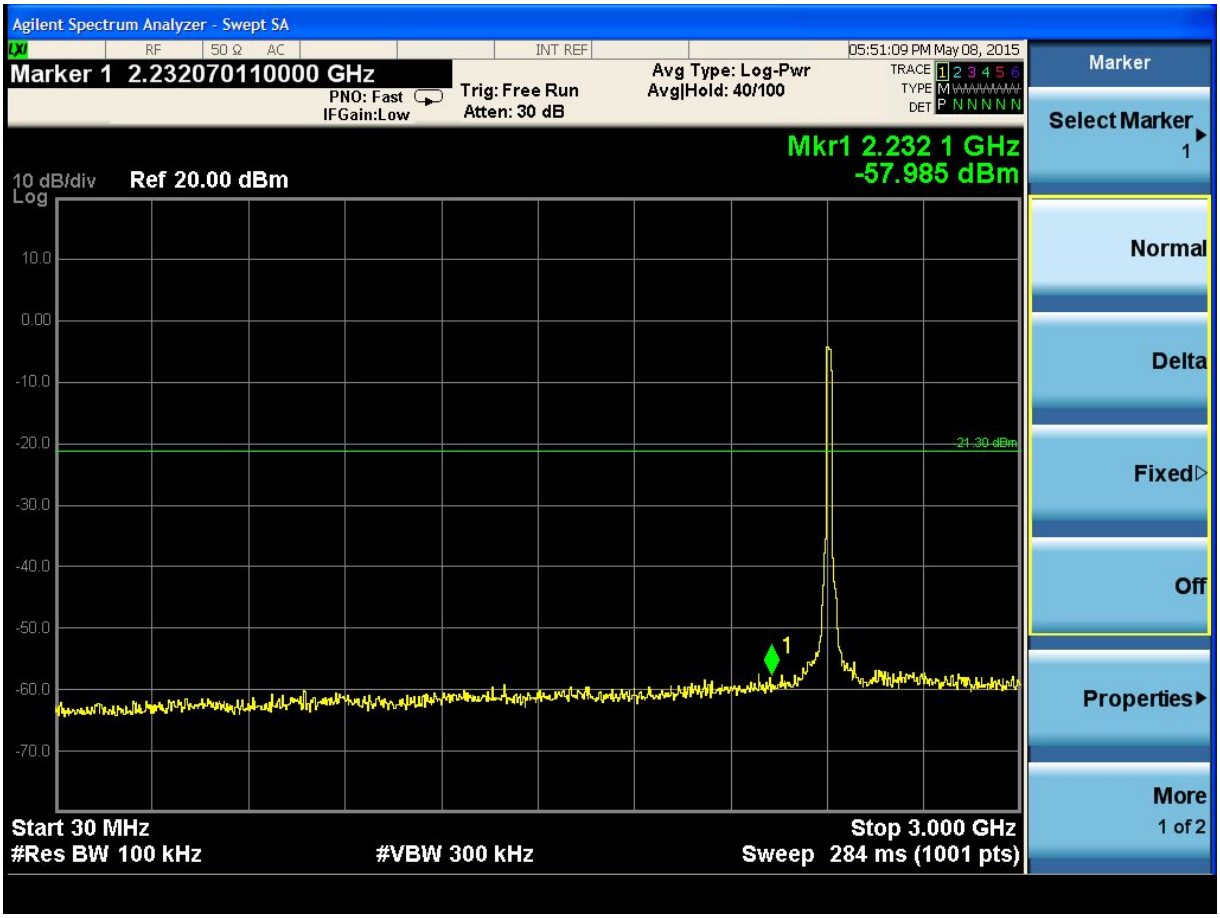
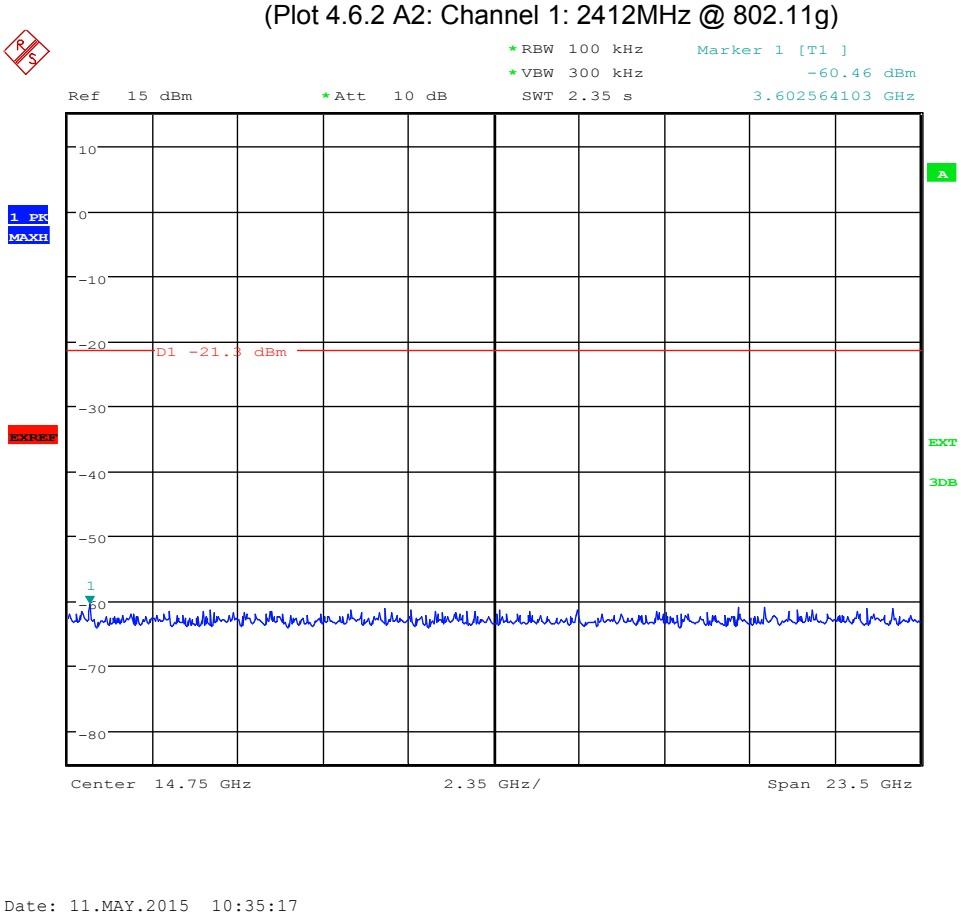
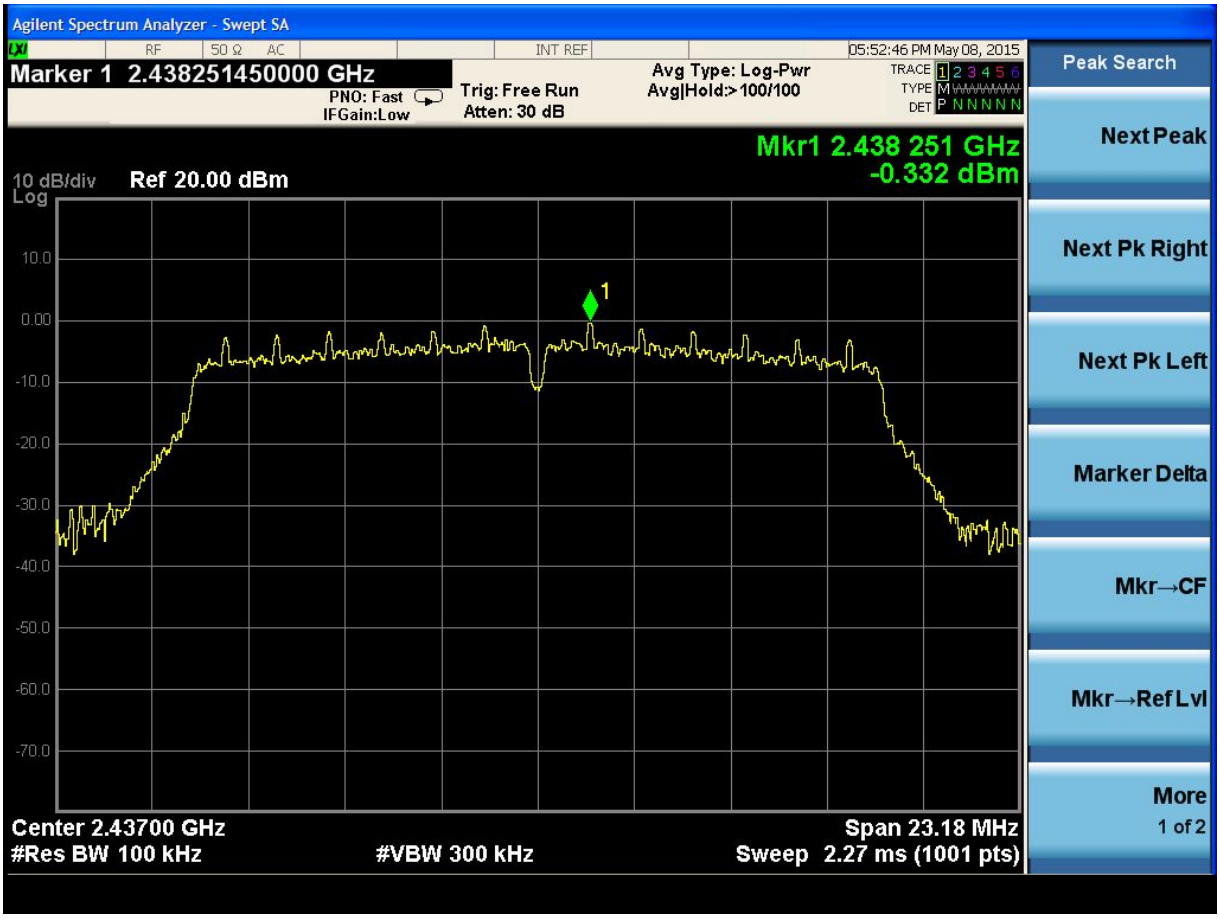


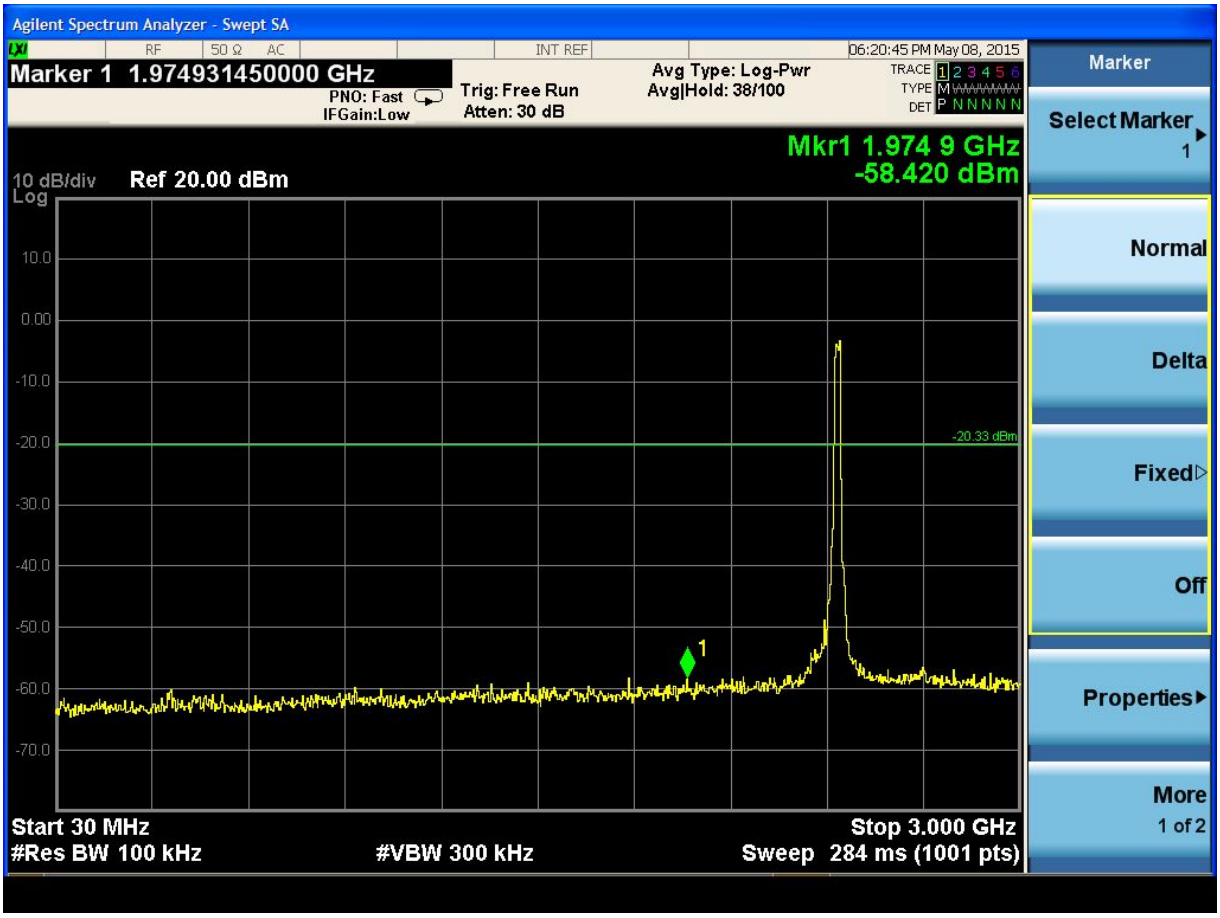
(Plot 4.6.2 A2: Channel 1: 2412MHz @ 802.11g)



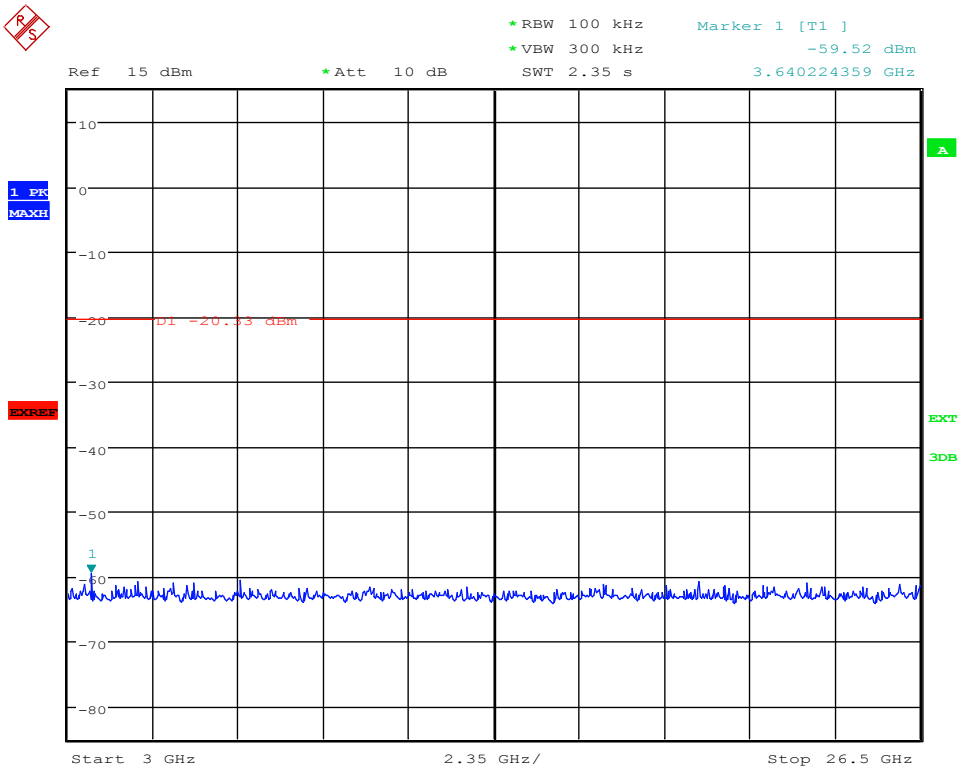
(Plot 4.6.2 A3: Channel 1: 2412MHz @ 802.11g)



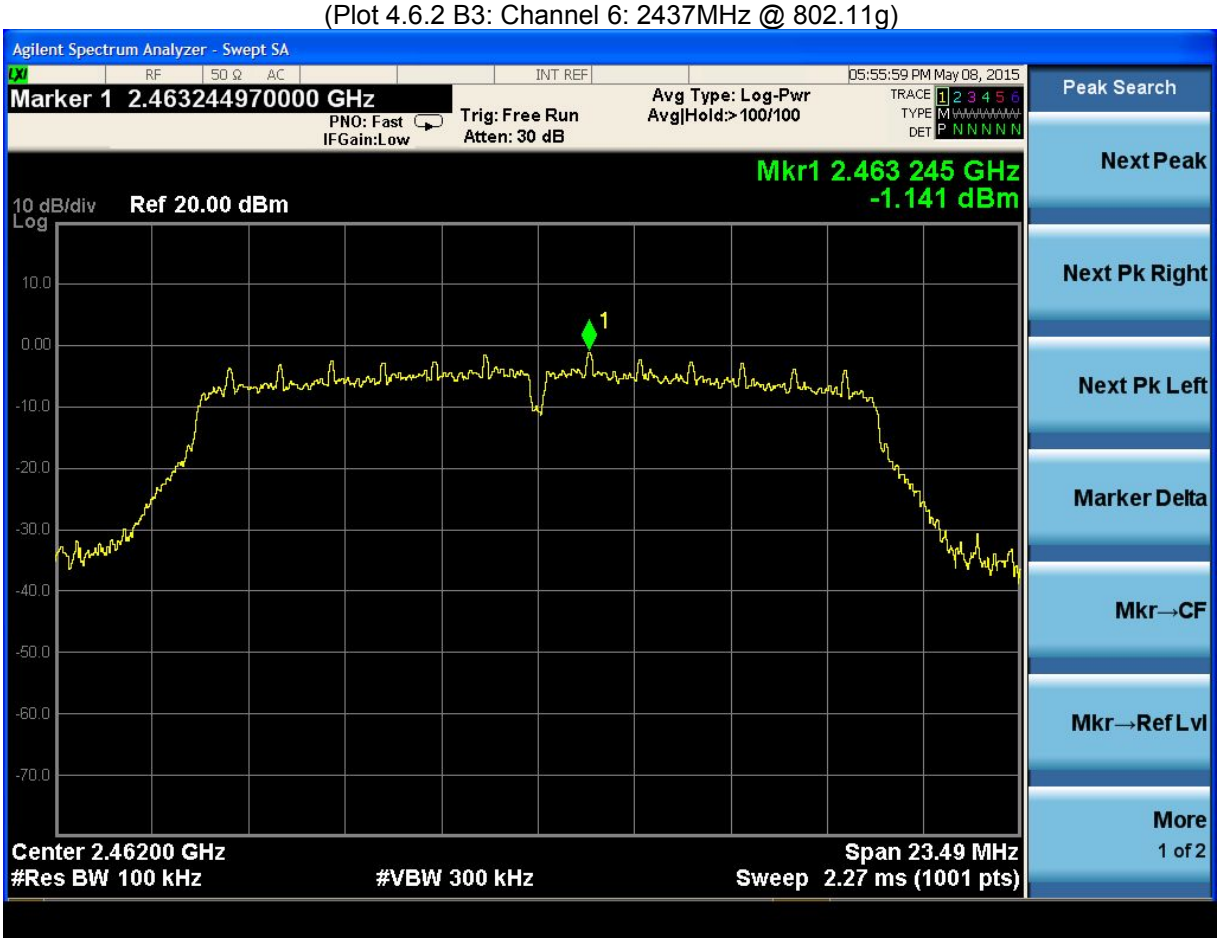
(Plot 4.6.2 B1: Channel 6: 2437MHz @ 802.11g)



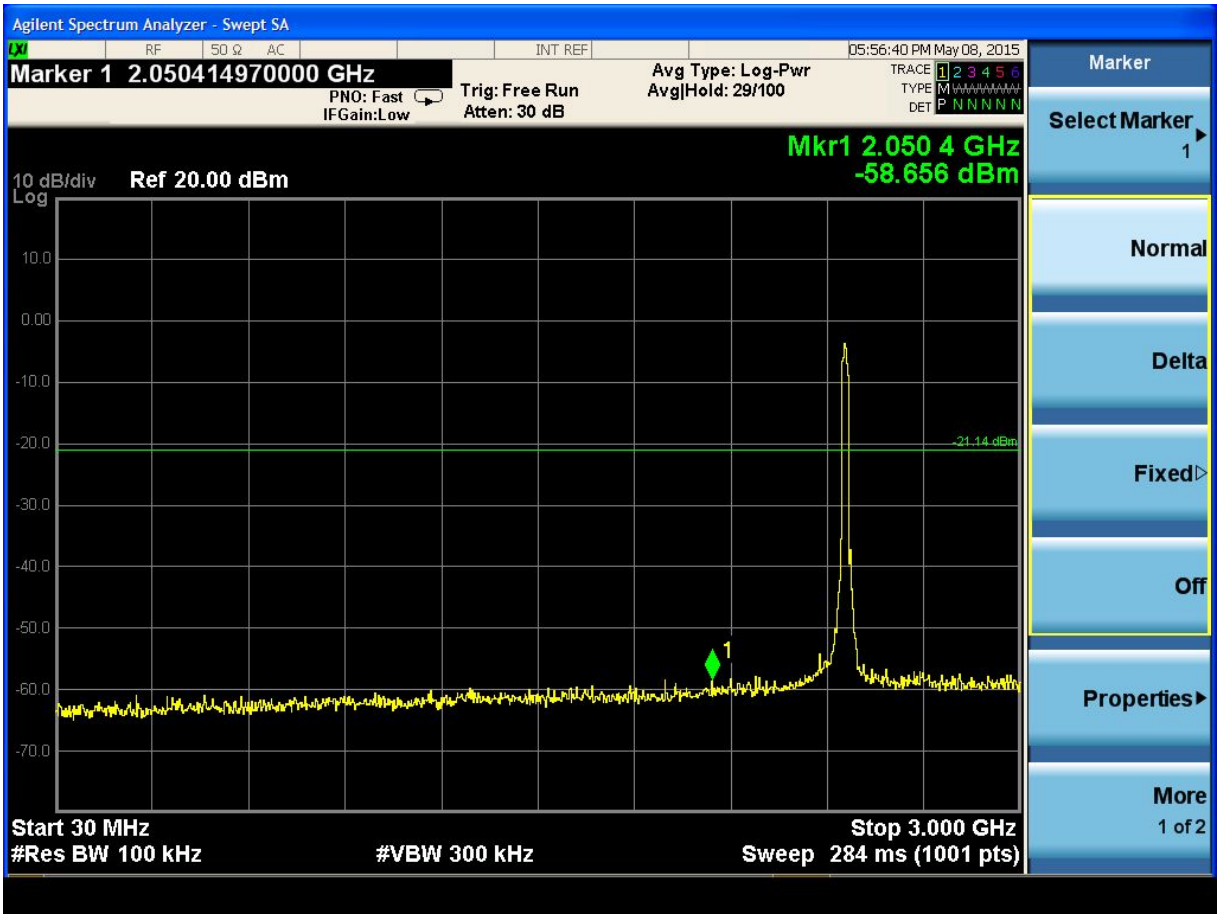
(Plot 4.6.2 B2: Channel 6: 2437MHz @ 802.11g)



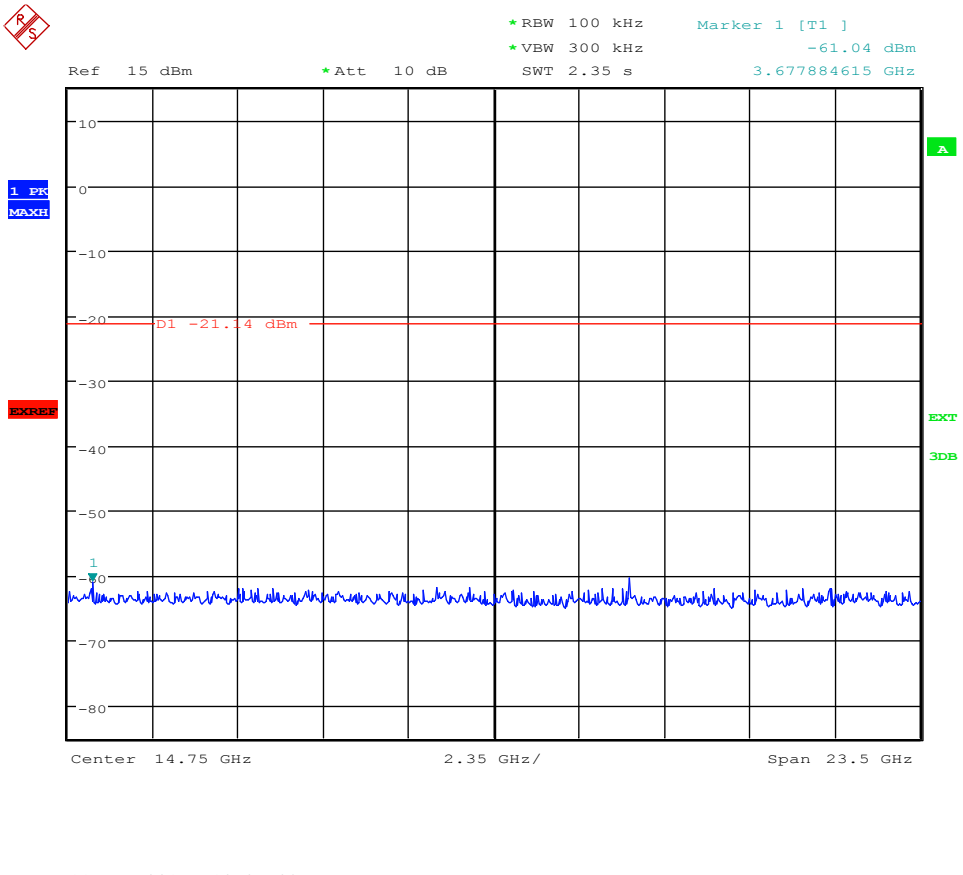
(Plot 4.6.2 B3: Channel 6: 2437MHz @ 802.11g)



(Plot 4.6.2 C1: Channel 11: 2462MHz @ 802.11g)



(Plot 4.6.2 C2: Channel 11: 2462MHz @ 802.11g)



(Plot 4.6.2 C3: Channel 11: 2462MHz @ 802.11g)

4.6.3 802.11n HT20MHz Test Mode

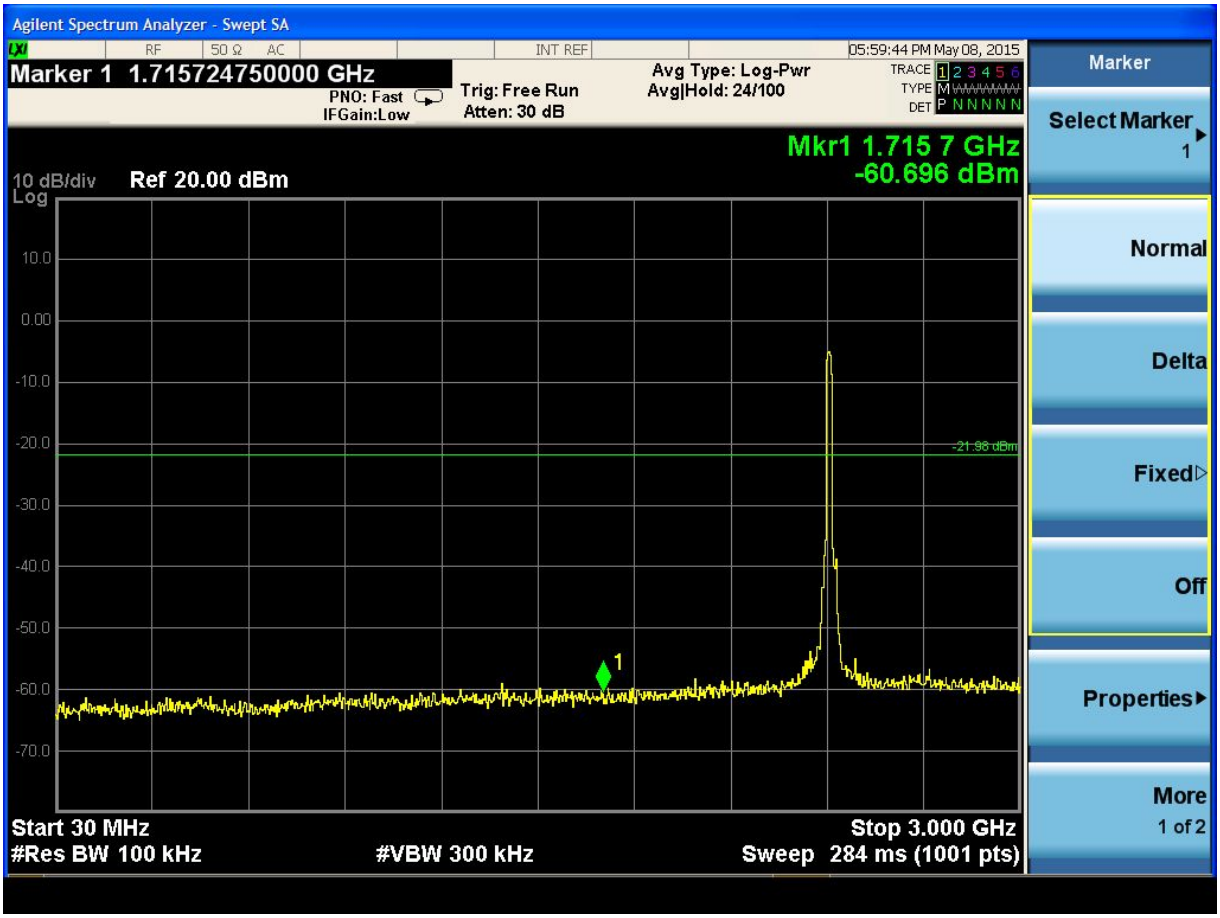
A. Test Verdict

Channel	Frequency (MHz)	Frequency Range	Refer to Plot	Limit (dBc)	Verdict
1	2412	2.412 GHz	Plot 4.6.3 A1	---	PASS
		30MHz -3GHz	Plot 4.6.3 A2	-20	PASS
		3GHz-26.5 GHz	Plot 4.6.3 A3	-20	PASS
6	2437	2.412 GHz	Plot 4.6.3 A1	---	PASS
		30MHz -3GHz	Plot 4.6.3 A2	-20	PASS
		3GHz-26.5 GHz	Plot 4.6.3 A3	-20	PASS
11	2462	2.412 GHz	Plot 4.6.3 A1	---	PASS
		30MHz -3GHz	Plot 4.6.3 A2	-20	PASS
		3GHz-26.5 GHz	Plot 4.6.3 A3	-20	PASS

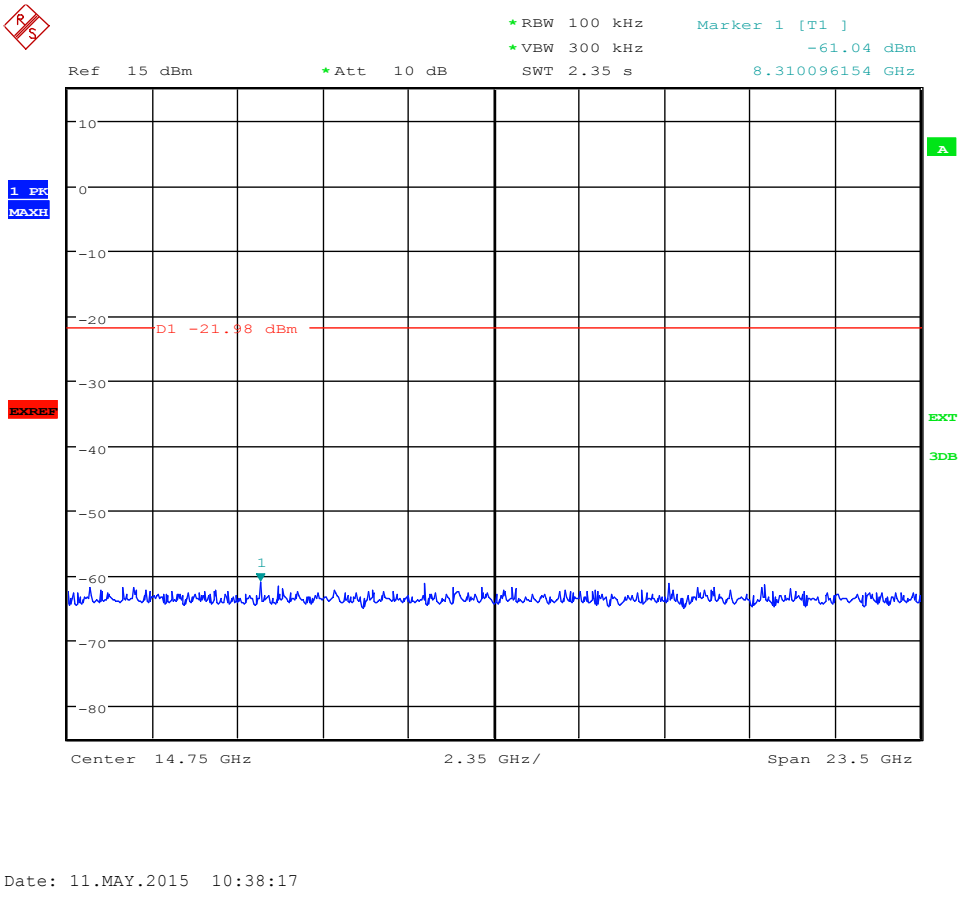
Note:
1. For 802.11n HT20MHz mode at finial test to get the worst-case emission at 6.5Mbps.
2. The test results including the cable lose.
3. For 9KHz -30MHz,Because there was only background, So We did not recorded data.

B. Test Plots

(Plot 4.6.3 A1: Channel 1: 2412MHz @ 802.11n HT20)

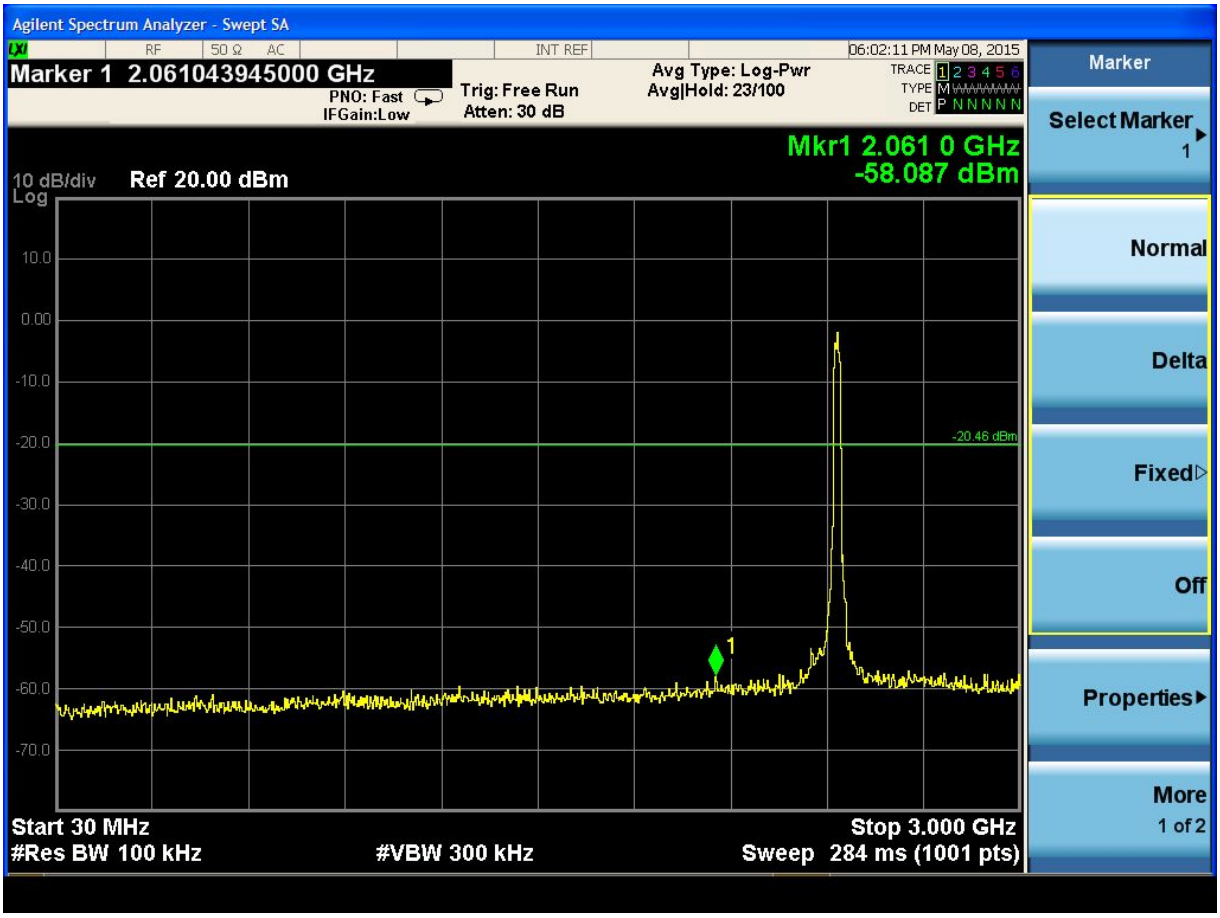


(Plot 4.6.3 A2: Channel 1: 2412MHz @ 802.11n HT20)

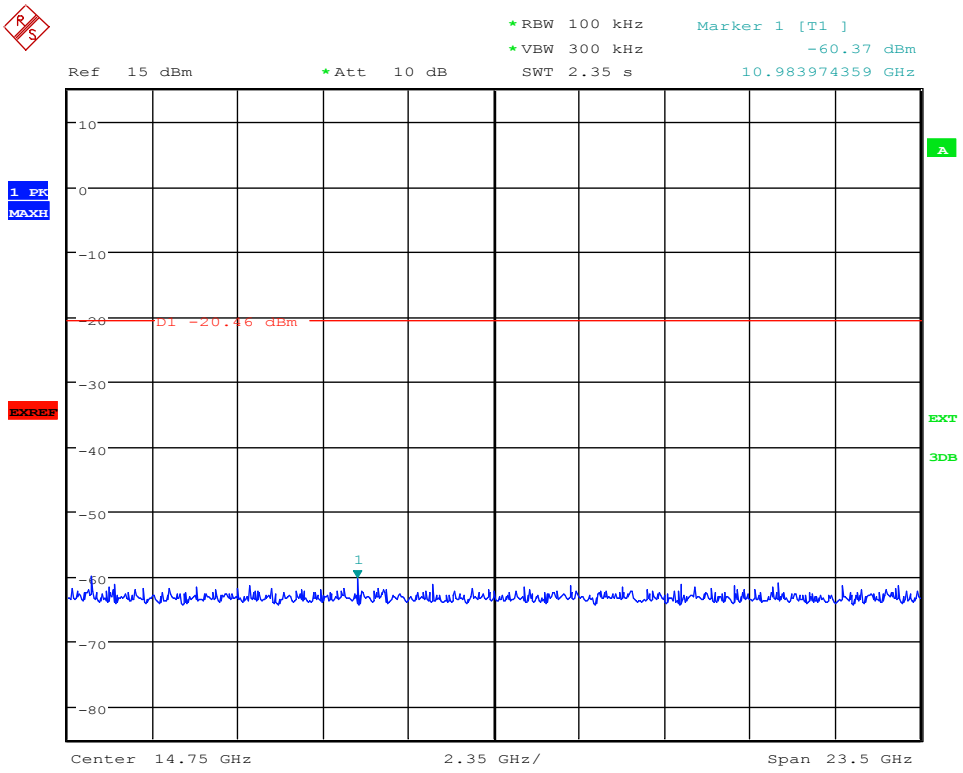


(Plot 4.6.3 A3: Channel 1: 2412MHz @ 802.11n HT20)

(Plot 4.6.3 B1: Channel 6: 2437MHz @ 802.11n HT20)

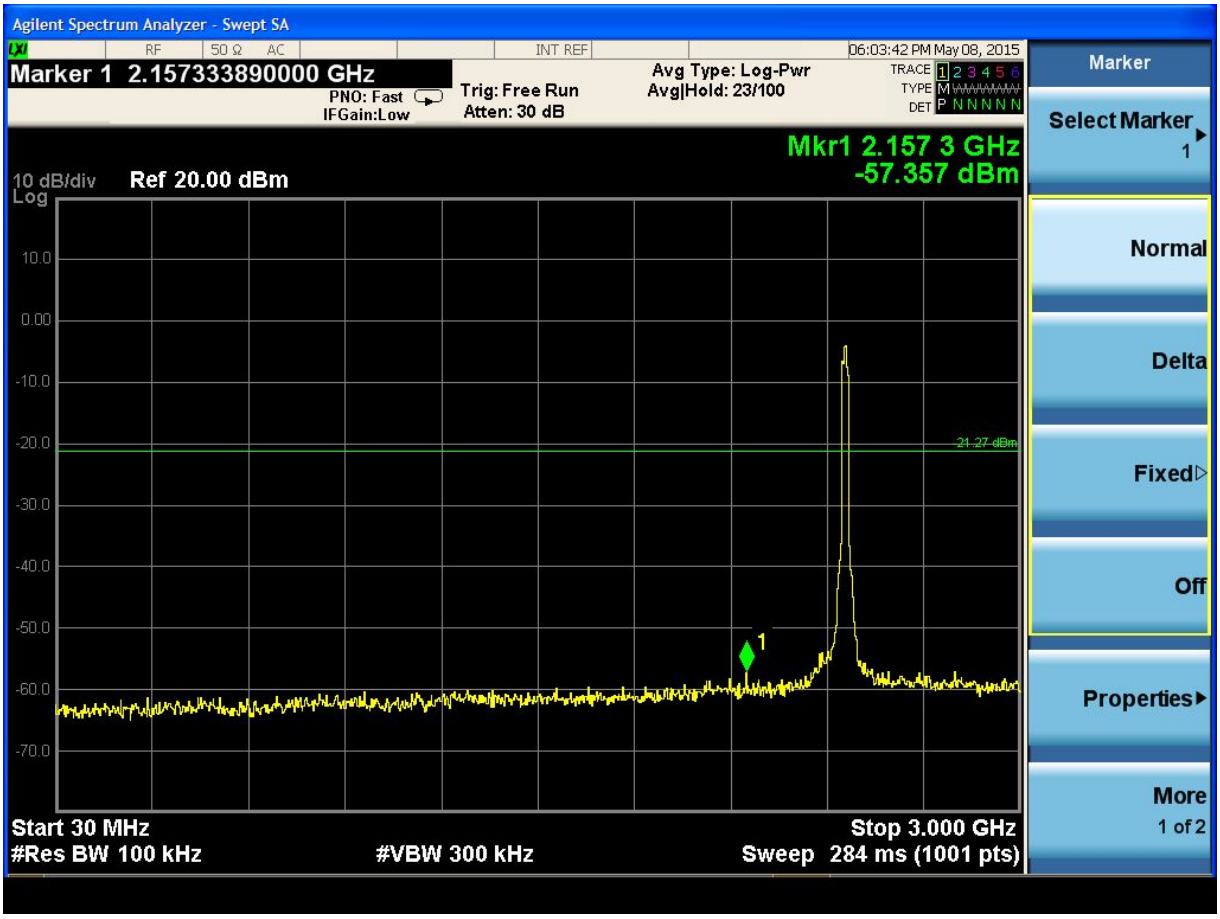


(Plot 4.6.3 B2: Channel 6: 2437MHz @ 802.11n HT20)

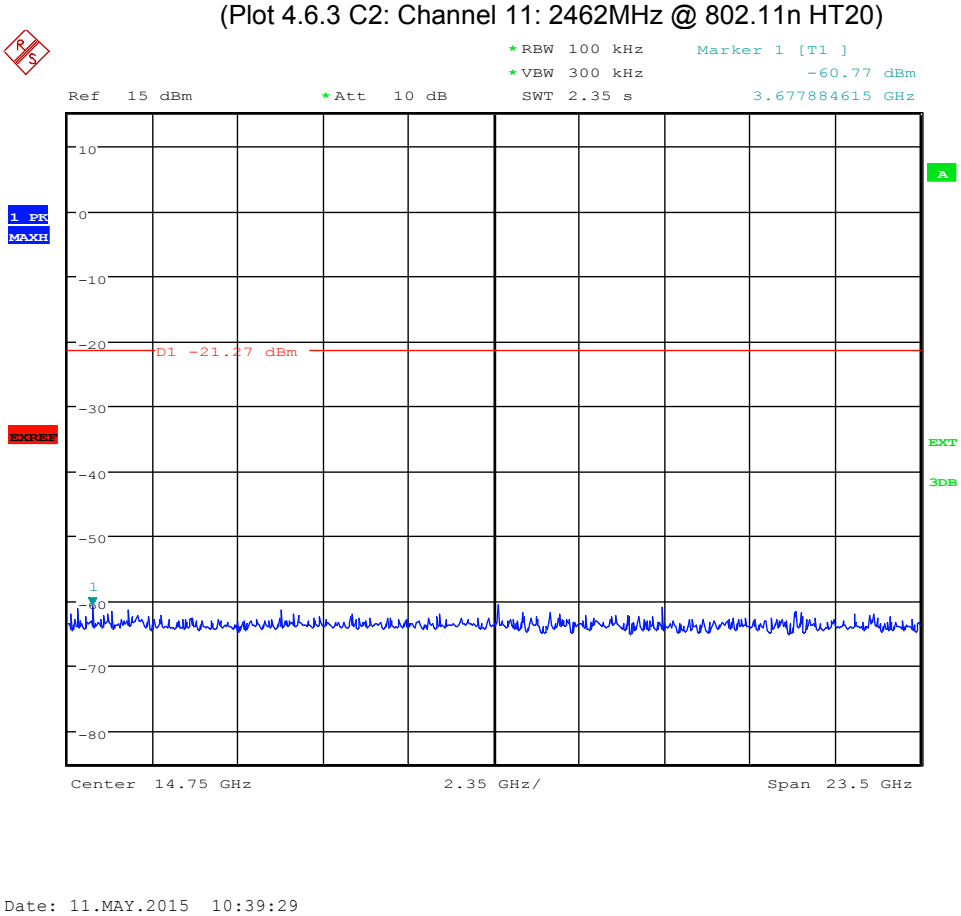


(Plot 4.6.3 B2: Channel 6: 2437MHz @ 802.11n HT20)

(Plot 4.6.3 C1: Channel 11: 2462MHz @ 802.11n HT20)



(Plot 4.6.3 C2: Channel 11: 2462MHz @ 802.11n HT20)



(Plot 4.6.3 C2: Channel 11: 2462MHz @ 802.11n HT20)

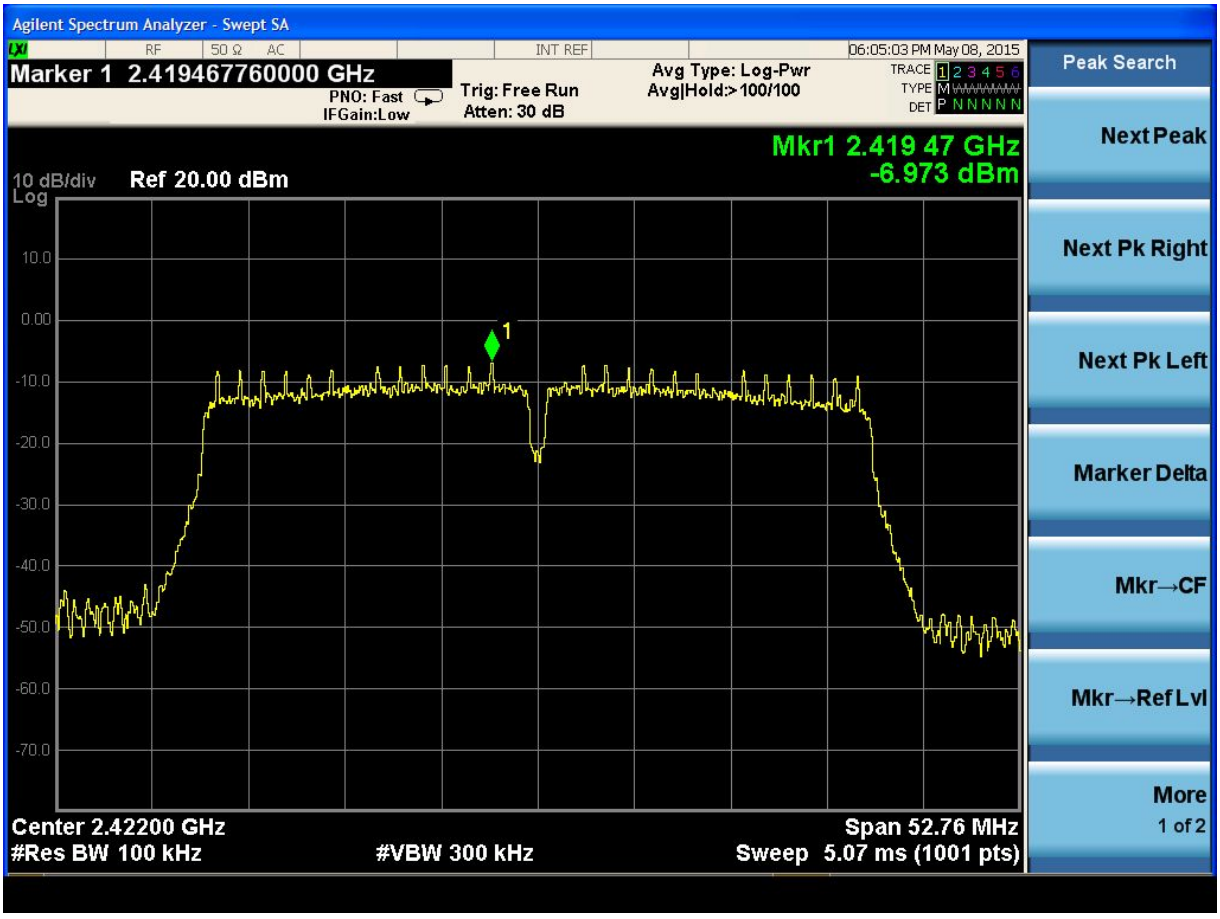
4.6.4 802.11n HT40MHz Test Mode

A. Test Verdict

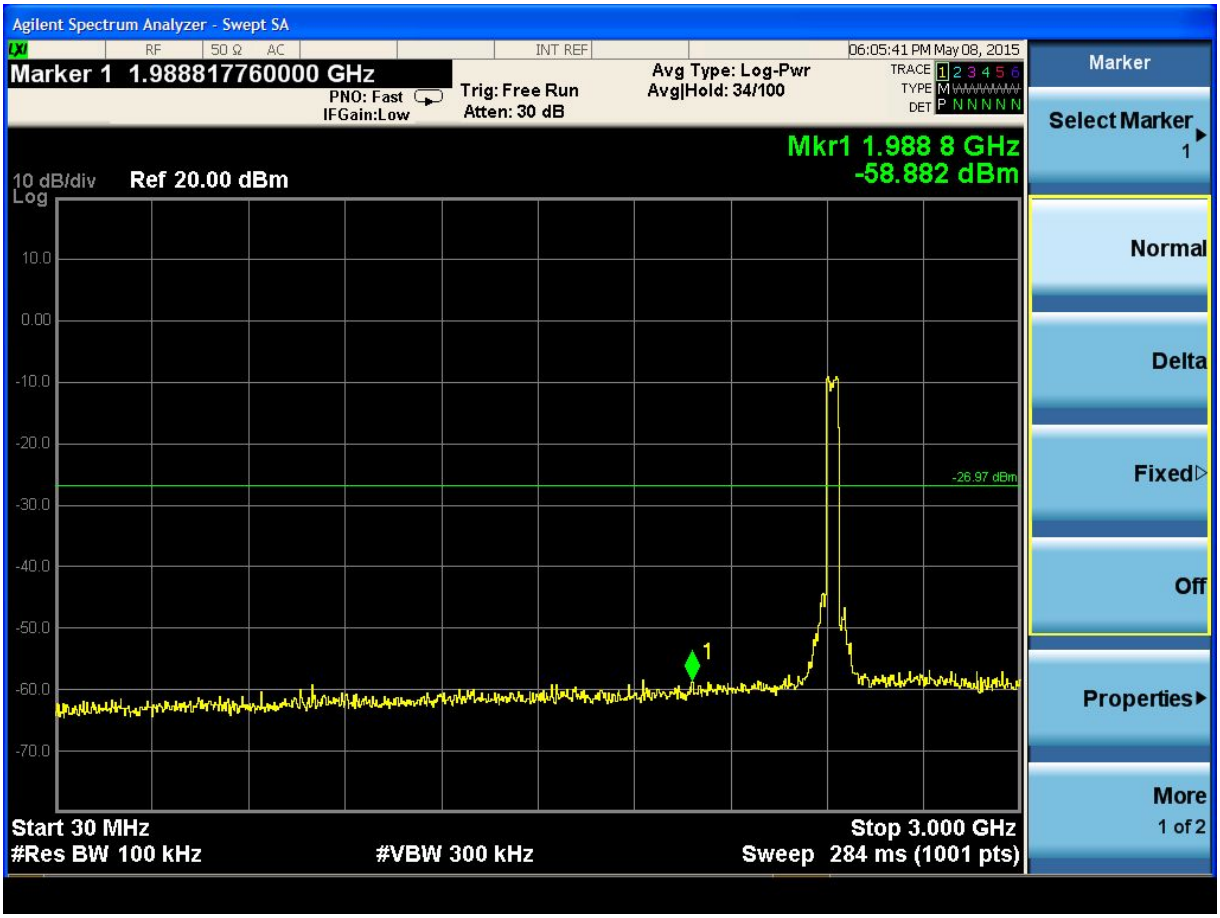
Channel	Frequency (MHz)	Frequency Range	Refer to Plot	Limit (dBc)	Verdict
3	2422	2.412 GHz	Plot 4.6.4 A1	---	PASS
		30MHz -3GHz	Plot 4.6.4 A2	-20	PASS
		3GHz-26.5 GHz	Plot 4.6.4 A3	-20	PASS
6	2437	2.412 GHz	Plot 4.6.4 B1	---	PASS
		30MHz -3GHz	Plot 4.6.4 B2	-20	PASS
		3GHz-26.5 GHz	Plot 4.6.4 B3	-20	PASS
9	2452	2.412 GHz	Plot 4.6.4 C1	---	PASS
		30MHz -3GHz	Plot 4.6.3 C2	-20	PASS
		3GHz-26.5 GHz	Plot 4.6.3 C3	-20	PASS

Note:
1. For 802.11n HT40MHz mode at finial test to get the worst-case emission at 13.5Mbps.
2. The test results including the cable lose.
3. For 9KHz -30MHz,Because there was only background, So We did not recorded data.

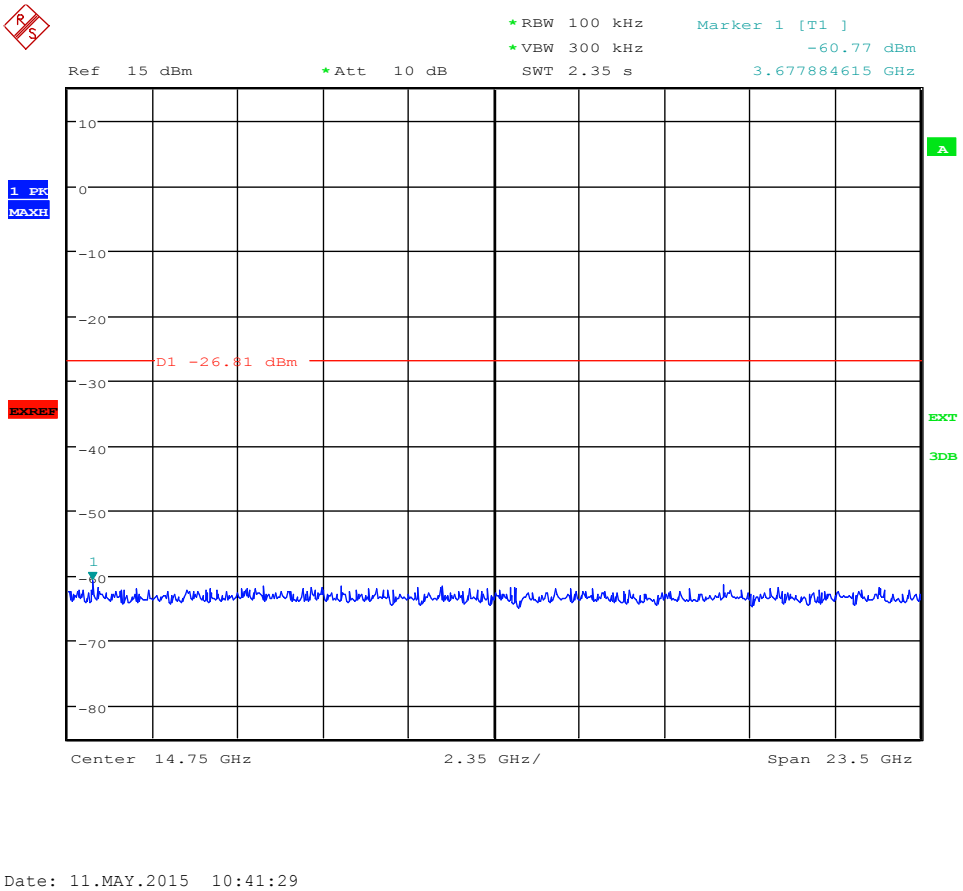
B. Test Plots



(Plot 4.6.4 A1: Channel 3: 2422MHz @ 802.11n HT40)

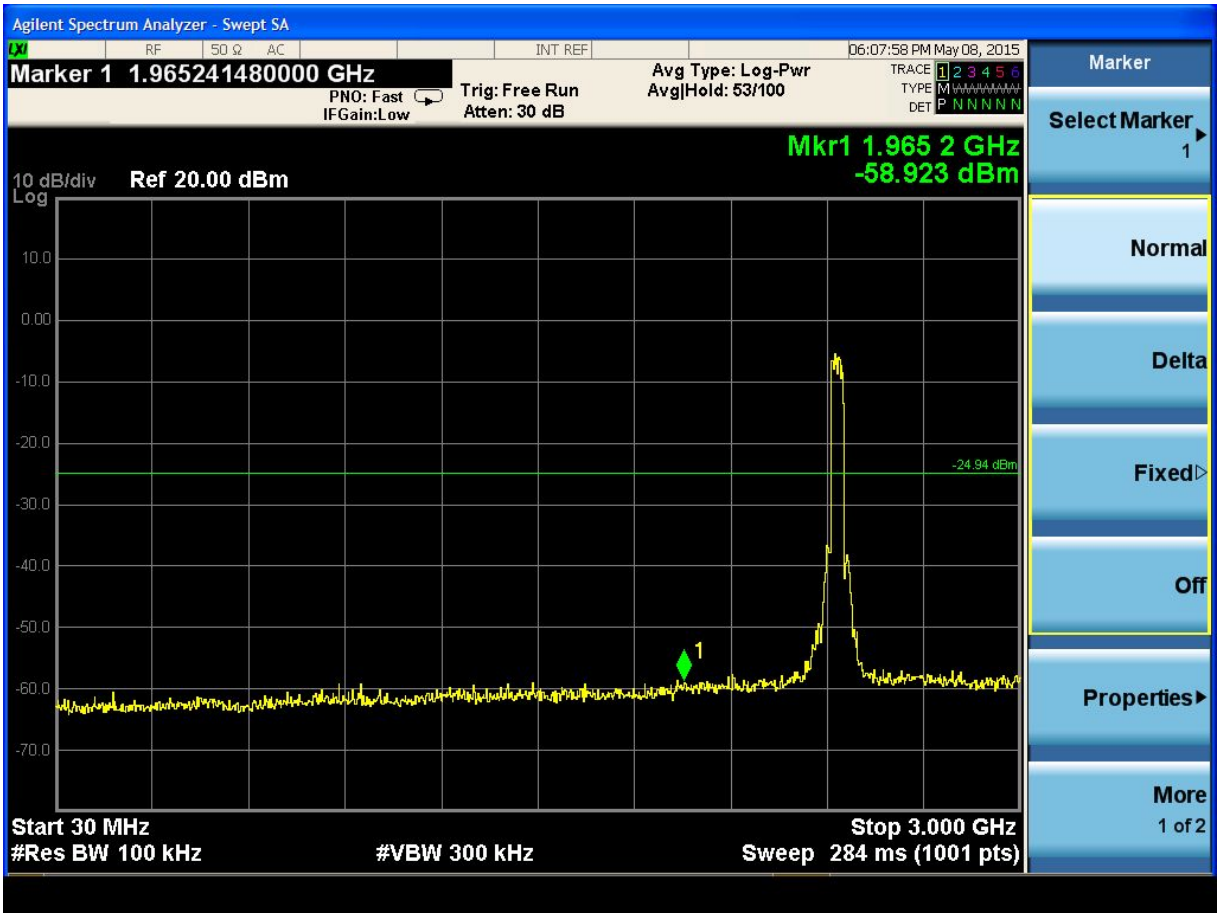


(Plot 4.6.4 A2: Channel 3: 2422MHz @ 802.11n HT40)

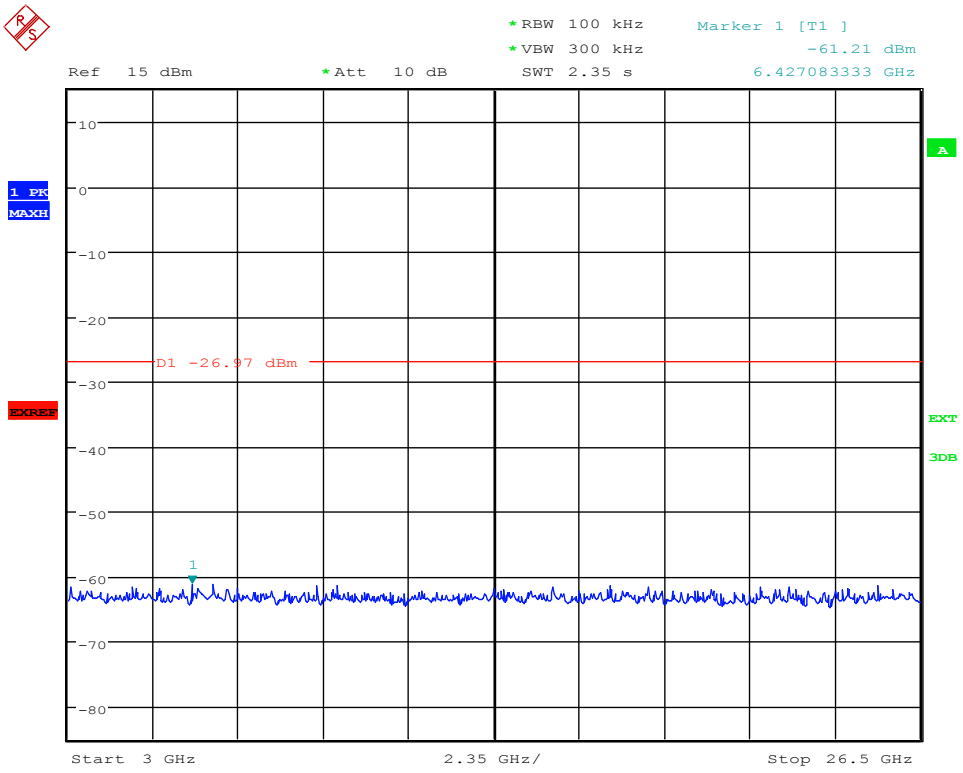


(Plot 4.6.4 A3: Channel 3: 2422MHz @ 802.11n HT40)

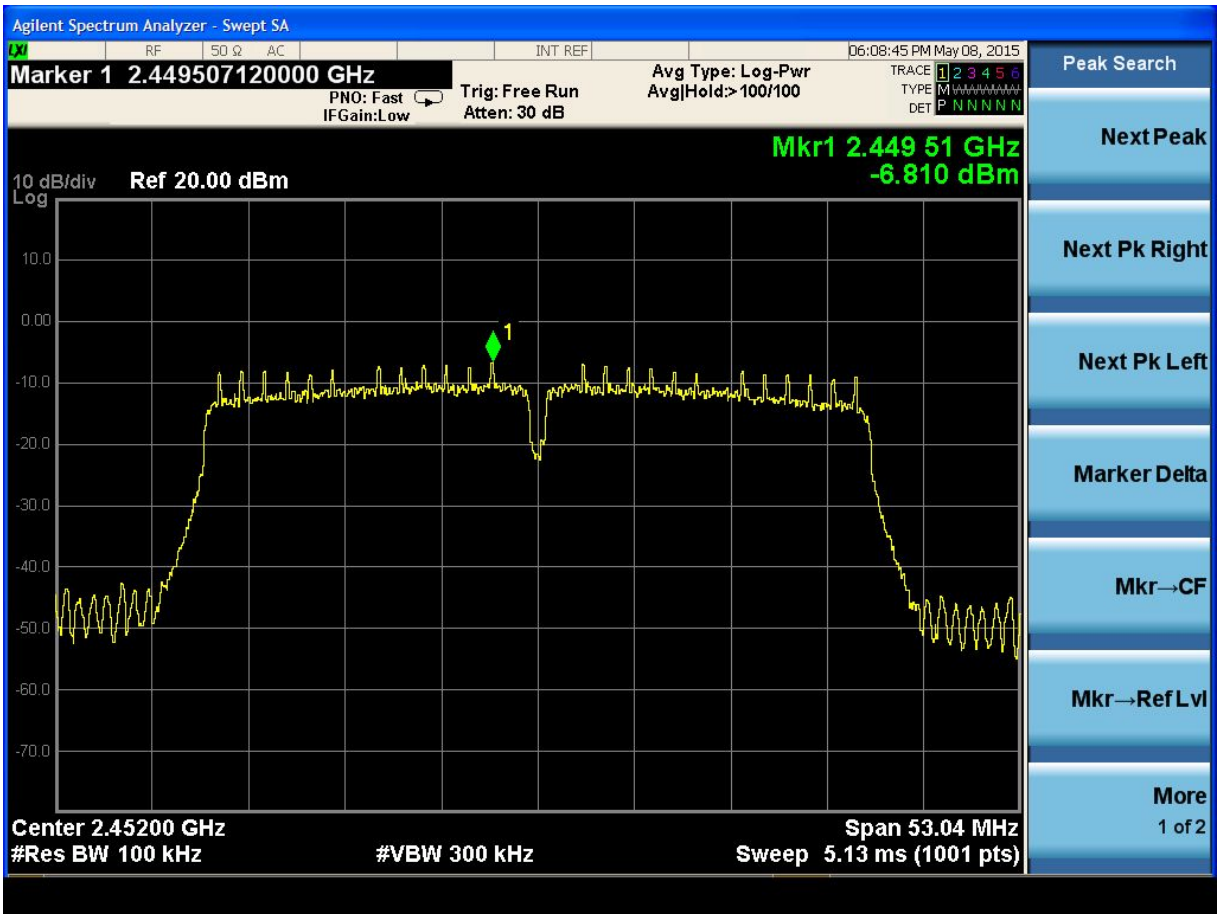
(Plot 4.6.4 B1: Channel 6: 2437MHz @ 802.11n HT40)



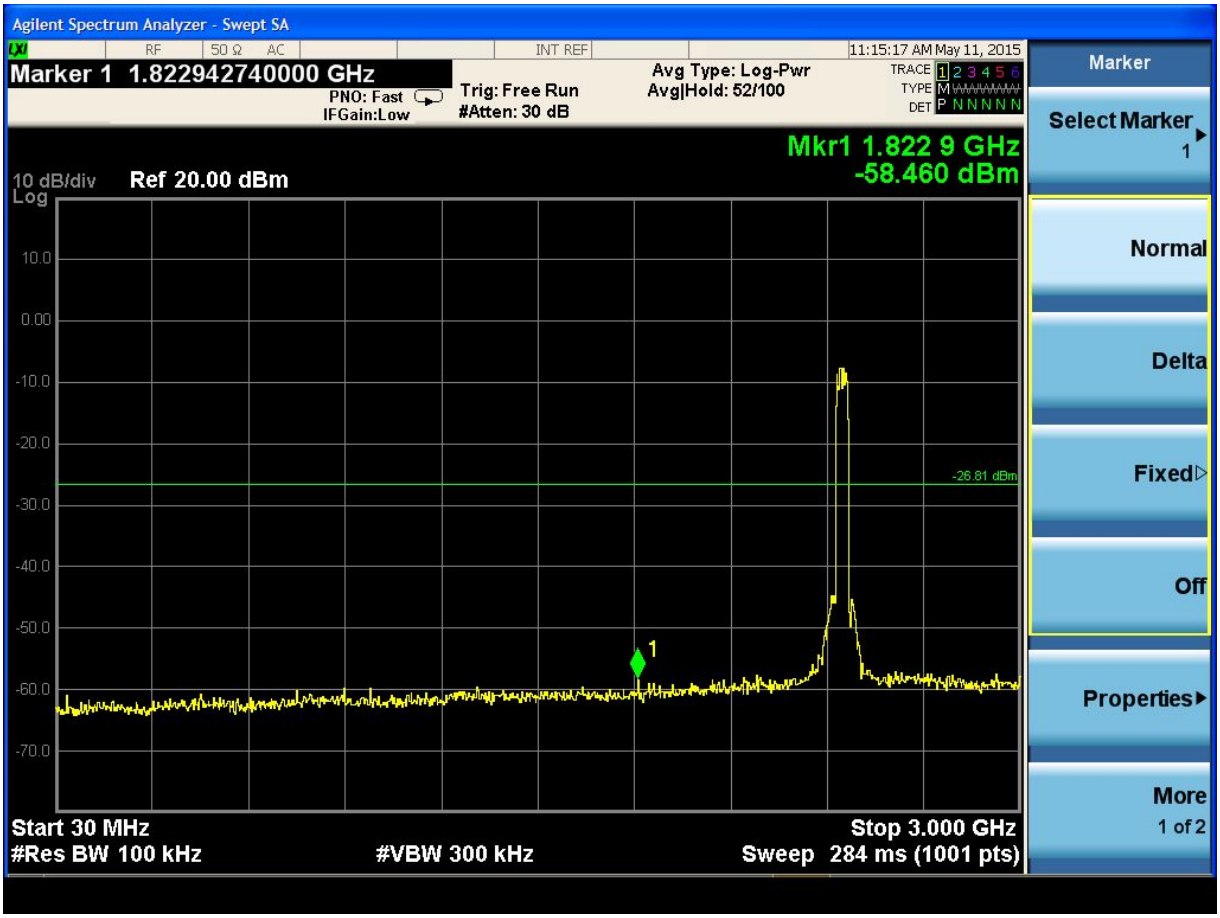
(Plot 4.6.4 B2: Channel 6: 2437MHz @ 802.11n HT40)



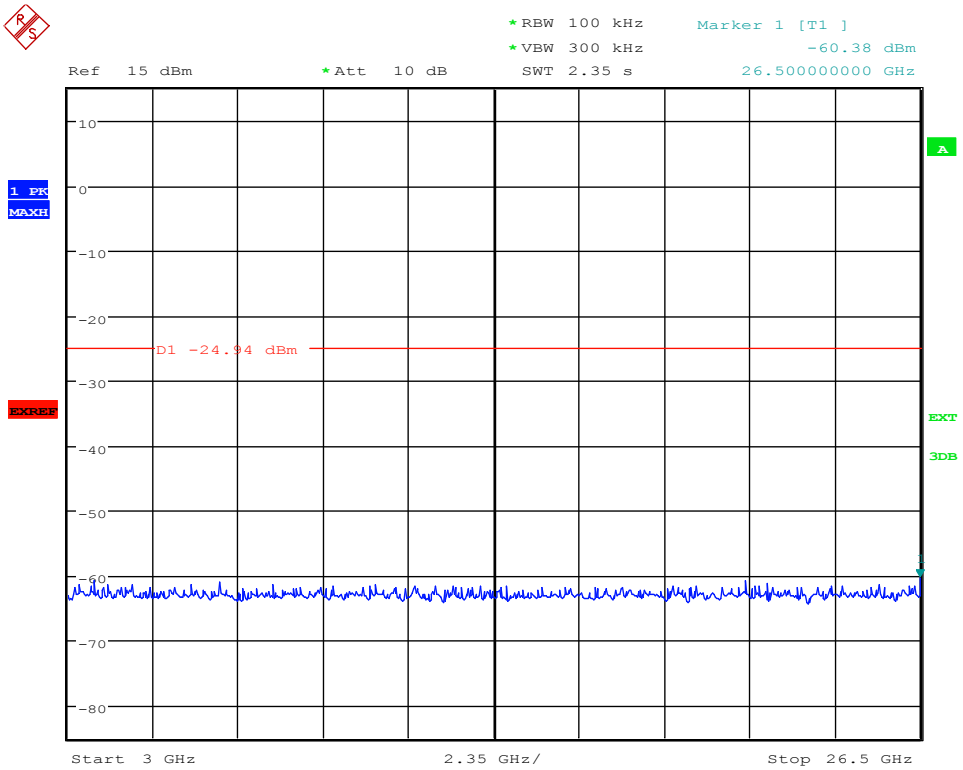
(Plot 4.6.4 B3: Channel 6: 2437MHz @ 802.11n HT40)



(Plot 4.6.4 C1: Channel 9 : 2452MHz @ 802.11n HT40)



(Plot 4.6.4 C2: Channel 9: 2452MHz @ 802.11n HT40)



(Plot 4.6.4 C2: Channel 9: 2452MHz @ 802.11n HT40)

4.7. 6dB Bandwidth

TEST CONFIGURATION

TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW=100 KHz and VBW=300KHz.
The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.
According to KDB558074 D01 V03 for one of the following procedures may be used to determine the modulated DTS device signal bandwidth.
1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 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.

LIMIT

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

TEST RESULTS

4.7.1 801.11b Test Mode

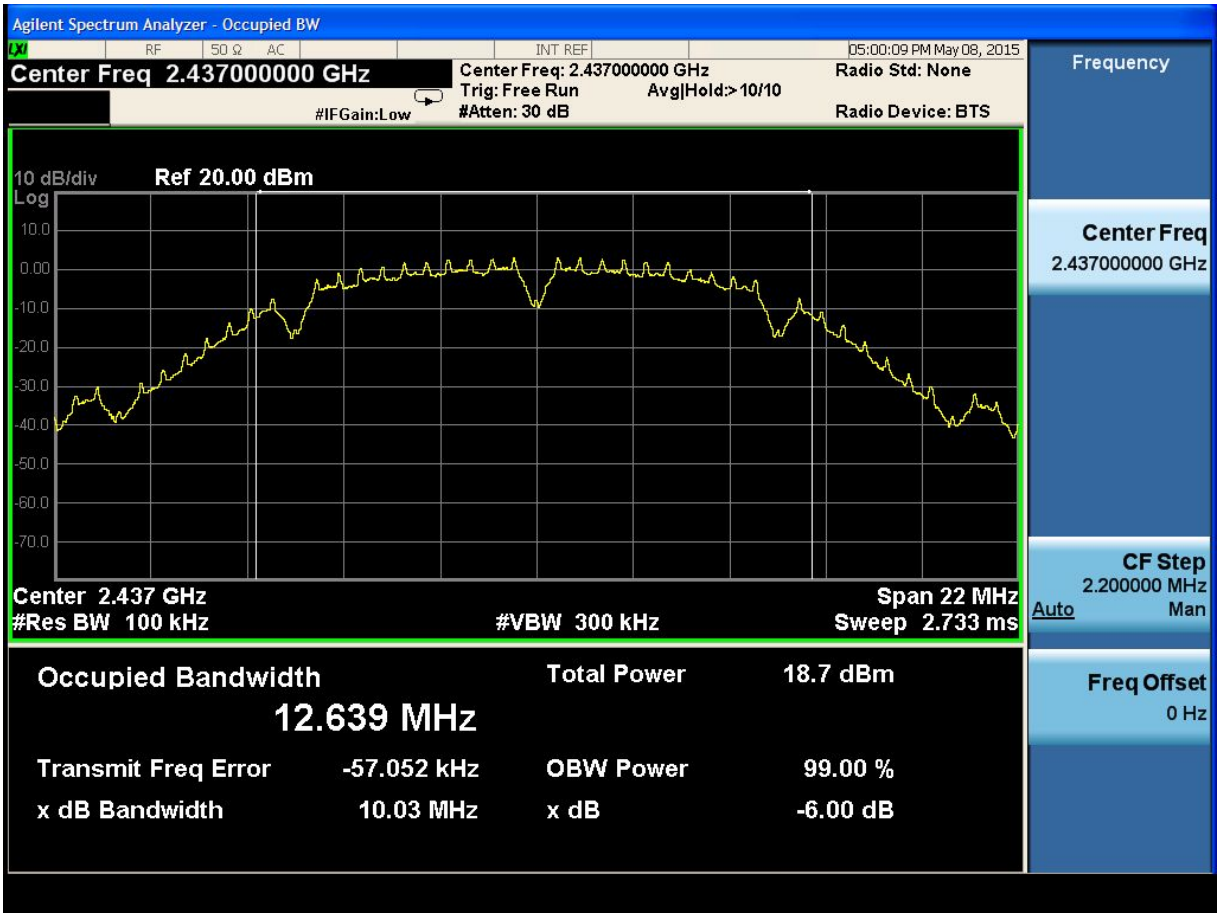
A. Test Verdict

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	10.03	Plot 4.7.1 A	≥500	PASS
6	2437	10.03	Plot 4.7.1 B	≥500	PASS
11	2462	10.03	Plot 4.7.1 C	≥500	PASS

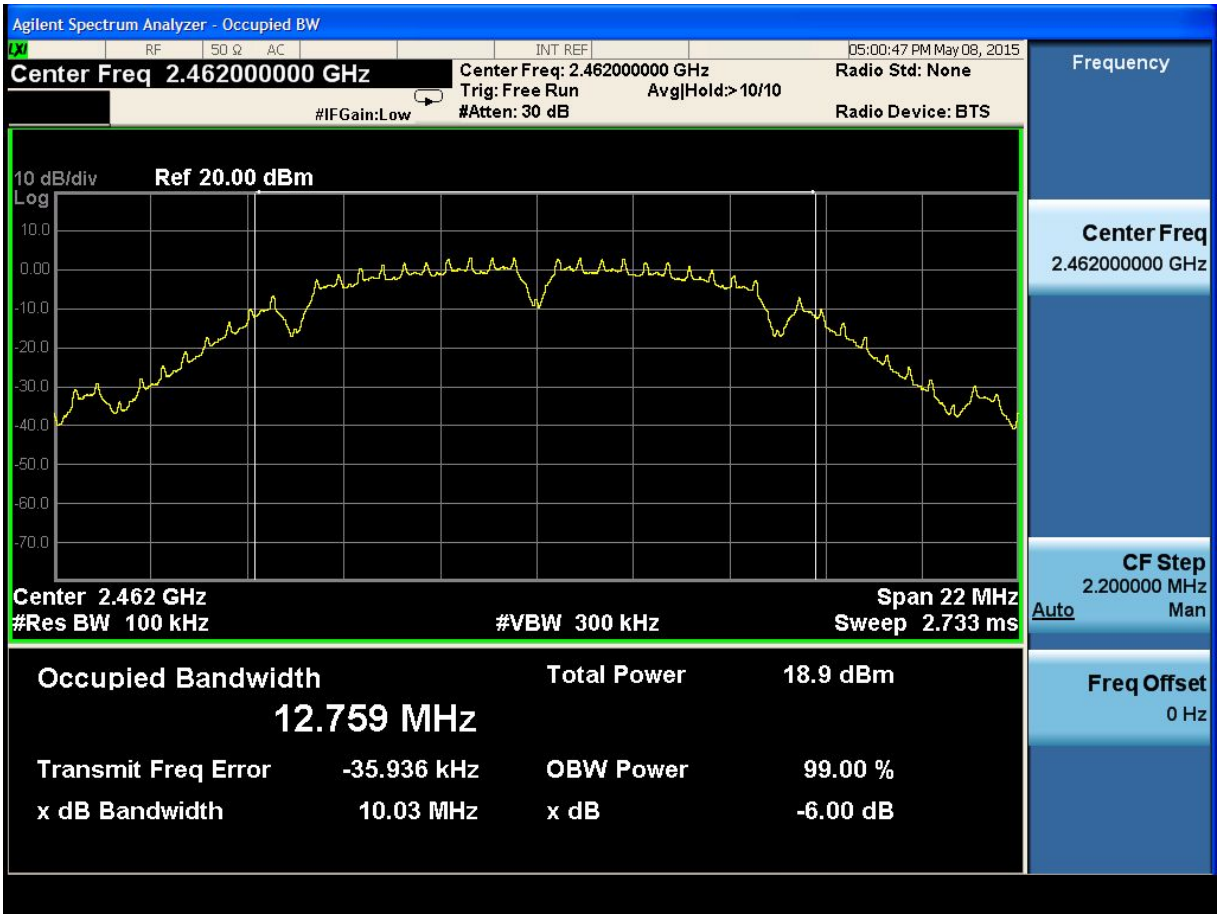
Note:
1. For 802.11b mode at finial test to get the worst-case emission at 1Mbps.
2.The test results including the cable lose.

B. Test Plots

(Plot 4.7.1 A: Channel 1: 2412MHz @ 802.11b)



(Plot 4.7.1 B: Channel 6: 2437MHz @ 802.11b)



(Plot 4.7.1 C: Channel 11: 2462MHz @ 802.11b)

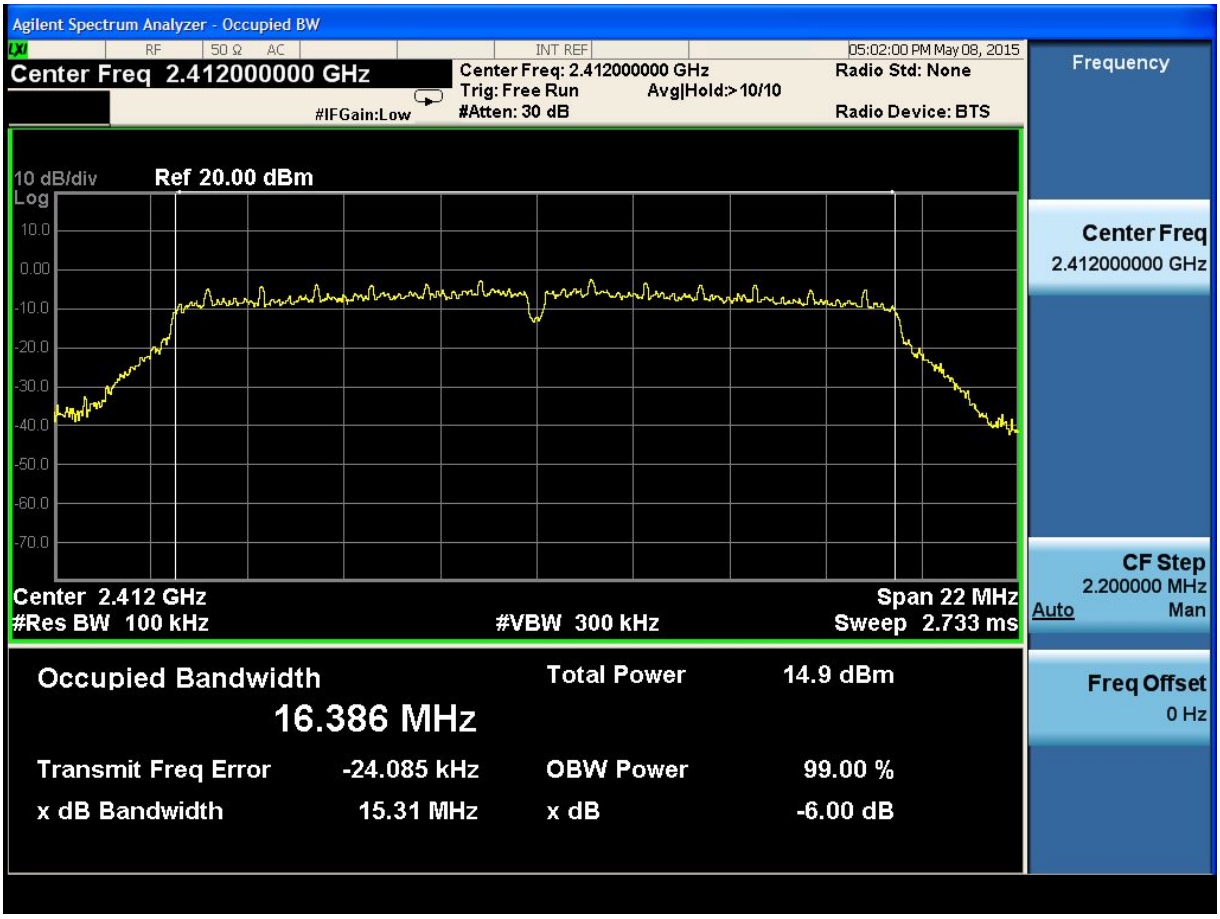
4.7.2 801.11g Test Mode

A. Test Verdict

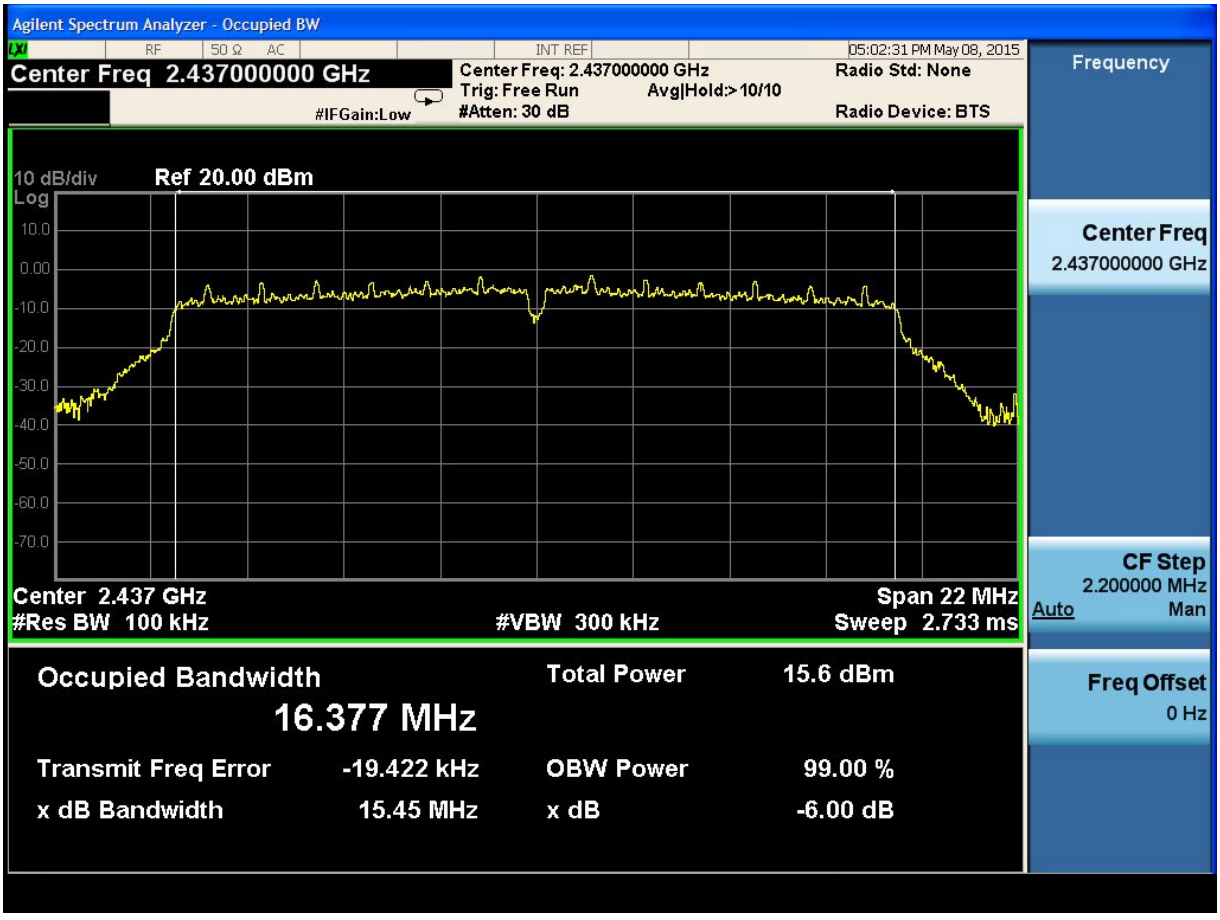
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	15.31	Plot 4.7.2 A	≥500	PASS
6	2437	15.45	Plot 4.7.2 B	≥500	PASS
11	2462	15.66	Plot 4.7.2 C	≥500	PASS

Note:
1. For 802.11g mode at finial test to get the worst-case emission at 6Mbps.
2.The test results including the cable lose.

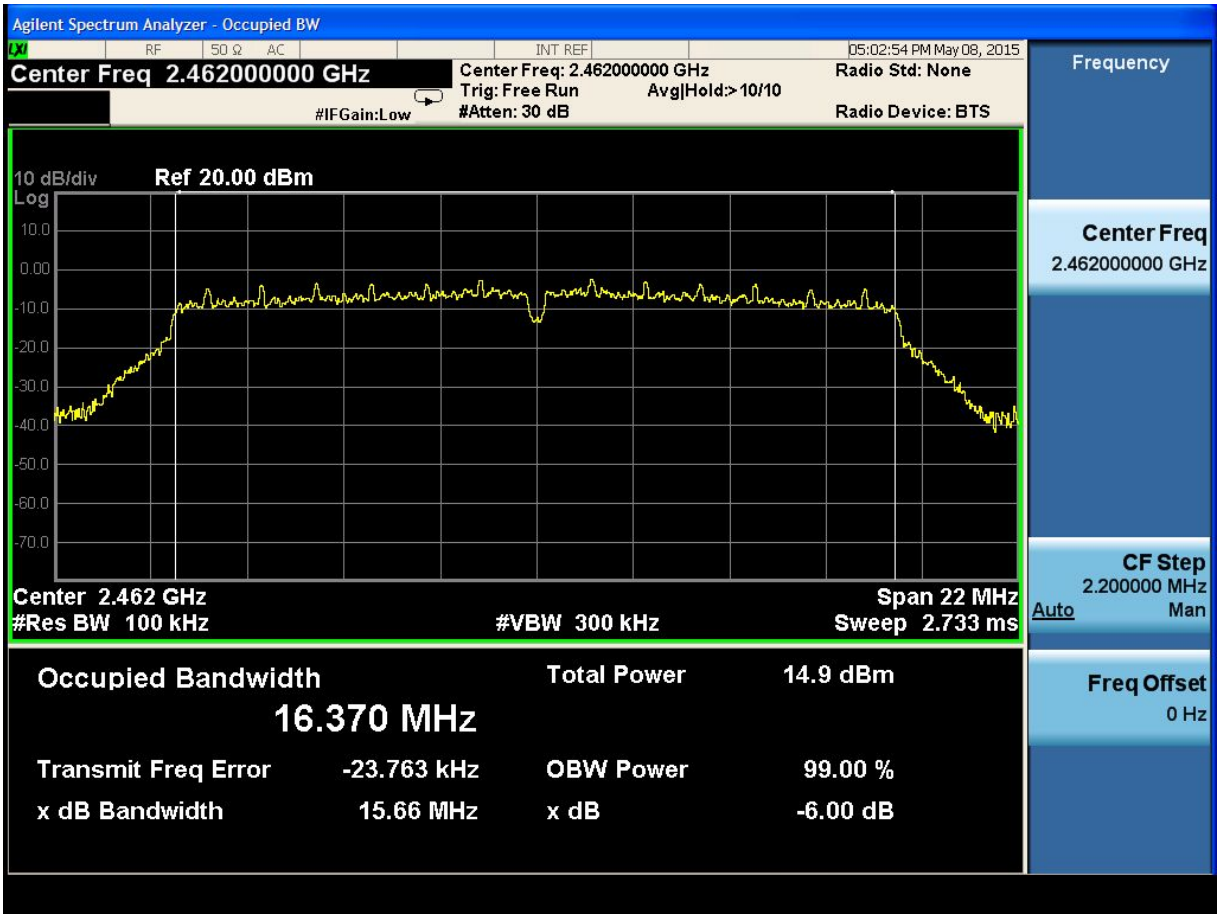
B. Test Plots



(Plot 4.7.2 A: Channel 1: 2412MHz @ 802.11g)



(Plot 4.7.2 B: Channel 6: 2437MHz @ 802.11g)



(Plot 4.7.2 C: Channel 11: 2462MHz @ 802.11g)

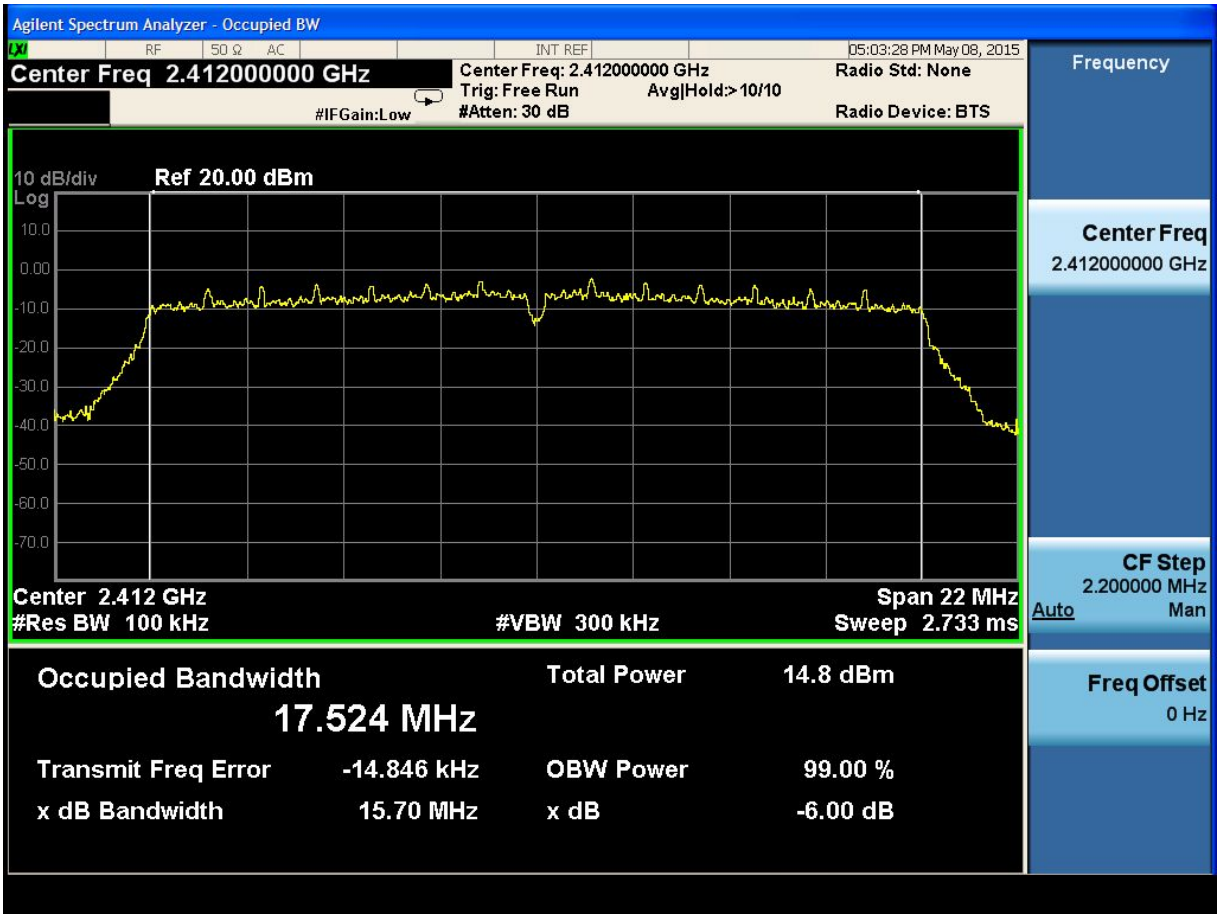
4.7.3 801.11n HT20 Test Mode

A. Test Verdict

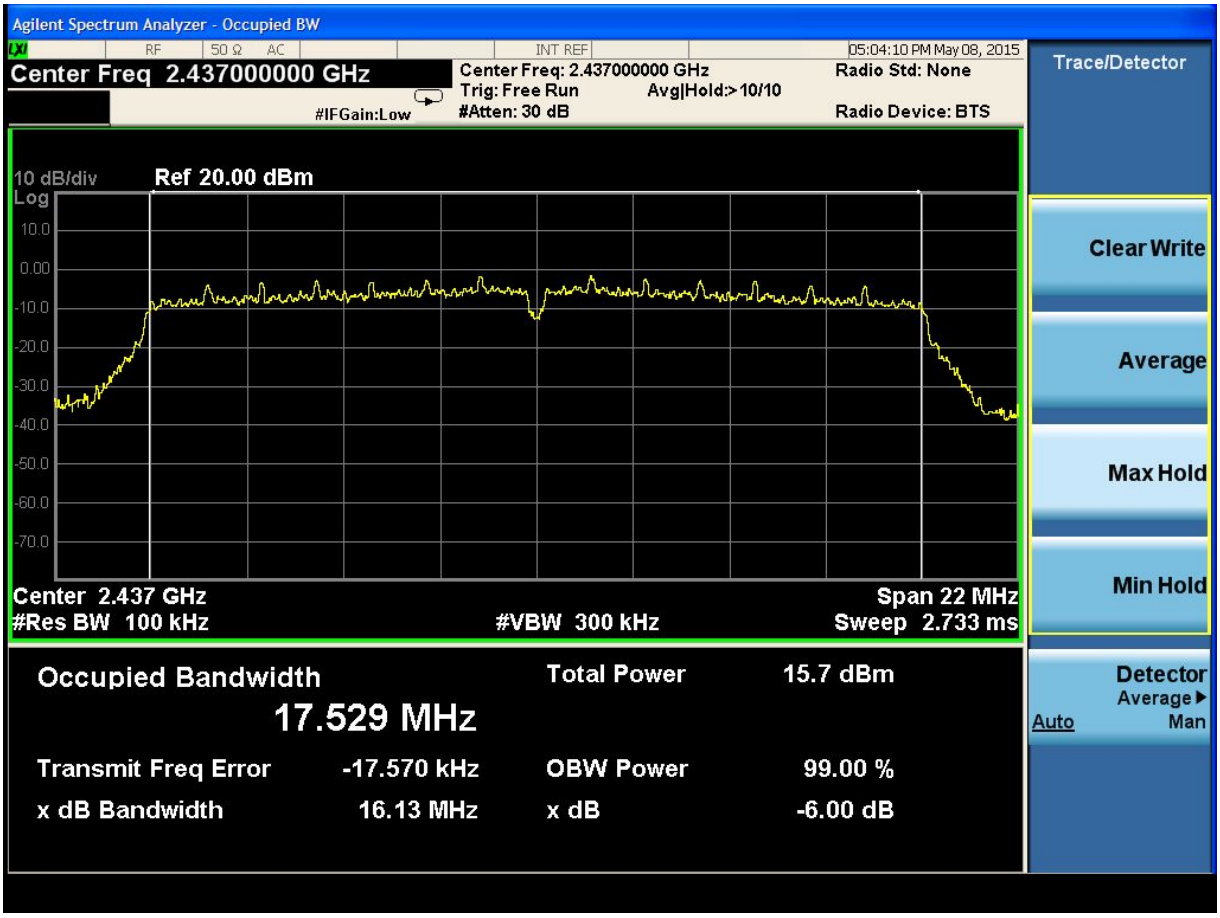
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	15.70	Plot 4.7.3 A	≥500	PASS
6	2437	16.13	Plot 4.7.3 B	≥500	PASS
11	2462	16.26	Plot 4.7.3 C	≥500	PASS

Note:
1. For 802.11n HT20 mode at finial test to get the worst-case emission at 6.5Mbps.
2.The test results including the cable lose.

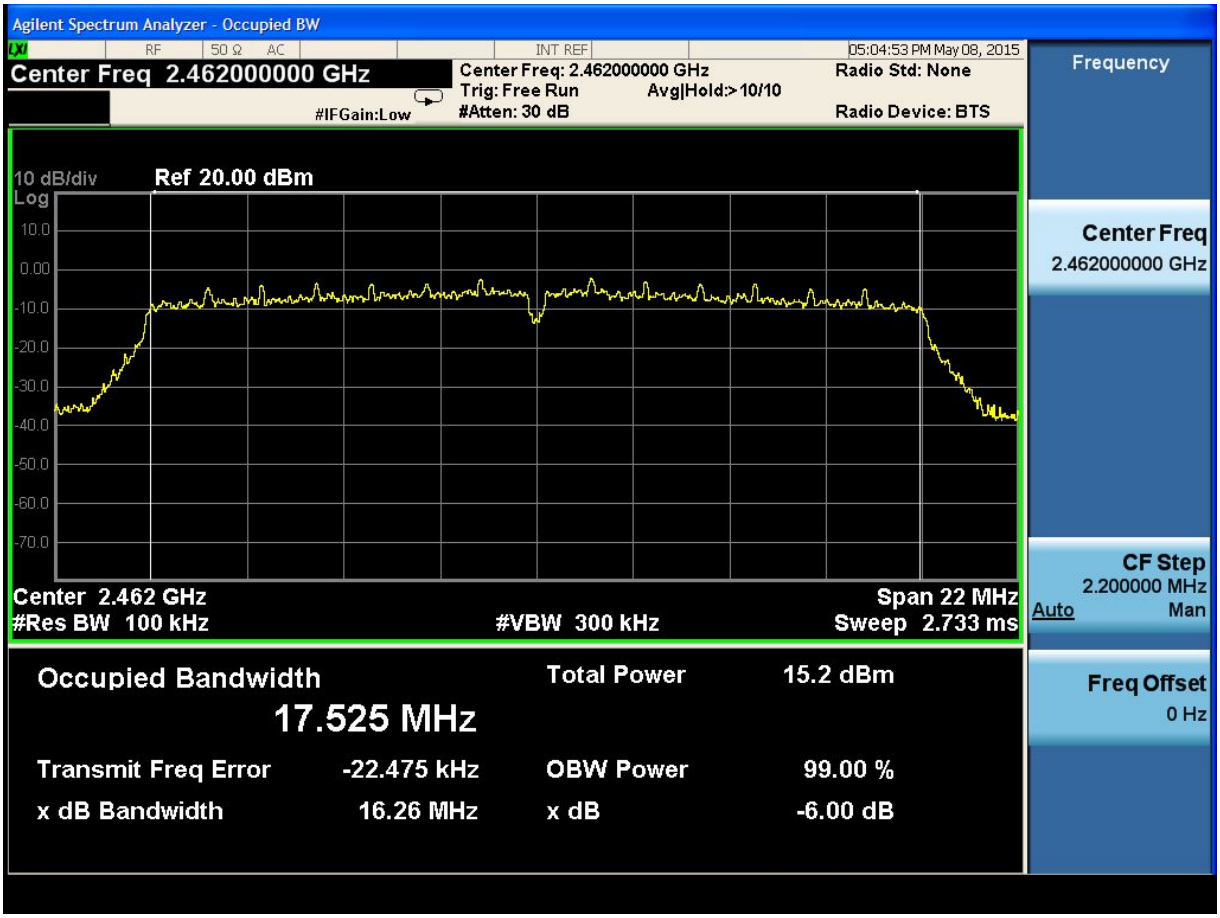
B. Test Plots



(Plot 4.7.3 A: Channel 1: 2412MHz @ 802.11n HT20)



(Plot 4.7.3 B: Channel 6: 2437MHz @ 802.11n HT20)



(Plot 4.7.3 C: Channel 11: 2462MHz @ 802.11n HT20)

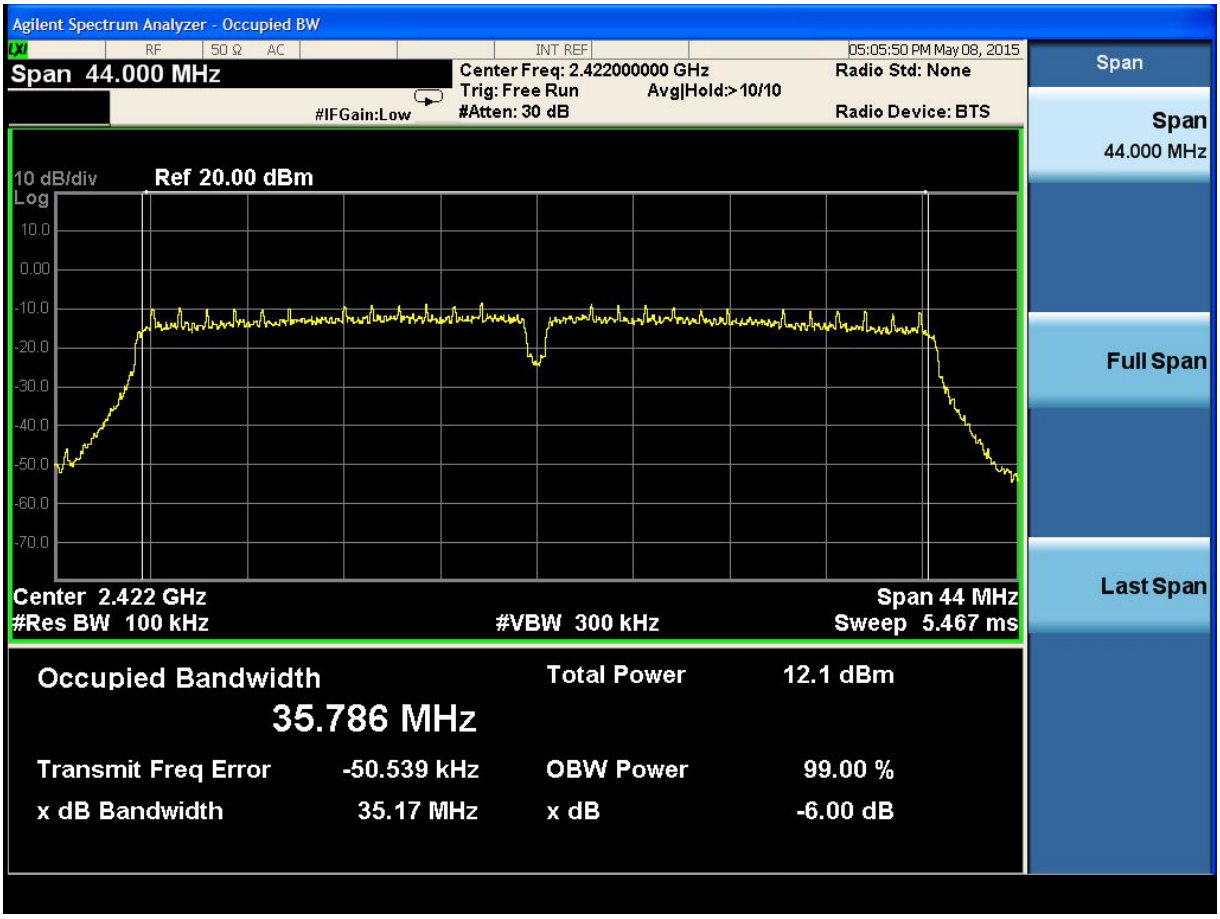
4.7.4 801.11n HT40 Test Mode

A. Test Verdict

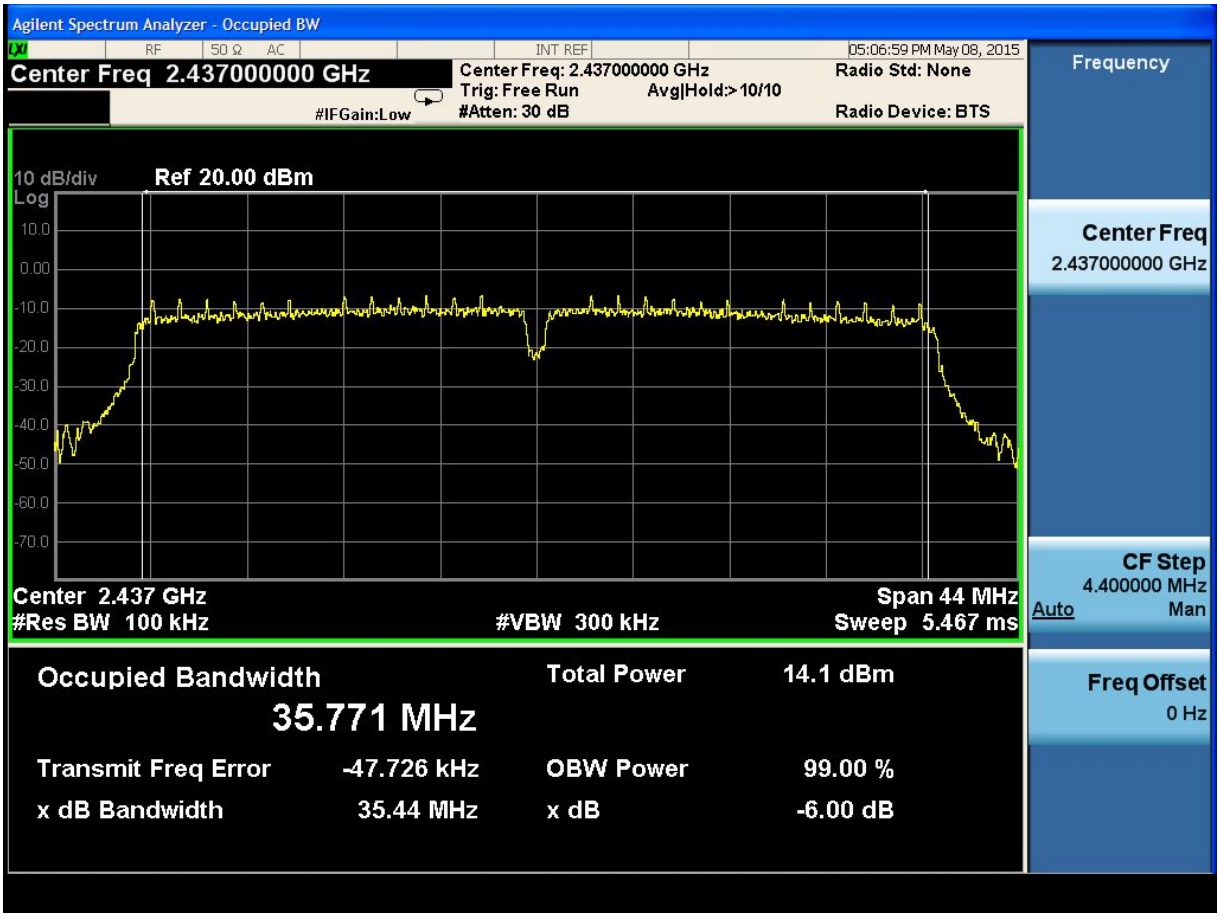
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
3	2422	35.17	Plot 4.7.4 A	≥500	PASS
6	2437	35.44	Plot 4.7.4 B	≥500	PASS
9	2452	35.36	Plot 4.7.4 C	≥500	PASS

Note:
1. For 802.11n HT40 mode at finial test to get the worst-case emission at 13.5Mbps.
2. The test results including the cable lose.

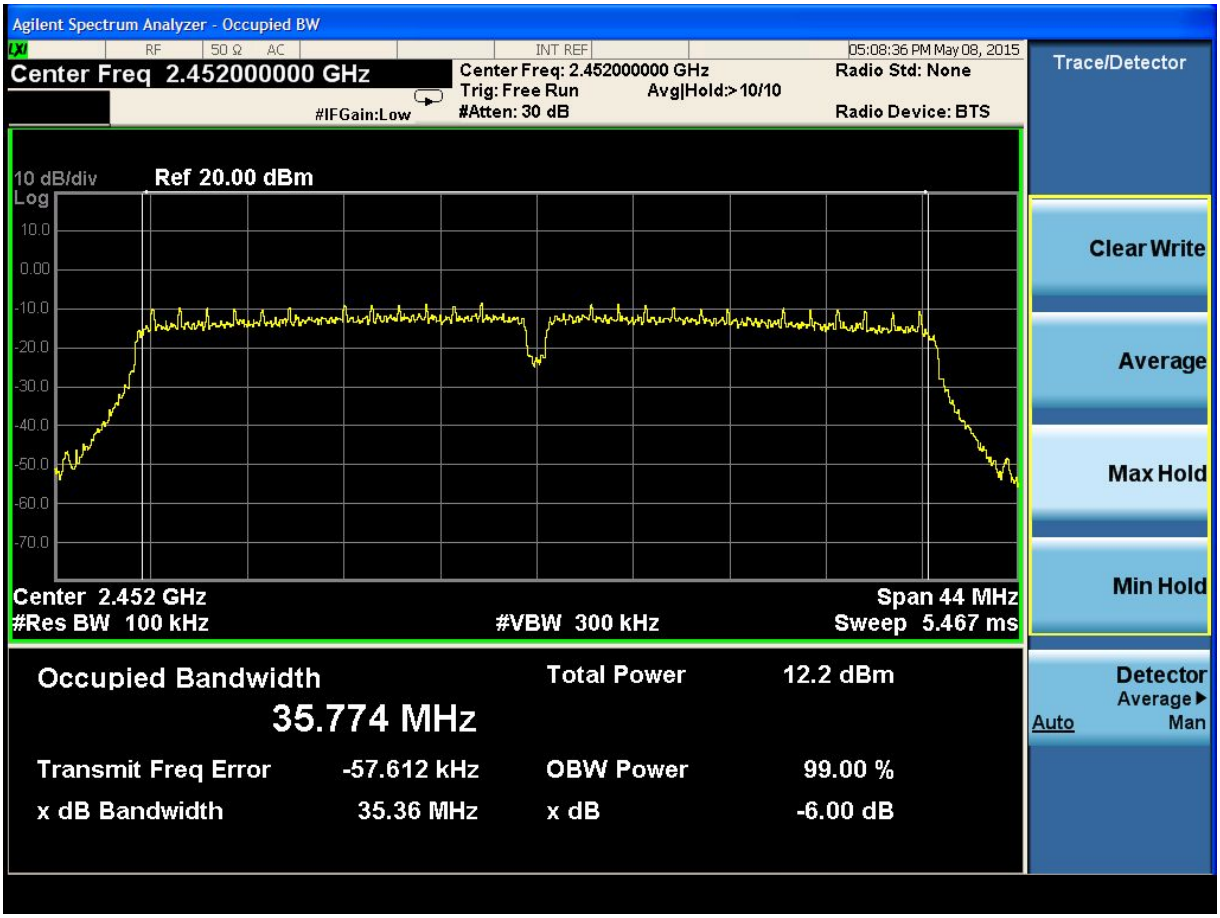
B. Test Plots



(Plot 4.7.4 A: Channel 3: 2422MHz @ 802.11n HT40)



(Plot 4.7.3 B: Channel 6: 2437MHz @ 802.11n HT40



(Plot 4.7.4 C: Channel 9: 2452MHz @ 802.11n HT40)

4.8. Antenna Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 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.

And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The maximum gain of WIFI antenna was -1.12dBi. it is a FPC ANT.

5. Test Setup Photos of the EUT

.....End of Report.....