

## **APPENDIX H GRAPHS**

### **CONDUCTED EMI**

<b>Graph 1:</b>	0.15 MHz - 30 MHz	Active Line
<b>Graph 2:</b>	0.15 MHz - 30 MHz	Neutral Line

### **RADIATED EMI**

<b>Graph 3:</b>	100 kHz – 150 kHz	10m Measurement
<b>Graph 4:</b>	30 MHz – 1000 MHz	Vertical Polarisation
<b>Graph 5:</b>	30 MHz – 1000 MHz	Horizontal Polarisation
<b>Graph 6:</b>	1000 MHz – 2000 MHz	Vertical Polarisation
<b>Graph 7:</b>	1000 MHz – 2000 MHz	Horizontal Polarisation

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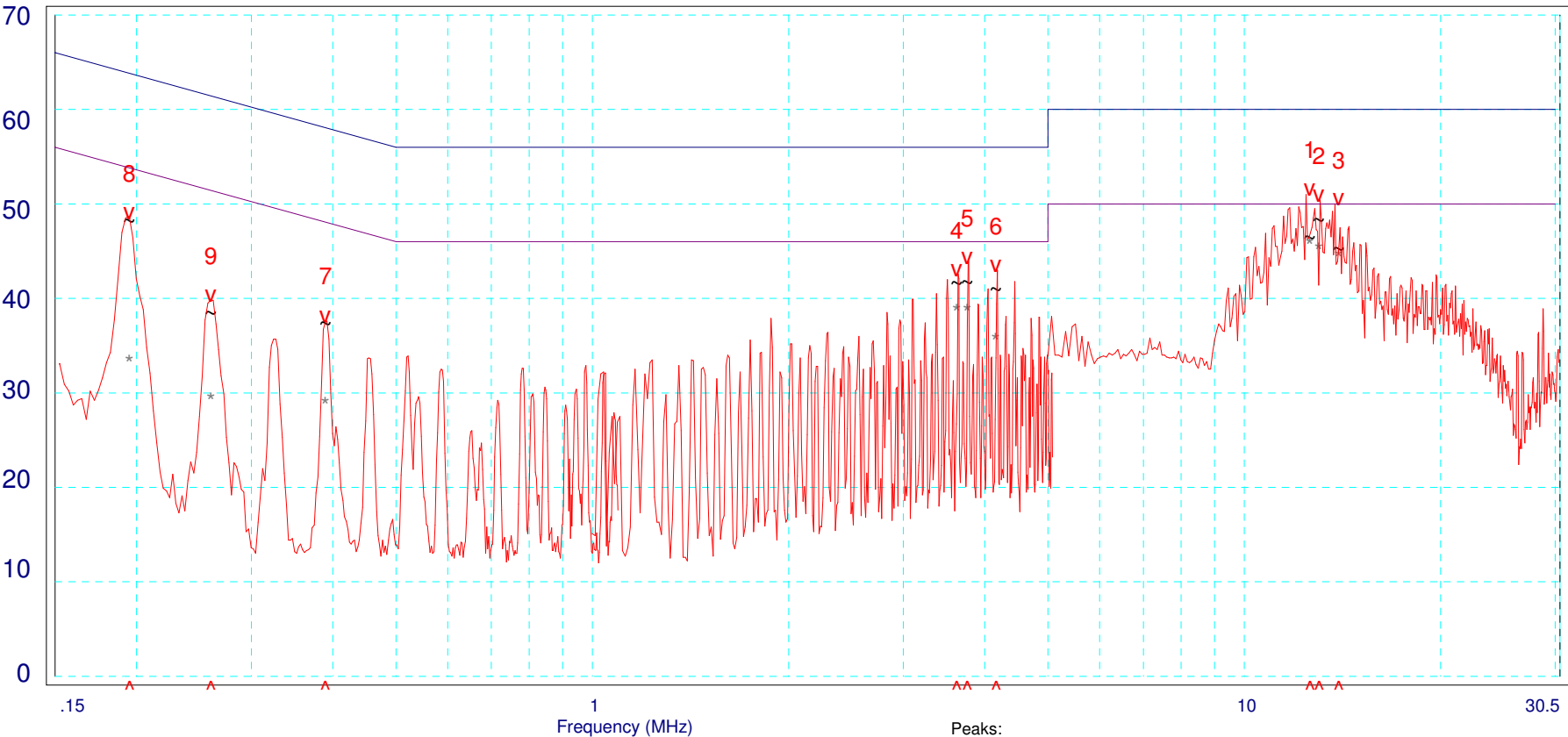
Conducted Emissions (dBUV)

Job No:M120519

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Test Date: 06/07/12

GRAPH No. 1



Aleis Pty Ltd  
RFID Tag Reader

Active Line

Limits:  
C22\_BQP  
C22\_BAV

CISPR 22 CLASS B Conducted Quasi-Peak Limits  
CISPR22 CLASS B Conducted Average Limits

Legend:

Ver 5.5 Build 160  
room 2 cond emissions MAINS  
t:L0220912 c1:C2841212 c2:C3990313 p:NONE a:L0170812  
Site ID: Room#2,176 Harrick Rd, Keilor Park,Vic  
Test Officer:Matthew Grimwood

Source:  
M120519 , 9 , 10

EMC Technologies (Melbourne) 176 Harrick Rd, Keilor Park, 3042, Vic, Australia  
Phone+(613) 9365 1000 Fax+(613) 9331 7455

Peaks:								
No	Freq (MHz)	Peak (dBUV)	QP Val (dBUV)	C22_BQP (dBUV)	dL1 (dB)	Av Val (dBUV)	C22_BAV (dBUV)	dL2 (dB)
1	12.61	51.1	45.8	60.0	-14.2	44.9	50.0	-5.1
2	13.02	50.4	47.6	60.0	-12.4	44.3	50.0	-5.7
3	13.96	50.0	44.6	60.0	-15.4	43.6	50.0	-6.4
4	3.623	42.6	41.0	56.0	-15.0	37.8	46.0	-8.2
5	3.758	43.9	41.0	56.0	-15.0	37.8	46.0	-8.2
6	4.161	43.0	40.4	56.0	-15.6	34.8	46.0	-11.2
7	0.390	37.7	36.7	58.1	-21.4	28.0	48.1	-20.1
8	0.195	48.6	47.6	63.8	-16.2	32.4	53.8	-21.4
9	0.260	39.9	37.8	61.4	-23.6	28.4	51.4	-23.0

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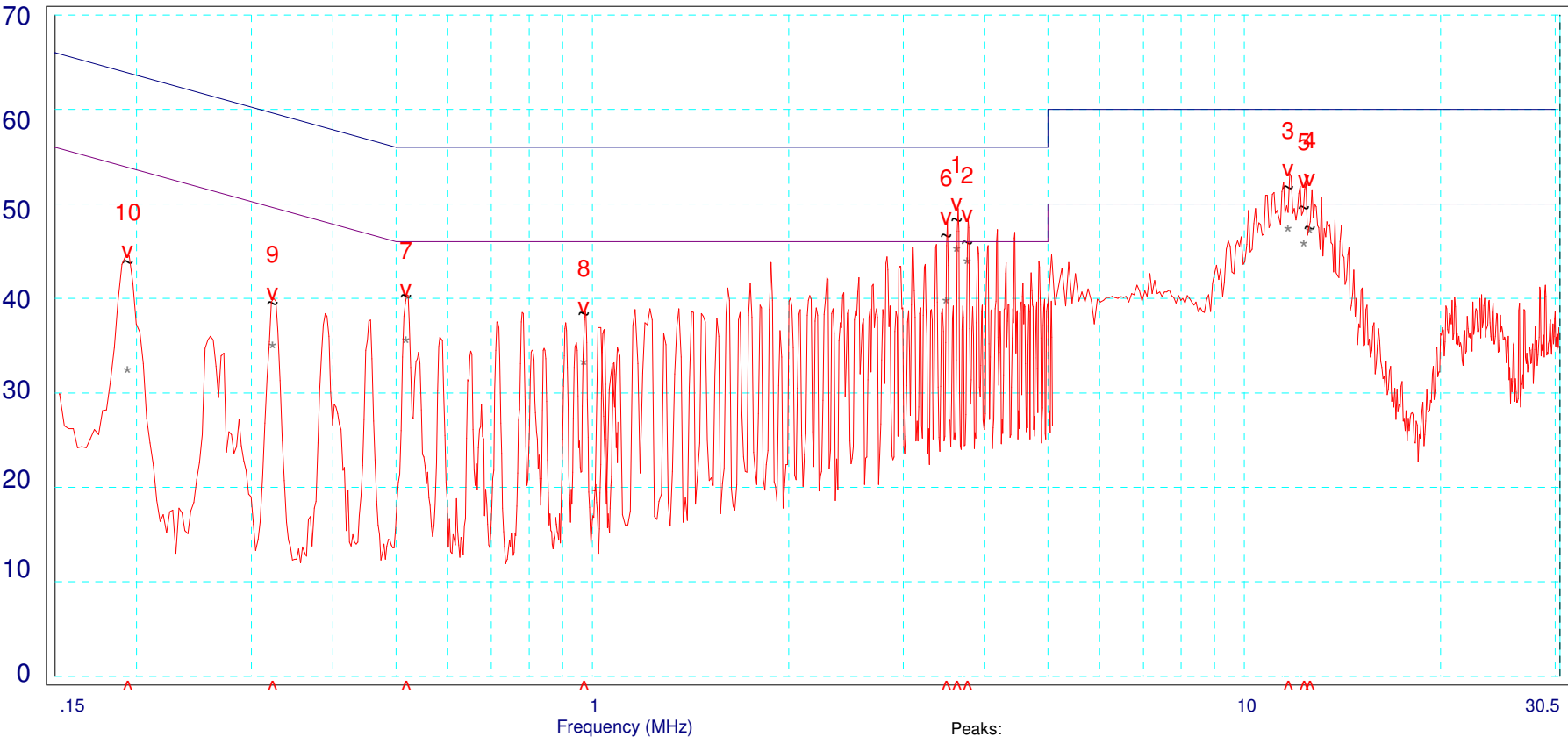
Conducted Emissions (dBuV)

Job No:M120519

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Test Date: 06/07/12

GRAPH No. 2



Aleis Pty Ltd  
RFID Tag Reader

Neutral Line

Limits:  
C22\_BQP CISPR 22 CLASS B Conducted Quasi-Peak Limits  
C22\_BAV CISPR 22 CLASS B Conducted Average Limits

Legend:

Ver 5.5 Build 160  
room 2 cond emissions MAINS  
t:L0220912 c1:C2841212 c2:C3990313 p:NONE a:L0170812  
Site ID: Room#2,176 Harrick Rd, Keilor Park,Vic  
Test Officer:Matthew Grimwood

Source:  
M12051901, 12, 13

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No	Freq (MHz)	Peak (dBuV)	QP Val (dBuV)	C22_BQP (dBuV)	dL1 (dB)	Av Val (dBuV)	C22_BAV (dBuV)	dL2 (dB)
1	3.624	49.5	47.6	56.0	-8.4	44.0	46.0	-2.0
2	3.759	48.4	45.3	56.0	-10.7	42.8	46.0	-3.2
3	11.68	53.2	51.1	60.0	-8.9	46.2	50.0	-3.8
4	12.61	52.1	46.8	60.0	-13.2	46.0	50.0	-4.0
5	12.35	51.9	49.0	60.0	-11.0	44.6	50.0	-5.4
6	3.490	48.1	46.0	56.0	-10.0	38.6	46.0	-7.4
7	0.518	40.4	39.6	56.0	-16.4	34.4	46.0	-11.6
8	0.971	38.6	37.7	56.0	-18.3	32.1	46.0	-13.9
9	0.323	40.0	38.9	59.6	-20.7	33.8	49.6	-15.8
10	0.194	44.5	43.2	63.9	-20.7	31.2	53.9	-22.7

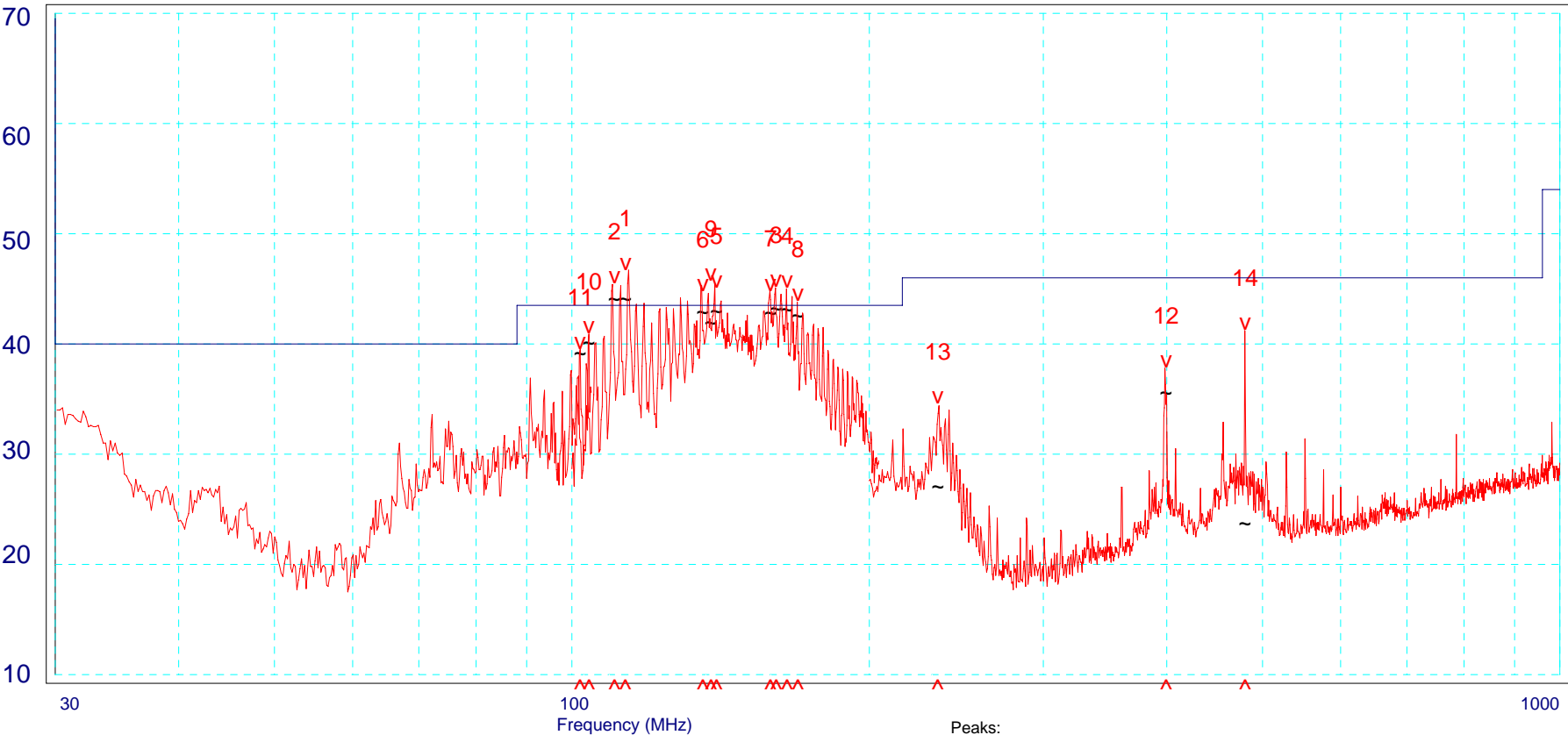
No	Freq (MHz)	Peak (dBuV/m)	QP Val (dBuV/m)	dL1 (dB)
1	0.134	123.4	121.9	.0

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Radiated Emissions (dBUV/m)  
# = Ambient

Job No:m120519      p:\PCF\m120519a\_4.PCF  
Test Date: 26/06/12

GRAPH No. 4



Aleis Pty Ltd  
RFID Tag Reader

Vertical Polarity

Limits:  
FCC15209      FCC PART 15.209 3mtr LMTS

Legend:  
— Vertical Emissions

Ver 5.5 Build 160  
3m setup for Room 12 radiated  
t:A3630213 c1:C4210113 c2:C4370213 p:NONE a:NONE  
Site ID: Room#12(iOATS),176 Harrick Rd, Keilor Park,Vic  
Test Officer:Chieu Huynh

Source:  
M120519R34,130,131,132,133

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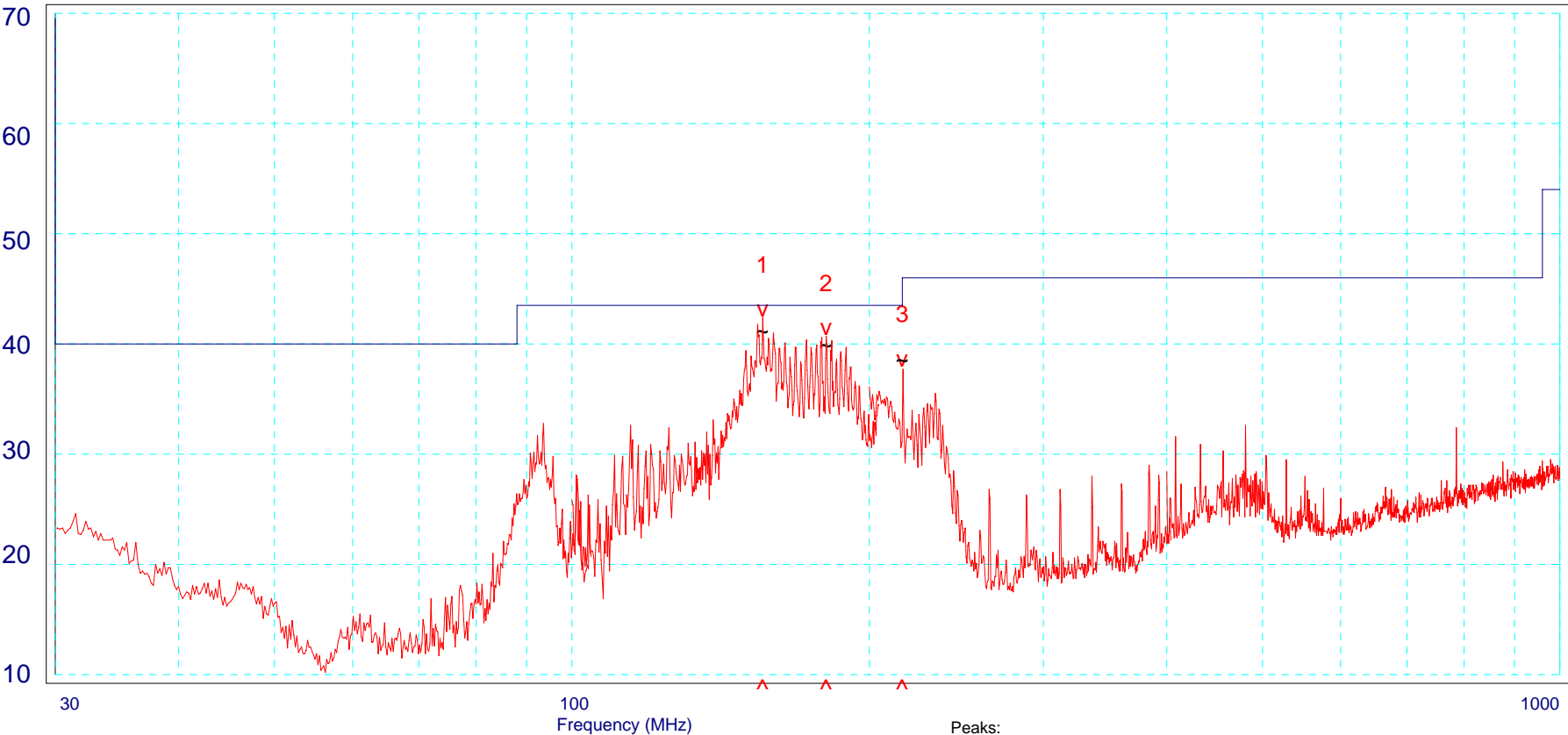
Peaks:					
No	Freq (MHz)	Peak (dBUV/m)	QP Val	FCC15209 (dBUV/m)	dL1 (dB)
1	113.36	46.6	43.5	43.5	.0
2	110.45	45.4	43.4	43.5	-.1
3	161.01	45.1	42.5	43.5	-1.0
4	165.20	45.0	42.4	43.5	-1.1
5	140.16	45.0	42.3	43.5	-1.2
6	135.71	44.7	42.2	43.5	-1.3
7	158.92	44.7	42.2	43.5	-1.3
8	169.39	43.8	41.9	43.5	-1.6
9	138.32	45.6	41.3	43.5	-2.2
10	104.07	40.9	39.4	43.5	-4.1
11	101.97	39.4	38.5	43.5	-5.0
12	399.48	37.8	34.9	46.0	-11.1
13	234.66	34.5	26.4	46.0	-19.6
14	480.27	41.2	23.1	46.0	-22.9

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Radiated Emissions (dBUV/m)  
# = Ambient

Job No:m120519      p:\PCFM120519a\_5.PCF  
Test Date: 27/06/12

GRAPH No. 5



Aleis Pty Ltd  
RFID Tag Reader  
  
Horizontal Polarity

Limits: FCC15209      FCC PART 15.209 3mtr LMTS  
  
Legend: — Horizontal Emissions  
  
Ver 5.5 Build 160  
3m setup for Room 12 radiated  
t:A3630213 c1:C4210113 c2:C4370213 p:NONE a:NONE  
Site ID: Room#12(iOATS),176 Harrick Rd, Keilor Park,Vic  
Test Officer:Matthew Grimwood

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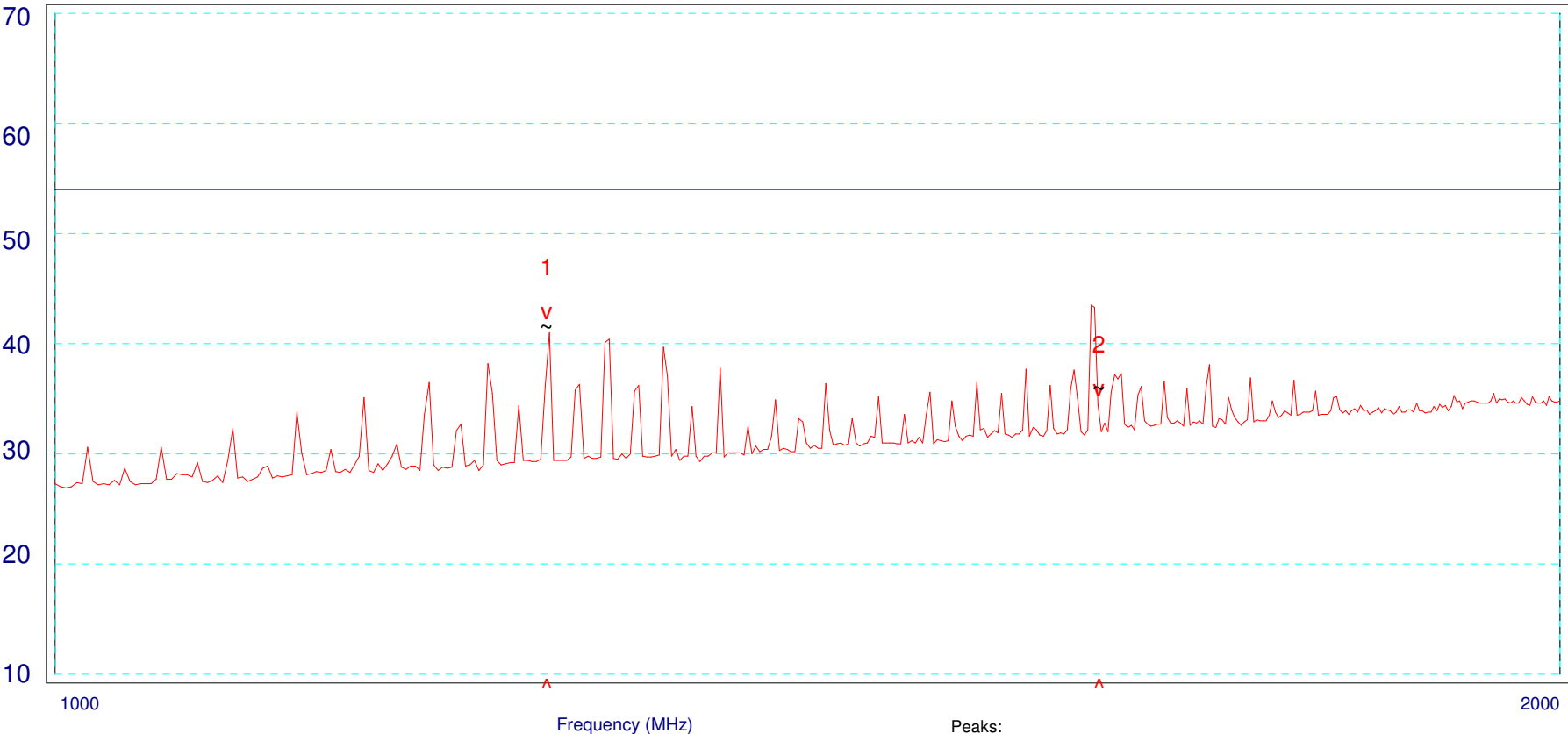
Peaks:					
No	Freq (MHz)	Peak (dBUV/m)	QP Val	FCC15209 (dBUV/m)	dL1 (dB)
1	155.94	42.4	40.5	43.5	-3.0
2	180.86	40.7	39.2	43.5	-4.3
3	216.00	37.9	37.9	46.0	-8.1

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Radiated Emissions (dBuV/m)  
# = Ambient

Job No:m120519      P:\PCFM120519a\_6.PCF  
Test Date: 27/06/12

GRAPH No. 6



Aleis Pty Ltd  
RFID Tag Reader  
  
Vertical Polarity

Limits: FCC15209      FCC PART 15.209 3mtr LMTS  
  
Legend:  
— Vertical Emissions  
  
Ver 5.5 Build 160  
3m setup for Room 12 radiated  
t:A3630213 c1:C4210113 c2:C4370213 p:NONE a:NONE  
Site ID: Room#12(iOATS),176 Harrick Rd, Keilor Park,Vic  
Test Officer:Matthew Grimwood  
  
Source:  
M120519R15

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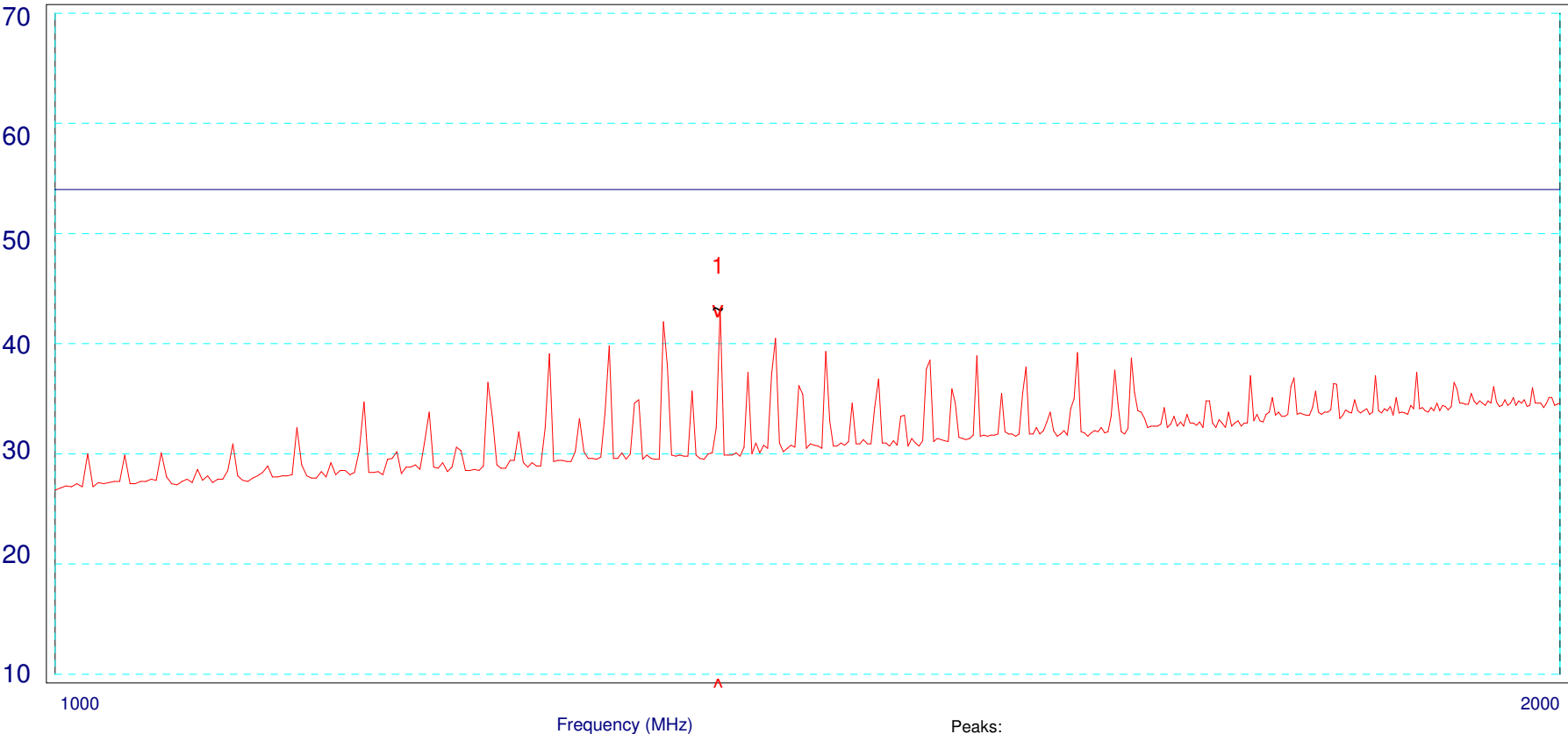
Peaks:					
No	Freq (MHz)	Peak (dBuV/m)	Av Val	FCC15209 (dBuV/m)	dL1 (dB)
1	1254.02	42.1	40.7	54.0	-13.3
2	1617.36	35.1	35.1	54.0	-18.9

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Radiated Emissions (dBuV/m)  
# = Ambient

Job No:m120519      P:\PCF\m120519a\_7.PCF  
Test Date: 27/06/12

GRAPH No. 7



Aleis Pty Ltd  
RFID Tag Reader  
  
Horizontal Polarity

Limits: FCC15209      FCC PART 15.209 3mtr LMTS  
  
Legend:  
— Horizontal Emissions  
  
Ver 5.5 Build 160  
3m setup for Room 12 radiated  
t:A3630213 c1:C4210113 c2:C4370213 p:NONE a:NONE  
Site ID: Room#12(iOATS),176 Harrick Rd, Keilor Park,Vic  
Test Officer:Matthew Grimwood

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Peaks:					
No	Freq (MHz)	Peak (dBuV/m)	Av Val	FCC15209 (dBuV/m)	dL1 (dB)
1	1357.04	42.3	42.3	54.0	-11.7