

TEST REPORT FROM RFI GLOBAL SERVICES LTD

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Test Report Serial No:
RFI/RPTE1/RP48768JD01A

This Test Report Is Issued Under The Authority
Of Andrew Brown, Operations Manager:

pp.

A handwritten signature in blue ink, appearing to read 'A. Brown', enclosed within a faint blue circular stamp.

Tested By: Nigel Davison

pp

A handwritten signature in blue ink, appearing to read 'Nigel Davison', enclosed within a faint blue circular stamp.

Checked By: Michael Derby

A handwritten signature in blue ink, appearing to read 'M. Derby', enclosed within a faint blue circular stamp.

Report Copy No: PDF01

Issue Date: 07 February 2007

Test Dates: 21 November 2006 to 30 November 2006

This report is issued in Adobe Acrobat portable document format (PDF). It is only a valid copy of the report if it is being viewed in PDF format with the following security options not allowed: Changing the document, Selecting text and graphics, Adding or changing notes and form fields.

This report may be copied in full. The results in this report apply only to the sample(s) tested.

RFI Global Services Ltd

Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire RG23 8BG
Telephone: +44 (0)1256 312000 Facsimile: +44 (0)1256 312001
Email: info@rfi-global.com Website: www.rfi-global.com

Registered in England and Wales. Company number: 2117901

**Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600**

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

This page has been left intentionally blank.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Table of Contents

1. Client Information..... 4

2. Equipment Under Test (EUT) 5

3. Test Results 8

4. Deviations from the Test Specification 8

5. Operation of the EUT during Testing 9

6. Summary of Test Results 10

7. Measurements, Examinations and Derived Results 11

8. Measurement Uncertainty 80

Appendix 1. Test Equipment Used 81

Appendix 2. Test Configuration Drawings..... 84

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

1. Client Information

Company Name:	Motorola Point to Point Wireless Solutions Group
Address:	Unit A1 Linhay Business Park Eastern Road Ashburton Devon TQ13 7UP UK
Contact Name:	Mr Clem Fisher

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

2. Equipment Under Test (EUT)

The following information (with the exception of the Date of Receipt) has been supplied by the client:

2.1. Identification of Equipment Under Test (EUT)

Description:	5.4 GHz Microwave Fixed Link System (Master)
Brand Name:	PTP 600 Series
Model Name or Number:	PTP54600
Serial Number:	E252708017F4
Hardware Version:	D05-R01-C
Software Version:	54600-B1066 + !wdog
FCC ID Number:	QWP54100
Country of Manufacture:	UK
Date of Receipt:	27 November 2006

Description:	5.4 GHz Microwave Fixed Link System (Slave)
Brand Name:	Spectra
Model Name or Number:	PTP54600
Serial Number:	E252708017DA
Hardware Version:	D05-R01-C
Software Version:	54600-B1066 +!wdog
FCC ID Number:	QWP54100
Country of Manufacture:	UK
Date of Receipt:	27 November 2006

2.2. Accessories

No accessories were supplied with the EUT.

2.3. Description of EUT

The equipment under test is a 5.4 GHz UNII microwave fixed link system.

2.4. Modifications Incorporated in EUT

During the course of testing the EUT was not modified.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

2.5. Additional Information Related to Testing

Power Supply Requirement:	110 VAC		
Intended Operating Environment:	Commercial		
Equipment Category:	Broadband Radio Access Network, Fixed Link.		
Type of Unit:	Base Station (Fixed Use)		
Transmit Frequency Range:	5486 MHz to 5708 MHz		
Transmit Channels Tested:	Channel ID	Channel Number	Channel Frequency (MHz)
	Bottom	1	5486
	Middle	11	5590
	Top	23	5708
Receive Frequency Range:	5486 MHz to 5708 MHz		
Receive Channels Tested:	Channel ID	Channel Number	Channel Frequency (MHz)
	Bottom	1	5486
	Middle	11	5590
	Top	23	5708
Maximum Power Output (EIRP)	28.3 dBm		

2.6. Port Identification

Port	Description
1	Cat 5 Ethernet.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

2.7. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	Power IDU
Brand Name:	Motorola
Model Name or Number:	Canopy Power IDU
Serial Number:	0604018625
Revision:	00

Description:	Power IDU
Brand Name:	Motorola
Model Name or Number:	Canopy Power IDU
Serial Number:	0633322995
Revision:	00

Description:	Laptop
Brand Name:	Dell
Model Name or Number:	PP0XA
Serial Number:	TF733A00

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

3. Test Results

Reference:	FCC Part 15.407: 2006 (Subpart E)
Title:	Code of Federal Regulations, Part 15.407 (47CFR15) Unlicensed National Information Infrastructure (U-NII) devices operating in the 5.15-5.35 GHz, 5.47-5.725 GHz and 5.725-5.825 GHz bands.

3.1. Methods and Procedures

The methods and procedures used were as detailed in:

ANSI C63.2 (1987)

Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (2003)

Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)

Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)

Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1: (1999)

Title: Specification For Radio Disturbance and Immunity Measuring Apparatus and Methods. Part 1: Radio Disturbance and Immunity Measuring Apparatus.

3.2. Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Appendix 1 contains a list of the test equipment used.

4. Deviations from the Test Specification

DFS testing was not performed.

All other tests were performed in accordance with the test specification.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

5. Operation of the EUT during Testing

5.1. Operating Modes

The EUT was tested in the following operating modes, unless otherwise stated:

The EUT was operating at maximum power in BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM and Acquisition modes.

5.2. Configuration and Peripherals

The EUT was tested in the following configuration:

The host was connected to a slave unit and controlled via laptop.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

6. Summary of Test Results

Range of Measurements	Specification Reference	Port Type	Compliance Status
Transmitter 99% and 26 dB Bandwidth	Part 15.407(a)	Terminal	Complied
Maximum Conducted Output Power	Part 15.407(a)	Terminal	Complied
Peak Power Spectral Density	Part 15.407(a)	Terminal	Complied
Peak Excursion	Part 15.407(a)(6)	Terminal	Complied
Conducted Transmitter Spurious Emissions	Part 15.407	Terminal	Complied
Radiated Transmitter Spurious Emissions	Part 15.209/15.407	Enclosure	Complied
AC Mains Conducted Emissions	Part 15.107/15.207	AC Mains	Complied
Transmitter Power Control	Part 15.407(h)(1)	Terminal	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ.

FCC Site Registration Number: 90895

IC Site Registration Number: 3485

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7. Measurements, Examinations and Derived Results

7.1. General Comments

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to section 8 for details of measurement uncertainties.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2. Test Results

7.2.1. Transmitter 99% and 26 dB Bandwidths: Part 15.407(a)

The 26 dB bandwidth (B) is used elsewhere within this report for the determination of output power limits.

The 99% bandwidth was determined using the measurement analyser's occupied bandwidth function. The 26 dB bandwidth was determined by setting the analyser span to encompass the emission being measured, setting the resolution bandwidth to 1% of the emission bandwidth, setting a limit line to 26 dBc and placing a delta marker where the envelope intercepted the display line. This resulted in the 26 dB bandwidth. The procedure was reproduced for each modulation type.

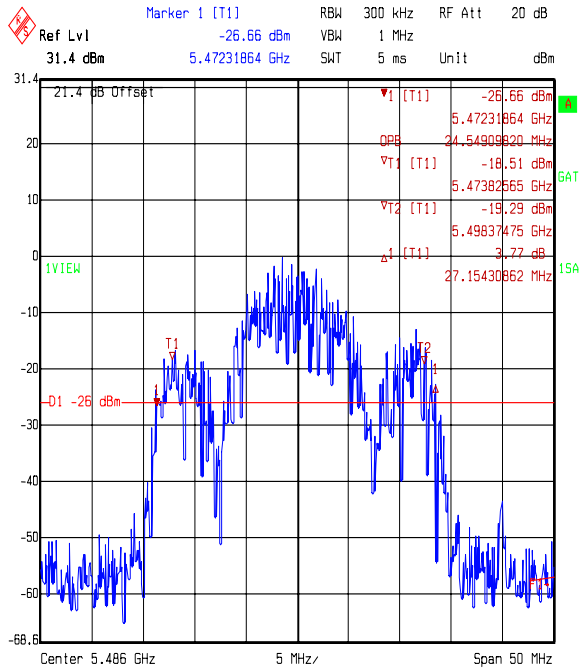
Results: Acquisition Mode

Channel	Data Rate (Mbps)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
Bottom	N/A	24.549	27.154
Middle	N/A	24.449	27.255
Top	N/A	24.449	27.655

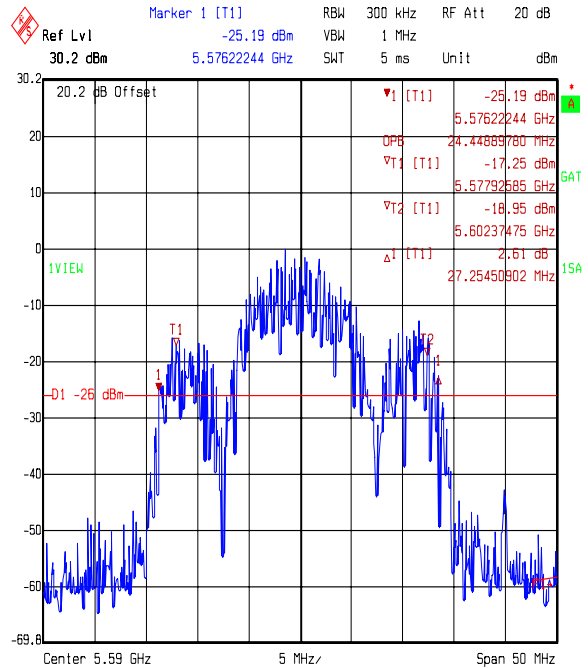
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

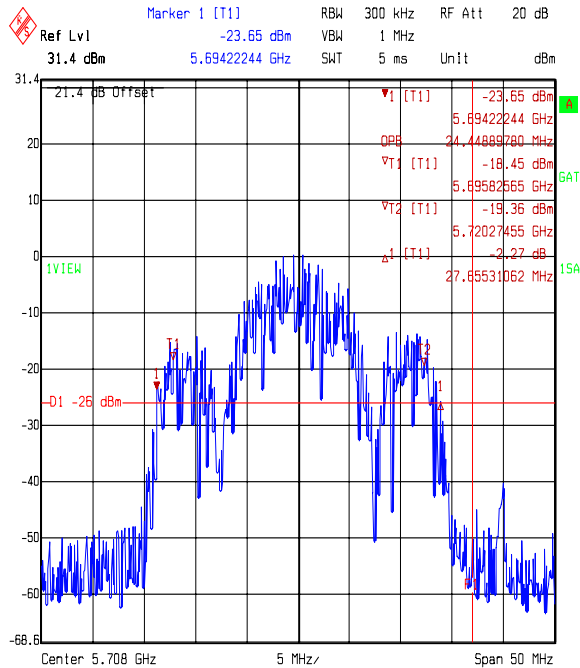
Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)



Title: Acq - Bottom Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 15:33:58



Title: Acq - Middle Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:12:43



Title: Acq - Top Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:37:13

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)

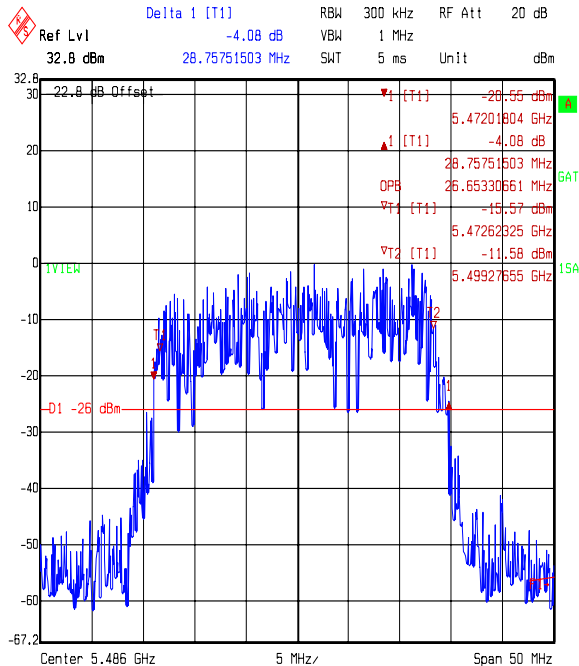
Results: BPSK Mode

Channel	Data Rate (Mbps)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
Bottom	82.26	26.653	28.758
Middle	82.26	26.653	28.758
Top	82.26	26.653	29.058

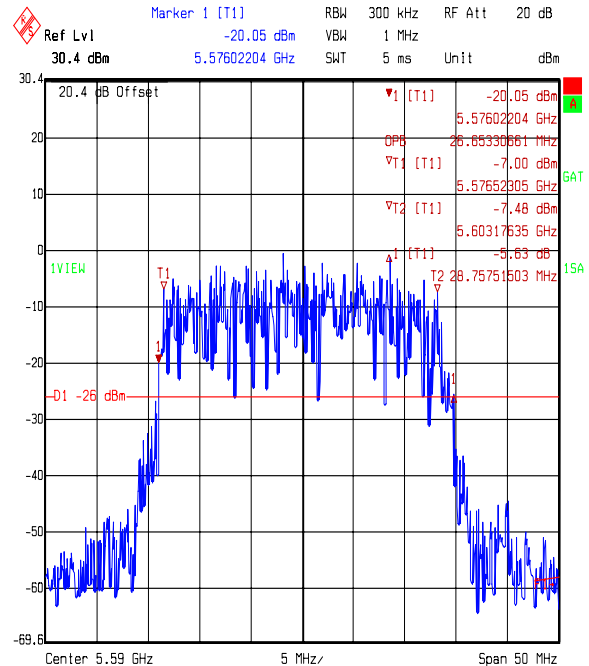
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

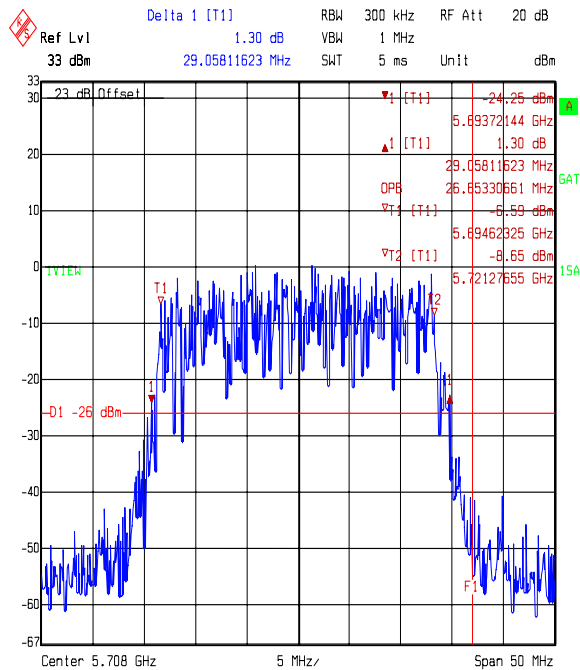
Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)



Title: BPSK - Bottom Channel for Motorola JN: 48768J001
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 15:37:46



Title: BPSK - Middle Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth for Motorola JN: 48768JD01
Date: 04.DEC.2006 13:01:46



Title: BPSK - Top Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:28:38

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)

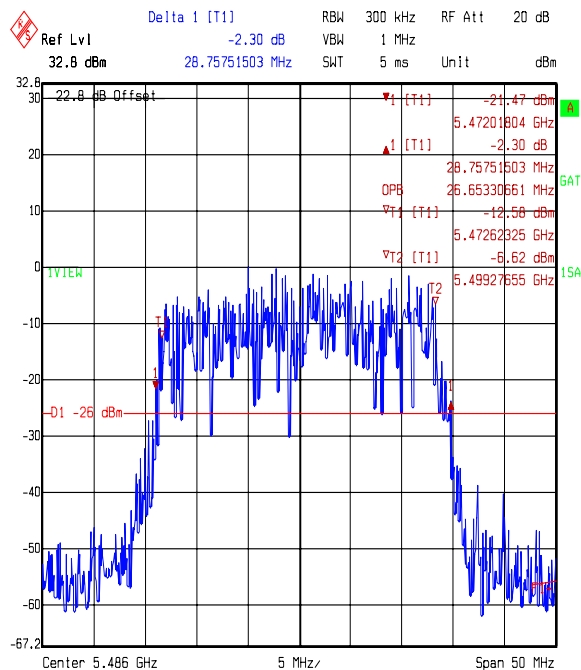
Results: QPSK Mode

Channel	Data Rate (Mbps)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
Bottom	89.49	26.653	28.758
Middle	89.49	26.553	29.459
Top	89.49	26.554	29.459

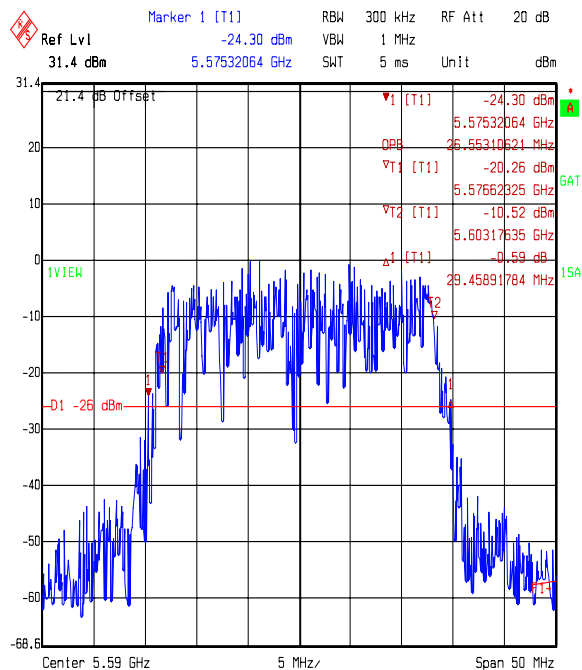
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

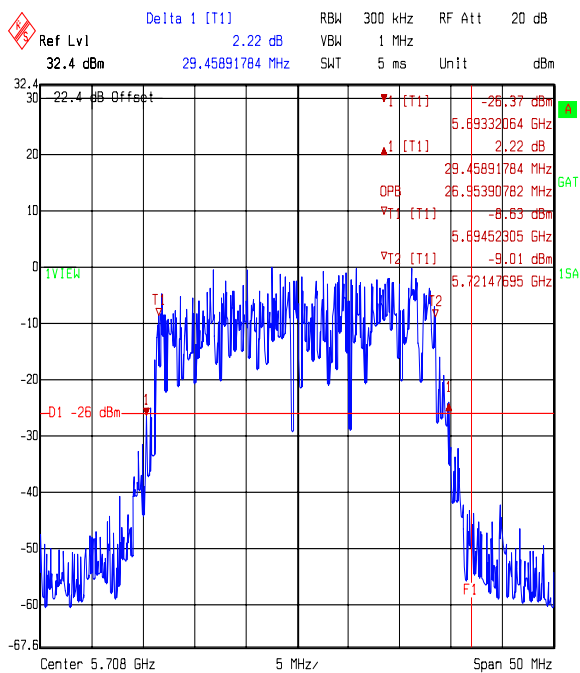
Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)



Title: QPSK - Bottom Channel for Motorola JN: 48768J001
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 15:38:46



Title: QPSK - Middle Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth for Motorola JN: 48768JD01
Date: 04.DEC.2006 13:03:09



Title: QPSK - Top Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:30:55

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)

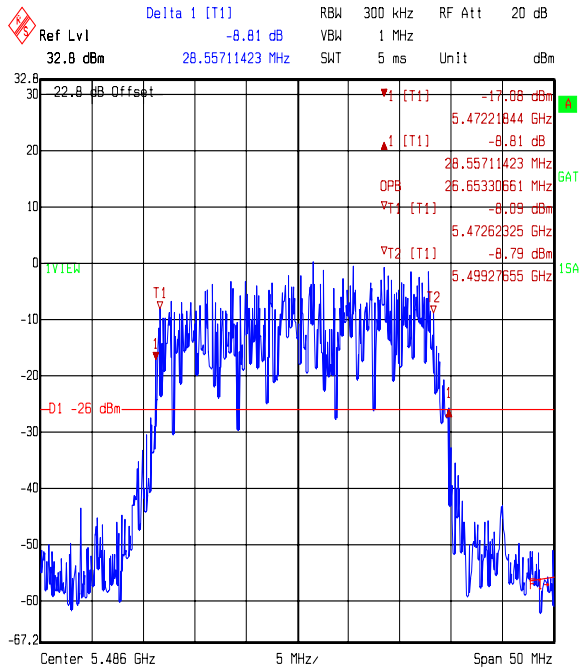
Results: 16QAM Mode

Channel	Data Rate (Mbps)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
Bottom	103.93	26.653	28.557
Middle	103.93	26.653	29.459
Top	103.93	26.353	29.459

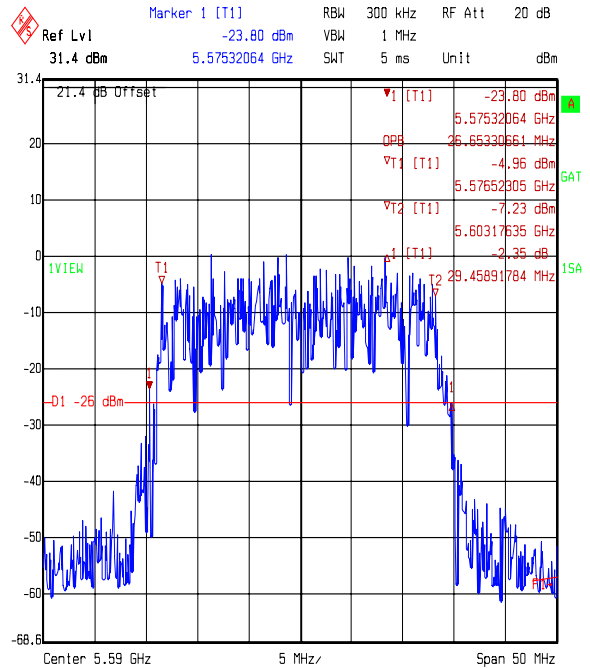
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

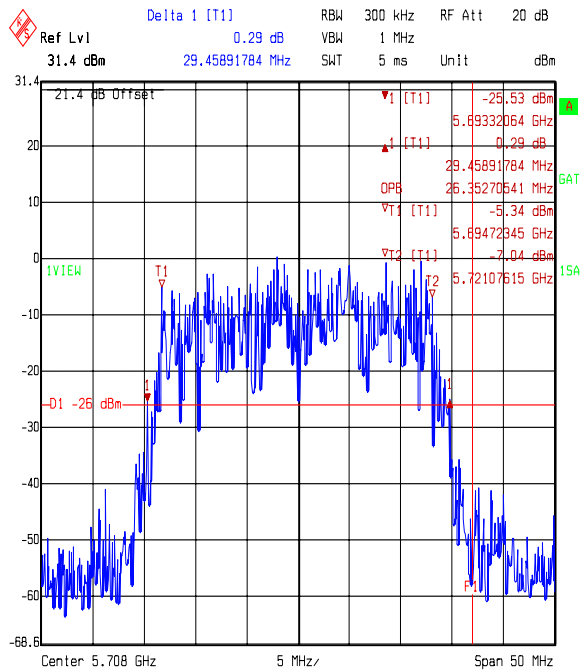
Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)



Title: 16QAM - Bottom Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 15:41:02



Title: 16QAM - Middle Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth for Motorola JN: 48768JD01
Date: 04.DEC.2006 13:04:37



Title: 16QAM - Top Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:32:33

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)

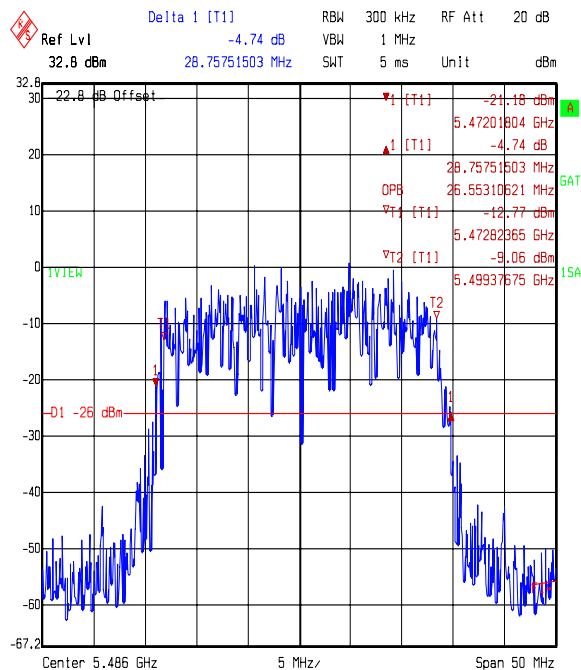
Results: 64QAM Mode

Channel	Data Rate (Mbps)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
Bottom	126.71	26.553	28.758
Middle	126.71	26.754	28.758
Top	126.71	26.353	28.758

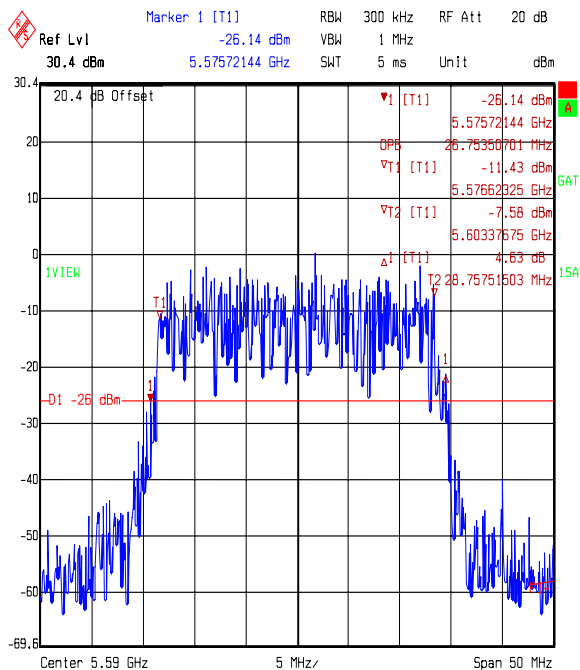
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

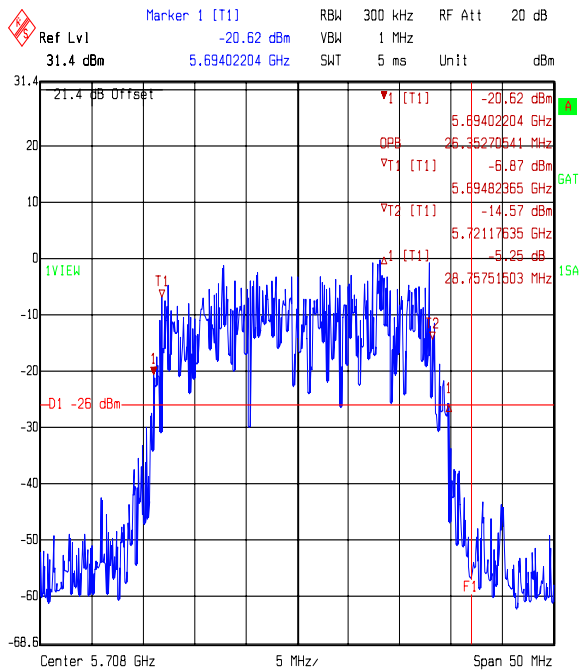
Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)



Title: 64QAM - Bottom Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 15:41:55



Title: 64QAM - Middle Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth for Motorola JN: 48768JD01
Date: 04.DEC.2006 13:06:22



Title: 64QAM - Top Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:33:40

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)

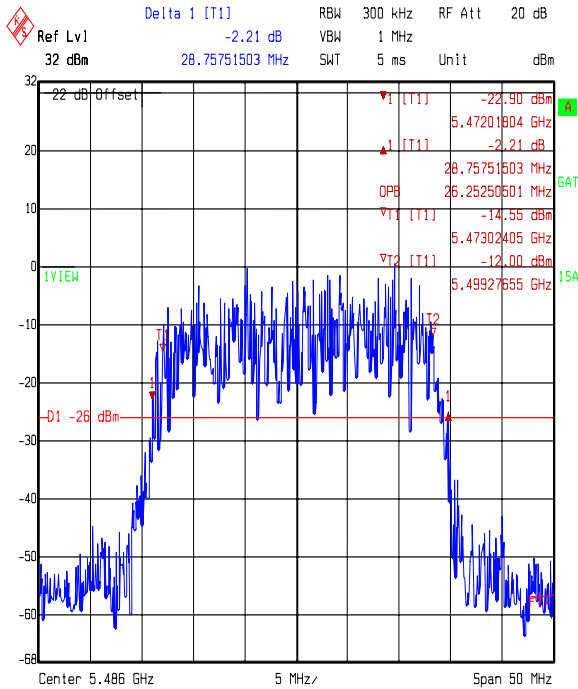
Results: 256QAM Mode

Channel	Data Rate (Mbps)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
Bottom	150.08	26.256	28.758
Middle	150.08	26.653	29.058
Top	150.08	26.854	28.758

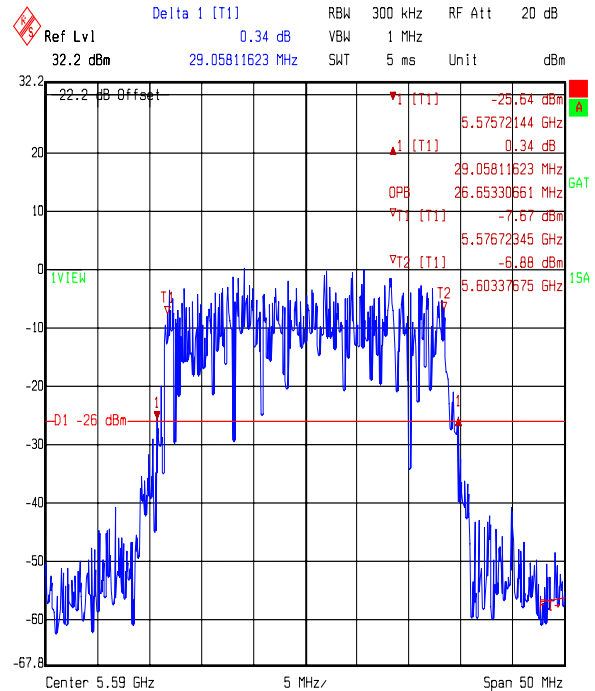
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

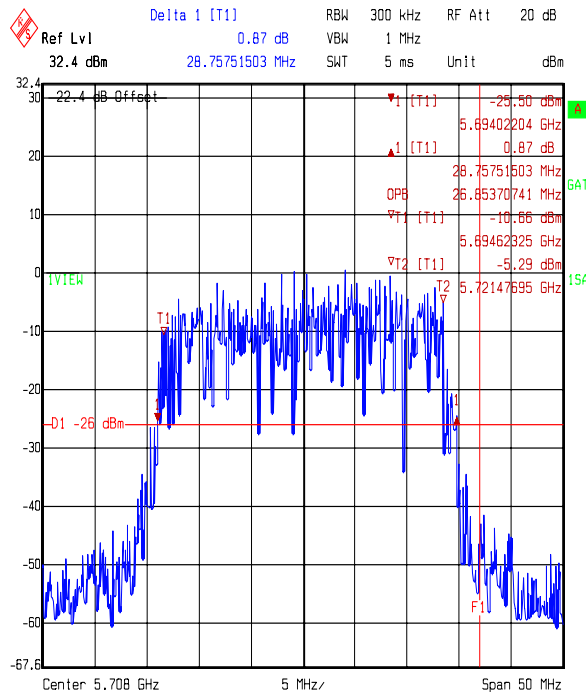
Transmitter 99% and 26 dB Bandwidths: Part 15.407(a) (Continued)



Title: 256QAM - Bottom Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 15:44:09



Title: 256QAM - Middle Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:10:59



Title: 256QAM - Top Channel for Motorola JN: 48768JD01
Comment A: 99% and 26dB Bandwidth
Date: 04.DEC.2006 13:35:27

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2.2. Maximum Conducted Output Power: Part 15.31(e)/15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26 dB emission bandwidth in megahertz.

For transmitting antennas of directional gain greater than 6 dBi the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

The maximum output power was measured using an average power meter. The recorded result was corrected for the transmitter's measured duty cycle (the time the transmitter was not transmitting burst data). The duty cycle correction factor was calculated as the log base 10 of the burst time over the period. The resultant correction factor was -3.2 dB for Acquisition mode and -3.4 dB for all other modes.

The EUT was also tested at 85% and at 115% of 110V. There was no variation in output power over these extremes.

Results: Acquisition Mode

Minimum Measured B = 27.154 MHz, Antenna Gain = 23.5 dBi, limit is lowest of 25.3 dBm or 24 dBm.

The maximum conducted composite power is 2.5 dBm.

The maximum composite EIRP is 2.5 + 23.5 dBi = 26.0 dBm.

The limit is 24 dBm conducted and 30 dBm radiated.

If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The Acquisition mode complies with a margin of 21.5 dB conducted and 4.0 dB radiated.

Port H

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	N/A	-1.8	24	25.8
11	N/A	-0.6	24	24.6
23	N/A	-1.3	24	25.3

Port V

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	N/A	-1.7	24	25.7
11	N/A	-0.5	24	24.5
23	N/A	-0.7	24	24.7

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Maximum Conducted Output Power: Part 15.31(e)/15.407(a)(2)(Continued)

Composite

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	N/A	1.3	24	22.7
11	N/A	2.5	24	21.5
23	N/A	2.0	24	22.0

Results: BPSK Mode

Min Measured B = 10.887 MHz, Limit = 21.4 dBm, Antenna Gain = 23 dBi

The maximum output power recorded in BPSK mode is 3.8 dBm. The maximum EIRP is $3.8 + 23 \text{ dBi} = 26.8 \text{ dBm}$. The maximum allowed radiated limit is $21.4 \text{ dBm} + 6 \text{ dBi} = 27.4 \text{ dBm}$.

The BPSK mode complies with a margin of 17.6 dB conducted and 0.6 dB radiated.

Port H

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	82.26	0.7	24	23.3
11	82.26	1.9	24	22.1
23	82.26	1.2	24	22.8

Port V

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	82.26	0.6	24	23.4
11	82.26	1.8	24	22.2
23	82.26	1.6	24	22.4

Composite

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	82.26	3.6	24	20.4
11	82.26	4.8	24	19.2
23	82.26	4.4	24	19.6

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Maximum Conducted Output Power: Part 15.31(e)/15.407(a)(2) (Continued)

Results: QPSK Mode

Min Measured B = 11.278 MHz, Limit = 21.5 dBm, Antenna Gain = 23 dBi

The maximum output power recorded in QPSK mode is 3.8 dBm. The maximum EIRP is $3.8 + 23 \text{ dBi} = 26.8 \text{ dBm}$. The maximum allowed radiated limit is $21.5 \text{ dBm} + 6 \text{ dBi} = 27.5 \text{ dBm}$.

The QPSK mode complies with a margin of 17.7 dB conducted and 0.7 dB radiated.

Port H

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	89.49	0.7	24	23.3
11	89.49	1.9	24	22.1
23	89.49	1.2	24	22.8

Port V

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	89.49	0.6	24	23.4
11	89.49	1.8	24	22.2
23	89.49	1.6	24	22.4

Composite

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	89.49	3.6	24	20.4
11	89.49	4.8	24	19.2
23	89.49	4.4	24	19.6

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Maximum Conducted Output Power: Part 15.31(e)/15.407(a)(2) (Continued)

Results: 16QAM Mode

Min measured B = 11.333 MHz, Limit = 21.5 dBm, Antenna Gain = 23 dBi

The maximum output power recorded in a 16QAM mode is 3.8 dBm. The maximum EIRP is 3.8 + 23 dBi = 26.8 dBm. The maximum allowed radiated limit is 21.5 dBm + 6 dBi = 27.5 dBm.

The 16QAM mode complies with a margin of 17.7 dB conducted and 0.7 dB radiated.

Port H

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	103.93	0.7	24	23.3
11	103.93	1.9	24	22.1
23	103.93	1.2	24	22.8

Port V

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	103.93	0.6	24	23.4
11	103.93	1.8	24	22.2
23	103.93	1.6	24	22.4

Composite

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	103.93	3.6	24	20.4
11	103.93	4.8	24	19.2
23	103.93	4.4	24	19.6

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Maximum Conducted Output Power: Part 15.31(e)/15.407(a)(2) (Continued)

Results: 64QAM Mode

Min Measured B = 11.182 MHz, Limit = 21.5 dBm, Antenna Gain = 23 dBi

The maximum output power recorded in 64QAM mode is 3.8 dBm. The maximum EIRP is $3.8 + 23 \text{ dBi} = 26.8 \text{ dBm}$. The maximum allowed radiated limit is $21.5 \text{ dBm} + 6 \text{ dBi} = 27.5 \text{ dBm}$.

The 64QAM mode complies with a margin of 17.7 dB conducted and 0.7 dB radiated.

Port H

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	126.71	0.7	24	23.3
11	126.71	1.9	24	22.1
23	126.71	1.2	24	22.8

Port V

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	126.71	0.6	24	23.4
11	126.71	1.8	24	22.2
23	126.71	1.6	24	22.4

Composite

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	126.71	3.6	24	20.4
11	126.71	4.8	24	19.2
23	126.71	4.4	24	19.6

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Maximum Conducted Output Power: Part 15.31(e)/15.407(a)(2) (Continued)

Results: 256QAM Mode

Minimum Measured B = 28.757 MHz, Antenna Gain = 23.5 dBi, limit is lowest of 25.6 dBm or 24 dBm.

The maximum conducted composite power is 4.8 dBm.

The maximum composite EIRP is $4.8 + 23.5 \text{ dBi} = 28.3 \text{ dBm}$.

The limit is 24 dBm conducted and 30 dBm radiated.

If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The 256QAM mode complies with a margin of 19.2 dB conducted and 1.7 dB radiated.

Port H

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	126.71	0.7	24	23.3
11	126.71	1.9	24	22.1
23	126.71	1.2	24	22.8

Port V

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	126.71	0.6	24	23.4
11	126.71	1.8	24	22.2
23	126.71	1.6	24	22.4

Composite

Channel	Data Rate (Mbps)	Maximum Output Power (dBm)	Limit (dBm)	Margin (dB)
1	126.71	3.6	24	20.4
11	126.71	4.8	24	19.2
23	126.71	4.4	24	19.6

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2.3. Peak Power Spectral Density: Part 15.407(a)(2)

The peak power spectral density shall not exceed 11dBm in any 1MHz band.

For transmitting antennas of directional gain greater than 6dBi the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

The spectrum analyser was used in its gated mode so that only the TX signal was considered in the final measurement.

The spectrum analyser was set to the relevant transmitter channel. The marker peak function was then used to locate the highest in band emission and the centre frequency reset to the highest level found. The spectrum analyser was then set to channel power mode and an average power reading was taken.

Peak Power Spectral Density: Part 15.407(a)(2)

Results: BPSK Mode – Data Rate 82.26 Mbps

The maximum conducted composite peak power spectral density is -11.2 dBm/MHz.

The maximum composite EIRP is $-11.2 + 23.5 \text{ dBi} = 12.3 \text{ dBm/MHz}$.

The limit is 11 dBm/MHz conducted and 17 dBm/MHz radiated.

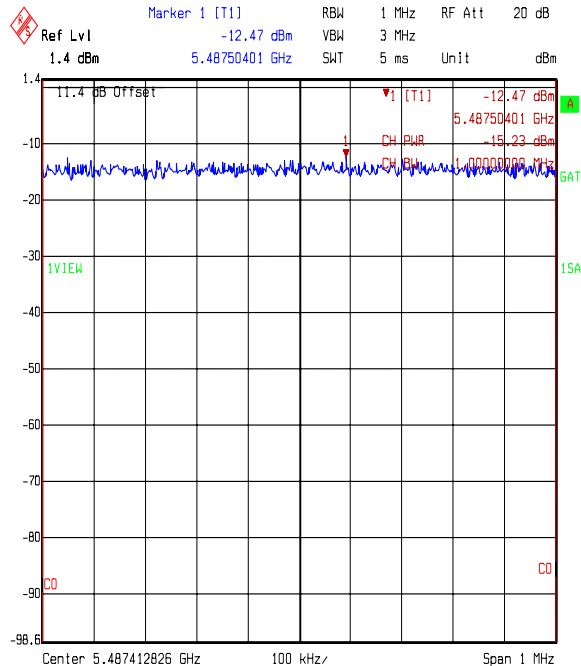
If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The BPSK mode complies with a margin of 22.2 dB conducted and 4.7 dB radiated.

Channel	Power Spectral Density (dBm/MHz)			Limit (dBm)	Margin (dB)
	Port H	Port V	Composite		
1	-15.2	-15.2	-12.2	11.0	23.2
11	-13.9	-14.5	-11.2	11.0	22.2
23	-14.4	-15.6	-11.9	11.0	22.9

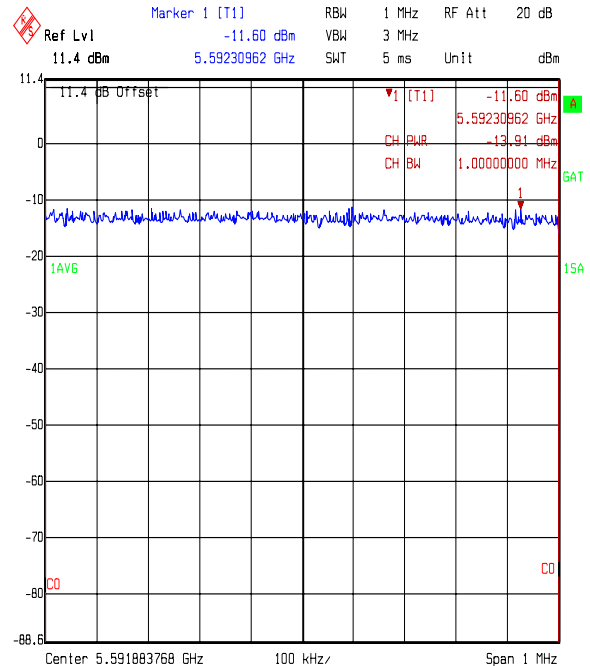
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

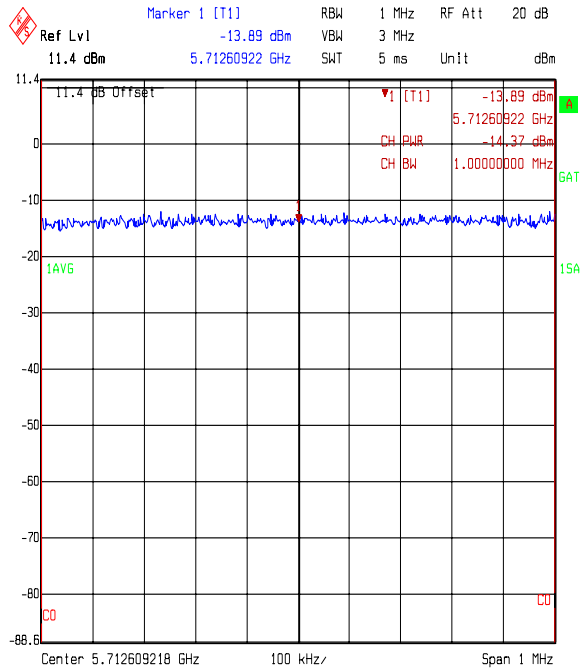
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) - Port H



Title: PPSD for Motorola JN: 48768J001
Comment A: BPSK - Bottom Channel
Date: 05.DEC.2006 17:12:12



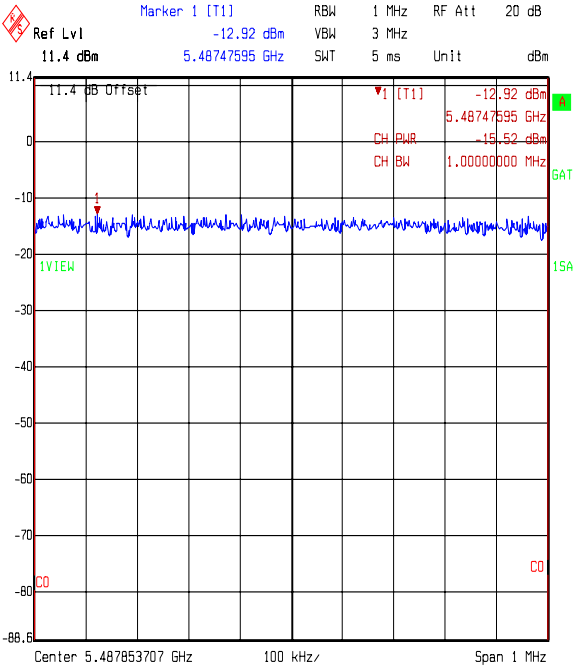
Title: PPSD for Motorola JN: 48768J001
Comment A: BPSK - Middle Channel
Date: 05.DEC.2006 17:47:10



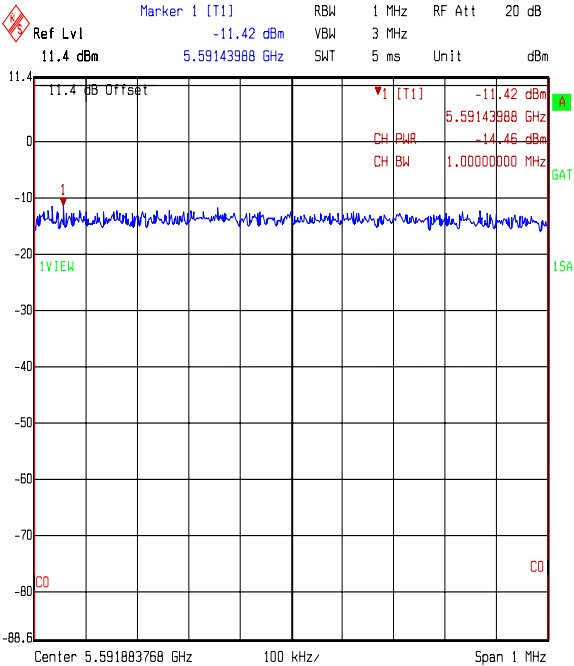
Title: PPSD for Motorola JN: 48768JD01
Comment A: BPSK - Top Channel
Date: 06.DEC.2006 10:06:28

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

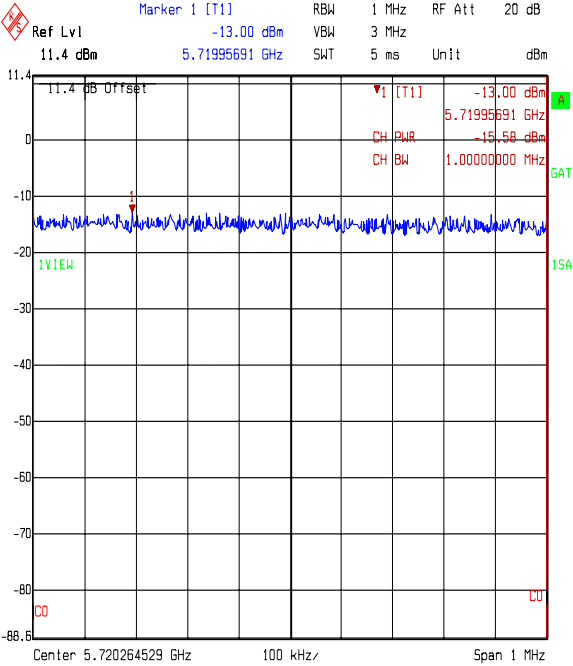
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port V



Title: PPSD for Motorola JN: 48768JD01
Comment A: BPSK - Bottom Channel
Date: 05.DEC.2006 17:26:42



Title: PPSD for Motorola JN: 48768JD01
Comment A: BPSK - Middle Channel
Date: 05.DEC.2006 17:34:51



Title: PPSD for Motorola JN: 48768JD01
Comment A: BPSK - Top Channel
Date: 06.DEC.2006 10:20:26

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Peak Power Spectral Density: Part 15.407(a)(2) (Continued)

Results: QPSK Mode – Data Rate 89.49 Mbps

The maximum conducted composite peak power spectral density is -11.5 dBm/MHz.

The maximum composite EIRP is $-11.5 + 23.5 \text{ dBi} = 12.0 \text{ dBm/MHz}$.

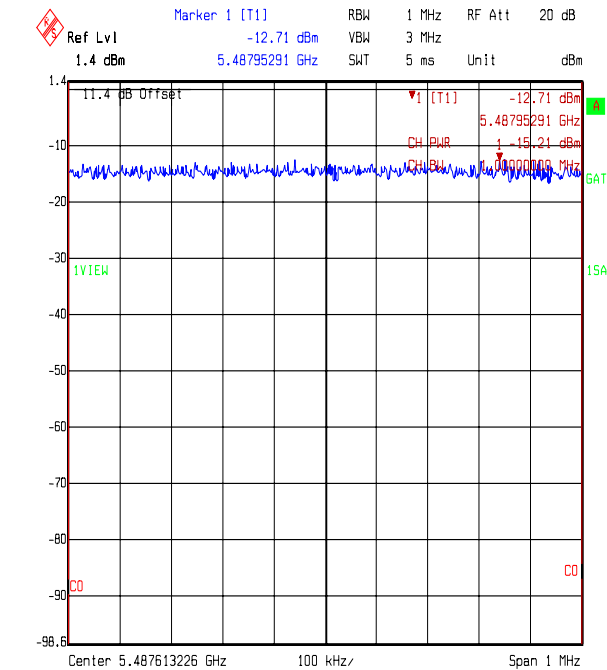
The limit is 11 dBm/MHz conducted and 17 dBm/MHz radiated.

If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The QPSK mode complies with a margin of 22.5 dB conducted and 5.0 dB radiated.

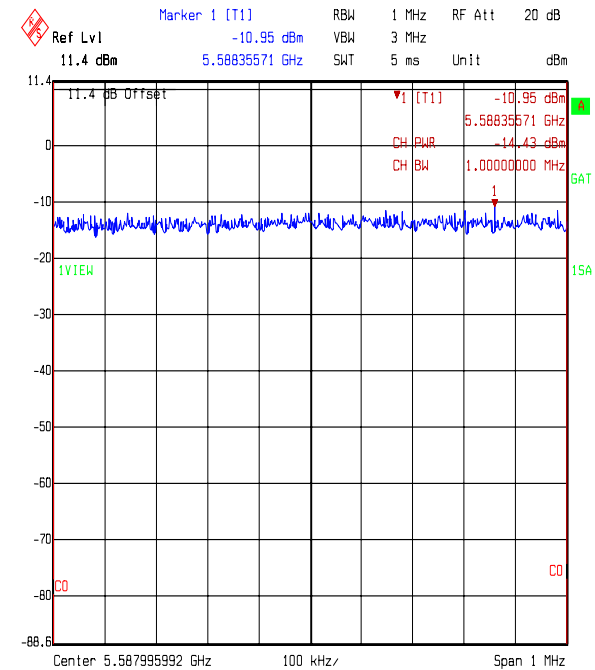
Channel	Power Spectral Density (dBm/MHz)			Limit (dBm)	Margin (dB)
	Port H	Port V	Composite		
1	-15.2	-15.6	-12.4	11.0	23.4
11	-14.4	-14.8	-11.6	11.0	22.5
23	-15.7	-14.8	-12.2	11.0	23.2

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

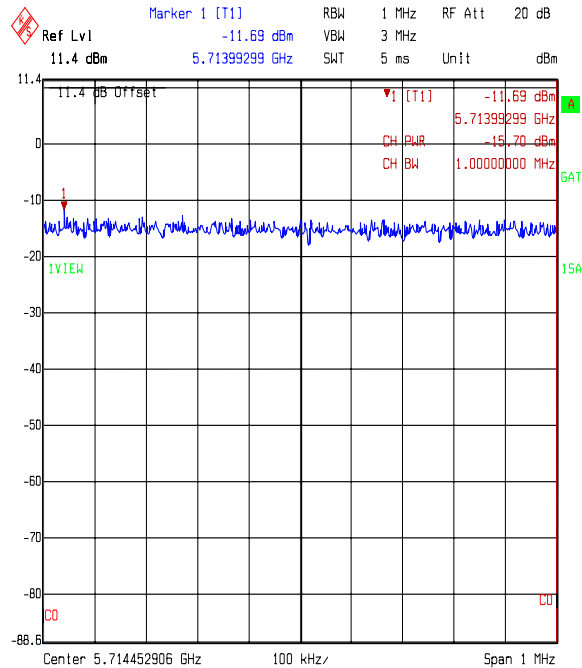
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port H



Title: PPSP for Motorola JN: 48768JD01
Comment A: QPSK - Bottom Channel
Date: 05.DEC.2006 17:16:31



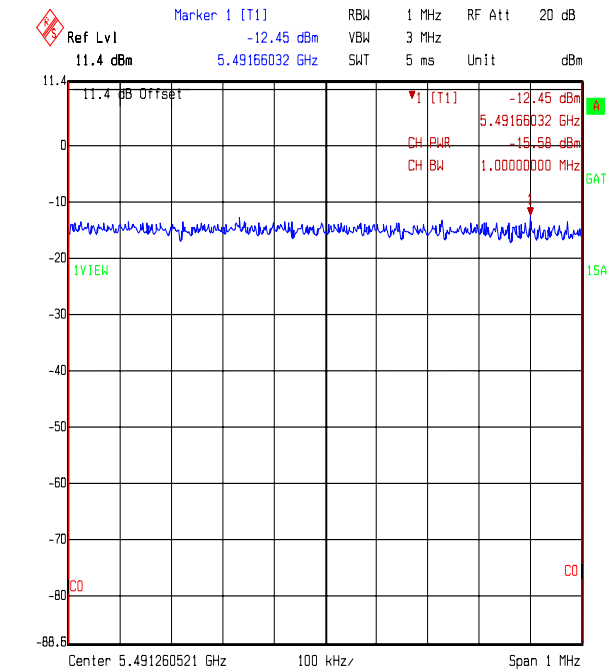
Title: PPSP for Motorola JN: 48768JD01
Comment A: QPSK - Middle Channel
Date: 05.DEC.2006 17:51:46



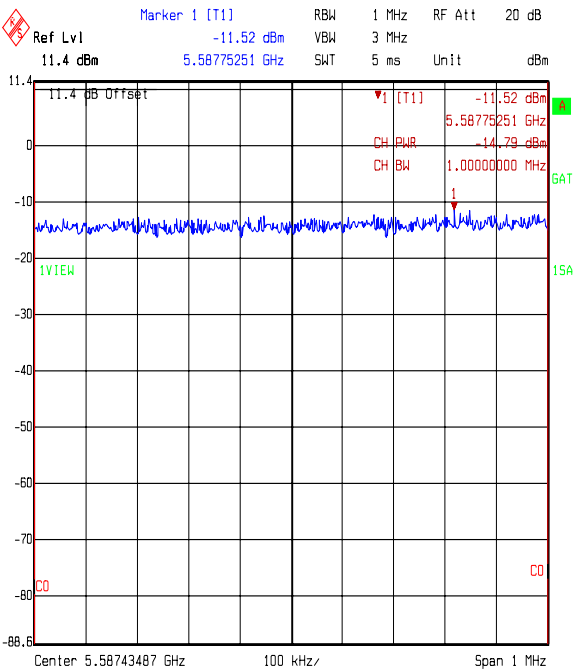
Title: PPSP for Motorola JN: 48768JD01
Comment A: QPSK - Top Channel
Date: 06.DEC.2006 10:14:51

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

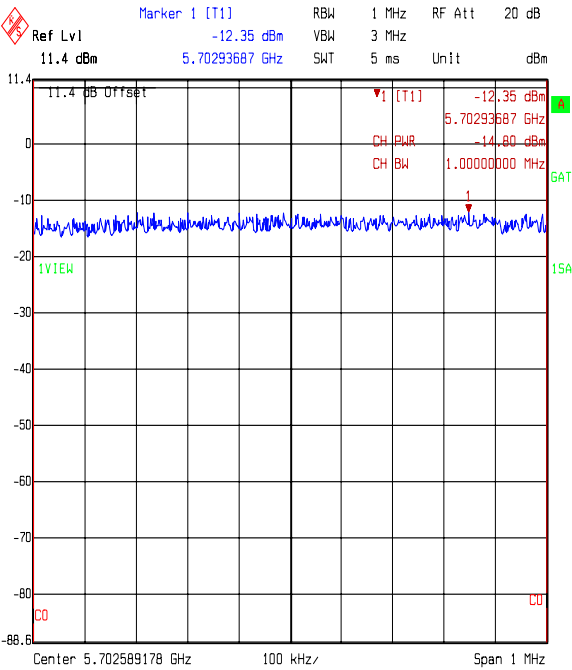
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port V



Title: PPSD for Motorola JN: 48768JD01
Comment A: QPSK - Bottom Channel
Date: 05.DEC.2006 17:27:52



Title: PPSD for Motorola JN: 48768JD01
Comment A: QPSK - Middle Channel
Date: 05.DEC.2006 17:35:59



Title: PPSD for Motorola JN: 48768JD01
Comment A: QPSK - Top Channel
Date: 06.DEC.2006 10:21:30

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Peak Power Spectral Density: Part 15.407(a)(2) (Continued)

Results: 16QAM Mode – Data Rate 103.93 Mbps

The maximum conducted composite peak power spectral density is -11.9 dBm/MHz.

The maximum composite EIRP is $-11.9 + 23.5 \text{ dBi} = 11.6 \text{ dBm/MHz}$.

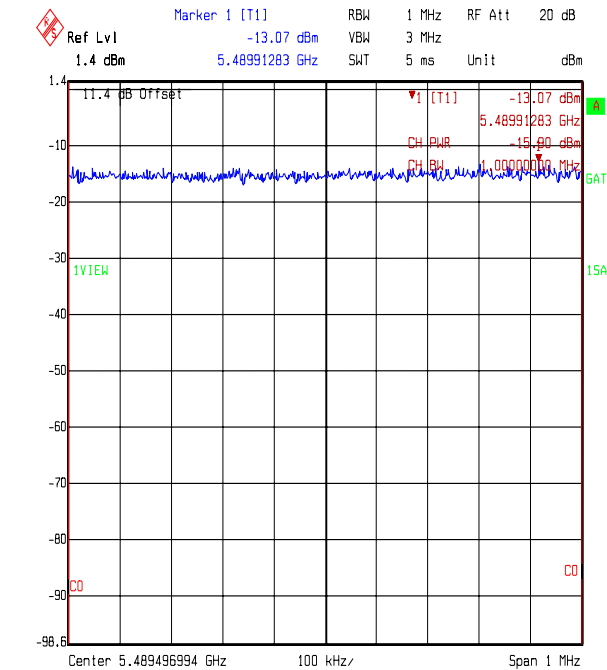
The limit is 11 dBm/MHz conducted and 17 dBm/MHz radiated.

If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The 16QAM mode complies with a margin of 22.9 dB conducted and 5.4 dB radiated.

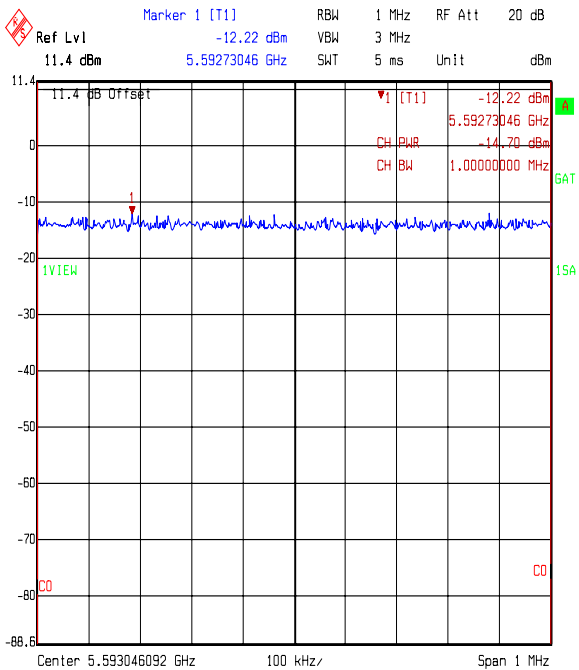
Channel	Power Spectral Density (dBm/MHz)			Limit (dBm)	Margin (dB)
	Port H	Port V	Composite		
1	-15.9	-15.5	-12.7	11.0	23.7
11	-14.7	-15.5	-12.1	11.0	23.1
23	-14.6	-15.2	-11.9	11.0	22.9

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

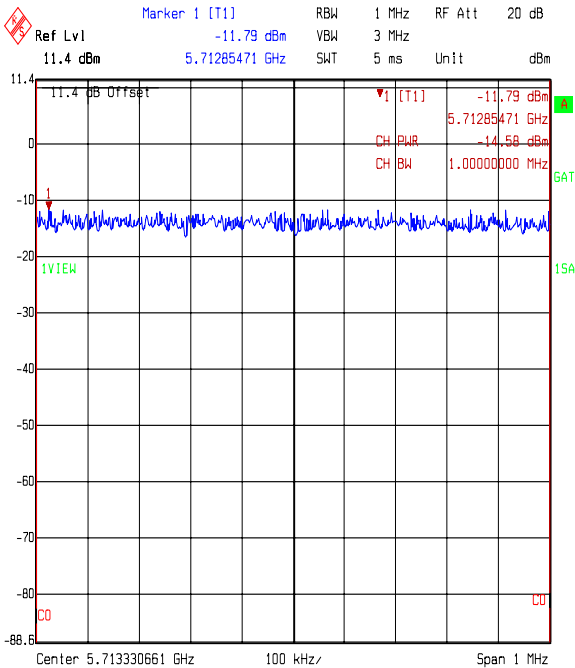
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port H



Title: PPSP for Motorola JN: 48768JD01
Comment A: 16QAM - Bottom Channel
Date: 05.DEC.2006 17:17:39



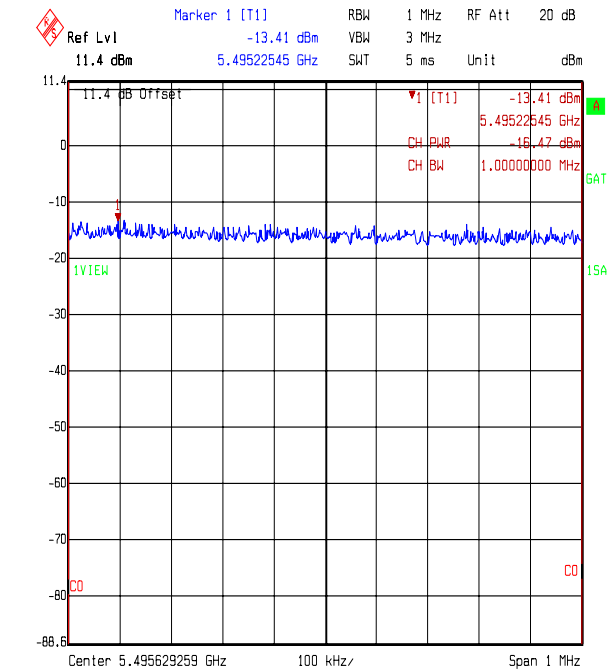
Title: PPSP for Motorola JN: 48768JD01
Comment A: 16QAM - Middle Channel
Date: 05.DEC.2006 17:55:27



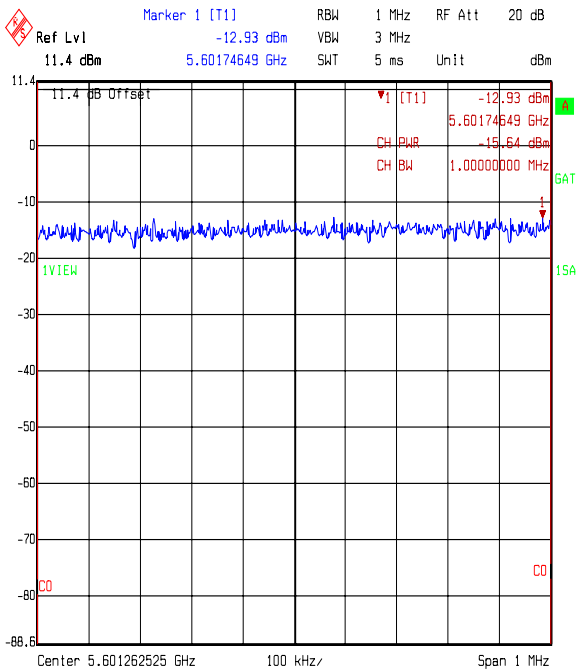
Title: PPSP for Motorola JN: 48768JD01
Comment A: 16QAM - Top Channel
Date: 06.DEC.2006 10:15:49

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

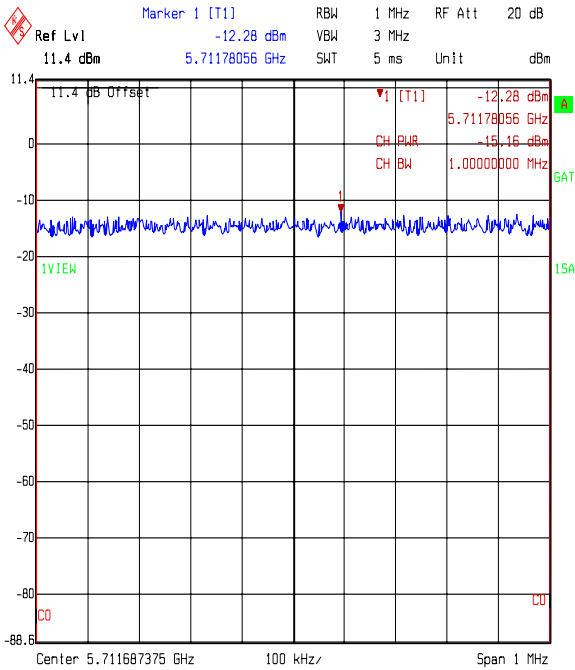
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port V



Title: PPSP for Motorola JN: 48768JD01
Comment A: 16QAM - Bottom Channel
Date: 05.DEC.2006 17:28:55



Title: PPSP for Motorola JN: 48768JD01
Comment A: 16QAM - Middle Channel
Date: 05.DEC.2006 17:38:02



Title: PPSP for Motorola JN: 48768JD01
Comment A: 16QAM - Top Channel
Date: 06.DEC.2006 10:22:58

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Peak Power Spectral Density: Part 15.407(a)(2) (Continued)

Results: 64QAM Mode – Data Rate 103.93 Mbps

The maximum conducted composite peak power spectral density is -11.2 dBm/MHz.

The maximum composite EIRP is $-11.2 + 23.5 \text{ dBi} = 12.3 \text{ dBm/MHz}$.

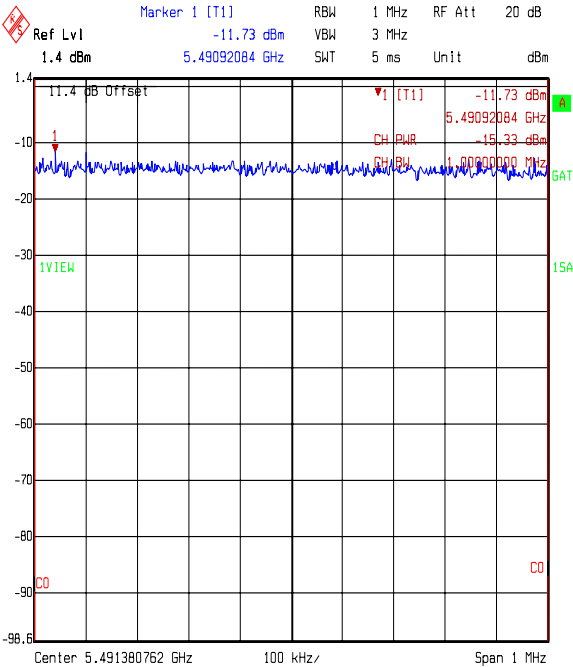
The limit is 11 dBm/MHz conducted and 17 dBm/MHz radiated.

If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The 64QAM mode complies with a margin of 22.2 dB conducted and 4.7 dB radiated.

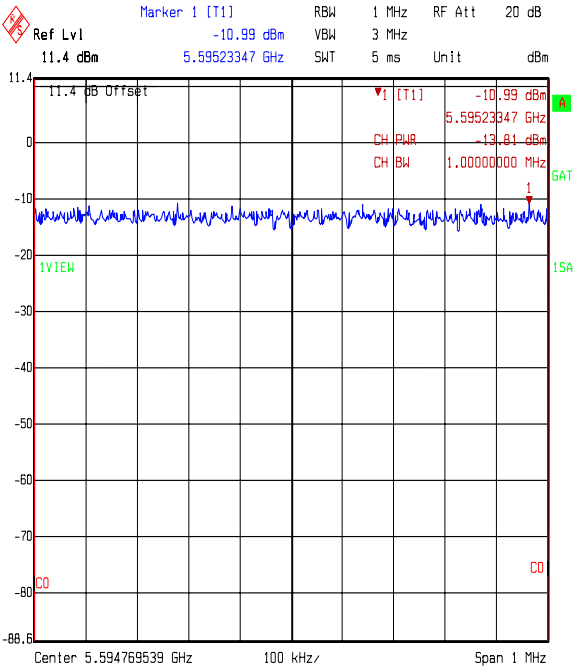
Channel	Power Spectral Density (dBm/MHz)			Limit (dBm)	Margin (dB)
	Port H	Port V	Composite		
1	-15.3	-15.6	-12.4	11.0	23.4
11	-13.8	-14.6	-11.2	11.0	22.2
23	-14.6	-14.5	-11.5	11.0	22.5

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

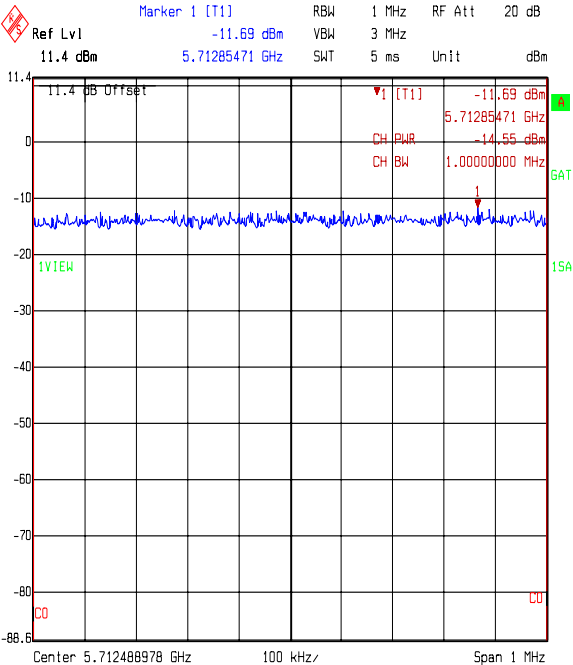
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port H



Title: PPSP for Motorola JN: 48768JD01
Comment A: 64QAM - Bottom Channel
Date: 05.DEC.2006 17:18:43



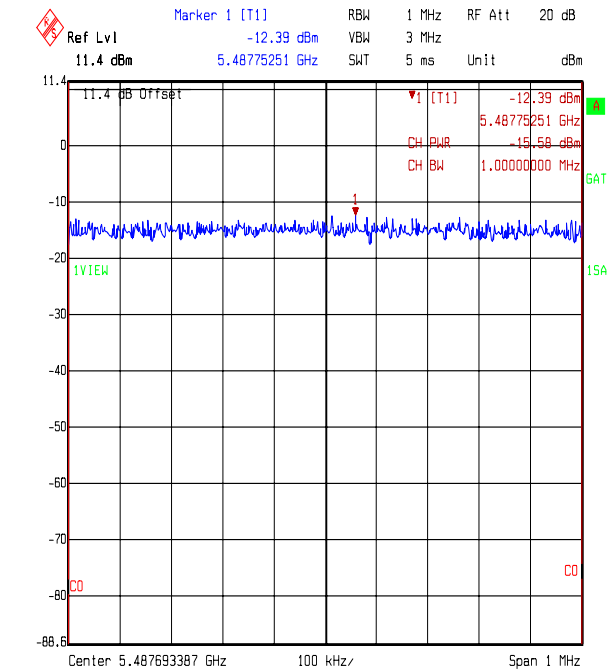
Title: PPSP for Motorola JN: 48768JD01
Comment A: 64QAM - Middle Channel
Date: 05.DEC.2006 17:56:21



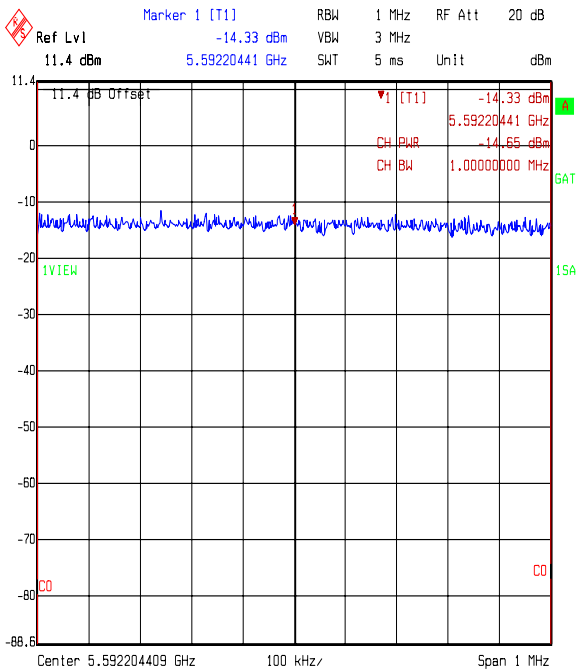
Title: PPSP for Motorola JN: 48768JD01
Comment A: 64QAM - Top Channel
Date: 06.DEC.2006 10:17:00

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

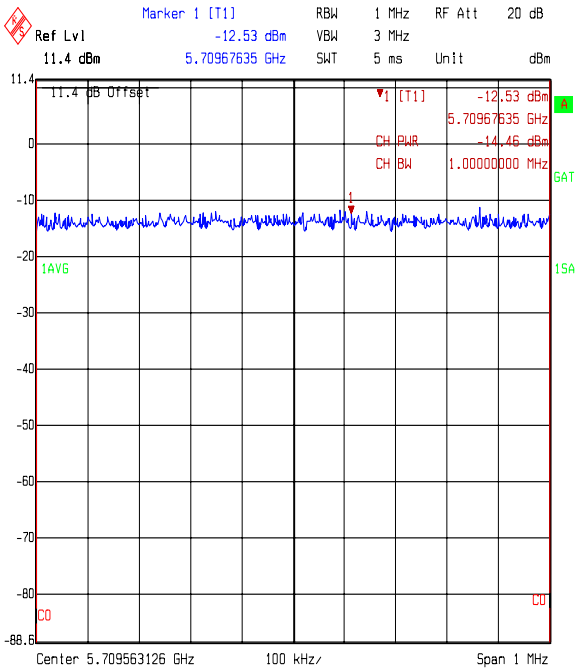
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port V



Title: PPSP for Motorola JN: 48768JD01
Comment A: 64QAM - Bottom Channel
Date: 05.DEC.2006 17:29:59



Title: PPSP for Motorola JN: 48768JD01
Comment A: 64QAM - Middle Channel
Date: 05.DEC.2006 17:39:05



Title: PPSP for Motorola JN: 48768JD01
Comment A: 64QAM - Top Channel
Date: 06.DEC.2006 10:24:14

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Peak Power Spectral Density: Part 15.407(a)(2) (Continued)

Results: 256QAM Mode – Data Rate 126.71 Mbps

The maximum conducted composite peak power spectral density is -11.5 dBm/MHz.

The maximum composite EIRP is $-11.5 + 23.5 \text{ dBi} = 12.0 \text{ dBm/MHz}$.

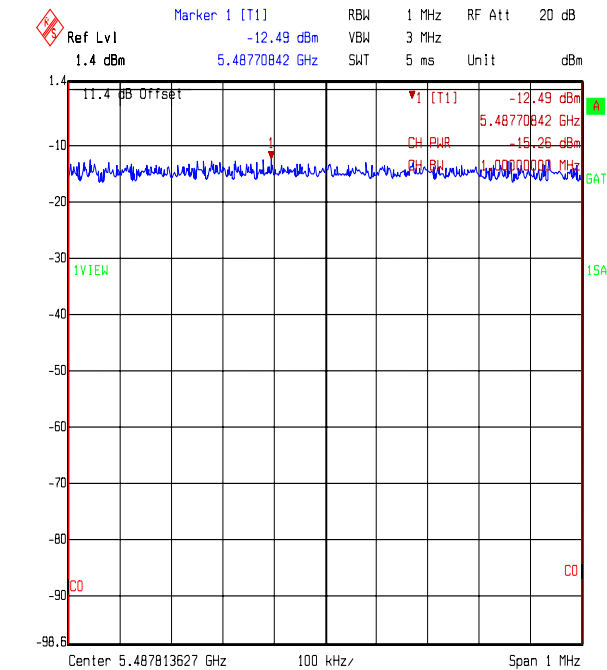
The limit is 11 dBm/MHz conducted and 17 dBm/MHz radiated.

If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The 256QAM mode complies with a margin of 22.5 dB conducted and 5.0 dB radiated.

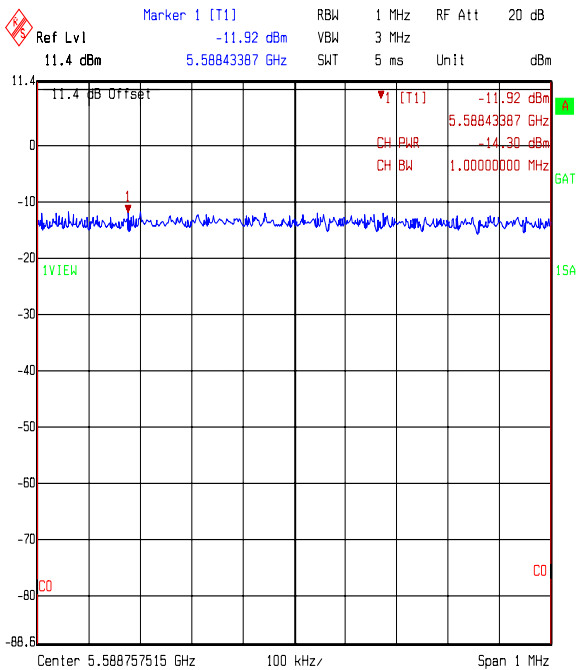
Channel	Power Spectral Density (dBm/MHz)			Limit (dBm)	Margin (dB)
	Port H	Port V	Composite		
1	-15.3	-15.7	-12.6	11.0	23.5
11	-14.3	-14.7	-11.5	11.0	22.5
23	-14.6	-14.5	-11.5	11.0	22.5

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

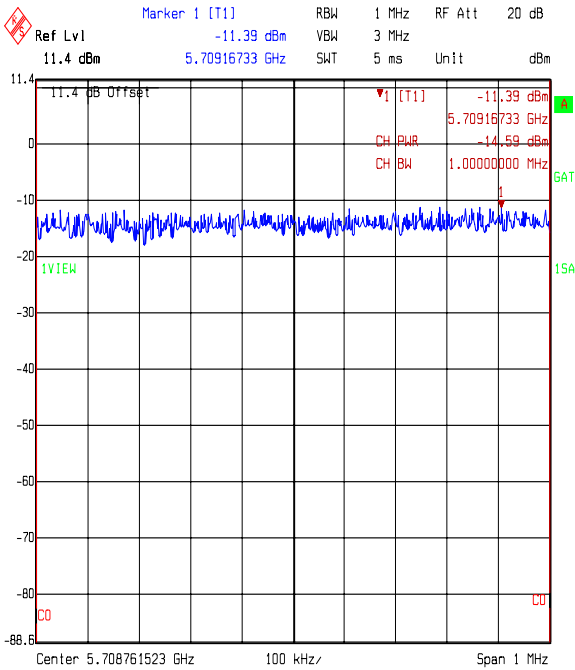
Peak Power Spectral Density: Part 15.407(a)(2) (Continued)



Title: PPSP for Motorola JN: 48768JD01
Comment A: 256QAM - Bottom Channel
Date: 05.DEC.2006 17:19:42



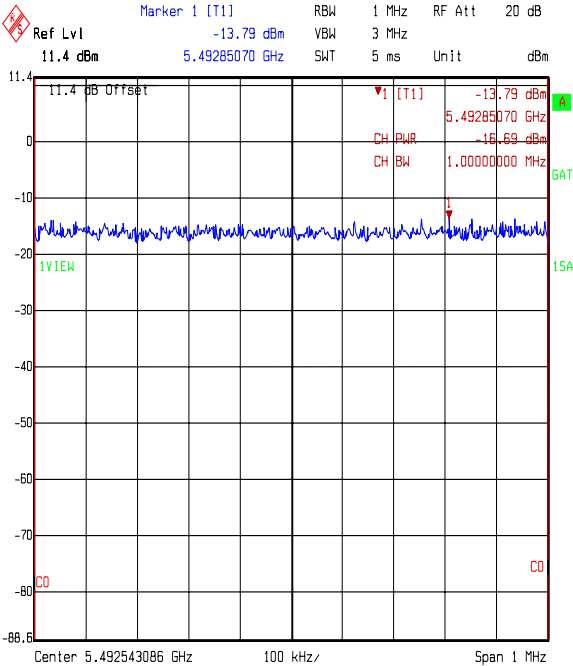
Title: PPSP for Motorola JN: 48768JD01
Comment A: 256QAM - Middle Channel
Date: 05.DEC.2006 17:57:37



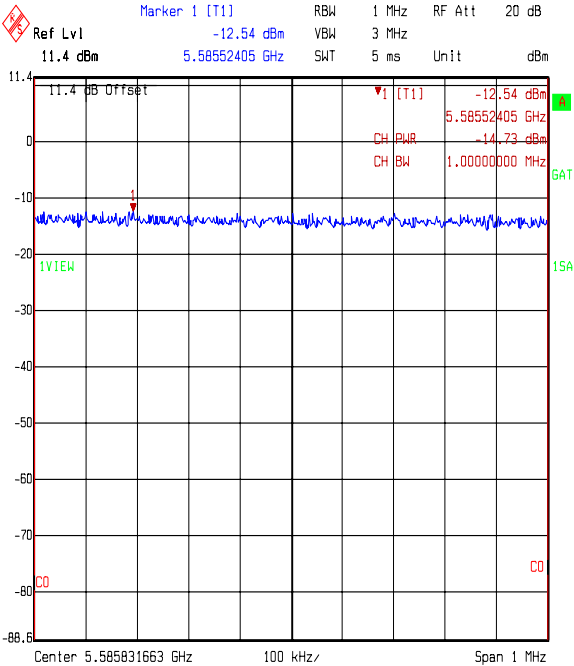
Title: PPSP for Motorola JN: 48768JD01
Comment A: 256QAM - Top Channel
Date: 06.DEC.2006 10:18:27

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

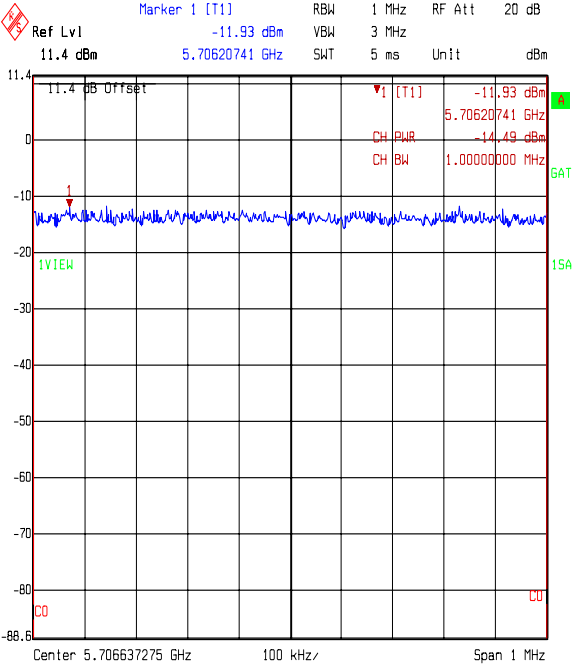
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port V



Title: PPSD for Motorola JN: 48768JD01
Comment A: 256QAM - Bottom Channel
Date: 05.DEC.2006 17:30:50



Title: PPSD for Motorola JN: 48768JD01
Comment A: 256QAM - Middle Channel
Date: 05.DEC.2006 17:40:43



Title: PPSD for Motorola JN: 48768JD01
Comment A: 256QAM - Top Channel
Date: 06.DEC.2006 10:25:24

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Peak Power Spectral Density: Part 15.407(a)(2) (Continued)

Results: Acquisition

The maximum conducted composite peak power spectral density is -8.4 dBm/MHz.

The maximum composite EIRP is $-8.4 + 23.5 \text{ dBi} = 15.1 \text{ dBm/MHz}$.

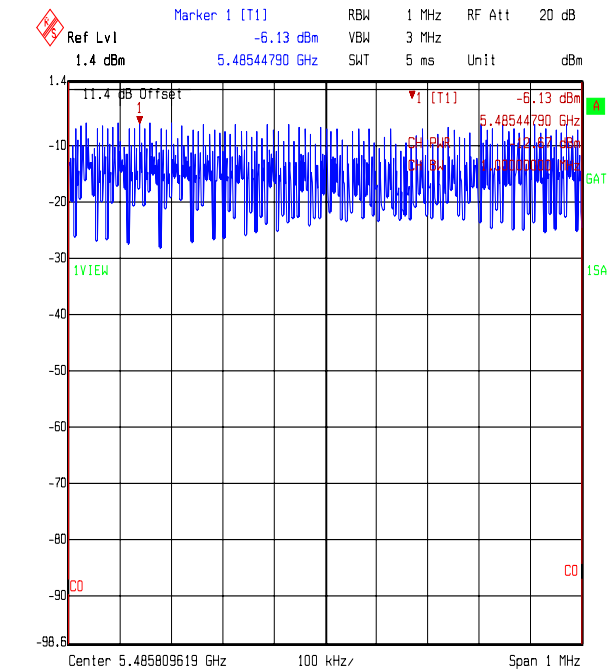
The limit is 11 dBm/MHz conducted and 17 dBm/MHz radiated.

If an antenna gain exceeds 6 dBi then the conducted power must be reduced until the EIRP limit is met. The acquisition mode complies with a margin of 19.4 dB conducted and 1.9 dB radiated.

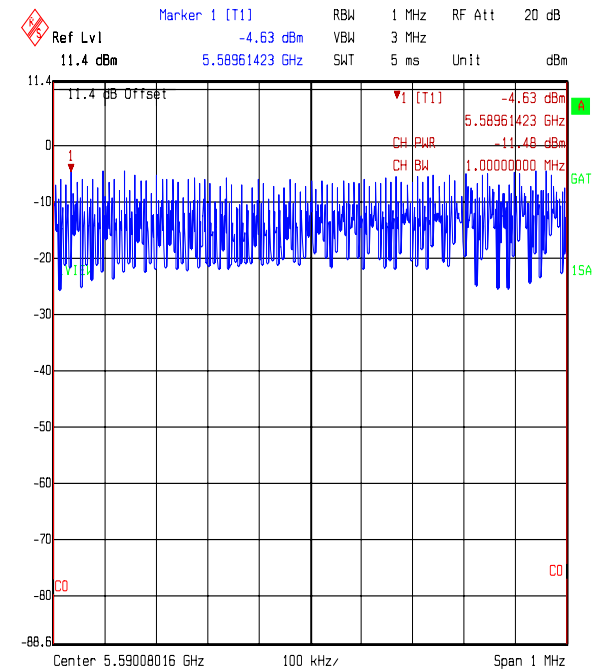
Channel	Power Spectral Density (dBm/MHz)			Limit (dBm)	Margin (dB)
	Port H	Port V	Composite		
1	-12.6	-12.6	-9.6	11.0	20.6
11	-11.5	-11.4	-8.4	11.0	19.4
23	-11.9	-11.7	-8.8	11.0	19.8

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

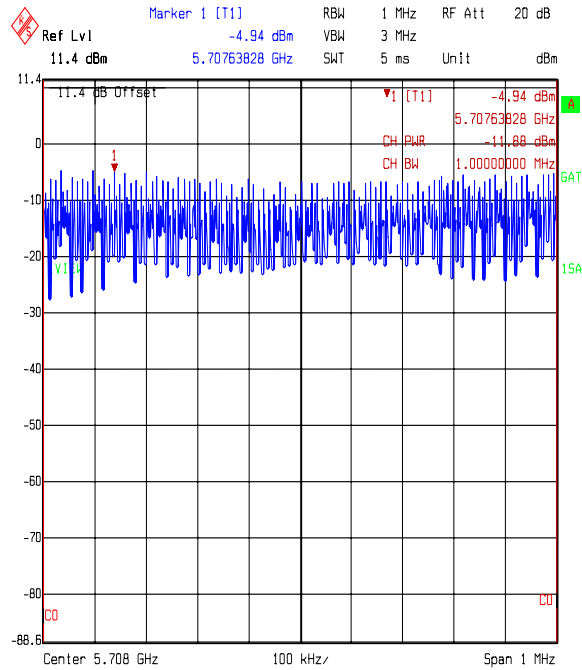
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port H



Title: PPSP for Motorola JN: 48768JD01
Comment A: Acq - Bottom Channel
Date: 05.DEC.2006 17:21:43



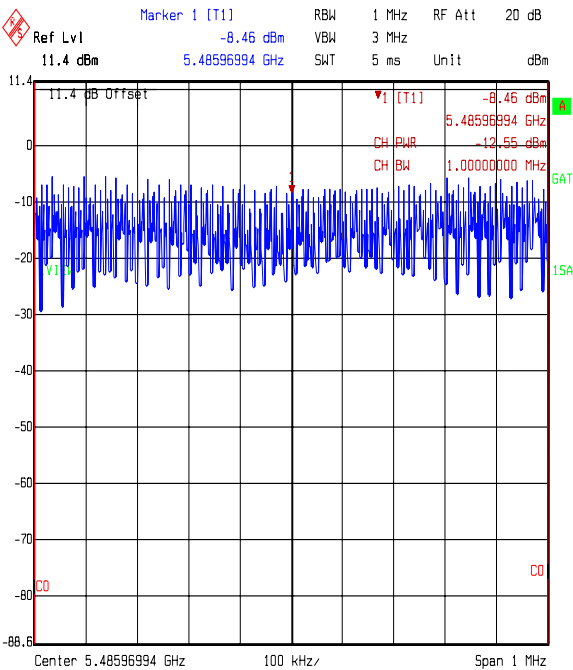
Title: PPSP for Motorola JN: 48768JD01
Comment A: Acq - Middle Channel
Date: 05.DEC.2006 17:43:48



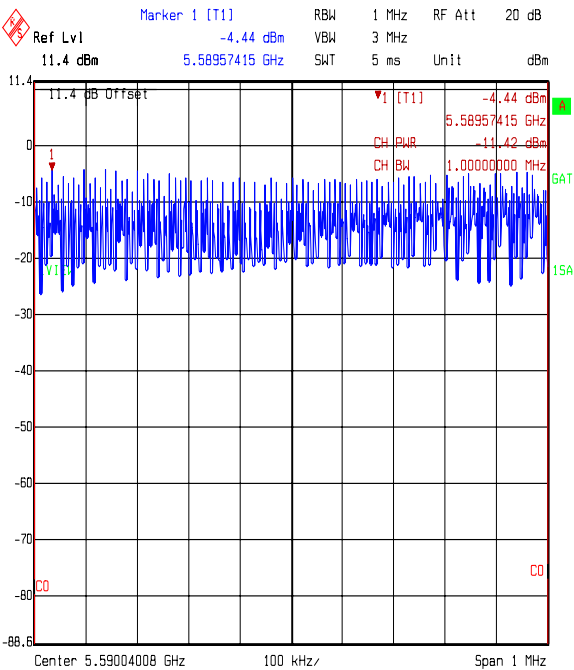
Title: PPSP for Motorola JN: 48768JD01
Comment A: Acq - Top Channel
Date: 06.DEC.2006 10:12:59

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

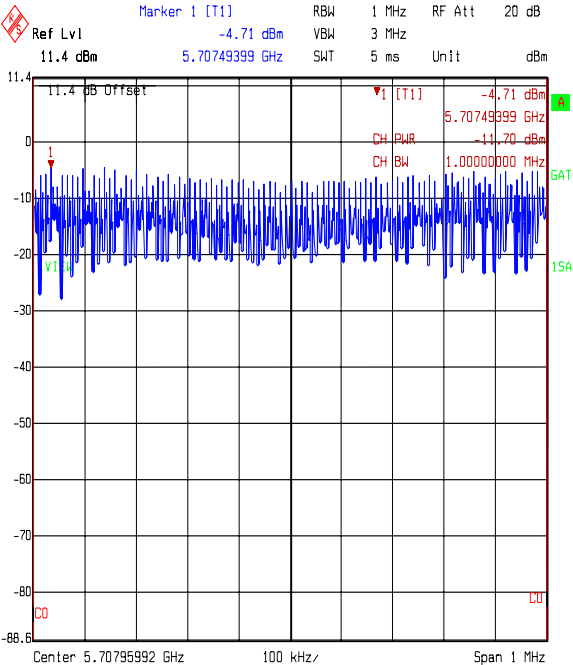
Peak Power Spectral Density: Part 15.407(a)(2) (Continued) – Port V



Title: PPSD for Motorola JN: 48768JD01
Comment A: Acq - Bottom Channel
Date: 05.DEC.2006 17:25:26



Title: PPSD for Motorola JN: 48768JD01
Comment A: Acq - Middle Channel
Date: 05.DEC.2006 17:42:31



Title: PPSD for Motorola JN: 48768JD01
Comment A: Acq - Top Channel
Date: 06.DEC.2006 10:26:40

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2.4. Peak Excursion: Part 15.407(a)(6)

The ratio of the peak excursion of the modulation envelope shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

Peak Excursion was performed on the 'H' antenna port only. The rationale for this was that both ports exhibited very similar behaviour as they are electrically identical.

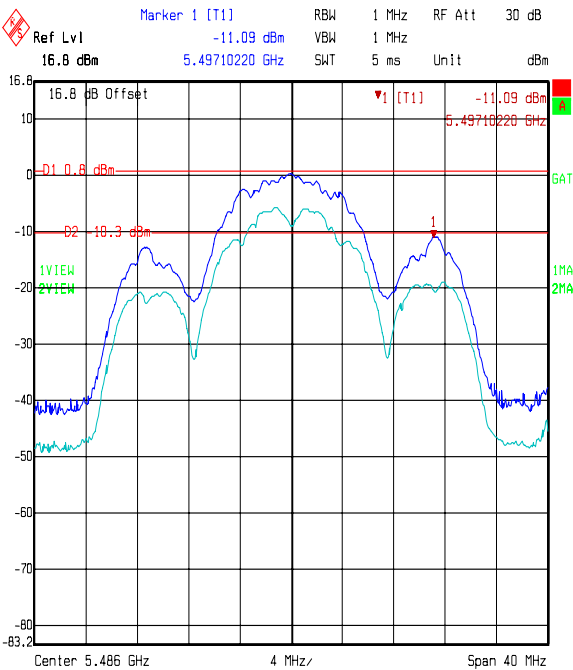
The measurement was performed in accordance with FCC UNII Devices Part 15 Subpart E procedure for Peak Excursion Measurement.

Results: Acquisition Mode

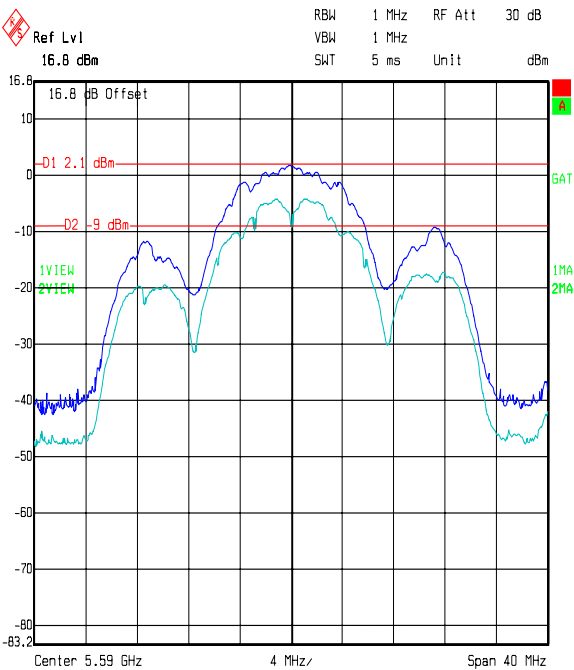
Channel	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Bottom	11.1	13.0	1.9
Middle	11.1	13.0	1.9
Top	11.3	13.0	1.7

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

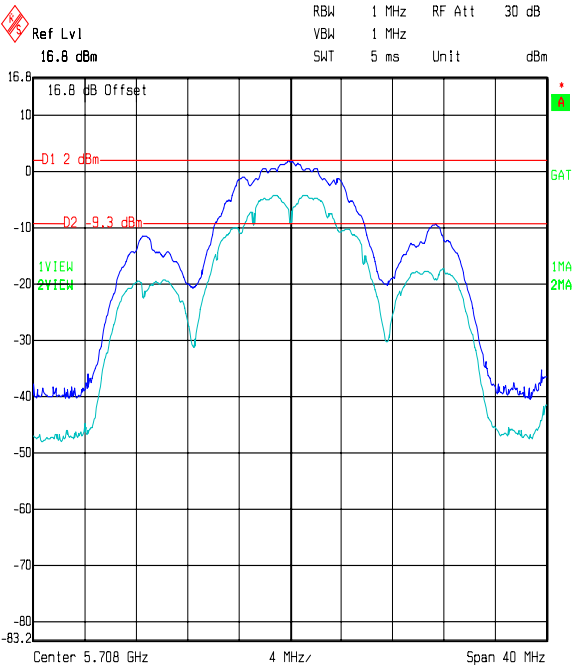
Peak Excursion: Part 15.407(a)(6) (Continued)



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: Acq - Bottom Channel
Date: 05.DEC.2006 14:54:18



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: Acq - Middle Channel
Date: 05.DEC.2006 11:03:24



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: Acq - Top Channel
Date: 05.DEC.2006 10:28:29

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

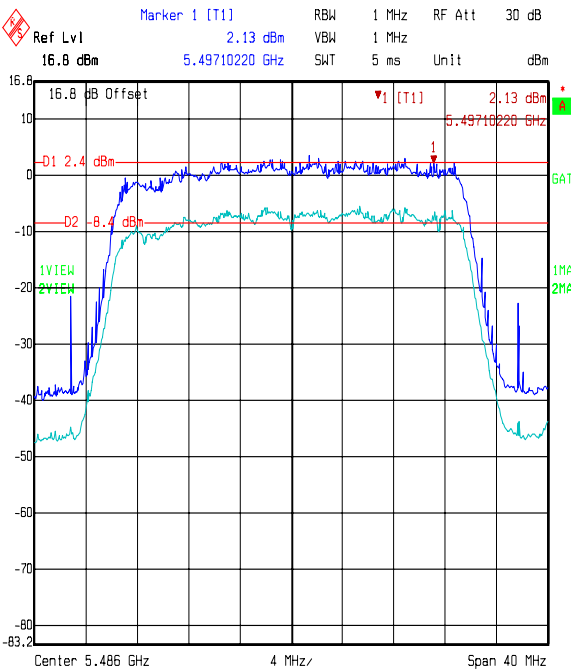
Peak Excursion: Part 15.407(a)(6) (Continued)

Results: BPSK Mode – Data Rate 82.26 Mbps

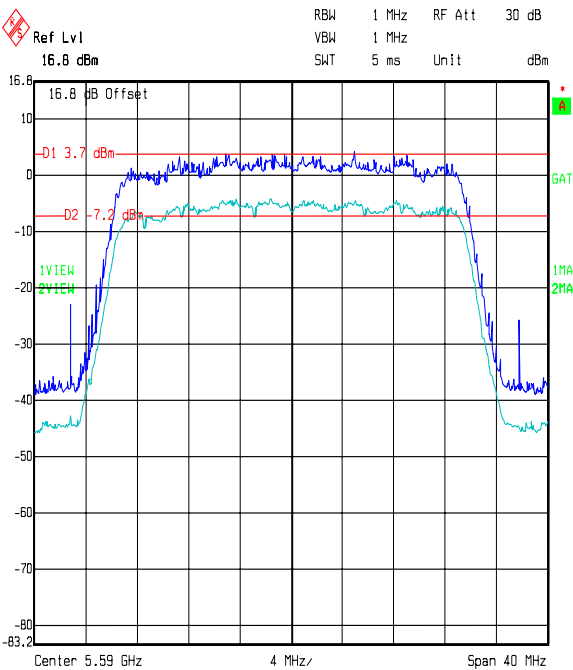
Channel	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Bottom	10.8	13.0	2.2
Middle	10.9	13.0	2.1
Top	11.3	13.0	1.7

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

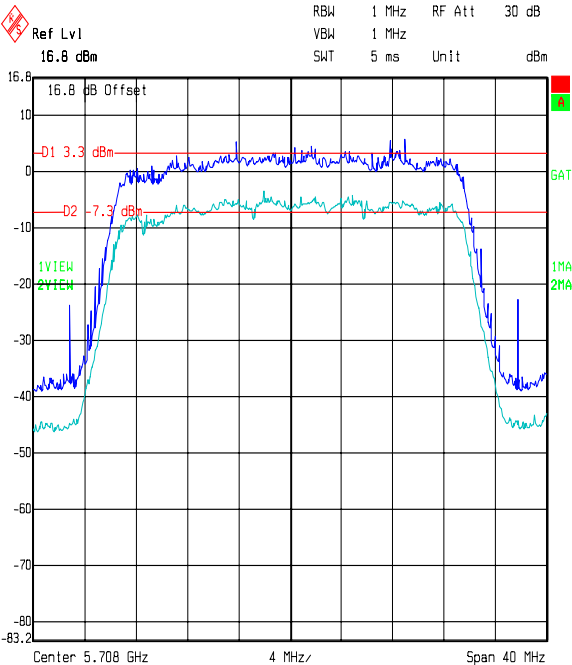
Peak Excursion: Part 15.407(a)(6) (Continued)



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: BPSK - Bottom Channel
Date: 05.DEC.2006 13:21:09



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: BPSK - Middle Channel
Date: 05.DEC.2006 10:52:12



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: BPSK - Top Channel
Date: 05.DEC.2006 10:41:25

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

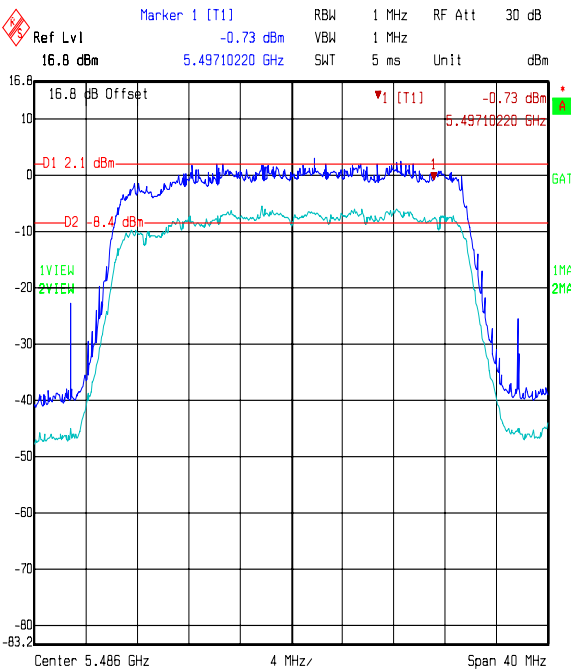
Peak Excursion: Part 15.407(a)(6) (Continued)

Results: QPSK Mode – Data Rate 89.49 Mbps

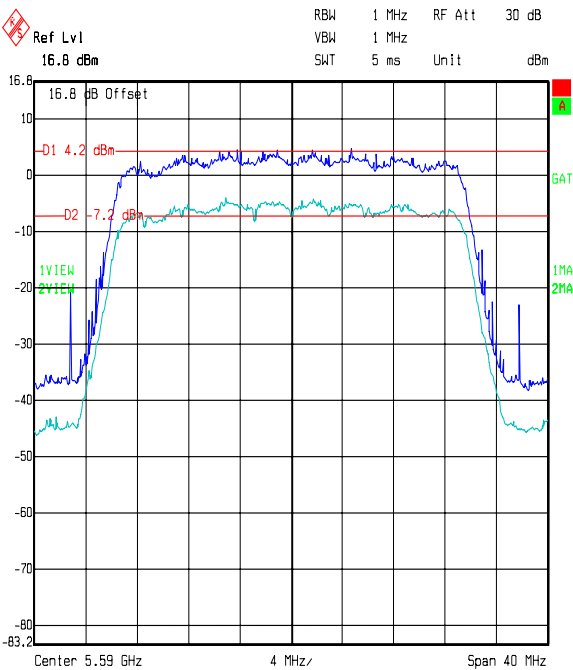
Channel	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Bottom	10.5	13.0	2.5
Middle	11.4	13.0	1.6
Top	10.3	13.0	2.7

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

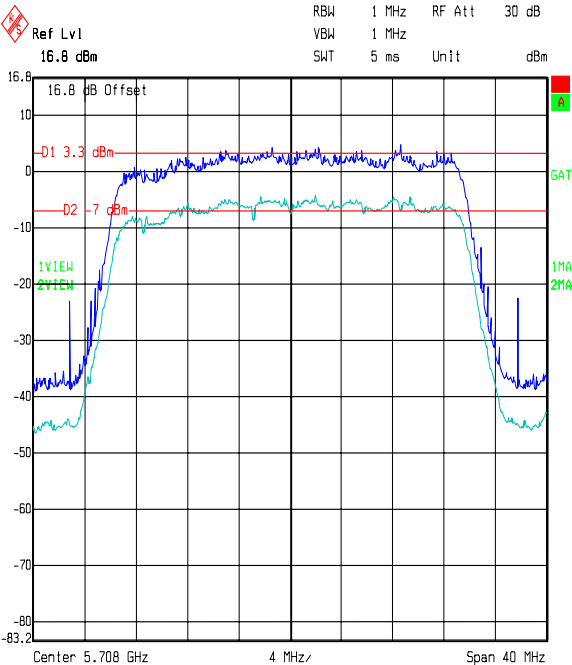
Peak Excursion: Part 15.407(a)(6) (Continued)



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: QPSK - Bottom Channel
Date: 05.DEC.2006 14:48:12



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: QPSK - Middle Channel
Date: 05.DEC.2006 10:54:13



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: QPSK - Top Channel
Date: 05.DEC.2006 10:43:06

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

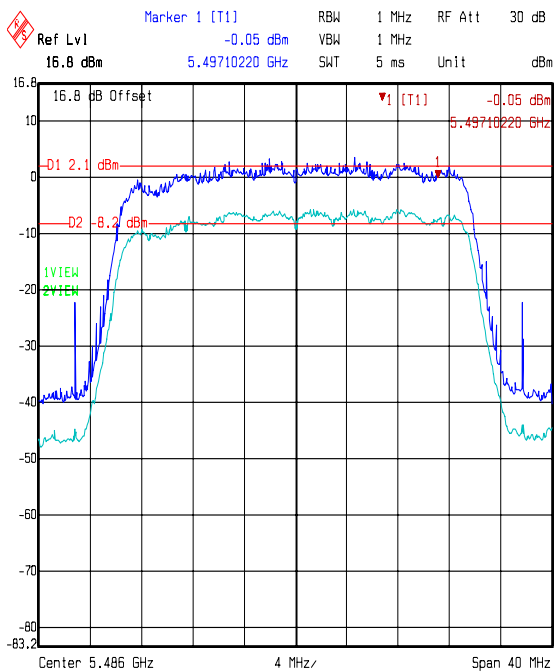
Peak Excursion: Part 15.407(a)(6) (Continued)

Results: 16QAM Mode – Data Rate 103.93 Mbps

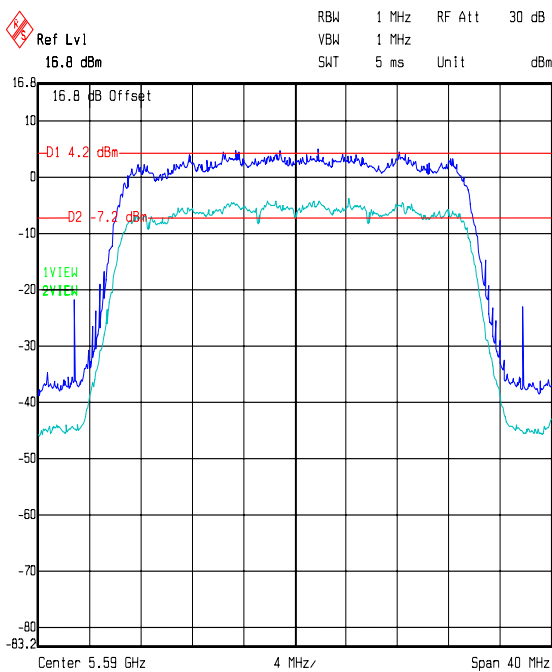
Channel	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Bottom	10.3	13.0	2.7
Middle	11.4	13.0	1.6
Top	10.7	13.0	2.3

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

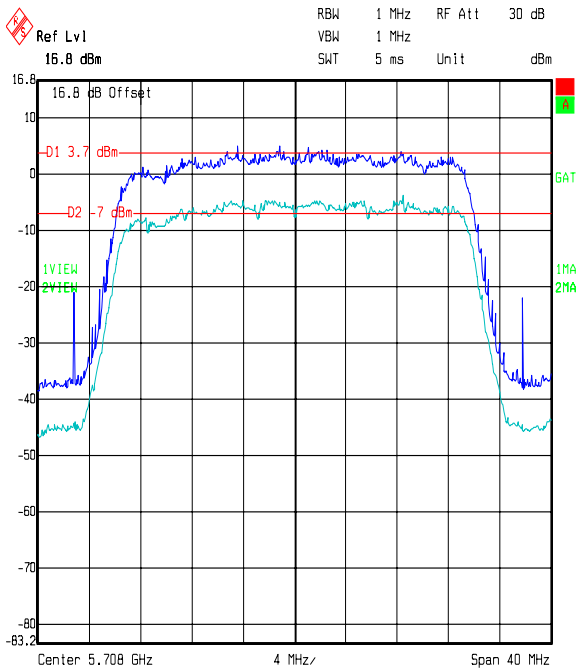
Peak Excursion: Part 15.407(a)(6) (Continued)



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 16QAM - Bottom Channel
Date: 05.DEC.2006 14:49:36



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 16QAM - Middle Channel
Date: 05.DEC.2006 10:57:06



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 16QAM - Top Channel
Date: 05.DEC.2006 10:44:16

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

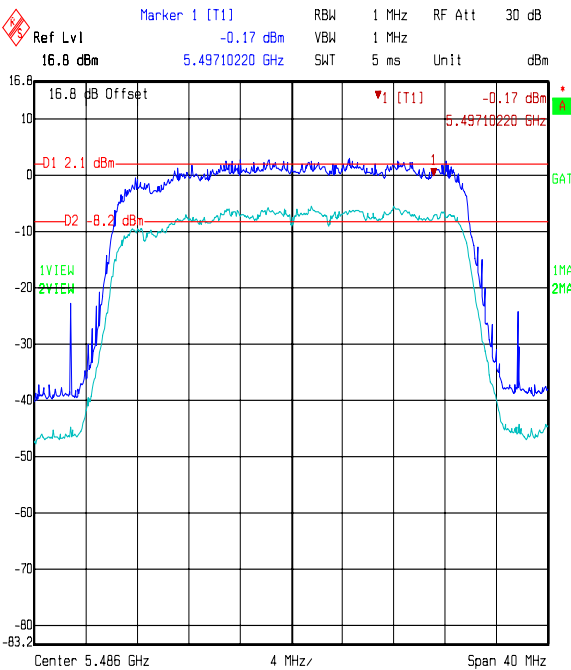
Peak Excursion: Part 15.407(a)(6) (Continued)

Results: 64QAM Mode – Data Rate 126.71 Mbps

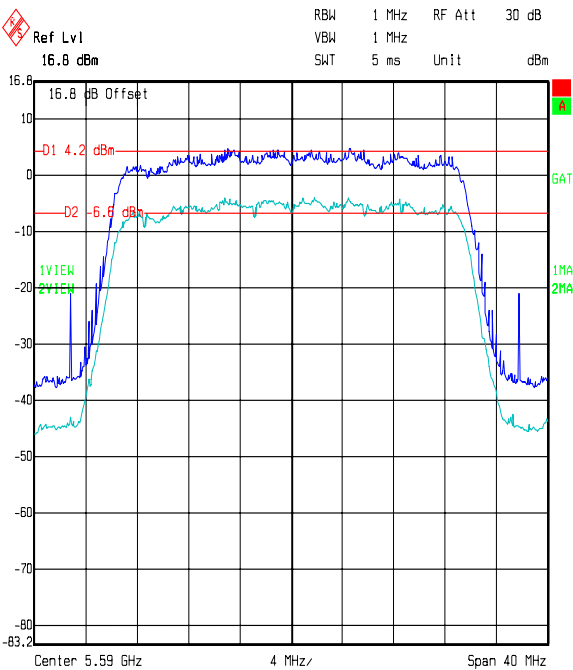
Channel	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Bottom	10.3	13.0	2.7
Middle	10.8	13.0	2.2
Top	10.8	13.0	2.2

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

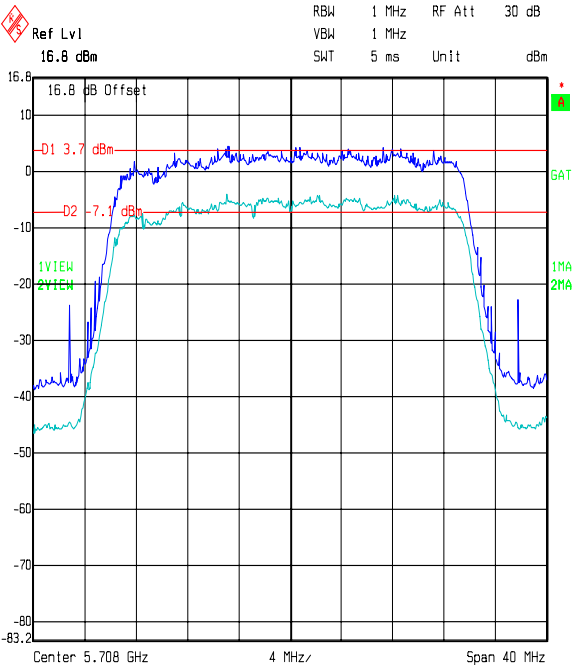
Peak Excursion: Part 15.407(a)(6) (Continued)



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 64QAM - Bottom Channel
Date: 05.DEC.2006 14:50:52



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 64QAM - Middle Channel
Date: 05.DEC.2006 10:58:49



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 64QAM - Top Channel
Date: 05.DEC.2006 10:46:55

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

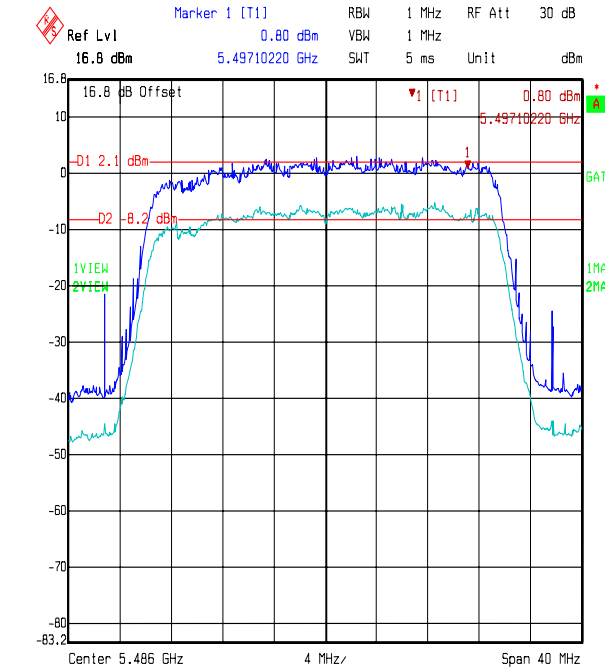
Peak Excursion: Part 15.407(a)(6) (Continued)

Results: 256QAM Mode – Data Rate 150.08 Mbps

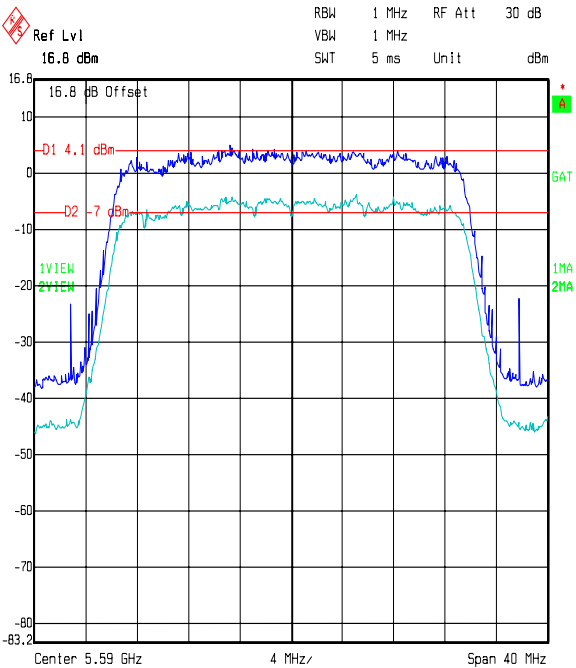
Channel	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Bottom	10.3	13.0	2.7
Middle	11.1	13.0	1.9
Top	11.4	13.0	1.6

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

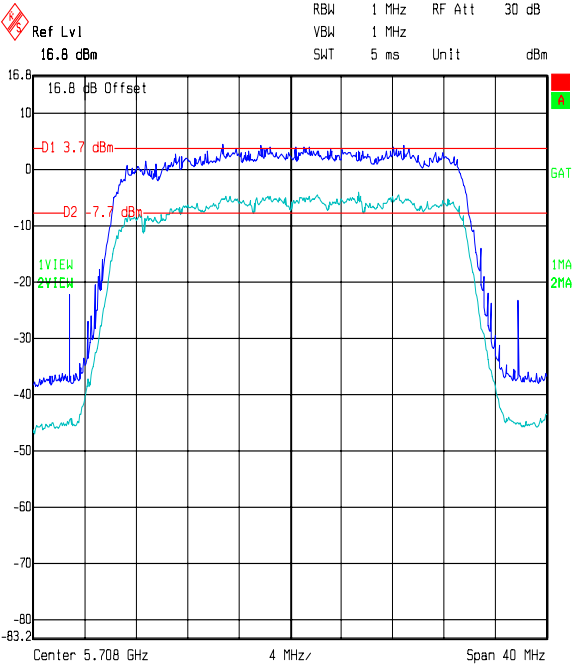
Peak Excursion: Part 15.407(a)(6) (Continued)



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 256QAM - Bottom Channel
Date: 05.DEC.2006 14:52:41



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 256QAM - Middle Channel
Date: 05.DEC.2006 11:00:57



Title: Peak Excursion for Motorola JN: 48768JD01
Comment A: 256QAM - Top Channel
Date: 05.DEC.2006 10:48:14

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2.5. Conducted Transmitter Spurious Emissions: Part 15.407

For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.

Only spurious emissions within 20 dB of the limit need be reported.

-27 dBm/MHz is the EIRP limit assuming a 0 dBi gain antenna. The declared antenna gain is 23.5 dBi.

The limit shown in the table below is calculated as $-27 \text{ dBm} - 23.5 \text{ dBi} = -50.5 \text{ dBm/MHz}$

Conducted spurious emissions were performed on the 'H' antenna port only as the 'V' antenna port is electrically identical.

The worse case mode of operation for conducted spurious emission was using BPSK modulation and thus all measurements were made in this mode.

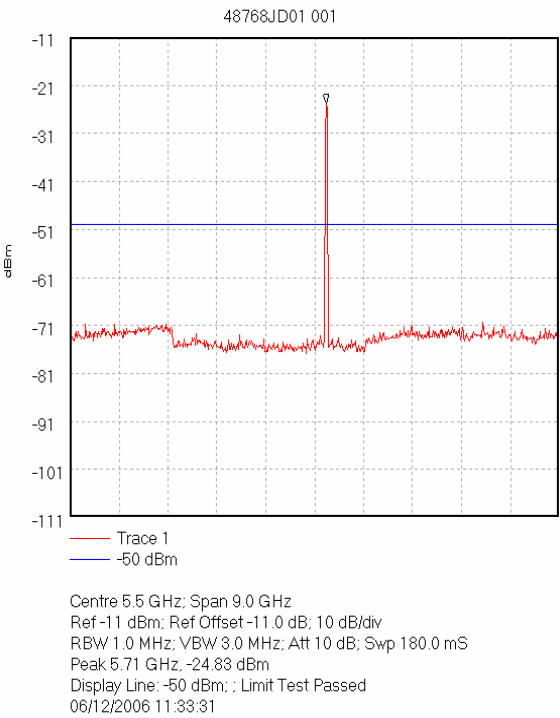
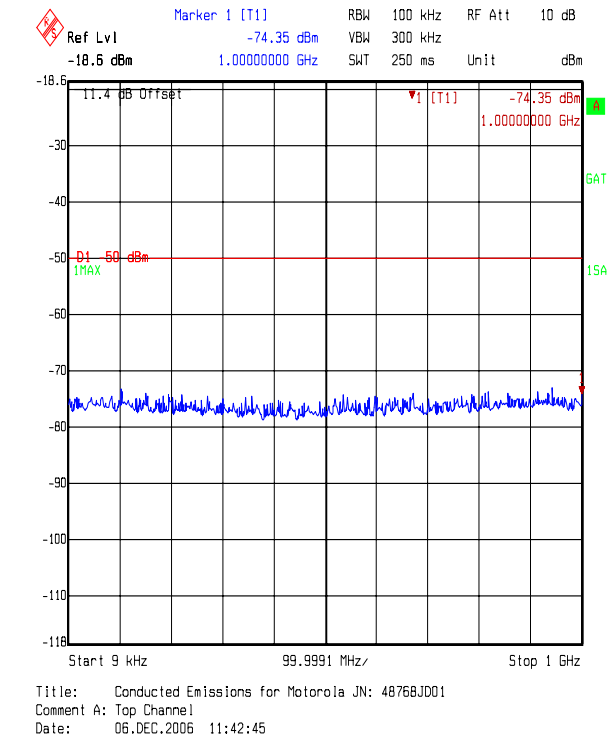
Testing was performed up to 40 GHz.

Results: BPSK Mode

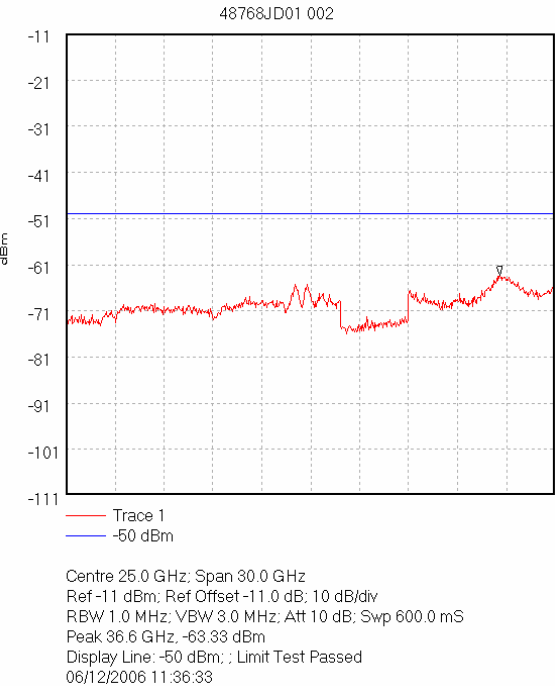
Frequency (MHz)	Data Rate (Mbps)	Peak Emission Level (dBm)	Limit (dBm/MHz)	Margin (dB)
1000	82.26	-74.4	-50.5	23.9
36600	82.26	-63.3	-50.5	12.8

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)



1GHz to 10GHz - Note that the emissions indicated in the centre of the plot is that of the carrier.



10GHz to 40GHz.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)

Band Edge

The band edge measurements were performed using a spectrum analysers channel power function centred in the 1 MHz band immediately adjacent to the band edges. This method results in the total 1 MHz channel power as requested in 15.407(b)(3) for the band edges.

The limit is calculated from the radiated limit minus the antenna gain of 23.5 dBi.

Results: BPSK Mode

Frequency (MHz)	Data Rate (Mbps)	Peak Emission Level (dBm)	Limit (dBm/MHz)	Margin (dB)
5470.000	82.26	-53.2	-50.5	2.7
5725.000	82.26	-57.4	-50.5	6.9

Results: QPSK Mode

Frequency (MHz)	Data Rate (Mbps)	Peak Emission Level (dBm)	Limit (dBm/MHz)	Margin (dB)
5470.000	82.26	-53.2	-50.5	2.7
5725.000	82.26	-57.4	-50.5	6.9

Results: 16QAM Mode

Frequency (MHz)	Data Rate (Mbps)	Peak Emission Level (dBm)	Limit (dBm/MHz)	Margin (dB)
5470.000	82.26	-53.9	-50.5	3.4
5725.000	82.26	-57.4	-50.5	6.9

Results: 64QAM Mode

Frequency (MHz)	Data Rate (Mbps)	Peak Emission Level (dBm)	Limit (dBm/MHz)	Margin (dB)
5470.000	82.26	-54.1	-50.5	3.6
5725.000	82.26	-57.4	-50.5	6.9

Results: 256QAM Mode

Frequency (MHz)	Data Rate (Mbps)	Peak Emission Level (dBm)	Limit (dBm/MHz)	Margin (dB)
5470.000	82.26	-54.1	-50.5	3.6
5725.000	82.26	-57.4	-50.5	6.9

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)

Band Edge

Results:

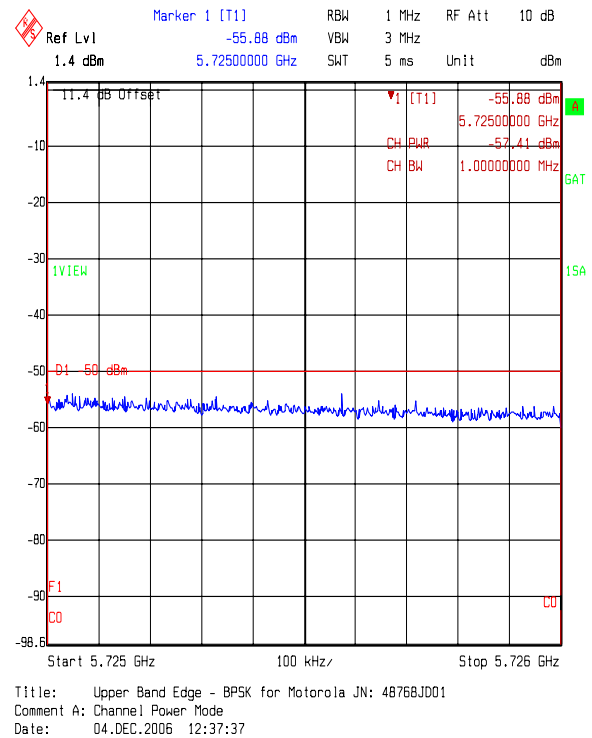
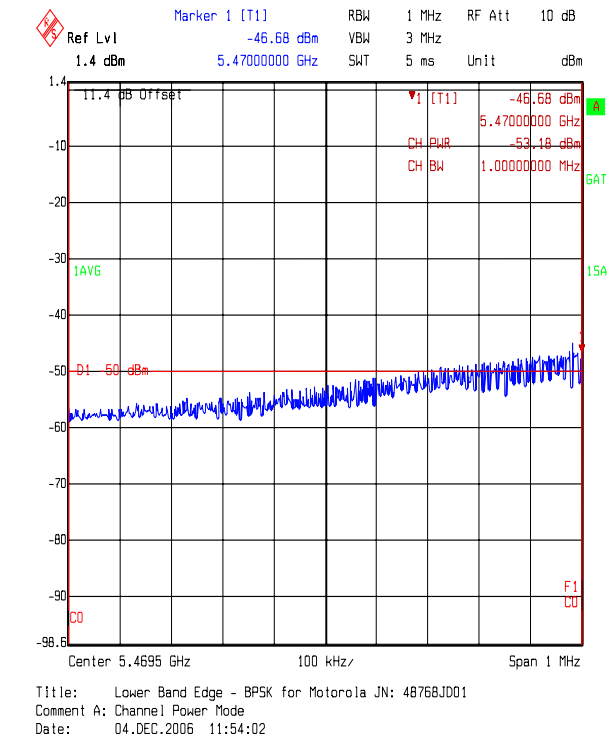
Acquisition Mode

Frequency (MHz)	Data Rate (Mbps)	Peak Emission Level (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)
5470.000	82.26	-62.2	-50.5	11.7
5725.000	82.26	-60.3	-50.5	9.8

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)

BPSK Mode

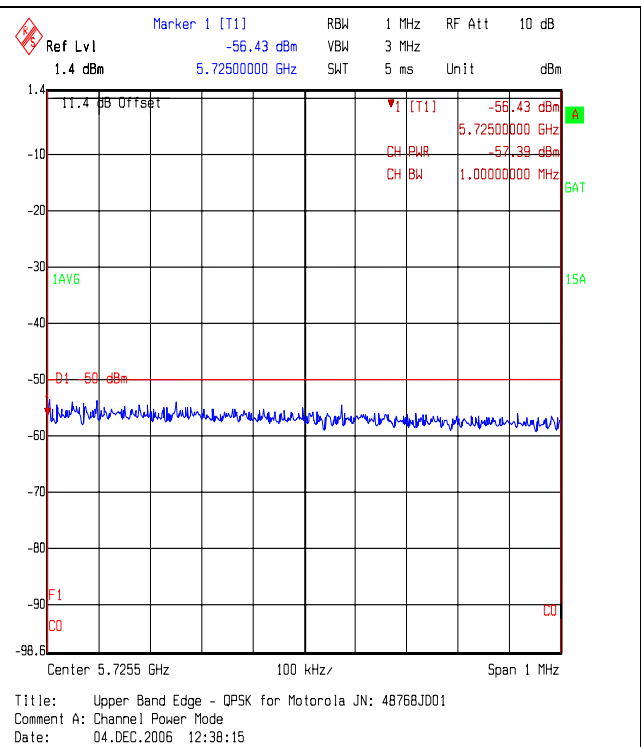
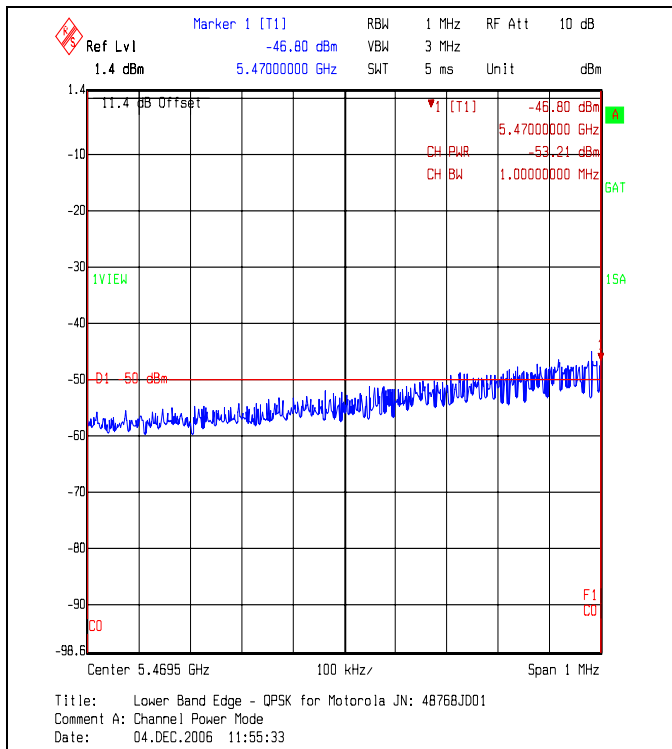


Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)

QPSK Mode

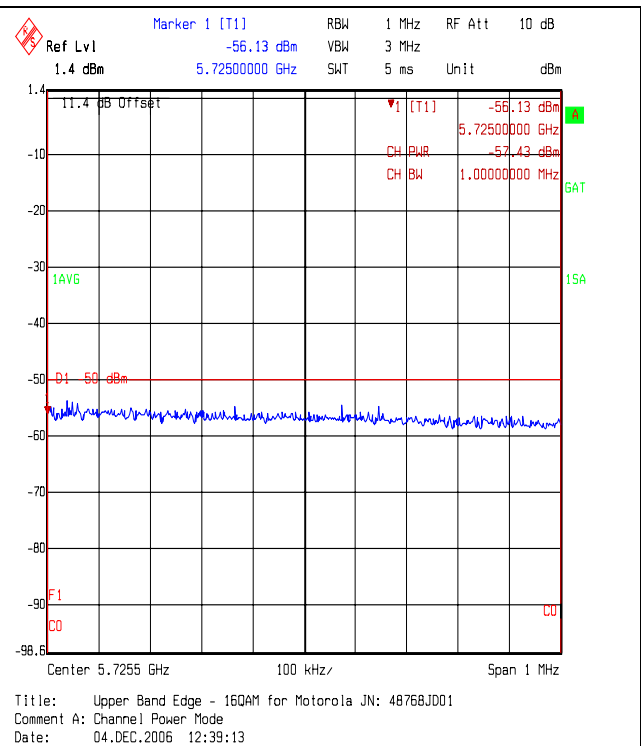
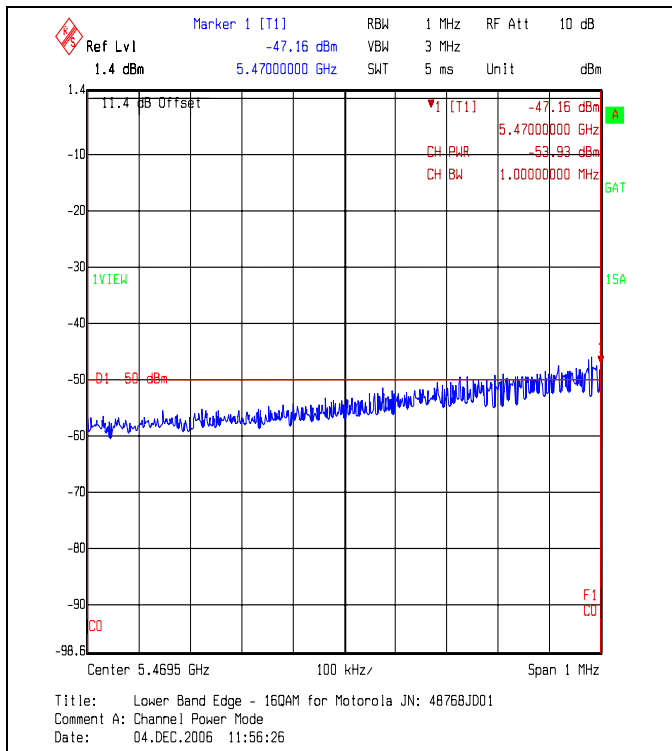


Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)

16QAM Mode

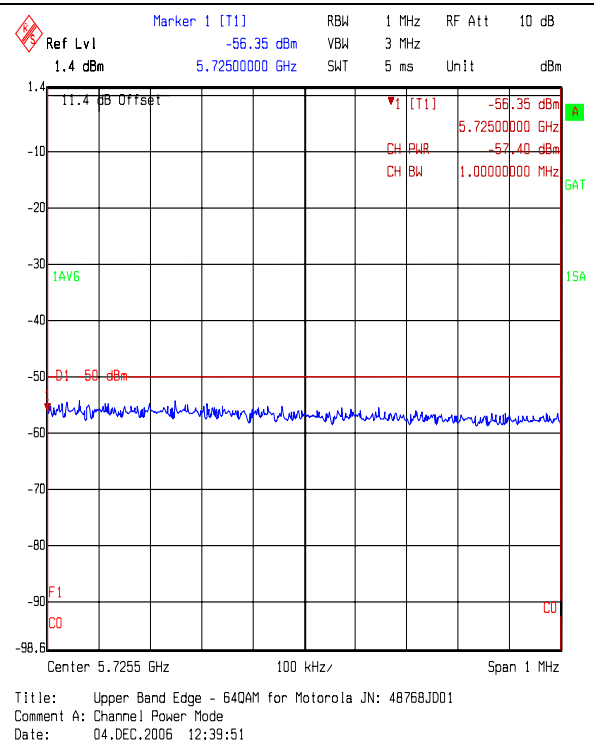
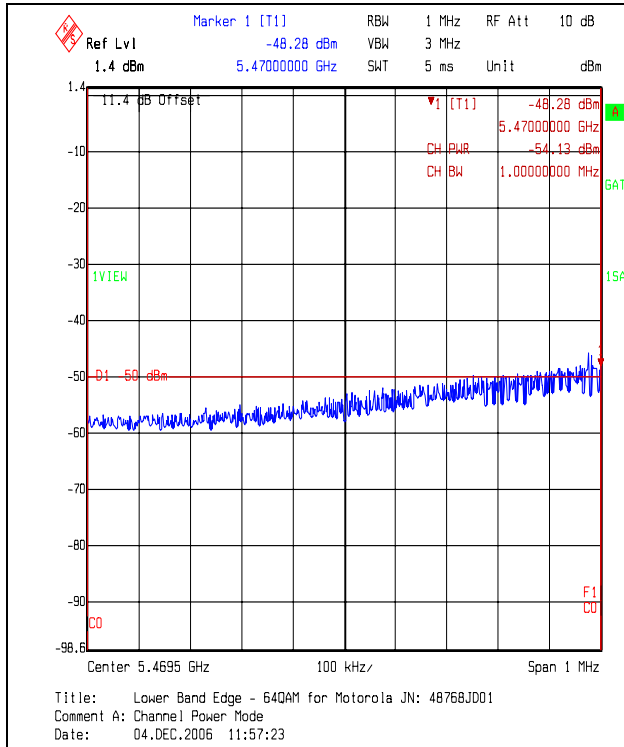


Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)

64QAM Mode

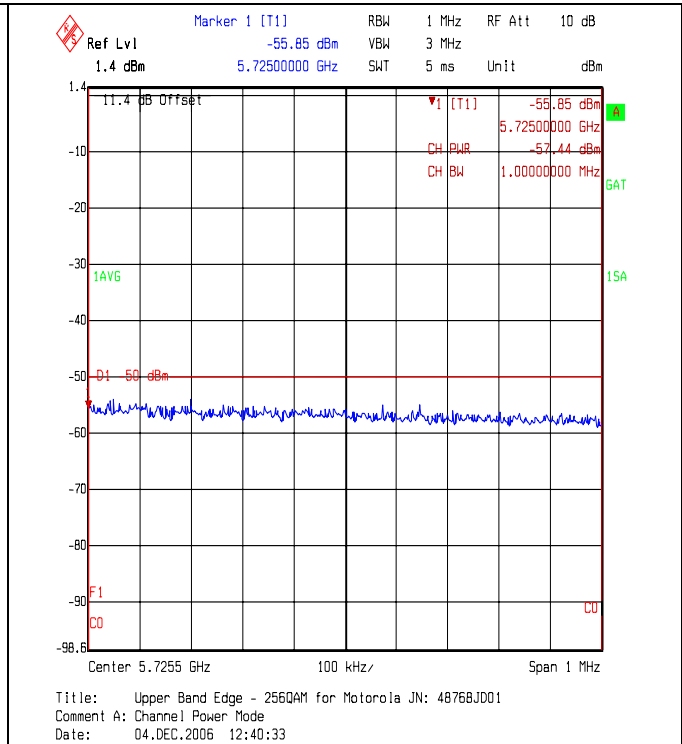
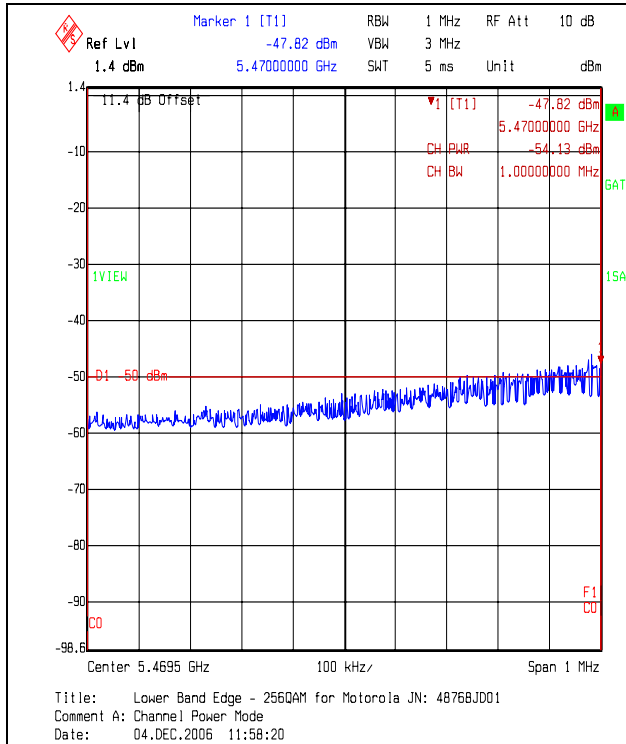


Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)

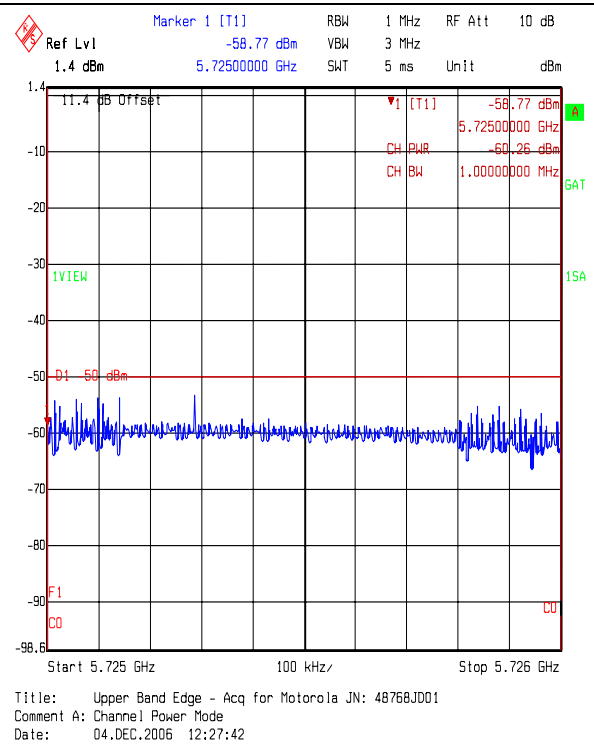
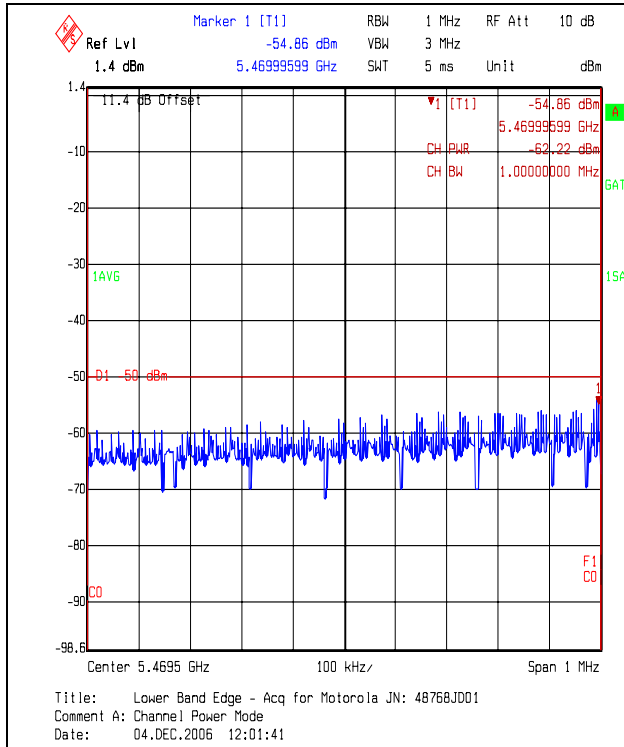
256QAM Mode



Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

**To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)**

Conducted Transmitter Spurious Emissions: Part 15.407 (Continued)
: Acquisition



Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2.6. Radiated Intentional Spurious Emissions: Part 15.209/15.407

Electric Field Strength Measurements (30 MHz to 1 GHz)

Radiated emissions measurements were performed in accordance with the standard, against appropriate limits for each detector function.

Initial measurements covering the entire measurement band in the form of swept scans in a shielded enclosure were performed in order to identify frequencies on which the EUT was generating interference. This determined the frequencies on which the EUT should be re-measured in full on the open area test site.

The initial scans were performed using an antenna height of 1.5 m and a measurement distance of 3 m. Following the initial scans, graphs were produced giving an overview of the emissions from the EUT plotted against the appropriate specification limit. Any emission within 20 dB of the limit were then measured on the open area test site, except in cases where the noise floor was within 20 dB of the limit, in these cases the highest point of the noise floor was measured.

For the final measurements the EUT was arranged on a non-conducting turn table on a standard test site compliant with ANSI C63.4 – 2001 Clause 5.4.

All measurements on the open area test site were performed using broadband antennas.

On the open area test site, at each frequency where a signal was to be measured, the trace was maximised by rotating a turntable through 360°. The angle at which the maximum signal was observed was locked out. For frequencies below 1000 MHz the test antenna was varied in height between 1 m and 4 m in order to further maximise the target emission.

For frequencies above 1000 MHz where a horn antenna was used, height searching was performed to locate the optimal height of the horn with respect to the EUT. At this point the horn was locked off and the turntable was again rotated through 360° to maximise the target signal.

Results:

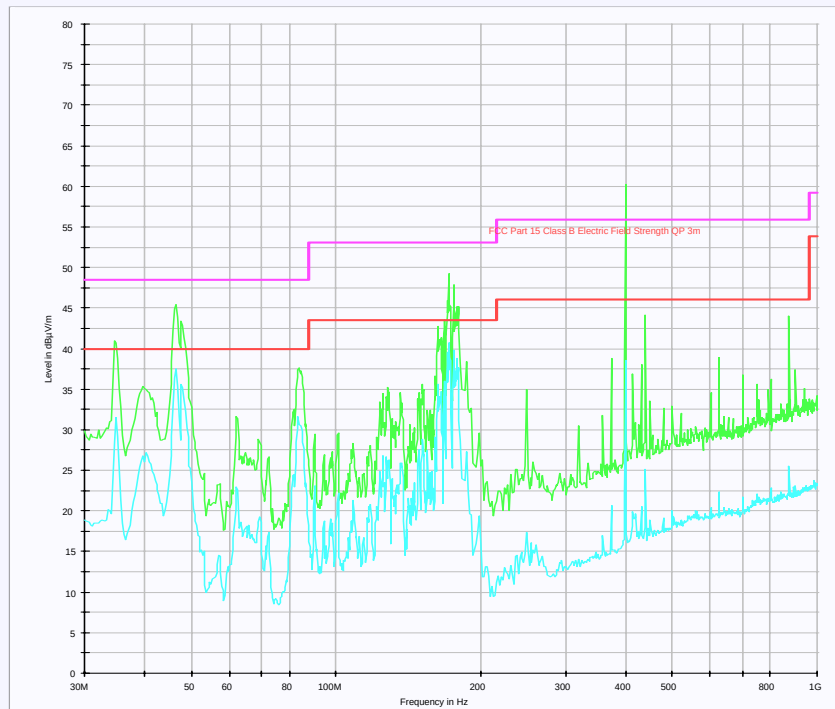
Top/Bottom Channels

Frequency (MHz)	Antenna Polarity	Q-P Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
34.779	Vertical	34.5	40.0	5.5
46.523	Vertical	17.3	40.0	22.7
81.552	Vertical	11.7	40.0	28.3
171.152	Vertical	25.3	43.5	18.2
400.009	Vertical	44.0	46.0	2.0
874.989	Horizontal	39.4	46.0	6.6

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Radiated Intentional Spurious Emissions: Part 15.209/15.407 (Continued)



Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Radiated Intentional Spurious Emissions: Part 15.209/15.407 (Continued)

Average Electric Field Strength Measurements (1 GHz to 40 GHz)

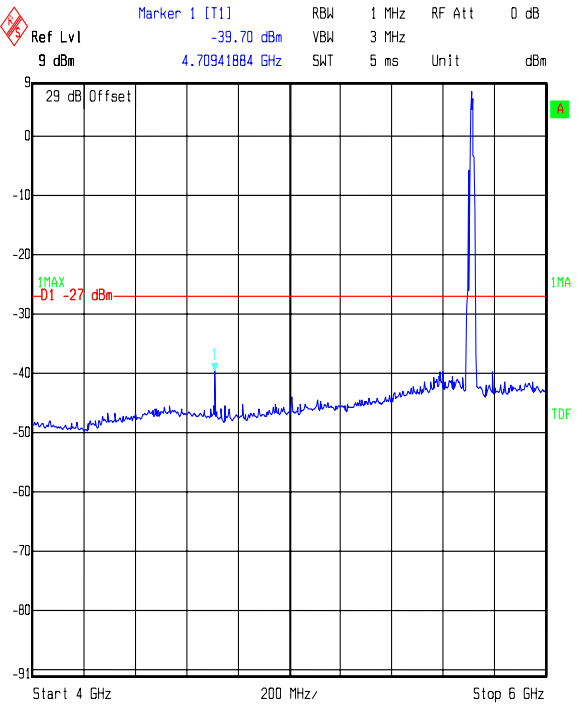
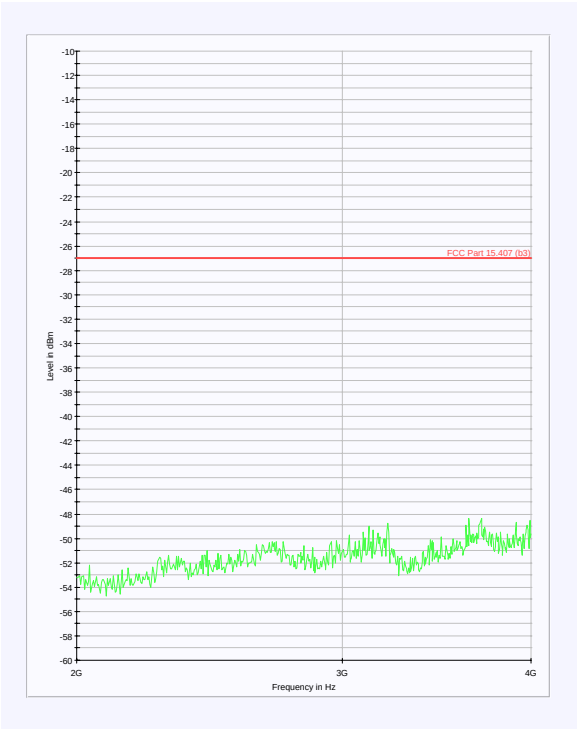
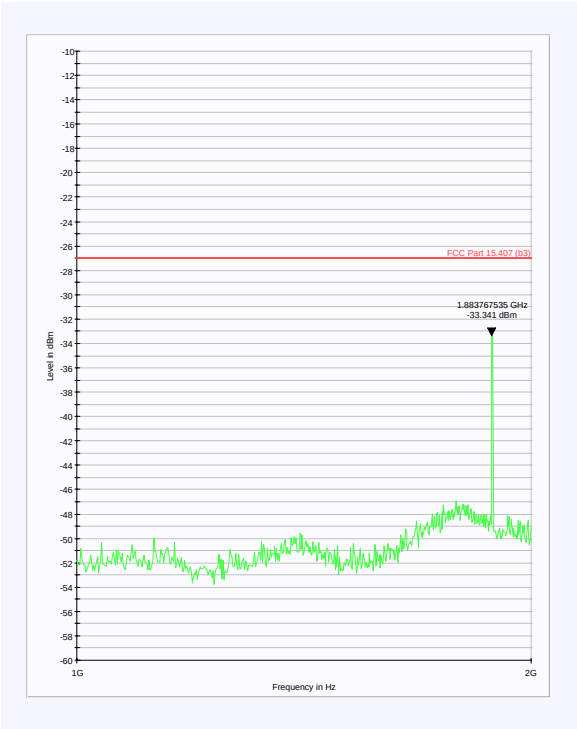
Results:

Bottom/Middle/Top Channel

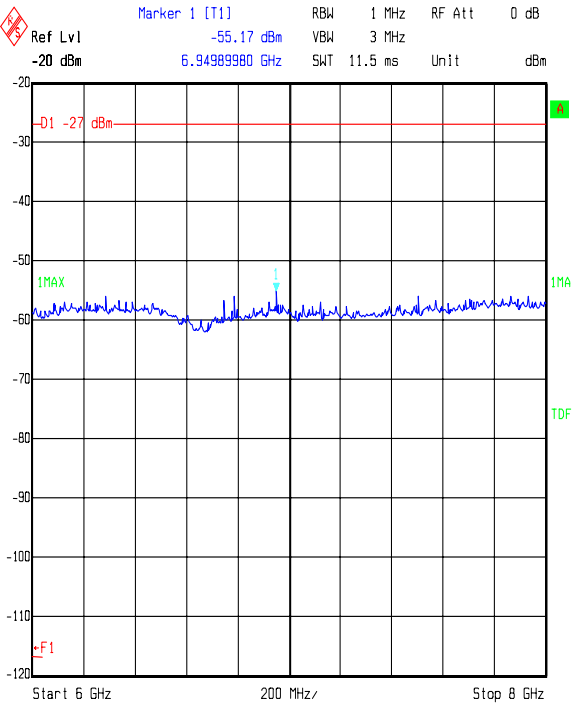
Frequency (MHz)	Antenna Polarity	Level (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)
1883.738	Vertical	-34.9	-27	7.9
4488.022	Vertical	-43.5	-27	16.5
4597.784	Vertical	-44.1	-27	17.1
4707.767	Vertical	-38.4	-27	11.4

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Radiated Intentional Spurious Emissions: Part 15.209/15.407 (Continued)



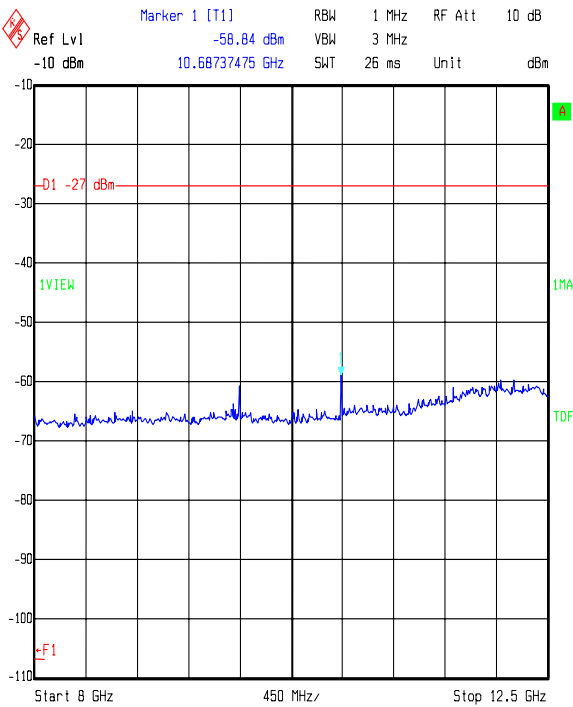
Date: 28.NOV.2006 12:04:38



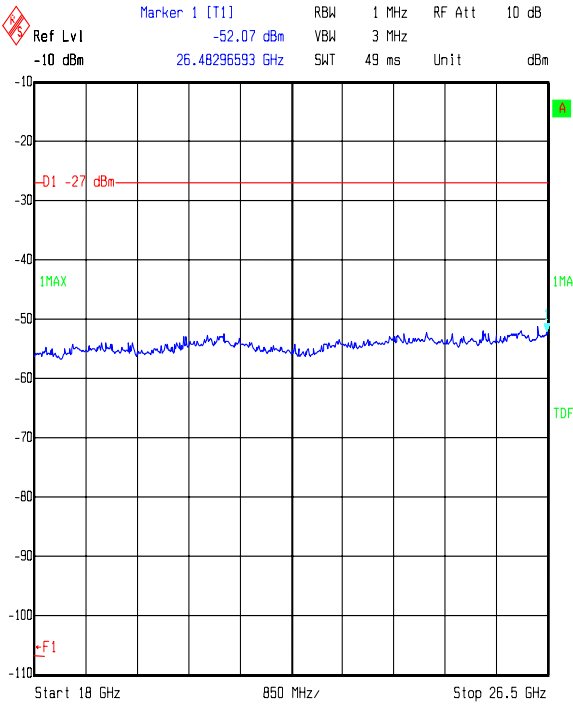
Date: 28.NOV.2006 15:02:31

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

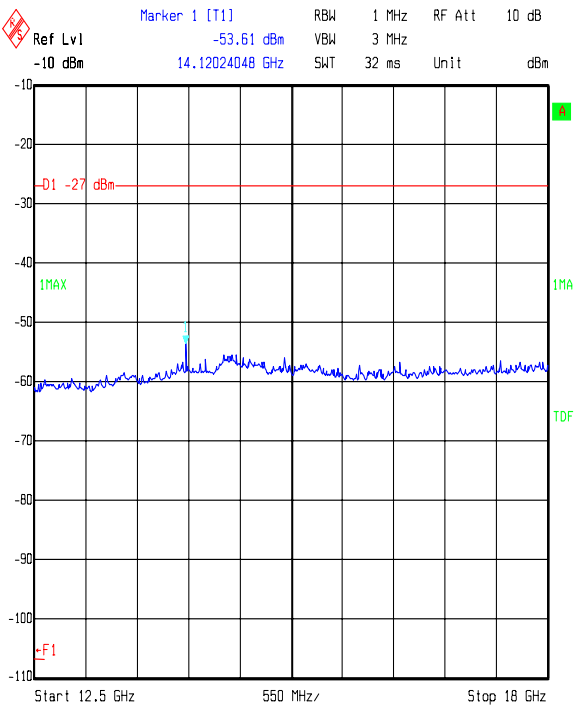
Radiated Intentional Spurious Emissions: Part 15.209/15.407 (Continued)



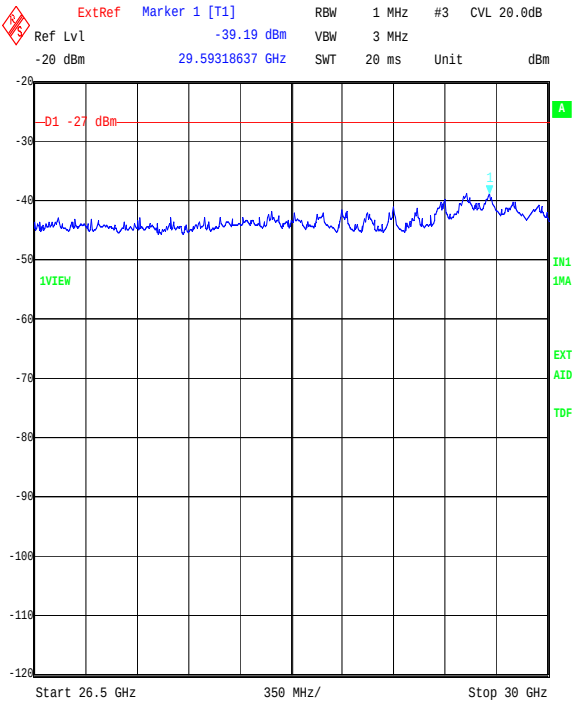
Date: 28.NOV.2006 15:51:25



Date: 28.NOV.2006 15:37:49



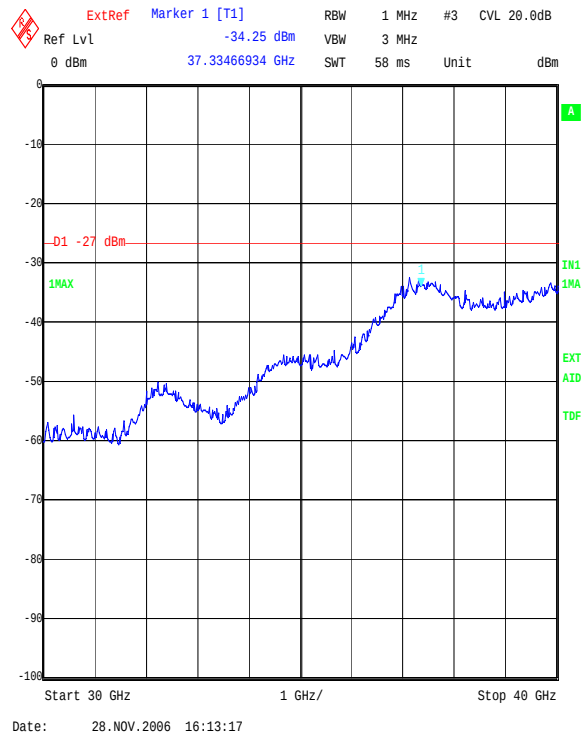
Date: 28.NOV.2006 15:21:34



Date: 28.NOV.2006 16:08:37

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600
To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Radiated Intentional Spurious Emissions: Part 15.209/15.407 (Continued)



Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2.7. AC Conducted Emissions: Part 15.207

AC mains conducted emissions measurements were performed in accordance with the standard, against appropriate limits for each detector function.

The test was performed in a shielded enclosure with the equipment arranged as detailed in the standard on a wooden bench using the floor of the screened enclosure as the ground reference plane. The EUT was powered with 110 V, 60 Hz, AC mains supplied via a Line Impedance Stabilisation Network (LISN).

Initial measurements in the form of swept scans covering the entire measurement band were performed in order to identify frequencies on which the EUT was generating interference. In order to minimise the time taken for these swept measurements, a Peak detector was used in conjunction with the appropriate detector IF measuring bandwidths (see table below). Repetitive scans were performed to allow for emissions with low repetition rates, and the duty cycle of the EUT. The test configuration was the same for the initial scans as for the final measurements.

Following the initial scans, a graph was produced giving an overview of the emissions from the EUT plotted against the appropriate specification limit. A tolerance line was set 6 dB below the specification limit and levels above the tolerance line were re-tested (at individual frequencies) using the appropriate detector function.

The test equipment settings for conducted emissions measurements were as follows:

Receiver Function	Initial Scan	Final Measurements
Detector Type:	Peak	Quasi-Peak (CISPR)/Average
Mode:	Max Hold	Not applicable
Bandwidth:	10 kHz	9 kHz
Amplitude Range:	60 dB	20 dB
Measurement Time:	Not applicable	> 1 s
Observation Time:	Not applicable	> 15 s
Step Size:	Continuous sweep	Not applicable
Sweep Time:	Coupled	Not applicable

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

AC Conducted Emissions: Part 15.207 (Continued)

Results:

Quasi-Peak Detector Measurements on Live and Neutral Lines

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.170	Neutral	48.8	65.0	16.2	Complied
0.174	Neutral	46.5	64.8	18.3	Complied
0.210	Live	34.8	63.2	28.4	Complied
0.230	Neutral	45.8	62.4	16.6	Complied
0.282	Live	36.5	60.8	24.3	Complied
0.342	Live	41.8	59.2	17.4	Complied
0.398	Live	40.4	57.9	17.5	Complied
0.514	Live	39.0	56.0	17.0	Complied
0.682	Live	33.0	56.0	23.0	Complied
29.830	Live	40.1	60.0	19.9	Complied

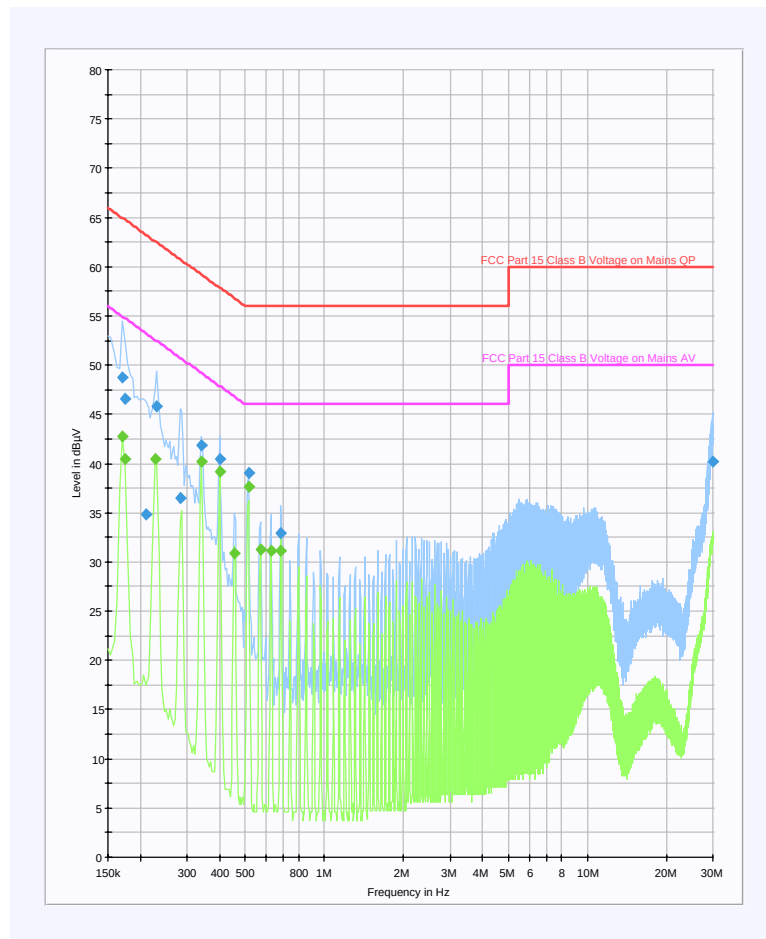
Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

AC Conducted Emissions: Part 15.207 (Continued)

Average Detector Measurements on Live and Neutral Lines

Frequency (MHz)	Line	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Result
0.170	Neutral	42.7	55.0	12.3	Complied
0.174	Neutral	40.4	54.8	14.4	Complied
0.226	Live	40.4	52.6	12.2	Complied
0.342	Live	40.2	49.2	9.0	Complied
0.398	Live	39.1	47.9	8.8	Complied
0.454	Live	30.9	46.8	15.9	Complied
0.514	Live	37.6	46.0	8.4	Complied
0.570	Live	31.2	46.0	14.8	Complied
0.626	Live	31.1	46.0	14.9	Complied
0.682	Live	31.2	46.0	14.8	Complied



Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

7.2.8. Transmitter Power Control

The maximum radiated power was measured as 28.3 dBm, therefore to show TPC compliance the EUT must show that it can control its power down to at least 22.3 dBm.

The following test was performed on one antenna port only and is intended to demonstrate the EUT power control software which is identical in operation for both antenna ports.

A step attenuator was installed between the Master and slave transceivers. The attenuator was adjusted in 2 dB steps and the EUT output was monitored via power meter. It can be seen from the following table that the EUT output power decreased by 8 dB thus showing that EUT power control functions satisfactorily and that the 6 dB limit is clearly met.

Attenuator Setting (dB)	Output Power (dBm)
48	-1.8
46	-5.0
44	-4.6
42	-8.3
40	-10.0

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

8. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Measurement Type	Confidence Level (%)	Calculated Uncertainty
Transmitter 99% and 26 dB Bandwidth	95%	11.4 ppm
Maximum Conducted Output Power	95%	0.3 dB
Average Output Power	95%	0.3 dB
Peak Power Spectral Density	95%	0.3 dB
Peak Excursion	95%	0.3 dB
Conducted Transmitter Spurious Emissions	95%	0.5 dB
Radiated Standby Spurious Emissions	95%	2.9 dB
Radiated Transmitter Spurious Emissions	95%	2.9 dB
AC Mains Conducted Emissions	95%	3.94 dB
Transmitter Power Control (TPC)	95%	0.3 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A028	Horn Antenna	Eaton	91888-2	304	08 Jun 06	36
A031	2 to 4 GHz Eaton Horn Antenna	Eaton	91889-2	557	08 Jun 06	36
A1037	Chase Bilog Antenna	Chase EMC Ltd	CBL6112B	2413	20 Sept 06	12
A1069	ESH3-Z5	Rohde & Schwarz	ESH3-Z5	837469/012	31 Jan 06	12
A1272	Power splitter	mini circuits	ZFRSC-42	002	Cal Before Use	-
A1275	Power splitter	mini circuits	ZFSC-2-2500	001	Cal Before Use	-
A1360	ESH3-Z2 Pulse Limiter	Rohde & Schwarz	ESH3-Z2	A1360-20112003	06 Sept 06	12
A1391	10dB/18GHz/50Ohm Attenuator	HUBER + SUHNER AG	757987	6810.17.B	Cal Before Use	-
A1392	20dB/18GHz/50Ohm Attenuator	HUBER + SUHNER AG	757456	6820.17.B	Cal Before Use	-
A1393	20dB/18GHz/50Ohm Attenuator	HUBER + SUHNER AG	757456	6820.17.B	Cal Before Use	-
A1396	10dB/18GHz/50Ohm Attenuator	HUBER + SUHNER AG	757987	6810.17.B	Cal Before Use	-
A1491	DC-4GHz 10dB Attenuator	M/A	FSC 96341	2082-6173-10	Cal Before Use	-
A1492	DC-4GHz 10dB Attenuator	M/A	FSC96341	2082-6173-10	Cal Before Use	-
A1495	DC-18GHz 6dB Attenuator	M/A	FSC 96341	2082-6146-06	Cal Before Use	-
A1496	DC-18GHz 6dB Attenuator	M/A	FSC 96341	2083-6146-06	Cal Before Use	-
A1534	Preamplifier 1-26.5 GHz	Hewlett Packard	8449B OPT H02	3008A00405	06 Oct 06	12
A1536	Variable Attenuators	Hwelett Packard	9494B & 9496B	3308A30801 & 3308A19649	Cal Before Use	-
A244	20 dB Attenuator	Schaffner	6820-17-B	None	Cal Before Use	-
A254	WG 14 Microwave Horn	Flann Microwave	14240-20	139	17 Nov 06	36
A255	WG 16 Microwave Horn	Flann Microwave	16240-20	519	17 Nov 06	36

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Test Equipment Used (Continued)

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A428	WG 12 horn	Flann	12240-20	134	17 Nov 06	36
A430	WG 18 horn	Flann	18240-20	425	17 Nov 06	36
A435	WG 22 horn	Flann	22240-20	400	21 Jul 06	36
C1081	Cable 2m	Rosenberger	FA210A102 0M5050	28463-2	Cal Before Use	-
C1082	Cable 2m	Rosenberger	FA210A102 0M5050	28463-1	Cal Before Use	-
C1111	Cable	Semflex Inc.	X116BFSX1 0080	0337	05 May 06	12
C1153	SMA cable	The Workhorse	WHU26- 3636-060	None	Cal Before Use	-
C1154	SMA cable	The Workhorse	WHU26- 3636-060	None	Cal Before Use	-
C1164	1.5m N-type Cable	Rosenberger Micro-Coax	FA210A101 5007070	43188-1	Cal Before Use	-
C1166	2m N-Type Cable	Rosenberger Micro-Coax	FA210A102 0007070	43189-02	Cal Before Use	-
C1180	BNC cable	RS Components	284-3792	0	Cal Before Use	-
C1182	BNC cable	RS Components	284-3809	0	Cal Before Use	-
C1192	SMA Cable	Rosenberger	FA210A101 5M3030	27141-07	28 Apr 06	12
C151	Cable	Rosenberger	UFA210A-1- 1181-70x70	None	22 Sept 06	12
C160	Cables	Rosenberger	UFA210A-1- 1181-70x70	None	22 Jan 06	12
C348	Cable	Rosenberger	UFA210A-1- 1181-70x70	2993	29 Jan 06	12

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Test Equipment Used (Continued)

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
C363	BNC Cable	Rosenberger	RG142	None	29 Jan 06	12
C433	Cable	Not stated	Not stated	Not stated	30 Jan 06	12
M1122	40 GHz Peak Power Sensor	Boonton Electronics	57340	3297	17 May 06	12
M1123	RF Power Meter	Boonton	4531	138201	17 May 06	12
M1178	Thermo-Hygro	RS	212-124	N/A	11 Feb 06	12
M1242	FSEM30 Spectrum Analyser	Rohde & Schwarz, Inc.	FSEM30	845986_022	08 Sept 06	12
M1252	HP 83640A 40 GHz Signal Generator	HP	83640A	3119A00489	10 Aug 06	12
M1263	ESIB7	Rohde & Schwarz	ESIB7	100265	12 Jan 06	12
M1264	Thermo Hygro	RS	212-124	0	18 Feb 06	12
M1266	Thermo Hygro	RS	212-124	0	18 Feb 06	12
M1269	True RMS Multimeter	Fluke	179	90250210	16 Feb 06	12
M127	Spectrum Analyser	Rohde & Schwarz	FSEB 30	842 659/016	07 Aug 06	12
S202	Site 2	RFI	2	S202-15011990	06 Oct 06	12
S212	Site 12	RFI	12		N/A	-

NB In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

Appendix 2. Test Configuration Drawings

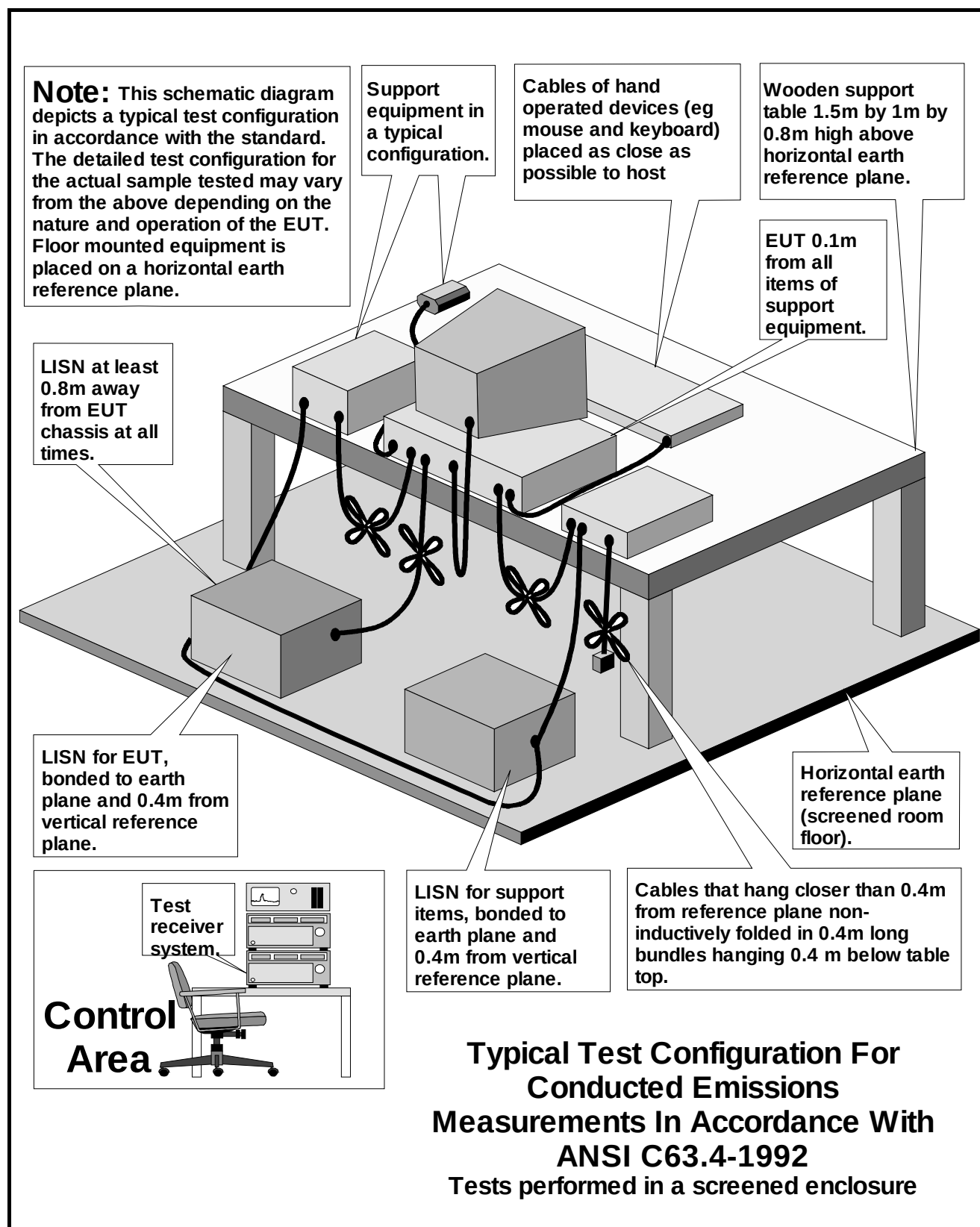
This appendix contains the following drawings:

Drawing Reference Number	Title
DRG\48768JD01\EMICON	Test configuration for measurement of conducted emissions.
DRG\48768JD01\EMIRAD	Test configuration for measurement of radiated emissions.

Test of: Motorola Point to Point Fixed Wireless Solutions Group
PTP54600

To: FCC Part 15.407: 2006 (Subpart E)
(Requested Parts Only)

DRG\48768JD01\EMICON



Test of: Motorola Point to Point Fixed Wireless Solutions Group

PTP54600

To: FCC Part 15.407: 2006 (Subpart E)

(Requested Parts Only)

DRG\48768JD01\EMIRAD

