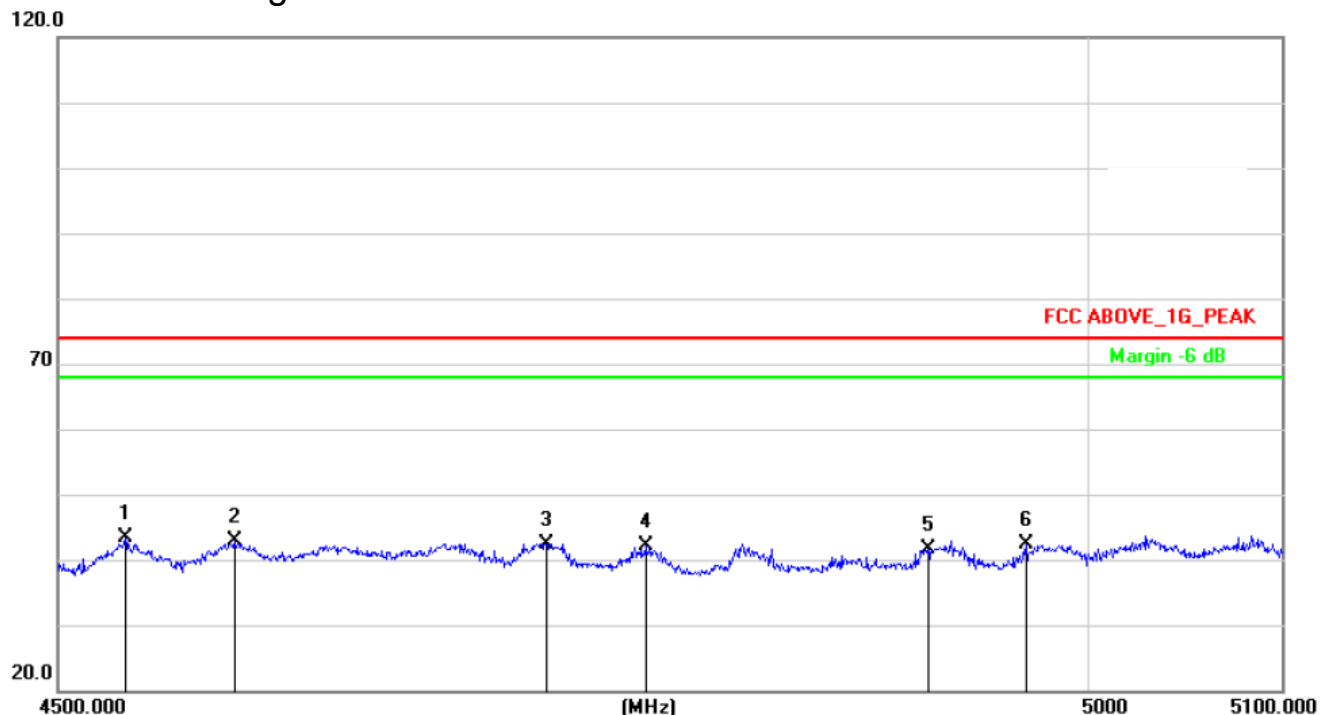
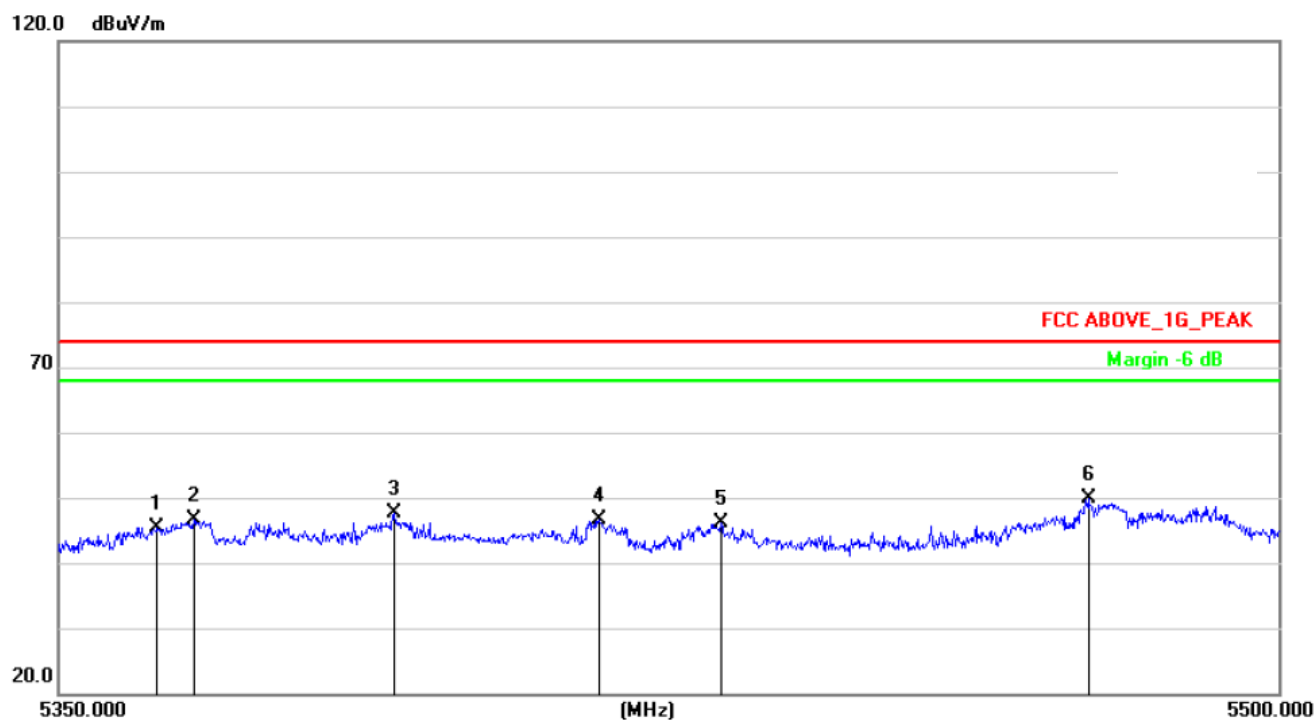


Radiated bandedge



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4531.200	43.99	-0.63	43.36	74.00	-30.64	peak
2	4582.200	43.44	-0.59	42.85	74.00	-31.15	peak
3	4731.000	42.96	-0.48	42.48	74.00	-31.52	peak
4	4779.000	42.46	-0.45	42.01	74.00	-31.99	peak
5	4919.400	42.06	-0.35	41.71	74.00	-32.29	peak
6	4968.600	42.63	-0.31	42.32	74.00	-31.68	peak



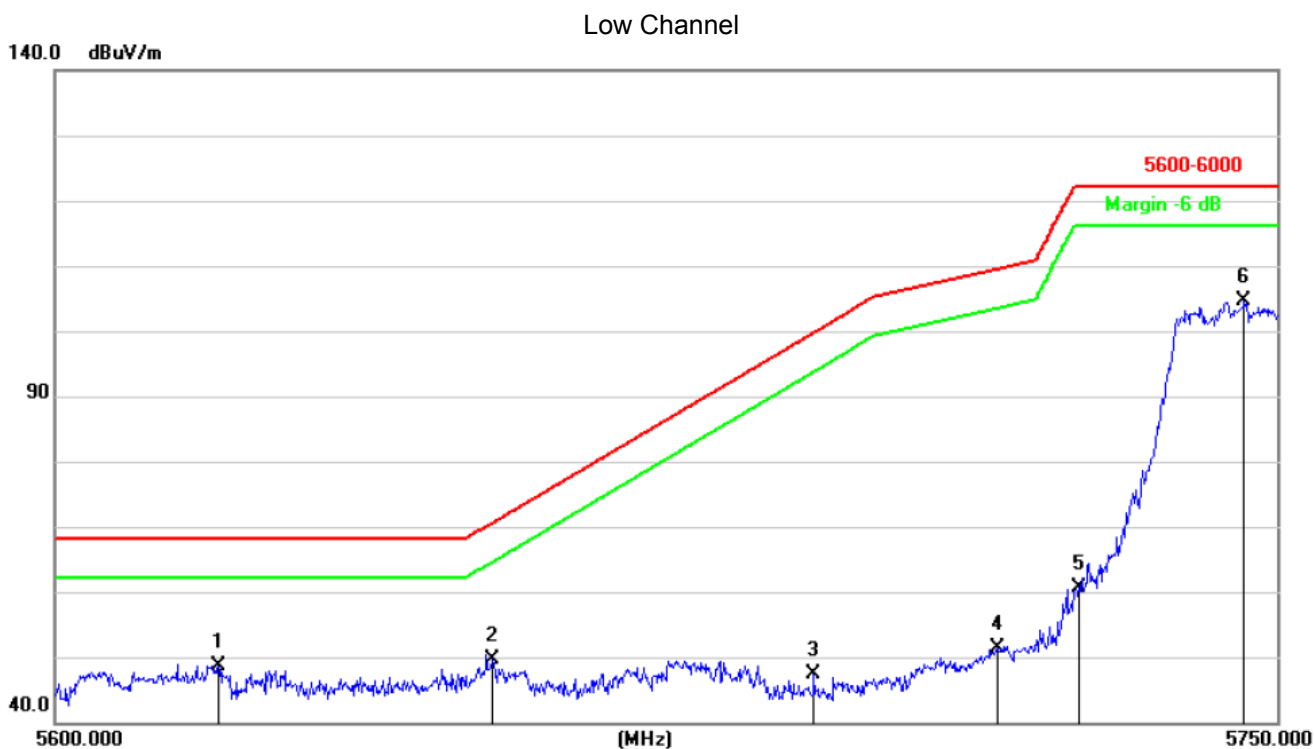
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5362.000	44.17	1.25	45.42	74.00	-28.58	peak
2	5366.500	45.24	1.27	46.51	74.00	-27.49	peak
3	5390.950	46.23	1.37	47.60	74.00	-26.40	peak
4	5416.000	45.24	1.48	46.72	74.00	-27.28	peak
5	5431.000	44.55	1.54	46.09	74.00	-27.91	peak
6	5476.450	48.24	1.73	49.97	68.20	-18.23	peak

Note:

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

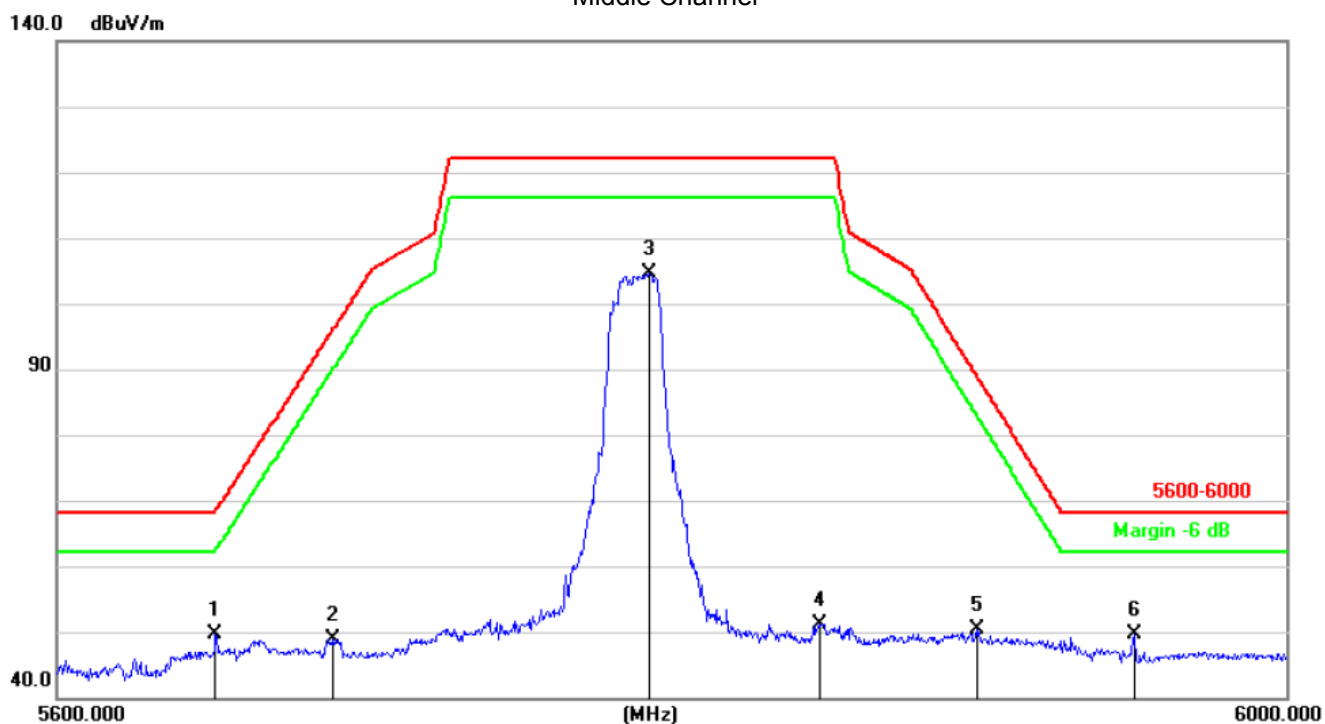
802.11n(HT20)

For the frequency band 5745-5825MHz



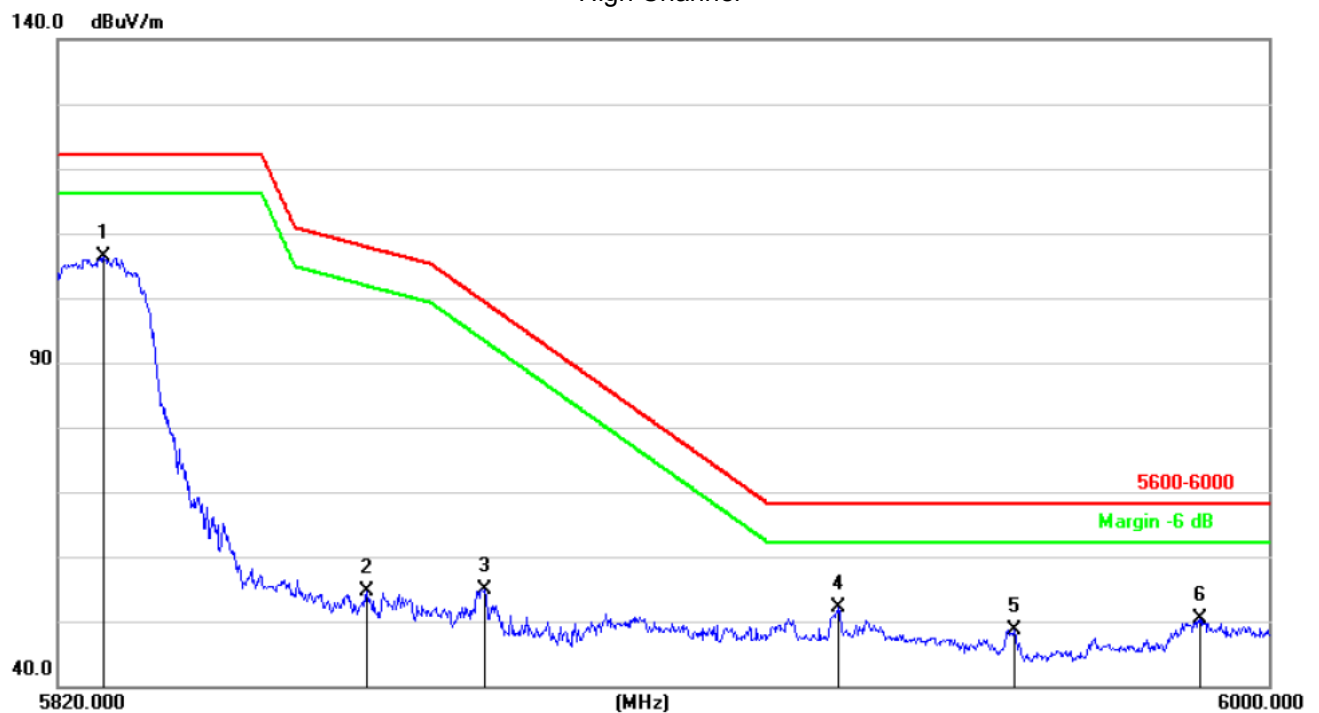
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5619.950	46.40	2.34	48.74	68.20	-19.46	peak
2	5653.250	47.11	2.49	49.60	70.61	-21.01	peak
3	5692.700	44.75	2.65	47.40	99.82	-52.42	peak
4	5715.350	48.54	2.75	51.29	109.50	-58.21	peak
5	5725.550	57.91	2.79	60.70	122.20	-61.50	peak
6	5745.950	101.76	2.88	104.64	122.20	-17.56	peak

Middle Channel



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.400	47.16	2.47	49.63	68.50	-18.87	peak
2	5687.600	46.29	2.63	48.92	96.05	-47.13	peak
3	5789.600	101.60	3.07	104.67	122.20	-17.53	peak
4	5845.200	47.80	3.30	51.10	122.20	-71.10	peak
5	5896.800	46.79	3.52	50.31	89.03	-38.72	peak
6	5949.600	45.95	3.75	49.70	68.20	-18.50	peak

High Channel



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5826.840	103.15	3.22	106.37	122.20	-15.83	peak
2	5865.540	51.14	3.39	54.53	107.85	-53.32	peak
3	5882.820	51.47	3.46	54.93	99.39	-44.46	peak
4	5935.560	48.43	3.69	52.12	68.20	-16.08	peak
5	5961.840	44.89	3.80	48.69	68.20	-19.51	peak
6	5989.740	46.52	3.92	50.44	68.20	-17.76	peak

Note:

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

8.SPURIOUS RF CONDUCTED EMISSIONS

8.1CONFORMANCE LIMIT

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(i) 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.

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

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.

8.5TEST RESULTS

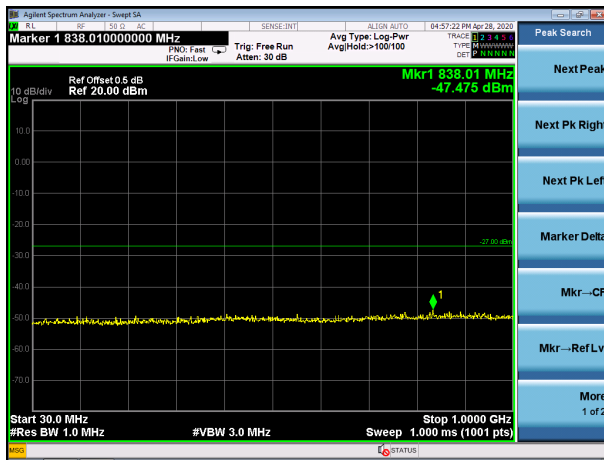
Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandedge measurement data.

About:26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

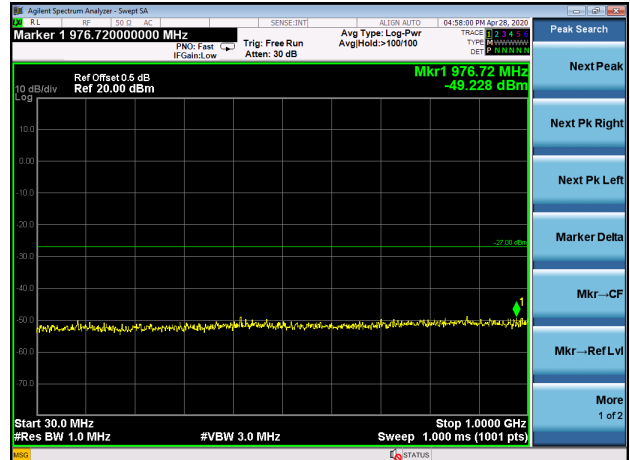
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A ,only shown Antenna A Plot.

5.1G

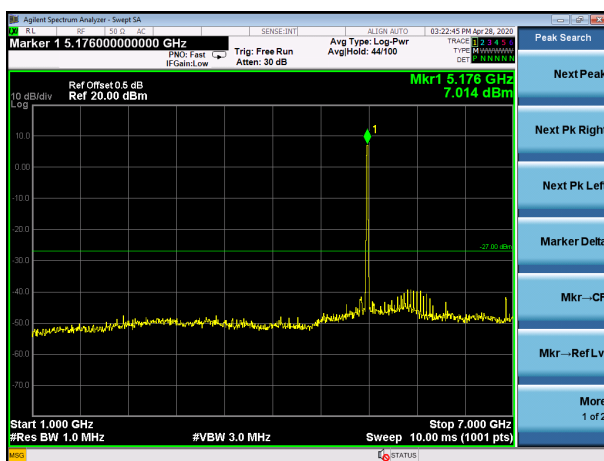
802.11a on channel 36



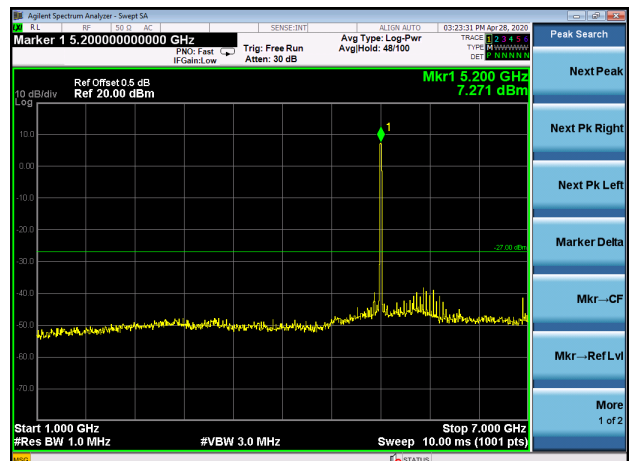
802.11a on channel 40



802.11a on channel 36



802.11a on channel 40



802.11a on channel 36

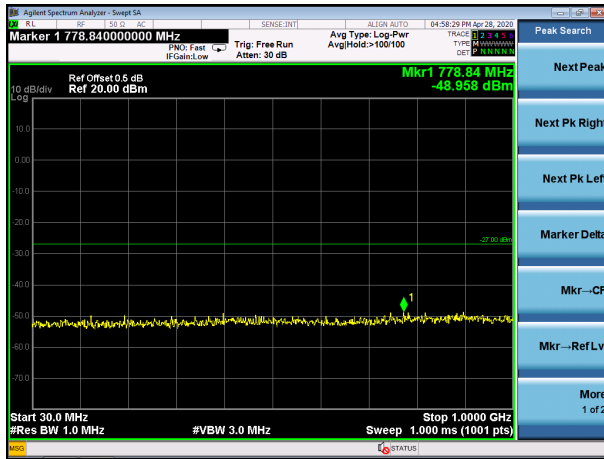


802.11a on channel 40

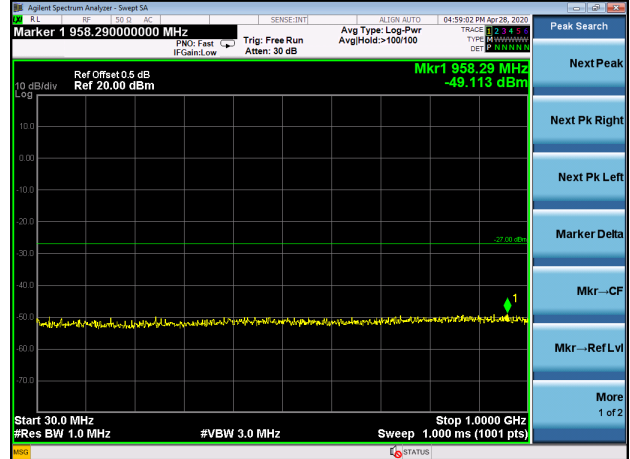


Test Plot

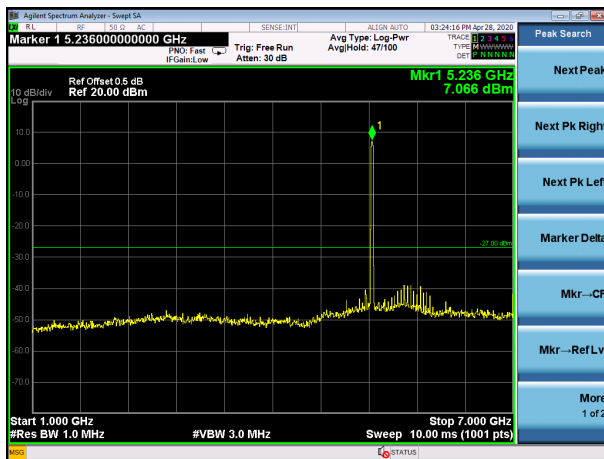
802.11a on channel 48



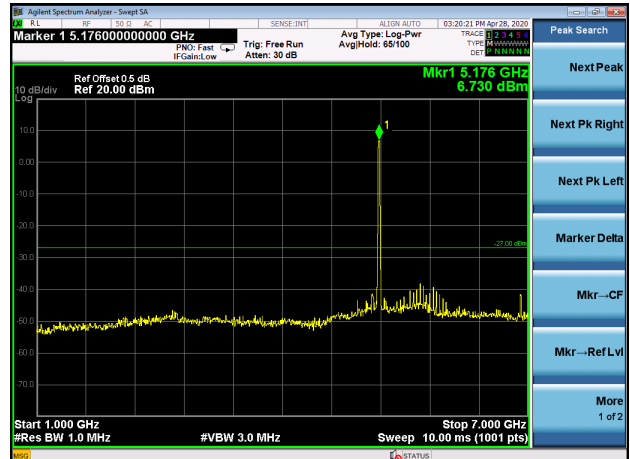
802.11n20 on channel 36



802.11a on channel 48



802.11n20 on channel 36



802.11a on channel 48

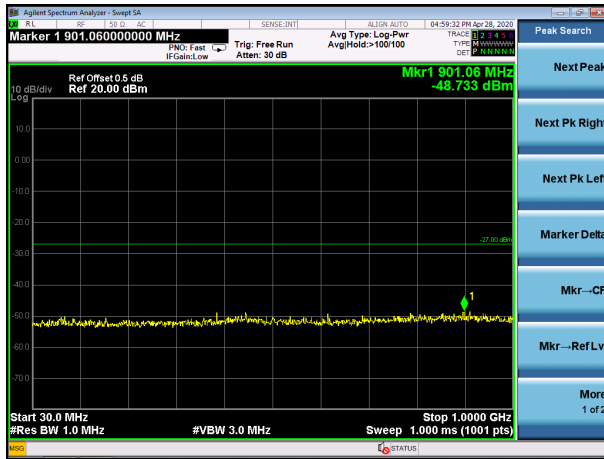


802.11n20 on channel 36

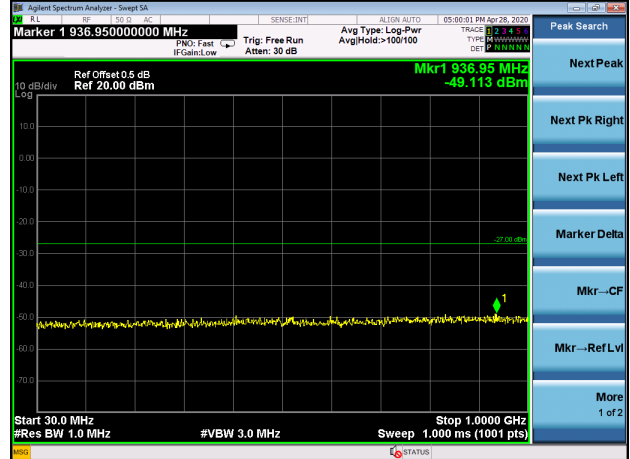


Test Plot

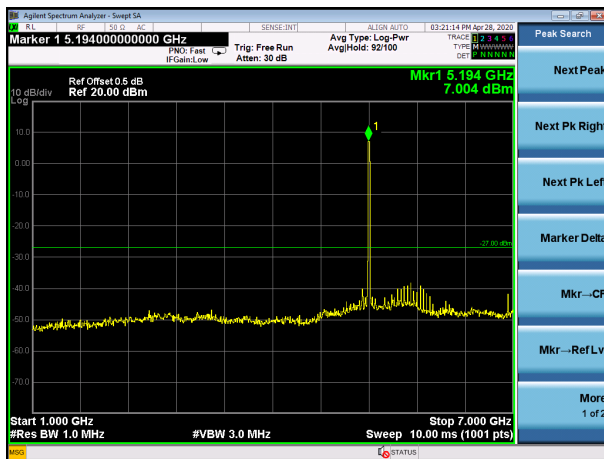
802.11n20 on channel 40



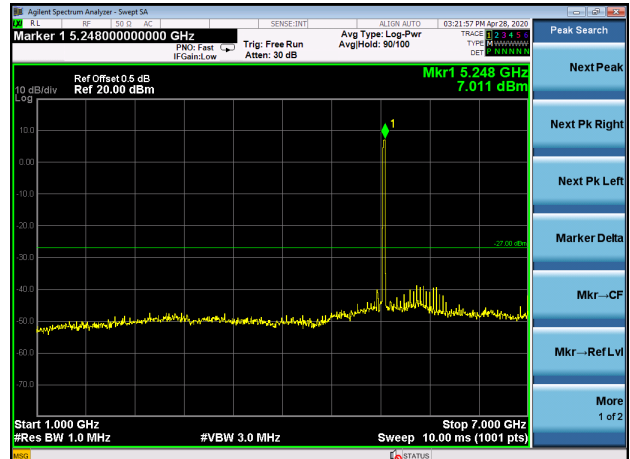
802.11n20 on channel 48



802.11n20 on channel 40



802.11n20 on channel 48



802.11n20 on channel 40

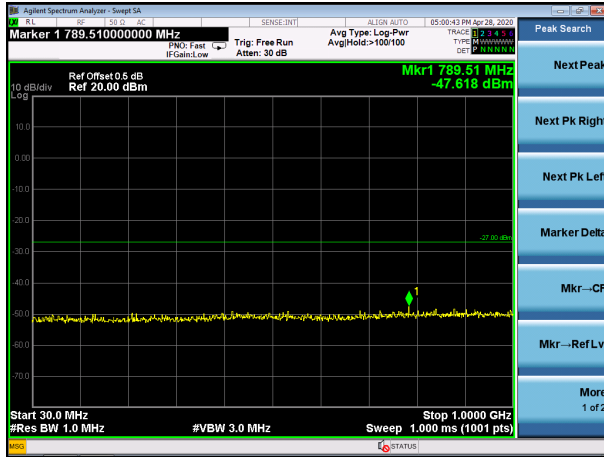


802.11n20 on channel 48

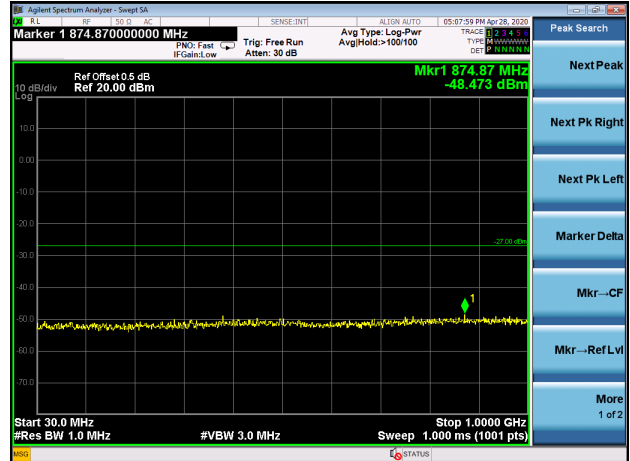


Test Plot

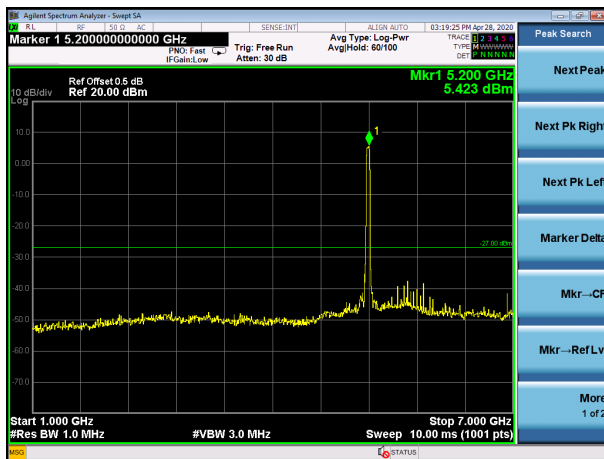
802.11n40 on channel 38



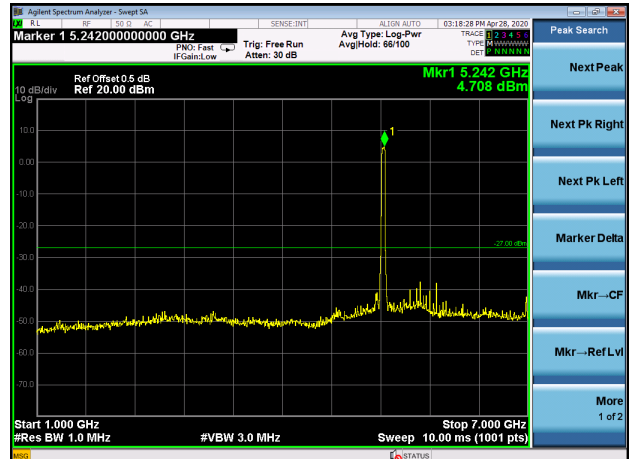
802.11n40 on channel 46



802.11n40 on channel 38



802.11n40 on channel 46



802.11n40 on channel 38



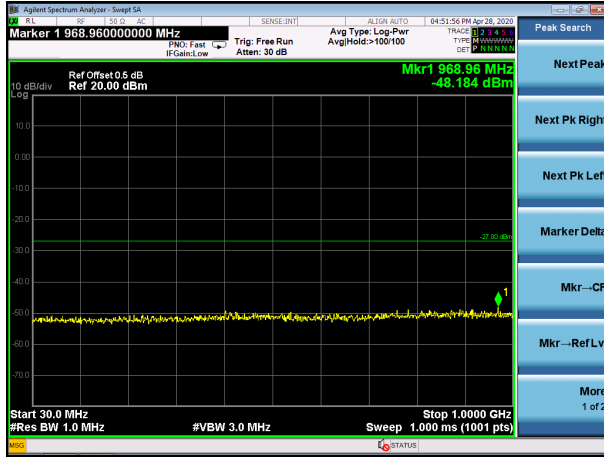
802.11n40 on channel 46



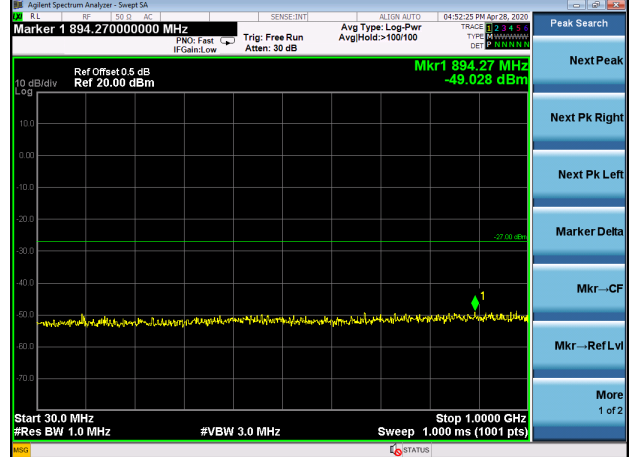
5.8G

Test Plot

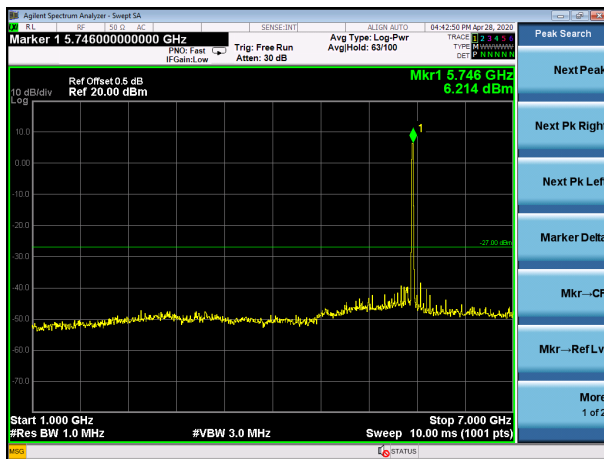
802.11a on channel 149



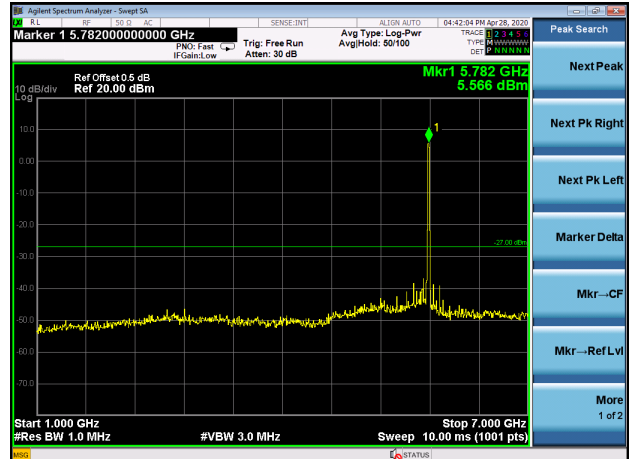
802.11a on channel 157



802.11a on channel 149



802.11a on channel 157



802.11a on channel 149

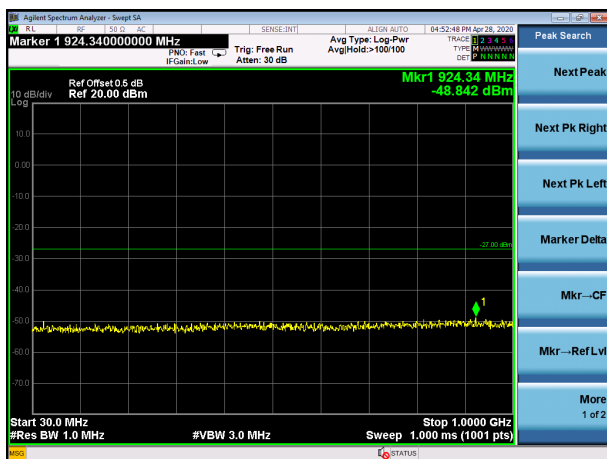


802.11a on channel 157

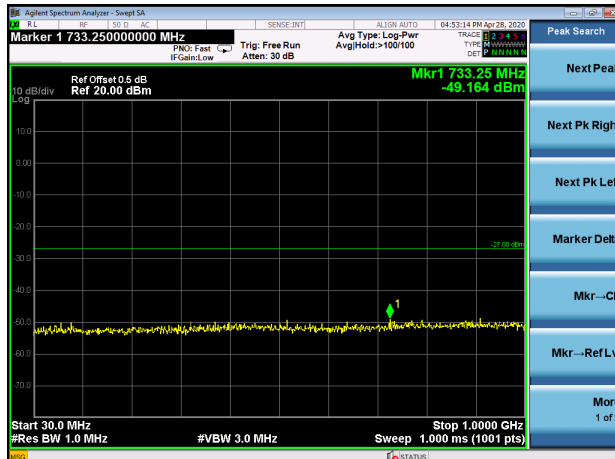


Test Plot

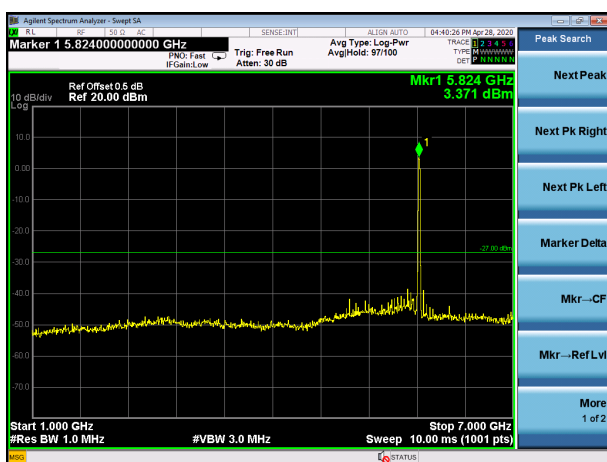
802.11a on channel 165



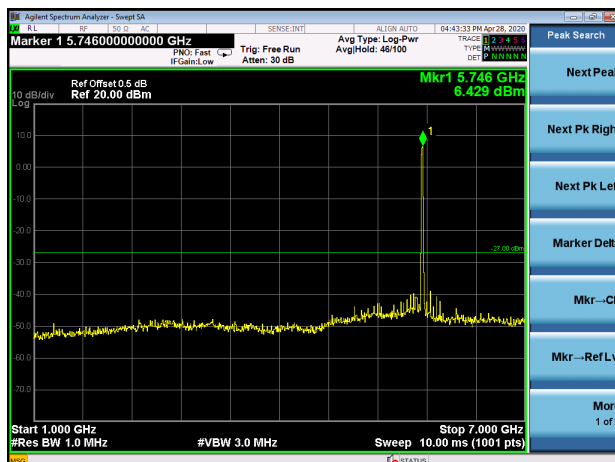
802.11n20 on channel 149



802.11a on channel 165



802.11n20 on channel 149



802.11a on channel 165

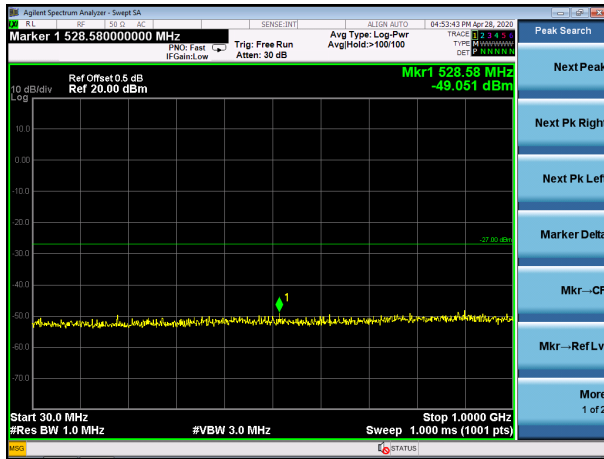


802.11n20 on channel 149

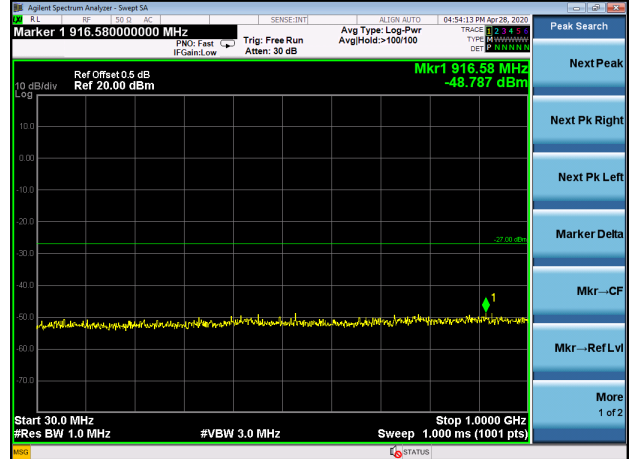


Test Plot

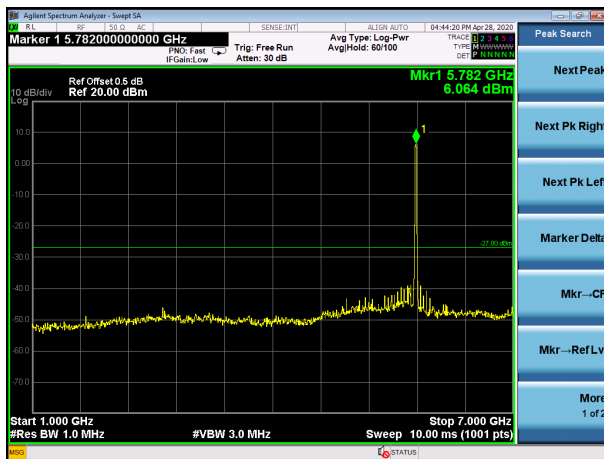
802.11n20 on channel 157



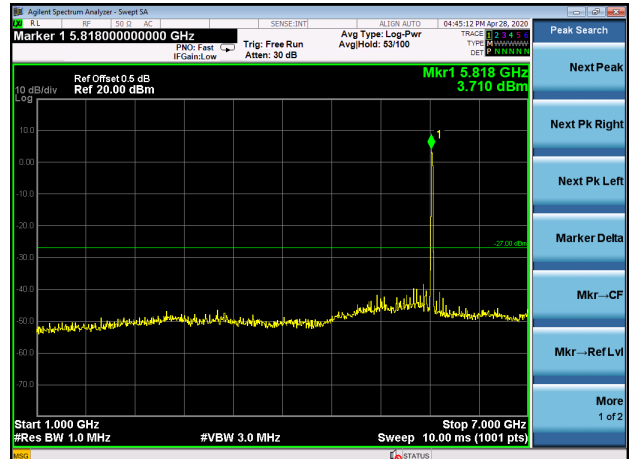
802.11n20 on channel 165



802.11n20 on channel 157



802.11n20 on channel 165



802.11n20 on channel 157

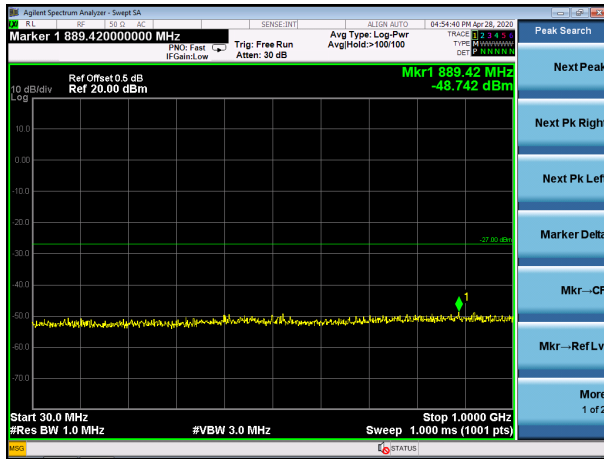


802.11n20 on channel 165

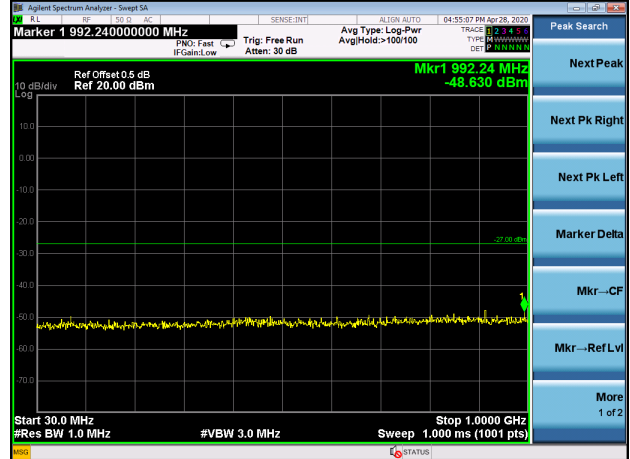


Test Plot

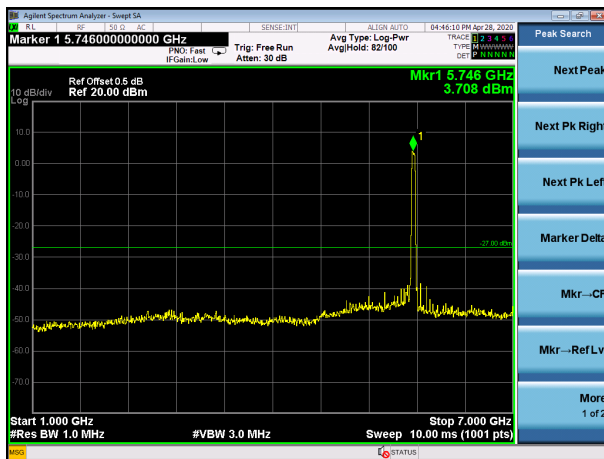
802.11n40 on channel 151



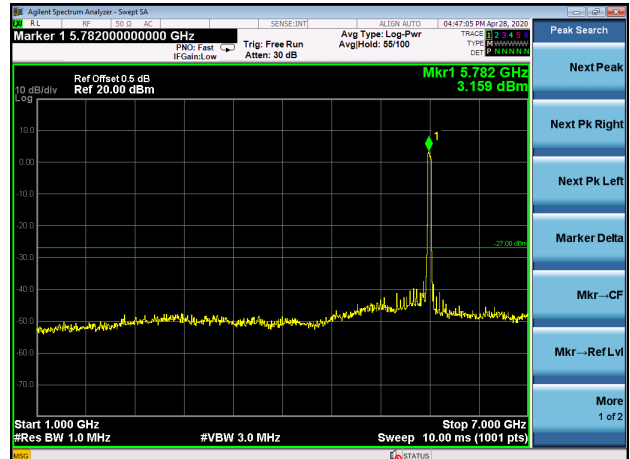
802.11n40 on channel 159



802.11n40 on channel 151



802.11n40 on channel 159



802.11n40 on channel 151



802.11n40 on channel 159



9. Frequency Stability Measurement

9.1 LIMIT

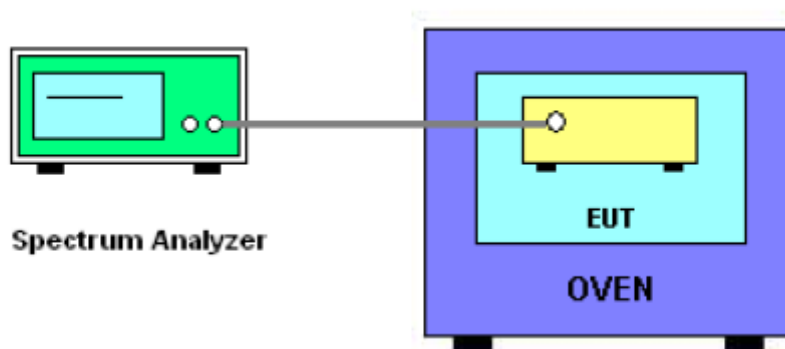
Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

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. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 10^6$ ppm and the limit is less than ± 20 ppm (IEEE 802.11n specification).
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 $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$.

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 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 7.4V
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	7.40	5180.0526	5180	0.0526	10.1544
		V max (V)	8.51	5180.0325	5180	0.0325	6.2741
		V min (V)	6.29	5180.0244	5180	0.0244	4.7104
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	7.4	T (°C)	-20	5180.0056	5180	0.0056	1.0811
		T (°C)	-10	5180.0102	5180	0.0102	1.9691
		T (°C)	0	5180.0326	5180	0.0326	6.2934
		T (°C)	10	5180.0384	5180	0.0384	7.4131
		T (°C)	20	5180.0293	5180	0.0293	5.6564
		T (°C)	30	5180.0216	5180	0.0216	4.1699
		T (°C)	40	5180.0127	5180	0.0127	2.4517
		T (°C)	50	5180.0093	5180	0.0093	1.7954
		T (°C)	60	5180.0416	5180	0.0416	8.0309
		T (°C)	70	5180.0694	5180	0.0694	13.3977
Limits				5150-5250 MHz			
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)	7.40	5200.0254	5200	0.0254	4.8846
		V max (V)	8.51	5200.0426	5200	0.0426	8.1923
		V min (V)	6.29	5200.0697	5200	0.0697	13.4038
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	7.4	T (°C)	-20	5200.0633	5200	0.0633	12.1731
		T (°C)	-10	5200.0525	5200	0.0525	10.0962
		T (°C)	0	5200.0433	5200	0.0433	8.3269
		T (°C)	10	5200.0926	5200	0.0926	17.8077
		T (°C)	20	5200.0635	5200	0.0635	12.2115
		T (°C)	30	5200.0129	5200	0.0129	2.4808
		T (°C)	40	5200.0733	5200	0.0733	14.0962
		T (°C)	50	5200.0414	5200	0.0414	7.9615
		T (°C)	60	5200.0325	5200	0.0325	6.2500
		T (°C)	70	5200.0426	5200	0.0426	8.1923
Limits				5150-5250 MHz			
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)	7.40	5240.0133	5240	0.0133	2.5382
		V max (V)	8.51	5240.0415	5240	0.0415	7.9198
		V min (V)	6.29	5240.0094	5240	0.0094	1.7939
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	7.4	T (°C)	-20	5240.0094	5240	0.0094	1.7939
		T (°C)	-10	5240.0035	5240	0.0035	0.6679
		T (°C)	0	5240.0143	5240	0.0143	2.7290
		T (°C)	10	5240.0855	5240	0.0855	16.3168
		T (°C)	20	5240.0117	5240	0.0117	2.2328
		T (°C)	30	5240.0123	5240	0.0123	2.3473
		T (°C)	40	5240.0067	5240	0.0067	1.2786
		T (°C)	50	5240.0075	5240	0.0075	1.4313
		T (°C)	60	5240.0086	5240	0.0086	1.6412
		T (°C)	70	5240.0102	5240	0.0102	1.9466
Limits				5150-5250 MHz			
Result				Complies			

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 7.4V
Hzst Mode :	TX Frequency(5745-5825MHz)		

Voltage vs. Frequency Stabilit

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	7.40	5745.00111	5745	0.00111	0.1925
		V max (V)	8.51	5745.00048	5745	0.00048	0.0842
		V min (V)	6.29	5745.00026	5745	0.00026	0.0459
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	7.4	T (°C)	-20	5745.00523	5745	0.00523	0.9101
		T (°C)	-10	5745.00745	5745	0.00745	1.2975
		T (°C)	0	5745.00925	5745	0.00925	1.6098
		T (°C)	10	5745.00731	5745	0.00731	1.2723
		T (°C)	20	5745.01316	5745	0.01316	2.2899
		T (°C)	30	5745.00976	5745	0.00976	1.6981
		T (°C)	40	5745.00911	5745	0.00911	1.5856
		T (°C)	50	5745.00690	5745	0.00690	1.2003
		T (°C)	60	5745.01346	5745	0.01346	2.3437
		T (°C)	70	5745.00054	5745	0.00054	0.0933
Limits				5725-5850 MHz			
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)	5.00	5785.00855	5785	0.00855	1.4781
		V max (V)	5.75	5785.00095	5785	0.00095	0.1642
		V min (V)	4.25	5785.01134	5785	0.01134	1.9602
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	7.4	T (°C)	-20	5785.01355	5785	0.01355	2.3416
		T (°C)	-10	5785.00190	5785	0.00190	0.3286
		T (°C)	0	5785.00210	5785	0.00210	0.3630
		T (°C)	10	5785.00090	5785	0.00090	0.1561
		T (°C)	20	5785.00983	5785	0.00983	1.6999
		T (°C)	30	5785.01124	5785	0.01124	1.9421
		T (°C)	40	5785.01242	5785	0.01242	2.1464
		T (°C)	50	5785.01180	5785	0.01180	2.0400
		T (°C)	60	5785.00772	5785	0.00772	1.3340
		T (°C)	70	5785.00029	5785	0.00029	0.0505
Limits				5725-5850 MHz			
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)	5.00	5825.00652	5825	0.00652	1.1200
		V max (V)	5.75	5825.00628	5825	0.00628	1.0777
		V min (V)	4.25	5825.00552	5825	0.00552	0.9471
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	7.4	T (°C)	-20	5825.00640	5825	0.00640	1.0979
		T (°C)	-10	5825.01064	5825	0.01064	1.8267
		T (°C)	0	5825.00528	5825	0.00528	0.9064
		T (°C)	10	5825.00513	5825	0.00513	0.8811
		T (°C)	20	5825.01051	5825	0.01051	1.8037
		T (°C)	30	5825.01295	5825	0.01295	2.2228
		T (°C)	40	5825.00516	5825	0.00516	0.8858
		T (°C)	50	5825.00738	5825	0.00738	1.2664
		T (°C)	60	5825.00933	5825	0.00933	1.6015
		T (°C)	70	5825.01145	5825	0.01145	1.9662
Limits				5725-5850 MHz			
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

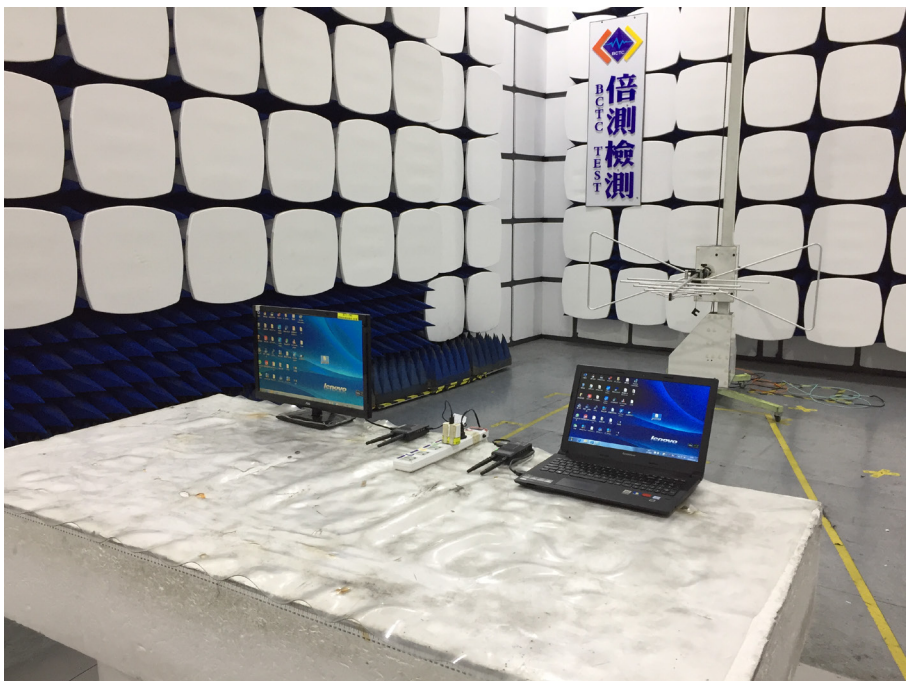
The EUT antenna is External antenna with RP-SMA connector, and the gain is 3dBi, it comply with the standard

11. EUT TEST PHOTO

Conducted Measurement Photos



Radiated Measurement Photos



12. EUT PHOTO

EUT Photo 1



EUT Photo 2



EUT Photo 3



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