COMPLIANCE WORLDWIDE INC.
TEST REPORT 136-16R4

In Accordance with the Requirements of

FCC PART 90:2015 Subpart R
Operation in the 758 to 775 MHz and 788 to 805 MHz bands
and PART 20:2015

Issued to

Westell, Inc.
670 North Commercial Street
Manchester, NH 03101
(603) 626-6677

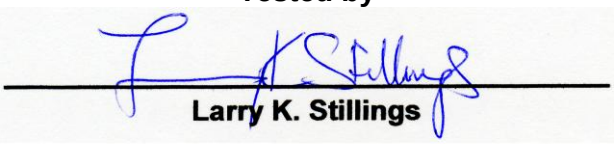
for

NFPA 72 Public Safety Signal Booster
Model: PS51080

FCC ID: NVRCSIPS51080PS78

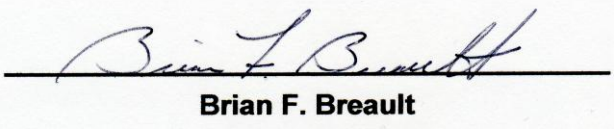
Original Report Issued on April 12, 2016
Revision R4 Issued on August 3, 2016

Tested by



Larry K. Stillings

Reviewed By



Brian F. Breault

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1. Scope

This test report certifies that the Westell Public Safety Signal Booster Model PS51080, as tested, meets the FCC Part 90 Subpart R requirements. The scope of this test report is limited to the test sample provided by the client, only in as much as that sample represents other production units. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required. Revision R1 adds noise figure measurements of the uplink and downlink bands in new section 6.7 of the test report. Revision R2 updates the test report for narrowband operation in the bands of 769 to 775 MHz and 799 to 805 MHz. Revision R3 removes all test data using CDMA 1.25 MHz signal and replaces that data with CW, 6.25, 12.5 and 25 kHz FM, CPAO P25 Phase 1 (C4FM) and Phase 2 (π/4-DQPSK) modulated signals. Revision R4 updates the MPE limit for occupational/controlled exposure.

2. Product Details

2.1. Manufacturer: Westell, Inc.

2.2. Model Numbers: PS51080

2.3. Serial Number: 15100001 (Radiated Emissions), 16030031

2.4. Description: The PS51080 repeater was developed for use in enclosed structures where signals from local public safety towers to operate mobile units is poor or unavailable. Adequate signal strength must be available outside the structure as a prerequisite to achieving in-building coverage. The device is connected to an external antenna, normally located on a roof, and to one or more internal antennas placed strategically throughout the area where wireless service is desired. The PS51080 supports uplink bands of 788-805/806-809 or 806-816 MHz and downlink bands of 758-775/851-854 or 851-861 MHz.

2.5. Power Source: 120 VAC, 60 Hz

2.6. Software Version: 1.9

2.7. EMC Modifications: None

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3. Product Configuration

3.1. Support Equipment

Device	Manufacturer	Model	Serial No.	Comment
Power Supply	APX Technologies	SP130P966ER	n/a	
Notebook PC	Dell	Latitude C400	9760689253	Configuring Unit

3.2. Cables

Cable Type	Length	Shield	From	To
RF, 50 Ω, N male – N male	1M	Yes	EUT	Signal Generator
RF, 50 Ω, N male – N male	1M	Yes	EUT	50 Ω Load
Power Supply	2M + 2M	Yes	EUT	120 VAC, 60 Hz
Ethernet	2M	No	EUT	Notebook PC
DB-9 Alarm Relays	2M	Yes	EUT	Un-terminated

Notebook PC is connected only during setup and configuration

3.3. Operational Characteristics & Software

(1) The unit was allowed to power up normally and go through its configuration cycle.

(2) Using an RF Signal Generator on the Input and a Spectrum Analyzer on the output Downlink or Uplink frequencies a signal was generated over the intended bandwidth of operation.

(3) The signal generator was configured to provide CW, 6.25, 12.5 and 25 kHz FM modulated, CPAO P25 Phase 1 and Phase 2 signals to the input of the amplifier across the public safety bands to be used by the product.

(4) The units internal AGC threshold was determined by applying an input signal until a 1 dB increase in input signal did not cause a 1 dB in output signal for each of the Uplink and Downlink frequencies.

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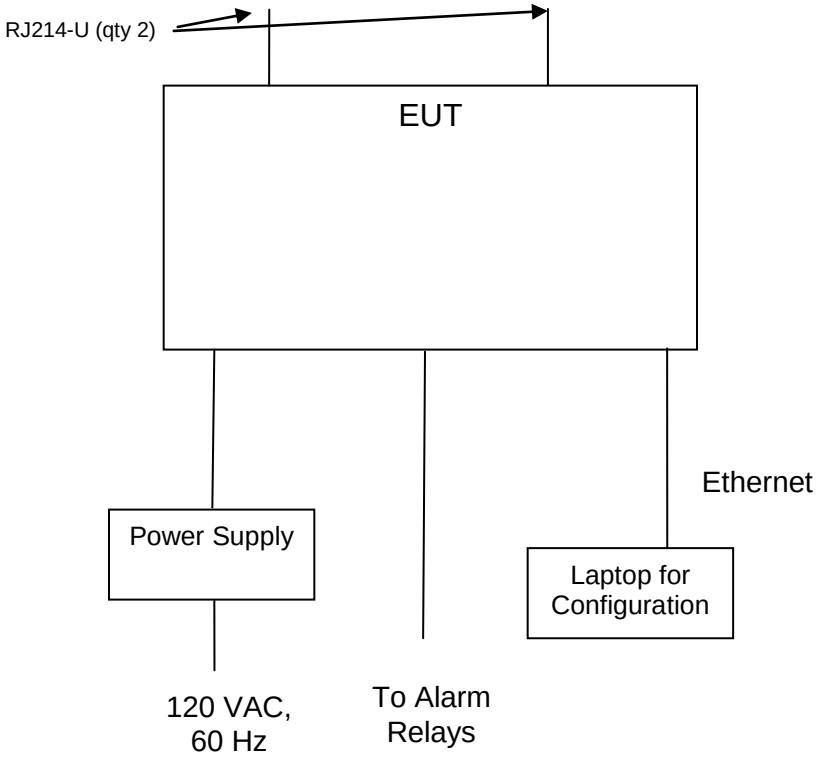
3. Product Configuration (continued)

3.3. Operational Characteristics & Software

Emission Designator	Modulation	Occupied Bandwidth	Channel Bandwidth	Audio Frequency
16K0F3E	FM	16 kHz	25 kHz	1 kHz
11K3F3E	FM	11.3 kHz	12.5 kHz	1 kHz
4K05F1E	FM	4 kHz	6.25 kHz	1 kHz
N/A	CW	N/A	N/A	N/A
8K15F1D	C4FM	8.09 kHz	12.5 kHz	N/A
9K80G1D	π/4-DQPSK	9.8 kHz	12.5 kHz	N/A

3.4. Block Diagram



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4. Measurements Parameters

4.1. Measurement Equipment Used to Perform Test

Device	Manufacturer	Model No.	Serial No.	Cal Due	Interval
EMI Test Receiver, 9kHz – 7GHz [1]	Rohde & Schwarz	ESR7	101156	7/23/2017	2 Years
Spectrum Analyzer 20 Hz – 40 GHz [2]	Rohde & Schwarz	FSV40	100899	7/23/2017	2 Years
Spectrum Analyzer, 9 kHz to 40 GHz [3]	Rohde & Schwarz	FSVR40	100909	7/23/2017	2 Years
EMI Receiver, 9 kHz to 6.5 GHz	Hewlett Packard	8546A	3650A00360	6/4/2016	2 Years
Biconilog Antenna, 30 MHz to 2 GHz	Sunol Sciences Corp	JB1	A050913	5/15/2016	3 Years
Horn Antenna, 960 MHz – 18 GHz	Electro-Metrics	RGA-50 / 60	2813	7/15/2016	2 Years
Preamplifier, 1 GHz to 26.5 GHz	Hewlett Packard	8449B	3008A01323	7/21/2017	2 Years
RF Signal Generator 5kHz to 6 GHz	Rohde & Schwarz	SMIQ06B	10090	7/23/2017	2 Years
Noise Source 10 MHz to 6 GHz	Micronetics	NS346B	17883	10/15/2016	1 Year
Digital Barometer	Control Company	4195	ID236	10/8/2017	2 Years

[1] ESR7 Firmware revision: V2.26, Date installed: 8/15/2014 Previous V2.17, installed 6/11/2014.
[2] FSV40 Firmware revision: V2.30 SP1 Date installed: 10/22/2014 Previous V2.30, installed 7/23/2014.
[3] FSVR40 Firmware revision: V2.23, Date installed: 10/20/2014 Previous V1.63 SP1, installed 8/28/2013.

4.2. Measurement & Equipment Setup

Test Dates:	1/18/2016, 1/20/2016, 1/25/2016, 2/1/2016, 5/12/2016, 6/24/2016, 7/20 to 7/23 2016
Test Engineer:	Larry Stillings
Normal Site Temperature (15 – 35°C):	24
Relative Humidity (20 -75%RH):	33

4.3. Test Procedure

The test measurements contained in this report are based on the requirements detailed in FCC Part 90 & Subpart R.

The test methods used to generate the data is this test report are in accordance with ANSI C63.4:2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz, FCC OET KDB 935210 D05 Indus Booster Basic Meas v01 dated 2-12-2016, Measurements Guidance for Industrial and Non-Consumer Signal Booster, Repeater and Amplifier Devices and FCC OET KDB 971168 D01 Power Meas License Digital Systems v02r02 dated 10-17-2014.

Measurements were also made in accordance with TIA-603-C:2004 Land Mobile FM or PM Communications Equipment Measurement and Performance Standard.

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5. Measurement Summary

Section Description or Test Requirement	FCC Part 90 Reference	Test Report Section	Result	Comment
Broadband Transmitting Power Limits	90.219(e)(1) 90.541 90.542	6.1	Compliant	
Occupied Bandwidth and Emission Mask	90.219(e)(4)(ii) Part 2.1049 90.210	6.2	Compliant	
Spurious Emissions at Antenna Terminals	90.219(e)(3) 90.543	6.3	Compliant	
Field Strength of Spurious Emissions	90.219(e)(3) 90.543	6.4	Compliant	
Frequency Stability	90.539	6.5	N/A	The EUT does not translate the frequency of the input signal
Out of Band Rejection	N/A	6.6	Compliant	
Noise Figure	90.219(e)(2)	6.7	Compliant	
Public Exposure to Radio Frequency Energy Levels	Section 1.1307 (b)(1)	6.8	Compliant	

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6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542

Requirement: The transmitter output power of mobile and control transmitters operating in the 758 to 768 MHz, 769 to 775 MHz, 788 to 798 MHz and 799 to 805 MHz bands must not exceed 30 Watts.

The output power capability of a signal booster must be designed for deployments providing a radiated power not exceeding 5 Watts ERP for each retransmitted channel.

Measurement of AGC Threshold

Test Method: KDB 935210 Section 4.2 & KDB 971168 Section 5.2

6.1.1. Mean Transmitter Output Power, Transmitter Only

Modulation Type	Center Frequency	Output Power		Input Power (dBm)	Result
	(MHz)	(dBm)	(Watts)		
FM Modulation	758	24.95	0.313	-52.49	Compliant
FM Modulation	766	27.18	0.522	-52.51	Compliant
FM Modulation	775	26.79	0.478	-52.56	Compliant
CW	758	24.97	0.314	-52.43	Compliant
CW	766	27.19	0.524	-52.45	Compliant
CW	775	26.81	0.480	-52.50	Compliant
C4FM Modulation	758	25.05	0.320	-52.33	Compliant
C4FM Modulation	766	27.30	0.537	-52.42	Compliant
C4FM Modulation	775	26.96	0.497	-52.48	Compliant
π/4-DQPSK Modulation	758	24.71	0.296	-53.06	Compliant
π/4-DQPSK Modulation	766	27.17	0.521	-52.55	Compliant
π/4-DQPSK Modulation	775	26.71	0.469	-52.59	Compliant
FM Modulation	788	25.82	0.382	-52.06	Compliant
FM Modulation	796	27.96	0.625	-52.08	Compliant
FM Modulation	805	27.34	0.542	-52.08	Compliant
CW	788	25.86	0.385	-52.04	Compliant
CW	796	27.99	0.630	-52.06	Compliant
CW	805	27.36	0.545	-52.07	Compliant
C4FM Modulation	788	25.96	0.394	-51.97	Compliant
C4FM Modulation	796	28.07	0.641	-51.93	Compliant
C4FM Modulation	805	27.49	0.561	-51.97	Compliant
π/4-DQPSK Modulation	788	25.79	0.379	-52.21	Compliant
π/4-DQPSK Modulation	796	27.60	0.575	-52.10	Compliant
π/4-DQPSK Modulation	805	26.84	0.483	-52.13	Compliant

Note: Input Power is at the 1 dB AGC threshold Level

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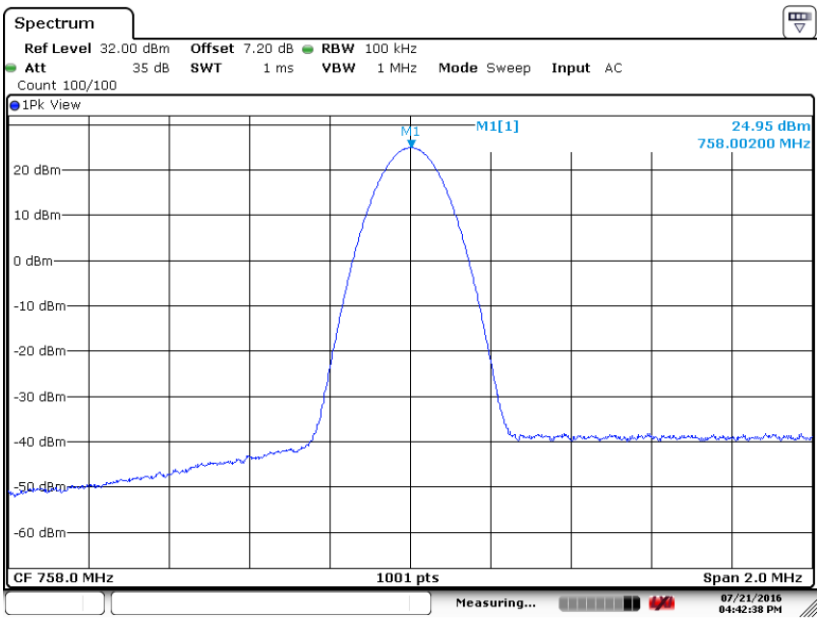
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.2. Mean Transmitter Output Power, 758 MHz, FM Modulation



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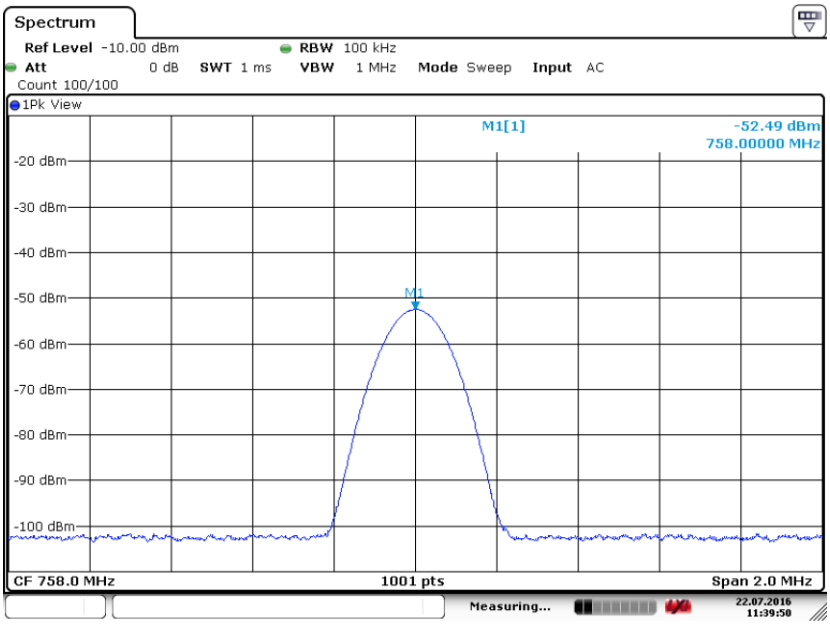
6.1.3. Mean Transmitter Input Power, 758 MHz, FM Modulation



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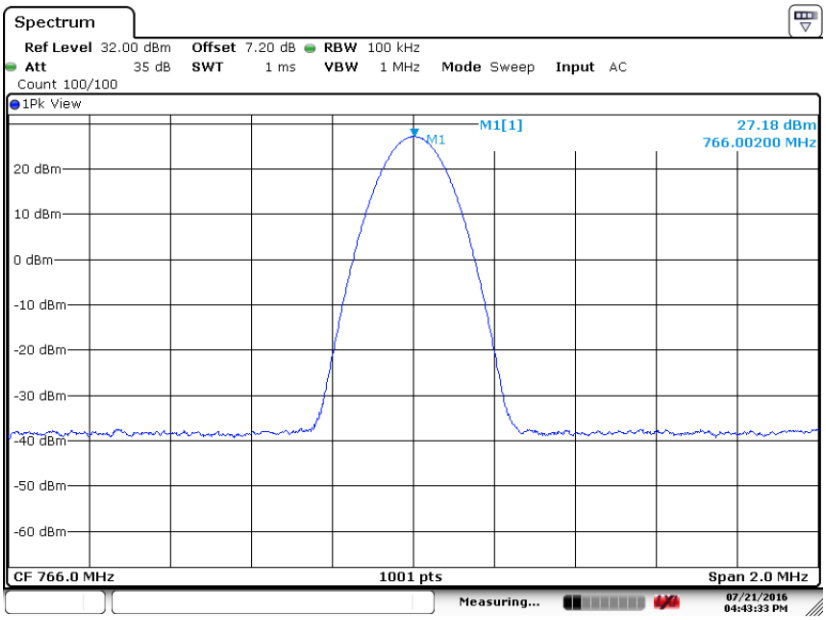
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.4. Mean Transmitter Output Power, 766 MHz, FM Modulation



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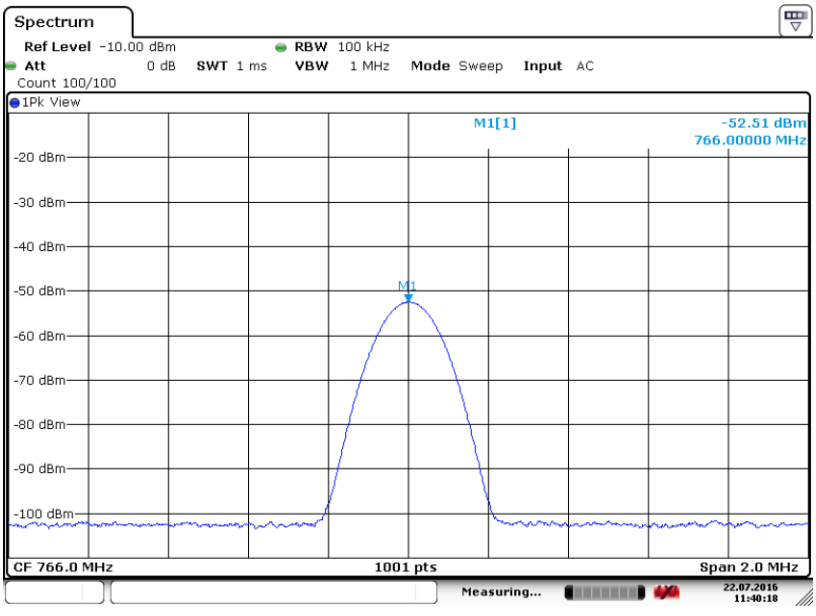
6.1.5. Mean Transmitter Input Power, 766 MHz, FM Modulation



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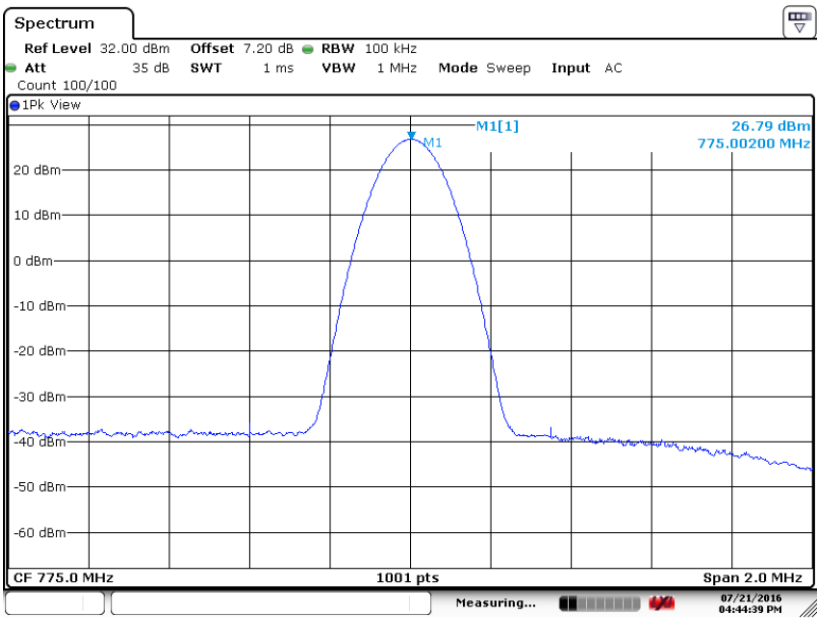
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.6. Mean Transmitter Output Power, 775 MHz, FM Modulation



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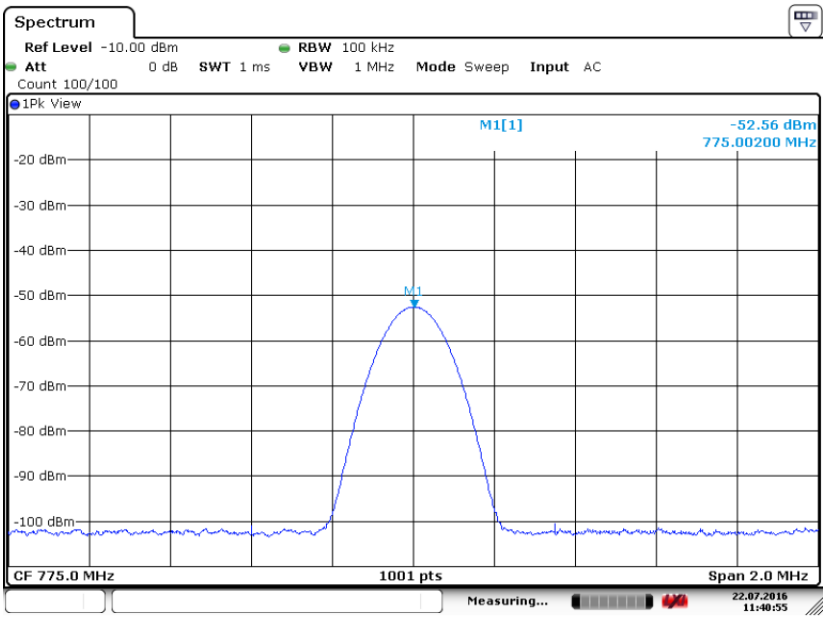
6.1.7. Mean Transmitter Input Power, 775 MHz, FM Modulation



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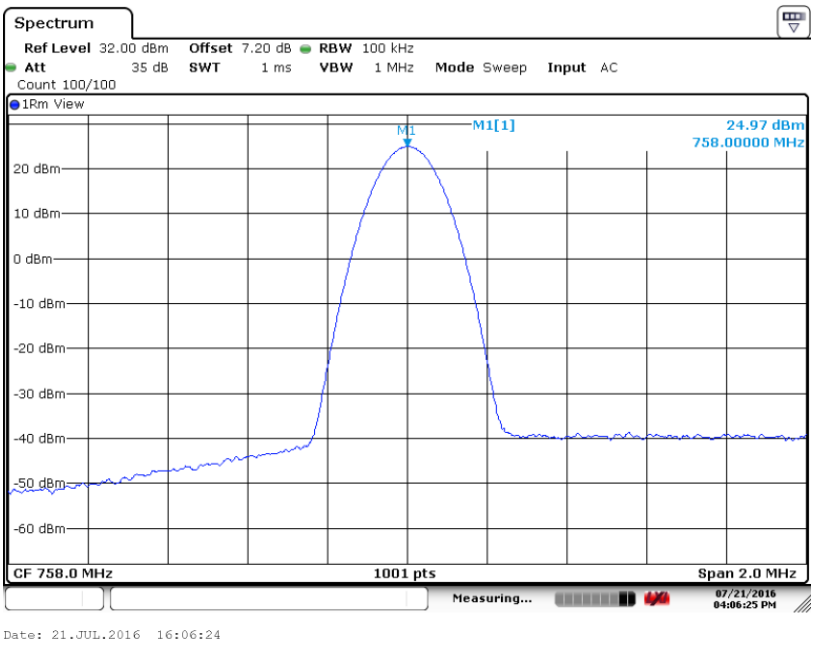
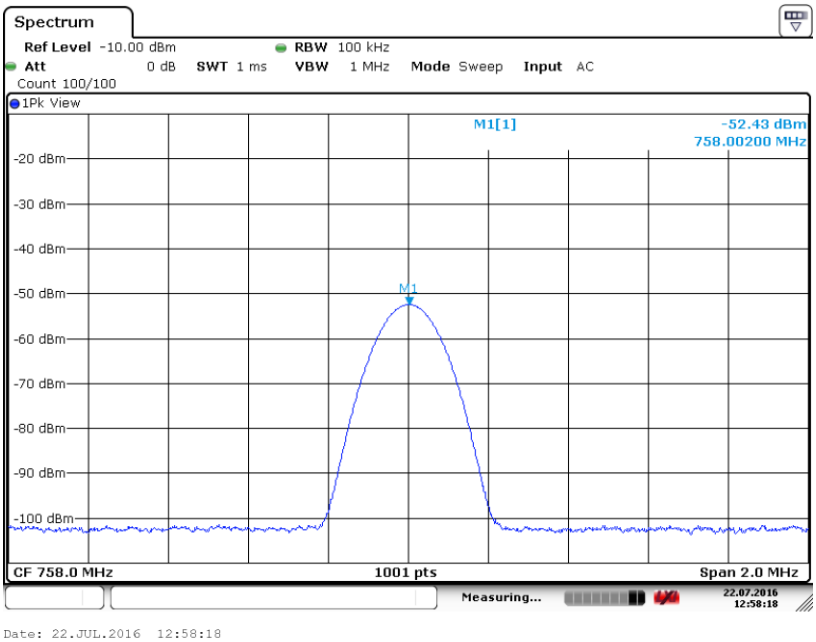
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.8. Mean Transmitter Output Power, 758 MHz, CW Signal



6.1.9. Mean Transmitter Input Power, 758 MHz, CW Signal



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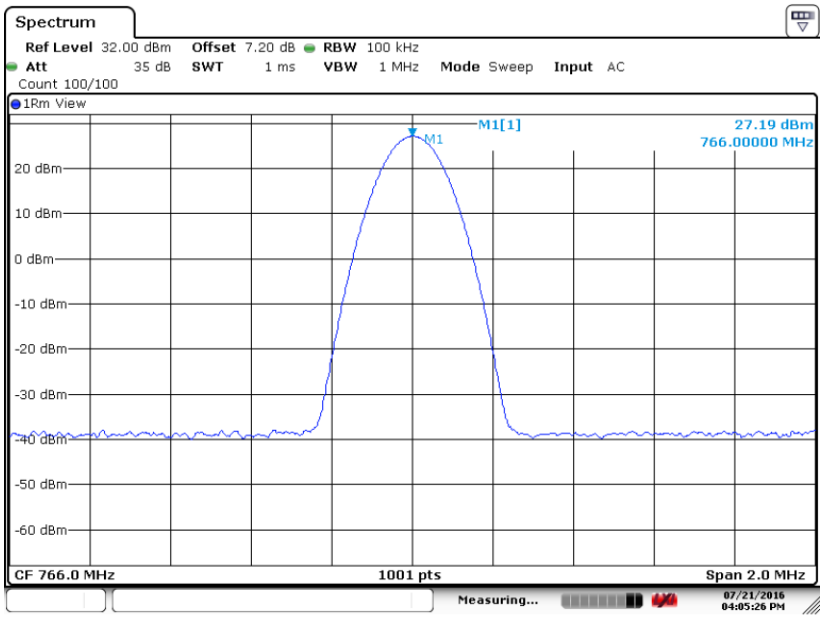
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.10. Mean Transmitter Output Power, 766 MHz, CW Signal



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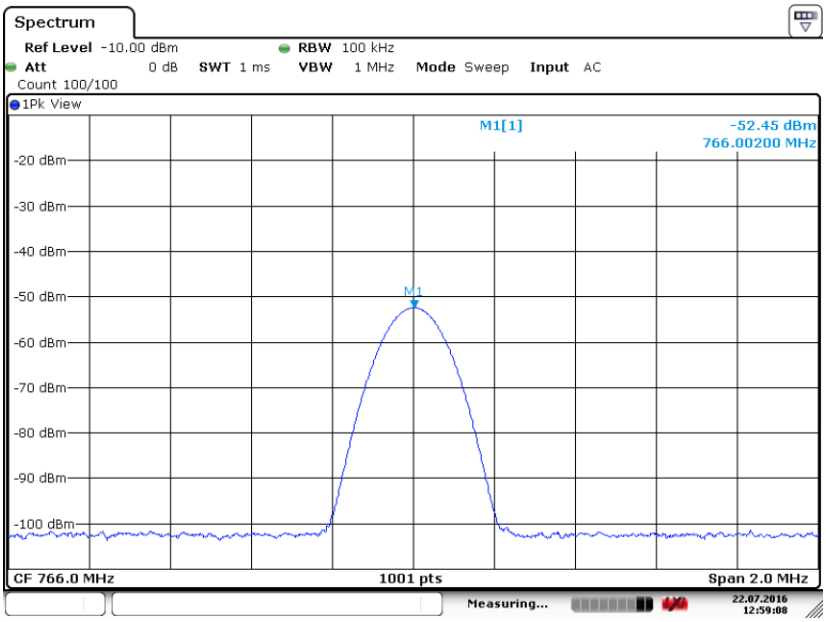
6.1.11. Mean Transmitter Input Power, 766 MHz, CW Signal



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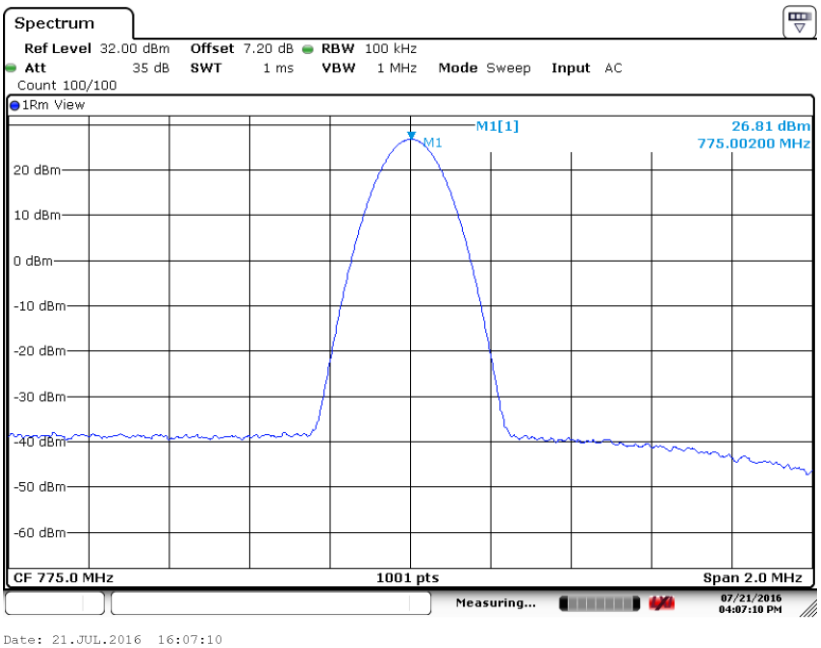
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.12. Mean Transmitter Output Power, 775 MHz, CW Signal



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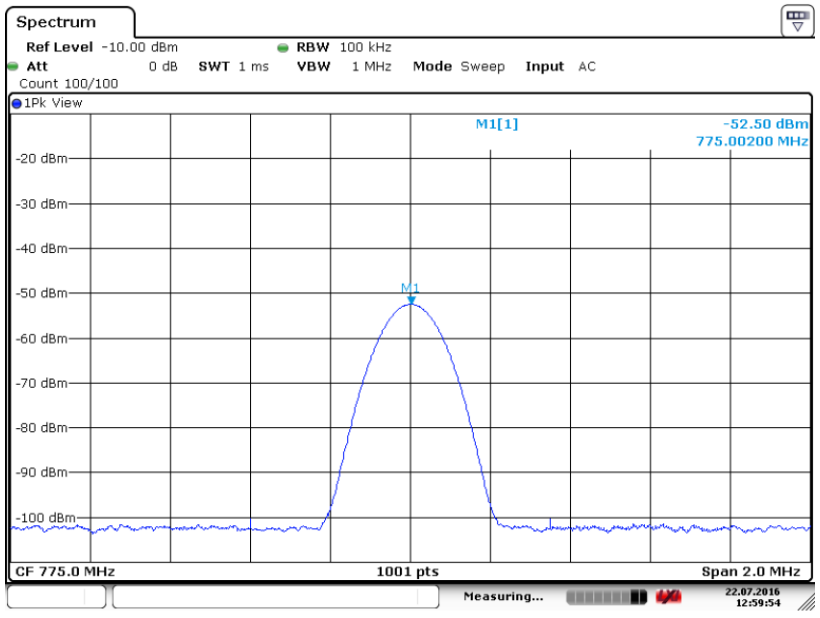
6.1.13. Mean Transmitter Input Power, 775 MHz, CW Signal



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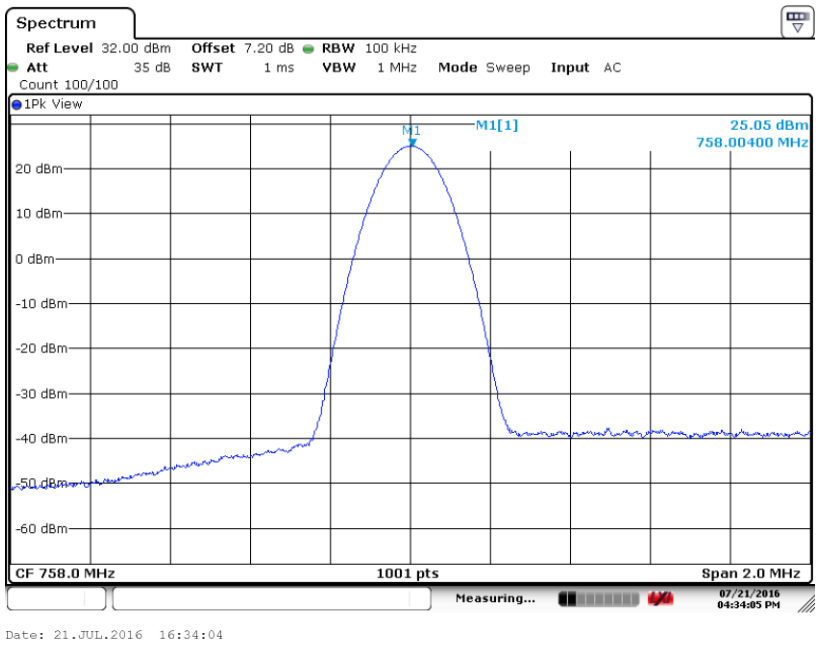
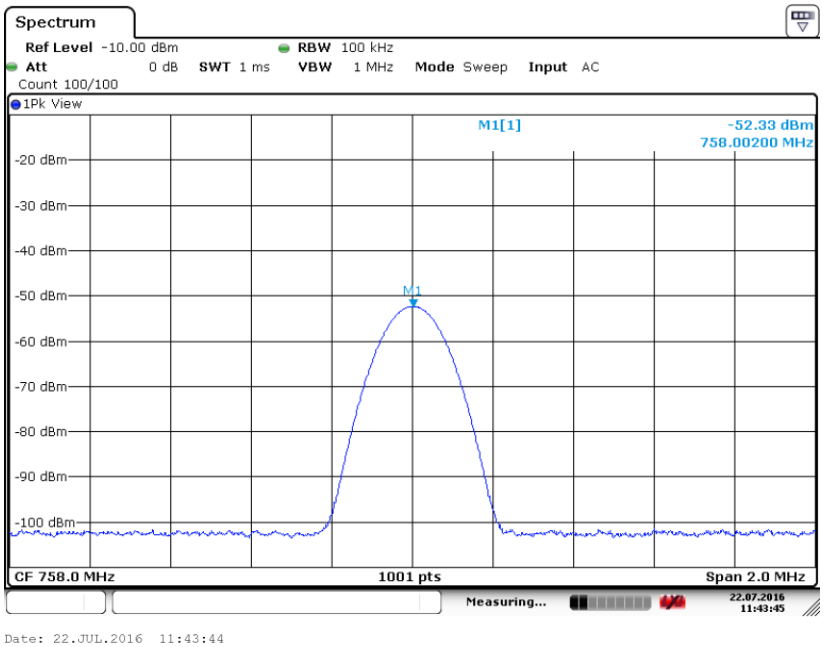
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.14. Mean Transmitter Output Power, 758 MHz, C4FM Modulation



6.1.15. Mean Transmitter Input Power, 758 MHz, C4FM Modulation



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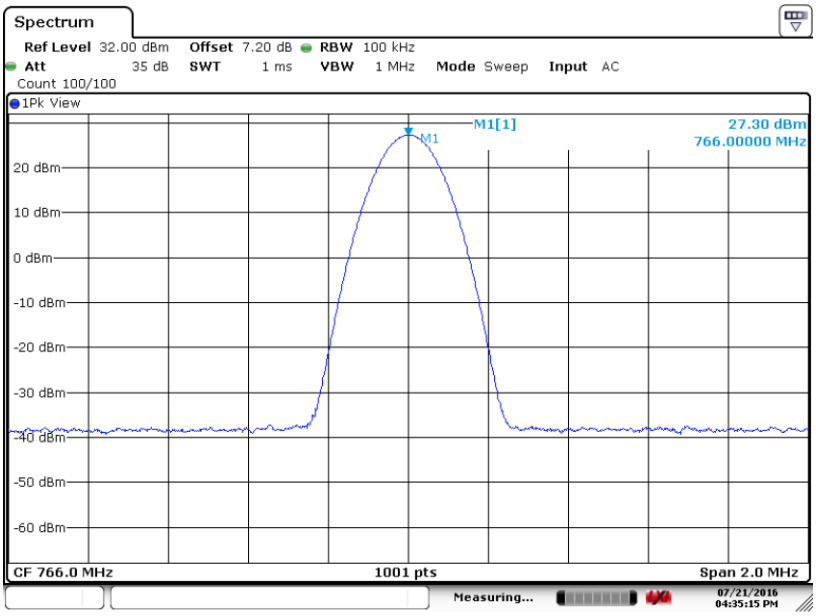
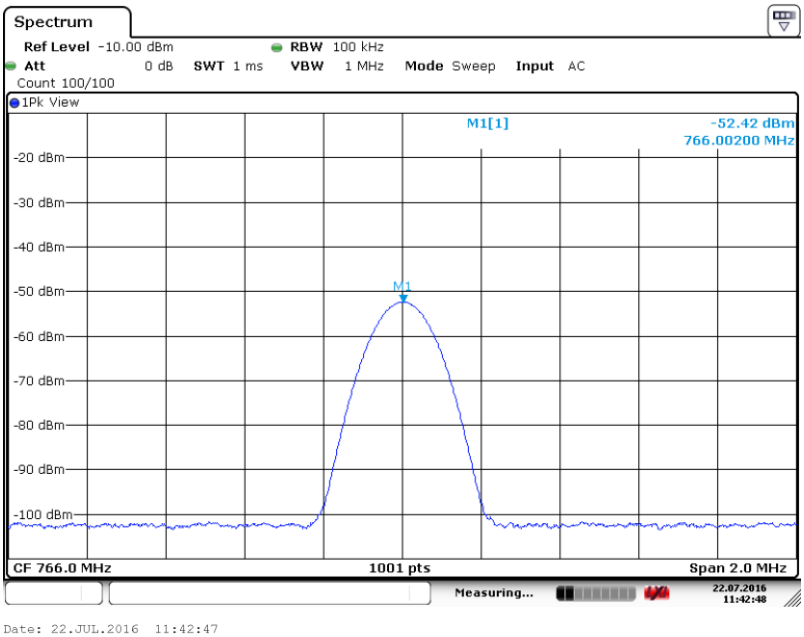
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.16. Mean Transmitter Output Power, 766 MHz, C4FM Modulation



6.1.17. Mean Transmitter Input Power, 766 MHz, C4FM Modulation



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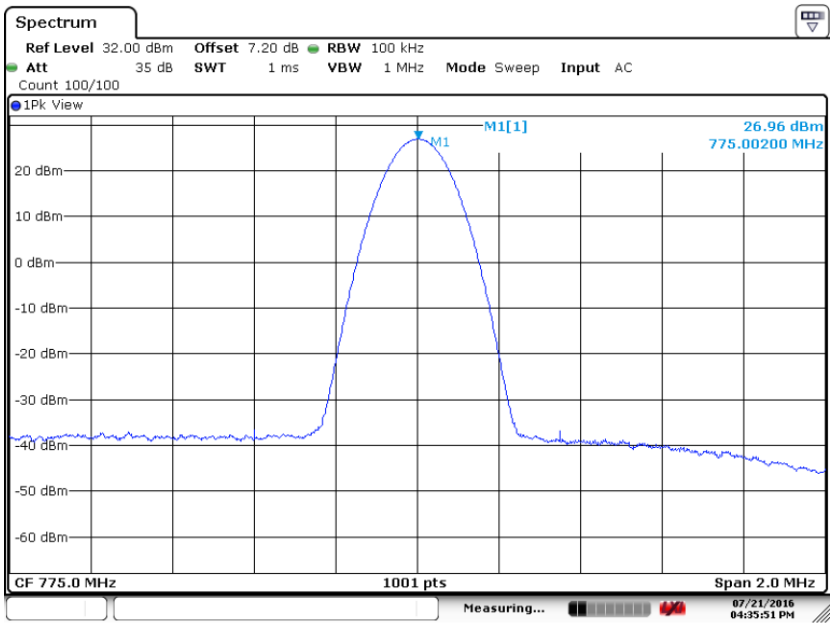
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.18. Mean Transmitter Output Power, 775 MHz, C4FM Modulation



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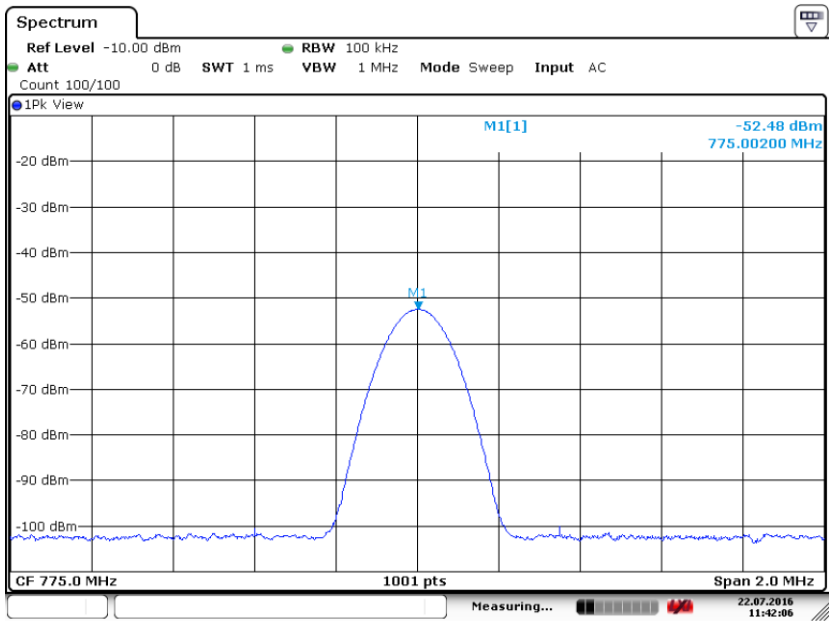
6.1.19. Mean Transmitter Input Power, 775 MHz, C4FM Modulation



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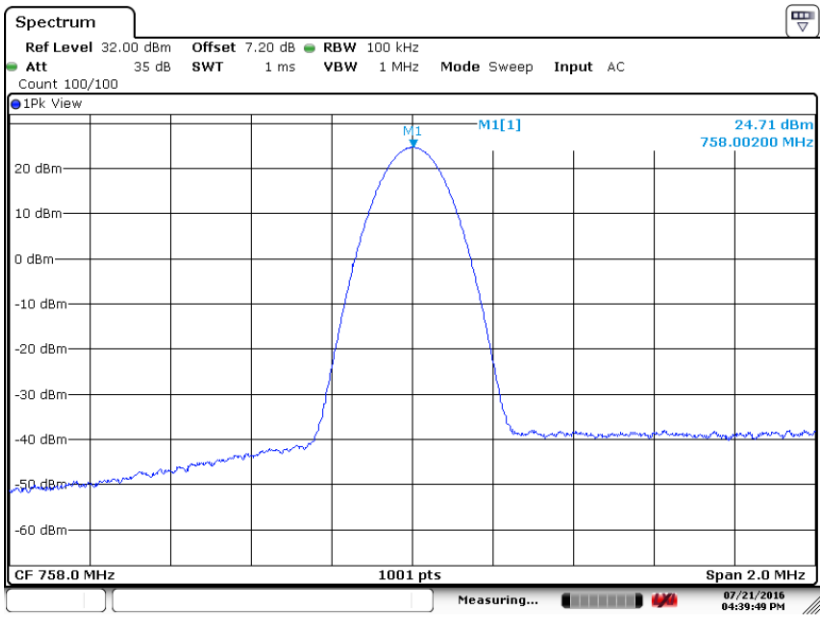
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.20. Mean Transmitter Output Power, 758 MHz, π/4-DQPSK Modulation



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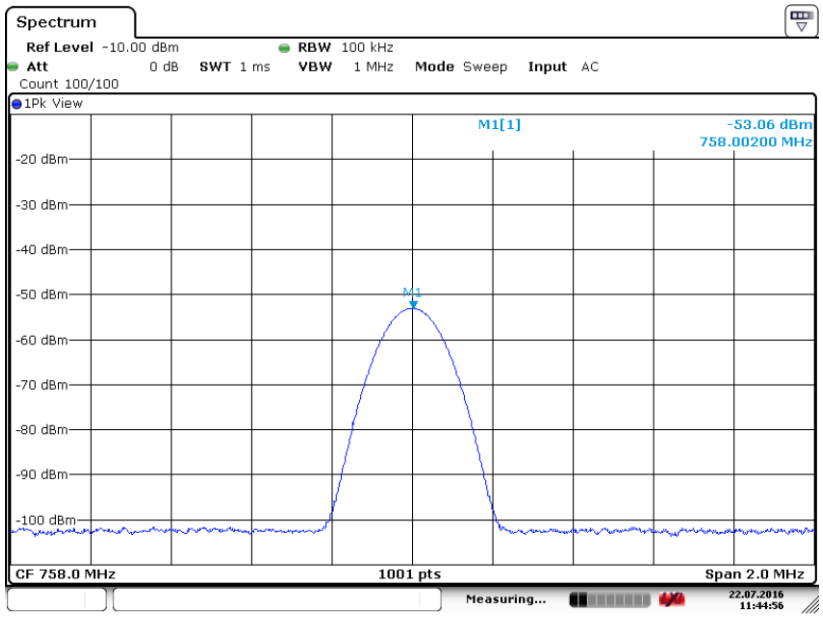
6.1.21. Mean Transmitter Input Power, 758 MHz, π/4-DQPSK Modulation



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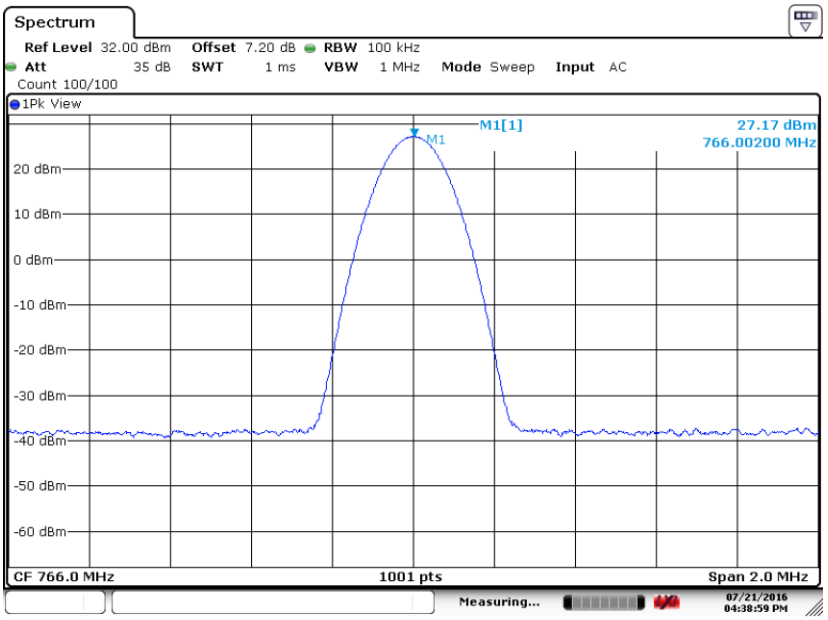
6. Measurement Data

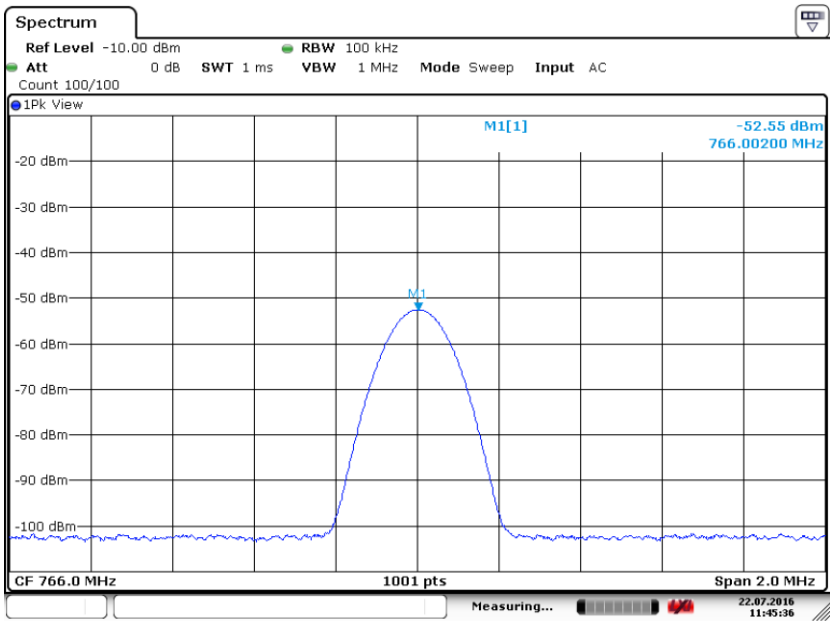
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.22. Mean Transmitter Output Power, 766 MHz, π/4-DQPSK Modulation



Date: 21.JUL.2016 16:38:58

6.1.23. Mean Transmitter Input Power, 766 MHz, π/4-DQPSK Modulation



Date: 22.JUL.2016 11:45:35

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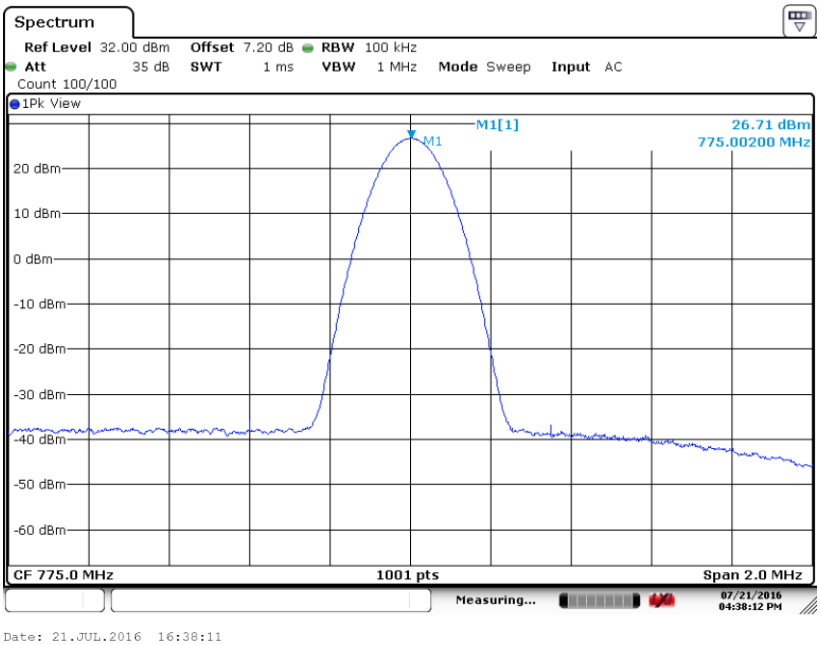
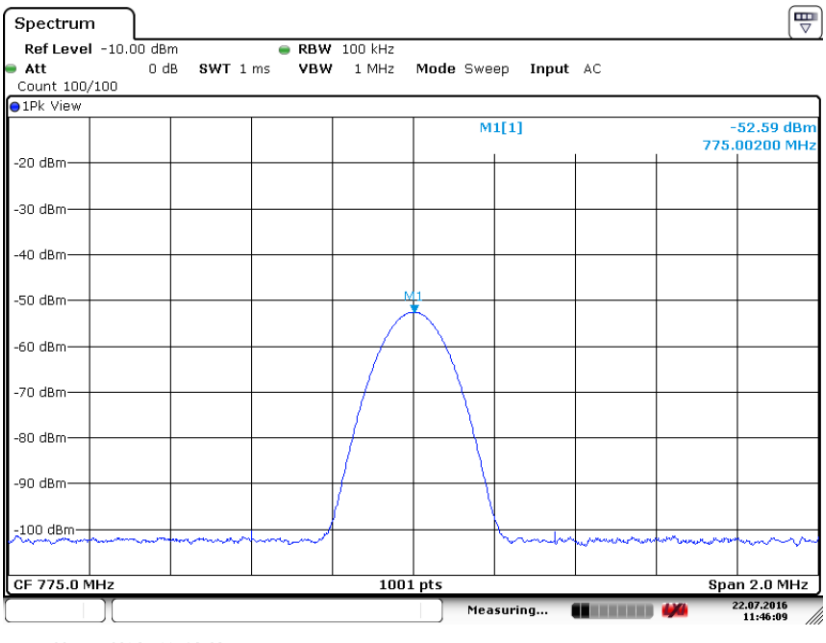
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.24. Mean Transmitter Output Power, 775 MHz, π/4-DQPSK Modulation



6.1.25. Mean Transmitter Input Power, 775 MHz, π/4-DQPSK Modulation



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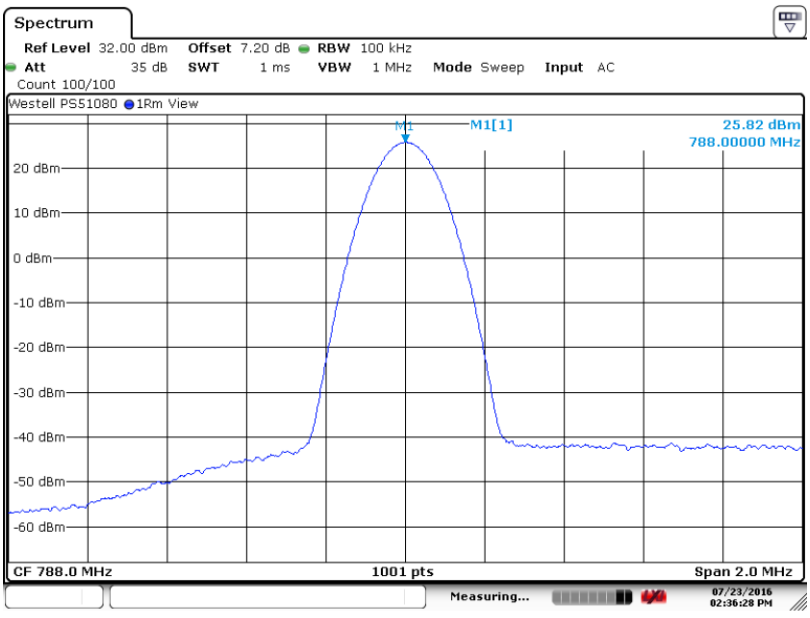
6. Measurement Data

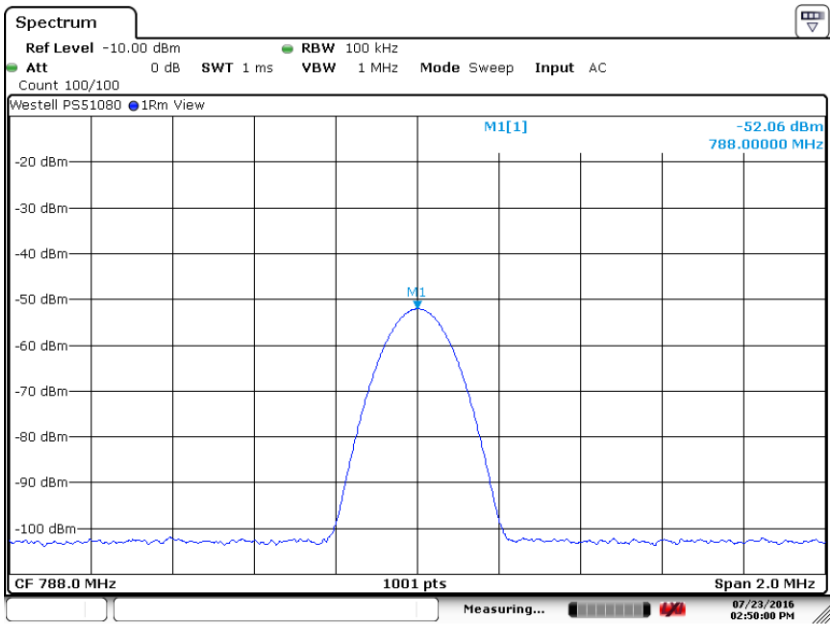
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.26. Mean Transmitter Output Power, 788 MHz, FM Modulation



Date: 23.JUL.2016 14:36:27

6.1.27. Mean Transmitter Input Power, 788 MHz, FM Modulation



Date: 23.JUL.2016 14:49:59

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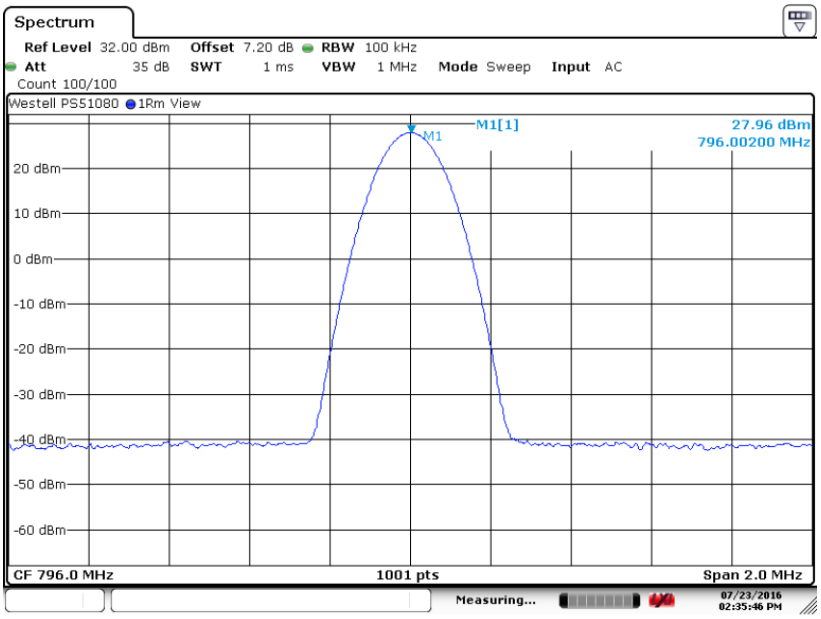
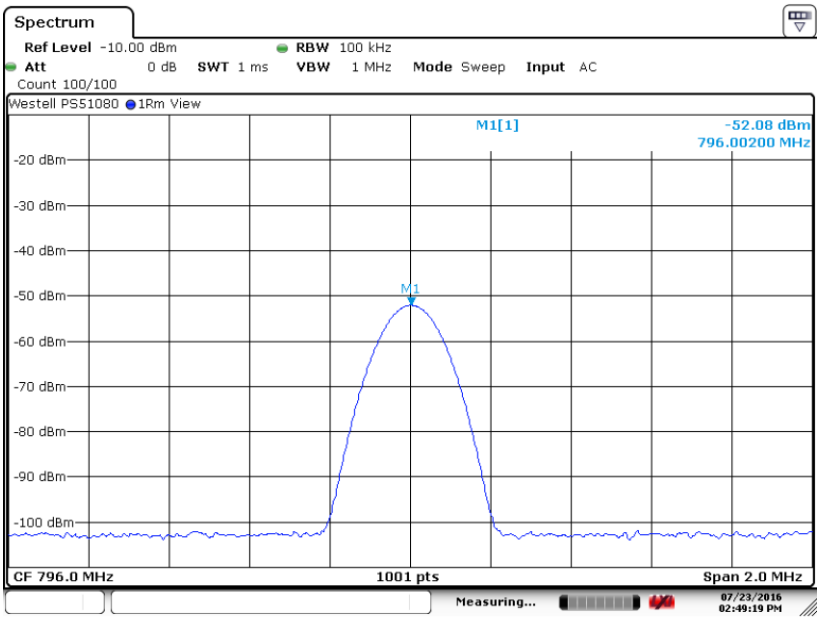
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.28. Mean Transmitter Output Power, 796 MHz, FM Modulation



6.1.29. Mean Transmitter Input Power, 796 MHz, FM Modulation



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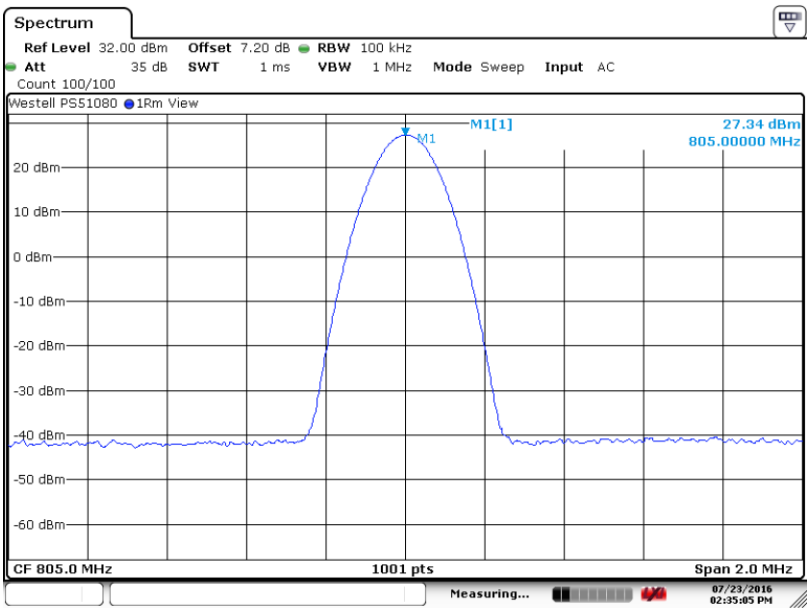
6. Measurement Data

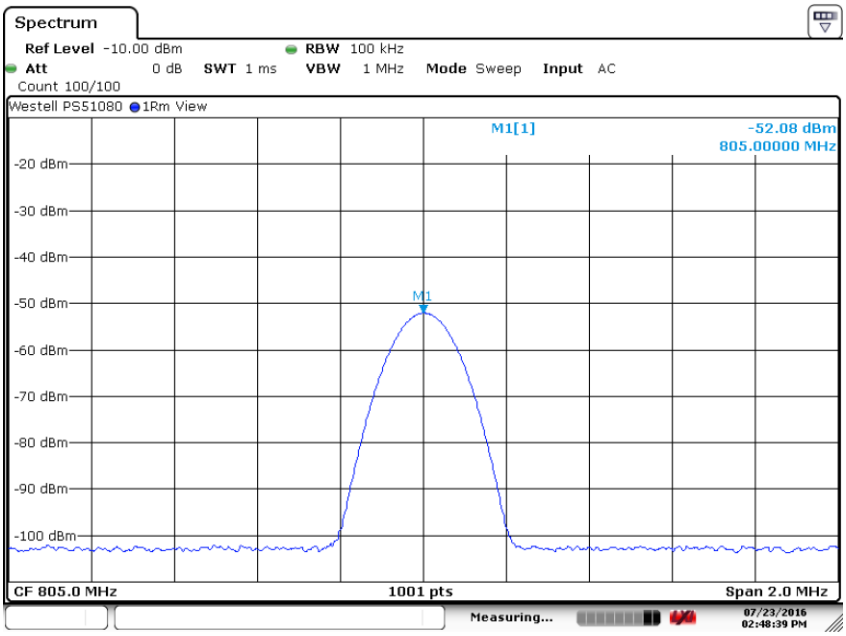
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.30. Mean Transmitter Output Power, 805 MHz, FM Modulation



Date: 23.JUL.2016 14:35:04

6.1.31. Mean Transmitter Input Power, 805 MHz, FM Modulation



Date: 23.JUL.2016 14:48:39

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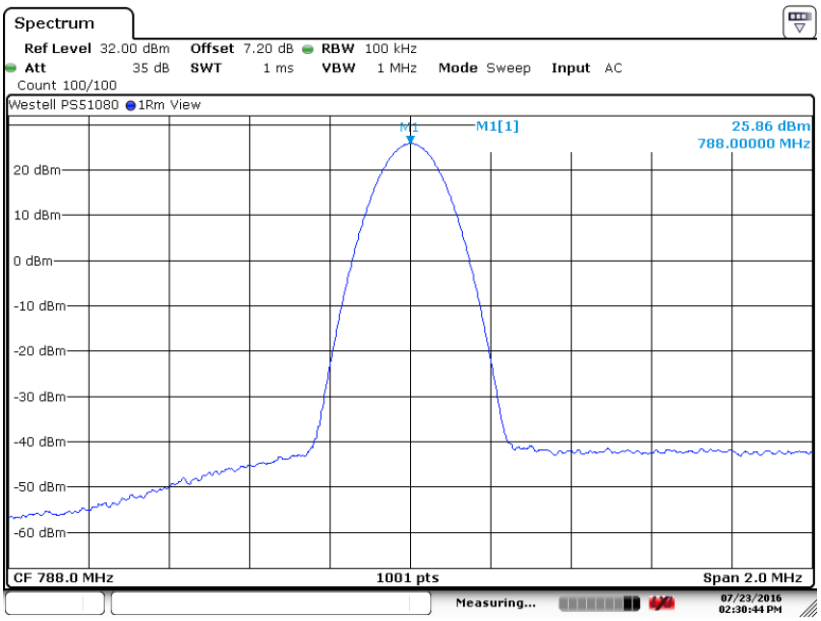
6. Measurement Data

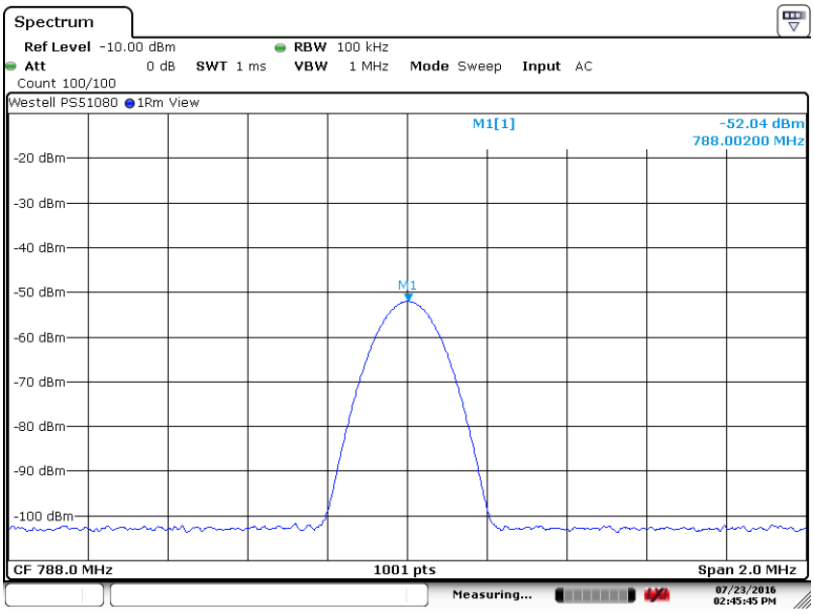
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.32. Mean Transmitter Output Power, 788 MHz, CW Signal



Date: 23.JUL.2016 14:30:43

6.1.33. Mean Transmitter Input Power, 788 MHz, CW Signal



Date: 23.JUL.2016 14:45:44

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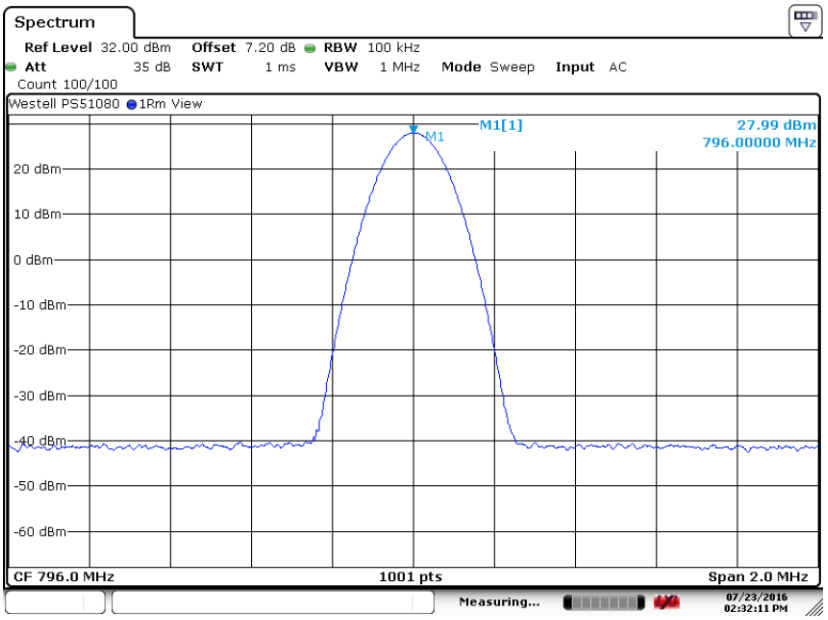
6. Measurement Data

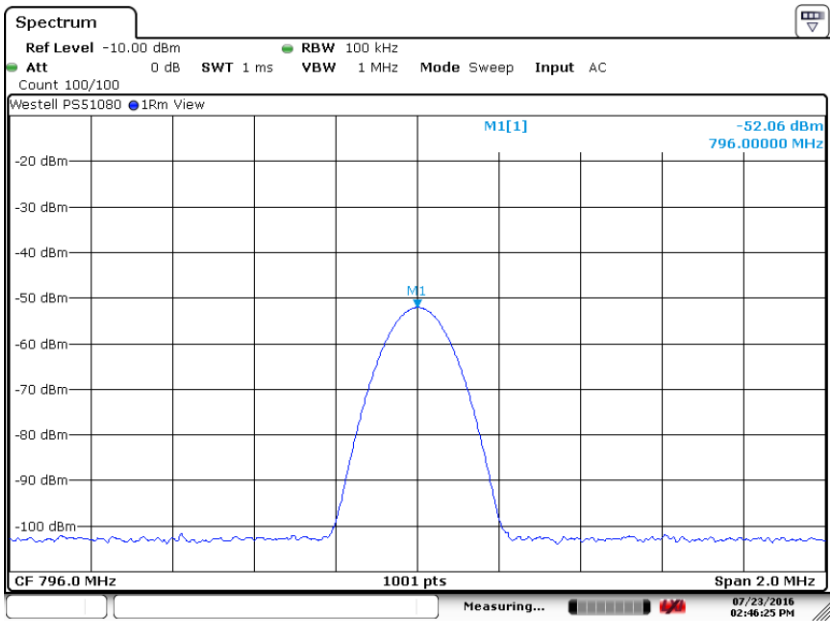
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.34. Mean Transmitter Output Power, 796 MHz, CW Signal



Date: 23.JUL.2016 14:32:10

6.1.35. Mean Transmitter Input Power, 796 MHz, CW Signal



Date: 23.JUL.2016 14:46:24

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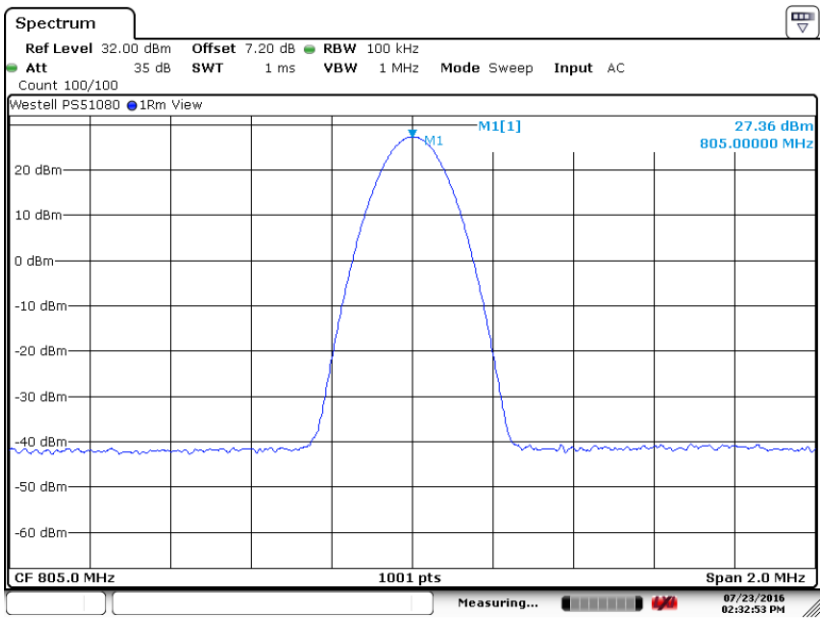
6. Measurement Data

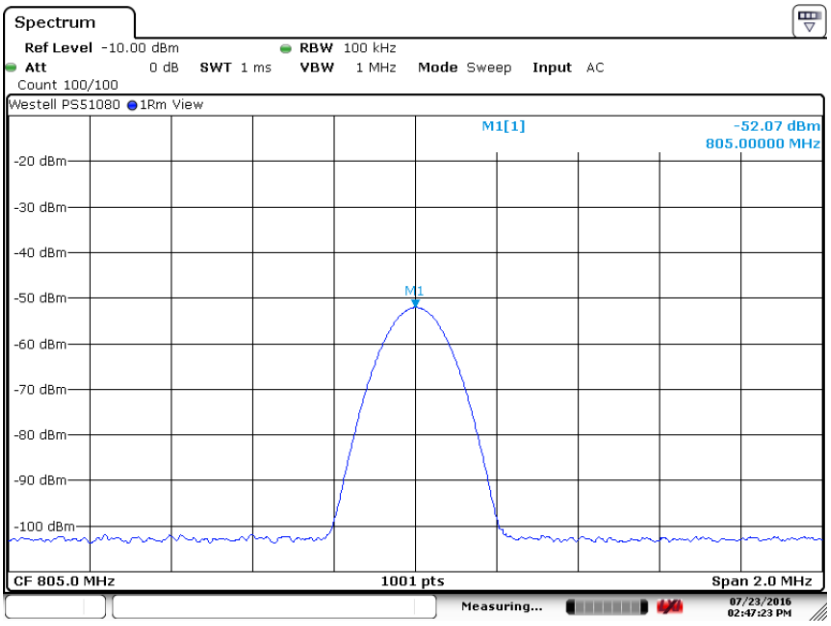
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.36. Mean Transmitter Output Power, 805 MHz, CW Signal



Date: 23.JUL.2016 14:32:52

6.1.37. Mean Transmitter Input Power, 805 MHz, CW Signal



Date: 23.JUL.2016 14:47:23

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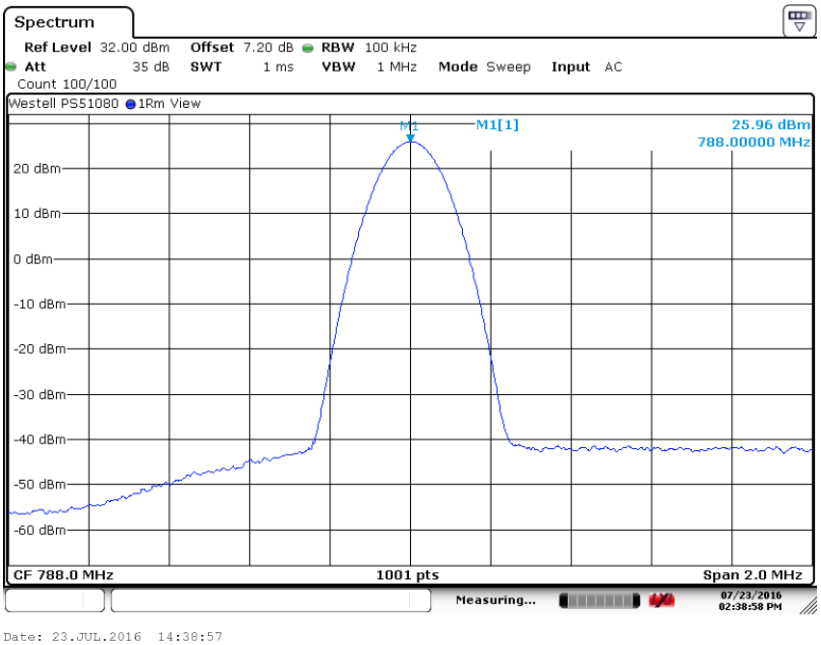
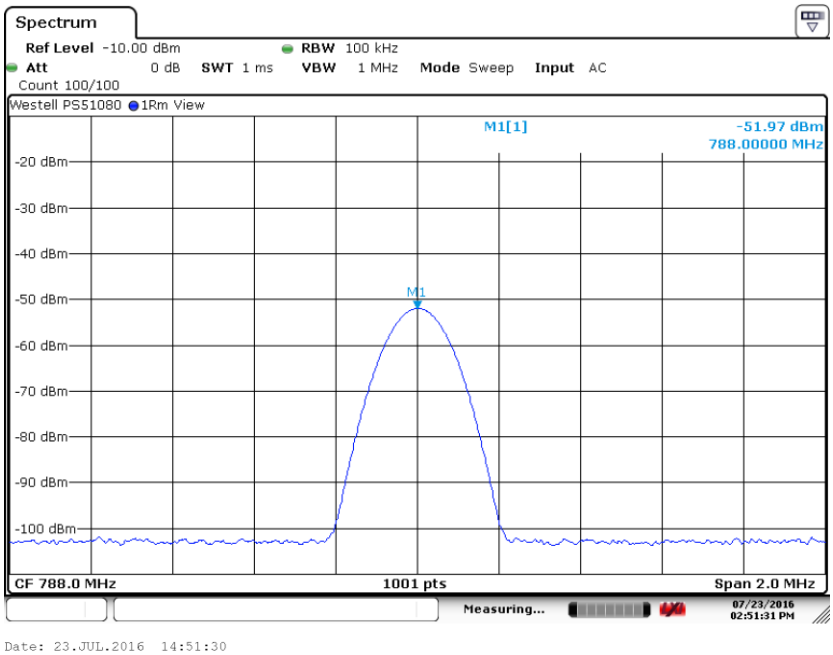
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.38. Mean Transmitter Output Power, 788 MHz, C4FM Modulation



6.1.39. Mean Transmitter Input Power, 788 MHz, C4FM Modulation



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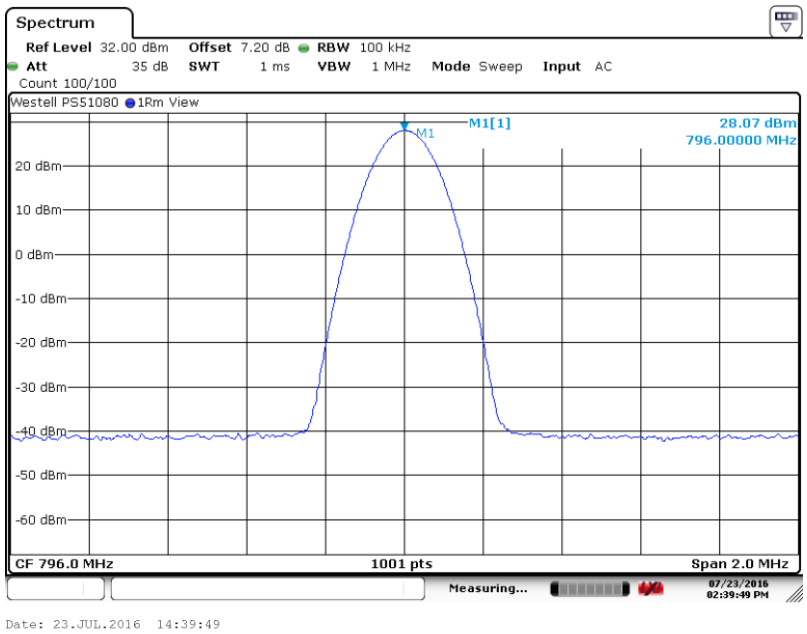
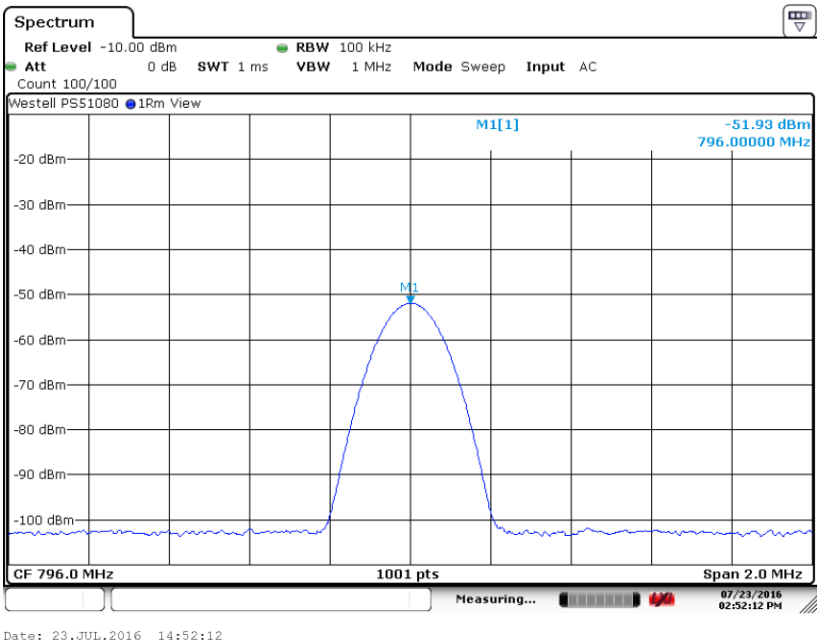
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.40. Mean Transmitter Output Power, 796 MHz, C4FM Modulation



6.1.41. Mean Transmitter Input Power, 796 MHz, C4FM Modulation



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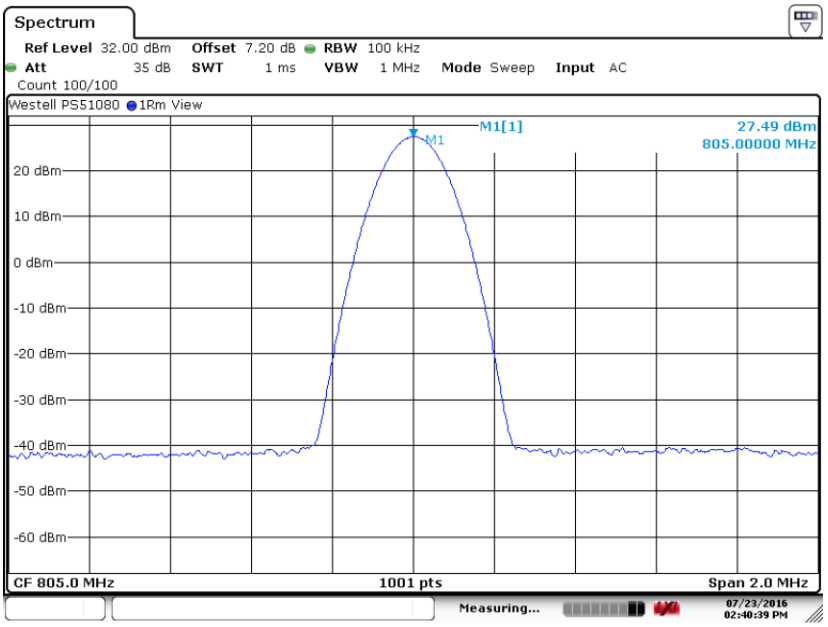
6. Measurement Data

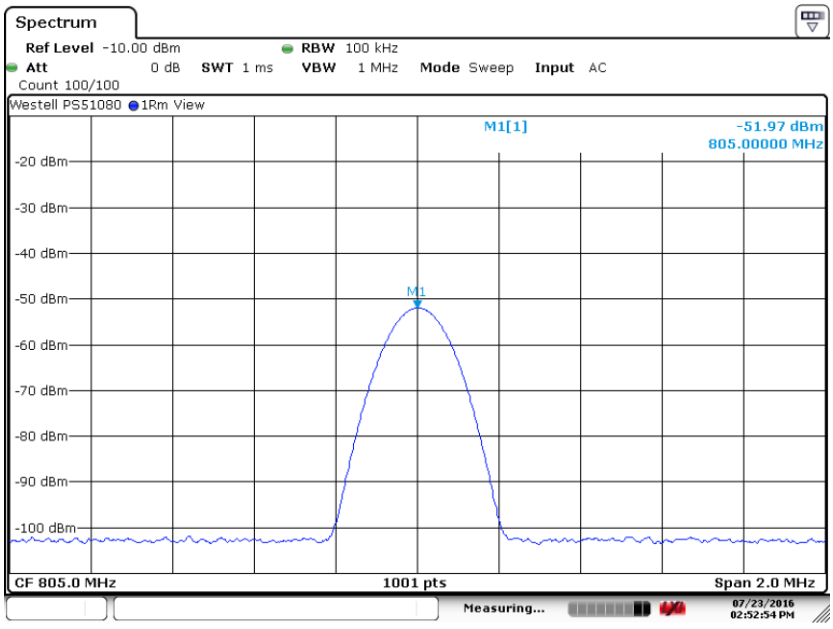
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.42. Mean Transmitter Output Power, 805 MHz, C4FM Modulation



Date: 23.JUL.2016 14:40:39

6.1.43. Mean Transmitter Input Power, 805 MHz, C4FM Modulation



Date: 23.JUL.2016 14:52:54

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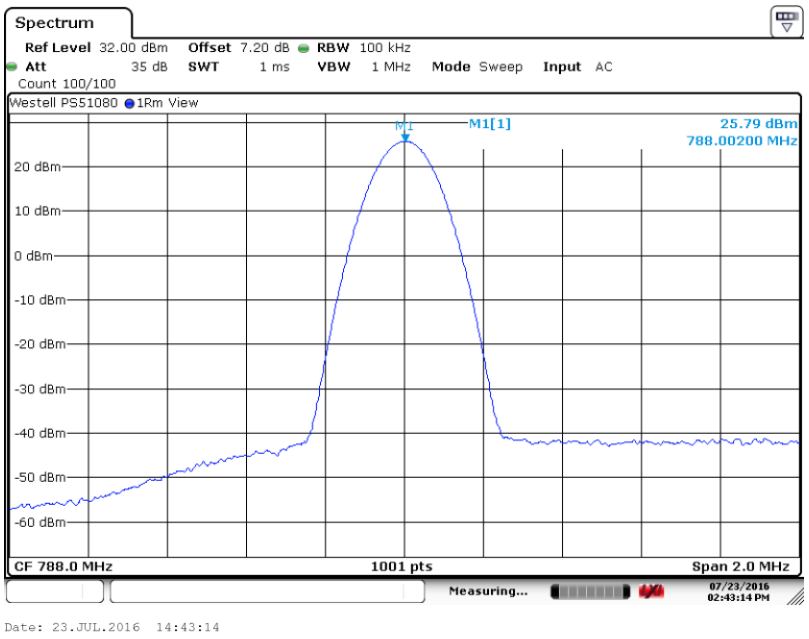
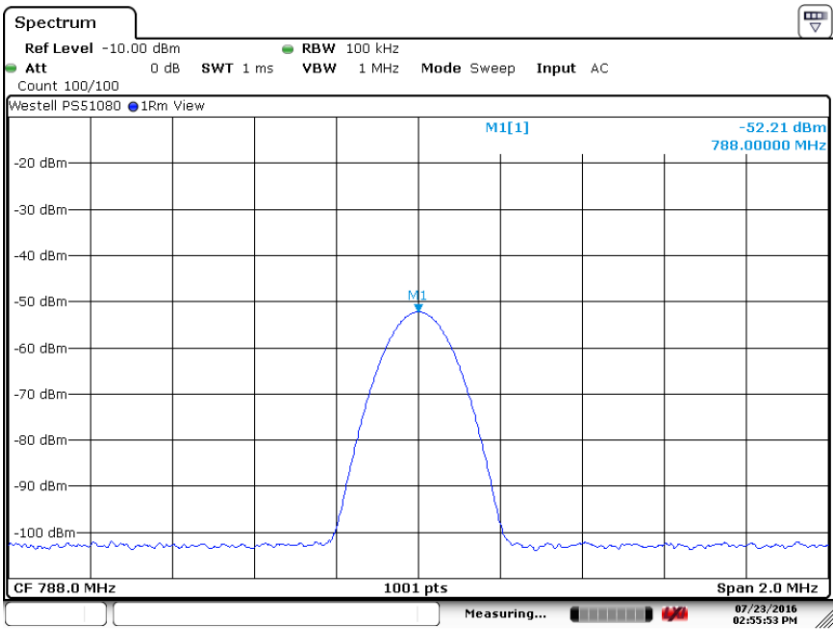
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.44. Mean Transmitter Output Power, 788 MHz, π/4-DQPSK Modulation



6.1.45. Mean Transmitter Input Power, 788 MHz, π/4-DQPSK Modulation



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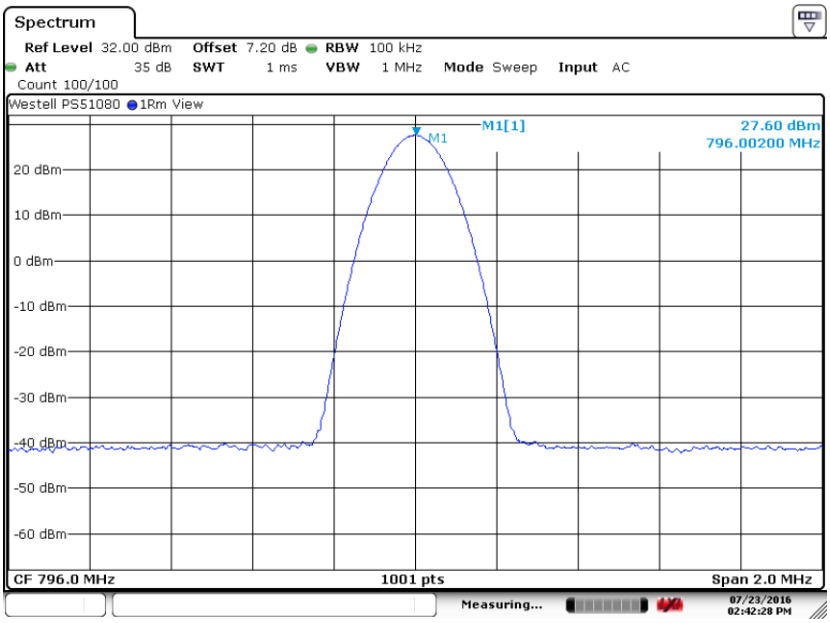
6. Measurement Data

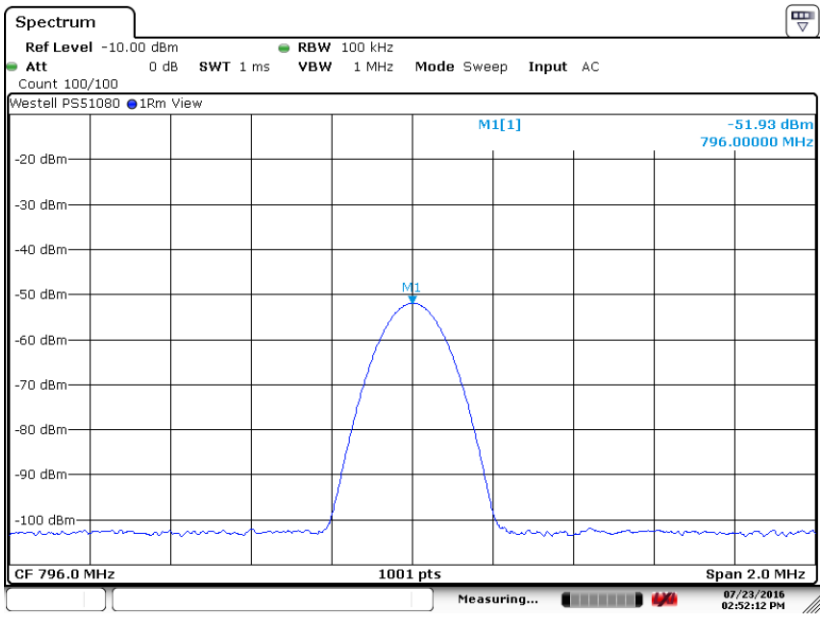
6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.46. Mean Transmitter Output Power, 796 MHz, π/4-DQPSK Modulation



Date: 23.JUL.2016 14:42:27

6.1.47. Mean Transmitter Input Power, 796 MHz, π/4-DQPSK Modulation



Date: 23.JUL.2016 14:52:12

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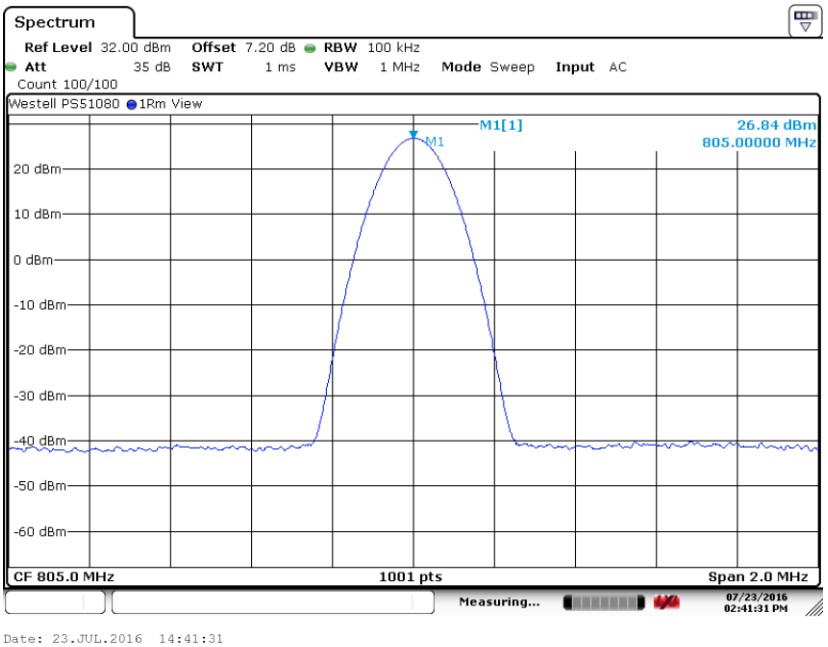
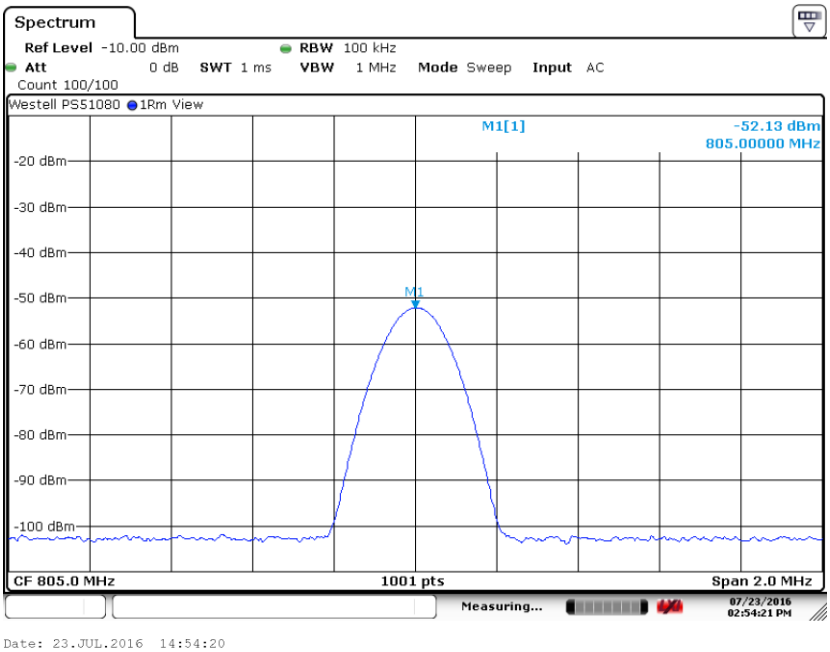
6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (cont)

6.1.48. Mean Transmitter Output Power, 805 MHz, π/4-DQPSK Modulation



6.1.49. Mean Transmitter Input Power, 805 MHz, π/4-DQPSK Modulation



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6. Measurement Data

6.1. Broadband Transmitting Power Limits 90.219(e)(1), 90.541, 90.542 (continued)

6.1.2. Maximum ERP

ERP is defined in FCC Title 47, Chapter I, Part 2, Subpart A, Section 2.1 as "Effective Radiated Power. The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction."

ERP = Transmitter Power (dBm) - Cable Loss (dB) + Antenna Gain (dBi)

The manufacturer of the device under test recommends one antenna and cable combination for use with their product. The following table provides the worst case effective radiated power based on the measured transmitter output power and the antenna gain:

Modulation Type	Center Frequency	Transmitter Power	Cable Insertion Loss	Antenna Gain	Total Output Power	
	MHz	dBm	dB	dBi	dBm	Watts
FM Modulation	758	24.95	0.00	3.00	27.95	0.62
FM Modulation	766	27.18	0.00	3.00	30.18	1.04
FM Modulation	775	26.79	0.00	3.00	29.79	0.95
CW	758	24.97	0.00	3.00	27.97	0.63
CW	766	27.19	0.00	3.00	30.19	1.04
CW	775	26.81	0.00	3.00	29.81	0.96
C4FM Modulation	758	25.05	0.00	3.00	28.05	0.64
C4FM Modulation	766	27.30	0.00	3.00	30.30	1.07
C4FM Modulation	775	26.96	0.00	3.00	29.96	0.99
π/4-DQPSK Modulation	758	24.71	0.00	3.00	27.71	0.59
π/4-DQPSK Modulation	766	27.17	0.00	3.00	30.17	1.04
π/4-DQPSK Modulation	775	26.71	0.00	3.00	29.71	0.94
FM Modulation	788	25.82	0.00	3.00	28.82	0.76
FM Modulation	796	27.96	0.00	3.00	30.96	1.25
FM Modulation	805	27.34	0.00	3.00	30.34	1.08
CW	788	25.86	0.00	3.00	28.86	0.77
CW	796	27.99	0.00	3.00	30.99	1.26
CW	805	27.36	0.00	3.00	30.36	1.09
C4FM Modulation	788	25.96	0.00	3.00	28.96	0.79
C4FM Modulation	796	28.07	0.00	3.00	31.07	1.28
C4FM Modulation	805	27.49	0.00	3.00	30.49	1.12
π/4-DQPSK Modulation	788	25.79	0.00	3.00	28.79	0.76
π/4-DQPSK Modulation	796	27.60	0.00	3.00	30.60	1.15
π/4-DQPSK Modulation	805	26.84	0.00	3.00	29.84	0.96

[1] Measured. See section 6.1.1.
[2] Customer supplied 3 dBi. Factor is a combination of both antenna gain and cable loss.

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6. Measurement Data (continued)

6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 and Emission Mask 90.210

Requirement: Each authorization issued to a station licensed under this part will show an emission designator representing the class of emission authorized. The designator will be prefixed by a specified necessary bandwidth. This number does not necessarily indicate the bandwidth occupied by the emission at any instant.

There is no significant change in the occupied bandwidth of the retransmitted signal.

Emission Mask shall also be met for each modulation type. Emission Mask C is used for the 758 to 775 MHz and 788 to 805 MHz bands per the table in section 90.210.

FM modulation at 16 kHz was used as worst case against emission mask C at AGC threshold and 3 dB above AGC threshold as the other modulations are narrower.

Test Method: KDB 935210 Section 4.4

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6. Measurement Data (continued)

6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1. Occupied (99% Power) Bandwidth

Modulation Type	Frequency	Output Occupied Bandwith	Input Occupied Bandwidth	Difference	Result
	MHz	kHz	kHz	kHz	
FM 16K0F3E	758	16.034	16.034	0.000	Compliant
FM 16K0F3E	766	16.034	16.034	0.000	Compliant
FM 16K0F3E	775	16.034	16.034	0.000	Compliant
FM 11K3F3E	758	11.329	11.329	0.000	Compliant
FM 11K3F3E	766	11.329	11.329	0.000	Compliant
FM 11K3F3E	775	11.329	11.329	0.000	Compliant
FM 4K05F1E	758	4.046	4.046	0.000	Compliant
FM 4K05F1E	766	4.046	4.046	0.000	Compliant
FM 4K05F1E	775	4.046	4.046	0.000	Compliant
C4FM	758	8.092	8.032	0.060	Compliant
C4FM	766	8.032	8.122	-0.090	Compliant
C4FM	775	8.092	8.062	0.030	Compliant
π/4-DQPSK	758	9.800	9.800	0.000	Compliant
π/4-DQPSK	766	9.770	9.740	0.030	Compliant
π/4-DQPSK	775	9.800	9.800	0.000	Compliant
FM 16K0F3E	788	16.034	16.034	0.000	Compliant
FM 16K0F3E	796	16.034	16.034	0.000	Compliant
FM 16K0F3E	805	16.034	16.034	0.000	Compliant
FM 11K3F3E	788	11.329	11.329	0.000	Compliant
FM 11K3F3E	796	11.329	11.329	0.000	Compliant
FM 11K3F3E	805	11.329	11.329	0.000	Compliant
FM 4K05F1E	788	4.046	4.046	0.000	Compliant
FM 4K05F1E	796	4.046	4.046	0.000	Compliant
FM 4K05F1E	805	4.046	4.046	0.000	Compliant
C4FM	788	8.152	8.181	-0.029	Compliant
C4FM	796	8.062	8.152	-0.090	Compliant
C4FM	805	8.002	8.092	-0.090	Compliant
π/4-DQPSK	788	9.770	9.770	0.000	Compliant
π/4-DQPSK	796	9.770	9.770	0.000	Compliant
π/4-DQPSK	805	9.800	9.800	0.000	Compliant

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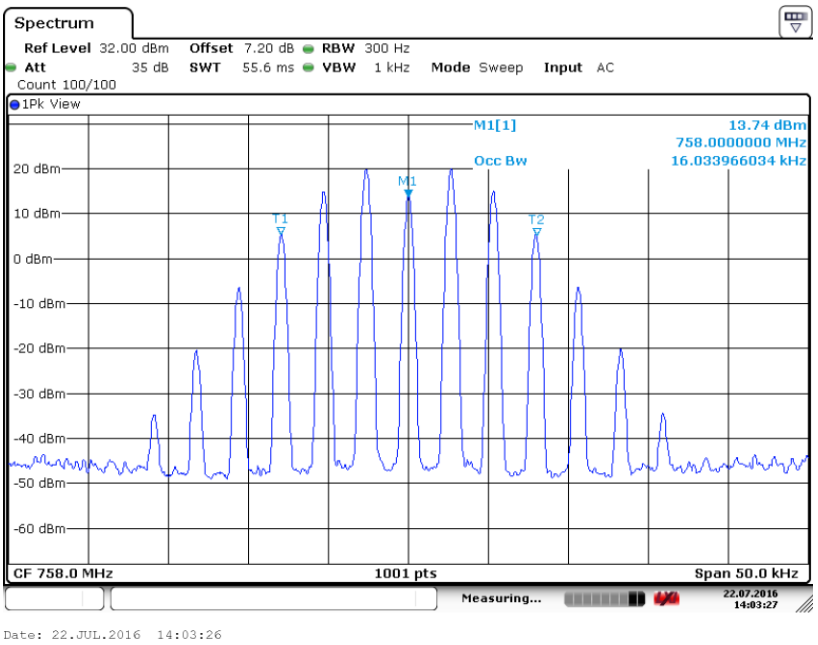
6. Measurement Data (continued)

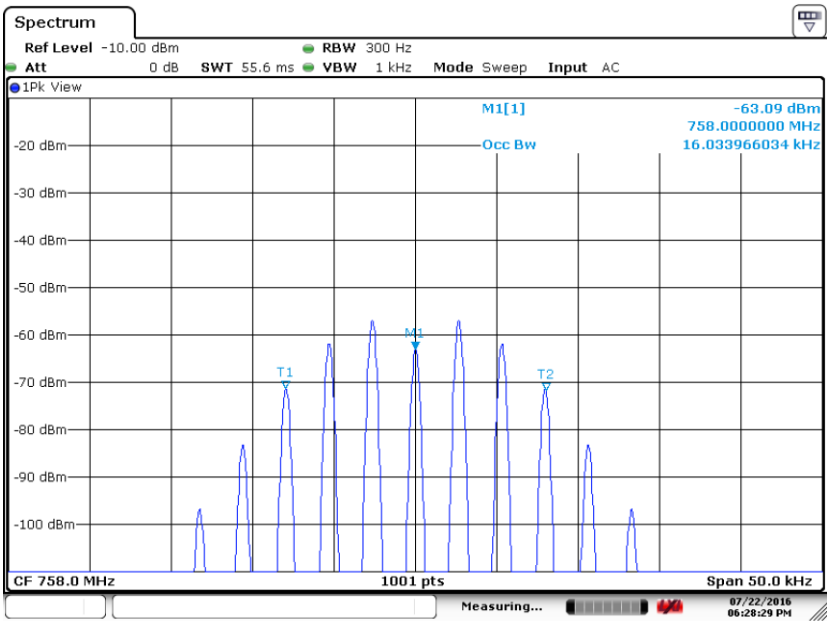
6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1.1. Occupied (99% Power) Bandwidth Measurement, 758 MHz, 16k FM



Date: 22.JUL.2016 14:03:26

6.2.1.2. Occupied (99% Power) Bandwidth Input, 758 MHz, 16k FM



Date: 22.JUL.2016 18:28:28

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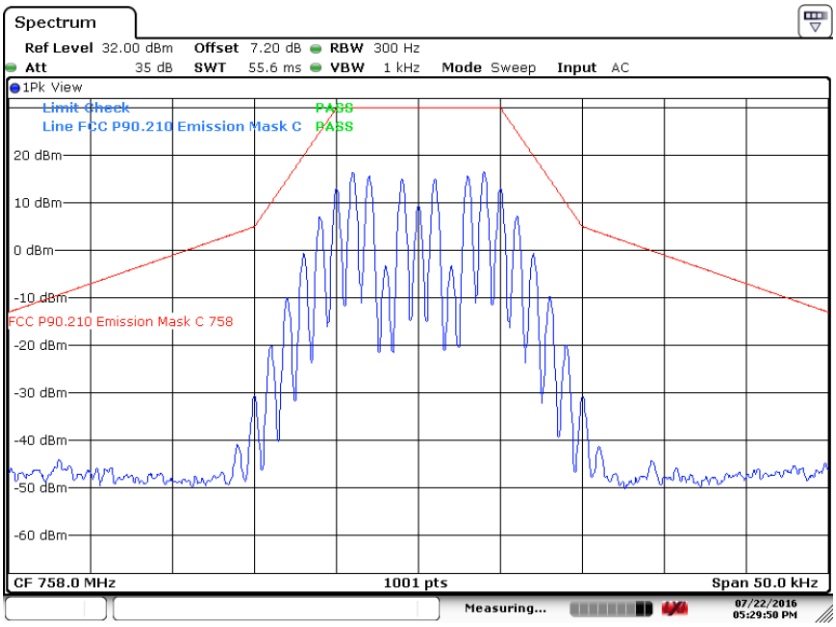
6. Measurement Data (continued)

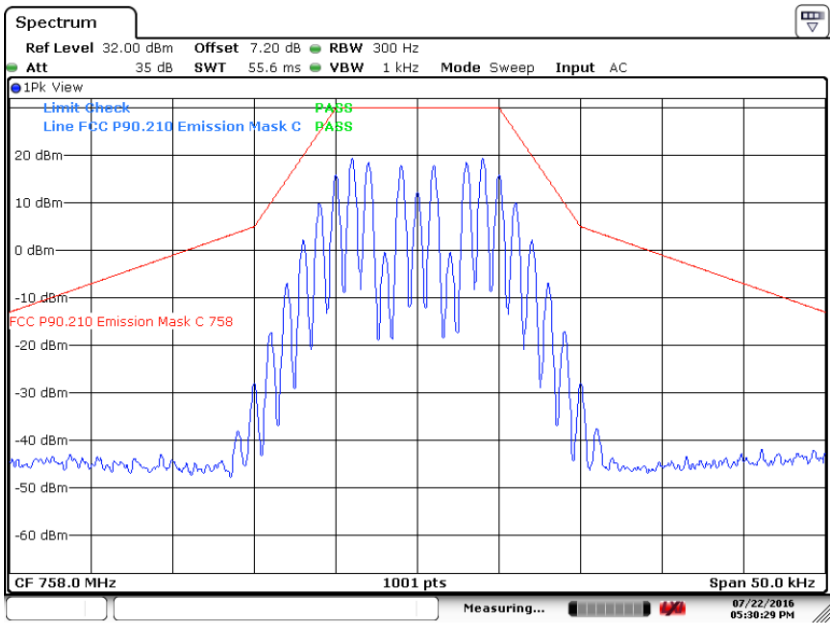
6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1.3. Occupied (99% Power) Emissions Mask C, 758 MHz, 16k FM



Date: 22.JUL.2016 17:29:50

6.2.1.4. Occupied (99% Power) Emissions Mask C plus 3 dB, 758 MHz, 16k FM



Date: 22.JUL.2016 17:30:29

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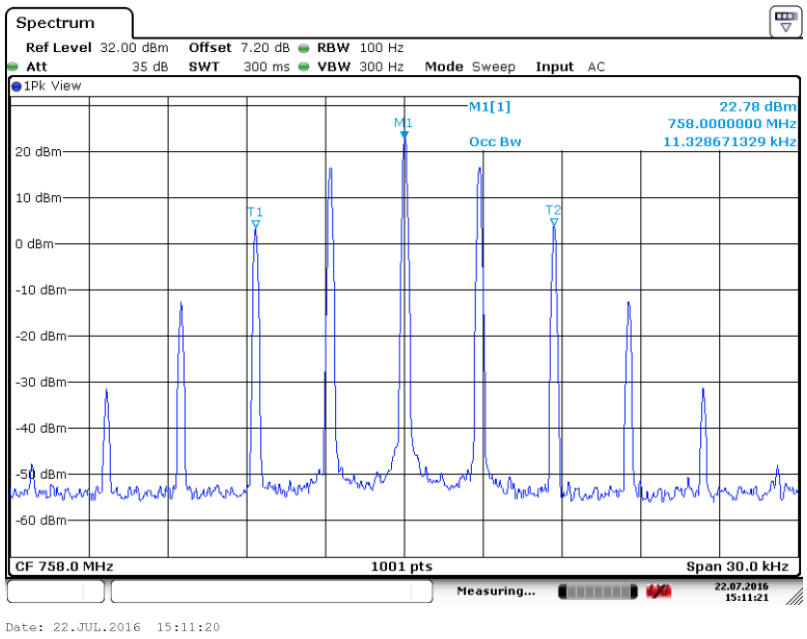
6. Measurement Data (continued)

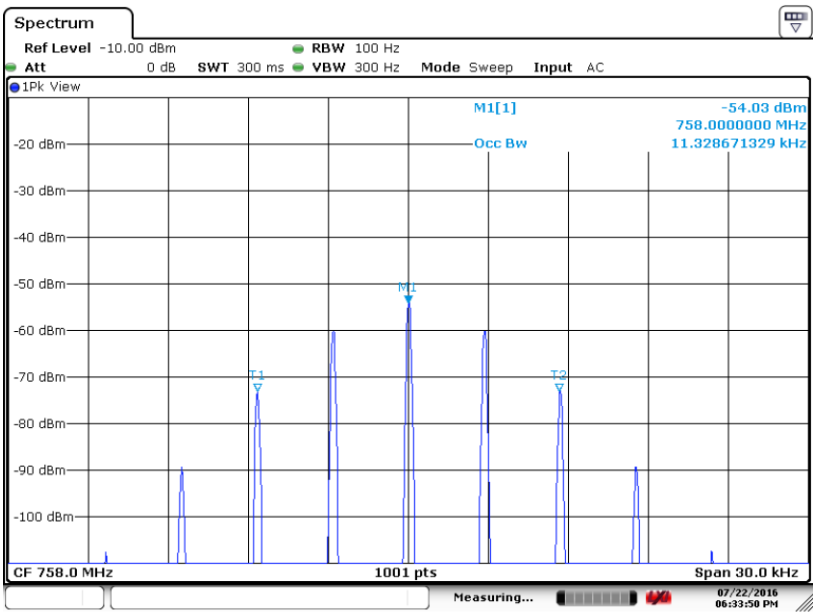
6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1.5. Occupied (99% Power) Bandwidth Measurement, 758 MHz, 11k FM



Date: 22.JUL.2016 15:11:20

6.2.1.6. Occupied (99% Power) Bandwidth Input, 758 MHz, 11k FM



Date: 22.JUL.2016 18:33:49

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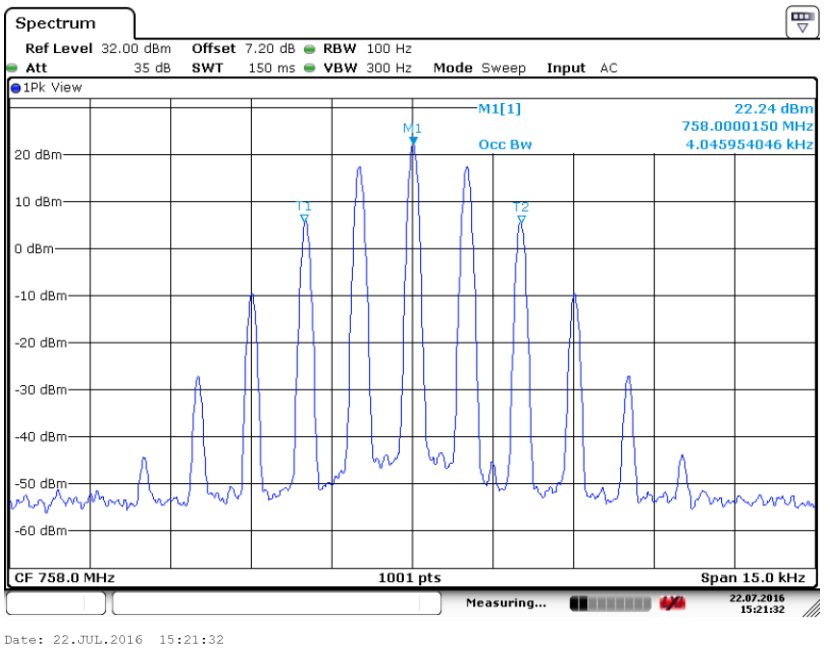
6. Measurement Data (continued)

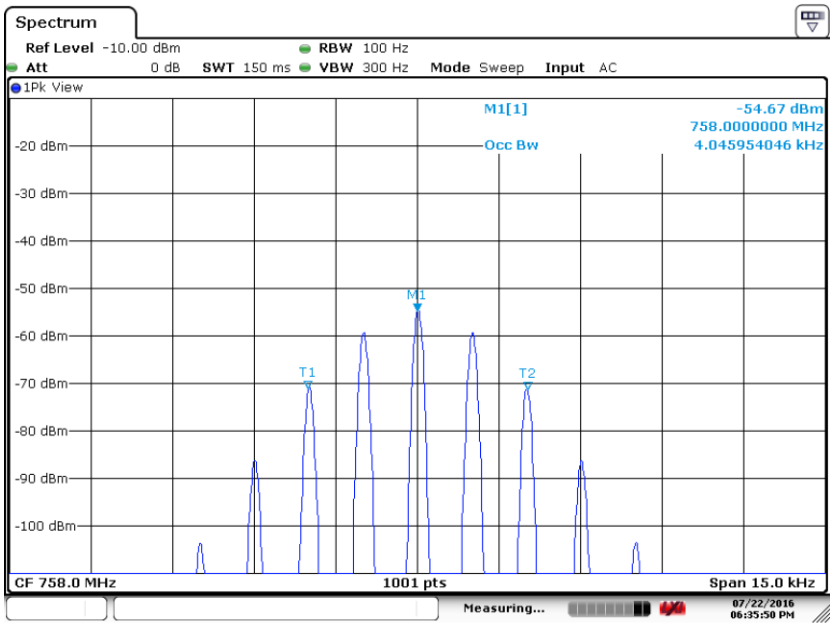
6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1.7. Occupied (99% Power) Bandwidth Measurement, 758 MHz, 4k FM



Date: 22.JUL.2016 15:21:32

6.2.1.8. Occupied (99% Power) Bandwidth Input, 758 MHz, 4k FM



Date: 22.JUL.2016 18:35:50

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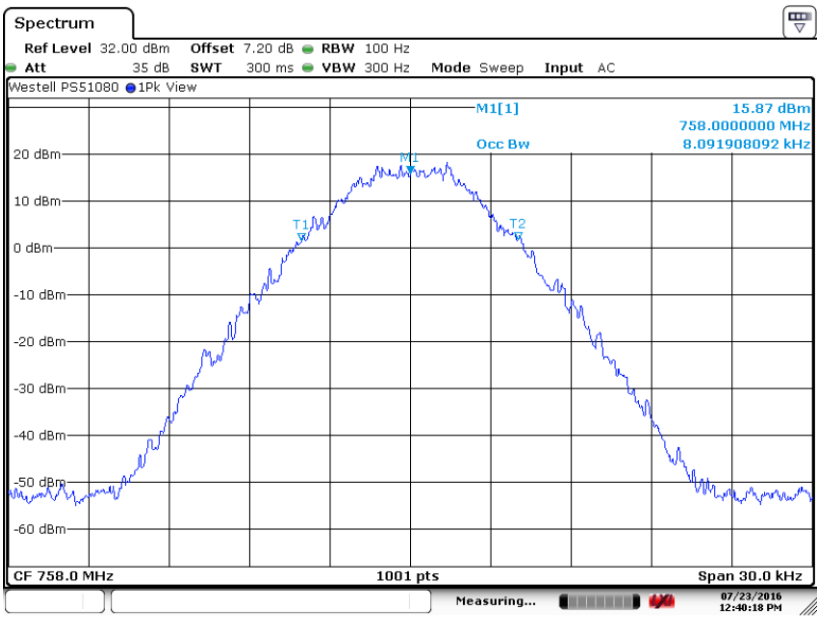
6. Measurement Data (continued)

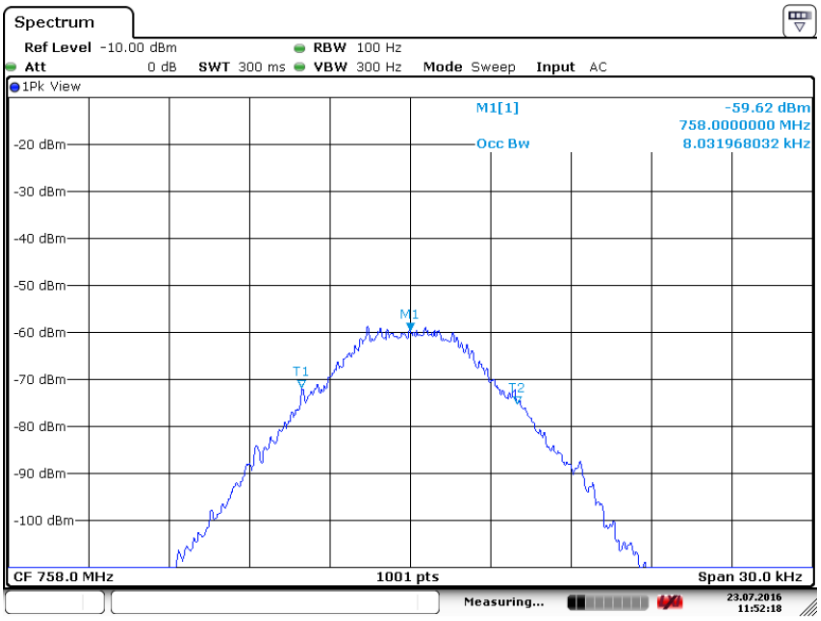
6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1.9. Occupied (99% Power) Bandwidth Measurement, 758 MHz, C4FM



Date: 23.JUL.2016 12:40:17

6.2.1.10. Occupied (99% Power) Bandwidth Input, 758 MHz, C4FM



Date: 23.JUL.2016 11:52:18

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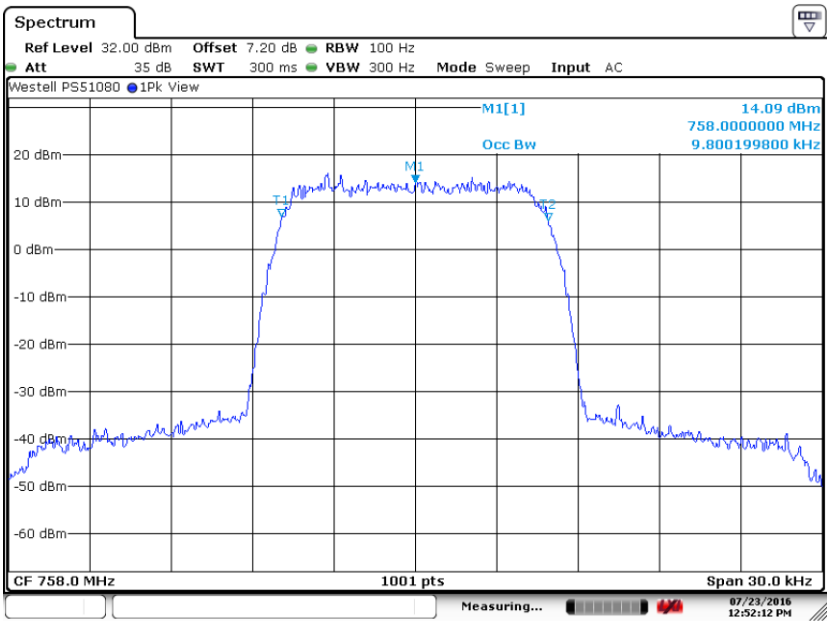
6. Measurement Data (continued)

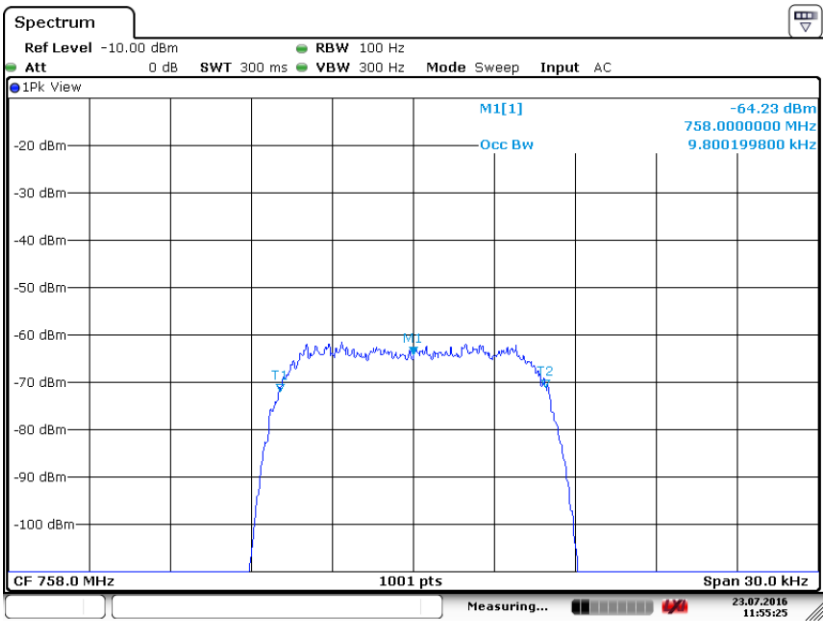
6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1.11. Occupied (99% Power) Bandwidth Measurement, 758 MHz, π/4-DQPSK



Date: 23.JUL.2016 12:52:11

6.2.1.12. Occupied (99% Power) Bandwidth Input, 758 MHz, π/4-DQPSK



Date: 23.JUL.2016 11:55:24

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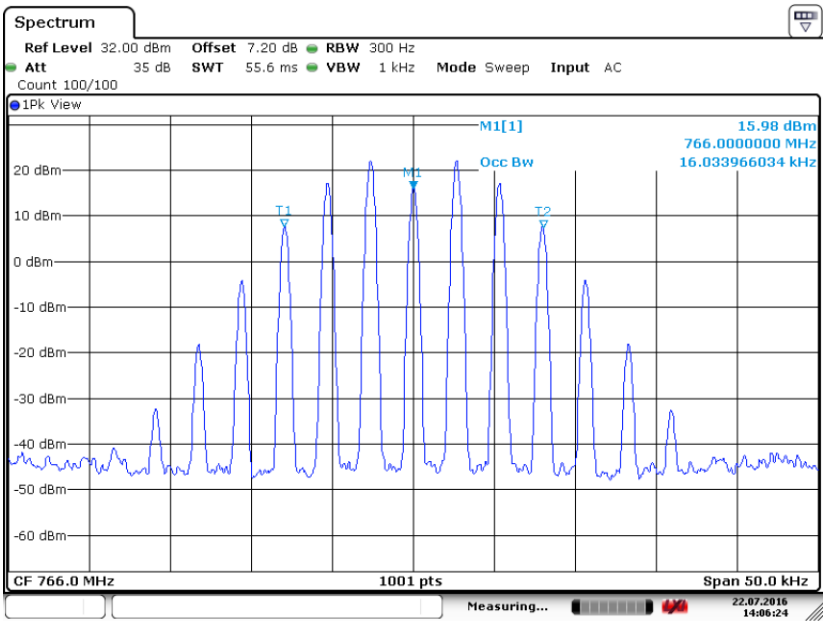
6. Measurement Data (continued)

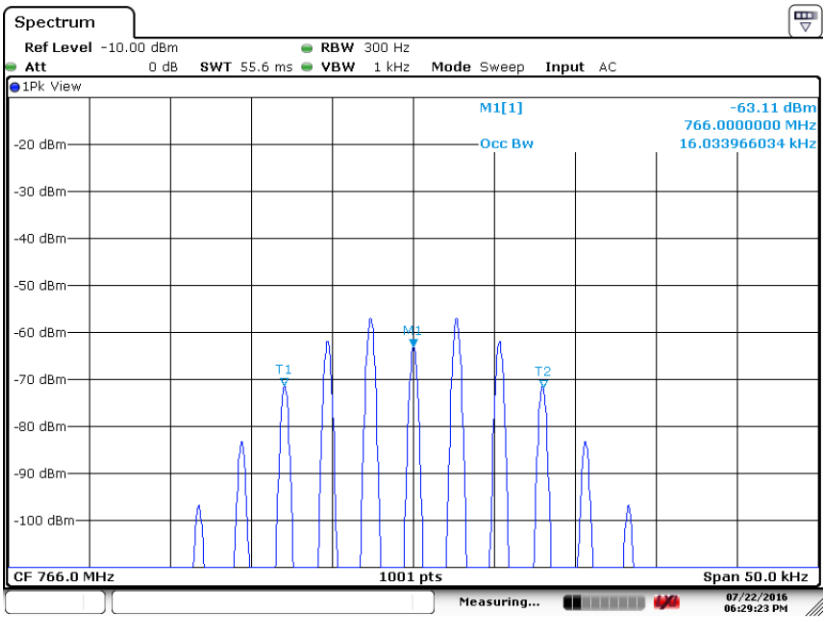
6.2. Bandwidth Limitations 90.219(e)(4)(ii), FCC Part 2.1049 (continued)

6.2.1.13. Occupied (99% Power) Bandwidth Measurement, 766 MHz, 16k FM



Date: 22.JUL.2016 14:06:23

6.2.1.14. Occupied (99% Power) Bandwidth Input, 766 MHz, 16k FM



Date: 22.JUL.2016 18:29:22

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