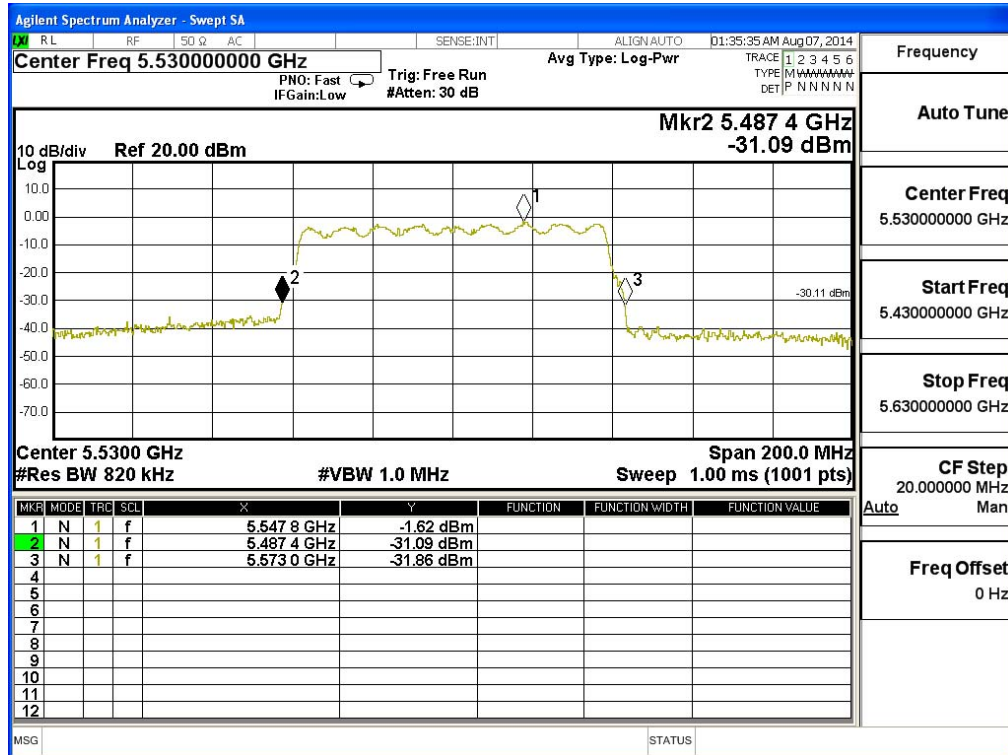
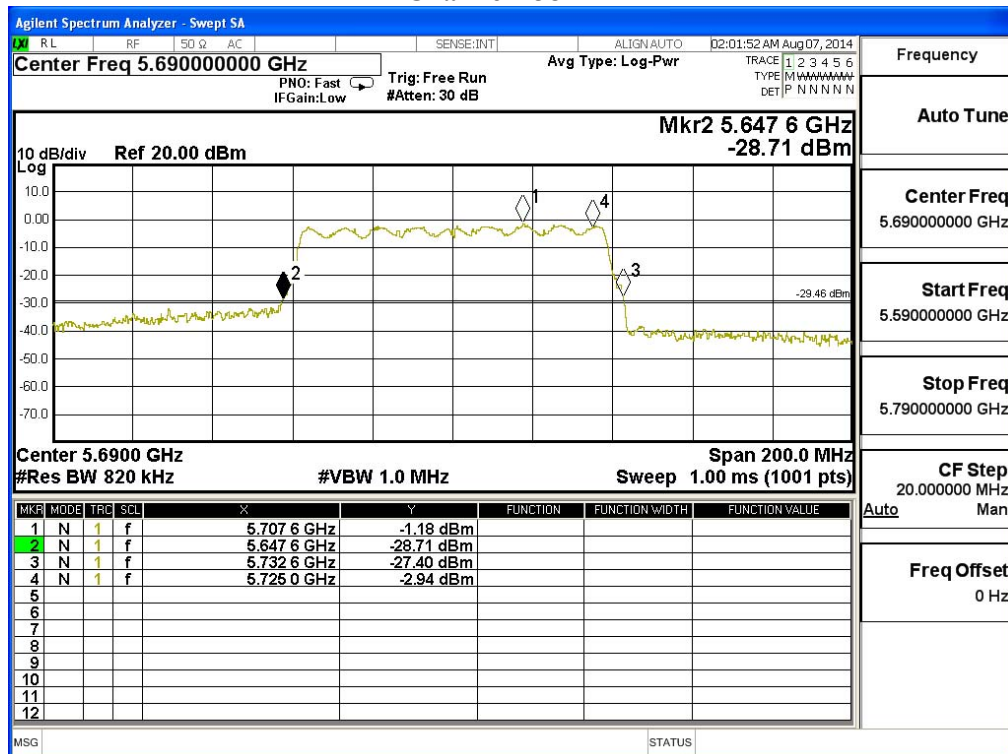


### Channel 106

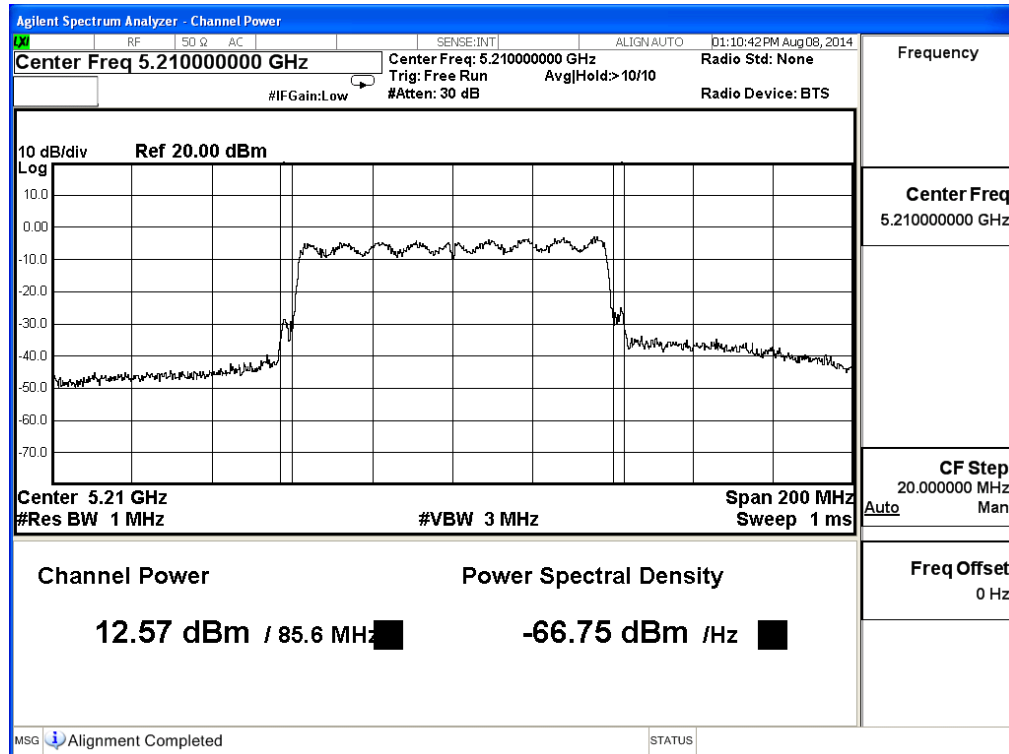


### Channel 138



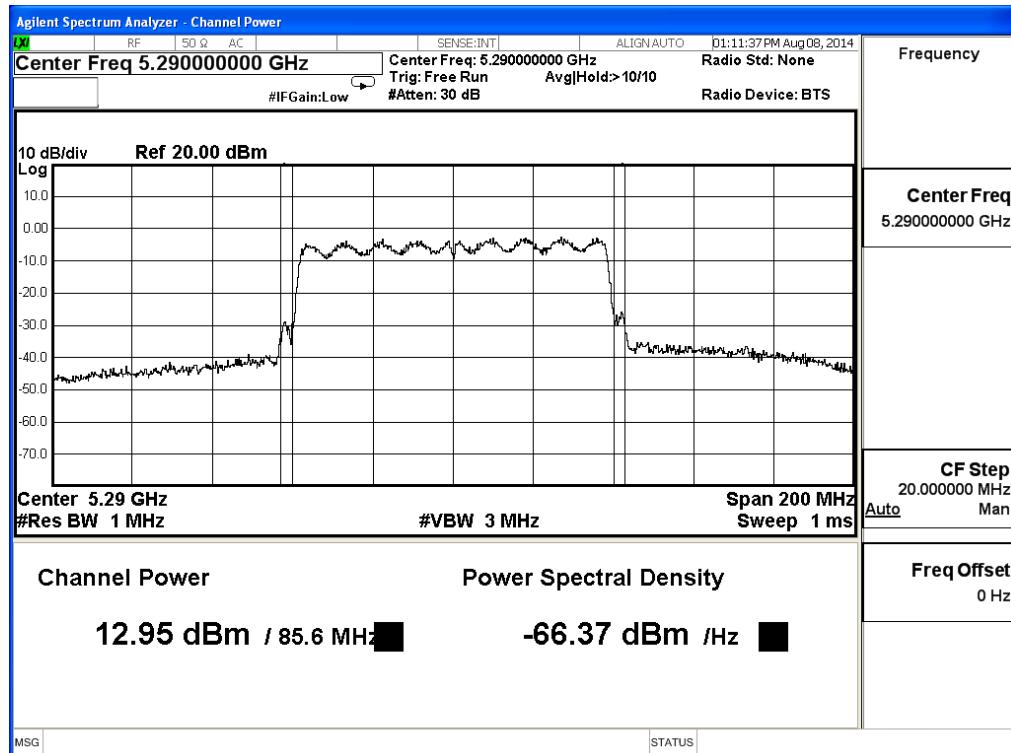
Maximum conducted output power:

Channel 42



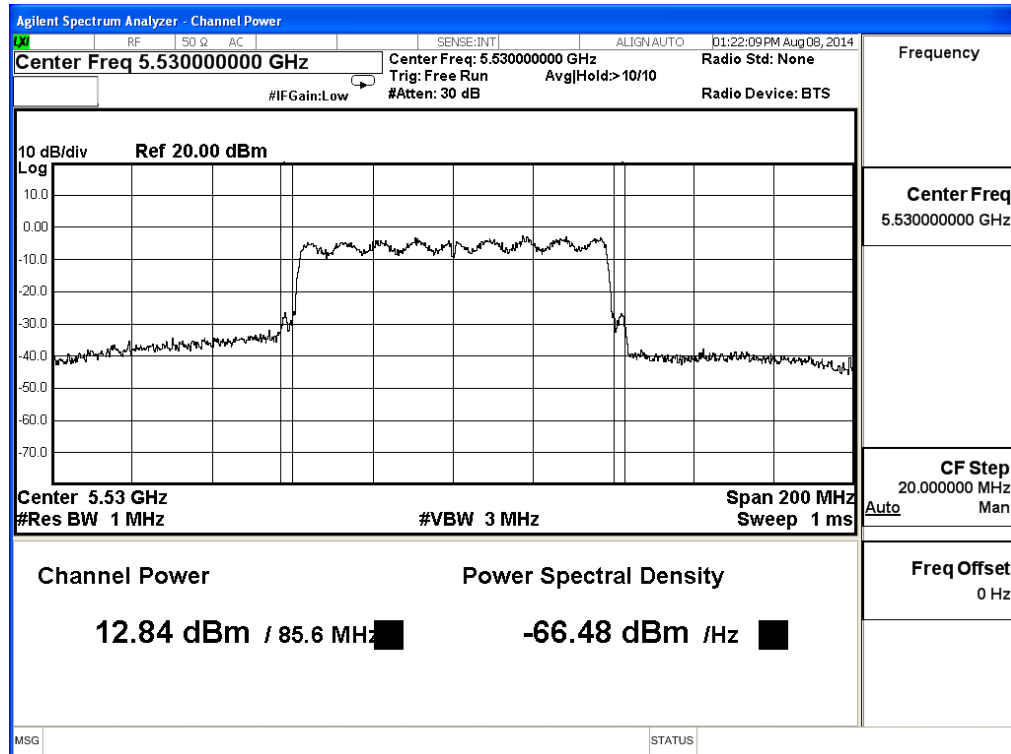
Maximum conducted output power:

Channel 58



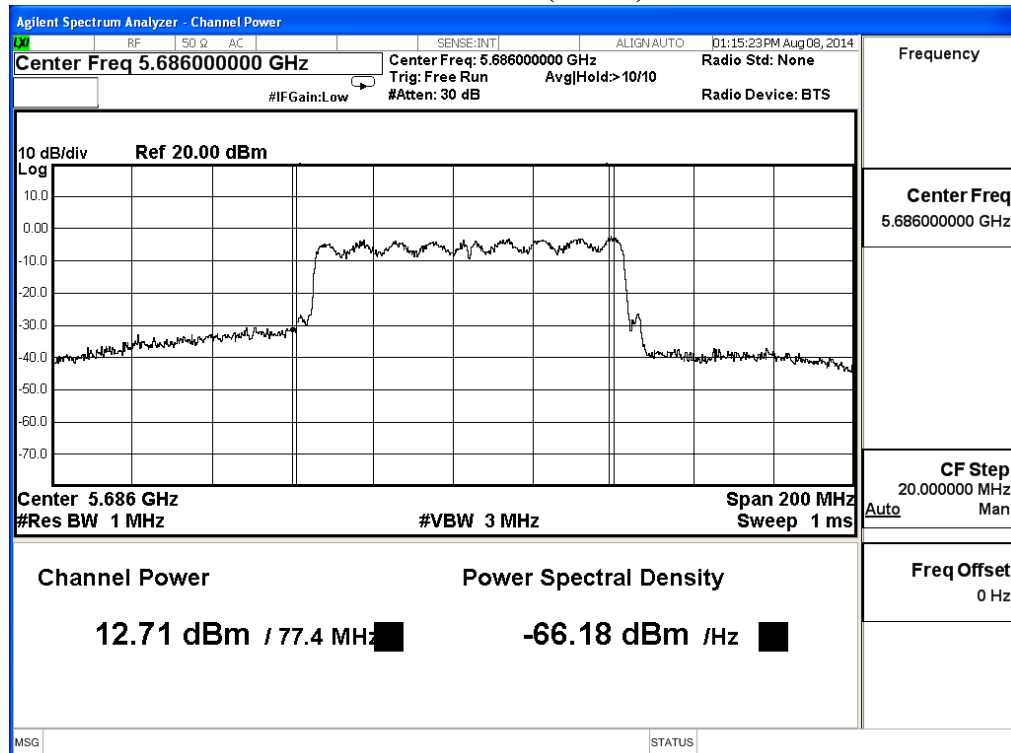
**Maximum conducted output power:**

**Channel 106**



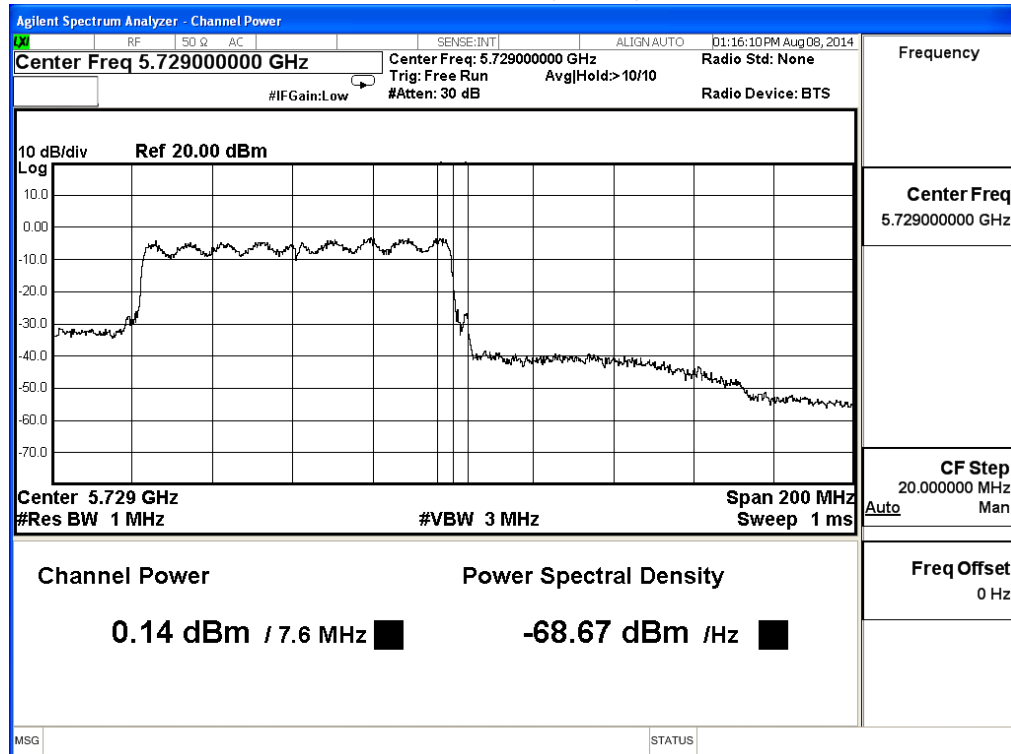
**Maximum conducted output power:**

**Channel 138 (Band3)**



**Maximum conducted output power:**

**Channel 138 (Band4)**



## 4. Peak Power Spectral Density

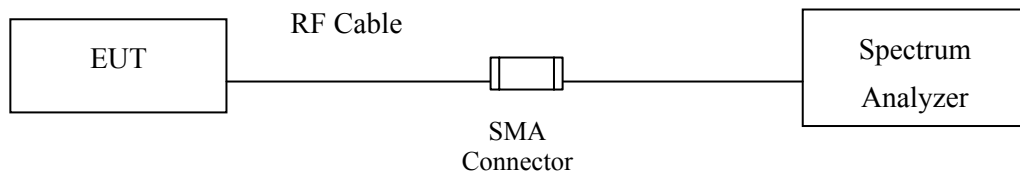
### 4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr, 2014

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

### 4.2. Test Setup



### 4.3. Limits

- (4) For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (5) For the band 5.25-5.35 GHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (6) For the band 5.725-5.825 GHz, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antenna of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

#### **4.4. Test Procedure**

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.

SA-1 method is selected to run the test.

#### **4.5. Uncertainty**

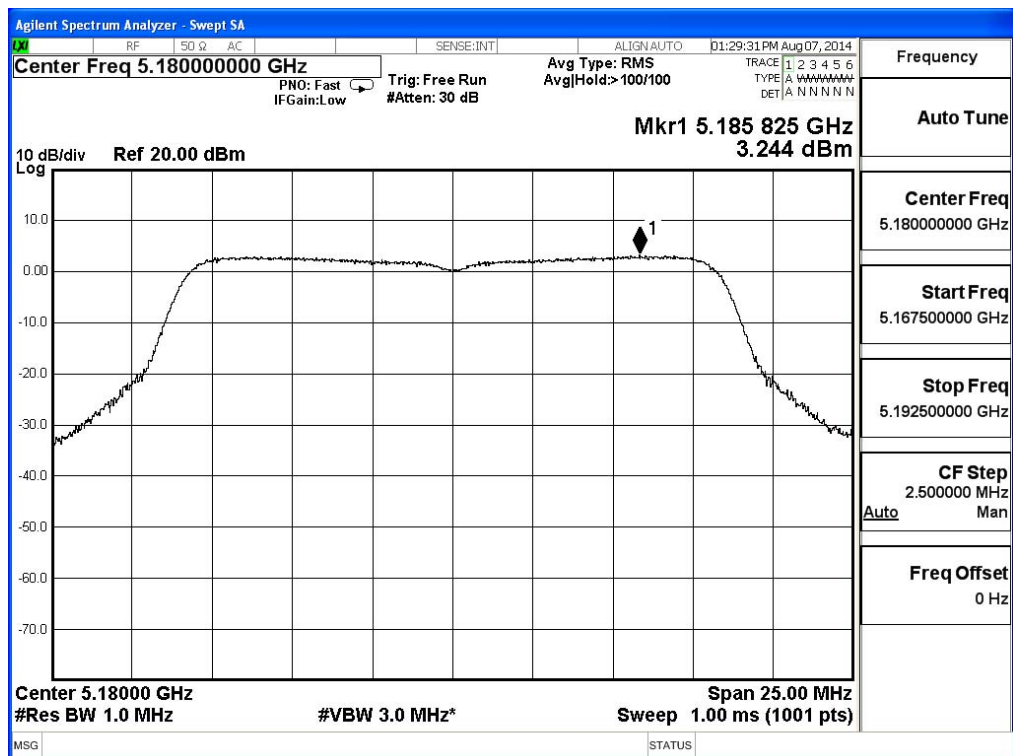
$\pm 1.27$  dB

#### 4.6. Test Result of Peak Power Spectral Density

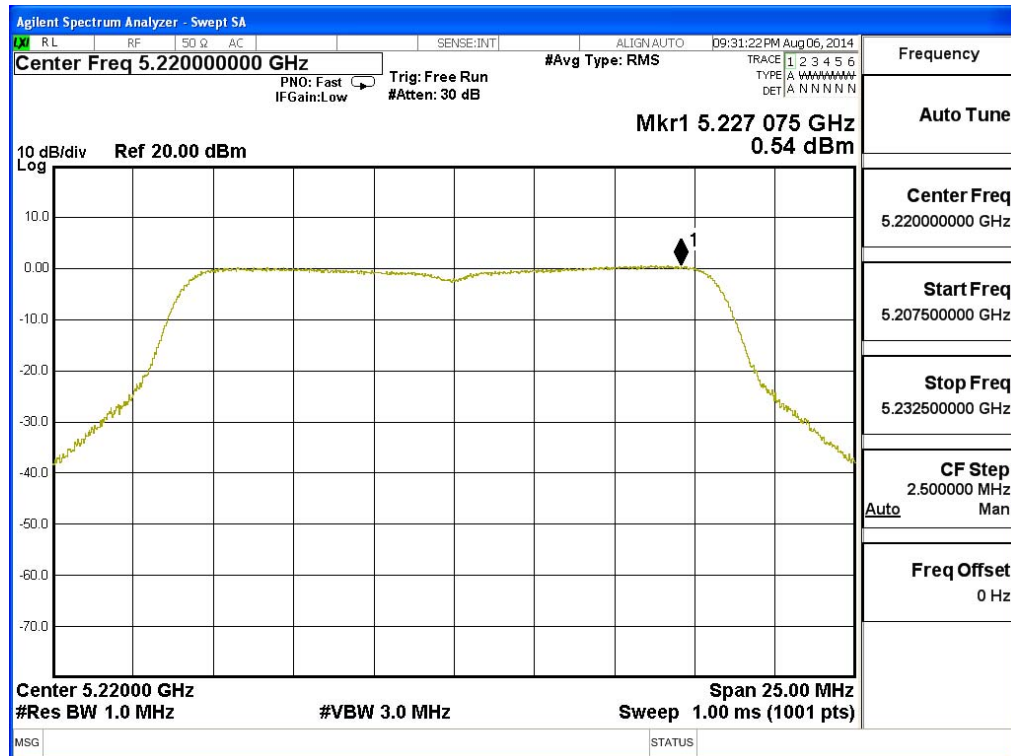
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Power Spectral Density  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Channel Number	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	3.244	<4	Pass
44	5220	0.540	<4	Pass
48	5240	2.480	<4	Pass
52	5260	2.170	<11	Pass
60	5300	0.790	<11	Pass
64	5320	1.050	<11	Pass
100	5500	0.880	<11	Pass
116	5580	1.250	<11	Pass
140	5700	2.000	<11	Pass

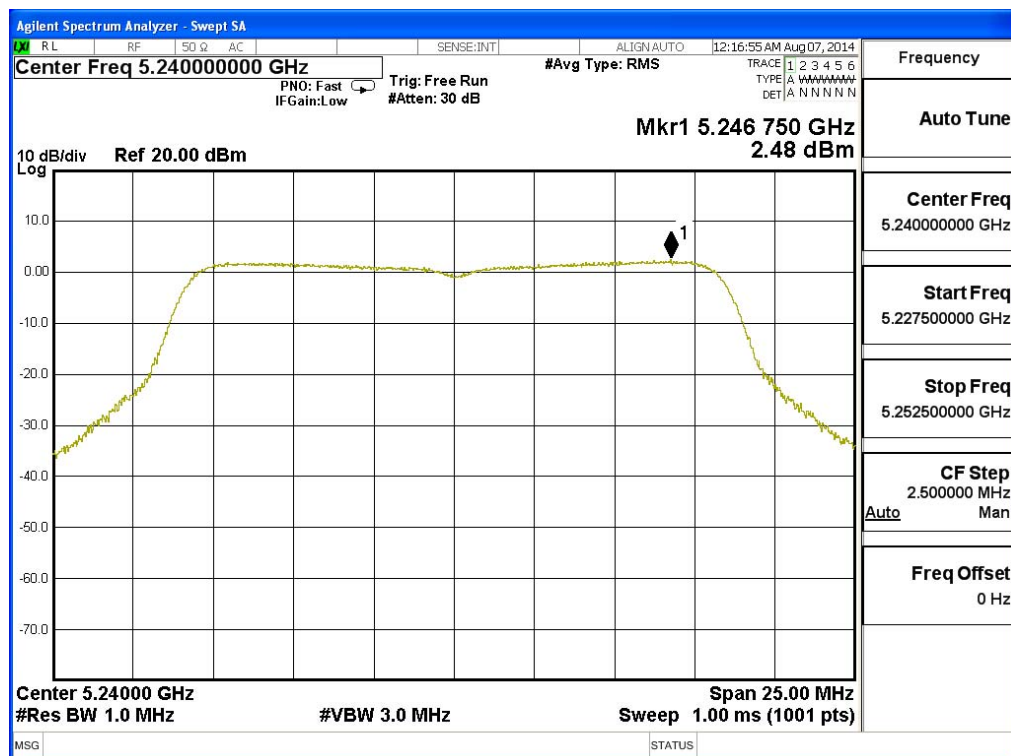
Channel 36:



### Channel 44:

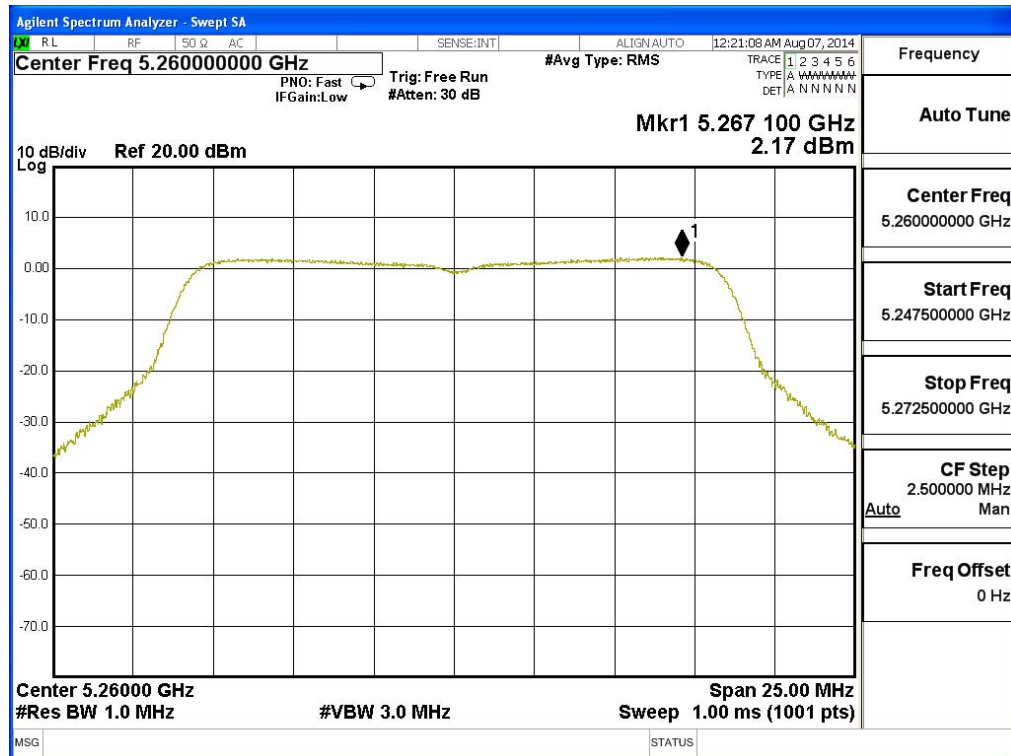


### Channel 48:

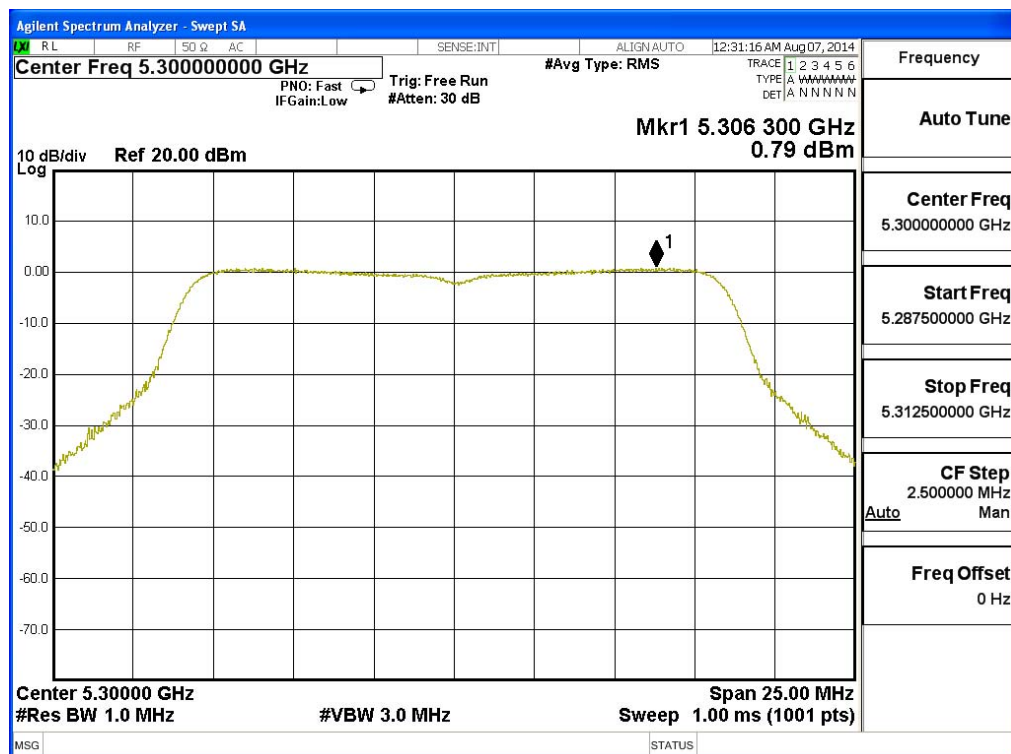




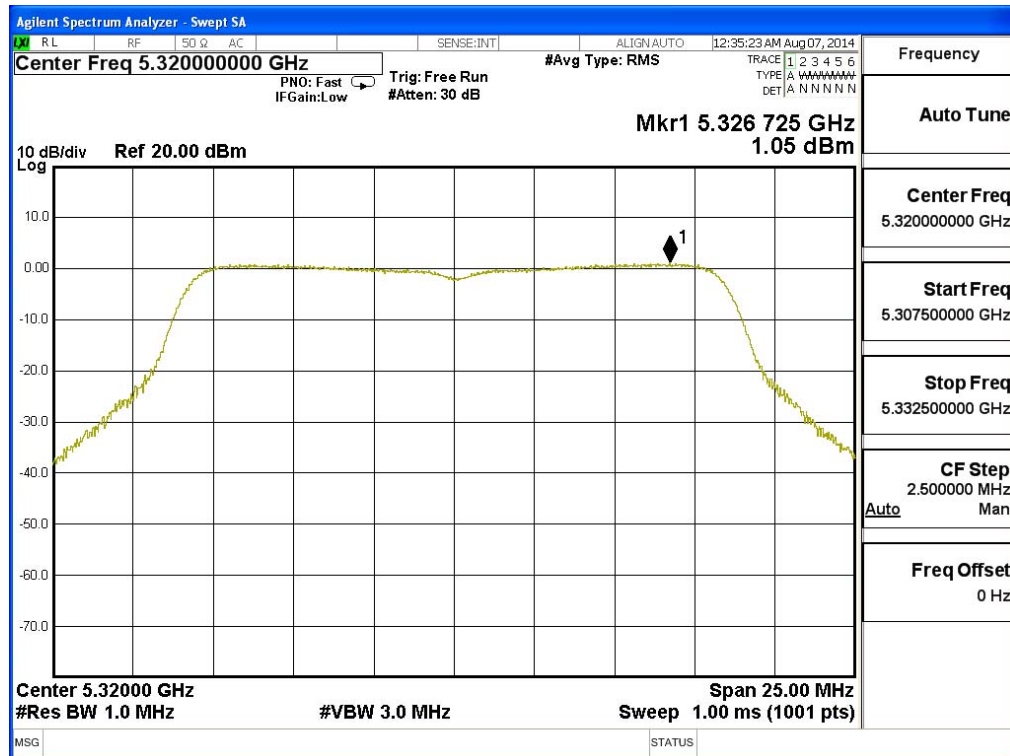
### Channel 52:



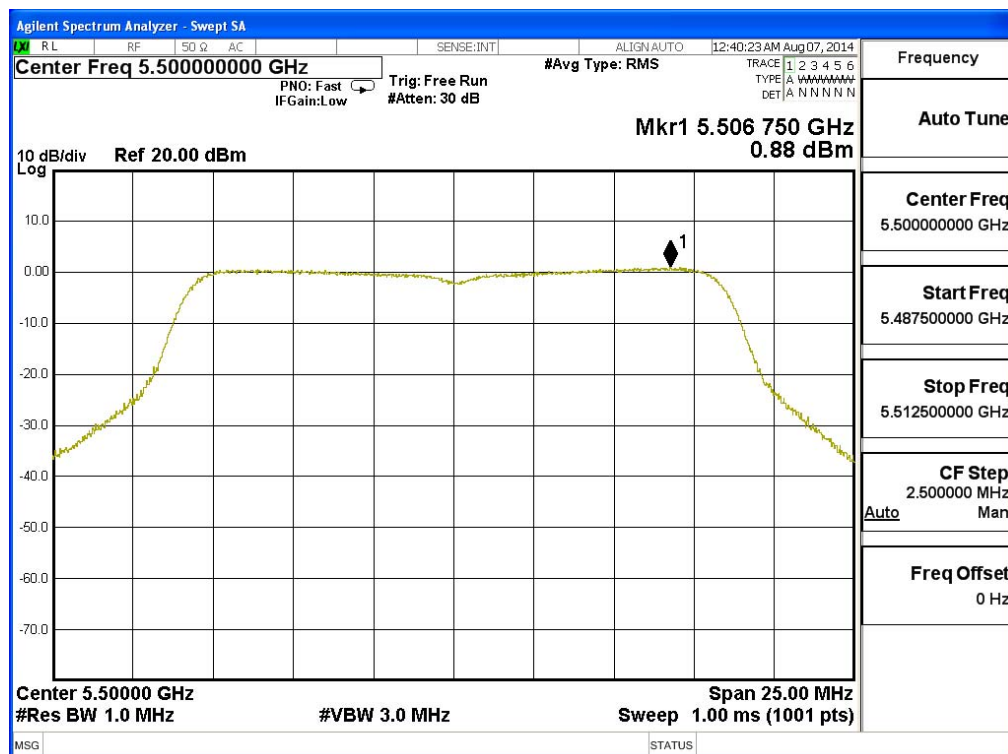
### Channel 60:



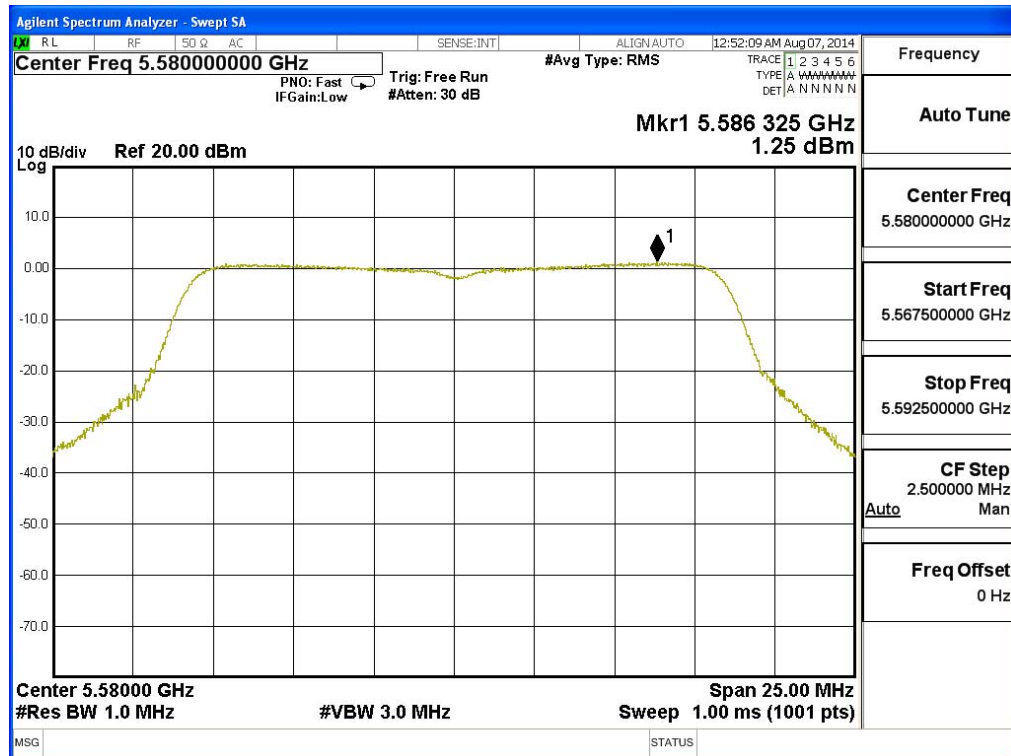
### Channel 64:



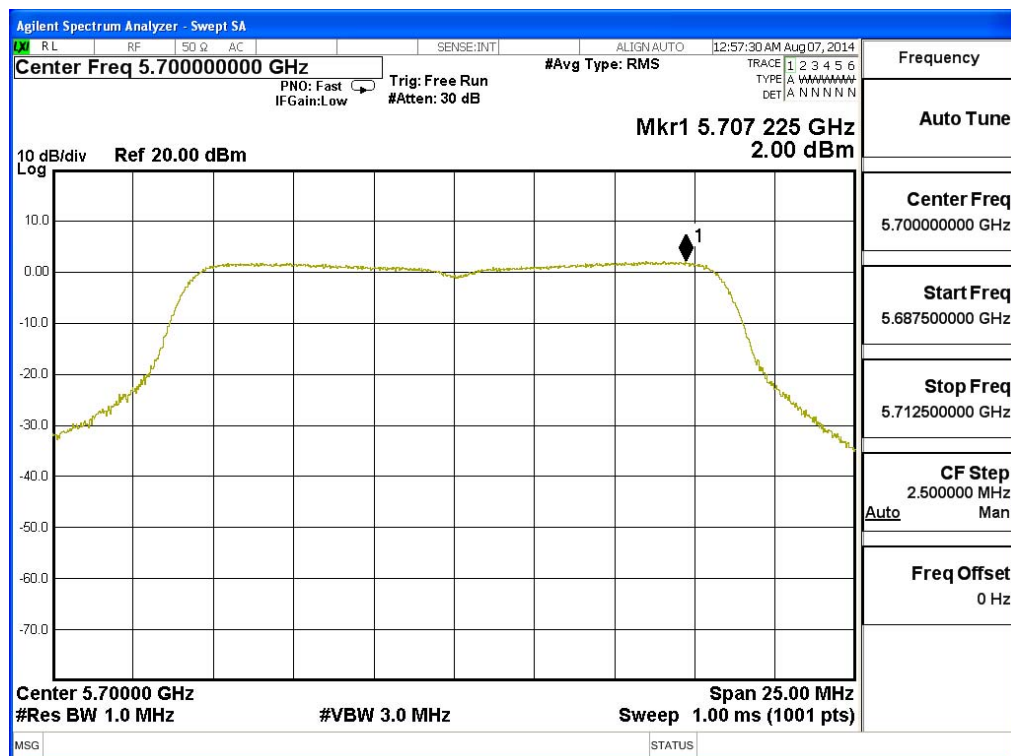
### Channel 100:



### Channel 116:



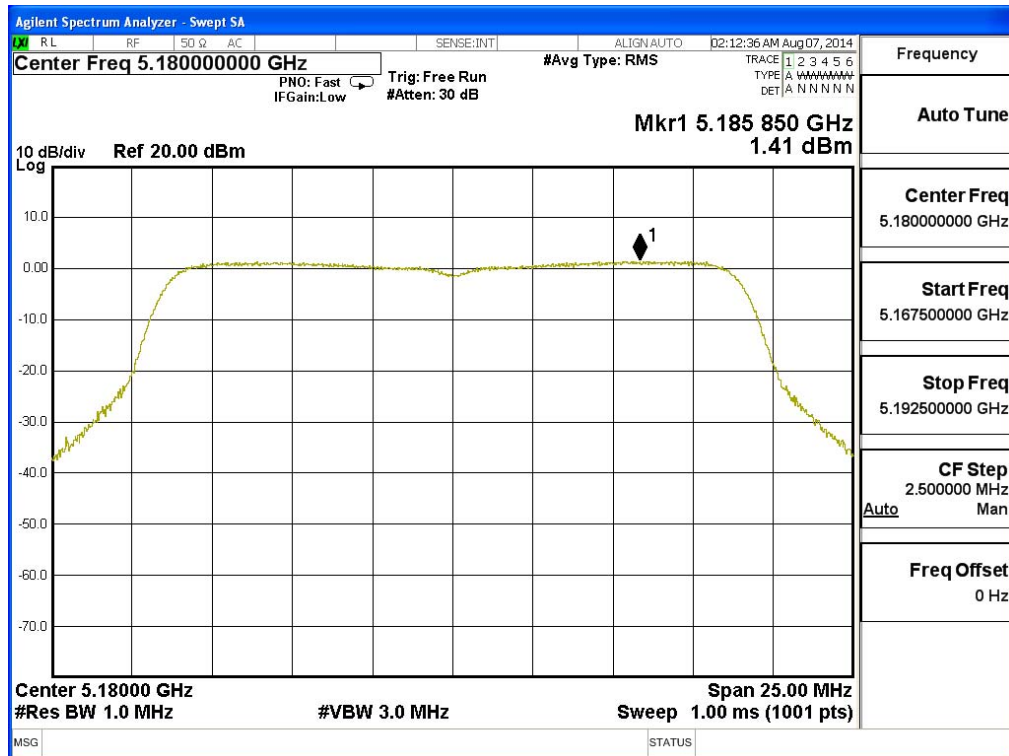
### Channel 140:



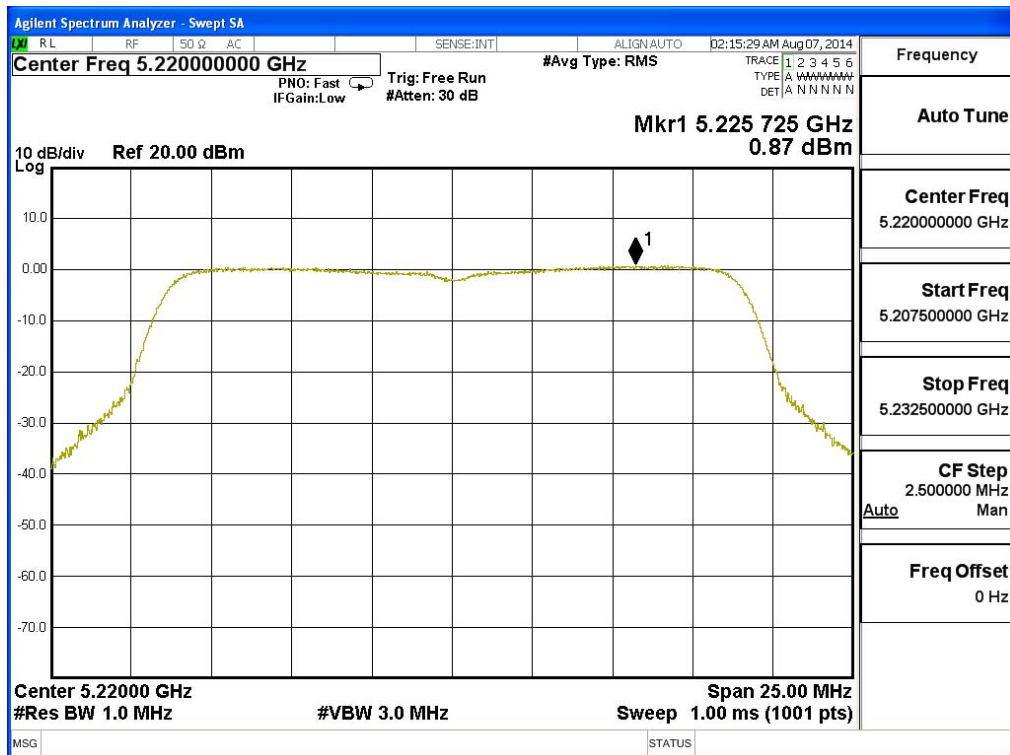
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
Test Item : Peak Power Spectral Density  
Test Site : No.3 OATS  
Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps)

Channel Number	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	1.410	<4	Pass
44	5220	0.870	<4	Pass
48	5240	1.470	<4	Pass
52	5260	1.380	<11	Pass
60	5300	1.240	<11	Pass
64	5320	3.777	<11	Pass
100	5500	0.810	<11	Pass
116	5580	1.310	<11	Pass
140	5700	2.220	<11	Pass

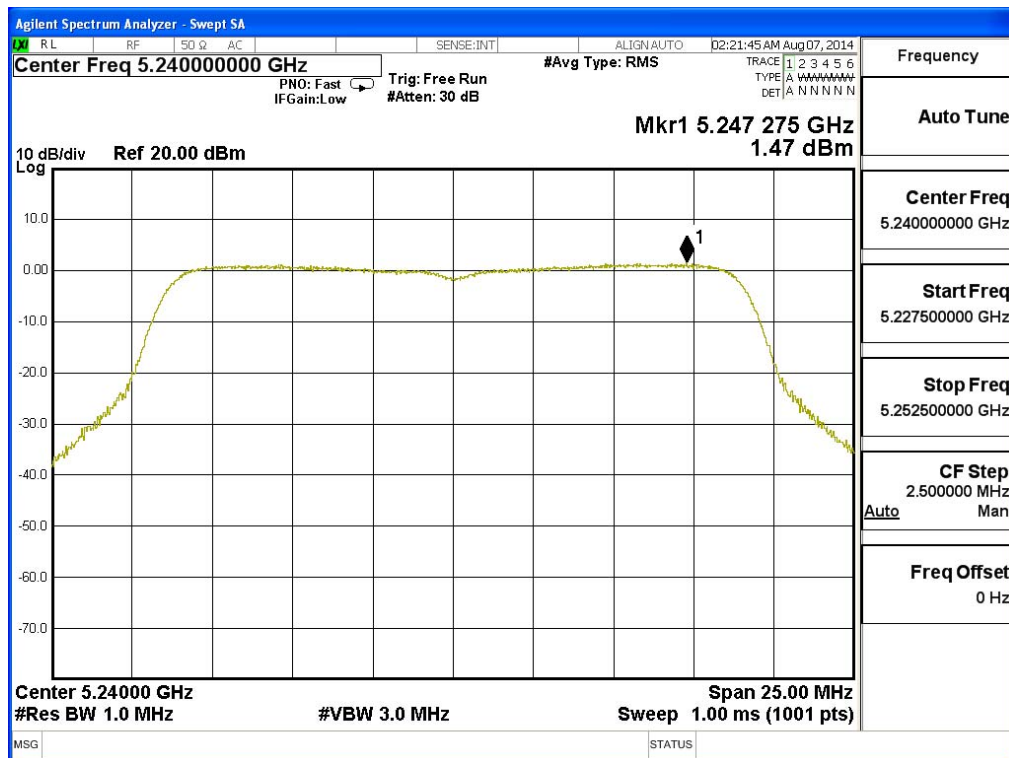
### Channel 36



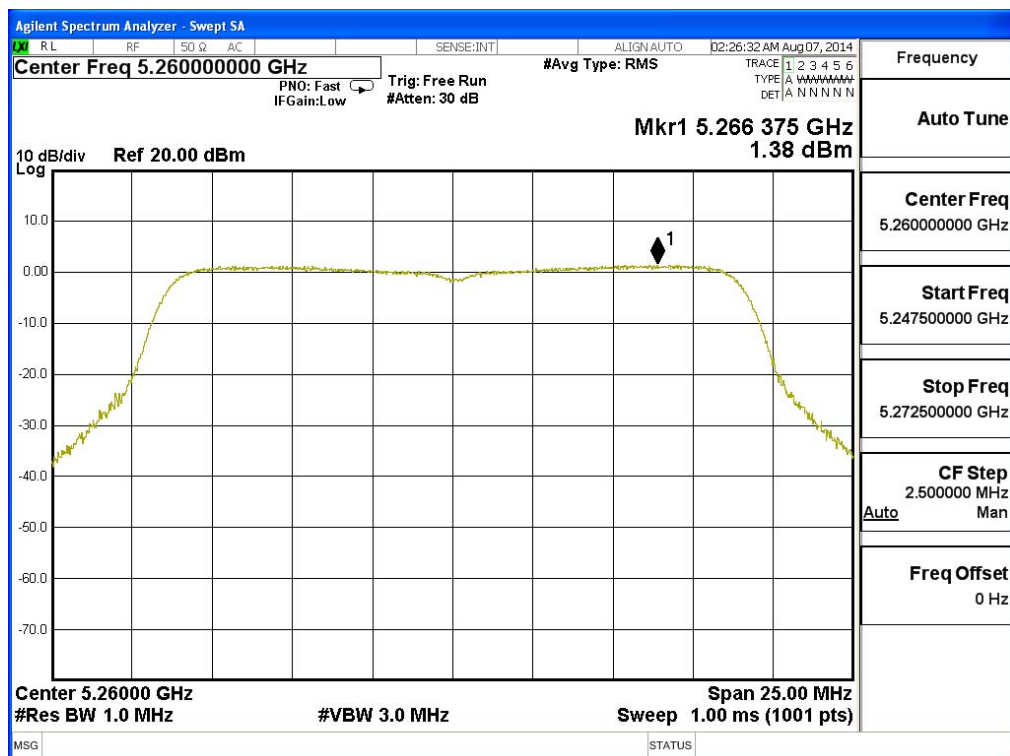
### Channel 44



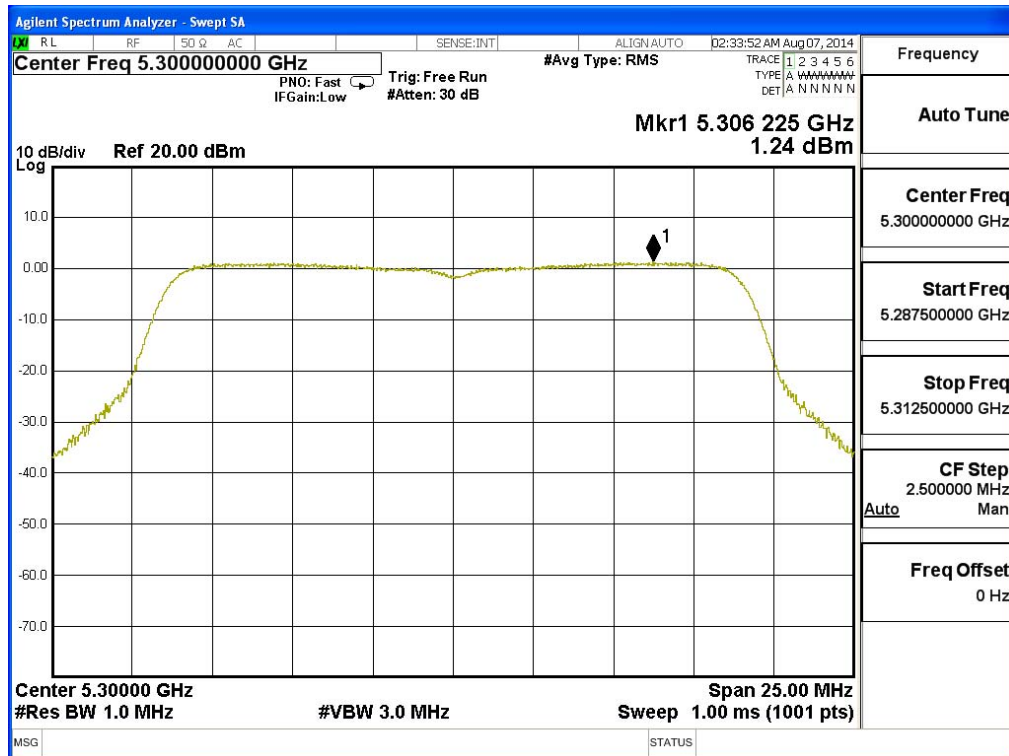
### Channel 48



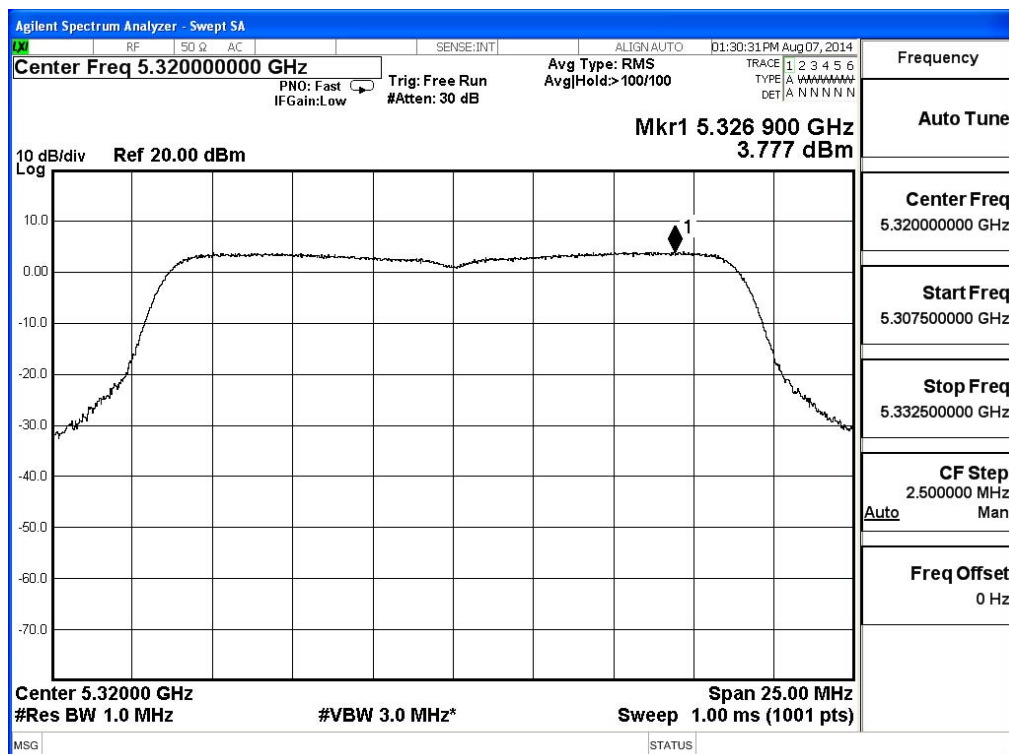
### Channel 52



### Channel 60

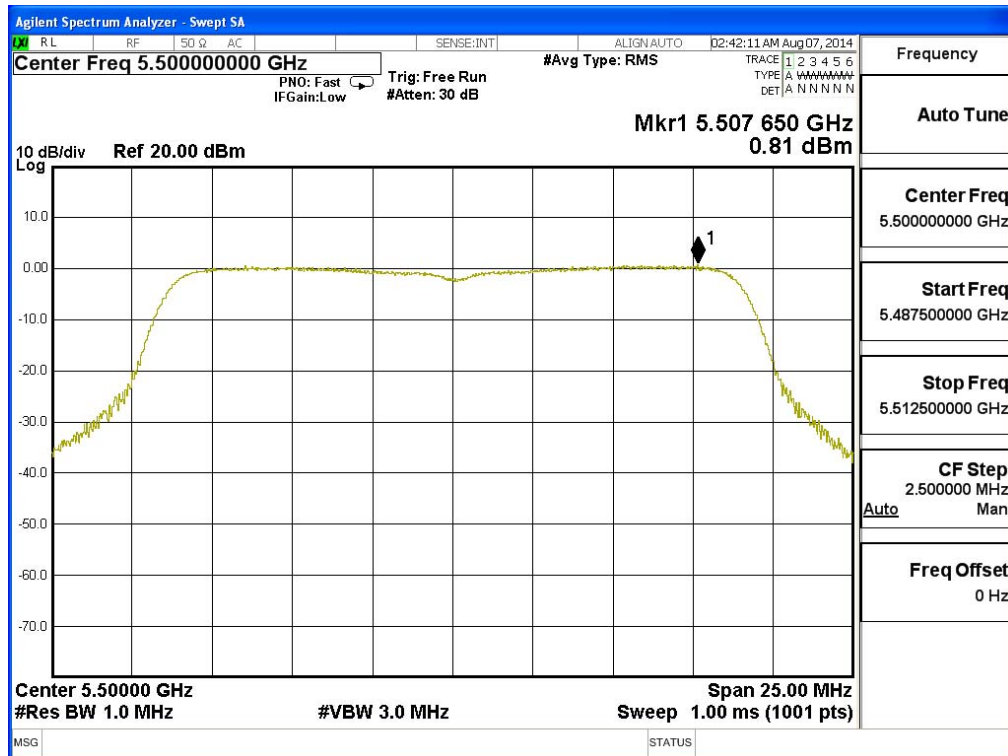


### Channel 64

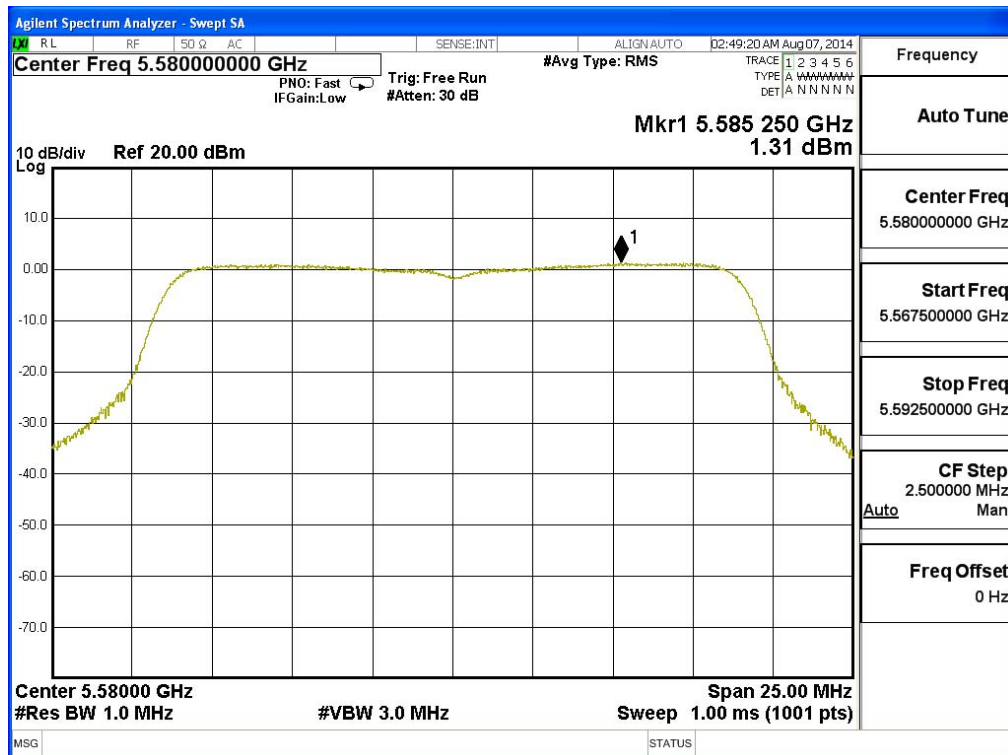




### Channel 100

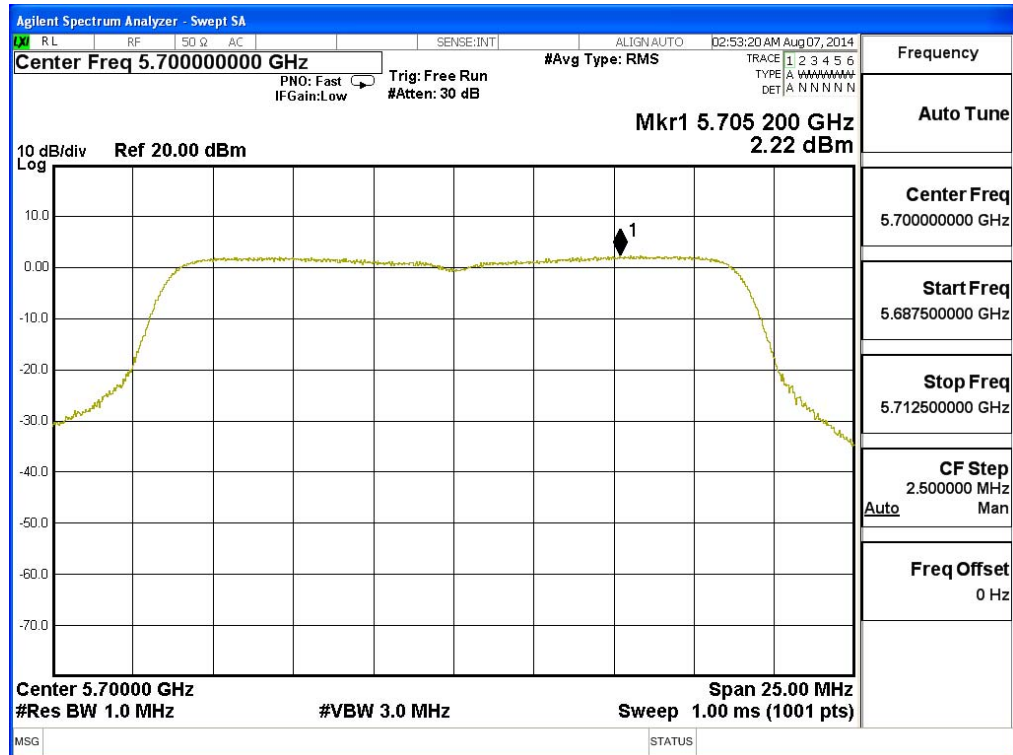


### Channel 116





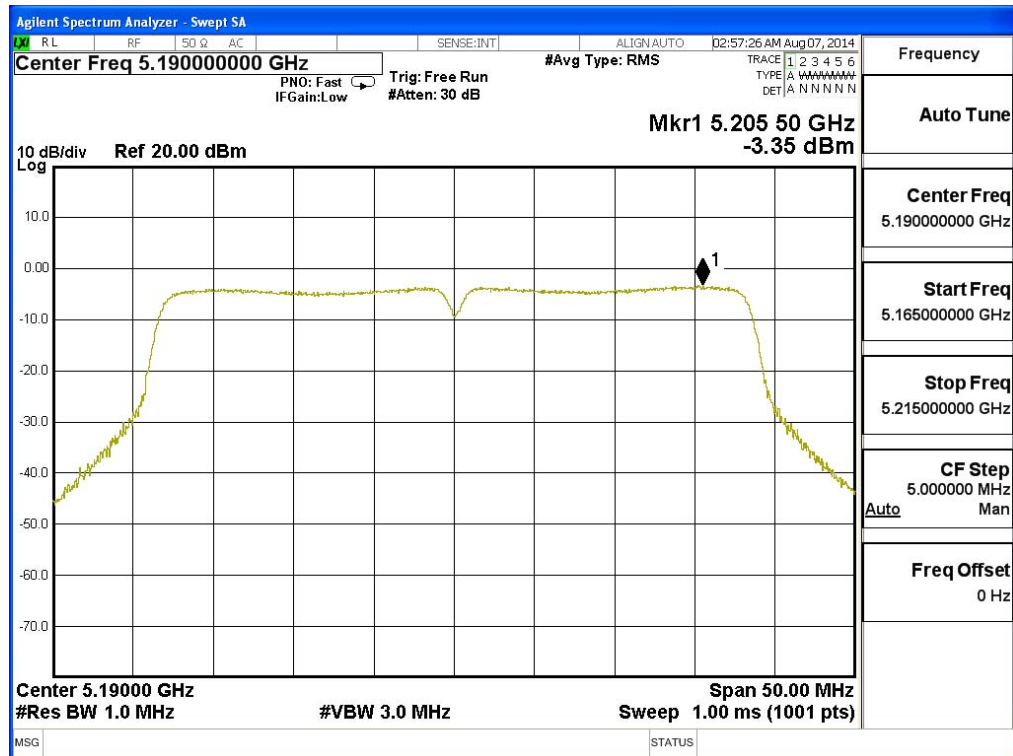
### Channel 140



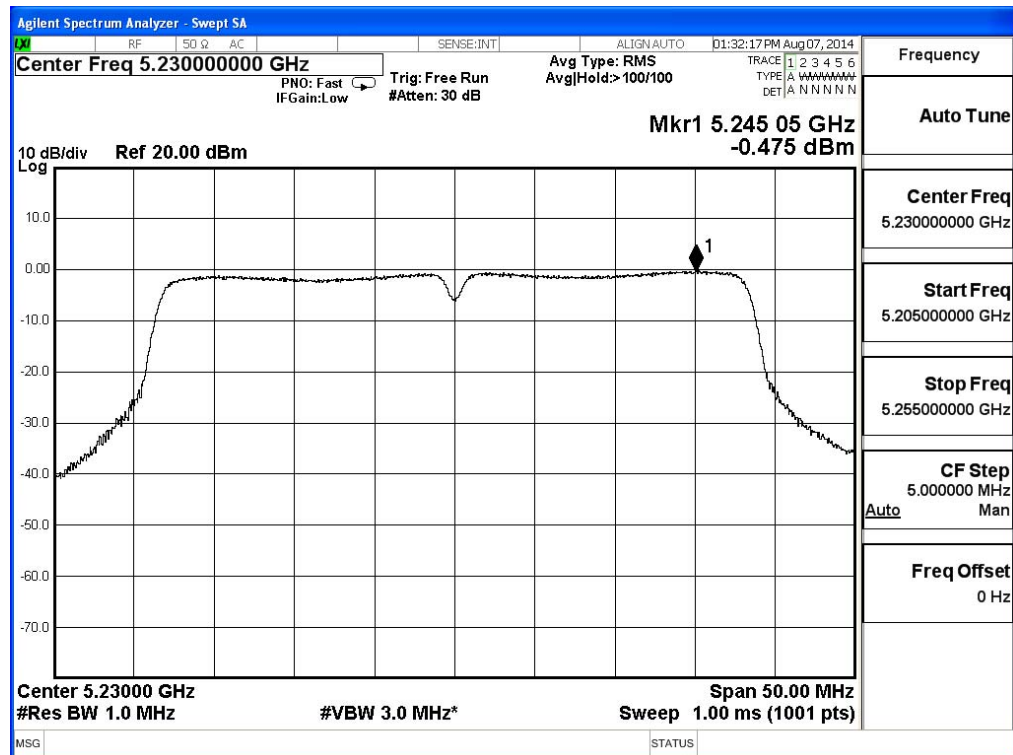
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
Test Item : Peak Power Spectral Density  
Test Site : No.3 OATS  
Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps)

Channel Number	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
38	5190	-3.350	<4	Pass
46	5230	-0.475	<4	Pass
54	5270	-3.920	<11	Pass
62	5310	-4.220	<11	Pass
102	5510	-1.286	<11	Pass
110	5550	-0.510	<11	Pass
134	5670	-4.750	<11	Pass

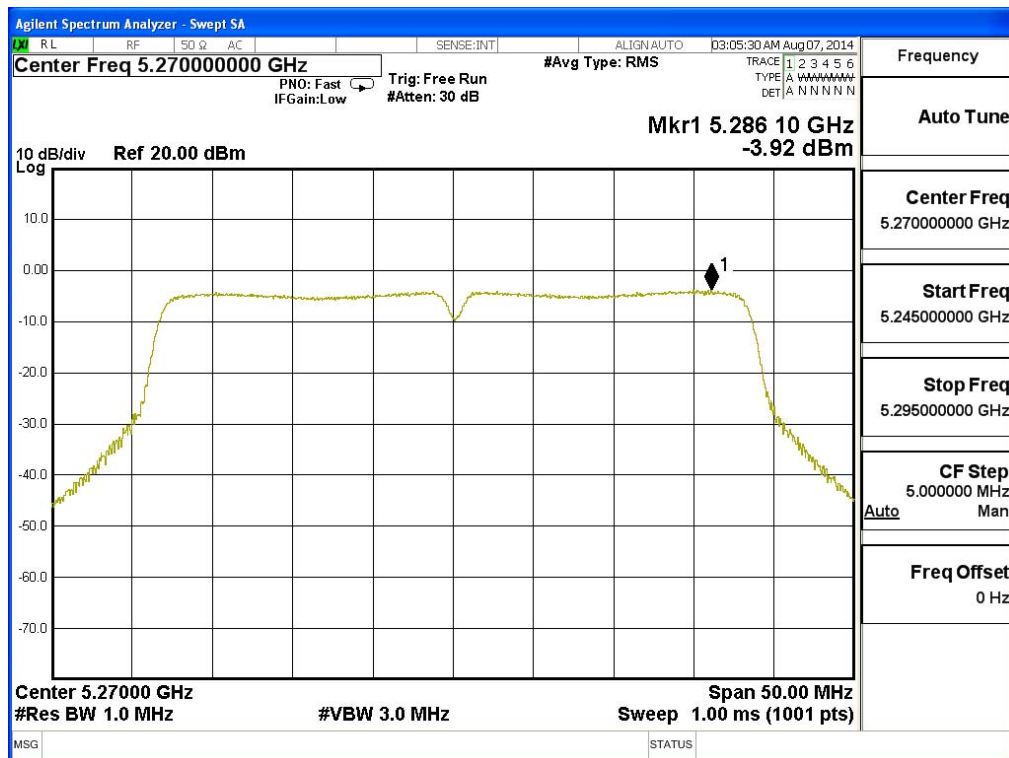
### Channel 38



### Channel 46



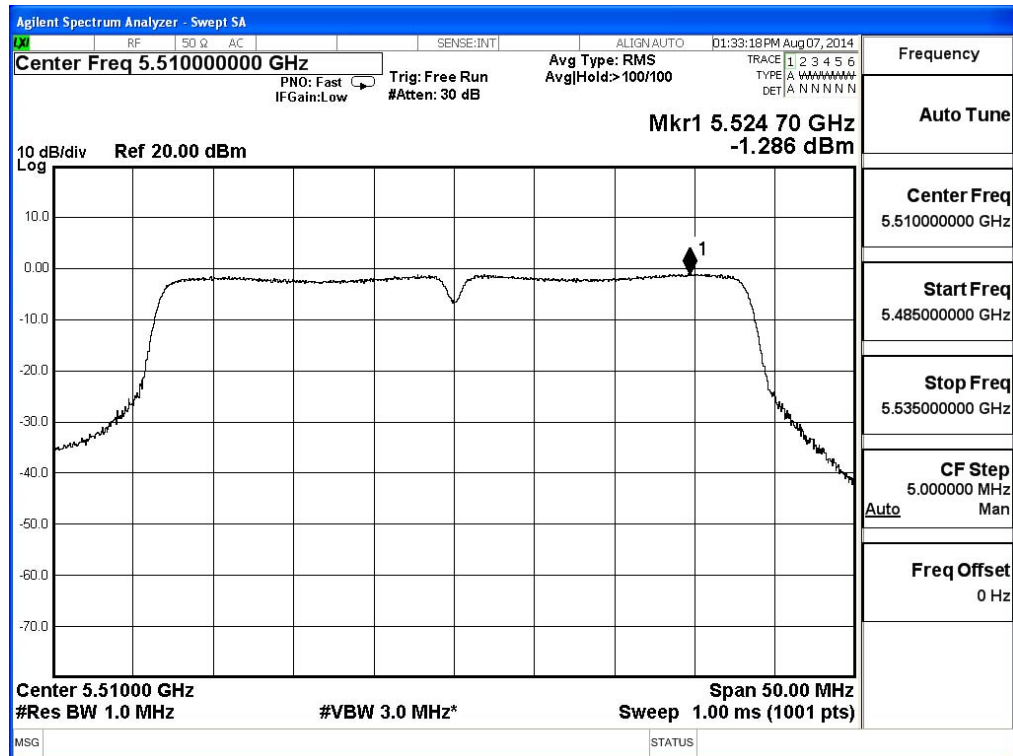
### Channel 54



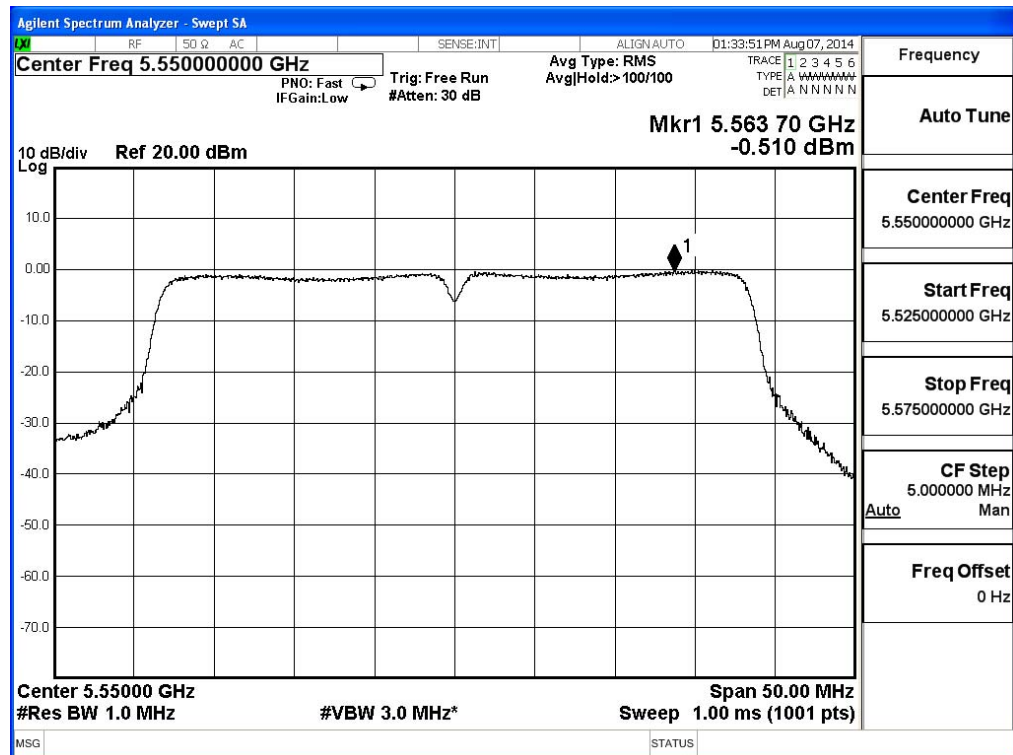
### Channel 62



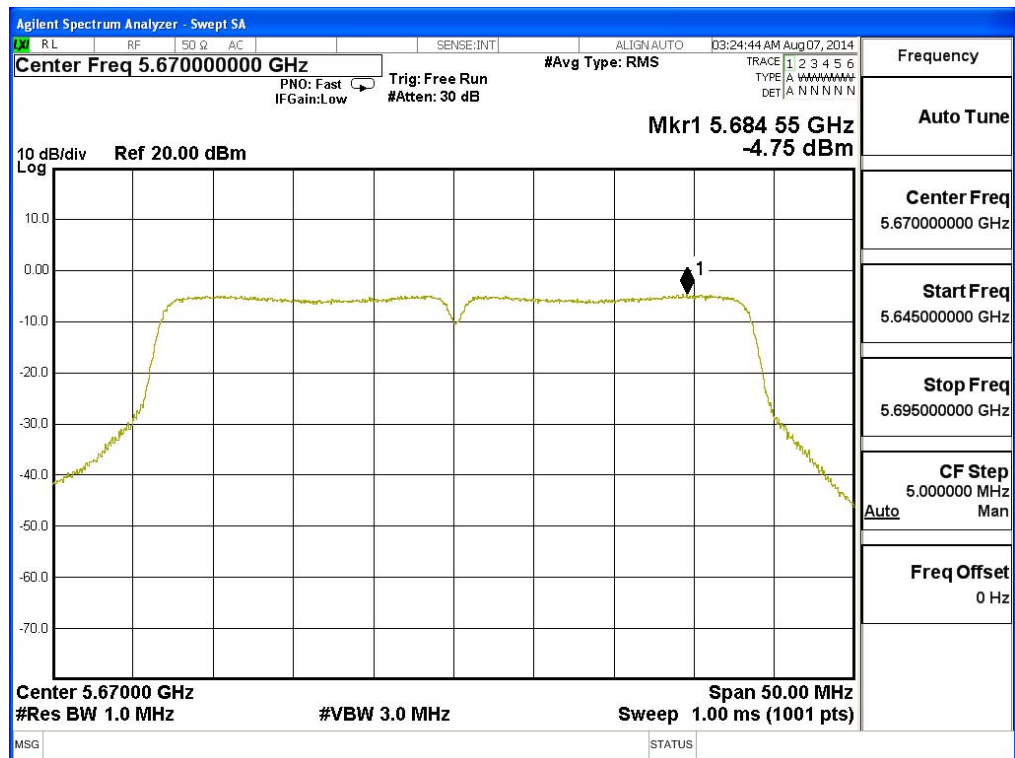
### Channel 102



### Channel 110



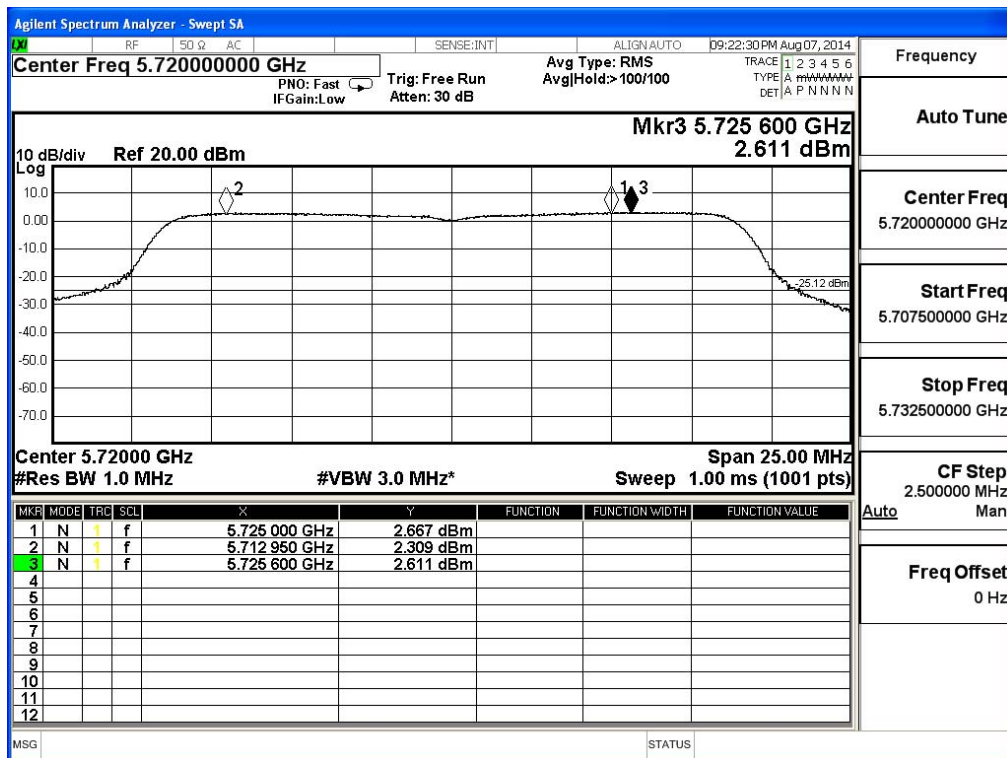
### Channel 134



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Power Spectral Density  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps)

Channel Number	Frequency (MHz)	PPSD/MHz (dBm)	Total PPSD/MHz (dBm) <sub>i</sub>	Required Limit (dBm)	Result
144	5720(Band3)	3.460	3.460	<11	Pass
	5720(Band4)	3.240	3.240	<17	Pass

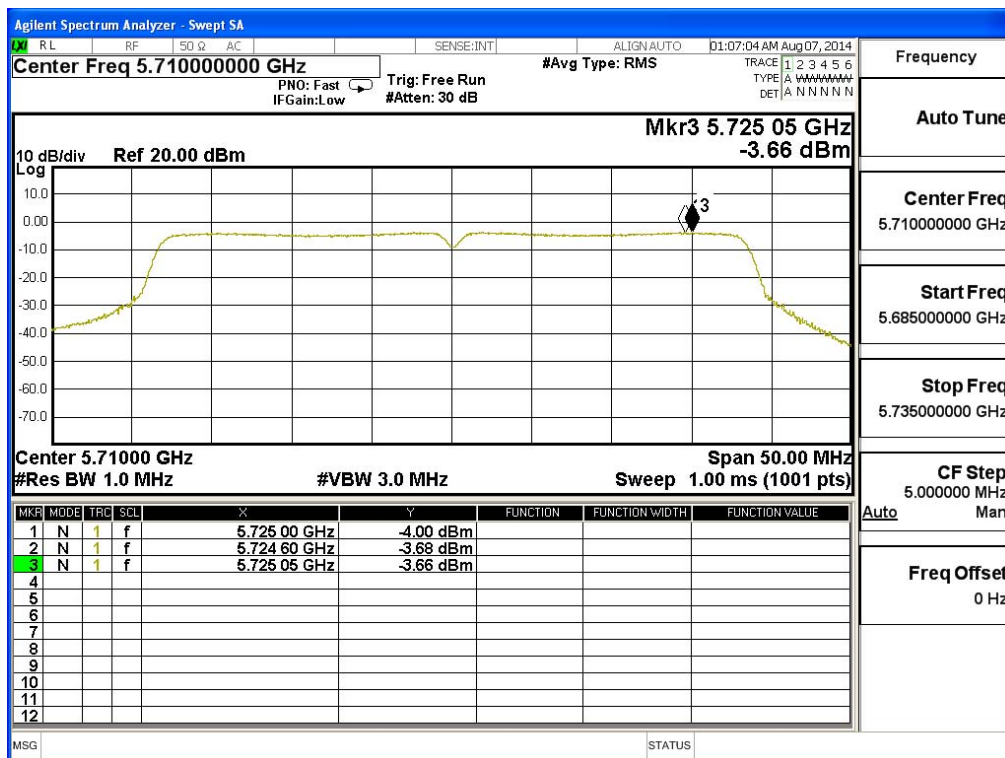
### Channel 144



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Power Spectral Density  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps)

Channel Number	Frequency (MHz)	PPSD/MHz (dBm)	Total PPSD/MHz (dBm) <sub>1</sub>	Required Limit (dBm)	Result
142	5710(Band3)	1.180	1.180	<11	Pass
	5710(Band4)	-2.130	-2.130	<17	Pass

### Channel 142

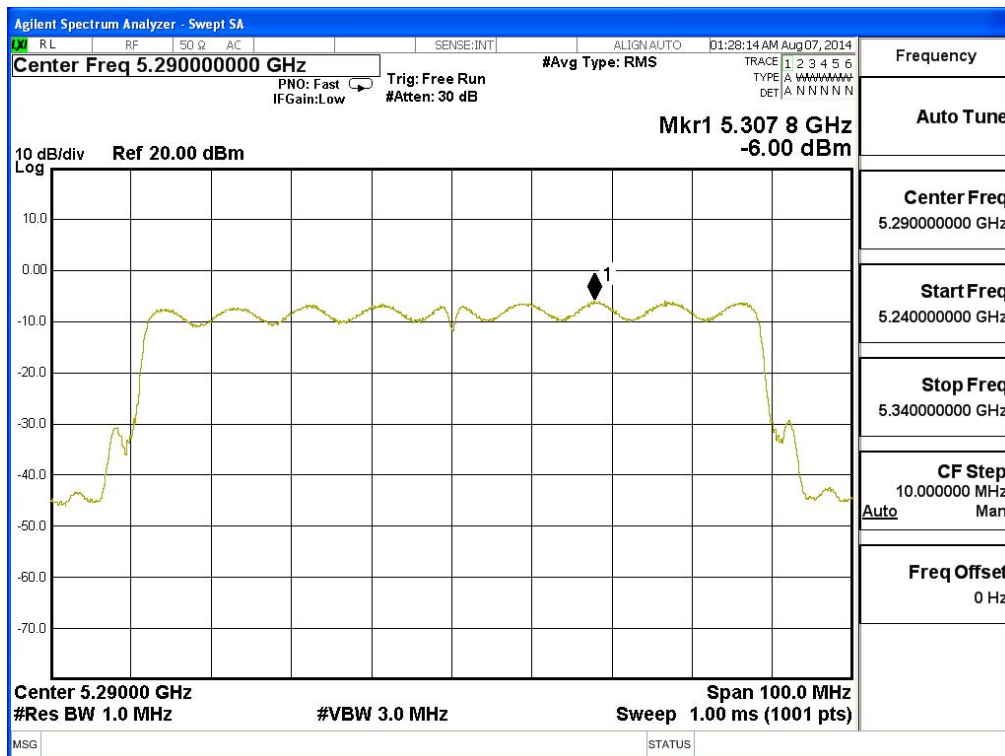




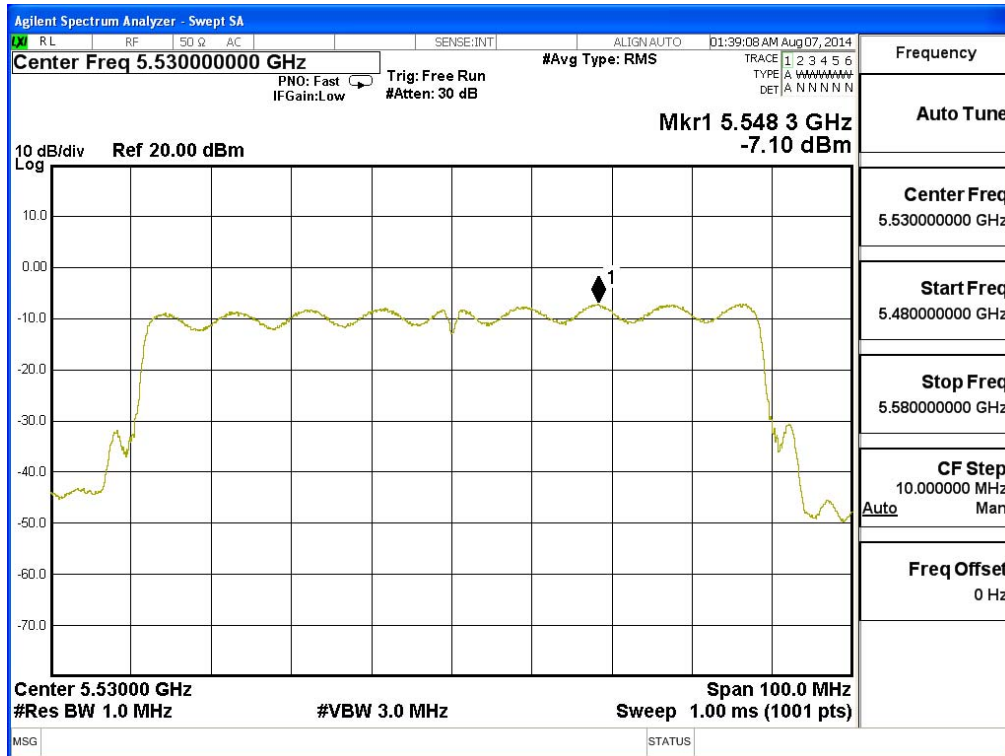
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Power Spectral Density  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps)

Channel Number	Frequency (MHz)	PPSD/MHz (dBm)	Total PPSD/MHz (dBm) <sub>1</sub>	Required Limit (dBm)	Result
42	5210	-8.660	-8.660	<4	Pass
58	5290	-6.920	-6.920	<4	Pass
106	5530	-7.890	-7.890	<11	Pass
138	5690 (Band3)	-3.190	-3.190	<11	Pass
138	5690 (Band4)	-8.110	-8.110	<17	Pass

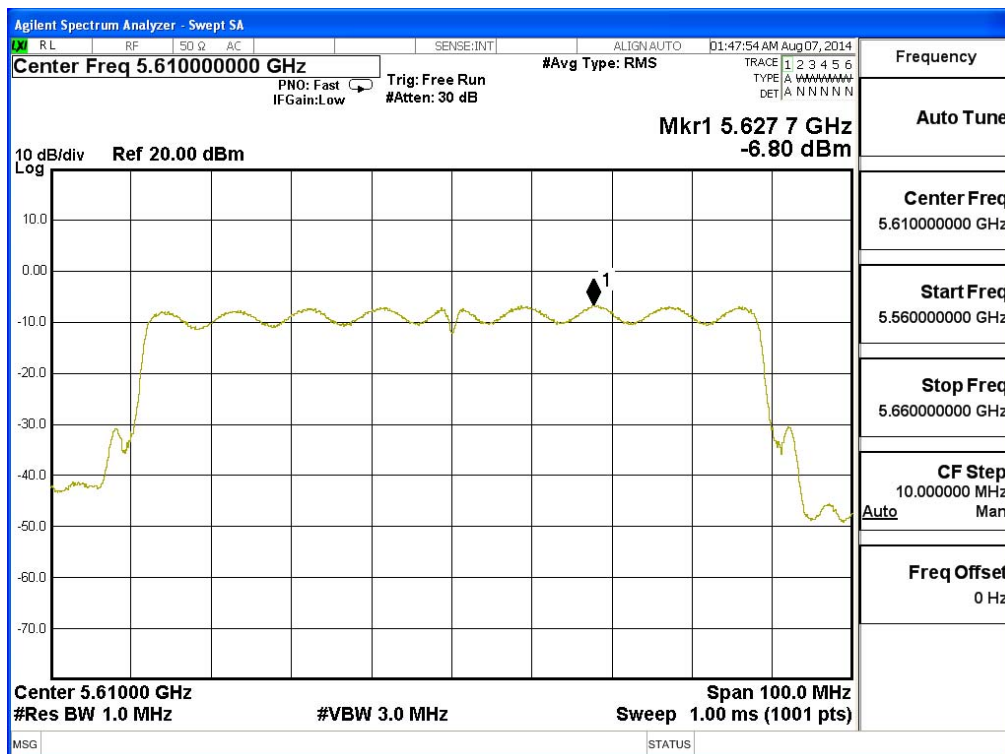
### Channel 42



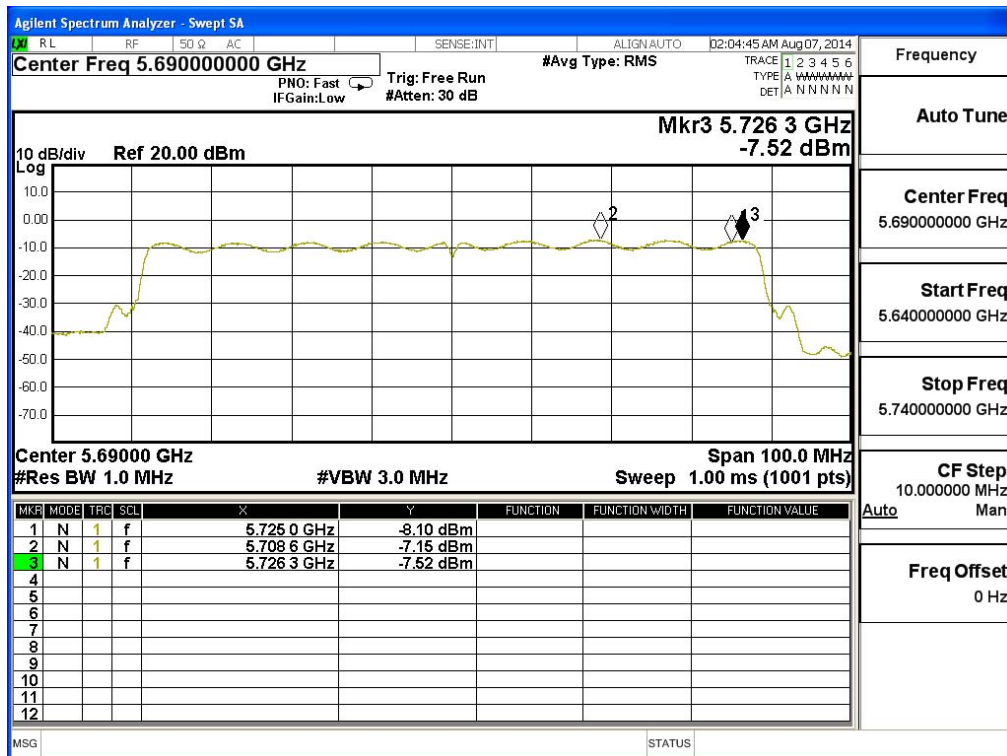
### Channel 58



### Channel 106



### Channel 138



## 5. Peak Excursion

### 5.1. Test Equipment

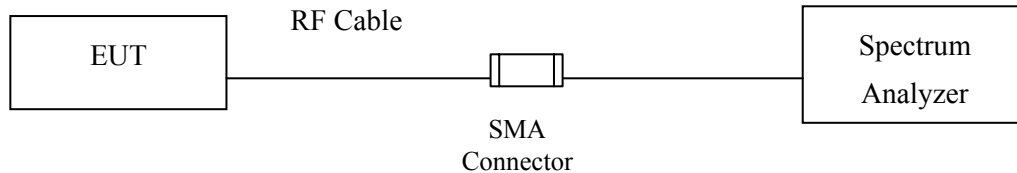
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2014

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

### 5.2. Test Setup

#### Conduction Power Measurement



### 5.3. Limits

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

#### 5.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

Step 1: Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

Step 2: Find the maximum of the peak-max-hold spectrum.

(Set RBW = 1 MHz, VBW  $\geq$  3 MHz, Detector = peak, Trace mode = max-hold,

Allow the sweeps to continue until the trace stabilizes, Use the peak search function to find the peak of the spectrum.)

Step 3: Use the procedure found under KDB-789033 F) to measure the PPSD.

Step 4: Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

#### 5.5. Uncertainty

$\pm 1.27$  dB

### Test Result of Peak Excursion

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Excursion  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dB)	Required Limit (dB)	Result
100	5500	6	7.660	<13	Pass
		12	8.640	<13	Pass
		24	8.850	<13	Pass
		54	8.530	<13	Pass

### Channel 100:

