TEST REPORT

Test Report No. : UL-RPT-RP10700048JD03A V3.0

Manufacturer	:	Cambium Networks Ltd
Model No.	:	PTP 700
FCC ID	:	QWP-45700
Test Standard(s)	:	FCC Parts 15.207, 15.209(a), 15.403(i), 15.407(a)(2), 15.407(b), 15.407(g)(1) &15.407(h)(1)

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2. The results in this report apply only to the sample(s) tested.
3. The sample tested is in compliance with the above standard(s).
4. The test results in this report are traceable to the national or international standards.
5. Version 3.0 supersedes all previous versions.

Date of Issue: 27 November 2015

Checked by:

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This laboratory is accredited by UKAS. The tests reported herein have been performed in accordance with its terms of accreditation.

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1. Customer Information

Company Name:	Cambium Networks Ltd
Address:	Unit B2/3, Linhay Business Park Eastern Road Ashburton Devon TQ13 7UP United Kingdom

2. Summary of Testing

2.1. General Information

Specification Reference:	47CFR15.403 and 47CFR15.407
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart E (Unlicensed National Information Infrastructure Devices) – Sections 15.403 and 15.407
Specification Reference:	47CFR15.207 and 47CFR15.209
Specification Title:	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Sections 15.207 and 15.209
Site Registration:	FCC: 209735
Location of Testing:	UL VS LTD, Unit 3 Horizon, Wade Road, Kingsland Business Park, Basingstoke, Hampshire, RG24 8AH, United Kingdom
Test Dates:	03 August 2015 to 23 October 2015

2.2. Summary of Test Results

FCC Reference (47CFR)	Measurement	Result
Part 15.207	Transmitter AC Conducted Emissions	✓
Part 15.403(i)	Transmitter 26 dB Emission Bandwidth	✓
Part 15.407(a)(2)	Transmitter Maximum Conducted Output Power	✓
Part 15.407(a)(2)	Transmitter Peak Power Spectral Density	✓
Part 15.407(b)/ 15.209(a)	Transmitter Out of Band Radiated Emissions	✓
Part 15.407(b)/ 15.209(a)	Transmitter Band Edge Radiated Emissions	✓
Part 15.407(b)/ 15.209(a)	Transmitter Band Edge Conducted Emissions	✓
Part 15.407(g)	Transmitter Frequency Stability (Temperature & Voltage Variation)	Note 1
Part 15.407(h)(1)	Transmitter Power Control	✓
Key to Results ✓ = Complied ✗ = Did not comply		

Note(s):

1. Frequency stability is better than 10 ppm, which ensures that the signal remains in the allocated bands under all operational conditions stated in the user manual.
2. DFS test results are contained in a separate report UL-RPT-RP10700048JD03D.

2.3. Methods and Procedures

Reference:	ANSI C63.10 (2013)
Title:	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Reference:	FCC KDB 789033 D02 v01 June 6, 2014
Title:	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E
Reference:	FCC KDB 662911 D01 Multiple Transmitter Output v02r01 October 31, 2013
Title:	Emissions Testing of Transmitters with Multiple Outputs in the Same Band
Reference:	FCC KDB 662911 D02 v01, October 25 2011
Title:	MIMO with Cross-Polarized Antennas
Reference:	FCC KDB 174176 D01 Line Conducted FAQ v01, 03/06/2015
Title:	AC power line conducted emissions, frequently asked questions

2.4. Deviations from the Test Specification

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specifications identified above.

3. Equipment Under Test (EUT)

3.1. Identification of Equipment Under Test (EUT)

Brand Name:	Cambium Networks Ltd
Model Name or Number:	PTP 700
Hardware Version:	P4
Software Version:	B105-MACDSP-G7FED
Serial Number:	0004565800BC
FCC ID:	QWP-45700

Brand Name:	Cambium Networks Ltd
Model Name or Number:	PTP 700
Hardware Version:	P4
Software Version:	B105-MACDSP-G7FED
Serial Number:	0004565800E2
FCC ID:	QWP-45700

Brand Name:	Cambium Networks Ltd
Model Name or Number:	PTP 700
Hardware Version:	P4
Software Version:	B105-MACDSP-G7FED
Serial Number:	0004565800D6
FCC ID:	QWP-45700

Description:	PoE Power supply
Brand Name:	Cambium Networks
Model Name or Number:	E100109B G
Part Number:	C000065L002B
Serial Number:	1451008904

Description:	PoE Power supply
Brand Name:	Cambium Networks
Model Name or Number:	E100109B G
Part Number:	C000065L002B
Serial Number:	1421005533

3.2. Description of EUT

The Equipment Under Test was a fixed radio transceiver operating in the 5250-5350 MHz and 5470-5725 MHz frequency bands. The EUT is available in two configurations:

1. Connectorised with two external antenna ports.
2. Connectorised with two external antenna ports and an integrated directional antenna (only external or internal antennas may be used at any one time, they may not be used simultaneously).

Power is provided by a PoE supply.

3.3. Modifications Incorporated in the EUT

No modifications were applied to the EUT during testing.

3.4. Additional Information Related to Testing

Technology Tested:		Unlicensed National Information Infrastructure (U-NII-2A & U-NII-2C)				
Type of Unit:		Microwave fixed radio link transceiver				
Modes/Modulation:		AQU, BPSK, QPSK, 16QAM, 64QAM, 256QAM				
Data rates:		BPSK: 21.8 Mbit/s; QPSK: 60.5 Mbit/s; 16QAM: 242.2 Mbit/s; 64QAM: 381 Mbit/s & 256QAM: 452.2 Mbit/s				
Power Supply Requirement(s):		Nominal	PoE supply input 120 VAC 60 Hz. PoE output 48 VDC.			
Maximum Conducted Output Power:		17.1 dBm (when used in conjunction with omnidirectional antenna)				
Frequency Range:		5250 MHz to 5350 MHz / 4' Parabolic Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5252.5	5252.5	5300	5344.25	5344.25
	10	5255	5255	5300	5341.75	5341.75
	15	5257.5	5257.5	5300	5339.5	5339.5
	20	5260	5260	5300	5336.5	5336.5
	30	5265	5265	5300	5330.5	5333.25
	40	5270	5270	5300	5325	5328.25
	45	5272.5	5272.5	5300	5319.25	5326.25
Frequency Range:		5470 MHz to 5725 MHz / 2' Parabolic Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5476.25	5476.25	5597	5720	5720
	10	5482.25	5482.25	5595	5715.75	5715.75
	15	5488.5	5488.5	5592	5712	5715.5
	20	5494.5	5494.5	5590	5703.75	5708
	30	5507	5510	5585	5691	5698
	40	5517	5521.25	5580	5684.75	5703.75
	45	5515.75	5526.5	5577	5682	5695.5

Additional Information Related to Testing (continued)

Frequency Range:		5250 MHz to 5350 MHz / Flat Plate Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5252.5	5252.5	5300	5343.75	5344
	10	5255	5255	5300	5340	5341
	15	5257.5	5257.5	5300	5335.5	5338.25
	20	5260	5260	5300	5333.75	5336.5
	30	5265	5265	5300	5322.25	5330.5
	40	5270	5270	5300	5320	5328.25
	45	5272.5	5272.5	5300	5315.25	5326.25
Frequency Range:		5470 MHz to 5725 MHz / Flat Plate Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5476	5476	5597	5720	5720
	10	5482.5	5482.5	5595	5715.75	5715.75
	15	5488.25	5488.25	5592	5712	5712
	20	5494.5	5494.5	5590	5703.75	5708
	30	5503.5	5509.75	5585	5691	5709.5
	40	5513.75	5521.25	5580	5684.75	5703.75
	45	5515.75	5526.5	5577	5681.5	5693.75

Additional Information Related to Testing (continued)

Frequency Range:		5250 MHz to 5350 MHz / Sectorised Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5252.5	5252.5	5300	5343.5	5345
	10	5255	5255	5300	5340.25	5342
	15	5257.5	5257.5	5300	5336.25	5339.5
	20	5260	5260	5300	5332	5337.75
	30	5265	5265	5300	5318	5333.25
	40	5270	5270	5300	5316.5	5328.25
	45	5272.5	5272.5	5300	5312	5326.5
Frequency Range:		5470 MHz to 5725 MHz / Sectorised Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5475.75	5476	5597	5719.25	5720.75
	10	5481	5482.5	5595	5715.5	5717.25
	15	5486.25	5488.25	5592	5711	5717
	20	5491.75	5494.75	5590	5705	5713.5
	30	5505.75	5509.75	5585	5689	5708.25
	40	5512.75	5520.75	5580	5685.25	5703
	45	5513.25	5525.5	5577	5683.5	5702

Additional Information Related to Testing (continued)

Frequency Range:		5250 MHz to 5350 MHz / Omnidirectional Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5252.5	5252.5	5300	5344.5	5345
	10	5255	5255	5300	5342	5342
	15	5257.5	5257.5	5300	5339.5	5339.5
	20	5260	5260	5300	5334.75	5337.75
	30	5265	5265	5300	5326.5	5333.25
	40	5270	5270	5300	5323	5328.25
	45	5272.5	5272.5	5300	5319.75	5326.5
Frequency Range:		5470 MHz to 5725 MHz / Omnidirectional Antenna				
Channels Tested:	**Channel Bandwidth (MHz)**	**Bottom Channel Frequency (MHz)**	**Lowest Full Pwr. Channel (MHz)**	**Middle Channel Frequency (MHz)**	**Highest Full Pwr. Channel (MHz)**	**Top Channel Frequency (MHz)**
	5	5475.75	5476.25	5597	5720.25	5721.25
	10	5481.25	5482.25	5595	5715.25	5717.75
	15	5486.75	5488	5592	5712	5716.25
	20	5492.5	5493.75	5590	5705.25	5714.75
	30	5505.5	5507.75	5585	5692.5	5709.75
	40	5510.75	5518	5580	5688.75	5704
	45	5515.75	5523.75	5577	5686.25	5702

Note(s):

The EUT is unable to operate at full power and remain compliant on some lower and higher channels. Power has been reduced on some lower and higher channels. ‘Lowest Full Pwr. Channel’ and ‘Highest Full Pwr. Channel’ in the table above show the lowest and highest channel frequencies that the EUT can operate at full power and remain compliant. All channel frequencies between the ‘Lowest Full Pwr. Channel’ and ‘Highest Full Pwr. Channel’ can operate at full power. Power settings used for testing are shown in Section 4.2 of this test report.

3.5. Support Equipment

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

Description:	Laptop PC
Brand Name:	Lenovo
Model Name or Number:	L440
Serial Number:	R9-019EA1 14/04

Description:	Ethernet Hub
Brand Name:	Netgear
Model Name or Number:	GS605
Serial Number:	2N21223M02078

3.6. Antenna

The table below lists the antennas that the manufacturer intends to use with this product when operating in the 5250-5350 & 5470-5725 MHz bands. The antenna gains were stated by Cambium Networks Ltd:

Type	Stated Gain (dBi)	Manufacturer	Antenna Name	Used for Testing	Note
Dual polarised plate (Integrated)	23.0	MARS	MA-WS54-5OR	-	1, 3
Dual polarised plate (Integrated)	21.0	MTI	MT-465027CVH	-	1, 3
Dual polarised plate (External)	28.5	MARS	MA-WA56-DP-28N	X	2
2 ft Parabolic Dual Polarised	28.5	MTI	MT-486013-NVH	X	5
4 ft Parabolic Dual Polarised	34.5	Andrews	PX4F-52-N7A/A	X	2, 4
90° Sectorised (External)	17.0	Laird	ANT, AP Sector	X	2
90° Sectorised (External)	17.0	Proprietary	Part No. A005189	-	1, 2
Omnidirectional	13.0	KP	KPPA-5.7-DPOMA	X	2
Omnidirectional	10.0	MARS	MA-WO56-DP10	-	1, 2

X = This antenna was used for testing purposes

Note(s):

1. This antenna has the same gain or less gain and is of the same type as the antenna that was tested. Therefore it was not tested.
2. Used in conjunction with two, 0.5 metre length RF cables (Radiall R284C0351033, N type male – N type male) having an individual insertion loss of 0.9 dB across the EUT operating band.
3. Integral antenna. No external RF cables.
4. For use in the 5250-5350 MHz Band only.
5. Supplied for testing with two, 1.72 metre length RF cables (WA42961800 C/D, N type male – N type male). The stated antenna gain includes the insertion loss of the supplied cables.

4. Operation and Monitoring of the EUT during Testing

4.1. Operating Modes

The EUT was tested in the following operating mode(s):

- The unit operates in transceiver mode only as a TDD device in its normal mode of operation. There is no dedicated receive only mode.
- For test purposes only, the EUT was continuously transmitting at maximum power with 100% duty cycle in test mode on the required channels using the supported modulation types.

4.2. Configuration and Peripherals

The EUT was tested in the following configuration(s):

- A laptop PC with Cambium Networks test applications ‘Regulatory RF Control V2.6’ and ‘Regulatory RF Control V2.7’ was used to configure the EUT via the PoE power supply and Ethernet cables. Test application ‘Regulatory RF Control V2.6’ was used for AC conducted emissions tests. Test application ‘Regulatory RF Control V2.7’ was used for all other tests.
- The EUT was powered throughout testing via the PoE power supply.
- The EUT was operating at maximum allowable output power for the configuration being tested unless otherwise stated.
- The EUT with serial number 0004565800BC was used for AC conducted emissions tests and radiated spurious emissions tests above 1 GHz.
- The EUT with serial number 0004565800D6 was used for radiated band edge tests.
- The EUT with serial number 0004565800E2 was used for all other tests.
- No receiver or idle mode tests were perfomed as the EUT constantly transmits and receives. It does not have a dedicated receive or idle mode.

Power settings used during testing

'LCF' in the tables below indicates the power setting on the lower channels. 'HCF' indicates the power setting on the higher channels. Where the tables are marked as 'Mid Ch' the maximum power setting was used for all channels from the Lowest Full Power Channel to the Highest Full Power Channel including the centre channel. Where LCF, Mid Ch and HCF have the same values, then maximum power was used across the band from the bottom channel to the top channel. Corresponding channel frequencies are shown in Section 3.4 of this report.

NOTE: Cambium Networks Ltd state that the PTP 700 uses Acquisition mode during installation by a professional installer and in the event that the RF link is dropped Acquisition mode is used to re-acquire the link. When in Acquisition mode the transmit power is restricted to be at least 4 dB lower than the maximum transmit power permitted in the band.

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the 4' parabolic antenna.

Power Settings Used For Testing / 4' Parabolic Antenna / 5250-5350 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-18	-18	-18	-11.25	-11.25	-11.25	-11.25	-11.25	-11.25
10	-15.25	-15.25	-15.25	-9	-9	-9	-9	-9	-9
15	-11.5	-11.5	-11.5	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
20	-10.25	-10.25	-10.25	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25
30	-8.75	-8.75	-12	-4.75	-4.75	-8	-4.75	-4.75	-8
40	-8.75	-8.75	-12	-4.75	-4.75	-8	-4.75	-4.75	-8
45	-8.75	-8.75	-12	-4.75	-4.75	-8	-4.75	-4.75	-8

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-11.25	-11.25	-11.25	-11.25	-11.25	-11.25	-11.25	-11.25	-11.25
10	-9	-9	-9	-9	-9	-9	-9	-9	-9
15	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
20	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25
30	-4.75	-4.75	-8	-4.75	-4.75	-8	-4.75	-4.75	-8
40	-4.75	-4.75	-8	-4.75	-4.75	-8	-4.75	-4.75	-8
45	-4.75	-4.75	-8	-4.75	-4.75	-8	-4.75	-4.75	-8

Power settings used during testing (continued)

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the 2' parabolic antenna.

Power Settings Used For Testing / 2' Parabolic Antenna / 5470-5725 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-10.5	-10.5	-10.5	-6.5	-6.5	-6.5	-6.5	-6.5	-6.5
10	-8.25	-8.25	0.25	-4.25	-4.25	-4.25	-4.25	-4.25	-4.25
15	-6.25	-6.25	-8.75	-2.25	-2.25	-4.75	-2.25	-2.25	-4.75
20	-5	-5	-7.5	-1	-1	-3.5	-1	-1	-3.5
30	-6.5	-3.5	-6.5	-2.5	0.5	-2.5	-2.5	0.5	-2.5
40	-6.5	-3.5	-9.5	-2.5	0.5	-5.5	-2.5	0.5	-5.5
45	-12.5	-3.5	-9.5	-8.5	0.5	-5.5	-8.5	0.5	-5.5

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-6.5	-6.5	-6.5	-6.5	-6.5	-6.5	-6.5	-6.5	-6.5
10	-4.25	-4.25	--4.25	-4.25	-4.25	-4.25	-4.25	-4.25	-4.25
15	-2.25	-2.25	-4.75	-2.25	-2.25	-4.75	-2.25	-2.25	-4.75
20	-1	-1	-3.5	-1	-1	-3.5	-1	-1	-3.5
30	-2.5	0.5	-2.5	-2.5	0.5	-2.5	-2.5	0.5	-2.5
40	-2.5	0.5	-5.5	-2.5	0.5	-5.5	-2.5	0.5	-5.5
45	-8.5	0.5	-5.5	-8.5	0.5	-5.5	-8.5	0.5	-5.5

Power settings used during testing (continued)

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the plate antenna.

Power Settings Used For Testing / Plate Antenna / 5250-5350 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-9.75	-9.75	-12.75	-5.75	-5.75	-8.75	-5.75	-5.75	-8.75
10	-7.25	-7.25	-7.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25
15	-5.5	-5.5	-8	-1.5	-1.5	-4	-1.5	-1.5	-4
20	-4	-4	-8.5	0	0	-4.5	0	0	-4.5
30	-2.5	-2.5	-7.5	1.5	1.5	-3.5	1.5	1.5	-3.5
40	-2.5	-2.5	-11.5	1.5	1.5	-7.5	1.5	1.5	-7.5
45	-2.5	-2.5	-11.5	1.5	1.5	-7.5	1.5	1.5	-7.5

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-5.75	-5.75	-8.75	-5.75	-5.75	-8.75	-5.75	-5.75	-8.75
10	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25
15	-1.5	-1.5	-4	-1.5	-1.5	-4	-1.5	-1.5	-4
20	0	0	-4.5	0	0	-4.5	0	0	-4.5
30	1.5	1.5	-3.5	1.5	1.5	-3.5	1.5	1.5	-3.5
40	1.5	1.5	-7.5	1.5	1.5	-7.5	1.5	1.5	-7.5
45	1.5	1.5	-7.5	1.5	1.5	-7.5	1.5	1.5	-7.5

Power settings used during testing (continued)

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the plate antenna.

Power Settings Used For Testing / Plate Antenna / 5470-5725 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-9.75	-9.75	-9.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75
10	-7.25	-7.25	-7.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25
15	-5.5	-5.5	-5.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
20	-4	-4	-6.5	0	0	-2.5	0	0	-2.5
30	-8.5	-2.5	-8.5	-4.5	1.5	-4.5	-4.5	1.5	-4.5
40	-8.5	-2.5	-8.5	-4.5	1.5	-4.5	-4.5	1.5	-4.5
45	-8.5	-2.5	-8.5	-4.5	1.5	-4.5	-4.5	1.5	-4.5

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75
10	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25	-3.25
15	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
20	0	0	-2.5	0	0	-2.5	0	0	-2.5
30	-4.5	1.5	-4.5	-4.5	1.5	-4.5	-4.5	1.5	-4.5
40	-4.5	1.5	-4.5	-4.5	1.5	-4.5	-4.5	1.5	-4.5
45	-4.5	1.5	-4.5	-4.5	1.5	-4.5	-4.5	1.5	-4.5

Power settings used during testing (continued)

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the sectorised antenna.

Power Settings Used For Testing / Sectorised Antenna / 5250-5350 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	2	2	-12.5	6	6	-8.5	6	6	-8.5
10	4.75	4.75	-1.75	8.75	8.75	2.25	8.75	8.75	2.25
15	6.75	6.75	0.5	10.75	10.75	4.5	10.75	10.75	4.5
20	7.75	7.75	-1.5	11.75	11.75	2.5	11.75	11.75	2.5
30	9	9	0	13	13	4	13	13	4
40	9	9	-0.25	13	13	3.75	13	13	3.75
45	9	9	-0.5	13	13	3.5	13	13	3.5

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	6	6	-8.5	6	6	-8.5	6	6	-8.5
10	8.75	8.75	2.25	8.75	8.75	2.25	8.75	8.75	2.25
15	10.75	10.75	4.5	10.75	10.75	4.5	10.75	10.75	4.5
20	11.75	11.75	2.5	11.75	11.75	2.5	11.75	11.75	2.5
30	13	13	4	13	13	4	13	13	4
40	13	13	3.75	13	13	3.75	13	13	3.75
45	13	13	3.5	13	13	3.5	13	13	3.5

Power settings used during testing (continued)

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the sectorised antenna.

Power Settings Used For Testing / Sectorised Antenna / 5470-5725 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	-1	2	-1	3	6	3	3	6	3
10	-1.25	4.75	1.75	2.75	8.75	5.75	2.75	8.75	5.75
15	0.75	6.75	0.75	4.75	10.75	4.75	4.75	10.75	4.75
20	1.75	7.75	1.75	5.75	11.75	5.75	5.75	11.75	5.75
30	6	9	3	10	13	7	10	13	7
40	3	9	3	7	13	7	7	13	7
45	1	9	1	5	13	5	5	13	5

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	3	6	3	3	6	3	3	6	3
10	2.75	8.75	5.75	2.75	8.75	5.75	2.75	8.75	5.75
15	4.75	10.75	4.75	4.75	10.75	4.75	4.75	10.75	4.75
20	5.75	11.75	5.75	5.75	11.75	5.75	5.75	11.75	5.75
30	10	13	7	10	13	7	10	13	7
40	7	13	7	7	13	7	7	13	7
45	5	13	5	5	13	5	5	13	5

Power settings used during testing (continued)

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the omnidirectional antenna.

Power Settings Used For Testing / Omnidirectional Antenna / 5250-5350 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	5.75	5.75	2	9.75	9.75	6	9.75	9.75	6
10	9	9	9	13	13	13	13	13	13
15	10.5	10.5	10.5	14.5	14.5	14.5	14.5	14.5	14.5
20	12	12	9	16	16	13	16	16	13
30	13	13	10	17	17	14	17	17	14
40	13	13	10	17	17	14	17	17	14
45	13	13	10	17	17	14	17	17	14

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	9.75	9.75	6	9.75	9.75	6	9.75	9.75	6
10	13	13	13	13	13	13	13	13	13
15	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
20	16	16	13	16	16	13	16	16	13
30	17	17	14	17	17	14	17	17	14
40	17	17	14	17	17	14	17	17	14
45	17	17	14	17	17	14	17	17	14

Power settings used during testing (continued)

The tables below show the EUT power settings that were used during testing for each channel bandwidth and mode/modulation type when the EUT was tested with the omnidirectional antenna.

Power Settings Used For Testing / Omnidirectional Antenna / 5470-5725 MHz Band

Ch. BW	AQU			BPSK			QPSK		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	2.75	5.75	2.75	6.75	9.75	6.75	6.75	9.75	6.75
10	6	9	6	10	13	10	10	13	10
15	7.5	10.5	7.5	11.5	14.5	11.5	11.5	14.5	11.5
20	9	12	6	13	16	10	13	16	10
30	10	13	7	14	17	11	14	17	11
40	7	13	7	11	17	11	11	17	11
45	7	13	7	11	17	11	11	17	11

Ch. BW	16QAM			64QAM			256QAM		
	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF	LCF	Mid Ch	HCF
5	6.75	9.75	6.75	6.75	9.75	6.75	6.75	9.75	6.75
10	10	13	10	10	13	10	10	13	10
15	11.5	14.5	11.5	11.5	14.5	11.5	11.5	14.5	11.5
20	13	16	10	13	16	10	13	16	10
30	14	17	11	14	17	11	14	17	11
40	11	17	11	11	17	11	11	17	11
45	11	17	11	11	17	11	11	17	11

5. Measurements, Examinations and Derived Results

5.1. General Comments

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* 6 *Measurement Uncertainty* for details.

In accordance with UKAS requirements all the measurement equipment is on a calibration schedule. All equipment was within the calibration period on the date of testing.

5.2. Test Results

5.2.1. Transmitter AC Conducted Spurious Emissions

Test Summary:

Test Engineer:	Georgios Vrezas	**Test Date:**	15 August 2015
Test Sample Serial Number:	0004565800BC		

FCC Reference:	Part 15.207
Test Method Used:	ANSI C63.10 Section 6.2

Environmental Conditions:

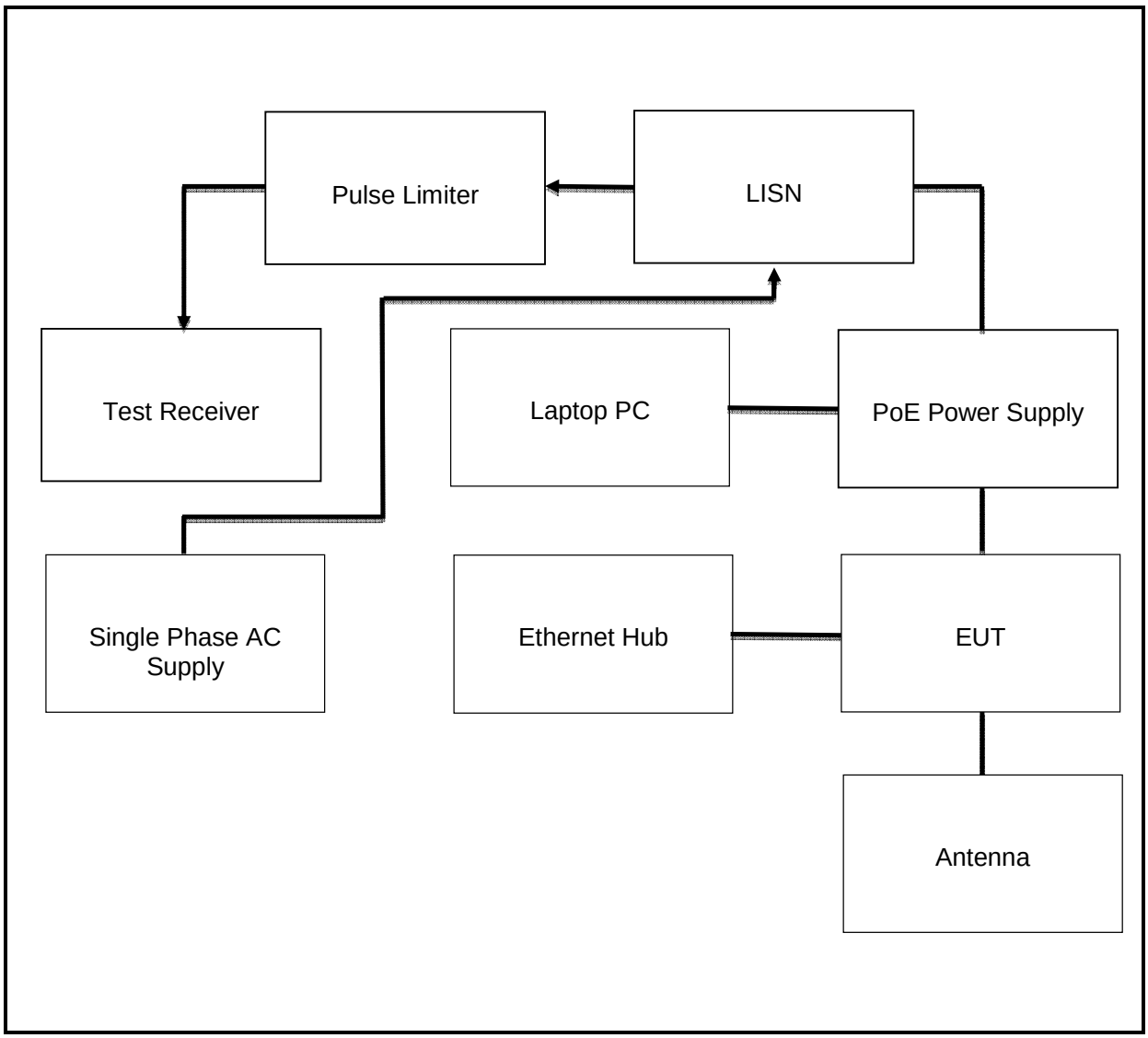
Temperature (°C):	24
Relative Humidity (%):	40

Note(s):

1. The input to the PoE power supply was connected to a 120 VAC 60 Hz single phase supply via a LISN during the testing. The output of the PoE power supply was connected to the input of the EUT via an Ethernet cable.
2. The EUT was transmitting at maximum power during the test on the middle channel of the 5.47-5.725 GHz band. A laptop PC was connected to the EUT via Ethernet. The unused Ethernet port on the EUT was terminated into an Ethernet hub.
3. The earth bonding point on the EUT was connected to the metal structure of the test chamber during testing.
4. All emissions >20 dB below the applicable limits were not recorded.

Transmitter AC Conducted Spurious Emissions (continued)

Test setup for AC conducted spurious emissions measurements:



Transmitter AC Conducted Spurious Emissions (continued)

Results: Live / Quasi Peak

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.173	Live	45.4	64.8	19.4	Complied

Results: Live / Average

Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.173	Live	36.9	54.8	17.9	Complied
0.303	Live	36.0	50.2	14.2	Complied
1.563	Live	32.8	46.0	13.2	Complied
4.209	Live	32.2	46.0	13.8	Complied
7.985	Live	33.3	50.0	16.7	Complied
14.145	Live	33.4	50.0	16.6	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results: Neutral / Quasi Peak

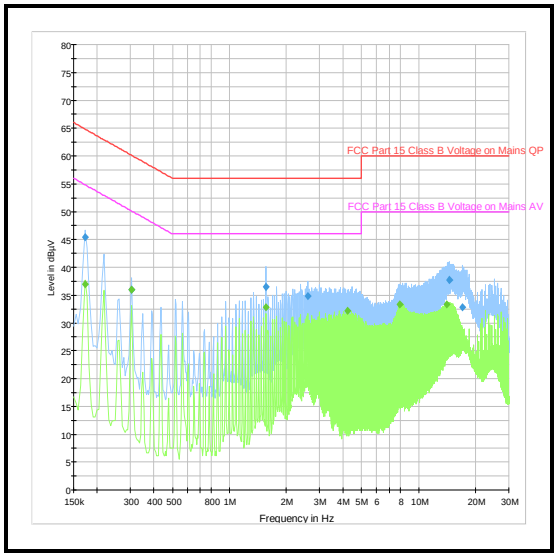
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.173	Neutral	46.2	64.8	18.6	Complied

Results: Neutral / Average

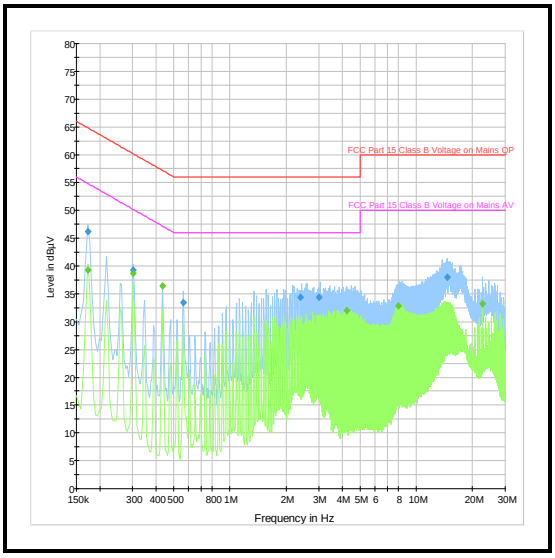
Frequency (MHz)	Line	Level (dBµV)	Limit (dBµV)	Margin (dB)	Result
0.173	Neutral	39.3	54.8	15.5	Complied
0.303	Neutral	38.7	50.2	11.5	Complied
0.434	Neutral	36.5	47.2	10.8	Complied
4.250	Neutral	32.0	46.0	14.0	Complied
8.025	Neutral	32.8	50.0	17.2	Complied
22.578	Neutral	33.2	50.0	16.8	Complied

Transmitter AC Conducted Spurious Emissions (continued)

Results:



Live



Neutral

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A004	LISN	Rohde & Schwarz	ESH3-Z5	890604/027	27 Nov 2015	12
A1830	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100668	02 Mar 2016	12
M1263	Test Receiver	Rohde & Schwarz	ESIB7	100265	14 Oct 2015	12
M1625	Thermohygrometer	JM Handelspunkt	30.5015.06	N/A	07 Jan 2016	12

5.2.2. Transmitter 26 dB Emission Bandwidth

Test Summary:

Test Engineer:	Georgios Vrezas	**Test Dates:**	25 September 2015 to 19 October 2015
Test Sample Serial Number:	0004565800E2		

FCC Reference:	Part 15.403(i)
Test Method Used:	FCC KDB 789033 Section II.C

Environmental Conditions:

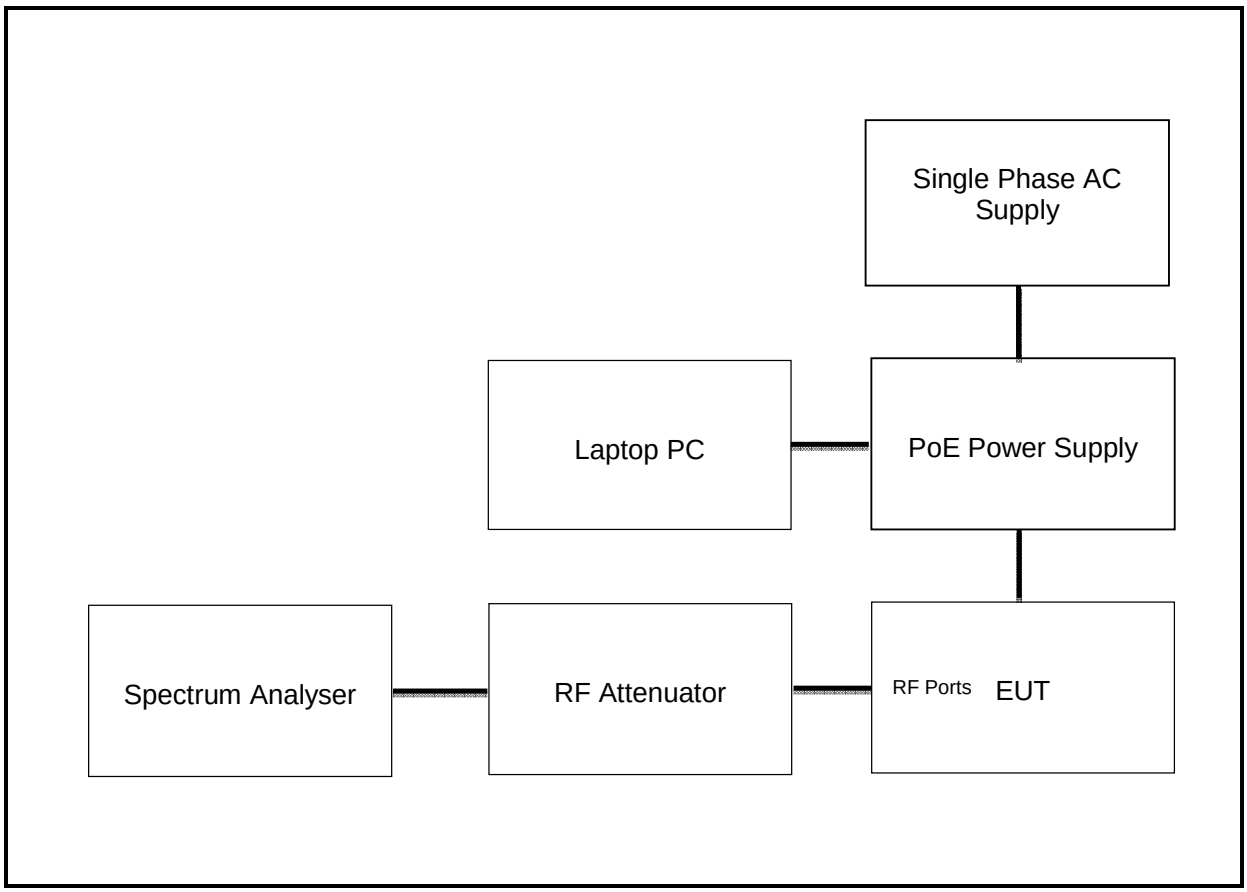
Temperature (°C):	24 to 25
Relative Humidity (%):	39 to 41

Note(s):

1. All configurations supported by the EUT were investigated on one channel in accordance with KDB 789033 Section II.C emission bandwidth test procedure. Spot checks were performed with the EUT transmitting at maximum power using all channel bandwidths and modes/modulation types. For each channel bandwidth, the measured occupied bandwidth was found to be identical in all modes apart from AQU which has a narrower bandwidth. Final measurements were performed with the EUT transmitting BPSK modulation only.
2. Plots for all configurations are archived on the UL VS LTD IT server and available for inspection upon request.
3. The test receiver was connected to the RF port on the EUT using suitable attenuation and RF cable.
4. Final measurements were performed in each supported operating band using the above configurations on the bottom, middle and top channels. Both RF ports show identical characteristics. The spectrum analyser was connected to the H port for all final measurements.
5. An RF level offset of 21 dB was used on the spectrum analyser to compensate for the attenuator and cable loss. A spectrum analyser reference level of 31 dB was used.

Transmitter 26 dB Emission Bandwidth (continued)

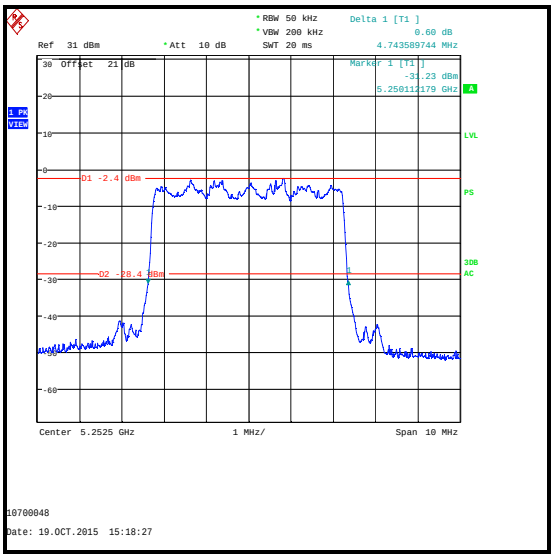
Test setup for bandwidth measurements:



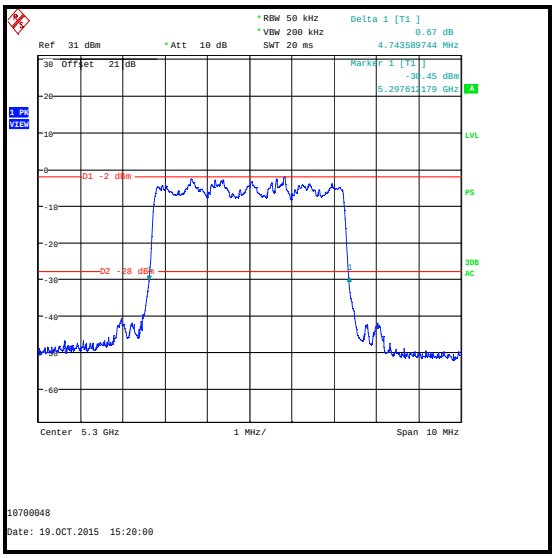
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.25-5.35 GHz Band / 5 MHz Channel / BPSK / H Port

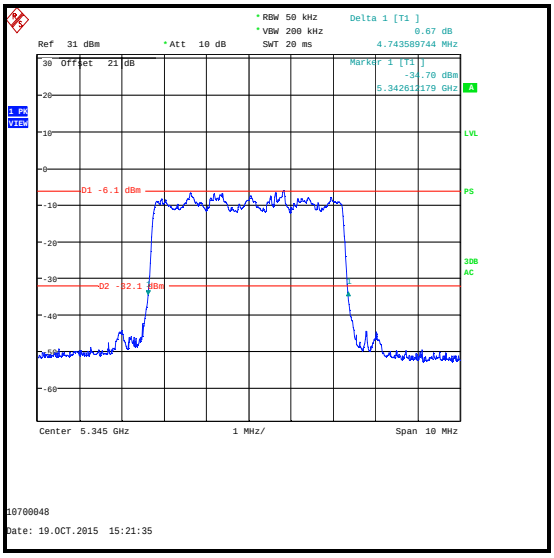
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5252.5	BPSK	50	200	4.744
Middle	5300	BPSK	50	200	4.744
Top	5345	BPSK	50	200	4.744



Bottom Channel



Middle Channel

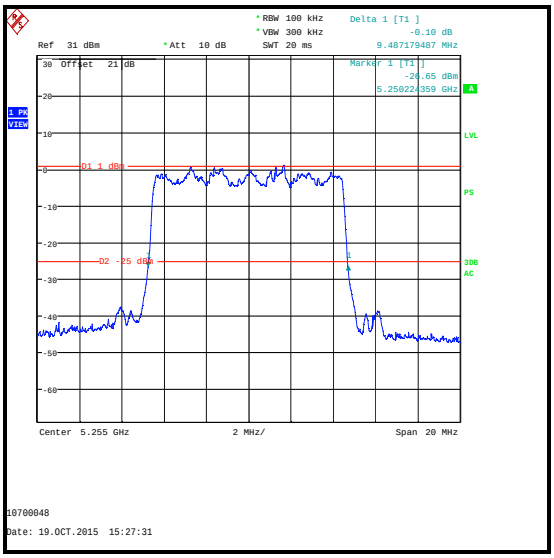


Top Channel

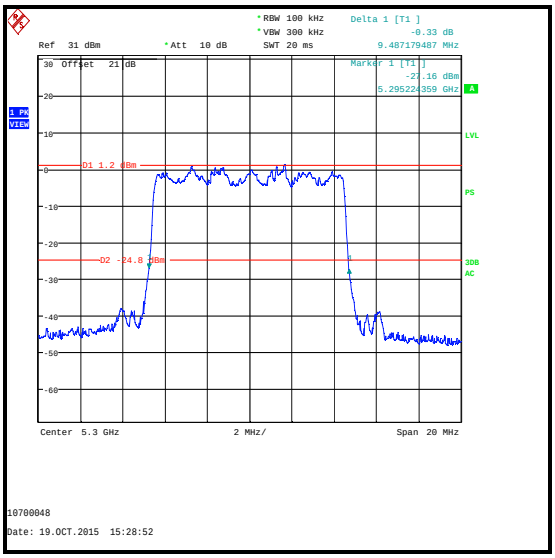
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.25-5.35 GHz Band / 10 MHz Channel / BPSK / H Port

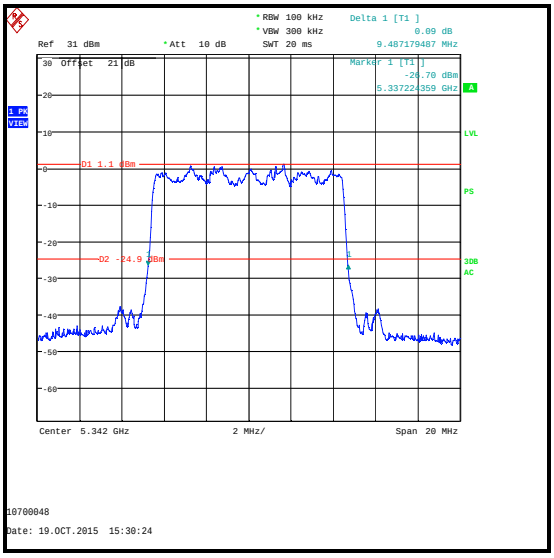
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5255	BPSK	100	300	9.487
Middle	5300	BPSK	100	300	9.487
Top	5342	BPSK	100	300	9.487



Bottom Channel



Middle Channel

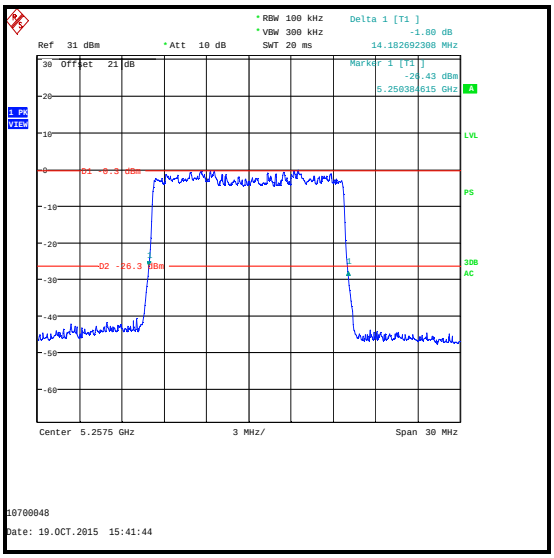


Top Channel

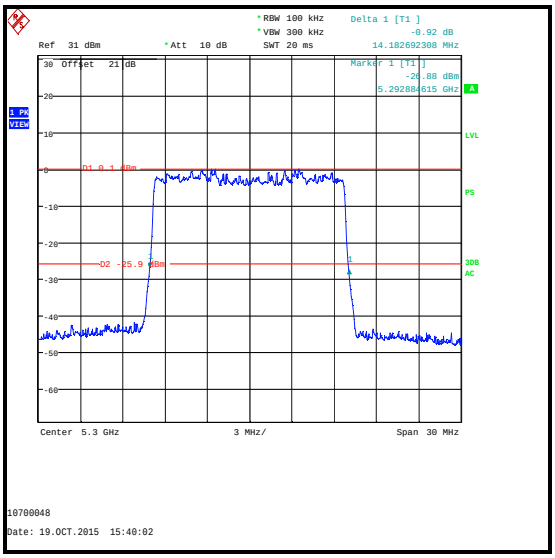
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.25-5.35 GHz Band / 15 MHz Channel / BPSK / H Port

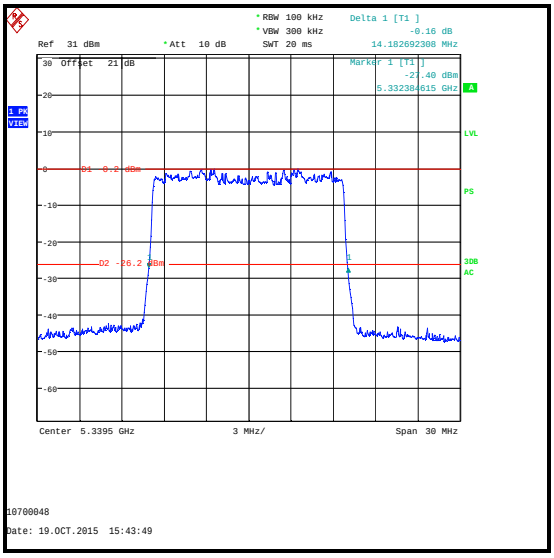
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5257.5	BPSK	100	300	14.183
Middle	5300	BPSK	100	300	14.183
Top	5339.5	BPSK	100	300	14.183



Bottom Channel



Middle Channel

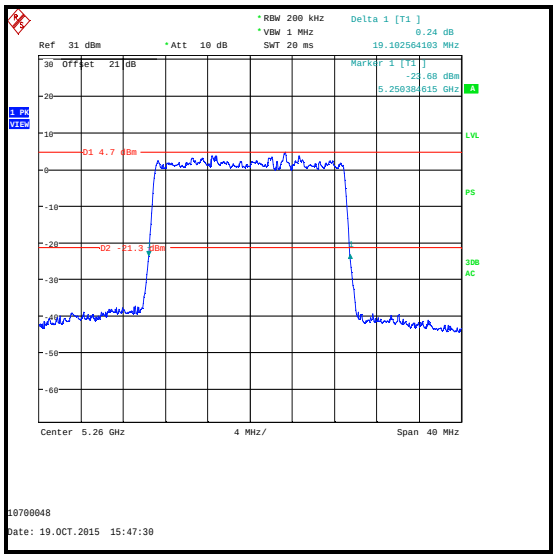


Top Channel

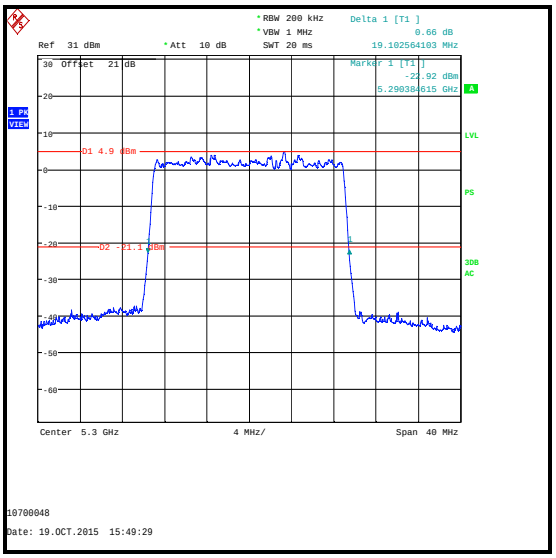
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.25-5.35 GHz Band / 20 MHz Channel / BPSK / H Port

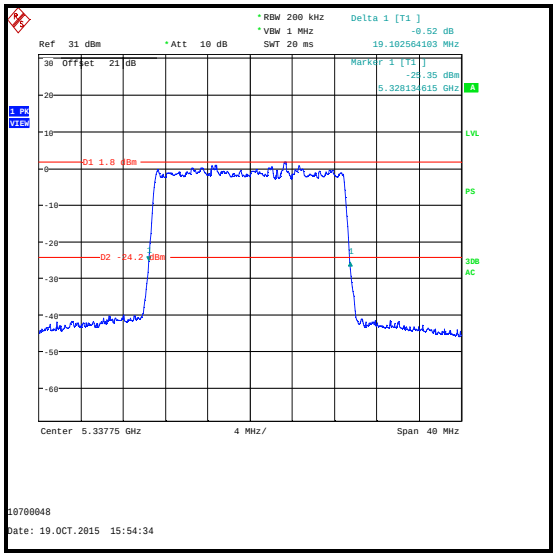
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5260	BPSK	200	1000	19.103
Middle	5300	BPSK	200	1000	19.103
Top	5337.75	BPSK	200	1000	19.103



Bottom Channel



Middle Channel

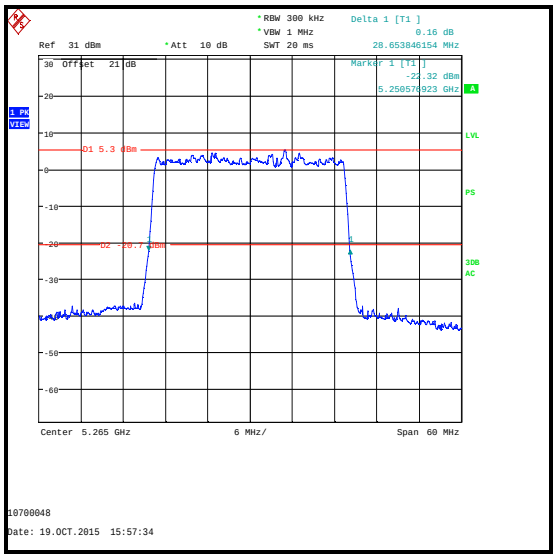


Top Channel

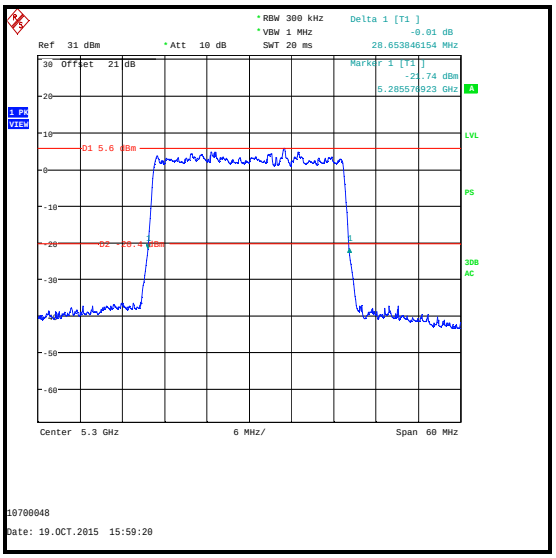
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.25-5.35 GHz Band / 30 MHz Channel / BPSK / H Port

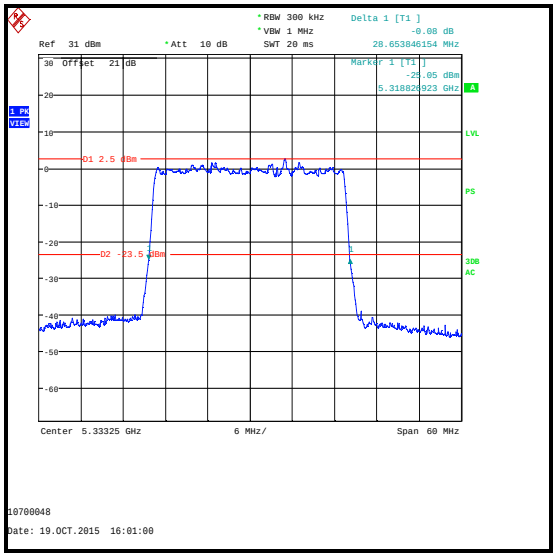
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5265	BPSK	300	1000	28.654
Middle	5300	BPSK	300	1000	28.654
Top	5333.25	BPSK	300	1000	28.654



Bottom Channel



Middle Channel

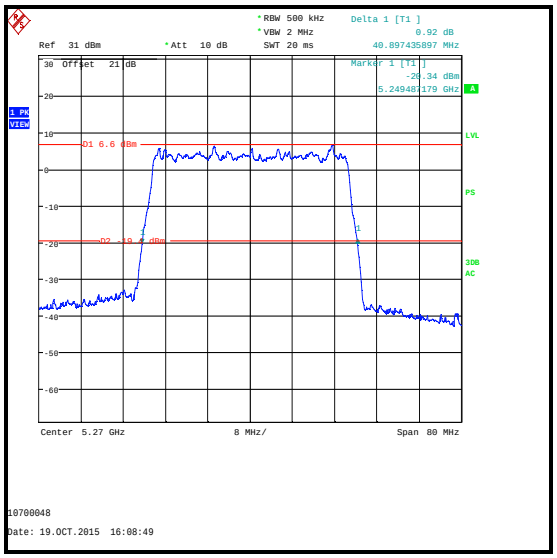


Top Channel

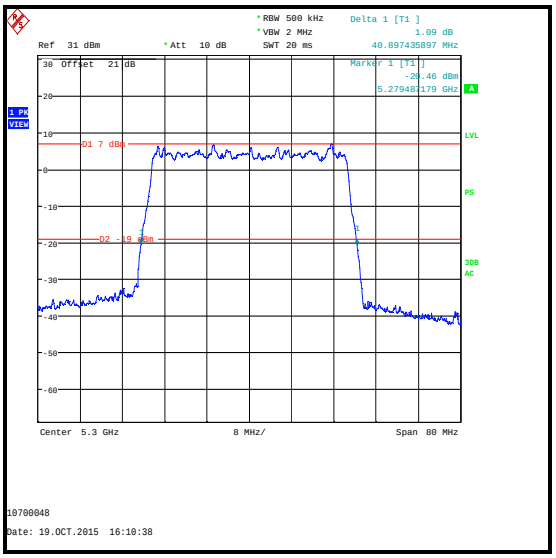
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.25-5.35 GHz Band / 40 MHz Channel / BPSK / H Port

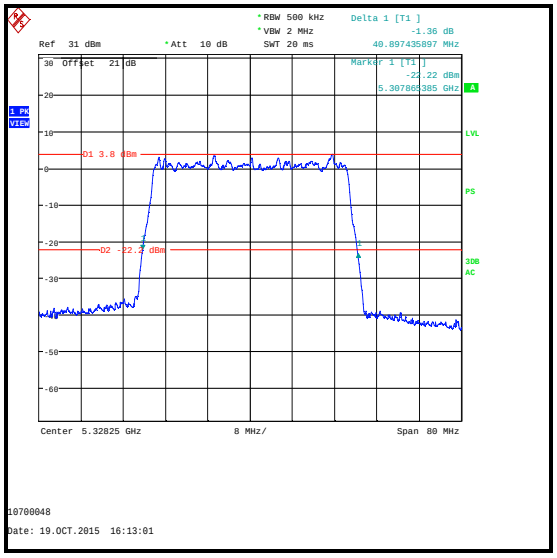
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5270	BPSK	500	2000	40.897
Middle	5300	BPSK	500	2000	40.897
Top	5328.25	BPSK	500	2000	40.897



Bottom Channel



Middle Channel

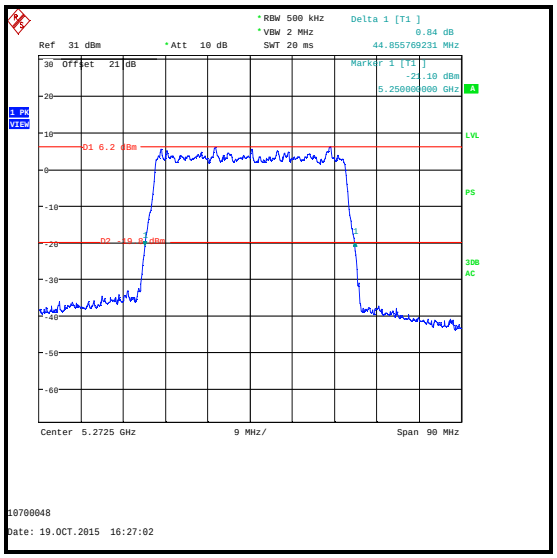


Top Channel

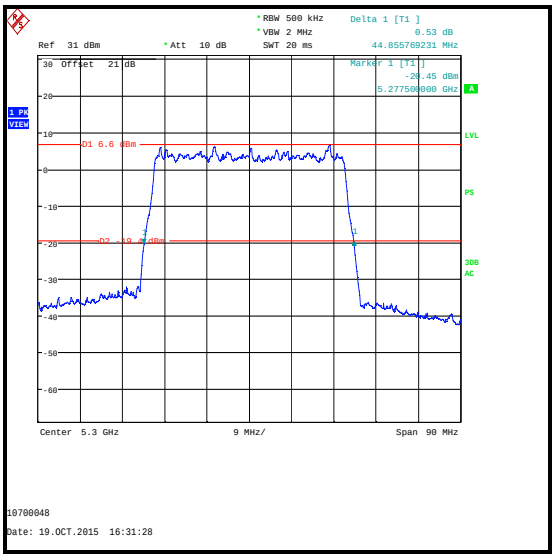
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.25-5.35 GHz Band / 45 MHz Channel / BPSK / H Port

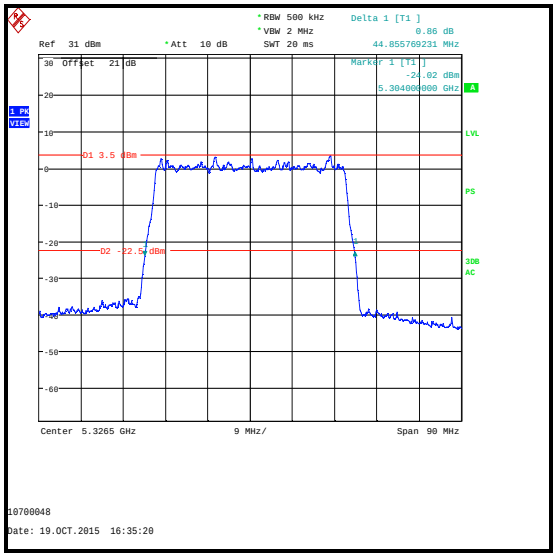
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5272.5	BPSK	500	2000	44.856
Middle	5300	BPSK	500	2000	44.856
Top	5326.5	BPSK	500	2000	44.856



Bottom Channel



Middle Channel

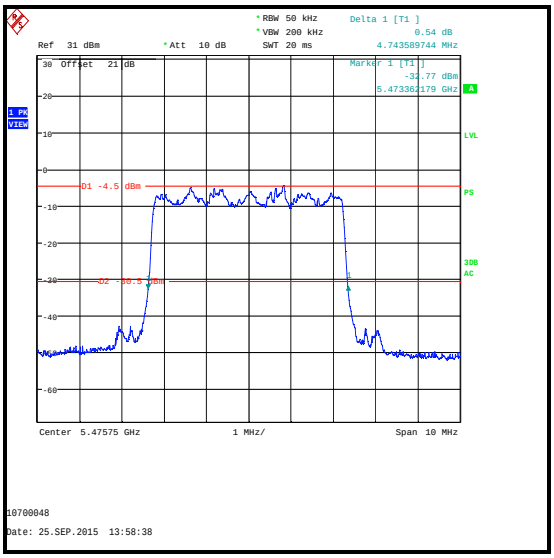


Top Channel

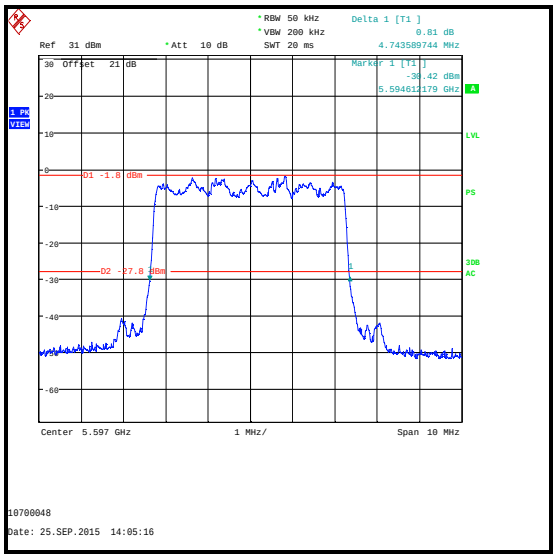
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.47-5.725 GHz Band / 5 MHz Channel / BPSK / H Port

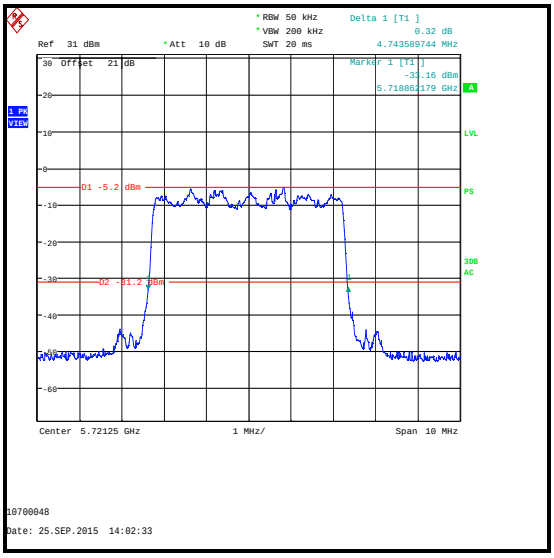
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5475.75	BPSK	50	200	4.744
Middle	5597	BPSK	50	200	4.744
Top	5721.25	BPSK	50	200	4.744



Bottom Channel



Middle Channel

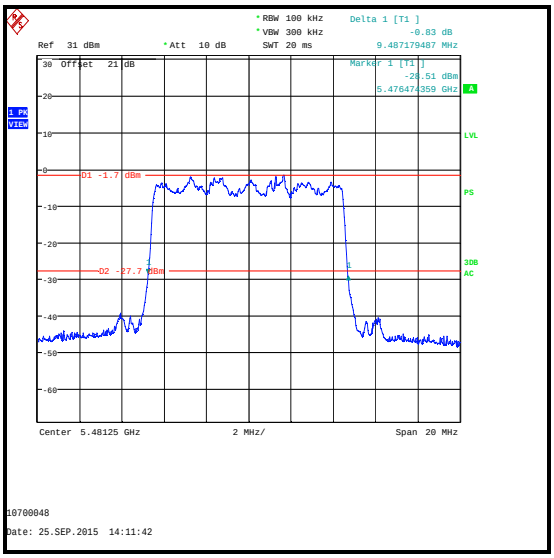


Top Channel

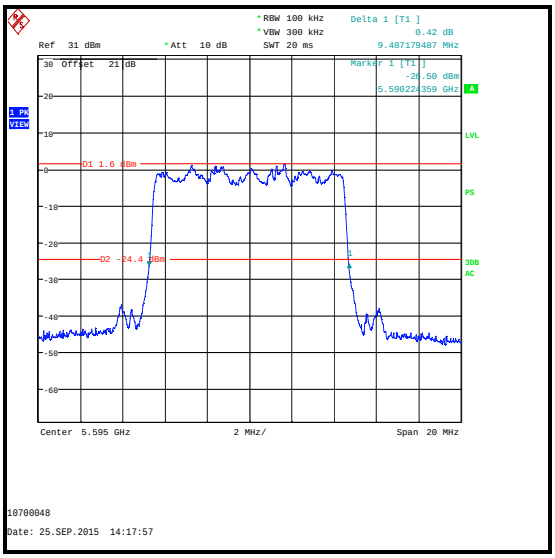
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.47-5.725 GHz Band / 10 MHz Channel / BPSK / H Port

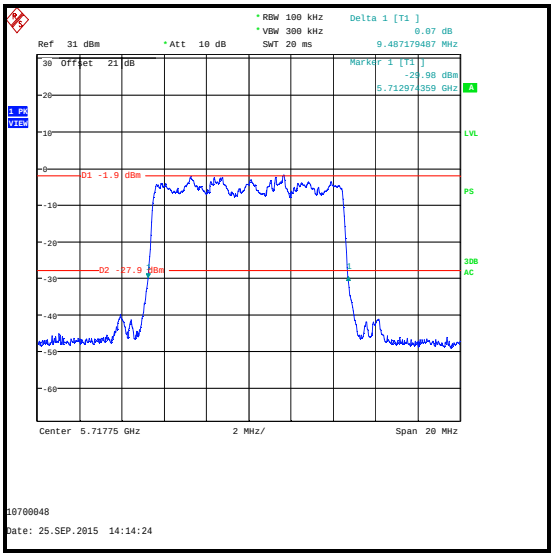
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5481.25	BPSK	100	300	9.487
Middle	5595	BPSK	100	300	9.487
Top	5717.75	BPSK	100	300	9.487



Bottom Channel



Middle Channel

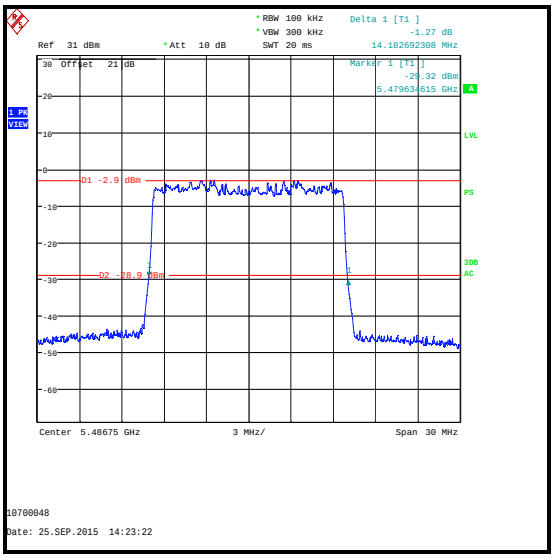


Top Channel

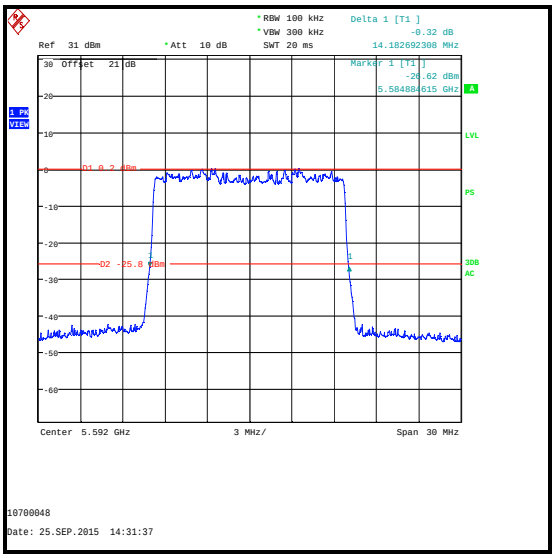
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.47-5.725 GHz Band / 15 MHz Channel / BPSK / H Port

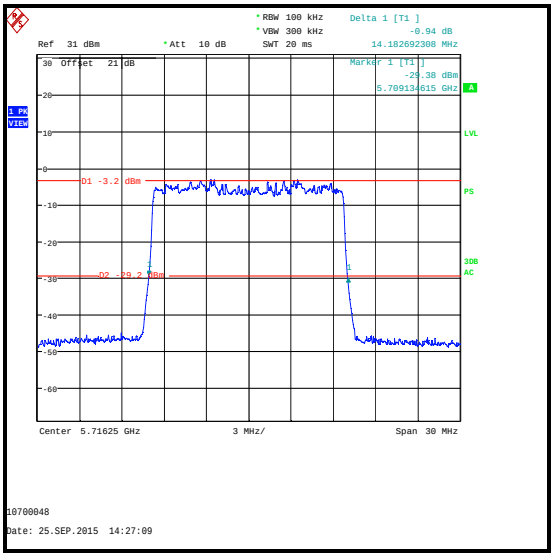
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5486.75	BPSK	100	300	14.183
Middle	5592	BPSK	100	300	14.183
Top	5716.25	BPSK	100	300	14.183



Bottom Channel



Middle Channel

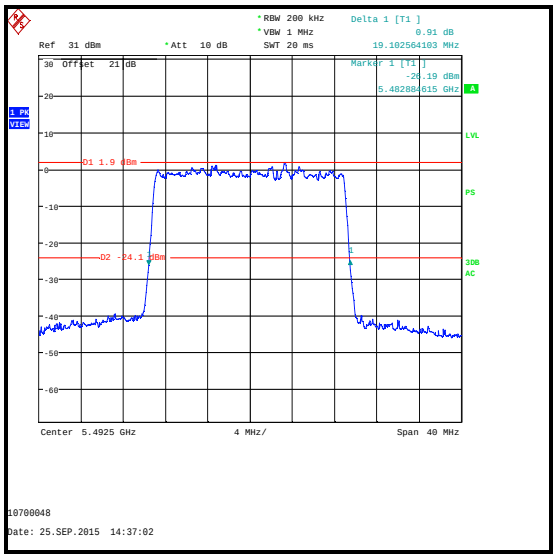


Top Channel

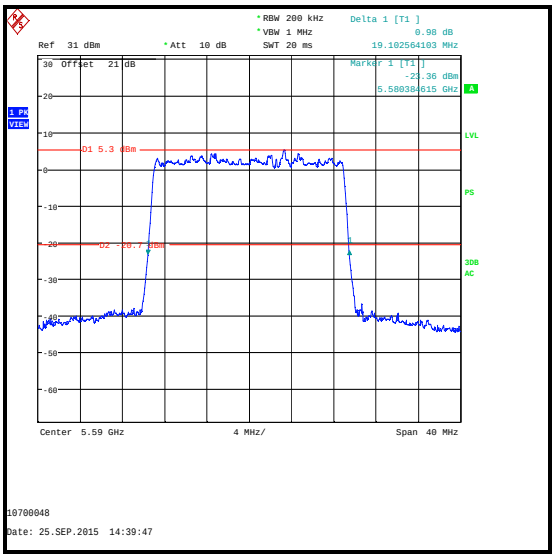
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.47-5.725 GHz Band / 20 MHz Channel / BPSK / H Port

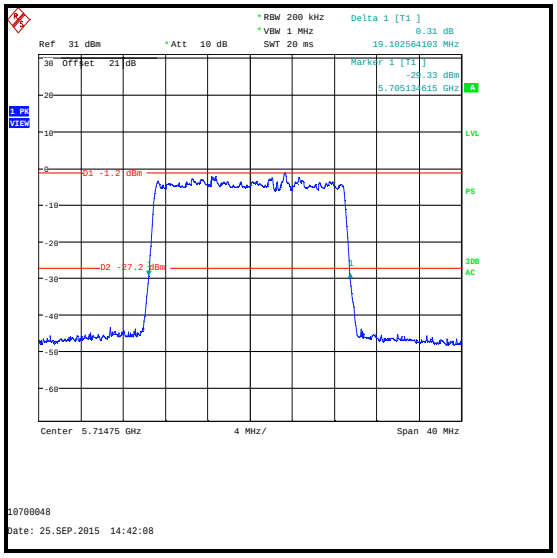
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5492.5	BPSK	200	1000	19.103
Middle	5590	BPSK	200	1000	19.103
Top	5714.75	BPSK	200	1000	19.103



Bottom Channel



Middle Channel

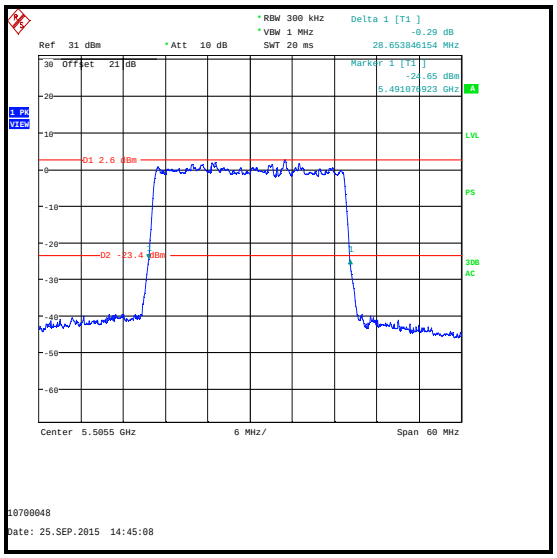


Top Channel

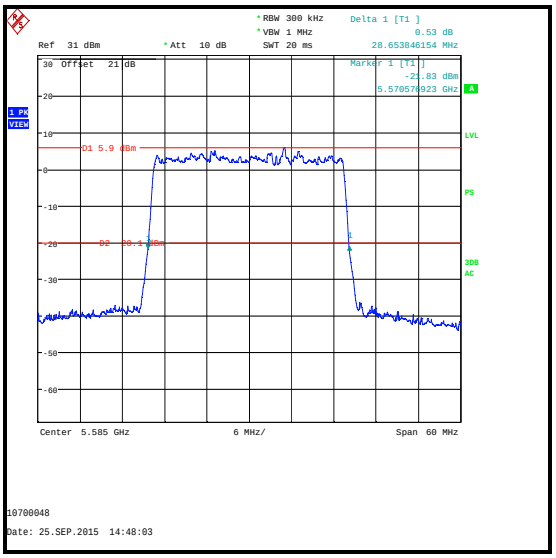
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.47-5.725 GHz Band / 30 MHz Channel / BPSK / H Port

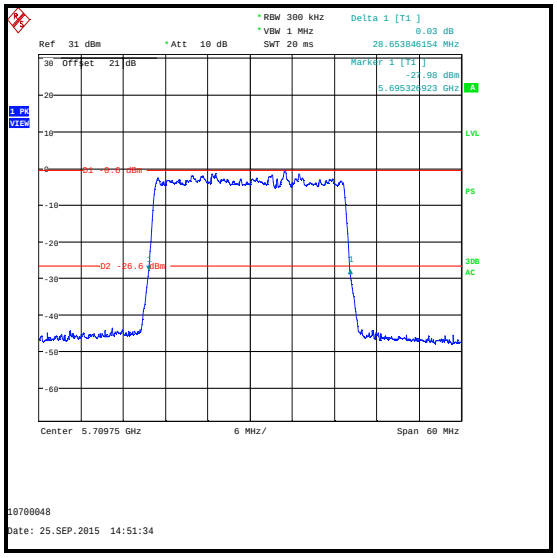
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5505.5	BPSK	300	1000	28.654
Middle	5585	BPSK	300	1000	28.654
Top	5709.75	BPSK	300	1000	28.654



Bottom Channel



Middle Channel

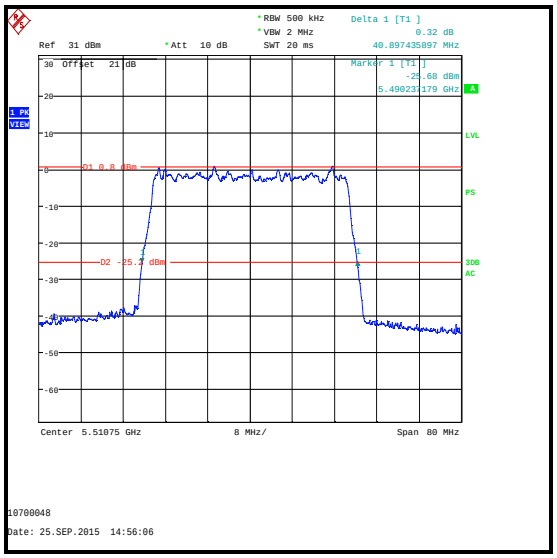


Top Channel

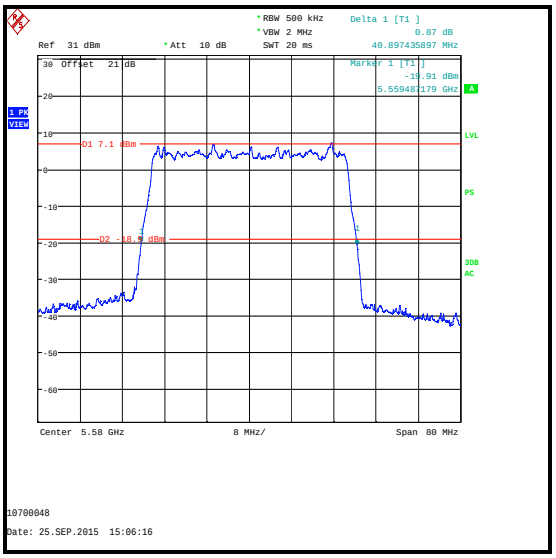
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.47-5.725 GHz Band / 40 MHz Channel / BPSK / H Port

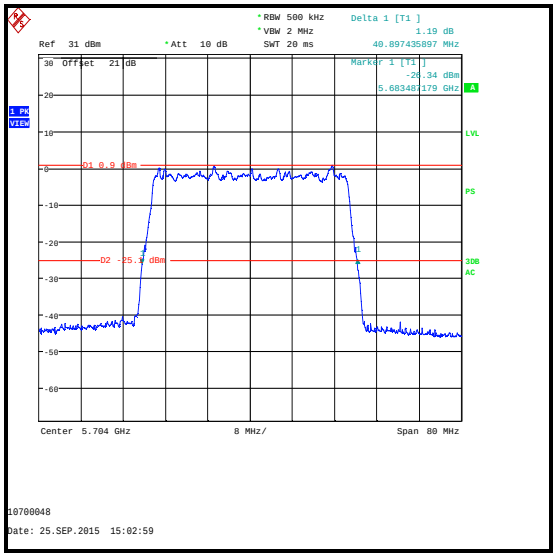
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5510.75	BPSK	500	2000	40.897
Middle	5580	BPSK	500	2000	40.897
Top	5704	BPSK	500	2000	40.897



Bottom Channel



Middle Channel

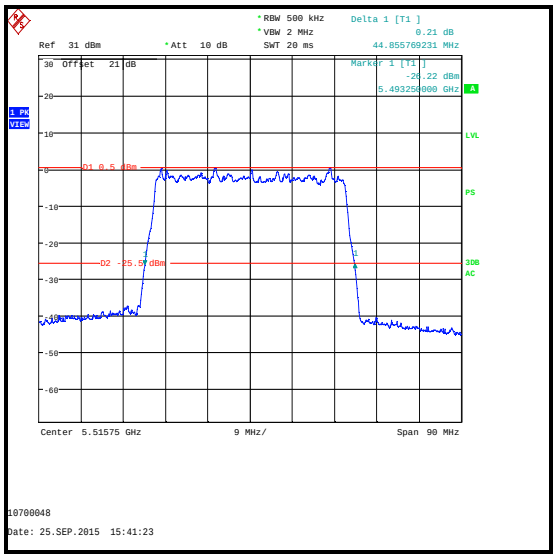


Top Channel

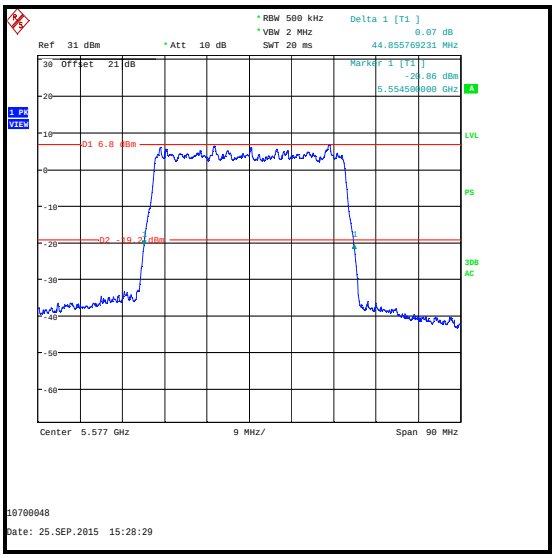
Transmitter 26 dB Emission Bandwidth (continued)

Results: 5.47-5.725 GHz Band / 45 MHz Channel / BPSK / H Port

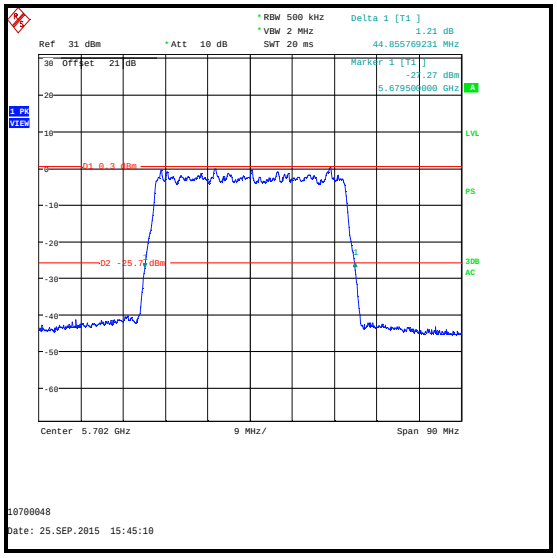
Channel	Frequency	Modulation	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	26 dB Bandwidth (MHz)
Bottom	5515.75	BPSK	500	2000	44.856
Middle	5577	BPSK	500	2000	44.856
Top	5702	BPSK	500	2000	44.856



Bottom Channel



Middle Channel



Top Channel

Transmitter 26 dB Emission Bandwidth (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A2527	Attenuator	AtlanTecRF	AN18W5-20	832828#2	Calibrated Before Use	N/A
M1886	Test Receiver	Rohde & Schwarz	ESU26	100554	21 May 2016	12
G0608	Signal Generator	Rohde & Schwarz	SMIQ 06B	838341/033	01 Apr 2016	12
M1785	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	23 Apr 2016	12

5.2.3. Transmitter Maximum Conducted Output Power (5.25-5.35 & 5.47-5.725 GHz Bands)

Test Summary:

Test Engineer:	Georgios Vrezas	**Test Dates:**	25 September 2015 to 20 October 2015
Test Sample Serial Number:	0004565800E2		

FCC Reference:	Part 15.407(a)(2)
Test Method Used:	FCC KDB 789033 D02 Section II.E.3.a) Method PM and Notes below

Environmental Conditions:

Temperature (°C):	24 to 25
Relative Humidity (%):	35 to 41

Notes:

1. Tests were performed with the EUT transmitting at its lowest and highest configurable output power and >99% duty cycle. Minimum output power is used when the EUT is connected to the highest gain antenna (4' parabolic antenna in the 5.25-5.35 GHz band and 2' parabolic antenna in the 5.47-5.725 GHz band). Maximum output power is used when the EUT is used in conjunction with the lowest gain antenna (omnidirectional).
2. All conducted power measurements were made using an RF average power meter in accordance with FCC KDB 789033 Section II.E.3.a) Method PM.
3. All supported modes and channel widths were initially investigated on one channel. The mode that produced the highest power and therefore deemed worst case is recorded in the result tables shown in this section of the test report.
4. Results for all supported modes and channel bandwidths are archived on the test laboratory IT server and available for inspection upon request.
5. Measurements were performed in each supported operating band on the bottom, middle and top channels.
6. The FCC Part 15.407(a)(2) limit is the lesser of 250 mW (24.0 dBm) or 11 dBm + 10 $\log_{10}$ B, where B is the previously measured 26 dB emission bandwidth in MHz. The limit for each channel was calculated as below:

Conducted Power Limit Calculations 5.25-5.35 GHz Band

5 MHz channel width = *11 dBm + 10 $\log_{10}$ 4.744 = 17.8 dBm*
10 MHz channel width = *11 dBm + 10 $\log_{10}$ 9.487 = 20.8 dBm*
15 MHz channel width = *11 dBm + 10 $\log_{10}$ 14.183 = 22.5 dBm*
20 MHz channel width = *11 dBm + 10 $\log_{10}$ 19.103 = 23.8 dBm*
30 MHz channel width = *11 dBm + 10 $\log_{10}$ 28.654 = 25.6 dBm*
40 MHz channel width = *11 dBm + 10 $\log_{10}$ 40.897 = 27.1 dBm*
45 MHz channel width = *11 dBm + 10 $\log_{10}$ 44.856 = 27.5 dBm*

Transmitter Maximum Output Power (continued)

Notes (continued):

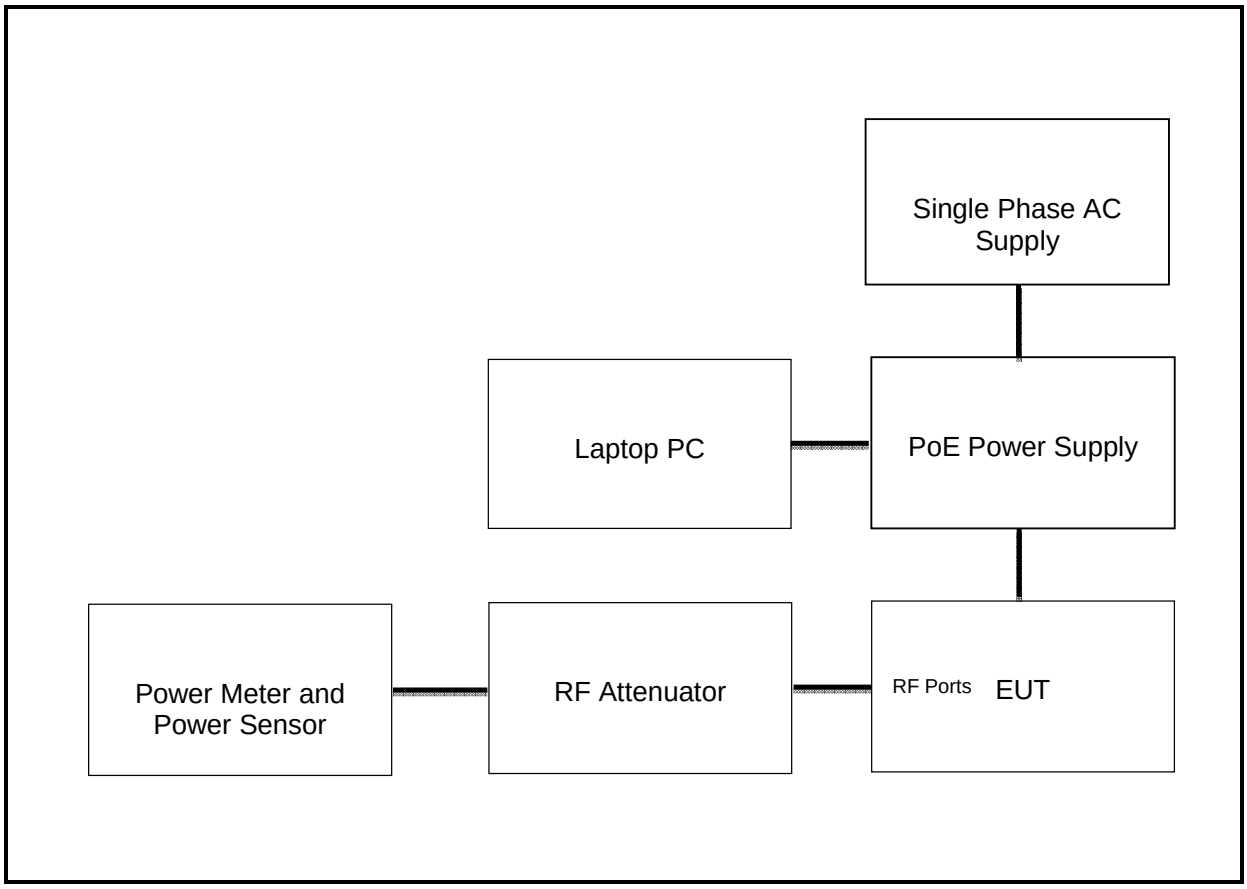
Conducted Power Limit Calculations 5.47-5.725 GHz Band

5 MHz channel width = *11 dBm + 10 log$_{10}$ 4.744 = 17.8 dBm*
10 MHz channel width = *11 dBm + 10 log$_{10}$ 9.487 = 20.8 dBm*
15 MHz channel width = *11 dBm + 10 log$_{10}$ 14.183 = 22.5 dBm*
20 MHz channel width = *11 dBm + 10 log$_{10}$ 19.103 = 23.8 dBm*
30 MHz channel width = *11 dBm + 10 log$_{10}$ 28.654 = 25.6 dBm*
40 MHz channel width = *11 dBm + 10 log$_{10}$ 40.897 = 27.1 dBm*
45 MHz channel width = *11 dBm + 10 log$_{10}$ 44.856 = 27.5 dBm*

7. The lesser of the calculated and fixed limits was applied to the test results. The limits were further reduced by the amount that the stated antenna gain including RF cable loss exceeds 6 dBi. Limits for the omnidirectional antenna were reduced by 6.1 dB (13 dBi gain – 0.9 dB cable loss – 6 dB). Limits for the 4' parabolic antenna were reduced by 27.6 dB (34.5 dBi gain – 0.9 dB cable loss – 6 dB). Limits for the 2' parabolic antenna were reduced by 22.5 dB (28.5 dBi gain (includes cable loss) – 6 dB).
8. All test equipment was within the calibration period on the date of testing.

Transmitter Maximum Output Power (continued)

Test setup for conducted power measurements:



Transmitter Maximum Output Power (5.25-5.35 GHz Band) (continued)

Results: 5 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	5.3	7.7	9.7	11.7	2.0	Complied
Middle	5.8	7.7	9.9	11.7	1.8	Complied
Top	1.8	4.0	6.0	11.7	5.7	Complied

Results: 5 MHz Channel / BPSK / 4' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-17.4	-12.4	-11.2	-9.8	1.4	Complied
Middle	-16.3	-12.6	-11.1	-9.8	1.2	Complied
Top	-16.2	-12.7	-11.1	-9.8	1.2	Complied

Results: 10 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	8.6	11.0	13.0	14.7	1.7	Complied
Middle	9.1	11.0	13.2	14.7	1.5	Complied
Top	9.0	10.9	13.1	14.7	1.6	Complied

Results: 10 MHz Channel / BPSK / 4' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-14.2	-10.2	-8.7	-6.8	1.9	Complied
Middle	-13.2	-10.1	-8.4	-6.8	1.6	Complied
Top	-13.1	-10.2	-8.4	-6.8	1.6	Complied

Transmitter Maximum Output Power (5.25-5.35 GHz Band) (continued)

Results: 15 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	10.0	12.4	14.4	16.4	2.0	Complied
Middle	10.6	12.3	14.5	16.4	1.9	Complied
Top	10.4	12.3	14.5	16.4	1.9	Complied

Results: 15 MHz Channel / BPSK / 4' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-12.4	-8.8	-7.2	-5.1	2.1	Complied
Middle	-11.6	-8.7	-6.9	-5.1	1.8	Complied
Top	-11.5	-8.9	-7.0	-5.1	1.9	Complied

Results: 20 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	11.6	13.8	15.8	17.7	1.9	Complied
Middle	12.1	13.9	16.1	17.7	1.6	Complied
Top	9.0	10.9	13.1	17.7	4.6	Complied

Results: 20 MHz Channel / BPSK / 4' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-11.1	-7.6	-6.0	-3.8	2.2	Complied
Middle	-10.2	-7.6	-5.7	-3.8	1.9	Complied
Top	-10.2	-7.8	-5.8	-3.8	2.0	Complied

Transmitter Maximum Output Power (5.25-5.35 GHz Band) (continued)

Results: 30 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	12.7	14.8	16.9	17.9	1.0	Complied
Middle	13.1	14.8	17.0	17.9	0.9	Complied
Top	10.0	11.9	14.1	17.9	3.8	Complied

Results: 30 MHz Channel / BPSK / 4' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-9.5	-6.3	-4.6	-3.6	1.0	Complied
Middle	-8.7	-6.2	-4.3	-3.6	0.7	Complied
Top	-12.2	-9.5	-7.6	-3.6	4.0	Complied

Results: 40 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	12.6	14.8	16.8	17.9	1.1	Complied
Middle	13.1	14.9	17.1	17.9	0.8	Complied
Top	10.0	11.9	14.1	17.9	3.8	Complied

Results: 40 MHz Channel / BPSK / 4' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-9.5	-6.3	-4.6	-3.6	1.0	Complied
Middle	-8.7	-6.2	-4.3	-3.6	0.7	Complied
Top	-12.1	-9.4	-7.5	-3.6	3.9	Complied

Transmitter Maximum Output Power (5.25-5.35 GHz Band) (continued)

Results: 45 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	12.6	14.9	16.9	17.9	1.0	Complied
Middle	13.1	14.9	17.1	17.9	0.8	Complied
Top	10.0	12.0	14.1	17.9	3.8	Complied

Results: 45 MHz Channel / BPSK / 4' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-9.5	-6.3	-4.6	-3.6	1.0	Complied
Middle	-8.8	-6.3	-4.4	-3.6	0.8	Complied
Top	-12.1	-9.4	-7.5	-3.6	3.9	Complied

Transmitter Maximum Output Power (5.47-5.725 GHz Band) (continued)

Results: 5 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port(dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	2.7	4.8	6.9	11.7	4.8	Complied
Middle	5.9	7.5	9.8	11.7	1.9	Complied
Top	2.2	5.3	7.0	11.7	4.7	Complied

Results: 5 MHz Channel / BPSK / 2' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-10.2	-8.0	-6.0	-4.7	1.2	Complied
Middle	-10.6	-8.3	-6.3	-4.7	1.6	Complied
Top	-12.1	-7.6	-6.3	-4.7	1.6	Complied

Results: 10 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	5.6	8.3	10.2	14.7	4.5	Complied
Middle	9.2	10.7	13.0	14.7	1.7	Complied
Top	5.6	8.3	10.2	14.7	4.5	Complied

Results: 10 MHz Channel / BPSK / 2' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-8.3	-5.7	-3.8	-1.7	2.1	Complied
Middle	-8.4	-6.0	-4.0	-1.7	2.3	Complied
Top	-9.3	-5.2	-3.8	-1.7	2.1	Complied

Transmitter Maximum Output Power (5.47-5.725 GHz Band) (continued)

Results: 15 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	7.2	9.7	11.6	16.4	4.8	Complied
Middle	10.7	12.1	14.5	16.4	1.9	Complied
Top	7.0	9.7	11.6	16.4	4.8	Complied

Results: 15 MHz Channel / BPSK / 2' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-6.4	-3.8	-1.9	0.0	1.9	Complied
Middle	-6.3	-4.1	-2.1	0.0	2.1	Complied
Top	-10.1	-5.8	-4.4	0.0	4.4	Complied

Results: 20 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	8.8	11.2	13.2	17.7	4.5	Complied
Middle	12.2	13.5	15.9	17.7	1.8	Complied
Top	5.5	8.4	10.2	17.7	7.5	Complied

Results: 20 MHz Channel / BPSK / 2' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-5.5	-2.4	-0.7	1.3	2.0	Complied
Middle	-5.0	-2.9	-0.8	1.3	2.1	Complied
Top	-8.7	-4.6	-3.2	1.3	4.5	Complied

Transmitter Maximum Output Power (5.47-5.725 GHz Band) (continued)

Results: 30 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	9.7	12.0	14.0	17.9	3.9	Complied
Middle	13.1	14.5	16.9	17.9	1.0	Complied
Top	6.4	9.2	11.0	17.9	6.9	Complied

Results: 30 MHz Channel / BPSK / 2' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-6.8	-3.9	-2.1	1.5	3.6	Complied
Middle	-3.6	-1.6	0.5	1.5	1.0	Complied
Top	-7.7	-3.7	-2.2	1.5	3.7	Complied

Results: 40 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	6.7	9.1	11.1	17.9	6.8	Complied
Middle	13.2	14.5	16.9	17.9	1.0	Complied
Top	6.2	9.3	11.0	17.9	6.9	Complied

Results: 40 MHz Channel / BPSK / 2' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-6.7	-3.9	-2.1	1.5	3.6	Complied
Middle	-3.6	-1.6	0.5	1.5	1.0	Complied
Top	-11.0	-6.5	-5.2	1.5	6.7	Complied

Transmitter Maximum Output Power (5.47-5.725 GHz Band) (continued)

Results: 45 MHz Channel / BPSK / Omnidirectional Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	6.7	9.1	11.1	17.9	6.8	Complied
Middle	13.1	14.5	16.9	17.9	1.0	Complied
Top	6.4	9.3	11.1	17.9	6.8	Complied

Results: 45 MHz Channel / BPSK / 2' Parabolic Antenna

Channel	Conducted Power H Port (dBm)	Conducted Power V Port (dBm)	Combined Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	Result
Bottom	-12.8	-9.6	-7.9	1.5	9.4	Complied
Middle	-3.5	-1.5	0.6	1.5	0.9	Complied
Top	-11.0	-6.5	-5.2	1.5	6.7	Complied

Transmitter Maximum Output Power (5.47-5.725 GHz Band) (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1435	Power Meter	Hewlett Packard	437B	3125U14631	24 Apr 2016	12
M1009	Power Meter	Hewlett Packard	437B	3125U13706	27 Jan 2016	12
M1147	Power Sensor*	Hewlett Packard	8485A	2238A00928	03 Oct 2015	12
M1175	Power Sensor	Hewlett Packard	8485A	2942A10299	11 Feb 2016	12
M1592	Power Sensor	Hewlett Packard	8487A	3318A02094	22 Sep 2016	12
A2142	Attenuator	AtlanTecRF	AN18-20	081120-23	Calibrated Before Use	N/A
A2527	Attenuator	AtlanTecRF	AN18W5-20	832828#2	Calibrated Before Use	N/A
A2139	Attenuator	AtlanTecRF	AN18-10	090918-04#1	Calibrated Before Use	N/A
A2140	Attenuator	AtlanTecRF	AN18-10	090918-14	Calibrated Before Use	N/A
G0608	Signal Generator	Rohde & Schwarz	SMIQ 06B	838341/033	01 Apr 2016	12
M1785	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	23 Apr 2016	12

*This instrument was not used after 02 October 2015

5.2.4. Transmitter Maximum Power Spectral Density (5.25-5.35 & 5.47-5.725 GHz Bands)

Test Summary:

Test Engineer:	Georgios Vrezas	**Test Dates:**	25 September 2015 to 23 October 2015
Test Sample Serial Number:	0004565800E2		

FCC Reference:	Part 15.407(a)(2)
Test Method Used:	FCC KDB 789033 Section II.F referencing KDB 789033 II.E.2.b

Environmental Conditions:

Temperature (°C):	22 to 25
Relative Humidity (%):	41 to 49

Note(s):

1. Tests were performed with the EUT transmitting at its maximum and minimum power control level. Minimum power control level is used when the EUT is connected to the highest gain antenna (4' parabolic antenna in the 5.25-5.35 GHz band and 2' parabolic antenna in the 5.47-5.725 GHz band). Maximum output power is used when the EUT is used in conjunction with the lowest gain antenna (omnidirectional).The EUT was transmitting with >99% duty cycle. Various other antennas can be used and the EUT manufacturer will reduce the maximum configurable output power by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
2. The peak power spectral density limit for the 4' parabolic antenna was recalculated as:

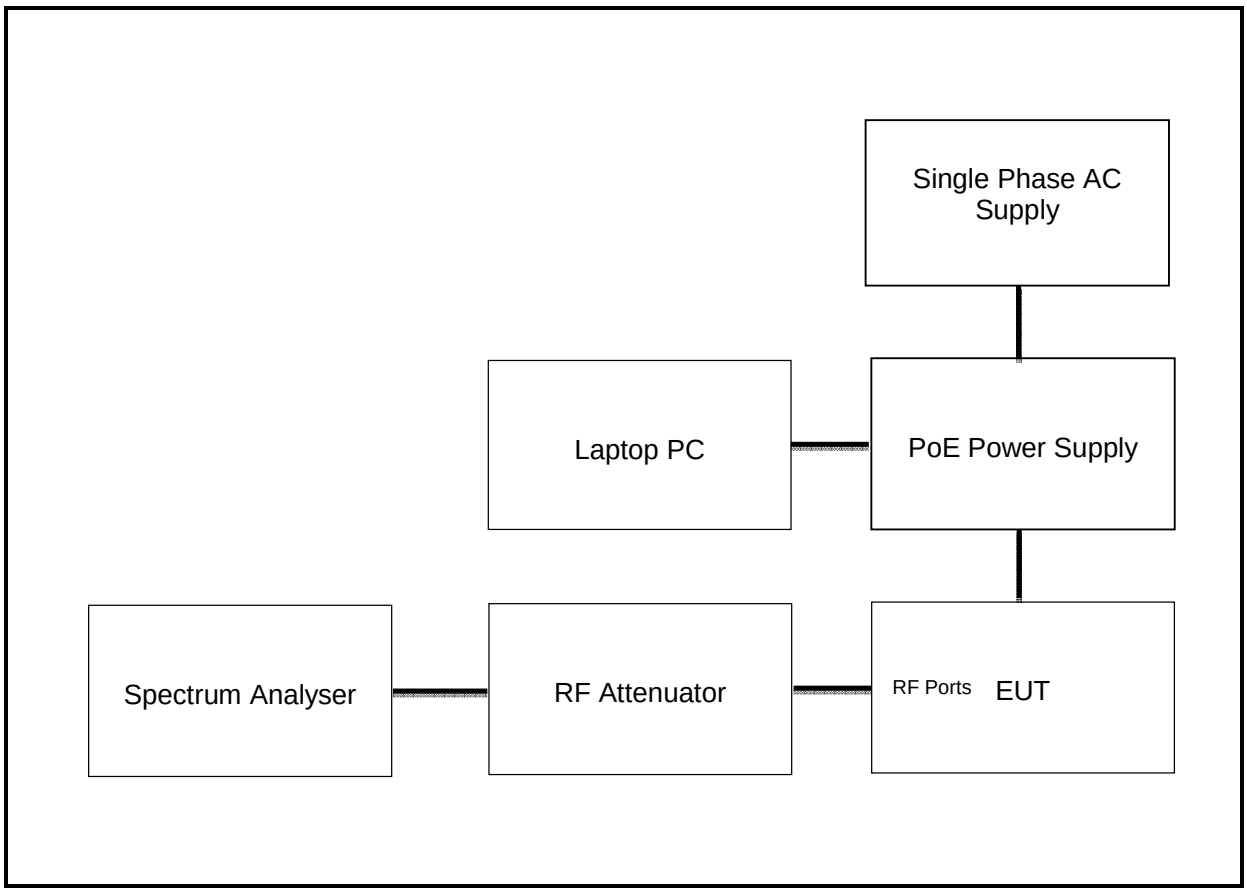
   34.5 dBi (antenna gain) – 0.9 dB (cable loss) = 33.6 dBi
   33.6 dBi – 6 dB = 27.6 dB
   The 11 dBm/MHz PSD limit was reduced by 27.6 dB to -16.6 dBm/MHz
3. The peak power spectral density limit for the 2' parabolic antenna was recalculated as:

   28.5 dBi (antenna gain with RF cable loss) – 6 dB = 22.5 dB
   The 11 dBm/MHz PSD limit was reduced by 22.5 dB to -11.5 dBm/MHz
4. The peak power spectral density limit for the omnidirectional antenna was recalculated as:

   13 dBi (antenna gain) – 0.9 dB (cable loss) = 12.1 dBi
   12.1 dBi – 6 dB = 6.1 dB
   The 11 dBm/MHz PSD limit was reduced by 6.1 dB to 4.9 dBm/MHz
5. All supported modes and channel widths were initially investigated on one channel. Final measurements were performed using the worst case modulation type for each modulation family on the bottom, middle and top channels in all supported channel bandwidths. Power Spectral Density was also checked in AQU mode using power settings stated in Section 4.2 of this test report and additional results are included in this section where the measured level in AQU mode exceeds the level measured in a modulated mode. Maximum power spectral density was measured on both RF ports. The results were linearly combined and compared to the limit to obtain the margin.
6. Transmitter Peak Power Spectral Density tests in all bands were performed using a calibrated spectrum analyser in accordance with FCC KDB 789033 II.E.2.b) Method SA-1.
7. The spectrum analyser was connected to each RF port on the EUT using suitable attenuation and RF cable. An RF level offset was entered on the spectrum analyser to compensate for the loss of the attenuator and RF cable.

Transmitter Maximum Power Spectral Density (continued)

Test setup for power spectral density measurements:

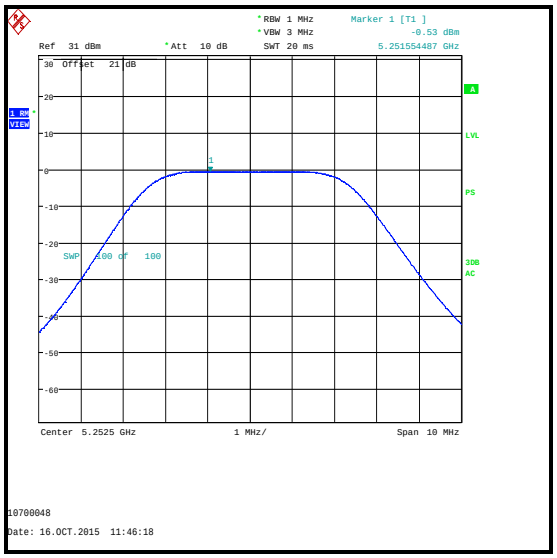


Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

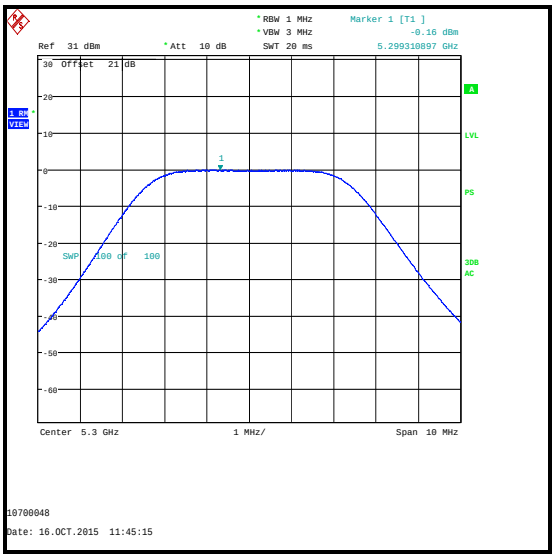
Results: 5 MHz Channel / BPSK / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-0.5	1.8	3.8	4.9	1.1	Complied
Middle	-0.2	1.7	3.9	4.9	1.0	Complied
Top	-4.1	-2.1	0.0	4.9	4.9	Complied

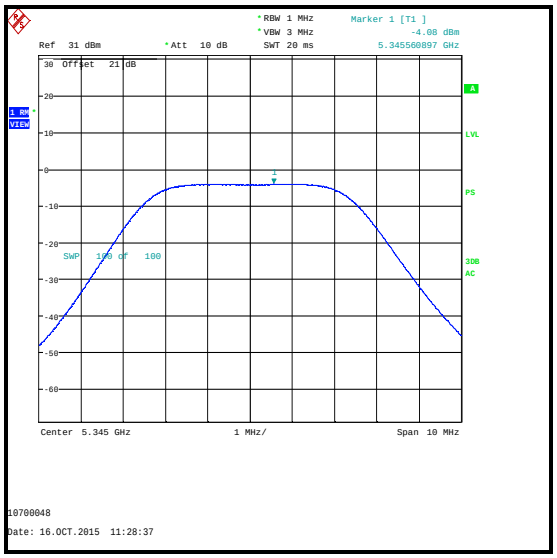
H Port



Bottom Channel



Middle Channel

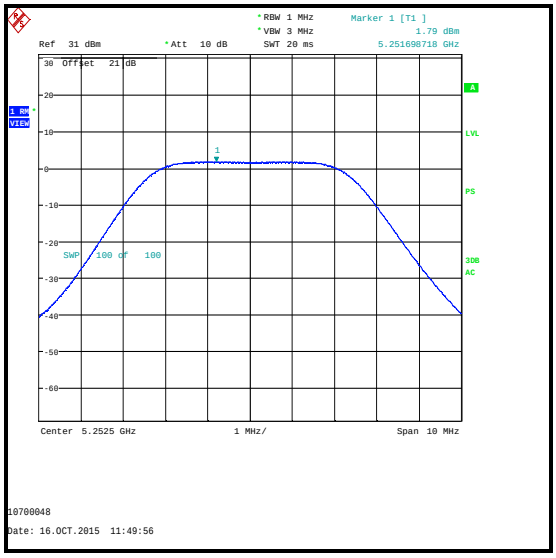


Top Channel

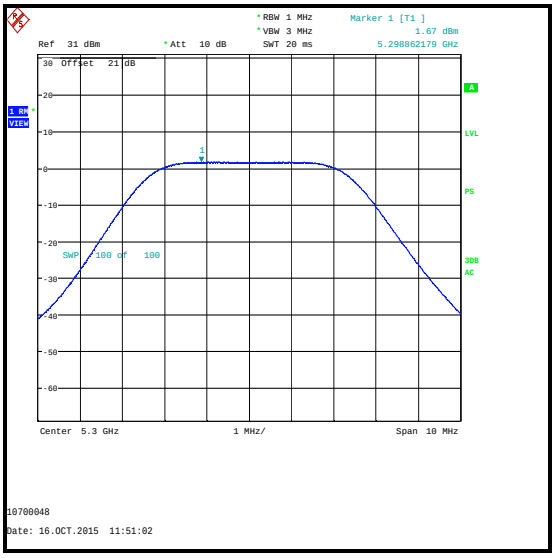
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 5 MHz Channel / BPSK / Omnidirectional Antenna

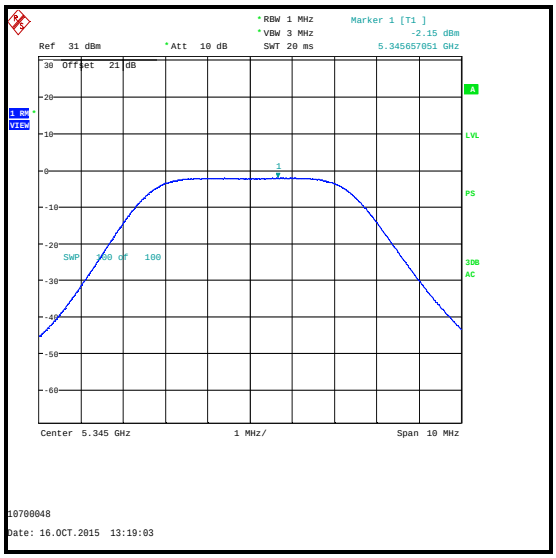
V Port



Bottom Channel



Middle Channel



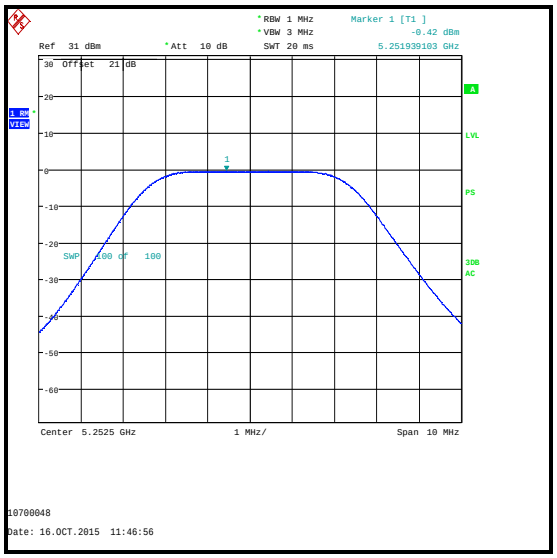
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

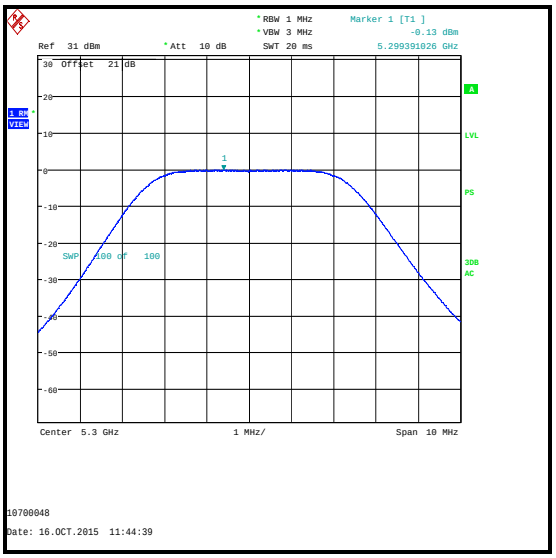
Results: 5 MHz Channel / 256QAM / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-0.4	1.7	3.8	4.9	1.1	Complied
Middle	-0.1	1.7	3.9	4.9	1.0	Complied
Top	-4.0	-2.1	0.1	4.9	4.8	Complied

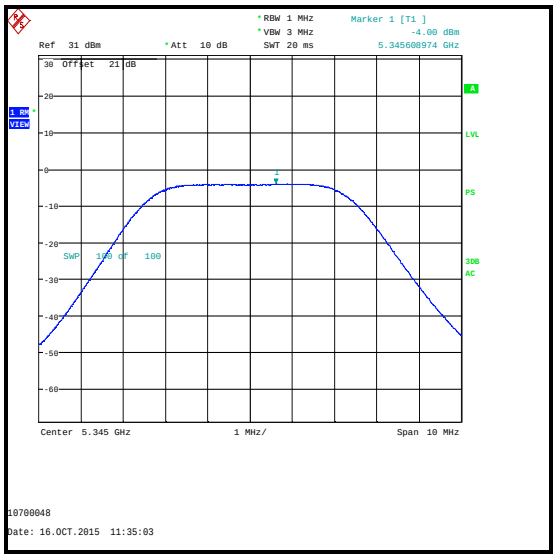
H Port



Bottom Channel



Middle Channel

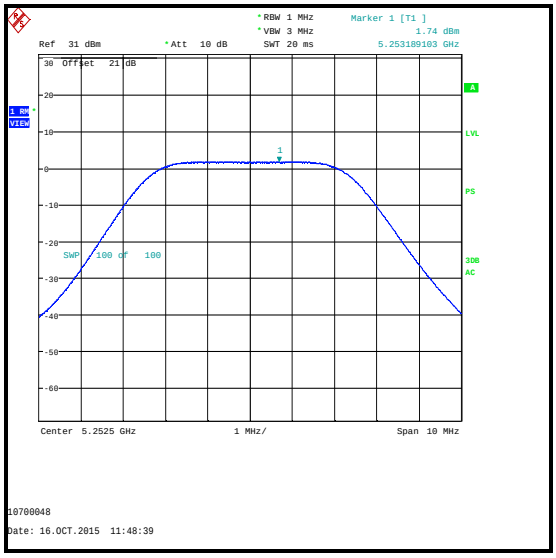


Top Channel

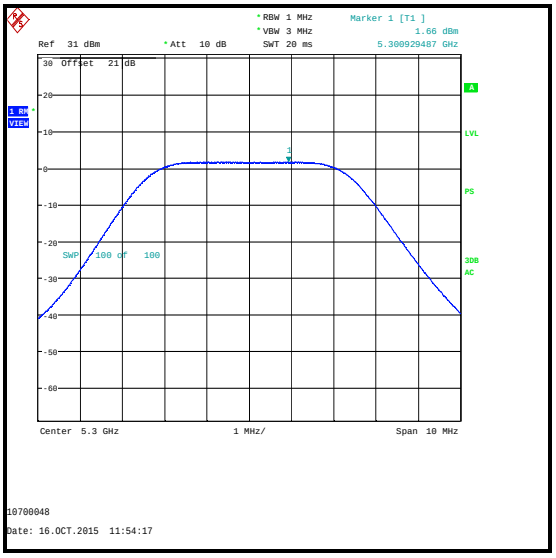
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 5 MHz Channel / 256QAM / Omnidirectional Antenna

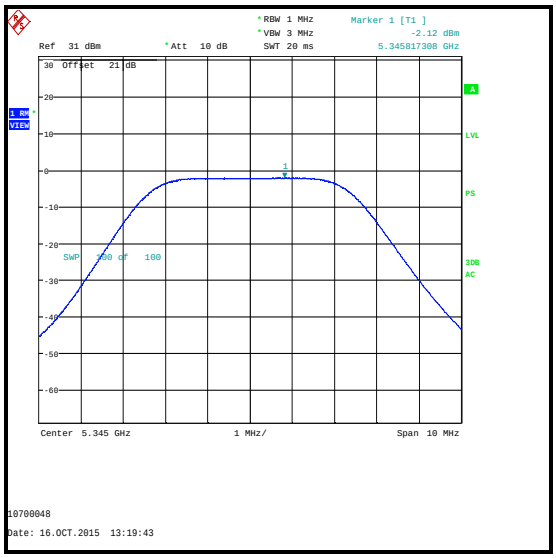
V Port



Bottom Channel



Middle Channel



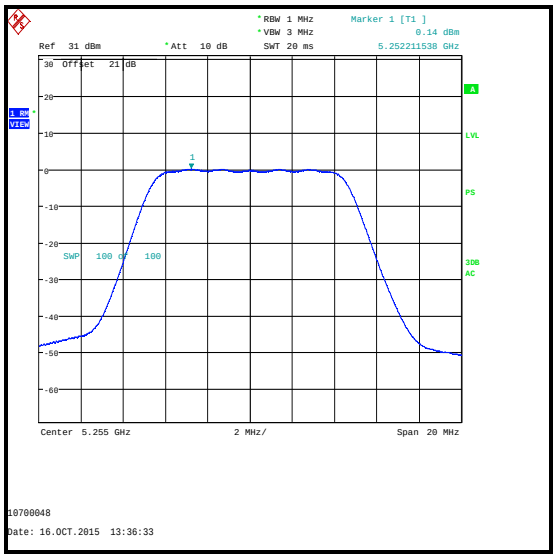
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

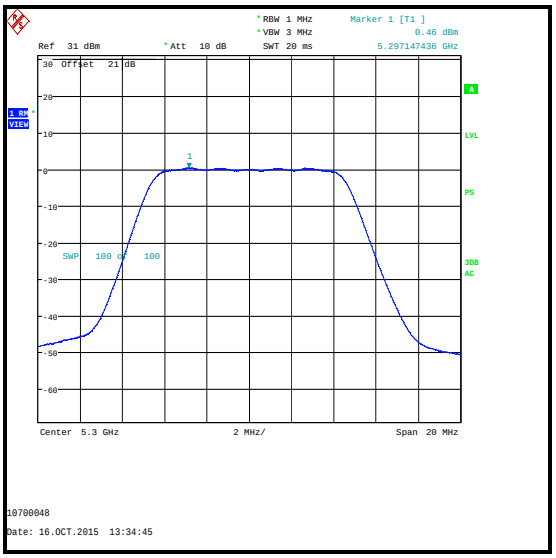
Results: 10 MHz Channel / BPSK / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	0.1	2.3	4.3	4.9	0.6	Complied
Middle	0.5	2.2	4.4	4.9	0.5	Complied
Top	0.3	2.0	4.2	4.9	0.7	Complied

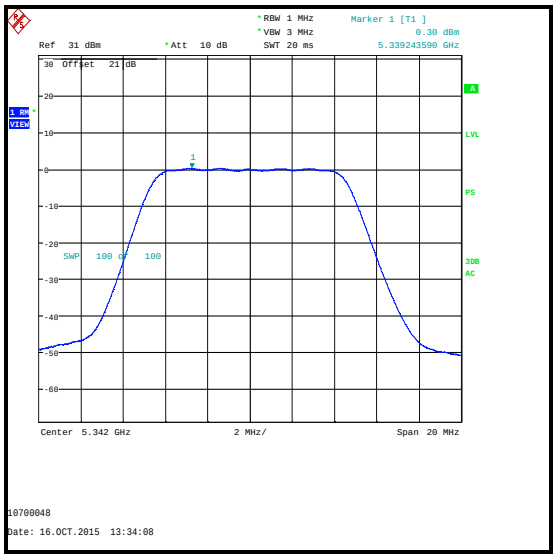
H Port



Bottom Channel



Middle Channel

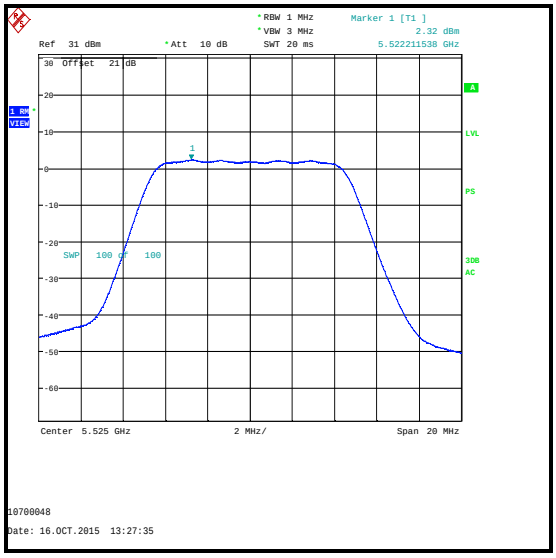


Top Channel

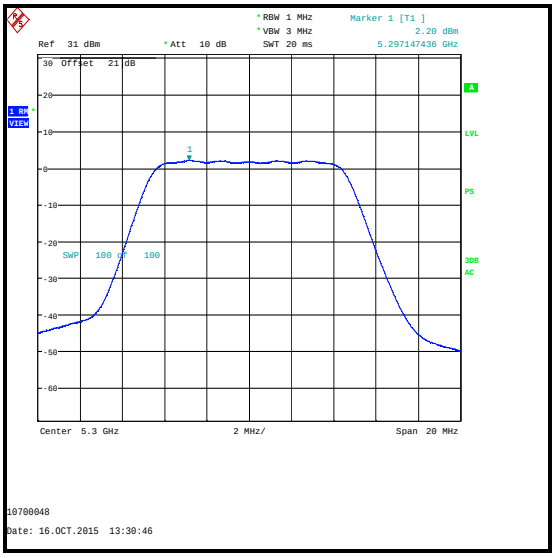
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 10 MHz Channel / BPSK / Omnidirectional Antenna

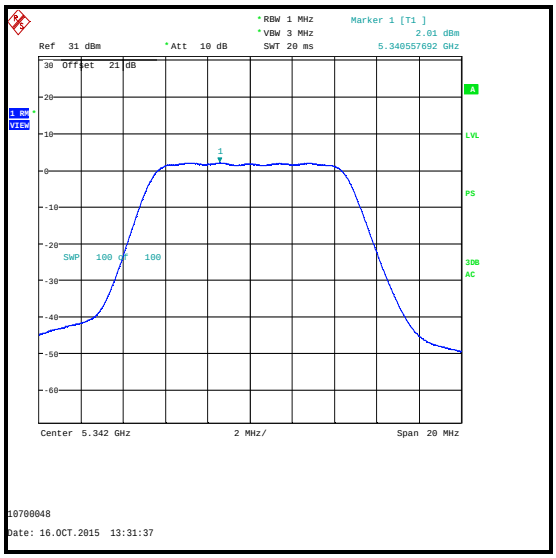
V Port



Bottom Channel



Middle Channel



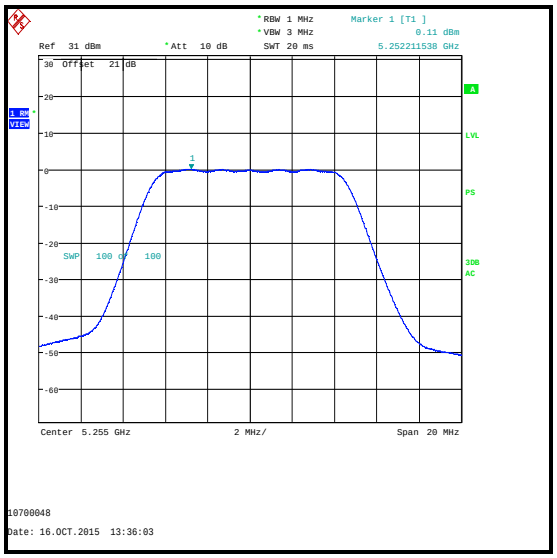
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

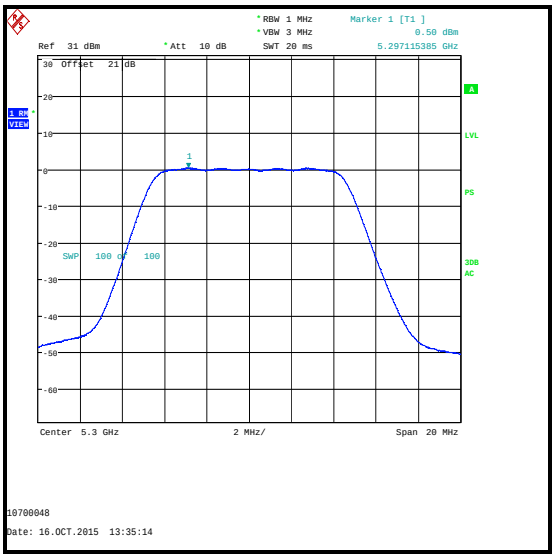
Results: 10 MHz Channel / 256QAM / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	0.1	2.3	4.3	4.9	0.6	Complied
Middle	0.5	2.2	4.4	4.9	0.5	Complied
Top	0.3	2.0	4.2	4.9	0.7	Complied

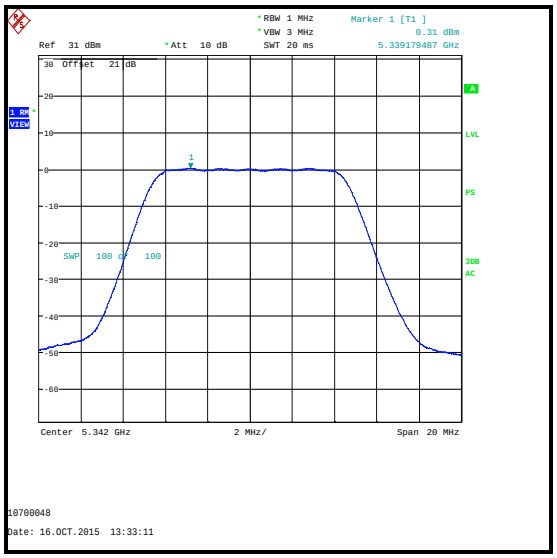
H Port



Bottom Channel



Middle Channel

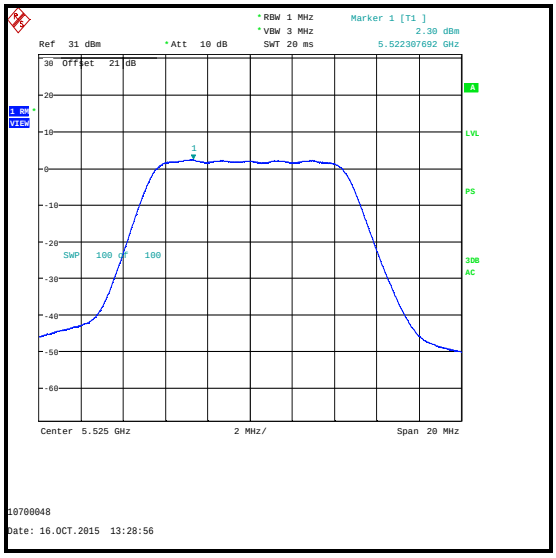


Top Channel

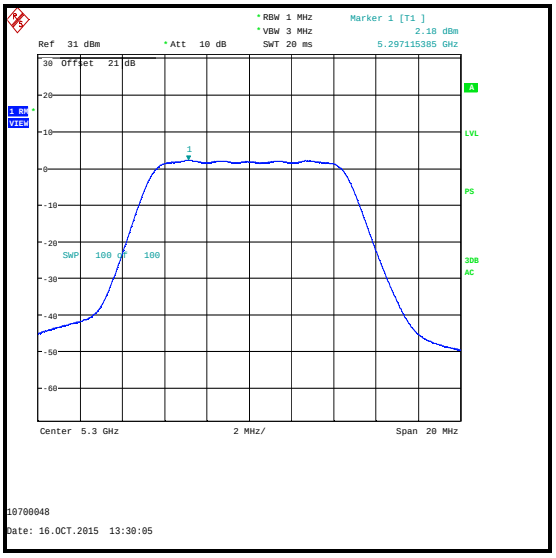
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 10 MHz Channel / 256QAM / Omnidirectional Antenna

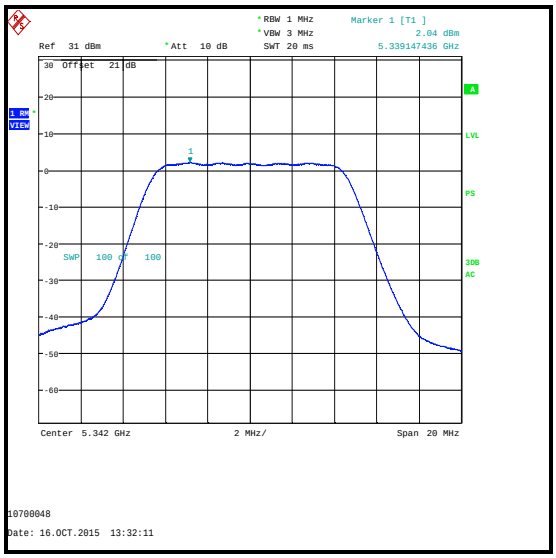
V Port



Bottom Channel



Middle Channel



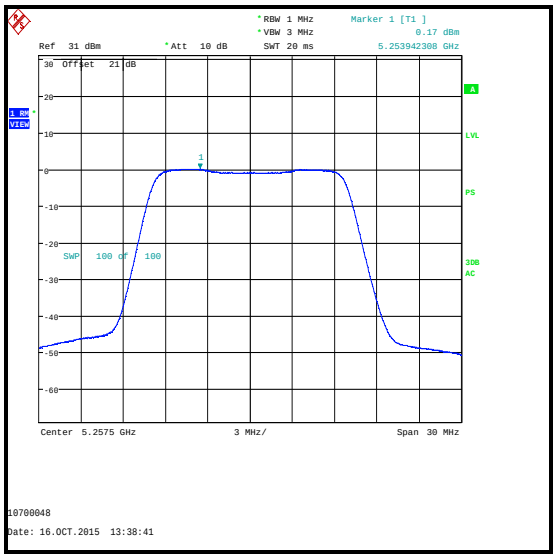
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

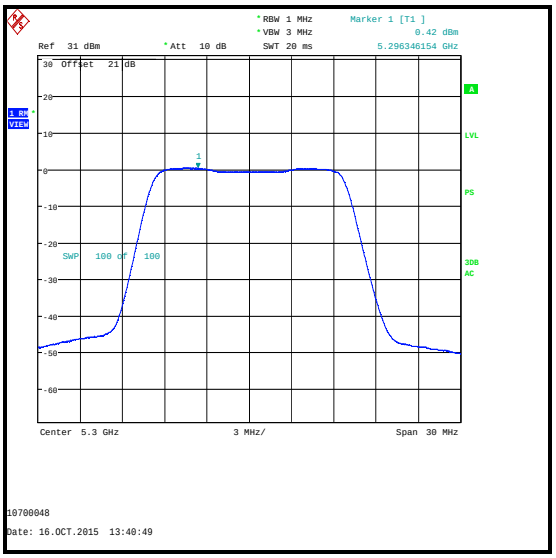
Results: 15 MHz Channel / BPSK / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	0.2	2.1	4.3	4.9	0.6	Complied
Middle	0.4	2.1	4.3	4.9	0.6	Complied
Top	0.2	1.9	4.1	4.9	0.8	Complied

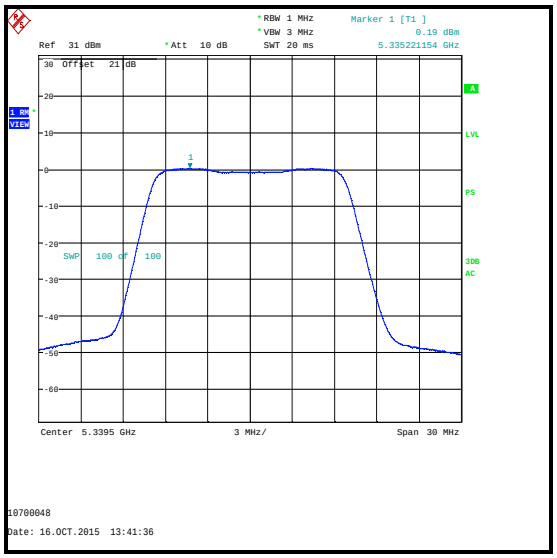
H Port



Bottom Channel



Middle Channel

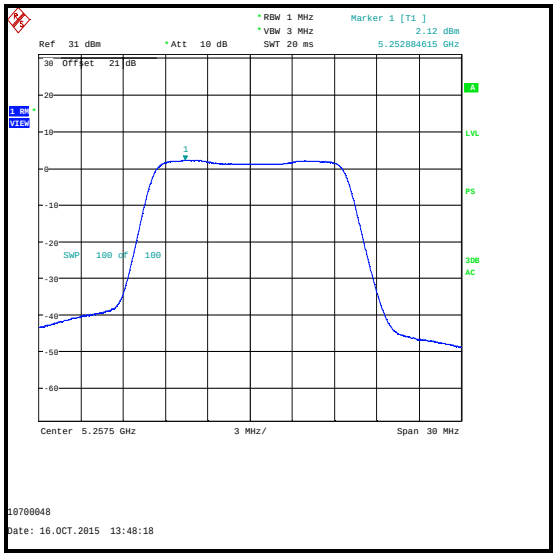


Top Channel

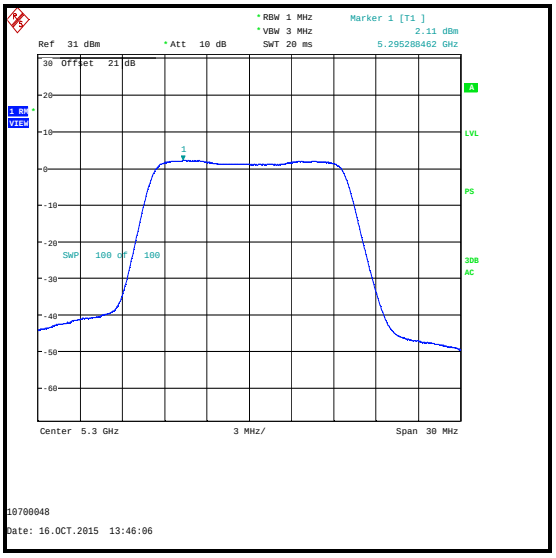
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 15 MHz Channel / BPSK / Omnidirectional Antenna

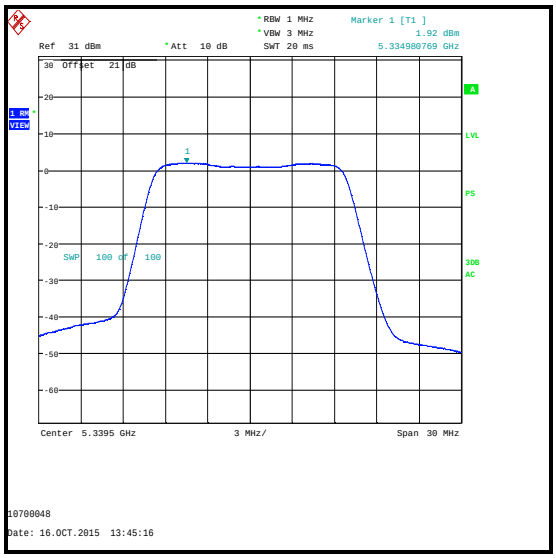
V Port



Bottom Channel



Middle Channel



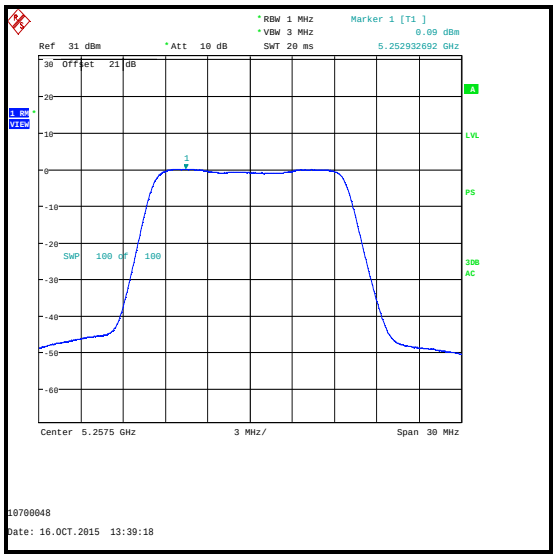
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

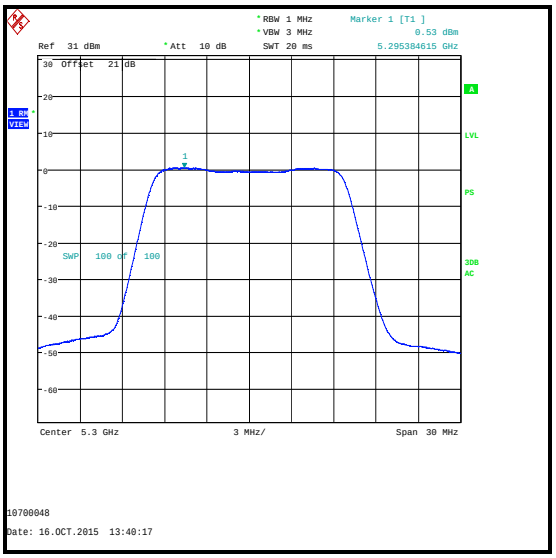
Results: 15 MHz Channel / 256QAM / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	0.1	2.2	4.3	4.9	0.6	Complied
Middle	0.5	2.2	4.4	4.9	0.5	Complied
Top	0.3	2.0	4.2	4.9	0.7	Complied

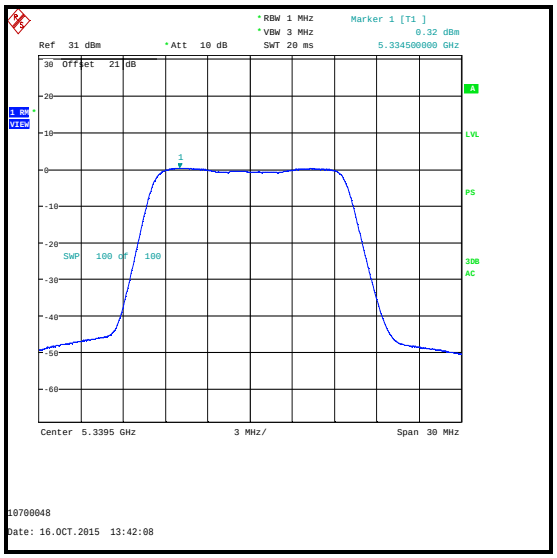
H Port



Bottom Channel



Middle Channel

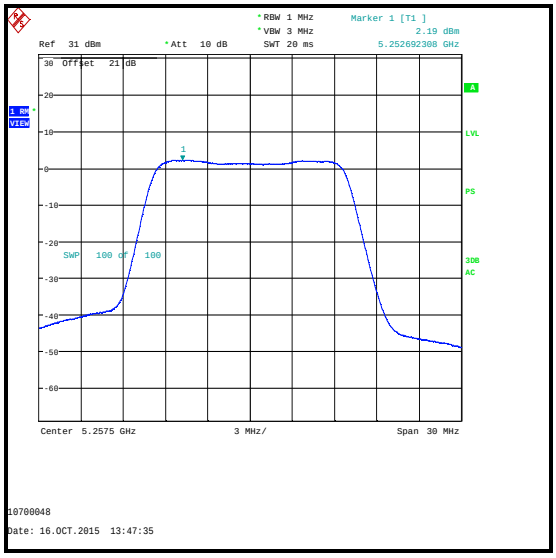


Top Channel

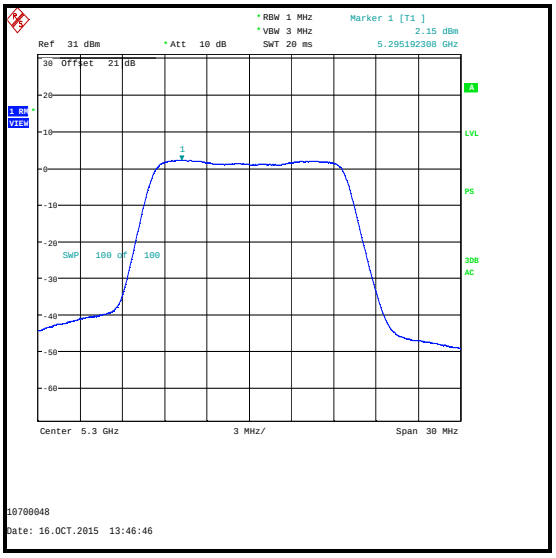
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 15 MHz Channel / 256QAM / Omnidirectional Antenna

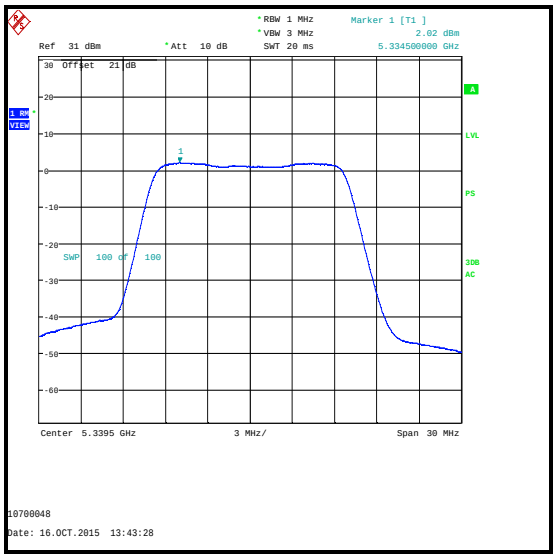
V Port



Bottom Channel



Middle Channel



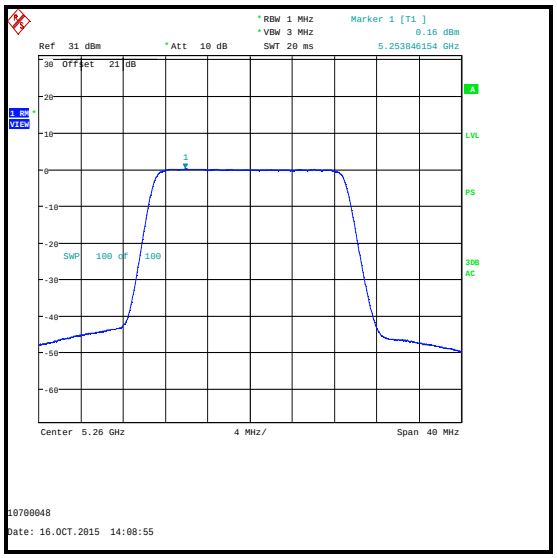
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

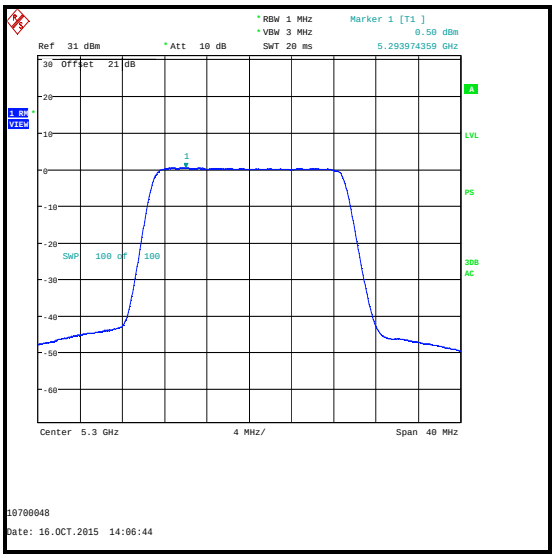
Results: 20 MHz Channel / BPSK / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	0.2	2.1	4.3	4.9	0.6	Complied
Middle	0.5	2.1	4.4	4.9	0.5	Complied
Top	-3.2	-1.5	0.7	4.9	4.2	Complied

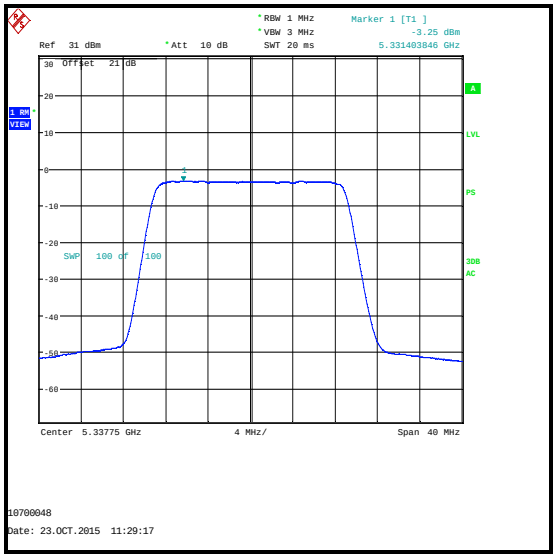
H Port



Bottom Channel



Middle Channel

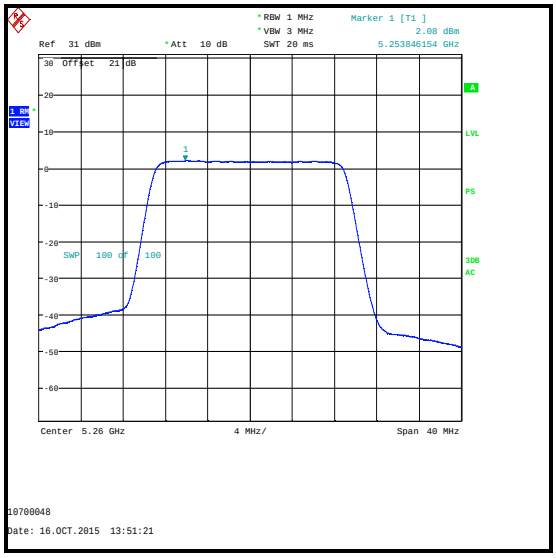


Top Channel

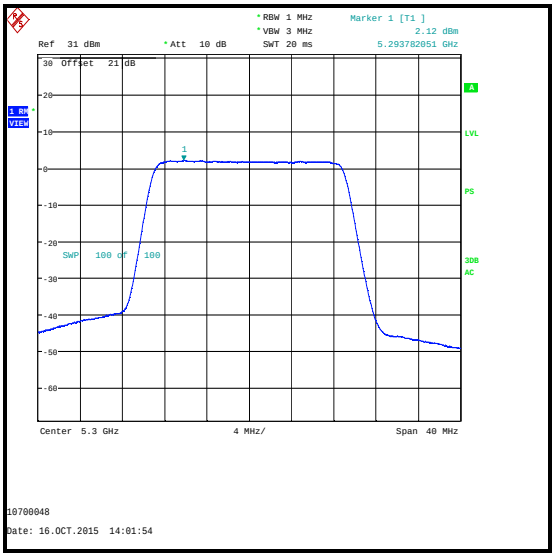
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 20 MHz Channel / BPSK / Omnidirectional Antenna

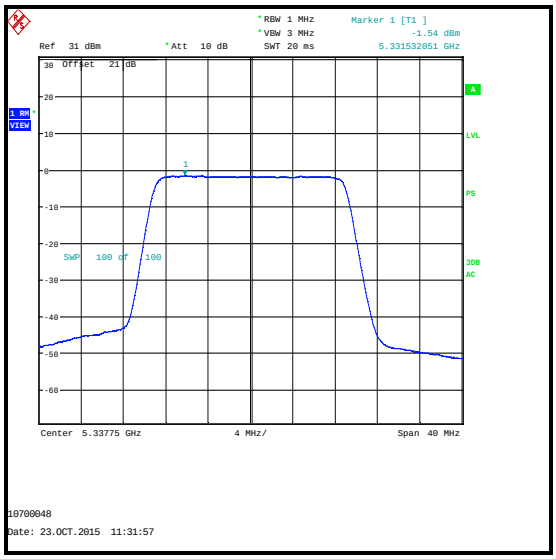
V Port



Bottom Channel



Middle Channel



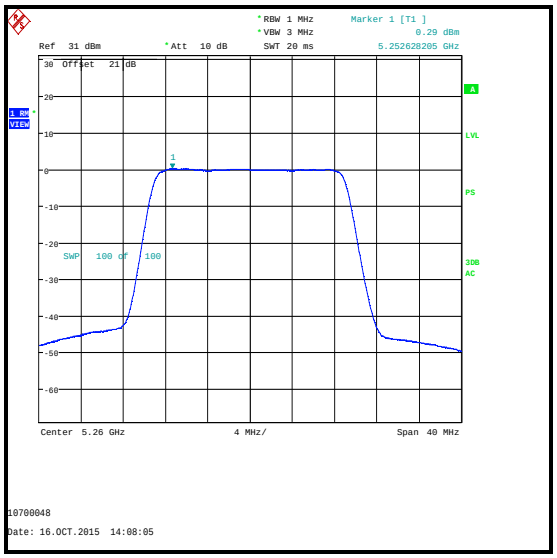
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

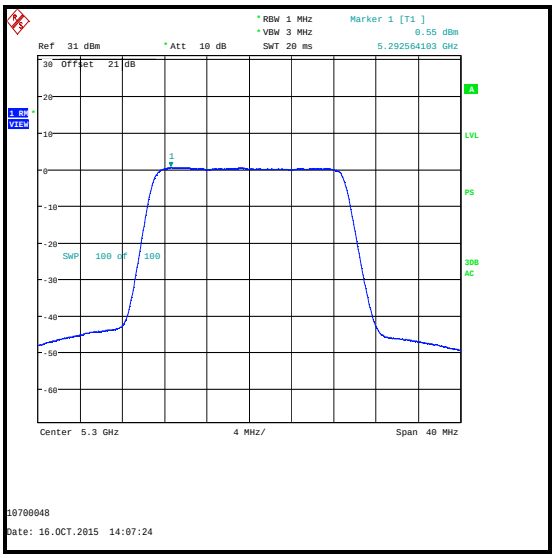
Results: 20 MHz Channel / 256QAM / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	0.3	2.2	4.4	4.9	0.5	Complied
Middle	0.6	2.2	4.5	4.9	0.4	Complied
Top	-3.1	-1.5	0.8	4.9	4.1	Complied

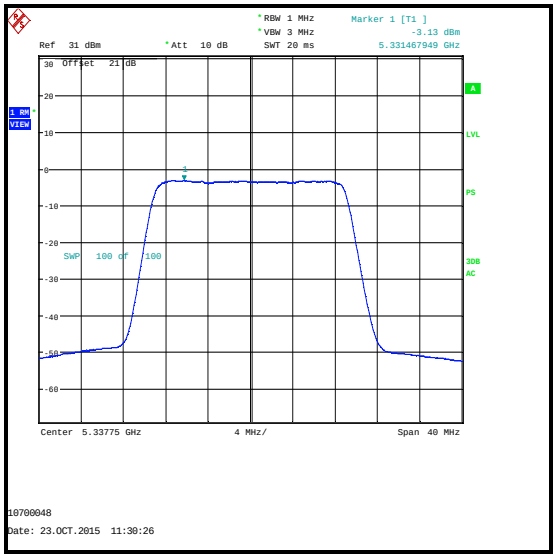
H Port



Bottom Channel



Middle Channel

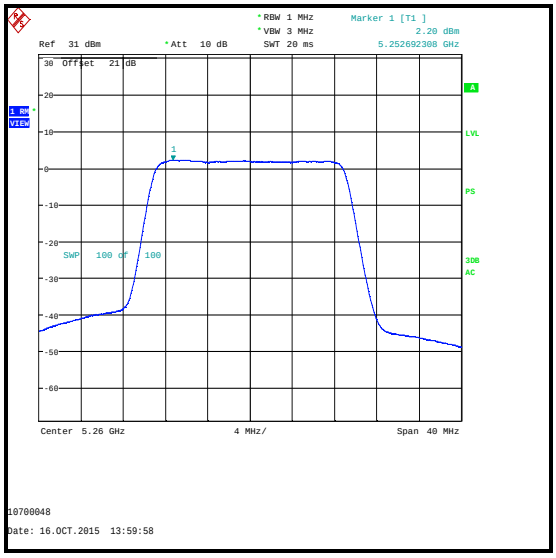


Top Channel

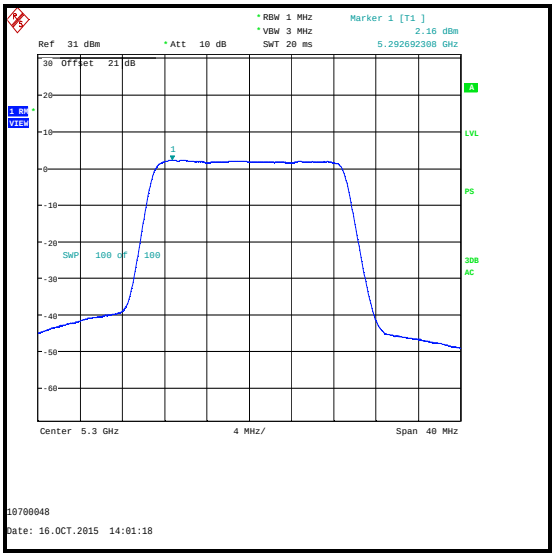
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 20 MHz Channel / 256QAM / Omnidirectional Antenna

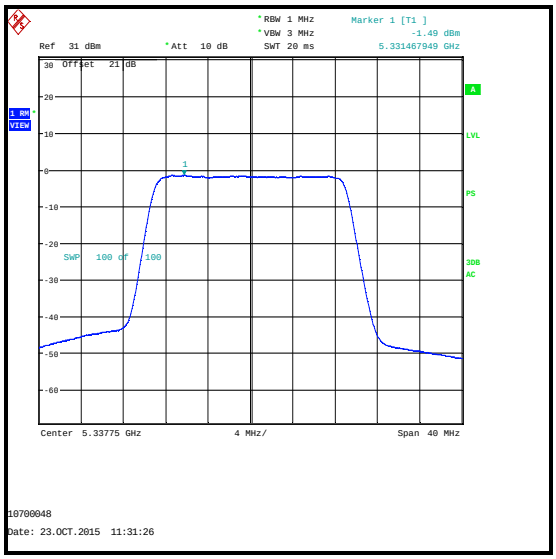
V Port



Bottom Channel



Middle Channel



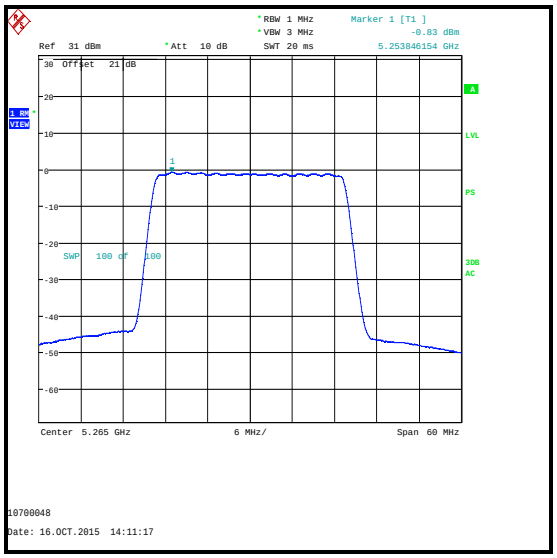
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

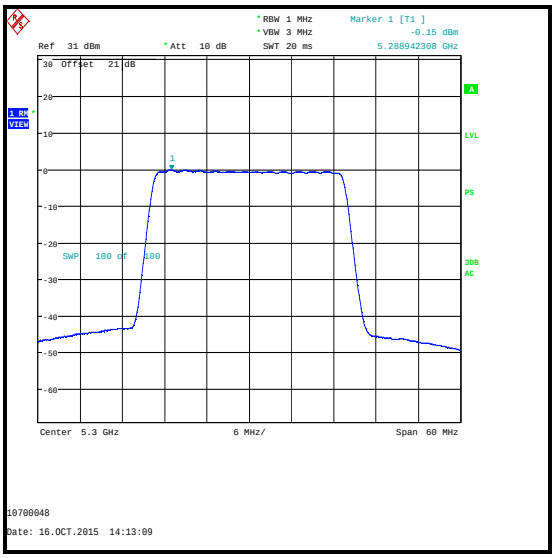
Results: 30 MHz Channel / BPSK / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-0.8	1.5	3.5	4.9	1.4	Complied
Middle	-0.1	1.5	3.8	4.9	1.1	Complied
Top	-3.4	-1.6	0.6	4.9	4.3	Complied

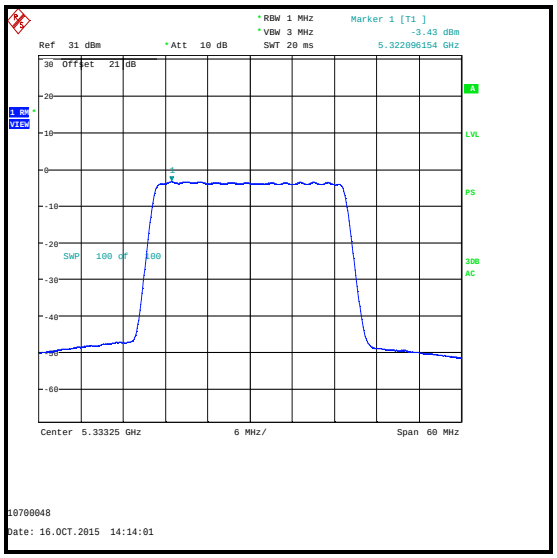
H Port



Bottom Channel



Middle Channel

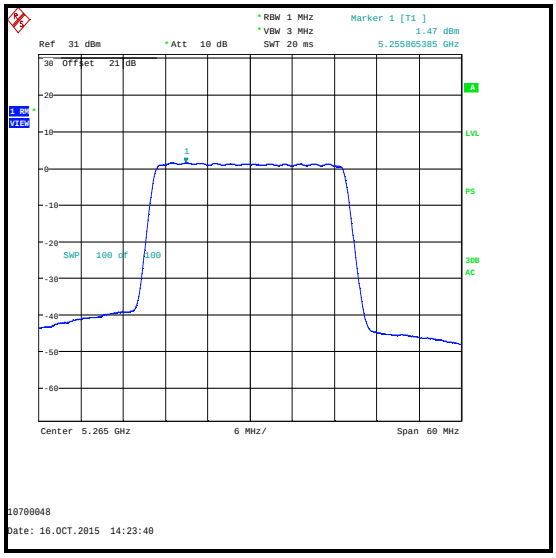


Top Channel

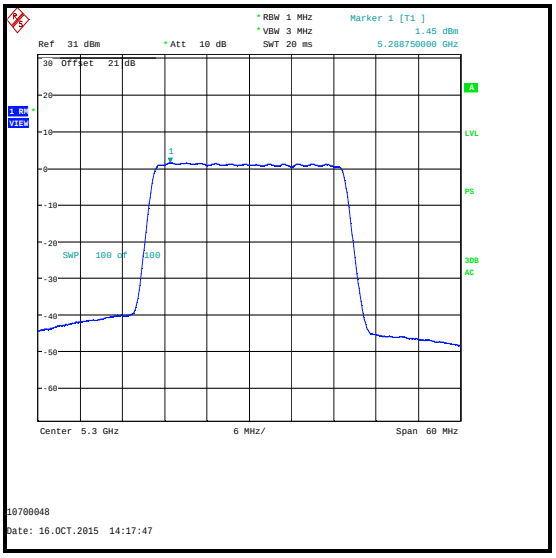
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 30 MHz Channel / BPSK / Omnidirectional Antenna

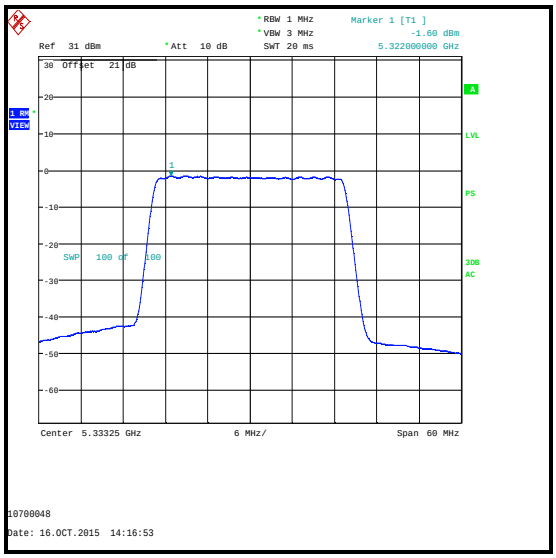
V Port



Bottom Channel



Middle Channel



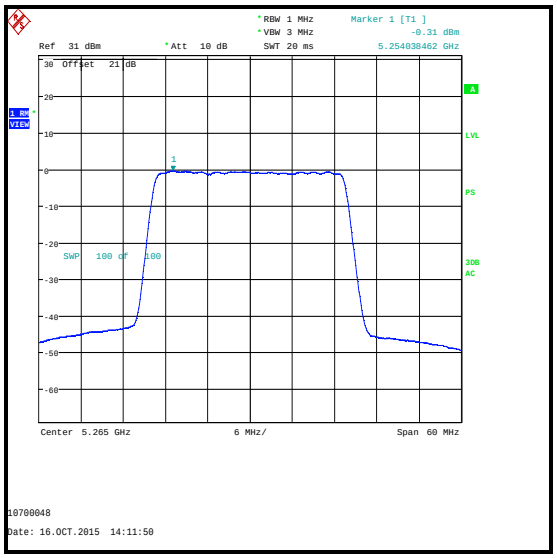
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) continued)

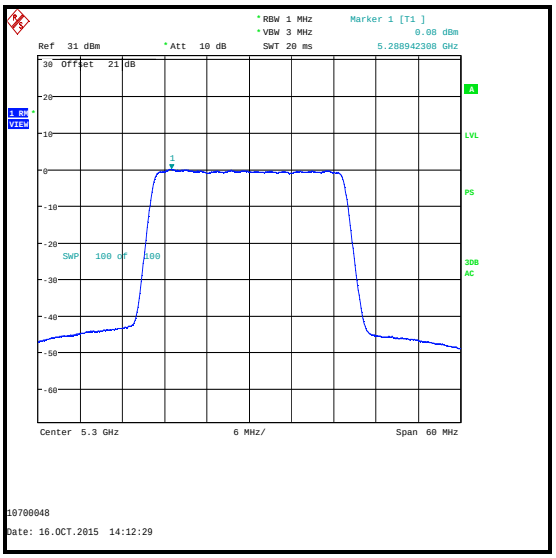
Results: 30 MHz Channel / 256QAM / Omnidirectional Antenna

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-0.3	1.6	3.8	4.9	1.1	Complied
Middle	0.1	1.6	3.9	4.9	1.0	Complied
Top	-3.3	-1.4	0.8	4.9	4.1	Complied

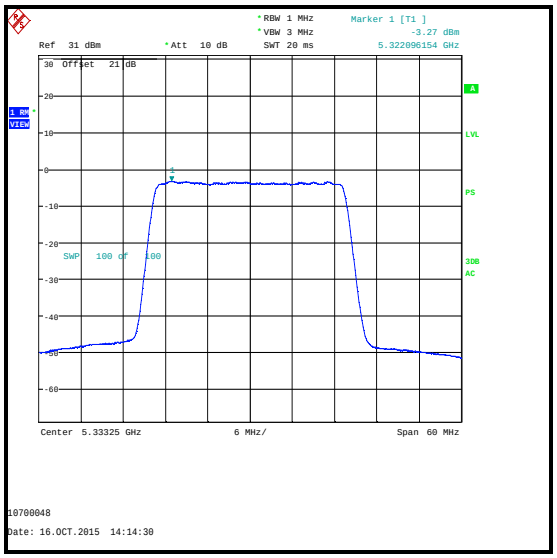
H Port



Bottom Channel



Middle Channel

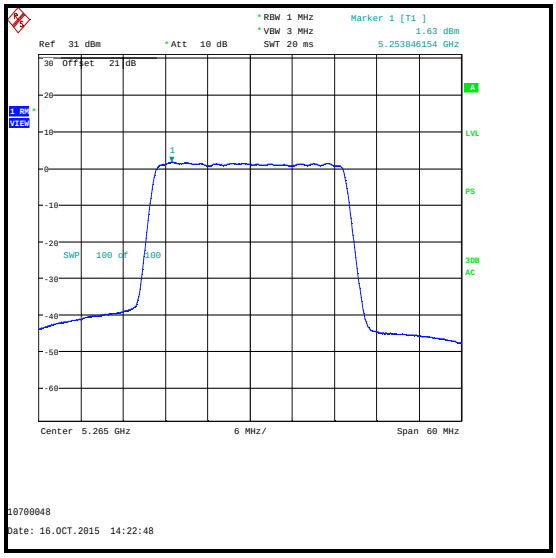


Top Channel

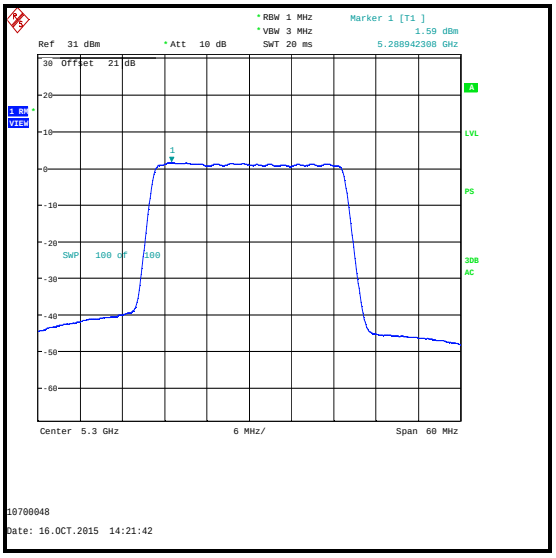
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 30 MHz Channel / 256QAM / Omnidirectional Antenna

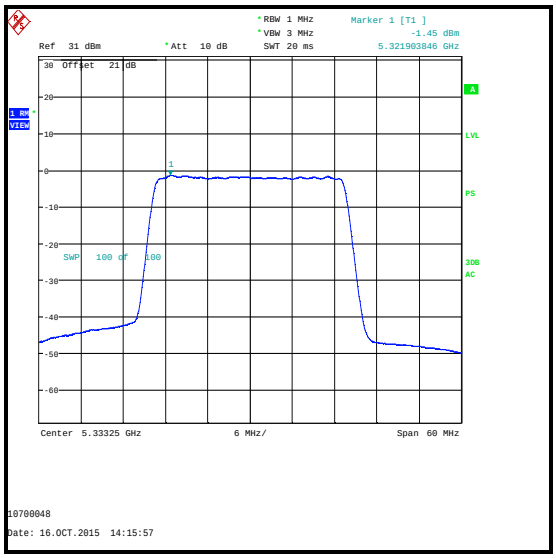
V Port



Bottom Channel



Middle Channel



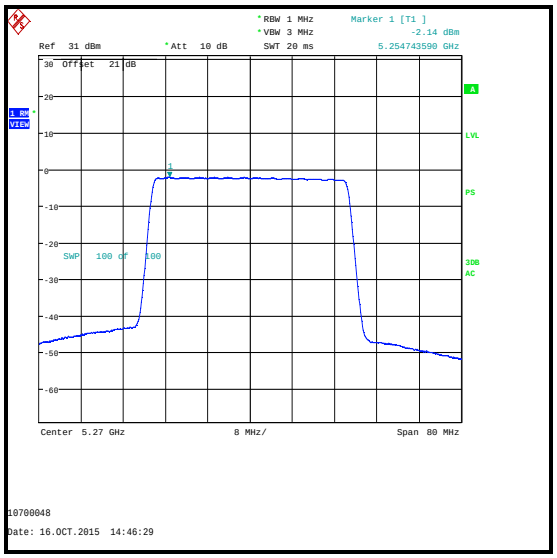
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

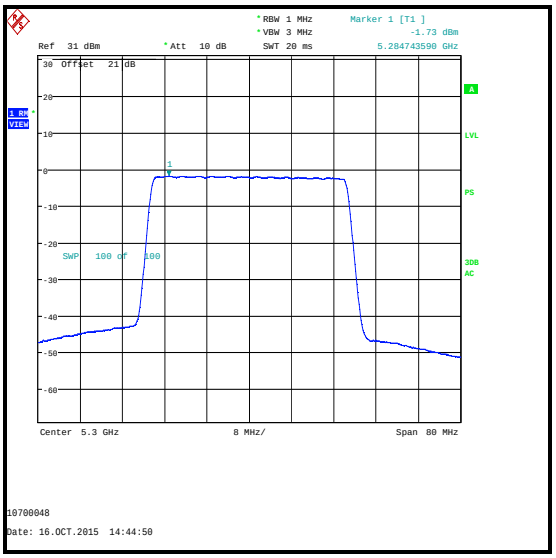
Results: Omnidirectional Antenna / 40 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.1	0.0	2.1	4.9	2.8	Complied
Middle	-1.7	0.1	2.3	4.9	2.6	Complied
Top	-5.0	-3.0	-0.9	4.9	5.8	Complied

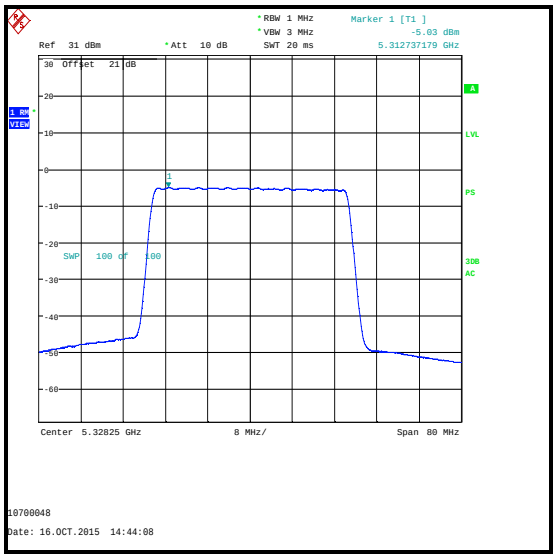
H Port



Bottom Channel



Middle Channel

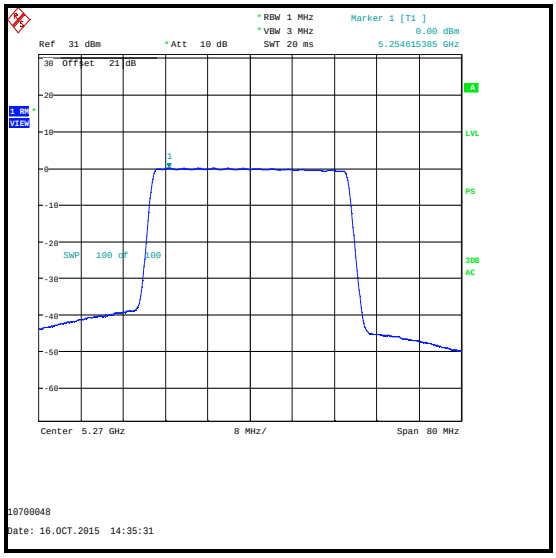


Top Channel

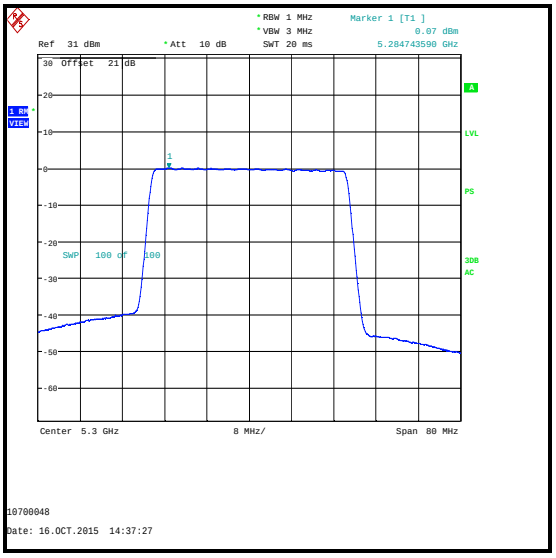
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: Omnidirectional Antenna / 40 MHz Channel / BPSK

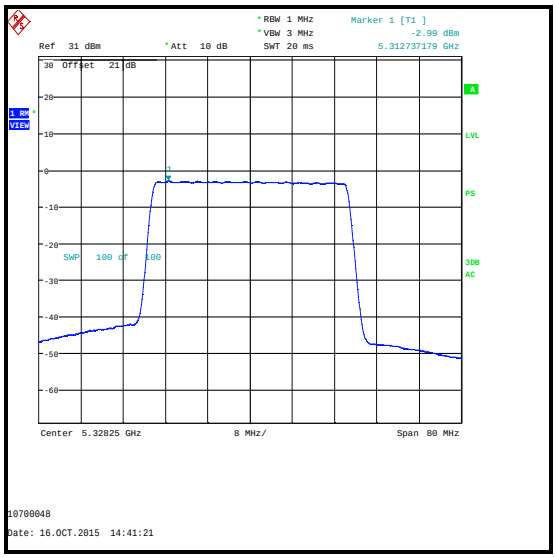
V Port



Bottom Channel



Middle Channel



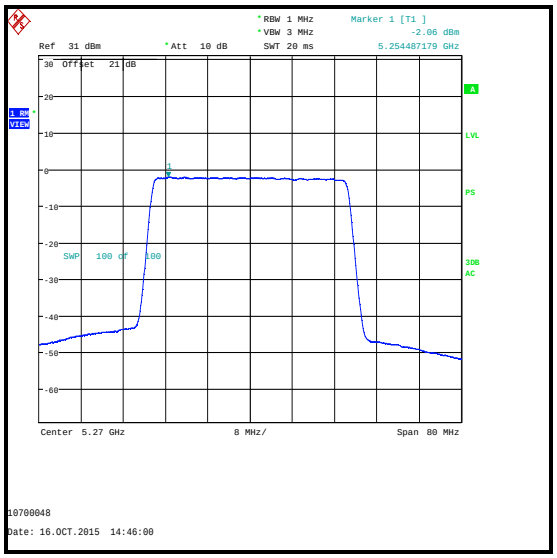
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

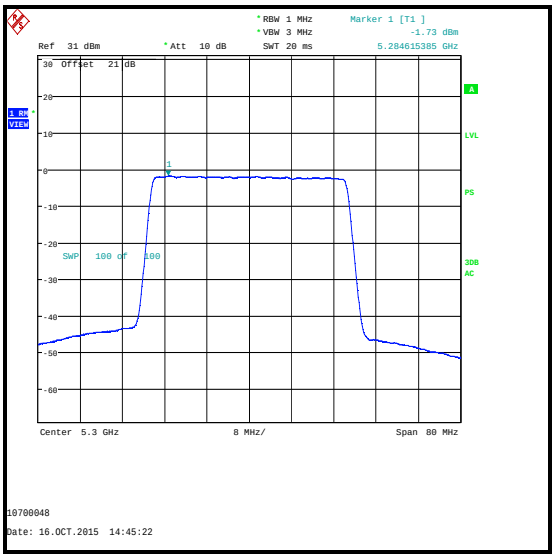
Results: Omnidirectional Antenna / 40 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.1	0.1	2.1	4.9	2.8	Complied
Middle	-1.7	0.1	2.3	4.9	2.6	Complied
Top	-5.0	-2.9	-0.8	4.9	5.7	Complied

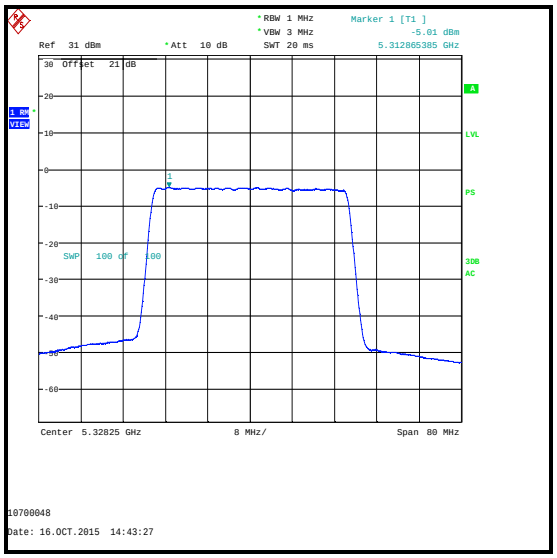
H Port



Bottom Channel



Middle Channel

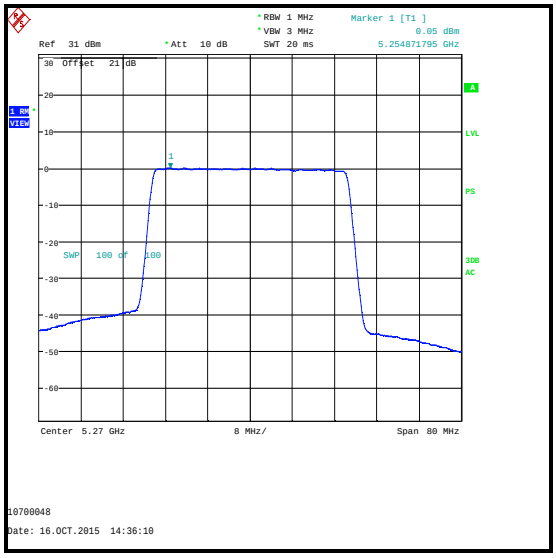


Top Channel

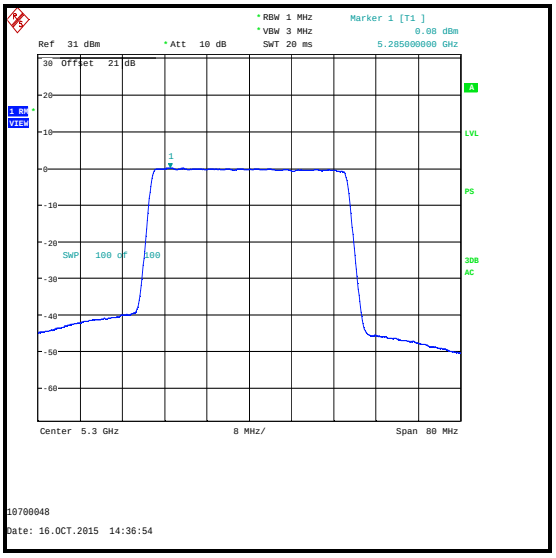
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: Omnidirectional Antenna / 40 MHz Channel / 256QAM

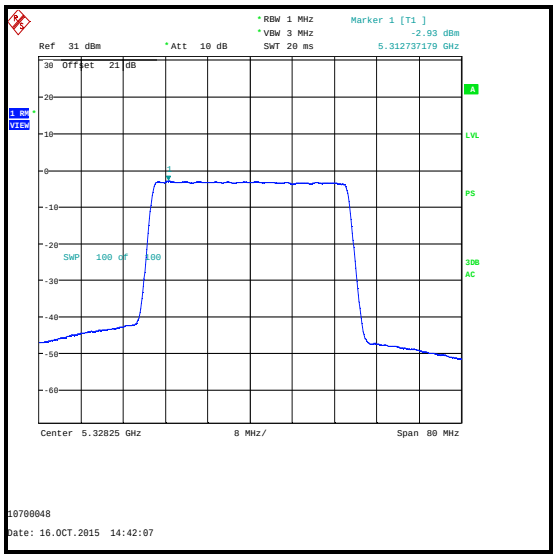
V Port



Bottom Channel



Middle Channel



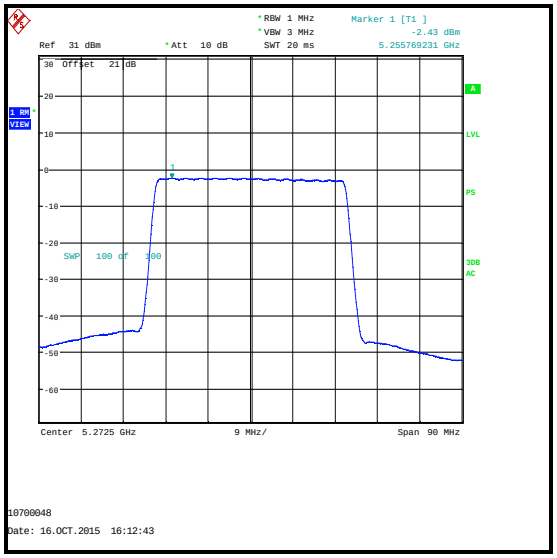
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

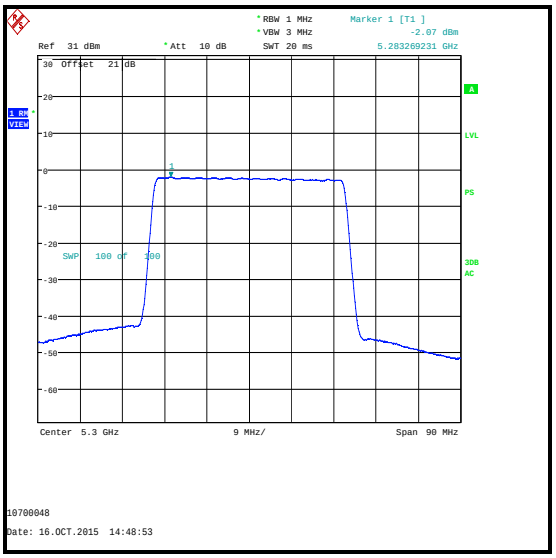
Results: Omnidirectional Antenna / 45 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.4	-0.4	1.7	4.9	3.2	Complied
Middle	-2.1	-0.3	1.9	4.9	3.0	Complied
Top	-5.3	-3.3	-1.2	4.9	6.1	Complied

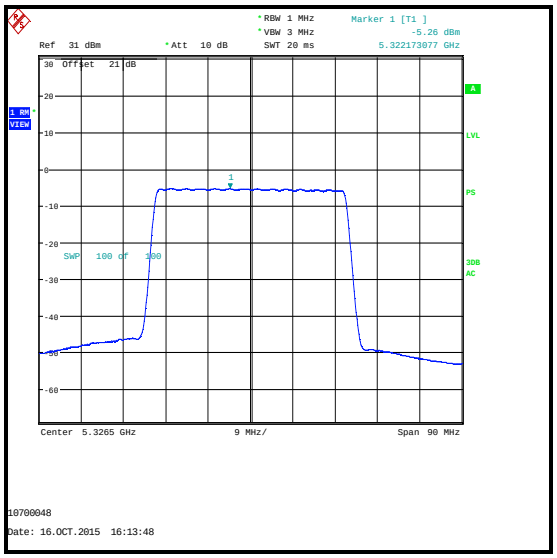
H Port



Bottom Channel



Middle Channel

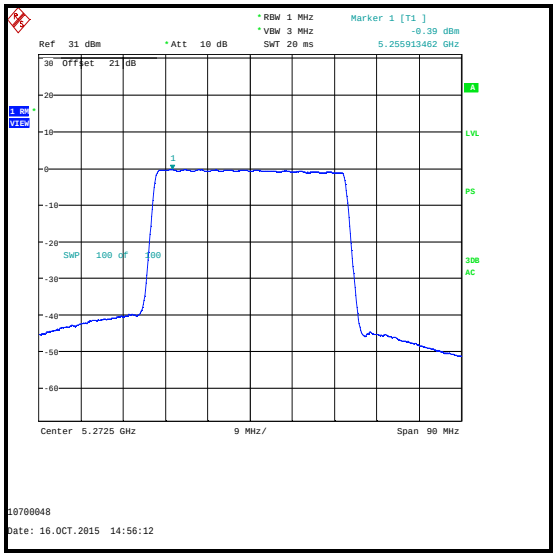


Top Channel

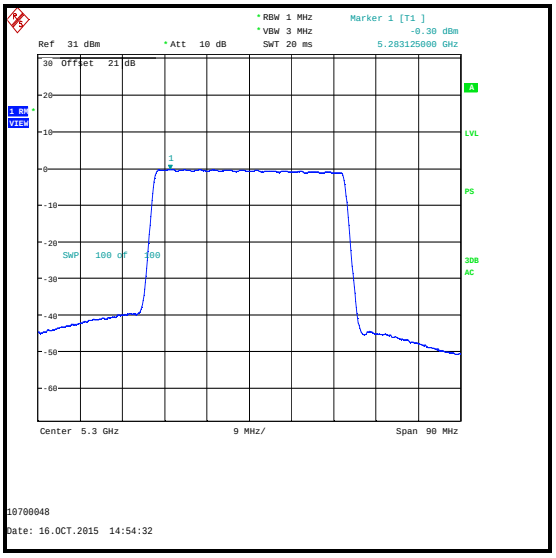
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: Omnidirectional Antenna / 45 MHz Channel / BPSK

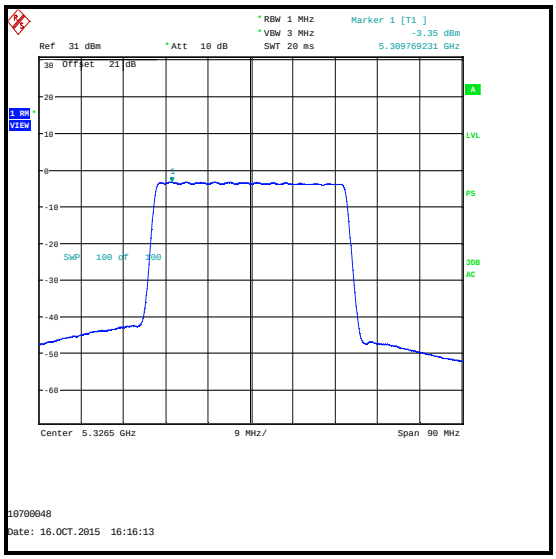
V Port



Bottom Channel



Middle Channel



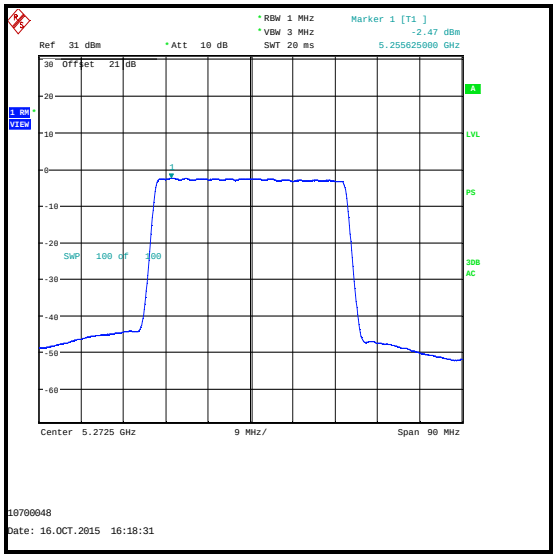
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

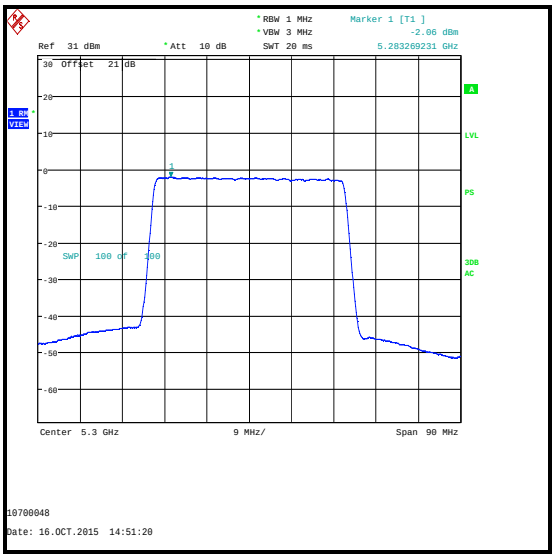
Results: Omnidirectional Antenna / 45 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.5	-0.2	1.8	4.9	3.1	Complied
Middle	-2.1	-0.3	1.9	4.9	3.0	Complied
Top	-5.4	-3.3	-1.2	4.9	6.1	Complied

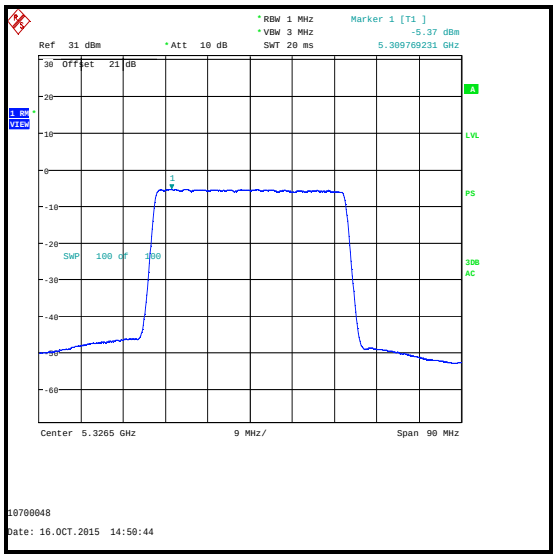
H Port



Bottom Channel



Middle Channel

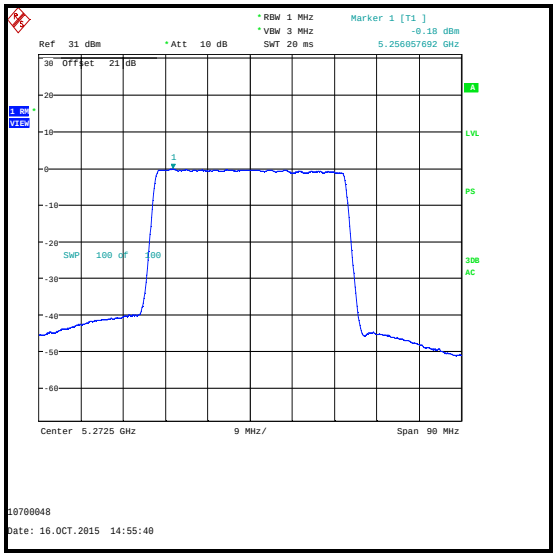


Top Channel

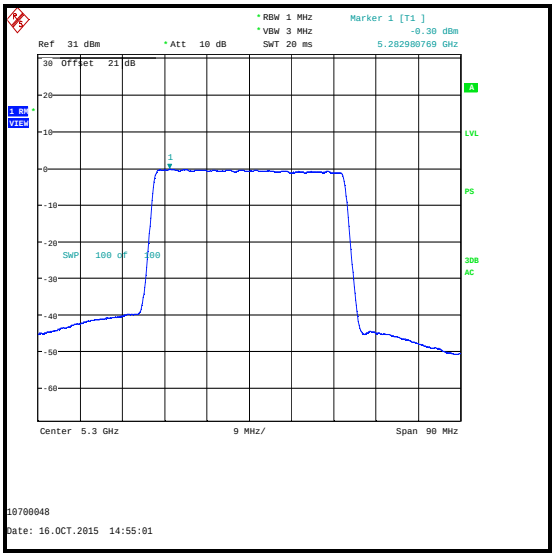
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: Omnidirectional Antenna / 45 MHz Channel / 256QAM

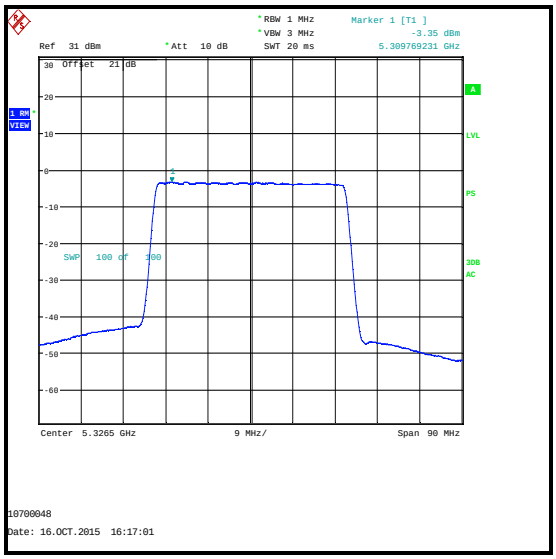
V Port



Bottom Channel



Middle Channel



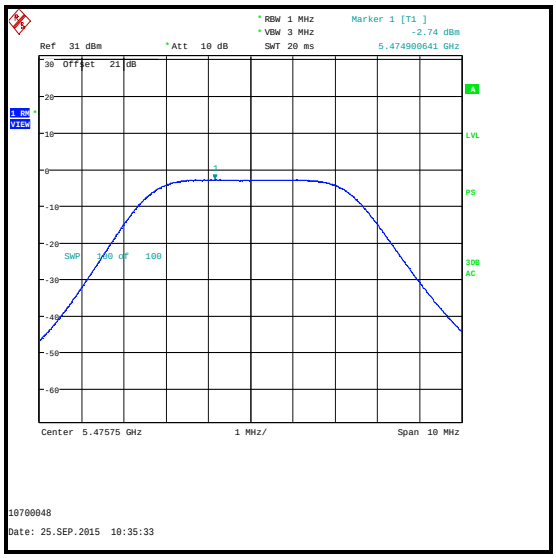
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

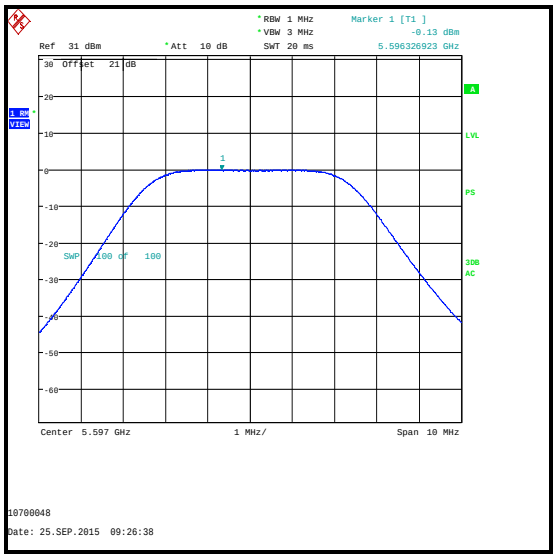
Results: Omnidirectional Antenna / 5 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.7	-0.8	1.4	4.9	3.5	Complied
Middle	-0.1	1.3	3.7	4.9	1.2	Complied
Top	-3.4	-0.5	1.3	4.9	3.6	Complied

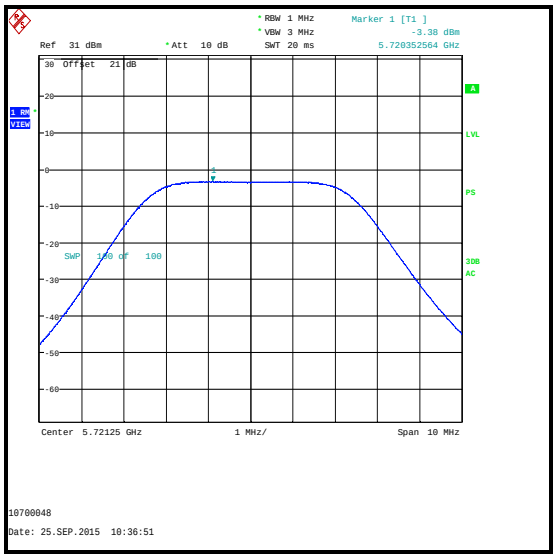
H Port



Bottom Channel



Middle Channel

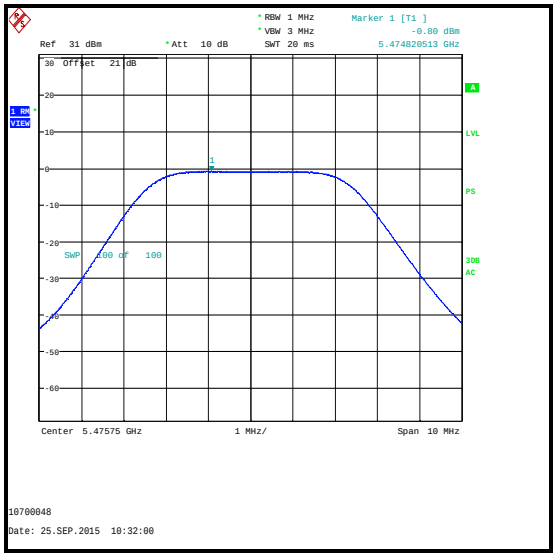


Top Channel

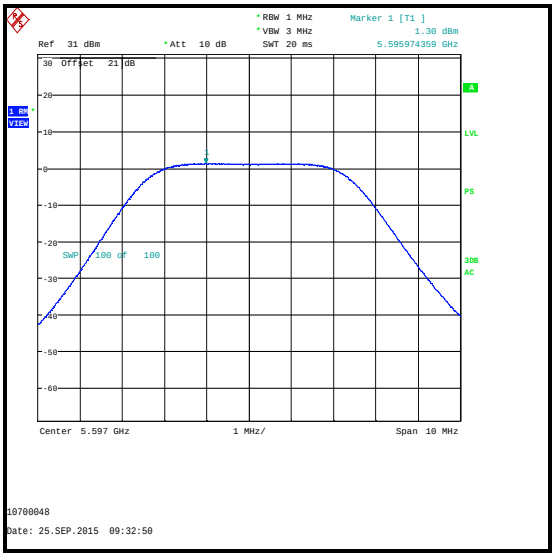
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 5 MHz Channel / BPSK

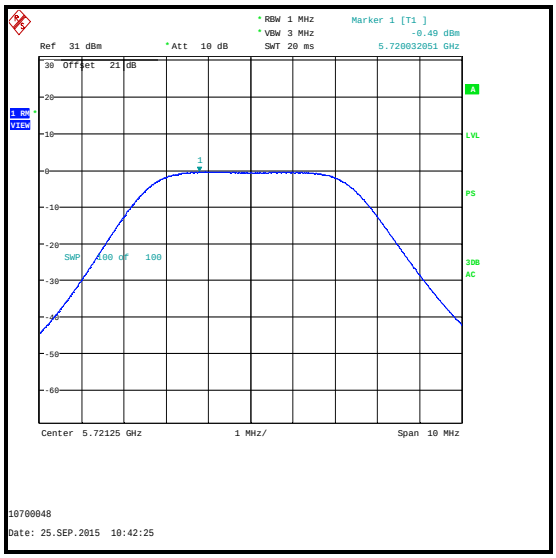
V Port



Bottom Channel



Middle Channel



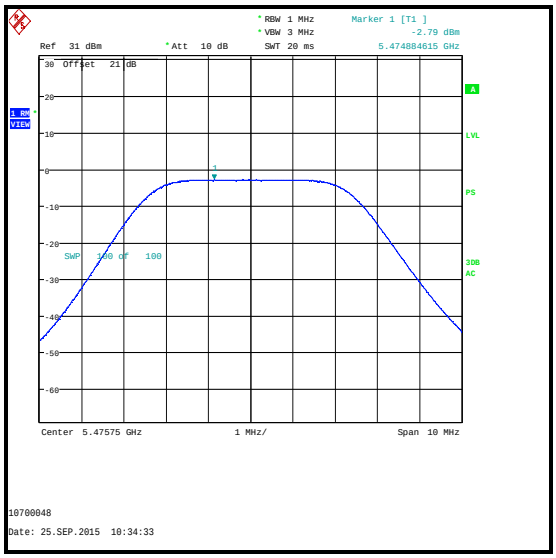
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

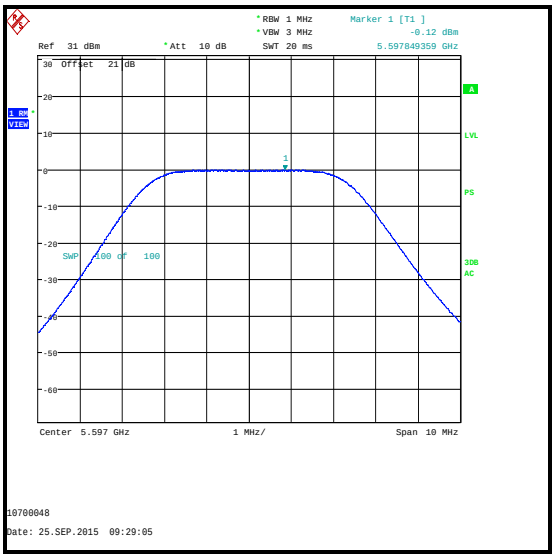
Results: Omnidirectional Antenna / 5 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.8	-0.8	1.3	4.9	3.6	Complied
Middle	-0.1	1.2	3.6	4.9	1.3	Complied
Top	-3.4	-0.6	1.2	4.9	3.7	Complied

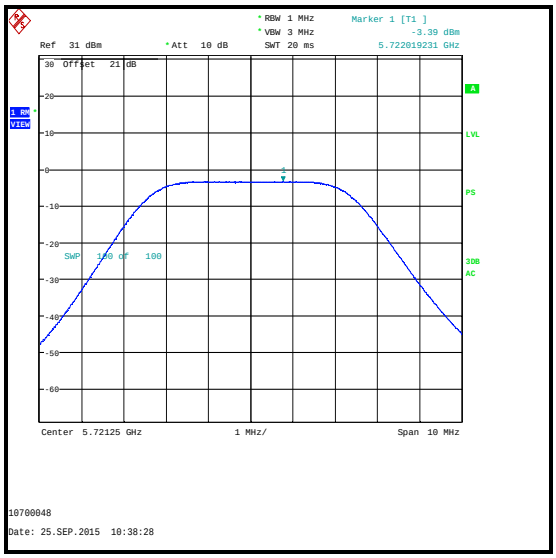
H Port



Bottom Channel



Middle Channel

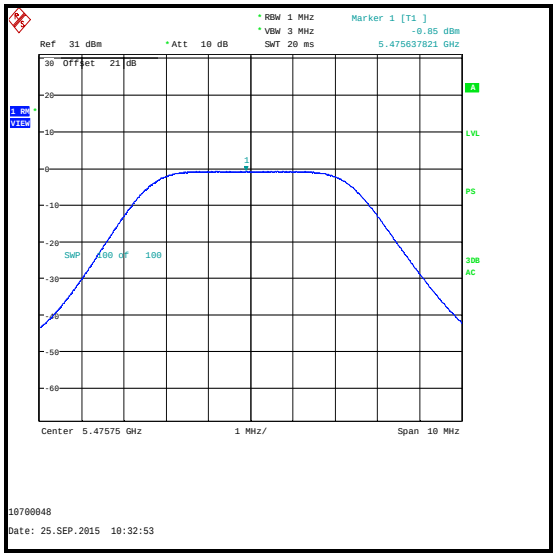


Top Channel

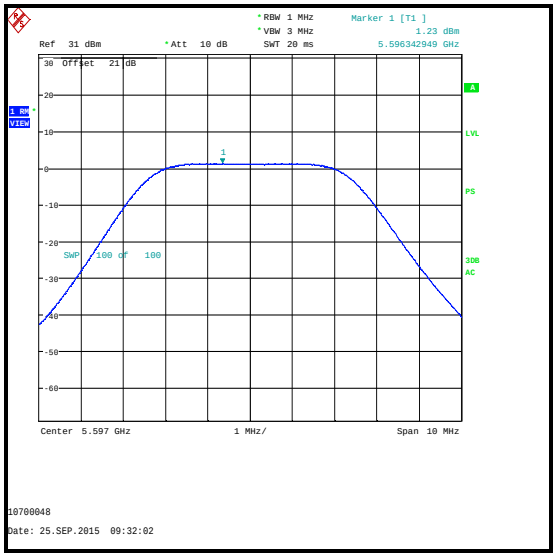
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 5 MHz Channel / 256QAM

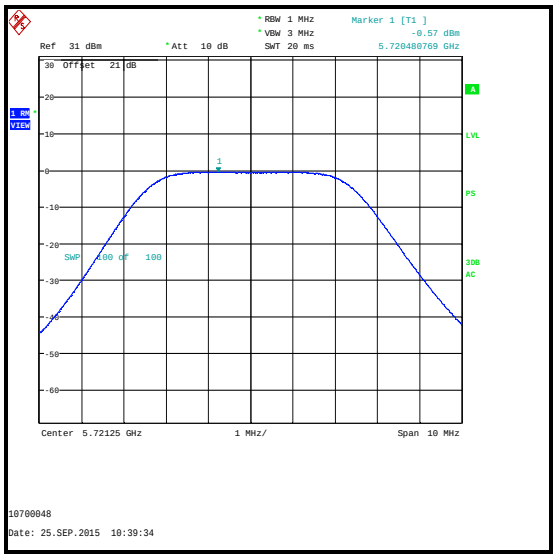
V Port



Bottom Channel



Middle Channel



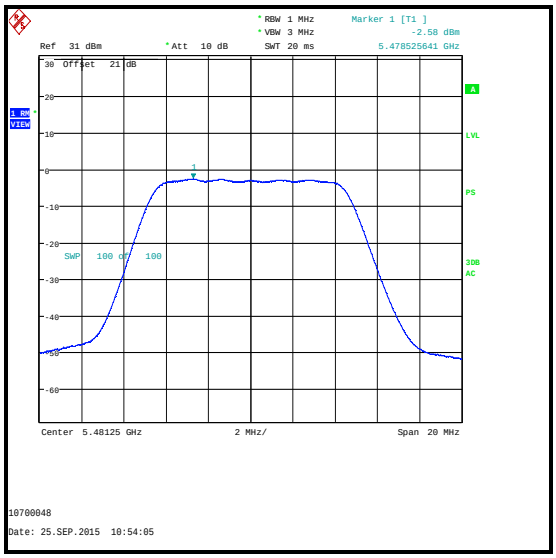
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

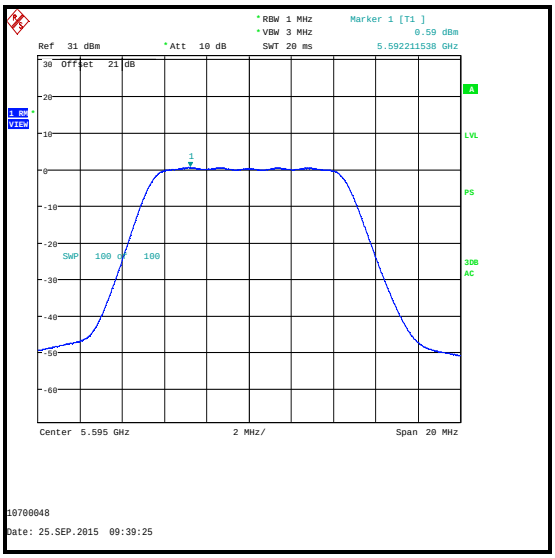
Results: Omnidirectional Antenna / 10 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.6	0.0	1.9	4.9	3.0	Complied
Middle	0.6	1.7	4.2	4.9	0.7	Complied
Top	-2.8	-0.1	1.8	4.9	3.1	Complied

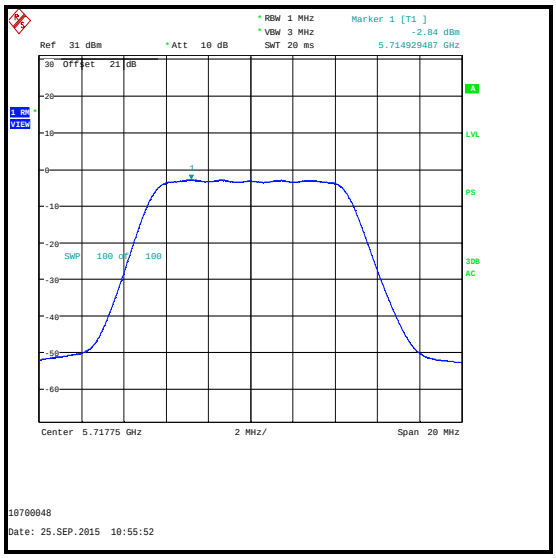
H Port



Bottom Channel



Middle Channel

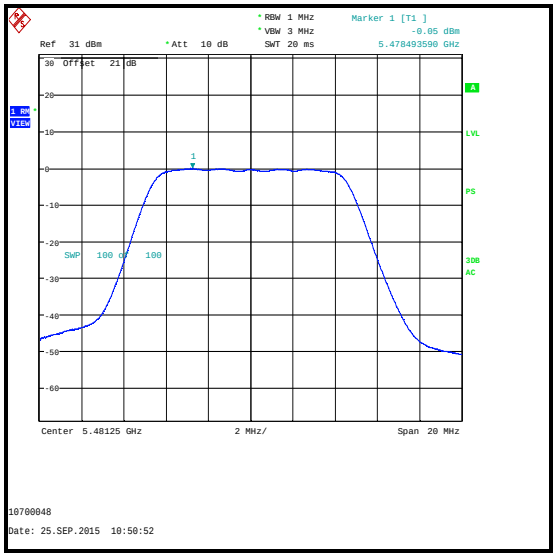


Top Channel

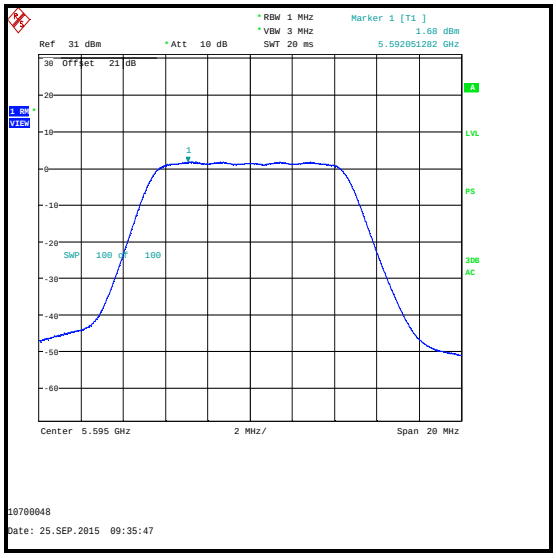
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 10 MHz Channel / BPSK

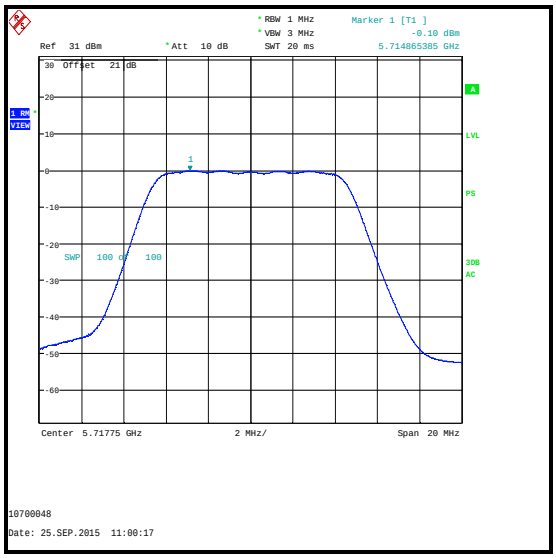
V Port



Bottom Channel



Middle Channel



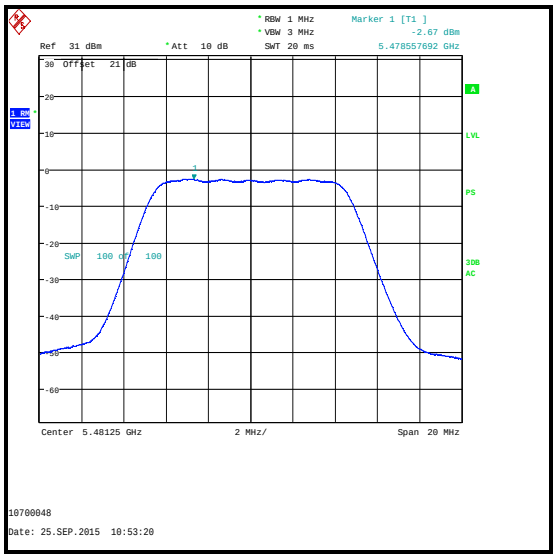
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

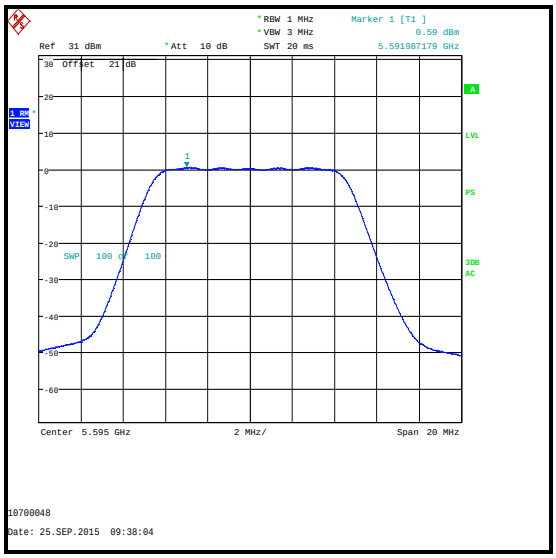
Results: Omnidirectional Antenna / 10 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.7	0.0	1.9	4.9	3.0	Complied
Middle	0.6	1.7	4.2	4.9	0.7	Complied
Top	-2.8	0.0	1.8	4.9	3.1	Complied

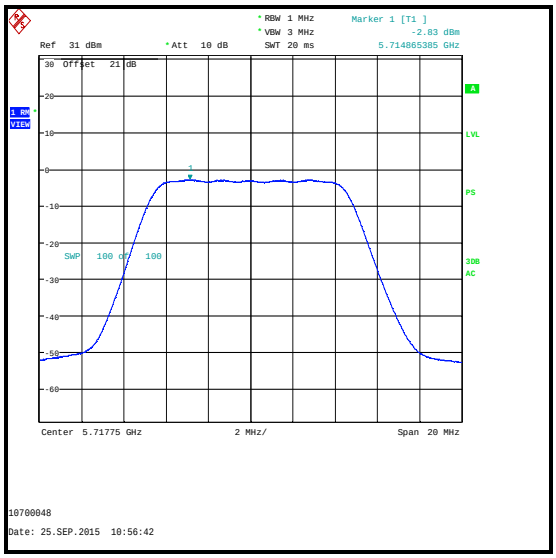
H Port



Bottom Channel



Middle Channel

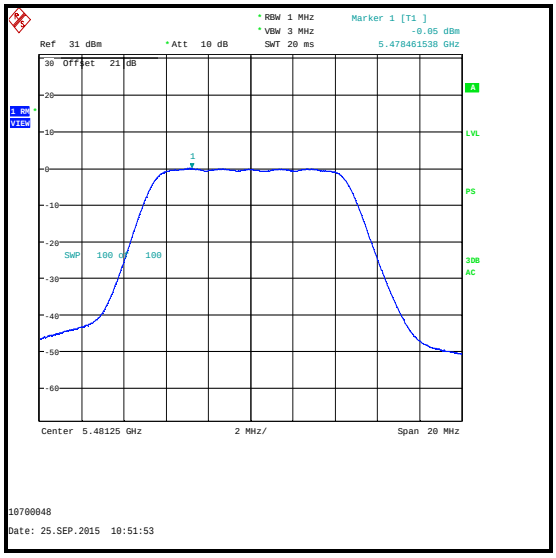


Top Channel

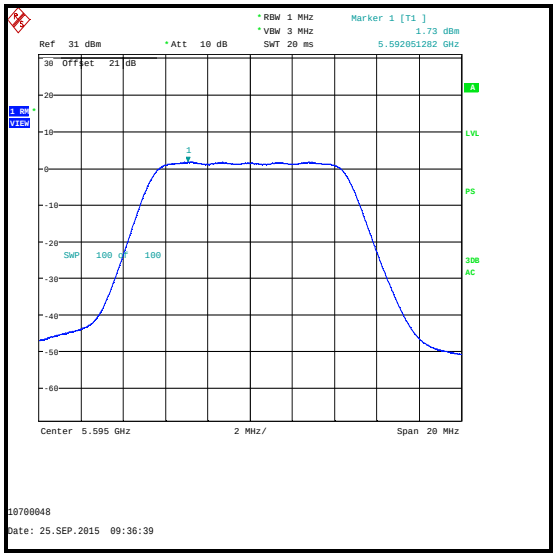
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 10 MHz Channel / 256QAM

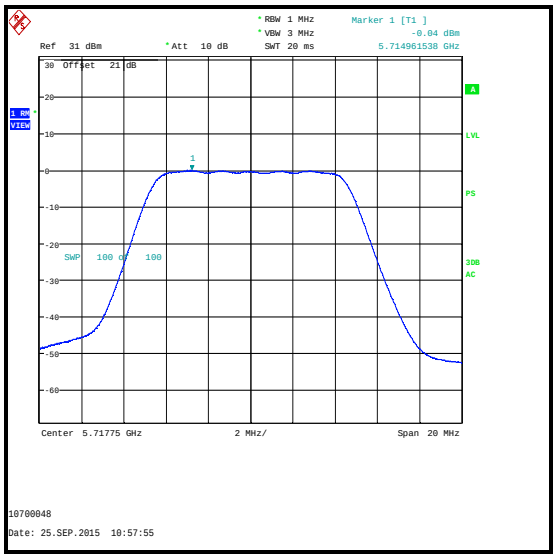
V Port



Bottom Channel



Middle Channel



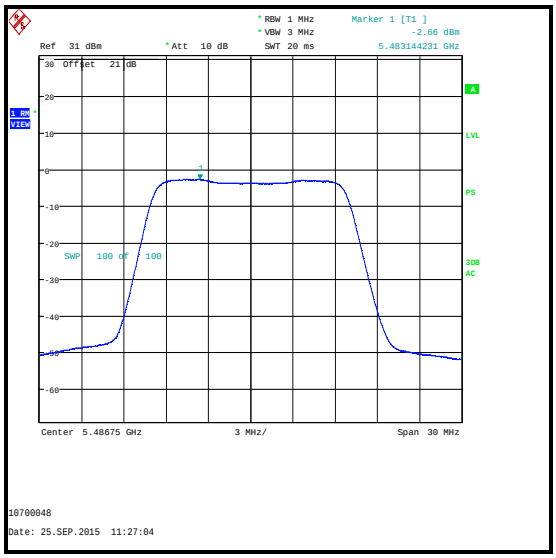
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

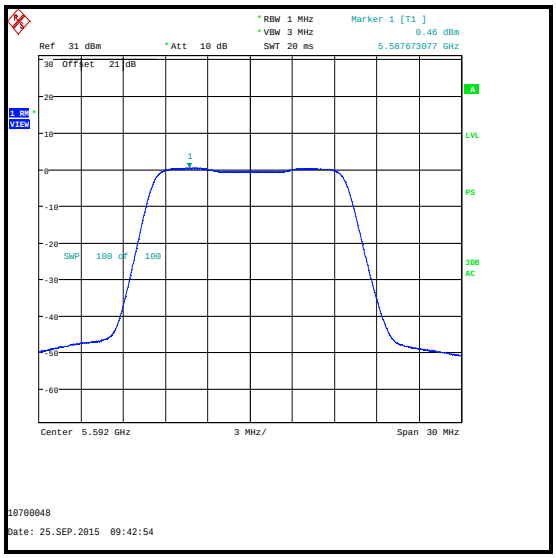
Results: Omnidirectional Antenna / 15 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.7	-0.2	1.7	4.9	3.2	Complied
Middle	0.5	1.8	4.2	4.9	0.7	Complied
Top	-2.9	-0.2	1.7	4.9	3.2	Complied

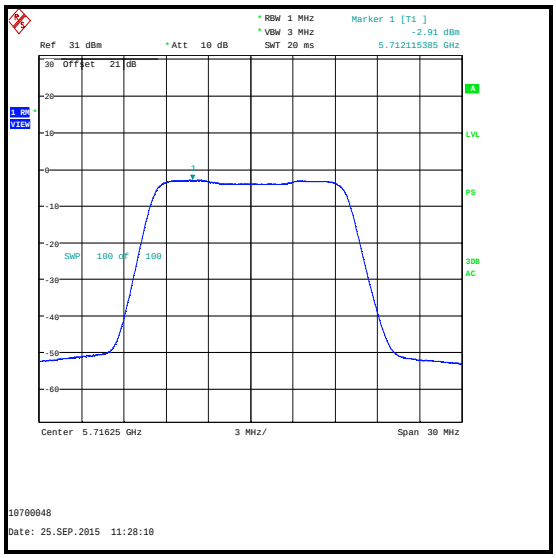
H Port



Bottom Channel



Middle Channel

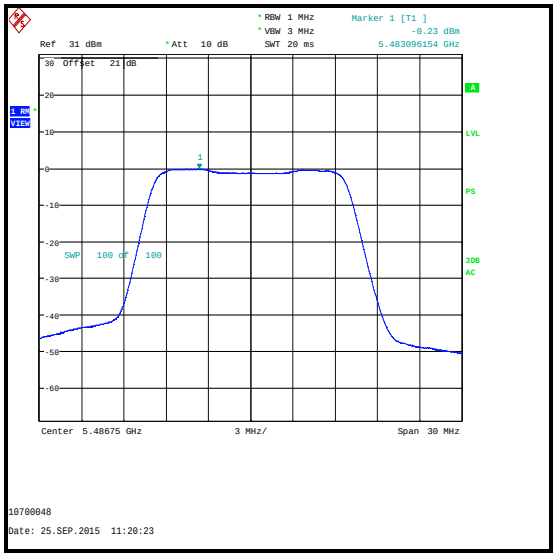


Top Channel

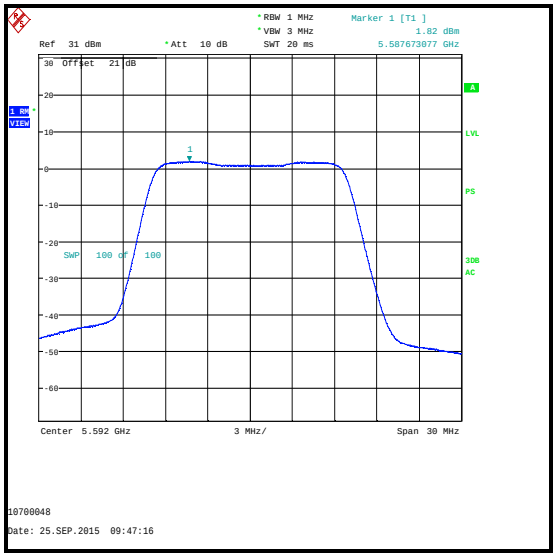
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 15 MHz Channel / BPSK

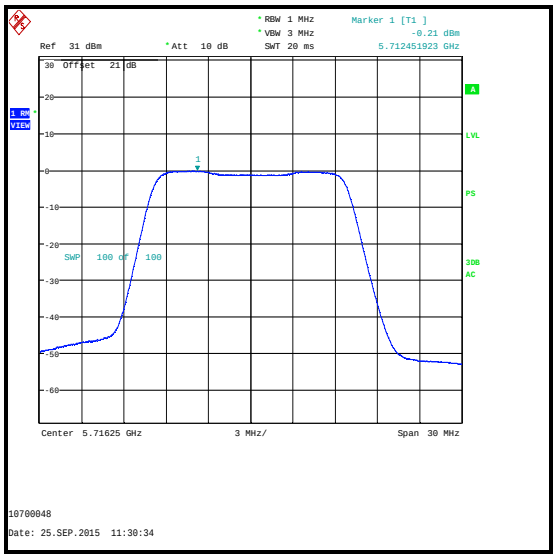
V Port



Bottom Channel



Middle Channel



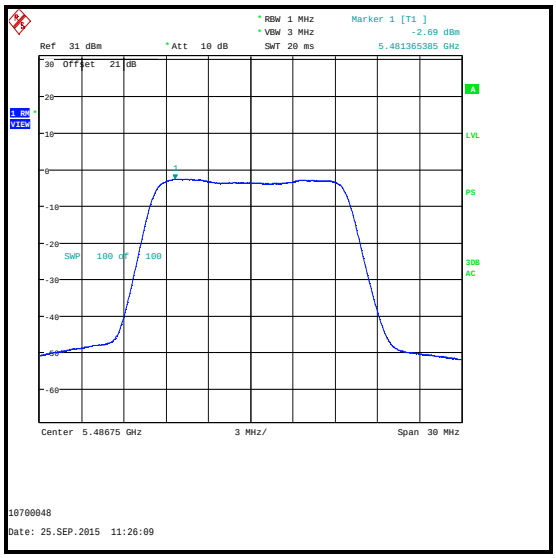
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

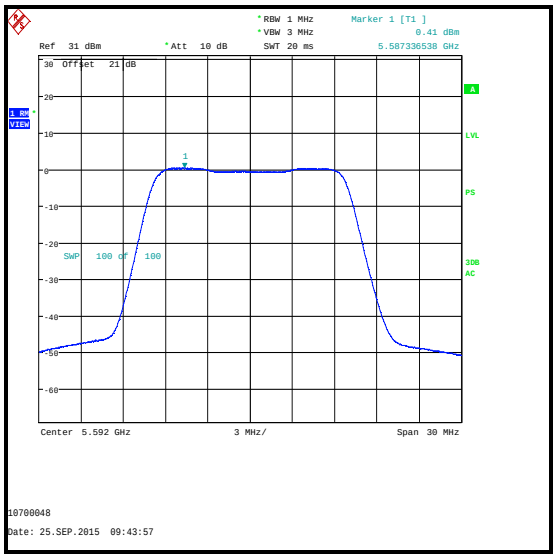
Results: Omnidirectional Antenna / 15 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.7	-0.2	1.7	4.9	3.2	Complied
Middle	0.4	1.8	4.2	4.9	0.7	Complied
Top	-3.0	-0.2	1.6	4.9	3.3	Complied

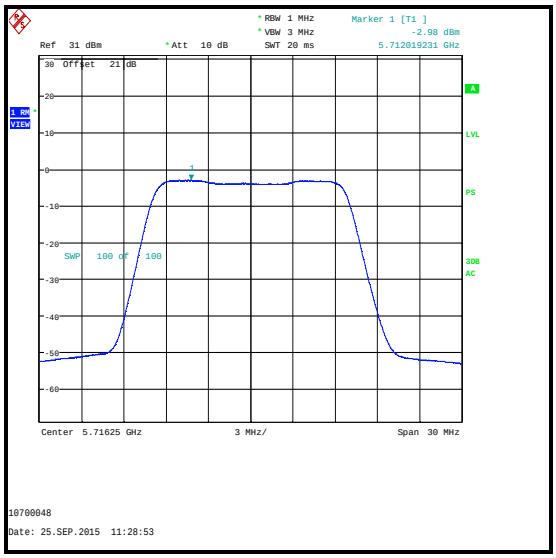
H Port



Bottom Channel



Middle Channel

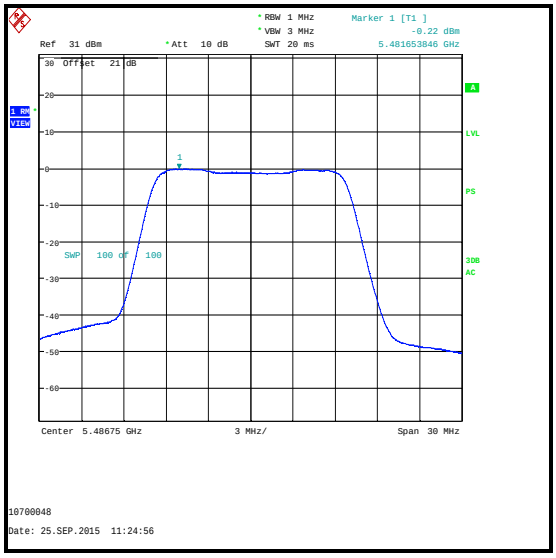


Top Channel

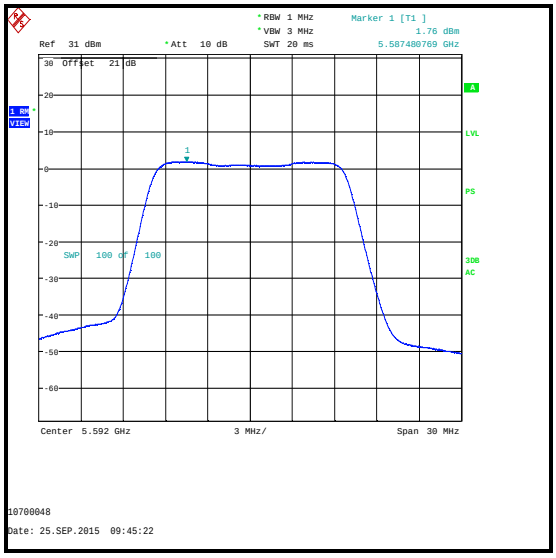
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 15 MHz Channel / 256QAM

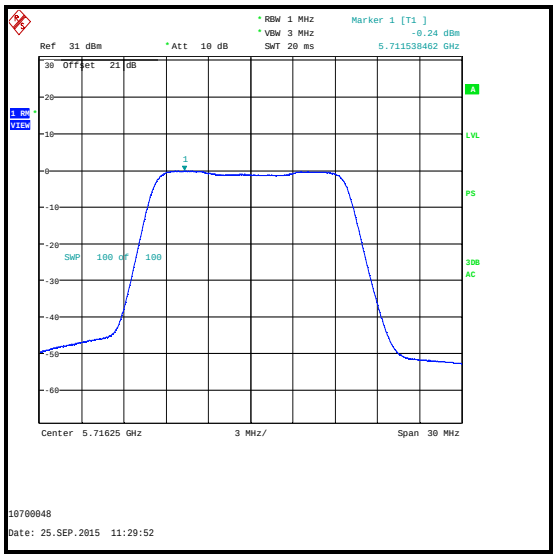
V Port



Bottom Channel



Middle Channel



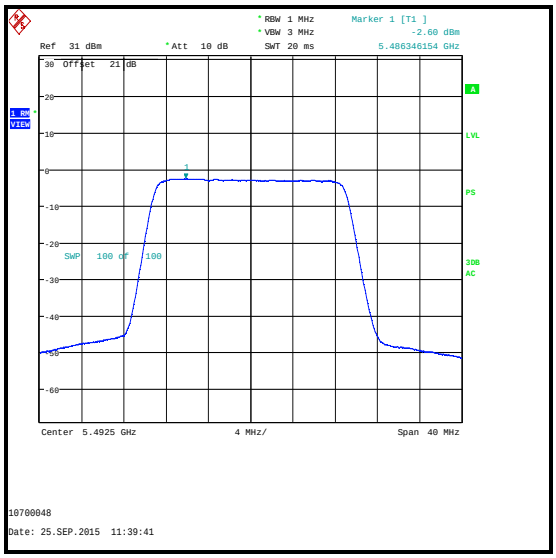
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

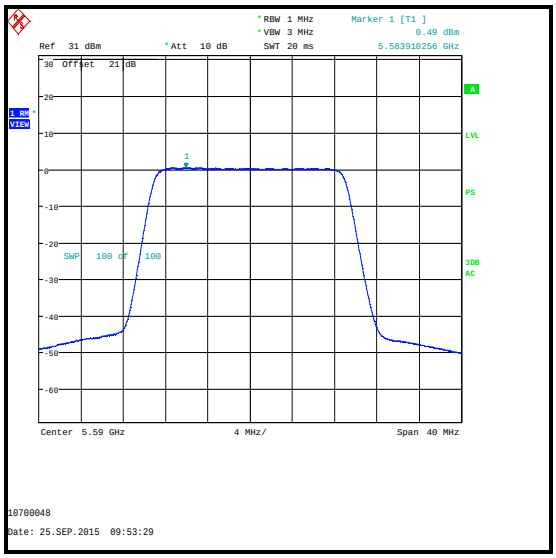
Results: Omnidirectional Antenna / 20 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.6	-0.3	1.7	4.9	3.2	Complied
Middle	0.5	1.8	4.2	4.9	0.7	Complied
Top	-5.9	-3.1	-1.3	4.9	6.2	Complied

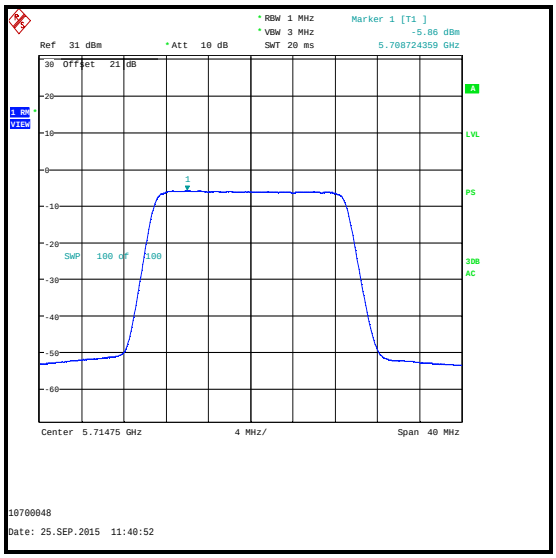
H Port



Bottom Channel



Middle Channel

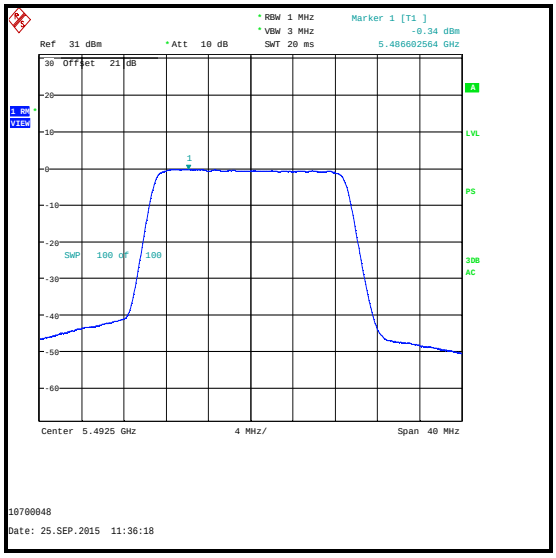


Top Channel

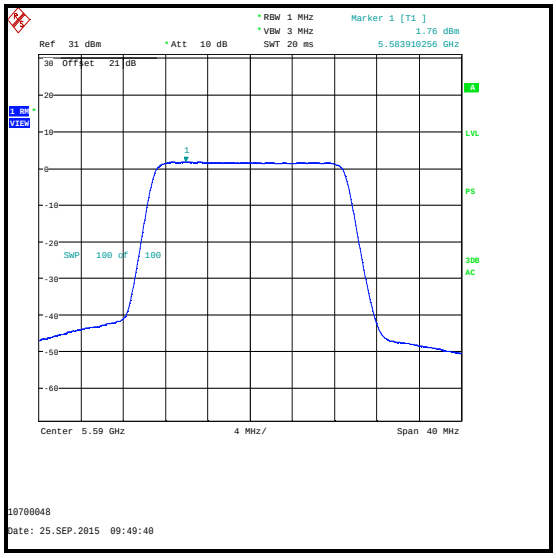
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 20 MHz Channel / BPSK

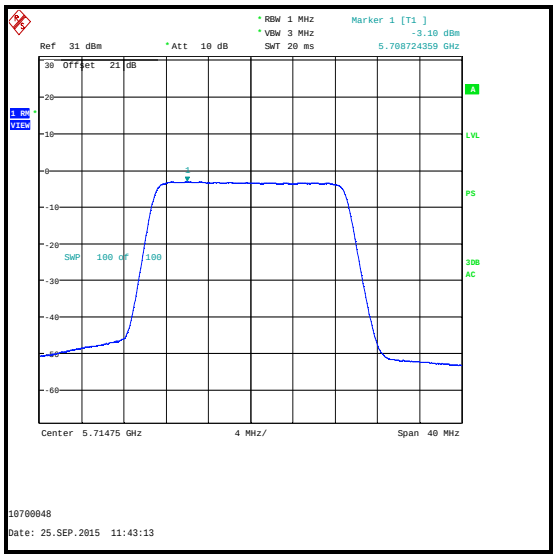
V Port



Bottom Channel



Middle Channel



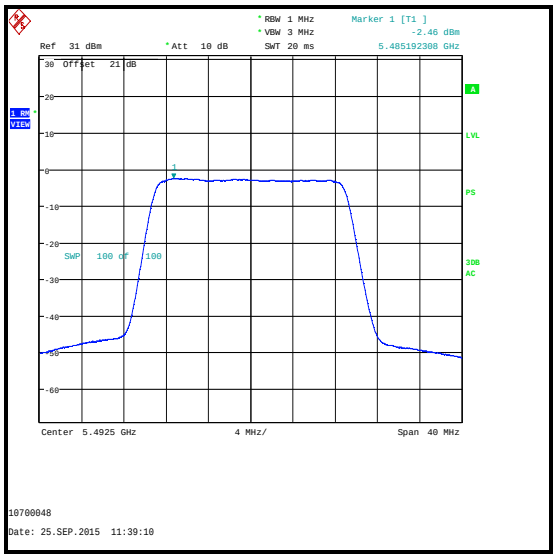
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

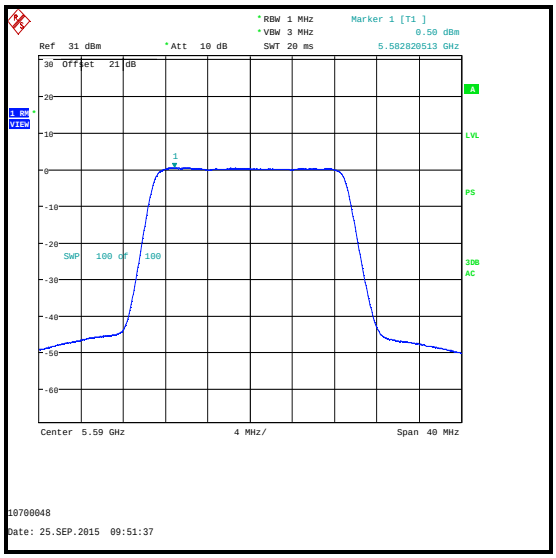
Results: Omnidirectional Antenna / 20 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-2.5	-0.1	1.9	4.9	3.0	Complied
Middle	0.5	1.9	4.3	4.9	0.6	Complied
Top	-5.8	-3.0	-1.2	4.9	6.1	Complied

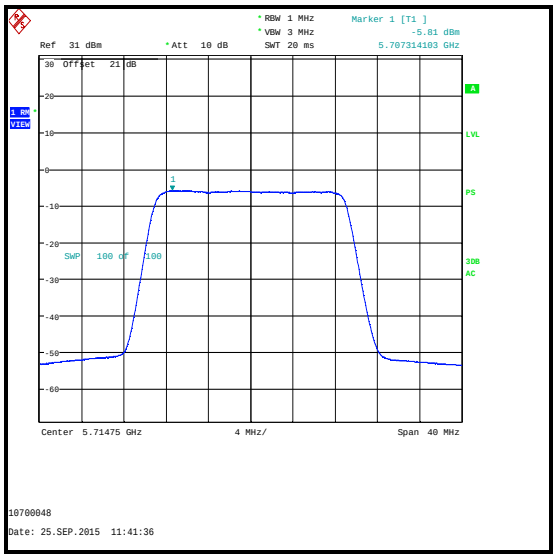
H Port



Bottom Channel



Middle Channel

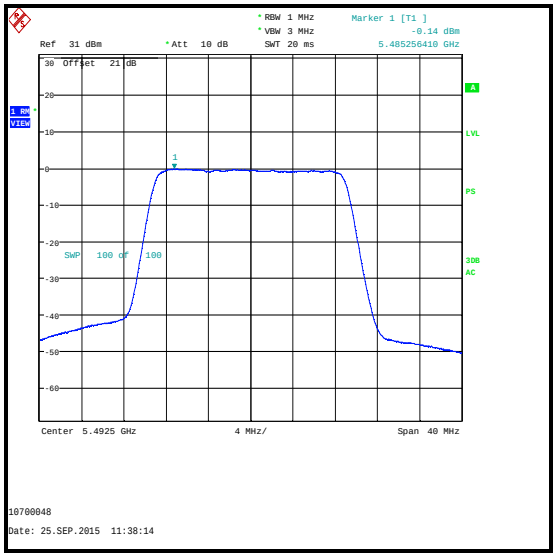


Top Channel

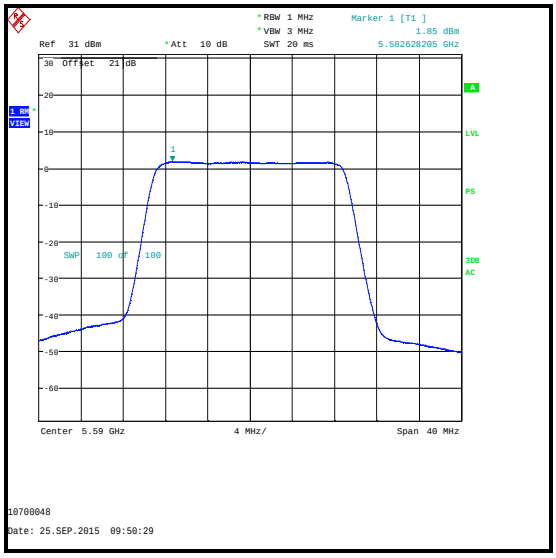
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 20 MHz Channel / 256QAM

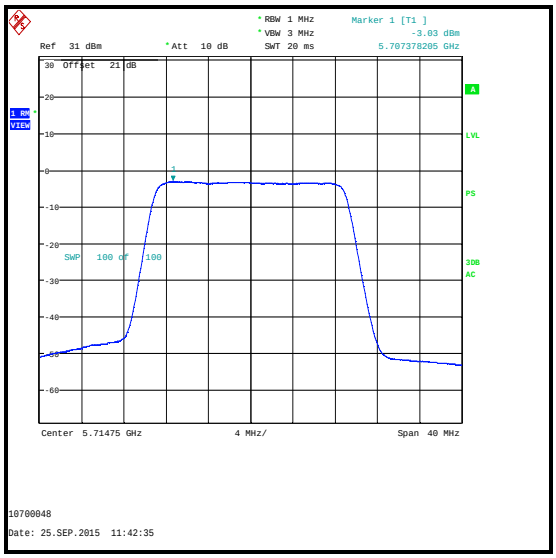
V Port



Bottom Channel



Middle Channel



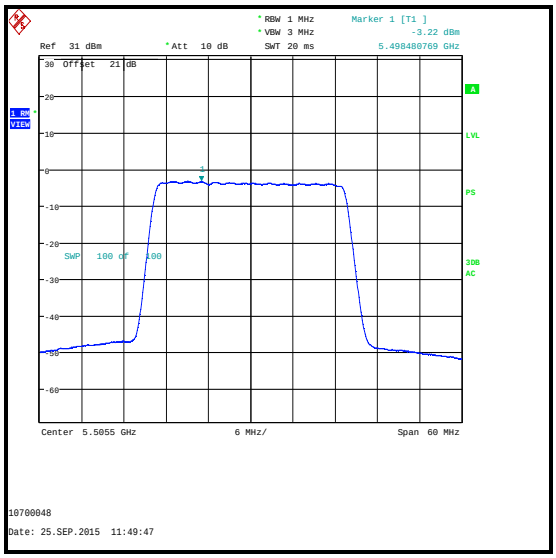
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

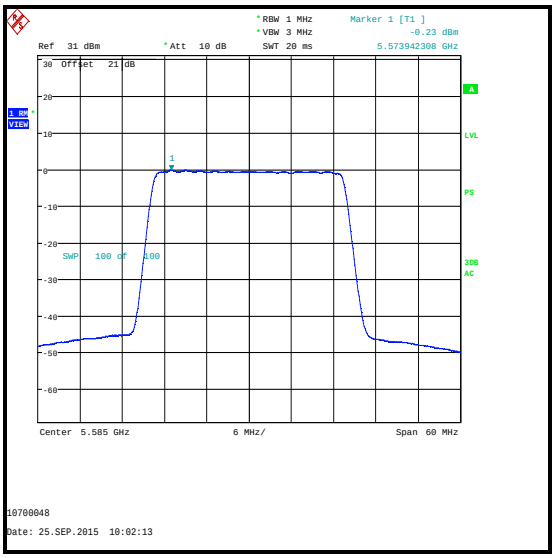
Results: Omnidirectional Antenna / 30 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-3.2	-1.0	1.0	4.9	3.9	Complied
Middle	-0.2	0.8	3.3	4.9	1.6	Complied
Top	-6.7	-3.9	-2.1	4.9	7.0	Complied

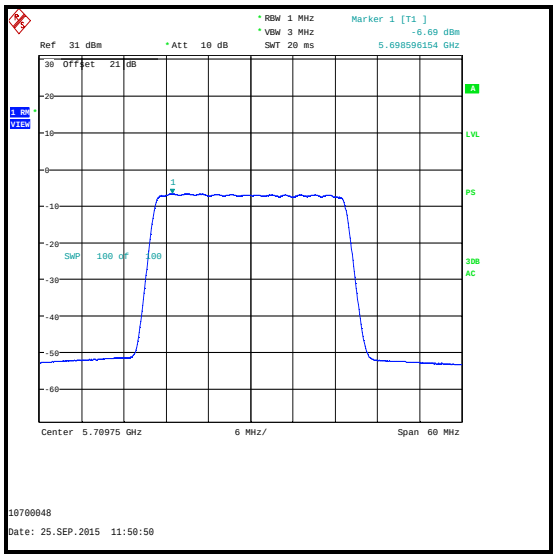
H Port



Bottom Channel



Middle Channel

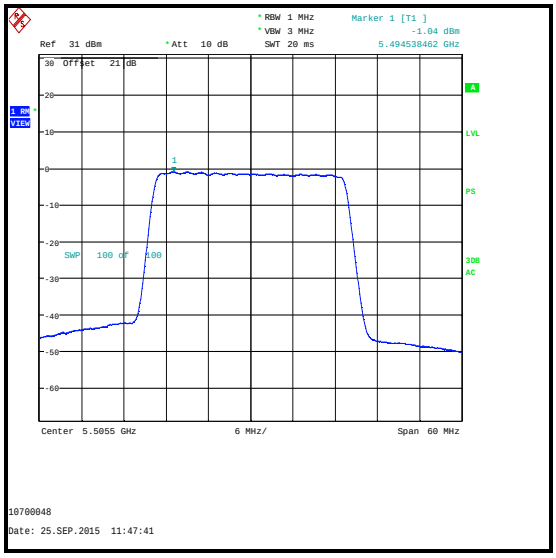


Top Channel

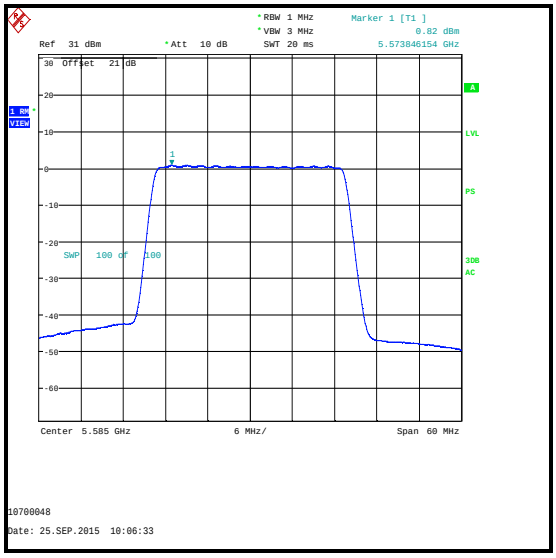
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 30 MHz Channel / BPSK

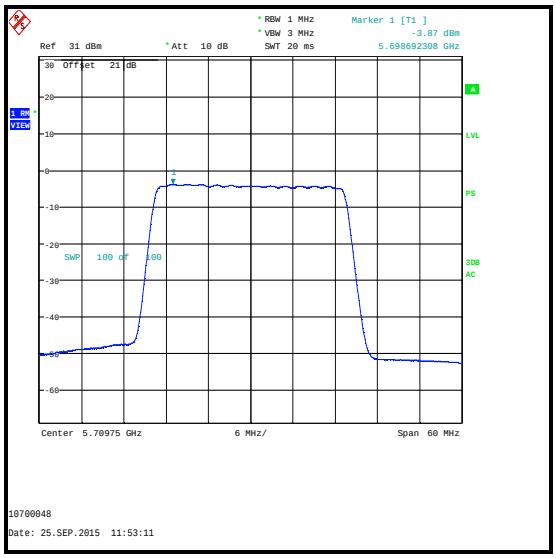
V Port



Bottom Channel



Middle Channel



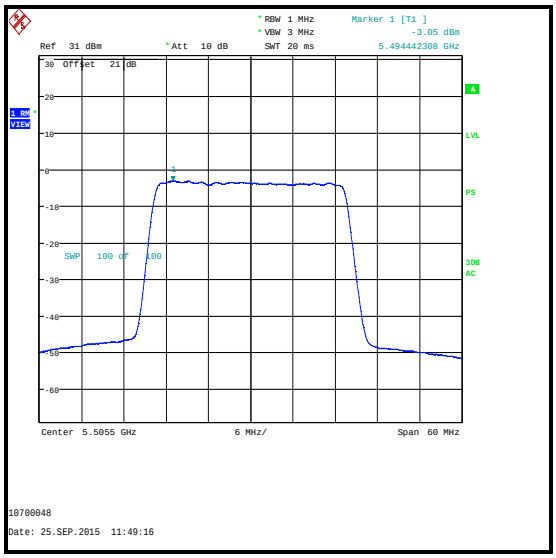
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) continued)

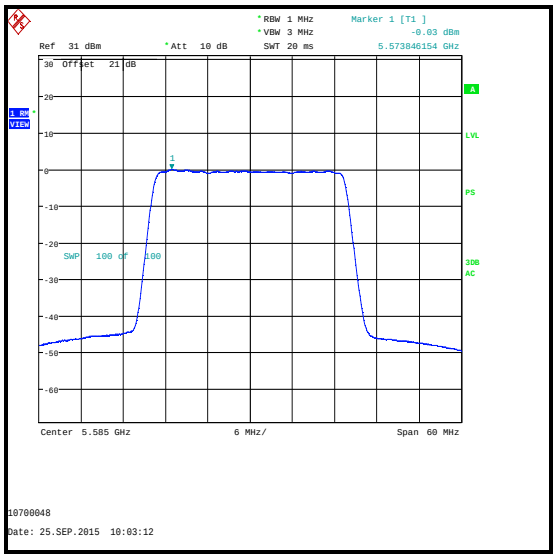
Results: Omnidirectional Antenna / 30 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-3.0	-0.9	1.2	4.9	3.7	Complied
Middle	0.0	1.0	3.5	4.9	1.4	Complied
Top	-6.5	-3.8	-1.9	4.9	6.8	Complied

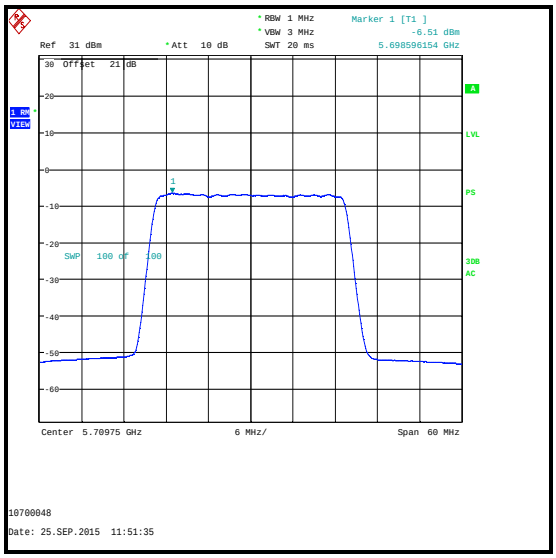
H Port



Bottom Channel



Middle Channel

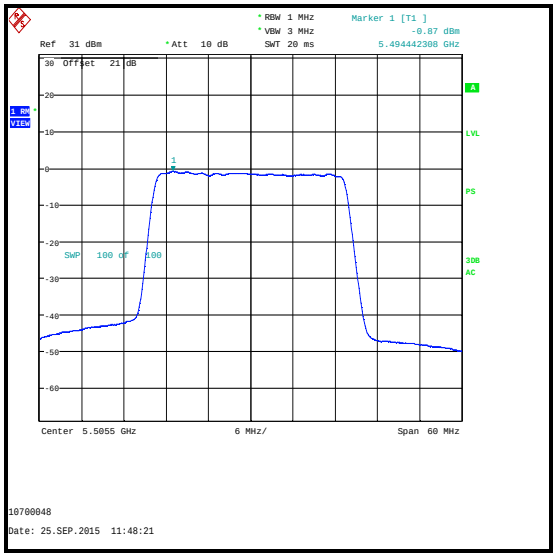


Top Channel

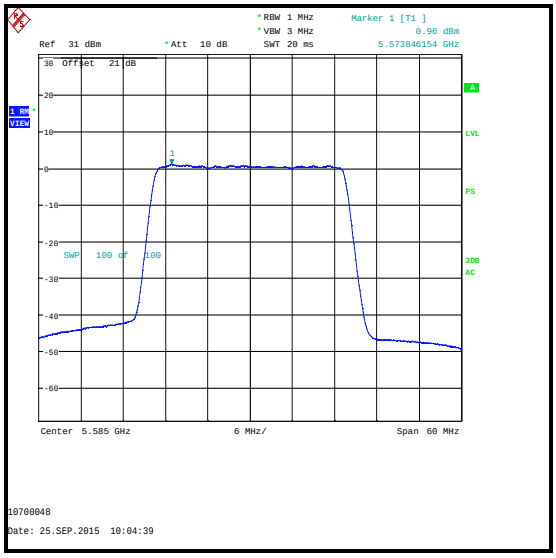
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 30 MHz Channel / 256QAM

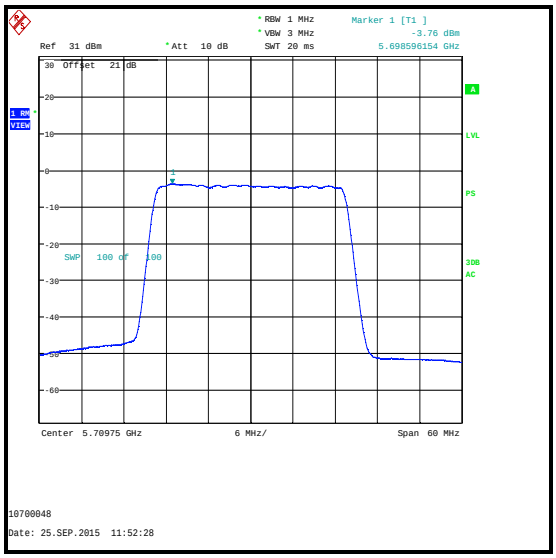
V Port



Bottom Channel



Middle Channel



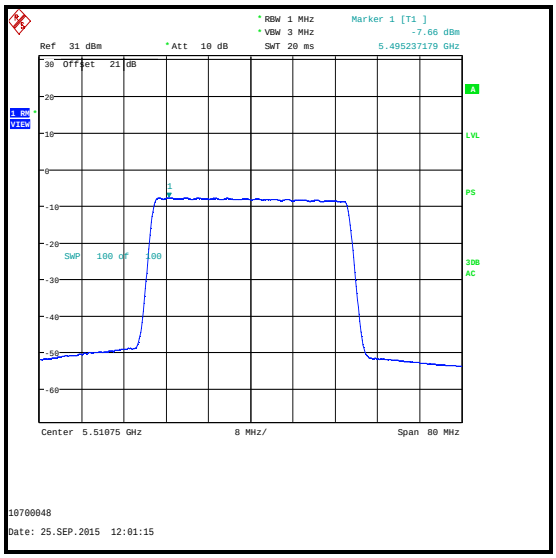
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

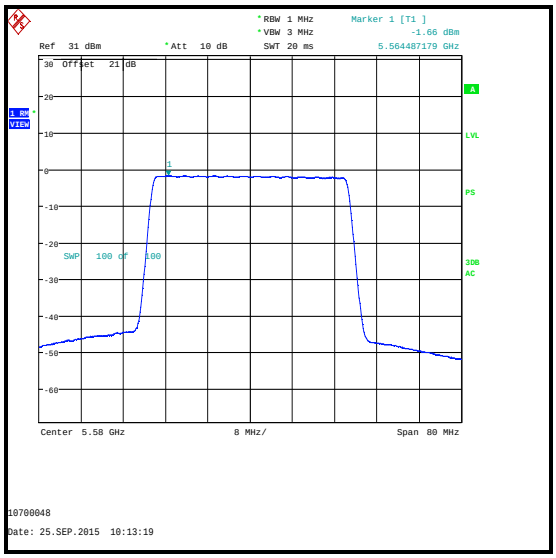
Results: Omnidirectional Antenna / 40 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-7.7	-5.3	-3.3	4.9	8.2	Complied
Middle	-1.7	-0.6	1.9	4.9	3.0	Complied
Top	-8.2	-5.3	-3.5	4.9	8.4	Complied

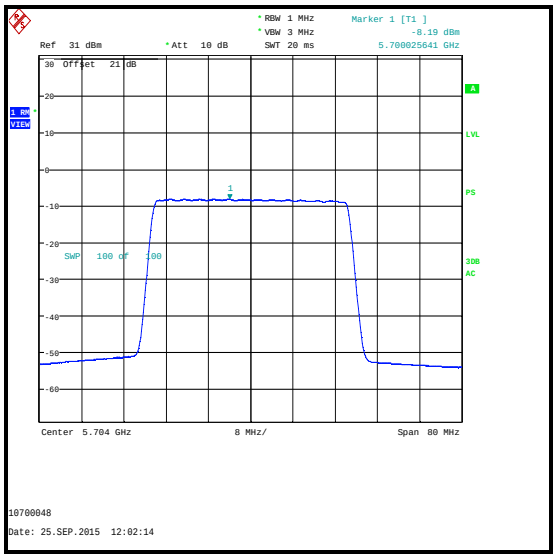
H Port



Bottom Channel



Middle Channel

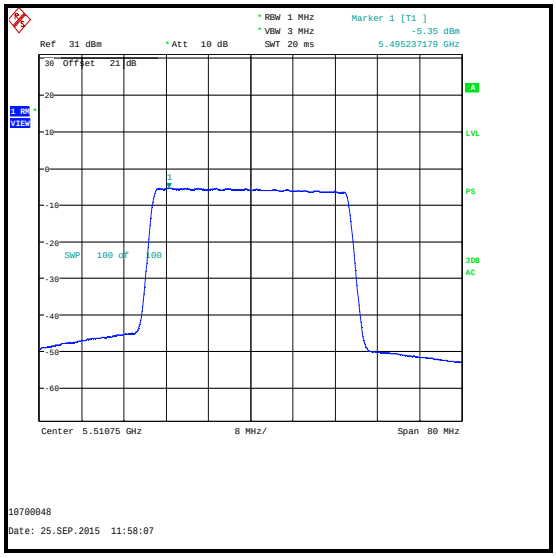


Top Channel

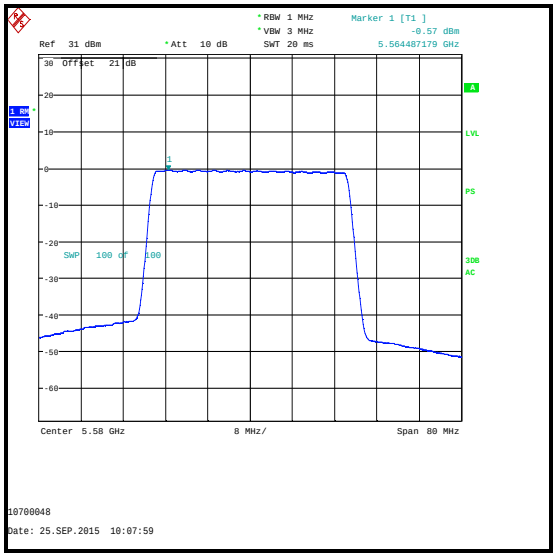
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 40 MHz Channel / BPSK

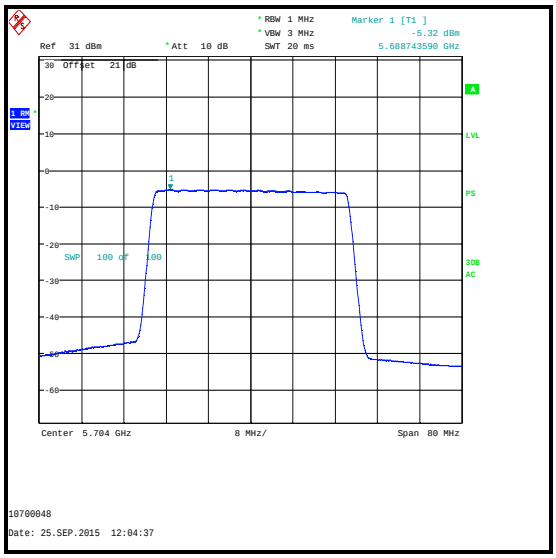
V Port



Bottom Channel



Middle Channel



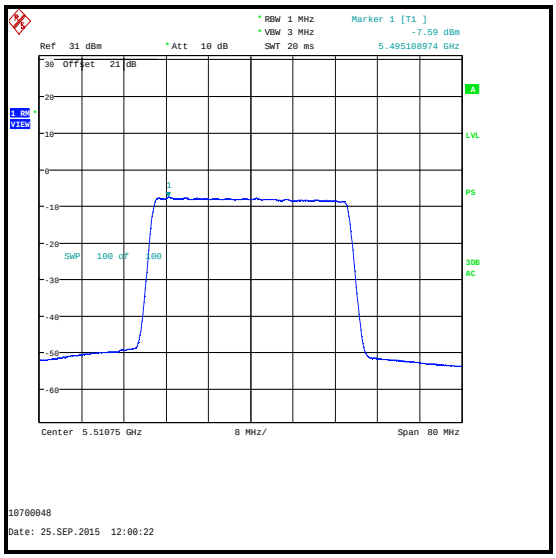
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

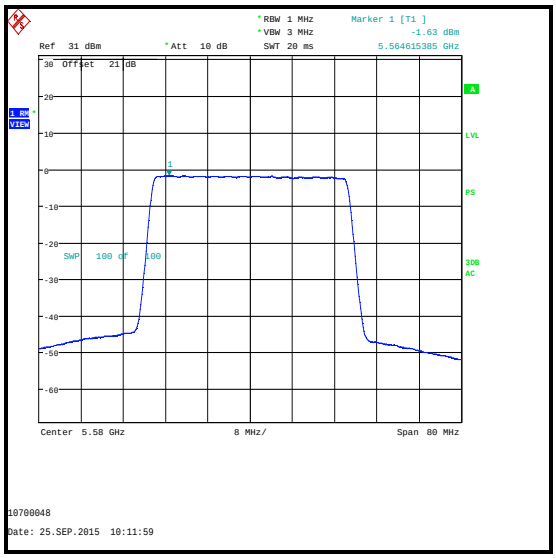
Results: Omnidirectional Antenna / 40 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-7.6	-5.3	-3.3	4.9	8.2	Complied
Middle	-1.6	-0.5	2.0	4.9	2.9	Complied
Top	-8.1	-5.2	-3.4	4.9	8.3	Complied

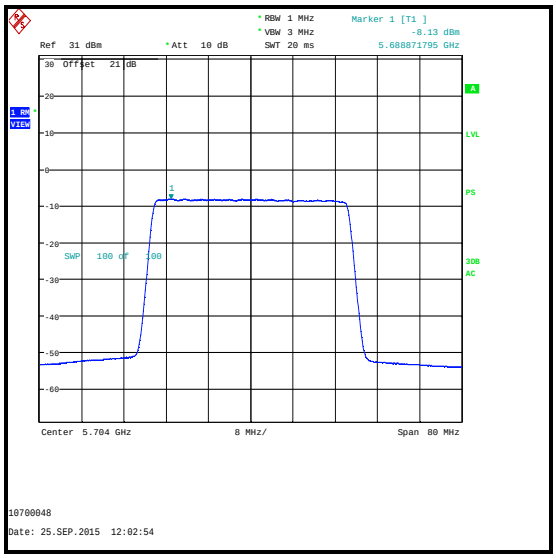
H Port



Bottom Channel



Middle Channel

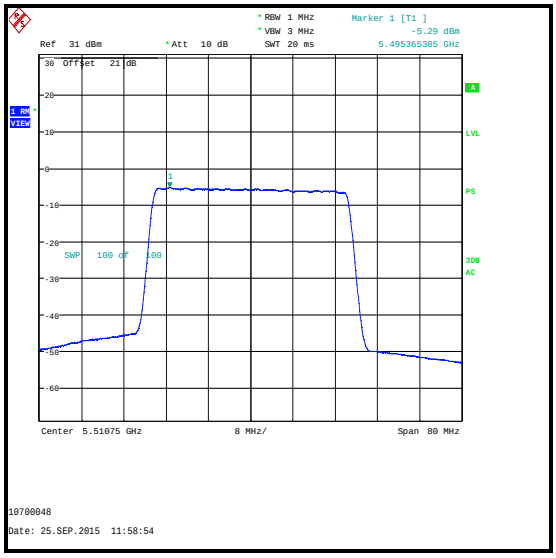


Top Channel

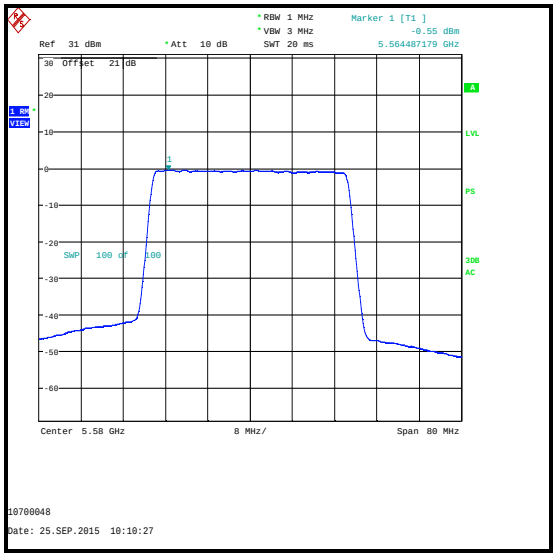
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 40 MHz Channel / 256QAM

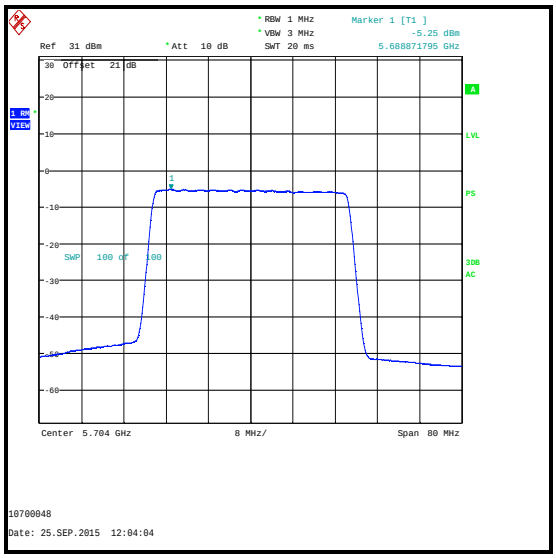
V Port



Bottom Channel



Middle Channel



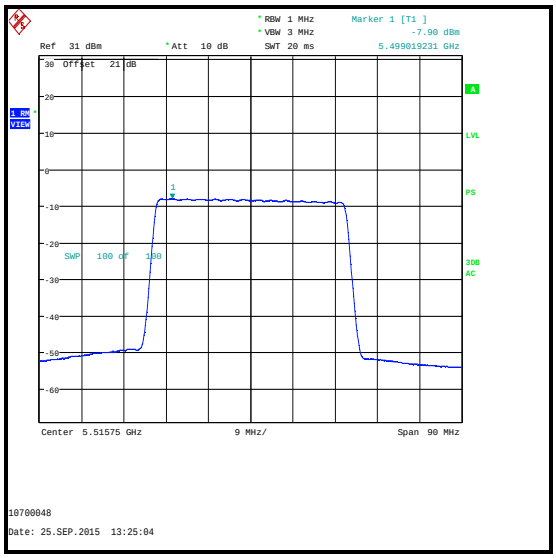
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

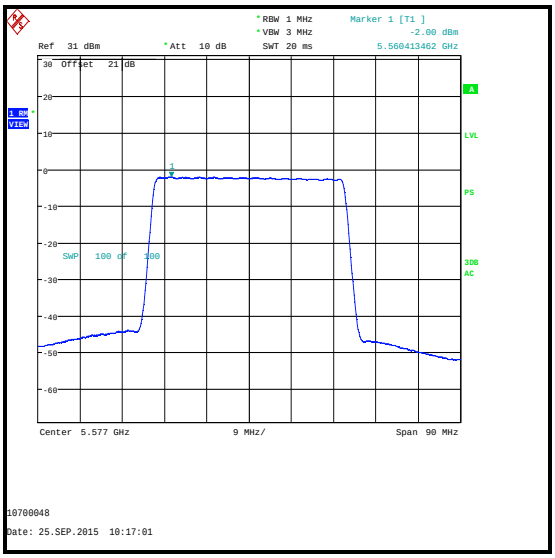
Results: Omnidirectional Antenna / 45 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-7.9	-5.8	-3.7	4.9	8.6	Complied
Middle	-2.0	-0.9	1.6	4.9	3.3	Complied
Top	-8.6	-5.7	-3.9	4.9	8.8	Complied

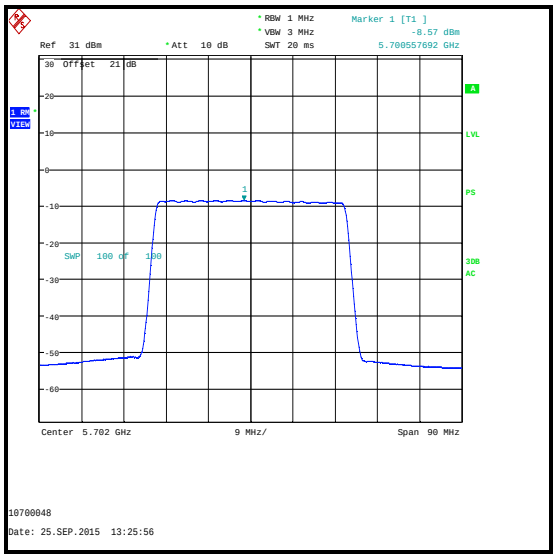
H Port



Bottom Channel



Middle Channel

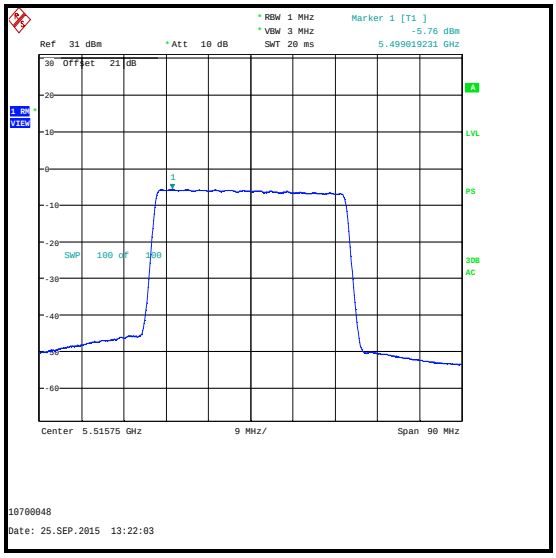


Top Channel

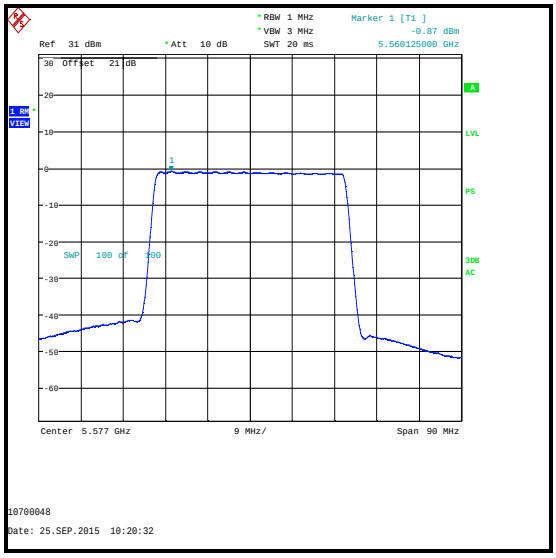
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 45 MHz Channel / BPSK

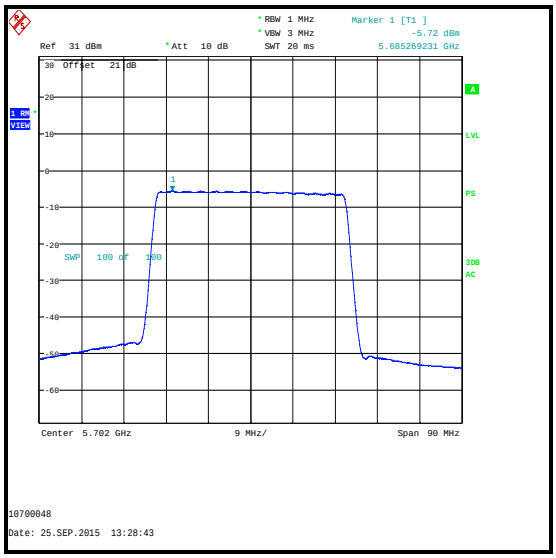
V Port



Bottom Channel



Middle Channel



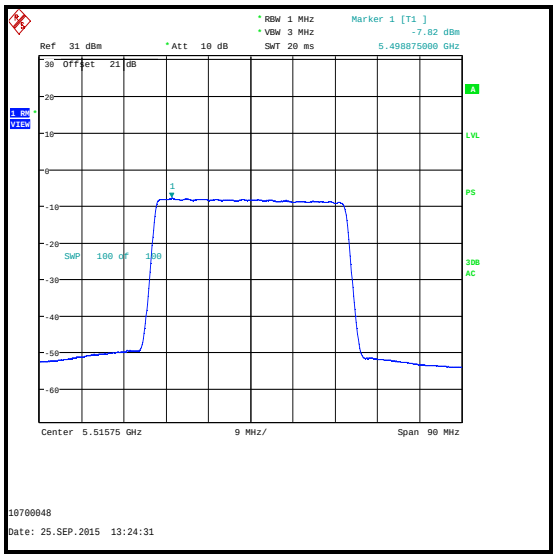
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

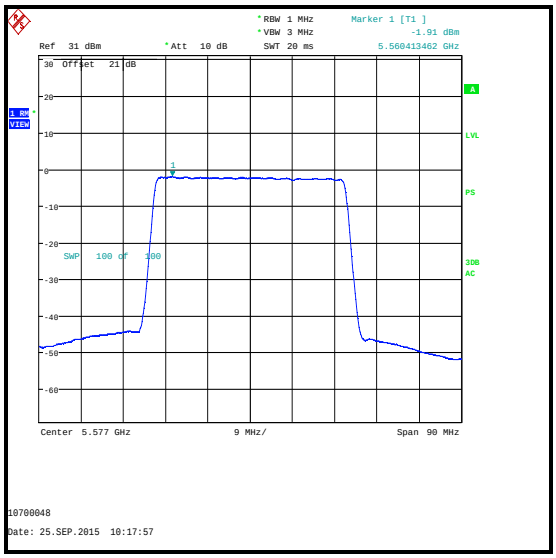
Results: Omnidirectional Antenna / 45 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-7.8	-5.6	-3.6	4.9	8.5	Complied
Middle	-1.9	-0.8	1.7	4.9	3.2	Complied
Top	-8.5	-5.6	-3.8	4.9	8.7	Complied

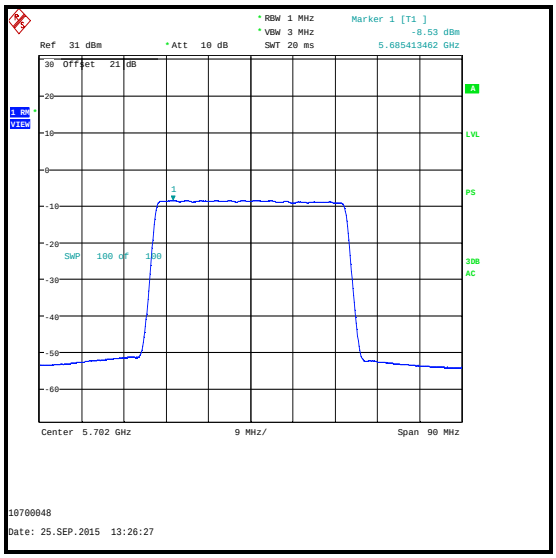
H Port



Bottom Channel



Middle Channel

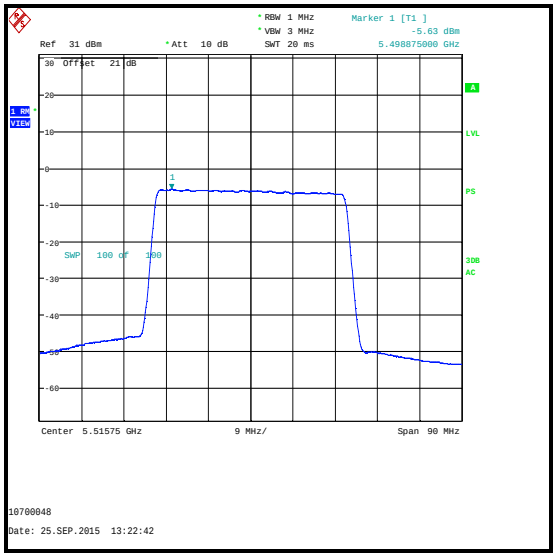


Top Channel

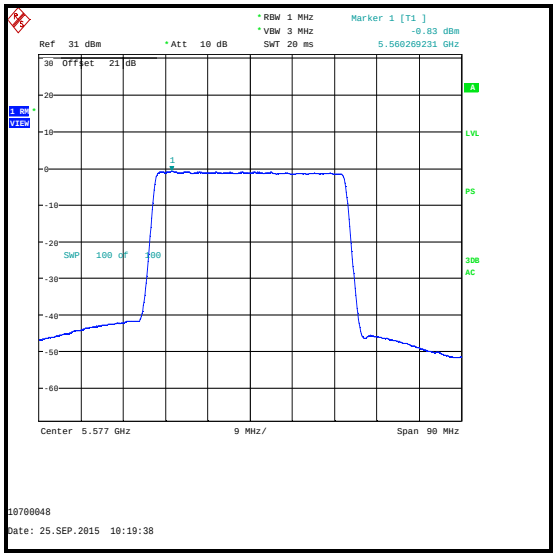
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: Omnidirectional Antenna / 45 MHz Channel / 256QAM

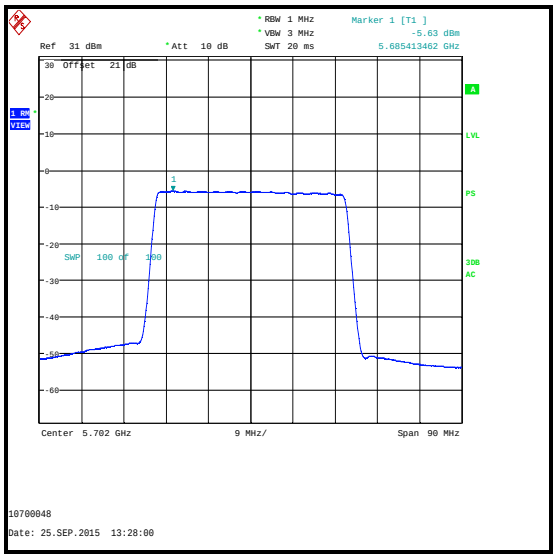
V Port



Bottom Channel



Middle Channel



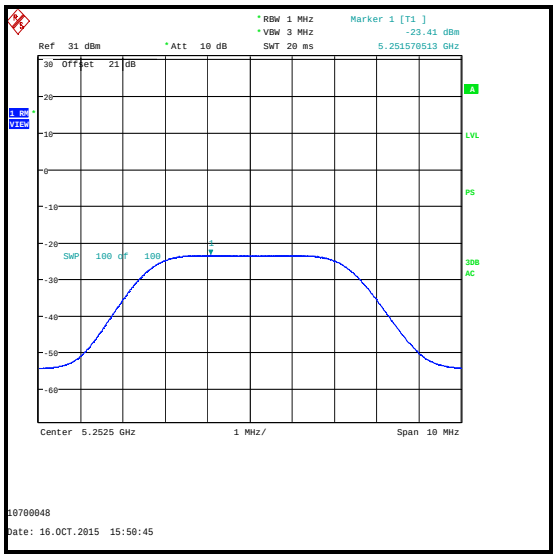
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

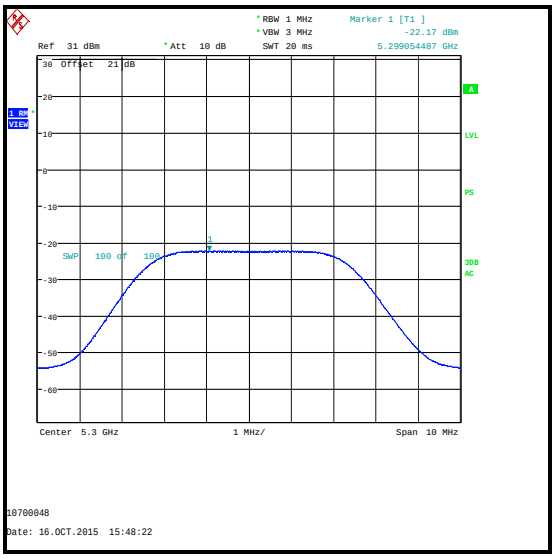
Results: 4' Parabolic Antenna / 5 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-23.4	-18.6	-17.4	-16.6	0.8	Complied
Middle	-22.2	-18.6	-17.0	-16.6	0.4	Complied
Top	-22.1	-18.8	-17.1	-16.6	0.5	Complied

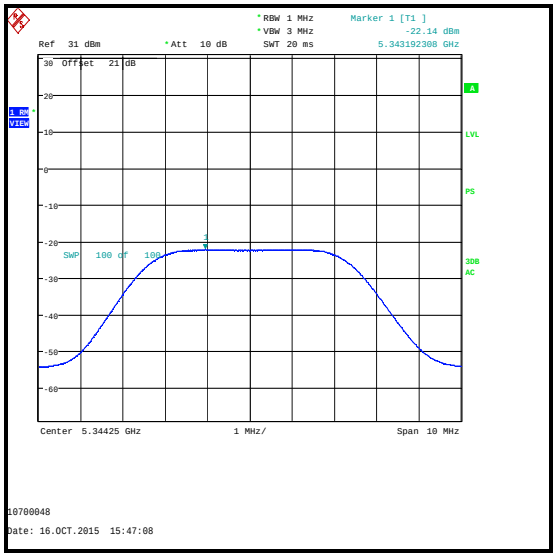
H Port



Bottom Channel



Middle Channel

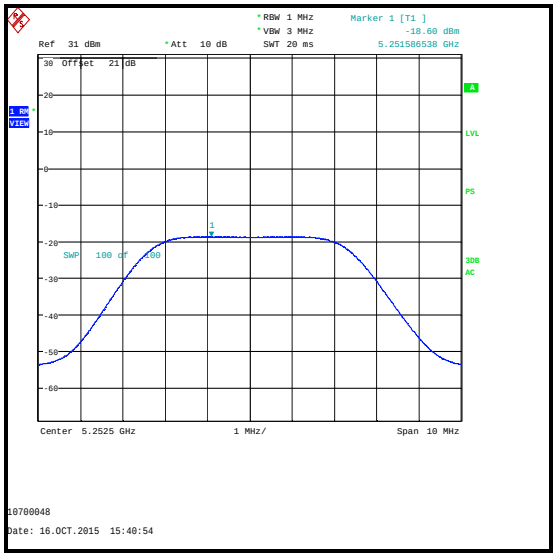


Top Channel

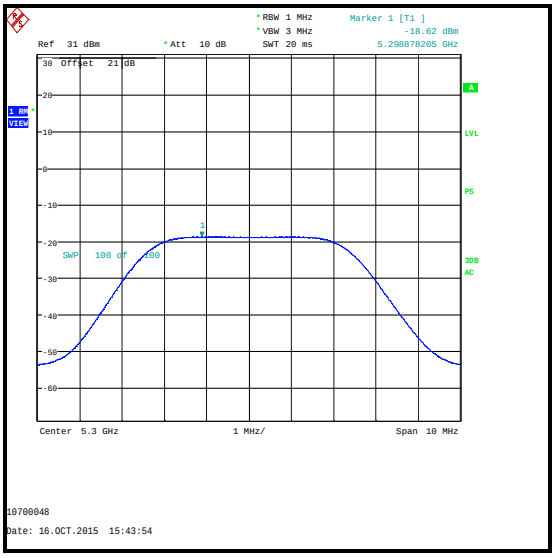
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 5 MHz Channel / BPSK

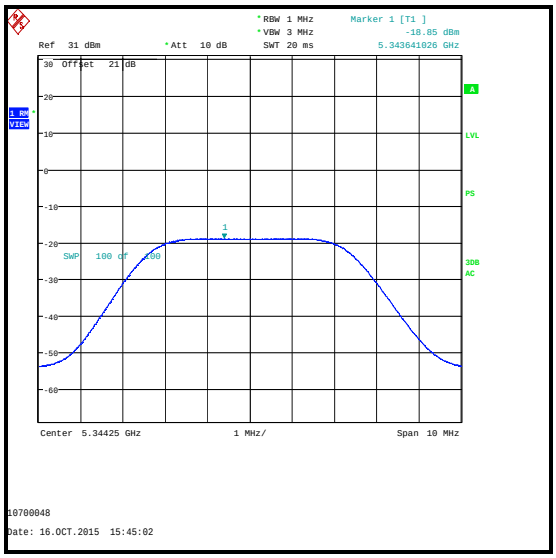
V Port



Bottom Channel



Middle Channel



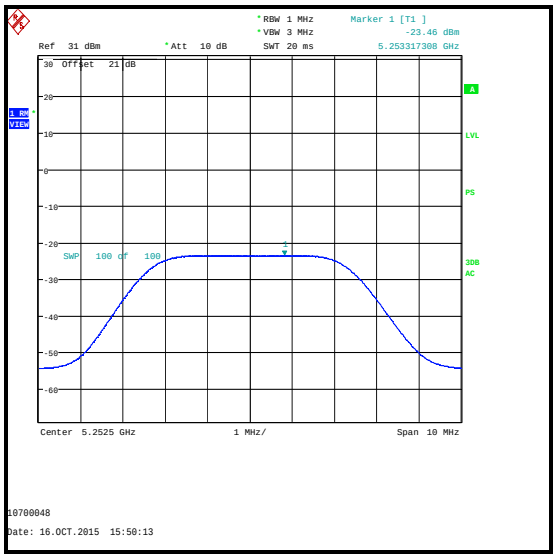
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

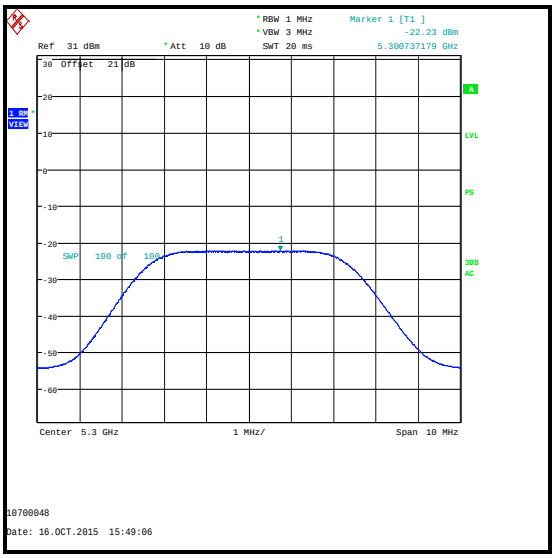
Results: 4' Parabolic Antenna / 5 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-23.5	-18.6	-17.4	-16.6	0.8	Complied
Middle	-22.2	-18.6	-17.0	-16.6	0.4	Complied
Top	-22.2	-18.8	-17.2	-16.6	0.6	Complied

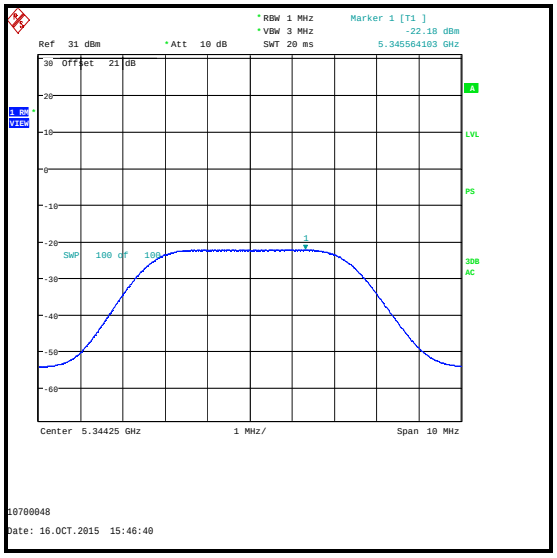
H Port



Bottom Channel



Middle Channel

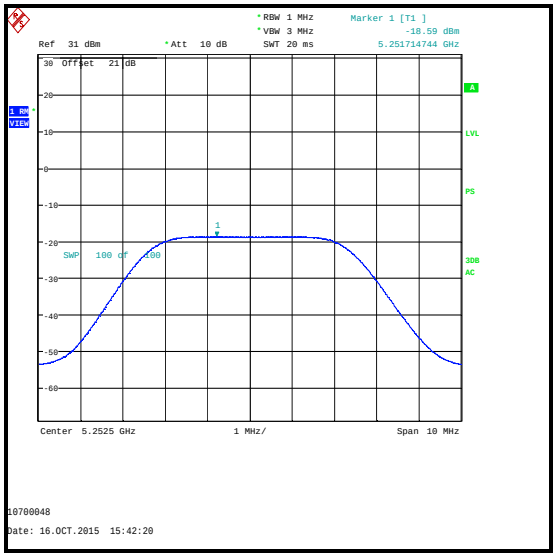


Top Channel

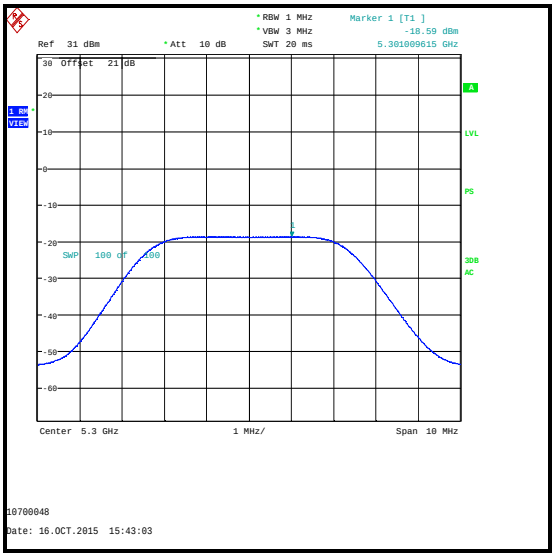
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 5 MHz Channel / 256QAM

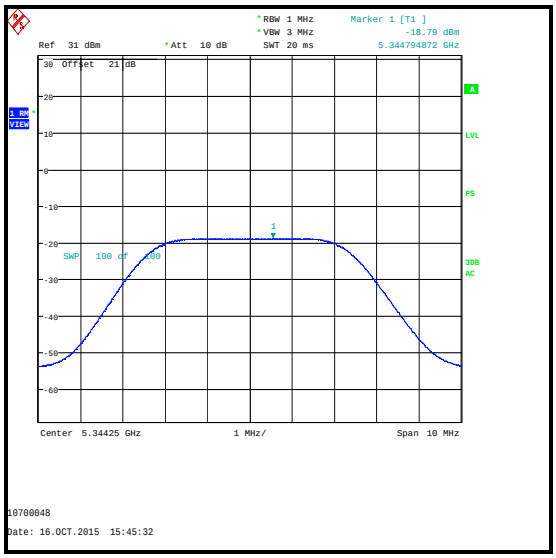
V Port



Bottom Channel



Middle Channel



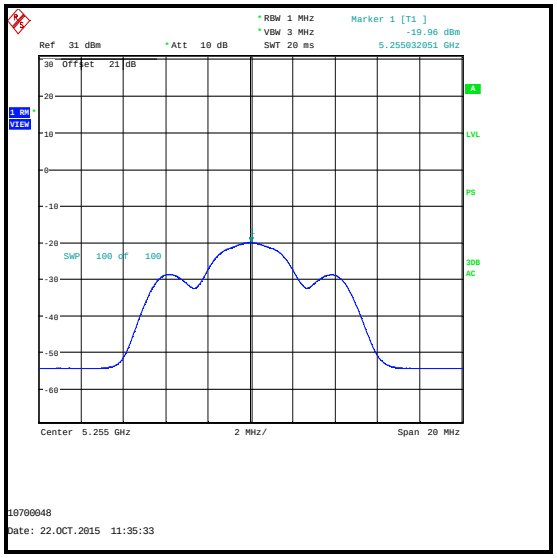
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

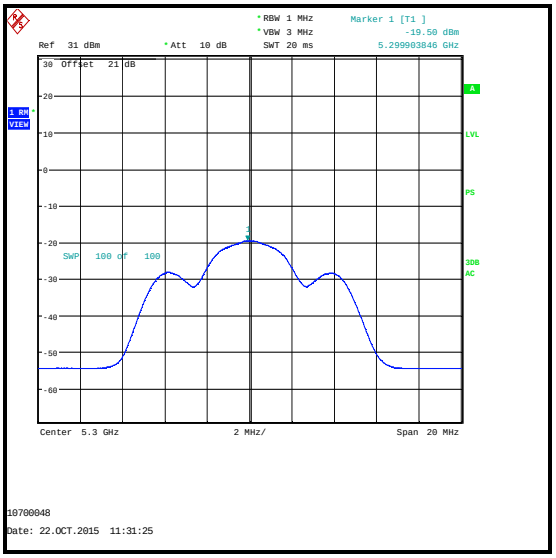
Results: 4' Parabolic Antenna / 10 MHz Channel / AQU

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-20.0	-21.0	-17.5	-16.6	0.9	Complied
Middle	-19.5	-20.5	-17.0	-16.6	0.4	Complied
Top	-19.5	-20.6	-17.0	-16.6	0.4	Complied

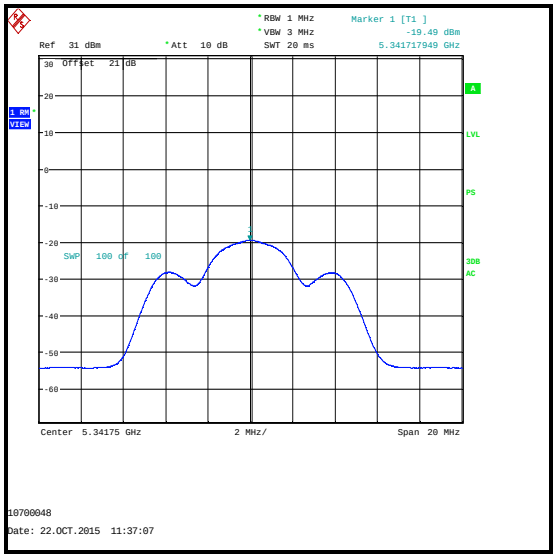
H Port



Bottom Channel



Middle Channel

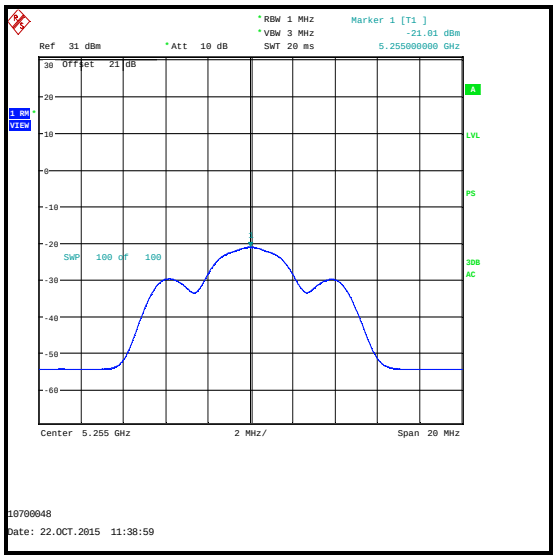


Top Channel

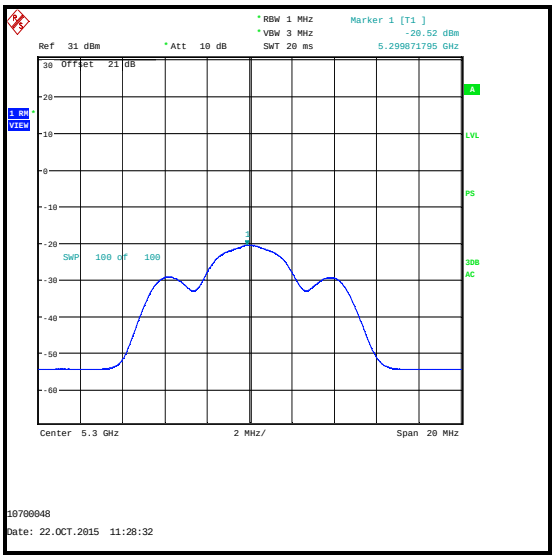
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 10 MHz Channel / AQU

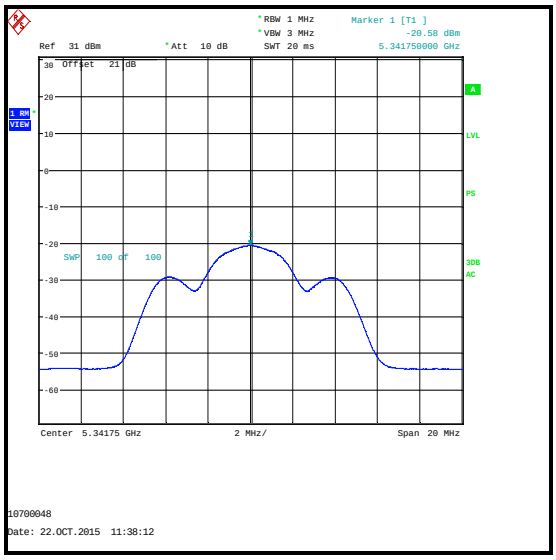
V Port



Bottom Channel



Middle Channel



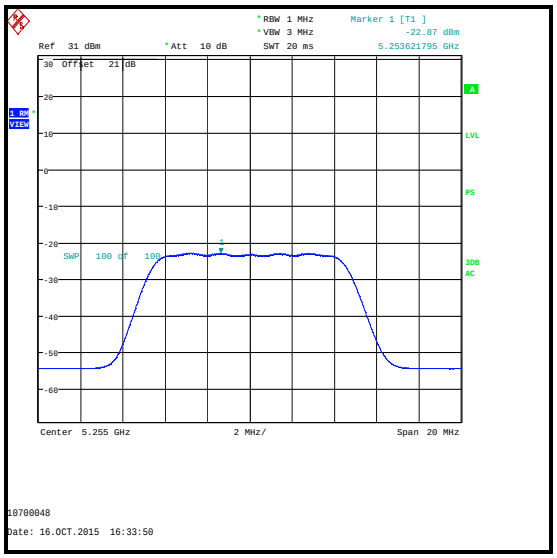
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

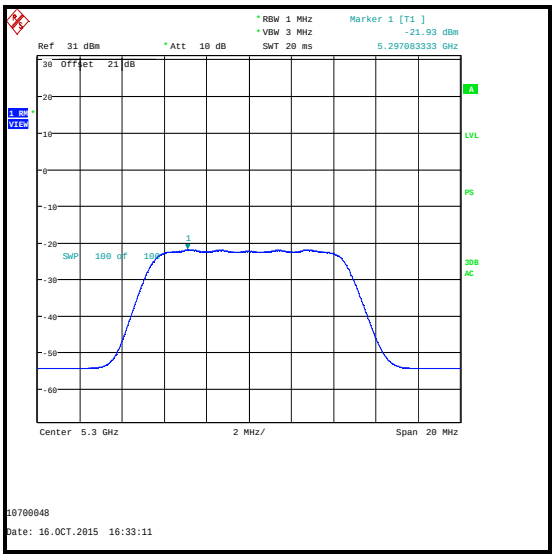
Results: 4' Parabolic Antenna / 10 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.9	-18.9	-17.4	-16.6	0.8	Complied
Middle	-21.9	-18.8	-17.1	-16.6	0.5	Complied
Top	-22.0	-19.0	-17.2	-16.6	0.6	Complied

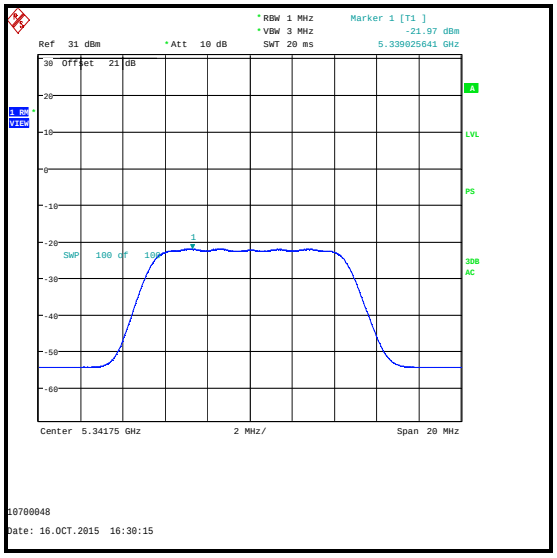
H Port



Bottom Channel



Middle Channel

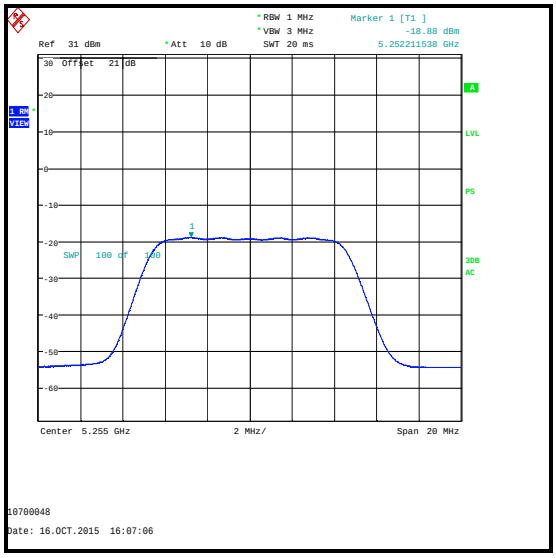


Top Channel

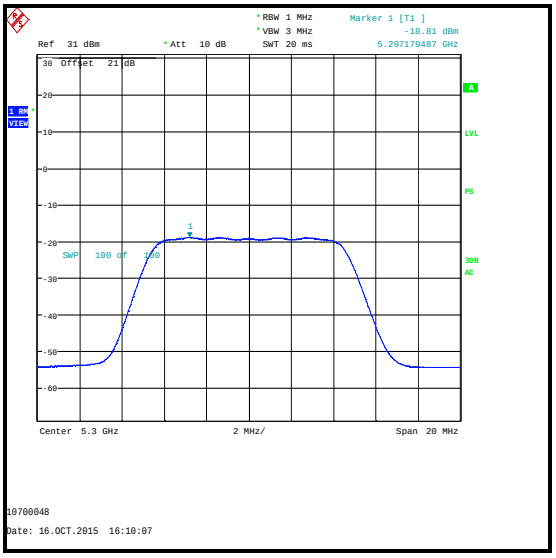
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 10 MHz Channel / BPSK

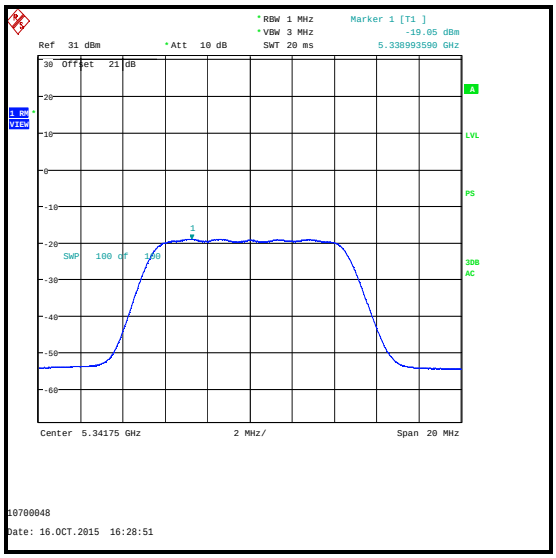
V Port



Bottom Channel



Middle Channel



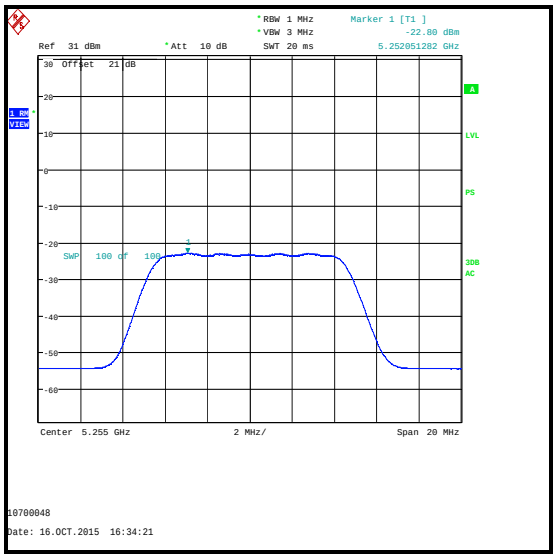
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

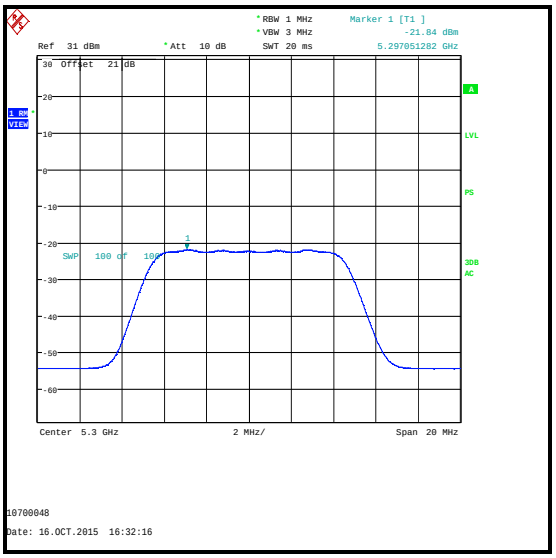
Results: 4' Parabolic Antenna / 10 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.8	-18.9	-17.4	-16.6	0.8	Complied
Middle	-21.8	-18.8	-17.0	-16.6	0.4	Complied
Top	-21.9	-19.1	-17.3	-16.6	0.7	Complied

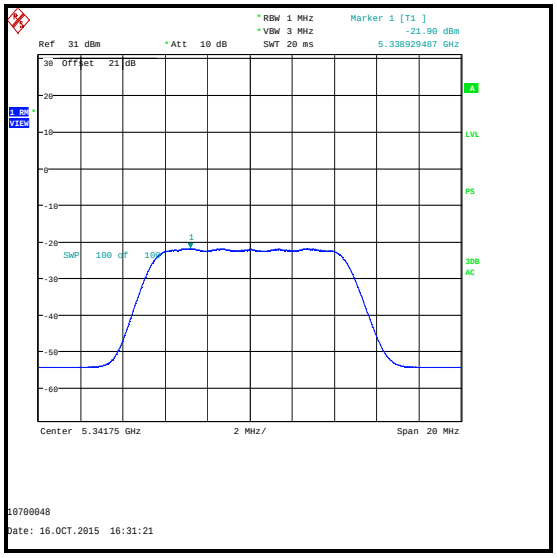
H Port



Bottom Channel



Middle Channel

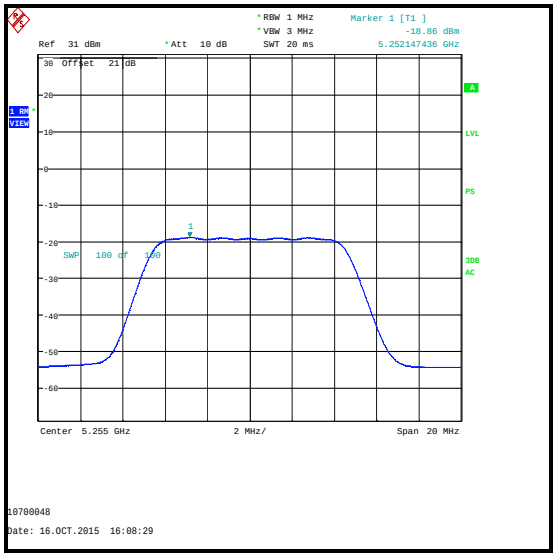


Top Channel

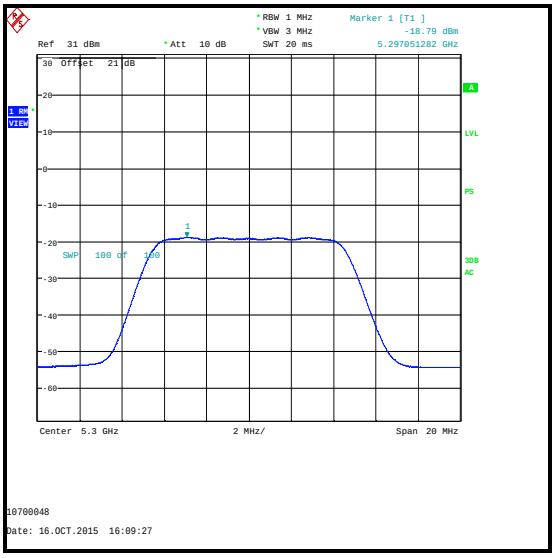
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: Parabolic Antenna / 10 MHz Channel / 256QAM

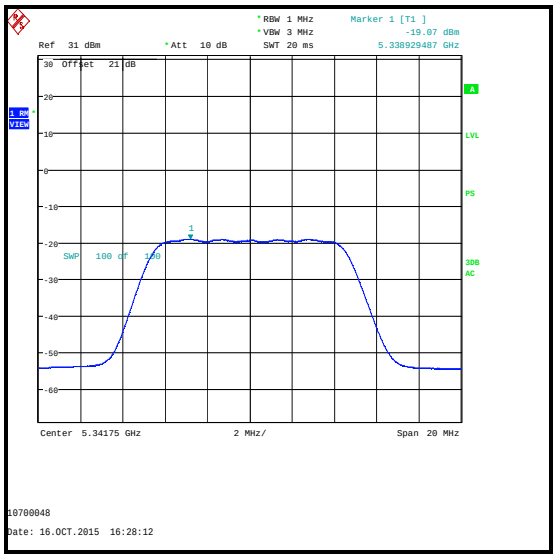
V Port



Bottom Channel



Middle Channel



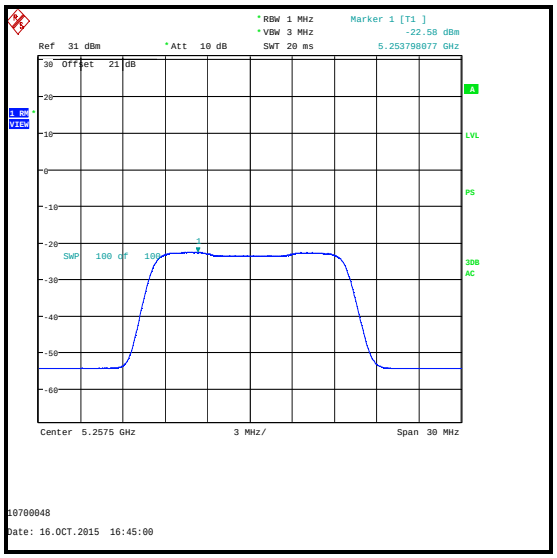
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

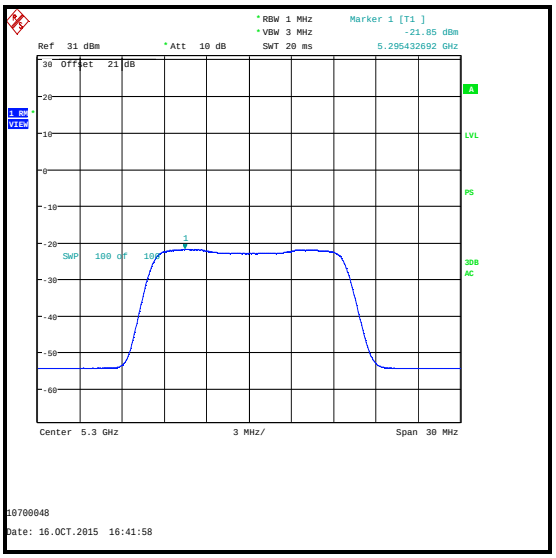
Results: 4' Parabolic Antenna / 15 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.6	-19.0	-17.4	-16.6	0.8	Complied
Middle	-21.8	-19.0	-17.2	-16.6	0.6	Complied
Top	-21.9	-19.3	-17.4	-16.6	0.8	Complied

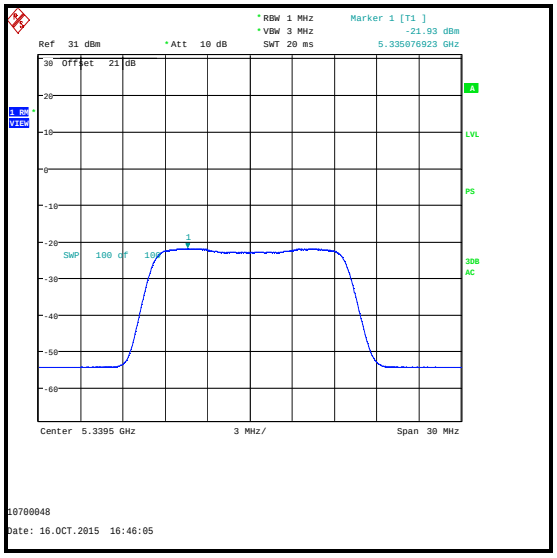
H Port



Bottom Channel



Middle Channel

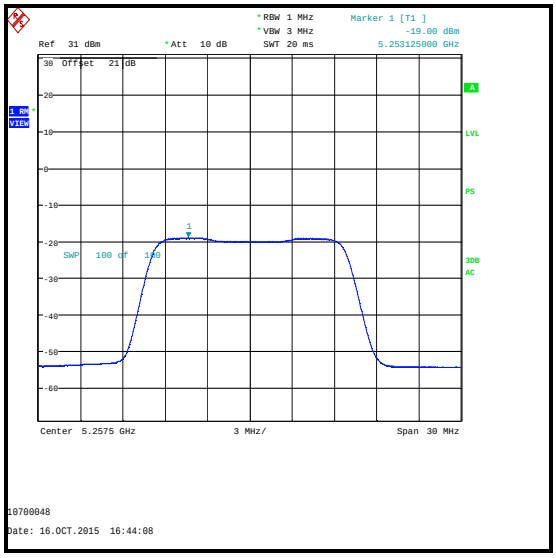


Top Channel

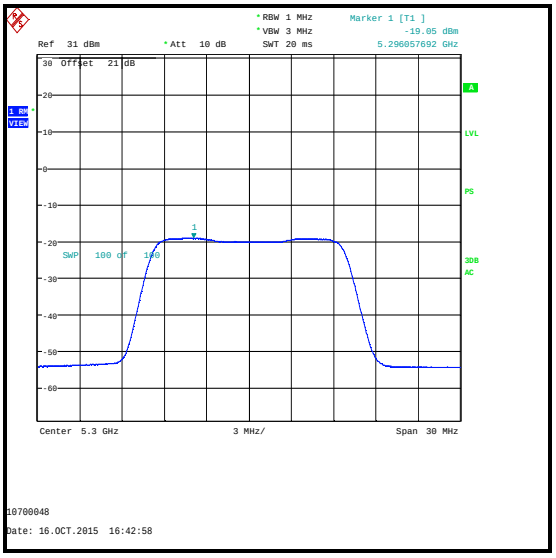
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 15 MHz Channel / BPSK

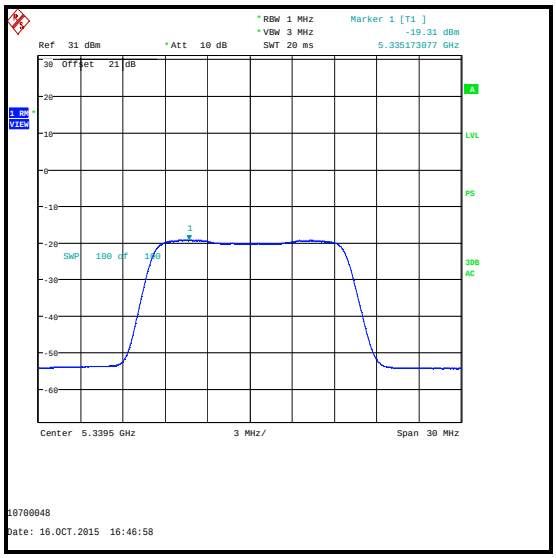
V Port



Bottom Channel



Middle Channel



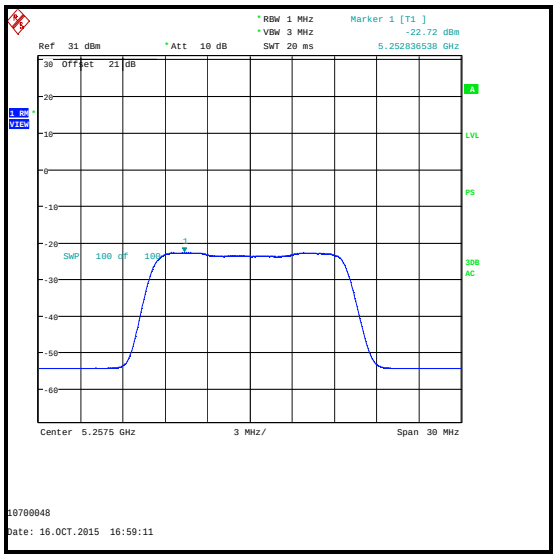
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

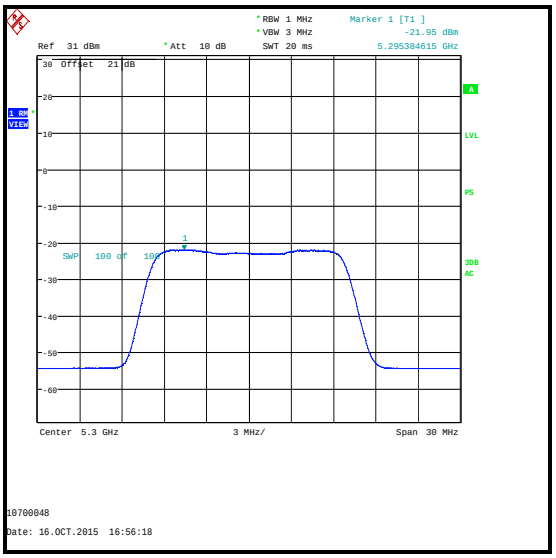
Results: 4' Parabolic Antenna / 15 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.7	-19.1	-17.5	-16.6	0.9	Complied
Middle	-21.9	-19.2	-17.3	-16.6	0.7	Complied
Top	-22.0	-19.2	-17.4	-16.6	0.8	Complied

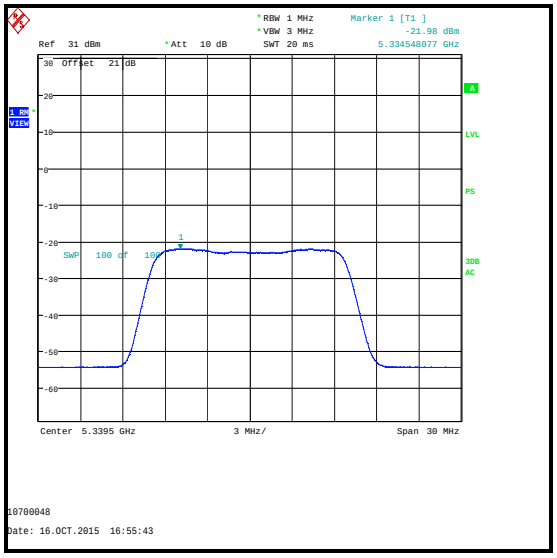
H Port



Bottom Channel



Middle Channel

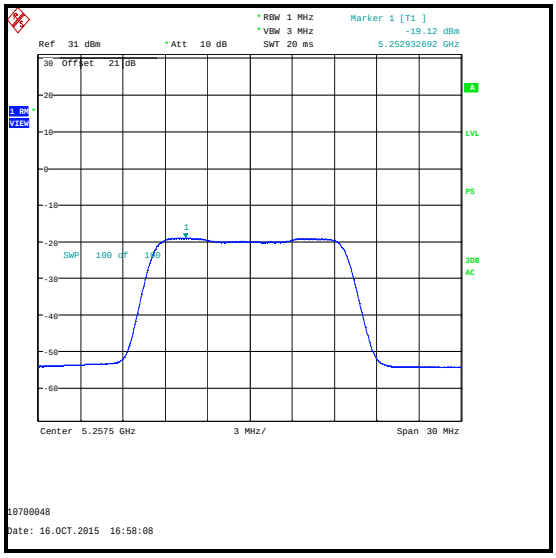


Top Channel

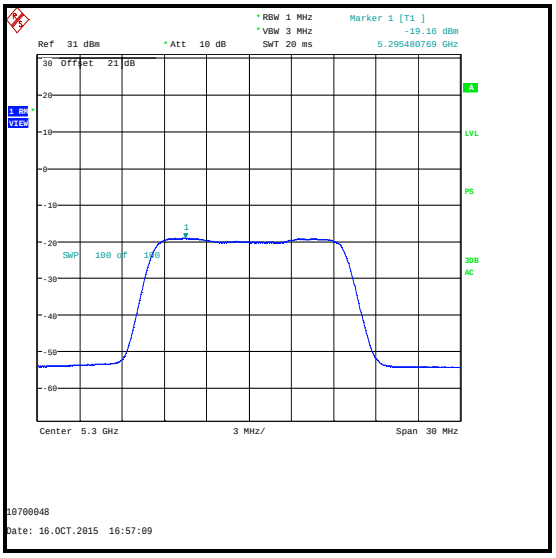
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 15 MHz Channel / 256QAM

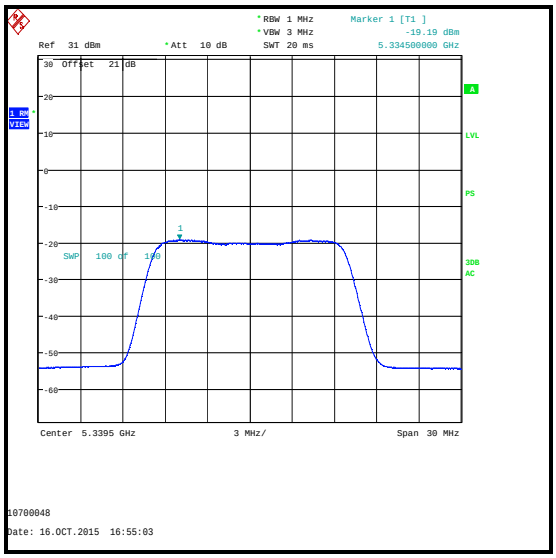
V Port



Bottom Channel



Middle Channel



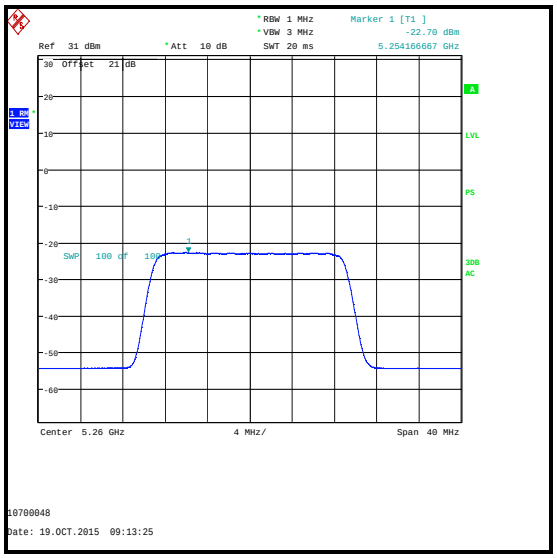
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

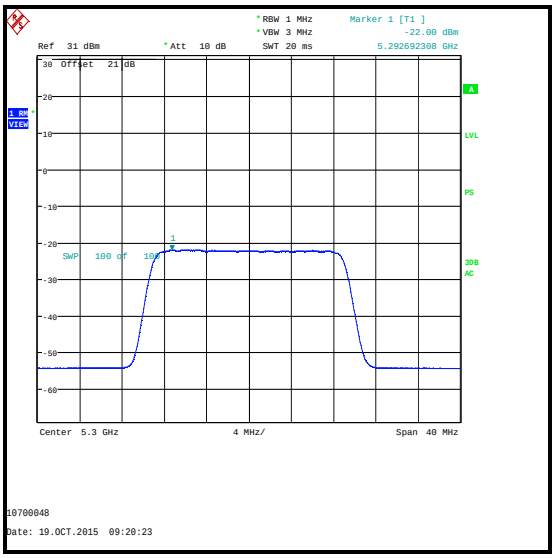
Results: 4' Parabolic Antenna / 20 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.7	-19.6	-17.9	-16.6	1.3	Complied
Middle	-22.0	-19.7	-17.7	-16.6	1.1	Complied
Top	-22.0	-19.9	-17.8	-16.6	1.2	Complied

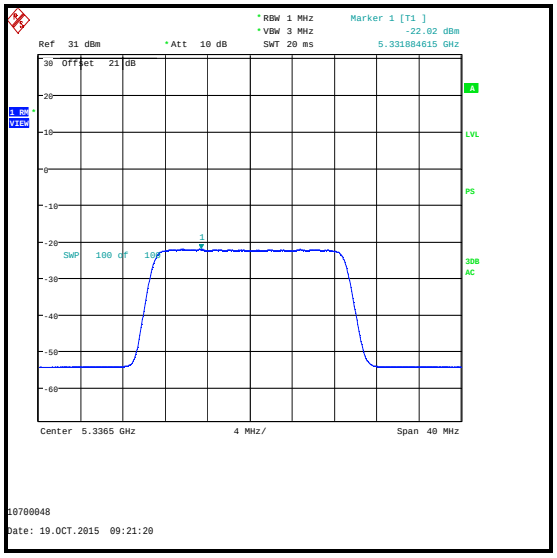
H Port



Bottom Channel



Middle Channel

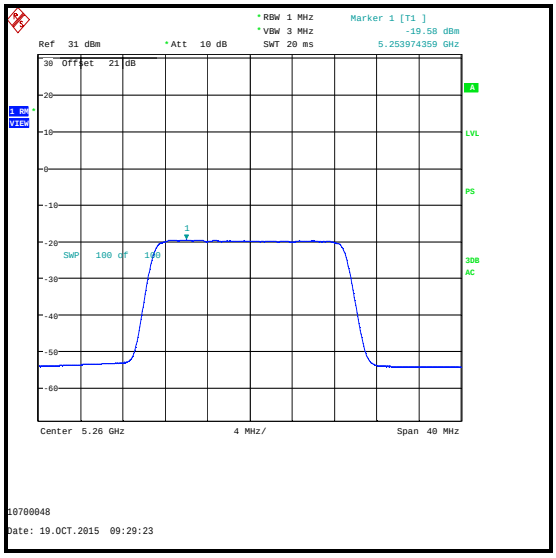


Top Channel

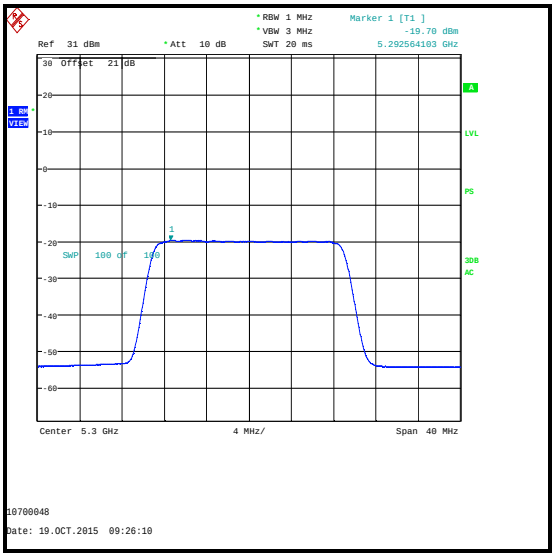
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 20 MHz Channel / BPSK

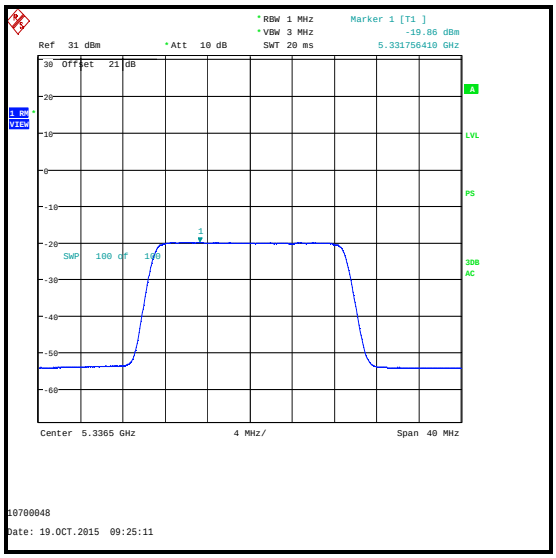
V Port



Bottom Channel



Middle Channel



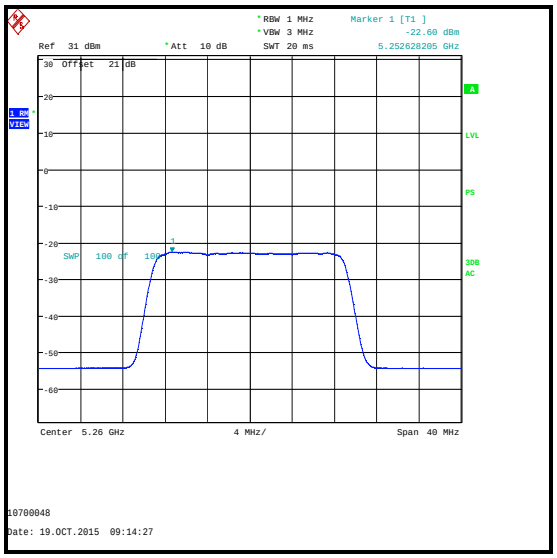
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

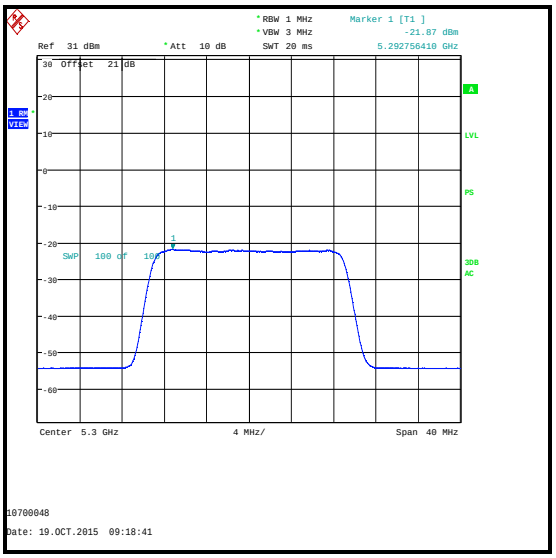
Results: 4' Parabolic Antenna / 20 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.6	-19.5	-17.8	-16.6	1.2	Complied
Middle	-21.9	-19.5	-17.5	-16.6	0.9	Complied
Top	-22.0	-19.8	-17.8	-16.6	1.2	Complied

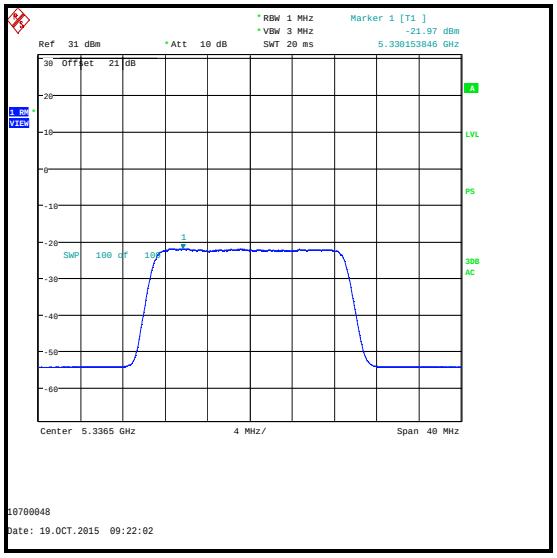
H Port



Bottom Channel



Middle Channel

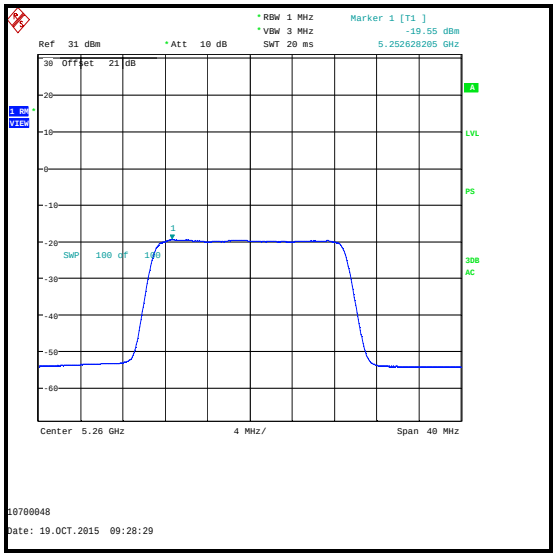


Top Channel

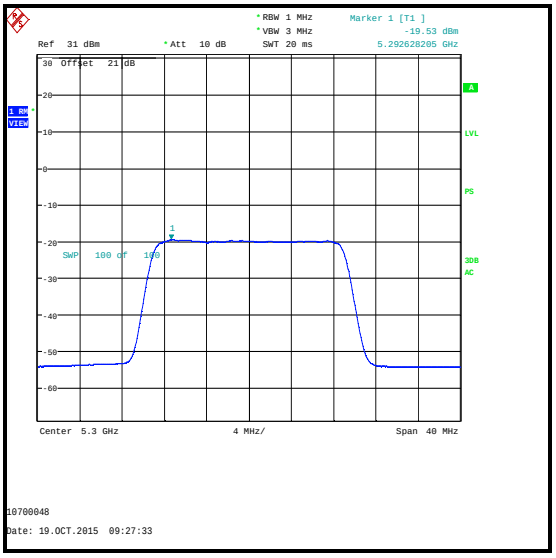
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 20 MHz Channel / 256QAM

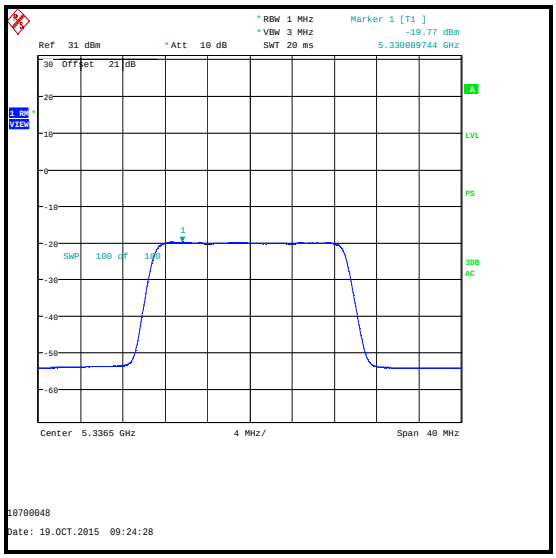
V Port



Bottom Channel



Middle Channel



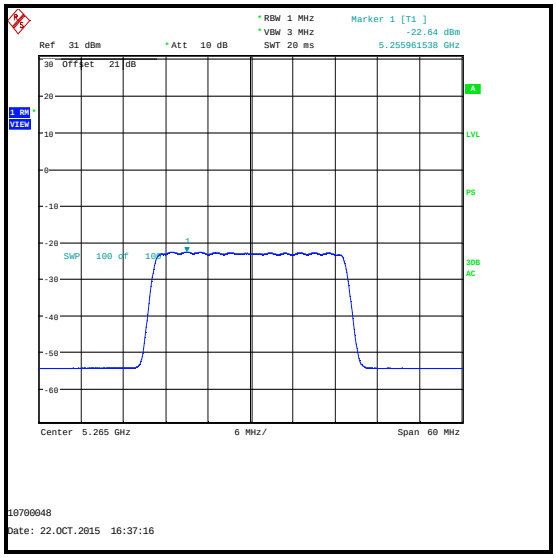
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

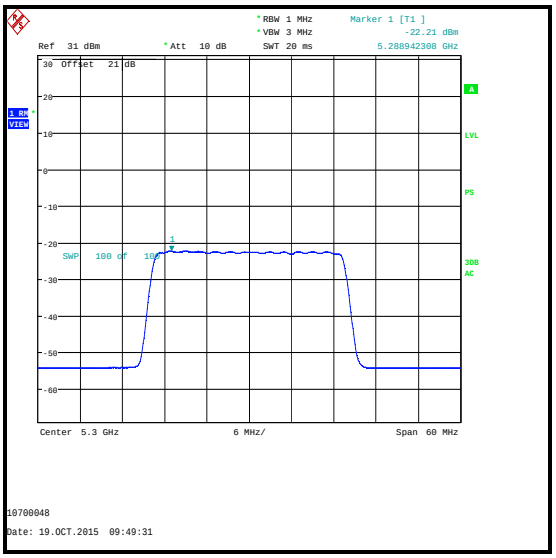
Results: 4' Parabolic Antenna / 30 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.6	-20.0	-18.1	-16.6	1.5	Complied
Middle	-22.2	-19.8	-17.8	-16.6	1.2	Complied
Top	-25.6	-23.3	-21.3	-16.6	4.7	Complied

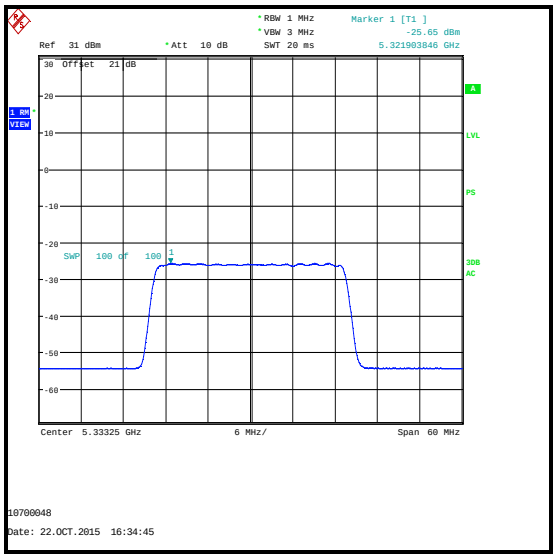
H Port



Bottom Channel



Middle Channel

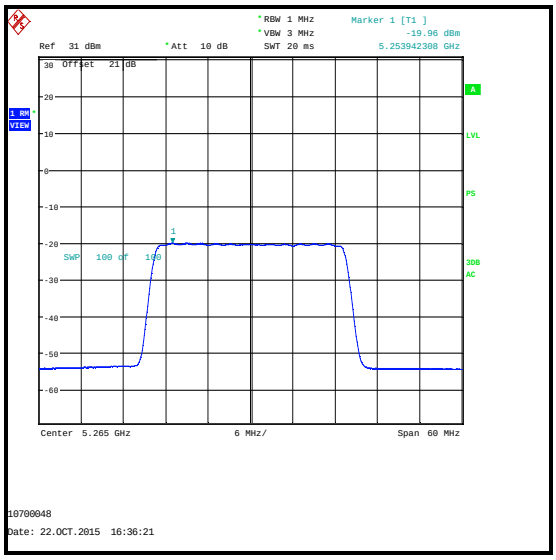


Top Channel

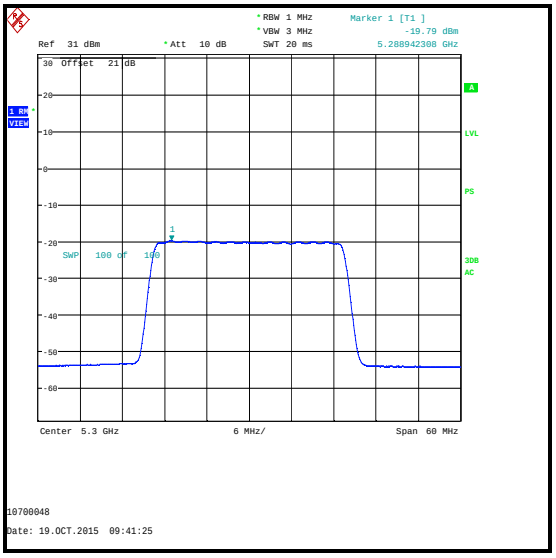
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 30 MHz Channel / BPSK

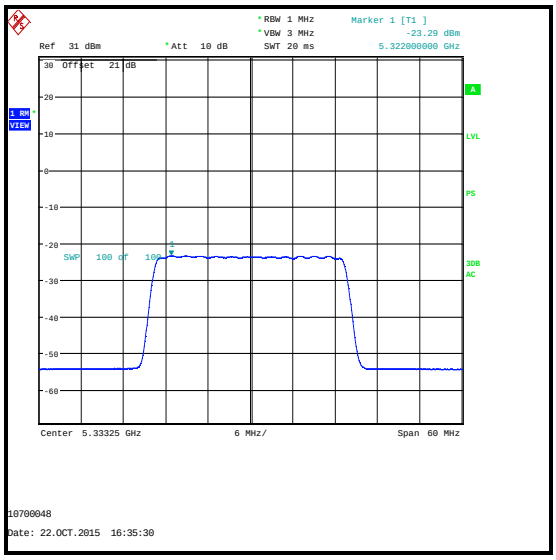
V Port



Bottom Channel



Middle Channel



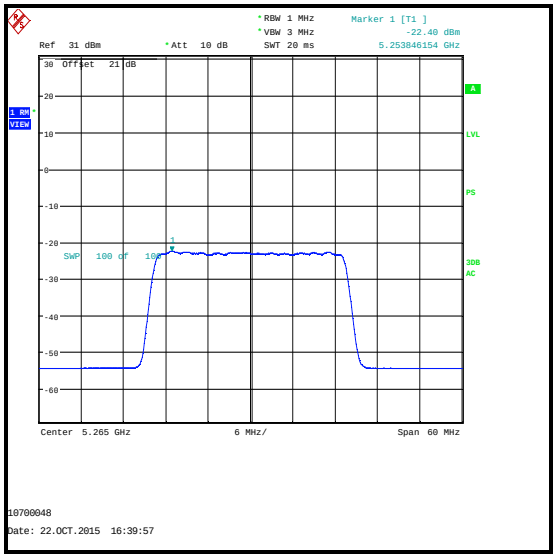
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) continued)

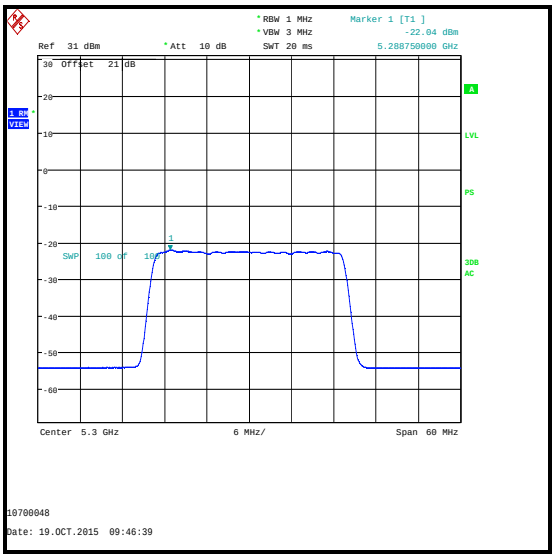
Results: 4' Parabolic Antenna / 30 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-22.4	-19.6	-17.8	-16.6	1.2	Complied
Middle	-22.0	-19.7	-17.7	-16.6	1.1	Complied
Top	-25.5	-22.8	-20.9	-16.6	4.3	Complied

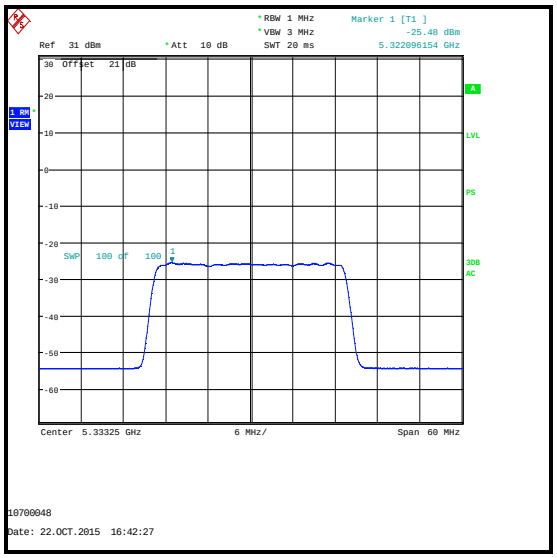
H Port



Bottom Channel



Middle Channel

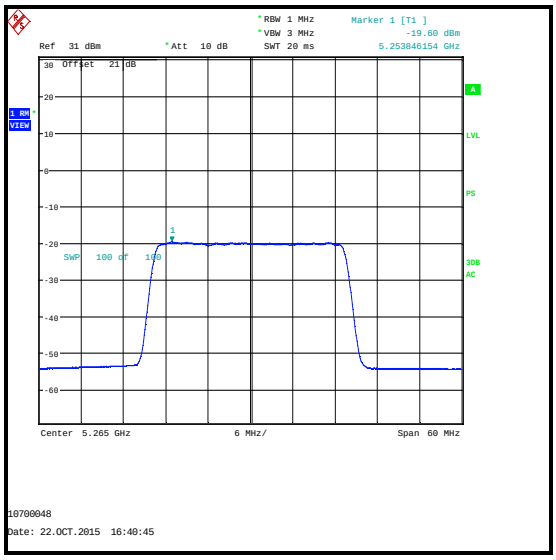


Top Channel

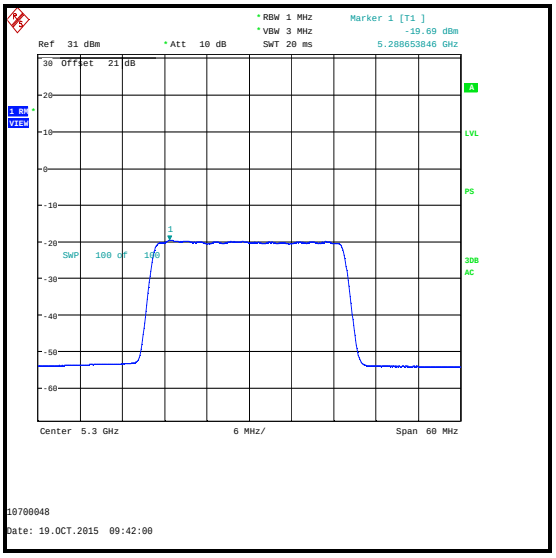
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 30 MHz Channel / 256QAM

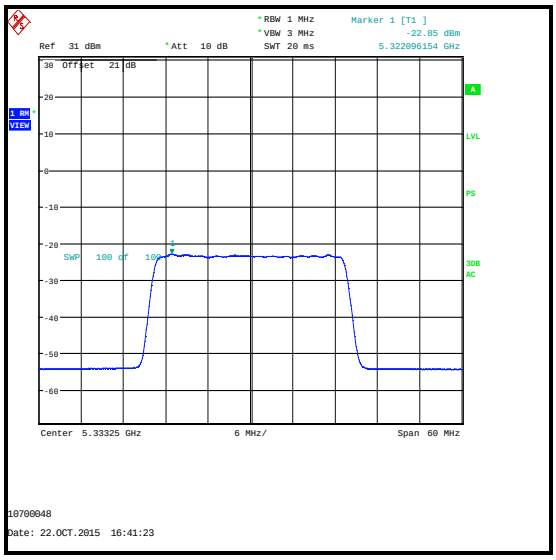
V Port



Bottom Channel



Middle Channel



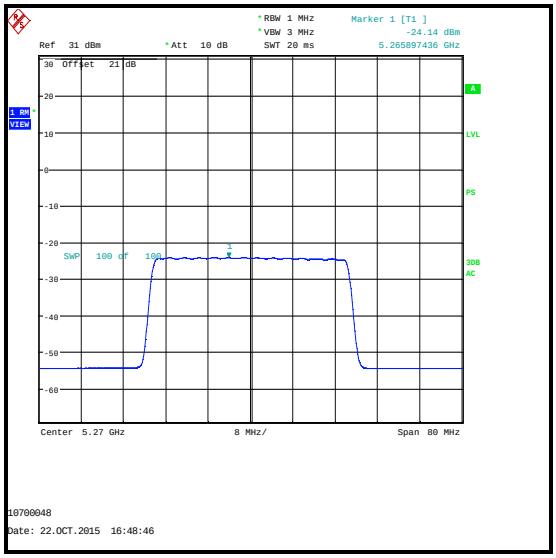
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

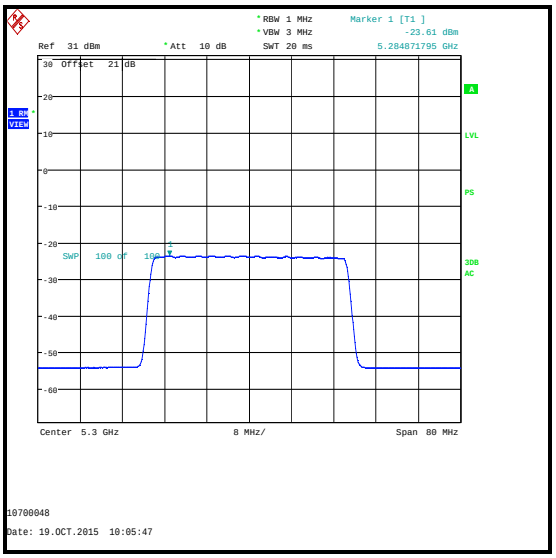
Results: 4' Parabolic Antenna / 40 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-24.1	-21.2	-19.4	-16.6	2.8	Complied
Middle	-23.6	-21.2	-19.2	-16.6	2.6	Complied
Top	-27.0	-24.4	-22.5	-16.6	5.9	Complied

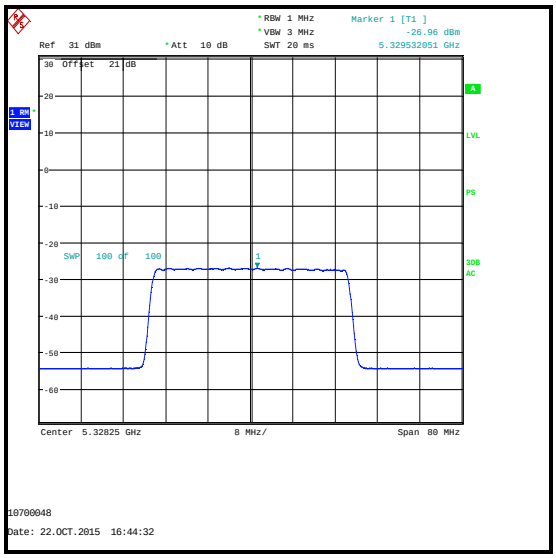
H Port



Bottom Channel



Middle Channel

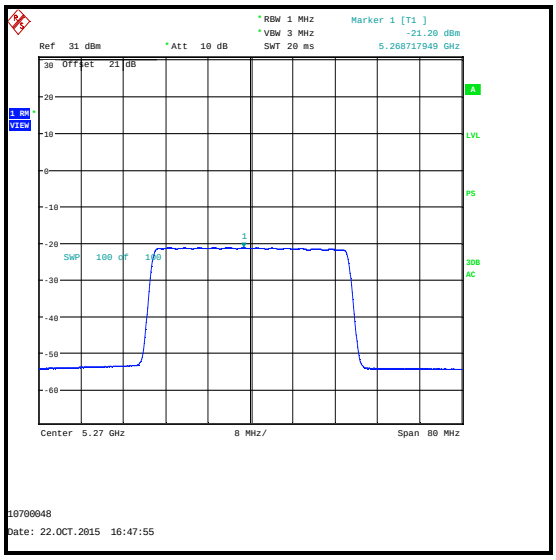


Top Channel

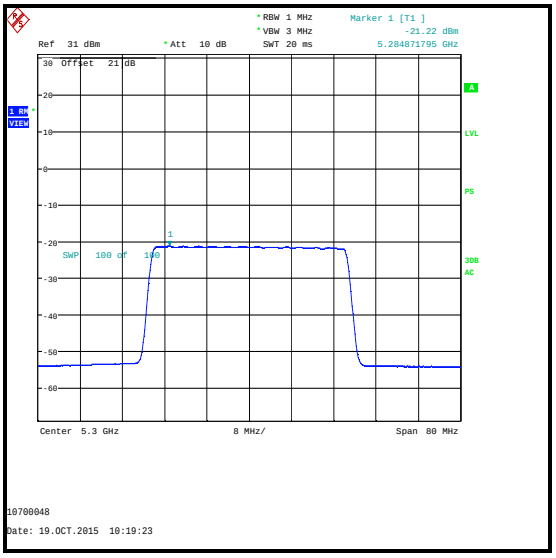
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 40 MHz Channel / BPSK

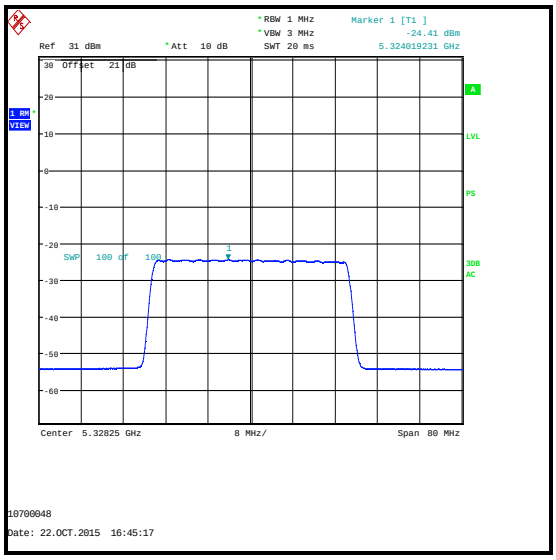
V Port



Bottom Channel



Middle Channel



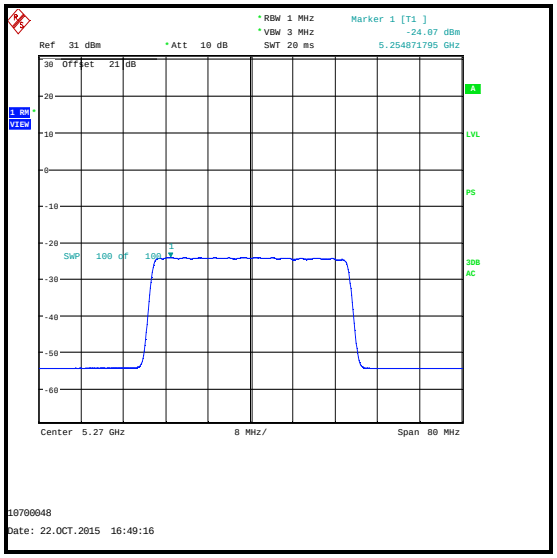
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

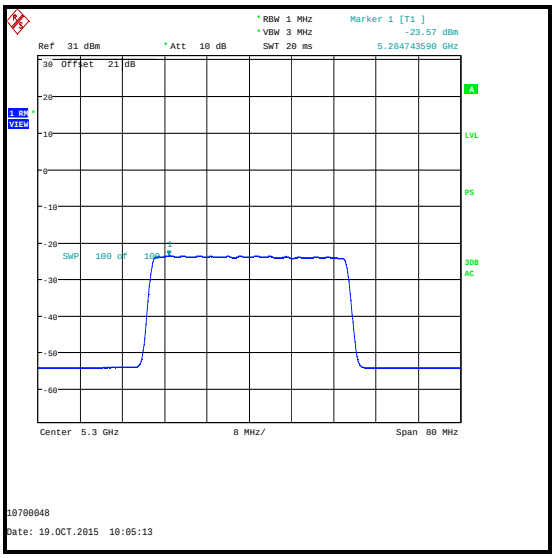
Results: 4' Parabolic Antenna / 40 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-24.1	-21.1	-19.3	-16.6	2.7	Complied
Middle	-23.6	-21.2	-19.2	-16.6	2.6	Complied
Top	-26.9	-24.4	-22.5	-16.6	5.9	Complied

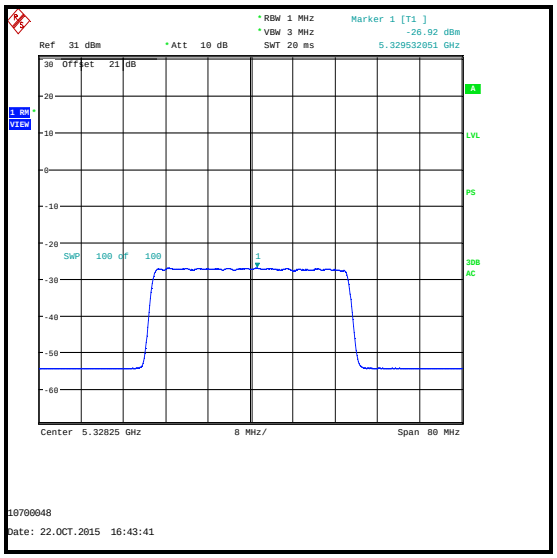
H Port



Bottom Channel



Middle Channel

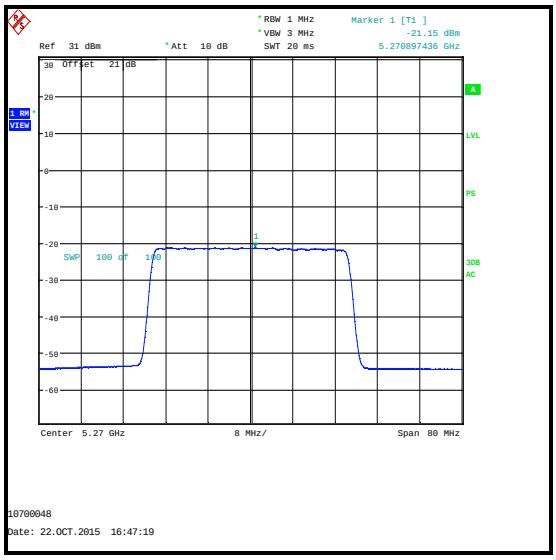


Top Channel

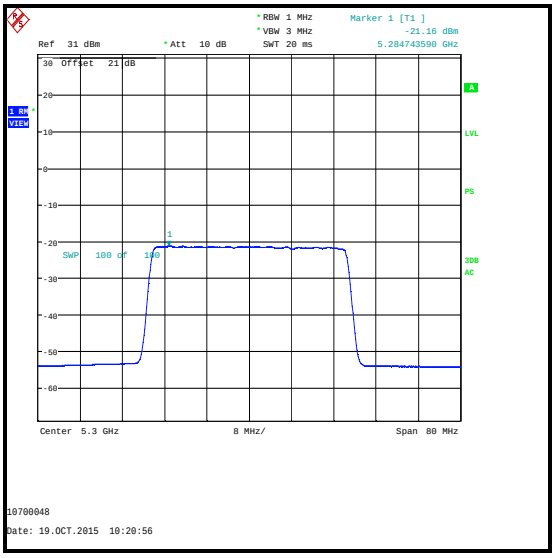
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 40 MHz Channel / 256QAM

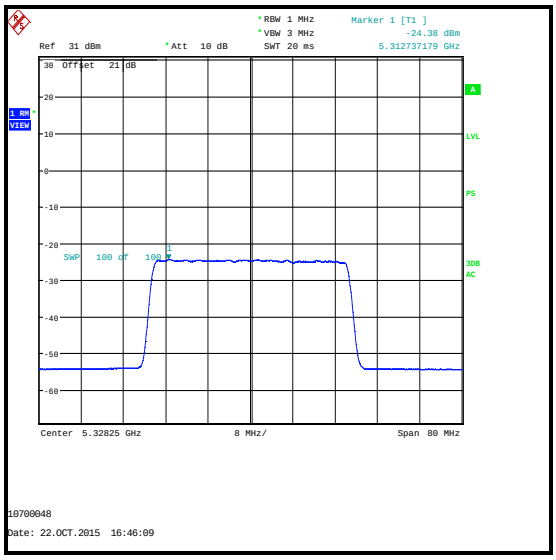
V Port



Bottom Channel



Middle Channel



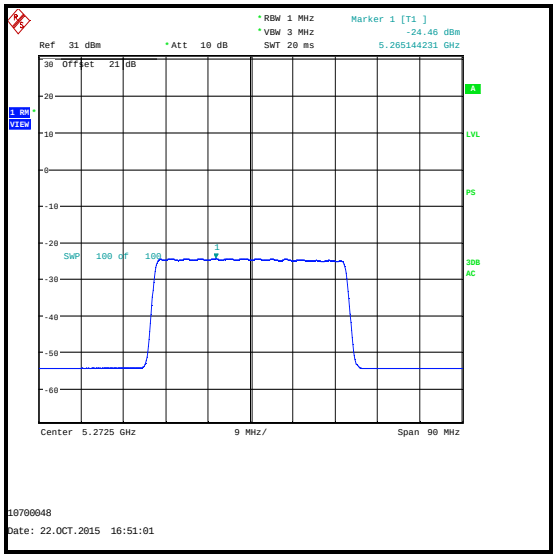
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

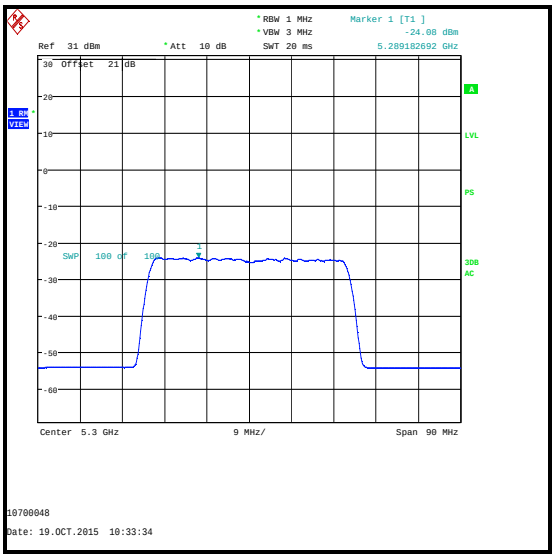
Results: 4' Parabolic Antenna / 45 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-24.5	-21.6	-19.8	-16.6	3.2	Complied
Middle	-24.1	-21.5	-19.6	-16.6	3.0	Complied
Top	-27.3	-24.6	-22.7	-16.6	6.1	Complied

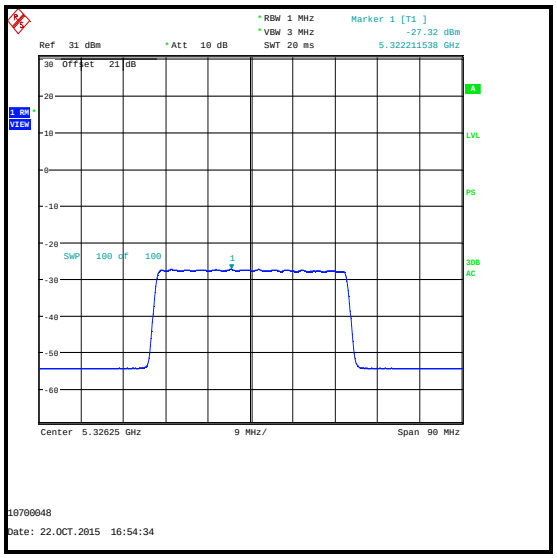
H Port



Bottom Channel



Middle Channel

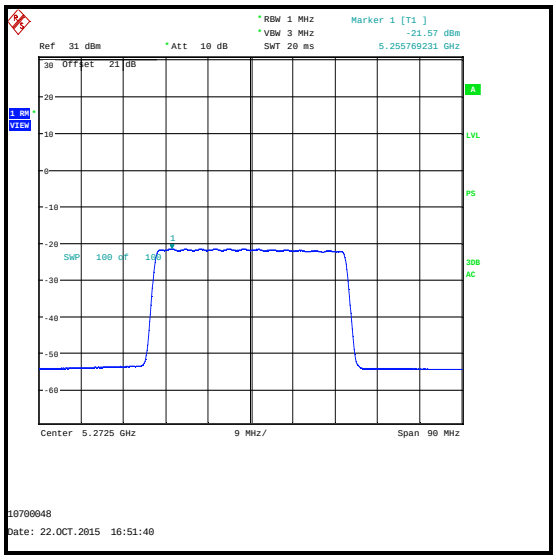


Top Channel

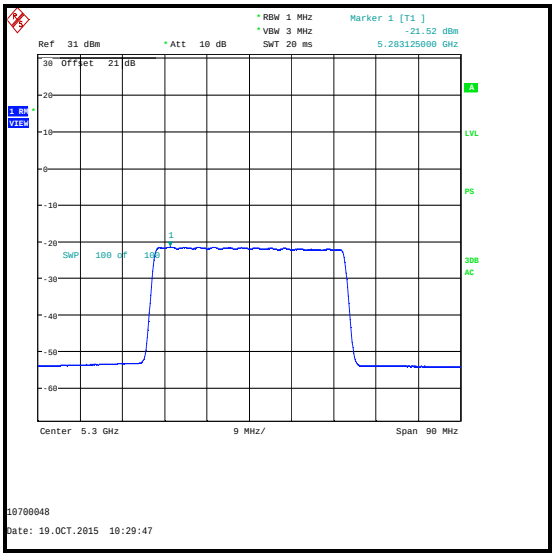
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 45 MHz Channel / BPSK

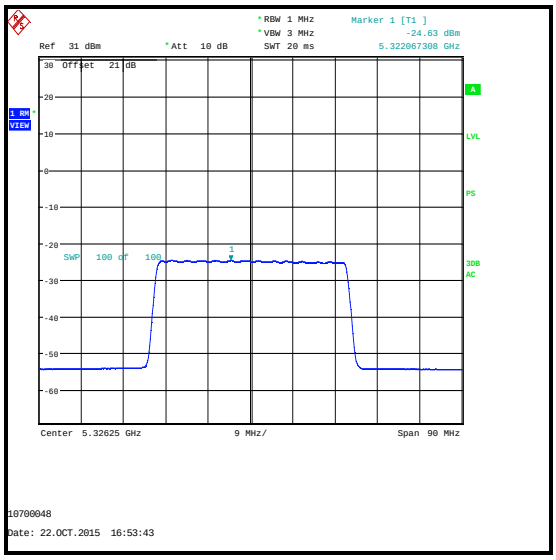
V Port



Bottom Channel



Middle Channel



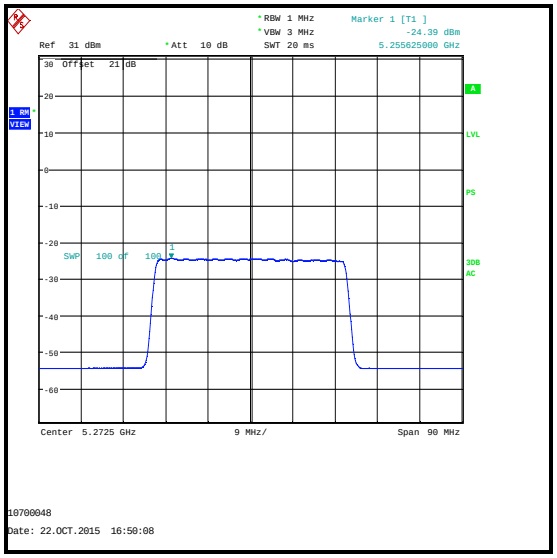
Top Channel

Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

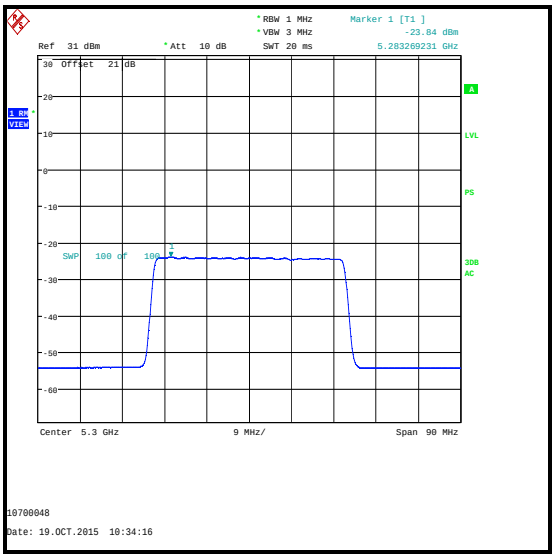
Results: 4' Parabolic Antenna / 45 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-24.4	-21.5	-19.7	-16.6	3.1	Complied
Middle	-23.8	-21.5	-19.5	-16.6	2.9	Complied
Top	-27.4	-24.6	-22.8	-16.6	6.2	Complied

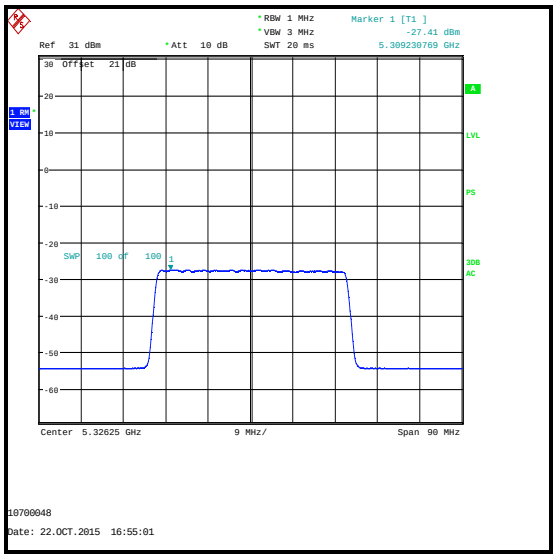
H Port



Bottom Channel



Middle Channel

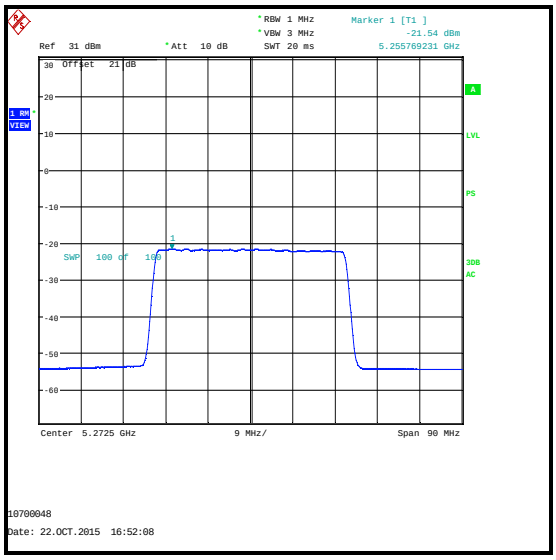


Top Channel

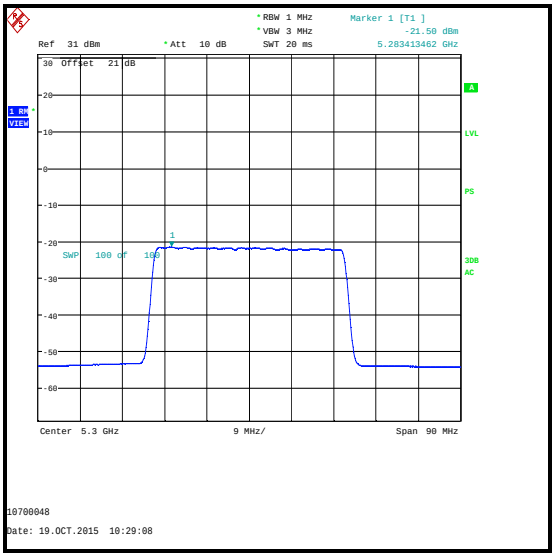
Transmitter Maximum Power Spectral Density (5.25-5.35 GHz Band) (continued)

Results: 4' Parabolic Antenna / 45 MHz Channel / 256QAM

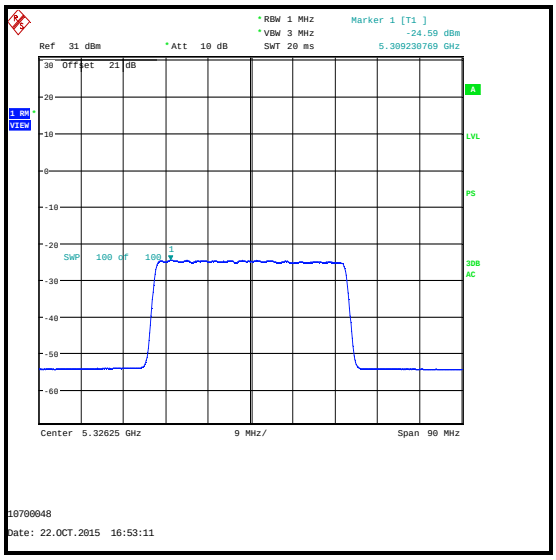
V Port



Bottom Channel



Middle Channel



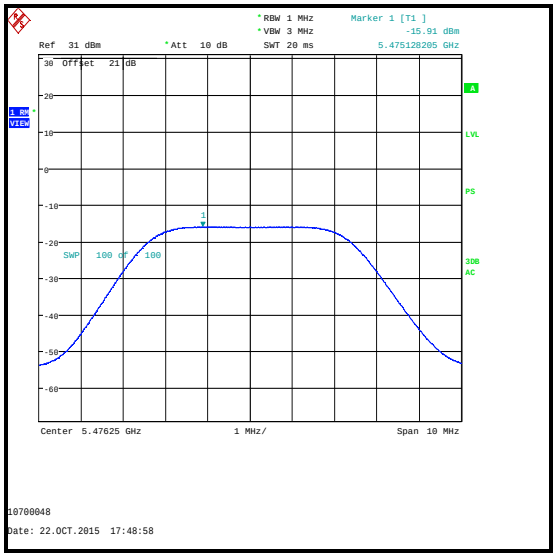
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

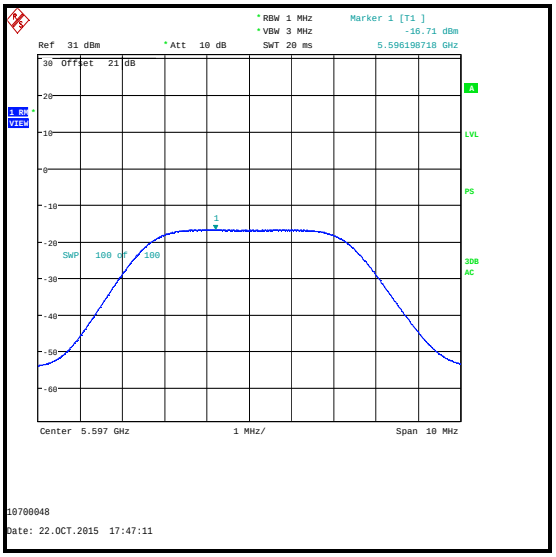
Results: 2' Parabolic Antenna / 5 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-15.9	-14.0	-11.8	-11.5	0.3	-11.8
Middle	-16.7	-14.1	-12.2	-11.5	0.7	-12.2
Top	-18.0	-13.0	-11.8	-11.5	0.3	-11.8

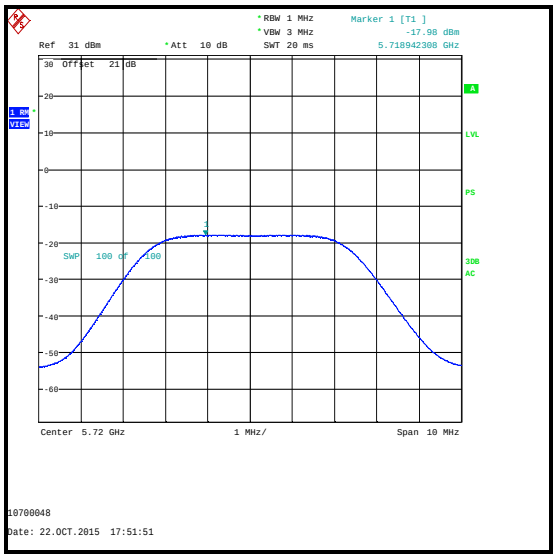
H Port



Bottom Channel



Middle Channel

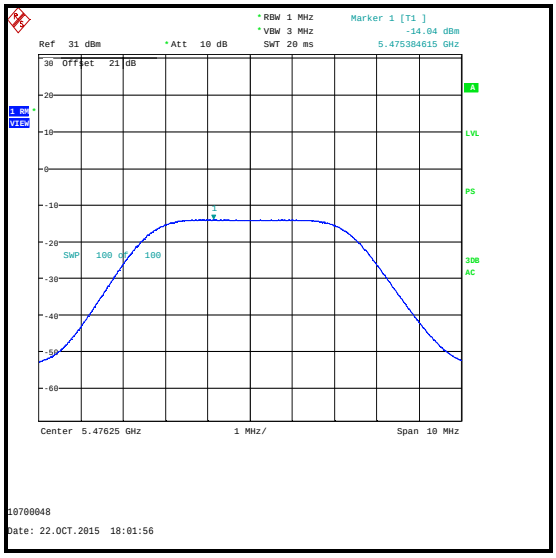


Top Channel

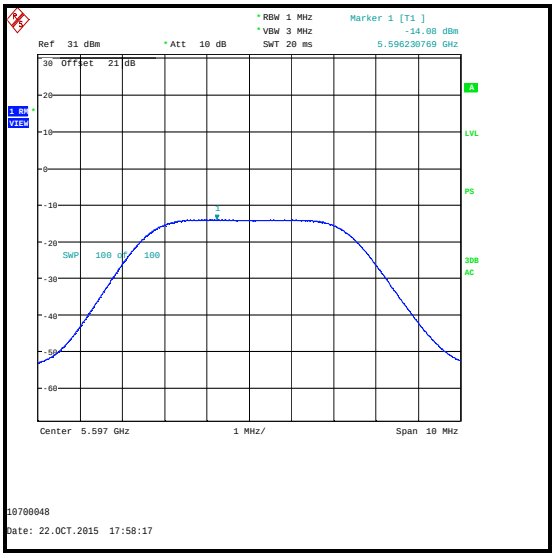
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 5 MHz Channel / BPSK

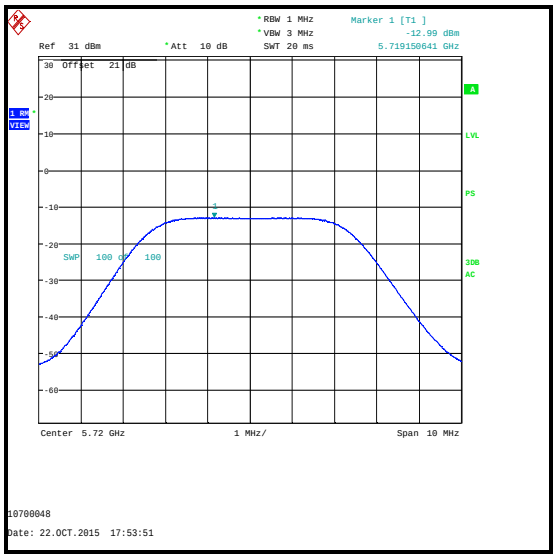
V Port



Bottom Channel



Middle Channel



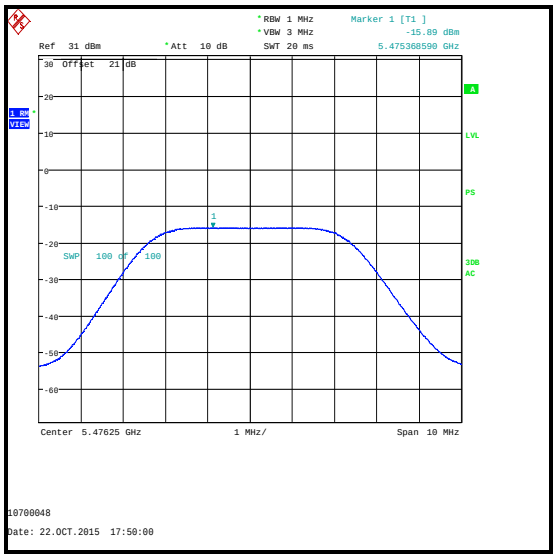
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

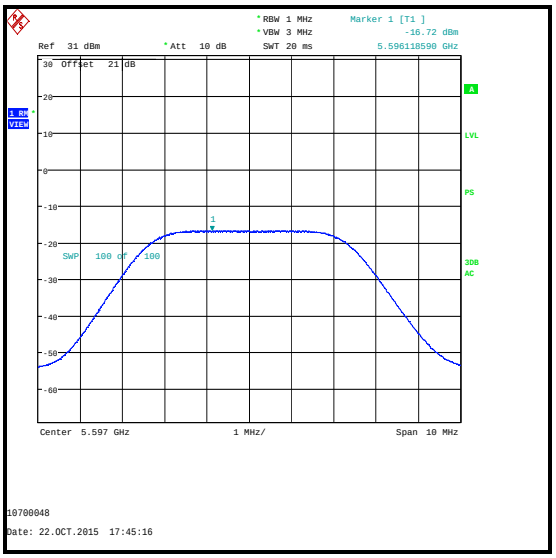
Results: 2' Parabolic Antenna / 5 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-15.9	-14.0	-11.8	-11.5	0.3	Complied
Middle	-16.7	-14.1	-12.2	-11.5	0.7	Complied
Top	-18.0	-13.0	-11.8	-11.5	0.3	Complied

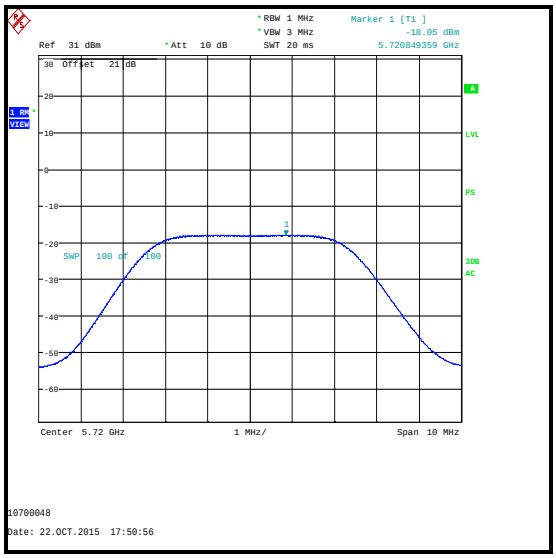
H Port



Bottom Channel



Middle Channel

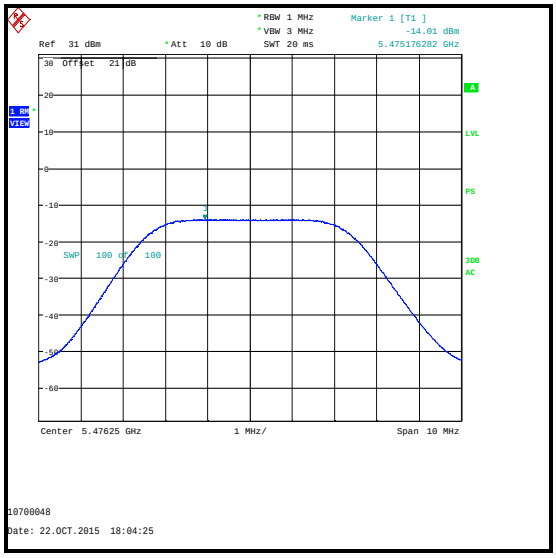


Top Channel

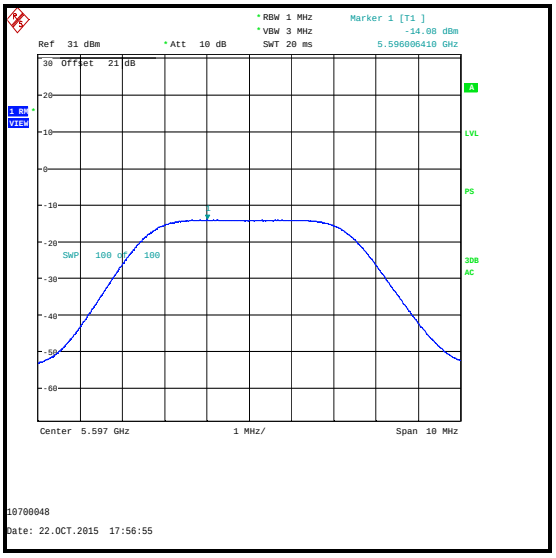
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 5 MHz Channel / 256QAM

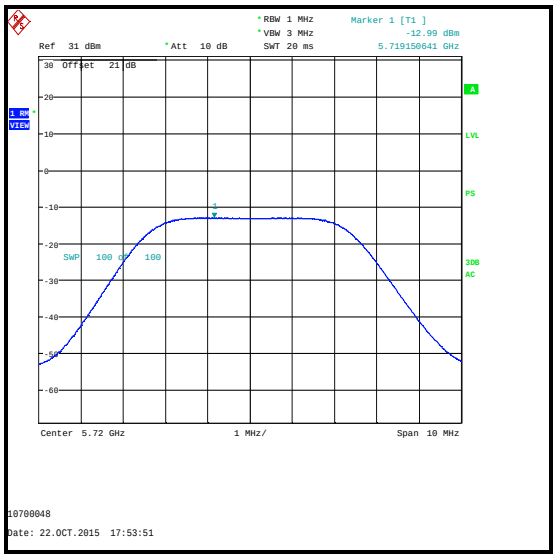
V Port



Bottom Channel



Middle Channel



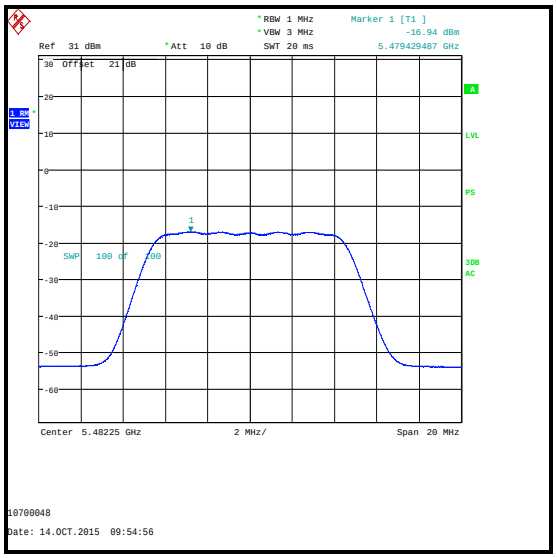
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

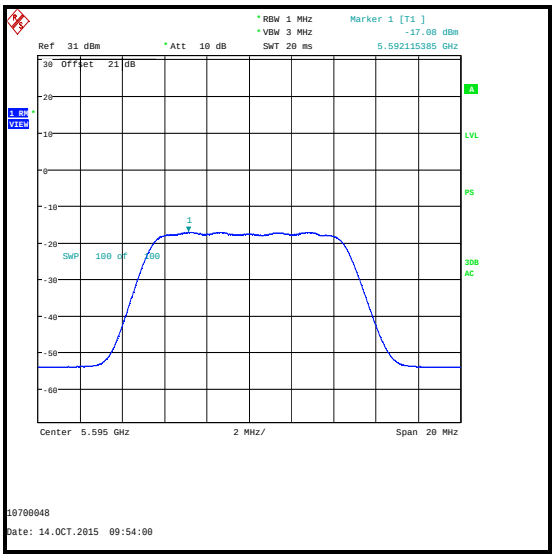
Results: 2' Parabolic Antenna / 10 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-16.9	-14.1	-12.3	-11.5	0.8	Complied
Middle	-17.1	-14.8	-12.8	-11.5	1.3	Complied
Top	-18.2	-13.9	-12.5	-11.5	1.0	Complied

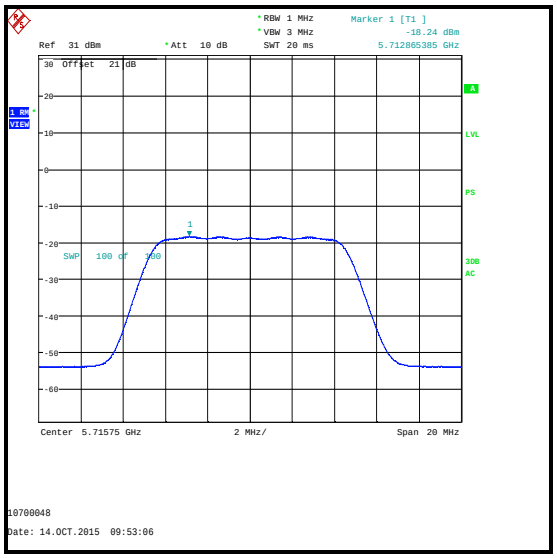
H Port



Bottom Channel



Middle Channel

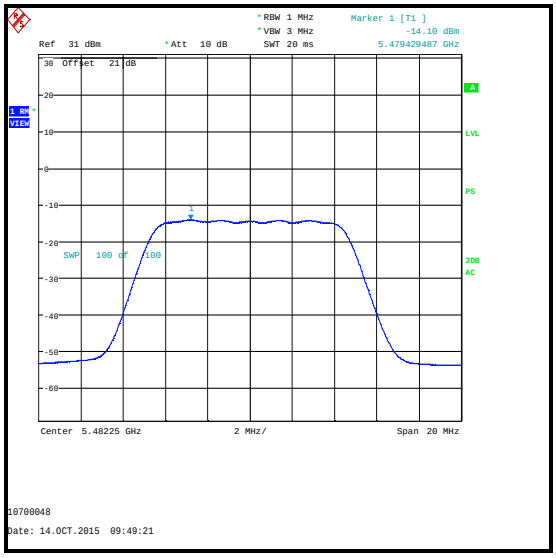


Top Channel

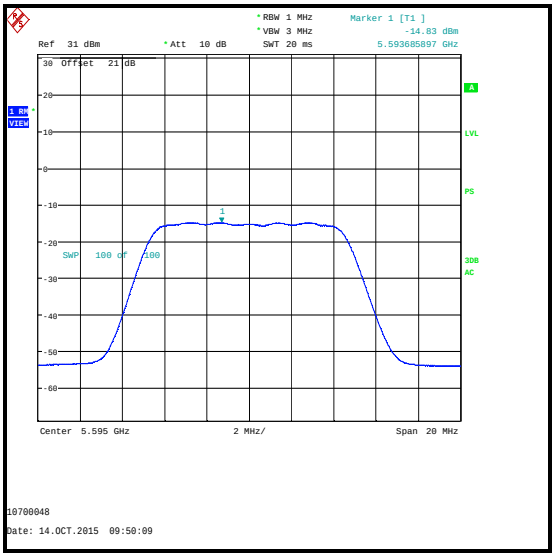
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 10 MHz Channel / BPSK

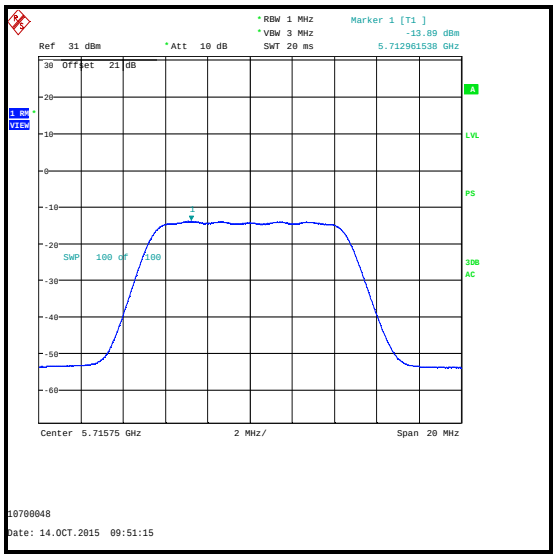
V Port



Bottom Channel



Middle Channel



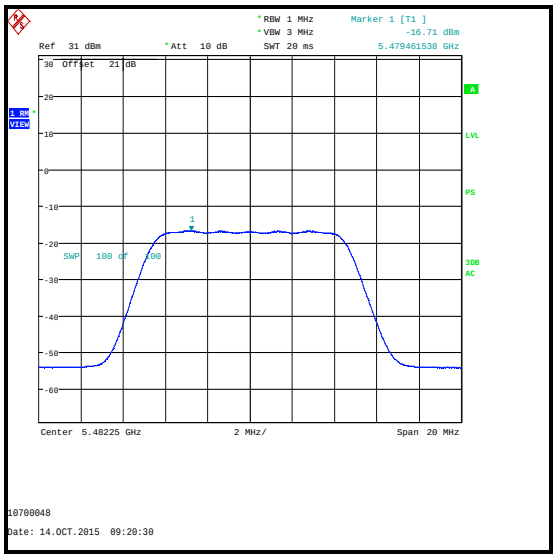
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

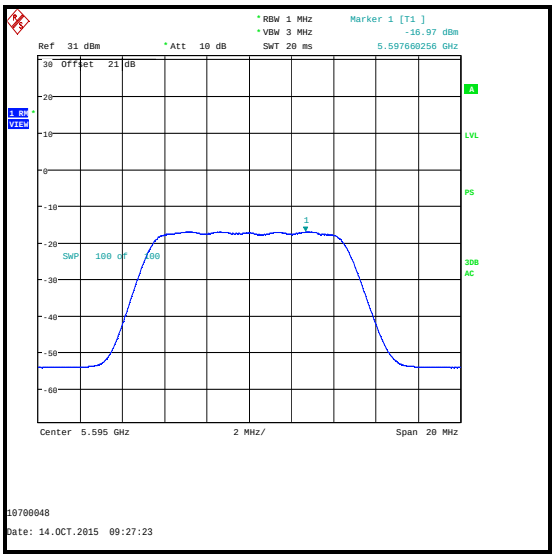
Results: 2' Parabolic Antenna / 10 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-16.7	-14.1	-12.2	-11.5	0.7	Complied
Middle	-17.0	-14.9	-12.8	-11.5	1.3	Complied
Top	-18.2	-13.9	-12.5	-11.5	1.0	Complied

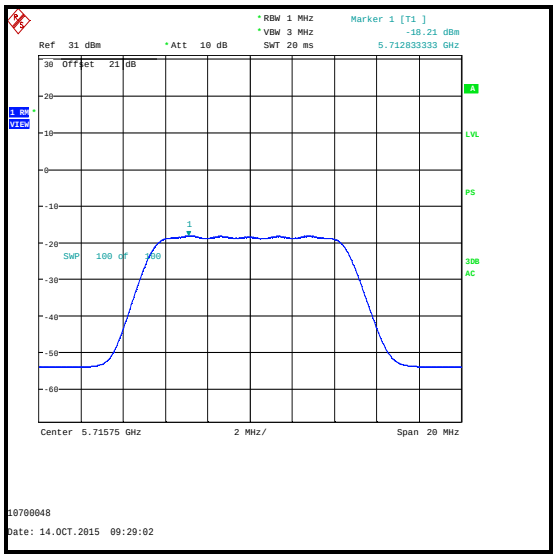
H Port



Bottom Channel



Middle Channel

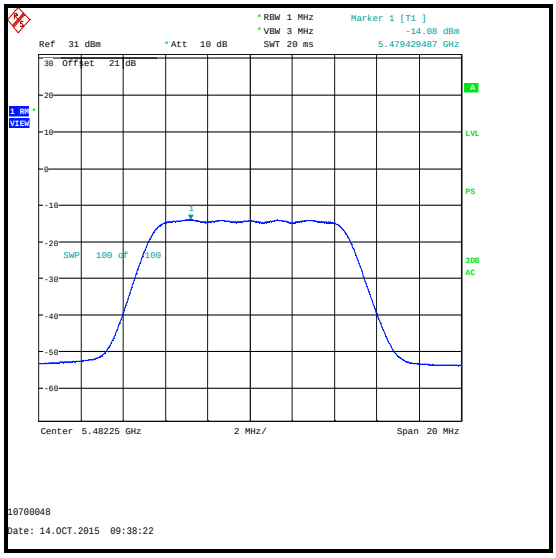


Top Channel

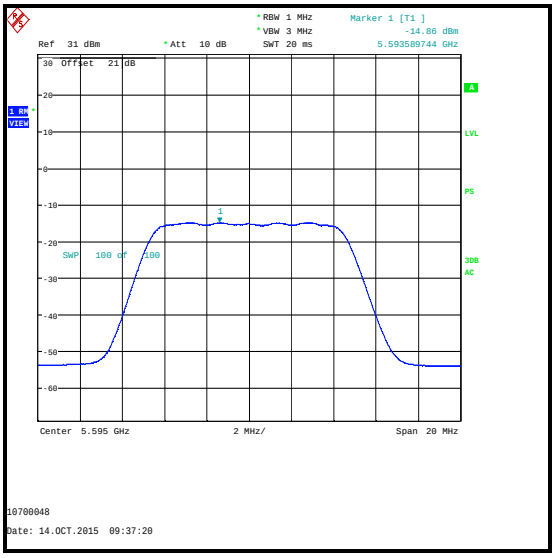
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 10 MHz Channel / 256QAM

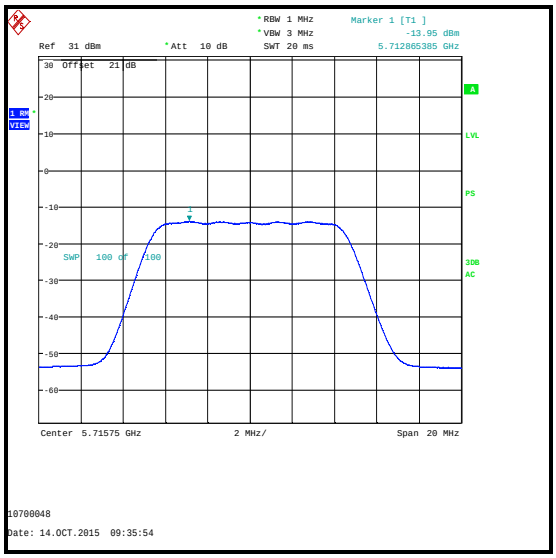
V Port



Bottom Channel



Middle Channel



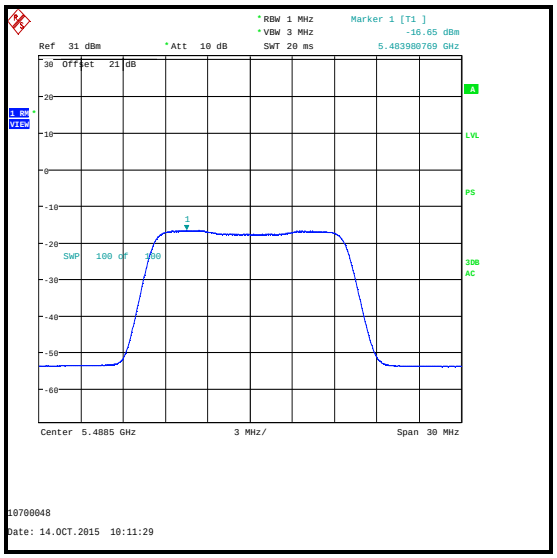
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

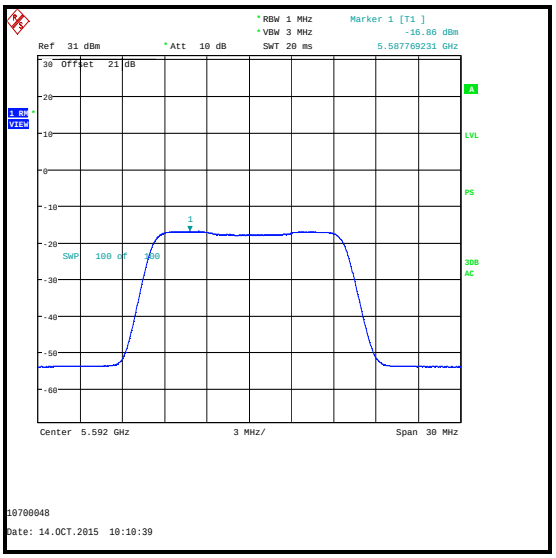
Results: 2' Parabolic Antenna / 15 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-16.6	-13.8	-12.0	-11.5	0.5	Complied
Middle	-16.9	-14.4	-12.5	-11.5	1.0	Complied
Top	-20.7	-16.1	-14.8	-11.5	3.3	Complied

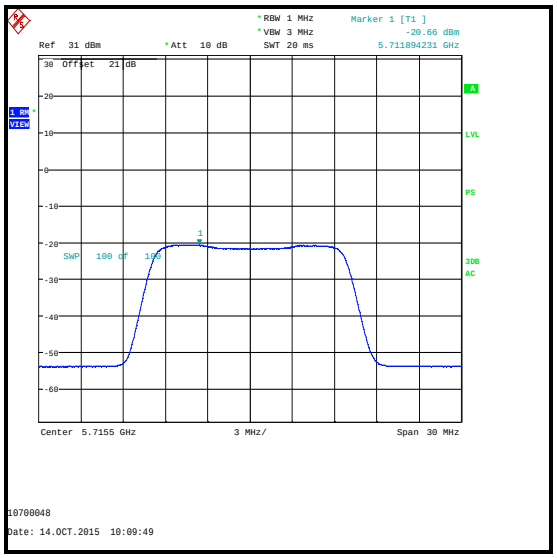
H Port



Bottom Channel



Middle Channel

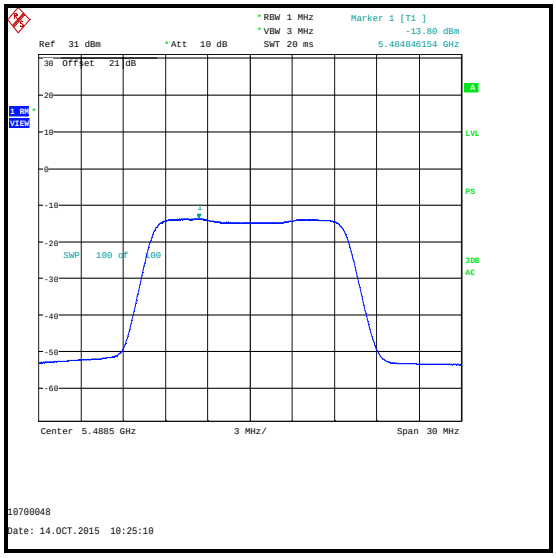


Top Channel

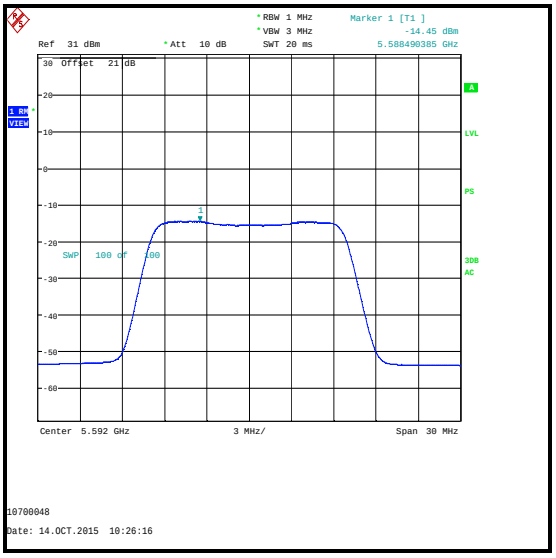
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 15 MHz Channel / BPSK

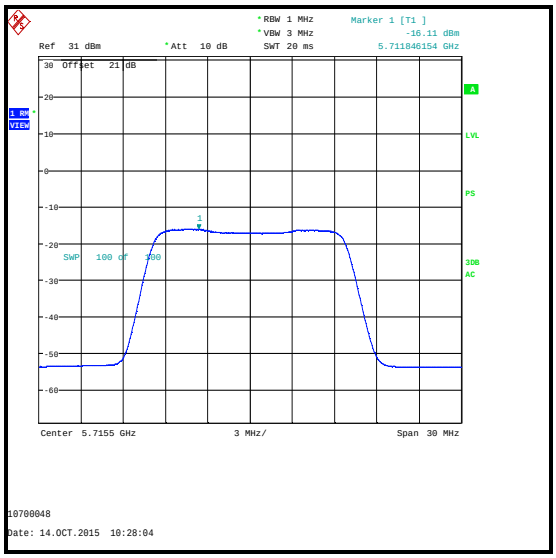
V Port



Bottom Channel



Middle Channel



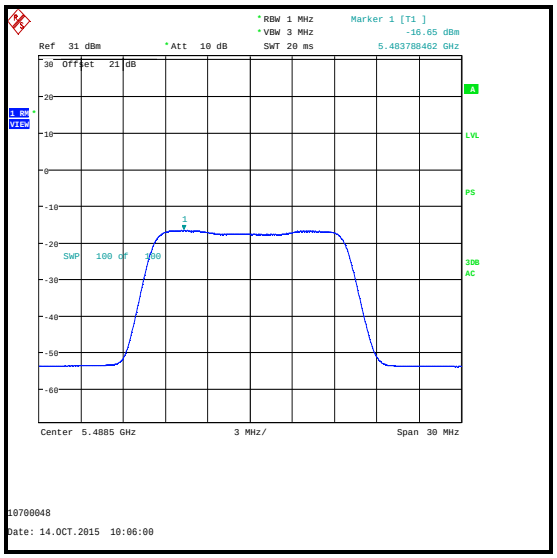
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

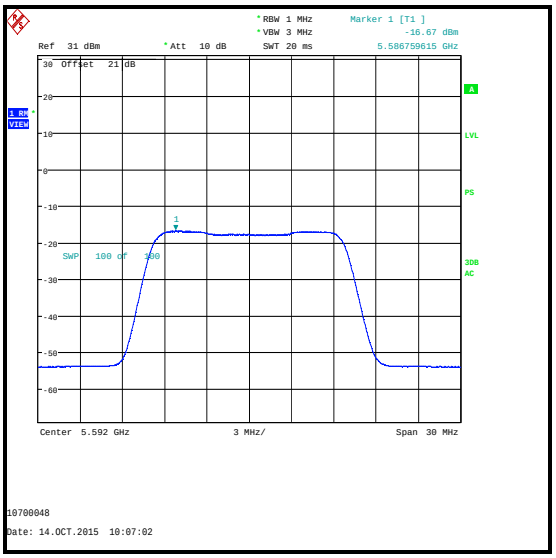
Results: 2' Parabolic Antenna / 15 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-16.6	-13.7	-11.9	-11.5	0.4	Complied
Middle	-16.7	-14.4	-12.4	-11.5	0.9	Complied
Top	-20.6	-16.0	-14.7	-11.5	3.2	Complied

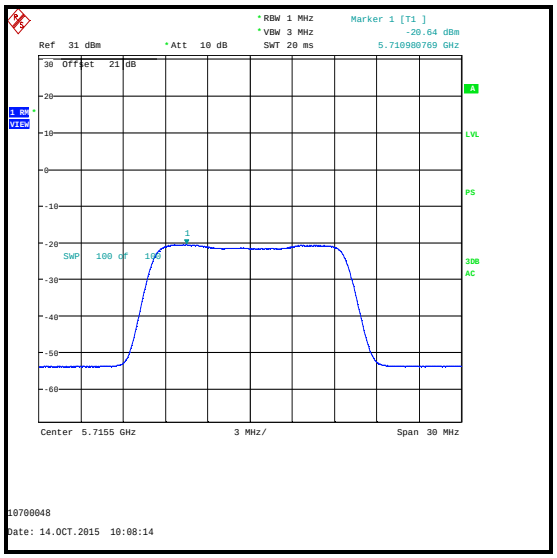
H Port



Bottom Channel



Middle Channel

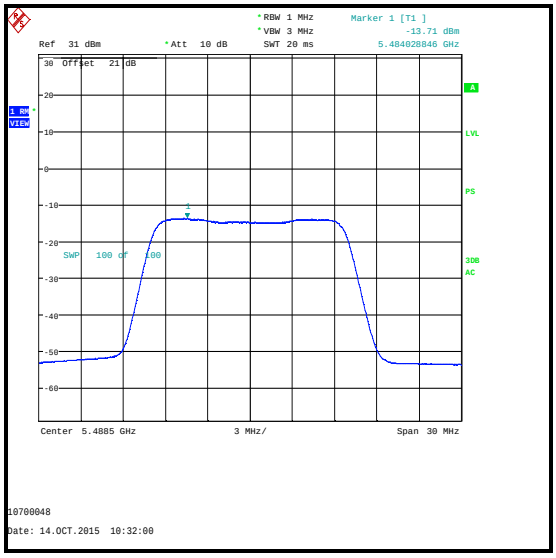


Top Channel

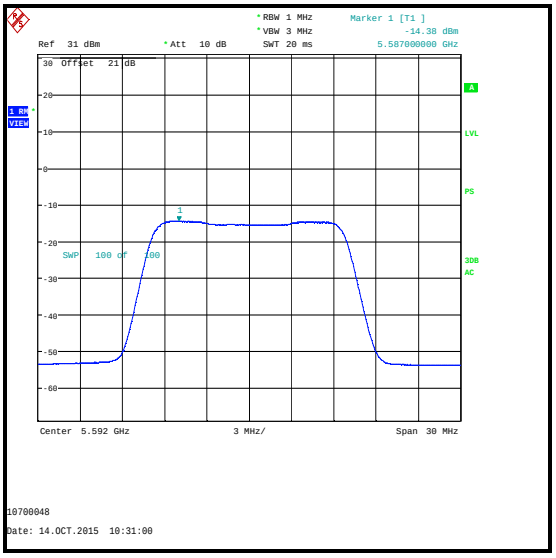
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 15 MHz Channel / 256QAM

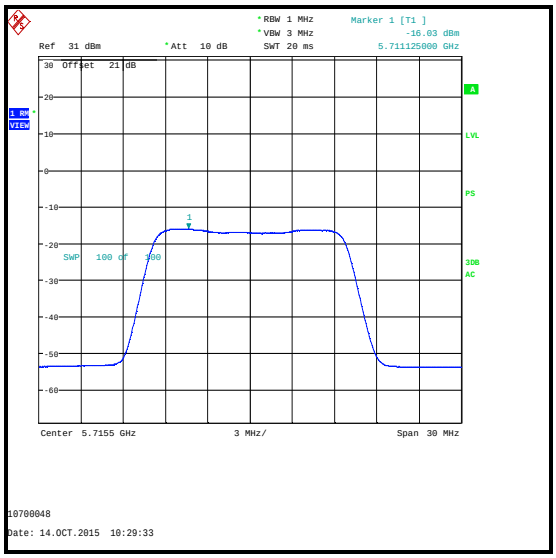
V Port



Bottom Channel



Middle Channel



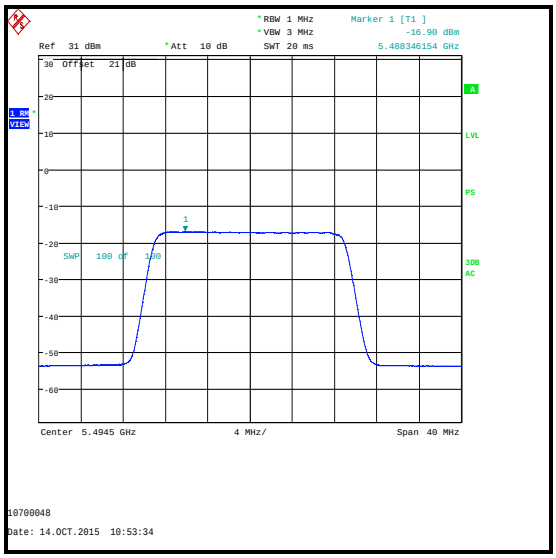
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

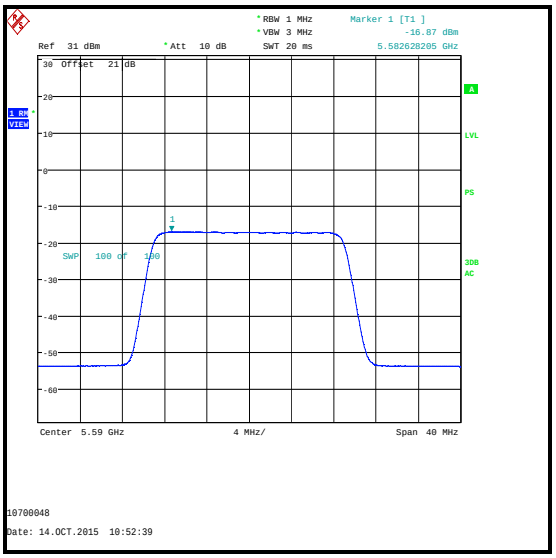
Results: 2' Parabolic Antenna / 20 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-16.9	-14.1	-12.3	-11.5	0.8	Complied
Middle	-16.9	-14.7	-12.7	-11.5	1.2	Complied
Top	-20.9	-16.3	-15.0	-11.5	3.5	Complied

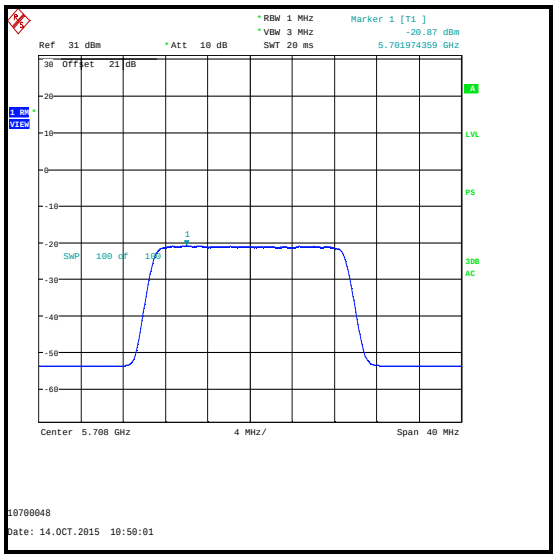
H Port



Bottom Channel



Middle Channel

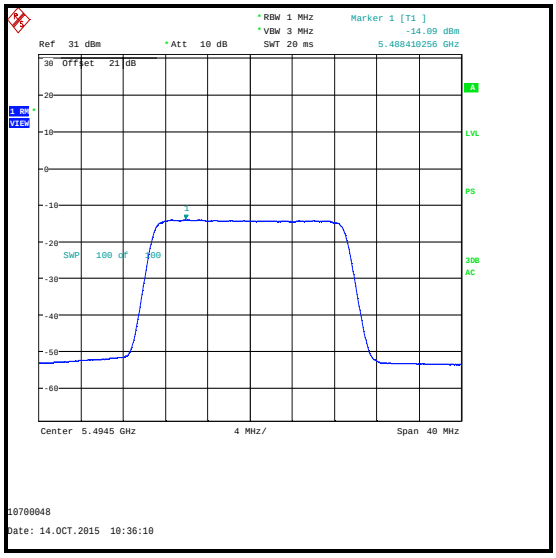


Top Channel

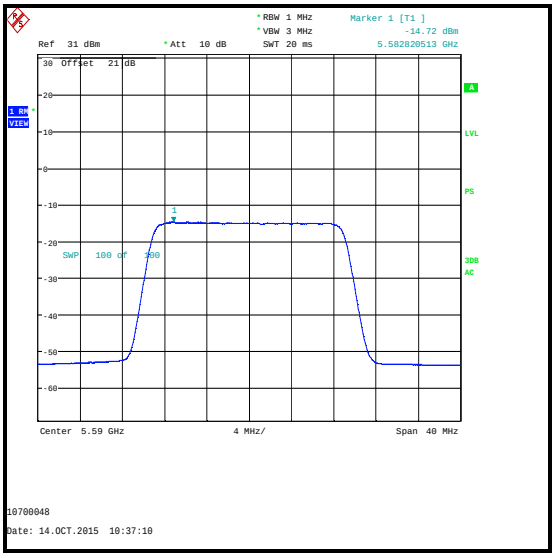
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 20 MHz Channel / BPSK

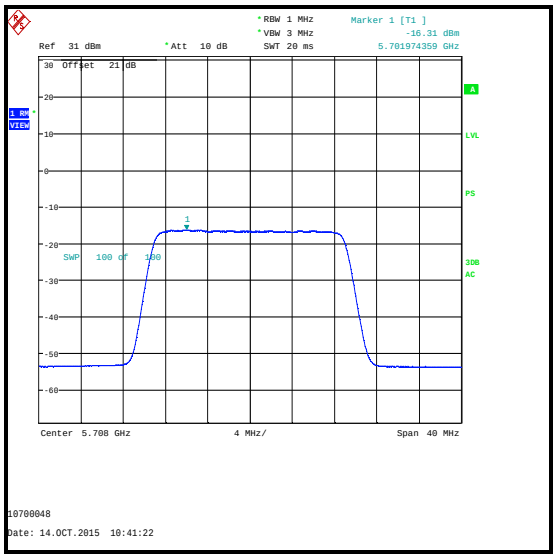
V Port



Bottom Channel



Middle Channel



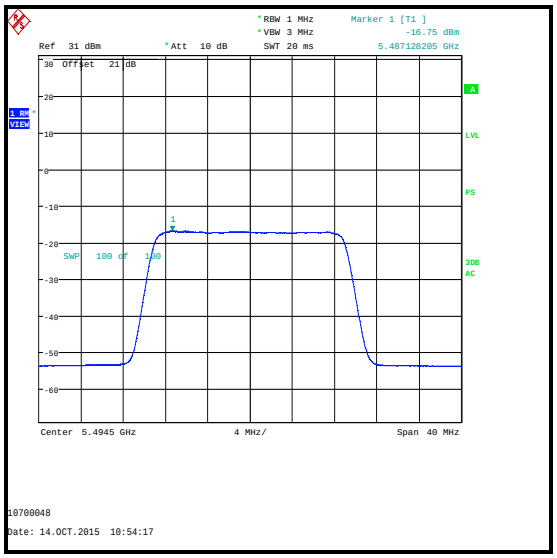
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

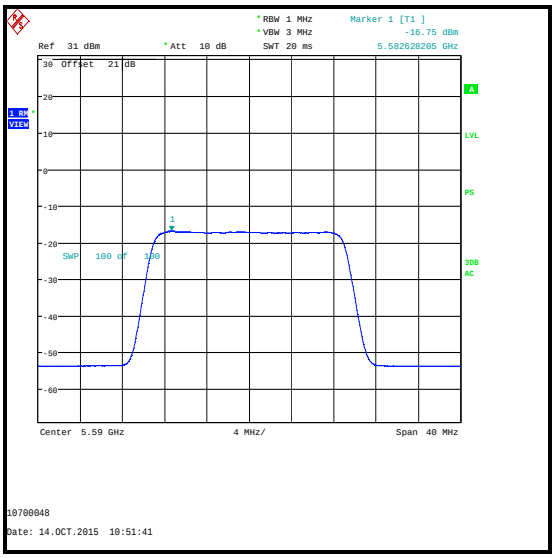
Results: 2' Parabolic Antenna / 20 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-16.7	-13.9	-12.1	-11.5	0.6	Complied
Middle	-16.7	-14.5	-12.5	-11.5	1.0	Complied
Top	-20.9	-16.2	-14.9	-11.5	3.4	Complied

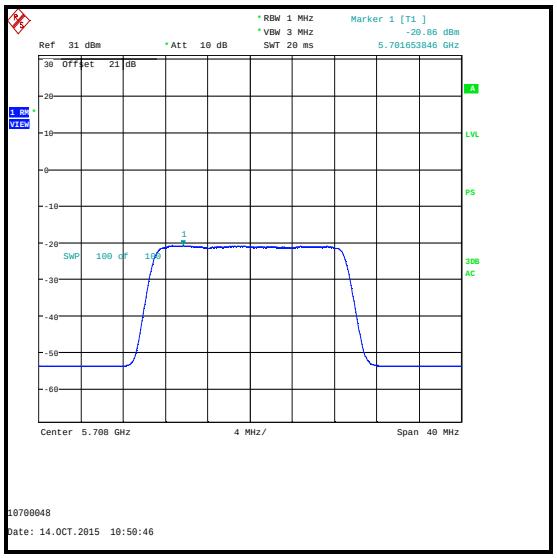
H Port



Bottom Channel



Middle Channel

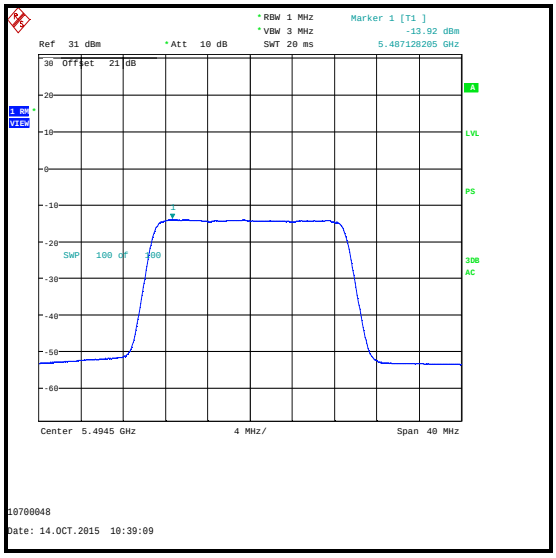


Top Channel

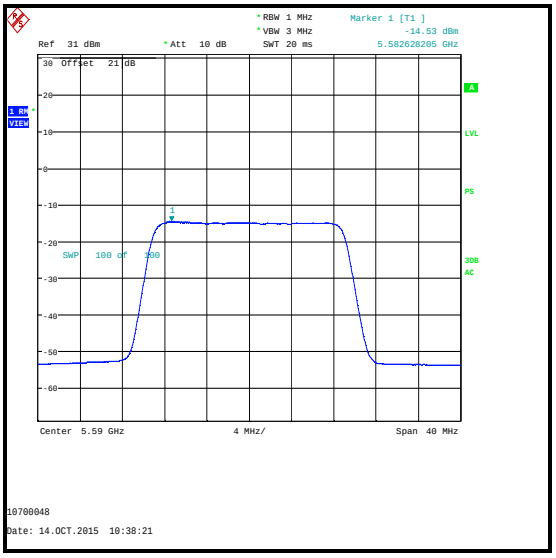
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 20 MHz Channel / 256QAM

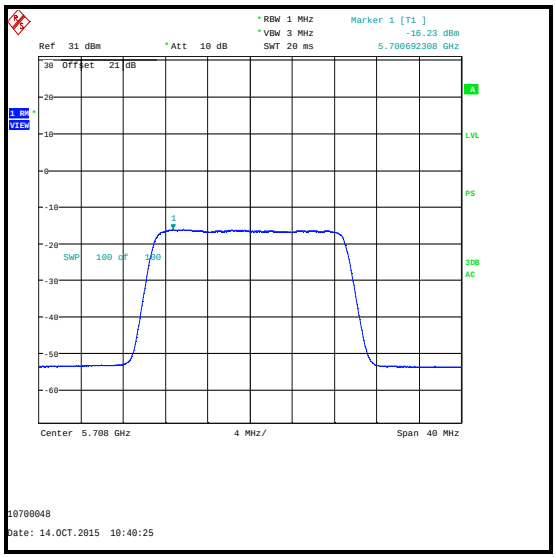
V Port



Bottom Channel



Middle Channel



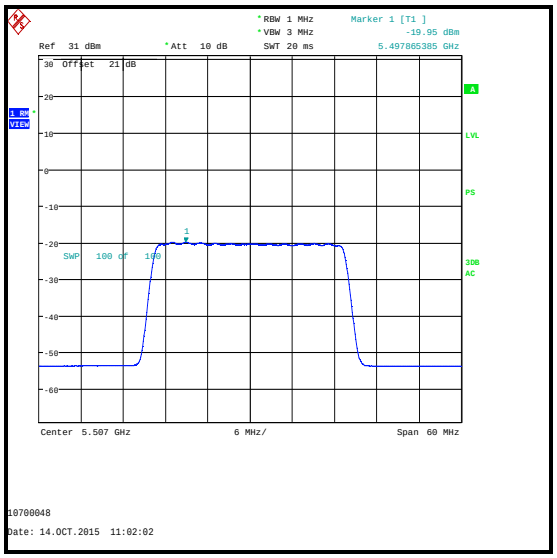
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

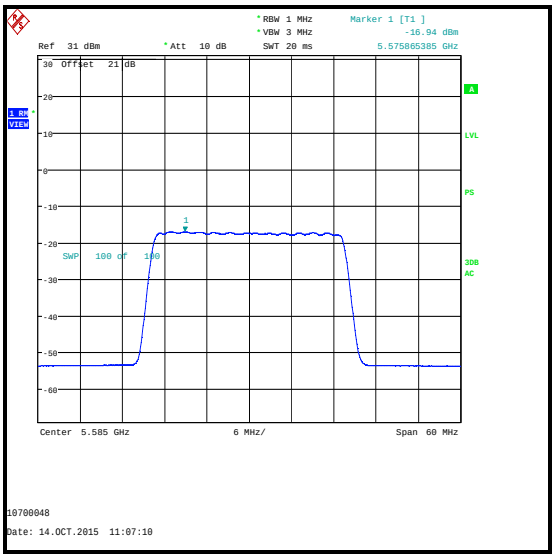
Results: 2' Parabolic Antenna / 30 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-19.9	-17.4	-15.5	-11.5	4.0	Complied
Middle	-16.9	-15.3	-13.0	-11.5	1.5	Complied
Top	-21.6	-17.3	-15.9	-11.5	4.4	Complied

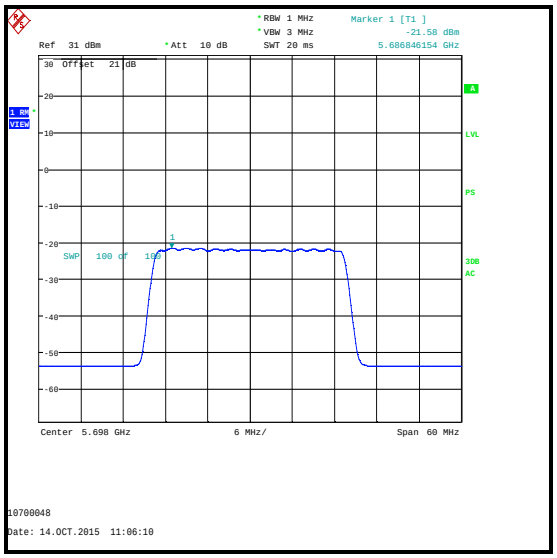
H Port



Bottom Channel



Middle Channel

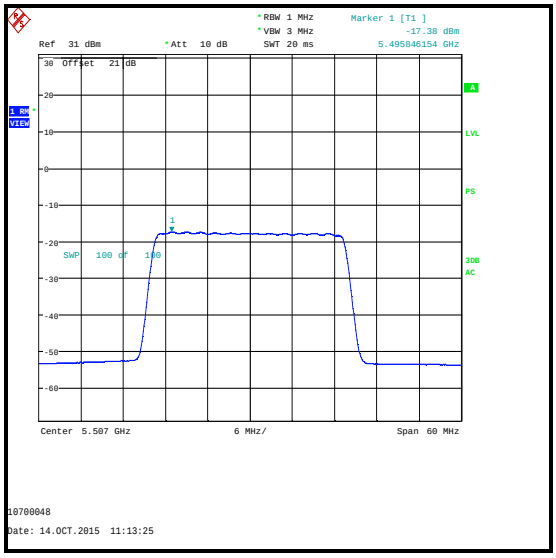


Top Channel

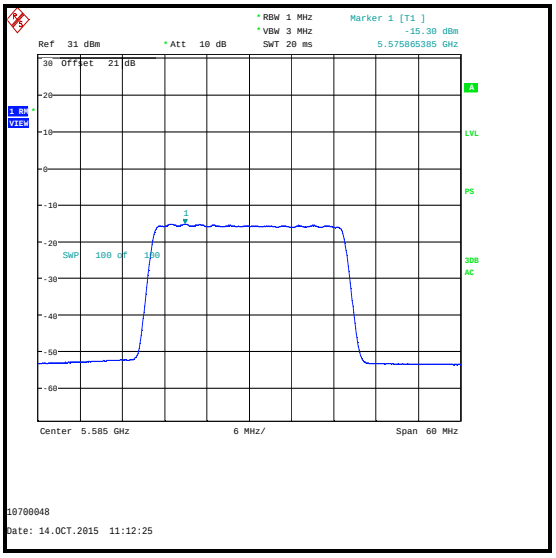
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 30 MHz Channel / BPSK

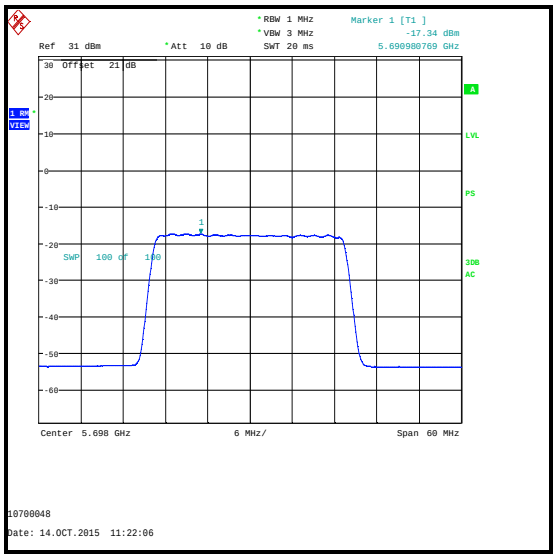
V Port



Bottom Channel



Middle Channel



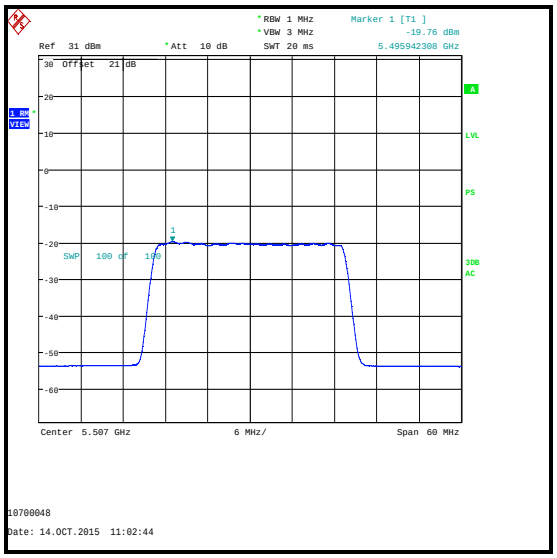
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) continued)

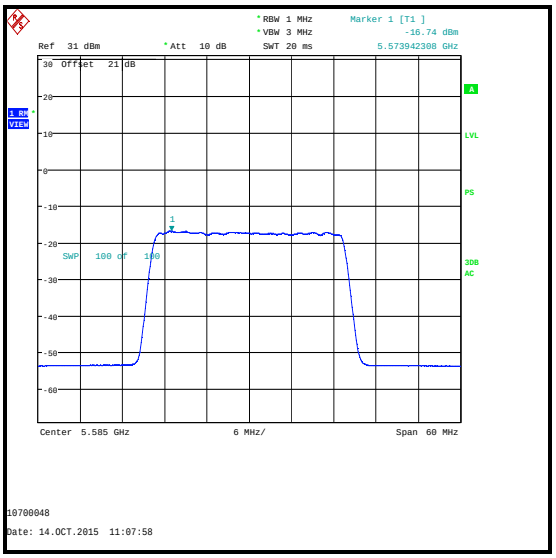
Results: 2' Parabolic Antenna / 30 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-19.8	-17.2	-15.3	-11.5	3.8	Complied
Middle	-16.7	-15.1	-12.8	-11.5	1.3	Complied
Top	-21.4	-17.2	-15.8	-11.5	4.3	Complied

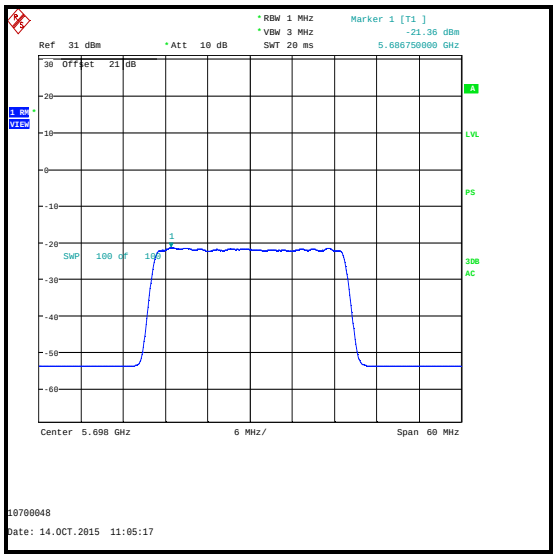
H Port



Bottom Channel



Middle Channel

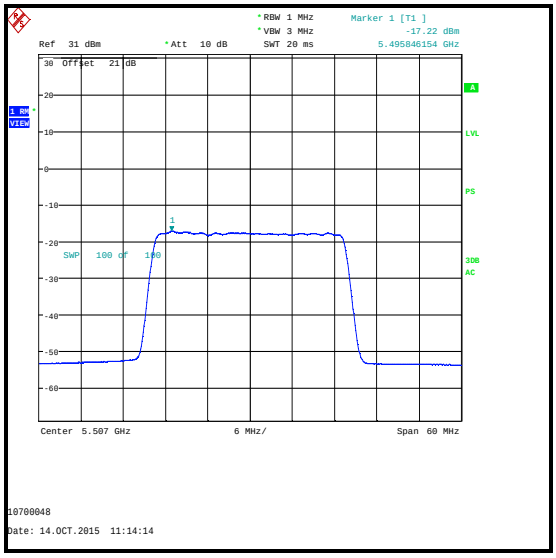


Top Channel

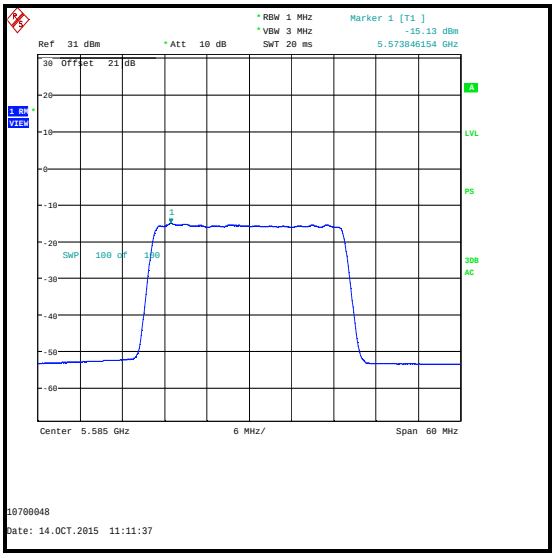
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 30 MHz Channel / 256QAM

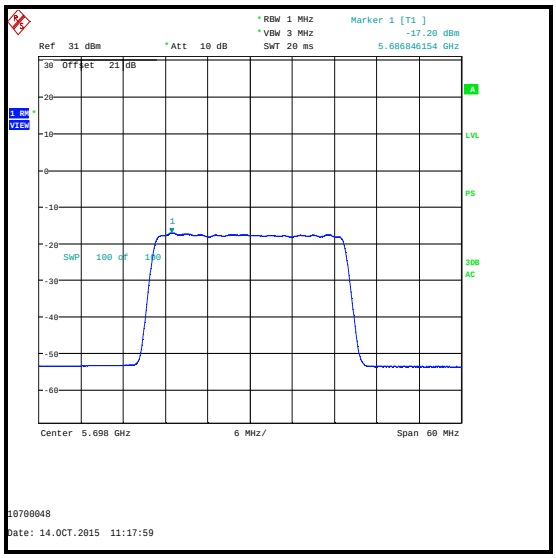
V Port



Bottom Channel



Middle Channel



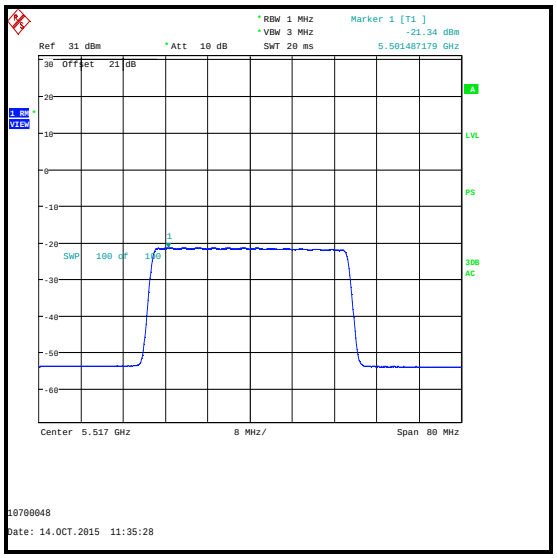
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

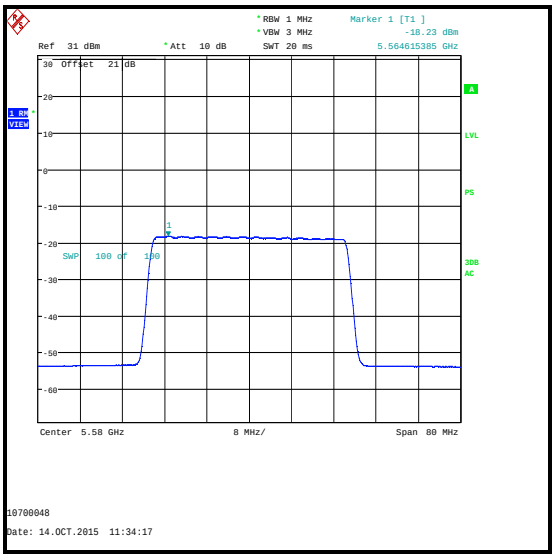
Results: 2' Parabolic Antenna / 40 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-21.3	-18.8	-16.9	-11.5	5.4	Complied
Middle	-18.2	-16.6	-14.3	-11.5	2.8	Complied
Top	-26.2	-21.6	-20.3	-11.5	8.8	Complied

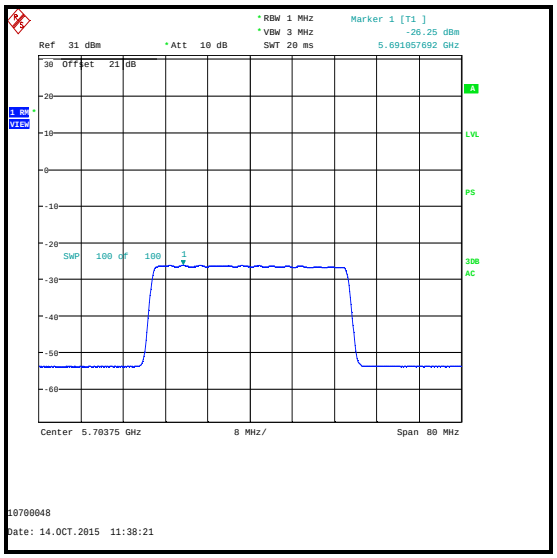
H Port



Bottom Channel



Middle Channel

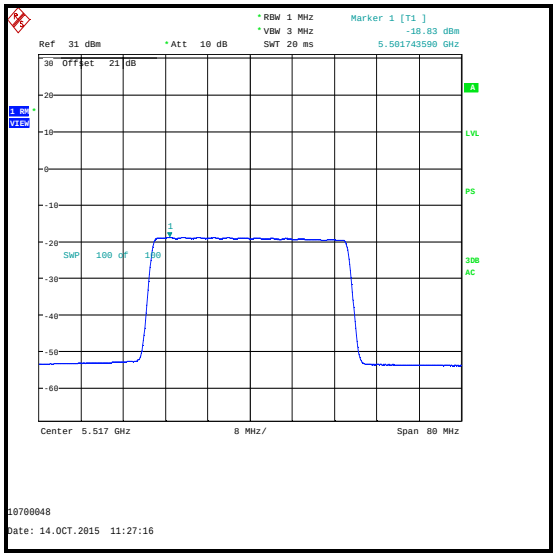


Top Channel

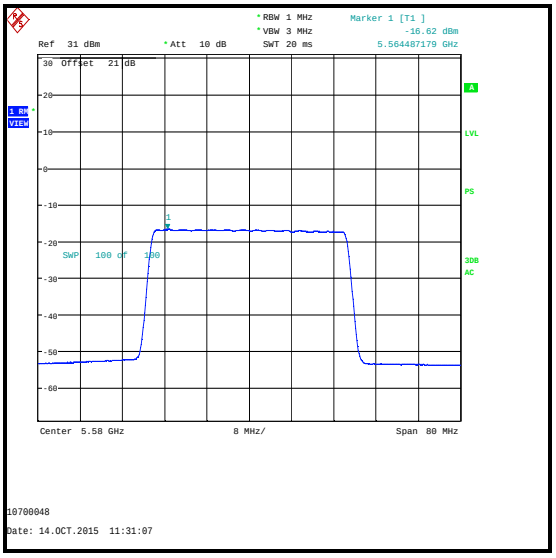
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 40 MHz Channel / BPSK

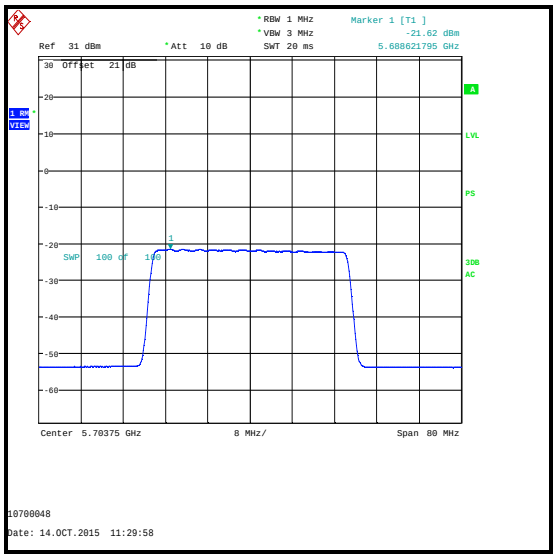
V Port



Bottom Channel



Middle Channel



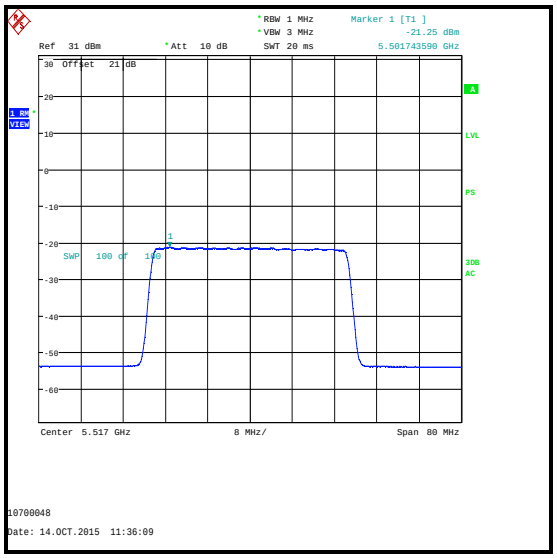
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

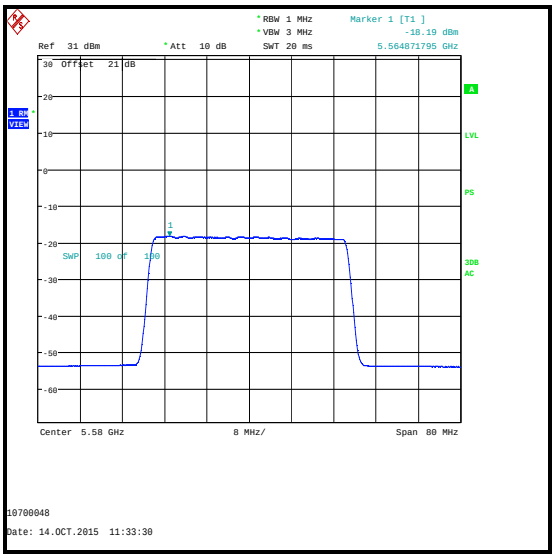
Results: 2' Parabolic Antenna / 40 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-21.2	-18.7	-16.8	-11.5	5.3	Complied
Middle	-18.2	-16.5	-14.3	-11.5	2.8	Complied
Top	-26.2	-21.6	-20.3	-11.5	8.8	Complied

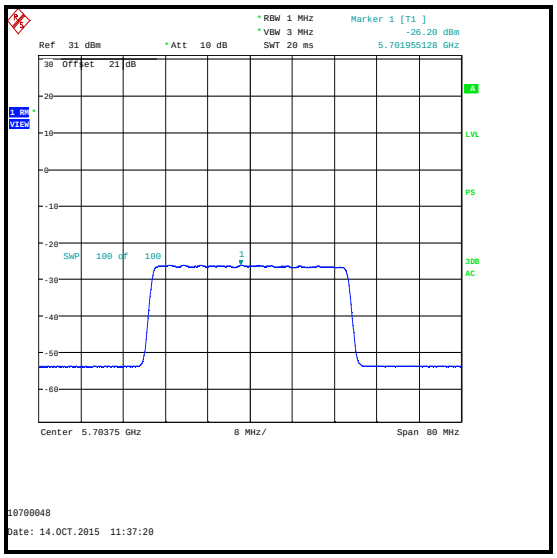
H Port



Bottom Channel



Middle Channel

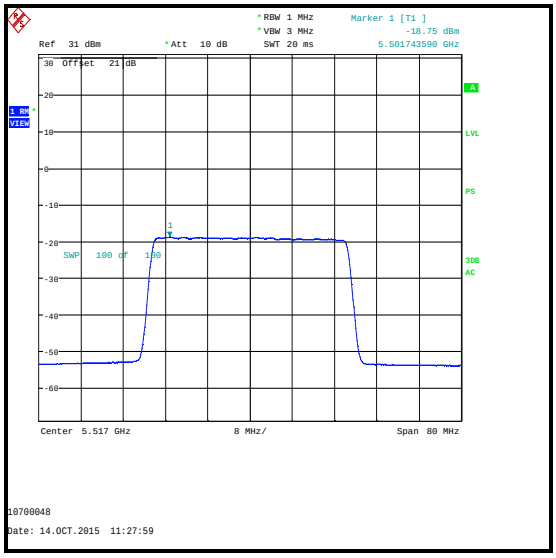


Top Channel

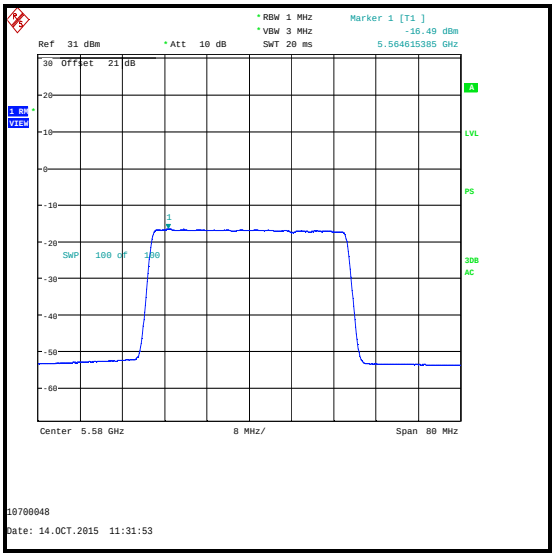
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 40 MHz Channel / 256QAM

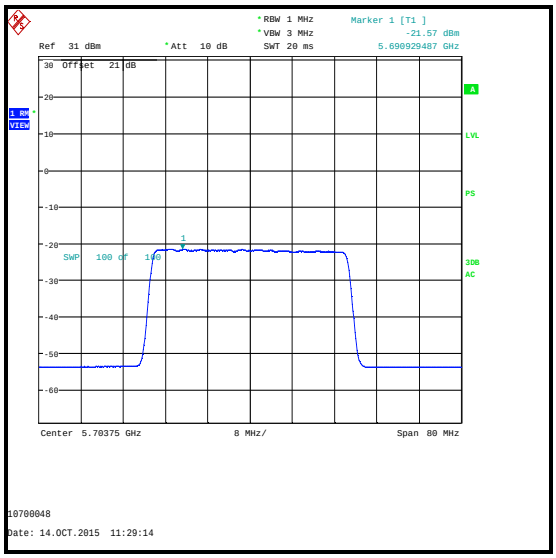
V Port



Bottom Channel



Middle Channel



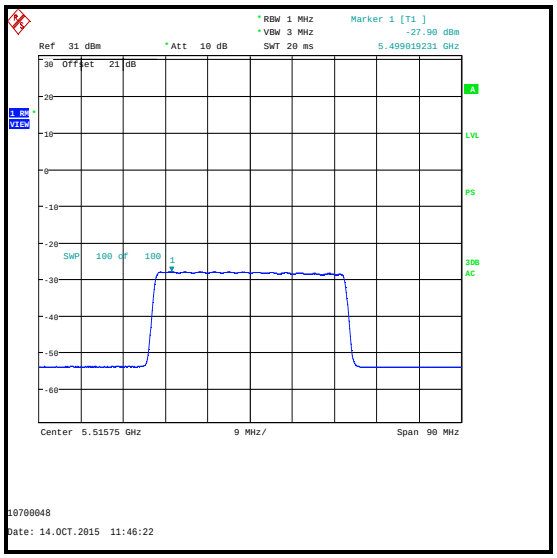
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

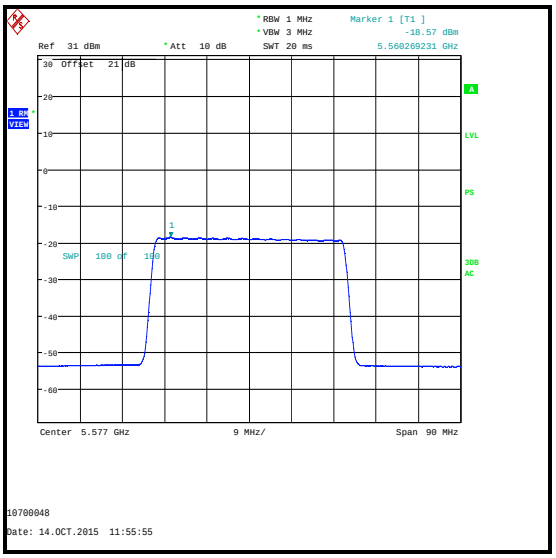
Results: 2' Parabolic Antenna / 45 MHz Channel / BPSK

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-27.9	-24.6	-22.9	-11.5	11.4	Complied
Middle	-18.6	-17.1	-14.8	-11.5	3.3	Complied
Top	-26.7	-21.6	-20.4	-11.5	8.9	Complied

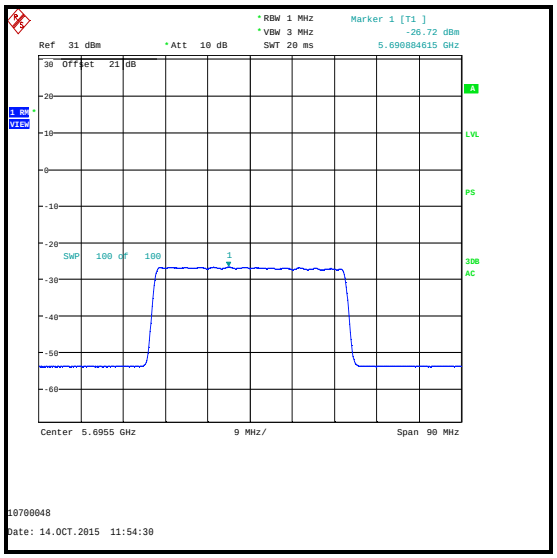
H Port



Bottom Channel



Middle Channel

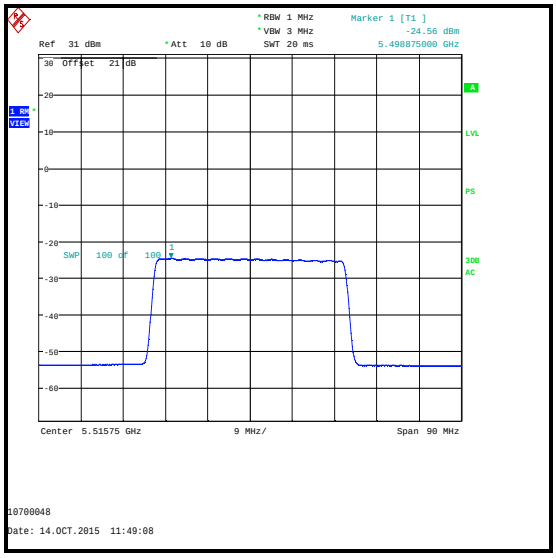


Top Channel

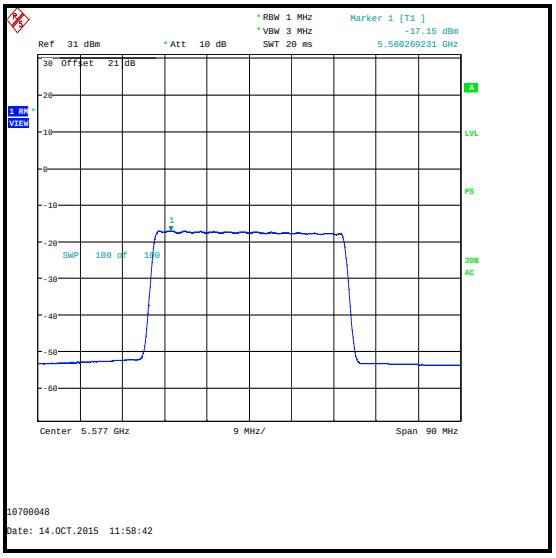
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 45 MHz Channel / BPSK

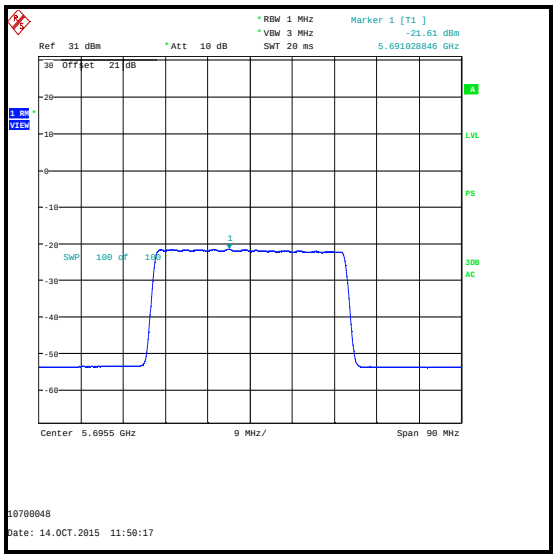
V Port



Bottom Channel



Middle Channel



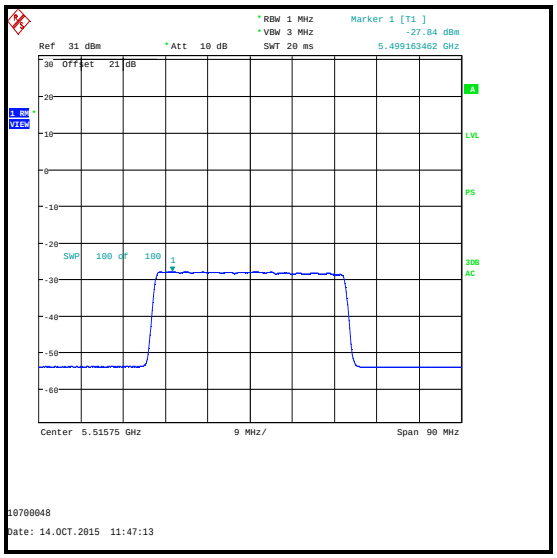
Top Channel

Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

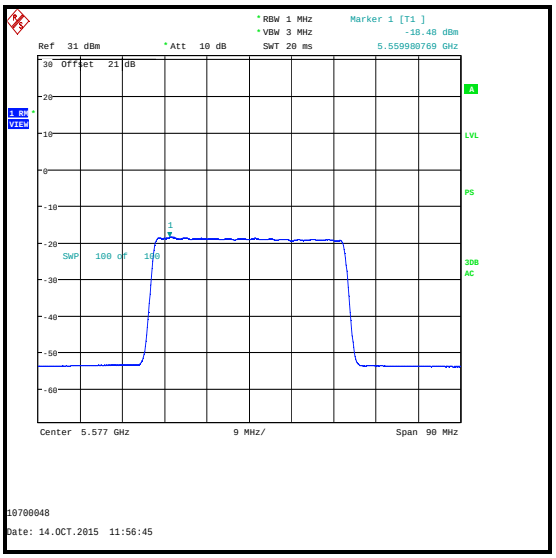
Results: 2' Parabolic Antenna / 45 MHz Channel / 256QAM

Channel	PSD H Port (dBm/MHz)	PSD V Port (dBm/MHz)	PSD Power (dBm/MHz)	PSD Power Limit (dBm/MHz)	Margin (dB)	Result
Bottom	-27.8	-24.5	-22.8	-11.5	11.3	Complied
Middle	-18.5	-17.0	-14.7	-11.5	3.2	Complied
Top	-26.7	-21.6	-20.4	-11.5	8.9	Complied

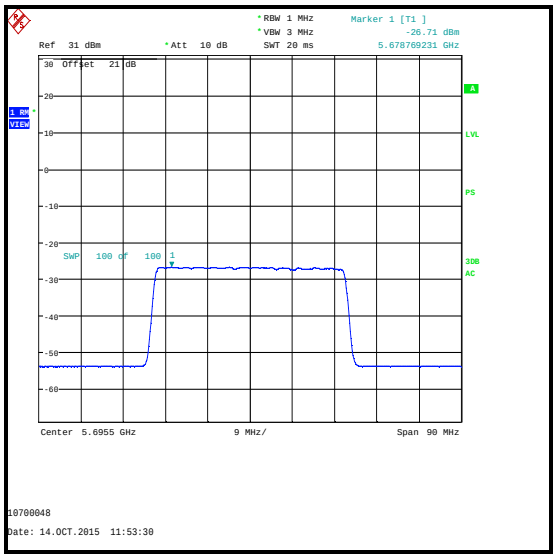
H Port



Bottom Channel



Middle Channel

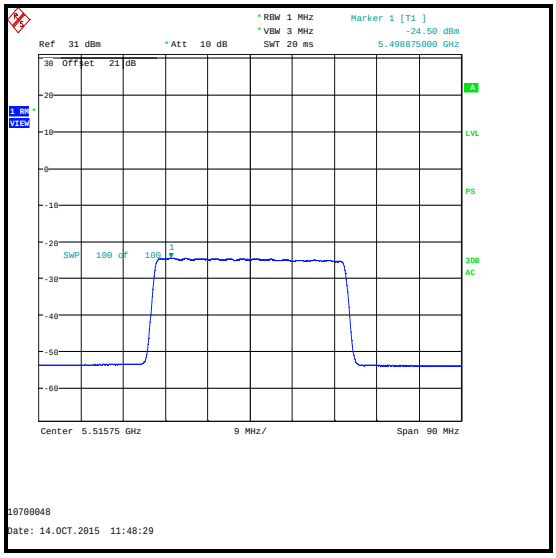


Top Channel

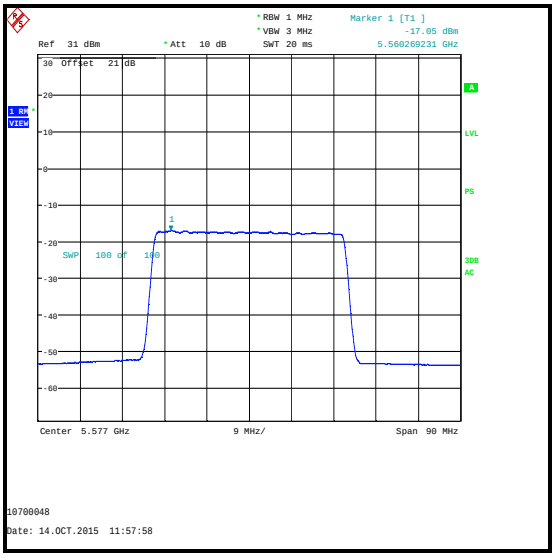
Transmitter Maximum Power Spectral Density (5.47-5.725 GHz Band) (continued)

Results: 2' Parabolic Antenna / 45 MHz Channel / 256QAM

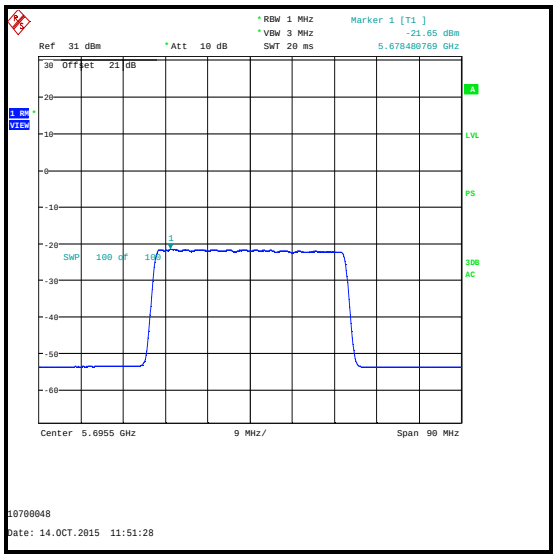
V Port



Bottom Channel



Middle Channel



Top Channel

Transmitter Maximum Power Spectral Density (continued)

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
A2527	Attenuator	AtlanTecRF	AN18W5-20	832828#2	Calibrated Before Use	N/A
M1886	Test Receiver	Rohde & Schwarz	ESU26	100554	21 May 2016	12
G0608	Signal Generator	Rohde & Schwarz	SMIQ 06B	838341/033	01 Apr 2016	12
M1785	Thermohygrometer	JM Handelspunkt	30.5015.13	None stated	23 Apr 2016	12

5.2.5. Transmitter Out of Band Radiated Emissions

Test Summary:

Test Engineer:	Georgios Vrezas	**Test Dates:**	26 August 2015 to 17 October 2015
Test Sample Serial Number:	0004565800E2		

FCC Reference:	Parts 15.407(b)(2) & 15.209(a)
Test Method Used:	FCC KDB 789033 II.G.4 & ANSI C63.10 Sections 6.3 & 6.5 and Notes below
Frequency Range:	30 MHz to 1000 MHz

Environmental Conditions:

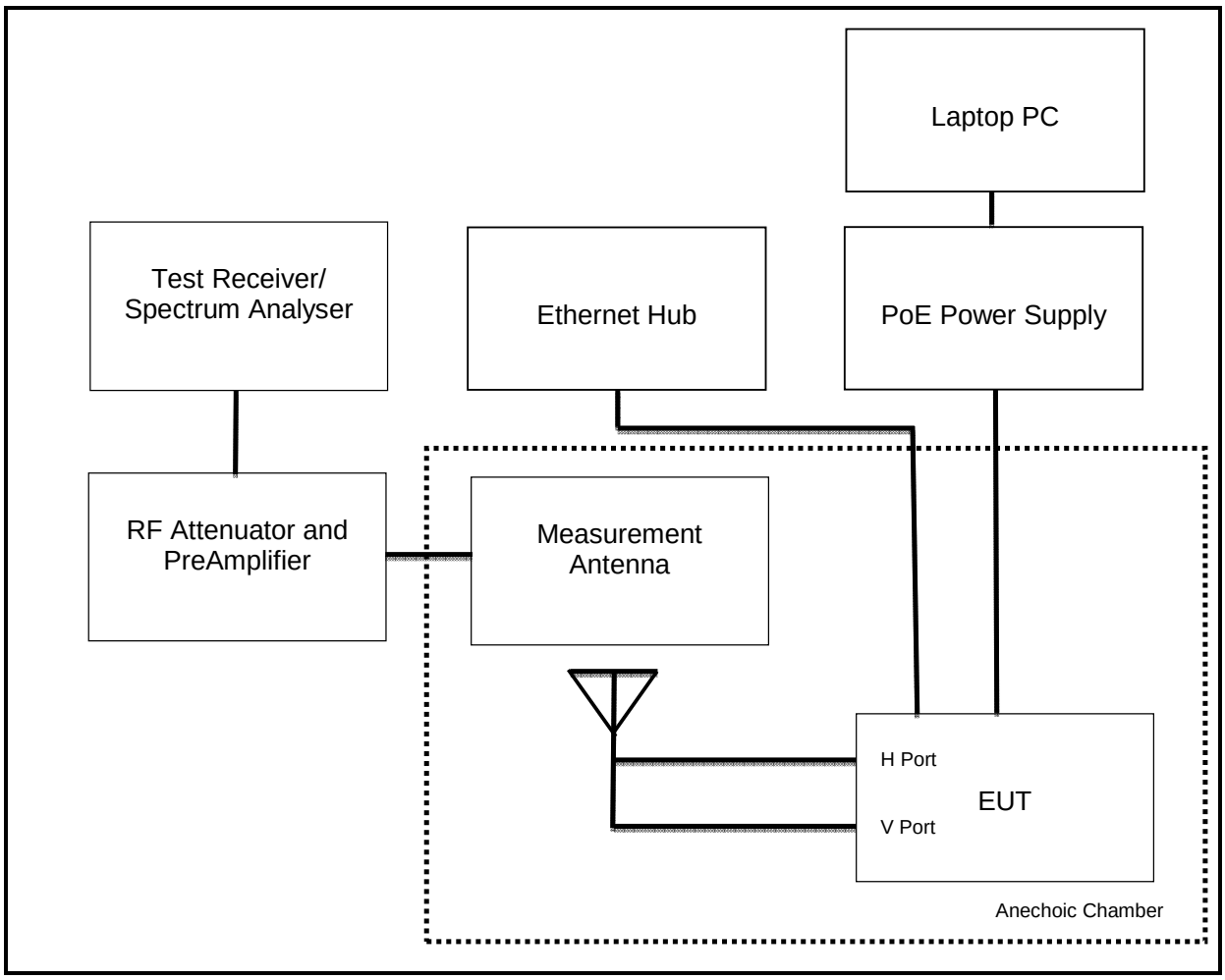
Temperature (°C):	23 to 24
Relative Humidity (%):	38 to 40

Note(s):

1. Radiated spurious emissions testing was performed with the EUT transmitting at maximum power on a 5 MHz channel with BPSK modulation. This configuration produced the highest emission levels and was therefore deemed to be worst case. The EUT was transmitting at >99% duty cycle. The highest gain antenna of each antenna type was tested using the appropriate maximum power setting.
2. For the 4' parabolic antenna, pre-scans were performed with the EUT transmitting on the middle channel of the 5.25-5.35 GHz band, in accordance with FCC Part 15.407(b)(2) which states all emissions outside of the 5.15-5.35 GHz band shall not exceed -27 dBm/MHz e.i.r.p. Part 15.407(b)(6) states unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209. Part 15.407(b)(7) states the provisions of 15.205 apply, i.e. restricted bands of operation.
3. For all other antennas, pre-scans were performed with the EUT transmitting on the middle channel of the 5.47-5.725 GHz band, in accordance with FCC Part 15.407(b)(3) which states all emissions outside of the 5.47-5.725 GHz band shall not exceed -27 dBm/MHz e.i.r.p. Part 15.407(b)(6) states unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209. Part 15.407(b)(7) states the provisions of §15.205 apply, i.e. restricted bands of operation.
4. The final measured value, for the given emission in the field strength result tables, incorporates the calibrated antenna factor, preamplifier gain, attenuator loss and cable loss.
5. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the middle channel only.
6. Measurements below 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed in the centre of the chamber turntable. The EUT and antenna were mounted onto a pole in a typical end-user configuration and interconnected using the RF cables supplied by the manufacturer. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
7. **All emissions shown on the prescan plots were investigated. The highest emission level was compared to the applicable limit to obtain the margin. All other emissions were found to be >20 dB below the applicable limit or ambient and therefore not recorded.**

Transmitter Radiated Emissions (continued)

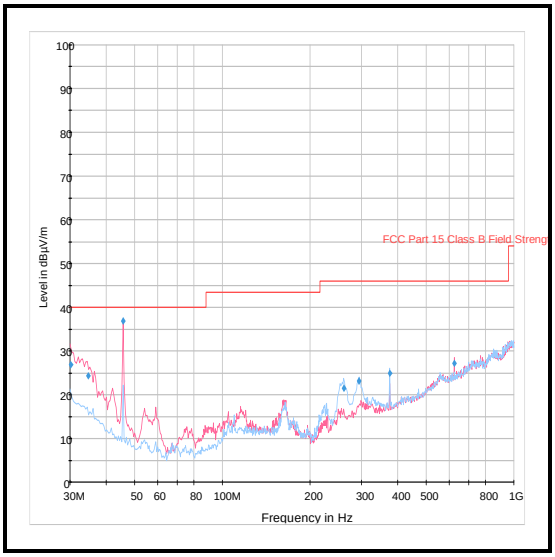
Test setup for radiated measurements:



Transmitter Radiated Emissions (continued)

Results: Middle Channel / BPSK / 4' Parabolic Antenna

Frequency (MHz)	Antenna Polarity	Quasi-Peak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
45.758	Vertical	36.9	40.0	3.1	Complied

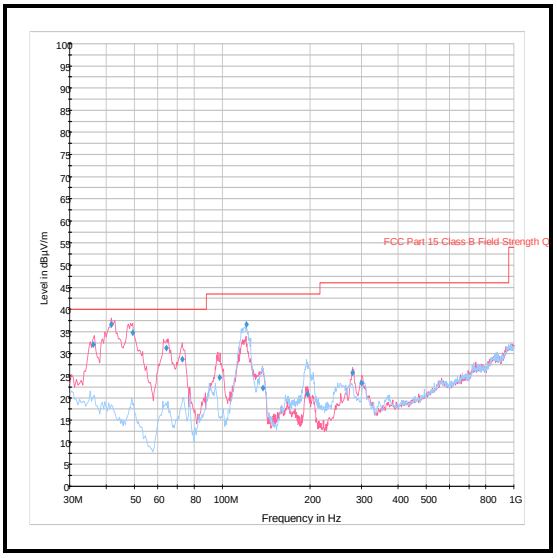


Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

Transmitter Radiated Emissions (continued)

Results: Middle Channel / BPSK / 2' Parabolic Antenna

Frequency (MHz)	Antenna Polarity	Quasi-Peak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
73.045	Vertical	28.8	40.0	11.2	Complied
120.877	Horizontal	36.5	43.5	7.0	Complied

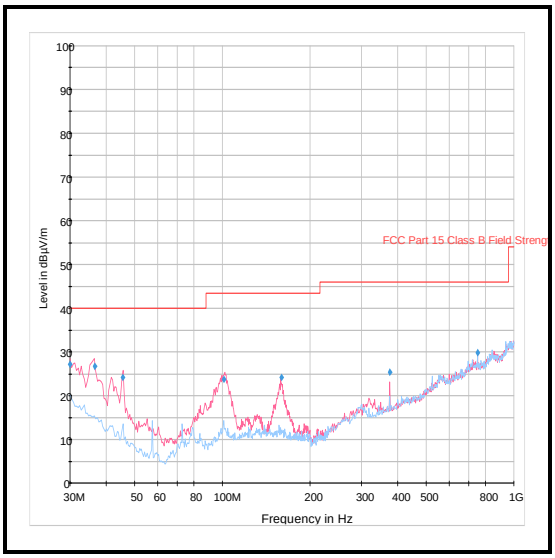


Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

Transmitter Out of Band Radiated Emissions (continued)

Results: Middle Channel / BPSK / Plate Antenna

Frequency (MHz)	Antenna Polarity	Quasi-Peak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
749.959	Vertical	29.9	46.0	16.1	Complied

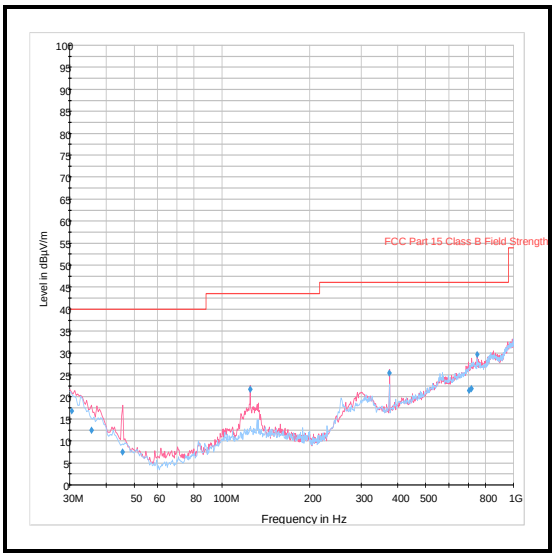


Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

Transmitter Radiated Emissions (continued)

Results: Middle Channel / BPSK / Sectorised Antenna

Frequency (MHz)	Antenna Polarity	Quasi-Peak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
749.980	Vertical	29.7	46.0	16.3	Complied

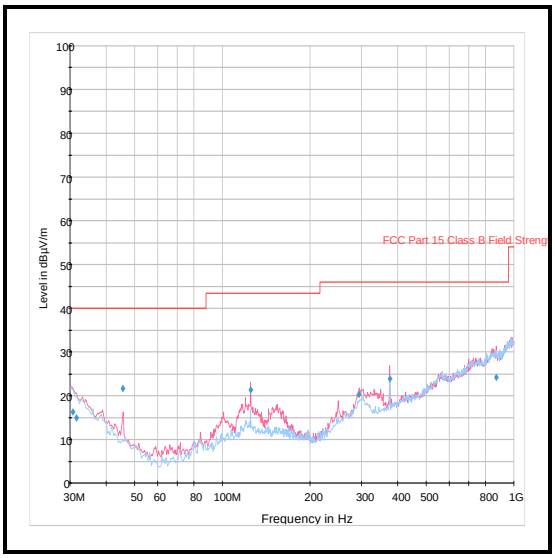


Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.

Transmitter Radiated Emissions (continued)

Results: Middle Channel / BPSK / Omnidirectional Antenna

Frequency (MHz)	Antenna Polarity	Quasi-Peak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
45.548	Vertical	21.7	40.0	18.3	Complied



Note: This plot is a pre-scan and for indication purposes only. For final measurements, see accompanying table.