	Frequency [MHz]	Meter reading [dB]	Connector factor [dB]	Noise figure [dB]	Limits [dB]	Margin [dB]
TV VHF Fundamental						
2	55.25	6.6	0.2	6.4	14.0	7.6
3	61.25	2.4	0.2	2.2	14.0	11.8
4	67.25	2.0	0.2	1.8	14.0	12.2
5	77.25	1.7	0.2	1.5	14.0	12.5
6	83.25	1.7	0.2	1.5	14.0	12.5
7	175.25	4.1	0.2	3.9	14.0	10.1
8	181.25	3.6	0.2	3.4	14.0	10.6
9	187.25	3.4	0.2	3.2	14.0	10.8
10	193.25	3.2	0.2	3.0	14.0	11.0
11	199.25	3.8	0.2	3.6	14.0	10.4
12	205.25	3.2	0.2	3.0	14.0	11.0
13	211.25	3.2	0.2	3.0	14.0	11.0
TV UHF Fundamental						
14	471.25	4.8	0.3	4.5	14.0	9.5
20	507.25	5.4	0.3	5.1	14.0	8.9
26	543.25	5.8	0.3	5.5	14.0	8.5
32	579.25	6.4	0.3	6.1	14.0	7.9
38	615.25	7.6	0.3	7.3	14.0	6.7
44	651.25	7.0	0.3	6.7	14.0	7.3
50	687.25	6.3	0.3	6.0	14.0	8.0
56	723.25	6.0	0.4	5.6	14.0	8.4
62	759.25	5.9	0.4	5.5	14.0	8.5
69	801.25	5.9	0.4	5.5	14.0	8.5
Mid-band						
14	121.25	1.1	0.2	0.9	14.0	13.1
16	133.25	7.0	0.2	6.8	14.0	7.2
18	145.25	5.5	0.2	5.3	14.0	8.7
20	157.25	4.6	0.2	4.4	14.0	9.6
22	169.25	4.1	0.2	3.9	14.0	10.1
Super-band						
23	217.25	3.1	0.2	2.9	14.0	11.1
26	235.25	3.1	0.2	2.9	14.0	11.1
29	253.25	3.2	0.2	3.0	14.0	11.0
32	271.25	3.2	0.2	3.0	14.0	11.0
36	295.25	3.3	0.2	3.1	14.0	10.9

Test Report No : 24IE0174-YW-1

APPENDIX 3

Test Instruments

Control No.	Instrument	Manufacturer	Model No.	Test Item	Calibration Data # 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	2003/05/15 * 12
APMAT05	Matching Pad	TME	ZT-130	AT, RF, ATS	2003/12/16 * 12
APNFM01	Noise Figure Indicator	Elena	ENF-2005	NF	2002/09/27 * 24
APNFS01	Noise Source	Elena	MC1100	NF	-
AV01-01	Signal Generator	Rohde & Schwarz	SMY01	PS	2004/02/19 * 12
SS-05	Digitizing Oscilloscope	Sony Tektronix	2221	PS	2004/01/22 * 12
APBPF01	Band pass filter	Erika Fiedler	BP	PS	Pre Check
APPRA01	Pre Amplifier	Anritsu	MH648A	AT, RF, ATS	2003/10/03 * 12
APPRA05	Pre Amplifier	Hewlett Packard	8449B	AT	2003/12/10 * 12
APCBL-01	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2004/01/08 * 12
APCBL-02	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2004/01/08 * 12
OS-15	Digital Humidity Indicator	SATO	PC-5000TRH	CE, RF, ATS, PS, NF	2003/05/09 * 12
AF-02	Pre Amplifier	Anritsu	MH648A	RE	2004/03/28 * 12
AT-03	Attenuator	Anritsu	MP721B	RE	2004/03/22 * 12
BA-10	Biconical Antenna	Schwarzbeck	BBA9106	RE	2003/10/31 * 12
SA-07	Spectrum Analyzer	Advantest	R3273	RE	2003/12/08 * 12
TR-02	Test Receiver	Rohde & Schwarz	ESVS30	RE	2003/05/08 * 12
LP-01	Loop Antenna	Rohde & Schwarz	HFH2-Z2	RE	2003/10/10 * 12
CC-10RC	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	2004/03/28 * 12
YOATS-01	Open Test Site	JSE	3m, 10m	RE	2003/08/13 * 12
OS-06	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2004/04/01 * 12
AF-03	Pre Amplifier	Anritsu	MH648A	RE	2004/03/28 * 12
AF-07	Pre Amplifier	Agilent	HP8449B	RE	2003/12/25 * 12
AT-04	Attenuator	Anritsu	MP721B	RE	2004/03/26 * 12
BA-04	Biconical Antenna	Schwarzbeck	BBA9106	RE	2004/04/10 * 12
LA-05	Logperiodic Antenna	Schwarzbeck	UHALP9108-A	RE	2003/10/19 * 12
SA-05	Spectrum Analyzer	Advantest	R3271	CE, RE	2003/12/21 * 12
TA-04	Terminator	TME	CT-01	CE	2004/05/02 * 12
TR-03	Test Receiver	Rohde & Schwarz	ESHS30	CE	2003/05/15 * 12
TR-04	Test Receiver	Rohde & Schwarz	ESVS10	RE	2003/05/15 * 12
LS-02	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE	2003/10/31 * 12
LS-07	LISN(AMN)	Schwarzbeck	NSLK8126	CE	2003/10/31 * 12
CC-20RC	Yokowa No.2 open coaxial(0.01-1000MHz)	UL Apex	CC-21,CC-22,CC-23, CC-24,CC-25,CC-26, CC-27,SW-21,SW-22	RE	2004/03/28 * 12
CC-2S	Yokowa No.2 shield coaxial(0.01MHz-1000MHz)	UL Apex	CC-24,CC-25,CC-26, CC-28,CC-29,SW-21, SW-22	CE	2004/03/28 * 12
YOATS-02	Open Test Site	JSE	3m, 10m	RE	2003/08/14 * 12
HA-01	Horn Antenna	A.H.Systems	SAS-200/571	RE	2004/04/10 * 12
OS-10	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2003/05/06 * 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