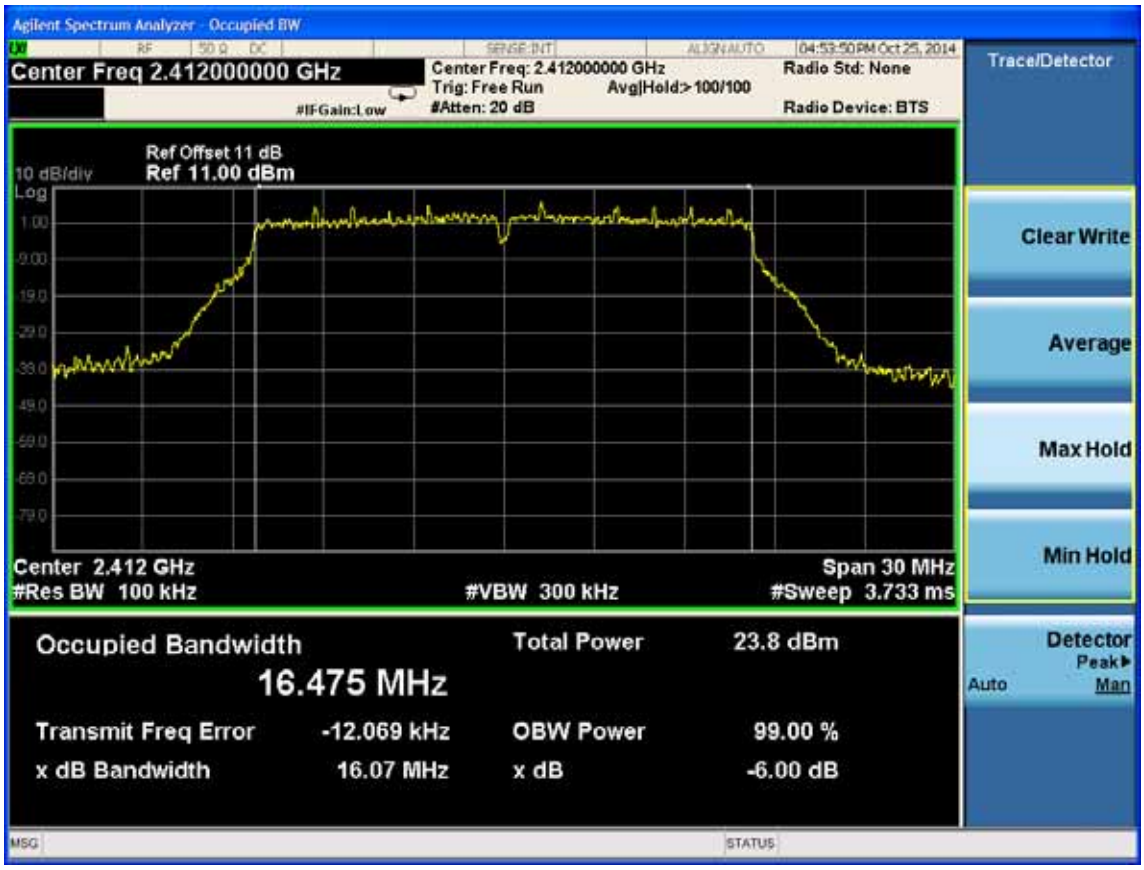
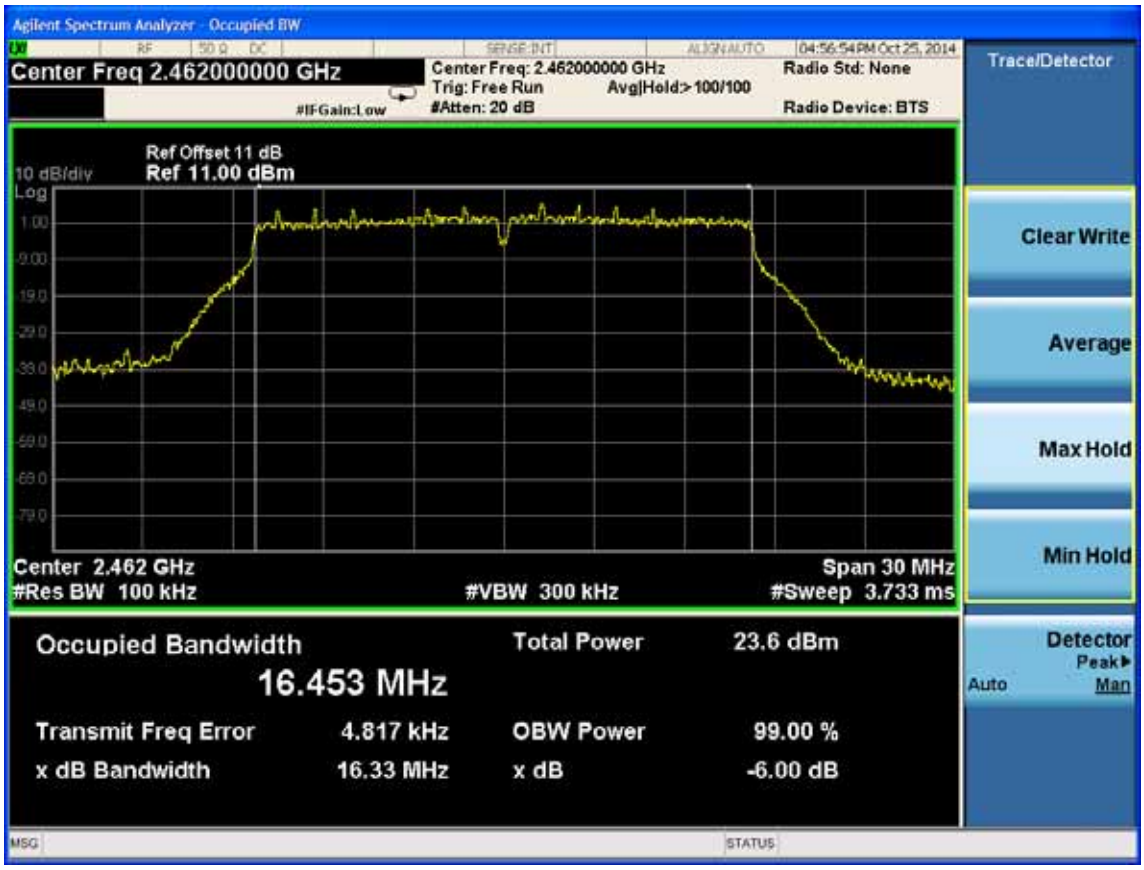
Test CH11: 2462MHz

Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz

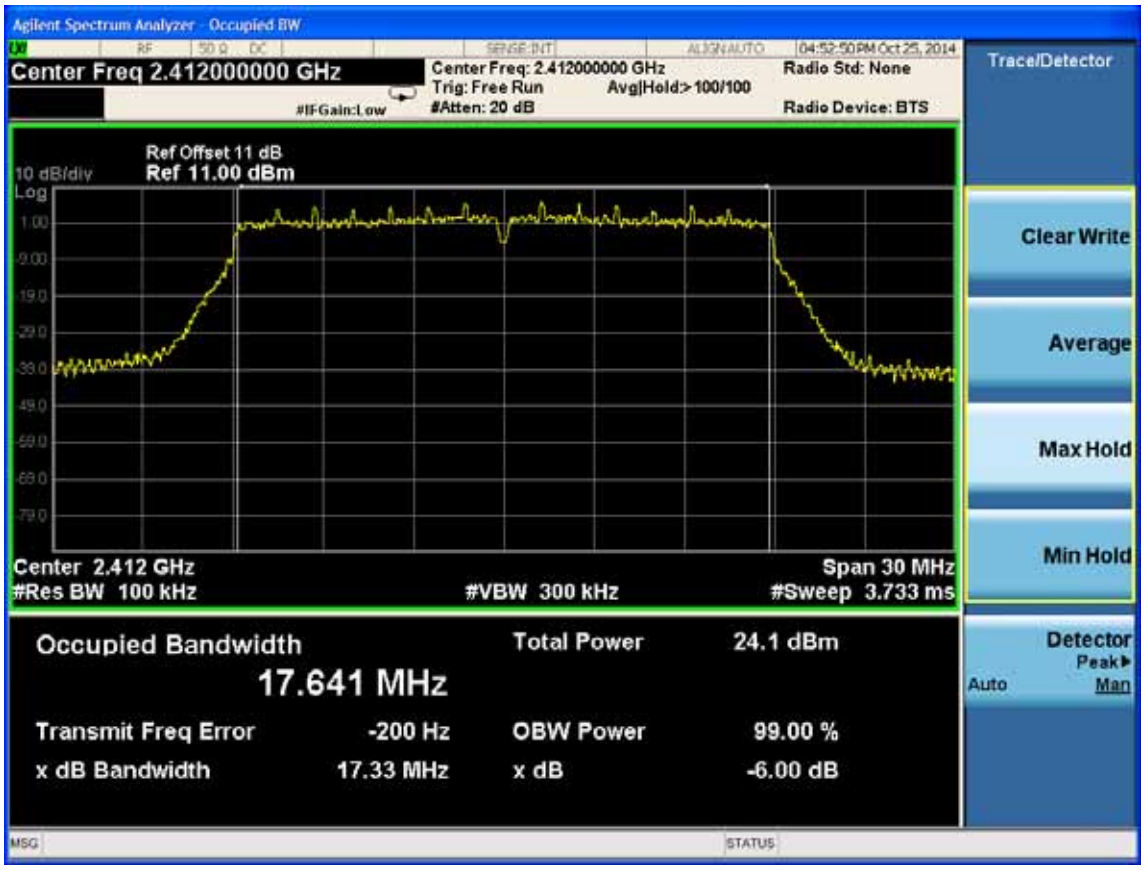


Test CH6: 2437MHz

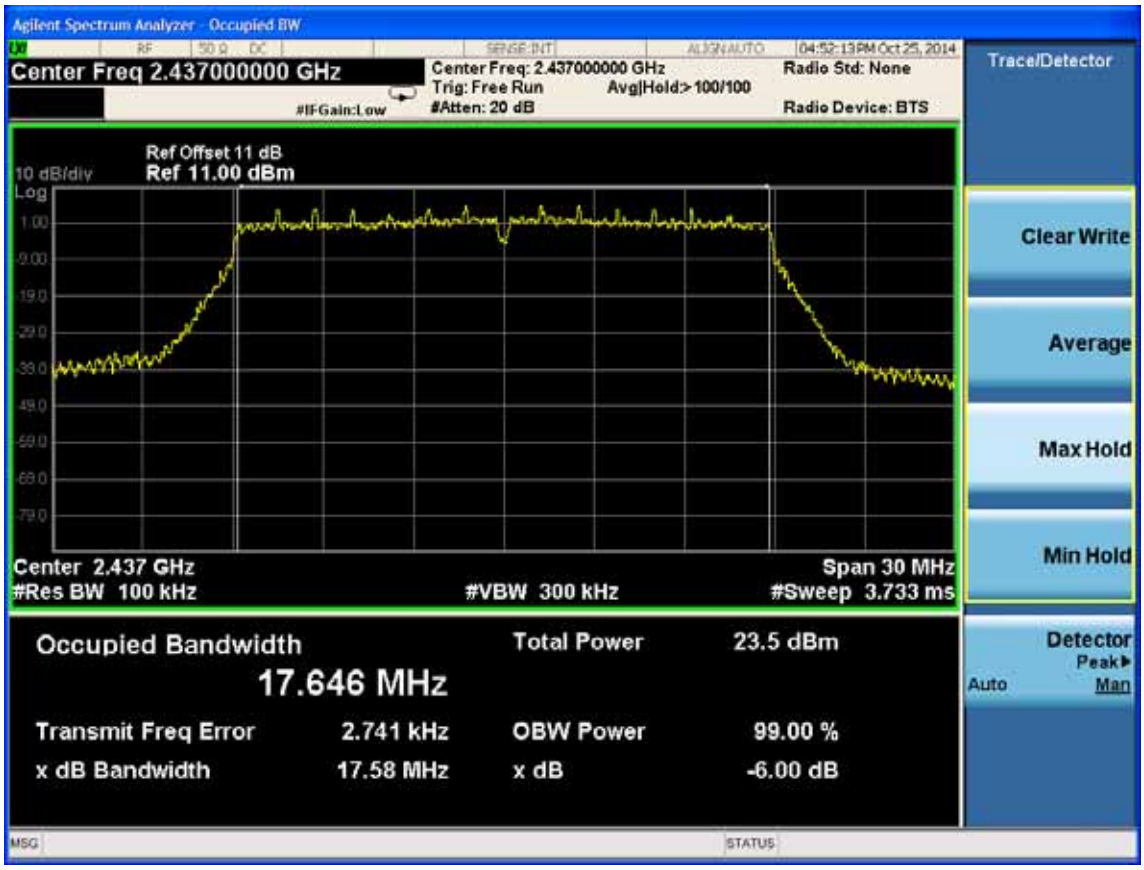
Test CH11: 2462MHz



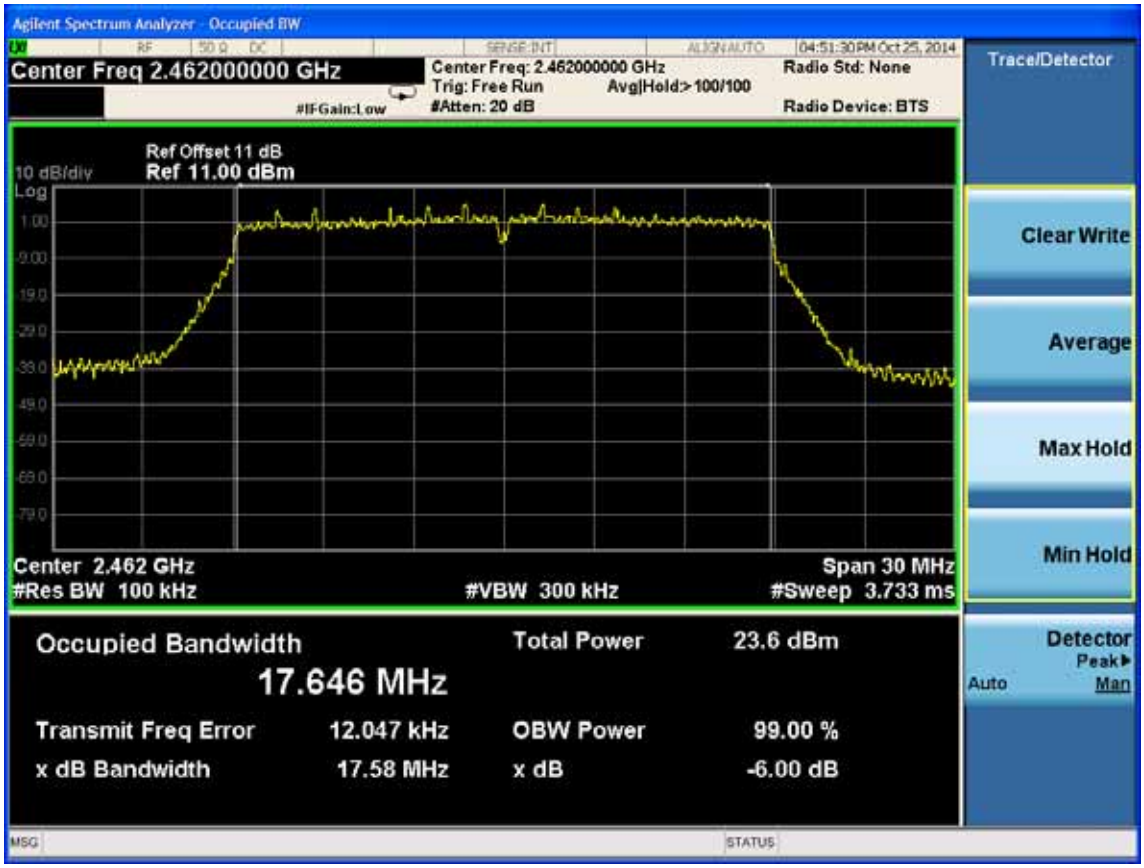
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



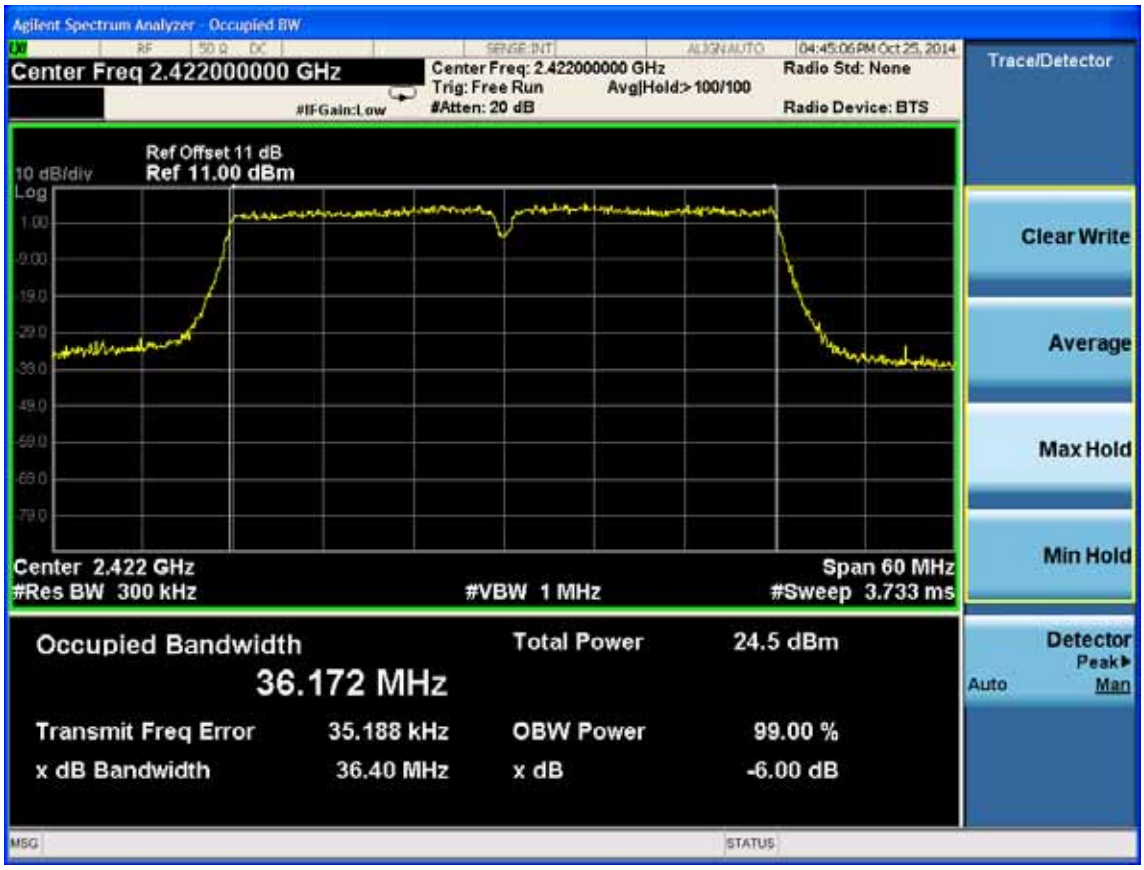
Test CH6: 2437MHz



Test CH11: 2462MHz

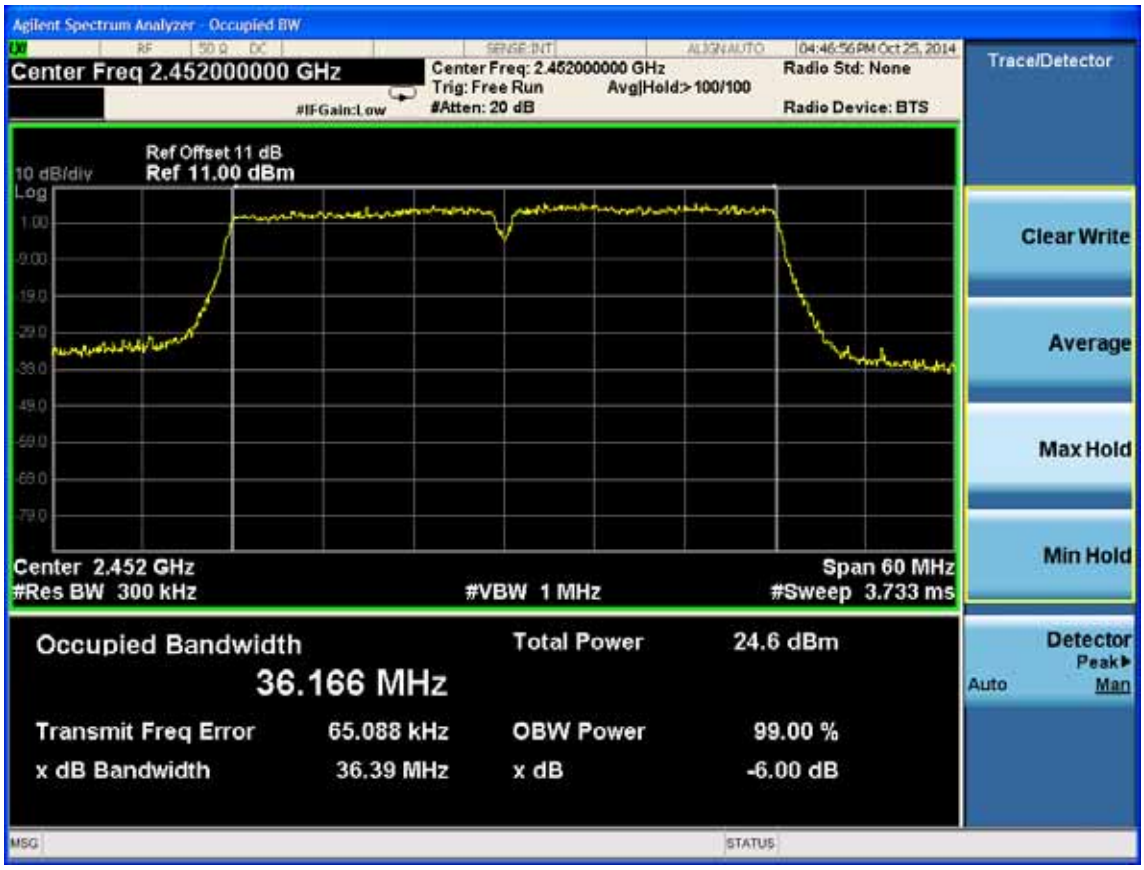


Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz



Test CH4: 2437MHz

Test CH7: 2452MHz



ANT 2:

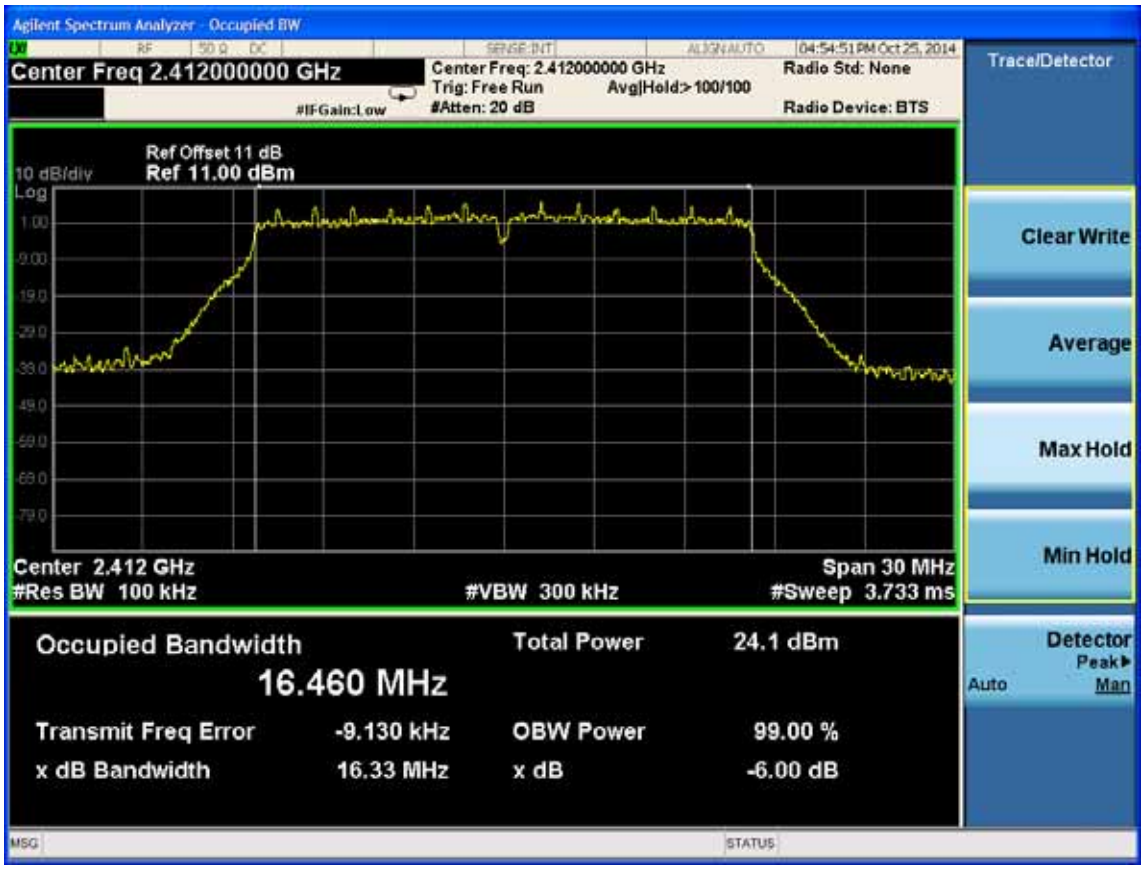
Test Mode: IEEE 802.11b TX

Test CH1: 2412MHz

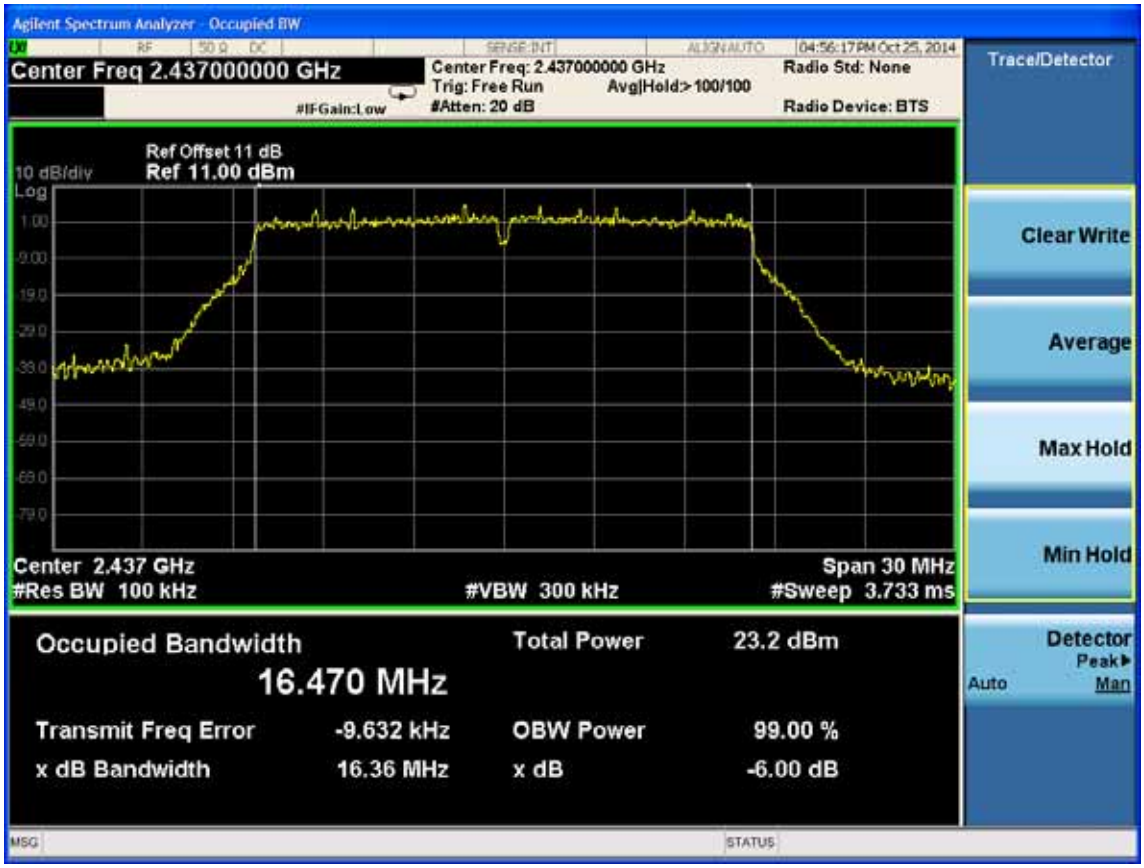
Test CH6: 2437MHz

Test CH11: 2462MHz

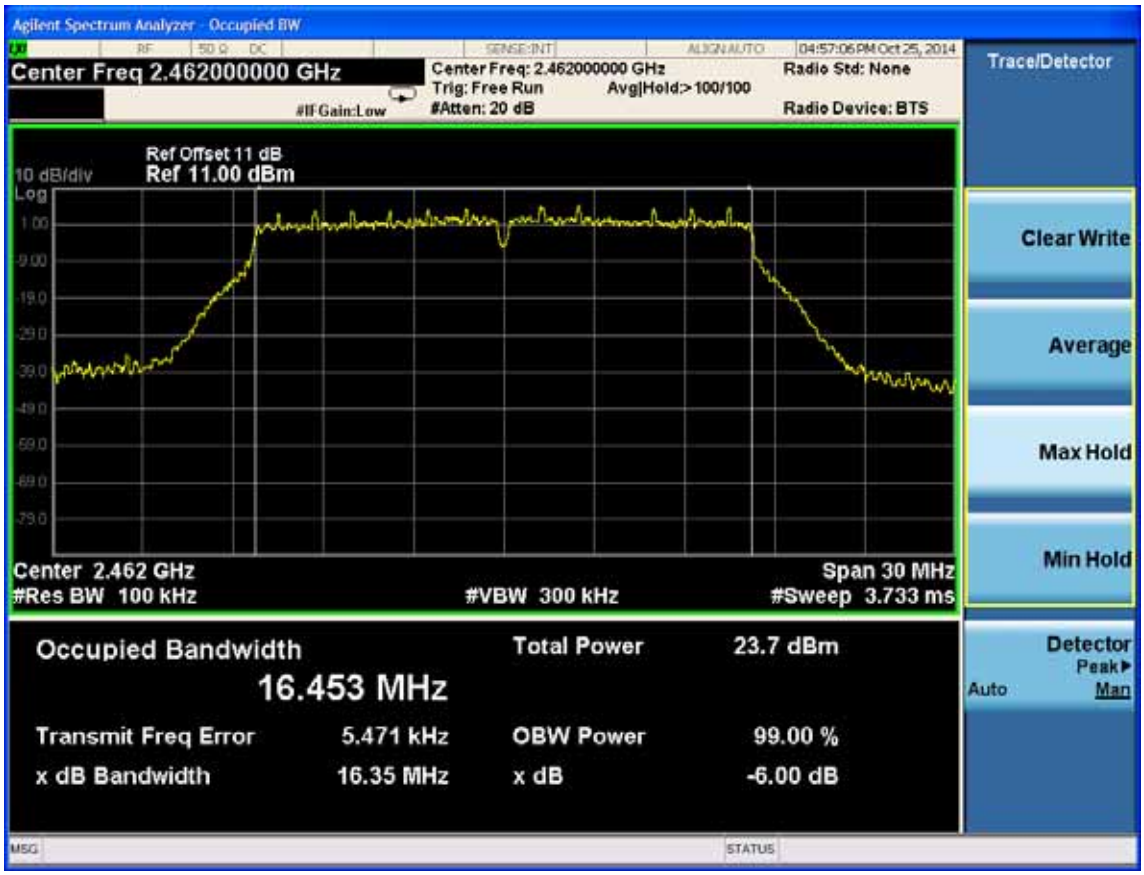
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



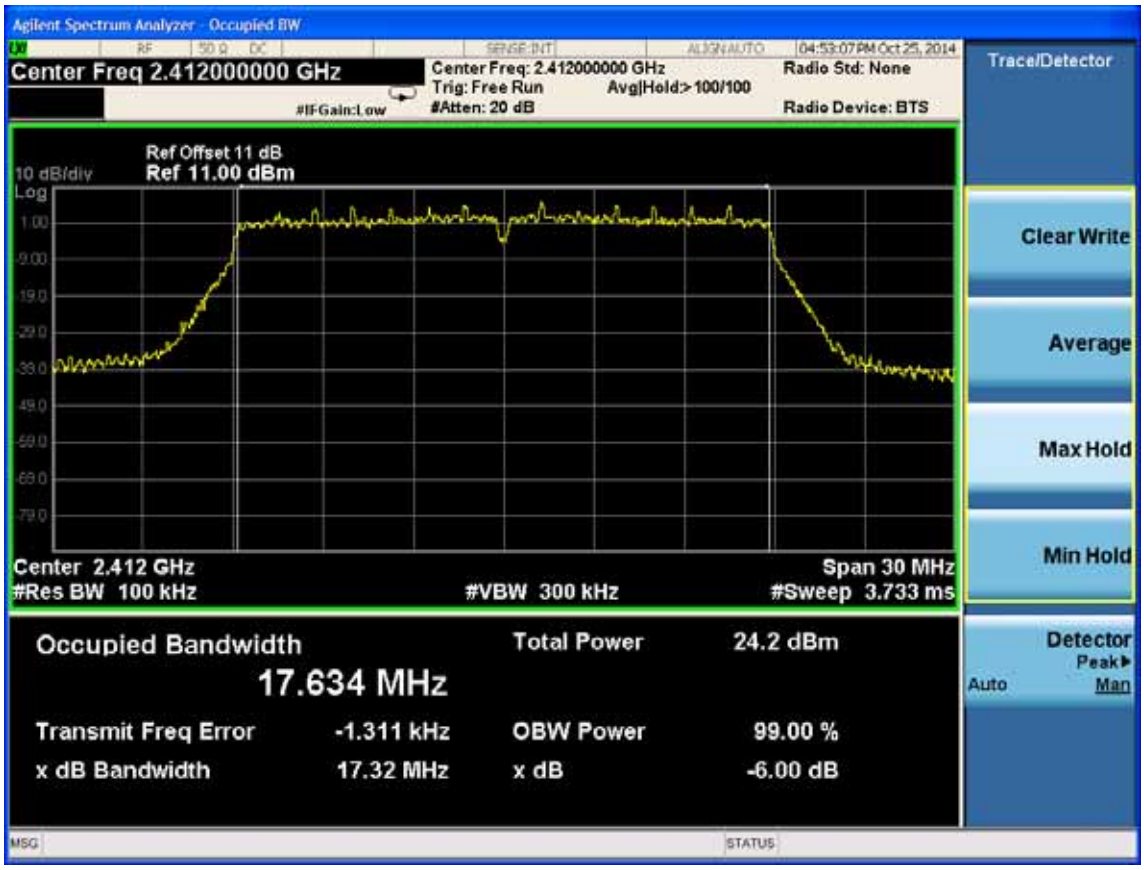
Test CH6: 2437MHz



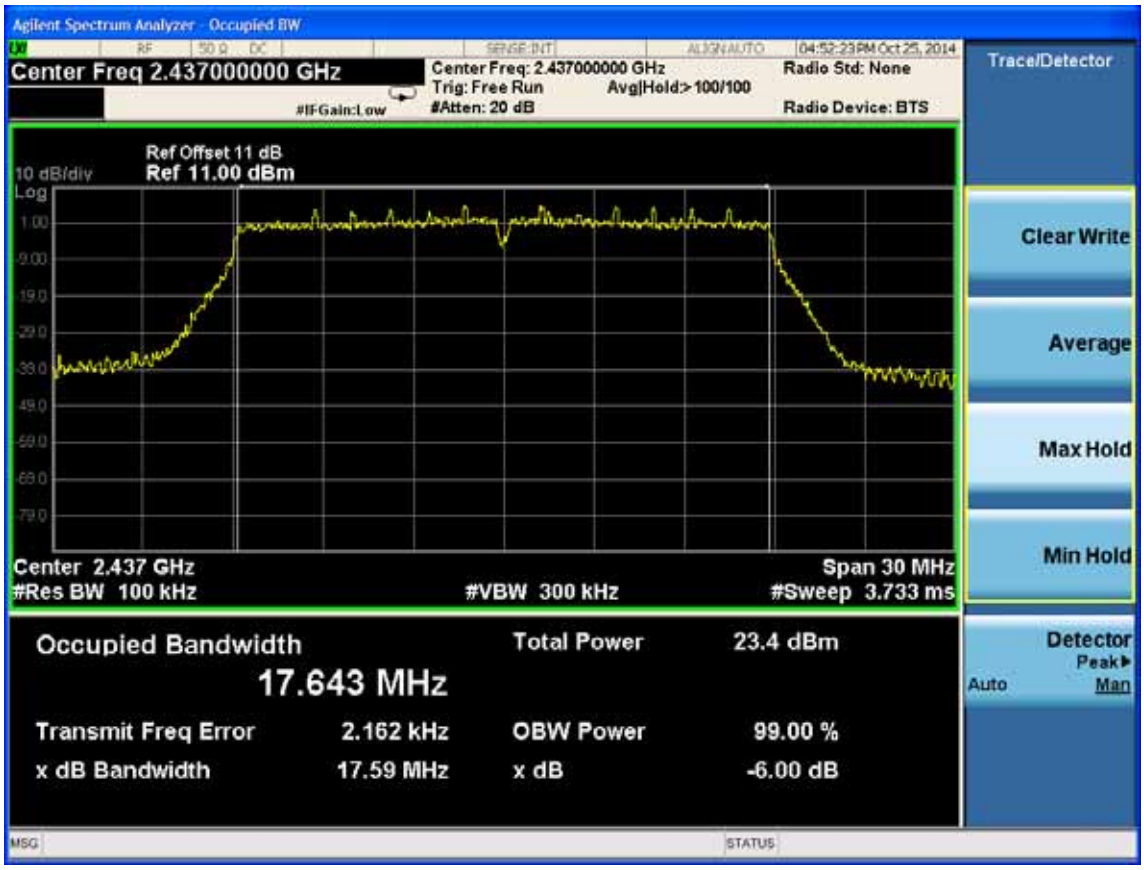
Test CH11: 2462MHz



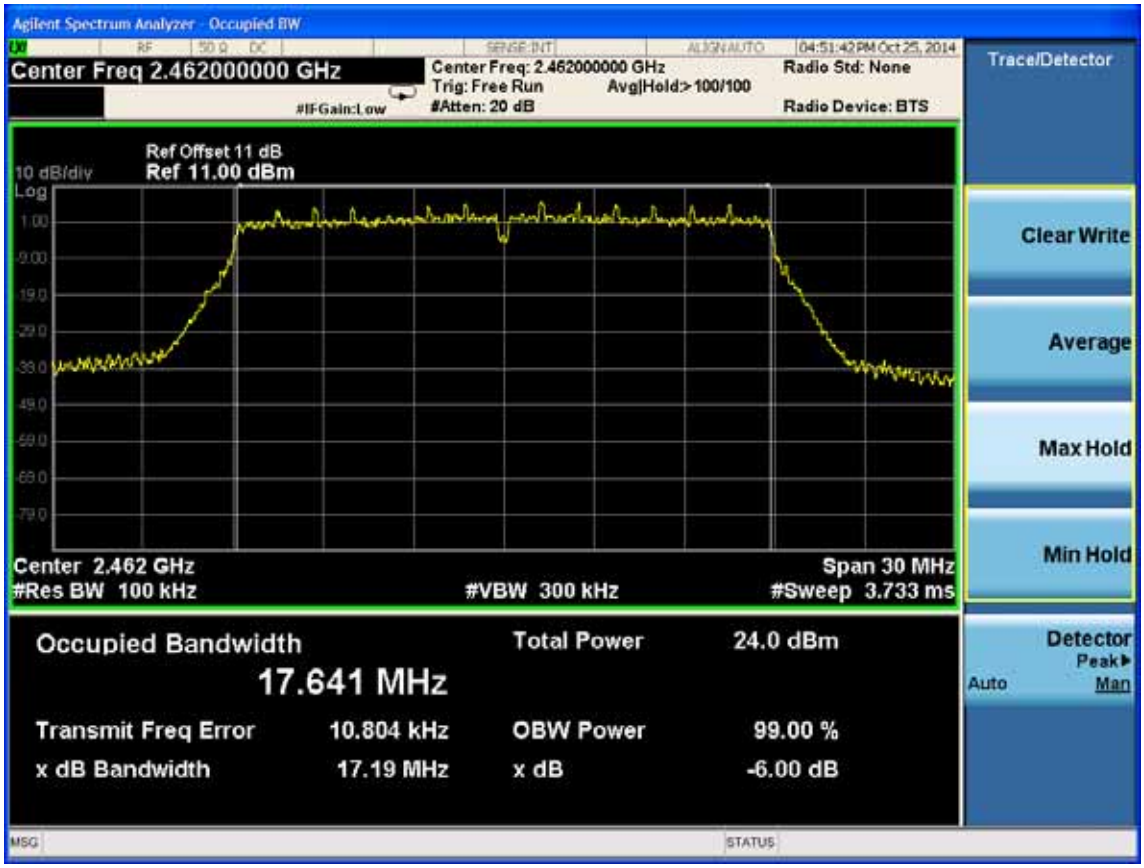
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



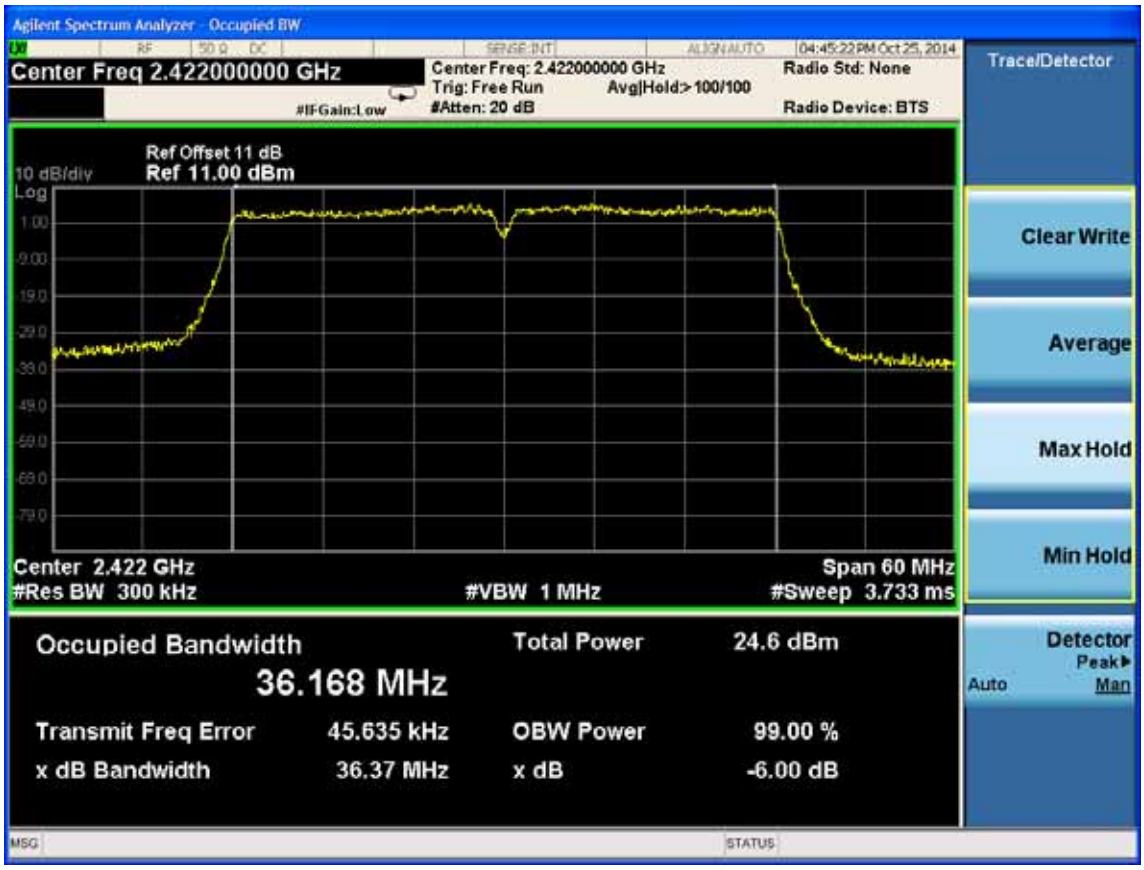
Test CH6: 2437MHz



Test CH11: 2462MHz

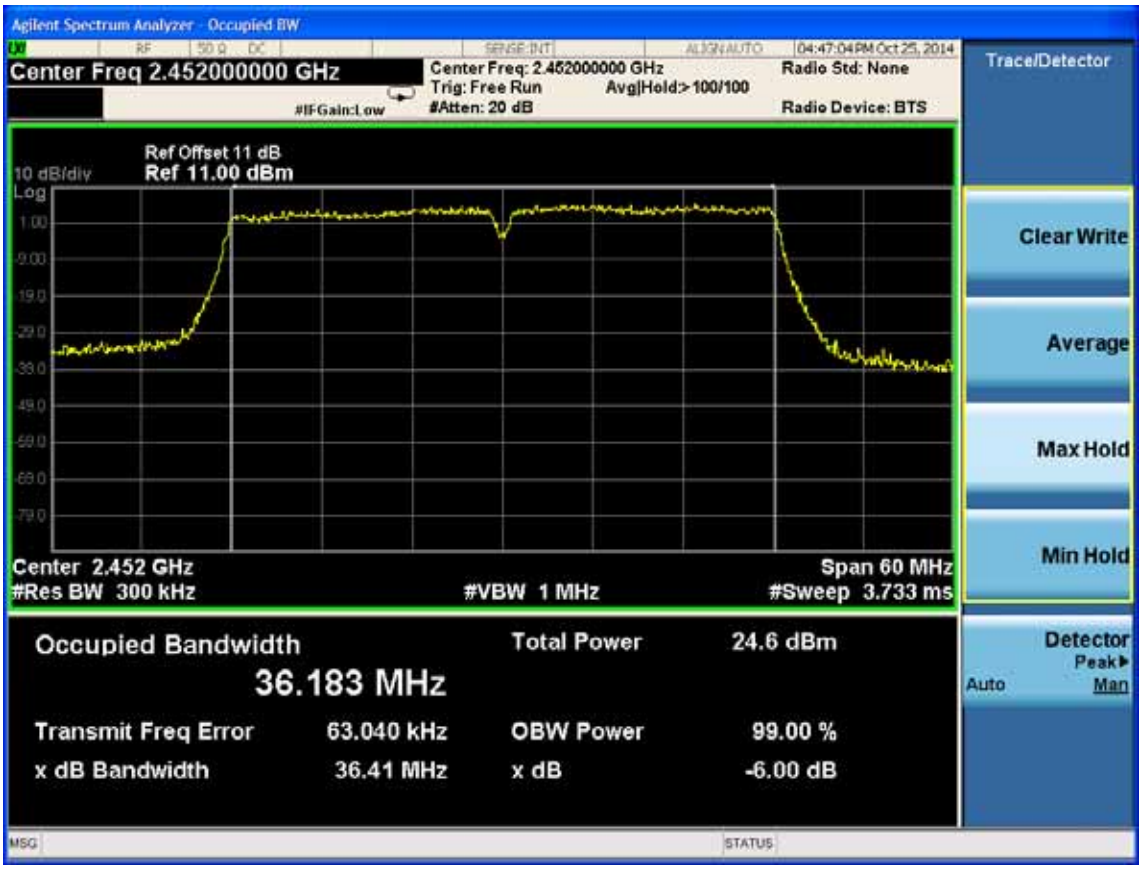


Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz



Test CH4: 2437MHz

Test CH7: 2452MHz



8. OUTPUT POWER TEST

8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	N9030A	MY51380221	Oct.29, 14	1Year
2.	Power meter	Anritsu	ML2487A	6K00002472	Apr. 28,14	1Year
3.	Power sensor	Anritsu	MA2491A	0033005	Apr. 28,14	1Year
4.	Attenuator (20dB)	Agilent	8491B	MY39262165	Apr. 28,14	1Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	Apr. 28,14	1Year

8.2.Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak output Power shall not exceed 1W(30dBm)

8.3.Test Procedure

1, Connected the EUT's antenna port to measure device by 26dB attenuator.

2, For IEEE 802.11b/g and IEEE802.11n HT20 mode, use a PK power meter which's bandwidth is 20MHz and above 26dB bandwidth of signal to measure out each test modes' PK output power.

3, For IEEE802.11n HT40&802.11nVHT40&VHT80 mode, because the signal's bandwidth is about 40MHz and above 20MHz bandwidth of power sensor ML2491A. So use the test method described in KDB558074 clause 9.2.2.
1) Set the RBW=1MHz and VBW =3MHz
2) Set the span at least 1.5 times the OBW
3) Detector = RMS
4) Sweep time = auto couple
5) allow trace to fully stabilize
6) use the spectrum amalyser's integrated band power measurement function with band limits set equal to the EBW band edges.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

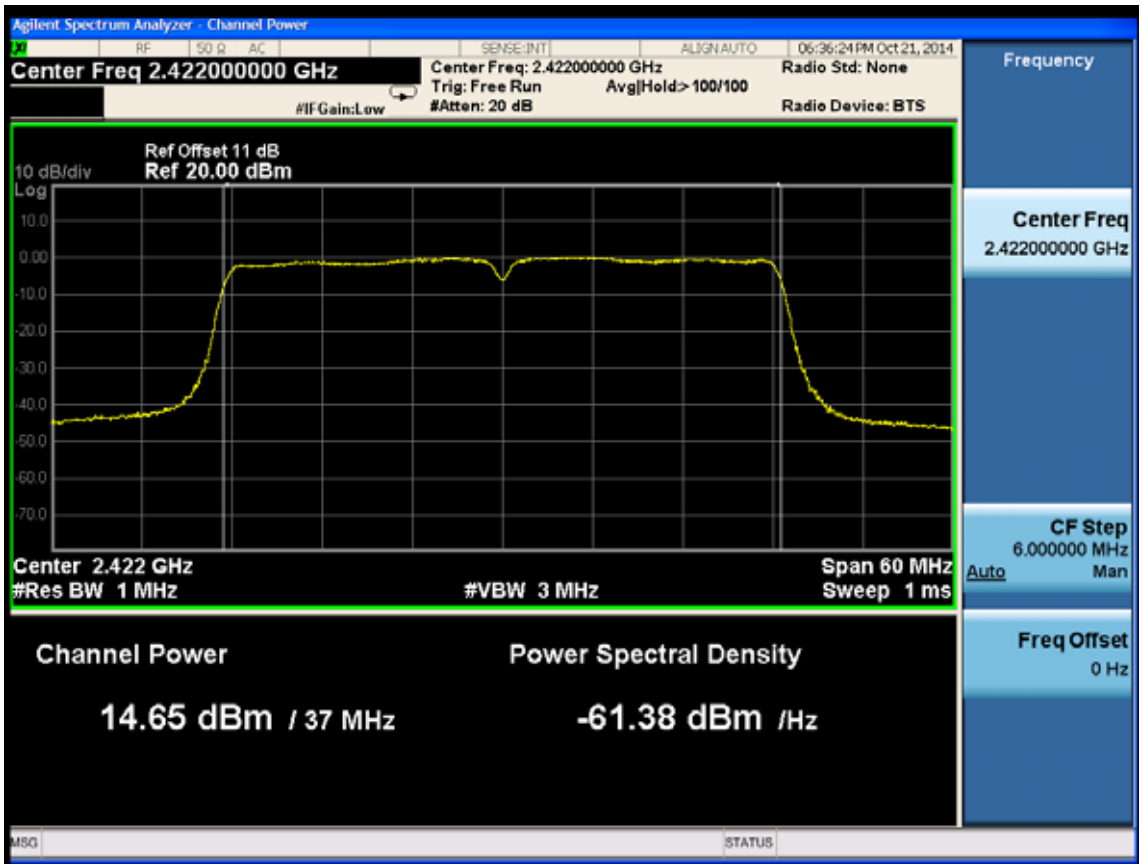
8.4.Test Results

EUT: AC1750 Wireless Dual Band PCI Express Adapter		
M/N: Archer T8E		
Test date: 2014-10-21	Pressure: 101.2±1.0kpa	Humidity: 51.3±3.0%
Tested by: Kobe_Huang	Test site: RF site	Temperature:22.6±0.6℃

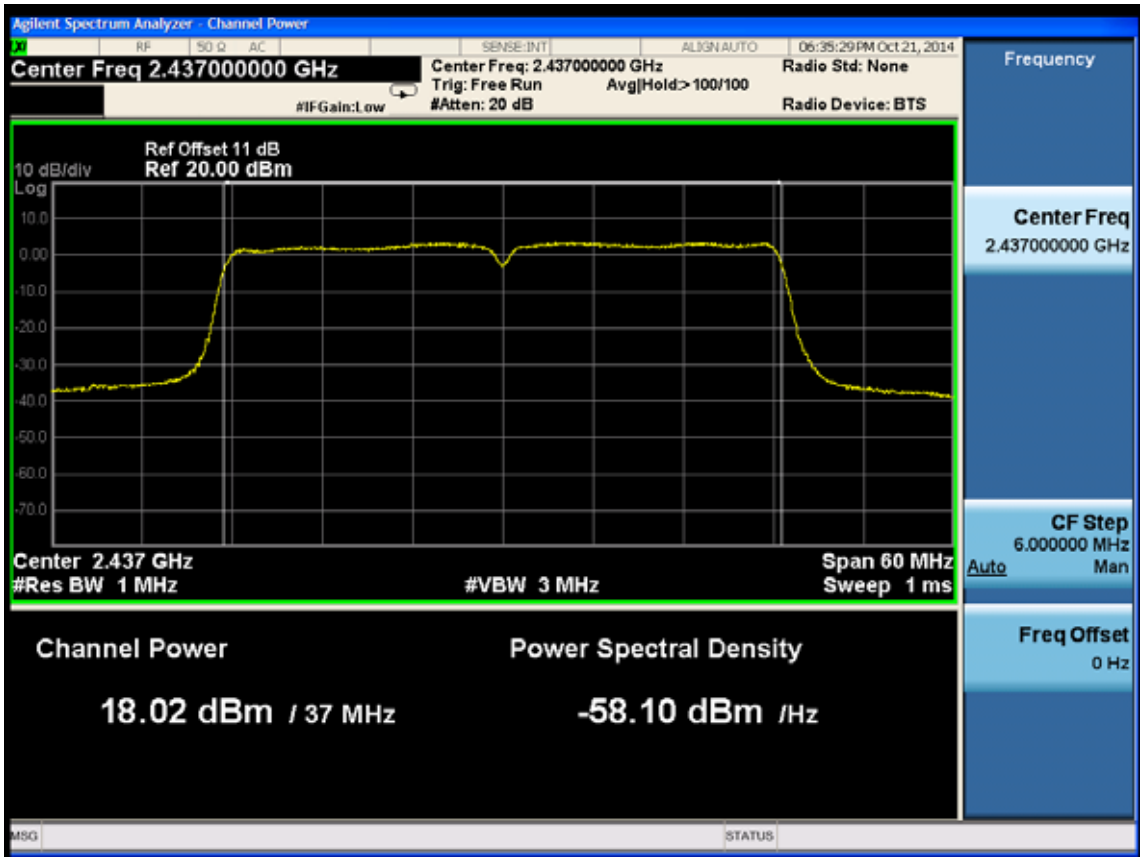
Test Mode	CH	Peak output Power (dBm)				Limit (dBm)
		ANT 0	ANT 1	ANT 2	Total	
11b	CH1	22.66	22.4	21.78	27.07	30
	CH6	21.96	22.23	21.21	26.59	30
	CH11	21.83	22.06	21.56	26.59	30
11g	CH1	17.85	17.38	17.32	22.29	30
	CH6	17.97	17.35	17.37	22.34	30
	CH11	17.62	16.64	16.78	21.81	30
11n HT20	CH1	17.03	16.56	16.2	21.38	30
	CH6	17.74	17.22	17.01	22.11	30
	CH11	17.46	16.63	17.05	21.83	30
11n HT40	CH1	14.65	14.52	14.45	19.31	30
	CH4	18.02	17.55	17.21	22.38	30
	CH7	15.21	14.85	14.23	19.55	30
Conclusion: PASS						

Note: 11b/g/n working at CDD mode which described in KDB662911.
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$

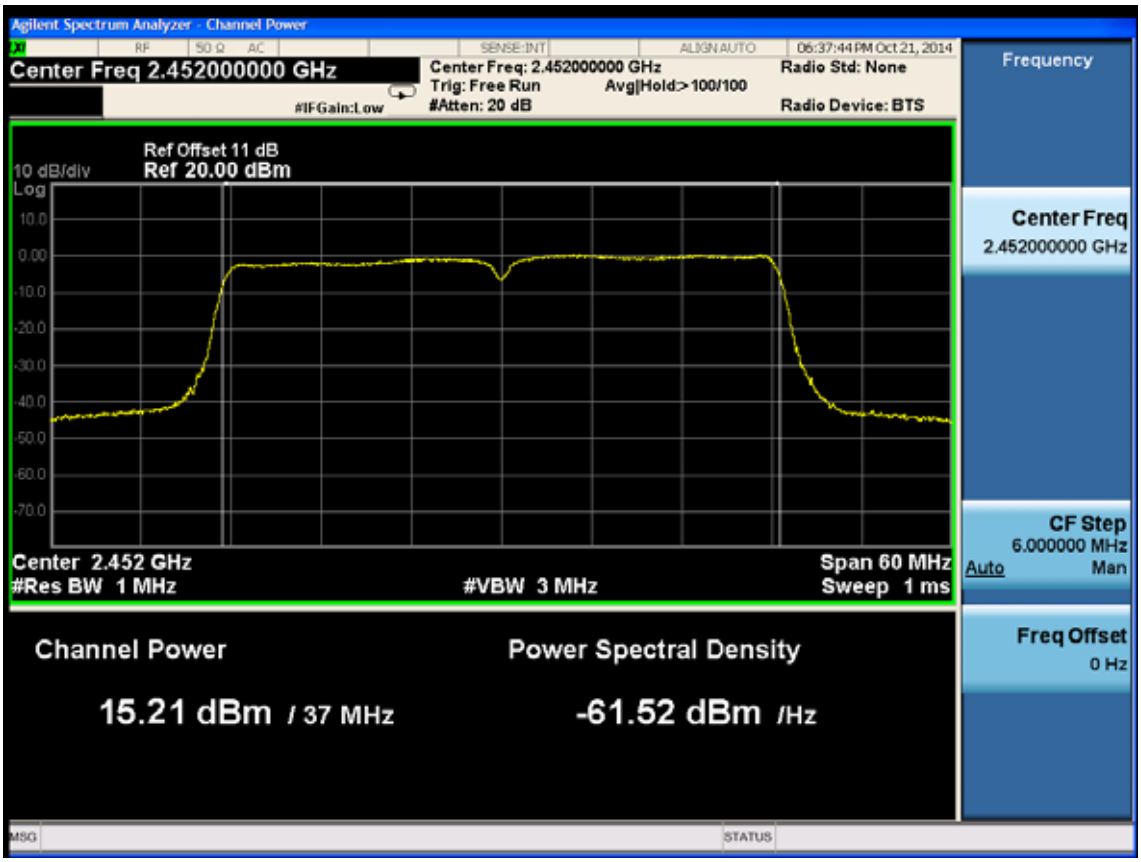
ANT 0:
Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz



Test CH4: 2437MHz



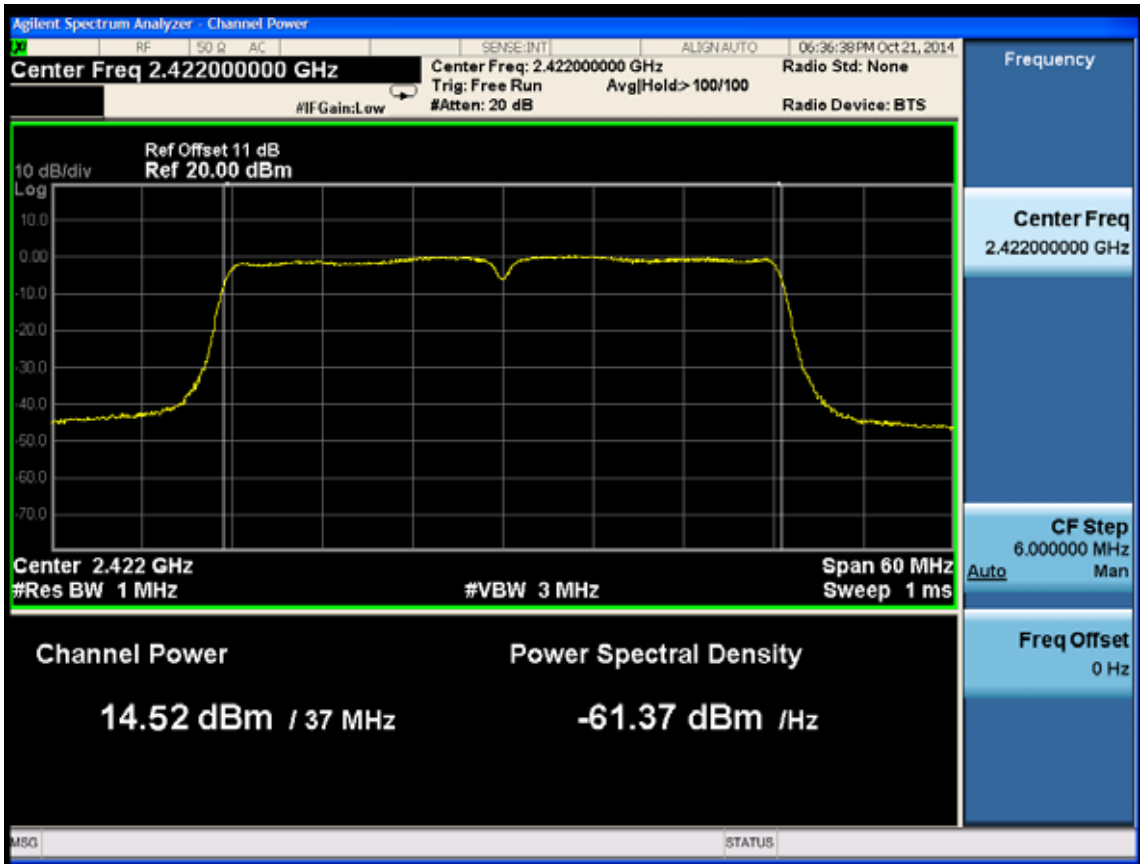
Test CH7: 2452MHz



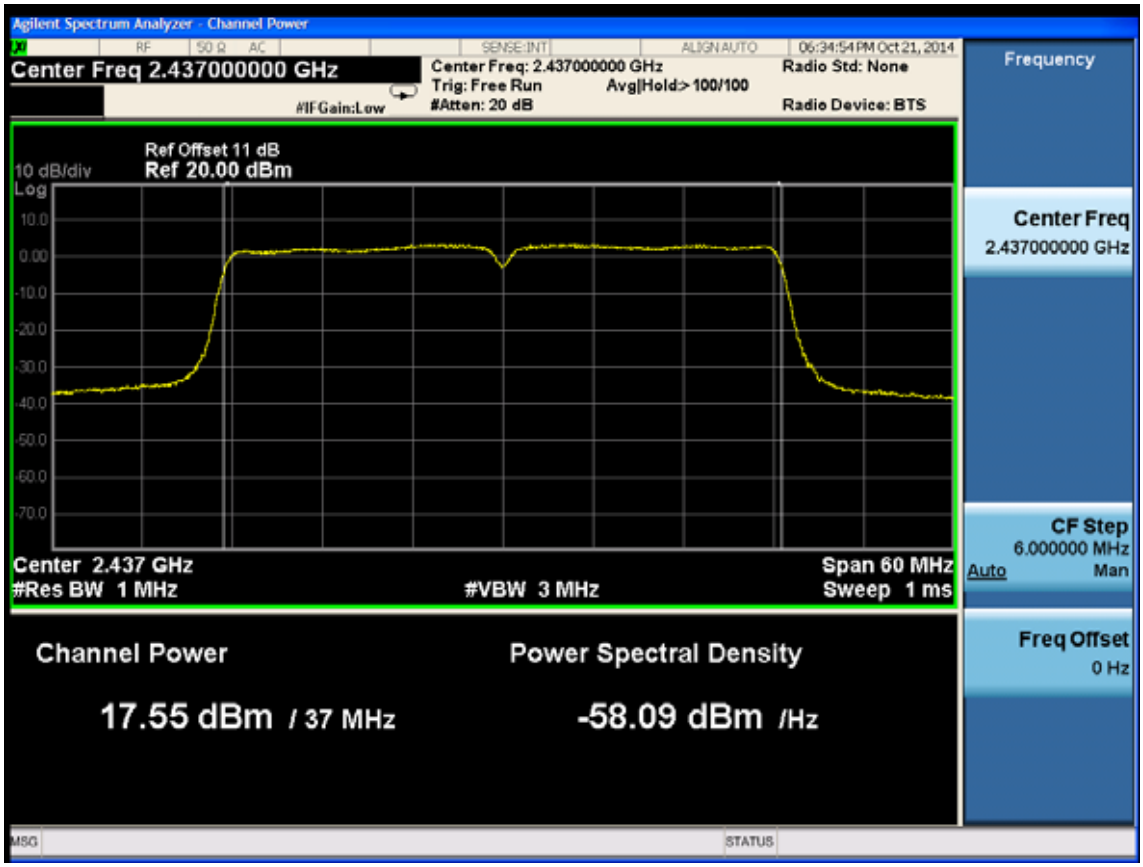
ANT 1:

Test Mode: IEEE 802.11n HT40 TX

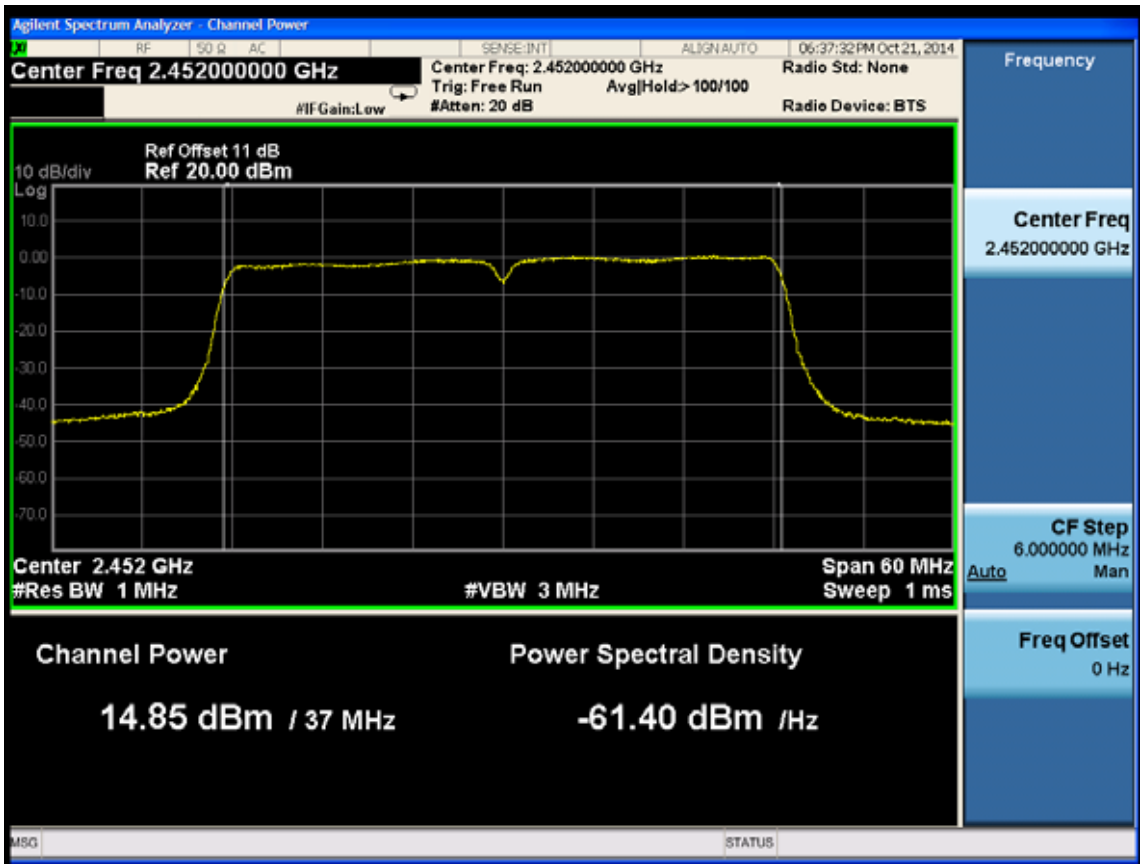
Test CH1: 2422MHz



Test CH4: 2437MHz



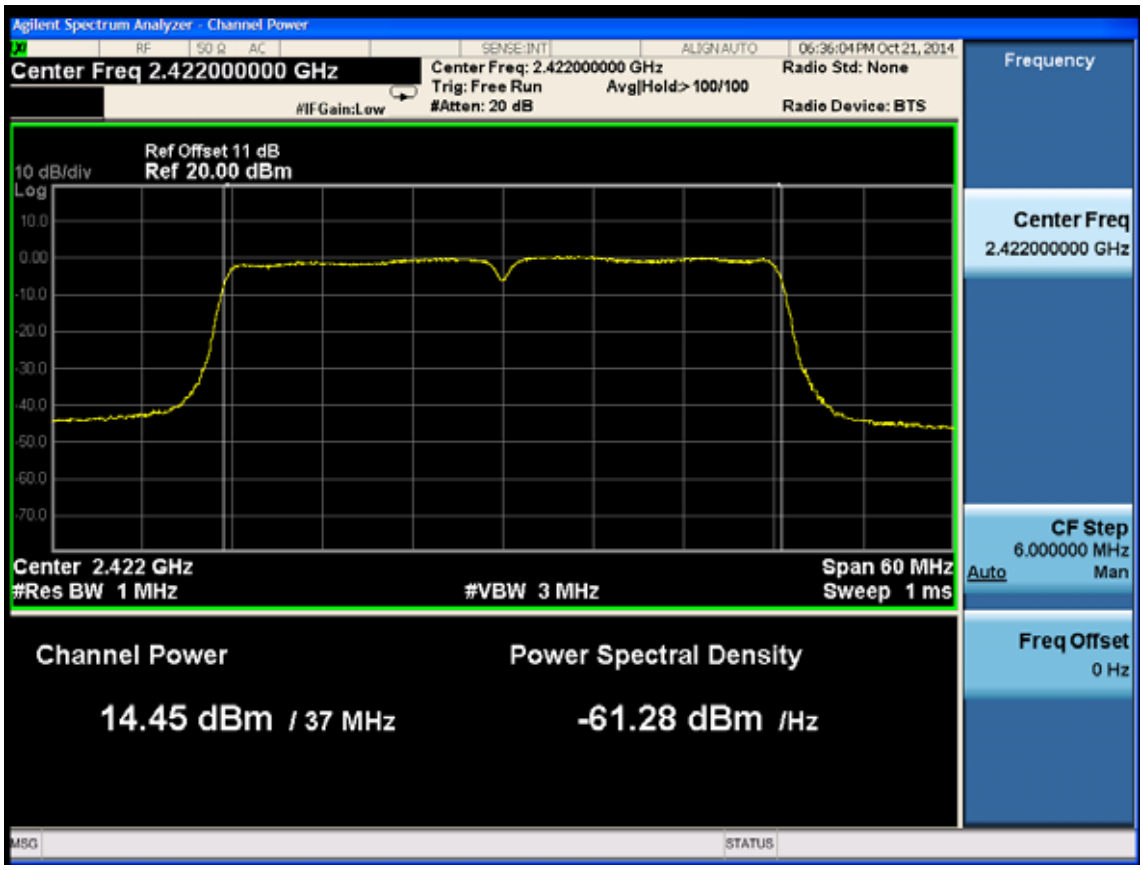
Test CH7: 2452MHz



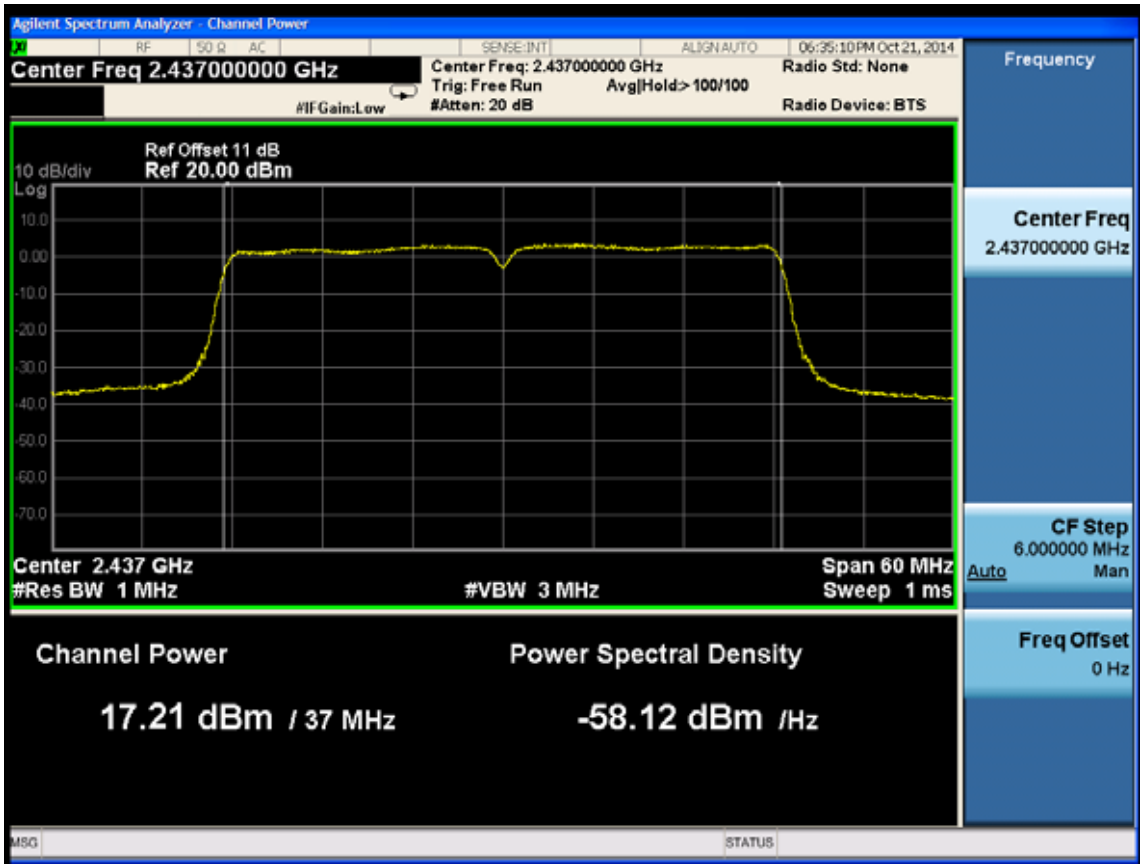
ANT 2:

Test Mode: IEEE 802.11n HT40 TX

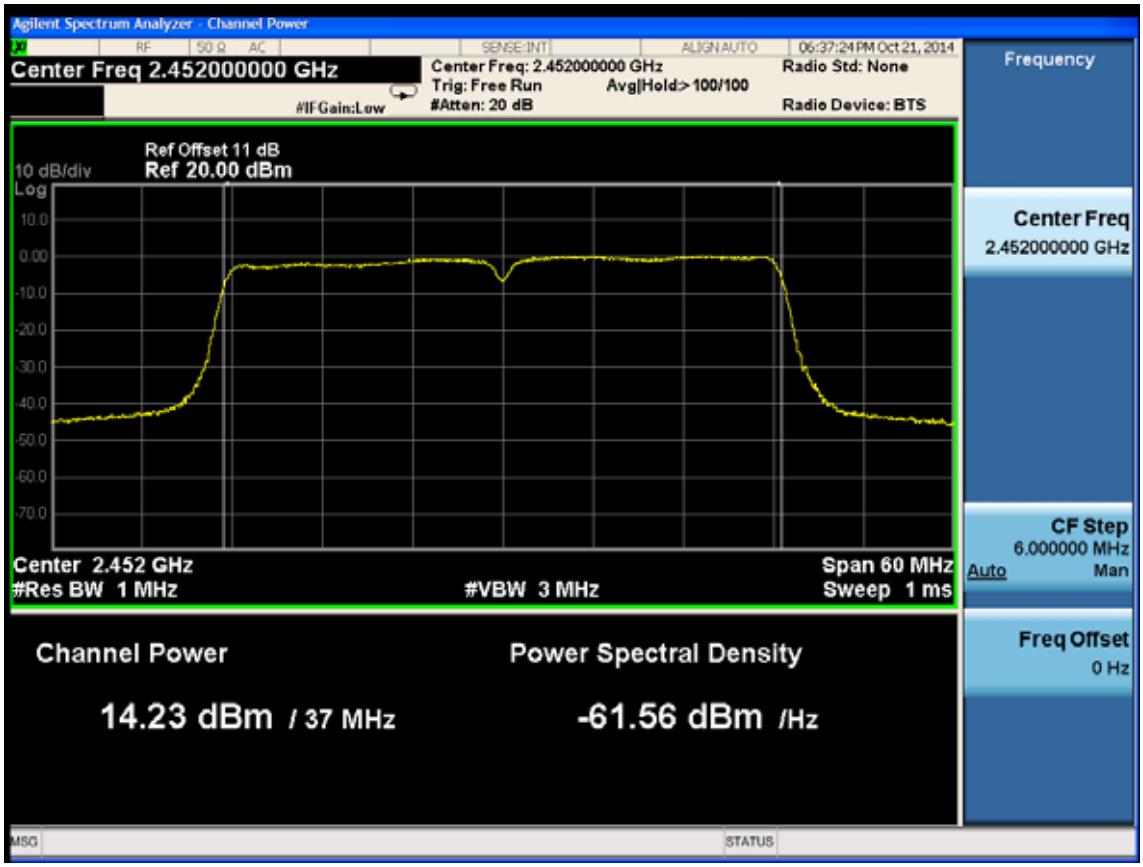
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



9. POWER SPECTRAL DENSITY TEST

9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	N9030A	MY51380221	Oct.29, 14	1Year
2.	Attenuator (20dB)	Agilent	8491B	MY39262165	Apr. 28,14	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	Apr. 28,14	1 Year

9.2.Limit

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

9.3.Test Procedure

1. Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.

2. Set the test frequency as center frequency, Set RBW=3KHz,VBW=10KHz,Span large enough capture the entire frequency, Read out maximum peak level frequency

3. Set the frequency read from produce 2 as center frequency, then set the span= 300KHz, Sweep time=Span/RBW, Then Max hold, read out each mode and each ANT's Power density.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude

9.4.Test Results

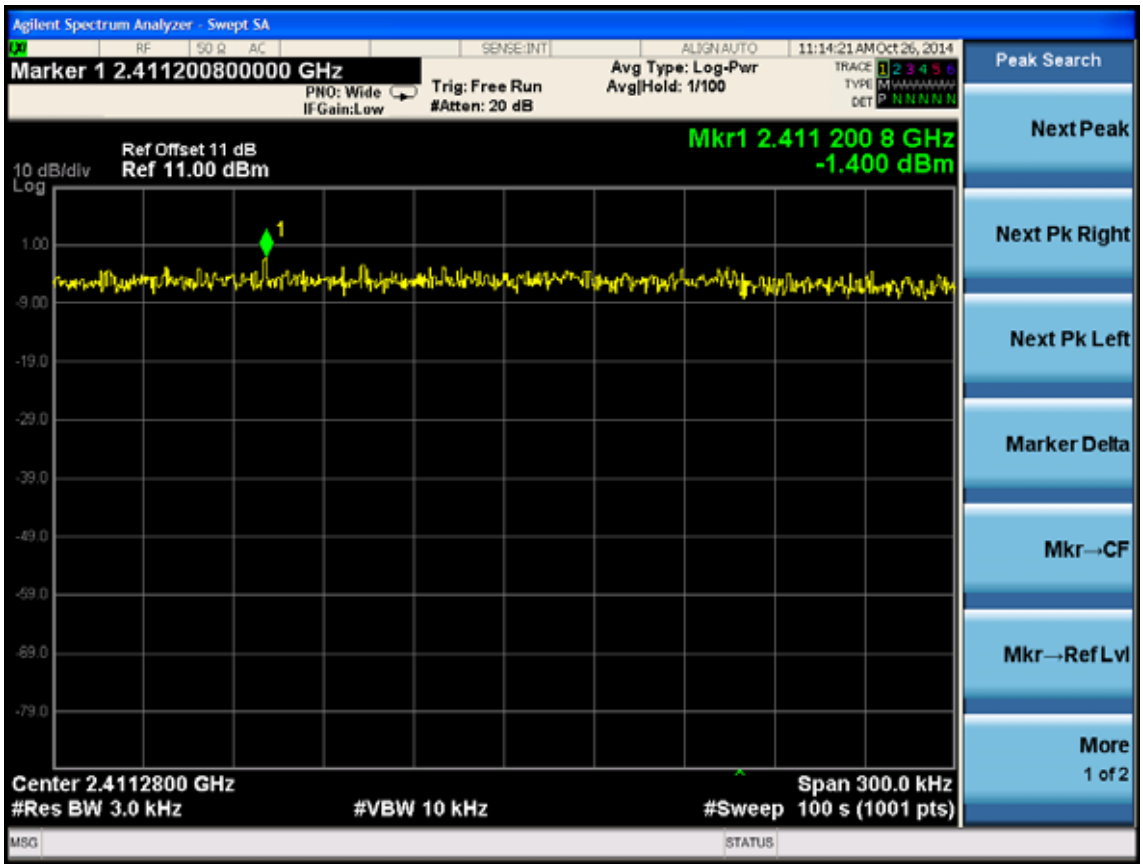
EUT: AC1750 Wireless Dual Band PCI Express Adapter		
M/N: Archer T8E		
Test date: 2014-10-25	Pressure: 101.1±1.0 kpa	Humidity: 52.1±3.0%
Tested by: Kobe_Huang	Test site: RF Site	Temperature: 22.5±0.6℃

Test Mode	CH	Power density (dBm/3kHz)				Limit (dBm/3kHz)
		ANT0	ANT1	ANT2	Total	
11b	CH1	-1.400	-3.370	-3.198	2.21	7.2
	CH6	-3.551	-3.962	-2.156	1.62	7.2
	CH11	-3.334	-3.657	-2.582	1.60	7.2
11g	CH1	-8.872	-8.885	-8.893	-4.11	7.2
	CH6	-10.062	-10.388	-10.128	-5.42	7.2
	CH11	-9.450	-9.966	-9.974	-5.02	7.2

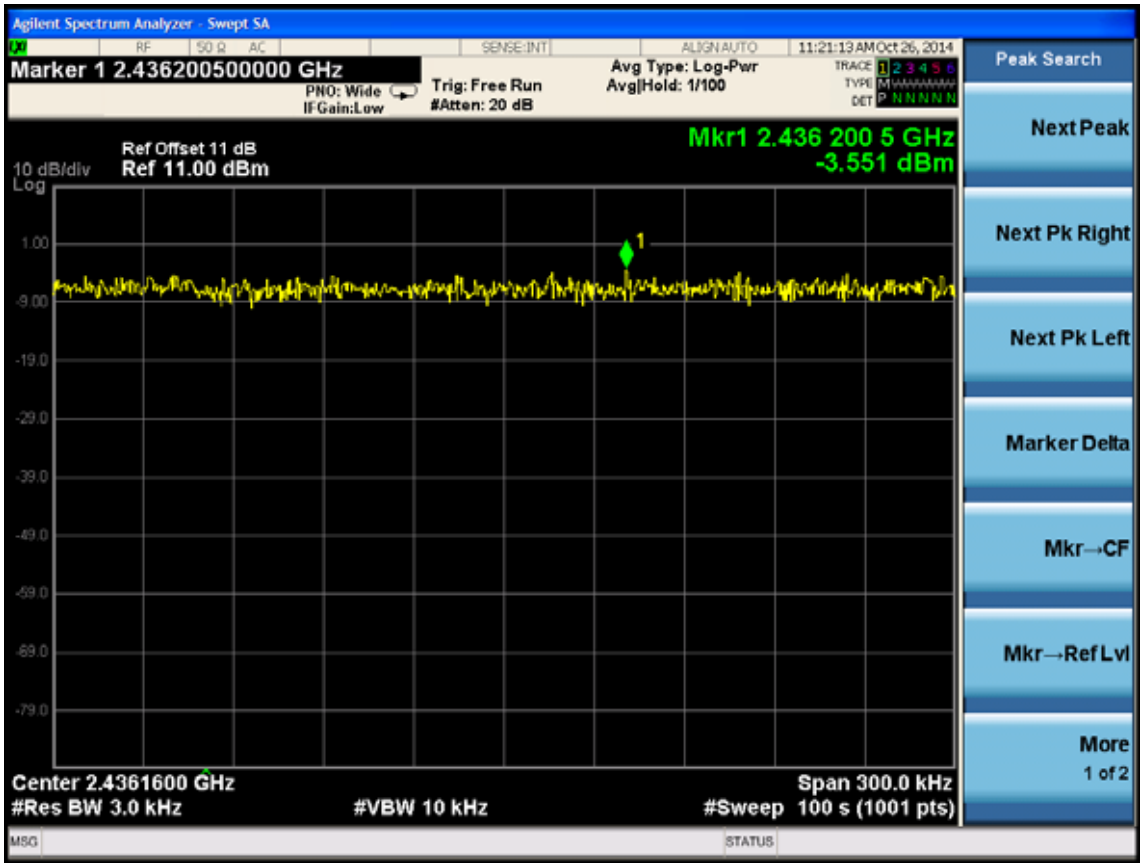
Test Mode	CH	Power density (dBm/3kHz)				Limit (dBm/3kHz)
		ANT0	ANT1	ANT2	Total	
11n HT20	CH1	-8.083	-8.639	-8.947	-3.77	7.2
	CH6	-9.380	-9.883	-10.234	-5.05	7.2
	CH11	-8.749	-10.395	-10.518	-5.04	7.2
11n HT40	CH1	-14.710	-13.827	-13.271	-9.12	7.2
	CH4	-12.173	-12.234	-12.040	-7.38	7.2
	CH7	-14.647	-13.532	-13.678	-9.15	7.2
Conclusion：PASS						

Note: 11b/g /n working at CDD mode which described in KDB662911,
so directional Gain = 2 + Array Gain = 2 + 10log3 = 6.8dBi > 6dBi

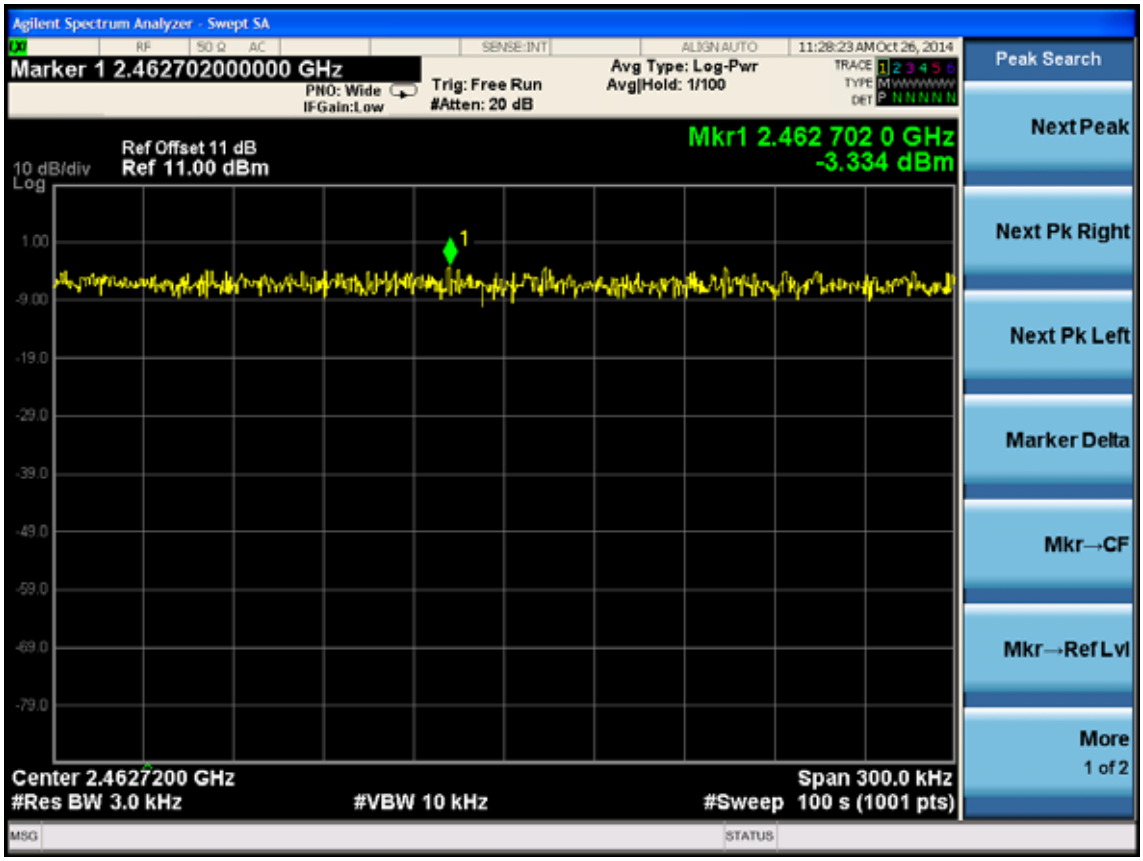
ANT 0:
Test Mode: IEEE 802.11b TX
Test CH1: 2412MHz



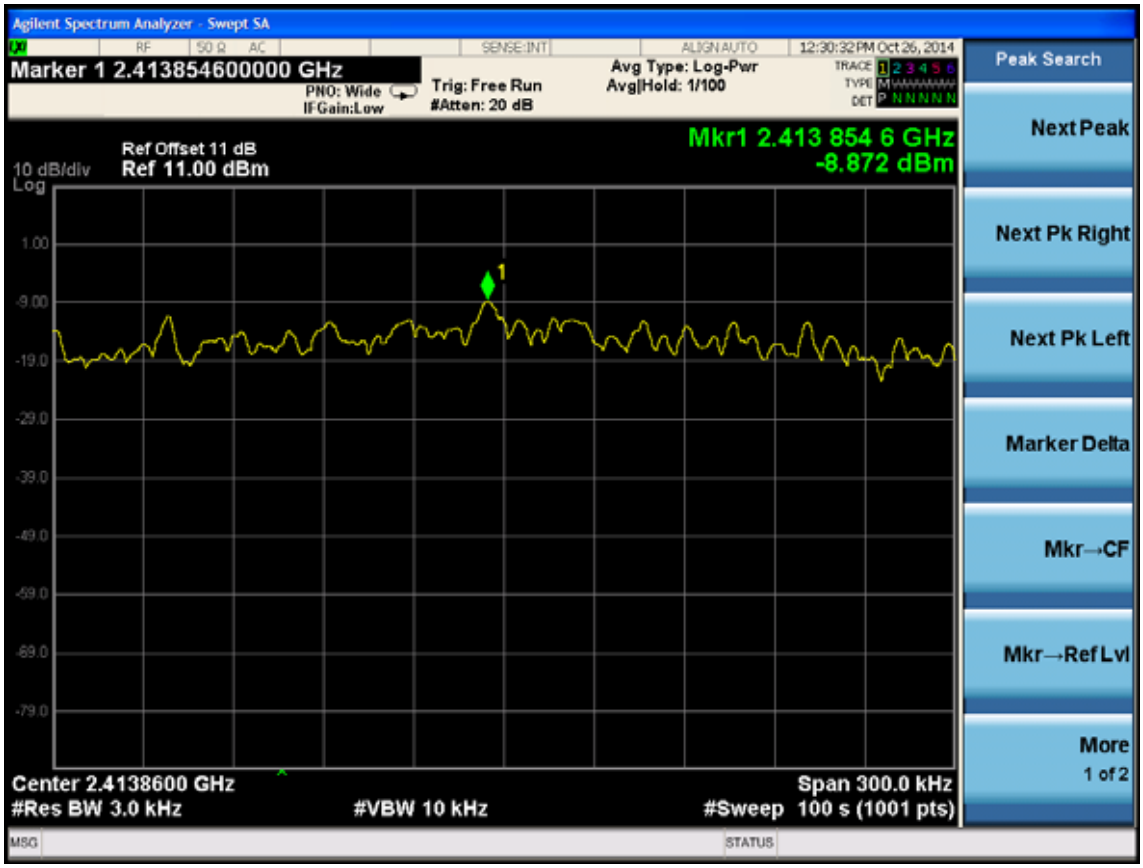
Test CH6: 2437MHz



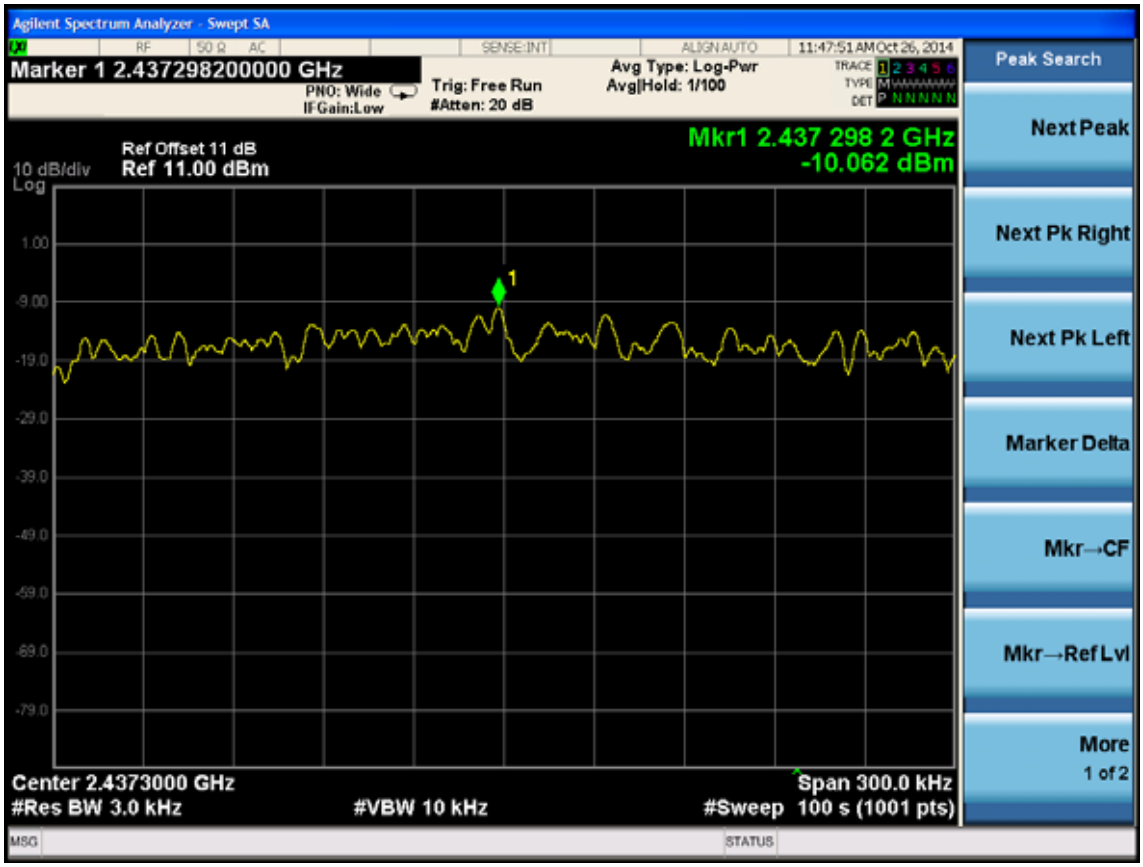
Test CH11: 2462MHz



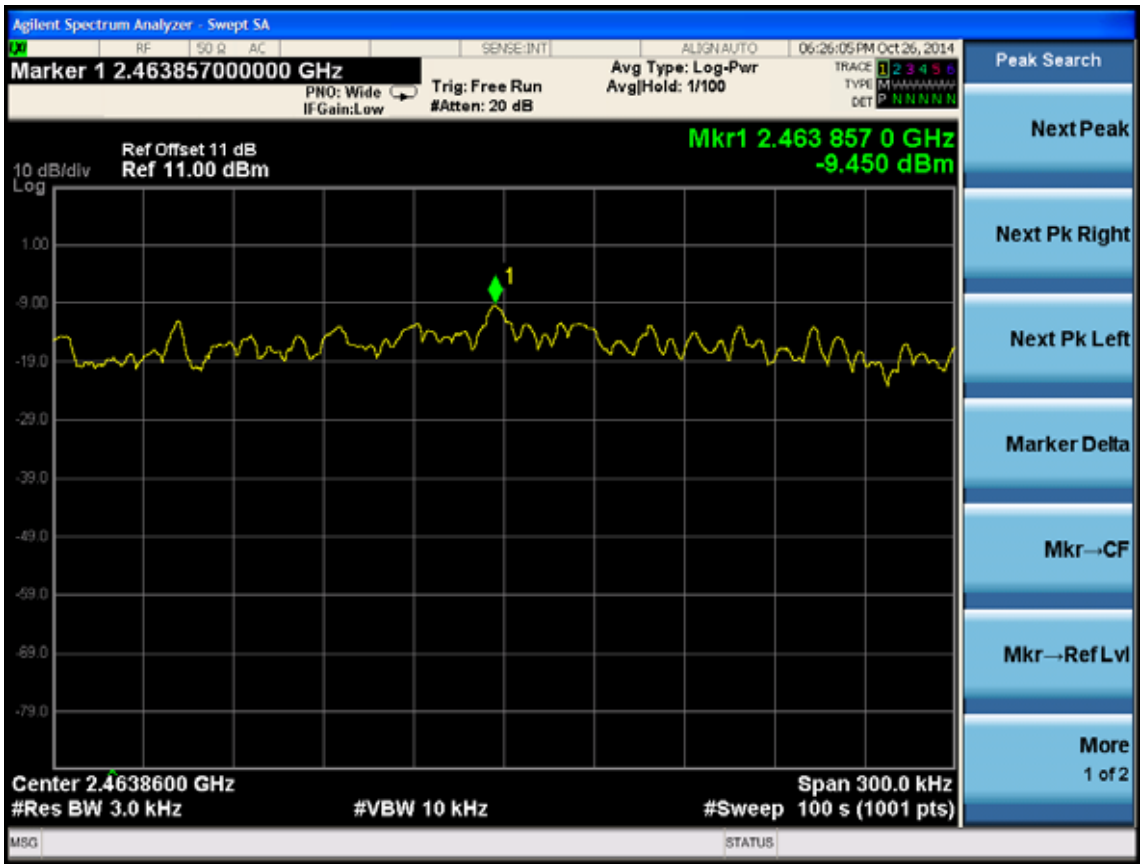
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



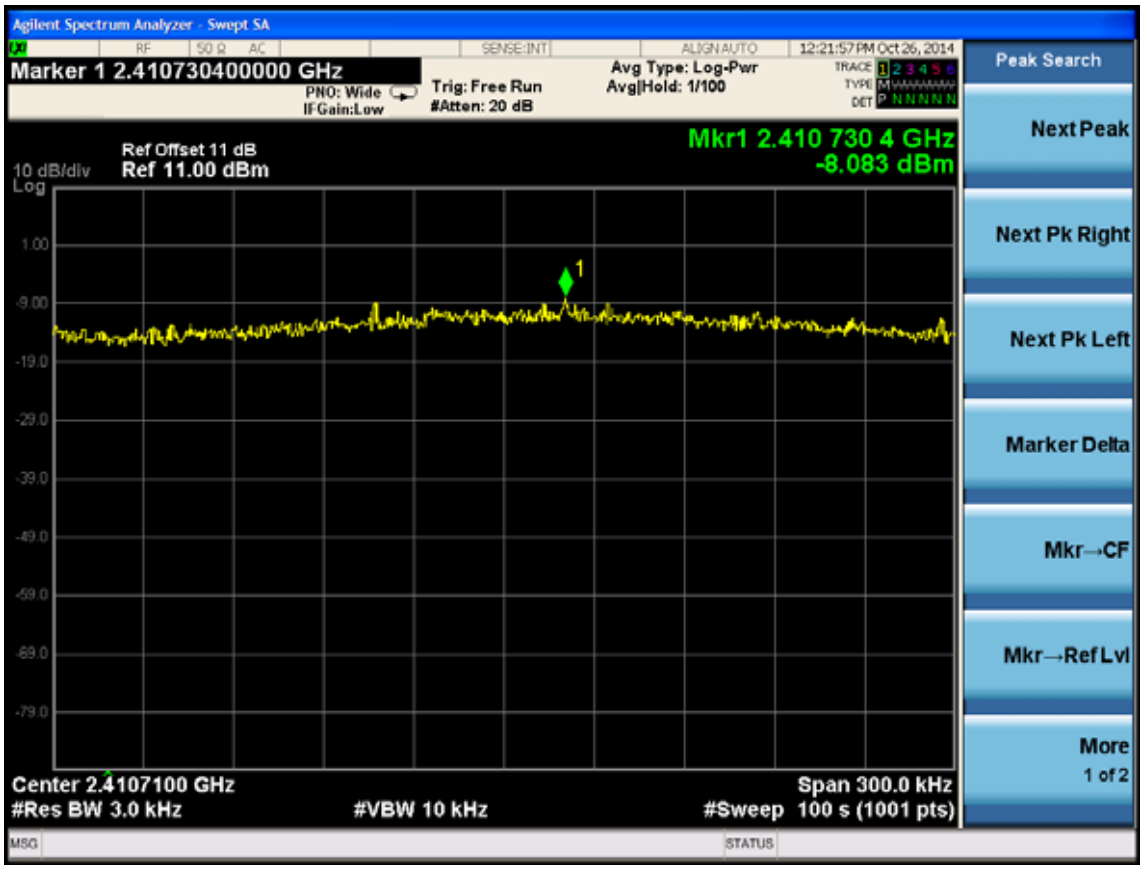
Test CH6: 2437MHz



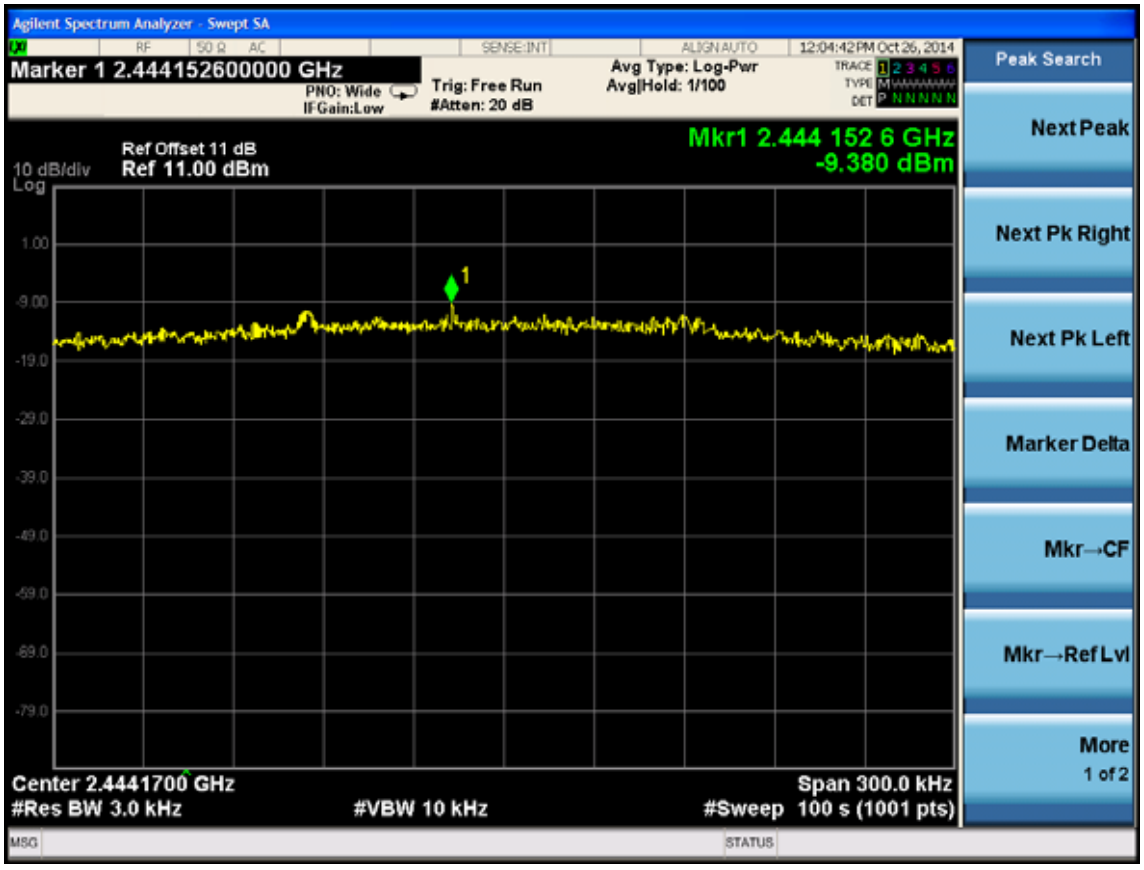
Test CH11: 2462MHz



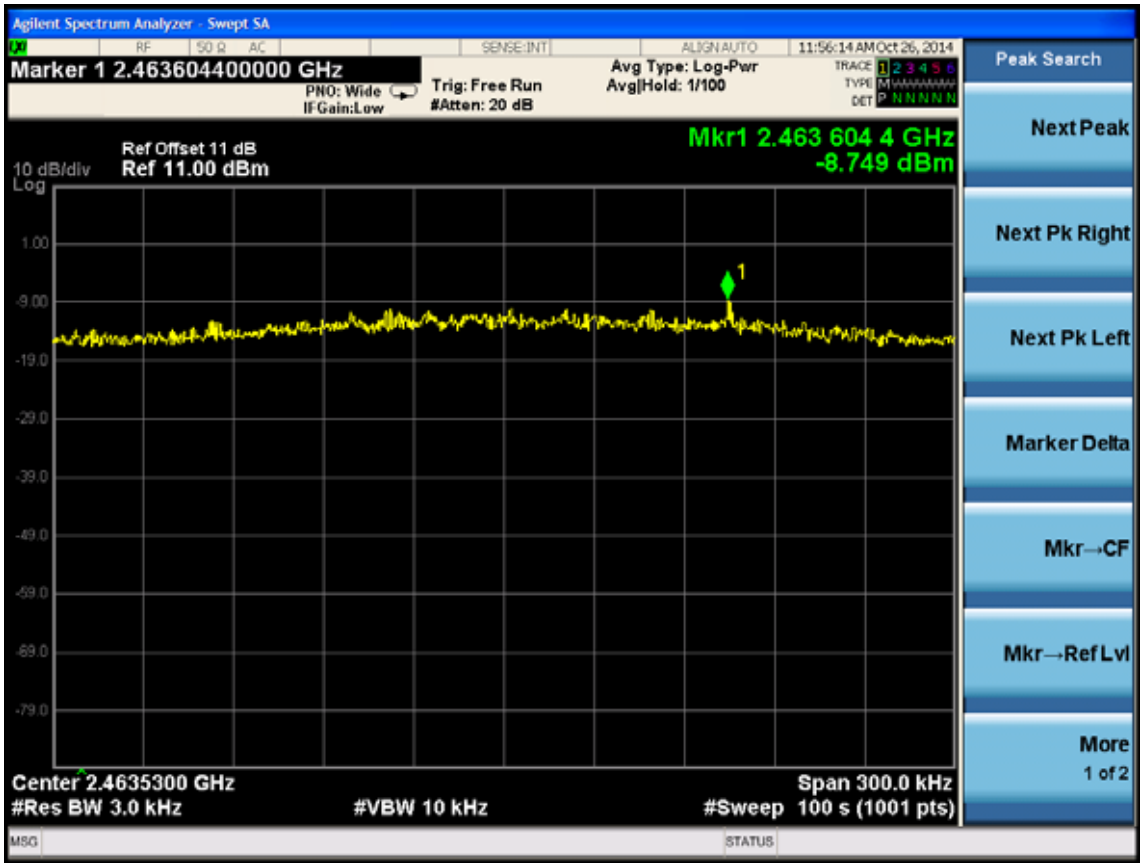
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



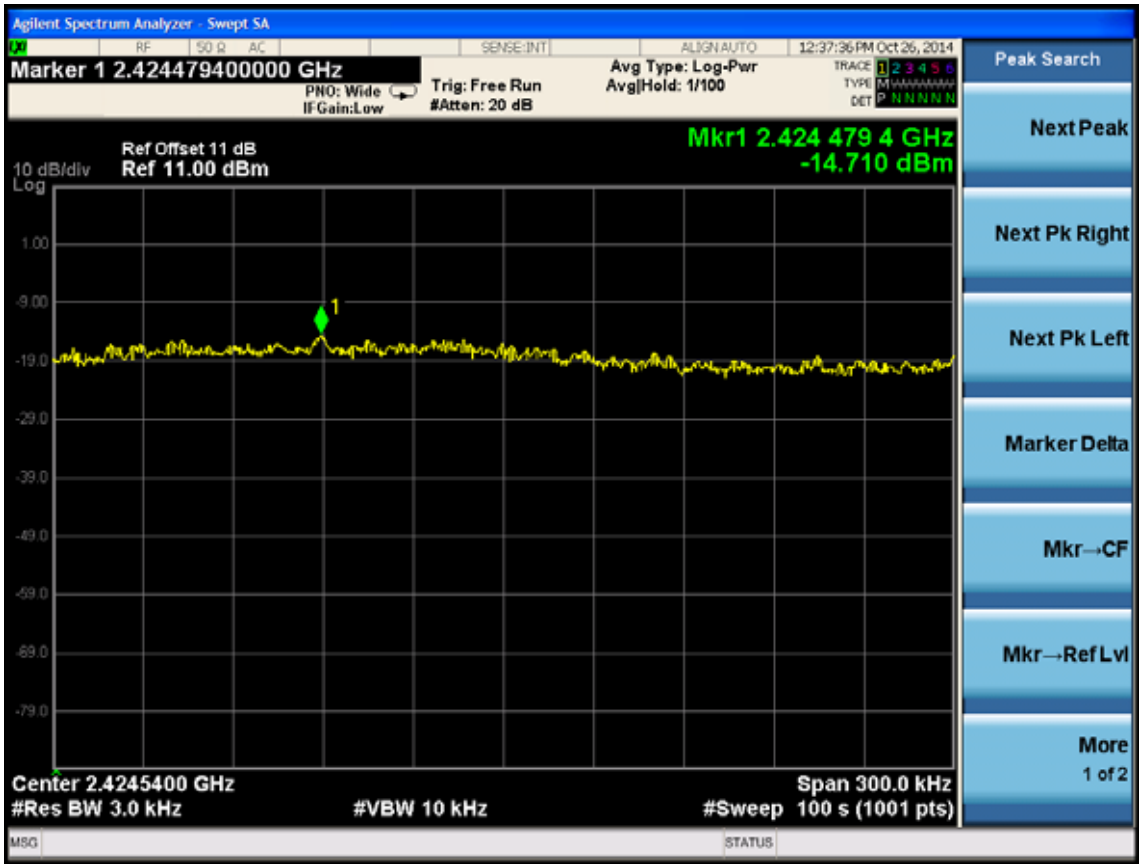
Test CH6: 2437MHz



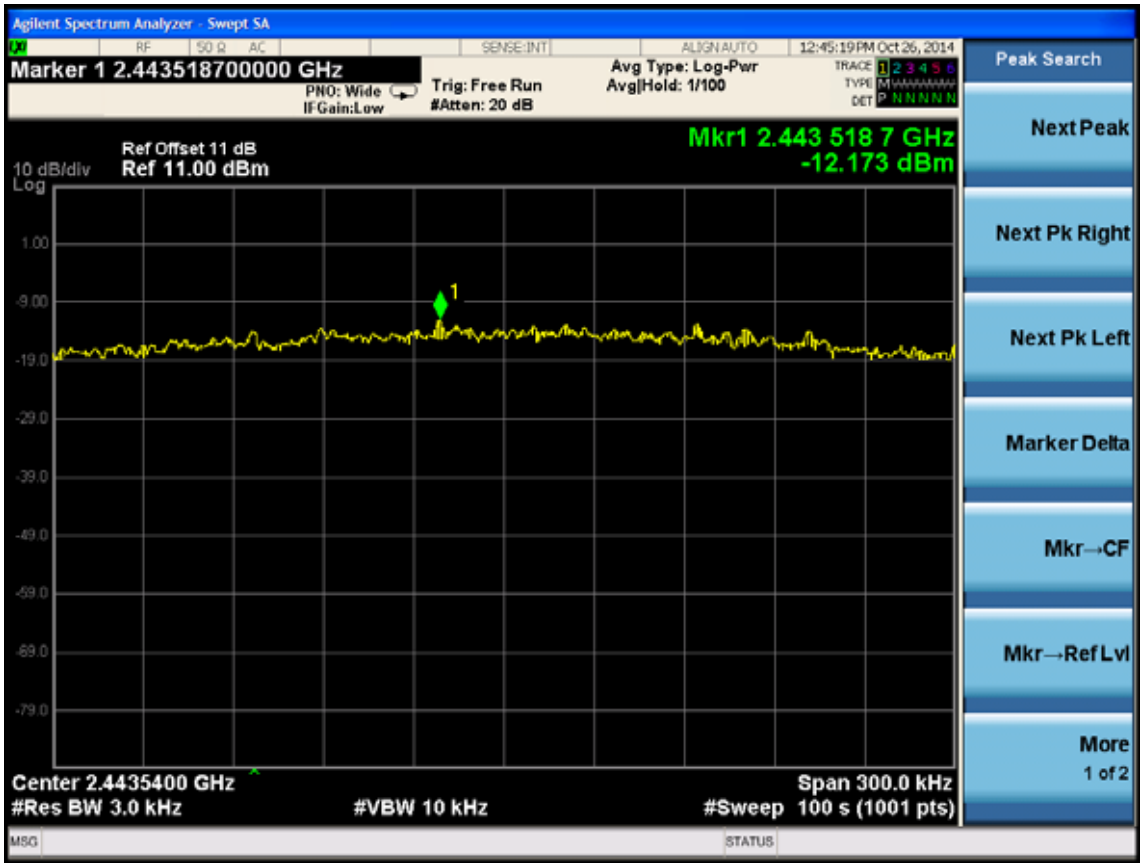
Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz

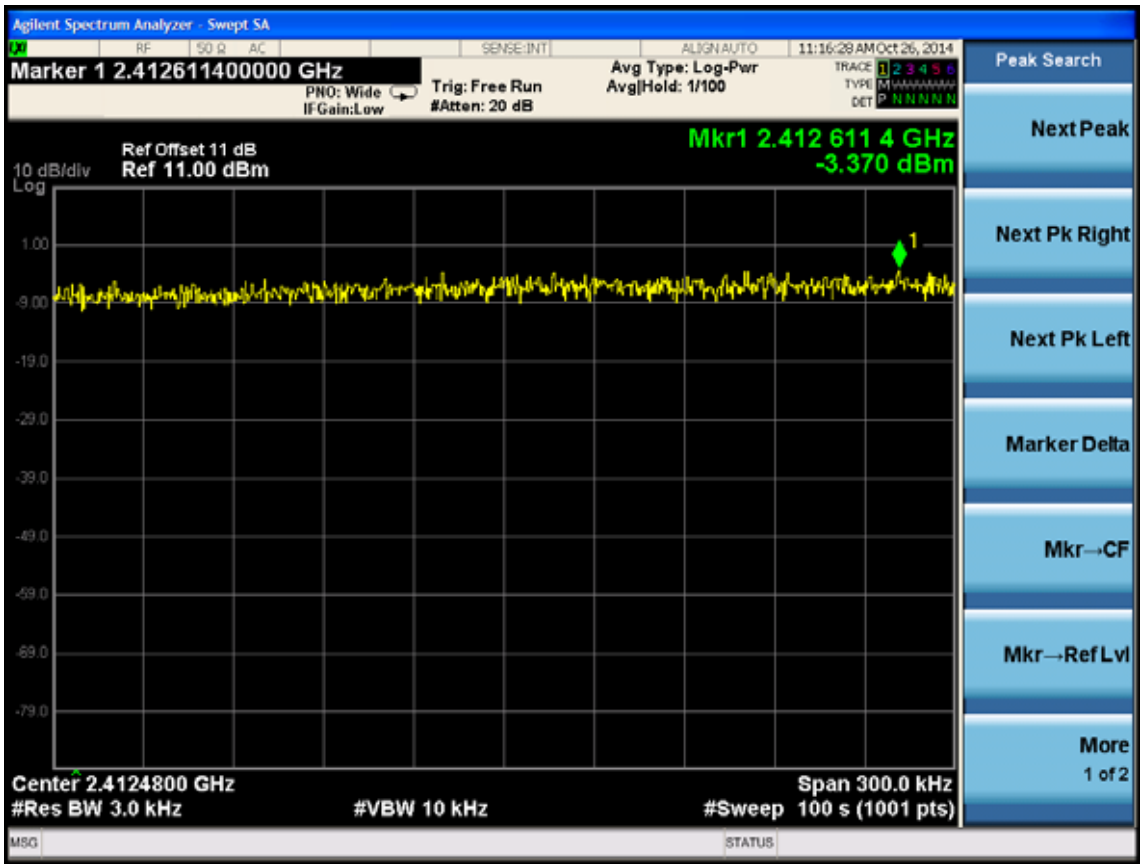


Test CH4: 2437MHz

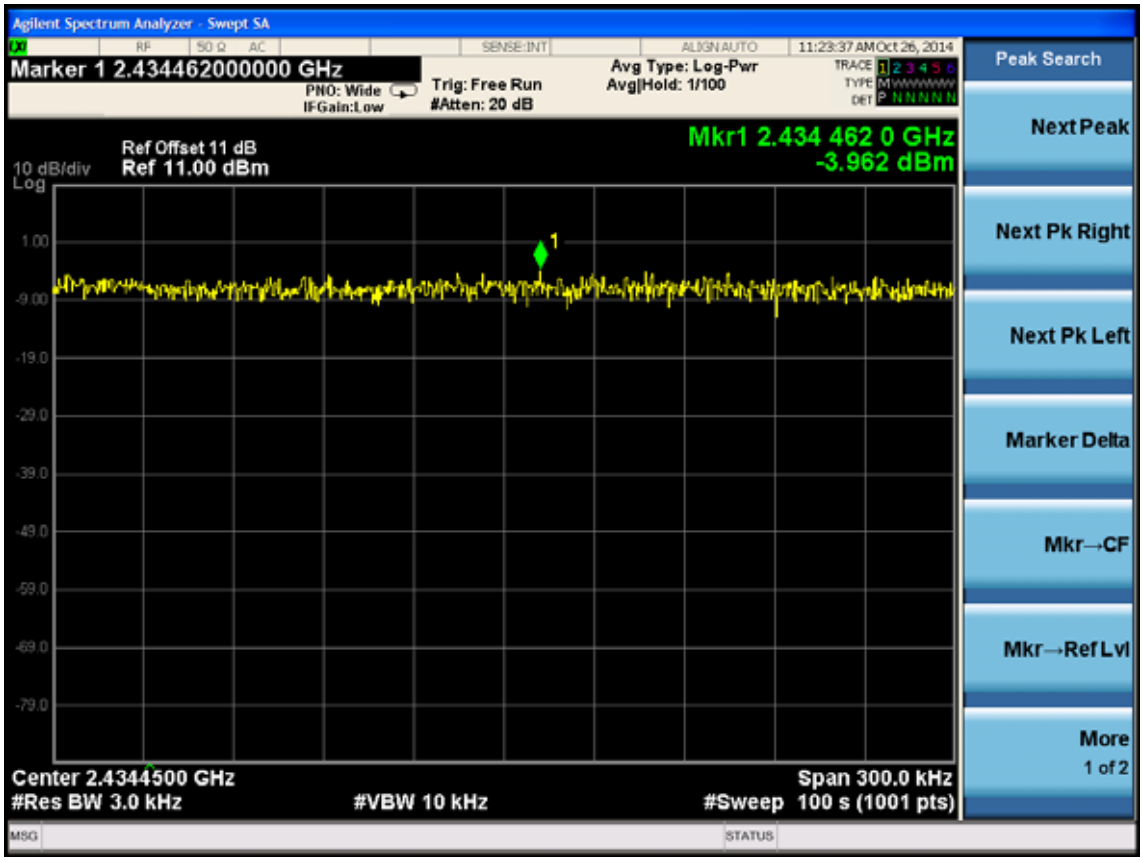


Test CH7: 2452MHz

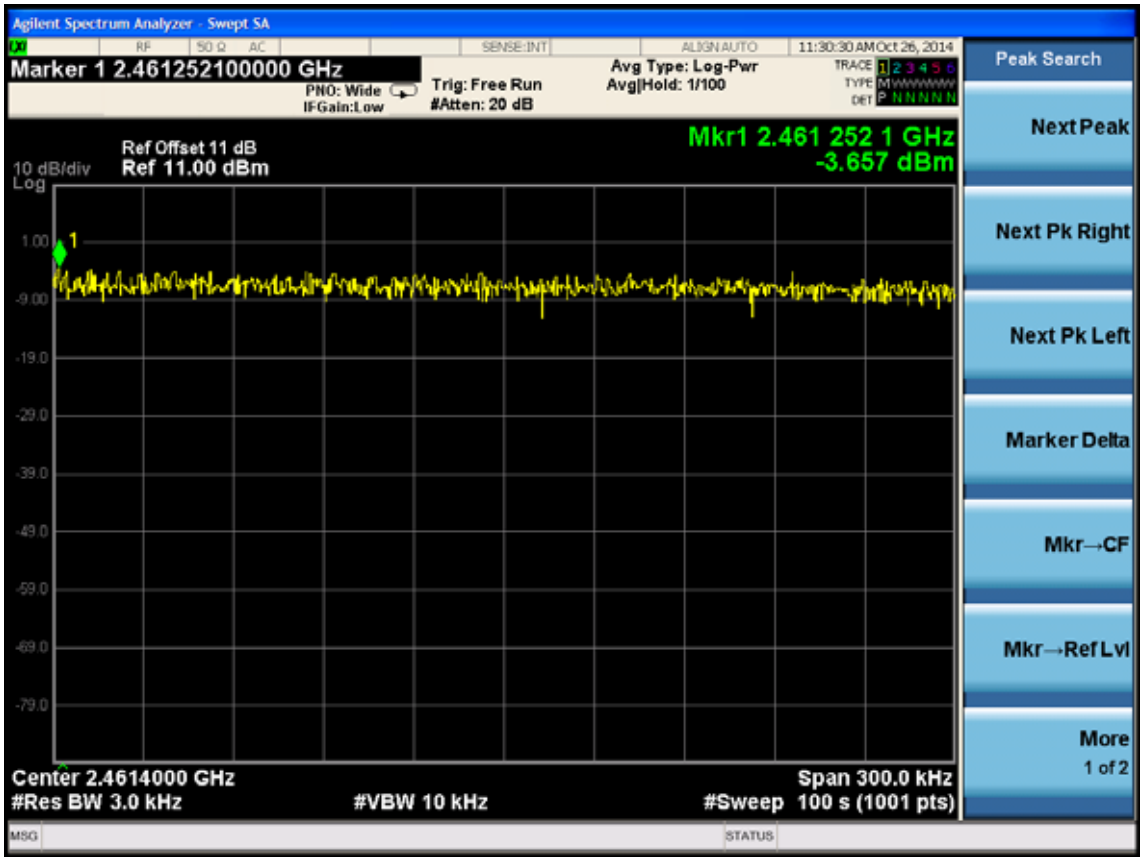
ANT 1:
Test Mode: IEEE 802.11b TX
Test CH1: 2412MHz



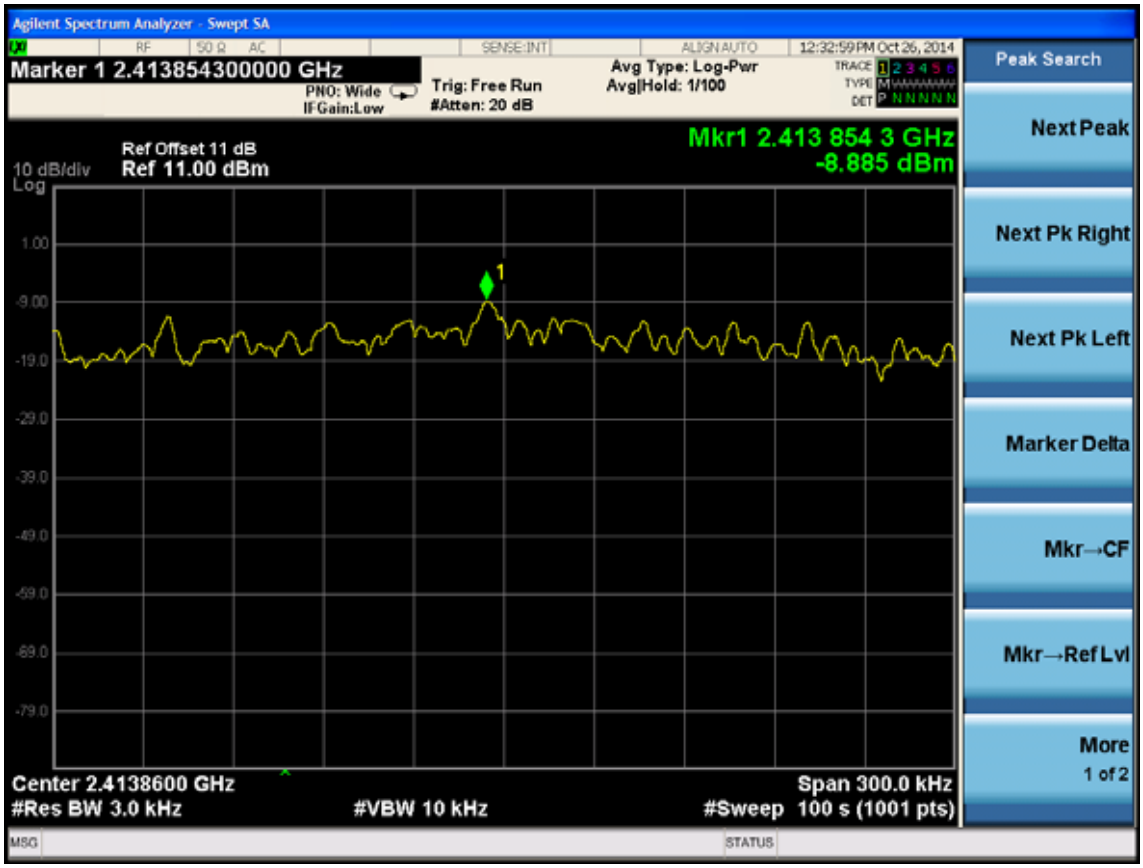
Test CH6: 2437MHz



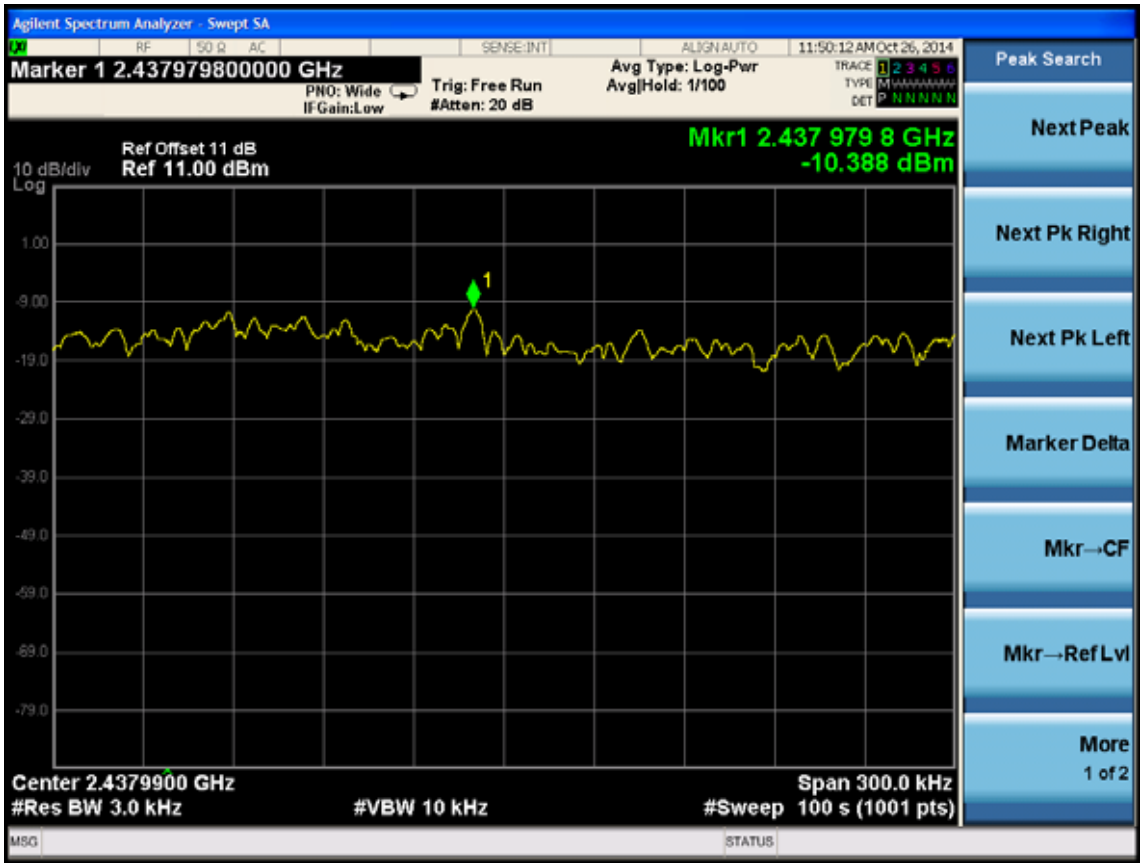
Test CH11: 2462MHz



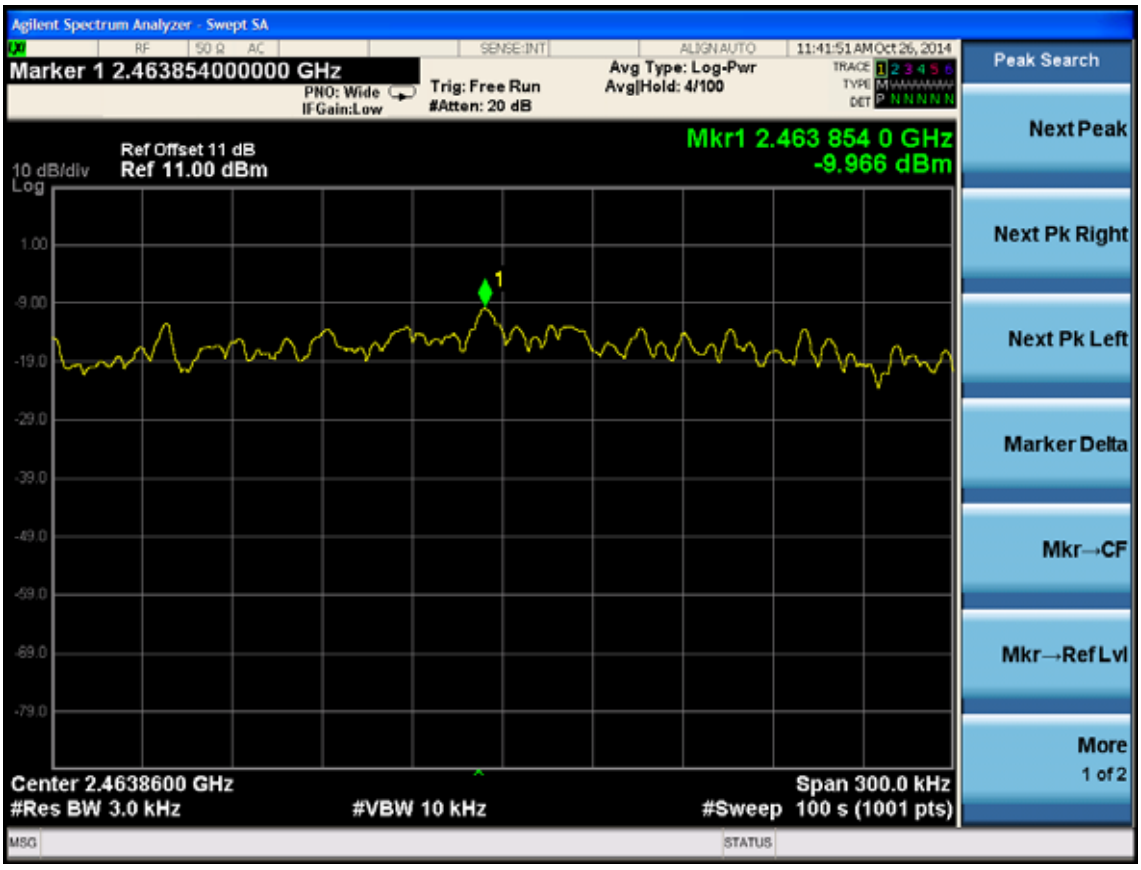
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



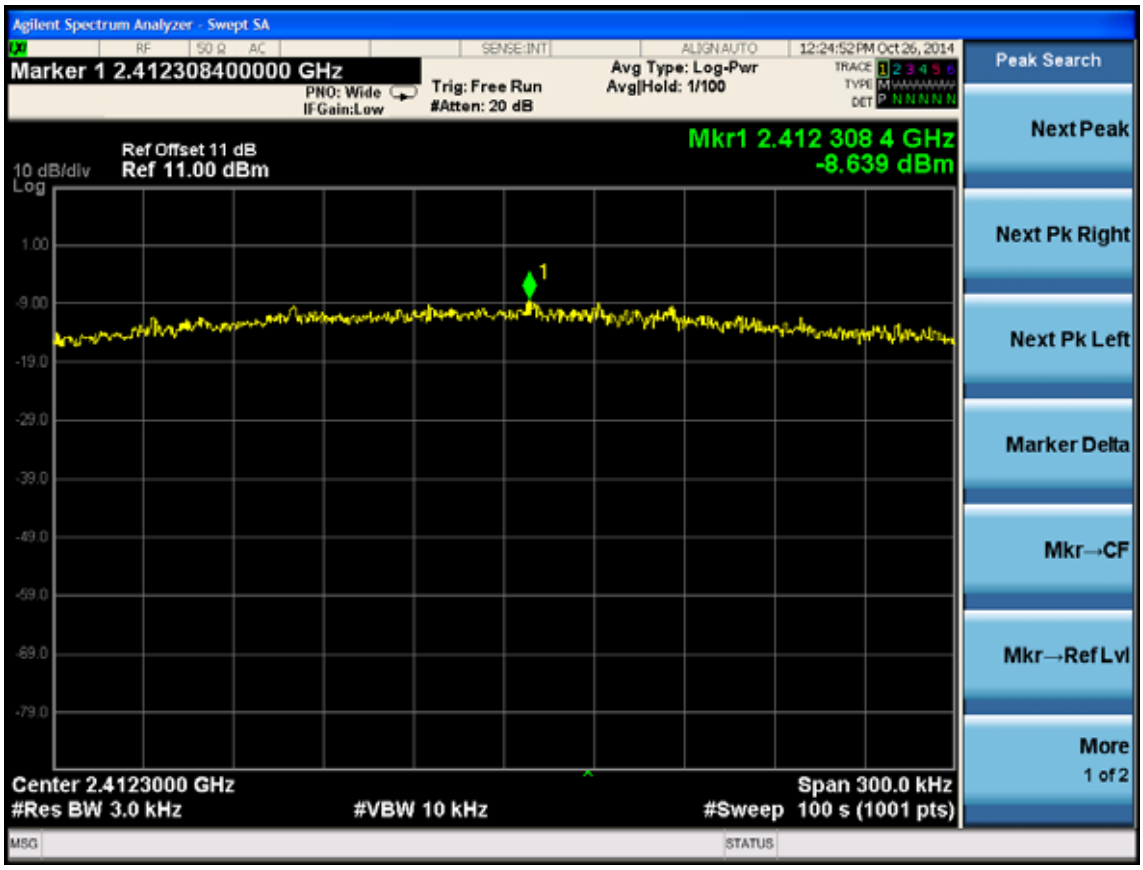
Test CH6: 2437MHz



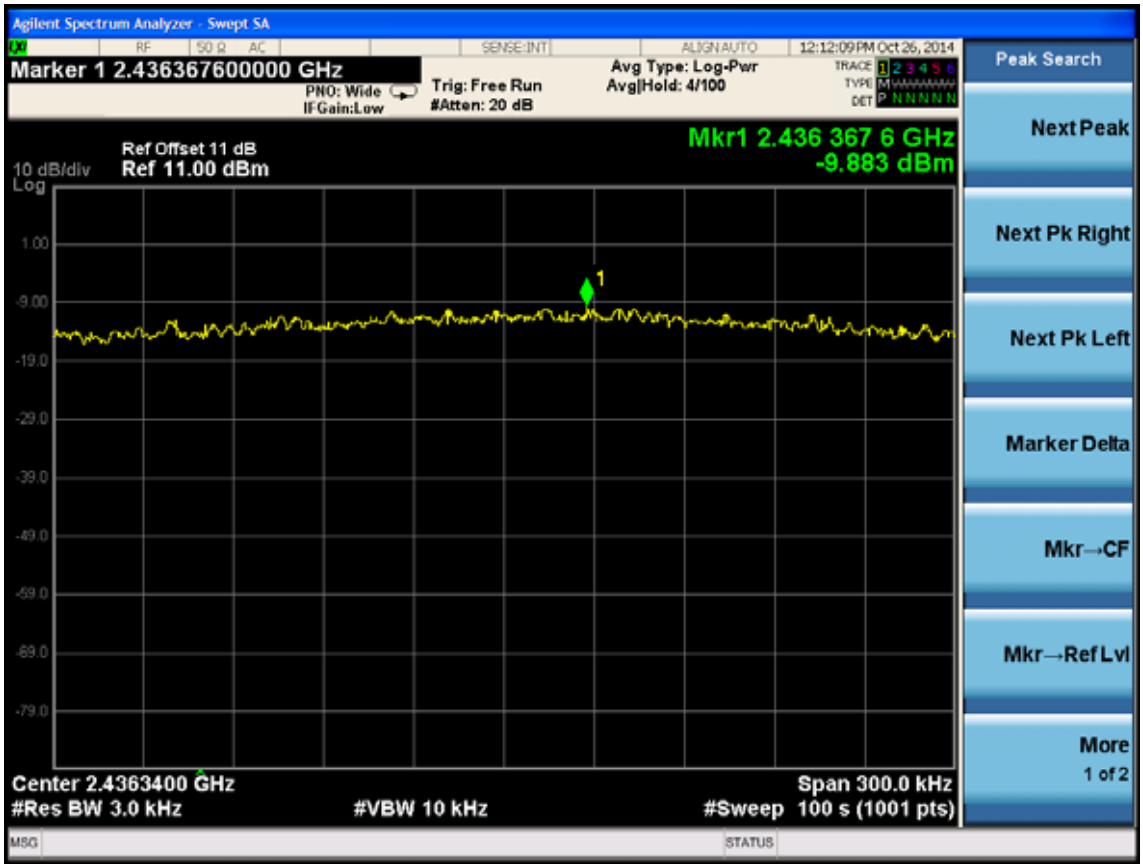
Test CH11: 2462MHz



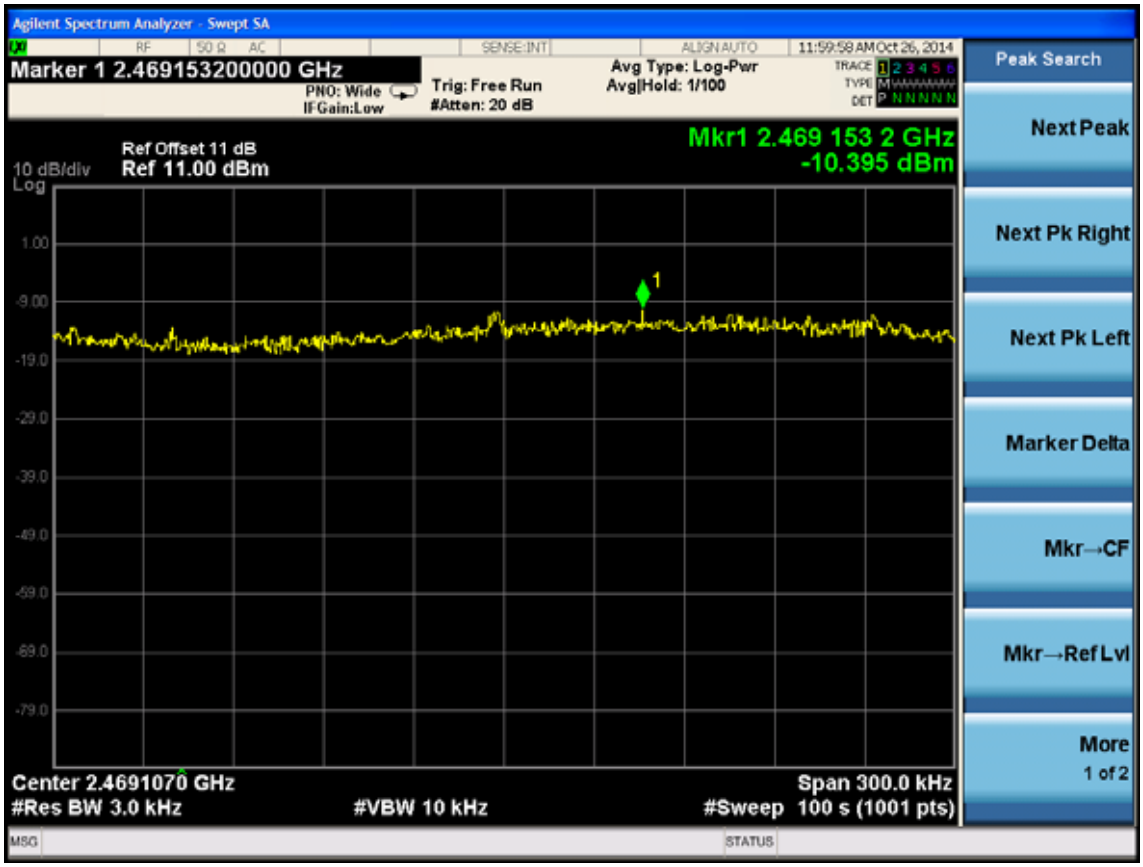
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



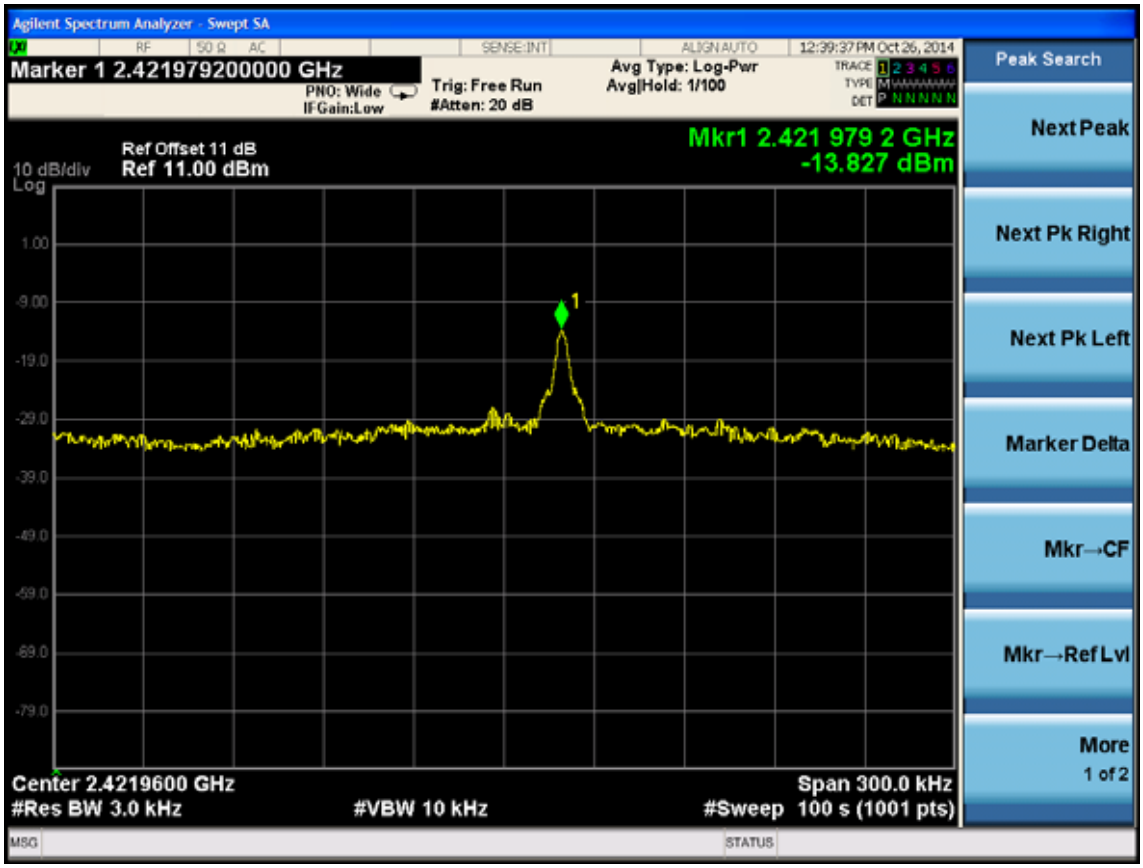
Test CH6: 2437MHz



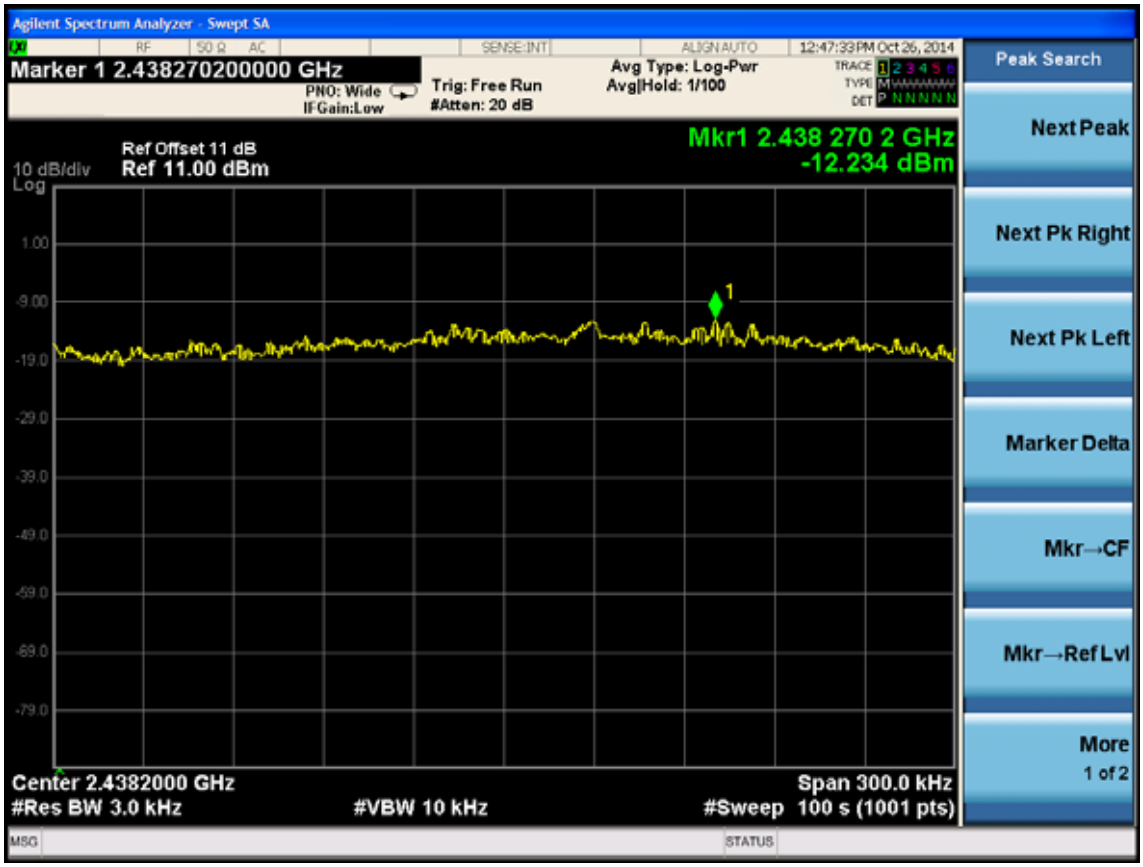
Test CH11: 2462MHz



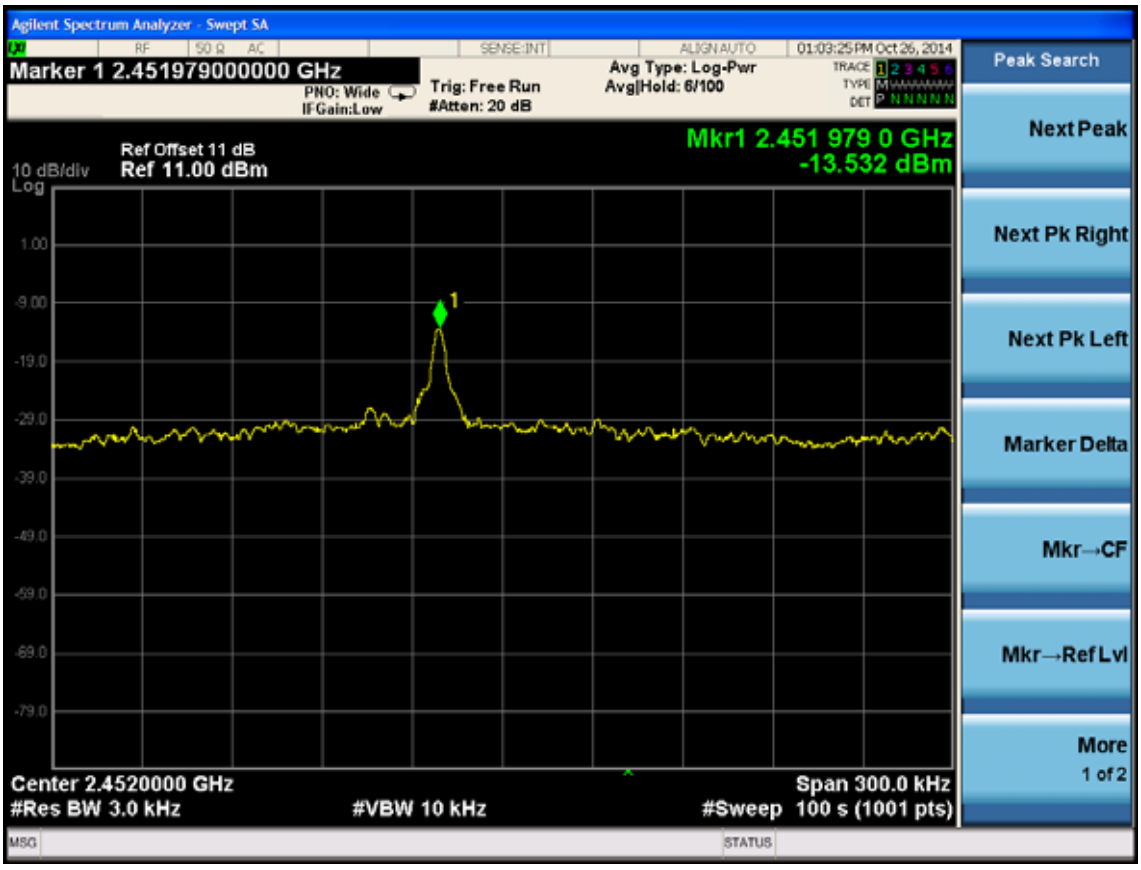
Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz



Test CH4: 2437MHz



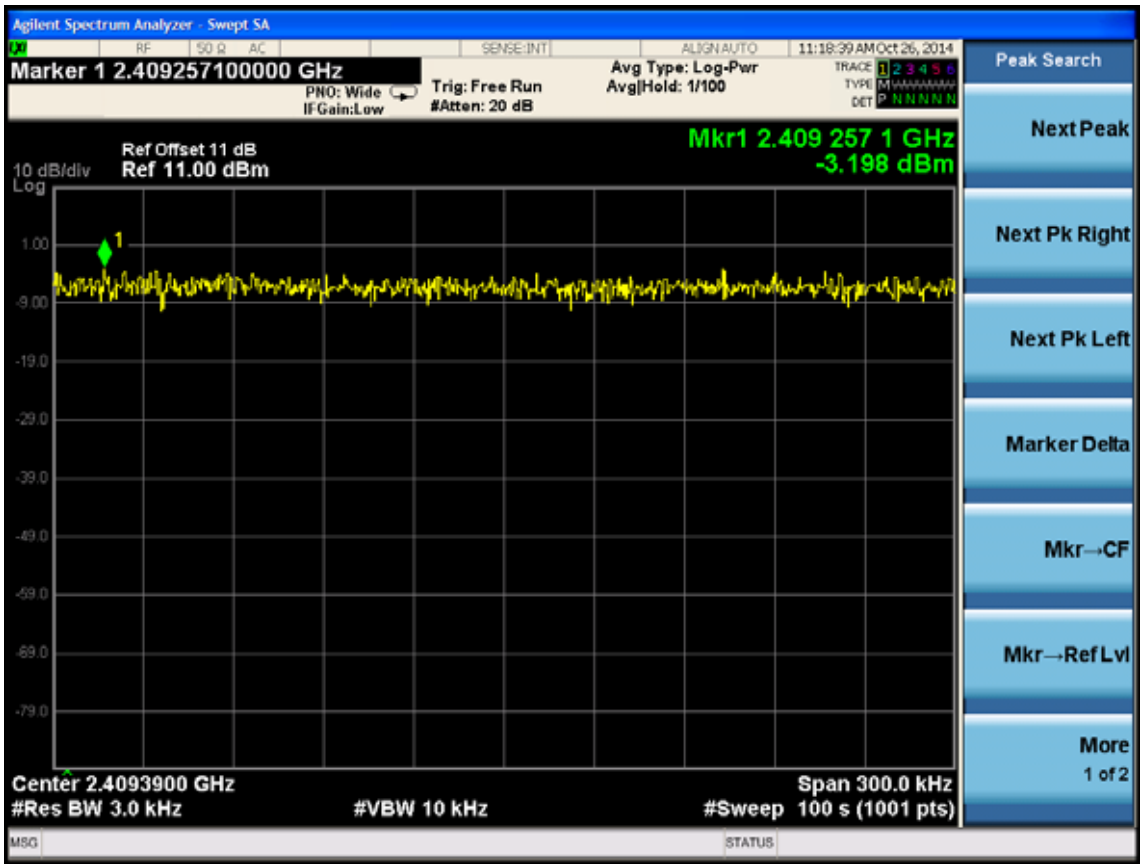
Test CH7: 2452MHz



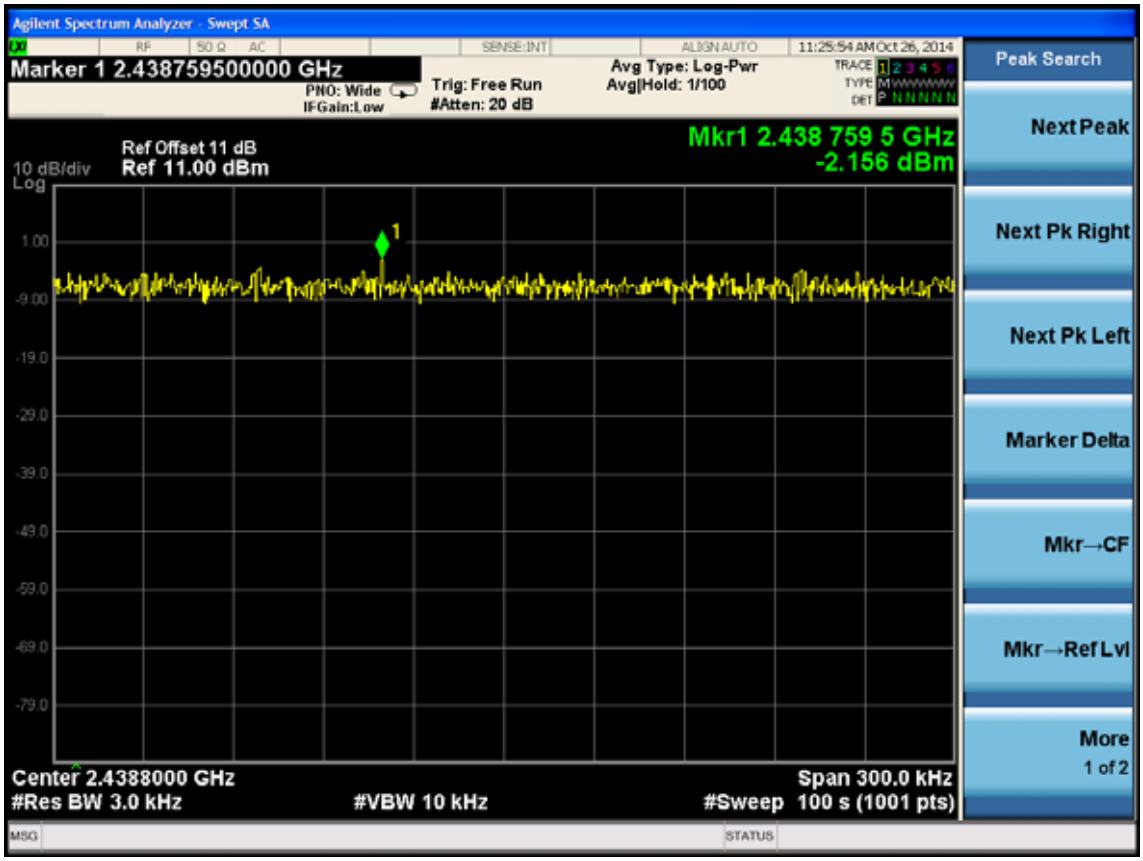
ANT 2:

Test Mode: IEEE 802.11b TX

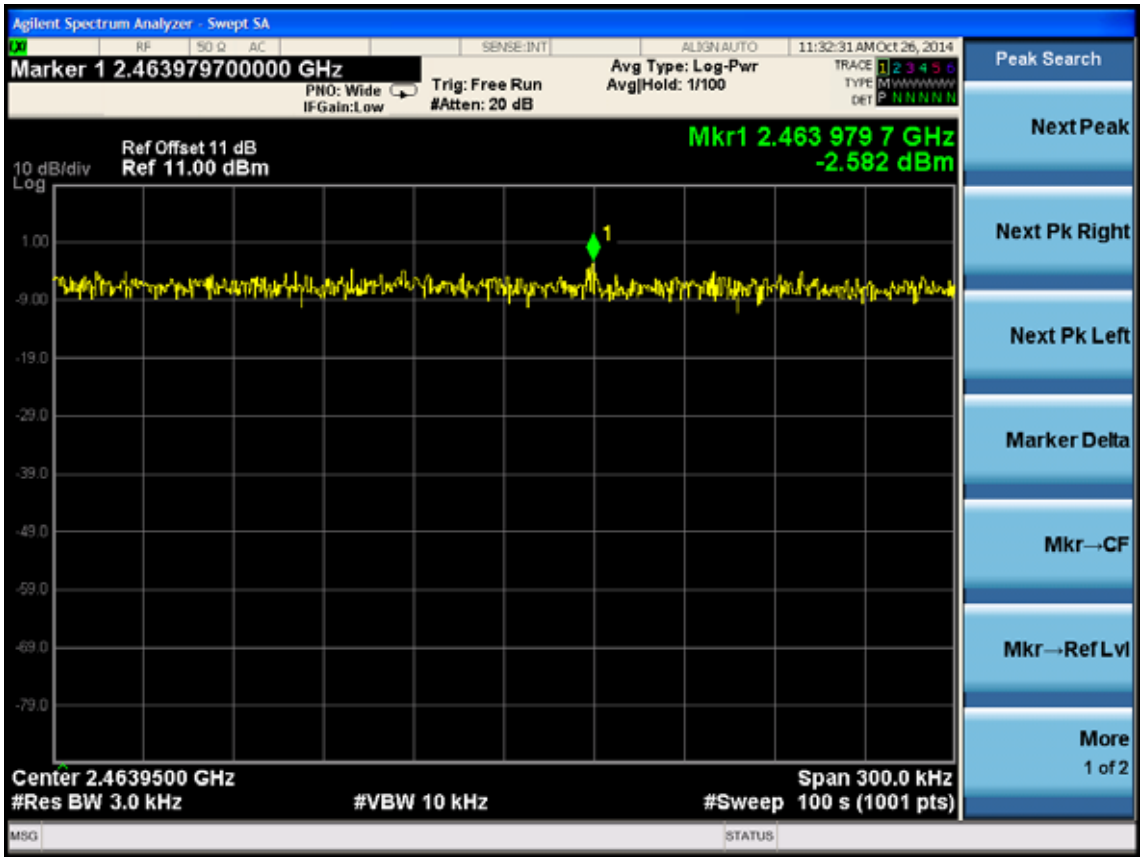
Test CH1: 2412MHz



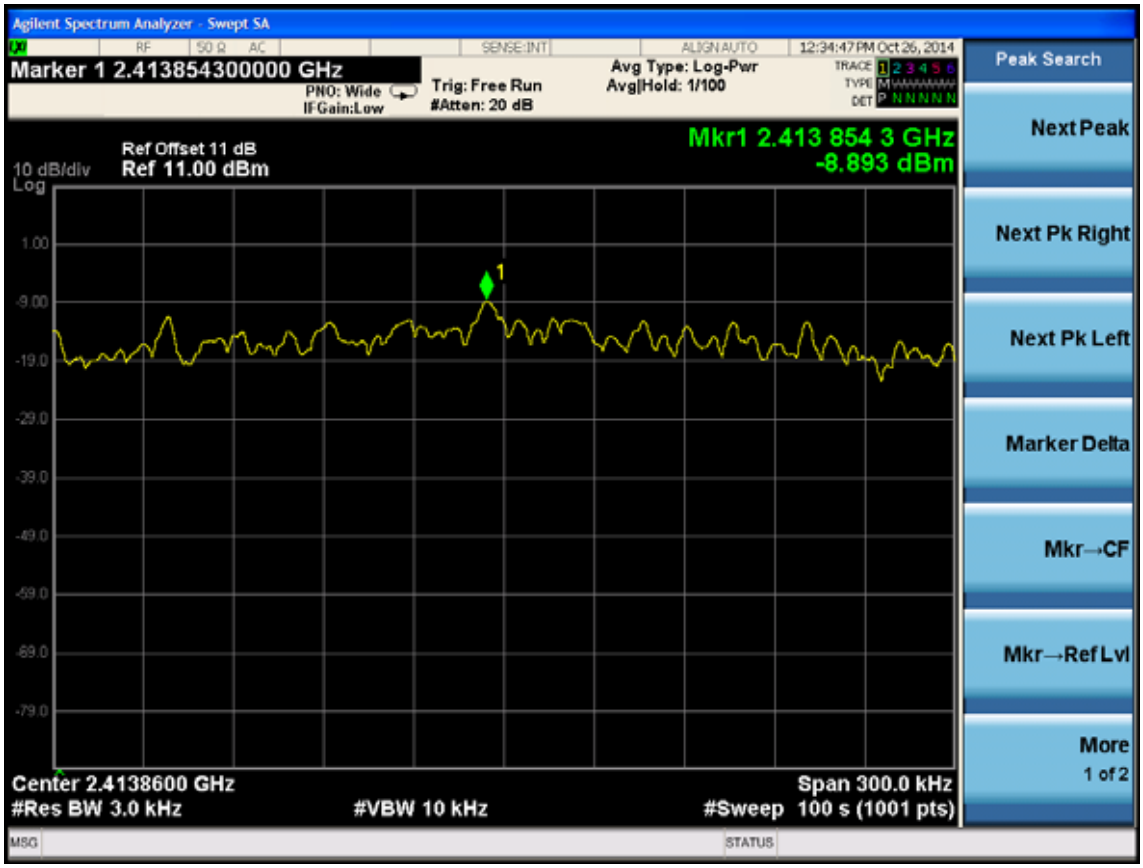
Test CH6: 2437MHz



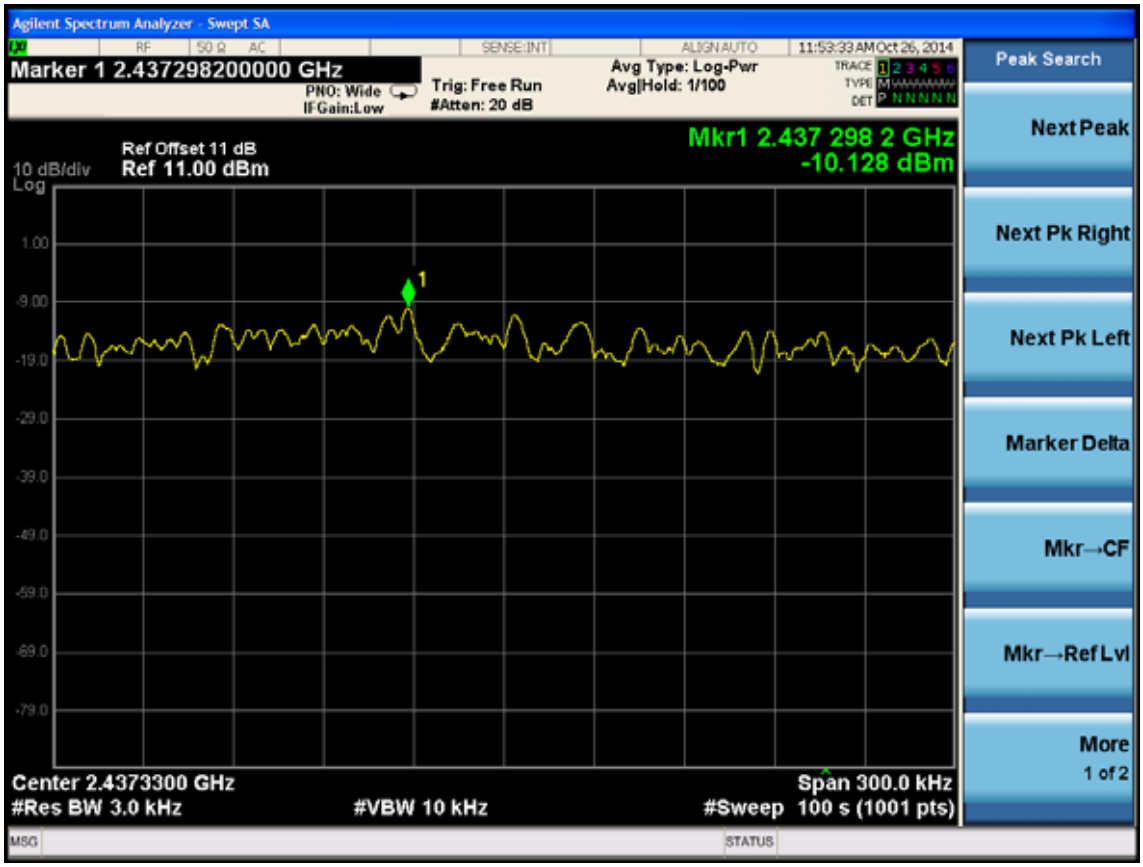
Test CH11: 2462MHz



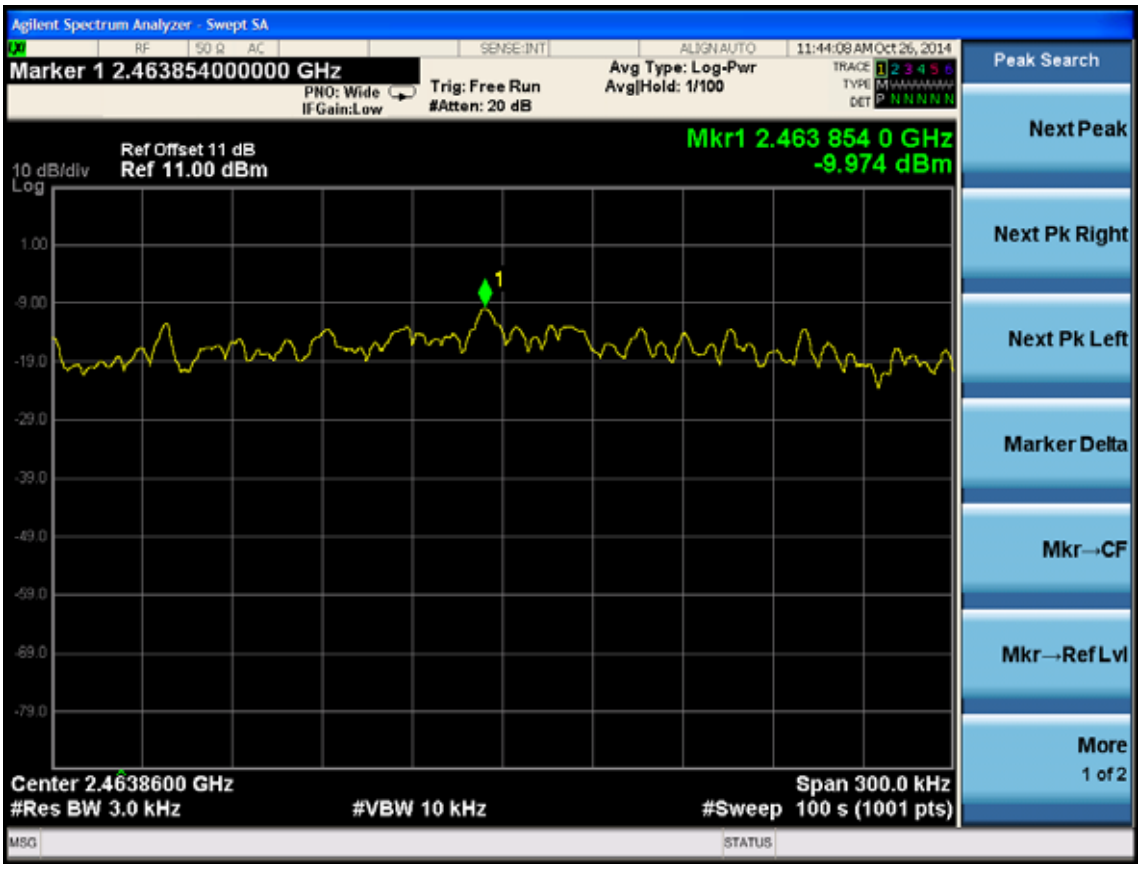
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



Test CH6: 2437MHz



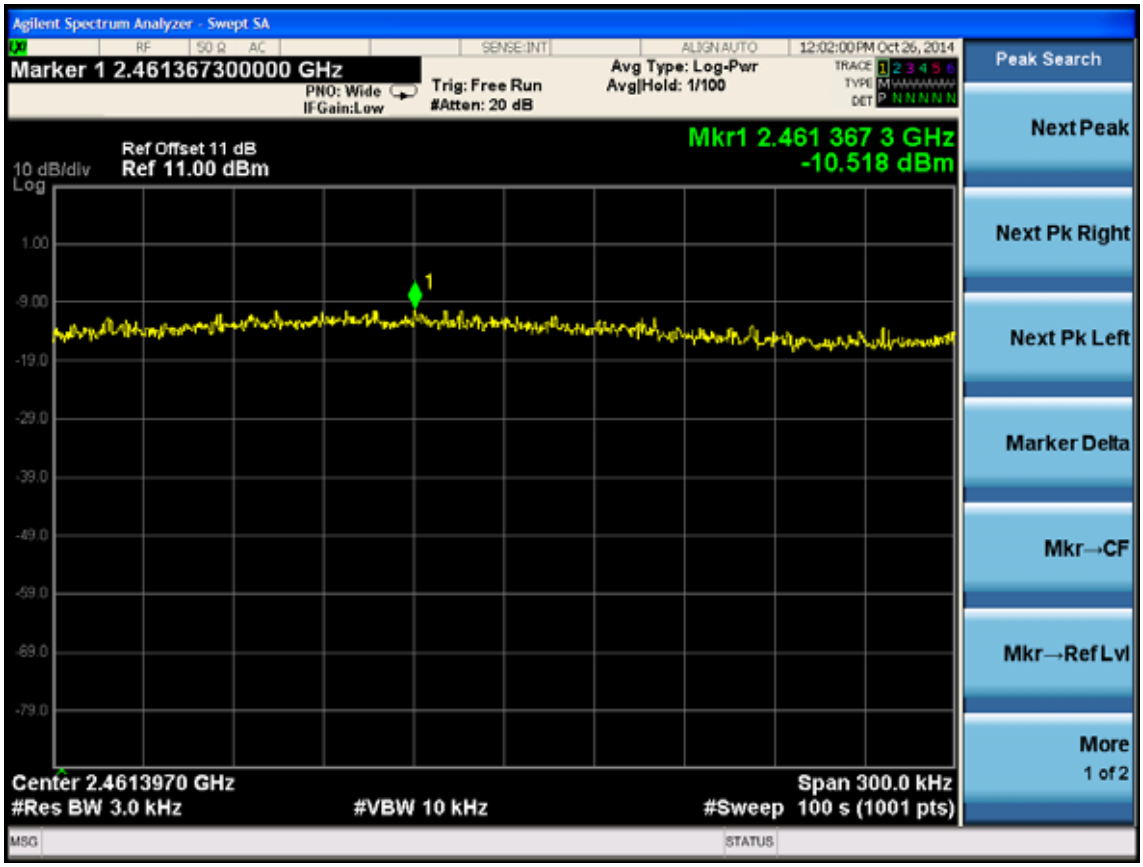
Test CH11: 2462MHz



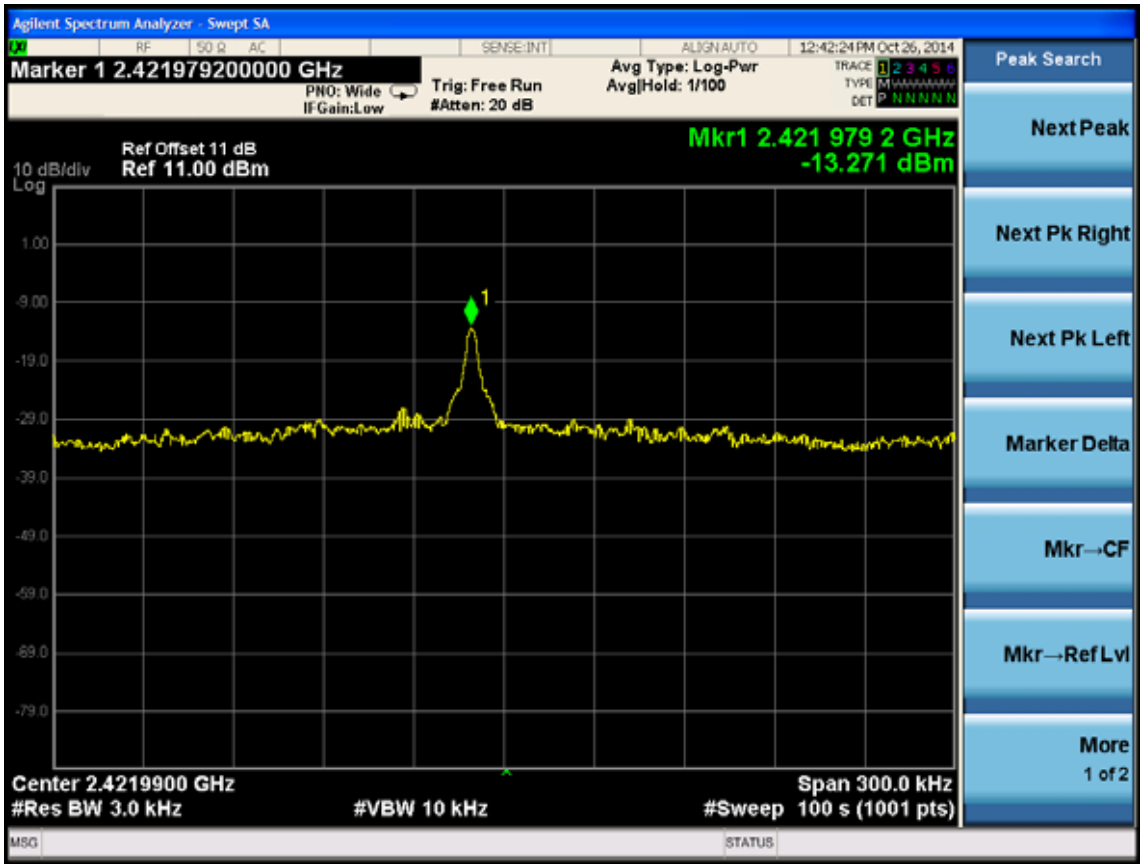
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz

Test CH6: 2437MHz

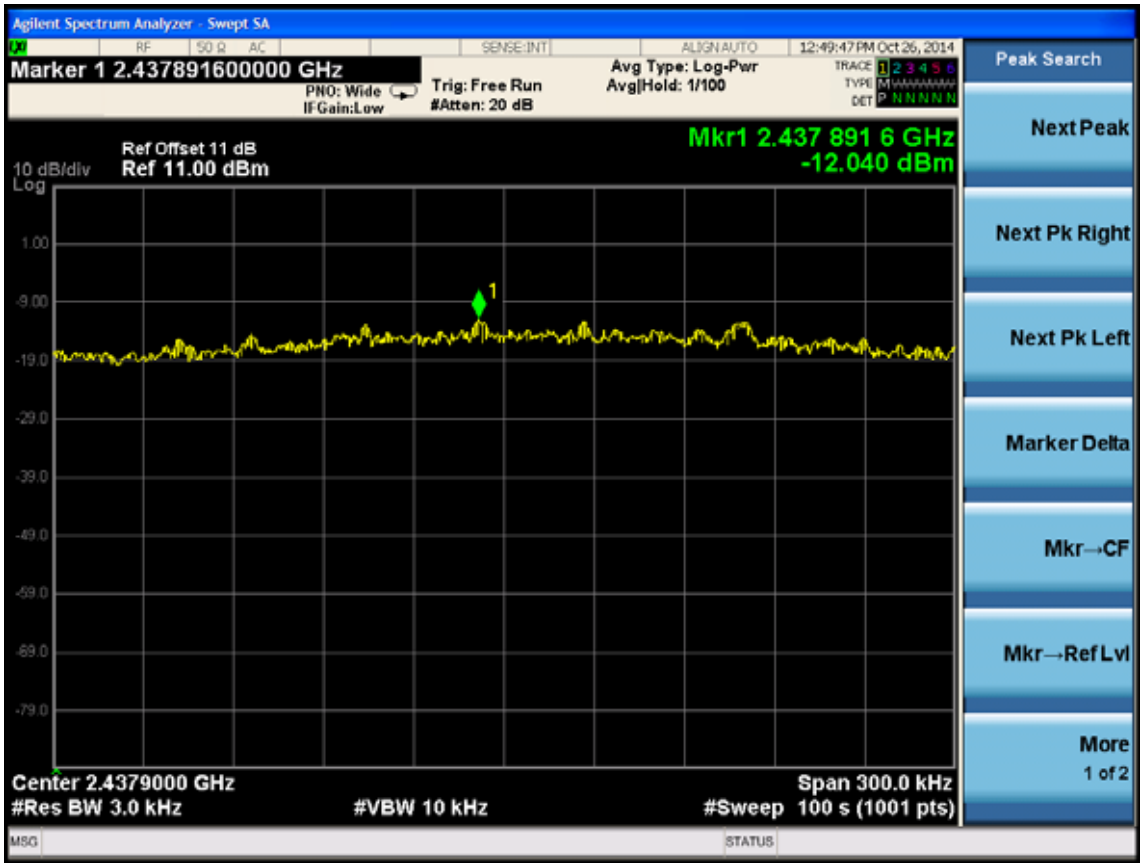
Test CH11: 2462MHz



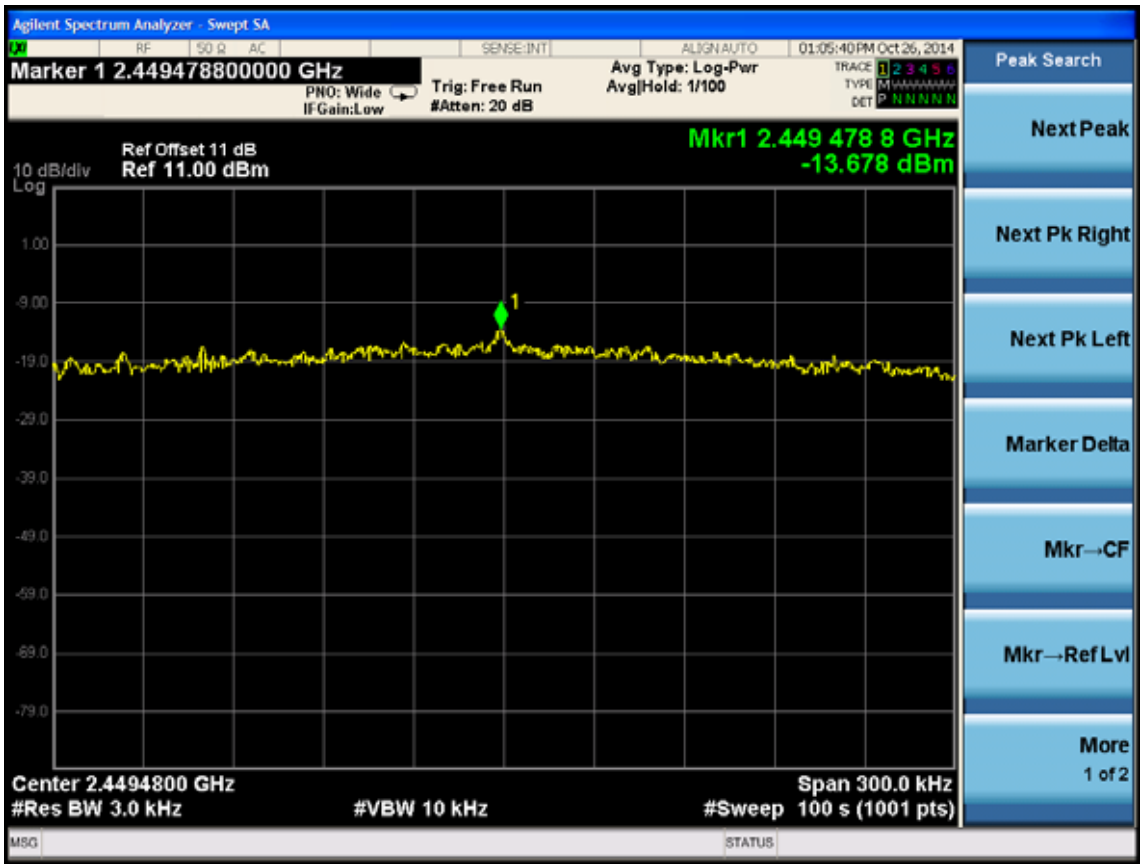
Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



11. ANTENNA REQUIREMENT

11.1. 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 (b), 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.

11.2. ANTENNA CONNECTED CONSTRUCTION

The antennas used for this product are dipole antenna that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 3.9dBi.

12.DEVIATION TO TEST SPECIFICATIONS

[NONE]