Appendix E

RF Test Data for 5.8G WLAN (Conducted Measurement)

Product Name: Network audio system (built-in amplifier)

Trade Mark: MAXIN

Test Model: RAPNAS MF-1

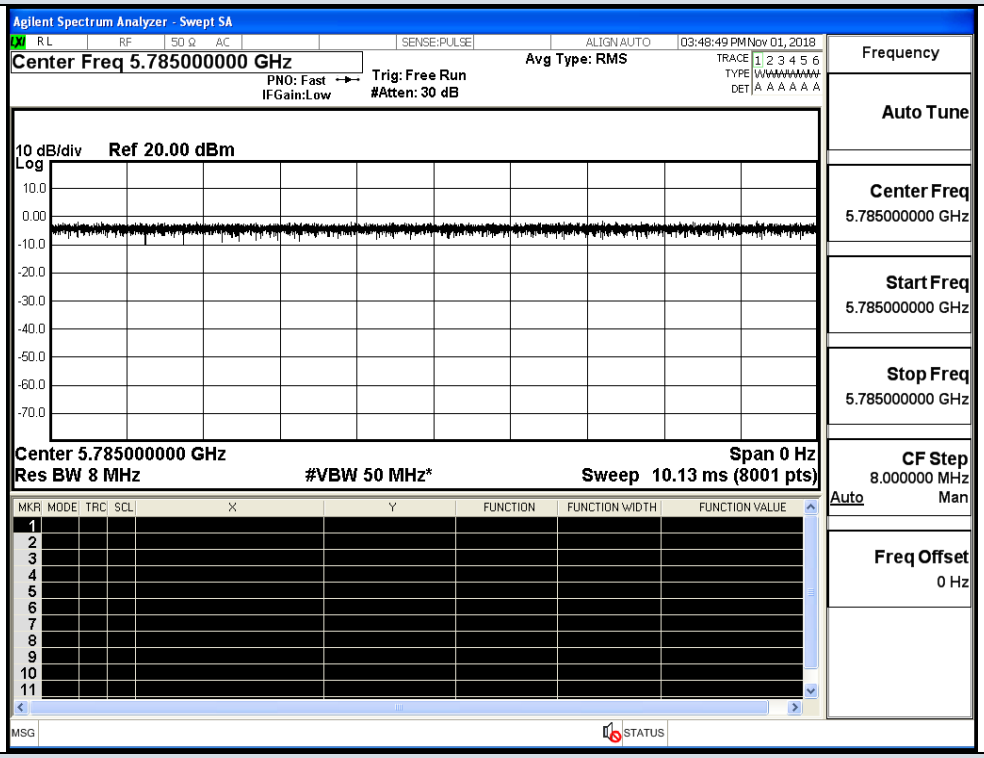
Environmental Conditions

Temperature:	24.6 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Jayden Zhuo

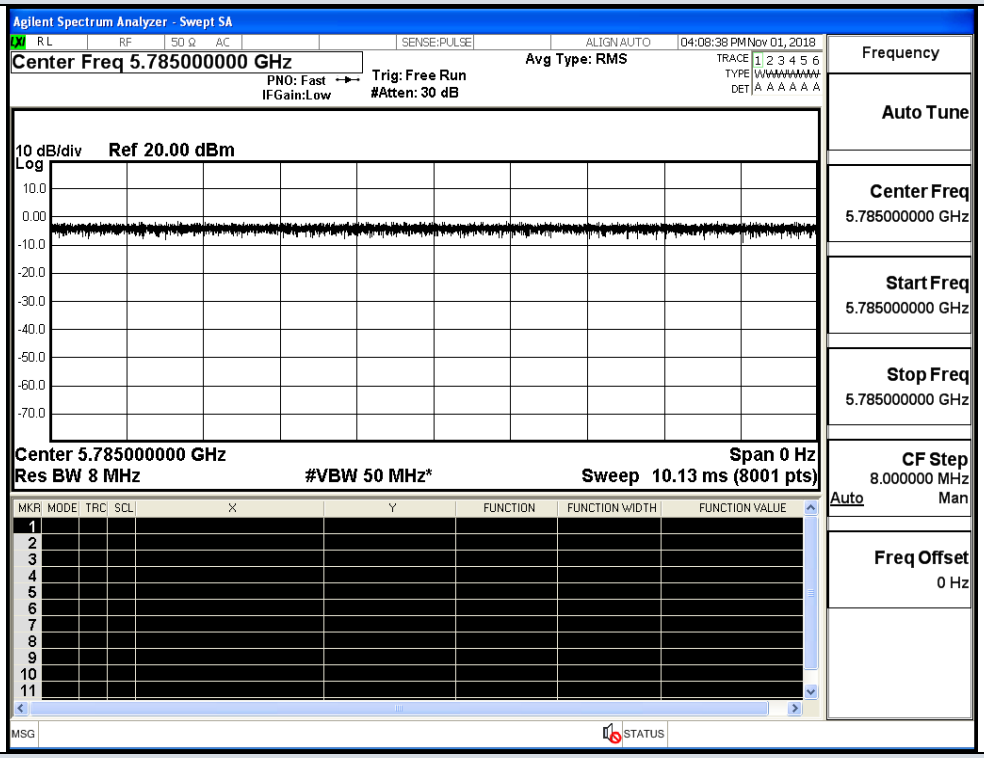
E.1 Duty Cycle

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11A	5785	100	0.00	0.01
11N20 SISO	5785	100	0.00	0.01
11N40 SISO	5755	100	0.00	0.01
11AC20 SISO	5785	100	0.00	0.01
11AC40 SISO	5755	100	0.00	0.01
11AC80 SISO	5775	100	0.00	0.01

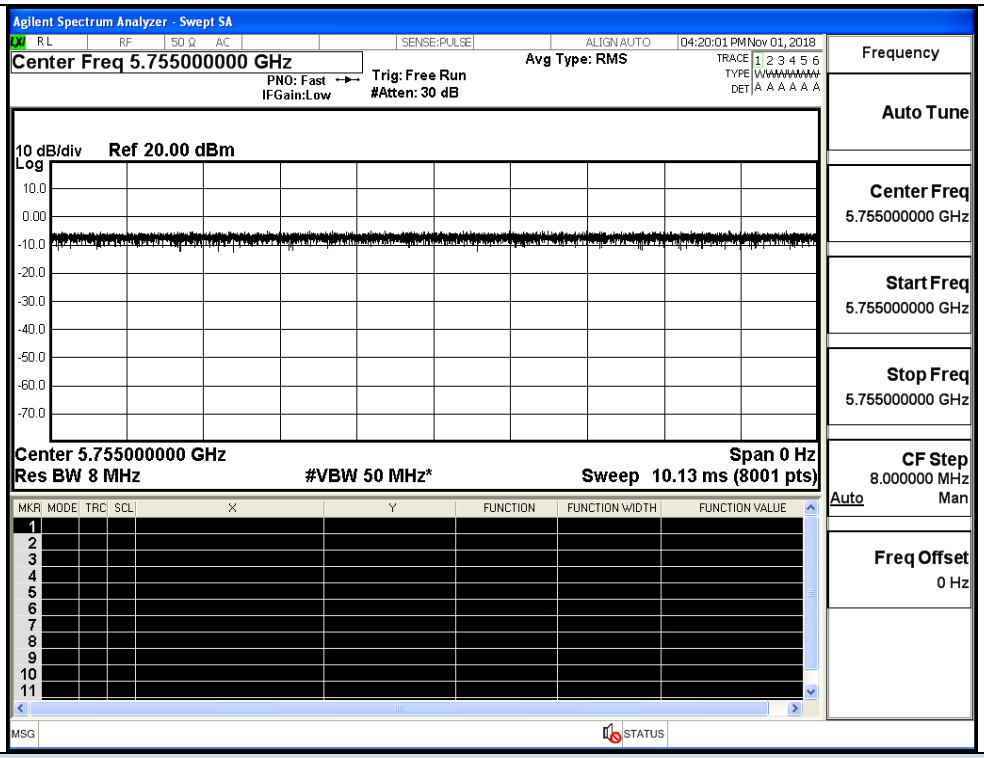
On Time and Duty Cycle



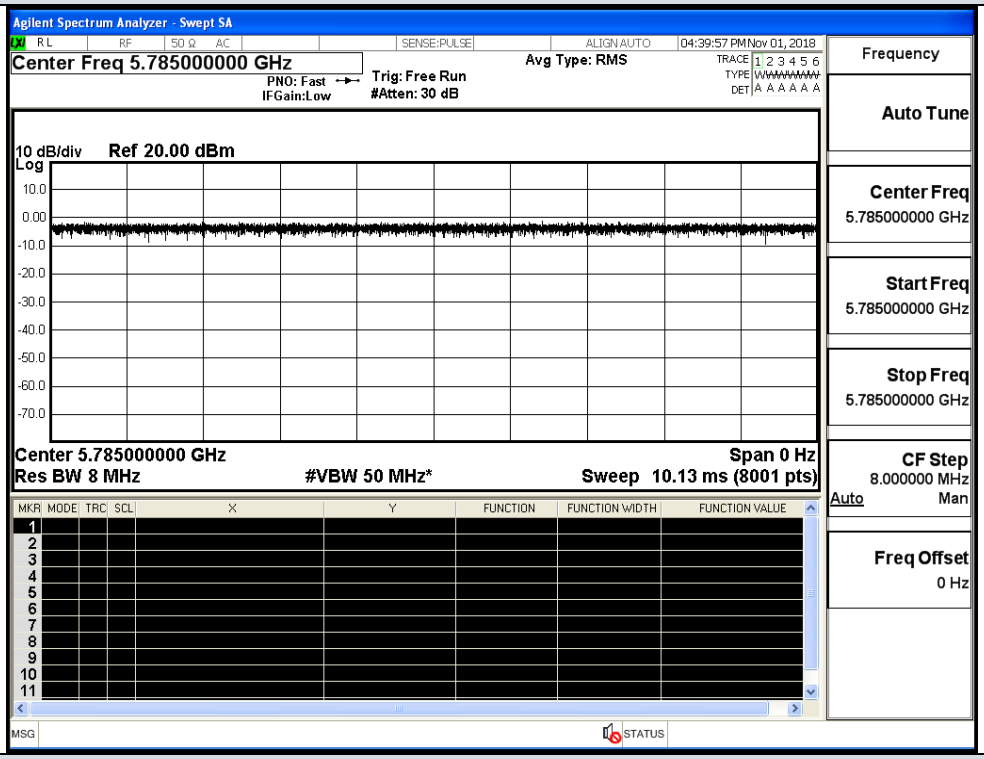
IEEE 802.11a



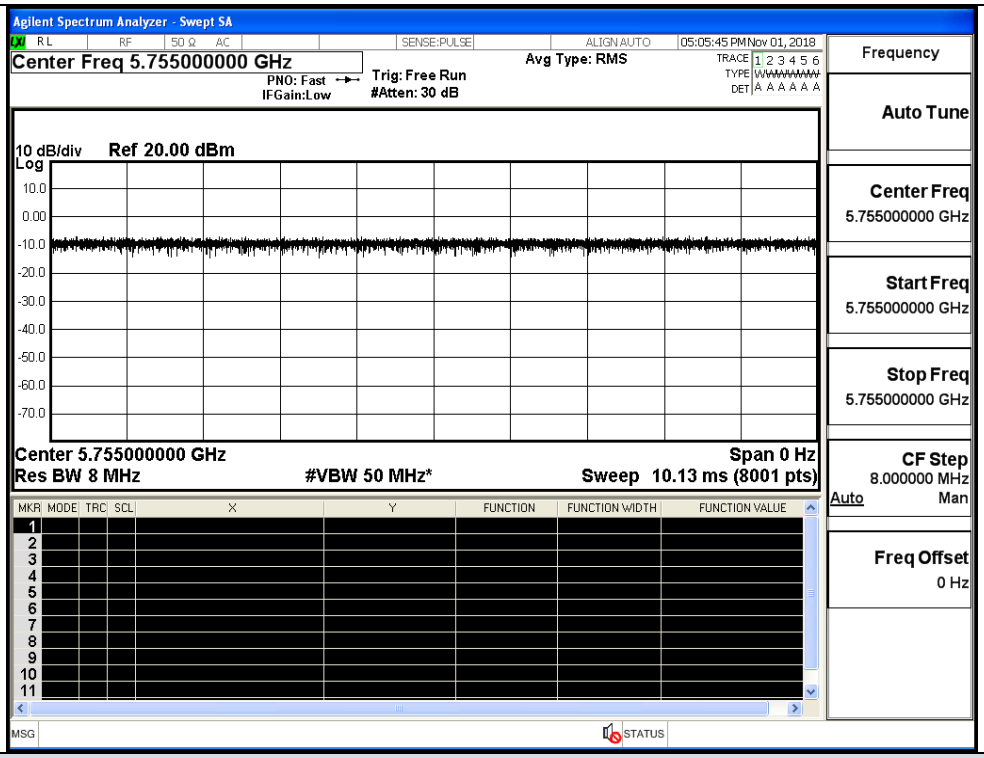
IEEE 802.11n HT20



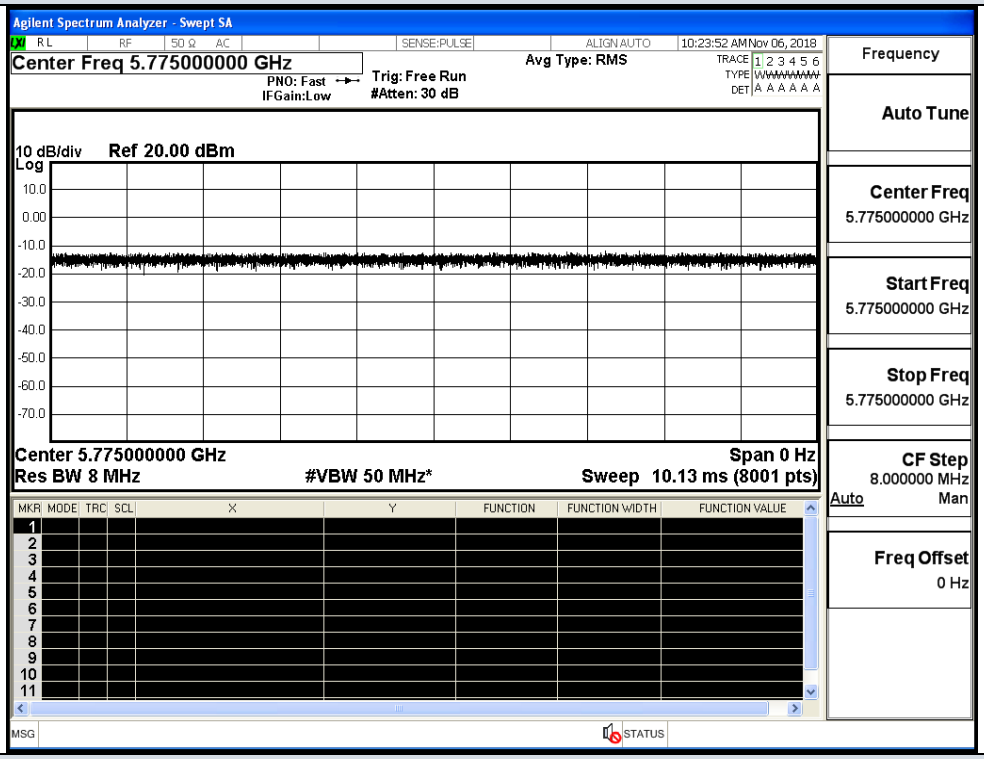
IEEE 802.11n HT40



IEEE 802.11ac VHT20



IEEE 802.11ac VHT40



IEEE 802.11ac VHT80

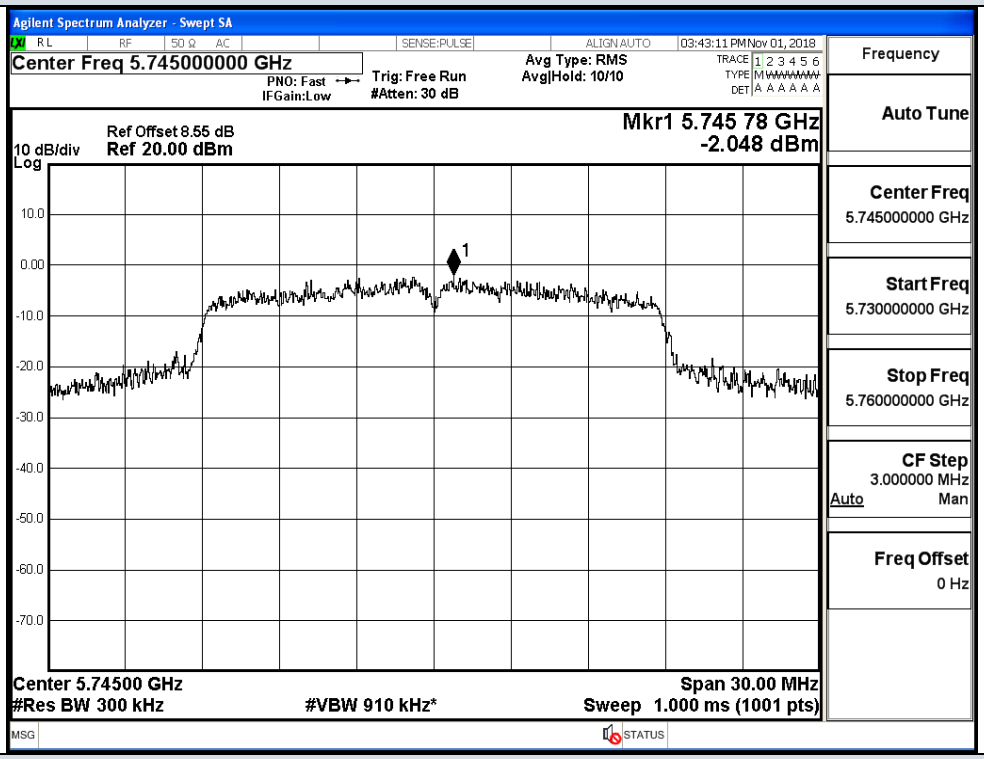
E.2 Maximum Conduct Output Power

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11A	149	5745	11.77	0	11.77	30
	157	5785	11.57	0	11.57	
	165	5825	11.27	0	11.27	
11N20 SISO	149	5745	11.81	0	11.81	30
	157	5785	11.73	0	11.73	
	165	5825	11.59	0	11.59	
11N40 SISO	151	5755	12.44	0	12.44	30
	159	5795	12.94	0	12.94	
11AC20 SISO	149	5745	12.19	0	12.19	30
	157	5785	12.54	0	12.54	
	165	5825	12.86	0	12.86	
11AC40 SISO	151	5755	14.48	0	14.48	30
	159	5795	13.34	0	13.34	
11AC80 SISO	155	5775	9.1	0	9.1	30

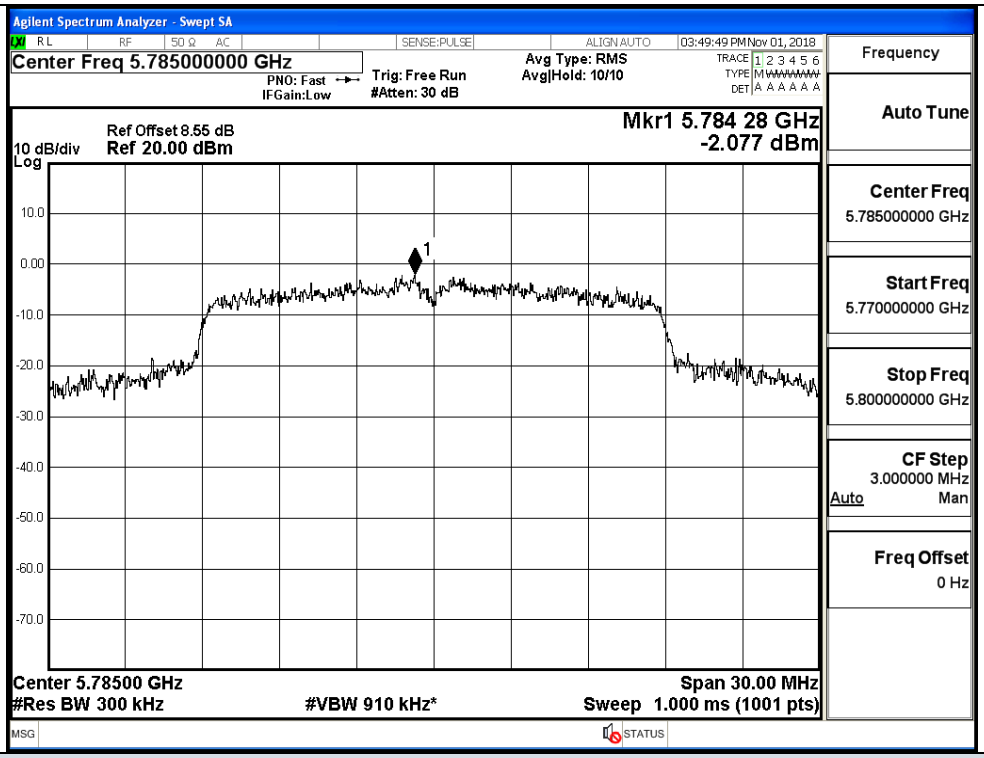
E.3 Power Spectral Density

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit (dBm/500KHz)
11A	149	5745	-2.048	0	2.218	0.170	30
	157	5785	-2.077	0	2.218	0.141	
	165	5825	-2.662	0	2.218	-0.444	
11N20 SISO	149	5745	-1.840	0	2.218	0.378	30
	157	5785	-1.944	0	2.218	0.274	
	165	5825	-1.893	0	2.218	0.325	
11N40 SISO	151	5755	-4.771	0	2.218	-2.553	30
	159	5795	-4.082	0	2.218	-1.864	
11AC20 SISO	149	5745	-2.052	0	2.218	0.166	30
	157	5785	-1.526	0	2.218	0.692	
	165	5825	-1.587	0	2.218	0.631	
11AC40 SISO	151	5755	-6.937	0	2.218	-4.719	30
	159	5795	-6.423	0	2.218	-4.205	
11AC80 SISO	155	5775	-11.430	0	2.218	-9.212	30

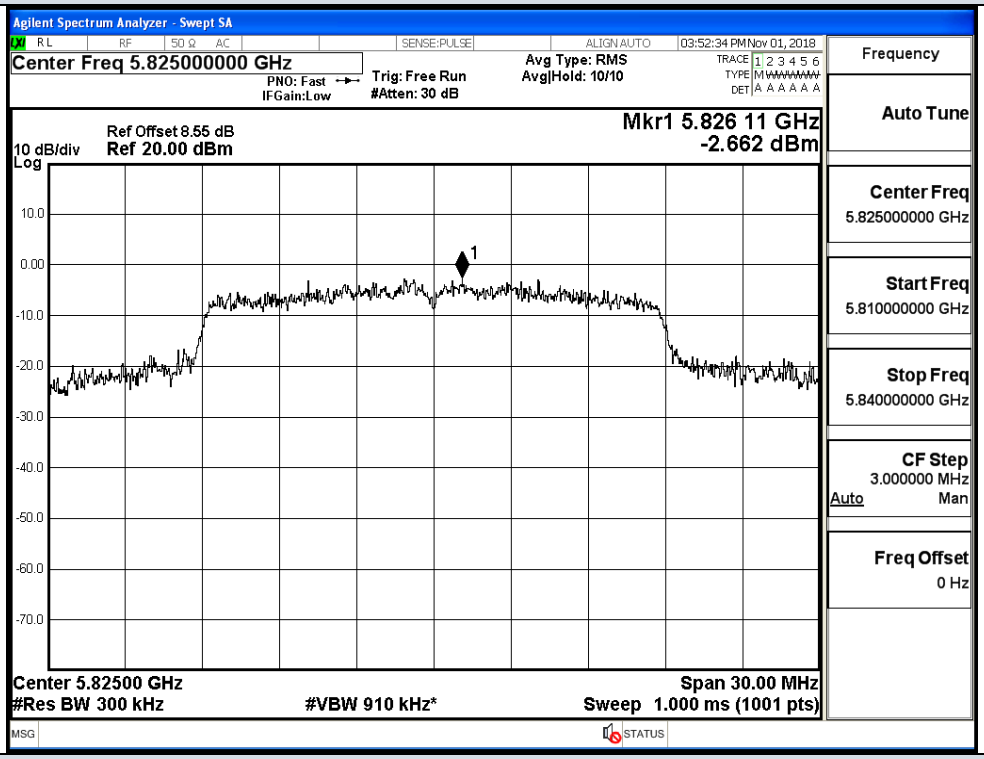
Power Spectral Density



IEEE 802.11a / Channel 149 / 5745 MHz

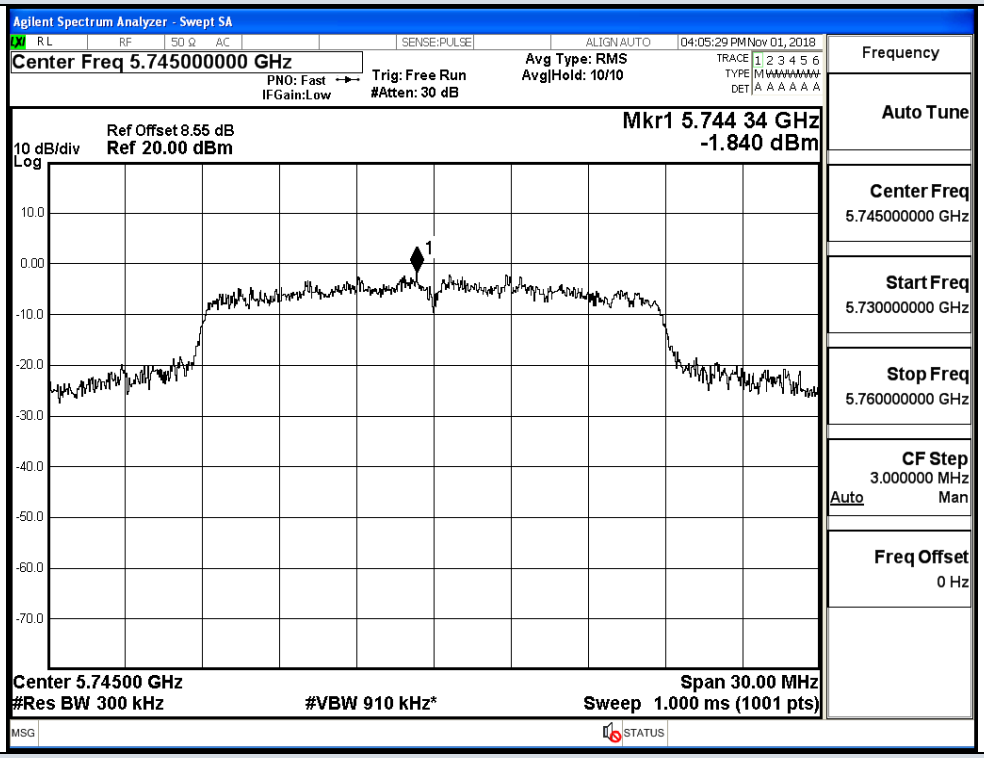


IEEE 802.11a / Channel 157 / 5785 MHz

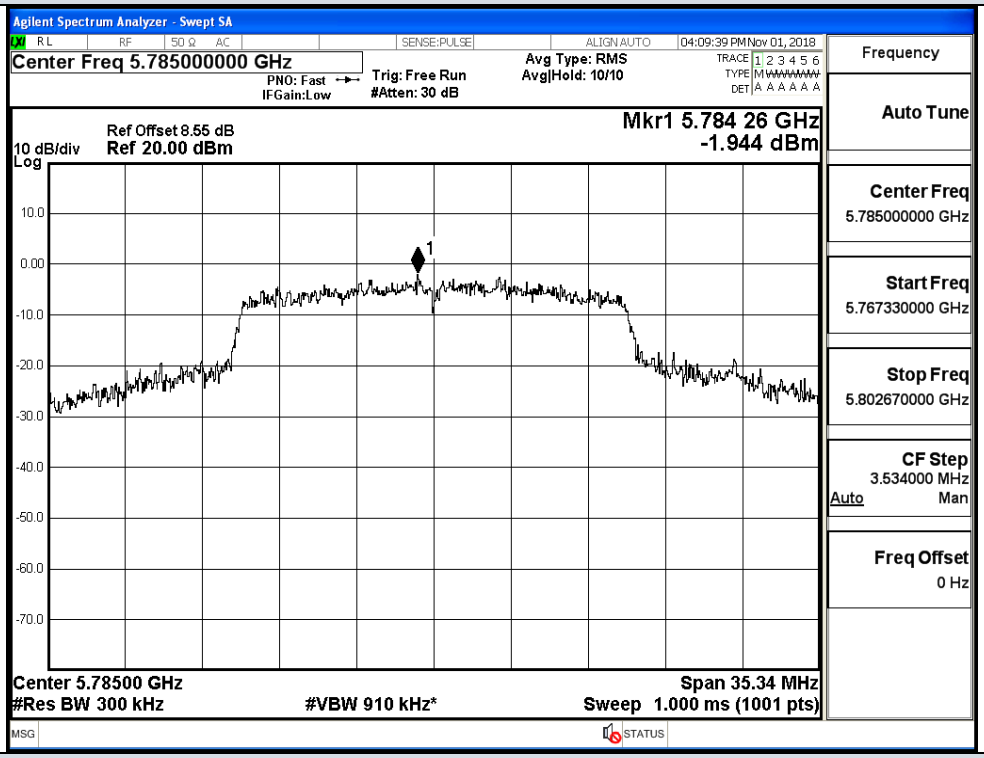


IEEE 802.11a / Channel 165 / 5825 MHz

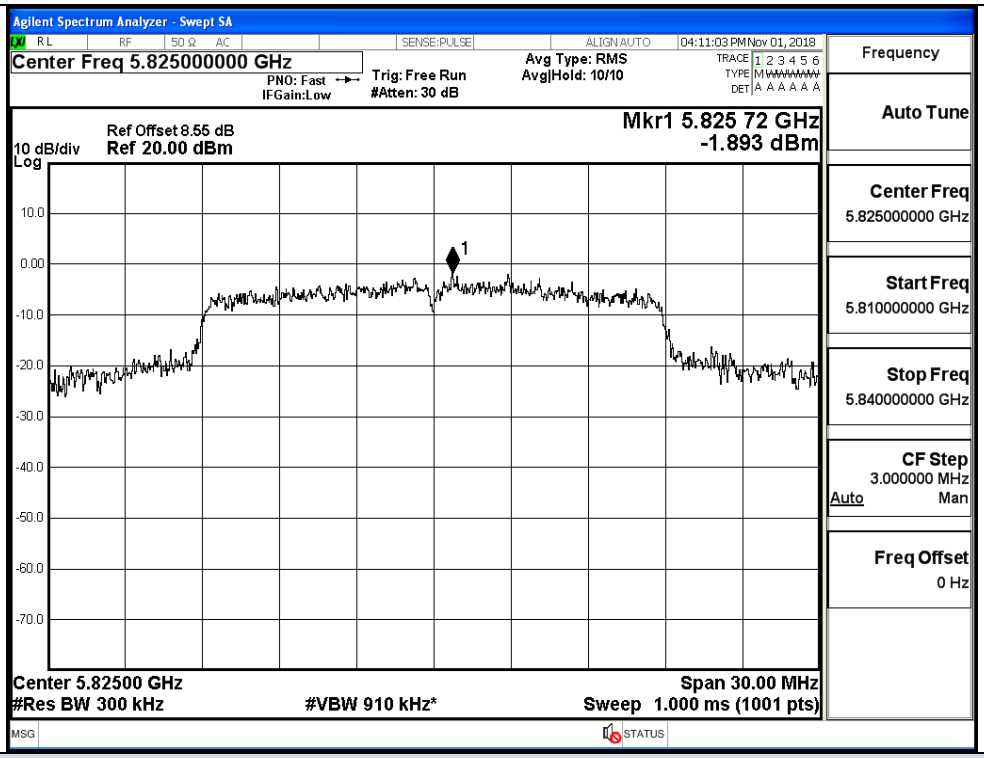
Power Spectral Density



IEEE 802.11n HT20 / Channel 149 / 5745 MHz

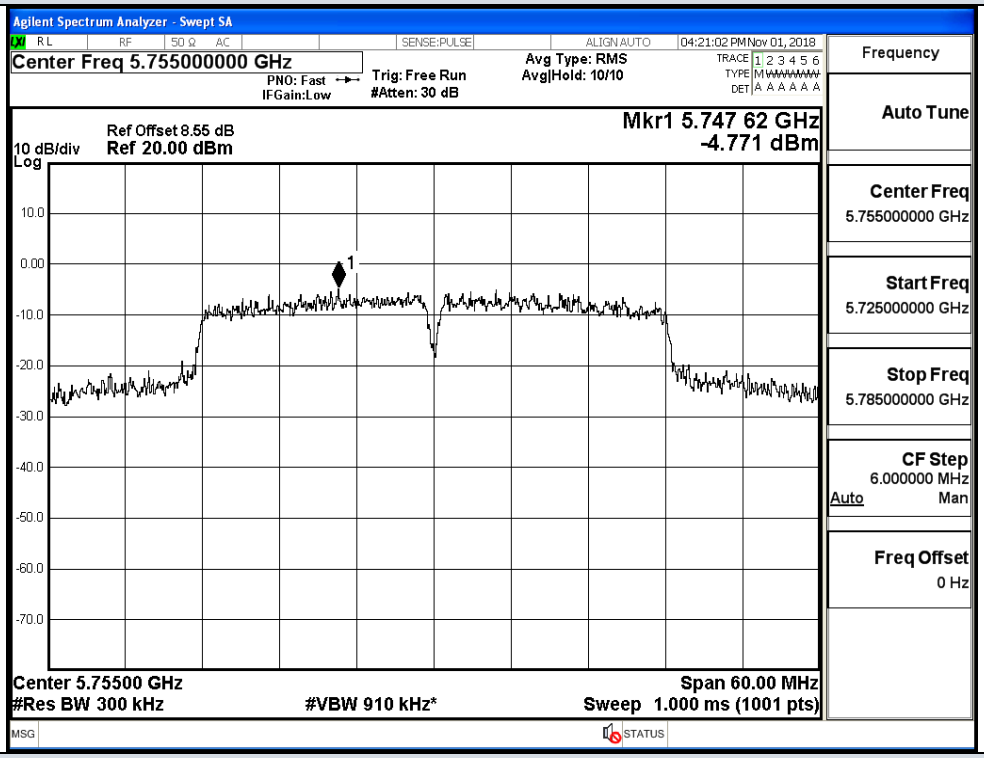


IEEE 802.11n HT20 / Channel 157 / 5785 MHz

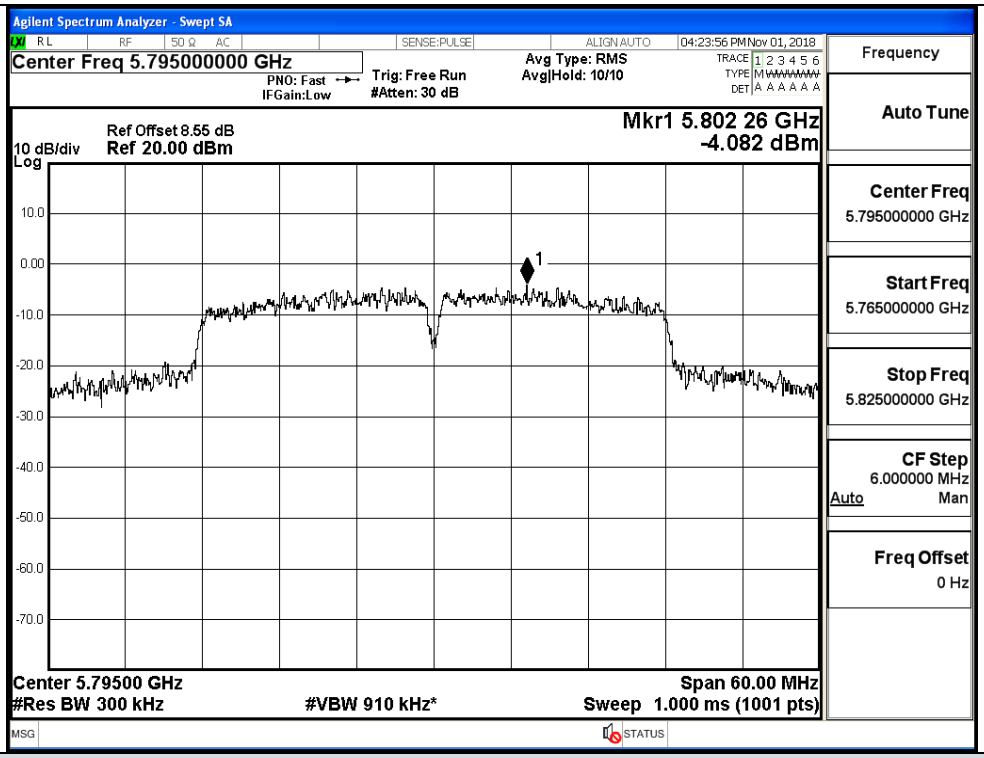


IEEE 802.11n HT20 / Channel 165 / 5825 MHz

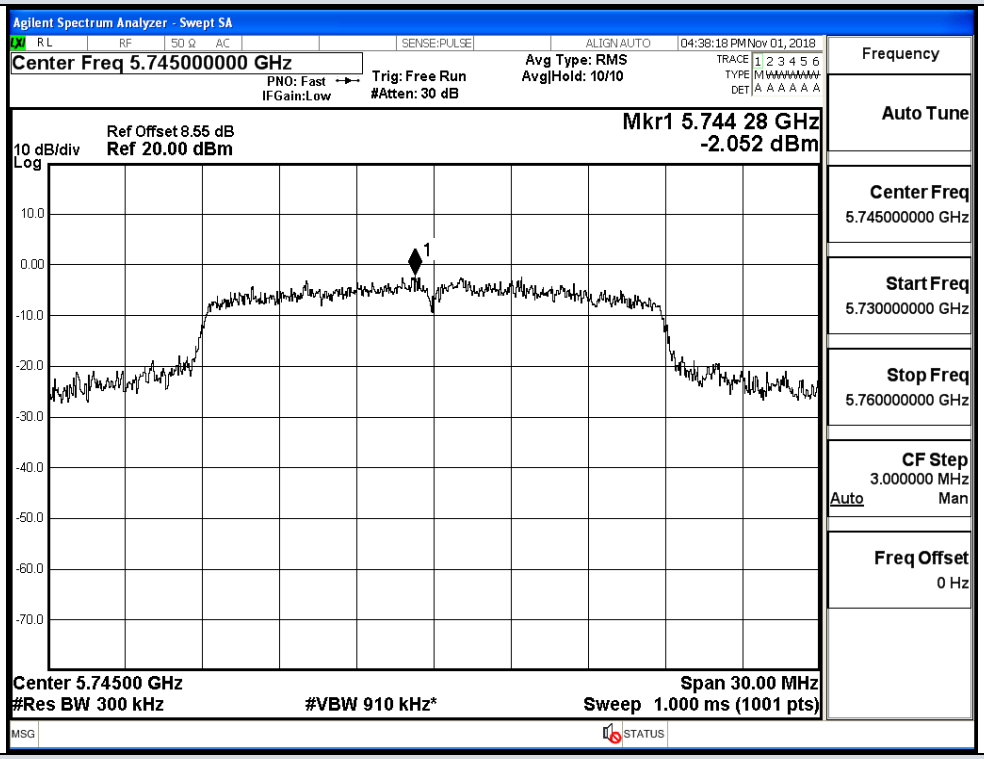
Power Spectral Density



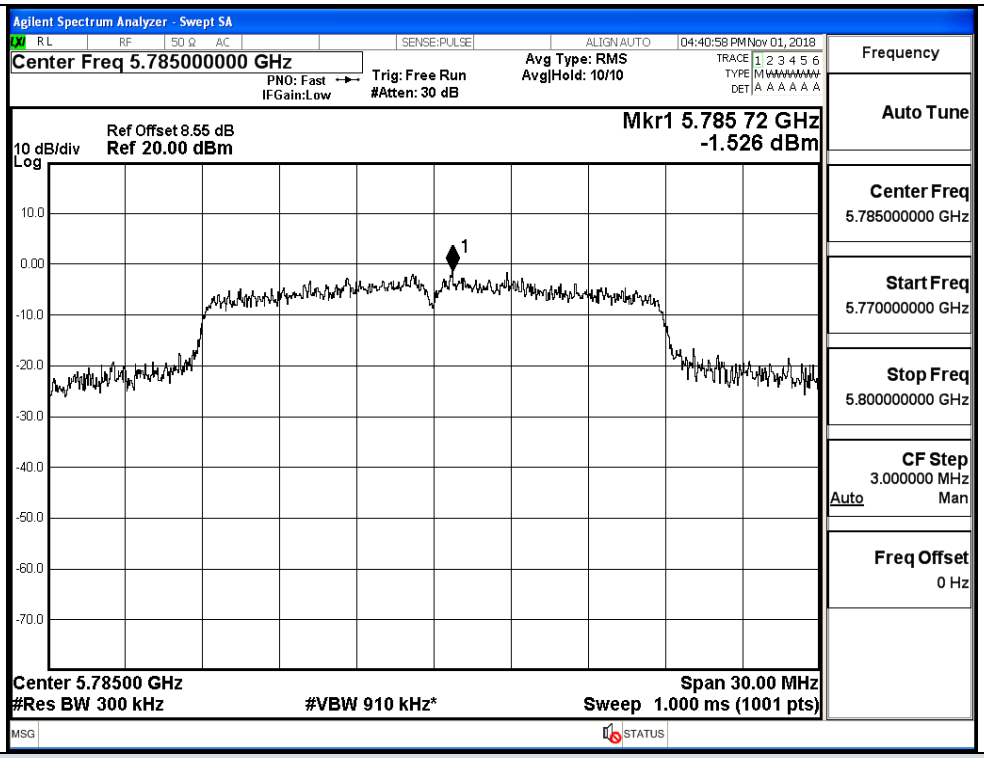
IEEE 802.11n HT40 / Channel 151 / 5755 MHz



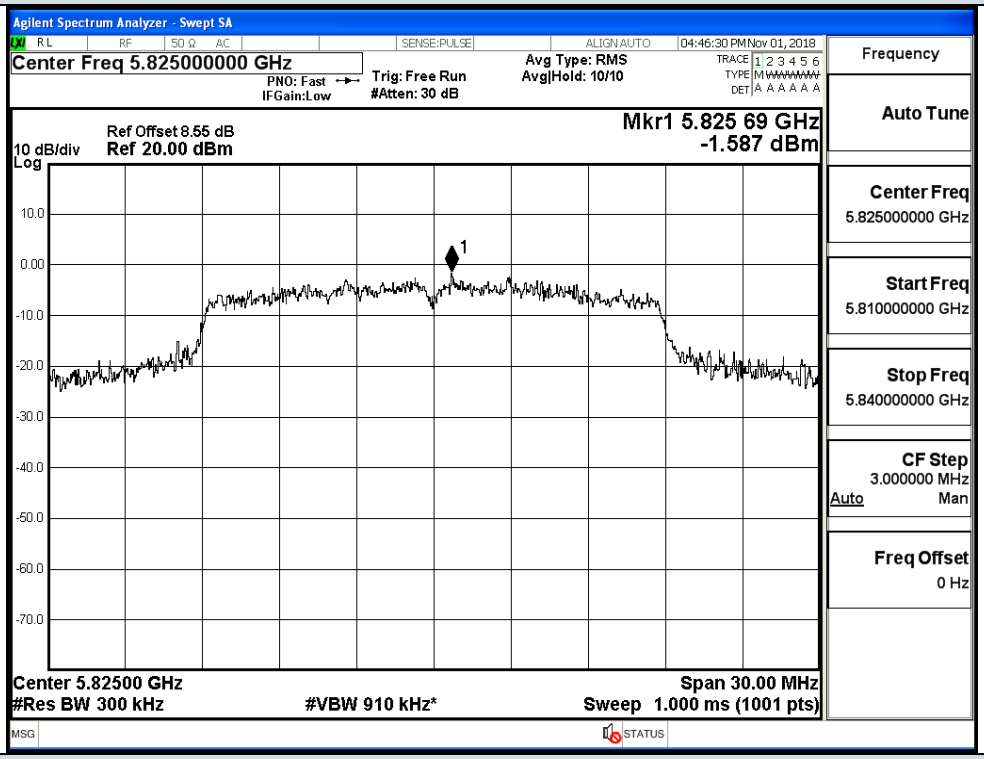
IEEE 802.11n HT40 / Channel 159 / 5795 MHz



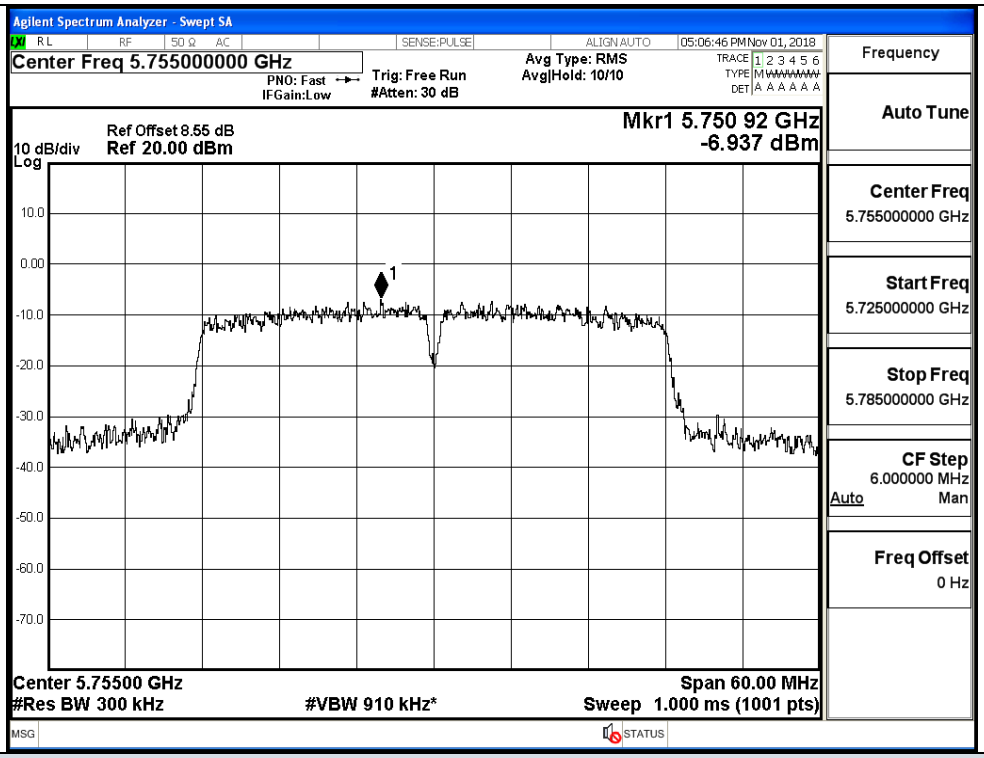
IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



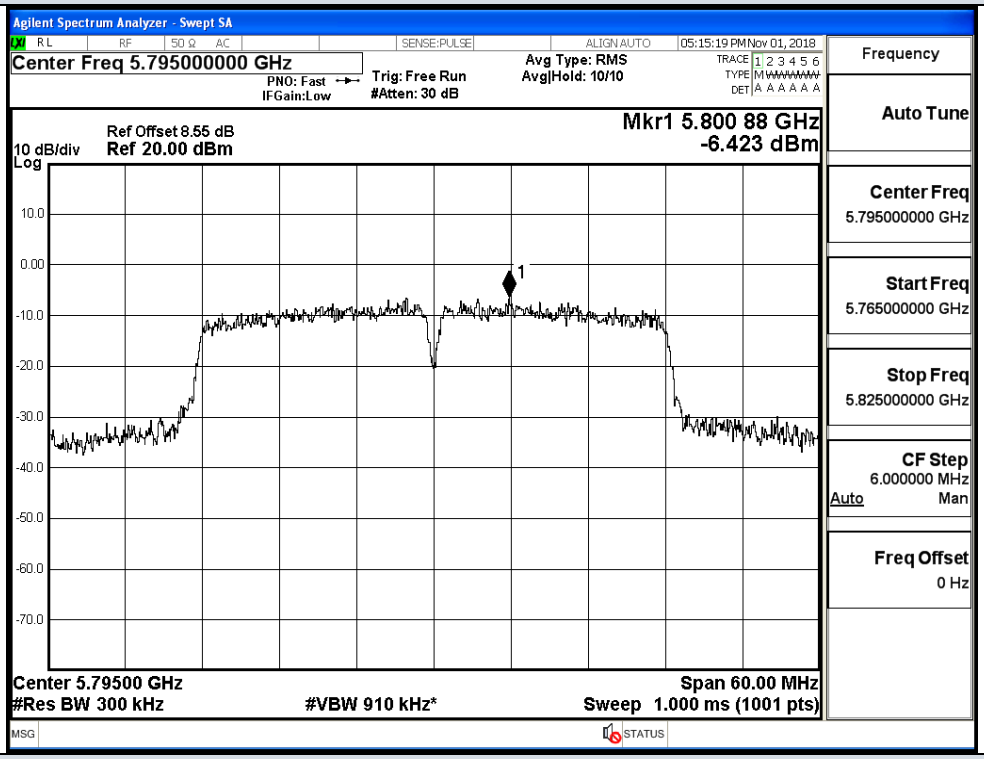
IEEE 802.11ac VHT20 / Channel 157 / 5785 MHz



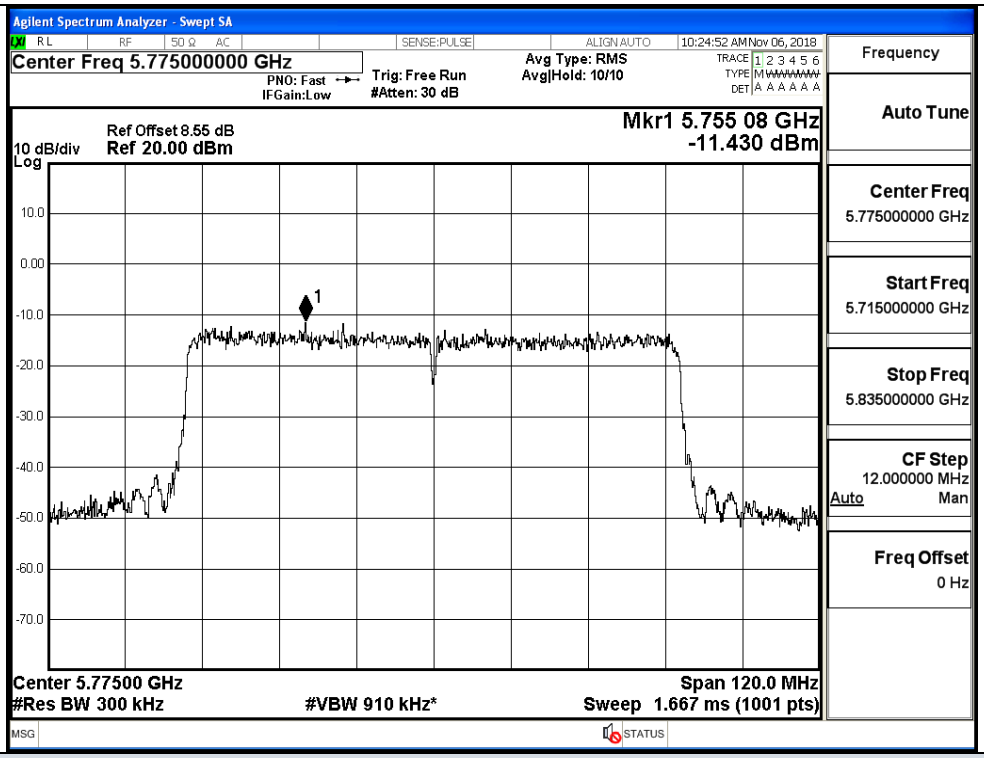
IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz



IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz



IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz

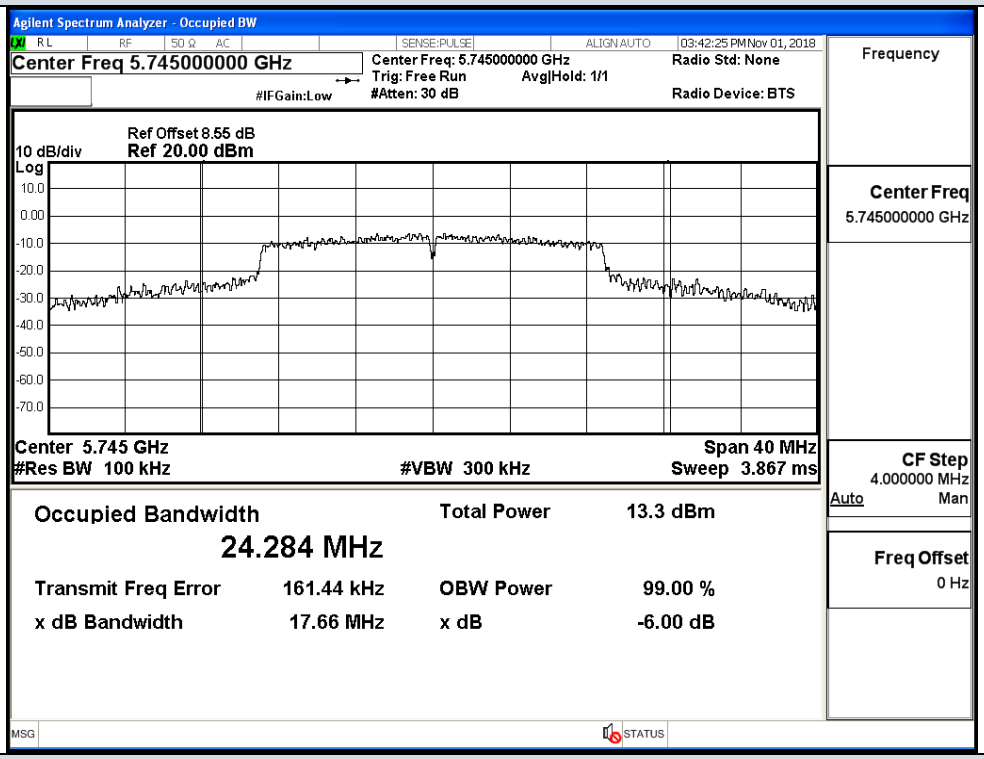


IEEE 802.11ac VHT80 / Channel 155/ 5775 MHz

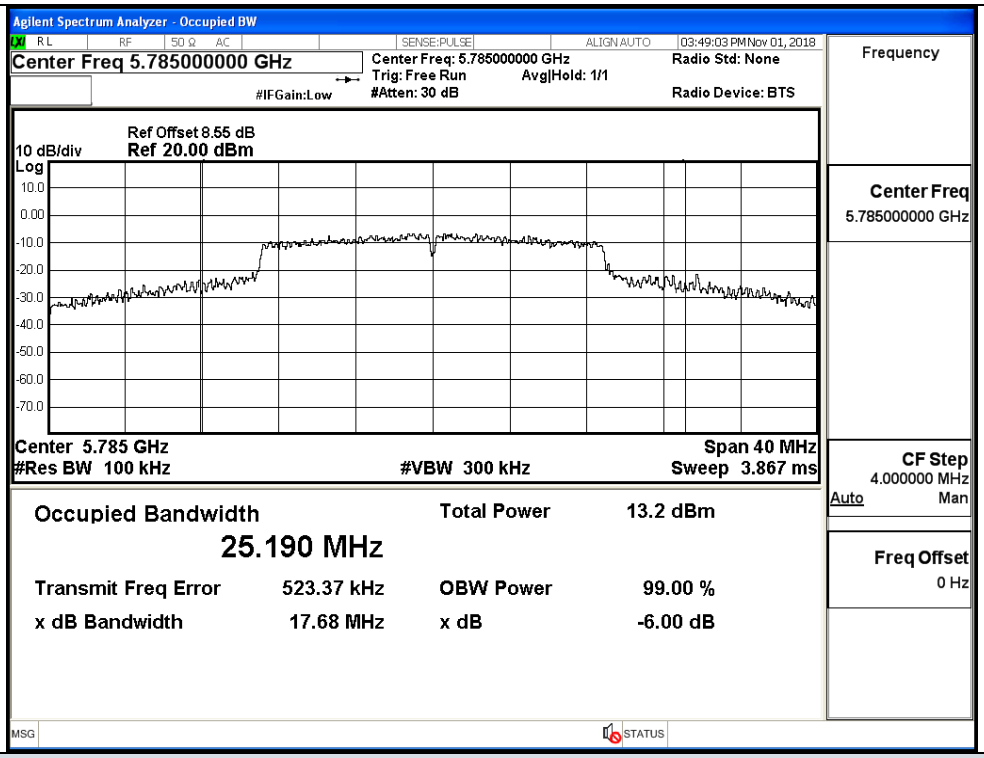
E.4 Emission Bandwidth

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
11A	149	5745	17.660	17.596	>=0.5
	157	5785	17.680	17.611	
	165	5825	17.700	17.670	
11N20 SISO	149	5745	17.630	17.587	>=0.5
	157	5785	17.670	17.604	
	165	5825	17.660	17.583	
11N40 SISO	151	5755	36.380	35.968	>=0.5
	159	5795	36.400	35.916	
11AC20SISO	149	5745	17.670	17.588	>=0.5
	157	5785	17.660	17.610	
	165	5825	17.680	17.605	
11AC40SISO	151	5755	36.400	35.987	>=0.5
	159	5795	36.380	35.950	
11AC80SISO	155	5775	76.020	75.510	>=0.5

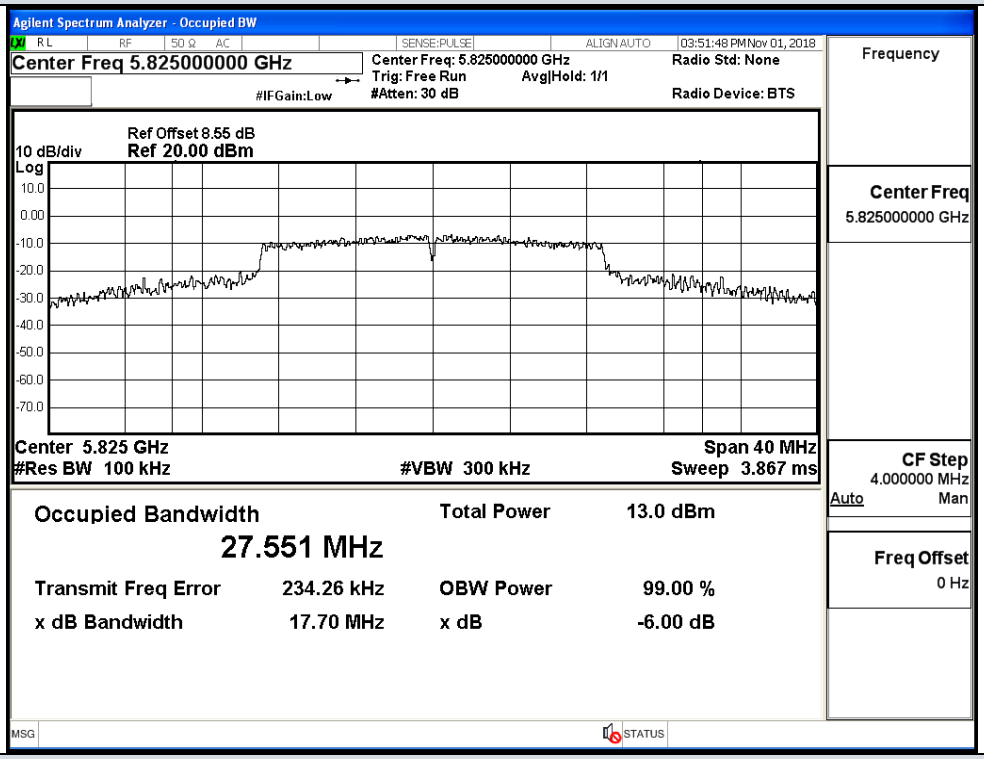
6dB Bandwidth



IEEE 802.11a / Channel 149 / 5745 MHz

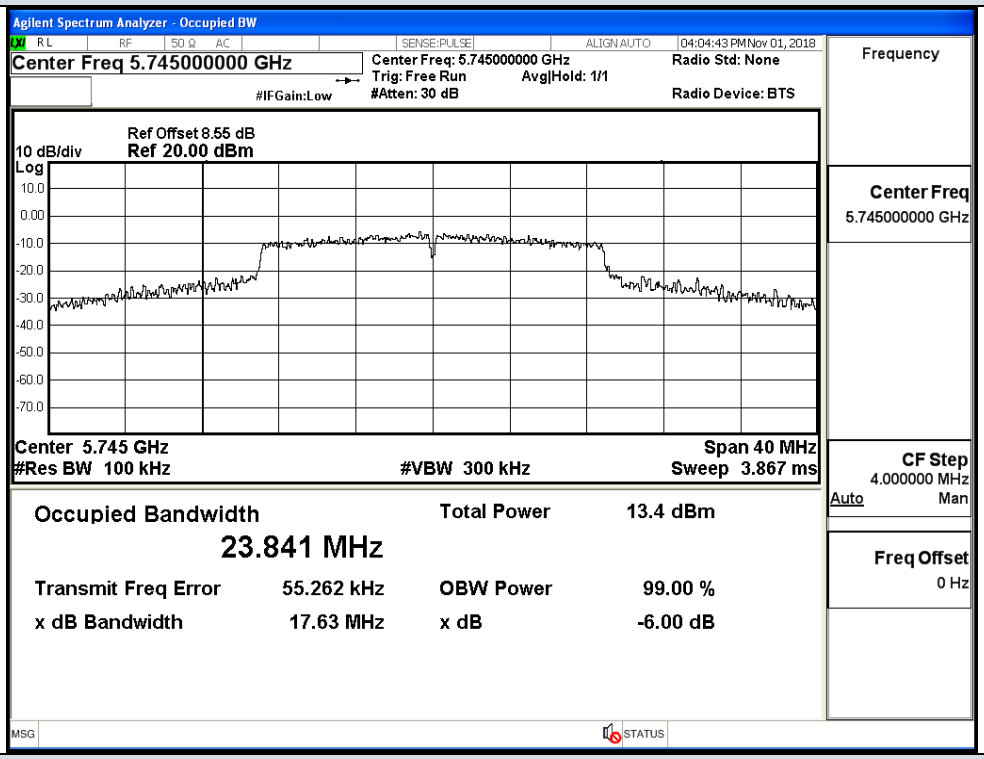


IEEE 802.11a / Channel 157 / 5785 MHz

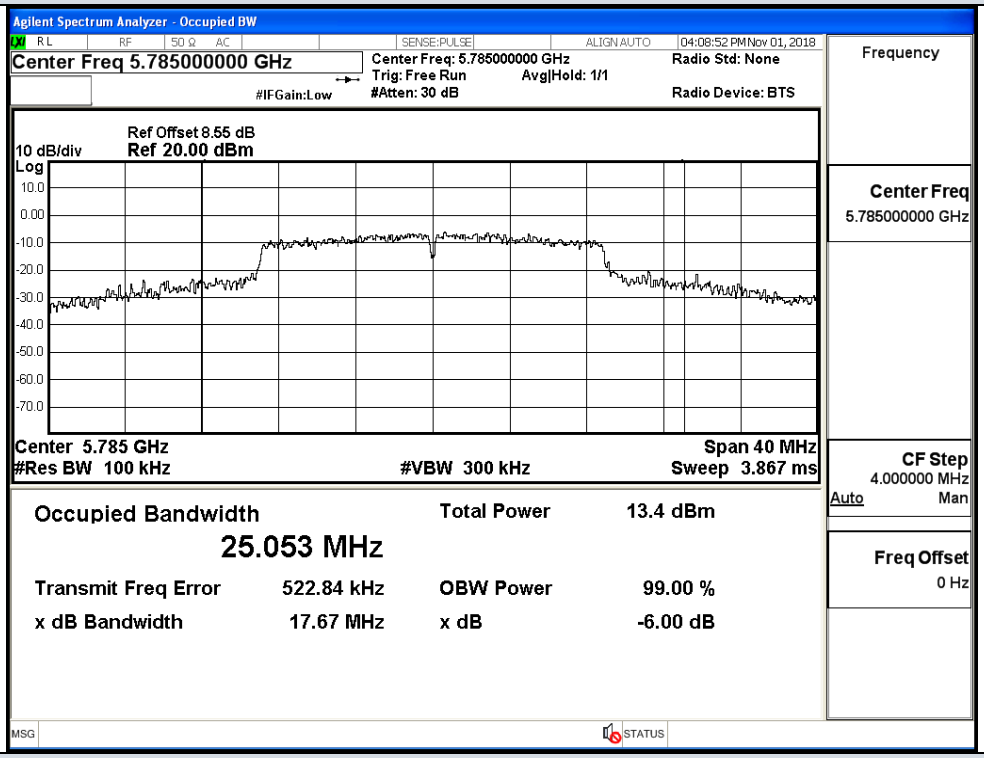


IEEE 802.11a / Channel 165 / 5825 MHz

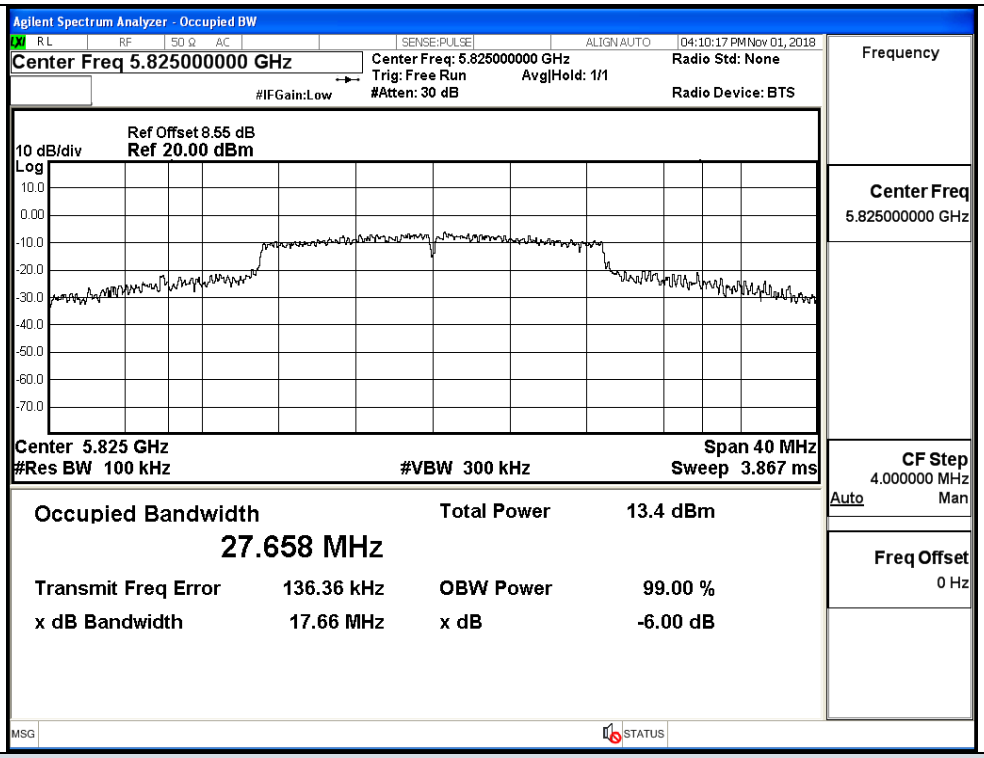
6dB Bandwidth



IEEE 802.11n HT20 / Channel 149 / 5745 MHz

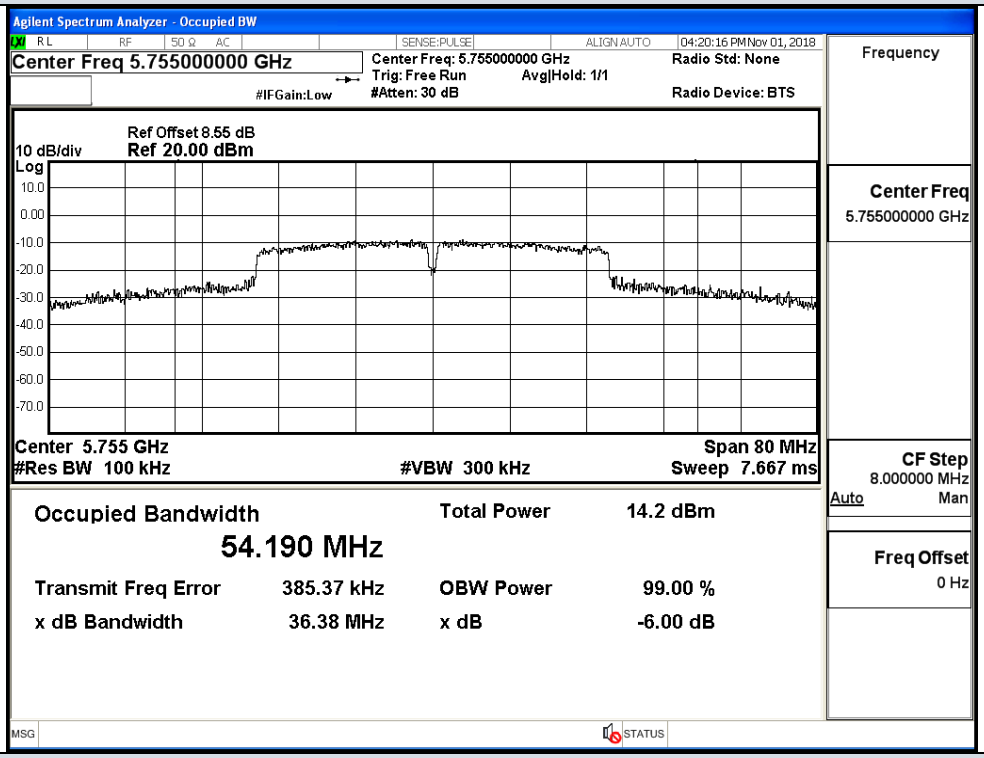


IEEE 802.11n HT20 / Channel 157 / 5785 MHz

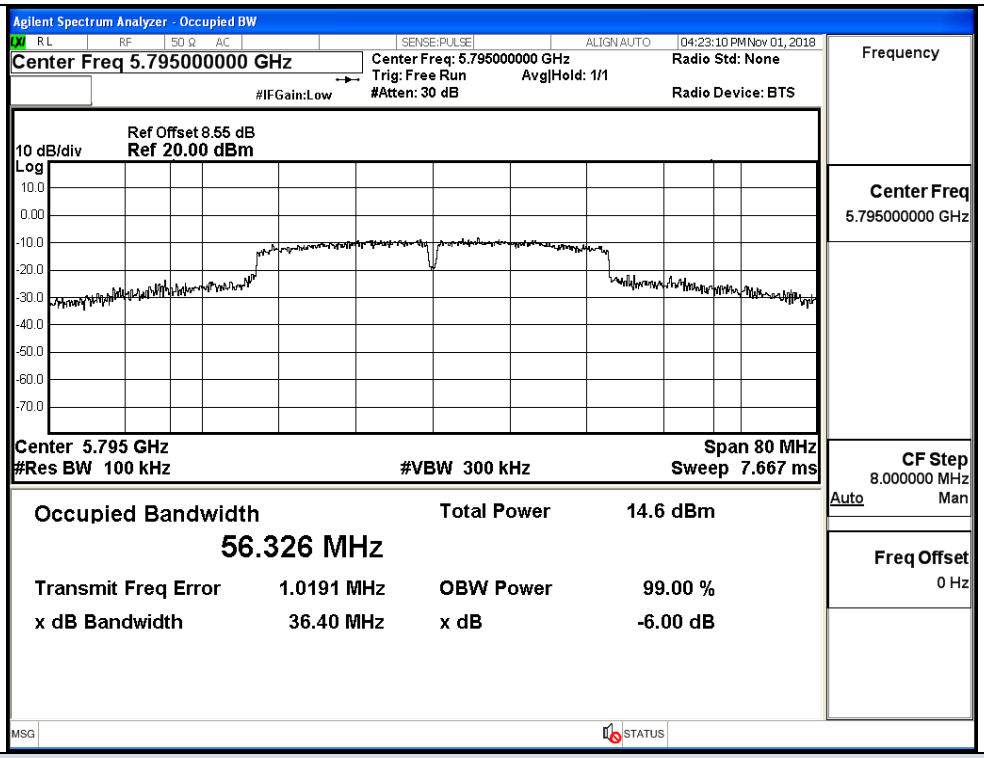


IEEE 802.11n HT20 / Channel 165 / 5825 MHz

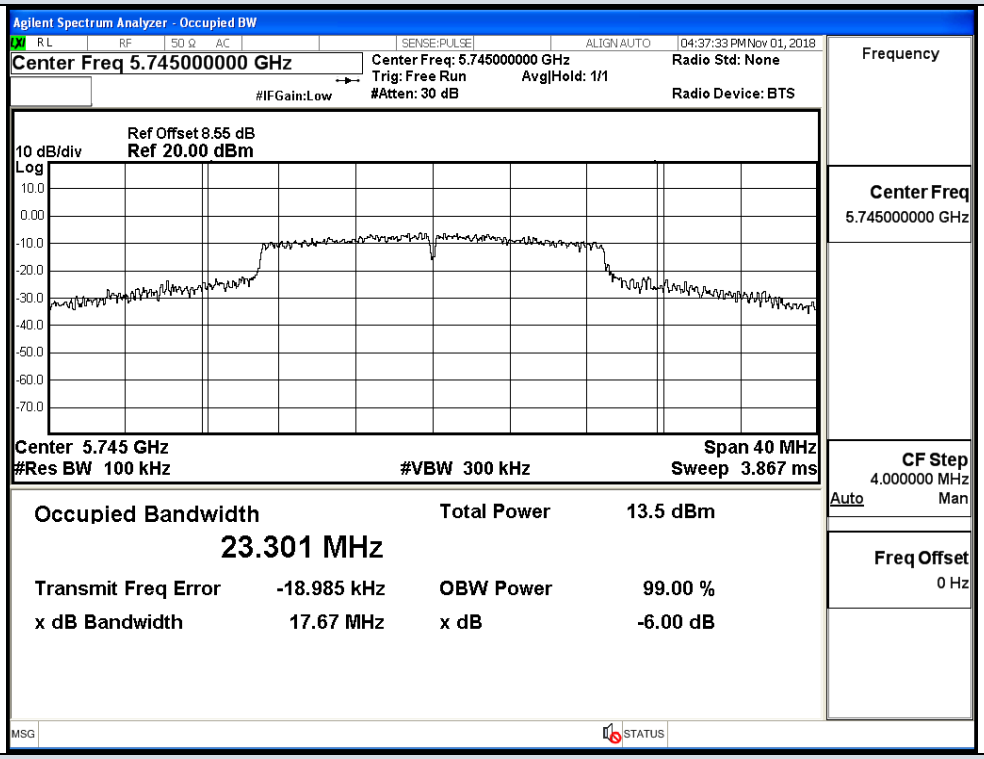
6dB Bandwidth



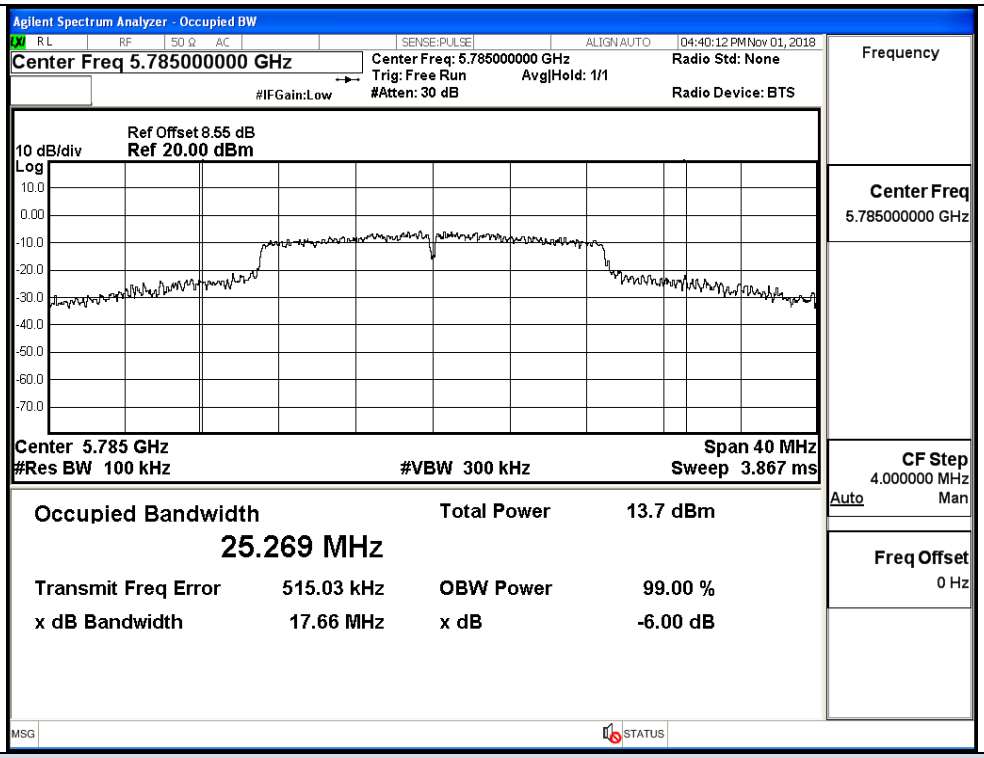
IEEE 802.11n HT40 / Channel 151 / 5755 MHz



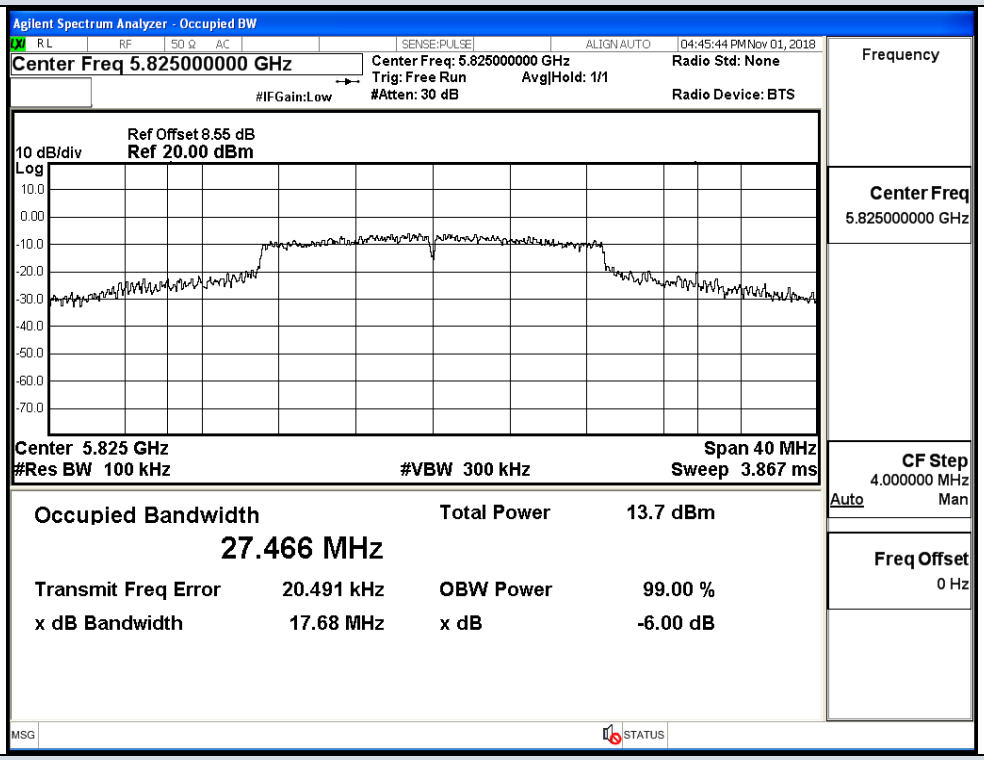
IEEE 802.11n HT40 / Channel 159 / 5795 MHz



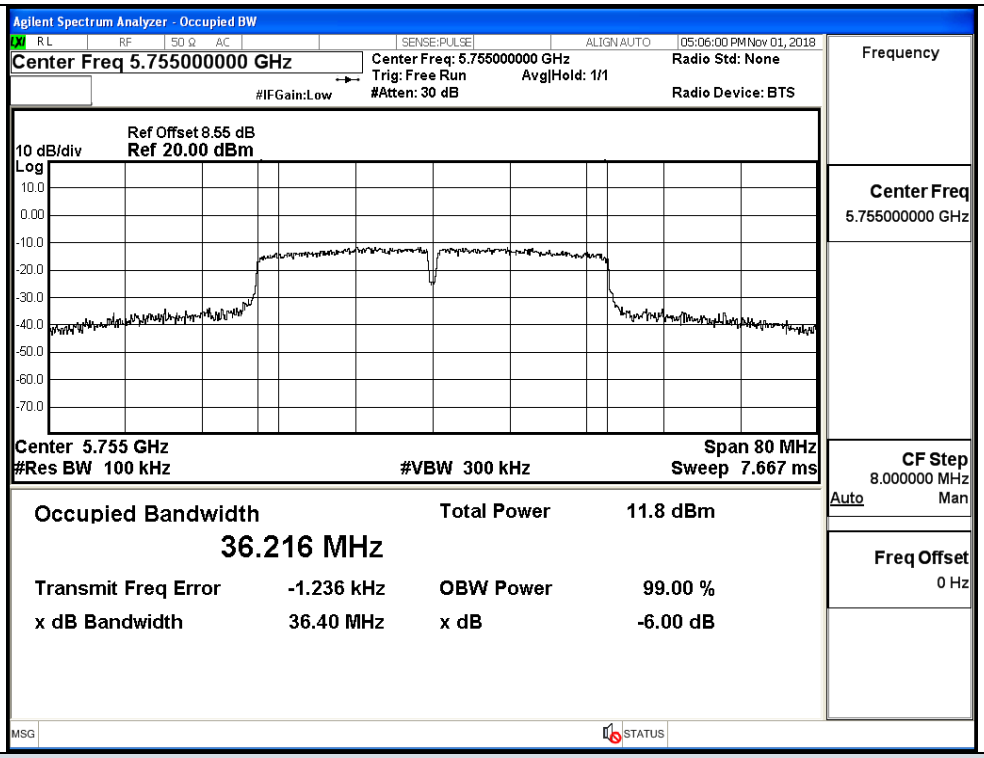
IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



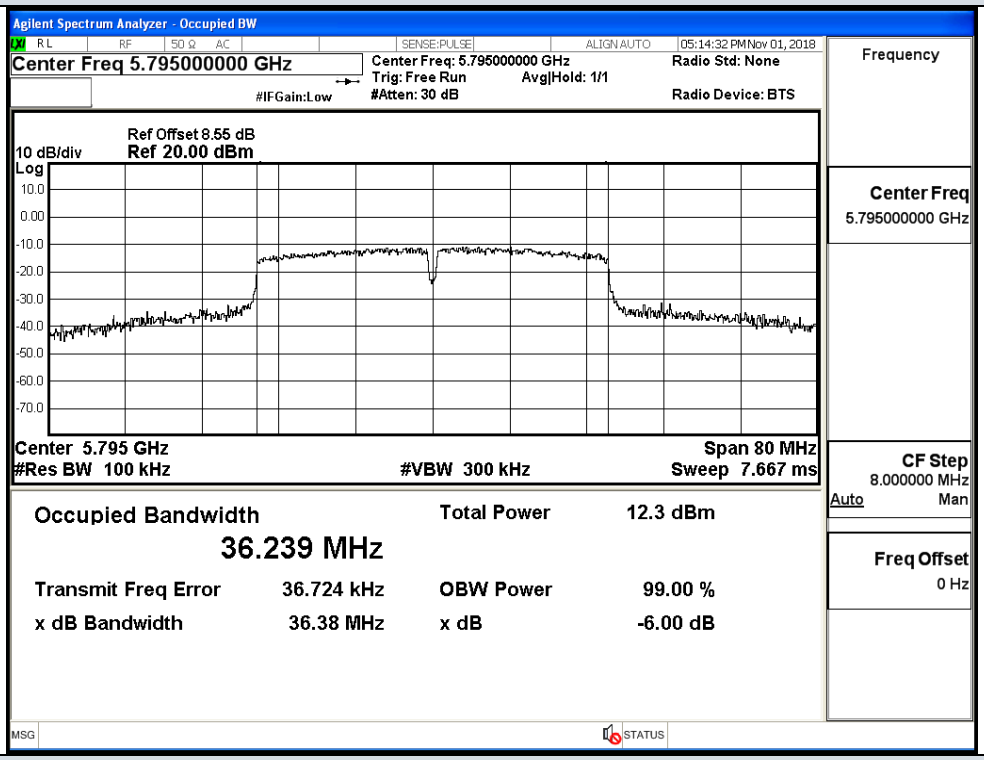
IEEE 802.11ac VHT20 / Channel 157/ 5785 MHz



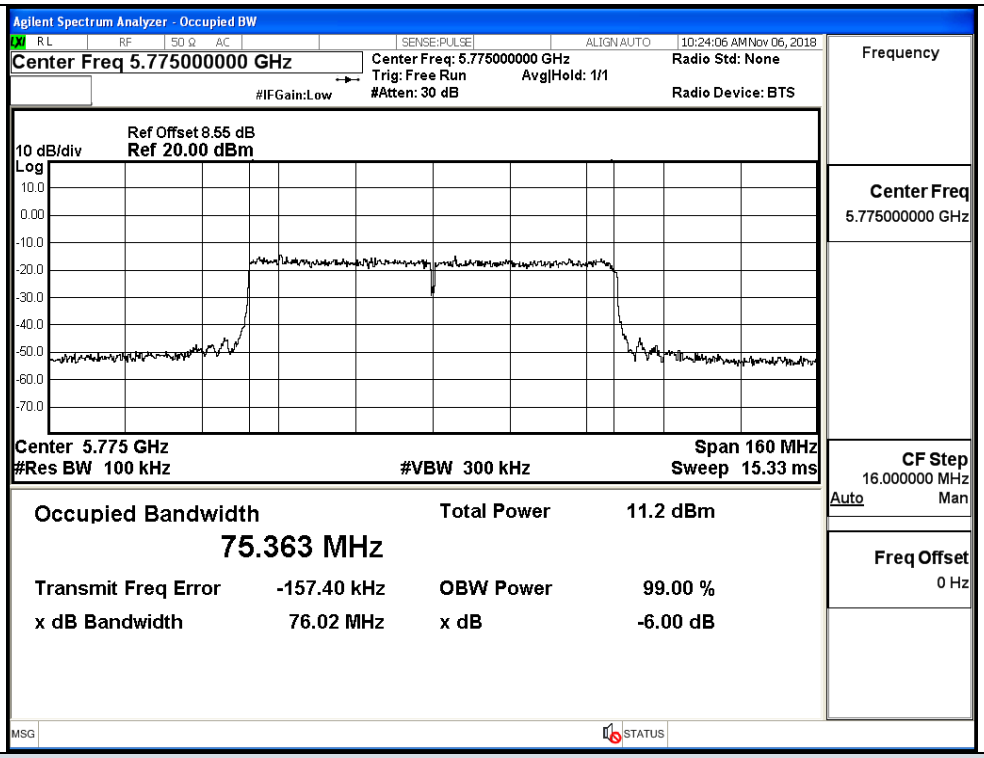
IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz



IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz

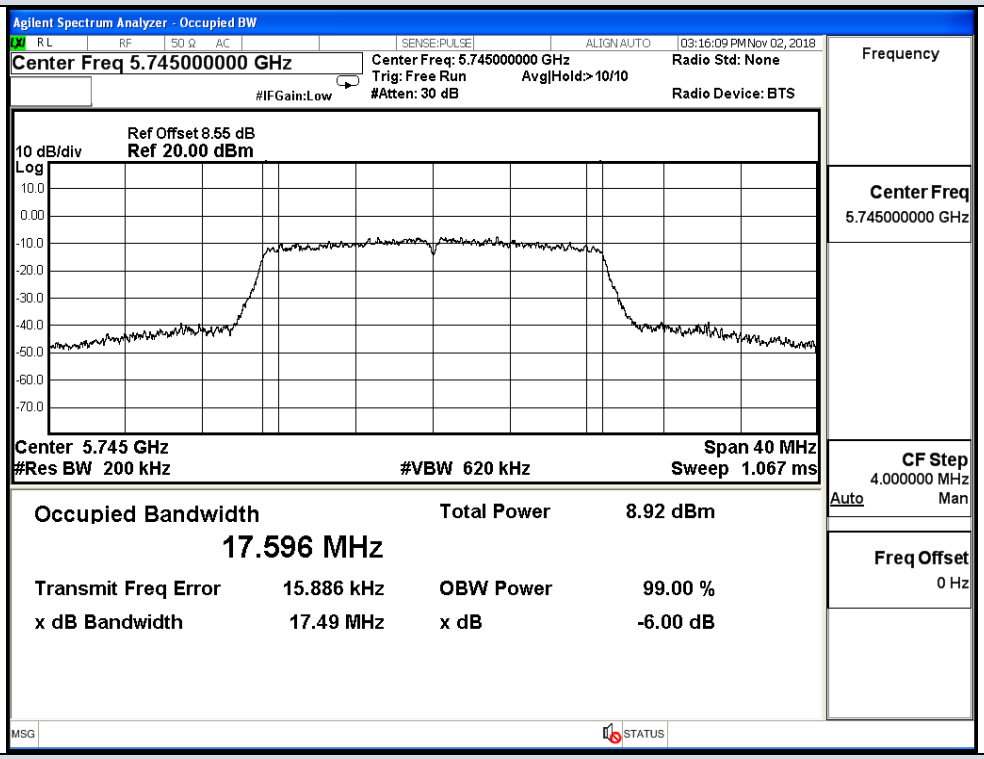


IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz

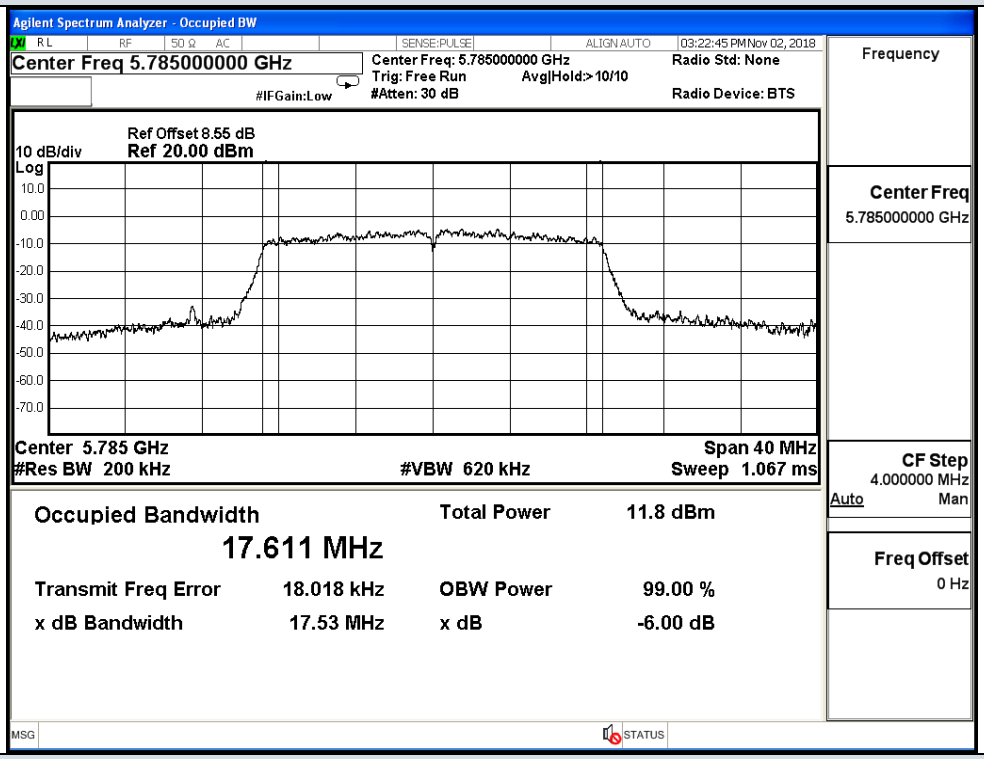


IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz

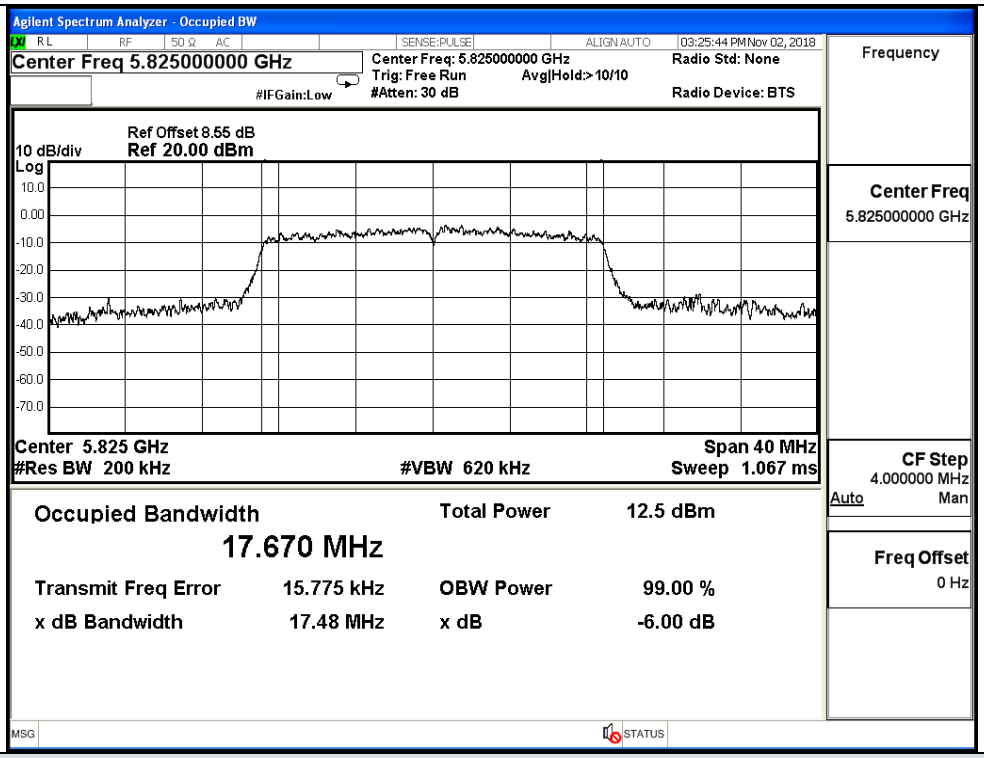
99% Occupied Bandwidth



IEEE 802.11a / Channel 149 / 5745 MHz

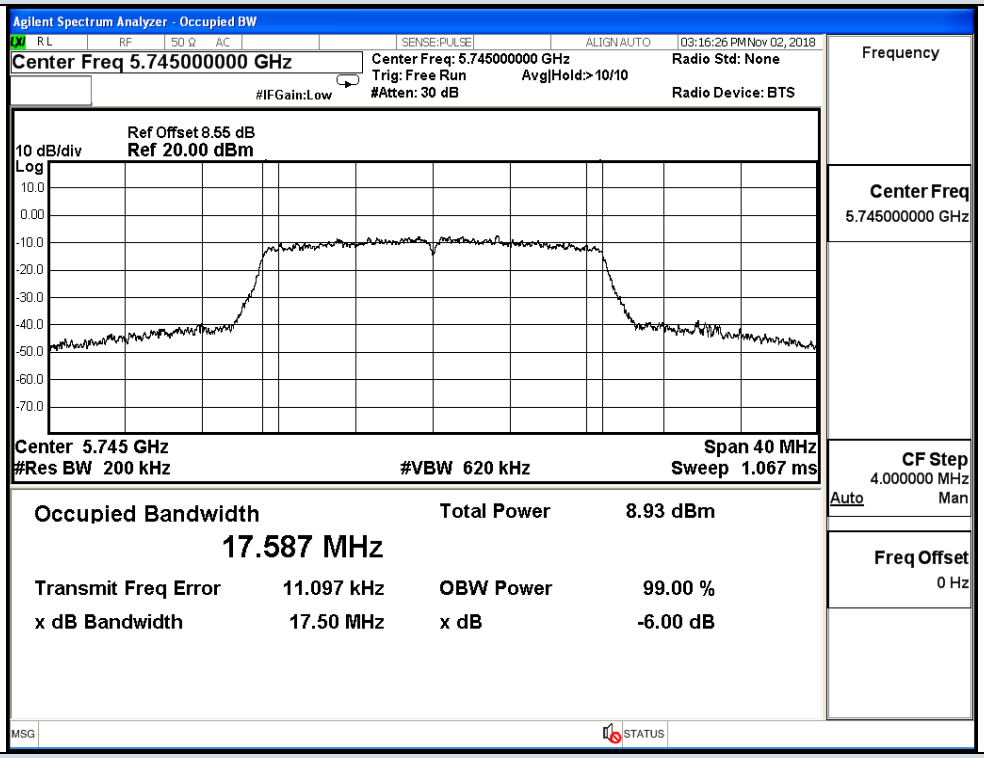


IEEE 802.11a / Channel 157 / 5785 MHz

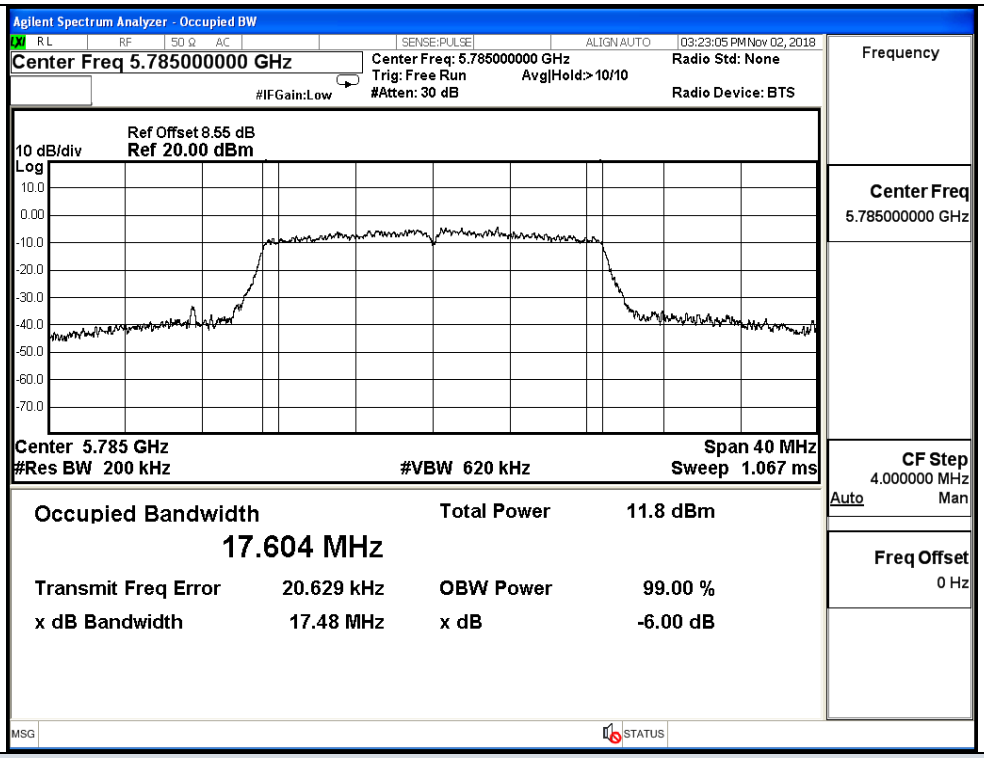


IEEE 802.11a / Channel 165 / 5825 MHz

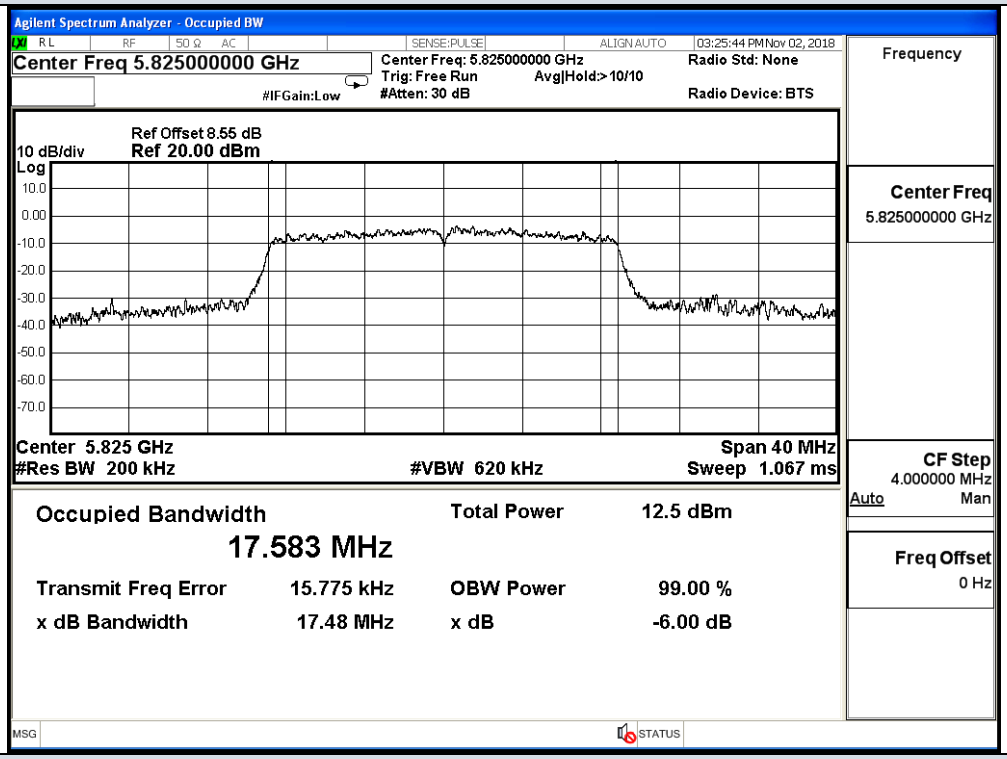
99% Occupied Bandwidth



IEEE 802.11n HT20 / Channel 149 / 5745 MHz

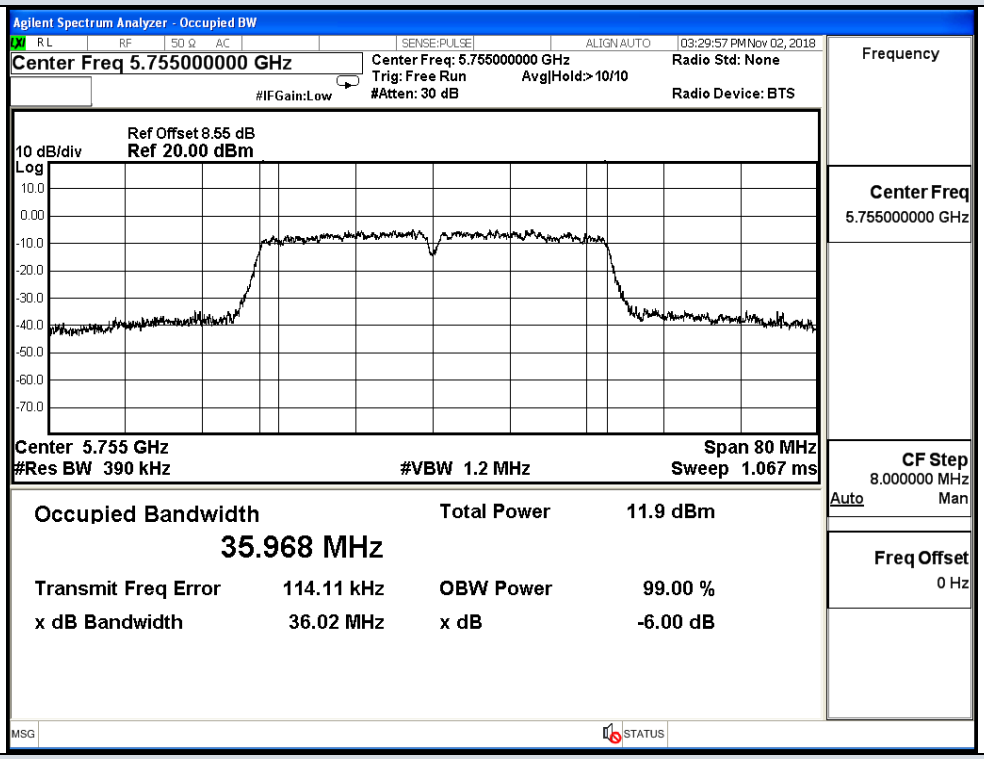


IEEE 802.11n HT20 / Channel 157 / 5785 MHz

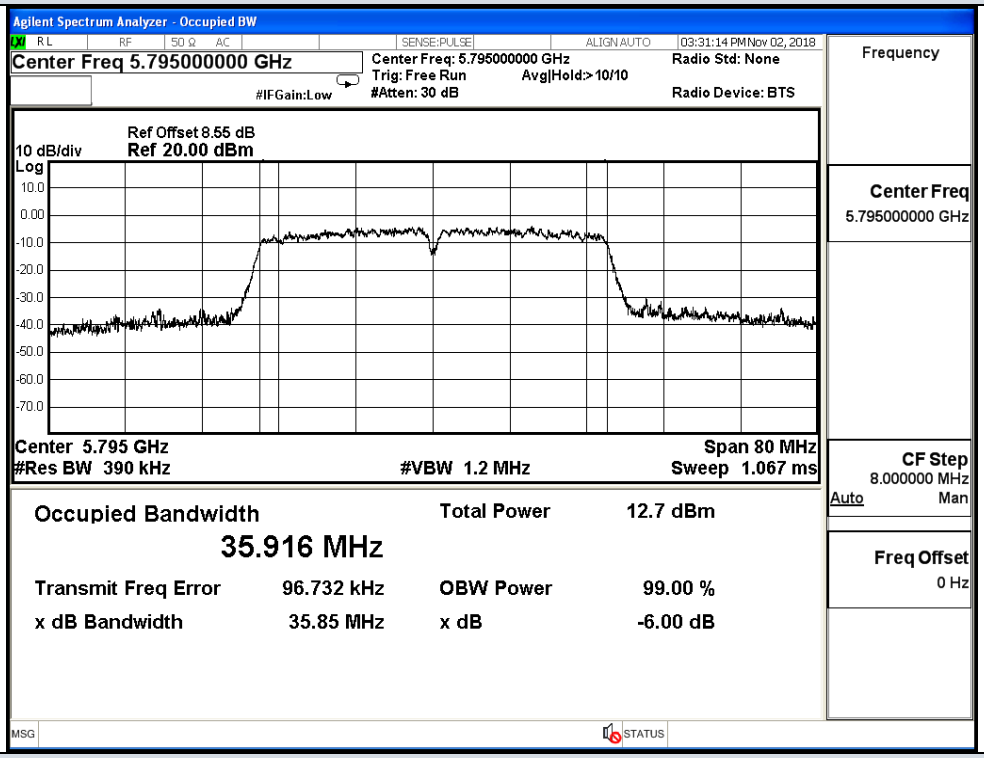


IEEE 802.11n HT20 / Channel 165 / 5825 MHz

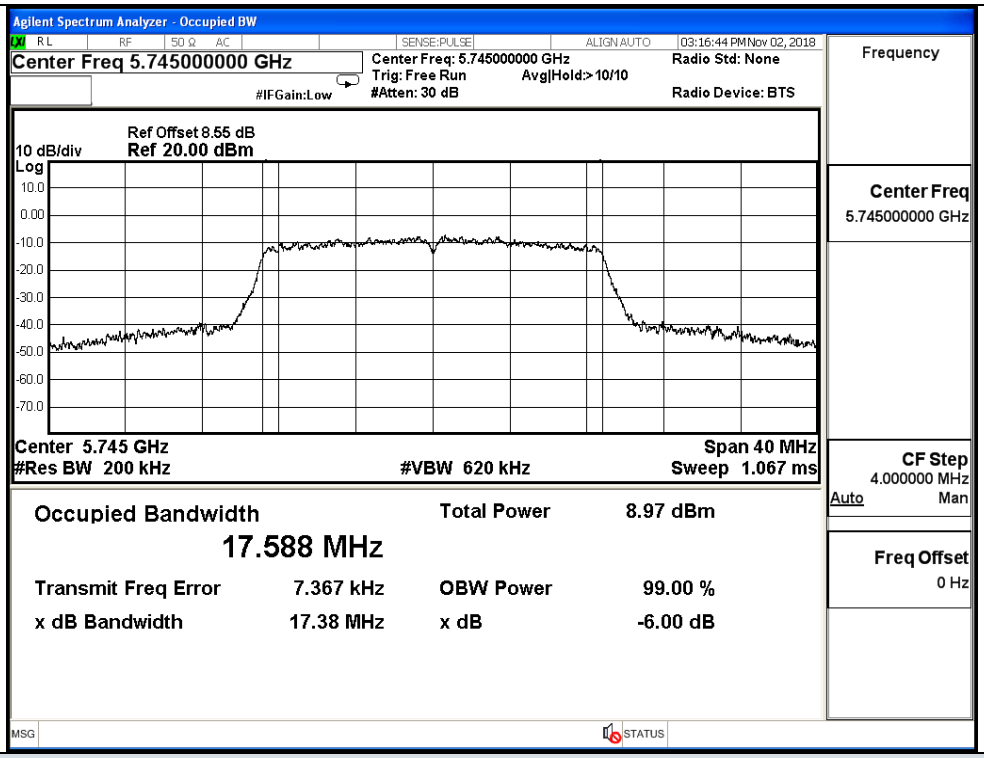
99% Occupied Bandwidth



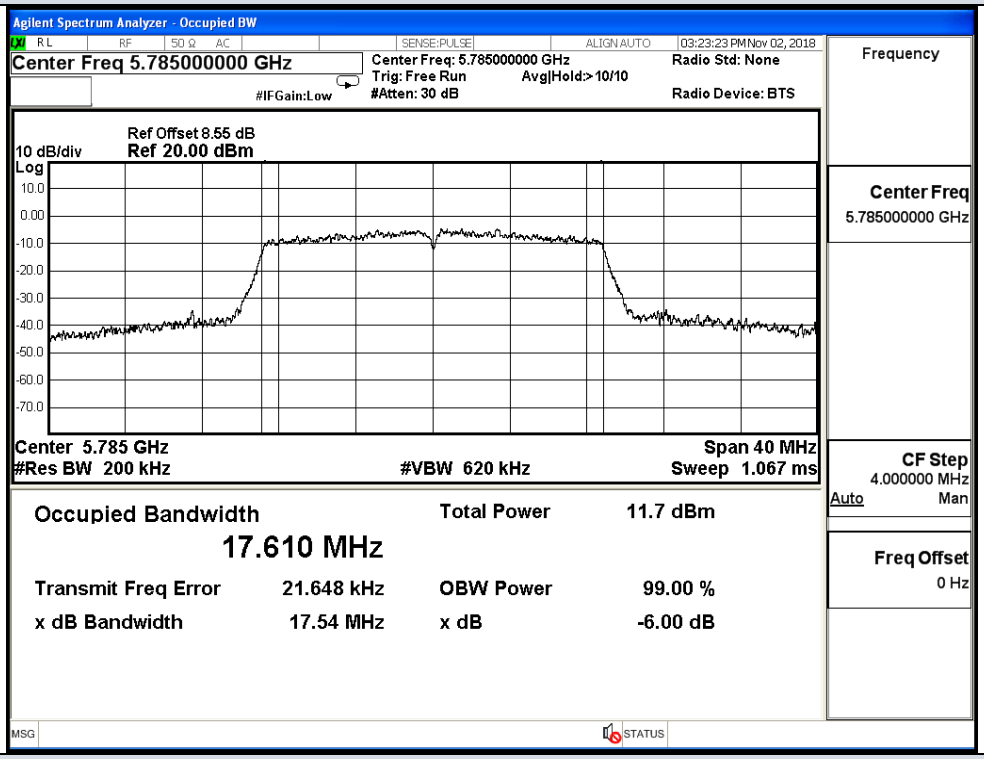
IEEE 802.11n HT40 / Channel 151 / 5755 MHz



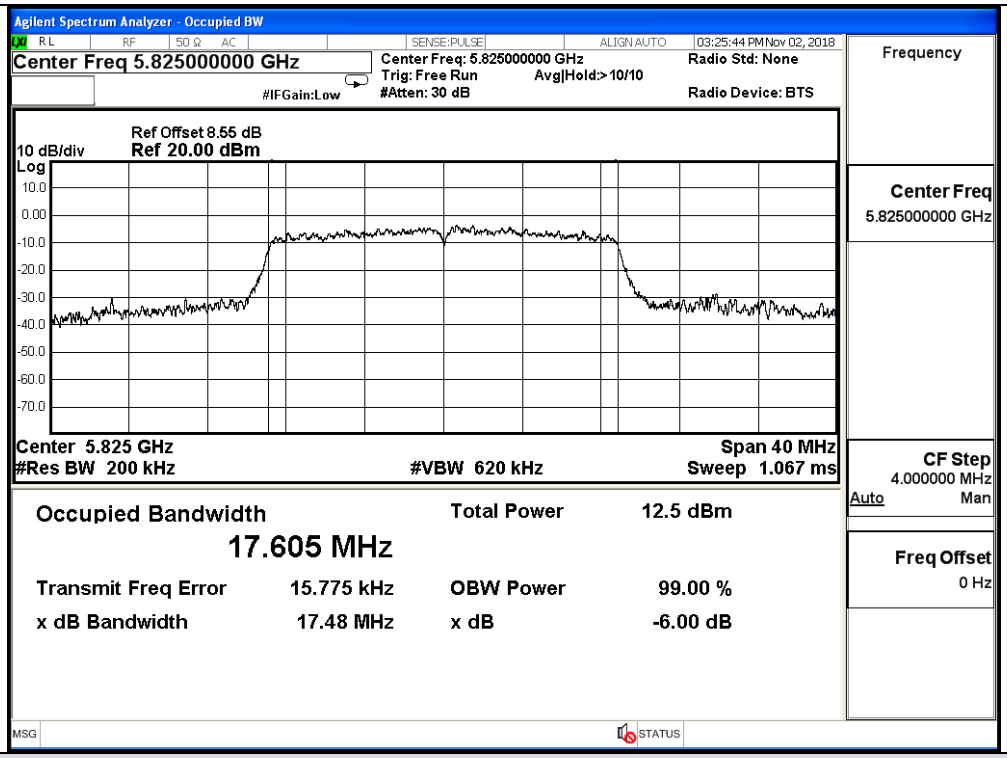
IEEE 802.11n HT40 / Channel 159 / 5795 MHz



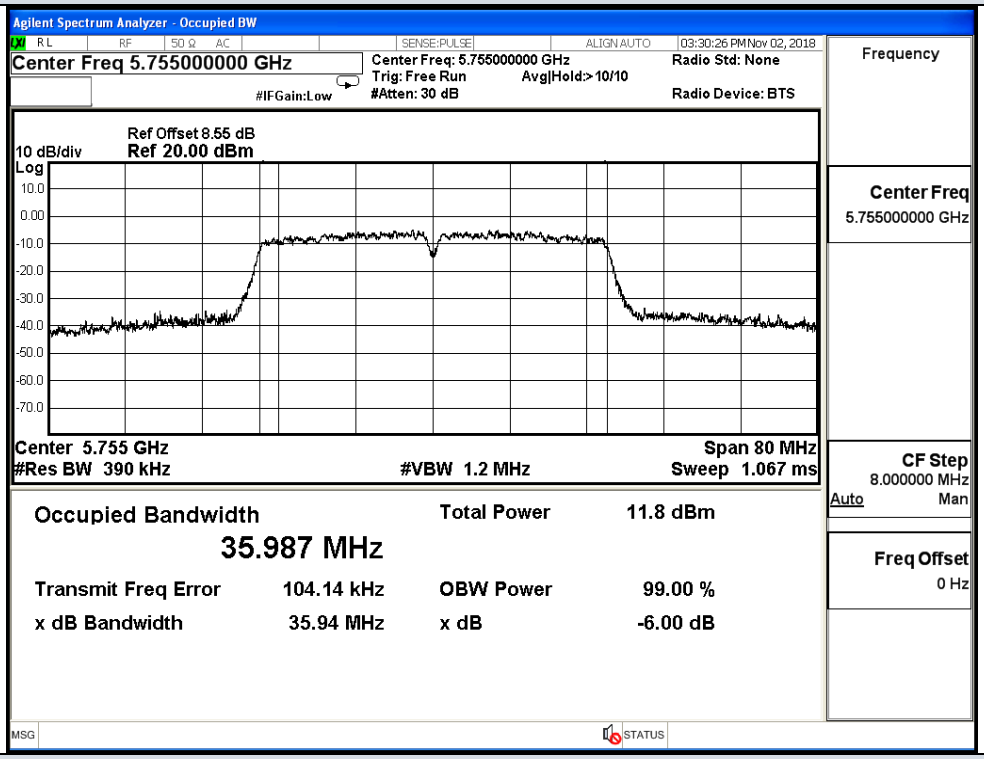
IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



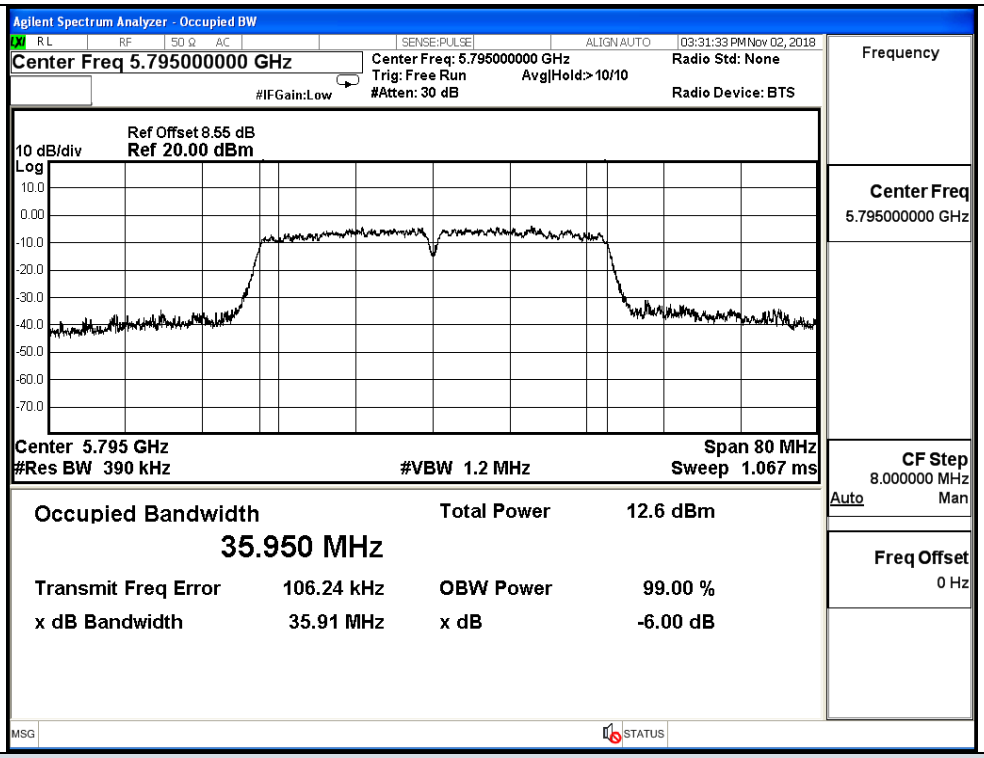
IEEE 802.11ac VHT20 / Channel 157/ 5785 MHz



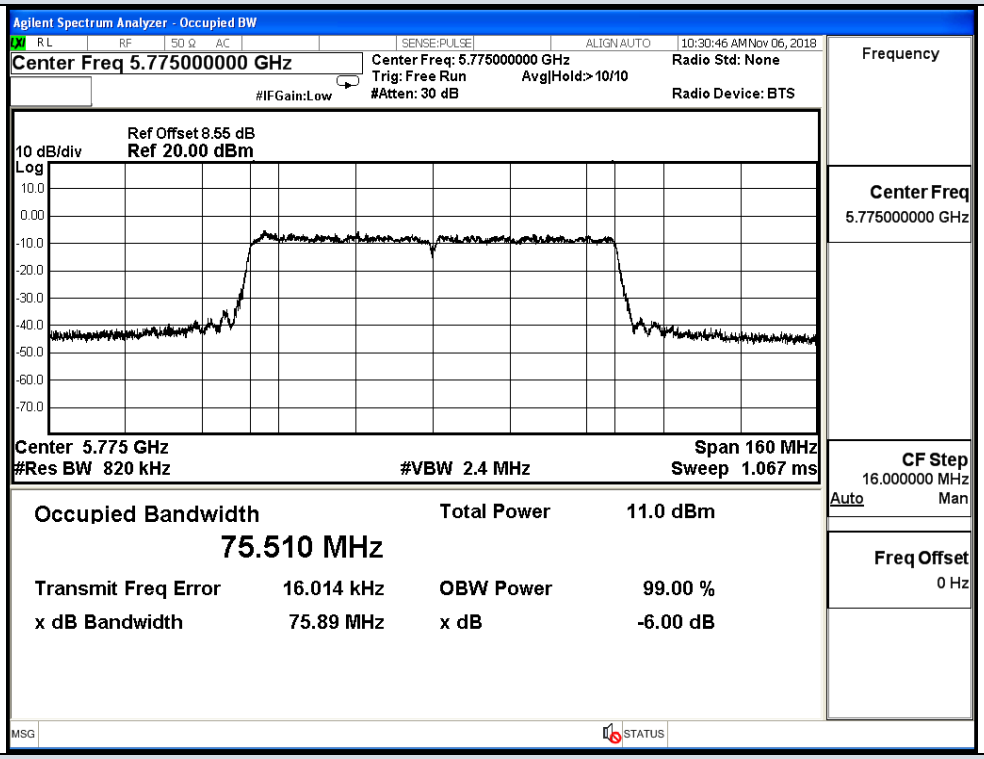
IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz



IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz



IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz



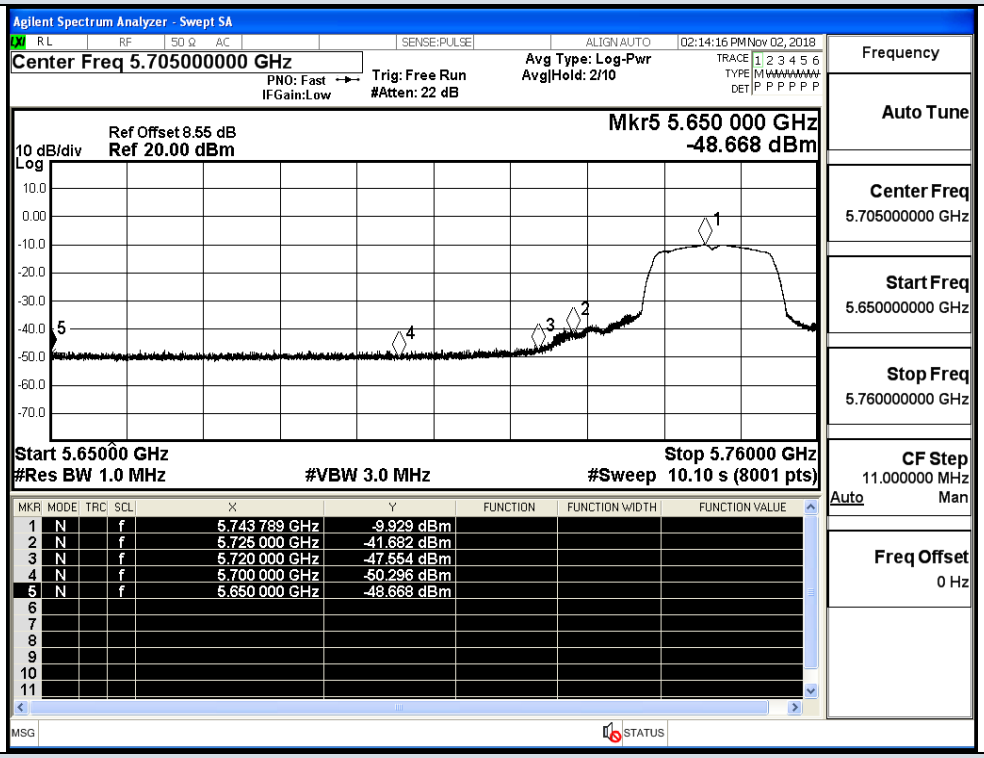
IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz

D.5 Undesirable Emissions Measurement

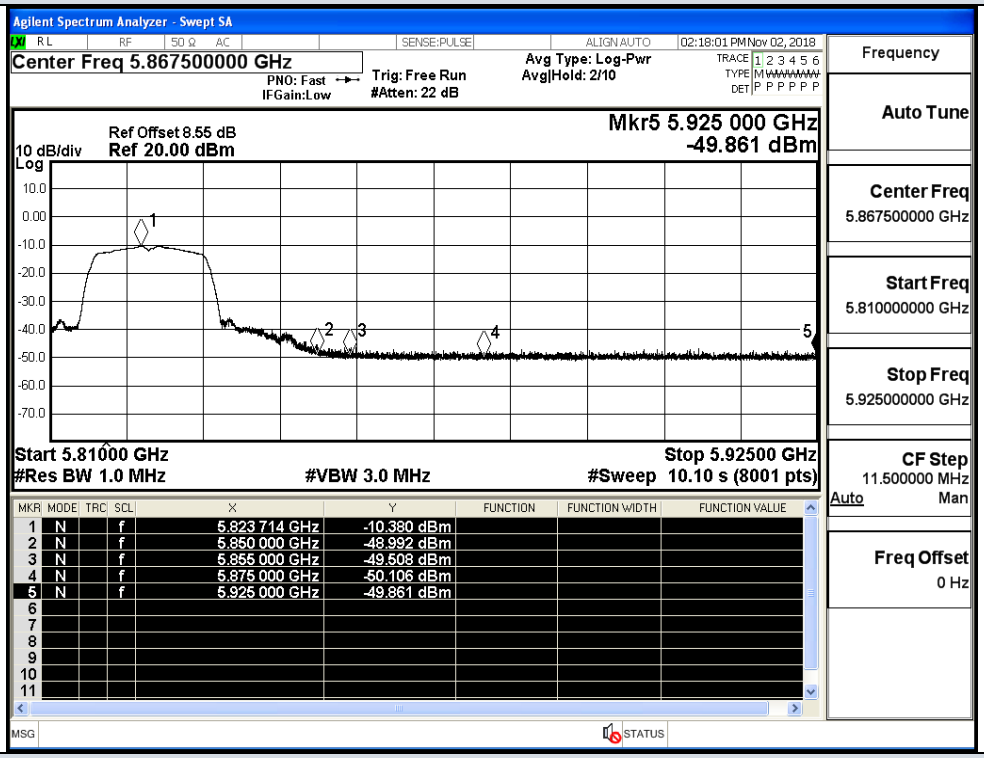
Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
11A	149	5650.0	-48.668	2.30	-46.368	Peak	27.0
		5700.0	-50.296	2.30	-47.996	Peak	15.6
		5720.0	-47.554	2.30	-45.254	Peak	10.0
		5725.0	-41.682	2.30	-39.382	Peak	-27.0
	165	5850.0	-48.992	2.30	-46.692	Peak	-27.0
		5855.0	-49.508	2.30	-47.208	Peak	10.0
		5875.0	-50.106	2.30	-47.806	Peak	15.6
		5925.0	-49.861	2.30	-47.561	Peak	27.0
11N20 SISO	149	5650.0	-50.129	2.30	-47.829	Peak	27.0
		5700.0	-50.140	2.30	-47.840	Peak	15.6
		5720.0	-48.945	2.30	-46.645	Peak	10.0
		5725.0	-41.802	2.30	-39.502	Peak	-27.0
	165	5850.0	-45.674	2.30	-43.374	Peak	-27.0
		5855.0	-49.122	2.30	-46.822	Peak	10.0
		5875.0	-49.591	2.30	-47.291	Peak	15.6
		5925.0	-50.797	2.30	-48.497	Peak	27.0
11N40 SISO	151	5650.0	-50.851	2.30	-48.551	Peak	27.0
		5700.0	-50.572	2.30	-48.272	Peak	15.6
		5720.0	-46.280	2.30	-43.980	Peak	10.0
		5725.0	-46.555	2.30	-44.255	Peak	-27.0
	159	5850.0	-48.774	2.30	-46.474	Peak	-27.0
		5855.0	-50.371	2.30	-48.071	Peak	10.0
		5875.0	-49.900	2.30	-47.600	Peak	15.6
		5925.0	-48.921	2.30	-46.621	Peak	27.0
11AC20 SISO	149	5650.0	-49.640	2.30	-47.340	Peak	27.0
		5700.0	-50.052	2.30	-47.752	Peak	15.6
		5720.0	-46.833	2.30	-44.533	Peak	10.0
		5725.0	-42.553	2.30	-40.253	Peak	-27.0
	165	5850.0	-48.236	2.30	-45.936	Peak	-27.0
		5855.0	-48.192	2.30	-45.892	Peak	10.0
		5875.0	-48.929	2.30	-46.629	Peak	15.6
		5925.0	-49.796	2.30	-47.496	Peak	27.0
11N40 SISO	151	5650.0	-49.933	2.30	-47.633	Peak	27.0
		5700.0	-50.217	2.30	-47.917	Peak	15.6
		5720.0	-47.914	2.30	-45.614	Peak	10.0
		5725.0	-46.348	2.30	-44.048	Peak	-27.0
	159	5850.0	-49.818	2.30	-47.518	Peak	-27.0
		5855.0	-49.462	2.30	-47.162	Peak	10.0
		5875.0	-49.457	2.30	-47.157	Peak	15.6
		5925.0	-49.813	2.30	-47.513	Peak	27.0
11N80 SISO	155	5650.0	-51.036	2.30	-48.736	Peak	27.0
		5700.0	-47.733	2.30	-45.433	Peak	15.6
		5720.0	-41.329	2.30	-39.029	Peak	10.0
		5725.0	-39.373	2.30	-37.073	Peak	-27.0
		5850.0	-48.072	2.30	-45.772	Peak	-27.0
		5855.0	-48.399	2.30	-46.099	Peak	10.0

		5875.0	-49.295	2.30	-46.995	Peak	15.6
		5925.0	-49.960	2.30	-47.660	Peak	27.0

Undesirable Emissions Measurement

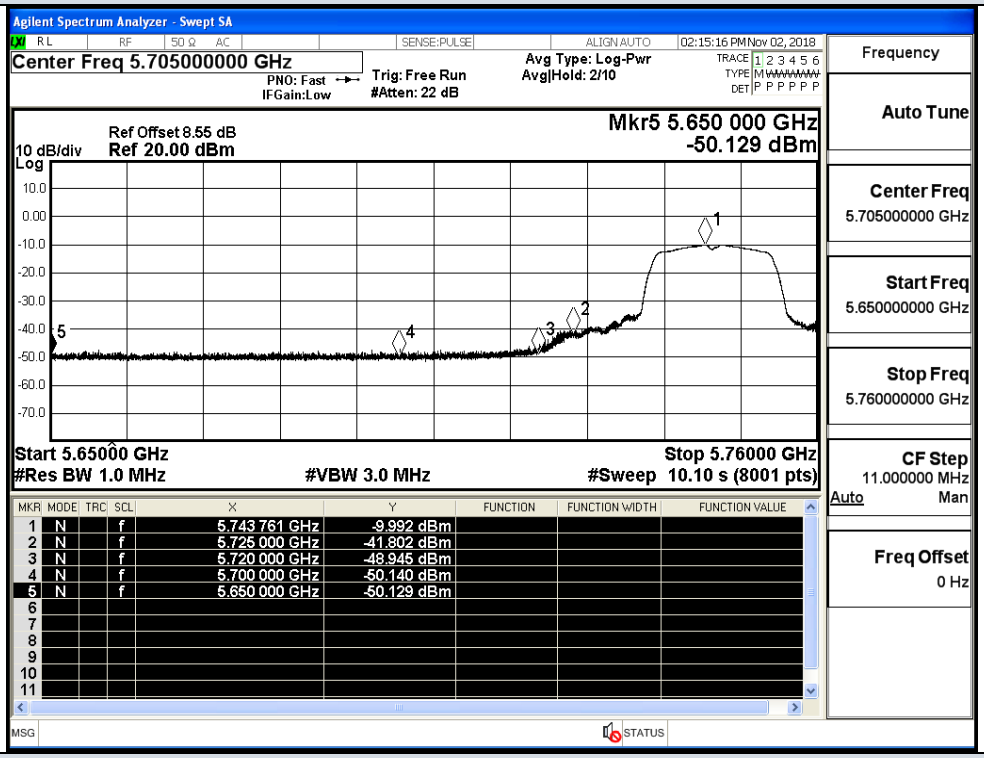


IEEE 802.11a / Channel 149 / 5745 MHz / Peak

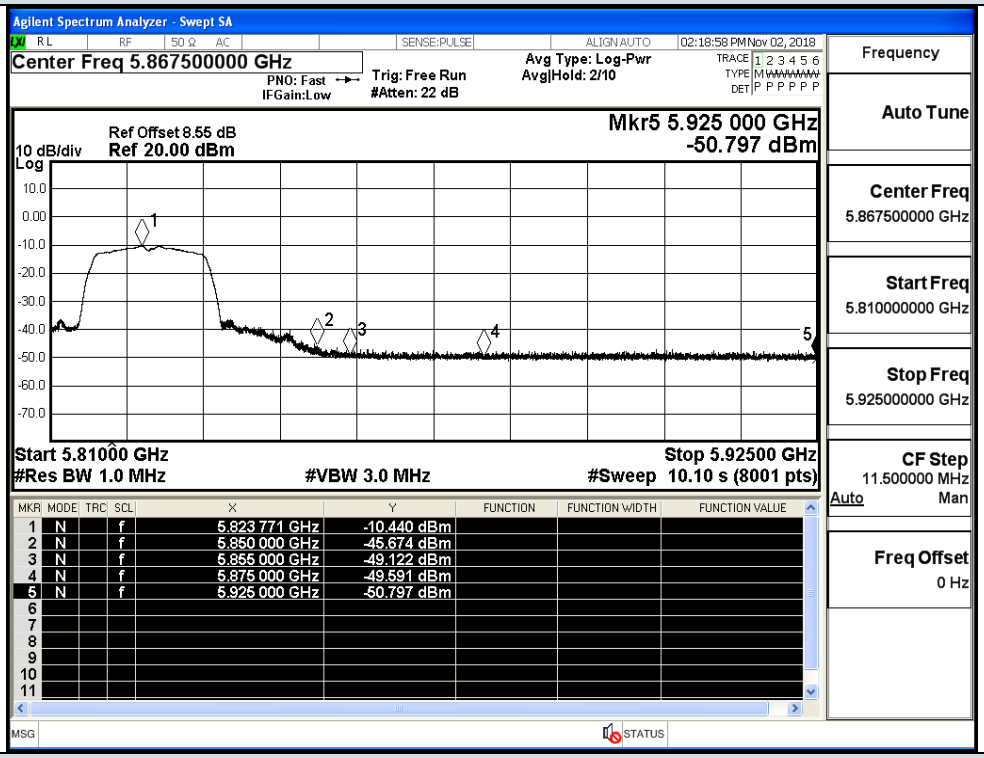


IEEE 802.11a / Channel 165 / 5825 MHz / Peak

Undesirable Emissions Measurement

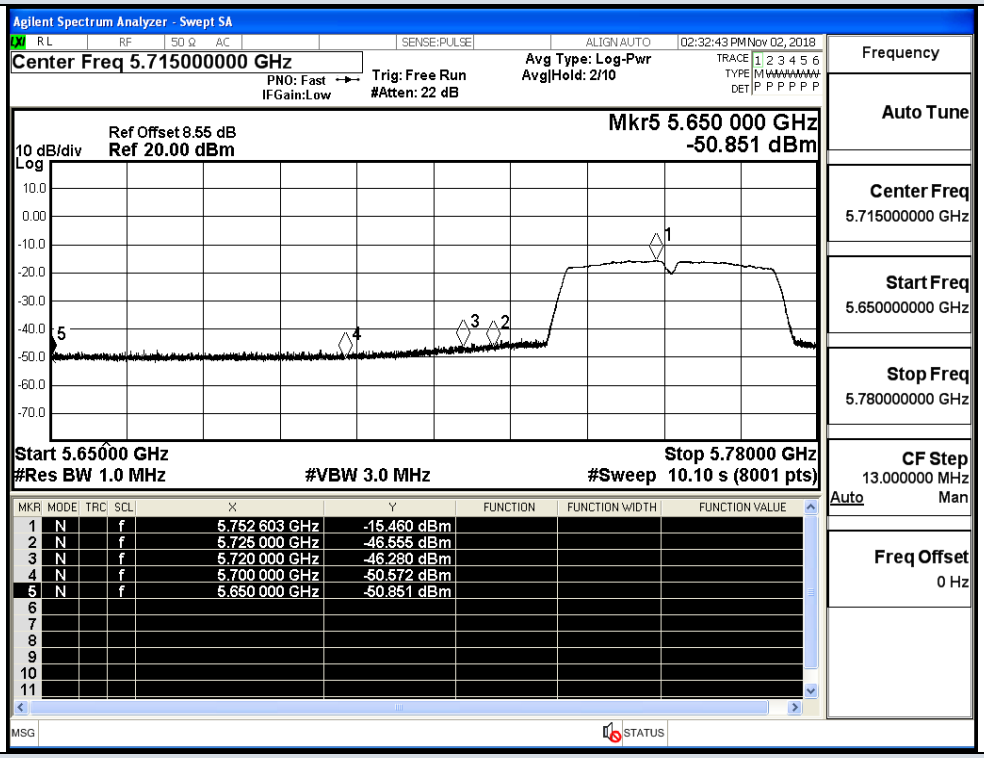


IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak

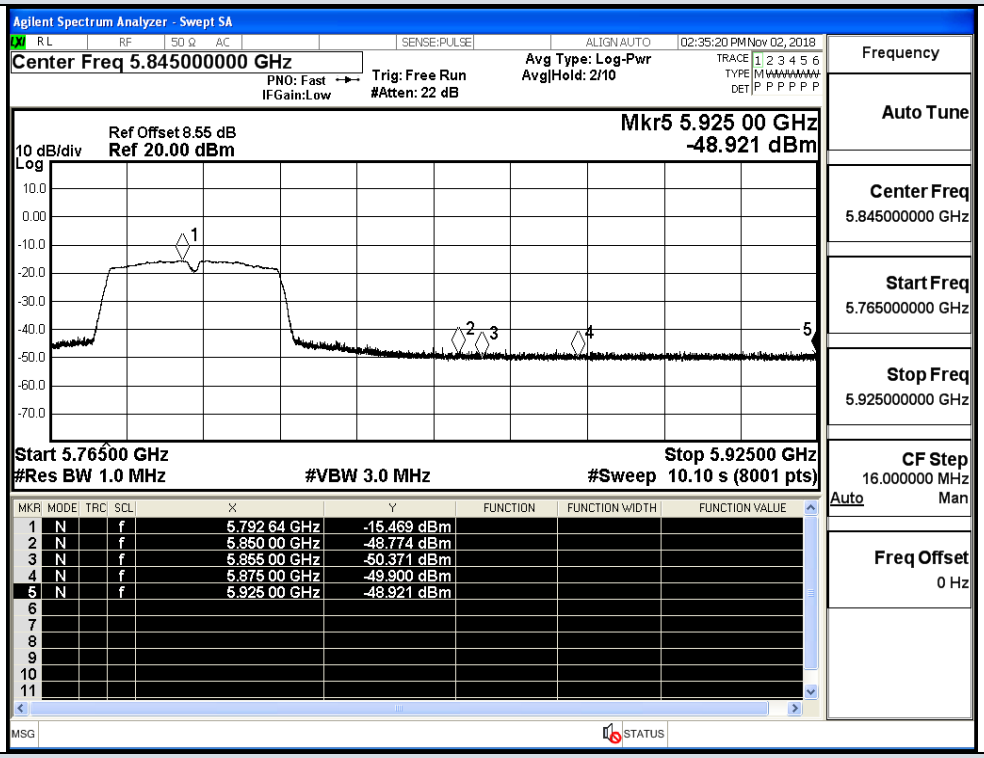


IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak

Undesirable Emissions Measurement

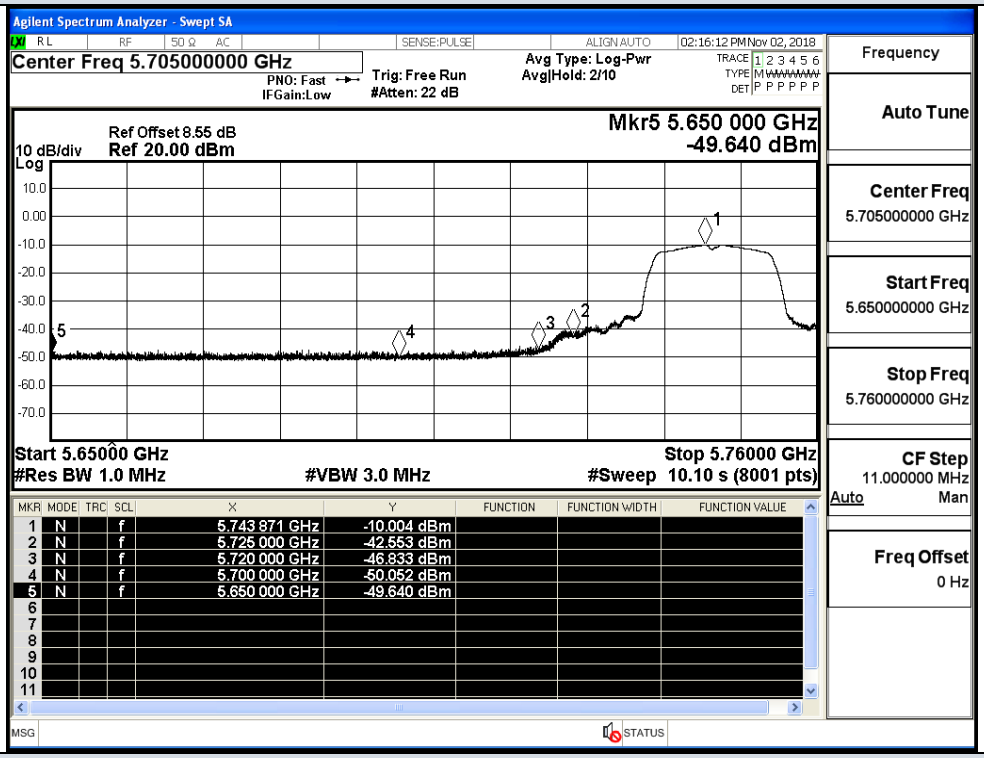


IEEE 802.11n HT40 / Channel 151 / 5755 MHz / Peak

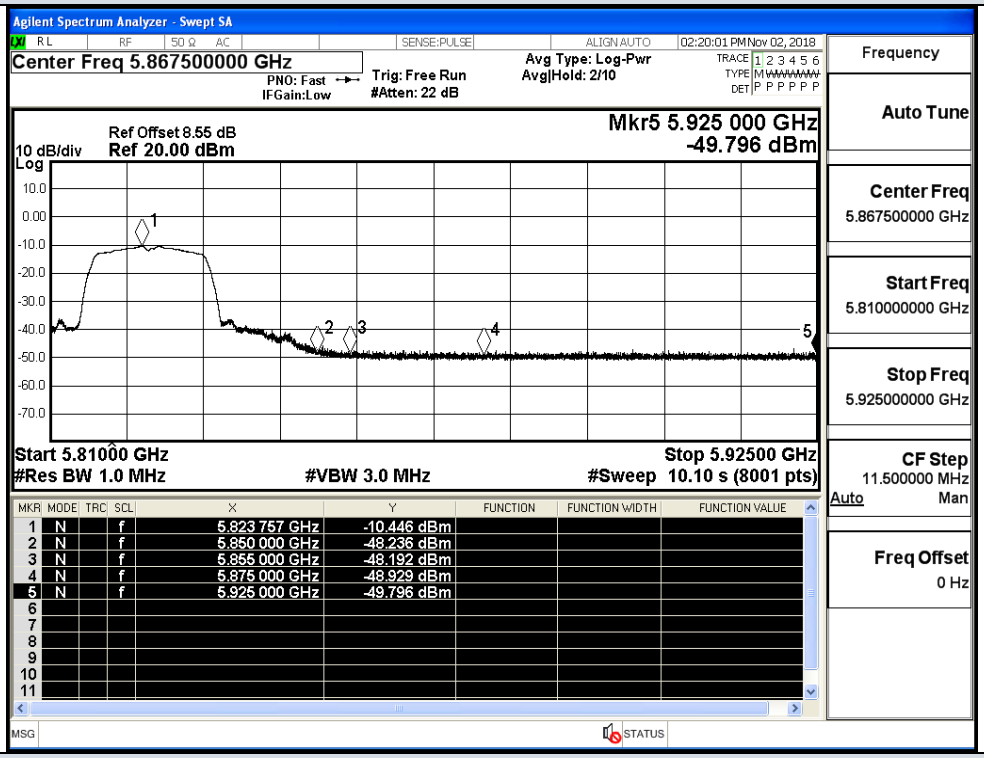


IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak

Undesirable Emissions Measurement

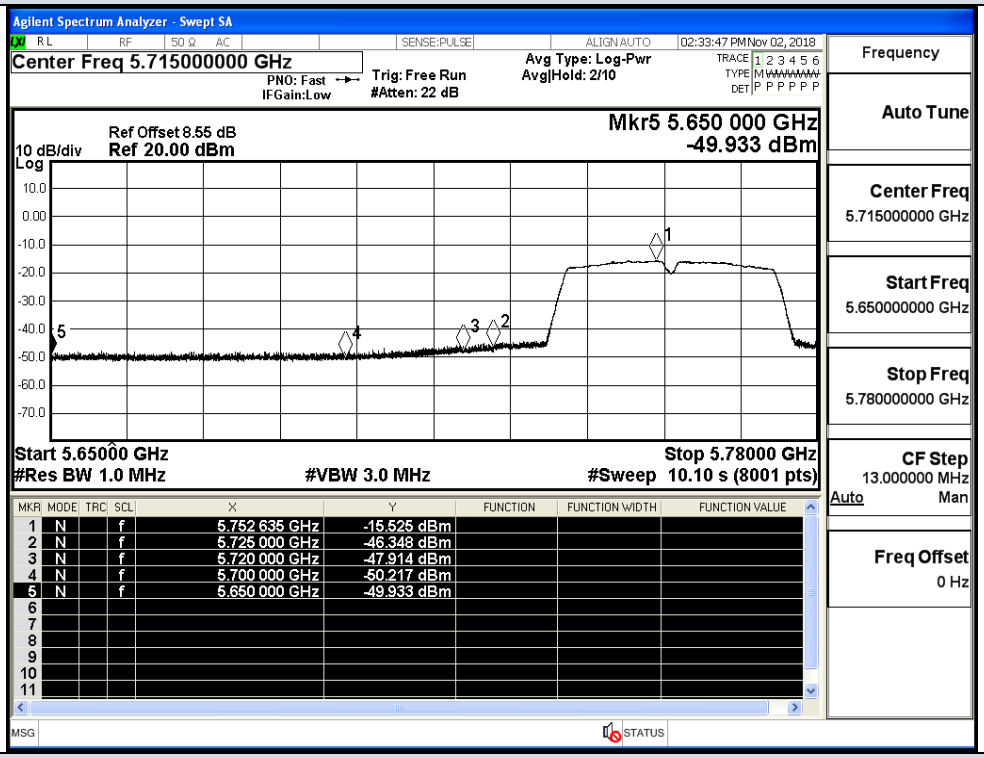


IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz / Peak

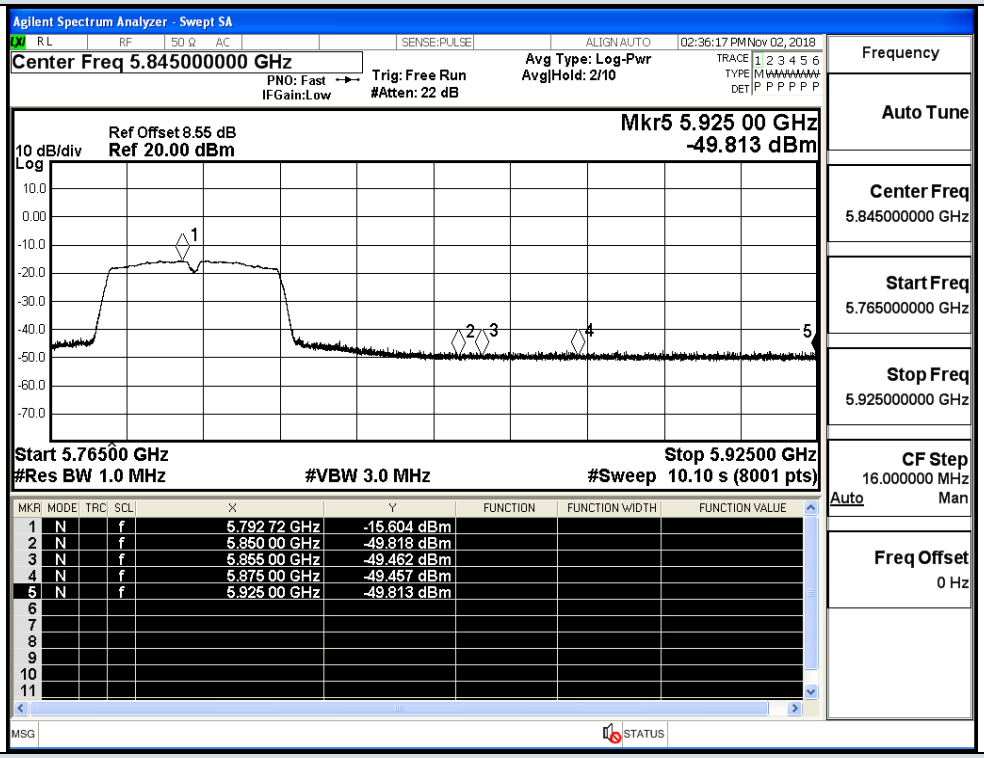


IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz / Peak

Undesirable Emissions Measurement

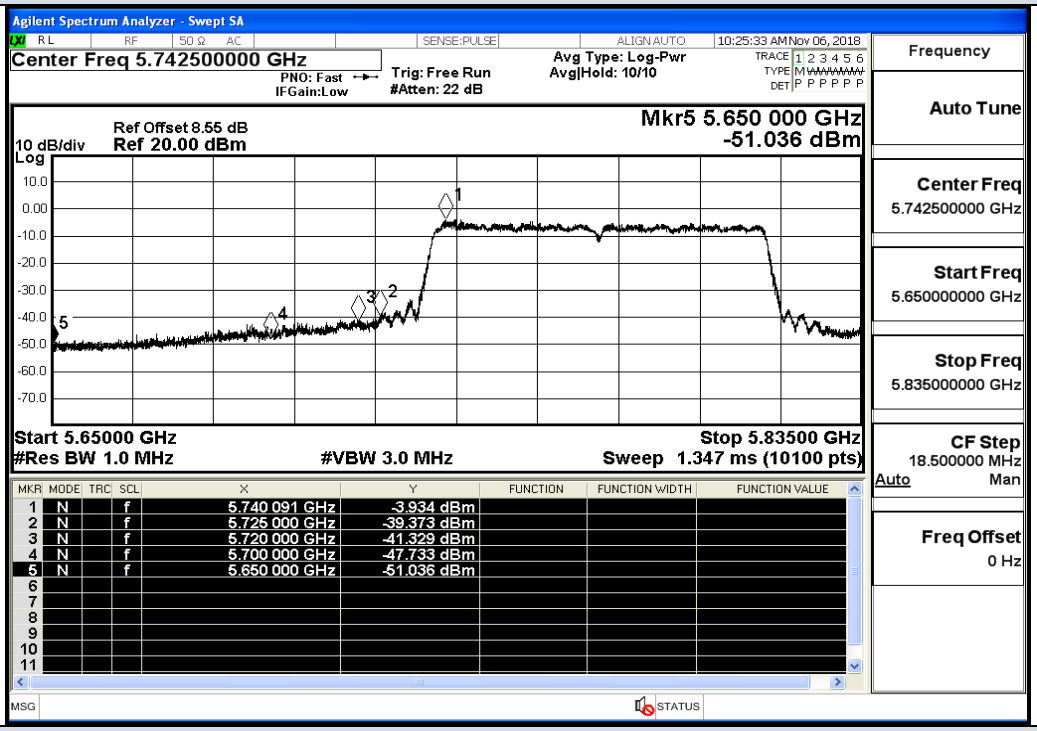


IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz / Peak

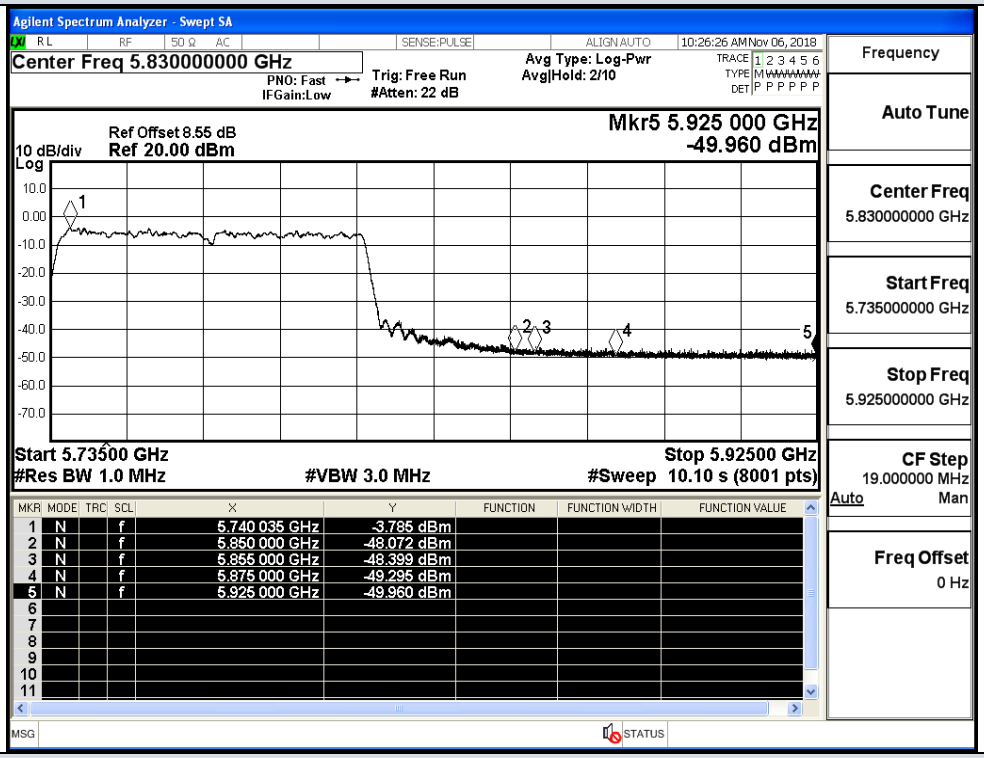


IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz / Peak

Undesirable Emissions Measurement



IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz / Peak



IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz / Peak