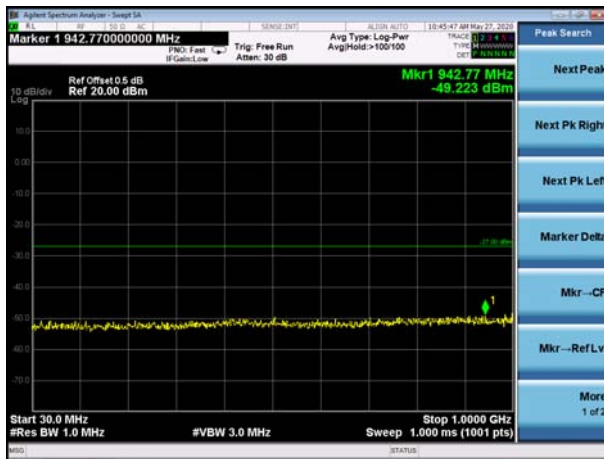
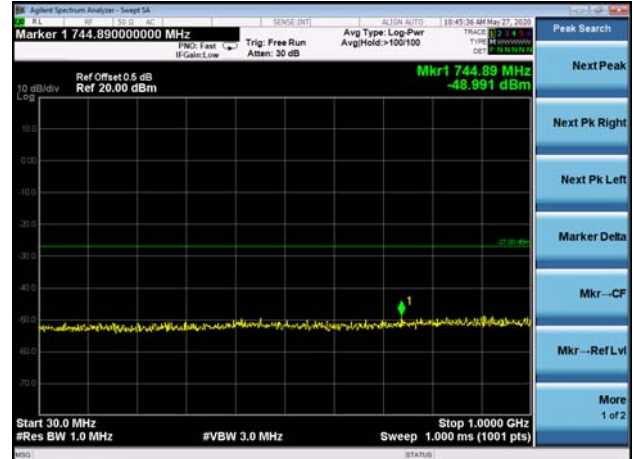


Test Plot

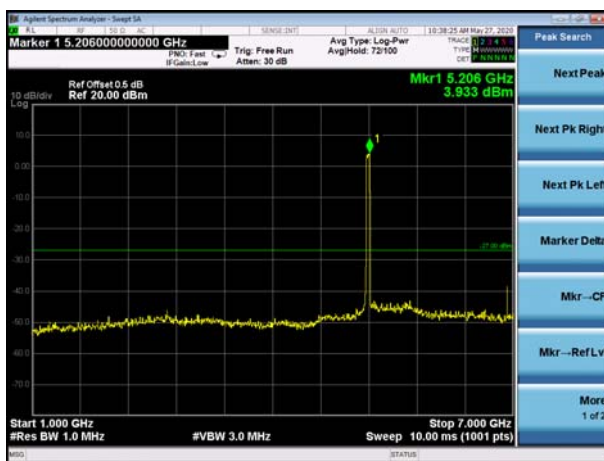
802.11n40 on channel 38



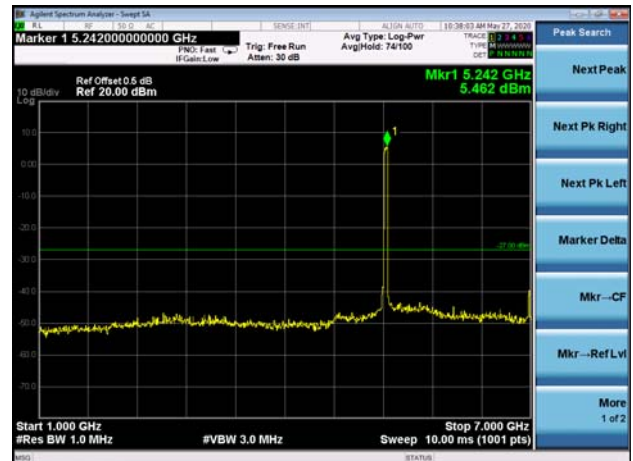
802.11n40 on channel 46



802.11n40 on channel 38



802.11n40 on channel 46



802.11n40 on channel 38

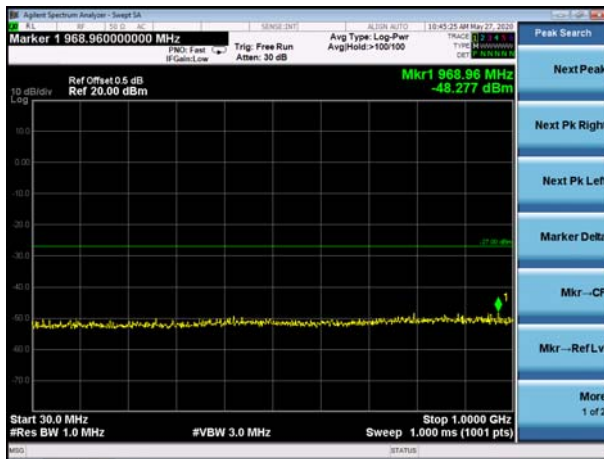


802.11n40 on channel 46

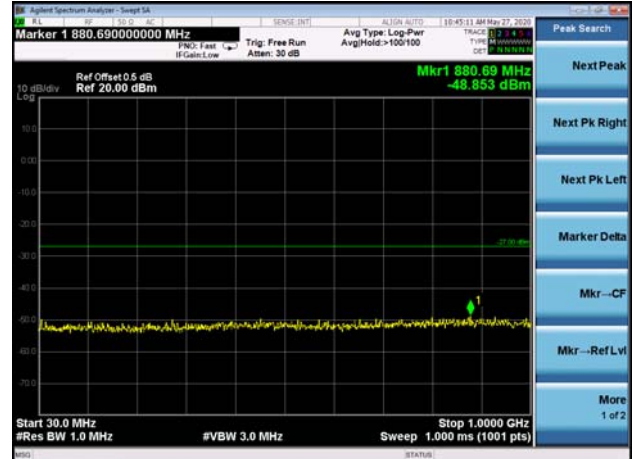


Test Plot

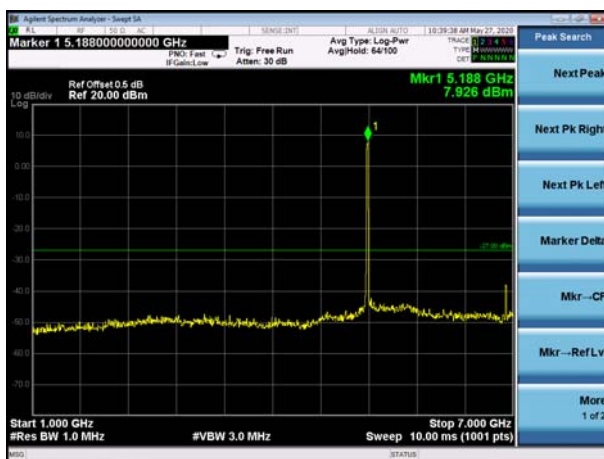
802.11ac20 on channel 36



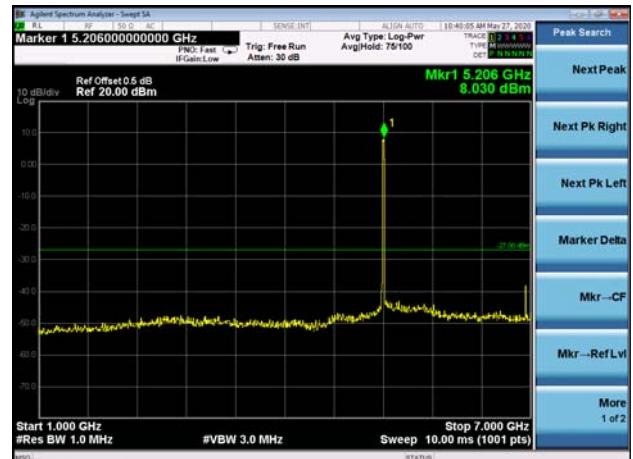
802.11ac20 on channel 40



802.11ac20 on channel 36



802.11ac20 on channel 40



802.11ac20 on channel 36

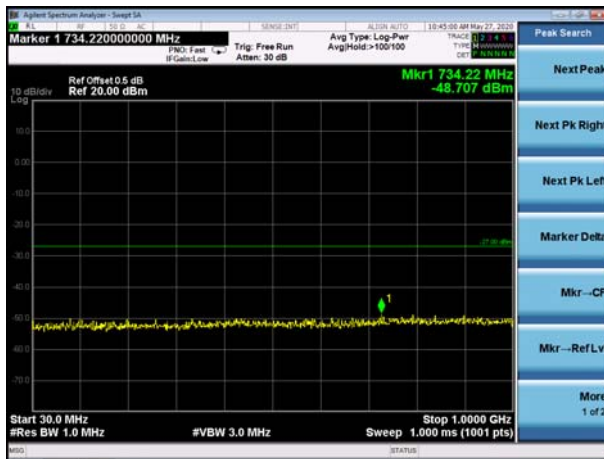


802.11ac20 on channel 40

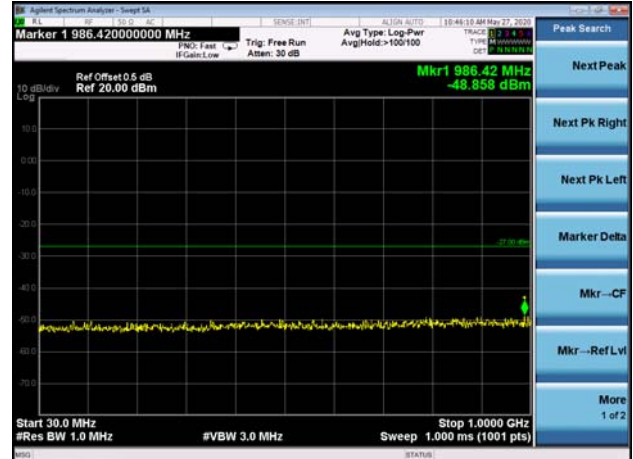


Test Plot

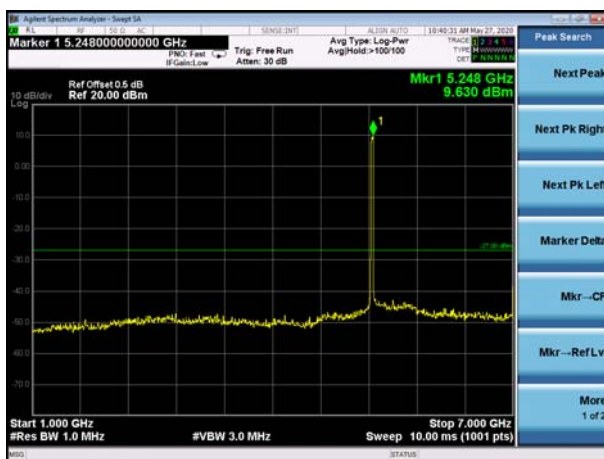
802.11ac20 on channel 48



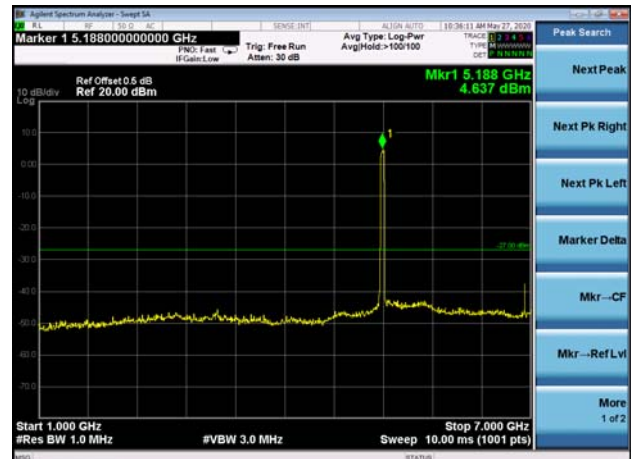
802.11ac40 on channel 38



802.11ac20 on channel 48



802.11ac40 on channel 38



802.11ac20 on channel 48

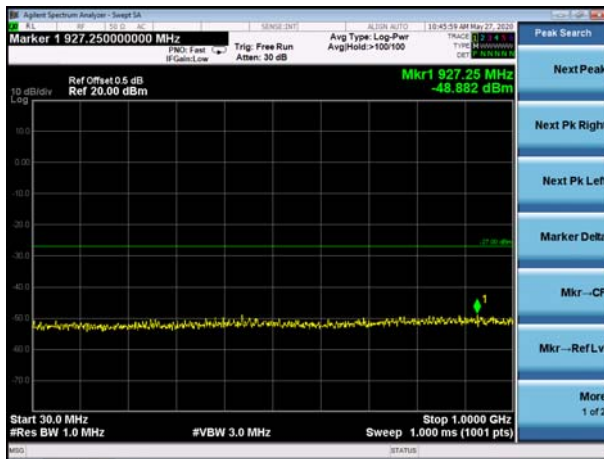


802.11ac40 on channel 38

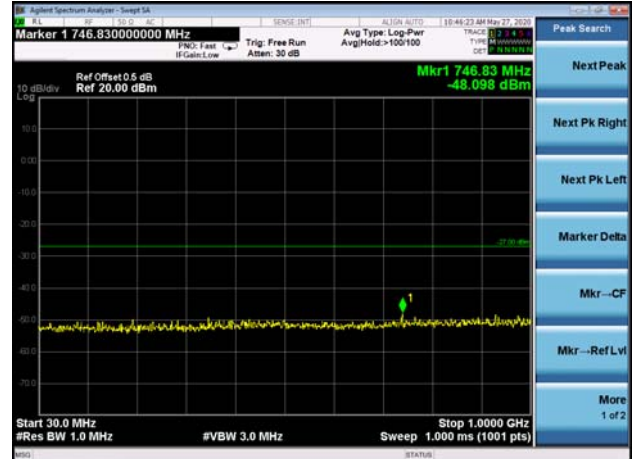


Test Plot

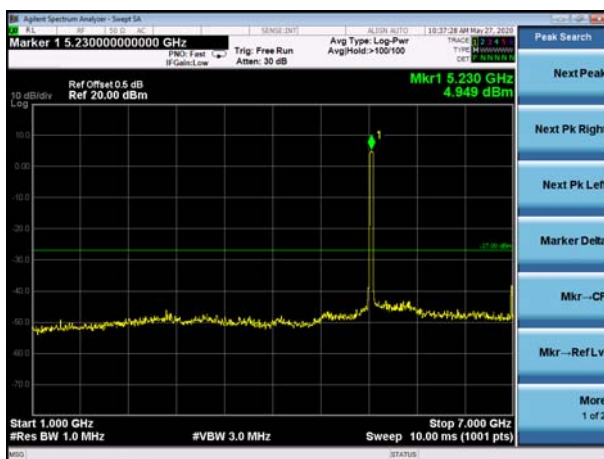
802.11ac40 on channel 46



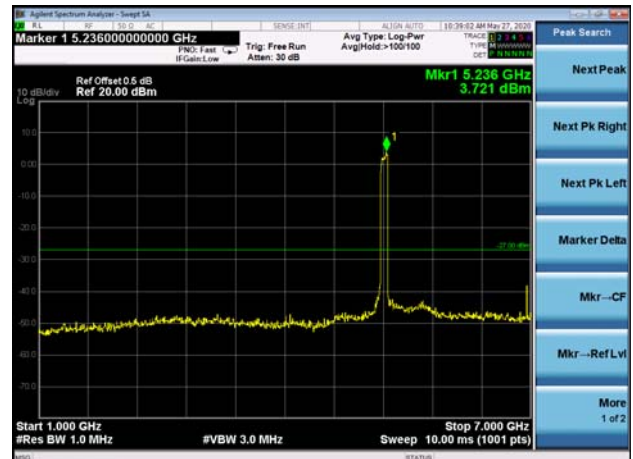
802.11ac80 on channel 42



802.11 ac40 on channel 46



802.11 ac80 on channel 42



802.11 ac40 on channel 46



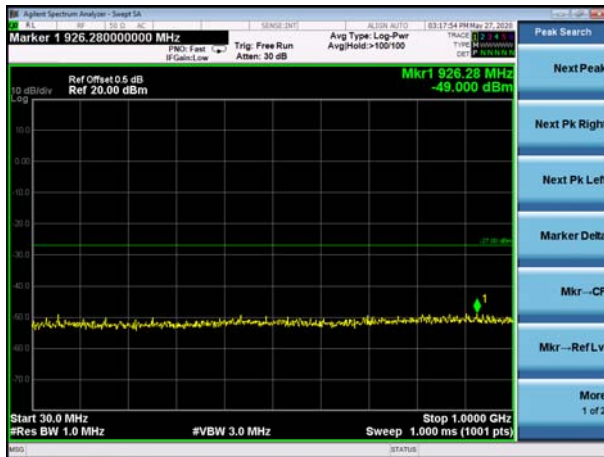
802.11 ac80 on channel 42



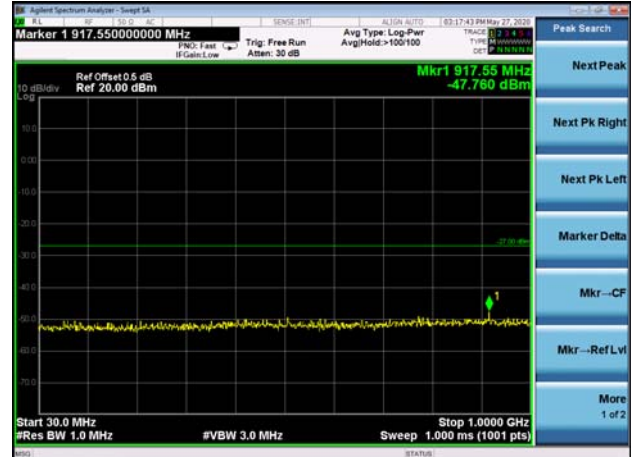
5.8G

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

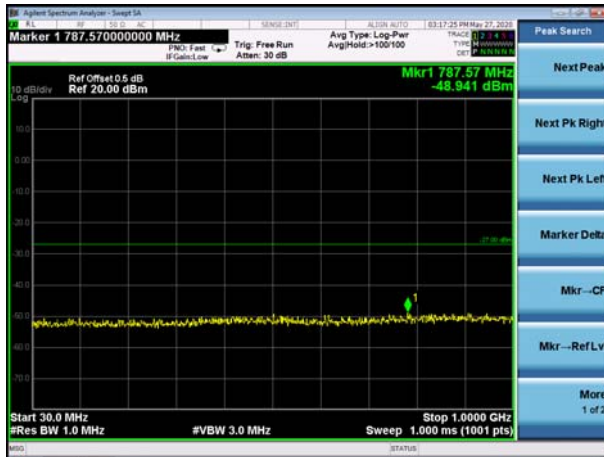


802.11a on channel 157

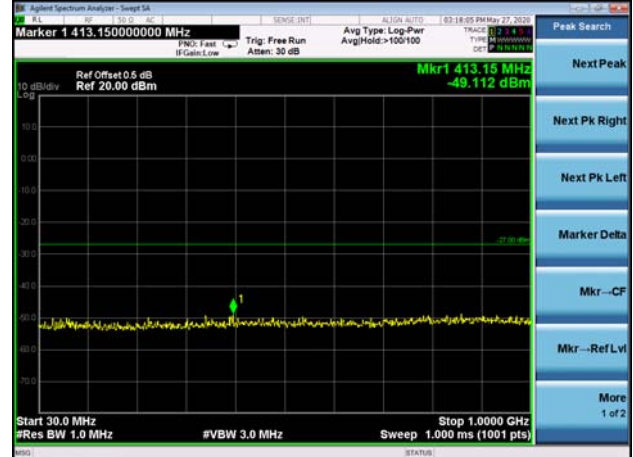


Test Plot

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

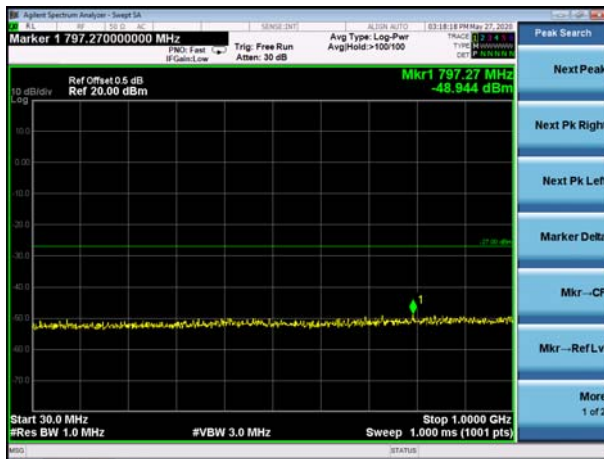


802.11n20 on channel 149

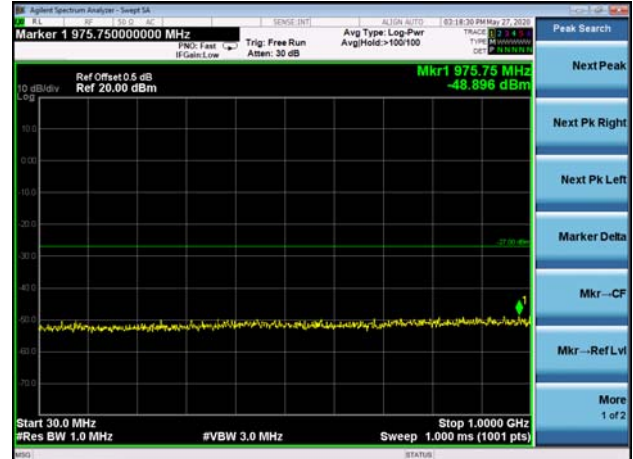


Test Plot

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

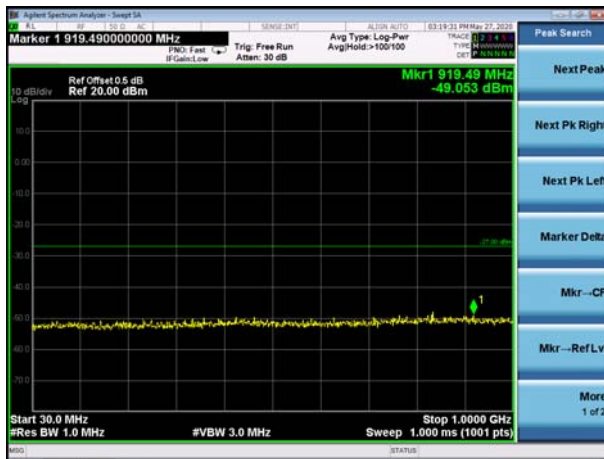


802.11n20 on channel 165

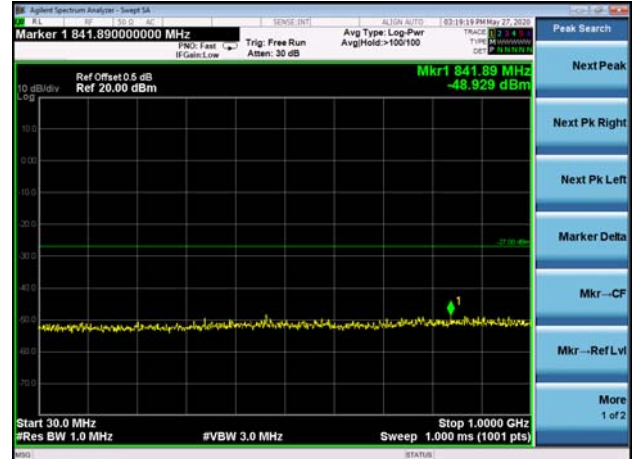


Test Plot

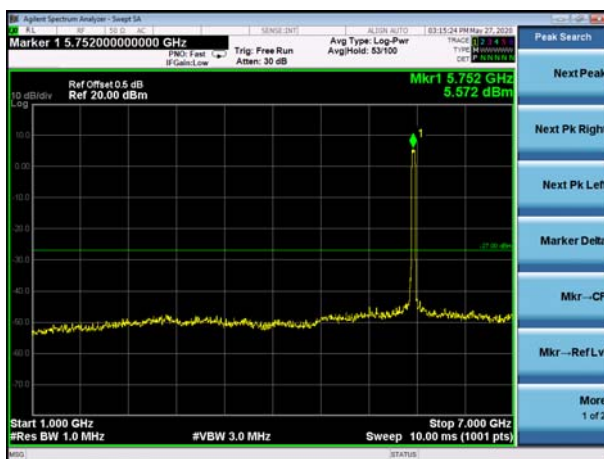
802.11n40 on channel 151



802.11n40 on channel 159



802.11n40 on channel 151



802.11n40 on channel 159



802.11n40 on channel 151

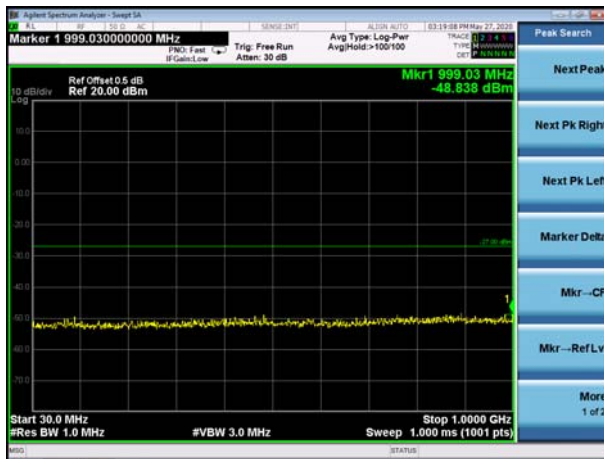


802.11n40 on channel 159

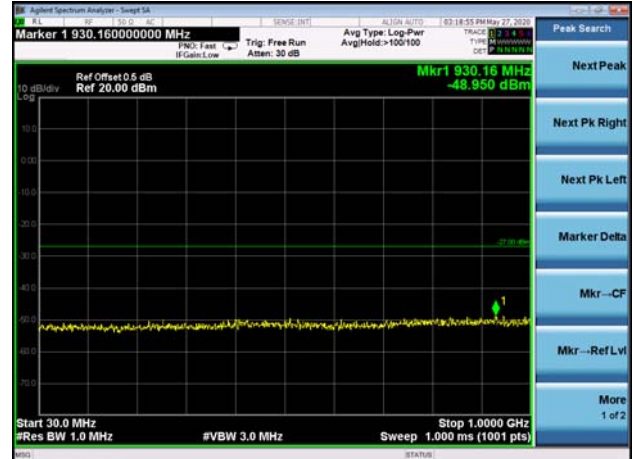


Test Plot

802.11ac20 on channel 149



802.11ac20 on channel 157



802.11ac20 on channel 149



802.11ac20 on channel 157



802.11ac20 on channel 149

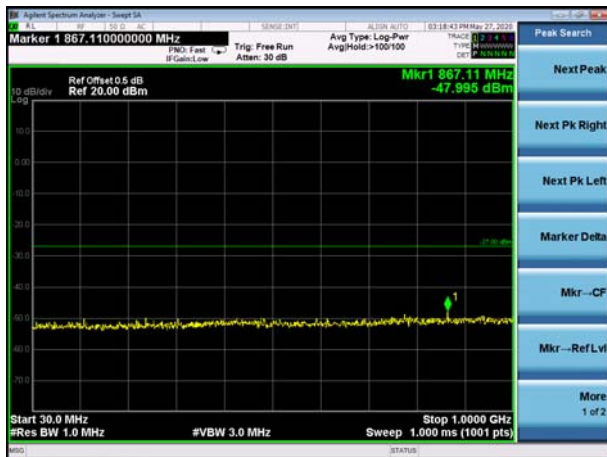


802.11ac20 on channel 157

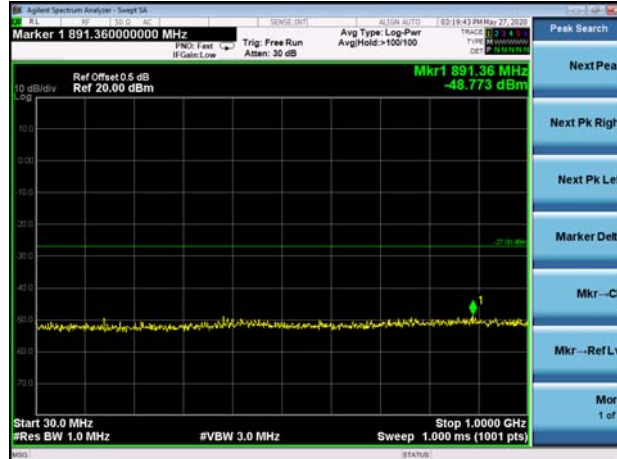


Test Plot

802.11ac20 on channel 165



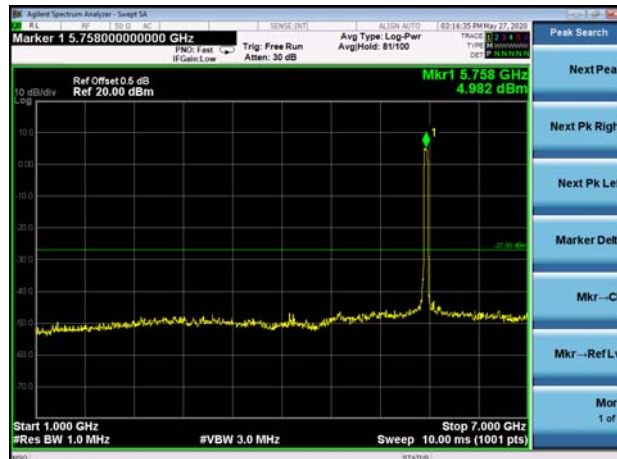
802.11ac40 on channel 151



802.11ac20 on channel 165



802.11ac40 on channel 151



802.11ac20 on channel 165

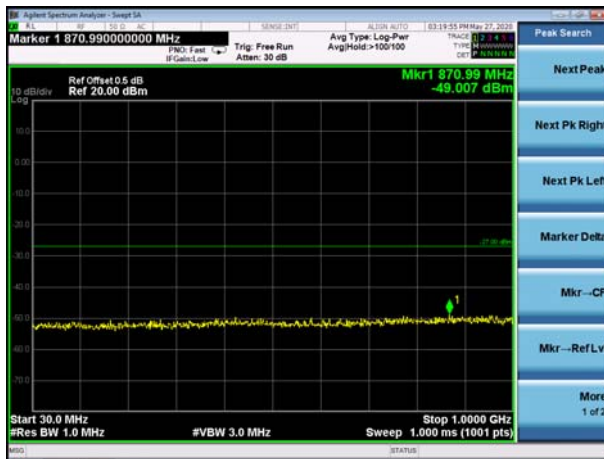


802.11ac40 on channel 151

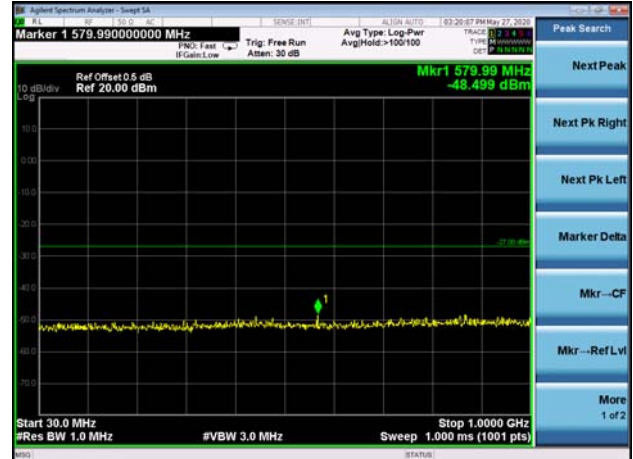


Test Plot

802.11ac40 on channel 159



802.11ac80 on channel 155



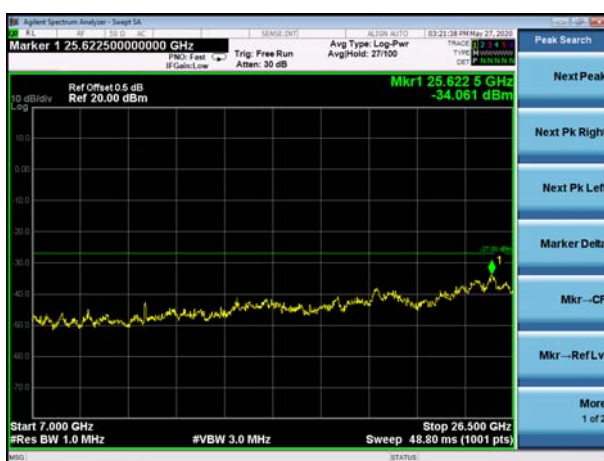
802.11 ac40 on channel 159



802.11 ac80 on channel 155



802.11 ac40 on channel 159



802.11 ac80 on channel 155



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.

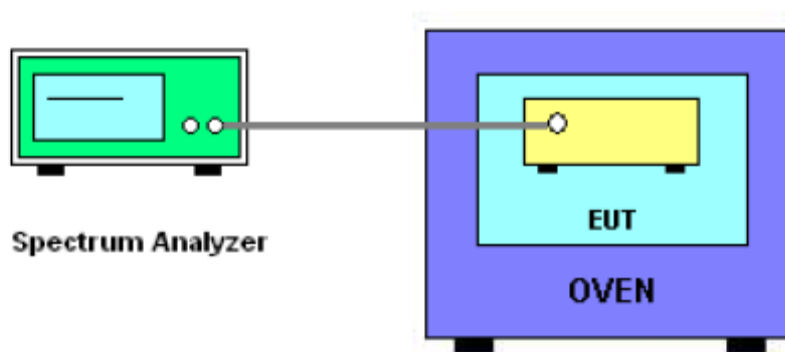
The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification).

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 :	AC 120V/60Hz
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)	120.00	5180.0527	5180	0.0527	10.1737
		V max (V)	138.00	5180.0325	5180	0.0325	6.2741
		V min (V)	102.00	5180.0246	5180	0.0246	4.7490
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)	120	T (°C)	-20	5180.0053	5180	0.0053	1.0232
		T (°C)	-10	5180.0105	5180	0.0105	2.0270
		T (°C)	0	5180.0326	5180	0.0326	6.2934
		T (°C)	10	5180.0385	5180	0.0385	7.4324
		T (°C)	20	5180.0297	5180	0.0297	5.7336
		T (°C)	30	5180.0216	5180	0.0216	4.1699
		T (°C)	40	5180.0126	5180	0.0126	2.4228
		T (°C)	50	5180.0097	5180	0.0097	1.8726
		T (°C)	60	5180.0416	5180	0.0416	8.0309
		T (°C)	70	5180.0695	5180	0.0695	13.4170
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)	120.00	5200.0253	5200	0.0253	4.8654
		V max (V)	138.00	5200.0426	5200	0.0426	8.1923
		V min (V)	102.00	5200.0692	5200	0.0692	13.3077
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)	120	T (°C)	-20	5200.0635	5200	0.0635	12.2115
		T (°C)	-10	5200.0523	5200	0.0523	10.0577
		T (°C)	0	5200.0437	5200	0.0437	8.4038
		T (°C)	10	5200.0926	5200	0.0926	17.8077
		T (°C)	20	5200.0635	5200	0.0635	12.2115
		T (°C)	30	5200.0127	5200	0.0127	2.4423
		T (°C)	40	5200.0735	5200	0.0735	14.1346
		T (°C)	50	5200.0413	5200	0.0413	7.9423
		T (°C)	60	5200.0328	5200	0.0328	6.3077
		T (°C)	70	5200.0425	5200	0.0425	8.1731
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)	120.00	5240.0136	5240	0.0136	2.5954
		V max (V)	138.00	5240.0415	5240	0.0415	7.9198
		V min (V)	102.00	5240.0097	5240	0.0097	1.8511
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)	120	T (°C)	-20	5240.0095	5240	0.0095	1.8130
		T (°C)	-10	5240.0038	5240	0.0038	0.7252
		T (°C)	0	5240.0141	5240	0.0141	2.6908
		T (°C)	10	5240.0857	5240	0.0857	16.3550
		T (°C)	20	5240.0116	5240	0.0116	2.2137
		T (°C)	30	5240.0123	5240	0.0123	2.3473
		T (°C)	40	5240.0062	5240	0.0062	1.1832
		T (°C)	50	5240.0078	5240	0.0078	1.4885
		T (°C)	60	5240.0084	5240	0.0084	1.6031
		T (°C)	70	5240.0107	5240	0.0107	2.0420
Limits				5150-5250 MHz			
Result				Complies			

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Hzst Mode :	TX Frequency(5745-5825MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5745.00080	5745	0.00080	0.1393
		V max (V)	138.00	5745.00076	5745	0.00076	0.1318
		V min (V)	102.00	5745.00086	5745	0.00086	0.1497
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)	120	T (°C)	-20	5745.00176	5745	0.00176	0.3059
		T (°C)	-10	5745.01095	5745	0.01095	1.9059
		T (°C)	0	5745.00080	5745	0.00080	0.1399
		T (°C)	10	5745.00220	5745	0.00220	0.3827
		T (°C)	20	5745.00105	5745	0.00105	0.1823
		T (°C)	30	5745.01006	5745	0.01006	1.7517
		T (°C)	40	5745.00743	5745	0.00743	1.2940
		T (°C)	50	5745.00242	5745	0.00242	0.4215
		T (°C)	60	5745.00433	5745	0.00433	0.7534
		T (°C)	70	5745.00667	5745	0.00667	1.1609
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)	120.00	5785.00633	5785	0.00633	1.0944
		V max (V)	138.00	5785.01322	5785	0.01322	2.2844
		V min (V)	102.00	5785.01262	5785	0.01262	2.1808
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)	120	T (°C)	-20	5785.01203	5785	0.01203	2.0788
		T (°C)	-10	5785.00597	5785	0.00597	1.0314
		T (°C)	0	5785.01191	5785	0.01191	2.0592
		T (°C)	10	5785.00182	5785	0.00182	0.3138
		T (°C)	20	5785.01309	5785	0.01309	2.2621
		T (°C)	30	5785.01091	5785	0.01091	1.8861
		T (°C)	40	5785.00120	5785	0.00120	0.2068
		T (°C)	50	5785.00322	5785	0.00322	0.5568
		T (°C)	60	5785.00484	5785	0.00484	0.8375
		T (°C)	70	5785.00381	5785	0.00381	0.6594
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)	120.00	5825.00464	5825	0.00464	0.7957
		V max (V)	138.00	5825.00139	5825	0.00139	0.2393
		V min (V)	102.00	5825.00329	5825	0.00329	0.5652
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)	120	T (°C)	-20	5825.00998	5825	0.00998	1.7140
		T (°C)	-10	5825.01088	5825	0.01088	1.8686
		T (°C)	0	5825.00466	5825	0.00466	0.8007
		T (°C)	10	5825.00853	5825	0.00853	1.4637
		T (°C)	20	5825.01300	5825	0.01300	2.2312
		T (°C)	30	5825.01200	5825	0.01200	2.0603
		T (°C)	40	5825.01343	5825	0.01343	2.3062
		T (°C)	50	5825.00662	5825	0.00662	1.1359
		T (°C)	60	5825.00818	5825	0.00818	1.4041
		T (°C)	70	5825.00824	5825	0.00824	1.4149
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 (antenna gain (A): 2dBi; antenna gain (B) : 2dBi). It comply with the standard requirement.

11. EUT TEST PHOTO

Conducted emissions



Radiated Measurement Photos



12. EUT PHOTO



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