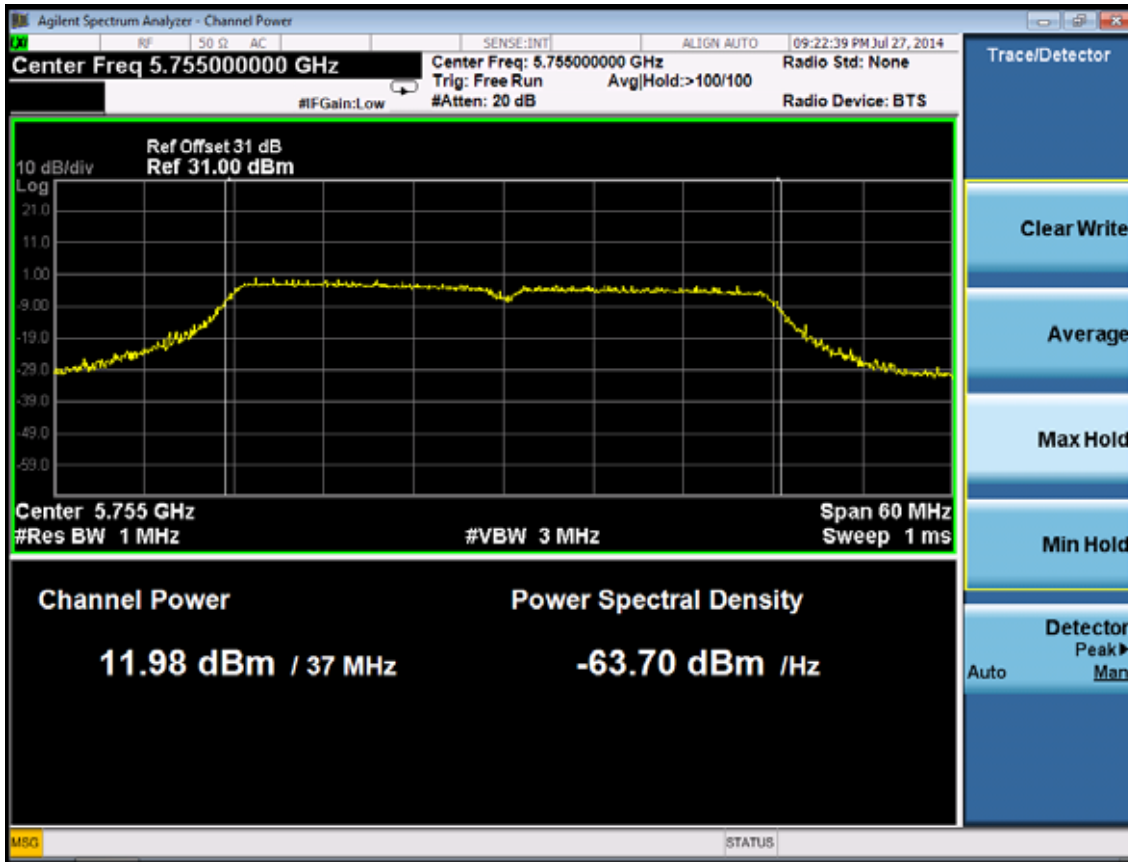


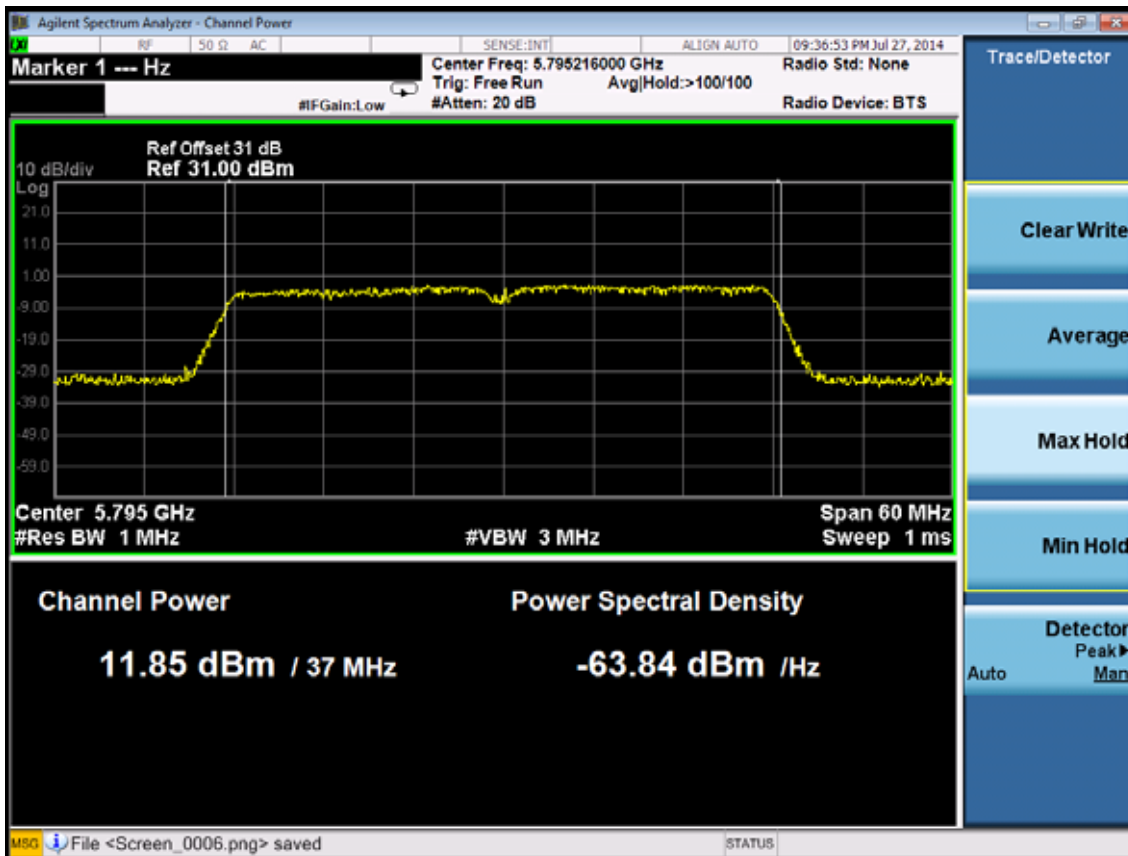
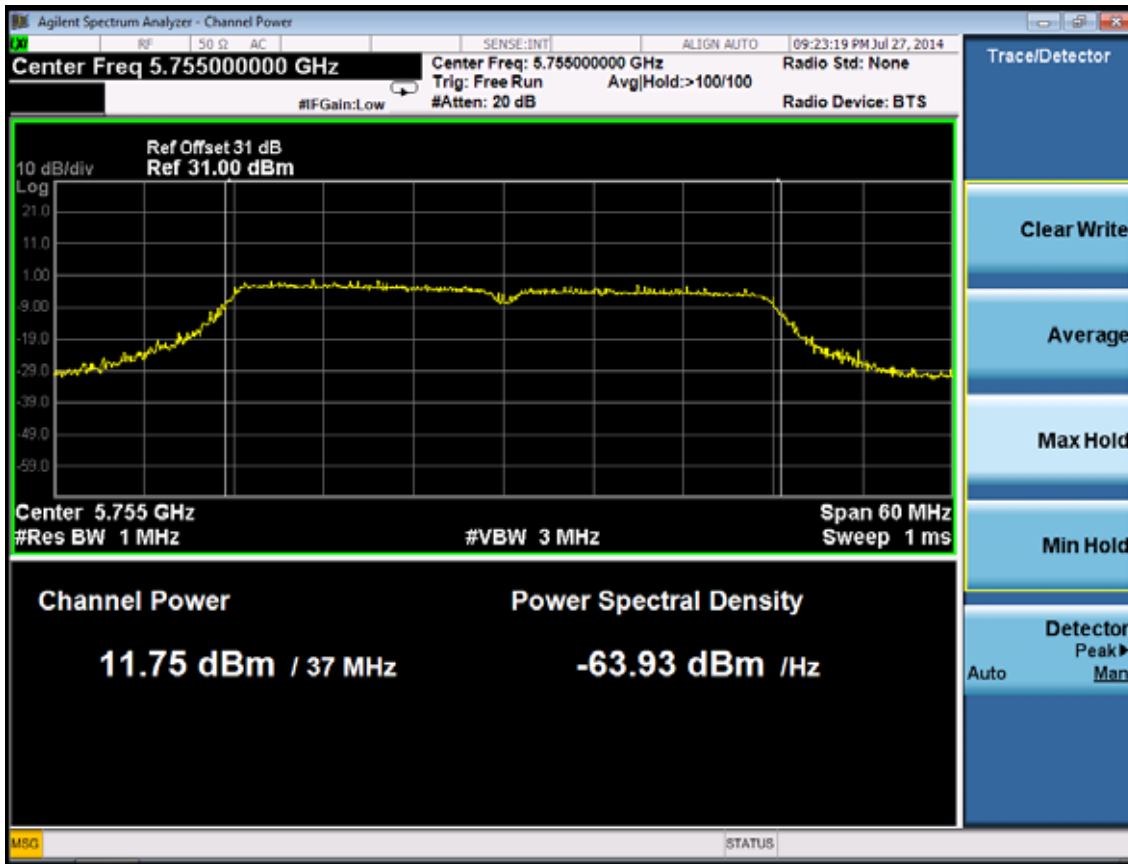
5.8G:

EUT:A8n Super WiFi Base Station					
M/N:WA8011N-X					
Test date: 2014-07-28		Pressure: 101.5±1.0 kpa		Humidity: 51.2±3.0%	
Tested by: Kevin_Hu		Test site: RF site		Temperature:22.4±0.6 °C	
Cable loss: 1 dB			Attenuator loss: 20 dB		
Test Mode	CH	Peak output Power (dBm)			Limit (dBm)
		ANT1	ANT2	Total	
11a	CH149	12.5	11.44	15.01	16
	CH157	12.39	11.38	14.92	16
	CH165	12.41	11.32	14.91	16
11n HT20	CH149	11.78	11.54	14.67	16
	CH157	11.77	11.57	14.68	16
	CH165	11.84	11.53	14.70	16
11n HT40	CH151	11.98	11.75	14.88	16
	CH159	11.99	11.85	14.93	16
Conclusion: PASS					

Test Mode: IEEE 802.11n HT40
ANT 1



ANT 2



9. POWER SPECTRAL DENSITY TEST

9.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Oct.31, 12	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 13	1 Year
3.	Antenna	EMCO	3115	9607-4877	Aug.28, 13	1Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 13	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 chain's Power density.

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

9.4. Test Results

2.4G:

EUT: A8n Super WiFi Base Station		
M/N:WA8011N-X		
Test date: 2013-10-14	Pressure: 101.2±1.0 kpa	Humidity: 49.2±3.0%
Tested by: Leo-Li	Test site: RF Site	Temperature : 23.4±0.6°C

Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH	Power density (dBm/3KHz)			Limit (dBm/3KHz)
		ANT 1	ANT 2	Total	
11b	CH1	-9.752	-12.406	-7.87	8
	CH6	-12.333	-8.643	-7.10	8
	CH11	-11.068	-10.844	-7.94	8
11g	CH1	-17.209	-18.419	-14.76	8
	CH6	-17.519	-18.108	-14.79	8
	CH11	-17.209	-17.651	-14.41	8
11n Mode					
Test Mode	CH	Power density (dBm/3KHz)			Limit (dBm/3KHz)
		ANT 1	ANT 2	Total	
11n HT20	CH1	-18.523	-18.369	-15.14	8
	CH6	-17.207	-16.748	-13.96	8
	CH11	-18.690	-17.092	-14.81	8
11n HT40	CH1	-16.936	-17.484	-14.19	8
	CH4	-15.302	-15.101	-12.19	8
	CH7	-16.883	-16.123	-13.48	8
Conclusion : PASS					

5.8G:

EUT: A8n Super WiFi Base Station		
M/N: WA8011N-X		
Test date: 2013-10-14	Pressure: 101.3±1.0 kpa	Humidity: 50.4±3.0%
Tested by: Leo-Li	Test site: RF Site	Temperature : 24.6±0.6°C

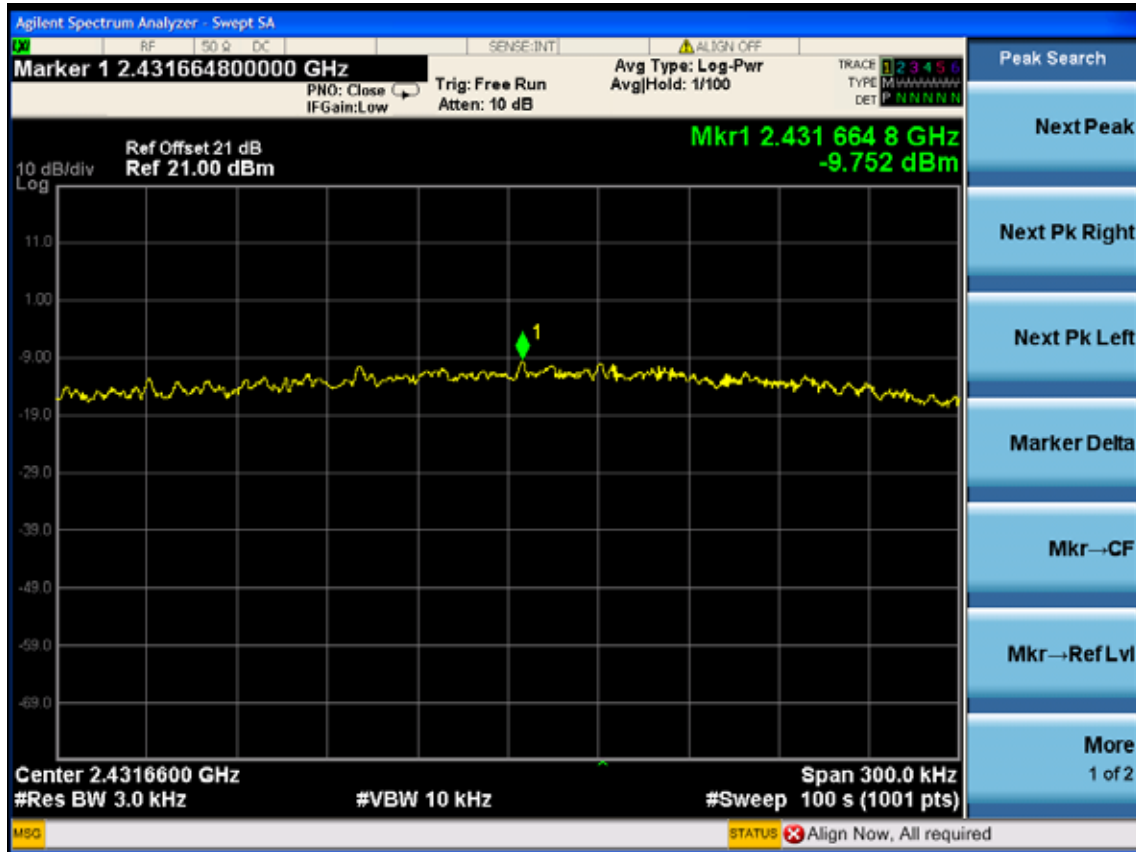
Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH	Power density (dBm/3KHz)			Limit (dBm/3KHz)
		ANT 1	ANT 2	Total	
11a	CH149	-5.049	-5.810	-2.40	8
	CH157	-2.953	-2.851	0.11	8
	CH165	-3.118	-3.219	-0.16	8
11n Mode					
Test Mode	CH	Power density (dBm/3KHz)			Limit (dBm/3KHz)
		ANT 1	ANT 2	Total	
11n HT20	CH149	-4.107	-4.223	-1.15	8
	CH157	-9.617	-2.140	-1.43	8
	CH165	-2.011	-6.090	-0.58	8
11n HT40	CH151	-0.028	-0.050	2.97	8
	CH159	-3.091	-3.110	-0.09	8
Conclusion : PASS					

2.4G:

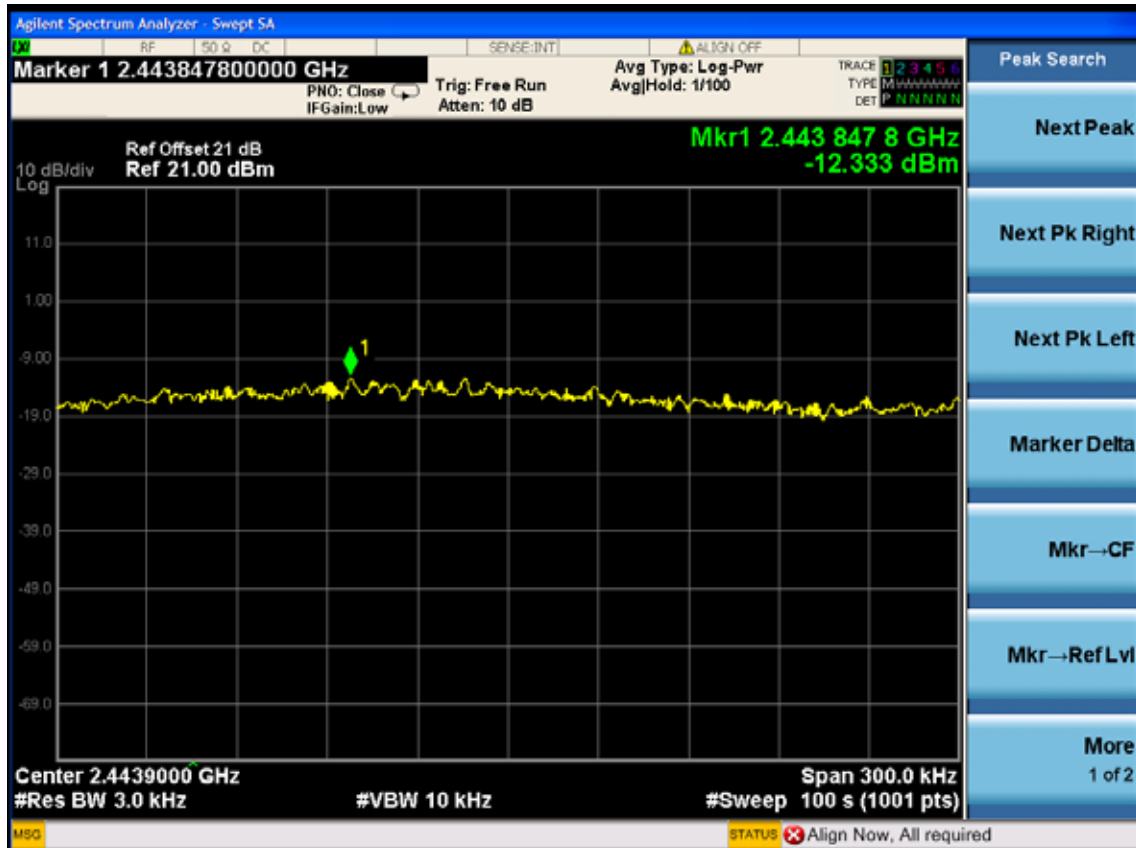
Chain 1:

Test Mode: IEEE 802.11b TX

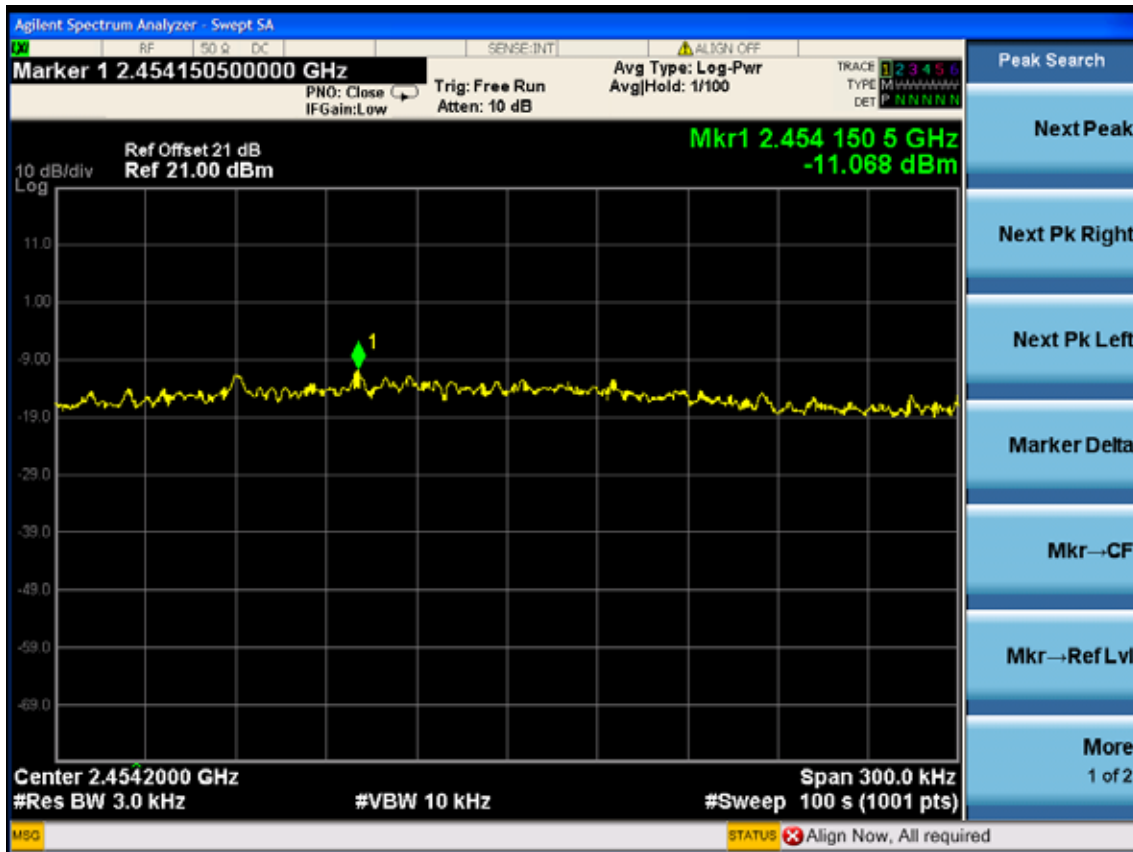
Test CH1: 2412MHz



Test CH6: 2437MHz

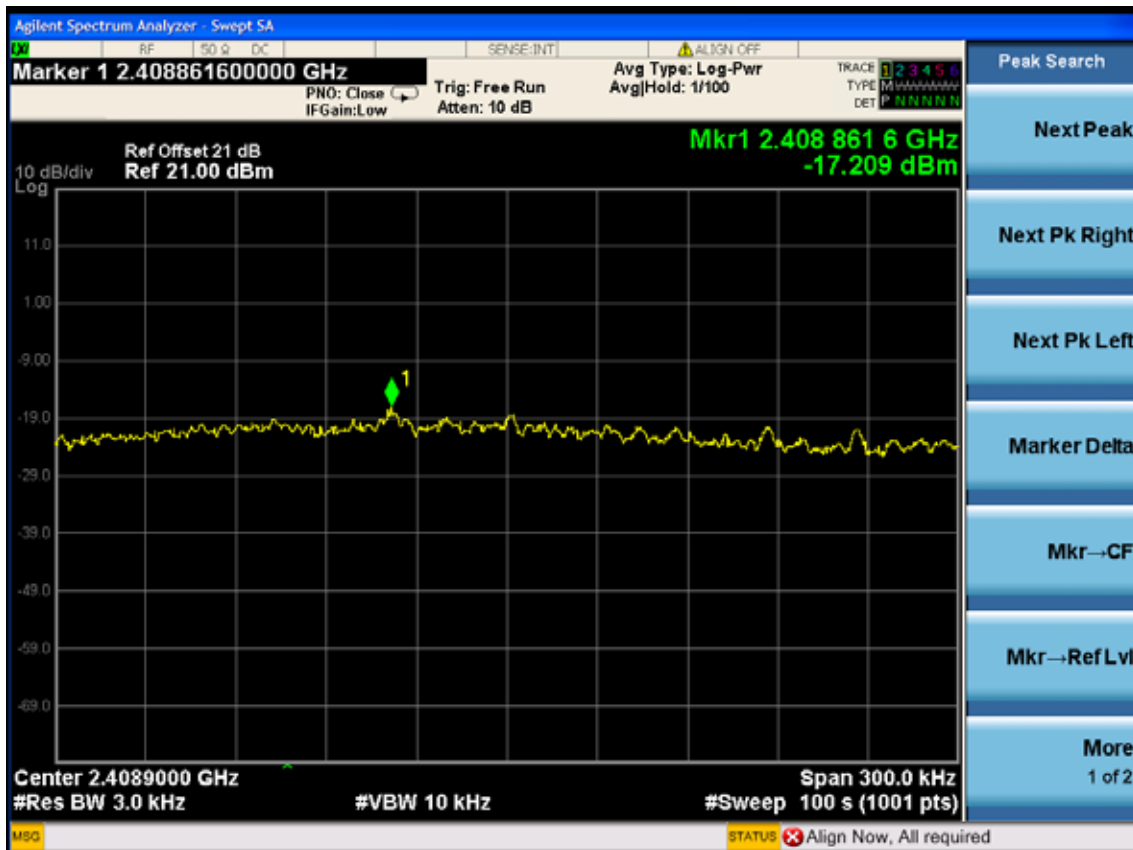


Test CH11: 2462MHz

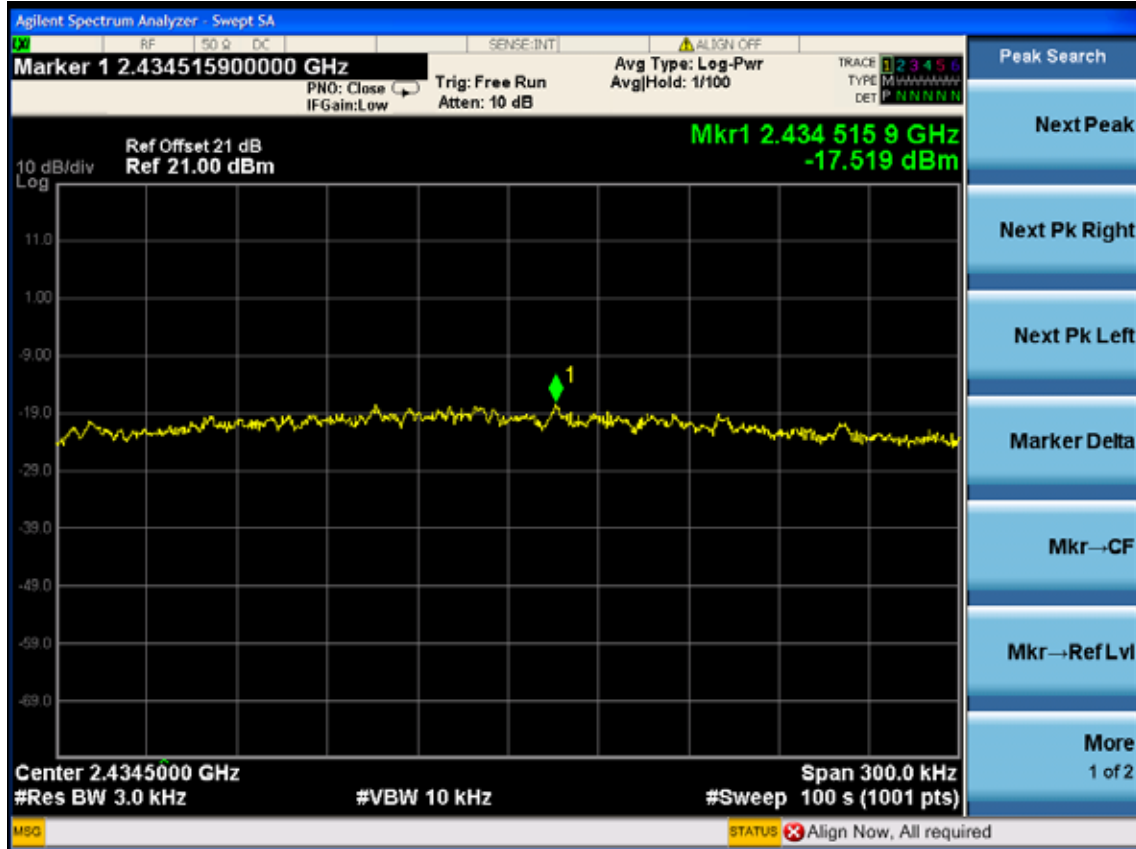


Test Mode: IEEE 802.11g TX

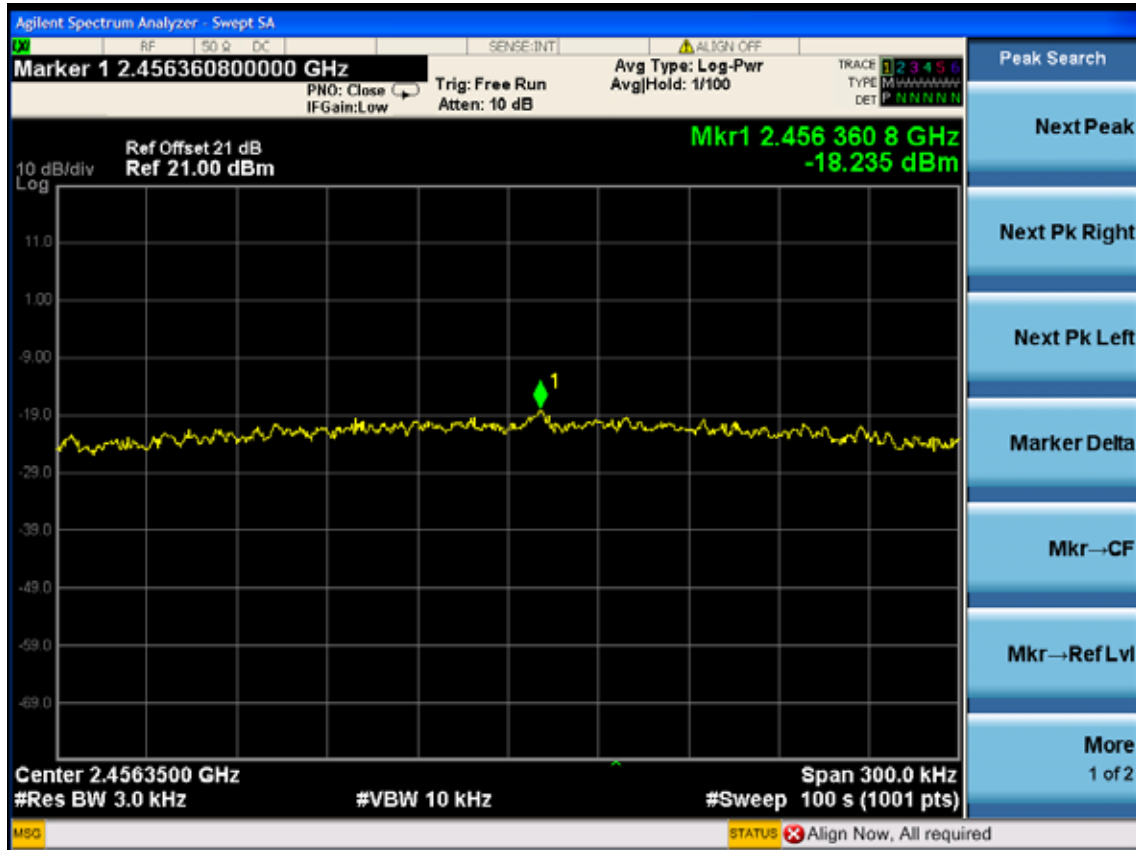
Test CH1: 2412MHz



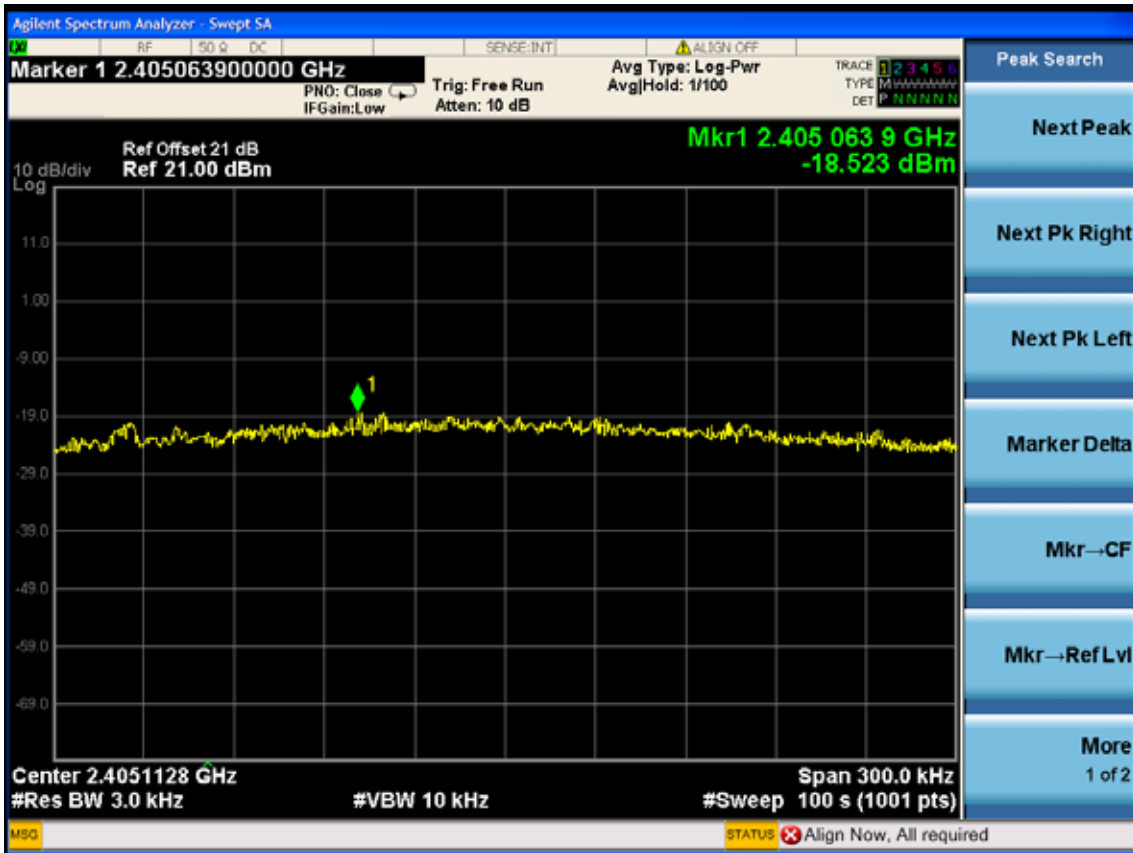
Test CH6: 2437MHz



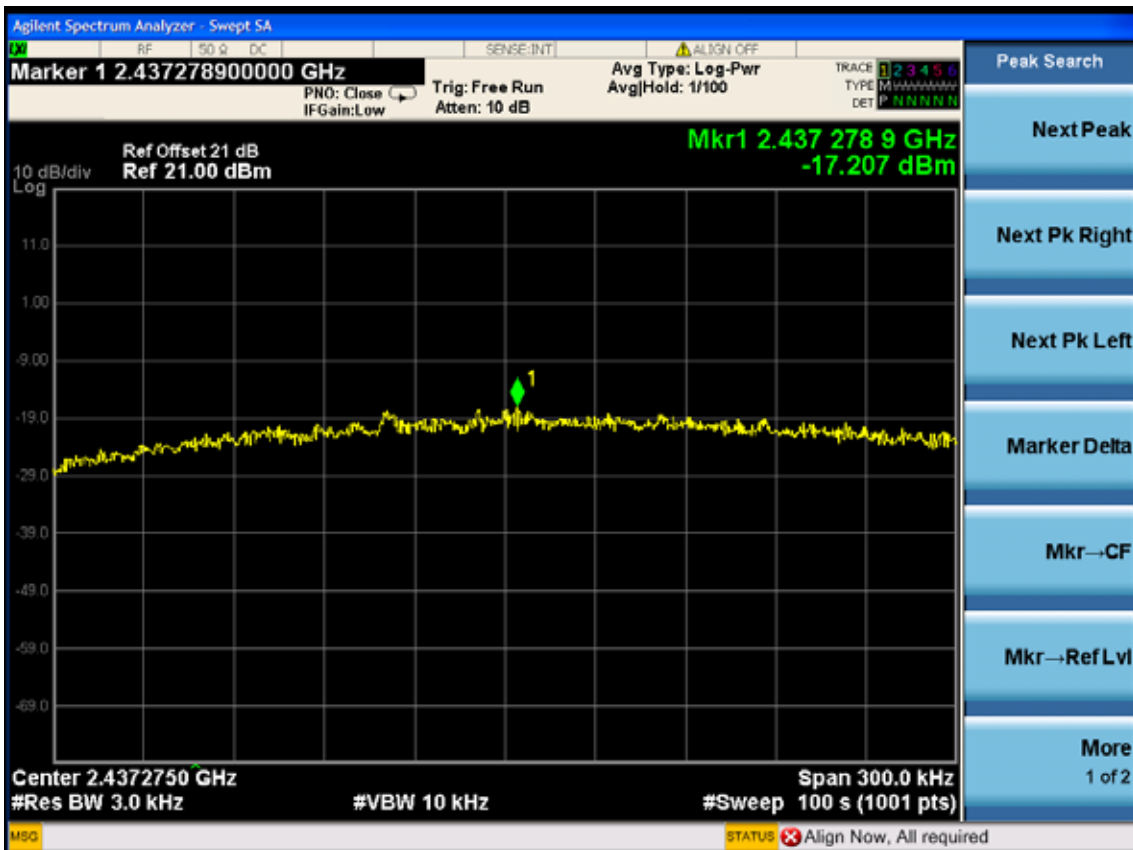
Test CH11: 2462MHz



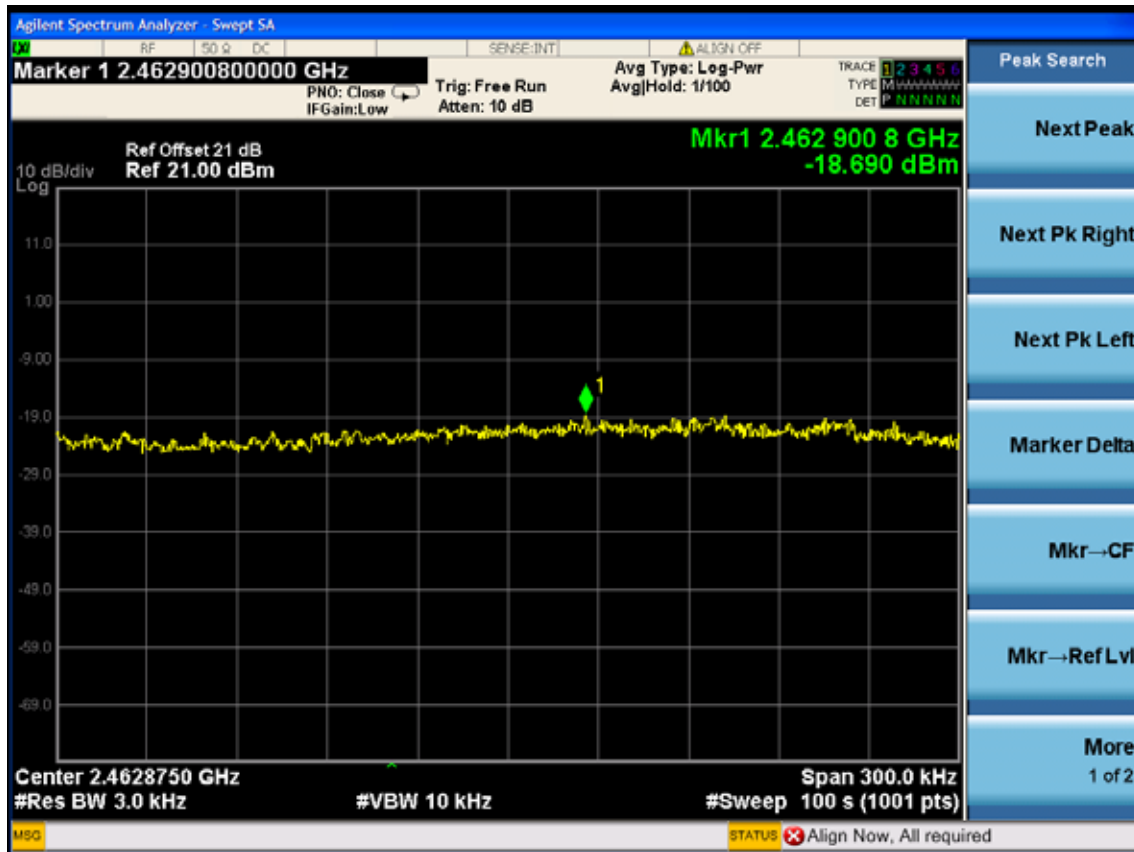
Test Mode: IEEE 802.11n HT20 TX
 Test CH1: 2412MHz



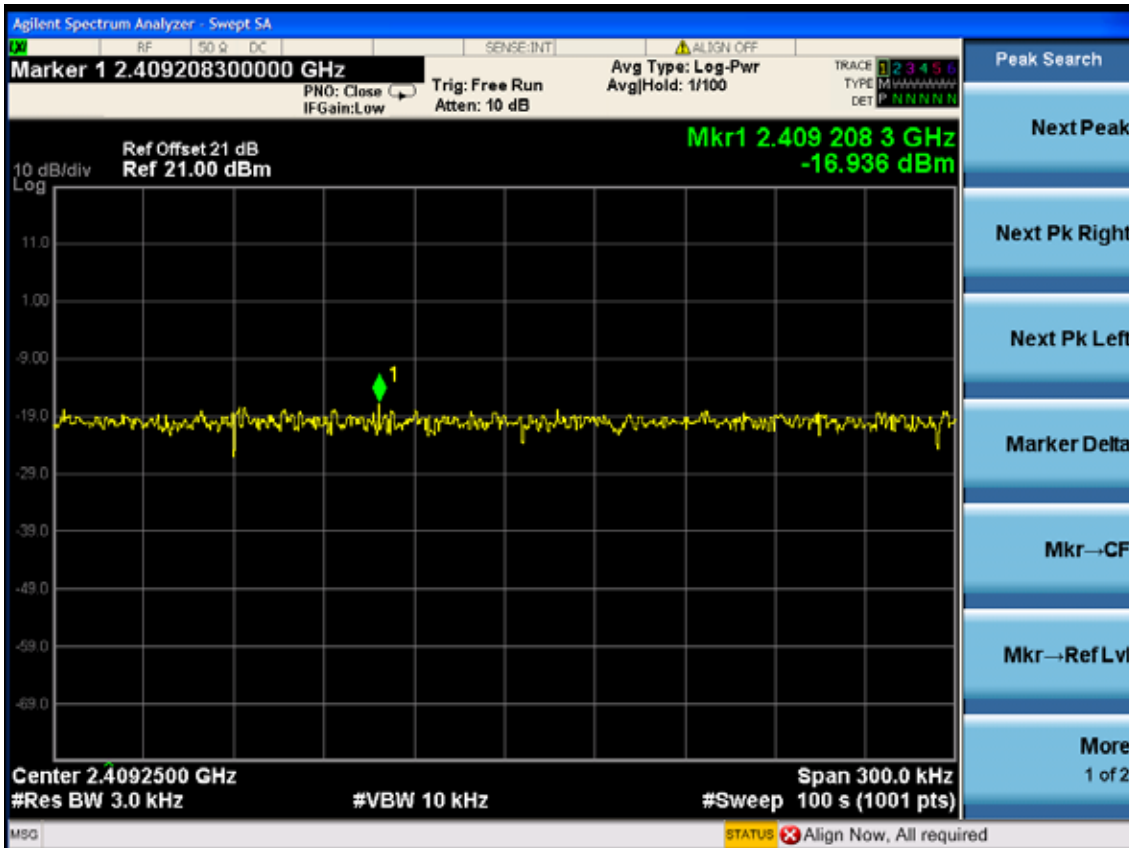
Test CH6: 2437MHz



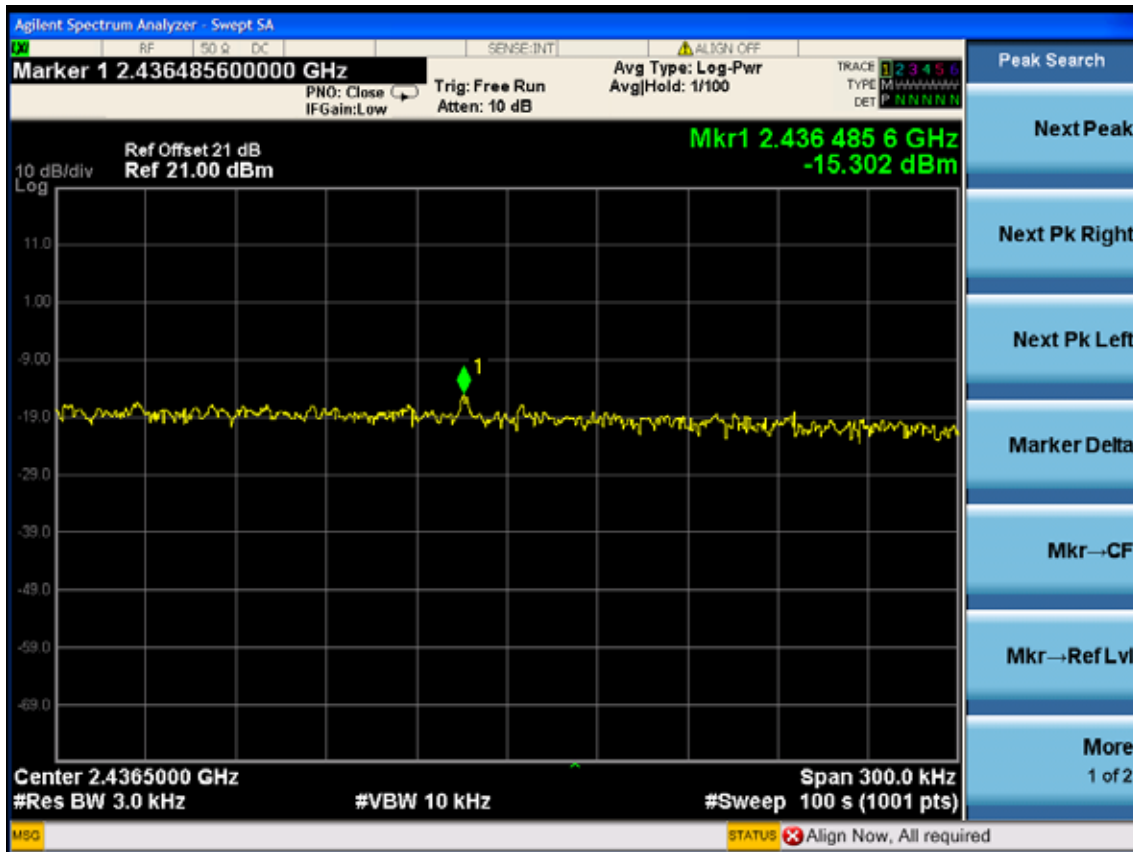
Test CH11: 2462MHz



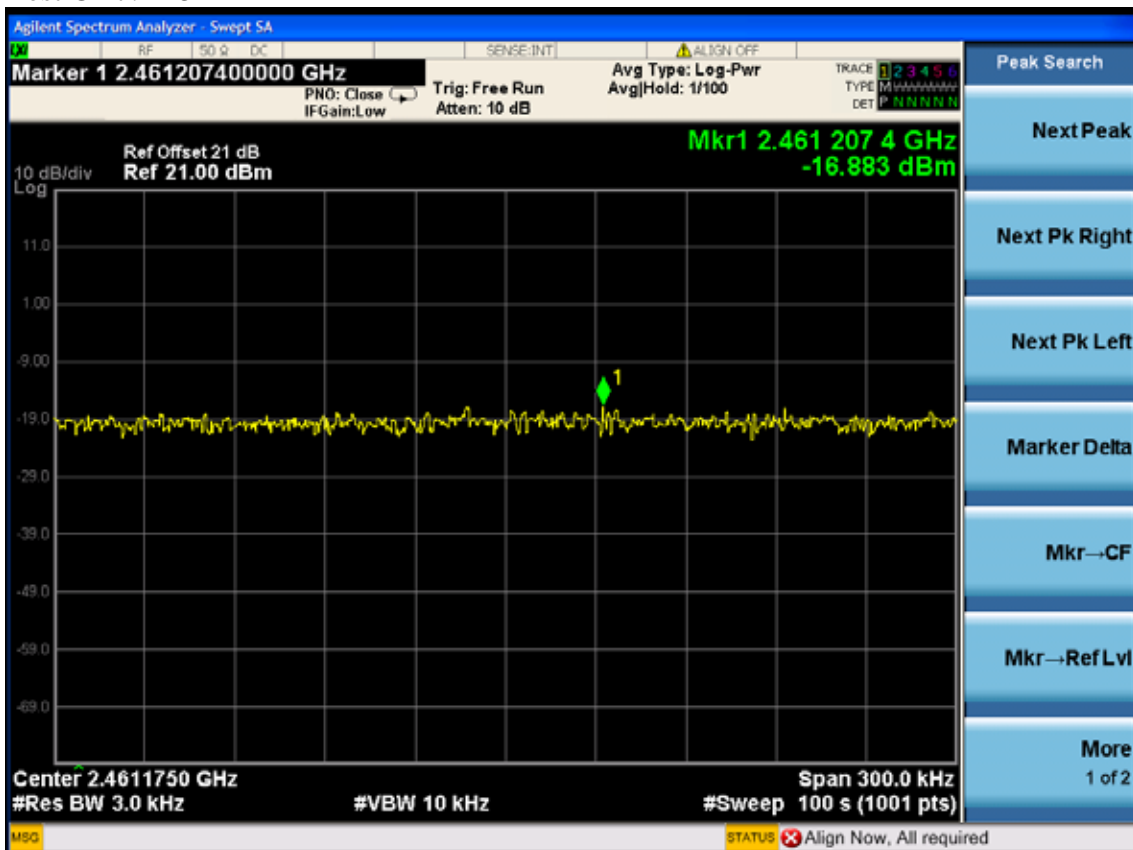
Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz



Test CH4: 2437MHz



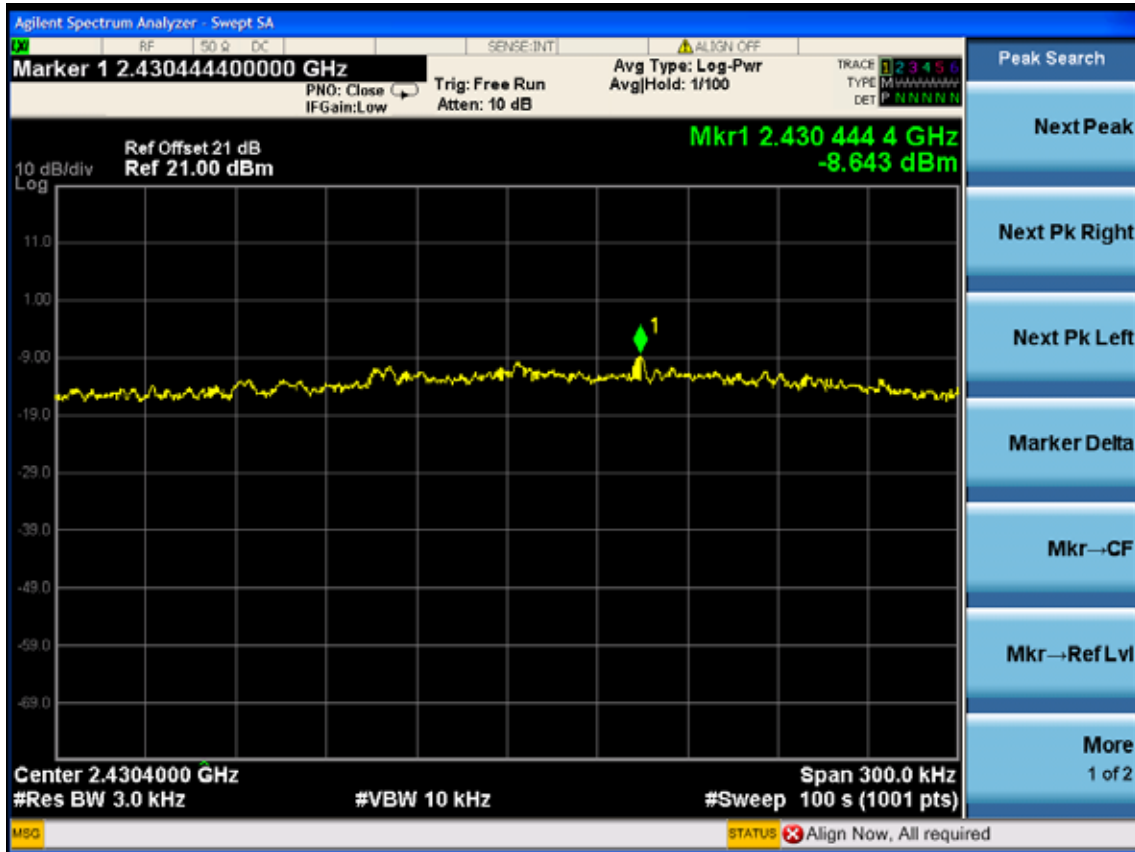
Test CH7: 2452MHz



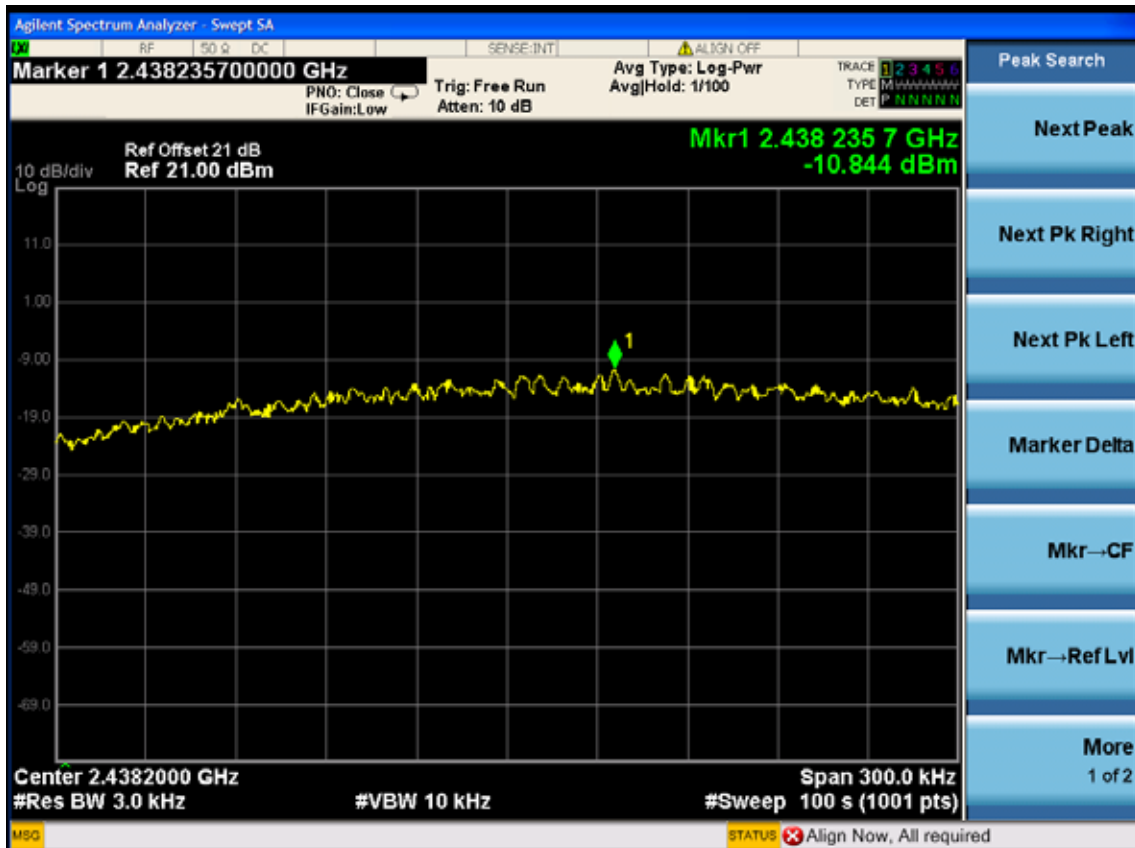
Chain 2:

Test Mode: IEEE 802.11b TX

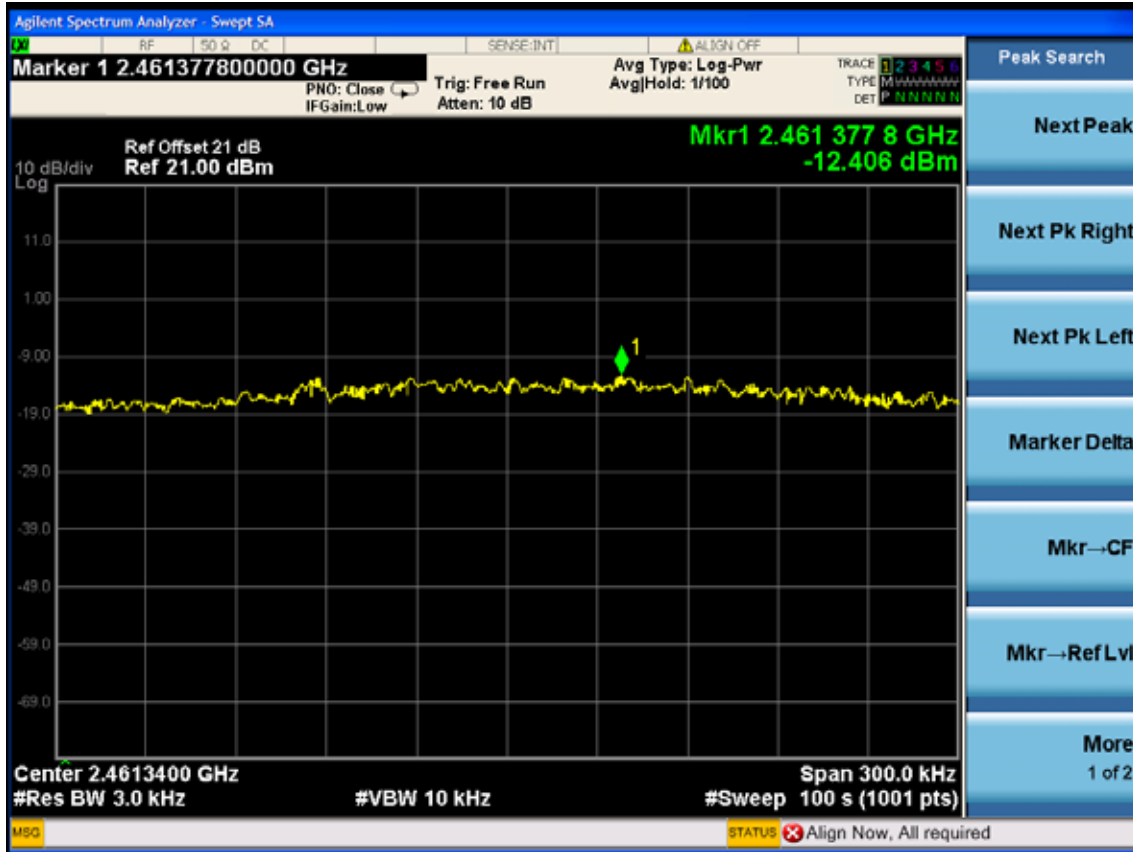
Test CH1: 2412MHz



Test CH6: 2437MHz

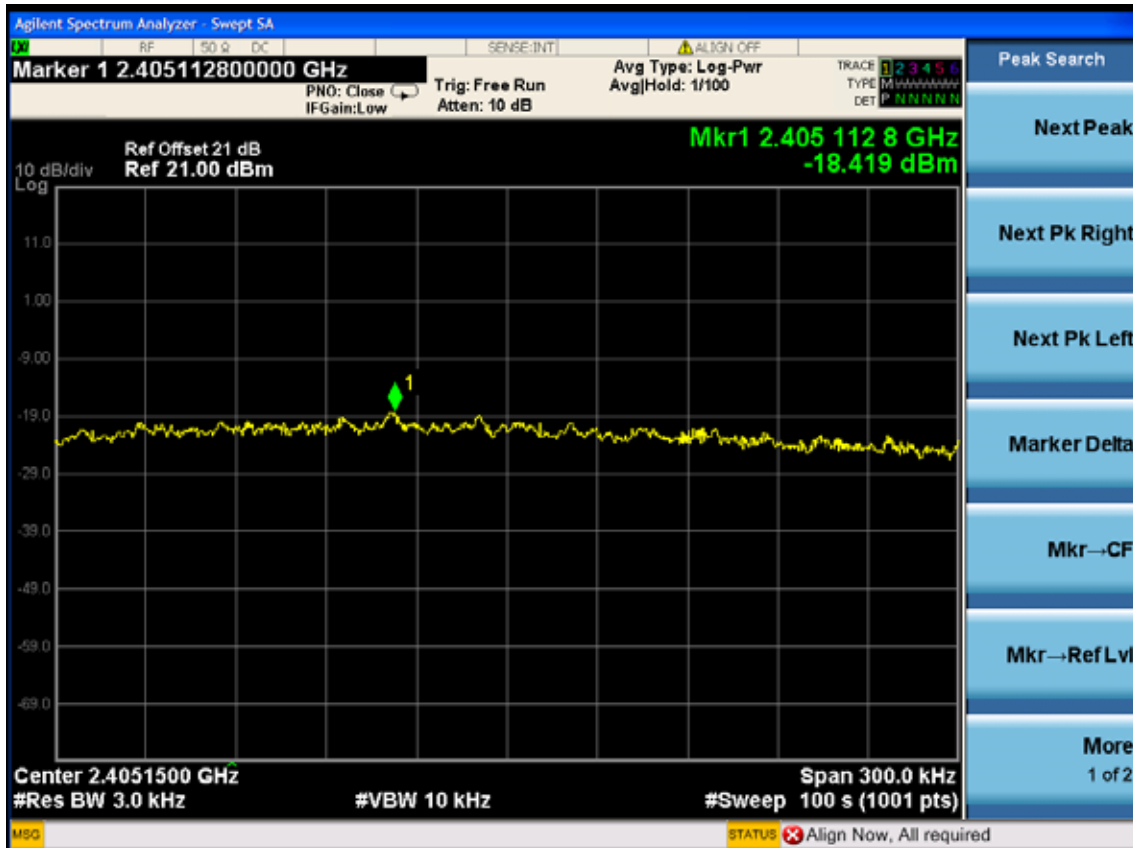


Test CH11: 2462MHz



Test Mode: IEEE 802.11g TX

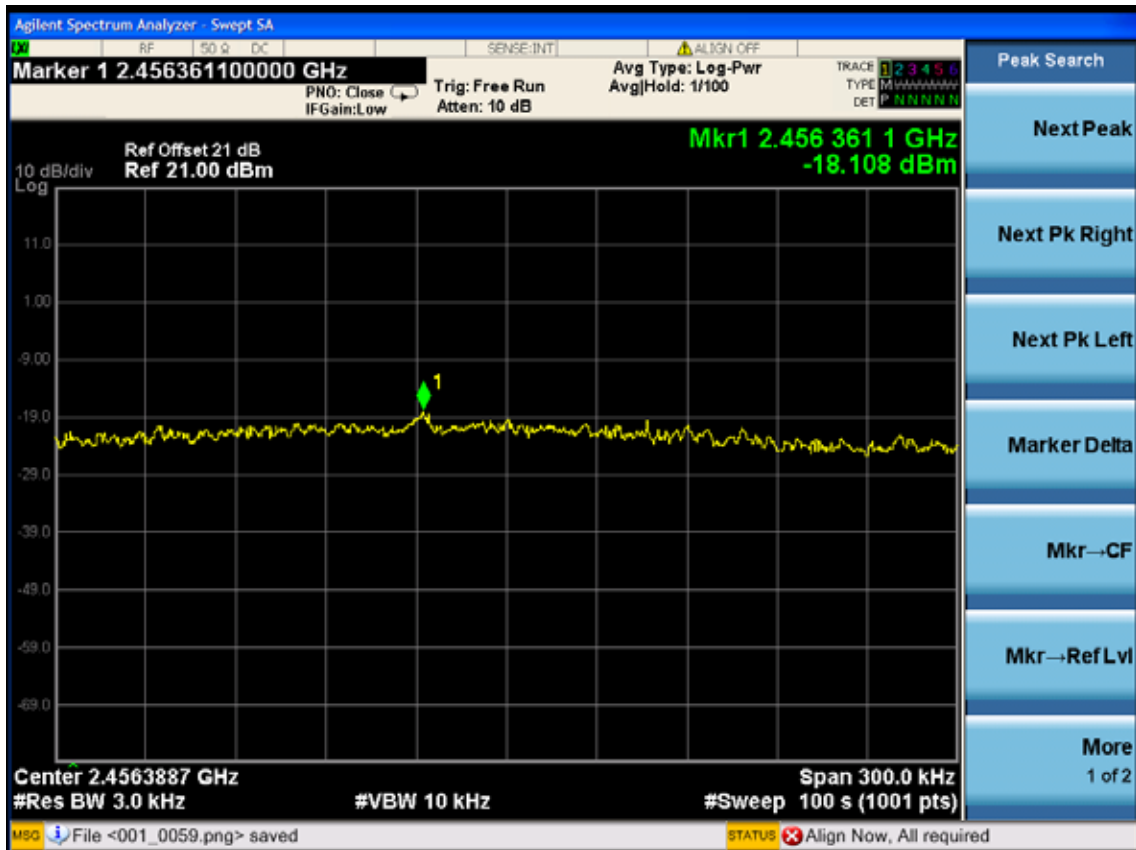
Test CH1: 2412MHz



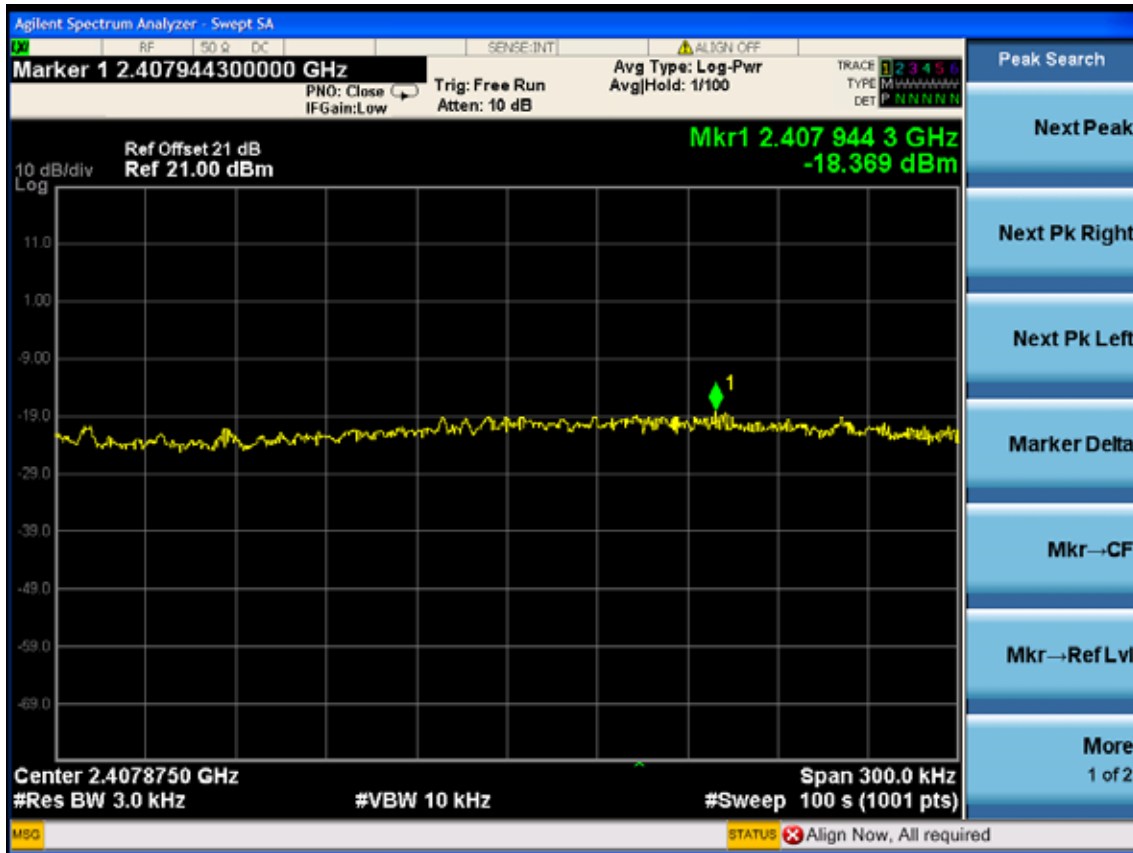
Test CH6: 2437MHz



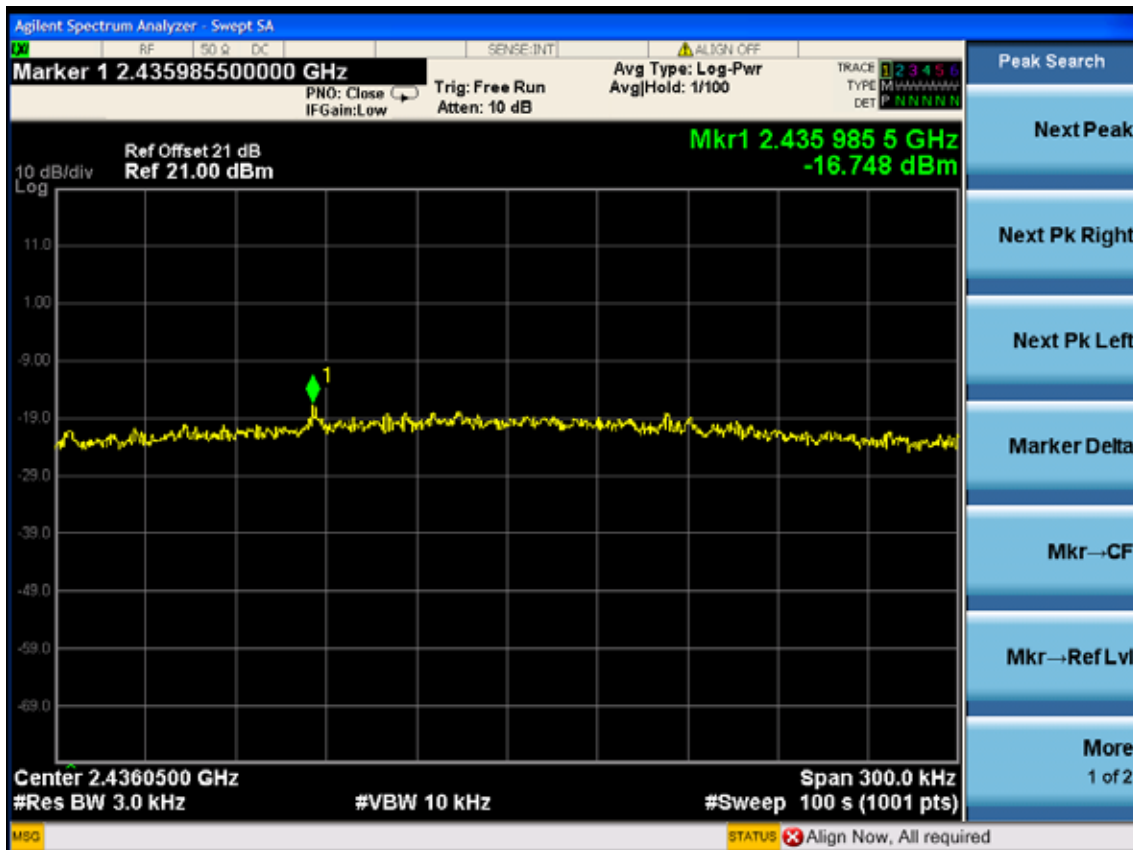
Test CH11: 2462MHz



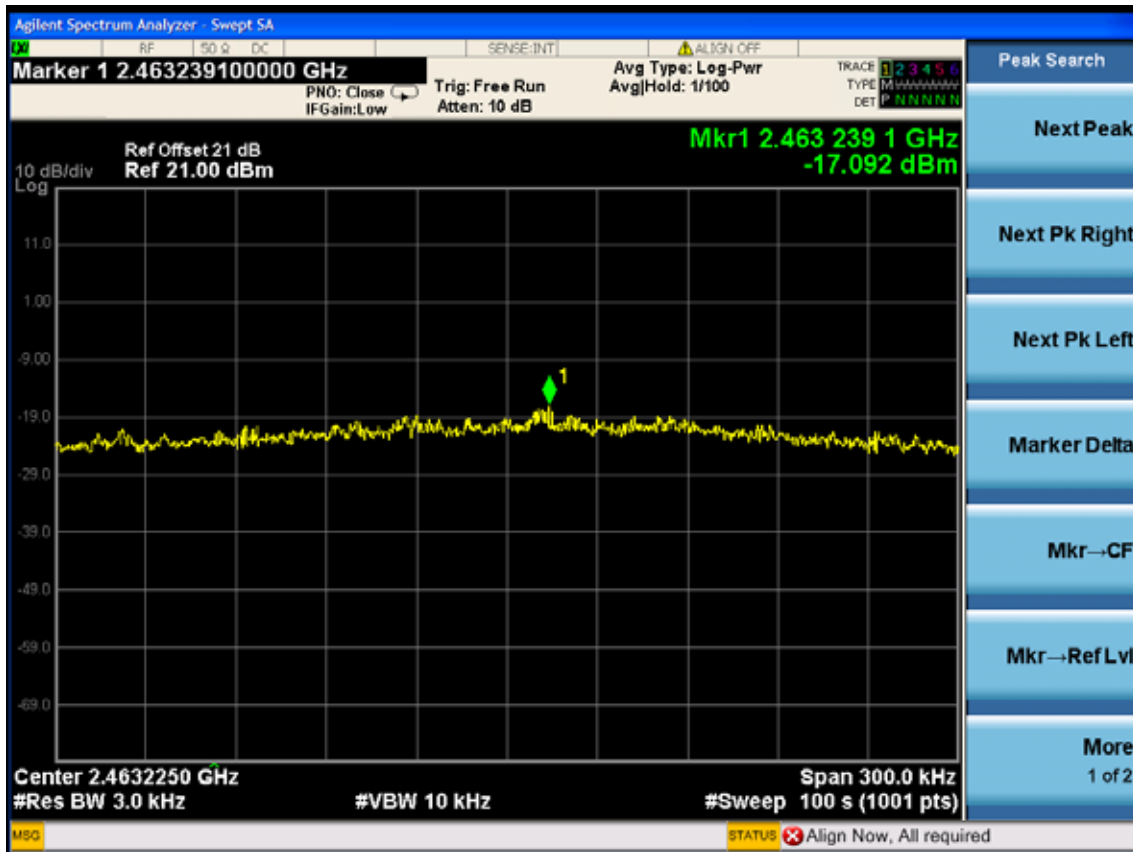
Test Mode: IEEE 802.11n HT20 TX
 Test CH1: 2412MHz



Test CH6: 2437MHz

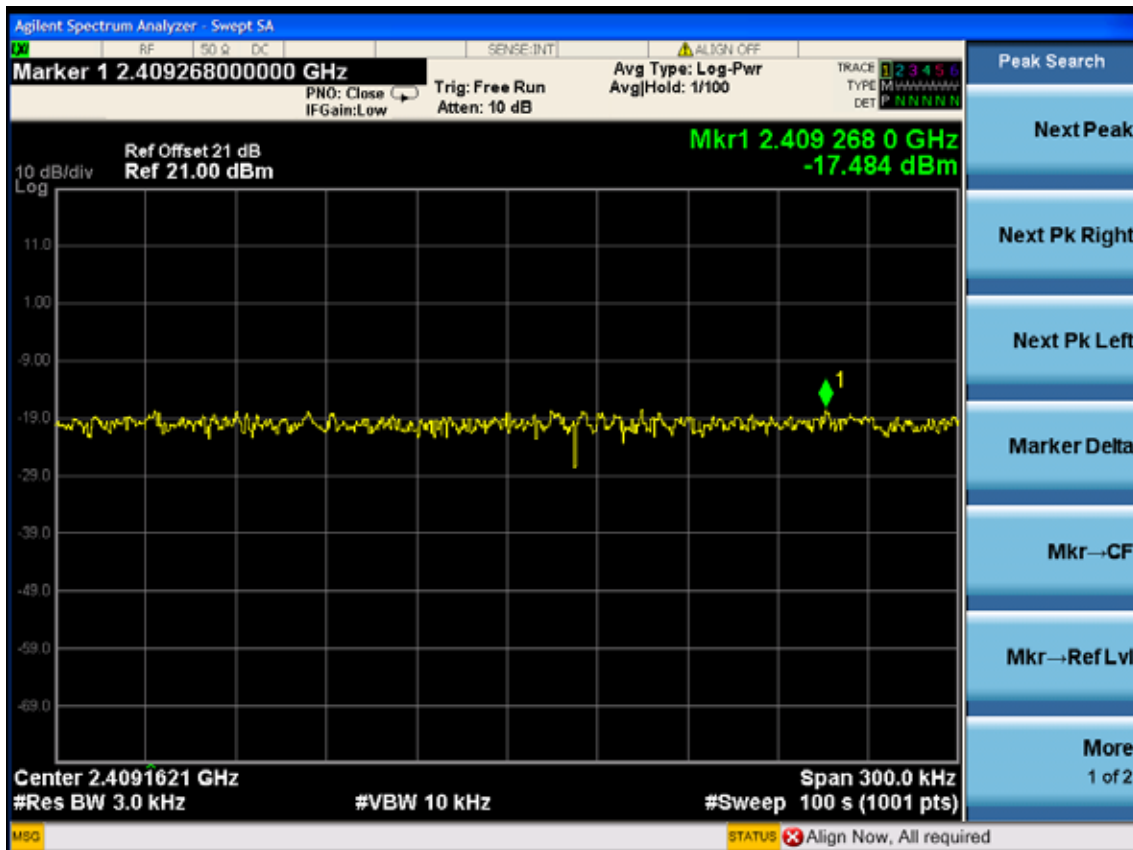


Test CH11: 2462MHz

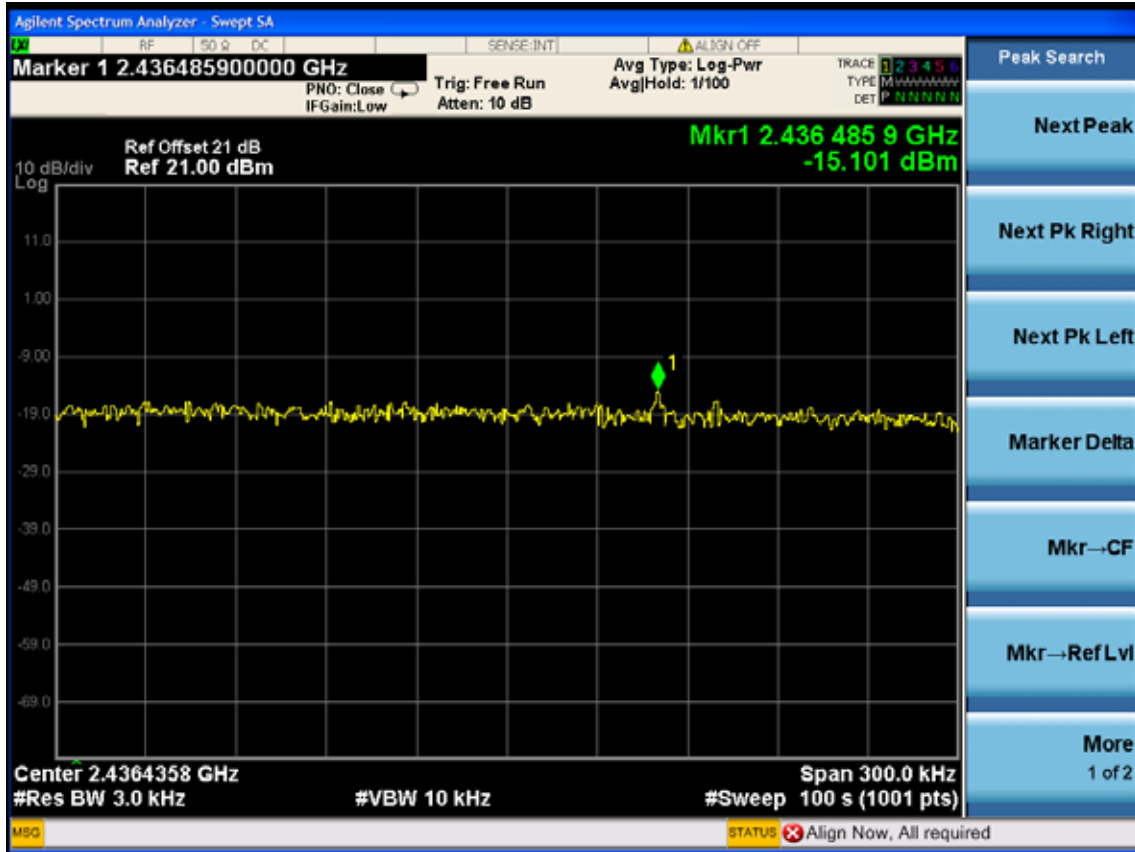


Test Mode: IEEE 802.11n HT40 TX

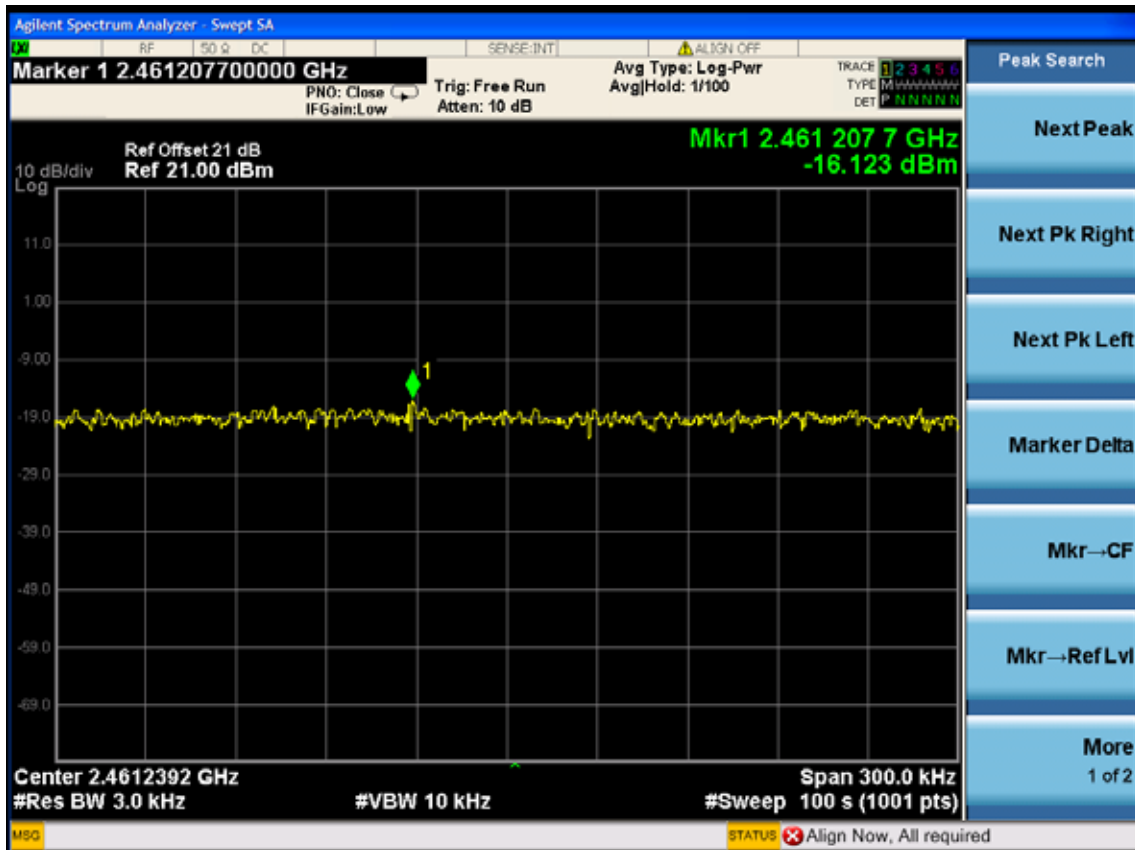
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz

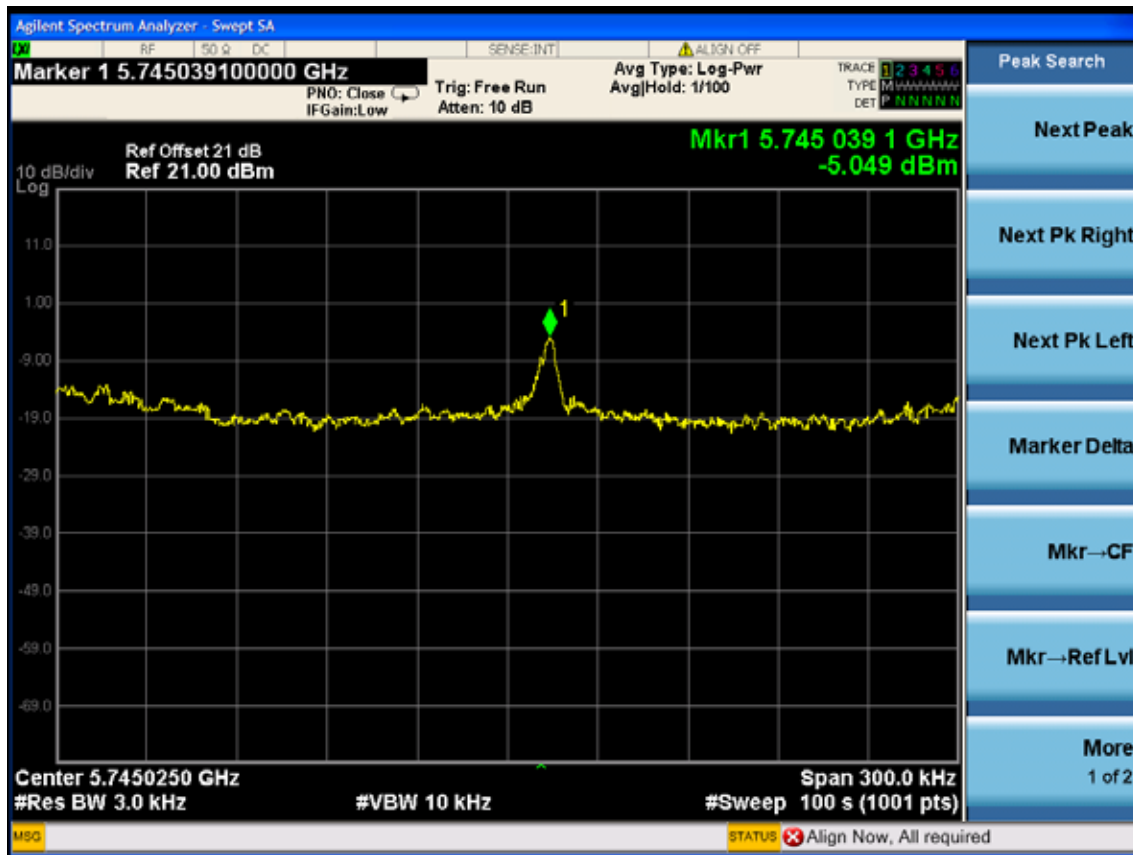


5.8G:

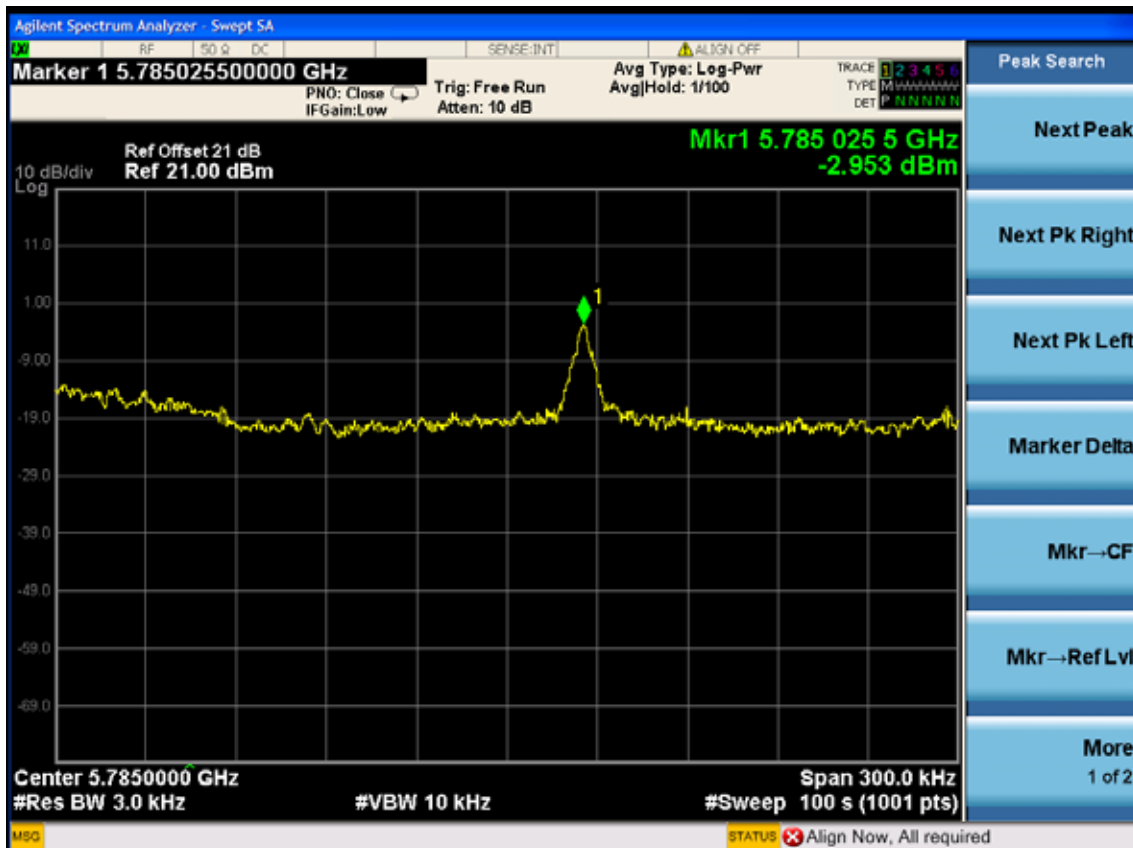
Chain 1:

Test Mode: IEEE 802.11a TX

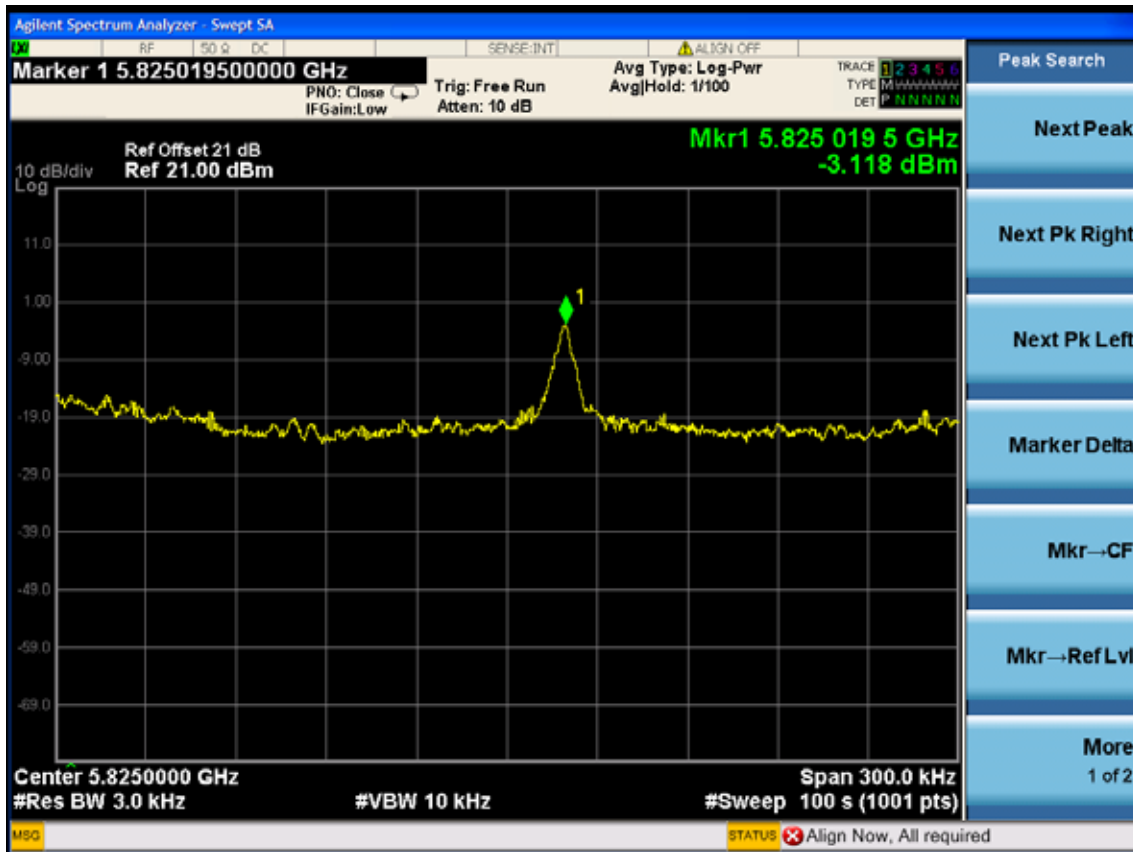
Test CH149: 5745MHz



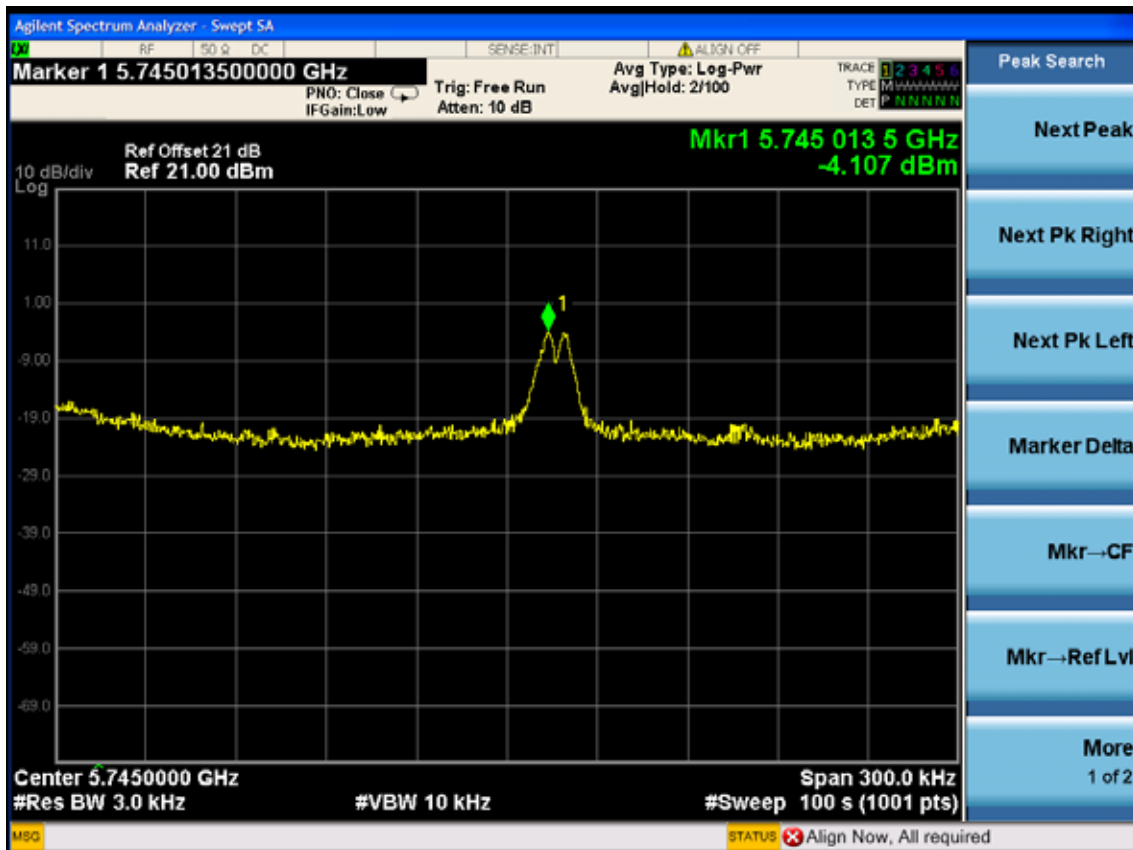
Test CH157: 5785MHz



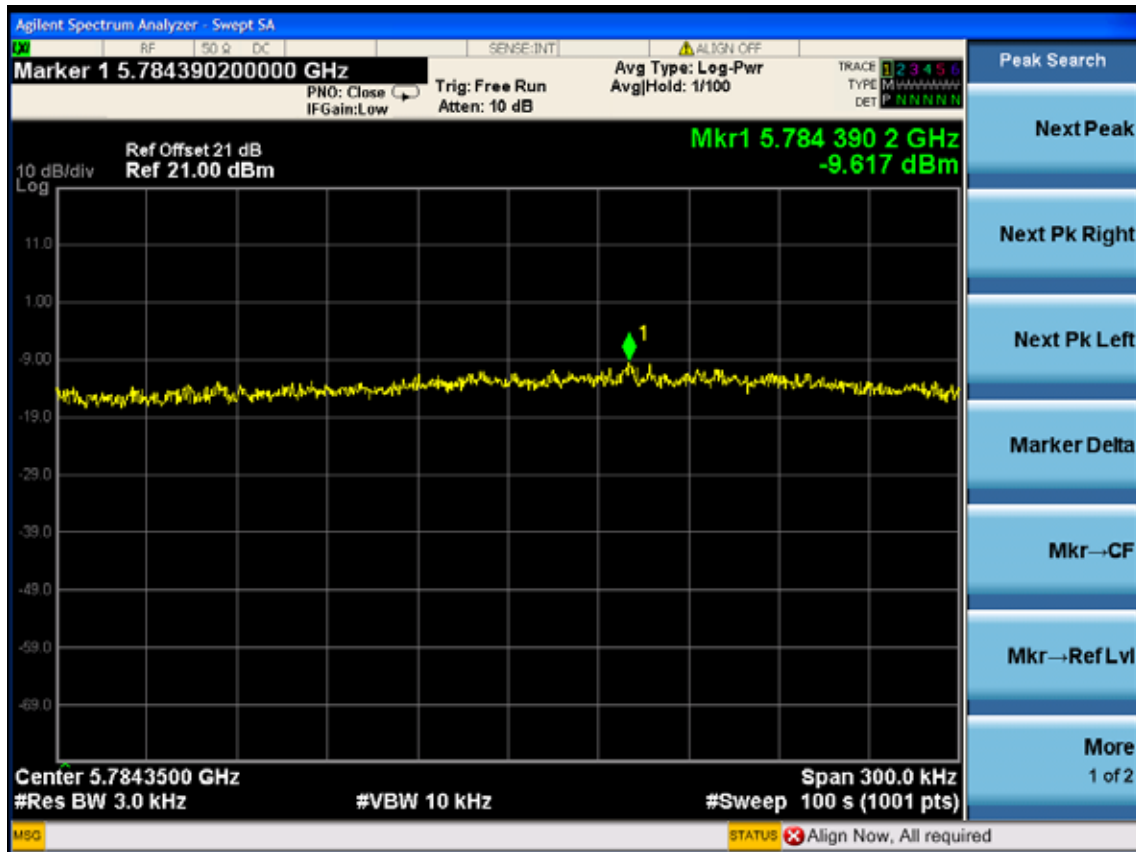
Test CH165: 5825MHz



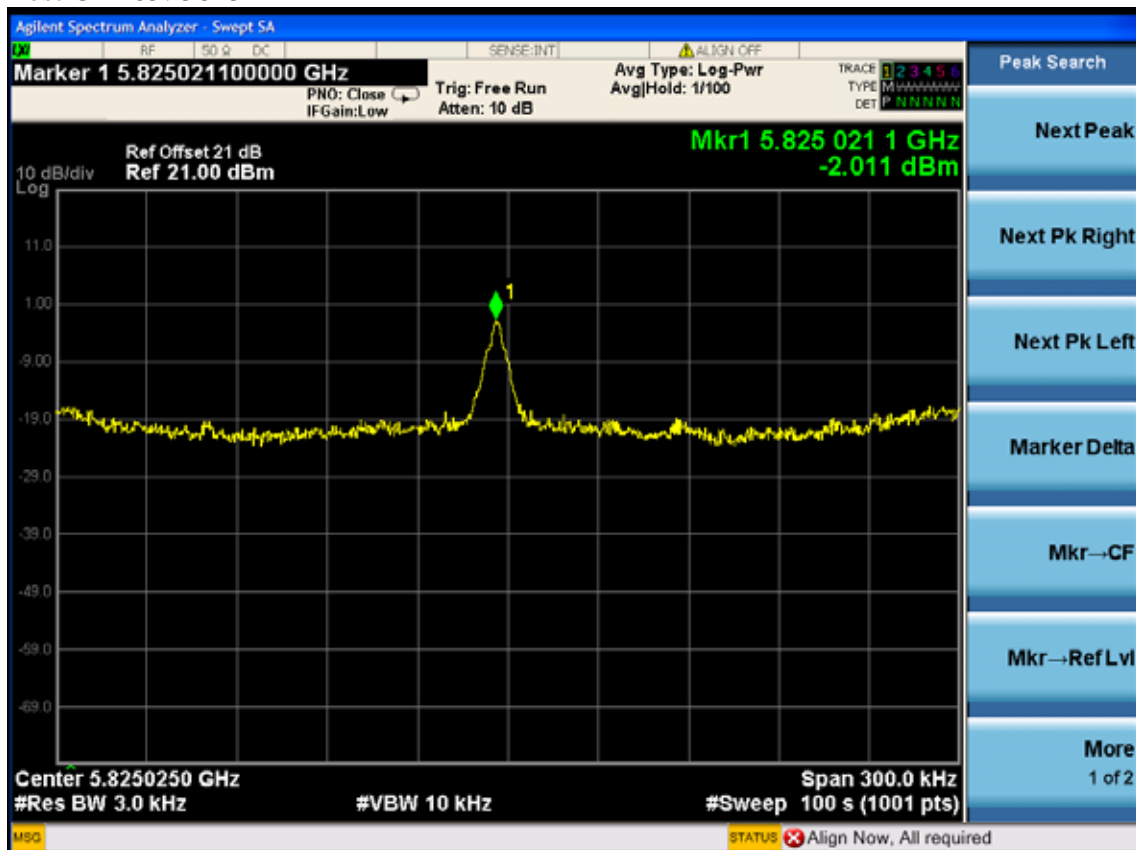
Test Mode: IEEE 802.11n HT20 TX
Test CH149: 5745MHz



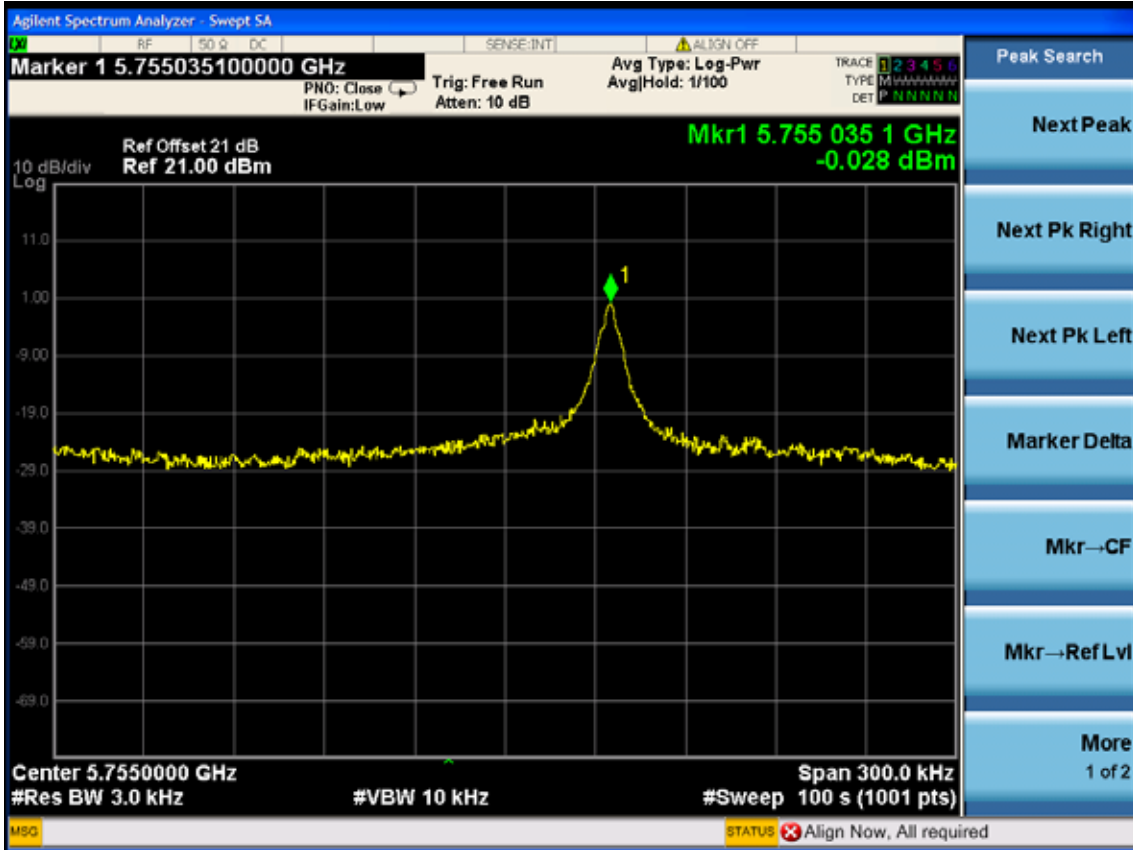
Test CH157: 5785MHz



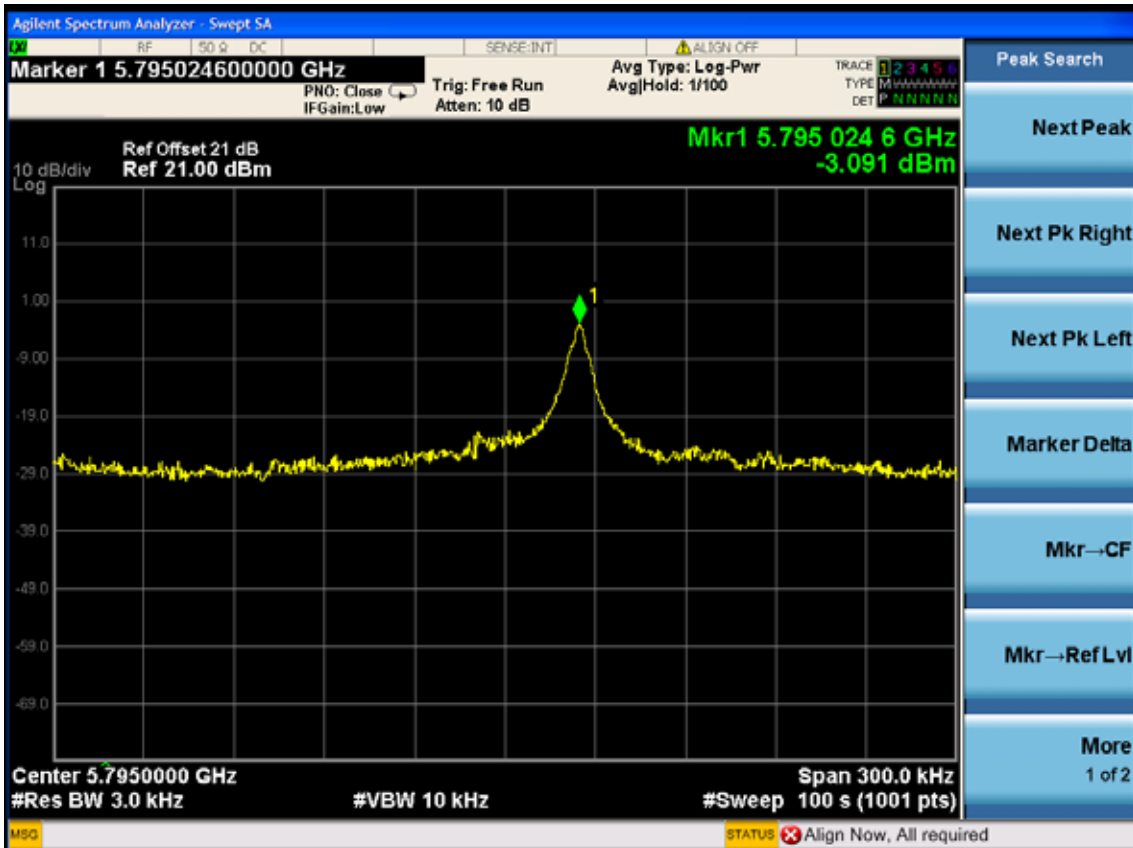
Test CH165: 5825MHz



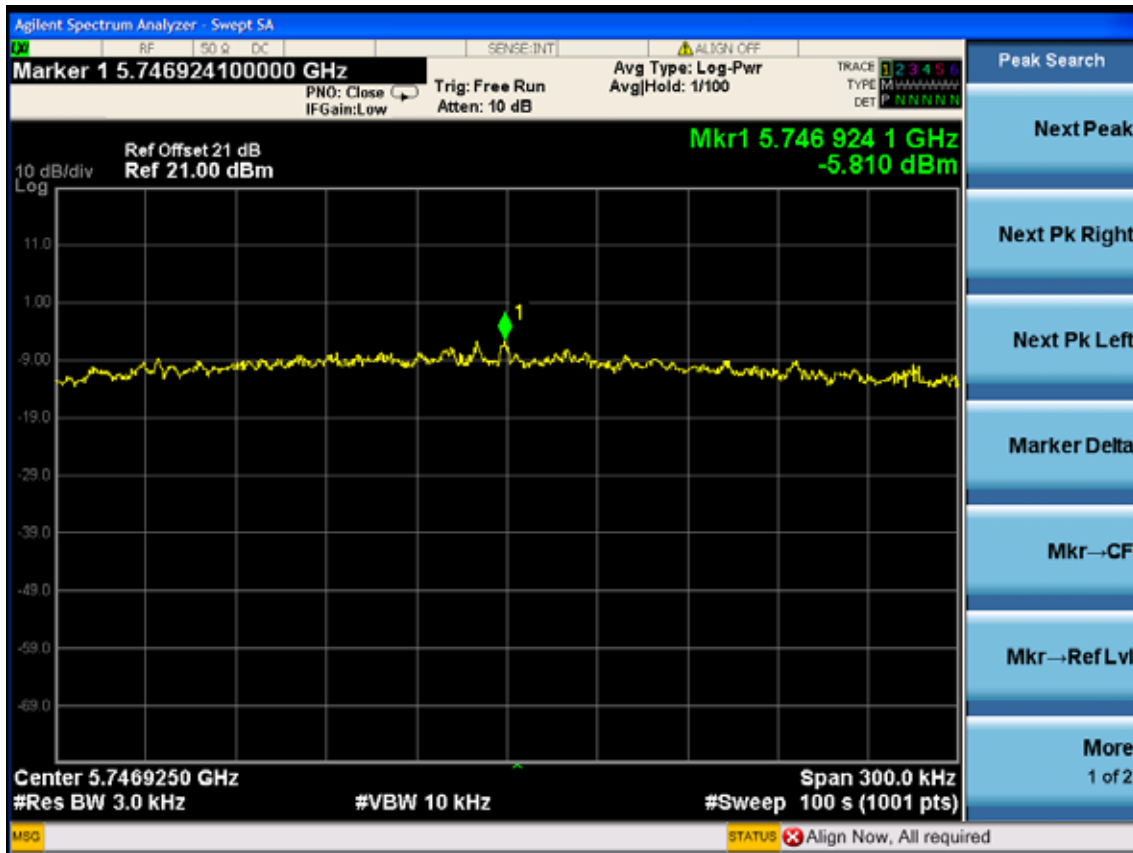
Test Mode: IEEE 802.11n HT40 TX
 Test CH151: 5755MHz



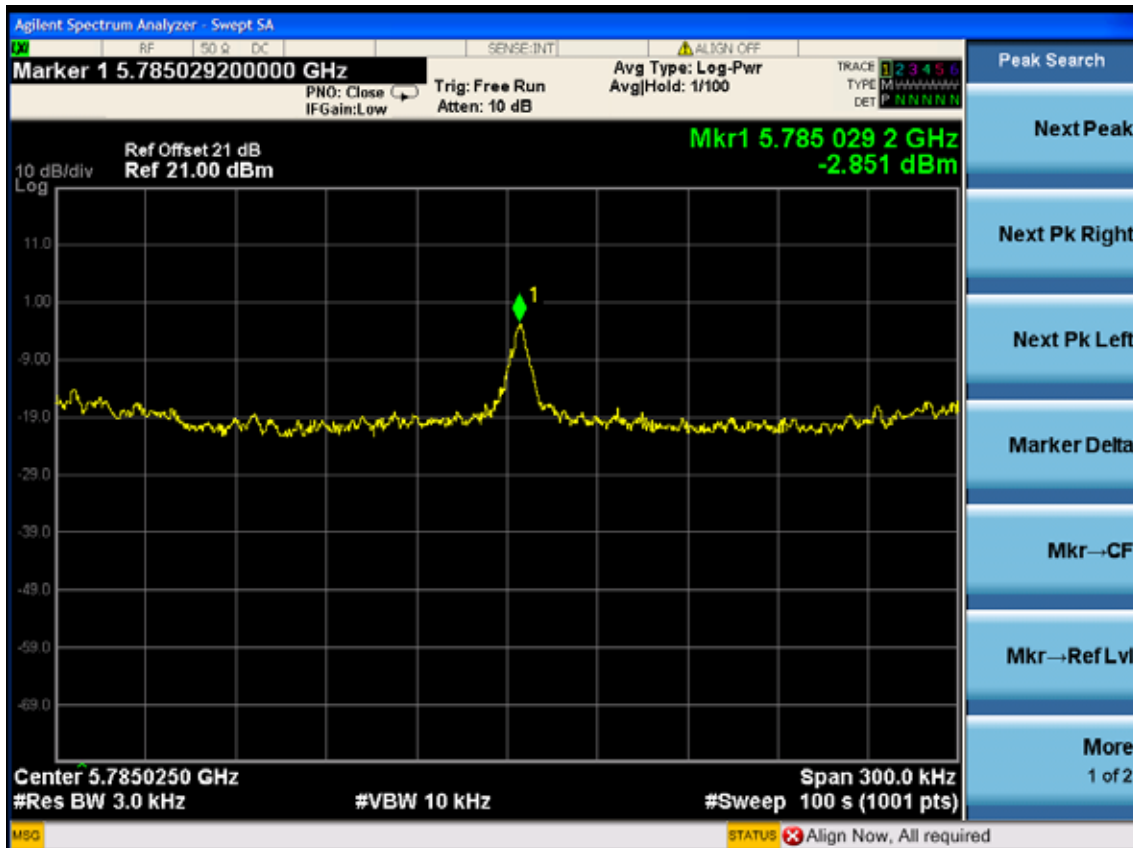
Test CH159: 5795MHz



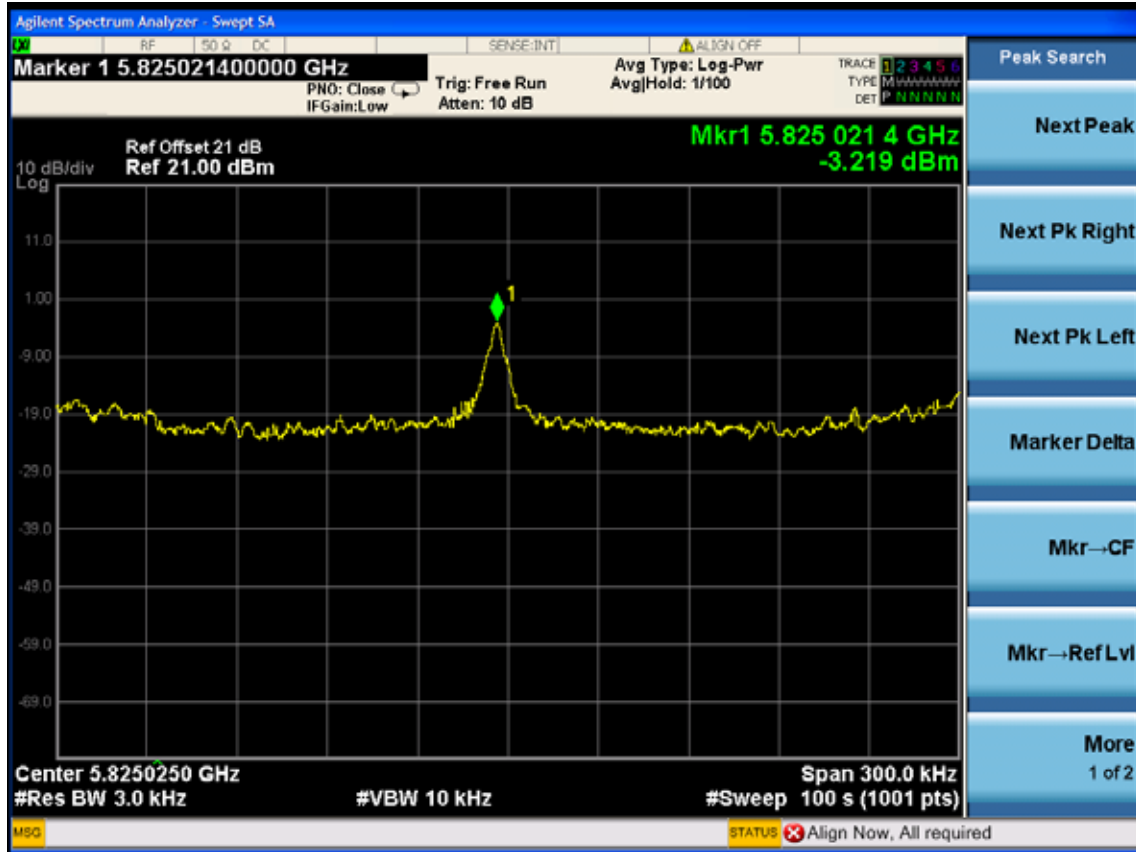
Chain 2:
 Test Mode: IEEE 802.11a TX
 Test CH149: 5745MHz



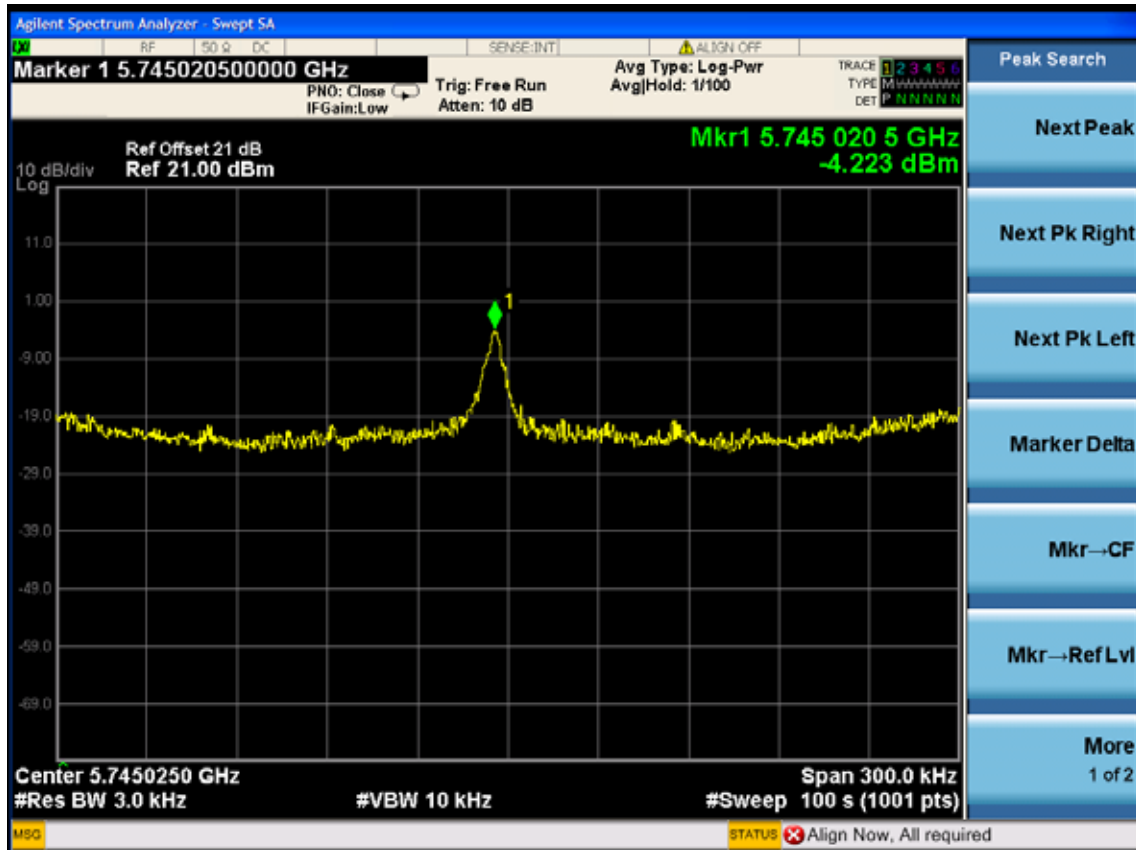
Test CH157: 5785MHz



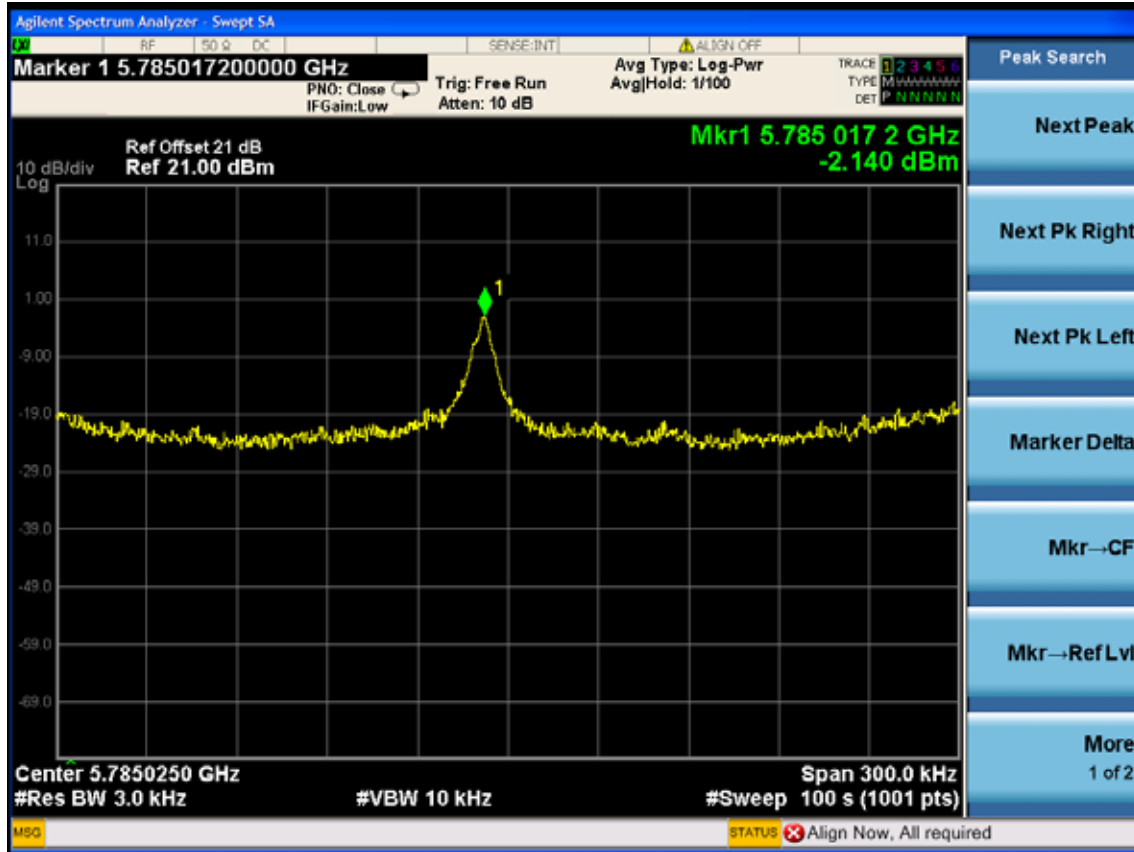
Test CH165: 5825MHz



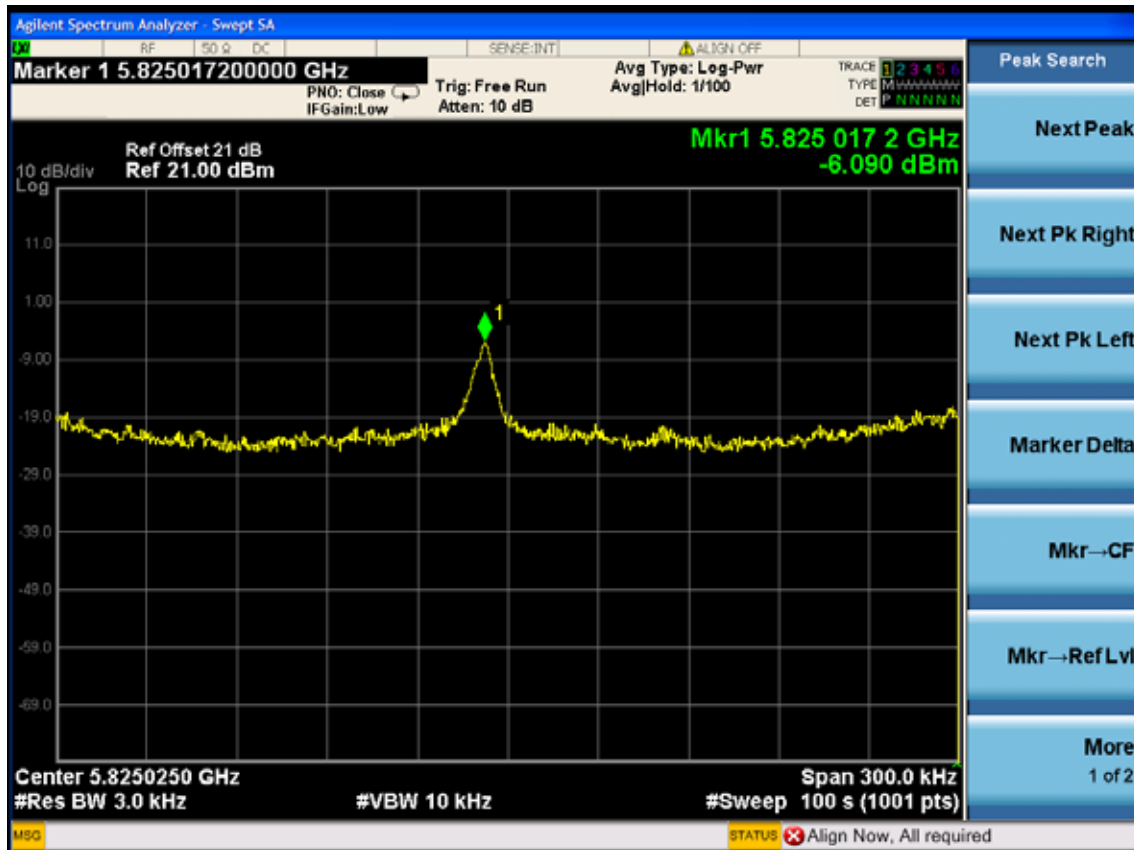
Test Mode: IEEE 802.11n HT20 TX
Test CH149: 5745MHz



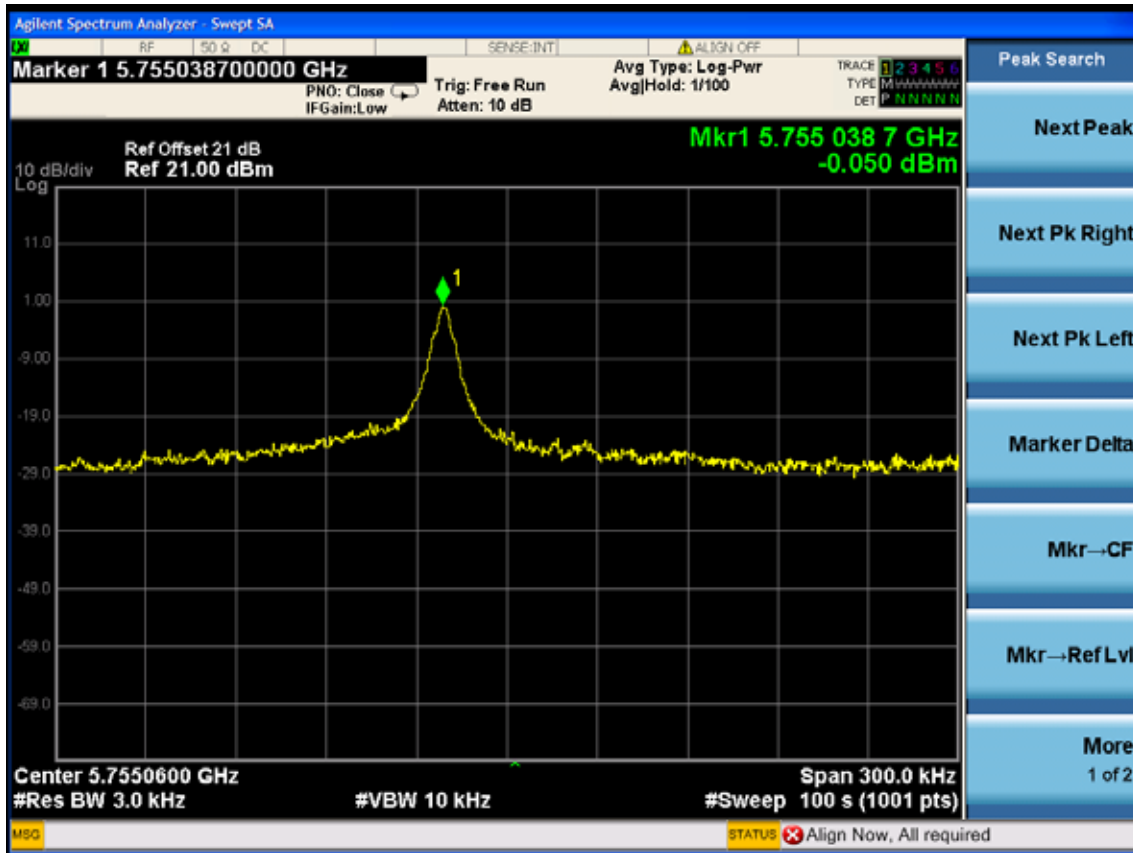
Test CH157: 5785MHz



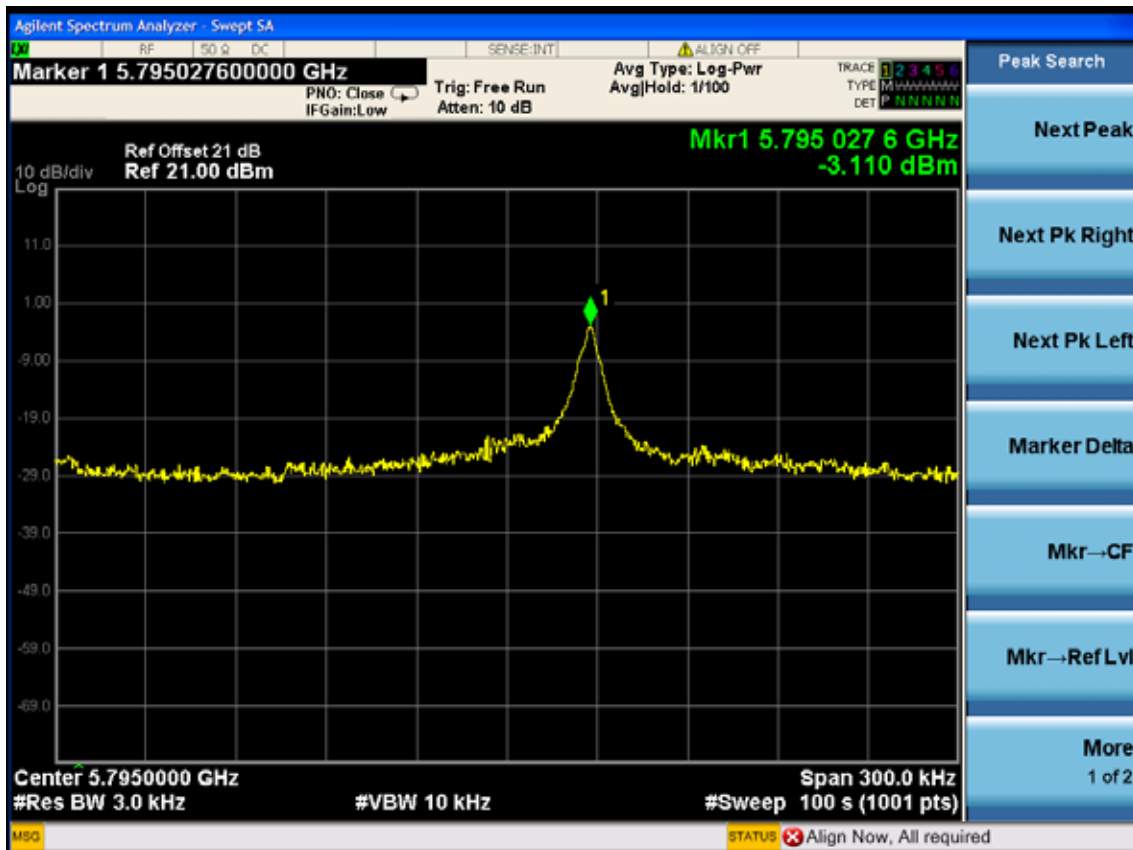
Test CH165: 5825MHz



Test Mode: IEEE 802.11n HT40 TX
 Test CH151: 5755MHz



Test CH159: 5795MHz



10.MPE ESTIMATION

10.1.Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm ²)	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Frequency(MHz)	Power density (mW/ cm ²)	Averaging time(minutes)
2412	1	30
2437	1	30
2462	1	30

Note: F= Frequency in MHz

10.2. Estimation Result

2.4GHz

EUT:A8n Super WiFi Base Station		
M/N:WA8011N-X		
Test date: 2014-07-28	Pressure: 101.3±1.0 kpa	Humidity: 49.6±3.0%
Tested by: Kevin_Hu	Test site: RF site	Temperature:22.9±0.6 °C

Cable loss: 1 dB		Attenuator loss: 20 dB				Antenna Gain: 14dBi	
Test Mode	CH	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11b	CH1	2412	21.21	132.13	14	25.12	0.6606
	CH6	2437	21.16	130.62	14	25.12	0.6531
	CH11	2462	21.14	130.02	14	25.12	0.6501
11g	CH1	2412	21.03	126.77	14	25.12	0.6338
	CH6	2437	20.19	104.47	14	25.12	0.5223
	CH11	2462	21.91	155.24	14	25.12	0.7762
11n HT20	CH1	2412	21.01	126.18	14	25.12	0.6309
	CH6	2437	21.10	128.82	14	25.12	0.6441
	CH11	2462	21.07	127.94	14	25.12	0.6397
11n HT40	CH1	2422	19.37	86.50	14	25.12	0.4325
	CH4	2437	19.38	86.70	14	25.12	0.4335
	CH7	2452	19.21	83.37	14	25.12	0.4168

5.8GHz

EUT:A8n Super WiFi Base Station		
M/N:WA8011N-X		
Test date: 2014-07-28	Pressure: 101.2±1.0 kpa	Humidity: 49.7±3.0%
Tested by: Kevin_Hu	Test site: RF site	Temperature:22.6±0.6 °C

Cable loss: 1 dB		Attenuator loss: 20 dB				Antenna Gain: 20dBi	
Test Mode	CH	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11a	CH149	5745	15.01	31.70	20	100.00	0.6309
	CH157	5785	14.92	31.05	20	100.00	0.6179
	CH165	5825	14.91	30.97	20	100.00	0.6165
11n HT20	CH149	5745	14.67	29.31	20	100.00	0.5834
	CH157	5785	14.68	29.38	20	100.00	0.5847
	CH165	5825	14.70	29.51	20	100.00	0.5874
11n HT40	CH151	5755	14.88	30.76	20	100.00	0.6123
	CH159	5795	14.93	31.12	20	100.00	0.6194

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 External 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 for 2.4GHz is 14dBi, and the maximum peak gain of the transmit antenna for 5.8GHz is 20dBi..

12.DEVIATION TO TEST SPECIFICATIONS

[NONE]