Appendix C

RF Test Data for 5.2G WLAN (Conducted Measurement)

Product Name: Lapbook
Trade Mark: Fusion5
Test Model: T90B+ Pro

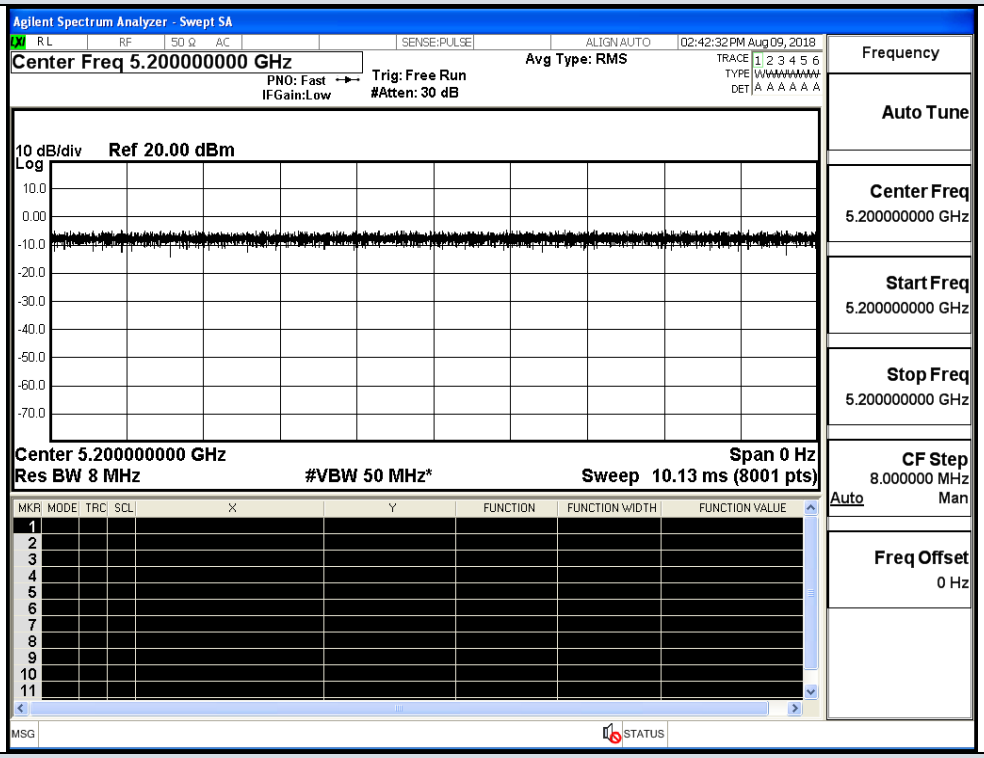
Environmental Conditions

Temperature:	24.6 ° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom.Liu
Supervised by:	Jayden.Zhuo

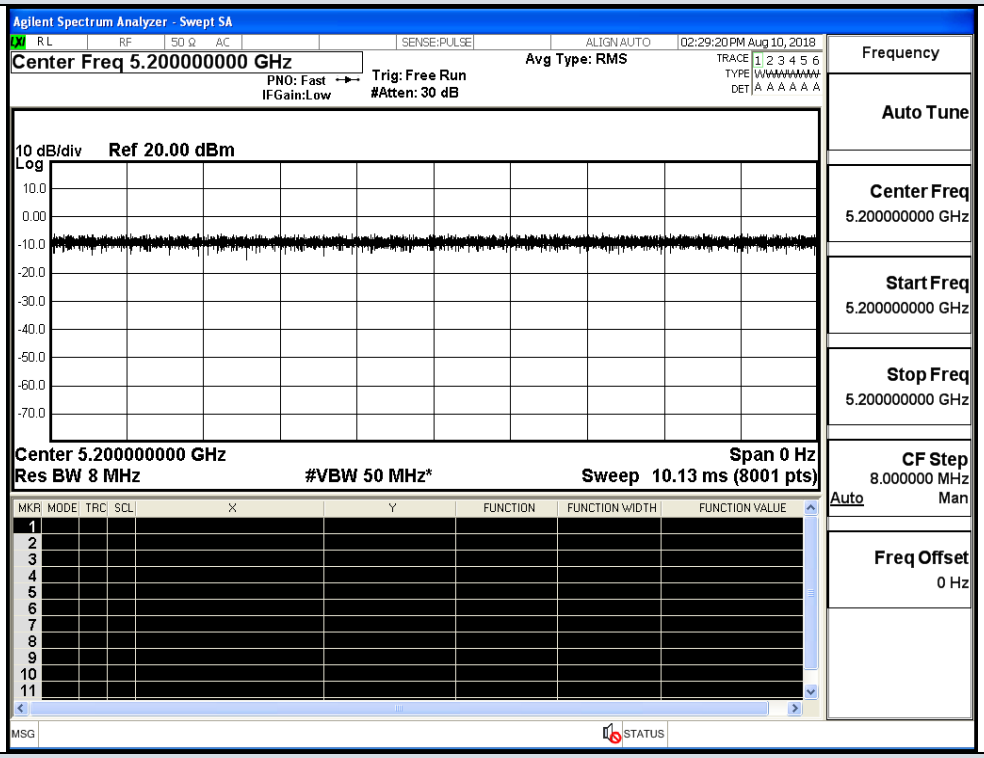
C.1 Duty Cycle

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW (KHz)
11A	5200	100	0.00	0.01
11N20 SISO	5200	100	0.00	0.01
11N40 SISO	5190	100	0.00	0.01
11AC20 SISO	5200	100	0.00	0.01
11AC40 SISO	5190	100	0.00	0.01
11AC80 SISO	5210	100	0.00	0.01

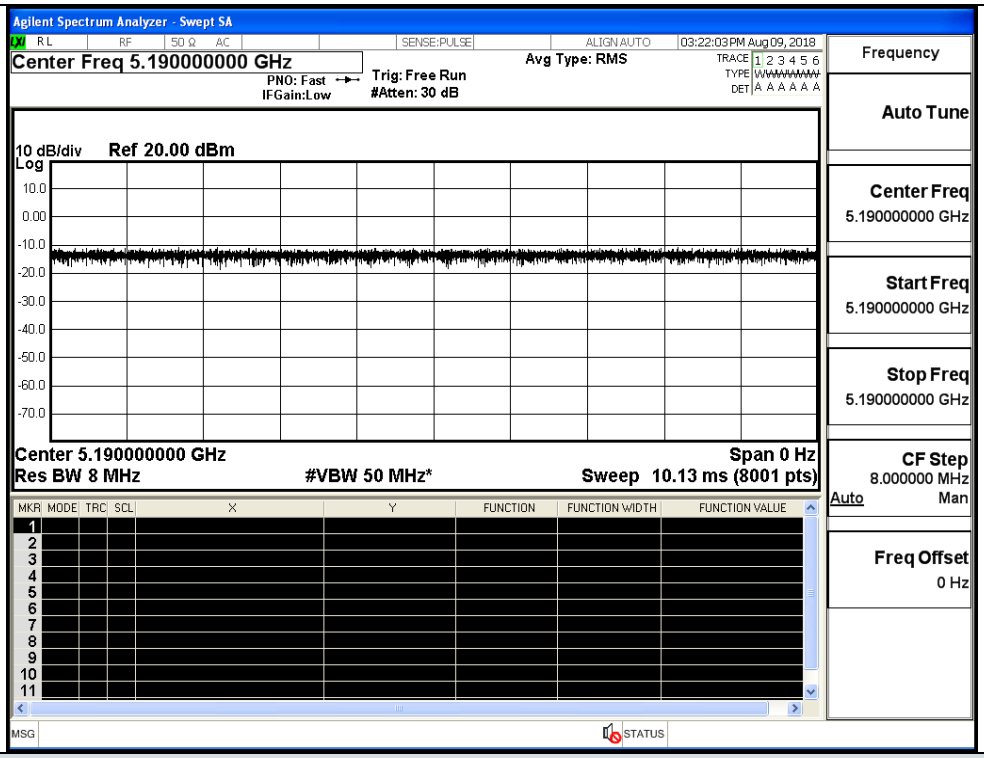
On Time and Duty Cycle



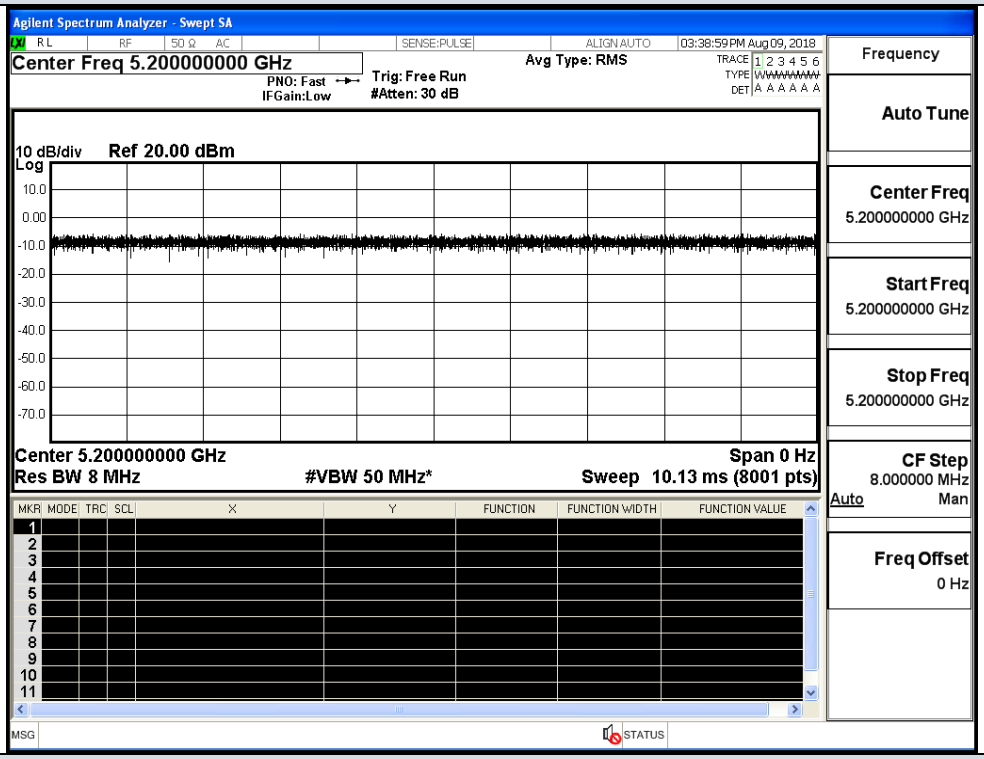
IEEE 802.11a



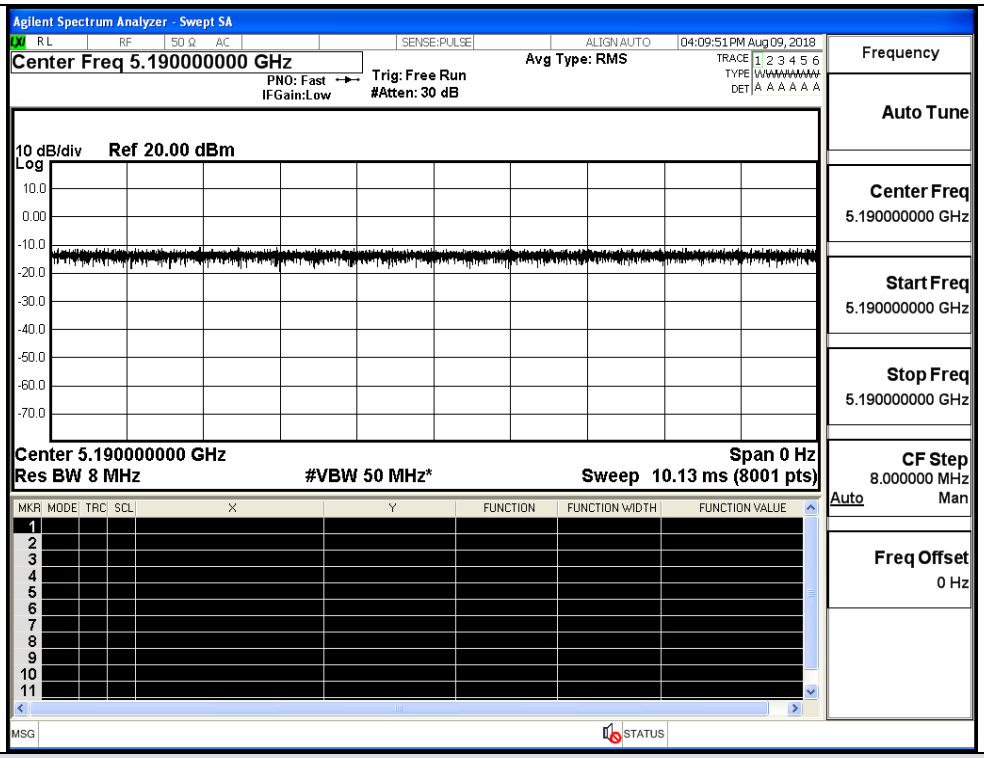
IEEE 802.11n HT20



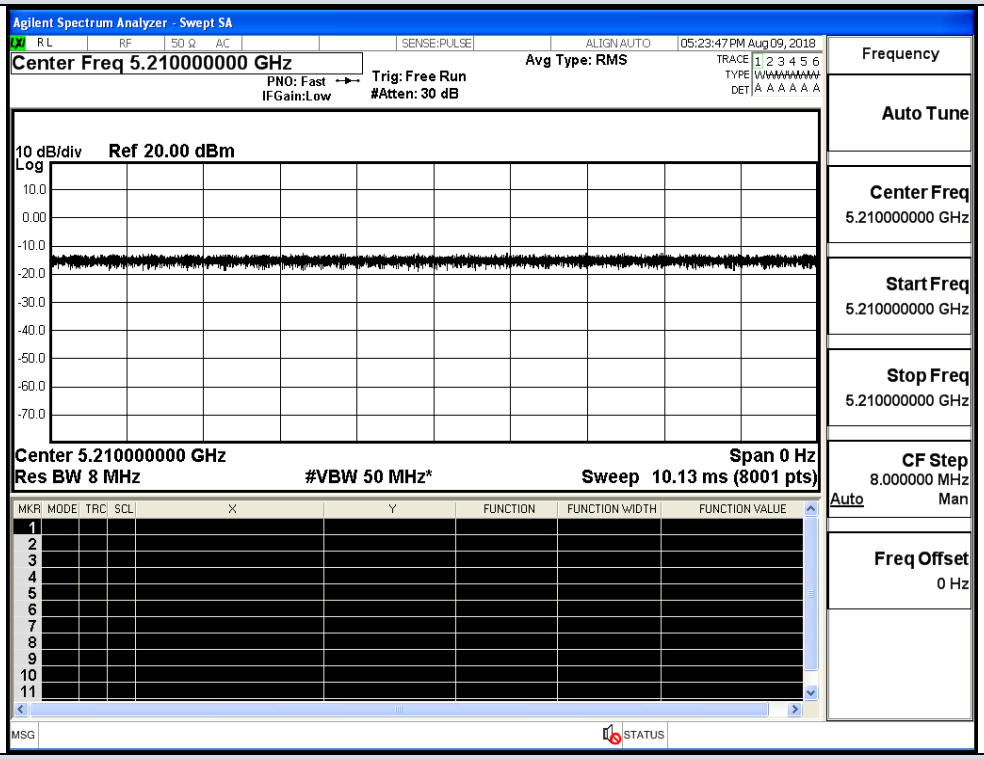
IEEE 802.11n HT40



IEEE 802.11ac VHT20



IEEE 802.11ac VHT40



IEEE 802.11ac VHT80

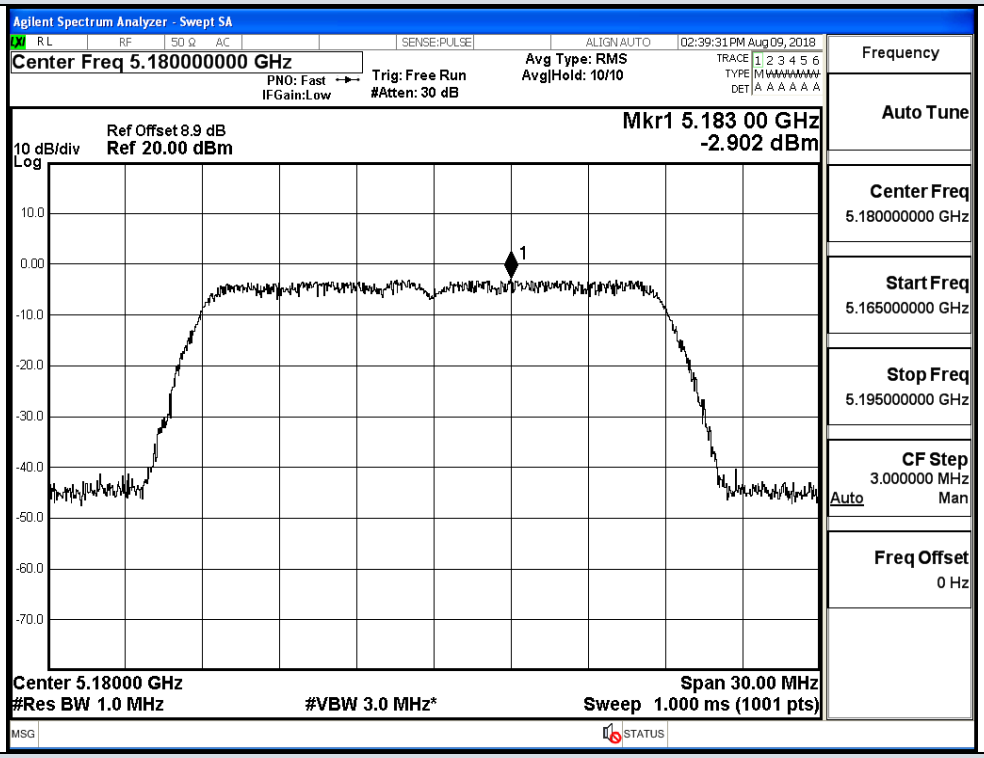
C.2 Maximum Conduct Output Power

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11A	36	5180	11.15	0	11.15	24
	40	5200	11.28	0	11.28	
	48	5240	11.09	0	11.09	
11N20 SISO	36	5180	11.21	0	11.21	24
	40	5200	11.36	0	11.36	
	48	5240	11.10	0	11.10	
11N40 SISO	38	5190	12.51	0	12.51	24
	46	5230	12.26	0	12.26	
11AC20 SISO	36	5180	11.04	0	11.04	24
	40	5200	11.24	0	11.24	
	48	5240	11.34	0	11.34	
11AC40 SISO	38	5190	11.97	0	11.97	24
	46	5230	12.65	0	12.65	
11AC80 SISO	42	5210	12.48	0	12.48	24

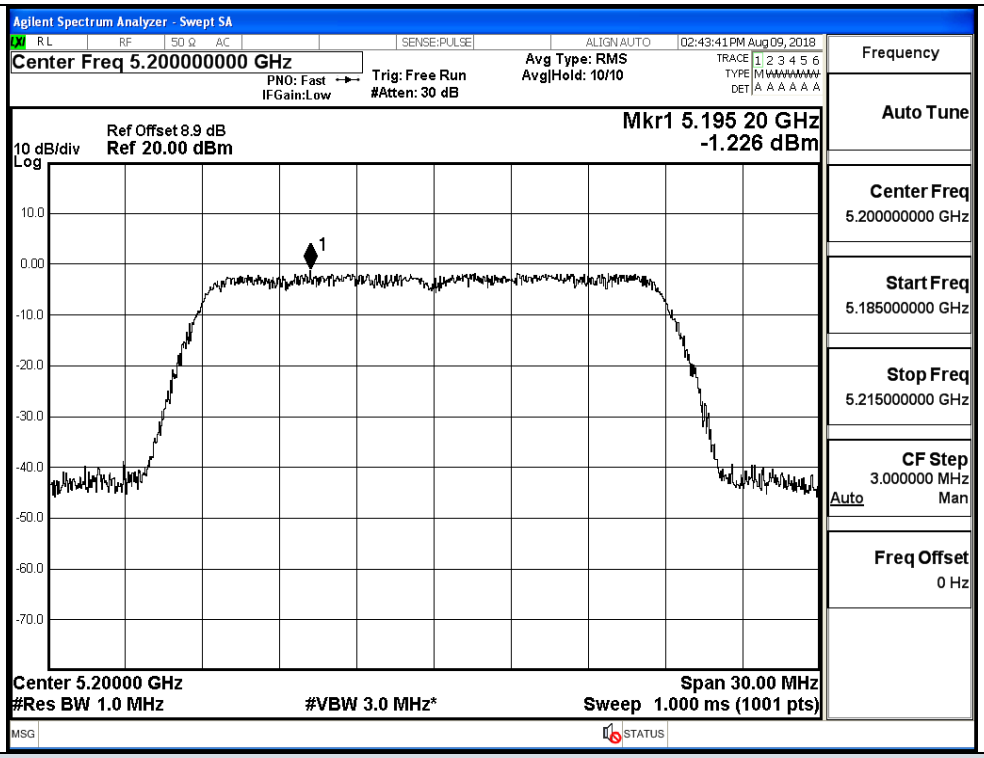
C.3 Power Spectral Density

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/MHz)	Duty Cycle Factor(dB)	Report Power Density (dBm/MHz)	Limit (dBm/MHz)
11A	36	5180	-2.902	0	-2.902	11
	40	5200	-1.226	0	-1.226	
	48	5240	-2.136	0	-2.136	
11N20 SISO	36	5180	-5.086	0	-5.086	11
	40	5200	-2.933	0	-2.933	
	48	5240	-1.822	0	-1.822	
11N40 SISO	38	5190	-7.392	0	-7.392	11
	46	5230	-4.888	0	-4.888	
11AC20 SISO	36	5180	-5.011	0	-5.011	11
	40	5200	-2.690	0	-2.690	
	48	5240	-1.725	0	-1.725	
11AC40 SISO	38	5190	-6.695	0	-6.695	11
	46	5230	-4.245	0	-4.245	
11AC80 SISO	42	5210	-7.669	0	-7.669	11

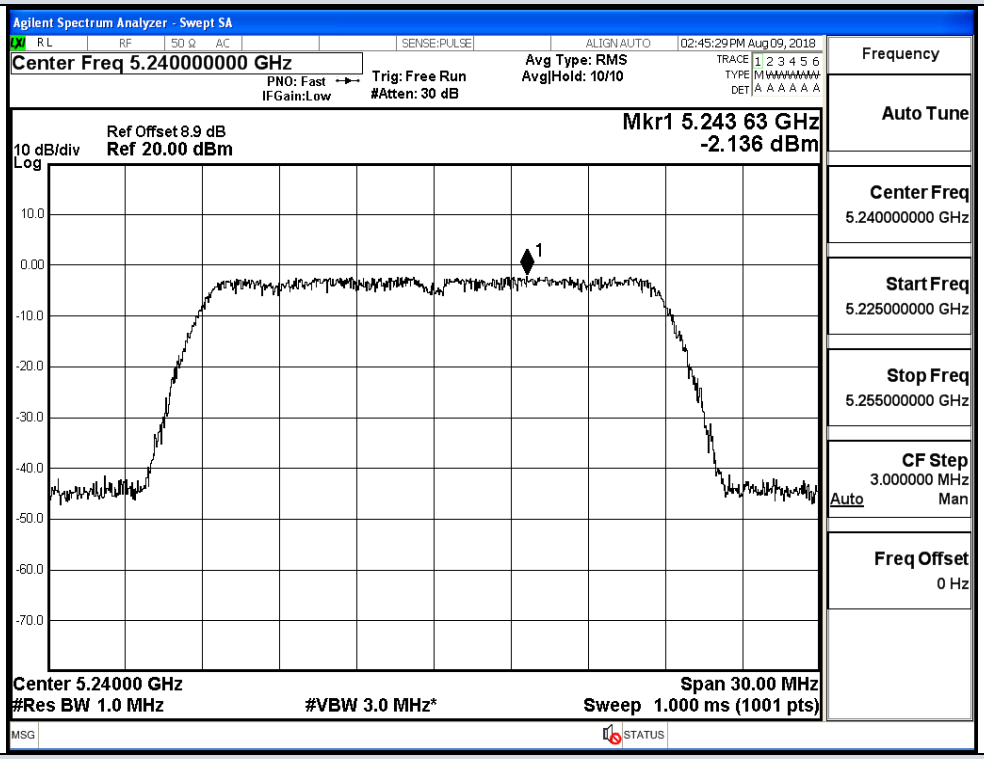
Power Spectral Density



IEEE 802.11a / Channel 36 / 5180 MHz

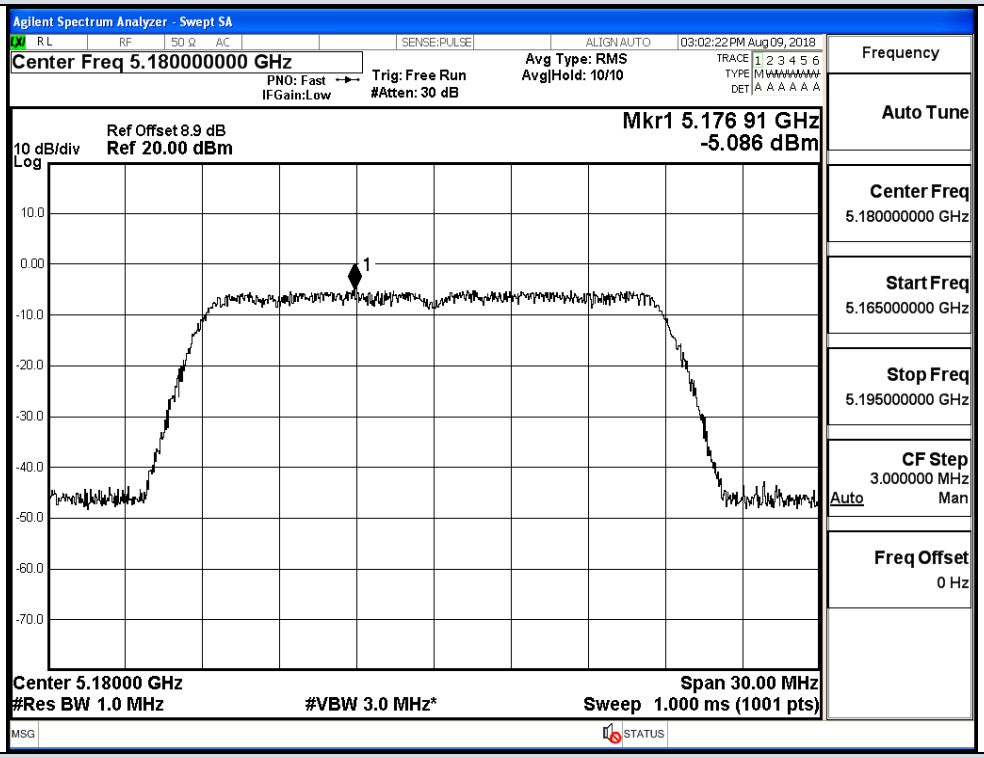


IEEE 802.11a / Channel 40 / 5200 MHz

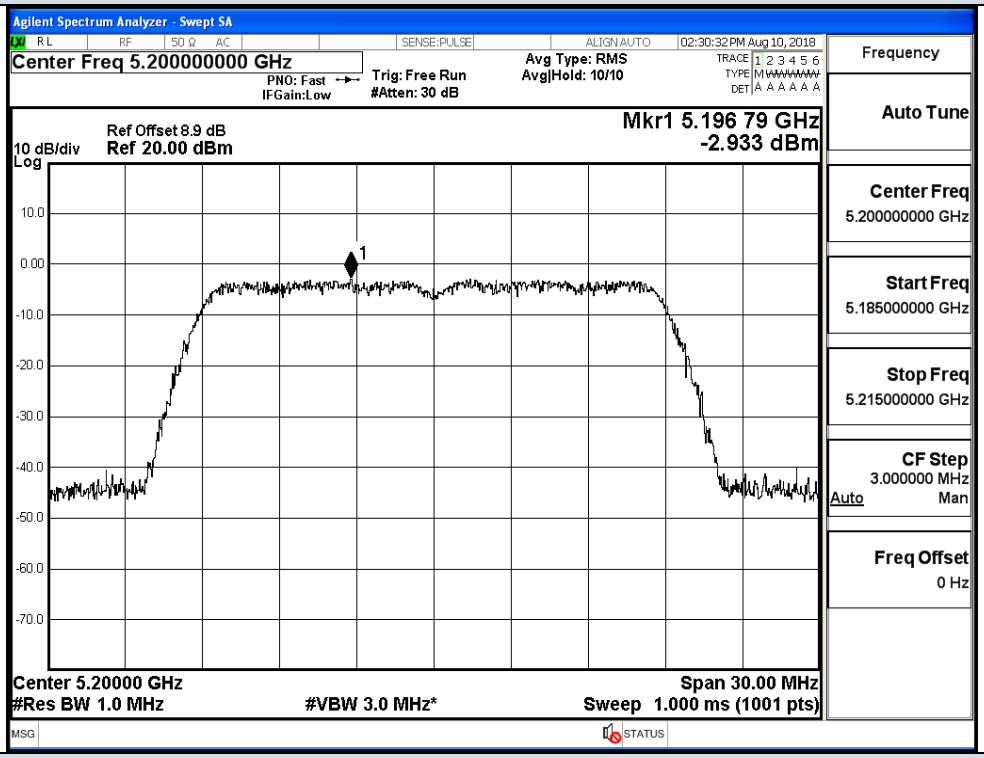


IEEE 802.11a / Channel 48 / 5240 MHz

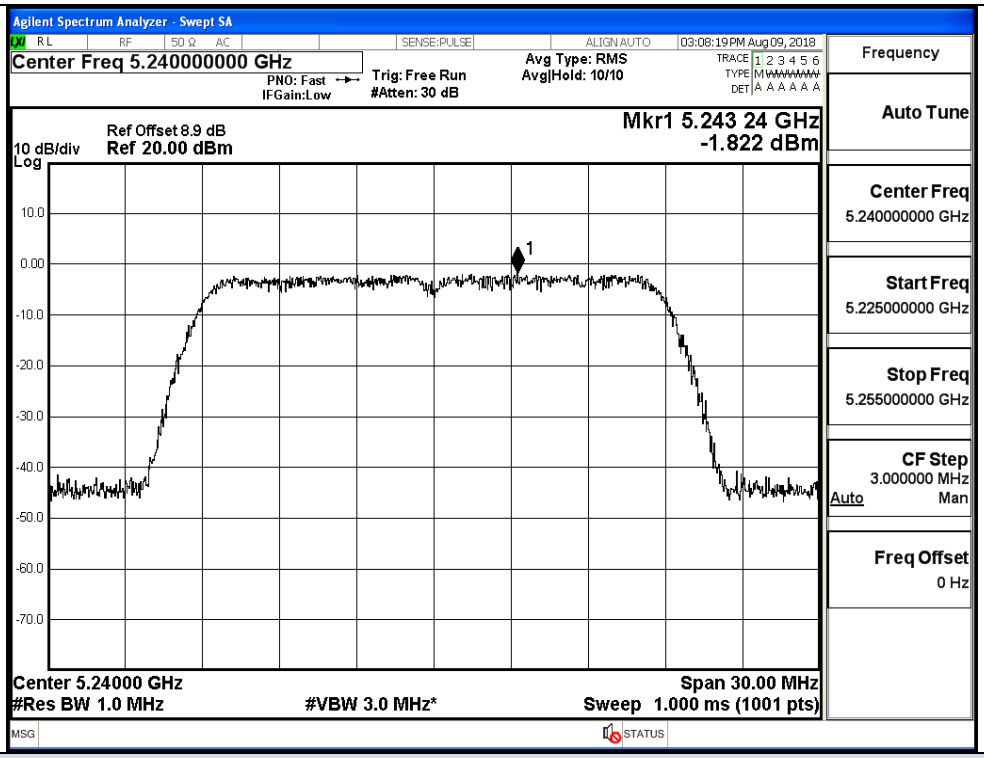
Power Spectral Density



IEEE 802.11n HT20 / Channel 36 / 5180 MHz

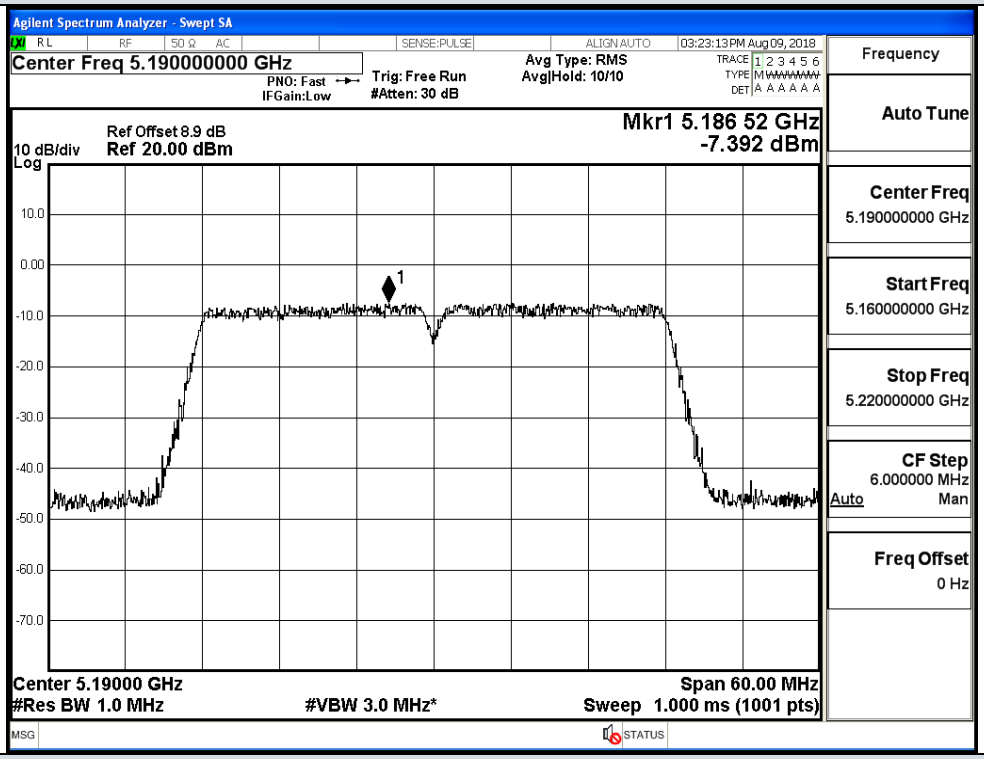


IEEE 802.11n HT20 / Channel 40 / 5200 MHz

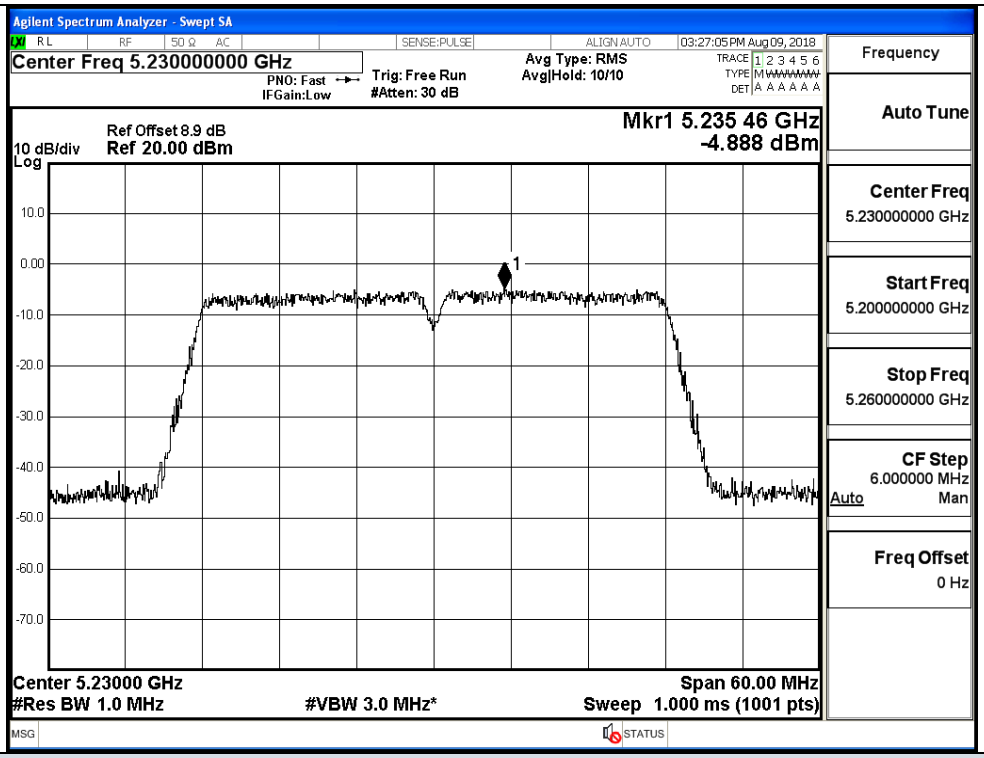


IEEE 802.11n HT20 / Channel 48 / 5240 MHz

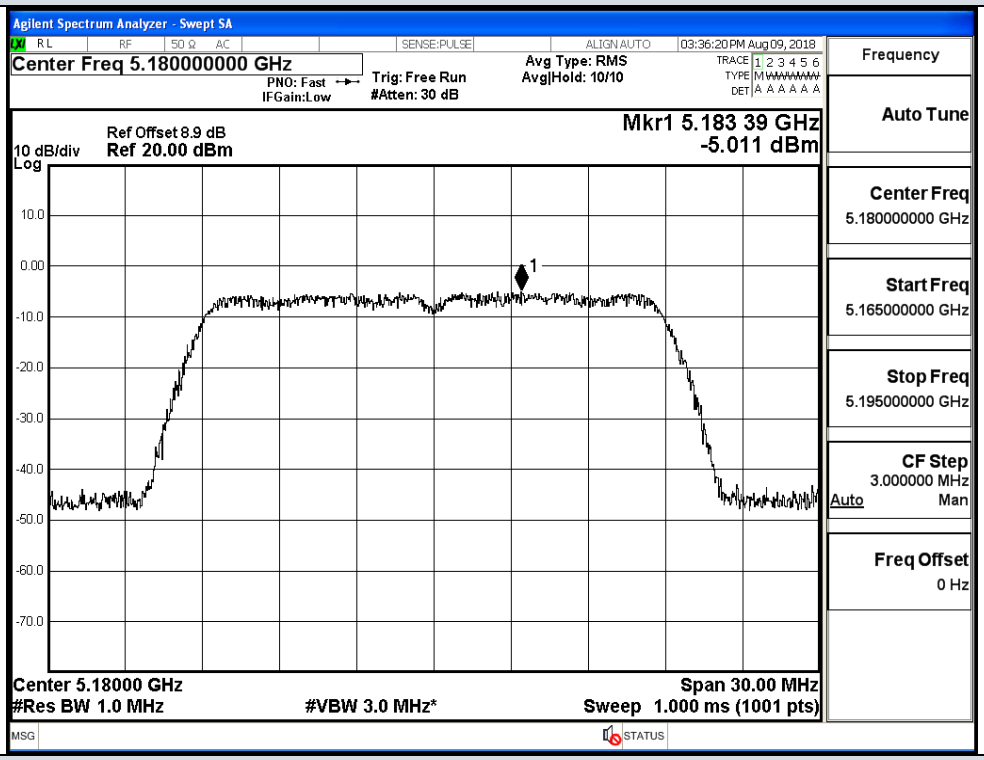
Power Spectral Density



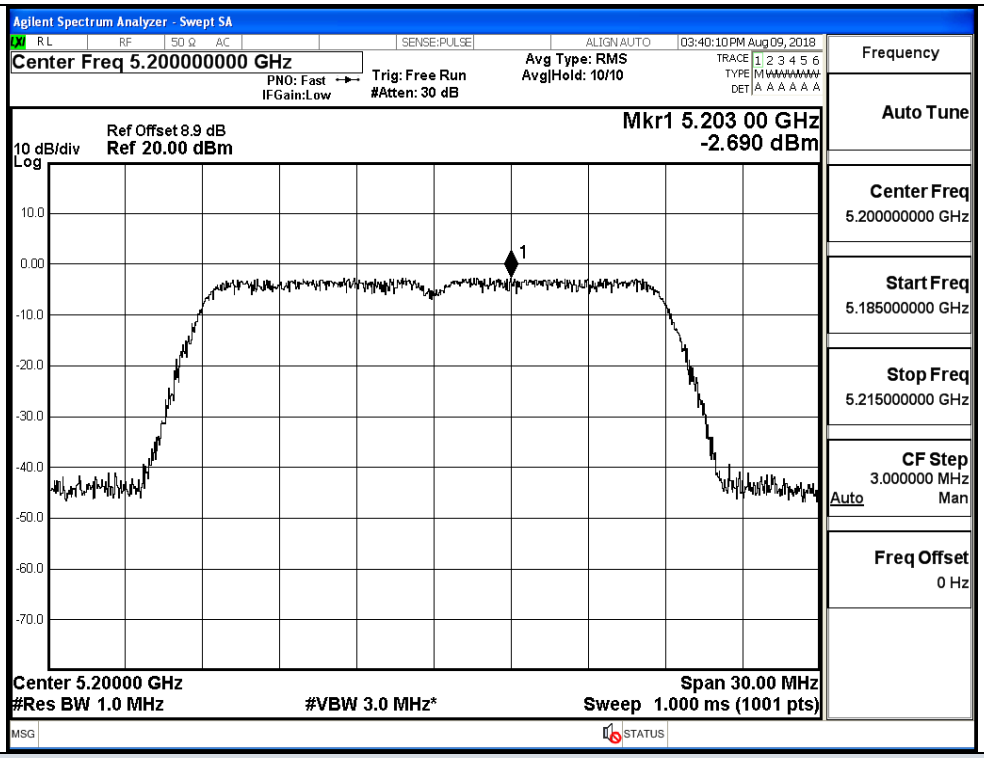
IEEE 802.11n HT40 / Channel 38 / 5190 MHz



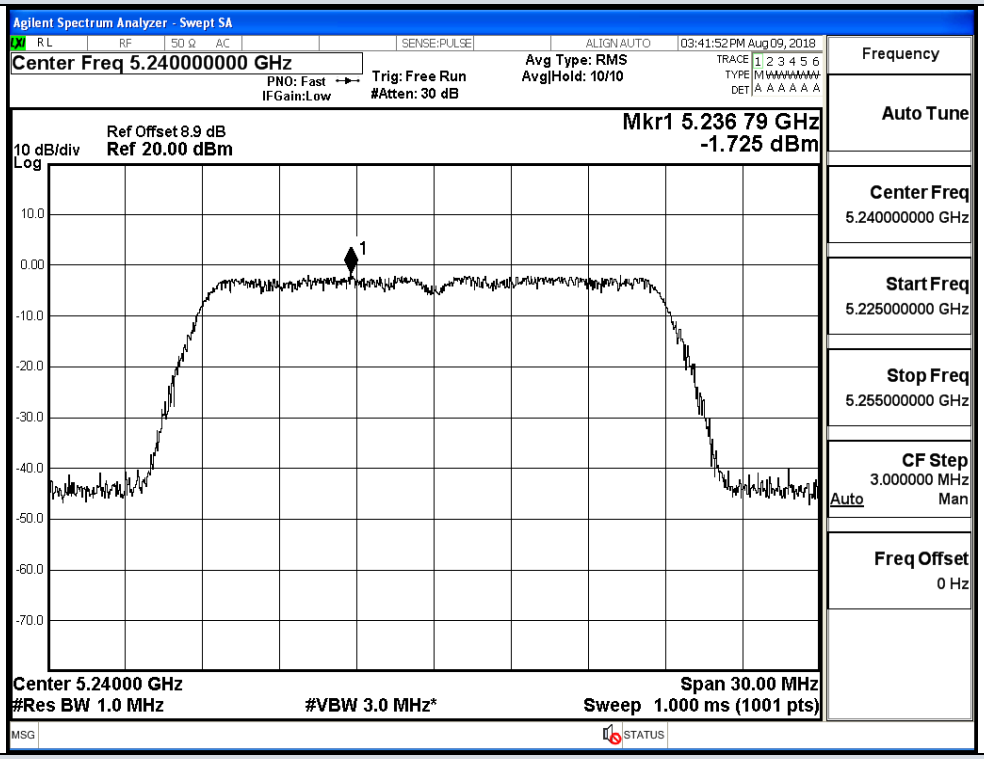
IEEE 802.11n HT40 / Channel 46 / 5230 MHz



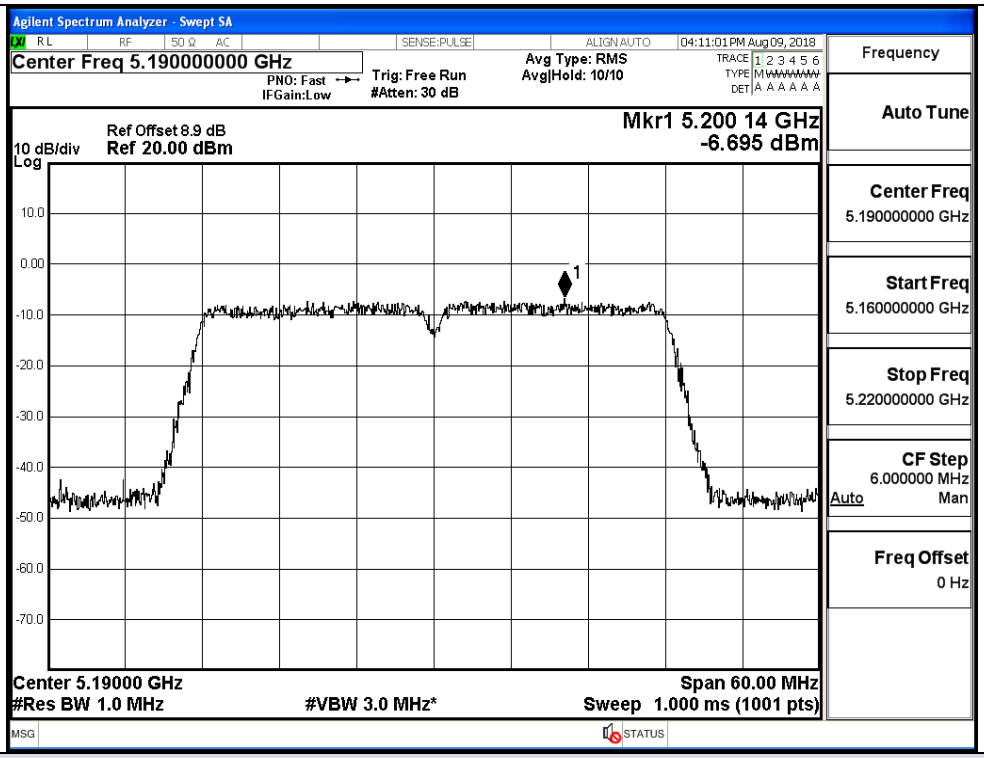
IEEE 802.11ac VHT20 / Channel 36 / 5180 MHz



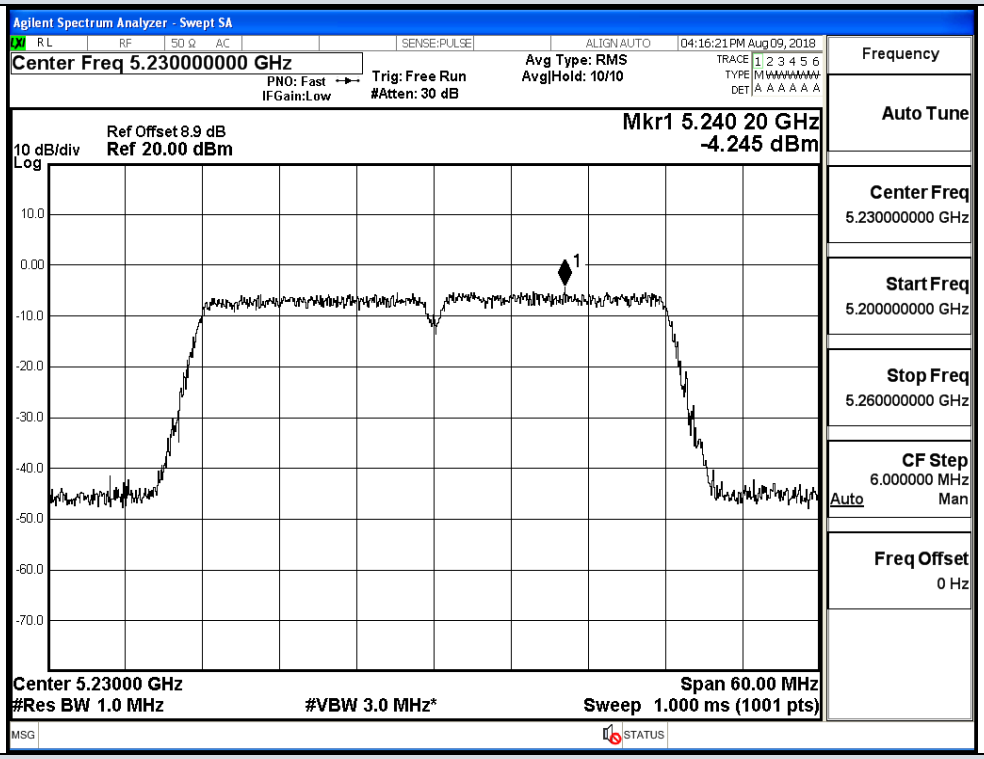
IEEE 802.11ac VHT20 / Channel 40 / 5200 MHz



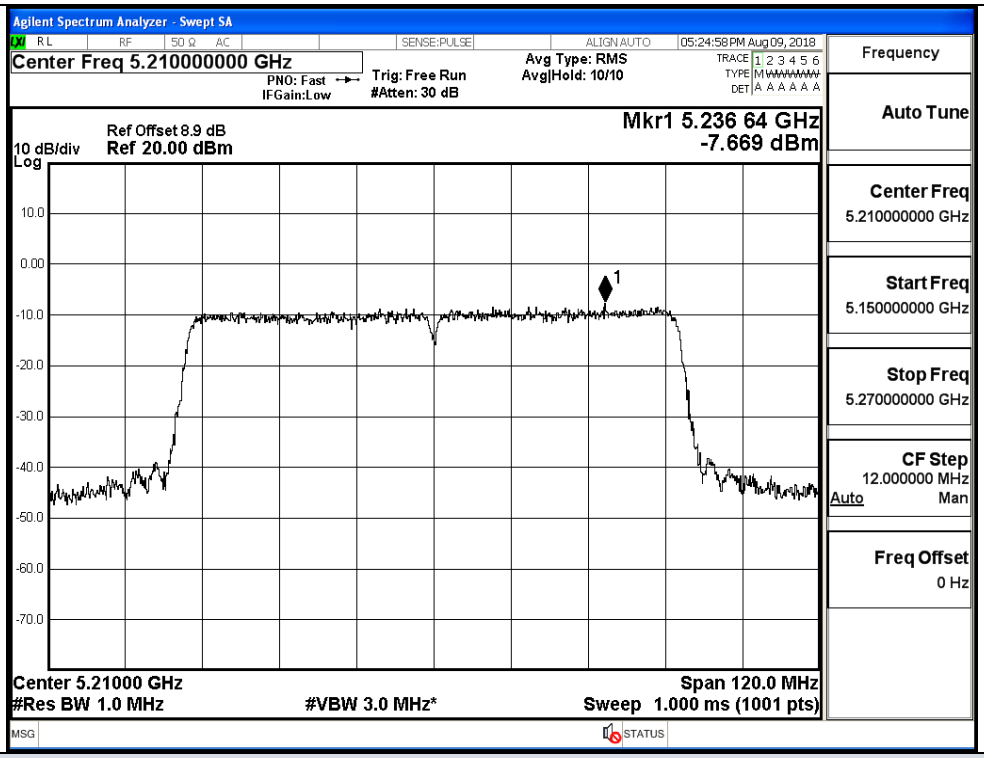
IEEE 802.11ac VHT20 / Channel 48 / 5240 MHz



IEEE 802.11ac VHT40 / Channel 38 / 5190 MHz



IEEE 802.11ac VHT40 / Channel 46 / 5230 MHz

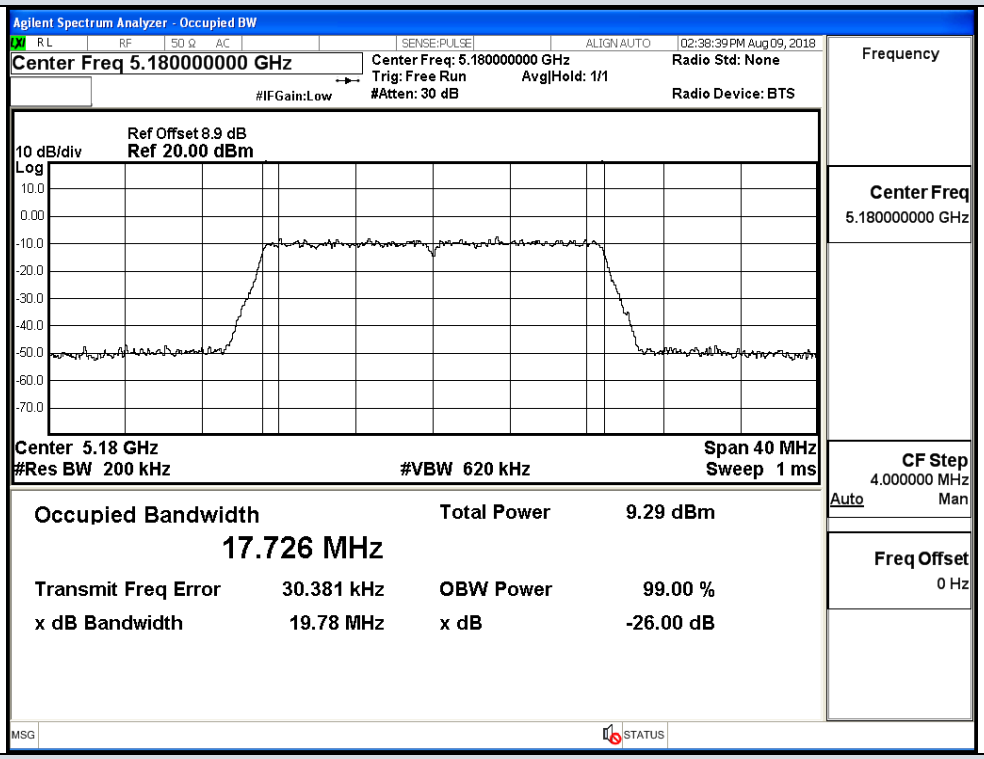


IEEE 802.11ac VHT80 / Channel 42 / 5210 MHz

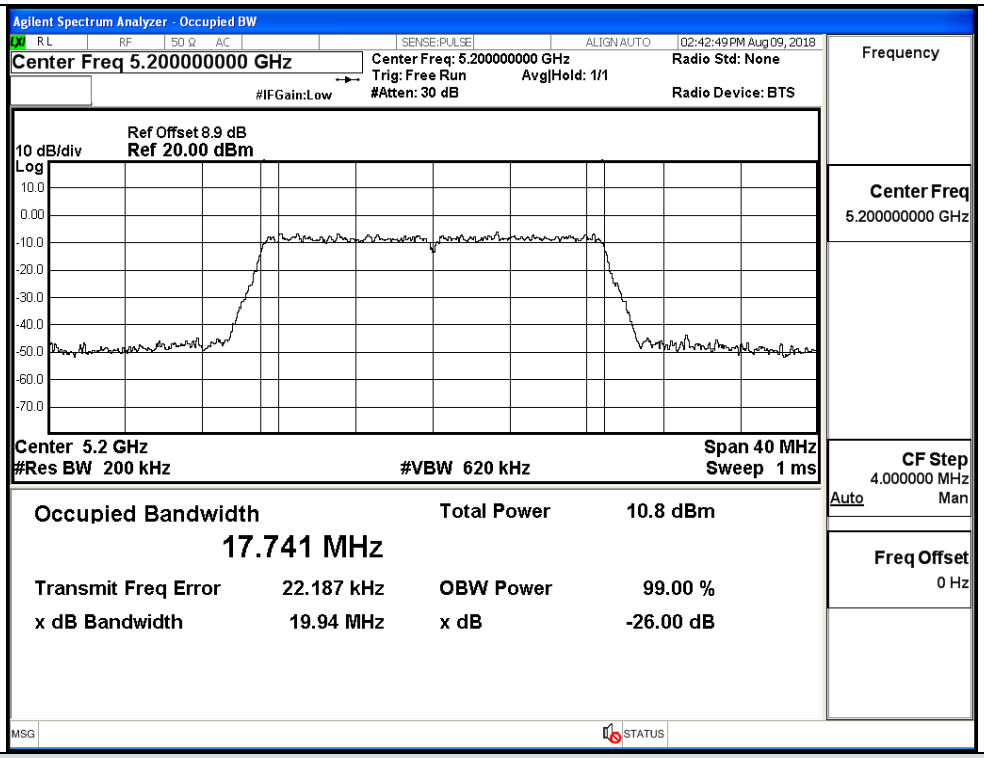
C.4 Emission Bandwidth

Test Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)
11A	36	5180	17.726	19.78	No Limit
	40	5200	17.741	19.94	
	48	5240	17.737	19.87	
11N20 SISO	36	5180	17.736	19.94	No Limit
	40	5200	17.740	19.99	
	48	5240	17.736	19.83	
11N40 SISO	38	5190	36.190	39.87	No Limit
	46	5230	36.196	40.02	
11AC20 SISO	36	5180	17.744	19.88	No Limit
	40	5200	17.756	19.94	
	48	5240	17.733	19.89	
11AC40 SISO	38	5190	36.204	40.12	No Limit
	46	5230	36.174	39.81	
11AC80 SISO	42	5210	75.562	81.23	No Limit

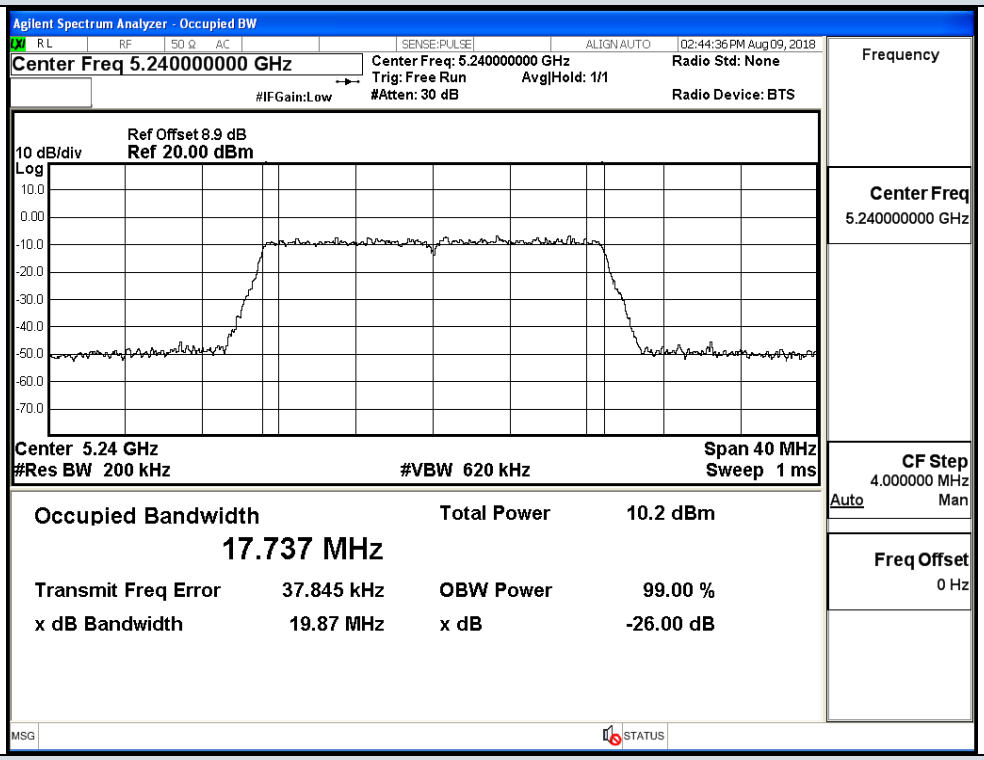
Emission Bandwidth



IEEE 802.11a / Channel 36 / 5180 MHz

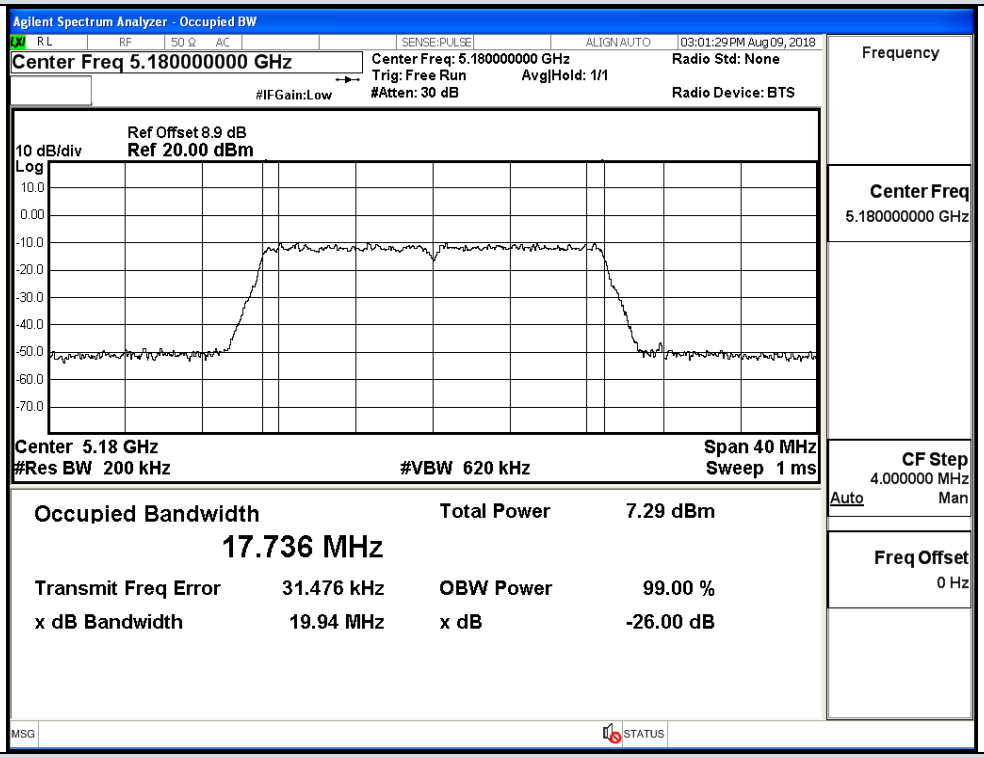


IEEE 802.11a / Channel 40 / 5200 MHz

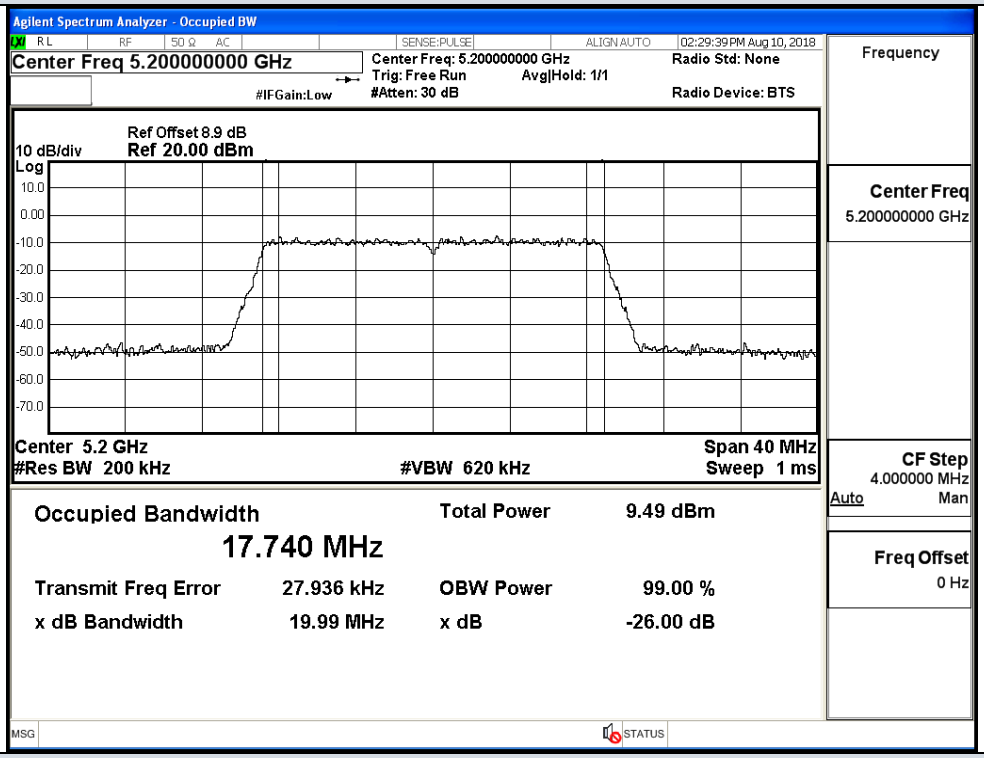


IEEE 802.11a / Channel 48 / 5240 MHz

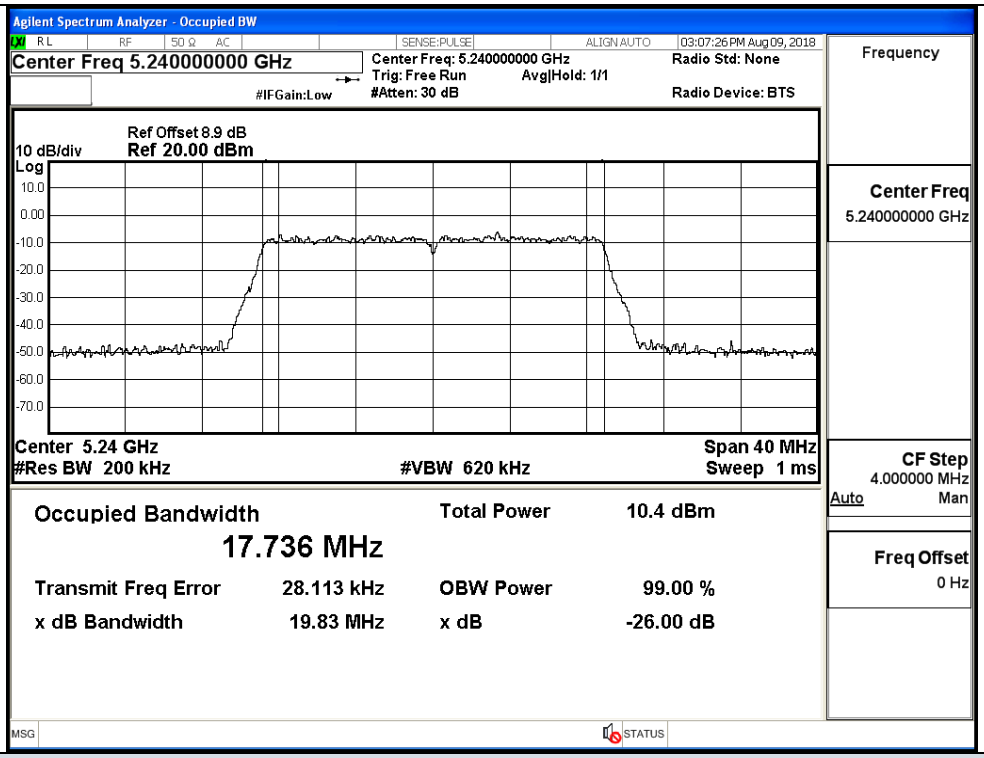
Emission Bandwidth



IEEE 802.11n HT20 / Channel 36 / 5180 MHz

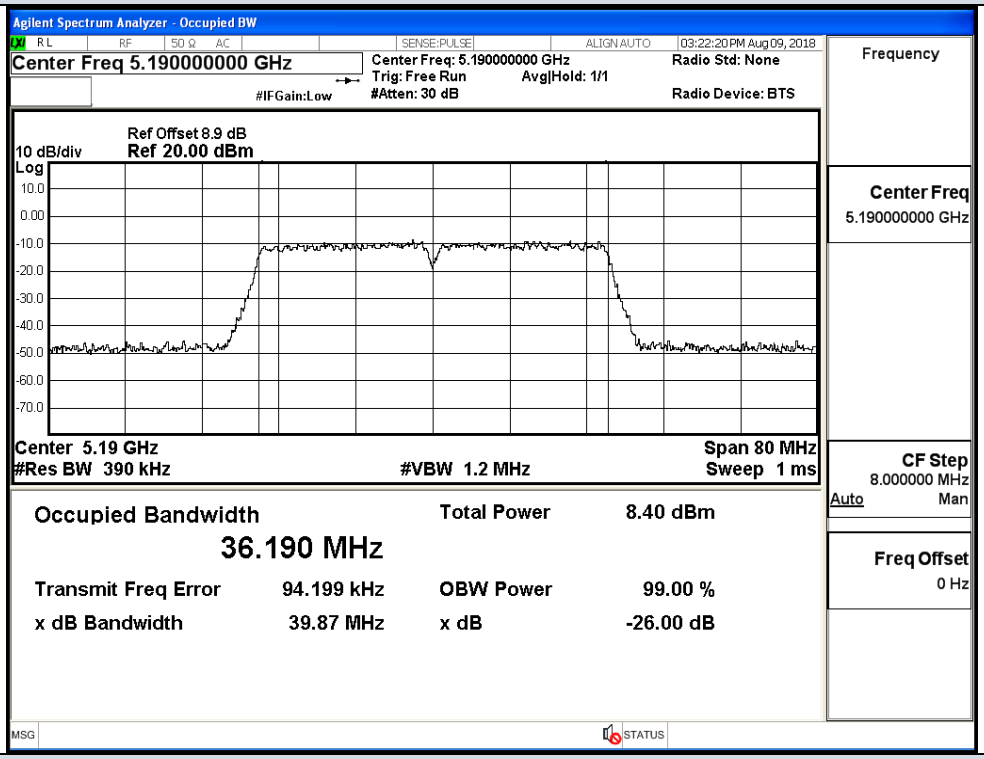


IEEE 802.11n HT20 / Channel 40 / 5200 MHz

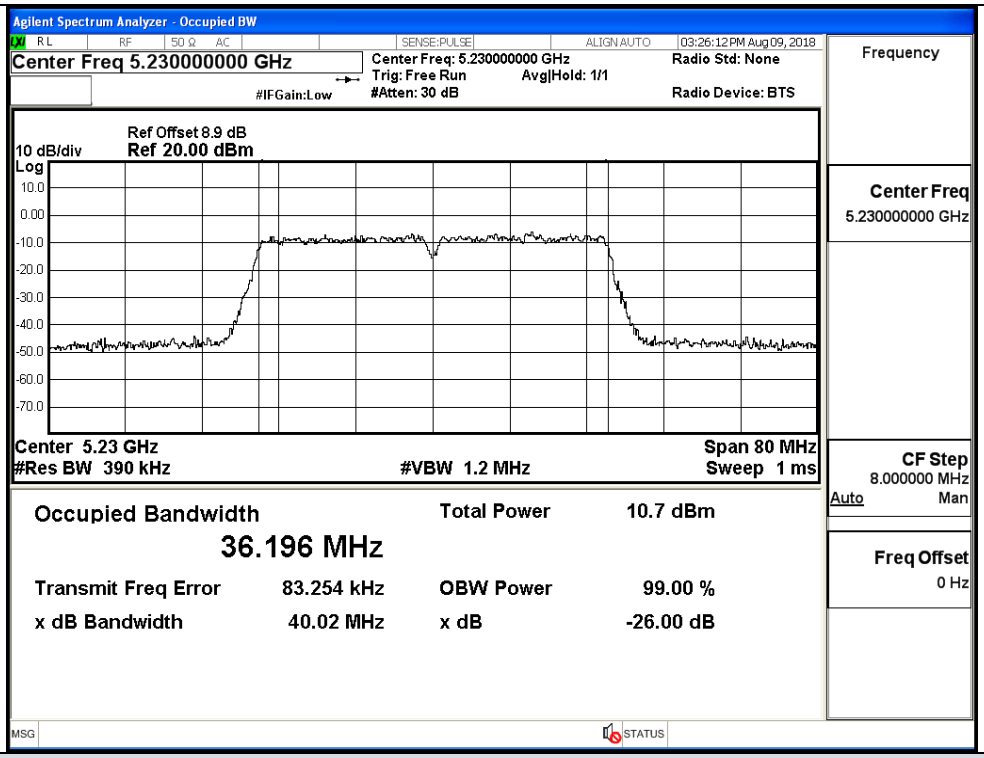


IEEE 802.11n HT20 / Channel 48 / 5240 MHz

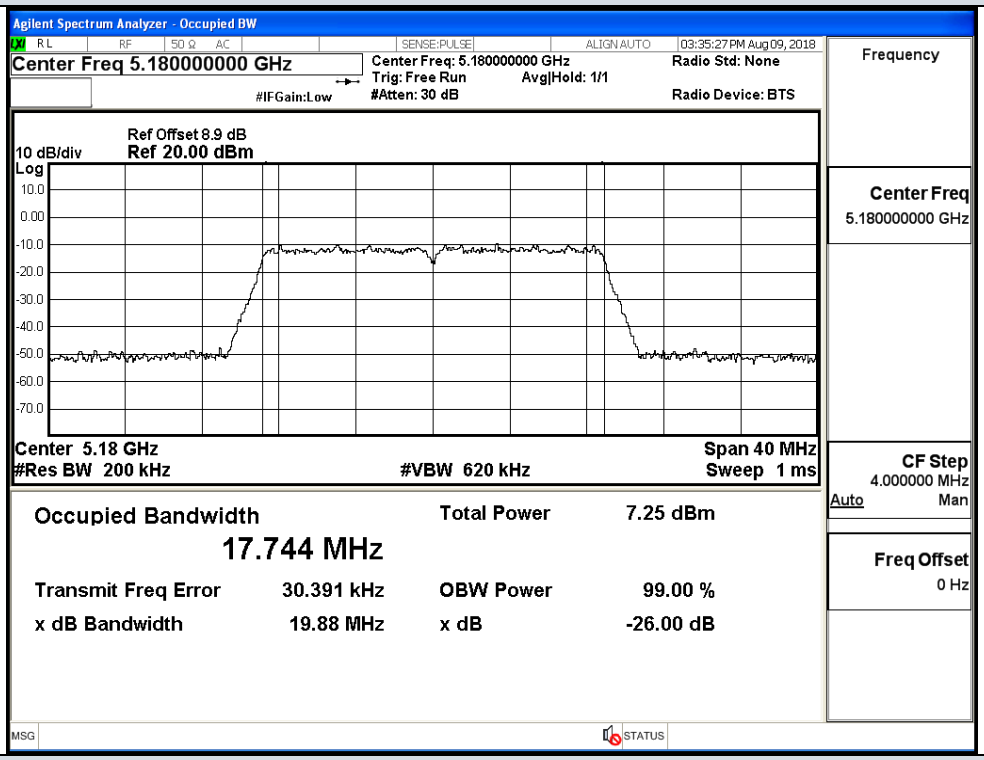
Emission Bandwidth



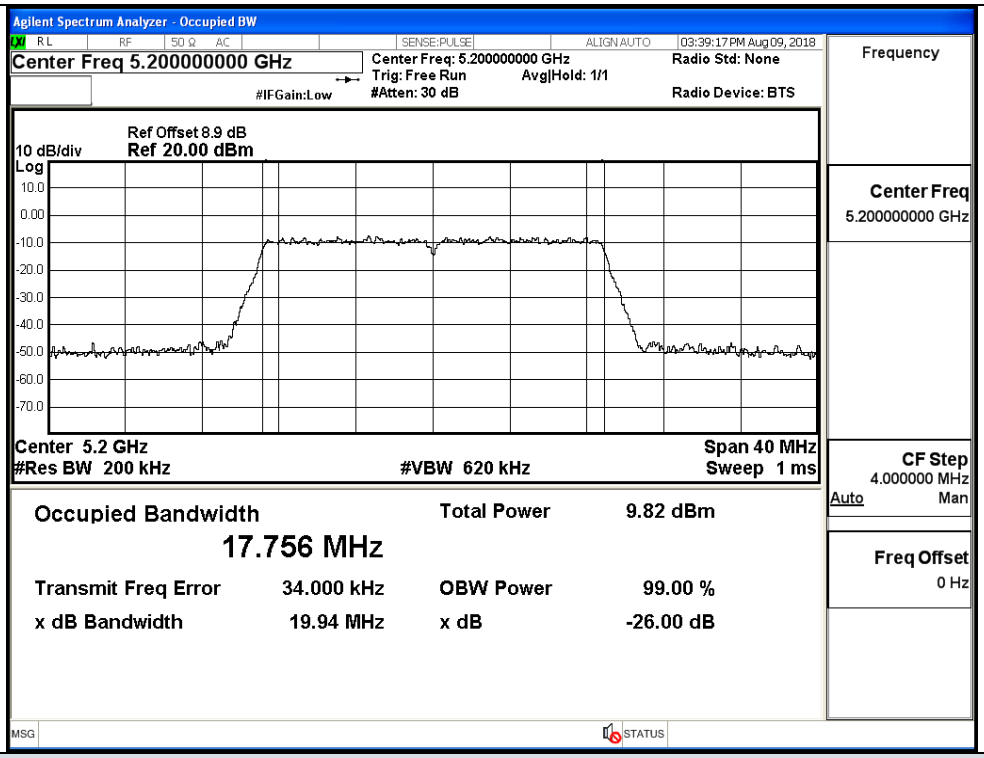
IEEE 802.11n HT40 / Channel 38 / 5190MHz



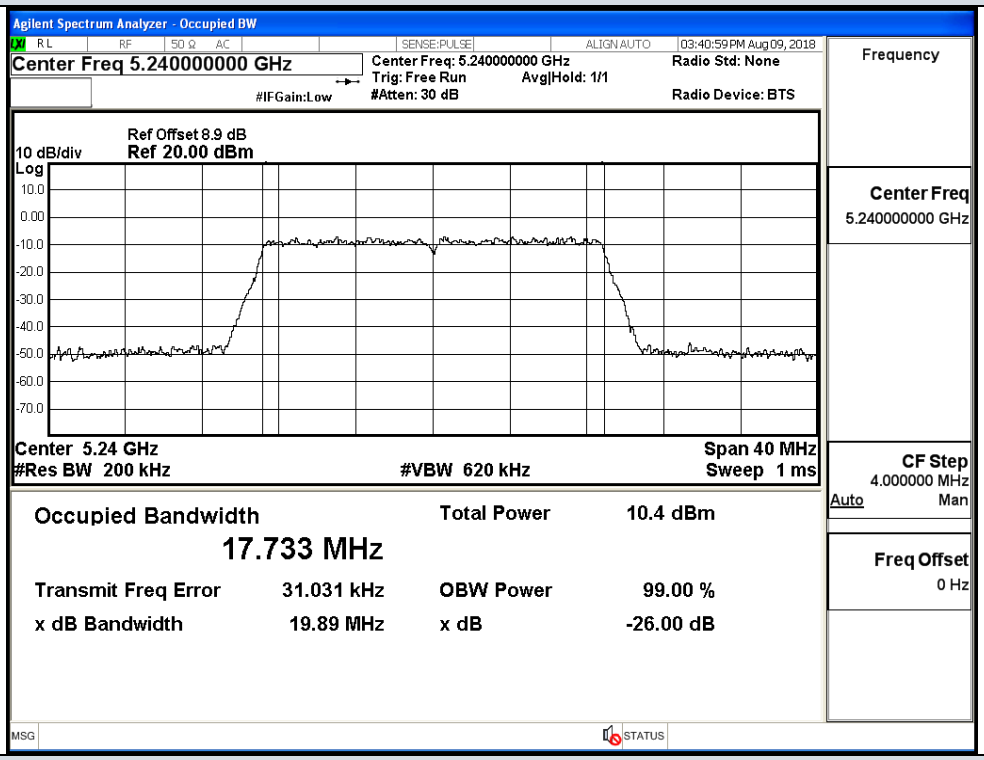
IEEE 802.11n HT40 / Channel 46 / 5230 MHz



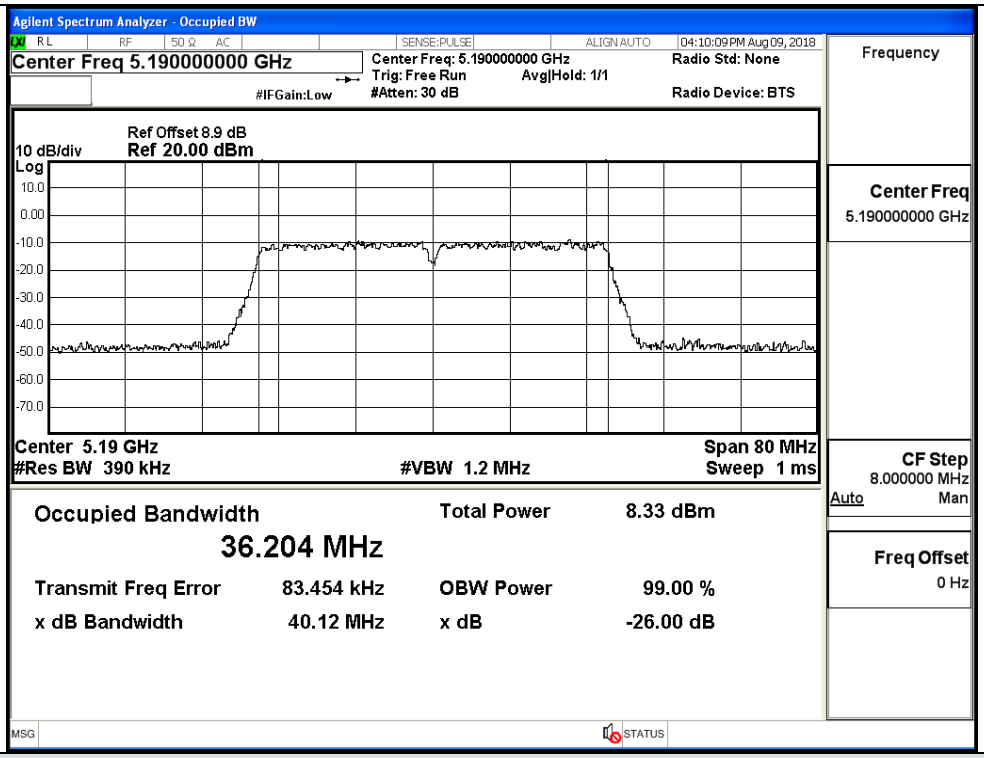
IEEE 802.11ac VHT20 / Channel 36 / 5180 MHz



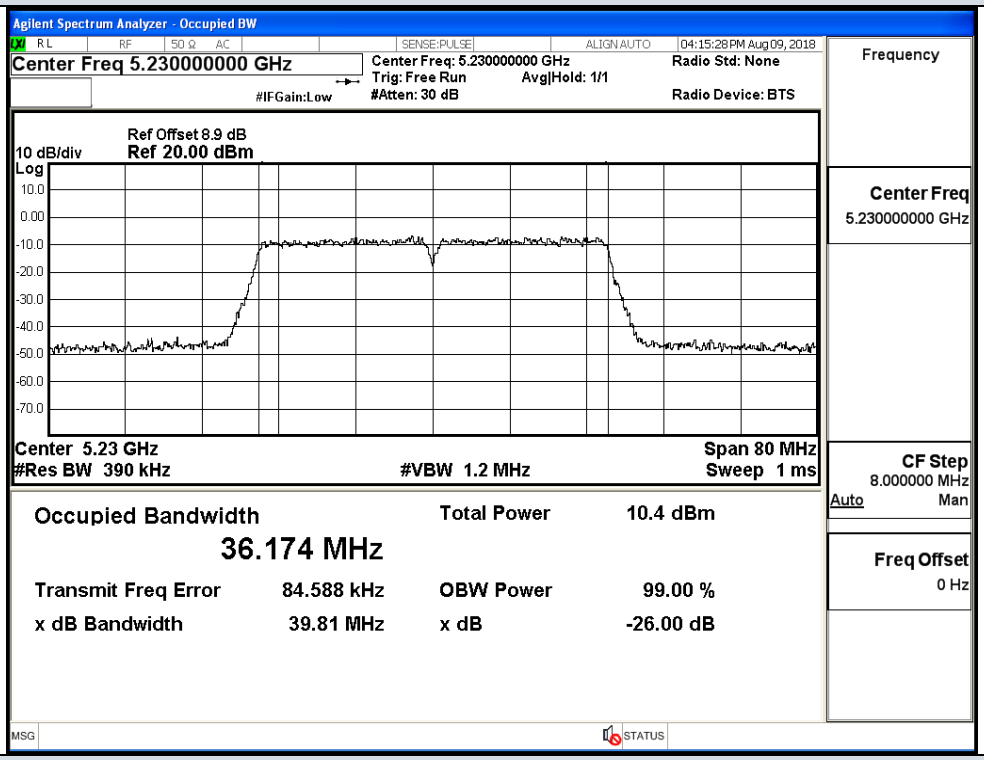
IEEE 802.11ac VHT20 / Channel 40 / 5200 MHz



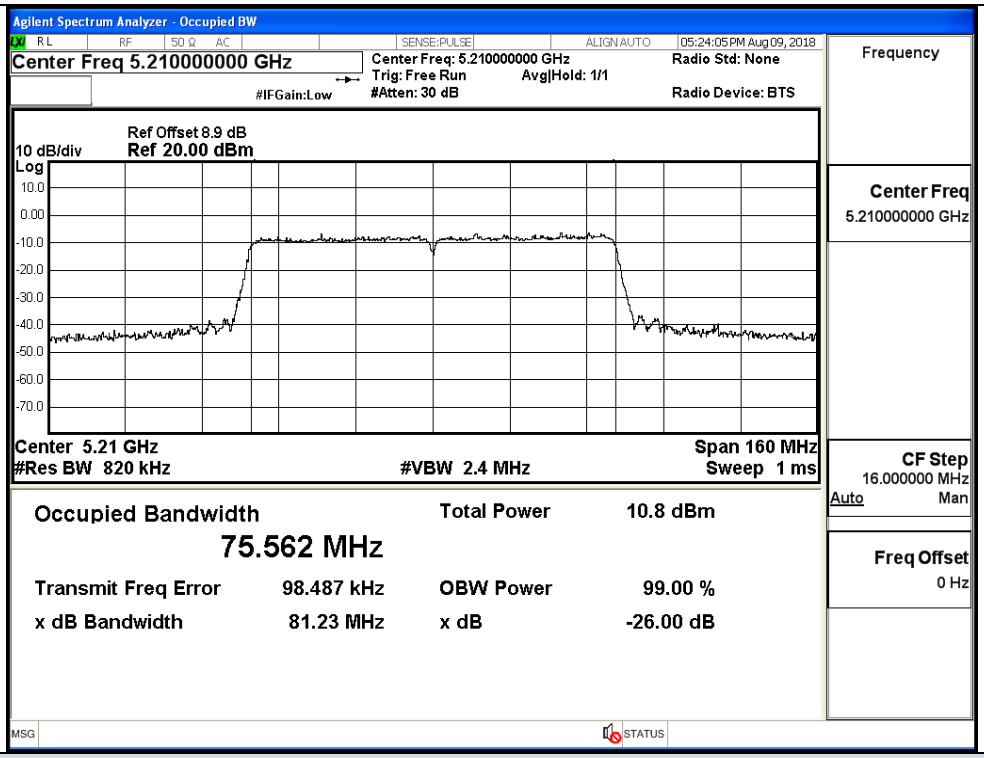
IEEE 802.11ac VHT20 / Channel 48 / 5240 MHz



IEEE 802.11ac VHT40 / Channel 38 / 5190 MHz



IEEE 802.11ac VHT40 / Channel 46 / 5230 MHz



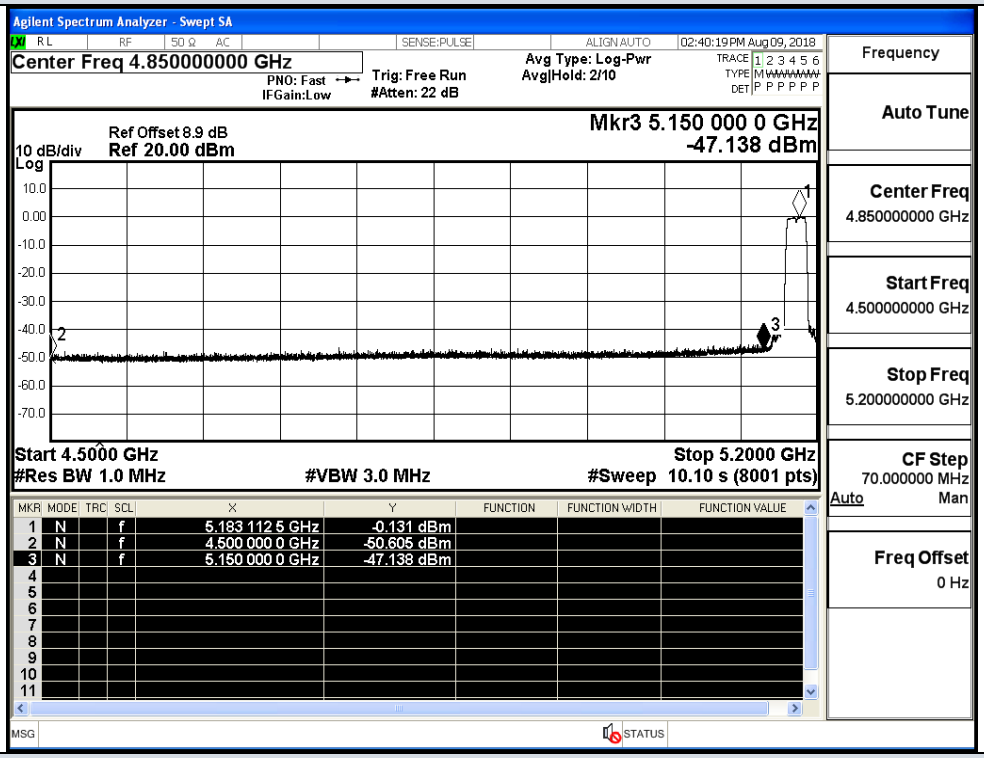
IEEE 802.11ac VHT80 / Channel 42 / 5210 MHz

C.5 Undesirable Emissions Measurement

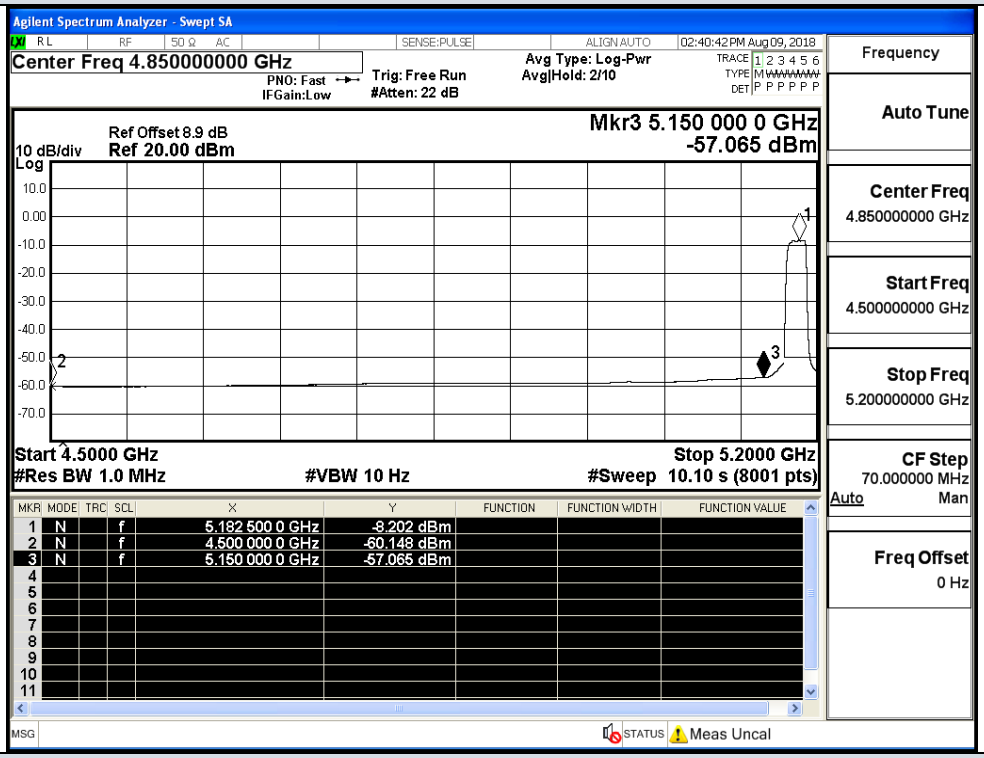
Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Ground Reflection Factor (dB)	Covert Radiated E Level At 3m (dBuV/m)	Detector	Limit (dBuV/m)
11A	36	4500.0	-50.605	3.000	0	47.623	Peak	68.20
		4500.0	-60.148	3.000	0	38.080	Average	54.00
		5150.0	-47.138	3.000	0	51.090	Peak	68.20
		5150.0	-57.065	3.000	0	41.163	Average	54.00
	48	5350.0	-49.234	3.000	0	48.994	Peak	68.20
		5350.0	-59.517	3.000	0	38.711	Average	54.00
		5460.0	-49.675	3.000	0	48.553	Peak	68.20
		5460.0	-60.247	3.000	0	37.981	Average	54.00
11N20 SISO	36	4500.0	-50.241	3.000	0	47.987	Peak	68.20
		4500.0	-60.139	3.000	0	38.089	Average	54.00
		5150.0	-47.736	3.000	0	50.492	Peak	68.20
		5150.0	-57.589	3.000	0	40.639	Average	54.00
	48	5350.0	-49.344	3.000	0	48.884	Peak	68.20
		5350.0	-59.527	3.000	0	38.701	Average	54.00
		5460.0	-48.814	3.000	0	49.414	Peak	68.20
		5460.0	-60.280	3.000	0	37.948	Average	54.00
11N40 SISO	38	4500.0	-50.096	3.000	0	48.132	Peak	68.20
		4500.0	-60.143	3.000	0	38.085	Average	54.00
		5150.0	-46.840	3.000	0	51.388	Peak	68.20
		5150.0	-57.225	3.000	0	41.003	Average	54.00
	46	5350.0	-48.268	3.000	0	49.960	Peak	68.20
		5350.0	-59.328	3.000	0	38.900	Average	54.00
		5460.0	-48.666	3.000	0	49.562	Peak	68.20
		5460.0	-59.971	3.000	0	38.257	Average	54.00
11AC20 SISO	36	4500.0	-50.460	3.000	0	47.768	Peak	68.20
		4500.0	-60.167	3.000	0	38.061	Average	54.00
		5150.0	-48.183	3.000	0	50.045	Peak	68.20
		5150.0	-57.622	3.000	0	40.606	Average	54.00
	48	4500.0	-49.971	3.000	0	48.257	Peak	68.20
		4500.0	-59.479	3.000	0	38.749	Average	54.00
		5150.0	-50.681	3.000	0	47.547	Peak	68.20
		5150.0	-60.243	3.000	0	37.985	Average	54.00
11AC40 SISO	38	4500.0	-50.719	3.000	0	47.509	Peak	68.20
		4500.0	-60.164	3.000	0	38.064	Average	54.00
		5150.0	-47.456	3.000	0	50.772	Peak	68.20
		5150.0	-57.235	3.000	0	40.993	Average	54.00
	46	5350.0	-48.472	3.000	0	49.756	Peak	68.20
		5350.0	-59.306	3.000	0	38.922	Average	54.00
		5460.0	-50.171	3.000	0	48.057	Peak	68.20
		5460.0	-59.961	3.000	0	38.267	Average	54.00
11AC80 SISO	42	4500.0	-49.981	3.000	0	48.247	Peak	68.20
		5150.0	-60.160	3.000	0	38.068	Average	54.00
		4500.0	-44.458	3.000	0	53.770	Peak	68.20
		5150.0	-53.656	3.000	0	44.572	Average	54.00

		5350.0	-49.649	3.000	0	48.579	Peak	68.20
		5460.0	-58.297	3.000	0	39.931	Average	54.00
		5350.0	-50.145	3.000	0	48.083	Peak	68.20
		5460.0	-58.981	3.000	0	39.247	Average	54.00

Undesirable Emissions Measurement

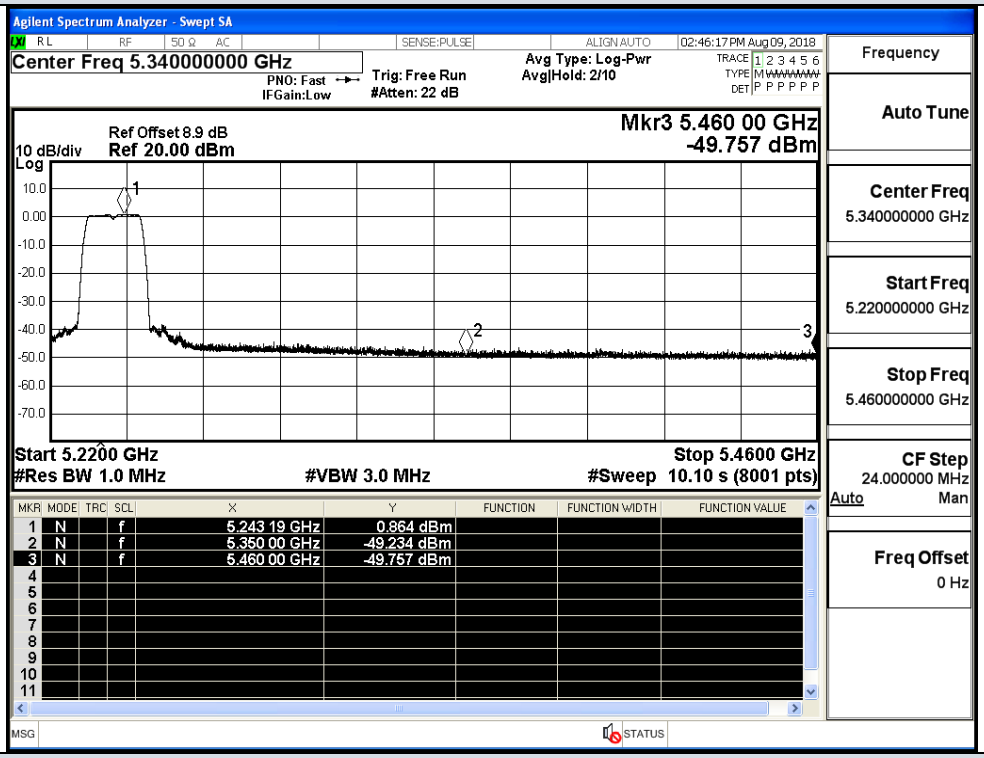


IEEE 802.11a / Channel 36 / 5180 MHz / Peak

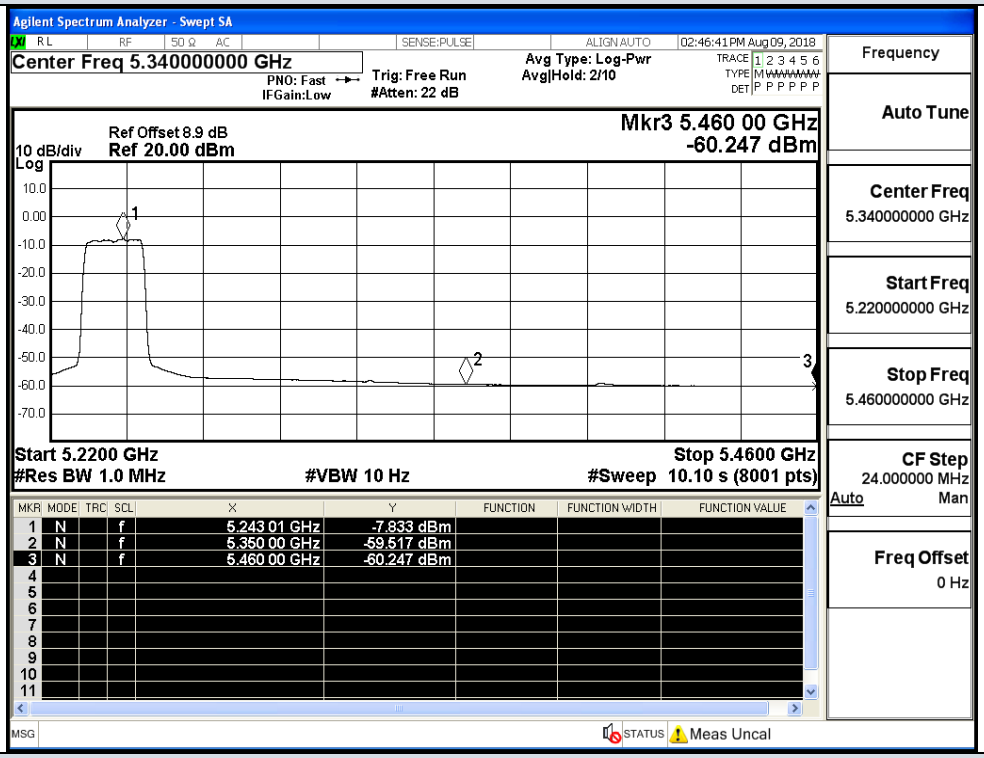


IEEE 802.11a / Channel 36 / 5180 MHz / Average

Undesirable Emissions Measurement

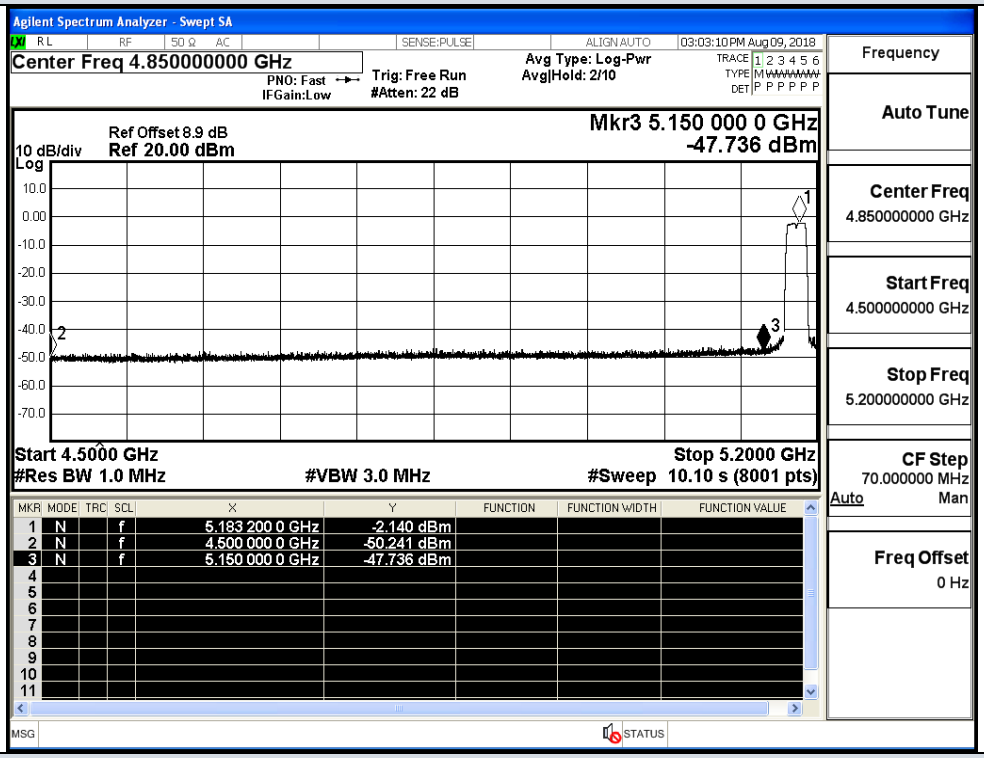


IEEE 802.11a / Channel 48 / 5240 MHz / Peak

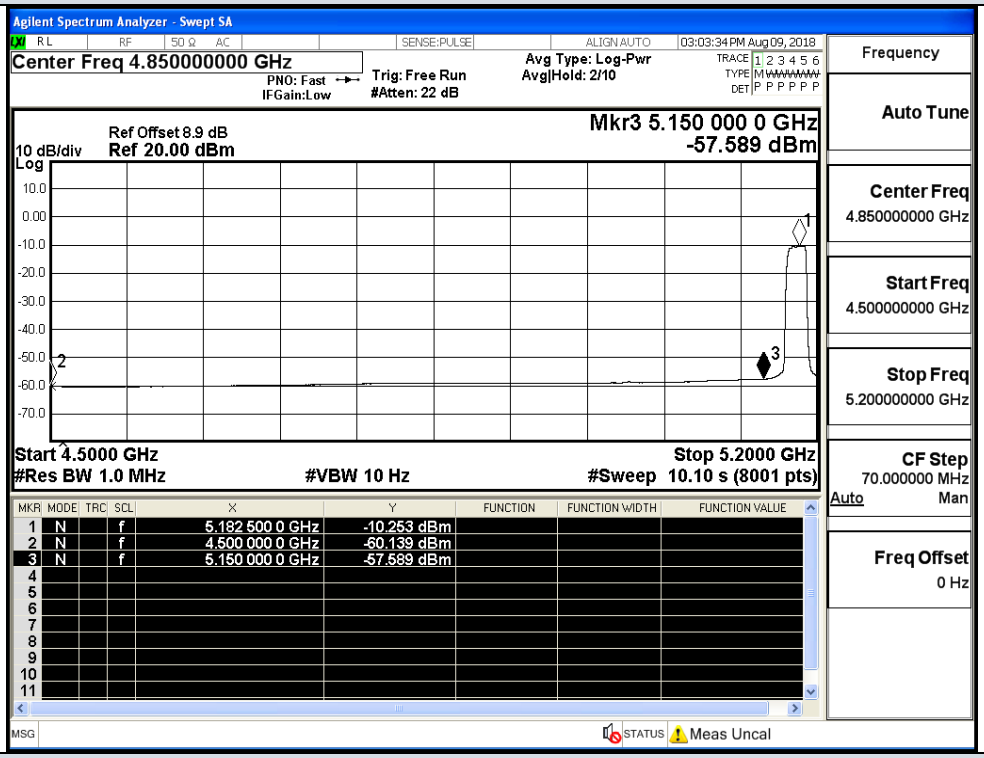


IEEE 802.11a / Channel 48 / 5240 MHz / Average

Undesirable Emissions Measurement

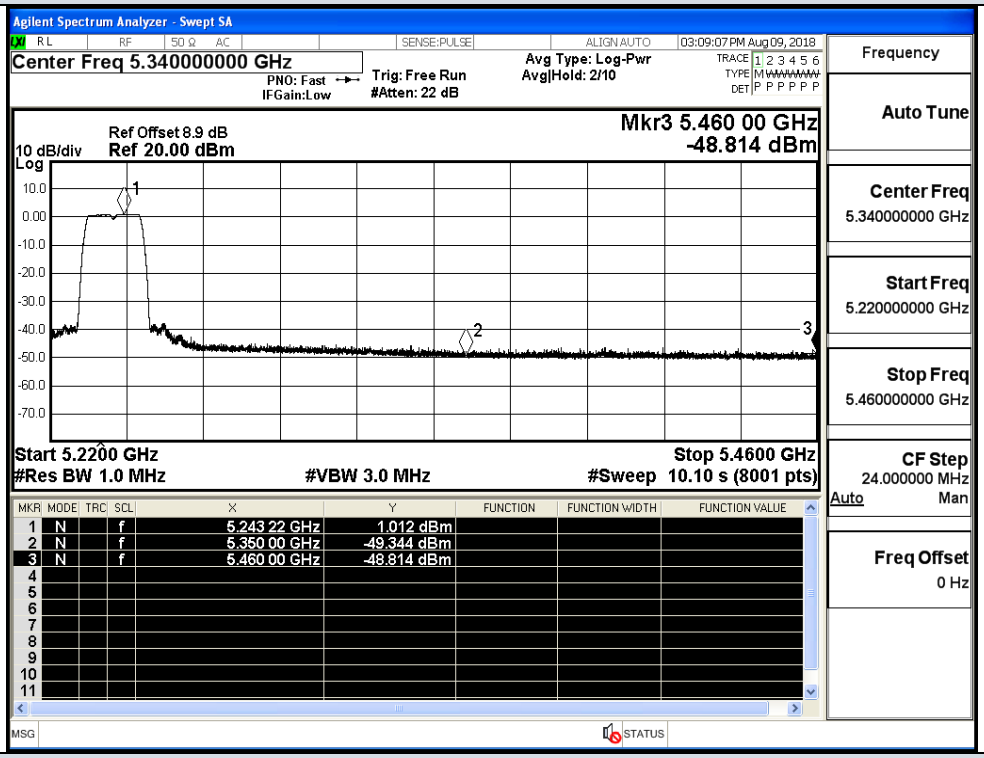


IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Peak

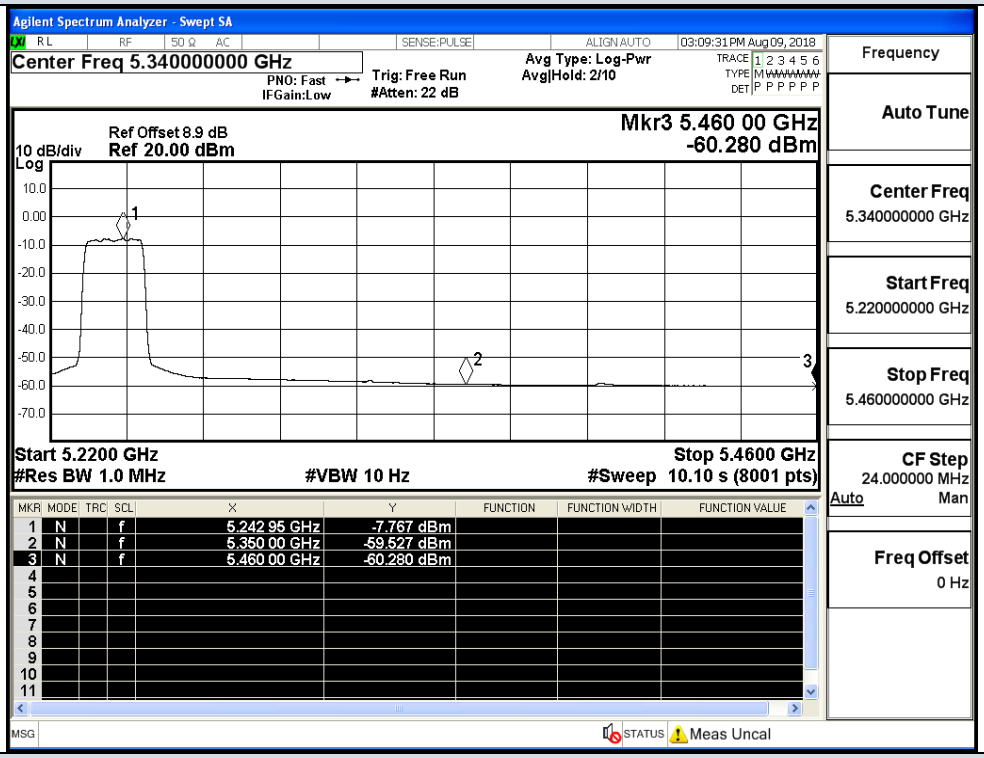


IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Average

Undesirable Emissions Measurement

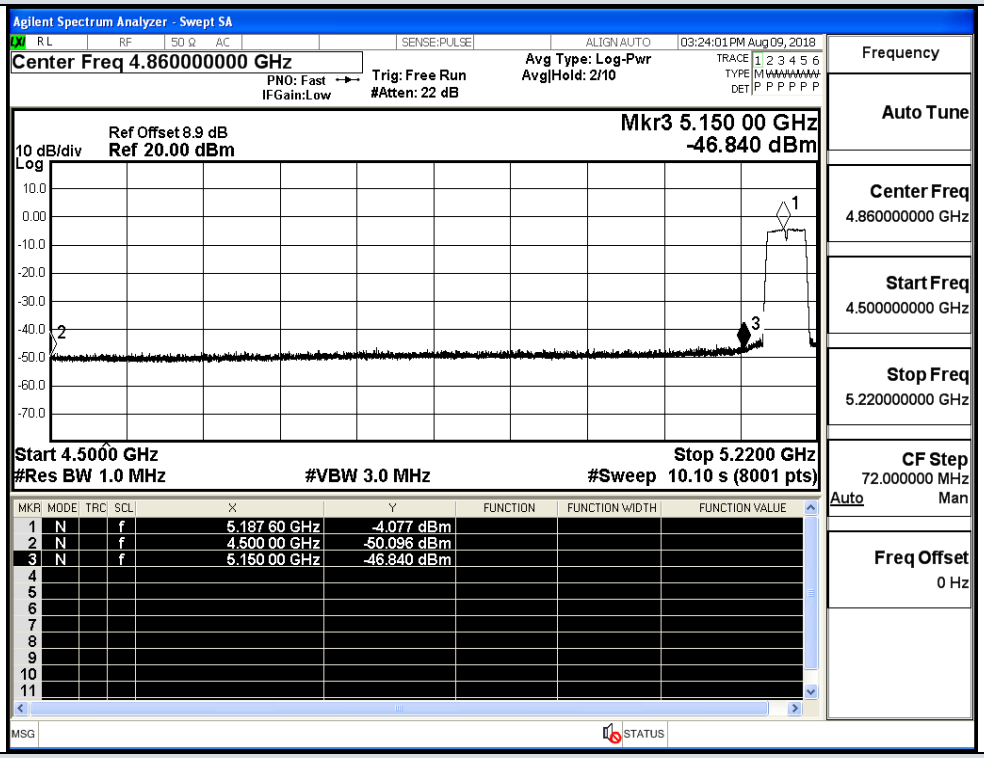


IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Peak

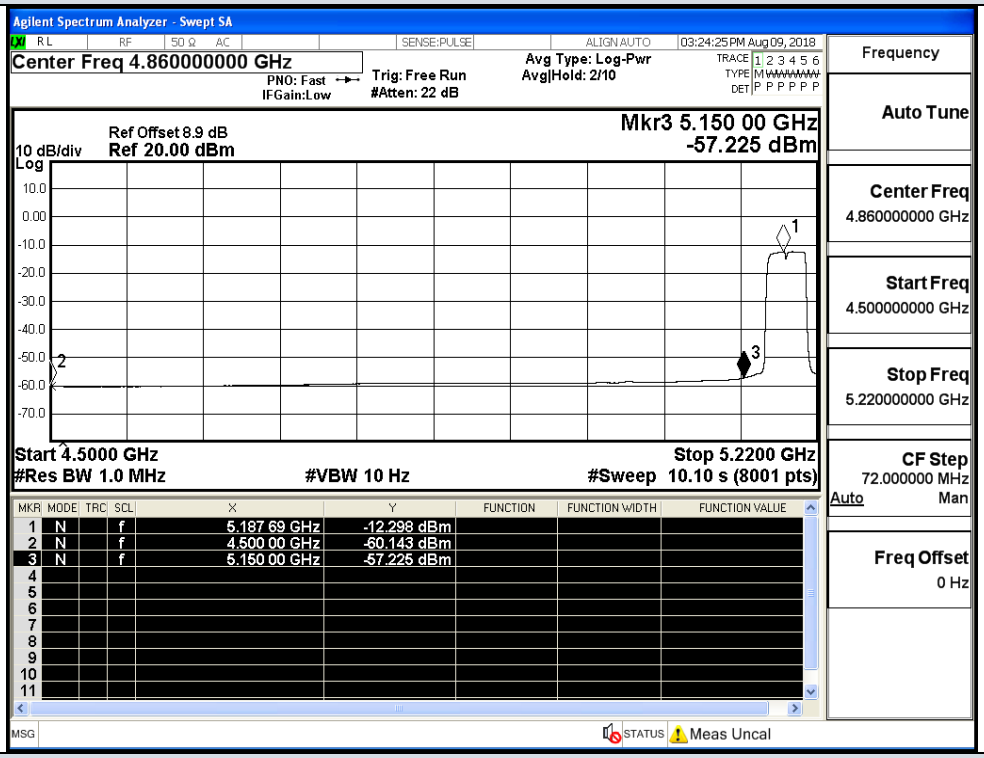


IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Average

Undesirable Emissions Measurement

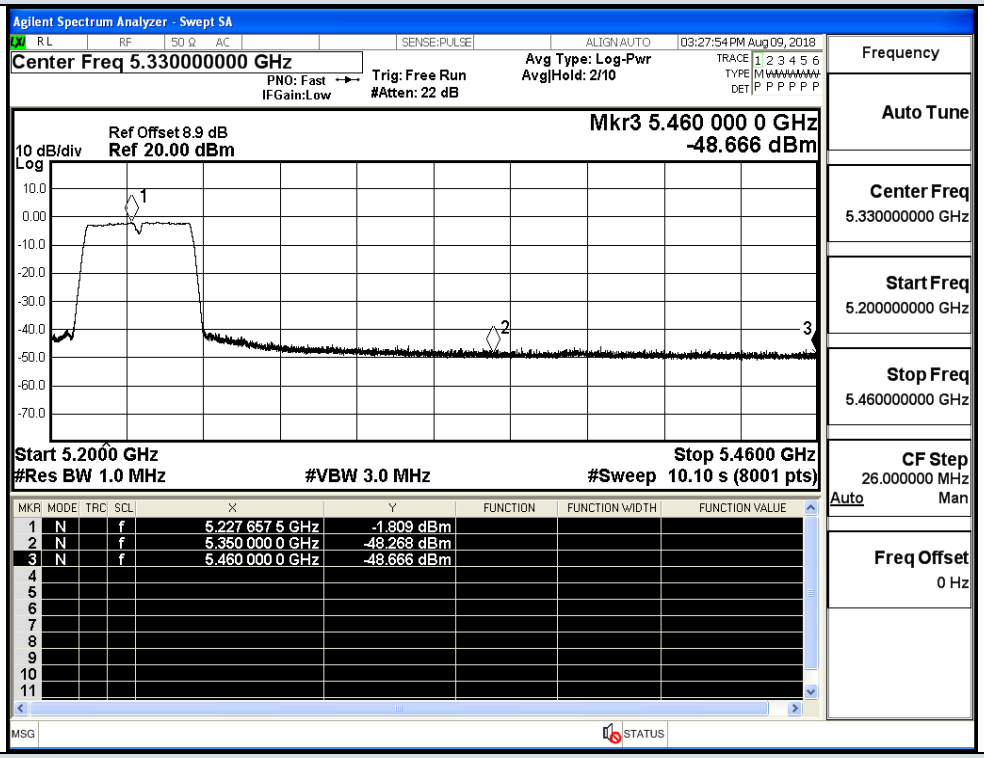


IEEE 802.11n HT40 / Channel 36 / 5180 MHz / Peak

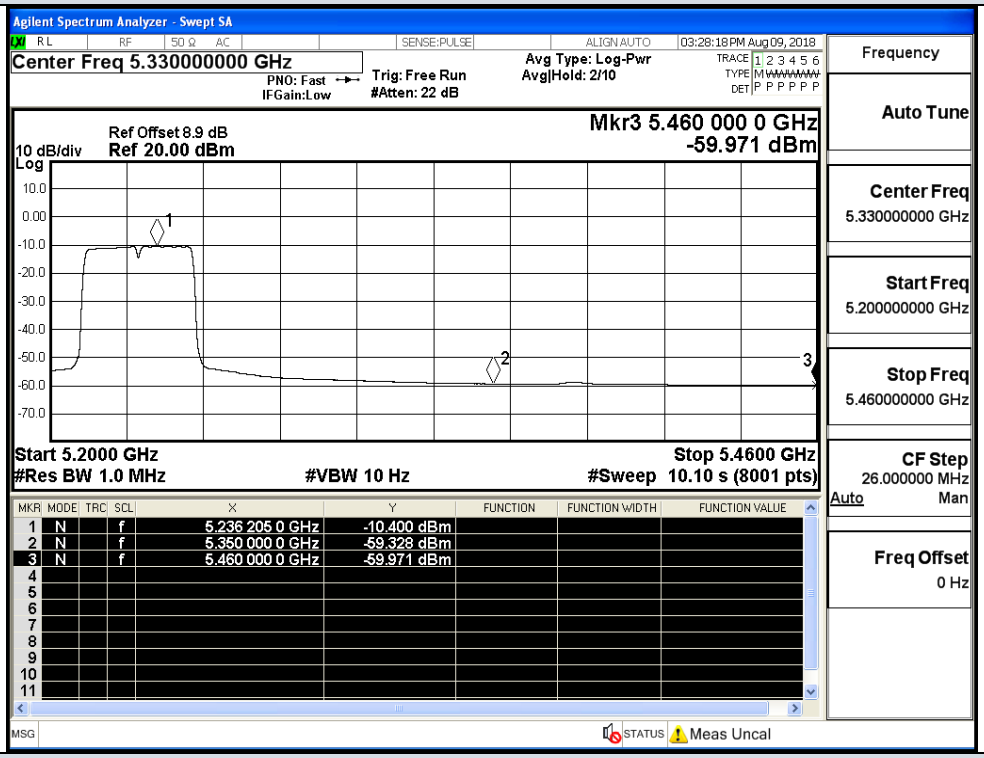


IEEE 802.11n HT40 / Channel 36 / 518 0MHz / Average

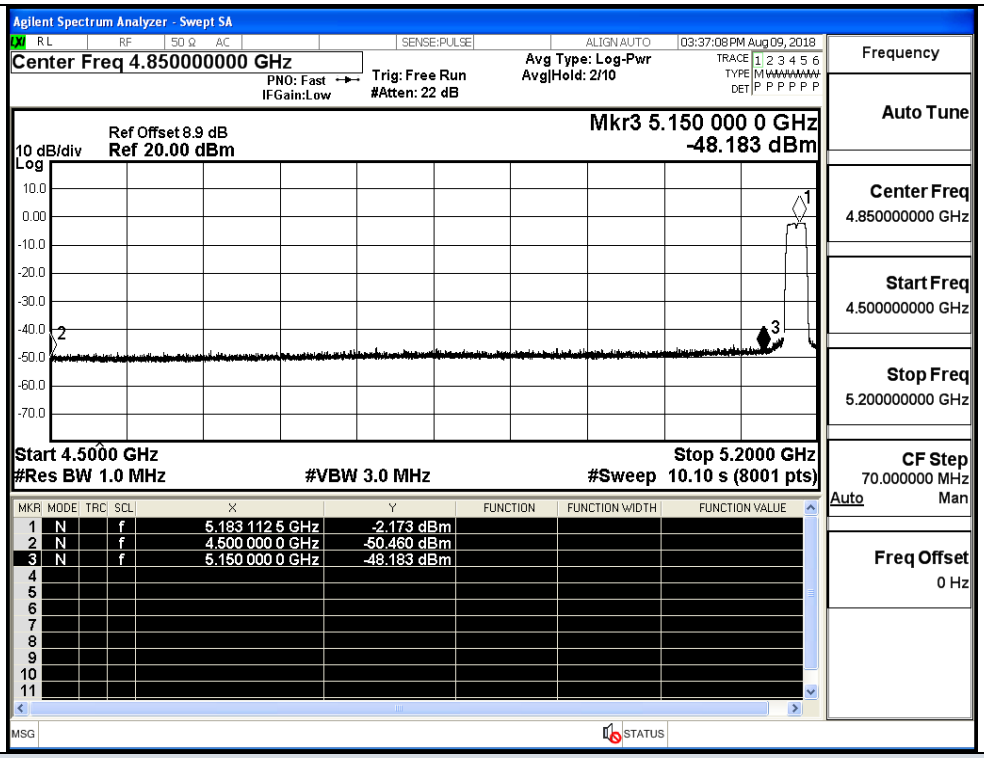
Undesirable Emissions Measurement



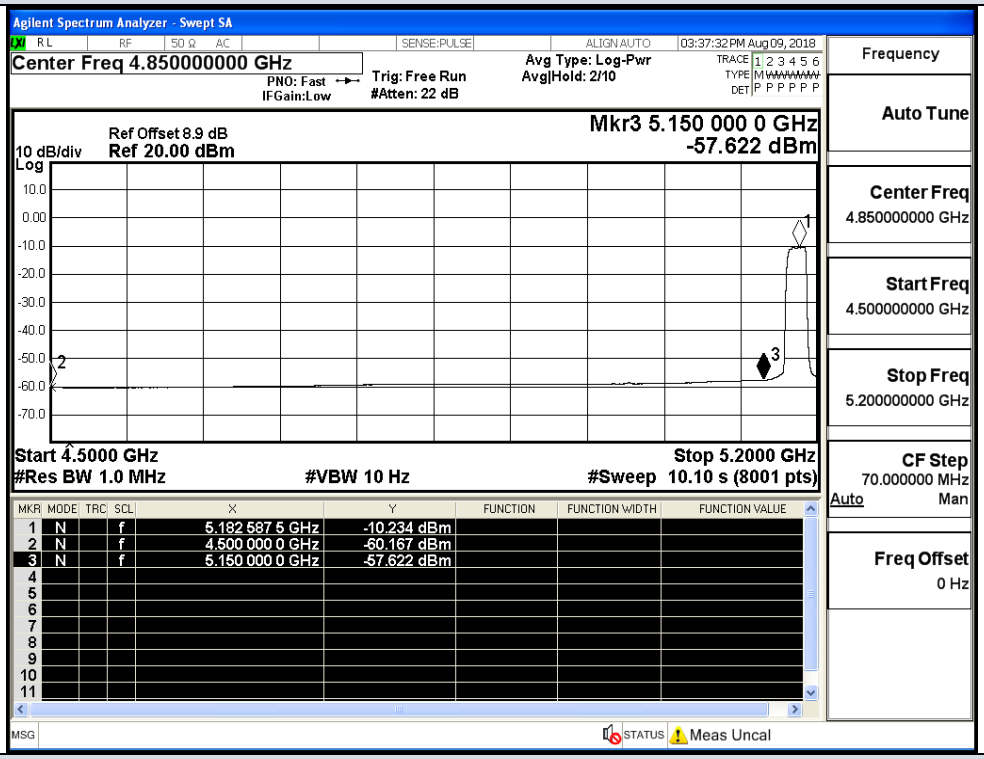
IEEE 802.11n HT40 / Channel 48 / 523 0MHz / Peak



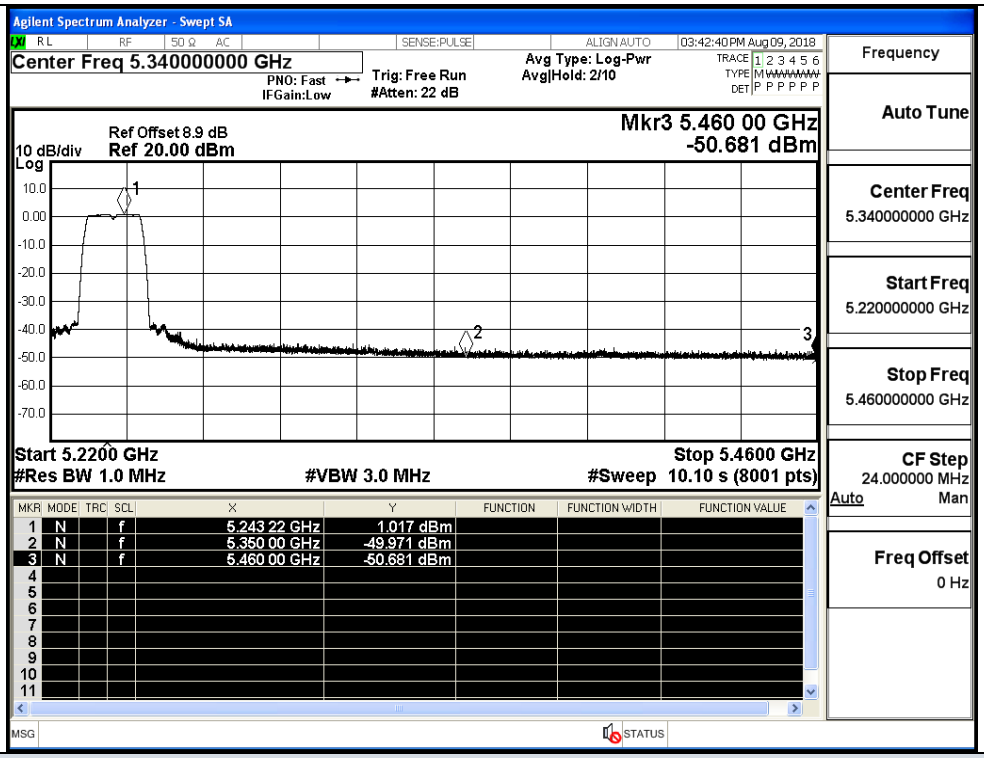
IEEE 802.11n HT40 / Channel 48 / 5230 MHz / Average



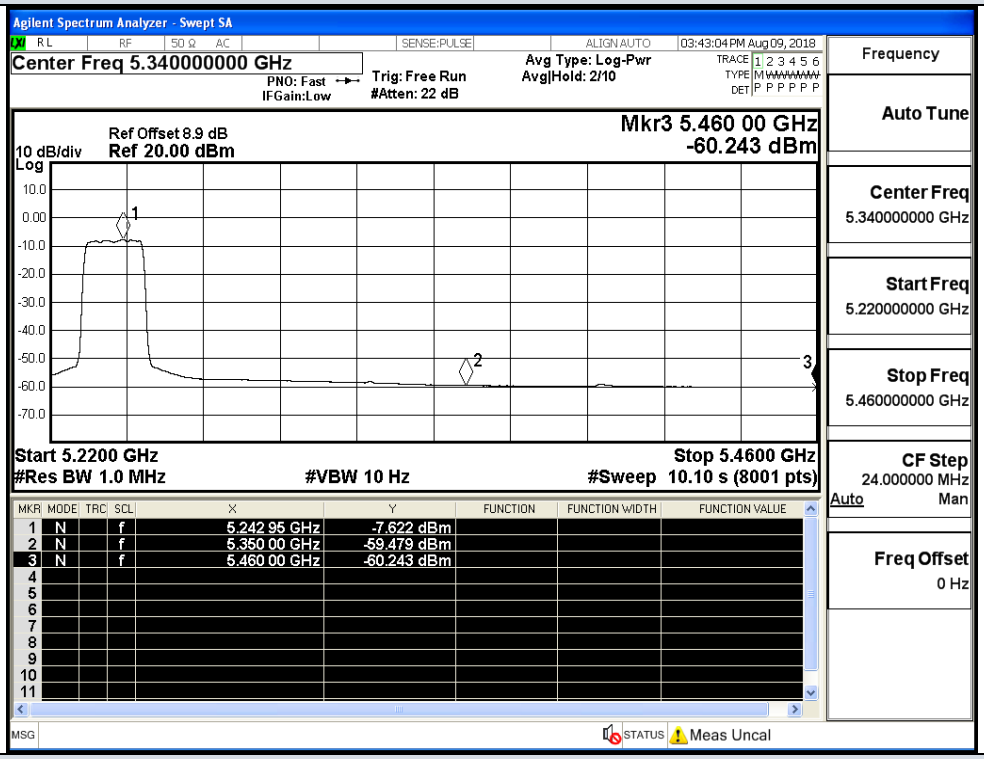
IEEE 802.11ac VHT20 / Channel 36 / 5180 MHz / Peak



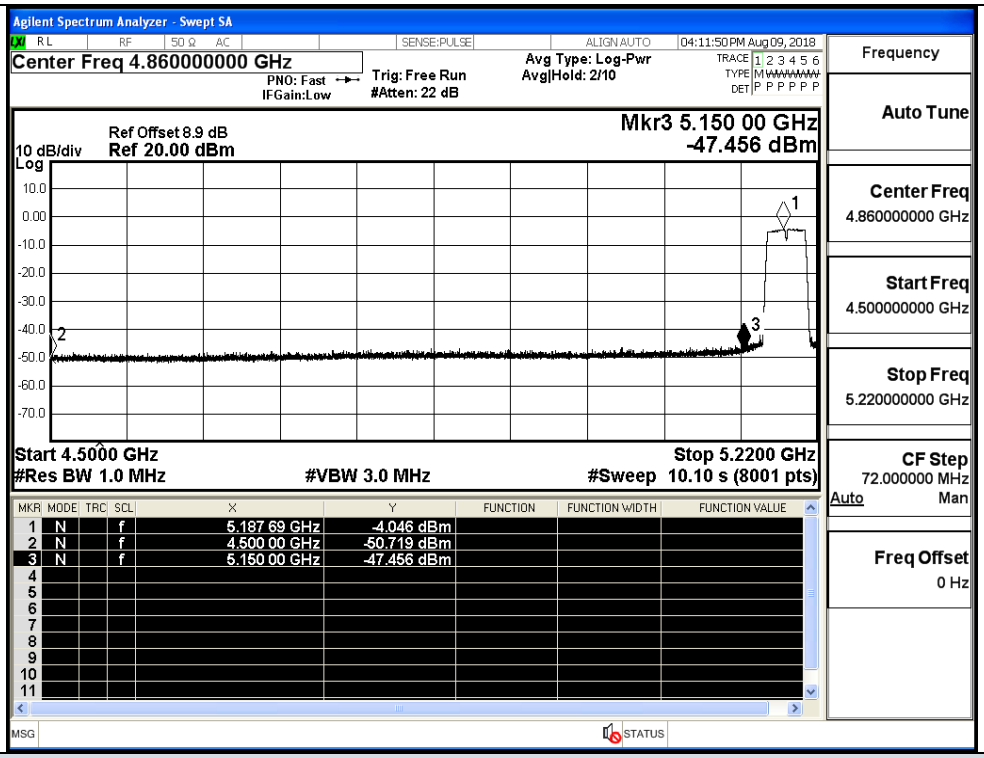
IEEE 802.11ac VHT20 / Channel 36 / 5180 MHz / Average



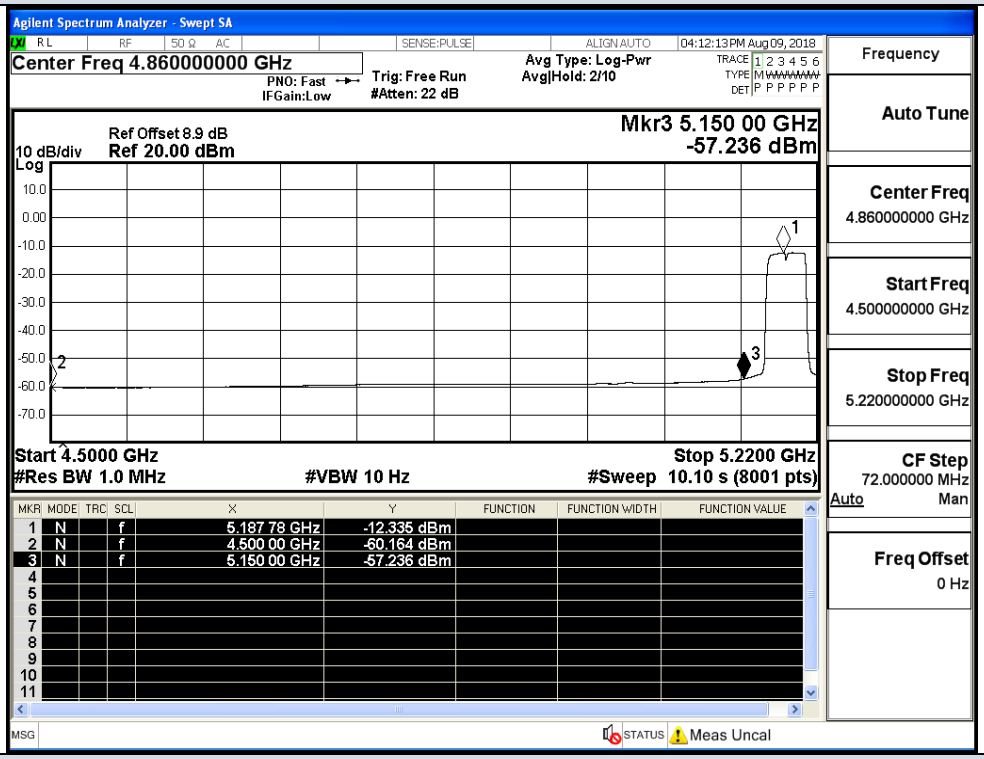
IEEE 802.11ac VHT20 / Channel 48 / 5240 MHz / Peak



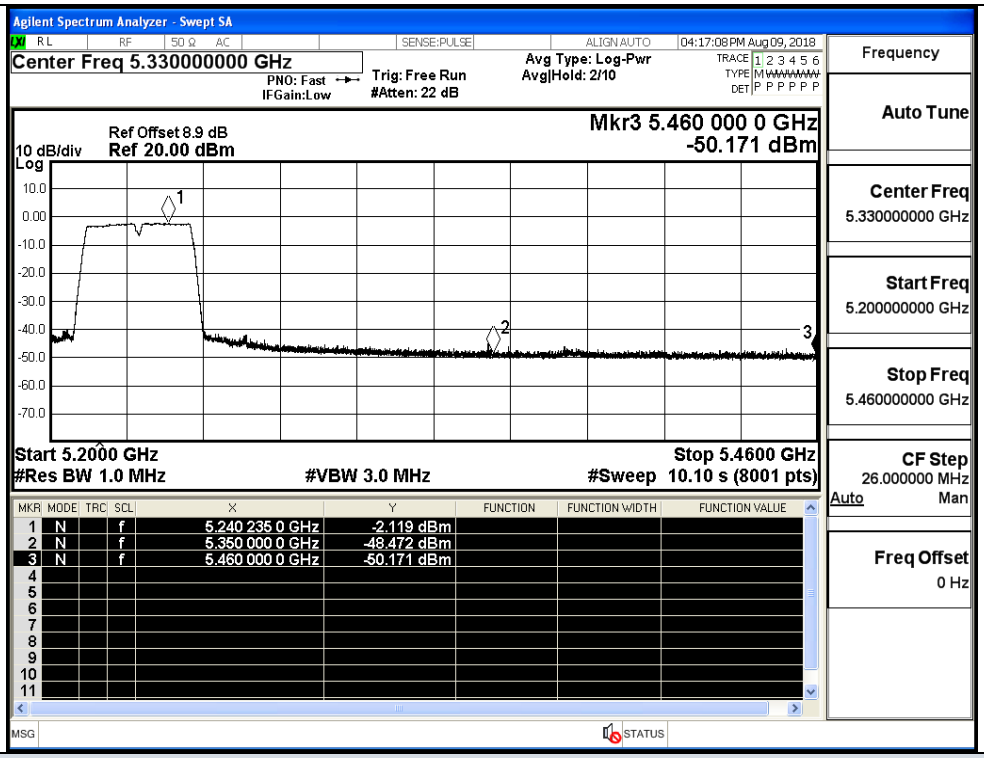
IEEE 802.11ac VHT20 / Channel 48 / 5240 MHz / Average



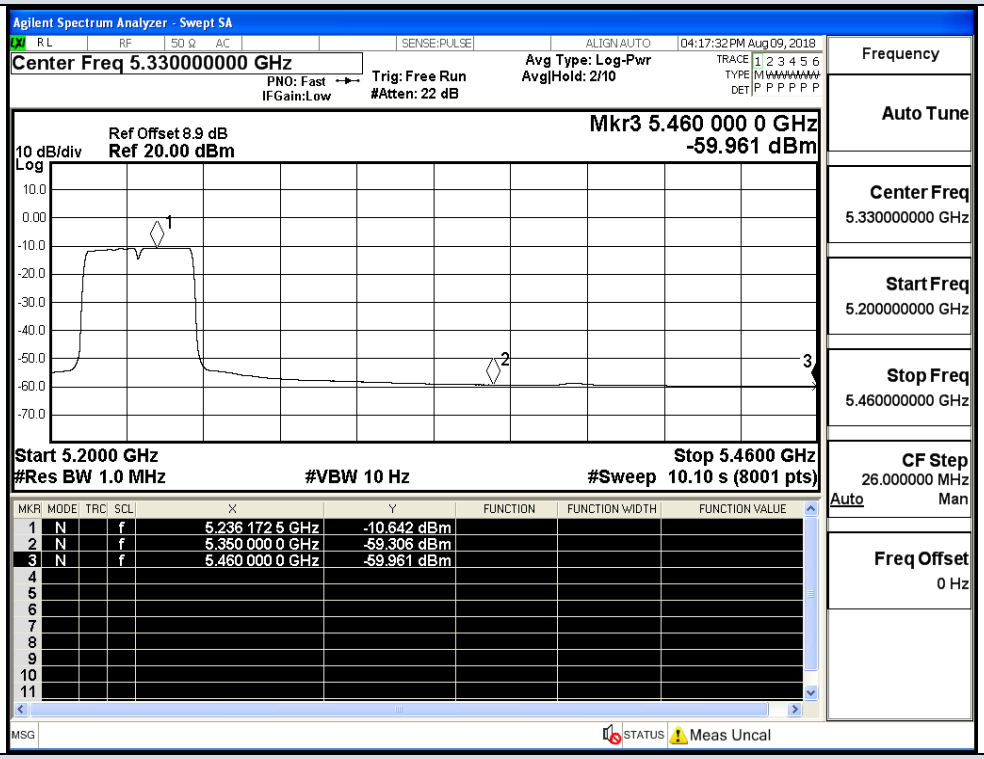
IEEE 802.11ac VHT40 / Channel 36 / 5180 MHz / Peak



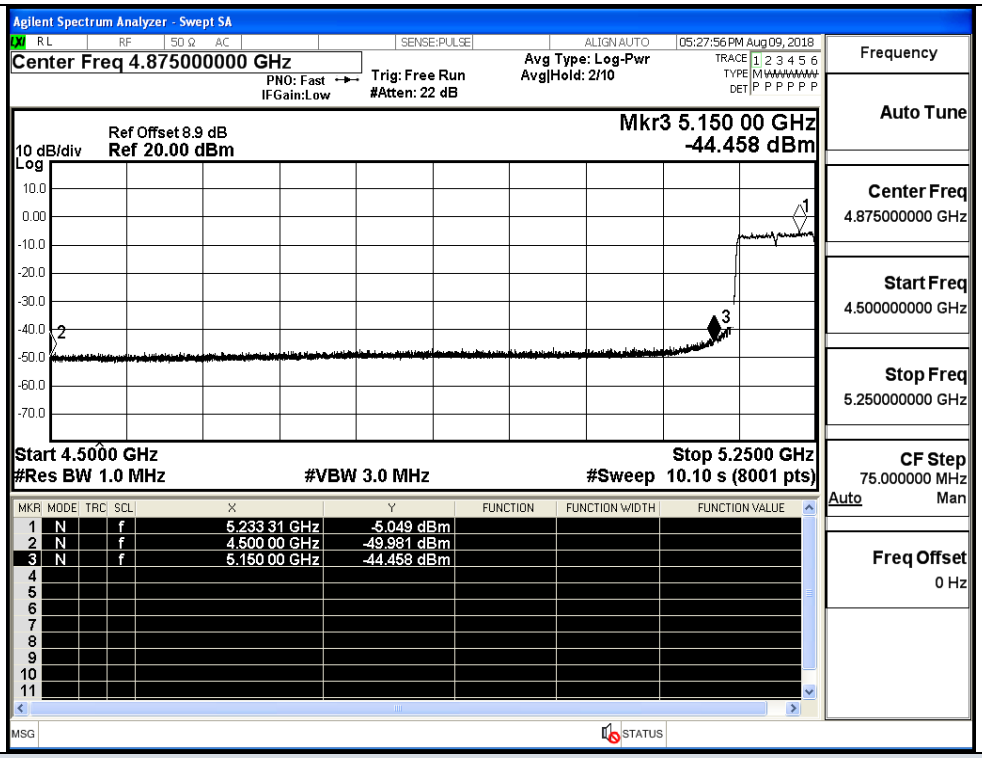
IEEE 802.11ac VHT40 / Channel 36 / 5180 MHz / Average



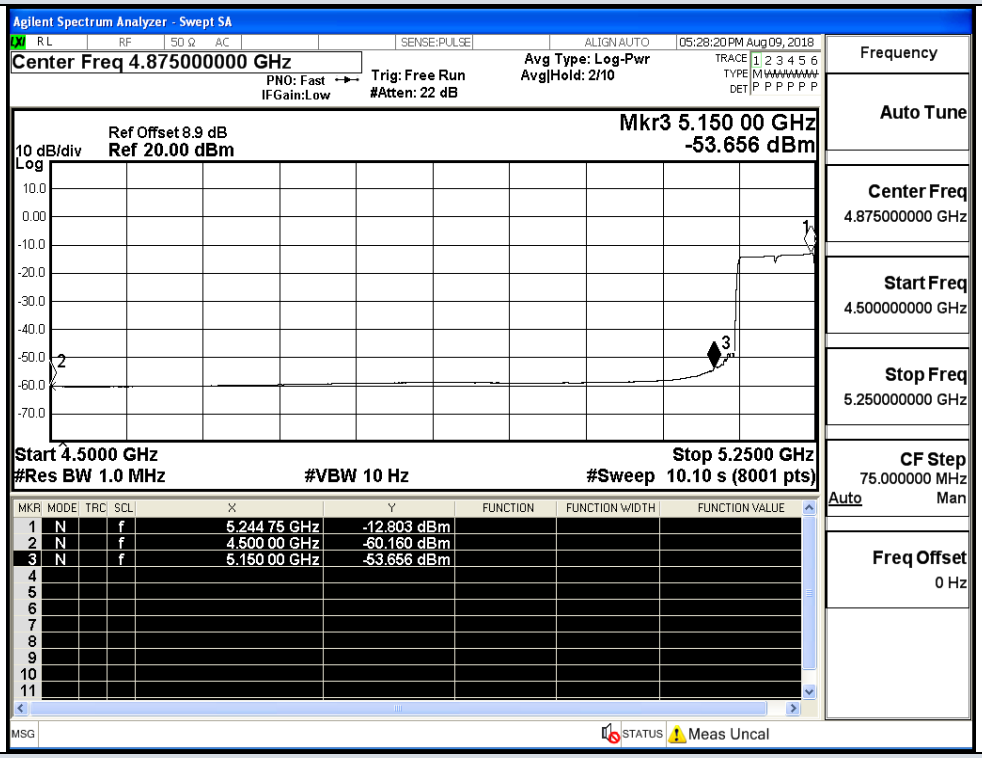
IEEE 802.11ac VHT40 / Channel 48 / 5230 MHz / Peak



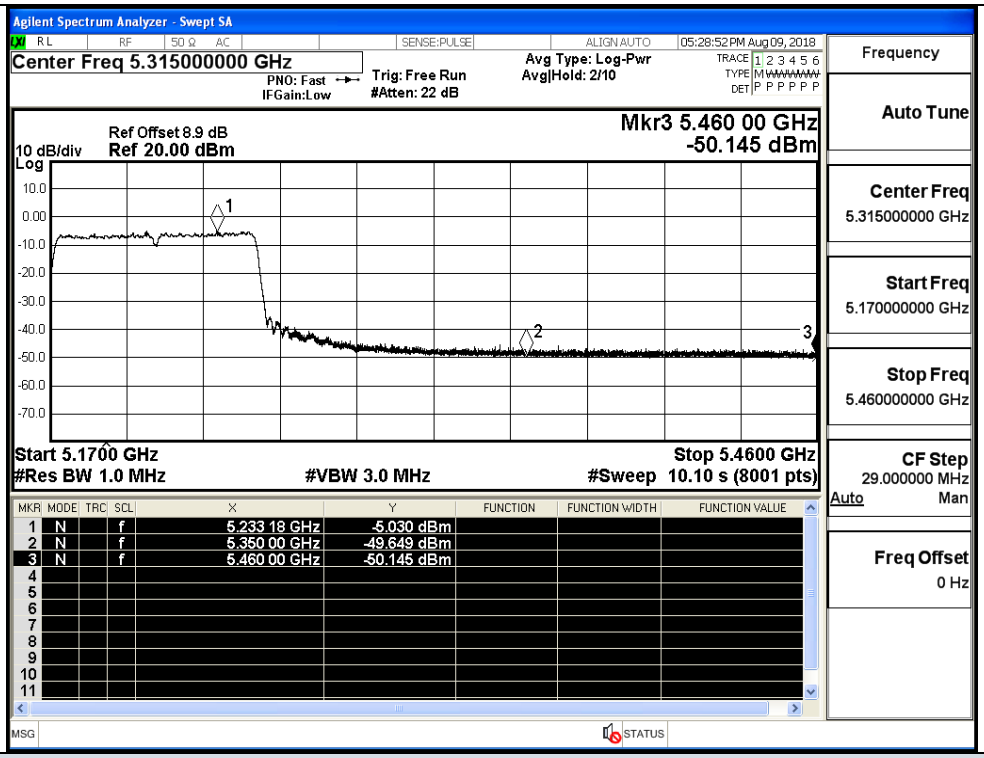
IEEE 802.11ac VHT40 / Channel 48 / 5230 MHz / Average



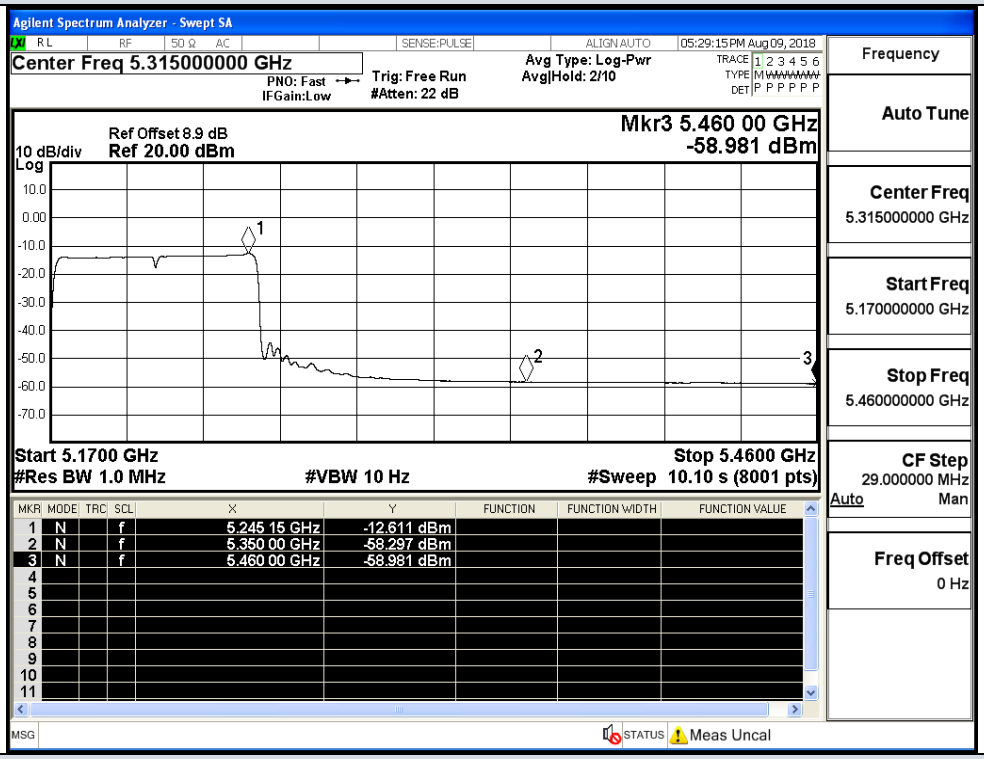
IEEE 802.11ac VHT80 / Channel 42 / 5210 MHz / Peak



IEEE 802.11ac VHT80 / Channel 42 / 5210 MHz / Average



IEEE 802.11ac VHT80 / Channel 42/ 5210 MHz / Peak



IEEE 802.11ac VHT80 / Channel 42 / 5210 MHz / Average