▣Straddle channels TEST RESULTS_ Sum Data of Ant.0, Ant.1, Ant.2, Ant.3

Conducted Output Power Measurements (802.11n_HT40/ac_VHT40 Mode: UNII 2C Band 5710MHz)

Mode (MIMO)	Frequency [MHz]	Channel No.	Sum Power of Ant.0 & 1	Limit (dBm)
802.11n	5710	142	19.69	23.42
802.11ac			19.67	23.41

Conducted Output Power Measurements (802.11n_HT40/ac_VHT40 Mode: UNII 3 Band 5710MHz)

Mode (MIMO)	Frequency [MHz]	Channel No.	Sum Power of Ant.0 & 1	Limit (dBm)
802.11n	5710	142	8.51	20.86
802.11ac			8.48	20.88

▣Straddle channels TEST RESULTS_Ant 0

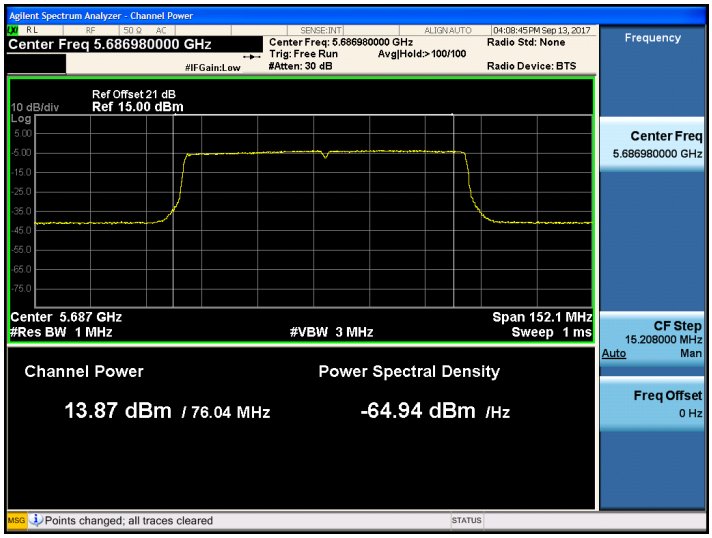
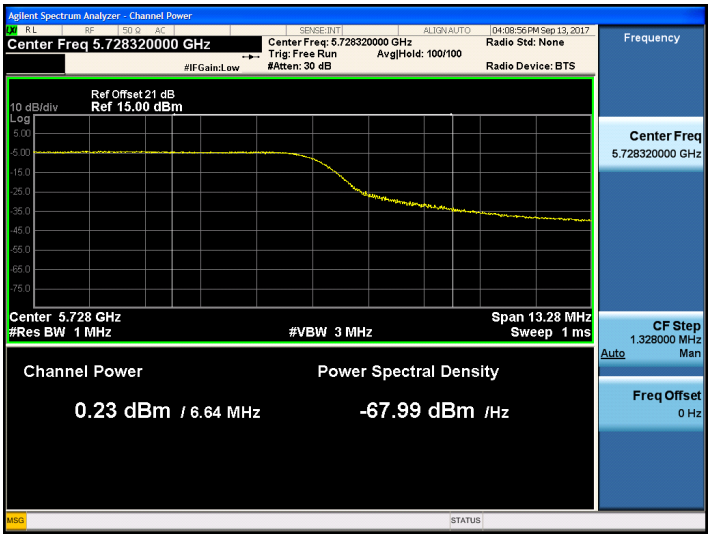
Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 2C Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	13.87	0.226	14.09	23.62

Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 3 Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	0.23	0.226	0.46	19.05

▣Straddle channels TEST Plot for 802.11ac_VHT80_Ant 0

802.11ac_VHT80 UNII 2C Band Average Power CH.138	802.11ac_VHT80 UNII 3 Band Average Power CH.138
	

▣Straddle channels TEST RESULTS_Ant 1

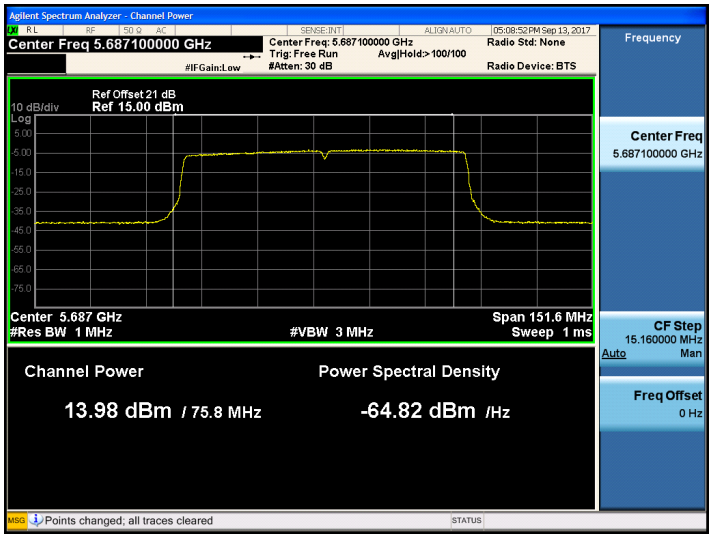
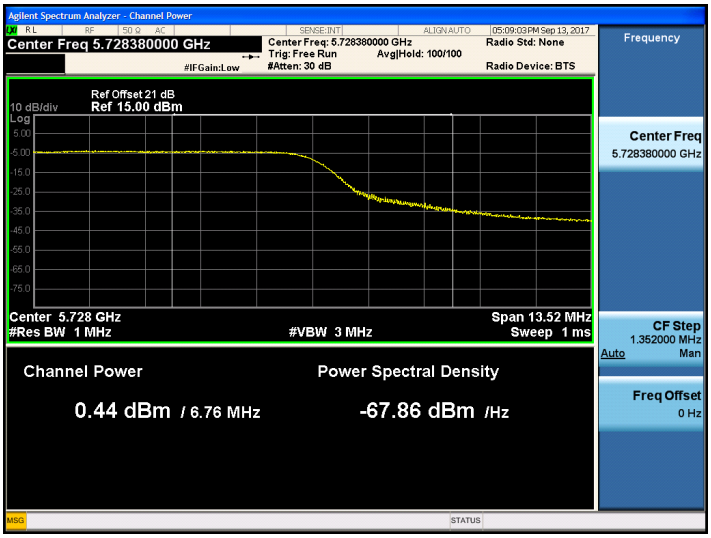
Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 2C Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	13.98	0.226	14.20	23.61

Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 3 Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	0.44	0.226	0.67	19.13

▣Straddle channels TEST Plot for 802.11ac_VHT80_Ant 1

802.11ac_VHT80 UNII 2C Band Average Power CH.138	802.11ac_VHT80 UNII 3 Band Average Power CH.138
	

▣Straddle channels TEST RESULTS_Ant 2

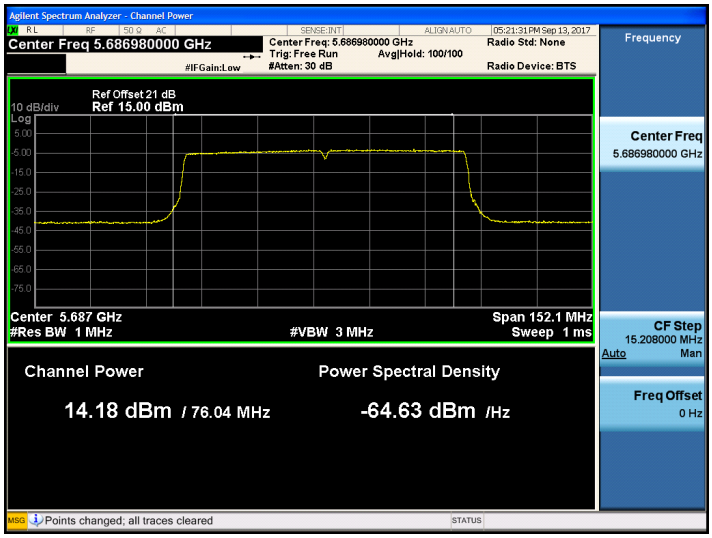
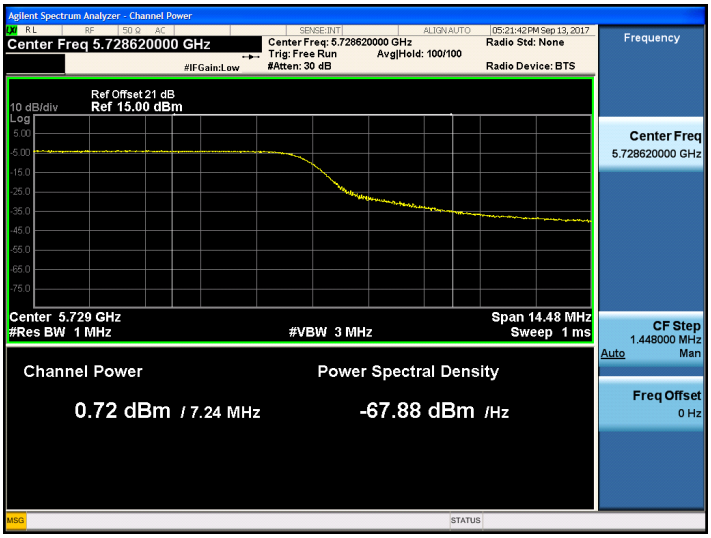
Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 2C Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	14.18	0.226	14.40	23.58

Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 3 Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	0.72	0.226	0.94	19.39

▣Straddle channels TEST Plot for 802.11ac_VHT80_Ant 2

802.11ac_VHT80 UNII 2C Band Average Power CH.138	802.11ac_VHT80 UNII 3 Band Average Power CH.138
	

▣Straddle channels TEST RESULTS_Ant 3

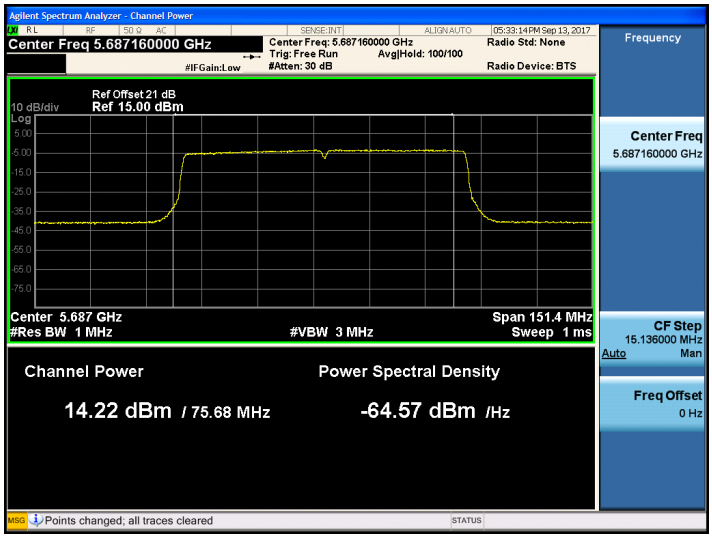
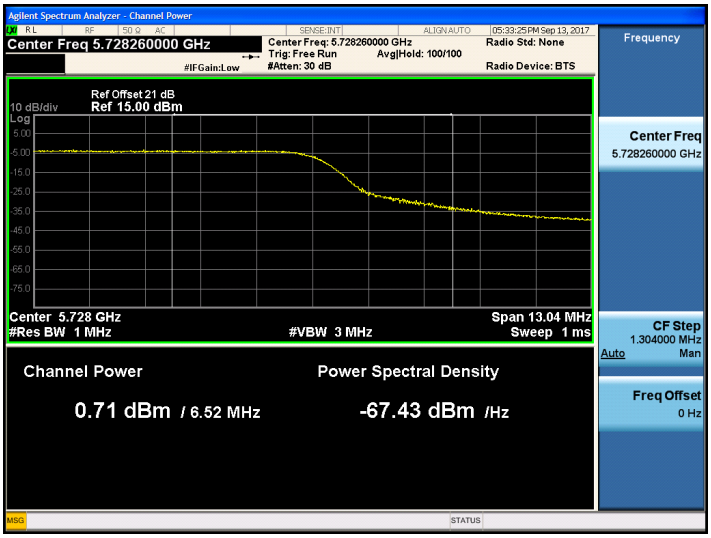
Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 2C Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	14.22	0.226	14.45	23.62

Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 3 Band 5690MHz)

Mode	Frequency [MHz]	Channel No.	Measured Power (dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
802.11ac	5690	138	0.71	0.226	0.94	18.99

▣Straddle channels TEST Plot for 802.11ac_VHT80_Ant 3

802.11ac_VHT80 UNII 2C Band Average Power CH.138	802.11ac_VHT80 UNII 3 Band Average Power CH.138
	

▣Straddle channels TEST RESULTS_ Sum Data of Ant.0, Ant.1, Ant.2, Ant.3

Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 3 Band 5690MHz)

Mode (MIMO)	Frequency [MHz]	Channel No.	Sum Power of Ant.0 & 1	Limit (dBm)
802.11ac	5690	138	20.31	23.61

Conducted Output Power Measurements (802.11ac_VHT80 Mode: UNII 3 Band 5690MHz)

Mode (MIMO)	Frequency [MHz]	Channel No.	Sum Power of Ant.0 & 1	Limit (dBm)
802.11ac	5690	138	6.78	19.06

9.4 POWER SPECTRAL DENSITY

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

▣ Limit

Power Spectral Density

Band	Mode	Limit
UNII 1	802.11a,n,ac	17 dBm/MHz
UNII 2A	802.11a,n,ac	11 dBm/MHz
UNII 2C	802.11a,n,ac	11 dBm/MHz
UNII 3	802.11a,n,ac	30 dBm/500 kHz

Note : Note : According to KDB644545 D03 v01, emission for straddle channels in each band shall comply with the PSD limits applicable to that band under the appropriate rule section.

Power Spectral Density (OMNI)

Operating Mode	Band	Mode	Operating Ant.	Ant. Gain (dBi)	Limit (dBm)
SISO	UNII 1	802.11a/n/ac	Ant 0	1.2	17.00
			Ant 1	-0.2	17.00
			Ant 2	1.5	17.00
			Ant 3	1.8	17.00
	UNII 2A		Ant 0	1.2	11.00
			Ant 1	0.7	11.00
			Ant 2	1.7	11.00
			Ant 3	2.0	11.00
	UNII 2C		Ant 0	1.9	11.00
			Ant 1	-0.5	11.00
			Ant 2	0.5	11.00
			Ant 3	2.3	11.00
	UNII 3		Ant 0	3.4	30.00
			Ant 1	1.7	30.00
			Ant 2	1.0	30.00
			Ant 3	3.8	30.00
MIMO	UNII 1	802.11a/n/ac	Ant 0 & 1 & 2 & 3	7.13	15.87
	UNII 2A			7.43	9.57
	UNII 2C			7.14	9.86
	UNII 3			8.57	27.43

Power Spectral Density (Directional)

Operating Mode	Band	Mode	Operating Ant.	Ant. Gain (dBi)	Limit (dBm)
SISO	UNII 1	802.11a/n/ac	Ant 0	2.5	17.00
			Ant 1	2.8	17.00
			Ant 2	3.1	17.00
			Ant 3	3.7	17.00
	UNII 2A		Ant 0	3.4	11.00
			Ant 1	2.8	11.00
			Ant 2	3.8	11.00
			Ant 3	3.6	11.00
	UNII 2C		Ant 0	4.0	11.00
			Ant 1	2.4	11.00
			Ant 2	2.5	11.00
			Ant 3	3.7	11.00
	UNII 3		Ant 0	5.0	30.00
			Ant 1	2.4	30.00
			Ant 2	3.3	30.00
			Ant 3	4.7	30.00
MIMO	UNII 1	802.11a/n/ac	Ant 0 & 1 & 2 & 3	9.06	13.94
	UNII 2A			9.43	7.57
	UNII 2C			9.2	7.80
	UNII 3			9.93	26.07

Note : 1. If all antenna gains are not equal,

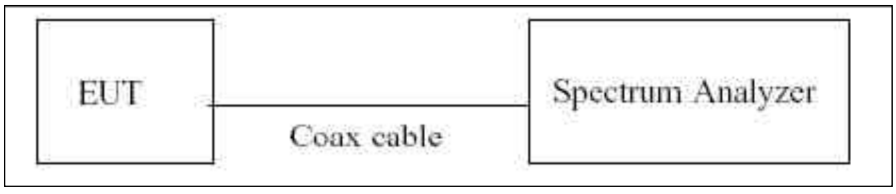
Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20}+\ldots+10^{GN/20})^2/N]$ dBi (802.11a/n/ac)

(according to KDB662911 D01 v02r01)

2. Limit is calculated by antenna gain.

3. The limits of maximum conducted power were applied the antenna gain. Therefore, if conducted power is pass, e.i.r.p. is also pass. So, we attached only conducted power table.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

We tested according to Method in KDB 789033 D02 v01r04.

The spectrum analyzer is set to :

1. Set span to encompass the entire emission bandwidth(EBW) of the signal.
2. RBW = 1 MHz(510 kHz for UNII 3)
3. VBW ≥ 3 MHz
4. Number of points in sweep ≥ 2*span/RBW.
5. Sweep time = auto.
6. Detector = RMS(i.e., power averaging), if available. Otherwise, use sample detector mode.
7. Do not use sweep triggering. Allow the sweep to “free run”.
8. Trace average at least 100 traces in power averaging(RMS) mode
9. Use the peak search function on the spectrum analyzer to find the peak of the spectrum.
10. If Method SA-2 was used, add 10 log(1/x), where x is the duty cycle, to the peak of the spectrum.

▣ Sample Calculation

ANT.0

PSD = Reading Value + ATT loss + Cable loss(1 ea) + Duty Cycle Factor

Ex) PSD = 10 dBm + 20 dB + 1.17 dB + 0.2 dB = 31.0 dBm

ANT.1

PSD = Reading Value + ATT loss + Cable loss(2 ea) + Duty Cycle Factor

Ex) PSD = 10 dBm + 20 dB + 2.05 dB + 0.2 dB = 31.7 dBm

Note :

1. Spectrum reading values are not plot data. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.

2. Spectrum offset = Attenuator loss + Cable loss

2. We apply the offset of Ant.0 and Ant.1 respectively.

The offset of the 5 GHz band on OMNI is 12.1dB.

The offset of the 5 GHz band on DRECTIONAL is 21 dB.

Actual value of loss for the attenuator and cable combination is below table.

ANT	Band	Loss(dB)
OMNI	5 GHz	12.1
DIRECTIONAL		21

(Actual value of loss for the attenuator and cable combination)

4. MIMO output power results are calculated by each antenna output power on MIMO operating mode.

So, in case of MIMO output power, we attached only MIMO output power except each antenna power result.

[Omni]

Ant.0

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11a (SISO)	3.923	0.494	4.417	17	Pass
5200	40		4.166	0.134	4.300		Pass
5240	48		4.287	0.202	4.489		Pass
5260	52		2.798	0.134	2.932	11	Pass
5300	60		3.058	0.202	3.260		Pass
5320	64		2.775	0.134	2.909		Pass
5500	100		2.716	0.202	2.918	11	Pass
5600	120		2.503	0.388	2.891		Pass
5720	144		2.773	0.388	3.161		Pass
5745	149		1.419	0.202	1.621	30	Pass
5785	157		1.364	0.202	1.566		Pass
5825	165		1.374	0.134	1.508		Pass

Ant.1

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11a (SISO)	4.245	0.143	4.388	17	Pass
5200	40		4.330	0.143	4.473		Pass
5240	48		4.224	0.143	4.367		Pass
5260	52		2.538	0.393	2.931	11	Pass
5300	60		2.864	0.143	3.007		Pass
5320	64		2.872	0.201	3.073		Pass
5500	100		2.682	0.201	2.883	11	Pass
5600	120		3.061	0.201	3.262		Pass
5720	144		2.738	0.201	2.939		Pass
5745	149		1.163	0.143	1.306	30	Pass
5785	157		1.251	0.201	1.452		Pass
5825	165		1.756	0.143	1.899		Pass

Ant.2

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11a (SISO)	4.567	0.135	4.702	17	Pass
5200	40		4.250	0.393	4.643		Pass
5240	48		4.271	0.209	4.480		Pass
5260	52		2.716	0.135	2.851	11	Pass
5300	60		2.884	0.209	3.093		Pass
5320	64		2.741	0.135	2.876		Pass
5500	100		2.821	0.209	3.030	11	Pass
5600	120		3.062	0.135	3.197		Pass
5720	144		3.043	0.209	3.252		Pass
5745	149		1.403	0.135	1.538	30	Pass
5785	157		1.450	0.135	1.585		Pass
5825	165		1.594	0.135	1.729		Pass

Ant.3

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11a (SISO)	4.164	0.144	4.308	17	Pass
5200	40		3.992	0.493	4.485		Pass
5240	48		4.231	0.202	4.433		Pass
5260	52		2.623	0.144	2.767	11	Pass
5300	60		2.501	0.388	2.889		Pass
5320	64		2.887	0.202	3.089		Pass
5500	100		2.821	0.144	2.965	11	Pass
5600	120		2.969	0.202	3.171		Pass
5720	144		2.954	0.144	3.098		Pass
5745	149		1.448	0.144	1.592	30	Pass
5785	157		1.741	0.144	1.885		Pass
5825	165		1.579	0.144	1.723		Pass

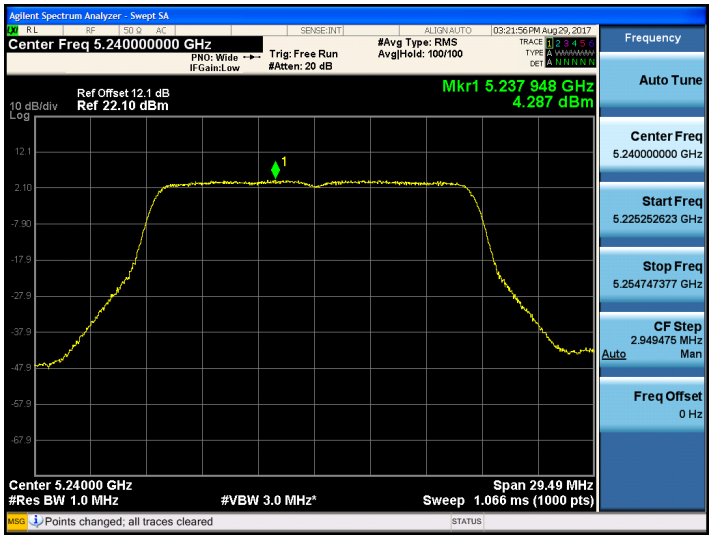
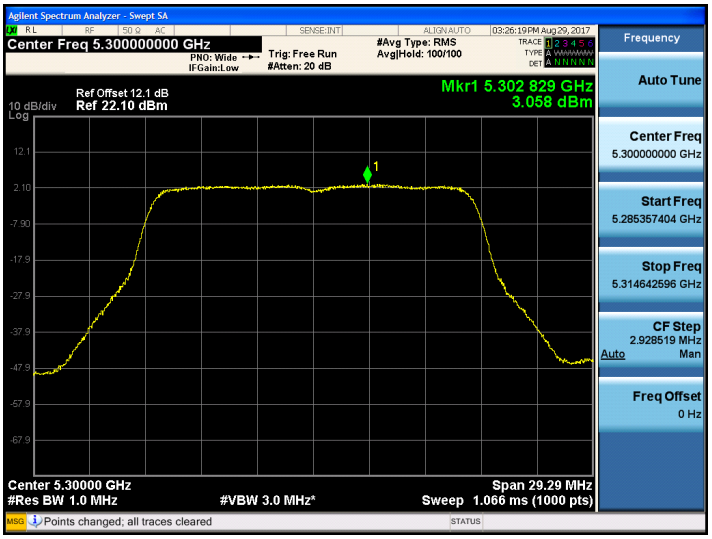
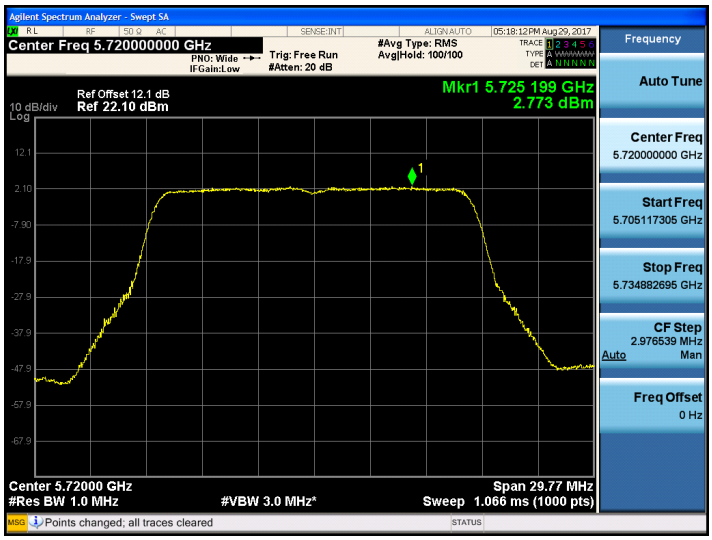
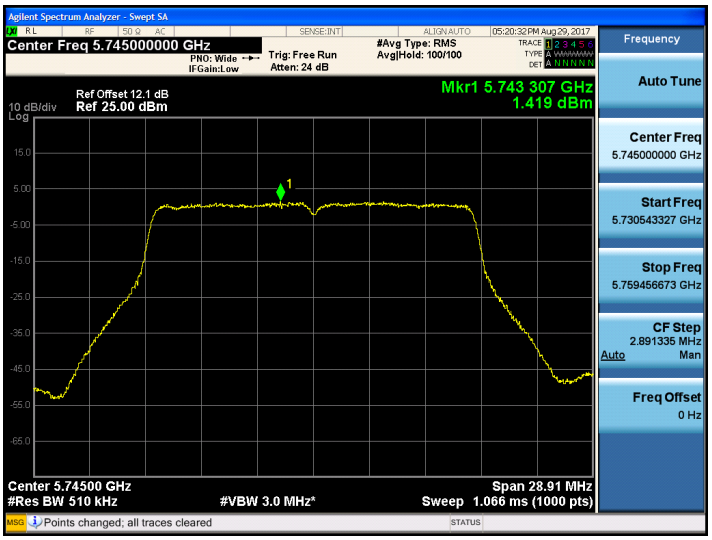
☑ **Sum Data of Ant.0 and Ant.1 and Ant.2 and Ant.3**

☑ **TEST RESULTS**

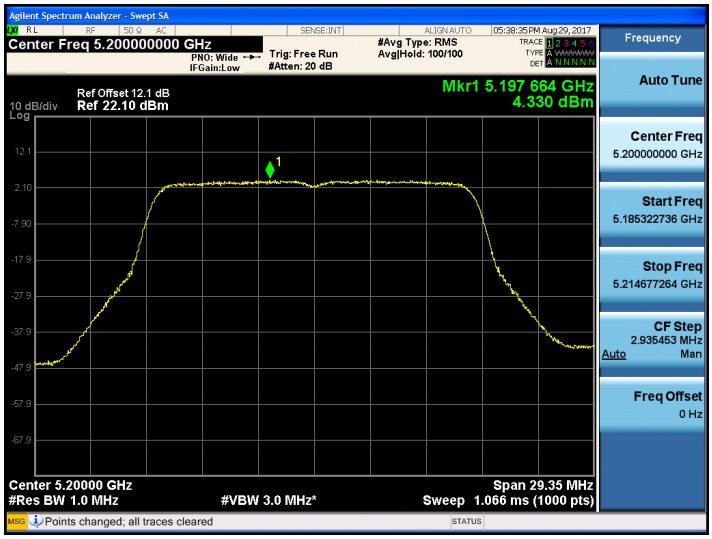
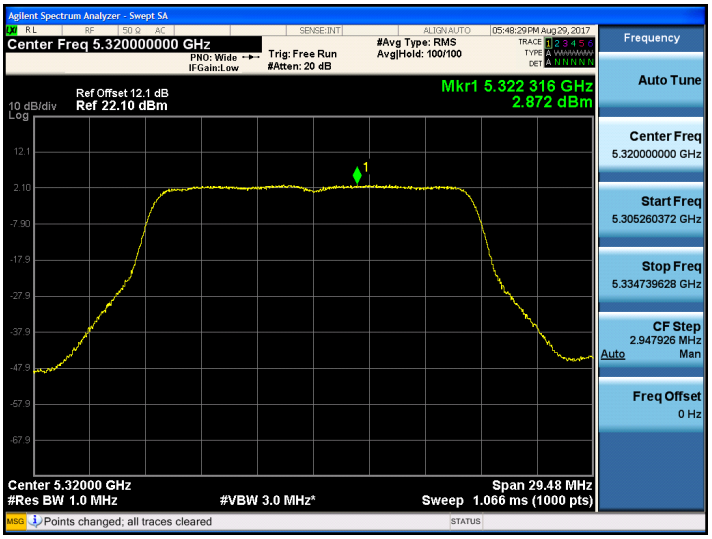
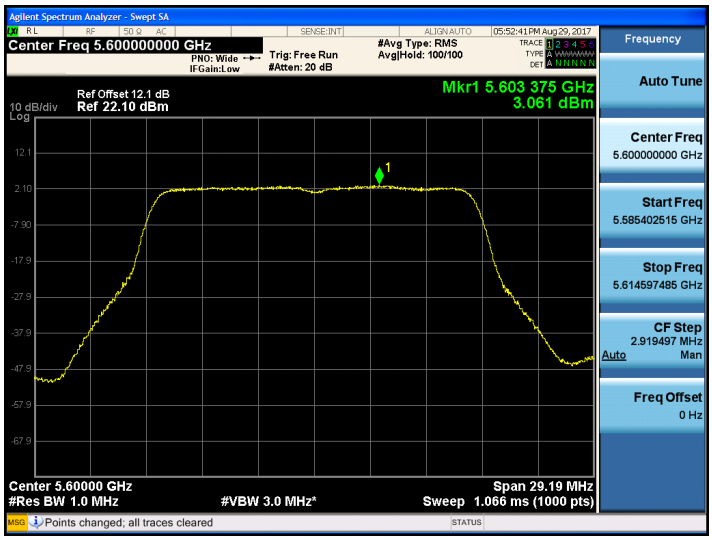
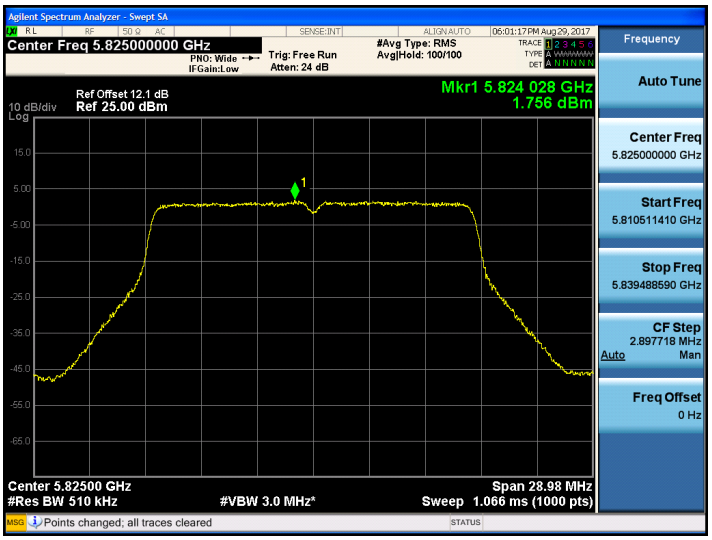
Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Measured Power Density (dBm)	Limit (dBm)	Pass/Fail
5180	36	802.11a (MIMO)	10.48	15.87	Pass
5200	40		10.50		Pass
5240	48		10.46		Pass
5260	52		8.89	9.57	Pass
5300	60		9.08		Pass
5320	64		9.01		Pass
5500	100		8.97	9.86	Pass
5600	120		9.15		Pass
5720	144		9.13		Pass
5745	149		7.54	27.43	Pass
5785	157		7.64		Pass
5825	165		7.74		Pass

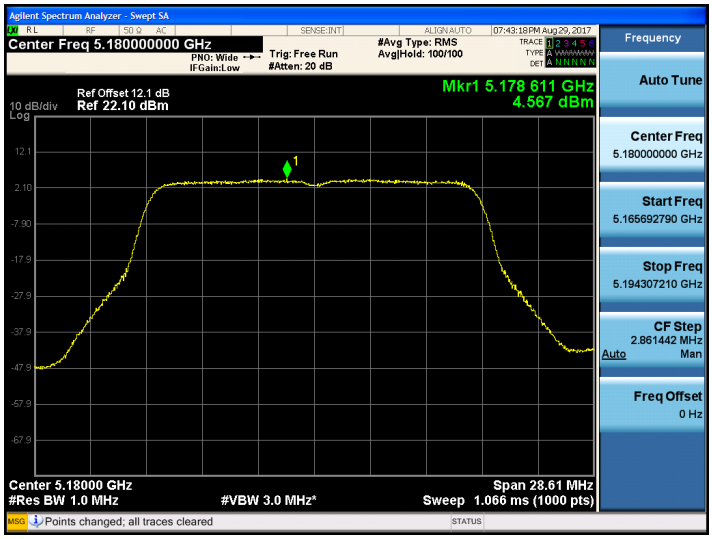
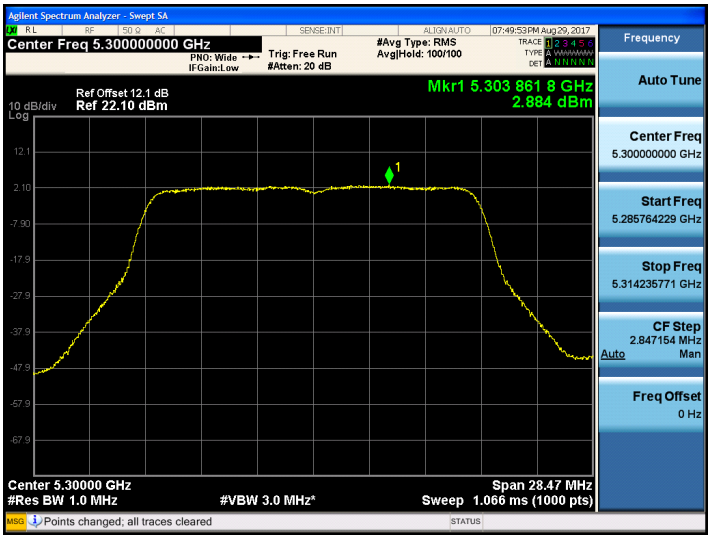
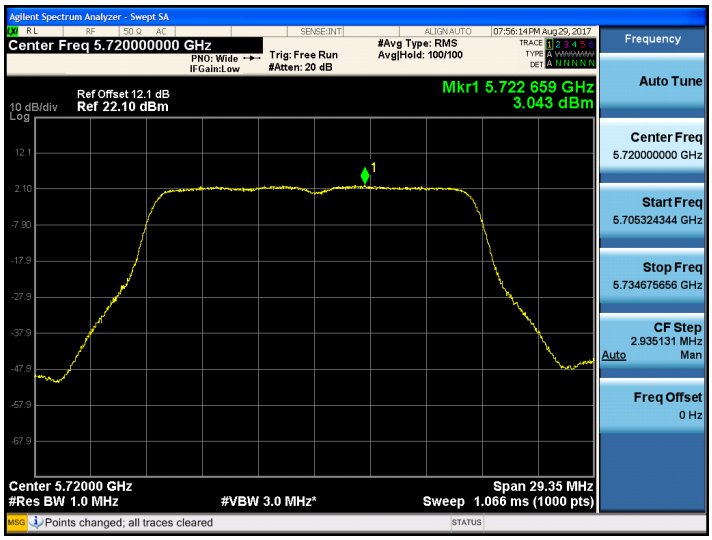
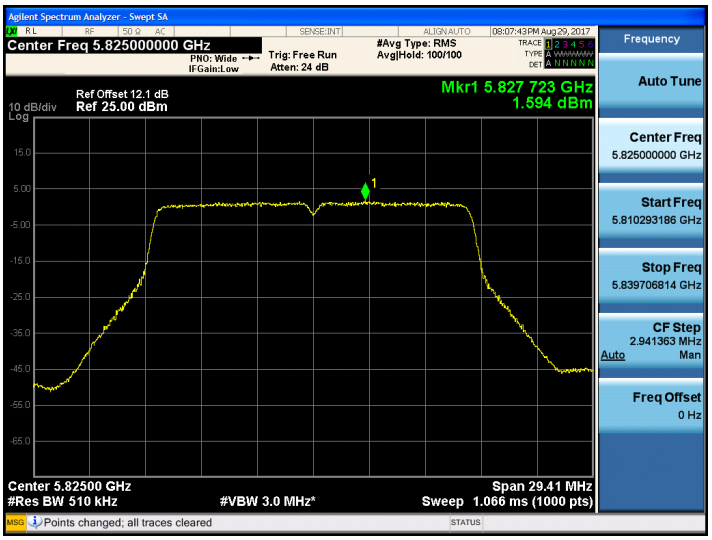
▣ TEST Plot for 802.11a 20MHz BW_Ant.0

802.11a UNII 1 BAND PSD CH 48	802.11a UNII 2A BAND PSD CH 60
	
802.11a UNII 2C BAND PSD CH 144	**802.11a UNII 3 BAND PSD CH 149**
	

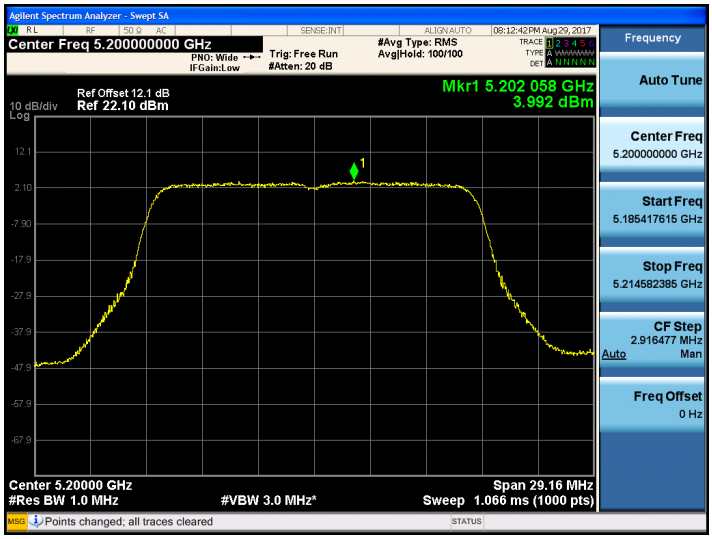
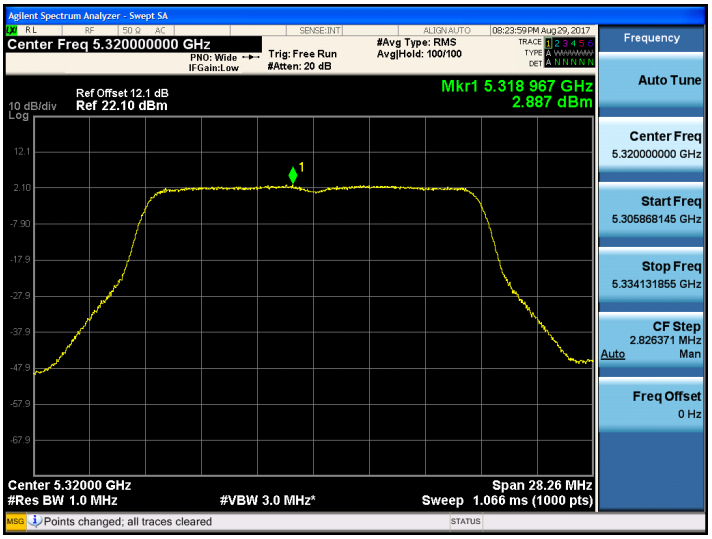
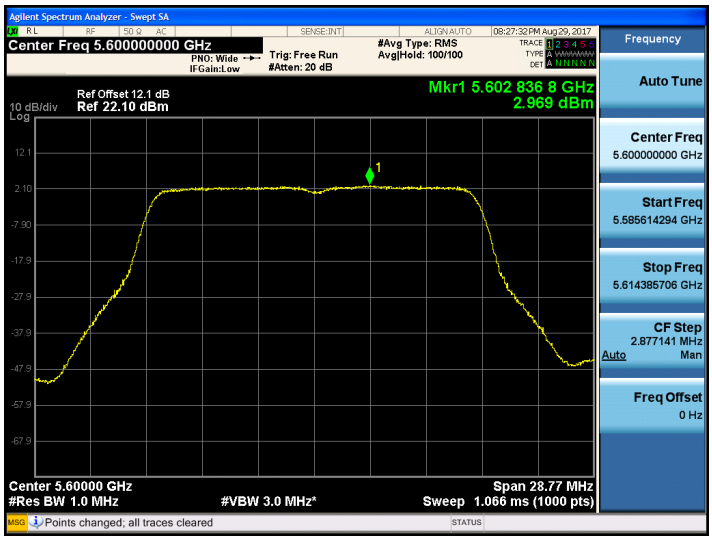
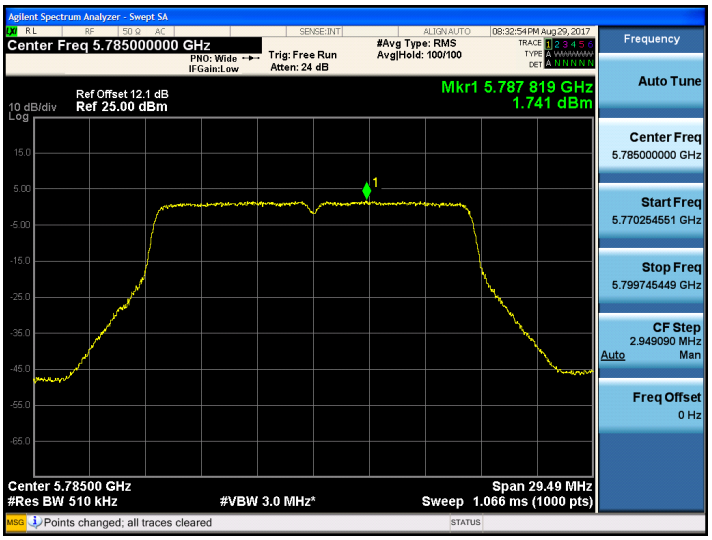
▣ TEST Plot for 802.11a 20MHz BW_Ant.1

802.11a UNII 1 BAND PSD CH 40	802.11a UNII 2A BAND PSD CH 64
	
802.11a UNII 2C BAND PSD CH 120	**802.11a UNII 3 BAND PSD CH 165**
	

▣ TEST Plot for 802.11a 20MHz BW_Ant.2

802.11a UNII 1 BAND PSD CH 36	802.11a UNII 2A BAND PSD CH 60
	
802.11a UNII 2C BAND PSD CH 144	**802.11a UNII 3 BAND PSD CH 165**
	

▣ TEST Plot for 802.11a 20MHz BW_Ant.3

802.11a UNII 1 BAND PSD CH 40	802.11a UNII 2A BAND PSD CH 64
	
802.11a UNII 2C BAND PSD CH 120	**802.11a UNII 3 BAND PSD CH 157**
	

Ant.0

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11n_ HT20 (SISO)	3.931	0.087	4.018	17	Pass
5200	40		3.906	0.087	3.993		Pass
5240	48		4.194	0.087	4.281		Pass
5260	52		2.546	0.087	2.633	11	Pass
5300	60		2.583	0.129	2.712		Pass
5320	64		2.597	0.087	2.684		Pass
5500	100		3.195	0.087	3.282	11	Pass
5600	120		2.618	0.087	2.705		Pass
5720	144		2.801	0.087	2.888		Pass
5745	149		1.239	0.052	1.291	30	Pass
5785	157		1.275	0.087	1.362		Pass
5825	165		1.014	0.052	1.066		Pass

Ant.1

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11n_ HT20 (SISO)	4.045	0.061	4.106	17	Pass
5200	40		4.168	0.096	4.264		Pass
5240	48		3.975	0.061	4.036		Pass
5260	52		2.483	0.096	2.579	11	Pass
5300	60		2.562	0.096	2.658		Pass
5320	64		2.854	0.096	2.950		Pass
5500	100		3.064	0.061	3.125	11	Pass
5600	120		2.836	0.096	2.932		Pass
5720	144		2.550	0.061	2.611		Pass
5745	149		1.032	0.096	1.128	30	Pass
5785	157		1.027	0.061	1.088		Pass
5825	165		1.396	0.061	1.457		Pass

Ant.2

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11n_ HT20 (SISO)	4.028	0.091	4.119	17	Pass
5200	40		4.330	0.091	4.421		Pass
5240	48		4.040	0.091	4.131		Pass
5260	52		2.434	0.091	2.525	11	Pass
5300	60		2.293	0.091	2.384		Pass
5320	64		2.266	0.091	2.357		Pass
5500	100		2.883	0.091	2.974	11	Pass
5600	120		2.456	0.052	2.508		Pass
5720	144		2.884	0.091	2.975		Pass
5745	149		0.971	0.091	1.062	30	Pass
5785	157		1.133	0.091	1.224		Pass
5825	165		1.379	0.091	1.470		Pass

Ant.3

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11n_ HT20 (SISO)	3.518	0.052	3.570	17	Pass
5200	40		3.493	0.052	3.545		Pass
5240	48		3.602	0.096	3.698		Pass
5260	52		2.265	0.096	2.361	11	Pass
5300	60		2.511	0.096	2.607		Pass
5320	64		2.524	0.096	2.620		Pass
5500	100		3.014	0.096	3.110	11	Pass
5600	120		2.608	0.096	2.704		Pass
5720	144		2.806	0.096	2.902		Pass
5745	149		1.420	0.096	1.516	30	Pass
5785	157		1.305	0.096	1.401		Pass
5825	165		1.257	0.096	1.353		Pass

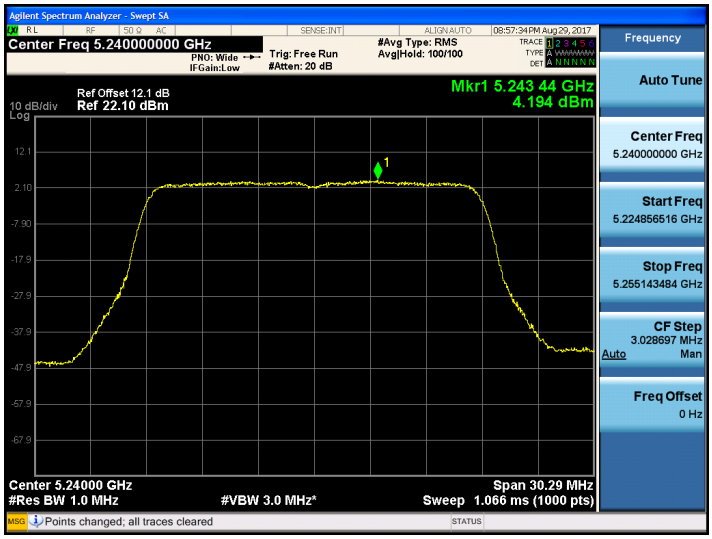
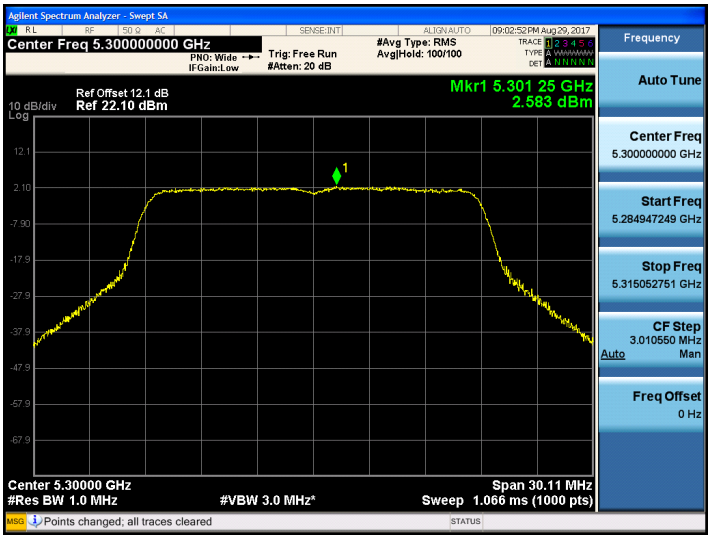
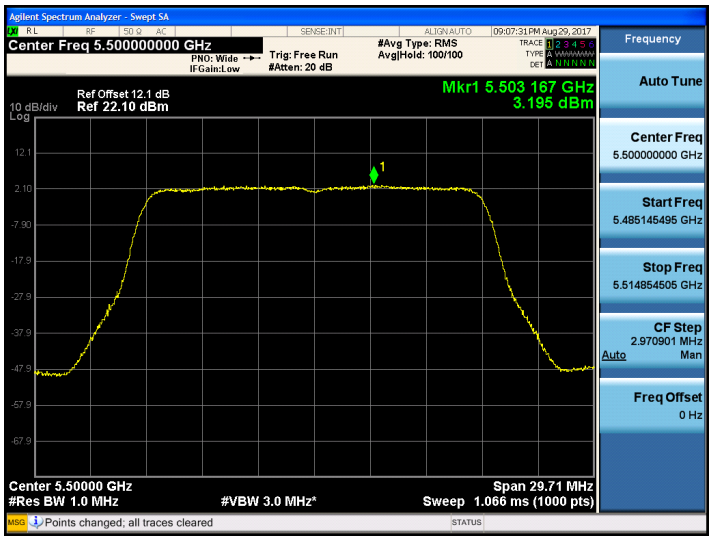
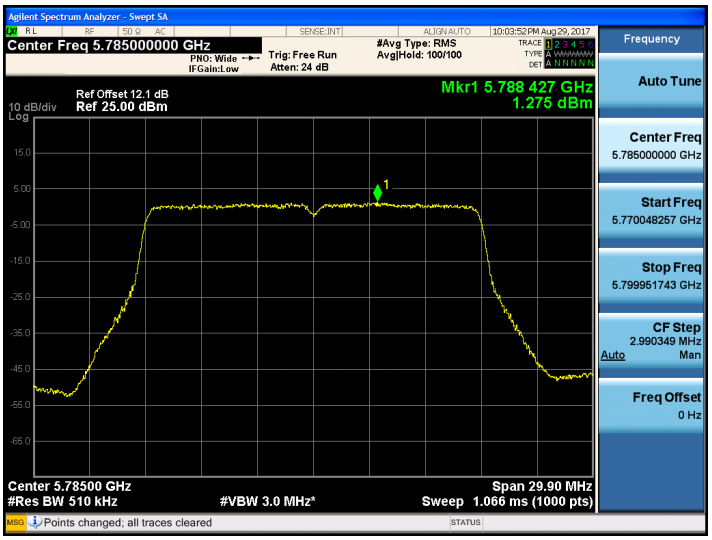
☑ **Sum Data of Ant.0 and Ant.1 and Ant.2 and Ant.3**

☑ **TEST RESULTS**

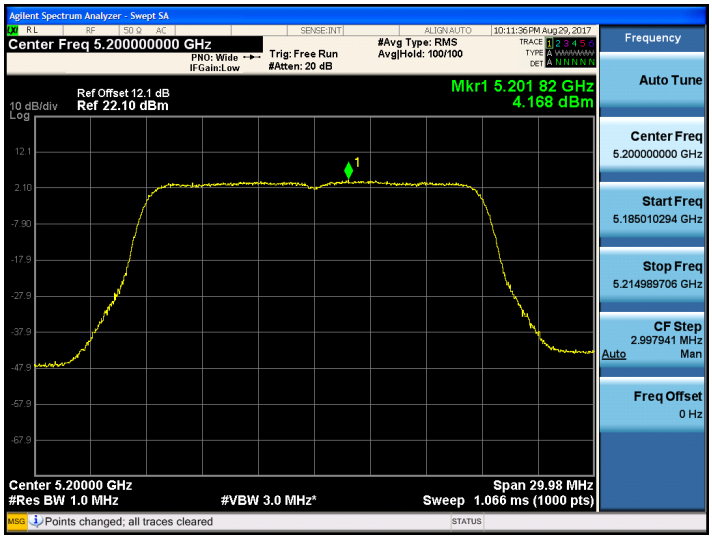
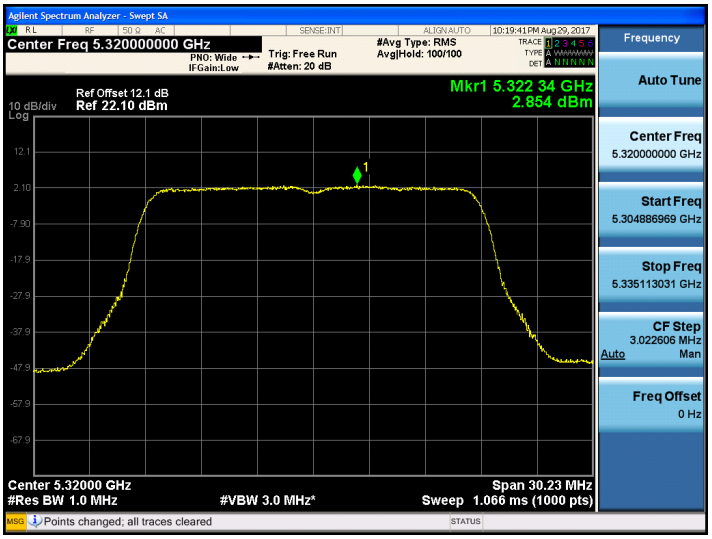
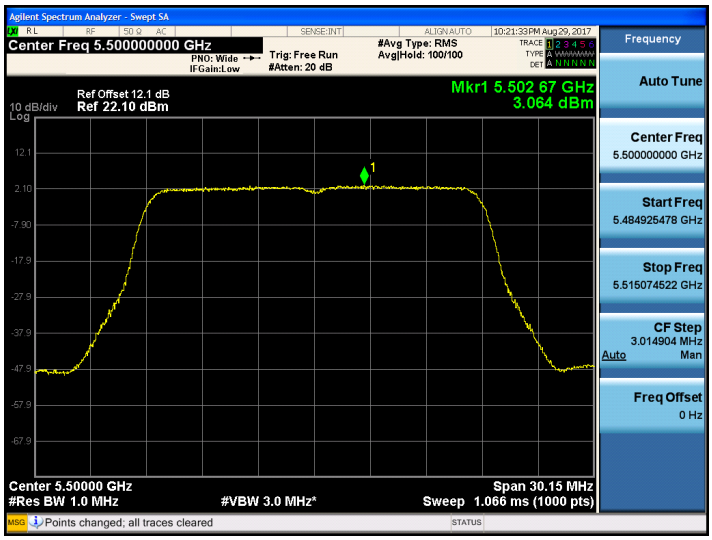
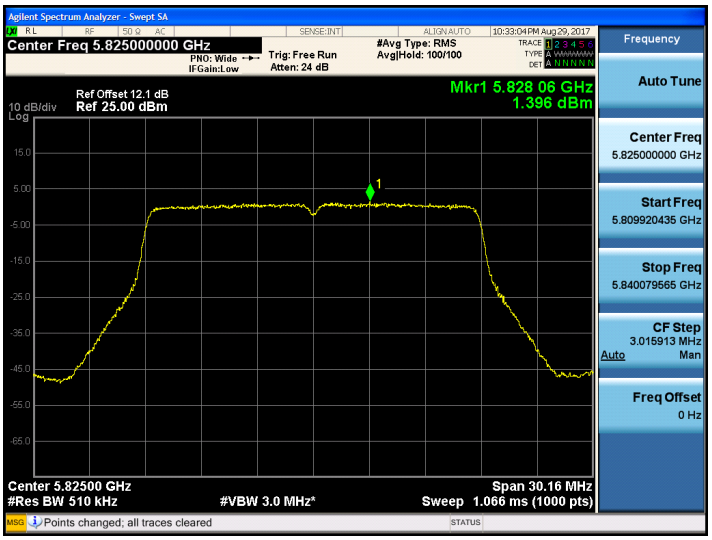
Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Measured Power Density (dBm)	Limit (dBm)	Pass/Fail
5180	36	802.11n_ HT20 (MIMO)	9.98	15.87	Pass
5200	40		10.08		Pass
5240	48		10.06		Pass
5260	52		8.55	9.57	Pass
5300	60		8.61		Pass
5320	64		8.68		Pass
5500	100		9.14	9.86	Pass
5600	120		8.73		Pass
5720	144		8.87		Pass
5745	149		7.27	27.43	Pass
5785	157		7.29		Pass
5825	165		7.36		Pass

▣ TEST Plot for 802.11n_HT20_Ant.0

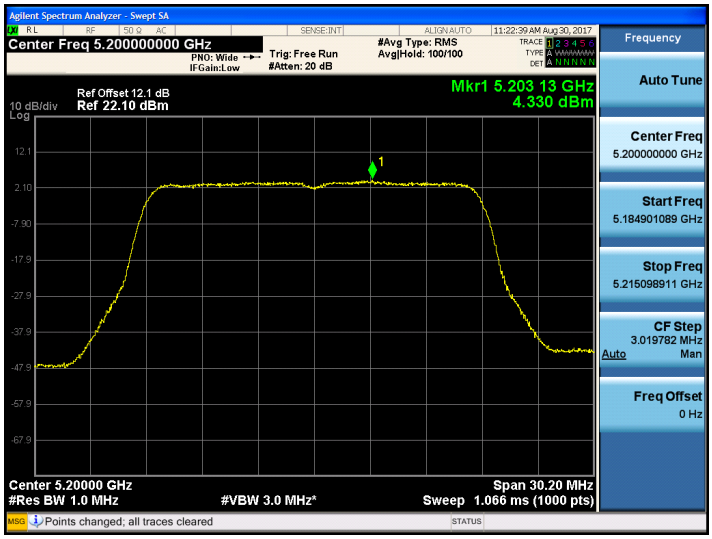
802.11n_HT20 UNII 1 BAND PSD CH 48	802.11n_HT20 UNII 2A BAND PSD CH 60
	
802.11n_HT20 UNII 2C BAND PSD CH 100	**802.11n_HT20 UNII 3 BAND PSD CH 157**
	

▣ TEST Plot for 802.11n_HT20_Ant.1

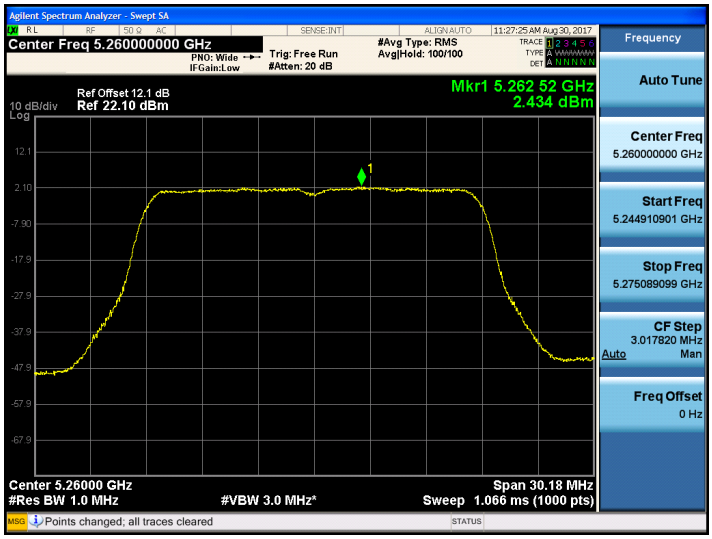
802.11n_HT20 UNII 1 BAND PSD CH 40	802.11n_HT20 UNII 2A BAND PSD CH 64
	
802.11n_HT20 UNII 2C BAND PSD CH 100	**802.11n_HT20 UNII 3 BAND PSD CH 165**
	

▣ TEST Plot for 802.11n_HT20_Ant.2

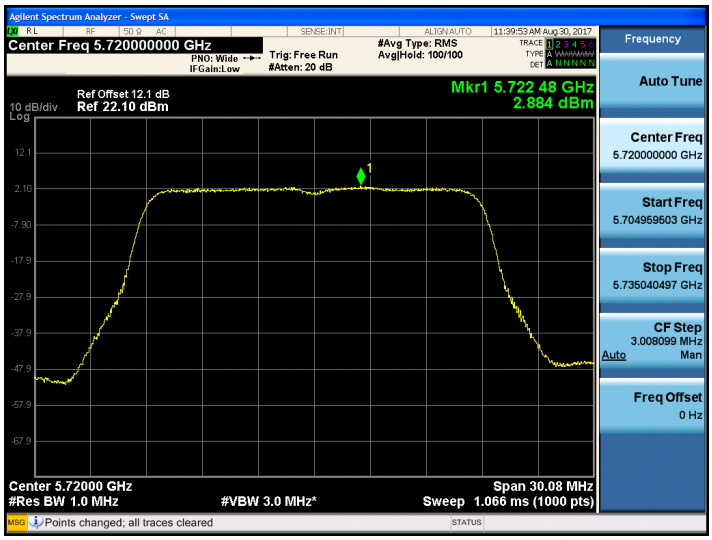
802.11n_HT20 UNII 1 BAND PSD CH 40



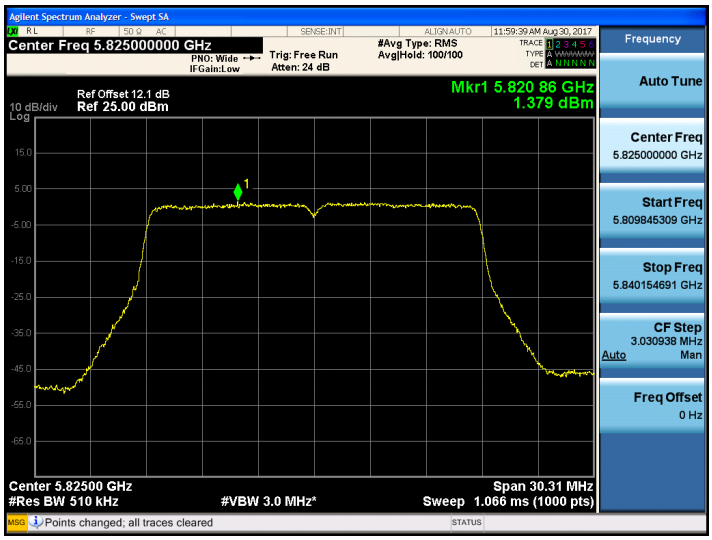
802.11n_HT20 UNII 2A BAND PSD CH 52



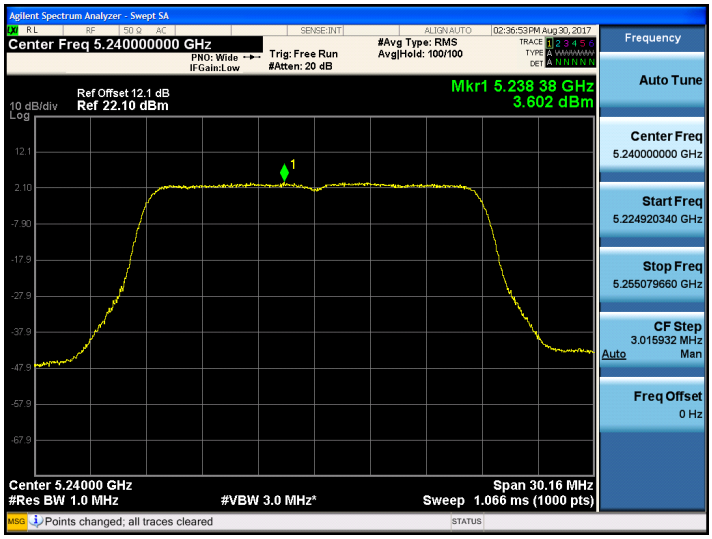
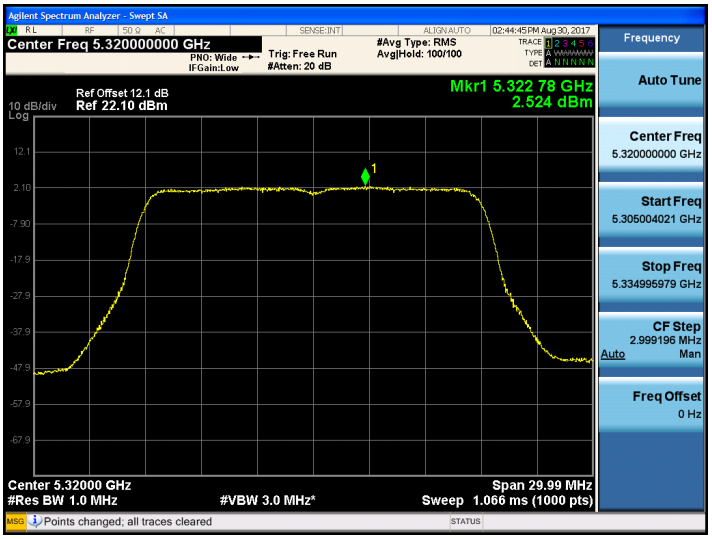
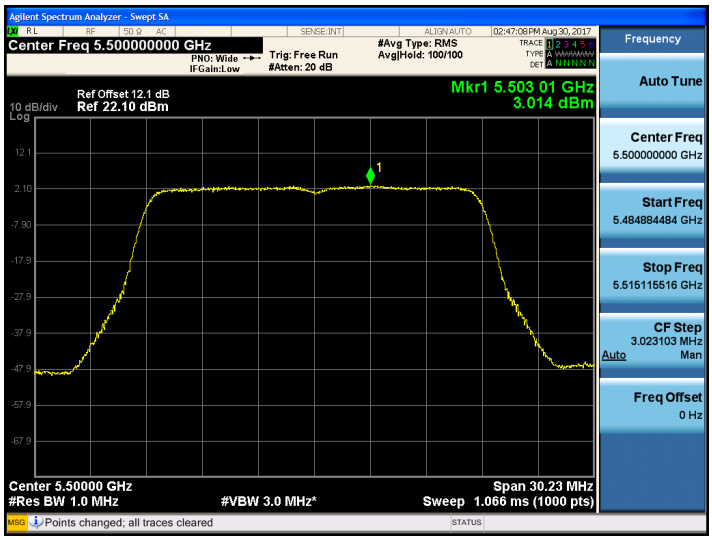
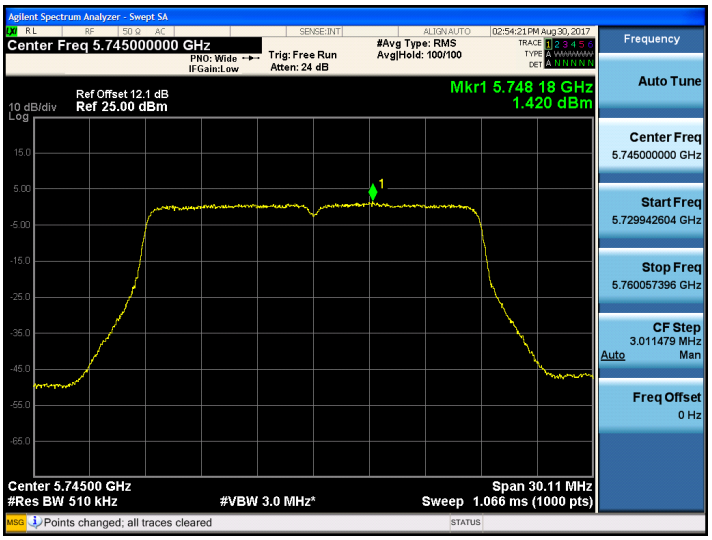
802.11n_HT20 UNII 2C BAND PSD CH 144



802.11n_HT20 UNII 3 BAND PSD CH 165



▣ TEST Plot for 802.11n_HT20_Ant.3

802.11n_HT20 UNII 1 BAND PSD CH 48	802.11n_HT20 UNII 2A BAND PSD CH 64
	
802.11n_HT20 UNII 2C BAND PSD CH 100	**802.11n_HT20 UNII 3 BAND PSD CH 149**
	

Ant.0

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11ac _VHT20 (SISO)	3.643	0.053	3.696	17	Pass
5200	40		3.713	0.087	3.800		Pass
5240	48		3.799	0.087	3.886		Pass
5260	52		2.259	0.087	2.346	11	Pass
5300	60		2.457	0.087	2.544		Pass
5320	64		2.415	0.087	2.502		Pass
5500	100		2.637	0.053	2.690	11	Pass
5600	120		2.522	0.087	2.609		Pass
5720	144		2.483	0.087	2.570		Pass
5745	149		0.785	0.053	0.838	30	Pass
5785	157		1.217	0.087	1.304		Pass
5825	165		1.055	0.087	1.142		Pass

Ant.1

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11ac _VHT20 (SISO)	4.113	0.087	4.200	17	Pass
5200	40		4.096	0.087	4.183		Pass
5240	48		3.965	0.061	4.026		Pass
5260	52		2.655	0.087	2.742	11	Pass
5300	60		2.734	0.087	2.821		Pass
5320	64		2.718	0.061	2.779		Pass
5500	100		3.000	0.087	3.087	11	Pass
5600	120		2.742	0.087	2.829		Pass
5720	144		2.437	0.087	2.524		Pass
5745	149		1.010	0.087	1.097	30	Pass
5785	157		0.897	0.087	0.984		Pass
5825	165		1.168	0.061	1.229		Pass

Ant.2

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11ac _VHT20 (SISO)	3.967	0.087	4.054	17	Pass
5200	40		4.193	0.087	4.280		Pass
5240	48		3.730	0.087	3.817		Pass
5260	52		2.392	0.087	2.479	11	Pass
5300	60		2.418	0.087	2.505		Pass
5320	64		2.349	0.087	2.436		Pass
5500	100		2.723	0.087	2.810	11	Pass
5600	120		2.600	0.087	2.687		Pass
5720	144		2.717	0.058	2.775		Pass
5745	149		0.785	0.087	0.872	30	Pass
5785	157		1.048	0.087	1.135		Pass
5825	165		1.339	0.087	1.426		Pass

Ant.3

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5180	36	802.11ac _VHT20 (SISO)	3.251	0.061	3.312	17	Pass
5200	40		3.530	0.078	3.608		Pass
5240	48		3.503	0.078	3.581		Pass
5260	52		2.128	0.078	2.206	11	Pass
5300	60		2.494	0.078	2.572		Pass
5320	64		2.420	0.061	2.481		Pass
5500	100		2.860	0.061	2.921	11	Pass
5600	120		2.435	0.061	2.496		Pass
5720	144		2.609	0.078	2.687		Pass
5745	149		1.024	0.061	1.085	30	Pass
5785	157		1.280	0.078	1.358		Pass
5825	165		1.557	0.078	1.635		Pass

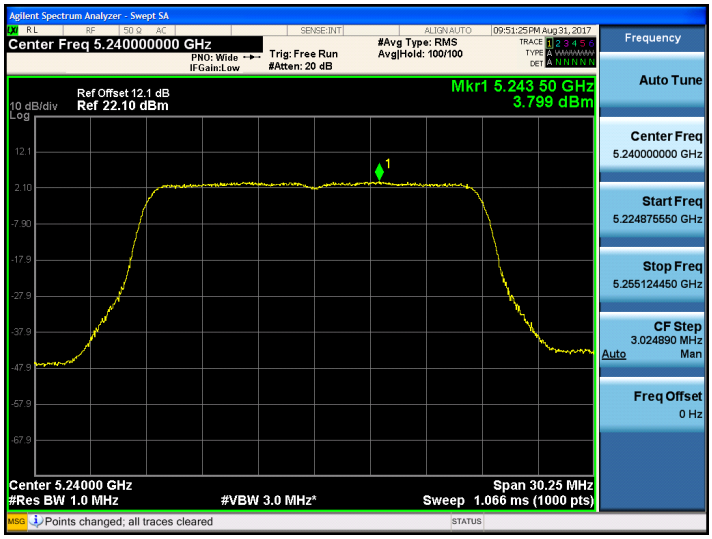
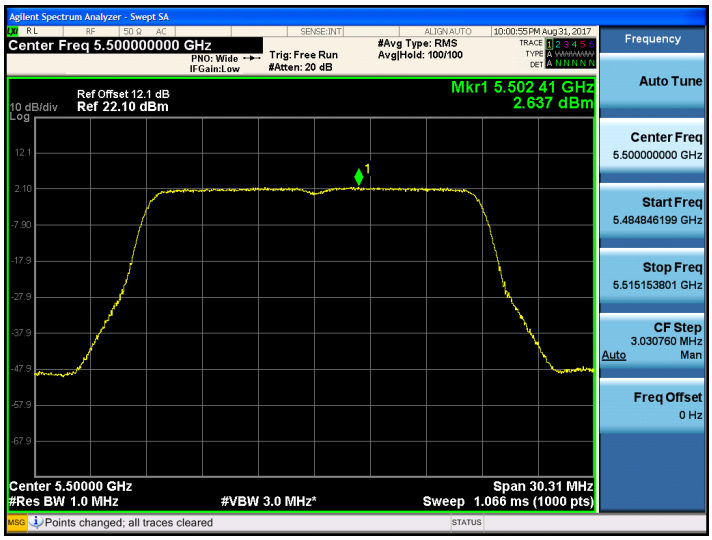
☑ **Sum Data of Ant.0 and Ant.1 and Ant.2 and Ant.3**

☑ **TEST RESULTS**

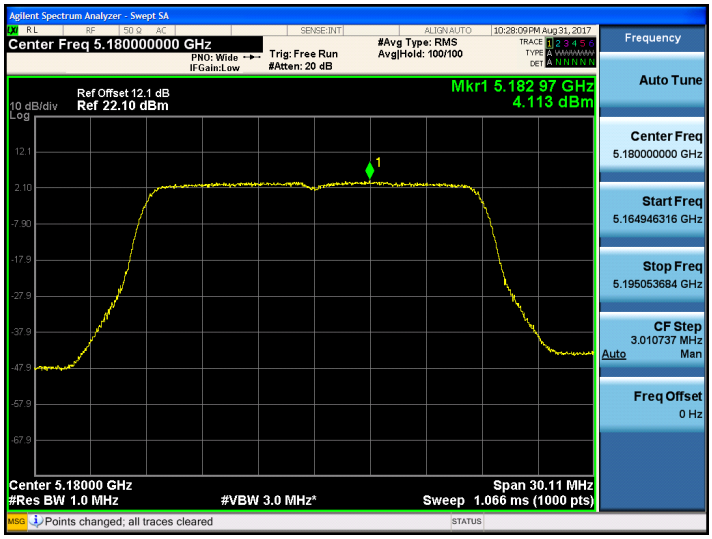
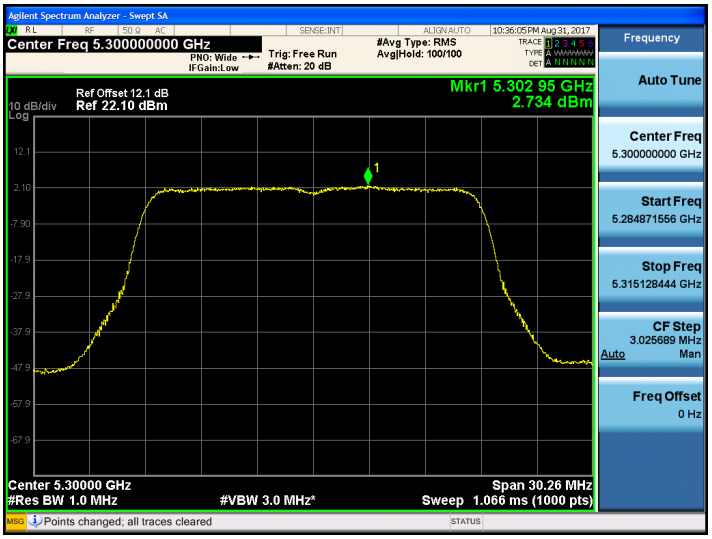
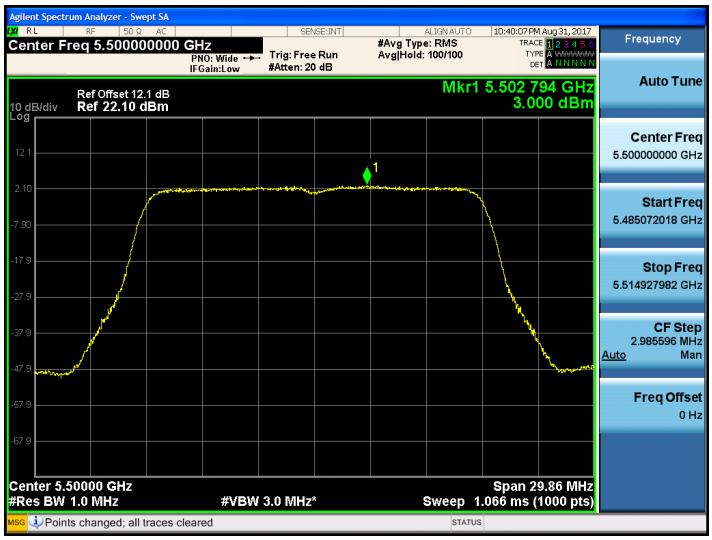
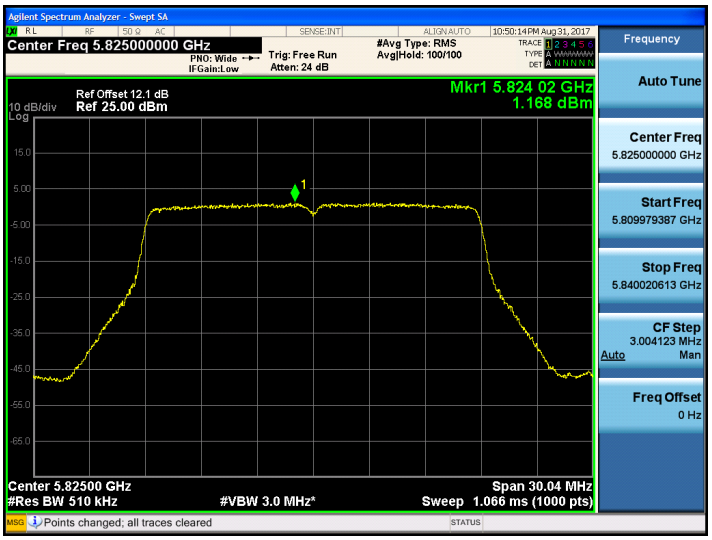
Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Measured Power Density (dBm)	Limit (dBm)	Pass/Fail
5180	36	802.11ac _VHT20 (MIMO)	9.84	15.87	Pass
5200	40		9.99		Pass
5240	48		9.85		Pass
5260	52		8.47	9.57	Pass
5300	60		8.63		Pass
5320	64		8.57		Pass
5500	100		8.90	9.86	Pass
5600	120		8.68		Pass
5720	144		8.66		Pass
5745	149		6.99	27.43	Pass
5785	157		7.22		Pass
5825	165		7.38		Pass

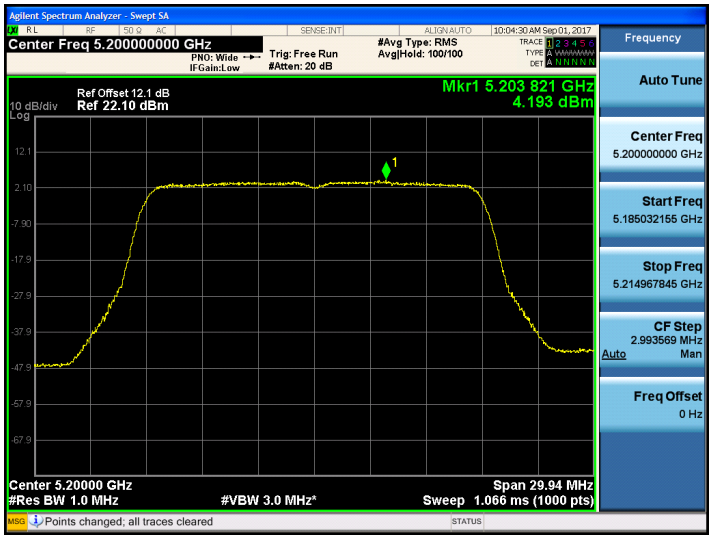
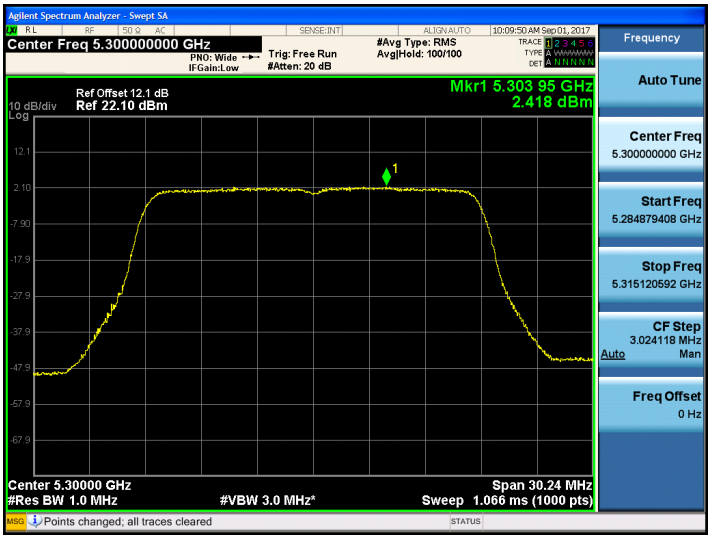
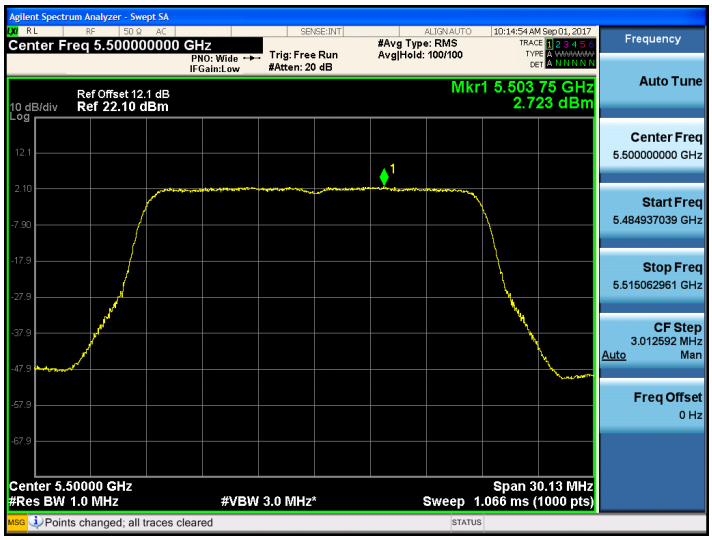
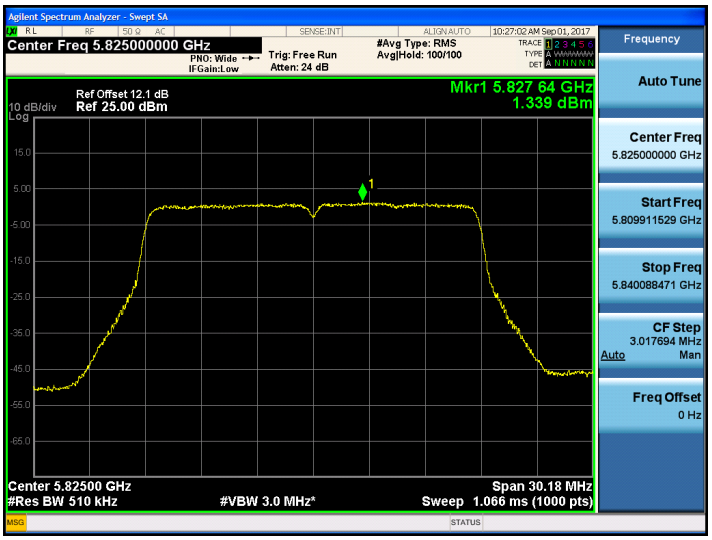
▣ TEST Plot for 802.11ac_VHT20_Ant.0

802.11ac_VHT20 UNII 1 BAND PSD CH 48	802.11ac_VHT20 UNII 2A BAND PSD CH 60
	
802.11ac_VHT20 UNII 2C BAND PSD CH 100	**802.11ac_VHT20 UNII 3 BAND PSD CH 157**
	

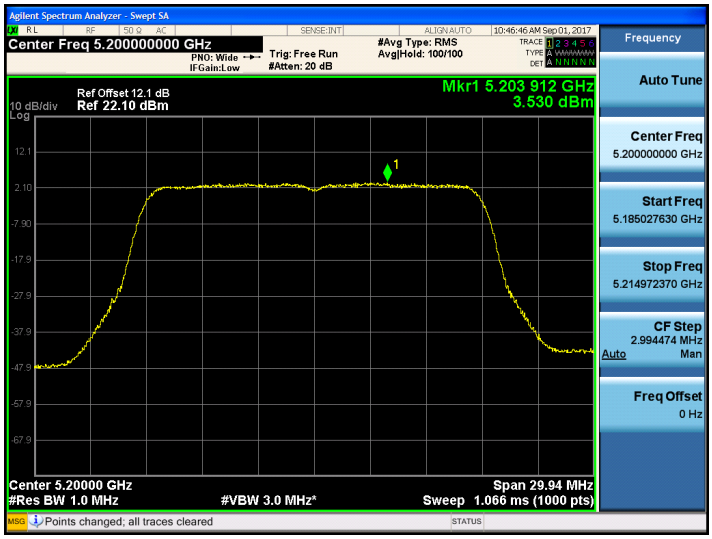
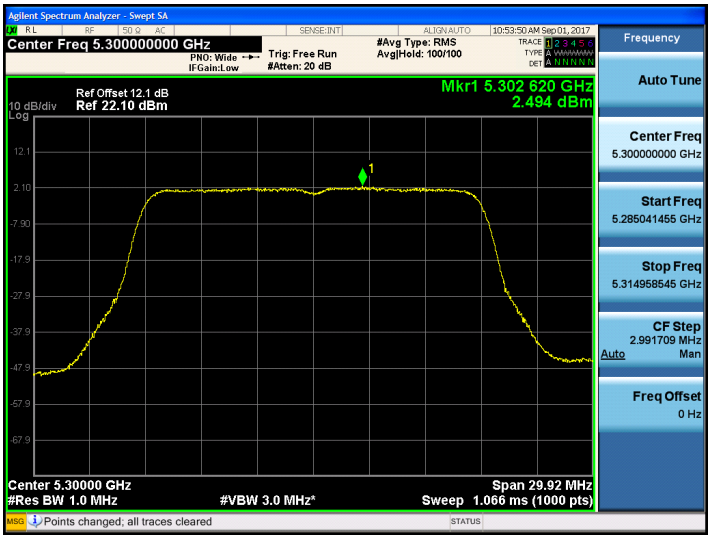
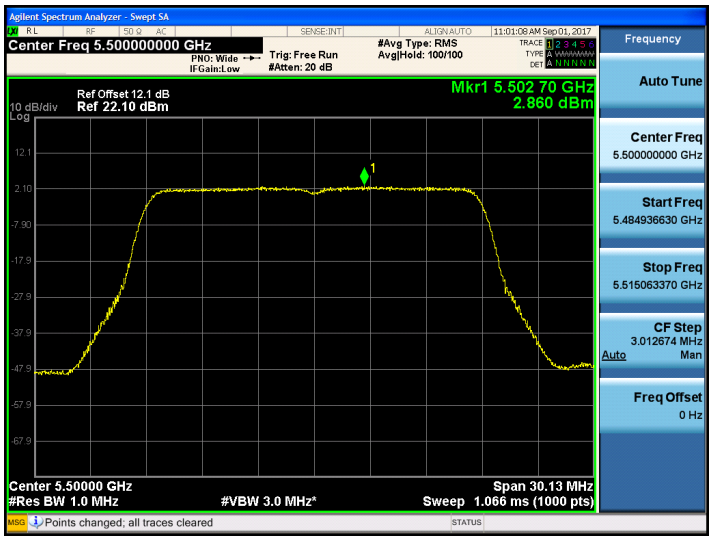
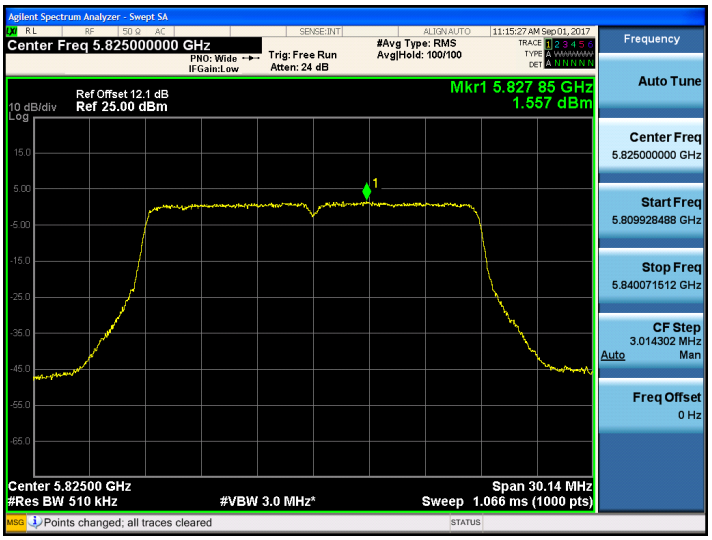
▣ TEST Plot for 802.11ac_VHT20_Ant.1

802.11ac_VHT20 UNII 1 BAND PSD CH 36	802.11ac_VHT20 UNII 2A BAND PSD CH 60
	
802.11ac_VHT20 UNII 2C BAND PSD CH 100	**802.11ac_VHT20 UNII 3 BAND PSD CH 165**
	

▣ TEST Plot for 802.11ac_VHT20_Ant.2

802.11ac_VHT20 UNII 1 BAND PSD CH 40	802.11ac_VHT20 UNII 2A BAND PSD CH 60
	
802.11ac_VHT20 UNII 2C BAND PSD CH 100	**802.11ac_VHT20 UNII 3 BAND PSD CH 165**
	

▣ TEST Plot for 802.11ac_VHT20_Ant.3

802.11ac_VHT20 UNII 1 BAND PSD CH 40	802.11ac_VHT20 UNII 2A BAND PSD CH 60
	
802.11ac_VHT20 UNII 2C BAND PSD CH 100	**802.11ac_VHT20 UNII 3 BAND PSD CH 165**
	

Ant.0

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11n _HT40 (SISO)	-4.405	0.228	-4.177	17	Pass
5230	46		1.157	0.242	1.399		Pass
5270	54		1.189	0.242	1.431	11	Pass
5310	62		-3.184	0.228	-2.956		Pass
5510	102		-1.137	0.242	-0.895	11	Pass
5590	118		0.862	0.116	0.978		Pass
5710	142		0.737	0.228	0.965		Pass
5755	151		-1.915	0.228	-1.687	30	Pass
5795	159		-1.759	0.242	-1.517		Pass

Ant.1

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11n _HT40 (SISO)	-4.207	0.116	-4.091	17	Pass
5230	46		1.111	0.220	1.331		Pass
5270	54		0.916	0.254	1.170	11	Pass
5310	62		-2.973	0.220	-2.753		Pass
5510	102		-1.638	0.117	-1.521	11	Pass
5590	118		0.795	0.254	1.049		Pass
5710	142		0.368	0.117	0.485		Pass
5755	151		-2.223	0.117	-2.106	30	Pass
5795	159		-2.190	0.220	-1.970		Pass

Ant.2

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11n _HT40 (SISO)	-4.273	0.117	-4.156	17	Pass
5230	46		0.821	0.212	1.033		Pass
5270	54		0.978	0.254	1.232	11	Pass
5310	62		-3.374	0.254	-3.120		Pass
5510	102		-1.447	0.254	-1.193	11	Pass
5590	118		0.718	0.212	0.930		Pass
5710	142		0.807	0.212	1.019		Pass
5755	151		-1.967	0.254	-1.713	30	Pass
5795	159		-2.197	0.116	-2.081		Pass

Ant.3

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11n _HT40 (SISO)	-4.516	0.254	-4.262	17	Pass
5230	46		1.106	0.117	1.223		Pass
5270	54		1.124	0.254	1.378	11	Pass
5310	62		-3.095	0.254	-2.841		Pass
5510	102		-1.103	0.254	-0.849	11	Pass
5590	118		1.172	0.220	1.392		Pass
5710	142		1.021	0.117	1.138		Pass
5755	151		-1.769	0.254	-1.515	30	Pass
5795	159		-1.837	0.254	-1.583		Pass

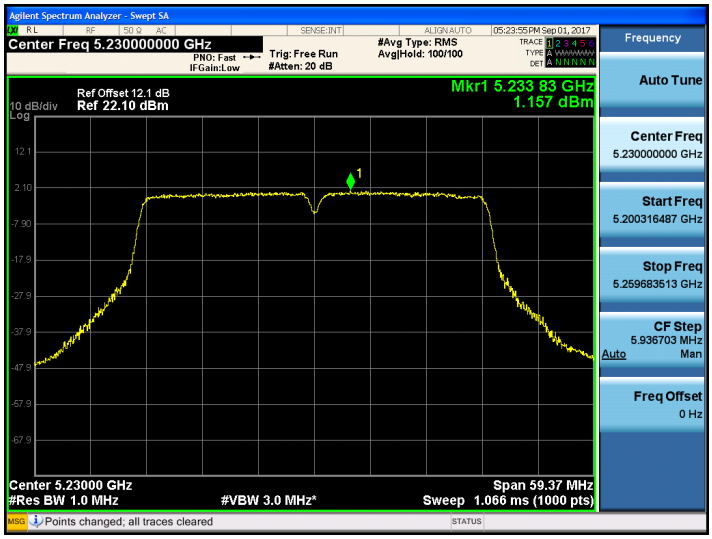
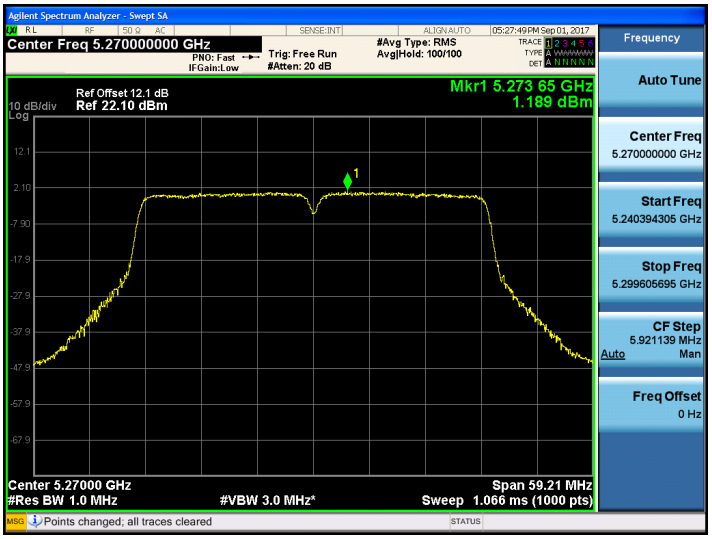
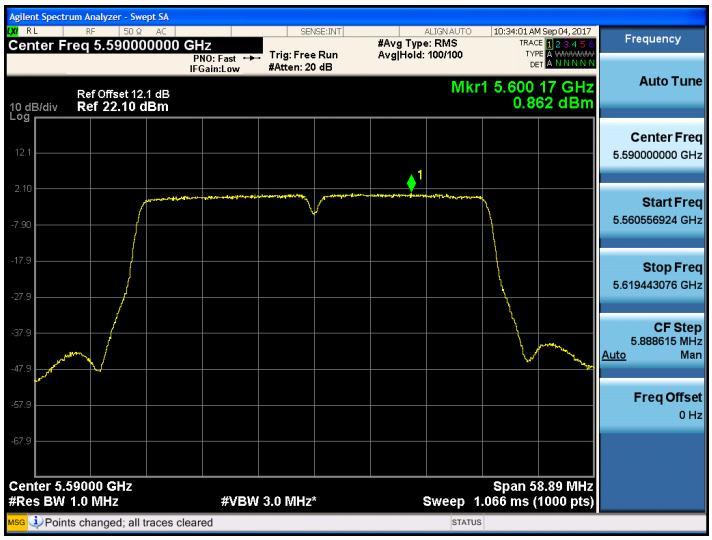
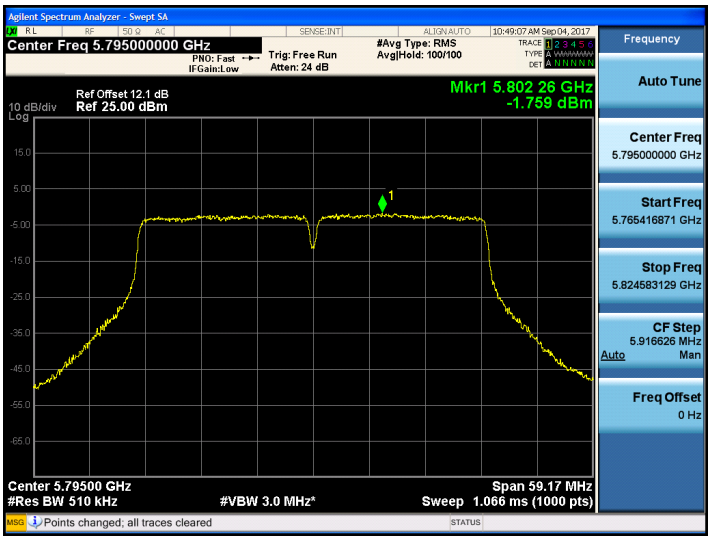
☑ **Sum Data of Ant.0 and Ant.1 and Ant.2 and Ant.3**

☑ **TEST RESULTS**

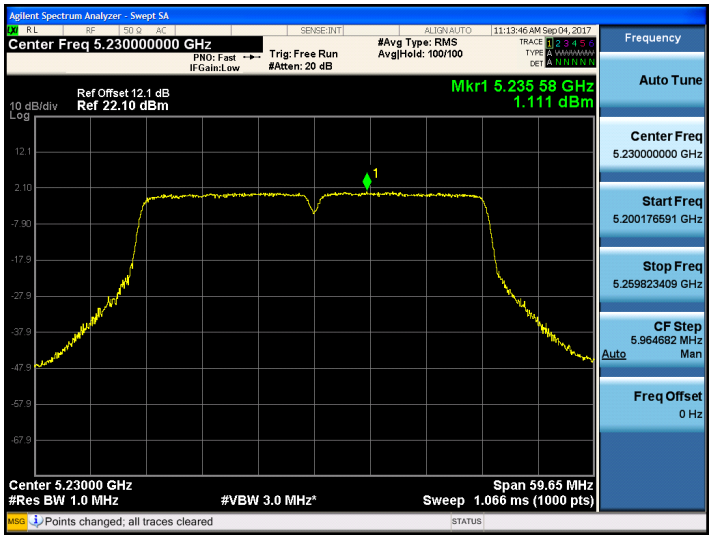
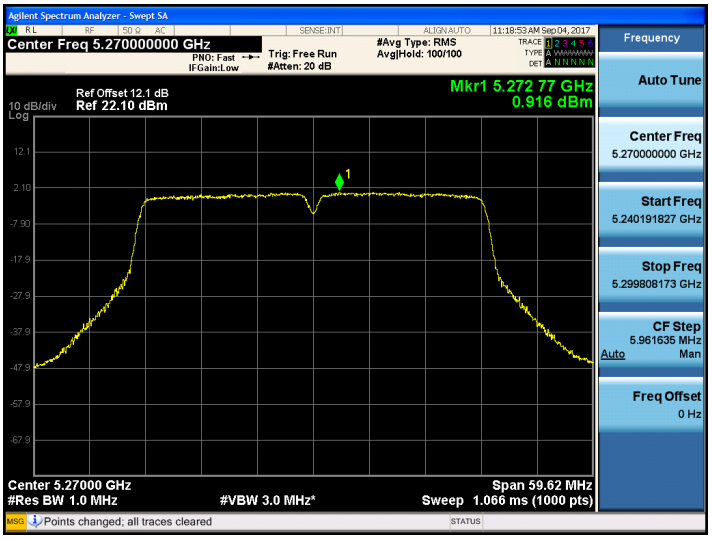
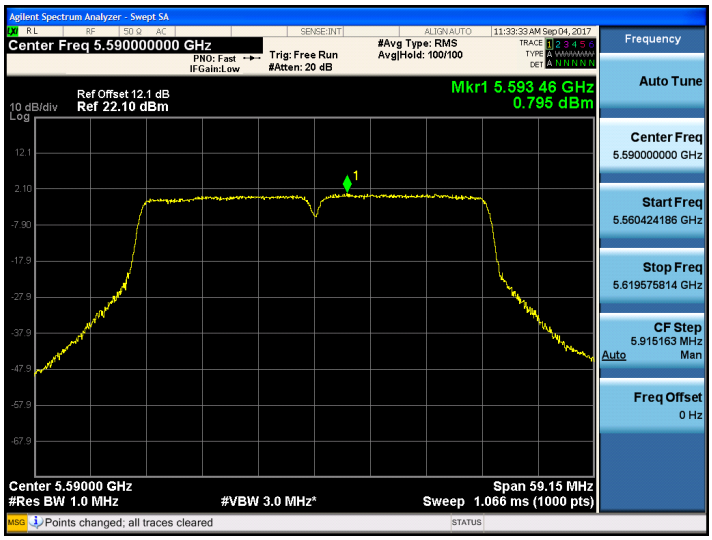
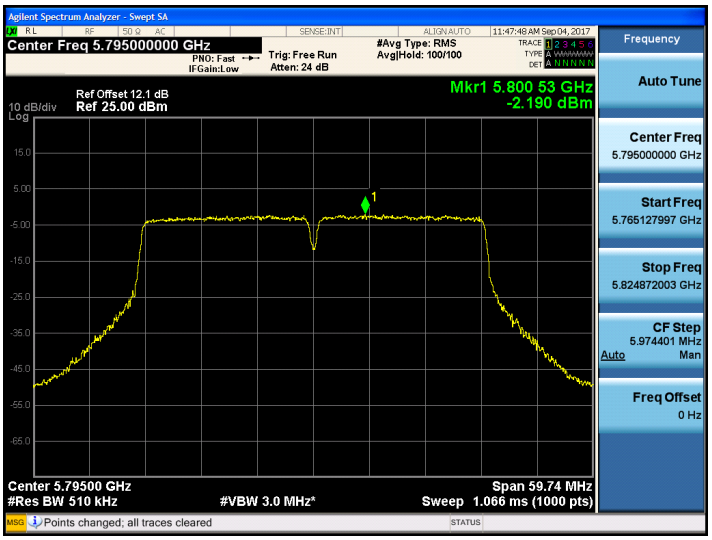
Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Measured Power Density (dBm)	Limit (dBm)	Pass/Fail
5190	38	802.11n _HT40 (MIMO)	1.85	15.87	Pass
5230	46		7.27		Pass
5270	54		7.32	9.57	Pass
5310	62		3.10		Pass
5510	102		4.91	9.86	Pass
5590	118		7.11		Pass
5710	142		6.93		Pass
5755	151		4.27	27.43	Pass
5795	159		4.24		Pass

▣ TEST Plot for 802.11n_HT40_Ant.0

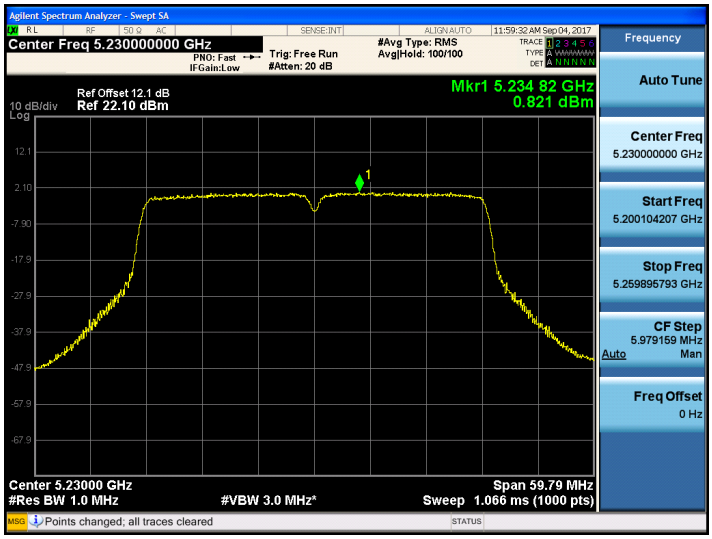
802.11n_HT40 UNII 1 BAND PSD CH 46	802.11n_HT40 UNII 2A BAND PSD CH 54
	
802.11n_HT40 UNII 2C BAND PSD CH 118	**802.11n_HT40 UNII 3 BAND PSD CH 159**
	

▣ TEST Plot for 802.11n_HT40_Ant.1

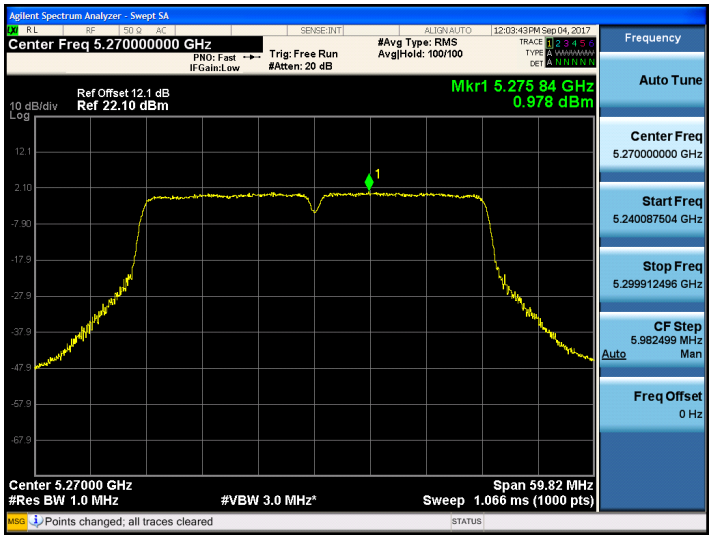
802.11n_HT40 UNII 1 BAND PSD CH 46	802.11n_HT40 UNII 2A BAND PSD CH 54
	
802.11n_HT40 UNII 2C BAND PSD CH 118	**802.11n_HT40 UNII 3 BAND PSD CH 159**
	

▣ TEST Plot for 802.11n_HT40_Ant.2

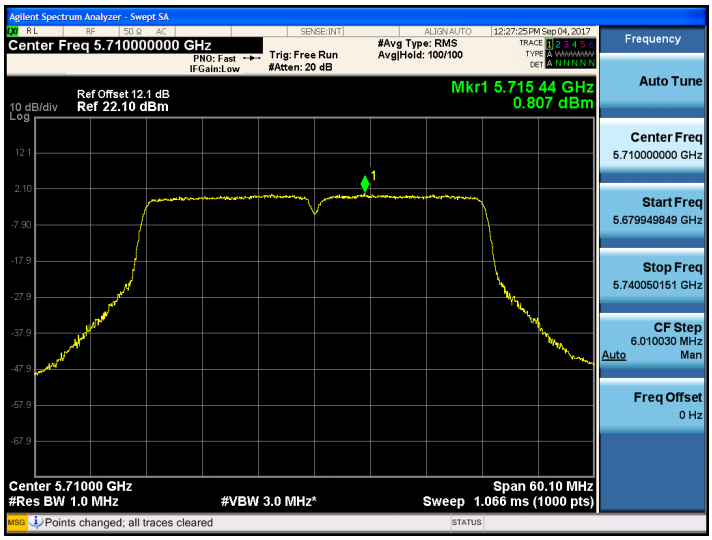
802.11n_HT40 UNII 1 BAND PSD CH 46



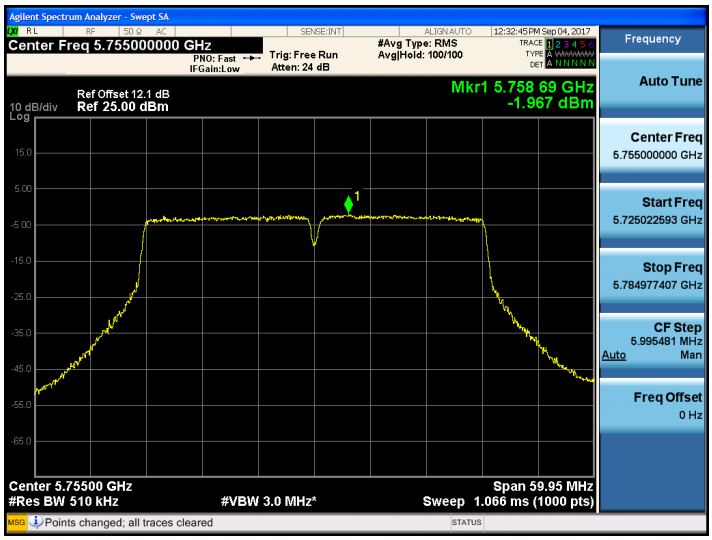
802.11n_HT40 UNII 2A BAND PSD CH 54



802.11n_HT40 UNII 2C BAND PSD CH 142

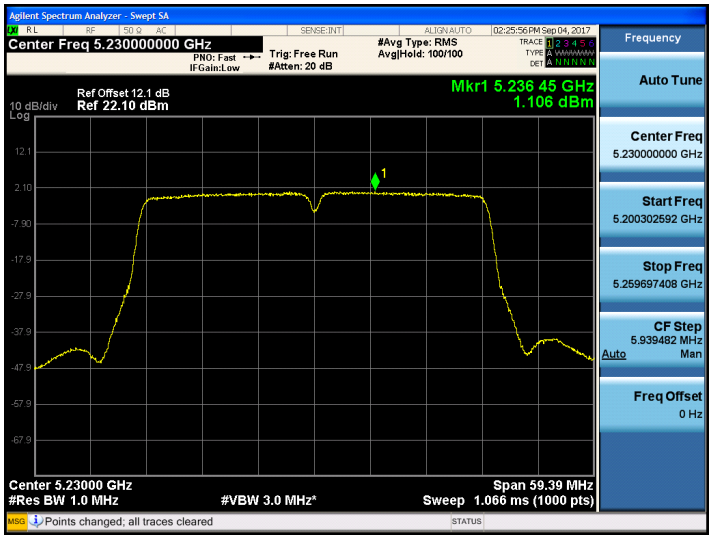


802.11n_HT40 UNII 3 BAND PSD CH 151

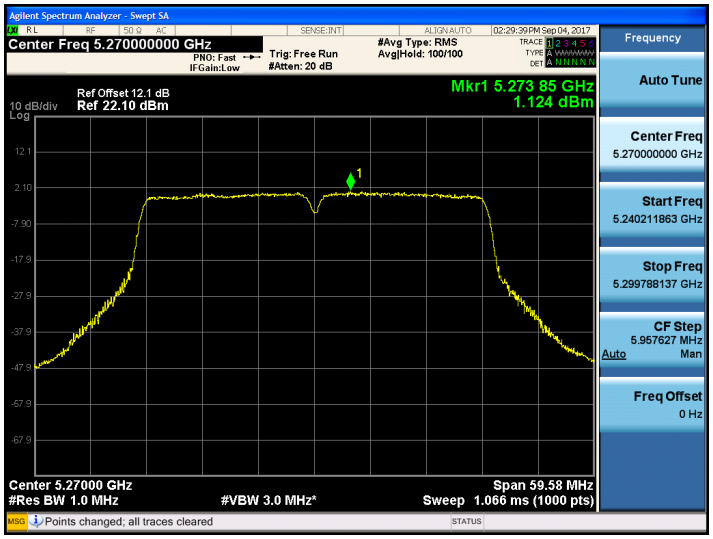


▣ TEST Plot for 802.11n_HT40_Ant.3

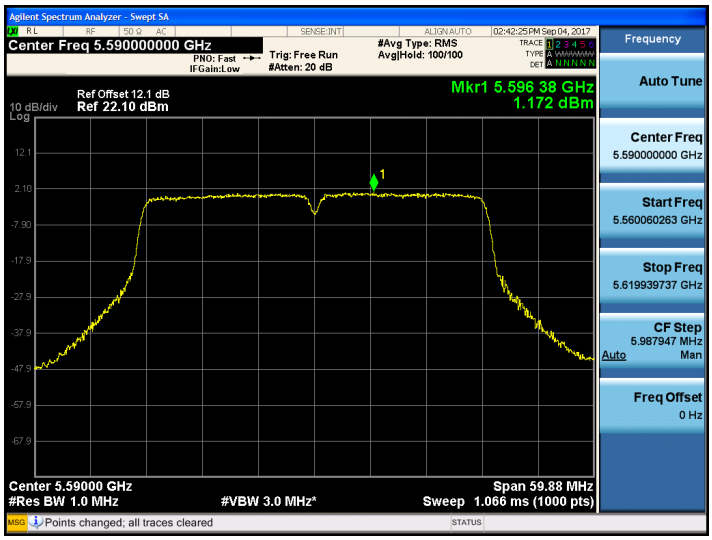
802.11n_HT40 UNII 1 BAND PSD CH 46



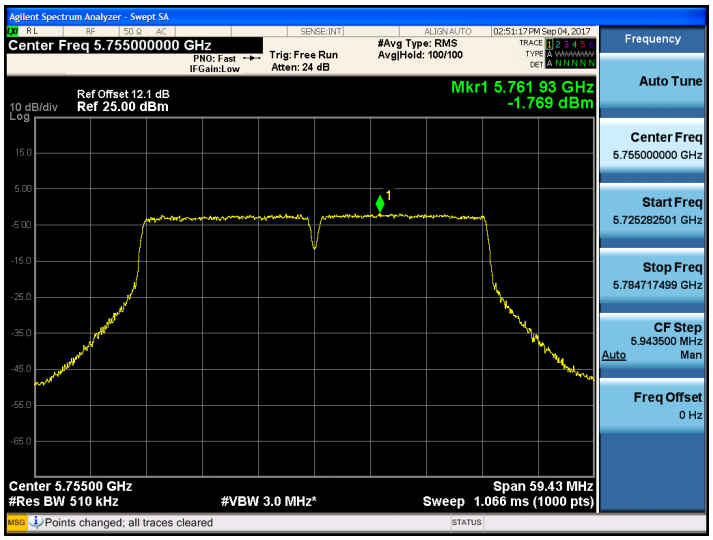
802.11n_HT40 UNII 2A BAND PSD CH 54



802.11n_HT40 UNII 2C BAND PSD CH 118



802.11n_HT40 UNII 3 BAND PSD CH 151



Ant.0

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11ac _VHT40	-4.273	0.117	-4.156	17	Pass
5230	46		1.009	0.355	1.364		Pass
5270	54		1.091	0.139	1.230	11	Pass
5310	62		-3.125	0.317	-2.808		Pass
5510	102		-1.258	0.317	-0.941	11	Pass
5590	118		1.002	0.117	1.119		Pass
5710	142		0.729	0.139	0.868		Pass
5755	151		-1.842	0.211	-1.631	30	Pass
5795	159		-1.749	0.211	-1.538		Pass

Ant.1

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11ac _VHT40	-4.563	0.319	-4.244	17	Pass
5230	46		1.188	0.204	1.392		Pass
5270	54		1.169	0.319	1.488	11	Pass
5310	62		-2.809	0.204	-2.605		Pass
5510	102		-1.398	0.139	-1.259	11	Pass
5590	118		0.857	0.319	1.176		Pass
5710	142		0.702	0.245	0.947		Pass
5755	151		-1.767	0.245	-1.522	30	Pass
5795	159		-1.927	0.245	-1.682		Pass

Ant.2

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11ac _VHT40	-4.224	0.117	-4.107	17	Pass
5230	46		1.266	0.316	1.582		Pass
5270	54		0.969	0.116	1.085	11	Pass
5310	62		-3.301	0.316	-2.985		Pass
5510	102		-1.254	0.117	-1.137	11	Pass
5590	118		1.127	0.211	1.338		Pass
5710	142		0.526	0.117	0.643		Pass
5755	151		-2.191	0.116	-2.075	30	Pass
5795	159		-1.799	0.316	-1.483		Pass

Ant.3

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5190	38	802.11ac _VHT40	-4.585	0.324	-4.261	17	Pass
5230	46		1.229	0.324	1.553		Pass
5270	54		1.050	0.324	1.374	11	Pass
5310	62		-3.170	0.324	-2.846		Pass
5510	102		-1.747	0.324	-1.423	11	Pass
5590	118		0.950	0.324	1.274		Pass
5710	142		0.656	0.324	0.980		Pass
5755	151		-1.789	0.117	-1.672	30	Pass
5795	159		-1.801	0.117	-1.684		Pass

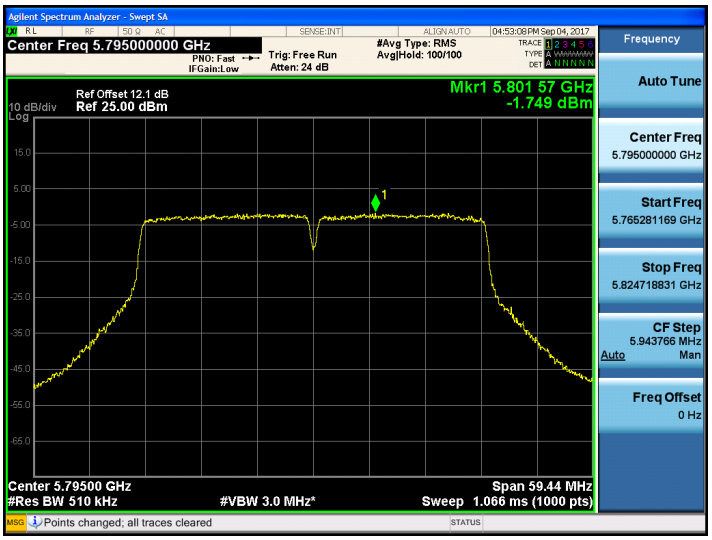
☑ **Sum Data of Ant.0 and Ant.1 and Ant.2 and Ant.3**

☑ **TEST RESULTS**

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Measured Power Density (dBm)	Limit (dBm)	Pass/Fail
5190	38	802.11ac _VHT40	1.83	15.87	Pass
5230	46		7.49		Pass
5270	54		7.32	9.57	Pass
5310	62		3.21		Pass
5510	102		4.83	9.86	Pass
5590	118		7.25		Pass
5710	142		6.88		Pass
5755	151		4.30	27.43	Pass
5795	159		4.42		Pass

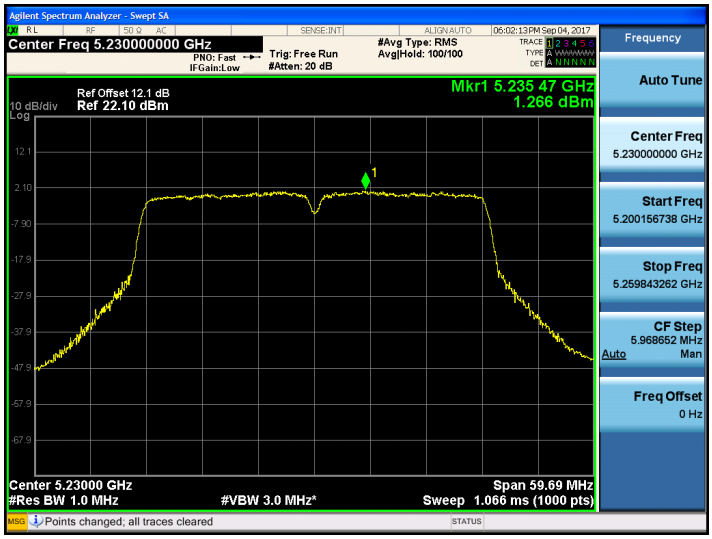
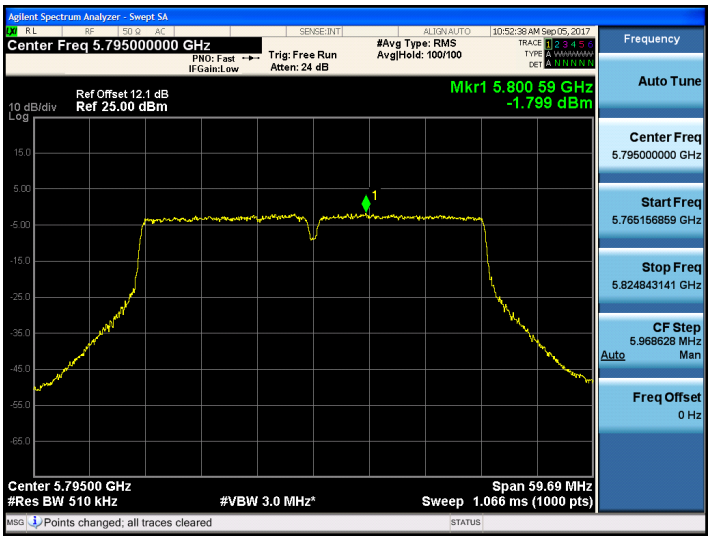
▣ TEST Plot for 802.11ac_VHT40_Ant.0

802.11ac_VHT40 UNII 1 BAND PSD CH 46	802.11ac_VHT40 UNII 2A BAND PSD CH 54
	
802.11ac_VHT40 UNII 2C BAND PSD CH 118	**802.11ac_VHT40 UNII 3 BAND PSD CH 159**
	

▣ TEST Plot for 802.11ac_VHT40_Ant.1

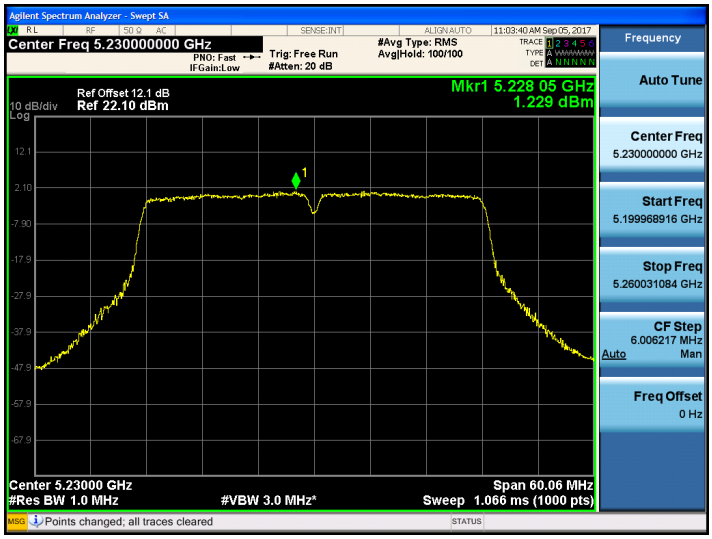
802.11ac_VHT40 UNII 1 BAND PSD CH 46	802.11ac_VHT40 UNII 2A BAND PSD CH 54
	
802.11ac_VHT40 UNII 2C BAND PSD CH 118	**802.11ac_VHT40 UNII 3 BAND PSD CH 151**
	

▣ TEST Plot for 802.11ac_VHT40_Ant.2

802.11ac_VHT40 UNII 1 BAND PSD CH 46	802.11ac_VHT40 UNII 2A BAND PSD CH 54
	
802.11ac_VHT40 UNII 2C BAND PSD CH 118	**802.11ac_VHT40 UNII 3 BAND PSD CH 159**
	

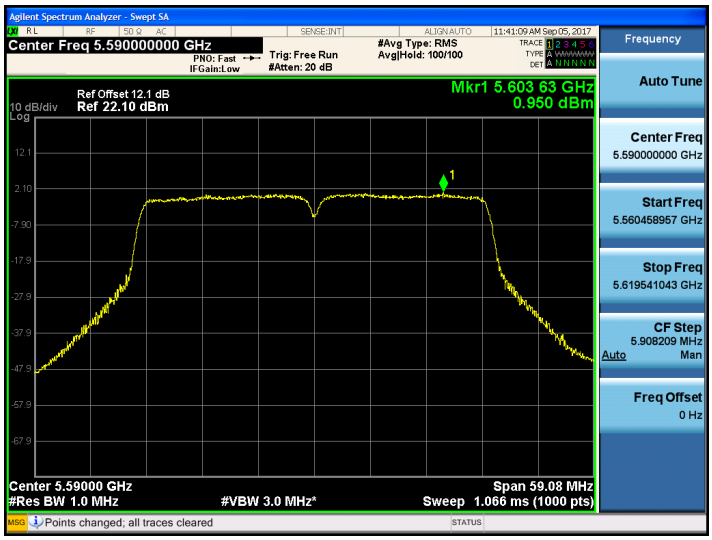
▣ TEST Plot for 802.11ac_VHT40_Ant.3

802.11ac_VHT40 UNII 1 BAND PSD CH 46



802.11ac_VHT40 UNII 2A BAND PSD CH 54

802.11ac_VHT40 UNII 2C BAND PSD CH 118



802.11ac_VHT40 UNII 3 BAND PSD CH 151

Ant.0

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT80	-10.185	0.226	-9.959	17	Pass
5290	58		-8.348	0.226	-8.122	11	Pass
5530	106		-8.142	0.226	-7.916		Pass
5610	122		-2.247	0.226	-2.021	11	Pass
5690	138		-2.344	0.226	-2.118		Pass
5775	155		-5.561	0.226	-5.335	30	Pass

Ant.1

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT80	-9.677	0.227	-9.450	17	Pass
5290	58		-7.872	0.227	-7.645	11	Pass
5530	106		-8.614	0.227	-8.387		Pass
5610	122		-2.101	0.227	-1.874	11	Pass
5690	138		-2.275	0.227	-2.048		Pass
5775	155		-5.155	0.227	-4.928	30	Pass

Ant.2

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT80	-10.041	0.235	-9.806	17	Pass
5290	58		-8.206	0.235	-7.971	11	Pass
5530	106		-8.688	0.235	-8.453		Pass
5610	122		-2.134	0.235	-1.899	11	Pass
5690	138		-2.095	0.235	-1.860		Pass
5775	155		-5.300	0.235	-5.065	30	Pass

Ant.3

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT80	-10.166	0.594	-9.572	17	Pass
5290	58		-8.125	0.223	-7.902	11	Pass
5530	106		-8.283	0.223	-8.060		Pass
5610	122		-2.362	0.223	-2.139	11	Pass
5690	138		-1.954	0.223	-1.731		Pass
5775	155		-5.199	0.223	-4.976	30	Pass

☑ **Sum Data of Ant.0 and Ant.1 and Ant.2 and Ant.3**

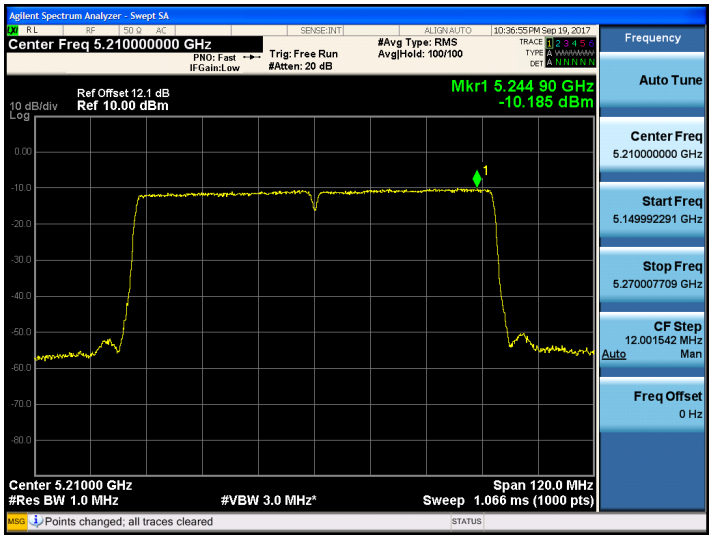
☑ **TEST RESULTS**

Conducted Power Density Measurements

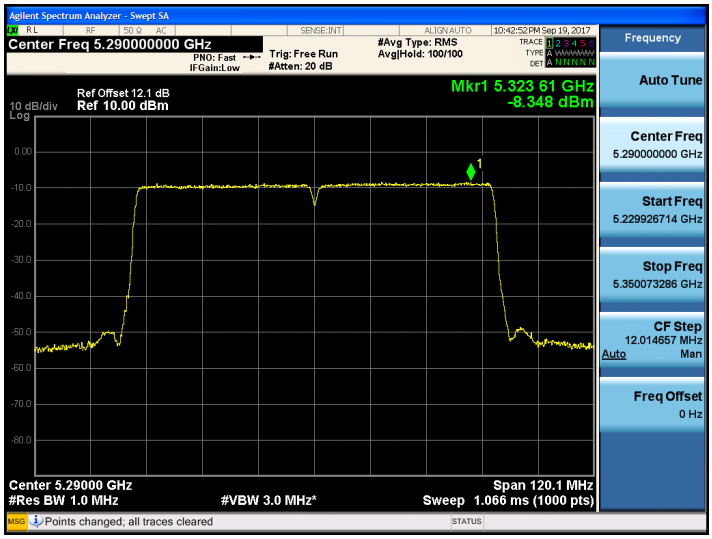
Frequency (MHz)	Channel No.	Mode	Test Result		
			Measured Power Density (dBm)	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT80	-3.67	15.87	Pass
5290	58		-1.89	9.57	Pass
5530	106		-2.18	9.86	Pass
5610	122		4.04		Pass
5690	138		4.08		Pass
5775	155		0.95	27.43	Pass

▣ TEST Plot for 802.11ac_VHT80_Ant.0

802.11ac_VHT80 UNII 1 BAND PSD CH 42



802.11ac_VHT80 UNII 2A BAND PSD CH 58

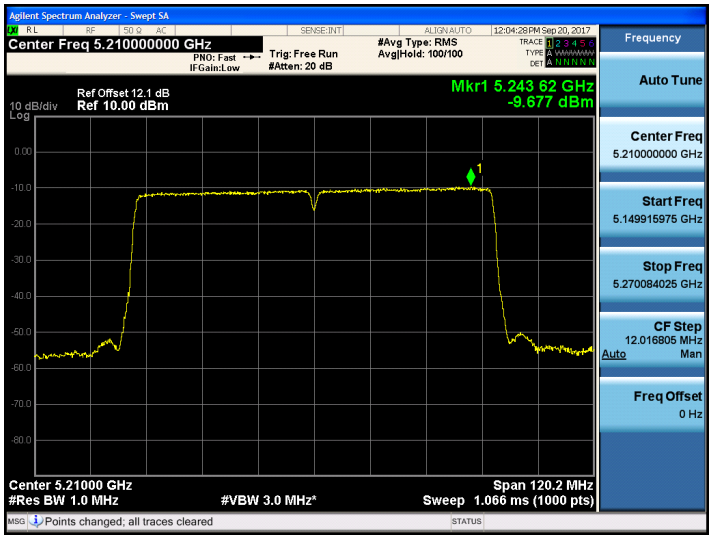


802.11ac_VHT80 UNII 2C BAND PSD CH 122

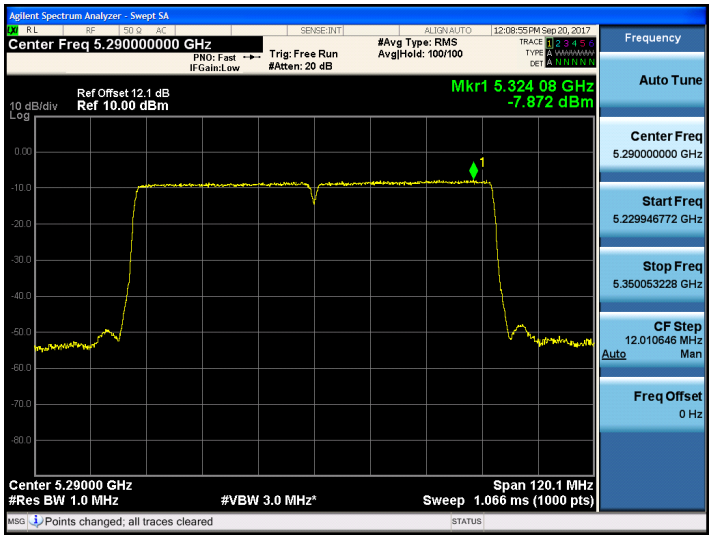
802.11ac_VHT80 UNII 3 BAND PSD CH 155

▣ TEST Plot for 802.11ac_VHT80_Ant.1

802.11ac_VHT80 UNII 1 BAND PSD CH 42



802.11ac_VHT80 UNII 2A BAND PSD CH 58

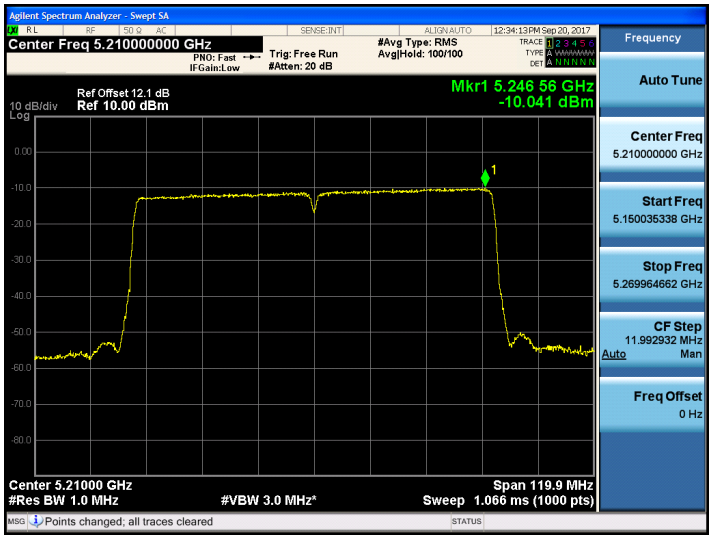


802.11ac_VHT80 UNII 2C BAND PSD CH 122

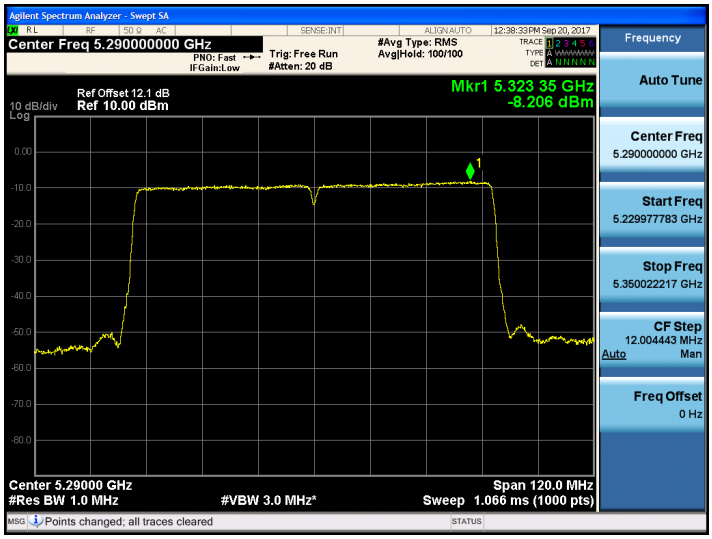
802.11ac_VHT80 UNII 3 BAND PSD CH 155

▣ TEST Plot for 802.11ac_VHT80_Ant.2

802.11ac_VHT80 UNII 1 BAND PSD CH 42



802.11ac_VHT80 UNII 2A BAND PSD CH 58

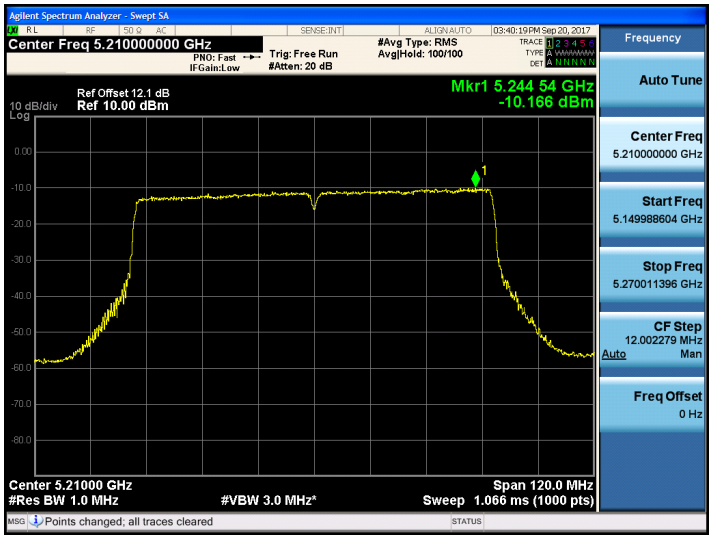


802.11ac_VHT80 UNII 2C BAND PSD CH 138

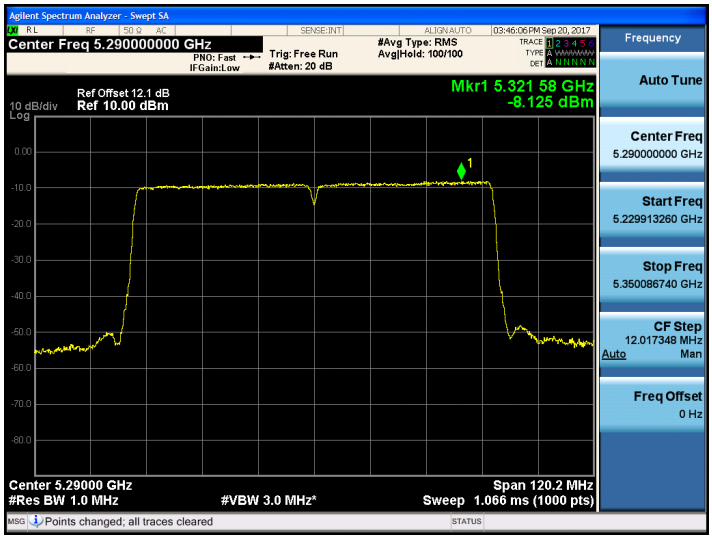
802.11ac_VHT80 UNII 3 BAND PSD CH 155

▣ TEST Plot for 802.11ac_VHT80_Ant.3

802.11ac_VHT80 UNII 1 BAND PSD CH 42



802.11ac_VHT80 UNII 2A BAND PSD CH 58



802.11ac_VHT80 UNII 2C BAND PSD CH 138

802.11ac_VHT80 UNII 3 BAND PSD CH 155

Ant.0, 2

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT160	-6.220	0.130	-6.090	17	Pass
5290	58		-6.439	0.130	-6.309	11	Pass
5530	106		-4.037	0.130	-3.907		Pass
5610	122		-4.508	0.130	-4.378	11	Pass
5210	42		-4.660	0.130	-4.530		Pass
5775	155		-4.920	0.130	-4.790	30	Pass

Ant.1, 3

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result				
			Measured Power Density (dBm)	Duty Cycle Factor (dB)	Measured Power Density(dBm) + Duty Cycle Factor	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT160	-7.211	0.130	-7.081	17	Pass
5290	58		-7.269	0.130	-7.139	11	Pass
5530	106		-3.470	0.130	-3.340		Pass
5610	122		-3.627	0.130	-3.497	11	Pass
5210	42		-5.929	1.052	-4.877		Pass
5775	155		-5.652	0.130	-5.522	30	Pass

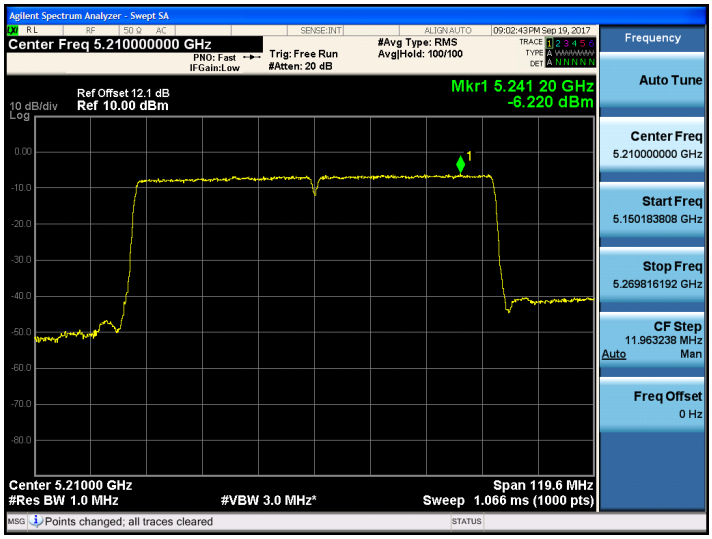
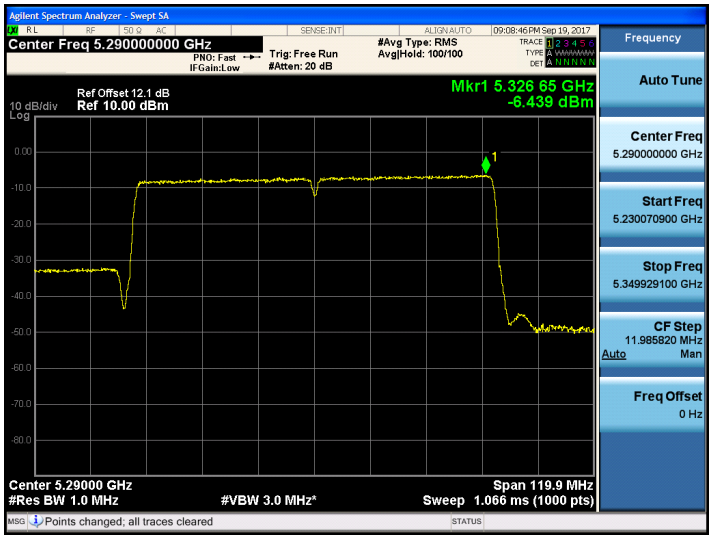
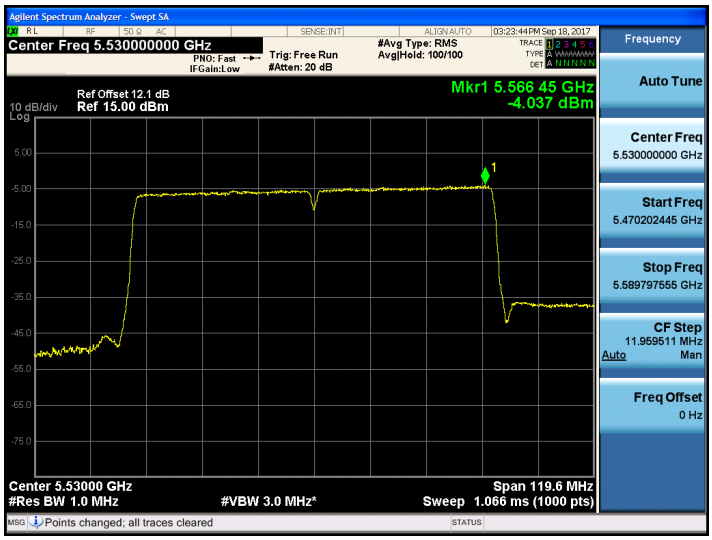
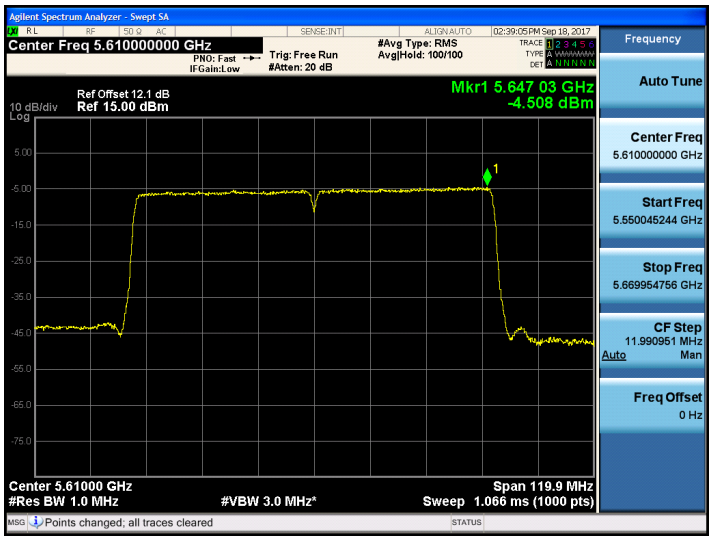
☑ **Sum Data of Ant.0, 2 and Ant.1, 3**

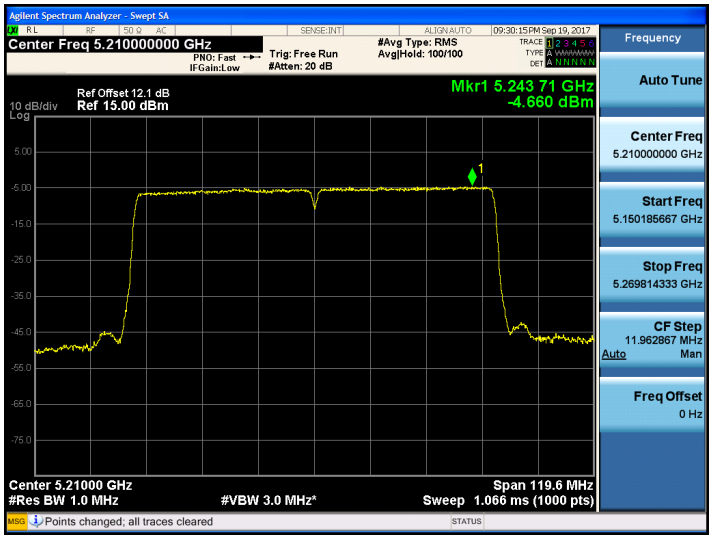
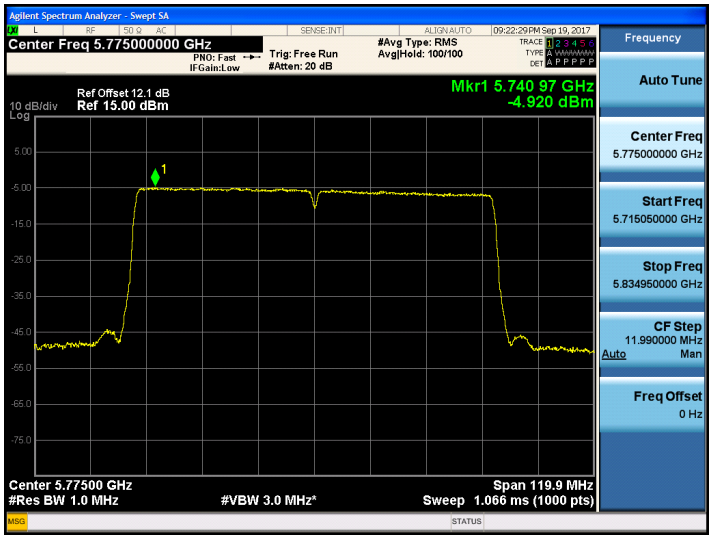
☑ **TEST RESULTS**

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Measured Power Density (dBm)	Limit (dBm)	Pass/Fail
5210	42	802.11ac _VHT160	3.34	15.87	Pass
5290	58		3.30	9.57	Pass
5530	106		4.40	9.86	Pass
5610	122		4.28		Pass
5210	42		3.98		Pass
5775	155		3.82	27.43	Pass

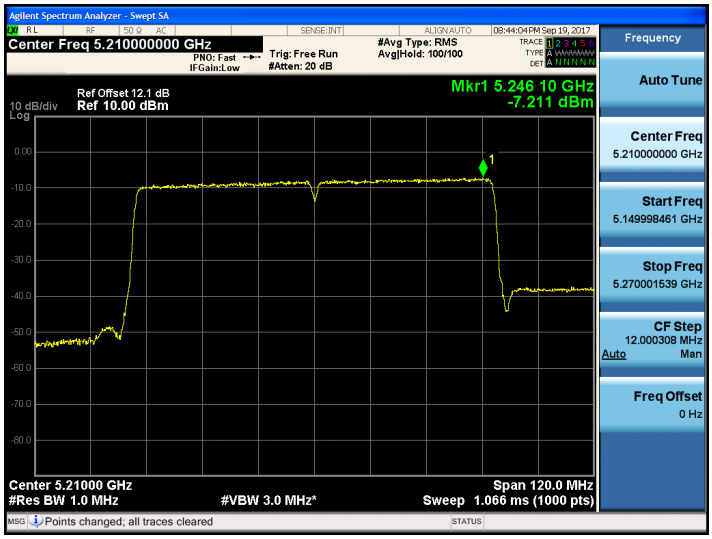
▣ TEST Plot for 802.11ac_VHT160_Ant.0, 2

802.11ac_VHT160 PSD CH 42	802.11ac_VHT160 PSD CH 58
	
802.11ac_VHT160 PSD CH 106	**802.11ac_VHT160 PSD CH 122**
	

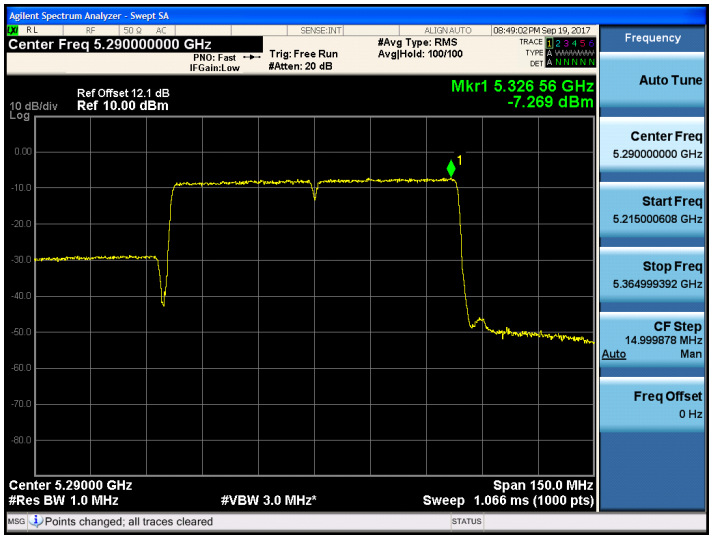
802.11ac_VHT160 PSD CH 42	802.11ac_VHT160 PSD CH 155
	

▣ TEST Plot for 802.11ac_VHT160_Ant.1, 3

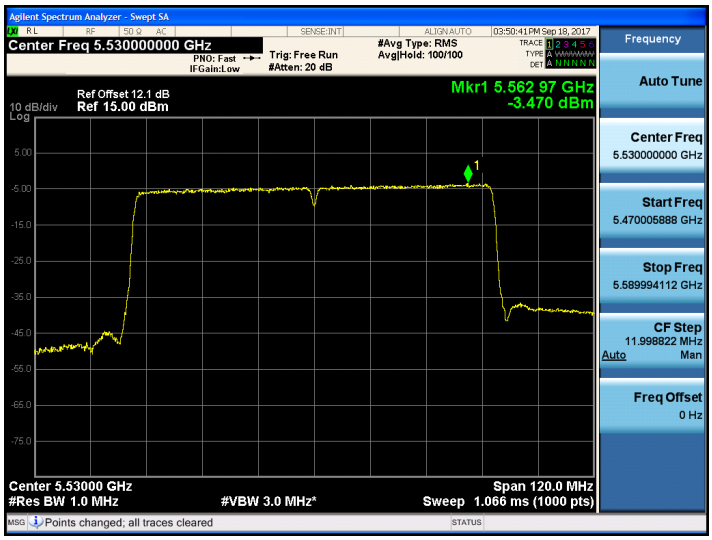
802.11ac_VHT160 PSD CH 42



802.11ac_VHT160 PSD CH 58



802.11ac_VHT160 PSD CH 106



802.11ac_VHT160 PSD CH 122