

DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

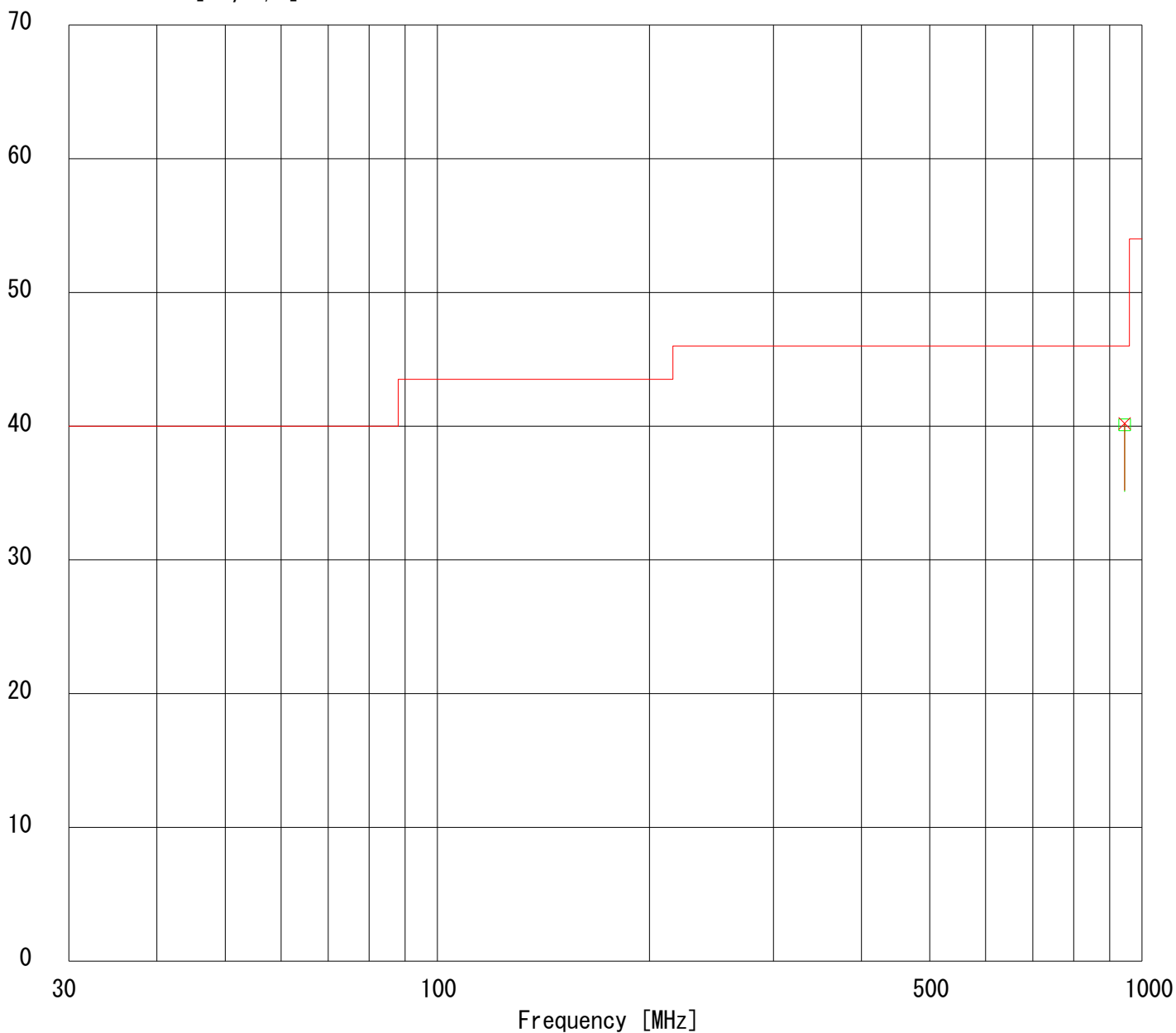
Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1 + DVD/VCR Rec(1Vp-p)
Remarks :
Date : 4/20/2006
Test Distance : 3 m
Temperature : 17 °C
Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

Emission Level [dB μ V/m]

□ Horizontal

× Vertical



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Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1 + DVD/VCR Rec(1Vp-p)
Remarks : AV (RBW: 1MHz, VBW: 10Hz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1350.02	BB	40.8	44.7	24.7	37.8	4.8	0.0	32.5	36.4	54.0	21.5	17.6

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

■ ANTENNA: KHA-01 (SAS-200 571)

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

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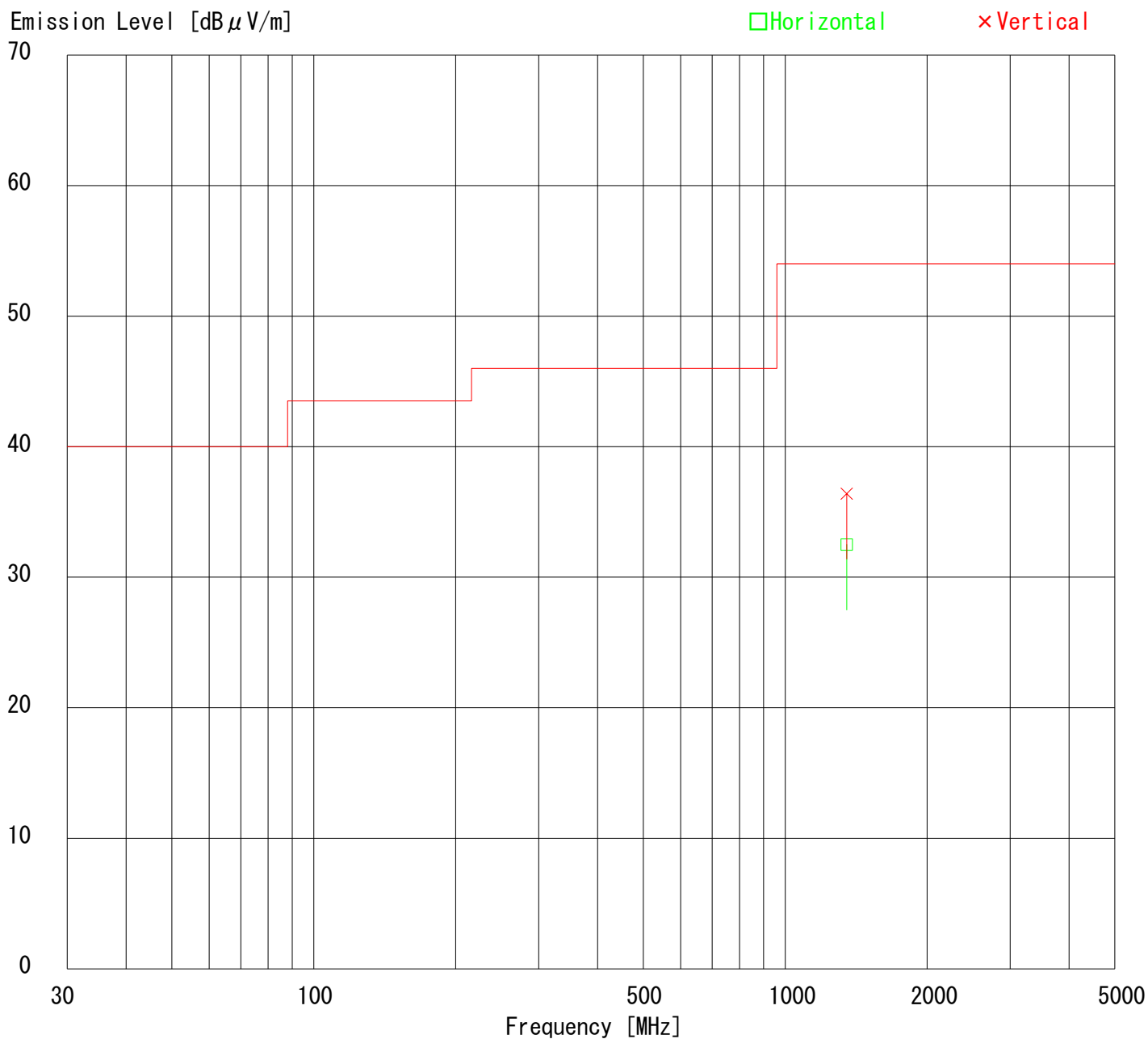
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Power : AC120V/60Hz
Mode : AV Input1 + DVD/VCR Rec(1Vp-p)
Remarks : PK (RBW: 1MHz, VBW: 1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(PK)

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1350.02	BB	50.5	54.6	24.7	37.8	4.8	0.0	42.2	46.3	74.0	31.8	27.7

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

■ ANTENNA: KHA-01 (SAS-200 571)

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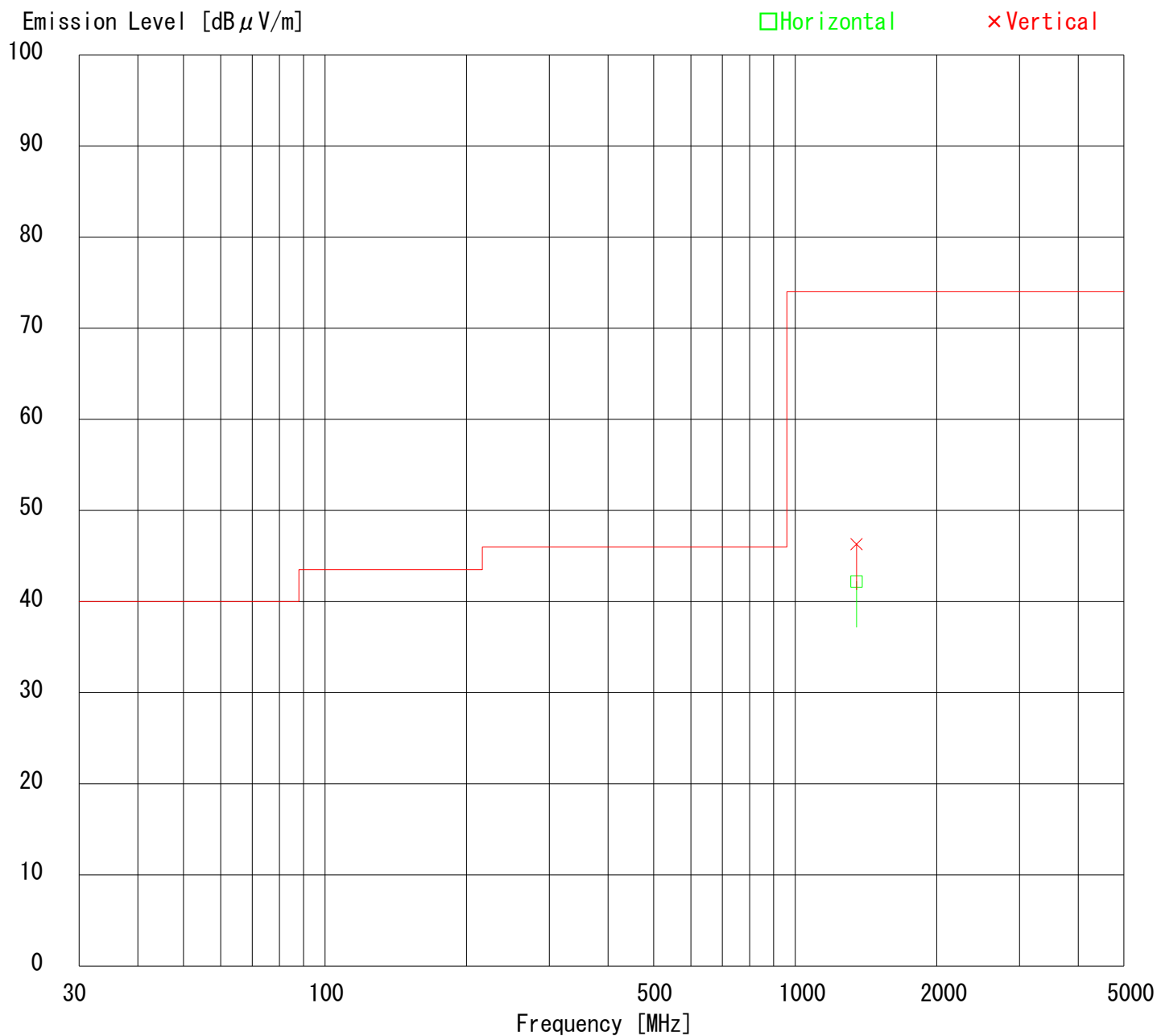
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Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input1 + DVD/VCR Rec(5Vp-p)
Remarks :
Date : 4/20/2006
Test Distance : 3 m
Temperature : 17 °C
Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	48.01	BB	27.8	35.6	10.8	28.4	1.8	6.0	18.0	25.8	40.0	22.0	14.2
2.	85.91	BB	33.9	44.2	7.1	28.3	2.4	6.0	21.1	31.4	40.0	18.9	8.6
3.	168.95	BB	31.4	25.5	16.0	28.0	3.4	6.0	28.8	22.9	43.5	14.7	20.6
4.	216.00	BB	29.9	27.2	17.2	27.8	3.9	6.0	29.2	26.5	43.5	14.3	17.0
5.	270.00	BB	34.5	27.2	18.9	27.7	4.5	6.0	36.2	28.9	46.0	9.8	17.1
6.	419.18	BB	38.4	35.9	17.7	28.6	5.8	6.0	39.3	36.8	46.0	6.7	9.2
7.	540.00	BB	31.1	34.0	18.8	29.2	6.7	6.0	33.4	36.3	46.0	12.6	9.7
8.	732.82	BB	28.0	28.4	20.9	29.1	8.0	6.0	33.8	34.2	46.0	12.2	11.8
9.	945.01	BB	30.7	30.9	22.8	28.6	9.4	6.0	40.3	40.5	46.0	5.7	5.5

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

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

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

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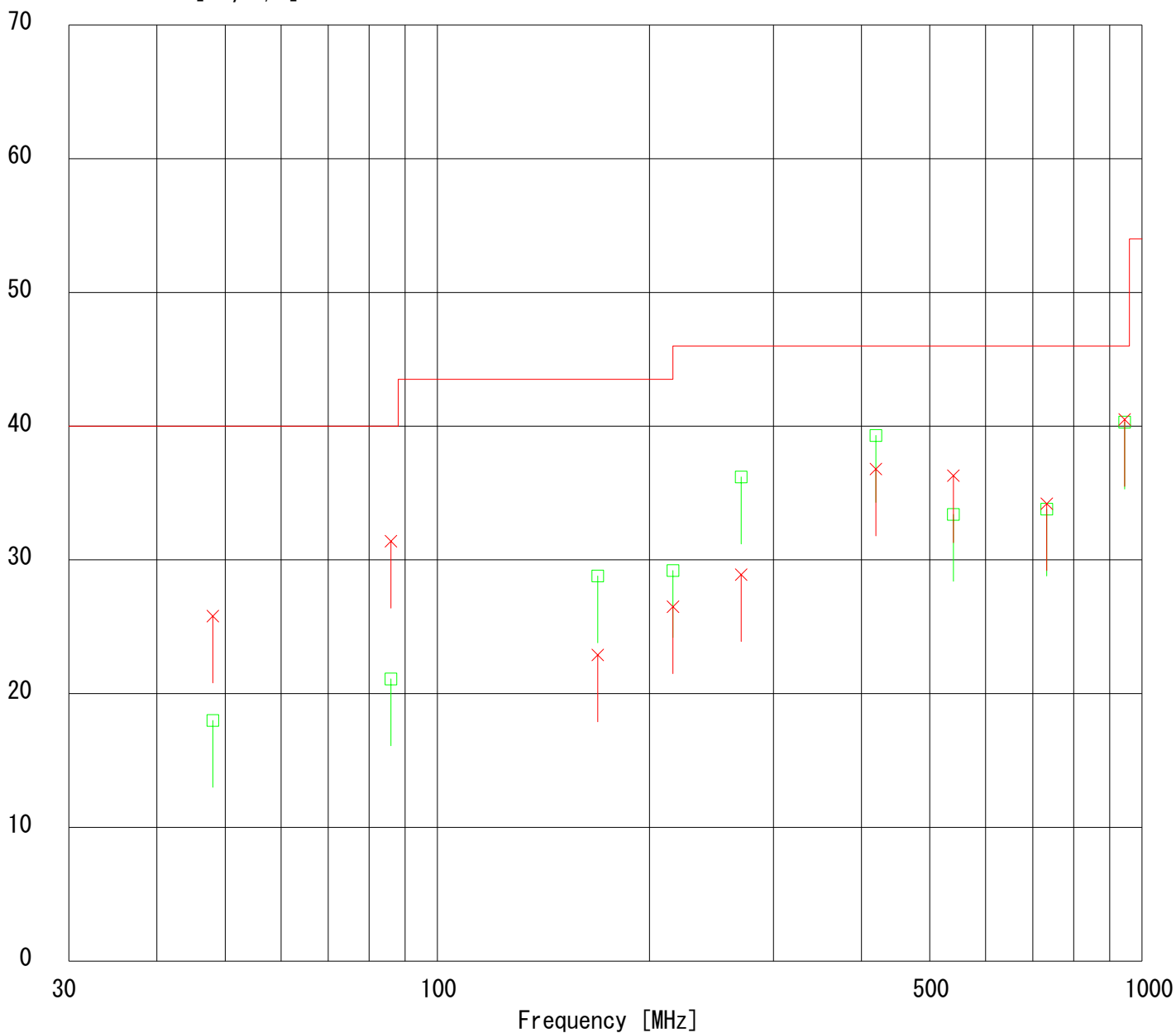
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Emission Level [dB μ V/m]

□ Horizontal

× Vertical



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No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.78	BB	37.5	37.5	24.3	38.5	4.3	0.0	27.6	27.6	54.0	26.4	26.4
2.	1080.36	BB	41.0	44.0	24.4	38.4	4.3	0.0	31.3	34.3	54.0	22.7	19.7
3.	1350.00	BB	40.8	44.8	24.7	37.8	4.8	0.0	32.5	36.5	54.0	21.5	17.5

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

■ ANTENNA: KHA-01 (SAS-200 571)

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

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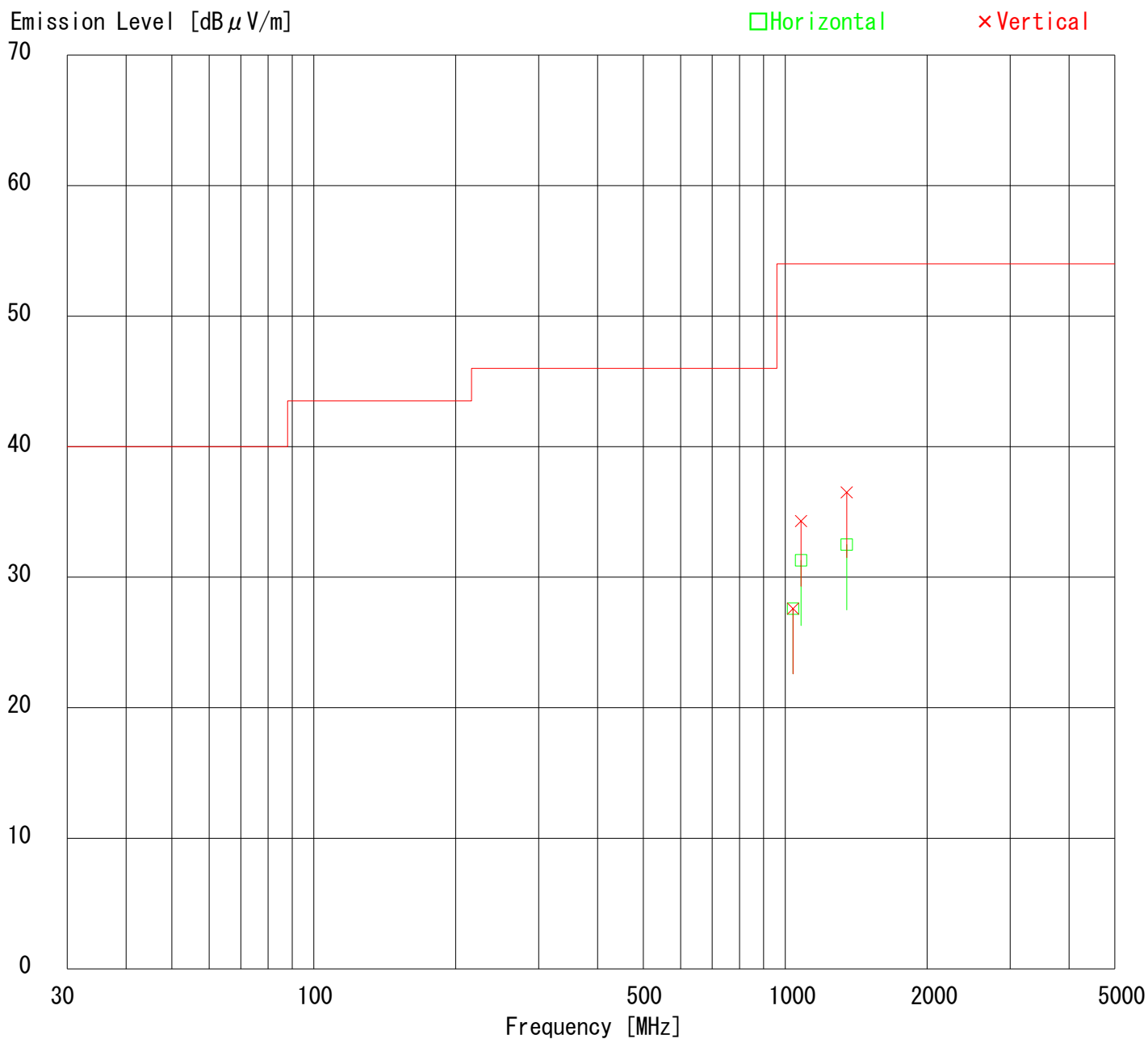
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			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.78	BB	50.5	54.0	24.3	38.5	4.3	0.0	40.6	44.1	74.0	33.4	29.9
2.	1080.36	BB	51.1	54.1	24.4	38.4	4.3	0.0	41.4	44.4	74.0	32.6	29.6
3.	1350.00	BB	51.0	54.8	24.7	37.8	4.8	0.0	42.7	46.5	74.0	31.3	27.5

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

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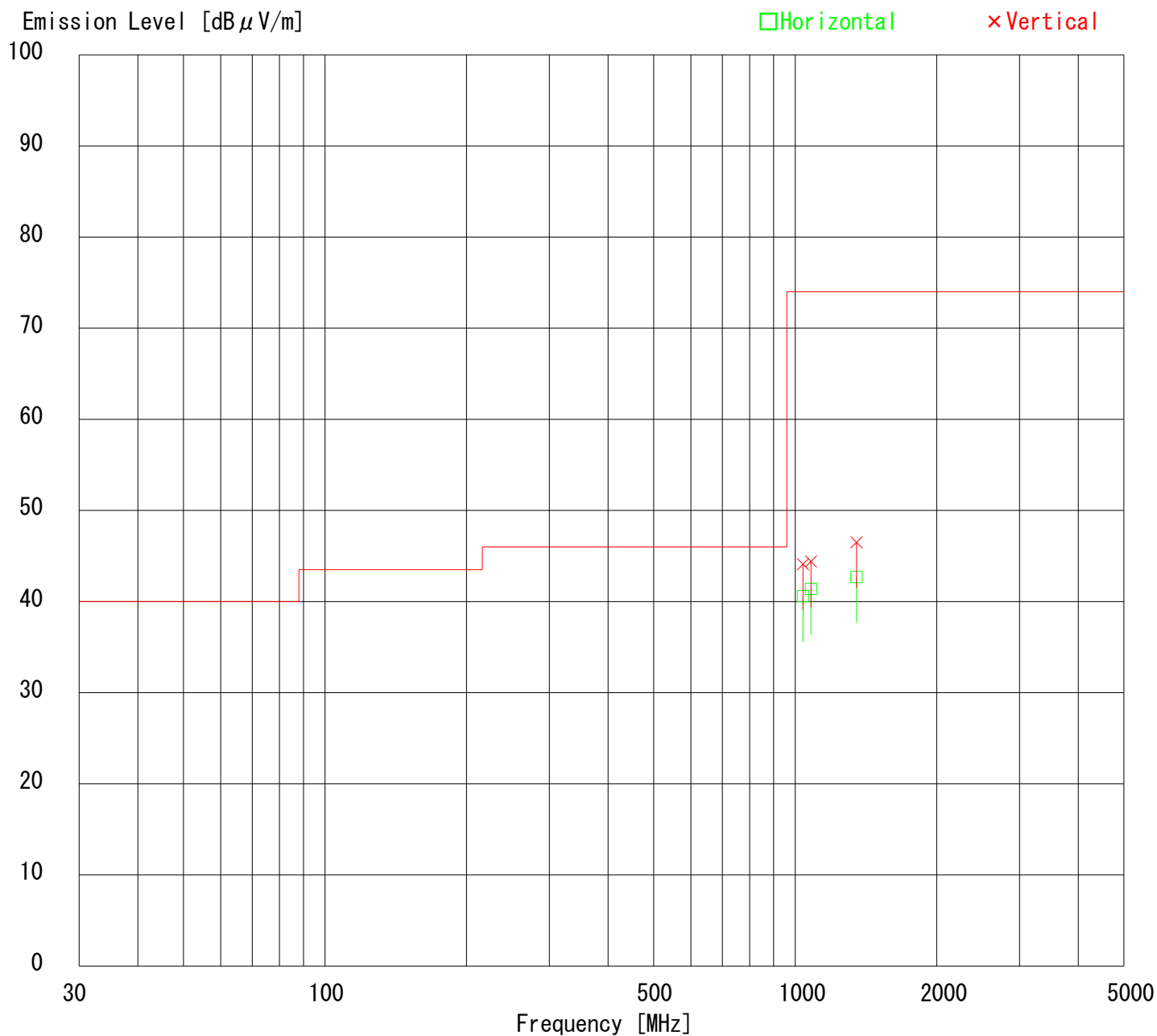
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Remarks :
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Humidity : 75 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

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			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	945.01	BB	30.4	30.9	22.8	28.6	9.4	6.0	40.0	40.5	46.0	6.0	5.5

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

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

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

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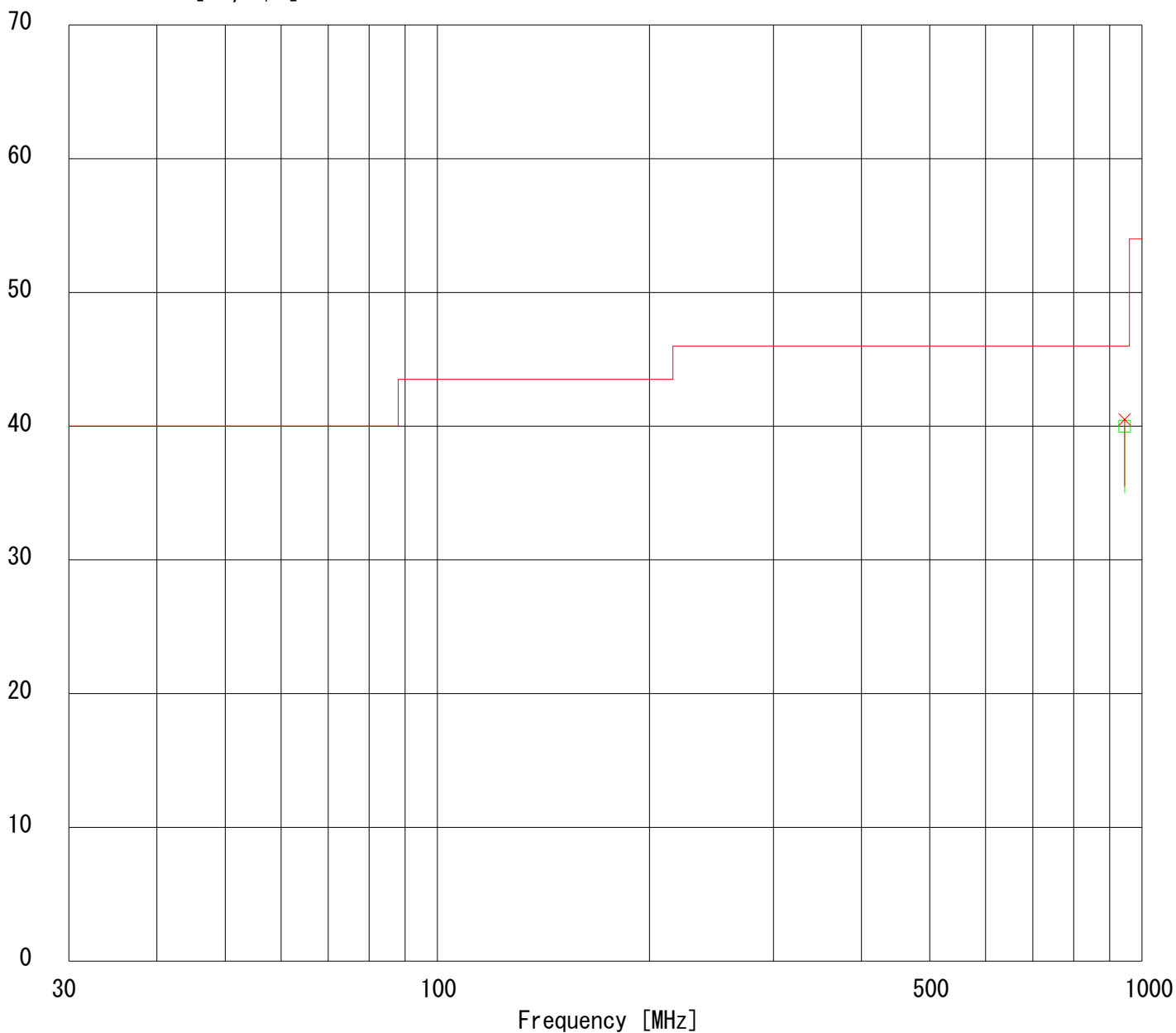
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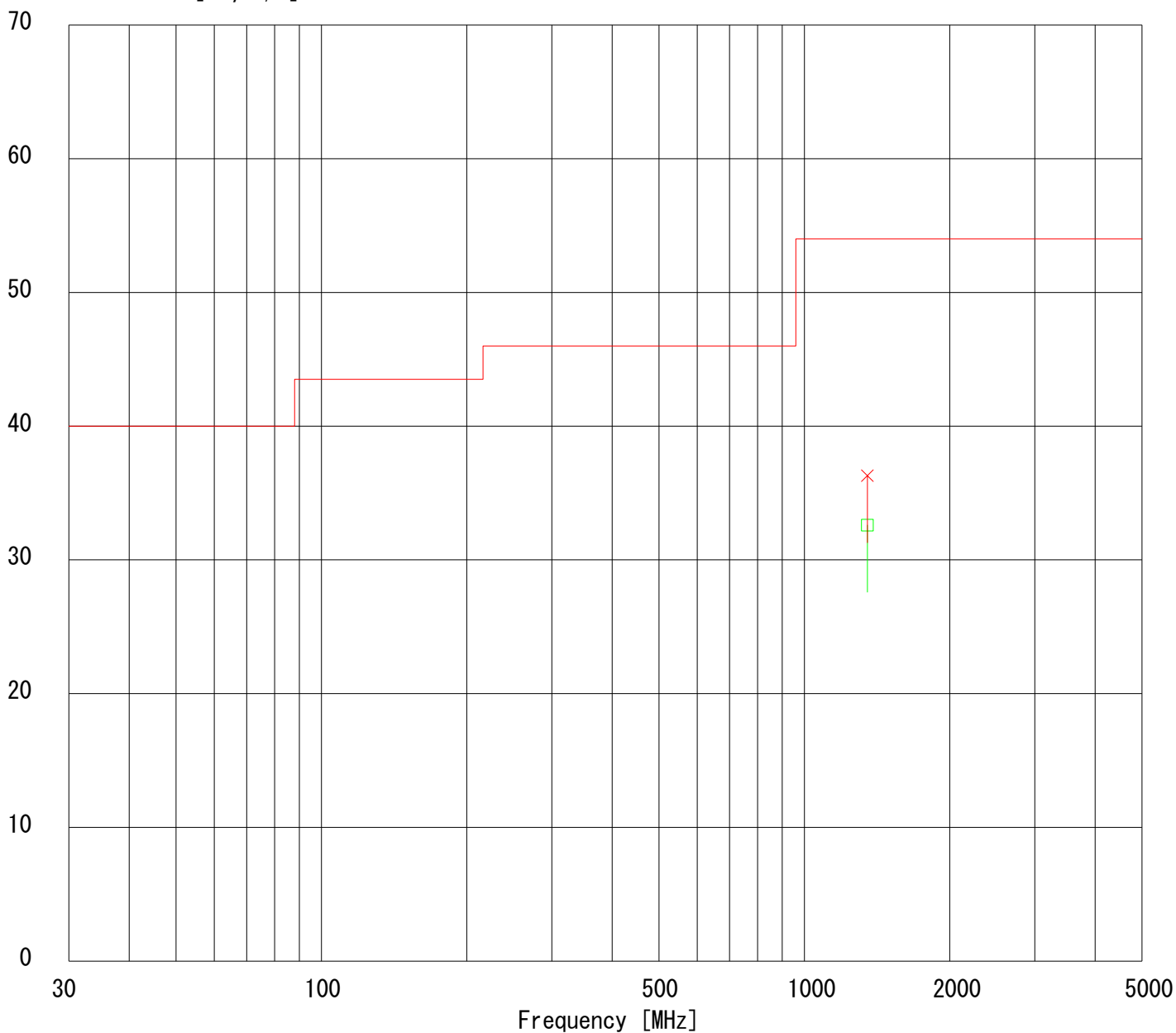
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			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
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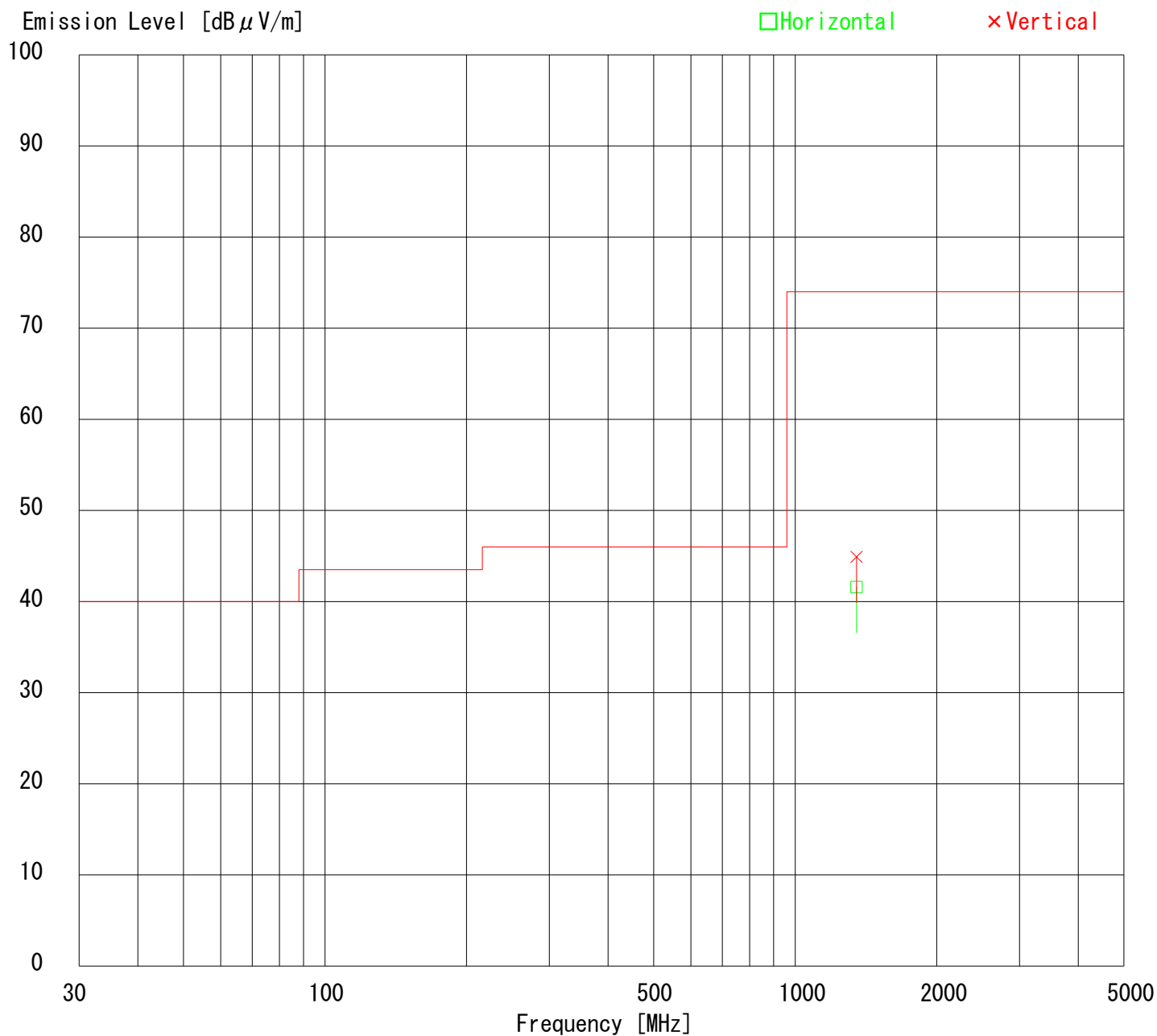
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3.	168.96	BB	32.0	26.2	16.0	28.0	3.4	6.0	29.4	23.6	43.5	14.1	19.9
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8.	732.81	BB	28.3	28.5	20.9	29.1	8.0	6.0	34.1	34.3	46.0	11.9	11.7
9.	945.01	BB	30.7	31.0	22.8	28.6	9.4	6.0	40.3	40.6	46.0	5.7	5.4

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

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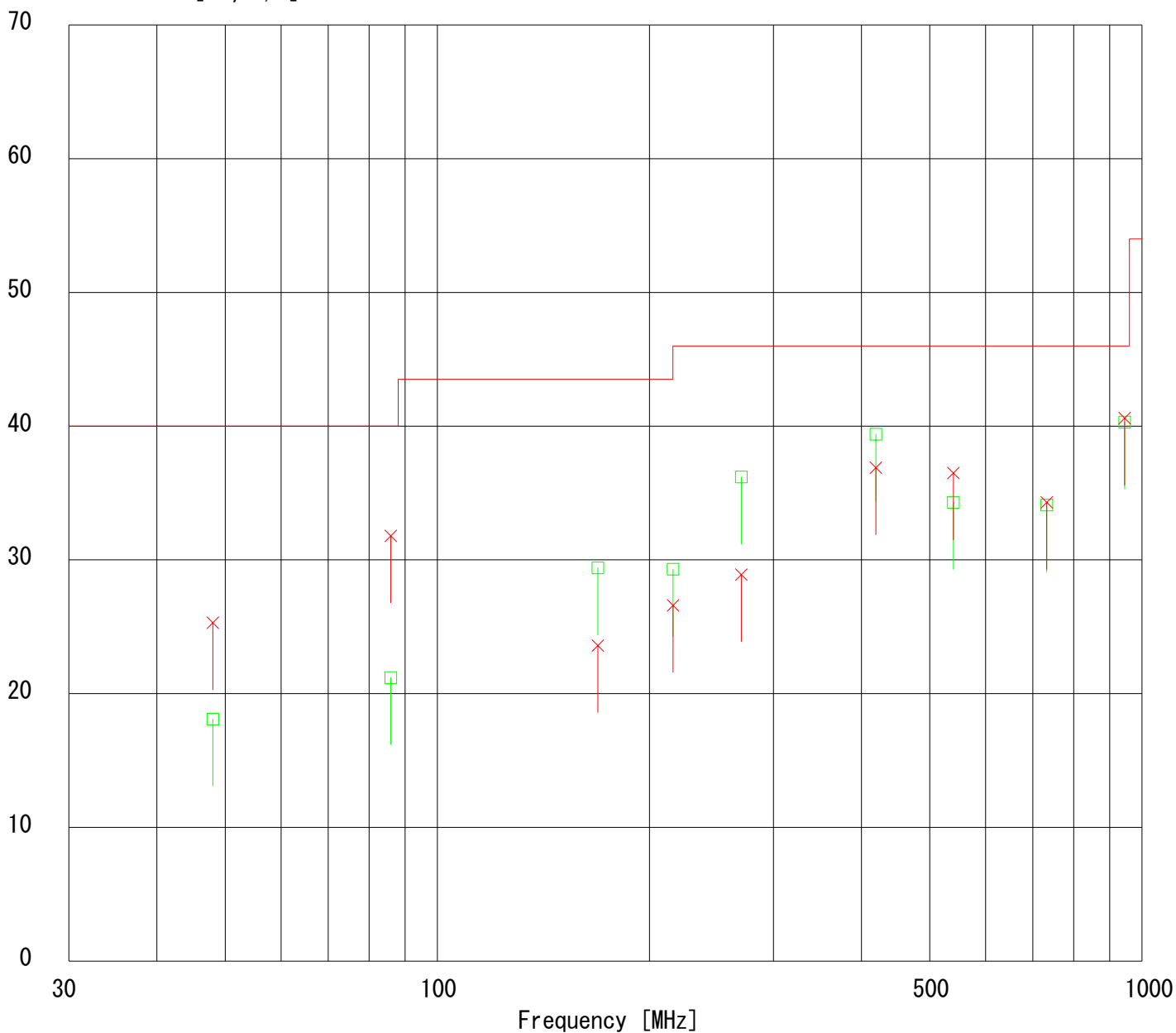
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Power : AC120V/60Hz
Mode : AV Input2 + DVD/VCR Rec(5Vp-p)
Remarks : AV(RBW:1MHz, VBW:10Hz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.70	BB	37.1	37.6	24.3	38.5	4.3	0.0	27.2	27.7	54.0	26.8	26.3
2.	1080.35	BB	40.9	44.1	24.4	38.4	4.3	0.0	31.2	34.4	54.0	22.8	19.6
3.	1350.02	BB	40.6	45.0	24.7	37.8	4.8	0.0	32.3	36.7	54.0	21.7	17.3

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

■ ANTENNA: KHA-01 (SAS-200 571)

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

DATA OF RADIATION TEST

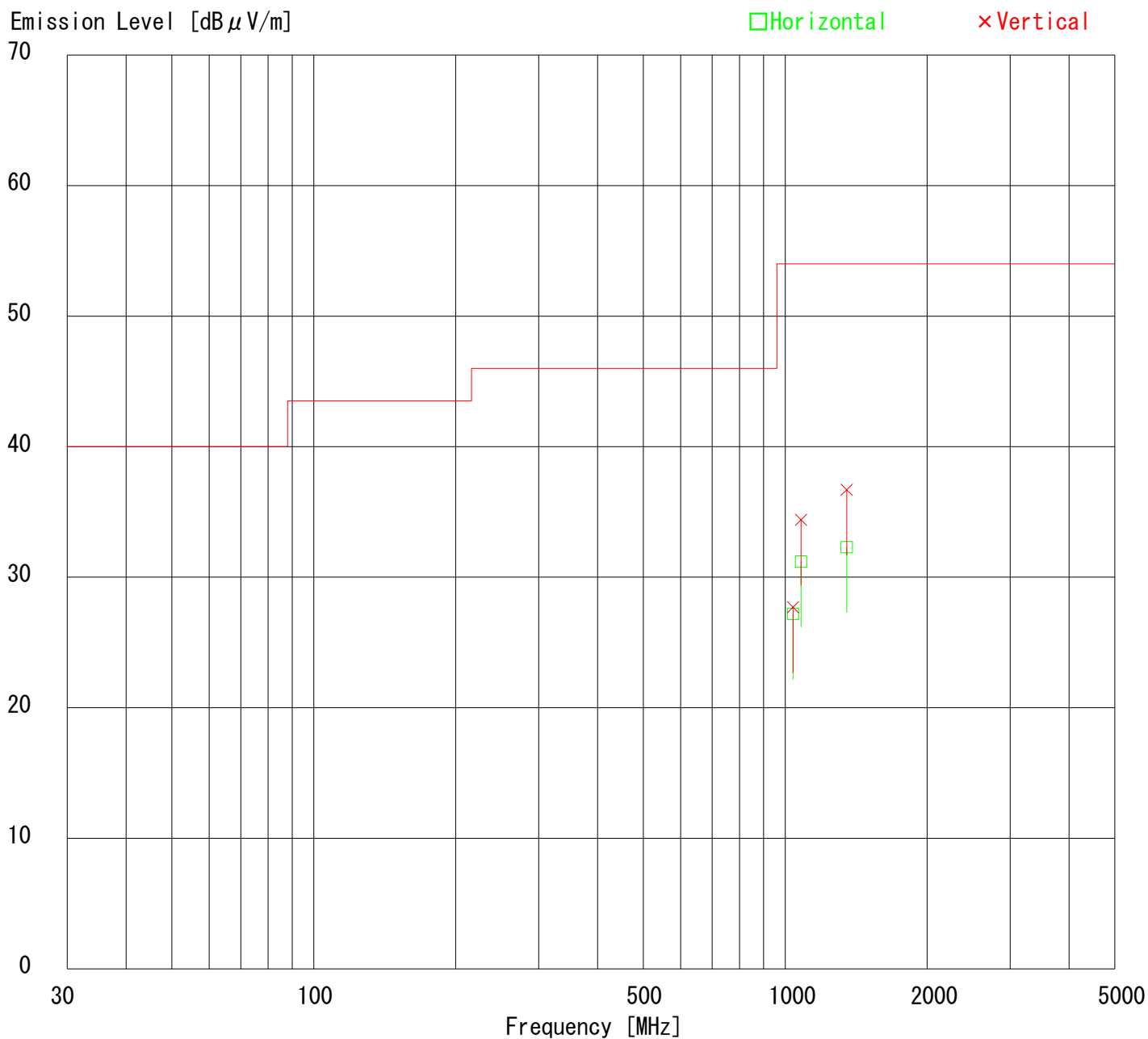
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2 + DVD/VCR Rec (5Vp-p)
Remarks : AV (RBW: 1MHz, VBW: 10Hz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B § 15.109(a)

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2 + DVD/VCR Rec(5Vp-p)
Remarks : PK(RBW:1MHz, VBW:1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(PK)

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.70	BB	50.9	54.0	24.3	38.5	4.3	0.0	41.0	44.1	74.0	33.0	29.9
2.	1080.35	BB	50.5	53.7	24.4	38.4	4.3	0.0	40.8	44.0	74.0	33.2	30.0
3.	1350.02	BB	50.1	54.0	24.7	37.8	4.8	0.0	41.8	45.7	74.0	32.2	28.3

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

■ ANTENNA:KHA-01 (SAS-200 571)

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

DATA OF RADIATION TEST

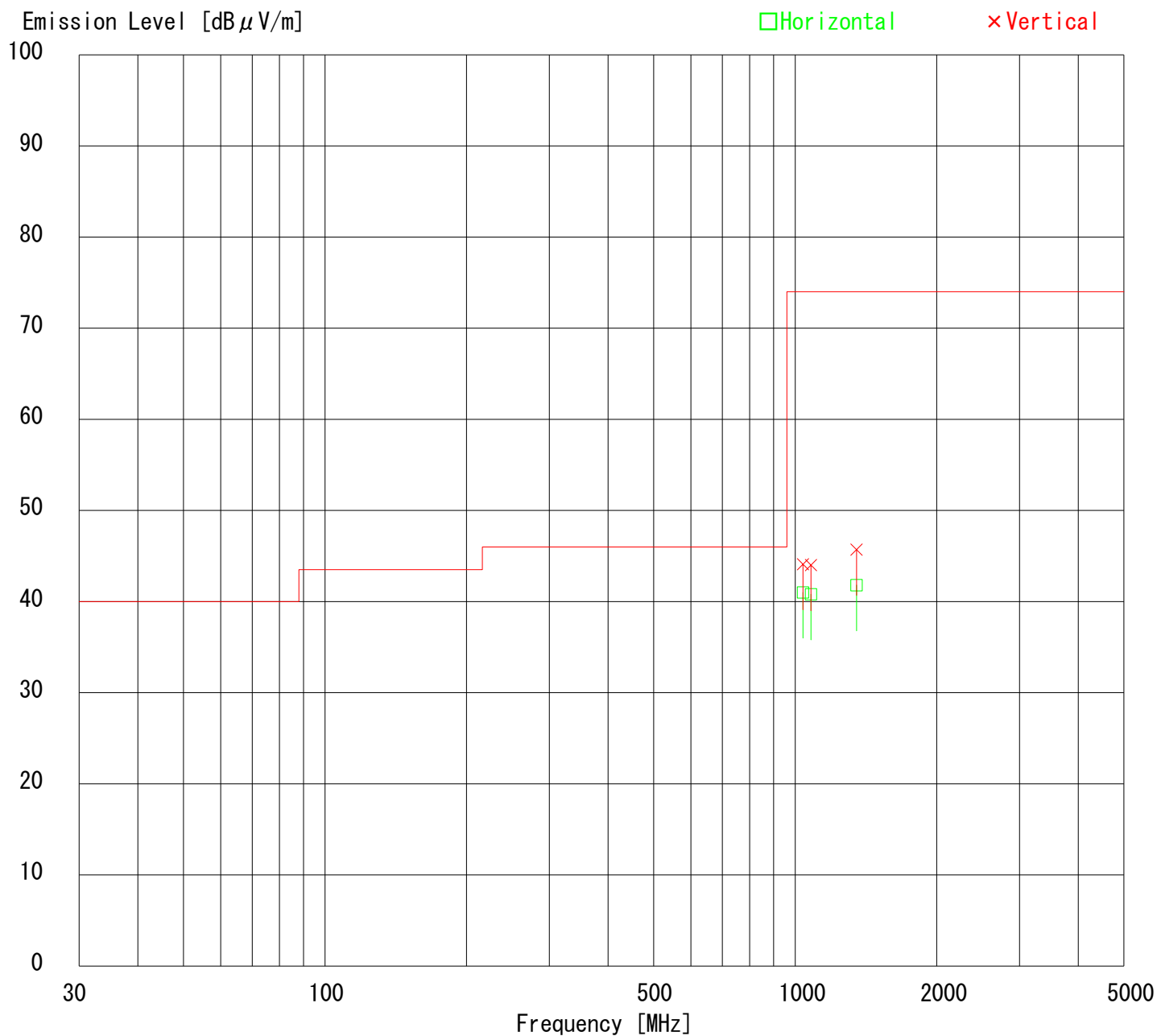
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : AV Input2 + DVD/VCR Rec (5Vp-p)
Remarks : PK (RBW: 1MHz, VBW: 1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B (PK)

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

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

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μV/m]	MARGIN	
			HOR [dB μV]	VER [dB μV]					HOR [dB μV/m]	VER [dB μV/m]		HOR [dB]	VER [dB]
1.	72.19	BB	45.4	36.9	6.4	28.3	2.2	6.0	31.7	23.2	40.0	8.3	16.8
2.	73.73	BB	43.0	37.7	6.3	28.3	2.2	6.0	29.2	23.9	40.0	10.8	16.1
3.	85.92	BB	33.7	42.3	7.1	28.3	2.4	6.0	20.9	29.5	40.0	19.1	10.5
4.	170.50	BB	32.5	28.1	16.0	28.0	3.4	6.0	29.9	25.5	43.5	13.6	18.0
5.	176.90	BB	28.7	30.1	16.2	28.0	3.5	6.0	26.4	27.8	43.5	17.1	15.7
6.	202.75	BB	34.2	24.5	16.9	27.9	3.8	6.0	33.0	23.3	43.5	10.5	20.2
7.	216.01	BB	34.1	29.2	17.2	27.8	3.9	6.0	33.4	28.5	46.0	12.6	17.5
8.	419.26	BB	37.9	35.2	17.7	28.7	5.8	6.0	38.7	36.0	46.0	7.3	10.0
9.	732.83	BB	28.0	30.7	20.9	29.1	8.0	6.0	33.8	36.5	46.0	12.2	9.5
10.	945.00	BB	28.4	31.4	22.8	28.6	9.4	6.0	38.0	41.0	46.0	8.0	5.0

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

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

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

DATA OF RADIATION TEST

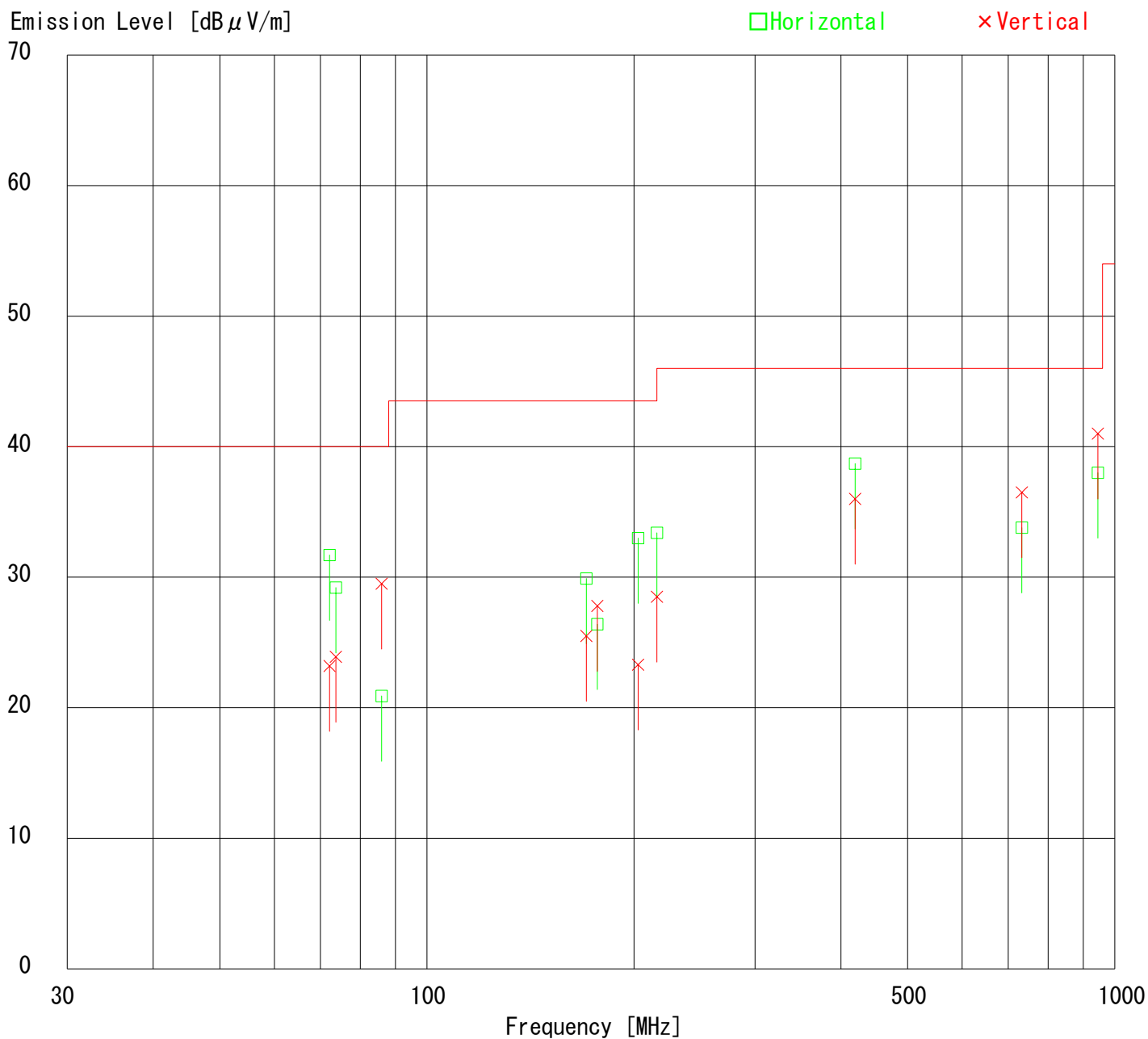
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

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

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

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

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.59	BB	38.1	39.1	24.3	38.5	4.3	0.0	28.2	29.2	54.0	25.8	24.8
2.	1080.33	BB	41.3	42.7	24.4	38.4	4.3	0.0	31.6	33.0	54.0	22.4	21.0
3.	1350.05	BB	41.0	44.9	24.7	37.8	4.8	0.0	32.7	36.6	54.0	21.3	17.4

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

■ ANTENNA: KHA-01 (SAS-200 571)

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

DATA OF RADIATION TEST

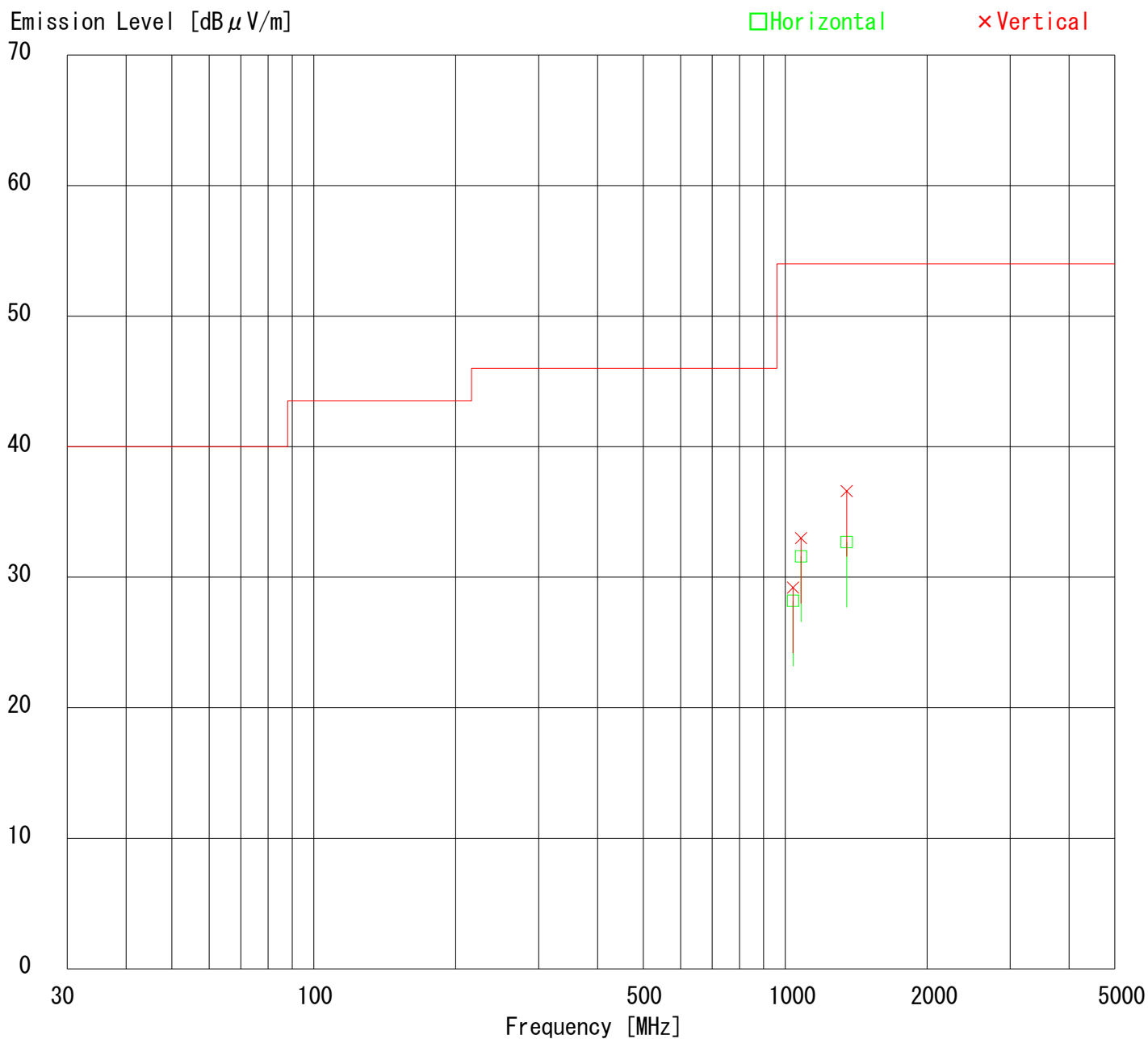
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

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

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

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

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.59	BB	50.7	53.3	24.3	38.5	4.3	0.0	40.8	43.4	74.0	33.2	30.6
2.	1080.33	BB	50.2	54.9	24.4	38.4	4.3	0.0	40.5	45.2	74.0	33.5	28.8
3.	1350.05	BB	50.0	53.9	24.7	37.8	4.8	0.0	41.7	45.6	74.0	32.3	28.4

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

■ ANTENNA: KHA-01 (SAS-200 571)

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

DATA OF RADIATION TEST

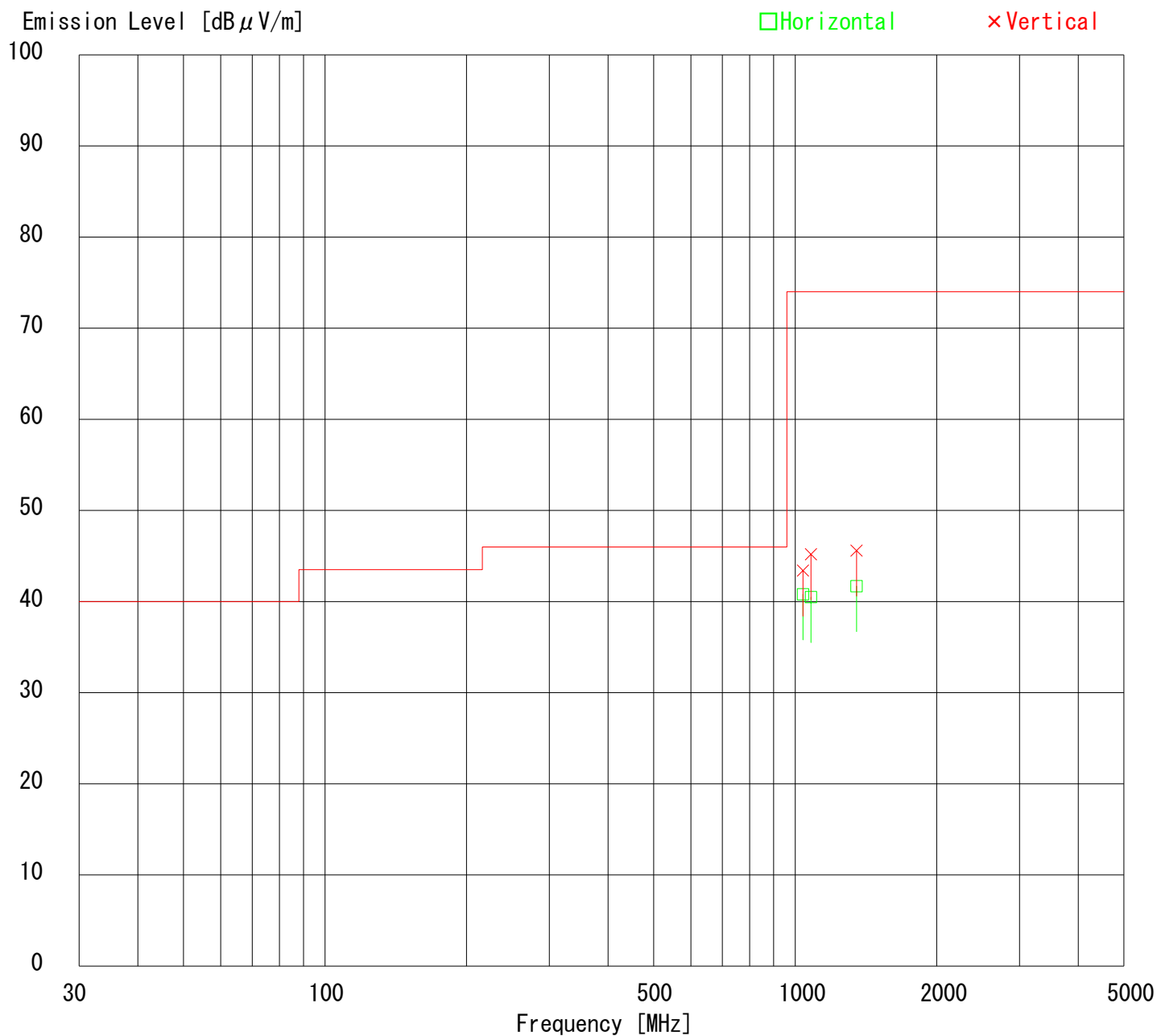
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

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

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

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

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	72.20	BB	44.8	36.4	6.4	28.3	2.2	6.0	31.1	22.7	40.0	8.9	17.3
2.	73.74	BB	45.4	36.2	6.3	28.3	2.2	6.0	31.6	22.4	40.0	8.4	17.6
3.	85.93	BB	34.2	44.5	7.1	28.3	2.4	6.0	21.4	31.7	40.0	18.6	8.3
4.	176.91	BB	29.0	29.9	16.2	28.0	3.5	6.0	26.7	27.6	43.5	16.8	15.9
5.	216.00	BB	33.3	29.2	17.2	27.8	3.9	6.0	32.6	28.5	43.5	10.9	15.0
6.	419.26	BB	37.6	34.9	17.7	28.7	5.8	6.0	38.4	35.7	46.0	7.6	10.3
7.	540.01	BB	33.0	29.6	18.8	29.2	6.7	6.0	35.3	31.9	46.0	10.7	14.1
8.	732.81	BB	27.5	30.9	20.9	29.1	8.0	6.0	33.3	36.7	46.0	12.7	9.3
9.	945.01	BB	28.3	31.3	22.8	28.6	9.4	6.0	37.9	40.9	46.0	8.1	5.1

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

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

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

DATA OF RADIATION TEST

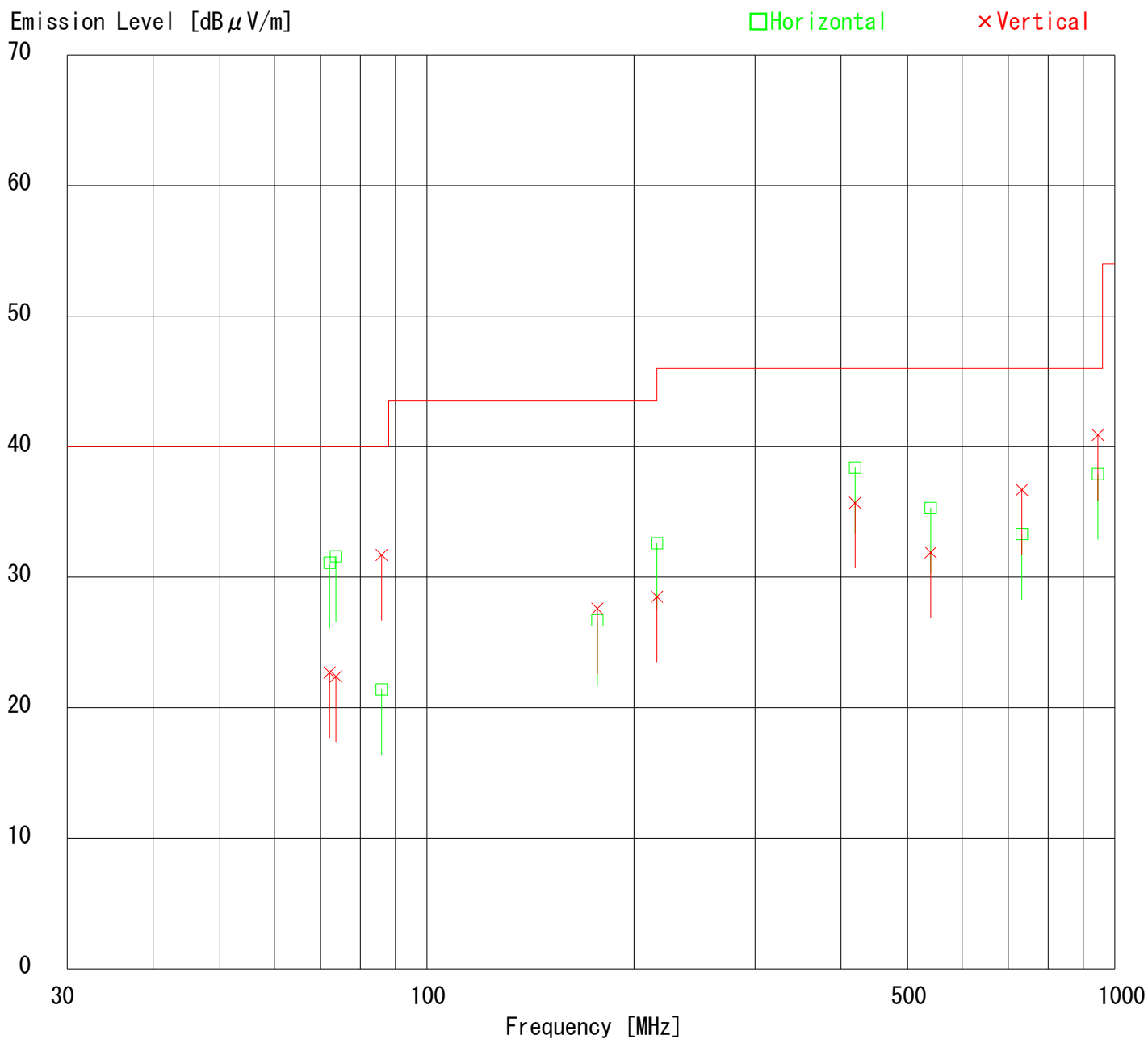
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

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

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

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

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.57	BB	37.8	38.4	24.3	38.5	4.3	0.0	27.9	28.5	54.0	26.1	25.5
2.	1350.00	BB	41.7	45.8	24.7	37.8	4.8	0.0	33.4	37.5	54.0	20.6	16.5
3.	1909.94	BB	33.1	37.1	27.9	37.1	5.9	0.0	29.8	33.8	54.0	24.2	20.2

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

■ ANTENNA: KHA-01 (SAS-200 571)

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

DATA OF RADIATION TEST

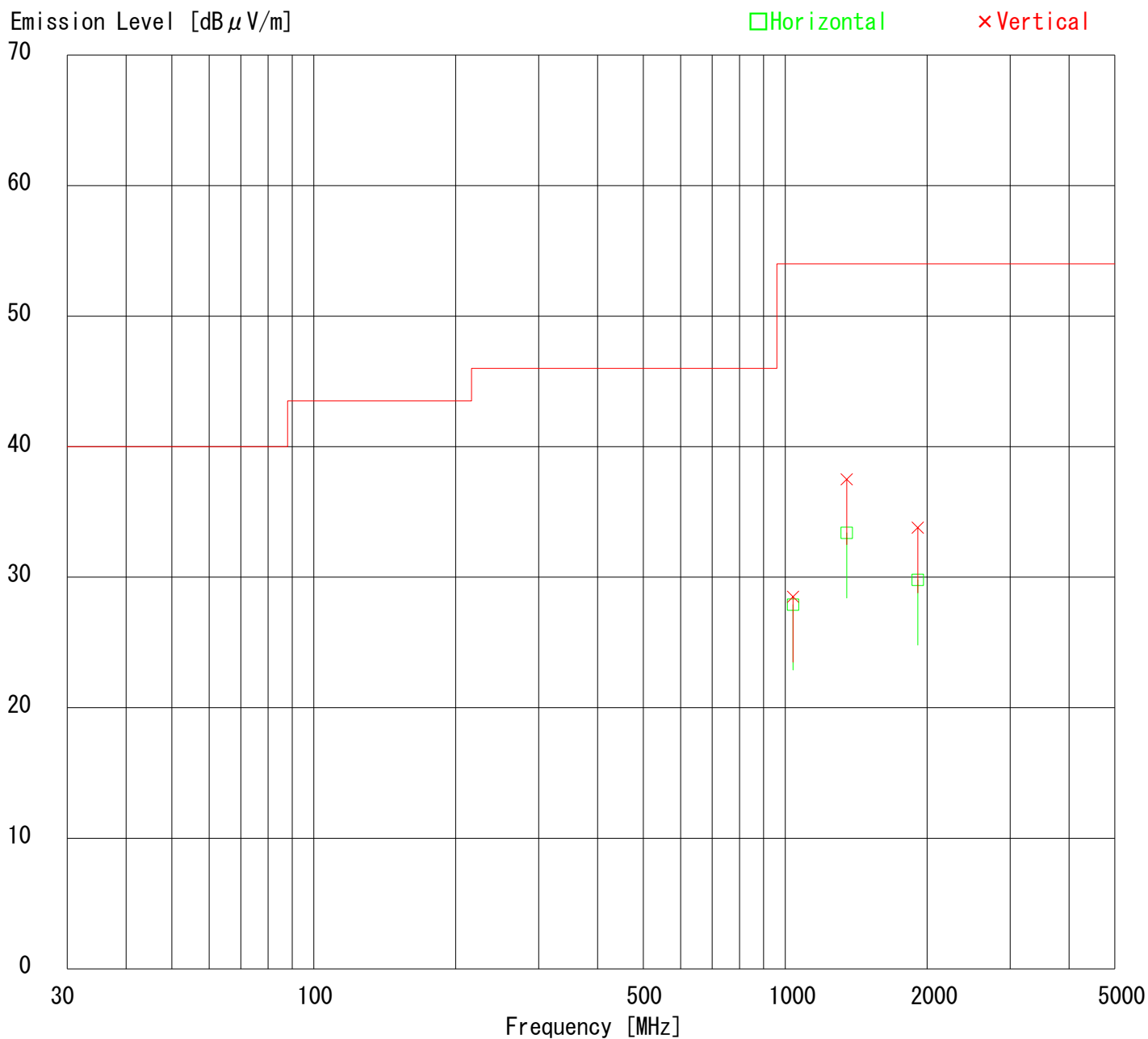
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

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

Engineer : Go Ishiwata



DATA OF RADIATION TEST

UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 261E0251-YW-1

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

Engineer : Go Ishiwata

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1038.57	BB	51.1	52.9	24.3	38.5	4.3	0.0	41.2	43.0	74.0	32.8	31.0
2.	1350.00	BB	50.2	54.7	24.7	37.8	4.8	0.0	41.9	46.4	74.0	32.1	27.6
3.	1909.94	BB	44.2	53.9	27.9	37.1	5.9	0.0	40.9	50.6	74.0	33.1	23.4

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

■ ANTENNA: KHA-01 (SAS-200 571)

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

DATA OF RADIATION TEST

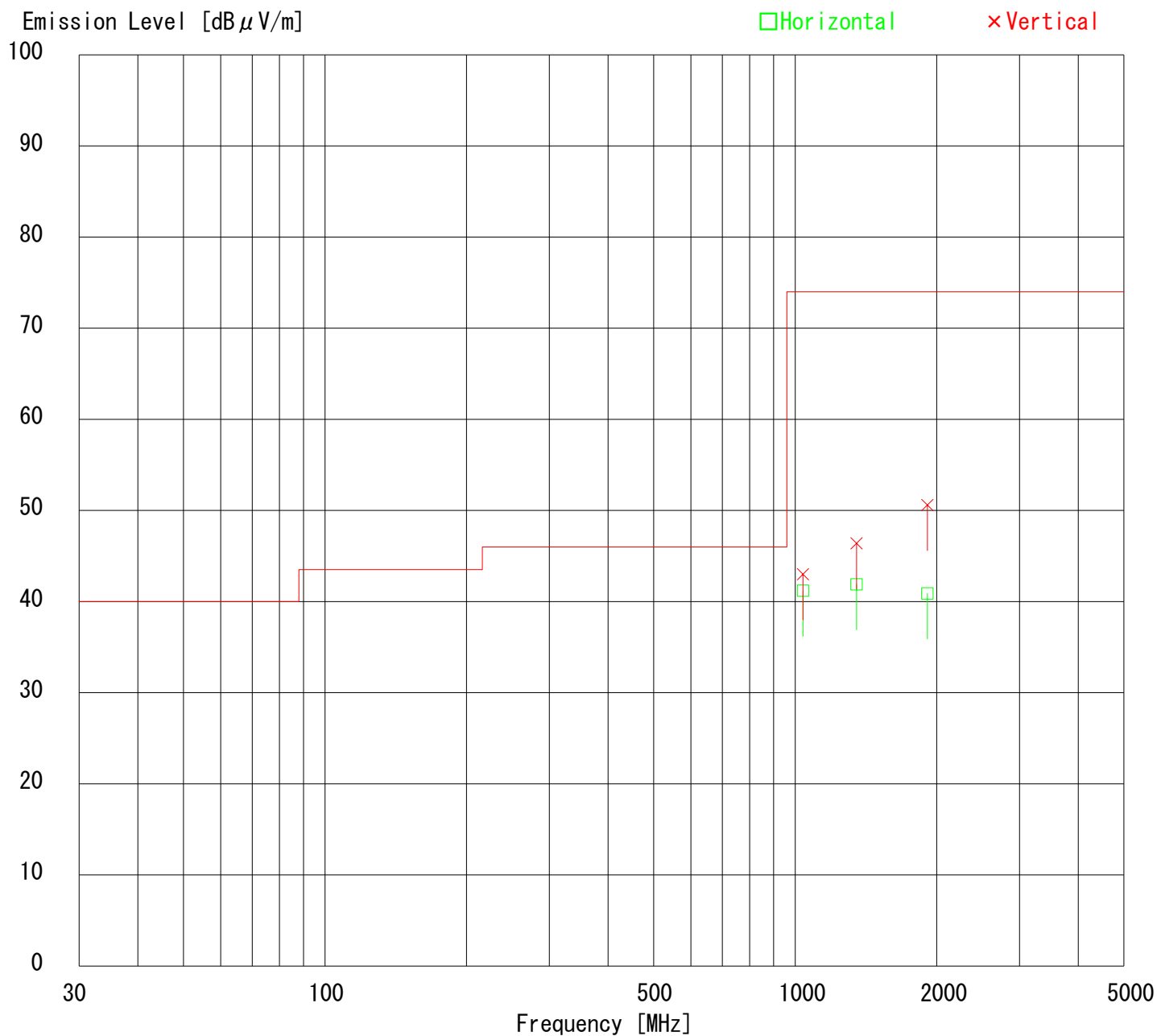
UL Apex Co.,Ltd.

YAMAKITA No.1 OPEN TEST SITE

Report No. : 26IE0251-YW-1

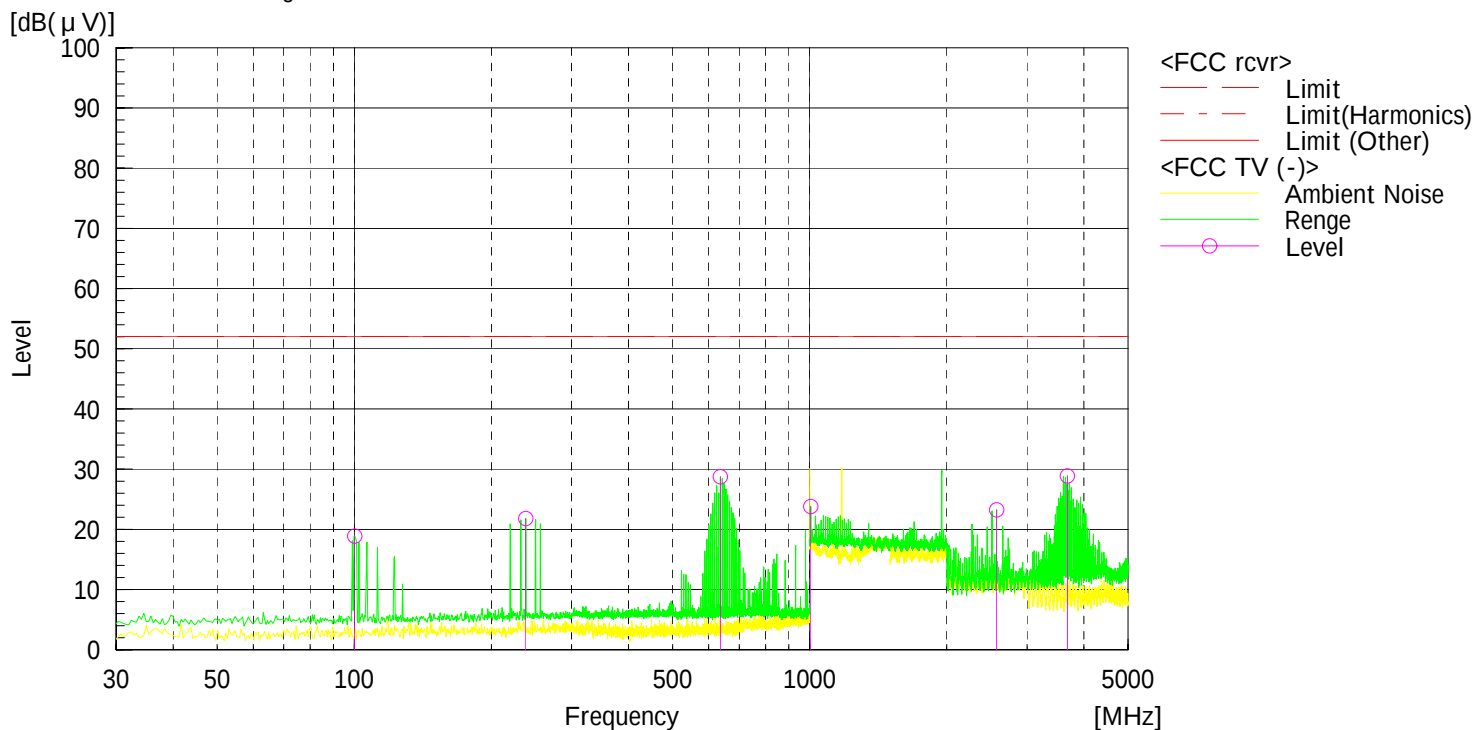
Applicant : Orion Electric Co., Ltd.
Kind of Equipment : DVD/VCR
Model No. : DVR-RT502-S
Serial No. : -
Power : AC120V/60Hz
Mode : VCR Play + DVD Rec
Remarks : PK (RBW: 1MHz, VBW: 1MHz)
Date : 4/21/2006
Test Distance : 3 m
Temperature : 21 °C
Humidity : 38 %
Regulation : FCC Part15B CLASS B(PK)

Engineer : Go Ishiwata



EUT TYPE : DVD/VCR
APPLICANT : Orion Electric Co., Ltd.
Model No. : DVR-RT502-S
EUT POWER : AC120V/60Hz
TEMP./HUMID. : 23deg.C / 39%

LIMIT : FCC Part15 Subpart B
MODE : TV Tuning
ENGINEER : Tsubasa Takayama
TEST ROOM : Yokowa No.7S/R
JOB NO. : 26IE0251-YW-1

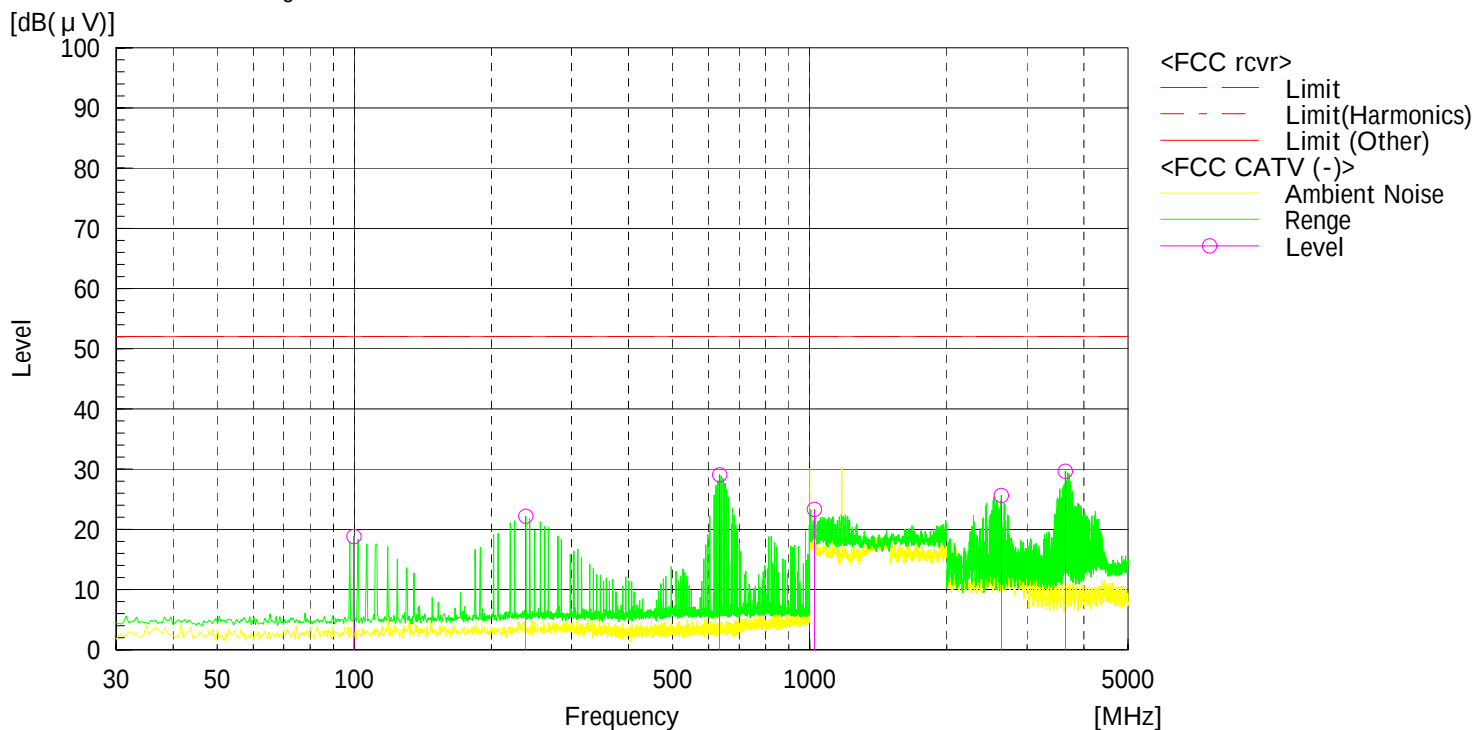


Final Result

Ch.	No.	Frequency [MHz]	Harm (<)	Reading PK [dB(μV)]	c.f [dB]	Result PK [dB(μV)]	Limit [dB(μV)]	Margin PK [dB]
-	1	100.243		38.4	-19.5	18.9	52.0	33.1
	2	238.050		40.9	-19.1	21.8	52.0	30.2
	3	636.571	14	47.4	-18.7	28.7	52.0	23.3
	4	1005.000	22	54.2	-30.4	23.8	52.0	28.2
	5	2572.857	56	58.2	-35.0	23.2	52.0	28.8
	6	3680.000	80	63.4	-34.5	28.9	52.0	23.1

EUT TYPE : DVD/VCR
APPLICANT : Orion Electric Co., Ltd.
Model No. : DVR-RT502-S
EUT POWER : AC120V/60Hz
TEMP./HUMID. : 23deg.C / 39%

LIMIT : FCC Part15 Subpart B
MODE : CATV Tuning
ENGINEER : Tsubasa Takayama
TEST ROOM : Yokowa No.7S/R
JOB NO. : 26IE0251-YW-1



Final Result

Ch.	No.	Frequency [MHz]	Harm (<)	Reading PK [dB(μV)]	c.f [dB]	Result PK [dB(μV)]	Limit [dB(μV)]	Margin PK [dB]
-	1	99.821		38.3	-19.5	18.8	52.0	33.2
	2	238.050		41.3	-19.1	22.2	52.0	29.8
	3	634.571	14	47.8	-18.7	29.1	52.0	23.0
	4	1024.286	22	53.7	-30.4	23.3	52.0	28.7
	5	2634.286	58	60.6	-35.0	25.6	52.0	26.4
	6	3641.429	80	64.1	-34.5	29.6	52.0	22.4

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 26IE0251-YW-1
Equipment	: DVD-MU/VCR	Regulation	: FCC Part 15 Subpart B
Model Number	: DVR-RT502-S	Date	: May 08, 2006
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: TV Reception+VCR Rec+DVD Rec	Engineer	: Masanori Nishiyama
Remarks	: -		

TV Reception(0dBmV)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	82.0	19.8	62.2	69.5	7.3
4	67.25	82.7	19.7	63.0	69.5	6.6
Audio Signal						
3	56.75	67.7	19.8	47.9	56.5	8.6
	65.75	66.6	19.7	46.9	56.5	9.6
4	62.75	67.4	19.7	47.7	56.5	8.8
	71.75	66.3	19.6	46.7	56.5	9.9

TV Reception(25dBmV)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	83.2	19.8	63.4	69.5	6.1
4	67.25	82.8	19.7	63.1	69.5	6.4
Audio Signal						
3	56.75	67.6	19.8	47.8	56.5	8.7
	65.75	66.7	19.7	47.0	56.5	9.5
4	62.75	67.4	19.7	47.7	56.5	8.8
	71.75	66.3	19.6	46.7	56.5	9.8

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 26IE0251-YW-1
Equipment	: DVD-MU/VCR	Regulation	: FCC Part 15 Subpart B
Model Number	: DVR-RT502-S	Date	: May 08, 2006
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: AV Input 1+VCR Rec+DVD Rec	Engineer	: Masanori Nishiyama
Remarks	: -		

AV Input1(1Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	83.3	19.8	63.5	69.5	6.1
4	67.25	81.1	19.7	61.4	69.5	8.1
Audio Signal						
3	56.75	68.0	19.8	48.2	56.5	8.3
	65.75	66.7	19.7	47.0	56.5	9.5
4	62.75	67.5	19.7	47.8	56.5	8.8
	71.75	66.4	19.6	46.8	56.5	9.7

AV Input1(5Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	82.6	19.8	62.8	69.5	6.7
4	67.25	82.7	19.7	63.0	69.5	6.5
Audio Signal						
3	56.75	67.8	19.8	48.0	56.5	8.5
	65.75	66.7	19.7	47.0	56.5	9.5
4	62.75	67.7	19.7	48.0	56.5	8.5
	71.75	66.5	19.6	46.9	56.5	9.6

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 26IE0251-YW-1
Equipment	: DVD-MU/VCR	Regulation	: FCC Part 15 Subpart B
Model Number	: DVR-RT502-S	Date	: May 08, 2006
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: AV Input 2+VCR Rec+DVD Rec	Engineer	: Masanori Nishiyama
Remarks	: -		

AV Input2(1Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	82.0	19.8	62.2	69.5	7.3
4	67.25	81.4	19.7	61.7	69.5	7.8
Audio Signal						
3	56.75	67.7	19.8	47.9	56.5	8.6
	65.75	67.1	19.7	47.4	56.5	9.1
4	62.75	67.4	19.7	47.7	56.5	8.8
	71.75	66.3	19.6	46.7	56.5	9.8

AV Input2(5Vp-p)

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	82.5	19.8	62.7	69.5	6.8
4	67.25	81.3	19.7	61.6	69.5	8.0
Audio Signal						
3	56.75	67.8	19.8	48.0	56.5	8.5
	65.75	66.7	19.7	47.0	56.5	9.5
4	62.75	68.0	19.7	48.3	56.5	8.2
	71.75	67.0	19.6	47.4	56.5	9.1

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 26IE0251-YW-1
Equipment	: DVD-MU/VCR	Regulation	: FCC Part 15 Subpart B
Model Number	: DVR-RT502-S	Date	: May 08, 2006
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: VCR Playback+DVD Rec	Engineer	: Masanori Nishiyama
Remarks	: -		

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	83.4	19.8	63.6	69.5	5.9
4	67.25	82.8	19.7	63.1	69.5	6.4
Audio Signal						
3	56.75	68.0	19.8	48.2	56.5	8.3
	65.75	67.0	19.7	47.3	56.5	9.2
4	62.75	67.4	19.7	47.7	56.5	8.8
	71.75	66.3	19.6	46.7	56.5	9.8

RF Output Level

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company	: Orion Electric Co., Ltd.	Report Number	: 26IE0251-YW-1
Equipment	: DVD-MU/VCR	Regulation	: FCC Part 15 Subpart B
Model Number	: DVR-RT502-S	Date	: May 08, 2006
Power	: 120V/60Hz	Temp / Humid	: 23deg.C / 41%
Description	: DVD Play+VCR Rec	Engineer	: Masanori Nishiyama
Remarks	: -		

Ch	Frequency [MHz]	Meter Reading [dB μ V]	Correction Factor [dB]	Result [dB]	Limits [dB μ V]	Margin [dB]
Video Signal						
3	61.25	81.7	19.8	61.9	69.5	7.6
4	67.25	81.4	19.7	61.7	69.5	7.8
Audio Signal						
3	56.75	67.9	19.8	48.1	56.5	8.4
	65.75	67.1	19.7	47.4	56.5	9.1
4	62.75	67.4	19.7	47.7	56.5	8.8
	71.75	66.3	19.6	46.7	56.5	9.8

DATA OF RF SPURIOUS TEST

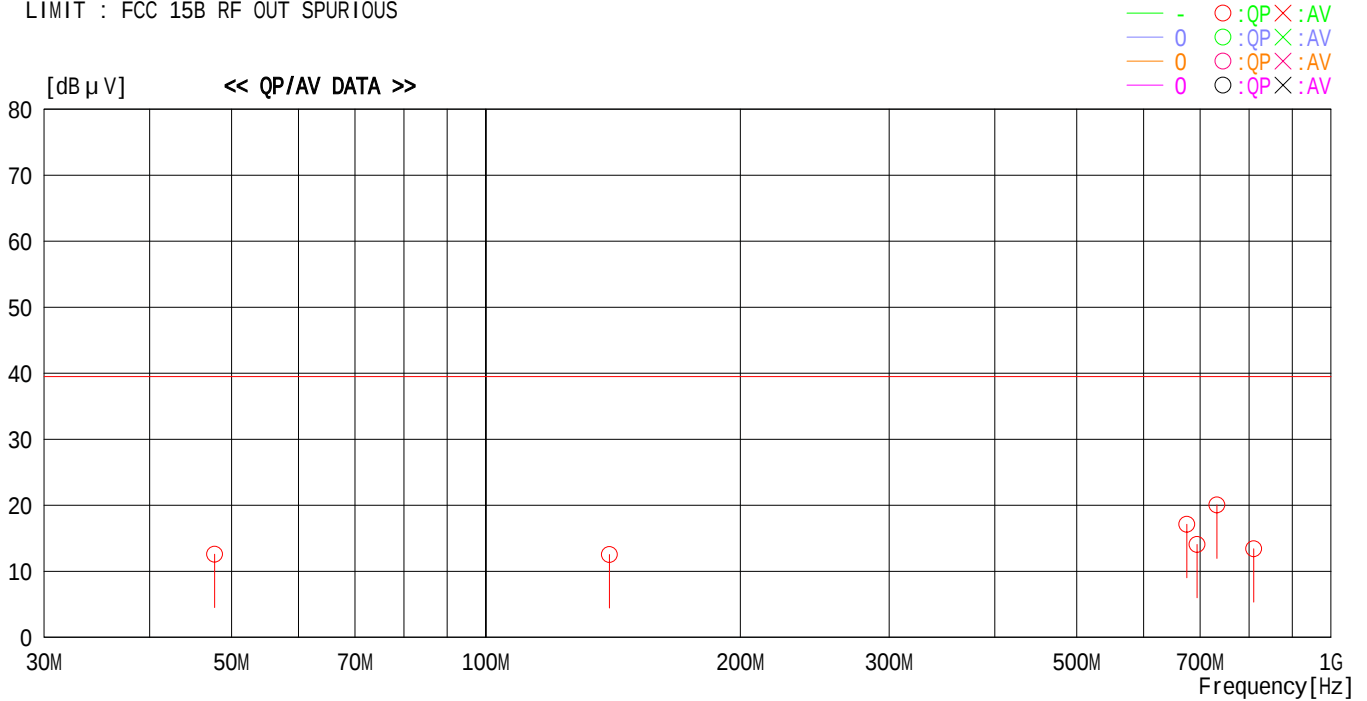
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : TV Reception+VCR Rec+DVD Rec(0dBmV)_3ch

LIMIT : FCC 15B RF OUT SPURIOUS



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	47.7400	32.4	----	-19.8	12.6	----	39.5	----	26.9	----	-
2	140.0000	32.1	----	-19.6	12.5	----	39.5	----	27.0	----	-
3	674.9900	36.6	----	-19.5	17.1	----	39.5	----	22.4	----	-
4	694.2900	33.6	----	-19.5	14.1	----	39.5	----	25.4	----	-
5	732.8500	39.6	----	-19.6	20.0	----	39.5	----	19.5	----	-
6	810.0100	33.0	----	-19.6	13.4	----	39.5	----	26.1	----	-

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

DATA OF RF SPURIOUS TEST

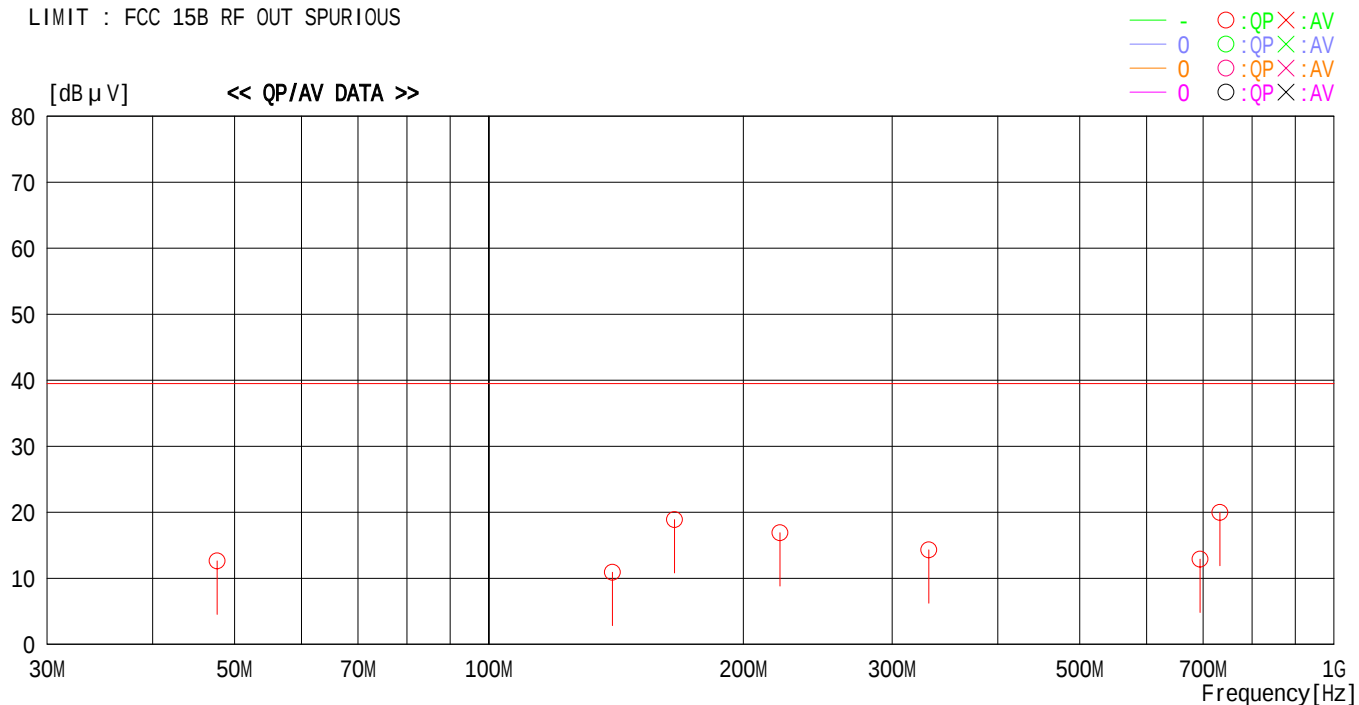
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 261E0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : TV Reception+VCR Rec+DVD Rec(25dBmV)_3ch

LIMIT : FCC 15B RF OUT SPURIOUS



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	47.7000	32.4	----	-19.8	12.6	----	39.5	----	26.9	----	-
2	139.9900	30.5	----	-19.6	10.9	----	39.5	----	28.6	----	-
3	165.7800	38.5	----	-19.6	18.9	----	39.5	----	20.6	----	-
4	221.0100	36.3	----	-19.4	16.9	----	39.5	----	22.6	----	-
5	331.5400	33.7	----	-19.4	14.3	----	39.5	----	25.2	----	-
6	694.2800	32.4	----	-19.5	12.9	----	39.5	----	26.6	----	-
7	732.9300	39.6	----	-19.6	20.0	----	39.5	----	19.5	----	-

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

DATA OF RF SPURIOUS TEST

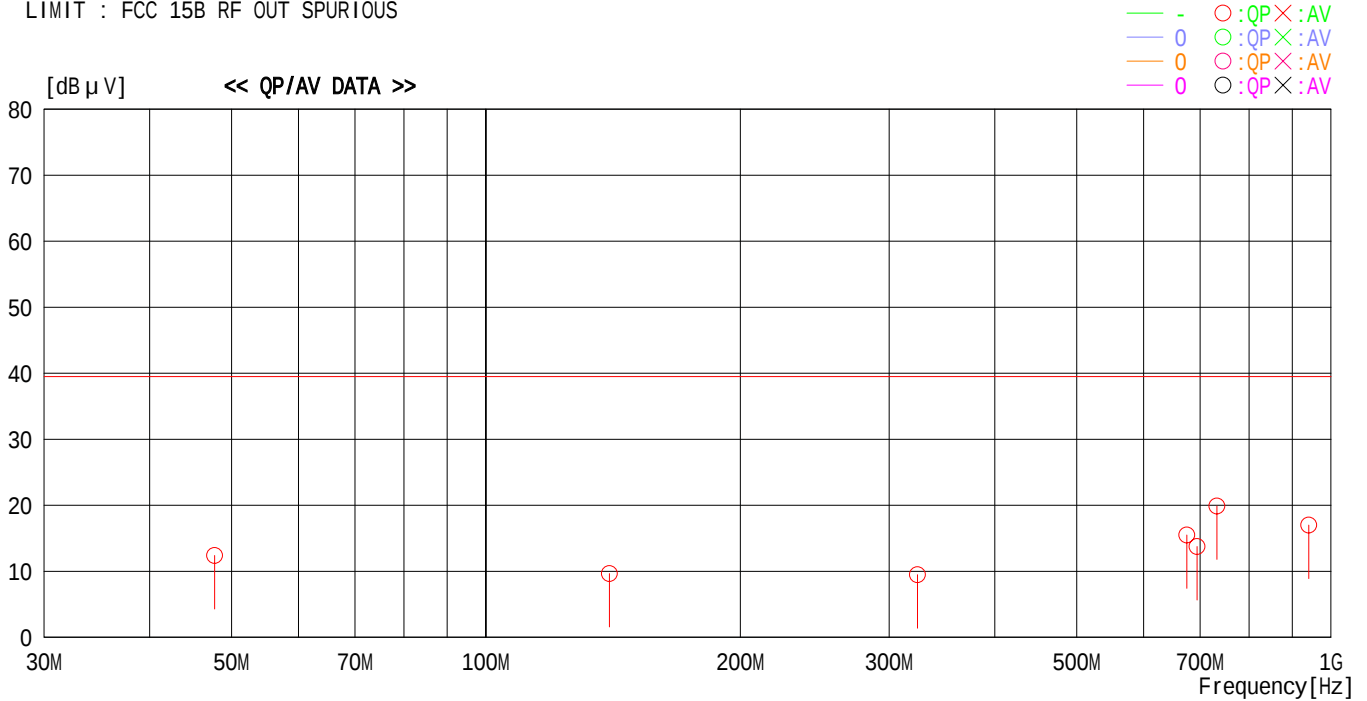
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(1Vp-p)_3ch

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

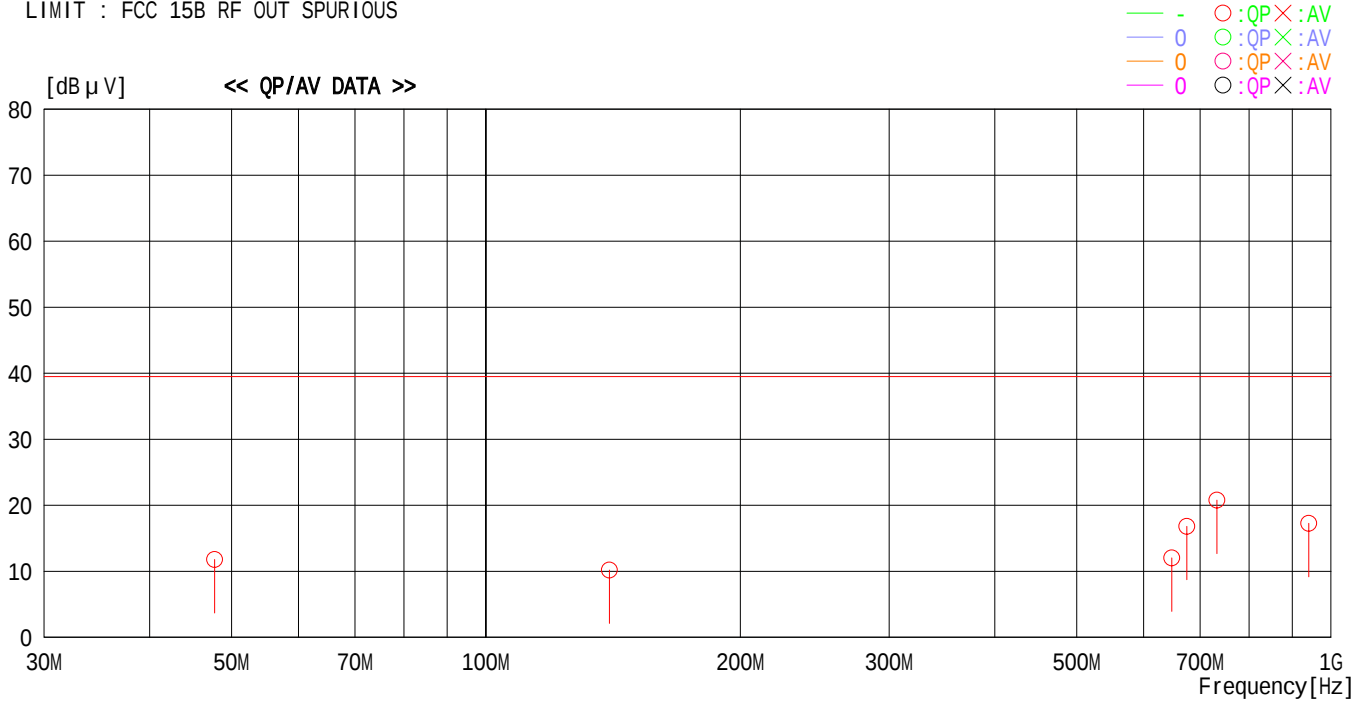
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(5Vp-p)_3ch

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	47.7500	31.6	----	-19.8	11.8	----	39.5	----	27.7	----	-
2	140.0000	29.8	----	-19.6	10.2	----	39.5	----	29.3	----	-
3	647.9700	31.5	----	-19.5	12.0	----	39.5	----	27.5	----	-
4	674.9900	36.3	----	-19.5	16.8	----	39.5	----	22.7	----	-
5	732.8900	40.4	----	-19.6	20.8	----	39.5	----	18.7	----	-
6	941.3600	37.0	----	-19.7	17.3	----	39.5	----	22.3	----	-

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

DATA OF RF SPURIOUS TEST

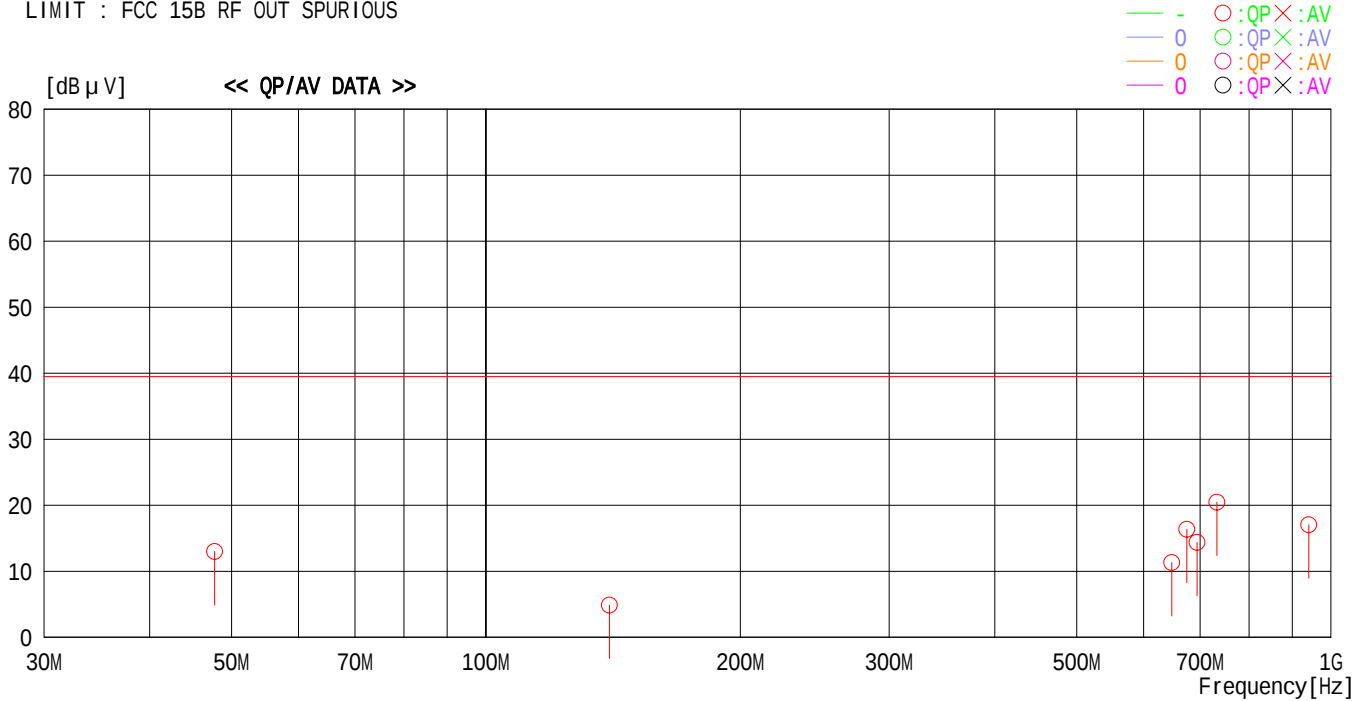
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(1Vp-p)_3ch

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	47.7500	32.8	----	-19.8	13.0	----	39.5	----	26.5	----	-
2	140.0100	24.5	----	-19.6	4.9	----	39.5	----	34.6	----	-
3	648.0000	30.8	----	-19.5	11.3	----	39.5	----	28.2	----	-
4	675.0300	35.9	----	-19.5	16.4	----	39.5	----	23.1	----	-
5	694.2900	33.9	----	-19.5	14.4	----	39.5	----	25.1	----	-
6	732.8900	40.1	----	-19.6	20.5	----	39.5	----	19.0	----	-
7	941.3400	36.8	----	-19.7	17.1	----	39.5	----	22.4	----	-

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

DATA OF RF SPURIOUS TEST

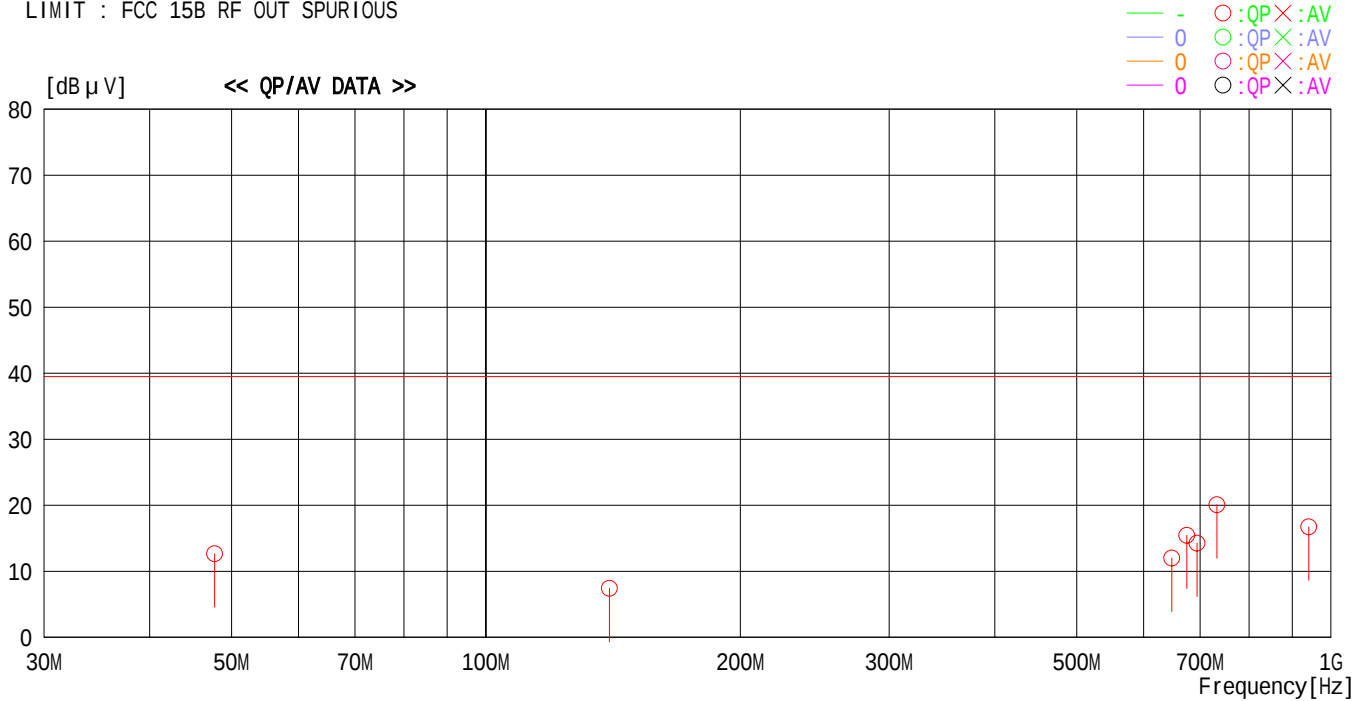
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(5Vp-p)_3ch

LIMIT : FCC 15B RF OUT SPURIOUS



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	47.7400	32.5	----	-19.8	12.7	----	39.5	----	26.8	----	-
2	140.0200	27.0	----	-19.6	7.4	----	39.5	----	32.1	----	-
3	648.0100	31.5	----	-19.5	12.0	----	39.5	----	27.5	----	-
4	675.0000	35.0	----	-19.5	15.5	----	39.5	----	24.1	----	-
5	694.3000	33.8	----	-19.5	14.3	----	39.5	----	25.2	----	-
6	732.8700	39.7	----	-19.6	20.1	----	39.5	----	19.4	----	-
7	941.3600	36.4	----	-19.7	16.7	----	39.5	----	22.8	----	-

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

DATA OF RF SPURIOUS TEST

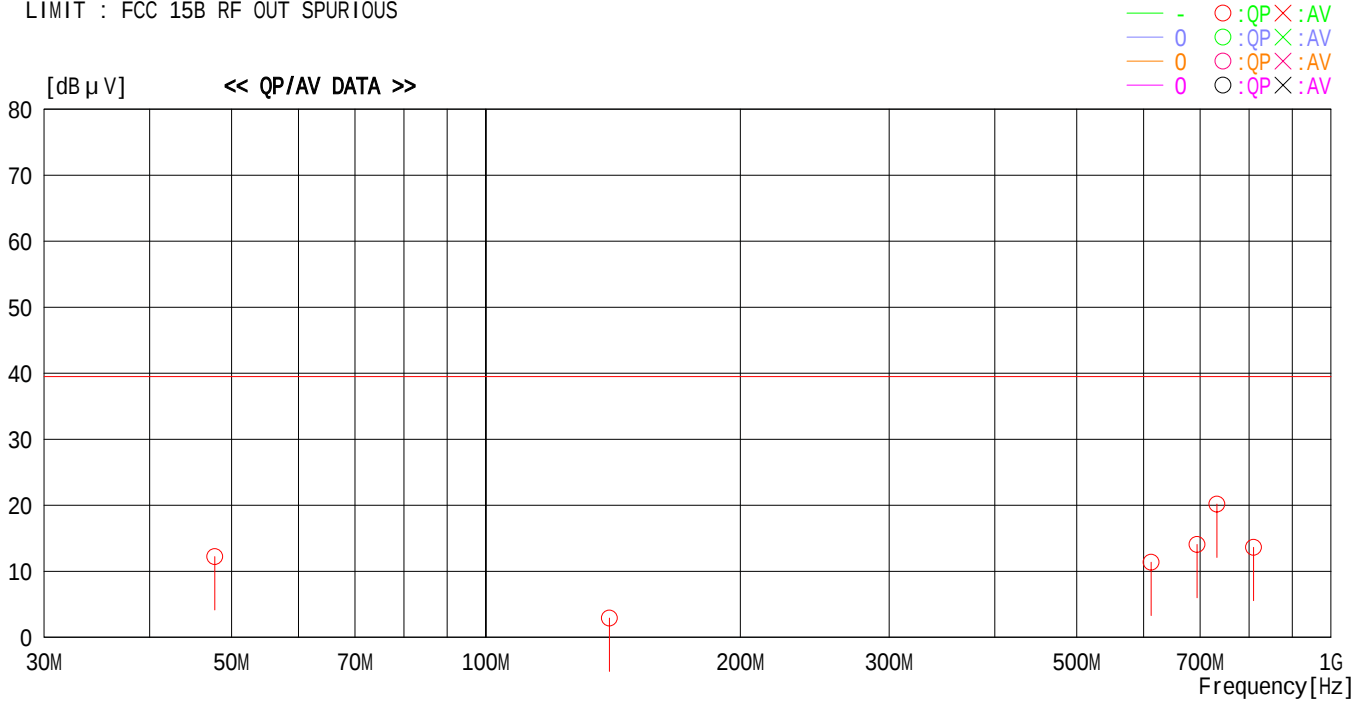
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : VCR Playback+DVD Rec_3ch

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

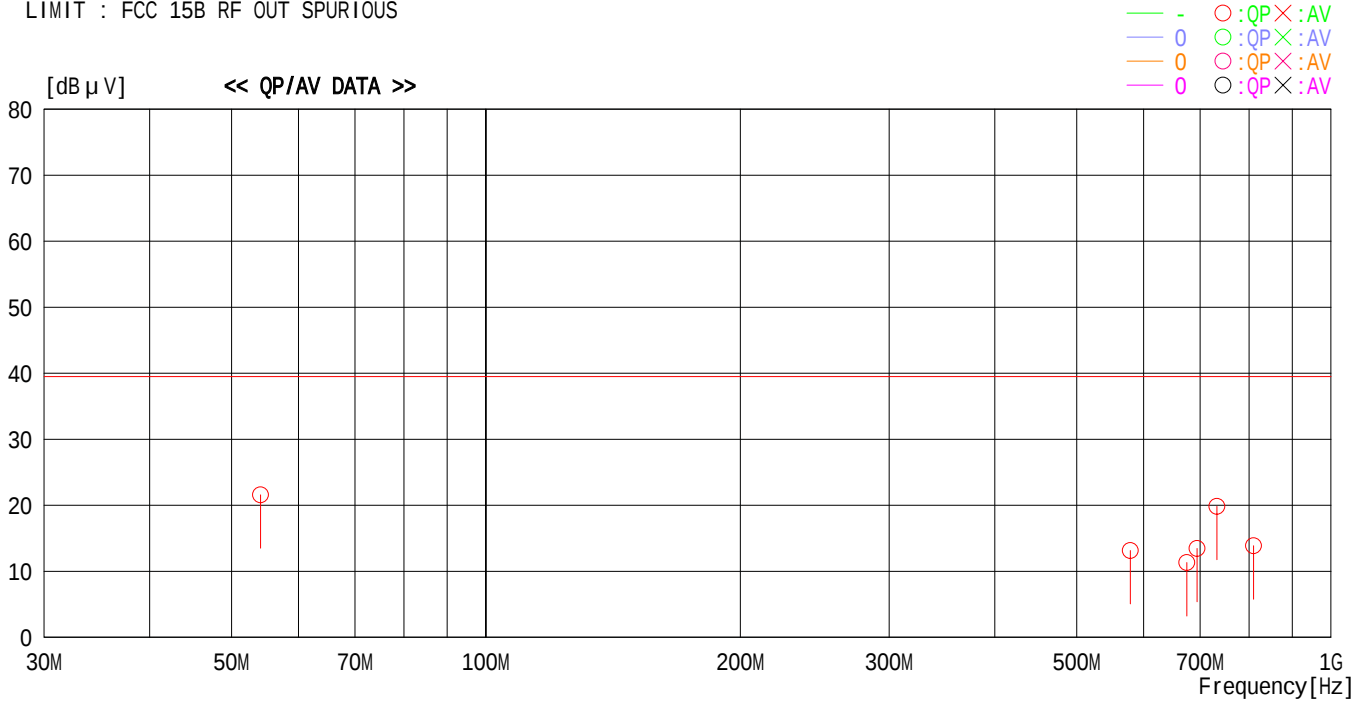
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : DVD Play+VCR Rec_3ch

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

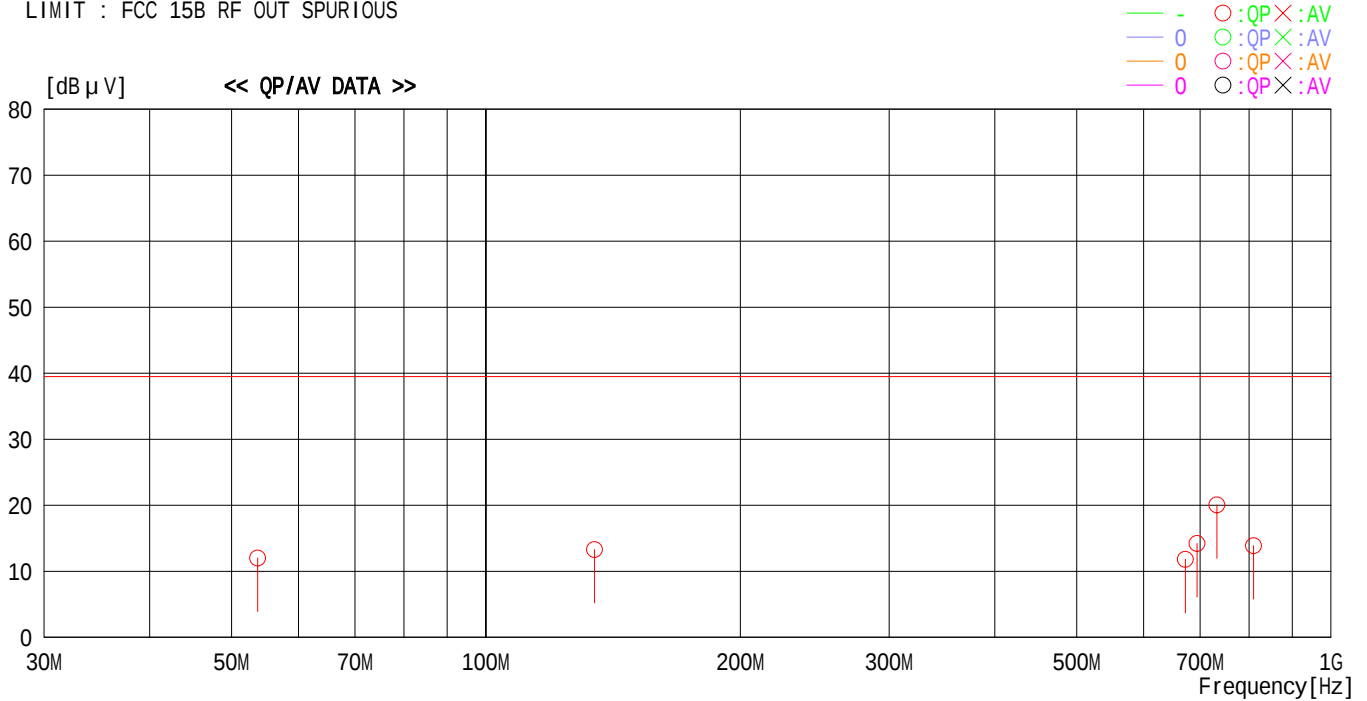
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : TV Reception +VCR Rec+DVD Rec(0dBmV)_4ch

LIMIT : FCC 15B RF OUT SPURIOUS



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	53.6900	31.8	----	-19.8	12.0	----	39.5	----	27.5	----	-
2	134.4600	32.9	----	-19.6	13.3	----	39.5	----	26.2	----	-
3	672.3300	31.3	----	-19.5	11.8	----	39.5	----	27.7	----	-
4	694.2700	33.7	----	-19.5	14.2	----	39.5	----	25.3	----	-
5	732.8300	39.7	----	-19.6	20.1	----	39.5	----	19.4	----	-
6	809.9800	33.5	----	-19.6	13.9	----	39.5	----	25.6	----	-

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

DATA OF RF SPURIOUS TEST

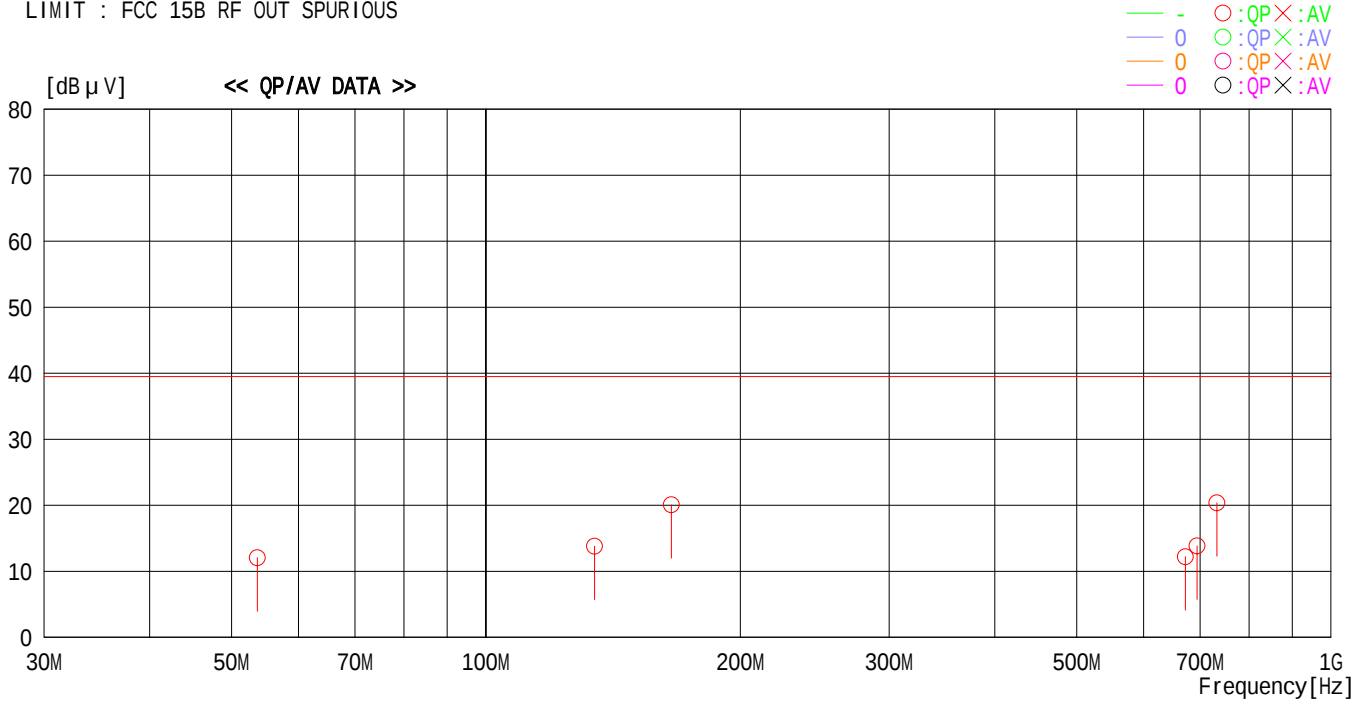
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : TV Reception +VCR Rec+DVD Rec(25dBmV)_4ch

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

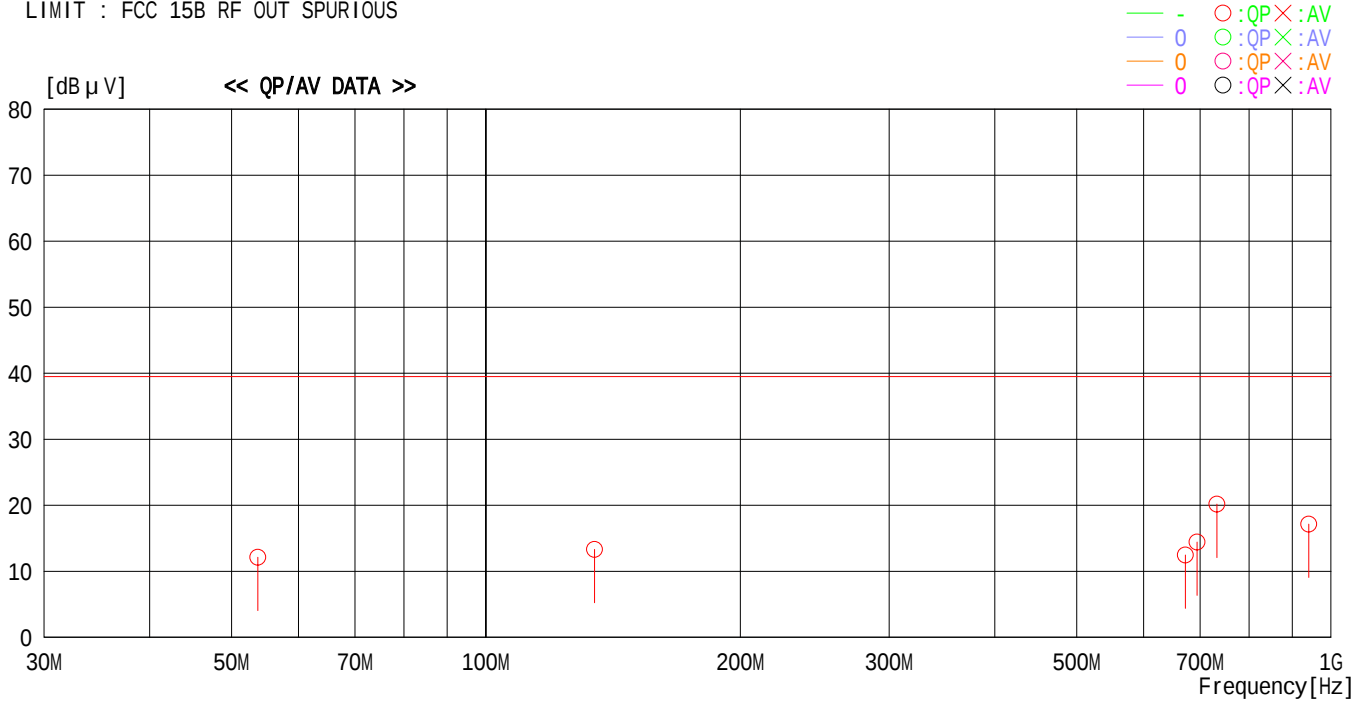
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 261E0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(1Vp-p)_4ch

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

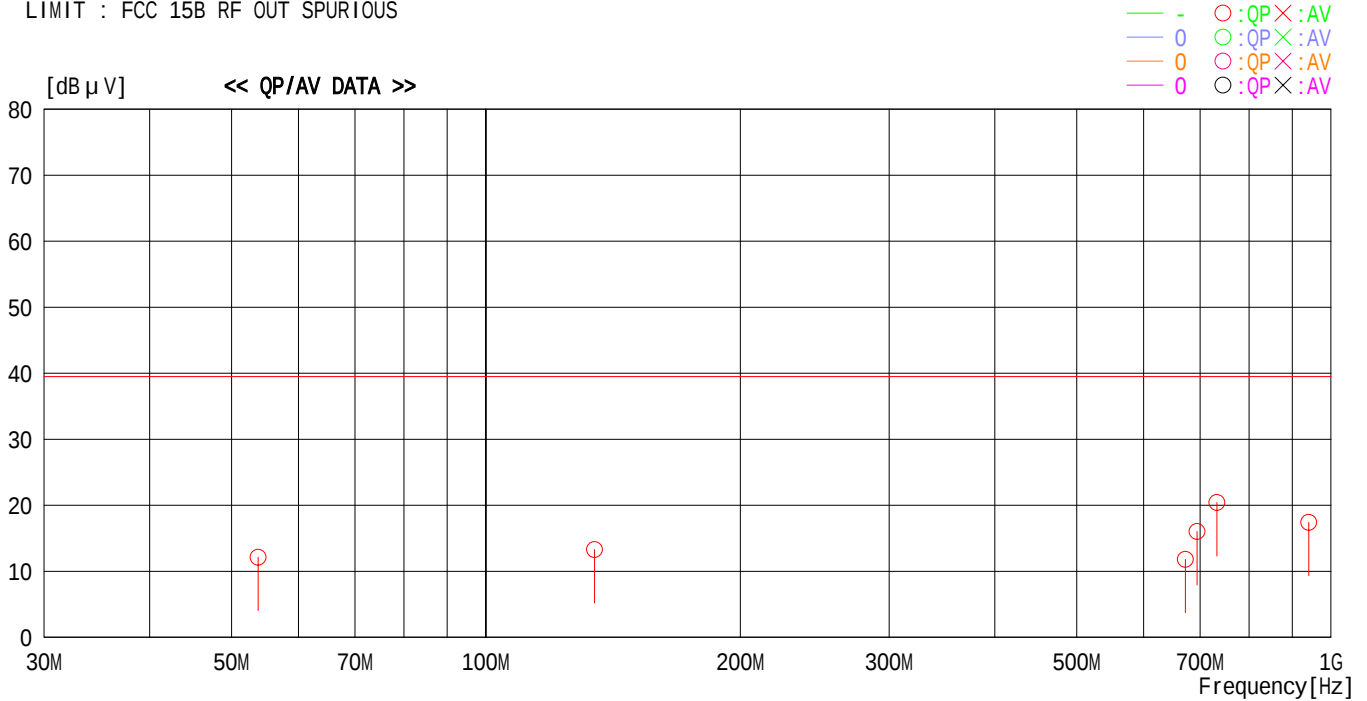
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 261E0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(5Vp-p)_4ch

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

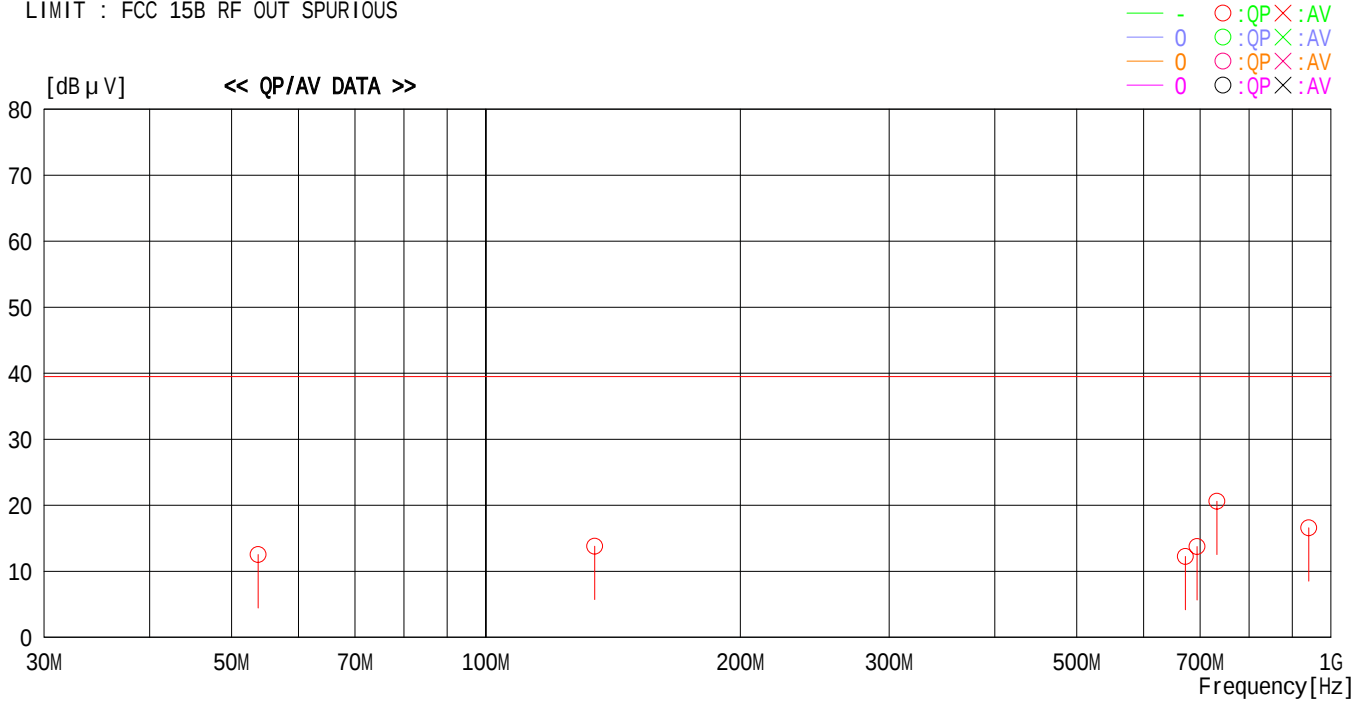
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(1Vp-p)_4ch

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	53.7500	32.3	----	-19.8	12.5	----	39.5	----	27.0	----	-
2	134.4800	33.4	----	-19.6	13.8	----	39.5	----	25.7	----	-
3	672.3500	31.8	----	-19.5	12.3	----	39.5	----	27.3	----	-
4	694.3000	33.2	----	-19.5	13.7	----	39.5	----	25.8	----	-
5	732.8400	40.2	----	-19.6	20.6	----	39.5	----	18.9	----	-
6	941.3600	36.3	----	-19.7	16.6	----	39.5	----	22.9	----	-

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

DATA OF RF SPURIOUS TEST

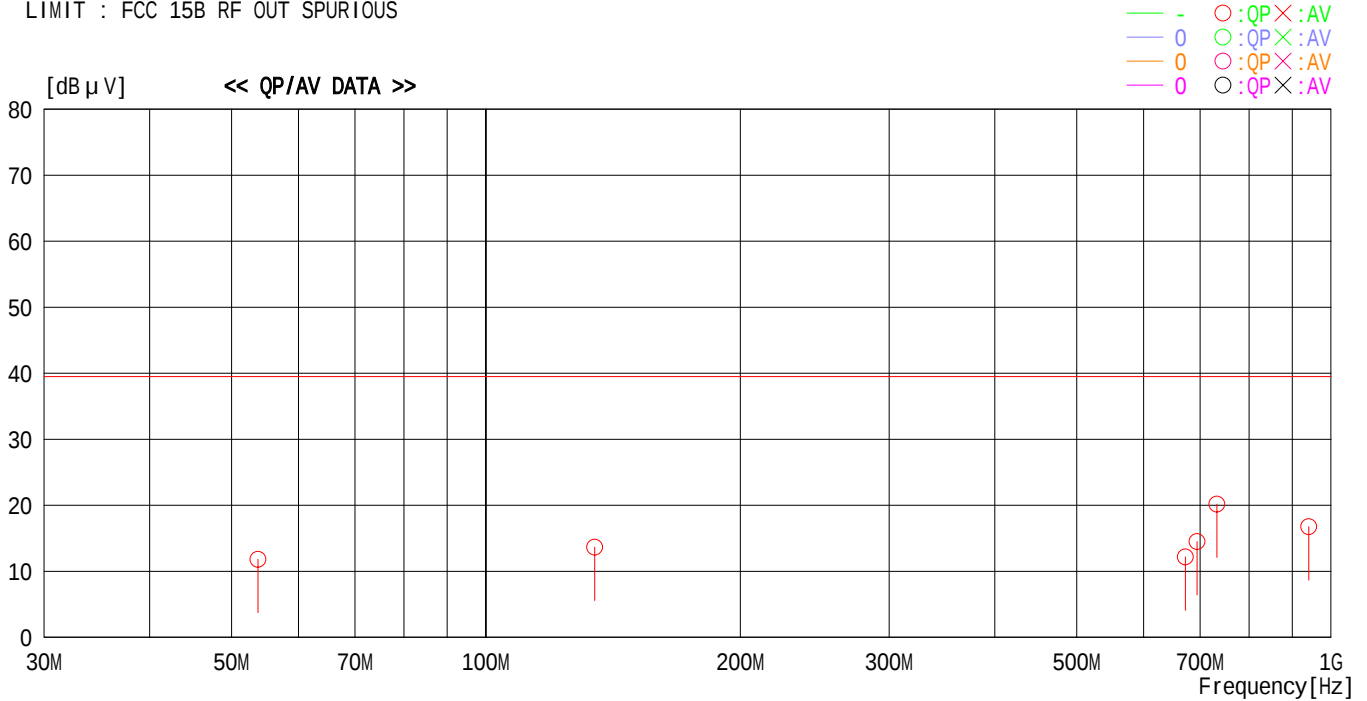
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(5Vp-p)_4ch

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	53.7300	31.6	----	-19.8	11.8	----	39.5	----	27.7	----	-
2	134.4700	33.3	----	-19.6	13.7	----	39.5	----	25.8	----	-
3	672.3200	31.7	----	-19.5	12.2	----	39.5	----	27.3	----	-
4	694.3000	34.0	----	-19.5	14.5	----	39.5	----	25.0	----	-
5	732.8400	39.8	----	-19.6	20.2	----	39.5	----	19.3	----	-
6	941.4300	36.5	----	-19.7	16.8	----	39.5	----	22.8	----	-

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

DATA OF RF SPURIOUS TEST

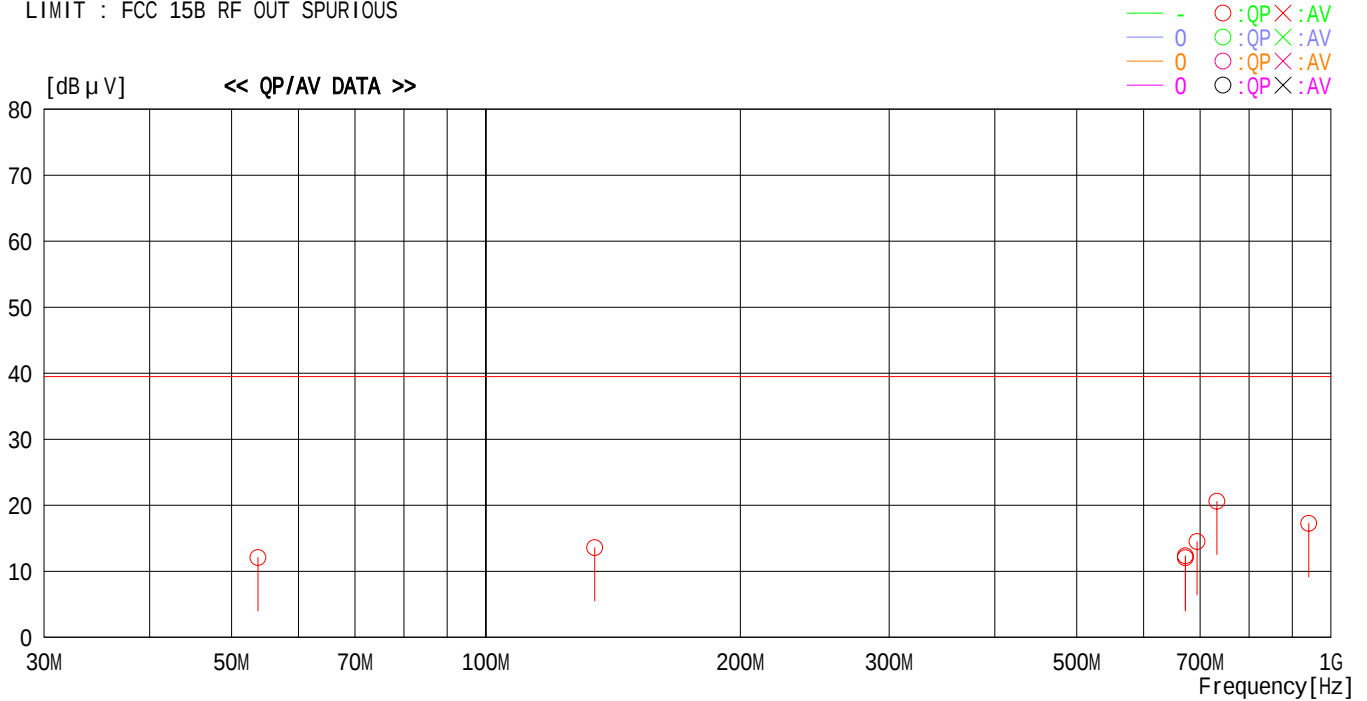
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 261E0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : VCR Playback+DVD Rec_4ch

LIMIT : FCC 15B RF OUT SPURIOUS



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

DATA OF RF SPURIOUS TEST

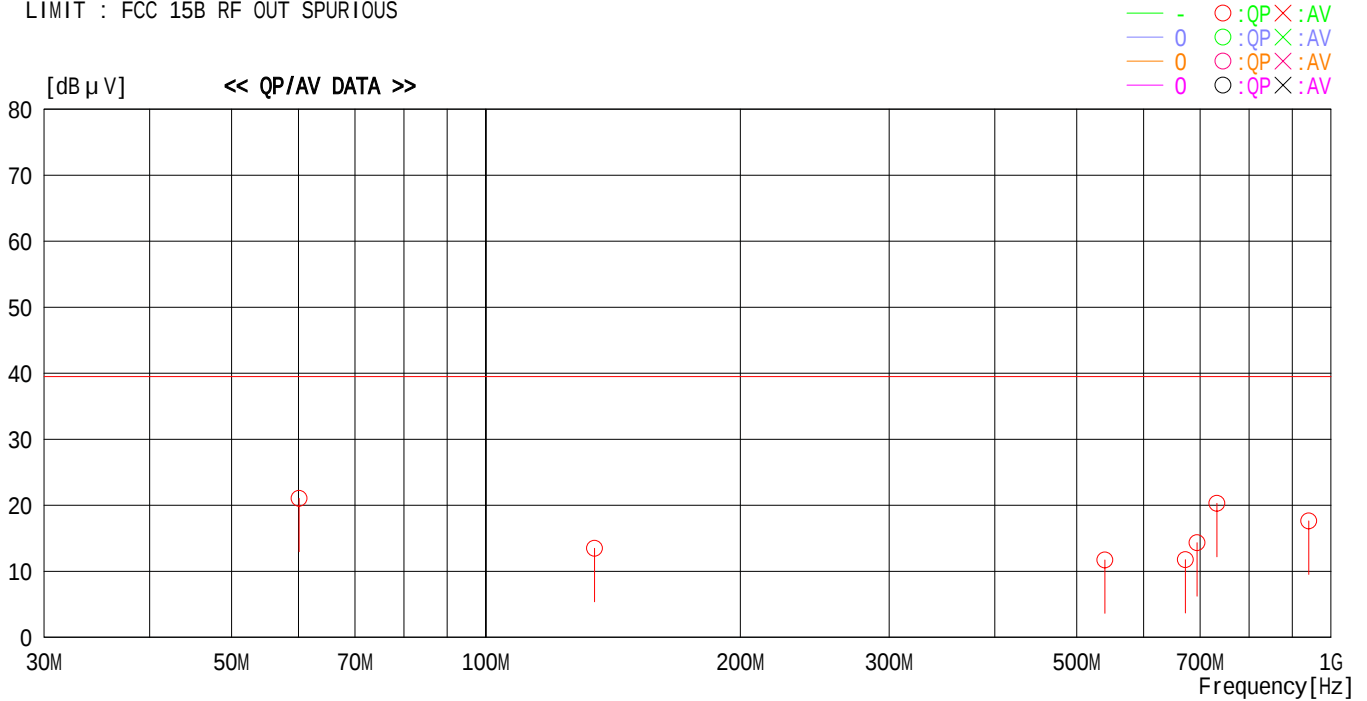
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : DVD Play+VCR Rec_4ch

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	60.1100	40.9	----	-19.8	21.1	----	39.5	----	18.5	----	-
2	134.4500	33.1	----	-19.6	13.5	----	39.5	----	26.0	----	-
3	539.9900	31.0	----	-19.3	11.7	----	39.5	----	27.8	----	-
4	672.3200	31.3	----	-19.5	11.8	----	39.5	----	27.7	----	-
5	694.2600	33.8	----	-19.5	14.3	----	39.5	----	25.2	----	-
6	732.8600	39.9	----	-19.6	20.3	----	39.5	----	19.2	----	-
7	941.3400	37.3	----	-19.7	17.6	----	39.5	----	21.9	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

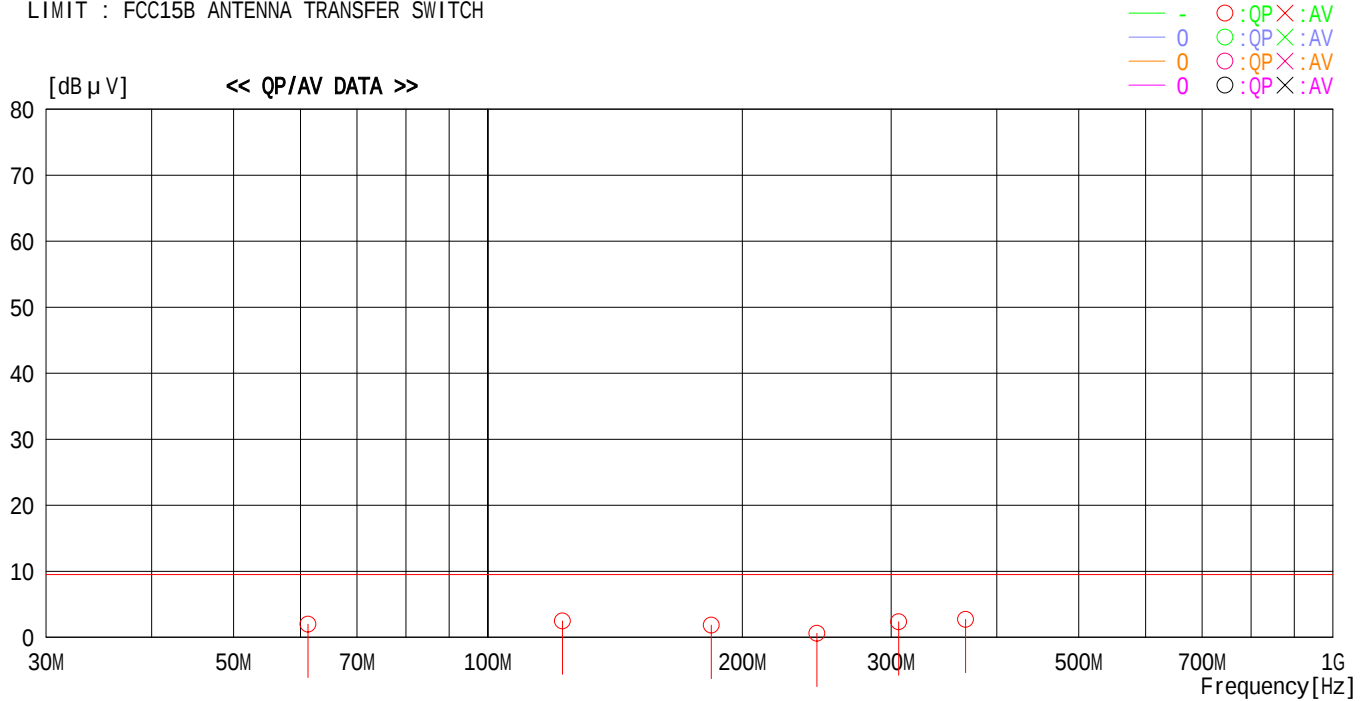
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(1Vp-p)_3ch

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	21.8	----	-19.8	2.0	----	9.5	----	7.5	----	-
2	122.5000	22.2	----	-19.7	2.5	----	9.5	----	7.0	----	-
3	183.7500	21.3	----	-19.5	1.8	----	9.5	----	7.7	----	-
4	245.0000	20.1	----	-19.5	0.6	----	9.5	----	8.9	----	-
5	306.2500	21.9	----	-19.5	2.4	----	9.5	----	7.2	----	-
6	367.5000	22.1	----	-19.4	2.7	----	9.5	----	6.8	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

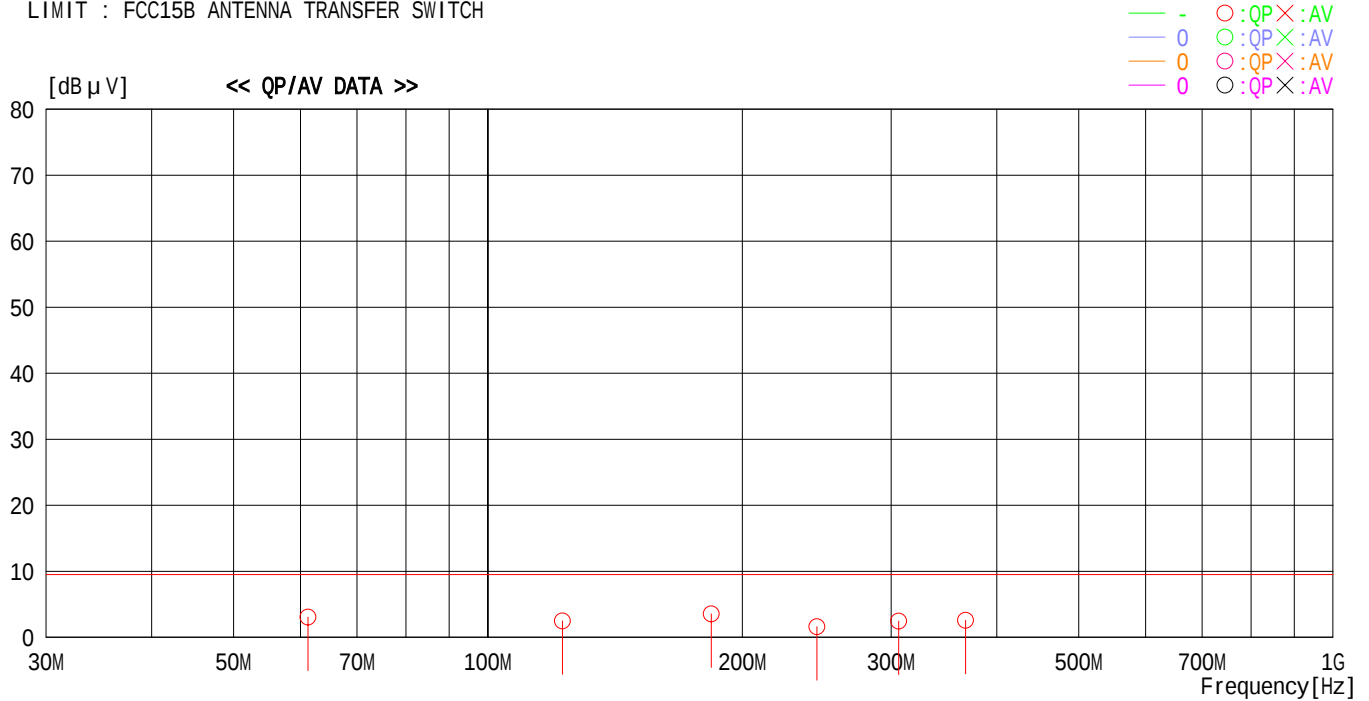
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 261E0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(5Vp-p)_3ch

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	22.9	----	-19.8	3.1	----	9.5	----	6.4	----	-
2	122.5000	22.2	----	-19.7	2.5	----	9.5	----	7.0	----	-
3	183.7500	23.0	----	-19.5	3.5	----	9.5	----	6.0	----	-
4	245.0000	21.1	----	-19.5	1.6	----	9.5	----	7.9	----	-
5	306.2500	22.0	----	-19.5	2.5	----	9.5	----	7.0	----	-
6	367.5000	22.0	----	-19.4	2.6	----	9.5	----	6.9	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

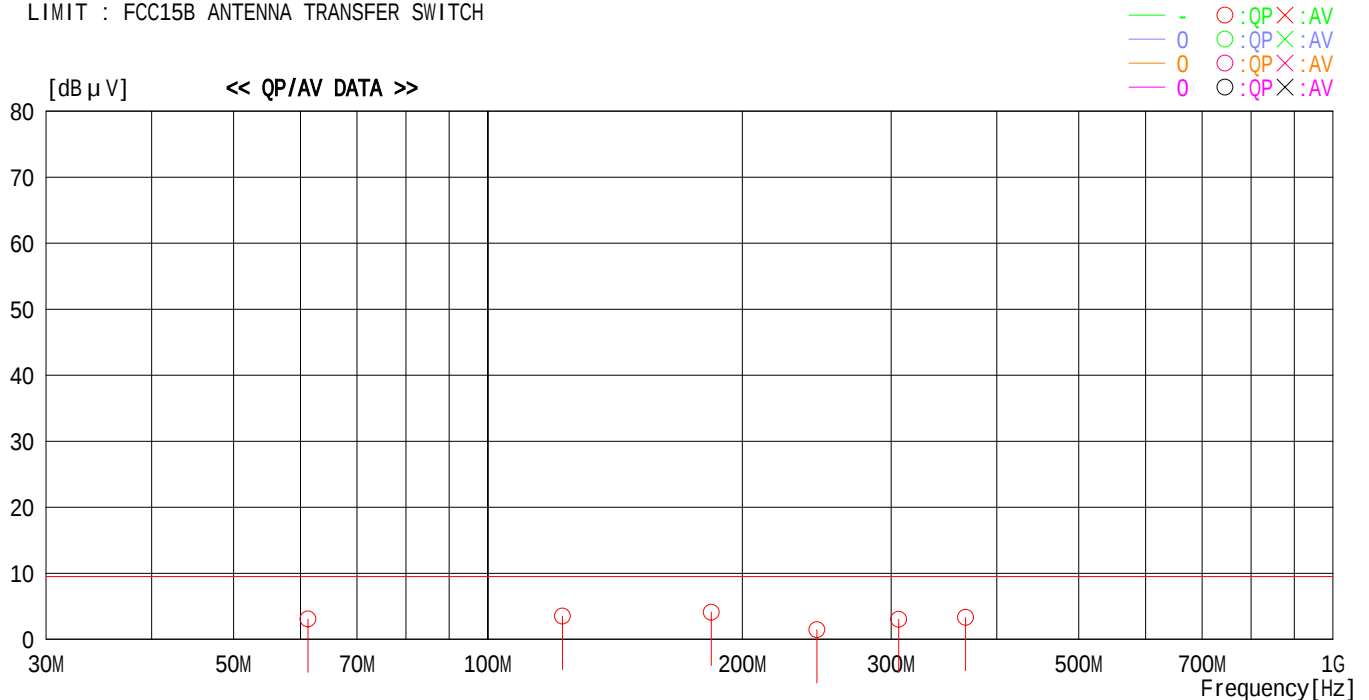
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 261E0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(1Vp-p)_3ch

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	22.9	----	-19.8	3.1	----	9.5	----	6.4	----	-
2	122.5000	23.2	----	-19.7	3.5	----	9.5	----	6.0	----	-
3	183.7500	23.6	----	-19.5	4.1	----	9.5	----	5.4	----	-
4	245.0000	21.0	----	-19.5	1.5	----	9.5	----	8.0	----	-
5	306.2500	22.5	----	-19.5	3.0	----	9.5	----	6.5	----	-
6	367.5000	22.7	----	-19.4	3.3	----	9.5	----	6.2	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

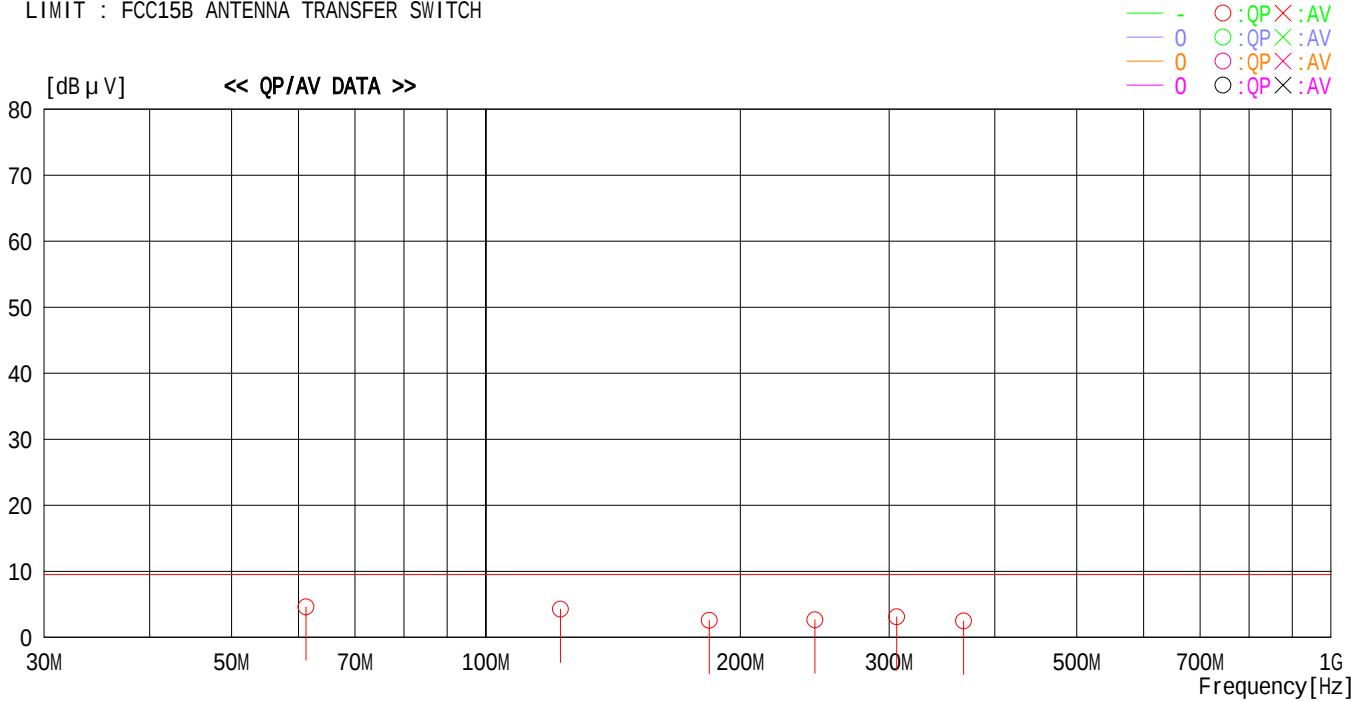
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 261E0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(5Vp-p)_3ch

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	24.4	----	-19.8	4.6	----	9.5	----	4.9	----	-
2	122.5000	24.0	----	-19.7	4.3	----	9.5	----	5.2	----	-
3	183.7500	22.1	----	-19.5	2.6	----	9.5	----	6.9	----	-
4	245.0000	22.1	----	-19.5	2.6	----	9.5	----	6.9	----	-
5	306.2500	22.6	----	-19.5	3.1	----	9.5	----	6.4	----	-
6	367.5000	21.9	----	-19.4	2.5	----	9.5	----	7.0	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

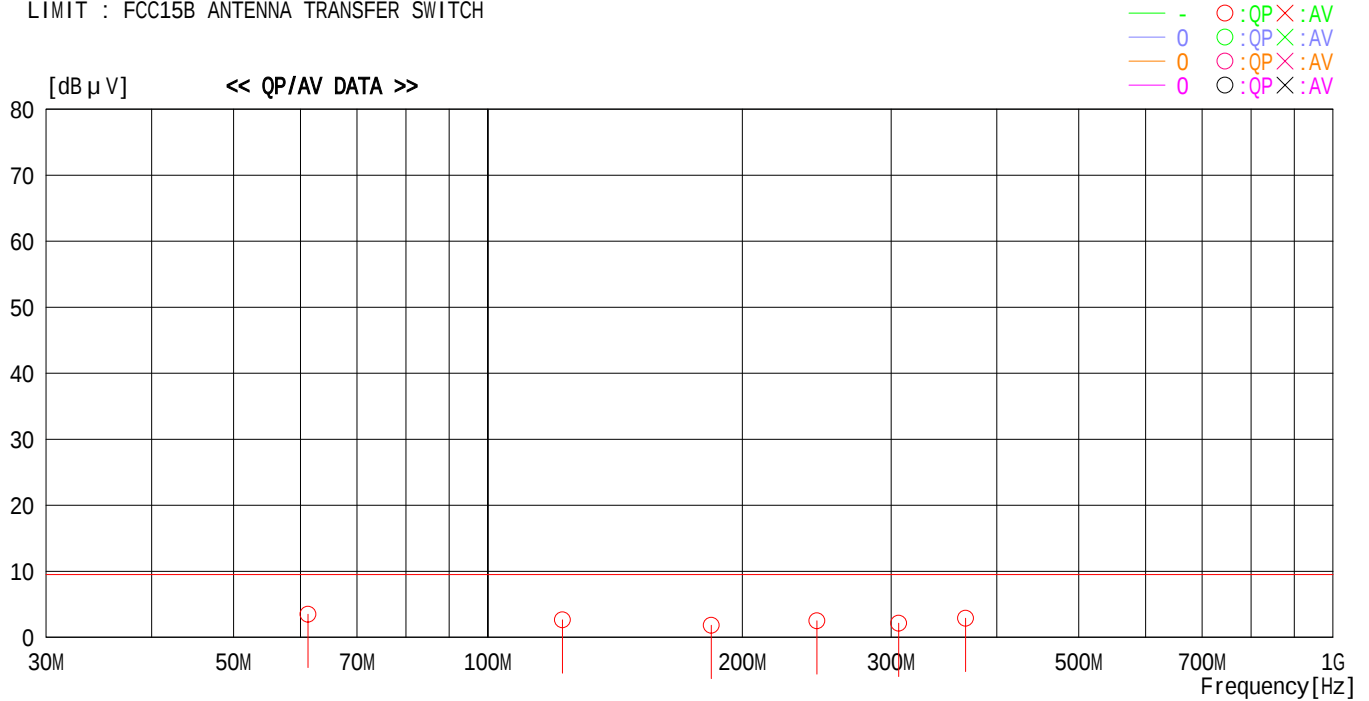
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : VCR Playback + DVD Rec_3ch

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	23.3	----	-19.8	3.5	----	9.5	----	6.0	----	-
2	122.5000	22.3	----	-19.7	2.6	----	9.5	----	6.9	----	-
3	183.7400	21.3	----	-19.5	1.8	----	9.5	----	7.7	----	-
4	245.0000	22.0	----	-19.5	2.5	----	9.5	----	7.0	----	-
5	306.2500	21.7	----	-19.5	2.2	----	9.5	----	7.4	----	-
6	367.5000	22.3	----	-19.4	2.9	----	9.5	----	6.6	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

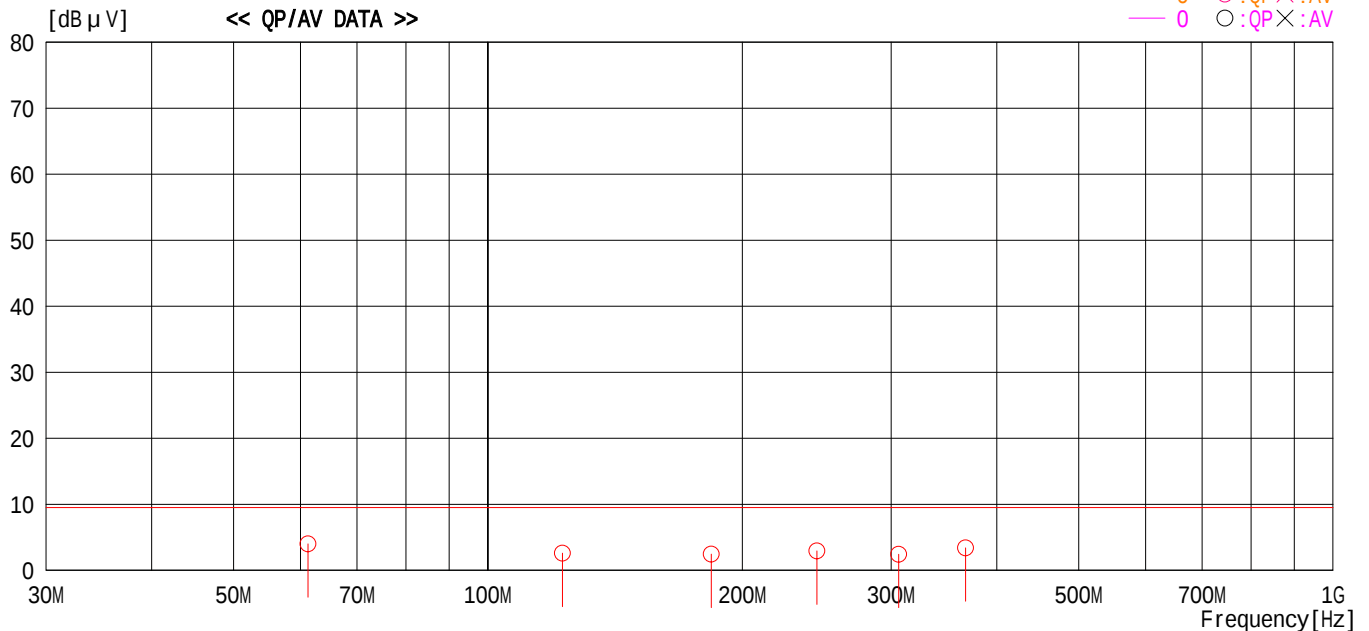
COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : DVD Play + VCR Rec_3ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH

— - ○:QP×:AV
— 0 ○:QP×:AV
— 0 ○:QP×:AV
— 0 ○:QP×:AV



NO	FREQ [MHz]	READING		C.F	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	23.8	----	-19.8	4.0	----	9.5	----	5.5	----	-
2	122.5000	22.3	----	-19.7	2.6	----	9.5	----	6.9	----	-
3	183.7500	22.0	----	-19.5	2.5	----	9.5	----	7.0	----	-
4	245.0000	22.4	----	-19.5	2.9	----	9.5	----	6.6	----	-
5	306.2500	21.9	----	-19.5	2.4	----	9.5	----	7.1	----	-
6	367.5000	22.8	----	-19.4	3.4	----	9.5	----	6.1	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.

EQUIPMENT : DVD-MU/VCR

MODEL : DVR-RT502-S

TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1

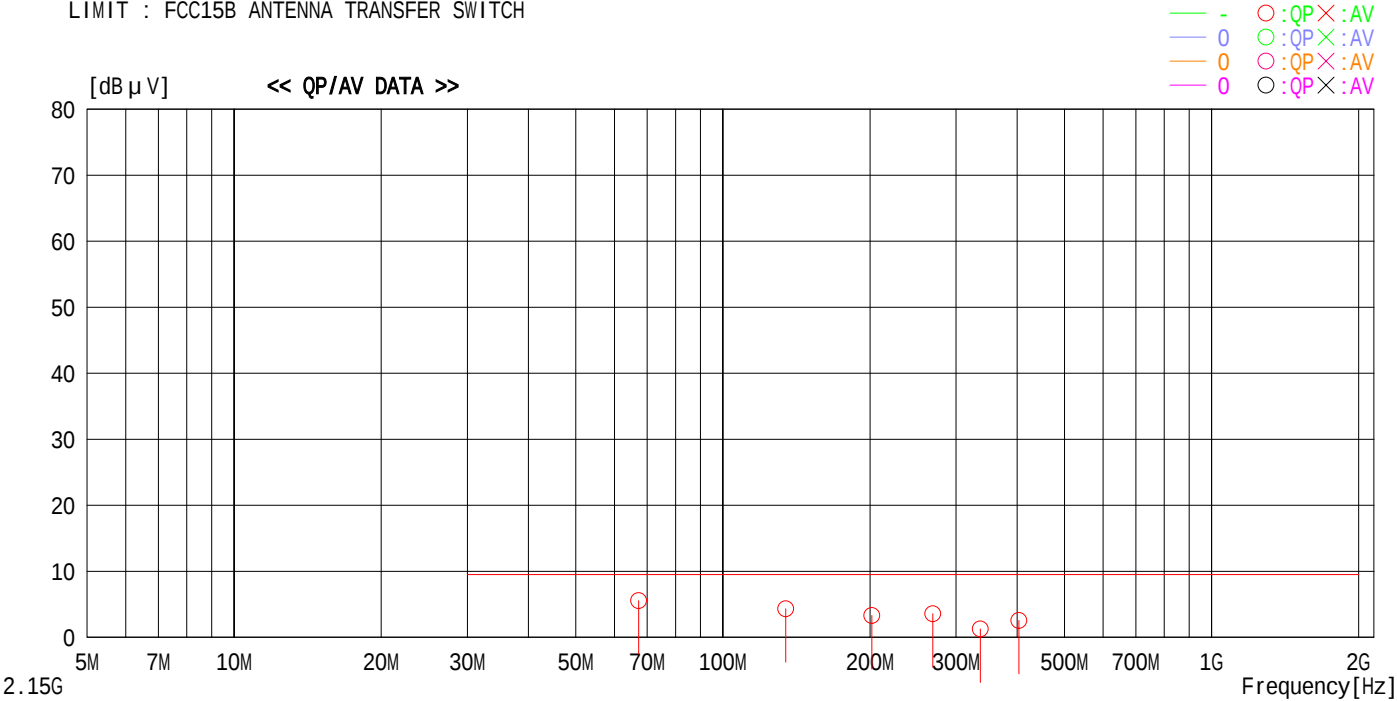
DATE : May 08, 2006

REGULATION : FCC Part15 Subpart B

TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(1Vp-p)_4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.

EQUIPMENT : DVD-MU/VCR

MODEL : DVR-RT502-S

TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1

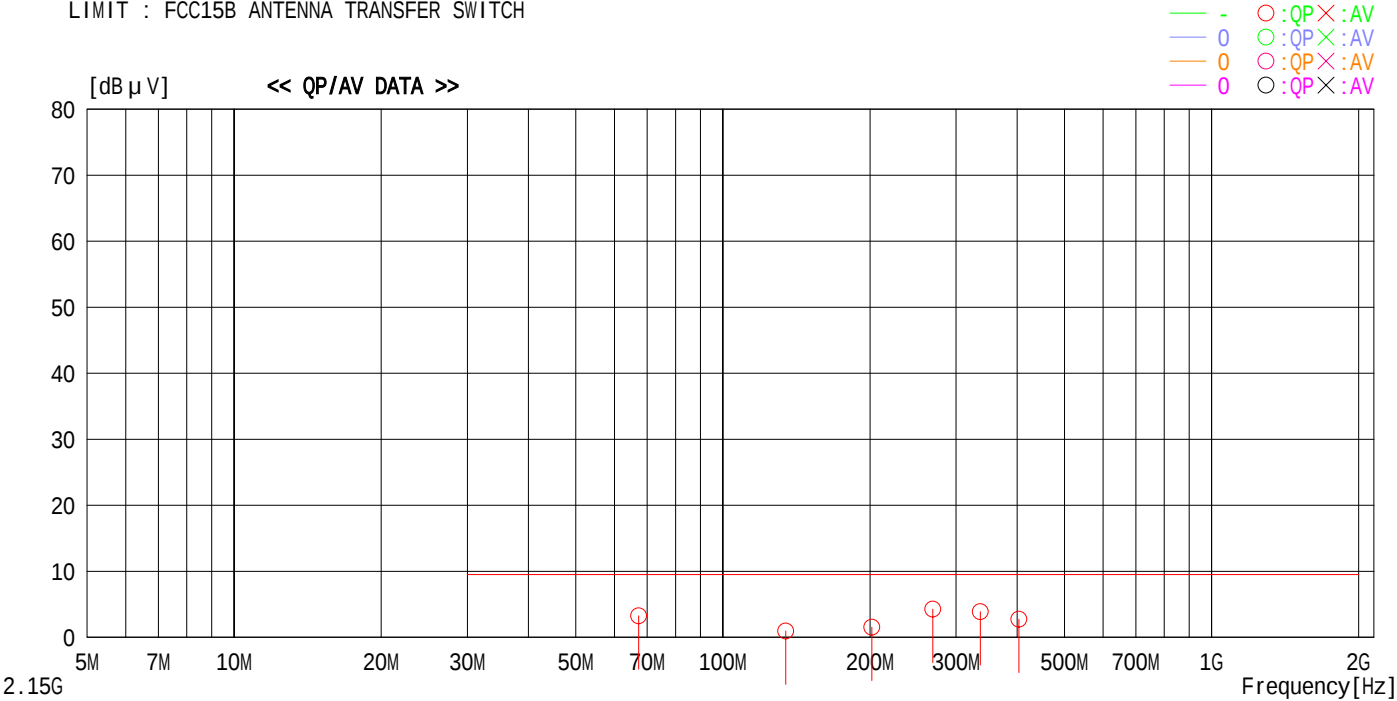
DATE : May 08, 2006

REGULATION : FCC Part15 Subpart B

TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 1+VCR Rec+DVD Rec(5Vp-p)_4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



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

DATA OF ANTENNA TRANSFER SWITCH TEST

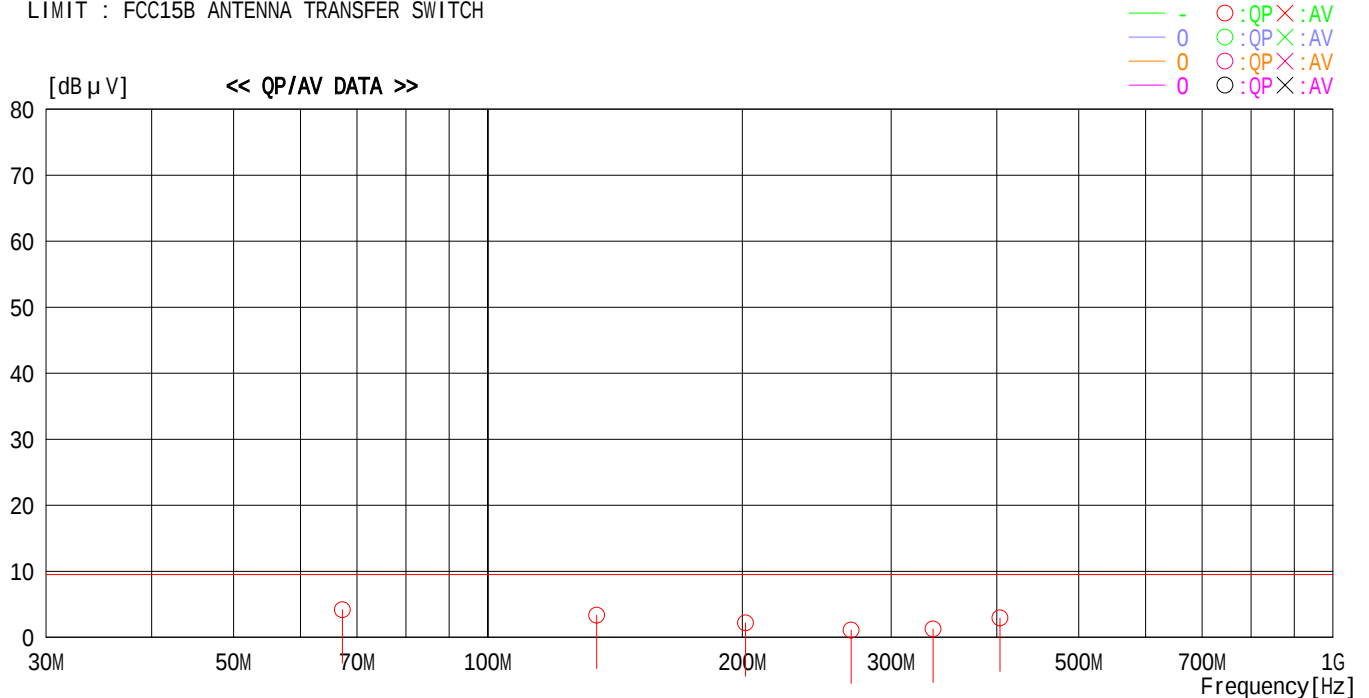
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(1Vp-p)_4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



NO	FREQ [MHz]	READING		C.F	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	23.9	----	-19.7	4.2	----	9.5	----	5.3	----	-
2	134.5000	23.0	----	-19.6	3.4	----	9.5	----	6.1	----	-
3	201.7500	21.6	----	-19.4	2.2	----	9.5	----	7.3	----	-
4	269.0000	20.6	----	-19.5	1.1	----	9.5	----	8.4	----	-
5	336.2500	20.8	----	-19.5	1.3	----	9.5	----	8.3	----	-
6	403.5000	22.3	----	-19.4	2.9	----	9.5	----	6.6	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.

EQUIPMENT : DVD-MU/VCR

MODEL : DVR-RT502-S

TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1

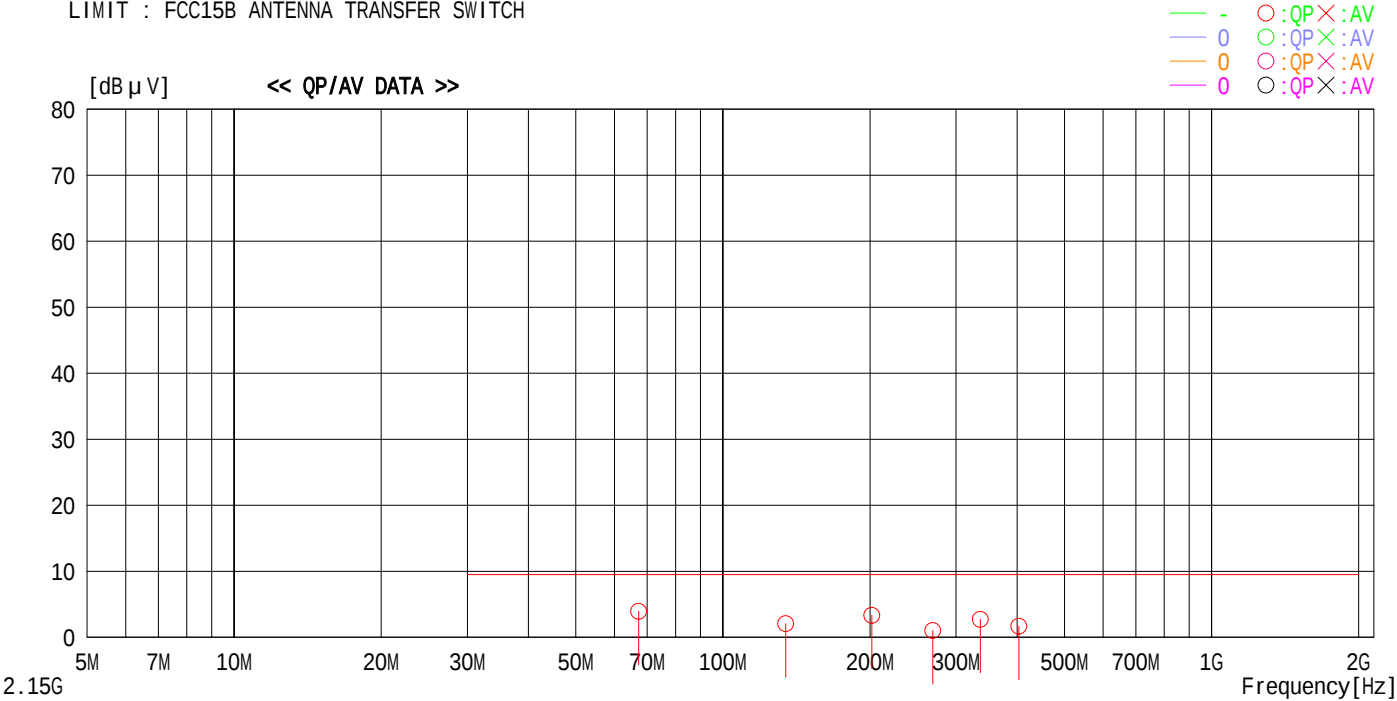
DATE : May 08, 2006

REGULATION : FCC Part15 Subpart B

TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : AV Input 2+VCR Rec+DVD Rec(5Vp-p)_4ch

LIMIT : FCC15B ANTENNA TRANSFER SWITCH



DATA OF ANTENNA TRANSFER SWITCH TEST

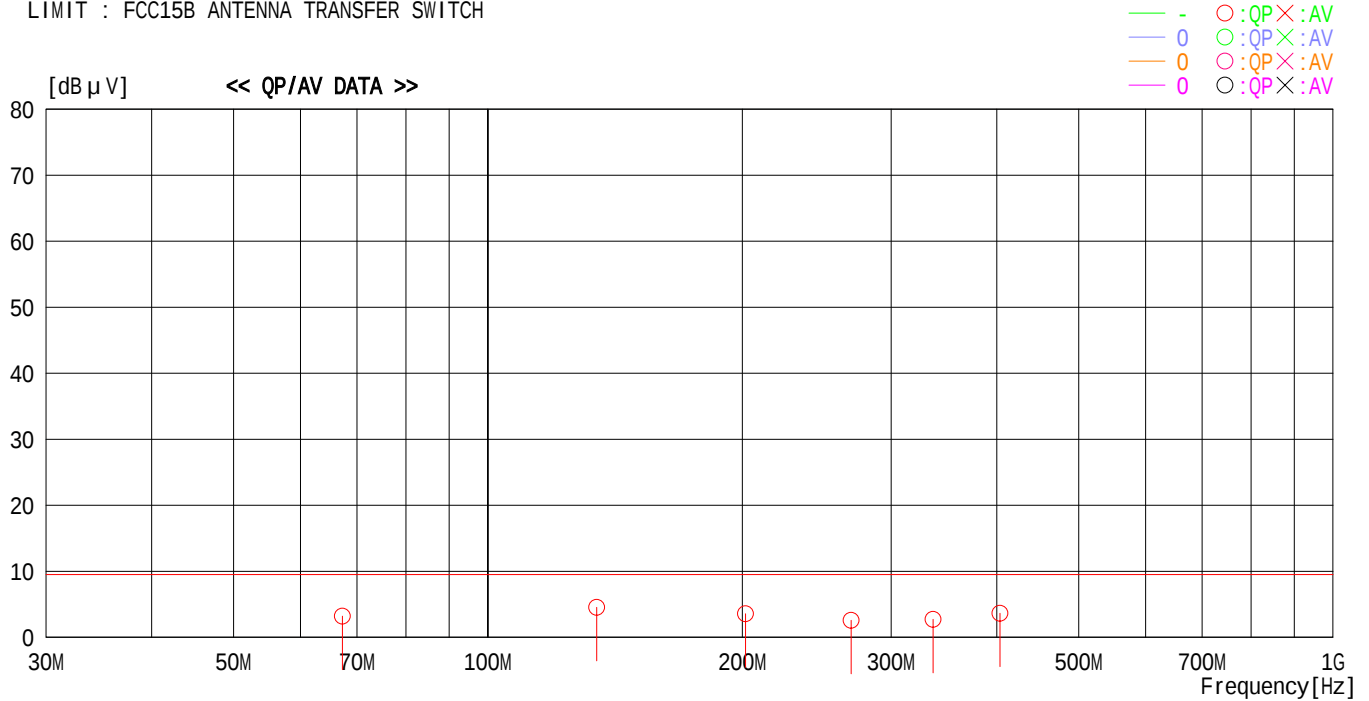
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : VCR Playback + DVD Rec_4ch

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	22.9	----	-19.7	3.2	----	9.5	----	6.3	----	-
2	134.5000	24.1	----	-19.6	4.5	----	9.5	----	5.0	----	-
3	201.7500	23.0	----	-19.4	3.6	----	9.5	----	5.9	----	-
4	269.0000	22.1	----	-19.5	2.6	----	9.5	----	6.9	----	-
5	336.2500	22.2	----	-19.5	2.7	----	9.5	----	6.8	----	-
6	403.5000	23.0	----	-19.4	3.6	----	9.5	----	5.9	----	-

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

DATA OF ANTENNA TRANSFER SWITCH TEST

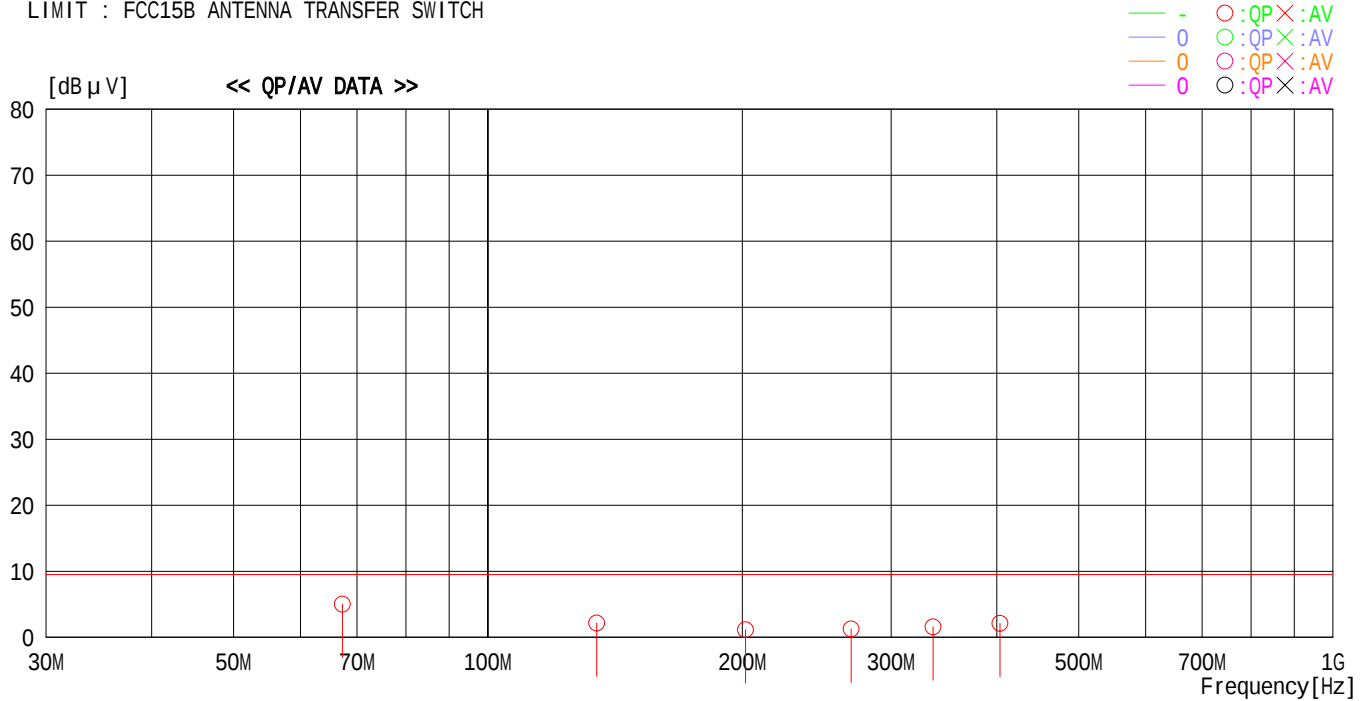
UL Apex Co.,Ltd.

COMPANY : Orion Electric Co., Ltd.
EQUIPMENT : DVD-MU/VCR
MODEL : DVR-RT502-S
TEMP./HUMID. : 22 /41%

REPORT NO : 26IE0251-YW-1
DATE : May 08, 2006
REGULATION : FCC Part15 Subpart B
TEST ENGINEER : Masanori Nishiyama

OPERATION MODE : DVD Play + VCR Rec_4ch

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	24.7	----	-19.7	5.0	----	9.5	----	4.5	----	-
2	134.5000	21.8	----	-19.6	2.2	----	9.5	----	7.3	----	-
3	201.7500	20.6	----	-19.4	1.2	----	9.5	----	8.3	----	-
4	269.0000	20.8	----	-19.5	1.3	----	9.5	----	8.2	----	-
5	336.2500	21.1	----	-19.5	1.6	----	9.5	----	7.9	----	-
6	403.5000	21.5	----	-19.4	2.1	----	9.5	----	7.4	----	-

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

Picture Sensitivity Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.
Equipment : DVD-MU/VCR
Model Number : DVR-RT502-S
Power : 120V/60Hz
Description : TV Reception
Remarks : -

Report Number : 26IE0251-YW-1
Regulation : FCC Part15 SubpartB
Date : May 08,2006
Temp / Humid : 22deg.C / 41 %
Engineer : Masanori Nishiyama

Ch [VHF]	Frequency [MHz]	Sensitivity [MHz]		Ch [UHF]	Frequency [MHz]	Sensitivity [MHz]	
		[dBμV]	[μV]			[dB μ V]	[μ V]
2	55.25	20.0	10.0	14	471.25	21.4	11.7
3	61.25	17.4	7.4	20	507.25	22.3	13.0
4	67.25	16.9	7.0	26	543.25	22.8	13.8
5	77.25	16.8	6.9	32	579.25	23.0	14.1
6	83.25	16.4	6.6	38	615.25	22.8	13.8
7	175.25	20.2	10.2	44	651.25	22.8	13.8
8	181.25	19.9	9.9	50	687.25	21.9	12.4
9	187.25	19.6	9.5	56	723.25	21.5	11.9
10	193.25	19.8	9.8	62	759.25	22.3	13.0
11	199.25	20.0	10.0	69	801.25	22.7	13.6
12	205.25	20.6	10.7	-	-	-	
13	211.25	20.7	10.8	-	-	-	-
Average VHF			9.1	Average UHF			13.1
Average UHF/VHF : 20 log UHF[μV] / VHF[μV]=				3.2	[Limit : 8.0dB]		

Noise Figure Test

UL Apex Co.,Ltd.
Yokowa EMC Laboratory

Company : Orion Electric Co., Ltd.	Report Number : 26IE0251-YW-1
Equipment : DVD-MU/VCR	Regulation : FCC Part15 Subpart B
Model Number : DVR-RT502-S	Date : May 08, 2006
Power : 120V/60Hz	Temp / Humid : 22deg.C / 41%
Description : TV Reception	Engineer : Masanori Nishiyama
Remarks : -	

Ch	Frequency [MHz]	Meter Reading [dB]	Correction Factor [dB]	Noise Figure [dB]	Limits [dB]	Margin [dB]
TV VHF Fundamental						
2	55.25	5.3	0.2	5.1	14.0	8.9
3	61.25	4.8	0.2	4.6	14.0	9.4
4	67.25	3.9	0.2	3.7	14.0	10.3
5	77.25	3.8	0.2	3.6	14.0	10.4
6	83.25	3.7	0.2	3.5	14.0	10.5
7	175.25	3.7	0.2	3.5	14.0	10.5
8	181.25	3.7	0.2	3.5	14.0	10.5
9	187.25	3.8	0.2	3.6	14.0	10.4
10	193.25	3.8	0.2	3.6	14.0	10.4
11	199.25	3.8	0.2	3.6	14.0	10.4
12	205.25	3.8	0.2	3.6	14.0	10.4
13	211.25	3.9	0.2	3.7	14.0	10.3
TV UHF Fundamental						
14	471.25	4.1	0.3	3.8	14.0	10.2
20	507.25	4.3	0.3	4.0	14.0	10.0
26	543.25	4.6	0.3	4.3	14.0	9.7
32	579.25	4.8	0.3	4.5	14.0	9.5
38	615.25	5.1	0.3	4.8	14.0	9.3
44	651.25	5.5	0.3	5.2	14.0	8.8
50	687.25	6.3	0.3	6.0	14.0	8.0
56	723.25	6.5	0.4	6.1	14.0	7.9
62	759.25	6.7	0.4	6.3	14.0	7.7
69	801.25	7.0	0.4	6.6	14.0	7.4
Mid band						
14	121.25	5.4	0.2	5.2	14.0	8.8
16	133.25	5.5	0.2	5.3	14.0	8.7
18	145.25	6.7	0.2	6.5	14.0	7.5
20	157.25	6.3	0.2	6.1	14.0	7.9
22	169.25	5.8	0.2	5.6	14.0	8.4
Super band						
23	217.25	4.4	0.2	4.2	14.0	9.8
26	235.25	5.0	0.2	4.8	14.0	9.2
29	253.25	5.6	0.2	5.4	14.0	8.6
32	271.25	6.1	0.2	5.9	14.0	8.1
36	295.25	6.8	0.2	6.6	14.0	7.4

Test Report No : 26IE0251-YW-1

APPENDIX 3

Test Instruments

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
APSPA03	Spectrum Analyzer	Advantest	R3265	AT, PS	2005/11/01 * 12
IP-03	Matching Pad	TME	ZT-130	PS, NF	2005/09/30 * 12
APNFM02	Noise Figure Analyzer	Agilent	N8973A	NF	2005/08/25 * 12
APNFS02	Noise Source	Agilent	346A	NF	2005/08/02 * 12
AV01-01	Signal Generator	Rohde & Schwarz	SMY01	PS	2006/02/22 * 12
APPRA02	Pre Amplifier	Advantest	R14601	AT	2005/07/09 * 12
AF-06	Pre Amplifier	Agilent	HP8449B	AT	2005/12/03 * 12
LS-03	LISN(AMN)	Schwarzbeck	NSLK8127	CE	2005/12/01 * 12
LS-02	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE (EUT)	2005/07/11 * 12
SA-05	Spectrum Analyzer	Advantest	R3271	CE	2005/12/13 * 12
APRCV05	Test Receiver	Rohde & Schwarz	ESS	AT	2005/07/11 * 12
CC-2S	Yokowa No.2 shield coaxial(0.01MHz-1000M Hz)	UL Apex	CC-25,CC-27,CC-28, CC-29,SW-21,SW-22	CE	2006/03/22 * 12
OS-15	Digital Humidity Indicator	SATO	PC-5000TRH	CE	2006/04/20 * 24
IP-01	Matching Pad	Anritsu	MP614A	PS	2005/09/01 * 12
TA-04	Terminator	TME	CT-01	CE	2006/04/30 * 12
TR-03	Test Receiver	Rohde & Schwarz	ESHS30	CE	2005/05/30 * 12
OS-02	Digital Humidity Indicator	SATO	PC-5000TRH- II	AT, PS, NF	2006/03/30 * 24
CC-C5	Microwave Cable	Suhner/storm	-	AT	2005/12/12 * 12
CC-C4	Microwave Cable	Suhner	-	AT	2005/12/12 * 12
YA-RE	Radiated emission(software)	UL-Apex	RE(Ver.1.5)	RE	
KAF-01	Pre Amplifier	Hewlett Packard	8447D	RE	2006/05/10 * 12
KAT6-02	Attenuator	INMET	18N-6dB	RE	2006/03/24 * 12
KBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/08/04 * 12
KCC-10/11/12 /13/18/KRM-01	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	8D-2W/12D-SFA/S04272B/S04272B/-	RE	2006/05/16 * 12
KLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2006/01/17 * 12
KOTS-01	Open Test Site	JSE	30m	RE	2005/08/10 * 12
KSA-01	Spectrum Analyzer	Advantest	R3365	RE	2005/07/06 * 12
KOS-03	Digital Humidity Indicator	SATO	PC-5000TRH	RE	2004/07/22 * 24
KSA-04	Spectrum Analyzer	Advantest	R3271A	RE	2005/09/13 * 12
KAF-02	Pre Amplifier	Hewlett Packard	8449B	RE	2006/04/24 * 12
KCC-D11/D12	Coaxial cable	Suhner/storm	SCOFLEX103/90-388-020	RE	2005/09/09 * 12
KHA-01	Horn Antenna	A.H.Systems	SAS-200/571	RE	2005/08/20 * 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

PS: Picture sensitivity

NF: Noise figure