

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 0dBm Input
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dBuV]		[dBuV]					[dBuV]		[dBuV]		[dB]	
1.	0.5404	38.1	-	37.6	-	0.1	0.2	0.0	38.4	-	56.0	46.0	17.6	-
2.	0.6037	38.0	-	37.5	-	0.1	0.2	0.0	38.3	-	56.0	46.0	17.7	-
3.	0.7232	39.7	-	39.4	-	0.1	0.2	0.0	40.0	-	56.0	46.0	16.0	-
4.	0.8993	37.7	-	37.5	-	0.1	0.2	0.0	38.0	-	56.0	46.0	18.0	-
5.	1.5736	36.0	-	35.5	-	0.1	0.3	0.0	36.4	-	56.0	46.0	19.6	-
6.	2.2488	31.3	-	32.6	-	0.1	0.4	0.0	33.1	-	56.0	46.0	22.9	-
7.	15.3580	20.2	-	18.8	-	0.6	0.9	0.0	21.7	-	60.0	50.0	38.3	-

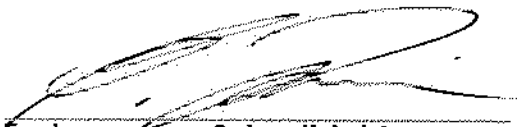
CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

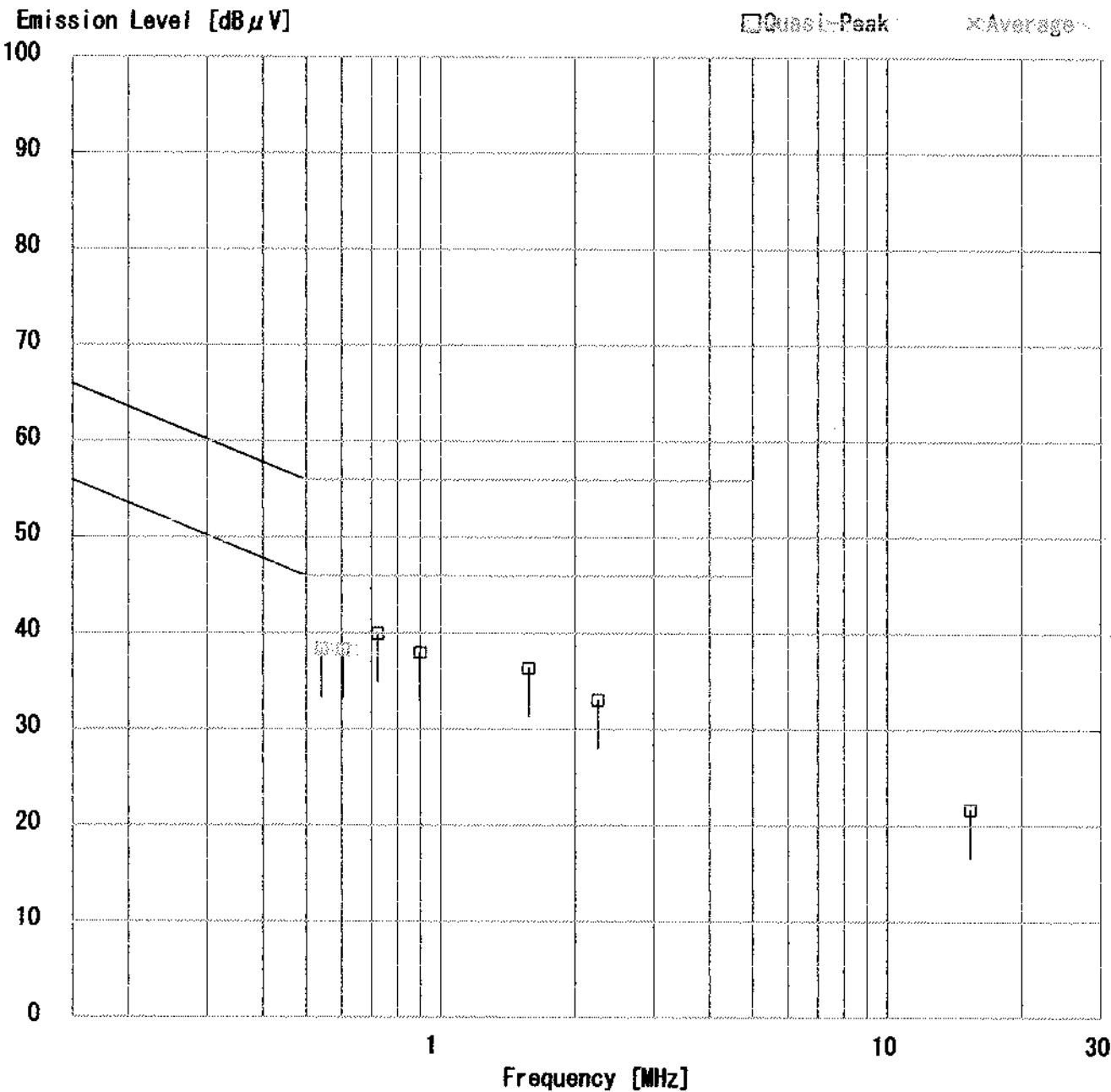
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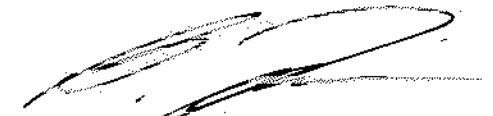

Engineer : Seigo Kakehi

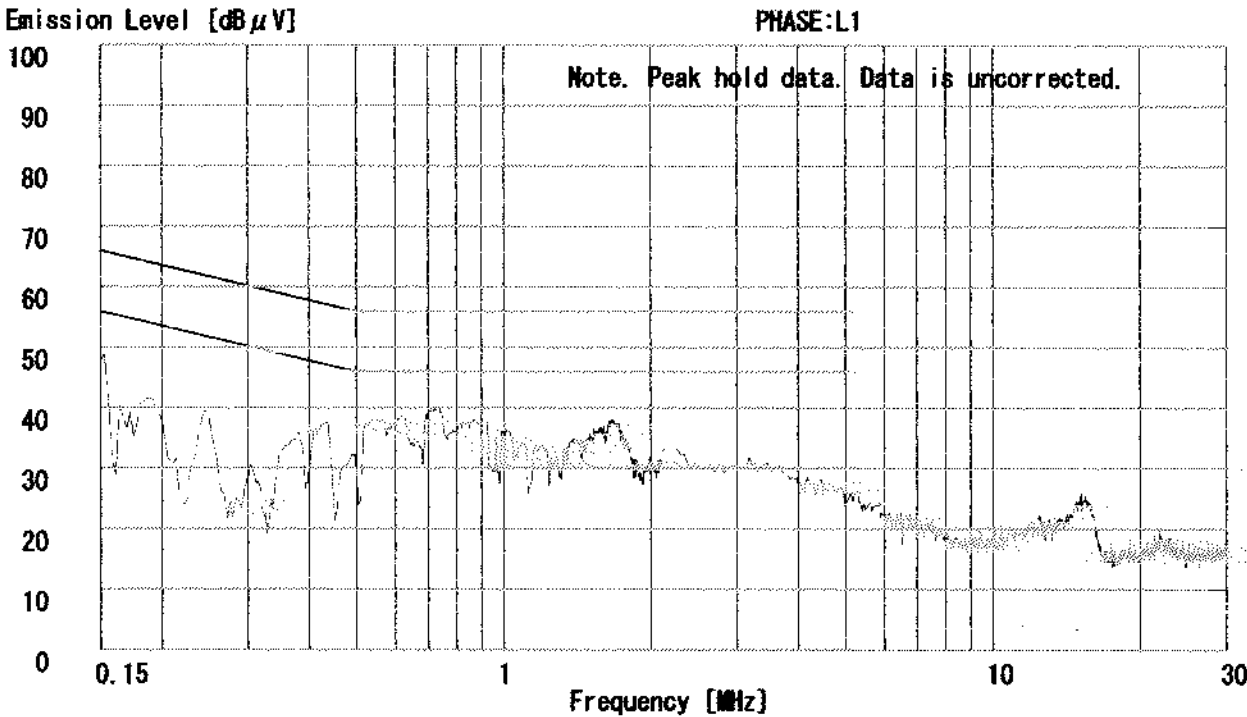
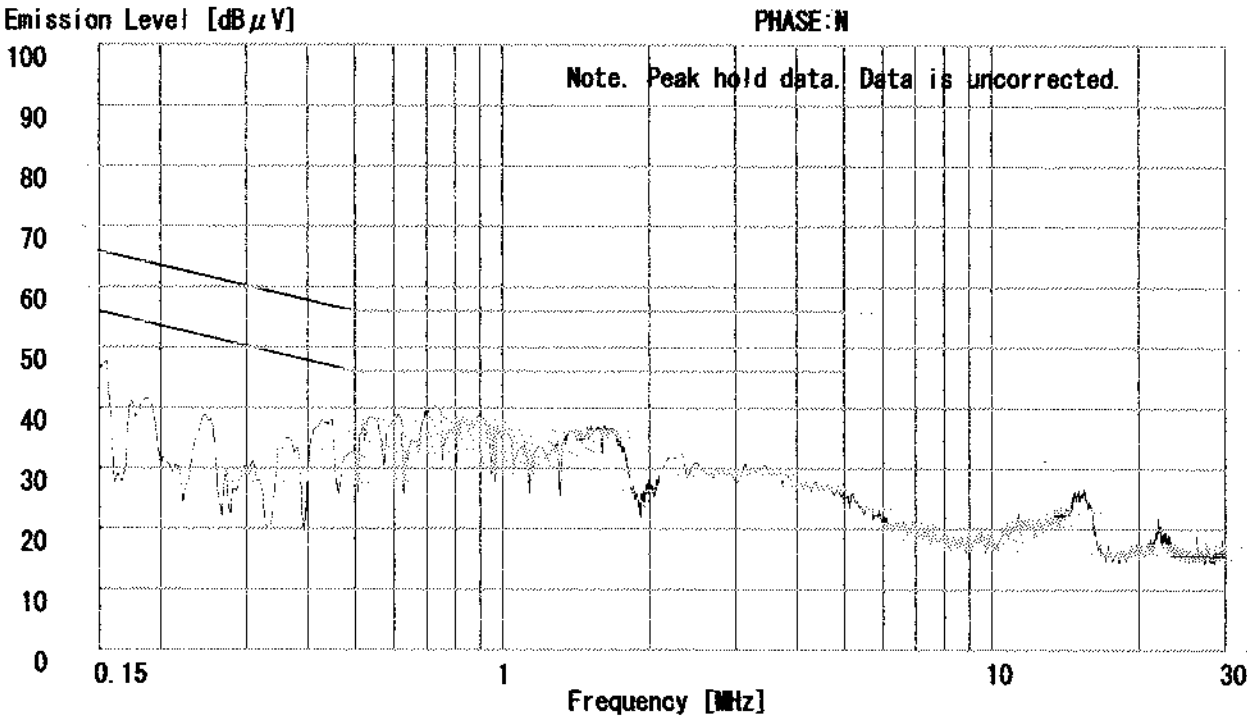


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
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Remarks : 0dBm Input
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Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation 1 : FCC Part15 CLASS B(02-157)
Regulation 2 : None


Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
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Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBm Input
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dBuV]		[dBuV]					[dBuV]		[dBuV]		[dB]	
1.	0.5415	37.8	-	37.0	-	0.1	0.2	0.0	38.1	-	56.0	46.0	17.9	-
2.	0.6167	37.9	-	37.3	-	0.1	0.2	0.0	38.2	-	56.0	46.0	17.8	-
3.	0.7220	39.5	-	38.9	-	0.1	0.2	0.0	39.8	-	56.0	46.0	16.2	-
4.	0.8993	37.5	-	37.3	-	0.1	0.2	0.0	37.8	-	56.0	46.0	18.2	-
5.	1.5789	35.8	-	33.7	-	0.1	0.3	0.0	36.2	-	56.0	46.0	19.8	-
6.	2.2685	31.0	-	32.6	-	0.1	0.4	0.0	33.1	-	56.0	46.0	22.9	-
7.	15.3657	20.0	-	19.0	-	0.6	0.9	0.0	21.5	-	60.0	50.0	38.5	-

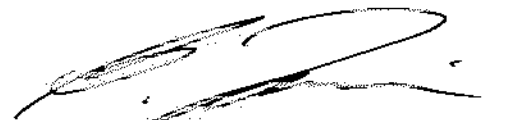
CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

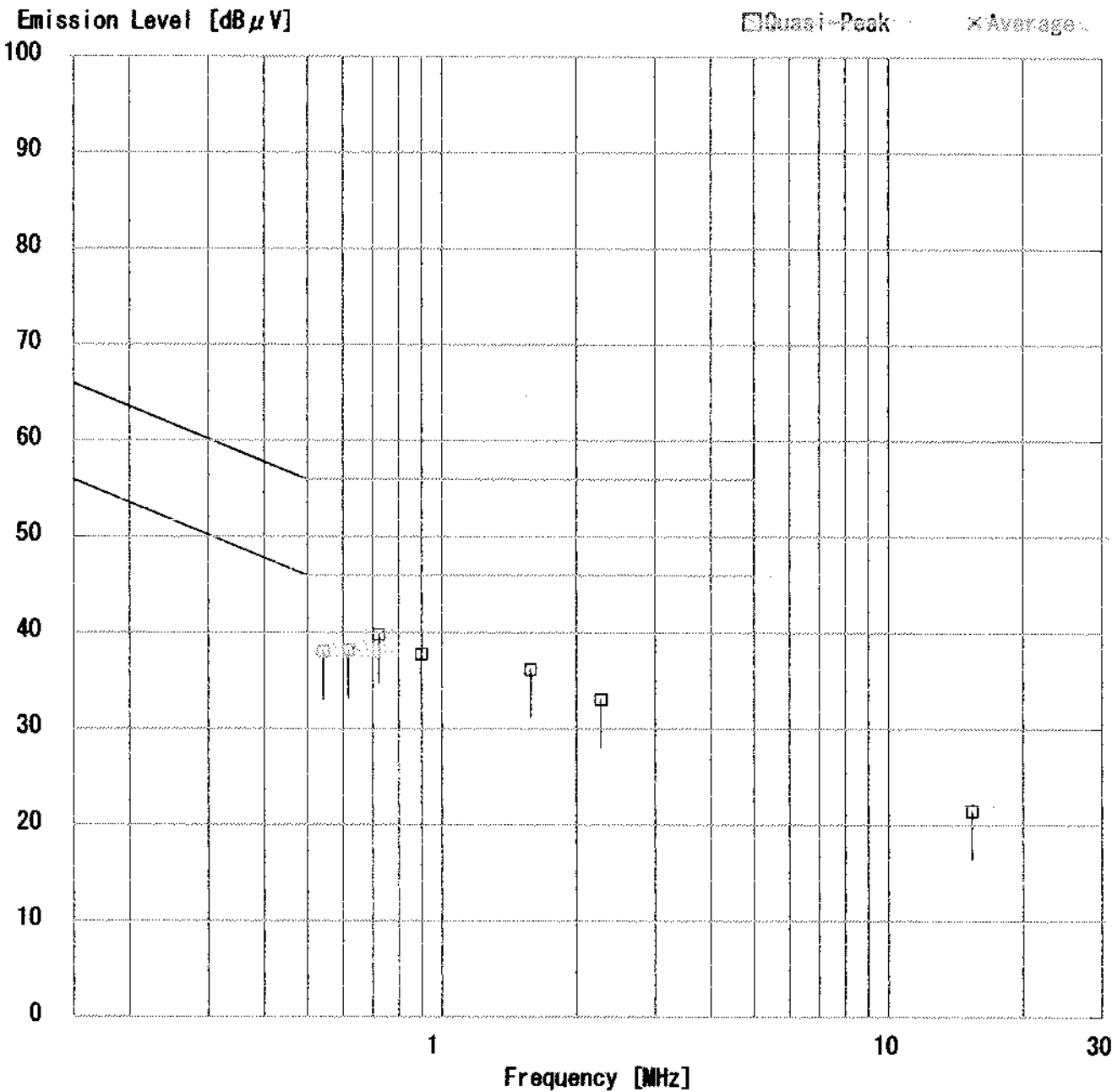
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Power : AC120V/60Hz
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Remarks : 25dBm Input
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

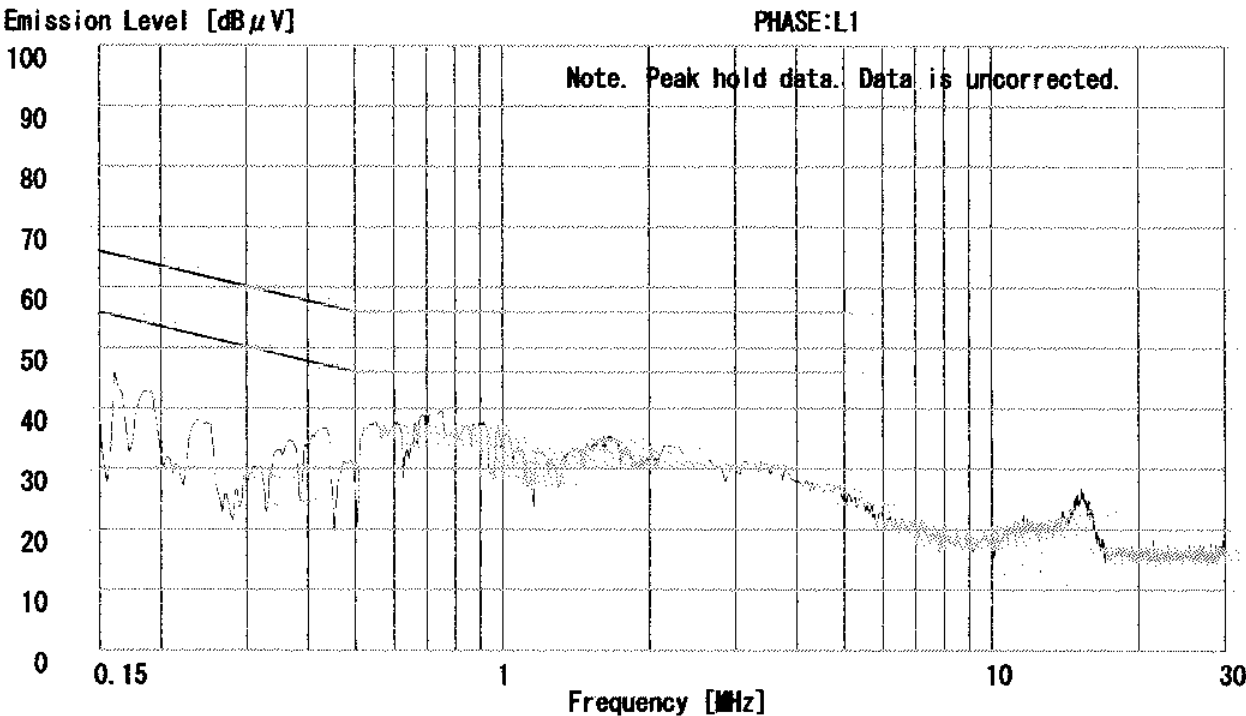
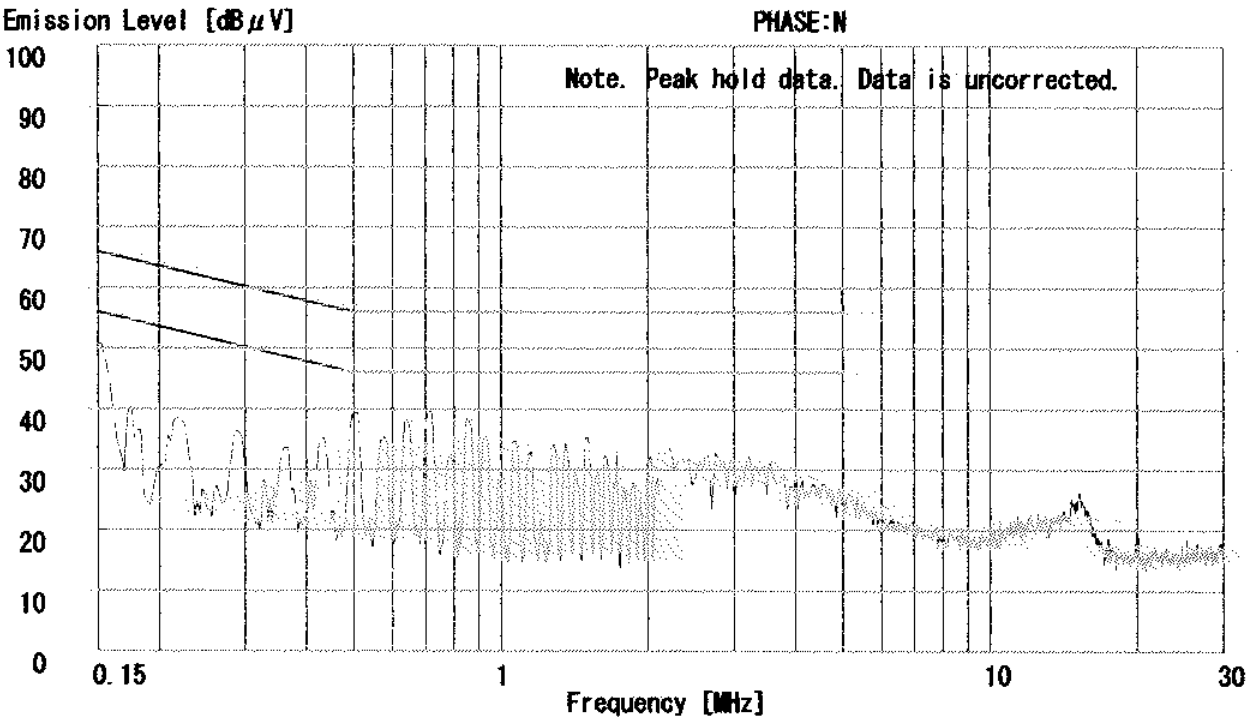


DATA OF CONDUCTION TEST CHART

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Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : TV Reception + Rec
Remarks : 25dBm Input
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation 1 : FCC Part15 CLASS B(02-157)
Regulation 2 : None


Engineer : Seigo Kakehi



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Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : AV Input 1 + Rec
Remarks : 1Vp-p
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]				QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]
1.	0.5630	35.1	-	37.9	-	0.1	0.2	0.0	38.2	-	56.0	46.0	17.8	-
2.	0.6347	38.1	-	38.0	-	0.1	0.2	0.0	38.4	-	56.0	46.0	17.6	-
3.	0.7498	39.8	-	39.3	-	0.1	0.2	0.0	40.1	-	56.0	46.0	15.9	-
4.	0.9464	35.7	-	36.8	-	0.1	0.2	0.0	37.1	-	56.0	46.0	18.9	-
5.	1.6350	32.8	-	34.0	-	0.1	0.3	0.0	34.4	-	56.0	46.0	21.6	-
6.	2.2075	33.7	-	34.7	-	0.1	0.4	0.0	35.2	-	56.0	46.0	20.8	-
7.	15.6635	16.5	-	15.6	-	0.6	0.9	0.0	18.0	-	60.0	50.0	42.0	-

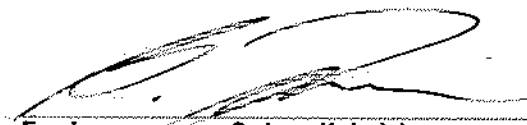
CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

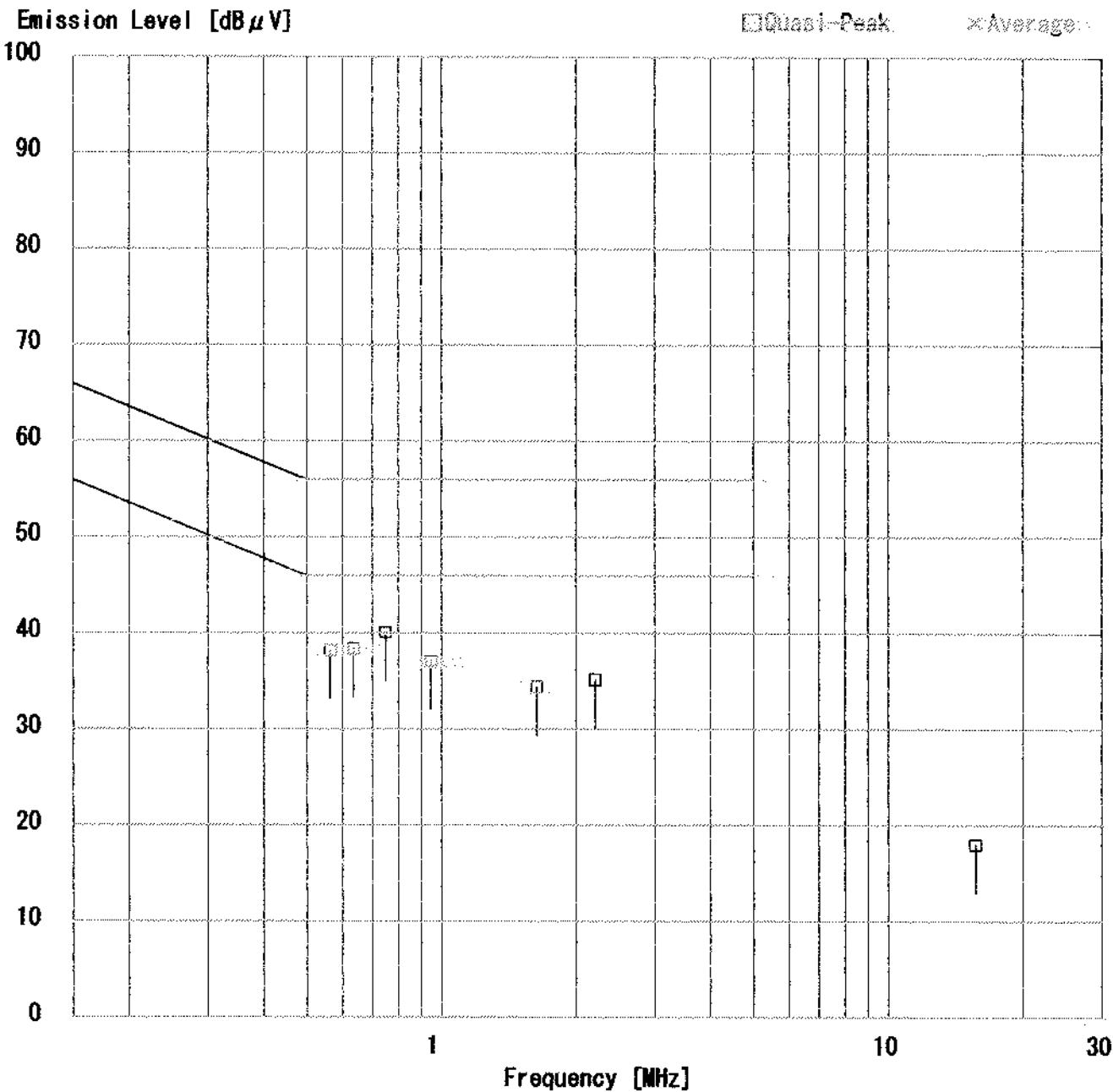
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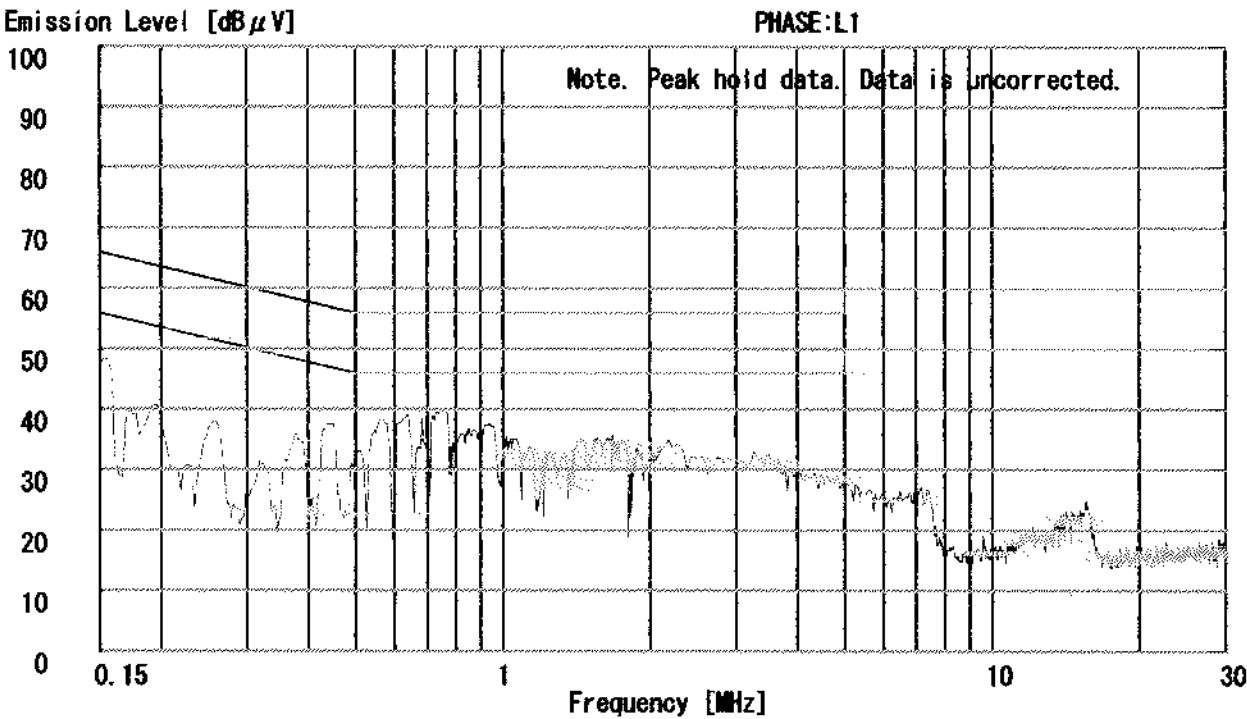
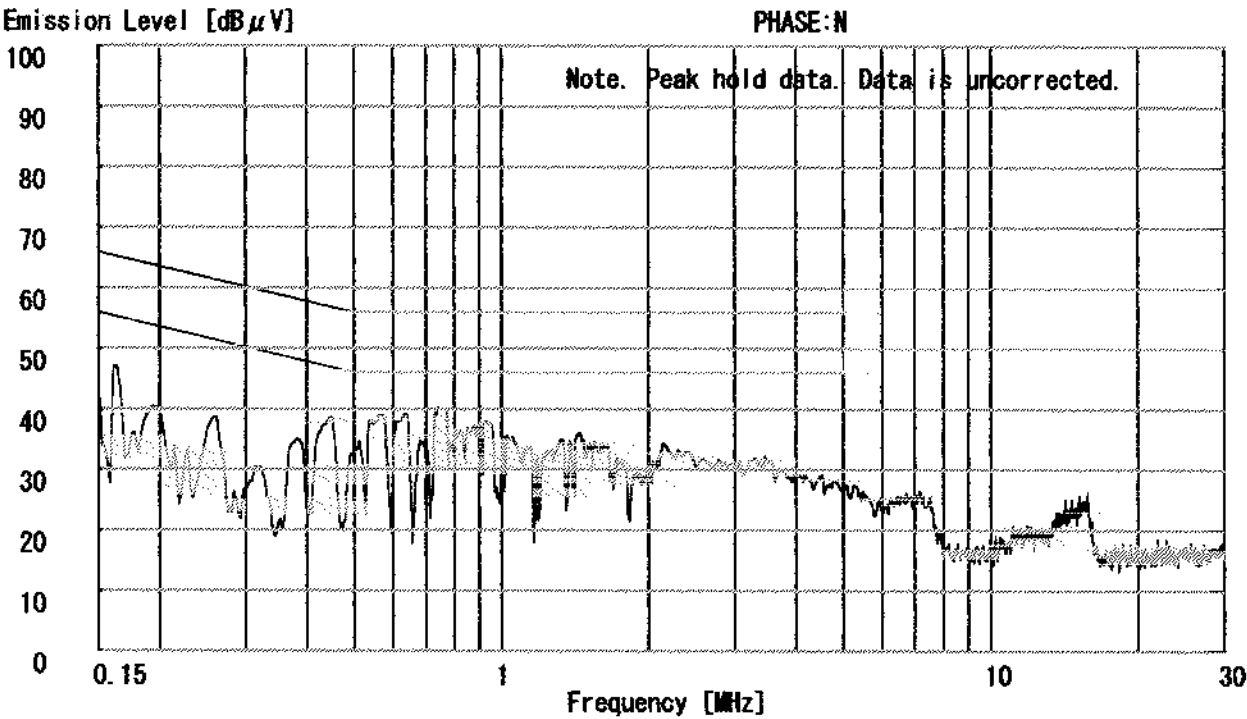


DATA OF CONDUCTION TEST CHART

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Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : AV Input 1 + Rec
Remarks : 1Vp-p
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation 1 : FCC Part15 CLASS B(02-157)
Regulation 2 : None

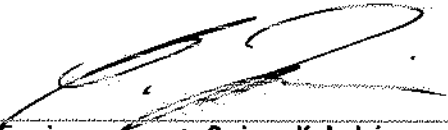

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Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : AV Input 1 + Rec
Remarks : 5Vp-p
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dBuV]		[dBuV]					[dBuV]		[dBuV]		[dB]	
1.	0.4963	39.4	-	39.1	-	0.1	0.2	0.0	39.7	-	56.1	46.1	16.4	-
2.	0.7091	39.8	-	39.6	-	0.1	0.2	0.0	40.1	-	56.0	46.0	15.9	-
3.	0.8461	38.5	-	38.1	-	0.1	0.2	0.0	38.8	-	56.0	46.0	17.2	-
4.	1.6169	32.1	-	34.3	-	0.1	0.3	0.0	34.7	-	56.0	46.0	21.3	-
5.	2.1070	33.2	-	35.6	-	0.1	0.3	0.0	36.0	-	56.0	46.0	20.0	-
6.	7.2451	24.2	-	22.9	-	0.2	0.6	0.0	25.0	-	60.0	50.0	35.0	-
7.	15.3353	18.3	-	15.9	-	0.6	0.9	0.0	19.8	-	60.0	50.0	40.2	-

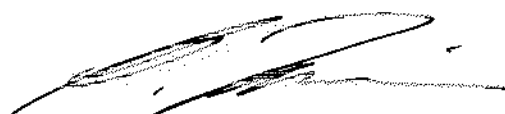
CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

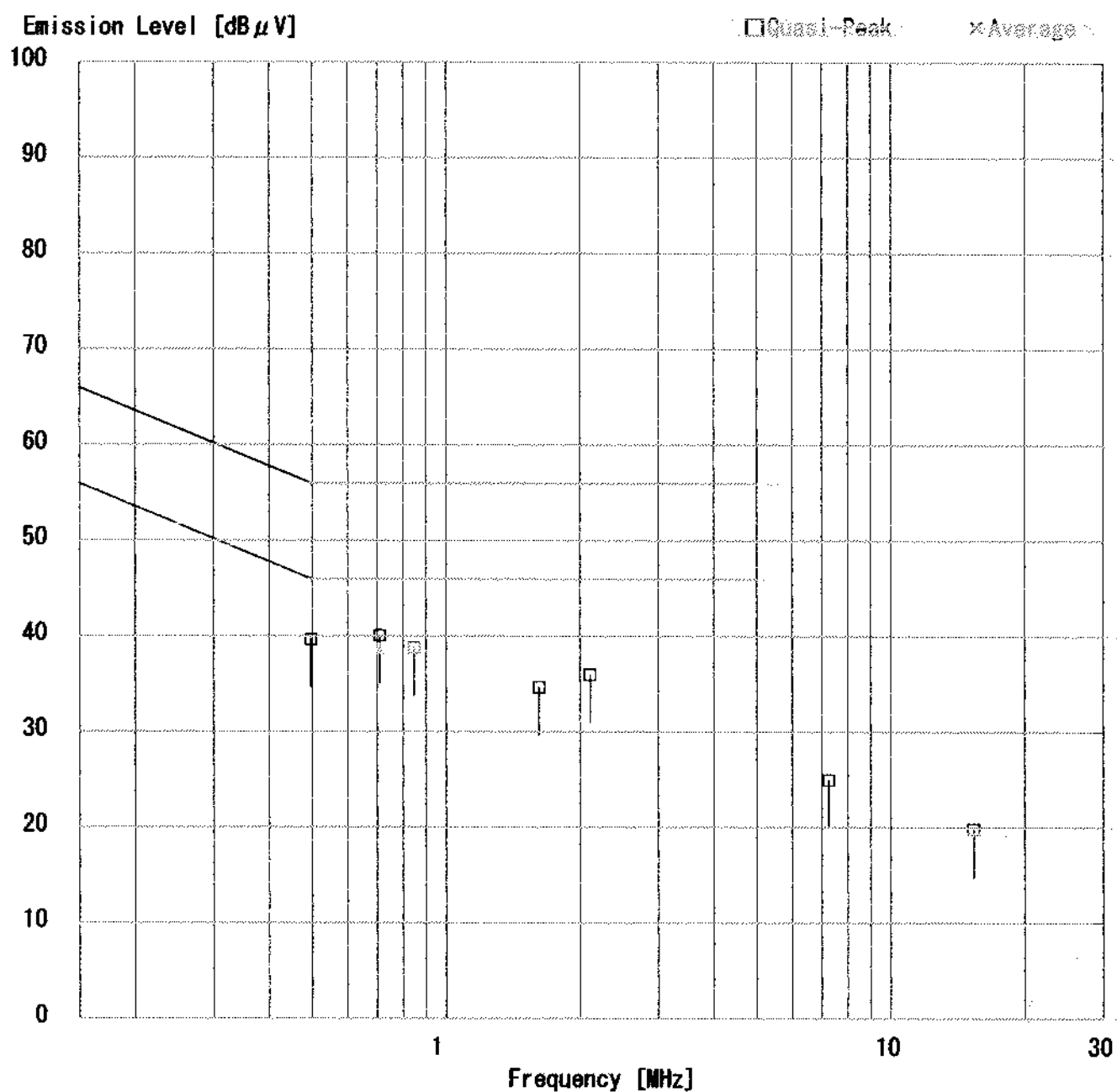
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Phase : Single Phase
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Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


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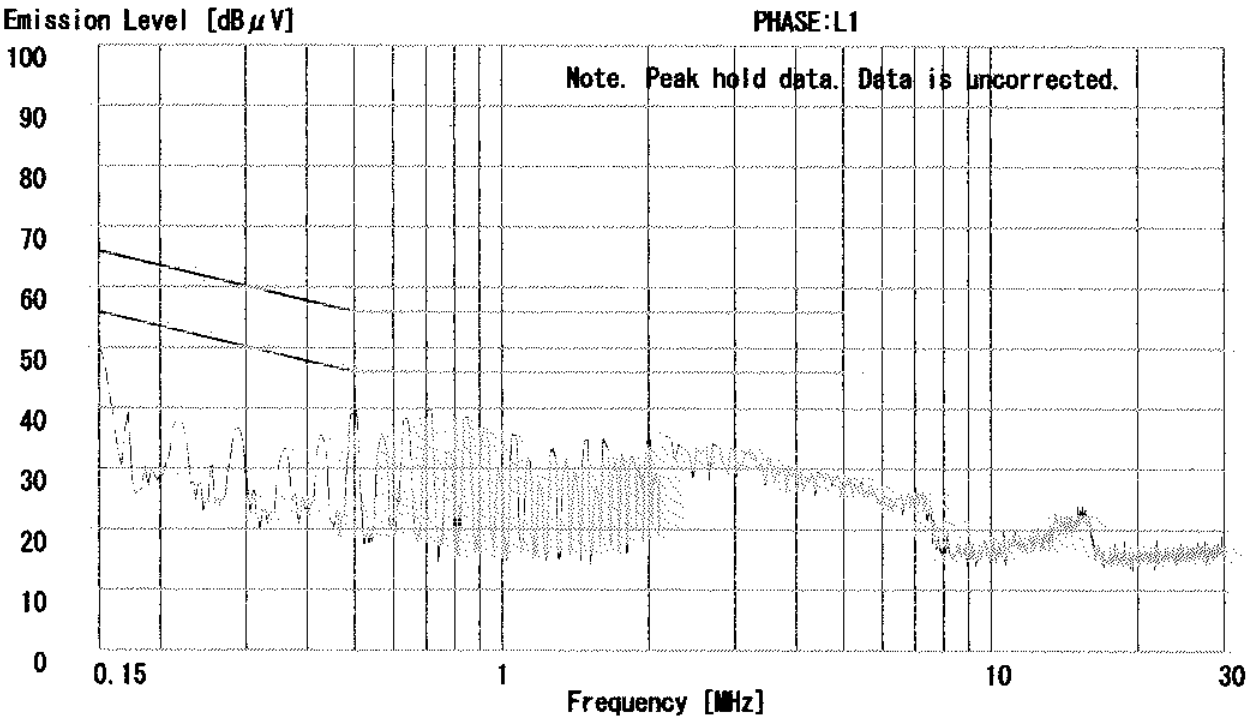
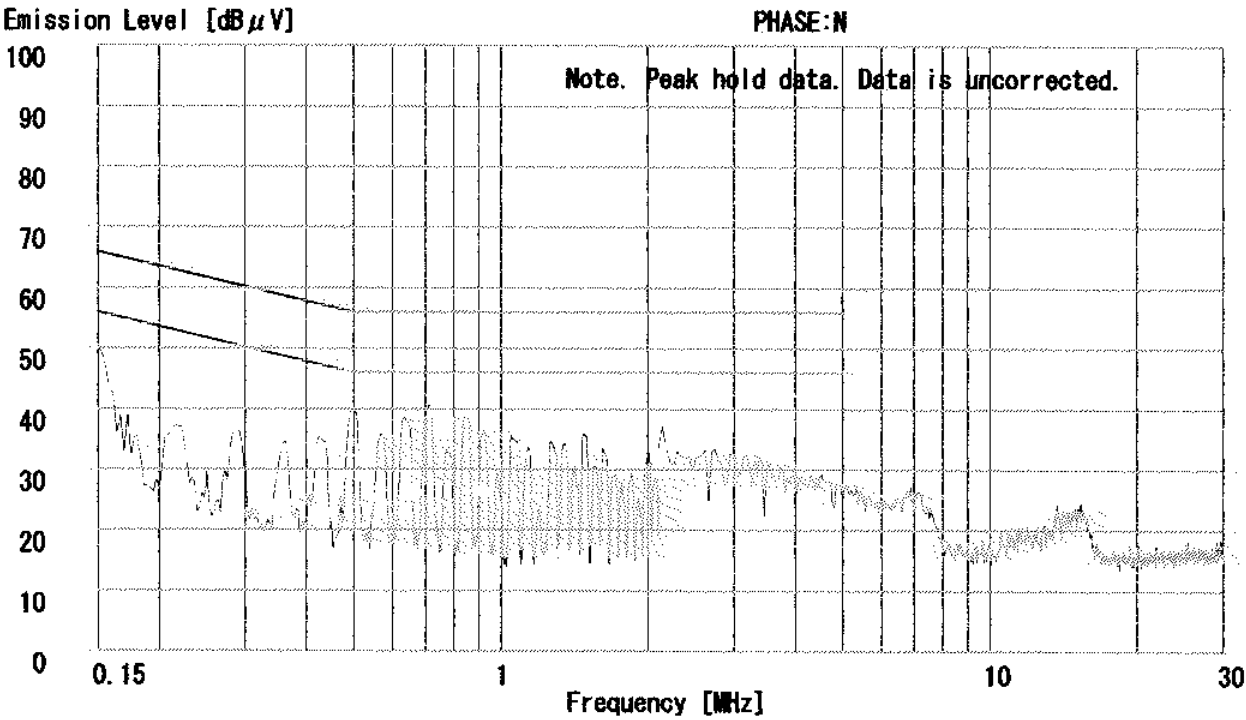


DATA OF CONDUCTION TEST CHART

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Remarks : 5Vp-p
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation 1 : FCC Part15 CLASS B(02-157)
Regulation 2 : None

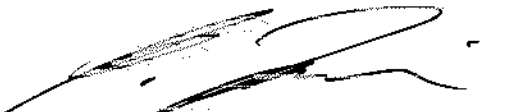

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Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]				QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]
1.	0.4958	39.4	-	39.0	-	0.1	0.2	0.0	39.7	-	56.1	46.1	16.4	-
2.	0.7075	39.8	-	39.5	-	0.1	0.2	0.0	40.1	-	56.0	46.0	15.9	-
3.	0.8410	38.6	-	38.2	-	0.1	0.2	0.0	38.9	-	56.0	46.0	17.1	-
4.	1.6153	32.1	-	34.2	-	0.1	0.3	0.0	34.6	-	56.0	46.0	21.4	-
5.	2.1102	33.1	-	35.6	-	0.1	0.3	0.0	36.0	-	56.0	46.0	20.0	-
6.	6.8206	24.6	-	24.2	-	0.2	0.6	0.0	25.4	-	60.0	50.0	34.6	-
7.	15.2990	18.0	-	16.2	-	0.6	0.9	0.0	19.5	-	60.0	50.0	40.5	-

CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

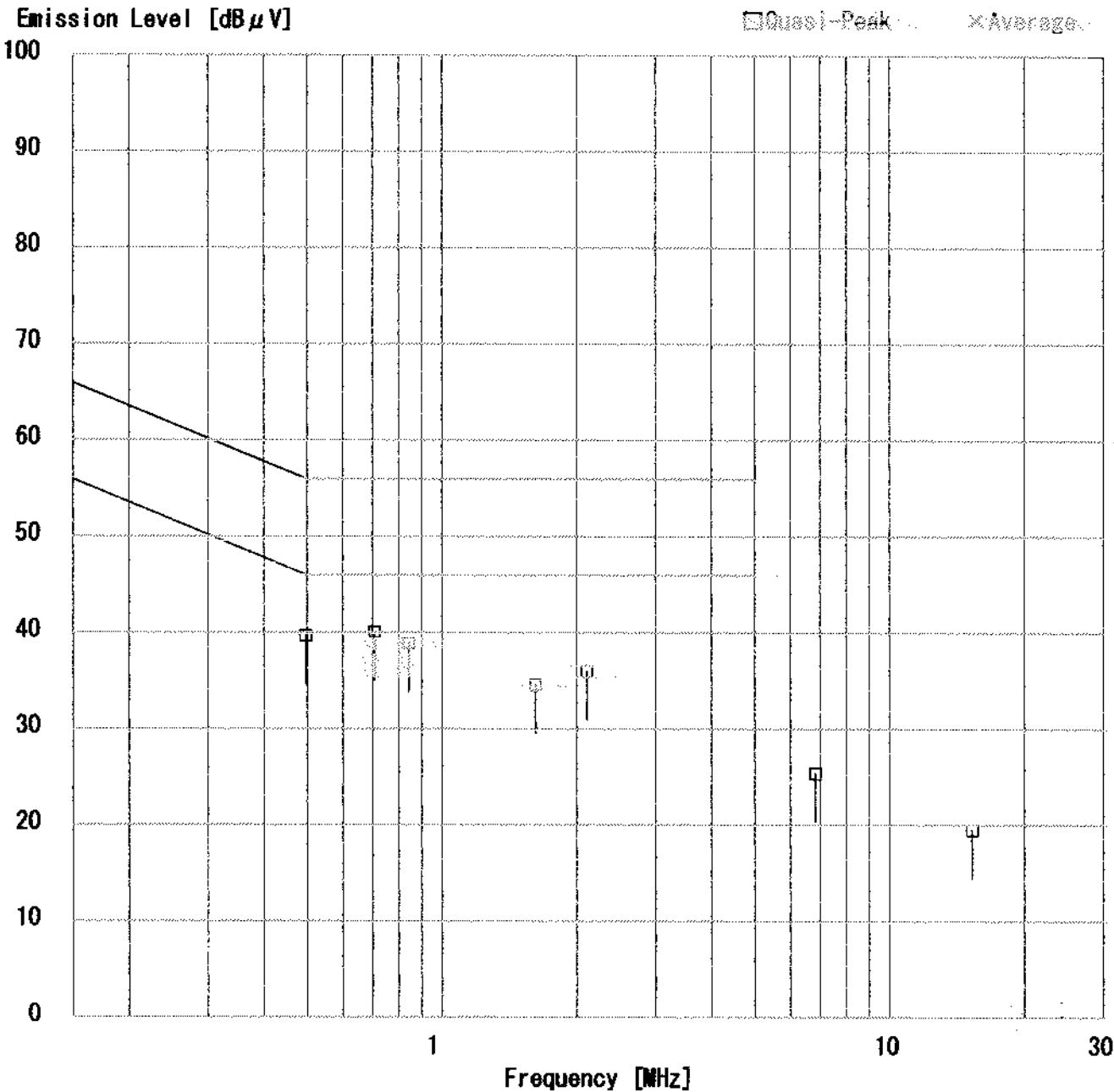
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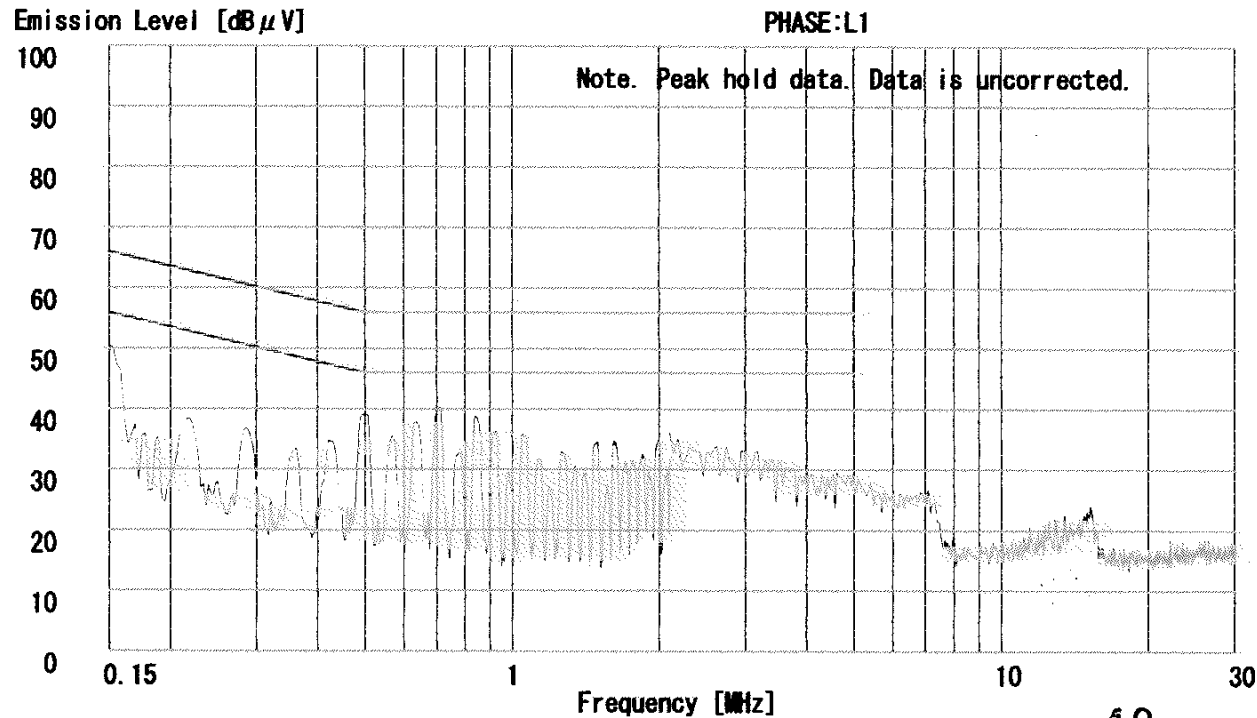
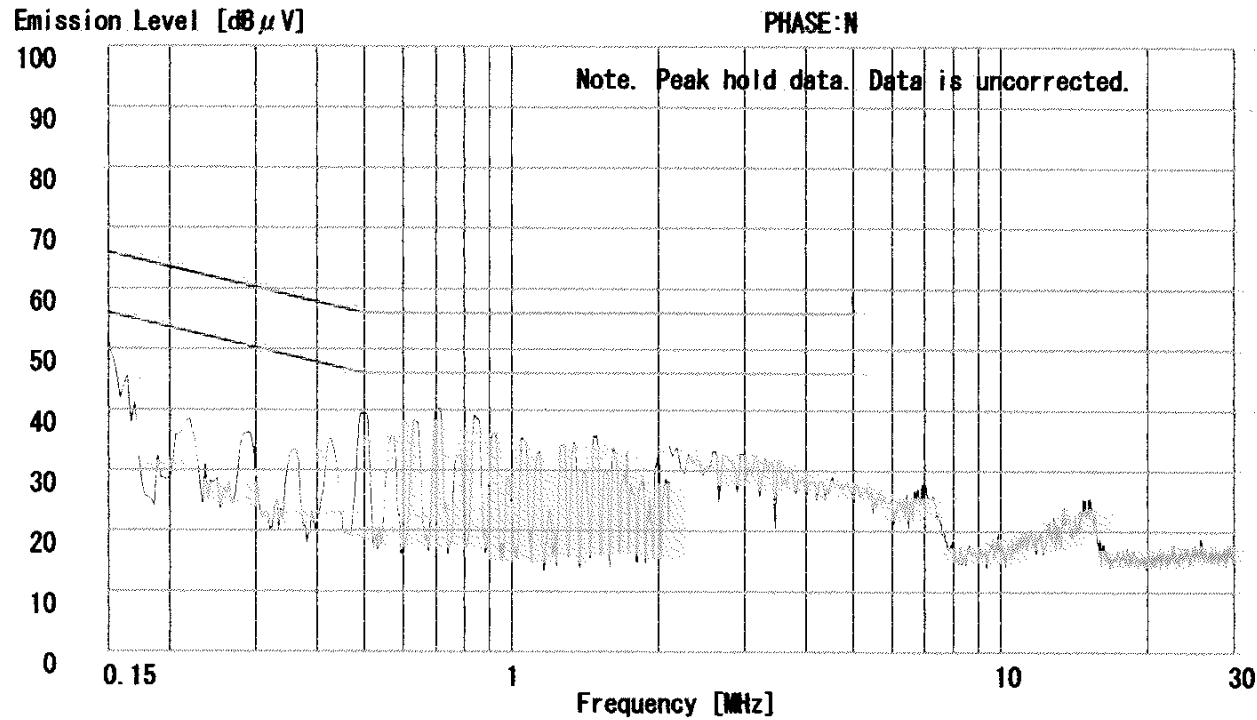


DATA OF CONDUCTION TEST CHART

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Regulation 1 : FCC Part15 CLASS B(02-157)
Regulation 2 : None


Engineer : Seigo Kakehi



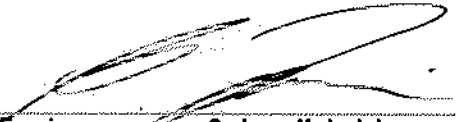
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No.	FREQ. [MHz]	READING (N)		READING (L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dBuV]	AV	QP [dBuV]	AV				QP [dBuV]	AV	QP [dBuV]	AV	QP [dB]	AV
1.	0.4939	39.4	-	38.9	-	0.1	0.2	0.0	39.7	-	56.1	46.1	16.4	-
2.	0.7091	39.8	-	39.4	-	0.1	0.2	0.0	40.1	-	56.0	46.0	15.9	-
3.	0.8440	38.4	-	38.1	-	0.1	0.2	0.0	38.7	-	56.0	46.0	17.3	-
4.	1.6189	32.2	-	34.1	-	0.1	0.3	0.0	34.5	-	56.0	46.0	21.5	-
5.	2.1108	33.4	-	35.8	-	0.1	0.3	0.0	36.2	-	56.0	46.0	19.8	-
6.	4.6636	26.6	-	27.4	-	0.2	0.5	0.0	28.1	-	56.0	46.0	27.9	-
7.	14.9173	17.7	-	16.2	-	0.6	0.9	0.0	19.2	-	60.0	50.0	40.8	-

CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

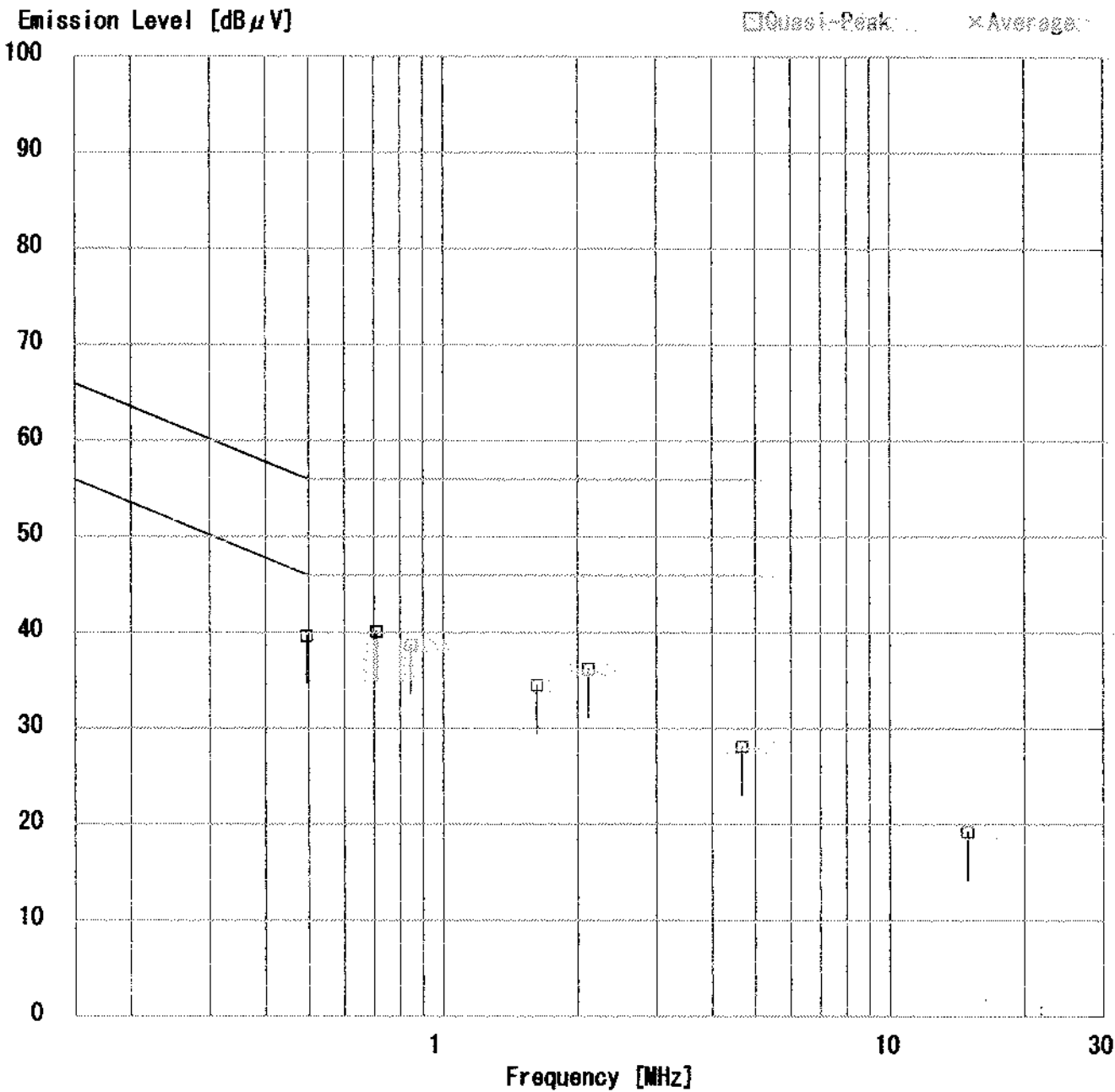
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Power : AC120V/60Hz
Mode : AV Input 2 + Rec
Remarks : 5Vp-p
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

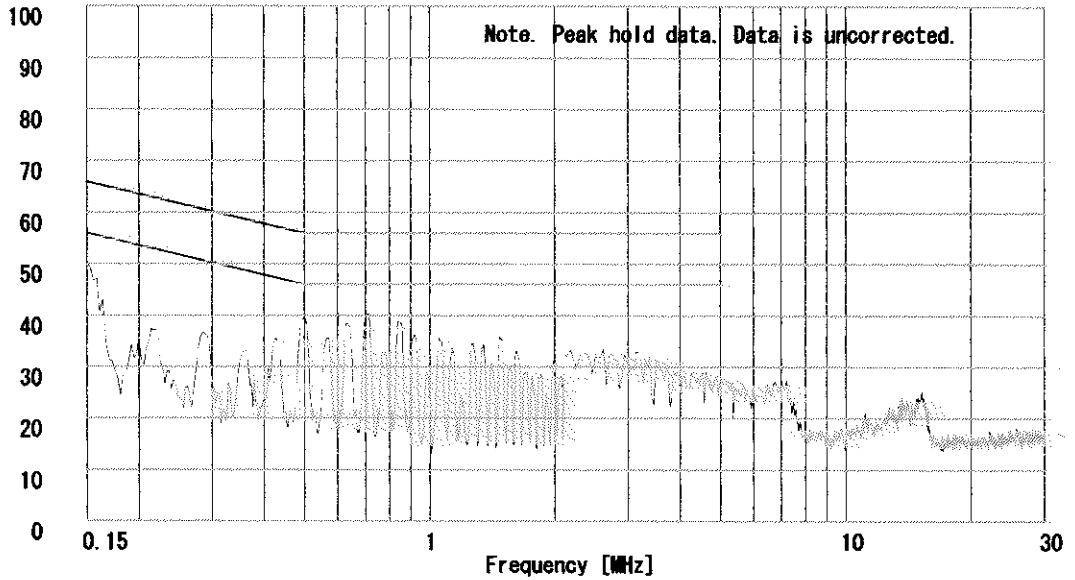
UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : AV Input 2 + Rec
Remarks : 5Vp-p
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation 1 : FCC Part15 CLASS B(02-157)
Regulation 2 : None

Engineer : Seigo Kakehi

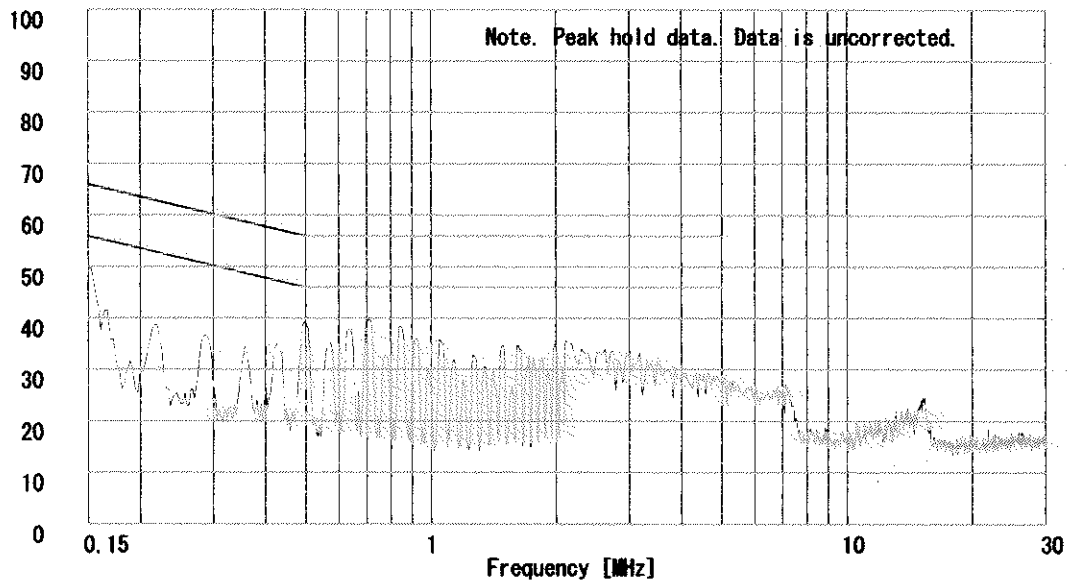
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : VCR Playback + Rec
Remarks :
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]				QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]
1.	0.6233	38.5	-	38.1	-	0.1	0.2	0.0	38.8	-	56.0	46.0	17.2	-
2.	0.7404	39.5	-	39.0	-	0.1	0.2	0.0	39.8	-	56.0	46.0	16.2	-
3.	0.9264	37.1	-	37.0	-	0.1	0.2	0.0	37.4	-	56.0	46.0	18.6	-
4.	1.6088	34.1	-	34.8	-	0.1	0.3	0.0	35.2	-	56.0	46.0	20.8	-
5.	2.1674	31.6	-	33.6	-	0.1	0.3	0.0	34.0	-	56.0	46.0	22.0	-
6.	7.0600	22.7	-	22.2	-	0.2	0.6	0.0	23.5	-	60.0	50.0	36.5	-
7.	15.2584	18.2	-	16.7	-	0.6	0.9	0.0	19.7	-	60.0	50.0	40.3	-

CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

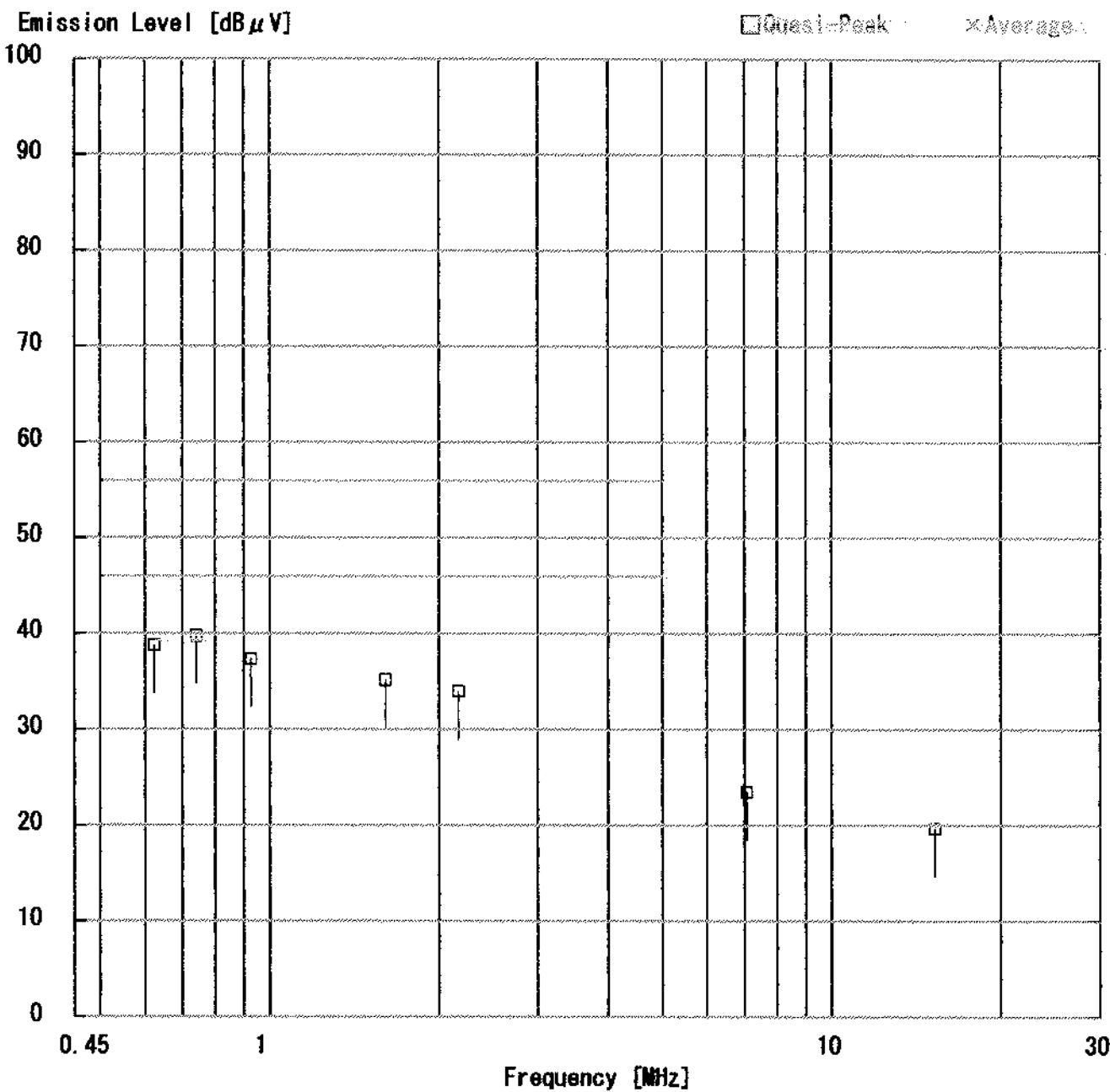
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : VCR Playback + Rec
Remarks :
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)

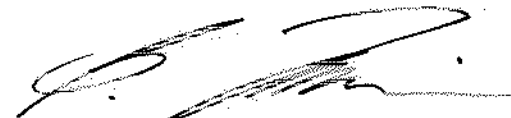

Engineer : Seigo Kakehi



DATA OF CONDUCTION TEST CHART

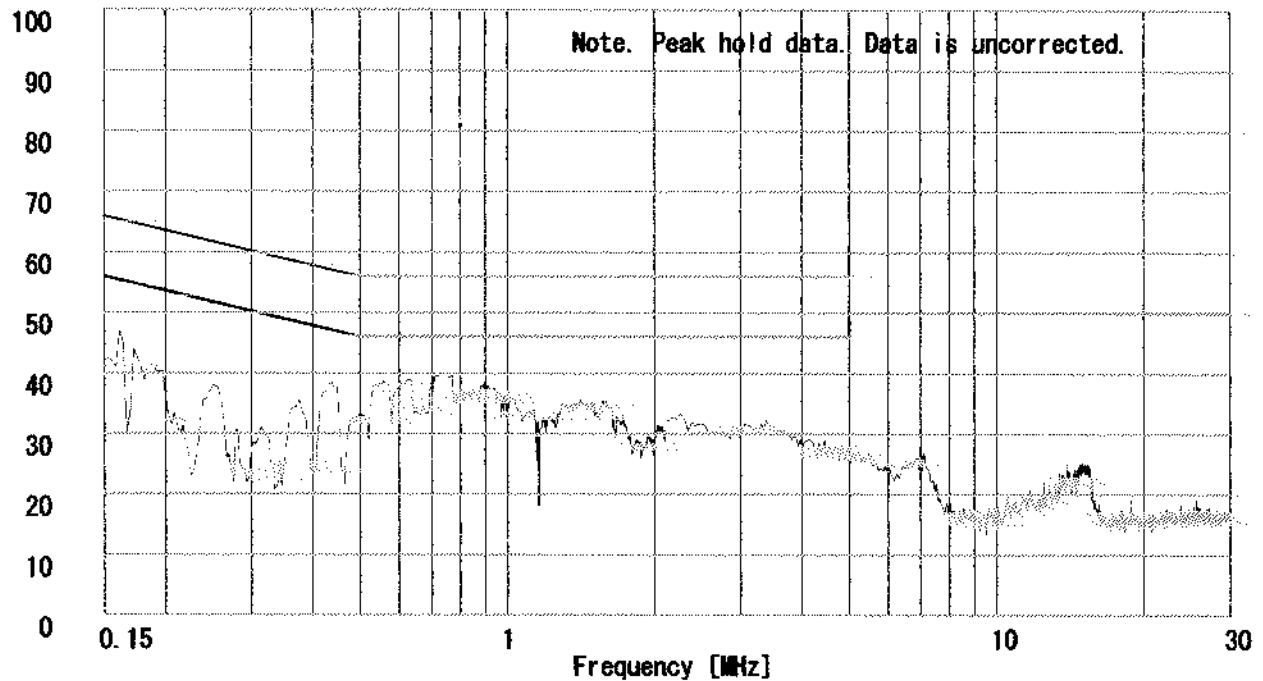
UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : VCR Playback + Rec
Remarks :
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation 1 : FCC Part15 CLASS B (02-157)
Regulation 2 : None


Engineer : Seigo Kakehi

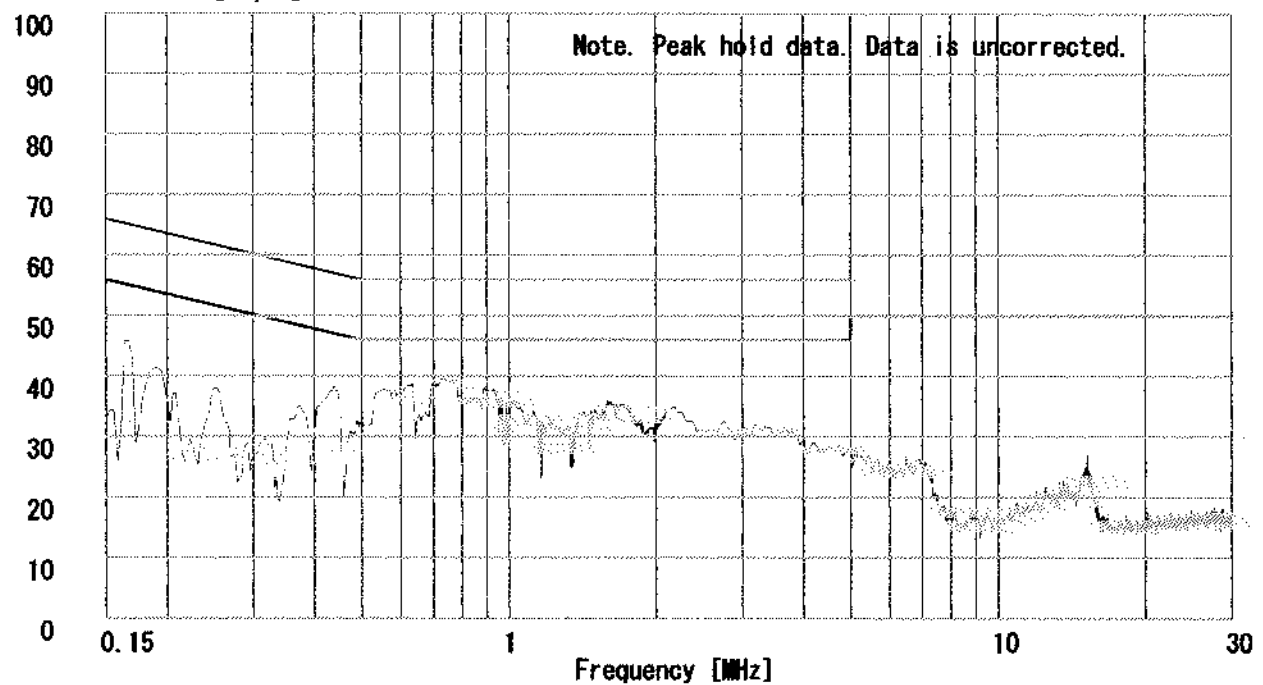
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

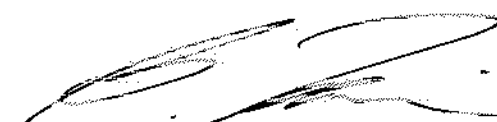
PHASE:L1



DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer Seigo Kakehi

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP	AV	QP	AV				QP	AV	QP	AV	QP	AV
		[dBuV]		[dBuV]					[dBuV]		[dBuV]		[dB]	
1.	0.4704	36.0	-	35.3	-	0.1	0.2	0.0	36.3	-	56.5	46.5	20.2	-
2.	0.6059	35.3	-	34.6	-	0.1	0.2	0.0	35.6	-	56.0	46.0	20.4	-
3.	0.6769	36.1	-	35.7	-	0.1	0.2	0.0	36.4	-	56.0	46.0	19.6	-
4.	0.8082	36.1	-	35.5	-	0.1	0.2	0.0	36.4	-	56.0	46.0	19.6	-
5.	1.5537	30.5	-	31.2	-	0.1	0.3	0.0	31.6	-	56.0	46.0	24.4	-
6.	2.1936	26.7	-	29.1	-	0.1	0.3	0.0	29.5	-	56.0	46.0	26.5	-
7.	29.4355	7.5	-	7.8	-	1.0	1.2	0.0	10.0	-	60.0	50.0	50.0	-

CALCULATION: READING[dBμV] + LISN FACTOR[dB] + CABLE LOSS[dB] + ATTEN[dB].

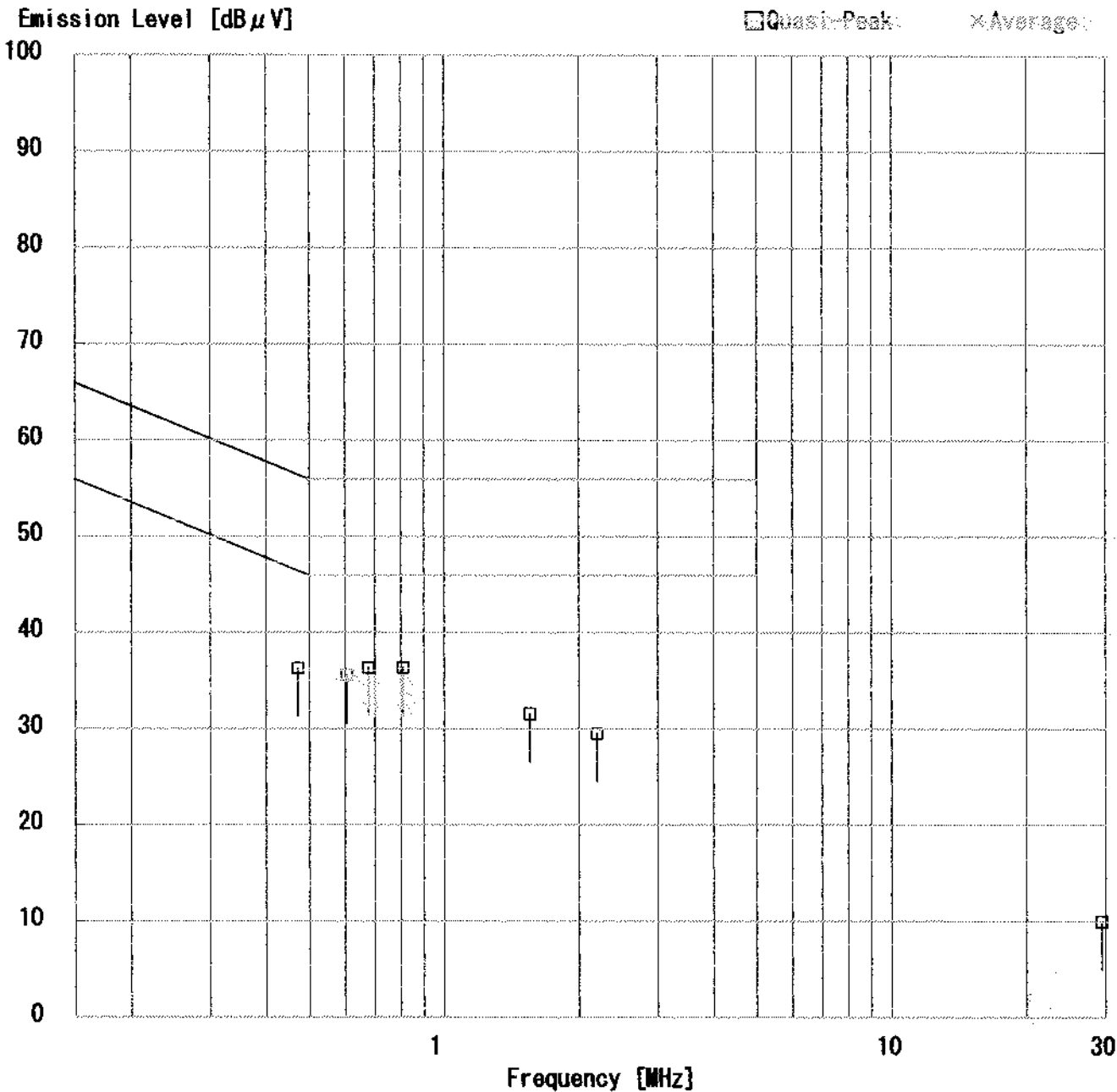
Except for the above table: adequate margin data below the limits.

DATA OF CONDUCTION TEST

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks : -
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation : FCC Part15 CLASS B(02-157)


Engineer : Seigo Kakehi

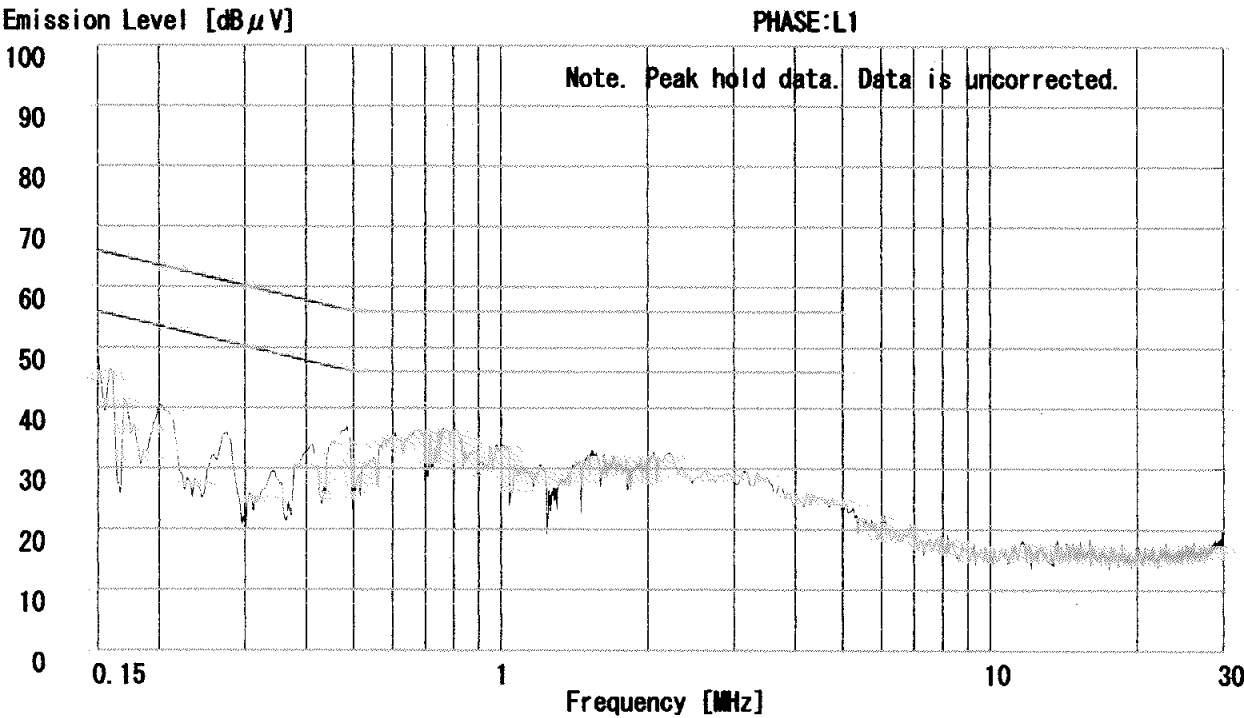
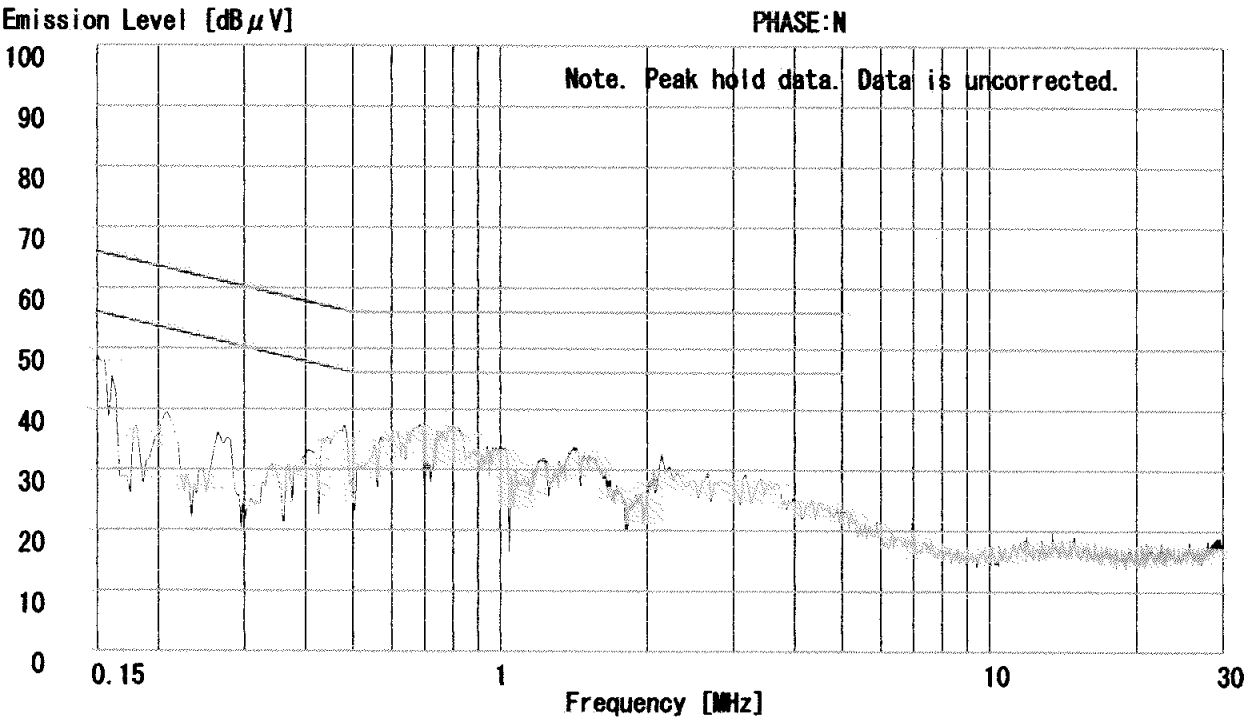


DATA OF CONDUCTION TEST CHART

UL Apex Co., Ltd.
YOKOWA No.1 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : DVD Play
Remarks :
Date : 8/5/2003
Phase : Single Phase
Temperature : 26 °C
Humidity : 35 %
Regulation 1 : FCC Part15 CLASS B (02-157)
Regulation 2 : None


Engineer : Seigo Kakehi



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA NO.3 OPEN TEST SITE

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD RW/VCR
MODEL No. : VHDVD4005
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 24AE0029-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : August 03,2003

ENGINEER : Tsubasa Takayama

CH.	FREQ	READING		ANT TYPE	ANT. FAC.	CABLE LOSS	AMP GAIN	RESULTS		LIMIT	MARGIN	
	[MHz]	HOR.	VER.					[dBuV]	HOR.		VER.	[dBuV/m]
VHF Fundamental												
2	101	25.3	26.3	BC	10.1	1.9	28.6	14.7	15.7	43.5	28.8	27.8
3	107	25.1	26.3	BC	11.1	2.0	28.7	15.5	16.7	43.5	28.0	26.8
4	113	26.3	26.5	BC	12.2	2.0	28.9	17.6	17.8	43.5	25.9	25.7
5	123	27.0	27.6	BC	13.5	2.1	28.7	19.9	20.5	43.5	23.6	23.0
6	129	25.4	28.8	BC	13.8	2.2	28.9	18.5	21.9	43.5	25.0	21.6
7	221	26.3	25.6	BC	16.4	3.1	28.8	23.0	22.3	46.0	23.0	23.7
8	227	27.2	26.3	BC	16.4	3.1	28.9	23.8	22.9	46.0	22.2	23.1
9	233	26.5	26.1	BC	16.5	3.1	28.9	23.2	22.8	46.0	22.8	23.2
10	239	26.0	25.4	BC	16.5	3.2	28.9	22.8	22.2	46.0	23.2	23.8
11	245	26.3	25.2	BC	16.6	3.2	28.9	23.2	22.1	46.0	22.8	23.9
12	251	26.1	24.3	BC	16.7	3.3	28.9	23.2	21.4	46.0	22.8	24.6
13	257	24.3	25.9	BC	17.0	3.3	28.9	21.7	23.3	46.0	24.3	22.7
VHF 2nd Harmonic												
2	202	23.0	23.6	BC	16.2	2.9	28.8	19.3	19.9	43.5	24.2	23.6
3	214	24.1	22.5	BC	16.3	3.0	28.8	20.6	19.0	43.5	22.9	24.5
4	226	23.5	23.6	BC	16.4	3.1	28.9	20.1	20.2	46.0	25.9	25.8
5	246	23.6	23.4	BC	16.6	3.2	28.9	20.5	20.3	46.0	25.5	25.7
6	258	23.9	24.3	BC	17.1	3.3	28.9	21.4	21.8	46.0	24.6	24.2
7	442	23.1	22.3	LP	18.4	5.0	28.9	23.6	22.8	46.0	22.4	23.2
8	454	22.5	23.2	LP	18.6	5.0	28.9	23.2	23.9	46.0	22.8	22.1
9	466	22.3	23.6	LP	18.8	5.1	28.8	23.4	24.7	46.0	22.6	21.3
10	478	22.1	22.5	LP	19.0	5.2	28.8	23.5	23.9	46.0	22.5	22.1
11	490	22.5	23.1	LP	19.2	5.2	28.9	24.0	24.6	46.0	22.0	21.4
12	502	22.0	22.3	LP	19.3	5.4	28.9	23.8	24.1	46.0	22.2	21.9
13	514	22.9	23.5	LP	19.4	5.4	28.9	24.8	25.4	46.0	21.2	20.6

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA NO.3 OPEN TEST SITE

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD RW/VCR
MODEL No. : VHDVD4005
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 24AE0029-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : August 03,2003

ENGINEER : Tsubasa Takayama

CH.	FREQ [MHz]	READING		ANT TYPE	ANT. FAC. [dB]	CABLE LOSS [dB]	AMP GAIN [dB]	RESULTS		LIMIT [dBuV/m]	MARGIN	
		HOR.	VER.					HOR.	VER.		HOR.	VER.
		[dBuV]						[dBuV/m]			[dB]	[dB]
CATV Fundamental												
1	119	24.9	25.9	BC	13.2	2.1	27.9	18.3	19.3	43.5	25.2	24.2
95	137	24.6	24.3	BC	14.1	2.3	27.9	19.1	18.8	43.5	24.4	24.7
97	149	24.2	25.3	BC	14.5	2.4	27.7	19.4	20.5	43.5	24.1	23.0
99	161	25.3	26.1	BC	14.9	2.5	27.8	20.9	21.7	43.5	22.6	21.8
14	167	24.3	25.1	BC	15.2	2.6	27.8	20.3	21.1	43.5	23.2	22.4
18	191	25.0	24.9	BC	16.0	2.8	27.8	22.0	21.9	43.5	21.5	21.6
22	215	24.1	24.8	BC	16.3	3.0	27.8	21.6	22.3	43.5	21.9	21.2
23	263	24.0	25.9	BC	17.4	3.4	27.5	23.3	25.2	46.0	22.7	20.8
29	299	24.3	25.5	BC	19.7	3.8	27.8	26.0	27.2	46.0	20.0	18.8
36	341	26.8	25.2	LP	16.7	4.2	27.9	25.8	24.2	46.0	20.2	21.8
37	347	26.9	25.2	LP	16.8	4.2	27.9	26.0	24.3	46.0	20.0	21.7
65	515	29.6	32.8	LP	21.4	5.4	27.9	34.5	37.7	46.0	11.5	8.3
94	689	29.1	30.1	LP	21.6	6.3	27.2	35.8	36.8	46.0	10.2	9.2
100	695	30.0	31.2	LP	21.7	6.4	27.1	37.0	38.2	46.0	9.0	7.8
113	773	29.4	29.5	LP	22.7	6.8	27.0	37.9	38.0	46.0	8.1	8.0
125	845	29.7	29.0	LP	23.5	7.1	27.0	39.3	38.6	46.0	6.7	7.4
CATV 2nd Harmonic												
1	238	21.2	22.3	BC	16.5	3.2	27.5	19.4	20.5	46.0	26.6	25.5
95	274	21.9	21.4	BC	18.1	3.5	27.8	21.7	21.2	46.0	24.3	24.8
97	298	21.5	22.0	BC	19.7	3.8	27.8	23.2	23.7	46.0	22.8	22.3
99	322	22.9	23.4	LP	16.4	4.0	28.0	21.3	21.8	46.0	24.7	24.2
14	334	23.5	22.3	LP	16.6	4.1	28.0	22.2	21.0	46.0	23.8	25.0
18	382	23.6	22.6	LP	17.5	4.6	27.9	23.8	22.8	46.0	22.2	23.2
22	430	23.1	22.8	LP	18.3	5.0	27.8	24.6	24.3	46.0	21.4	21.7
23	526	22.5	22.1	LP	19.5	5.4	27.8	25.6	25.2	46.0	20.4	20.8
29	598	2.6	22.3	LP	20.0	5.8	27.5	6.9	26.6	46.0	39.1	19.4
36	682	22.4	22.2	LP	21.5	6.3	27.3	28.9	28.7	46.0	17.1	17.3
37	694	22.3	21.3	LP	21.7	6.4	27.1	29.3	28.3	46.0	16.7	17.7
65	1030	52.3	51.0	HO	24.7	1.7	39.0	39.7	38.4	54.0	14.3	15.6
94	1378	50.5	53.6	HO	26.0	1.9	38.6	39.8	42.9	54.0	14.2	11.1
100	1390	50.7	52.3	HO	26.0	2.0	38.6	40.1	41.7	54.0	13.9	12.3
113	1546	50.1	49.4	HO	26.8	2.1	38.5	40.5	39.8	54.0	13.5	14.2
125	1690	52.2	50.1	HO	27.9	2.3	38.3	44.1	42.0	54.0	9.9	12.0

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA NO.3 OPEN TEST SITE

COMPANY : Orion Electric Co.,Ltd.
EQUIPMENT : DVD RW/VCR
MODEL No. : VHDVD4005
POWER : AC120V/60Hz
DESCRIPTION : TV Reception

REPORT No. : 24AE0029-YW-1
REGULATION : FCC PART15 B
TEST DISTANCE : 3m
ATTENUATION : 101-847MHz 6dB
1030-1694MHz 0dB
DATE : August 03,2003

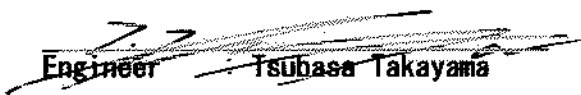

ENGINEER : Tsubasa Takayama

CH.	FREQ	READINGG		ANT TYPE	ANT. FAC.	CABLE LOSS	AMP GAIN	RESULTS		LIMIT	MARGIN	
	[MHz]	HOR.	VER.					[dBuV]	HOR.		VER.	[dBuV/m]
UHF Fundamental												
14	517	31.2	34.2	LP	19.4	5.4	28.9	33.1	36.1	46.0	12.9	9.9
19	547	31.7	36.1	LP	19.7	5.5	29.0	33.9	38.3	46.0	12.1	7.7
28	601	30.9	34.7	LP	20.1	5.8	28.9	33.9	37.7	46.0	12.1	8.3
36	649	30.6	34.5	LP	20.9	6.1	29.0	34.6	38.5	46.0	11.4	7.5
44	697	33.6	32.8	LP	21.7	6.4	28.9	38.8	38.0	46.0	7.2	8.0
53	751	32.0	31.8	LP	22.5	6.7	28.9	38.3	38.1	46.0	7.7	7.9
61	799	29.6	30.1	LP	23.1	6.8	28.9	36.6	37.1	46.0	9.4	8.9
69	847	29.2	29.6	LP	23.5	7.1	28.9	36.9	37.3	46.0	9.1	8.7
UHF 2nd Harmonic												
14	1034	52.2	55.0	HO	24.7	1.6	39.0	39.5	42.3	54.0	14.5	11.7
19	1094	50.1	52.6	HO	24.9	1.7	39.0	37.7	40.2	54.0	16.3	13.8
28	1202	51.3	57.7	HO	25.3	1.8	38.8	39.6	46.0	54.0	14.4	8.0
36	1298	55.0	55.3	HO	25.7	1.9	38.7	43.9	44.2	54.0	10.1	9.8
44	1394	50.4	56.5	HO	26.0	2.0	38.6	39.8	45.9	54.0	14.2	8.1
53	1502	50.0	49.8	HO	26.4	2.1	38.5	40.0	39.8	54.0	14.0	14.2
61	1598	52.6	49.9	HO	27.2	2.2	38.4	43.6	40.9	54.0	10.4	13.1
69	1694	53.8	51.2	HO	28.0	2.3	38.3	45.8	43.2	54.0	8.2	10.8

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : TV Reception + Rec
Remarks : 0dBmV
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
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]	[dB μ V/m]	[dB μ V/m]	[dB μ V/m]	[dB]	[dB]
1.	239.61	BB	42.0	35.2	16.5	28.9	3.2	6.0	38.8	32.0	46.0	7.2	14.0

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

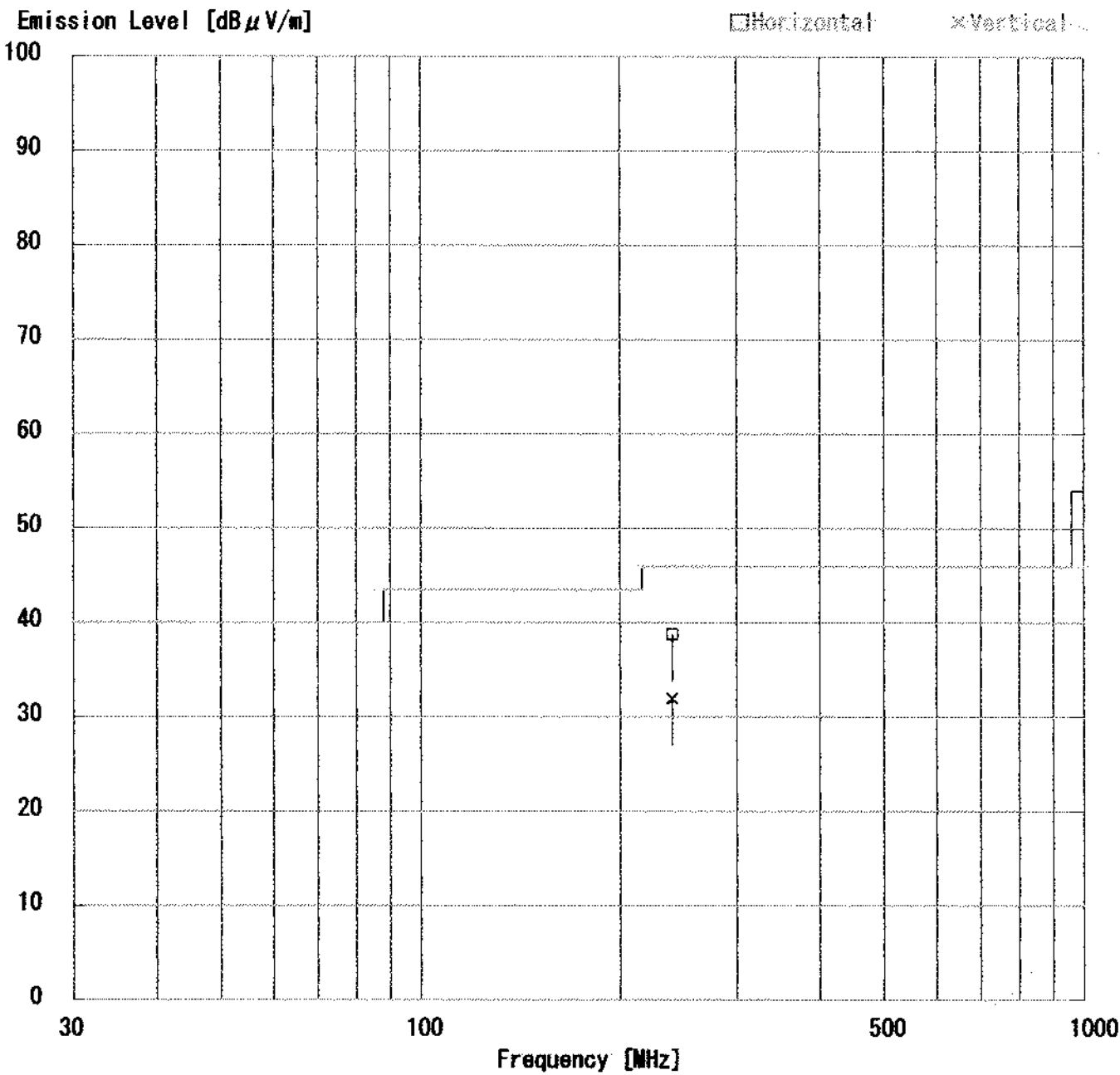
Except for the above table: adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : TV Reception + Rec
Remarks : 0dBmV
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
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.	135.04	BB	31.2	32.6	14.0	28.7	2.3	6.0	24.8	26.2	43.5	18.7	17.3
2.	165.02	BB	31.2	28.9	15.1	28.7	2.6	6.0	26.2	23.9	43.5	17.3	19.6
3.	192.00	BB	34.3	31.5	16.0	28.9	2.8	6.0	30.2	27.4	43.5	13.3	16.1
4.	202.74	BB	39.4	36.0	16.2	28.8	2.9	6.0	35.7	32.3	43.5	7.8	11.2
5.	239.61	BB	42.7	35.5	16.5	28.9	3.2	6.0	39.5	32.3	46.0	6.5	13.7
6.	258.05	BB	39.7	35.7	17.1	28.9	3.3	5.9	37.1	33.1	46.0	8.9	12.9
7.	347.23	BB	37.5	33.8	16.9	28.9	4.2	6.0	35.7	32.0	46.0	10.3	14.0
8.	423.96	BB	33.9	31.3	18.2	28.9	4.9	6.0	34.1	31.5	46.0	11.9	14.5
9.	675.02	BB	28.7	32.1	21.4	29.0	6.3	5.9	33.3	36.7	46.0	12.7	9.3
10.	718.91	BB	30.0	31.2	22.0	28.9	6.6	5.9	35.6	36.8	46.0	10.4	9.2

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

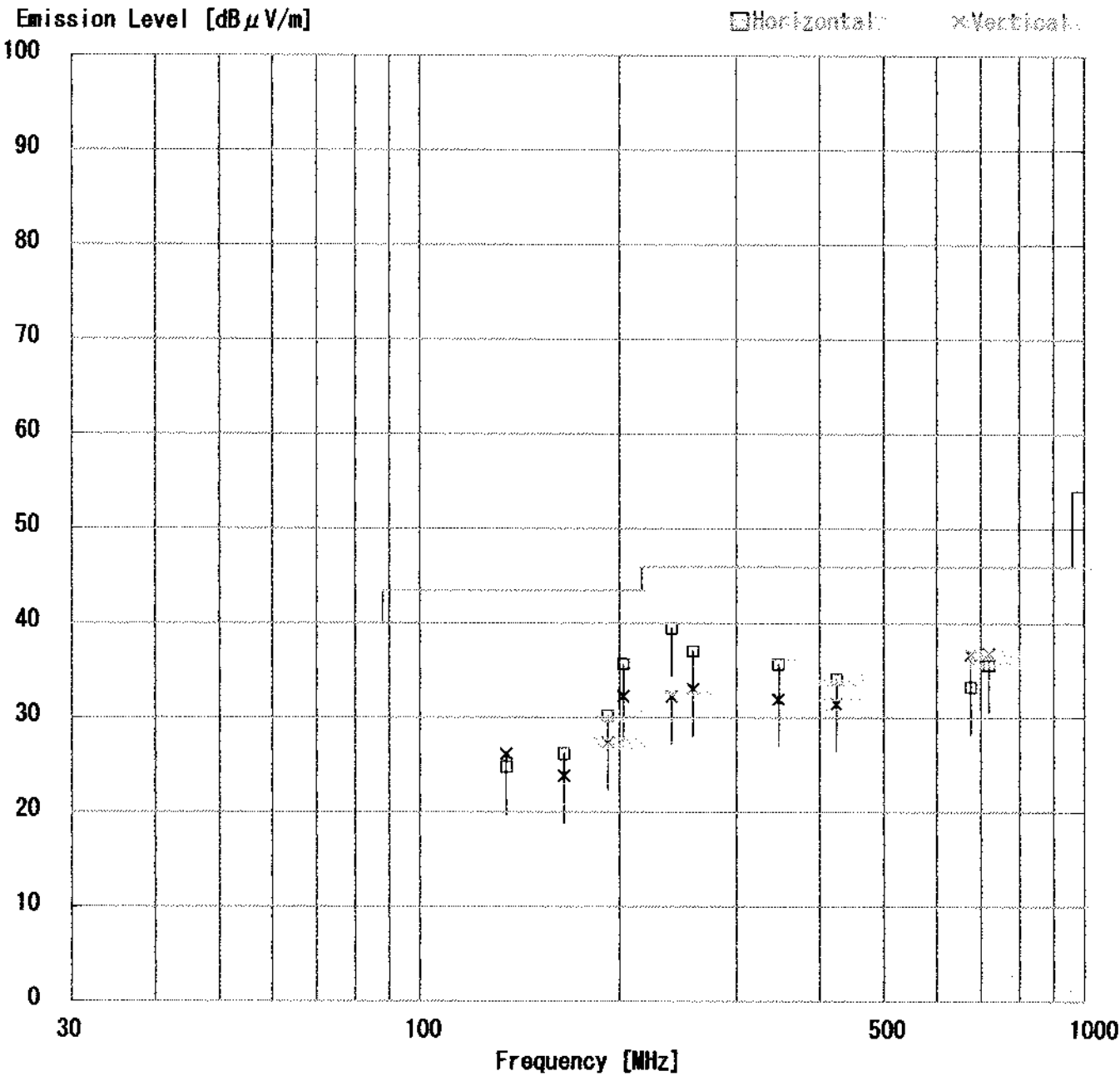
Except for the above table: adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : TV Reception + Rec
Remarks : 25dBmV
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : AV Input 1 + Rec
Remarks : 1Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
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.	239.61	BB	42.4	34.5	16.5	28.9	3.2	6.0	39.2	31.3	46.0	6.8	14.7

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

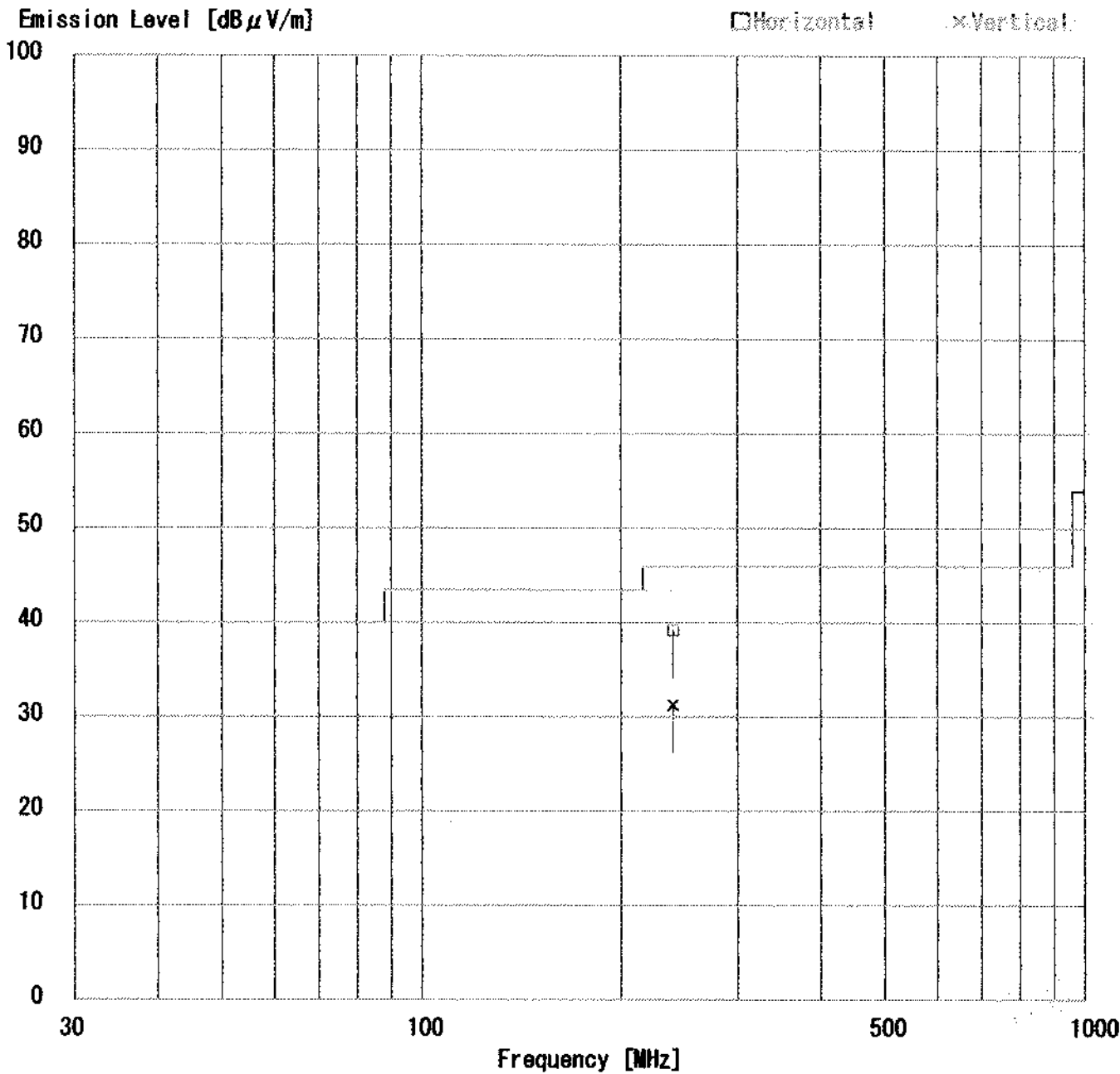
Except for the above table: adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : AV Input 1 + Rec
Remarks : 1Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

~~Engineer : Tsubasa Takayama~~



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : AV Input 1 + Rec
Remarks : 5Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	67.20	BB	26.3	40.2	7.1	28.8	1.6	6.0	12.2	26.1	40.0	27.8	13.9
2.	135.00	BB	33.8	33.6	14.0	28.7	2.2	6.0	27.3	27.1	43.5	16.2	16.4
3.	165.03	BB	27.0	26.5	15.1	28.7	2.6	6.0	22.0	21.5	43.5	21.5	22.0
4.	192.00	BB	29.7	28.6	16.0	28.9	2.8	6.0	25.6	24.5	43.5	17.9	19.0
5.	202.74	BB	39.7	36.4	16.2	28.8	2.9	6.0	36.0	32.7	43.5	7.5	10.8
6.	239.61	BB	42.6	34.8	16.5	28.9	3.2	6.0	39.4	31.6	46.0	6.6	14.4
7.	258.04	BB	39.7	36.0	17.1	28.9	3.3	5.9	37.1	33.4	46.0	8.9	12.6
8.	347.23	BB	35.9	32.3	16.9	28.9	4.2	6.0	34.1	30.5	46.0	11.9	15.5
9.	424.02	BB	35.5	32.0	18.2	28.9	4.9	6.0	35.7	32.2	46.0	10.3	13.8
10.	675.02	BB	29.4	32.2	21.4	29.0	6.3	5.9	34.0	36.8	46.0	12.0	9.2
11.	718.88	BB	29.3	31.0	22.0	28.9	6.6	5.9	34.9	36.6	46.0	11.1	9.4

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

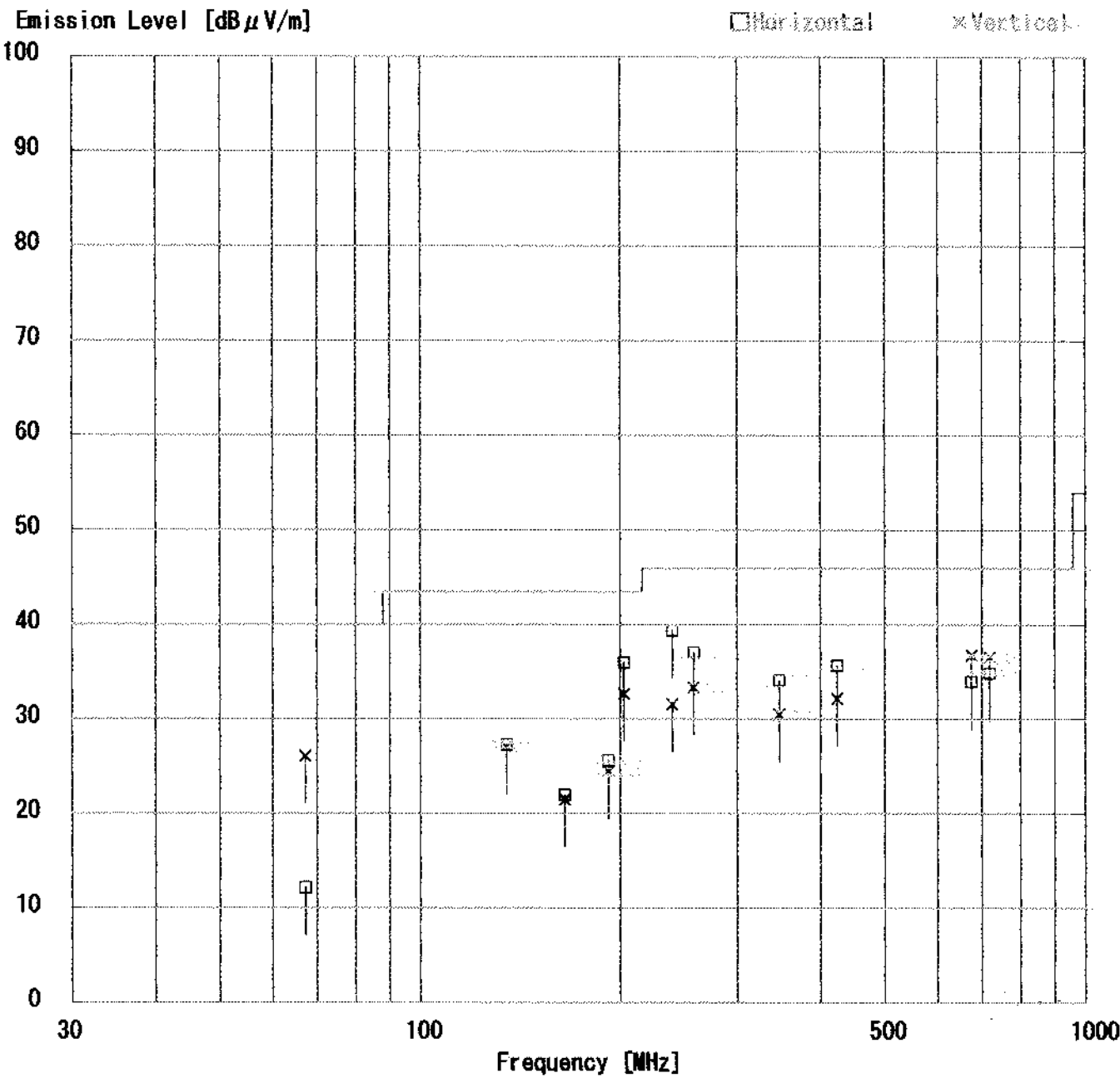
Except for the above table: adequate margin data below the limits.
ANT. TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : AV Input 1 + Rec
Remarks : 5Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : AV Input 2 + Rec
Remarks : 1Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer : ~~Tsubasa Takayama~~

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR	AMP GAIN	CABLE LOSS	ATTEN. [dB]	RESULT		LIMITS	MARGIN	
			HOR	VER					HOR	VER		HOR	VER
			[dB μ V]	[dB/m]	[dB]	[dB]	[dB]	[dB]	[dB μ V/m]	[dB μ V/m]	[dB μ V/m]	[dB]	[dB]
1.	239.61	BB	41.0	33.2	16.5	28.9	3.2	6.0	37.8	30.0	46.0	8.2	16.0

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

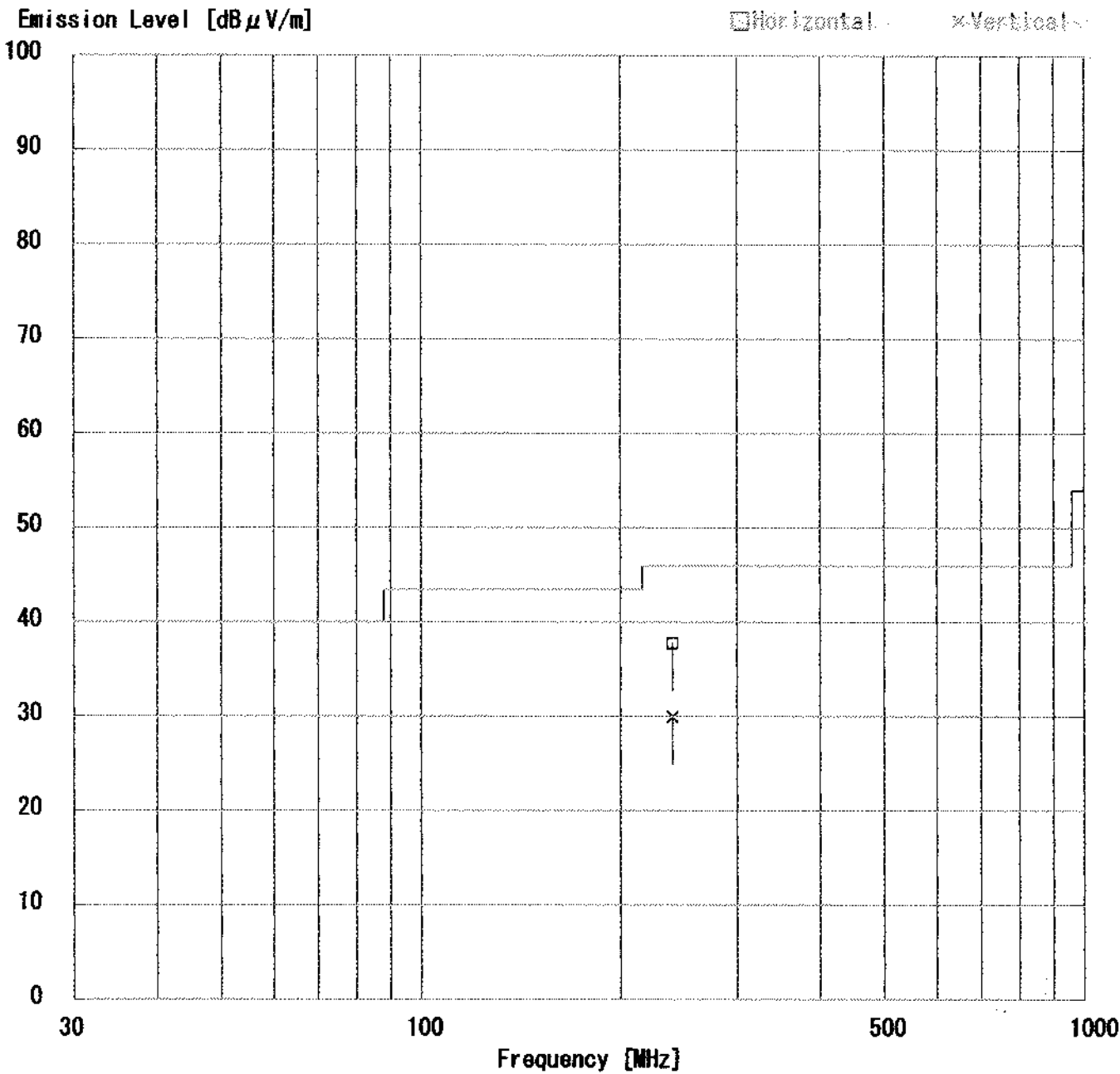
Except for the above table: adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : AV Input 2 + Rec
Remarks : 1Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer ~~Tsubasa Takayama~~



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : AV Input 2 + Rec
Remarks : 5Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer  Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	67.10	BB	37.0	43.0	7.1	28.8	1.5	6.0	22.8	28.8	40.0	17.2	11.2
2.	135.01	BB	34.1	32.3	14.0	28.7	2.3	6.0	27.7	25.9	43.5	15.8	17.6
3.	192.00	BB	28.0	28.0	16.0	28.9	2.8	6.0	23.9	23.9	43.5	19.6	19.6
4.	202.74	BB	38.7	37.1	16.2	28.8	2.9	6.0	35.0	33.4	43.5	8.5	10.1
5.	215.99	BB	37.0	33.5	16.3	28.8	3.0	6.0	33.5	30.0	43.5	10.0	13.5
6.	239.61	BB	41.1	33.2	16.5	28.9	3.2	6.0	37.9	30.0	46.0	8.1	16.0
7.	258.04	BB	38.9	33.9	17.1	28.9	3.3	5.9	36.3	31.3	46.0	9.7	14.7
8.	347.51	BB	37.0	33.6	16.9	28.9	4.2	6.0	35.2	31.8	46.0	10.8	14.2
9.	424.02	BB	35.5	32.9	18.2	28.9	4.9	6.0	35.7	33.1	46.0	10.3	12.9
10.	675.02	BB	30.5	33.5	21.4	29.0	6.3	5.9	35.1	38.1	46.0	10.9	7.9
11.	718.82	BB	29.6	32.3	22.0	28.9	6.6	5.9	35.2	37.9	46.0	10.8	8.1

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

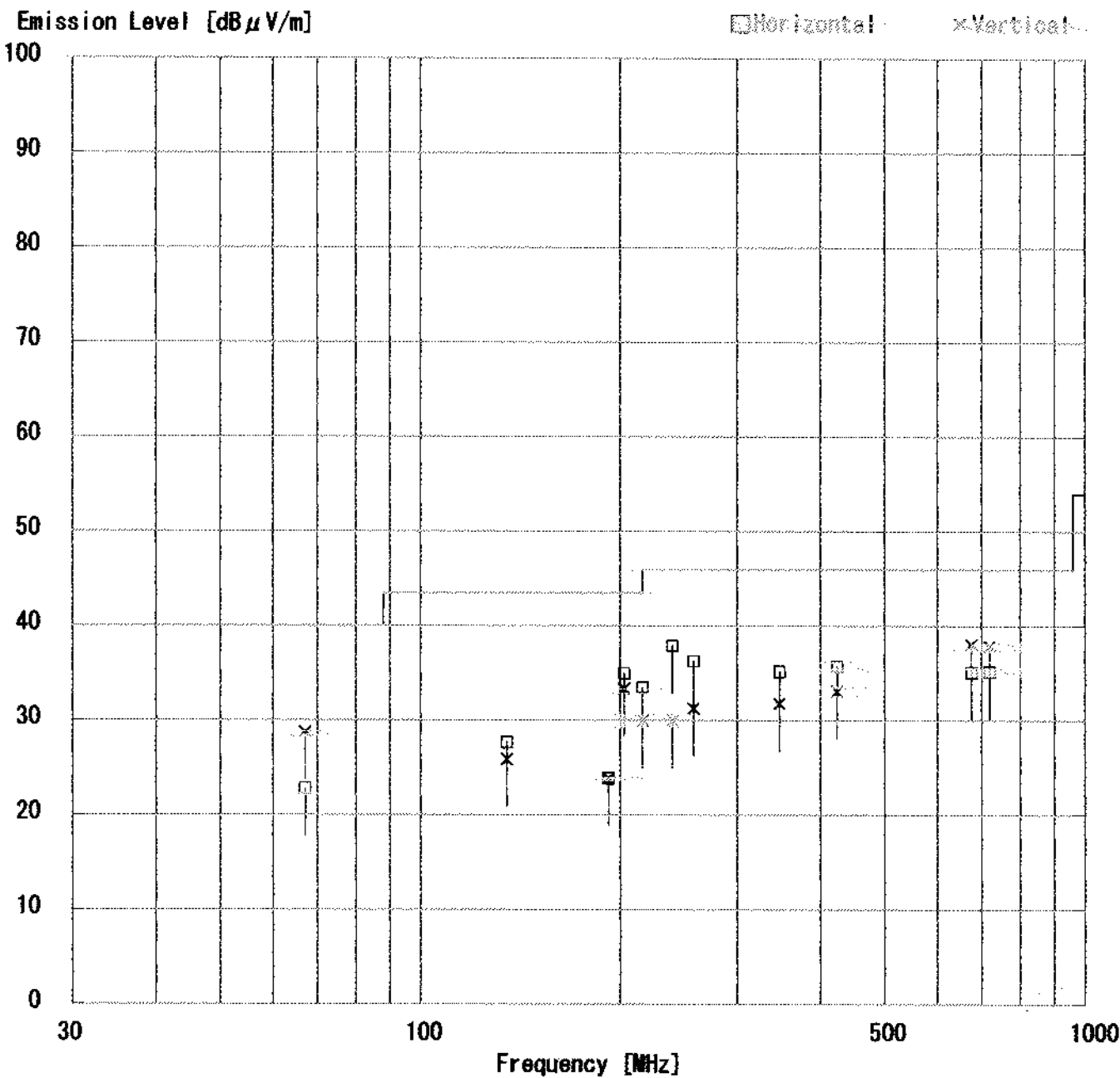
Except for the above table: adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : AV Input 2 + Rec
Remarks : 5Vp-p
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer  Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : VCR Playback + Rec
Remarks : -
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer ~~Isobasa 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.	54.05	BB	40.1	38.6	10.1	28.7	1.4	5.9	28.8	27.3	40.0	11.2	12.7
2.	129.00	BB	36.4	32.6	13.8	28.9	2.2	6.0	29.5	25.7	43.5	14.0	17.8
3.	135.01	BB	32.3	28.2	14.0	28.7	2.3	6.0	25.9	21.8	43.5	17.6	21.7
4.	189.09	BB	34.7	30.8	16.0	28.9	2.8	6.0	30.6	26.7	43.5	12.9	16.8
5.	192.70	BB	36.1	29.1	16.1	28.8	2.8	6.0	32.2	25.2	43.5	11.3	18.3
6.	202.75	BB	41.2	36.6	16.2	28.8	2.9	6.0	37.5	32.9	43.5	6.0	10.6
7.	216.01	BB	39.7	30.2	16.3	28.8	3.0	6.0	36.2	26.7	46.0	9.8	19.3
8.	239.61	BB	42.2	33.0	16.5	28.9	3.2	6.0	39.0	29.8	46.0	7.0	16.2
9.	258.04	BB	39.9	36.6	17.1	28.9	3.3	5.9	37.3	34.0	46.0	8.7	12.0
10.	331.76	BB	37.1	33.8	16.6	28.9	4.1	6.0	34.9	31.6	46.0	11.1	14.4
11.	347.83	BB	34.8	31.4	16.9	28.9	4.2	6.0	33.0	29.6	46.0	13.0	16.4
12.	424.01	BB	35.4	28.1	18.2	28.9	4.9	6.0	35.6	28.3	46.0	10.4	17.7
13.	675.02	BB	29.8	33.5	21.4	29.0	6.3	5.9	34.4	38.1	46.0	11.6	7.9
14.	718.82	BB	29.5	31.4	22.0	28.9	6.6	5.9	35.1	37.0	46.0	10.9	9.0

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

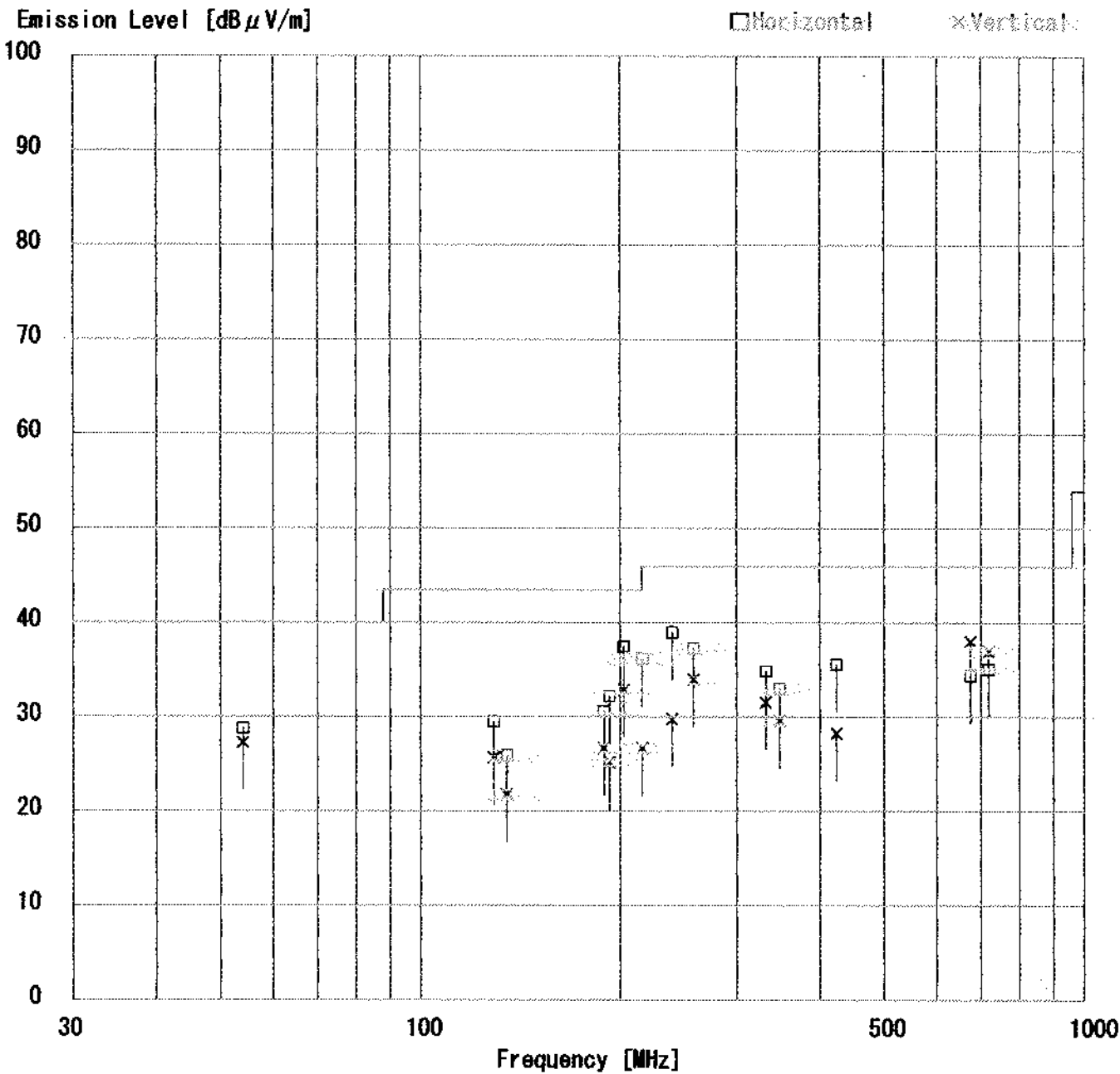
Except for the above table: adequate margin data below the limits.
ANT. TYPE: 30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : VCR Playback + Rec
Remarks :
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : VCR Playback + Rec
Remarks : Test Channel #3
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
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	27.3	26.9	8.2	28.7	1.5	5.9	14.2	13.8	40.0	25.8	26.2
2.	65.75	BB	29.3	27.8	7.4	28.9	1.5	6.0	15.3	13.8	40.0	24.7	26.2
3.	122.50	BB	24.1	24.6	13.5	28.8	2.1	6.0	16.9	17.4	43.5	26.6	26.1
4.	245.00	BB	23.9	23.5	16.6	28.9	3.2	5.9	20.7	20.3	46.0	25.3	25.7

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

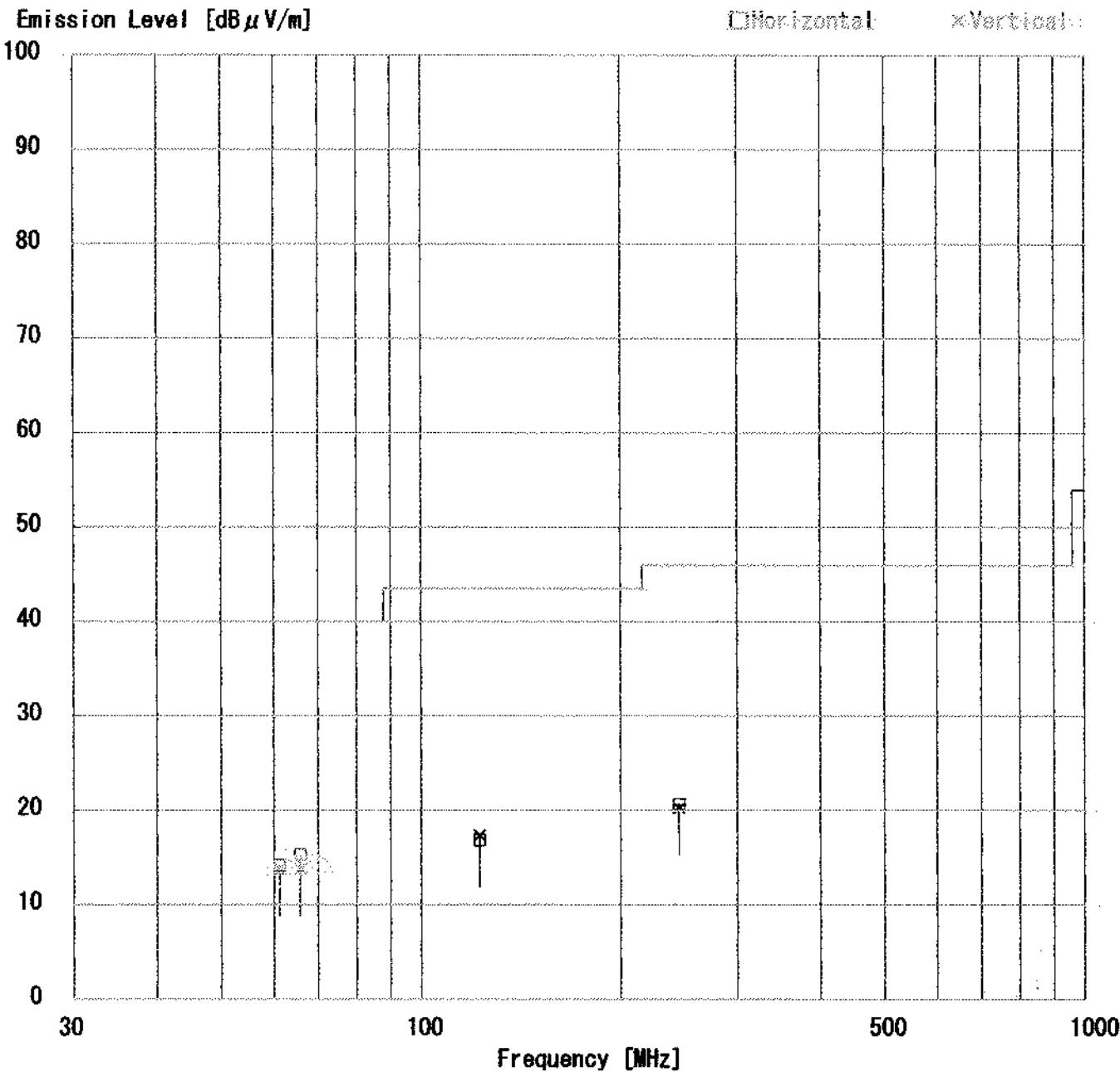
Except for the above table: adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : VCR Playback + Rec
Remarks : Test Channel #3
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer ~~Isobasa Takayama~~



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : VCR Playback + Rec
Remarks : Test Channel #4
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 65 %
Regulation : FCC Part15B CLASS B


Engineer : Tsubasa Takayama

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	67.25	BB	27.3	25.9	7.1	28.8	1.6	6.0	13.2	11.8	40.0	26.8	28.2
2.	71.75	BB	29.3	27.2	6.6	28.7	1.6	6.0	14.8	12.7	40.0	25.2	27.3
3.	134.50	BB	24.1	24.3	14.0	28.7	2.2	6.0	17.6	17.8	43.5	25.9	25.7
4.	201.75	BB	23.6	23.8	16.2	28.8	2.9	6.0	19.9	20.1	43.5	23.6	23.4

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

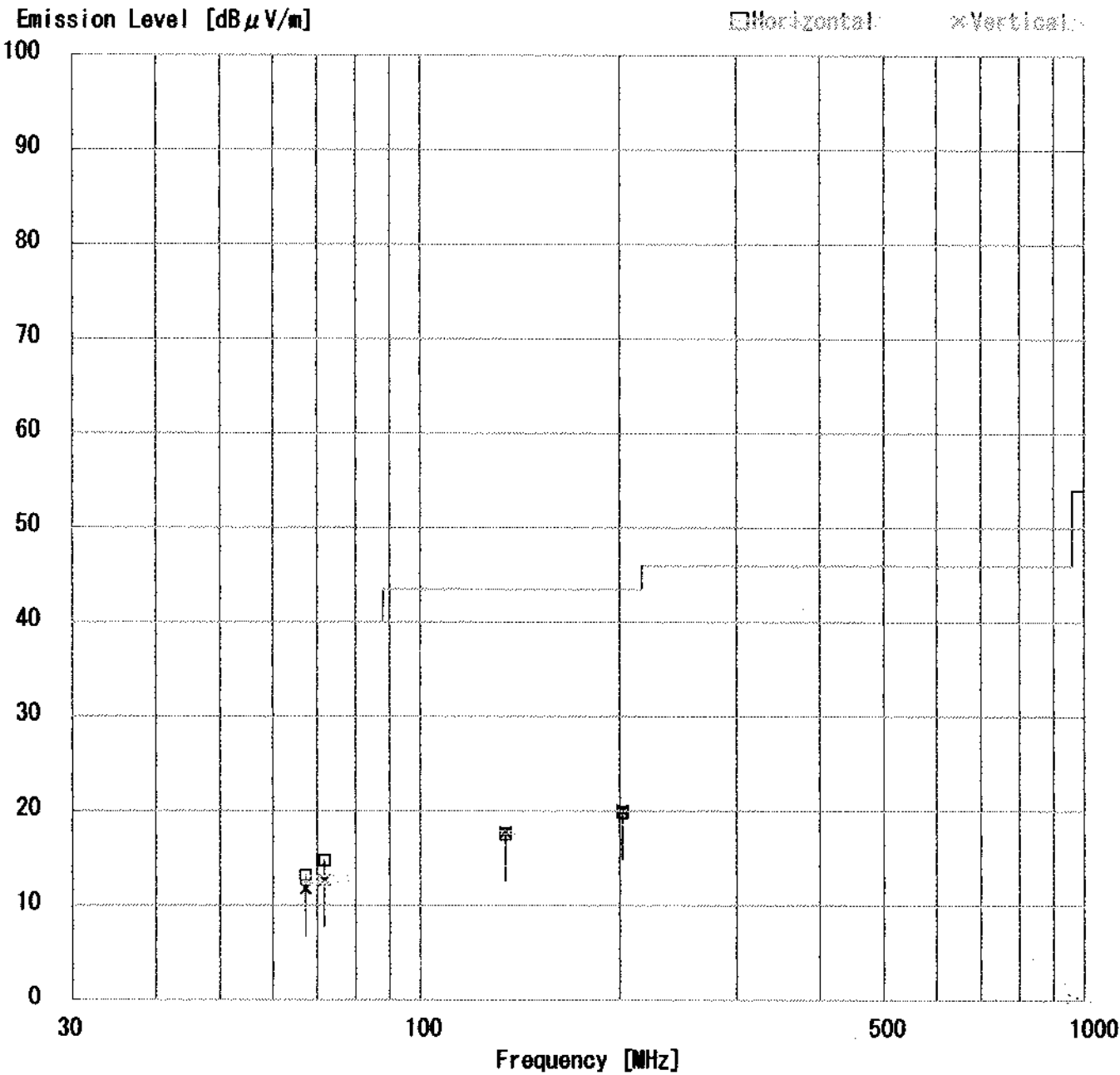
Except for the above table: adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/60Hz
Mode : VCR Playback + Rec
Remarks : Test Channel #4
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 65 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : DVD Play
Remarks :
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
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.	54.21	BB	39.6	36.4	10.1	28.7	1.4	5.9	28.3	25.1	40.0	11.7	14.9
2.	63.05	BB	35.6	34.4	7.9	28.8	1.5	5.9	22.1	20.9	40.0	17.9	19.1
3.	72.00	BB	40.0	40.2	6.6	28.7	1.6	6.0	25.5	25.7	40.0	14.5	14.3
4.	84.00	BB	36.0	40.2	7.0	28.6	1.6	6.0	22.0	26.2	40.0	18.0	13.8
5.	188.99	BB	33.1	28.4	16.0	28.9	2.8	6.0	29.0	24.3	43.5	14.5	19.2
6.	192.65	BB	36.5	32.4	16.1	28.8	2.8	6.0	32.6	28.5	43.5	10.9	15.0
7.	202.75	BB	37.9	34.9	16.2	28.8	2.9	6.0	34.2	31.2	43.5	9.3	12.3
8.	216.00	BB	41.0	34.6	16.3	28.8	3.0	6.0	37.5	31.1	43.5	6.0	12.4
9.	240.82	BB	37.9	28.0	16.5	28.9	3.2	6.0	34.7	24.8	46.0	11.3	21.2
10.	270.00	BB	36.0	29.9	17.9	28.9	3.4	5.9	34.3	28.2	46.0	11.7	17.8
11.	348.09	BB	33.5	36.5	16.9	28.9	4.2	6.0	31.7	34.7	46.0	14.3	11.3
12.	674.98	BB	29.7	33.3	21.4	29.0	6.2	5.9	34.2	37.8	46.0	11.8	8.2

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

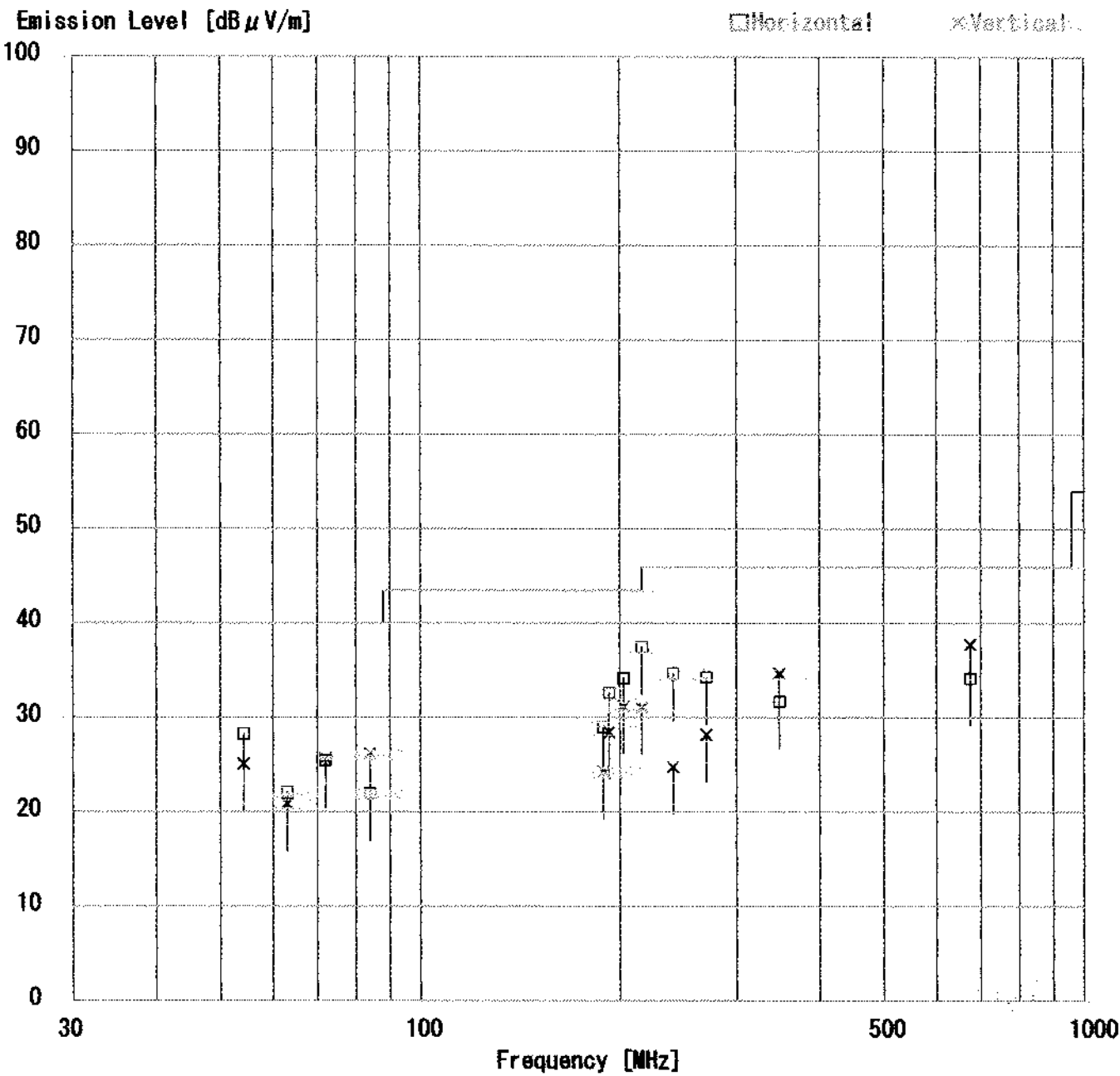
Except for the above table: adequate margin data below the limits.
ANT. TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

UL Apex Co., Ltd.
YOKOWA No.3 OPEN TEST SITE
Report No. : 24AE0029-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD-RW/VCR
Model No. : VHDVD4005
Serial No. :
Power : AC120V/50Hz
Mode : DVD Play
Remarks : -
Date : 8/3/2003
Test Distance : 3 m
Temperature : 27 °C
Humidity : 59 %
Regulation : FCC Part15B CLASS B

Engineer : Tsubasa Takayama



RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4 , 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C/ 65%
Description	: TV Reception + Rec. (0dBmV)		


Engineer : Tsubasa Takayama

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	84.8	20.4	64.4	69.5	5.2
4	67.25	85.2	20.4	64.8	69.5	4.7

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	71.2	20.4	50.8	56.5	5.7
	65.75	70.1	20.4	49.7	56.5	6.8
4	62.75	70.3	20.4	49.9	56.5	6.6
	71.75	69.2	20.4	48.8	56.5	7.7

RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4, 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C / 65%
Description	: TV Reception + Rec. (25dBmV)		

Engineer  : Tsubasa Takayama

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	86.4	20.4	66.0	69.5	3.5
4	67.25	85.2	20.4	64.8	69.5	4.7

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	71.4	20.4	51.0	56.5	5.5
	65.75	70.3	20.4	49.9	56.5	6.6
4	62.75	70.3	20.4	49.9	56.5	6.6
	71.75	69.3	20.4	48.9	56.5	7.6

RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4 , 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C/ 65%
Description	: AV Input 1 + Rec. (1V p-p)		

Engineer  : Tsubasa Takayama

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	84.5	20.4	64.1	69.5	5.4
4	67.25	85.4	20.4	65.0	69.5	4.5

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	71.0	20.4	50.6	56.5	5.9
	65.75	69.9	20.4	49.5	56.5	7.0
4	62.75	70.4	20.4	50.0	56.5	6.5
	71.75	69.2	20.4	48.8	56.5	7.7

RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4 , 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C/ 65%
Description	: AV Input 1 + Rec. (5V p-p)		

Engineer  : Tsubasa Takayama

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	85.0	20.4	64.6	69.5	4.9
4	67.25	84.9	20.4	64.5	69.5	5.0

Audio signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	56.75	70.9	20.4	50.5	56.5	6.0
	65.75	69.8	20.4	49.4	56.5	7.1
4	62.75	70.1	20.4	49.7	56.5	6.8
	71.75	69.1	20.4	48.7	56.5	7.8

RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4 , 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C/ 65%
Description	: AV Input 2 + Rec. (1V p-p)		


Engineer Tsubasa Takayama

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	84.4	20.4	64.0	69.5	5.5
4	67.25	85.5	20.4	65.1	69.5	4.4

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	71.0	20.4	50.6	56.5	5.9
	65.75	69.9	20.4	49.5	56.5	7.0
4	62.75	70.4	20.4	50.0	56.5	6.5
	71.75	69.3	20.4	48.9	56.5	7.6

RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4 , 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C/ 65%
Description	: AV Input 2 + Rec. (5V p-p)		

~~Engineer~~ : ~~Tsubasa Takayama~~

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	84.3	20.4	63.9	69.5	5.6
4	67.25	84.8	20.4	64.4	69.5	5.1

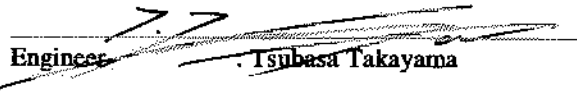
Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	71.0	20.4	50.6	56.5	5.9
	65.75	69.8	20.4	49.4	56.5	7.2
4	62.75	69.9	20.4	49.5	56.5	7.0
	71.75	68.5	20.4	48.1	56.5	8.4

RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4 , 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C/ 65%
Description	: VCR Playback + Rec		


Engineer Tsubasa Takayama

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	84.5	20.4	64.1	69.5	5.4
4	67.25	85.7	20.4	65.3	69.5	4.3

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	71.0	20.4	50.6	56.5	5.9
	65.75	69.8	20.4	49.4	56.5	7.1
4	62.75	70.5	20.4	50.1	56.5	6.4
	71.75	69.9	20.4	49.5	56.5	7.0

RF output level

UL Apex Co., Ltd.
YOKOWA EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VHDVD4005	Date	: August 4 , 2003
Power	: AC 120 V / 60 Hz	Temp. / Humid.	: 25°C/ 65%
Description	: DVD Play		

Engineer : Tsubasa Takayama

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	84.7	20.4	64.3	69.5	5.2
4	67.25	85.4	20.4	65.0	69.5	4.5

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	71.0	20.4	50.6	56.5	5.9
	65.75	69.9	20.4	49.5	56.5	7.0
4	62.75	70.4	20.4	50.0	56.5	6.5
	71.75	69.3	20.4	48.9	56.5	7.6

DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA ENG LABORATORY

COMPANY : Orion Electric Co., Ltd.

EQUIPMENT : DVD-RW/VCR

MODEL NAME : VHDVD4005

OPERATION MODE: TV Reception + Rec

PORT : RF OUTPUT TERMINAL

POWER : AC120V/60Hz

REMARKS 1 : 0dBmV Input

REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1

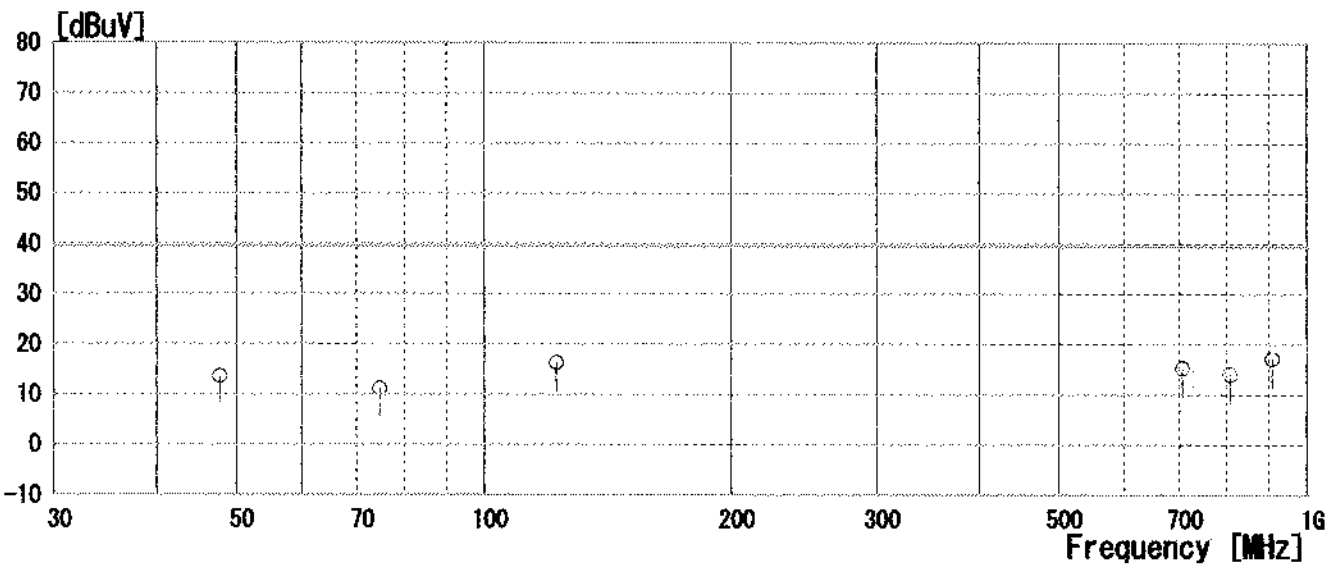
DATE : August 04, 2003

REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	47.760	34.8	—	-21.2	13.6	—	39.5	—	25.9	—
2	74.710	32.2	—	-21.1	11.1	—	39.5	—	28.4	—
3	122.540	37.0	—	-20.7	16.3	—	39.5	—	23.2	—
4	707.090	35.7	—	-20.5	15.2	—	39.5	—	24.3	—
5	808.090	34.4	—	-20.4	14.0	—	39.5	—	25.5	—
6	909.100	37.2	—	-20.0	17.1	—	39.5	—	22.4	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOHAMA EMC LABORATORY

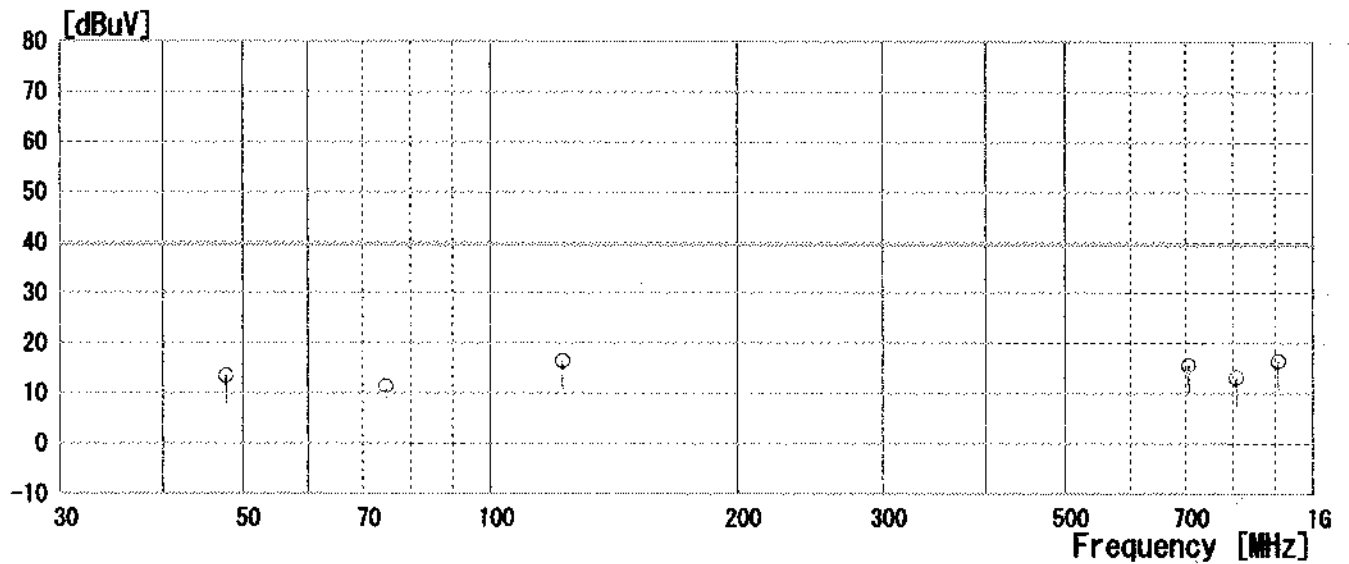
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : TV Reception + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 25dBmV Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	47.760	34.7	—	-21.2	13.5	—	39.5	—	26.0	—
2	74.710	32.5	—	-21.1	11.4	—	39.5	—	28.1	—
3	122.540	37.2	—	-20.7	16.5	—	39.5	—	23.0	—
4	707.090	36.1	—	-20.5	15.6	—	39.5	—	23.9	—
5	808.090	33.6	—	-20.4	13.2	—	39.5	—	26.3	—
6	909.100	36.5	—	-20.0	16.5	—	39.5	—	23.0	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

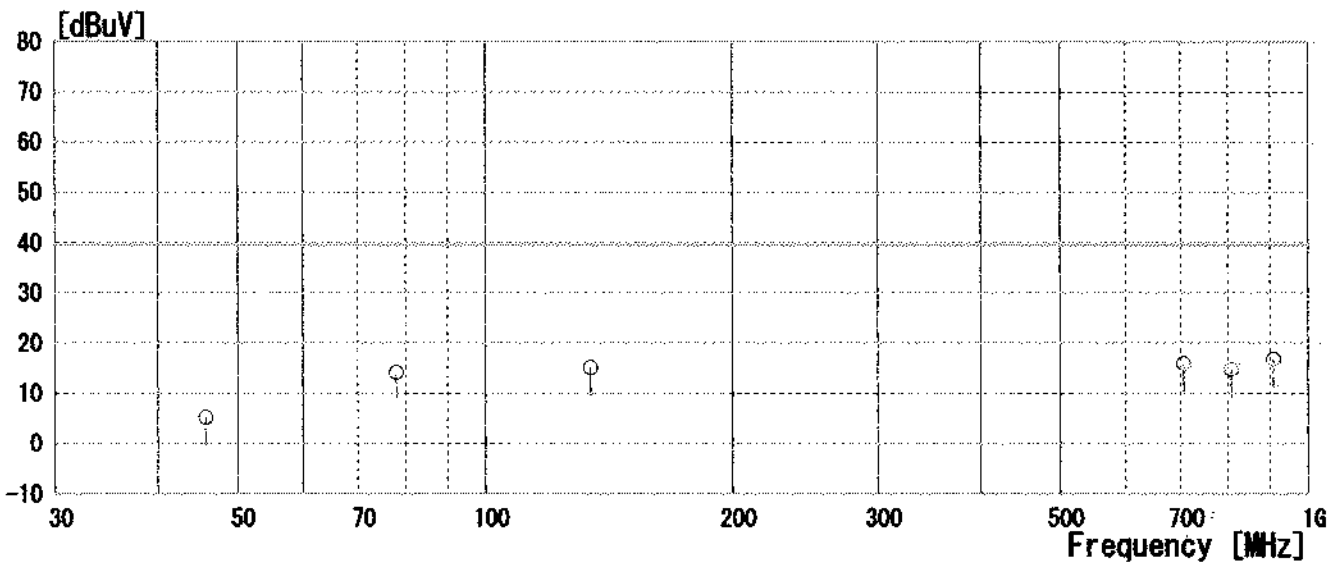
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : TV Reception + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 0dBmV Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV [dBuV]		QP	AV [dBuV]	QP	AV [dBuV]	QP	AV [dB]
1	45.760	26.4	—	-21.2	5.2	—	39.5	—	34.3	—
2	77.990	35.2	—	-21.1	14.1	—	39.5	—	25.4	—
3	134.470	35.7	—	-20.6	15.1	—	39.5	—	24.4	—
4	707.020	36.4	—	-20.5	15.9	—	39.5	—	23.6	—
5	808.080	35.1	—	-20.4	14.7	—	39.5	—	24.8	—
6	909.070	36.8	—	-20.0	16.8	—	39.5	—	22.7	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOHAMA EMC LABORATORY

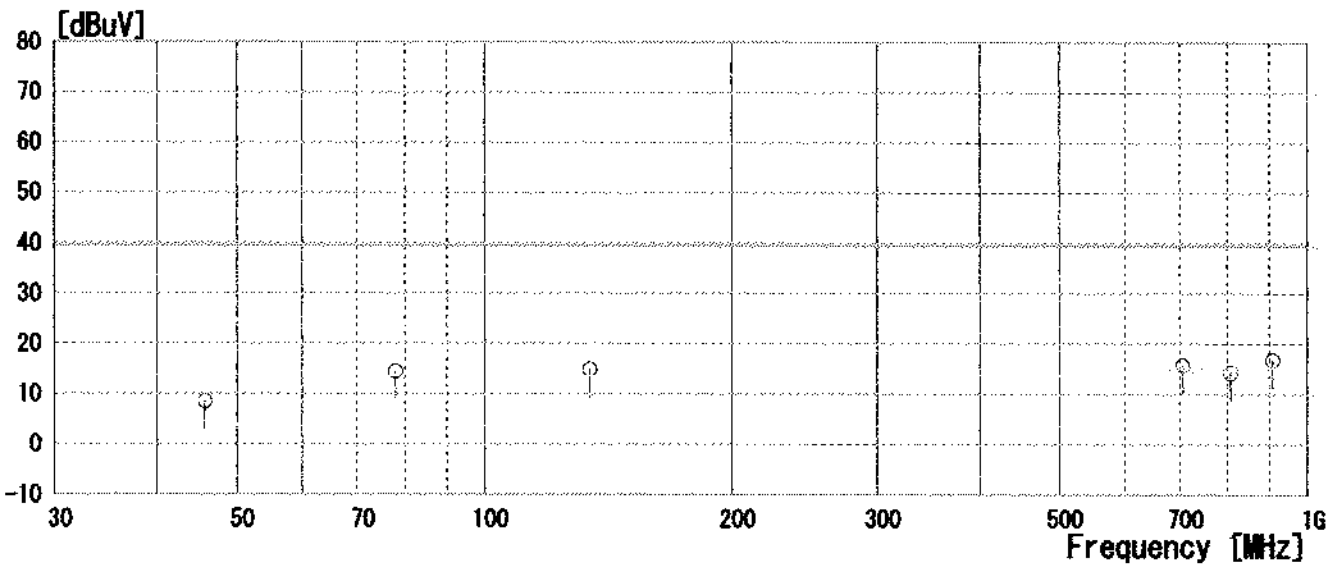
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : TV Reception + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 25dBmV Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Isobasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	45.760	29.7	-----	-21.2	8.5	-----	39.5	-----	31.0	-----
2	77.990	35.5	-----	-21.1	14.4	-----	39.5	-----	25.1	-----
3	134.470	35.5	-----	-20.6	14.9	-----	39.5	-----	24.6	-----
4	707.020	36.2	-----	-20.5	15.7	-----	39.5	-----	23.8	-----
5	808.080	34.6	-----	-20.4	14.2	-----	39.5	-----	25.3	-----
6	909.070	36.8	-----	-20.0	16.8	-----	39.5	-----	22.7	-----

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOMA EMC LABORATORY

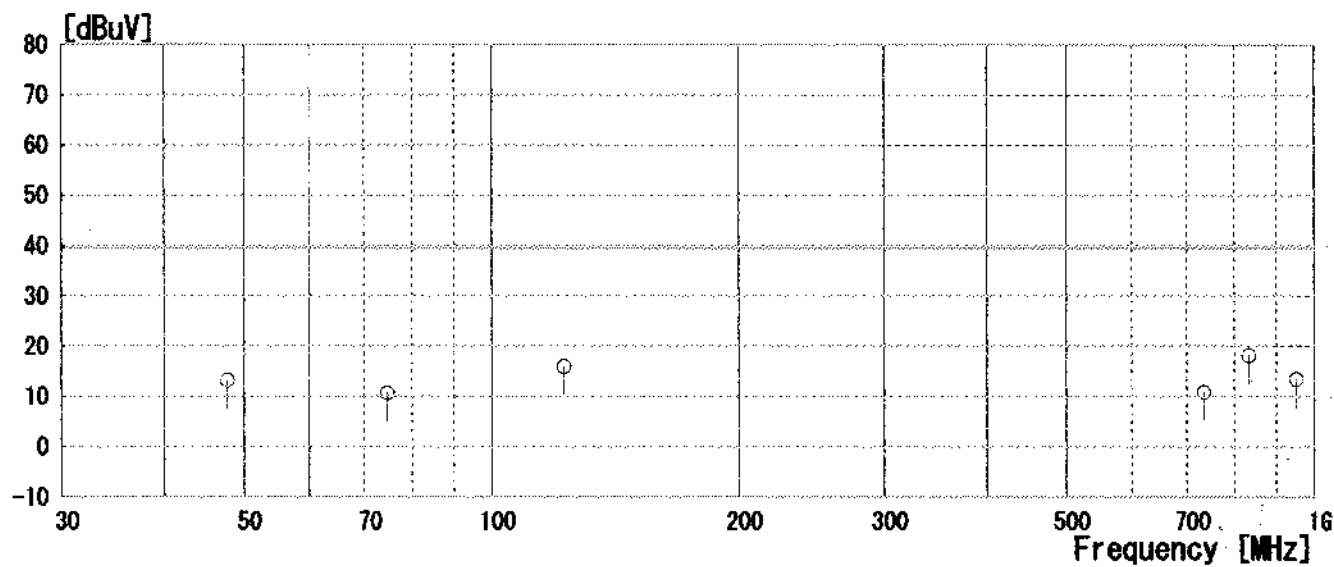
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE: AV Input 1 + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1V p-p Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

[Signature]
Engineer: Isobasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	47.760	34.4	—	-21.2	13.2	—	39.5	—	26.3	—
2	74.710	31.8	—	-21.1	10.7	—	39.5	—	28.8	—
3	122.540	36.6	—	-20.7	15.9	—	39.5	—	23.6	—
4	735.110	31.3	—	-20.4	10.9	—	39.5	—	28.6	—
5	833.150	38.5	—	-20.4	18.1	—	39.5	—	21.4	—
6	952.160	33.1	—	-19.7	13.4	—	39.5	—	26.1	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOMA EMC LABORATORY

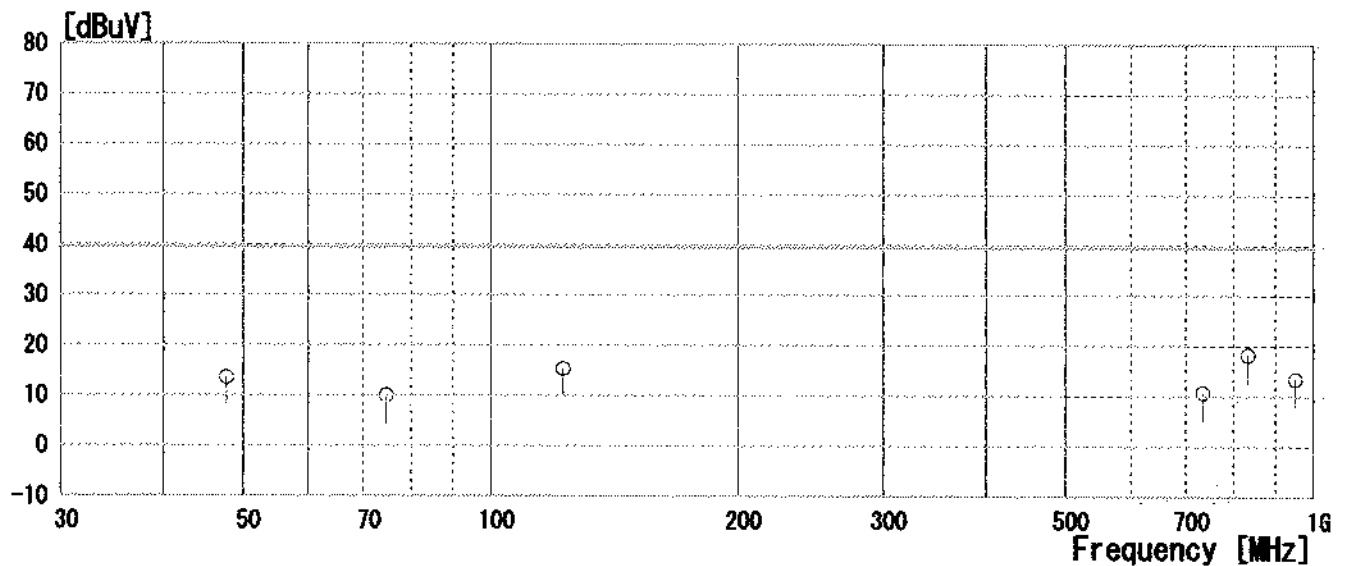
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 1 + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 5V p-p Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsutsumi Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	47.760	34.7	—	-21.2	13.5	—	39.5	—	26.0	—
2	74.710	31.1	—	-21.1	10.0	—	39.5	—	29.5	—
3	122.540	36.0	—	-20.7	15.3	—	39.5	—	24.2	—
4	735.110	31.1	—	-20.4	10.7	—	39.5	—	28.8	—
5	833.150	38.6	—	-20.4	18.2	—	39.5	—	21.3	—
6	952.160	33.1	—	-19.7	13.4	—	39.5	—	26.1	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

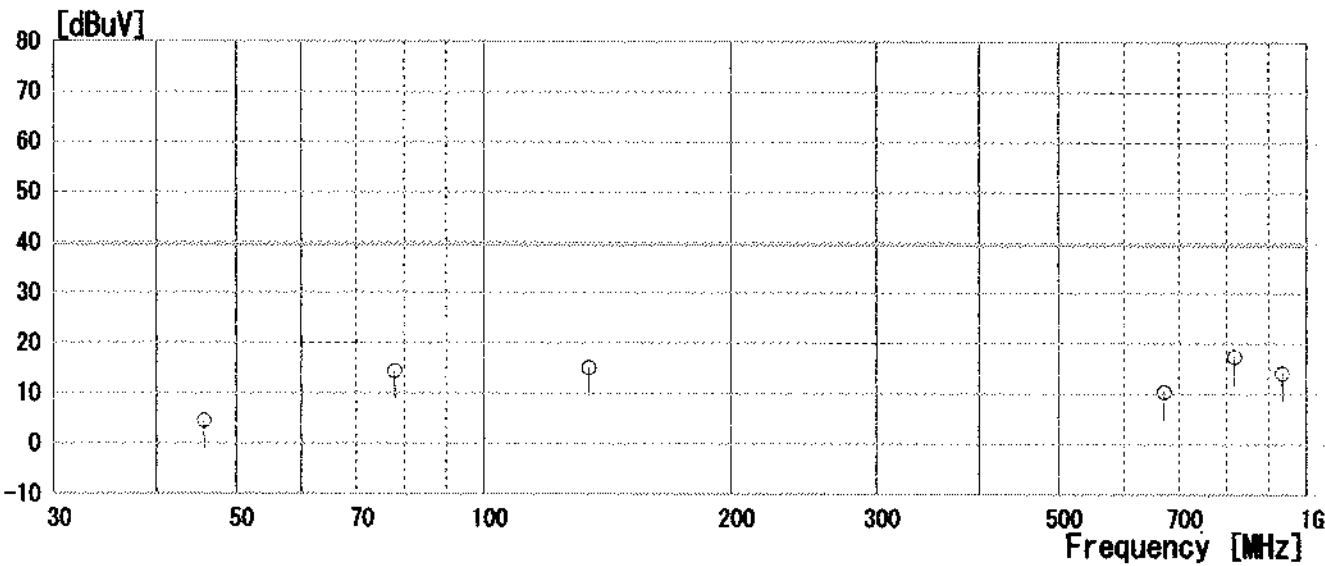
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 1 + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takeyama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]
1	45.760	25.7	—	-21.2	4.5	—	39.5	—	35.0	—
2	77.990	35.5	—	-21.1	14.4	—	39.5	—	25.1	—
3	134.470	35.7	—	-20.6	15.1	—	39.5	—	24.4	—
4	672.380	30.9	—	-20.5	10.4	—	39.5	—	29.1	—
5	819.050	37.8	—	-20.4	17.4	—	39.5	—	22.1	—
6	936.090	34.0	—	-19.8	14.2	—	39.5	—	25.3	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

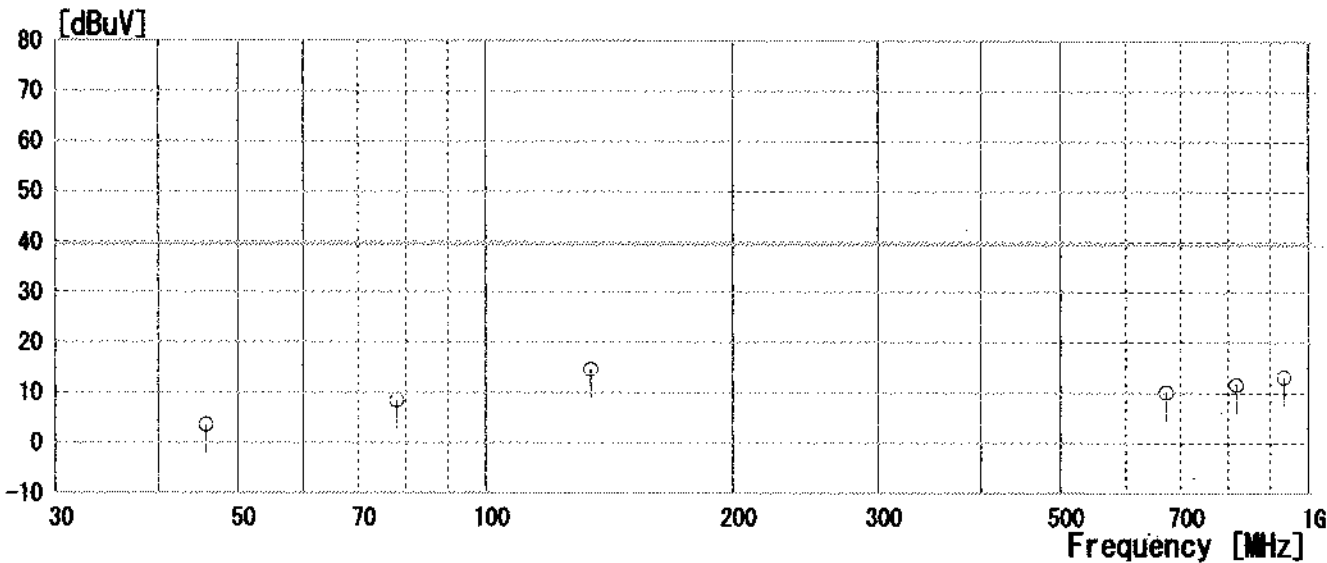
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 1 + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 5Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV [dBuV]		QP	AV [dBuV]	QP [dBuV]	AV	QP [dB]	AV
1	45.760	24.8	—	-21.2	3.6	—	39.5	—	35.9	—
2	77.990	29.5	—	-21.1	8.4	—	39.5	—	31.1	—
3	134.470	35.2	—	-20.6	14.6	—	39.5	—	24.9	—
4	672.380	30.6	—	-20.5	10.1	—	39.5	—	29.4	—
5	819.050	32.0	—	-20.4	11.6	—	39.5	—	27.9	—
6	936.090	33.0	—	-19.8	13.2	—	39.5	—	26.3	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

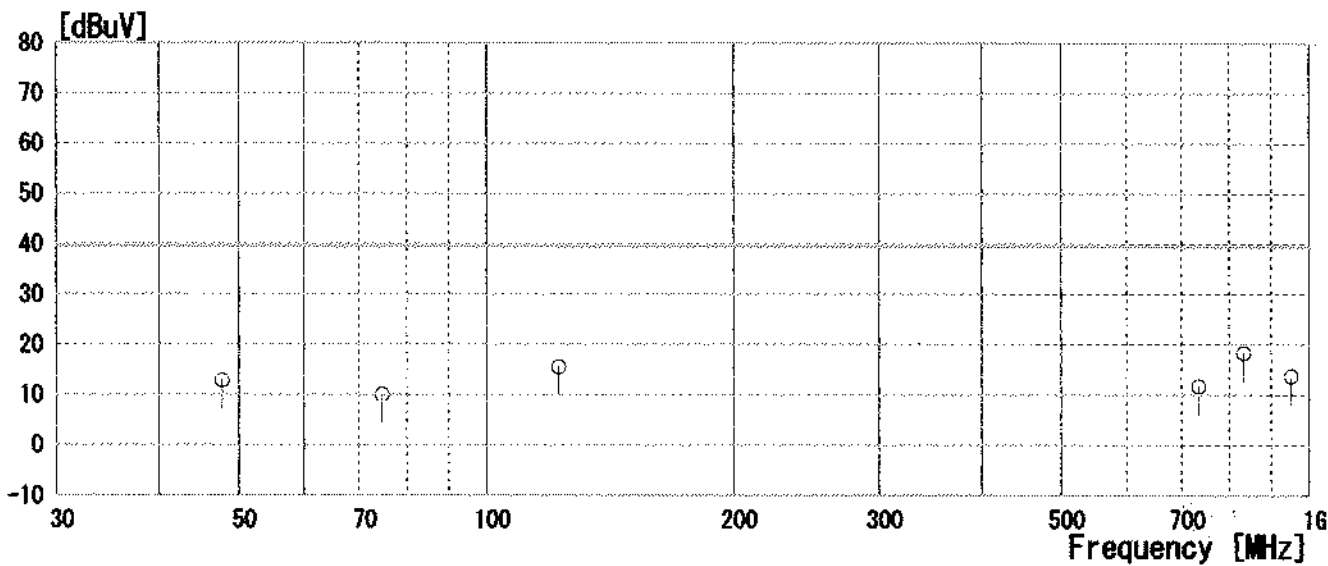
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 2 + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1V p-p Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	47.760	34.0	—	-21.2	12.8	—	39.5	—	26.7	—
2	74.710	31.1	—	-21.1	10.0	—	39.5	—	29.5	—
3	122.540	36.2	—	-20.7	15.5	—	39.5	—	24.0	—
4	735.110	32.1	—	-20.4	11.7	—	39.5	—	27.8	—
5	833.150	38.7	—	-20.4	18.3	—	39.5	—	21.2	—
6	952.160	33.4	—	-19.7	13.7	—	39.5	—	25.8	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

COMPANY : Orion Electric Co., Ltd.

EQUIPMENT : DVD-RW/VCR

MODEL NAME : VHDVD4005

OPERATION MODE : AV Input 2 + Rec

PORT : RF OUTPUT TERMINAL

POWER : AC120V/60Hz

REMARKS 1 : 5V p-p Input

REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1

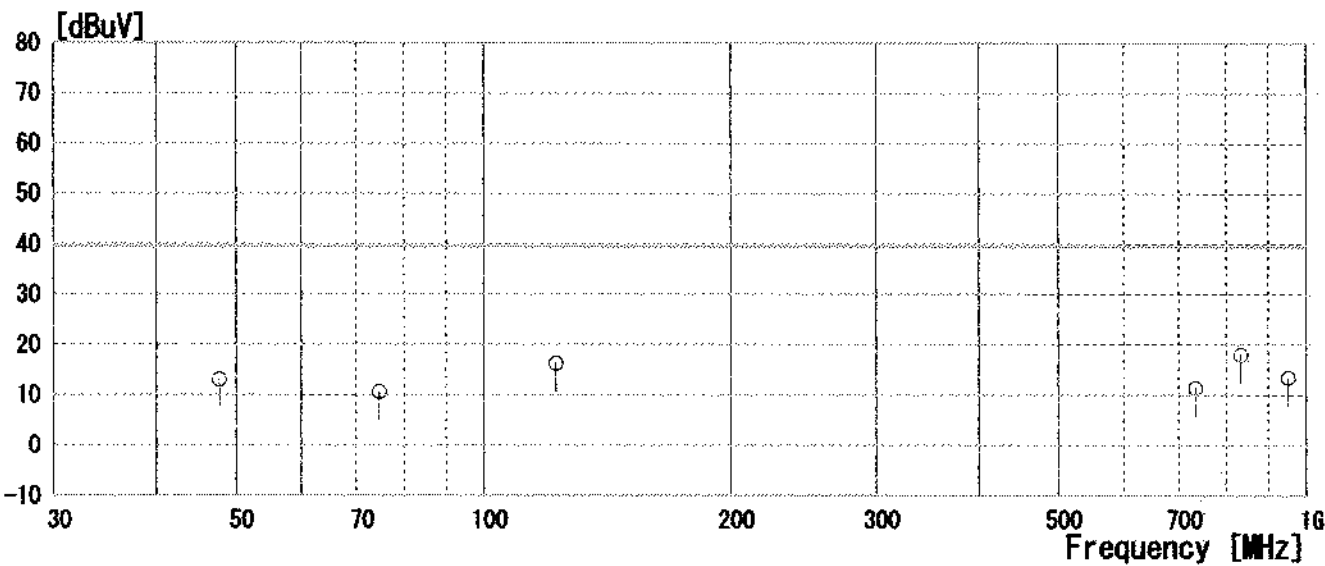
DATE : August 04, 2003

REGULATION : FCC PART15 SUBPART B

Engineer : Isubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV [dBuV]		QP	AV [dBuV]	QP [dBuV]	AV	QP [dB]	AV
1	47.760	34.3	—	-21.2	13.1	—	39.5	—	26.4	—
2	74.710	31.7	—	-21.1	10.6	—	39.5	—	28.9	—
3	122.540	36.9	—	-20.7	16.2	—	39.5	—	23.3	—
4	735.110	31.8	—	-20.4	11.3	—	39.5	—	28.2	—
5	833.150	38.3	—	-20.4	18.0	—	39.5	—	21.5	—
6	952.160	33.1	—	-19.7	13.4	—	39.5	—	26.1	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

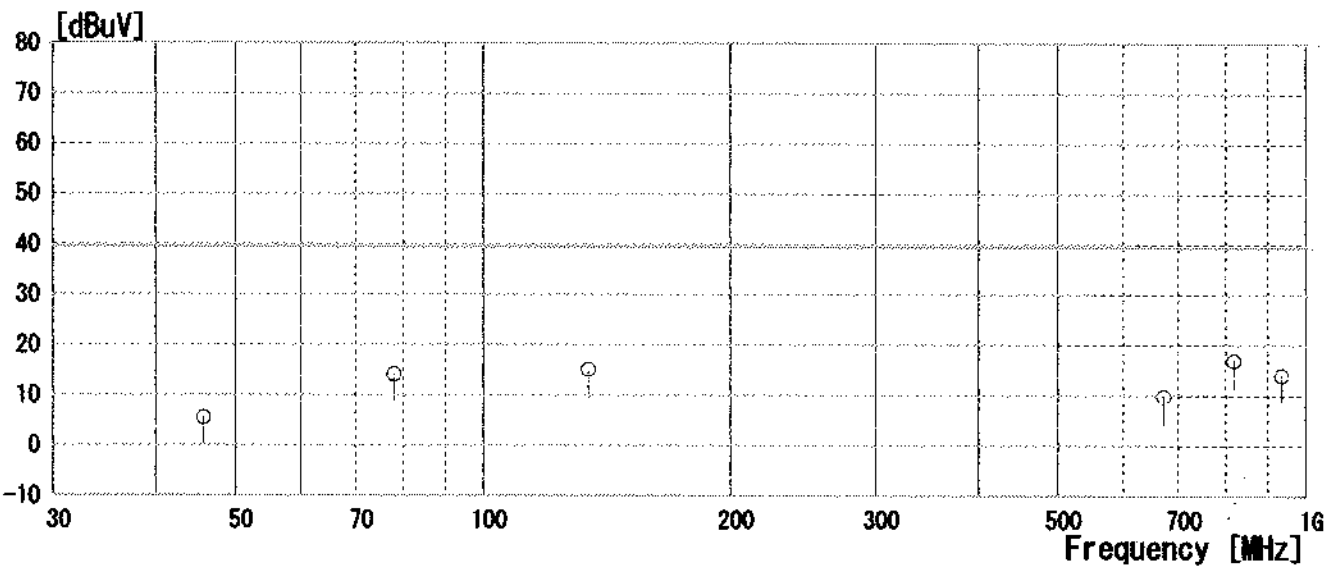
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 2 + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

~~Engineer Teubasa Takayama~~

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	45.760	26.7	—	-21.2	5.5	—	39.5	—	34.0	—
2	77.990	35.2	—	-21.1	14.1	—	39.5	—	25.4	—
3	134.470	35.7	—	-20.6	15.1	—	39.5	—	24.4	—
4	672.380	30.3	—	-20.5	9.8	—	39.5	—	29.7	—
5	819.050	37.3	—	-20.4	16.9	—	39.5	—	22.6	—
6	936.090	33.8	—	-19.8	14.0	—	39.5	—	25.5	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

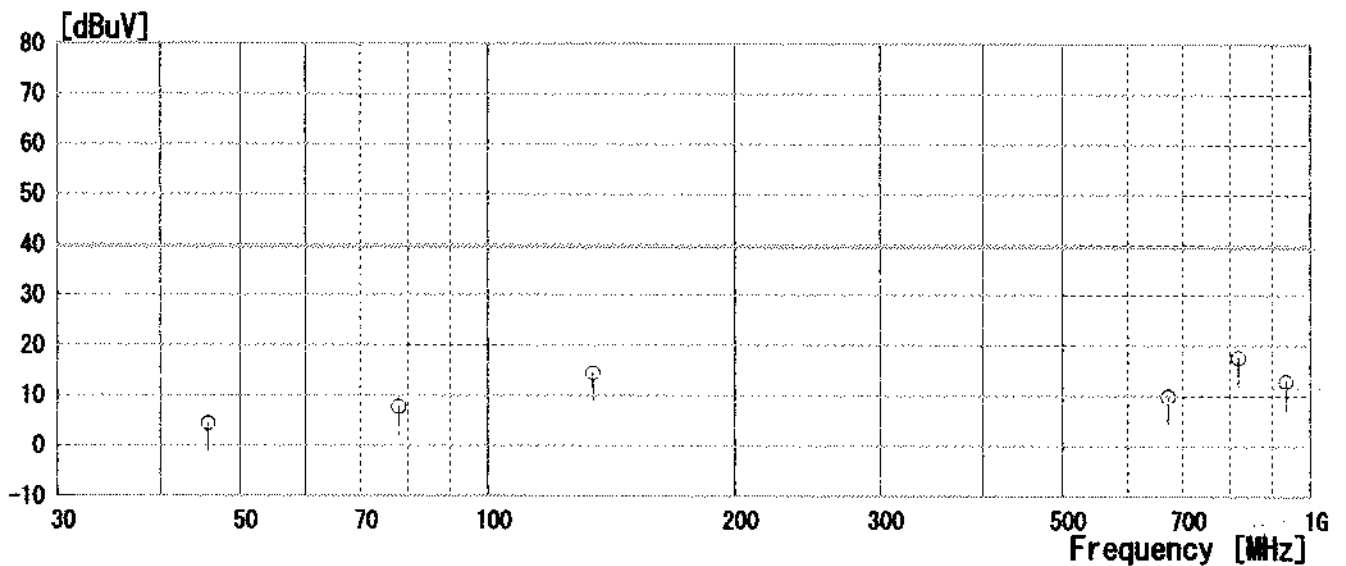
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 2 + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 5Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	45.760	25.6	—	-21.2	4.4	—	39.5	—	35.1	—
2	77.990	28.8	—	-21.1	7.7	—	39.5	—	31.8	—
3	134.470	35.1	—	-20.6	14.5	—	39.5	—	25.0	—
4	672.380	30.4	—	-20.5	9.9	—	39.5	—	29.6	—
5	819.050	38.0	—	-20.4	17.6	—	39.5	—	21.9	—
6	936.090	32.7	—	-19.8	12.9	—	39.5	—	26.6	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

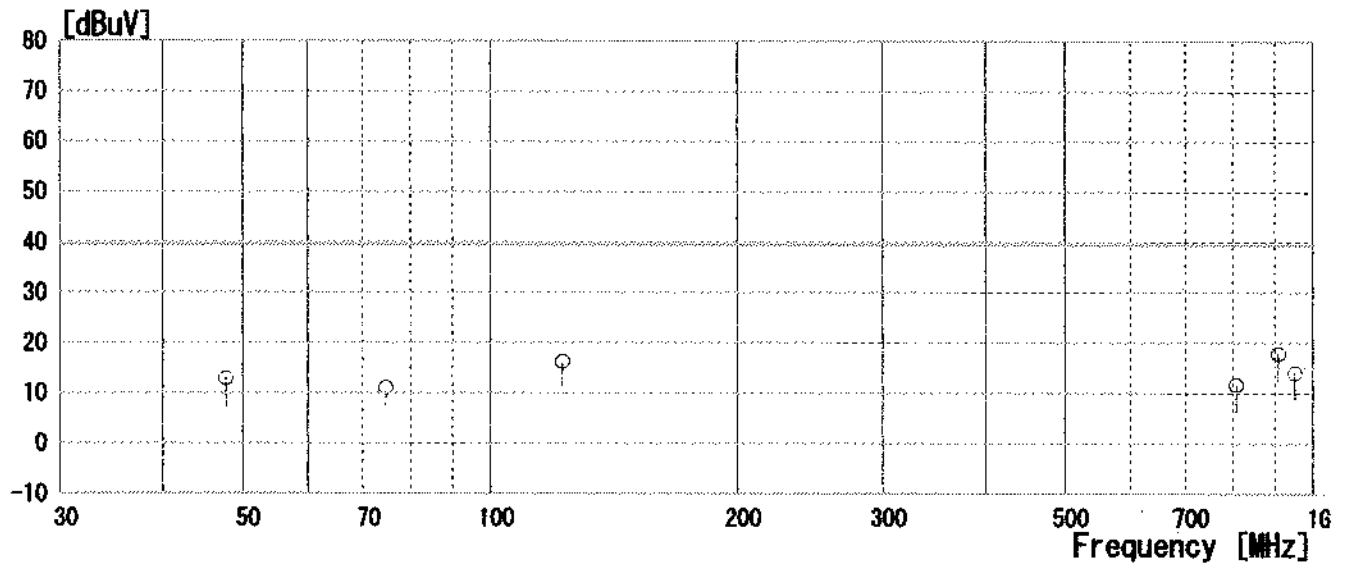
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : VCR Playback + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : -
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	47.760	34.1	—	-21.2	12.9	—	39.5	—	26.6	—
2	74.710	32.1	—	-21.1	11.0	—	39.5	—	28.5	—
3	122.540	36.9	—	-20.7	16.2	—	39.5	—	23.3	—
4	808.010	32.1	—	-20.4	11.7	—	39.5	—	27.8	—
5	909.010	37.9	—	-20.0	17.9	—	39.5	—	21.6	—
6	952.160	33.7	—	-19.7	14.0	—	39.5	—	25.5	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOHAMA EMC LABORATORY

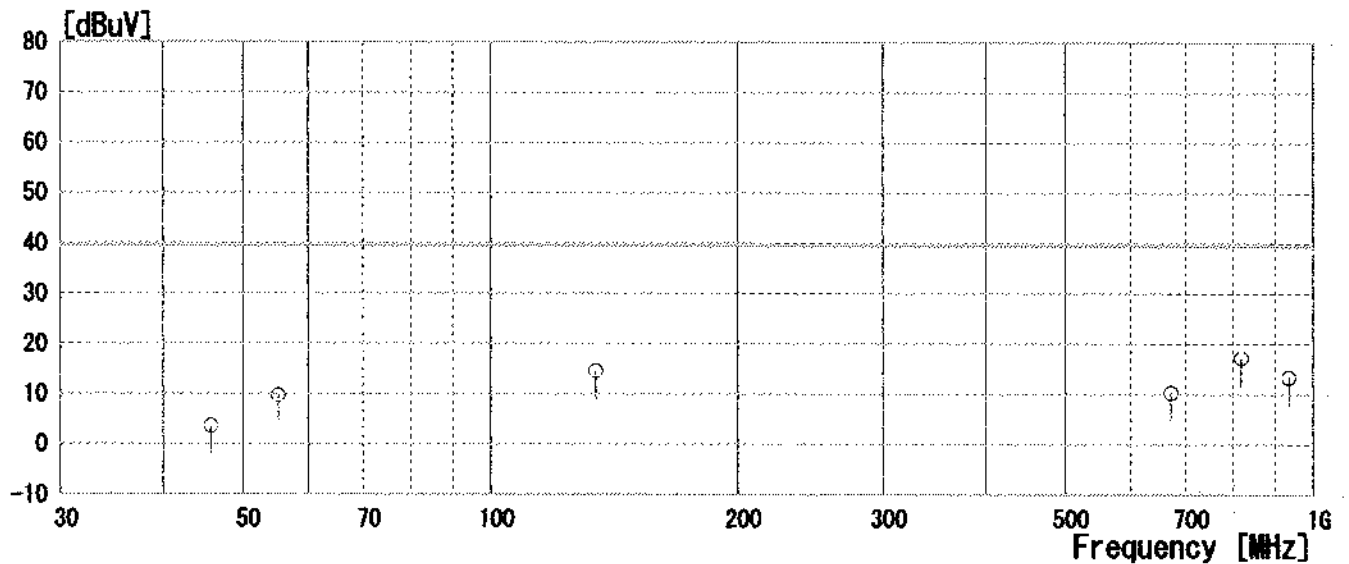
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : VCR Playback + Rec
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : -
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	45.760	24.8	—	-21.2	3.6	—	39.5	—	35.9	—
2	55.250	30.9	—	-21.2	9.7	—	39.5	—	29.8	—
3	134.470	35.2	—	-20.6	14.6	—	39.5	—	24.9	—
4	672.380	30.8	—	-20.5	10.3	—	39.5	—	29.2	—
5	819.050	37.6	—	-20.4	17.2	—	39.5	—	22.3	—
6	936.090	33.2	—	-19.8	13.4	—	39.5	—	26.1	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

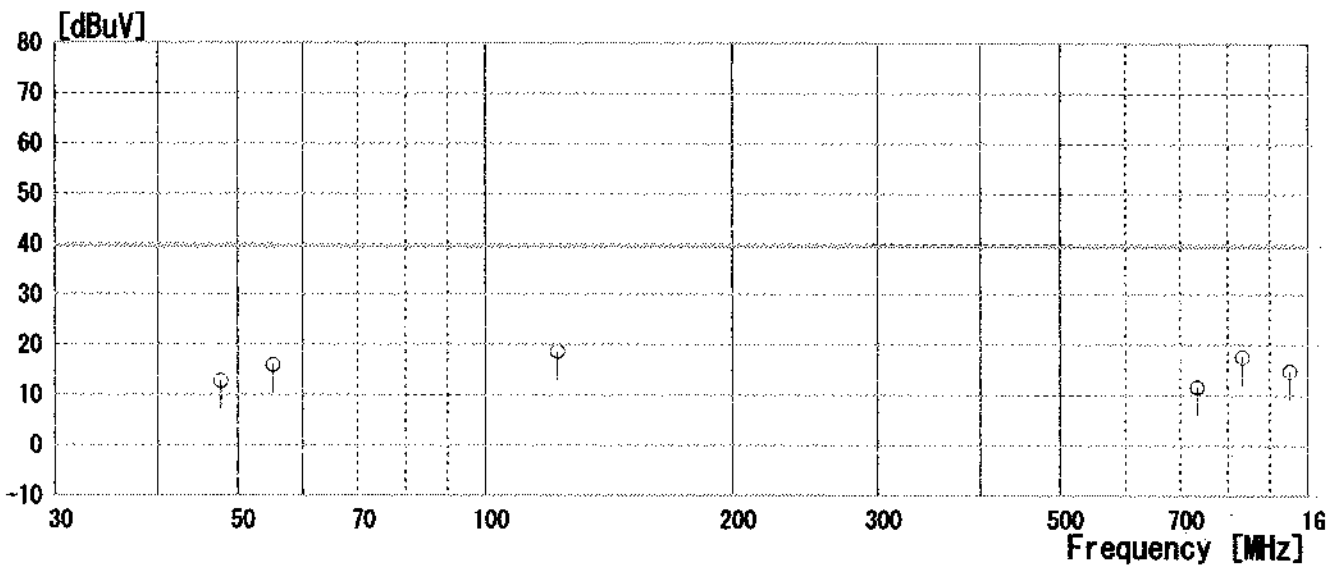
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : DVD Play
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : -
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer Tsubasa Lakayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	47.760	33.9	—	-21.2	12.7	—	39.5	—	26.8	—
2	55.250	37.1	—	-21.2	15.9	—	39.5	—	23.6	—
3	122.540	39.3	—	-20.7	18.6	—	39.5	—	20.9	—
4	735.110	32.1	—	-20.4	11.6	—	39.5	—	27.9	—
5	833.150	37.9	—	-20.4	17.6	—	39.5	—	21.9	—
6	952.160	34.5	—	-19.7	14.8	—	39.5	—	24.7	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF RF SPURIOUS

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

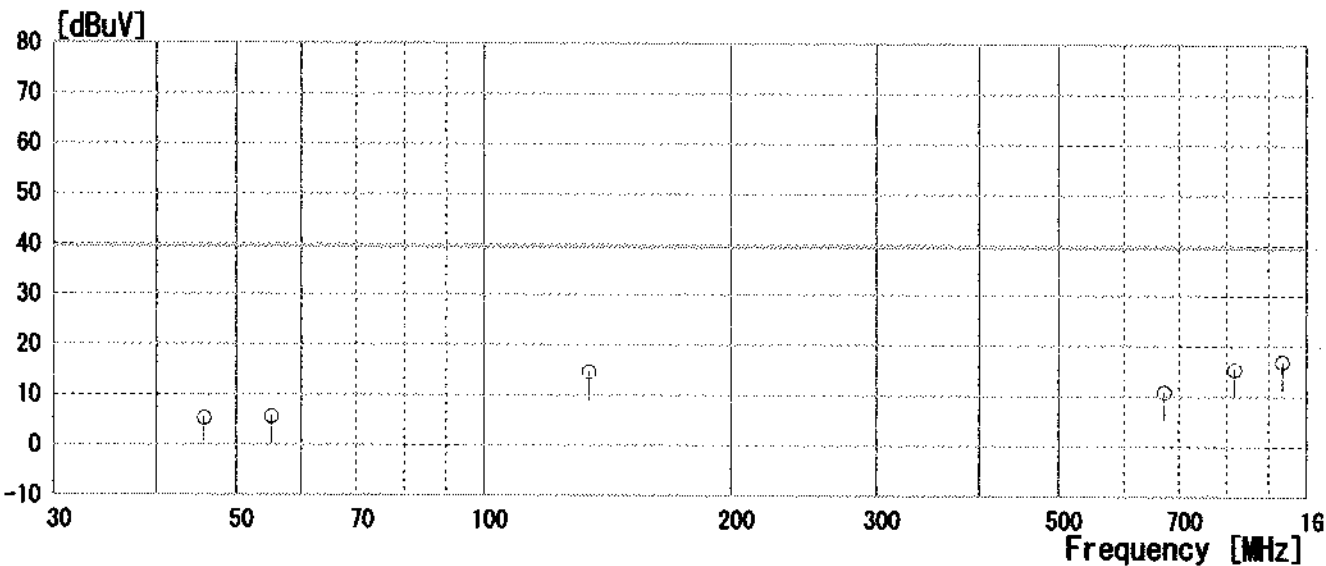
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : DVD Play
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : -
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: ~~Tsunasa Takayama~~

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	45.760	26.5	—	-21.2	5.3	—	39.5	—	34.2	—
2	55.250	26.8	—	-21.2	5.6	—	39.5	—	33.9	—
3	134.470	35.2	—	-20.6	14.6	—	39.5	—	24.9	—
4	672.380	31.4	—	-20.5	10.9	—	39.5	—	28.6	—
5	819.050	35.7	—	-20.4	15.3	—	39.5	—	24.2	—
6	936.090	36.7	—	-19.8	16.9	—	39.5	—	22.6	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOHAMA EMC LABORATORY

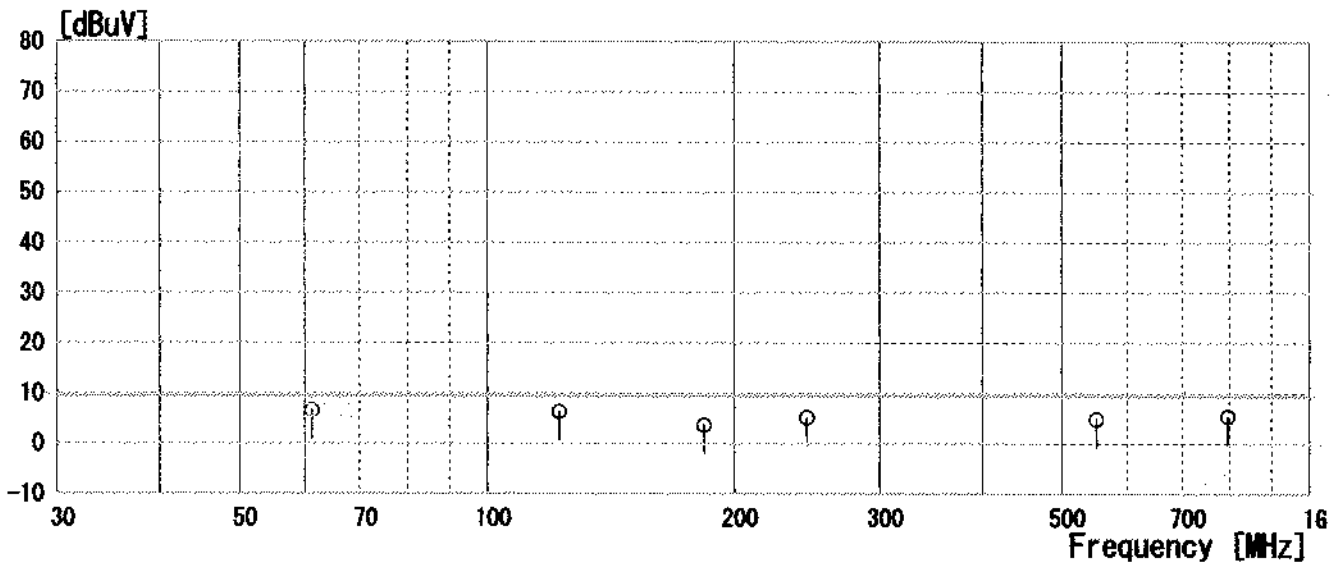
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 1 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1Vp-p Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	61.250	27.8	—	-21.2	6.5	—	9.5	—	3.0	—
2	122.500	27.0	—	-20.7	6.3	—	9.5	—	3.2	—
3	183.750	24.4	—	-20.7	3.7	—	9.5	—	5.8	—
4	245.000	25.7	—	-20.5	5.2	—	9.5	—	4.3	—
5	551.250	25.6	—	-20.7	4.9	—	9.5	—	4.6	—
6	796.250	25.8	—	-20.4	5.4	—	9.5	—	4.1	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

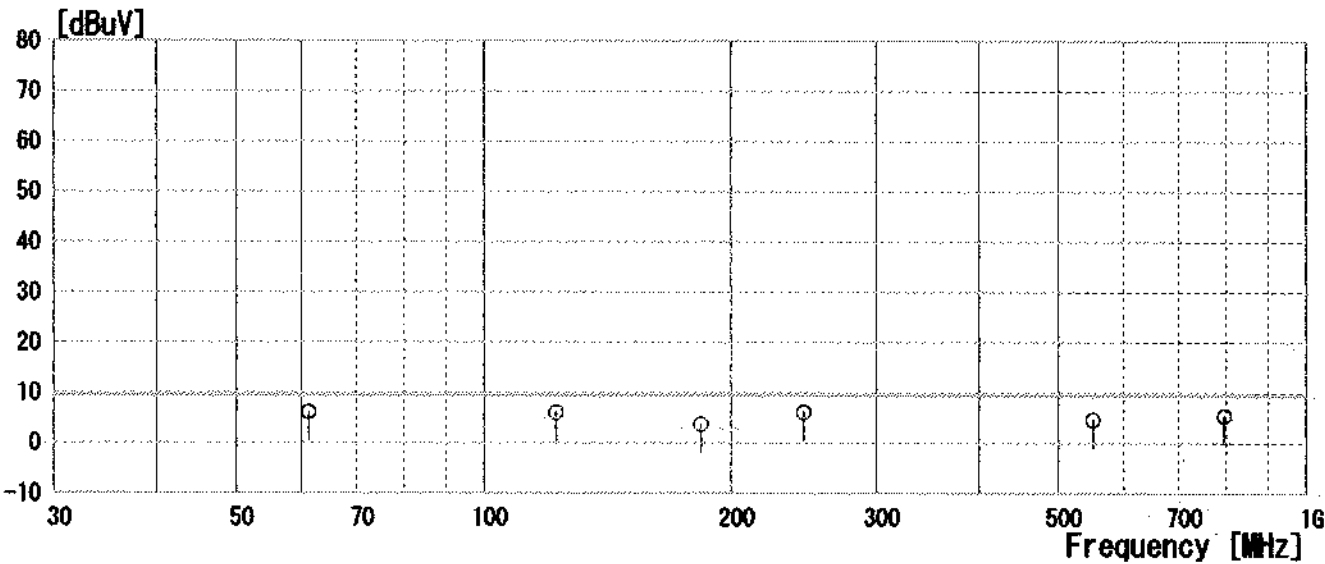
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 1 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 5Vp-p Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer : Teubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	61.250	27.3	—	-21.2	6.1	—	9.5	—	3.4	—
2	122.500	26.7	—	-20.7	6.0	—	9.5	—	3.5	—
3	183.750	24.5	—	-20.7	3.8	—	9.5	—	5.7	—
4	245.000	26.6	—	-20.5	6.1	—	9.5	—	3.4	—
5	551.250	25.3	—	-20.7	4.7	—	9.5	—	4.8	—
6	796.250	25.8	—	-20.4	5.5	—	9.5	—	4.0	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

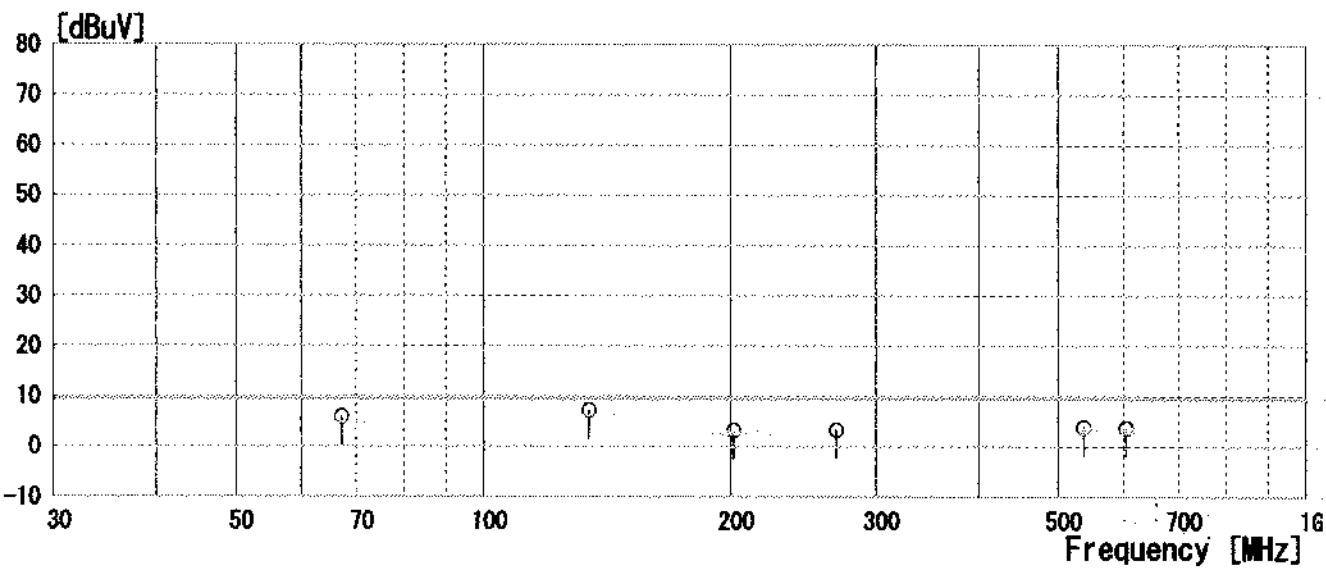
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 1 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	67.250	27.1	—	-21.2	5.9	—	9.5	—	3.6	—
2	134.500	27.9	—	-20.6	7.2	—	9.5	—	2.3	—
3	201.750	23.8	—	-20.7	3.2	—	9.5	—	6.3	—
4	269.000	24.0	—	-20.7	3.3	—	9.5	—	6.2	—
5	538.000	24.6	—	-20.7	3.9	—	9.5	—	5.6	—
6	605.250	24.3	—	-20.6	3.7	—	9.5	—	5.8	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

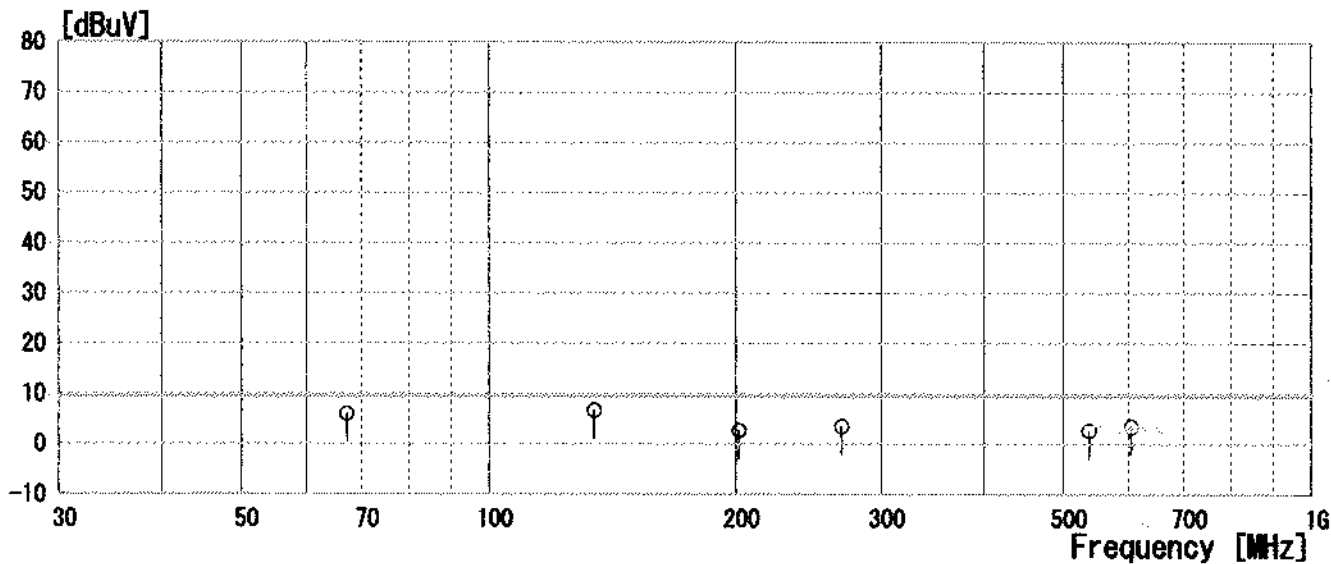
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE: AV Input 1 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 5Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: ~~Isu~~ Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]
1	67.250	27.1	-----	-21.2	6.0	-----	9.5	-----	3.5	-----
2	134.500	27.3	-----	-20.6	6.7	-----	9.5	-----	2.8	-----
3	201.750	23.3	-----	-20.7	2.7	-----	9.5	-----	6.8	-----
4	269.000	24.1	-----	-20.7	3.5	-----	9.5	-----	6.0	-----
5	538.000	23.3	-----	-20.7	2.7	-----	9.5	-----	6.8	-----
6	605.250	24.1	-----	-20.6	3.5	-----	9.5	-----	6.0	-----

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dB μV]
+ CABLE LOSS[dB μV] - AMPLIFIER GAIN[dB μV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOWA EMC LABORATORY

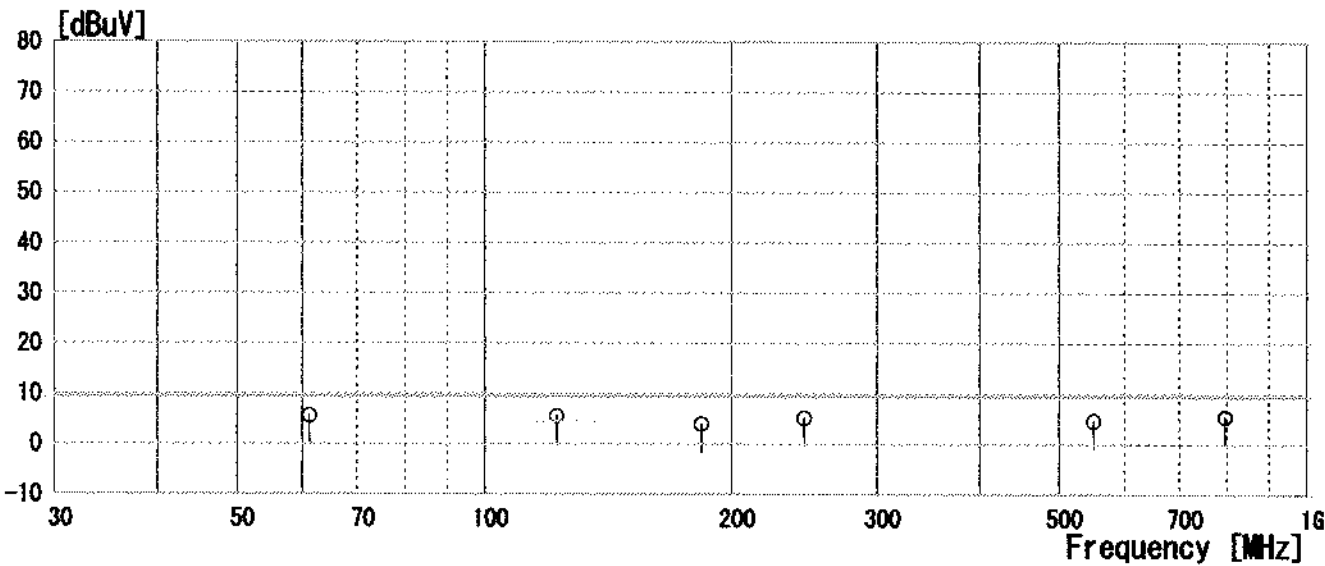
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE: AV Input 2 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1Vp-p Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer Teibasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	61.250	26.8	—	-21.2	5.6	—	9.5	—	3.9	—
2	122.500	26.3	—	-20.7	5.6	—	9.5	—	3.9	—
3	183.750	24.7	—	-20.7	4.0	—	9.5	—	5.5	—
4	245.000	25.7	—	-20.5	5.2	—	9.5	—	4.3	—
5	551.250	25.3	—	-20.7	4.7	—	9.5	—	4.8	—
6	796.250	25.8	—	-20.4	5.5	—	9.5	—	4.0	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOMA EMC LABORATORY

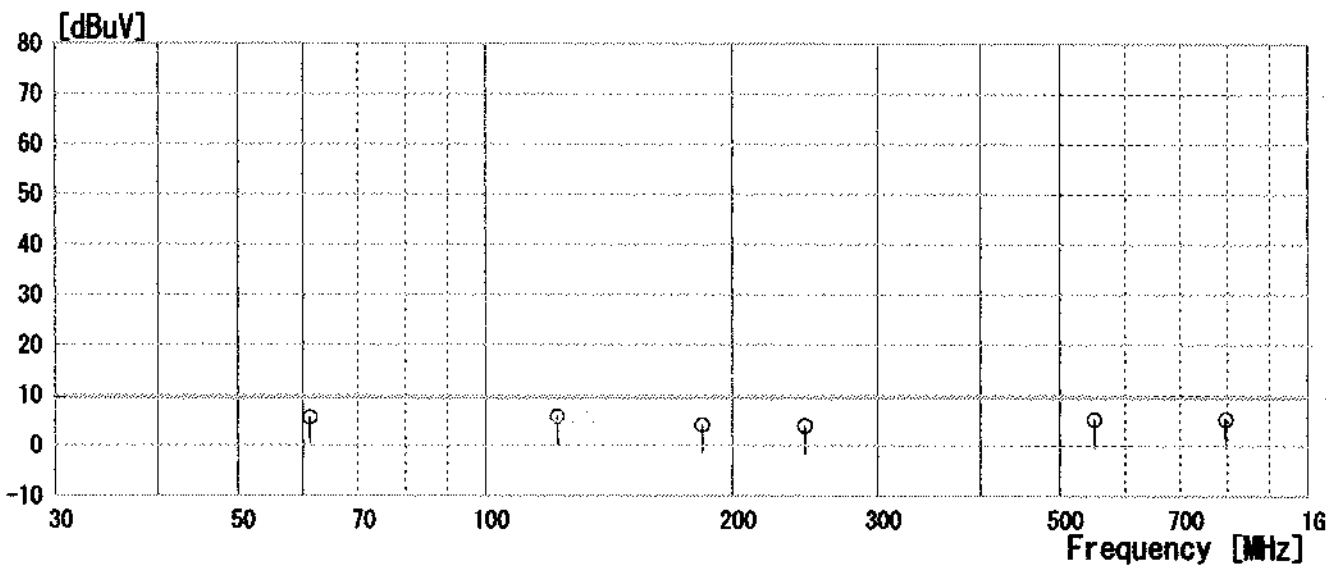
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE: AV Input 2 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 5Vp-p Input
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B


Engineer Isobasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV [dBμV]		QP	AV [dBμV]	QP	AV [dBμV]	QP	AV [dB]
1	61.250	26.8	—	-21.2	5.6	—	9.5	—	3.9	—
2	122.500	26.5	—	-20.7	5.8	—	9.5	—	3.7	—
3	183.750	24.8	—	-20.7	4.0	—	9.5	—	5.5	—
4	245.000	24.4	—	-20.5	3.9	—	9.5	—	5.6	—
5	551.250	25.8	—	-20.7	5.2	—	9.5	—	4.3	—
6	796.250	25.7	—	-20.4	5.3	—	9.5	—	4.2	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOWA ENG LABORATORY

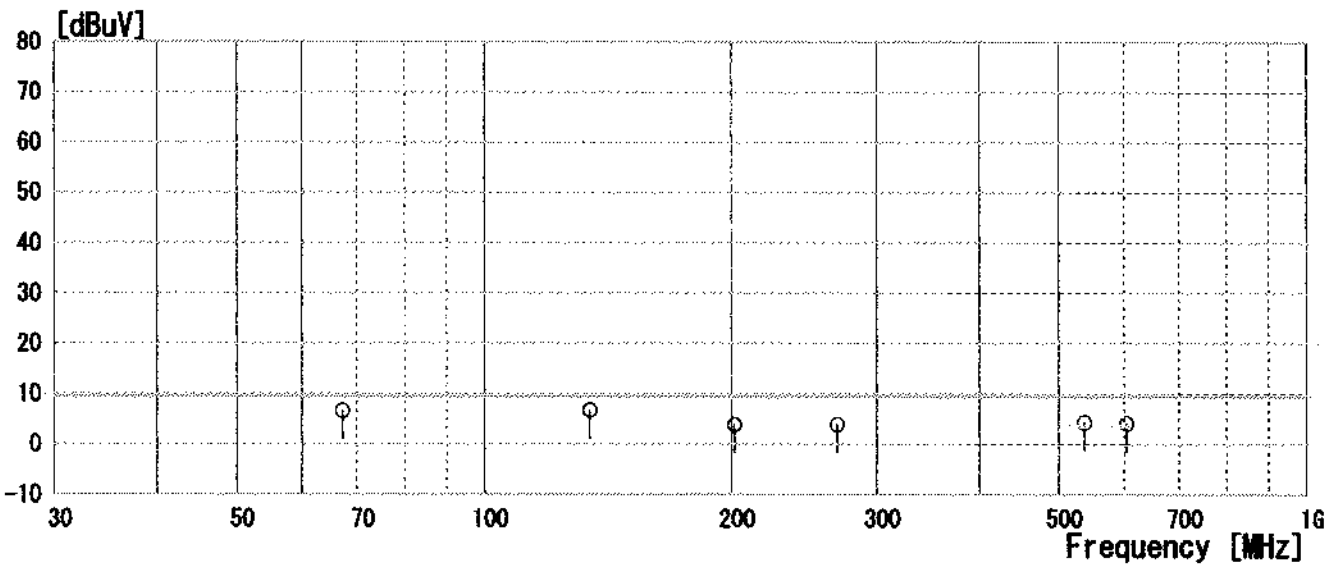
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : AV Input 2 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 1Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B


Engineer Teubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV [dBuV]		QP	AV [dBuV]	QP	AV [dBuV]	QP	AV [dB]
1	67.250	27.8	—	-21.2	6.6	—	9.5	—	2.9	—
2	134.500	27.4	—	-20.6	6.7	—	9.5	—	2.8	—
3	201.750	24.5	—	-20.7	3.9	—	9.5	—	5.6	—
4	269.000	24.6	—	-20.7	3.9	—	9.5	—	5.6	—
5	538.000	25.0	—	-20.7	4.3	—	9.5	—	5.2	—
6	605.250	24.7	—	-20.6	4.1	—	9.5	—	5.4	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOMA EMC LABORATORY

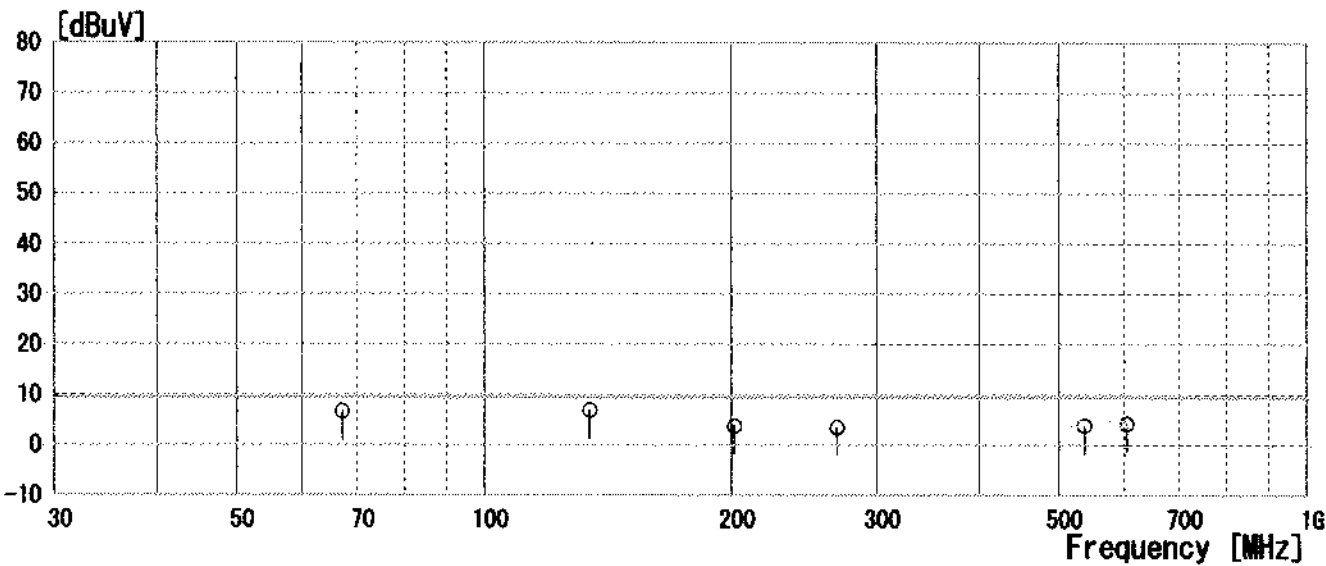
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE: AV Input 2 + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : 5Vp-p Input
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

~~Engineer: Tsubasa Takayama~~

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	67.250	27.9	—	-21.2	6.7	—	9.5	—	2.8	—
2	134.500	27.5	—	-20.6	6.9	—	9.5	—	2.6	—
3	201.750	24.4	—	-20.7	3.8	—	9.5	—	5.7	—
4	269.000	24.1	—	-20.7	3.5	—	9.5	—	6.0	—
5	538.000	24.5	—	-20.7	3.9	—	9.5	—	5.6	—
6	605.250	24.9	—	-20.6	4.3	—	9.5	—	5.2	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOMA EMC LABORATORY

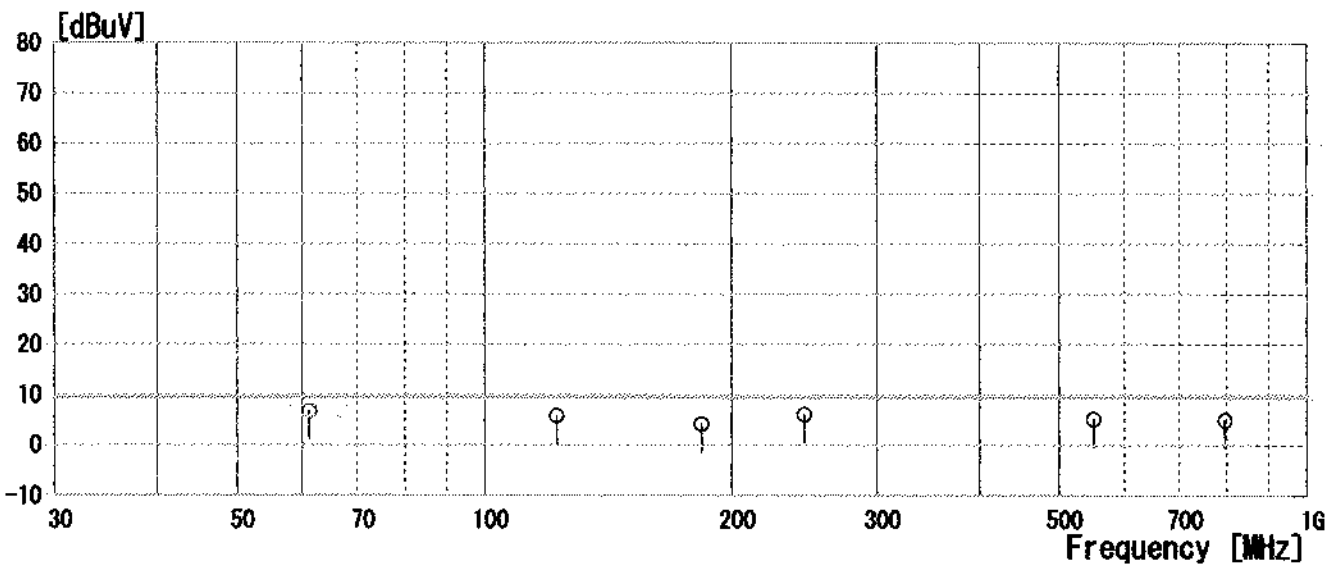
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : VCR Playback + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : -
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: Tsubasa Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	61.250	27.9	—	-21.2	6.7	—	9.5	—	2.8	—
2	122.500	26.6	—	-20.7	5.9	—	9.5	—	3.6	—
3	183.750	24.9	—	-20.7	4.2	—	9.5	—	5.3	—
4	245.000	26.5	—	-20.5	6.0	—	9.5	—	3.5	—
5	551.250	25.8	—	-20.7	5.2	—	9.5	—	4.3	—
6	796.250	25.4	—	-20.4	5.0	—	9.5	—	4.5	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOMA EMC LABORATORY

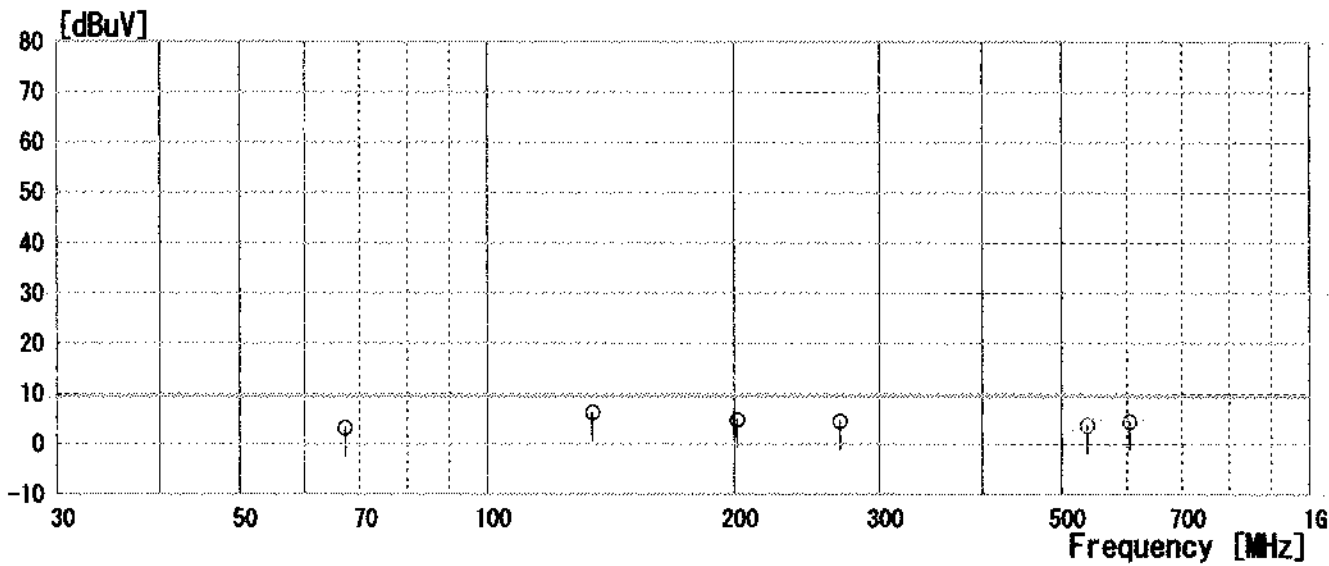
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE: VCR Playback + Rec
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 : -
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: ~~Toshio Takayama~~

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	67.250	24.3	—	-21.2	3.2	—	9.5	—	6.3	—
2	134.500	26.9	—	-20.6	6.3	—	9.5	—	3.2	—
3	201.750	25.5	—	-20.7	4.8	—	9.5	—	4.7	—
4	269.000	25.2	—	-20.7	4.5	—	9.5	—	5.0	—
5	538.000	24.4	—	-20.7	3.7	—	9.5	—	5.8	—
6	605.250	25.1	—	-20.6	4.5	—	9.5	—	5.0	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dB μV]
+ CABLE LOSS[dB μV] - AMPLIFIER GAIN[dB μV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOMA EMC LABORATORY

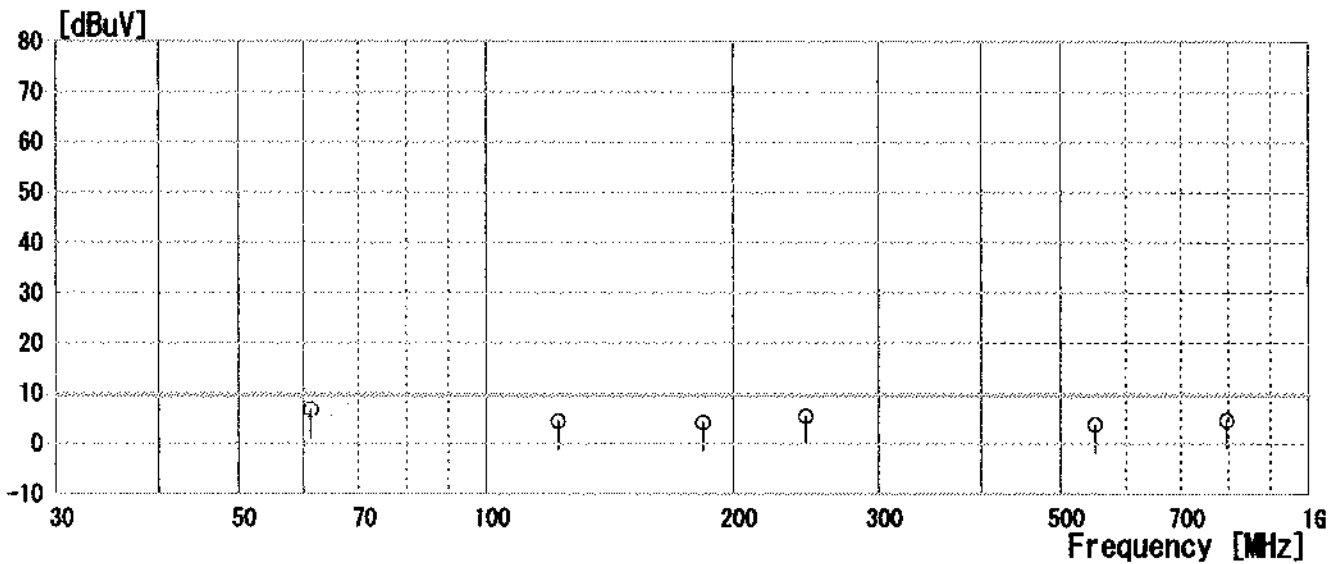
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : DVD Play
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 :
REMARKS 2 : 3CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer: ~~Reuben~~ Takayama

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	61.250	27.9	-----	-21.2	6.7	-----	9.5	-----	2.8	-----
2	122.500	25.2	-----	-20.7	4.5	-----	9.5	-----	5.0	-----
3	183.750	24.9	-----	-20.7	4.2	-----	9.5	-----	5.3	-----
4	245.000	25.9	-----	-20.5	5.4	-----	9.5	-----	4.1	-----
5	551.250	24.5	-----	-20.7	3.8	-----	9.5	-----	5.7	-----
6	796.250	25.0	-----	-20.4	4.6	-----	9.5	-----	4.9	-----

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dB μV]
+ CABLE LOSS[dB μV] - AMPLIFIER GAIN[dB μV]



DATA OF ANTENNA TRANSFER SWITCH

UL Apex Co., Ltd.
YOKOHAMA EMC LABORATORY

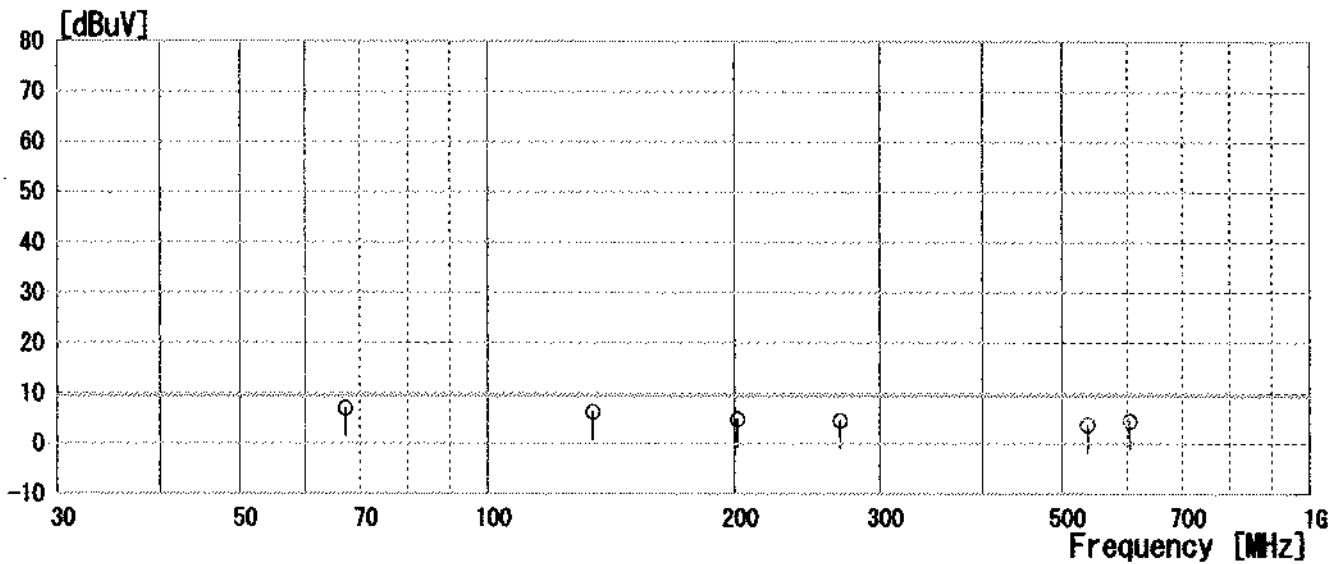
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL NAME : VHDVD4005
OPERATION MODE : DVD Play
PORT : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS 1 :
REMARKS 2 : 4CH Output

REPORT NO. : 24AE0029-YW-1
DATE : August 04, 2003
REGULATION : FCC PART15 SUBPART B

Engineer ~~Tsubasa Takayama~~

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	67.250	28.2	—	-21.2	7.0	—	9.5	—	2.5	—
2	134.500	26.9	—	-20.6	6.3	—	9.5	—	3.2	—
3	201.750	25.5	—	-20.7	4.8	—	9.5	—	4.7	—
4	269.000	25.2	—	-20.7	4.5	—	9.5	—	5.0	—
5	538.000	24.4	—	-20.7	3.7	—	9.5	—	5.8	—
6	605.250	25.1	—	-20.6	4.5	—	9.5	—	5.0	—

CALCULATION: READING + CORRECTION FACTOR
CORRECTION FACTOR = MATCHING PAD LOSS 7.8[dBμV]
+ CABLE LOSS[dBμV] - AMPLIFIER GAIN[dBμV]



Picture sensitivity test

UL Apex Co., Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 24AE0029-YW-1
Equipment	: DVD-RW/VCR	Regulation	: FCC Part 15B Subpart B
Model number	: VHDVD4005	Date	: August 4, 2003
Power	: AC 120 V / 60 Hz	Temp./Humid.	: 25°C/65%
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	23.8	15.5
3	61.25	18.0	7.9	20	507.25	23.9	15.7
4	67.25	19.9	9.9	26	543.25	24.1	16.0
5	77.25	19.7	9.7	32	579.25	24.8	17.4
6	83.25	19.8	9.8	38	615.25	25.2	18.2
7	175.25	22.4	13.2	44	651.25	26.6	21.4
8	181.25	22.9	14.0	50	687.25	26.3	20.7
9	187.25	22.5	13.3	56	723.25	26.2	20.4
10	193.25	22.0	12.6	62	759.25	25.9	19.7
11	199.25	22.1	12.7	69	801.25	26.6	21.4
12	205.25	22.0	12.6	-	-	-	-
13	211.25	21.8	12.3	-	-	-	-
Average VHF			11.5	Average UHF			18.6
Average UHF/VHF : $20 \log \text{UHF[uV]}/\text{VHF[uV]} =$				4.2	dB		
[Limit : 8.0 dB]							

Noise figure test

UL Apex Co., Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.

Equipment : DVD-RW/VCR

Model number : VHDVD4005

Power : AC 120 V / 60 Hz

Description : TV Reception

Report Number : 24AE0029-YW-1

Regulation : FCC Part15 Subpart B

Date : August 4, 2003

Temp./Humid. : 25°C/65%

Engineer : Tsubasa Takayama

Ch.	Frequency [MHz]	Meter reading [dB]	Correction factor [dB]	Noise figure [dB]	Limits [dB]	Margin [dB]
TV VHF Fundamental						
2	55.25	3.8	0.2	3.6	14.0	10.4
3	61.25	4.0	0.2	3.8	14.0	10.2
4	67.25	3.4	0.2	3.2	14.0	10.8
5	77.25	3.0	0.2	2.8	14.0	11.2
6	83.25	3.2	0.2	3.0	14.0	11.0
7	175.25	5.1	0.2	4.9	14.0	9.1
8	181.25	5.1	0.2	4.9	14.0	9.1
9	187.25	4.9	0.2	4.7	14.0	9.3
10	193.25	4.7	0.2	4.5	14.0	9.5
11	199.25	4.8	0.2	4.6	14.0	9.4
12	205.25	4.6	0.2	4.4	14.0	9.6
13	211.25	4.4	0.2	4.2	14.0	9.8
TV UHF Fundamental						
14	471.25	5.9	0.3	5.6	14.0	8.4
20	507.25	6.0	0.3	5.7	14.0	8.3
26	543.25	6.2	0.3	5.9	14.0	8.1
32	579.25	6.7	0.3	6.4	14.0	7.6
38	615.25	7.0	0.3	6.7	14.0	7.3
44	651.25	7.4	0.3	7.1	14.0	6.9
50	687.25	7.3	0.3	7.0	14.0	7.0
56	723.25	7.2	0.4	6.8	14.0	7.2
62	759.25	7.2	0.4	6.8	14.0	7.2
69	801.25	7.4	0.4	7.0	14.0	7.0
Mid-band						
14	121.25	4.7	0.2	4.5	14.0	9.5
16	133.25	6.7	0.2	6.5	14.0	7.5
18	145.25	6.1	0.2	5.9	14.0	8.1
20	157.25	5.6	0.2	5.4	14.0	8.6
22	169.25	5.5	0.2	5.3	14.0	8.7
Super-band						
23	217.25	4.5	0.2	4.3	14.0	9.7
26	235.25	4.1	0.2	3.9	14.0	10.1
29	253.25	3.8	0.2	3.6	14.0	10.4
32	271.25	3.6	0.2	3.4	14.0	10.6
36	295.25	3.6	0.2	3.4	14.0	10.6

DATA OF ANTENNA TERMINAL TEST

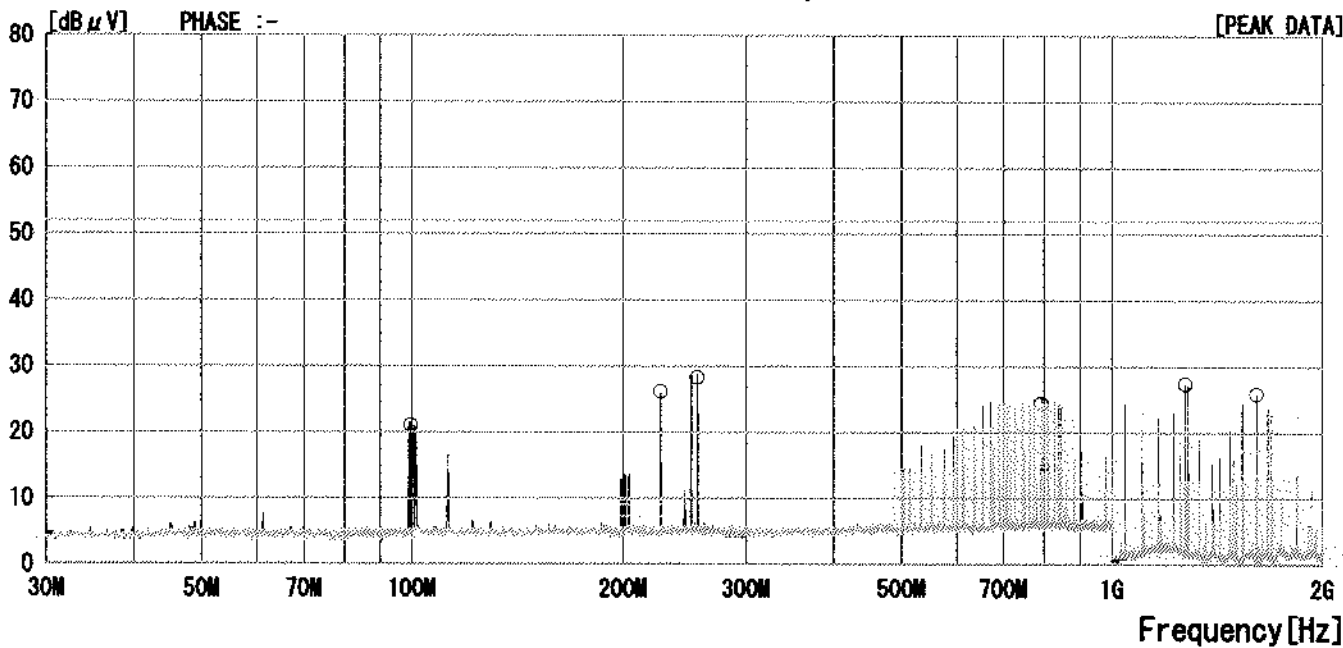
UL Apex Co., Ltd.
Date : 2003/08/11 22:18:50

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : VHDVD4005
OPERATION MODE : TV Tuning mode

REPORT NO : 24AE0029-YW-1
DATE : August 4, 2003
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING (PK) [dB μV]	C. F [dB]	RESULT [dB μV]	LIMIT		MARGIN		PHASE
					QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]	
1	99.59900	51.2	-30.2	21.0	52.0	---	31.0	---	-
2	226.57401	56.0	-29.8	26.2	52.0	---	25.8	---	-
3	255.71700	58.2	-29.9	28.3	52.0	---	23.7	---	-
4	792.14697	53.8	-29.4	24.4	52.0	---	27.6	---	-
5	1272.83899	67.4	-40.0	27.4	52.0	---	24.6	---	-
6	1608.56299	65.4	-39.5	25.9	52.0	---	26.1	---	-

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

DATA OF ANTENNA TERMINAL TEST

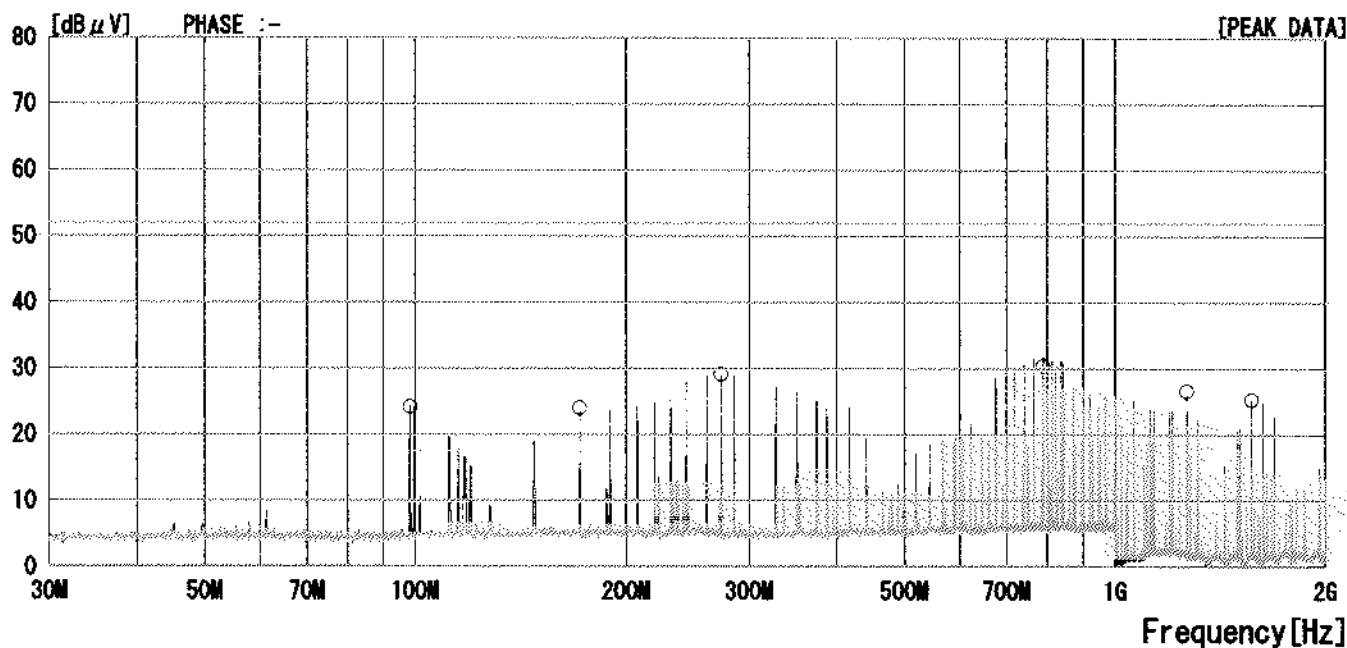
UL Apex Co., Ltd.
Date : 2003/08/11 22:20:39

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-RW/VCR
MODEL : VHDVD4005
OPERATION MODE : CATV Tuning mode

REPORT NO : 24AE0029-YW-1
DATE : August 4, 2003
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Tsubasa Takayama

TEMP./HUMID. : 24°C/61%

LIMIT : FCC 15B ANTENNA TERMINAL



NO	FREQ [MHz]	READING(PK) [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	98.29900	54.2	-30.0	24.2	52.0	—	27.8	—	-
2	171.71500	53.8	-29.8	24.0	52.0	—	28.0	—	-
3	273.71701	58.8	-29.7	29.1	52.0	—	22.9	—	-
4	789.57501	60.2	-29.8	30.4	52.0	—	21.6	—	-
5	1267.12500	66.6	-40.0	26.6	52.0	—	25.4	—	-
6	1567.13794	64.8	-39.5	25.3	52.0	—	26.7	—	-

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

Test Report No :24AE0029-YW-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	2003/05/15 * 12
APMAT04	Matching Pad	TME	ZT-204	PS, NF	2002/12/16 * 12
APMAT05	Matching Pad	TME	ZT-130	AT, RF, ATS	2002/12/16 * 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	2003/02/18 * 12
SS-05	Digitizing Oscilloscope	Sony Tektronix	2221	PS	2003/01/07 * 12
APBPF01	Band pass filter	Erika Fiedler	BP	PS	Pre Check
APPRA01	Pre Amplifier	Anritsu	MH648A	AT, RF, ATS	2002/09/11 * 12
APPRA05	Pre Amplifier	Hewlett Packard	8449B	AT	2002/12/05 * 12
APCBL-01	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2003/01/12 * 12
APCBL-02	Coaxial Cable	Fujikura	5D-2W	AT, RF, ATS	2003/01/12 * 12
OS-15	Digital Humidity Indicator	SATO	PC-5000TRH	AT, RF, ATS, PS, NF	2003/05/09 * 12
HA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2003/04/28 * 12
LS-01	LISN(AMN)	Rohde & Schwarz	ESH2-Z5	CE	2002/11/05 * 12
LS-10	LISN(AMN)	Schwarzbeck	NSLK8127	CE (EUT)	2003/04/04 * 12
TA-03	Terminator	TME	CT-01	CE	2003/04/30 * 12
TR-02	Test Receiver	Rohde & Schwarz	ESVS30	RE	2003/04/23 * 12
CC-1S	Yokowa No.1 shield coaxial(0.01MHz-1000MHz)	UL Apex	CC-14,CC-15,C C-16,CC-18,CC -19,SW-11,SW- 12	CE	2003/03/28 * 12
OS-05	Digital Humidity Indicator	SATO	PC-5000TRH	CE	2003/04/25 * 12
AF-03	Pre Amplifier	Anritsu	MH648A	AT	2003/03/27 * 12
AF-07	Pre Amplifier	Agilent	HP8449B	AT	2002/12/20 * 12
SA-05	Spectrum Analyzer	Advantest	R3271	AT	2002/12/24 * 12
AF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2003/03/27 * 12
AF-06	Pre Amplifier	Agilent	HP8449B	RE	2002/12/20 * 12
AT-06	Attenuator	Anritsu	MP721B	RE	2003/03/27 * 12
BA-06	Biconical Antenna	Schwarzbeck	BBA9106	RE	2003/02/06 * 12
LA-07	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2003/02/19 * 12
SA-08	Spectrum Analyzer	Advantest	R3273	RE	2002/11/19 * 12
TR-08	Test Receiver	Rohde & Schwarz	ESVS10	RE	2002/11/22 * 12
CC-30RC	Yokowa No.3 open coaxial(0.01-1000MHz)	UL Apex	CC-31,CC-32,C C-33,CC-34,CC -35,CC-36,CC- 37,SW-31,SW-3 2	RE	2003/03/28 * 12
CC-C15	Microwave Cable	Suhner	SUCOFLEX	RE	2003/04/18 * 12
CC-C17	Microwave Cable	Suhner	SUCOFLEX	RE	2003/05/01 * 12
YOATS-03	Open Test Site	JSE	3m, 10m	RE	2003/04/20 * 12
OS-16	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2003/05/14 * 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

UL Apex Co., Ltd.