



**TEST REPORT
FROM
RFI GLOBAL SERVICES LTD**

Partial Test of: PTP25600

To: FCC Part 27: 2008 Subpart C

Test Report Serial No:
RFI/RPT2/RP74240JD01A

Supersedes Test Report Serial No:
RFI/RPT1/RP74240JD01A

This Test Report Is Issued Under The Authority Of Brian Watson, Operations Director:	
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Checked By: 	Report Copy No: PDF01
Issue Date: 10 February 2009	Test Dates: 12 January to 14 January 2009

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1. Customer Information

Company Name:	Motorola Point to Point Fixed Wireless Solutions Group
Address:	Unit 3B/C Linhay Business Park Eastern Road Ashburton Devon TQ13 7UP

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2. Equipment Under Test (EUT)

2.1. Identification of Equipment Under Test (EUT)

Description:	2.5 GHz Backhaul
Brand Name:	Motorola
Model Name or Number:	PTP25600 ODU
Serial Number:	80:5D:6F
FCC ID Number:	QWP25001
Hardware Version:	Version 3
Software Version:	B1465
Country of Manufacture:	United Kingdom
Date of Receipt:	12 January 2009

2.2. Description of EUT

The equipment under test was a Point to Point Wireless Ethernet bridge.

2.3. Modifications Incorporated in the EUT

During the course of testing the EUT was not modified.

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2.4. Additional Information Related to Testing

Type of Unit:	Transceiver			
Data Rate:	Up to 300 Mbps			
Channel Bandwidth:	5, 10 and 15 MHz			
Modulation Type:	BPSK, QPSK, 16QAM, 64QAM, 256QAM on all channel widths			
Channel Spacing:	5.5 and 6 MHz			
Duty Cycle:	Variable up to 80%			
Antenna Ports:	Two ports, H (horizontal) and V (vertical). N Type female.			
Transmit Frequency Range:	2496 MHz to 2690 MHz			
Transmit Channels Tested:	Channel Bandwidth (MHz)	Bottom Channel Frequency (MHz)	Centre Channel Frequency (MHz)	Top Channel Frequency (MHz)
	5	2499.25	2593.0	2687.25
	10	2502.0	2590.0	2684.5
	15	2504.75	2593.0	2681.75
Receive Frequency Range:	2496 MHz to 2690 MHz			
Receive Channels Tested:	Channel Bandwidth (MHz)	Bottom Channel Frequency (MHz)	Centre Channel Frequency (MHz)	Top Channel Frequency (MHz)
	5	2499.25	2593.0	2687.25
	10	2502.0	2590.0	2684.5
	15	2504.75	2593.0	2681.75
Highest Fundamental Frequency	2687.25 MHz (operating channel) 4239.0 MHz (local oscillator)			
Power Supply Requirement:	Nominal Voltage	120V 60Hz AC		
	Minimum Voltage	102V 60Hz AC		
	Maximum Voltage	138V 60Hz AC		

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2.5. Support Equipment

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

Description:	Power In Door Unit - PIDU for Master ODU (EUT)
Brand Name:	Motorola
Model Name or Number:	PIDU Plus – PTP 600 Series
Serial Number:	0639390840
Cable Length and Type:	2 metre CAT 5 and 2 metre mains cable
Connected to Port:	Ethernet on master Wireless Ethernet Bridge and Ethernet to laptop PC

Description:	Wireless Ethernet Bridge – ODU (Slave)
Brand Name:	Motorola
Model Name or Number:	PTP25600 ODU
Serial Number:	80:5D:6D
Cable Length and Type:	0.5 metres / coaxial and 2 metre Ethernet
Connected to Port:	RF port on EUT master Wireless Ethernet Bridge. Ethernet to slave PIDU.

Description:	Power In Door Unit - PIDU for Slave ODU
Brand Name:	Motorola
Model Name or Number:	PIDU Plus – PTP 600 Series
Serial Number:	0624215516
Cable Length and Type:	2 metre CAT 5 and 2 metre mains cable
Connected to Port:	Ethernet on slave Wireless Ethernet Bridge and Ethernet to laptop PC

Description:	Laptop PC
Brand Name:	Dell
Model Name or Number:	D420
Serial Number:	256-240-260-91
Cable Length and Type:	2 metres CAT 5 / Ethernet
Connected to Port:	Ethernet on EUT PIDU and Ethernet on slave PIDU

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3. Test Specification, Methods and Procedures

3.1. Test Specifications

Reference:	FCC Part 27: 2008
Title:	Code of Federal Regulations, Part 27 (47CFR) Subpart C Miscellaneous Wireless Communications Services
Purpose of Test:	To determine whether the equipment complied with the requirements of the specification for the purposes of certification.

3.2. Methods and Procedures

The methods and procedures used were as detailed in:

ANSI/TIA-603-B-2003

Land Mobile Communications Equipment, Measurements and performance Standards

ANSI C63.2 (1987)

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

ANSI C63.4 (2001)

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.

3.3. 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.

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4. Deviations from the Test Specification

The EUT was previously tested by RFI Global Services Ltd. under Test Report RFI/RPTE1/RP49146JD01A and in order to show compliance at the upper band edge during this testing, the transmit power had to be reduced on the top channel.

Partial testing was requested by the customer to demonstrate that the revised version of the product operating at full power on the top channel is now compliant.

Transmitter Carrier Output Power, Occupied Bandwidth, Conducted Emissions, Conducted Band Edge, Radiated Spurious Emissions tests were requested.

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5. Operation of the EUT During Testing

5.1. Operating Modes

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

- As a master device, transmitting using the following modulation types; BPSK, QPSK, 16QAM, 64QAM and 256QAM. Acquisition mode was also tested.
- Limited testing was performed as follows:
Occupied BW for all modulation types, top channel, 5, 10 and 15MHz bandwidths
Tx conducted output power and EIRP on top and bottom channels 5, 10 and 15MHz bandwidths.
Tx conducted and radiated emissions at 10MHz channel spacing
EIRP results are based on the manufacturers declared antenna gain of 18dBi
- Transmitter power tests were performed with the EUT transmitting at full power (23dBm).

5.2. Configuration and Peripherals

The EUT was tested in the following configuration:

- The EUT was connected to a slave ODU through suitably attenuated RF cables and a communications link was maintained. The integral antenna was replaced by a connector plate giving access to horizontal and vertical antenna connections. Connection to the measuring equipment was made through suitably attenuated RF cables, and/or an RF splitter/combiner connected to the RF port on the EUT.
- The unused port was terminated with a 50 Ohm load during radiated emission tests.
- The ODU was powered by the PIDU through the Ethernet cable. The PIDU was powered by mains voltage.
- A laptop PC with Customer's bespoke software was used to configure the EUT and slave ODU during the testing.

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6. Summary of Test Results

Range of Measurements	FCC Reference	Port Type	Result
Transmitter Carrier Output Power and EIRP	CFR 47 FCC Part 2.1046 CFR 47 FCC Part 27.50	Antenna Terminals	Complied
Occupied Bandwidth	CFR 47 FCC Part 2.1049	Antenna Terminals	Complied
Conducted Emissions	CFR 47 FCC Part 2.1051 CFR 47 FCC Part 27.53	Antenna Terminals	Complied
Conducted Emissions Band Edge	CFR 47 FCC Part 2.1051 CFR 47 FCC Part 27.53	Antenna Terminals	Complied
Radiated Spurious Emissions	CFR 47 FCC Part 2.1051 CFR 47 FCC Part 27.53	Enclosure	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Wade Road, Basingstoke, Hampshire, RG24 8AH.

6.2. Site Registration Numbers

FCC: 209735

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7. Measurements, Examinations and Derived Results

7.1. General Comments

7.1.1. This section contains test results only.

7.1.2. 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.

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7.2. Transmitter Carrier Output Power and Effective Isotropic Radiated Power (EIRP)

Ambient Temperature: 23°C to 19°C

Relative Humidity: 29% to 35%

7.2.1. Tests were performed in accordance with FCC Parts 2.1046 and 27.50(h)(1).

Note(s):

1. The Client stated that antenna gain is +18 dBi and antenna beam width is 20 degrees.
2. Occupied bandwidths used to calculate the above limits were obtained from the measured values shown in the Occupied Bandwidth Section of this report.
3. The Part 27.50 (h)(1) limit is calculated as $33+10 \log (\text{Occupied Bandwidth}/Y) + 10 \log (360 / \text{Antenna Beamwidth})$ dBW. (where Y is 6 MHz for channels in the MBS and 5.5 MHz for channels in the LBS and UBS).

MBS = $33+10 \log (\text{Occupied Bandwidth}/Y) + 10 \log (360 / \text{Beamwidth})$ dBW

LBS and UBS = $33 + 10 \log (\text{Occupied Bandwidth}/Y) + 10 \log (360 / \text{Beamwidth})$ dBW.

The limits below were calculated for 5 MHz, 10 MHz and 15 MHz channels based on the widest occupied bandwidths previously measured:

5 MHz channel - Calculation of a UBS limit using a measured occupied bandwidth of 4.449 MHz and antenna beamwidth of 20 degrees:

$$33 + ((10 \log (4.449 / 5.5) + 10 \log (360 / 20)) = 44.6 \text{ dBW}$$

10 MHz channel - Calculation of a UBS limit using a measured occupied bandwidth of 4.449 MHz and antenna beamwidth of 20 degrees:

$$33 + ((10 \log (9.078 / 5.5) + 10 \log (360 / 20)) = 47.7 \text{ dBW}$$

15 MHz channel - Calculation of a UBS limit using a measured occupied bandwidth of 13.707 MHz and antenna beamwidth of 20 degrees:

$$33 + ((10 \log (13.707 / 5.5) + 10 \log (360 / 20)) = 49.5 \text{ dBW}$$

4. Measurements were performed with the EUT transmitting all supported modulation types and Acquisition mode on the V port. Some additional testing was performed with BPSK and 256QAM to show compliance on the H port. Both of these modulation schemes typically showed the highest power output during preliminary testing on the V port.
5. The channel power function on a spectrum analyser was used to make power measurements.
6. The effective isotropic radiated power (EIRP) was calculated by adding the Client's declared antenna gain to the measured conducted RF output power.

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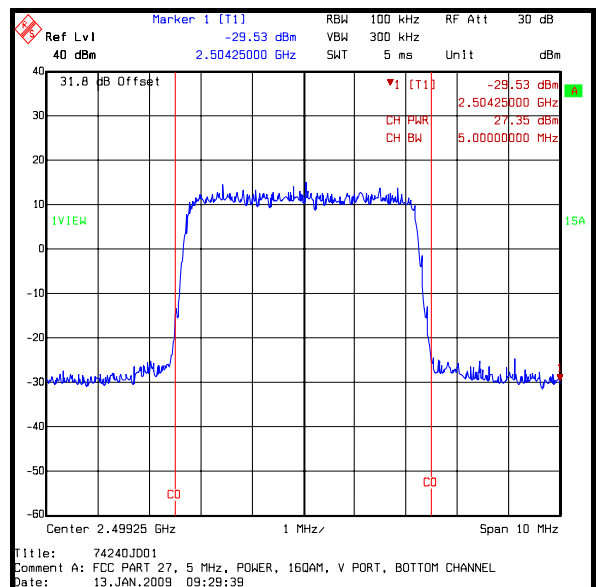
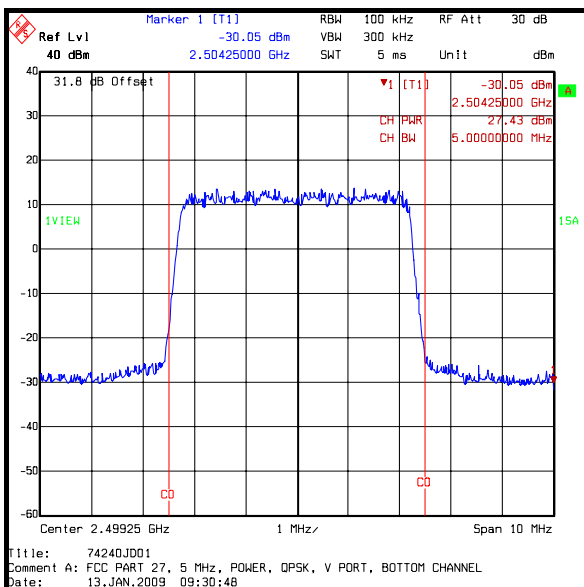
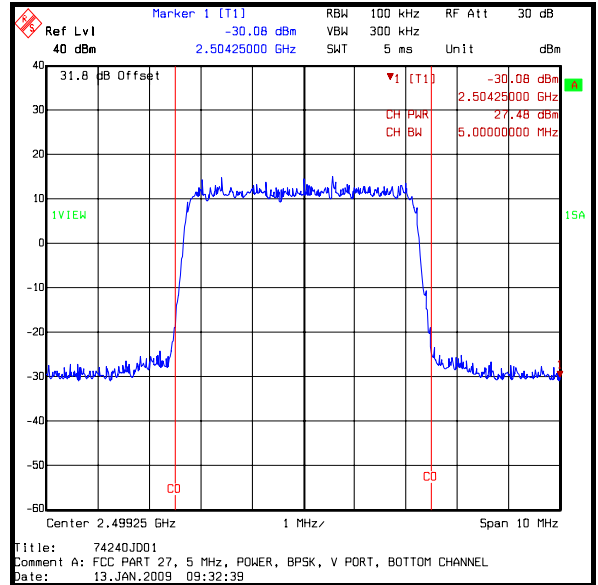
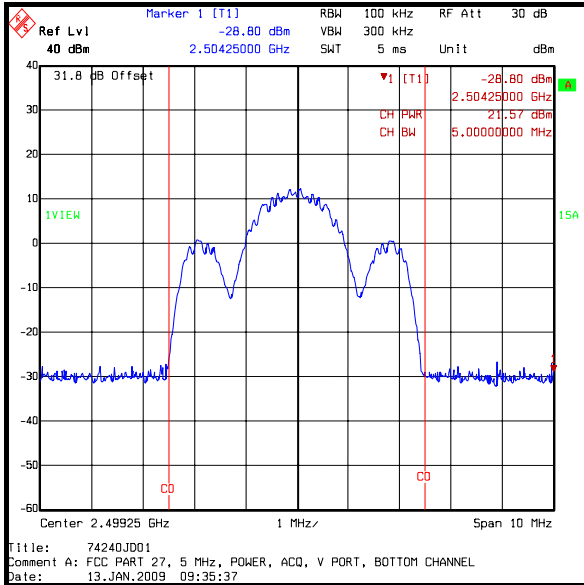
Results: 5 MHz Channel Width / V port / Bottom channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
ACQ	2499.25	21.6	18.0	39.6	9.6	44.6	35.0	Complied
BPSK	2499.25	27.5	18.0	45.5	15.5	44.6	29.1	Complied
QPSK	2499.25	27.4	18.0	45.4	15.4	44.6	29.2	Complied
16QAM	2499.25	27.4	18.0	45.4	15.4	44.6	29.2	Complied
64QAM	2499.25	27.5	18.0	45.5	15.5	44.6	29.1	Complied
256QAM	2499.25	27.5	18.0	45.5	15.5	44.6	29.1	Complied

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Transmitter Output Power and (EIRP Limitations) (continued)

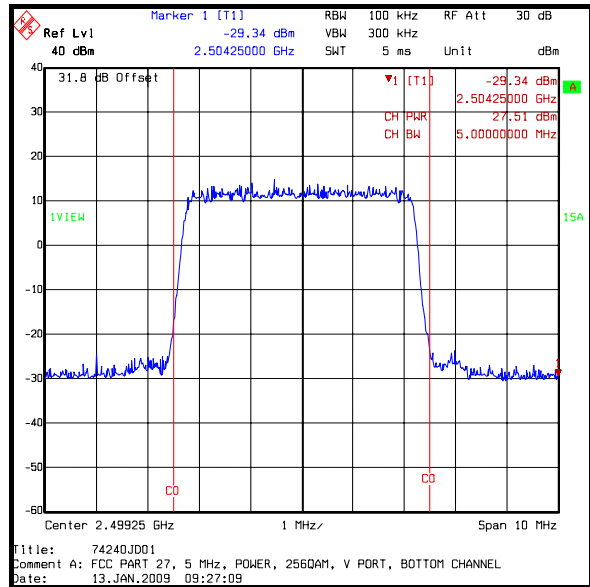
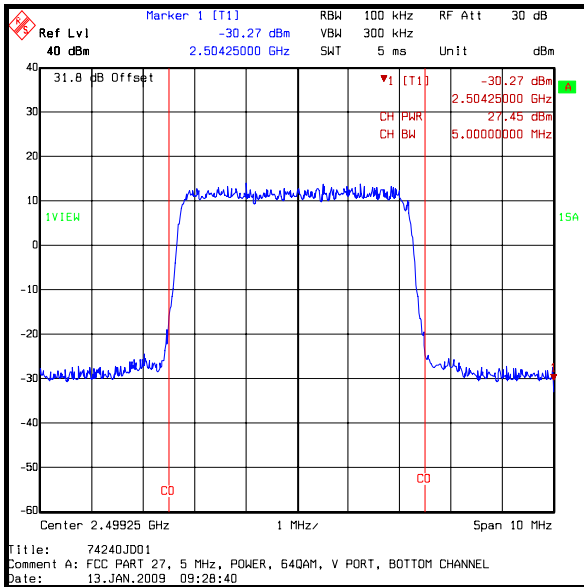
5 MHz Channel Width / V port / Bottom channel



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Transmitter Output Power and (EIRP Limitations) (continued)

5 MHz Channel Width / V port / Bottom channel



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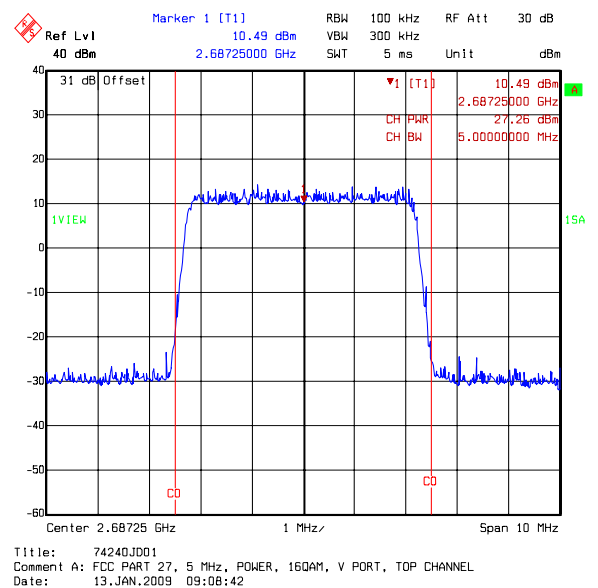
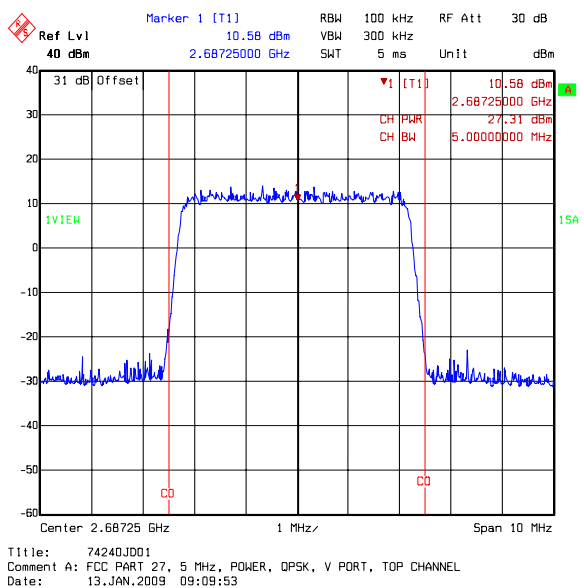
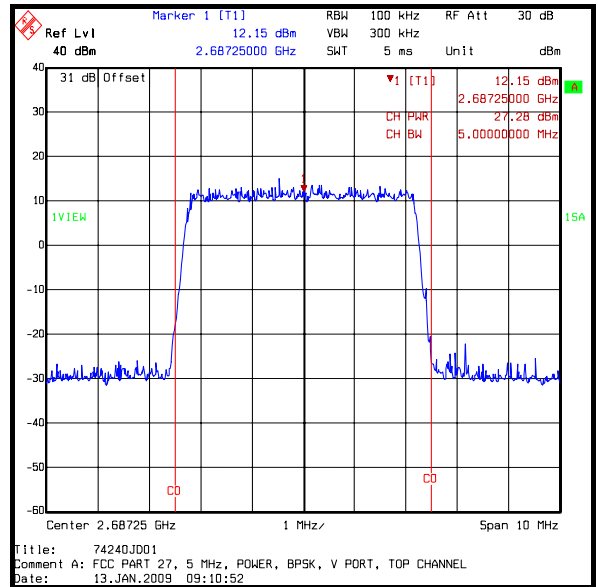
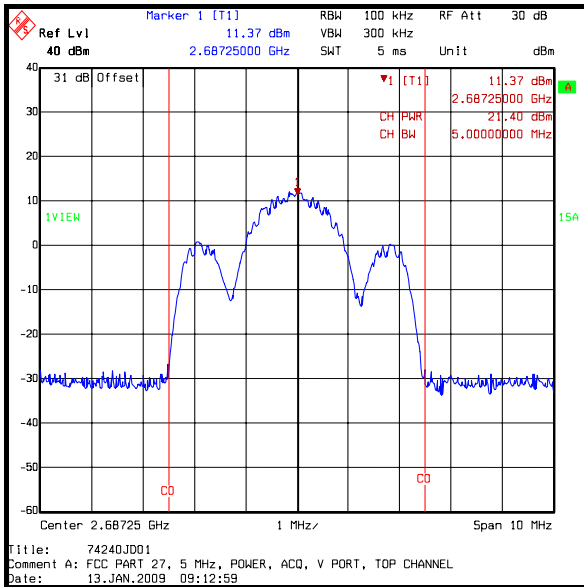
Results: 5 MHz Channel Width / V port / Top channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
ACQ	2687.25	21.4	18.0	39.4	9.3	44.6	35.3	Complied
BPSK	2687.25	27.3	18.0	45.3	15.3	44.6	29.3	Complied
QPSK	2687.25	27.3	18.0	45.3	15.3	44.6	29.3	Complied
16QAM	2687.25	27.3	18.0	45.3	15.3	44.6	29.3	Complied
64QAM	2687.25	26.9	18.0	44.9	14.9	44.6	29.7	Complied
256QAM	2687.25	27.4	18.0	45.4	15.4	44.6	29.2	Complied

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Transmitter Output Power and (EIRP Limitations) (continued)

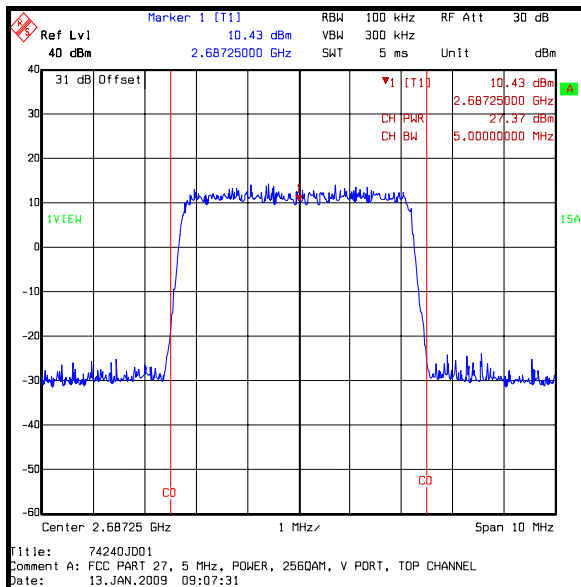
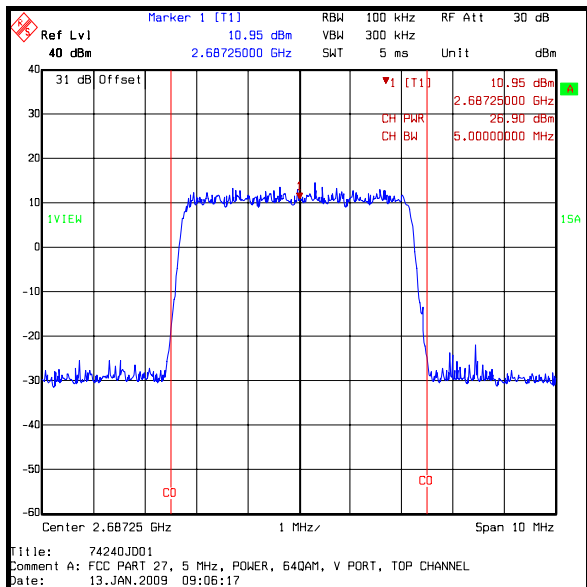
5 MHz Channel Width / V port / Top channel



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Transmitter Output Power and (EIRP Limitations) (continued)

5 MHz Channel Width / V port / Top channel

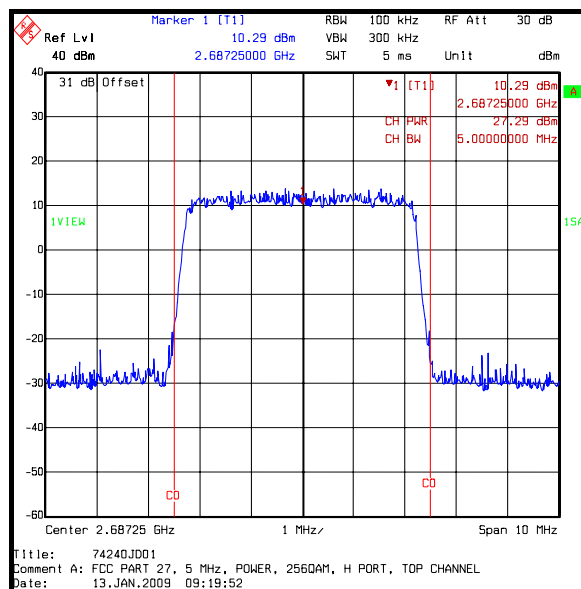
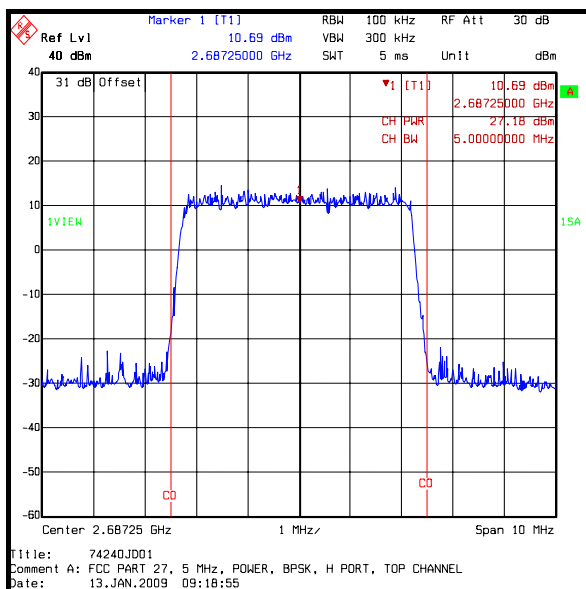


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Transmitter Output Power and (EIRP Limitations) (continued)

Results: 5 MHz Channel Width / H port / Top channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
BPSK	2687.25	27.2	18.0	45.2	15.2	44.6	29.4	Complied
256QAM	2687.25	27.3	18.0	45.3	15.3	44.6	29.3	Complied



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Transmitter Output Power and (EIRP Limitations) (continued)

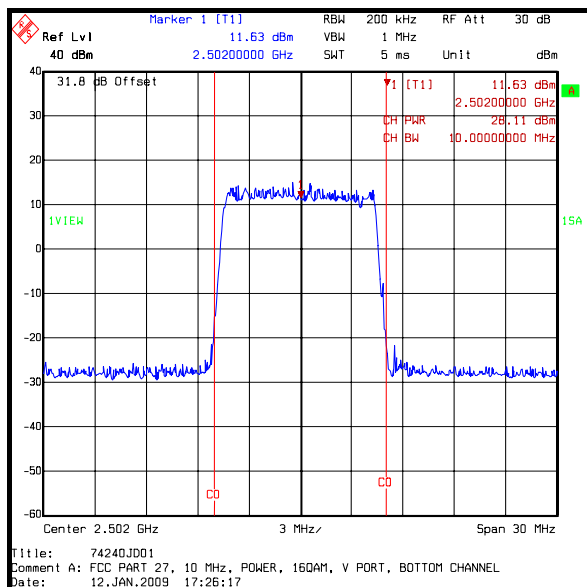
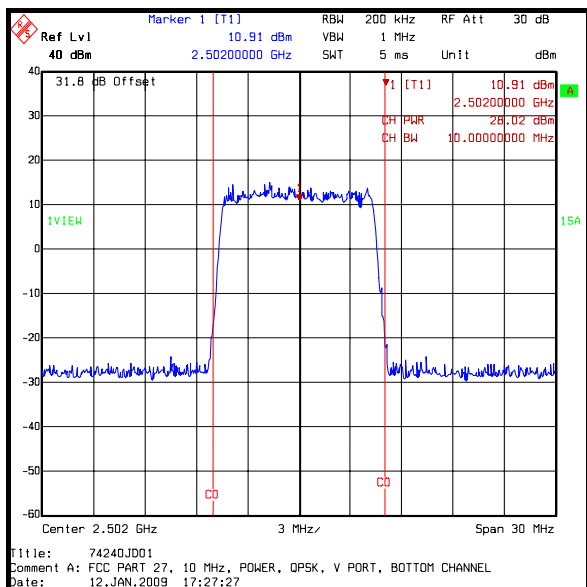
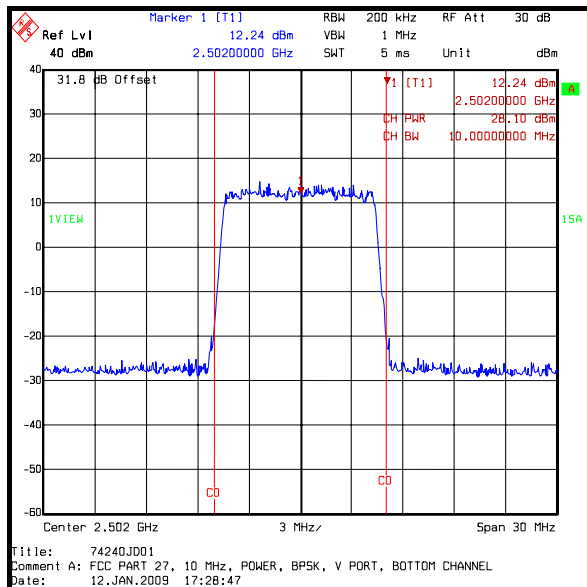
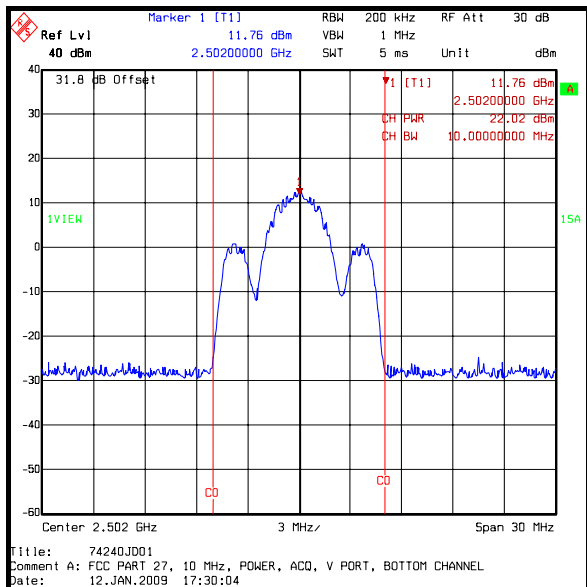
Results: 10 MHz Channel Width / V port / Bottom channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
ACQ	2502.0	22.0	18.0	40.0	10.0	47.7	37.7	Complied
BPSK	2502.0	28.1	18.0	46.1	16.1	47.7	31.6	Complied
QPSK	2502.0	28.0	18.0	46.0	16.0	47.7	31.7	Complied
16QAM	2502.0	28.1	18.0	46.1	16.1	47.7	31.6	Complied
64QAM	2502.0	27.9	18.0	45.9	15.9	47.7	31.8	Complied
256QAM	2502.0	28.1	18.0	46.1	16.1	47.7	31.6	Complied

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Transmitter Output Power and (EIRP Limitations) (continued)

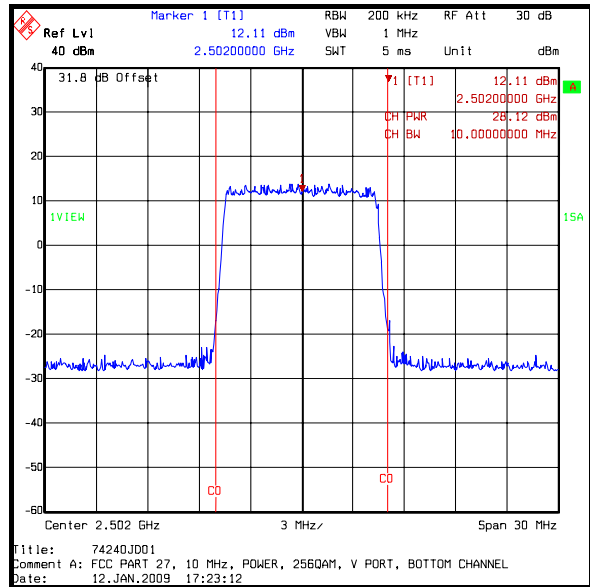
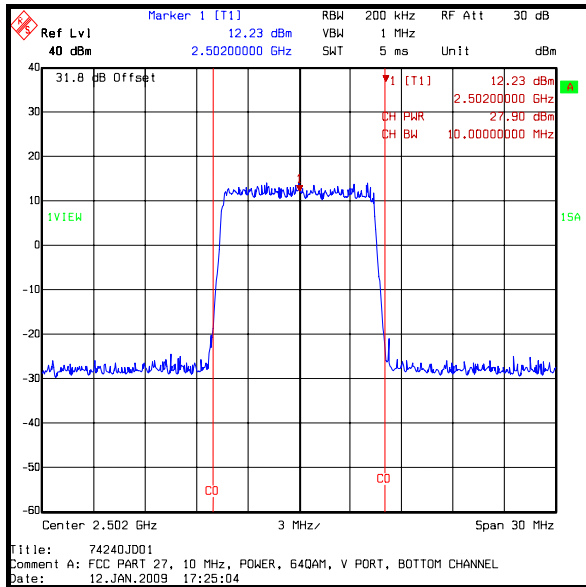
10 MHz Channel Width / V port / Bottom channel



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Transmitter Output Power and (EIRP Limitations) (continued)

10 MHz Channel Width / V port / Bottom channel



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Transmitter Output Power and (EIRP Limitations) (continued)

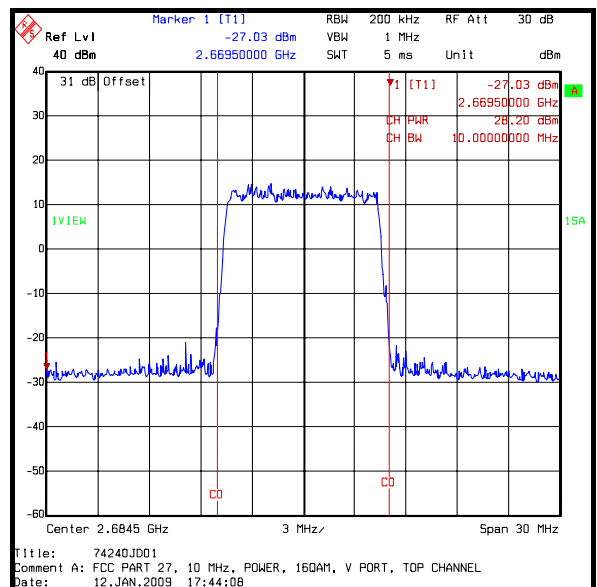
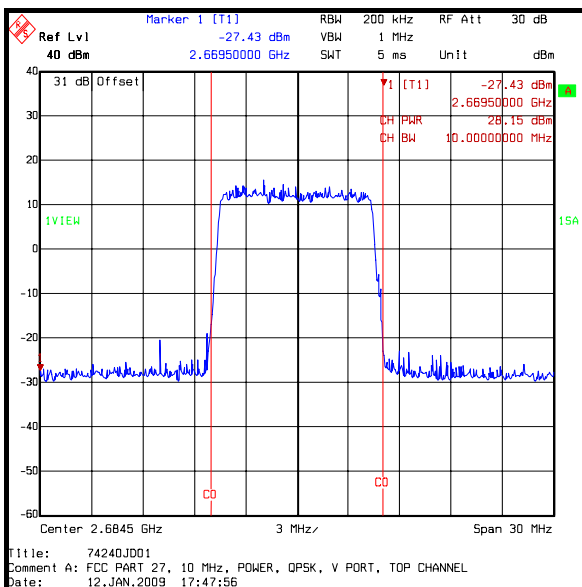
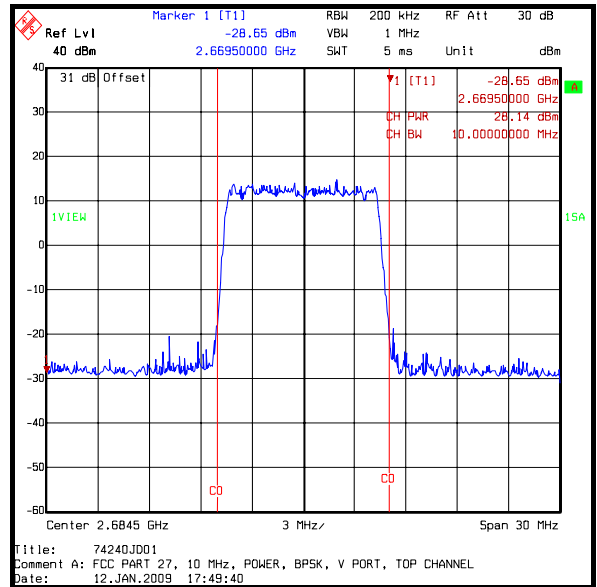
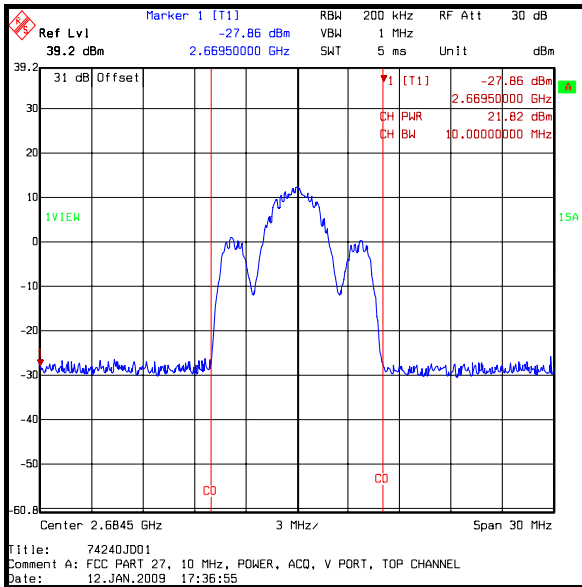
Results: 10 MHz Channel Width / V port / Top channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
ACQ	2684.5	21.8	18.0	39.8	9.8	47.7	37.9	Complied
BPSK	2684.5	28.1	18.0	46.1	16.1	47.7	31.6	Complied
QPSK	2684.5	28.2	18.0	46.2	16.2	47.7	31.5	Complied
16QAM	2684.5	28.2	18.0	46.2	16.2	47.7	31.5	Complied
64QAM	2684.5	28.2	18.0	46.2	16.2	47.7	31.5	Complied
256QAM	2684.5	28.0	18.0	46.0	16.0	47.7	31.7	Complied

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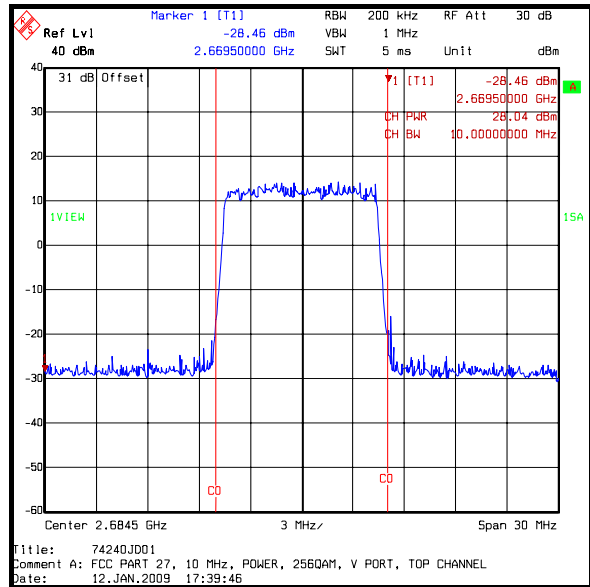
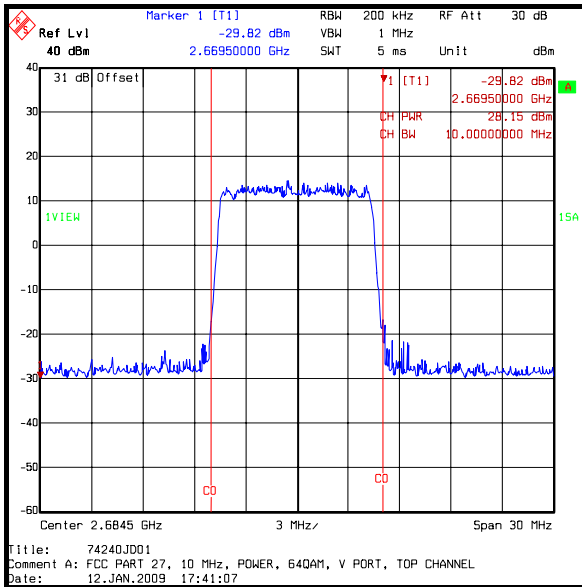
10 MHz Channel Width / V port / Top channel



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Transmitter Output Power and (EIRP Limitations) (continued)

10 MHz Channel Width / V port / Top channel

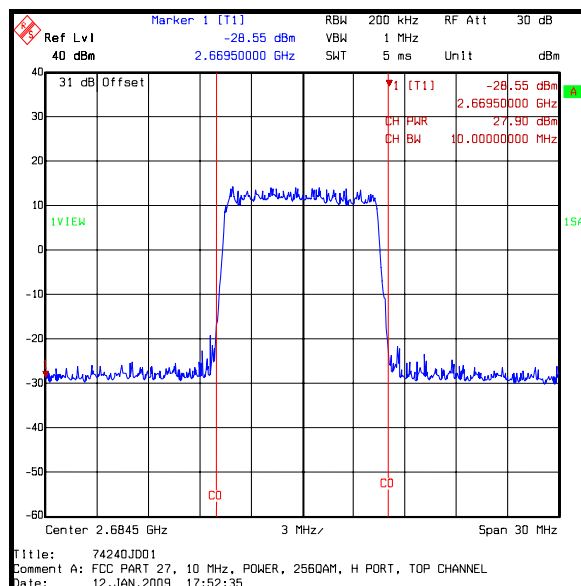
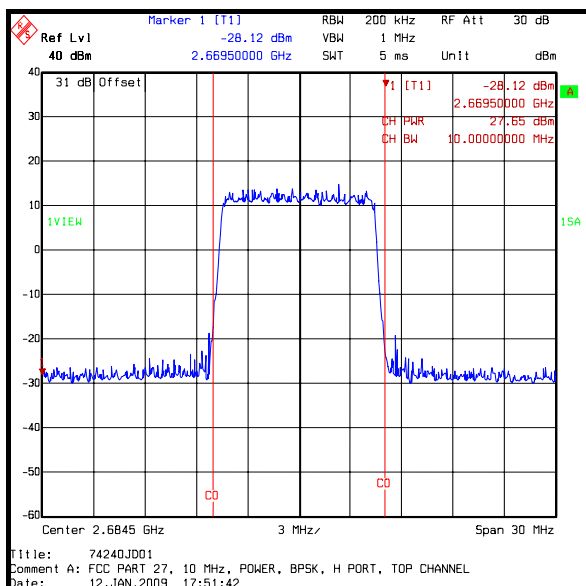


Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

Results: 10 MHz Channel Width / H port / Top channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
BPSK	2684.5	27.7	18.0	45.7	15.7	47.7	32.0	Complied
256QAM	2684.5	27.9	18.0	45.9	15.9	47.7	31.8	Complied



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

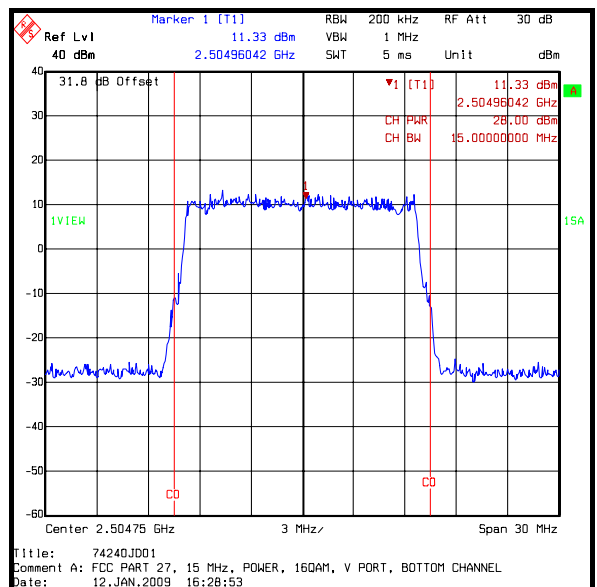
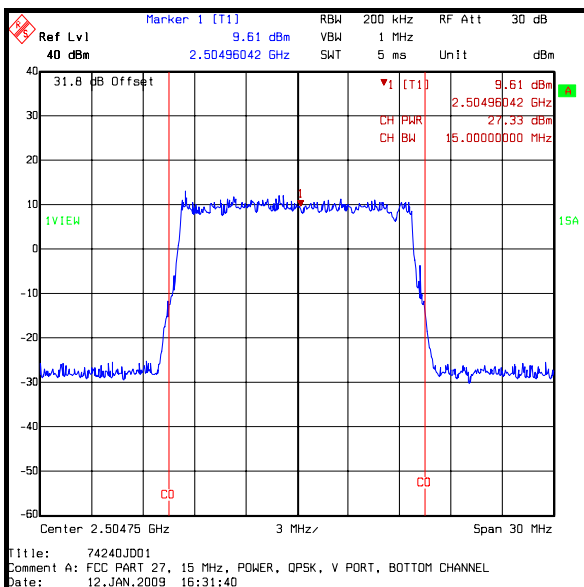
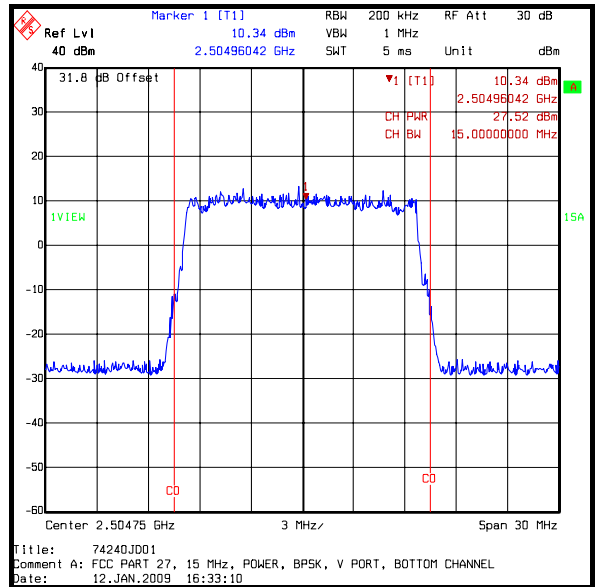
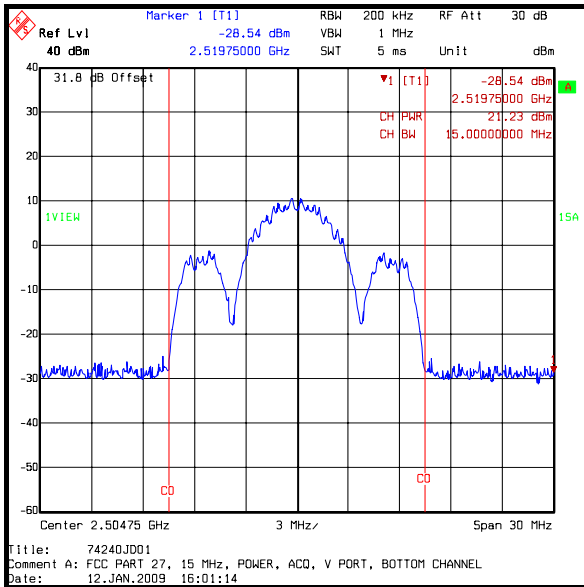
Results: 15 MHz Channel Width / V port / Bottom channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
ACQ	2504.75	21.2	18.0	39.2	9.2	49.5	40.3	Complied
BPSK	2504.75	27.5	18.0	45.5	15.5	49.5	34.0	Complied
QPSK	2504.75	27.3	18.0	45.3	15.3	49.5	34.2	Complied
16QAM	2504.75	28.0	18.0	46.0	16.0	49.5	33.5	Complied
64QAM	2504.75	27.9	18.0	45.9	15.9	49.5	33.6	Complied
256QAM	2504.75	27.7	18.0	45.7	15.7	49.5	33.8	Complied

Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

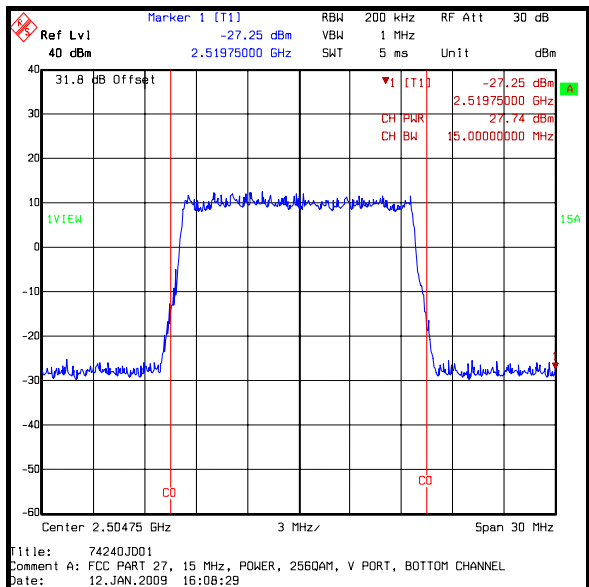
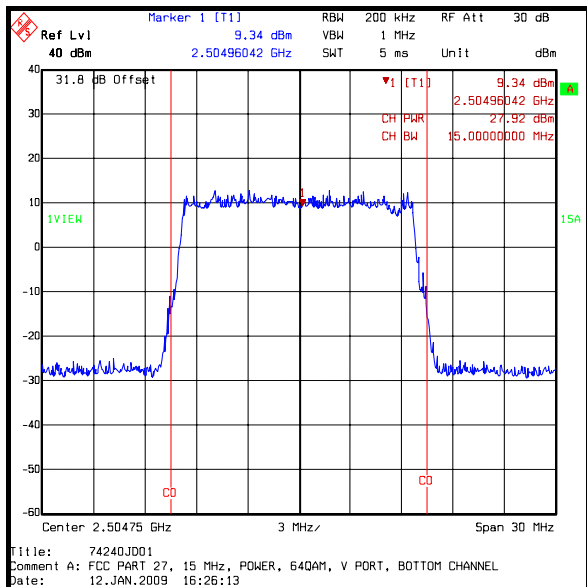
15 MHz Channel Width / V port / Bottom channel



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

15 MHz Channel Width / V port / Bottom channel

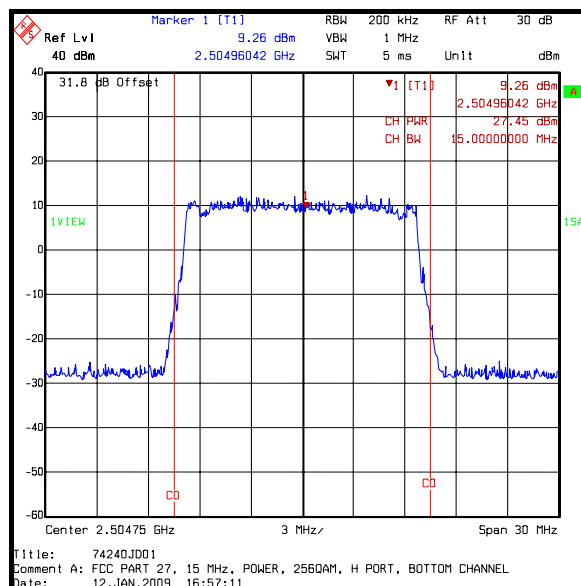
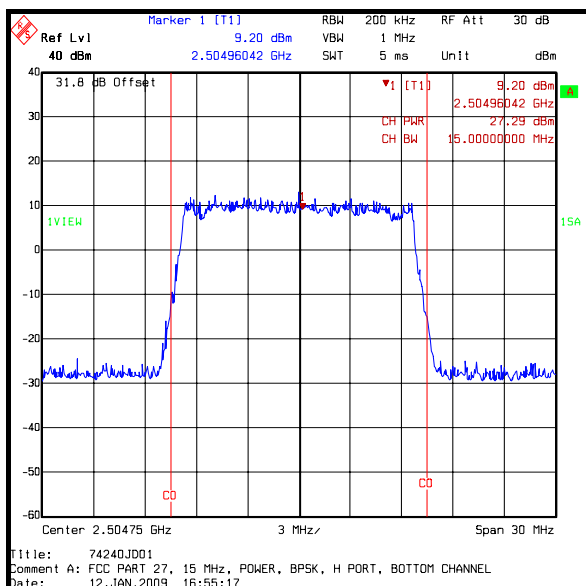


Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

Results: 15 MHz Channel Width / H port / Bottom channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
BPSK	2504.75	27.3	18.0	45.3	15.3	49.5	34.2	Complied
256QAM	2504.75	27.5	18.0	45.5	15.5	49.5	34.0	Complied



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

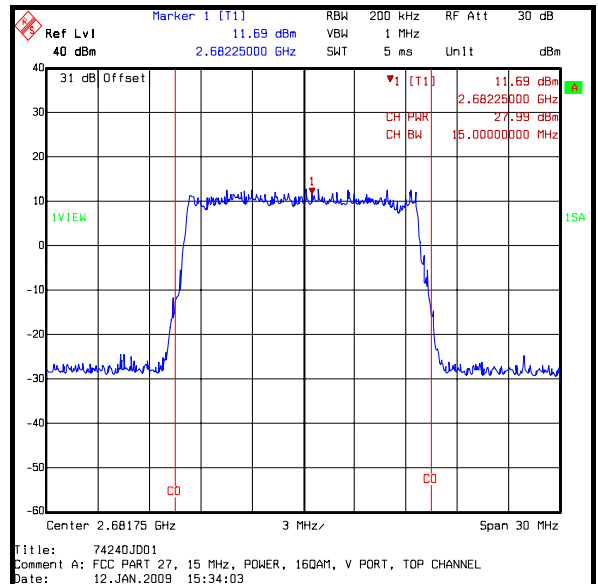
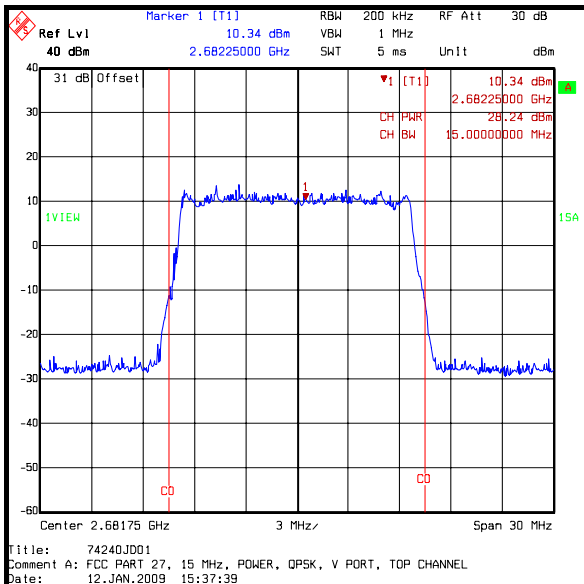
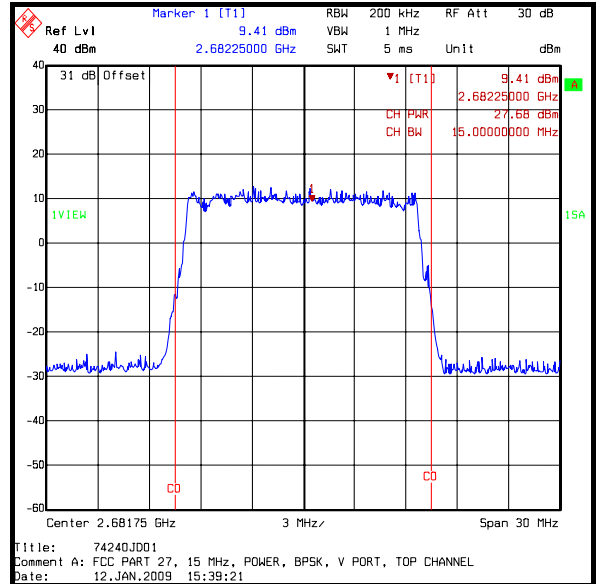
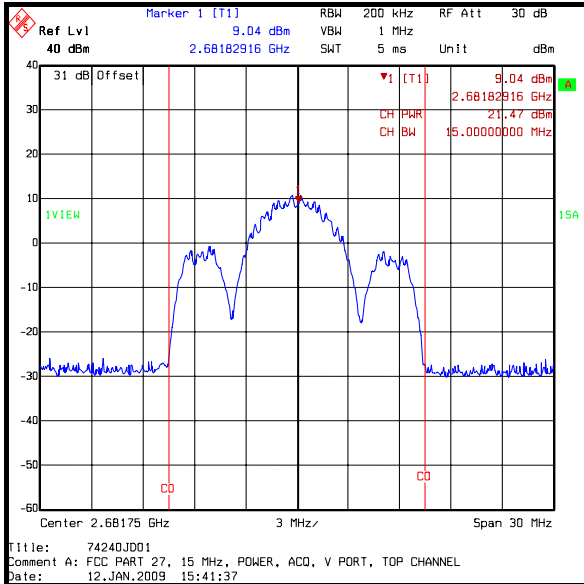
15 MHz Channel Width / V port / Top channel

Modulation	Frequency (MHz)	Conducted RF O/P Power (dBm)*	Antenna Gain (dBi)	EIRP (dBm)	EIRP (dBW)	Limit EIRP (dBW)	Margin (dB)	Result
ACQ	2681.75	21.5	18.0	39.5	9.5	49.5	40.0	Complied
BPSK	2681.75	27.7	18.0	45.7	15.7	49.5	33.8	Complied
QPSK	2681.75	28.2	18.0	46.2	16.2	49.5	33.3	Complied
16QAM	2681.75	28.0	18.0	46.0	16.0	49.5	33.5	Complied
64QAM	2681.75	27.8	18.0	45.8	15.8	49.5	33.7	Complied
256QAM	2681.75	28.1	18.0	46.1	16.1	49.5	33.4	Complied

Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

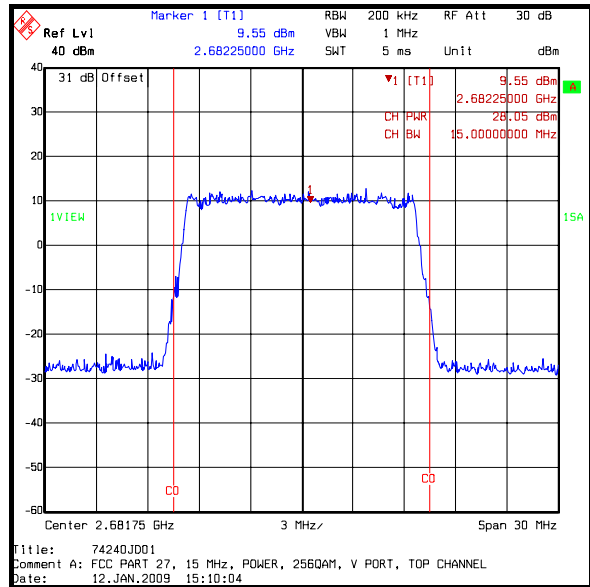
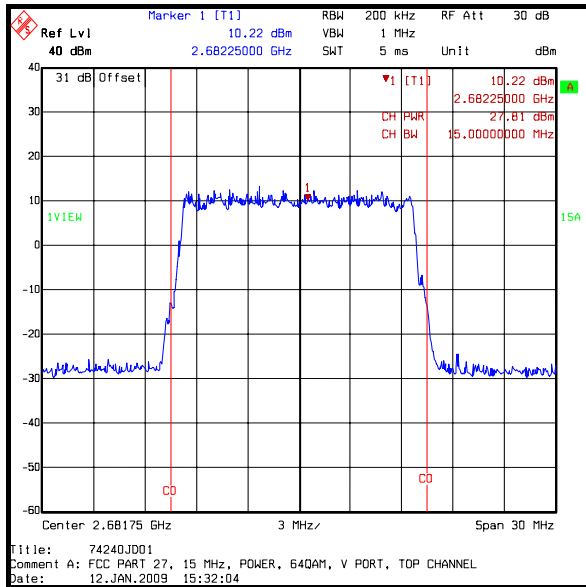
15 MHz Channel Width / V port / Top channel



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Output Power and (EIRP Limitations) (continued)

15 MHz Channel Width / V port / Top channel



Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

7.3. Transmitter Occupied Bandwidth: Part 2.1049

7.3.1. Tests were performed in accordance with FCC Part 2.1049.

Note(s):

1. The EUT was configured to transmit at a maximum power on all channel bandwidths.
2. All tests were performed on the V port. Comparison tests were performed on the H port to check there was no difference between the two ports.
3. Measurements were made on the top channel as this falls into the UBS. The LBS and UBS utilises a 5.5 MHz channel raster which is narrower than the 6 MHz specified in the MBS.
4. The Customer declared that the same channel bandwidth filter is used across all band segments.
5. The occupied bandwidth function on a spectrum analyser was used to make bandwidth measurements.

Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)

Ambient Temperature: 23°C

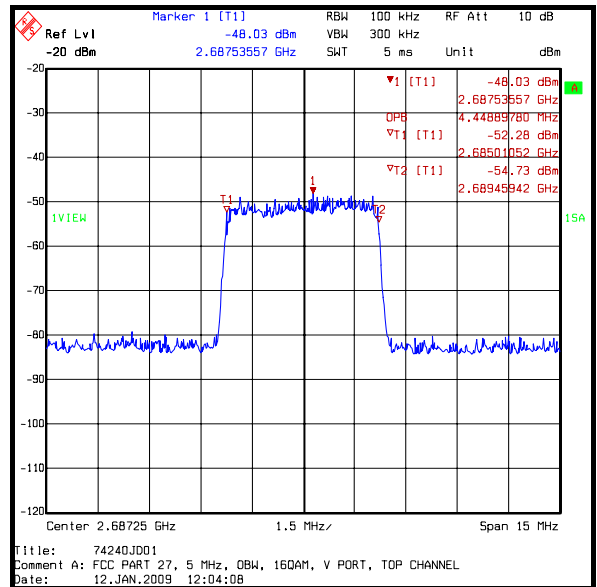
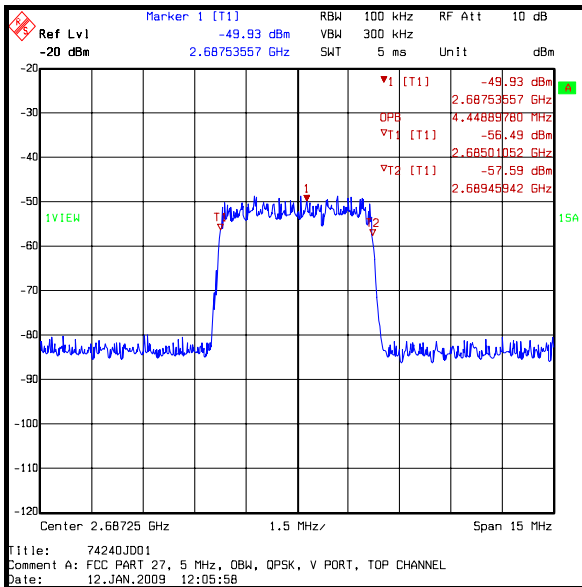
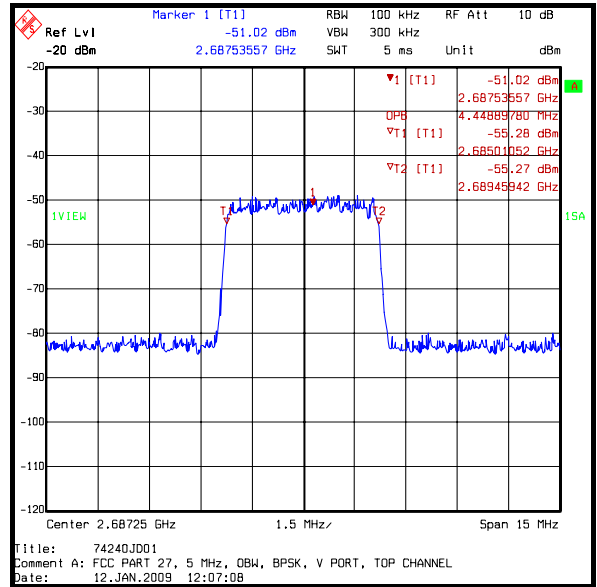
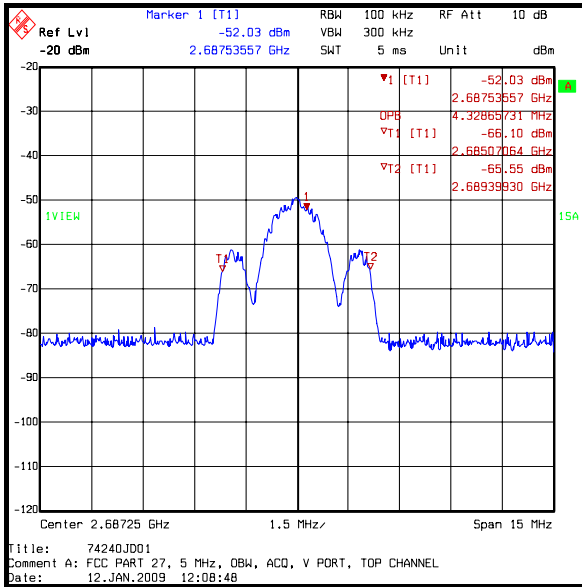
Relative Humidity: 29%

Results: 5 MHz Bandwidth / Top channel / 2687.25 MHz

Modulation	Port	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
ACQ	Vertical	100	300	4.329
BPSK	Vertical	100	300	4.449
QPSK	Vertical	100	300	4.449
16QAM	Vertical	100	300	4.449
64QAM	Vertical	100	300	4.449
256QAM	Vertical	100	300	4.449

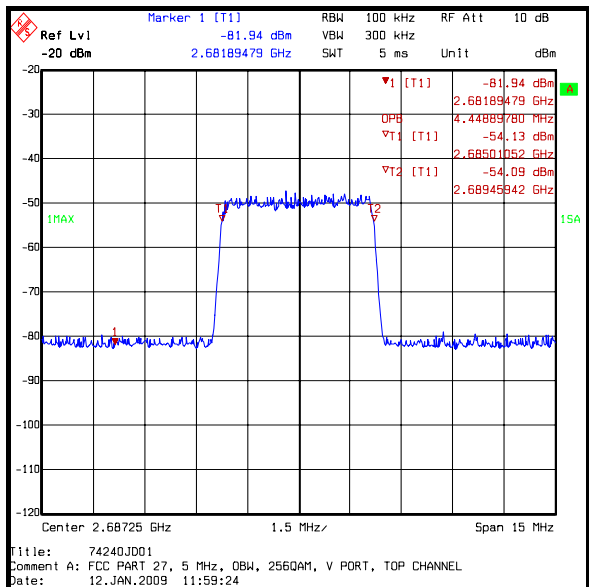
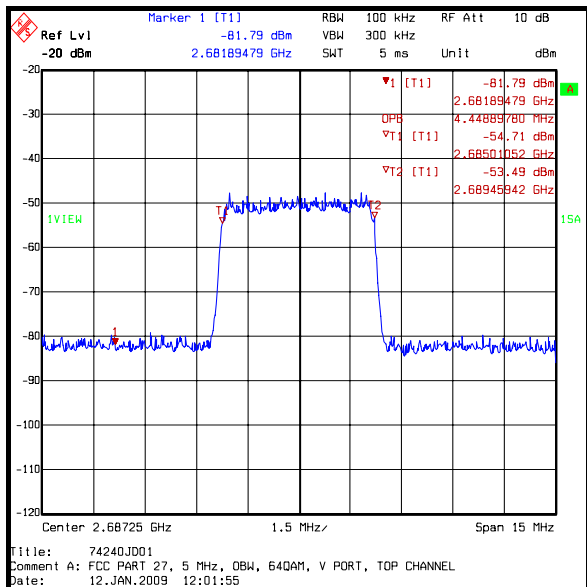
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)



Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

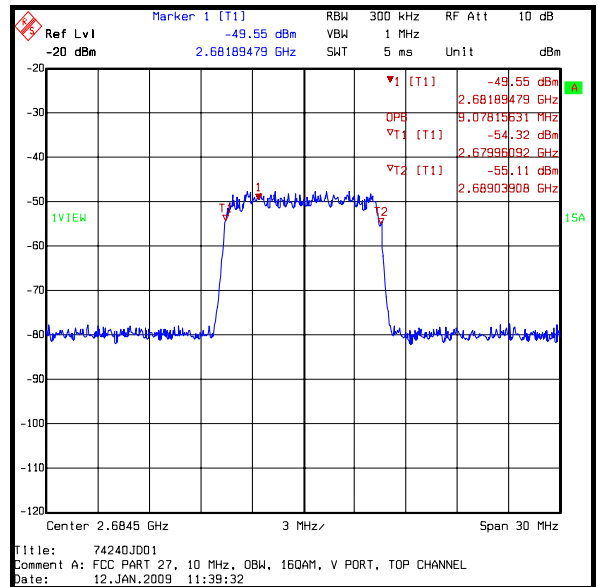
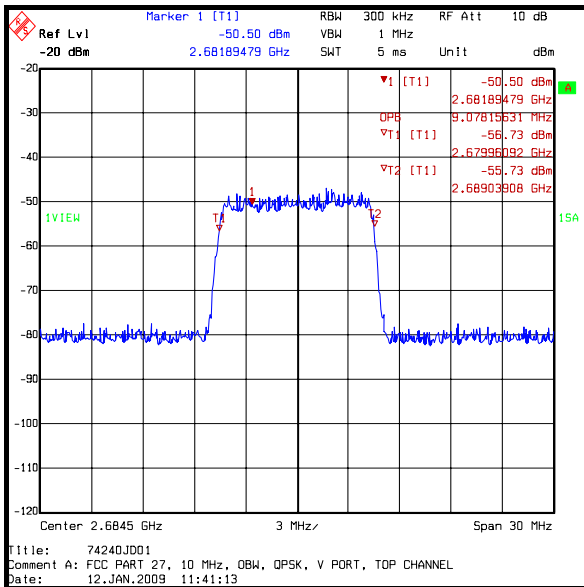
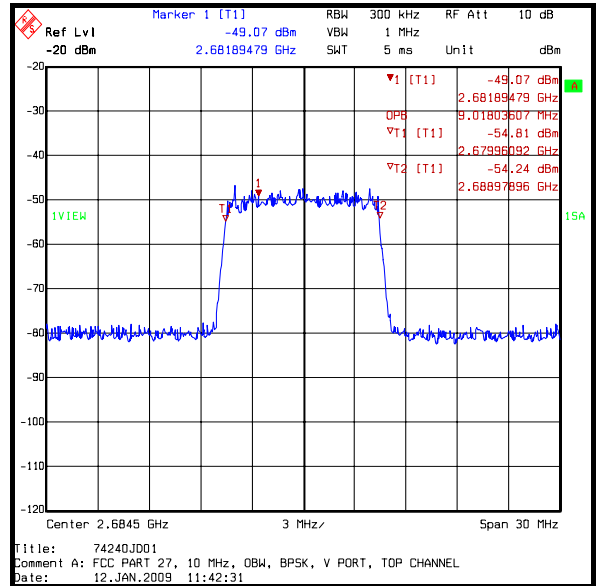
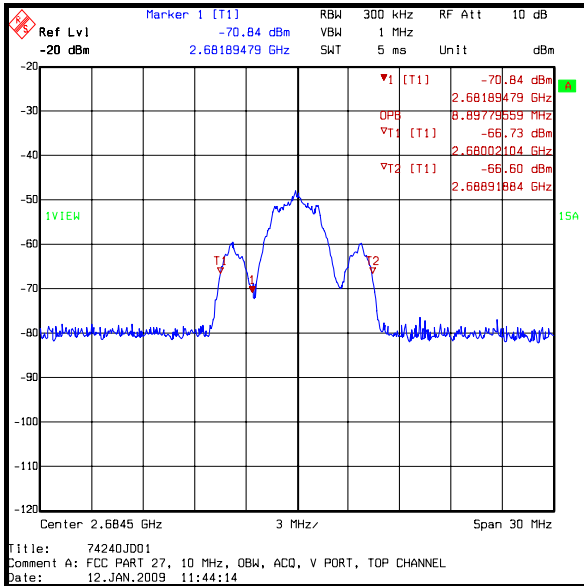
Transmitter Occupied Bandwidth: Part 2.1049 (continued)

Results: 10 MHz Bandwidth / Top channel / 2684.5 MHz

Modulation	Port	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
ACQ	Vertical	300	1000	8.898
BPSK	Vertical	300	1000	9.018
QPSK	Vertical	300	1000	9.078
16QAM	Vertical	300	1000	9.078
64QAM	Vertical	300	1000	9.018
256QAM	Vertical	300	1000	9.078

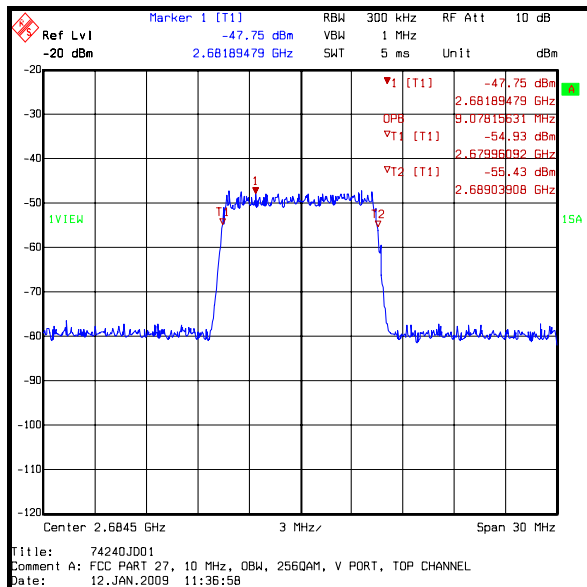
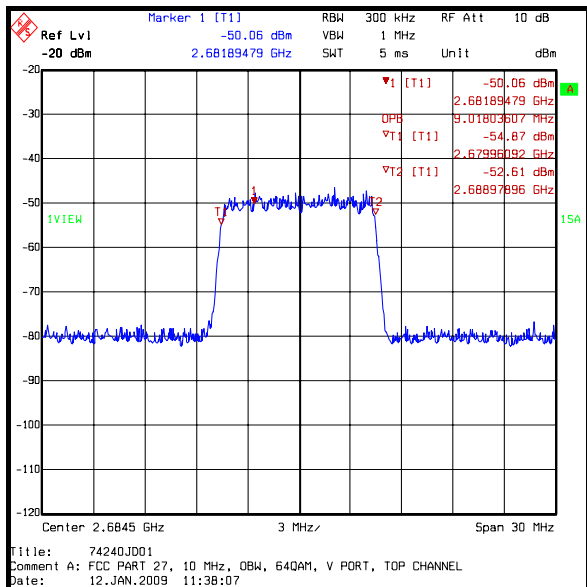
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)



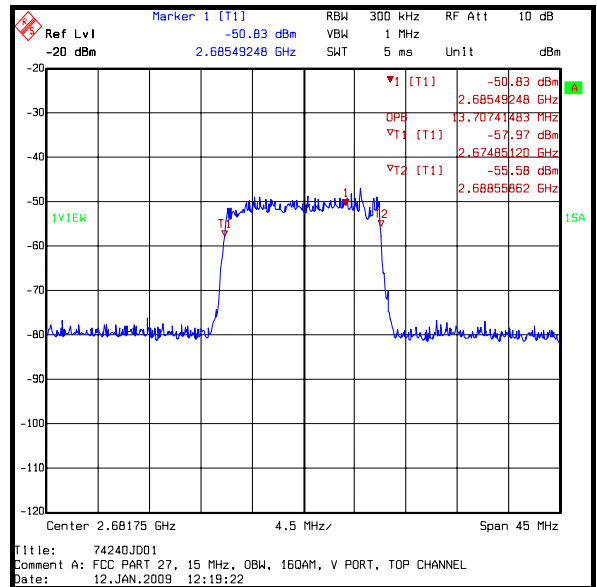
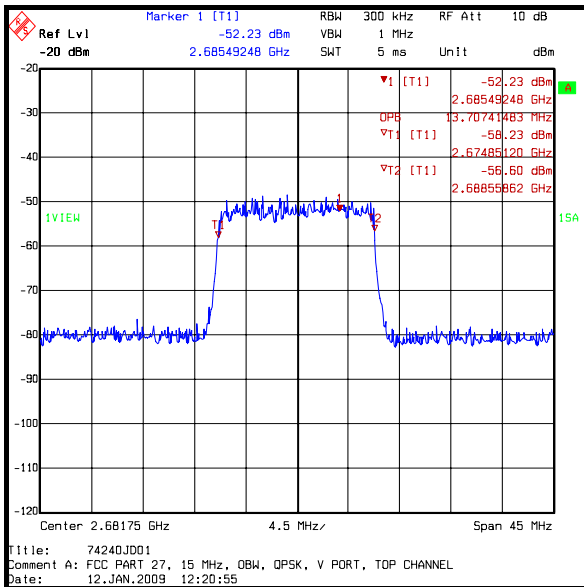
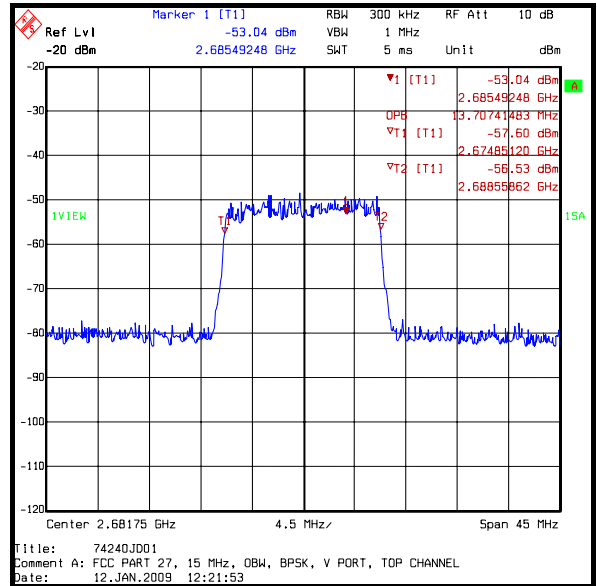
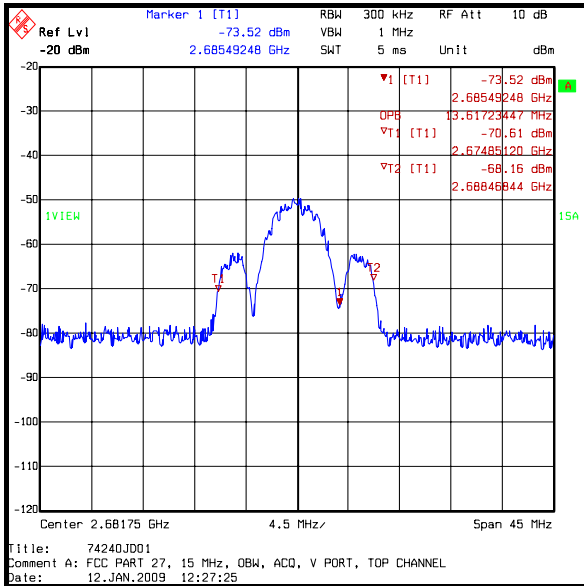
Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)**Results: 15 MHz Bandwidth / Top channel / 2681.75 MHz**

Modulation	Port	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
ACQ	Vertical	300	1000	13.617
BPSK	Vertical	300	1000	13.707
QPSK	Vertical	300	1000	13.707
16QAM	Vertical	300	1000	13.707
64QAM	Vertical	300	1000	13.707
256QAM	Vertical	300	1000	13.707

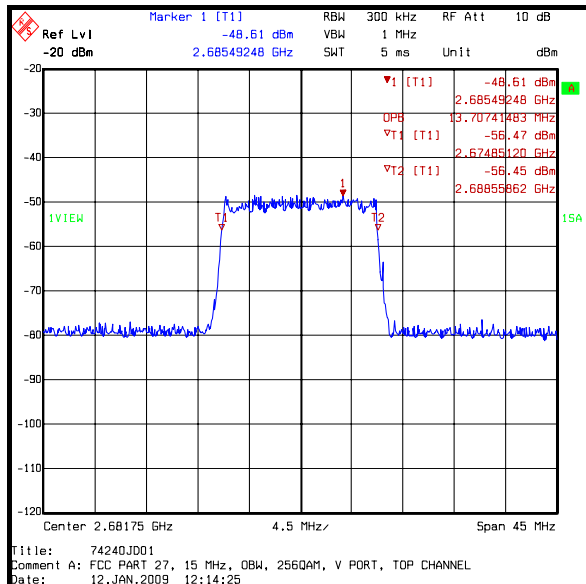
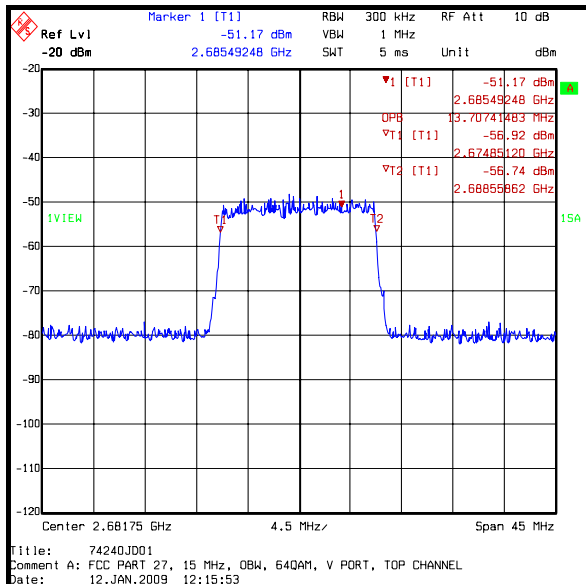
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)



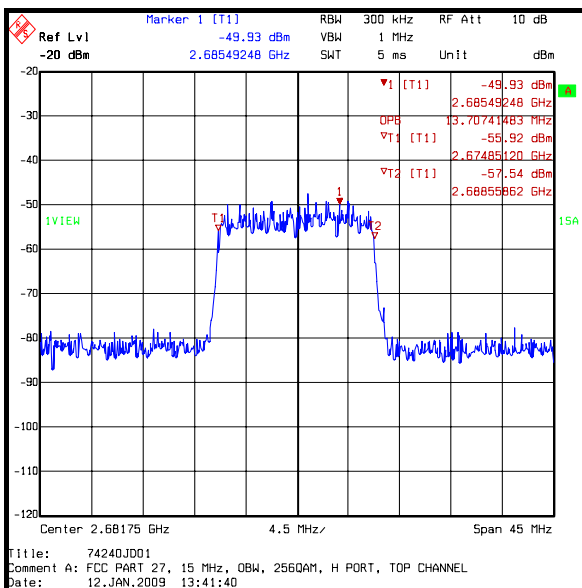
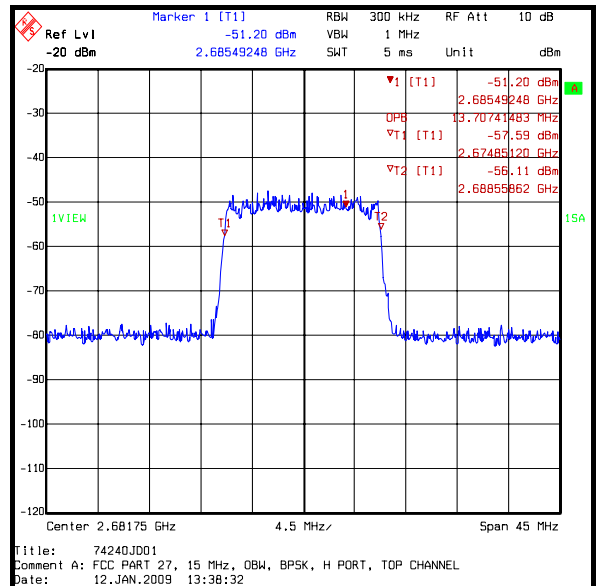
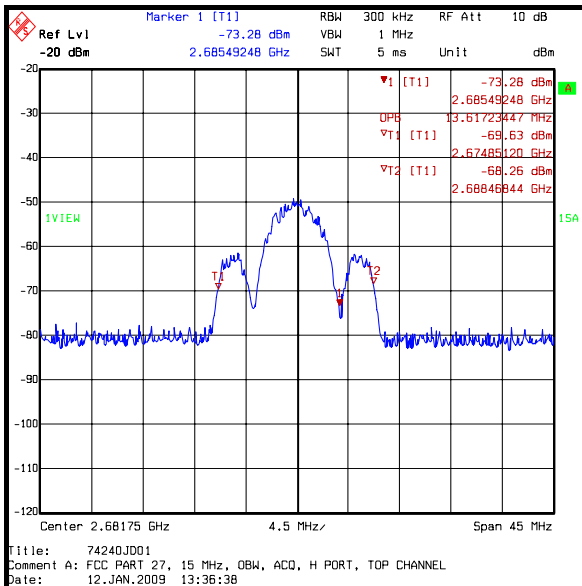
Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)**Results: 15 MHz Bandwidth / Top channel / 2681.75 MHz**

Modulation	Port	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (MHz)
ACQ	Horizontal	300	1000	13.617
BPSK	Horizontal	300	1000	13.707
256QAM	Horizontal	300	1000	13.707

Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Occupied Bandwidth: Part 2.1049 (continued)



Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

7.4. Transmitter Conducted Emissions (Band Edge)

Ambient Temperature: 23°C

Relative Humidity: 29%

7.4.1. Tests were performed in accordance with FCC Part 2.1051 and 27.53.

Results: 5 MHz Bandwidth / Lower Band Edge

Modulation	Port	Peak Emission Level (dBm)	Band edge limit (dBm)	Margin (dB)	Result
ACQ	Vertical	-31.5	-13.0	18.5	Complied
BPSK	Vertical	-26.9	-13.0	13.9	Complied
QPSK	Vertical	-26.5	-13.0	13.5	Complied
16QAM	Vertical	-26.9	-13.0	13.9	Complied
64QAM	Vertical	-27.2	-13.0	14.2	Complied
256QAM	Vertical	-25.9	-13.0	12.9	Complied
64QAM	Horizontal	-27.0	-13.0	14.0	Complied
256QAM	Horizontal	-27.7	-13.0	14.7	Complied

Results: 10 MHz Bandwidth / Lower Band Edge

Modulation	Port	Peak Emission Level (dBm)	Band edge limit (dBm)	Margin (dB)	Result
ACQ	Vertical	-32.6	-13.0	19.6	Complied
BPSK	Vertical	-28.9	-13.0	15.9	Complied
QPSK	Vertical	-28.5	-13.0	15.5	Complied
16QAM	Vertical	-28.3	-13.0	15.3	Complied
64QAM	Vertical	-27.2	-13.0	14.2	Complied
256QAM	Vertical	-28.2	-13.0	15.2	Complied
64QAM	Horizontal	-29.3	-13.0	16.3	Complied
256QAM	Horizontal	-28.8	-13.0	15.8	Complied

Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)

Results: 15 MHz Bandwidth / Lower Band Edge

Modulation	Port	Peak Emission Level (dBm)	Band edge limit (dBm)	Margin (dB)	Result
ACQ	Vertical	-31.2	-13.0	18.2	Complied
BPSK	Vertical	-28.9	-13.0	15.9	Complied
QPSK	Vertical	-28.6	-13.0	15.6	Complied
16QAM	Vertical	-28.3	-13.0	15.3	Complied
64QAM	Vertical	-29.2	-13.0	16.2	Complied
256QAM	Vertical	-29.0	-13.0	16.0	Complied
64QAM	Horizontal	-29.0	-13.0	16.0	Complied
256QAM	Horizontal	-29.1	-13.0	16.1	Complied

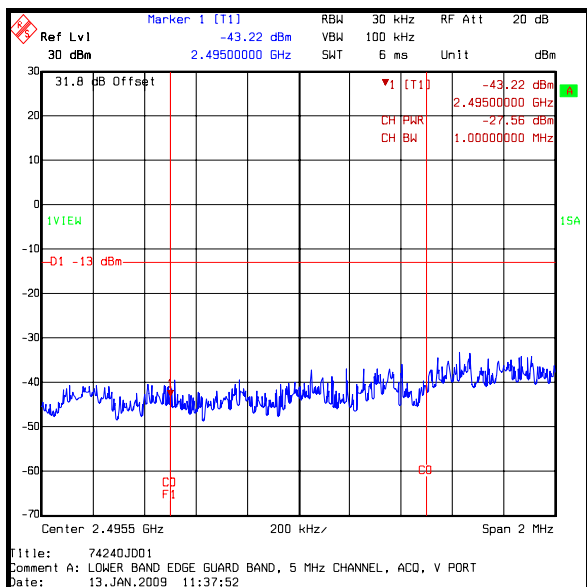
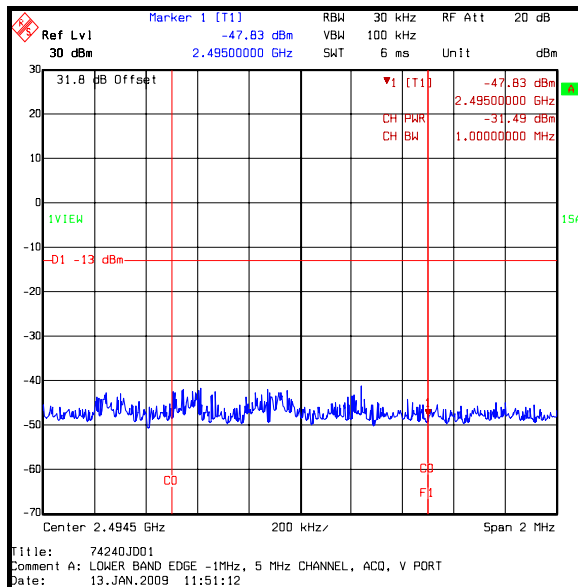
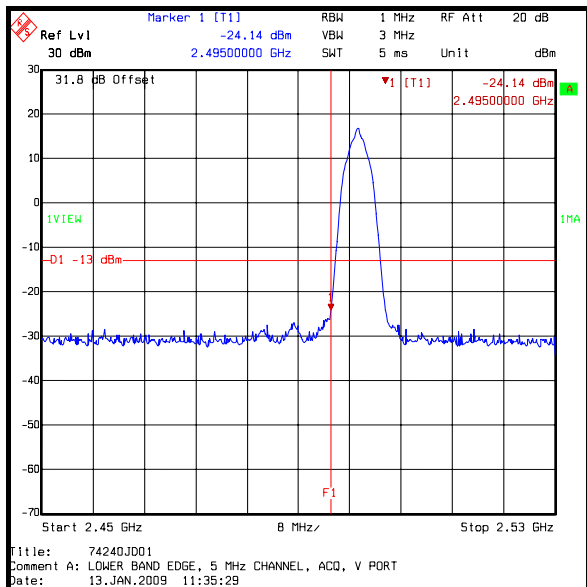
Note(s):

1. The EUT was configured using the Installation tool to transmit at maximum power on bottom and top channels. All modulation types and Acquisition mode were tested.
2. Measurements were made in the 1 MHz bands immediately outside and adjacent to the band edges. Initially the RBW was set to 1MHz but as expected it caused the carrier bandwidth to be greater then it actually was so the 1MHz blocks immediately adjacent the band edges was made using the channel power function of the spectrum analyser.
3. Measurements were made in the 1 MHz band immediately outside and adjacent to, the lower band edge at 2495 MHz. This measurement was made using the channel power function of the spectrum analyser. The test was also repeated in the 1 MHz guard band above the lower band edge between 2495 MHz and 2496 MHz, graphical results only are shown for the guard band as no limit is specified.
4. Measurements were made in the 1 MHz band immediately outside and adjacent to, the upper band edge at 2690 MHz. This measurement was made using the channel power function of the spectrum analyser.
5. Measurements were performed with the EUT transmitting with all modulation types and Acquisition mode on the V port. BPSK and 256QAM were also tested on the H port in order to prove compliance on both ports.
6. The band edge limit is calculated according to FCC Section 27.53(l)(2) as follows: $43 + 10\log(P)$ where P is the transmitter power in Watts.

Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

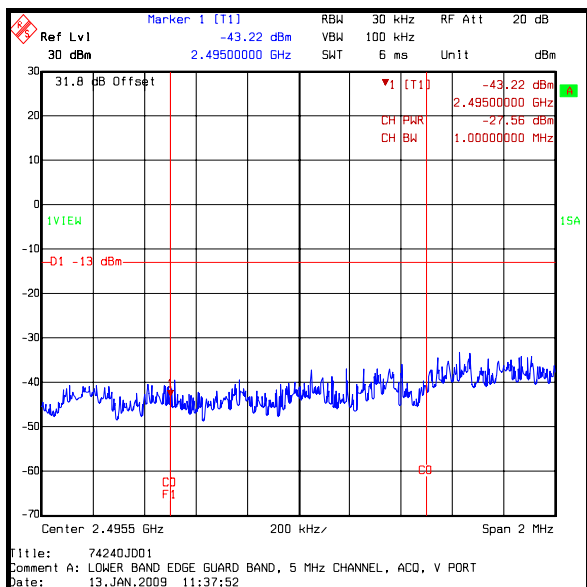
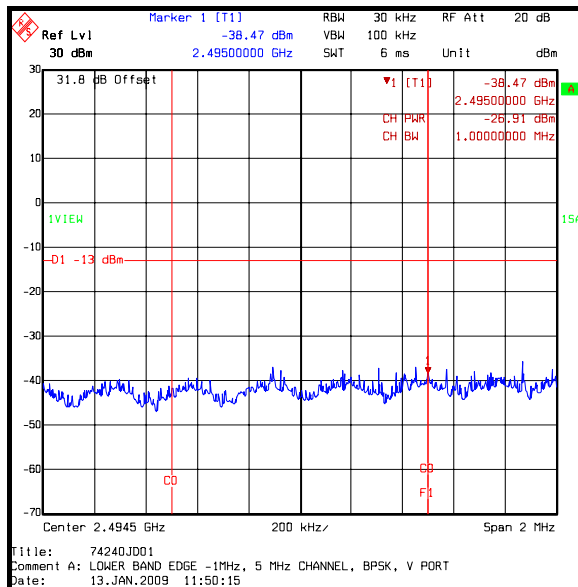
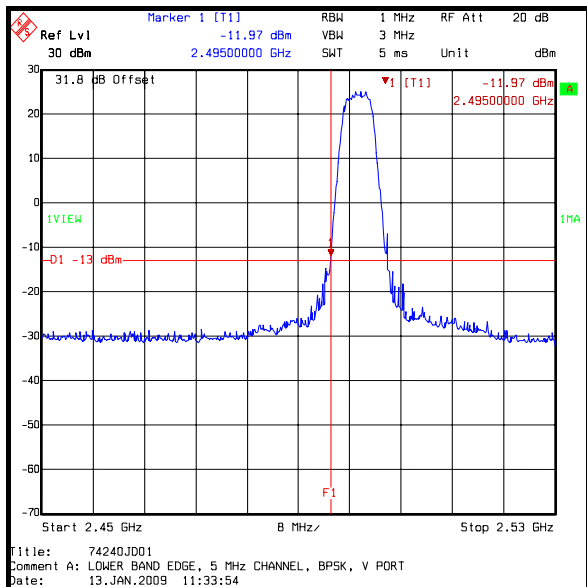
5 MHz Bandwidth / ACQ / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

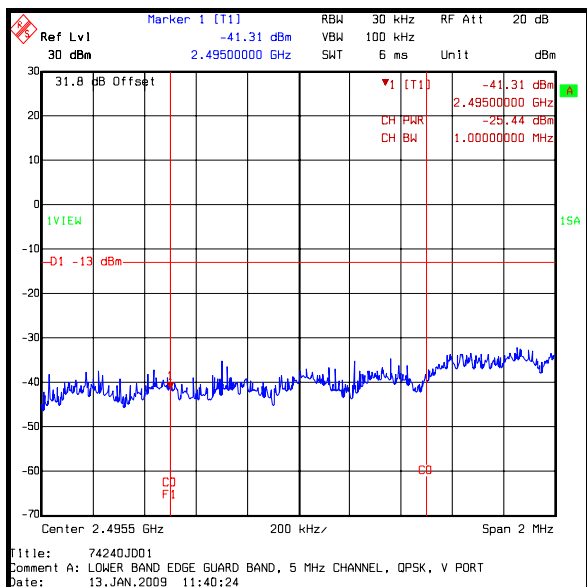
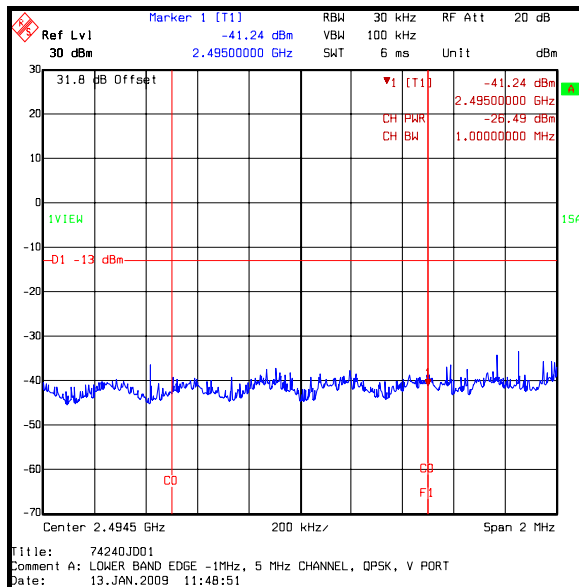
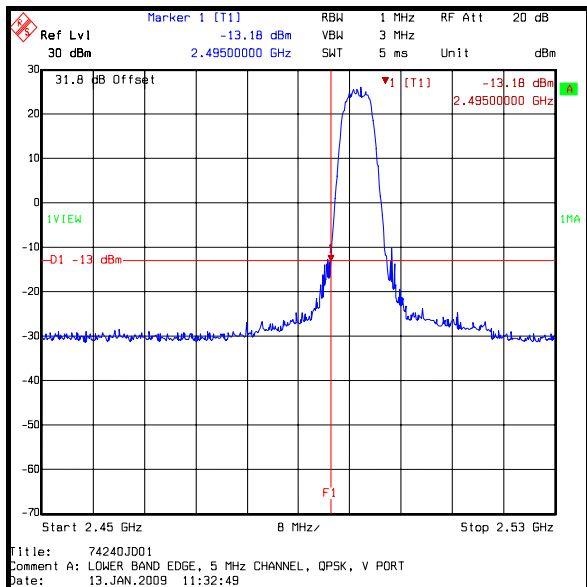
5 MHz Bandwidth / BPSK / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

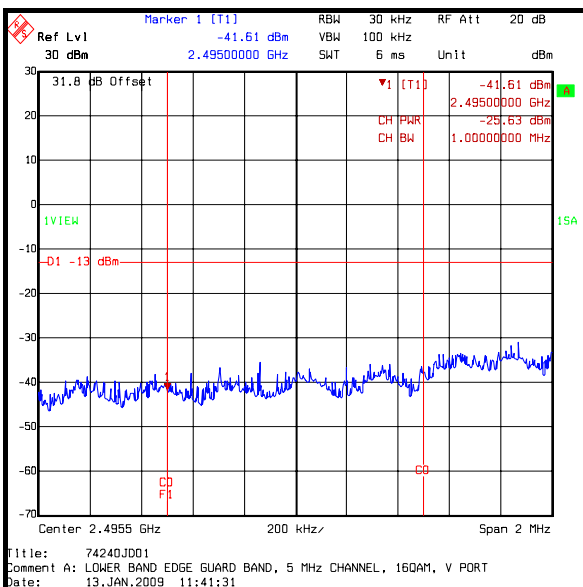
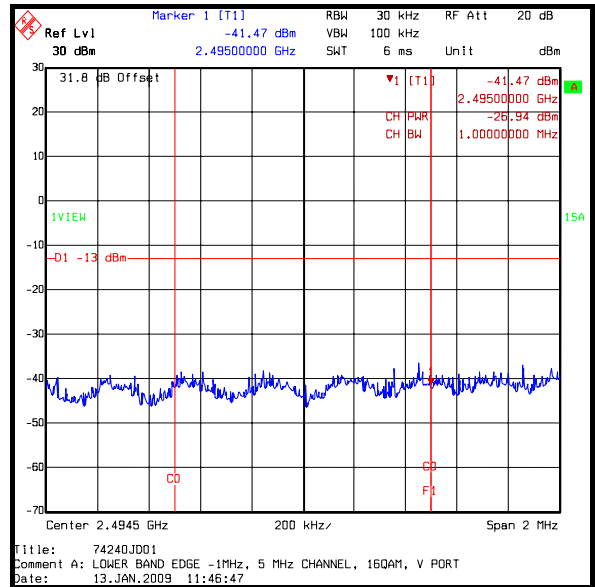
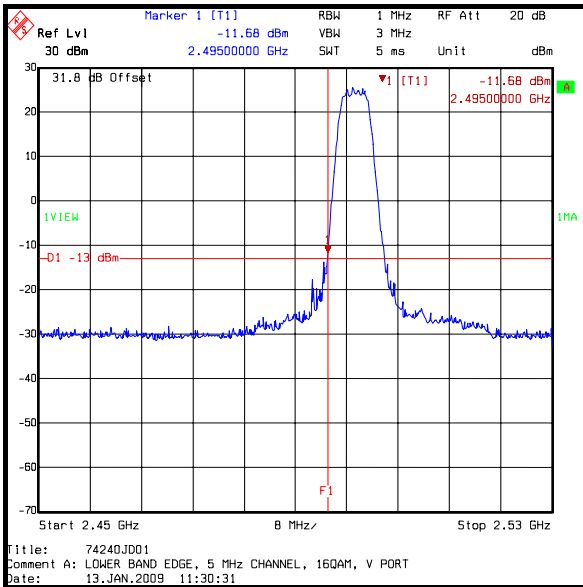
5 MHz Bandwidth / QPSK / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

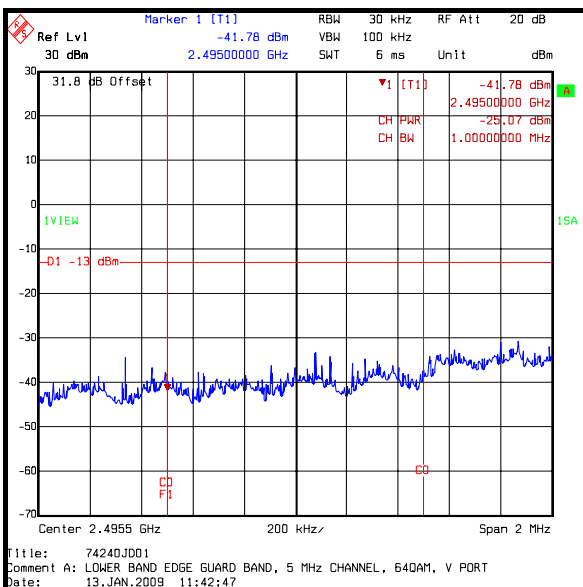
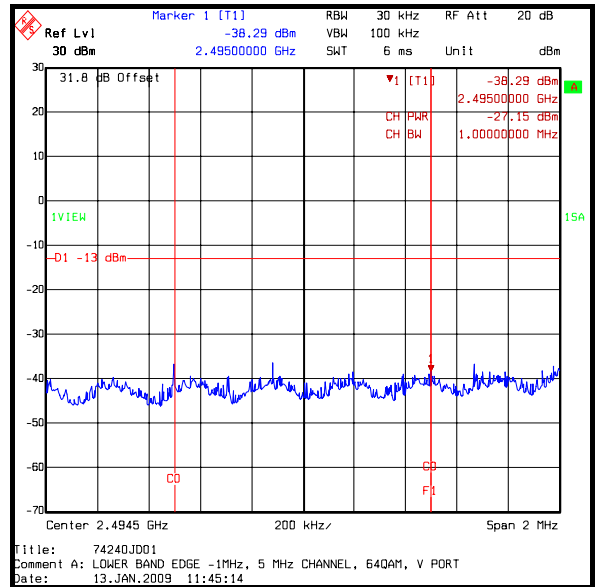
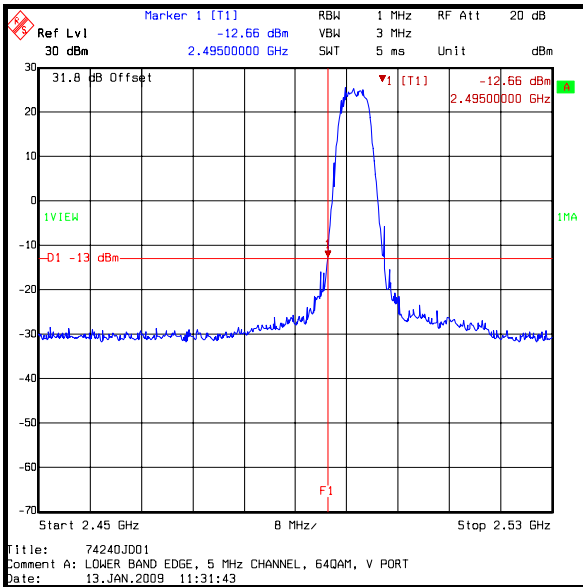
5 MHz Bandwidth / 16 QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

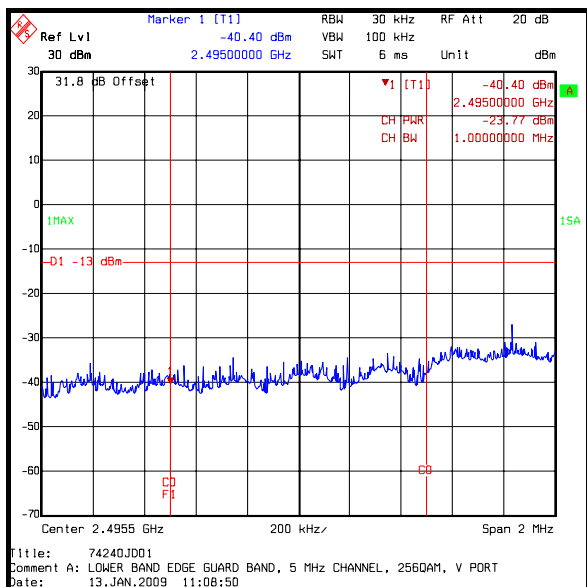
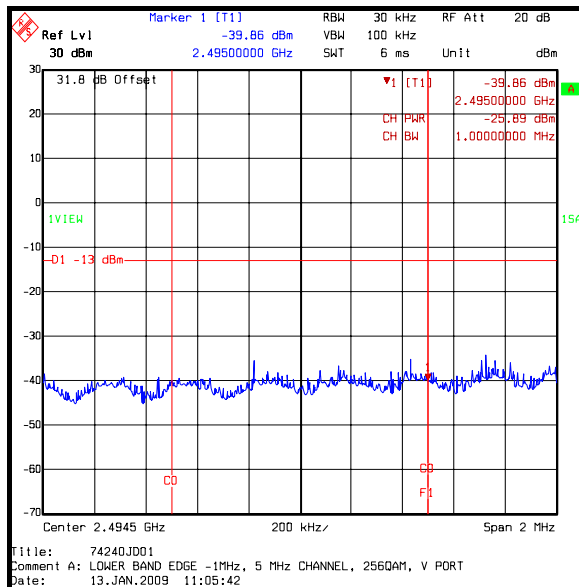
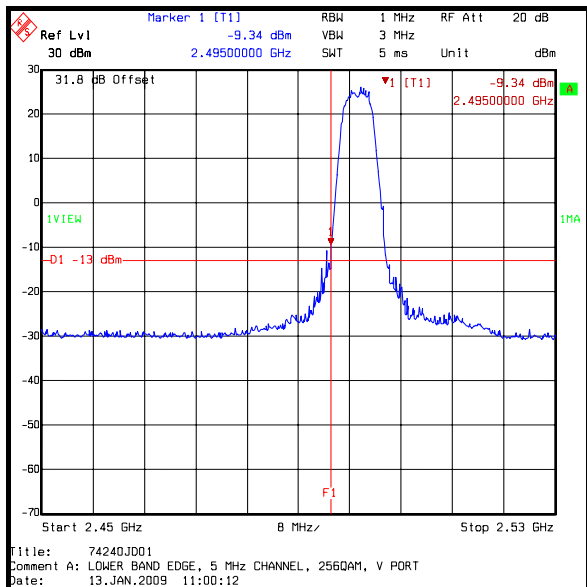
5 MHz Bandwidth / 64QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

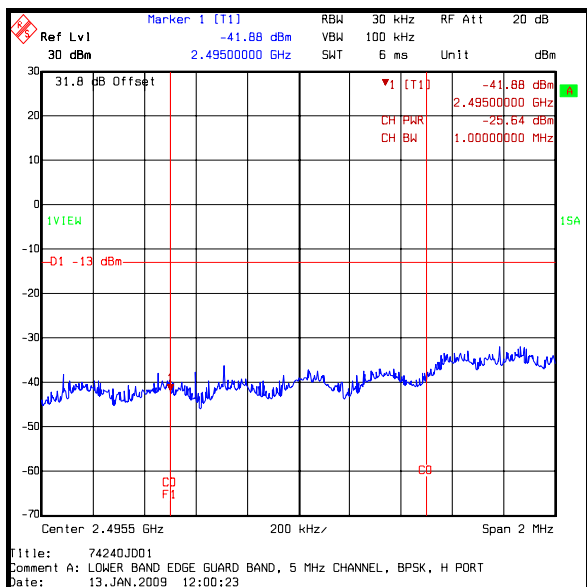
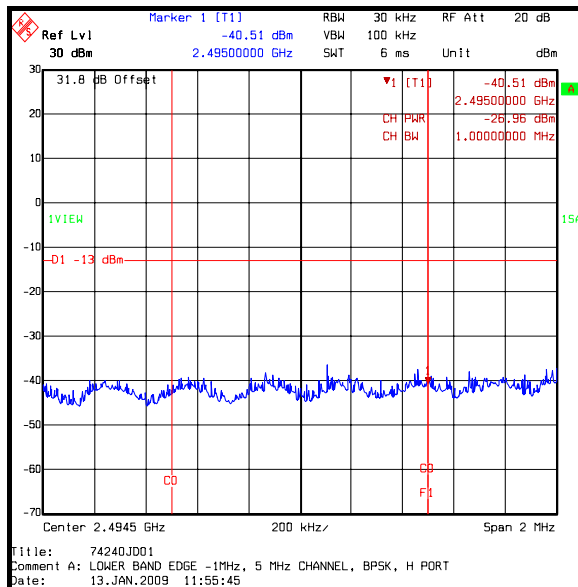
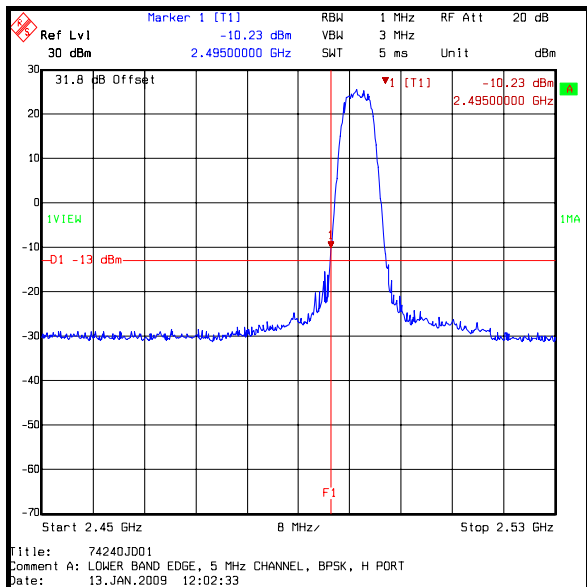
5 MHz Bandwidth / 256 QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

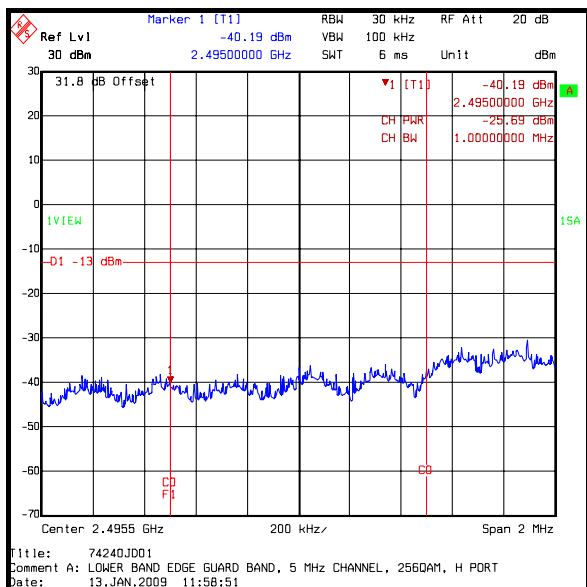
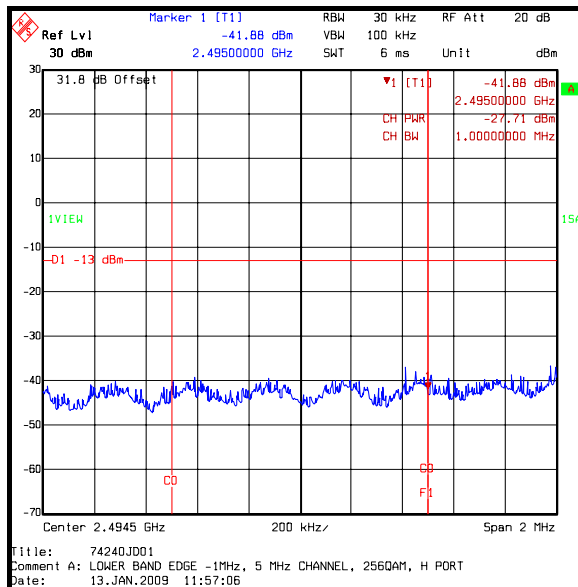
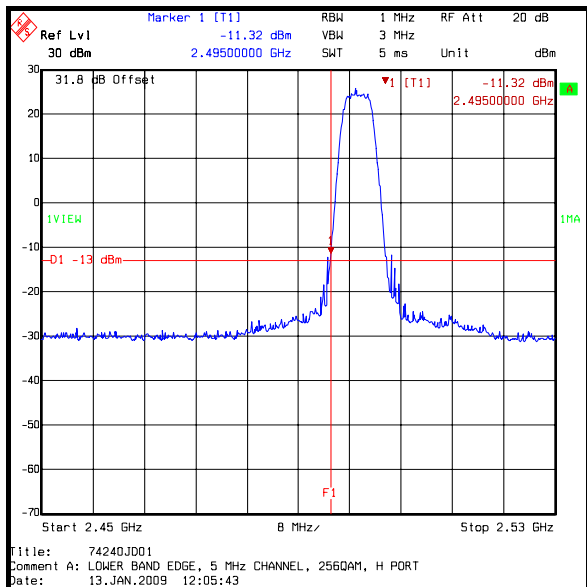
5 MHz Bandwidth / BPSK / H Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

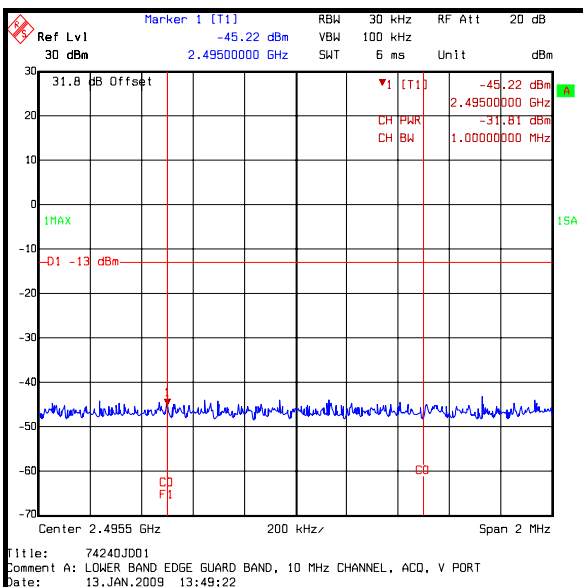
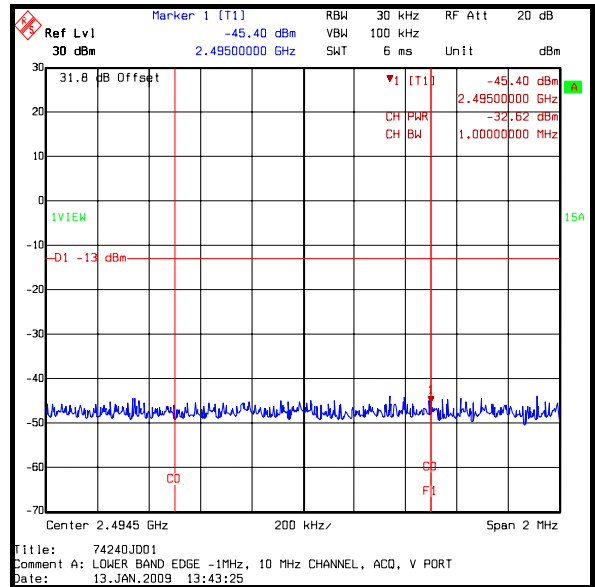
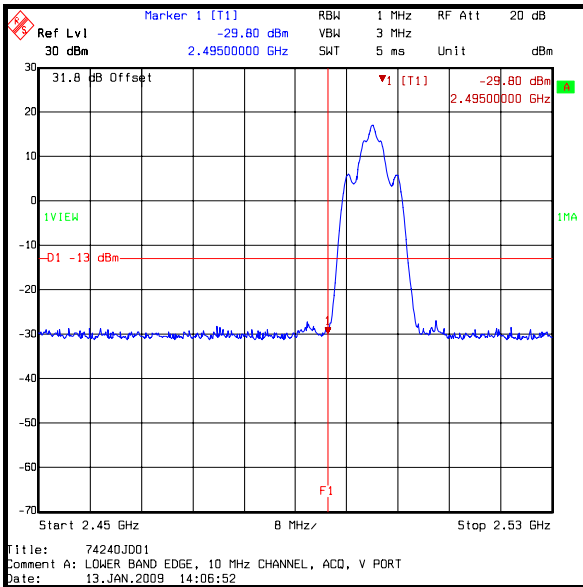
5 MHz Bandwidth / 256QAM / H Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

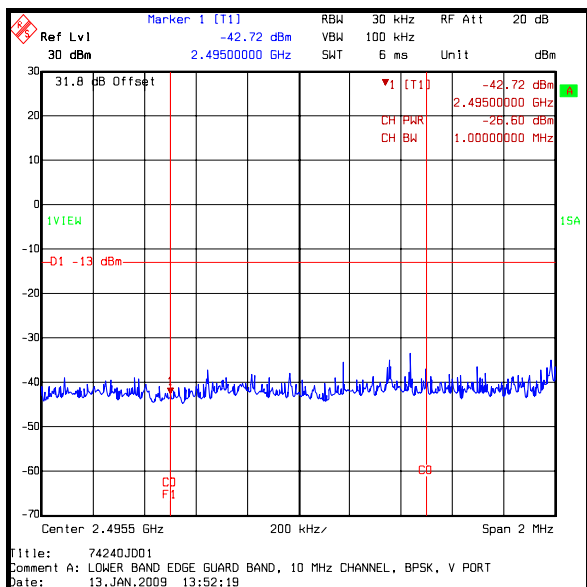
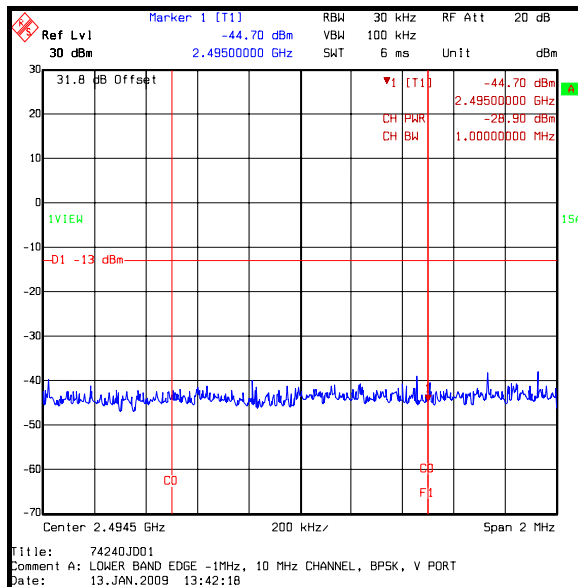
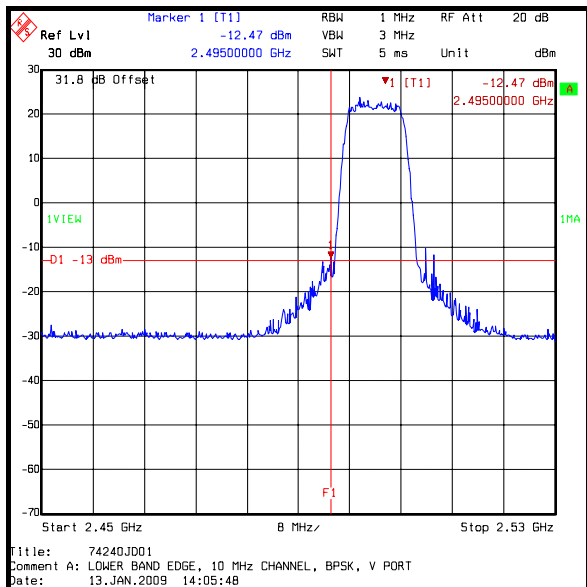
10 MHz Bandwidth / ACQ / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

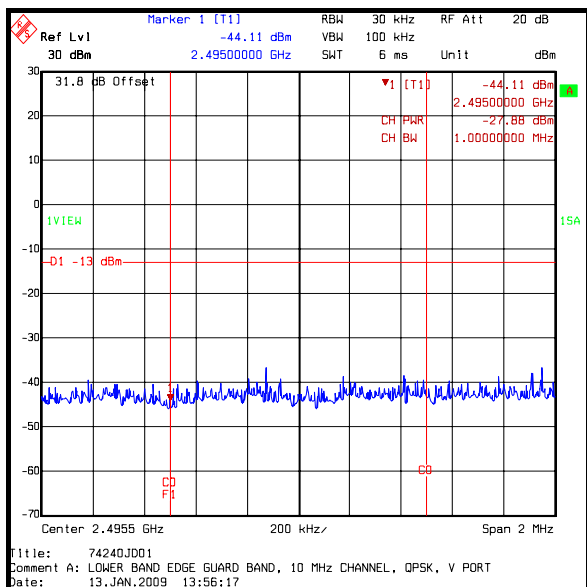
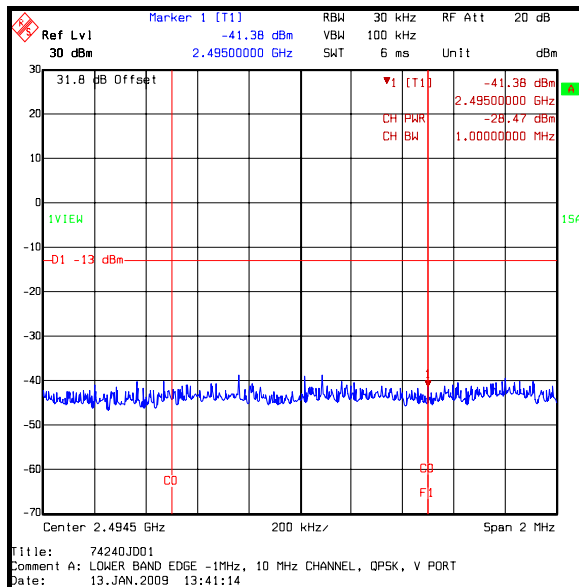
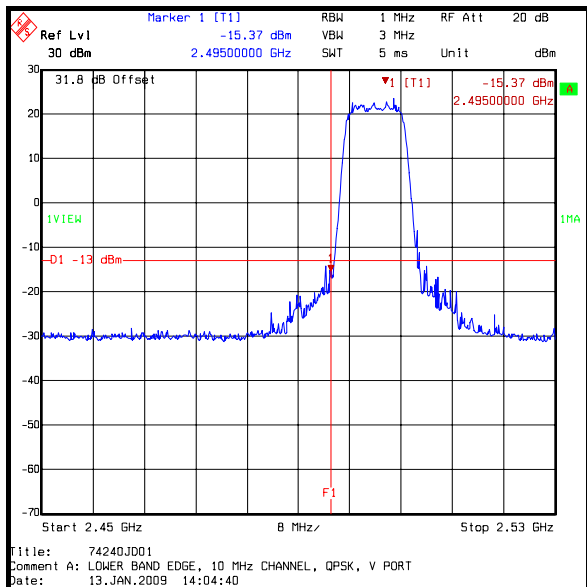
10 MHz Bandwidth / BPSK / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

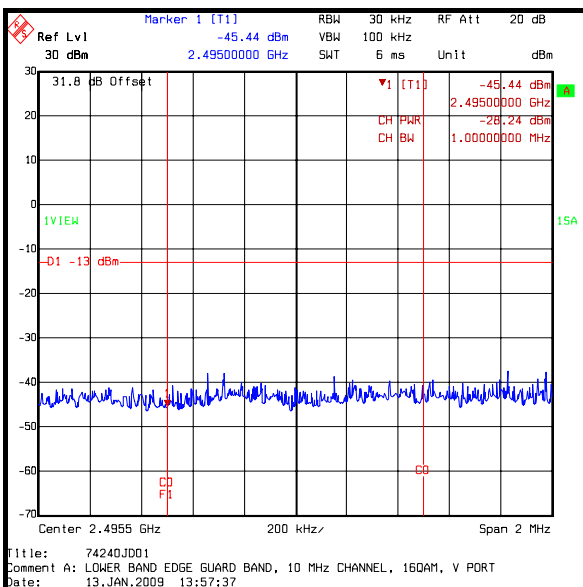
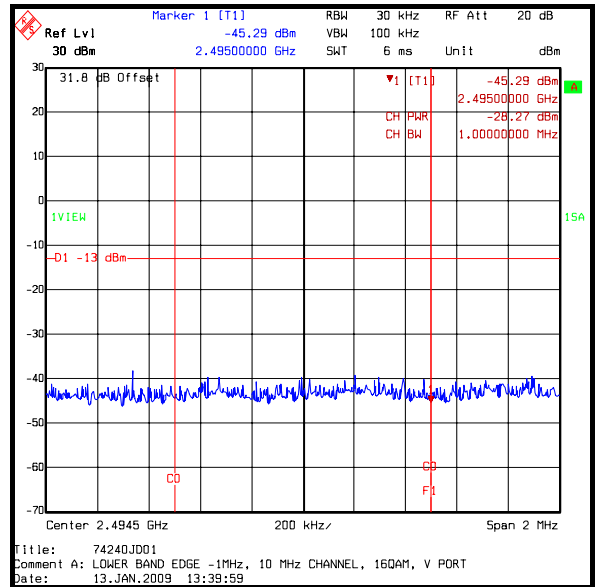
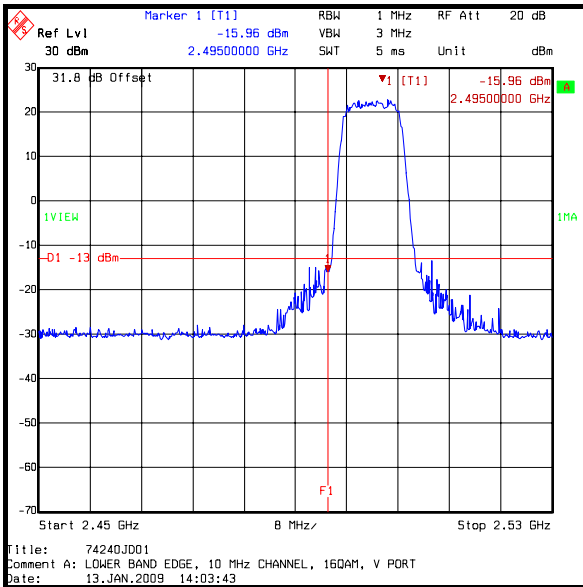
10 MHz Bandwidth / QPSK / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

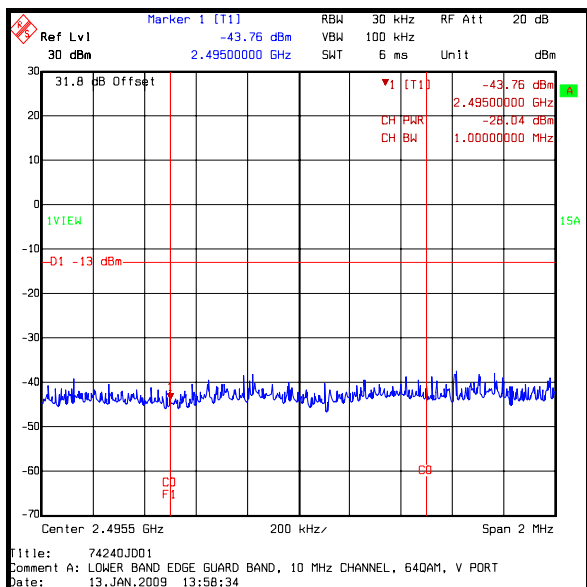
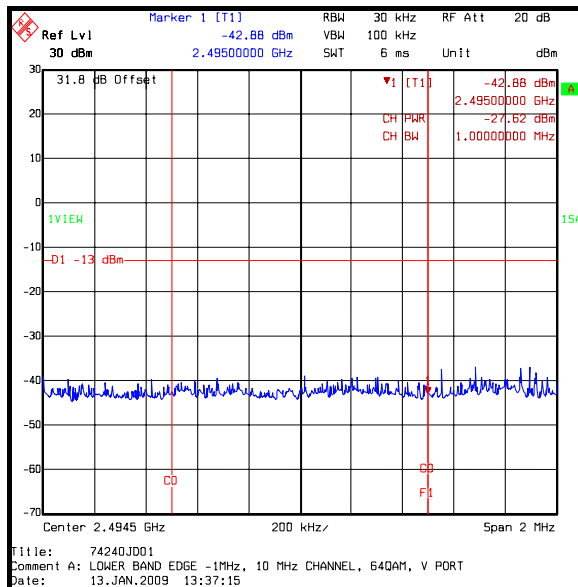
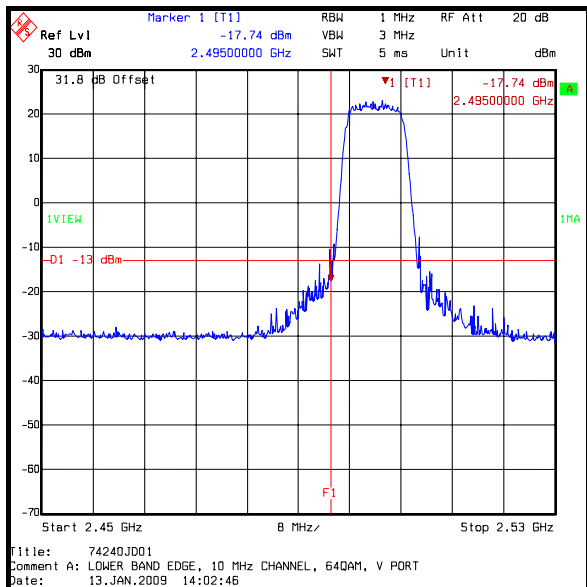
10 MHz Bandwidth / 16 QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

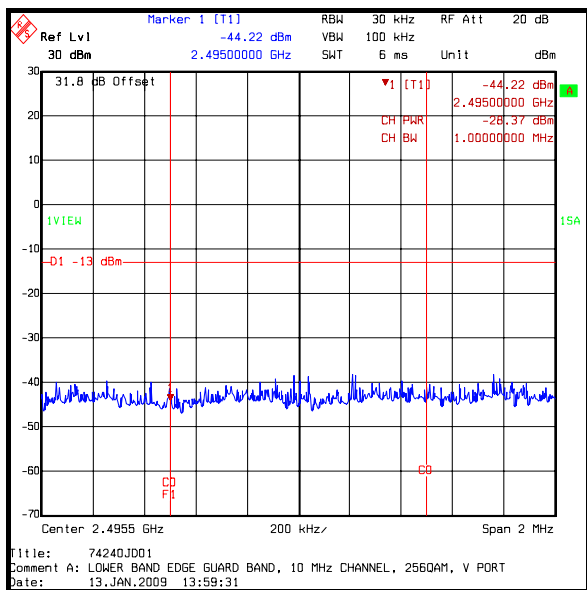
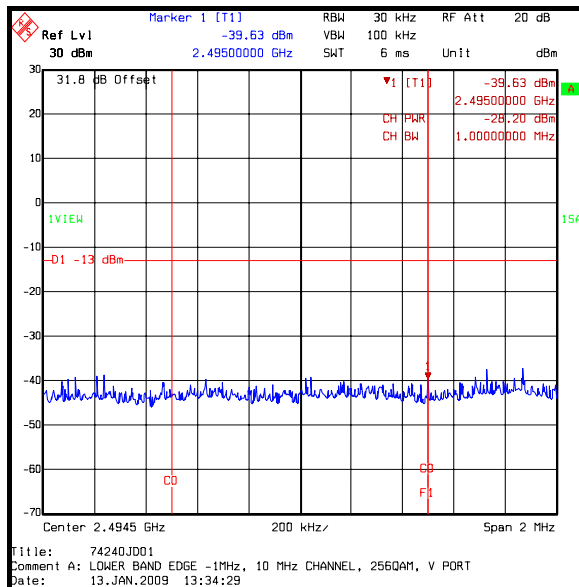
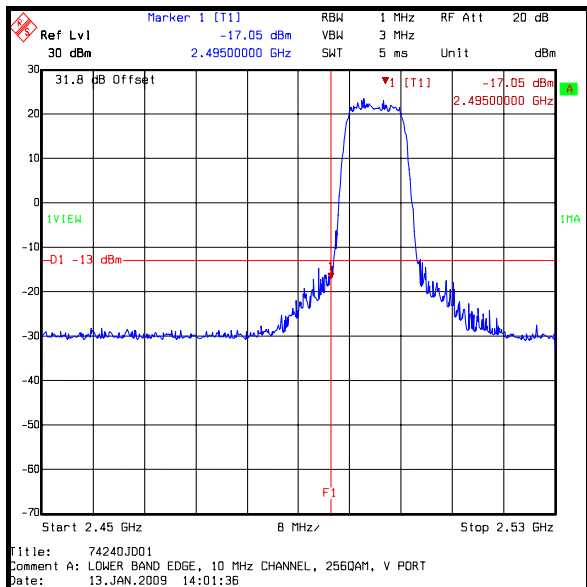
Transmitter Conducted Emissions (Lower Band Edge) (continued)

10 MHz Bandwidth / 64QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

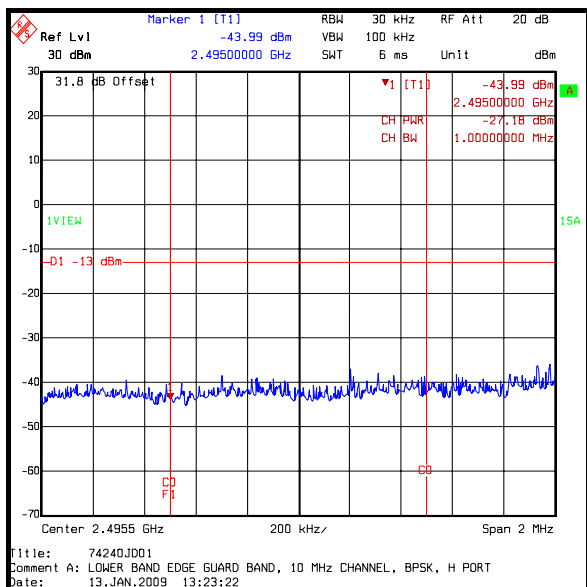
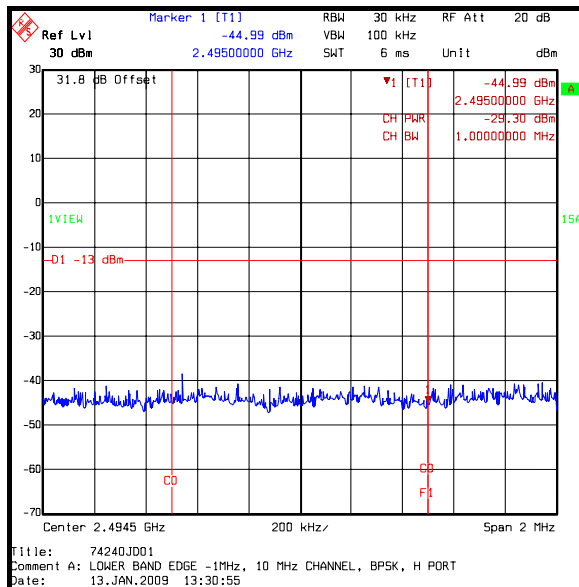
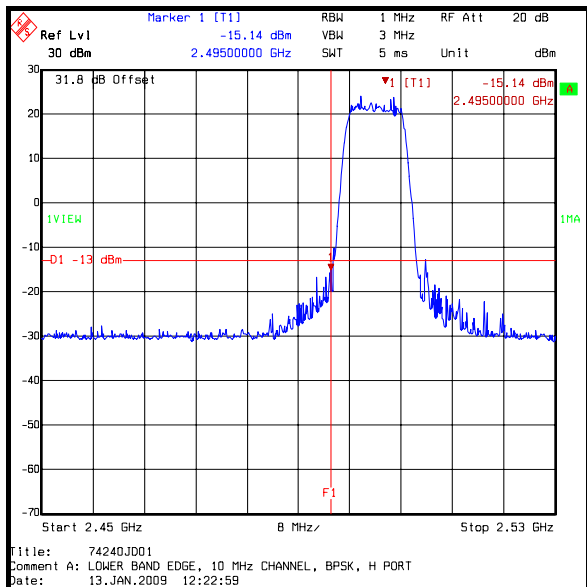
Transmitter Conducted Emissions (Lower Band Edge) (continued)
10 MHz Bandwidth / 256 QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

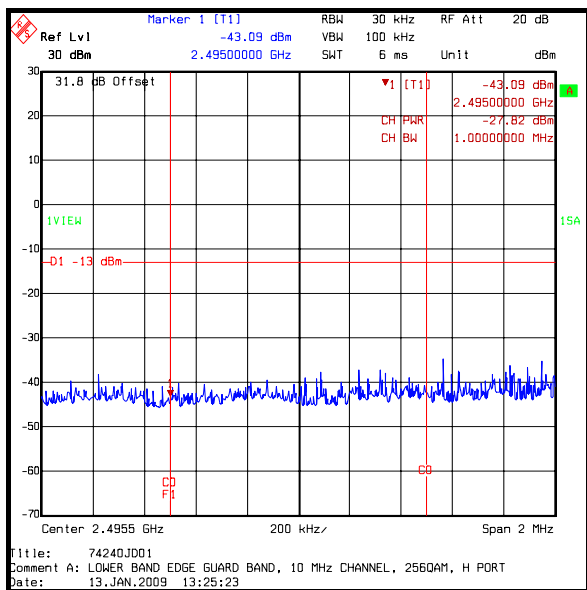
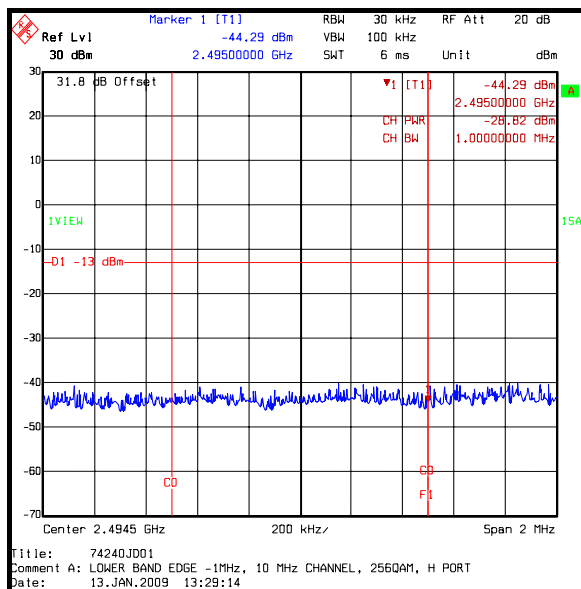
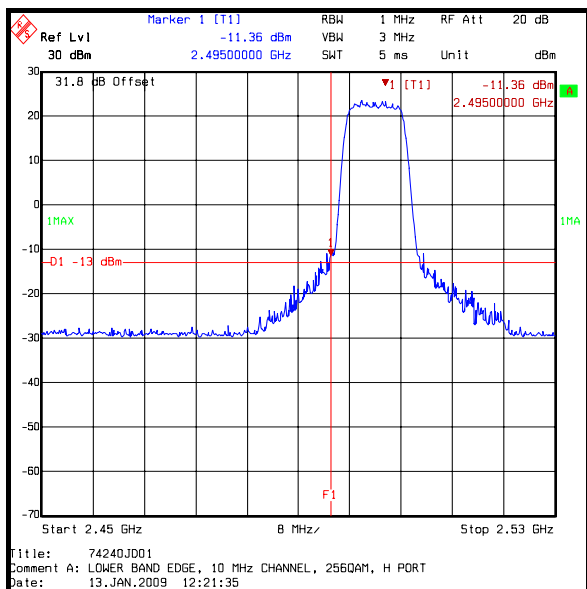
10 MHz Bandwidth / BPSK / H Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

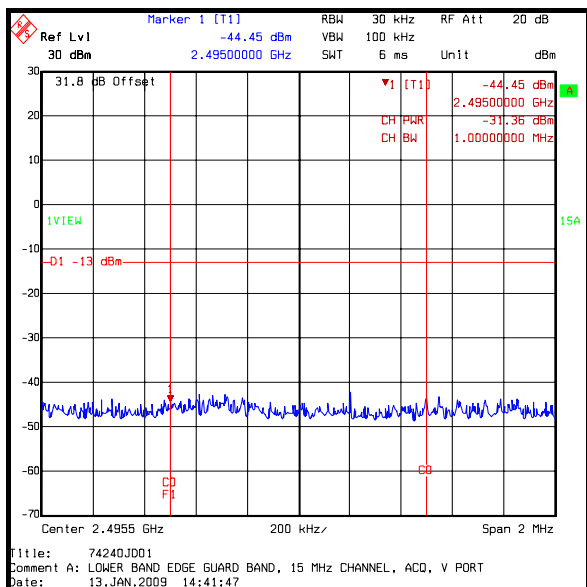
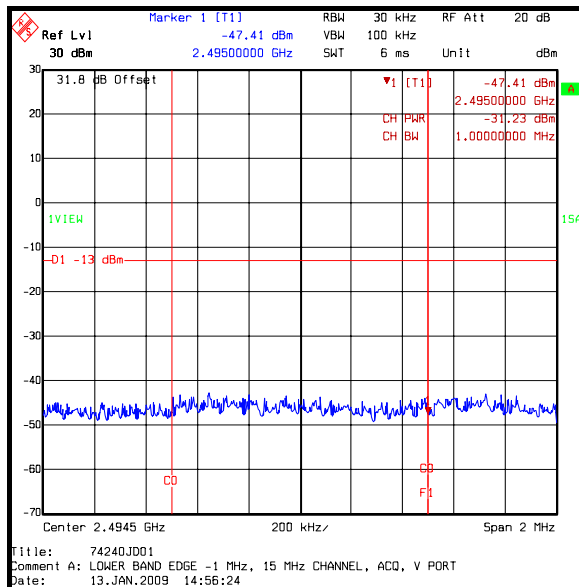
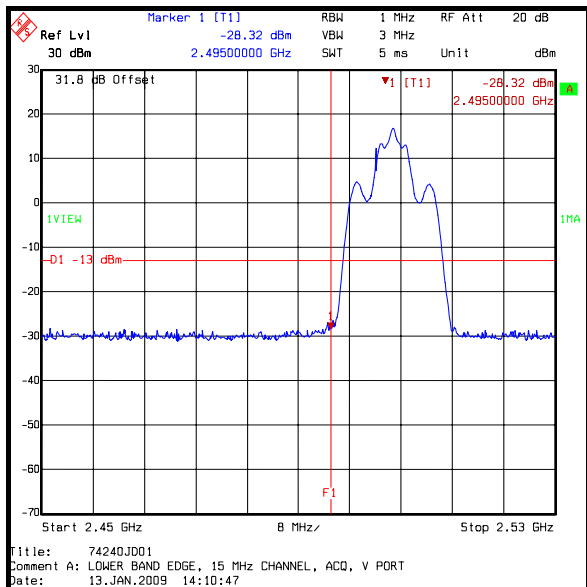
10 MHz Bandwidth / 256QAM / H Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

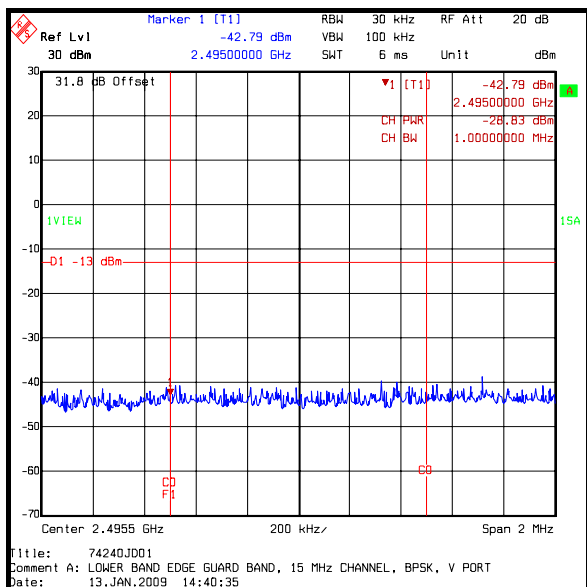
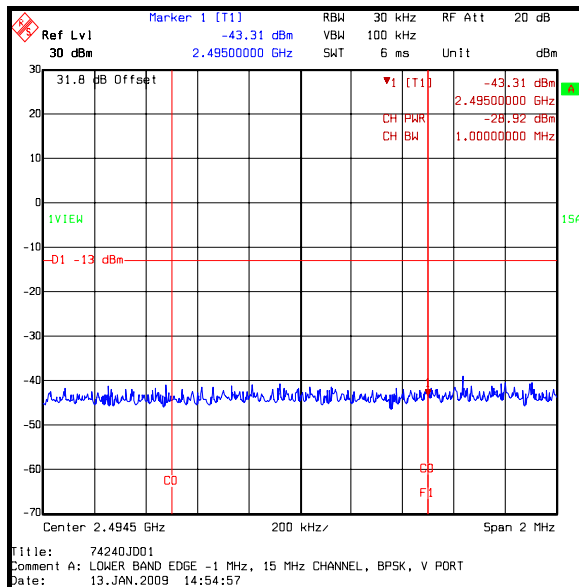
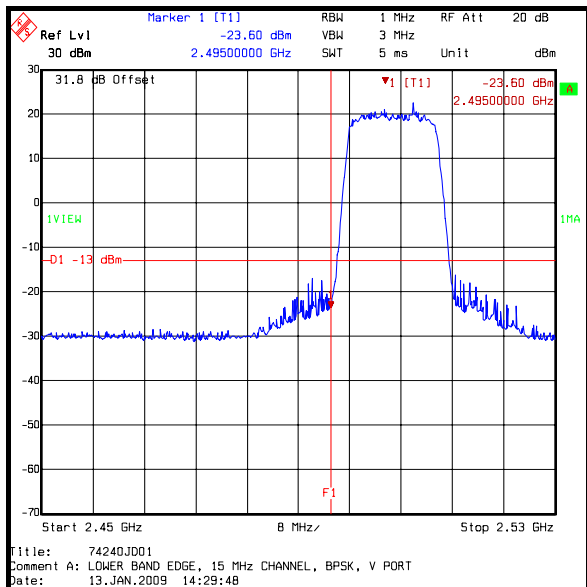
15 MHz Bandwidth / ACQ / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

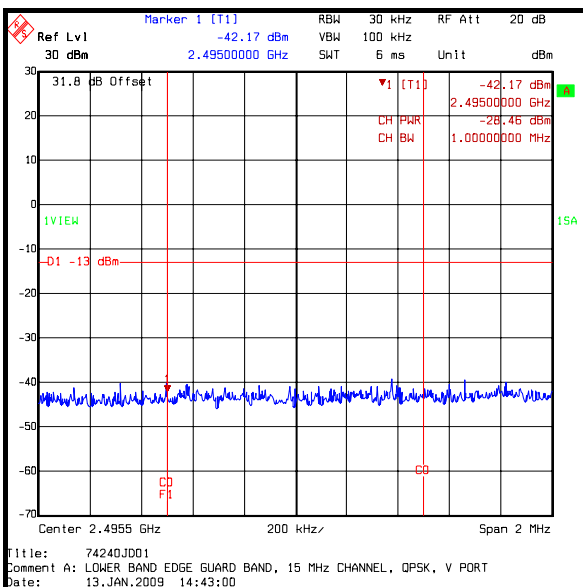
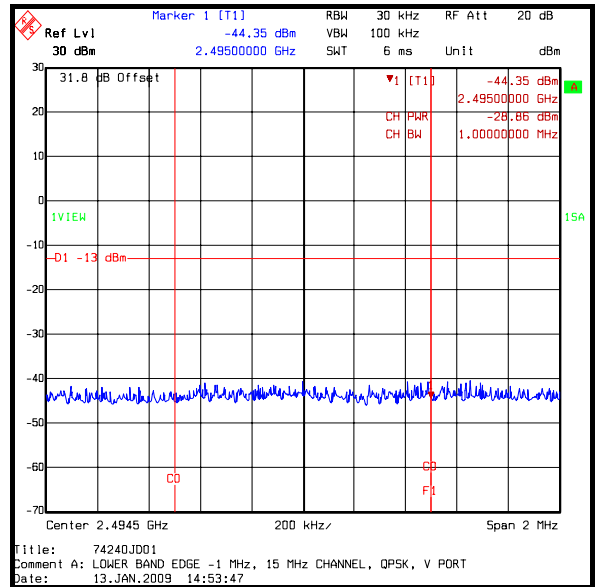
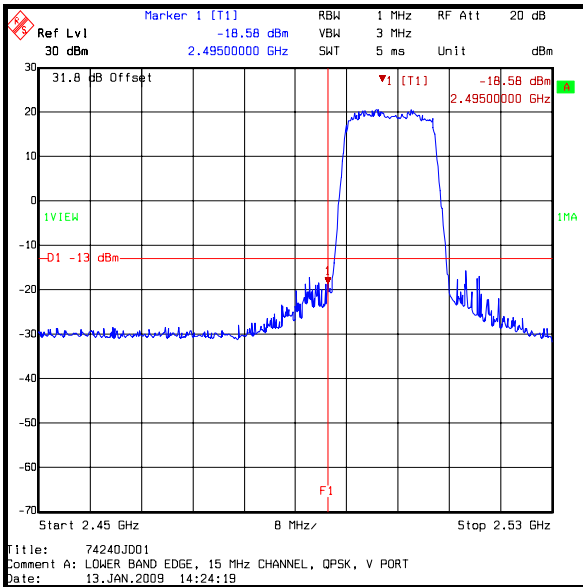
15 MHz Bandwidth / BPSK / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

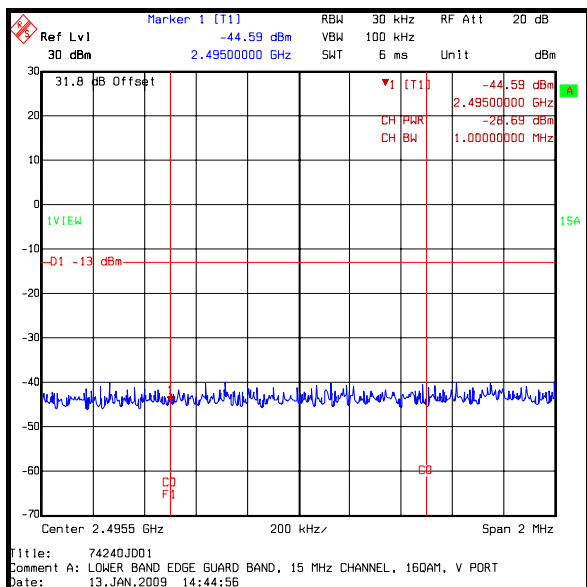
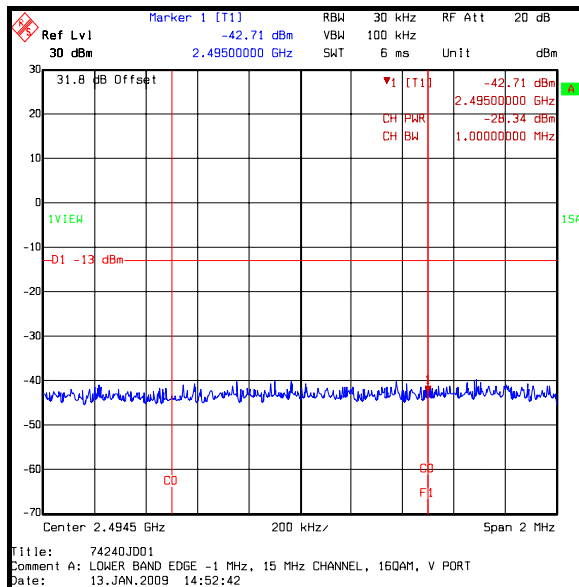
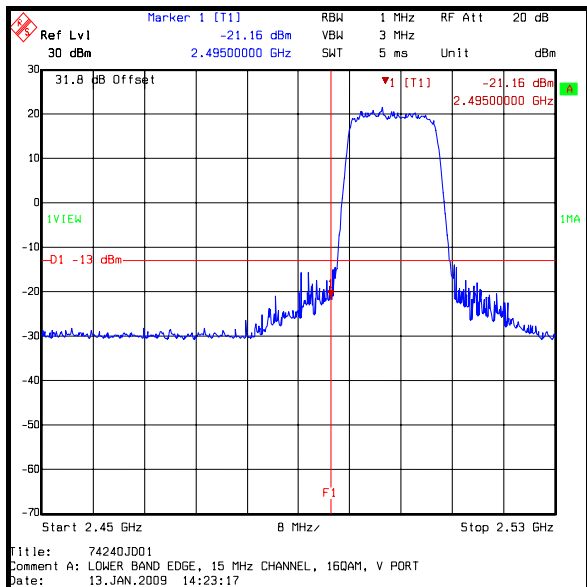
15 MHz Bandwidth / QPSK / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

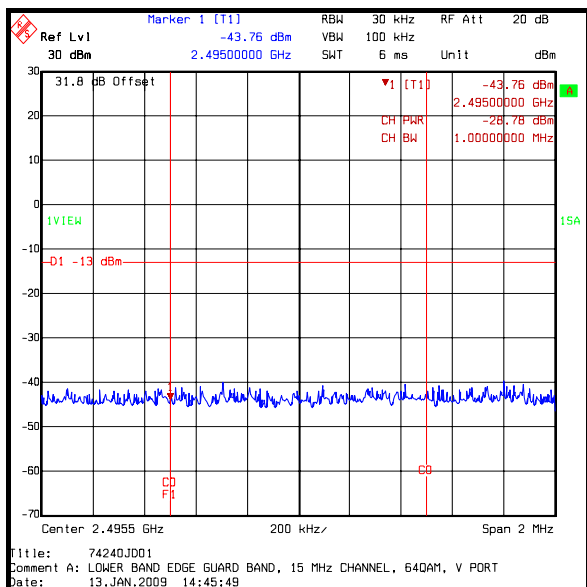
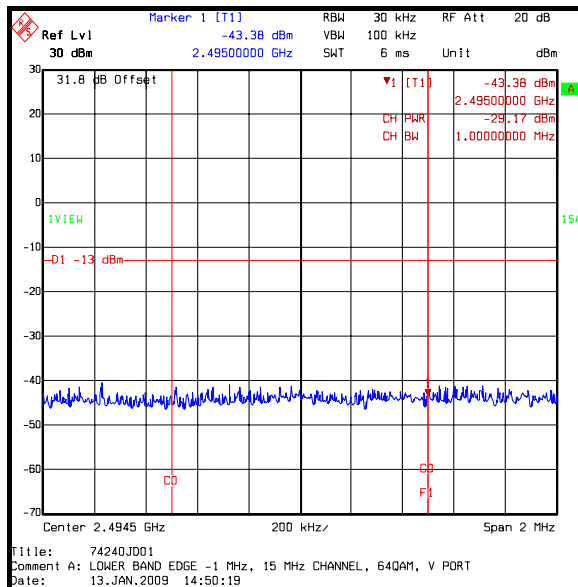
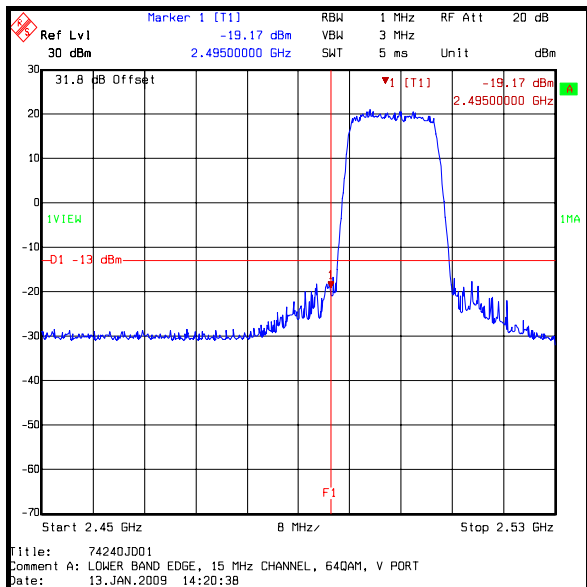
15 MHz Bandwidth / 16 QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

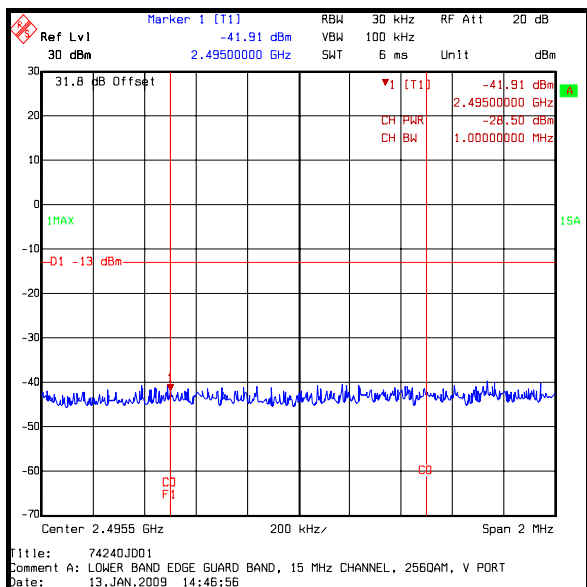
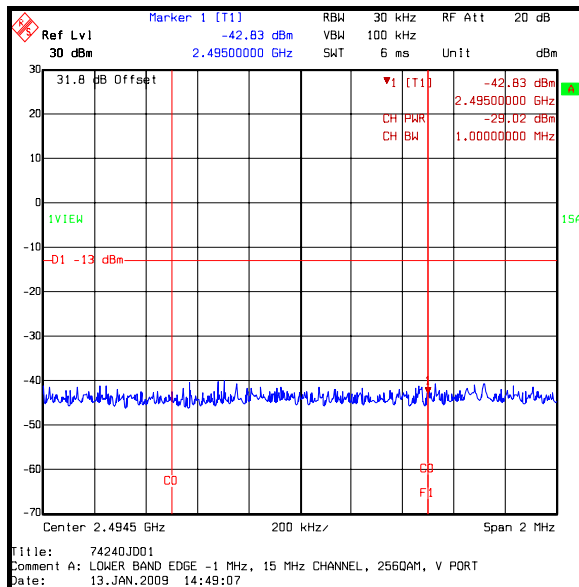
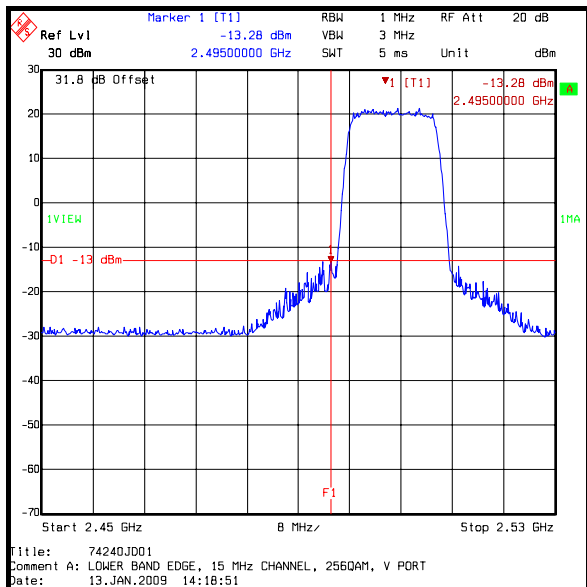
15 MHz Bandwidth / 64QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

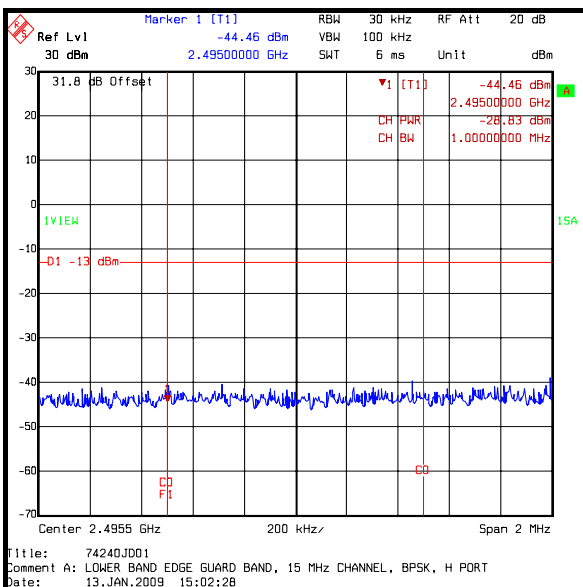
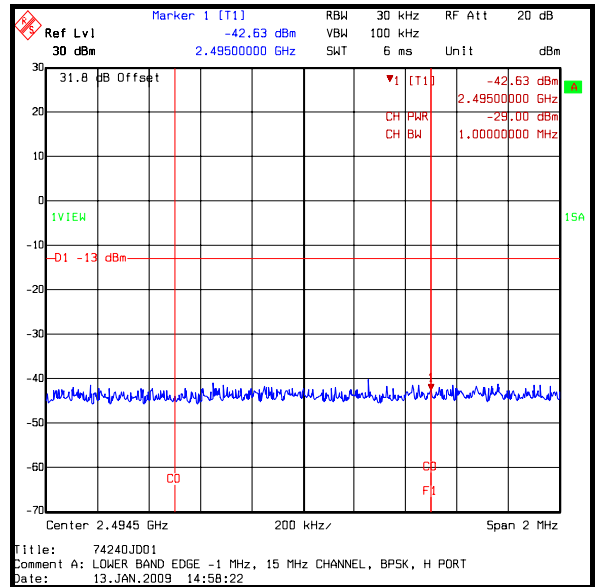
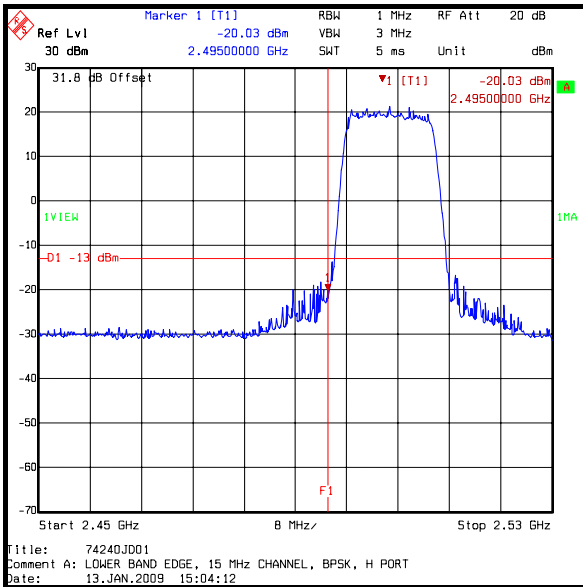
15 MHz Bandwidth / 256 QAM / V Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

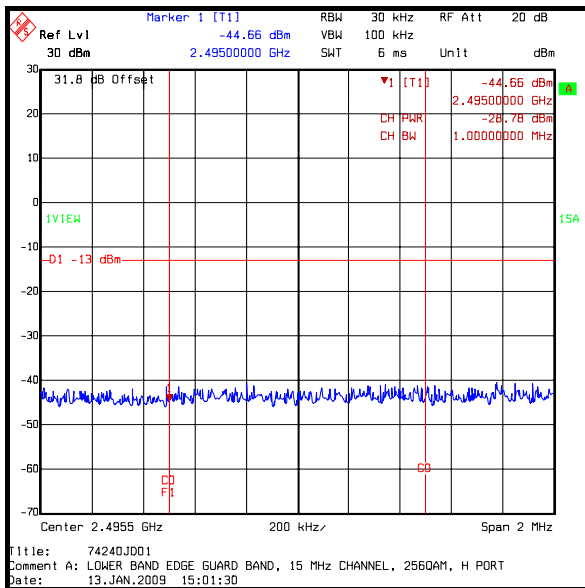
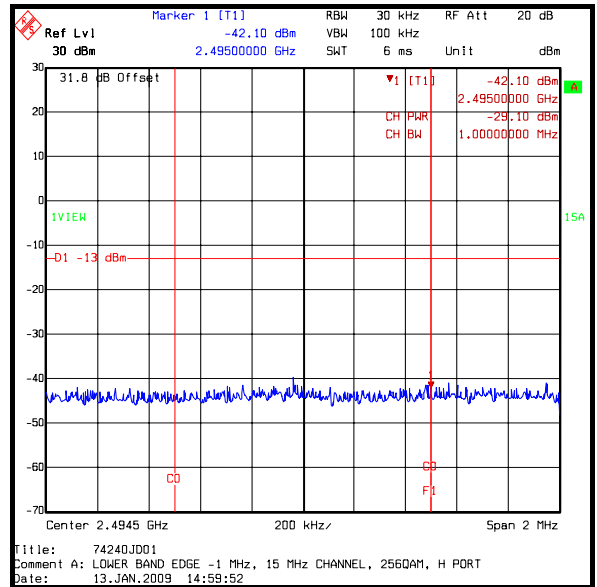
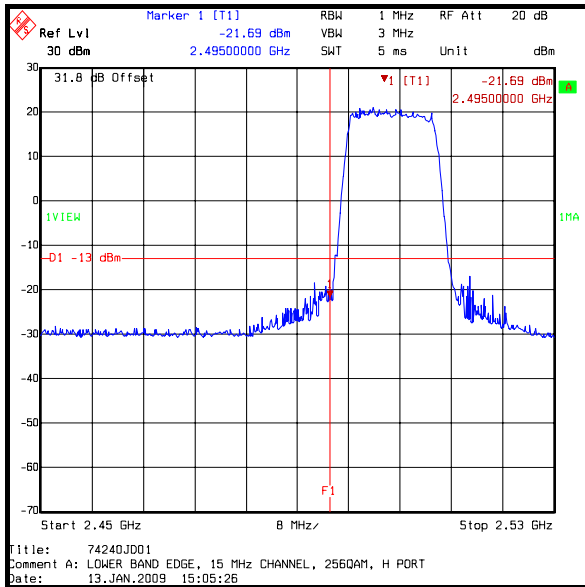
15 MHz Bandwidth / BPSK / H Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Lower Band Edge) (continued)

15 MHz Bandwidth / 256QAM / H Port



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)**Results: 5 MHz Bandwidth / Upper Band Edge**

Modulation	Port	Peak Emission Level (dBm)	Band edge limit (dBm)	Margin (dB)	Result
ACQ	Vertical	-31.6	-13.0	18.6	Complied
BPSK	Vertical	-22.7	-13.0	9.7	Complied
QPSK	Vertical	-22.7	-13.0	9.7	Complied
16QAM	Vertical	-22.7	-13.0	9.7	Complied
64QAM	Vertical	-22.8	-13.0	9.8	Complied
256QAM	Vertical	-22.9	-13.0	9.9	Complied
64QAM	Horizontal	-22.2	-13.0	9.2	Complied
256QAM	Horizontal	-22.3	-13.0	9.3	Complied

Results: 10 MHz Bandwidth / Upper Band Edge

Modulation	Port	Peak Emission Level (dBm)	Band edge limit (dBm)	Margin (dB)	Result
ACQ	Vertical	-31.0	-13.0	18.0	Complied
BPSK	Vertical	-26.7	-13.0	13.7	Complied
QPSK	Vertical	-26.3	-13.0	13.3	Complied
16QAM	Vertical	-26.0	-13.0	13.0	Complied
64QAM	Vertical	-26.2	-13.0	13.2	Complied
256QAM	Vertical	-26.0	-13.0	13.0	Complied
64QAM	Horizontal	-24.9	-13.0	11.9	Complied
256QAM	Horizontal	-24.6	-13.0	11.6	Complied

Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

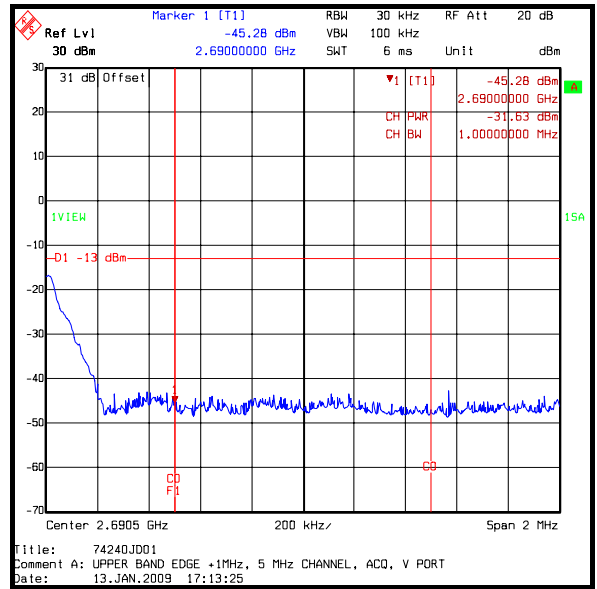
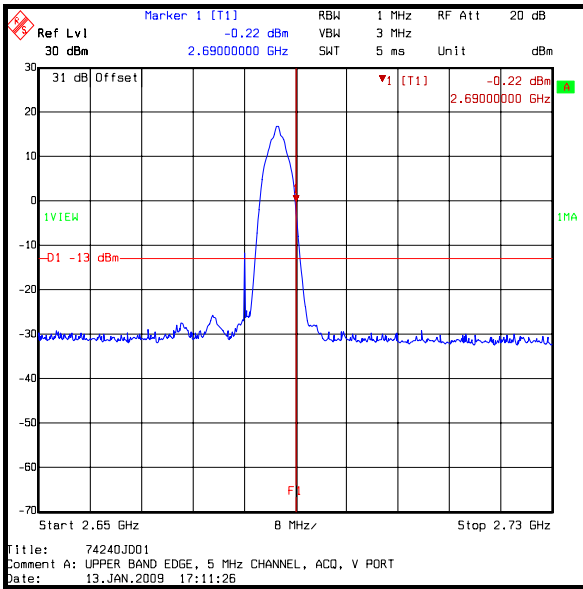
Transmitter Conducted Emissions (continued)**Results: 15 MHz Bandwidth / Upper Band Edge**

Modulation	Port	Peak Emission Level (dBm)	Band edge limit (dBm)	Margin (dB)	Result
ACQ	Vertical	-33.1	-13.0	20.1	Complied
BPSK	Vertical	-27.8	-13.0	14.8	Complied
QPSK	Vertical	-28.5	-13.0	15.5	Complied
16QAM	Vertical	-28.8	-13.0	15.8	Complied
64QAM	Vertical	-28.7	-13.0	15.7	Complied
256QAM	Vertical	-28.6	-13.0	15.6	Complied
64QAM	Horizontal	-27.8	-13.0	14.8	Complied
256QAM	Horizontal	-28.4	-13.0	15.4	Complied

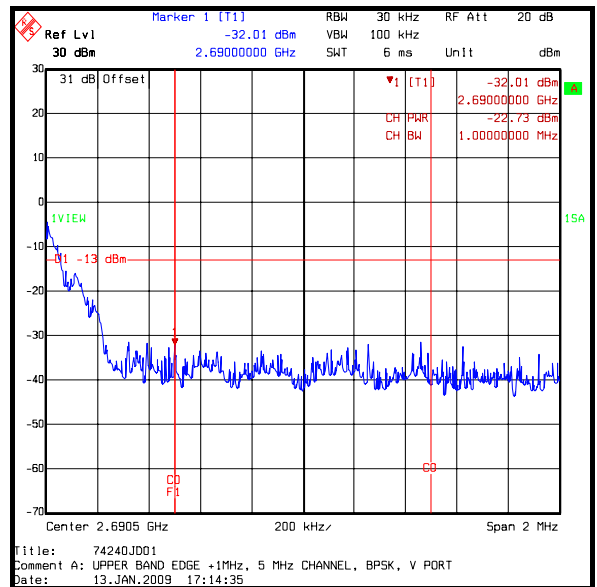
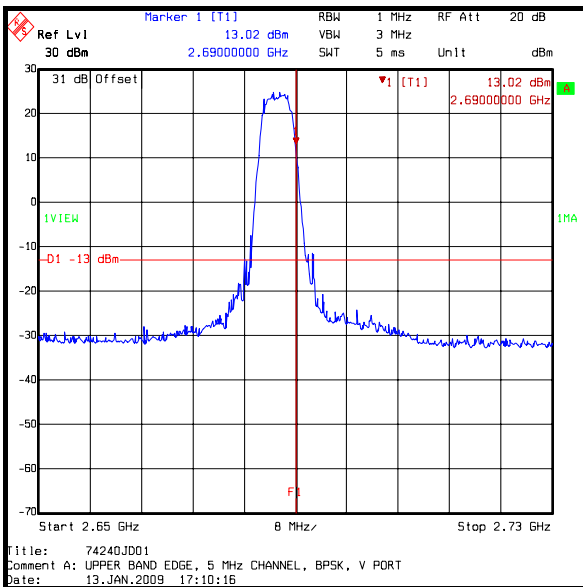
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

5 MHz Bandwidth / ACQ / V Port



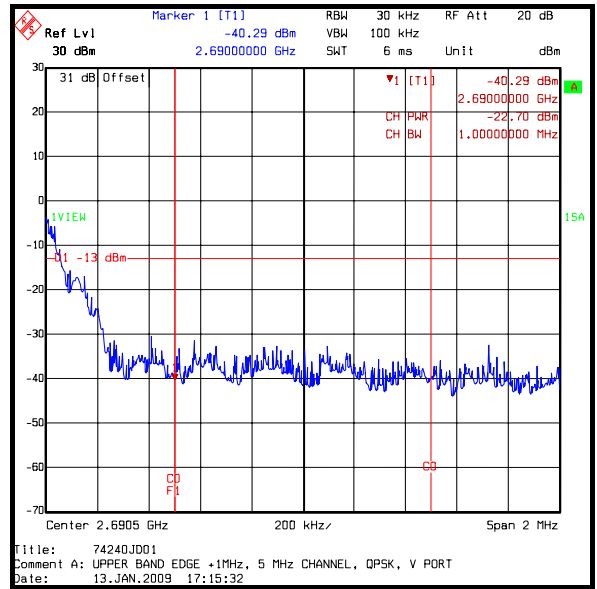
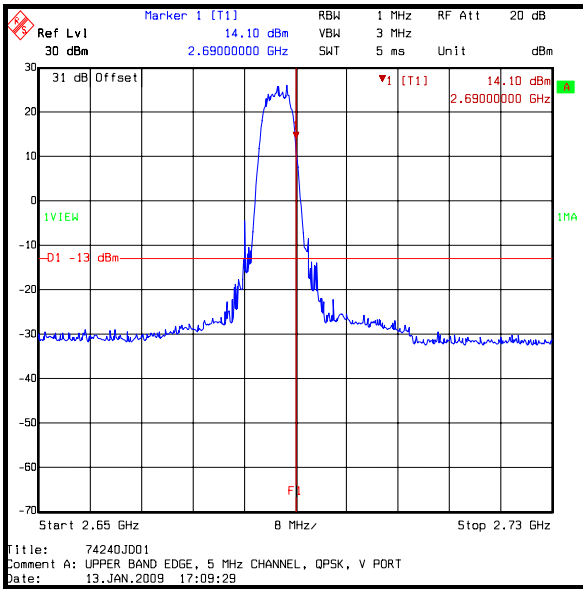
5 MHz Bandwidth / BPSK / V Port



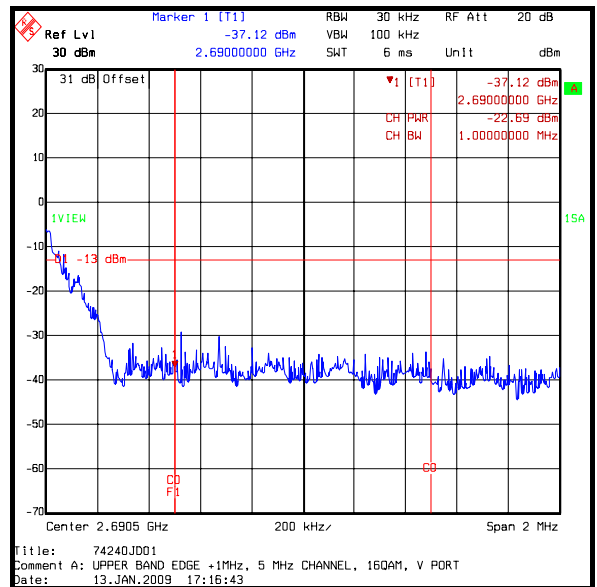
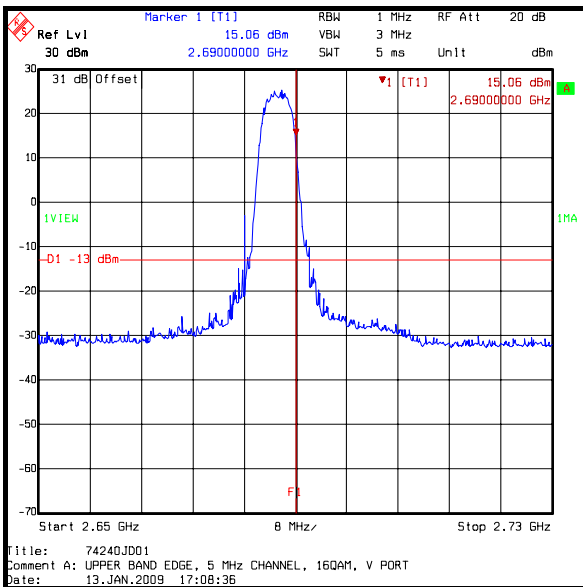
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

5 MHz Bandwidth / QPSK / V Port



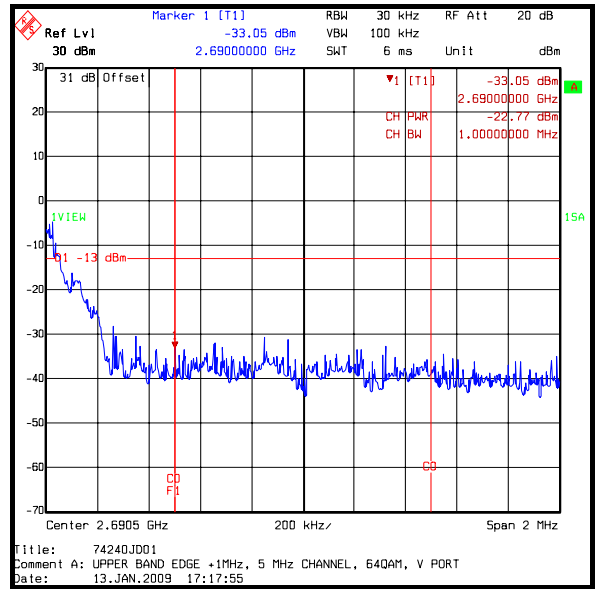
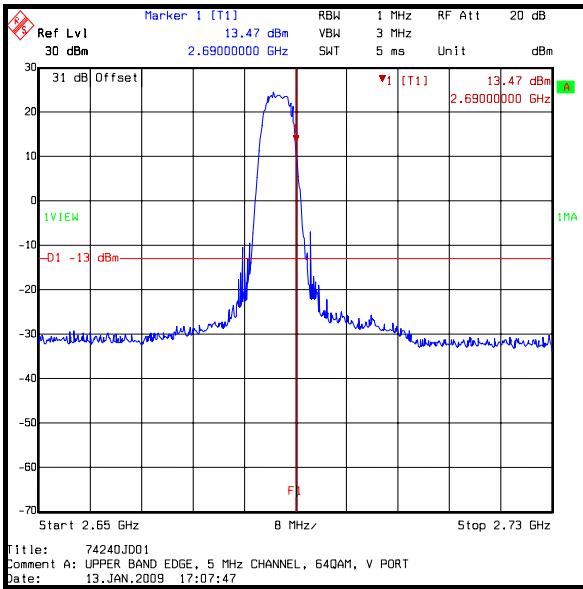
5 MHz Bandwidth / 16 QAM / V Port



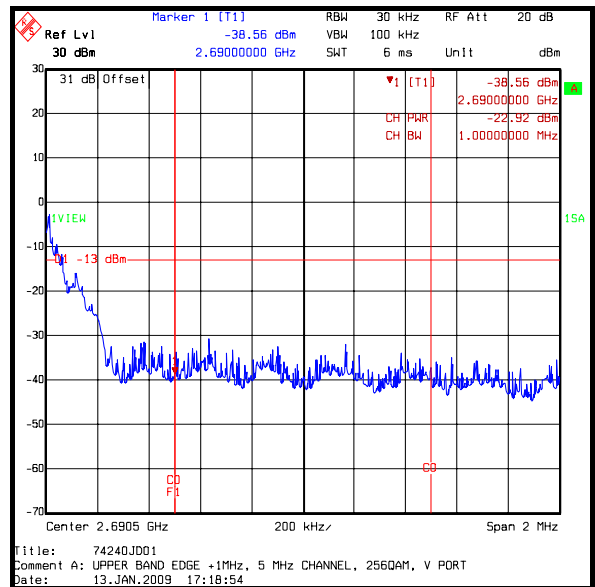
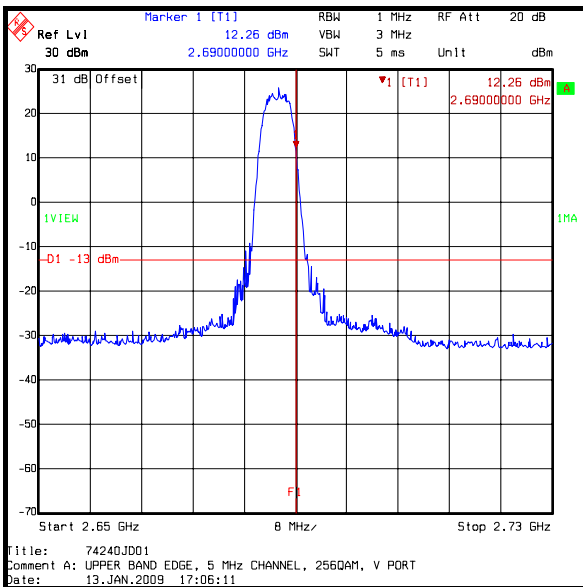
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

5 MHz Bandwidth / 64QAM / V Port



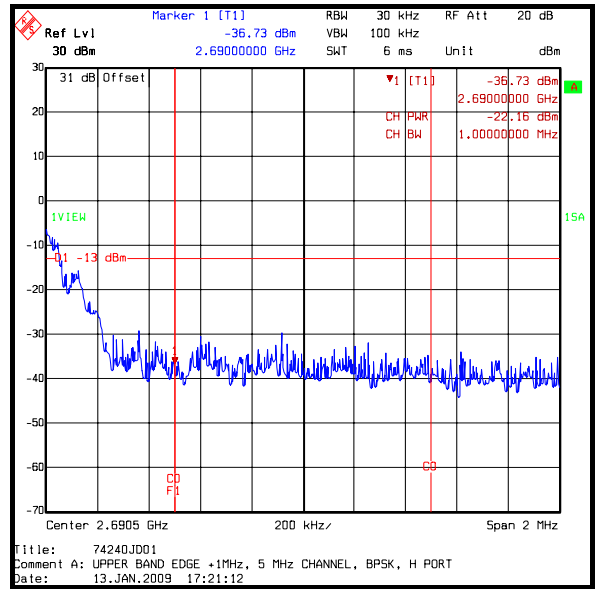
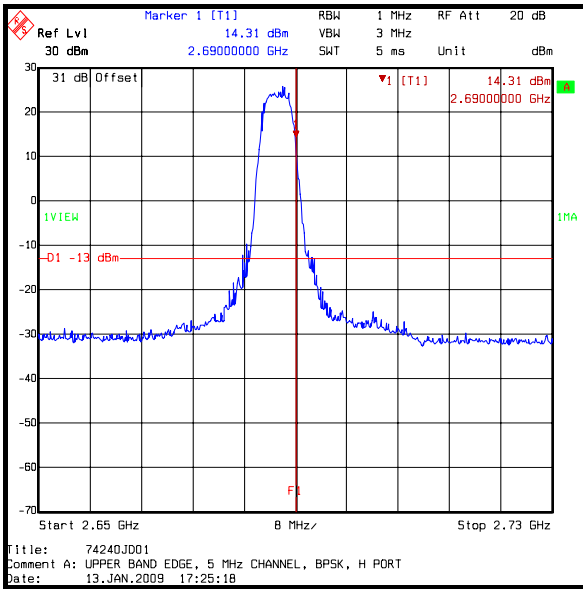
5 MHz Bandwidth / 256 QAM / V Port



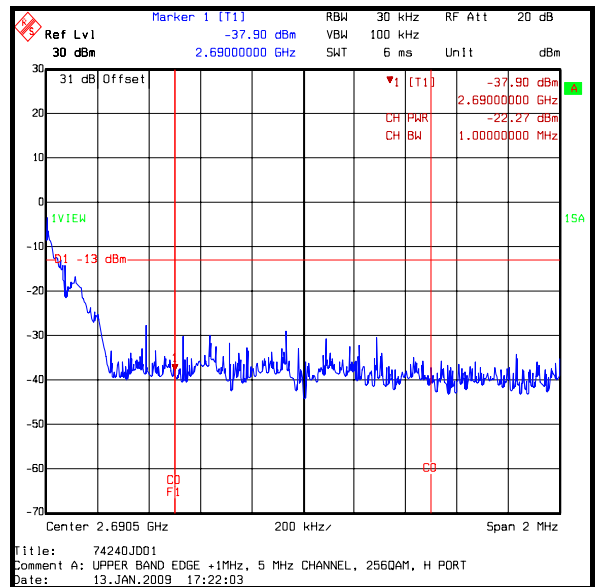
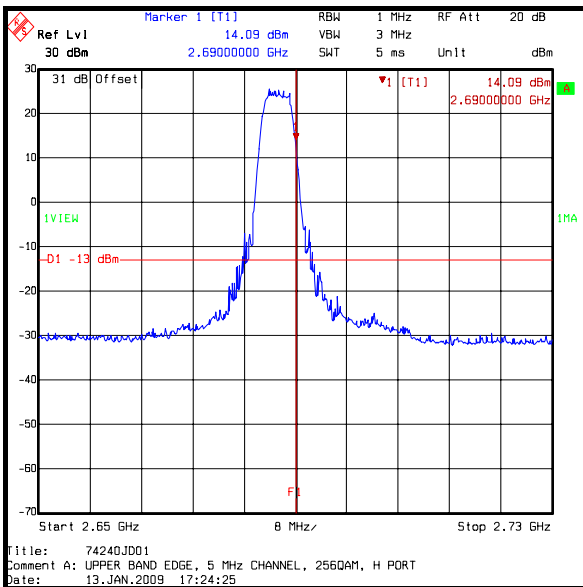
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

5 MHz Bandwidth / BPSK / H Port



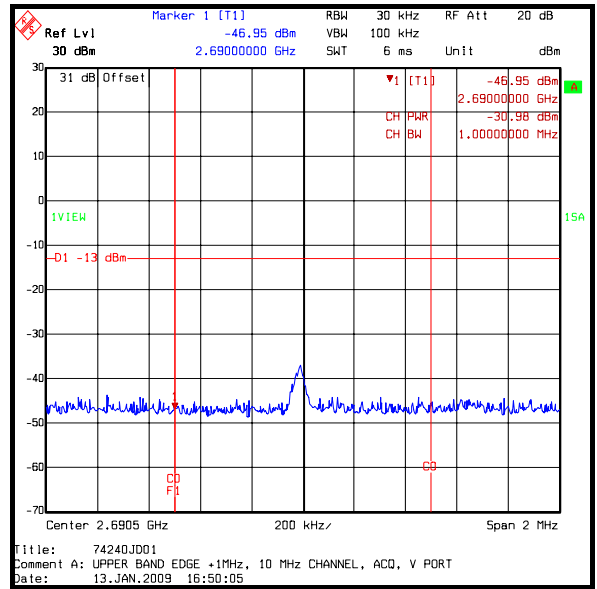
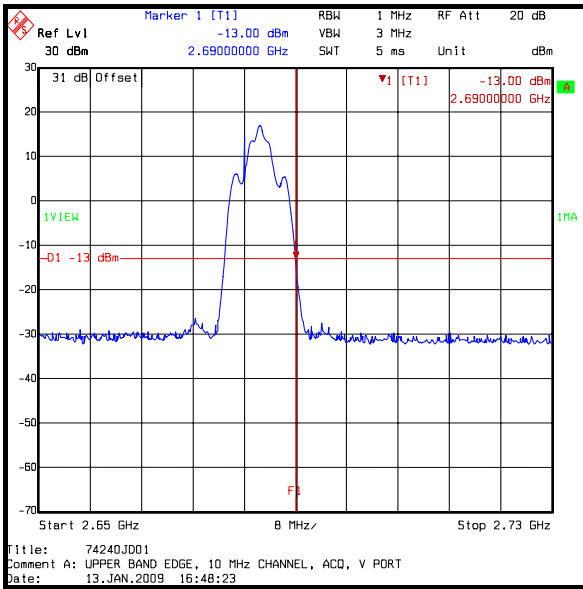
5 MHz Bandwidth / 256QAM / H Port



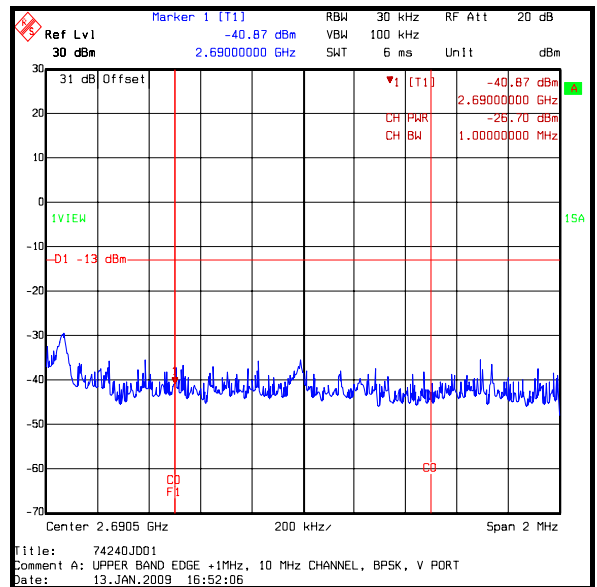
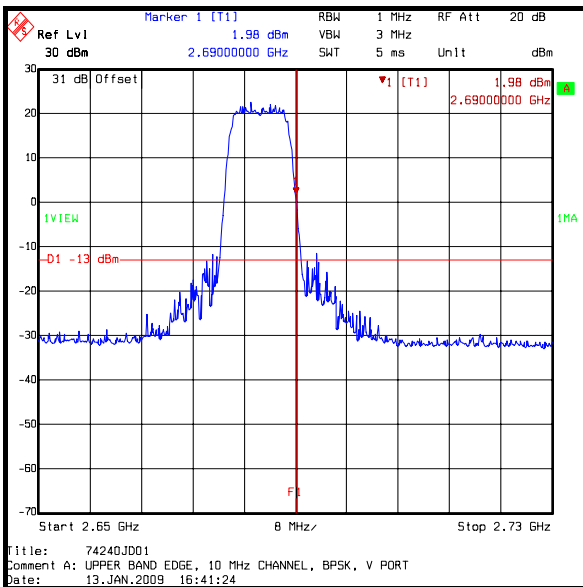
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

10 MHz Bandwidth / ACQ / V Port



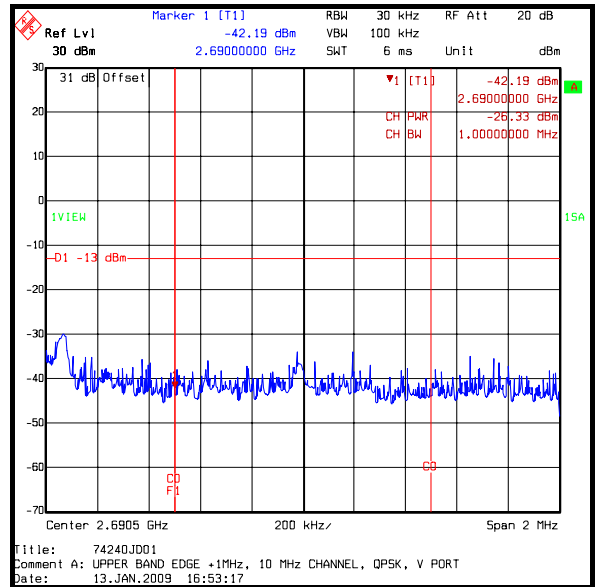
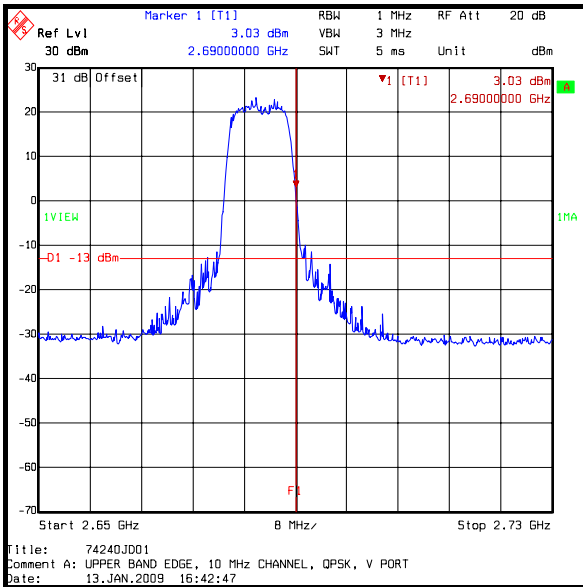
10 MHz Bandwidth / BPSK / V Port



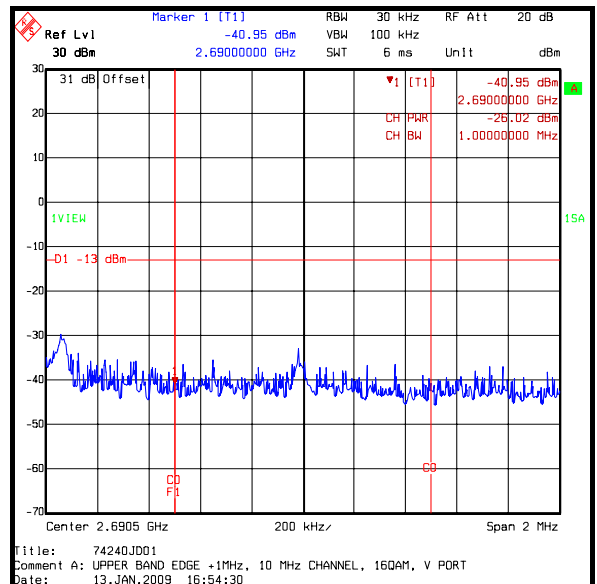
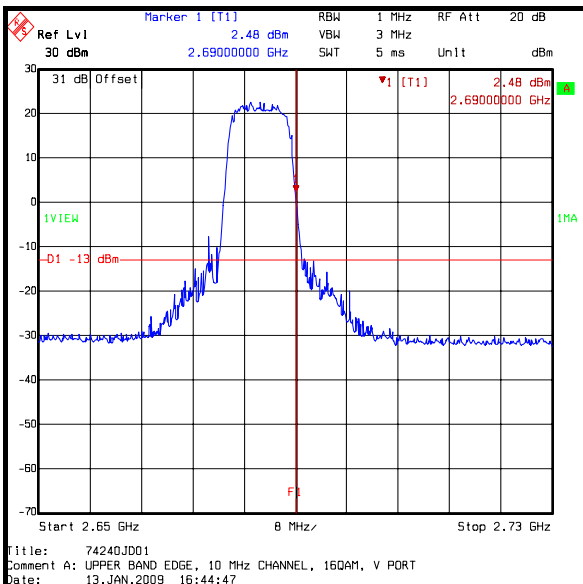
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

10 MHz Bandwidth / QPSK / V Port



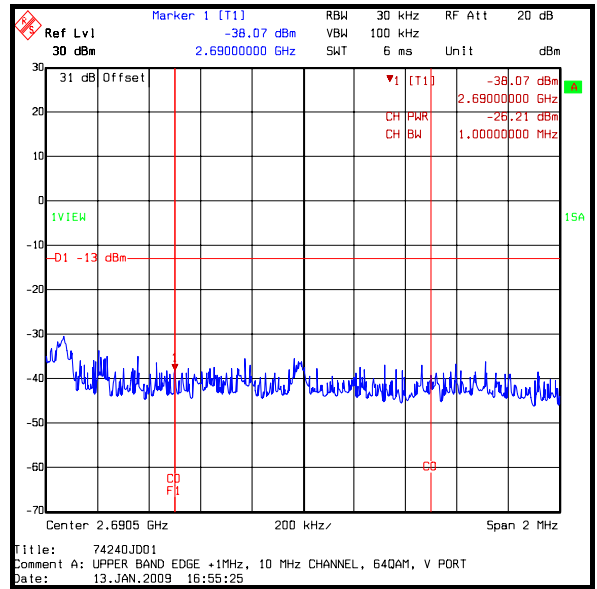
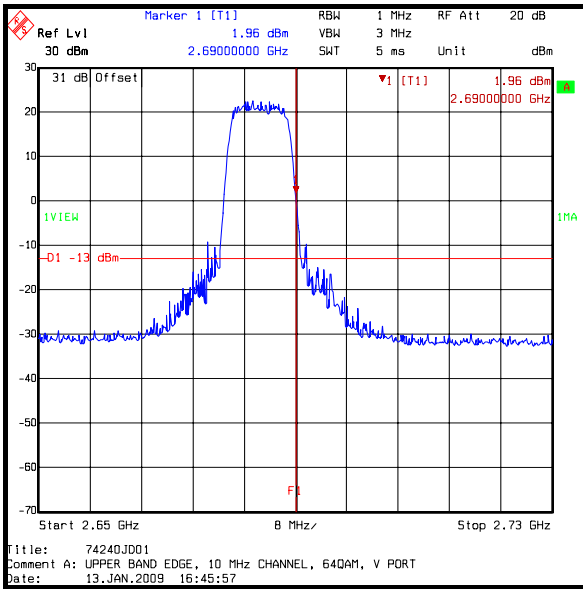
10 MHz Bandwidth / 16 QAM / V Port



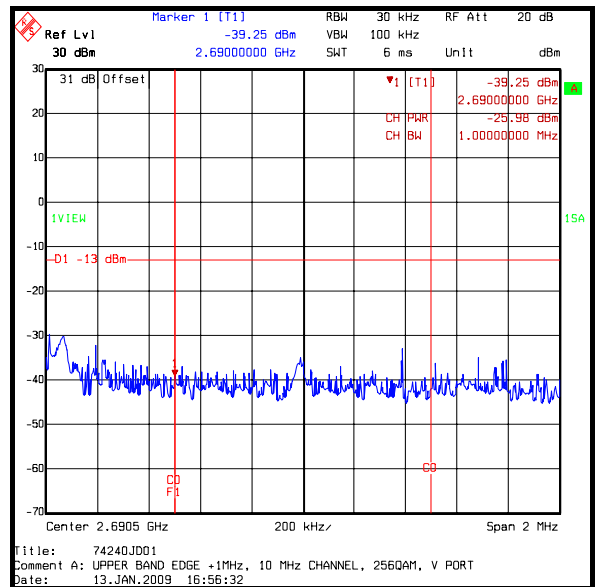
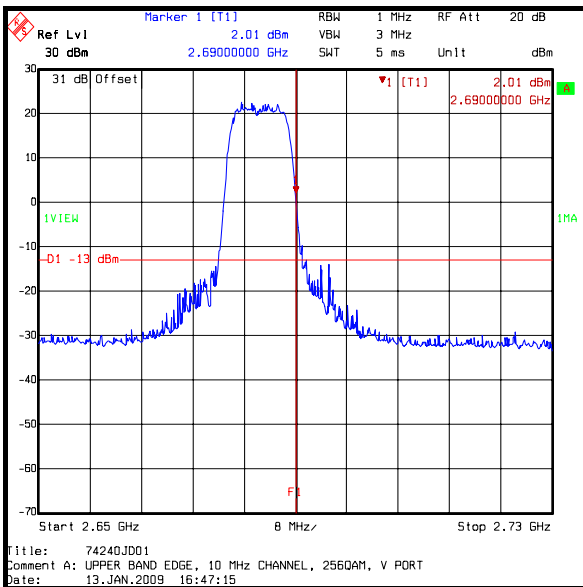
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

10 MHz Bandwidth / 64QAM / V Port



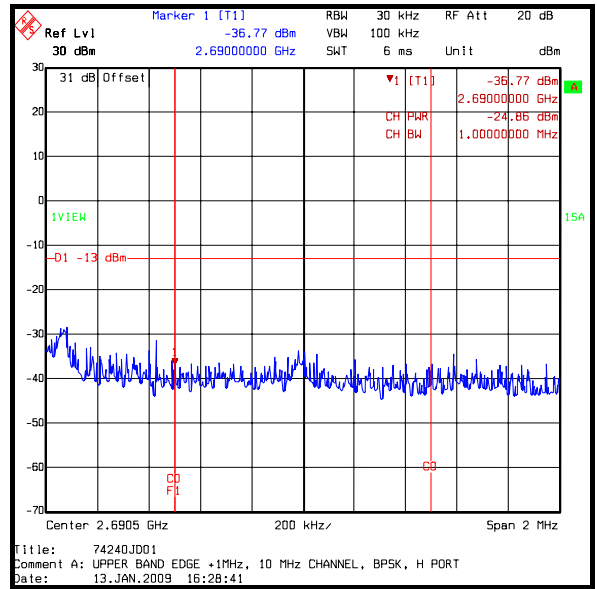
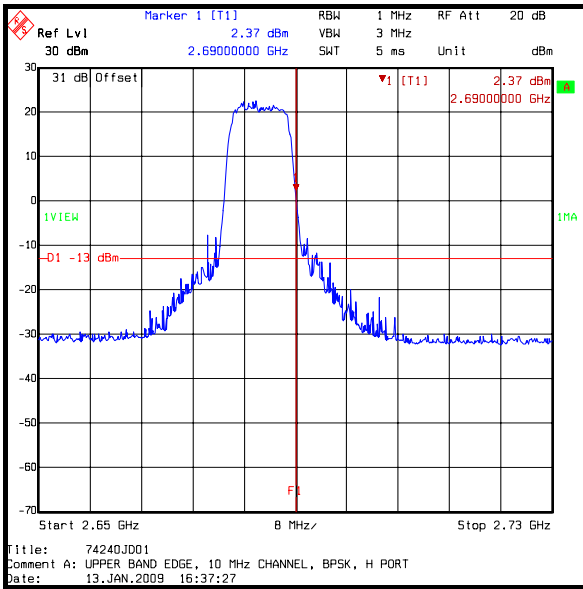
10 MHz Bandwidth / 256 QAM / V Port



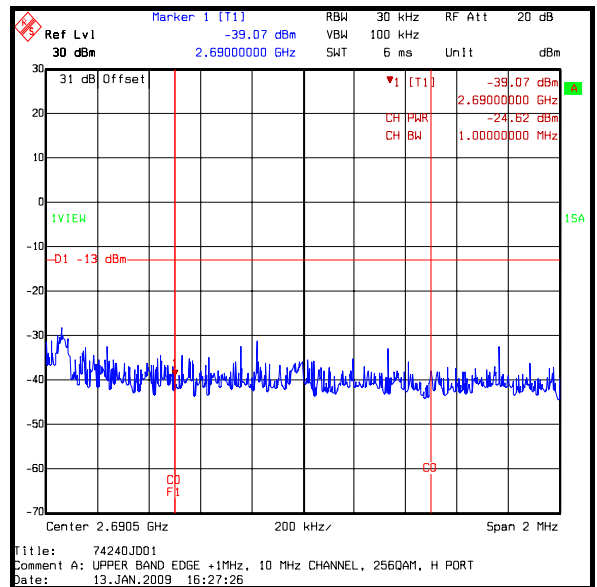
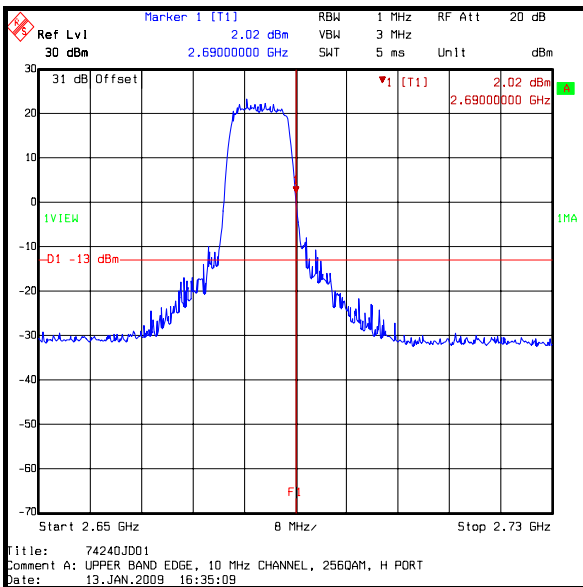
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

10 MHz Bandwidth / BPSK / H Port



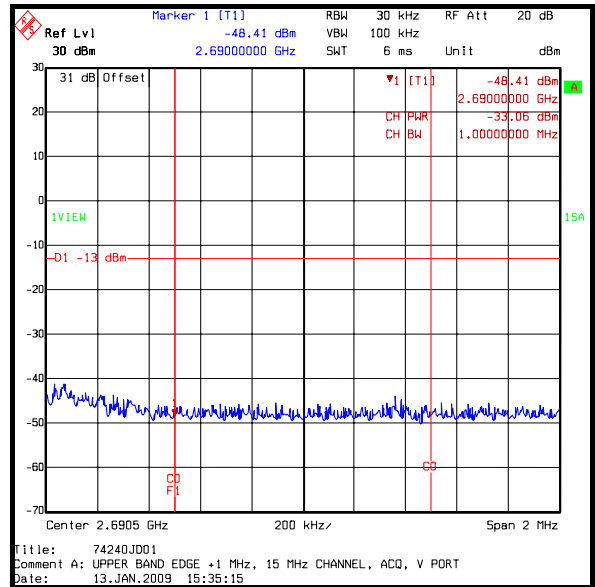
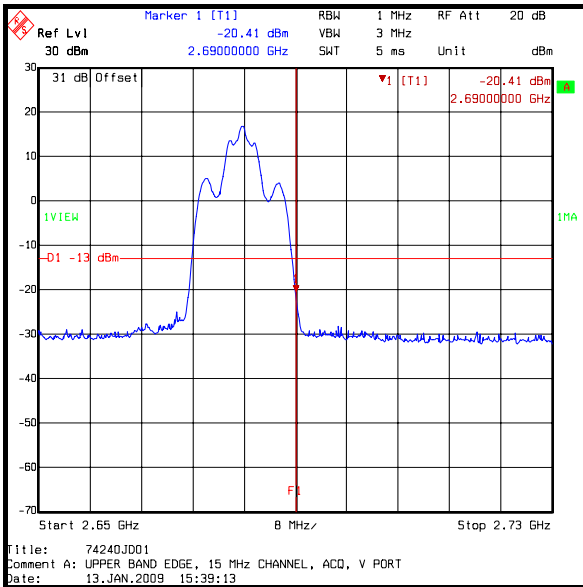
10 MHz Bandwidth / 256QAM / H Port



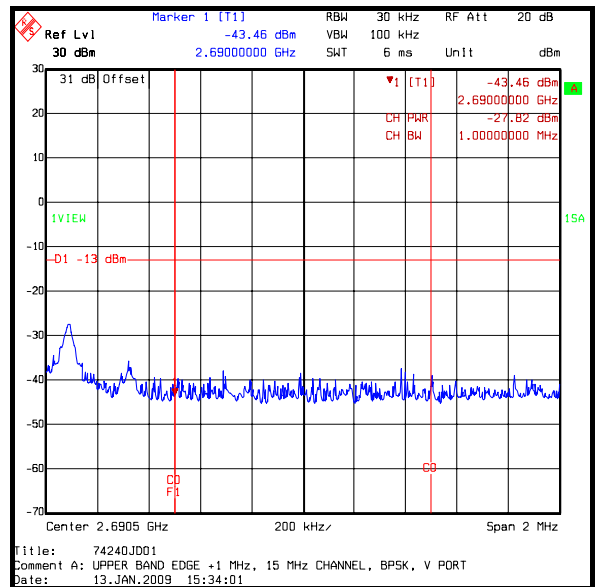
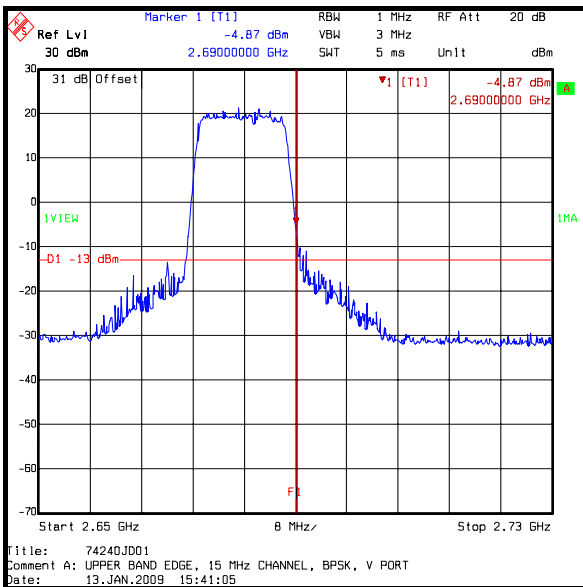
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

15 MHz Bandwidth / ACQ / V Port



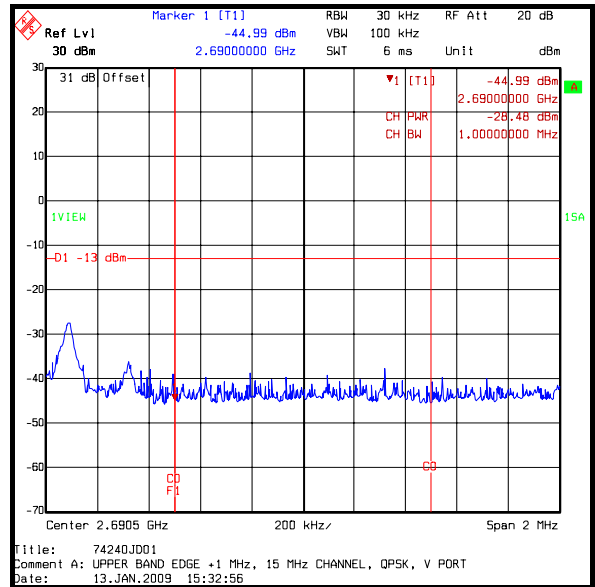
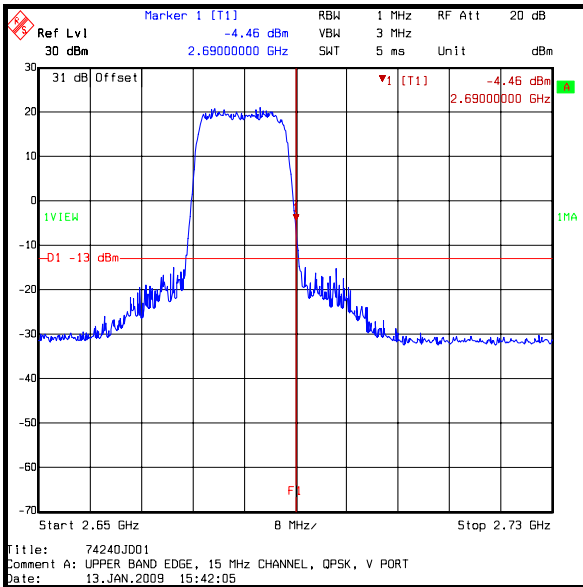
15 MHz Bandwidth / BPSK / V Port



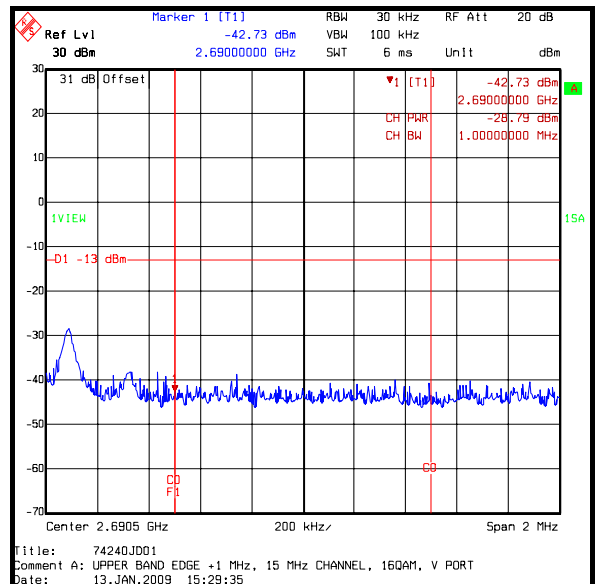
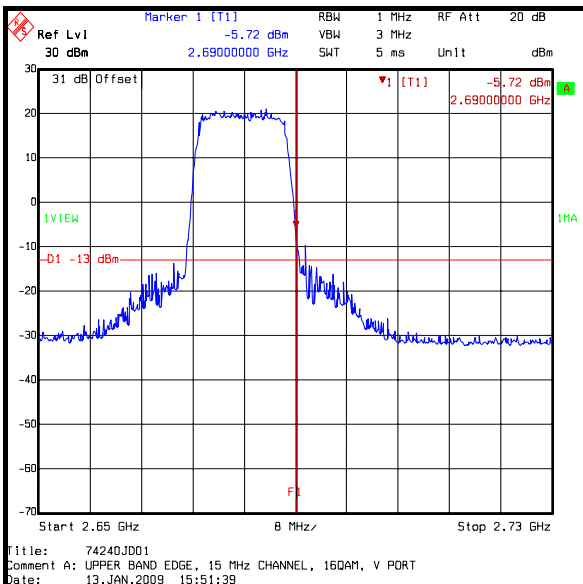
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

15 MHz Bandwidth / QPSK / V Port



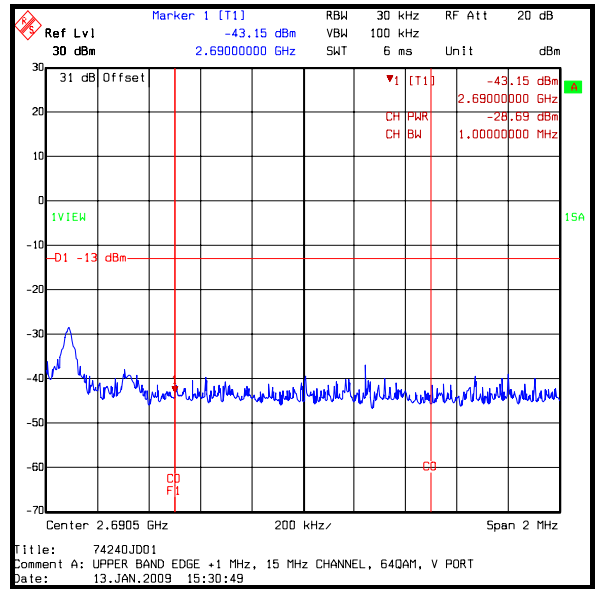
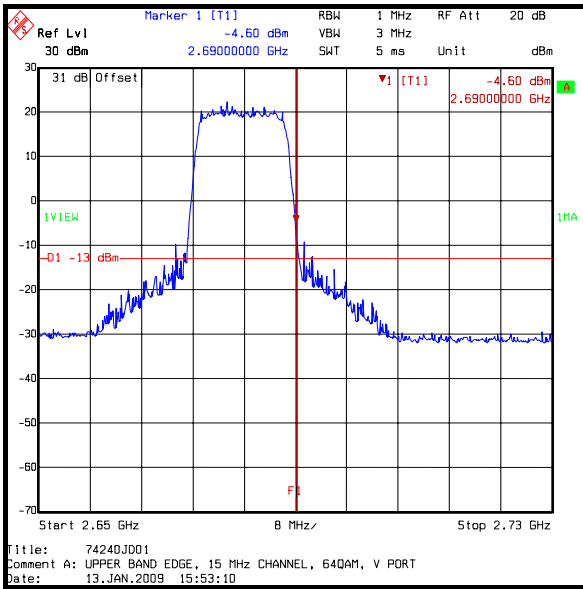
15 MHz Bandwidth / 16 QAM / V Port



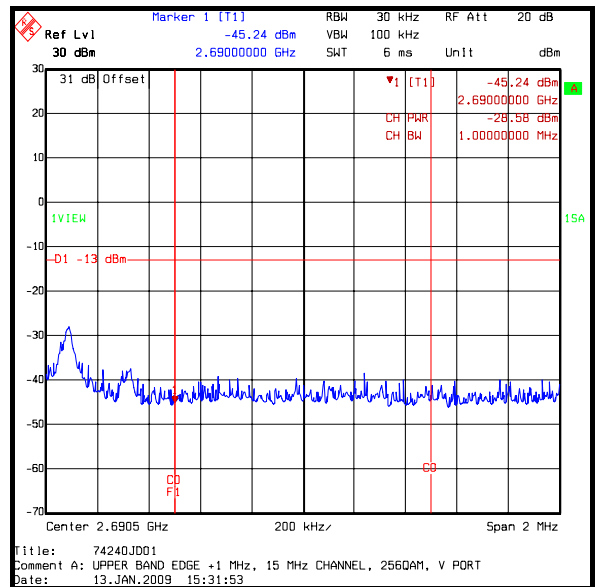
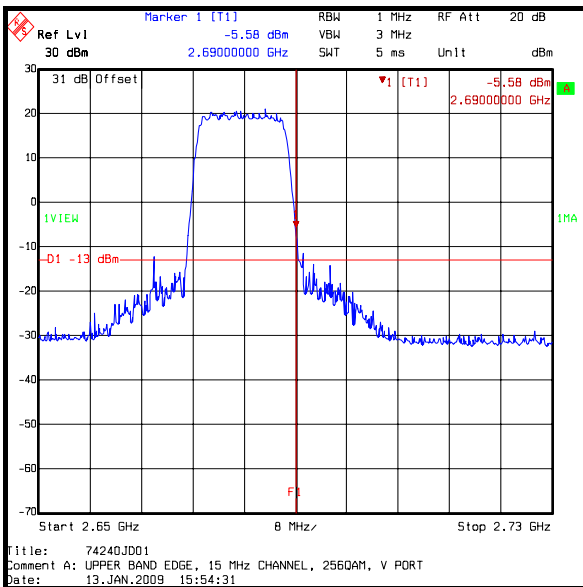
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

15 MHz Bandwidth / 64QAM / V Port



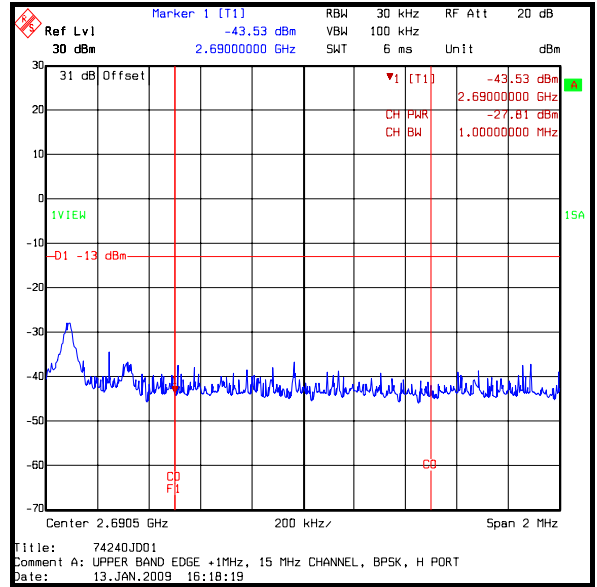
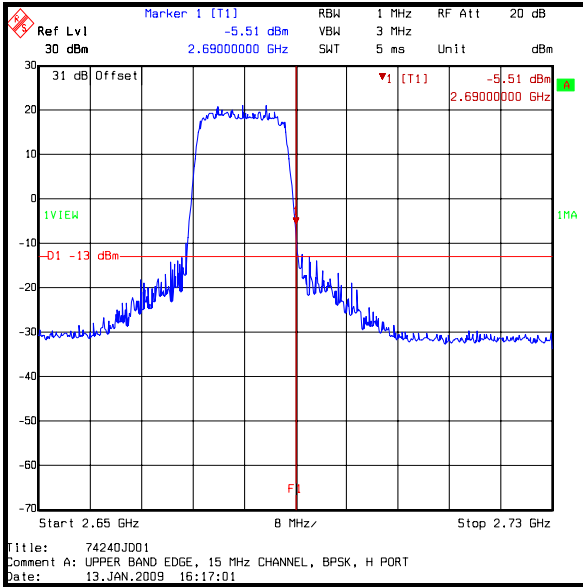
15 MHz Bandwidth / 256 QAM / V Port



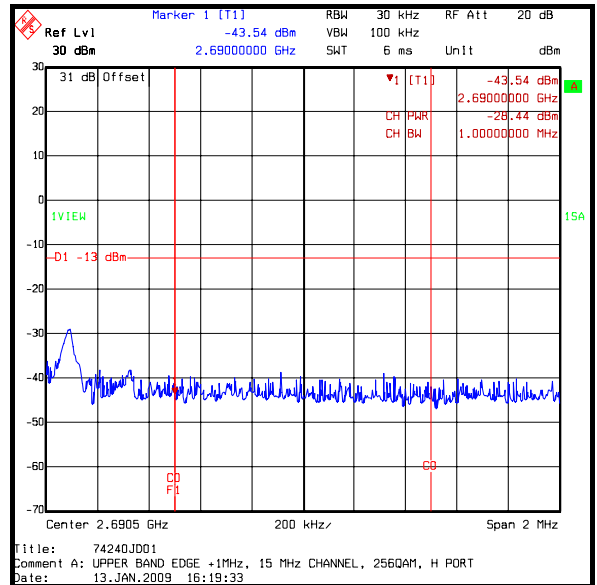
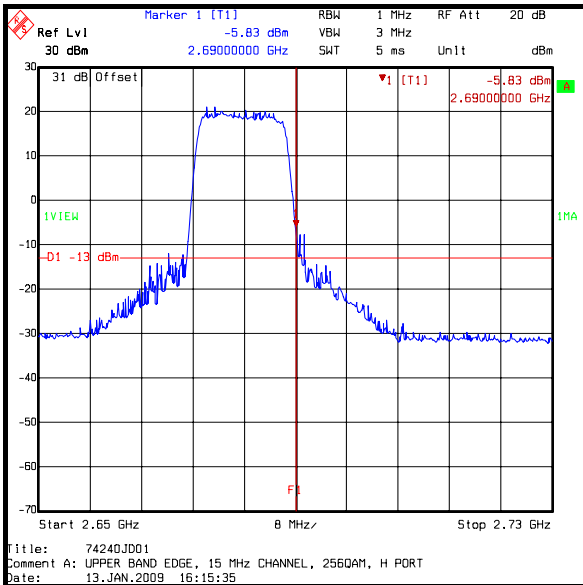
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (Upper Band Edge) (continued)

15 MHz Bandwidth / BPSK / H Port



15 MHz Bandwidth / 256QAM / H Port



Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

7.5. Transmitter Conducted Emissions: Part 2.1051 & Part 27.53

Ambient Temperature: 19°C to 21°C Relative Humidity: 35% to 31%

7.5.1. Tests were performed in accordance with FCC Part 2.1051 and 27.53.

Results: Bottom Channel (10 MHz Bandwidth)

Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
5003.977	-39.3	-13.0	26.3	Complied

Centre Channel (10 MHz Bandwidth)

Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
5180.250	-35.1	-13.0	22.1	Complied

Top Channel (10 MHz Bandwidth)

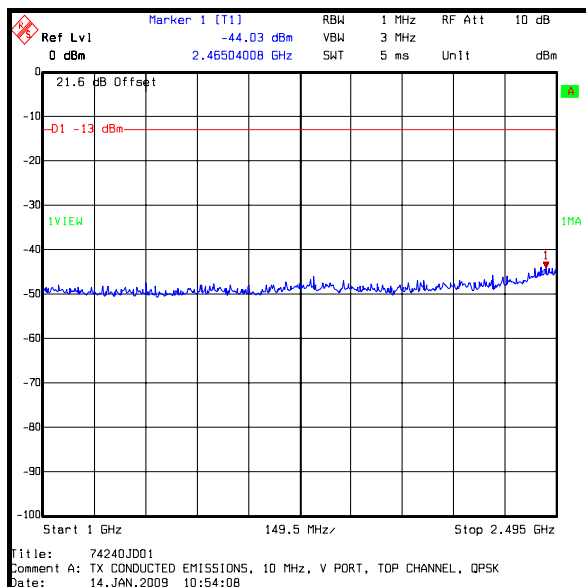
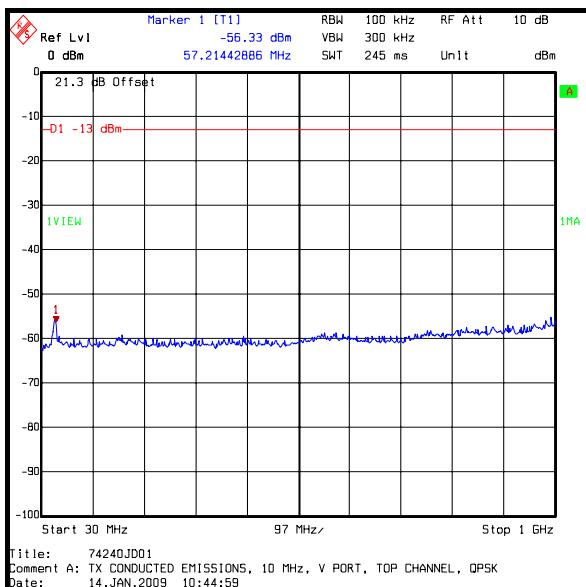
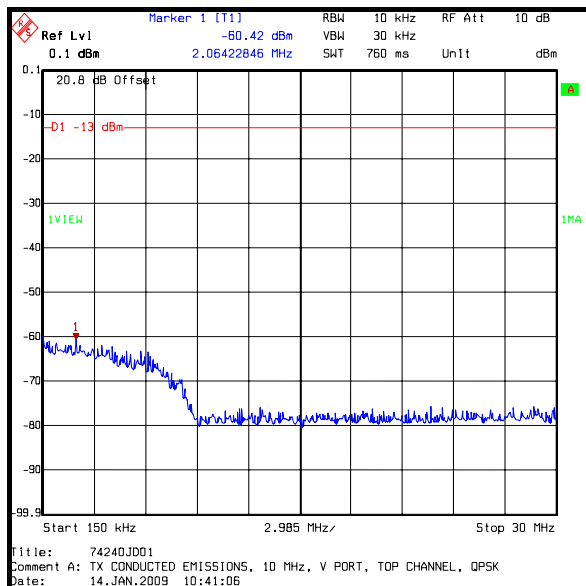
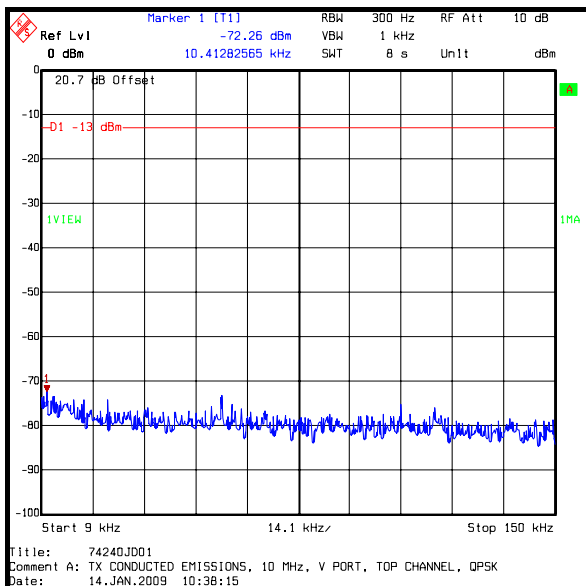
Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
5368.987	-38.3	-13.0	25.3	Complied

Note(s):

1. Pre-scans were performed on the top channel / QPSK / 10 MHz bandwidth as this combination was previously measured and resulted in the highest power as shown in the Conducted Output Power section of this report.
2. Final measurements were made on bottom, centre and top channels.
3. All other emissions were >20 dB below the applicable limit or below the level of the noise floor.

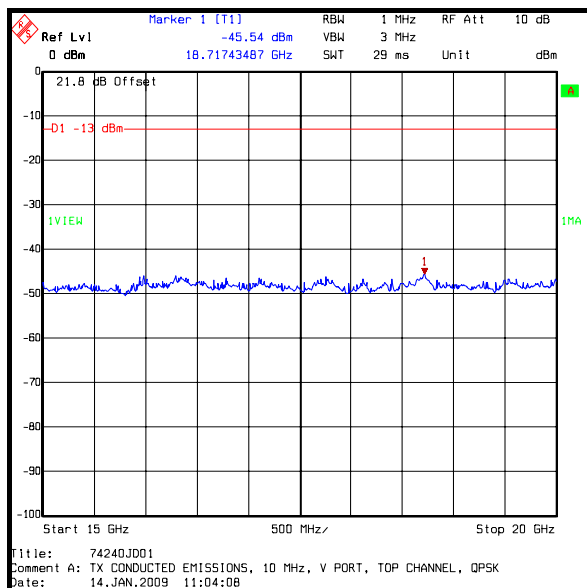
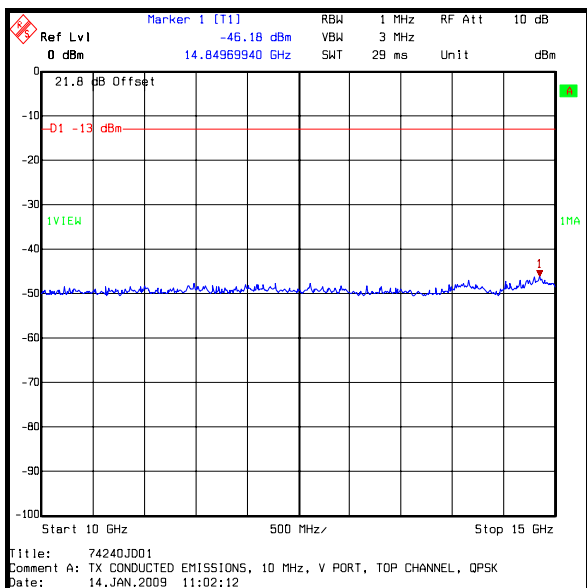
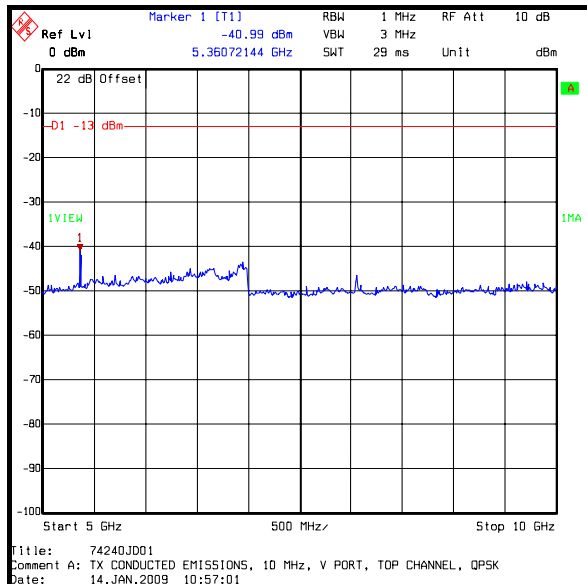
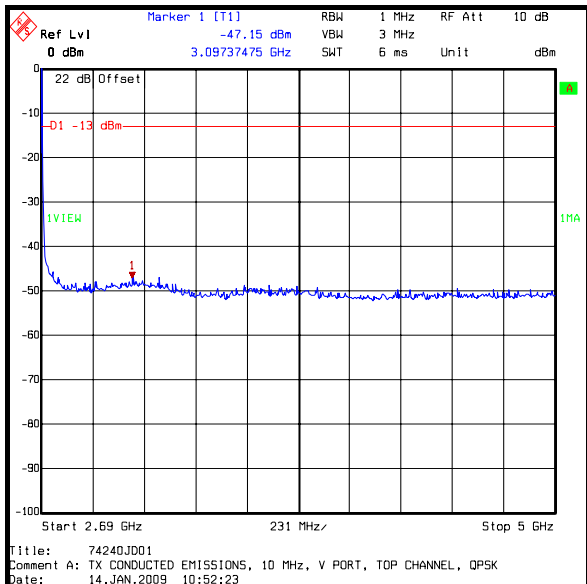
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)



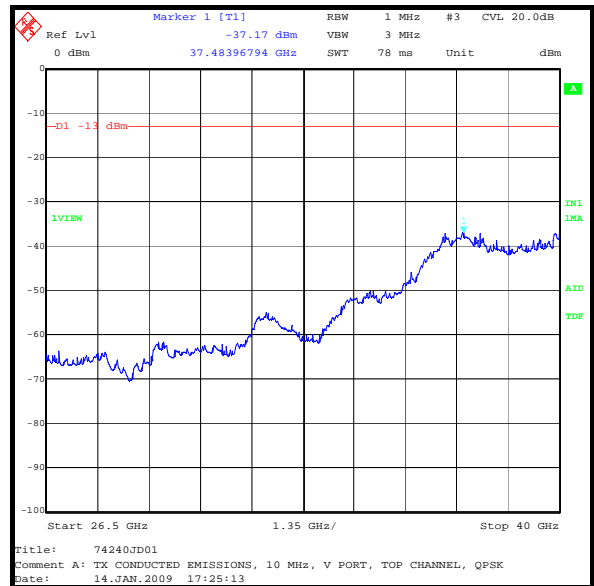
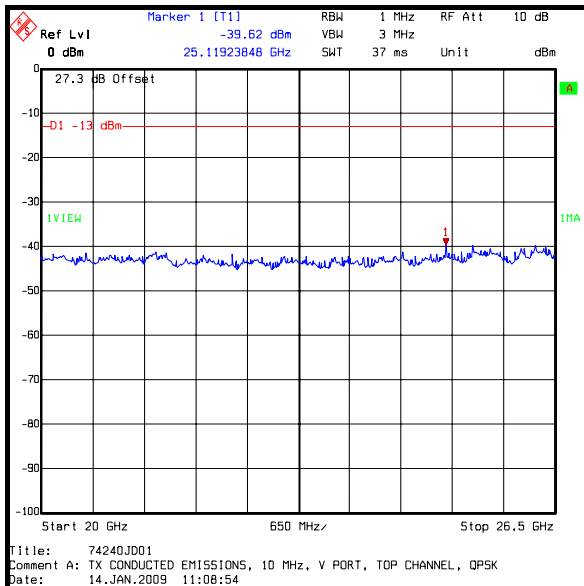
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)



Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)

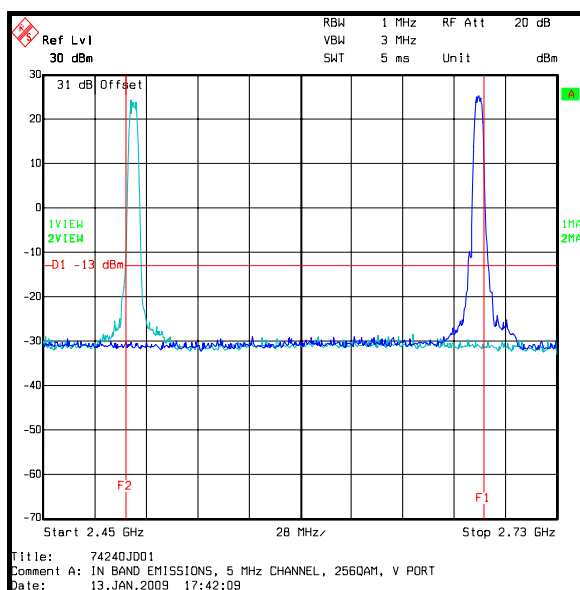


Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)

The plot below shows the in band emissions with the EUT transmitting on the top and bottom channels with a 5 MHz channel bandwidth. One test was performed with the EUT transmitting on the bottom channel and the test repeated with the EUT transmitting on the top channel. Both traces were overlaid on the same plot. The limit line shown on the plot only applies out of band.

Results: In-band emissions 5 MHz channel width / V Port / 256QAM

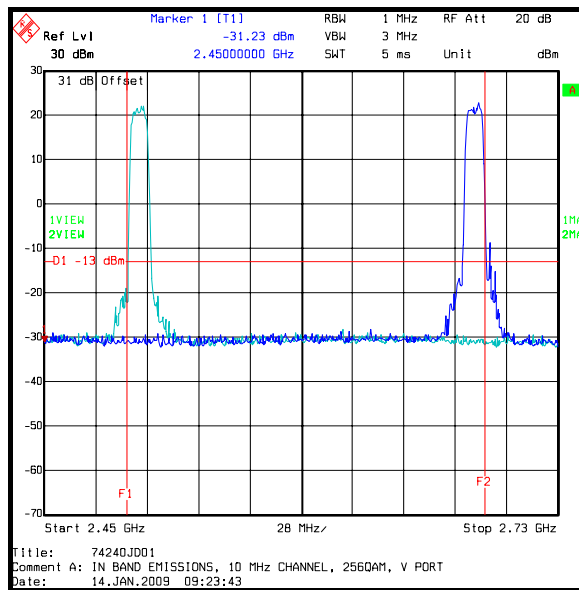


Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)

The plot below shows the in band emissions with the EUT transmitting on the top and bottom channels with a 10 MHz channel bandwidth. One test was performed with the EUT transmitting on the bottom channel and the test repeated with the EUT transmitting on the top channel. Both traces were overlaid on the same plot. The limit line shown on the plot only applies out of band.

Results: In-band emissions 10 MHz channel width / V Port / 256QAM



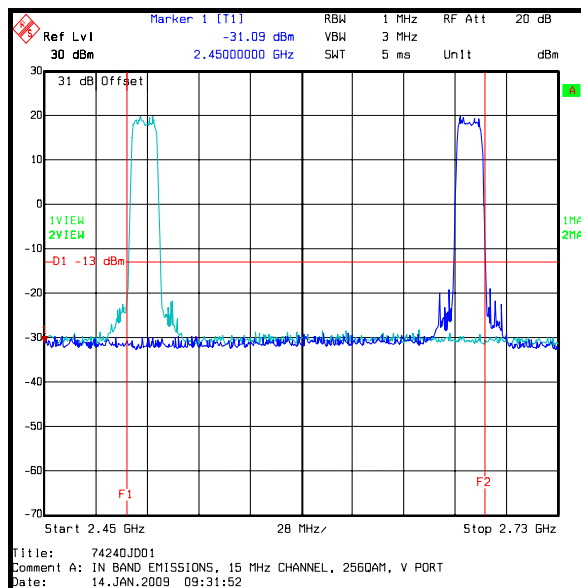
Partial Test of: PTP25600
 To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)

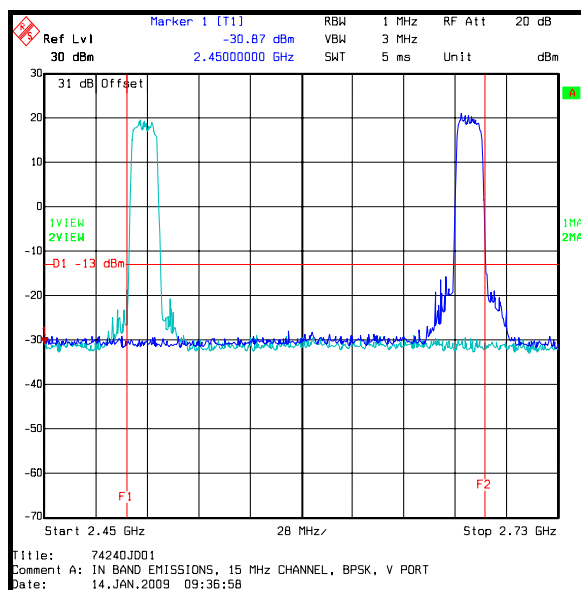
The plot below shows the in band emissions with the EUT transmitting on the top and bottom channels with a 15 MHz channel bandwidth. One test was performed with the EUT transmitting on the bottom channel and the test repeated with the EUT transmitting on the top channel. Both traces were overlaid on the same plot. The out of band limit shown on the plot only applies above and below the band edges.

BPSK and 256QAM modulation schemes were also tested on both ports in order to show compliance. The limit line shown on the plot only applies out of band.

In-band emissions 15 MHz channel width / V Port / 256QAM



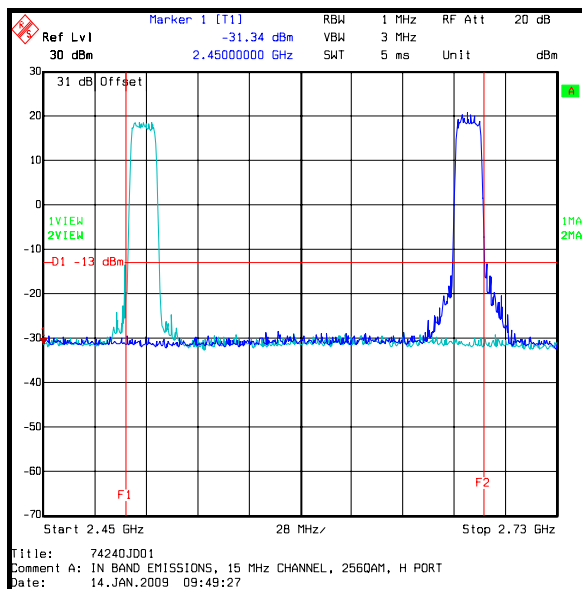
In-band emissions 15 MHz channel width / V Port / BPSK



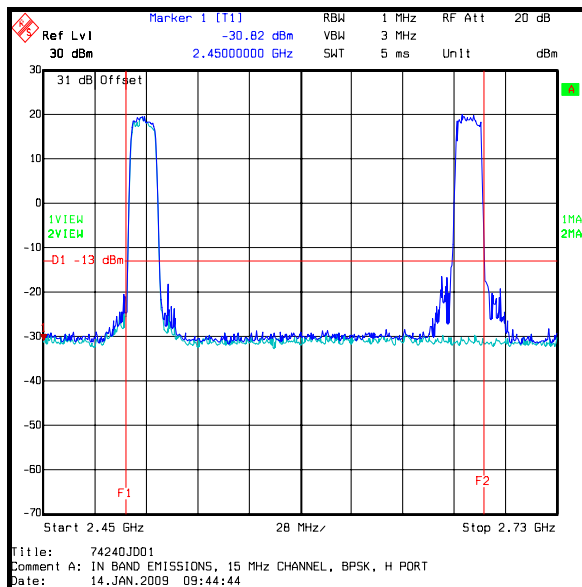
Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

Transmitter Conducted Emissions (continued)

In-band emissions 15 MHz channel width / H Port / 256QAM



In-band emissions 15 MHz channel width / H Port / BPSK



Partial Test of: PTP25600
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7.6. Transmitter Radiated Emissions

Ambient Temperature: 22°C

Relative Humidity: 30%

7.6.1. Tests were performed in accordance with FCC Part 2.1053, 27.53, ANSI C63.4-2003 Section 8 and TIA-603-C Section 2.2.

Results: Bottom Channel (10 MHz Bandwidth)

Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
3504.096	-43.6	-13.0	30.6	Complied

Results: Centre Channel (10 MHz Bandwidth)

Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
3592.084	-41.9	-13.0	28.9	Complied

Results: Top Channel (10 MHz Bandwidth)

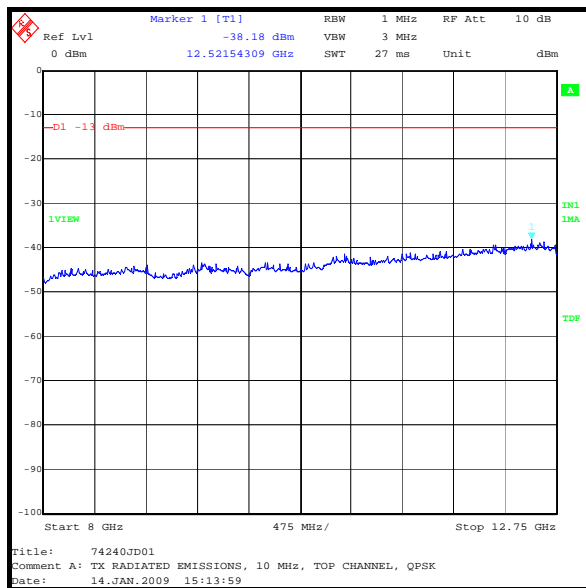
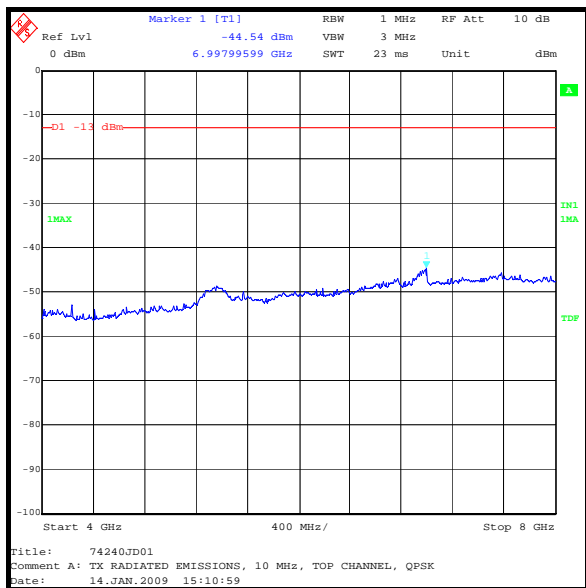
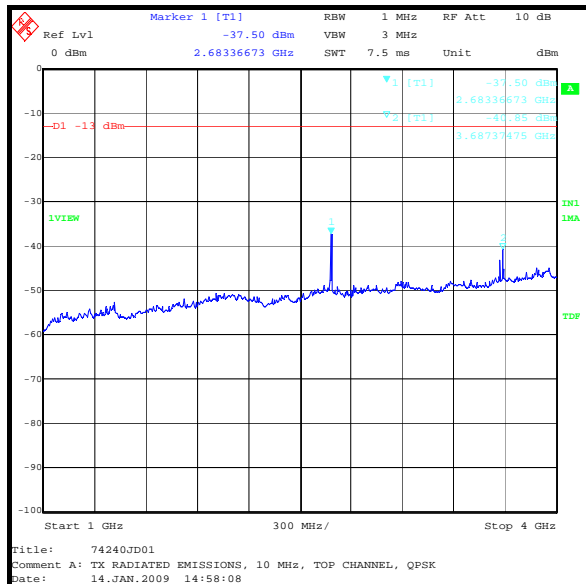
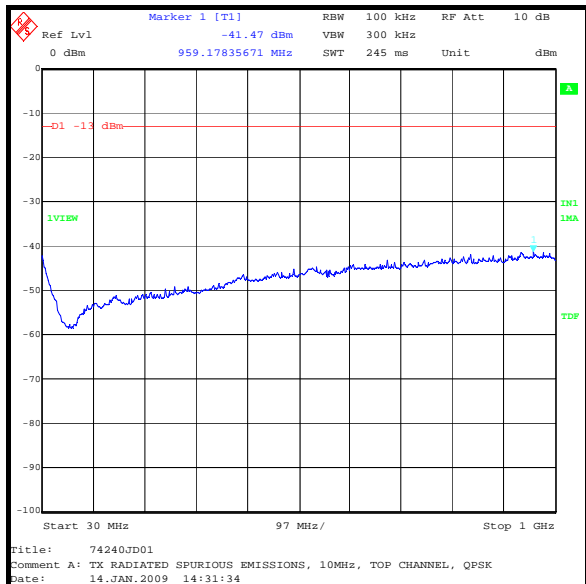
Frequency (MHz)	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
3686.513	-39.0	-13.0	26.0	Complied

Note(s):

1. The limit is calculated according to FCC Section 27.53(l)(2) as follows: $43 + 10\log(P)$ where P is the transmitter power in Watts.
2. Results were obtained with the measurement antenna in both polarisations and the highest level recorded.
3. The emission shown on the 1 to 4 GHz plot at approximately 2683 MHz is the carrier.
4. All other emissions were >20 dB below the applicable limit or below the level of the noise floor.
5. Measurements were made with the EUT transmitting at maximum power using a 10 MHz channel bandwidth and QPSK modulation as this combination resulted in the highest conducted power.
6. Prescans were performed on the top channel only. Final measurements were performed on the bottom, centre and top channels.

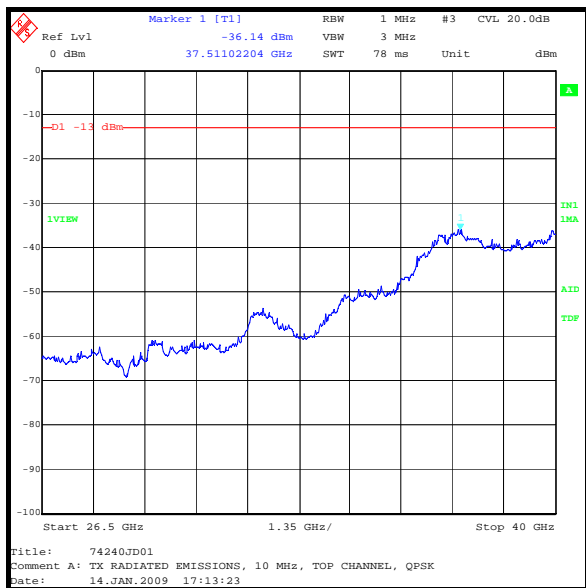
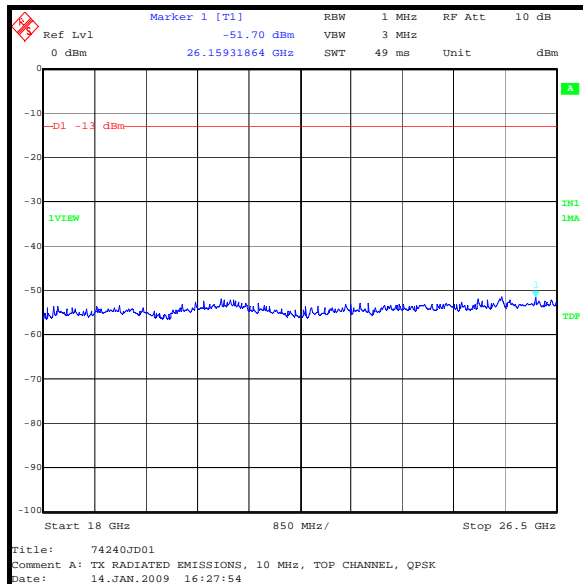
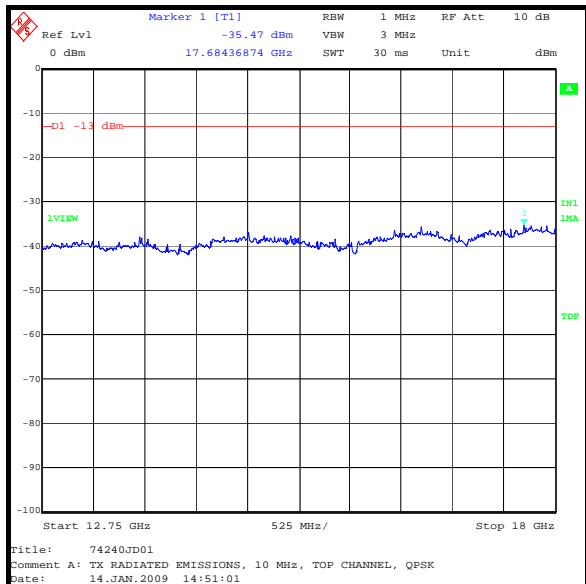
Partial Test of: PTP25600
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Transmitter Radiated Emissions (continued)



Partial Test of: PTP25600
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Transmitter Radiated Emissions (continued)



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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	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30.0 MHz	95%	+/- 3.25 dB
Conducted Carrier Output Power	9 kHz to 26 GHz	95%	+/- 1.2 dB
Carrier Output Power (EIRP)	2496 MHz to 2690 MHz	95%	+/- 1.78 dB
Occupied Bandwidth	2496 MHz to 2690 MHz	95%	+/- 0.12%
Conducted Emissions Antenna Port	9 kHz to 26 GHz	95%	+/- 1.2 dB
Frequency Stability	2496 MHz to 2690 MHz	95%	+/- 20 Hz

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.

Partial Test of: PTP25600
To: FCC Part 27: 2008 Subpart C

Appendix 1. Test Equipment Used

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A1368	Directional Coupler	Pasternack Enterprises.	PE2214-10	None	Calibrated before use	-
A1392	Attenuator	HUBER + SUHNER AG	757456	6820.17.B	Calibrated before use	-
A1534	Pre Amplifier	Hewlett Packard	8449B OPT H02	3008A00405	Calibrated before use	-
A1785	Low Noise Amplifier	Farran Technology	FLNA-28-30	FTL 6483	21 Jul 2008	12
A1818	Antenna	EMCO	3115	00075692	25 Oct 2008	12
A203	Antenna	Flann Microwave Ltd	22240-20	343	21 Jul 2006	36
A366	Isolator	MRI	FRR-400	169	Calibration not required	-
A436	Antenna	Flann	20240-20	330	24 Apr 2006	36
C1190	Cable	Rosenburg	FA210A10 15M3030	27141-05	Calibrated before use	-
K0002	Site Reference 4421	Rainford EMC	N/A	N/A	Calibration not required	-
K0004	Site Reference 4428	RFI Global Services Ltd	N/A	N/A	Calibration not required	-
M1124	Spectrum Analyser	Rohde & Schwarz	ESIB26	100046K	19 Feb 2008	12
M1242	Spectrum Analyser	Rohde & Schwarz, Inc.	FSEM30	845986/022	09 Dec 2008	12
M1390	Harmonic Mixer	Farran Technology	WHMP 28	FTL1677B	21 Jul 2008	12
S0537	EL302D Dual Power Supply	TTI	EL302D	249928	Calibrated before use	-

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