

APPENDIX H OF TEST REPORT T130919_F

GRAPHS OF EMI MEASUREMENT

FCC ID: 2ACNLGPSP-SPI-001
Manufacturer: GPSports Systems Pty Ltd
Test Sample: HPU (High Performance Unit)
Model Number: SPI HPU
Serial Number: SPI HPU 1206

Date: 18th August 2014

APPENDIX H**GRAPHS OF EMI MEASUREMENT****RADIATED EMI**

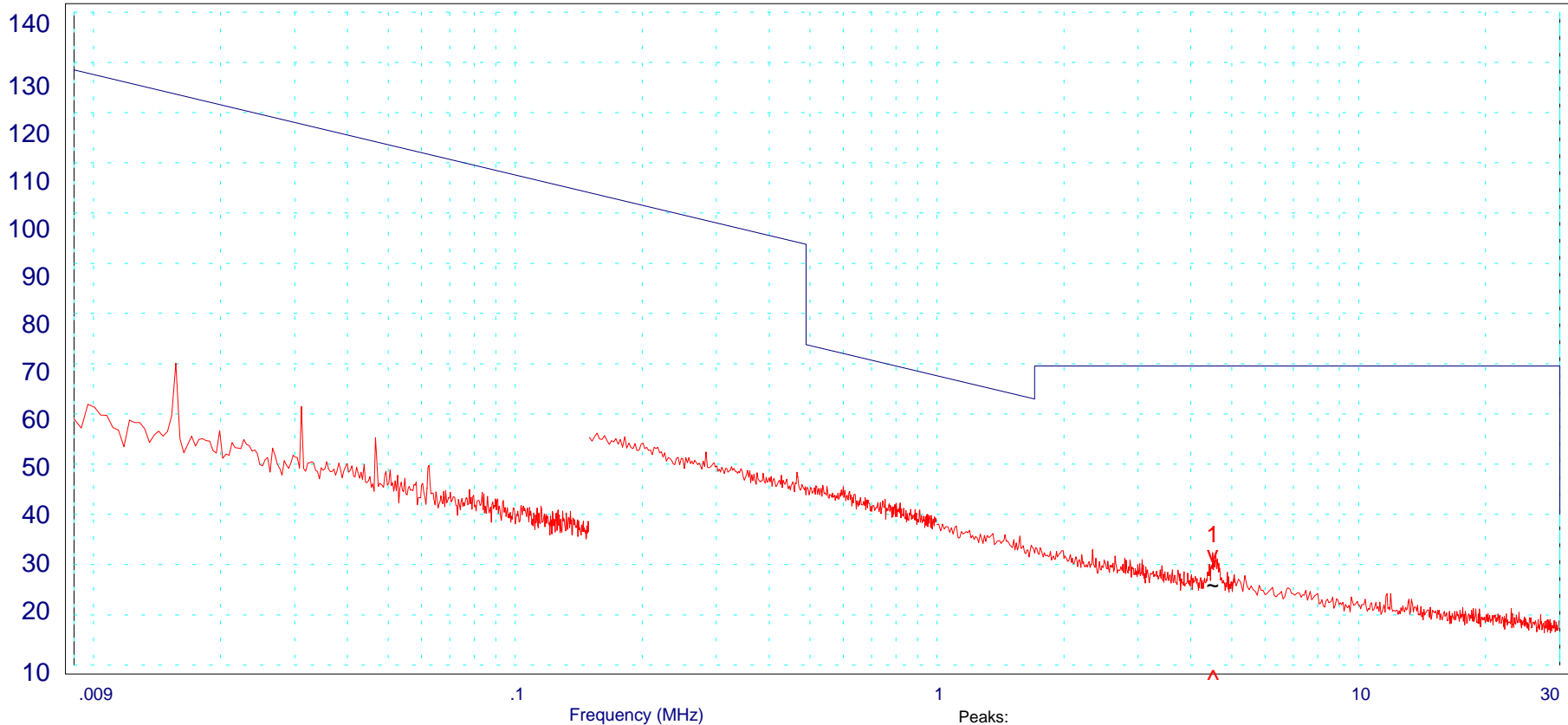
Graph 1:	Loop Antenna, 0 Degrees	9 kHz to 30 MHz
Graph 2:	Loop Antenna, 90 Degrees	9 kHz to 30 MHz
Graph 3:	Vertical Antenna Polarisation	29 to 1000 MHz
Graph 4:	Horizontal Antenna Polarisation	29 to 1000 MHz
Graph 5:	Low Channel 2405 MHz Peak	2400 to 2410 MHz
Graph 6:	Mid Channel 2440 MHz Peak	2435 to 2445 MHz
Graph 7:	High Channel 2480 MHz Peak	2477 to 2483 MHz
Graph 8:	Low Band edge Average	2390 to 2410 MHz
Graph 9:	High Band edge Average	2475 to 2495 MHz
Graph 10:	Vertical Polarisation Average	1000 to 3950 MHz
Graph 11:	Horizontal Polarisation Average	1000 to 3950 MHz
Graph 12:	Vertical Polarisation Average	1000 to 3950 MHz
Graph 13:	Horizontal Polarisation Average	1000 to 3950 MHz
Graph 14:	Vertical Polarisation Average	3950 to 12400 MHz
Graph 15:	Horizontal Polarisation Average	3950 to 12400 MHz
Graph 16:	Horizontal Polarisation, Peak	2600 to 3950 MHz
Graph 17:	Vertical Polarisation, Peak	4500 to 5850 MHz
Graph 18:	Horizontal Polarisation, Peak	4500 to 5850 MHz

EMC Technologies Pty. Ltd. - Global Product Certification

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

Job No:T130919 p:\PCF\T130919T_1.PCF
Test Date: 18-10-2013

GRAPH No. 1



GP Sports Systems Pty Ltd
HPU (High Performance Unit)
Model: SPI HPU Serial Number: SPI HPU 1206
Tested with SPI Pro X (Spx01955) and SPI HPU 1025 Transmitter

Limits: FCC-B3 Legend: FCC CLASS B RAD 3M LIMITS
— 0deg Emissions

Ver 5.5 Build 160
Radiated setup for Rm 3 with Loop Antenna
t:A0080414E c1:C0280714 c2:NONE p:NONE a:NONE
Site ID: Syd Room#3,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919T1 , 2 , 10 , 4

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Phone +(612) 9624 2777 Fax+(612) 9838 4050

No	Freq (MHz)	Peak (dBuV/m)	QP Val	FCC-B3 (dBuV/m)	dL1 (dB)
1	4.509	32.6	26.7	69.5	-42.8

= Ambient

p:\PCF\T130919T_2.PCF

GRAPH No. 2



No	Freq (MHz)	Peak (dBuV/m)	QP Val	FCC-B3 (dBuV/m)	dL1 (dB)
1	4.475	36.9	30.9	69.5	-38.6

Source:
T130919T5 , 6 , 9 , 8

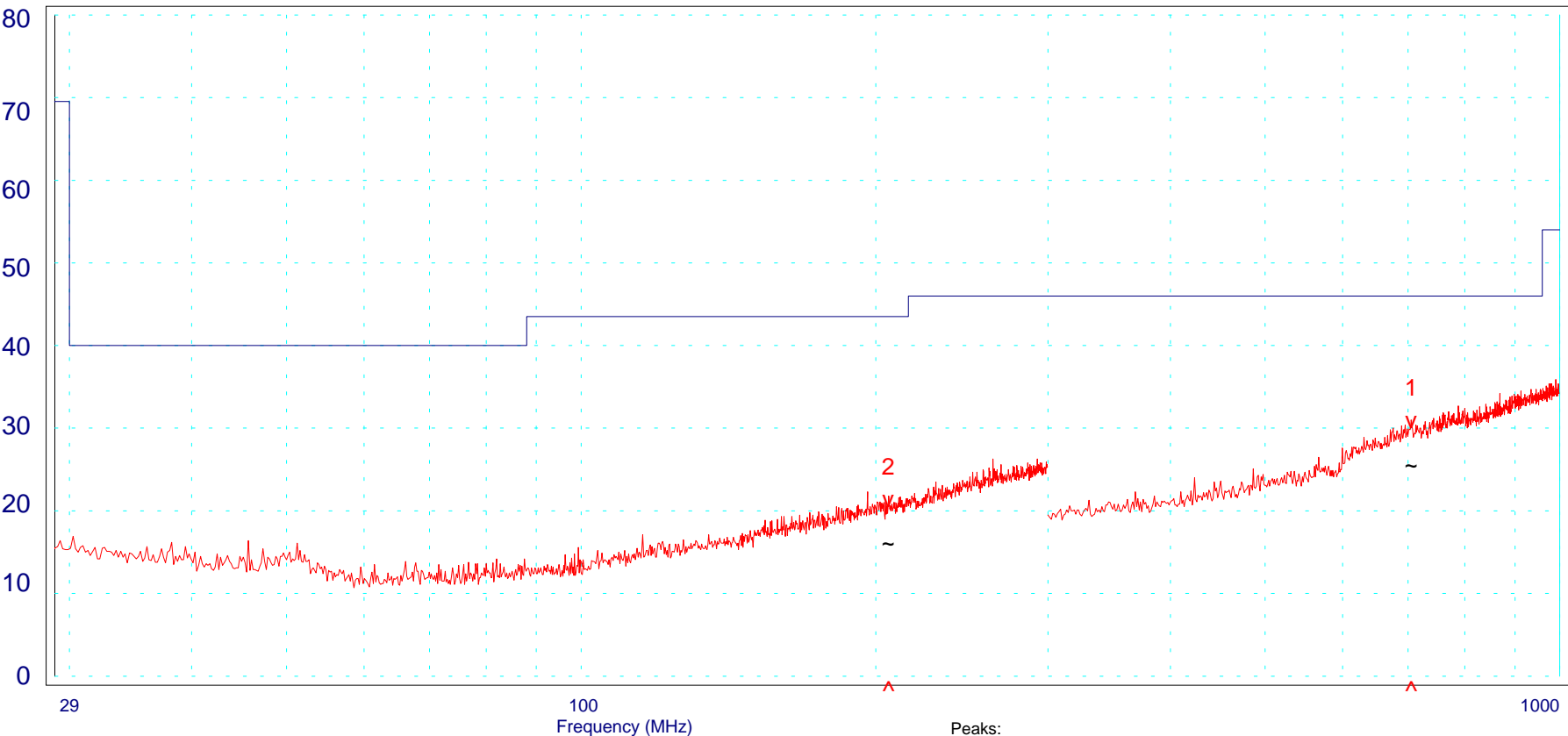
EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
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FCC Class B
Radiated Emissions (dBuV/m)
= Ambient

Job No:T130919 p:\PCF\T130919T_3.PCF
Test Date: 18-10-2013

GRAPH No. 3



GP Sports Systems Pty Ltd
HPU (High Performance Unit)
Model: SPI HPU Serial Number: SPI HPU 1206
Tested with SPI Pro X (Spx01955) and SPI HPU 1025 Transmitter

Peaks:

No	Freq (MHz)	Peak (dBuV/m)	QP Val	FCC-B3 (dBuV/m)	dL1 (dB)
1	705.09	30.5	25.2	46.0	-20.8
2	206.08	21.0	15.8	43.5	-27.7

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

Legend: Vertical Emissions

Ver 5.5 Build 160
Room 3 with HP Bicon
t:A2230214 c1:C0280714 c2:NONE p:NONE a:NONE
Site ID: Syd Room#3,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source: T130919T11,12,13,17,18

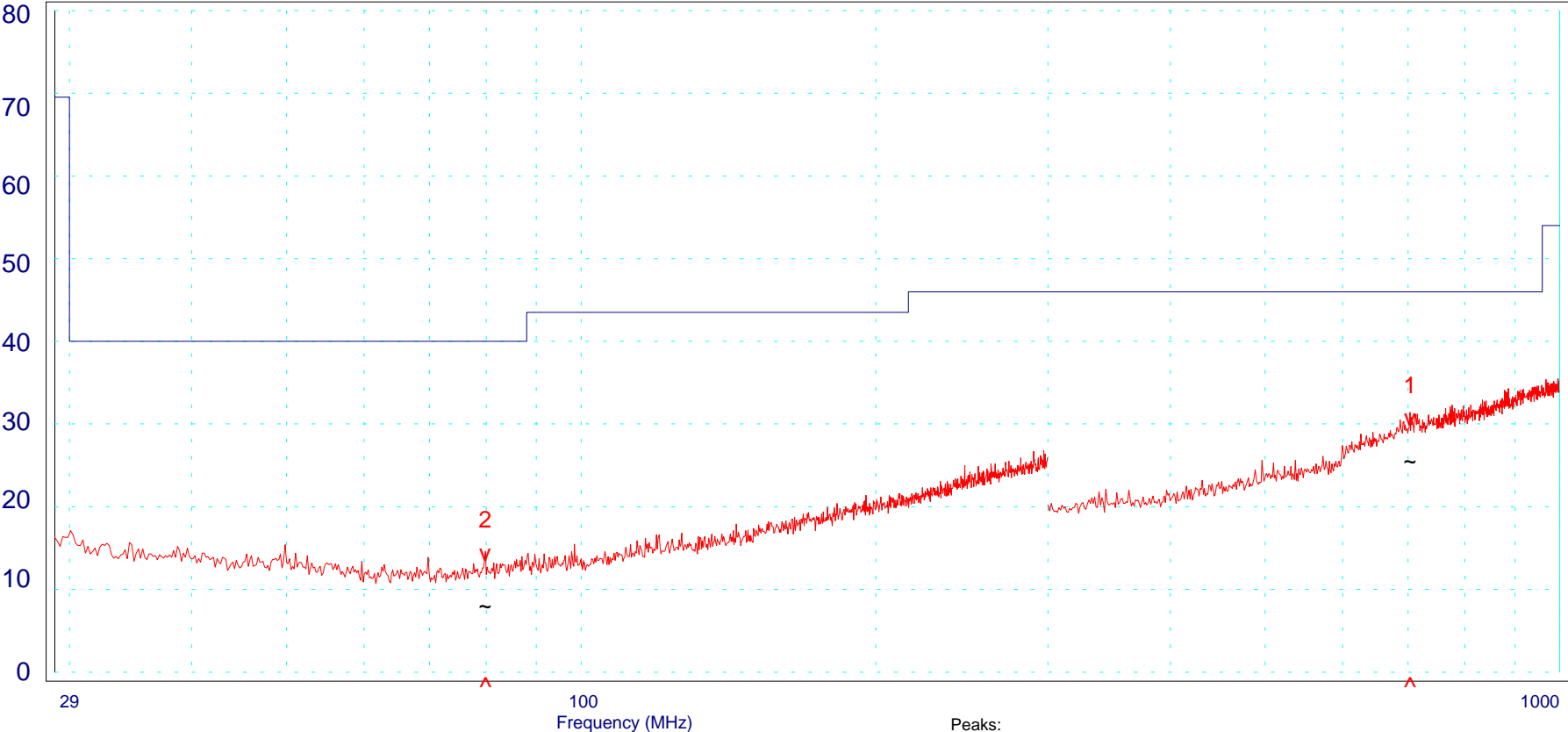
EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
Phone +(612) 9624 2777 Fax+(612) 9838 4050

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

Job No:T130919 p:\PCF\T130919T_4.PCF
Test Date: 18-10-2013

GRAPH No. 4



GP Sports Systems Pty Ltd
HPU (High Performance Unit)
Model: SPI HPU Serial Number: SPI HPU 1206
Tested with SPI Pro X (Spx01955) and SPI HPU 1025 Transmitter

Limits: FCC-B3 FCC CLASS B RAD 3M LIMITS Legend: — Horizontal Emissions

Ver 5.5 Build 160
Room 3 with HP Bicon
t:A2230214 c1:C0280714 c2:NONE p:NONE a:NONE
Site ID: Syd Room#3,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source: T130919T14,15,16,19,20

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

Peaks:					
No	Freq (MHz)	Peak (dBuV/m)	QP Val	FCC-B3 (dBuV/m)	dL1 (dB)
1	703.29	30.3	25.3	46.0	-20.7
2	79.83	14.0	7.7	40.0	-32.3

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FCC Class B

Radiated Emissions (dBuV/m)

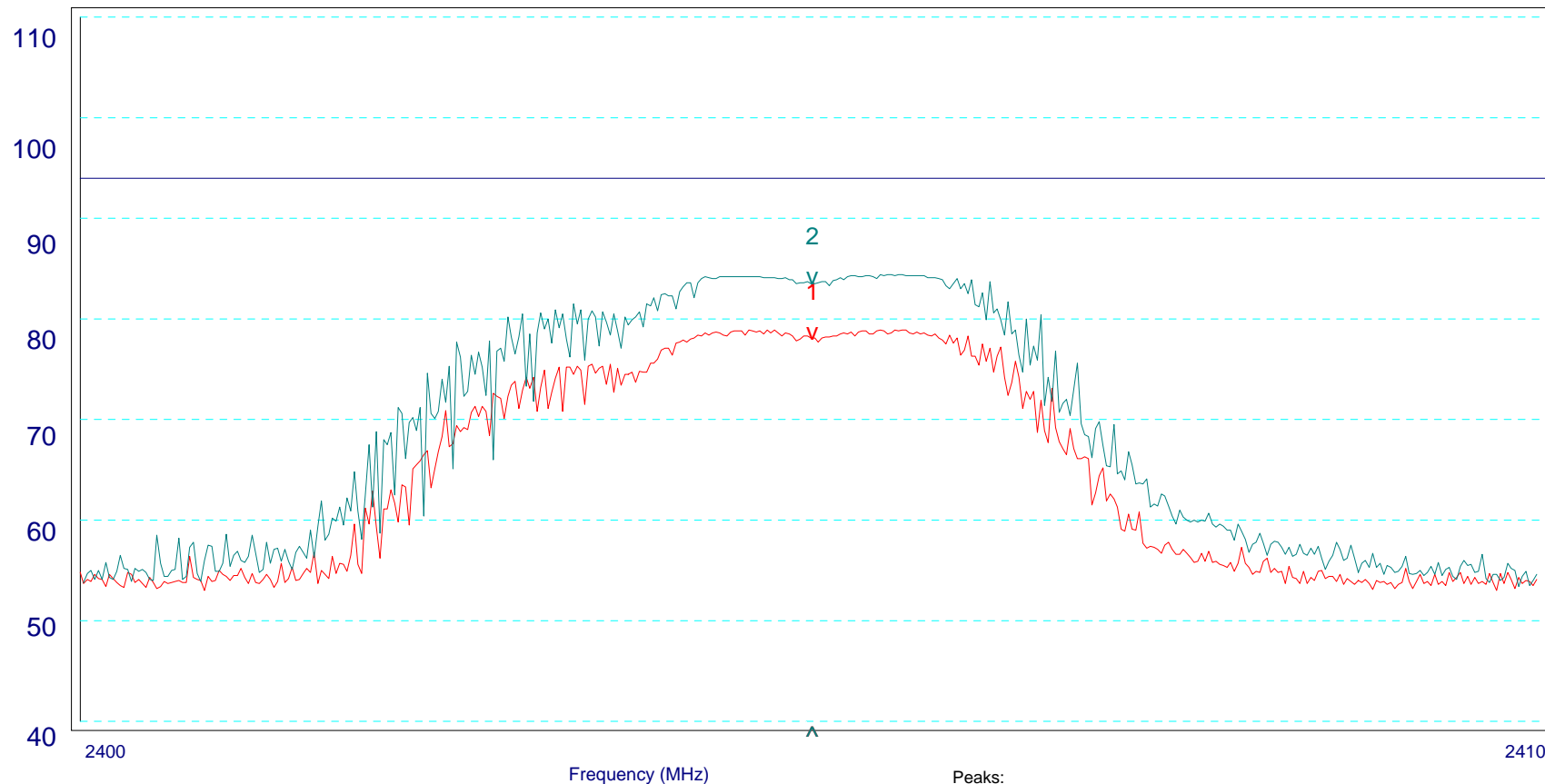
= Ambient

Job No:T130919

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Test Date: 03-10-2013

GRAPH No. 5



GP Sports Systems Pty Ltd
HPU (High Performance Unit) Model: SPI HPU
Low Channel 2405MHz Peak
Serial Number: SPI HPU 1206

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
— Vertical Emissions
— Horizontal Emissions

Ver 5.5 Build 160
Room3 Out side Radiated Test Setup 3m 1 - 6GHz
t:A3240115 c1:NONE c2:C0280714 p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambialah

Source:
T130919G9
T130919Q0

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FCC Class B

Radiated Emissions (dBuV/m)

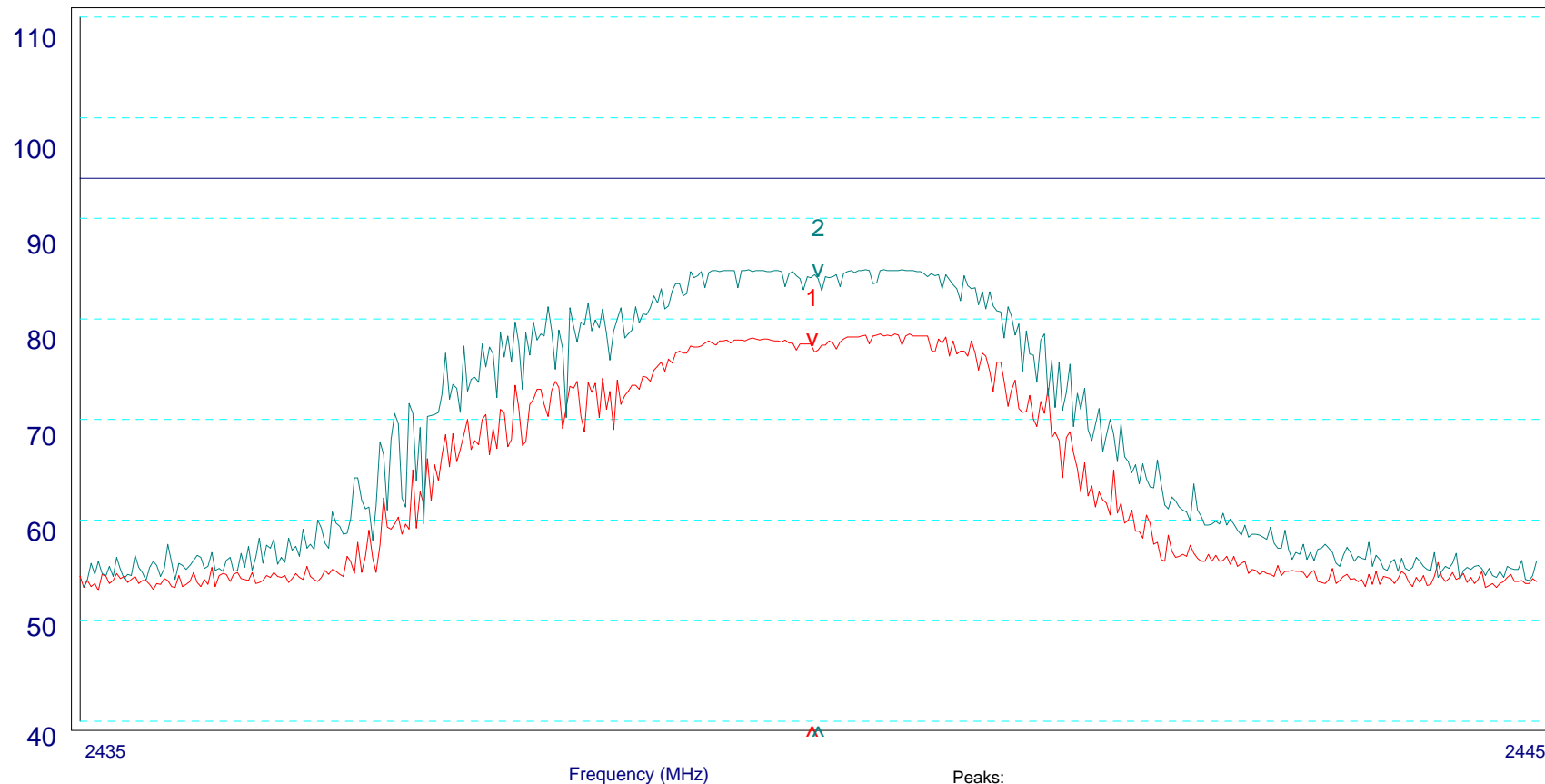
= Ambient

Job No:T130919

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Test Date: 03-10-2013

GRAPH No. 6



GP Sports Systems Pty Ltd
HPU (High Performance Unit) Model: SPI HPU
Mid Channel 2440MHz Peak
Serial Number: SPI HPU 1206

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
— Vertical Emissions
— Horizontal Emissions

Ver 5.5 Build 160
Room3 Out side Radiated Test Setup 3m 1 - 6GHz
t:A3240115 c1:NONE c2:C0280714 p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambialiah

Source:
T130919d3
T130919d4

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FCC Class B

Radiated Emissions (dBuV/m)

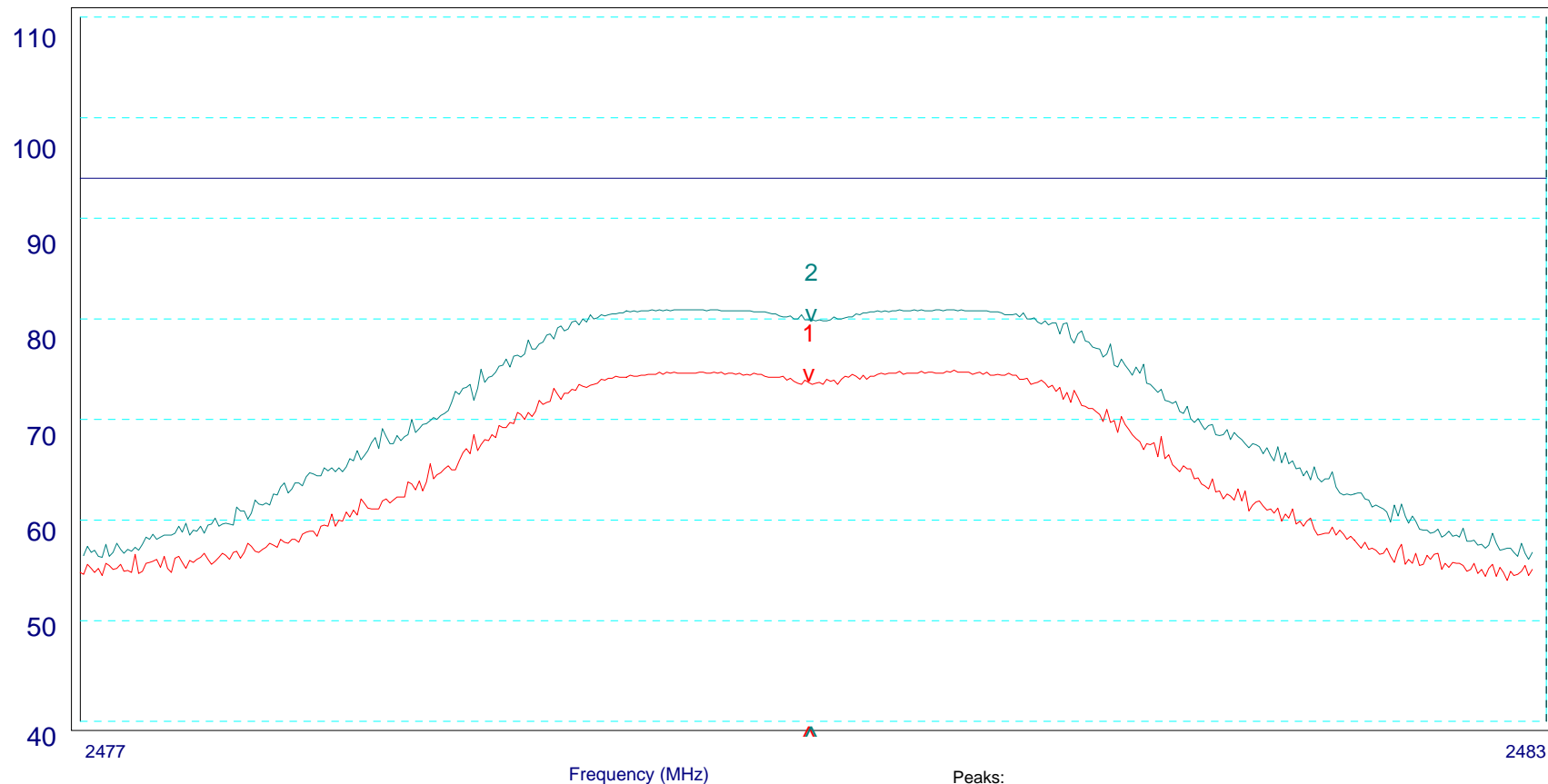
= Ambient

Job No:T130919

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Test Date: 03-10-2013

GRAPH No. 7



GP Sports Systems Pty Ltd
HPU (High Performance Unit) Model: SPI HPU
High Channel 2480MHz Peak
Serial Number: SPI HPU 1206

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
— Vertical Emissions
— Horizontal Emissions

Ver 5.5 Build 160
Room3 Out side Radiated Test Setup 3m 1 - 6GHz
t:A3240115 c1:NONE c2:C0280714 p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambialah

Source:

T130919

T130919

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

EMC Technologies Pty. Ltd. - Global Product Certification

FCC Class B

Radiated Emissions (dBuV/m)

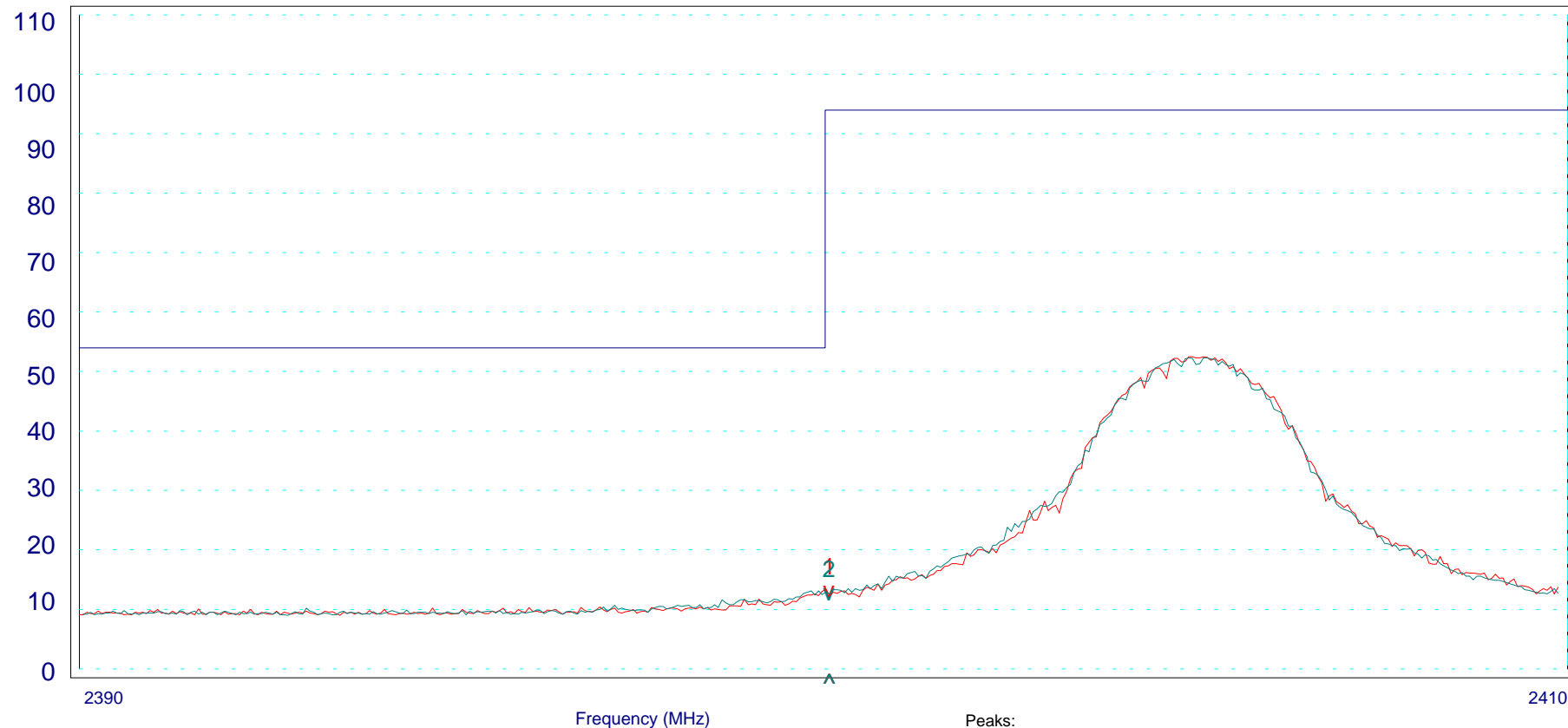
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Job No:T130919

p:\PCFT\T130919G_7.PCF

Test Date: 03-10-2013

GRAPH No. 8



GP Sports Systems Pty Ltd
HPU (High Performance Unit) Model: SPI HPU
Low Channel 2405MHz Avg
Serial Number: SPI HPU 1206

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
— Vertical Emissions
— Horizontal Emissions

Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 1.1 to 3.95 GHz
t:A2401115 c1:C0240314A c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919G9
T130919G0

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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FCC Class B

Radiated Emissions (dBuV/m)

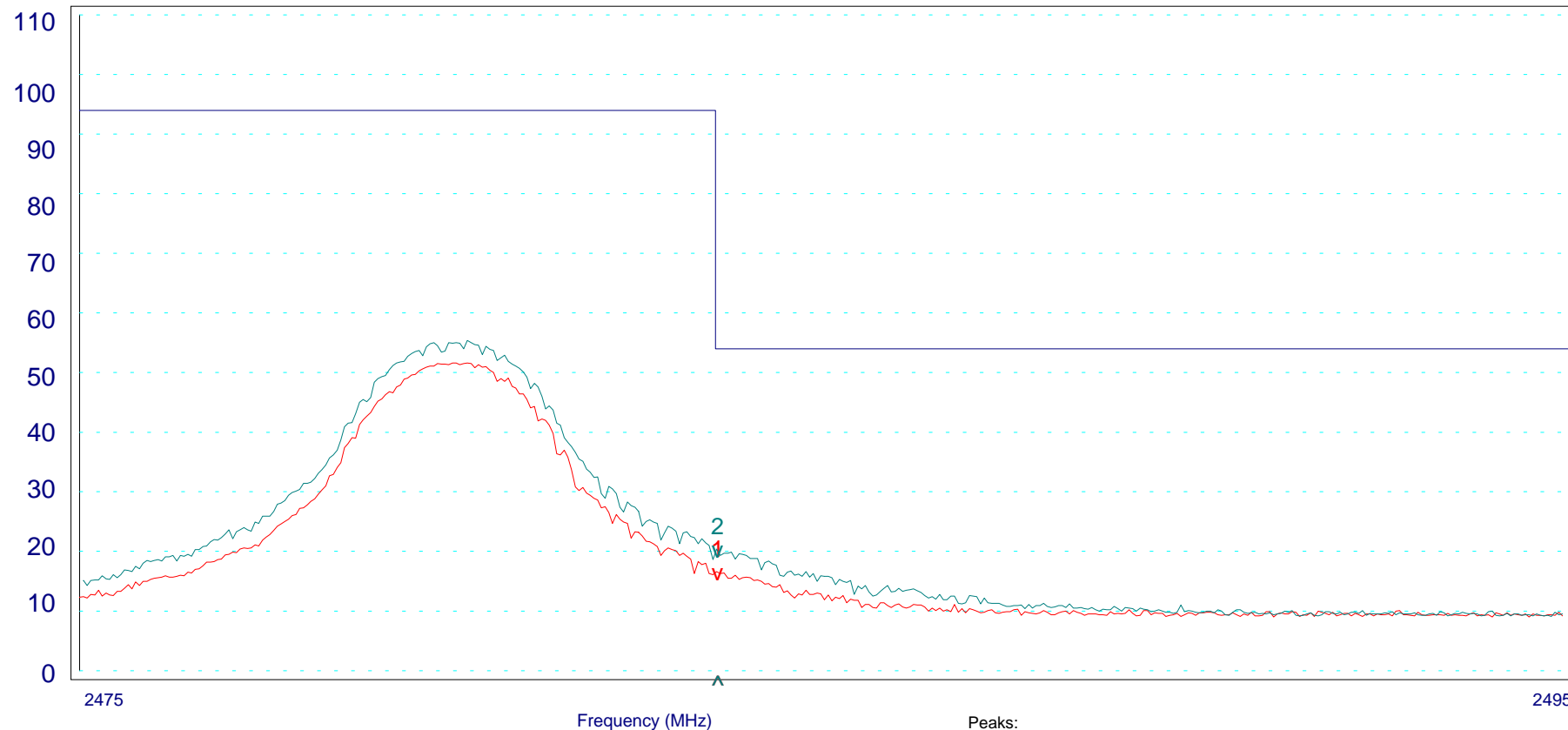
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Job No:T130919

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Test Date: 03-10-2013

GRAPH No. 9



GP Sports Systems Pty Ltd
HPU (High Performance Unit) Model: SPI HPU
High Channel 2480MHz Avg
Serial Number: SPI HPU 1206

Peaks:

No	Freq (MHz)	Peak (dBuV/m)	Fcc15249b (dBuV/m)	dL1 (dB)
1	2483.53	16.6	54.0	-37.4
2	2483.53	20.4	54.0	-33.6

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
— Vertical Emissions
— Horizontal Emissions

Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 1.1 to 3.95 GHz
t:A2401115 c1:C0240314A c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919G8
T130919G7

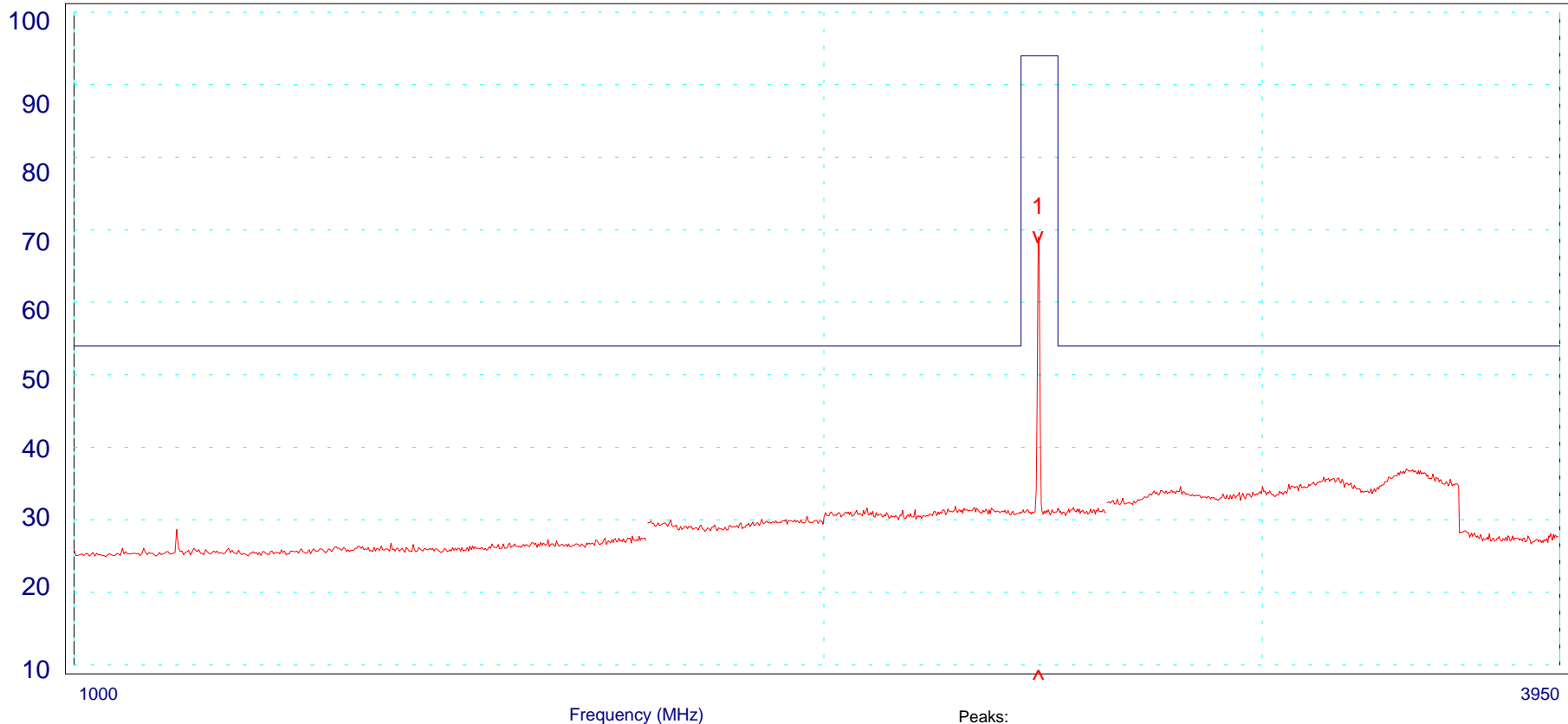
EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
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FCC Class B
Radiated Emissions (dBuV/m)
= Ambient

Job No:T130919 p:\PCF\T130919G_9.PCF
Test Date: 03-10-2013

GRAPH No. 10



GP Sports Systems Pty Ltd
Transmitter
Mid Channel 2440Mhz Average
Serial No: None

Limits: Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits
Legend: Vertical Emissions
Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 1.1 to 3.95 GHz
t:A2401115 c1:C0240314A c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiaiah

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Phone +(612) 9624 2777 Fax+(612) 9838 4050

Peaks:				
No	Freq (MHz)	Peak (dBuV/m)	Fcc15249b (dBuV/m)	dL1 (dB)
1	2438.32	69.0	94.0	-25.0

EMC Technologies Pty. Ltd. - Global Product Certification

FCC Class B

Radiated Emissions (dBuV/m)

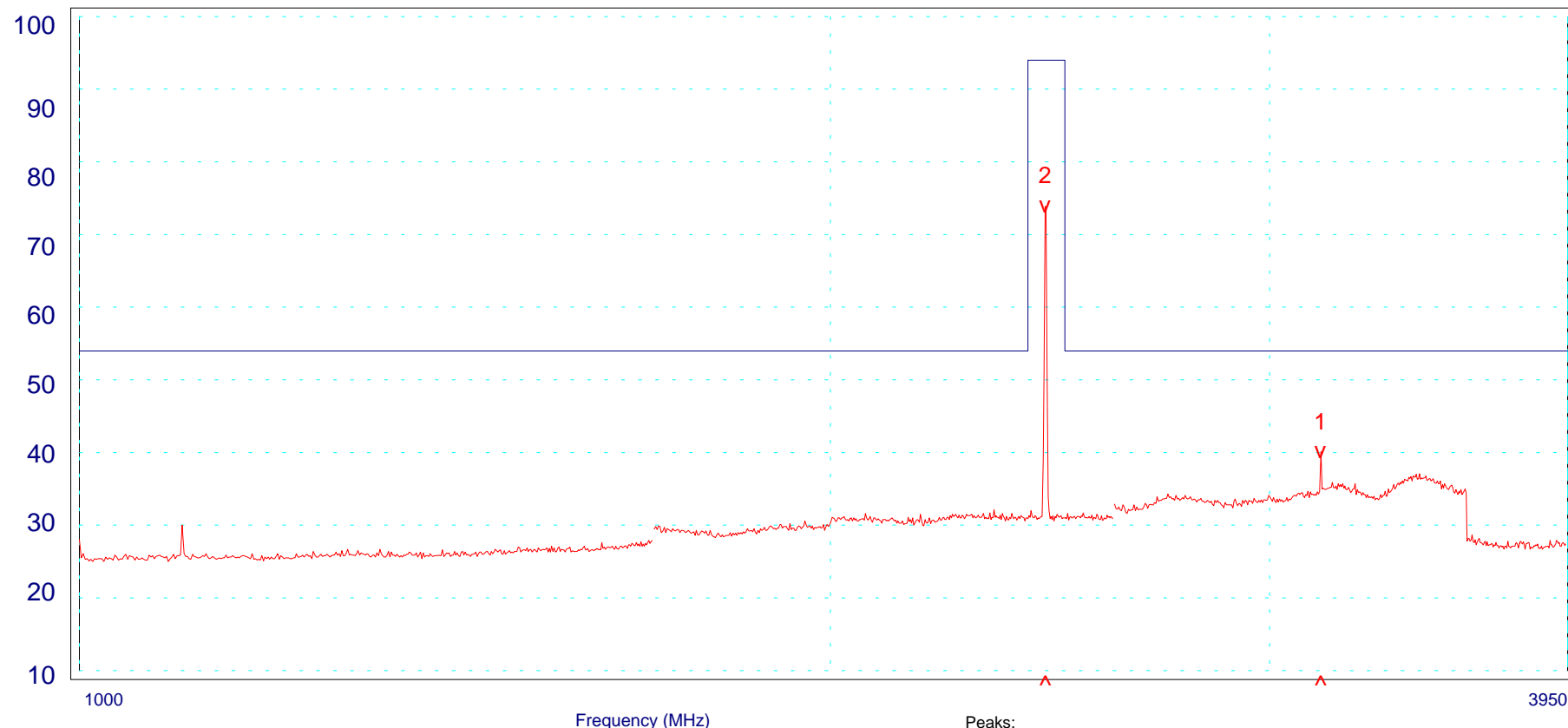
= Ambient

Job No:T130919

p:\PCFT\T130919G_10.PCF

Test Date: 03-10-2013

GRAPH No. 11



GP Sports Systems Pty Ltd
Transmitter
Mid Channel 2440Mhz Average
Serial No: None

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
Horizontal Emissions

Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 1.1 to 3.95 GHz
t:A2401115 c1:C0240314A c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919G2,68,66

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

EMC Technologies Pty. Ltd. - Global Product Certification

FCC Class B

Radiated Emissions (dBuV/m)

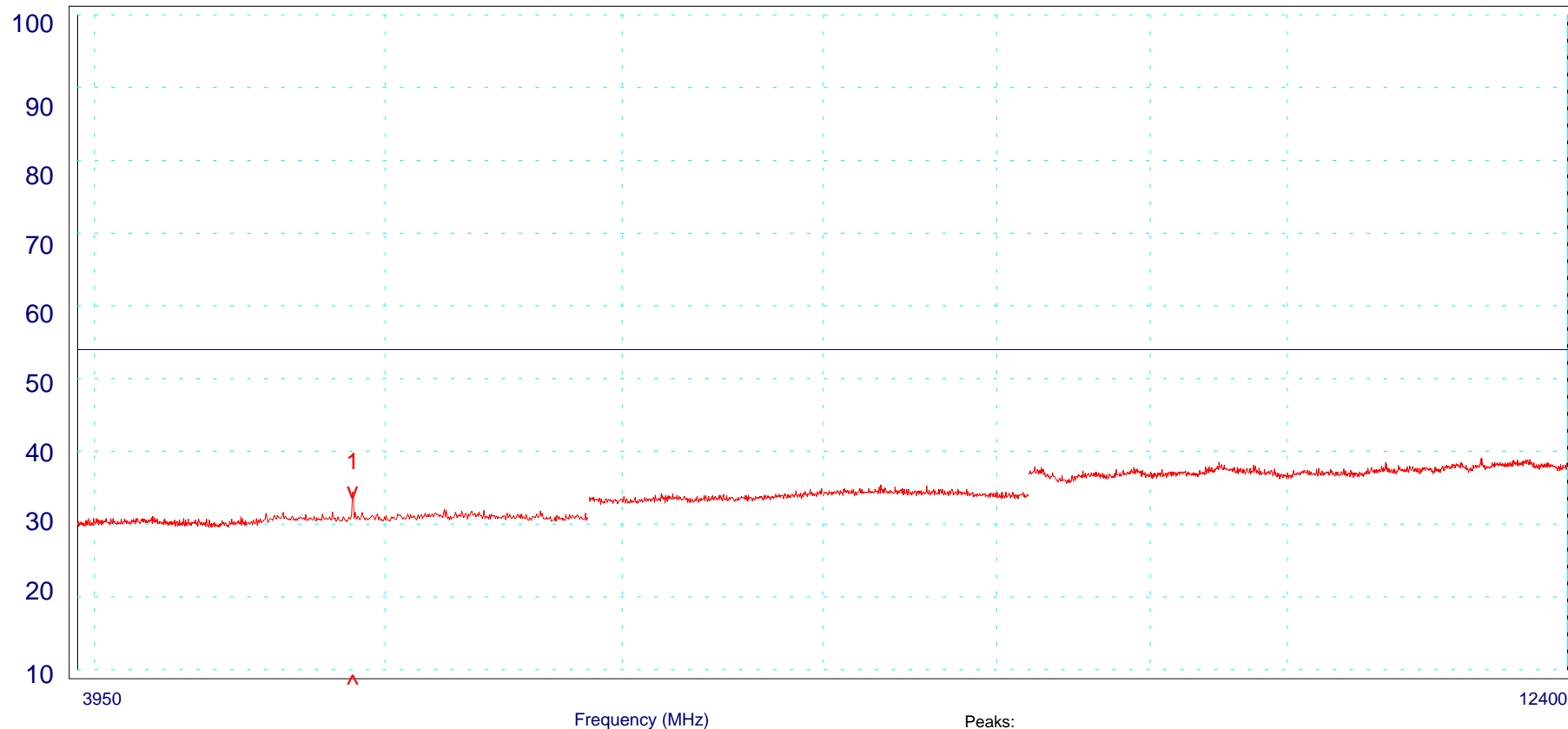
= Ambient

Job No:T130919

p:\PCFT\T130919G_11.PCF

Test Date: 03-10-2013

GRAPH No. 12



GP Sports Systems Pty Ltd
Transmitter
Mid Channel 2440Mhz Average
Serial No: None

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
— Vertical Emissions

Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 3.95 to 12.4 GHz
t:A2601115 c1:C0240314A c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919G9,72,73,74,77,78,79

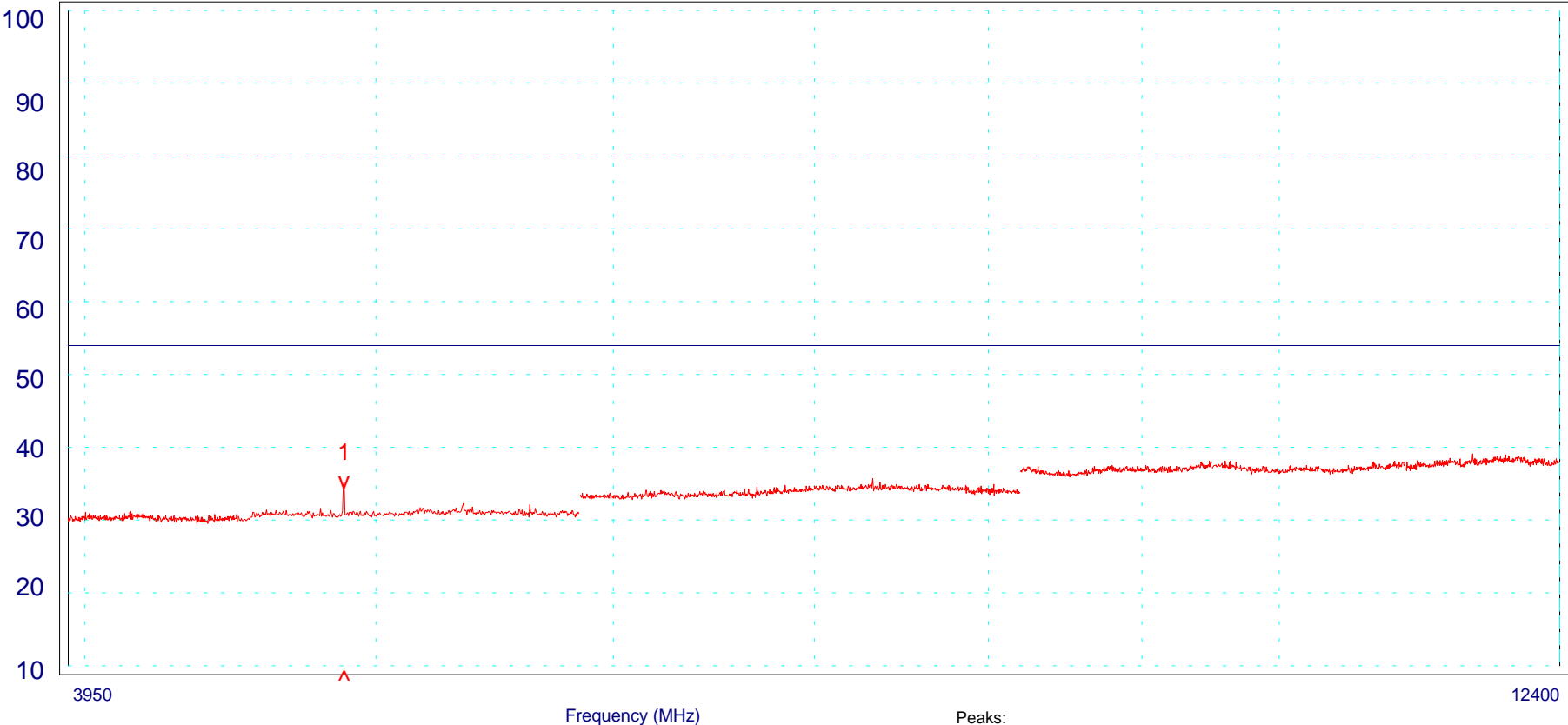
EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia
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FCC Class B
Radiated Emissions (dBuV/m)
= Ambient

Job No:T130919 p:\PCF\T130919G_12.PCF
Test Date: 03-10-2013

GRAPH No. 13



GP Sports Systems Pty Ltd
Transmitter
Mid Channel 2440Mhz Average
Serial No: None

Limits: Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits Legend: — Horizontal Emissions

Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 3.95 to 12.4 GHz
t:A2601115 c1:C0240314A c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919G0,71,75,76,80,81,82

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EMC Technologies Pty. Ltd. - Global Product Certification

FCC Class B

Radiated Emissions (dBuV/m)

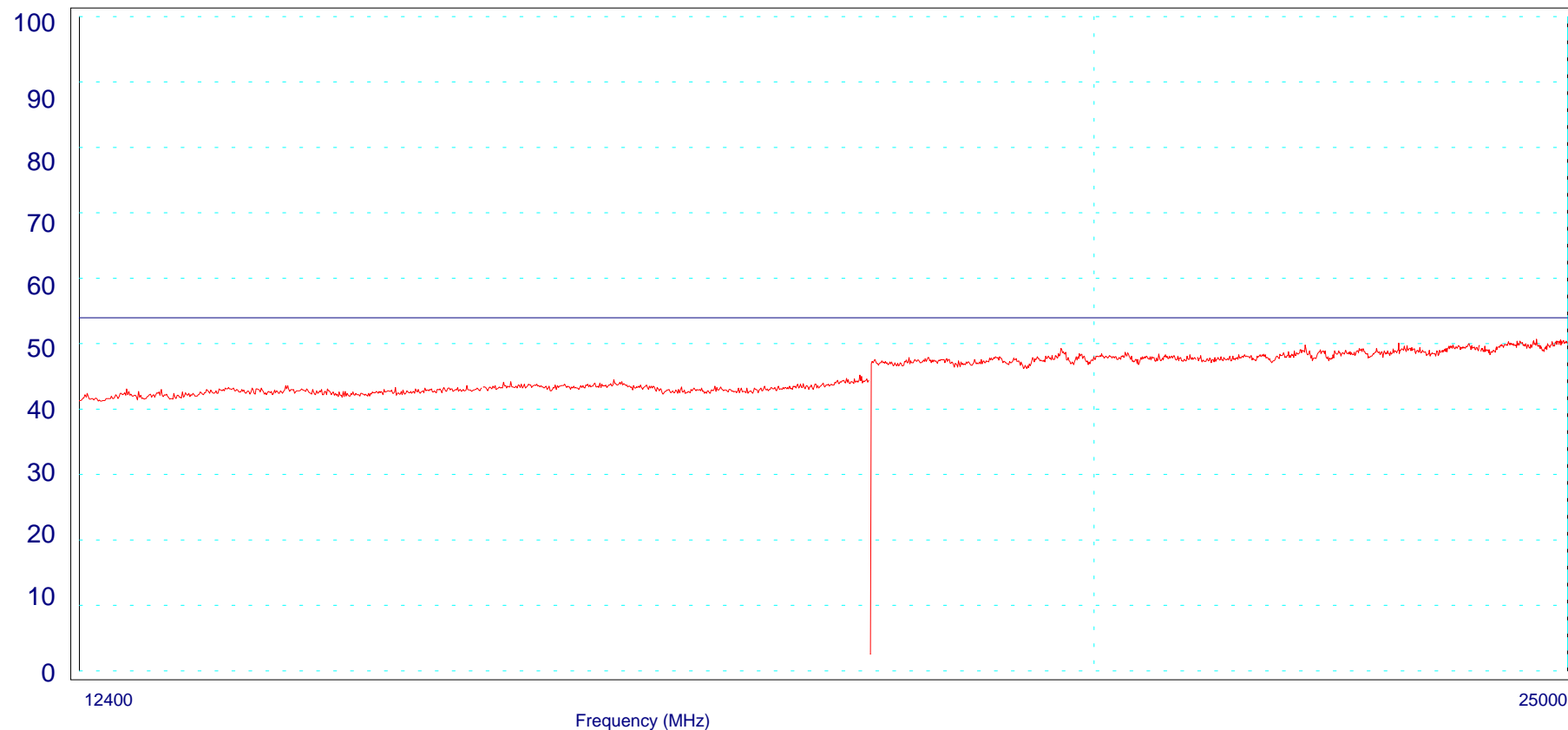
= Ambient

Job No:T130919

p:\PCFT\T130919G_13.PCF

Test Date: 03-10-2013

GRAPH No. 14



GP Sports Systems Pty Ltd
Transmitter
Mid Channel 2440Mhz Average
Serial No: None

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
— Vertical Emissions

Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 12.4 to 40 GHz
t:A3051115 c1:C413_414 c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919G3 ,84 ,94 ,95 ,96

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FCC Class B

Radiated Emissions (dBuV/m)

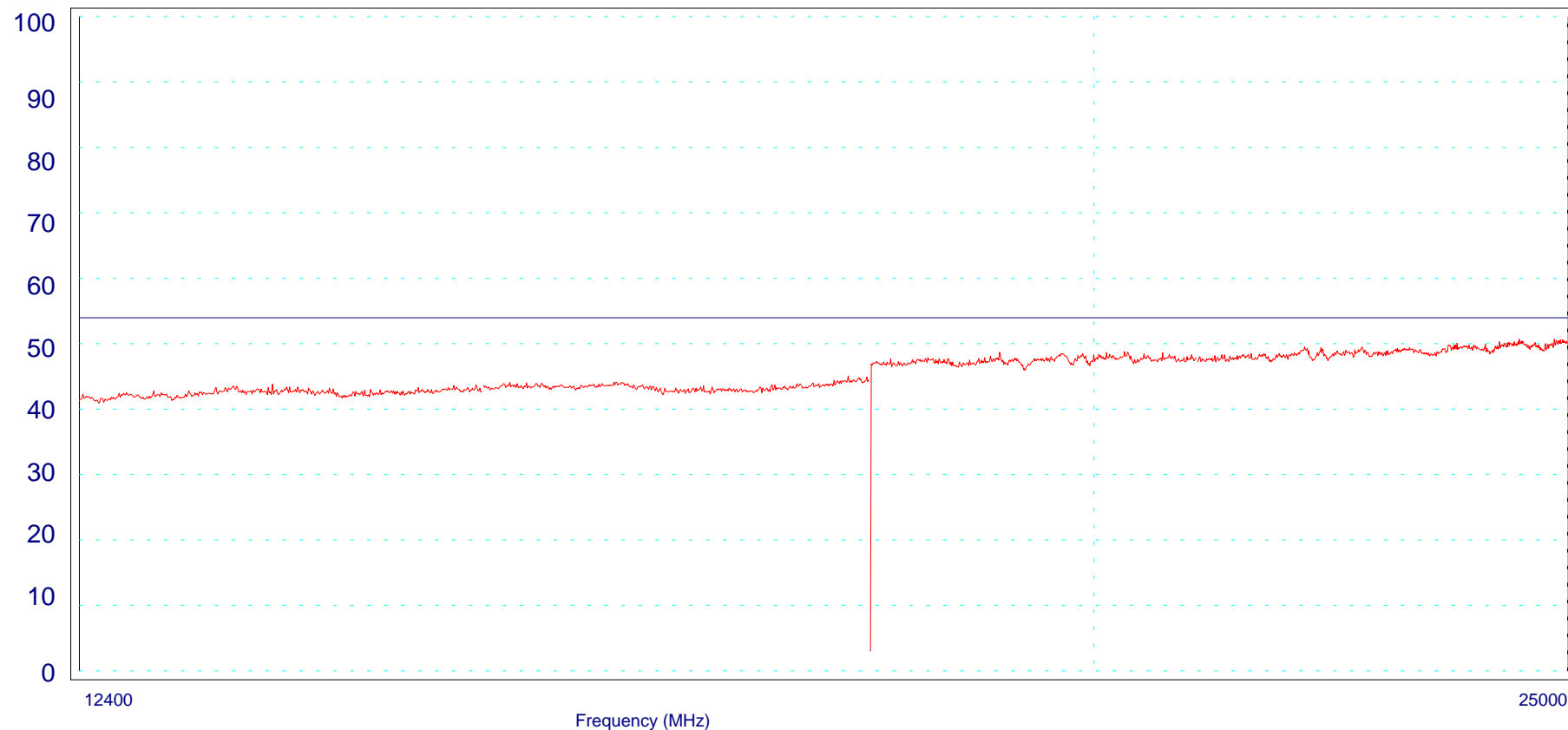
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Job No:T130919

p:\PCF\T130919G_14.PCF

Test Date: 03-10-2013

GRAPH No. 15



GP Sports Systems Pty Ltd
Transmitter
Mid Channel 2440Mhz Average
Serial No: None

Limits:
Fcc15249b FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:
Horizontal Emissions

Ver 5.5 Build 160
Standard Gain Horn Radiated Emissions 12.4 to 40 GHz
t:A3051115 c1:C413_414 c2:NONE p:NONE a:NONE
Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW
Test Officer:Kumar Thambiah

Source:
T130919G5 ,86 ,91 ,92 ,93

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Phone +(612) 9624 2777 Fax+(612) 9838 4050

EMC Technologies Pty. Ltd. - Global Product Certification

FCC Class B

Radiated Emissions (dBuV/m)

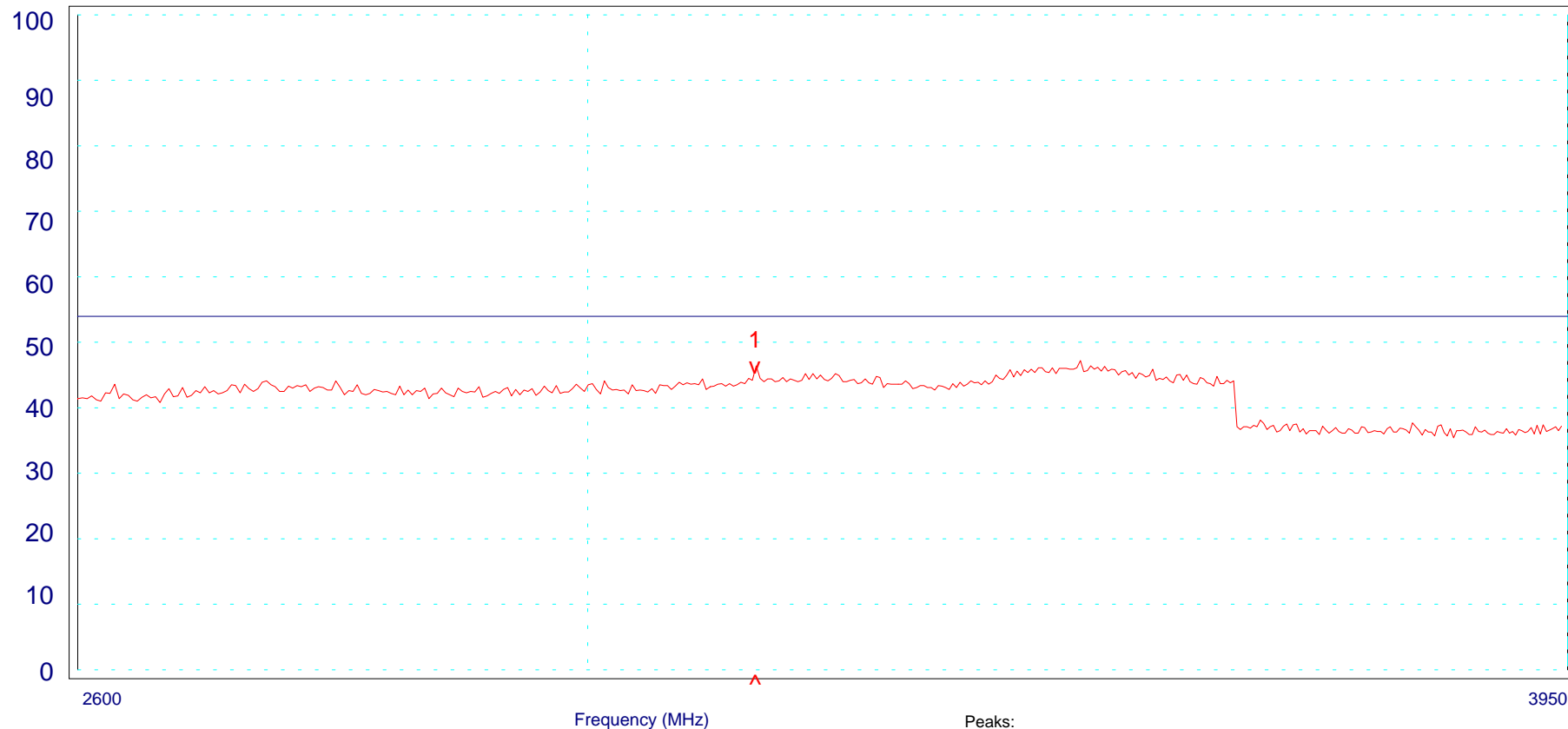
= Ambient

Job No:T130919

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Test Date: 03-10-2013

GRAPH No. 16



GP Sports Systems Pty Ltd

Transmitter

Mid Channel 2440Mhz Peak

Serial No: None

Limits:

Fcc15249b

FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:

Horizontal Emissions

Ver 5.5 Build 160

Standard Gain Horn Radiated Emissions 1.1 to 3.95 GHz

t:A2401115 c1:C0240314A c2:NONE p:NONE a:NONE

Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW

Test Officer:Kumar Thambiah

Source:

T130919G02

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EMC Technologies Pty. Ltd. - Global Product Certification

FCC Class B

Radiated Emissions (dBuV/m)

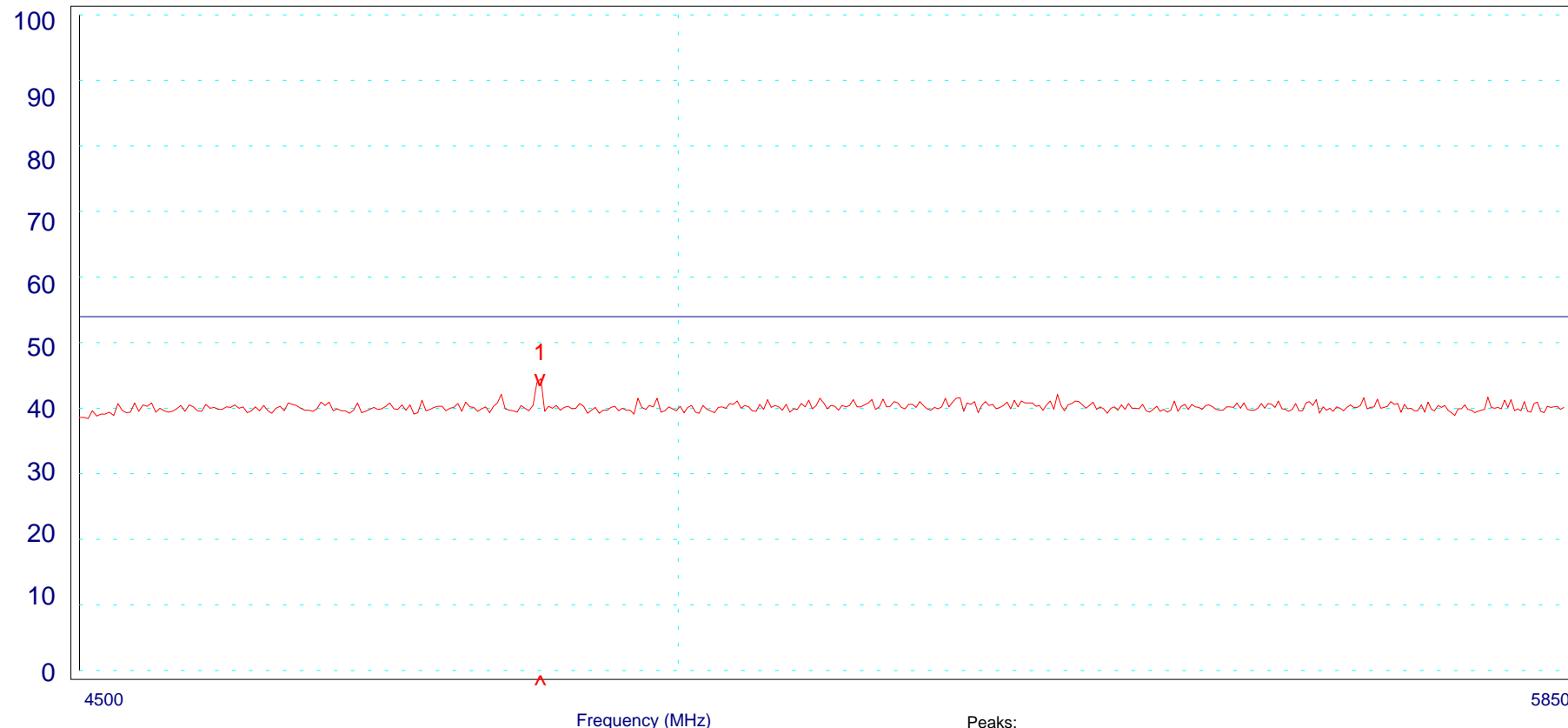
= Ambient

Job No:T130919

p:\PCFT\T130919G_16.PCF

Test Date: 03-10-2013

GRAPH No. 17



GP Sports Systems Pty Ltd

Transmitter

Mid Channel 2440Mhz Peak

Serial No: None

Limits:

Fcc15249b

FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:

— Vertical Emissions

Ver 5.5 Build 160

Standard Gain Horn Radiated Emissions 3.95 to 12.4 GHz

t:A2571115 c1:C0240314A c2:NONE p:NONE a:NONE

Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW

Test Officer:Kumar Thambiah

Source:

T130919G04

EMC Technologies (Sydney) 3/87 Station Rd, Seven Hills, NSW, 2147, NSW, Australia

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EMC Technologies Pty. Ltd. - Global Product Certification

FCC Class B

Radiated Emissions (dBuV/m)

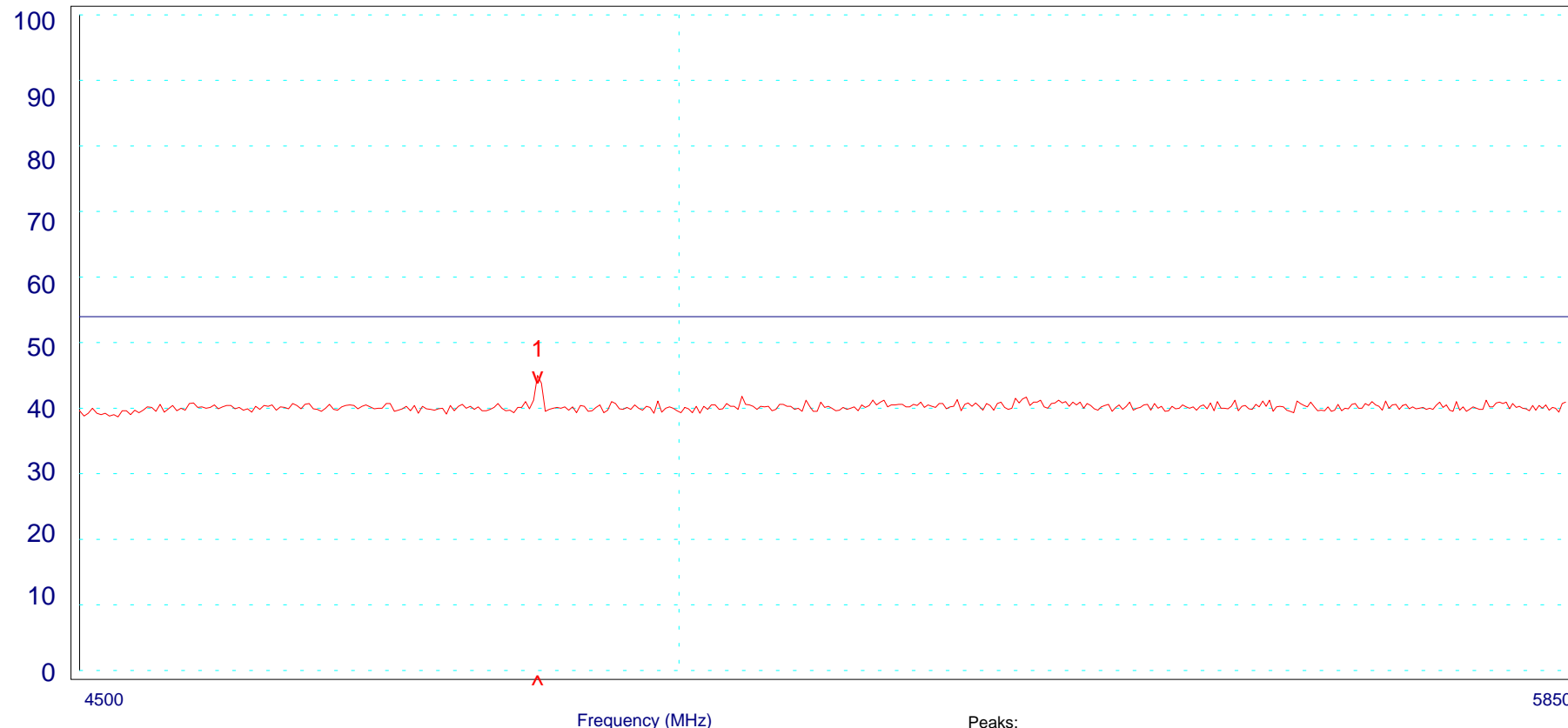
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Job No:T130919

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Test Date: 03-10-2013

GRAPH No. 18



GP Sports Systems Pty Ltd

Transmitter

Mid Channel 2440Mhz Peak

Serial No: None

Limits:

Fcc15249b

FCC 15.249 b (2400-2483.5MHz) Intentional Radiator Limits

Legend:

Horizontal Emissions

Ver 5.5 Build 160

Standard Gain Horn Radiated Emissions 3.95 to 12.4 GHz

t:A2571115 c1:C0240314A c2:NONE p:NONE a:NONE

Site ID: Syd Room#1,3/87 Station Rd, Seven Hills, NSW

Test Officer:Kumar Thambiah

Source:

T130919G06

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

Peaks:

No	Freq (MHz)	Peak (dBuV/m)	Fcc15249b (dBuV/m)	dL1 (dB)
1	4877.28	45.0	54.0	-9.0