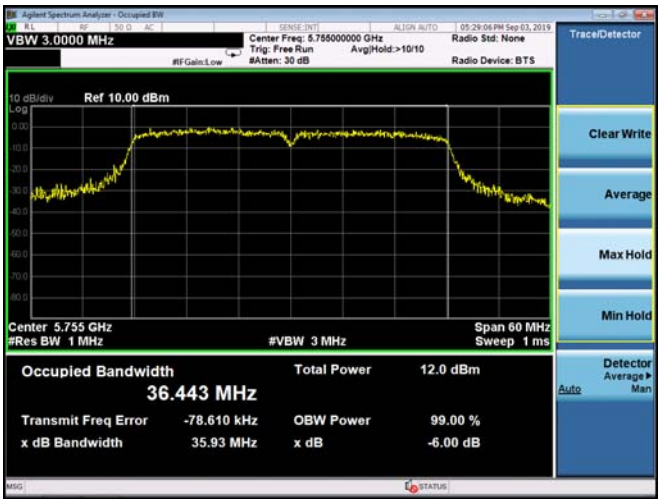
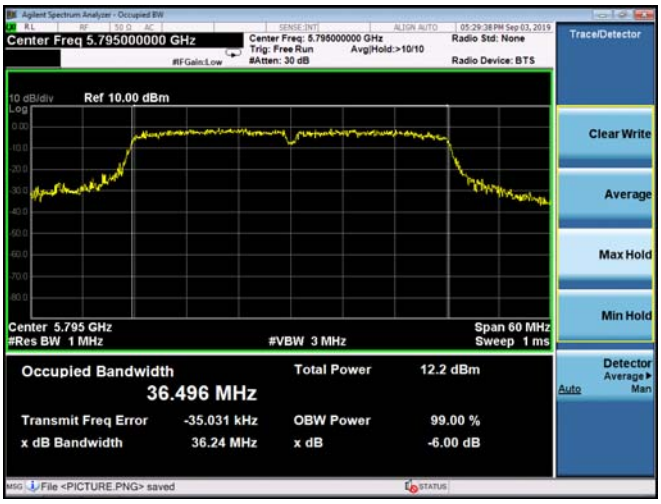
Mode:	802.11n-HT40
5755 MHz	
5795 MHz	

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 PPLIED PROCEDURES / LIMIT

According to FCC §15.407

The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

The maximum e.i.r.p should not exceed:

Frequency Band(MHz)	Limit
5150~5250	200mW or 10dBm +10logB whichever is less
5725~5850	N/A

Note: Where “B” is the 99% emission bandwidth in MHz

6.2 TEST PROCEDURE

. Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)

Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).

• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.

(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

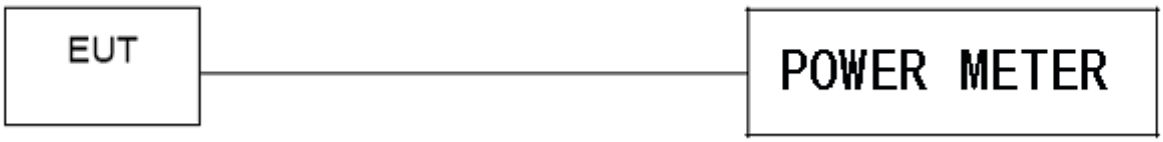
(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 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.

6.6 TEST RESULTS

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101 kPa	Test Voltage ：	AC 120V/60Hz

5150-5250MHz					
Operating mode	Test Channel MHz	Output Power			Limit (dBm)
		Chain A(dBm)	Chain B(dBm)	Total(dBm)	
802.11a	5180	14.82	15.28	/	23.98
	5200	15.23	14.73	/	23.98
	5240	13.83	14.13	/	23.98
802.11n-HT20	5180	14.60	14.50	17.56	23.97
	5200	13.93	14.28	17.12	23.97
	5240	13.46	13.77	16.63	23.97
802.11n-HT40	5190	11.70	11.97	14.85	23.97
	5230	12.70	13.18	15.96	23.97

Antenna A gain:3dBi, Antenna B gain: 3dBi, Directional gain=[10log(GA+ G B)] dbi =6.01dbi

5725-5850MHz					
Operating mode	Test Channel MHz	Output Power			Limit (dBm)
		Chain A(dBm)	Chain B(dBm)	Total(dBm)	
802.11a	5745	8.27	8.38	/	30
	5785	8.96	9.20	/	30
	5825	9.56	9.52	/	30
802.11n-HT20	5745	9.40	9.16	12.29	29.99
	5785	10.10	9.91	13.02	29.99
	5825	10.25	10.04	13.16	29.99
802.11n-HT40	5755	5.80	5.40	8.61	29.99
	5795	6.33	6.16	9.26	29.99

Antenna A gain: 3dBi, Antenna B gain: 3dBi, Directional gain=[10log(GA+ G B)] dbi =6.01dbi

7. OUT OF BAND EMISSIONS

7.1 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) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

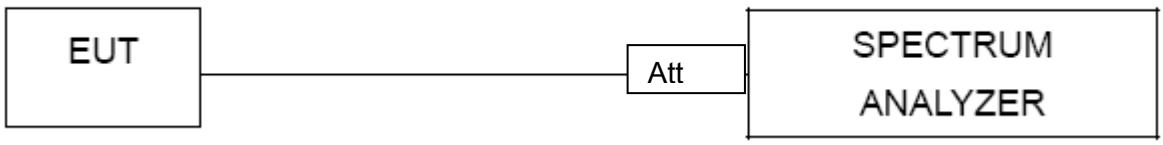
7.2 TEST PROCEDURE

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.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 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.

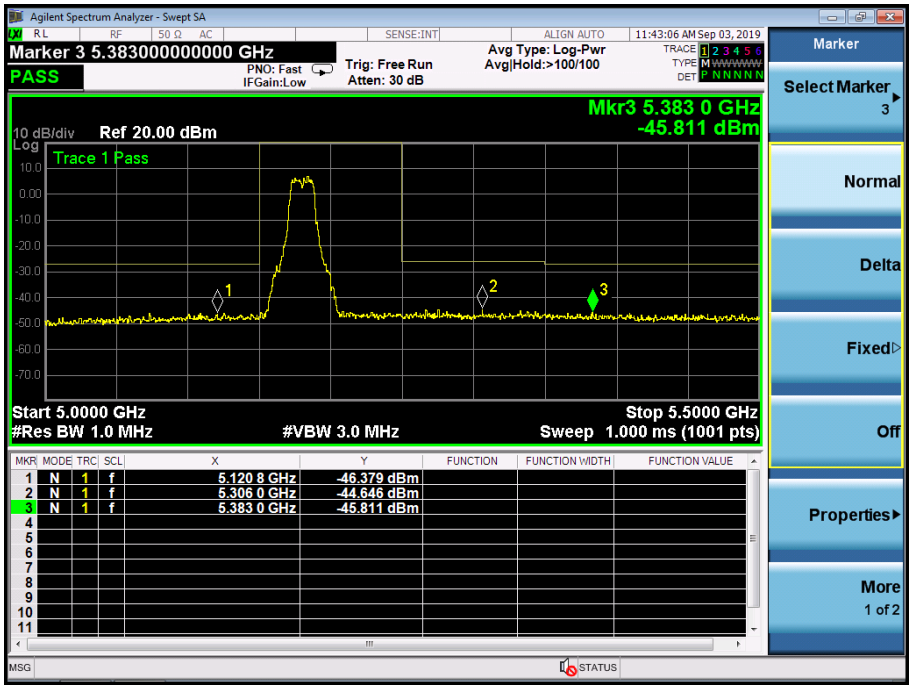
7.6 TEST RESULTS

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101 kPa	Test Voltage ：	AC 120V/60Hz

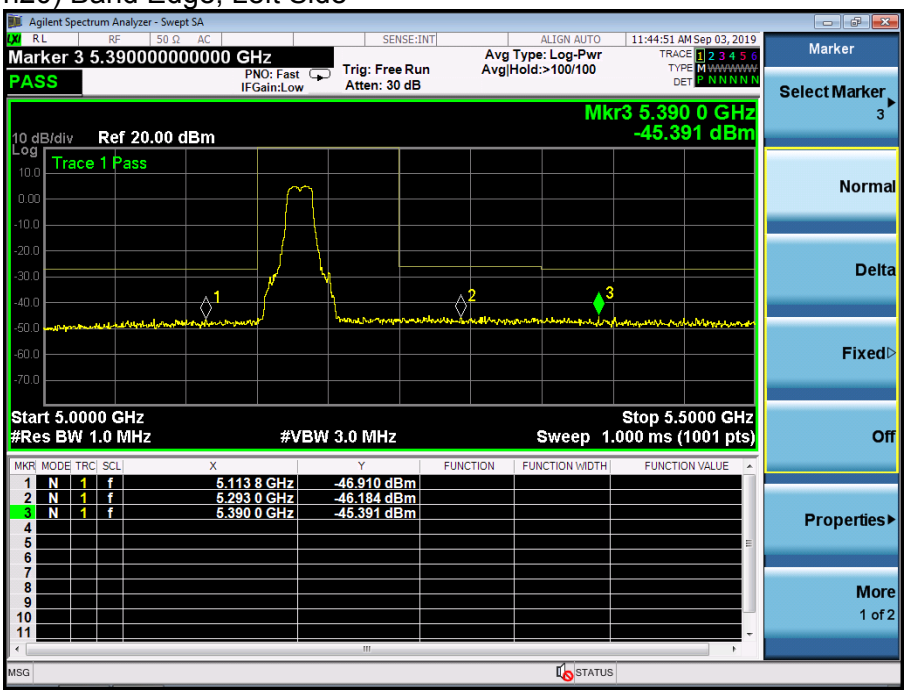
5.2G

5.15~5.25 GHz

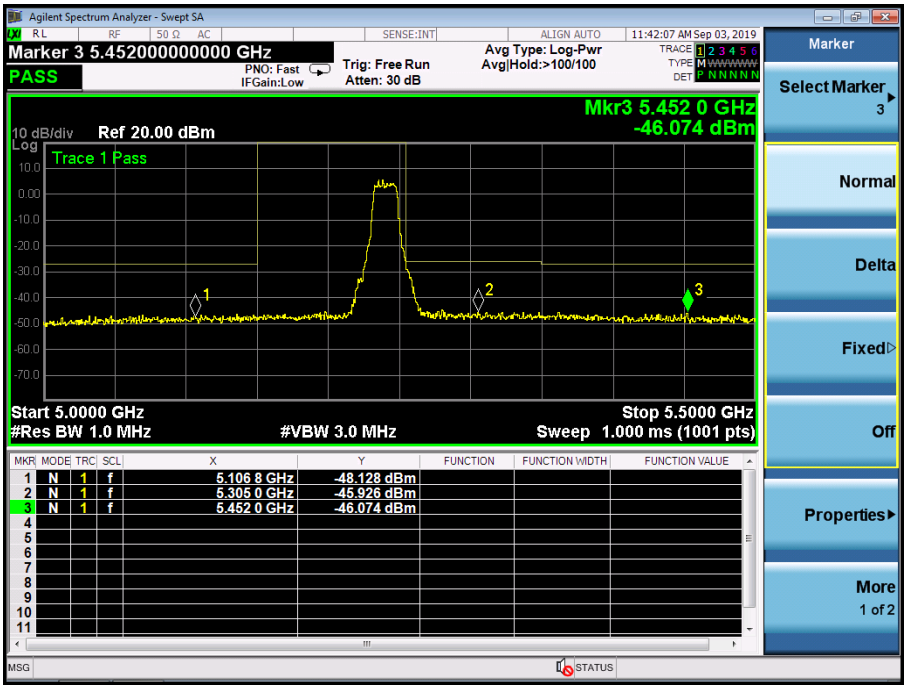
(802.11a) Band Edge, Left Side



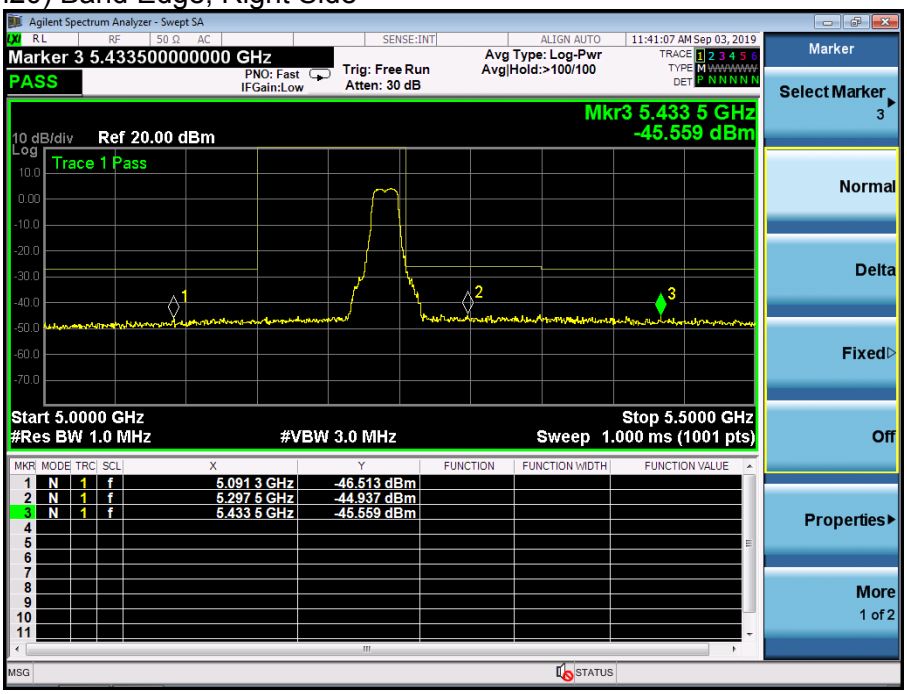
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

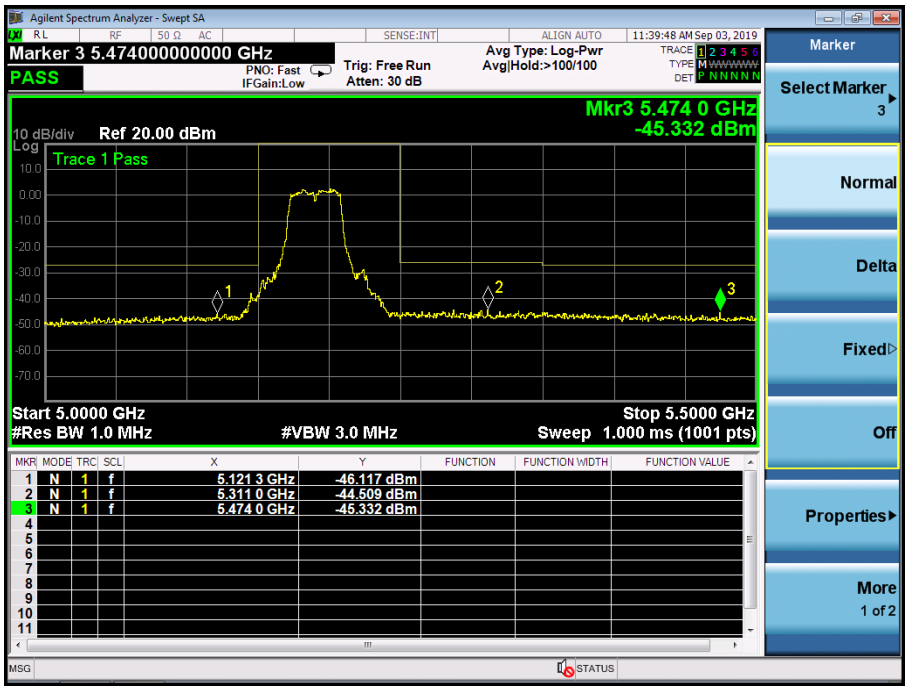


(802.11n20) Band Edge, Right Side

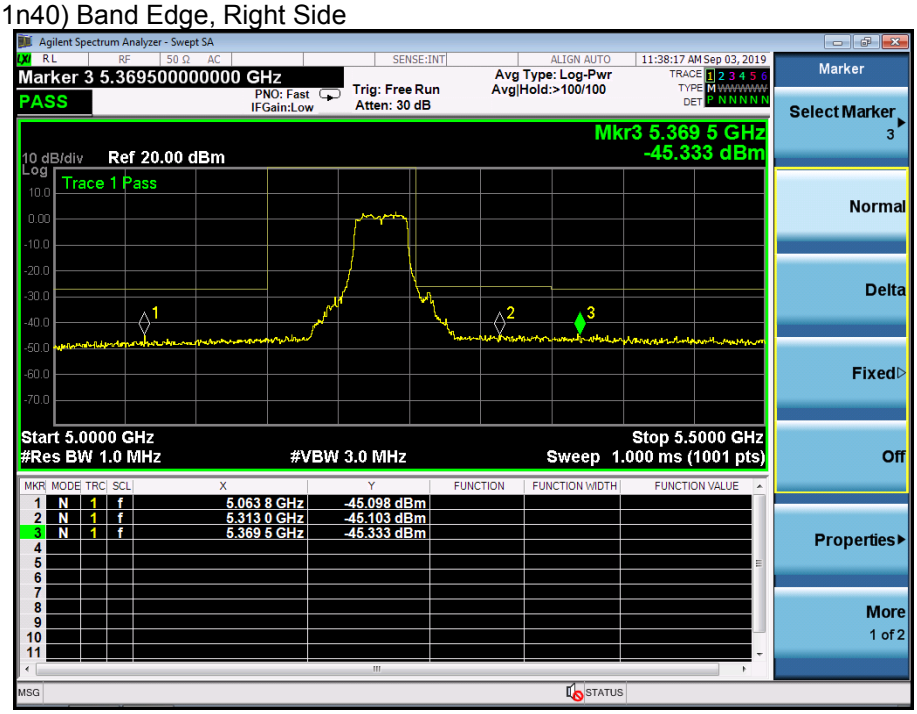


5.15~5.25 GHz

(802.11n40) Band Edge, Left Side



(802.11n40) Band Edge, Right Side

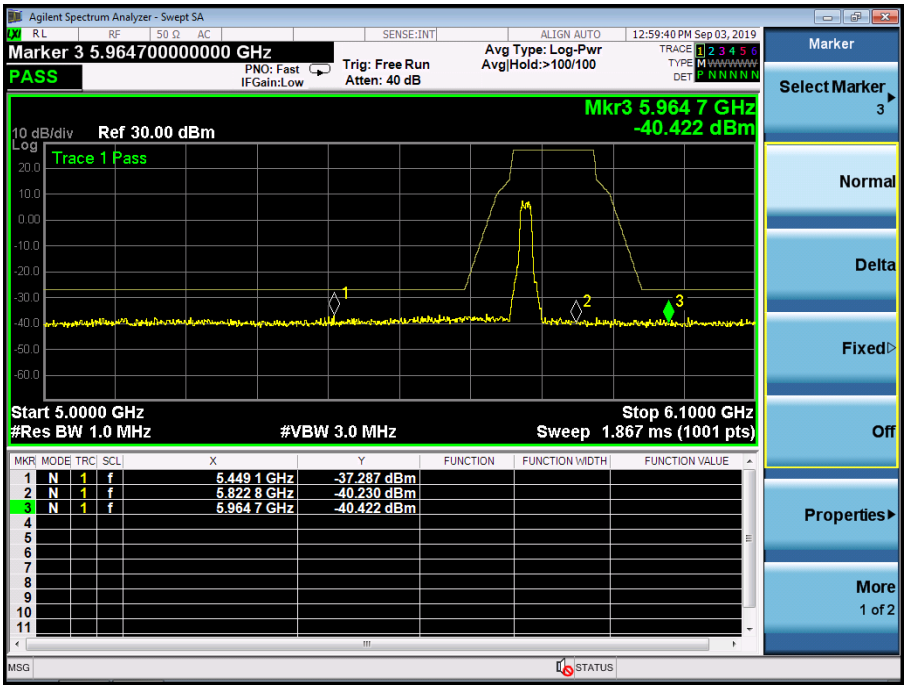


Antenna A: 5725-5850MHz

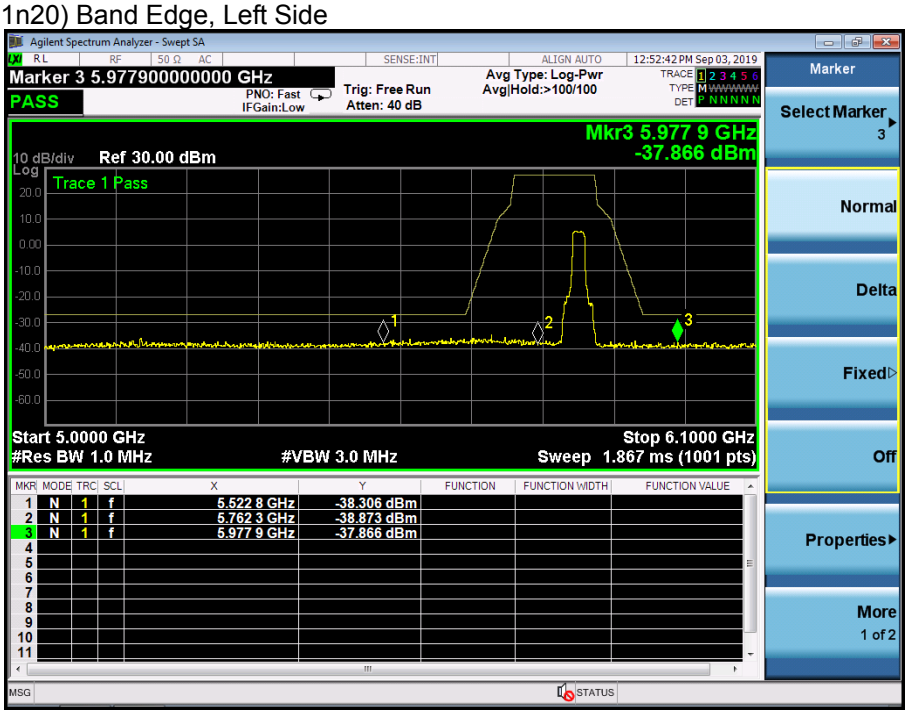
5.8G

5.75~5.85 GHz

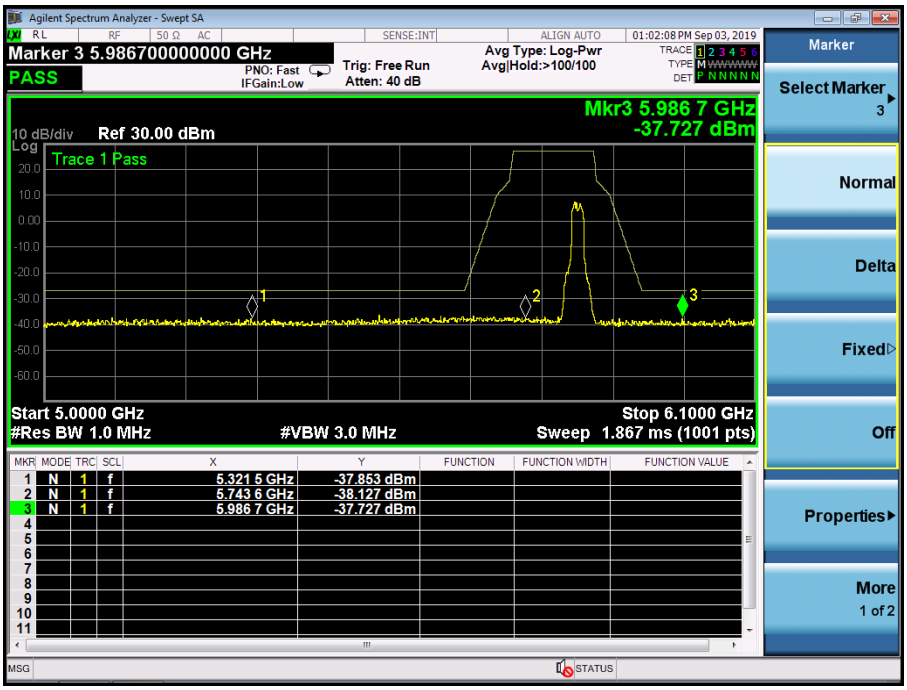
(802.11a) Band Edge, Left Side



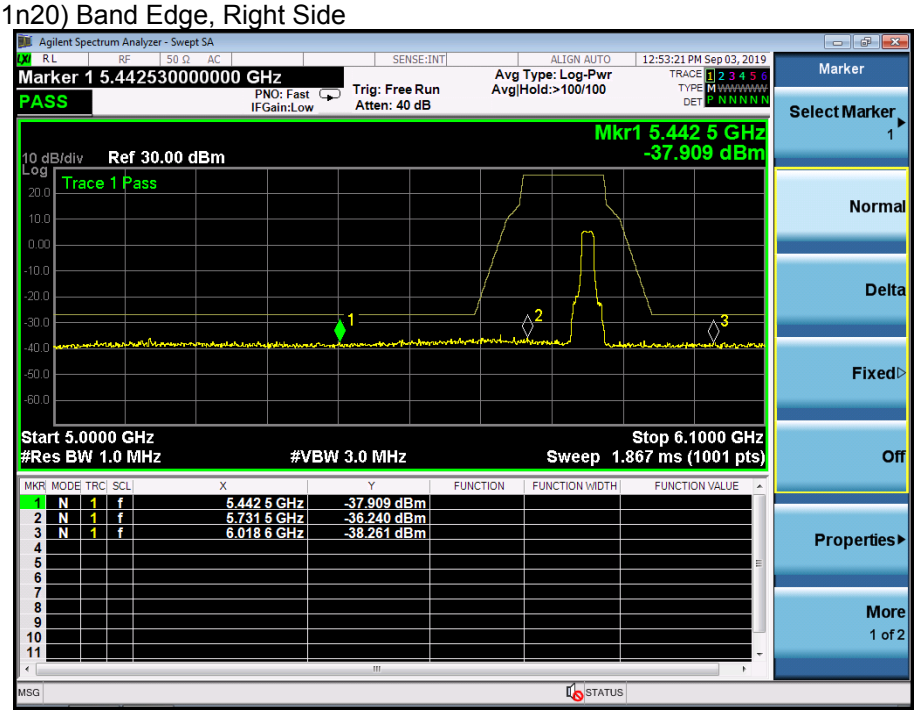
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

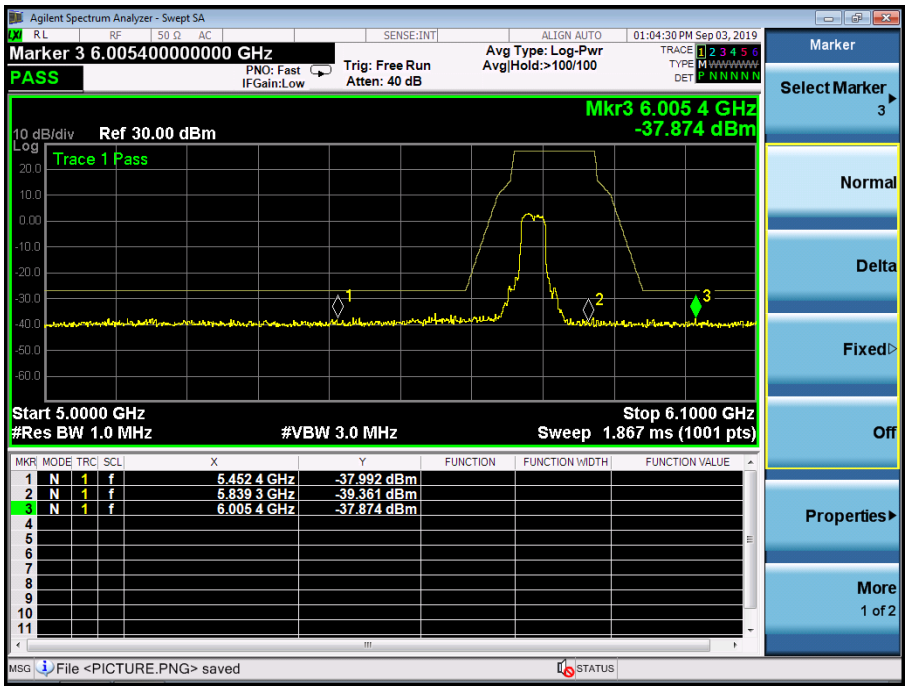


(802.11n20) Band Edge, Right Side

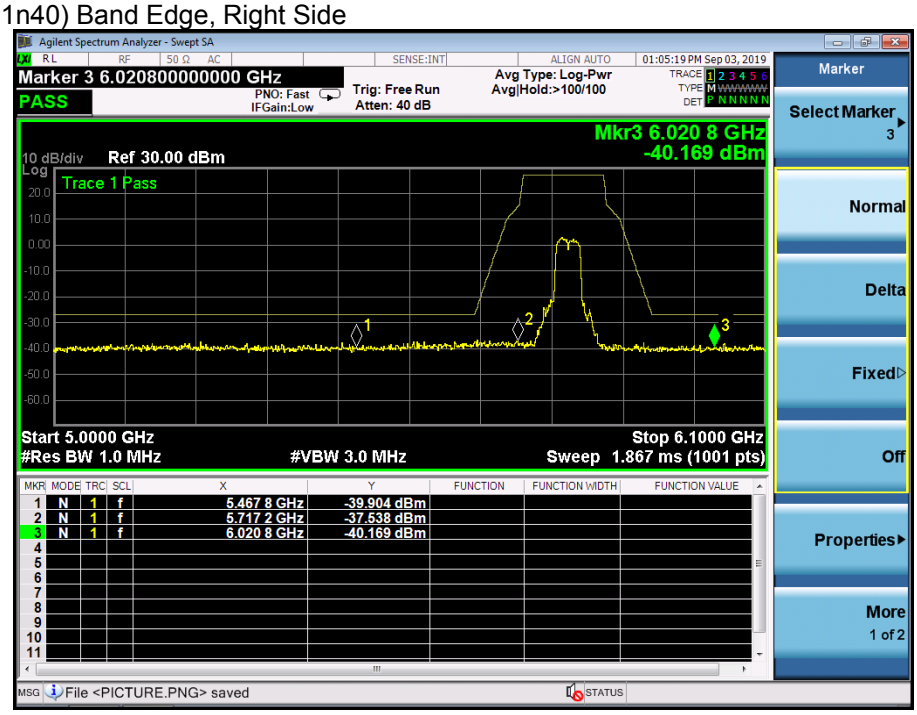


5.75~5.85 GHz

(802.11n40) Band Edge, Left Side



(802.11n40) Band Edge, Right Side

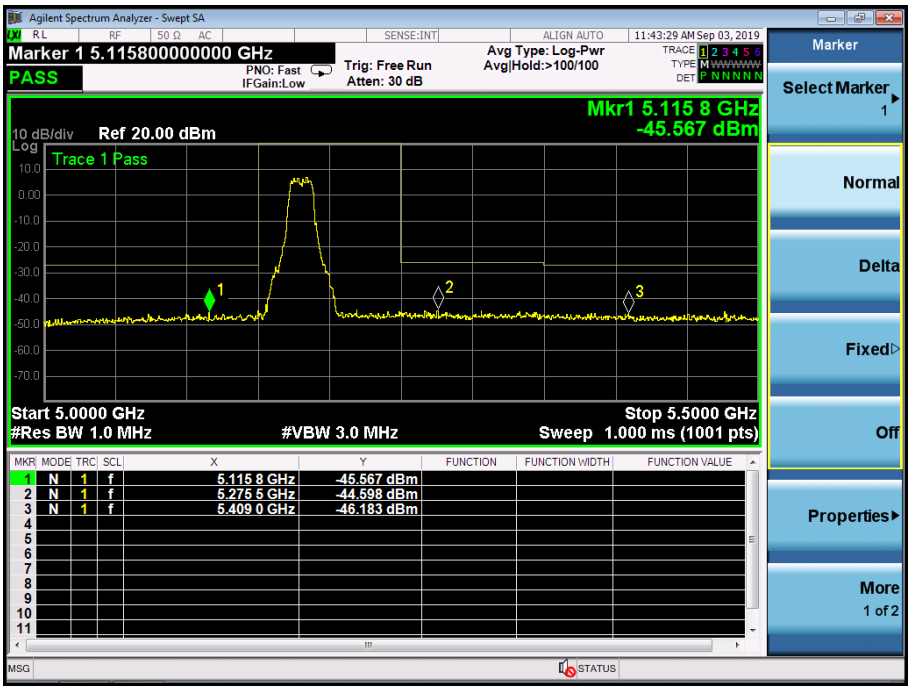


Antenna B: 5150-5250MHz

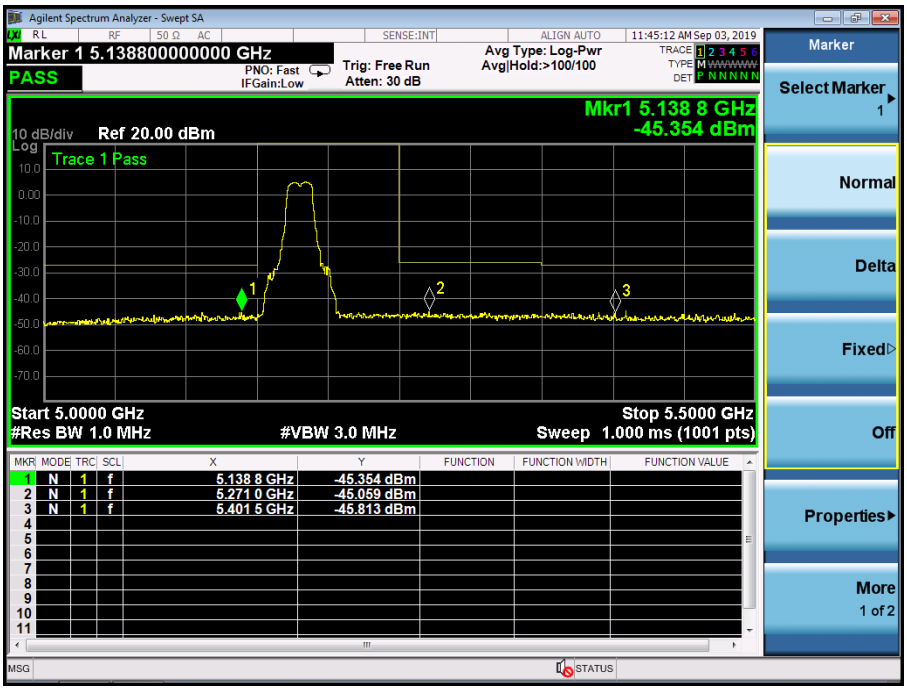
5.2G

5.15~5.25 GHz

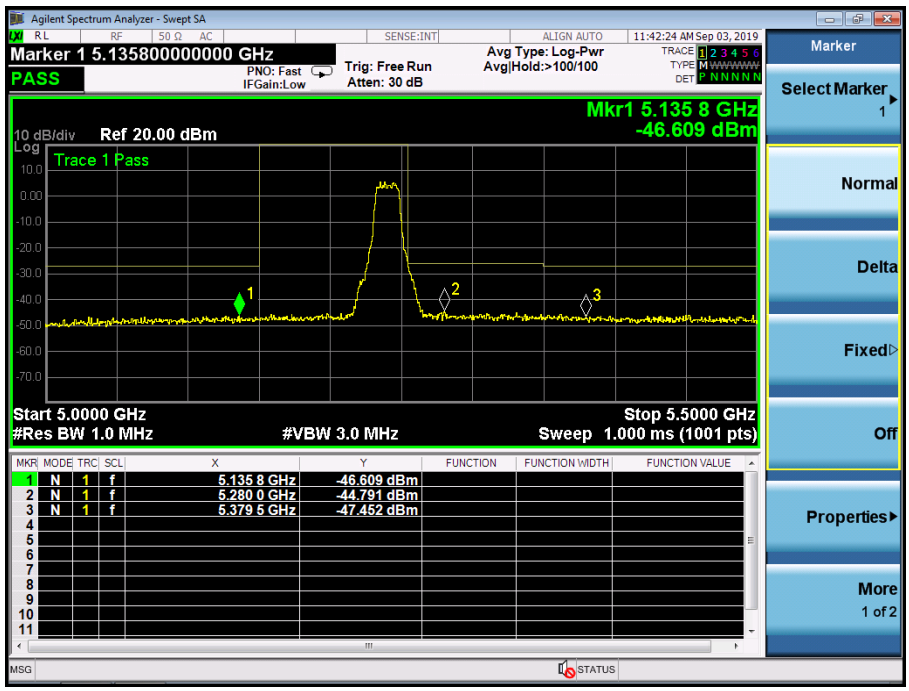
(802.11a) Band Edge, Left Side



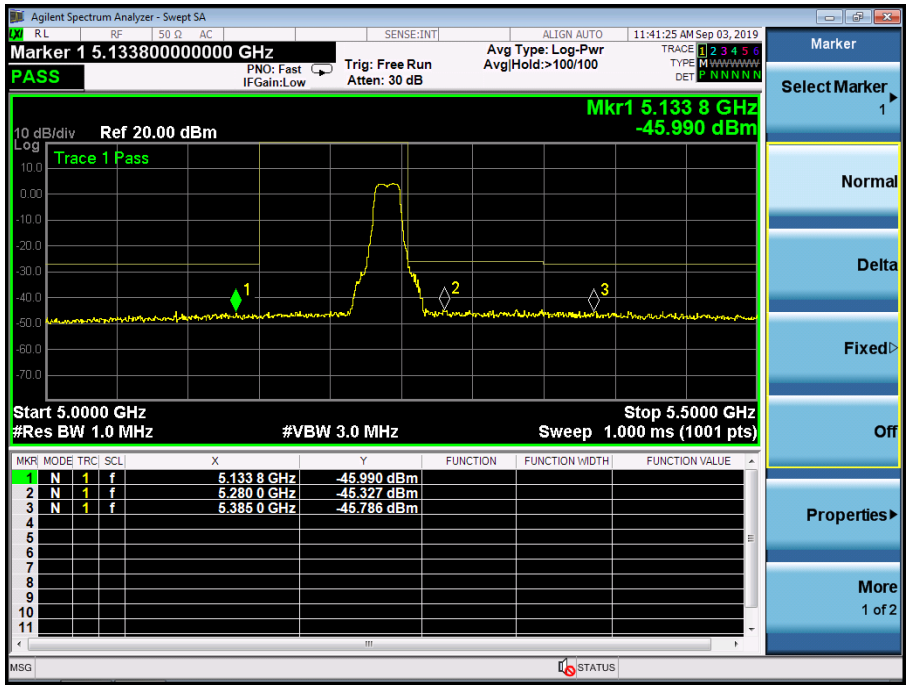
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

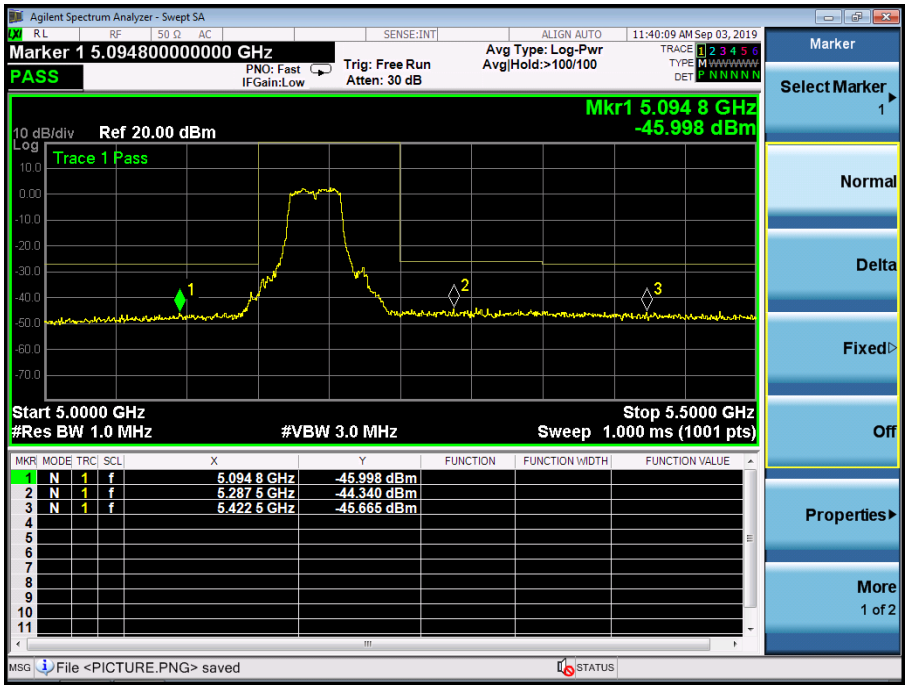


(802.11n20) Band Edge, Right Side

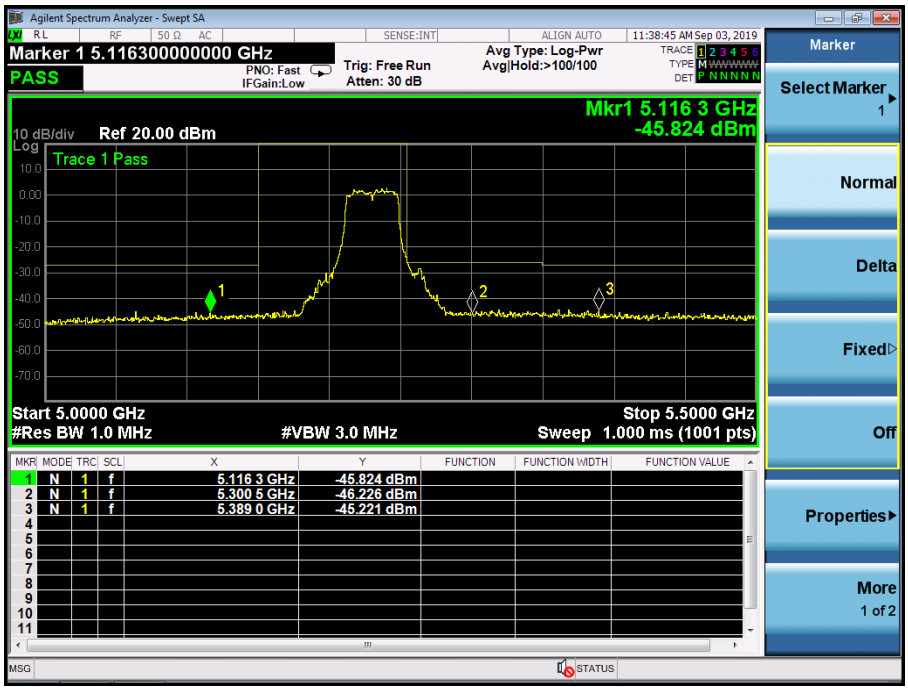


5.15~5.25 GHz

(802.11n40) Band Edge, Left Side



(802.11n40) Band Edge, Right Side

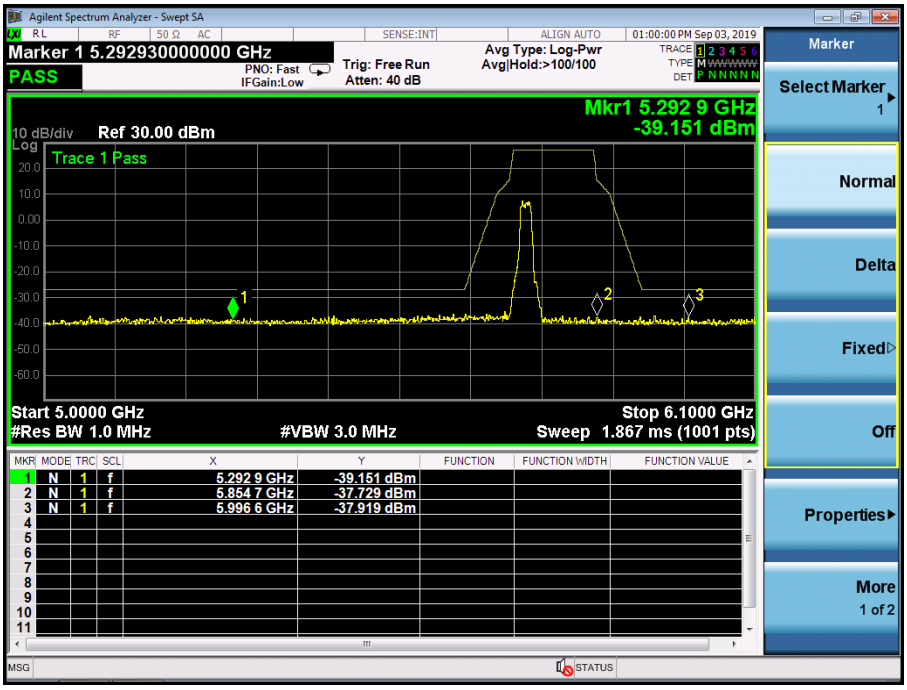


Antenna B: 5725-5850MHz

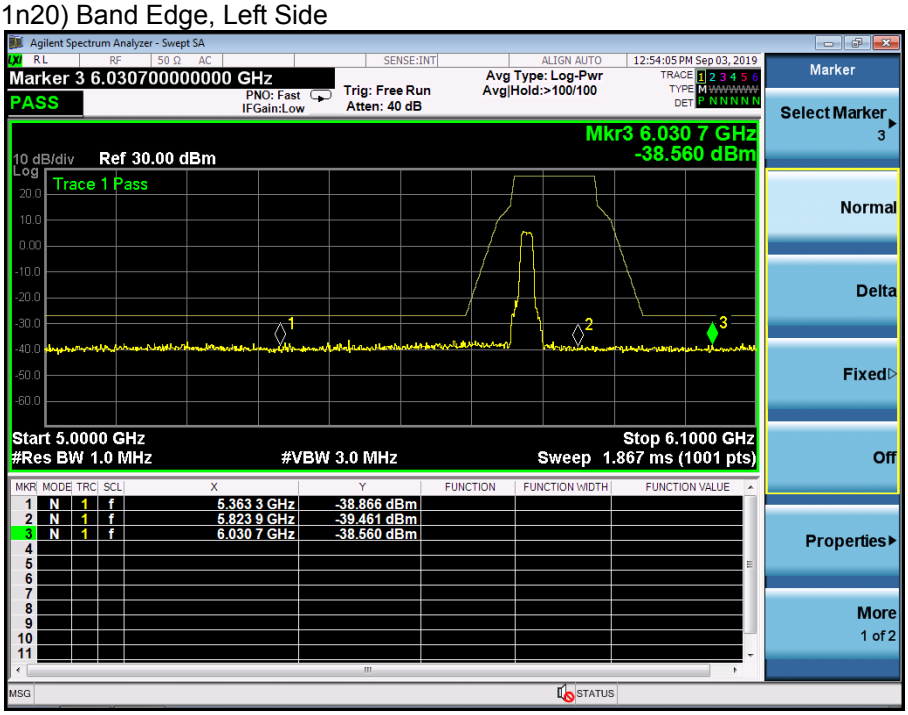
5.8G

5.75~5.85 GHz

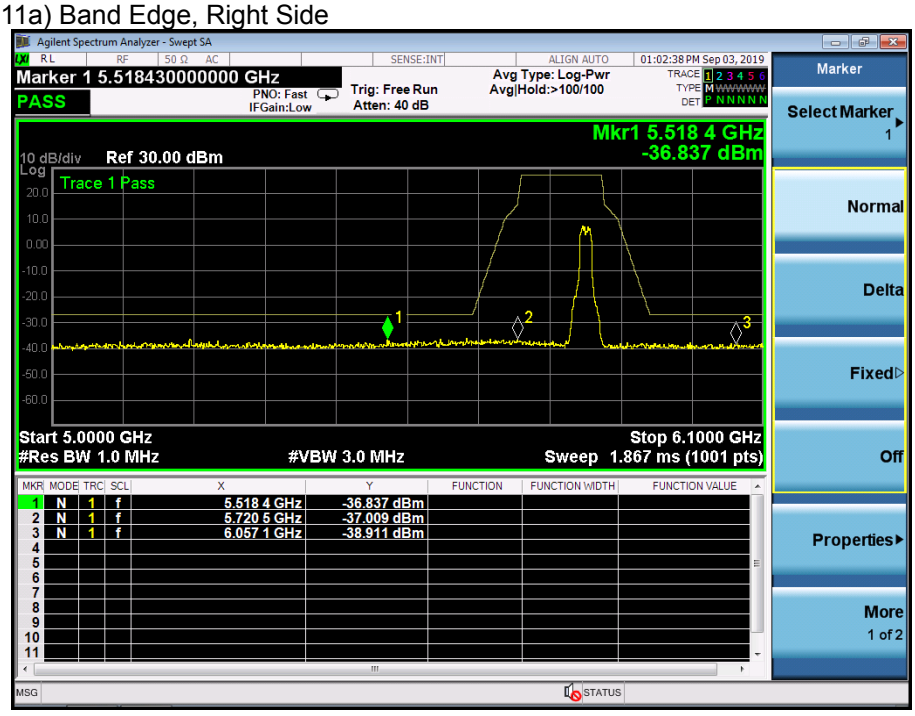
(802.11a) Band Edge, Left Side



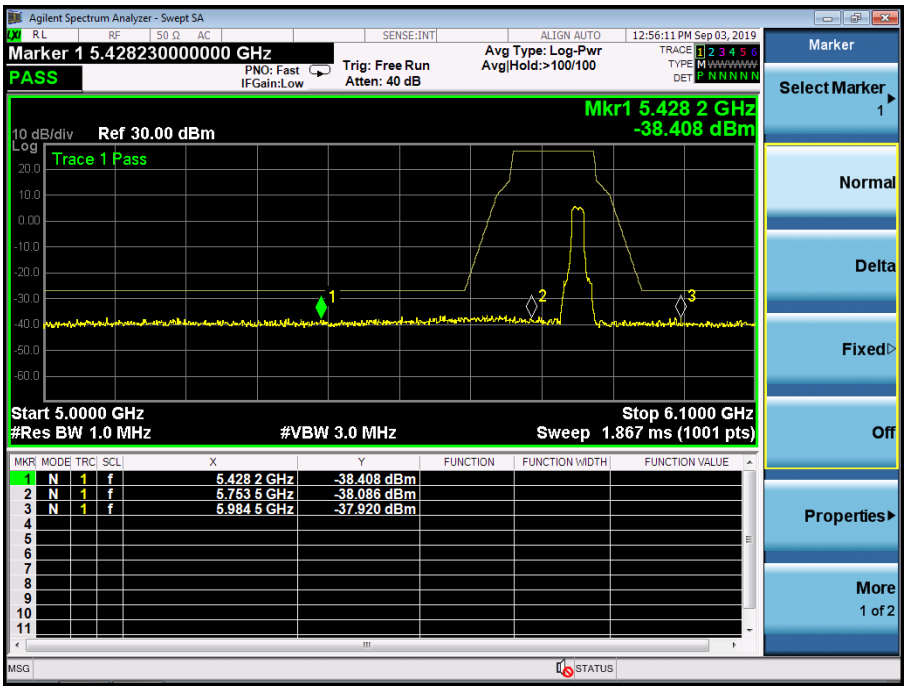
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

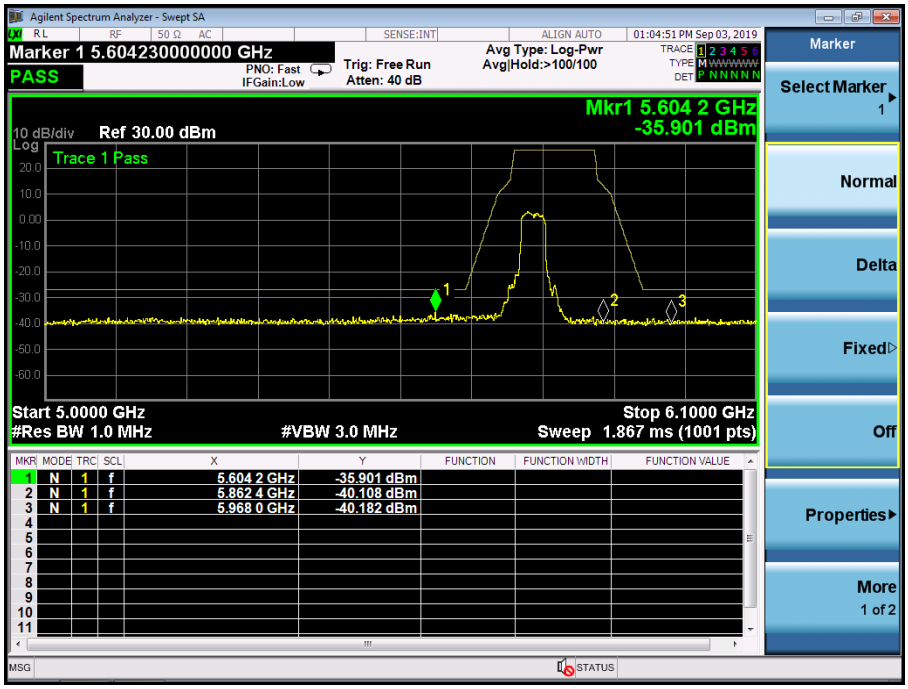


(802.11n20) Band Edge, Right Side

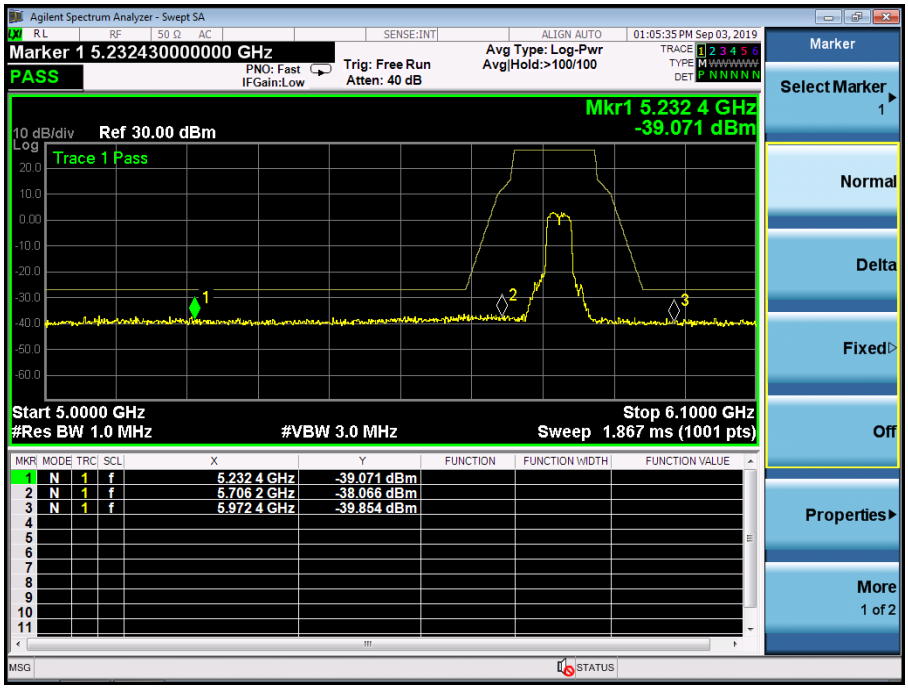


5.75~5.85 GHz

(802.11n40) Band Edge, Left Side

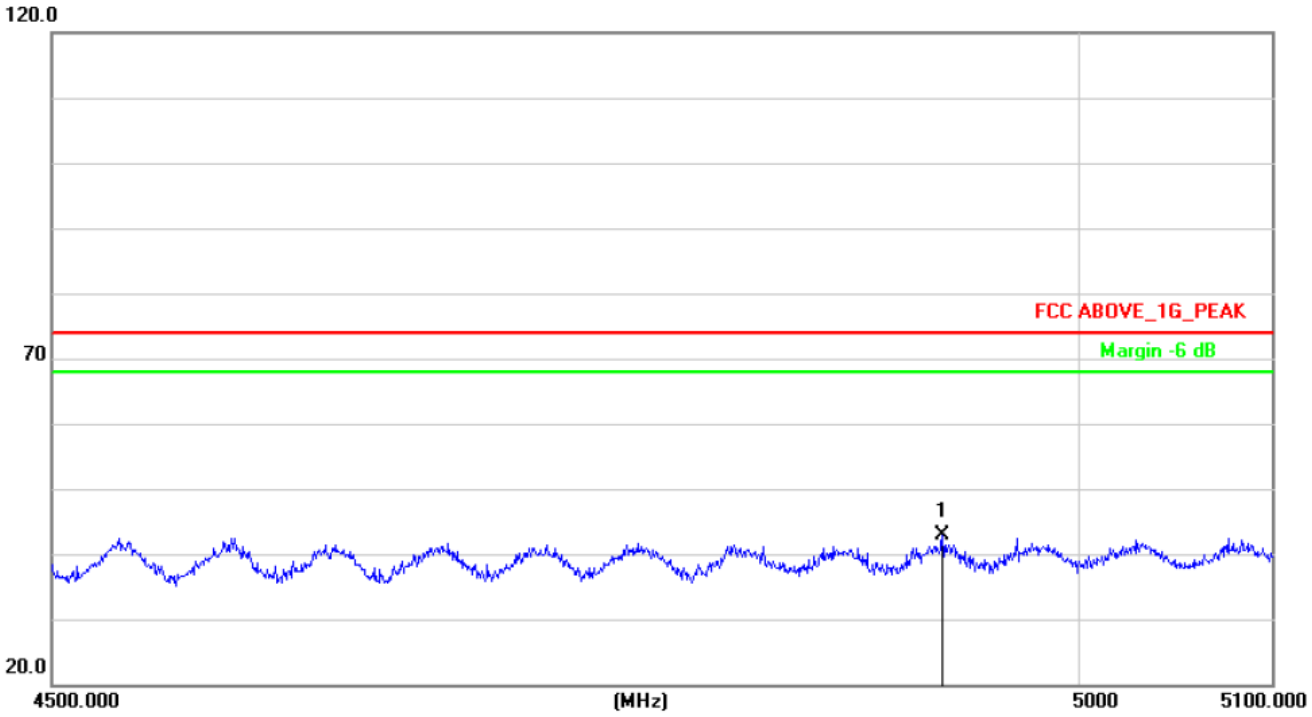


(802.11n40) Band Edge, Right Side

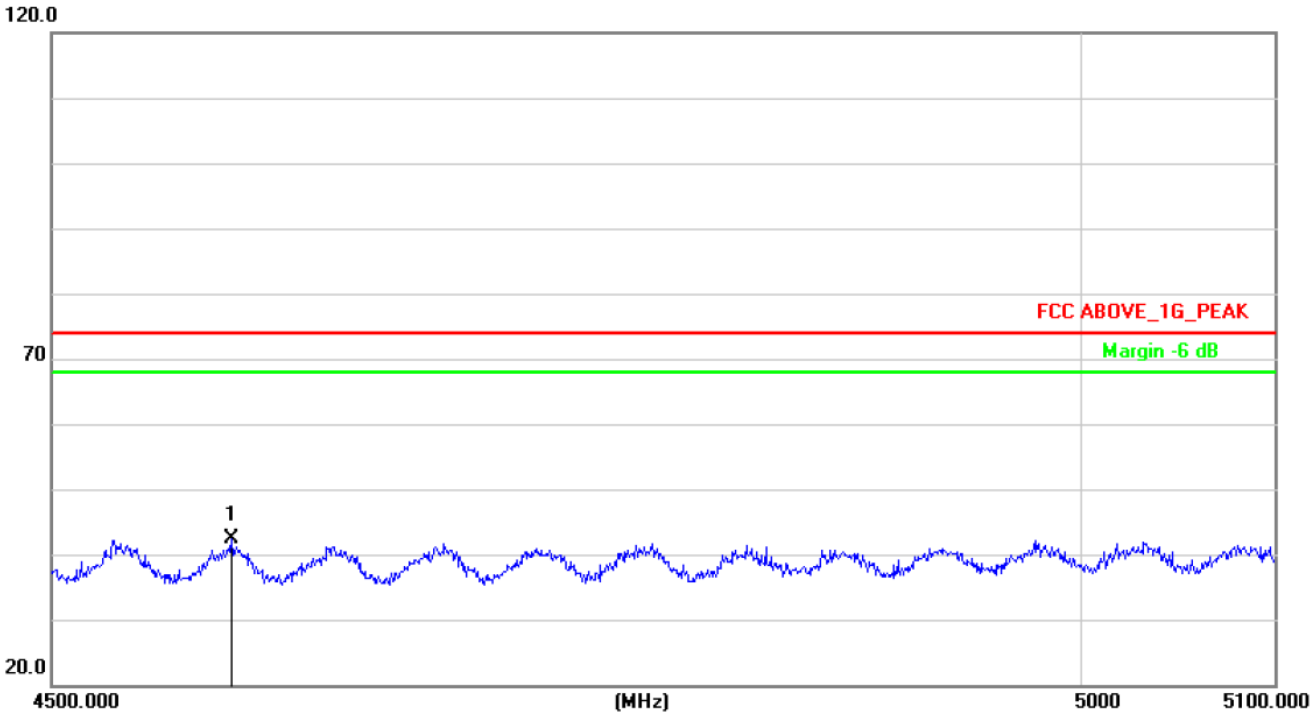


Radiated bandedge

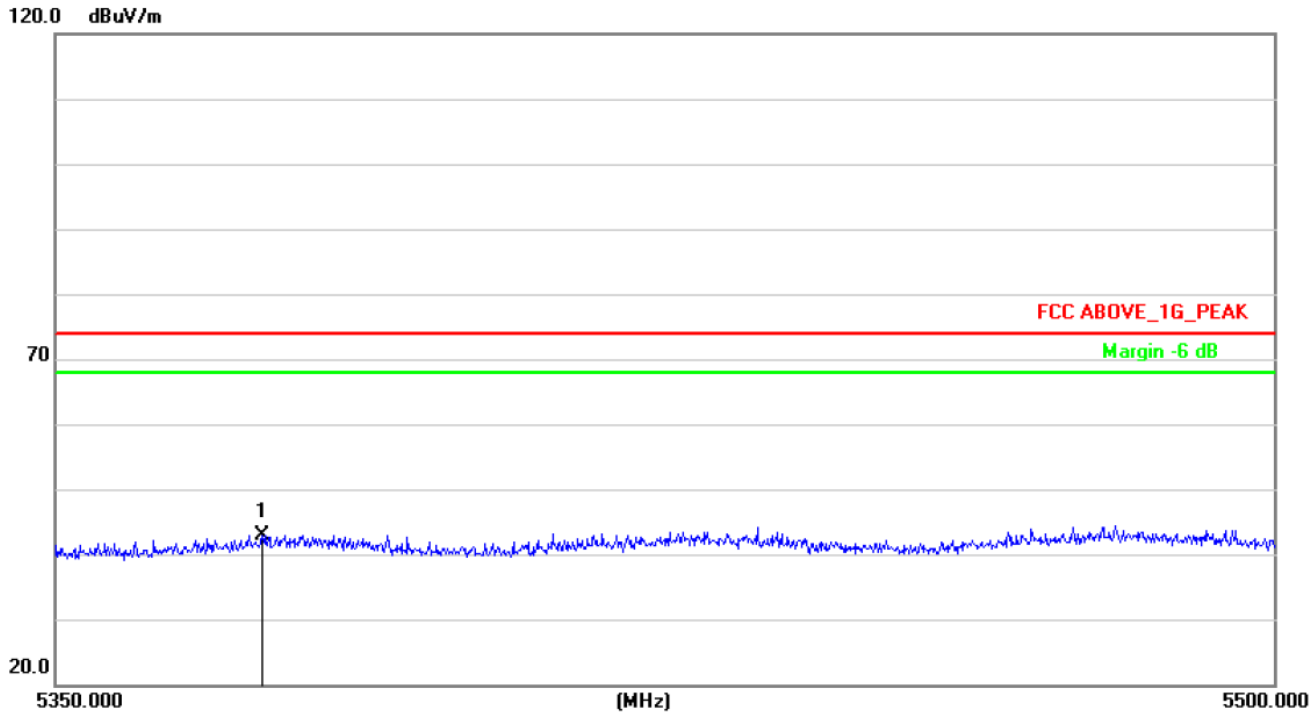
802.11 a
For the frequency band 5150-5250MHz



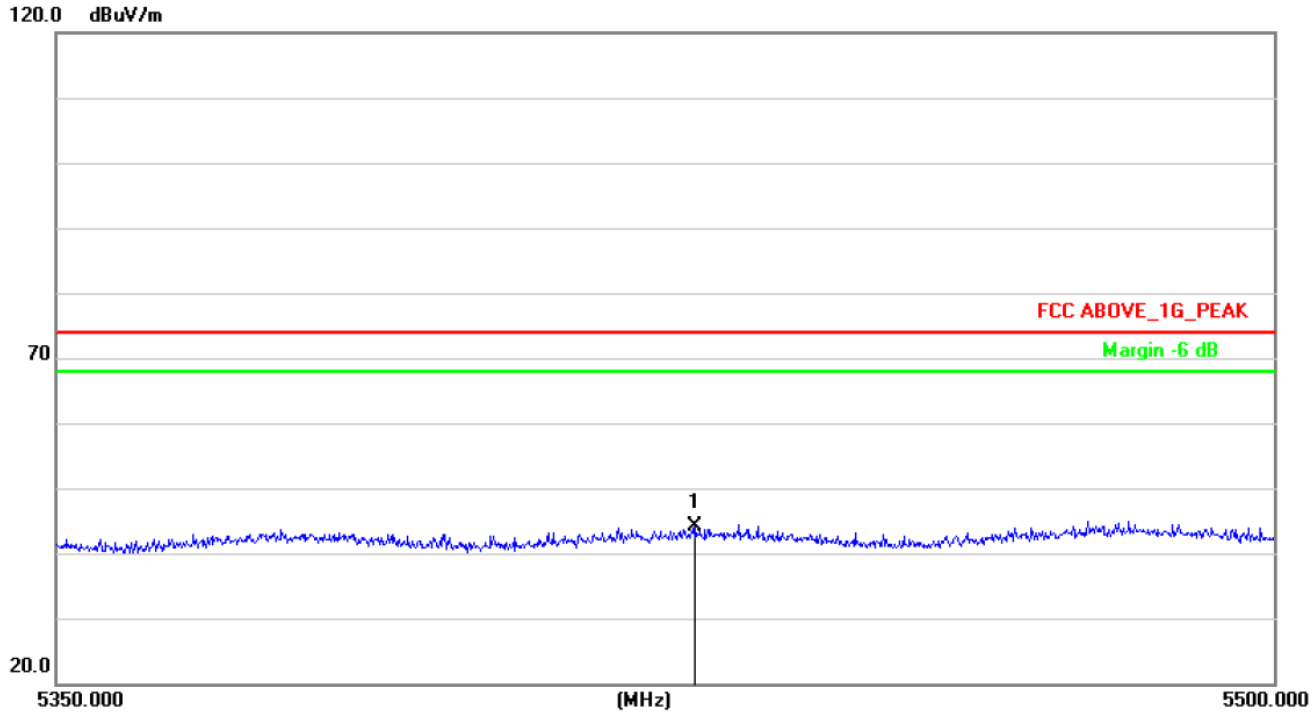
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	Polarization
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
4930.800	43.17	-0.34	42.83	74.00	-31.17	PK	Horizontal
Remark: Factor = Antenna Factor + Correct Factor. Correct Factor= Cable Loss – Pre-amplifier							



Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	Polarization
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
4584.000	42.97	-0.59	42.38	74.00	-31.62	PK	Vertical
Remark: Factor = Antenna Factor + Correct Factor. Correct Factor= Cable Loss – Pre-amplifier							



Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	Polarization
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
5375.350	41.58	1.31	42.89	74.00	-31.11	PK	Horizontal
Remark: Factor = Antenna Factor + Correct Factor. Correct Factor= Cable Loss – Pre-amplifier							

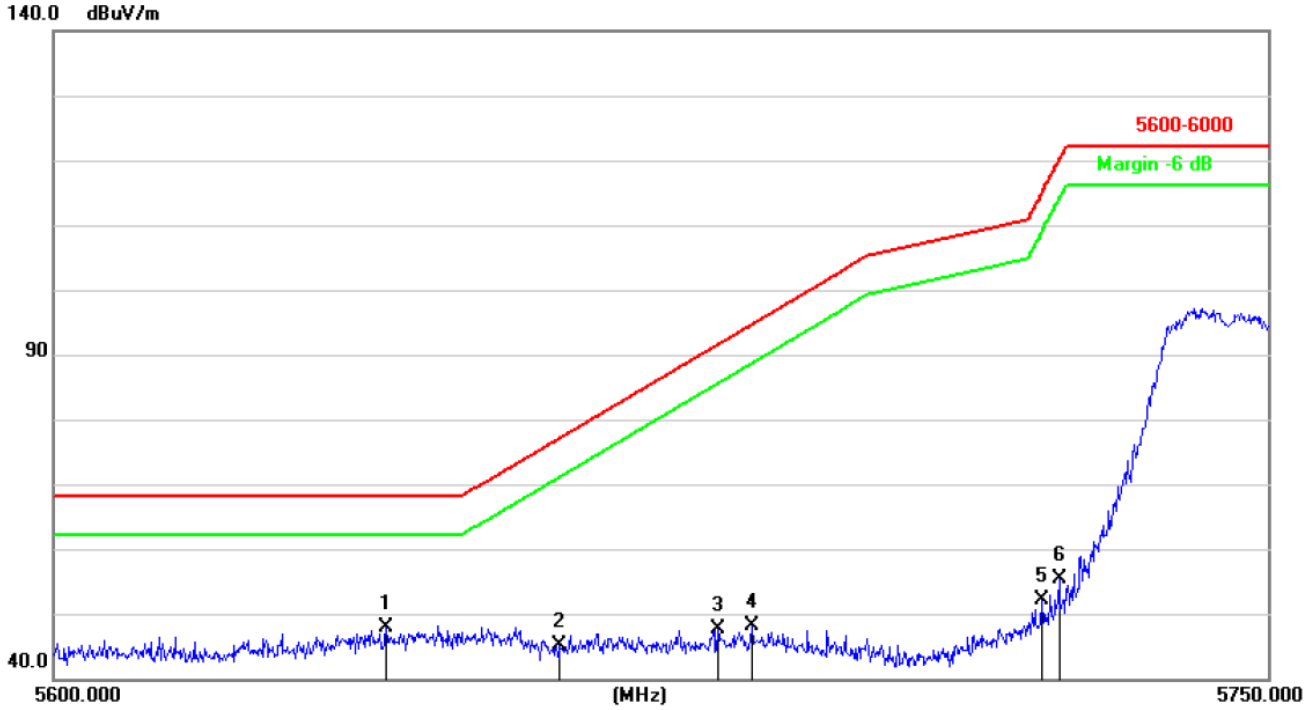


Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	Polarization
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
5428.300	42.48	1.53	44.01	74.00	-29.99	PK	Vertical
Remark: Factor = Antenna Factor + Correct Factor. Correct Factor= Cable Loss – Pre-amplifier							

Note:
1. This EUT was tested in 802.11a/n(HT20), n(HT40) mode and 802.11a the worst case position data was reported.

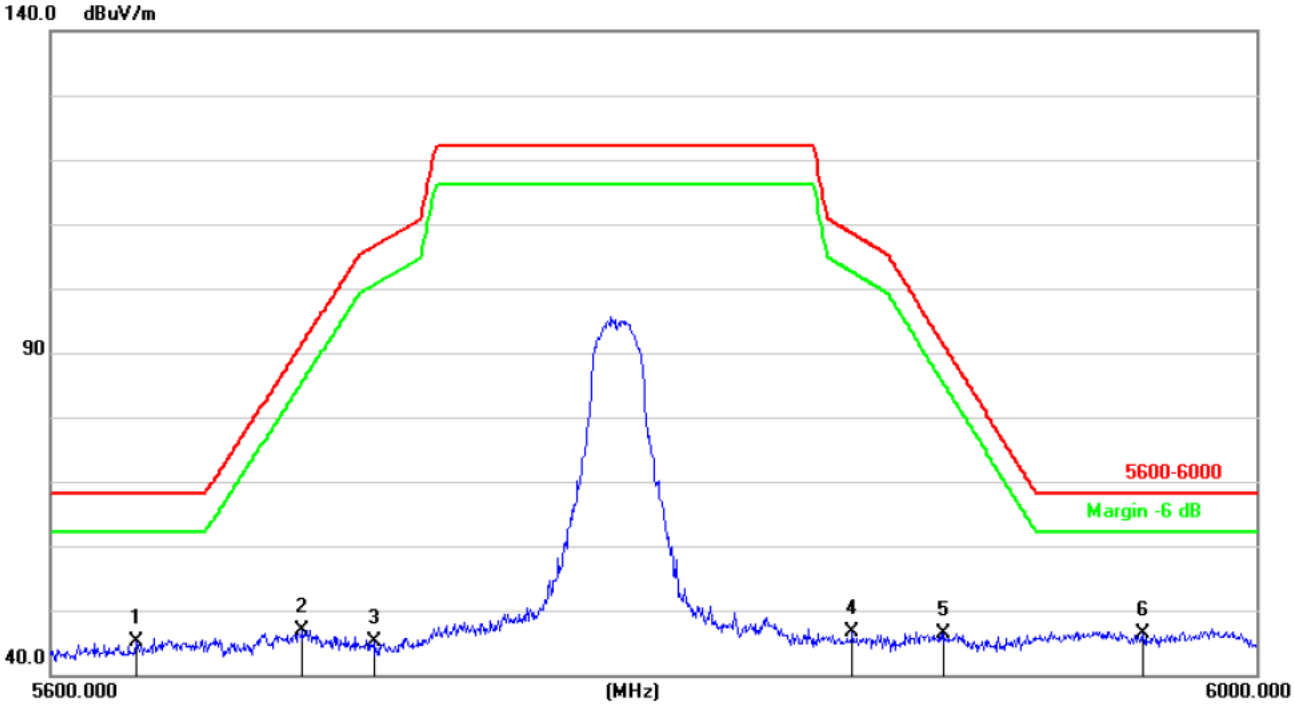
802.11n(HT20)
For the frequency band 5725-5850MHz

Low Channel



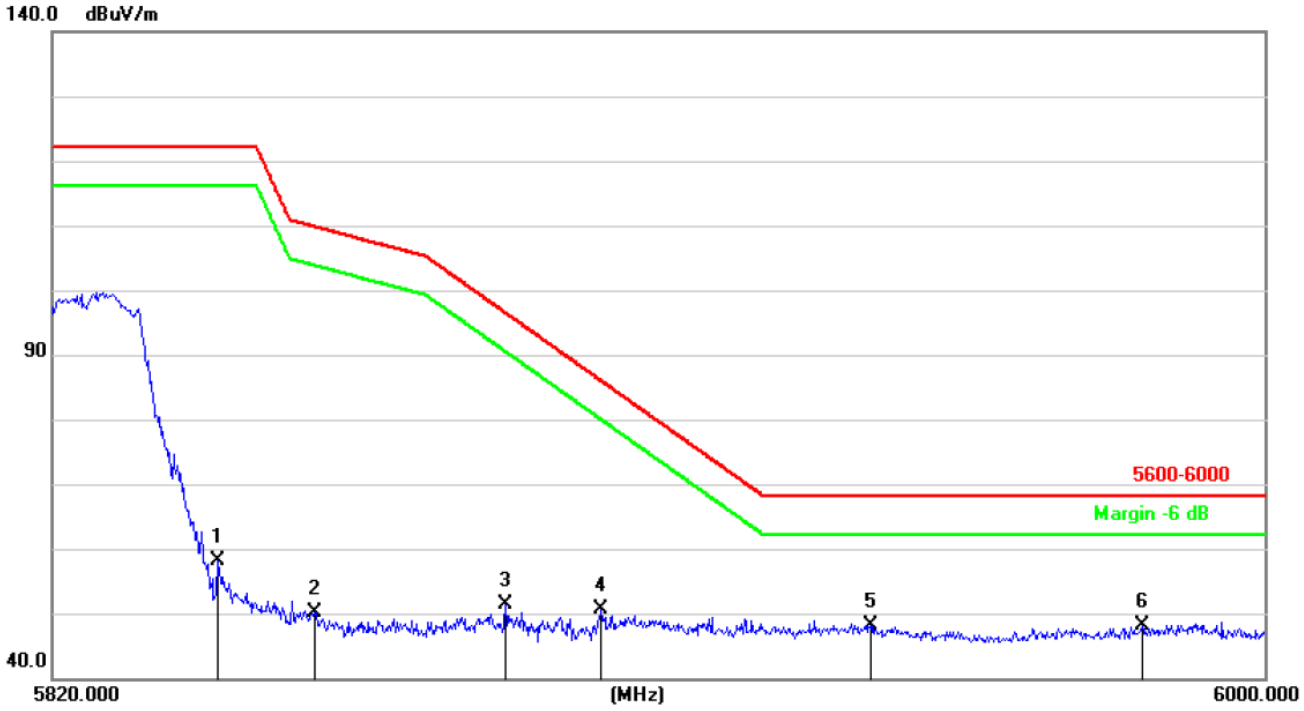
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5640.800	45.36	2.43	47.79	68.20	-20.41	peak
2	5662.100	42.69	2.52	45.21	77.18	-31.97	peak
3	5681.600	44.92	2.61	47.53	91.62	-44.09	peak
4	5685.800	45.43	2.62	48.05	94.73	-46.68	peak
5	5721.800	49.37	2.78	52.15	114.91	-62.76	peak
6	5724.050	52.61	2.79	55.40	120.03	-64.63	peak

Middle Channel



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5627.600	42.64	2.38	45.02	68.20	-23.18	peak
2	5681.600	44.34	2.61	46.95	91.62	-44.67	peak
3	5704.800	42.31	2.71	45.02	106.55	-61.53	peak
4	5863.200	43.13	3.38	46.51	108.50	-61.99	peak
5	5894.000	42.85	3.51	46.36	91.10	-44.74	peak
6	5961.600	42.46	3.80	46.26	68.20	-21.94	peak

High Channel



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5844.300	54.88	3.30	58.18	122.20	-64.02	peak
2	5858.520	46.71	3.36	50.07	109.81	-59.74	peak
3	5886.780	47.93	3.48	51.41	96.45	-45.04	peak
4	5901.000	47.02	3.54	50.56	85.92	-35.36	peak
5	5940.960	44.30	3.71	48.01	68.20	-20.19	peak
6	5981.640	44.25	3.88	48.13	68.20	-20.07	peak

Note:
1. This EUT was tested in 802.11a/n/ac(HT20), n/ac(HT40), ac(HT80) mode and 802.11n(HT20) the worst case position data was reported.

8.SPURIOUS RF CONDUCTED EMISSIONS

8.1CONFORMANCE LIMIT

1. Below -20dB of the highest emission level in operating band.
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

8.2MEASURING INSTRUMENTS

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

8.3TEST SETUP

Please refer to Section 6.1 of this test report.

8.4TEST 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 mwasure frequeny range from 9KHz to 26.5GHz.

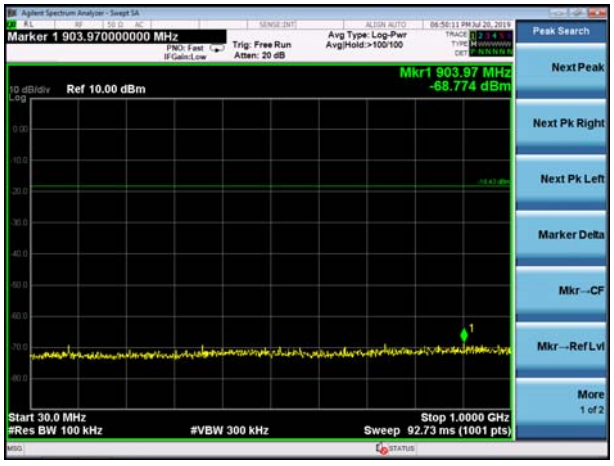
8.5TEST RESULTS

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 bandege measurement data.

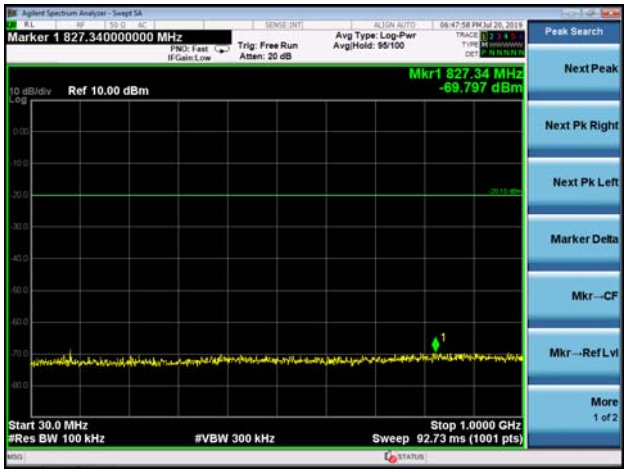
5.2G

Test Plot

802.11a on channel 36



802.11a on channel 40



802.11a on channel 36

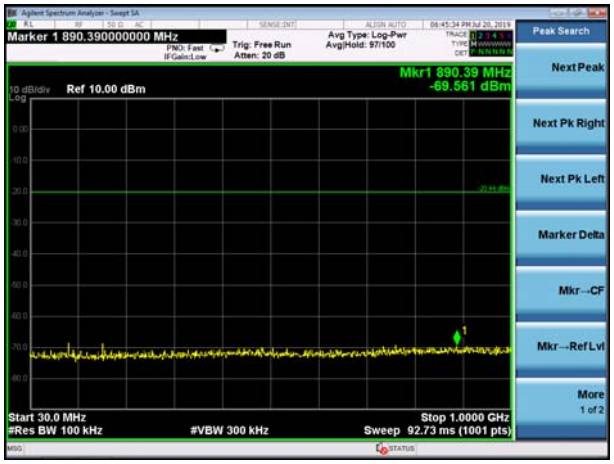
802.11a on channel 40

802.11a on channel 36

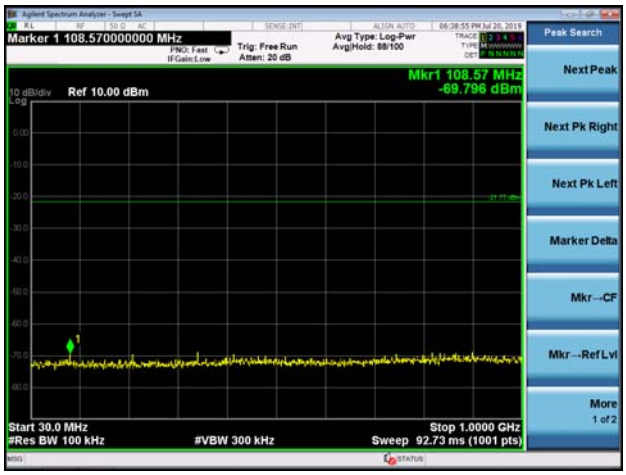
802.11a on channel 40

Test Plot

802.11a on channel 48



802.11n20 on channel 36



802.11a on channel 48

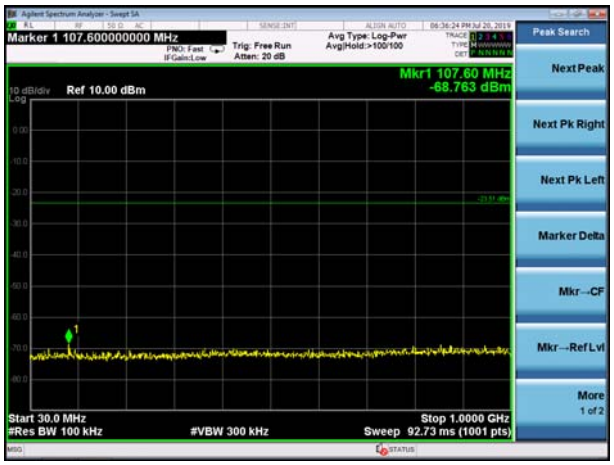
802.11n20 on channel 36

802.11a on channel 48

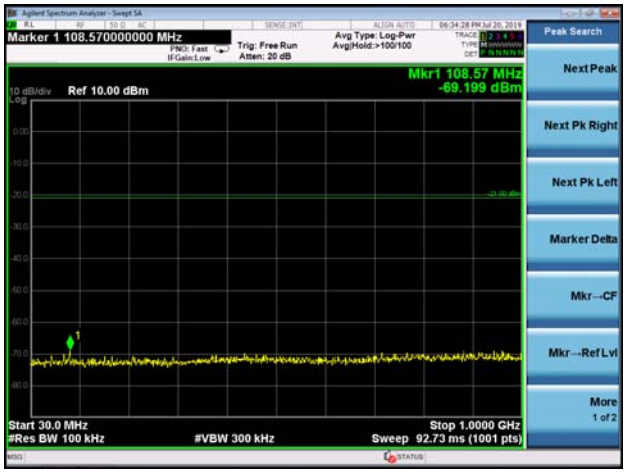
802.11n20 on channel 36

Test Plot

802.11n20 on channel 40



802.11n20 on channel 48



802.11n20 on channel 40

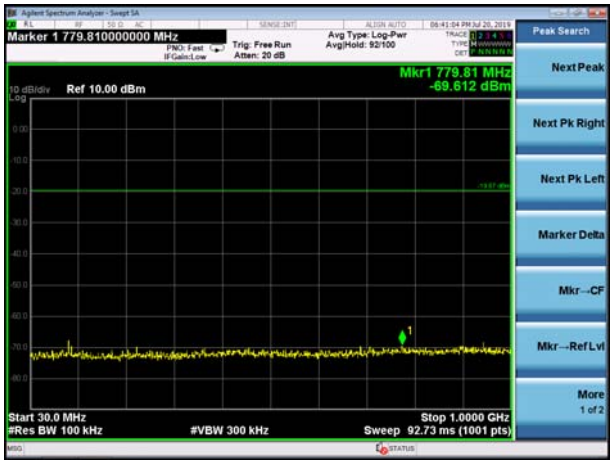
802.11n20 on channel 48

802.11n20 on channel 40

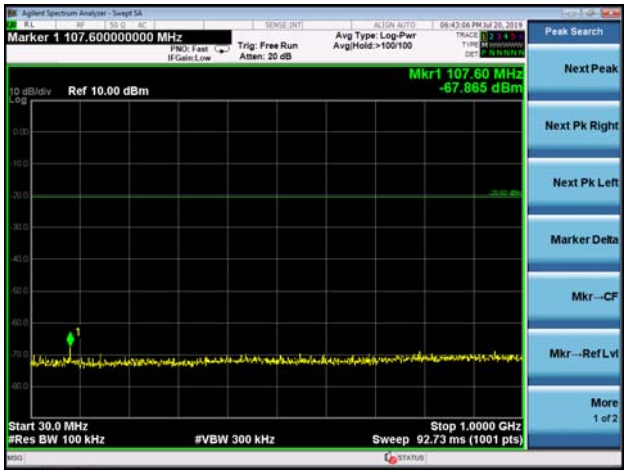
802.11n20 on channel 48

Test Plot

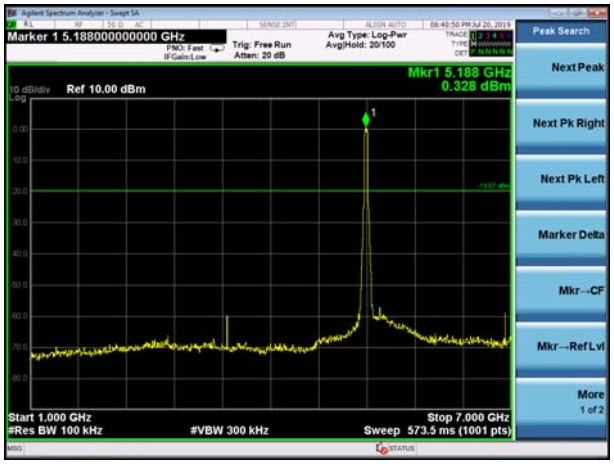
802.11n40 on channel 38



802.11n40 on channel 46



802.11n40 on channel 38



802.11n40 on channel 46

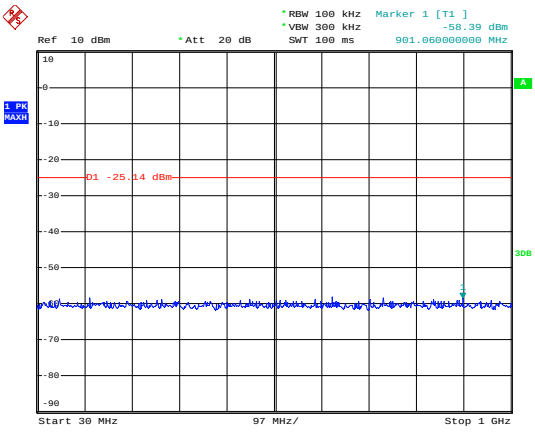
802.11n40 on channel 38

802.11n40 on channel 46

5.8G

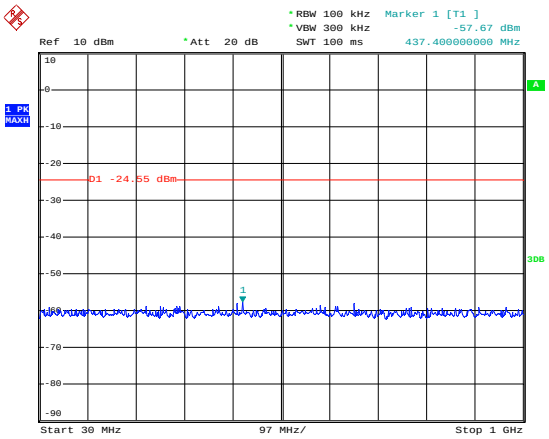
Test Plot

802.11a on channel 149



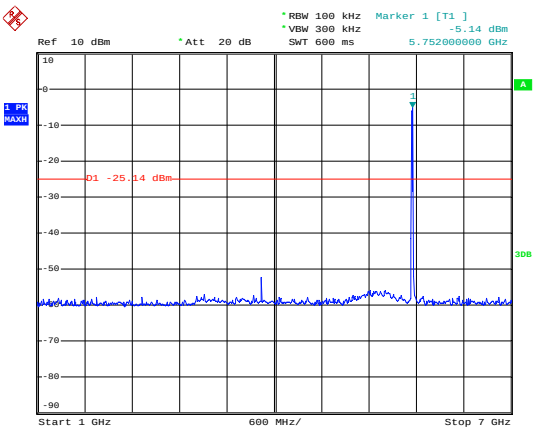
Date: 20.JUL.2019 14:50:15

802.11a on channel 157



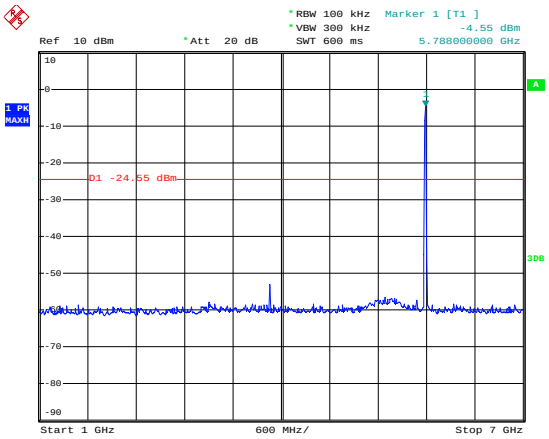
Date: 20.JUL.2019 14:55:41

802.11a on channel 149



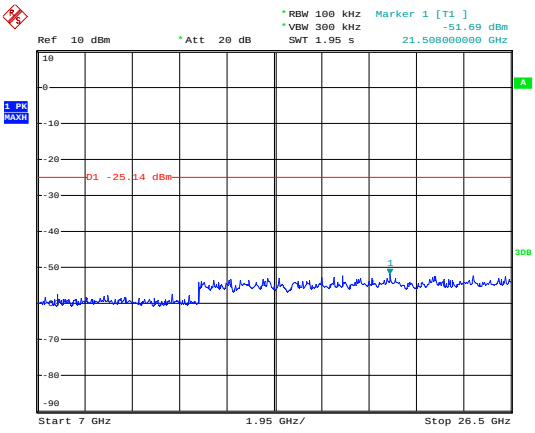
Date: 20.JUL.2019 14:48:56

802.11a on channel 157



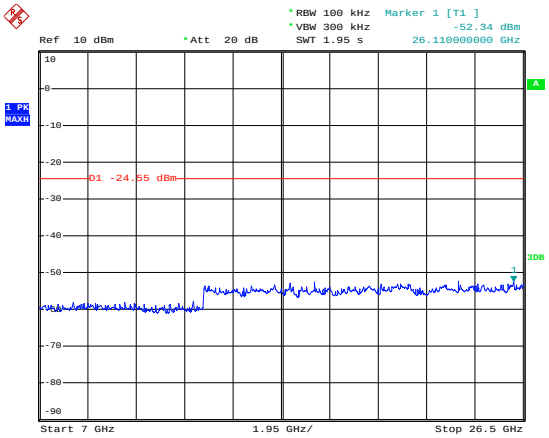
Date: 20.JUL.2019 14:55:11

802.11a on channel 149



Date: 20.JUL.2019 14:51:01

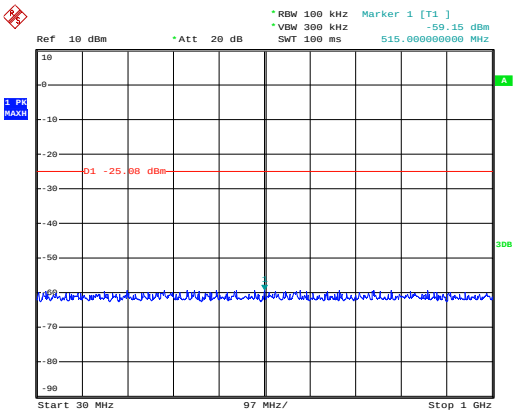
802.11a on channel 157



Date: 20.JUL.2019 14:56:18

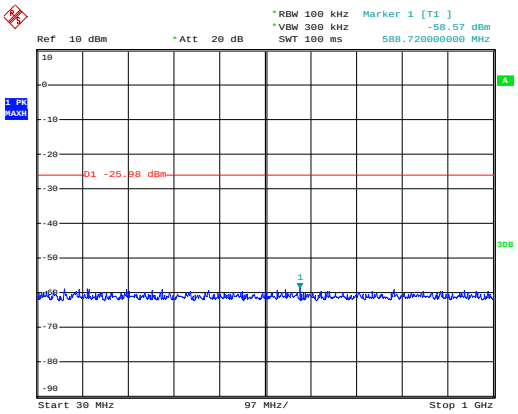
Test Plot

802.11a on channel 165



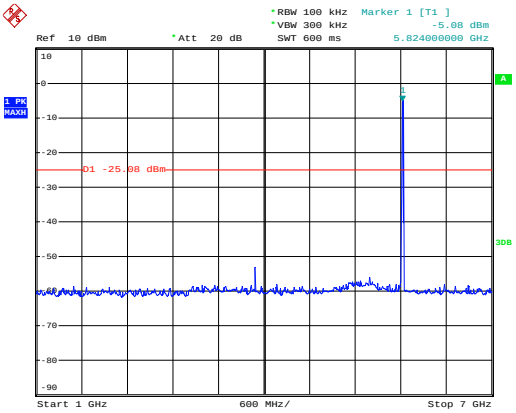
Date: 20.JUL.2019 14:59:59

802.11n20 on channel 149



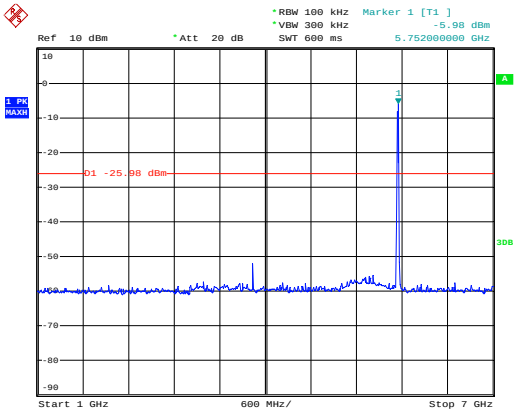
Date: 20.JUL.2019 15:04:49

802.11a on channel 165



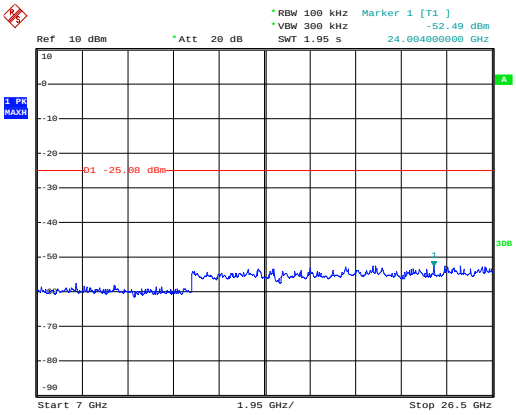
Date: 20.JUL.2019 14:59:34

802.11n20 on channel 149



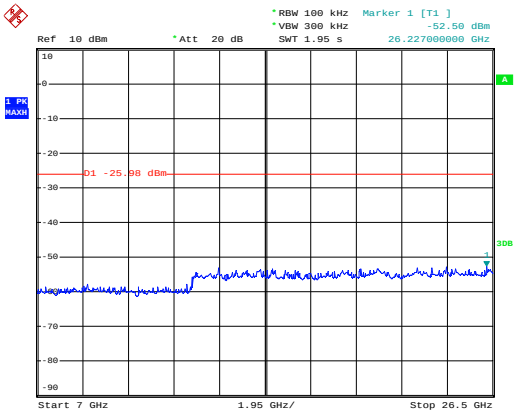
Date: 20.JUL.2019 15:04:09

802.11a on channel 165



Date: 20.JUL.2019 15:00:38

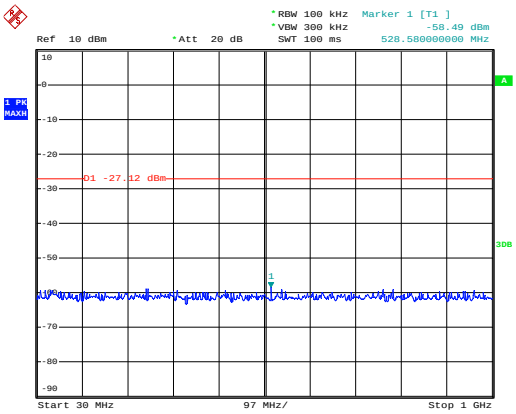
802.11n20 on channel 149



Date: 20.JUL.2019 15:05:16

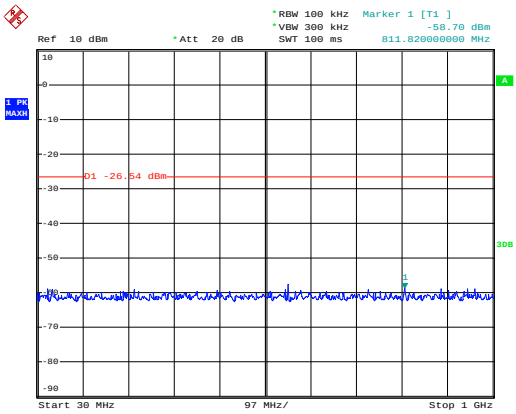
Test Plot

802.11n20 on channel 157



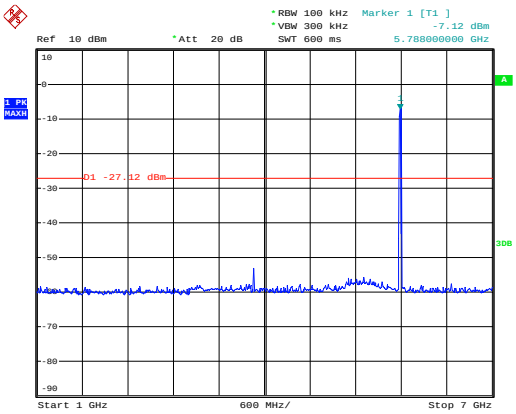
Date: 20.JUL.2019 15:09:57

802.11n20 on channel 165



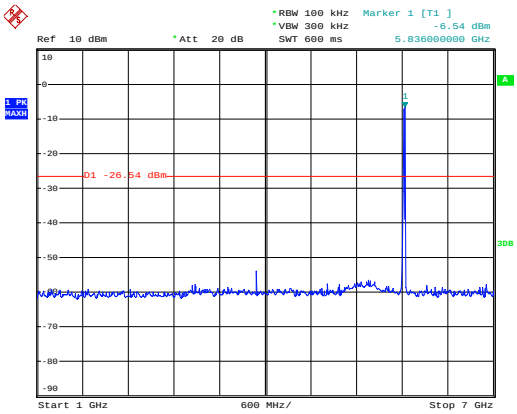
Date: 20.JUL.2019 15:13:49

802.11n20 on channel 157



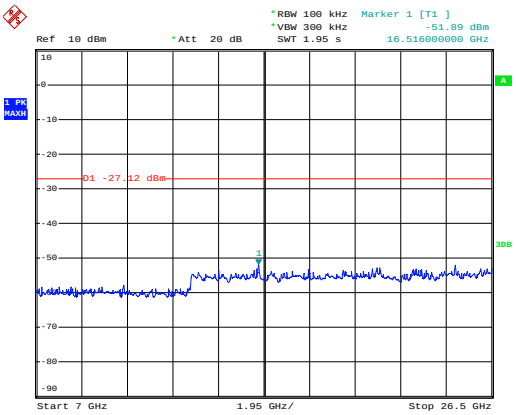
Date: 20.JUL.2019 15:09:25

802.11n20 on channel 165



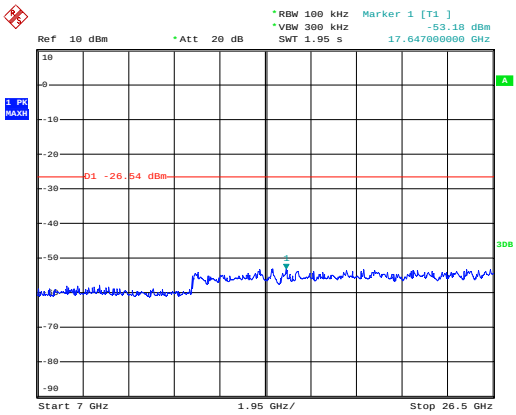
Date: 20.JUL.2019 15:13:23

802.11n20 on channel 157



Date: 20.JUL.2019 15:10:24

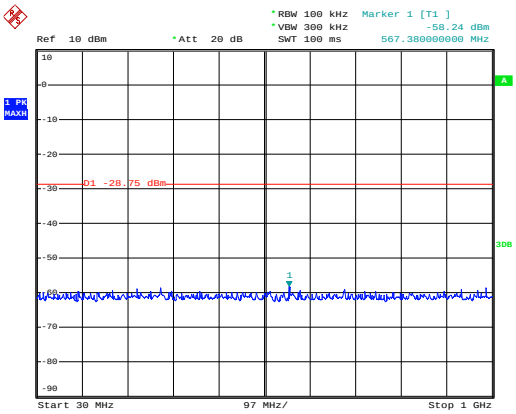
802.11n20 on channel 165



Date: 20.JUL.2019 15:14:11

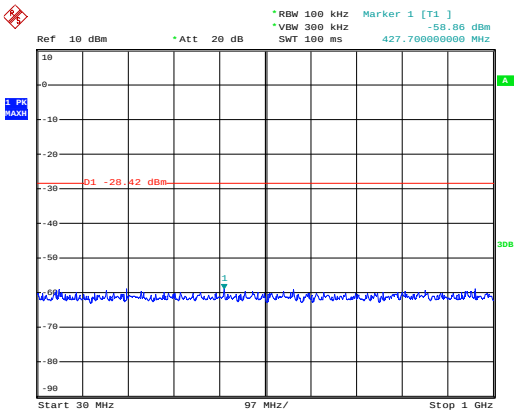
Test Plot

802.11n40 on channel 151



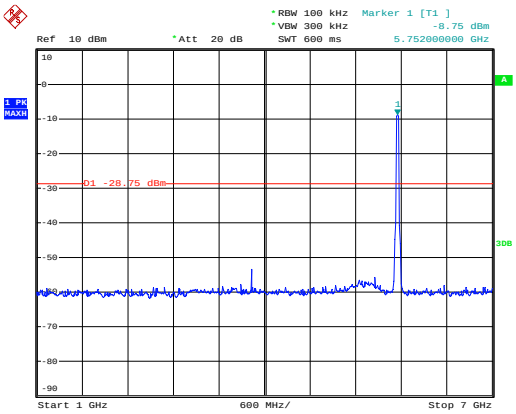
Date: 20.JUL.2019 15:18:12

802.11n40 on channel 159



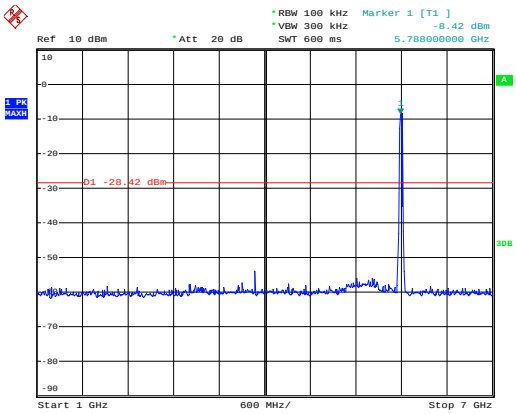
Date: 20.JUL.2019 15:21:43

802.11n40 on channel 151



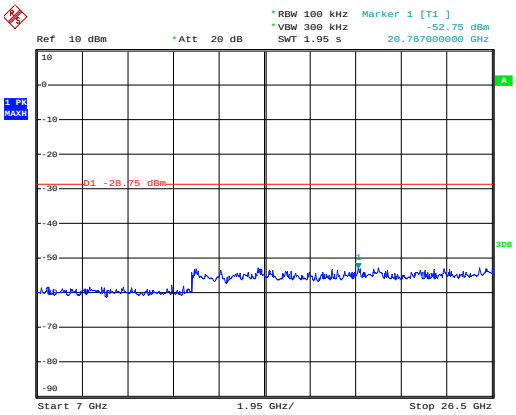
Date: 20.JUL.2019 15:17:45

802.11n40 on channel 159



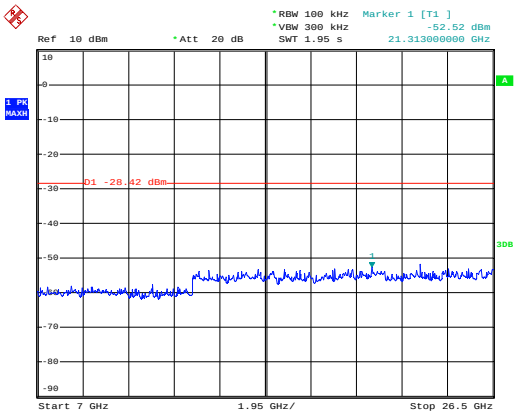
Date: 20.JUL.2019 15:21:17

802.11n40 on channel 151



Date: 20.JUL.2019 15:18:45

802.11n40 on channel 159

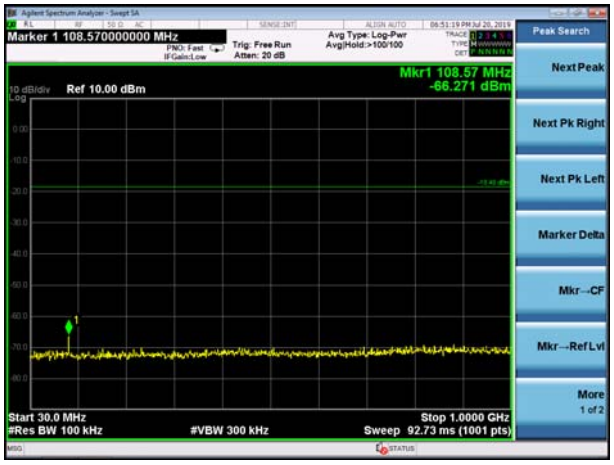


Date: 20.JUL.2019 15:22:07

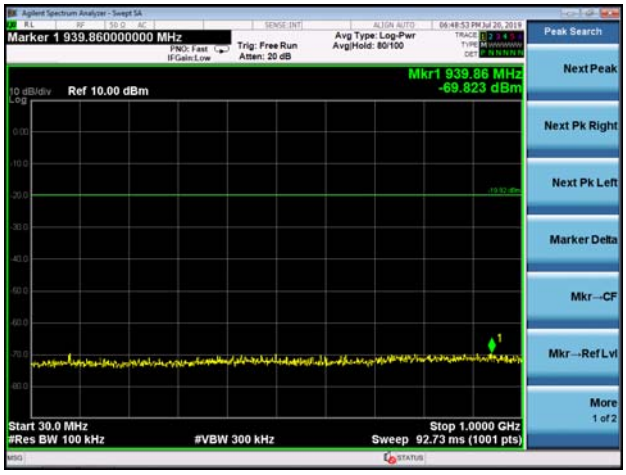
5.2G

Test Plot

802.11a on channel 36



802.11a on channel 40



802.11a on channel 36

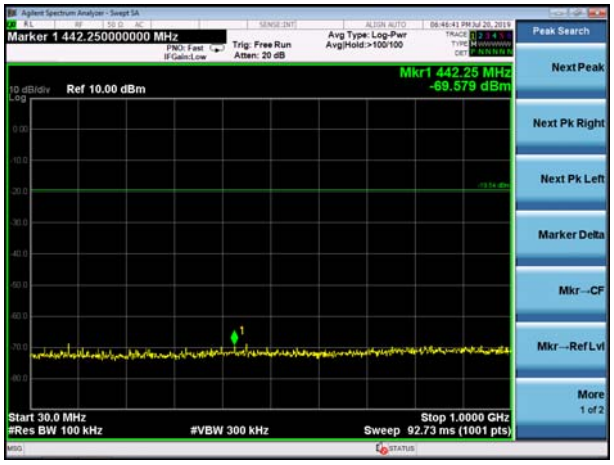
802.11a on channel 40

802.11a on channel 36

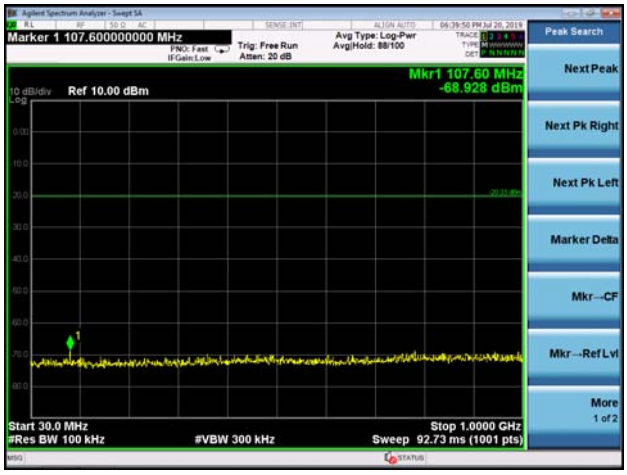
802.11a on channel 40

Test Plot

802.11a on channel 48



802.11n20 on channel 36



802.11a on channel 48

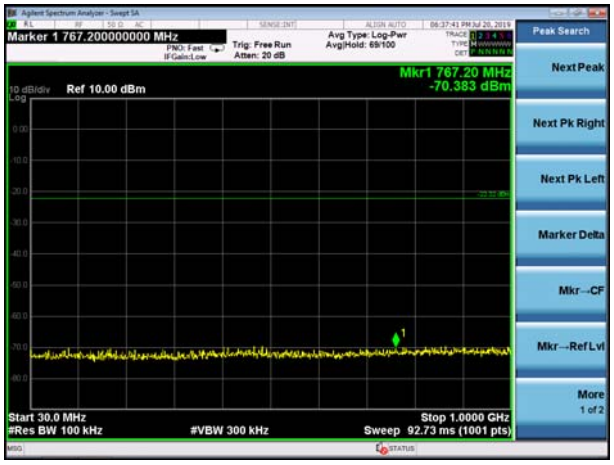
802.11n20 on channel 36

802.11a on channel 48

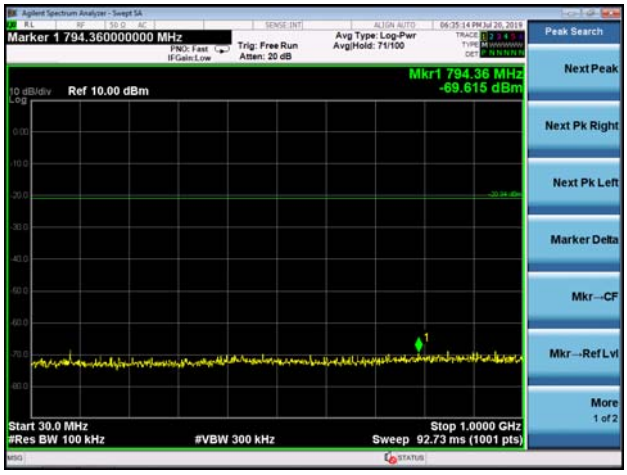
802.11n20 on channel 36

Test Plot

802.11n20 on channel 40



802.11n20 on channel 48



802.11n20 on channel 40

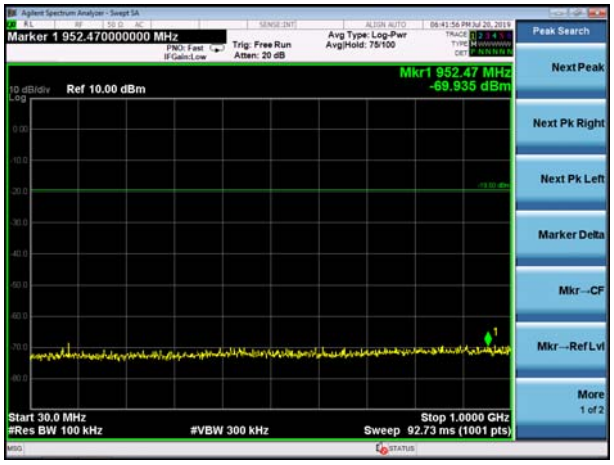
802.11n20 on channel 48

802.11n20 on channel 40

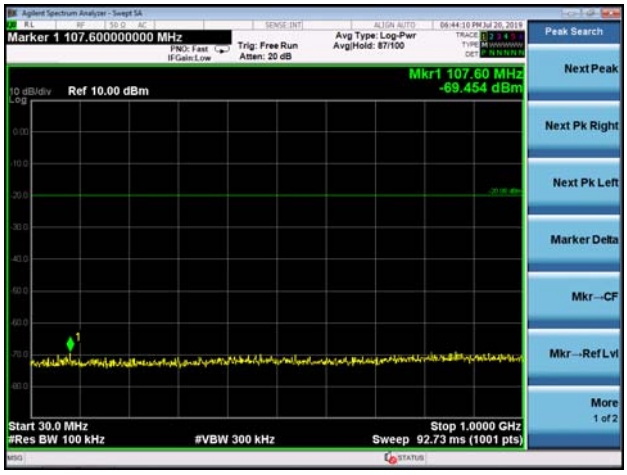
802.11n20 on channel 48

Test Plot

802.11n40 on channel 38



802.11n40 on channel 46



802.11n40 on channel 38

802.11n40 on channel 46

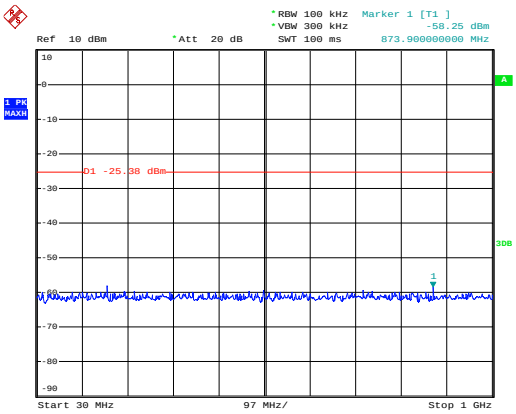
802.11n40 on channel 38

802.11n40 on channel 46

5.8G

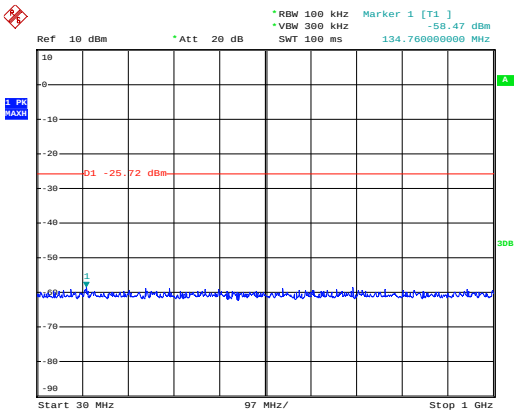
Test Plot

802.11a on channel 149



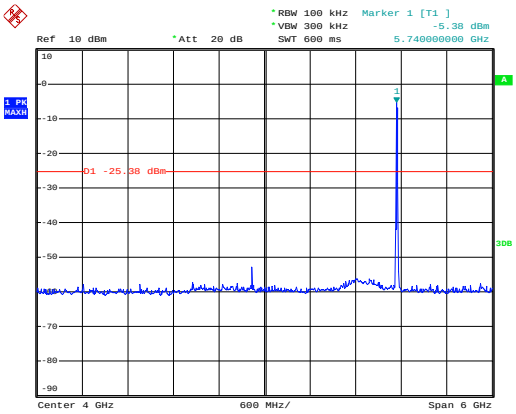
Date: 20.JUL.2019 14:53:23

802.11a on channel 157



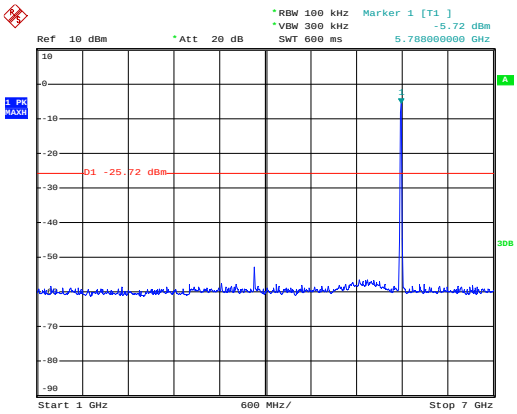
Date: 20.JUL.2019 14:57:56

802.11a on channel 149



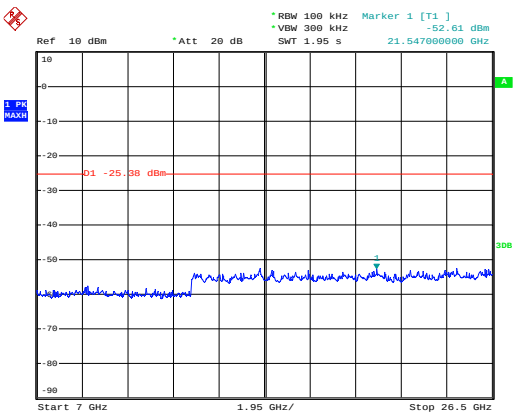
Date: 20.JUL.2019 14:52:46

802.11a on channel 157



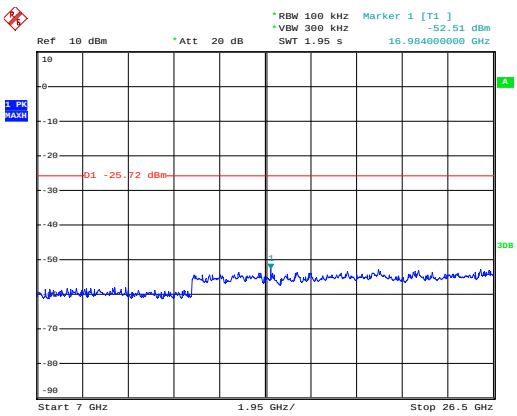
Date: 20.JUL.2019 14:57:19

802.11a on channel 149



Date: 20.JUL.2019 14:53:58

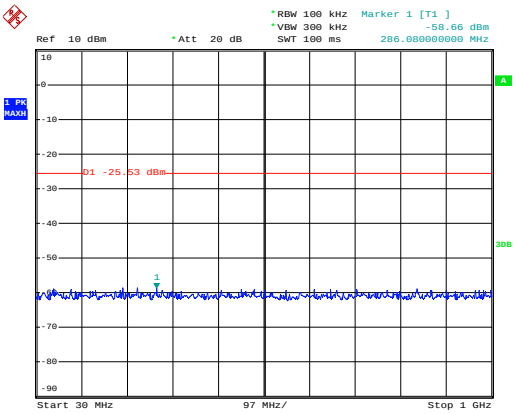
802.11a on channel 157



Date: 20.JUL.2019 14:58:26

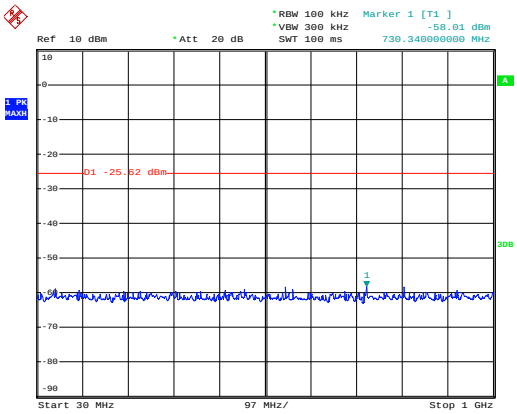
Test Plot

802.11a on channel 165



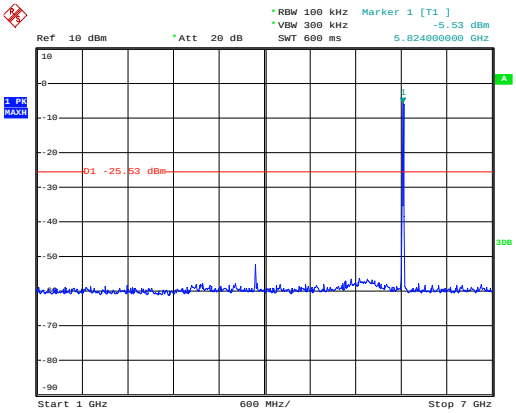
Date: 20.JUL.2019 15:02:19

802.11n20 on channel 149



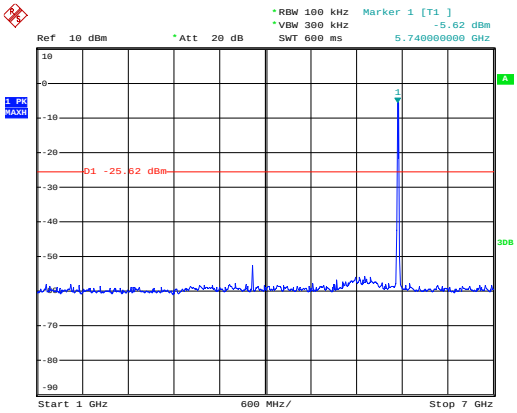
Date: 20.JUL.2019 15:07:13

802.11a on channel 165



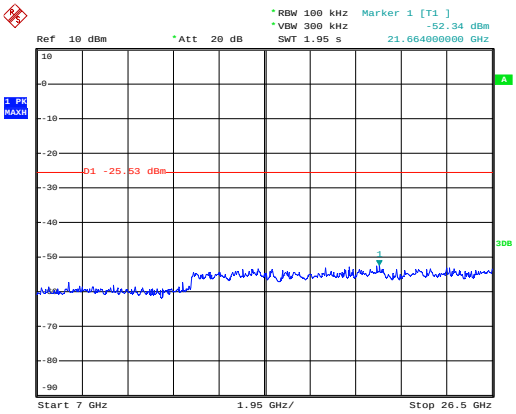
Date: 20.JUL.2019 15:01:49

802.11n20 on channel 149



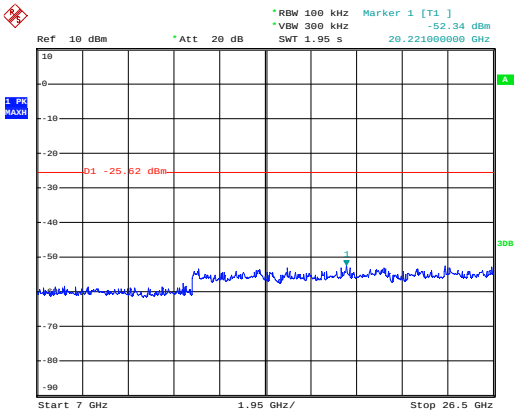
Date: 20.JUL.2019 15:06:43

802.11a on channel 165



Date: 20.JUL.2019 15:02:52

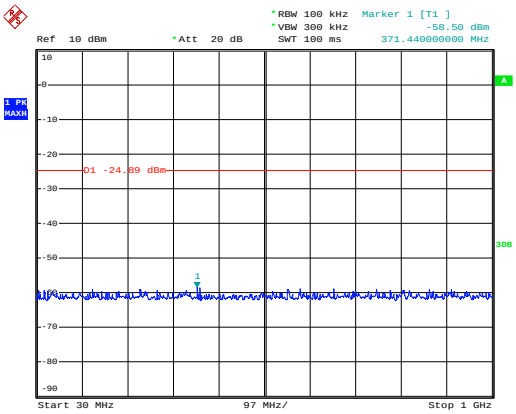
802.11n20 on channel 149



Date: 20.JUL.2019 15:07:42

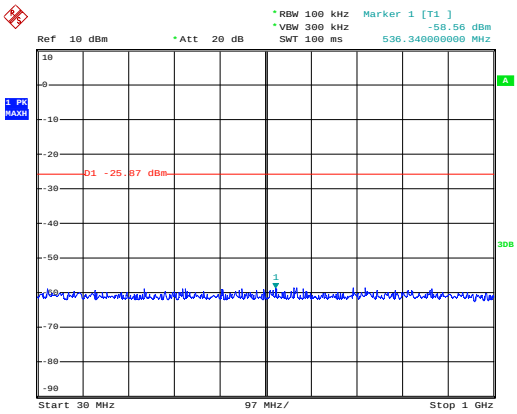
Test Plot

802.11n20 on channel 157



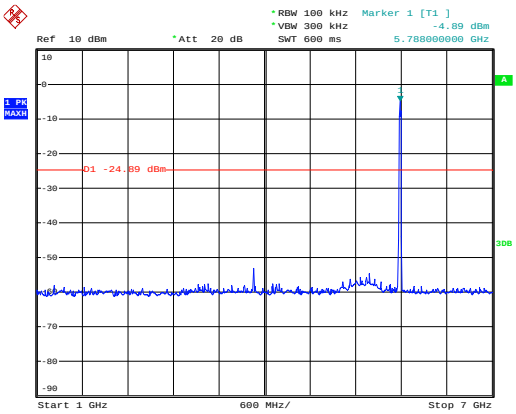
Date: 20.JUL.2019 15:12:14

802.11n20 on channel 165



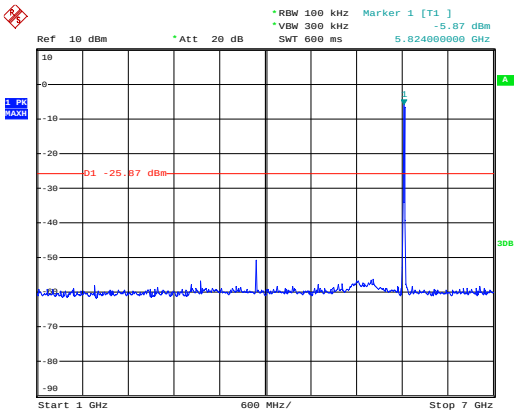
Date: 20.JUL.2019 15:16:26

802.11n20 on channel 157



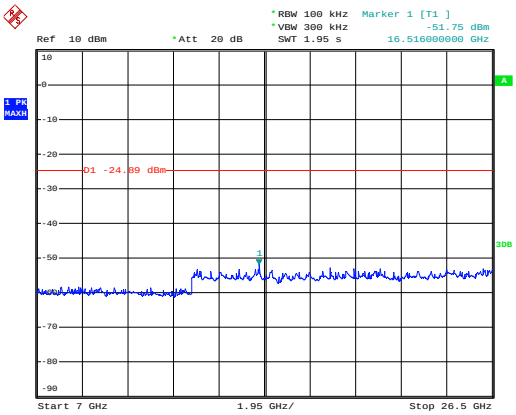
Date: 20.JUL.2019 15:11:49

802.11n20 on channel 165



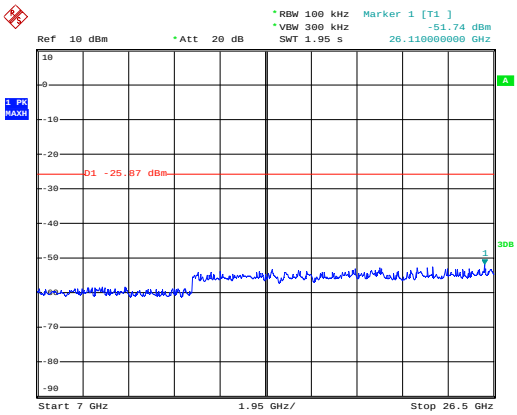
Date: 20.JUL.2019 15:15:58

802.11n20 on channel 157



Date: 20.JUL.2019 15:12:38

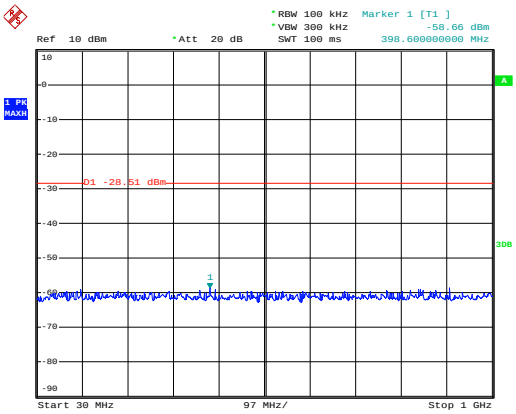
802.11n20 on channel 165



Date: 20.JUL.2019 15:16:50

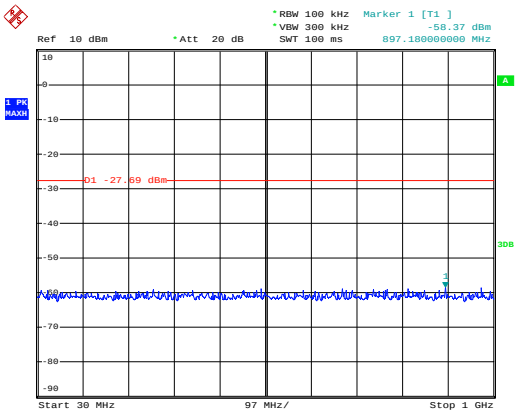
Test Plot

802.11n40 on channel 151



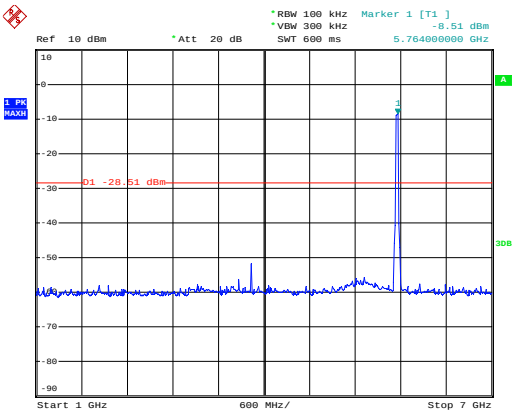
Date: 20.JUL.2019 15:20:02

802.11n40 on channel 159



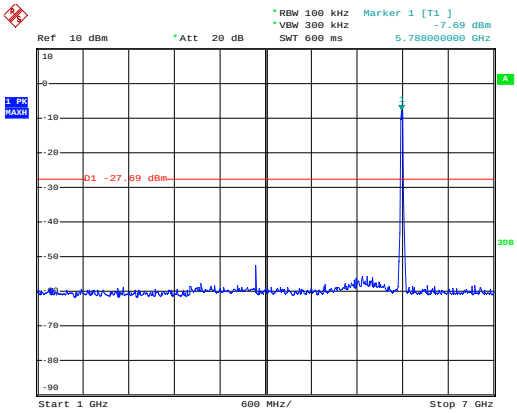
Date: 20.JUL.2019 15:23:29

802.11n40 on channel 151



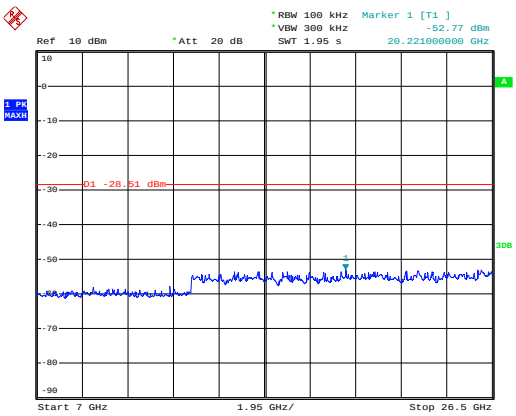
Date: 20.JUL.2019 15:19:36

802.11n40 on channel 159



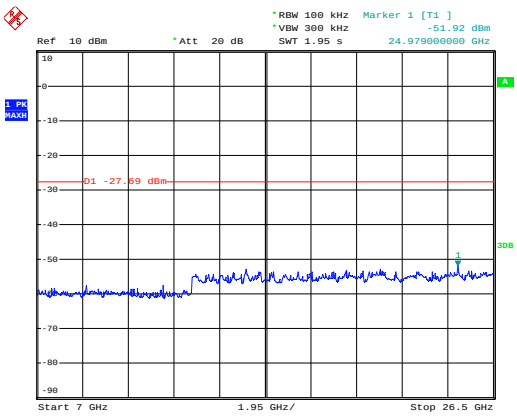
Date: 20.JUL.2019 15:22:59

802.11n40 on channel 151



Date: 20.JUL.2019 15:20:25

802.11n40 on channel 159



Date: 20.JUL.2019 15:23:54

9. Frequency Stability Measurement

9.1 LIMIT

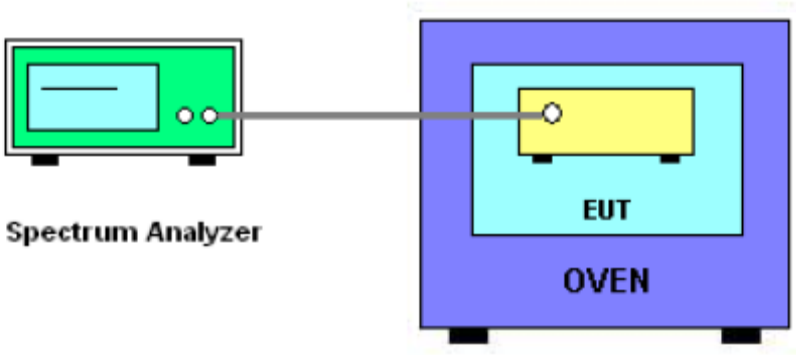
Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification).

9.2 TEST PROCEDURES

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10_6 ppm and the limit is less than ±20ppm (IEEE 802.11nspecification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is -20°C~70°C.

9.3 TEST SETUP LAYOUT



9.4 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously un-modulation transmitting mode.

9.5 TEST RESULTS

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101 kPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX Frequency Band I (5150-5250MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5180.0523	5180	0.0523	-10.0965
		V max (V)	13.80	5180.0324	5180	0.0324	-6.2548
		V min (V)	10.20	5180.0242	5180	0.0242	-4.6718
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5180.0056	5180	0.0056	-1.0811
		T (°C)	-10	5180.0106	5180	0.0106	-2.0463
		T (°C)	0	5180.0324	5180	0.0324	-6.2548
		T (°C)	10	5180.0385	5180	0.0385	-7.4324
		T (°C)	20	5180.0298	5180	0.0298	-5.7529
		T (°C)	30	5180.0212	5180	0.0212	-4.0927
		T (°C)	40	5180.0122	5180	0.0122	-2.3552
		T (°C)	50	5180.0096	5180	0.0096	-1.8533
		T (°C)	60	5180.0416	5180	0.0416	-8.0309
		T (°C)	70	5180.0691	5180	0.0691	-13.3398
Limits				± 20 ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5200.0253	5200	0.0253	-4.8654
		V max (V)	13.80	5200.0422	5200	0.0422	-8.1154
		V min (V)	10.20	5200.0691	5200	0.0691	-13.2885
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5200.0635	5200	0.0635	-12.2115
		T (°C)	-10	5200.0528	5200	0.0528	-10.1538
		T (°C)	0	5200.0437	5200	0.0437	-8.4038
		T (°C)	10	5200.0924	5200	0.0924	-17.7692
		T (°C)	20	5200.0632	5200	0.0632	-12.1538
		T (°C)	30	5200.0125	5200	0.0125	-2.4038
		T (°C)	40	5200.0734	5200	0.0734	-14.1154
		T (°C)	50	5200.0416	5200	0.0416	-8.0000
		T (°C)	60	5200.0322	5200	0.0322	-6.1923
		T (°C)	70	5200.0423	5200	0.0423	-8.1346
Limits				± 20 ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5240.0136	5240	0.0136	-2.5954
		V max (V)	13.80	5240.0415	5240	0.0415	-7.9198
		V min (V)	10.20	5240.0093	5240	0.0093	-1.7748
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5240.0634	5240	0.0634	-12.0992
		T (°C)	-10	5240.0526	5240	0.0526	-10.0382
		T (°C)	0	5240.0433	5240	0.0433	-8.2634
		T (°C)	10	5240.0926	5240	0.0926	-17.6718
		T (°C)	20	5240.0635	5240	0.0635	-12.1183
		T (°C)	30	5240.0123	5240	0.0123	-2.3473
		T (°C)	40	5240.0736	5240	0.0736	-14.0458
		T (°C)	50	5240.0413	5240	0.0413	-7.8817
		T (°C)	60	5240.0326	5240	0.0326	-6.2214
		T (°C)	70	5240.0421	5240	0.0421	-8.0344
Limits				± 20 ppm			
Result				Complies			

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101 kPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX Frequency(5745-5850MHz)		

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5745.0134	5745	0.0134	-2.3325
		V max (V)	13.80	5745.0412	5745	0.0412	-7.1715
		V min (V)	10.20	5745.0091	5745	0.0091	-1.5840
Limits				± 20 ppm			
Result				Complies			

Voltage vs. Frequency Stability
Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5745.0632	5745	0.0632	-11.0009
		T (°C)	-10	5745.0523	5745	0.0523	-9.1036
		T (°C)	0	5745.0432	5745	0.0432	-7.5196
		T (°C)	10	5745.0924	5745	0.0924	-16.0836
		T (°C)	20	5745.0634	5745	0.0634	-11.0357
		T (°C)	30	5745.0124	5745	0.0124	-2.1584
		T (°C)	40	5745.0732	5745	0.0732	-12.7415
		T (°C)	50	5745.0412	5745	0.0412	-7.1715
		T (°C)	60	5745.0323	5745	0.0323	-5.6223
		T (°C)	70	5745.0425	5745	0.0425	-7.3977
Limits				± 20 ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5785.00801	5785	0.00801	-1.3839
		V max (V)	13.80	5785.00397	5785	0.00397	-0.6855
		V min (V)	10.20	5785.01049	5785	0.01049	-1.8128
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5785.0635	5785	0.0635	-10.9767
		T (°C)	-10	5785.0527	5785	0.0527	-9.1098
		T (°C)	0	5785.0434	5785	0.0434	-7.5022
		T (°C)	10	5785.0923	5785	0.0923	-15.9551
		T (°C)	20	5785.0633	5785	0.0633	-10.9421
		T (°C)	30	5785.0126	5785	0.0126	-2.1780
		T (°C)	40	5785.0731	5785	0.0731	-12.6361
		T (°C)	50	5785.0419	5785	0.0419	-7.2429
		T (°C)	60	5785.0322	5785	0.0322	-5.5661
		T (°C)	70	5785.0423	5785	0.0423	-7.3120
Limits				± 20 ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5825.00931	5825	0.00931	-1.5976
		V max (V)	13.80	5825.01200	5825	0.01200	-2.0602
		V min (V)	10.20	5825.00086	5825	0.00086	-0.1471
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5825.0634	5825	0.0634	-10.8841
		T (°C)	-10	5825.0524	5825	0.0524	-8.9957
		T (°C)	0	5825.0432	5825	0.0432	-7.4163
		T (°C)	10	5825.0921	5825	0.0921	-15.8112
		T (°C)	20	5825.0637	5825	0.0637	-10.9356
		T (°C)	30	5825.0123	5825	0.0123	-2.1116
		T (°C)	40	5825.0736	5825	0.0736	-12.6352
		T (°C)	50	5825.0415	5825	0.0415	-7.1245
		T (°C)	60	5825.0326	5825	0.0326	-5.5966
		T (°C)	70	5825.0427	5825	0.0427	-7.3305
Limits				± 20 ppm			
Result				Complies			

10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

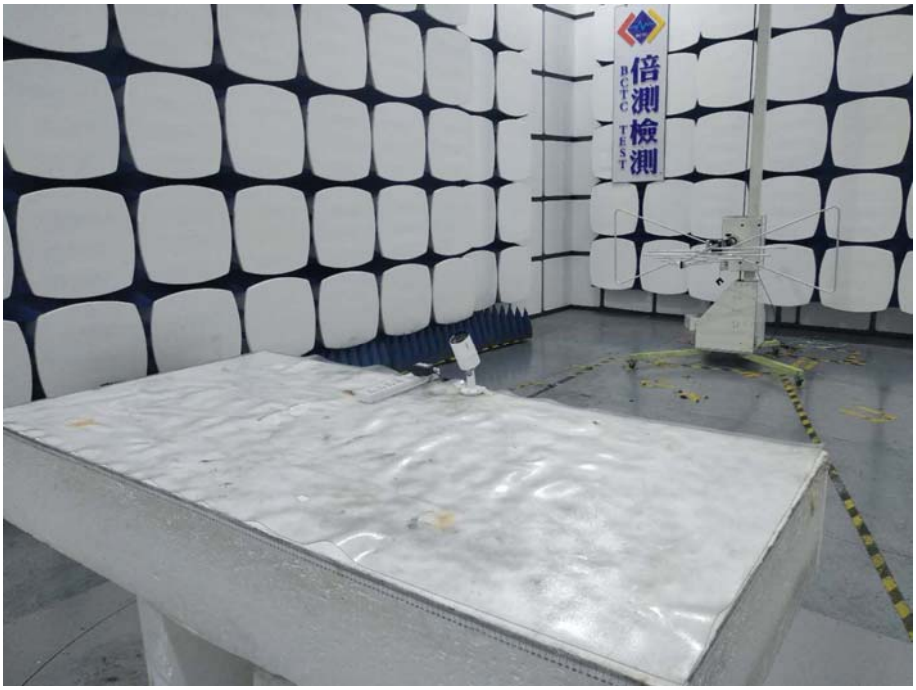
10.2 EUT ANTENNA

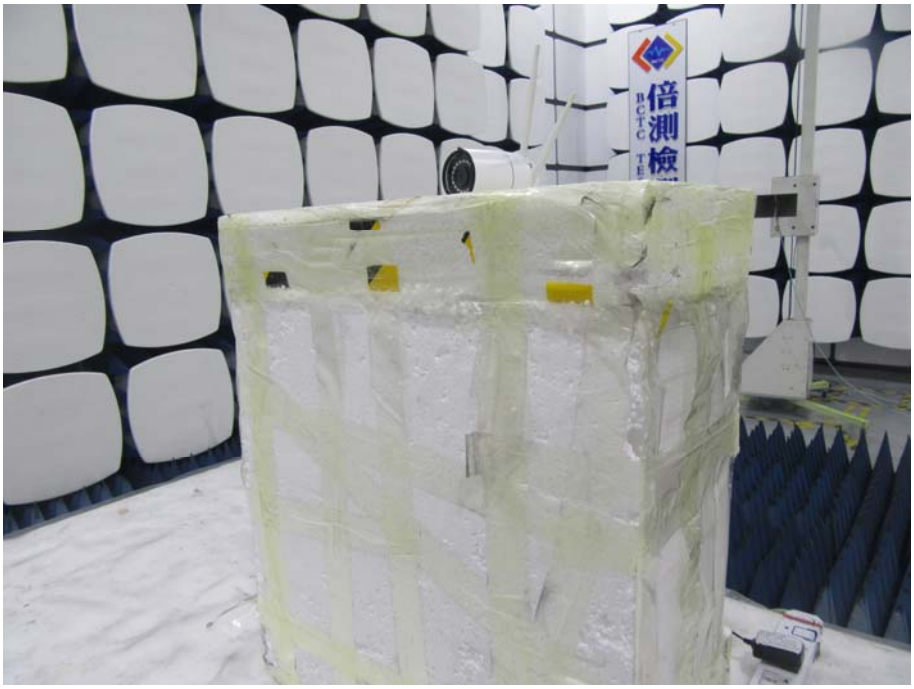
The EUT antenna is R-SMA Antenna. It comply with the standard requirement.

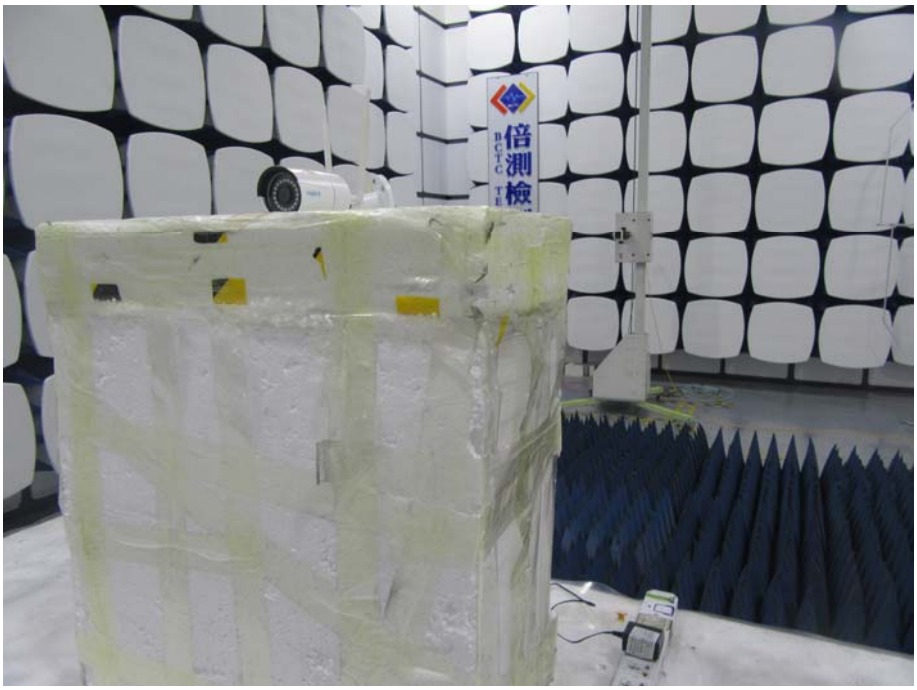
11. EUT TEST PHOTO

Conducted Measurement Photos

Radiated Measurement Photos







12. EUT PHOTO

******* END OF REPORT *******