TEST REPORT

Report Number: 103177090MPK-003
Project Number: G103177090
October 30, 2017

Testing performed on the
Pillbox
Model: v2.5
FCC ID: 2ANUG-PBXV2-5-USA
IC: 23220-PB25US

to

FCC Part 15 Subpart C (15.247)
Industry Canada RSS-247, Issue 2

For

TowerView Health, Inc.

Test Performed by:	Test Authorized by:
Intertek	TowerView Health, Inc.
1365 Adams Court	STE 2500, 2001 Market Street
Menlo Park, CA 94025 USA	Philadelphia, PA 19103 USA

Prepared by: _____ **Date:** October 30, 2017
Aaron Chang

Reviewed by: _____ **Date:** October 30, 2017
Krishna K Vemuri

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Report No. 103177090MPK-003

Equipment Under Test:	Pillbox
Trade Name:	TowerView Health, Inc.
Model Number:	v2.5
Applicant:	TowerView Health, Inc.
Contact:	Ankur Aggarwal
Address:	TowerView Health, Inc. STE 2500, 2001 Market Street Philadelphia, PA 19103
Country	USA
Tel. Number:	(650) 776-9322
Email:	Ankur@towerviewhealth.com
Applicable Regulation:	FCC Part 15 Subpart C (15.247) Industry Canada RSS-247 Issue 2
Date of Test:	October 2-26, 2017

We attest to the accuracy of this report:

Aaron Chang
Project Engineer

Krishna K Vemuri
Engineering Team Lead

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1.0 Summary of Tests

Test	Reference FCC	Reference Industry Canada	Result
RF Output Power	15.247(b)(3)	RSS-247, 5.4	Complies
6 dB Bandwidth	15.247(a)(2)	RSS-247, 5.2	Complies
Power Density	15.247(e)	RSS-247, 5.2	Complies
Out of Band Antenna Conducted Emission	15.247(d)	RSS-247, 5.5	Complies
Transmitter Radiated Emissions	15.247(d), 15.209, 15.205	RSS-247, 5.5	Complies
AC Line Conducted Emission	15.207	RSS-GEN	Complies*
Antenna Requirement	15.203	RSS-GEN	Complies (Unique Connector & Internal Antenna)
RF Exposure	15.247(i), 2.1093(d)	RSS-102	Complies

*See Report 103177090MPK-001 for compliance data.

EUT receive date: October 02, 2017

EUT receive condition: The pre-production version of the EUT was received in good condition with no apparent damage. As declared by the Applicant, it is identical to the production units.

Test start date: October 3, 2017

Test completion date: October 26, 2017

The test results in this report pertain only to the item tested.

2.0 General Information

2.1 Product Description

TowerView Health, Inc. supplied the following description of the EUT:

The TowerView pillbox stores a patient's medications for a week in a 4x7 grid of wells (4 doses per day, 7 days per week). Under each well is a capacitance sensing pad that allows the host microcontroller and system of IC's to detect if and when the patient removes his or her medications. If the patient does not take his or her medications within a certain window of his or her prescribed time, the pillbox triggers alarms in the forms of lights and sound on the pillbox itself, as well as text, phone, and email reminders, as configurable via TowerView's server. The pillbox also periodically sends sensing and telemetry data to the server via wireless networks using WIFI, Bluetooth, and/or cellular technologies.
For more information, see user's manual provided by the manufacturer.

For more information, see user's manual provided by the manufacturer.

This test report covers only the 2.4GHz WiFi radio.

Information about the WiFi radio is presented below:

The EUT supports a wide range of data rates in the 2.4GHz band:
IEEE 802.11b
IEEE 802.11g
IEEE 802.11n

Applicant	TowerView Health, Inc.
Model Number	v2.5
FCC Identifier	2ANUG-PBXV2-5-USA
IC Identifier	23220-PB25US
Modulation Technique	DSSS (BPSK, QPSK, CCK), OFDM (BPSK, QPSK, 16QAM, 64QAM)
Rated RF Output	802.11b: 14.10 dBm 802.11g: 14.19 dBm 802.11n HT20: 13.99 dBm 802.11n HT40: 12.66 dBm
Frequency Range	2412 – 2462 MHz, 802.11b/g/n
Type of modulation	BPSK, QPSK, 16QAM, 64QAM
Number of Channel(s)	11 for 802.11b/g/n HT20; 7 for 802.11n HT40
Antenna(s) & Gain	Internal Antenna, 1.00 dBi peak gain
Applicant Name & Address	TowerView Health, Inc. STE 2500, 2001 Market Street Philadelphia, PA 19103 USA

2.2 Related Submittal(s) Grants

None.

2.3 Test Methodology

Antenna conducted measurements were performed according to the FCC documents “Guidance for Performing Compliance Measurement on Digital Transmission Systems (DTS) Operating under §15.247” (KDB 558074 D01 DTS MEAS GUIDANCE V04), RSS-247 and RSS-GEN Issue 4.

Radiated emissions and AC mains conducted emissions measurements were performed according to the procedures in ANSI C63.10: 2013. Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Data Sheet" of this report.

2.4 Test Facility

The test site used to collect the radiated data is site 1 (10-m semi-anechoic chamber). This test facility and site measurement data have been fully placed on file with the FCC, IC and A2LA accredited.

2.5 Measurement Uncertainty

Compliance with the limits was based on the results of the measurements and doesn’t take into account the measurement uncertainty.

Estimated Measurement Uncertainty

Measurement	Expanded Uncertainty (k=2)		
	0.15 MHz – 1 GHz	1 GHz – 2.5 GHz	> 2.5 GHz
RF Power and Power Density – antenna conducted	-	0.7 dB	-
Unwanted emissions - antenna conducted	1.1 dB	1.3 dB	1.9 dB
Bandwidth – antenna conducted	-	30 Hz	-

Measurement	Expanded Uncertainty (k=2)			
	0.15 MHz – 30MHz	30 – 200 MHz	200 MHz – 1 GHz	1 GHz – 18 GHz
Radiated emissions	-	4.7	4.6	5.1 dB
AC mains conducted emissions	2.1 dB	-	-	-

3.0 System Test Configuration

3.1 Support Equipment and description

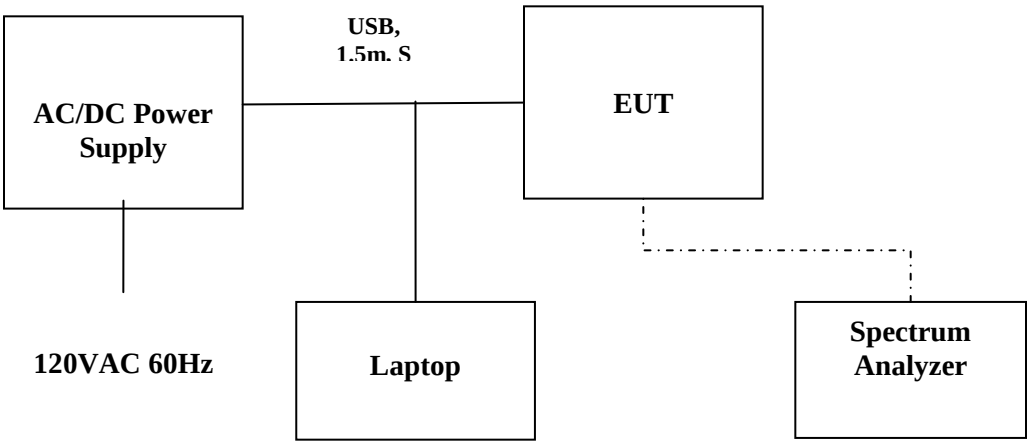
Description	Manufacturer	Model Number
Laptop	HP	EliteBook 840
AC/DC Power Adapter	No Markings	No Markings

3.2 Block Diagram of Test Setup

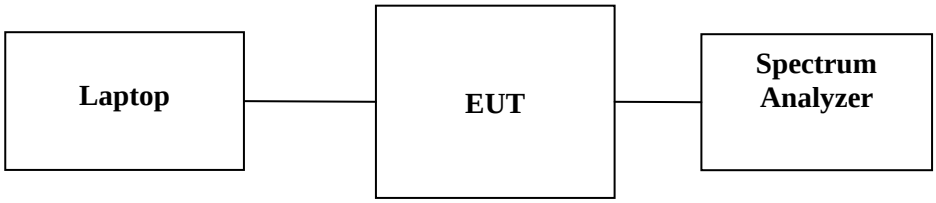
Equipment Under Test			
Description	**Manufacturer**	**Model Number**	**Serial Number**
Pillbox	TowerView Health, Inc.	v2.5	17380001

Antenna was removed and co-axial connector with a cable was installed for Conducted Measurements.

AC Powered



Battery Powered



S = Shielded **U** = Unshielded	**F** = With Ferrite **M** = Meter

3.3 Justification

Preliminary testing was performed for all modulation/data rate modes. The worse-case data rate with highest power and widest spectrum were selected for final measurements:

CCK 1 Mbps – for 802.11b
OFDM 6 Mbps – for 802.11g
OFDM MCS0 – for 802.11n

3.4 Mode of Operation During Test

During transmitter testing, the transmitter was setup to transmit continuously using the maximum RF power setting provided by the manufacturers via test scripts. Their corresponding output power in dBm can be found in section 4.2 of this report.

3.5 Modifications Required for Compliance

No modifications were made by the manufacturer or Intertek to the EUT in order to bring the EUT into compliance.

3.6 Additions, Deviations and Exclusions from Standards

No additions, deviations or exclusions from the standard were made.

4.0 Measurement Results

4.1 6-dB Bandwidth and 99% Occupied Bandwidth
FCC Rule: 15.247(a)(2); RSS-247 A8.2 and RSS-GEN;

4.1.1 Requirement

The minimum 6-dB bandwidth shall be at least 500 kHz

4.1.2 Procedure

A spectrum analyzer was connected to the antenna port of the transmitter.

For FCC 6dB Channel Bandwidth the Procedure described in the FCC Publication 558074 D01 DTS Meas Guidance v04 was used to determine the DTS occupied bandwidth. Section 8.1 Option 1 was used.

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

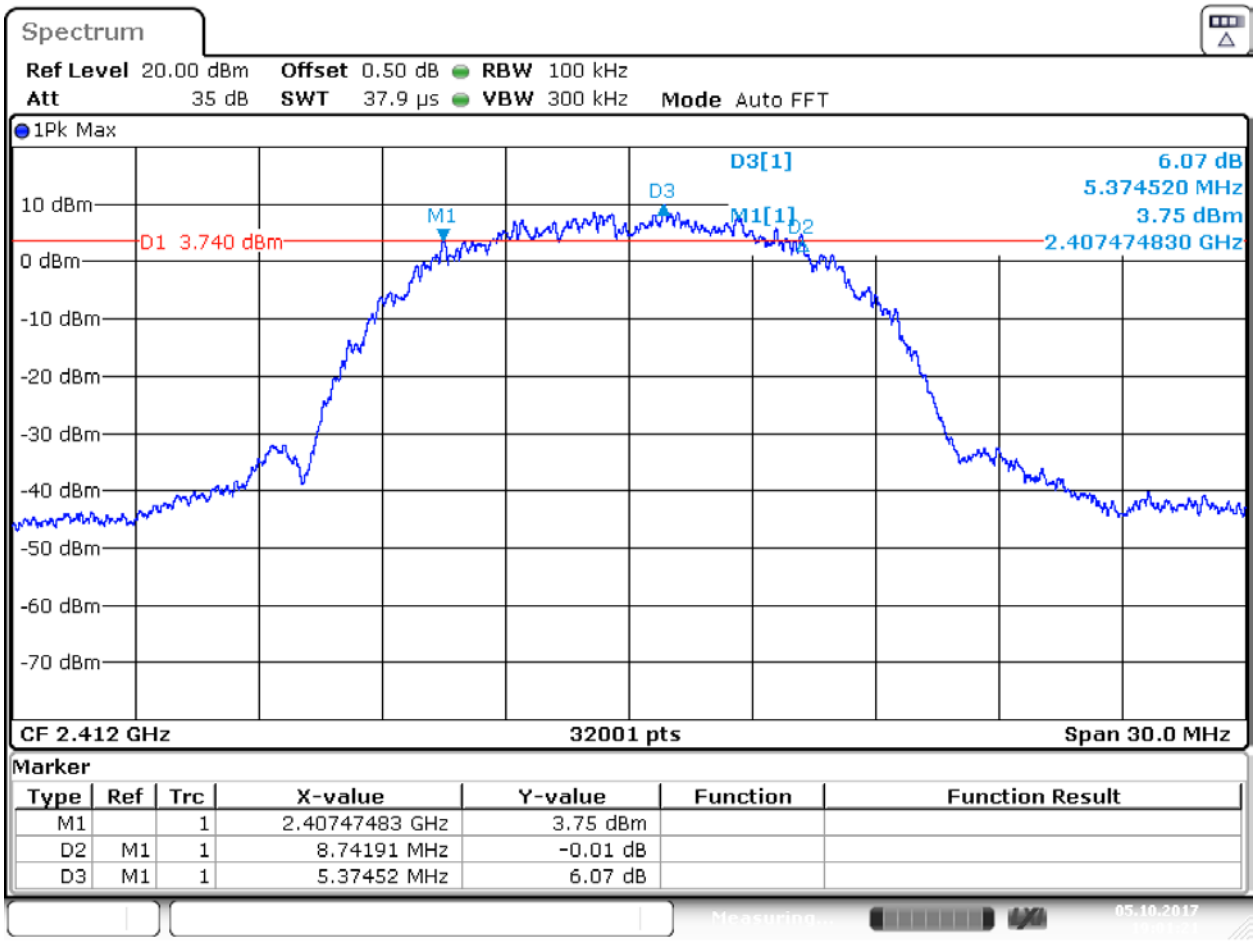
For 99% power bandwidth measurement, the bandwidth was determined by using the built-in 99% occupied bandwidth function of the spectrum analyzer. The resolution bandwidth is set to 1% of the selected span as is without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth.

Test Date:	October 5, 2017

4.1.3 Test Result

Frequency MHz	Ch.	Frequency MHz	6 dB FCC Bandwidth, MHz	Plot #	99% Bandwidth, MHz	Plot #
802.11b	1	2412	8.742	1.1	11.325	1.13
	6	2437	8.744	1.2	11.350	1.14
	11	2462	8.741	1.3	11.320	1.15
802.11g	1	2412	15.092	1.4	16.773	1.16
	6	2437	15.939	1.5	16.762	1.17
	11	2462	16.311	1.6	16.754	1.18
802.11n HT20	1	2412	17.309	1.7	17.722	1.19
	6	2437	17.307	1.8	17.741	1.20
	11	2462	17.308	1.9	17.729	1.21
802.11n HT40	3	2422	36.065	1.10	37.521	1.22
	6	2437	36.065	1.11	37.521	1.23
	9	2452	36.066	1.12	37.525	1.24

Plot 1.1 – 6dB Bandwidth (FCC)



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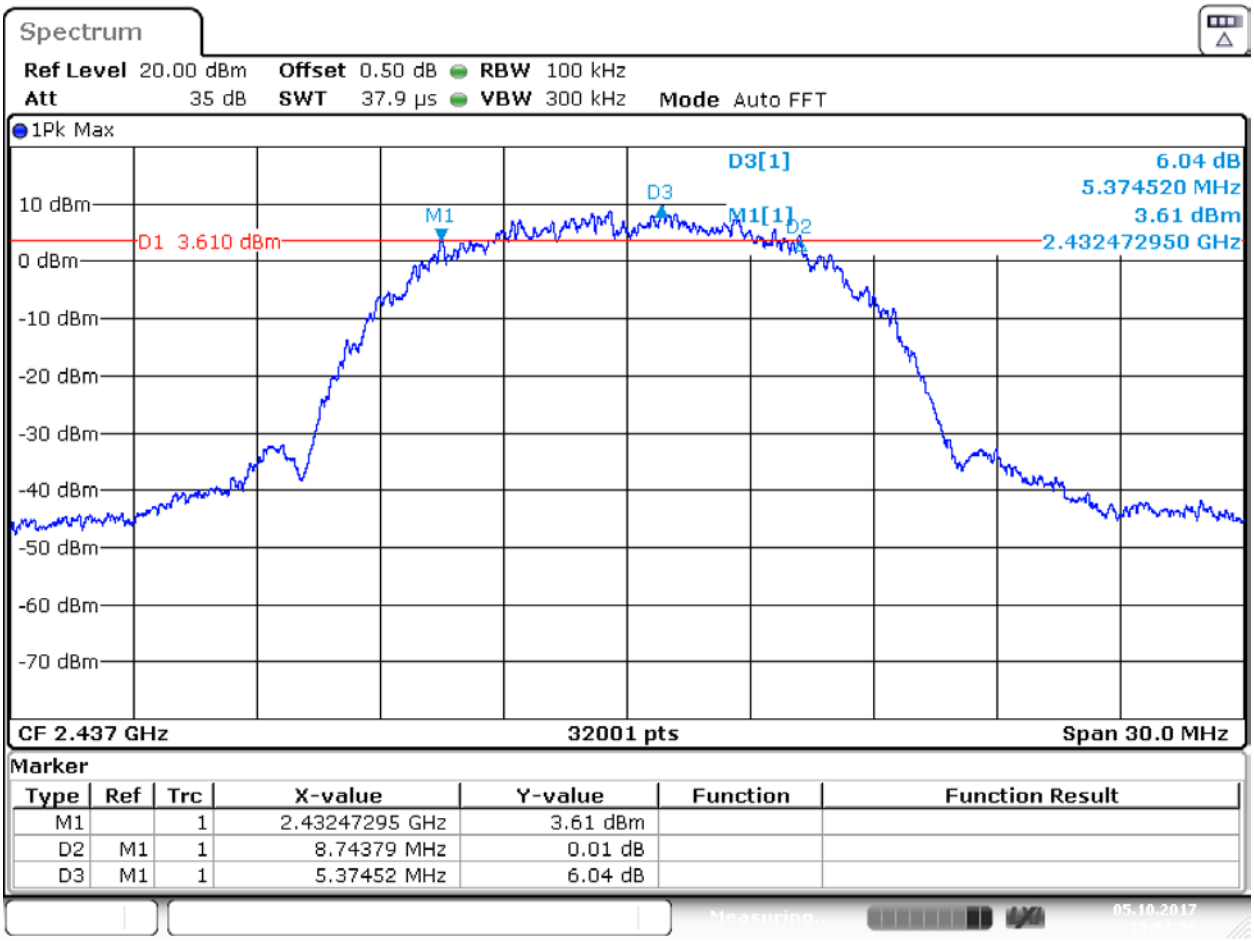
Plot 1.2 – 6dB Bandwidth (FCC)



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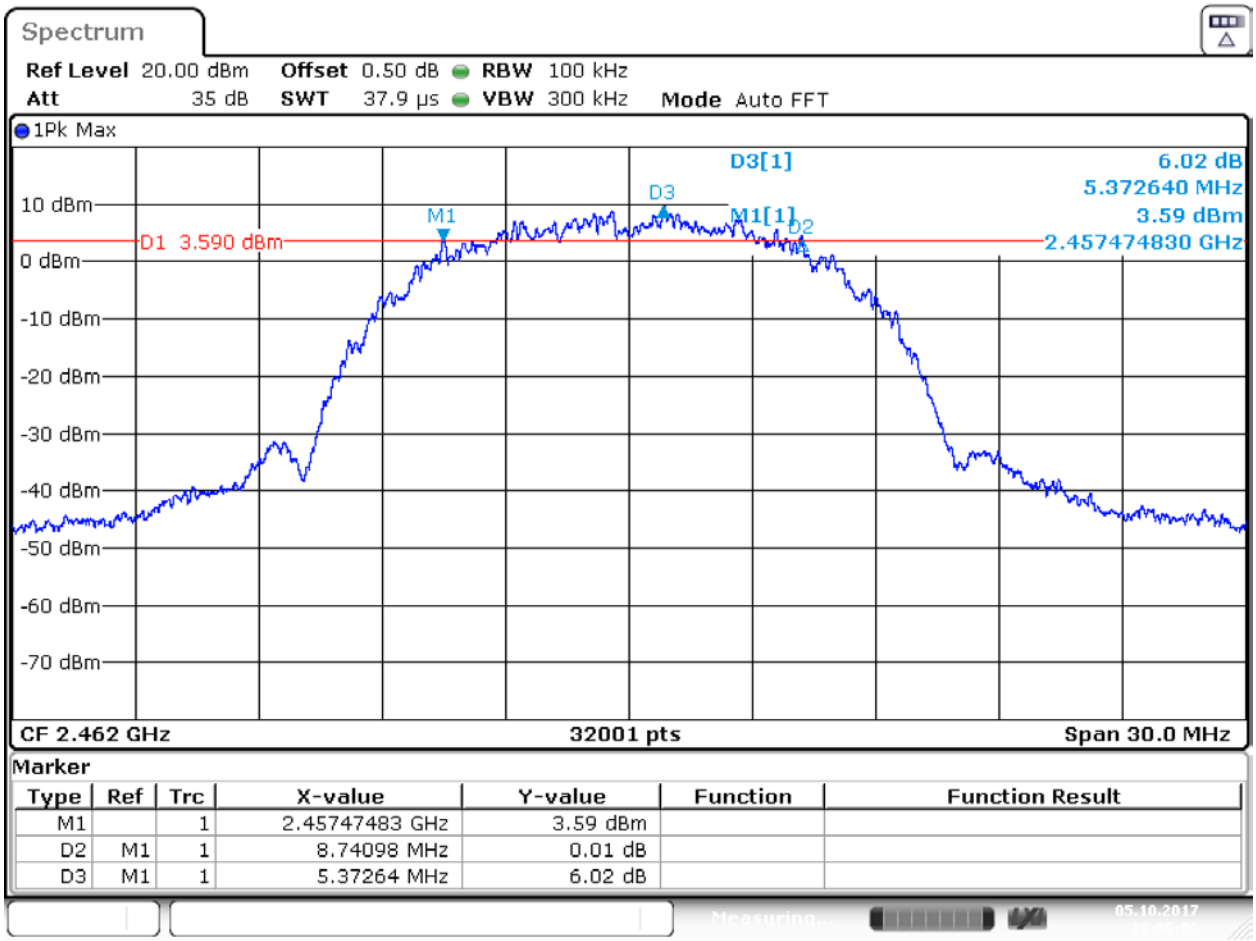
Plot 1 3 – 6dB Bandwidth (FCC)



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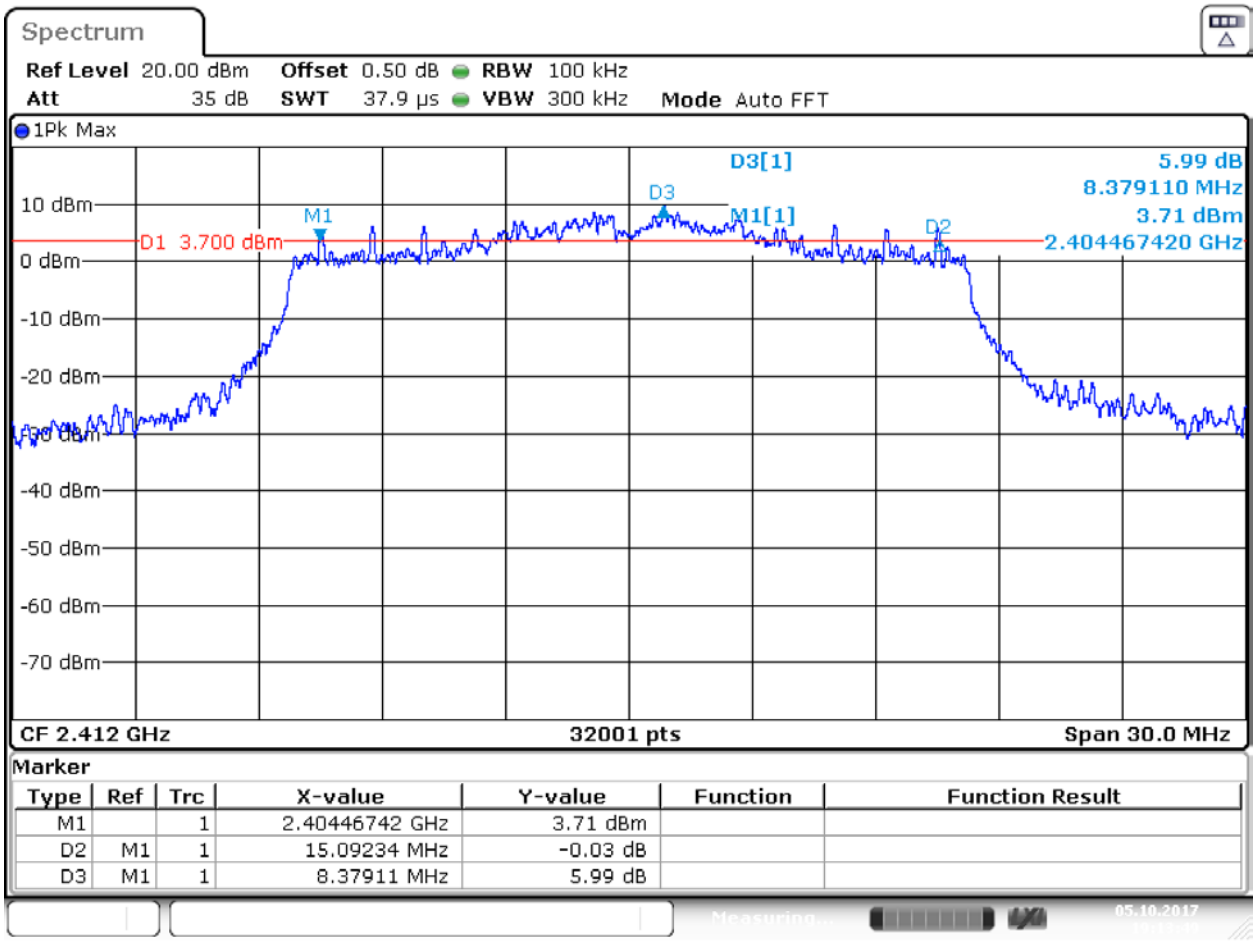
Plot 1.4 – 6dB Bandwidth (FCC)



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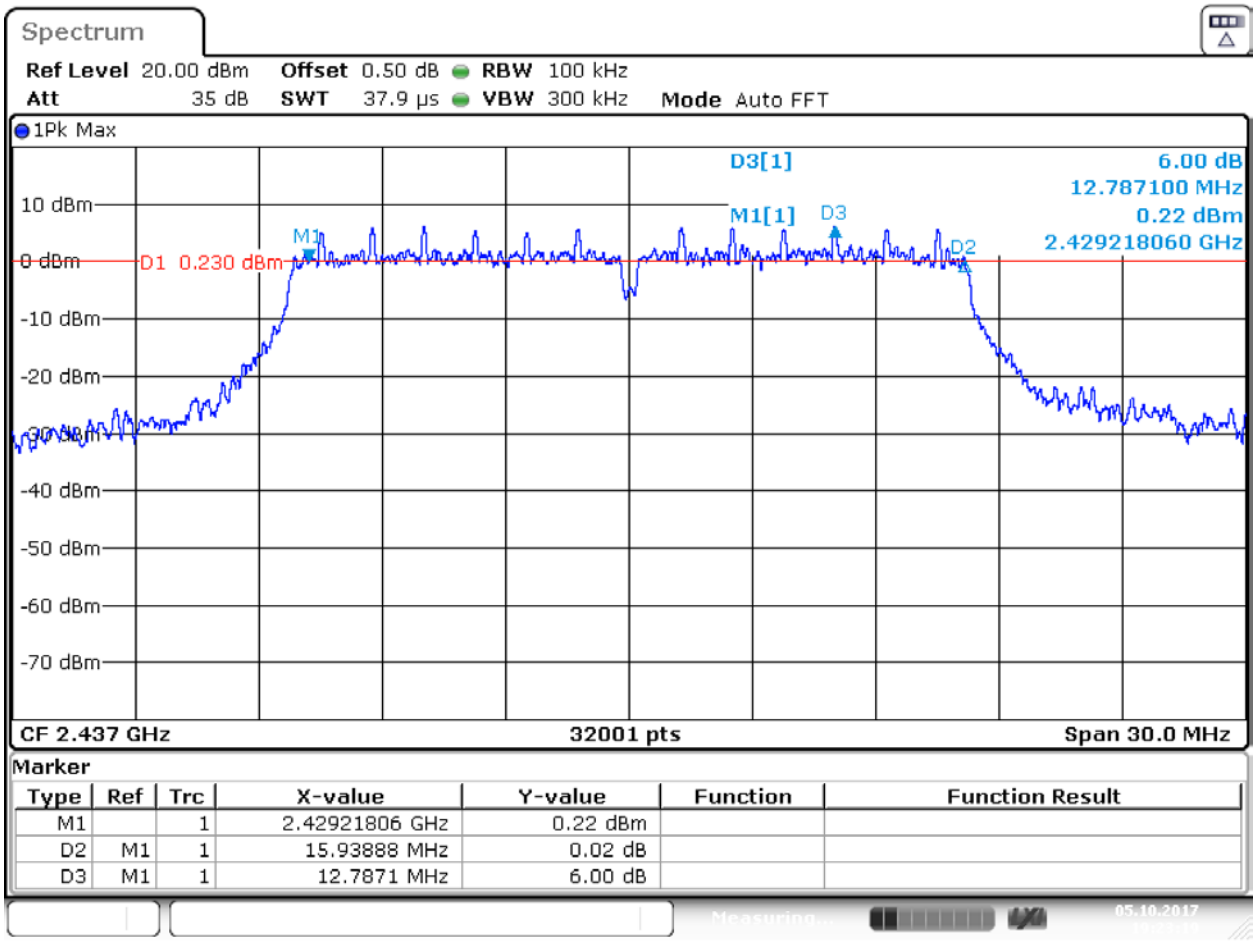
Plot 1.5 – 6dB Bandwidth (FCC)



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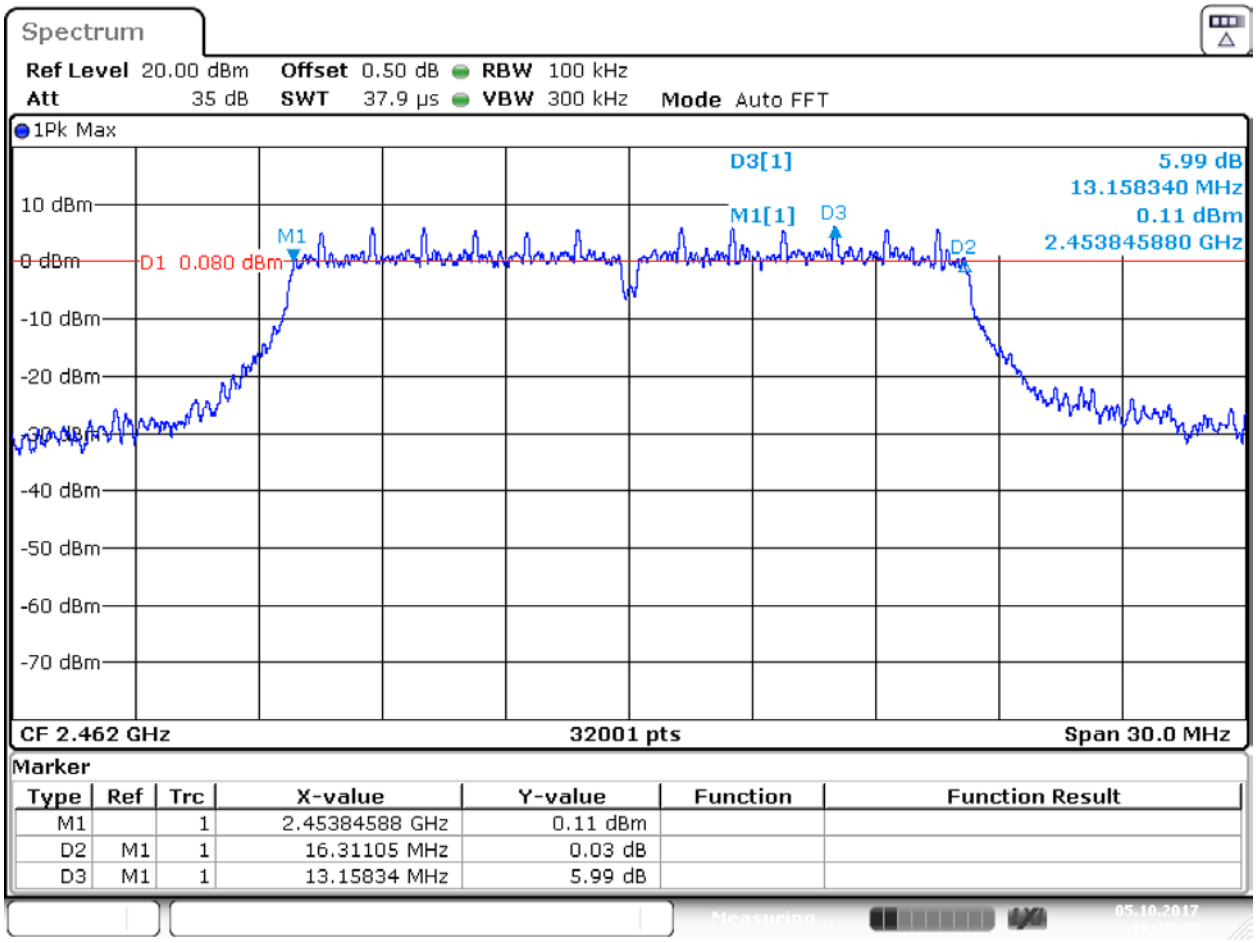
Plot 1.6 – 6dB Bandwidth (FCC)



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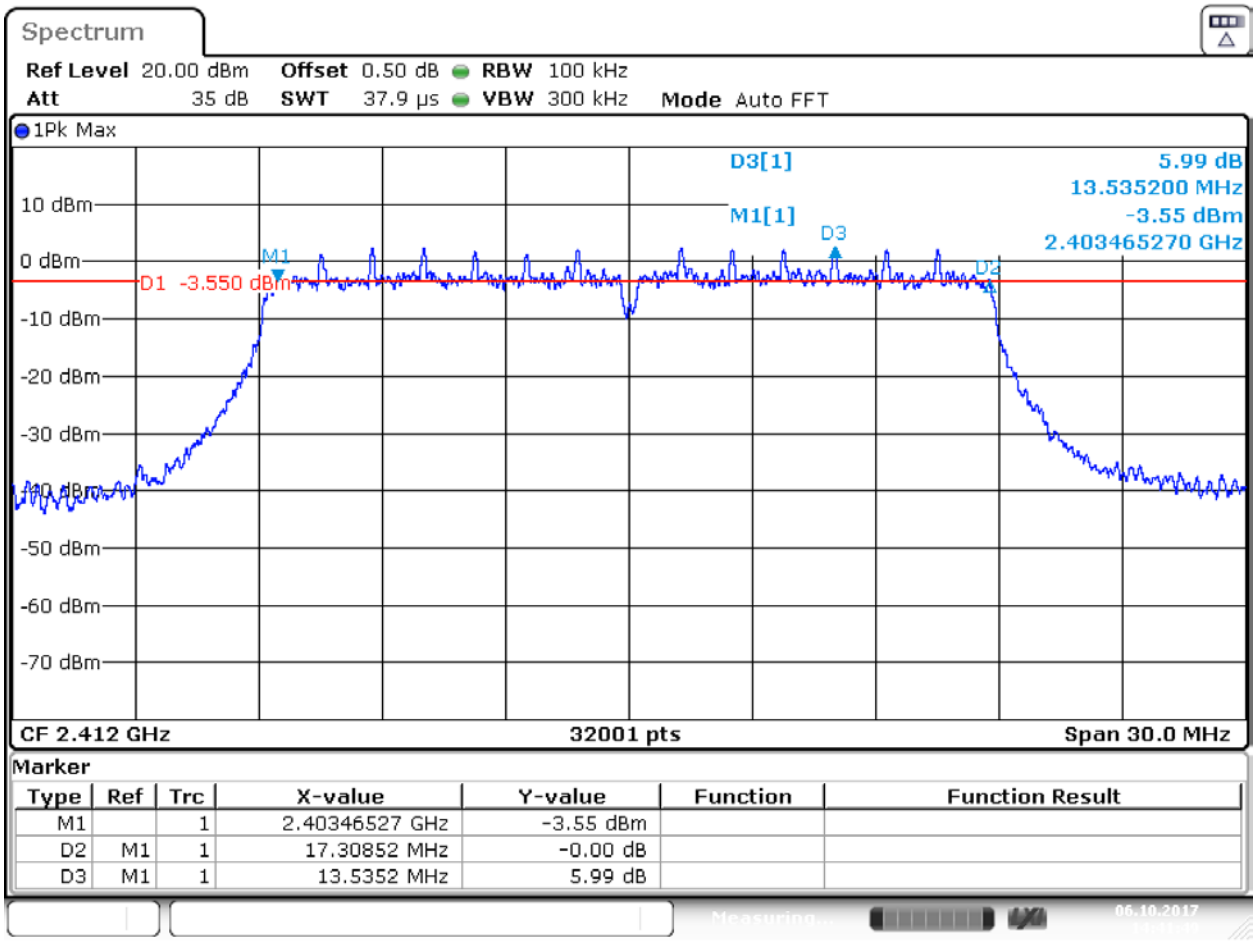
Plot 1.7 – 6dB Bandwidth (FCC)



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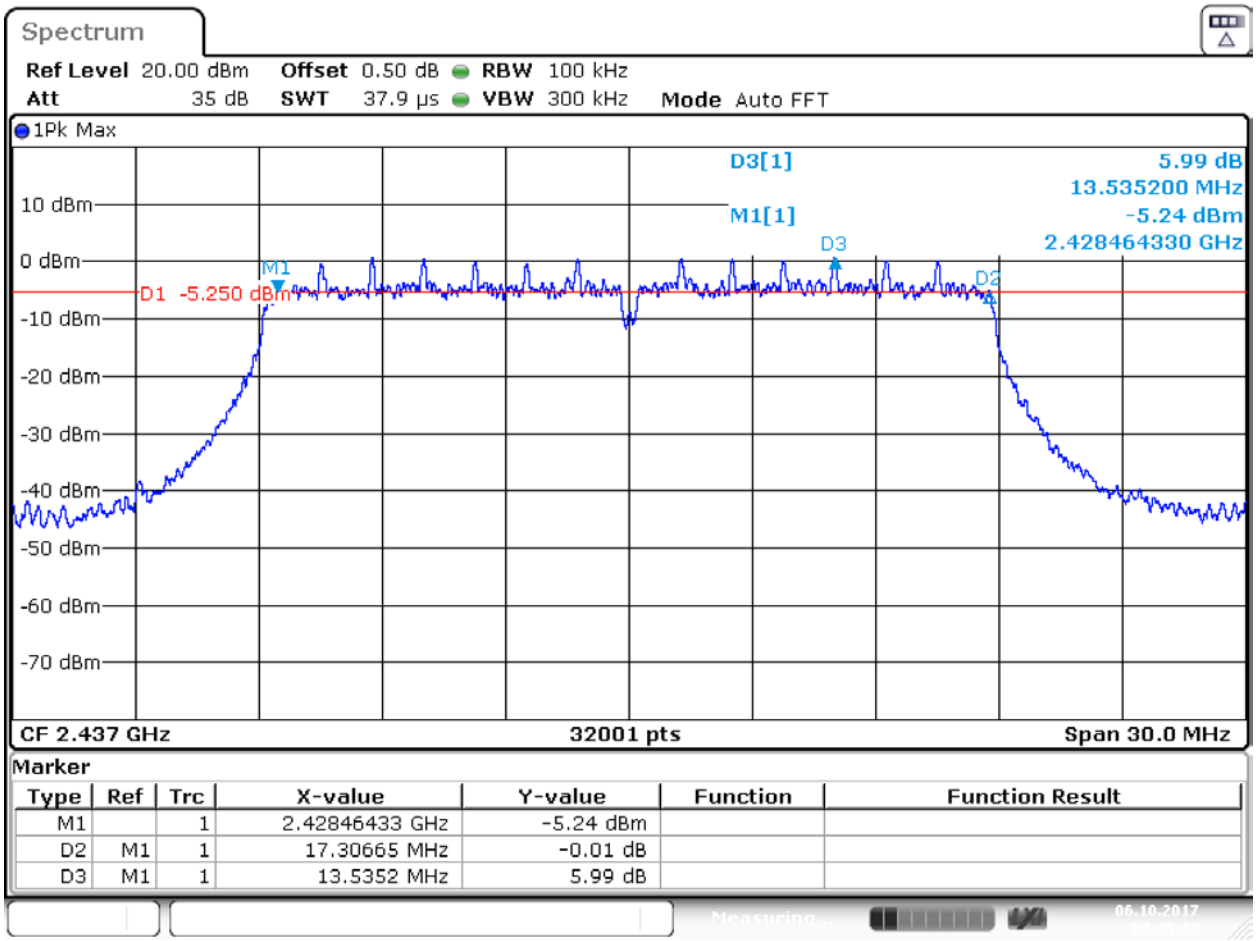
Plot 1.8 – 6dB Bandwidth (FCC)



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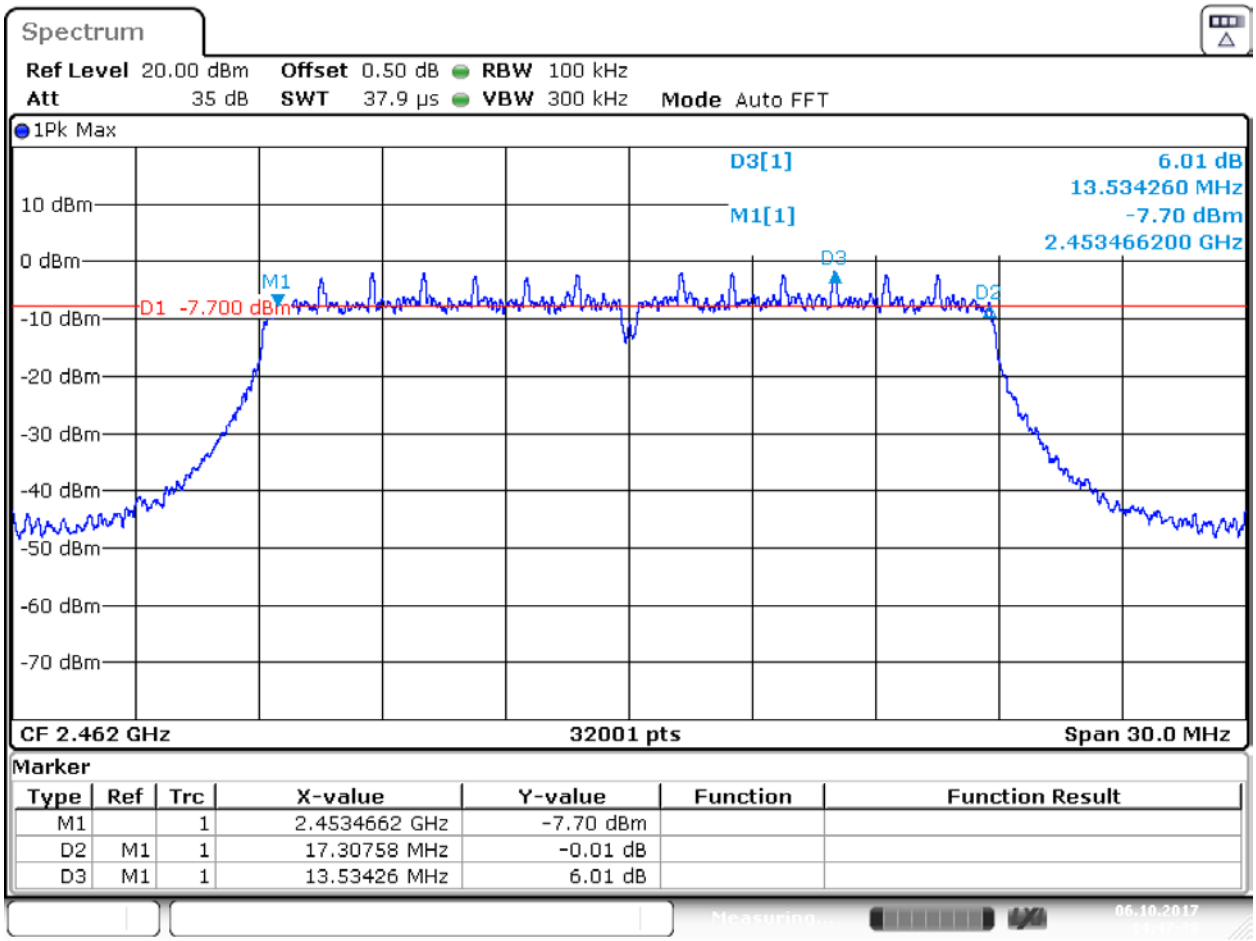
Plot 1.9 – 6dB Bandwidth (FCC)



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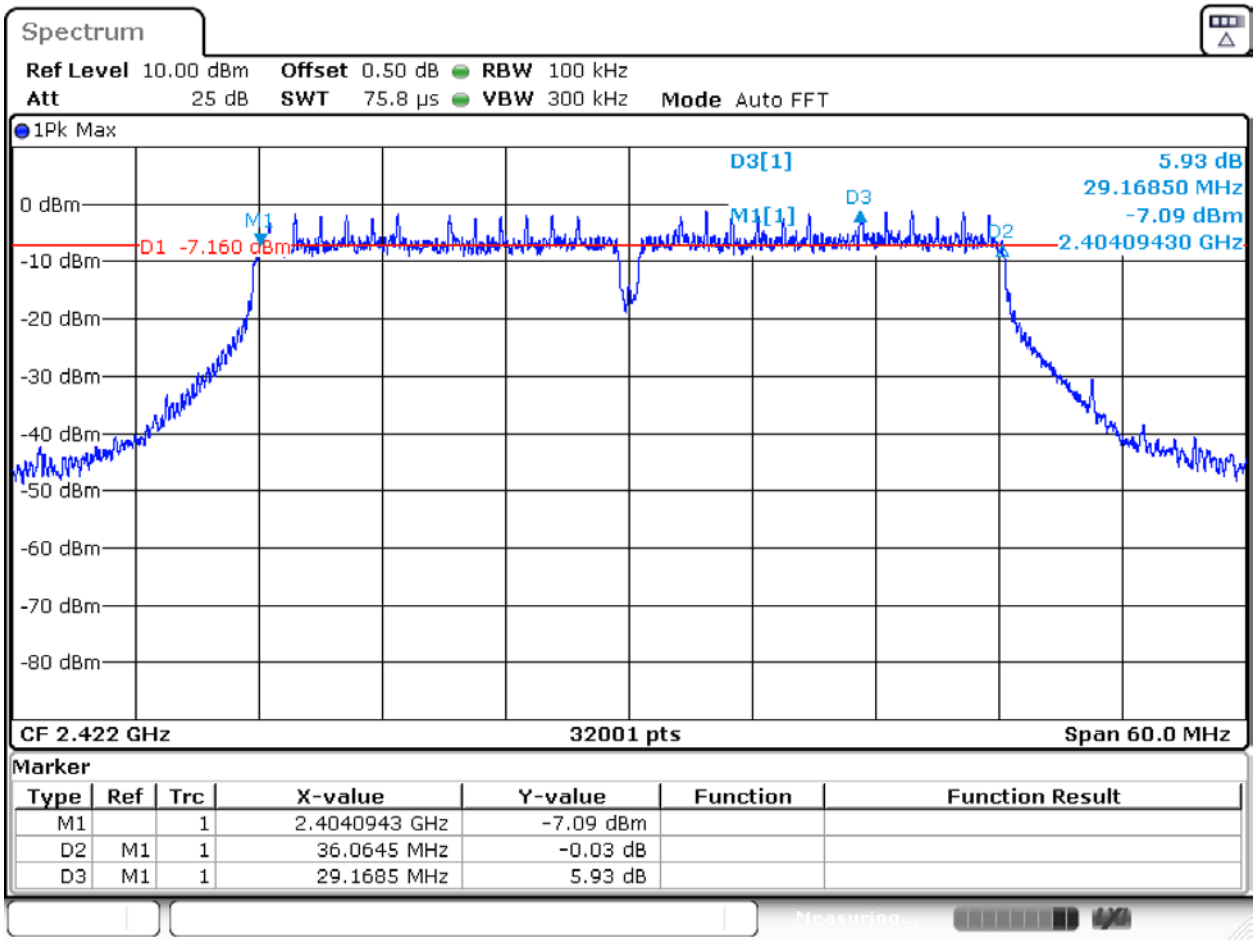
Plot 1.10 – 6dB Bandwidth (FCC)



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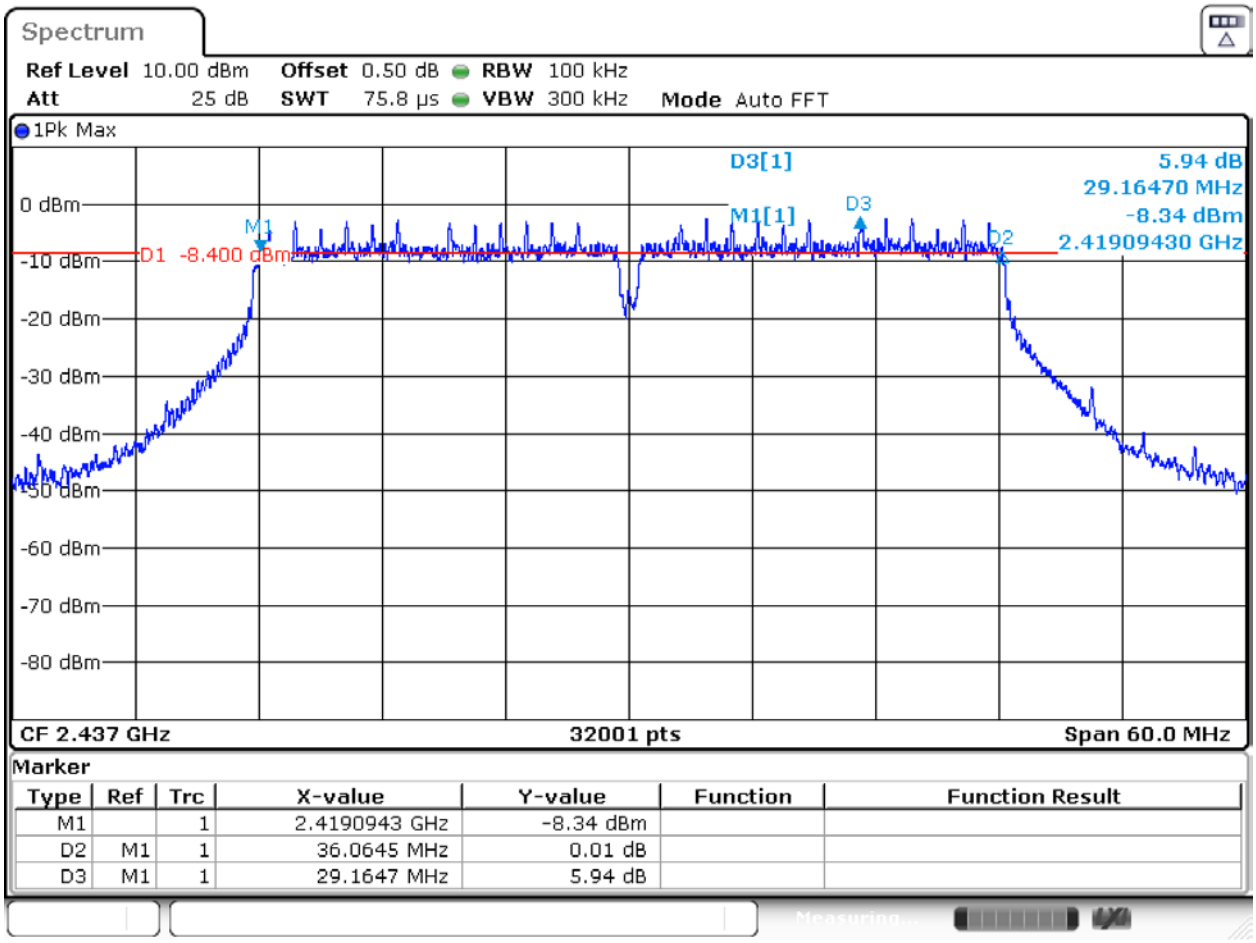
Plot 1.11 – 6dB Bandwidth (FCC)



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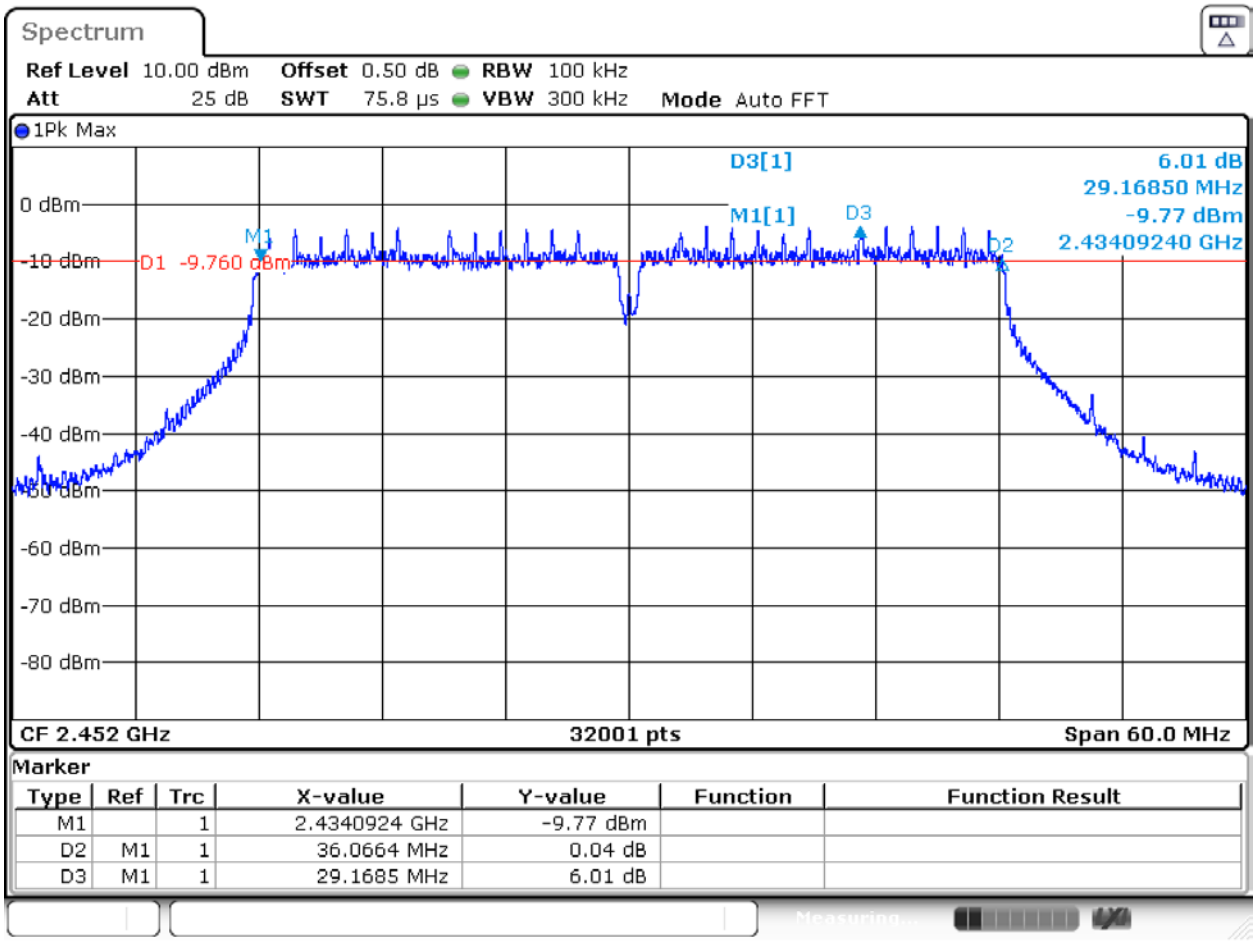
Plot 1.12 – 6dB Bandwidth (FCC)



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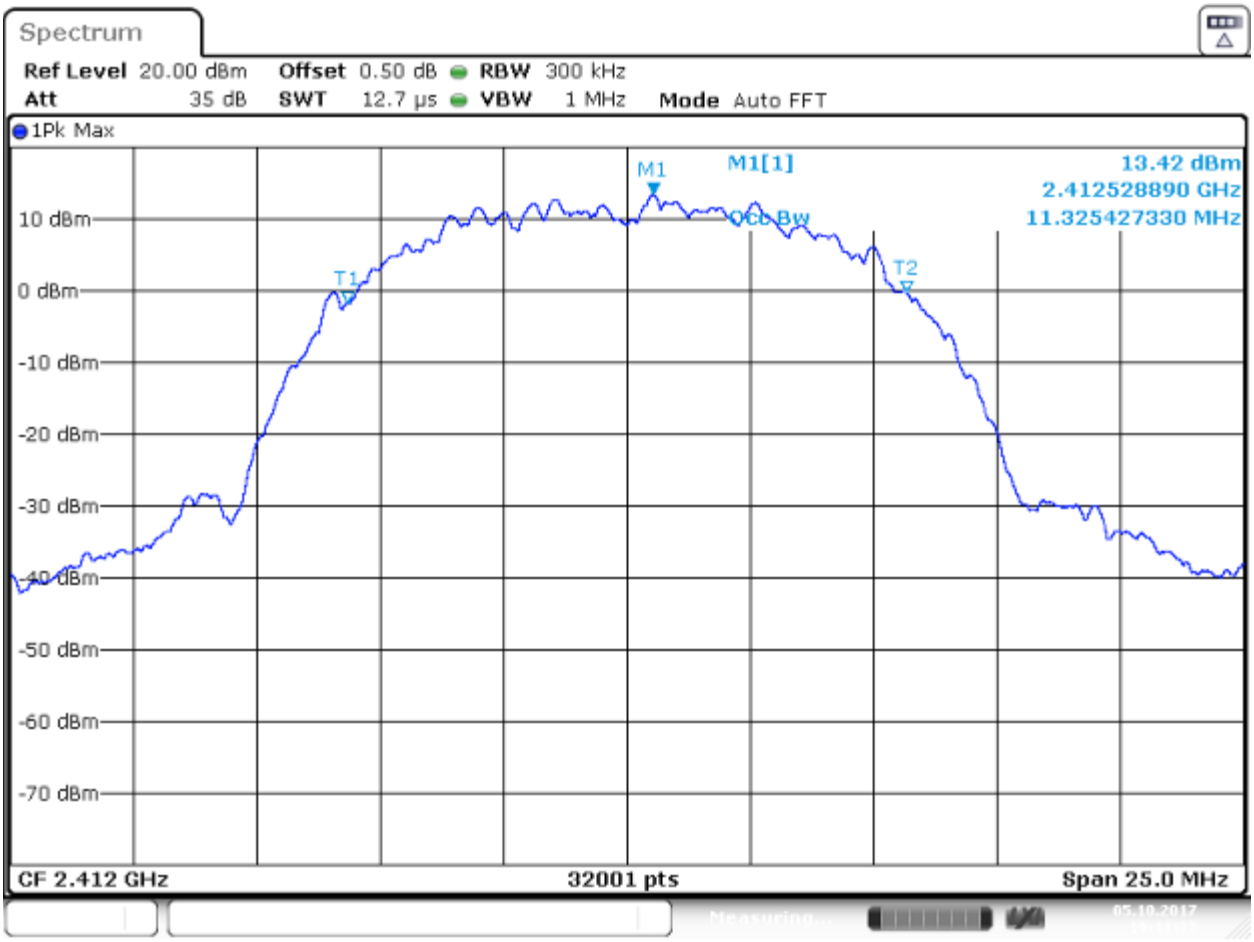
Plot 1.13 – 99% Bandwidth



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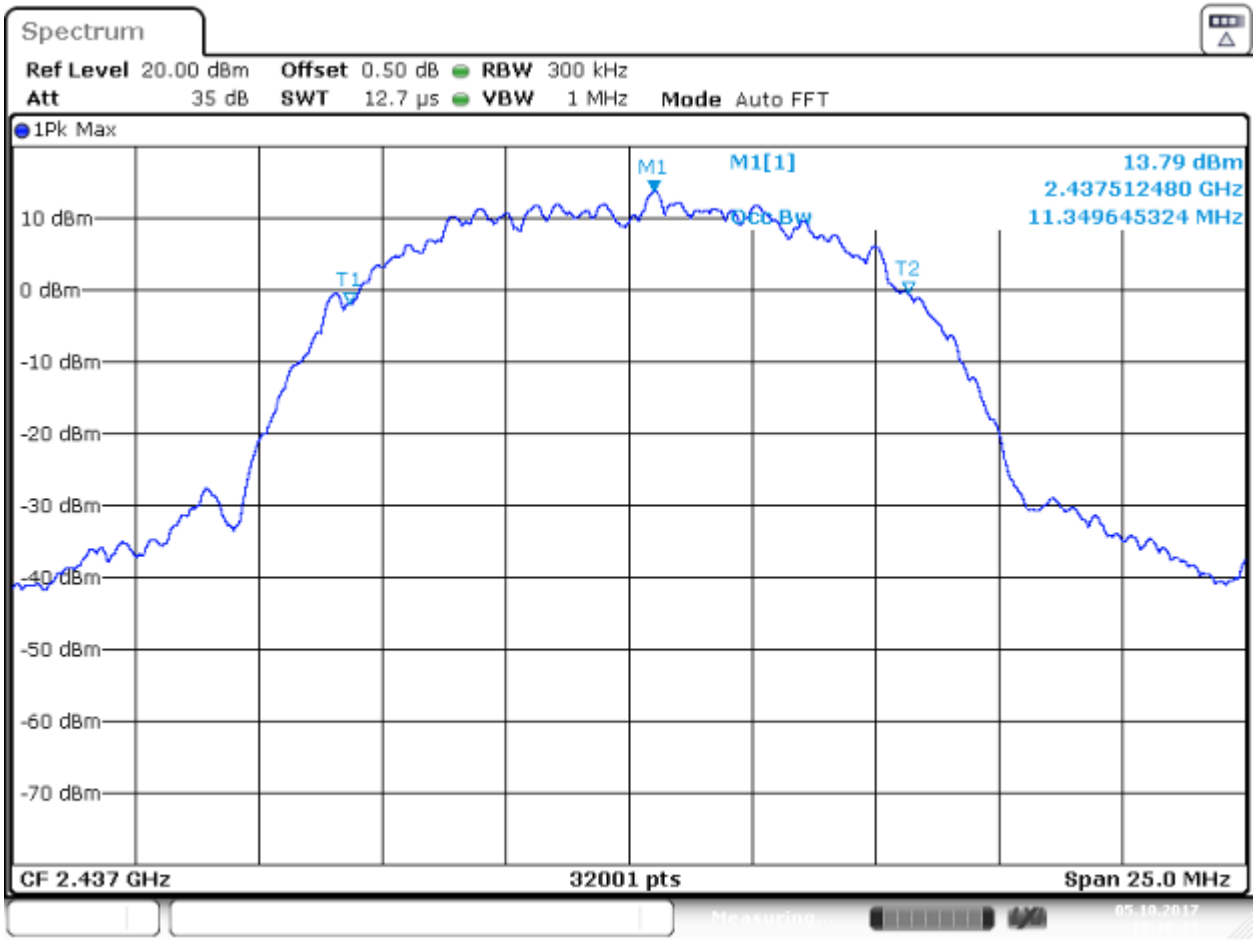

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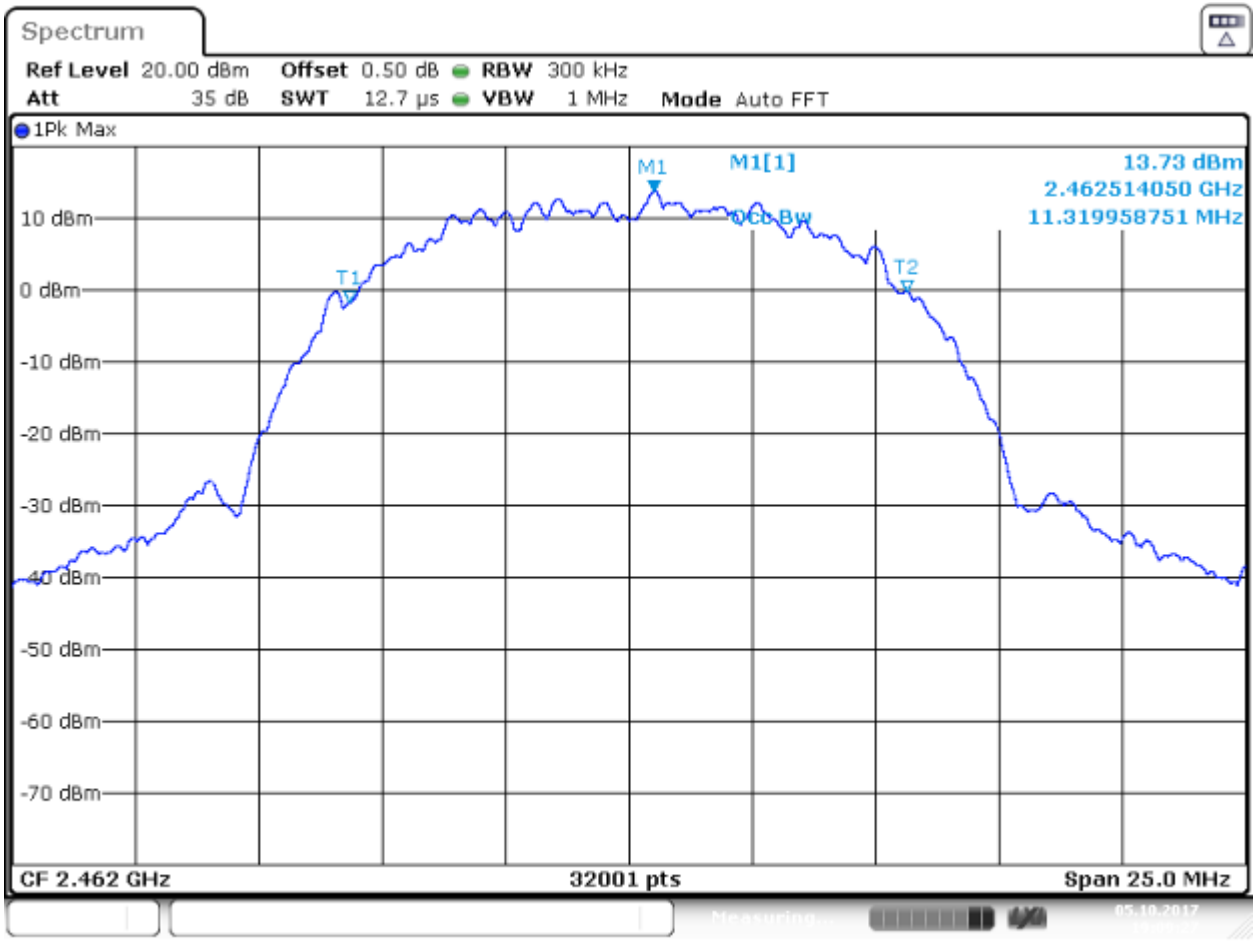
Plot 1.15 – 99% Bandwidth



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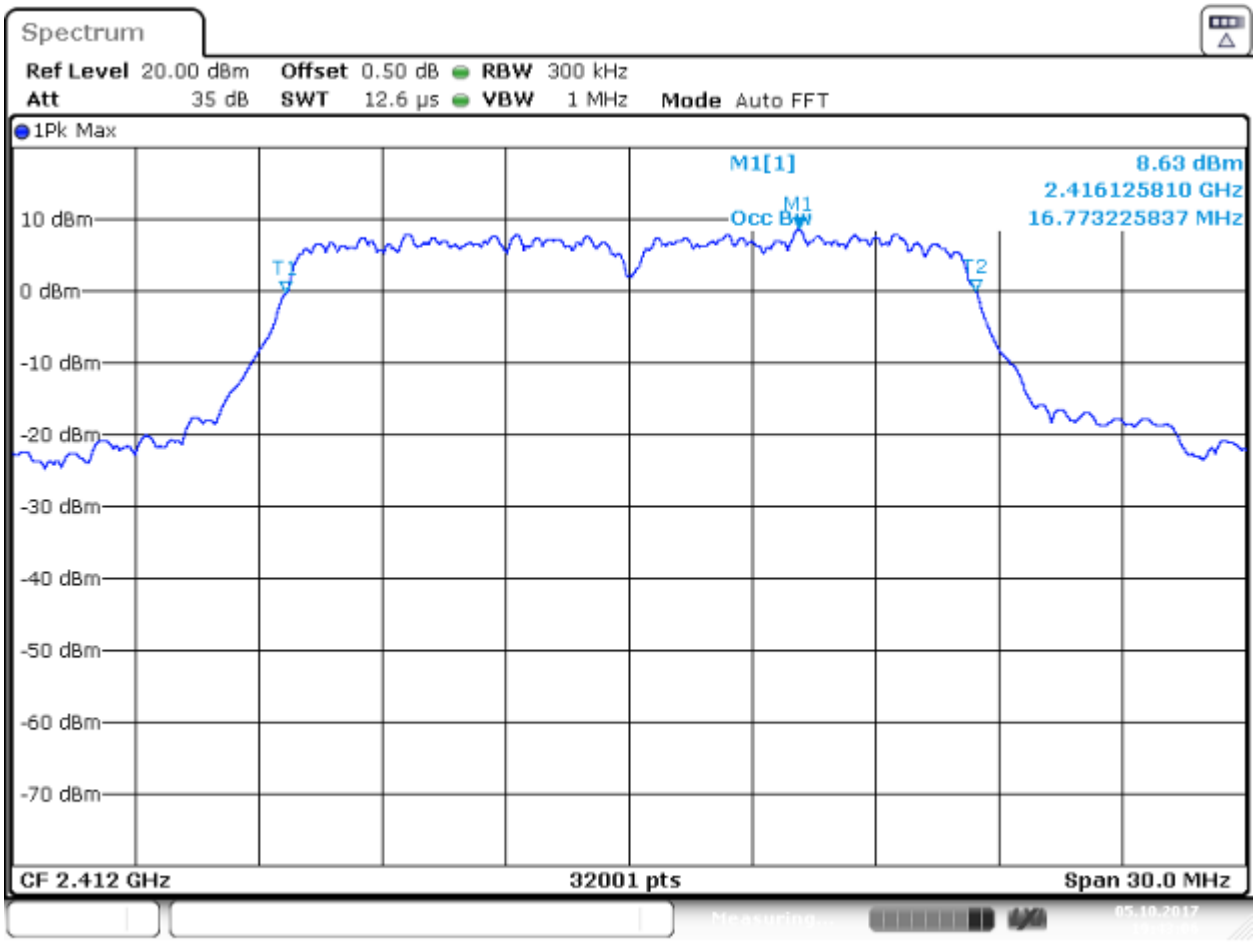
Plot 1.16 – 99% Bandwidth



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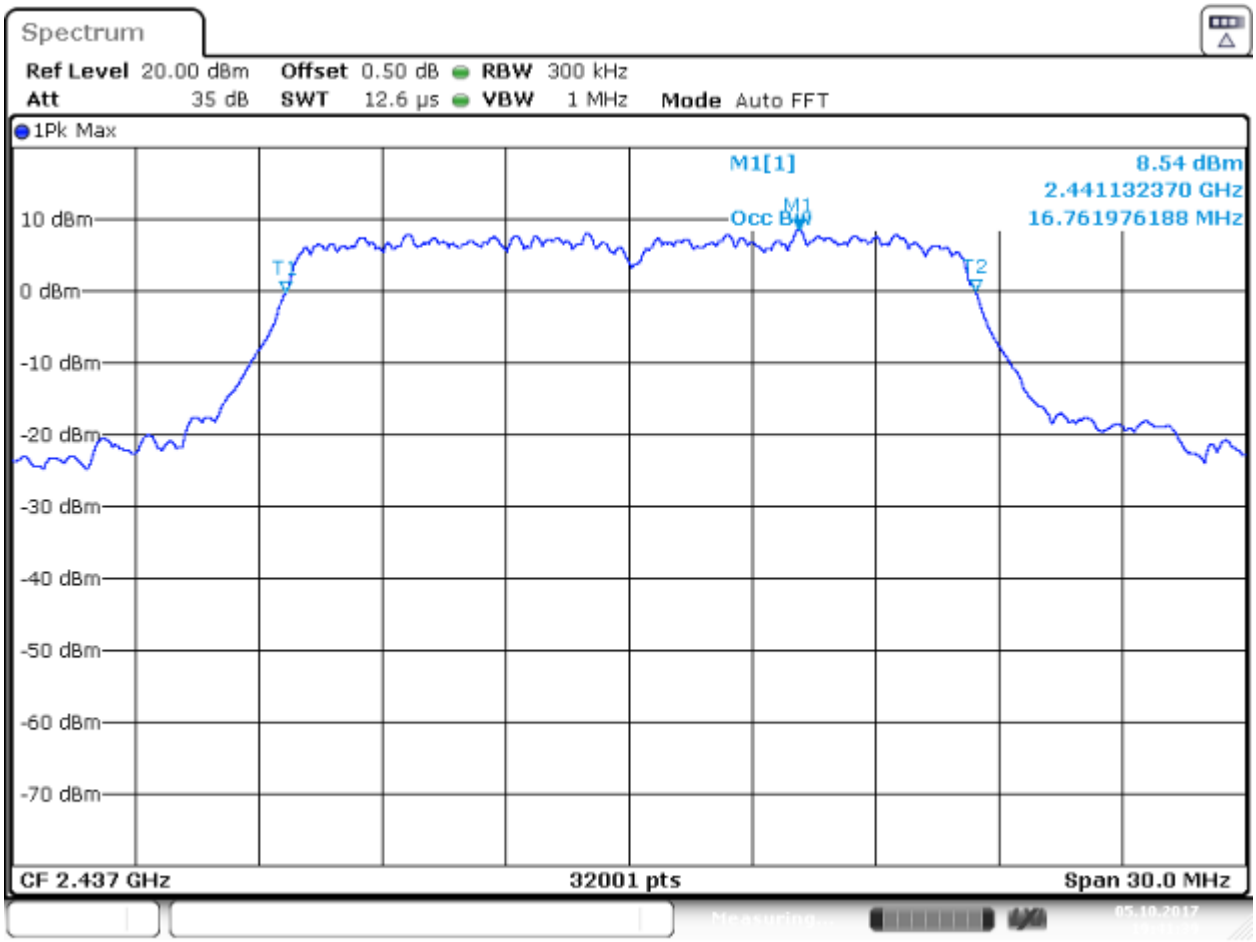
Plot 1.17 – 99% Bandwidth



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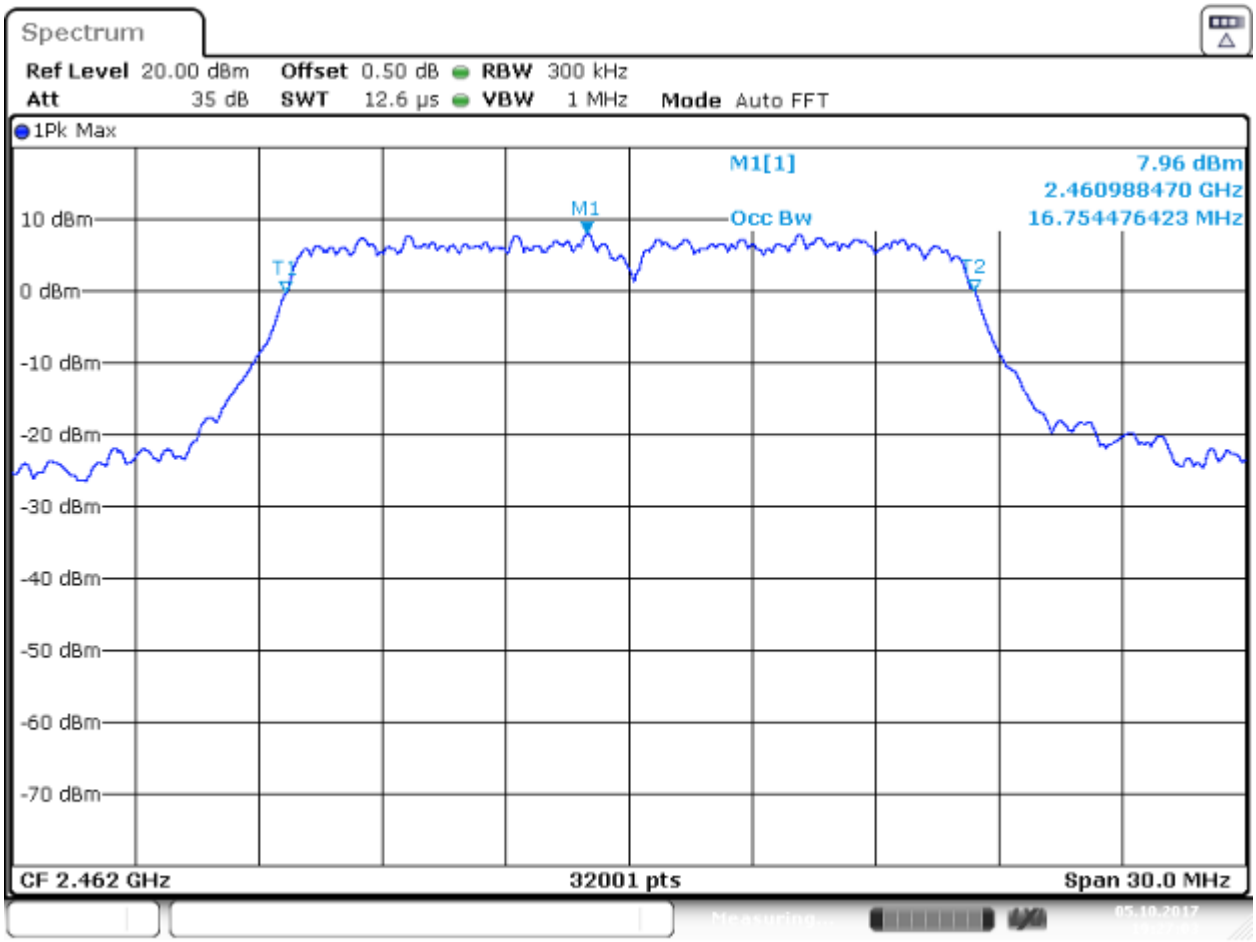
Plot 1.18 – 99% Bandwidth



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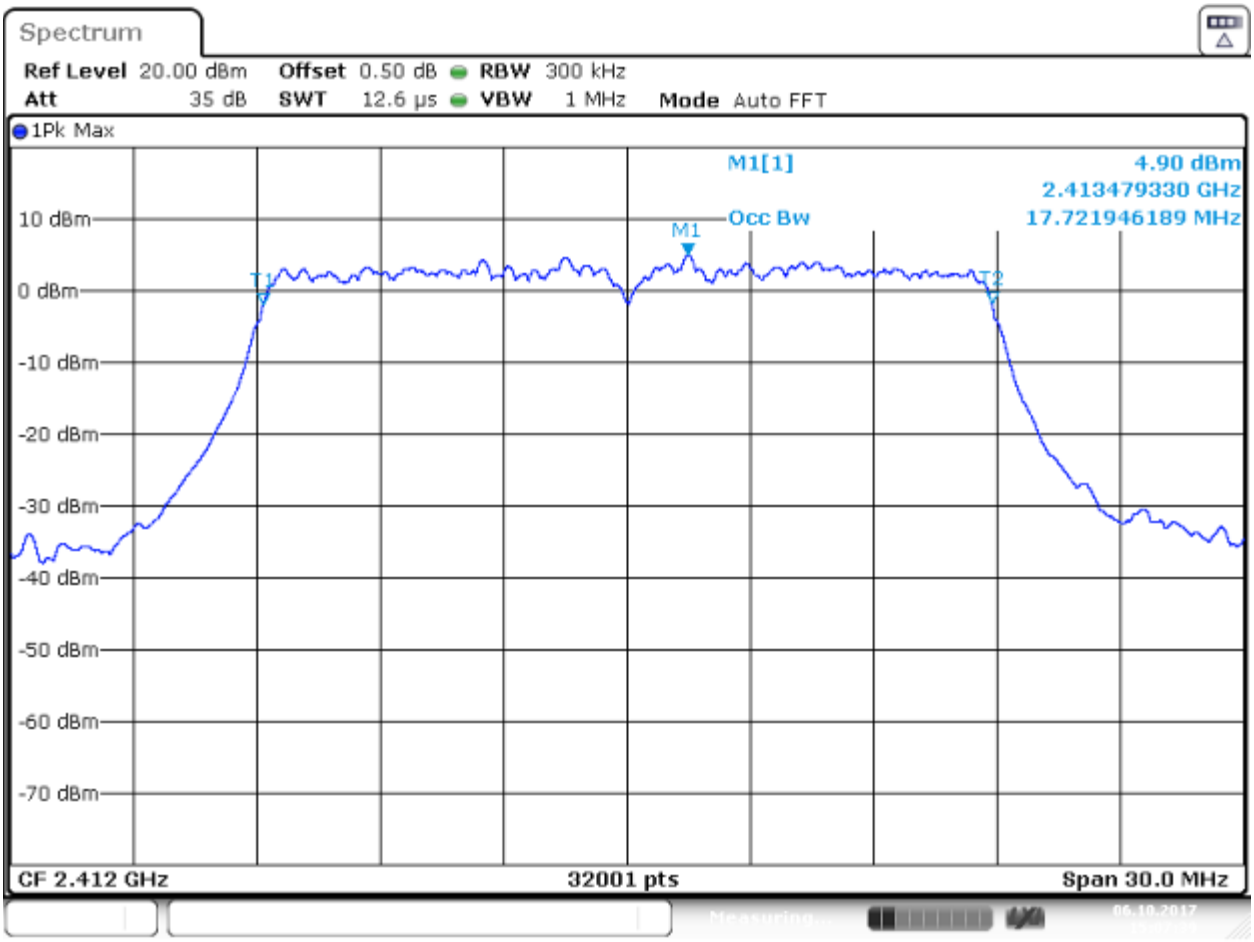
Plot 1.19 – 99% Bandwidth



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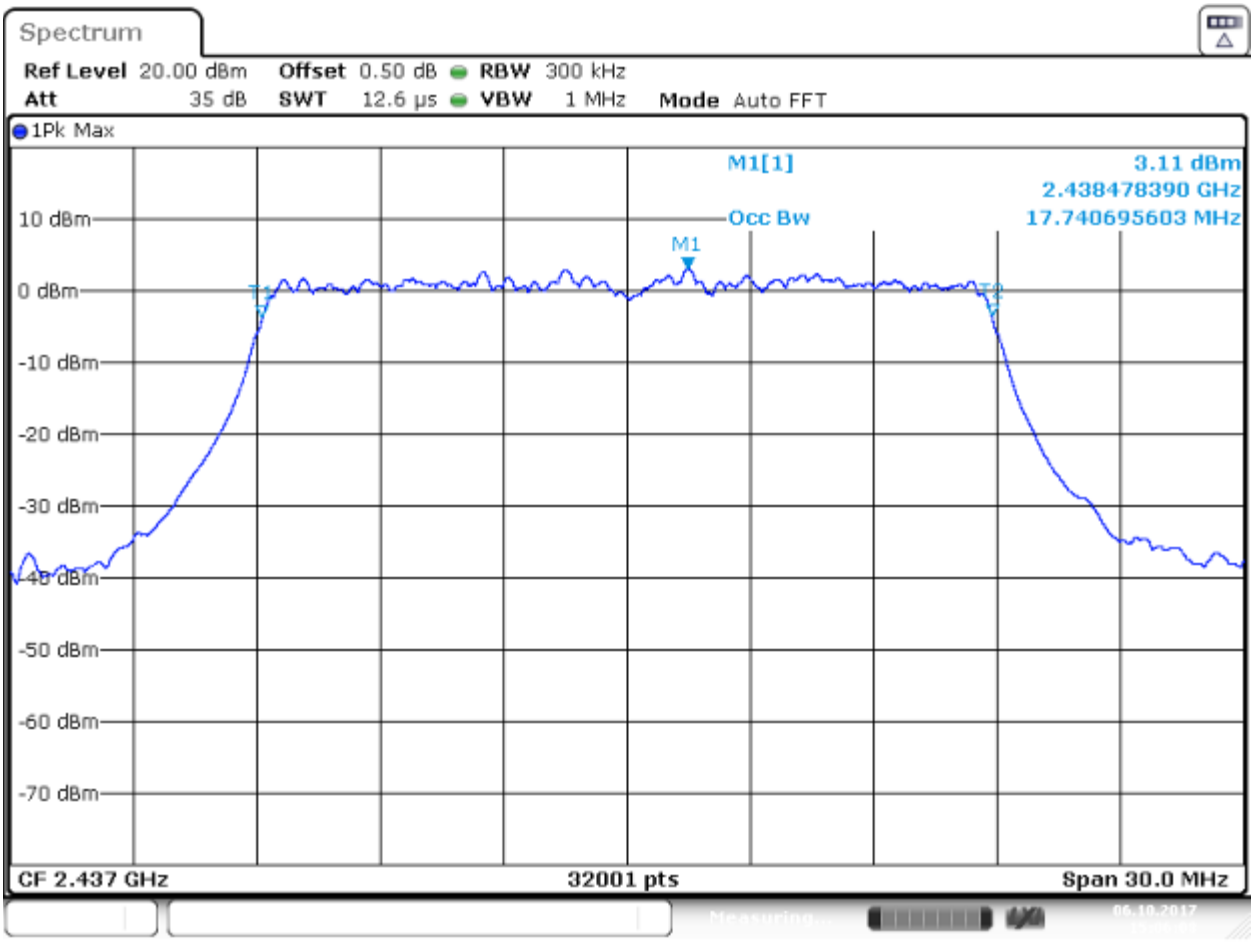
Plot 1.20 – 99% Bandwidth



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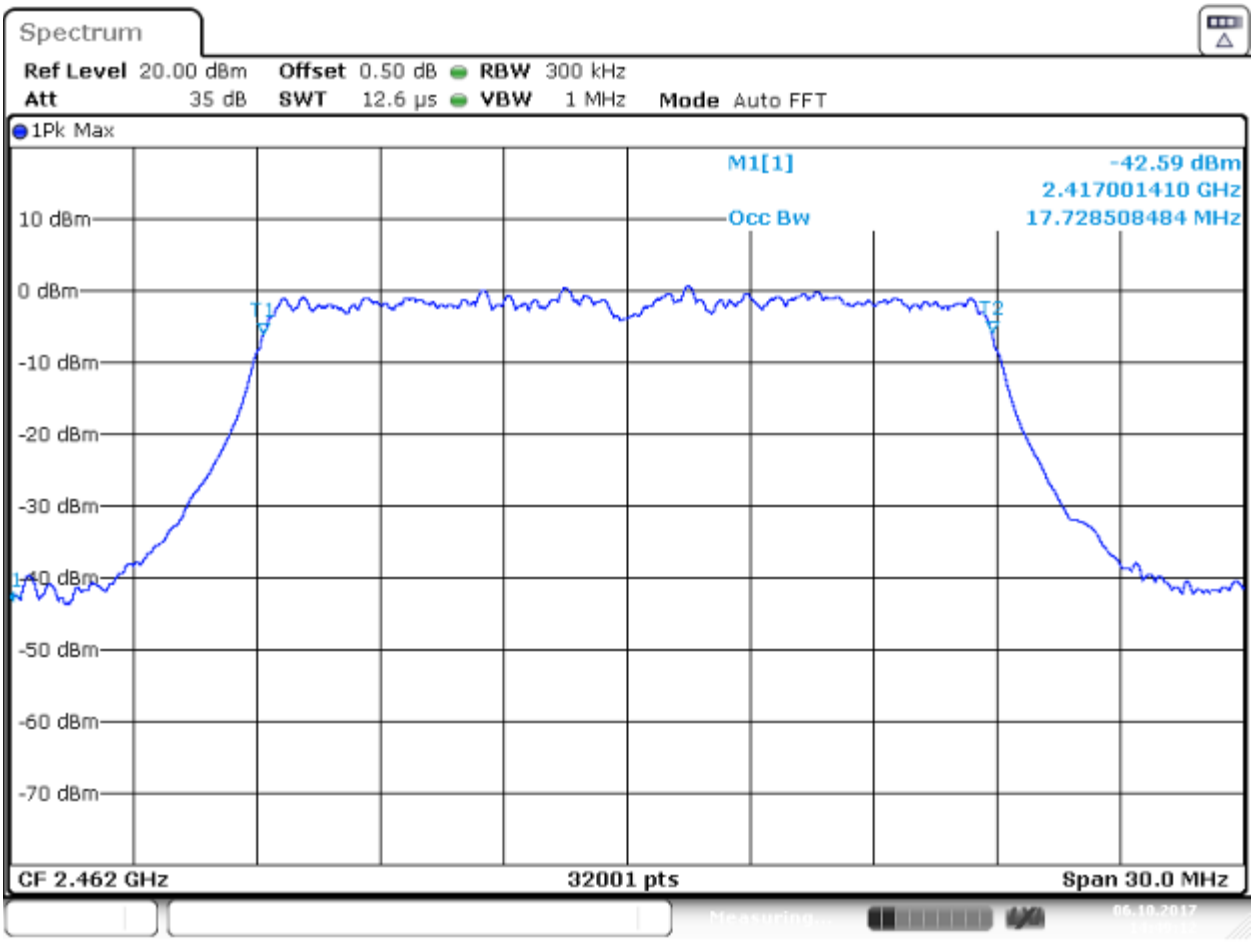
Plot 1.21 – 99% Bandwidth



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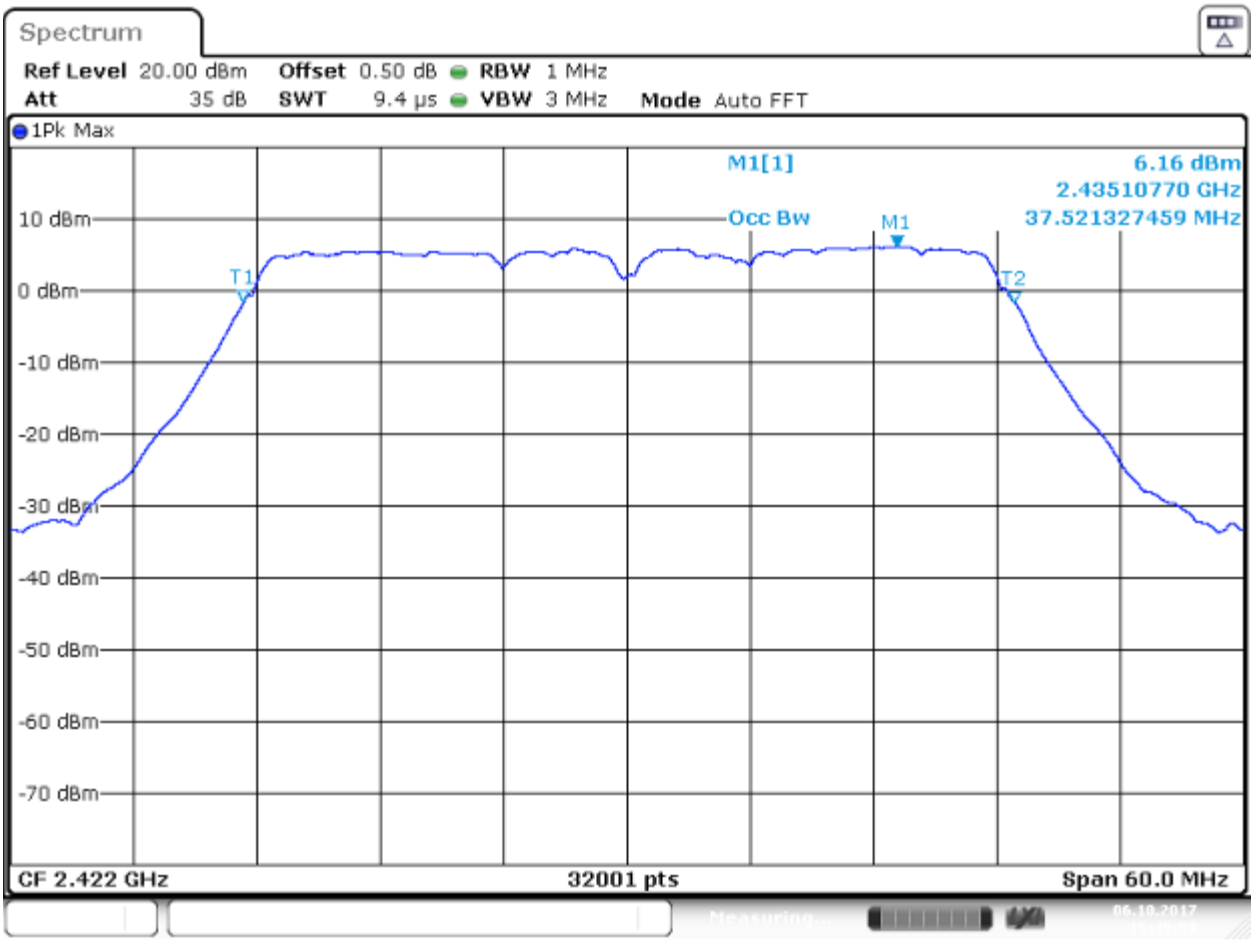
Plot 1.22 – 99% Bandwidth



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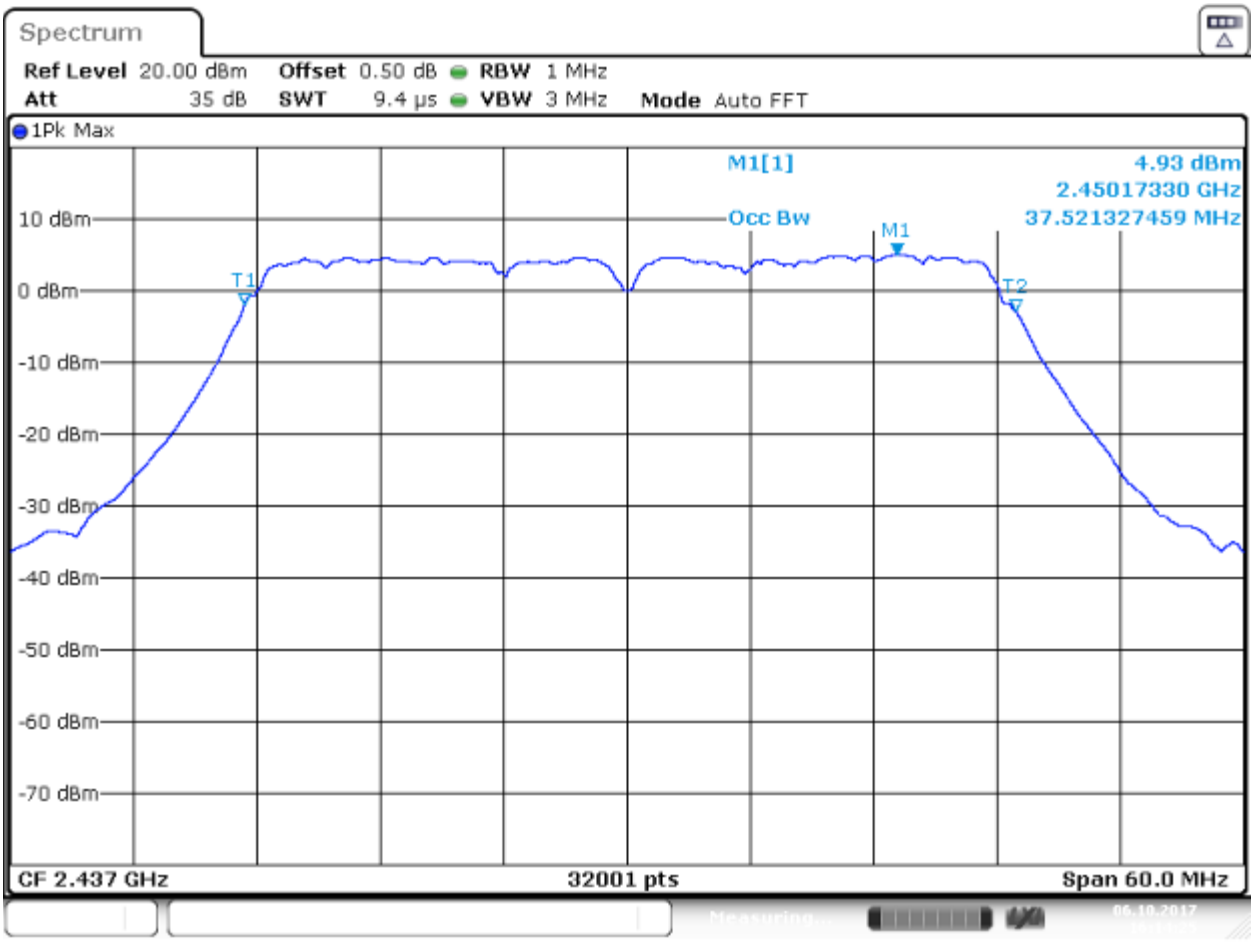
Plot 1.23 – 99% Bandwidth



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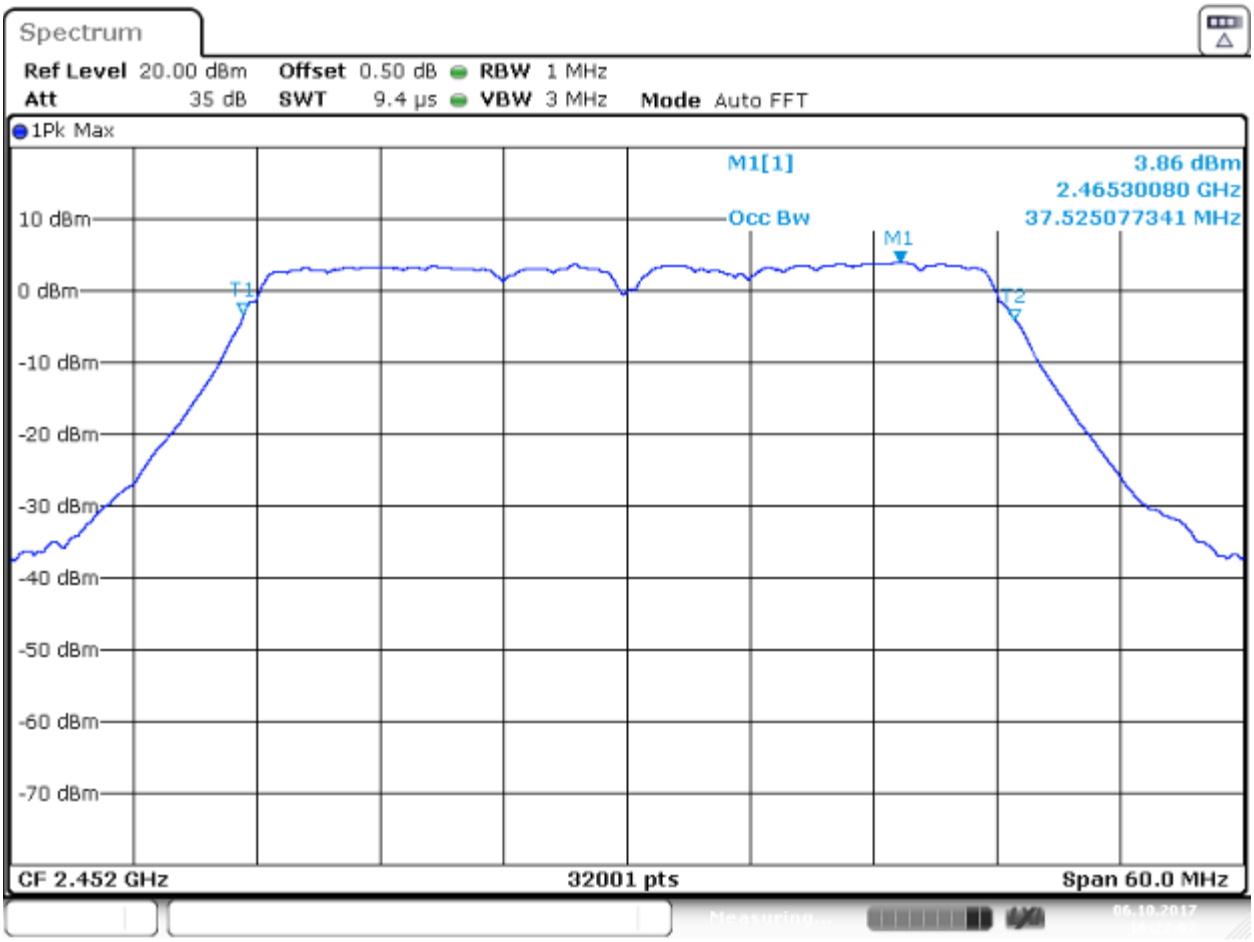
Plot 1.24 – 99% Bandwidth



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4.2 Maximum Conducted Output Power at Antenna Terminals FCC Rule 15.247(b)(3)

4.2.1 Requirement

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm).
For antennas with gains greater than 6 dBi, transmitter output level must be decreased appropriately, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2.2 Procedure

The antenna port of the EUT was connected to the input of a spectrum analyzer to measure the Maximum Conducted Transmitter Output Power. The offset programmed on the analyzer is corrected to include cable loss, attenuator and duty cycle correction.

The procedure described in FCC Publication 558074 D01 DTS Meas Guidance v04 was used. Specifically, section 9.2.2.5 Method AVGSA-2 Alternative (RMS detection with slow sweep with spectrum bin averaging across on- and off-times of the EUT transmissions, followed by duty cycle correction).

1. Measure the duty cycle, x, of the transmitter output signal.
2. Set span to at least 1.5 x OBW.
3. Set RBW = 1 % to 5 % of the OBW, not to exceed 1 MHz.
4. Set VBW ≥ 3 x RBW.
5. Number of points in sweep ≥ 2 x span / RBW. (This gives bin-to-bin spacing ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Manually set sweep time ≥ 10 x (number of points in sweep) x (total on/off period of the transmitted signal).
7. Set detector = RMS.
8. Perform a single sweep.
9. Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW.
10. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

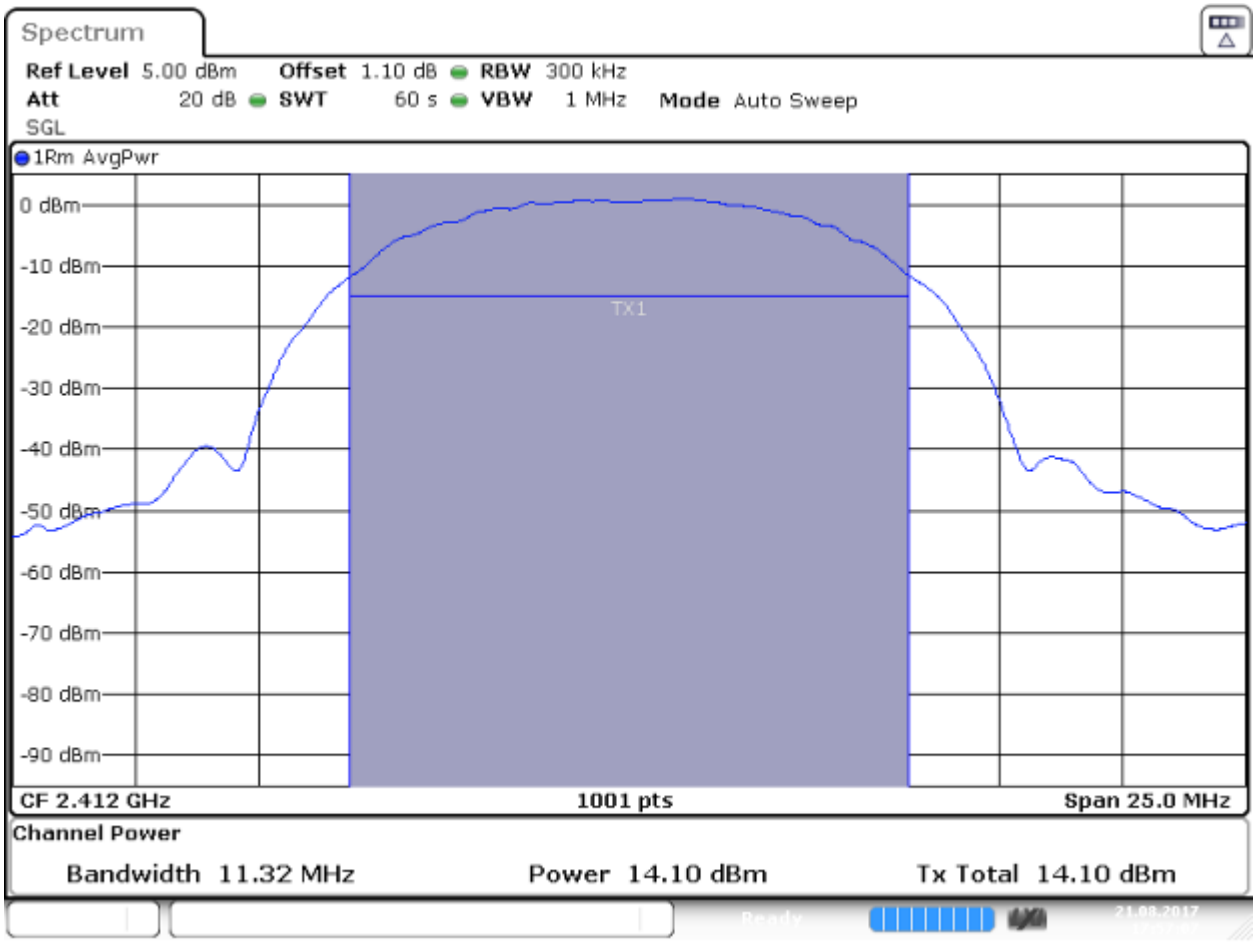
Test Date:	October 6 & 23, 2017

4.2.3 Test Result

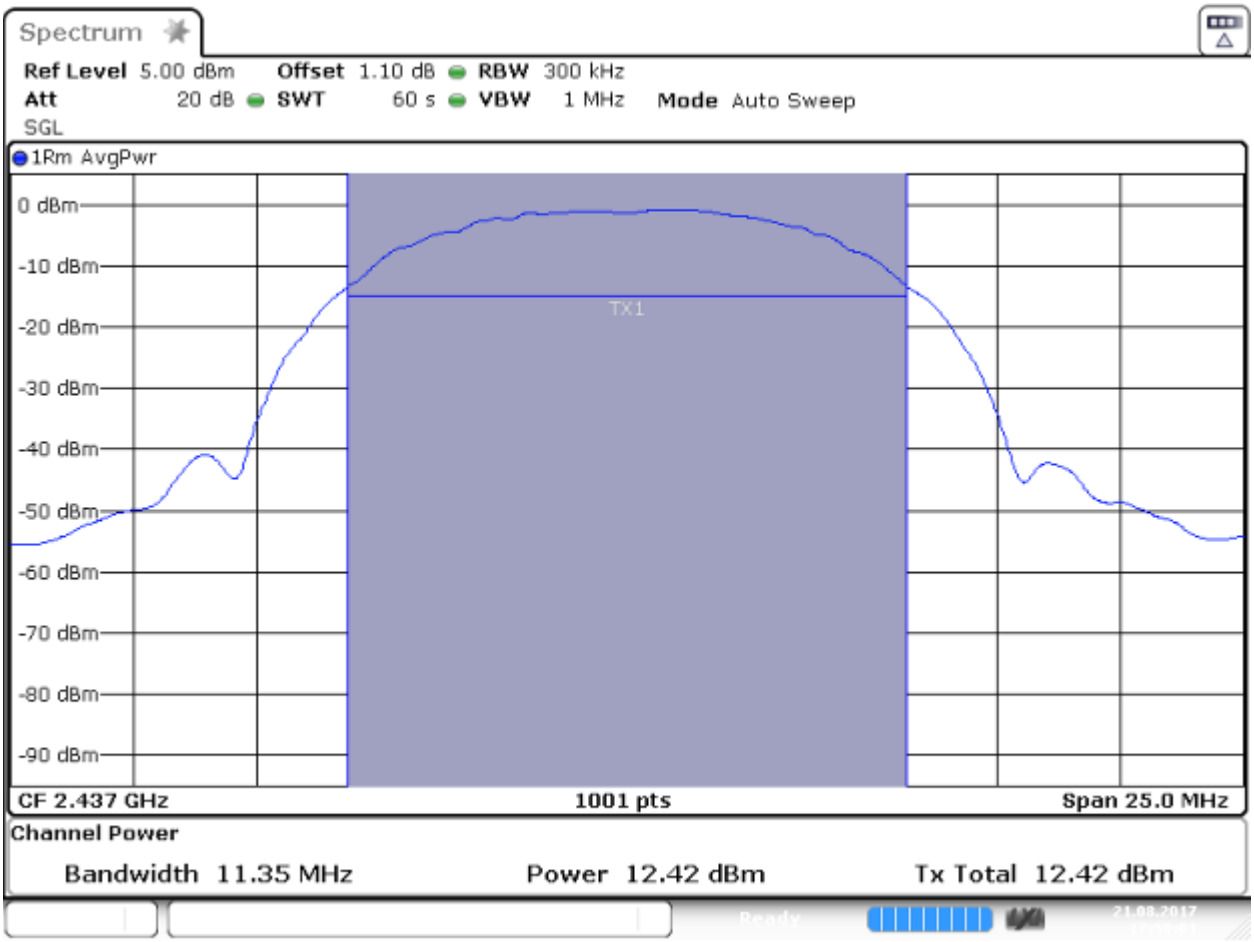
Refer to the following plots for the test result:

Standard	Data Rate	Channel	Frequency MHz	Conducted Average Power dBm	Conducted Average Power mW	Plot #
802.11b	1 Mbps	1	2412	14.10	25.704	2.1
		6	2437	12.42	17.458	2.2
		11	2462	9.96	9.908	2.3
802.11g	6 Mbps	1	2412	14.19	26.242	2.4
		6	2437	12.19	16.558	2.5
		11	2462	9.59	9.099	2.6
802.11n HT20	0 MCS	1	2412	13.99	21.827	2.7
		6	2437	12.03	15.959	2.8
		11	2462	9.49	8.892	2.9
802.11n HT40	0 MCS	3	2422	12.66	18.450	2.10
		6	2437	11.66	14.655	2.11
		9	2452	10.43	11.041	2.12

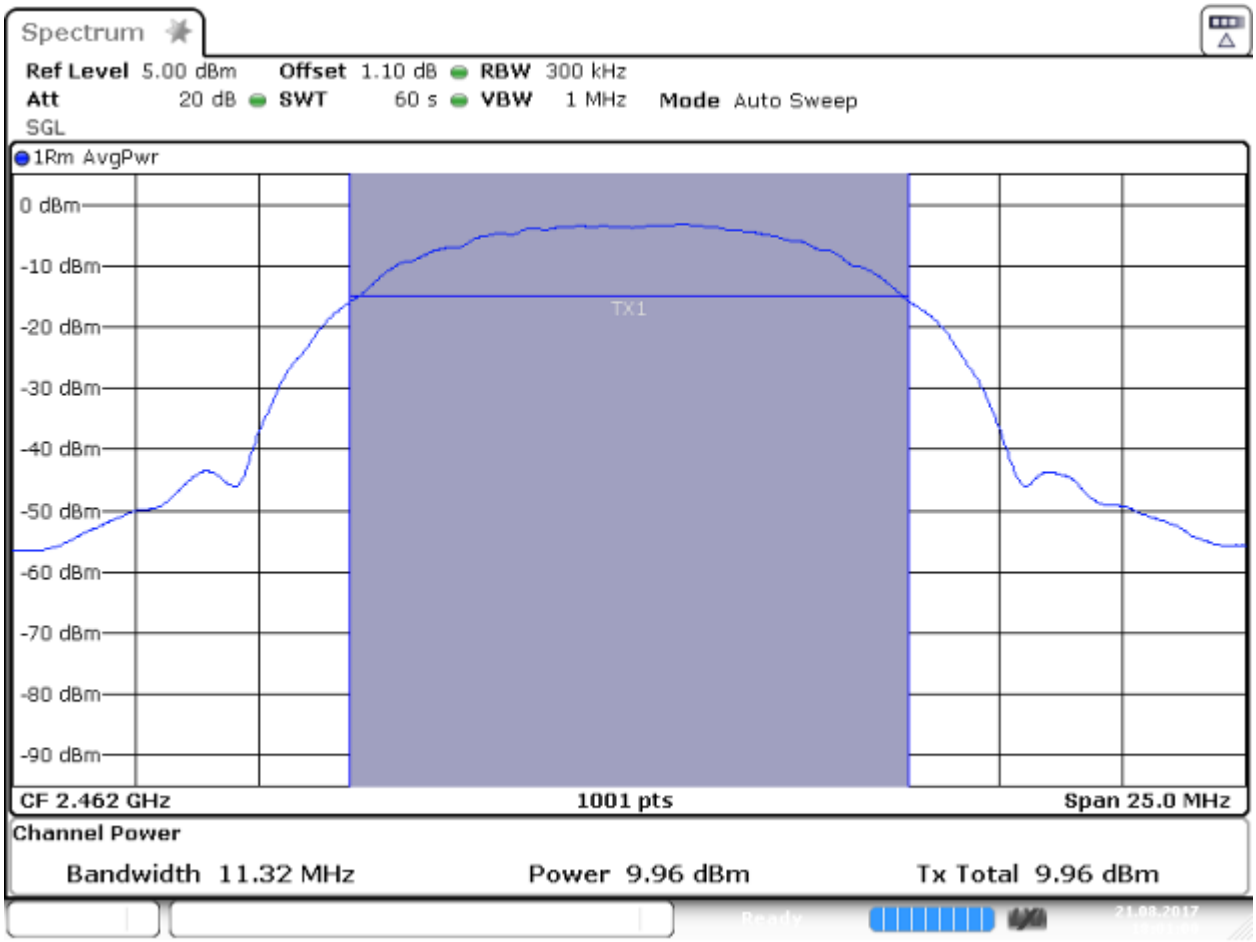
Plot 2. 1


Spectrum
Ref Level 5.00 dBm Offset 1.10 dB RBW 300 kHz
Att 20 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm AvgPwr
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
TX1
CF 2.412 GHz
1001 pts
Span 25.0 MHz
Channel Power
Bandwidth 11.32 MHz
Power 14.10 dBm
Tx Total 14.10 dBm

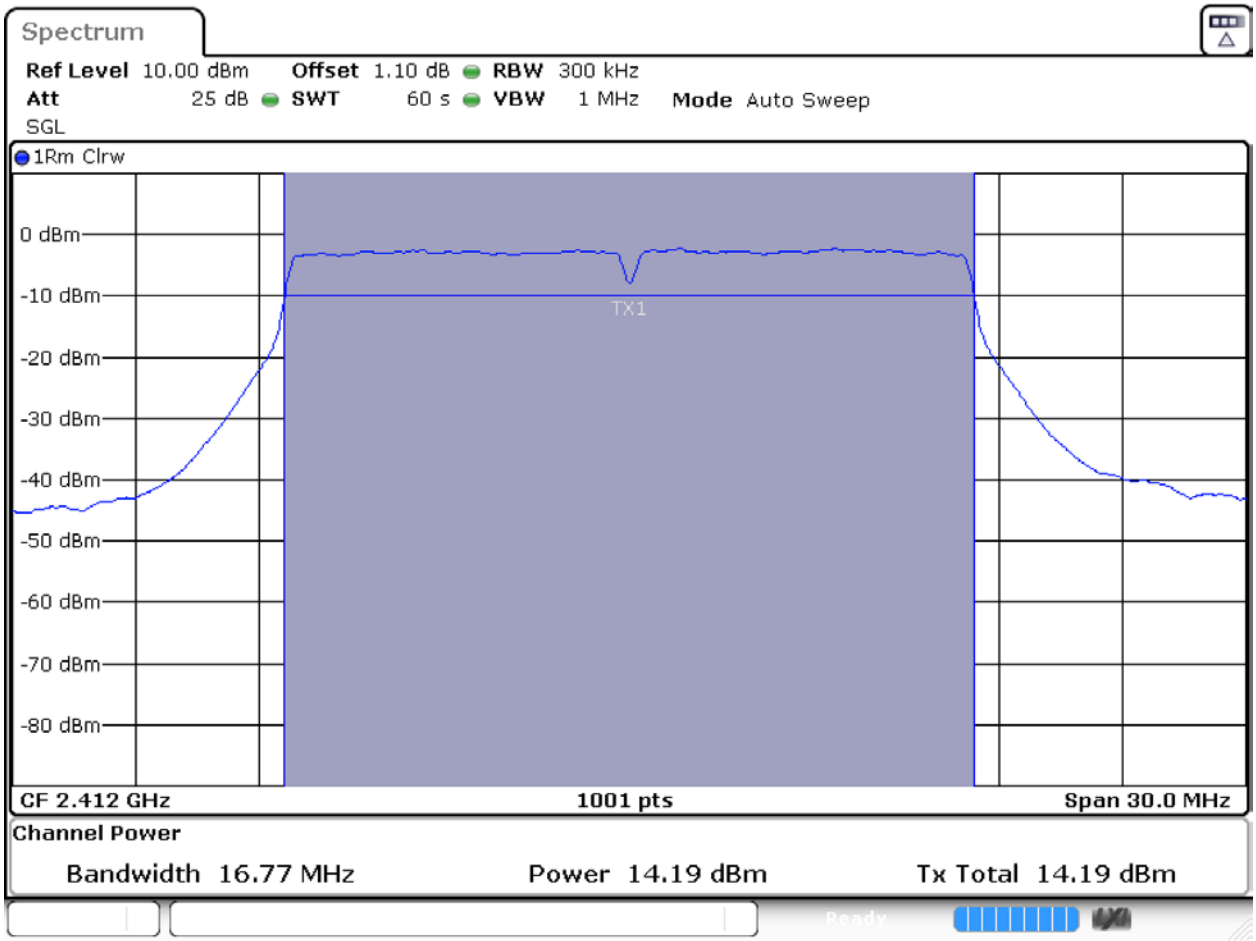
Plot 2. 2


Spectrum
Ref Level 5.00 dBm Offset 1.10 dB RBW 300 kHz
Att 20 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm AvgPwr
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
TX1
CF 2.437 GHz
1001 pts
Span 25.0 MHz
Channel Power
Bandwidth 11.35 MHz
Power 12.42 dBm
Tx Total 12.42 dBm

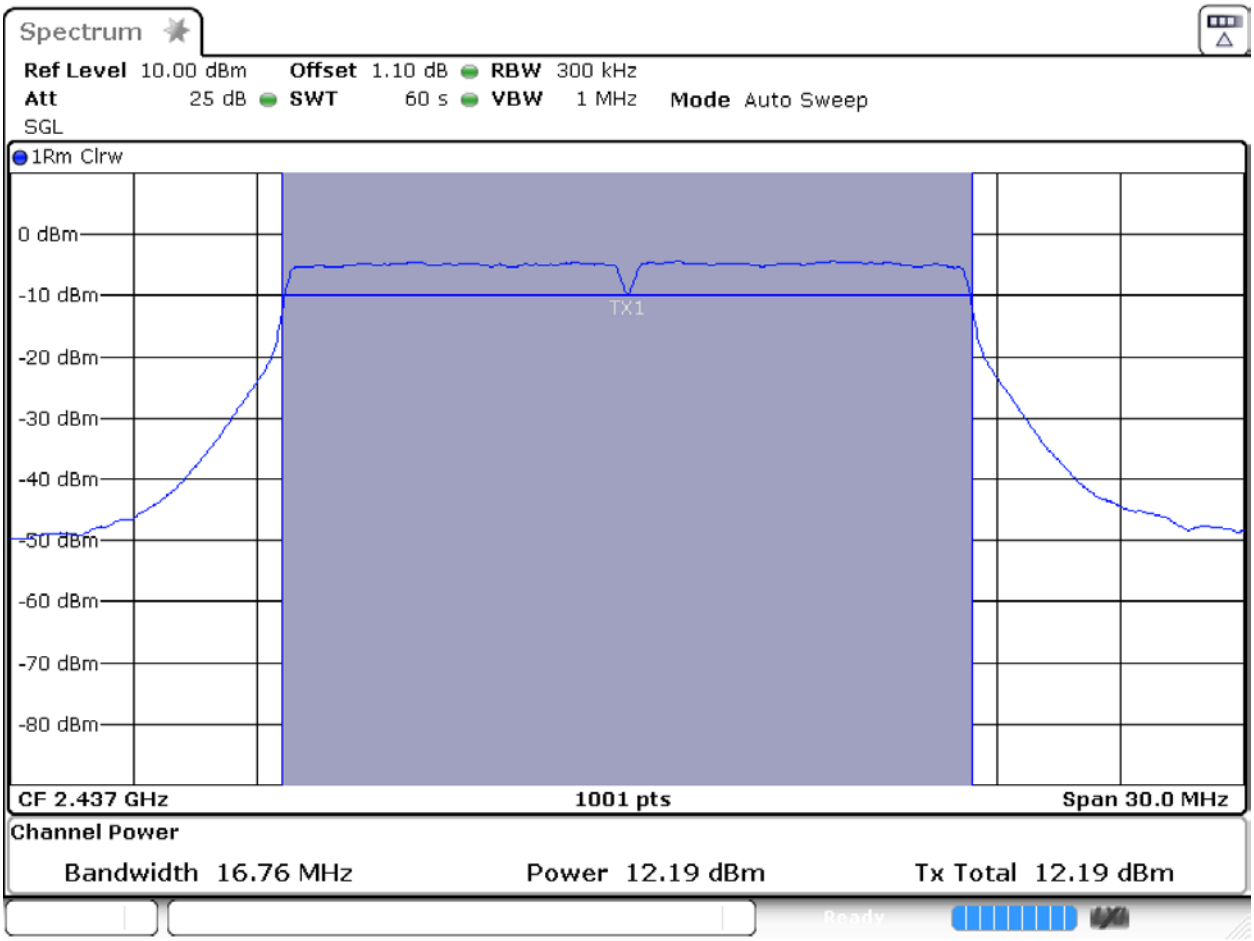
Plot 2. 3


Spectrum
Ref Level 5.00 dBm Offset 1.10 dB RBW 300 kHz
Att 20 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm AvgPwr
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
TX1
CF 2.462 GHz
1001 pts
Span 25.0 MHz
Channel Power
Bandwidth 11.32 MHz
Power 9.96 dBm
Tx Total 9.96 dBm

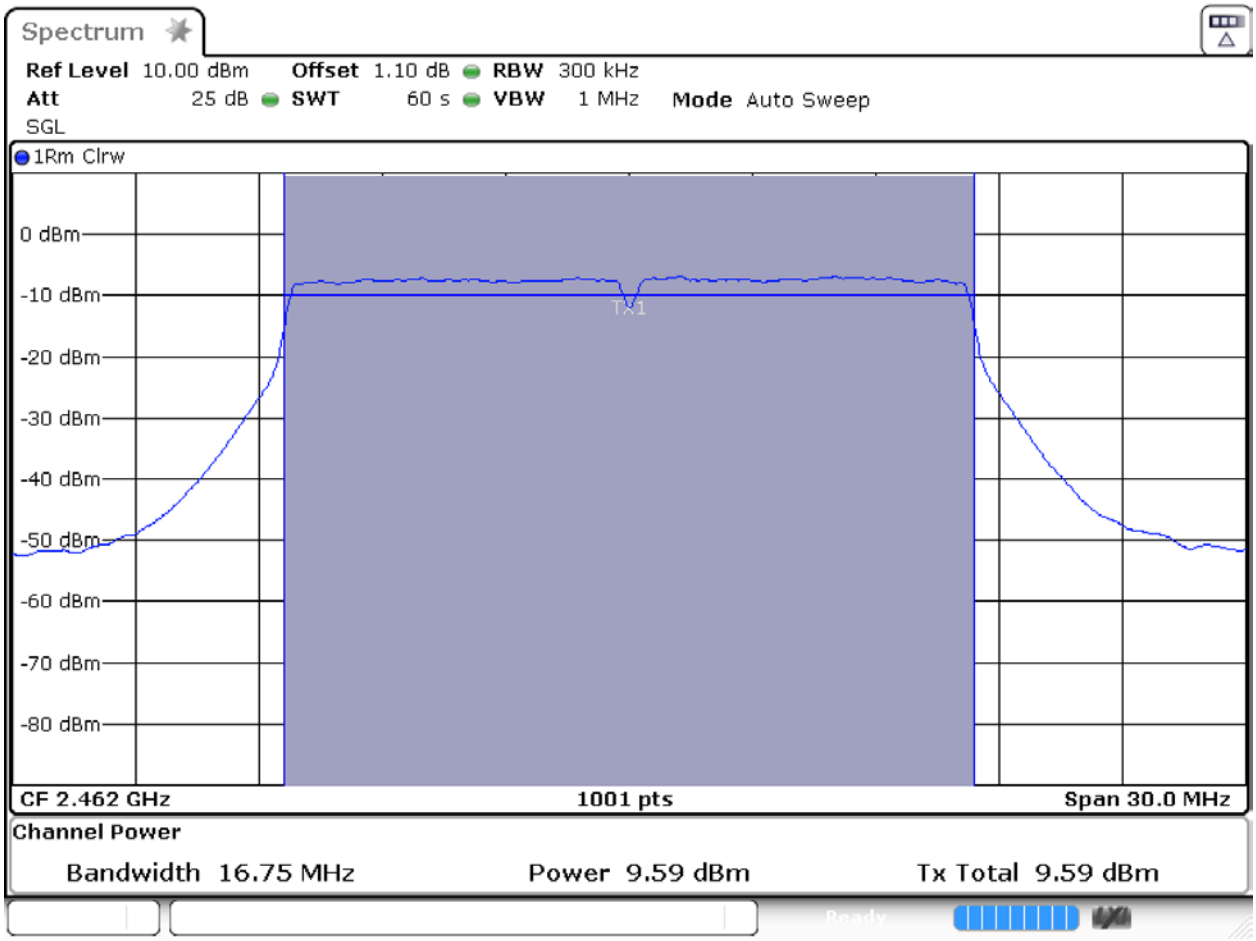
Plot 2. 4


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 300 kHz
Att 25 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm Clrw
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
TX1
CF 2.412 GHz
1001 pts
Span 30.0 MHz
Channel Power
Bandwidth 16.77 MHz
Power 14.19 dBm
Tx Total 14.19 dBm

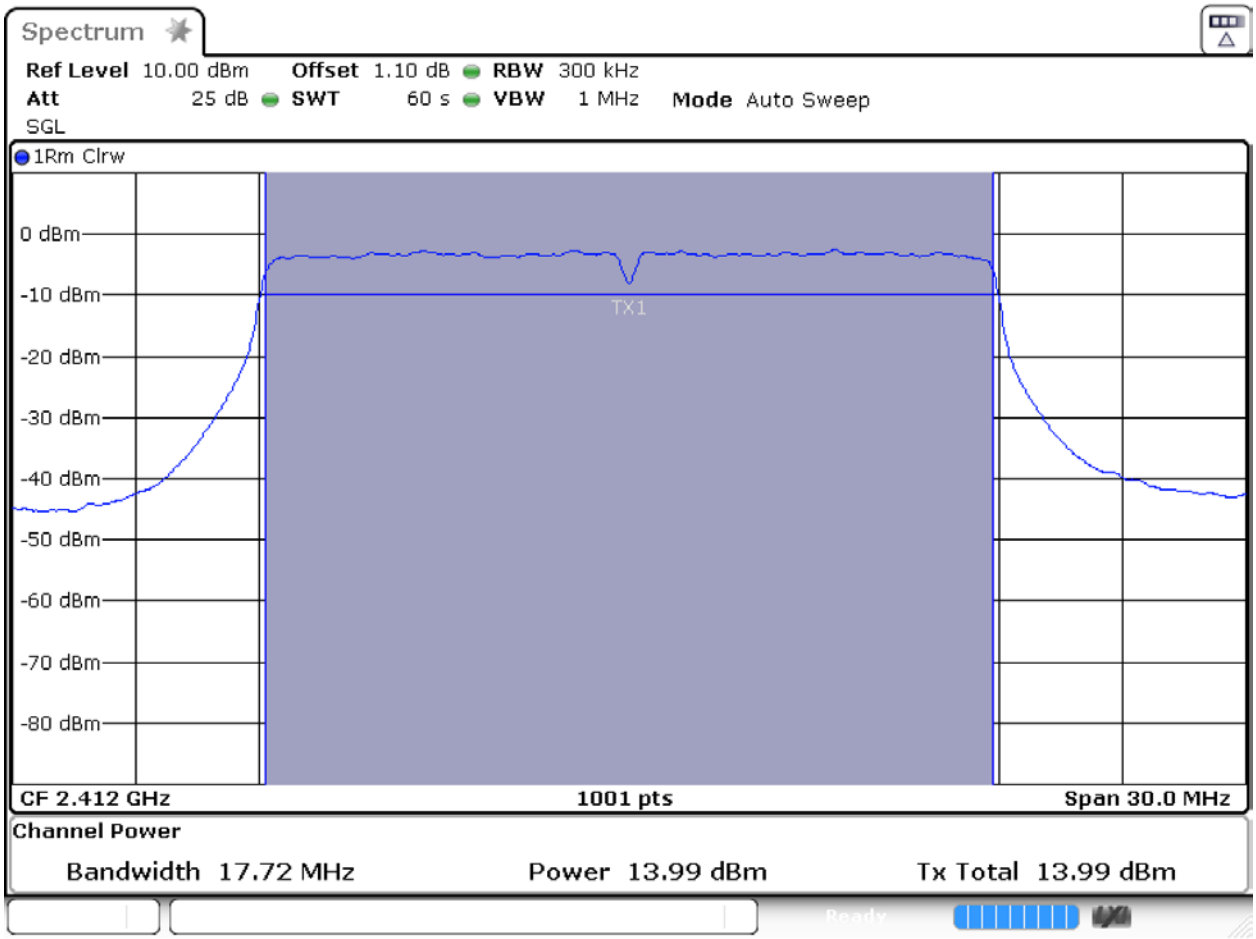
Plot 2. 5


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 300 kHz
Att 25 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm Clrw
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
TX1
CF 2.437 GHz
1001 pts
Span 30.0 MHz
Channel Power
Bandwidth 16.76 MHz
Power 12.19 dBm
Tx Total 12.19 dBm

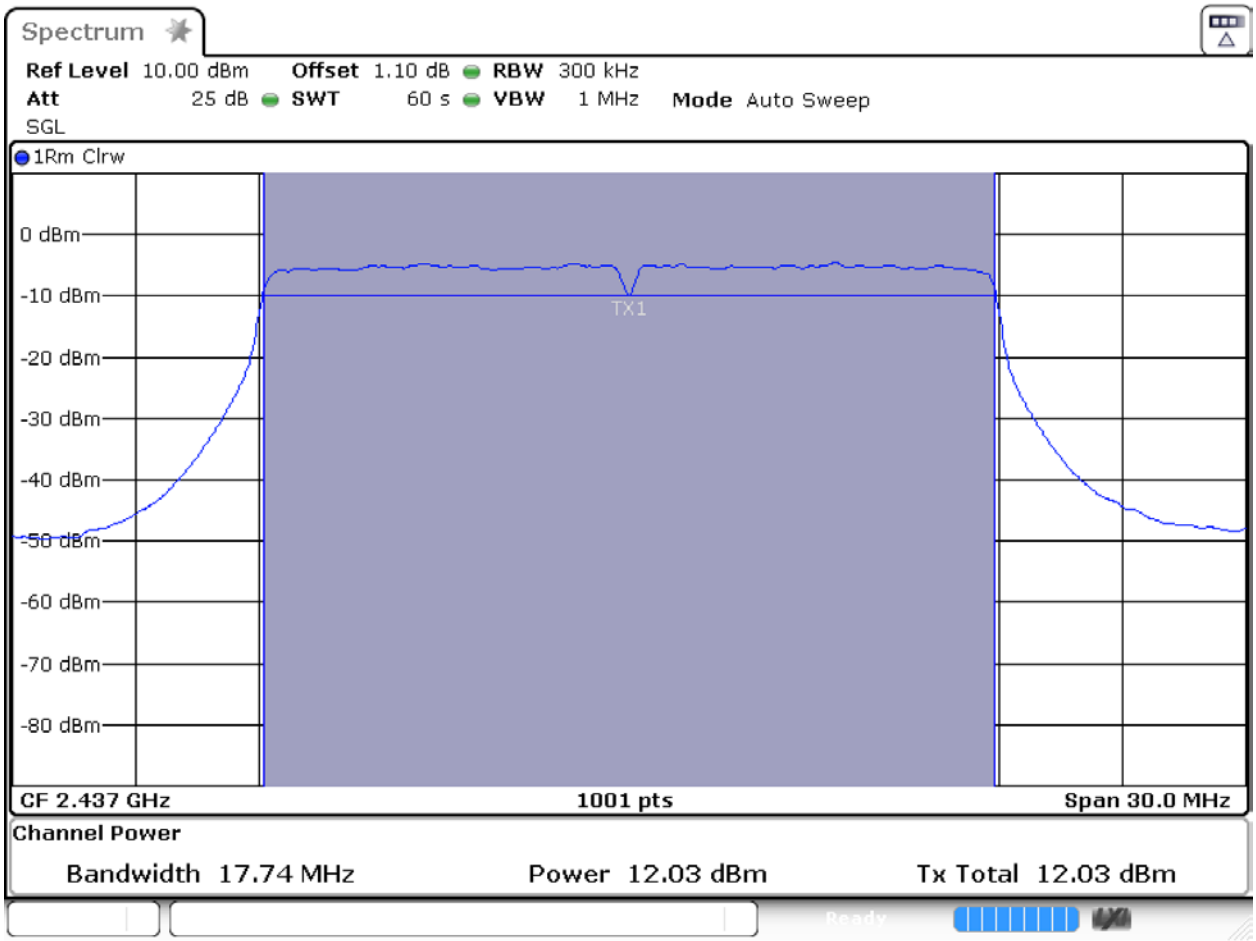
Plot 2. 6


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 300 kHz
Att 25 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm Clrw
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.462 GHz
1001 pts
Span 30.0 MHz
Channel Power
Bandwidth 16.75 MHz
Power 9.59 dBm
Tx Total 9.59 dBm

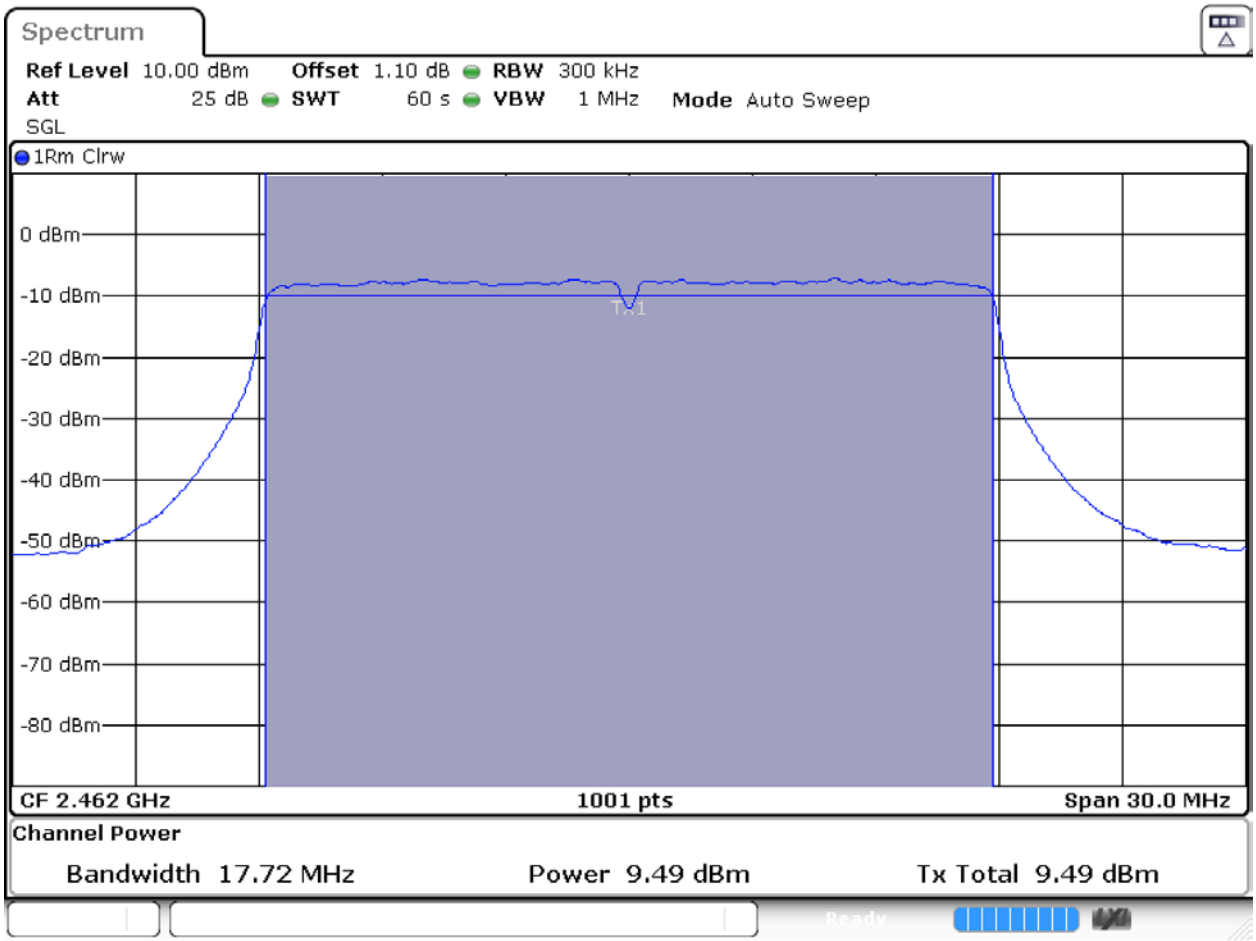
Plot 2. 7


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 300 kHz
Att 25 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm Clrw
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
TX1
CF 2.412 GHz
1001 pts
Span 30.0 MHz
Channel Power
Bandwidth 17.72 MHz
Power 13.99 dBm
Tx Total 13.99 dBm

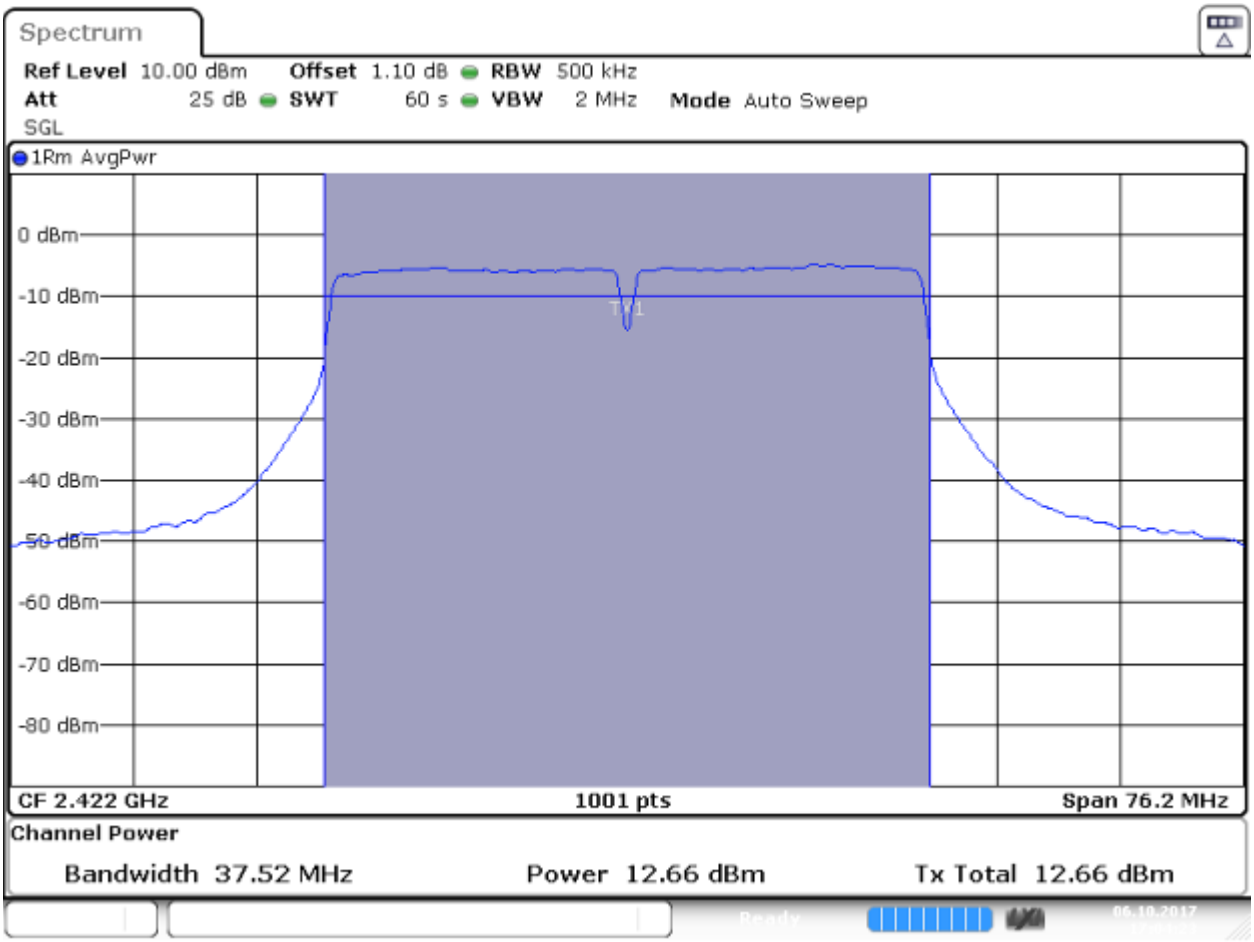
Plot 2. 8


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 300 kHz
Att 25 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm Clrw
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
TX1
CF 2.437 GHz
1001 pts
Span 30.0 MHz
Channel Power
Bandwidth 17.74 MHz
Power 12.03 dBm
Tx Total 12.03 dBm

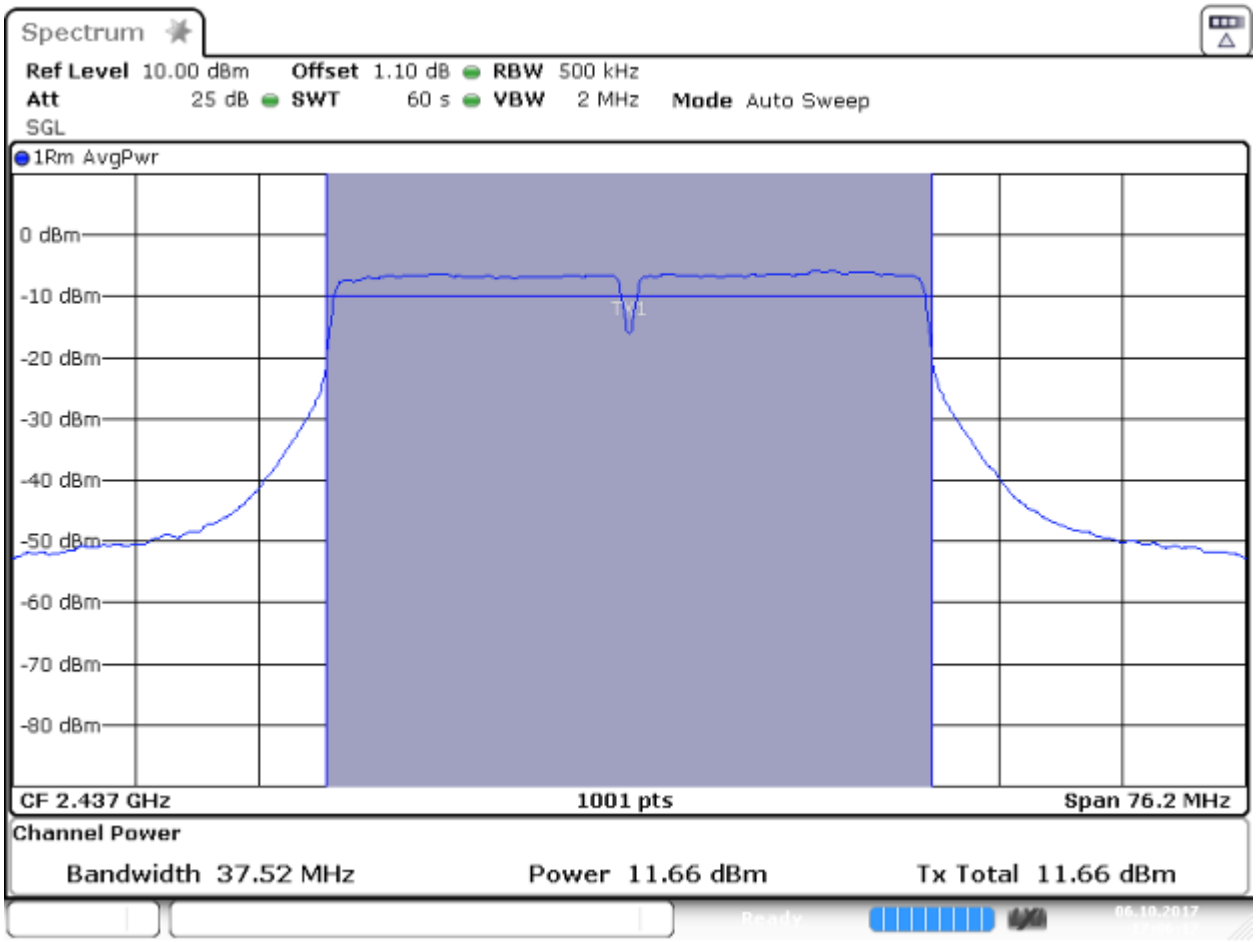
Plot 2. 9


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 300 kHz
Att 25 dB SWT 60 s VBW 1 MHz Mode Auto Sweep
SGL
1Rm Clrw
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
Tx1
CF 2.462 GHz
1001 pts
Span 30.0 MHz
Channel Power
Bandwidth 17.72 MHz
Power 9.49 dBm
Tx Total 9.49 dBm

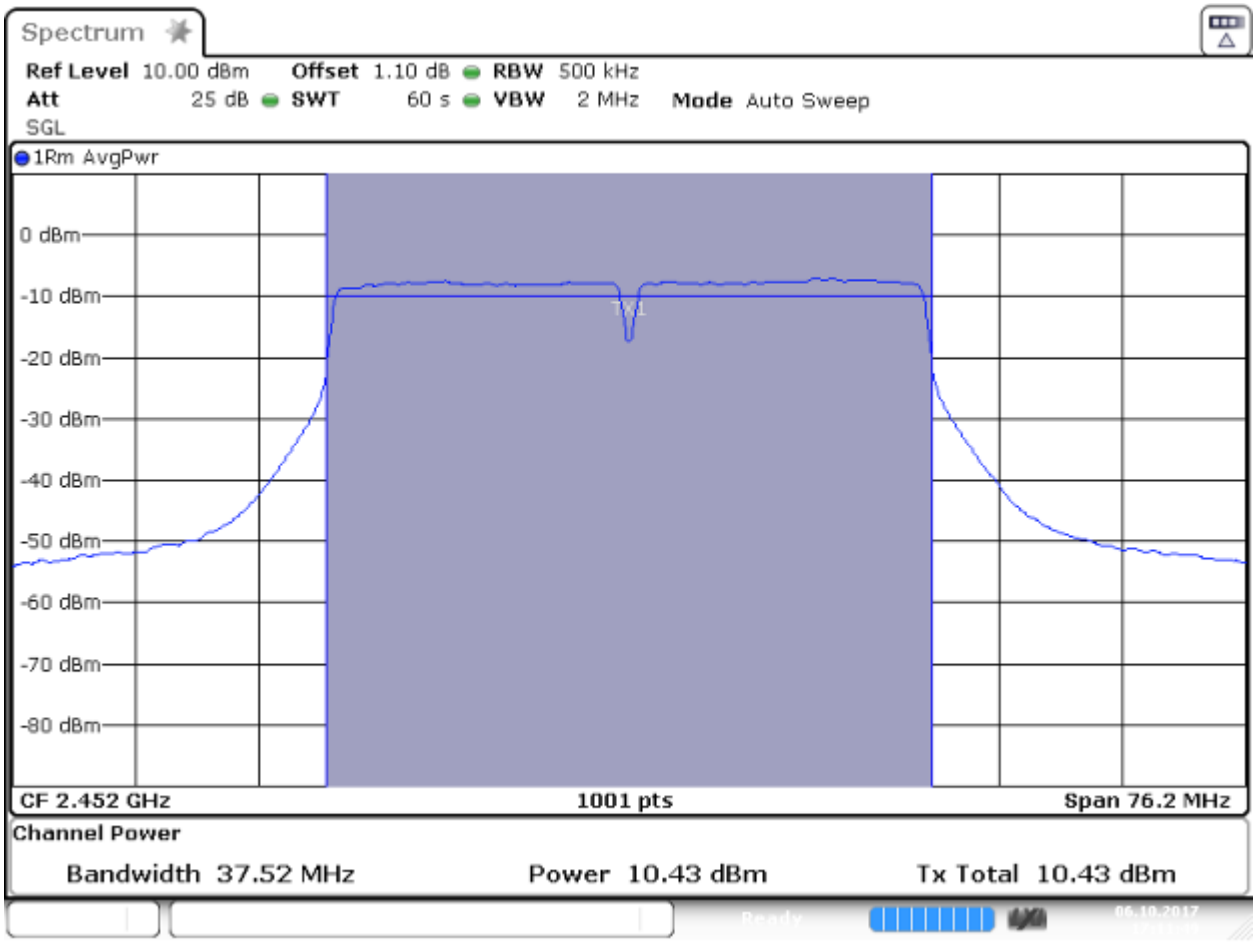
Plot 2. 10


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 500 kHz
Att 25 dB SWT 60 s VBW 2 MHz Mode Auto Sweep
SGL
1Rm AvgPwr
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.422 GHz
1001 pts
Span 76.2 MHz
Channel Power
Bandwidth 37.52 MHz
Power 12.66 dBm
Tx Total 12.66 dBm

Plot 2. 11


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 500 kHz
Att 25 dB SWT 60 s VBW 2 MHz Mode Auto Sweep
SGL
1Rm AvgPwr
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.437 GHz
1001 pts
Span 76.2 MHz
Channel Power
Bandwidth 37.52 MHz
Power 11.66 dBm
Tx Total 11.66 dBm

Plot 2. 12


Spectrum
Ref Level 10.00 dBm Offset 1.10 dB RBW 500 kHz
Att 25 dB SWT 60 s VBW 2 MHz Mode Auto Sweep
SGL
1Rm AvgPwr
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.452 GHz
1001 pts
Span 76.2 MHz
Channel Power
Bandwidth 37.52 MHz
Power 10.43 dBm
Tx Total 10.43 dBm

4.3 Power Spectral Density
FCC 15.247 (e)

4.3.1 Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna should not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2 Procedure

The antenna port of the EUT was connected to the input of a spectrum analyzer to measure the Transmitter Power Density (PSD). The offset programmed on the analyzer is corrected to include cable loss, attenuator.

The procedure described in FCC Publication 558074 D01 DTS Meas Guidance, specifically section 10.2 Method PKPSD (peak PSD).

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the *DTS bandwidth*.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

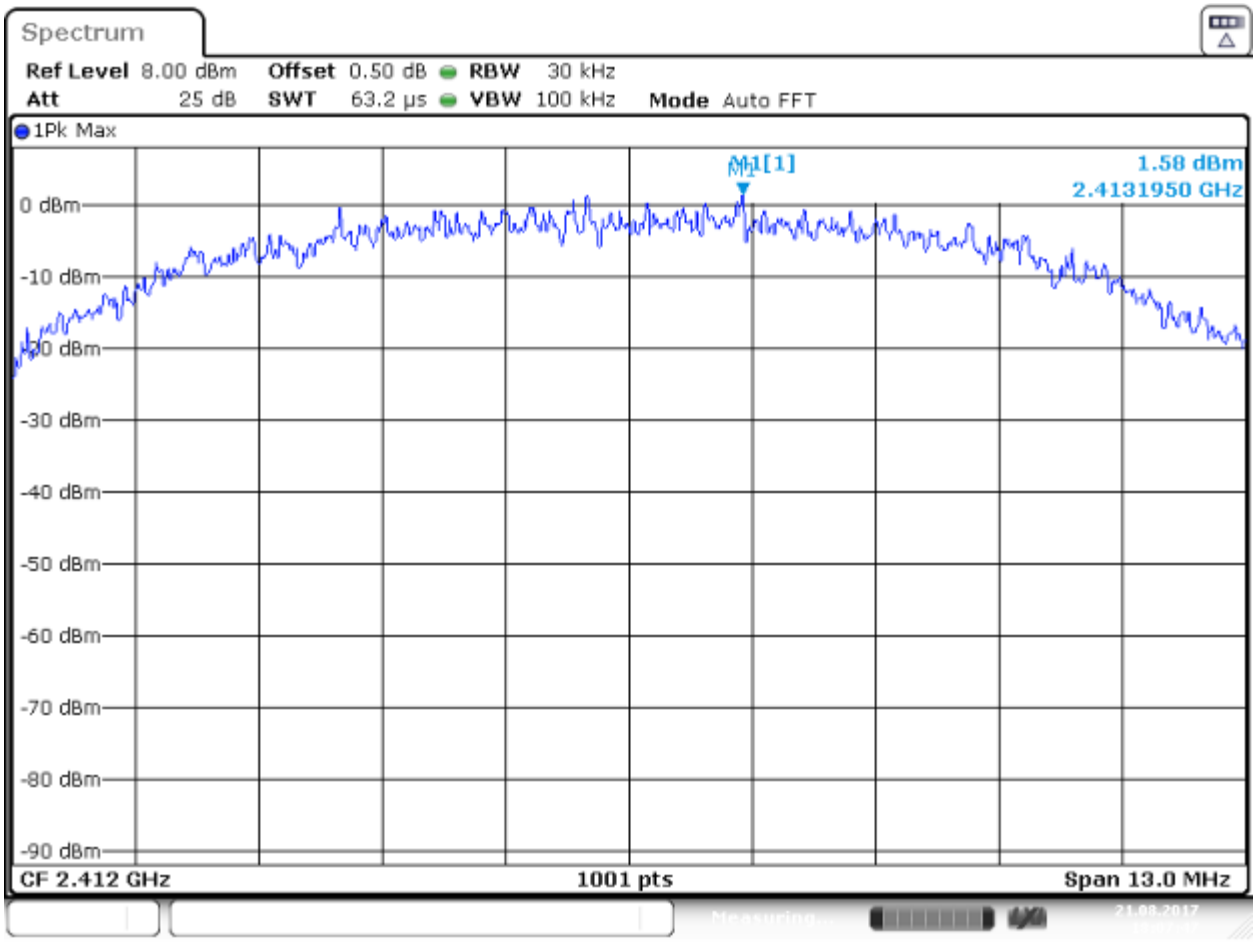
Test Date:	October 9, 2017

4.3.3 Test Result

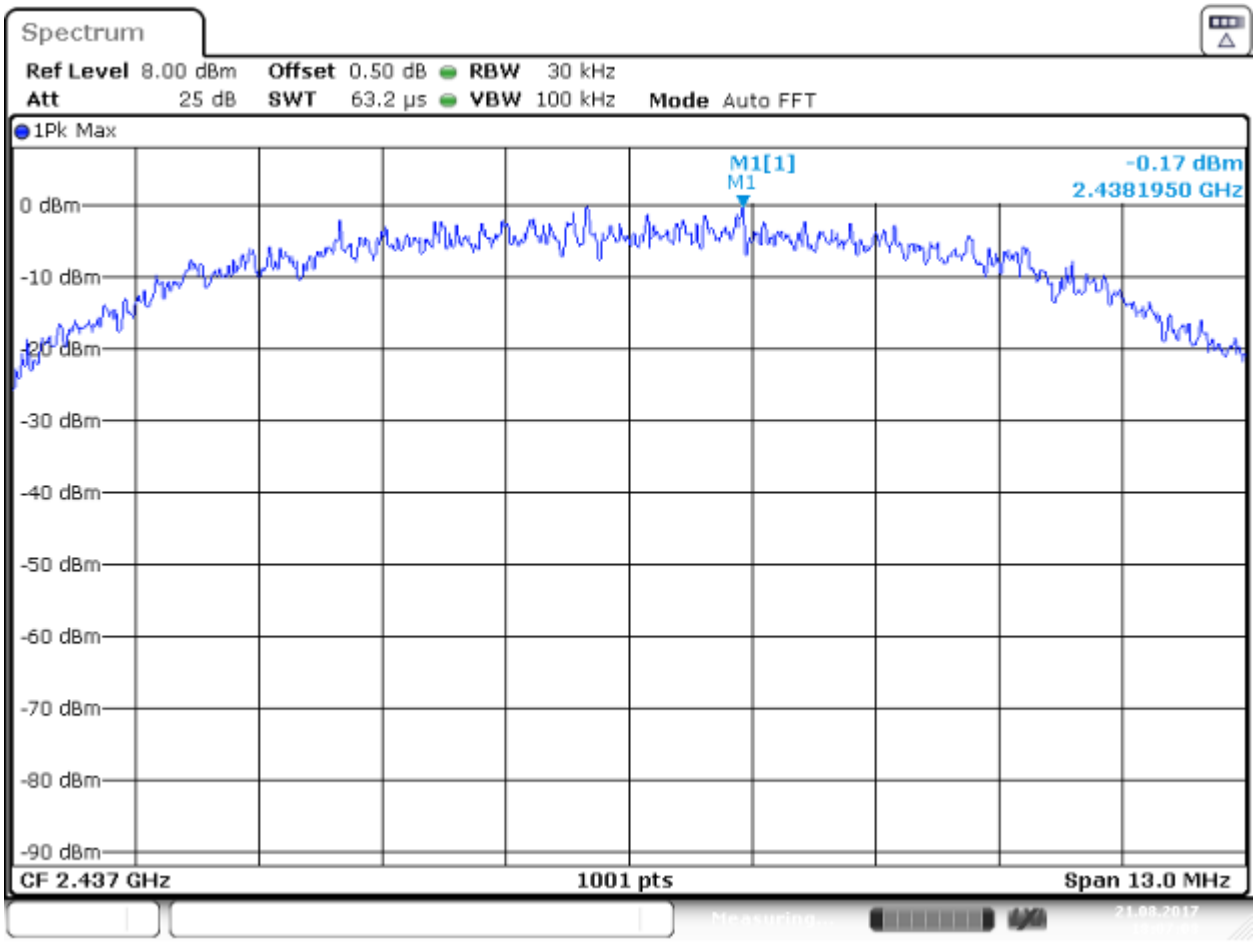
Refer to the following plots for the test result:

Standard	Channel	Frequency MHz	PSD (Peak) dBm	Margin to 8dBm Limit dB	Plot #
802.11b	1	2412	1.58	-6.42	3.1
	6	2437	-0.17	-8.17	3.2
	11	2462	-2.58	-10.58	3.3
802.11g	1	2412	-1.88	-9.88	3.4
	6	2437	-3.68	-11.68	3.5
	11	2462	-6.06	-14.06	3.6
802.11n HT20	1	2412	-1.52	-9.52	3.7
	6	2437	-3.31	-11.31	3.8
	11	2462	-5.73	-13.73	3.9
802.11n HT40	3	2422	-4.68	-12.68	3.10
	6	2437	-5.77	-13.77	3.11
	9	2452	-7.05	-15.05	3.12

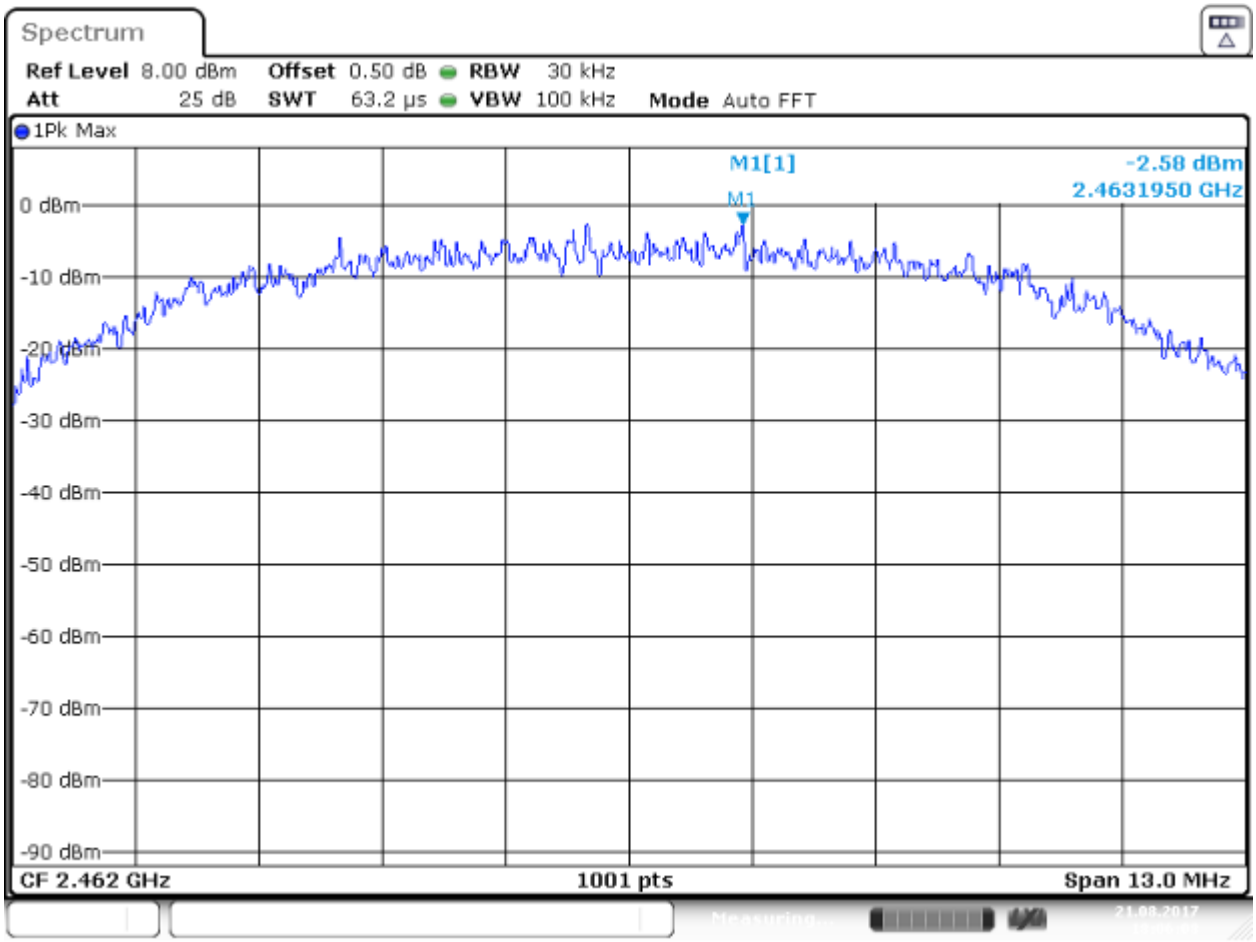
Plot 3. 1


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1] 1.58 dBm
2.4131950 GHz
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.412 GHz
1001 pts
Span 13.0 MHz

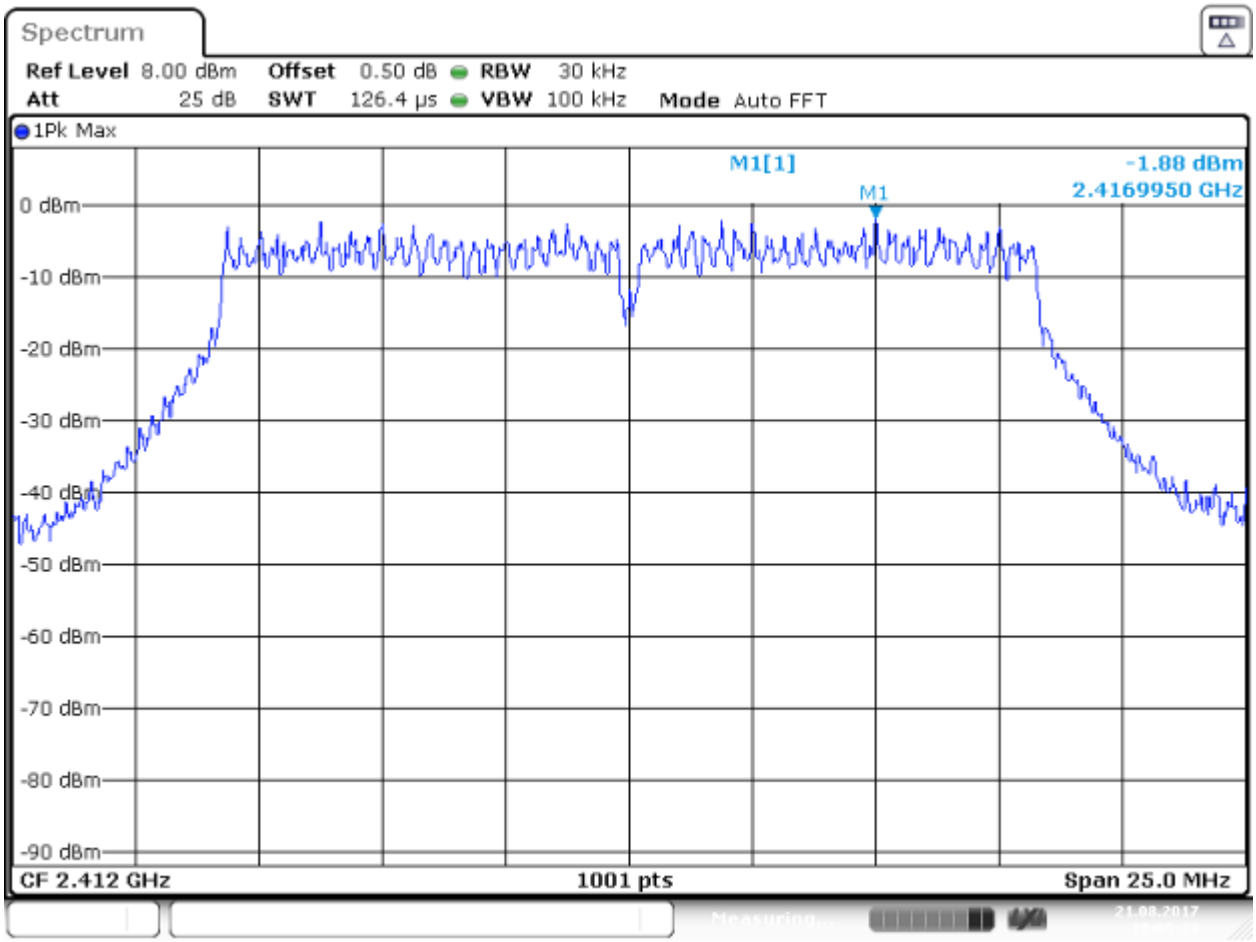
Plot 3. 2


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
M1
-0.17 dBm
2.4381950 GHz
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.437 GHz
1001 pts
Span 13.0 MHz

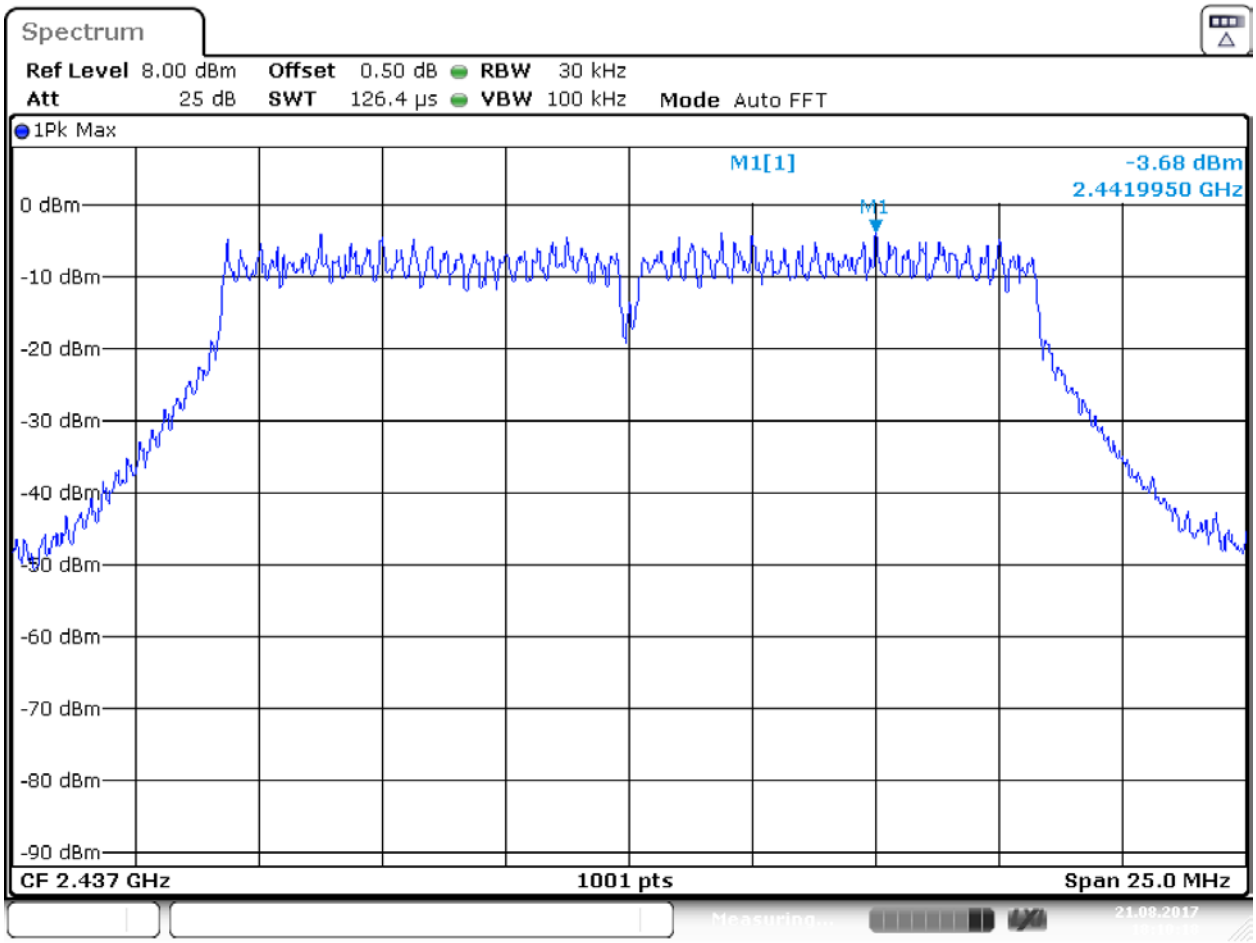
Plot 3. 3


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
-2.58 dBm
2.4631950 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.462 GHz
1001 pts
Span 13.0 MHz

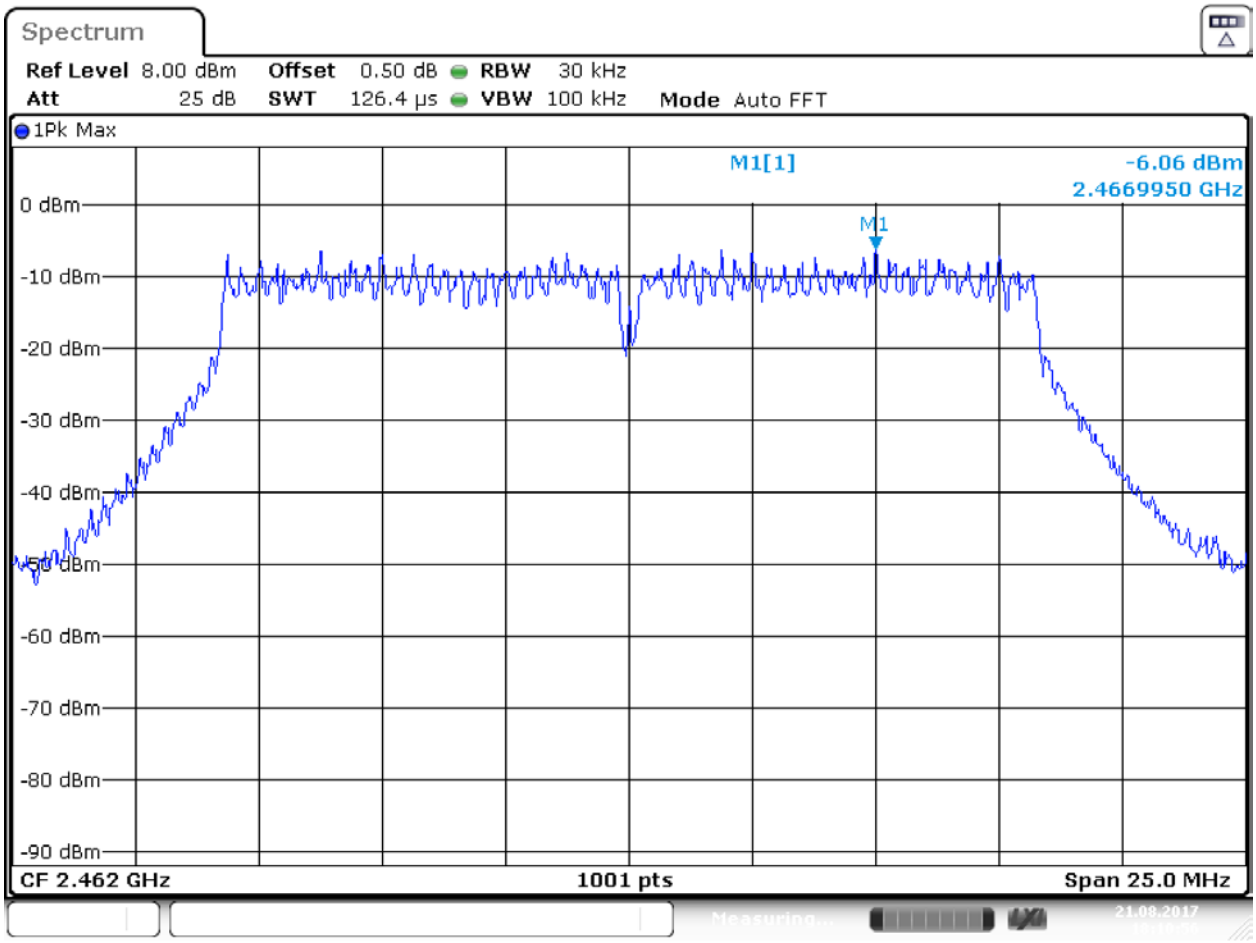
Plot 3. 4


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 126.4 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
-1.88 dBm
2.4169950 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.412 GHz
1001 pts
Span 25.0 MHz

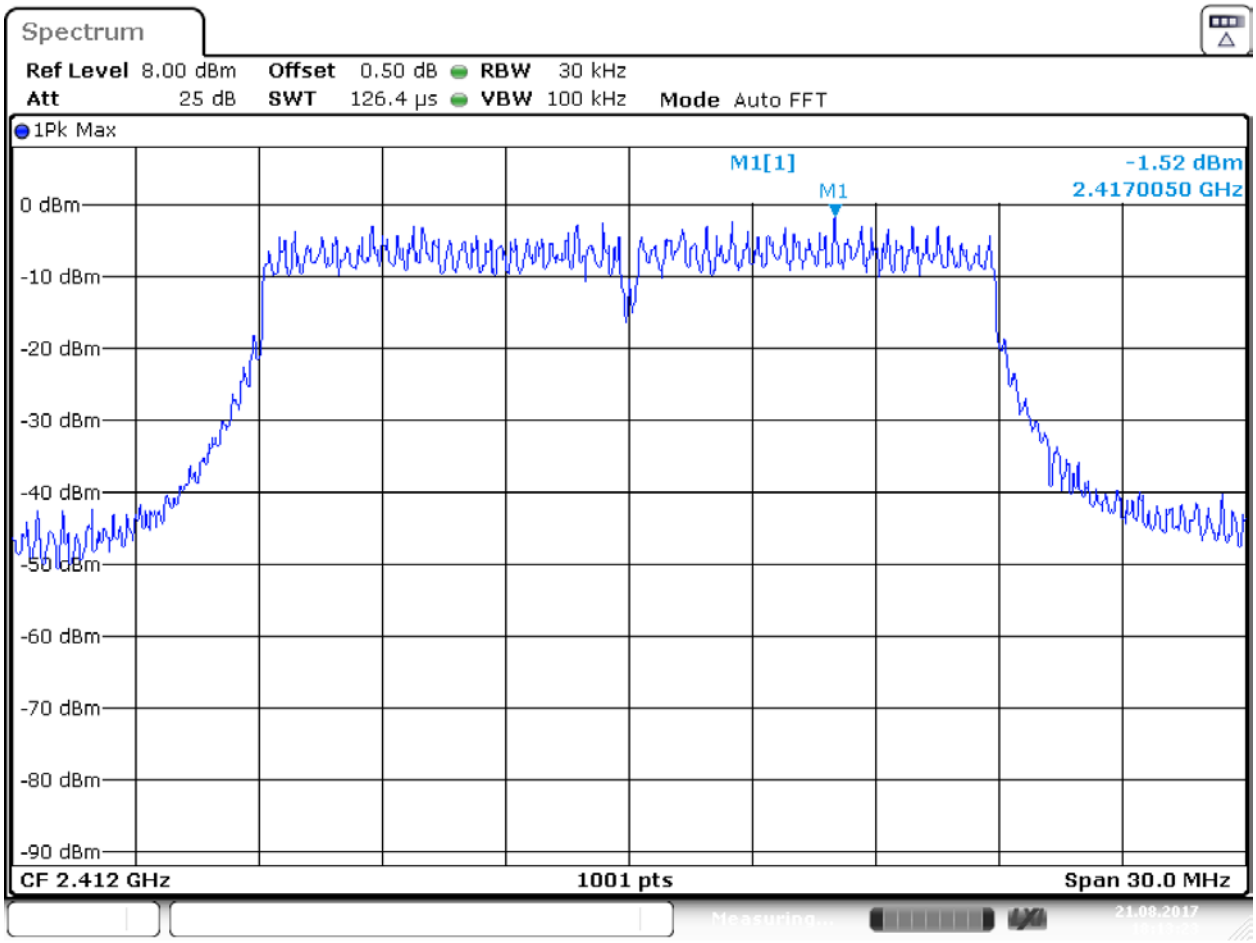
Plot 3. 5


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 126.4 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
-3.68 dBm
2.4419950 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.437 GHz
1001 pts
Span 25.0 MHz

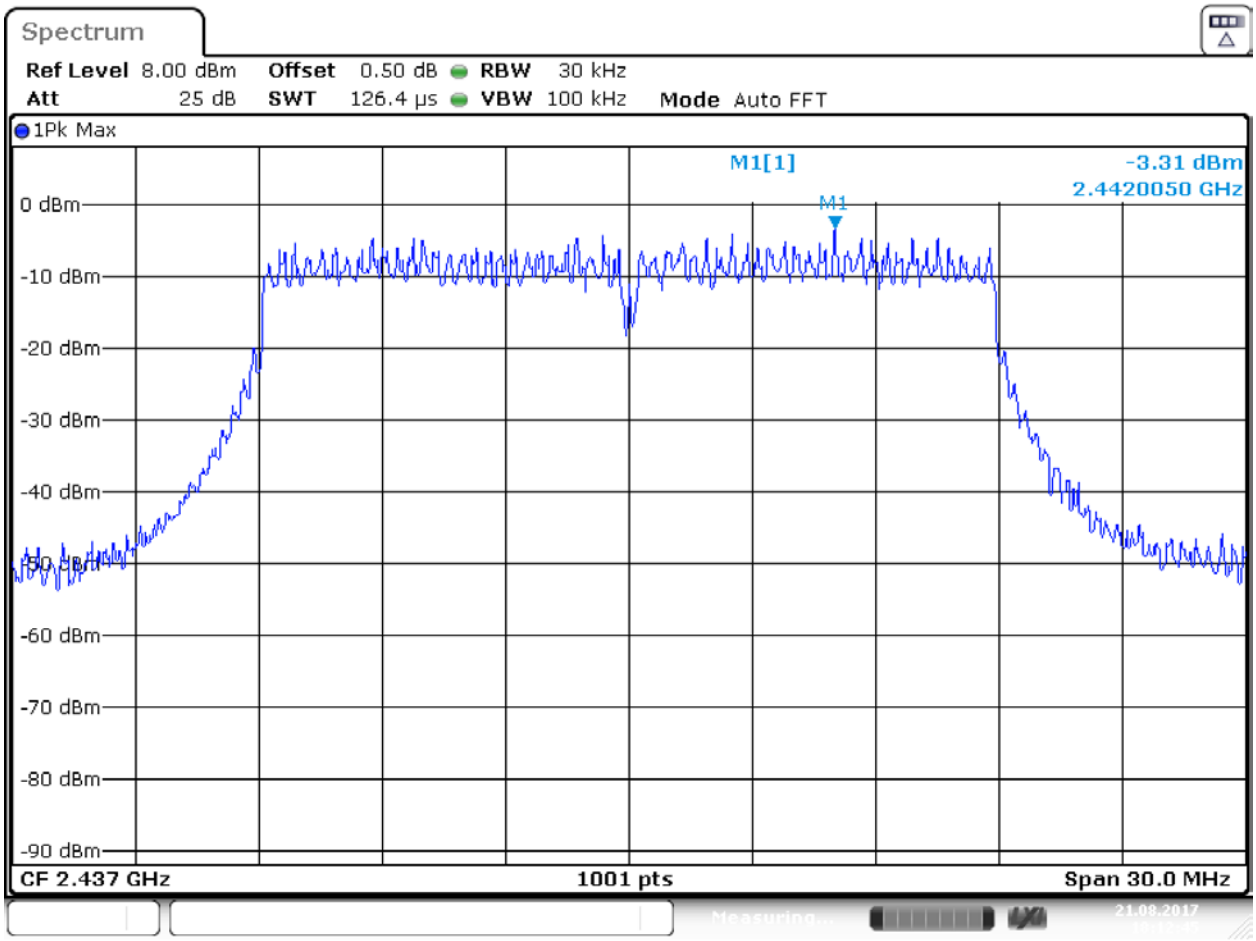
Plot 3. 6


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 126.4 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
-6.06 dBm
2.4669950 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.462 GHz
1001 pts
Span 25.0 MHz

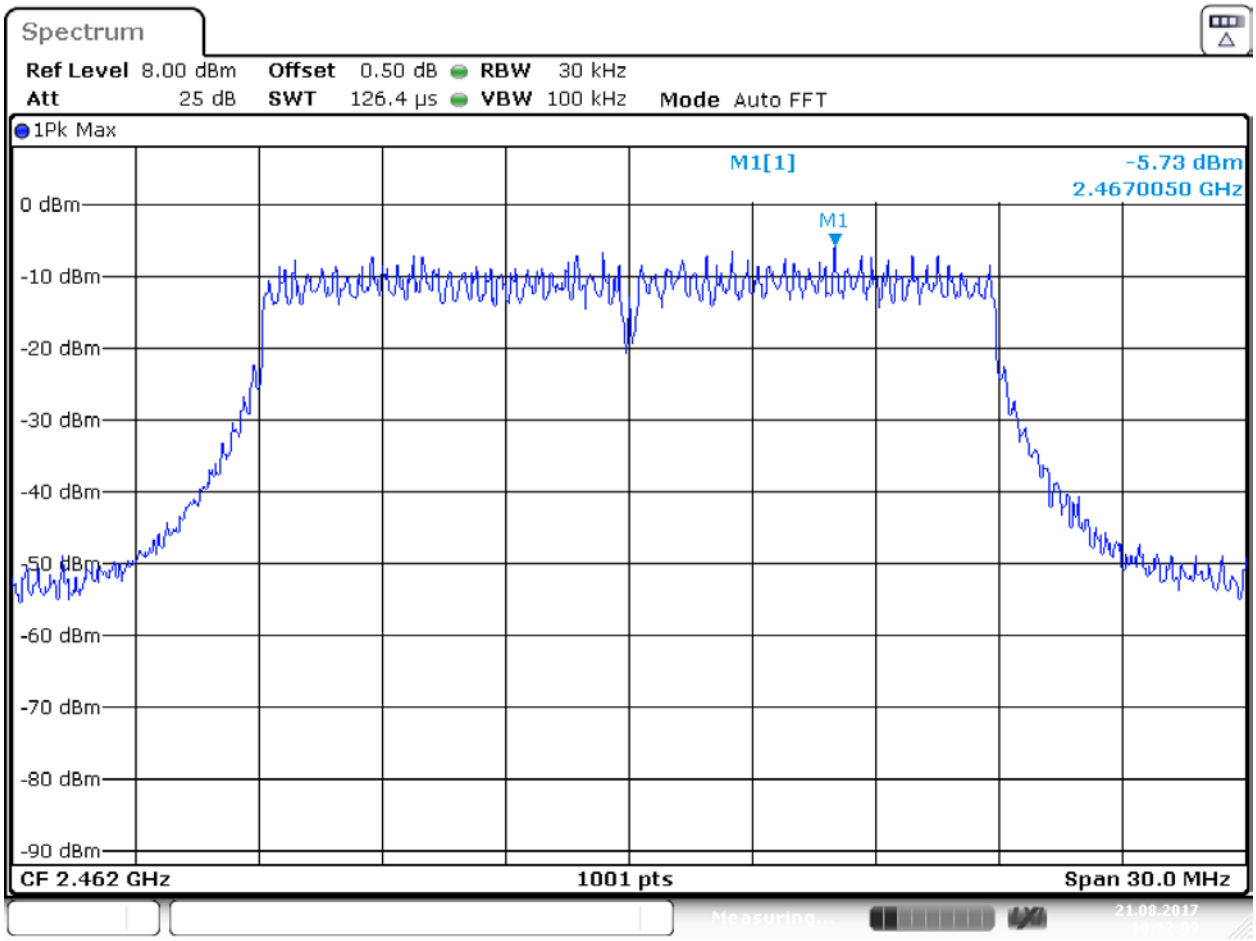
Plot 3. 7


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 126.4 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1] -1.52 dBm
M1 2.4170050 GHz
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.412 GHz
1001 pts
Span 30.0 MHz

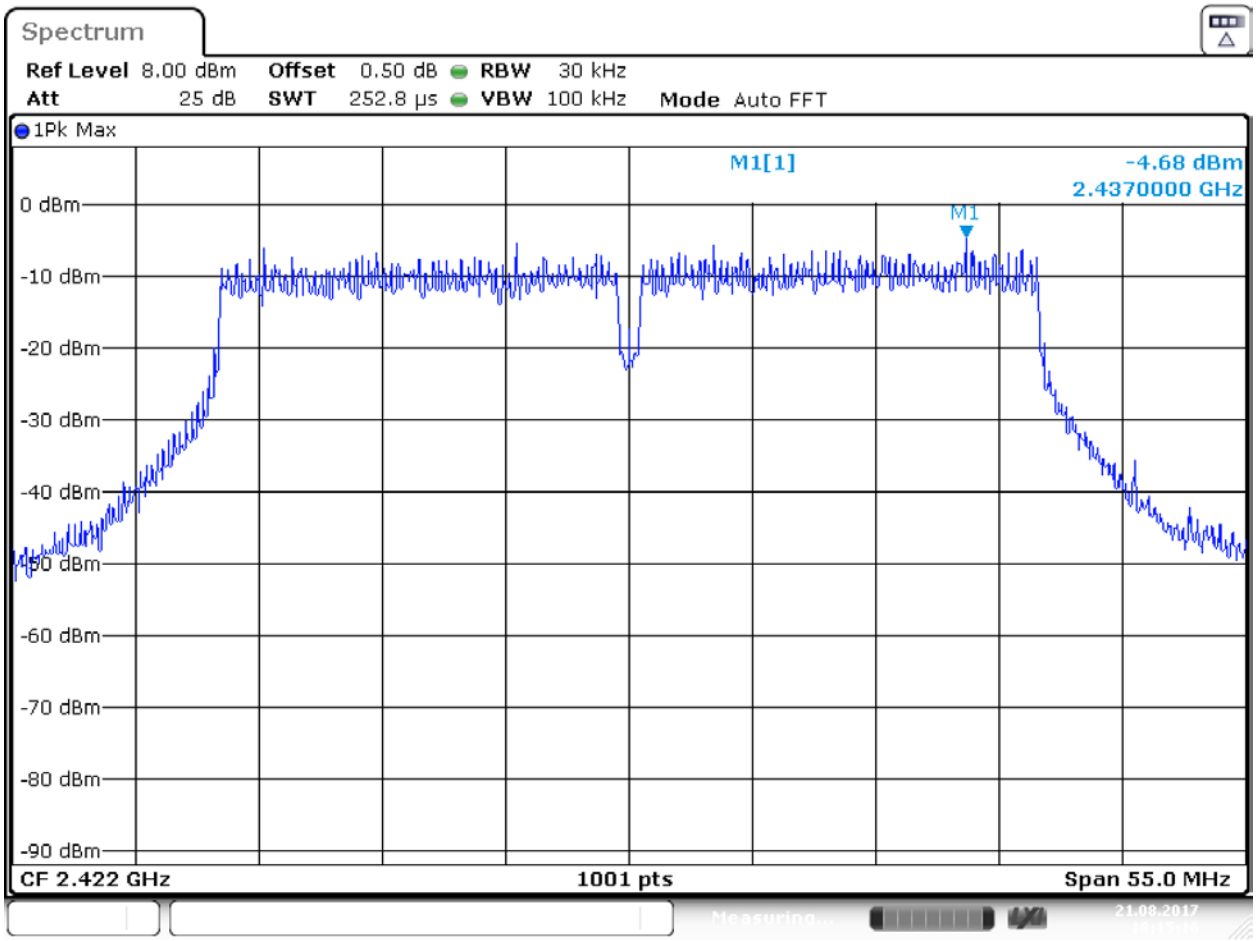
Plot 3. 8


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 126.4 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1] -3.31 dBm
2.4420050 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.437 GHz
1001 pts
Span 30.0 MHz

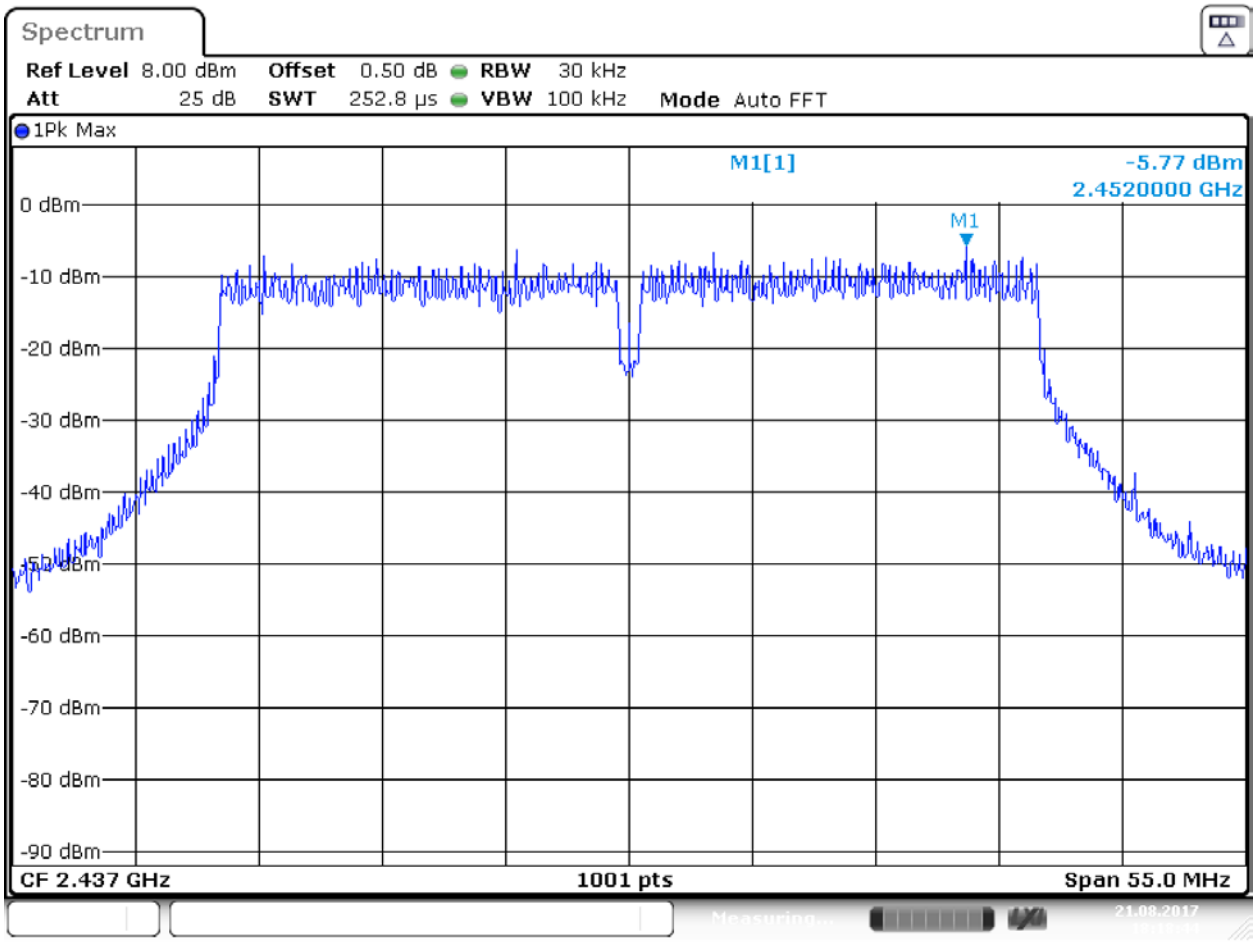
Plot 3. 9


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 126.4 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
-5.73 dBm
2.4670050 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.462 GHz
1001 pts
Span 30.0 MHz

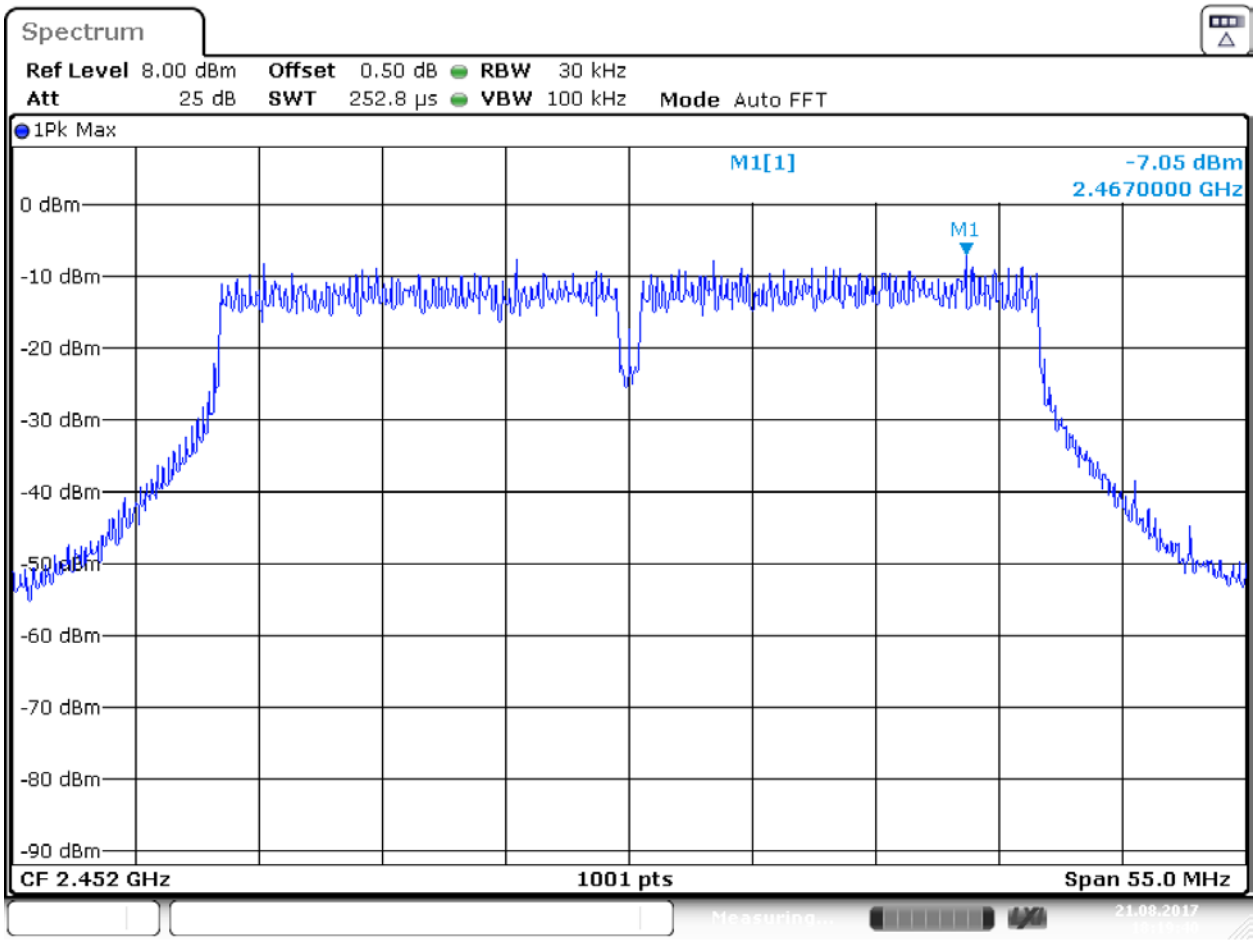
Plot 3. 10


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 252.8 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
-4.68 dBm
2.4370000 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.422 GHz
1001 pts
Span 55.0 MHz

Plot 3. 11


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 252.8 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1] -5.77 dBm
2.4520000 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.437 GHz
1001 pts
Span 55.0 MHz

Plot 3. 12


Spectrum
Ref Level 8.00 dBm Offset 0.50 dB RBW 30 kHz
Att 25 dB SWT 252.8 µs VBW 100 kHz Mode Auto FFT
1Pk Max
M1[1]
-7.05 dBm
2.4670000 GHz
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
CF 2.452 GHz
1001 pts
Span 55.0 MHz