FCC PART 15C TEST REPORT

TESTING
CNAS L3572

Issued to

GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD

For

Mobile Phone

Model Name:	OPPO X9006
Trade Name:	OPPO
Brand Name:	OPPO
FCC ID:	R9C-X9006
Standard:	47 CFR Part 15 Subpart C
Test date:	2013-12-20 to 2014-4-1
Issue date:	2014-4-1

by

Shenzhen Morlab Communications Technology Co., Ltd.
FL.3, Building A, FeiYang Science Park, No.8 LongChang Road,Block 67, BaoAn District,
ShenZhen, GuangDong Province P. R. China 518101

Tested by	Nie Quan	***Approved by***	Zeng Dexin	***Reviewed by***	Peng Huarui
	(Test Engineer)		(Chief Engineer)		(Dept. Manager)
Date	2014.4.1	***Date***	2014.4.1	***Date***	2014.4.1

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Change History		
Issue	Date	Reason for change
1.0	April 1, 2014	First Edition

1. General Information

1.1. EUT Description

EUT Type..... :	Mobile Phone
Serial No. ..... :	(n.a, marked #1 by test site)
Hardware Version..... :	213073
Software Version..... :	X9006_10_1.01_131216
Applicant..... :	GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD NO. 18 HAIBIN ROAD, WUSHA, CHANG'AN, DONGGUAN, GUANGDONG, CHINA
Manufacturer ..... :	GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD NO. 18 HAIBIN ROAD, WUSHA, CHANG'AN, DONGGUAN, GUANGDONG, CHINA
Frequency Range..... :	802.11b/g/n: 2.400GHz - 2.4835GHz 802.11a/n/ac: 5.150GHz- 5.350GHz 5.470GHz- 5725GHz 5.725GHz- 5.850GHz
Channel Number ..... :	2.4GHz Band: 802.11b/g/n-20MHz: 11 802.11n-40MHz: 7 802.11a/n/ac-20MHz: 5.725GHz- 5.850GHz: 5 Channels 5.150GHz – 5.350GHz: 8 Channels 5.470GHz – 5.725GHz: 11Channels 802.11n/ac-40MHz: 5.725GHz- 5.850GHz: 2 Channels 5.150GHz – 5.350GHz: 4 Channels 5.470GHz – 5.725GHz: 5 Channels
Modulation Type..... :	DSSS, OFDM
Antenna Type ..... :	PIFA Antenna
Antenna Gain..... :	1.0dBi MAX

Note :

1. 2.4GHz and 5.8GHz bands is applicable to this report, the U-NII band is documented in a separate report.
2. The EUT is Mobile Phone, it contains WIFI Module operating at 2.4GHz ISM and 5GHz band; it supports 802.11a, 802.11b, 802.11g, 802.11n,802.11ac and they are all tested in this report.
3. For 802.11b/g/n-20MHz (2.4GHz band), the frequencies allocated is F (MHz) =2412+5*(n-1) (1<=n<=11). The lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 1 (2412MHz), 6 (2437MHz) and 11 (2462MHz).
   For 802.11n-40MHz, the frequencies allocated is F (MHz) =2412+5*(n-1) (3<=n<=9). The lowest,

middle, highest channel numbers of the EUT used and tested in this report are separately 3 (2422MHz), 6 (2437MHz) and 9 (2452MHz).

4. For 5.8GHz band, 802.11a/n/ac-20MHz: CH149(5745MHz), CH157(5785MHz) and CH165(5825GHz), 802.11ac/n-40MHz: CH151(5755MHz), CH159(5795MHz) are tested in this report
5. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.
6. The antenna connector of EUT is designed with permanent attachment and no consideration of replacement.

2. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C (Wi-Fi, 2.4GHz ISM band radiators) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-12 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.203	Antenna Requirement	**PASS**
2	15.247(b)	Peak Output Power	**PASS**
3	15.247(a)	Bandwidth	**PASS**
4	15.247(d)	Conducted Spurious Emission and Band Edge	**PASS**
5	15.247(d)	Restricted Frequency Bands	**PASS**
6	15.207	Conducted Emission	**PASS**
7	15.209 ,15.247(d)	Radiated Emission	**PASS**
8	15.247(e)	Power spectral density (PSD)	**PASS**
9	15.247(i), 1.1307&2.1093	RF exposure evaluation	**PASS**

The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.4 2009.

These RF tests were performed according to the method of measurements prescribed in KDB558074 D01 v03r01 (04/09/2013).

2.1. Facilities and Accreditations

2.1.1. Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10 2009, ANSI C63.4 2009 and CISPR Publication 22; the FCC registration number is 695796.

2.1.2. Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

3. 47 CFR Part 15C Requirements

3.1. Antenna requirement

3.1.1. Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.1.2. Result: Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

3.2. Peak Output Power

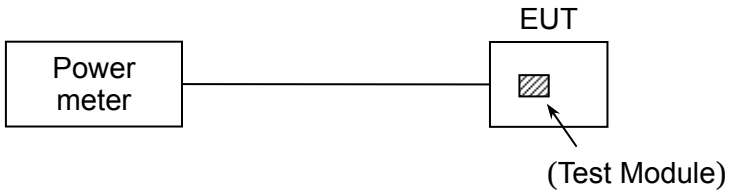
3.2.1. Requirement

According to FCC section 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: The maximum peak conducted output power of the intentional radiator shall not exceed1 Watt.

3.2.2. Test Description

The measured output power was calculated by the reading of the Power Meter and calibration.

A. Test Setup:



The EUT (Equipment under the test) which is powered by the Battery is coupled to the Power Meter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading, all test result in power meter.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
USB Wideband Power Sensor	Agilent	U2021XA	MY52280010	2013.05.12	2014.05.11

3.2.3. Test Result

The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

3.2.3.1. 802.11b Test Mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	14.60	0.028840	30	1	PASS
6	2437	14.58	0.028708			PASS
11	2462	14.19	0.026242			PASS

Channel	Frequency (MHz)	Measured Output Average Power
		dBm
1	2412	13.71
6	2437	13.39
11	2462	13.07

3.2.3.2. 802.11g Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	18.70	0.074131	30	1	PASS
6	2437	18.10	0.064565			PASS
11	2462	18.27	0.067143			PASS

Channel	Frequency (MHz)	Measured Output Average Power
		dBm
1	2412	12.35
6	2437	11.98
11	2462	11.63

3.2.3.3. 802.11n-20MHz Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	17.33	0.054075	30	1	PASS
6	2437	17.28	0.053456			PASS
11	2462	17.19	0.052360			PASS
149	5745	17.02	0.050350			
157	5785	17.00	0.050119			
165	5825	17.14	0.051761			

Channel	Frequency (MHz)	Measured Output Average Power
		dBm
1	2412	11.33
6	2437	11.14
11	2462	10.60
149	5745	9.05
157	5785	9.24
165	5825	9.55

3.2.3.4. 802.11n-40MHz Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
3	2422	16.13	0.041020	30	1	PASS
6	2437	16.01	0.039902			PASS
9	2452	16.41	0.043752			PASS
151	5755	14.88	0.030761			PASS
159	5795	14.45	0.027861			PASS

Channel	Frequency (MHz)	Measured Output Average Power
		dBm
3	2422	9.97
6	2437	9.70
9	2452	9.61
151	5755	7.22
159	5795	7.50

3.2.3.5. 802.11a Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
149	5745	18.84	0.076560	30	1	PASS
157	5785	18.58	0.072111			PASS
165	5825	19.12	0.081658			PASS

Channel	Frequency (MHz)	Measured Output Average Power
		dBm
149	5745	11.29
157	5785	11.41
165	5825	11.64

3.2.3.6. 802.11ac-20MHz

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
149	5745	16.07	0.040458	30	1	PASS
157	5785	16.20	0.041687			PASS
165	5825	16.60	0.045709			PASS

Channel	Frequency (MHz)	Measured Output Average Power
		dBm
149	5745	8.06
157	5785	8.18
165	5825	8.50

3.2.3.7. 802.11ac-40MHz Test mode

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
151	5755	14.88	0.030761	30	1	PASS
159	5795	14.45	0.027861			PASS

Channel	Frequency (MHz)	Measured Output Average Power
		dBm
151	5755	6.21
159	5795	6.40

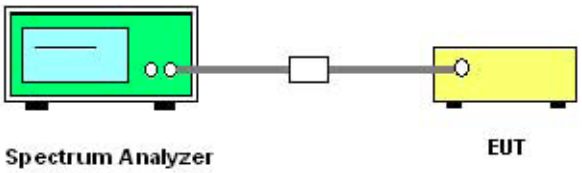
3.3. Bandwidth

3.3.1. Requirement

According to FCC section 15.247(a) (2), Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

3.3.2. Test Description

A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EXA Signal Analzyer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11

3.3.3. Test Result

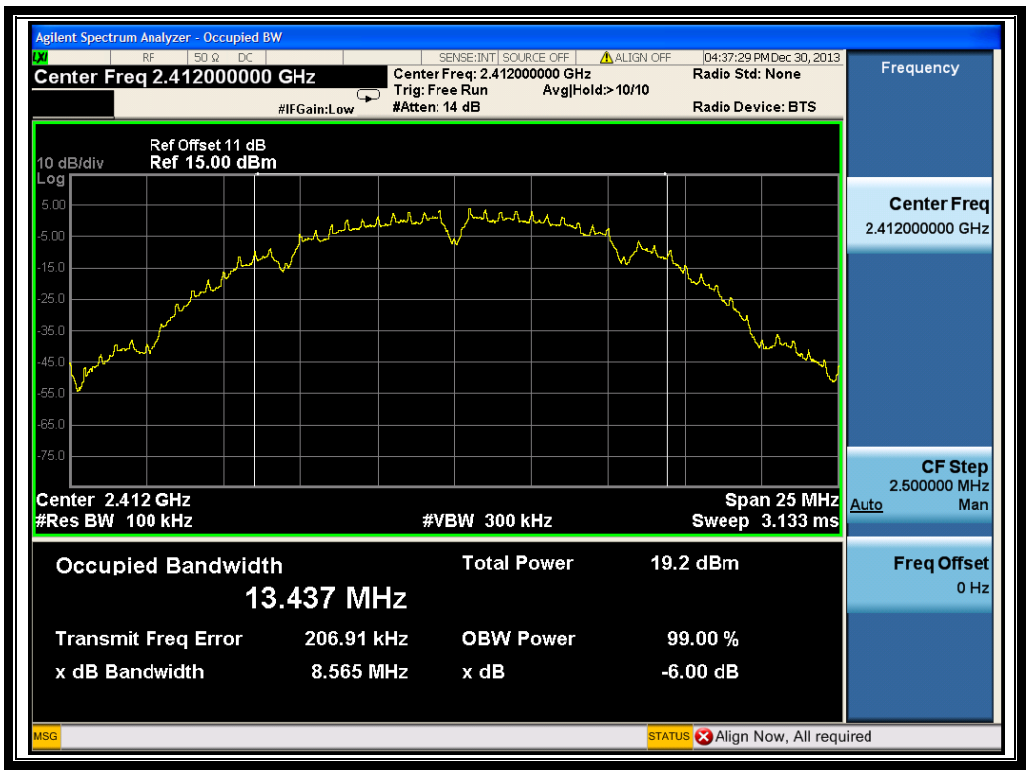
The lowest, middle and highest channels are selected to perform testing to record the 6 dB bandwidth of the Module.

3.3.3.1. 802.11b Test mode

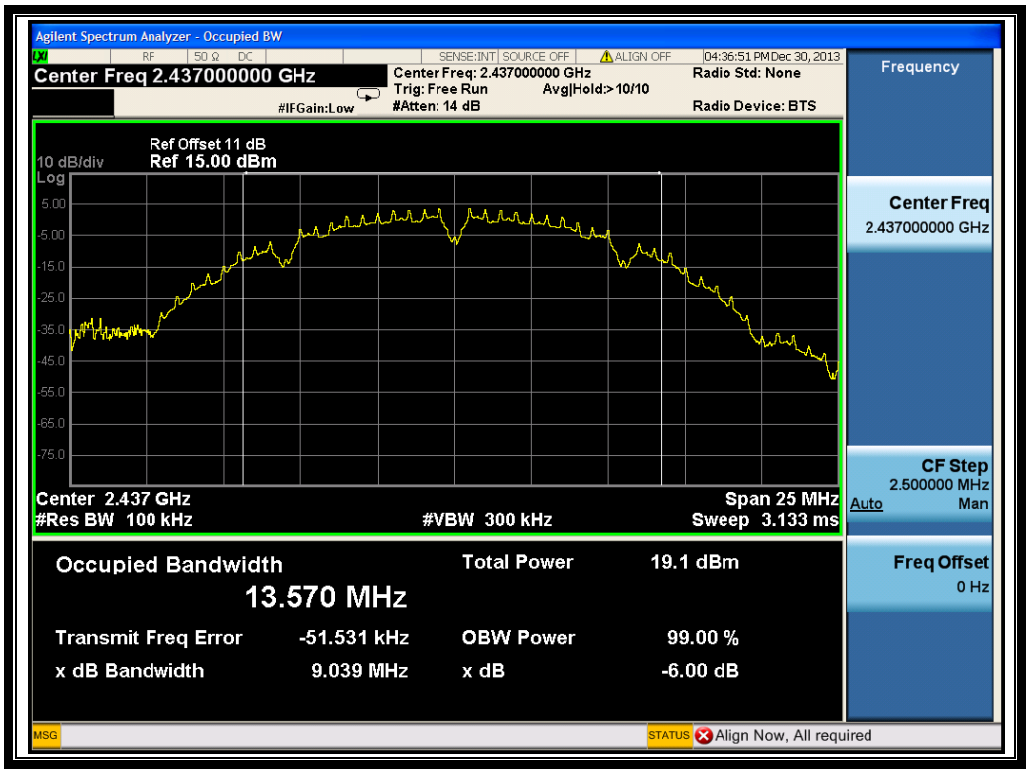
A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits(kHz)	Result
1	2412	8.565	≥500	PASS
6	2437	9.039	≥500	PASS
11	2462	9.044	≥500	PASS

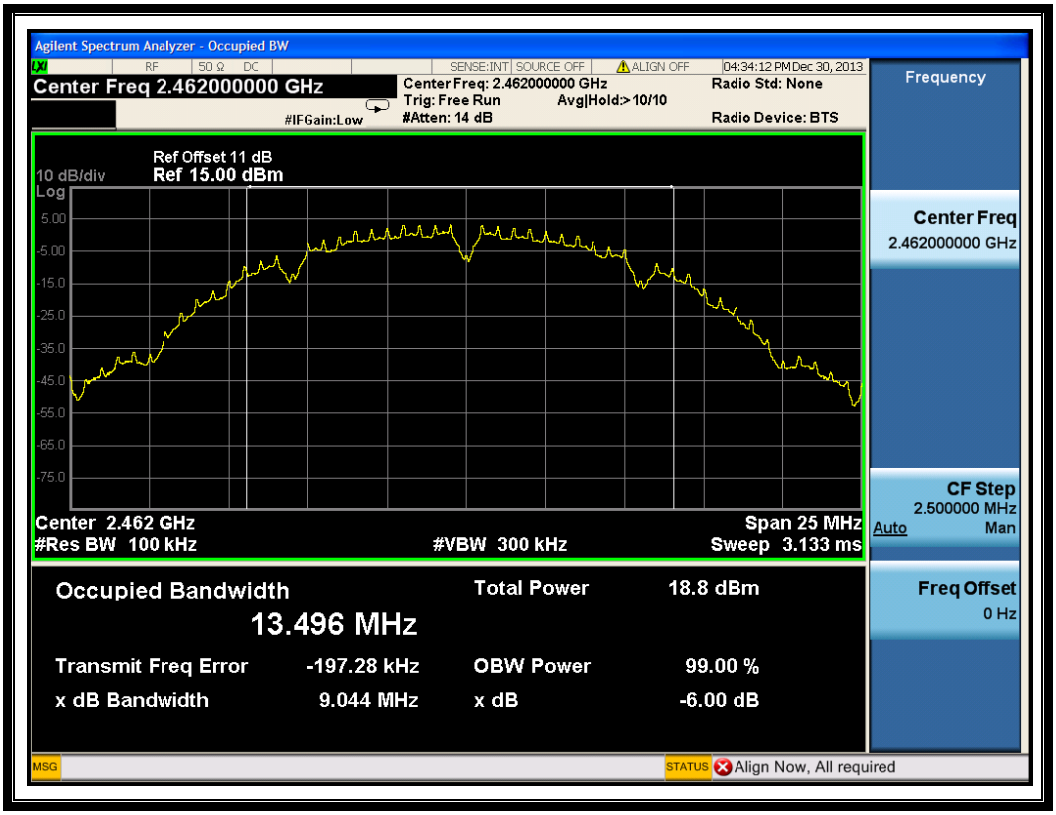
B. Test Plots



(Channel 1: 2412MHz @ 802.11b)



(Channel 6: 2437 MHz @ 802.11b)



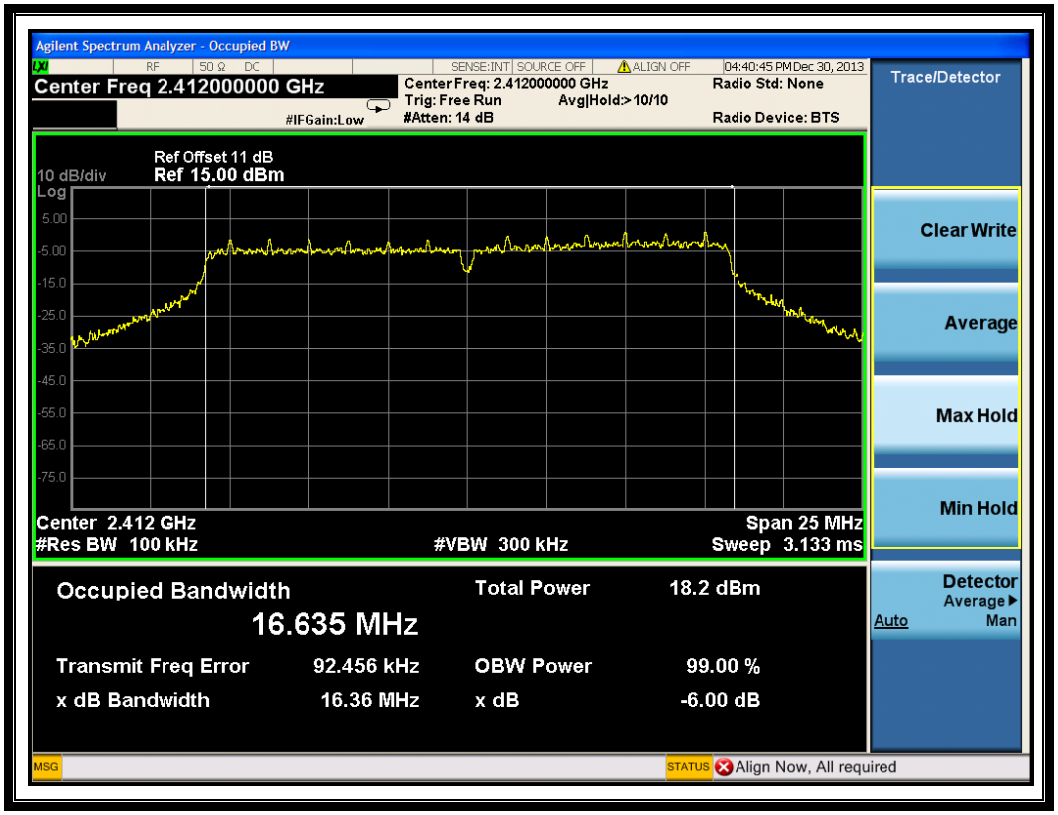
(Channel 11: 2462MHz @ 802.11b)

3.3.3.2. 802.11g Test mode

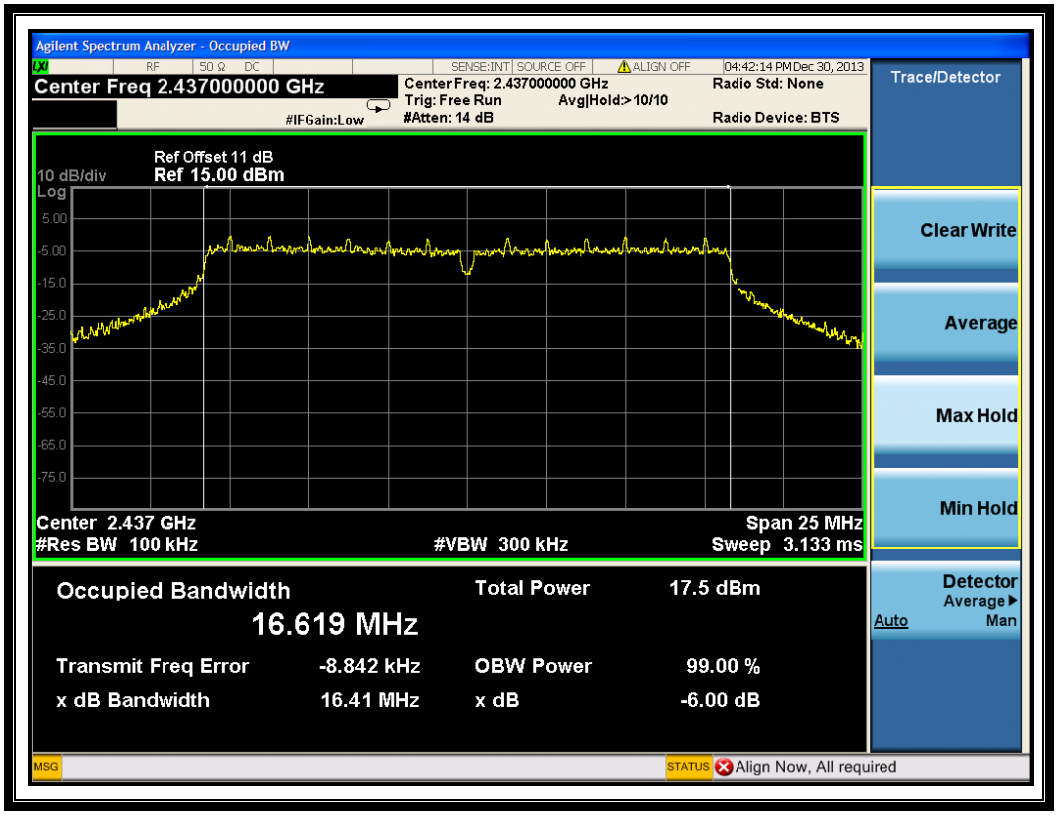
A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	16.36	≥500	PASS
6	2437	16.41	≥500	PASS
11	2462	16.35	≥500	PASS

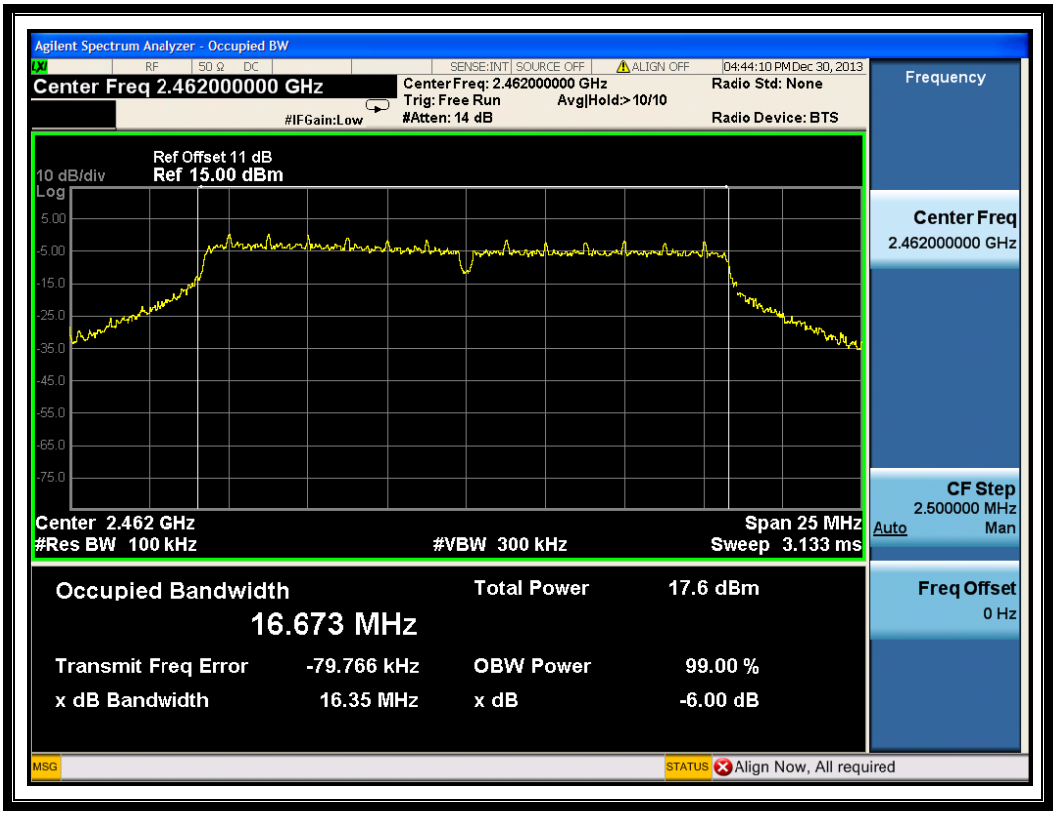
B. Test Plots:



(Channel 1: 2412MHz @ 802.11g)



(Channel 6: 2437MHz @ 802.11g)



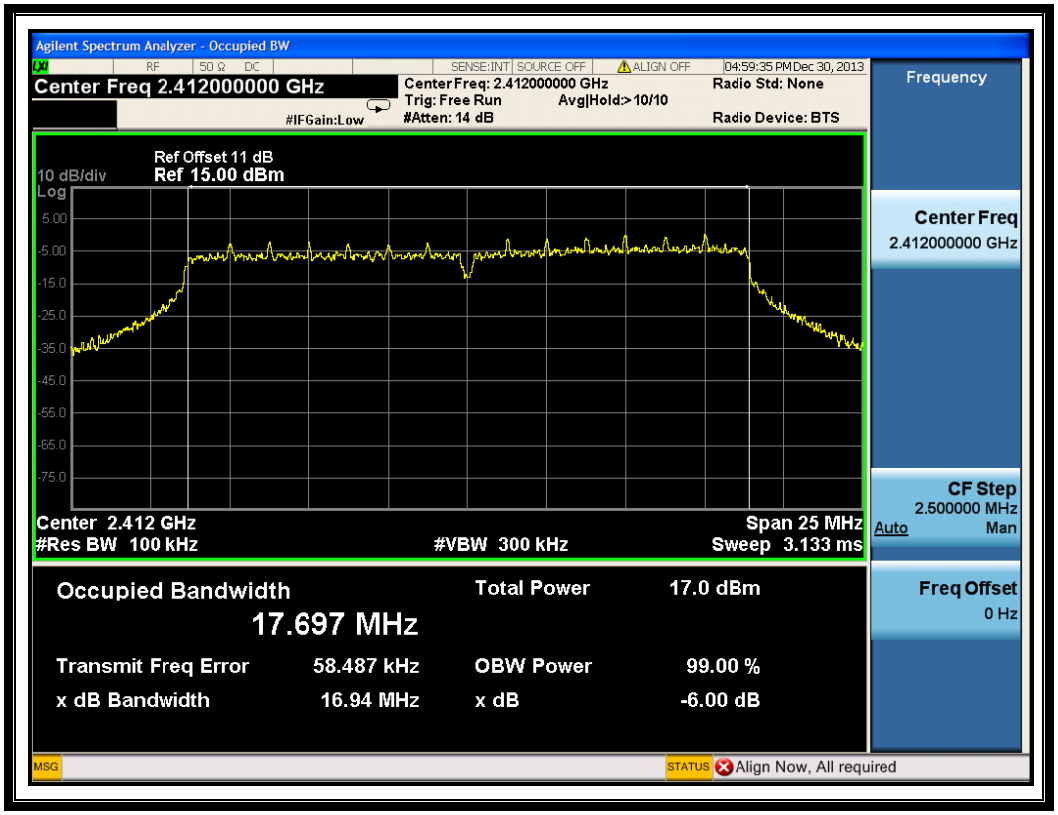
(Channel 11: 2462MHz @ 802.11g)

3.3.3.3. 802.11n-20 Test mode

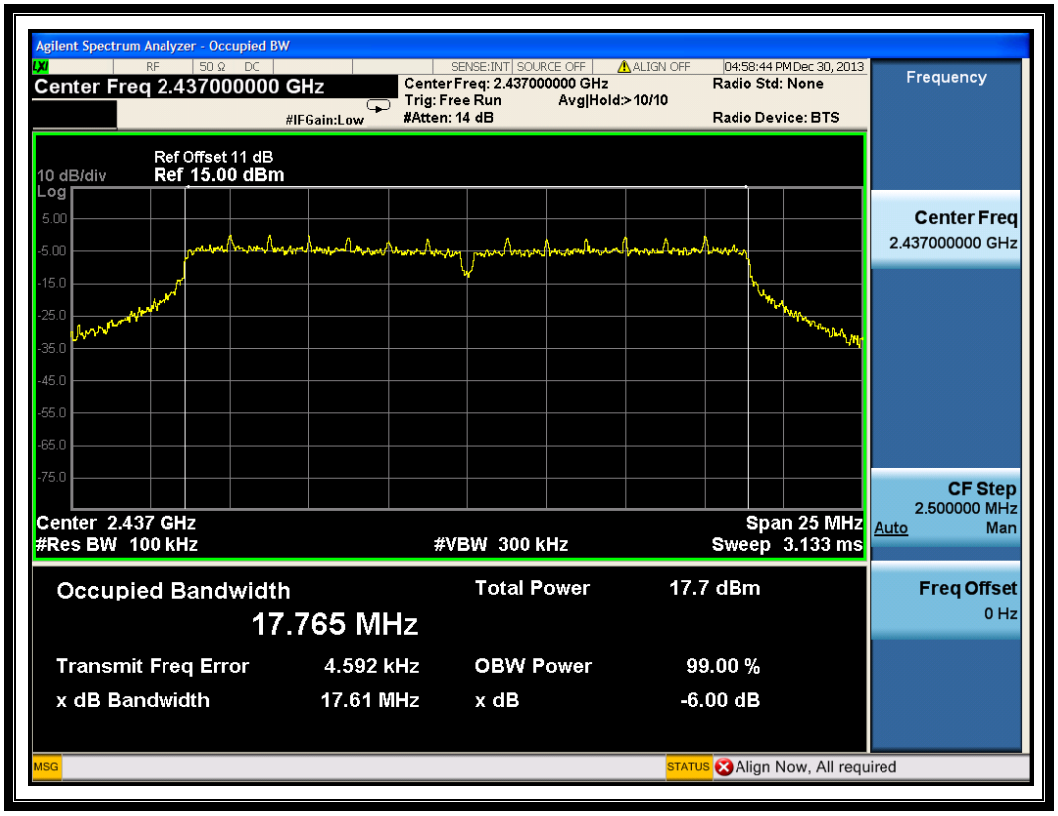
A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	16.94	≥500	PASS
6	2437	17.61	≥500	PASS
11	2462	17.21	≥500	PASS
149	5745	17.57	≥500	PASS
157	5785	17.58	≥500	PASS
165	5825	17.59	≥500	PASS

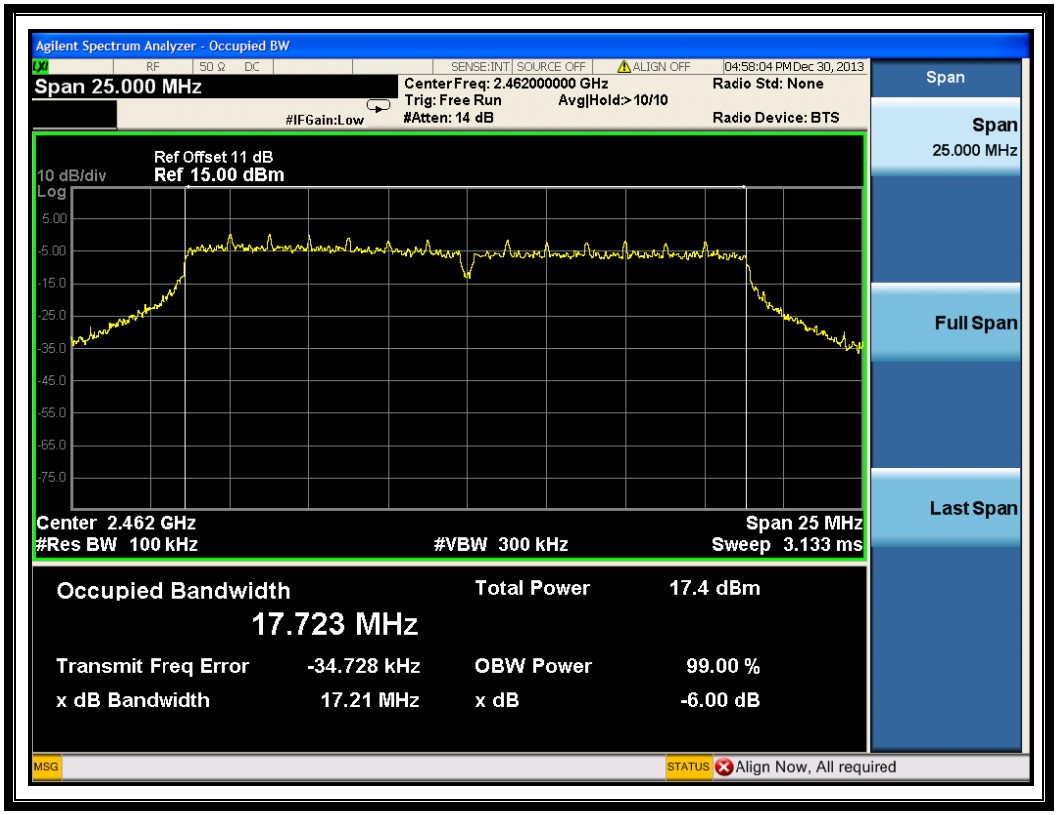
B. Test Plots:



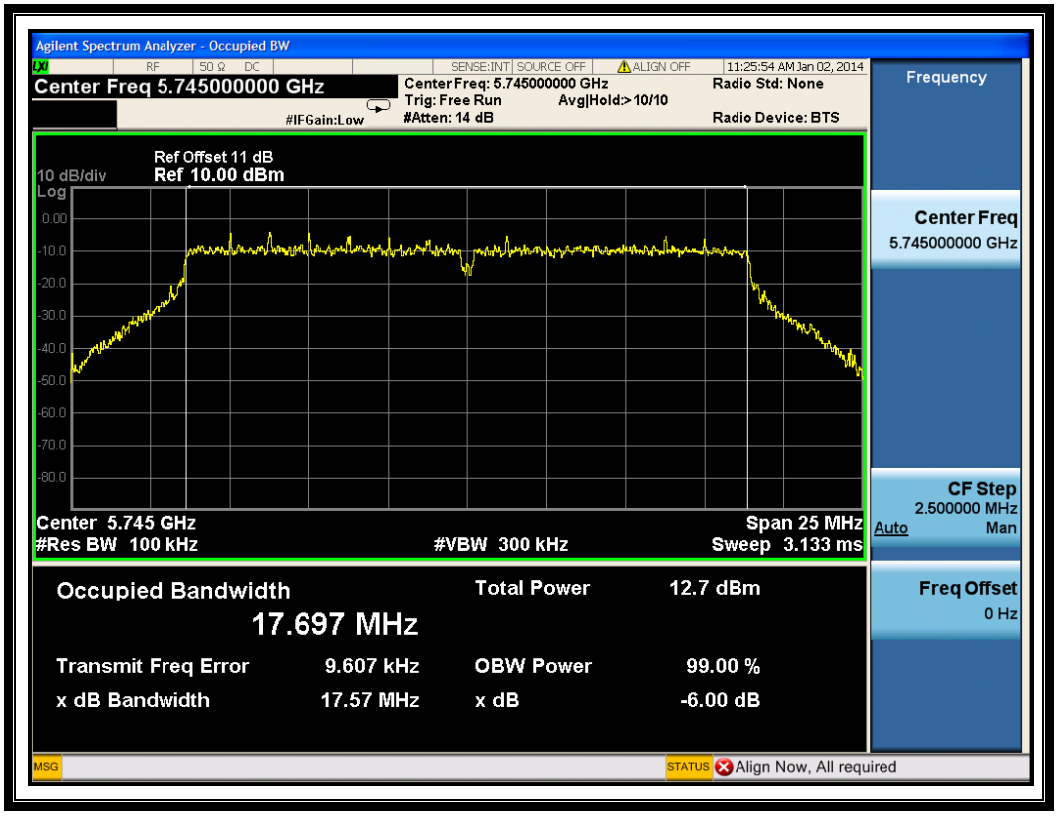
(Channel 1: 2412MHz @ 802.11n-20)



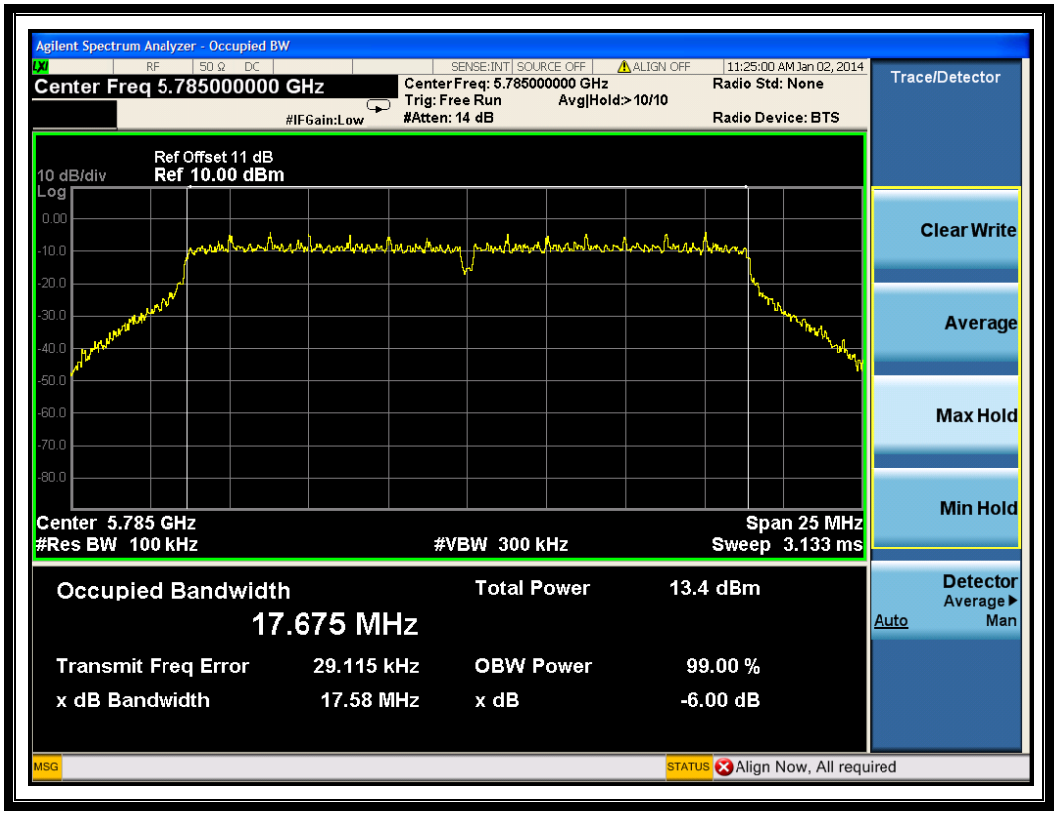
(Channel 6: 2437MHz @ 802.11n-20)



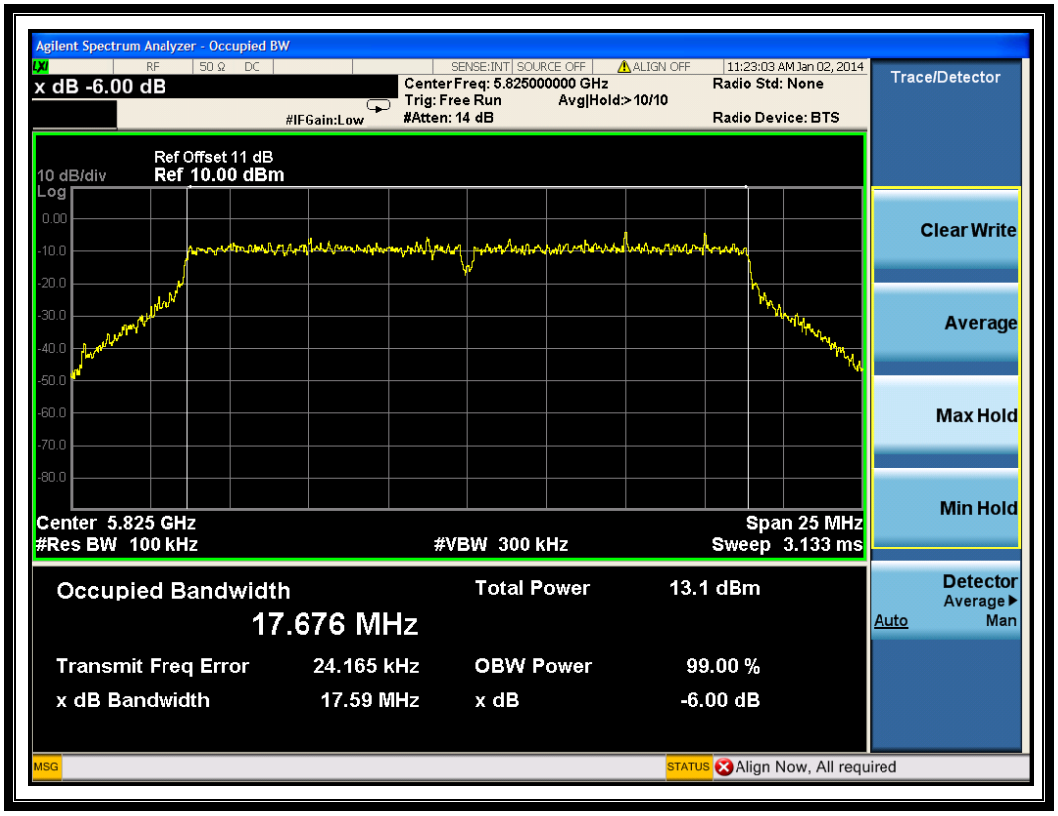
(Channel 11: 2462MHz @ 802.11n-20)



(Channel 149: 5745MHz @ 802.11n-20)



(Channel 157: 5785MHz @ 802.11n-20)



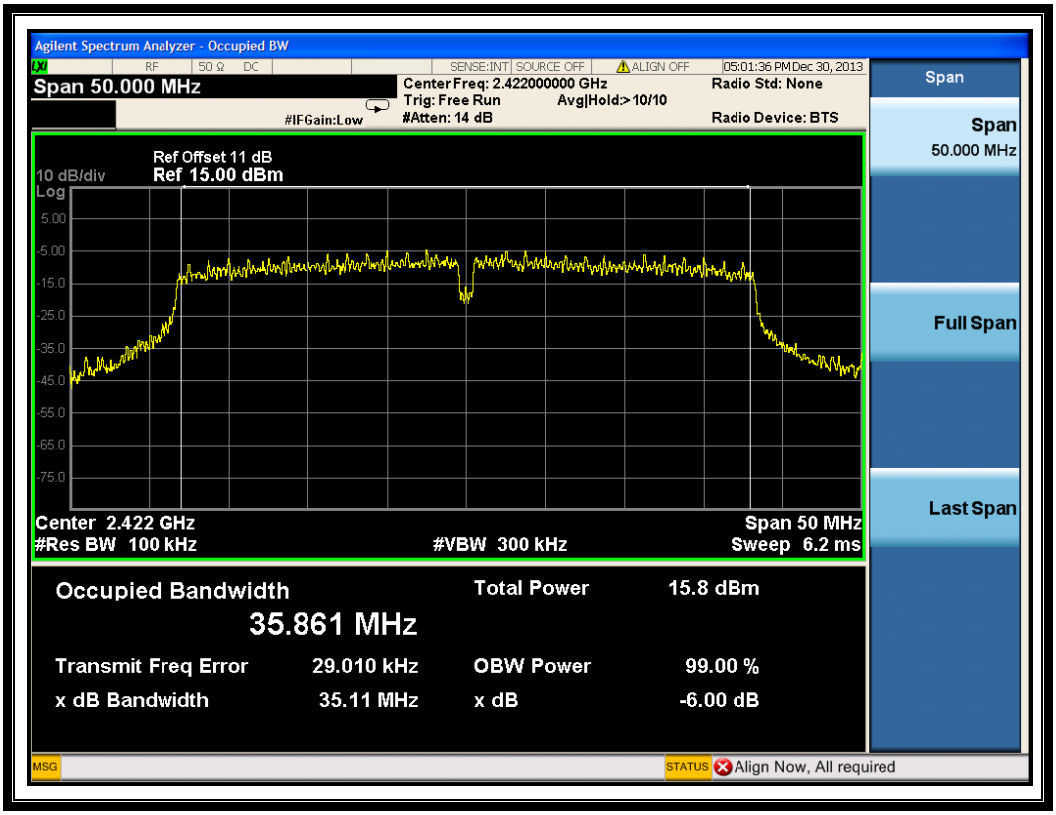
(Channel 165: 5825MHz @ 802.11n-20)

3.3.3.4. 802.11n-40 Test mode

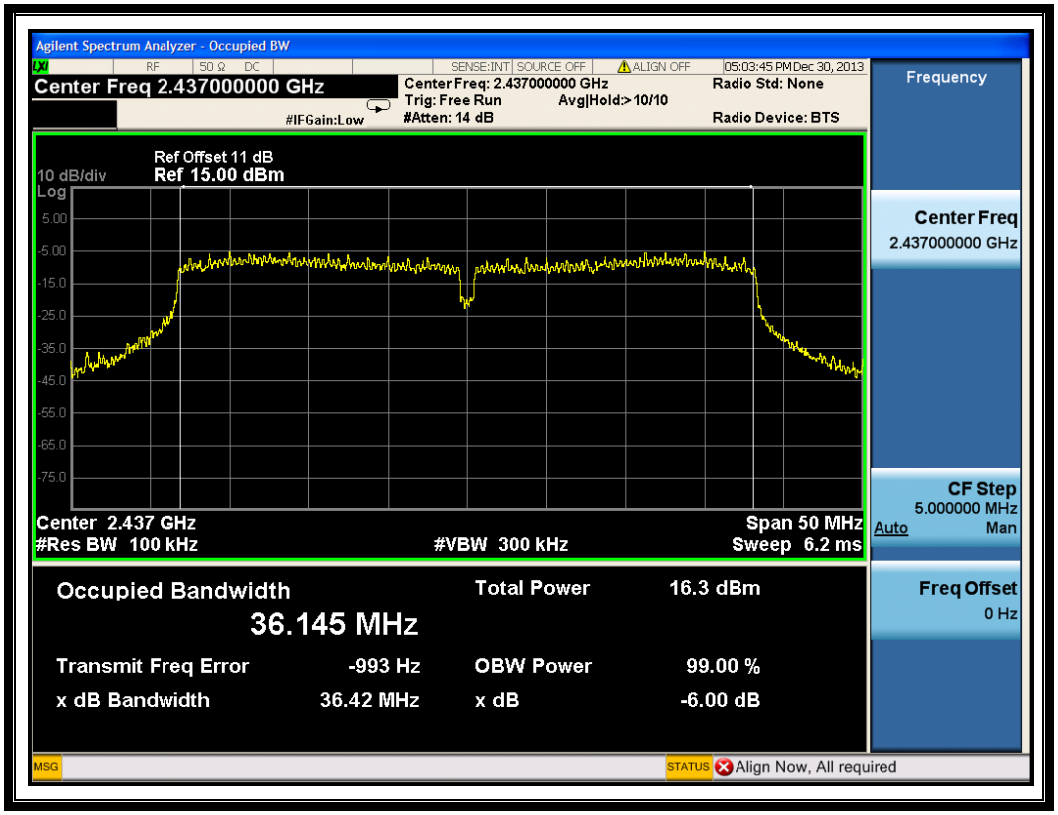
A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
3	2422	35.11	≥500	PASS
6	2437	36.42	≥500	PASS
9	2452	35.11	≥500	PASS
151	5755	35.16	≥500	PASS
159	5795	35.46	≥500	PASS

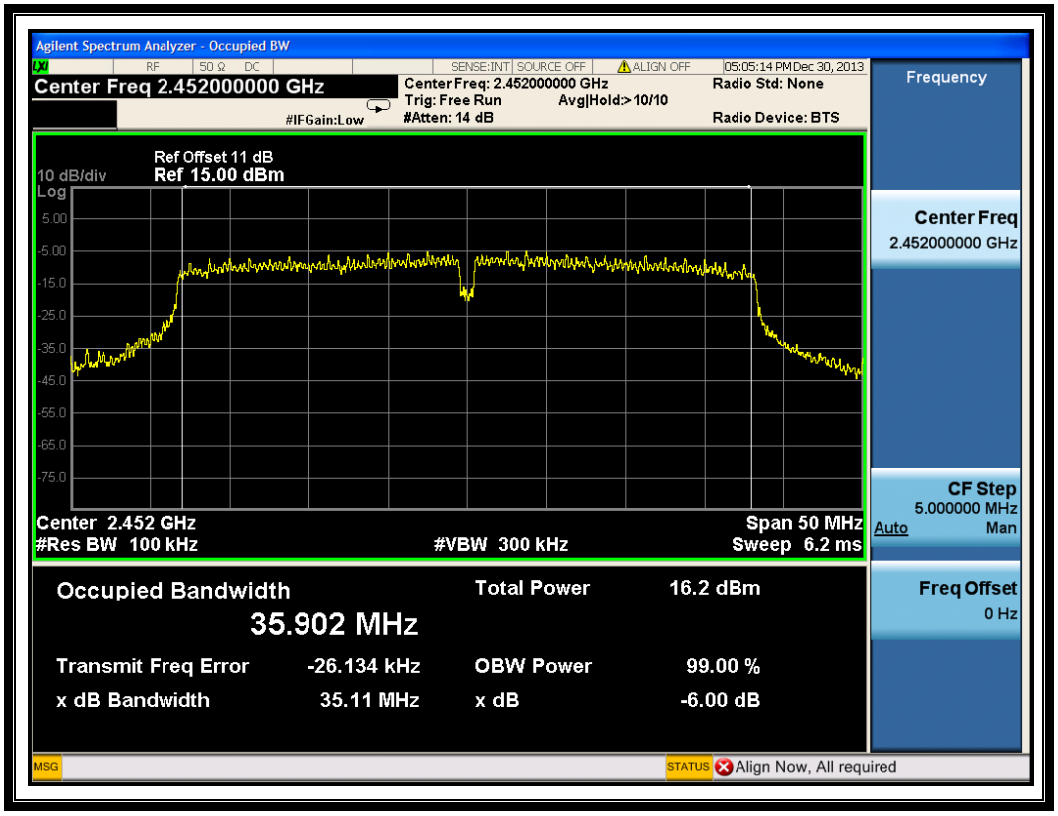
B. Test Plots:



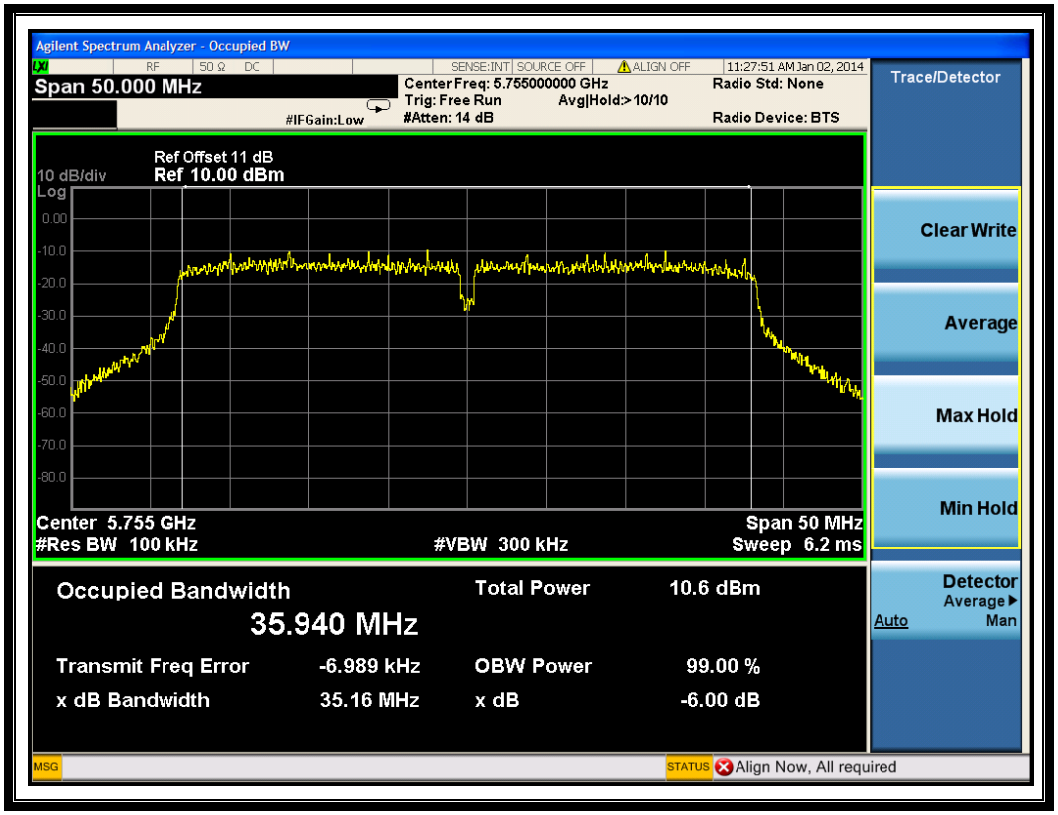
(Channel 3: 2422MHz @ 802.11n-40)



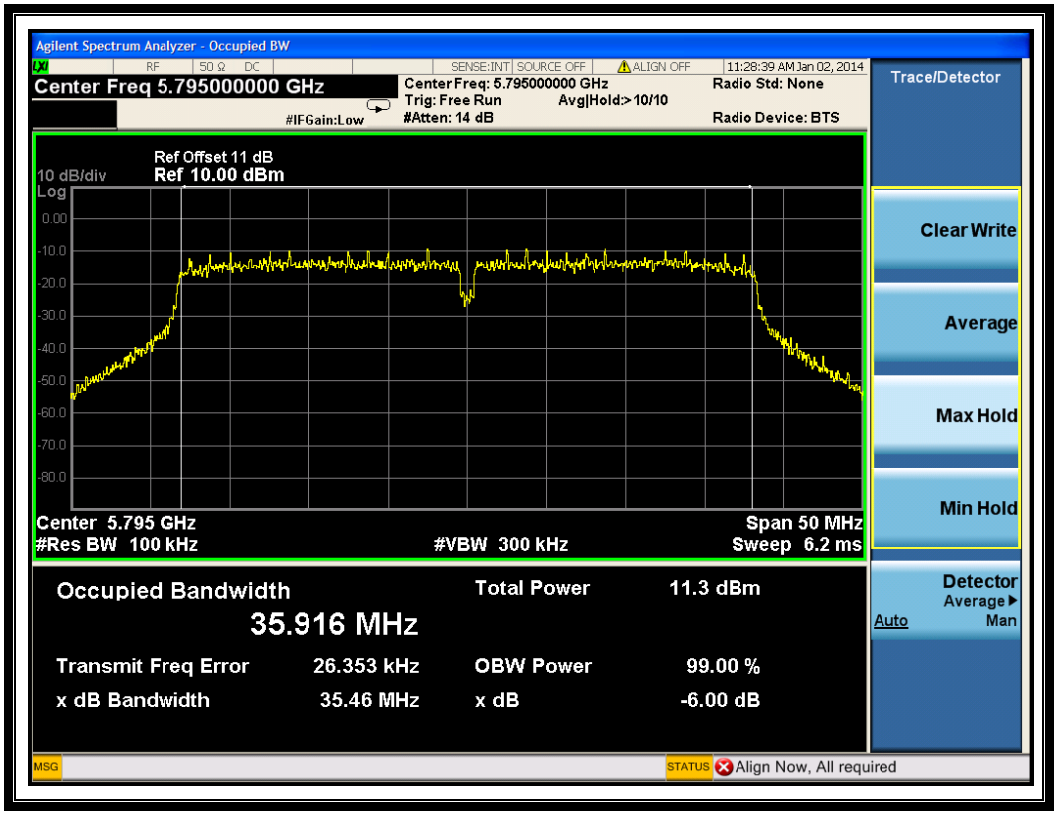
(Channel 6: 2437MHz @ 802.11n-40)



(Channel 9: 2452MHz @ 802.11n-40)



(Channel 151: 5755MHz @ 802.11n-40)



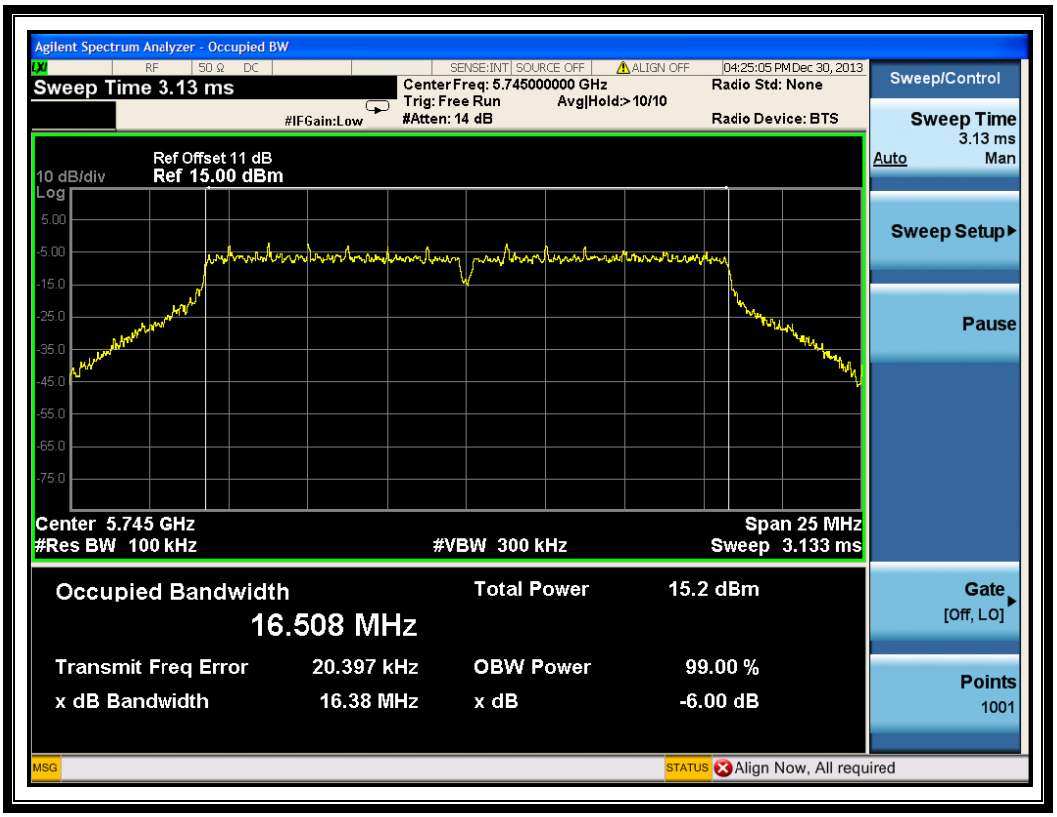
(Channel 159: 5795MHz @ 802.11n-40)

3.3.3.5. 802.11a Test mode

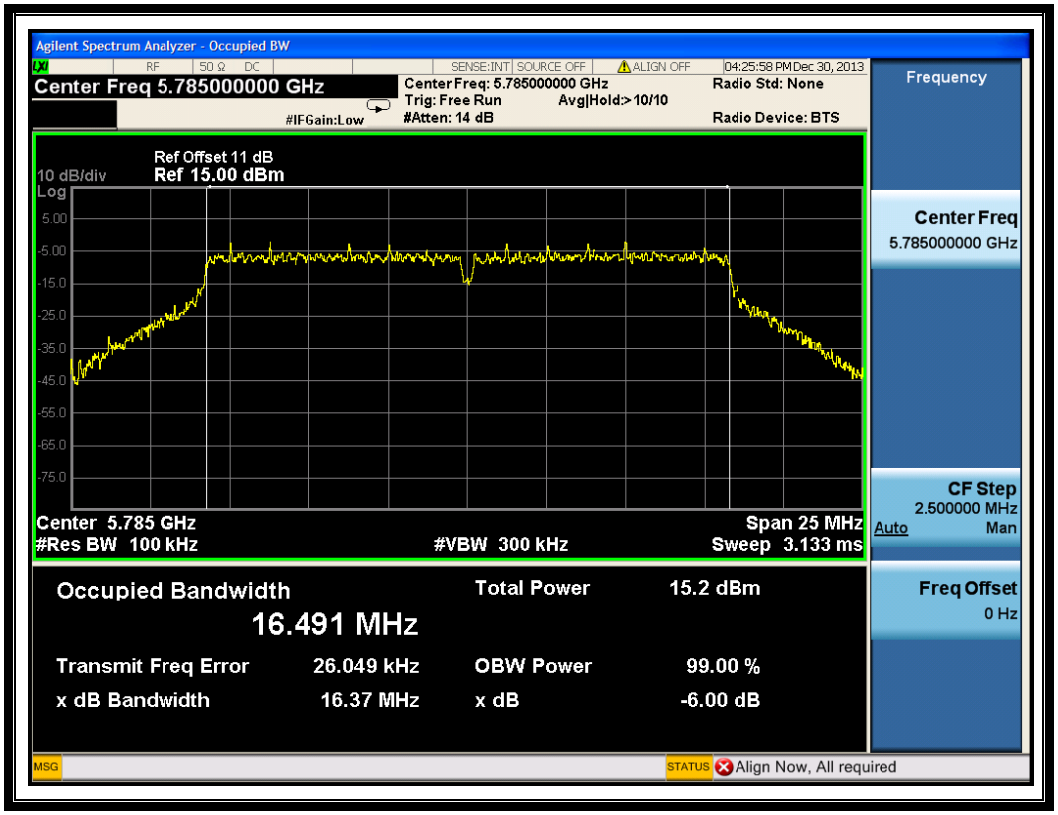
A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
149	5745	16.38	≥500	PASS
157	5785	16.37	≥500	PASS
165	5825	16.37	≥500	PASS

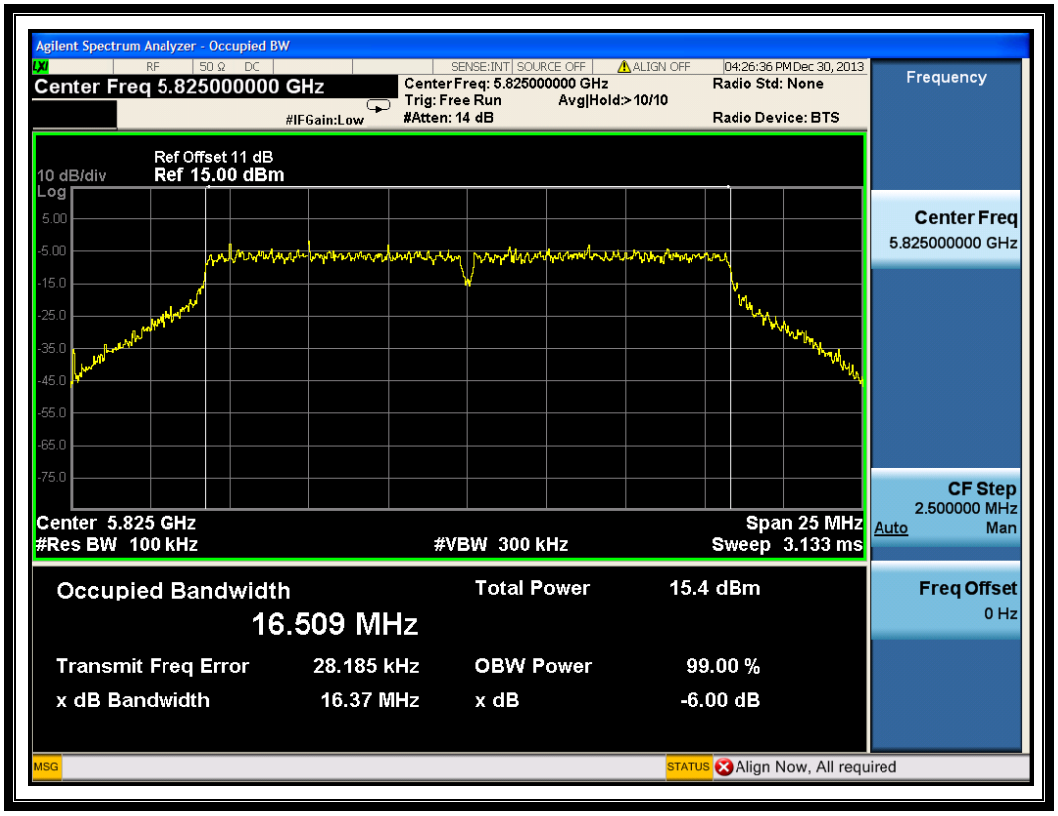
B. Test Plots:



(Channel 149: 5745MHz @ 802.11a)



(Channel 157: 5785MHz @ 802.11a)



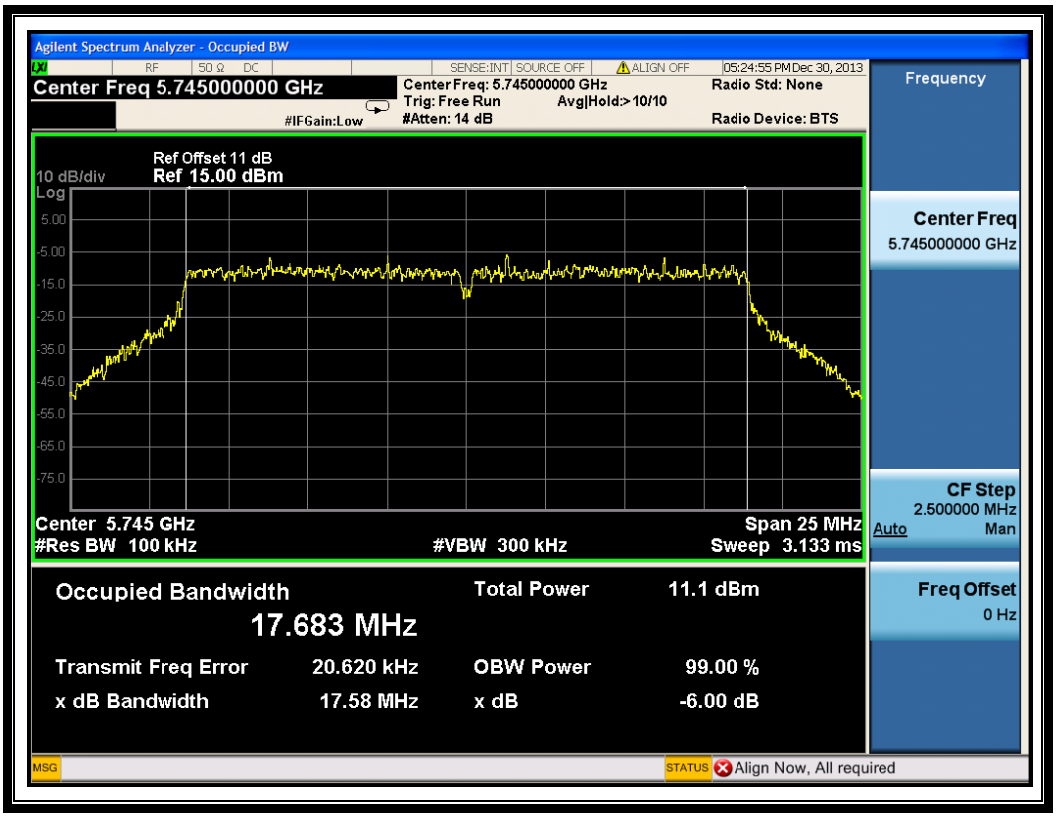
(Channel 165: 5825MHz @ 802.11a)

3.3.3.6. 802.11ac-20MHz

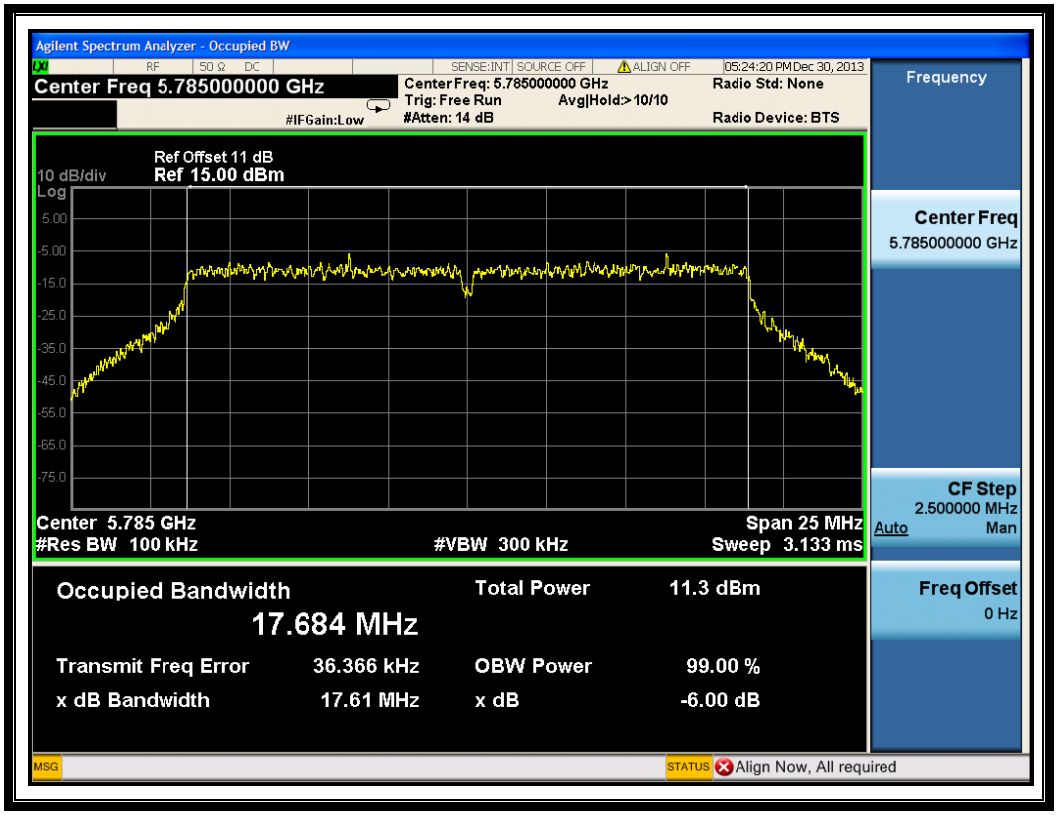
A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
149	5745	17.58	≥500	PASS
157	5785	17.61	≥500	PASS
165	5825	17.59	≥500	PASS

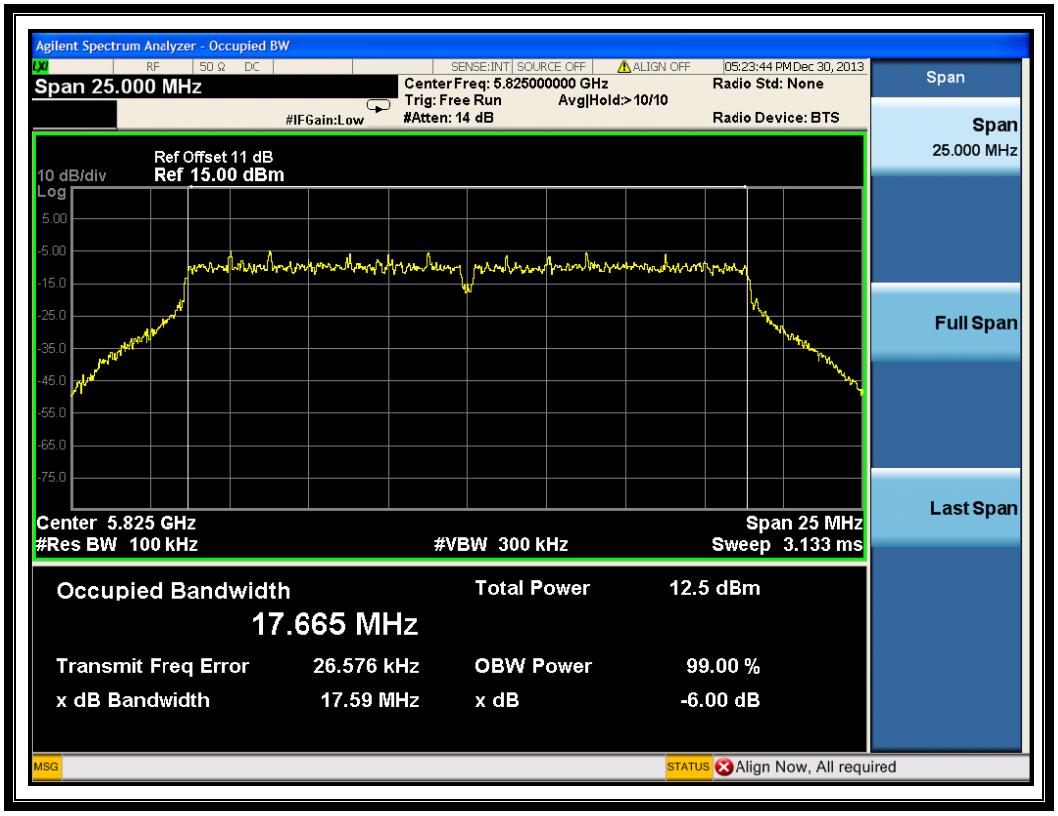
B. Test Plots:



(Channel 149: 5745MHz @ 802.11ac-20)



(Channel 157: 5785MHz @ 802.11ac-20)



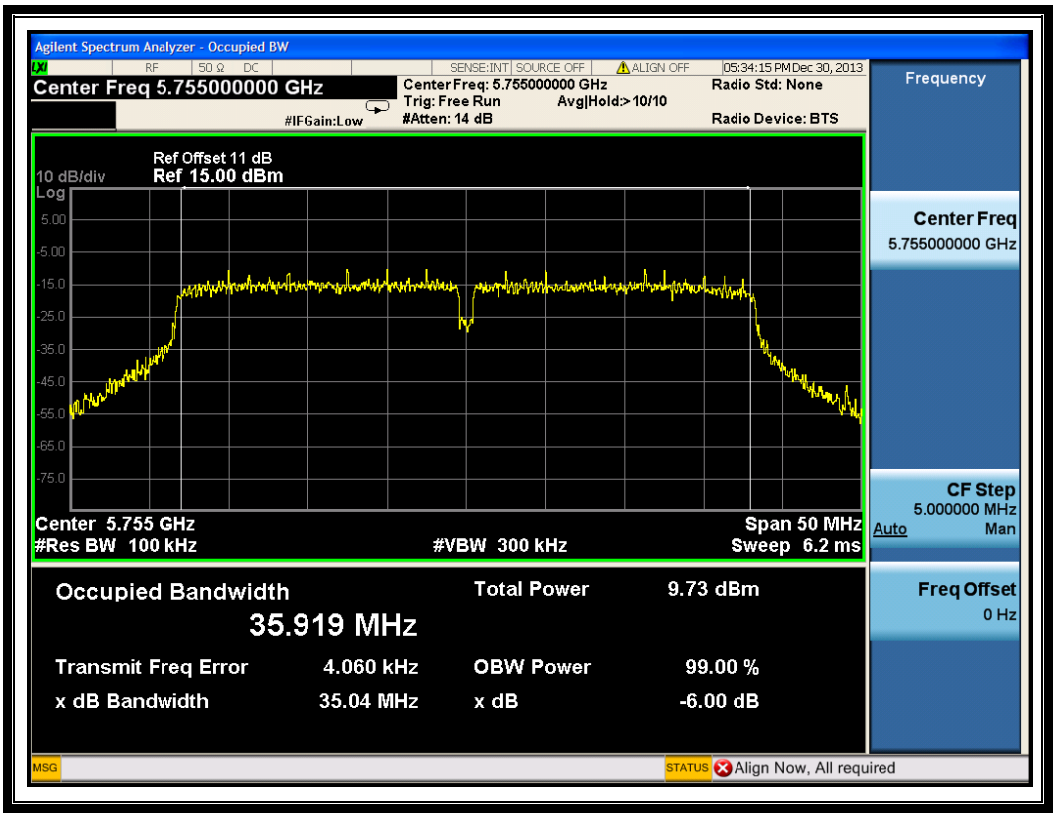
(Channel 165: 5825MHz @ 802.11ac-20)

3.3.3.7. 802.11ac-40 Test mode

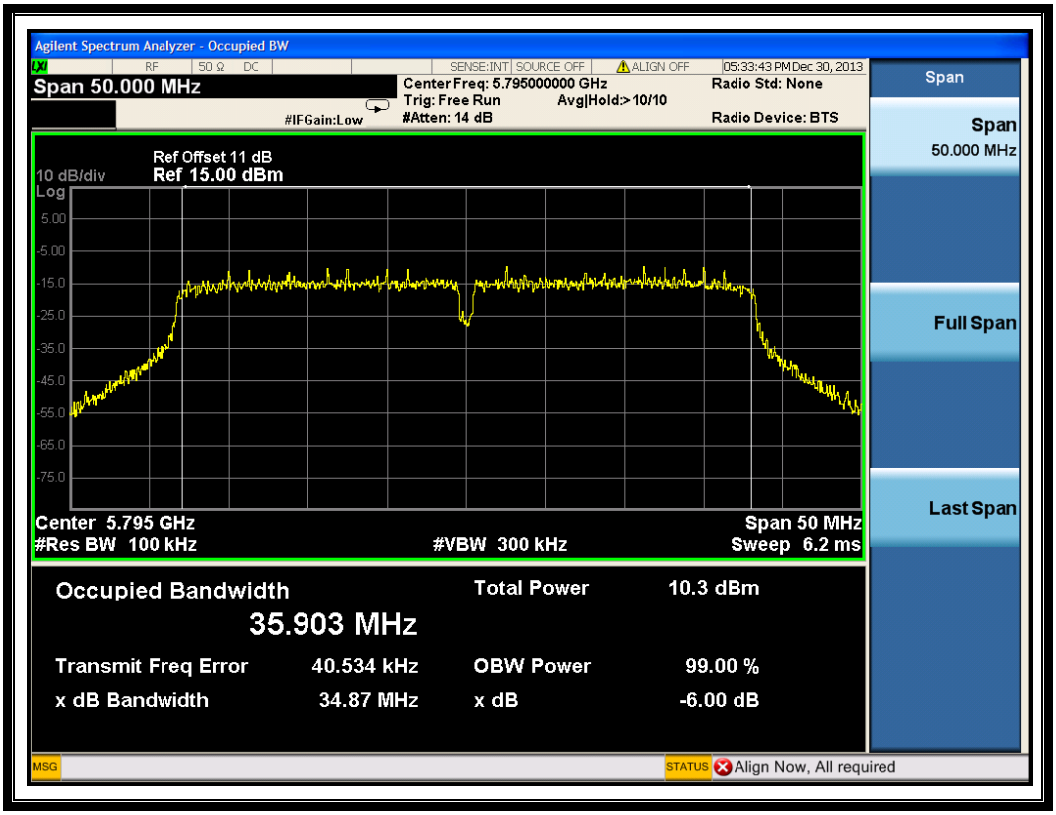
A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
151	5755	35.04	≥500	PASS
159	5795	34.87	≥500	PASS

B. Test Plots:



(Channel 151: 5755MHz @ 802.11ac-40)



(Channel 159: 5795MHz @ 802.11ac-40)

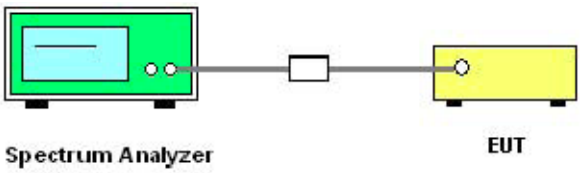
3.4. Conducted Spurious Emissions and Band Edge

3.4.1. Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

3.4.2. Test Description

A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EXA Signal Analzyer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11

3.4.3. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.

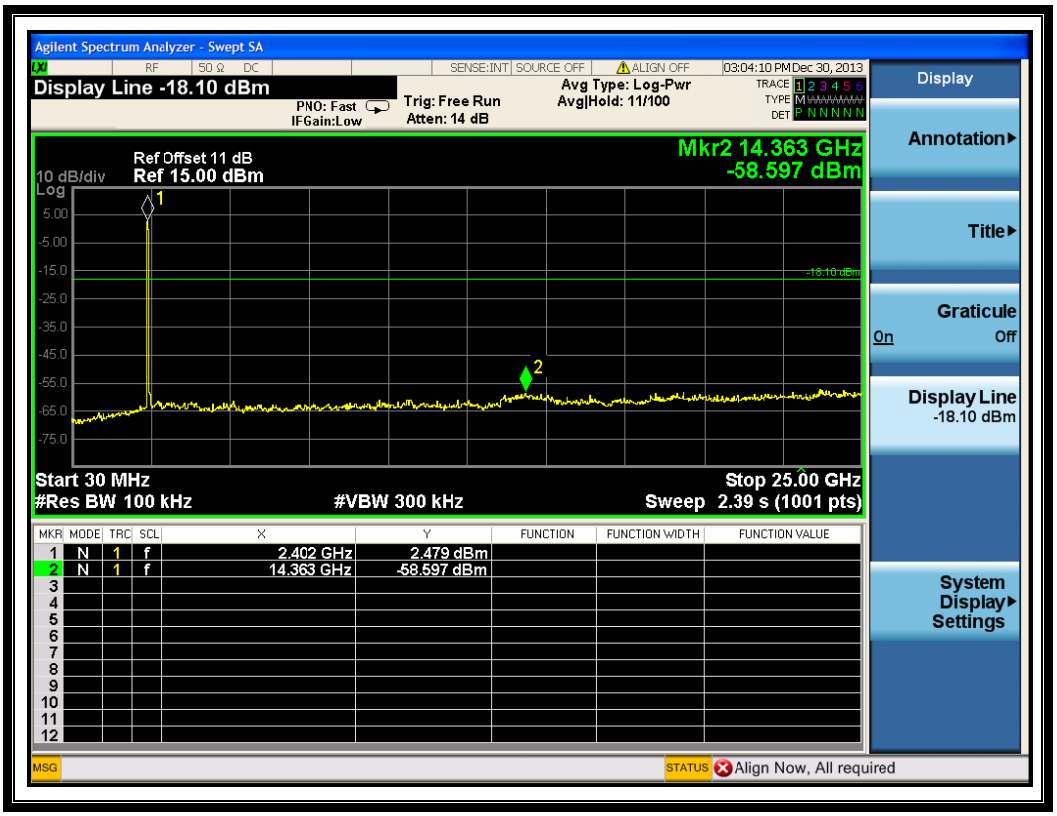
3.4.3.1. 802.11b Test mode

A. Test Verdict:

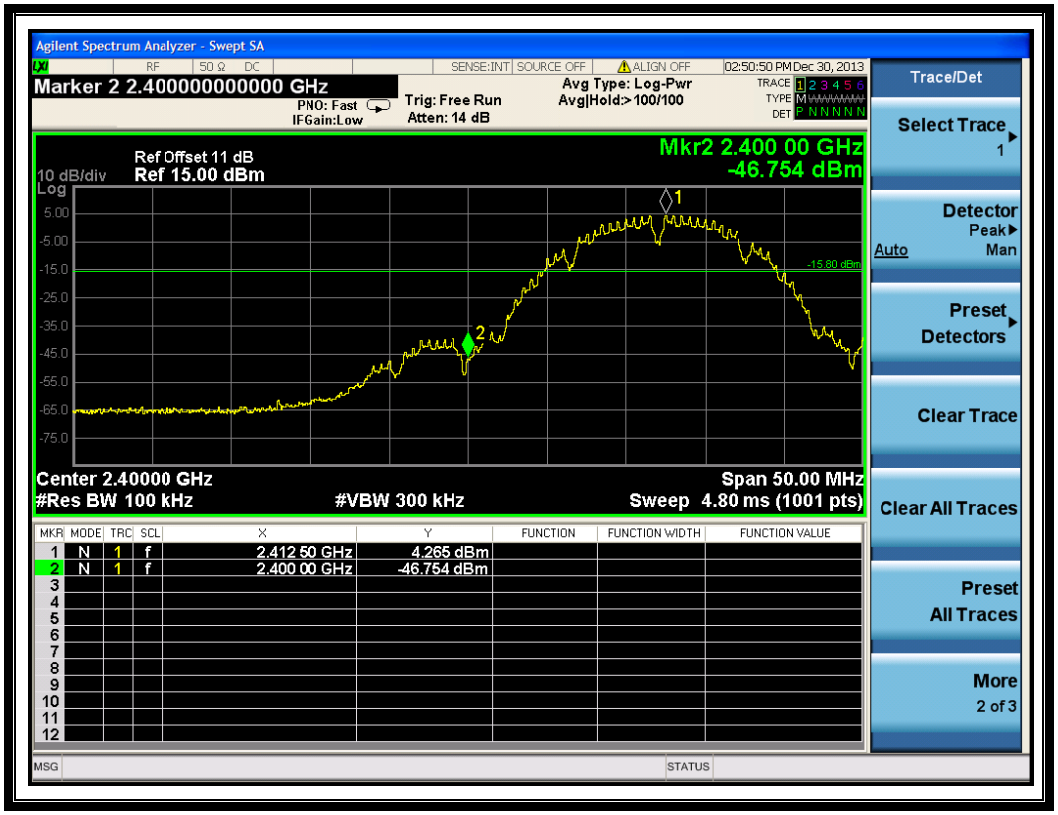
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
1	2412	-58.597	2.479	-17.5	PASS
6	2437	-57.995	3.283	-16.7	PASS
11	2462	-58.604	2.587	-17.4	PASS

B. Test Plots:

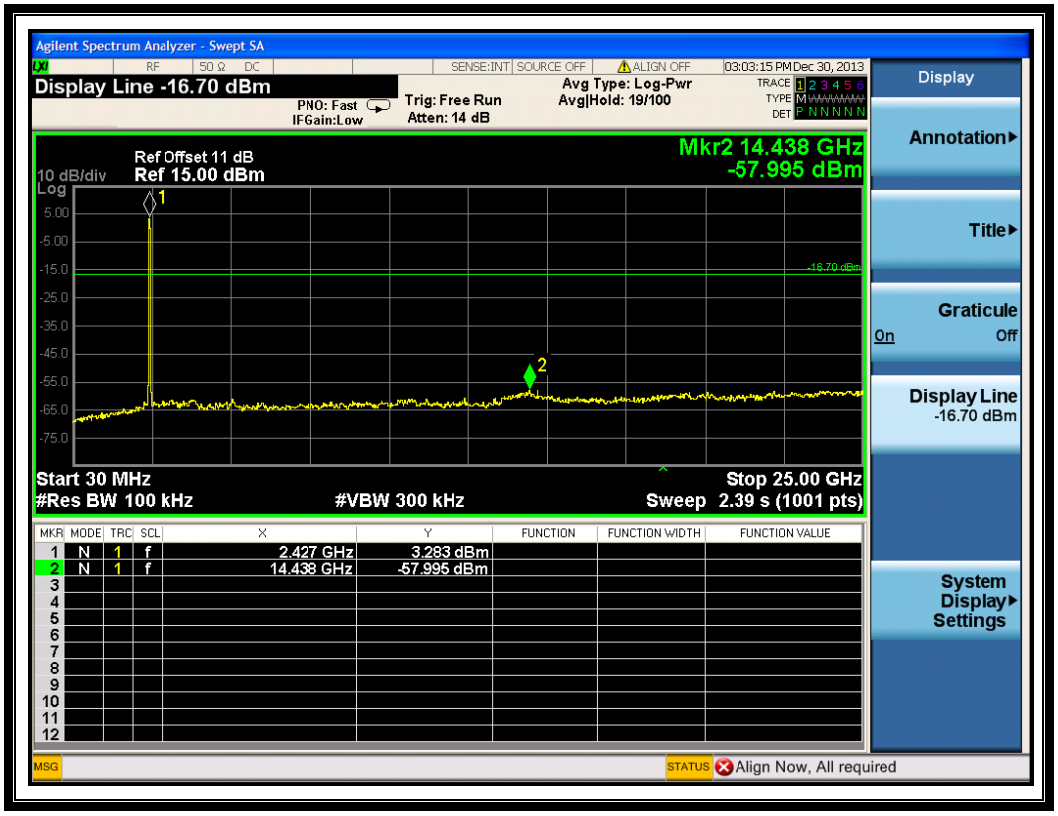
Note: the power of the Module transmitting frequency should be ignored.



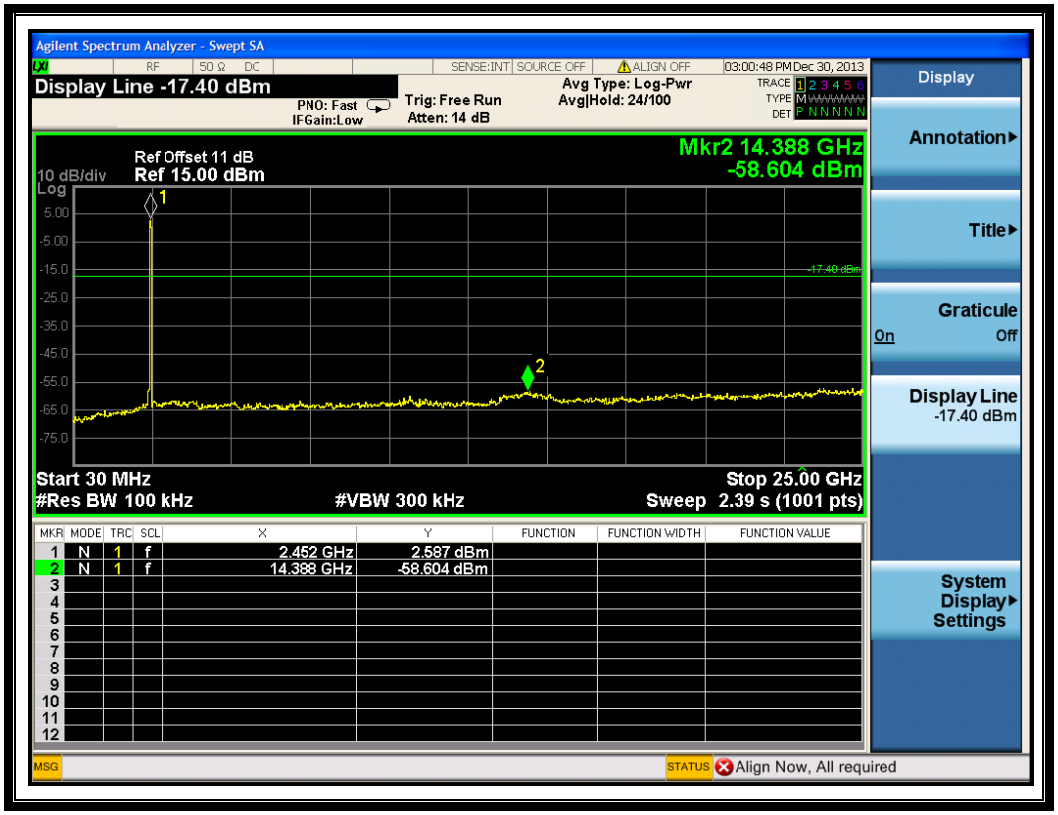
(Channel = 1, 30MHz to 25GHz)



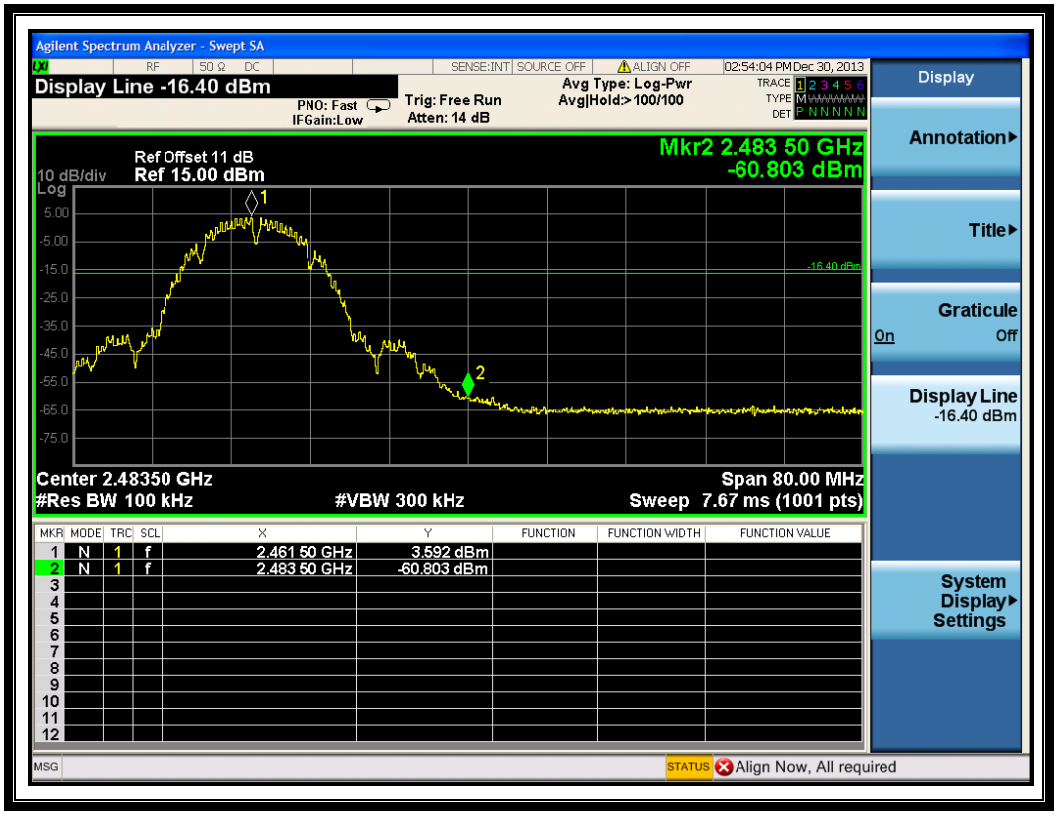
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)

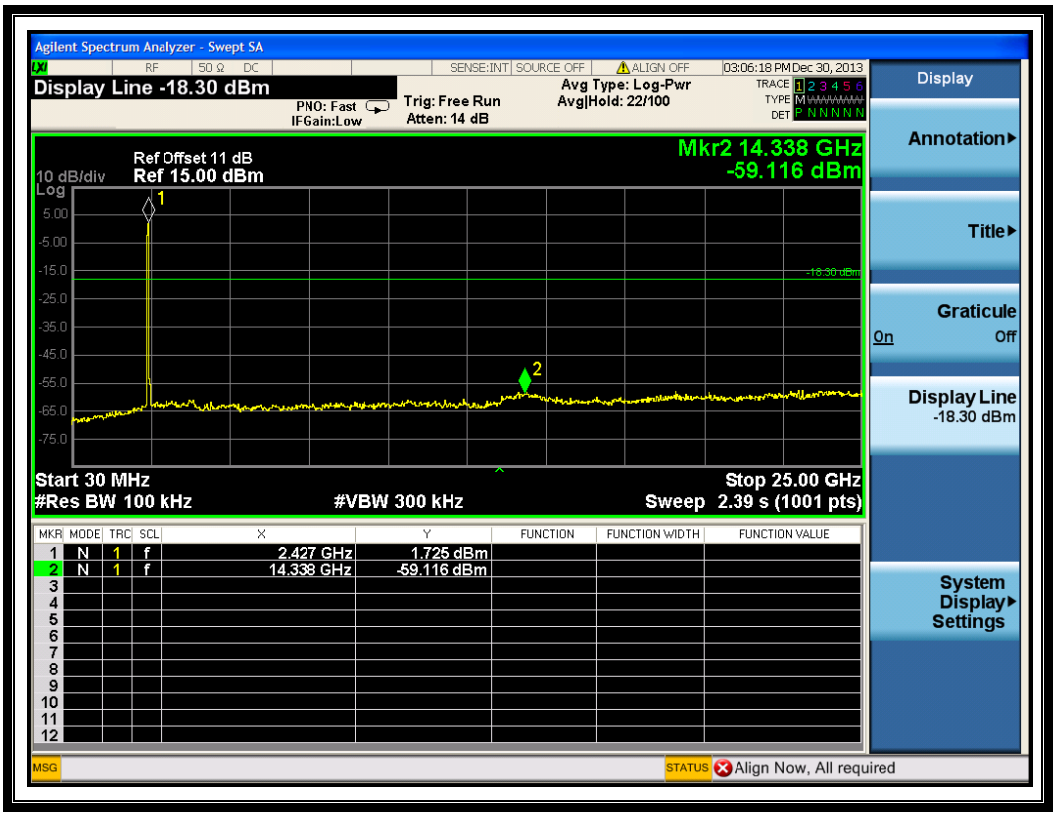
3.4.3.2. 802.11g Test mode

A. Test Verdict:

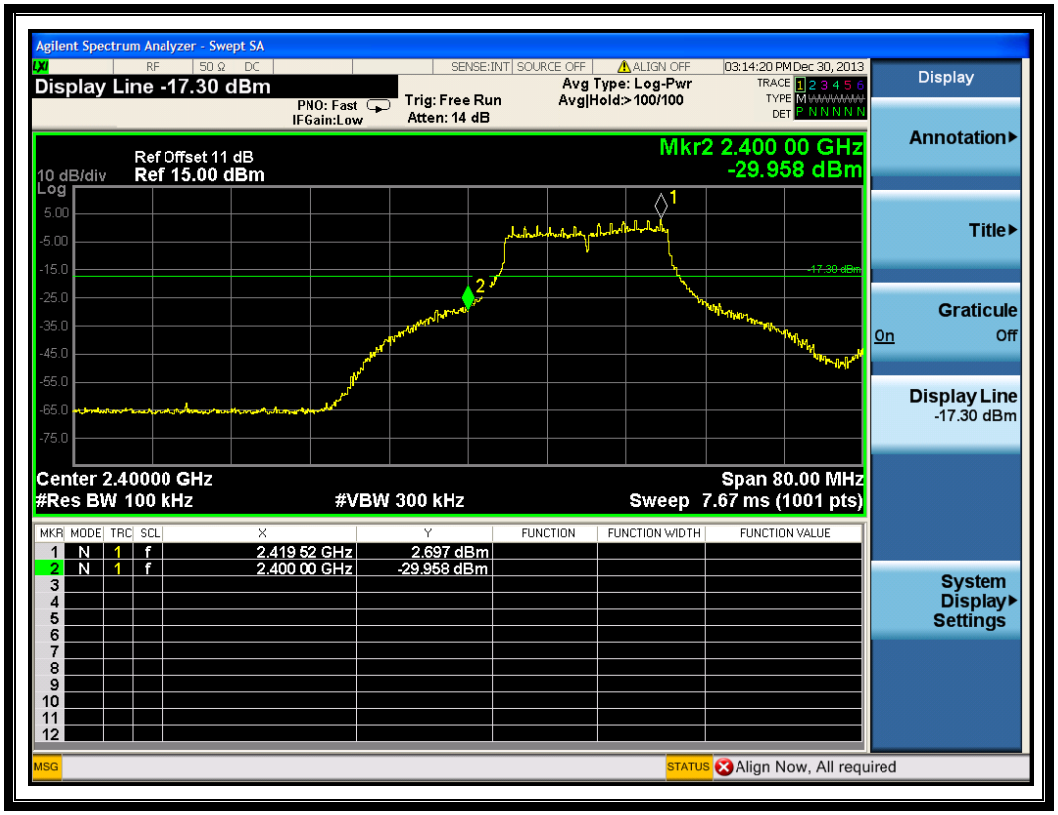
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
1	2412	-59.116	1.725	-18.3	PASS
6	2437	-57.740	-1.337	-21.3	PASS
11	2462	-58.483	2.238	-17.8	PASS

B. Test Plots:

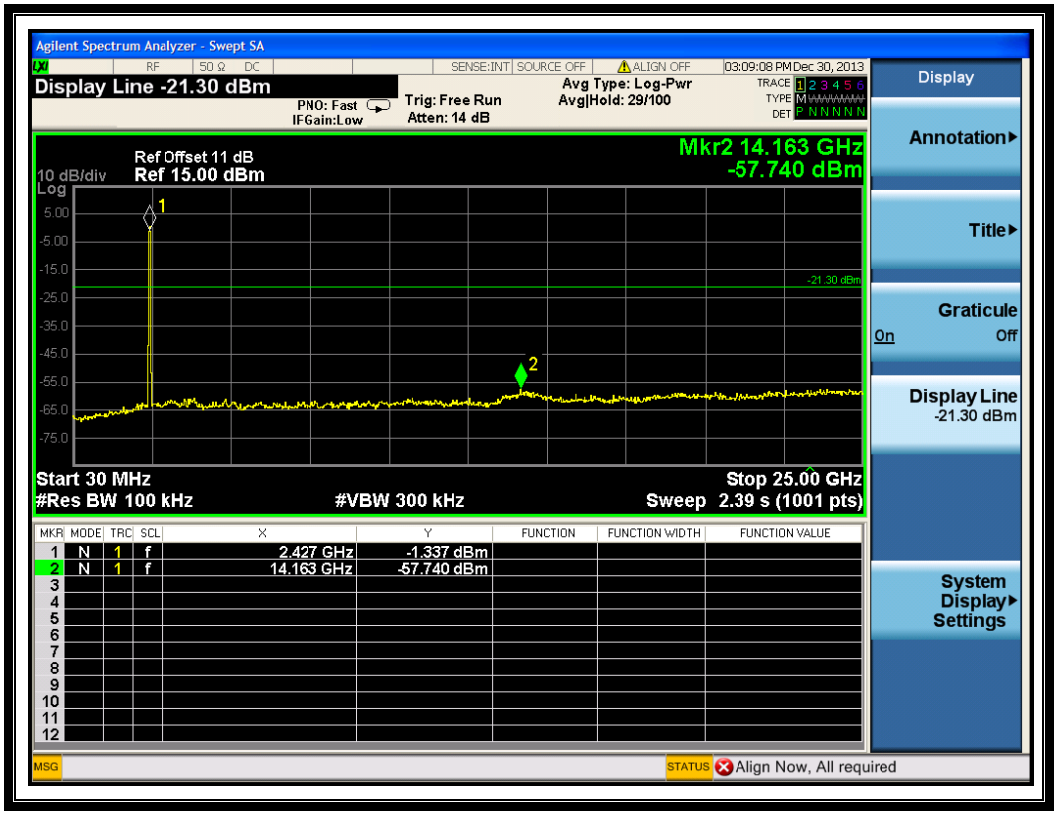
Note: the power of the Module transmitting frequency should be ignored.



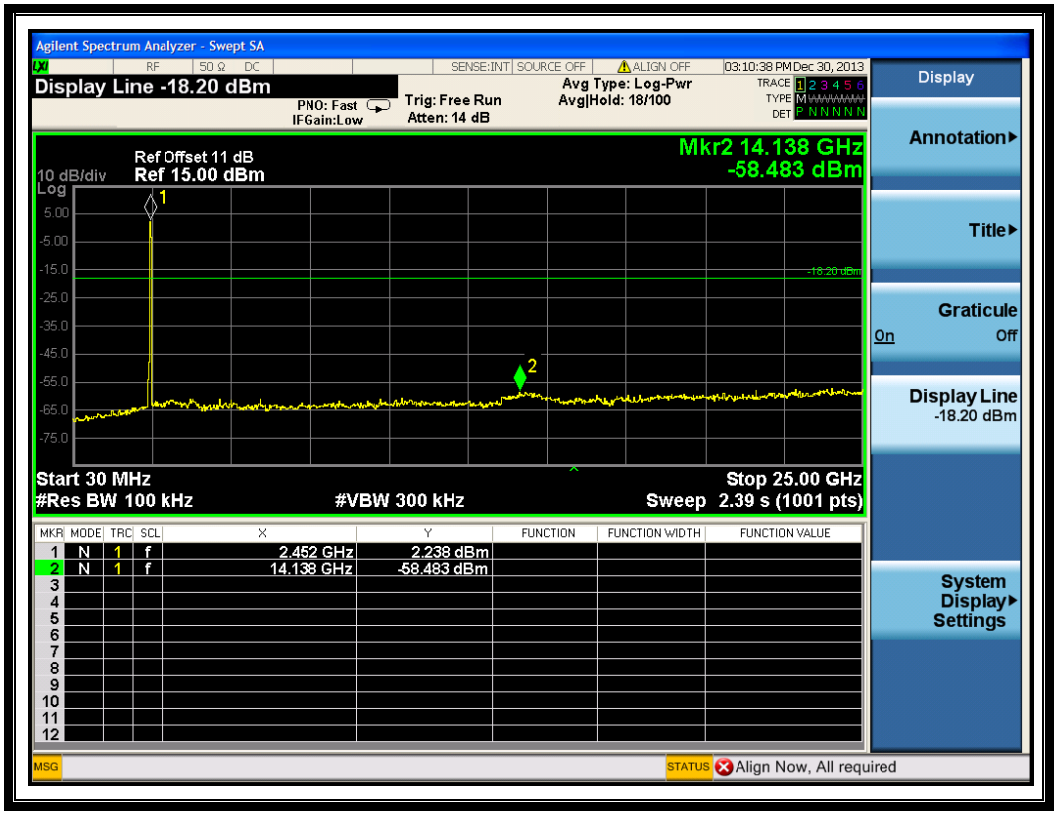
(Channel = 1, 30MHz to 25GHz)



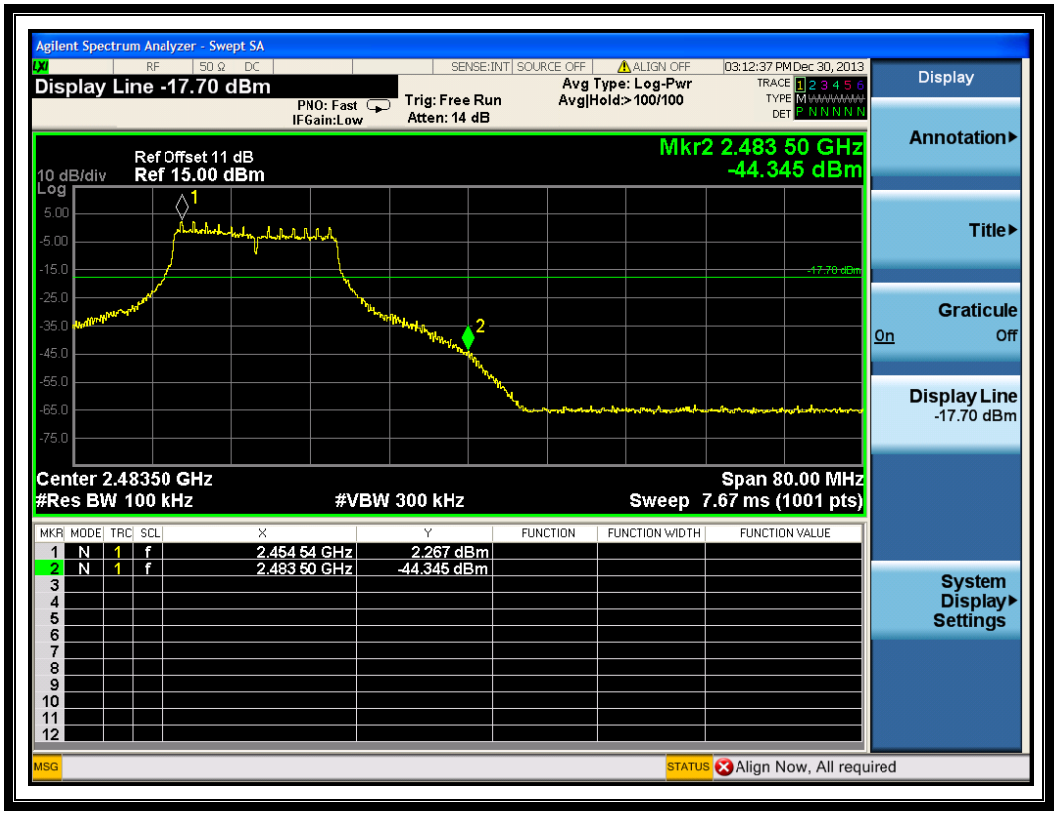
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)

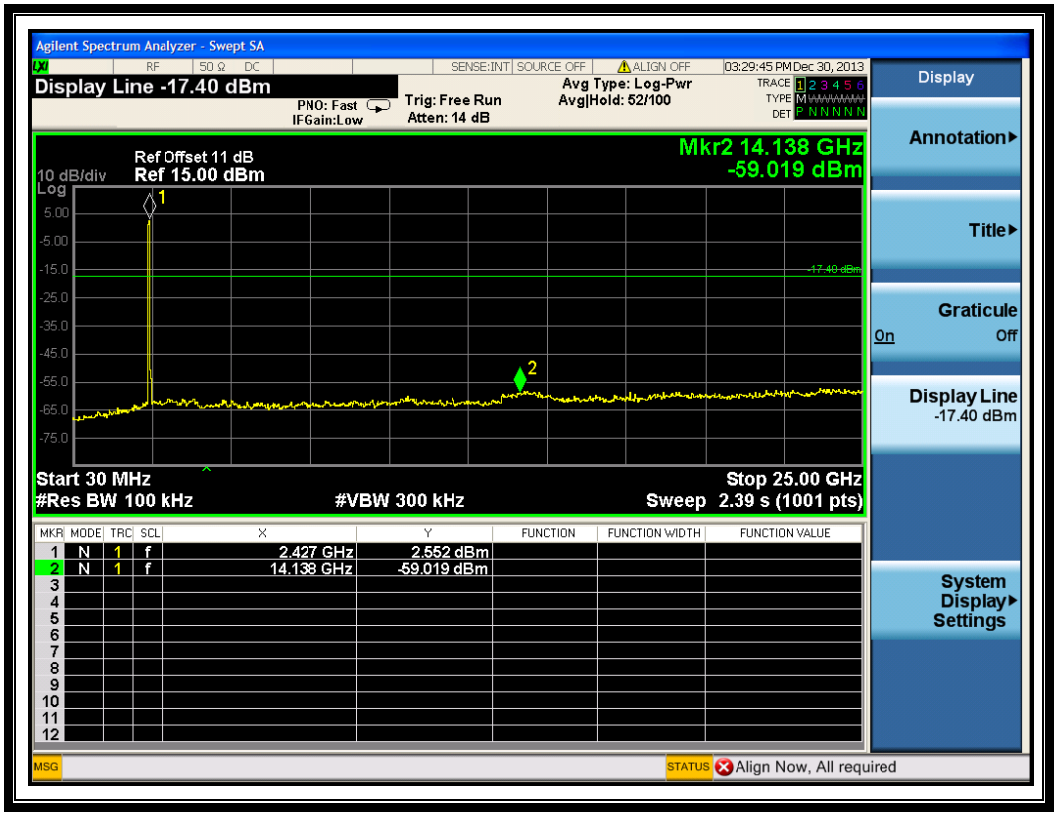
3.4.3.3. 802.11n -20MHz Test mode

A. Test Verdict:

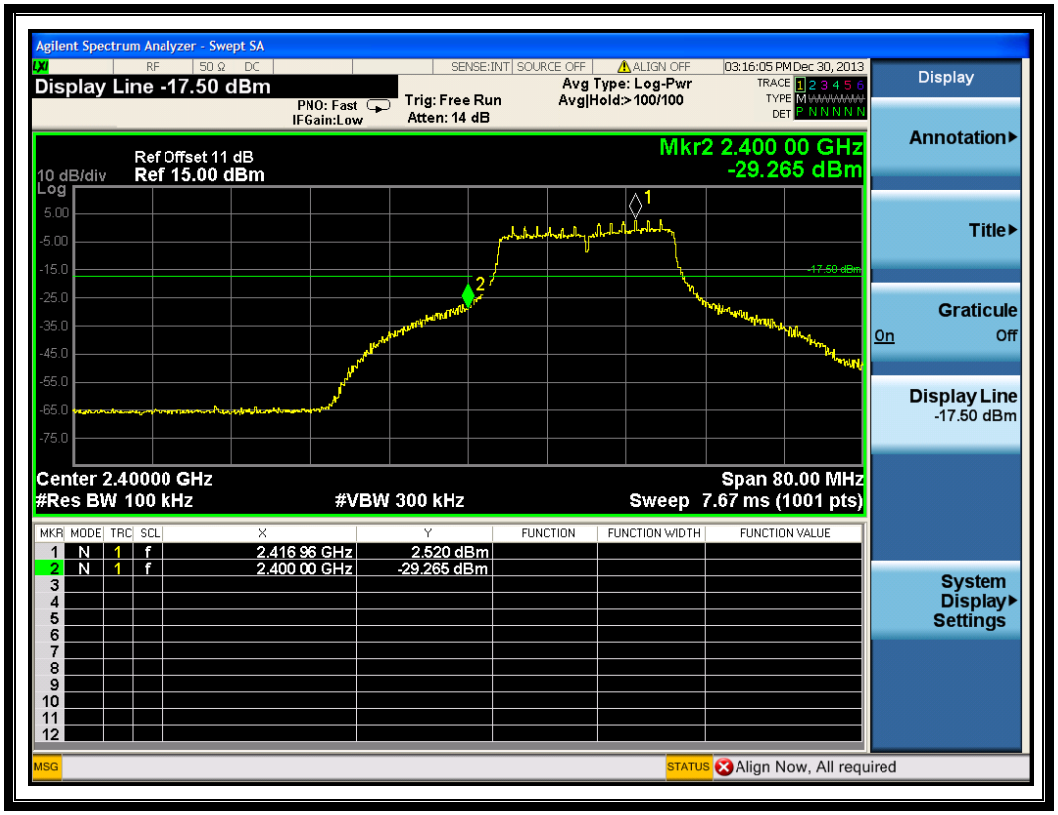
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
1	2412	-59.019	2.552	-17.4	PASS
6	2437	-58.848	1.593	-18.4	PASS
11	2462	-57.110	1.727	-18.3	PASS
149	5745	-54.489	-4.422	-24.4	PASS
157	5785	-54.103	-5.576	-25.6	PASS
165	5825	-54.028	-3.666	-23.7	PASS

B. Test Plots:

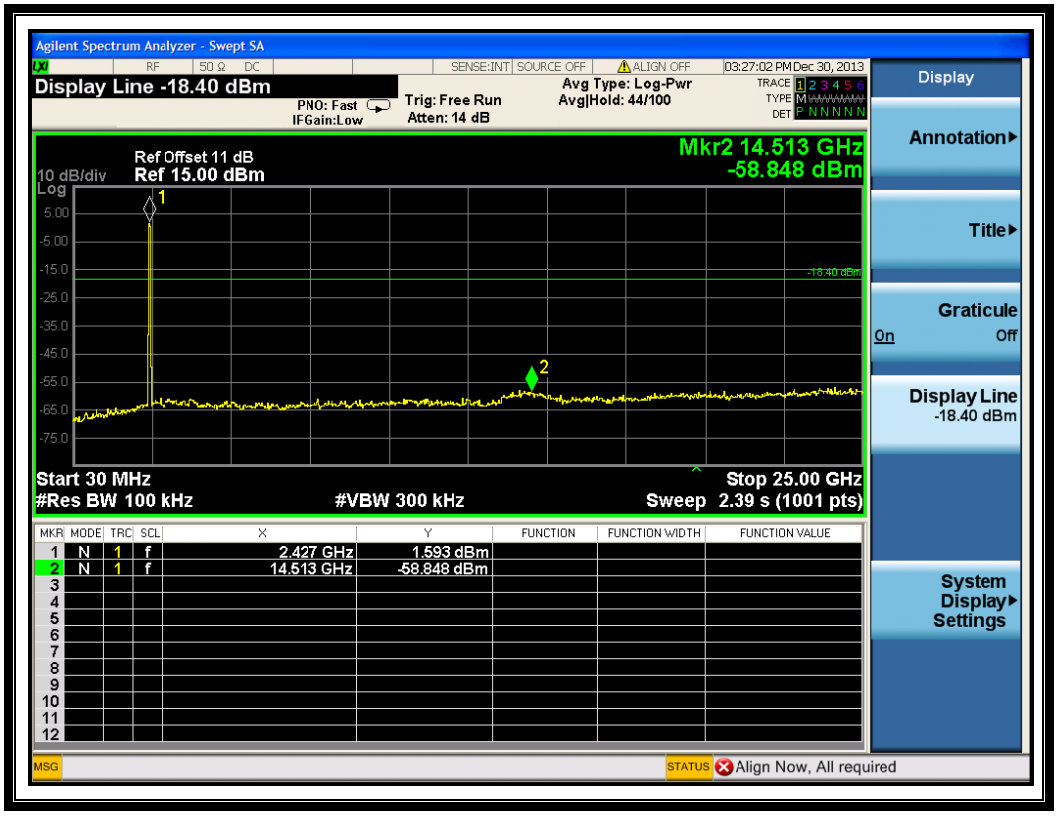
Note: the power of the Module transmitting frequency should be ignored.



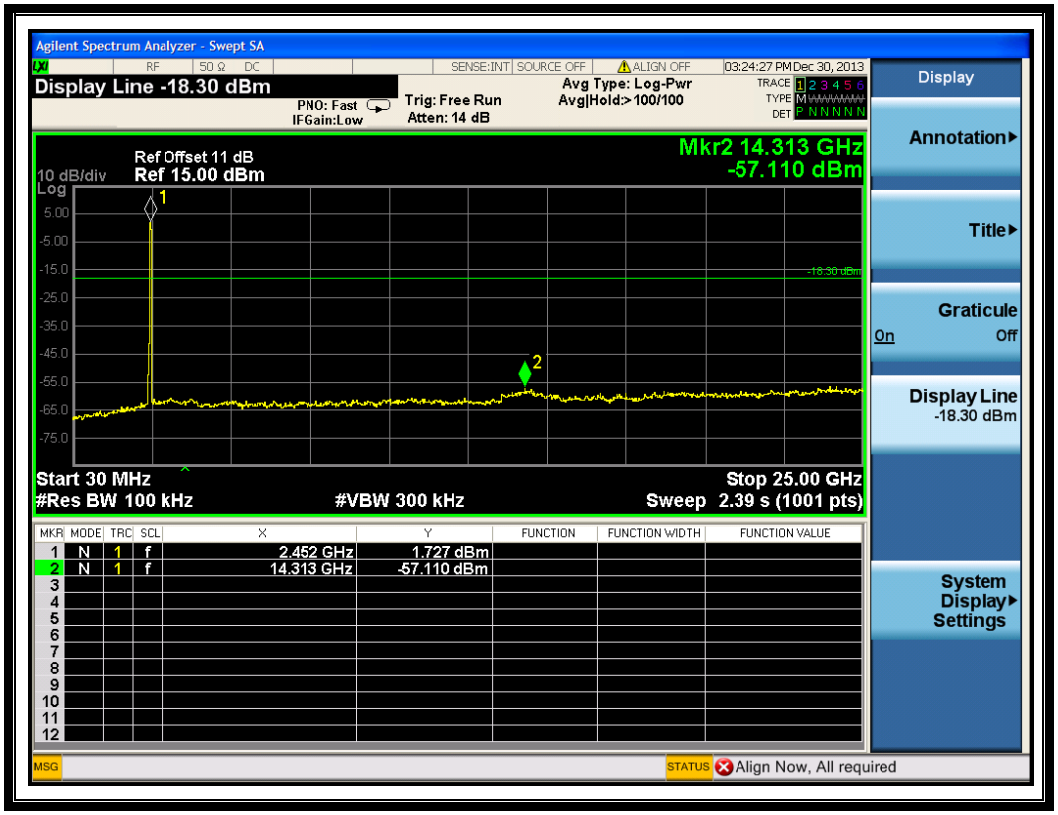
(Channel = 1, 30MHz to 25GHz)



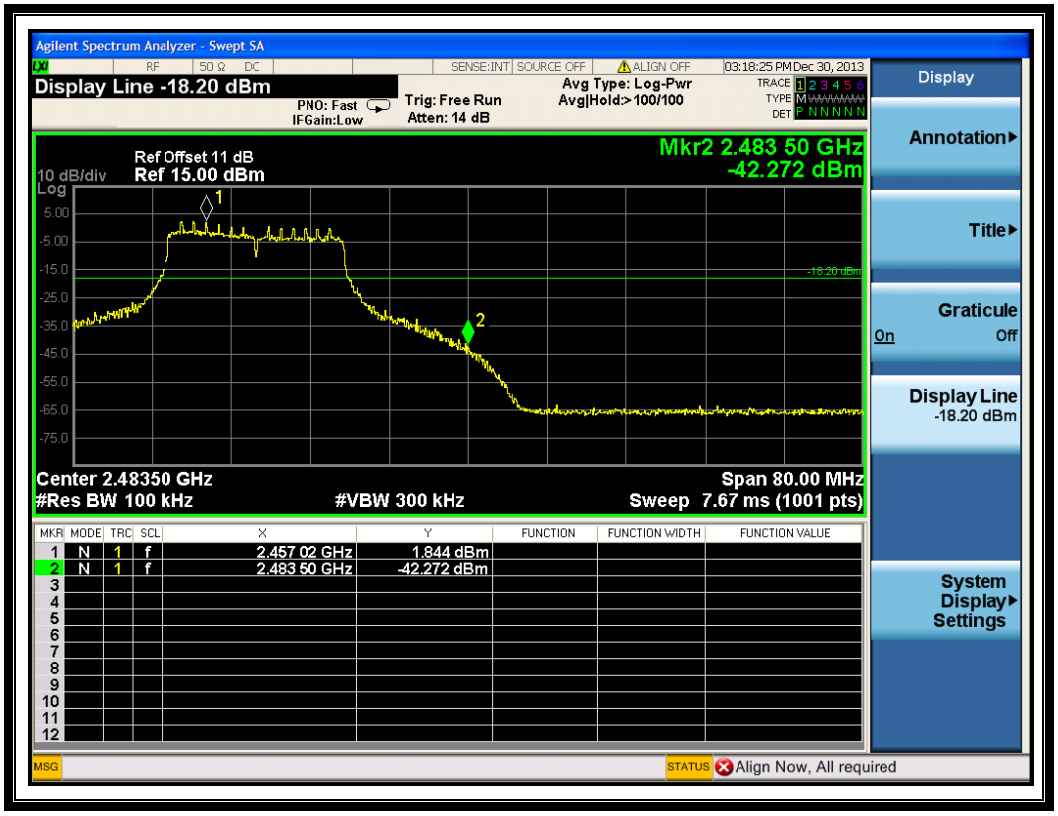
(Band Edge @ Channel = 1)



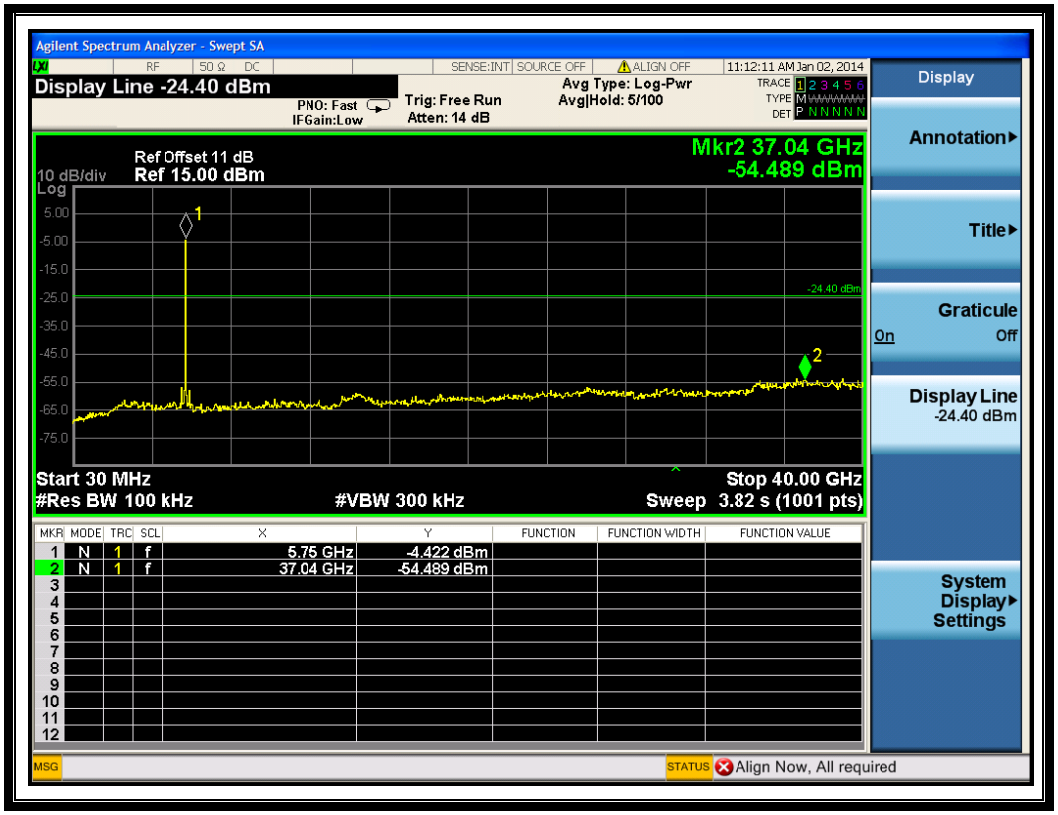
(Channel = 6, 30MHz to 25GHz)



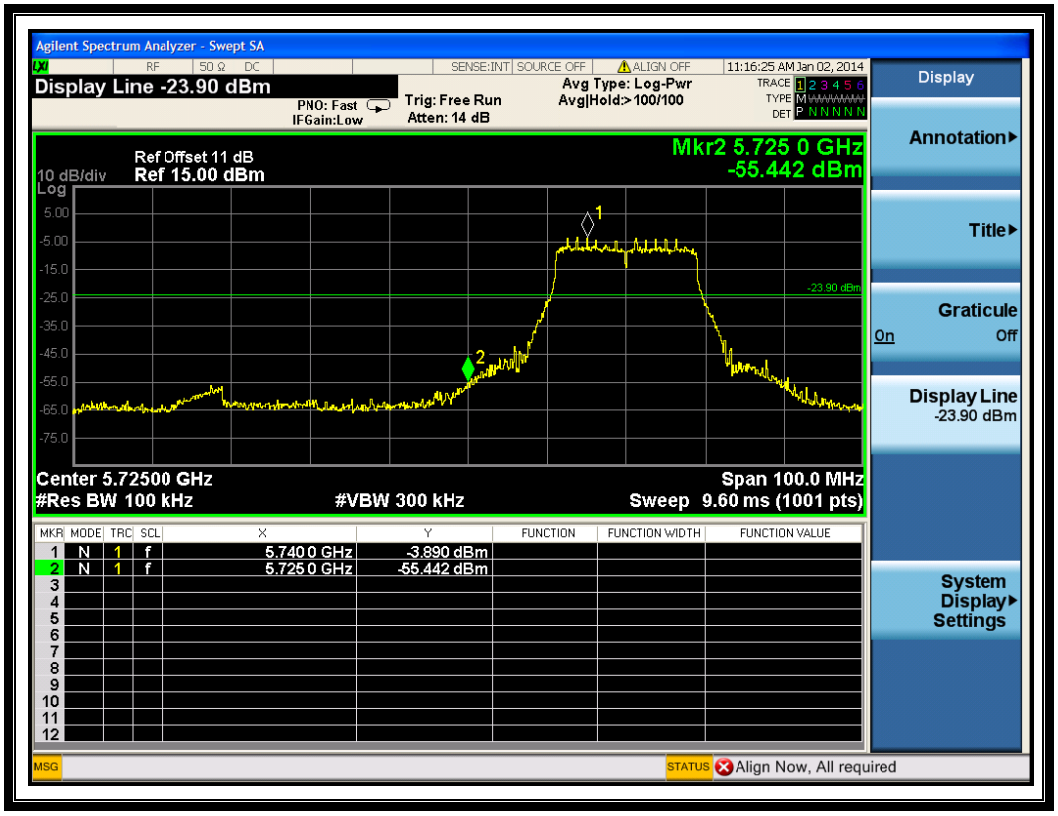
(Channel = 11, 30MHz to 25GHz)



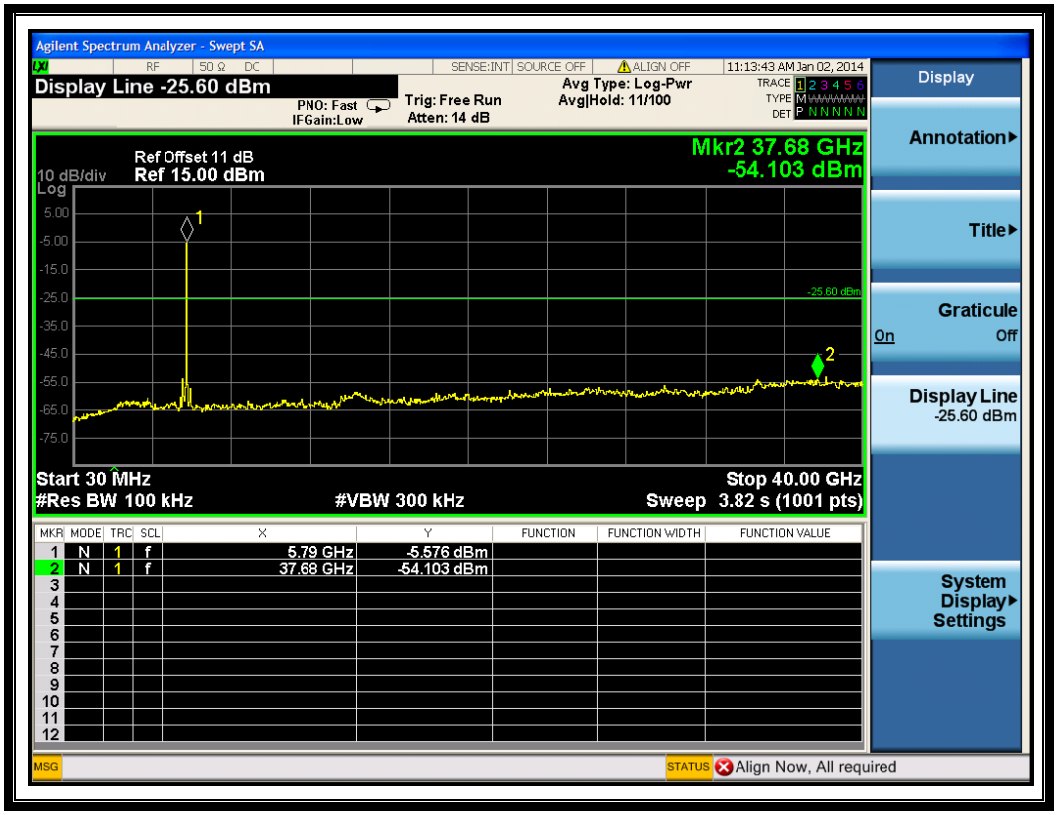
(Band Edge @ Channel = 11)



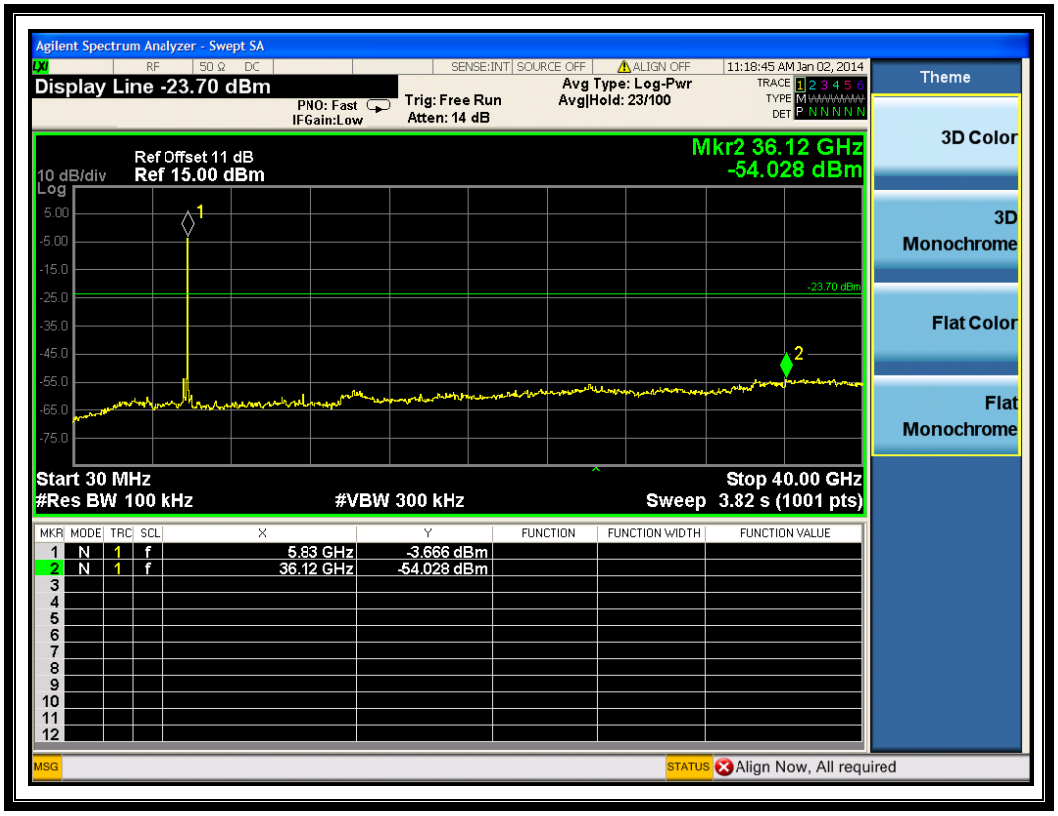
(Channel = 149, 30MHz to 40GHz)



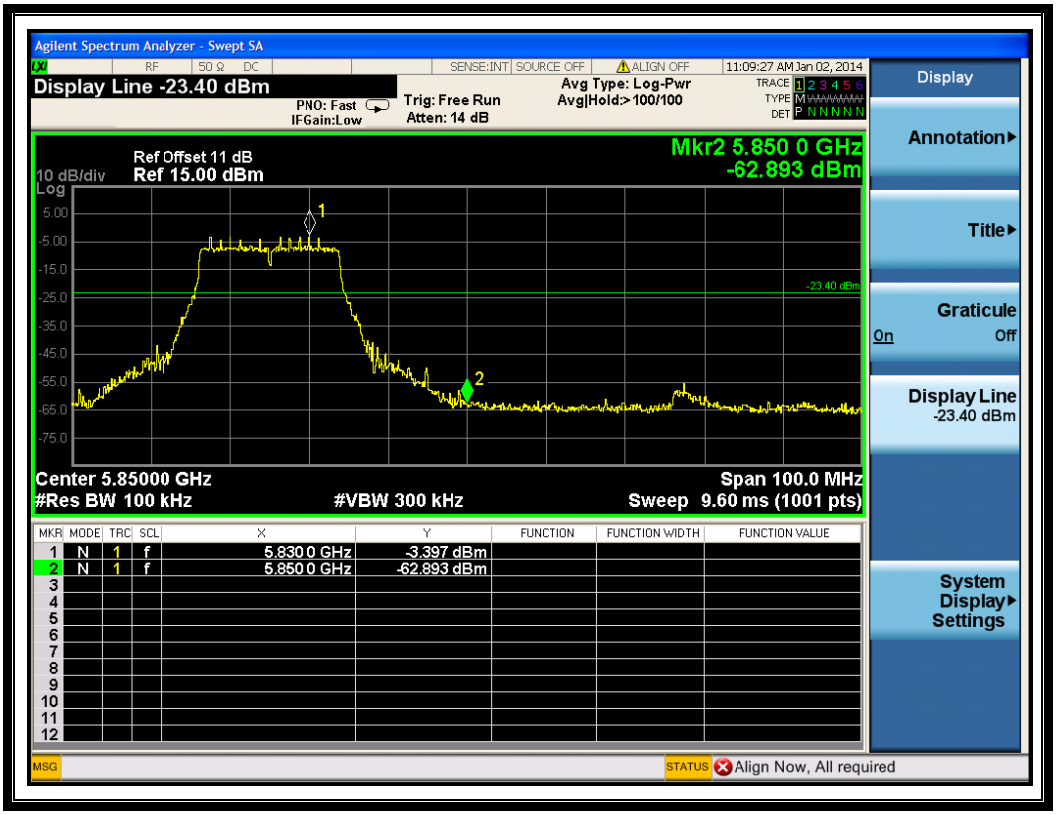
(Band Edge@ Channel = 149)



(Channel = 157, 30MHz to 40GHz)



(Channel = 165, 30MHz to 40GHz)



(Band Edge@ Channel = 165)

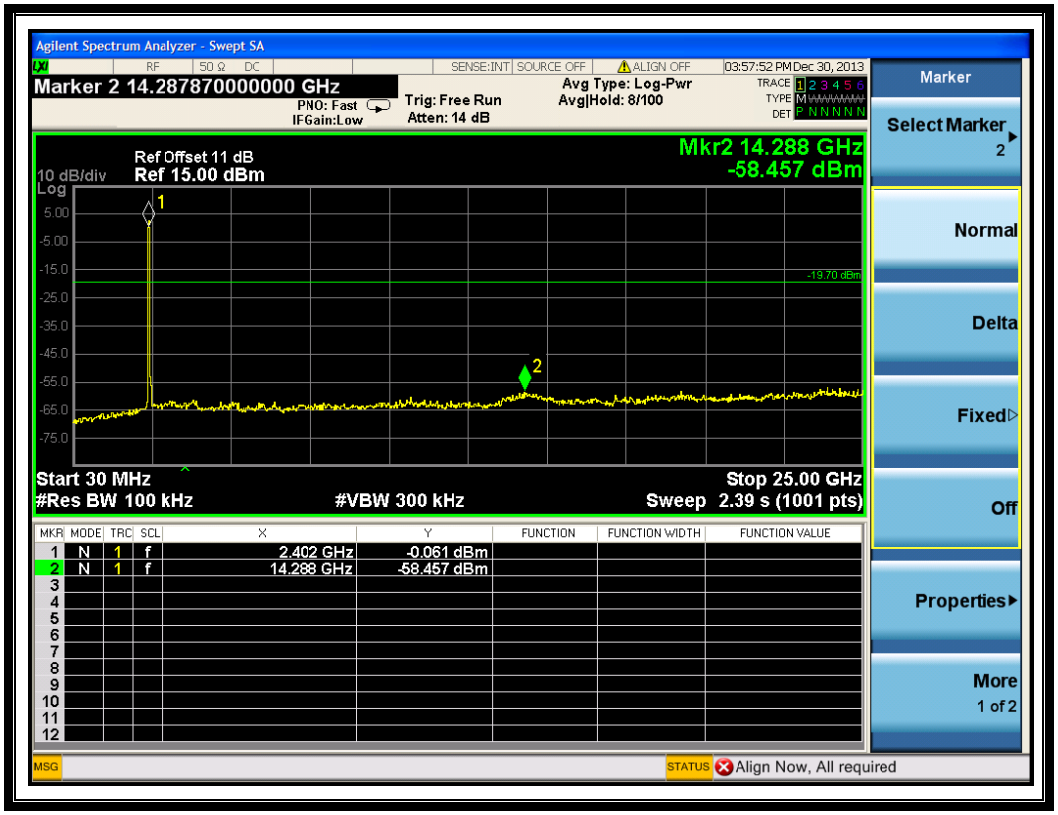
3.4.3.4. 802.11n -40MHz Test mode

A. Test Verdict:

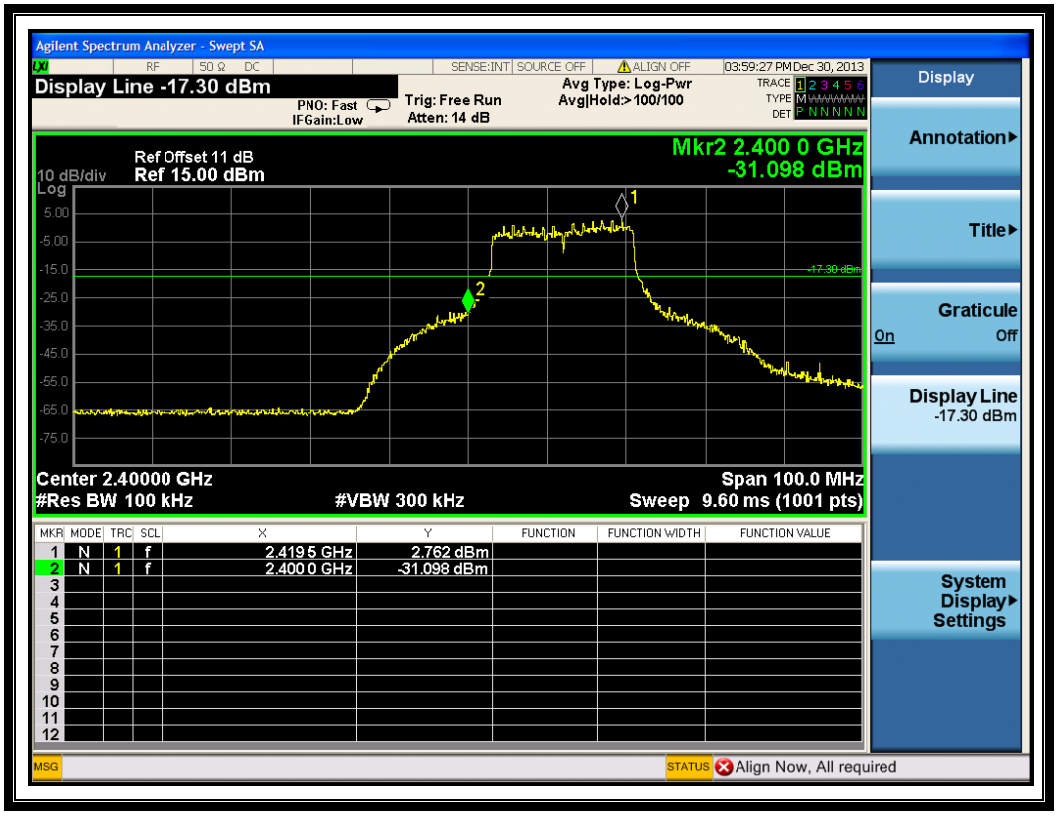
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
3	2422	-58.457	-0.061	-20.0	PASS
6	2437	-58.681	0.274	-19.7	PASS
9	2452	-59.580	-0.122	-20.1	PASS
151	5755	-52.688	-7.634	-27.6	PASS
159	5795	-53.359	-8.829	--28.8	PASS

B. Test Plots:

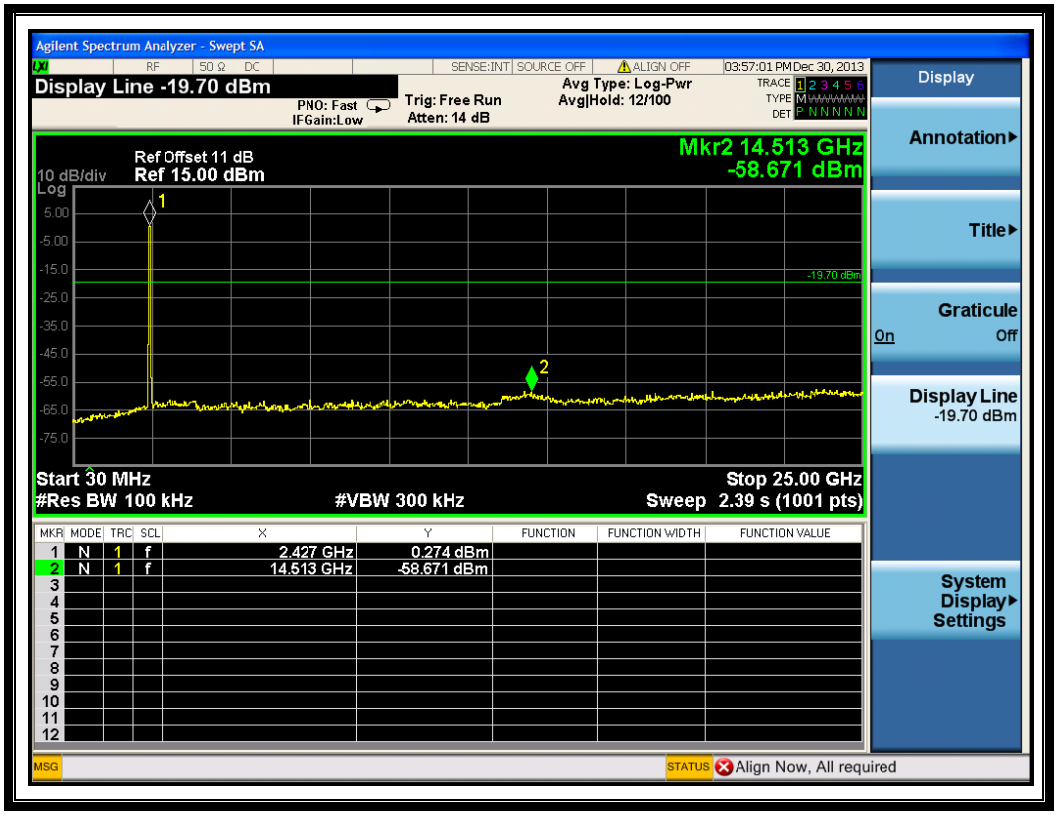
Note: the power of the Module transmitting frequency should be ignored.



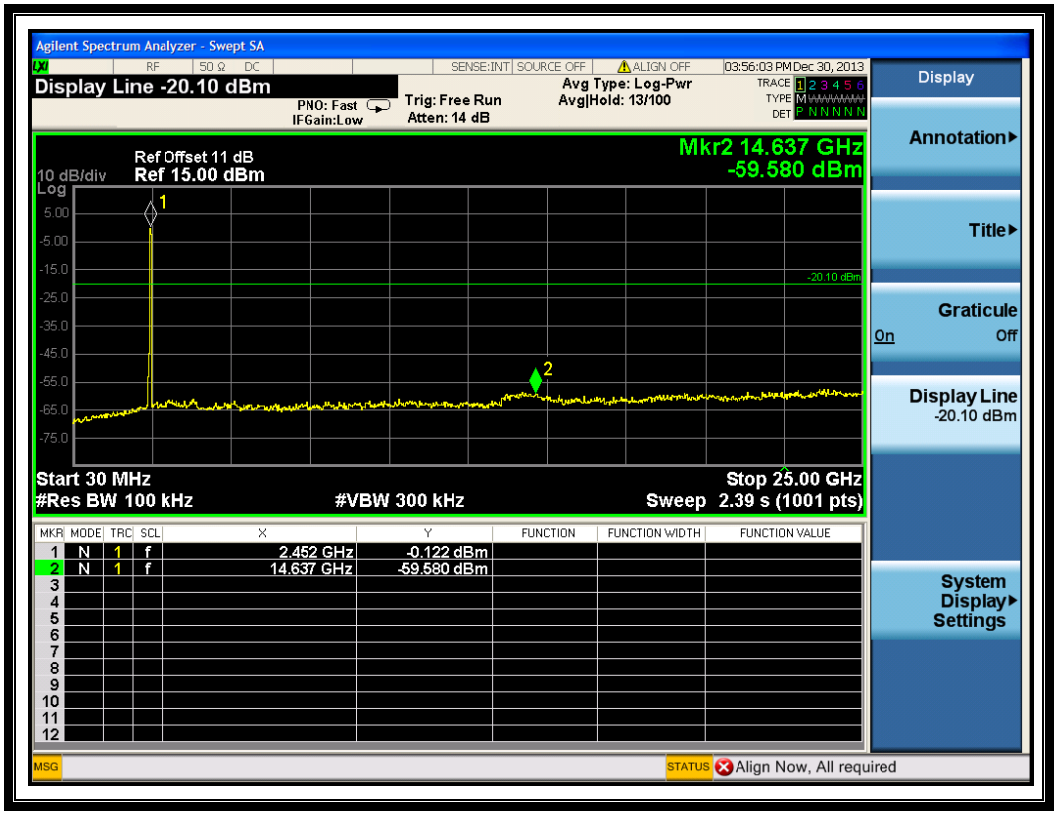
(Channel = 3, 30MHz to 25GHz)



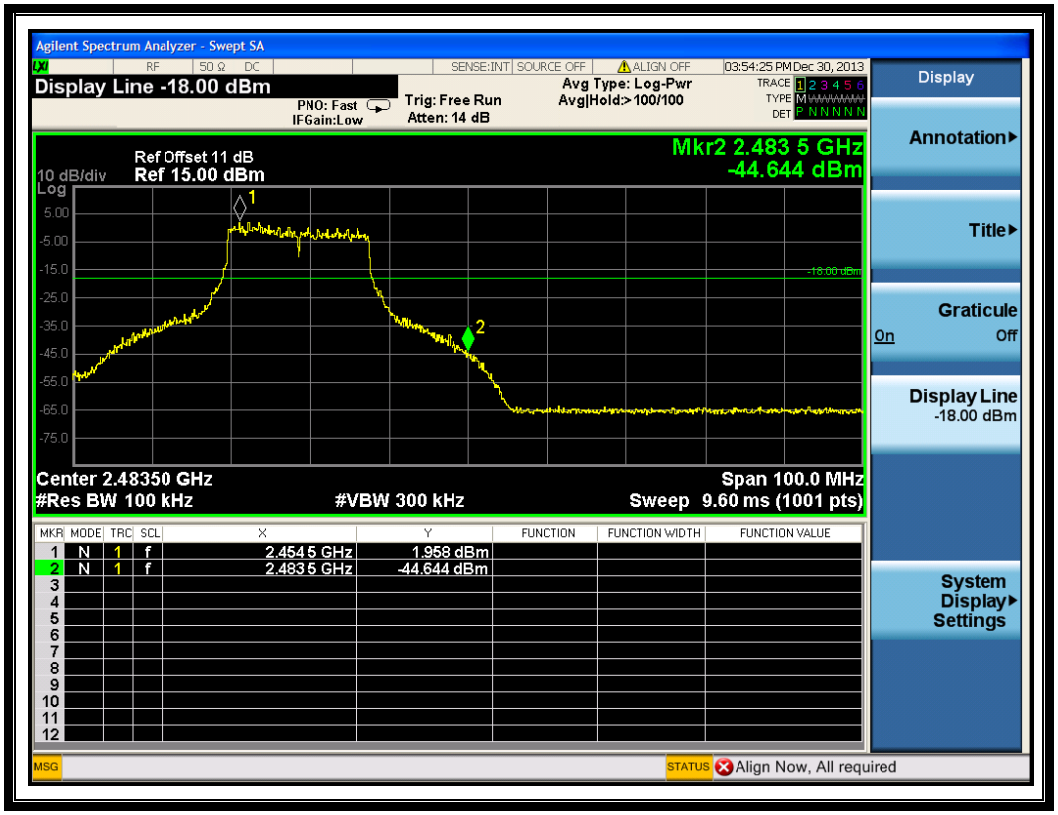
(Band Edge @ Channel = 3)



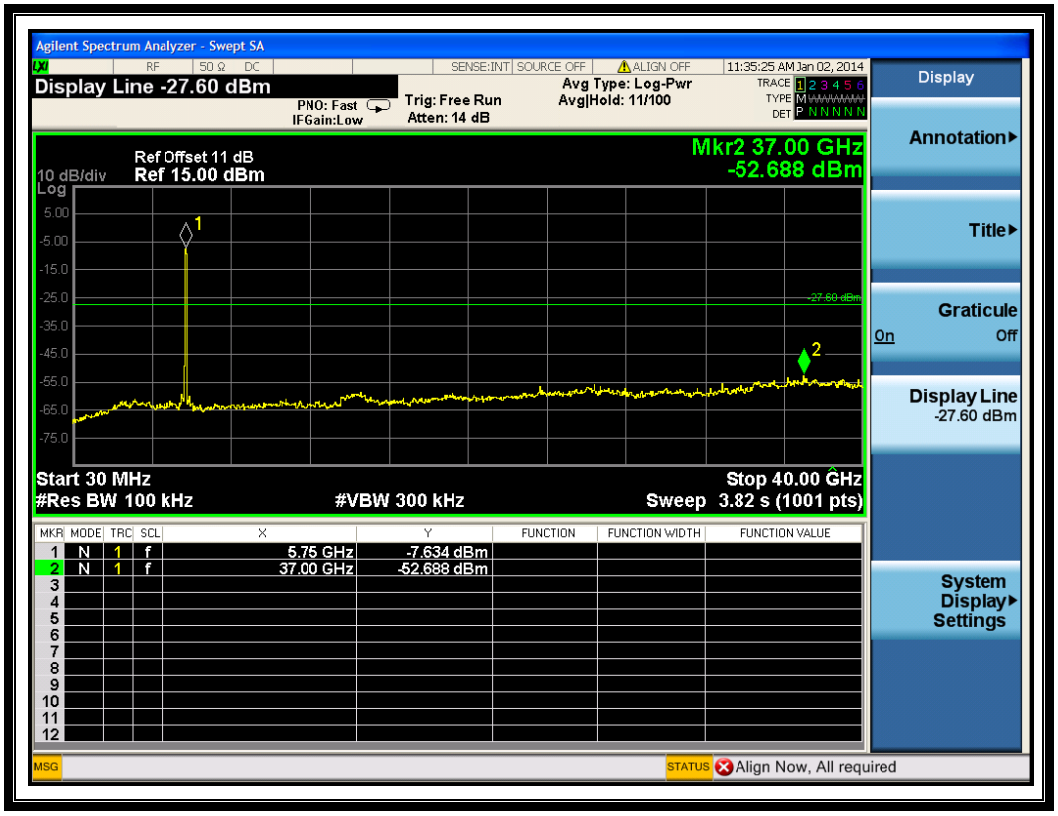
(Channel = 6, 30MHz to 25GHz)



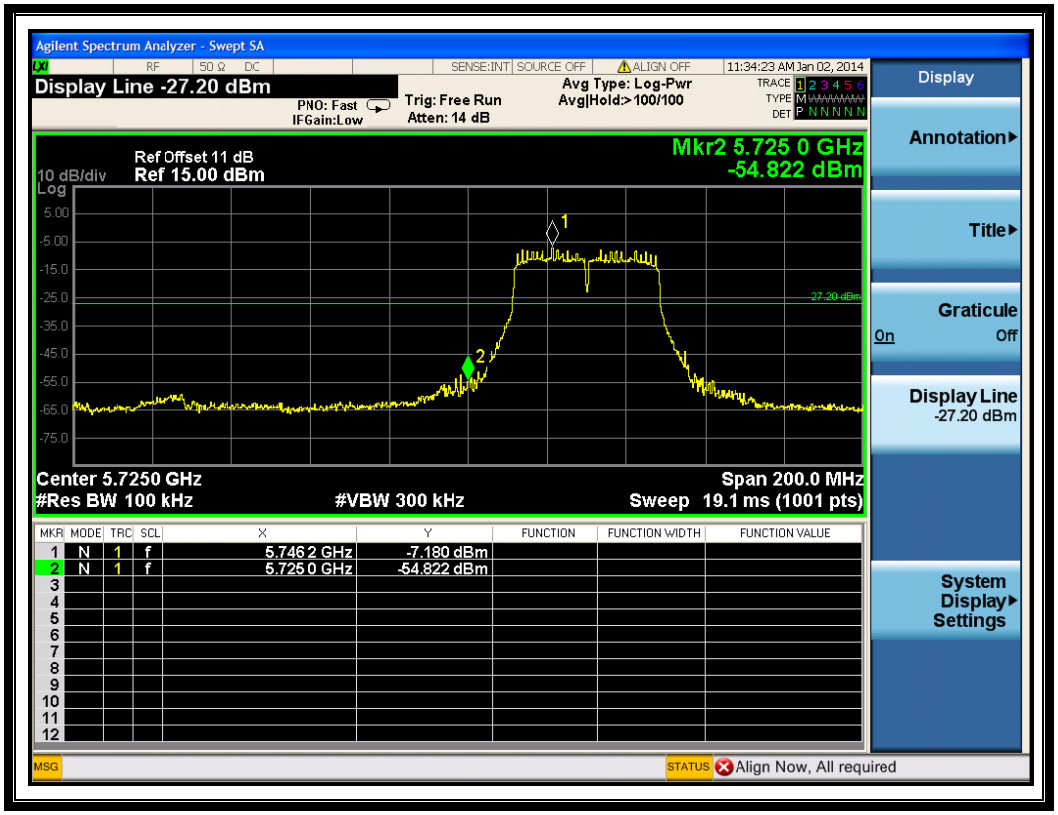
(Channel = 9, 30MHz to 25GHz)



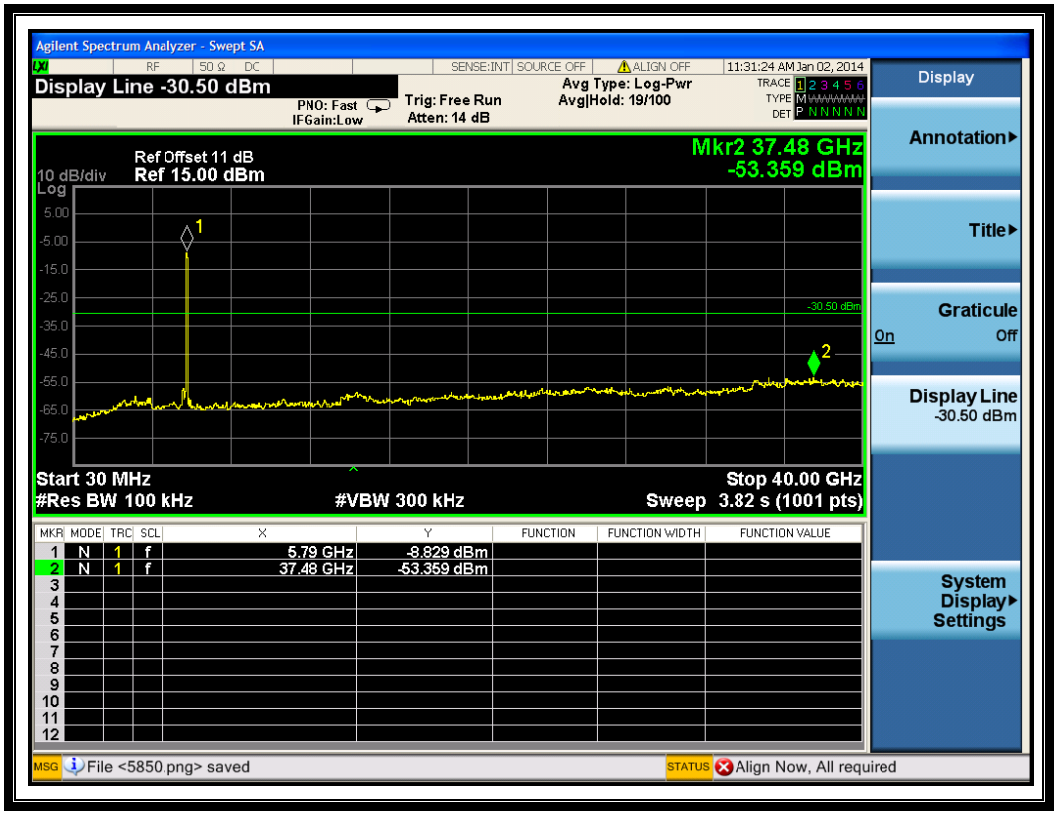
(Band Edge @ Channel = 9)



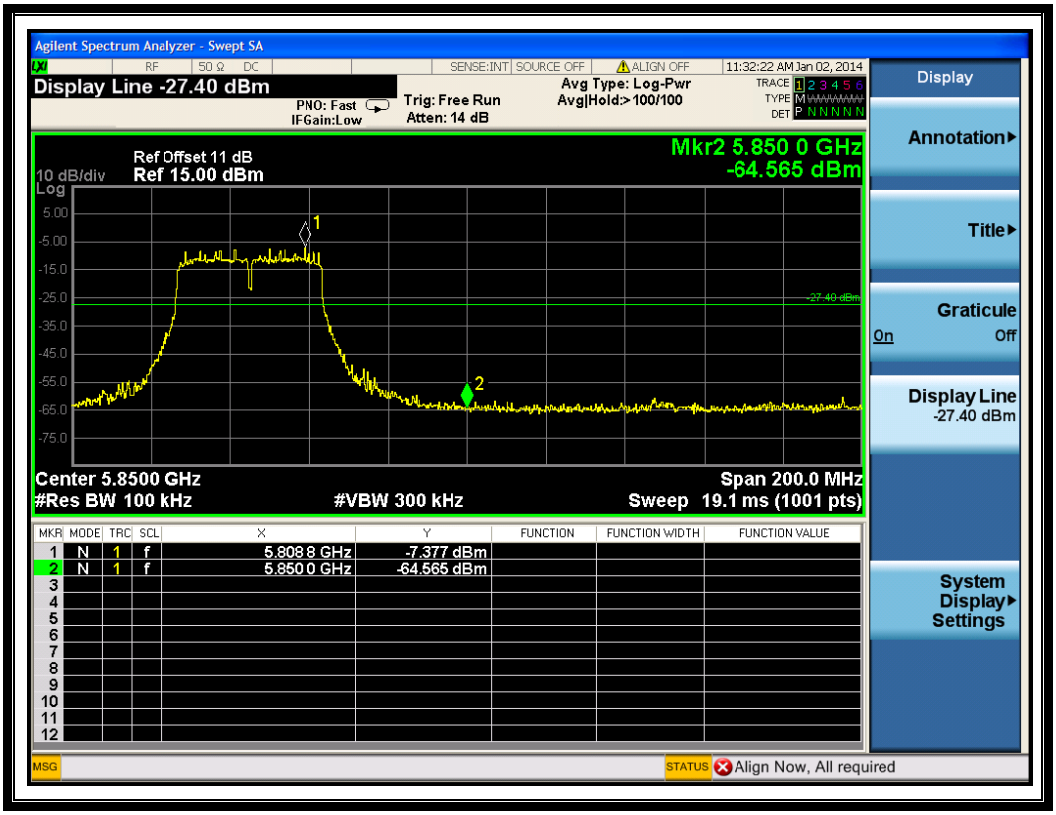
(Channel = 151, 30MHz to 40GHz)



(Band Edge@ Channel = 151)



(Channel = 159, 30MHz to 40GHz)



(Band Edge@ Channel = 159)

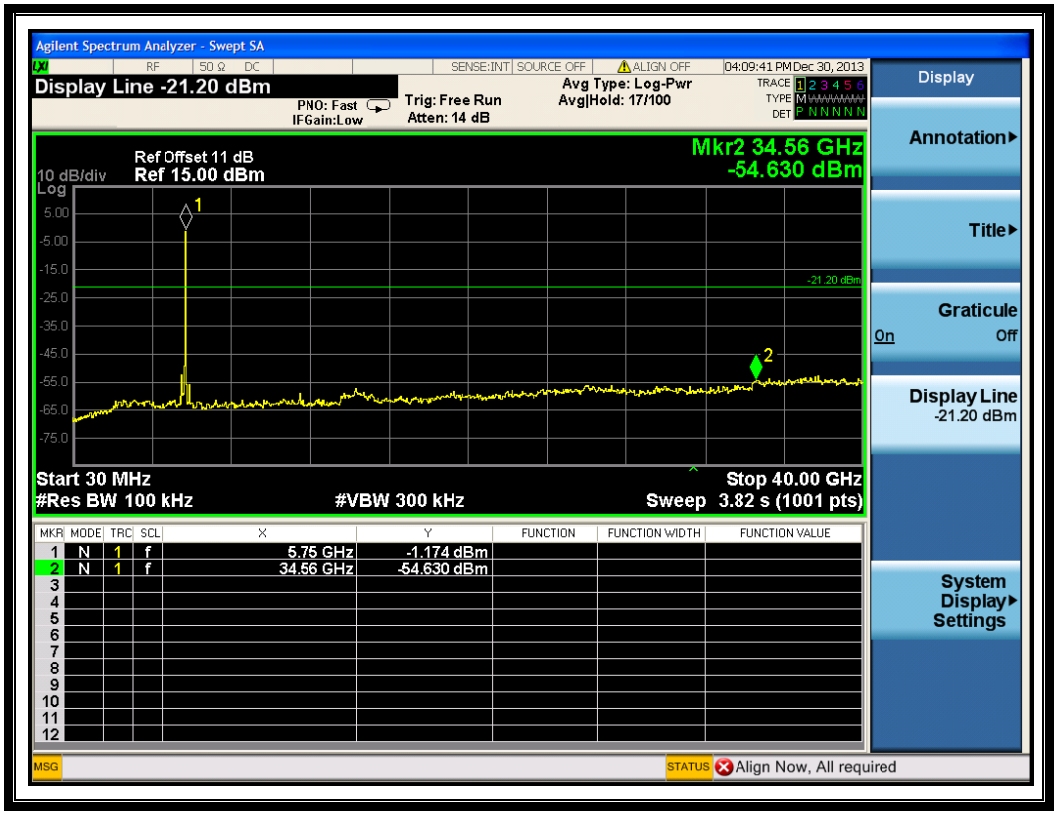
3.4.3.5. 802.11a Test mode

A. Test Verdict:

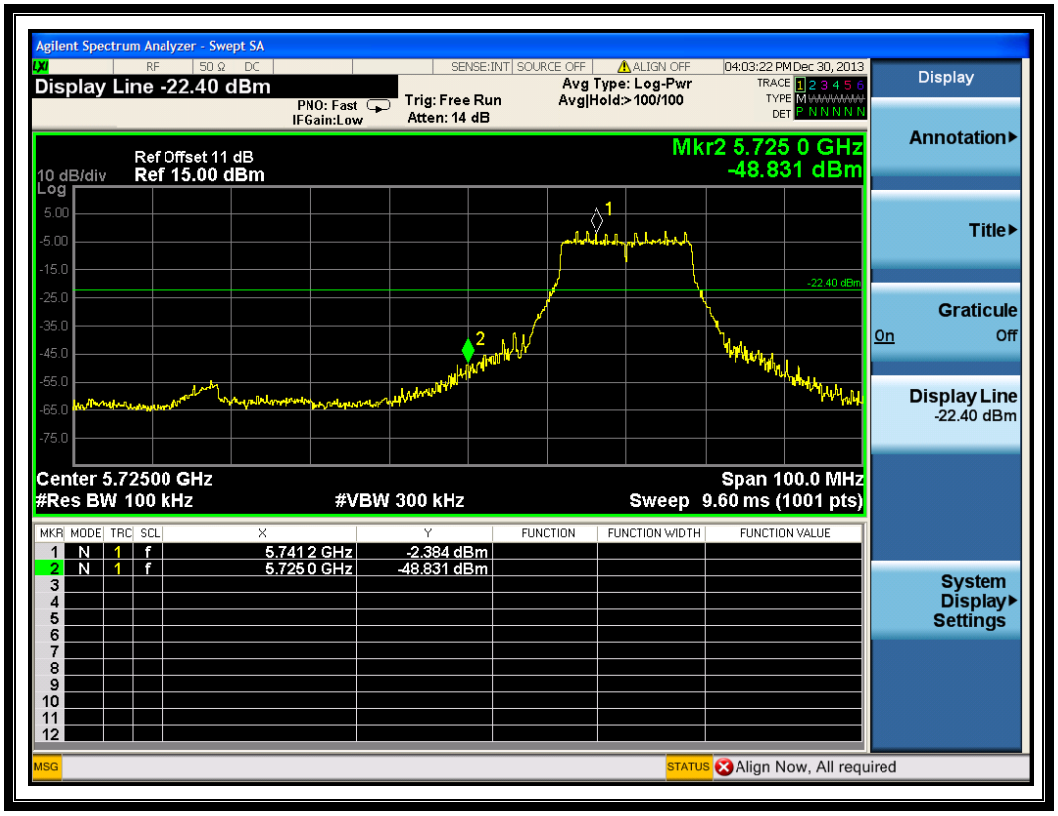
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
149	5745	-54.630	-1.174	-21.2	PASS
157	5785	-52.383	-1.394	-21.4	PASS
165	5825	-53.401	-2.275	-22.3	PASS

B. Test Plots:

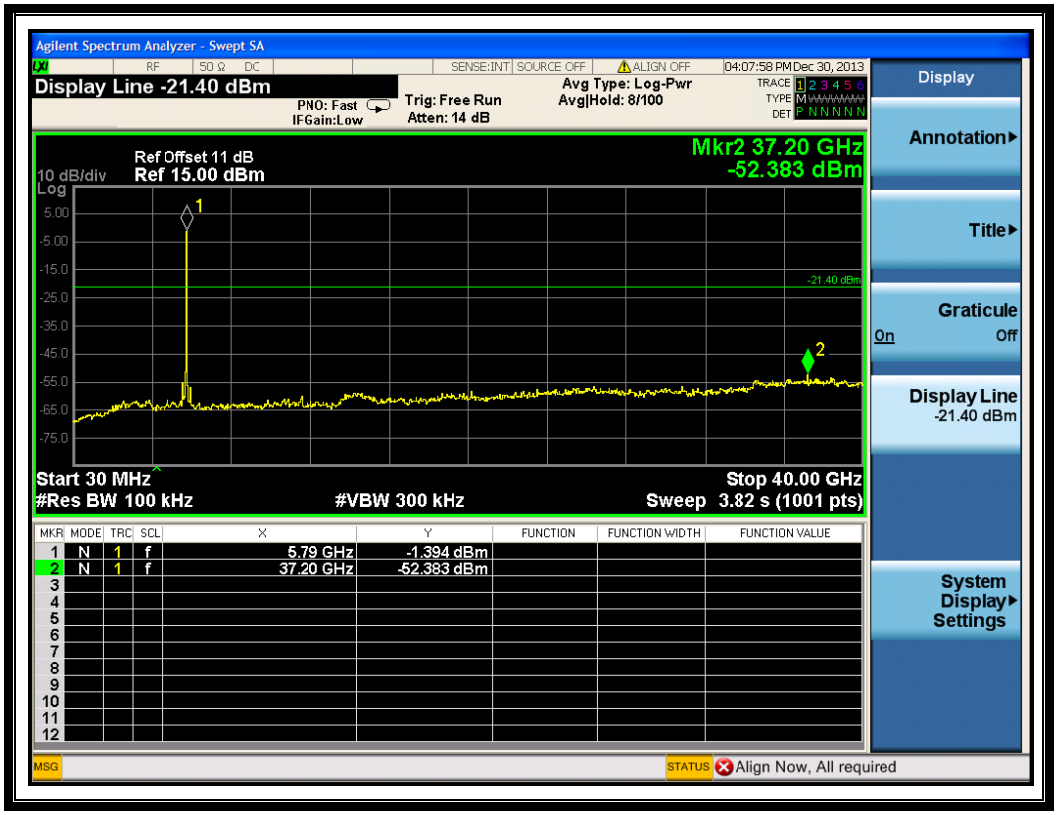
Note: the power of the Module transmitting frequency should be ignored.



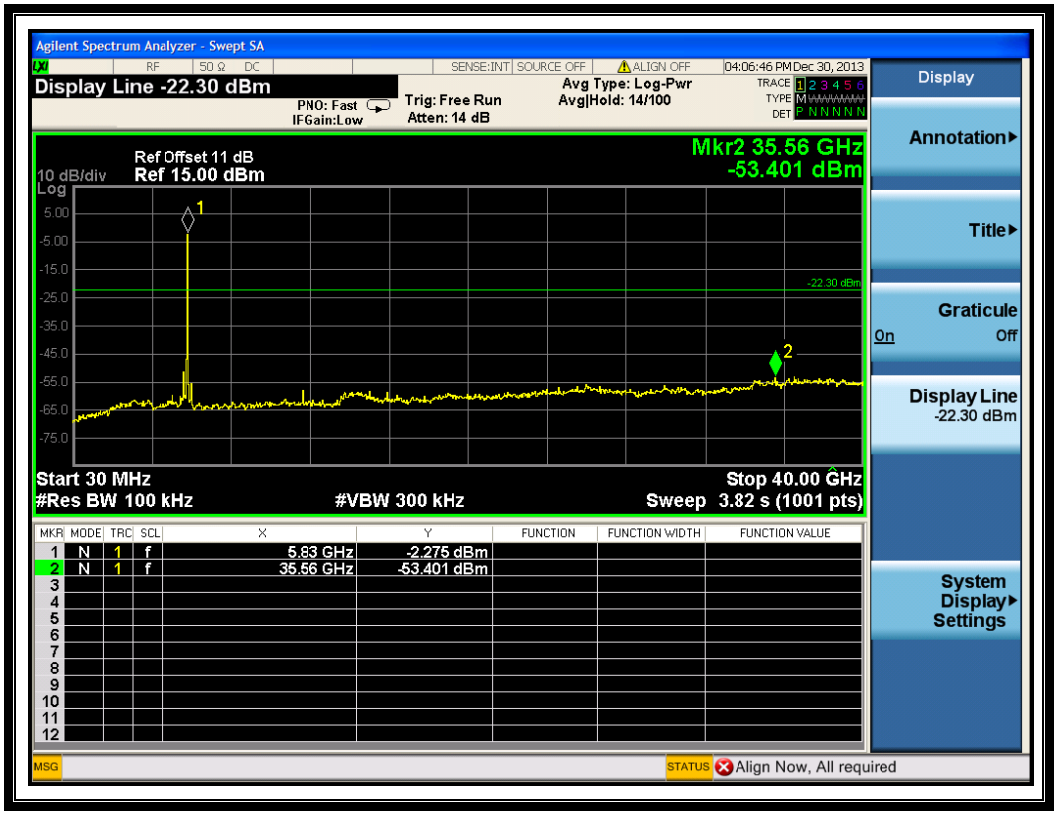
(Channel = 149, 30MHz to 40GHz)



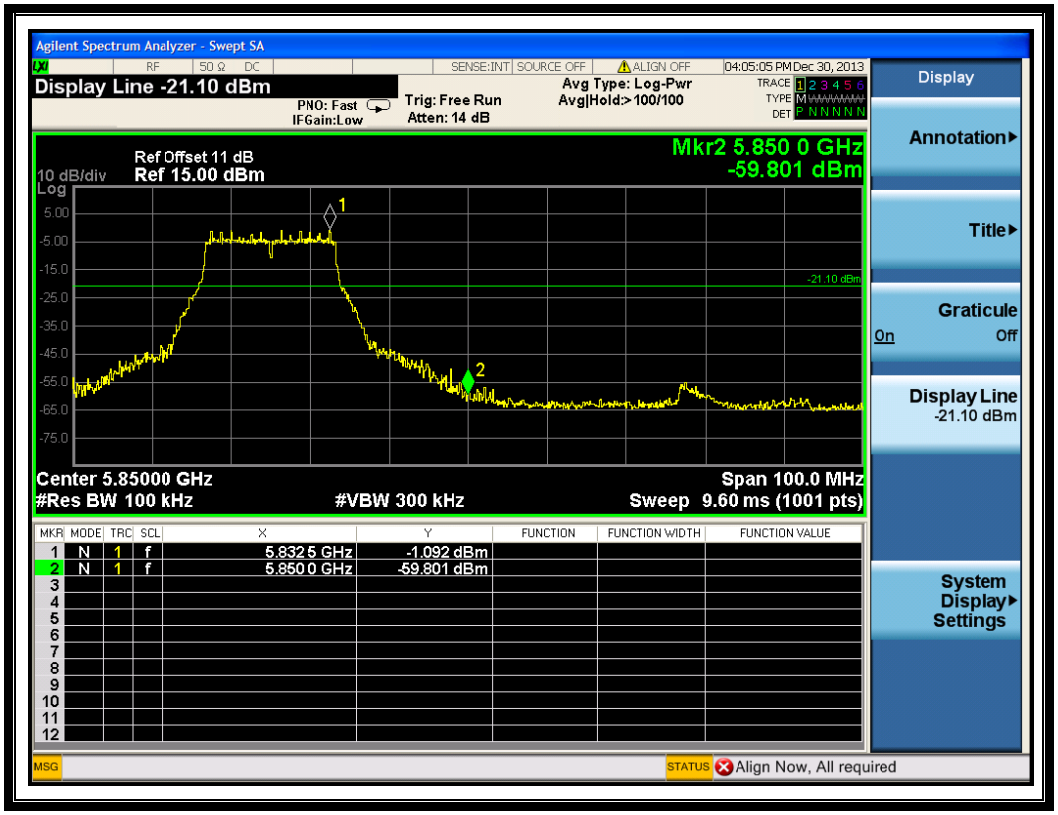
(Band Edge@ Channel = 149)



(Channel = 157, 30MHz to 40GHz)



(Channel = 165, 30MHz to 40GHz)



(Band Edge@ Channel = 165)

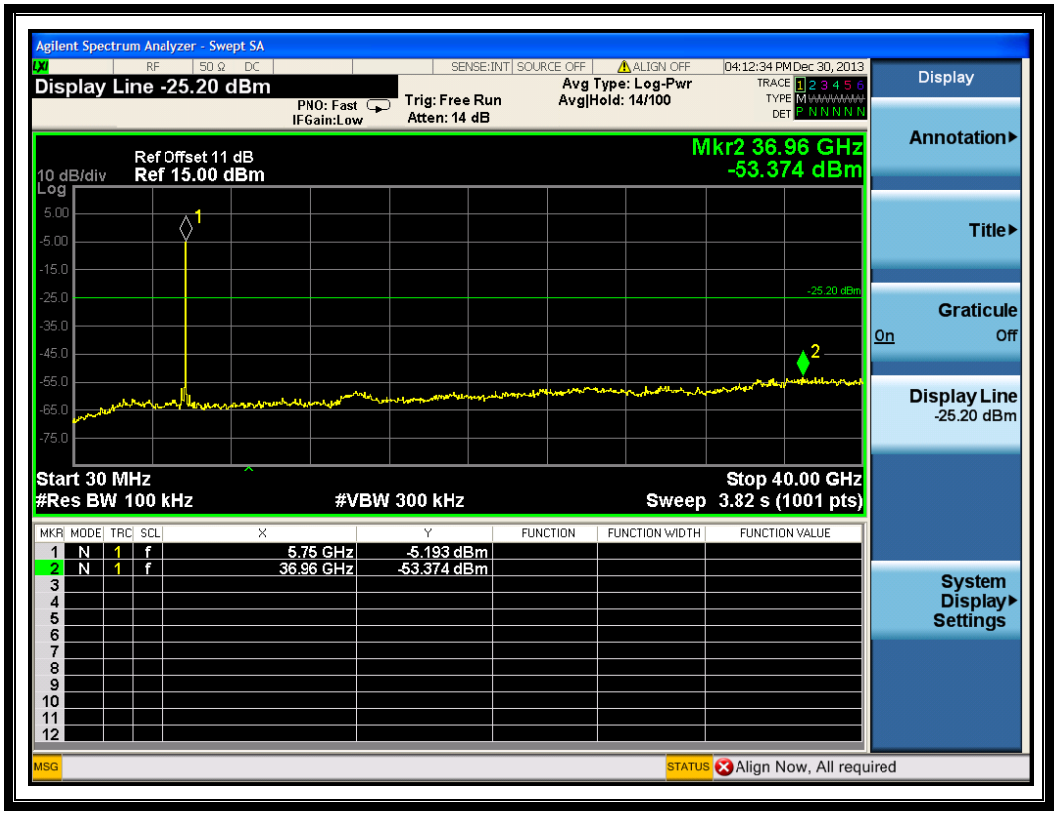
3.4.3.6. 802.11ac-20MHz Test mode

A. Test Verdict:

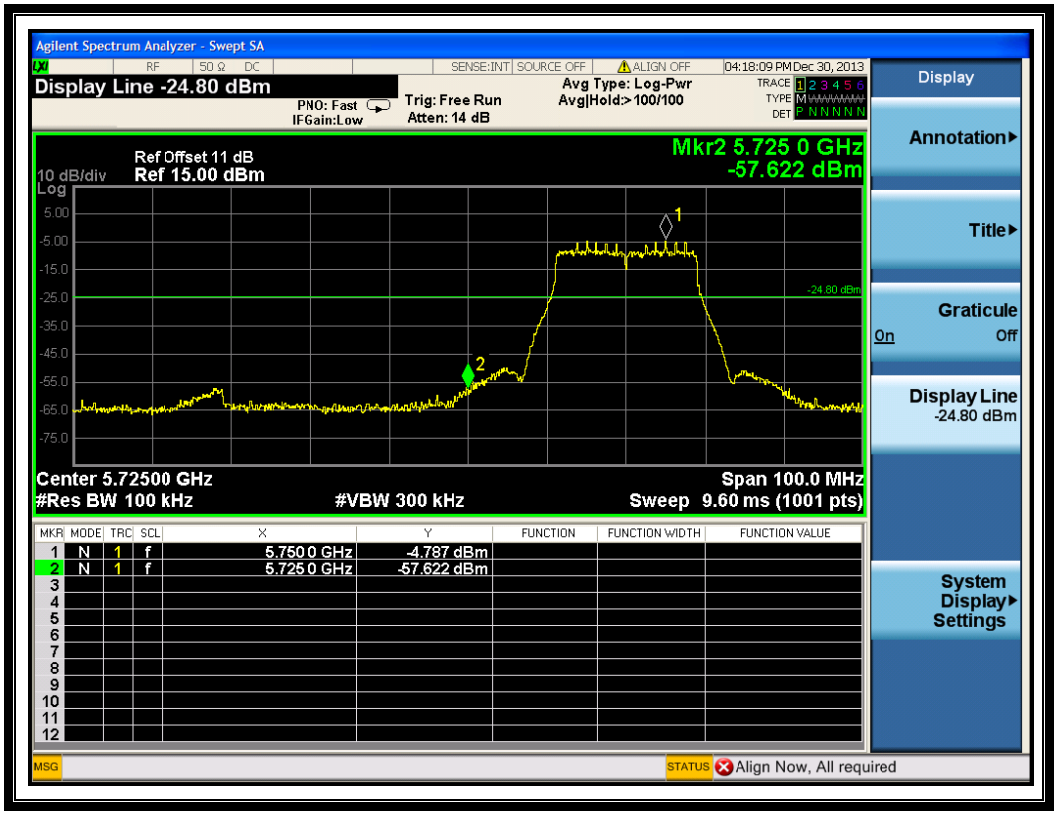
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
149	5745	-53.374	-5.193	-25.2	PASS
157	5785	-54.590	-4.491	-24.5	PASS
165	5825	-54.43	-6.714	-26.7	PASS

B. Test Plots:

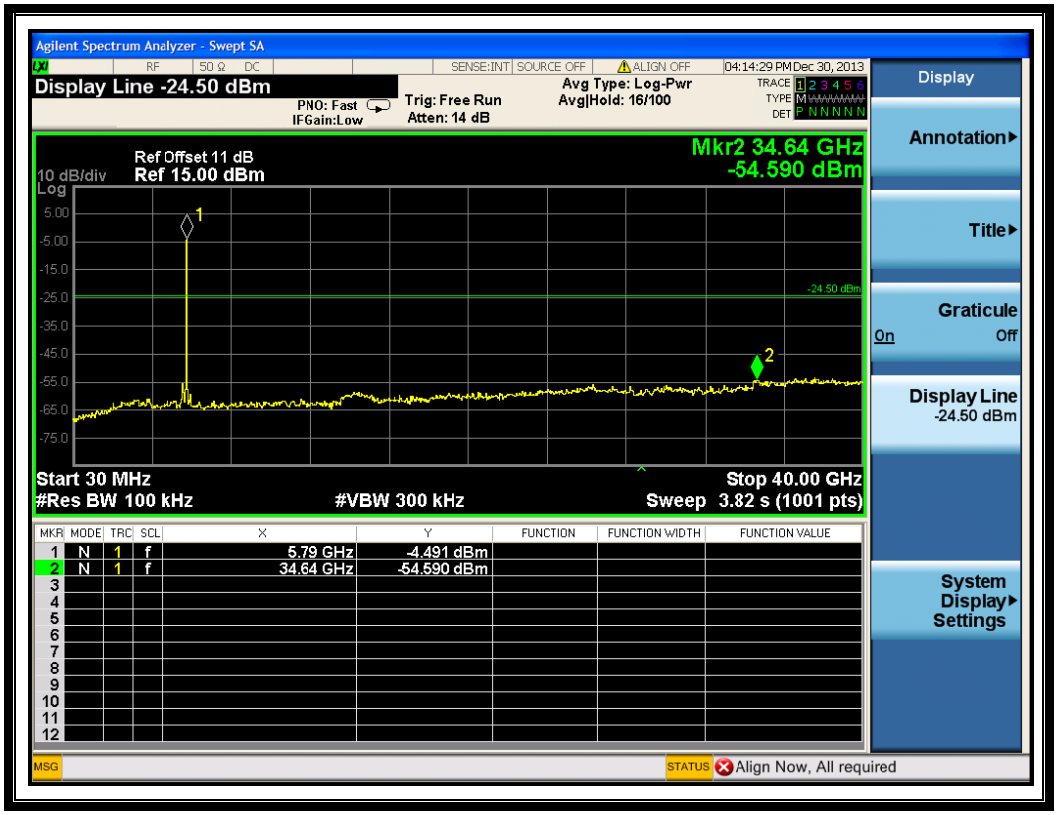
Note: the power of the Module transmitting frequency should be ignored.



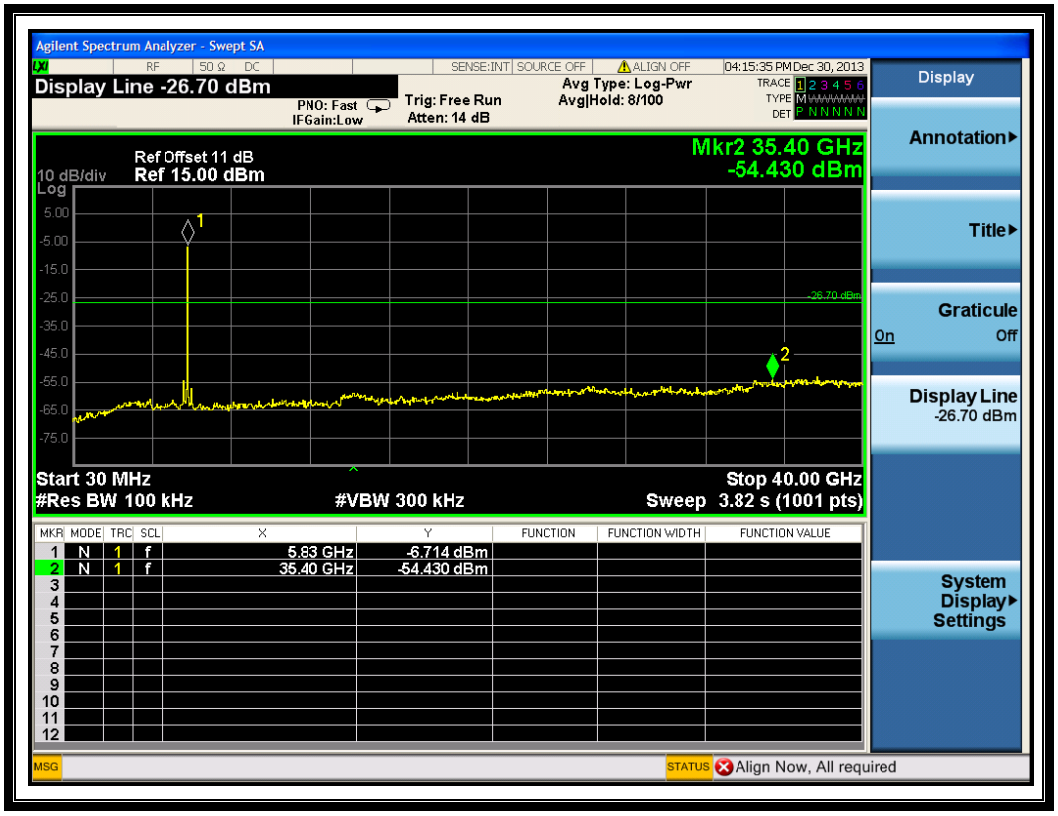
(Channel = 149, 30MHz to 40GHz)



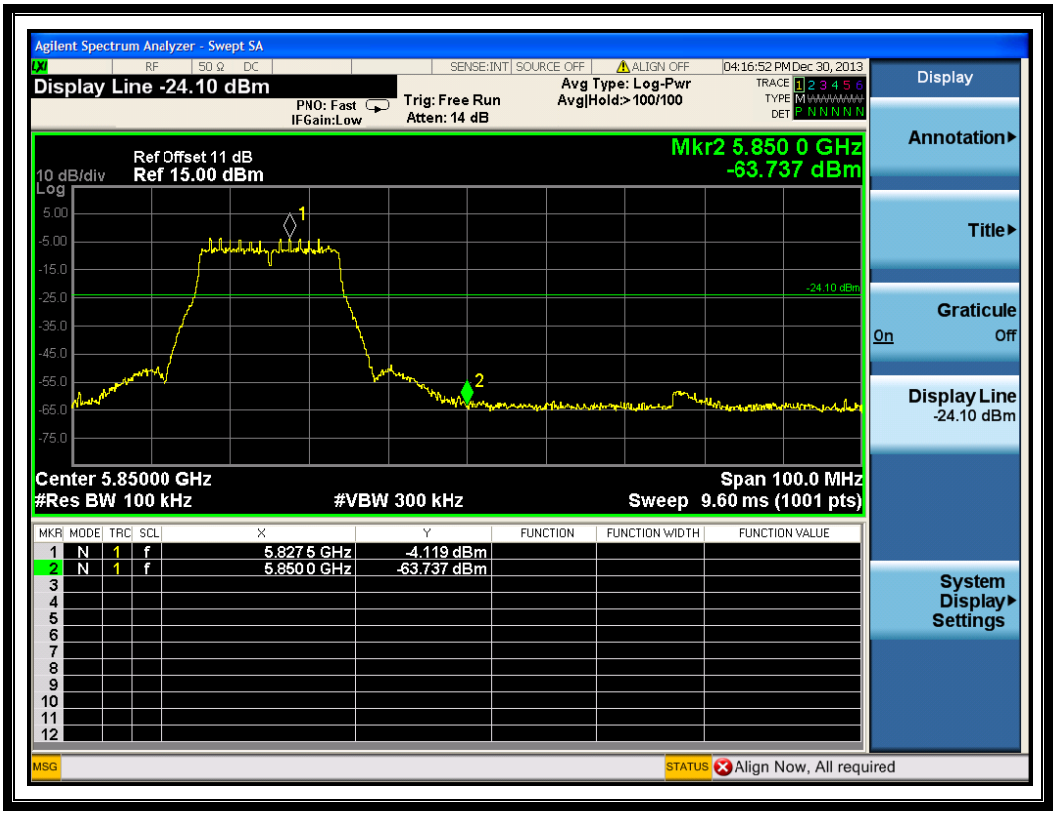
(Band Edge@ Channel = 149)



(Channel = 157, 30MHz to 40GHz)



(Channel = 165, 30MHz to 40GHz)



(Band Edge@ Channel = 165)

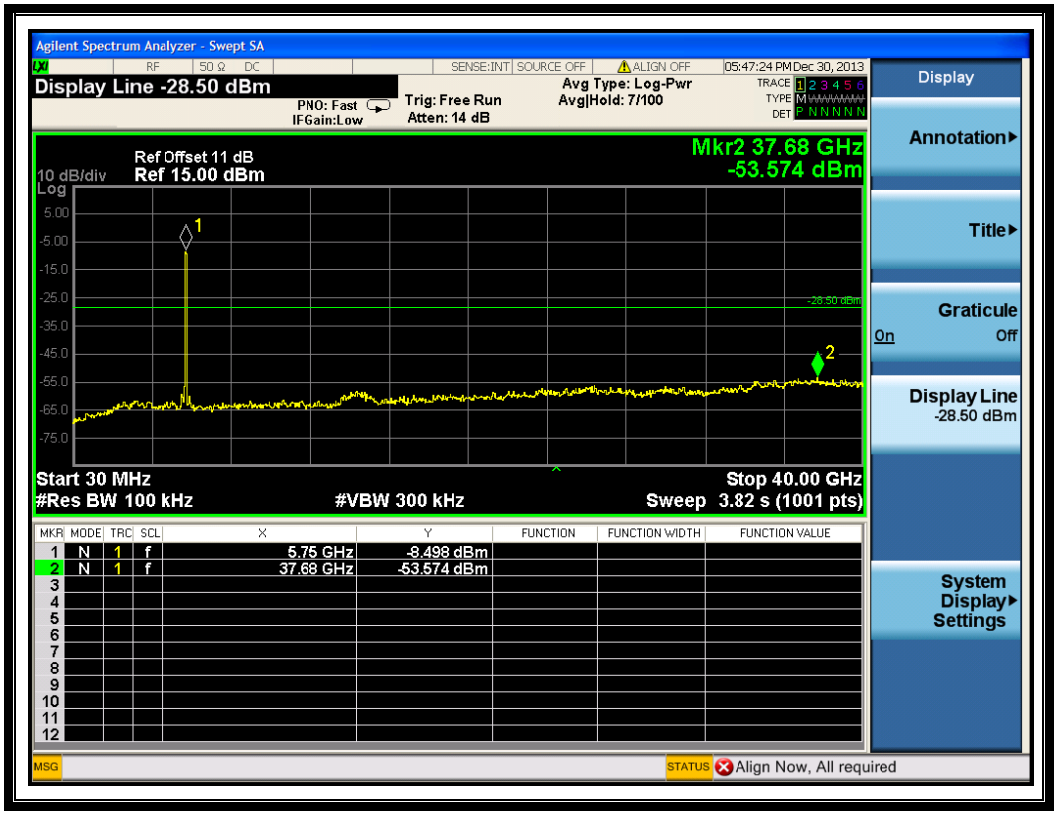
3.4.3.7. 802.11ac-40MHz Test mode

A. Test Verdict:

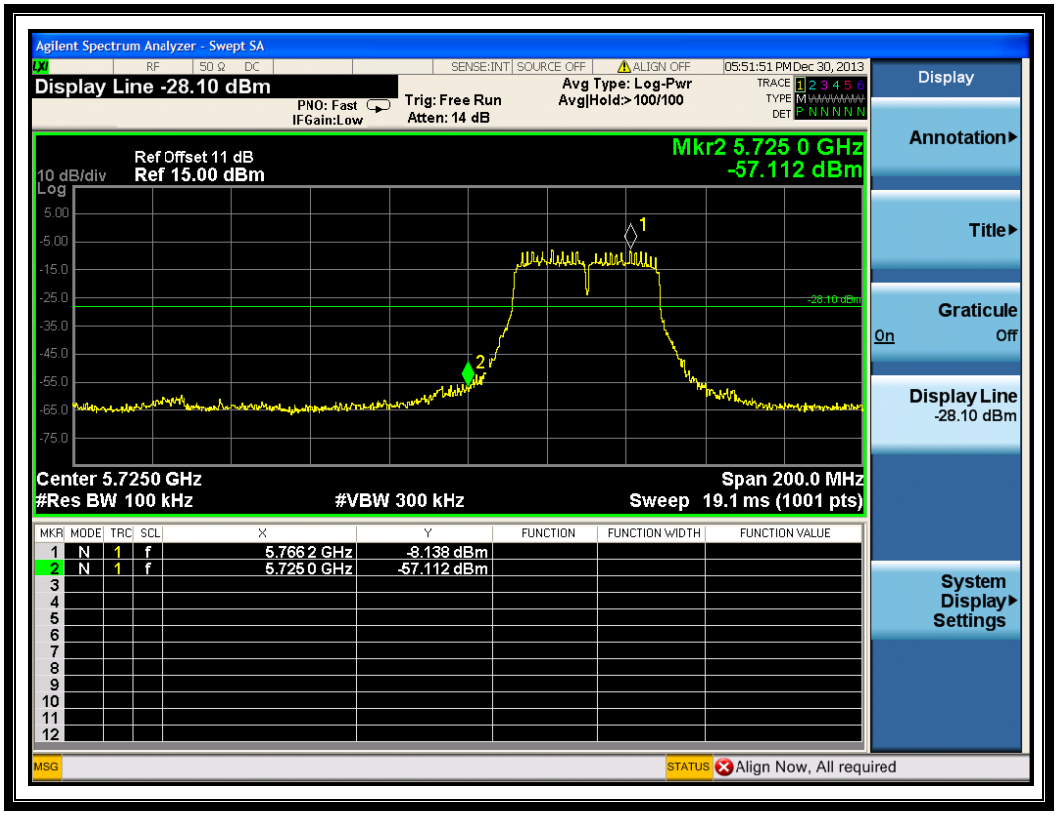
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -20dBc Limit	
151	5755	-53.574	-8.498	-28.5	PASS
159	5795	-53.927	-10.999	-31.0	PASS

B. Test Plots:

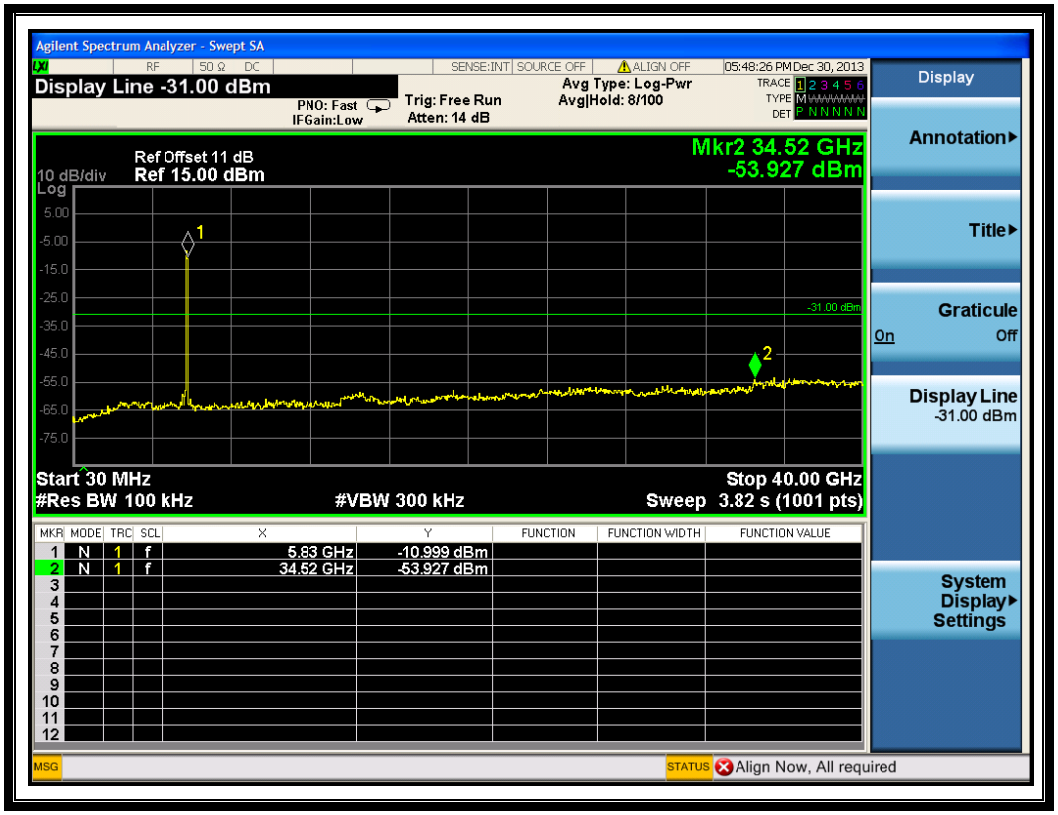
Note: the power of the Module transmitting frequency should be ignored.



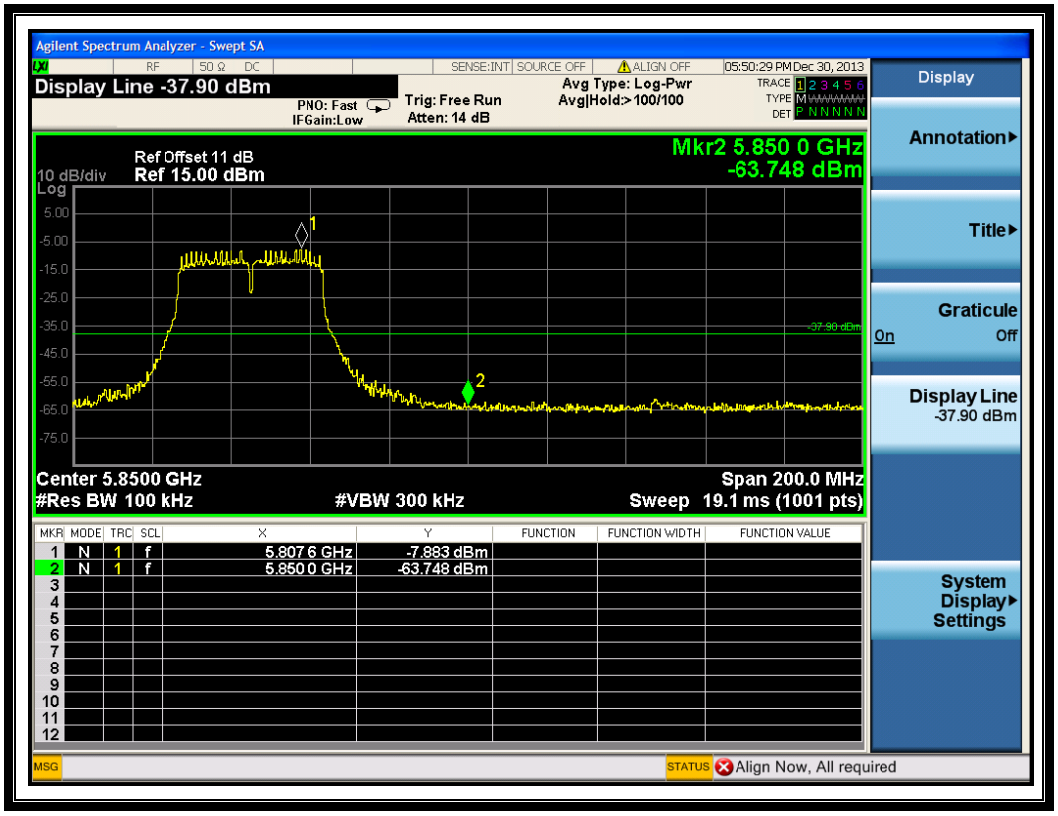
(Channel = 151, 30MHz to 40GHz)



(Band Edge@ Channel = 151)



(Channel = 159, 30MHz to 40GHz)



(Band Edge@ Channel = 159)

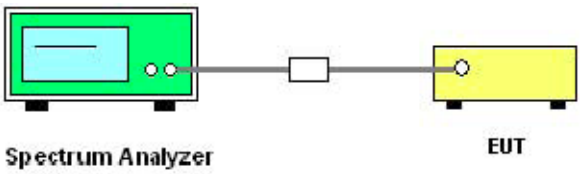
3.5. Power spectral density (PSD)

3.5.1. Requirement

According to FCC section 15.247(e), the same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used.

3.5.2. Test Description

A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EXA Signal Analzyer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11

3.5.3. Test Result

The lowest, middle and highest channels are tested to verify the band edge emissions.

3.5.3.1. 802.11b Test mode

A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-10.465	8	PASS
6	2437	-10.271	8	PASS
11	2462	-11.293	8	PASS
Measurement uncertainty: ±1.3dB				

B. Test Plots:

(Channel = 1 @ 802.11b)

(Channel = 6 @ 802.11b)

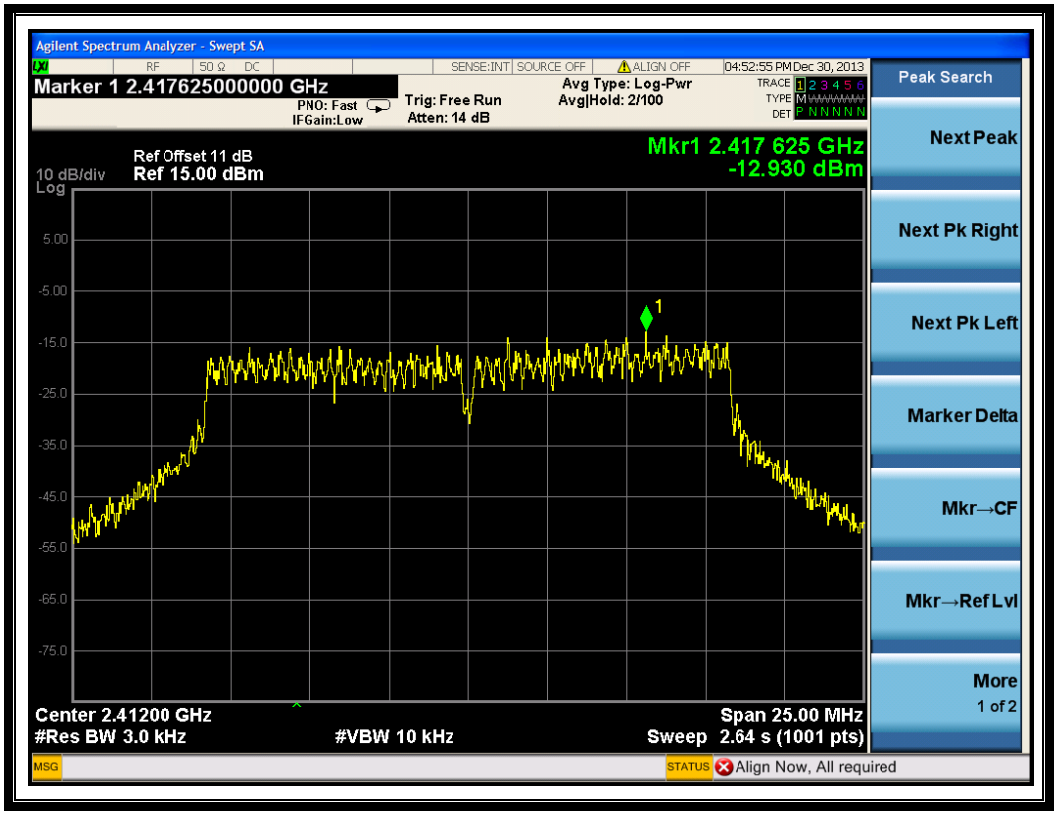
(Channel = 11 @ 802.11b)

3.5.3.2. 802.11g Test mode

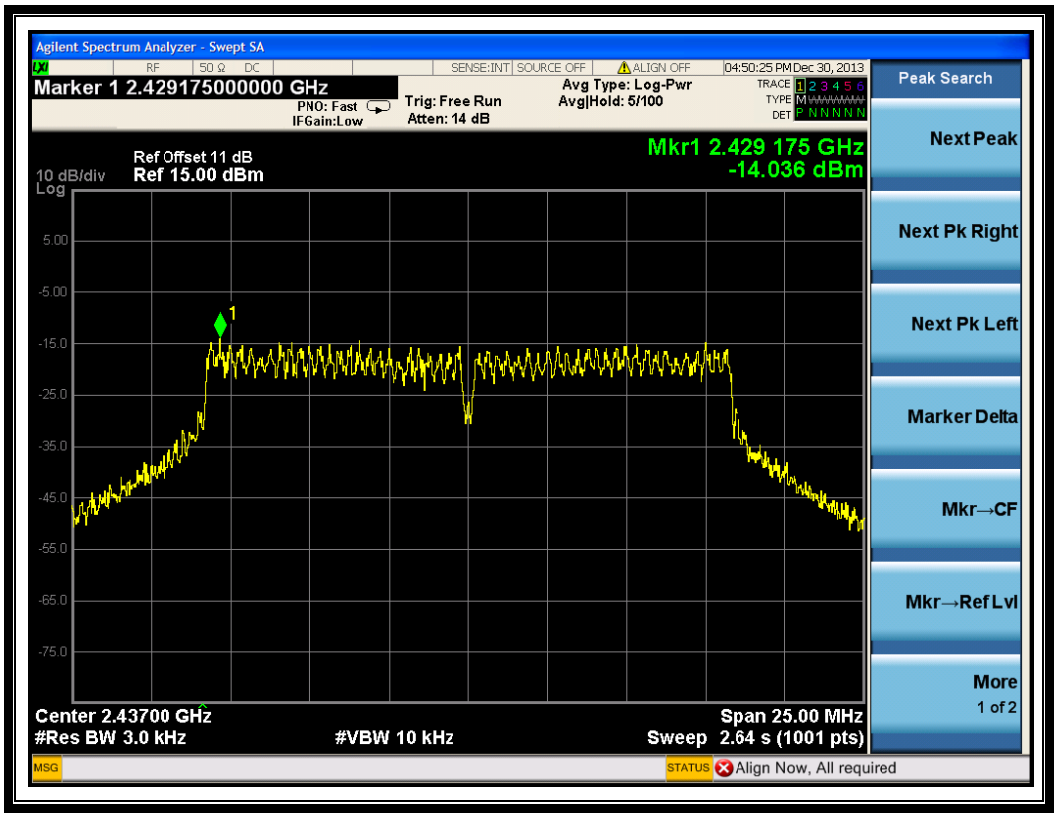
A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-12.930	8	PASS
6	2437	-14.036	8	PASS
11	2462	-13.579	8	PASS
Measurement uncertainty: ±1.3dB				

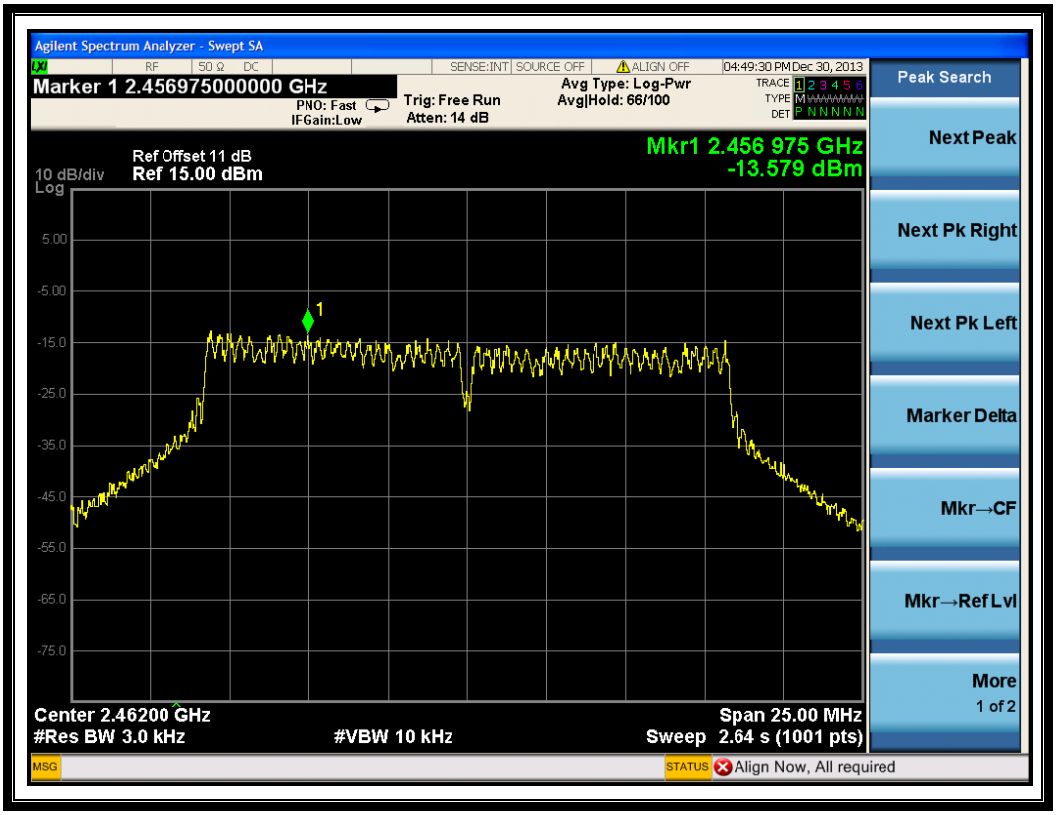
B. Test Plots:



(Channel = 1 @ 802.11g)



(Channel = 6 @ 802.11g)



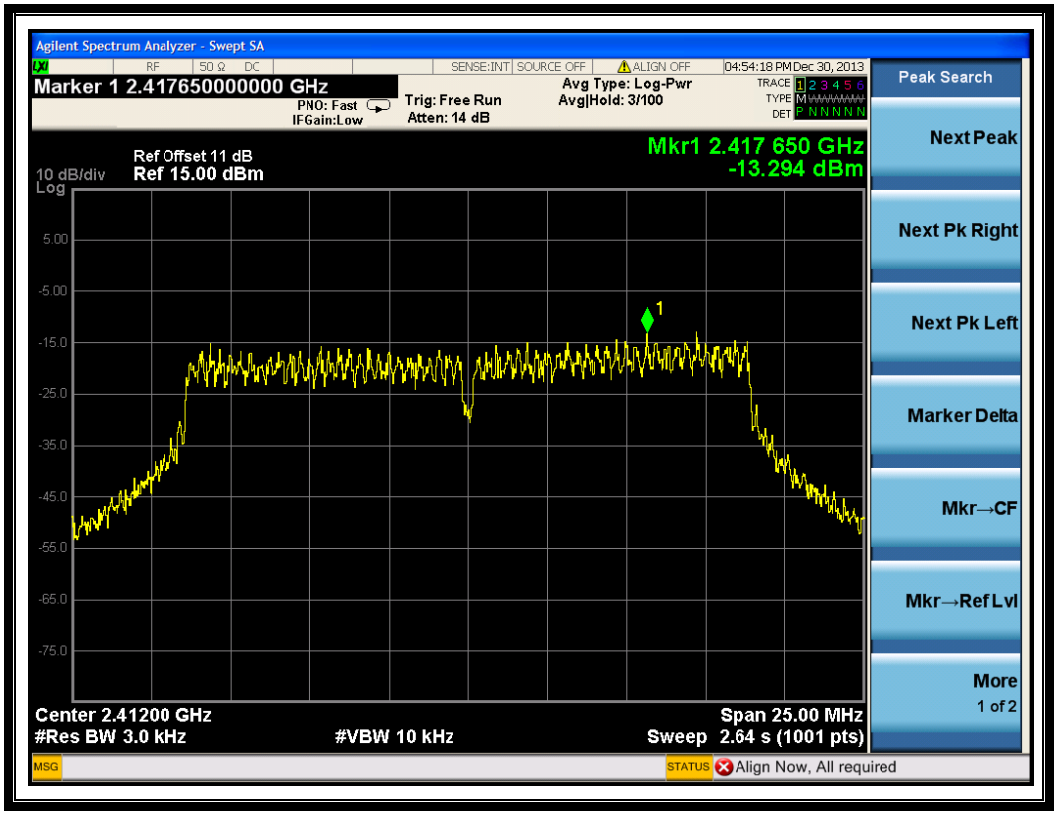
(Channel = 11 @ 802.11g)

3.5.3.3. 802.11n-20MHz Test mode

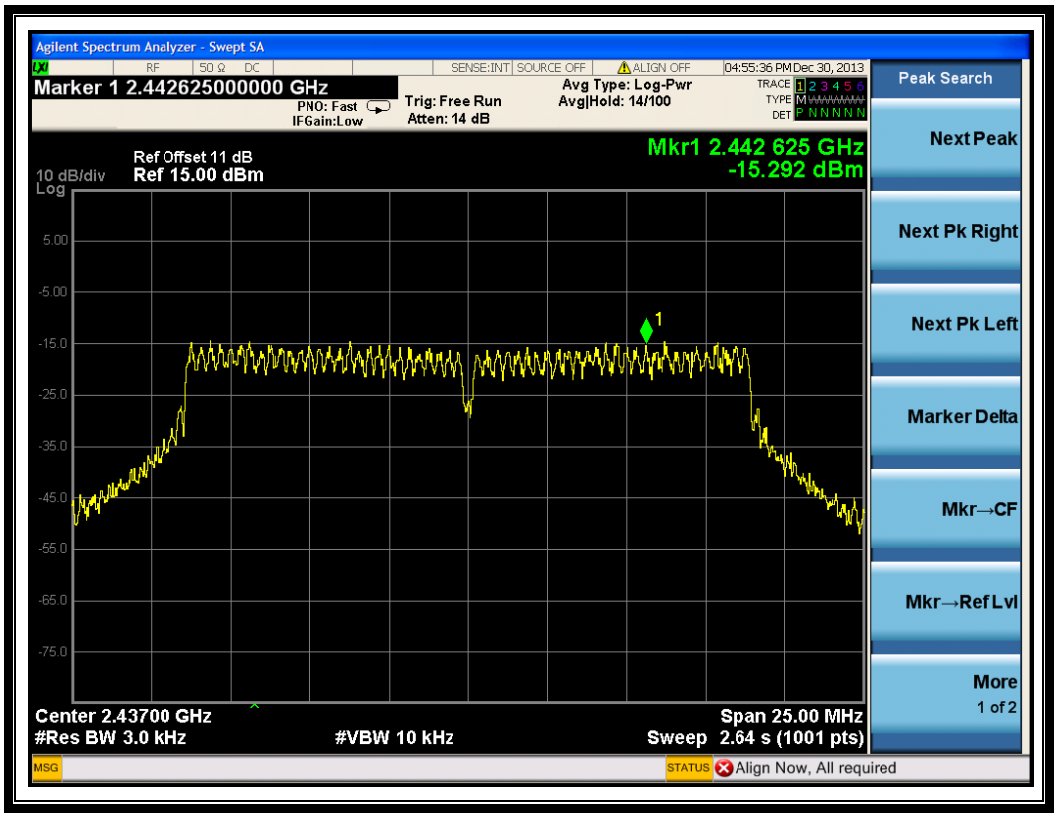
A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-13.294	8	PASS
6	2437	-15.292	8	PASS
11	2462	-13.572	8	PASS
149	5745	-17.876	8	PASS
157	5785	-18.055	8	PASS
165	5825	-17.762	8	PASS
Measurement uncertainty: ±1.3dB				

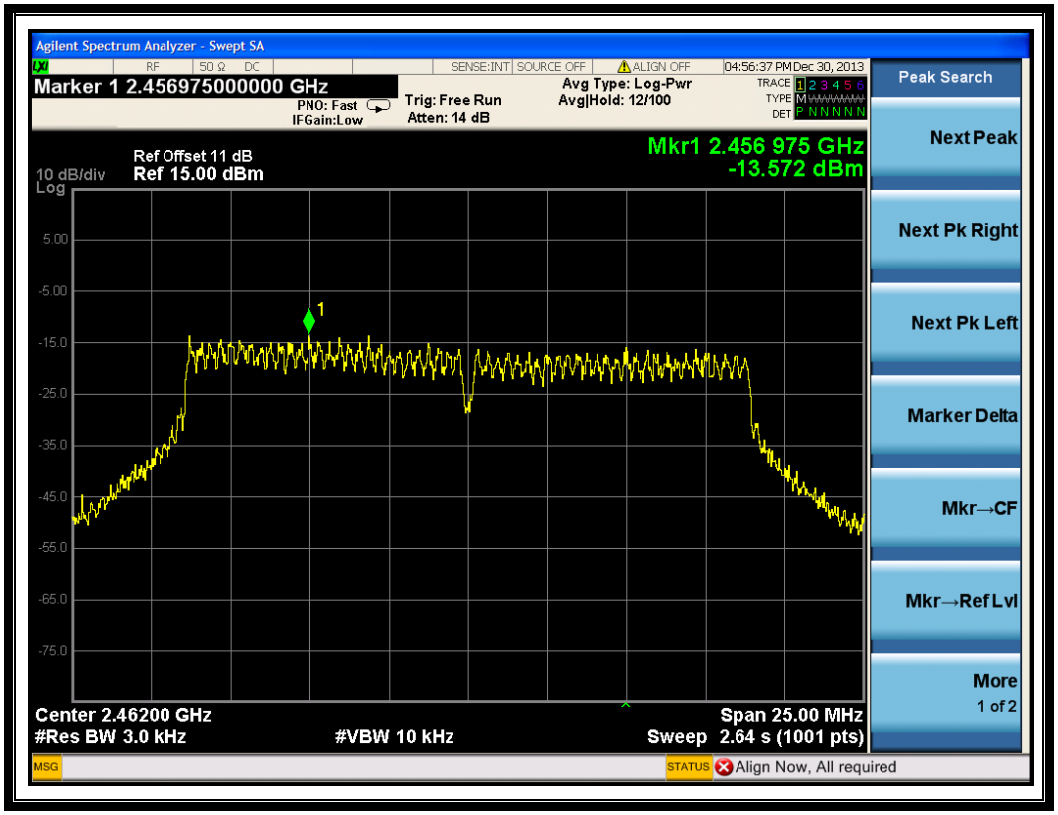
B. Test Plots:



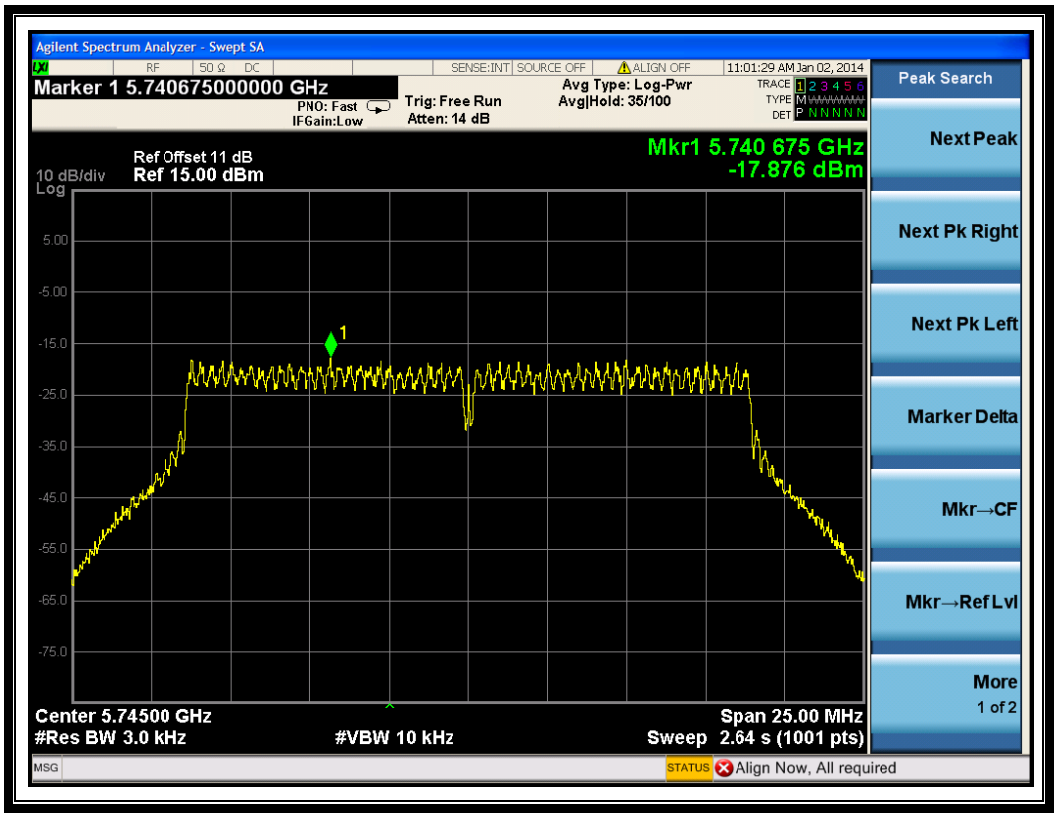
(Channel = 1 @ 802.11n-20MHz)



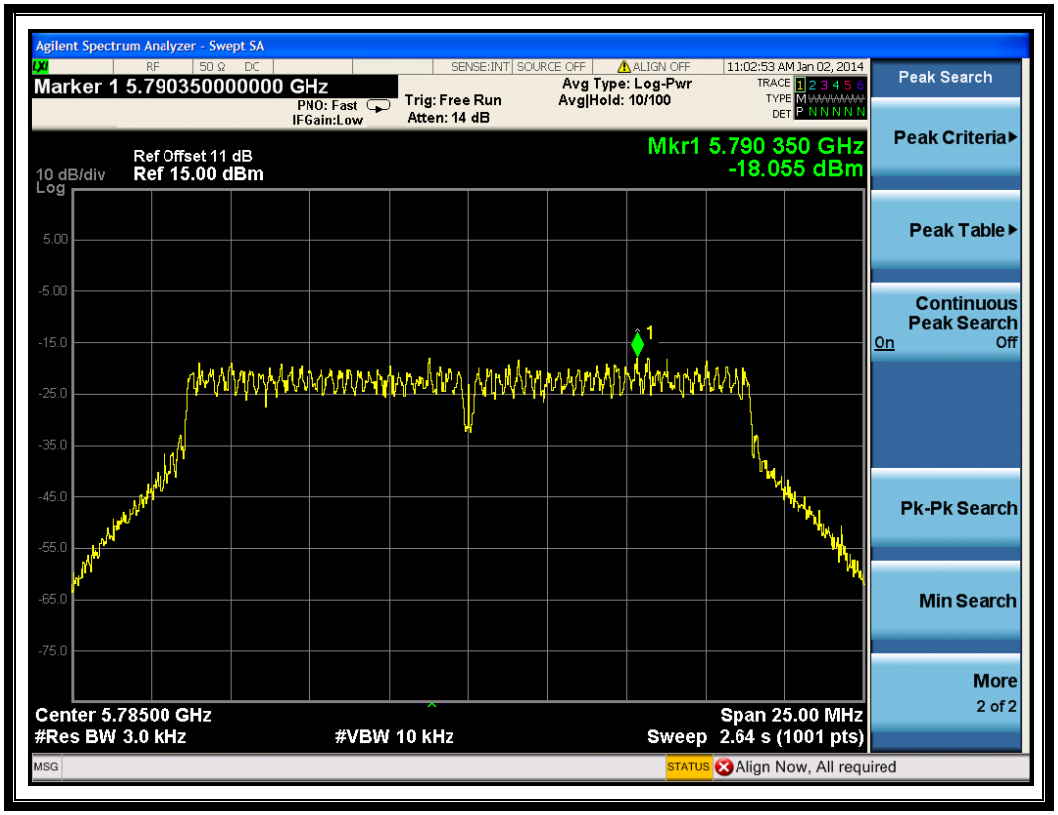
(Channel = 6 @ 802.11n-20MHz)



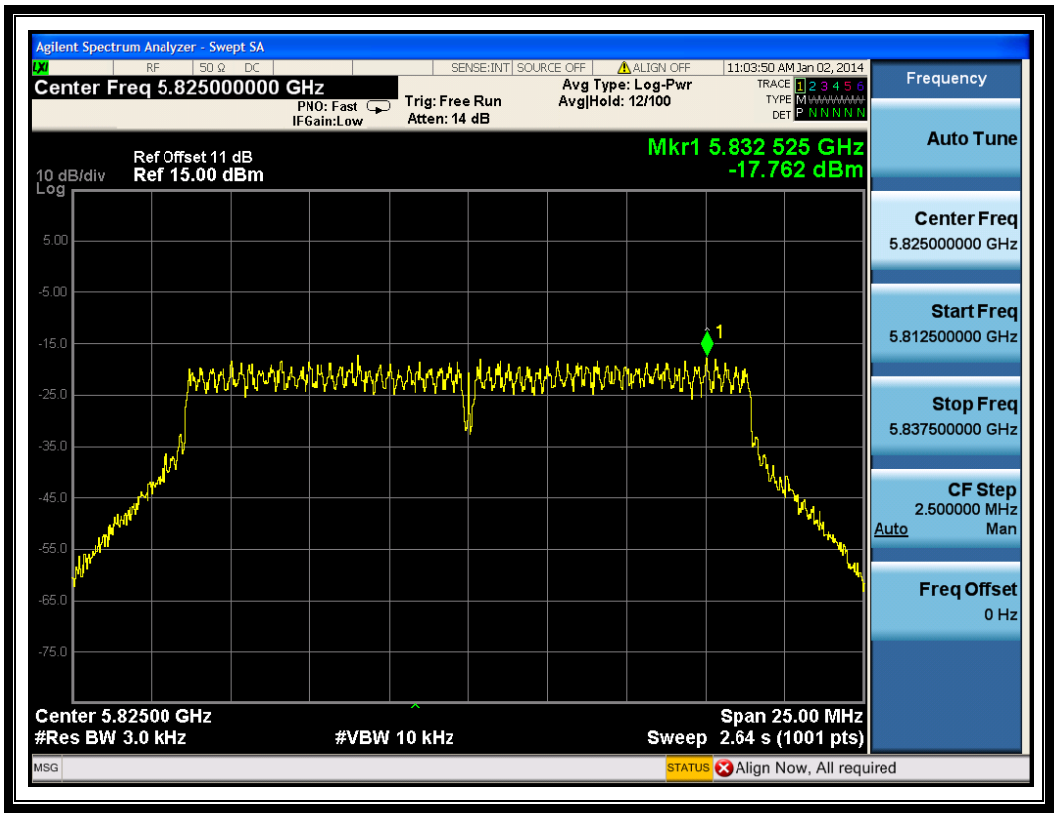
(Channel = 11 @ 802.11n-20MHz)



(Channel = 149 @ 802.11n-20MHz)



(Channel = 157 @ 802.11n-20MHz)



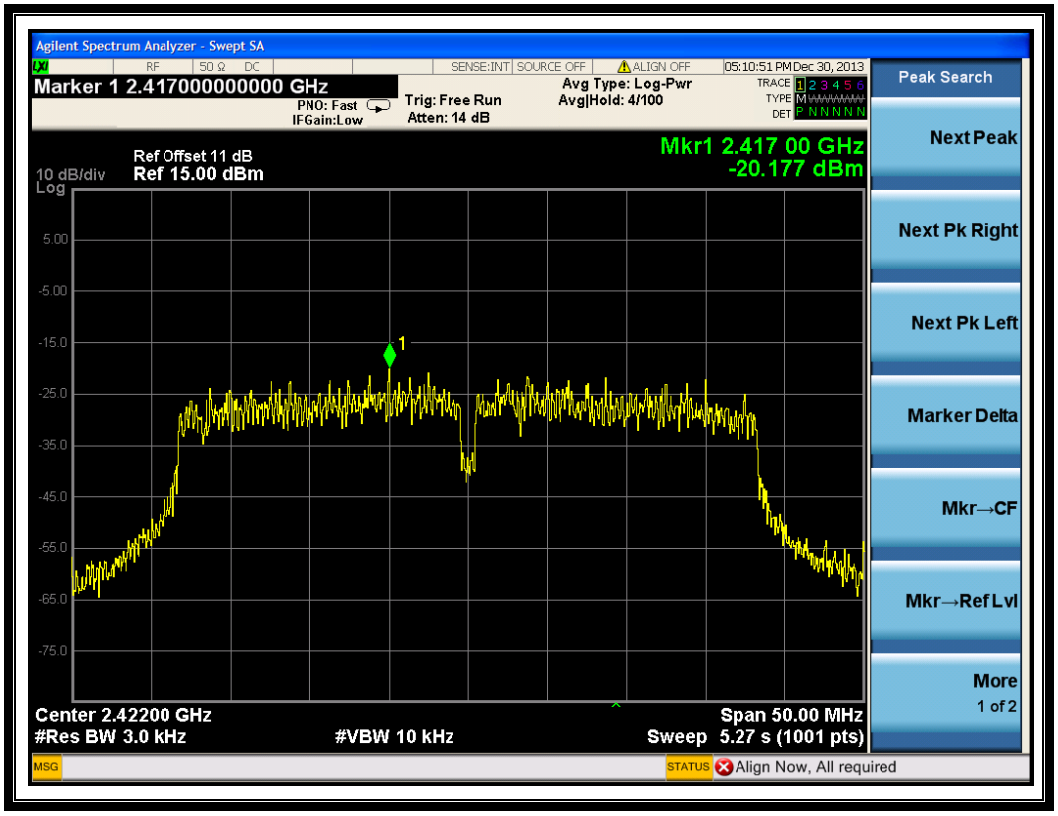
(Channel = 165 @ 802.11n-20MHz)

3.5.3.4. 802.11n-40MHz Test mode

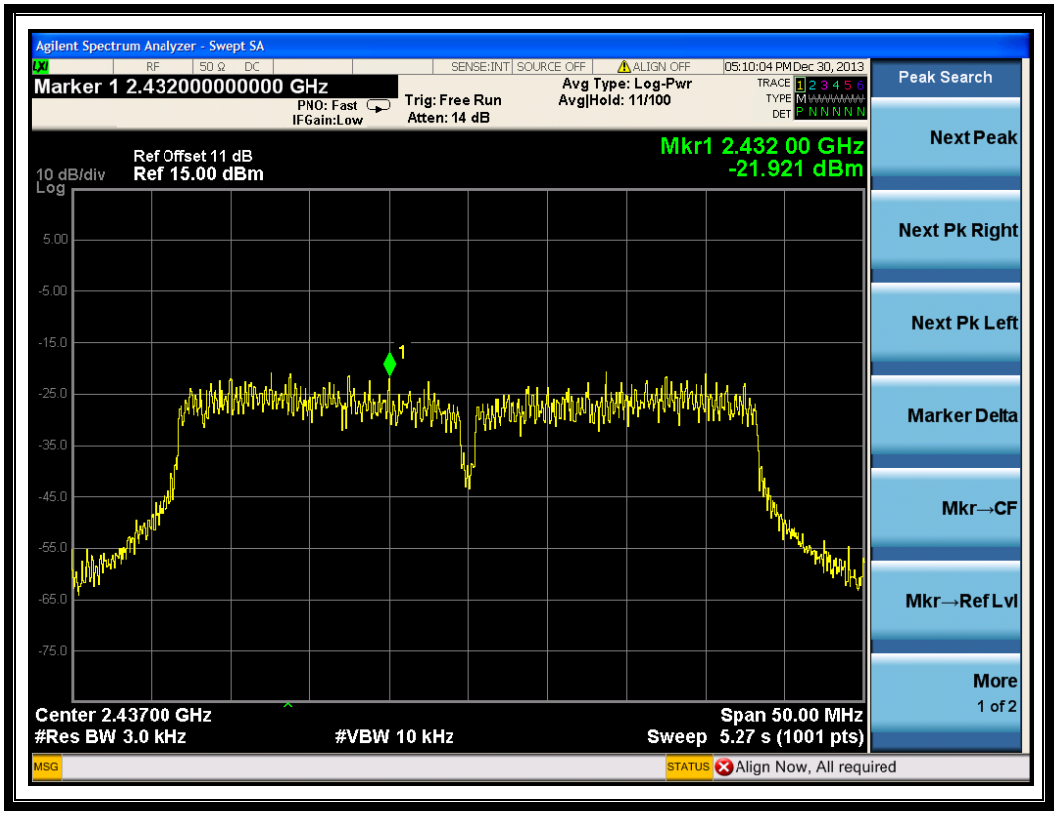
A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
3	2422	-20.177	8	PASS
6	2437	-21.921	8	PASS
9	2452	-20.640	8	PASS
151	5755	-21.270	8	PASS
159	5795	-21.114	8	PASS
Measurement uncertainty: ±1.3dB				

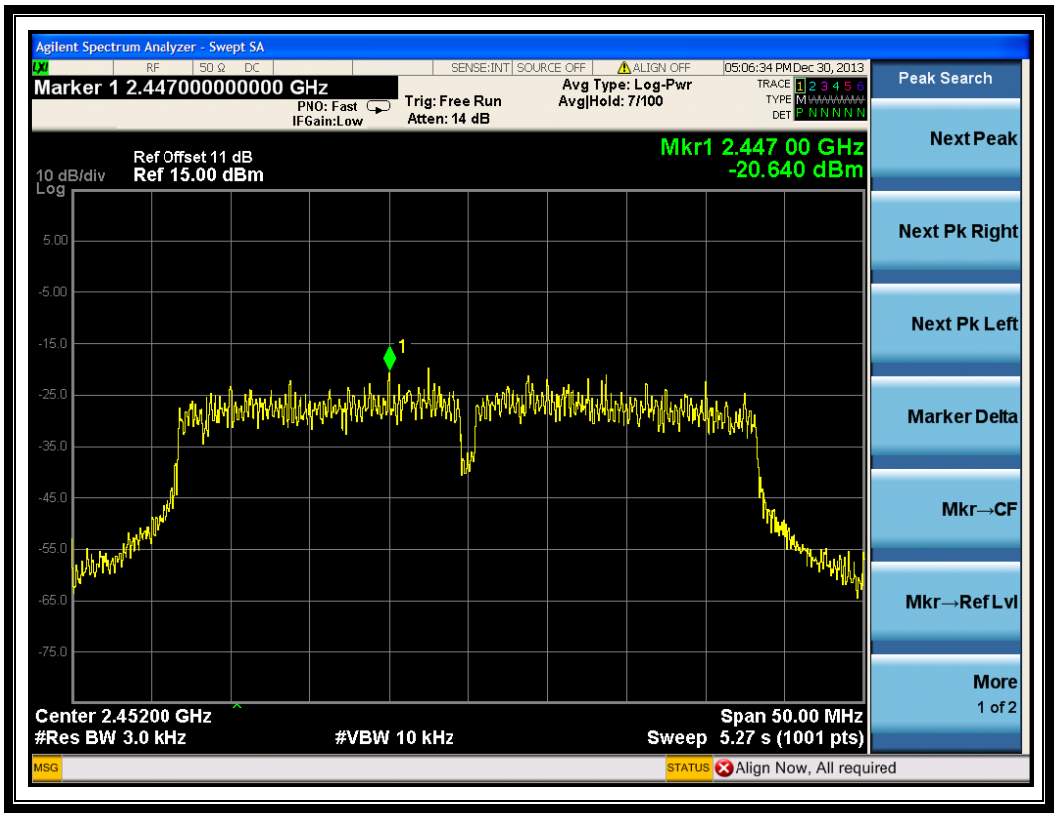
B. Test Plots:



(Channel = 3 @ 802.11n-40MHz)



(Channel = 6 @ 802.11n-40MHz)



(Channel = 9 @ 802.11n-40MHz)