

Appendix 2 : Data of EMI tests

This section contains the following data.

Page 31 to Page 42 :	Conducted interference
Page 43 to Page 57 :	Radiated emission
Page 58 to Page 59 :	Antenna terminal voltage
Page 60 to Page 77 :	RF output level / spurious emission
Page 78 to Page 85 :	Antenna transfer switch
Page 86 :	Picture sensitivity
Page 87 :	Noise figure

DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

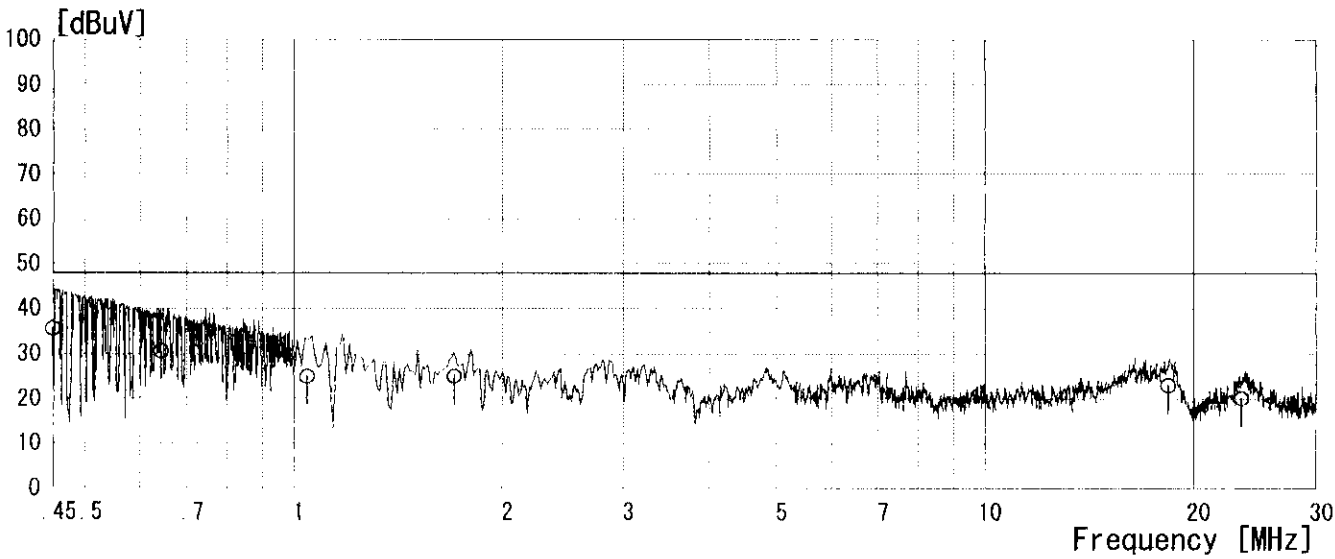
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: RECEIVE+VCR REC
LINE : N
POWER : AC120V/60Hz
REMARKS : 0dBmV INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 1

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	35.0	----	0.5	35.5	----	48.0	----	12.5	----
2	0.645	30.0	----	0.4	30.4	----	48.0	----	17.6	----
3	1.049	24.4	----	0.4	24.8	----	48.0	----	23.2	----
4	1.711	24.5	----	0.4	24.9	----	48.0	----	23.1	----
5	18.446	22.1	----	0.8	22.9	----	48.0	----	25.1	----
6	23.496	19.1	----	0.9	20.0	----	48.0	----	28.0	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

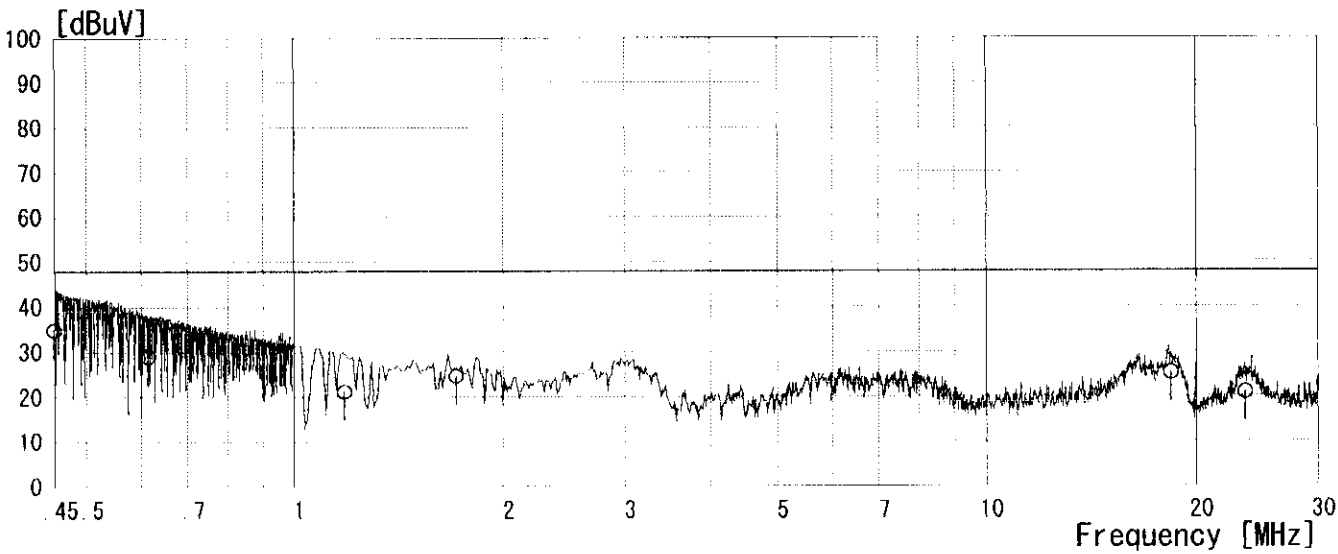
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : RECEIVE+VCR REC
LINE : L
POWER : AC120V/60Hz
REMARKS : 0dBmV INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 2

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.3	----	0.5	34.8	----	48.0	----	13.2	----
2	0.616	28.5	----	0.4	28.9	----	48.0	----	19.1	----
3	1.186	20.7	----	0.4	21.1	----	48.0	----	26.9	----
4	1.718	24.2	----	0.4	24.6	----	48.0	----	23.4	----
5	18.453	24.2	----	1.0	25.2	----	48.0	----	22.8	----
6	23.608	19.6	----	1.3	20.9	----	48.0	----	27.1	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

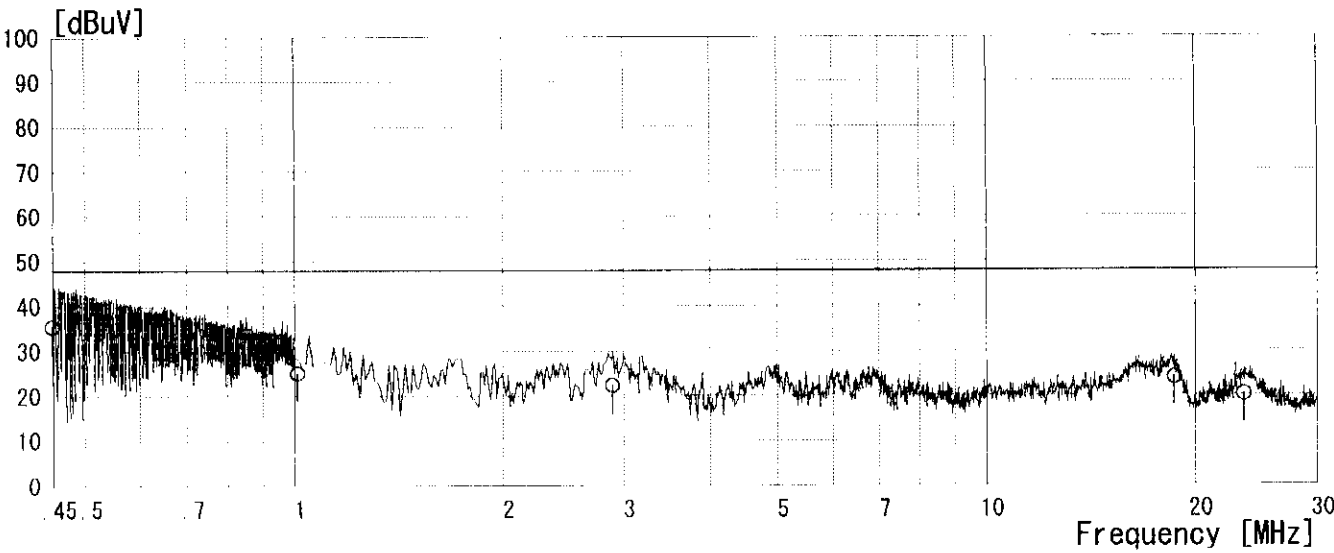
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: RECEIVE+VCR REC
LINE : N
POWER : AC120V/60Hz
REMARKS : 25dBmV INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 4

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	35.0	----	0.5	35.5	----	48.0	----	12.5	----
2	0.646	29.3	----	0.4	29.7	----	48.0	----	18.3	----
3	1.013	24.6	----	0.4	25.0	----	48.0	----	23.0	----
4	2.897	21.8	----	0.5	22.3	----	48.0	----	25.7	----
5	18.707	23.2	----	0.8	24.0	----	48.0	----	24.0	----
6	23.559	19.2	----	0.9	20.1	----	48.0	----	27.9	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

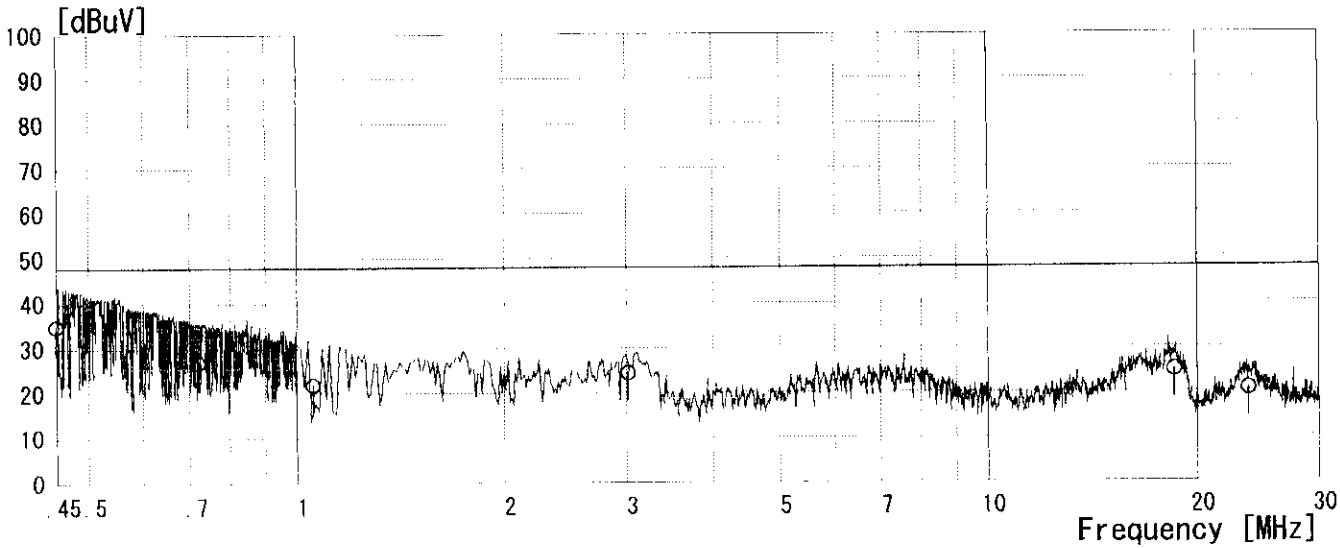
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: RECEIVE+VCR REC
LINE : L
POWER : AC120V/60Hz
REMARKS : 25dBmV INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 3

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.3	---	0.5	34.8	---	48.0	---	13.2	---
2	0.722	26.4	---	0.4	26.8	---	48.0	---	21.2	---
3	1.059	21.4	---	0.4	21.8	---	48.0	---	26.2	---
4	3.023	24.0	---	0.4	24.4	---	48.0	---	23.6	---
5	18.564	23.8	---	1.0	24.8	---	48.0	---	23.2	---
6	23.753	19.3	---	1.3	20.6	---	48.0	---	27.4	---

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

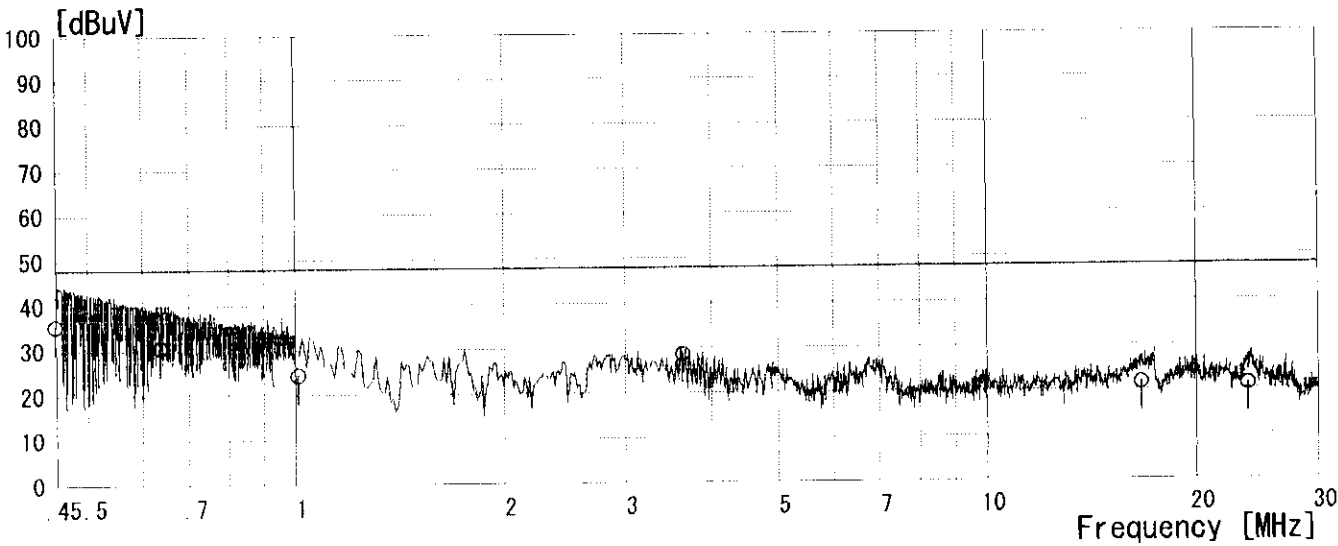
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: AV INPUT+VCR REC
LINE : N
POWER : AC120V/60Hz
REMARKS : 1Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 5

TEST ENGINEER *Hisayuki Kioka*
Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	35.0	----	0.5	35.5	----	48.0	----	12.5	----
2	0.639	30.0	----	0.4	30.4	----	48.0	----	17.6	----
3	1.013	23.8	----	0.4	24.2	----	48.0	----	23.8	----
4	3.642	28.1	----	0.5	28.6	----	48.0	----	19.4	----
5	16.696	20.7	----	0.8	21.5	----	48.0	----	26.5	----
6	23.796	20.1	----	1.0	21.1	----	48.0	----	26.9	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

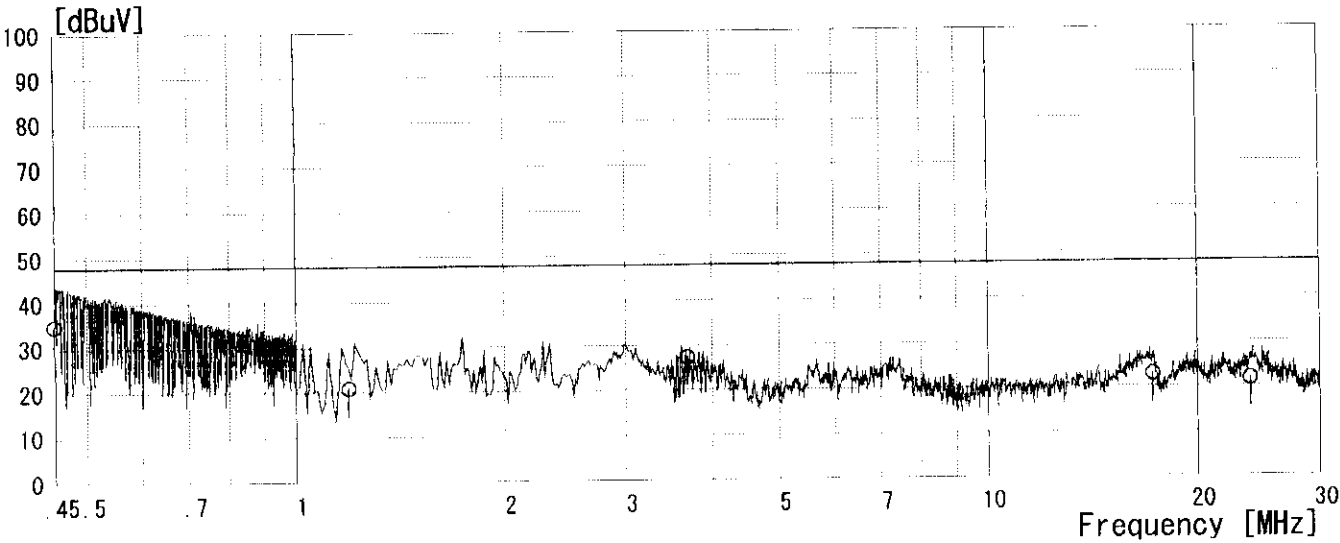
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : AV INPUT+VCR REC
LINE : L
POWER : AC120V/60Hz
REMARKS : 1Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 6

TEST ENGINEER:  Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.4	----	0.5	34.9	----	48.0	----	13.1	----
2	0.628	28.6	----	0.4	29.0	----	48.0	----	19.0	----
3	1.196	20.3	----	0.4	20.7	----	48.0	----	27.3	----
4	3.694	26.8	----	0.5	27.3	----	48.0	----	20.7	----
5	17.313	21.7	----	1.0	22.7	----	48.0	----	25.3	----
6	23.888	20.3	----	1.3	21.6	----	48.0	----	26.4	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

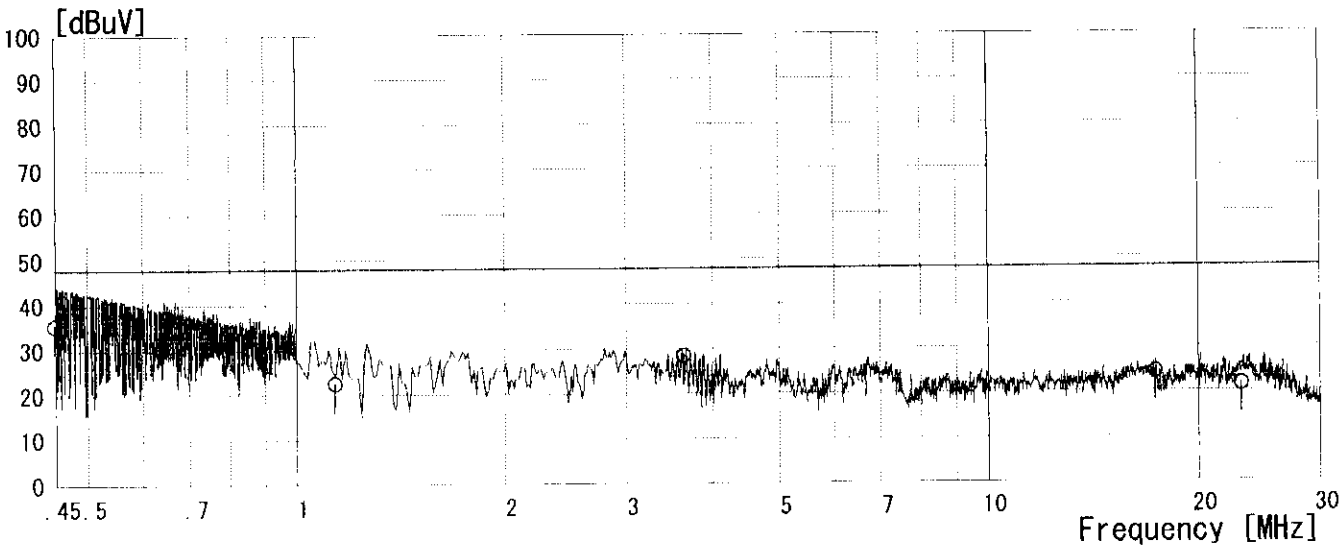
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: AV INPUT+VCR REC
LINE : N
POWER : AC120V/60Hz
REMARKS : 5Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 8

TEST ENGINEER  Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	35.0	----	0.5	35.5	----	48.0	----	12.5	----
2	0.641	29.6	----	0.4	30.0	----	48.0	----	18.0	----
3	1.140	22.0	----	0.4	22.4	----	48.0	----	25.6	----
4	3.641	27.8	----	0.5	28.3	----	48.0	----	19.7	----
5	17.391	23.4	----	0.8	24.2	----	48.0	----	23.8	----
6	23.115	20.5	----	0.9	21.4	----	48.0	----	26.6	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

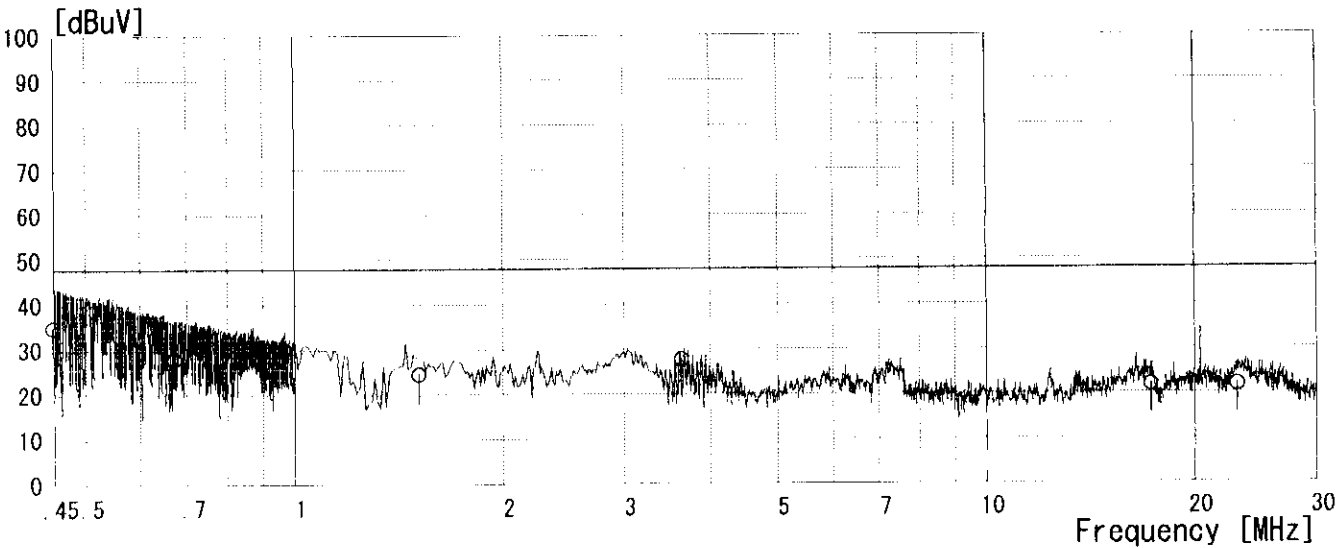
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : AV INPUT+VCR REC
LINE : L
POWER : AC120V/60Hz
REMARKS : 5Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 7

TEST ENGINEER:  Hrsayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.4	----	0.5	34.9	----	48.0	----	13.1	----
2	0.673	27.4	----	0.4	27.8	----	48.0	----	20.2	----
3	1.517	24.0	----	0.4	24.4	----	48.0	----	23.6	----
4	3.642	27.2	----	0.5	27.7	----	48.0	----	20.3	----
5	17.323	20.8	----	1.0	21.8	----	48.0	----	26.2	----
6	23.104	20.5	----	1.2	21.7	----	48.0	----	26.3	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

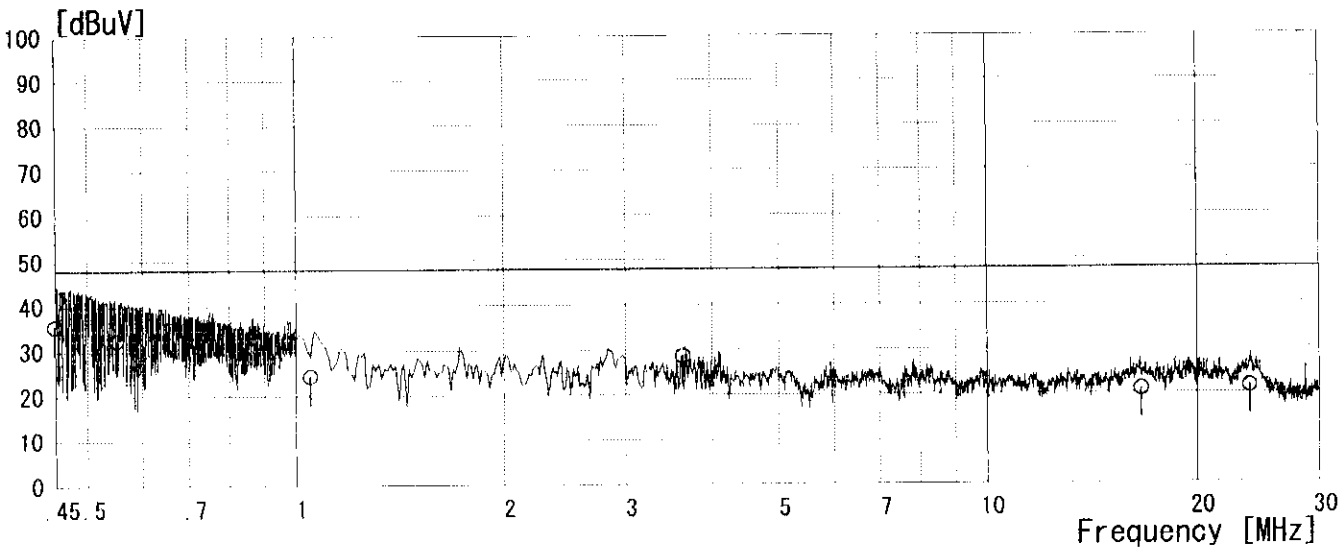
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: DVD PLAYBACK
LINE : N
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 12

TEST ENGINEER: 
Hrsayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.9	—	0.5	35.4	—	48.0	—	12.6	—
2	0.552	31.8	—	0.5	32.3	—	48.0	—	15.7	—
3	1.052	23.8	—	0.4	24.2	—	48.0	—	23.8	—
4	3.640	28.0	—	0.5	28.5	—	48.0	—	19.5	—
5	16.689	20.0	—	0.8	20.8	—	48.0	—	27.2	—
6	23.890	20.5	—	1.0	21.5	—	48.0	—	26.5	—

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

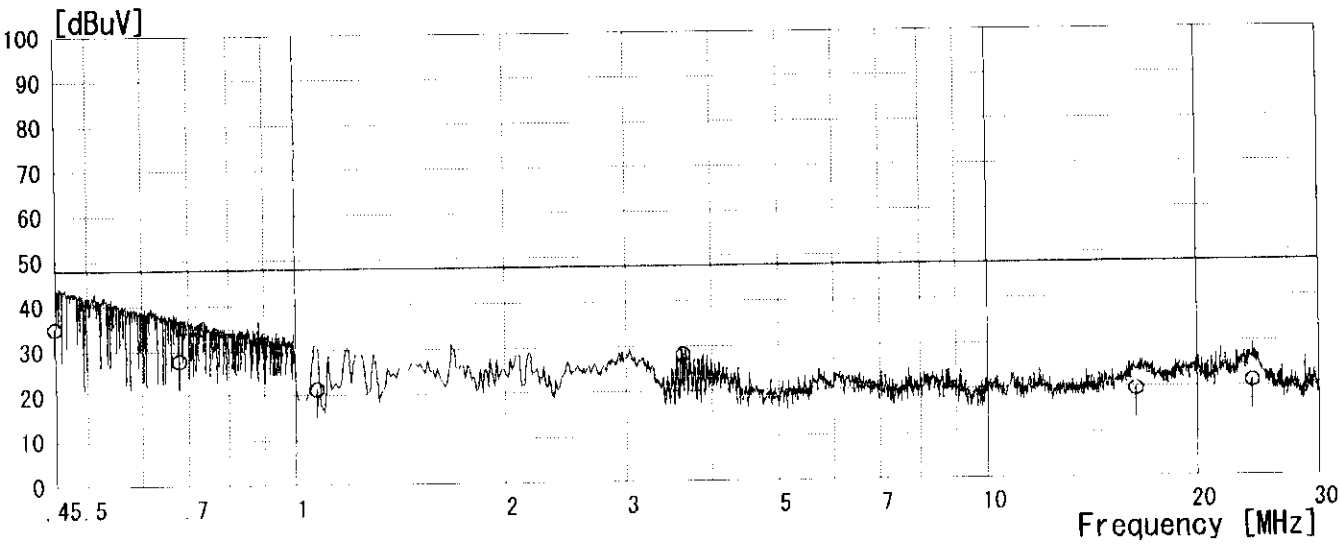
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : DVD PLAYBACK
LINE : L
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 11

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.5	---	0.5	35.0	---	48.0	---	13.0	---
2	0.680	27.3	---	0.4	27.7	---	48.0	---	20.3	---
3	1.077	20.8	---	0.4	21.2	---	48.0	---	26.8	---
4	3.642	27.7	---	0.4	28.1	---	48.0	---	19.9	---
5	16.359	18.8	---	0.7	19.5	---	48.0	---	28.5	---
6	24.074	20.2	---	0.9	21.1	---	48.0	---	26.9	---

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

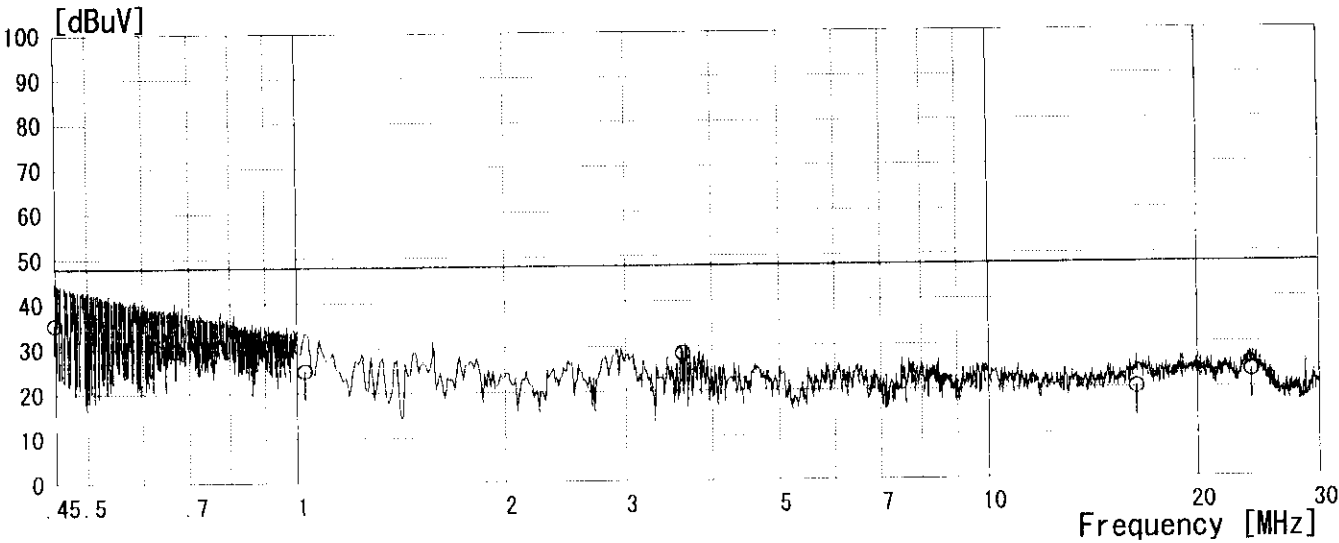
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : VCR PLAYBACK
LINE : N
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 9

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.8	----	0.5	35.3	----	48.0	----	12.7	----
2	0.670	29.0	----	0.4	29.4	----	48.0	----	18.6	----
3	1.030	24.4	----	0.4	24.8	----	48.0	----	23.2	----
4	3.640	27.8	----	0.5	28.3	----	48.0	----	19.7	----
5	16.396	19.3	----	0.8	20.1	----	48.0	----	27.9	----
6	23.999	22.7	----	1.0	23.7	----	48.0	----	24.3	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF CONDUCTED EMISSION

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

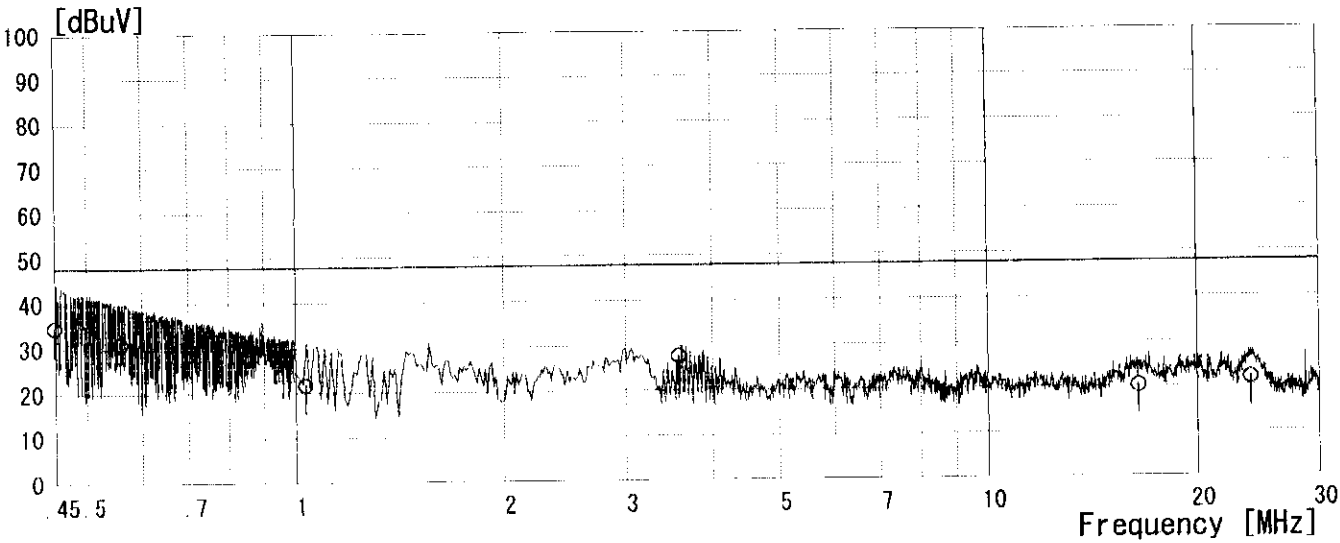
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : VCR PLAYBACK
LINE : L
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 10

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	0.450	34.2	----	0.5	34.7	----	48.0	----	13.3	----
2	0.560	30.5	----	0.4	30.9	----	48.0	----	17.1	----
3	1.036	21.3	----	0.4	21.7	----	48.0	----	26.3	----
4	3.587	27.2	----	0.4	27.6	----	48.0	----	20.4	----
5	16.506	19.4	----	0.7	20.1	----	48.0	----	27.9	----
6	23.973	20.9	----	0.9	21.8	----	48.0	----	26.2	----

RESULTS=READING+CABLE LOSS+LISN FACTOR



DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.2 SITE

COMPANY : ORION ELECTRIC CO., LTD.

EQUIPMENT : DVD/VCR

MODEL No. : VRDVD4000

POWER : AC120V/60Hz

DESCRIPTION : TV RECEPTION+REC

REPORT No. : 22DE0029-KT-1

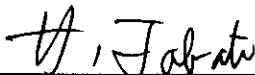
REGULATION : FCC PART15B

TEST DISTANCE : 3m

ATTENUATION : 101-847MHz 6dB

1034-1694MHz 0dB

DATE : December 06, 2001



ENGINEER : Hiroya Tabata

#	FREQ	READING		ANT	ANT	CABLE	AMP	RESDTS		LIMIT	SEARCH	
	MHz	100K	100K	TYPE	VOL	LOSS	GAIN	100K	100K	dBm	100K	100K
		dBm	dBm		dB	dB	dB	dB	dBm	dBm	dB	dB
VHF Fundamental												
2	101	25.1	26.6	BC	10.3	2.2	29.7	13.9	15.4	43.5	29.6	28.1
3	107	25.9	27.5	BC	11.3	2.3	29.7	15.8	17.4	43.5	27.7	26.1
4	113	25.4	25.9	BC	12.2	2.3	29.7	16.2	16.7	43.5	27.3	26.8
5	123	24.5	25.7	BC	13.5	2.5	29.7	16.8	18.0	43.5	26.7	25.5
6	129	24.1	23.9	BC	13.7	2.5	29.7	16.6	16.4	43.5	26.9	27.1
7	221	21.5	22.4	BC	16.7	3.4	29.7	17.9	18.8	46.0	28.1	27.2
8	227	22.9	22.6	BC	16.7	3.4	29.7	19.3	19.0	46.0	26.7	27.0
9	233	23.6	23.2	BC	16.8	3.5	29.7	20.2	19.8	46.0	25.8	26.2
10	239	23.0	23.5	BC	16.8	3.5	29.7	19.6	20.1	46.0	26.4	25.9
11	245	22.6	23.1	BC	16.9	3.6	29.7	19.4	19.9	46.0	26.6	26.1
12	251	22.4	22.5	BC	16.9	3.6	29.7	19.2	19.3	46.0	26.8	26.7
13	257	23.3	24.4	BC	17.2	3.7	29.7	20.5	21.6	46.0	25.5	24.4
VHF 2nd Harmonic												
2	202	22.3	22.7	BC	16.5	3.2	29.7	18.3	18.7	43.5	25.2	24.8
3	214	22.8	22.5	BC	16.6	3.3	29.7	19.0	18.7	43.5	24.5	24.8
4	226	22.4	21.6	BC	16.7	3.4	29.7	18.8	18.0	46.0	27.2	28.0
5	246	22.4	22.9	BC	16.9	3.6	29.7	19.2	19.7	46.0	26.8	26.3
6	258	24.2	22.7	BC	17.3	3.7	29.7	21.5	20.0	46.0	24.5	26.0
7	442	22.8	23.3	LP	18.7	5.1	29.9	22.7	23.2	46.0	23.3	22.8
8	454	23.3	23.6	LP	18.9	5.2	29.9	23.5	23.8	46.0	22.5	22.2
9	466	23.4	23.5	LP	19.2	5.3	29.9	24.0	24.1	46.0	22.0	21.9
10	478	22.1	22.3	LP	19.4	5.3	29.9	22.9	23.1	46.0	23.1	22.9
11	490	25.5	25.2	LP	19.6	5.4	29.9	26.6	26.3	46.0	19.4	19.7
12	502	23.2	25.1	LP	19.8	5.5	29.9	24.6	26.5	46.0	21.4	19.5
13	514	24.3	26.0	LP	19.8	5.6	29.8	25.9	27.6	46.0	20.1	18.4

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.2 SITE

COMPANY : ORION ELECTRIC CO., LTD.

EQUIPMENT : DVD/VCR

MODEL No. : VRDVD4000

POWER : AC120V/60Hz

DESCRIPTION : TV RECEPTION+REC

REPORT No. : 22DE0029-KT-1

REGULATION : FCC PART15B

TEST DISTANCE : 3m

ATTENUATION : 101-847MHz 6dB

1034-1694MHz 0dB

DATE : December 06, 2001

H. Tabata

ENGINEER : Hiroya Tabata

CH	FREQ	READING		ANT	ANT	CABLE	AMP	RESERVE		LIMIT	MARGIN	
		100%	50%					100%	50%		100%	50%
		(dB)	(dB)					(dB)	(dB)		(dB)	(dB)
CATV Fundamental												
1	119	24.2	27.4	BC	13.2	2.4	29.7	16.1	19.3	43.5	27.4	24.2
95	137	23.7	24.2	BC	14.0	2.6	29.7	16.6	17.1	43.5	26.9	26.4
97	149	23.7	23.2	BC	14.5	2.7	29.7	17.2	16.7	43.5	26.3	26.8
99	161	23.2	23.1	BC	14.9	2.8	29.7	17.2	17.1	43.5	26.3	26.4
14	167	22.9	20.8	BC	15.2	2.9	29.7	17.3	15.2	43.5	26.2	28.3
18	191	21.7	23.1	BC	16.1	3.1	29.6	17.3	18.7	43.5	26.2	24.8
22	215	22.5	22.0	BC	16.6	3.3	29.7	18.7	18.2	43.5	24.8	25.3
23	263	22.6	22.3	BC	17.5	3.7	29.7	20.1	19.8	46.0	25.9	26.2
29	299	21.4	22.3	BC	19.2	3.9	29.8	20.7	21.6	46.0	25.3	24.4
36	341	24.3	23.1	LP	17.1	4.2	29.8	21.8	20.6	46.0	24.2	25.4
37	347	22.4	22.6	LP	17.2	4.3	29.8	20.1	20.3	46.0	25.9	25.7
65	515	22.6	22.7	LP	19.8	5.6	29.8	24.2	24.3	46.0	21.8	21.7
94	689	22.5	22.3	LP	22.2	6.8	29.9	27.6	27.4	46.0	18.4	18.6
100	695	22.3	22.3	LP	22.4	6.8	29.9	27.6	27.6	46.0	18.4	18.4
113	773	22.3	22.0	LP	23.3	7.3	29.7	29.2	28.9	46.0	16.8	17.1
125	845	21.6	21.7	LP	23.9	7.6	29.4	29.7	29.8	46.0	16.3	16.2
CATV 2nd Harmonic												
1	238	23.1	24.2	BC	16.8	3.5	29.7	19.7	20.8	46.0	26.3	25.2
95	274	23.4	22.2	BC	18.0	3.8	29.7	21.5	20.3	46.0	24.5	25.7
97	298	24.5	22.4	BC	19.1	3.9	29.8	23.7	21.6	46.0	22.3	24.4
99	322	22.6	22.3	LP	16.8	4.1	29.8	19.7	19.4	46.0	26.3	26.6
14	334	22.3	22.2	LP	17.0	4.2	29.8	19.7	19.6	46.0	26.3	26.4
18	382	22.3	22.5	LP	17.6	4.6	29.9	20.6	20.8	46.0	25.4	25.2
22	430	23.0	30.9	LP	18.5	5.0	29.9	22.6	30.5	46.0	23.4	15.5
23	526	22.7	22.6	LP	19.9	5.6	29.9	24.3	24.2	46.0	21.7	21.8
29	598	22.8	22.9	LP	20.1	6.3	29.9	25.3	25.4	46.0	20.7	20.6
36	682	22.5	22.6	LP	22.1	6.7	29.9	27.4	27.5	46.0	18.6	18.5
37	694	22.3	22.3	LP	22.4	6.8	29.9	27.6	27.6	46.0	18.4	18.4
65	1030	45.5	44.1	HO	24.9	3.5	35.4	38.5	37.1	54.0	15.5	16.9
94	1378	42.2	42.0	HO	26.7	4.0	34.9	38.0	37.8	54.0	16.0	16.2
100	1390	40.2	40.9	HO	26.8	4.0	34.9	36.1	36.8	54.0	17.9	17.2
113	1546	40.9	34.9	HO	27.7	4.3	34.7	38.2	32.2	54.0	15.8	21.8
125	1690	39.3	37.5	HO	28.5	4.5	34.6	37.7	35.9	54.0	16.3	18.1

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.2 SITE

COMPANY : ORION ELECTRIC CO., LTD.

EQUIPMENT : DVD/VCR

MODEL No. : VRDVD4000

POWER : AC120V/60Hz

DESCRIPTION : TV RECEPTION+REC

REPORT No. : 22DE0029-KT-1

REGULATION : FCC PART15B

TEST DISTANCE : 3m

ATTENUATION : 101-847MHz 6dB

1034-1694MHz 0dB

DATE : December 06, 2001

H. Tabata

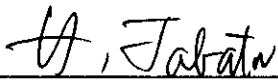
ENGINEER : Hiroya Tabata

CH	FREQ MHz	READING		ANT TYPE	ANT L.A.	CABLE LOSS	AMP GAIN	RESELECTION		LIMIT	MARGINS	
		HOR	VER					HOR	VER		HOR	VER
		dBm	dBm		dB	dB	dB	dB	dB	dB	dB	dB
UHF Fundamental												
14	517	31.0	35.9	LP	19.9	5.6	29.8	32.7	37.6	46.0	13.3	8.4
19	547	26.8	32.0	LP	19.9	5.8	29.9	28.6	33.8	46.0	17.4	12.2
28	601	24.7	26.2	LP	20.1	6.3	29.9	27.2	28.7	46.0	18.8	17.3
36	649	24.4	24.1	LP	21.3	6.5	29.9	28.3	28.0	46.0	17.7	18.0
44	697	26.0	27.7	LP	22.4	6.8	29.9	31.3	33.0	46.0	14.7	13.0
53	751	27.0	28.3	LP	23.1	7.1	29.7	33.5	34.8	46.0	12.5	11.2
61	799	25.3	26.2	LP	23.6	7.4	29.5	32.8	33.7	46.0	13.2	12.3
69	847	27.1	25.2	LP	23.9	7.6	29.4	35.2	33.3	46.0	10.8	12.7
UHF 2nd Harmonic												
14	1034	46.5	44.5	HO	24.9	3.5	35.4	39.5	37.5	54.0	14.5	16.5
19	1094	45.8	38.1	HO	25.2	3.6	35.3	39.3	31.6	54.0	14.7	22.4
28	1202	41.8	38.7	HO	25.8	3.8	35.1	36.3	33.2	54.0	17.7	20.8
36	1298	44.1	41.8	HO	26.3	3.9	35.0	39.3	37.0	54.0	14.7	17.0
44	1394	45.4	43.5	HO	26.8	4.1	34.9	41.4	39.5	54.0	12.6	14.5
53	1502	45.2	42.8	HO	27.4	4.2	34.7	42.1	39.7	54.0	11.9	14.4
61	1598	40.1	41.0	HO	28.0	4.3	34.6	37.8	38.7	54.0	16.2	15.3
69	1694	42.1	40.1	HO	28.5	4.5	34.6	40.5	38.5	54.0	13.5	15.5

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : Maximum Operation
Remarks : Test Channel #3
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B


Engineer : Hiroya Tabata

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	31.4	37.4	7.4	29.8	1.7	5.9	16.6	22.6	40.0	23.4	17.4
2.	65.75	BB	30.9	39.8	6.8	29.8	1.8	5.8	15.5	24.4	40.0	24.5	15.6
3.	122.50	BB	23.1	23.7	13.5	29.7	2.5	5.9	15.3	15.9	43.5	28.2	27.6
4.	245.00	BB	21.2	21.9	16.9	29.7	3.6	5.8	17.8	18.5	46.0	28.2	27.5

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

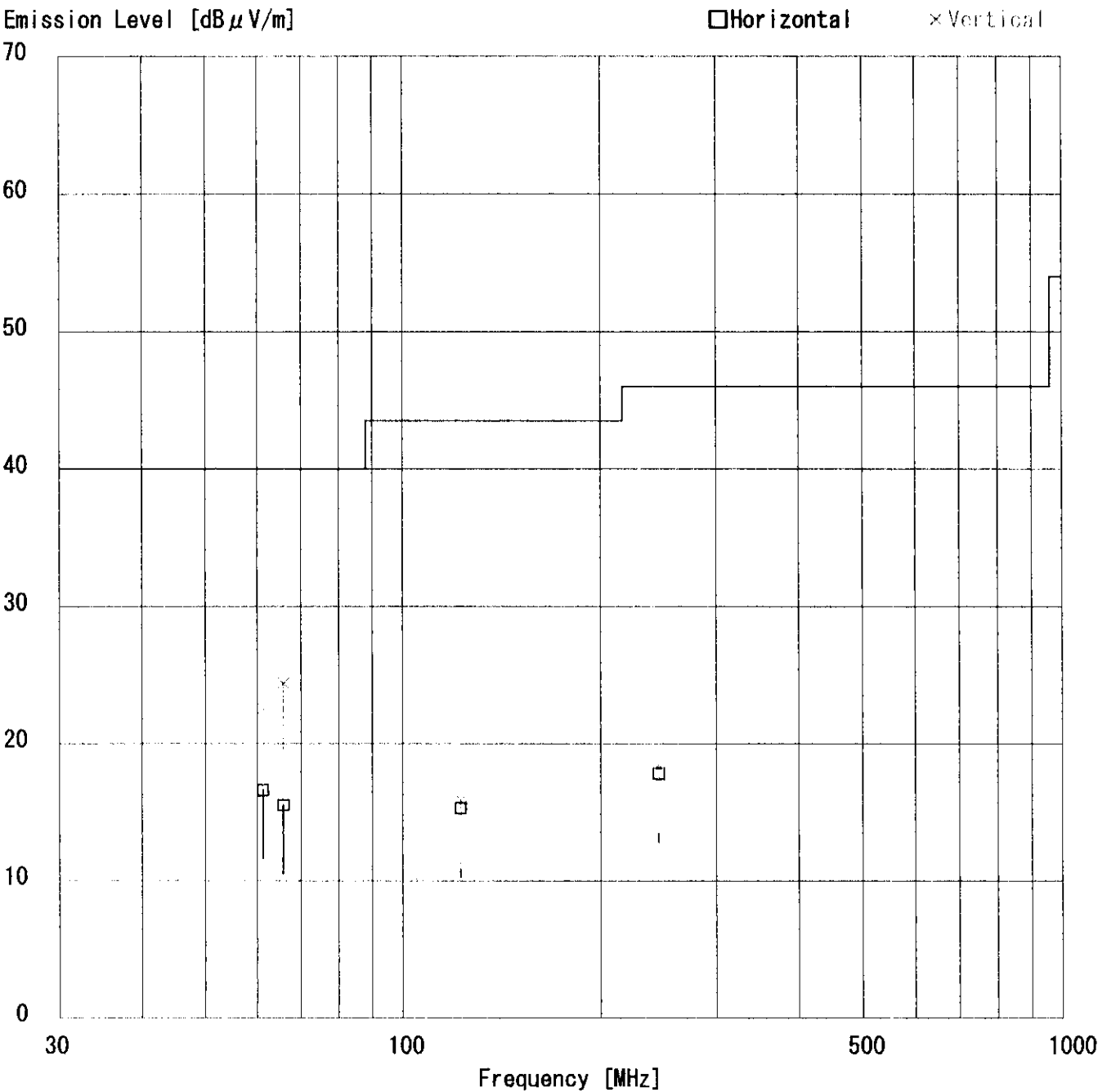
Except for the above table : adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : Maximum Operation
Remarks : Test Channel #3
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B

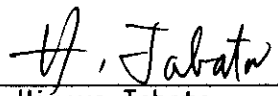
H. Tabata
Engineer : Hiroya Tabata



DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : Maximum Operation
Remarks : Test Channel #4
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B


Engineer : Hiroya Tabata

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	30.9	36.6	6.6	29.8	1.8	5.8	15.3	21.0	40.0	24.7	19.0
2.	71.75	BB	30.8	39.4	6.3	29.8	1.9	5.9	15.1	23.7	40.0	24.9	16.3
3.	134.50	BB	23.2	24.0	13.9	29.7	2.6	5.8	15.8	16.6	43.5	27.7	26.9
4.	201.75	BB	22.4	22.8	16.5	29.7	3.2	5.8	18.2	18.6	43.5	25.3	24.9

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

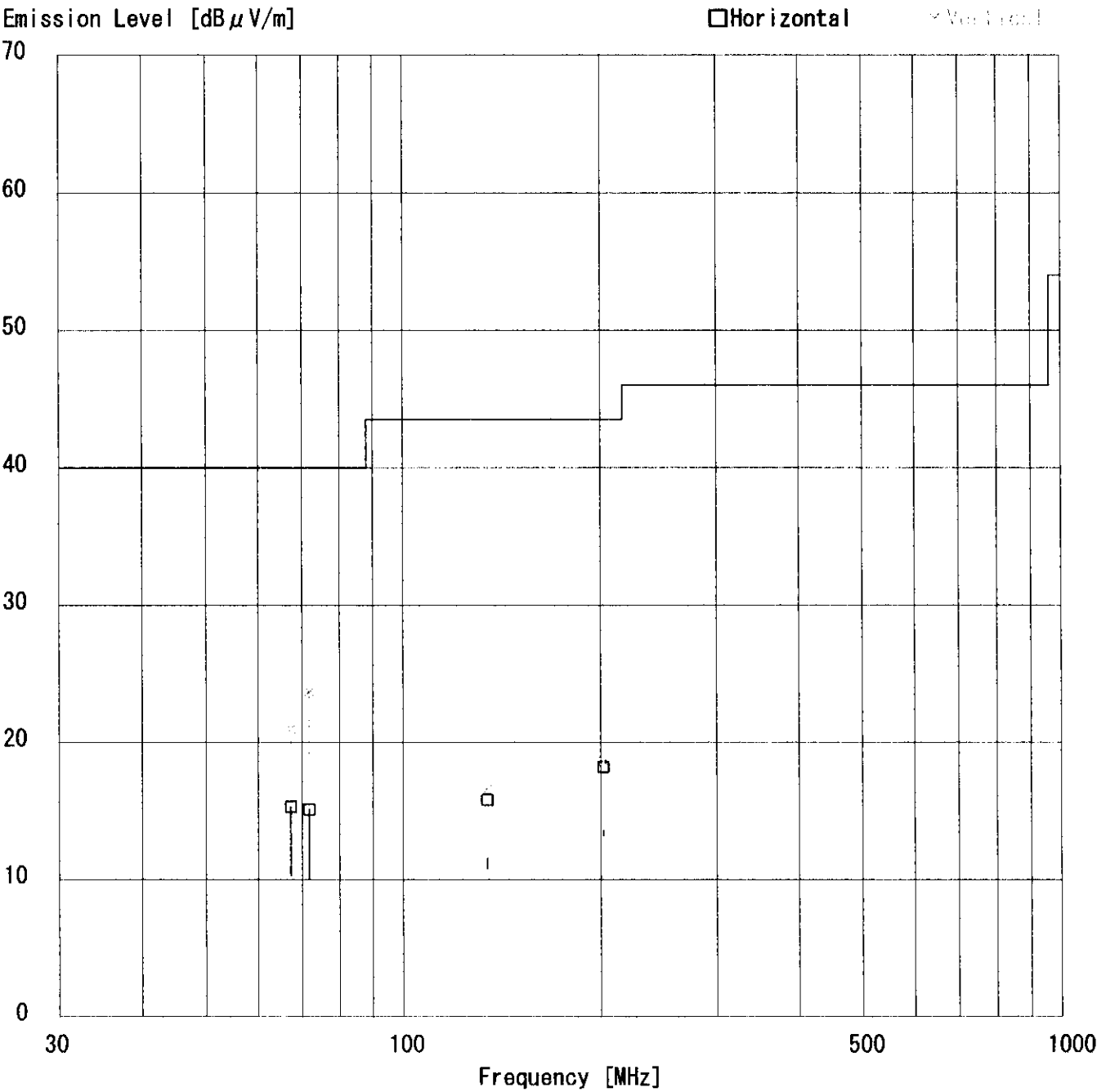
Except for the above table : adequate margin data below the limits.
ANT. TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : Maximum Operation
Remarks : Test Channel #4
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B

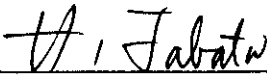
H. Tabata
Engineer : Hiroya Tabata



DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION+REC (25dBmV)
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B


Engineer : Hiroya Tabata

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.	130.57	BB	27.8	33.5	13.8	29.7	2.6	5.8	20.3	26.0	43.5	23.2	17.5
2.	135.01	BB	41.6	32.9	13.9	29.7	2.6	5.8	34.2	25.5	43.5	9.3	18.0
3.	162.02	BB	37.8	29.5	15.0	29.7	2.8	5.9	31.8	23.5	43.5	11.7	20.0
4.	324.03	BB	36.8	35.9	16.8	29.8	4.1	5.8	33.7	32.8	46.0	12.3	13.2
5.	378.04	BB	31.4	35.3	17.6	29.9	4.6	5.8	29.5	33.4	46.0	16.5	12.6
6.	459.04	BB	30.9	37.3	19.0	29.9	5.2	5.8	31.0	37.4	46.0	15.0	8.6
7.	486.04	BB	31.5	36.7	19.5	29.9	5.4	5.8	32.3	37.5	46.0	13.7	8.5
8.	513.04	BB	36.2	41.5	19.8	29.8	5.6	5.8	37.6	42.9	46.0	8.4	3.1

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

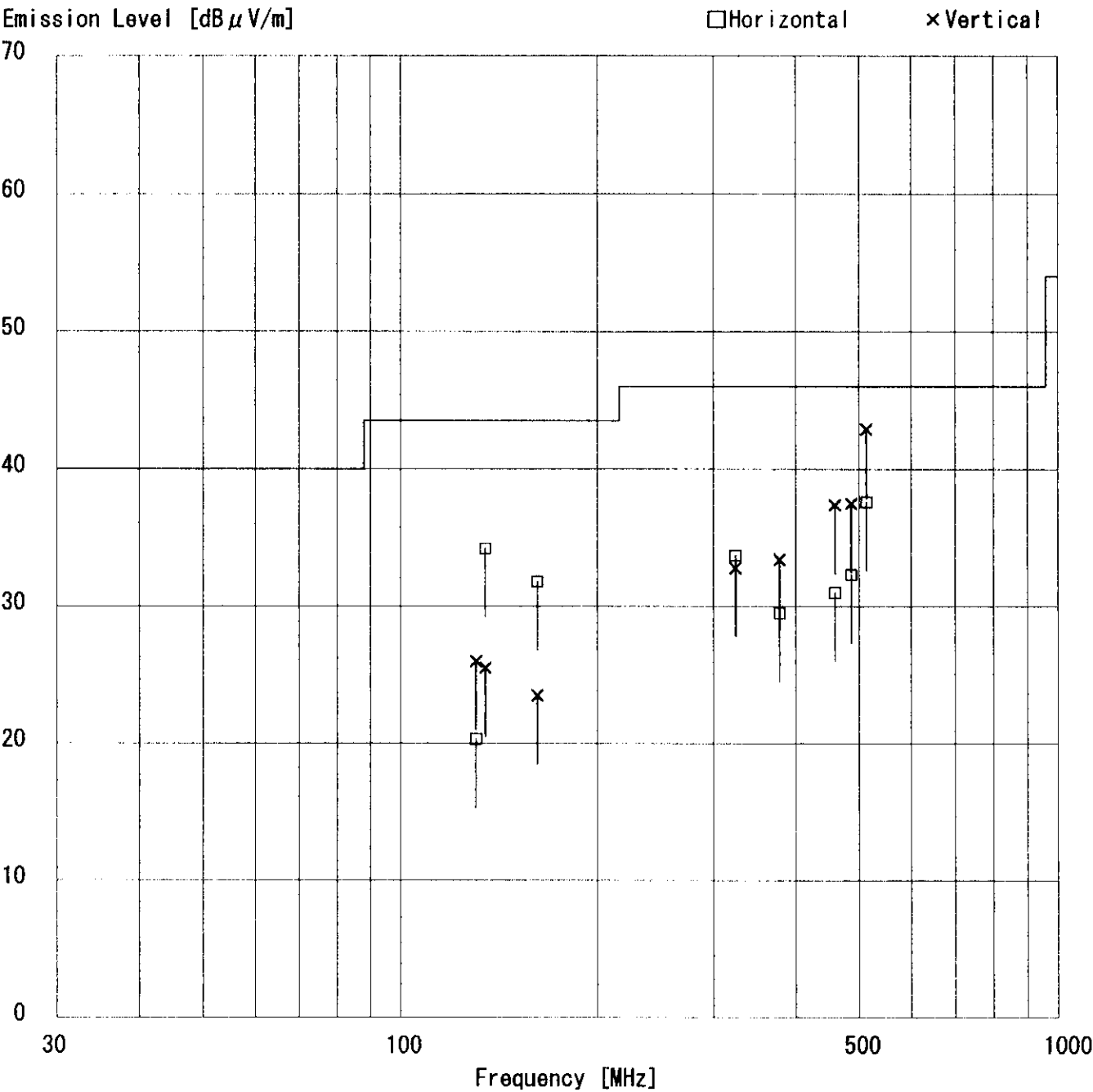
Except for the above table: adequate margin data below the limits.
ANT. TYPE:30-300MHz Biconical , 300-1000MHz Logperiodic

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : TV RECEPTION+REC (25dBmV)
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B

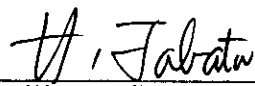
H. Tabata
Engineer : Hiroya Tabata



DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : VIDEO INPUT+REC (5Vp-p)
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B


Engineer : Hiroya Tabata

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.	135.01	BB	39.6	34.5	13.9	29.7	2.6	5.8	32.2	27.1	43.5	11.3	16.4
2.	161.08	BB	41.3	40.2	14.9	29.7	2.8	5.9	35.2	34.1	43.5	8.3	9.4
3.	270.02	BB	38.5	32.5	17.8	29.7	3.8	5.8	36.2	30.2	46.0	9.8	15.8
4.	307.23	BB	40.1	31.7	16.6	29.8	4.0	5.8	36.7	28.3	46.0	9.3	17.7
5.	324.04	BB	36.2	37.1	16.8	29.8	4.1	5.8	33.1	34.0	46.0	12.9	12.0
6.	378.03	BB	33.5	37.6	17.6	29.9	4.6	5.8	31.6	35.7	46.0	14.4	10.3
7.	459.04	BB	35.0	35.7	19.0	29.9	5.2	5.8	35.1	35.8	46.0	10.9	10.2
8.	486.04	BB	29.9	33.1	19.5	29.9	5.4	5.8	30.7	33.9	46.0	15.3	12.1
9.	513.05	BB	37.1	39.1	19.8	29.8	5.6	5.8	38.5	40.5	46.0	7.5	5.5

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

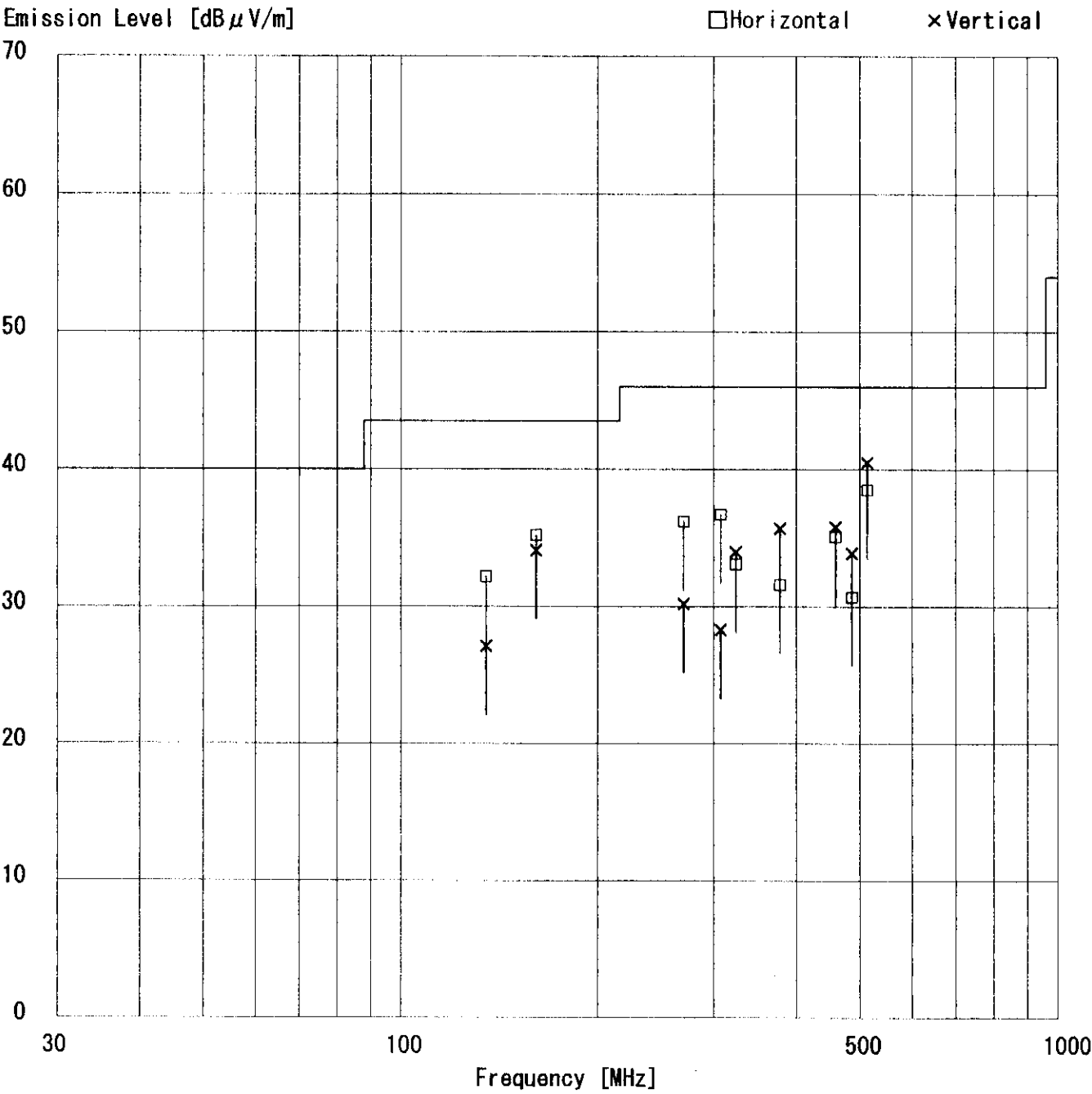
Except for the above table : adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : VIDEO INPUT+REC (5Vp-p)
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B

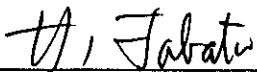
H. Tabata
Engineer : Hiroya Tabata



DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : PLAYBACK
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B


Engineer : Hiroya Tabata

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.	122.89	BB	41.1	34.9	13.5	29.7	2.5	5.8	33.2	27.0	43.5	10.3	16.5
2.	135.01	BB	39.8	36.8	13.9	29.7	2.6	5.8	32.4	29.4	43.5	11.1	14.1
3.	162.01	BB	42.1	36.6	15.0	29.7	2.8	5.9	36.1	30.6	43.5	7.4	12.9
4.	258.07	BB	42.5	29.3	17.3	29.7	3.7	5.8	39.6	26.4	46.0	6.4	19.6
5.	270.02	BB	42.9	28.8	17.8	29.7	3.8	5.8	40.6	26.5	46.0	5.4	19.5
6.	307.23	BB	39.3	30.7	16.6	29.8	4.0	5.8	35.9	27.3	46.0	10.1	18.7
7.	324.04	BB	38.1	34.9	16.8	29.8	4.1	5.8	35.0	31.8	46.0	11.0	14.2
8.	378.03	BB	35.9	39.5	17.6	29.9	4.6	5.8	34.0	37.6	46.0	12.0	8.4
9.	459.04	BB	34.2	35.0	19.0	29.9	5.2	5.8	34.3	35.1	46.0	11.7	10.9
10.	513.05	BB	37.6	40.3	19.8	29.8	5.6	5.8	39.0	41.7	46.0	7.0	4.3

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

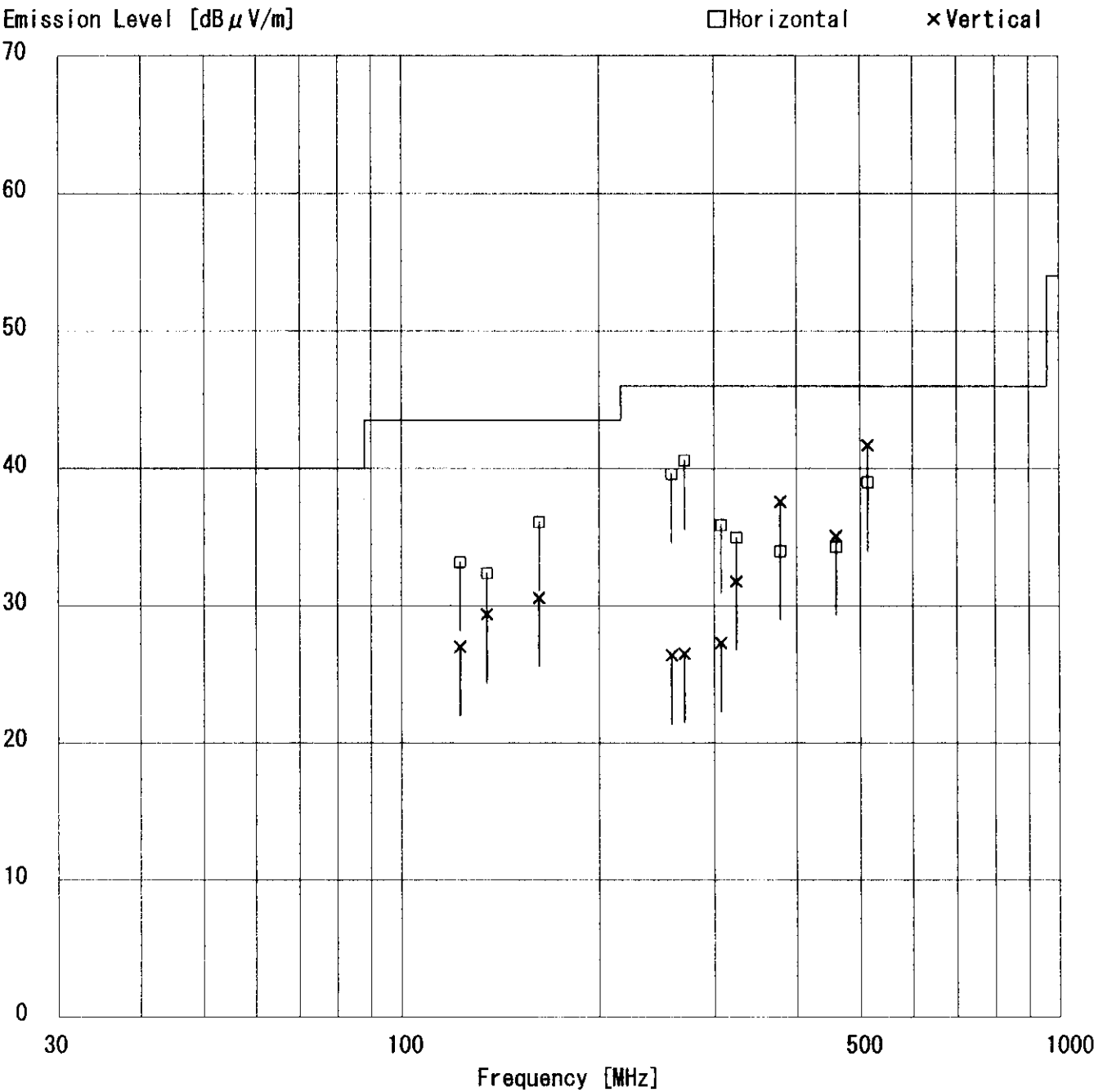
Except for the above table : adequate margin data below the limits.
ANT.TYPE:30-300MHz Biconical, 300-1000MHz Logperiodic

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : PLAYBACK
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B

H. Tabata
Engineer : Hiroya Tabata



DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B

H. Tabata
Engineer : Hiroya Tabata

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.	122.89	BB	40.6	34.6	13.5	29.7	2.5	5.8	32.7	26.7	43.5	10.8	16.8
2.	135.01	BB	39.3	34.4	13.9	29.7	2.6	5.8	31.9	27.0	43.5	11.6	16.5
3.	162.02	BB	40.8	37.7	15.0	29.7	2.8	5.9	34.8	31.7	43.5	8.7	11.8
4.	258.07	BB	41.9	30.4	17.3	29.7	3.7	5.8	39.0	27.5	46.0	7.0	18.5
5.	270.05	BB	38.2	30.2	17.8	29.7	3.8	5.8	35.9	27.9	46.0	10.1	18.1
6.	307.23	BB	40.1	31.9	16.6	29.8	4.0	5.8	36.7	28.5	46.0	9.3	17.5
7.	324.02	BB	41.4	35.2	16.8	29.8	4.1	5.8	38.3	32.1	46.0	7.7	13.9
8.	378.03	BB	41.7	42.6	17.6	29.9	4.6	5.8	39.8	40.7	46.0	6.2	5.3
9.	459.04	BB	39.4	37.8	19.0	29.9	5.2	5.8	39.5	37.9	46.0	6.5	8.1
10.	513.04	BB	36.8	39.7	19.8	29.8	5.6	5.8	38.2	41.1	46.0	7.8	4.9
11.	1178.01	BB	44.2	51.1	25.7	35.2	3.7	0.0	38.4	45.3	54.0	15.6	8.7
12.	1965.01	BB	48.3	45.1	30.1	34.4	4.9	0.0	48.9	45.7	54.0	5.1	8.3

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

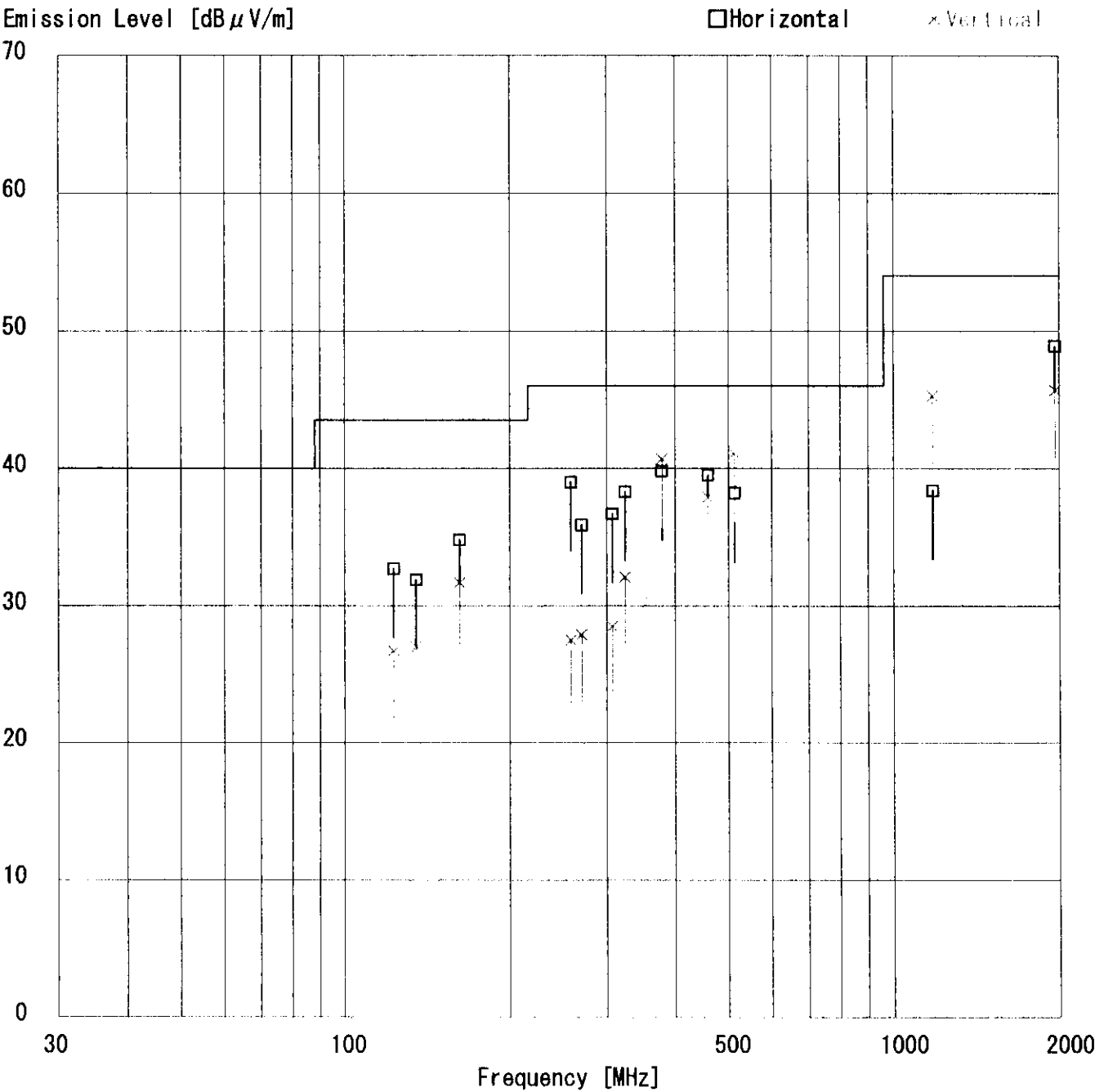
Except for the above table : adequate margin data below the limits.
ANT. TYPE: 30-300MHz Biconical, 300-1000MHz Logperiodic, 1G-2GHz Horn

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.2 OPEN TEST SITE
Report No. : 22DE0029-KT-1

Applicant : ORION ELECTRIC CO., LTD.
Kind of Equipment : DVD/VCR
Model No. : VRDVD4000
Serial No. :
Power : AC120V/60Hz
Mode : DVD PLAY
Remarks : OTHER
Date : 12/6/2001
Test Distance : 3 m
Temperature : 22 °C
Humidity : 41 %
Regulation : FCC Part15B CLASS B

H. Tabata
Engineer : Hiroya Tabata



DATA OF ANTENNA TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

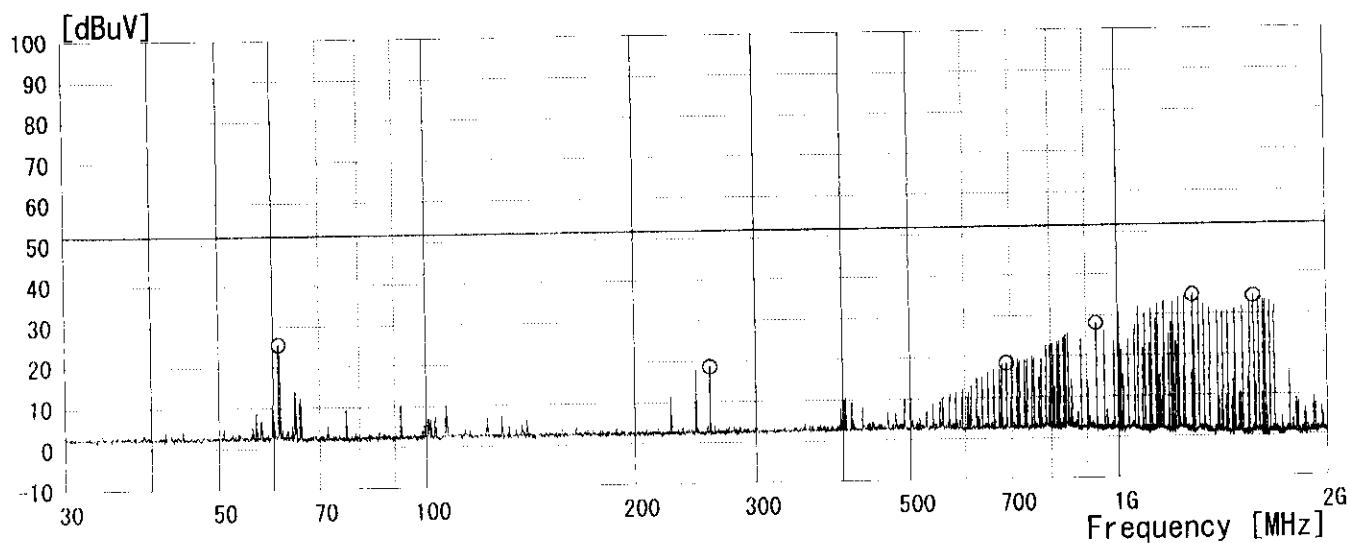
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : TUNNING
LINE : ANTENA TERMINAL
POWER : AC120V/60Hz
REMARKS : TV MODE

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 1

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	61.400	45.8	---	-20.4	25.4	---	52.0	---	26.6	---
2	258.300	38.9	---	-20.4	18.5	---	52.0	---	33.5	---
3	691.400	38.7	---	-20.3	18.4	---	52.0	---	33.6	---
4	932.300	48.3	---	-20.3	28.0	---	52.0	---	24.0	---
5	1285.000	63.5	---	-28.9	34.6	---	52.0	---	17.4	---
6	1573.600	63.1	---	-28.9	34.2	---	52.0	---	17.8	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



DATA OF ANTENNA TERMMLAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

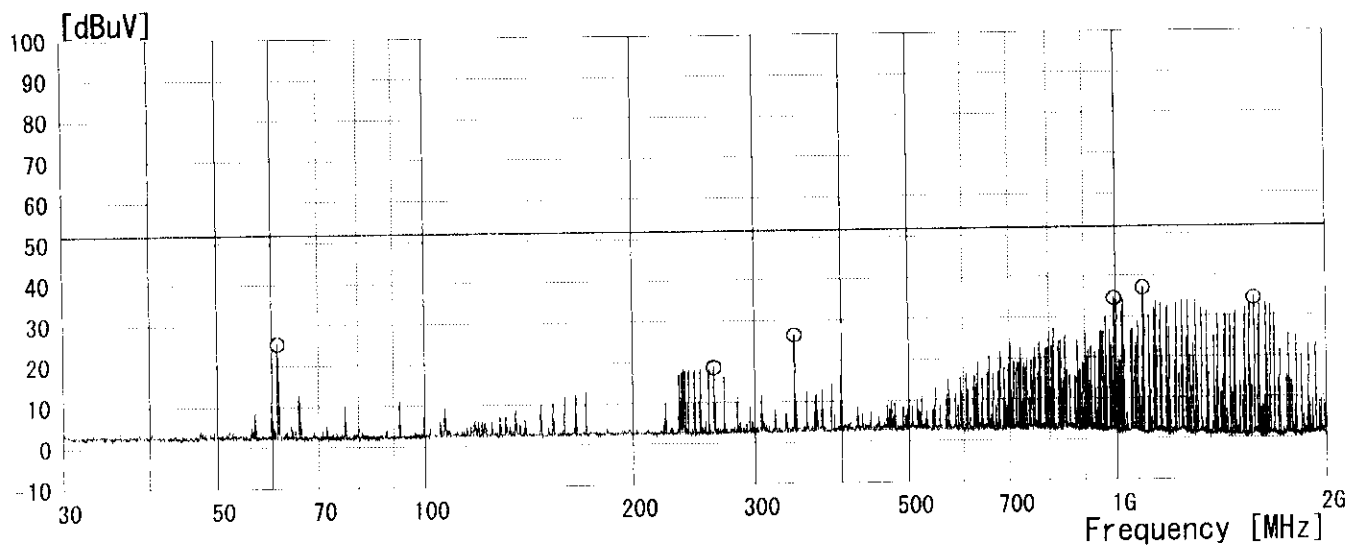
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : TUNNING
LINE : ANTENA TERMINAL
POWER : AC120V/60Hz
REMARKS : CATV MODE

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 2

TEST ENGINEER: *Htsayuki Kioka*
Htsayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	61.400	45.6	----	-20.4	25.2	----	52.0	----	26.8	----
2	262.600	38.9	----	-20.4	18.5	----	52.0	----	33.5	----
3	342.900	46.6	----	-20.3	26.3	----	52.0	----	25.7	----
4	994.400	54.7	----	-20.3	34.4	----	52.0	----	17.6	----
5	1094.300	65.8	----	-28.8	37.0	----	52.0	----	15.0	----
6	1578.600	63.1	----	-28.9	34.2	----	52.0	----	17.8	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP.GAIN





RF output level

A-PEX INTERNATIONAL CO., LTD.
Kanto office EMC Lab.

Company : ORION ELECTRIC CO.,LTD.

Equipment : DVD/VCR

Model number : VRDVD4000

Power : AC 120 V / 60 Hz

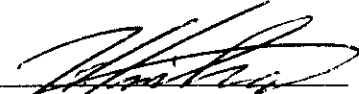
Description : Receive + Rec. mode (0 dBmV)

Report Number : 22DE0029-KT-1

Regulation : FCC Part 15 Subpart B

Date : December 12, 2001

Engineer


Hisayuki Kioka

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	88.4	20.4	68.0	69.5	1.5
4	67.25	86.2	20.4	65.8	69.5	3.7

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	72.3	20.4	51.9	56.5	4.6
	65.75	71.0	20.4	50.6	56.5	5.9
4	62.75	71.5	20.4	51.1	56.5	5.4
	71.75	69.7	20.4	49.3	56.5	7.2

RF output level

A-PEX INTERNATIONAL CO., LTD.

Kanto office EMC Lab.

Company : ORION ELECTRIC CO.,LTD.

Report Number : 22DE0029-KT-1

Equipment : DVD/VCR

Regulation : FCC Part 15 Subpart B

Model number : VRDVD4000

Date : December 12, 2001

Power : AC 120 V / 60 Hz

Description : Receive + Rec. mode (25 dBmV)

Engineer

: Hisayuki Kioka

Video signal

Ch.	Frequency [MHz]	Meter reading [dBuV]	Correction factor [dB]	Result [dB]	Limits [dBuV]	Margin [dB]
3	61.25	87.0	20.4	66.6	69.5	2.9
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	72.1	20.4	51.7	56.5	4.8
	65.75	71.0	20.4	50.6	56.5	5.9
4	62.75	71.5	20.4	51.1	56.5	5.4
	71.75	69.7	20.4	49.3	56.5	7.2



RF output level

A-PEX INTERNATIONAL CO., LTD.
Kanto office EMC Lab.

Company : ORION ELECTRIC CO.,LTD.

Equipment : DVD/VCR

Model number : VRDVD4000

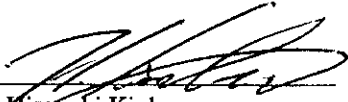
Power : AC 120 V / 60 Hz

Description : AV Input + Rec. mode (1 Vp-p)

Report Number : 22DE0029-KT-1

Regulation : FCC Part 15 Subpart B

Date : December 12, 2001

Engineer : 

Hisayuki Kioka

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	85.0	20.4	64.6	69.5	4.9

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	72.4	20.4	52.0	56.5	4.5
	65.75	71.3	20.4	50.9	56.5	5.6
4	62.75	71.8	20.4	51.4	56.5	5.1
	71.75	70.0	20.4	49.6	56.5	6.9



RF output level

A-PEX INTERNATIONAL CO., LTD.
Kanto office EMC Lab.

Company : ORION ELECTRIC CO.,LTD.

Equipment : DVD/VCR

Model number : VRDVD4000

Power : AC 120 V / 60 Hz

Description : AV Input + Rec. mode (5 Vp-p)

Report Number : 22DE0029-KT-1

Regulation : FCC Part 15 Subpart B

Date : December 12, 2001

Engineer : Hisayuki Kioka

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	86.9	20.4	66.5	69.5	3.0
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	72.3	20.4	51.9	56.5	4.6
	65.75	71.1	20.4	50.7	56.5	5.8
4	62.75	71.6	20.4	51.2	56.5	5.3
	71.75	69.7	20.4	49.3	56.5	7.2

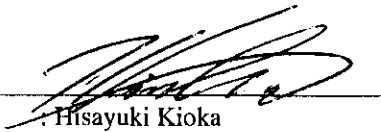
RF output level

A-PEX INTERNATIONAL CO., LTD.
Kanto office EMC Lab.

Company : ORION ELECTRIC CO.,LTD.
Equipment : DVD/VCR
Model number : VRDVD4000
Power : AC 120 V / 60 Hz
Description : DVD play mode

Report Number : 22DE0029-KT-1
Regulation : FCC Part 15 Subpart B
Date : December 12, 2001

Engineer



Hisayuki Kioka

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	87.0	20.4	66.6	69.5	2.9
4	67.25	86.0	20.4	65.6	69.5	3.9

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	72.5	20.4	52.1	56.5	4.4
	65.75	71.1	20.4	50.7	56.5	5.8
4	62.75	71.6	20.4	51.2	56.5	5.3
	71.75	69.7	20.4	49.3	56.5	7.2



RF output level

A-PEX INTERNATIONAL CO., LTD.
Kanto office EMC Lab.

Company : ORION ELECTRIC CO.,LTD.

Equipment : DVD/VCR

Model number : VRDVD4000

Power : AC 120 V / 60 Hz

Description : VCR playback mode

Report Number : 22DE0029-KT-1

Regulation : FCC Part 15 Subpart B

Date : December 12, 2001

Engineer

Hisayuki Kioka

Video signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	61.25	86.8	20.4	66.4	69.5	3.1
4	67.25	84.9	20.4	64.5	69.5	5.0

Audio signal

Ch.	Frequency	Meter reading	Correction factor	Result	Limits	Margin
	[MHz]	[dBuV]	[dB]	[dB]	[dBuV]	[dB]
3	56.75	72.2	20.4	51.8	56.5	4.7
	65.75	71.1	20.4	50.7	56.5	5.8
4	62.75	71.5	20.4	51.1	56.5	5.4
	71.75	69.8	20.4	49.4	56.5	7.1

SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

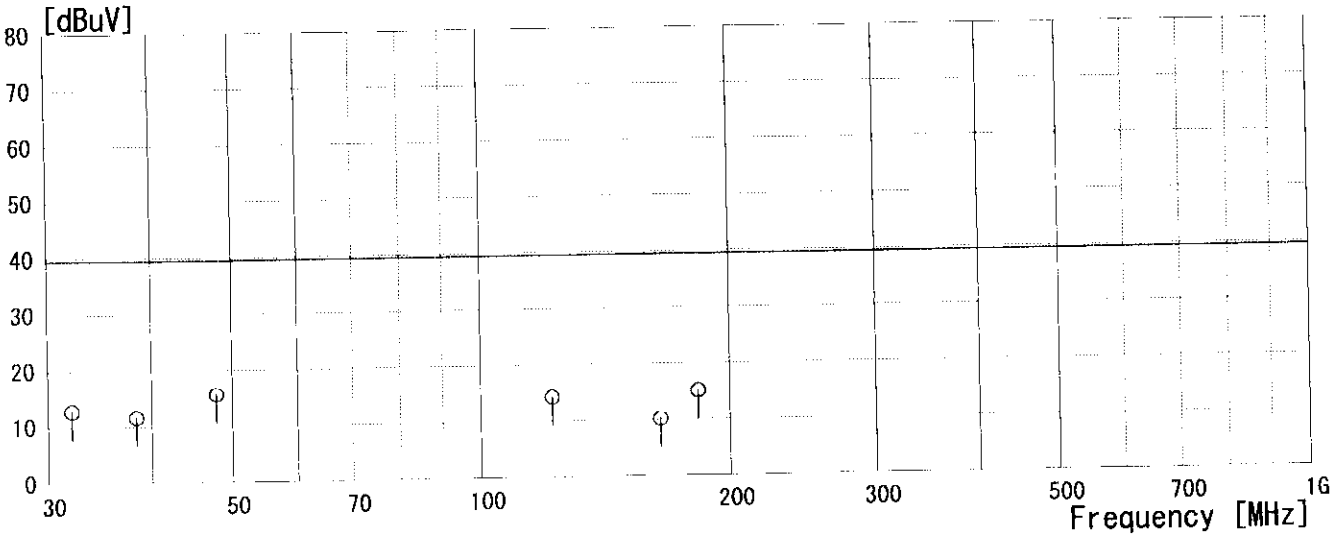
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : RECEIVE+REC (3CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 0dBmV

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 1

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.170	32.8	---	-20.1	12.7	---	39.5	---	26.8	---
2	38.460	31.7	---	-20.1	11.6	---	39.5	---	27.9	---
3	48.000	35.7	---	-20.1	15.6	---	39.5	---	23.9	---
4	122.200	34.3	---	-20.1	14.2	---	39.5	---	25.3	---
5	165.200	30.2	---	-20.1	10.1	---	39.5	---	29.4	---
6	183.600	35.1	---	-20.1	15.0	---	39.5	---	24.5	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

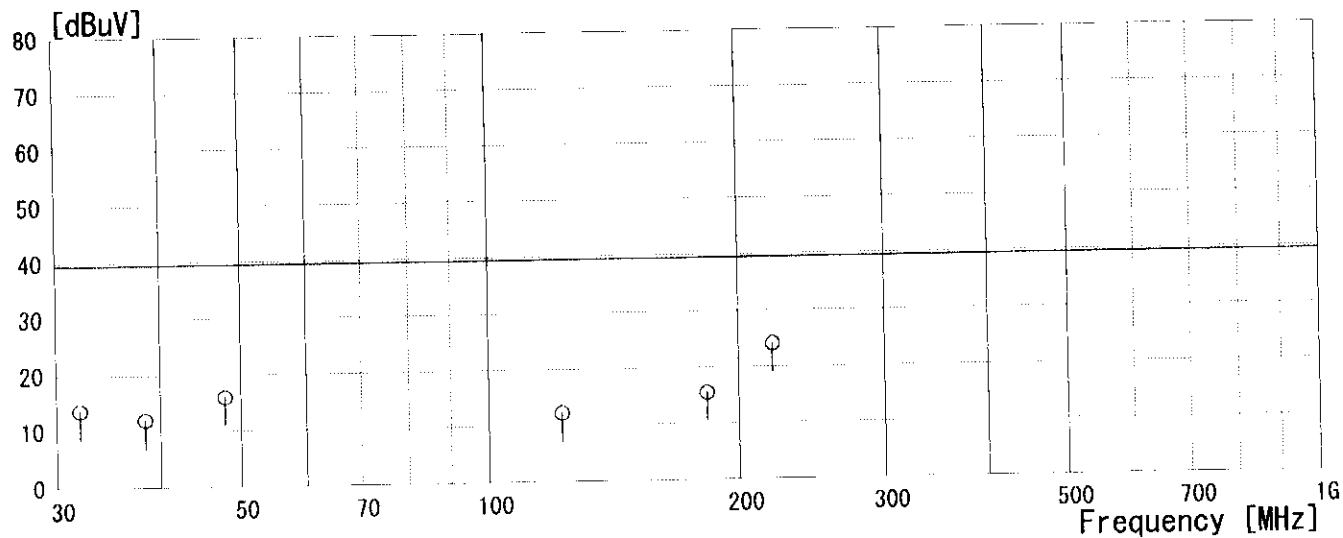
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : RECEIVE+REC (3CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 25dBmV

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 2

TEST ENGINEER: HIRAYUKI Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.110	33.7	---	-20.1	13.6	---	39.5	---	25.9	---
2	38.460	32.0	---	-20.1	11.9	---	39.5	---	27.6	---
3	48.000	36.0	---	-20.1	15.9	---	39.5	---	23.6	---
4	122.800	32.2	---	-20.1	12.1	---	39.5	---	27.4	---
5	183.600	35.5	---	-20.1	15.4	---	39.5	---	24.1	---
6	220.500	44.1	---	-20.1	24.0	---	39.5	---	15.5	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

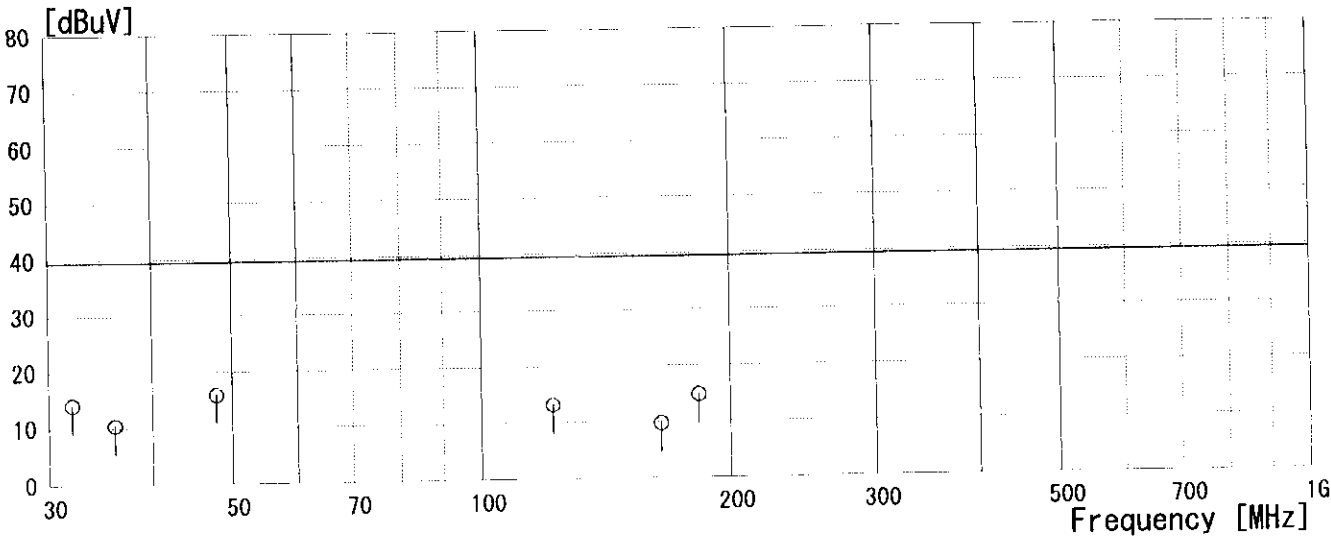
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: AV INPUT+REC (3CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 1Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 5

TEST ENGINEER: 
Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.110	34.2	----	-20.1	14.1	----	39.5	----	25.4	----
2	36.110	30.5	----	-20.1	10.4	----	39.5	----	29.1	----
3	48.000	35.9	----	-20.1	15.8	----	39.5	----	23.7	----
4	122.200	33.2	----	-20.1	13.1	----	39.5	----	26.4	----
5	165.200	29.7	----	-20.1	9.6	----	39.5	----	29.9	----
6	183.600	34.8	----	-20.1	14.7	----	39.5	----	24.8	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

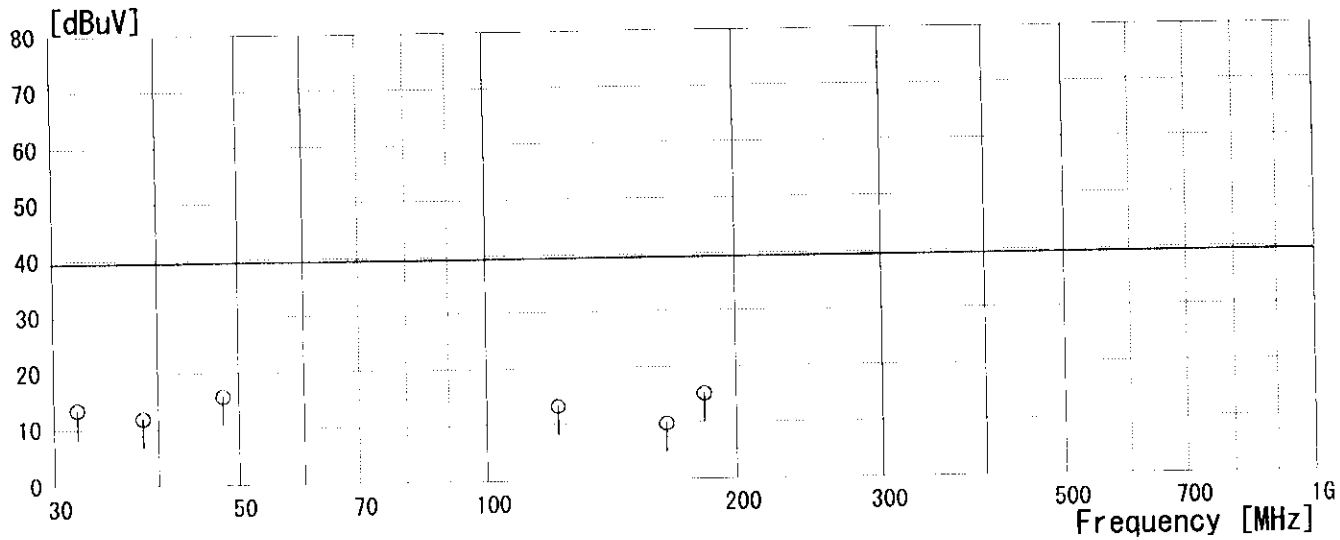
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : AV INPUT+REC (3CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 5Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 6

TEST ENGINEER: 
Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.110	33.5	----	-20.1	13.4	----	39.5	----	26.1	----
2	38.460	31.9	----	-20.1	11.8	----	39.5	----	27.7	----
3	48.000	35.8	----	-20.1	15.7	----	39.5	----	23.8	----
4	122.200	33.2	----	-20.1	13.1	----	39.5	----	26.4	----
5	165.200	29.9	----	-20.1	9.8	----	39.5	----	29.7	----
6	183.600	35.2	----	-20.1	15.1	----	39.5	----	24.4	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

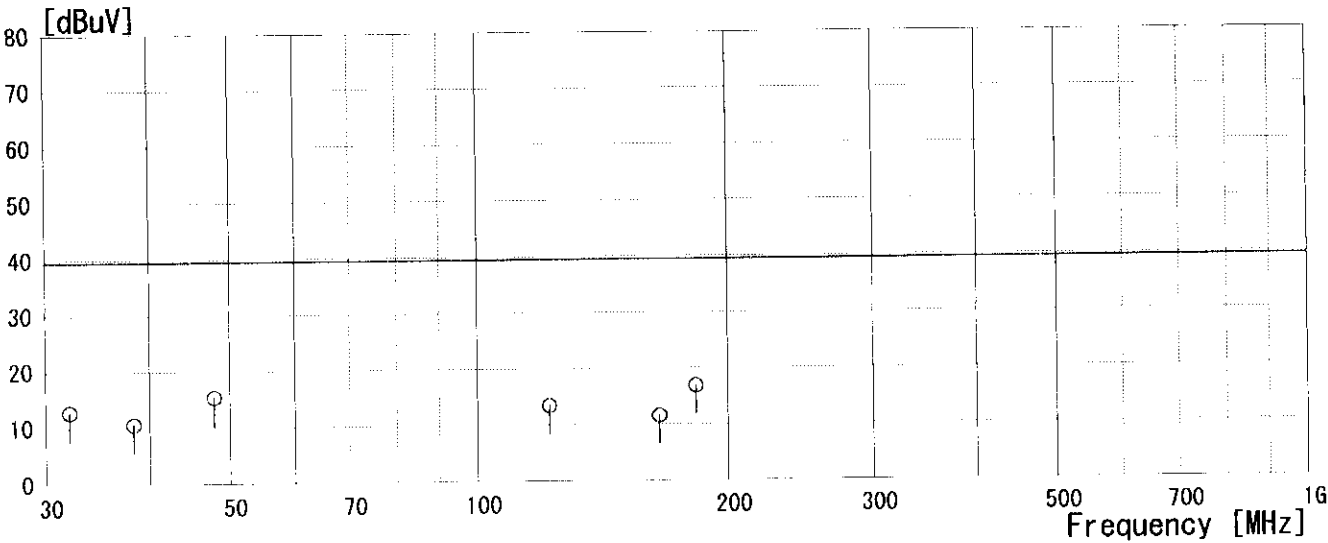
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : DVD PLAYBACK (3CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 9

TEST ENGINEER: 
Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.170	32.8	----	-20.1	12.7	----	39.5	----	26.8	----
2	38.400	30.7	----	-20.1	10.6	----	39.5	----	28.9	----
3	48.000	35.4	----	-20.1	15.3	----	39.5	----	24.2	----
4	122.200	33.5	----	-20.1	13.4	----	39.5	----	26.1	----
5	165.800	31.6	----	-20.1	11.5	----	39.5	----	28.0	----
6	183.600	36.9	----	-20.1	16.8	----	39.5	----	22.7	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

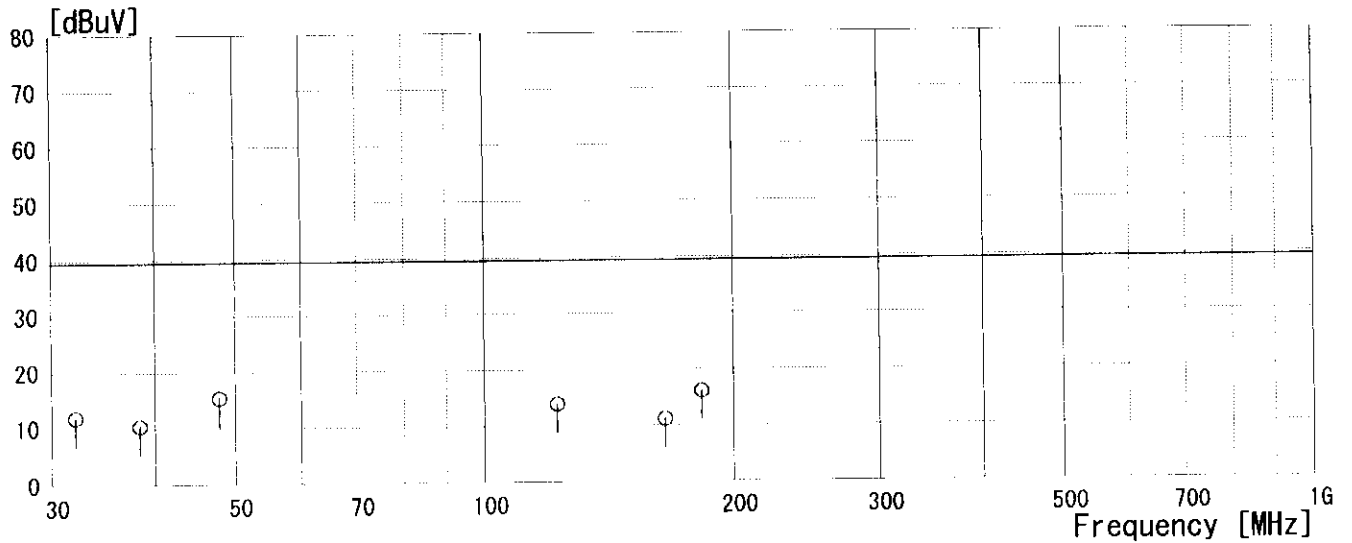
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : VCR PLAYBACK (3CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 11

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.170	32.0	----	-20.1	11.9	----	39.5	----	27.6	----
2	38.460	30.5	----	-20.1	10.4	----	39.5	----	29.1	----
3	48.000	35.4	----	-20.1	15.3	----	39.5	----	24.2	----
4	122.800	33.9	----	-20.1	13.8	----	39.5	----	25.7	----
5	165.800	31.2	----	-20.1	11.1	----	39.5	----	28.4	----
6	183.600	36.1	----	-20.1	16.0	----	39.5	----	23.5	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

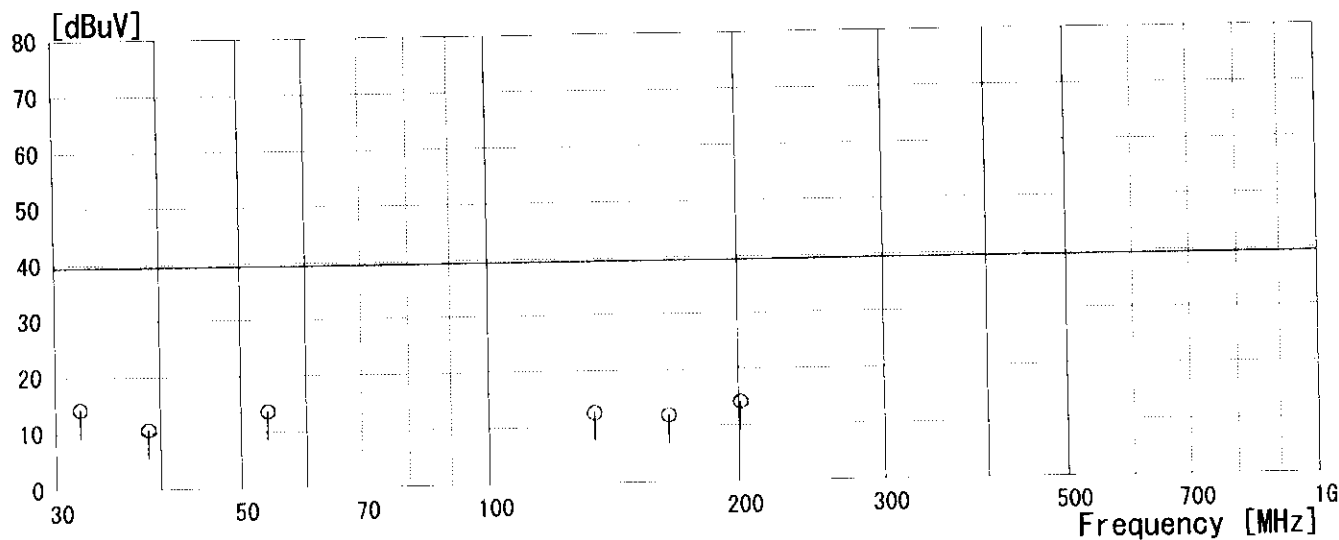
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : RECEIVE+REC (4CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : OdBmV

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 3

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.200	34.3	---	-20.1	14.2	---	39.5	---	25.3	---
2	38.800	30.6	---	-20.1	10.5	---	39.5	---	29.0	---
3	54.060	33.7	---	-20.1	13.6	---	39.5	---	25.9	---
4	134.500	32.6	---	-20.1	12.5	---	39.5	---	27.0	---
5	165.200	32.0	---	-20.1	11.9	---	39.5	---	27.6	---
6	201.500	34.2	---	-20.1	14.1	---	39.5	---	25.4	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

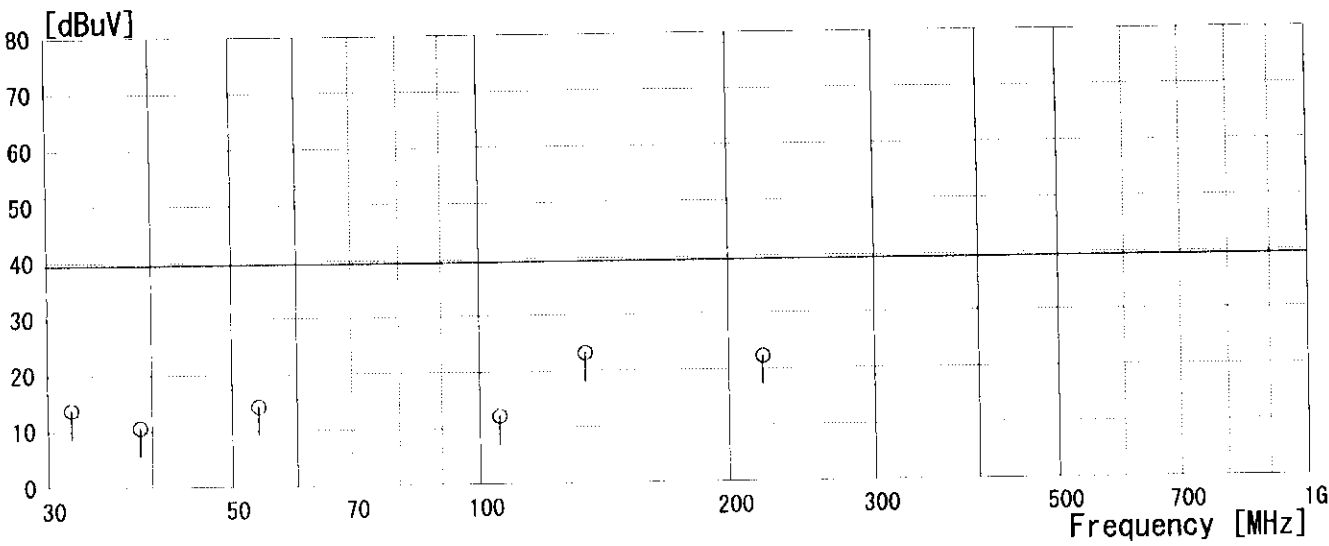
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : RECEIVE+REC (4CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 25dBmV

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 4

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.110	33.8	----	-20.1	13.7	----	39.5	----	25.8	----
2	38.800	30.7	----	-20.1	10.6	----	39.5	----	28.9	----
3	54.000	34.3	----	-20.1	14.2	----	39.5	----	25.3	----
4	105.800	32.1	----	-20.1	12.0	----	39.5	----	27.5	----
5	134.500	43.2	----	-20.1	23.1	----	39.5	----	16.4	----
6	220.500	42.3	----	-20.1	22.2	----	39.5	----	17.3	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

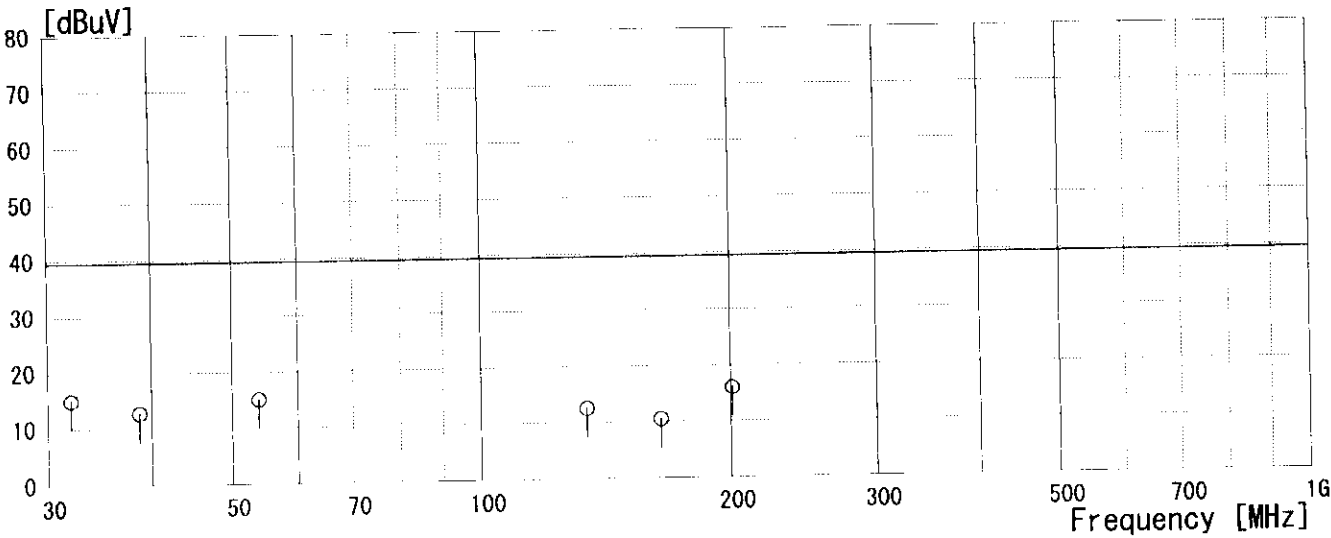
A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : AV INPUT+REC (4CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 1Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 7
TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.110	35.1	---	-20.1	15.0	---	39.5	---	24.5	---
2	38.800	32.8	---	-20.1	12.7	---	39.5	---	26.8	---
3	54.000	35.1	---	-20.1	15.0	---	39.5	---	24.5	---
4	134.500	32.6	---	-20.1	12.5	---	39.5	---	27.0	---
5	165.200	30.5	---	-20.1	10.4	---	39.5	---	29.1	---
6	201.500	36.0	---	-20.1	15.9	---	39.5	---	23.6	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

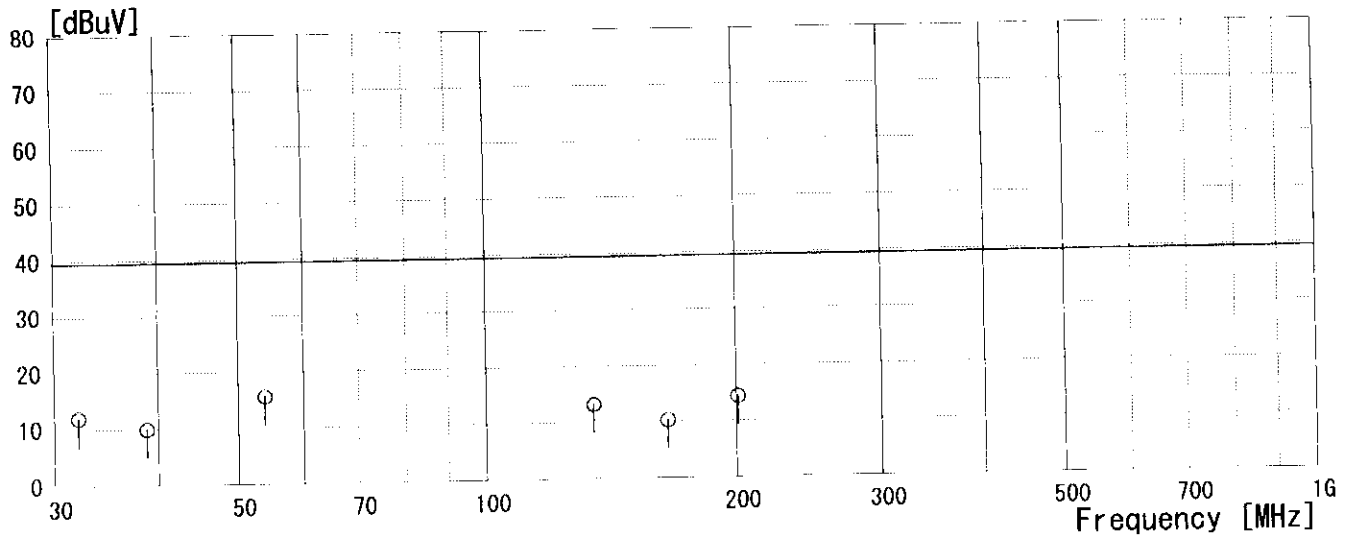
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : AV INPUT+REC (4CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 5Vp-p INPUT

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 8

TEST ENGINEER: Htsayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.170	32.0	---	-20.1	11.9	---	39.5	---	27.6	---
2	38.900	30.0	---	-20.1	9.9	---	39.5	---	29.6	---
3	54.000	35.6	---	-20.1	15.5	---	39.5	---	24.0	---
4	135.100	33.2	---	-20.1	13.1	---	39.5	---	26.4	---
5	165.800	30.3	---	-20.1	10.2	---	39.5	---	29.3	---
6	201.500	34.4	---	-20.1	14.3	---	39.5	---	25.2	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

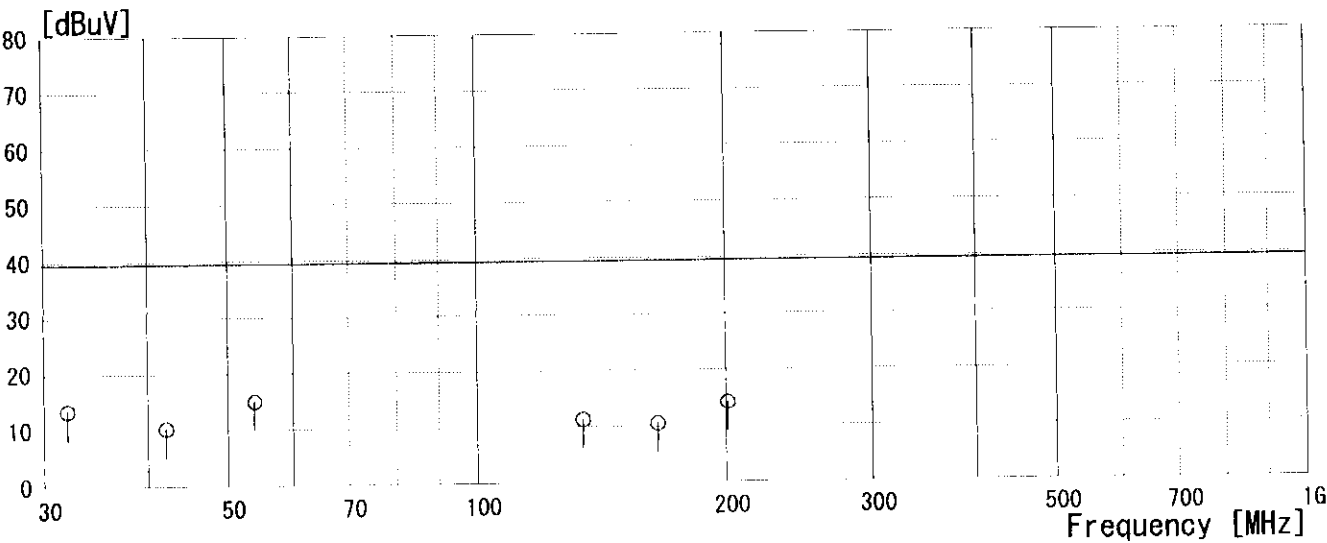
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : DVD PLAYBACK (4CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 10

TEST ENGINEER: Htsayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.110	33.5	---	-20.1	13.4	---	39.5	---	26.1	---
2	42.230	30.3	---	-20.1	10.2	---	39.5	---	29.3	---
3	54.060	35.1	---	-20.1	15.0	---	39.5	---	24.5	---
4	134.500	31.3	---	-20.1	11.2	---	39.5	---	28.3	---
5	165.800	30.5	---	-20.1	10.4	---	39.5	---	29.1	---
6	201.500	34.2	---	-20.1	14.1	---	39.5	---	25.4	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



SPURIOUS FROM RF OUTPUT TERMINAL

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

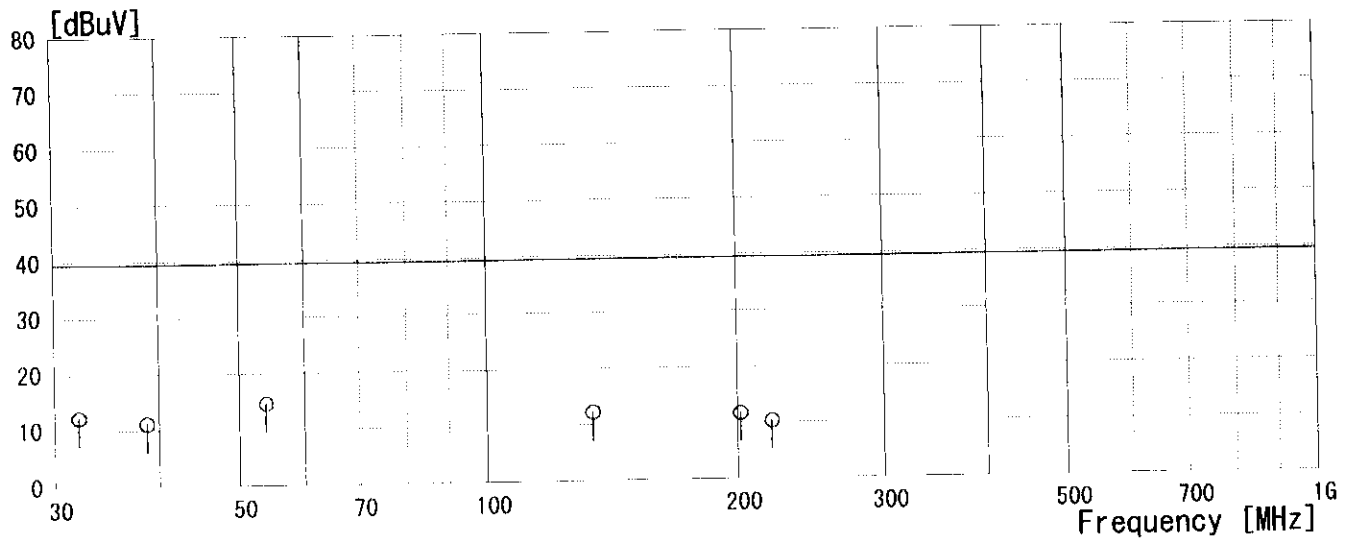
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : VCR PLAYBACK (4CH OUTPUT)
PORT : RF OUTPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 12, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 12

TEST ENGINEER: Hisayuki Kioka

No.	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN	
		QP	AV		QP	AV	QP	AV	QP	AV
		[dBuV]			[dBuV]		[dBuV]		[dB]	
1	32.170	32.3	---	-20.1	12.2	---	39.5	---	27.3	---
2	38.800	31.2	---	-20.1	11.1	---	39.5	---	28.4	---
3	54.060	34.6	---	-20.1	14.5	---	39.5	---	25.0	---
4	134.500	32.2	---	-20.1	12.1	---	39.5	---	27.4	---
5	202.100	31.7	---	-20.1	11.6	---	39.5	---	27.9	---
6	220.500	30.3	---	-20.1	10.2	---	39.5	---	29.3	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

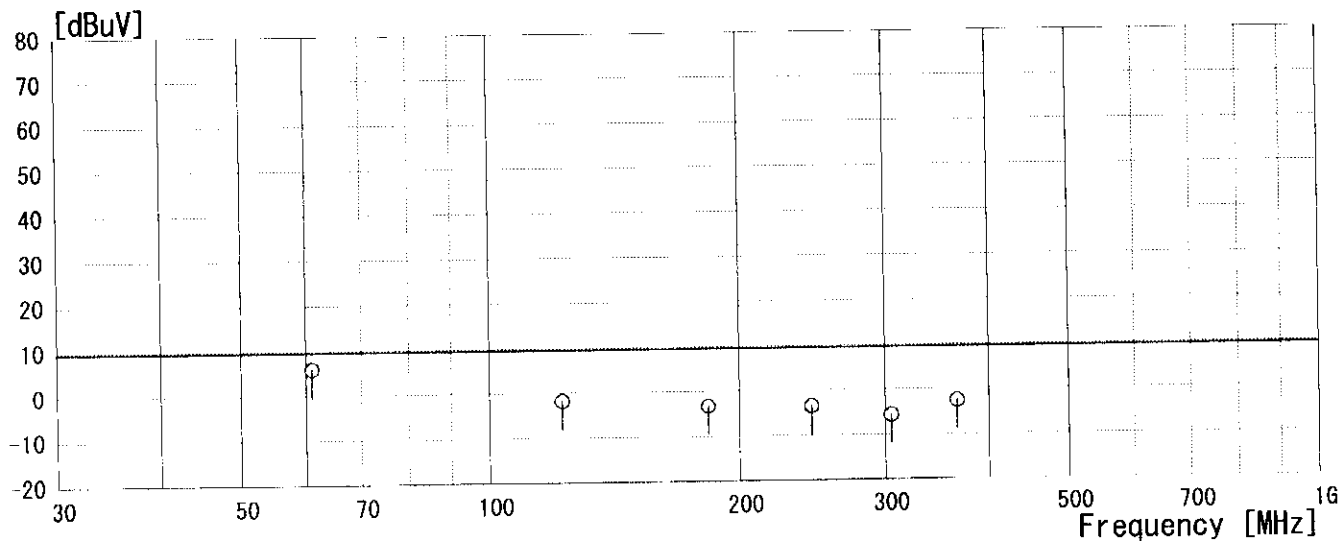
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: AV INPUT (3CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 1Vp-p

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 1

TEST ENGINEER: Hisayuki Kioka

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	25.9	----	-20.1	5.8	----	9.5	----	3.7	----
2	122.500	18.2	----	-20.1	-1.9	----	9.5	----	11.4	----
3	183.750	16.7	----	-20.1	-3.4	----	9.5	----	12.9	----
4	245.000	16.5	----	-20.1	-3.6	----	9.5	----	13.1	----
5	306.250	14.4	----	-20.1	-5.7	----	9.5	----	15.2	----
6	367.500	17.5	----	-20.1	-2.6	----	9.5	----	12.1	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP.GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

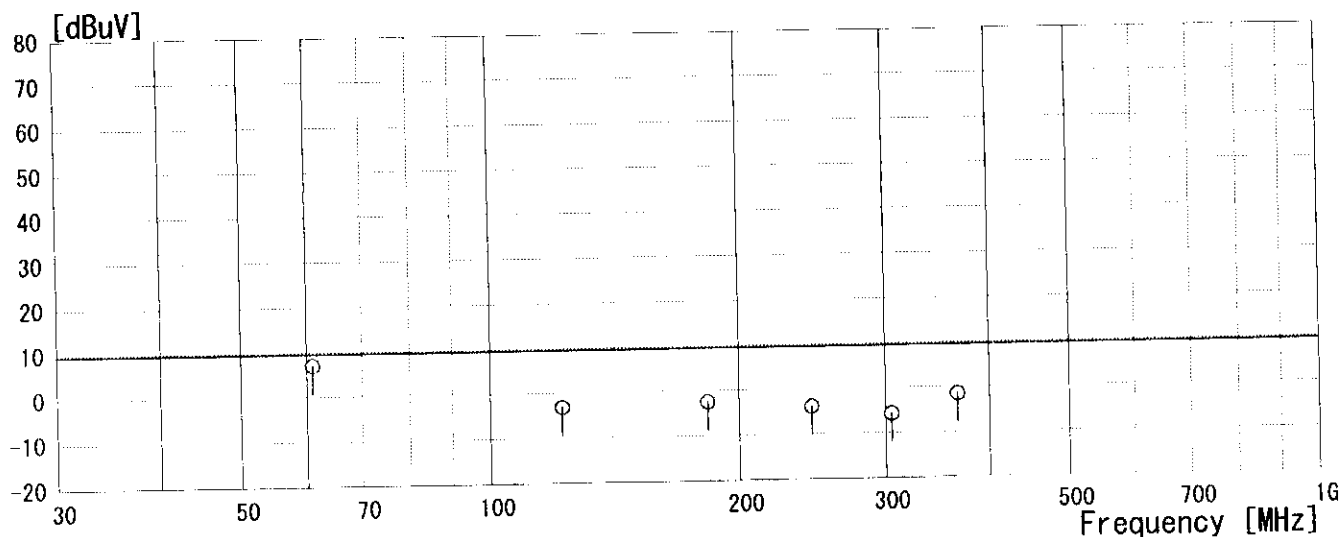
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : AV INPUT (3CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 5Vp-p

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 2

TEST ENGINEER: Htsayuki Kioka

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	27.0	---	-20.1	6.9	---	9.5	---	2.6	---
2	122.500	16.9	---	-20.1	-3.2	---	9.5	---	12.7	---
3	183.750	17.5	---	-20.1	-2.6	---	9.5	---	12.1	---
4	245.000	16.1	---	-20.1	-4.0	---	9.5	---	13.5	---
5	306.250	14.3	---	-20.1	-5.8	---	9.5	---	15.3	---
6	367.500	18.5	---	-20.1	-1.6	---	9.5	---	11.1	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

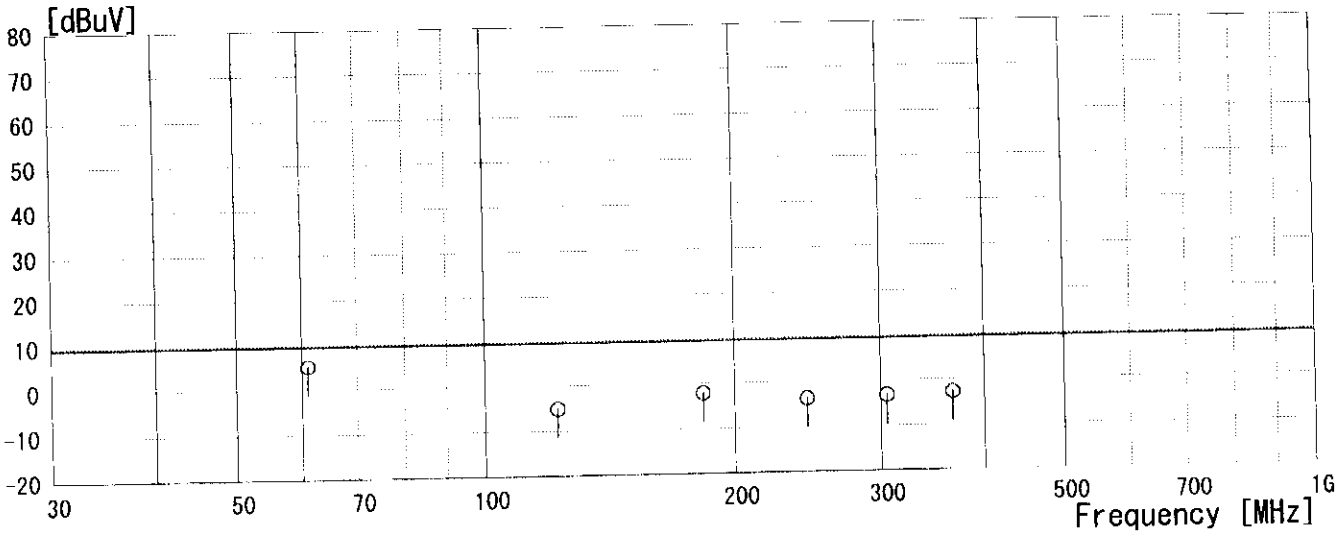
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : DVD PLAYBACK (3CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 3

TEST ENGINEER: Hisayuki Kioka

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	25.3	----	-20.1	5.2	----	9.5	----	4.3	----
2	122.500	15.0	----	-20.1	-5.1	----	9.5	----	14.6	----
3	183.750	17.9	----	-20.1	-2.2	----	9.5	----	11.7	----
4	245.000	16.4	----	-20.1	-3.7	----	9.5	----	13.2	----
5	306.250	16.8	----	-20.1	-3.3	----	9.5	----	12.8	----
6	367.500	17.3	----	-20.1	-2.8	----	9.5	----	12.3	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

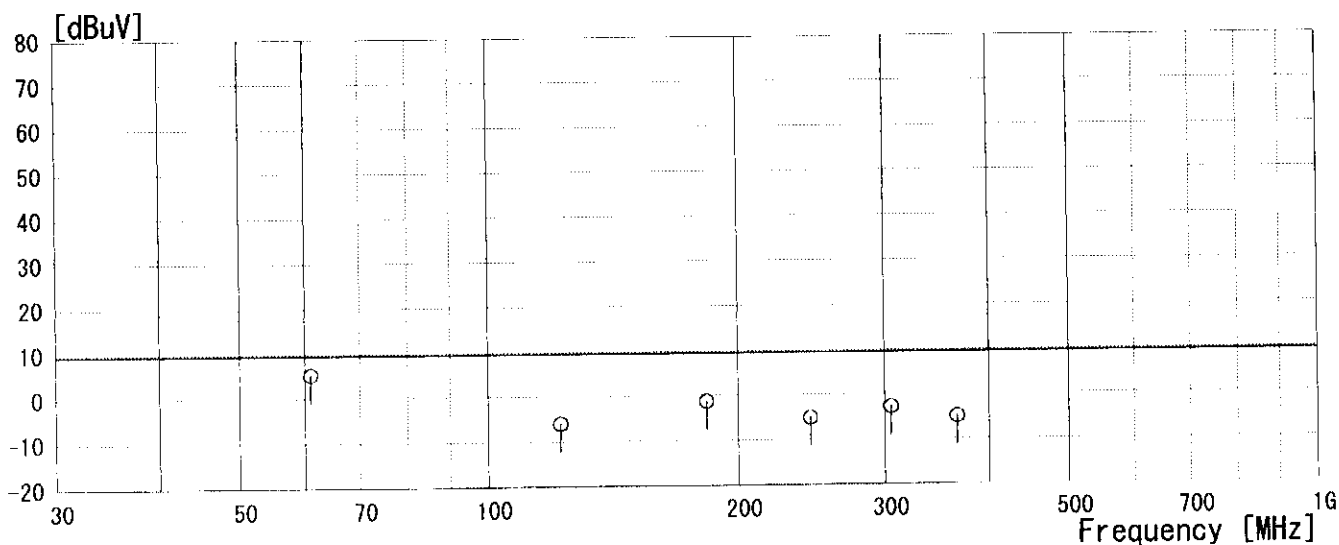
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : VCR PLAYBACK (3CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 4

TEST ENGINEER: Hisayuki Kioka

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	25.4	---	-20.1	5.3	---	9.5	---	4.2	---
2	122.500	14.0	---	-20.1	-6.1	---	9.5	---	15.6	---
3	183.750	18.8	---	-20.1	-1.3	---	9.5	---	10.8	---
4	245.000	15.0	---	-20.1	-5.1	---	9.5	---	14.6	---
5	306.250	17.3	---	-20.1	-2.8	---	9.5	---	12.3	---
6	367.500	15.1	---	-20.1	-5.0	---	9.5	---	14.5	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

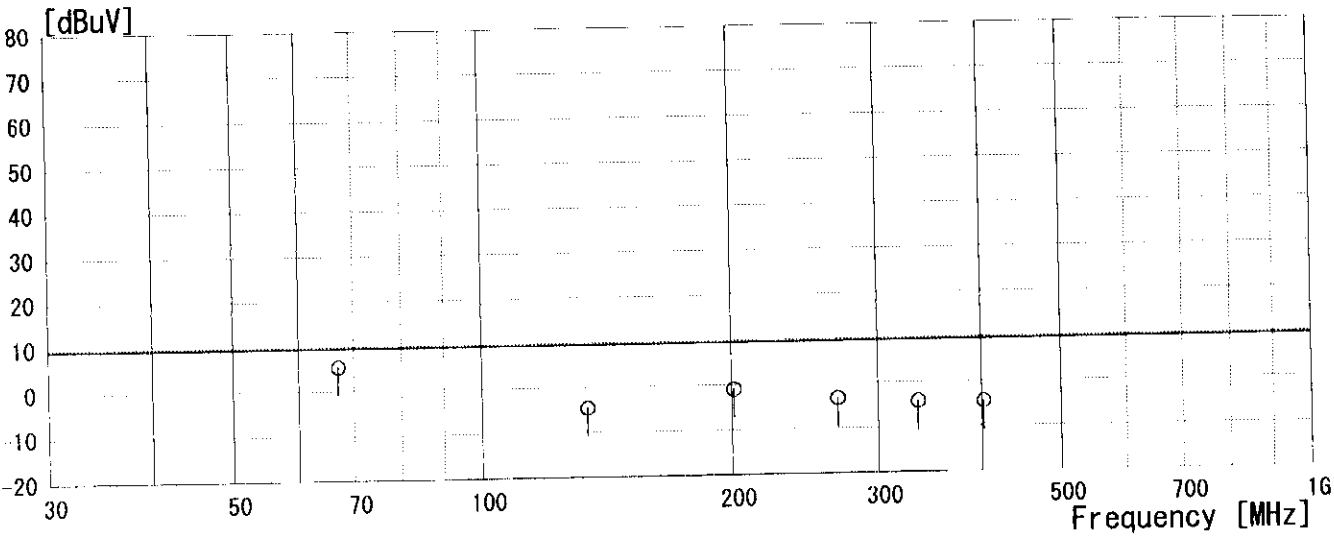
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : AV INPUT (4CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 1Vp-p

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 8

TEST ENGINEER: Hisayuki Kioka

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	25.5	----	-20.1	5.4	----	9.5	----	4.1	----
2	134.500	15.5	----	-20.1	-4.6	----	9.5	----	14.1	----
3	201.750	19.1	----	-20.1	-1.0	----	9.5	----	10.5	----
4	269.000	16.7	----	-20.1	-3.4	----	9.5	----	12.9	----
5	336.250	15.8	----	-20.1	-4.3	----	9.5	----	13.8	----
6	403.500	15.6	----	-20.0	-4.4	----	9.5	----	13.9	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

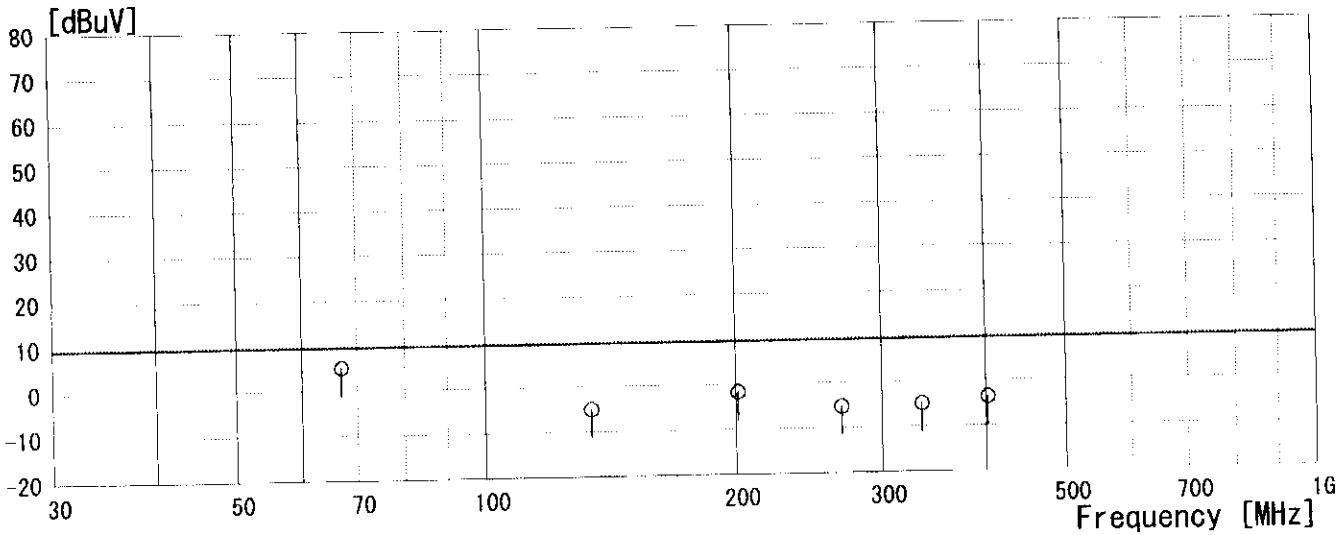
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE: AV INPUT (4CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : 5Vp-p

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 7

TEST ENGINEER: Hisayuki Kioka

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	25.2	---	-20.1	5.1	---	9.5	---	4.4	---
2	134.500	15.0	---	-20.1	-5.1	---	9.5	---	14.6	---
3	201.750	18.3	---	-20.1	-1.8	---	9.5	---	11.3	---
4	269.000	14.7	---	-20.1	-5.4	---	9.5	---	14.9	---
5	336.250	15.1	---	-20.1	-5.0	---	9.5	---	14.5	---
6	403.500	16.3	---	-20.0	-3.7	---	9.5	---	13.2	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO., LTD.
Kanto Office EMC Lab.

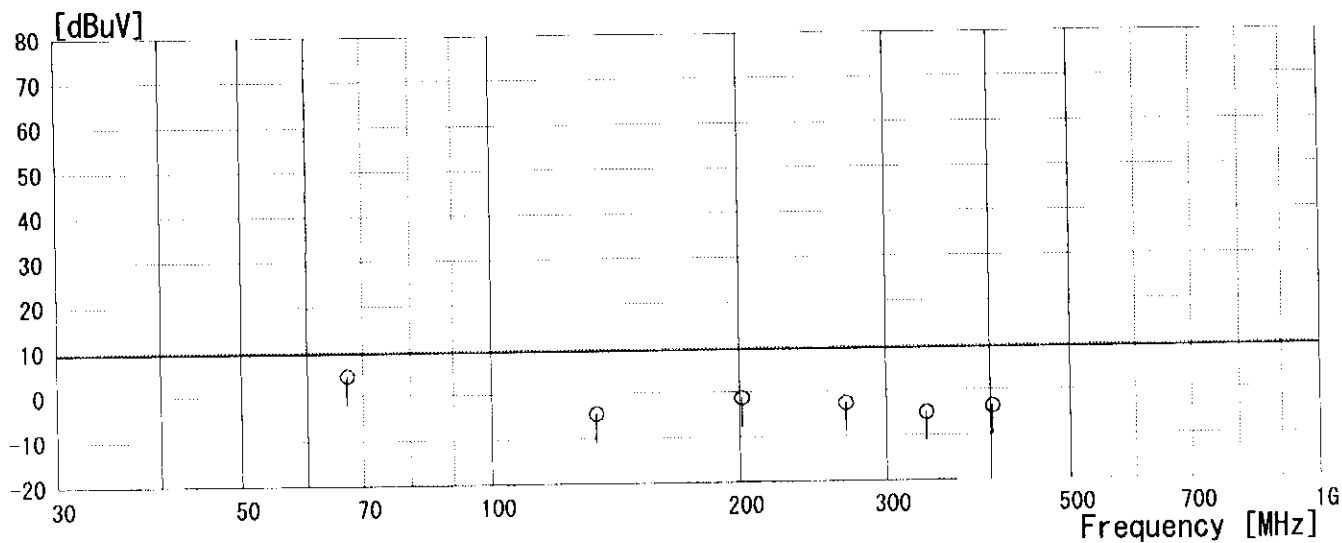
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : DVD PLAYBACK (4CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 6

TEST ENGINEER: Hisayuki Kioka

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	24.6	----	-20.1	4.5	----	9.5	----	5.0	----
2	134.500	15.6	----	-20.1	-4.5	----	9.5	----	14.0	----
3	201.750	18.7	----	-20.1	-1.4	----	9.5	----	10.9	----
4	269.000	17.4	----	-20.1	-2.7	----	9.5	----	12.2	----
5	336.250	15.1	----	-20.1	-5.0	----	9.5	----	14.5	----
6	403.500	16.3	----	-20.0	-3.7	----	9.5	----	13.2	----

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



ANTENNA TRANSFER SWITCH

A-PEX INTERNATIONAL CO.,LTD.
Kanto Office EMC Lab.

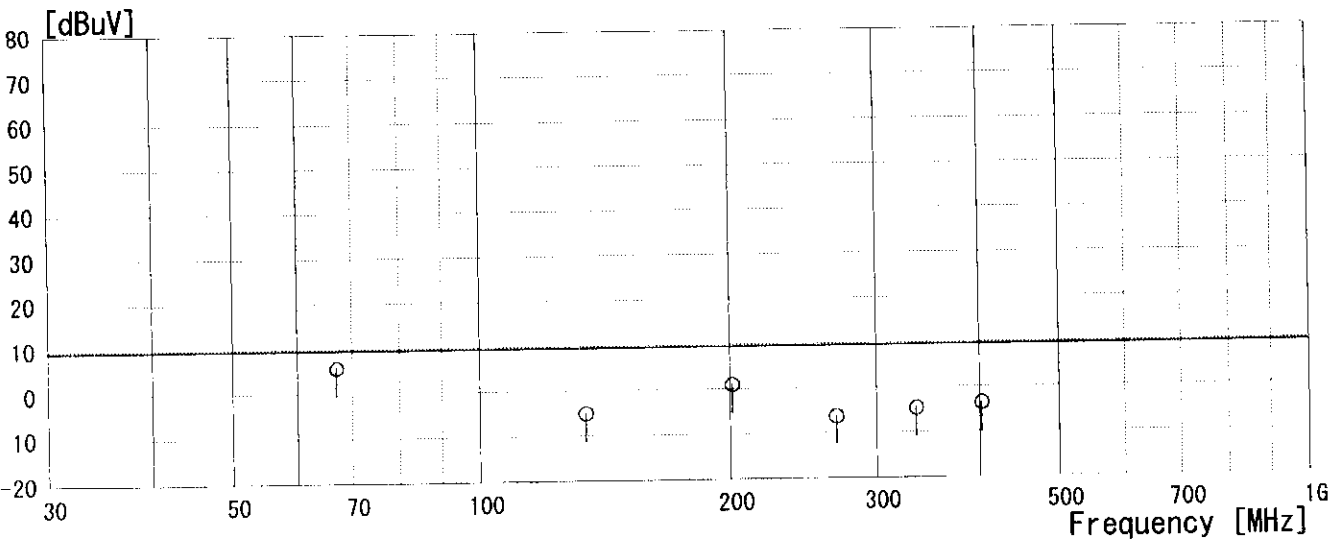
COMPANY : ORION ELECTRIC CO., LTD.
EQUIPMENT : DVD/VCR
MODEL NAME : VRDVD4000
OPERATION MODE : VCR PLAYBACK (4CH OUTPUT)
LINE : RF INPUT TERMINAL
POWER : AC120V/60Hz
REMARKS : -

REPORT No. : 22DE0029-KT-1
DATE : DECEMBER 11, 2001
REGULATION : FCC PART15 SUBPART B
TEST No. : 5

TEST ENGINEER: Hisayuki Kioka

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	25.7	---	-20.1	5.6	---	9.5	---	3.9	---
2	134.500	15.0	---	-20.1	-5.1	---	9.5	---	14.6	---
3	201.750	21.0	---	-20.1	0.9	---	9.5	---	8.6	---
4	269.000	13.7	---	-20.1	-6.4	---	9.5	---	15.9	---
5	336.250	15.4	---	-20.1	-4.7	---	9.5	---	14.2	---
6	403.500	16.4	---	-20.0	-3.6	---	9.5	---	13.1	---

RESULTS=READING+CABLE LOSS+PAD LOSS-AMP. GAIN



Picture sensitivity test

A-PEX INTERNATIONAL CO., LTD.

Kanto office EMC Laboratory

Company : ORION ELECTRIC CO.,LTD.

Report Number : 22DE0029-KT-1

Equipment : DVD/VCR

Regulation : FCC Part 15 Subpart B

Model number : VRDVD4000

Date : December 13, 2001

Power : AC 120 V / 60 Hz

Description : Receive mode

Engineer

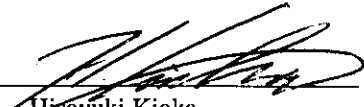
! Hisayuki Kioka

Ch.	Frequency	Sensitivity		Ch.	Frequency	Sensitivity	
[VHF]	[MHz]	[dBuV]	[uV]	[UHF]	[MHz]	[dBuV]	[uV]
2	55.25	20.0	10.0	14	471.25	20.1	10.1
3	61.25	20.8	10.9	20	507.25	20.8	10.9
4	67.25	18.9	8.8	26	543.25	21.3	11.6
5	77.25	19.4	9.3	32	579.25	21.1	11.3
6	83.25	19.3	9.2	38	615.25	27.1	22.6
7	175.25	15.7	6.0	44	651.25	21.4	11.7
8	181.25	15.6	6.0	50	687.25	21.4	11.7
9	187.25	15.4	5.8	56	723.25	21.3	11.6
10	193.25	15.5	5.9	62	759.25	20.6	10.7
11	199.25	15.4	5.8	69	801.25	21.4	11.7
12	205.25	15.3	5.8	-	-	-	-
13	211.25	15.2	5.7	-	-	-	-
Average VHF			7.4	Average UHF			12.4
Average UHF/VHF : $20 \log \text{UHF}[\mu\text{V}]/\text{VHF}[\mu\text{V}] = 4.4 \text{ dB}$							
[Limit : 8.0 dB]							

Noise figure test

A-PEX INTERNATIONAL CO., LTD.
Kanto office EMC Laboratory

Company	: ORION ELECTRIC CO.,LTD.	Report Number	: 22DE0029-KT-1
Equipment	: DVD/VCR	Regulation	: FCC Part 15 Subpart B
Model number	: VRDVD4000	Date	: December 13, 2001
Power	: AC 120 V / 60 Hz		
Description	: Receive mode		

Engineer 
Hisayuki Kioka

Ch.	Frequency [MHz]	Meter reading [dB]	Correction factor [dB]	Noise figure [dB]	Limits [dB]	Margin [dB]
TV VHF Fundamental						
2	55.25	5.6	0.2	5.4	14.0	8.6
3	61.25	6.2	0.2	6.0	14.0	8.0
4	67.25	7.2	0.2	7.0	14.0	7.0
5	77.25	8.0	0.2	7.8	14.0	6.2
6	83.25	7.8	0.2	7.6	14.0	6.4
7	175.25	3.2	0.2	3.0	14.0	11.0
8	181.25	3.0	0.2	2.8	14.0	11.2
9	187.25	3.0	0.2	2.8	14.0	11.2
10	193.25	3.0	0.2	2.8	14.0	11.2
11	199.25	3.0	0.2	2.8	14.0	11.2
12	205.25	2.9	0.2	2.7	14.0	11.3
13	211.25	2.9	0.2	2.7	14.0	11.3
TV UHF Fundamental						
14	471.25	6.0	0.3	5.7	14.0	8.3
20	507.25	6.2	0.3	5.9	14.0	8.1
26	543.25	6.4	0.3	6.1	14.0	7.9
32	579.25	6.6	0.3	6.3	14.0	7.7
38	615.25	6.6	0.3	6.3	14.0	7.7
44	651.25	6.8	0.3	6.5	14.0	7.5
50	687.25	6.8	0.3	6.5	14.0	7.5
56	723.25	6.8	0.4	6.4	14.0	7.6
62	759.25	7.0	0.4	6.6	14.0	7.4
69	801.25	7.6	0.4	7.2	14.0	6.8
Mid-band						
14	121.25	6.8	0.2	6.6	14.0	7.4
16	133.25	5.2	0.2	5.0	14.0	9.0
18	145.25	4.2	0.2	4.0	14.0	10.0
20	157.25	3.7	0.2	3.5	14.0	10.5
22	169.25	3.7	0.2	3.5	14.0	10.5
Super-band						
23	217.25	3.4	0.2	3.2	14.0	10.8
26	235.25	2.8	0.2	2.6	14.0	11.4
29	253.25	3.0	0.2	2.8	14.0	11.2
32	271.25	3.0	0.2	2.8	14.0	11.2
36	295.25	3.2	0.2	3.0	14.0	11.0