



EMC Technologies Pty Ltd

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APPENDIX K
OF
TEST REPORT T60643_F

GRAPHS OF EMI MEASUREMENT

FCC ID: TVN-MDR1109
Manufacturer: MAGELLAN TECHNOLOGY PTY LIMITED
Test Sample: MDR-1109 Desk Top Reader
Model: MDR-1109
Serial Number: 100132

Date: 19th July 2006

APPENDIX K**GRAPHS OF EMI MEASUREMENT****CONDUCTED**

Graph 1: Active Line 0.145 to 30.5 MHz

Graph 2: Neutral Line 0.145 to 30.5 MHz

Antenna Terminated:

Graph 3: Active Line 0.145 to 30.5 MHz

Graph 4: Neutral Line 0.145 to 30.5 MHz

RADIATED EMI

Graph 5: Magnetic Loop Antenna 9 kHz to 30 MHz

Graph 6: Carrier 13.56 MHz 13.552 to 13.568 MHz

Graph 7: Vertical Antenna Polarisation 30 to 1000 MHz

Graph 8: Horizontal Antenna Polarisation 30 to 1000 MHz

EMC Technologies Pty. Ltd. - Global Product Certification

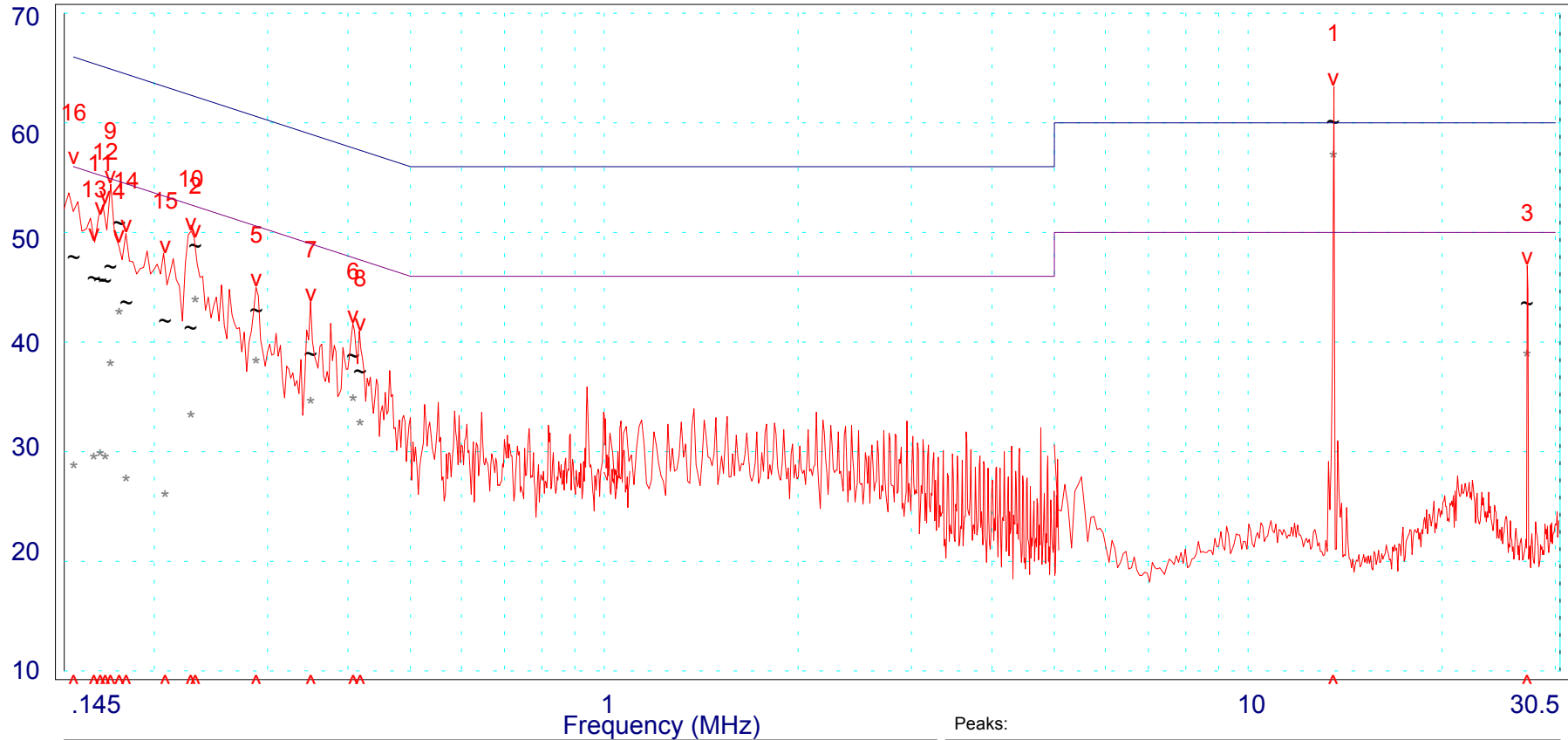
FCC Class B
Conducted Emissions (dBuV)

Job No:T60643

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Test Date: 11/7/06

GRAPH No. 1



Magellan Technology Pty Ltd
Desk Top Reader
Model: MDR-1109 Serial No: 100132
Transmitter terminals connected to antenna.

Limits:
FCCN_BQP FCC CLASS B QP CONDUCTED LIMITS (CISPR)
FCCN_BAV FCC CLASS B AV CONDUCTED LIMITS (CISPR)
Legend:
— Active Line

Ver 0.55 Build 120
Source:
t:L0360107 c1:C0180906 c2:NONE p:NONE a:L0100407
T60643c1 7 8 9
Site ID: Syd Room#2,3/87 Station Rd, Seven Hills, NSW
Test Officer:Jodie Foyle

EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
Phone +(612) 9624 2777 Fax+(612) 9838 4050

No	Freq (MHz)	Peak (dBuV)	QP Val (dBuV)	FCCN_BQP (dBuV)	dL1 (dB)	Av Val (dBuV)	FCCN_BAV (dBuV)	dL2 (dB)
1	13.56	63.3	59.3	60.0	-7	55.8	50.0	5.8
2	0.232	49.5	47.9	62.4	-14.5	42.6	52.4	-9.8
3	27.12	47.0	42.7	60.0	-17.3	37.7	50.0	-12.3
4	0.177	48.9	50.0	64.6	-14.6	41.5	54.6	-13.1
5	0.288	45.0	42.0	60.6	-18.5	37.0	50.6	-13.6
6	0.407	41.7	38.0	57.7	-19.8	33.6	47.7	-14.1
7	0.350	43.7	38.1	59.0	-20.9	33.4	49.0	-15.6
8	0.418	41.0	36.5	57.5	-21.0	31.4	47.5	-16.1
9	0.171	54.4	46.1	64.9	-18.8	36.8	54.9	-18.1
10	0.228	50.1	40.5	62.5	-22.1	32.1	52.5	-20.4
11	0.165	51.5	44.9	65.2	-20.3	28.6	55.2	-26.6
12	0.168	52.5	44.8	65.1	-20.3	28.3	55.1	-26.8
13	0.161	49.1	45.0	65.4	-20.4	28.3	55.4	-27.1
14	0.181	49.9	42.8	64.4	-21.7	26.3	54.4	-28.1
15	0.208	48.1	41.1	63.3	-22.2	24.9	53.3	-28.4
16	0.150	56.2	46.9	66.0	-19.1	27.5	56.0	-28.5

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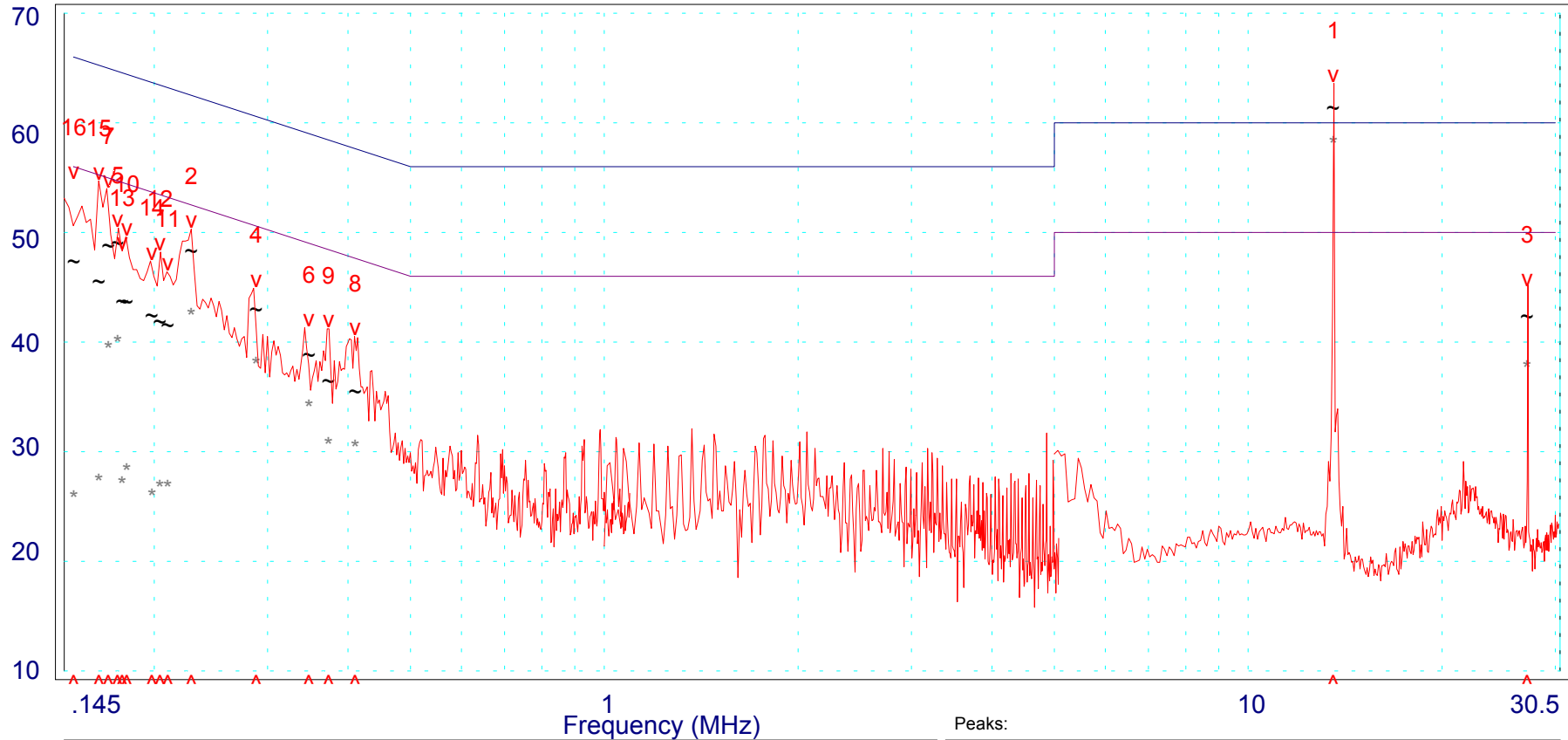
FCC Class B
Conducted Emissions (dBuV)

Job No:T60643

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Test Date: 11/7/06

GRAPH No. 2



Magellan Technology Pty Ltd
Desk Top Reader
Model: MDR-1109 Serial No: 100132
Transmitter terminals connected to antenna.

Limits:
FCCN_BQP FCC CLASS B QP CONDUCTED LIMITS (CISPR)
FCCN_BAV FCC CLASS B AV CONDUCTED LIMITS (CISPR)
Legend:
— Neutral Line

Ver 0.55 Build 120
Source:
t:L0360107 c1:C0180906 c2:NONE p:NONE a:L0100407
T60643c1 10 11 12
Site ID: Syd Room#2,3/87 Station Rd, Seven Hills, NSW
Test Officer: Jodie Foyle

EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
Phone +(612) 9624 2777 Fax+(612) 9838 4050

No	Freq (MHz)	Peak (dBuV)	QP Val (dBuV)	FCCN_BQP (dBuV)	dL1 (dB)	Av Val (dBuV)	FCCN_BAV (dBuV)	dL2 (dB)
1	13.56	63.6	60.5	60.0	.5	57.2	50.0	7.2
2	0.228	50.3	47.4	62.5	-15.1	41.5	52.5	-11.0
3	27.12	45.0	41.5	60.0	-18.5	36.7	50.0	-13.3
4	0.288	44.9	42.2	60.6	-18.4	37.0	50.6	-13.6
5	0.176	50.4	48.2	64.7	-16.5	39.0	54.7	-15.7
6	0.348	41.3	38.0	59.0	-21.0	33.1	49.0	-15.9
7	0.170	54.0	47.9	65.0	-17.0	38.5	55.0	-16.5
8	0.410	40.5	34.7	57.6	-23.0	29.5	47.6	-18.1
9	0.373	41.2	35.6	58.4	-22.8	29.7	48.4	-18.7
10	0.181	49.6	42.8	64.4	-21.6	27.3	54.4	-27.1
11	0.210	46.4	40.7	63.2	-22.5	25.8	53.2	-27.4
12	0.204	48.2	41.1	63.4	-22.4	25.8	53.4	-27.6
13	0.178	48.3	42.9	64.6	-21.7	26.1	54.6	-28.5
14	0.198	47.4	41.6	63.7	-22.1	25.0	53.7	-28.7
15	0.164	54.7	44.7	65.3	-20.6	26.4	55.3	-28.9
16	0.150	54.8	46.5	66.0	-19.5	24.9	56.0	-31.1

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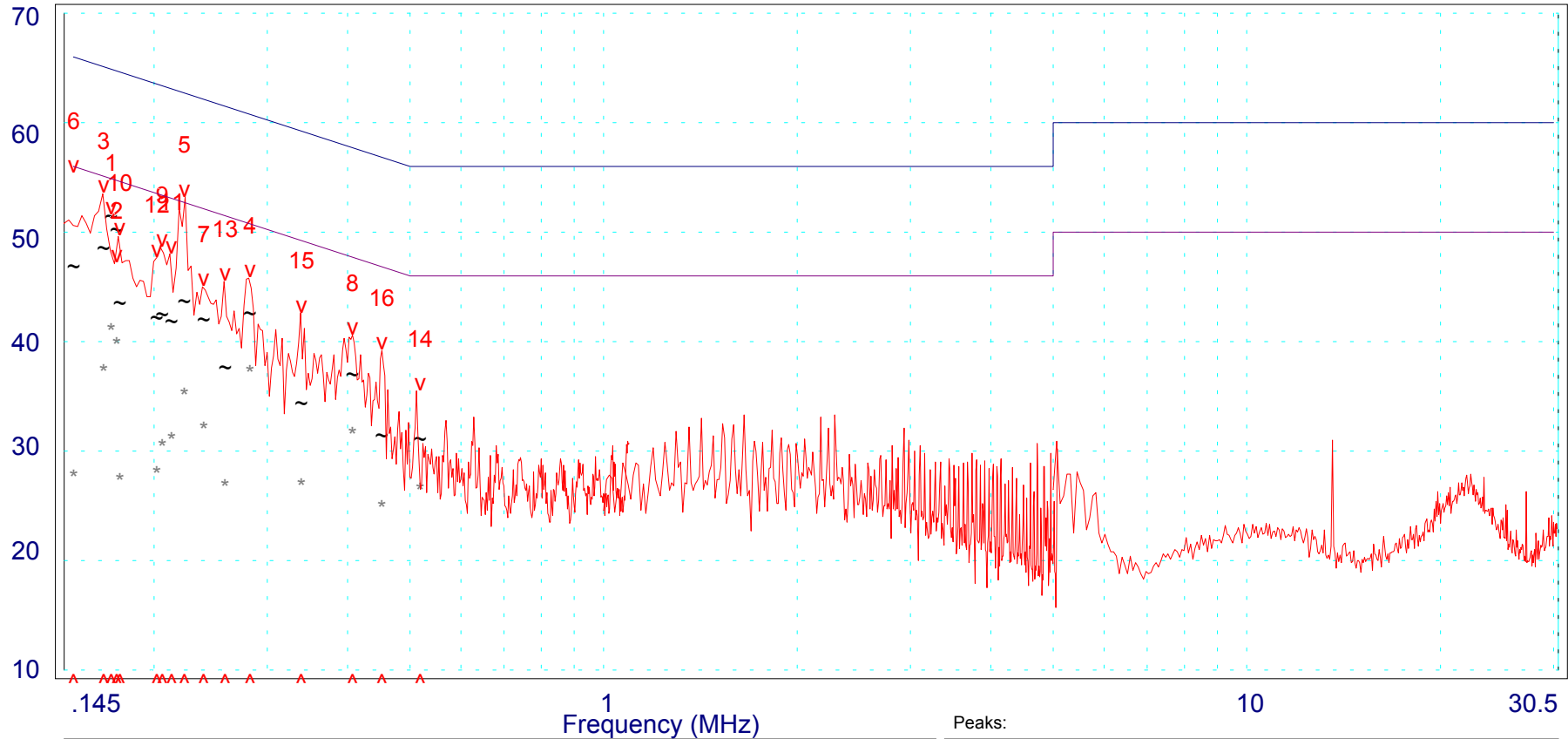
FCC Class B
Conducted Emissions (dBuV)

Job No:T60643

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Test Date: 11/7/06

GRAPH No. 3



Magellan Technology Pty Ltd
Desk Top Reader
Model: MDR-1109 Serial No: 100132
Transmitter terminals connected to 1k Ohm load.

Limits:
FCCN_BQP FCC CLASS B QP CONDUCTED LIMITS (CISPR)
FCCN_BAV FCC CLASS B AV CONDUCTED LIMITS (CISPR)
Legend:
— Active Line

Ver 0.55 Build 120
Source:
t:L0360107 c1:C0180906 c2:NONE p:NONE a:L0100407
T60643c1 13 14 15
Site ID: Syd Room#2,3/87 Station Rd, Seven Hills, NSW
Test Officer:Jodie Foyle

EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
Phone +(612) 9624 2777 Fax+(612) 9838 4050

No	Freq (MHz)	Peak (dBuV)	QP Val (dBuV)	FCCN_BQP (dBuV)	dL1 (dB)	Av Val (dBuV)	FCCN_BAV (dBuV)	dL2 (dB)
1	0.172	51.5	50.6	64.9	-14.3	40.1	54.9	-14.8
2	0.175	47.1	49.4	64.7	-15.3	38.8	54.7	-15.9
3	0.167	53.5	47.7	65.1	-17.4	36.3	55.1	-18.8
4	0.282	45.8	41.8	60.8	-19.0	36.2	50.8	-14.6
5	0.223	53.2	42.9	62.7	-19.9	34.2	52.7	-18.5
6	0.150	55.3	46.0	66.0	-20.0	26.7	56.0	-29.3
7	0.239	45.0	41.2	62.1	-21.0	31.1	52.1	-21.0
8	0.407	40.6	36.2	57.7	-21.5	30.6	47.7	-17.1
9	0.206	48.6	41.7	63.4	-21.7	29.5	53.4	-23.9
10	0.177	49.6	42.7	64.6	-22.0	26.4	54.6	-28.2
11	0.213	48.0	41.0	63.1	-22.1	30.1	53.1	-23.0
12	0.202	47.7	41.3	63.5	-22.2	27.0	53.5	-26.5
13	0.258	45.5	36.8	61.5	-24.7	25.8	51.5	-25.7
14	0.519	35.5	30.3	56.0	-25.7	25.5	46.0	-20.5
15	0.339	42.6	33.5	59.2	-25.7	25.9	49.2	-23.3
16	0.452	39.2	30.6	56.8	-26.2	23.9	46.8	-22.9

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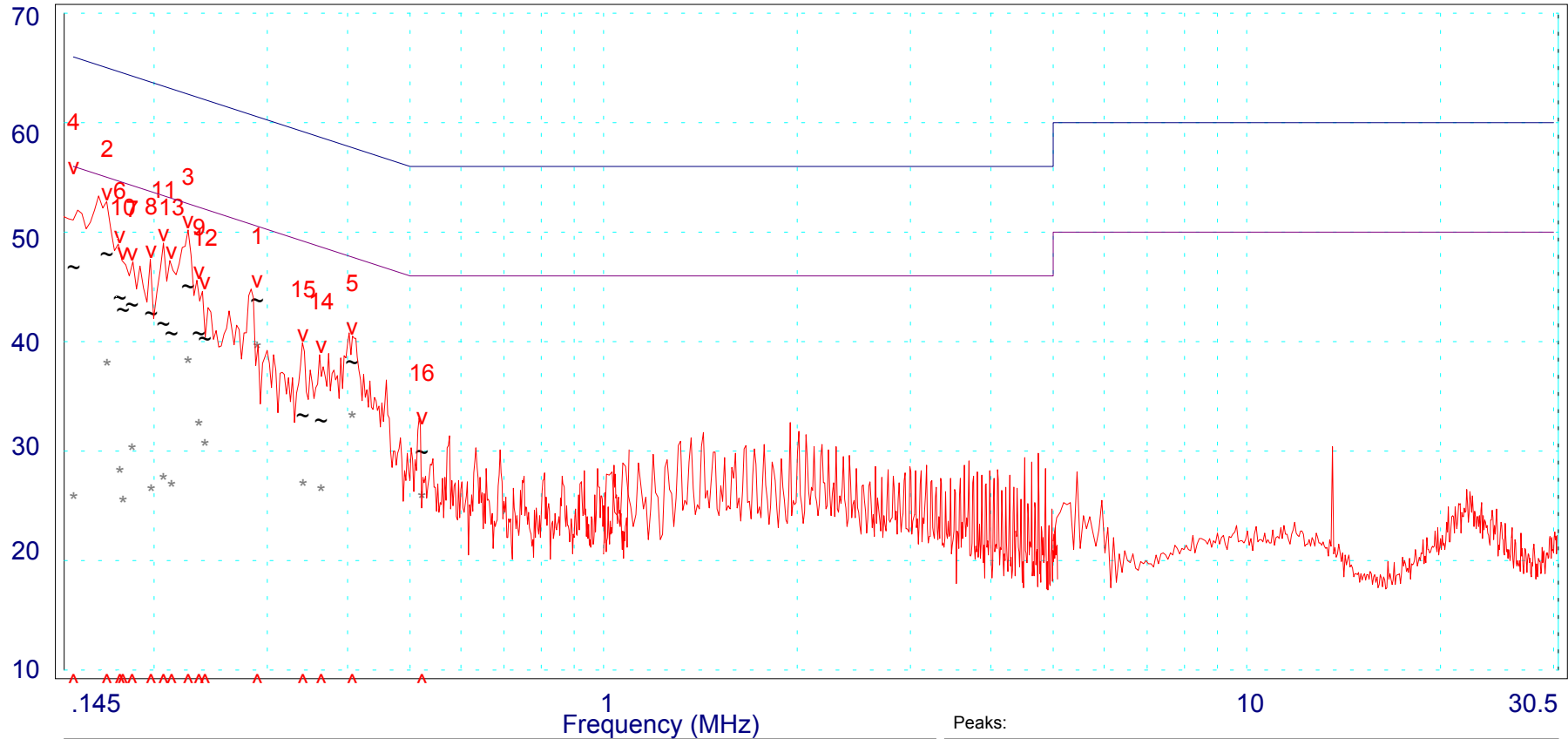
FCC Class B
Conducted Emissions (dBuV)

Job No:T60643

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Test Date: 11/7/06

GRAPH No. 4



Magellan Technology Pty Ltd
Desk Top Reader
Model: MDR-1109 Serial No: 100132
Transmitter terminals connected to 1k Ohm load.

Limits:
FCCN_BQP FCC CLASS B QP CONDUCTED LIMITS (CISPR)
FCCN_BAV FCC CLASS B AV CONDUCTED LIMITS (CISPR)
Legend:
— Neutral Line

Ver 0.55 Build 120
Source:
t:L0360107 c1:C0180906 c2:NONE p:NONE a:L0100407
T60643c1 16 17 18
Site ID: Syd Room#2,3/87 Station Rd, Seven Hills, NSW
Test Officer:Jodie Foyle

EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
Phone +(612) 9624 2777 Fax+(612) 9838 4050

No	Freq (MHz)	Peak (dBuV)	QP Val (dBuV)	FCCN_BQP (dBuV)	dL1 (dB)	Av Val (dBuV)	FCCN_BAV (dBuV)	dL2 (dB)
1	0.289	44.8	42.9	60.5	-17.6	38.4	50.5	-12.1
2	0.169	52.8	47.1	65.0	-17.9	36.8	55.0	-18.2
3	0.226	50.2	44.2	62.6	-18.4	37.0	52.6	-15.6
4	0.150	55.2	46.0	66.0	-20.1	24.6	56.0	-31.4
5	0.407	40.5	37.3	57.7	-20.4	32.0	47.7	-15.7
6	0.177	48.9	43.2	64.6	-21.4	27.0	54.6	-27.6
7	0.185	47.3	42.5	64.3	-21.7	29.1	54.3	-25.2
8	0.198	47.5	41.7	63.7	-22.0	25.3	53.7	-28.4
9	0.235	45.6	39.9	62.3	-22.4	31.3	52.3	-21.0
10	0.179	47.4	42.1	64.5	-22.4	24.3	54.5	-30.2
11	0.207	49.0	40.8	63.3	-22.5	26.4	53.3	-26.9
12	0.240	44.6	39.4	62.1	-22.7	29.5	52.1	-22.6
13	0.213	47.4	39.9	63.1	-23.2	25.7	53.1	-27.4
14	0.364	38.8	32.0	58.6	-26.7	25.3	48.6	-23.3
15	0.341	39.9	32.4	59.2	-26.8	25.8	49.2	-23.4
16	0.522	32.3	29.1	56.0	-26.9	24.7	46.0	-21.3

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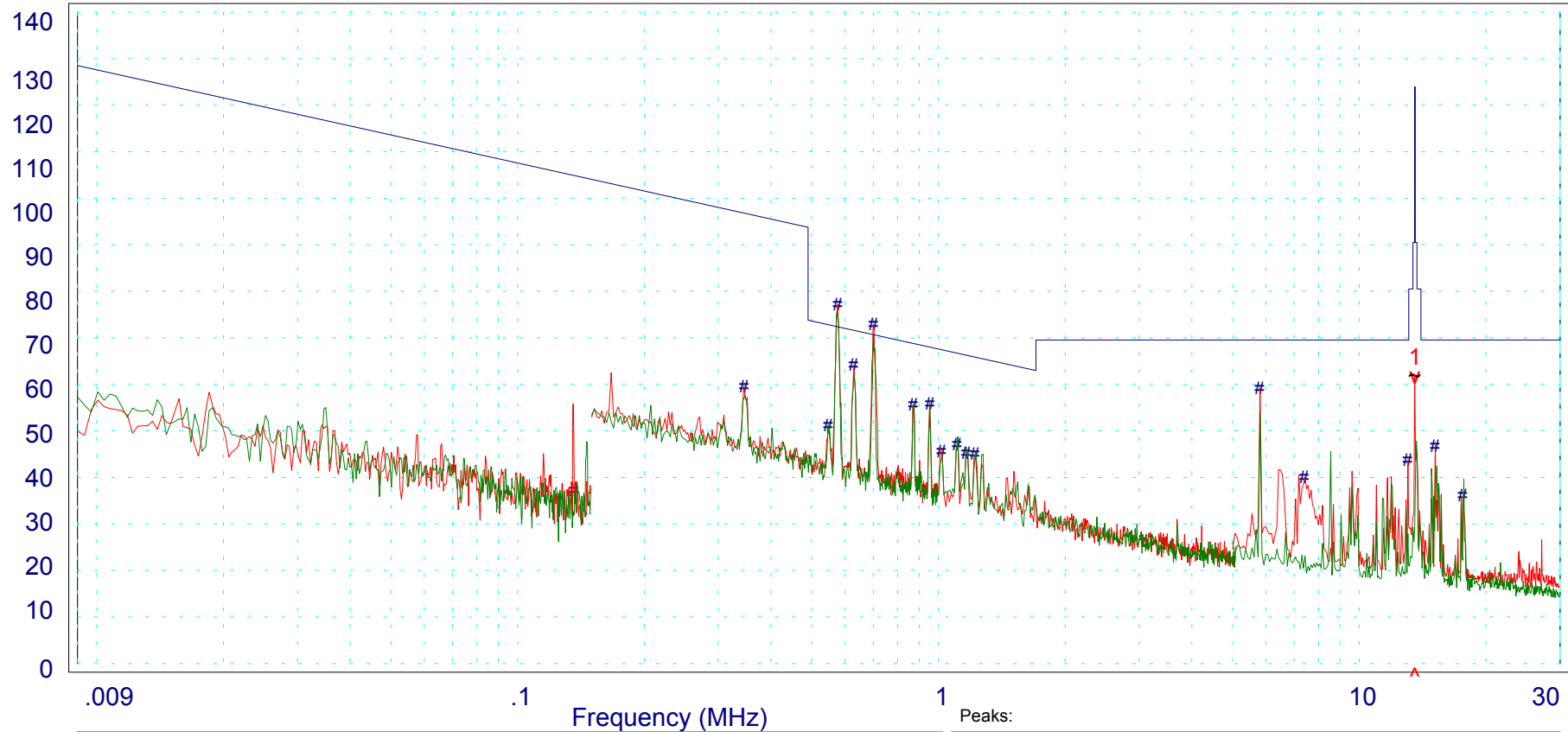
FCC Class B
Radiated Emissions (dBuV)
= Ambient

Job No:T60643

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Test Date: 03-07-06

GRAPH No. 5



Peaks:

No	Freq (MHz)	Peak (dBuV)	Qp Val	FCC_loop_3dL1 (dBuV)	FCC_loop_3dL1 (dB)
1	13.56	62.6	62.6	124.0	-61.4

Magellan Technology
MDR-1109 Desk Top Reader
Model:MDR-1109

Limits:
FCC_loop_3mFcc Pt15 Subpart C Section 15.209(a) 3Metre Limits

Legend:
— Ambients
— Emissions

Ver 5.5 Build 107
Colo Radiated Test Setup Active Loop
t:A0080408E c1:C0201206 c2:NONE p:NONE a:NONE
Site ID: OATS#1,1247 Upper Colo Rd. Colo, NSW
Test Officer: Bruce Holdsworth

Source:
T60643r2 6 7 8 9
T60643r2 1 2 3 4

EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
Phone +(612) 9624 2777 Fax+(612) 9838 4050

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Job No:T60643

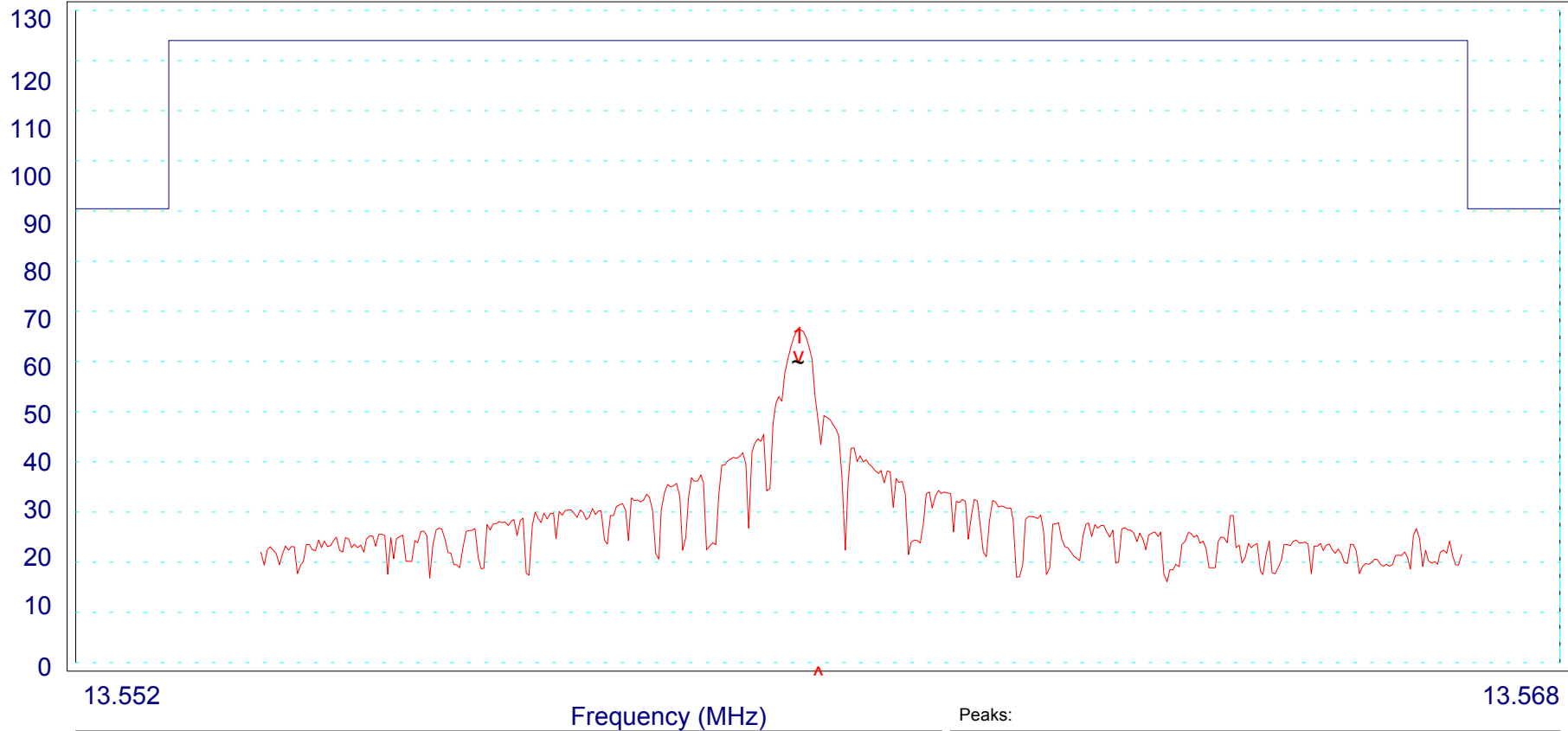
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Radiated Emissions (dBuV)

Test Date: 03-07-06

GRAPH No. 6

= Ambient



Magellan Technology
MDR-1109 Desk Top Reader
Model:MDR-1109

Peaks:

No	Freq (MHz)	Peak (dBuV)	Qp Val	FCC_loop_3dL1 (dBuV)	3dL1 (dB)
1	13.56	61.7	60.5	124.0	-63.6

Limits: FCC_loop_3mFcc Pt15 Subpart C Section 15.209(a) 3Metre Limits

Legend:
— Carrier

Ver 5.5 Build 107
Colo Radiated Test Setup Active Loop
t:A0080408E c1:C0201206 c2:NONE p:NONE a:NONE
Site ID: OATS#1,1247 Upper Colo Rd. Colo, NSW
Test Officer: Bruce Holdsworth

Source:
T60643r2 5

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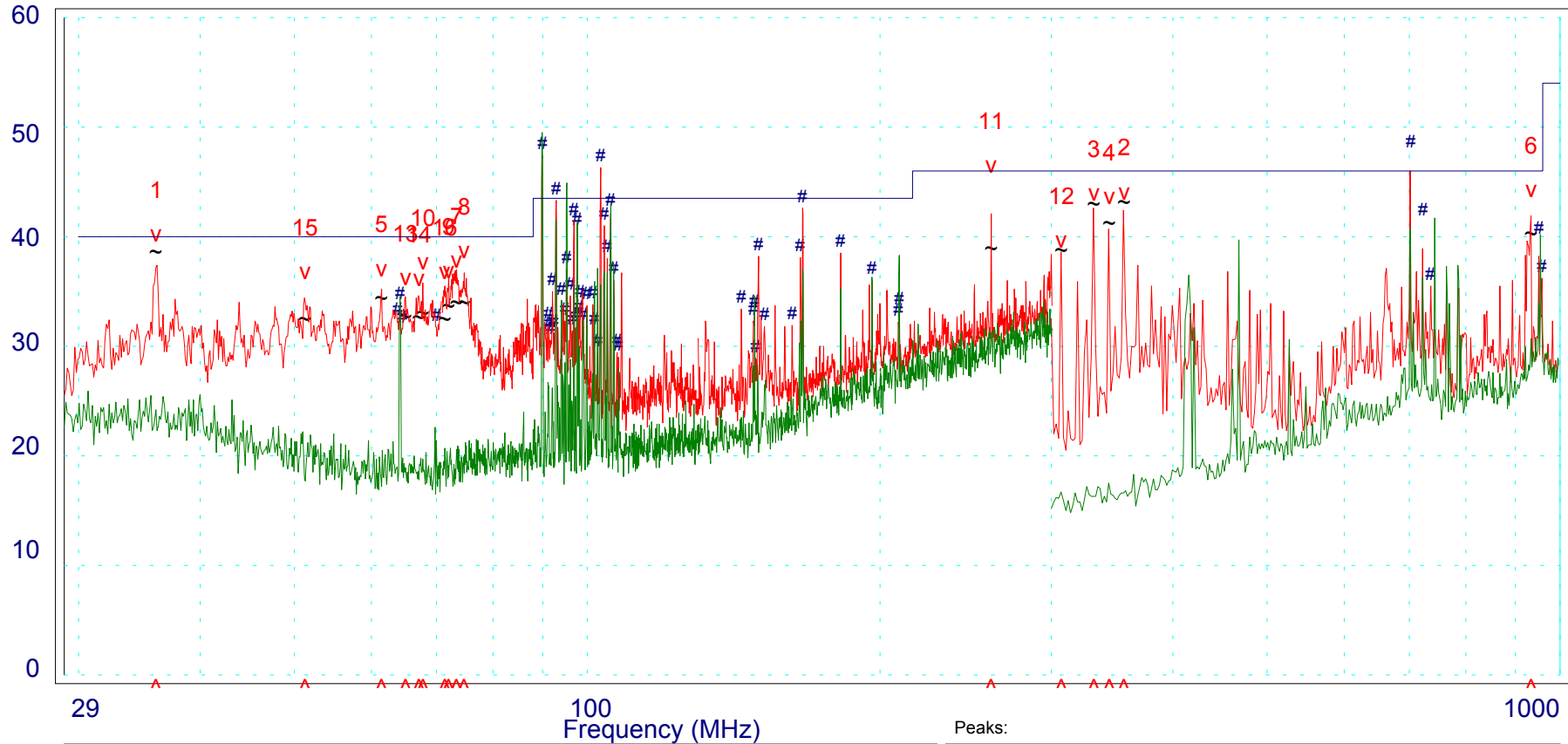
FCC Class B
Radiated Emissions (dBuV/m)
= Ambient

Job No:T60643

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Test Date: 03-07-06

GRAPH No. 7



Magellan Technology
MDR-1109 Desk Top Reader
Model:MDR-1109

Limits:
FCC-B3 FCC CLASS B RAD 3M LIMITS

Legend:
— Vertical Ambients
— Vertical Emissions

Source:
rtsVAmb2 1 2 3 4 5 11
T60643r3 1 2 3 4 5 11

Ver 5.5 Build 107
Colo Radiated Test Setup
t:A0690207 c1:C0200207 c2:NONE p:A0960906 a:NONE
Site ID: OATS#1,1247 Upper Colo Rd. Colo, NSW
Test Officer: Bruce Holdsworth

Peaks:

No	Freq (MHz)	Peak (dBuV/m)	Qp Val	FCC-B3 (dBuV/m)	dL1 (dB)
1	36.03	39.5	37.8	40.0	-2.2
2	356.34	43.3	42.3	46.0	-3.7
3	331.78	43.2	42.2	46.0	-3.8
4	344.04	42.9	40.4	46.0	-5.6
5	61.43	36.3	33.5	40.0	-6.5
6	933.87	43.5	39.5	46.0	-6.5
7	73.39	37.1	33.1	40.0	-6.9
8	74.71	37.9	33.1	40.0	-6.9
9	72.02	36.1	32.8	40.0	-7.2
10	67.79	36.9	32.2	40.0	-7.8
11	260.14	45.7	38.1	46.0	-7.9
12	307.20	38.9	38.0	46.0	-8.0
13	65.05	35.5	31.9	40.0	-8.1
14	67.14	35.4	31.8	40.0	-8.2
15	51.27	36.0	31.7	40.0	-8.4
16	71.36	36.0	31.7	40.0	-8.4

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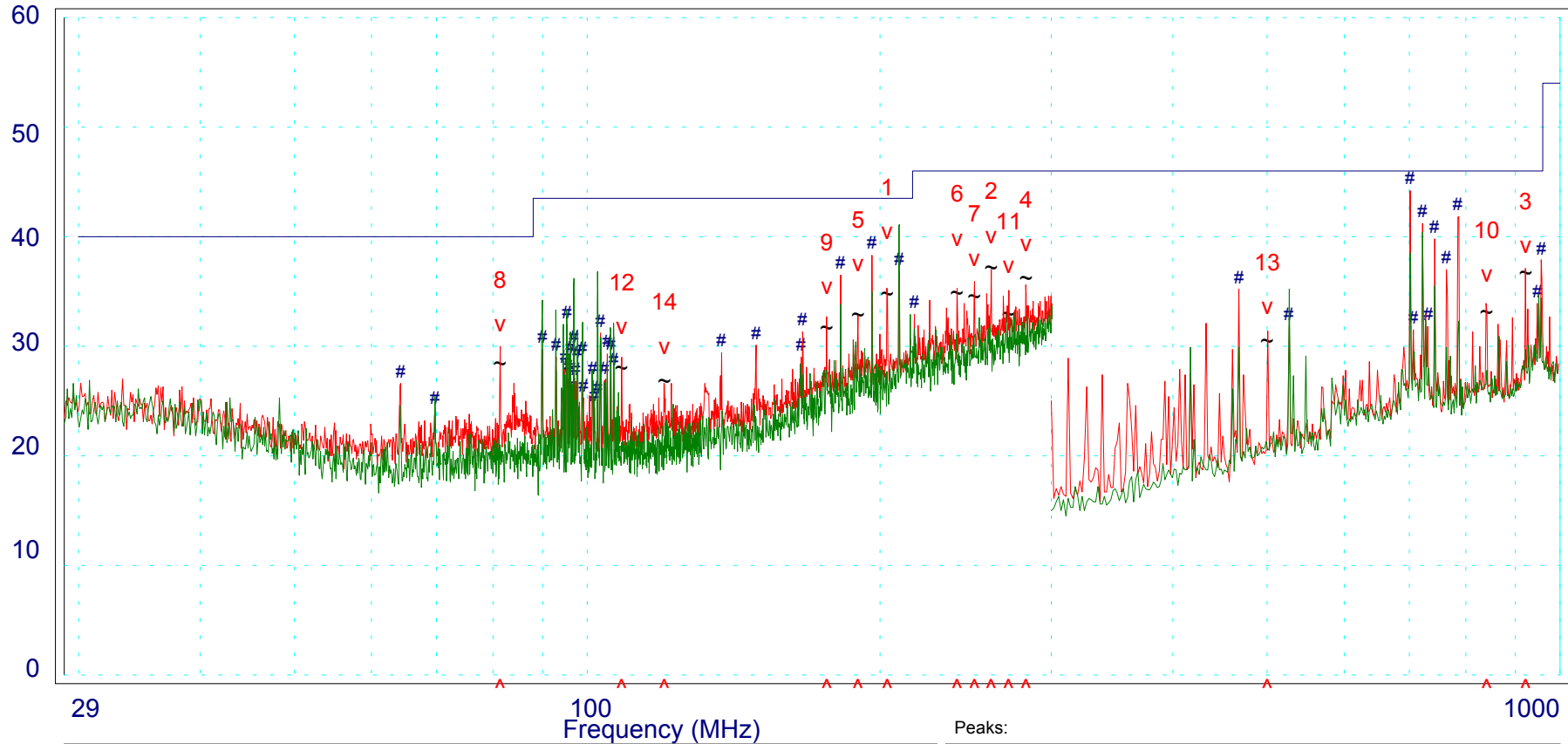
FCC Class B
Radiated Emissions (dBuV/m)
= Ambient

Job No:T60643

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Test Date: 03-07-06

GRAPH No. 8



Magellan Technology
MDR-1109 Desk Top Reader
Model:MDR-1109

Limits: FCC-B3 FCC CLASS B RAD 3M LIMITS
Legend: Horizontal Ambients (green line), Horizontal Emissions (red line)

Ver 5.5 Build 107
Colo Radiated Test Setup
t:A0690207 c1:C0200207 c2:NONE p:A0960906 a:NONE
Site ID: OATS#1,1247 Upper Colo Rd. Colo, NSW
Test Officer:Bruce Holdsworth

Source:
rtsVAmb2 6 7 8 9 10 12
T60643r3 6 7 8 9 10 12

Peaks:

No	Freq (MHz)	Peak (dBuV/m)	Qp Val	FCC-B3 (dBuV/m)	dL1 (dB)
1	203.38	39.7	34.0	43.5	-9.5
2	260.11	39.3	36.4	46.0	-9.6
3	922.06	38.4	35.9	46.0	-10.1
4	282.62	38.6	35.4	46.0	-10.6
5	189.83	36.7	32.0	43.5	-11.5
6	240.02	39.1	34.1	46.0	-11.9
7	250.00	37.3	33.7	46.0	-12.3
8	81.36	31.2	27.6	40.0	-12.4
9	176.28	34.7	30.9	43.5	-12.6
10	840.71	35.8	32.3	46.0	-13.7
11	271.19	36.6	32.1	46.0	-13.9
12	108.48	31.0	27.2	43.5	-16.3
13	499.97	32.9	29.7	46.0	-16.3
14	120.03	29.2	26.0	43.5	-17.5

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