

## 7.6 TEST RESULTS

EUT :	Notebook	Model Name. :	G139
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 7.6V
Test Mode :	TX (5G) Mode Frequency Band I (5150-5250MHz)		

Test Channel	Frequency	Maximum output power. Antenna port (AV)	LIMIT	Result
	(MHz)	(dBm)	dBm	
TX 802.11a Mode				
CH36	5180	12.1	23.98	Pass
CH40	5200	12.2	23.98	Pass
CH48	5240	12.3	23.98	Pass
TX 802.11 n20M Mode				
CH36	5180	11.9	23.98	Pass
CH40	5200	12.0	23.98	Pass
CH48	5240	12.0	23.98	Pass
TX 802.11 n40M Mode				
CH38	5190	12.2	23.98	Pass
CH46	5230	12.3	23.98	Pass
TX 802.11 ac20M Mode				
CH36	5180	11.9	23.98	Pass
CH40	5200	12.0	23.98	Pass
CH48	5240	12.0	23.98	Pass
TX 802.11 ac40M Mode				
CH38	5190	12.2	23.98	Pass
CH46	5230	12.3	23.98	Pass
TX 802.11 ac80M Mode				
CH42	5210	12.2	23.98	Pass

EUT :	Notebook	Model Name. :	G139
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	DC 7.6V
Test Mode :	TX (5G) Mode Frequency Band IV (5745-5825MHz)		

Test Channel	Frequency	Maximum output power. Antenna port (AV)	LIMIT	Result
	(MHz)	(dBm)	dBm	
TX 802.11a Mode				
CH 149	5745	11.3	30	Pass
CH 157	5785	11.2	30	Pass
CH 165	5825	11.2	30	Pass
TX 802.11 n20M Mode				
CH 149	5745	11.3	30	Pass
CH 157	5785	11.2	30	Pass
CH 165	5825	11.2	30	Pass
TX 802.11 n40M Mode				
CH 151	5755	11.5	30	Pass
CH 159	5795	11.3	30	Pass
TX 802.11 ac20M Mode				
CH 149	5745	11.3	30	Pass
CH 157	5785	11.2	30	Pass
CH 165	5825	11.2	30	Pass
TX 802.11 ac40M Mode				
CH 151	5755	11.5	30	Pass
CH 159	5795	11.3	30	Pass
TX 802.11 ac80M Mode				
CH 155	5775	11.3	30	Pass

## 8. OUT OF BAND EMISSIONS

### 8.1 APPLICABLE STANDARD

#### According to FCC §15.407(b)

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.
- (2) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of  $-17$  dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

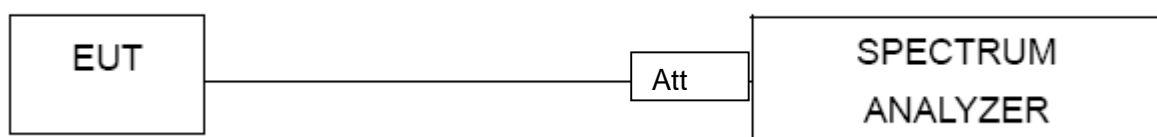
### 8.2 TEST PROCEDURE

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

### 8.3 DEVIATION FROM STANDARD

No deviation.

### 8.4 TEST SETUP



### 8.5 EUT OPERATION CONDITIONS

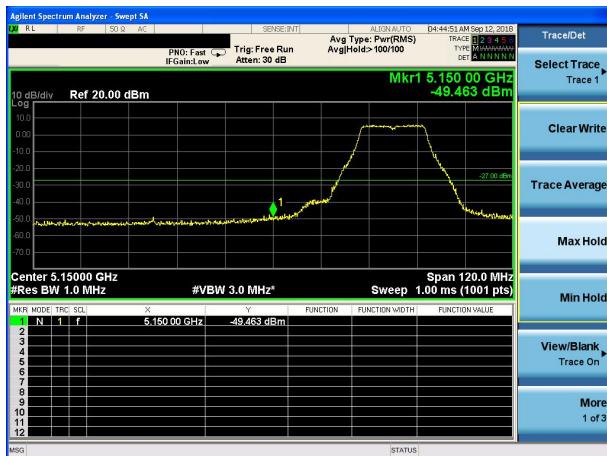
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

**8.6 TEST RESULTS**

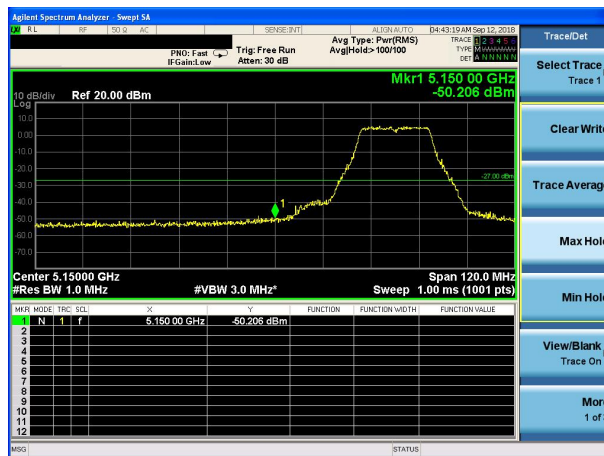
EUT :	Notebook	Model Name. :	G139
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 7.6V

## 5.15~5.25 GHz

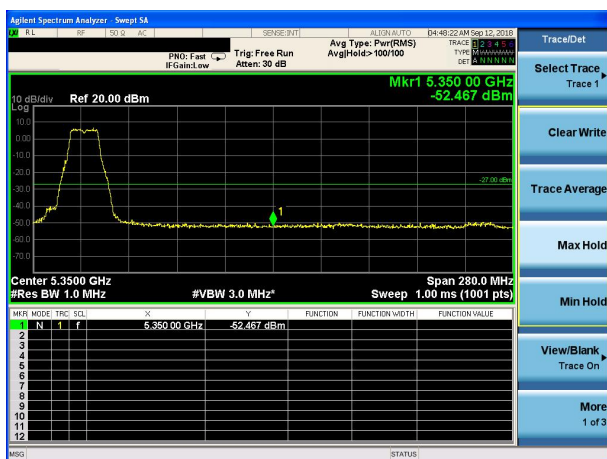
(802.11a) Band Edge, Left Side



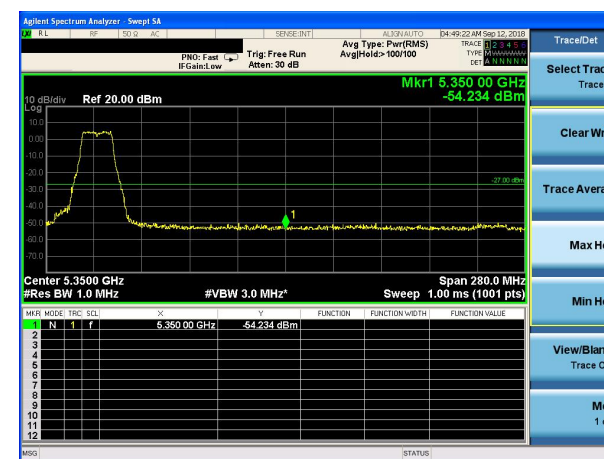
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

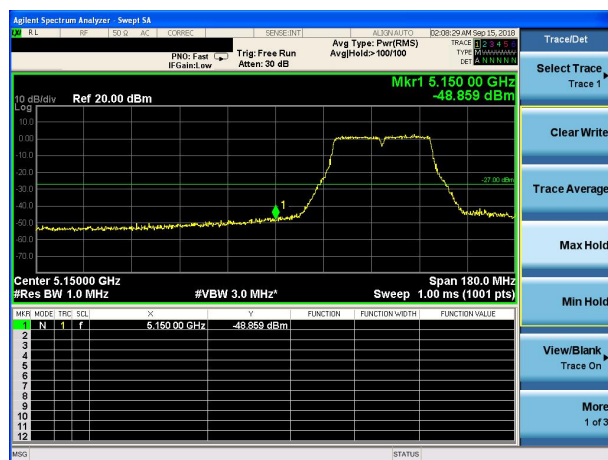


(802.11n20) Band Edge, Right Side



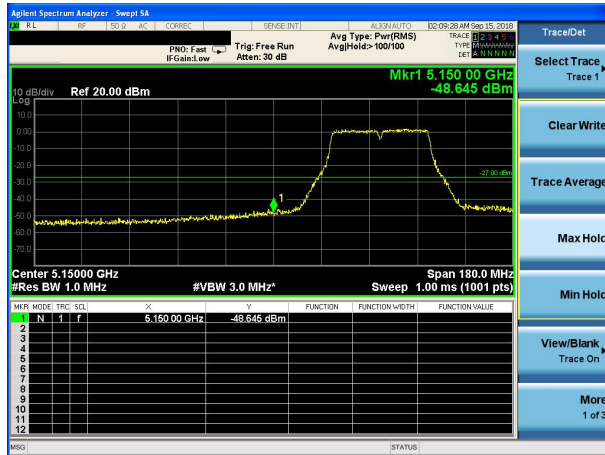
## 5.15~5.25 GHz

(802.11n40) Band Edge, Left Side



## 5.15~5.25 GHz

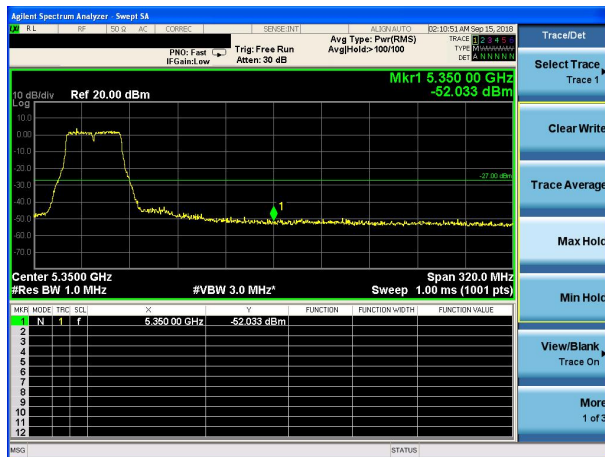
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge, Left Side



(802.11ac40) Band Edge, Right Side



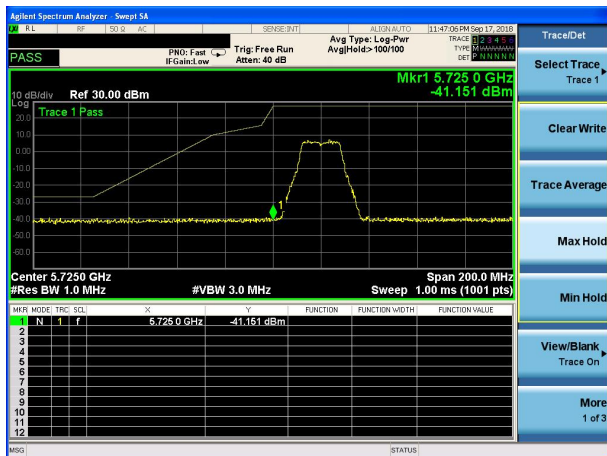
(802.11ac80) Band Edge, Right Side



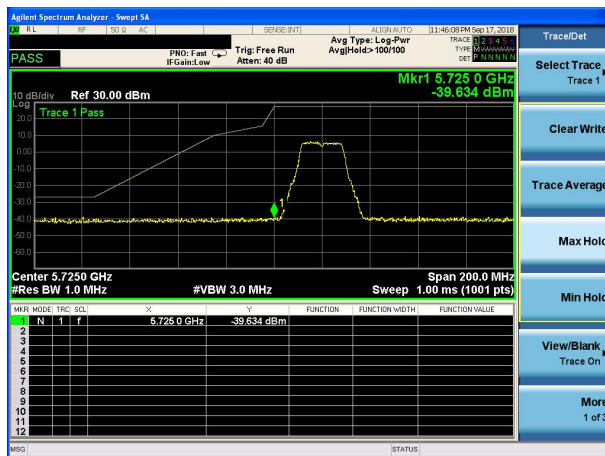


## 5.725~5.85 GHz

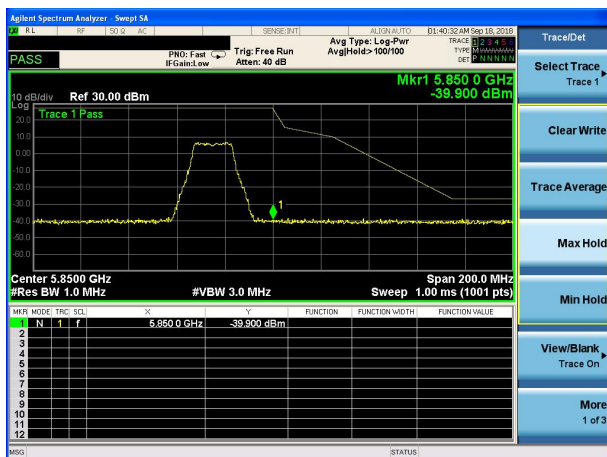
(802.11a) Band Edge, Left Side



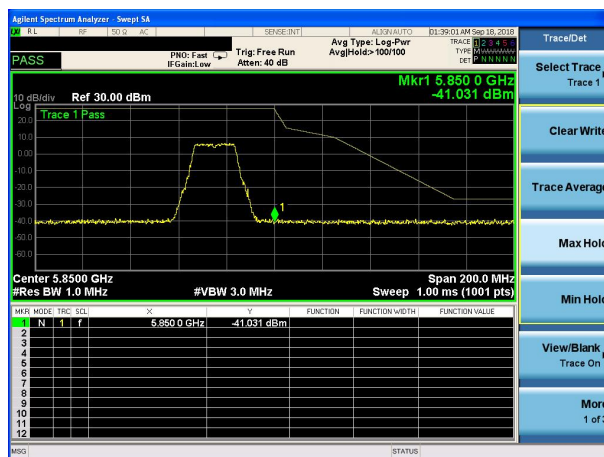
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side



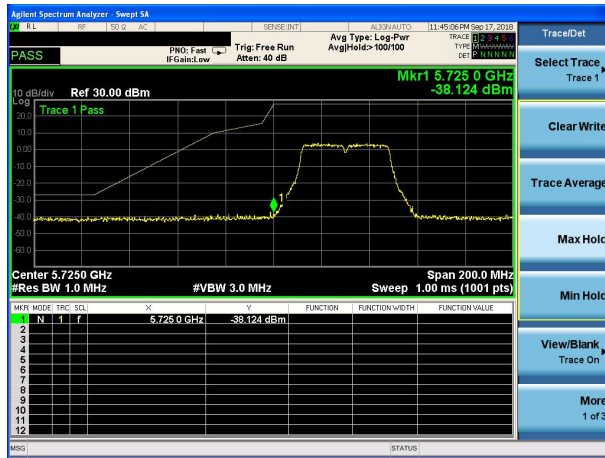
(802.11n20) Band Edge, Right Side



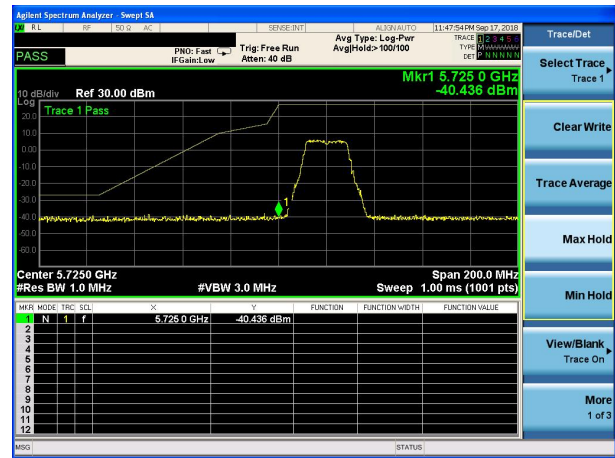


## 5.725~5.85 GHz

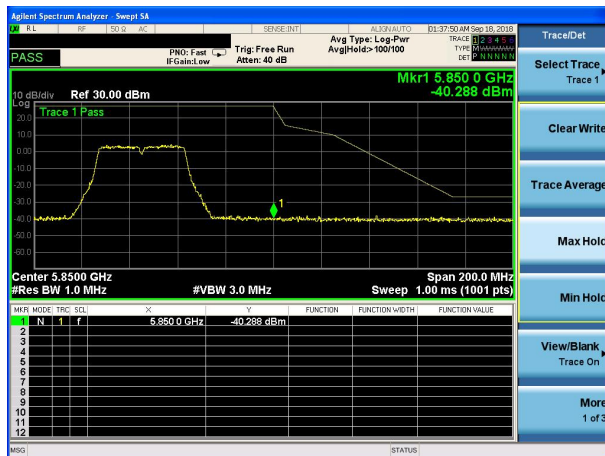
(802.11n40) Band Edge, Left Side



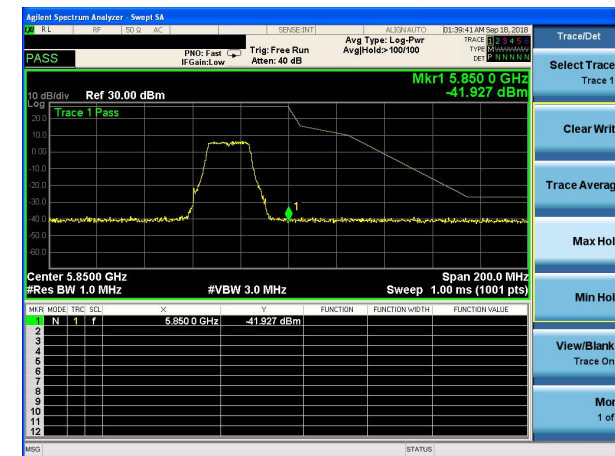
(802.11ac20) Band Edge, Left Side



(802.11n40) Band Edge, Right Side

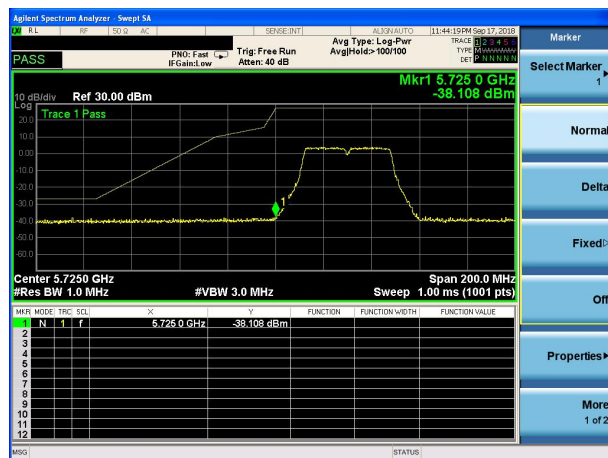


(802.11ac20) Band Edge, Right Side

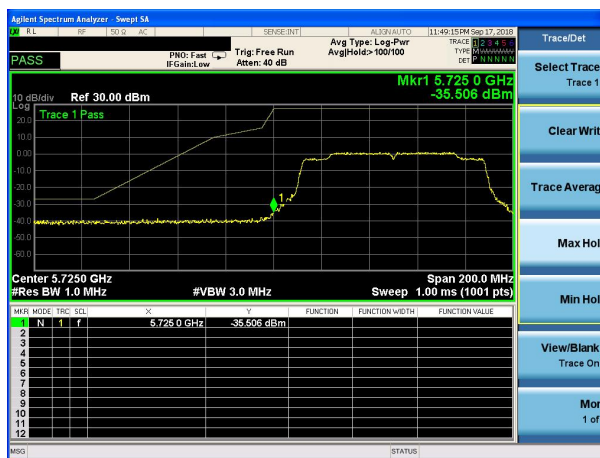


## 5.725~5.85 GHz

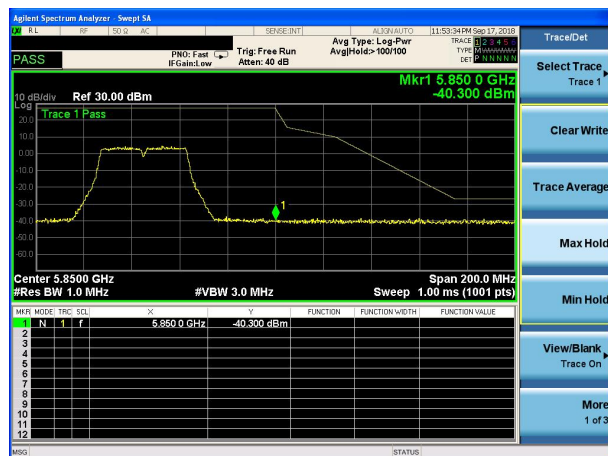
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge, Left Side



(802.11ac40) Band Edge, Right Side



(802.11ac80) Band Edge, Right Side



## 9. SPURIOUS RF CONDUCTED EMISSIONS

### 9.1 CONFORMANCE LIMIT

§15.407 (b) Undesirable emission limits.

Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

### 9.2 MEASURING INSTRUMENTS

The Measuring equipment is listed in the section 6.3 of this test report.

### 9.3 TEST SETUP

Please refer to Section 6.1 of this test report.

### 9.4 TEST PROCEDURE

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW= 300KHz to measure the peak field strength, and measure frequency range from 9KHz to 26.5GHz.

### 9.5 TEST RESULTS

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and band edge measurement data.

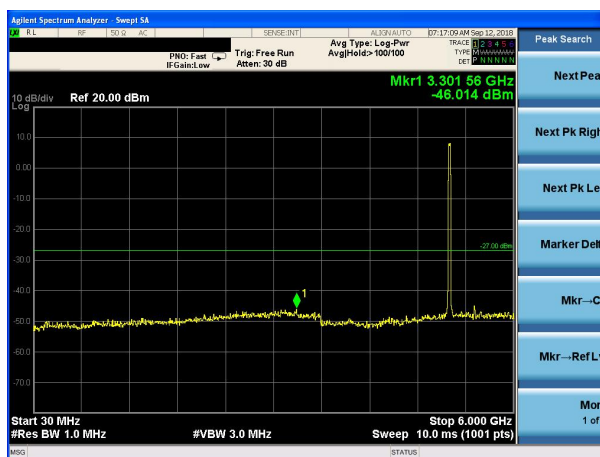
## 5.2G

### Test Plot

802.11a on channel 36



802.11a on channel 40



802.11a on channel 36

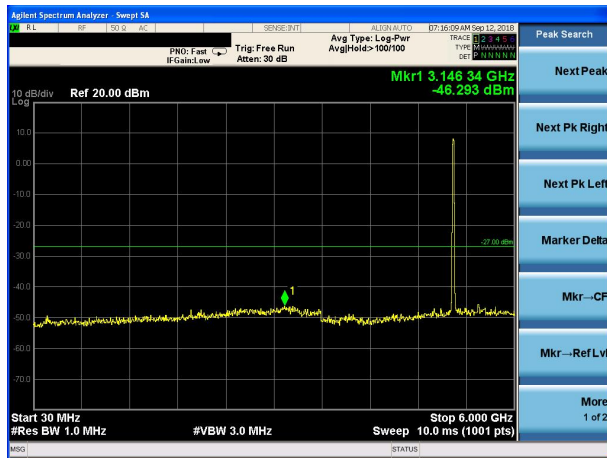


802.11a on channel 40

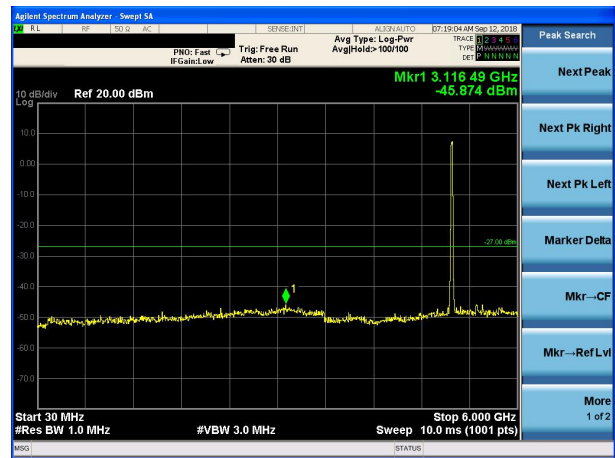


## Test Plot

802.11a on channel 48



802.11n20 on channel 36



802.11a on channel 48

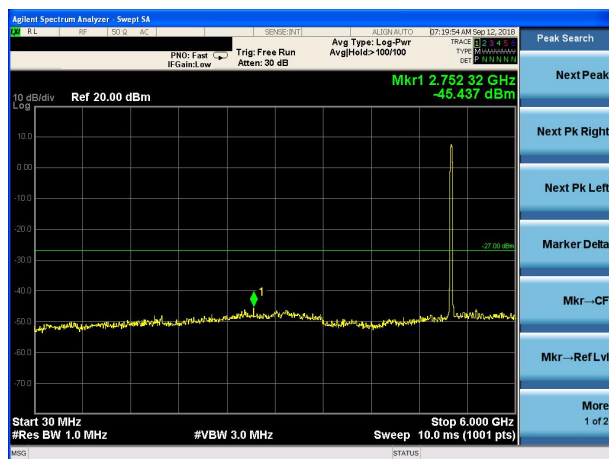


802.11n20 on channel 36

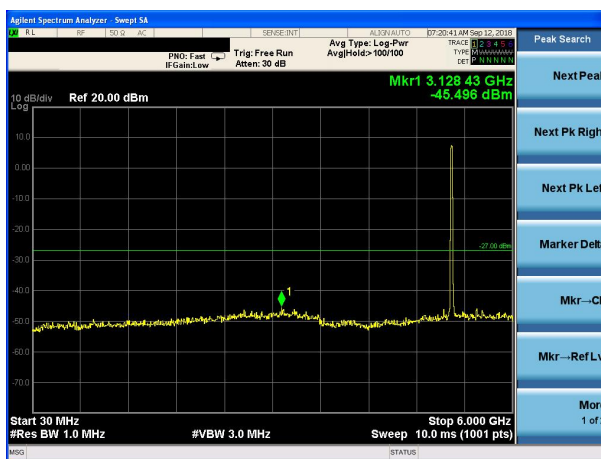


## Test Plot

802.11n20 on channel 40



802.11n20 on channel 48



802.11n20 on channel 40



802.11n20 on channel 48

