

## Appendix B

### RF Test Data for 5.8G WLAN (Conducted Measurement)

Product Name: Wireless Extender

Trade Mark: N/A

Test Model: LKV388mini

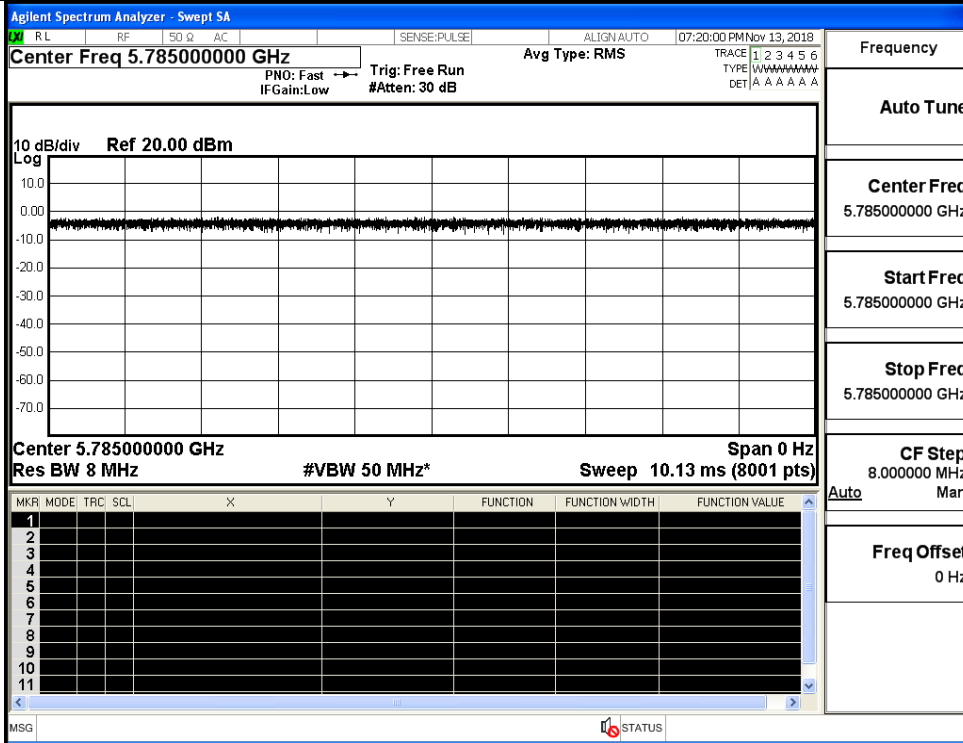
#### Environmental Conditions

Temperature:	23.6 ° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Jayden Zhuo

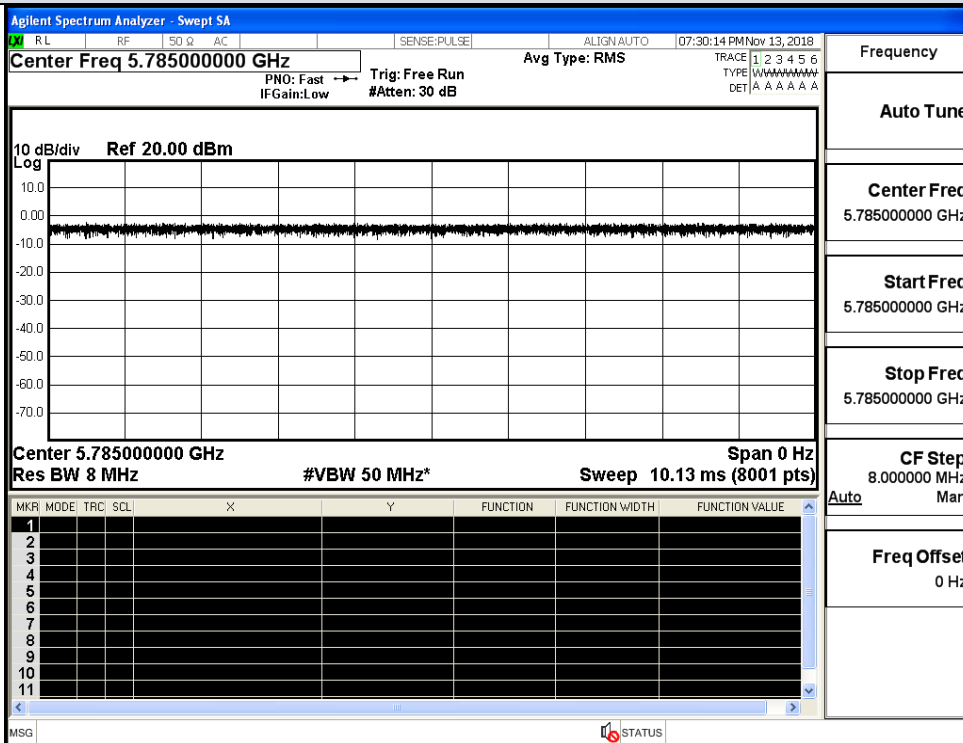
#### B.1 Duty Cycle

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

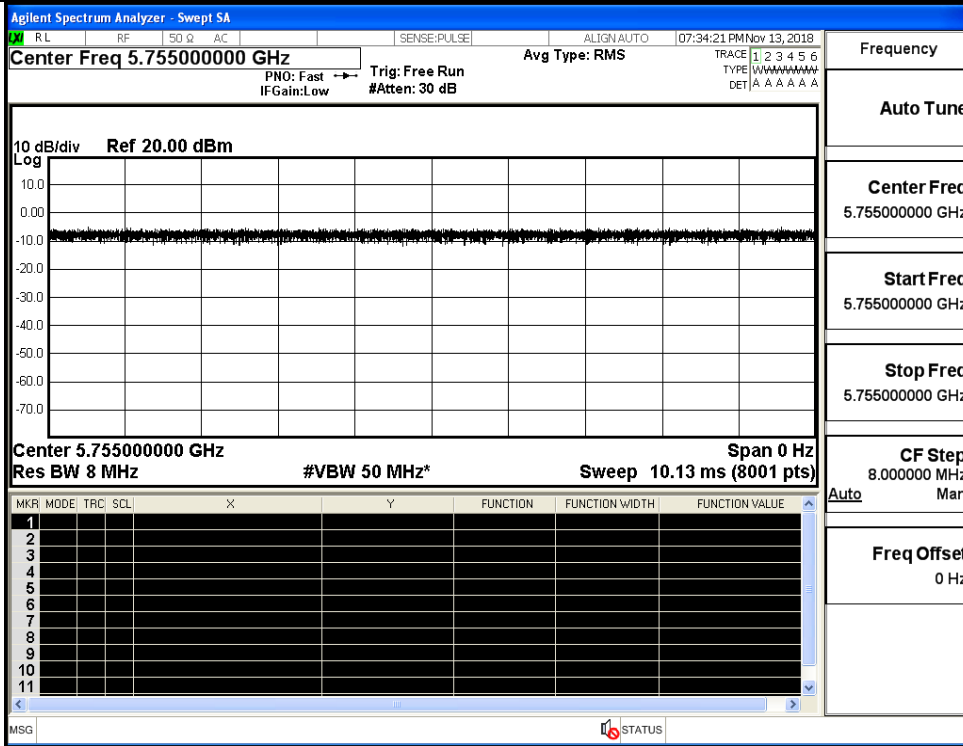
On Time and Duty Cycle



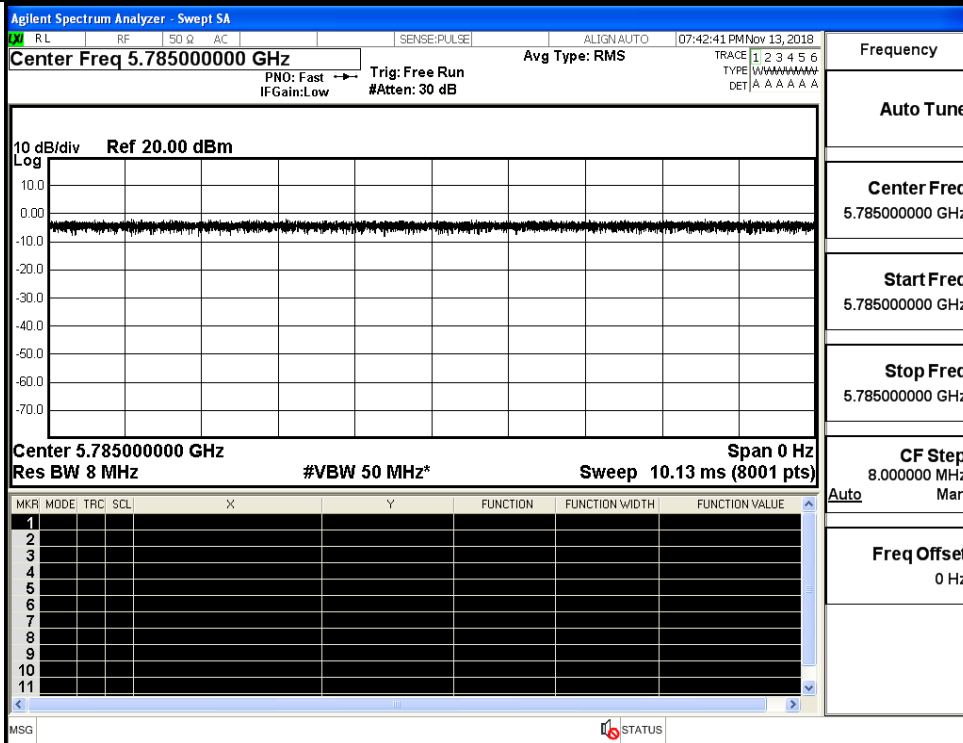
IEEE 802.11a



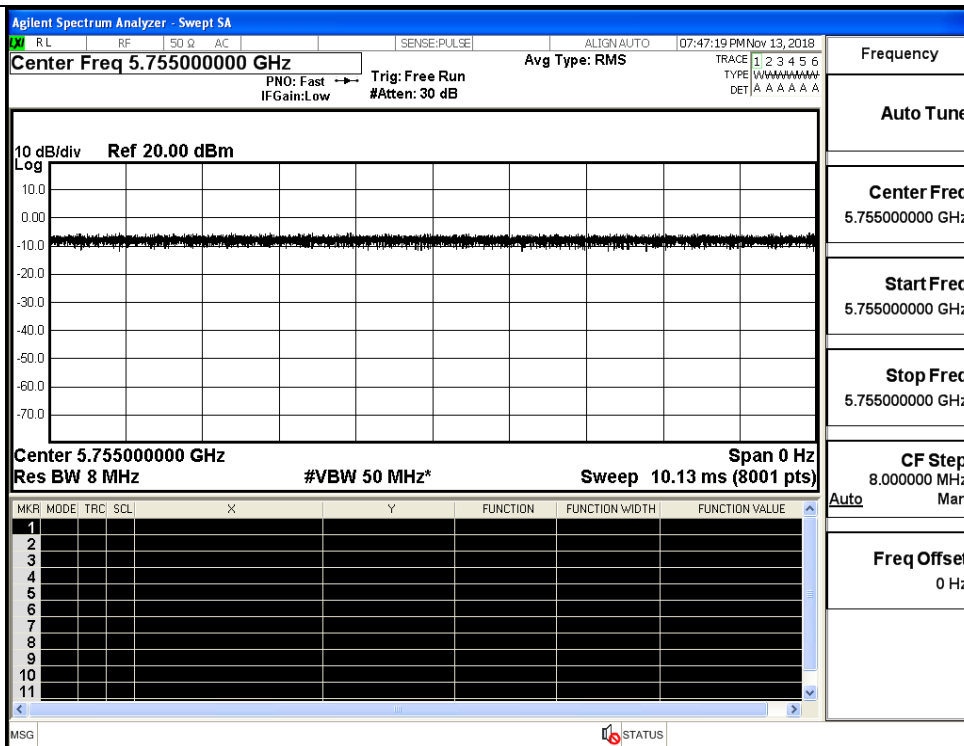
IEEE 802.11n HT20



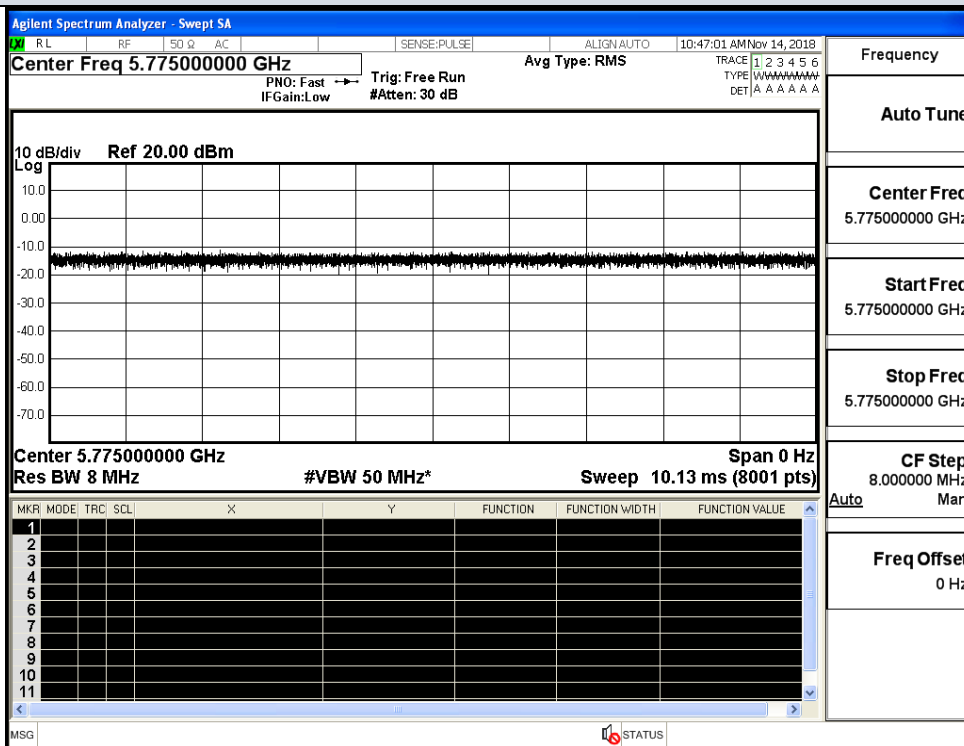
IEEE 802.11n HT40



IEEE 802.11ac VHT20



IEEE 802.11ac VHT40



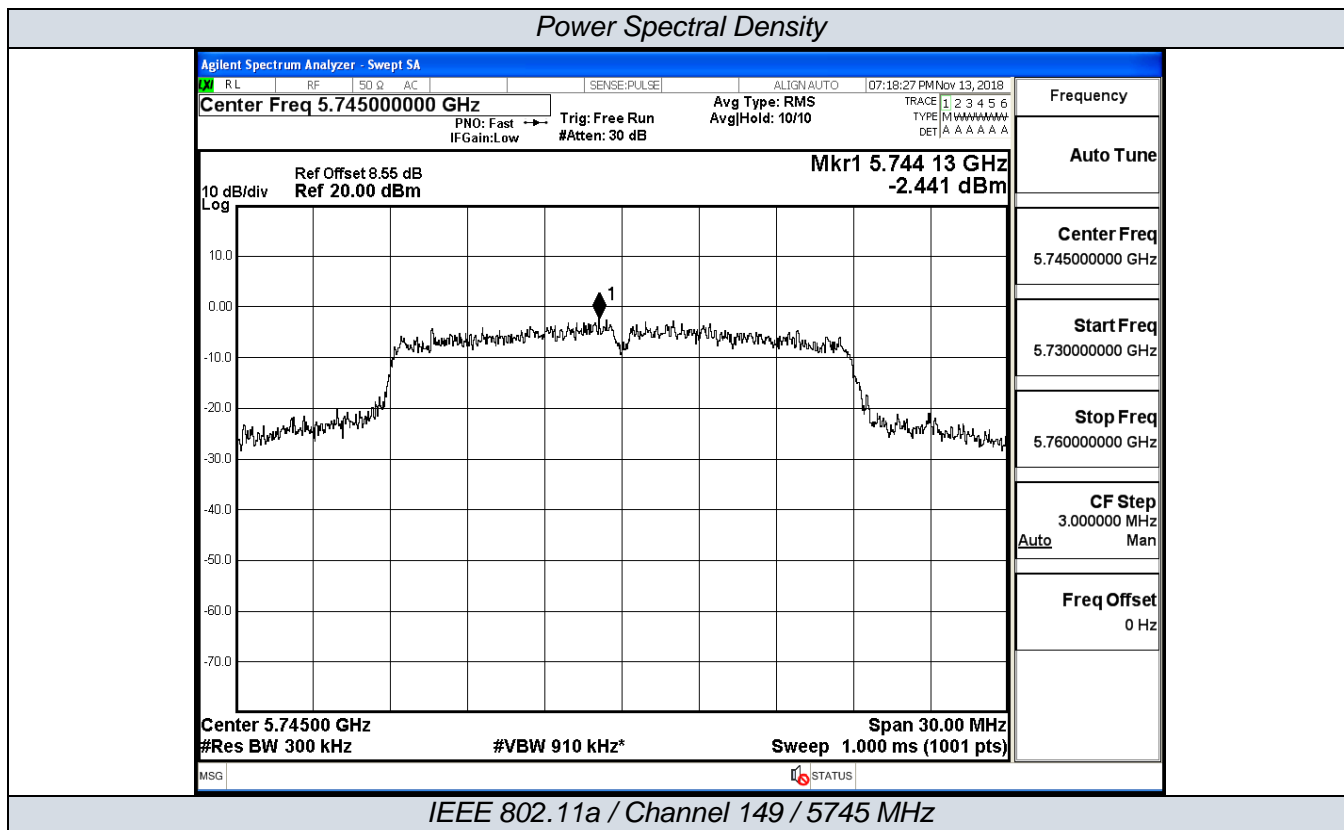
IEEE 802.11ac VHT80

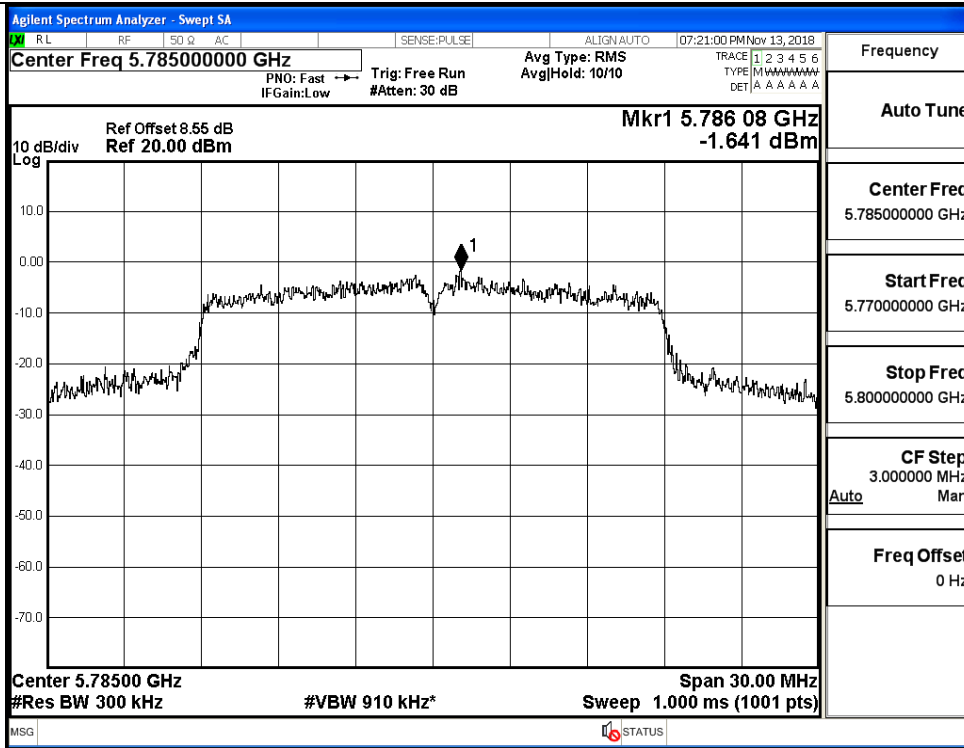
**B.2 Maximum Conduct Output Power**

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11A	149	5745	11.42	0	11.42	30
	157	5785	11.44	0	11.44	
	165	5825	11.50	0	11.50	
11N20 SISO	149	5745	11.45	0	11.45	30
	157	5785	11.11	0	11.11	
	165	5825	11.29	0	11.29	
11N40 SISO	151	5755	11.87	0	11.87	30
	159	5795	11.88	0	11.88	
11AC20 SISO	149	5745	11.79	0	11.79	30
	157	5785	11.53	0	11.53	
	165	5825	11.68	0	11.68	
11AC40 SISO	151	5755	11.79	0	11.79	30
	159	5795	11.96	0	11.96	
11AC80 SISO	155	5775	9.85	0	9.85	30

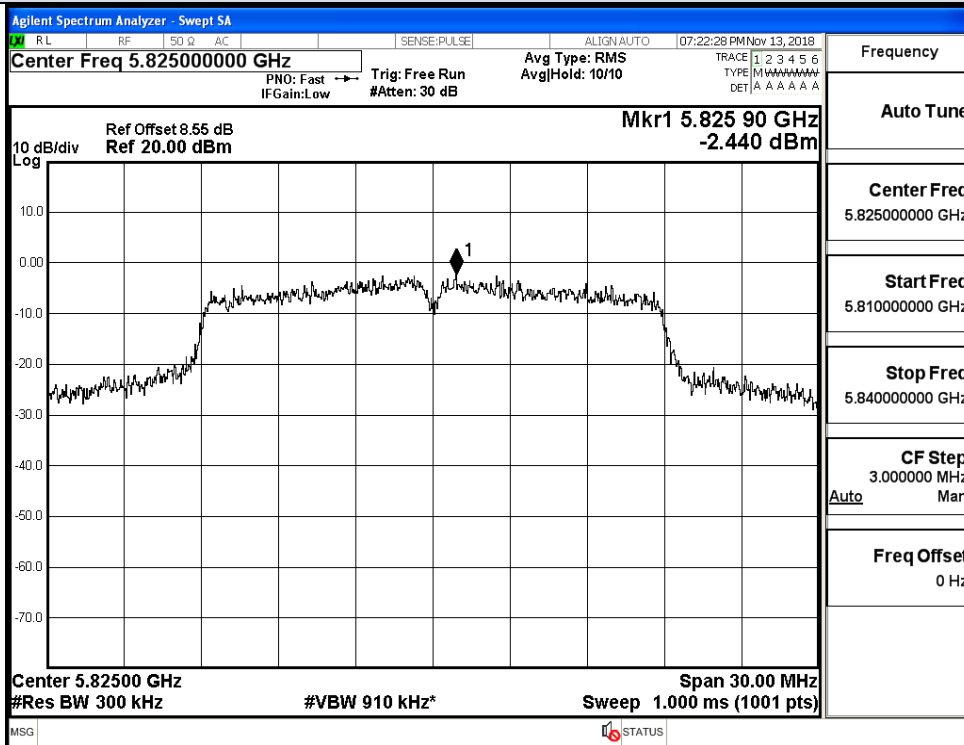
### B.3 Power Spectral Density

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	-2.441	0	2.218	-0.223	30
	157	5785	-1.641	0	2.218	0.577	
	165	5825	-2.440	0	2.218	-0.222	
11N20 SISO	149	5745	-2.252	0	2.218	-0.034	30
	157	5785	-2.802	0	2.218	-0.584	
	165	5825	-2.913	0	2.218	-0.695	
11N40 SISO	151	5755	-5.251	0	2.218	-3.033	30
	159	5795	-5.177	0	2.218	-2.959	
11AC20 SISO	149	5745	-1.339	0	2.218	0.879	30
	157	5785	-2.457	0	2.218	-0.239	
	165	5825	-2.349	0	2.218	-0.131	
11AC40 SISO	151	5755	-5.084	0	2.218	-2.866	30
	159	5795	-5.088	0	2.218	-2.870	
11AC80 SISO	155	5775	-11.445	0	2.218	-9.227	30



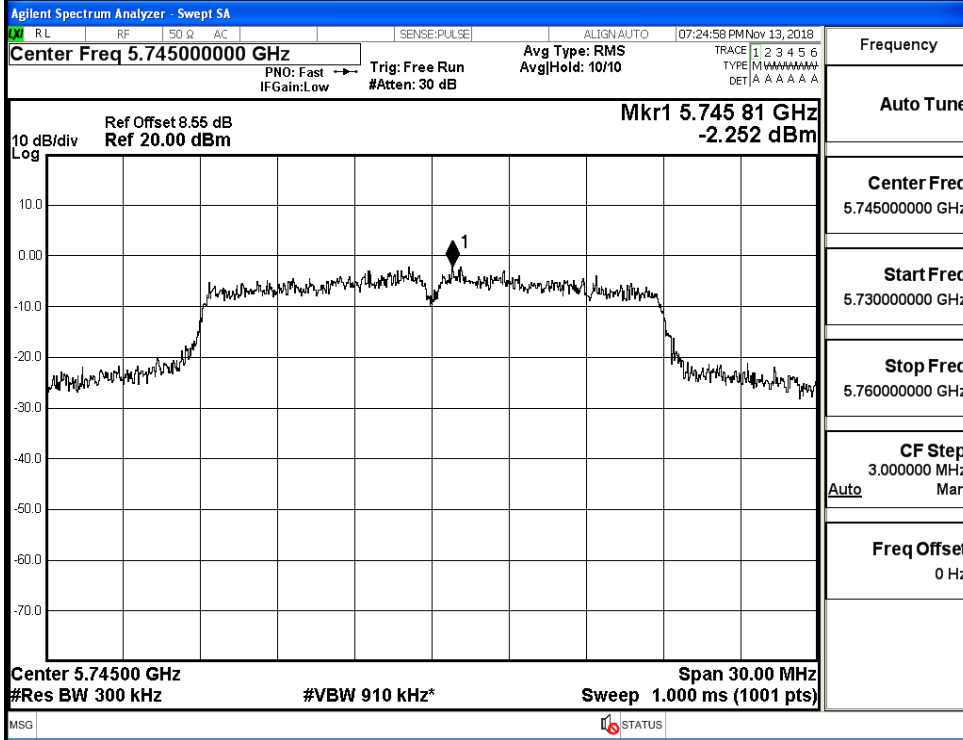


IEEE 802.11a / Channel 157 / 5785 MHz

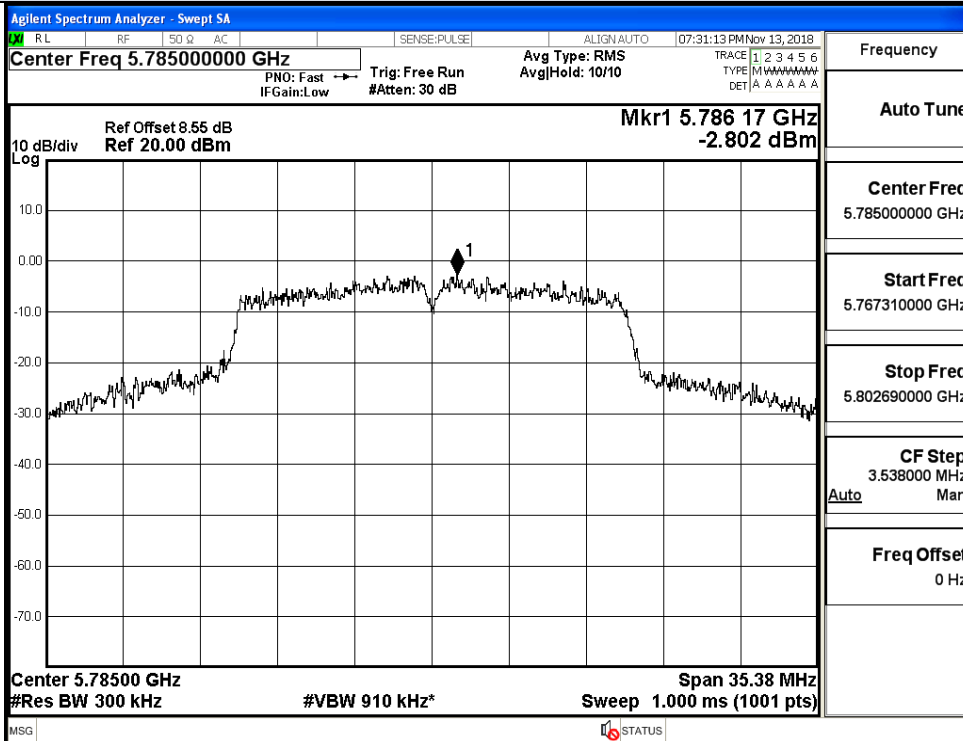


IEEE 802.11a / Channel 165 / 5825 MHz

Power Spectral Density

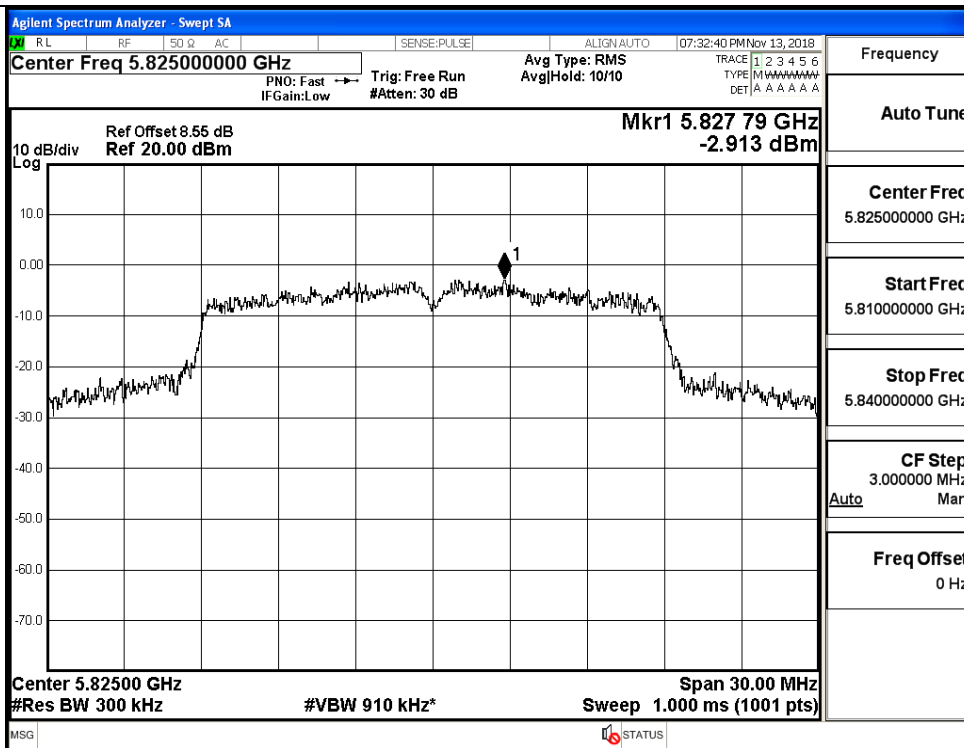


IEEE 802.11n HT20 / Channel 149 / 5745 MHz



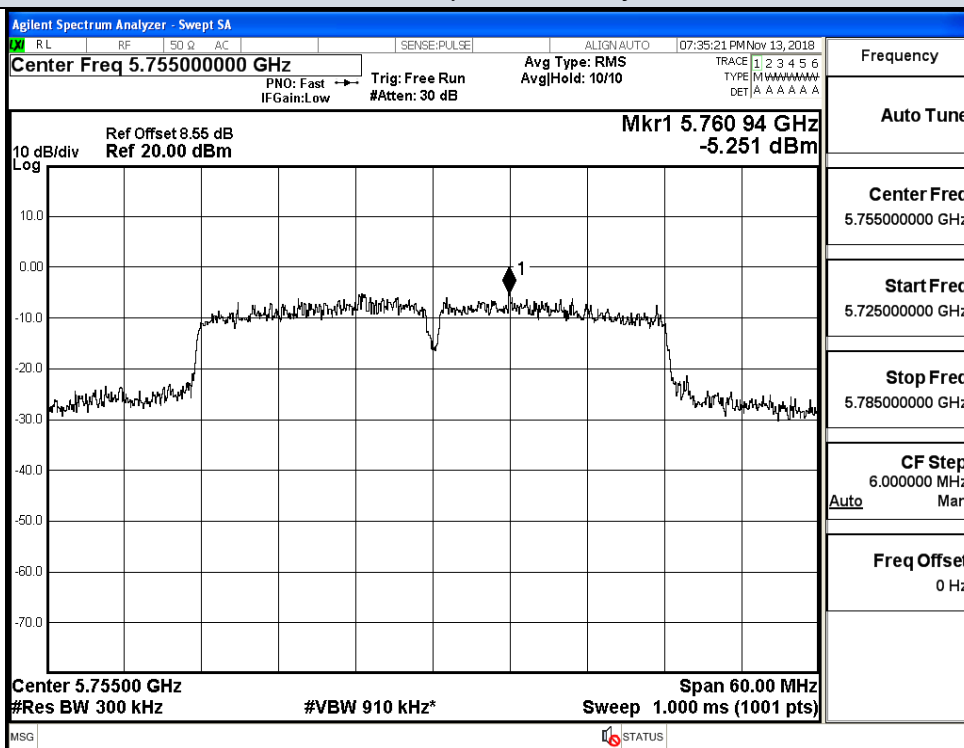
IEEE 802.11n HT20 / Channel 157 / 5785 MHz



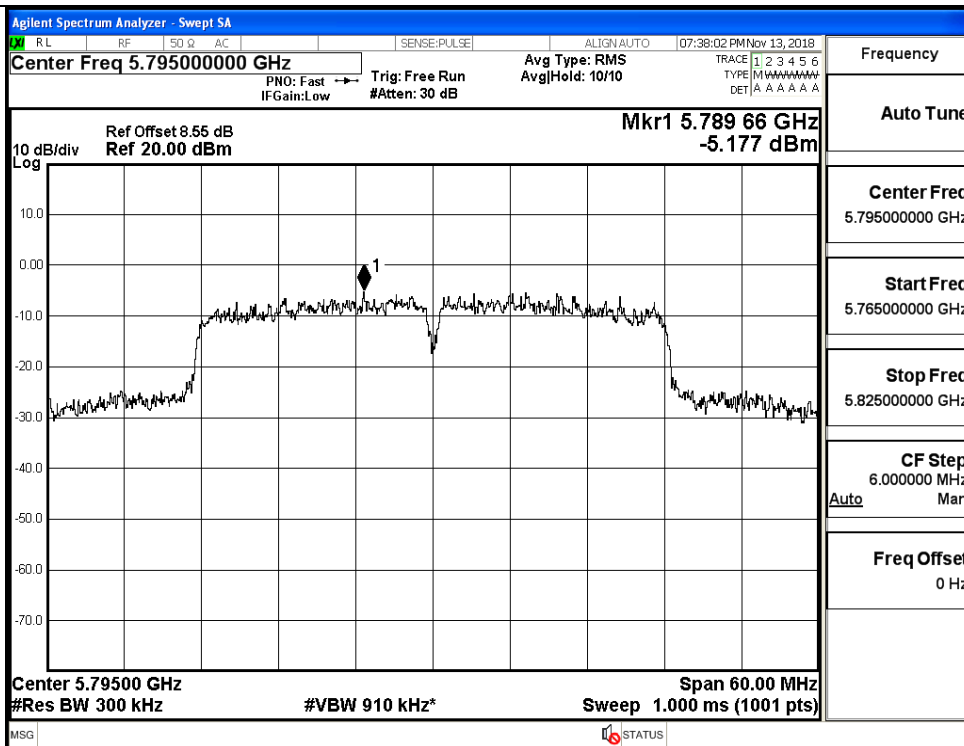


IEEE 802.11n HT20 / Channel 165 / 5825 MHz

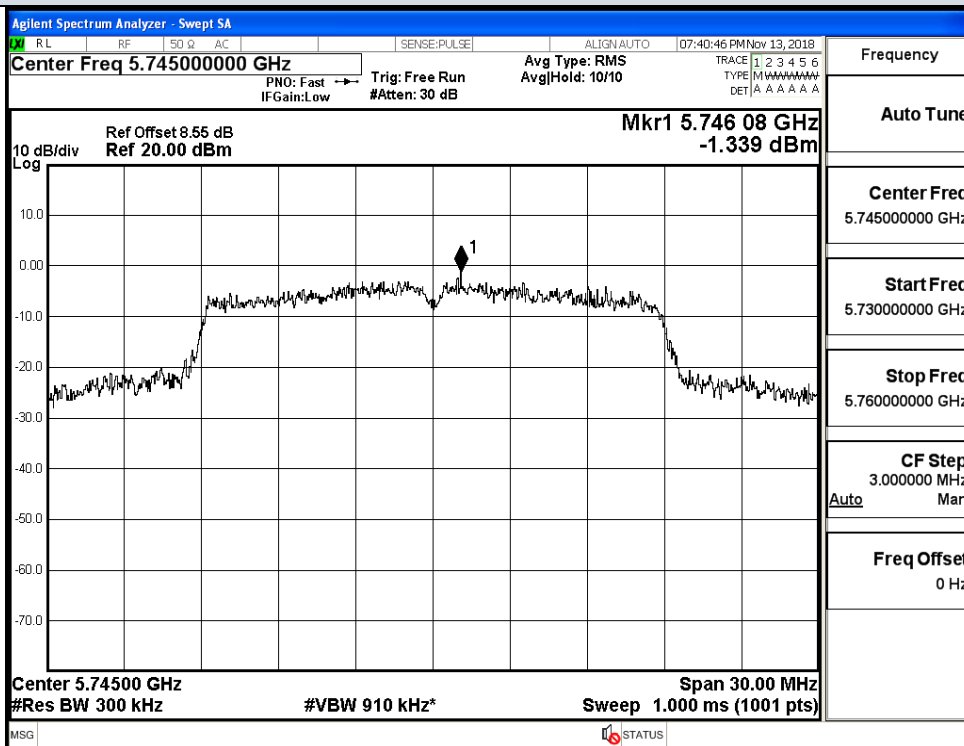
Power Spectral Density



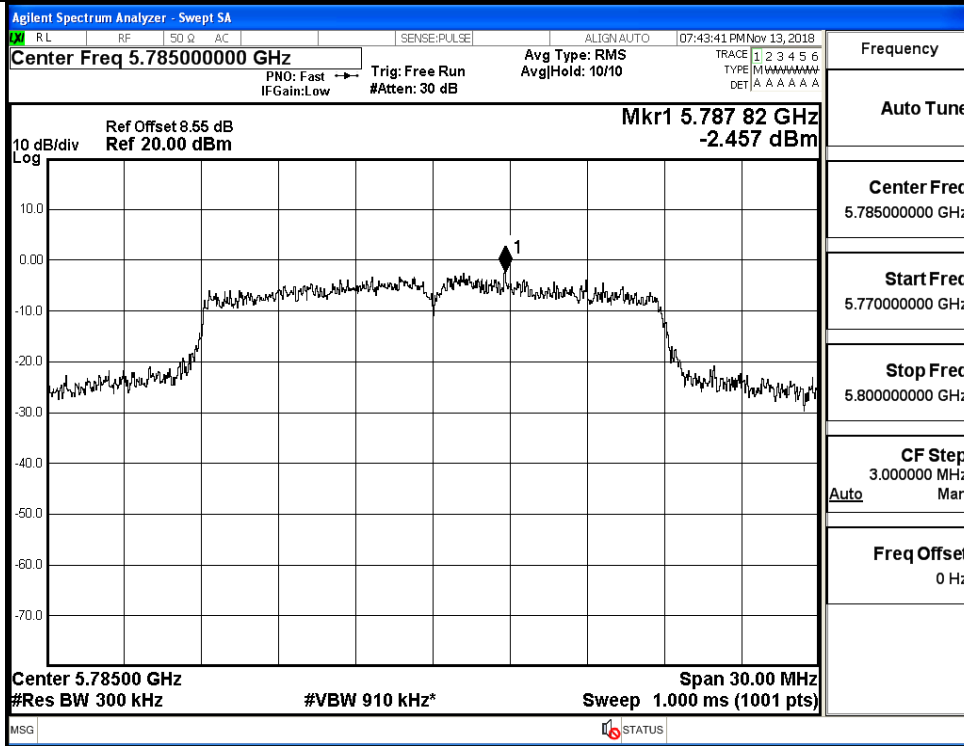
IEEE 802.11n HT40 / Channel 151 / 5755 MHz



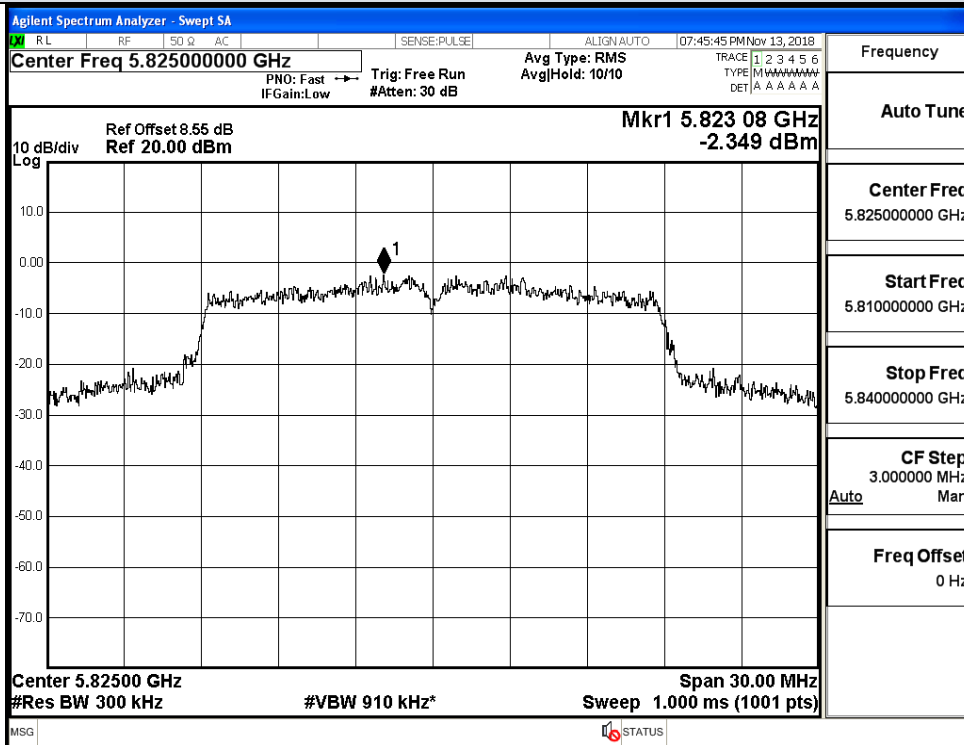
IEEE 802.11n HT40 / Channel 159 / 5795 MHz



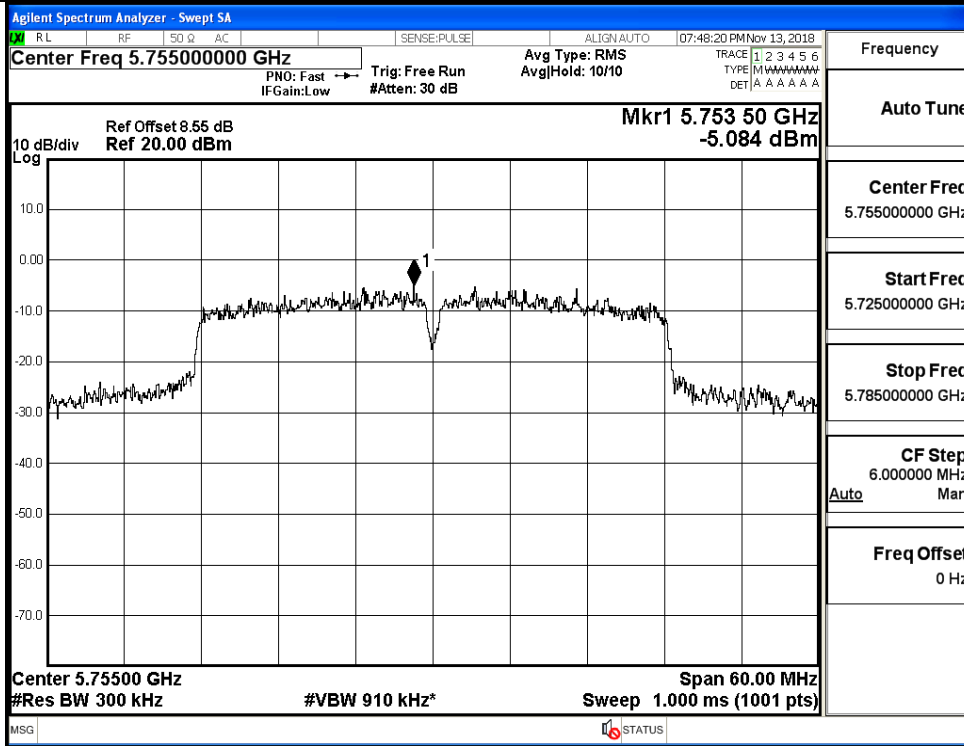
IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



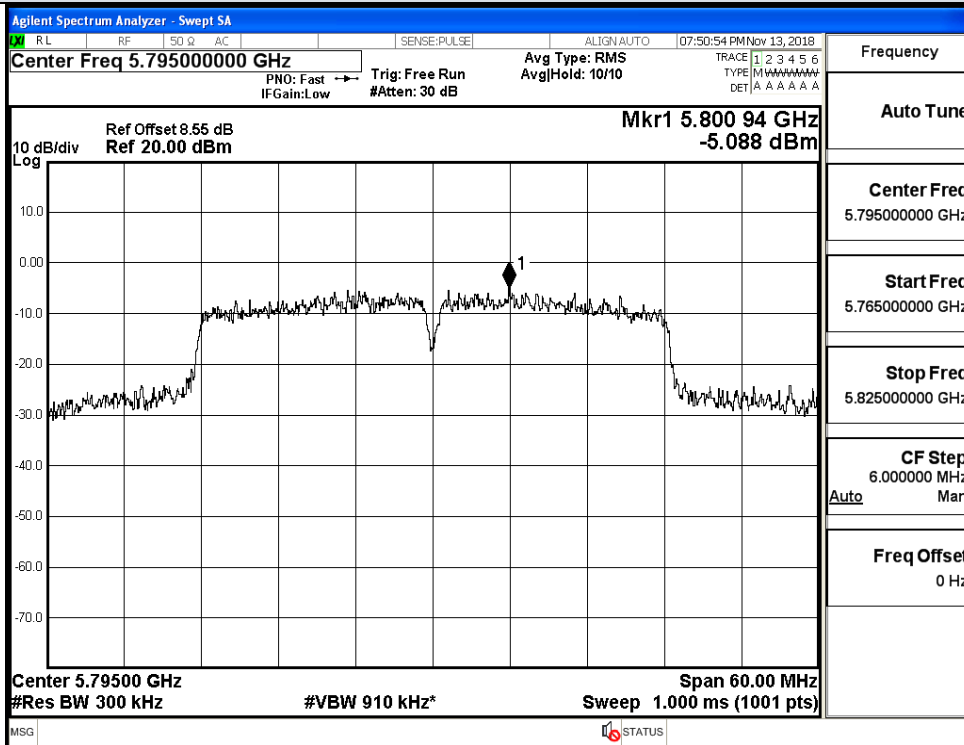
IEEE 802.11ac VHT20 / Channel 157 / 5785 MHz



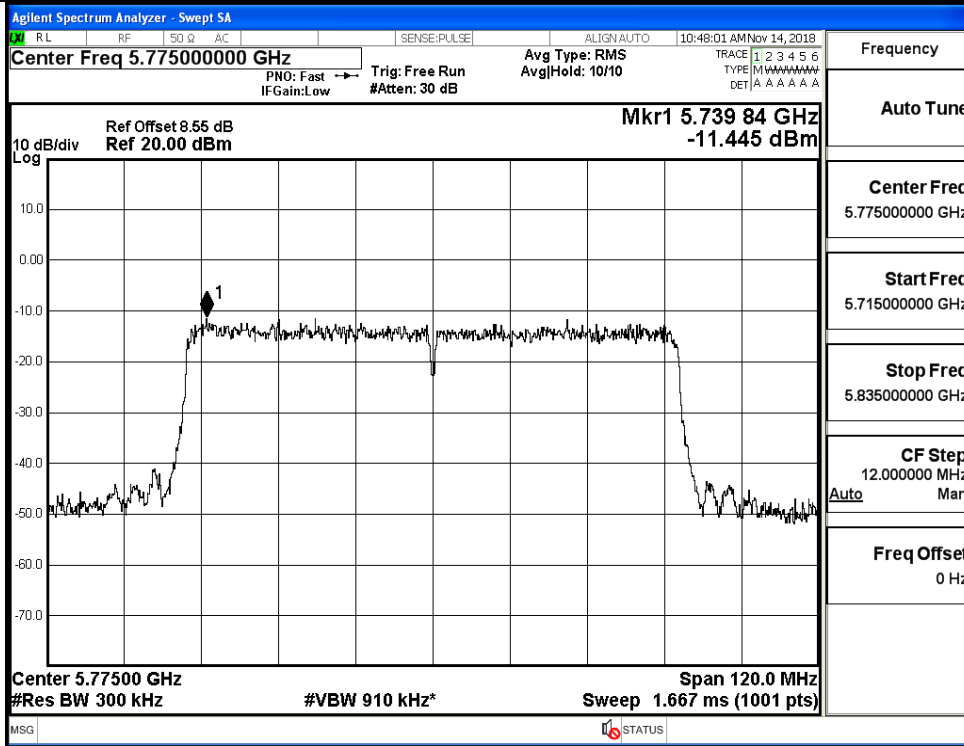
IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz



IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz



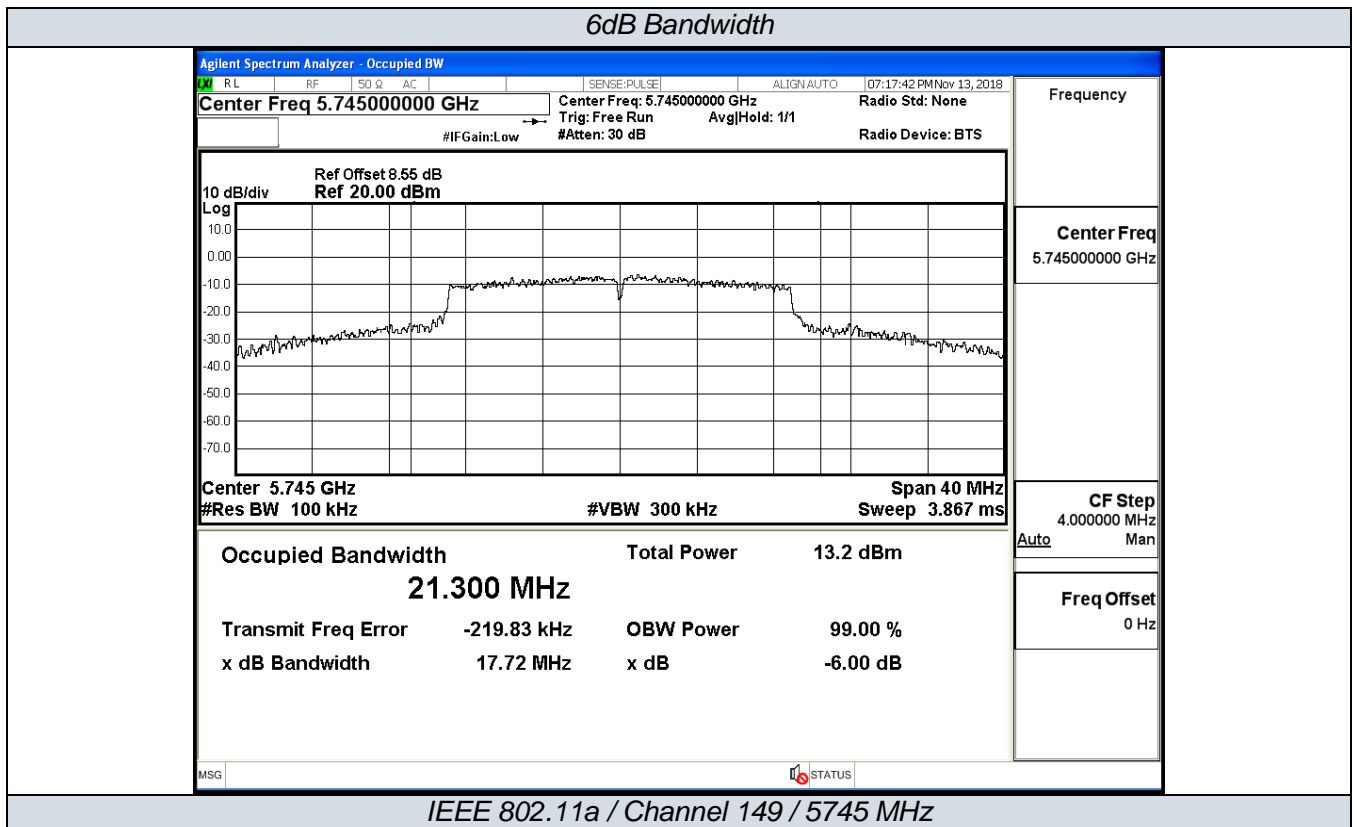
IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz

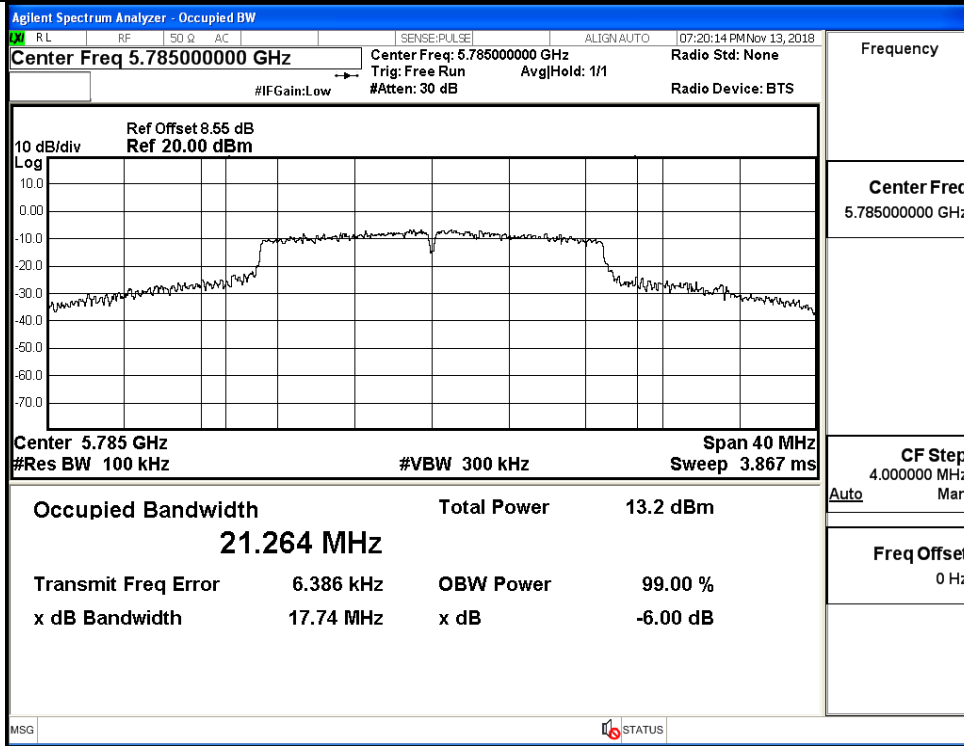


IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz

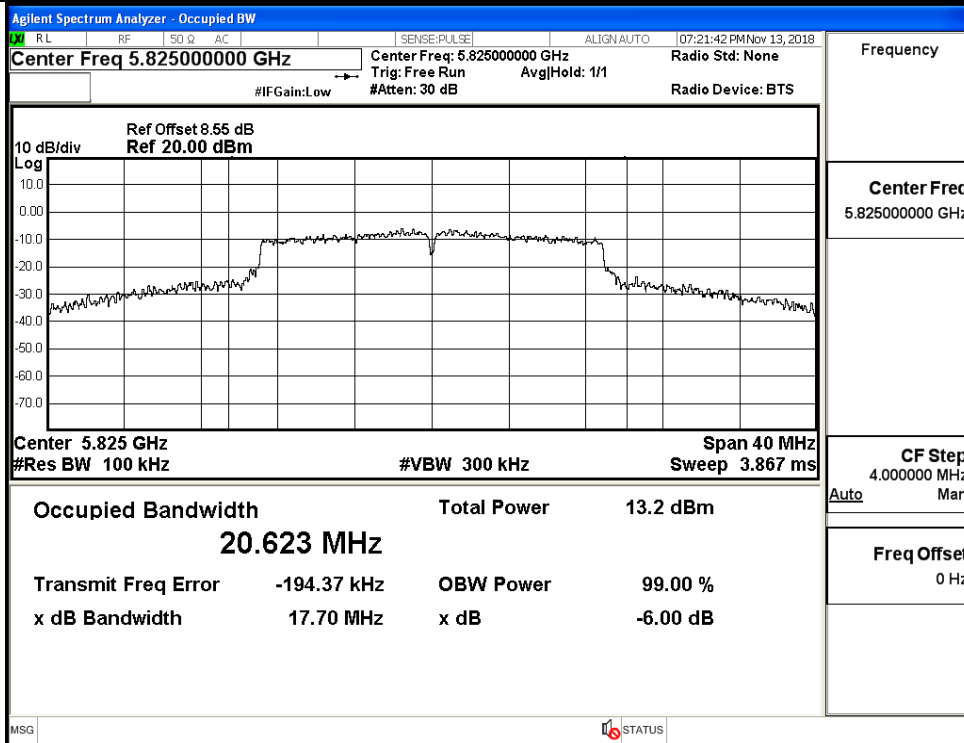
**B.4 Emission Bandwidth**

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11A	149	5745	17.720	>=0.5
	157	5785	17.740	
	165	5825	17.700	
11N20 SISO	149	5745	17.700	>=0.5
	157	5785	17.690	
	165	5825	17.680	
11N40 SISO	151	5755	36.450	>=0.5
	159	5795	36.400	
11AC20SISO	149	5745	17.670	>=0.5
	157	5785	17.710	
	165	5825	17.710	
11AC40SISO	151	5755	36.430	>=0.5
	159	5795	36.440	
11AC80SISO	155	5775	76.440	>=0.5





IEEE 802.11a / Channel 157 / 5785 MHz



IEEE 802.11a / Channel 165 / 5825 MHz

6dB Bandwidth

Agilent Spectrum Analyzer - Occupied BW

Center Freq: 5.74500000 GHz

Ref Offset 8.55 dB  
Ref 20.00 dBm

Center 5.745 GHz  
#Res BW 100 kHz

Span 40 MHz  
Sweep 3.867 ms

Occupied Bandwidth	Total Power	13.2 dBm
<b>22.088 MHz</b>		
Transmit Freq Error	-385.47 kHz	OBW Power 99.00 %
x dB Bandwidth	17.70 MHz	x dB -6.00 dB

Frequency: 5.74500000 GHz

CF Step: 4.000000 MHz

Freq Offset: 0 Hz

IEEE 802.11n HT20 / Channel 149 / 5745 MHz

Agilent Spectrum Analyzer - Occupied BW

Center Freq: 5.78500000 GHz

Ref Offset 8.55 dB  
Ref 20.00 dBm

Center 5.785 GHz  
#Res BW 100 kHz

Span 40 MHz  
Sweep 3.867 ms

Occupied Bandwidth	Total Power	12.9 dBm
<b>21.013 MHz</b>		
Transmit Freq Error	-115.24 kHz	OBW Power 99.00 %
x dB Bandwidth	17.69 MHz	x dB -6.00 dB

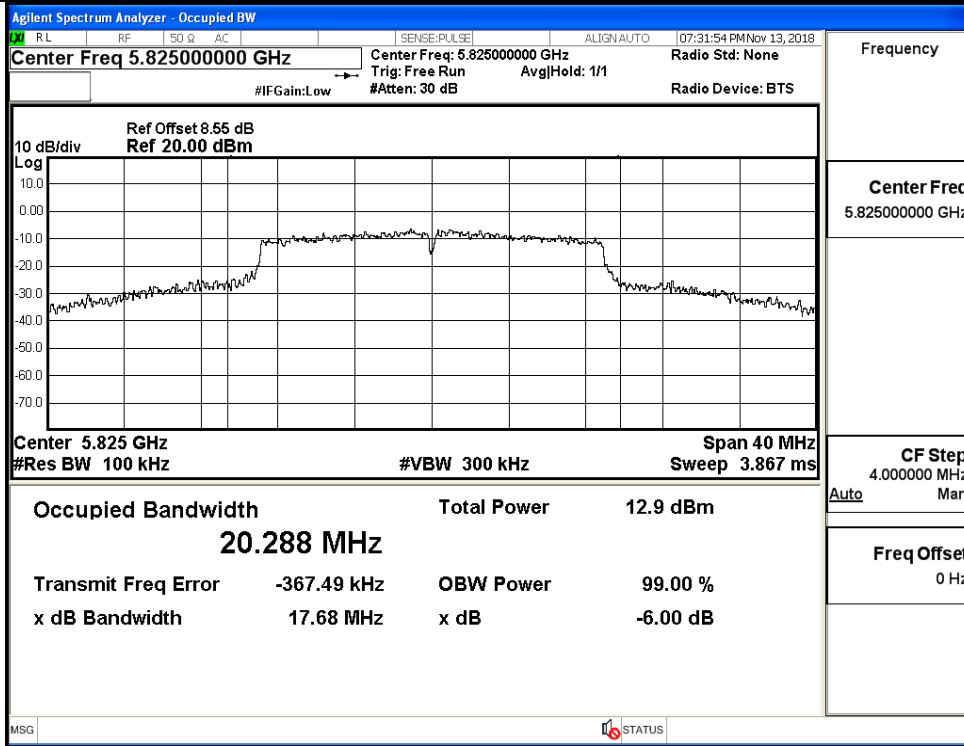
Frequency: 5.78500000 GHz

CF Step: 4.000000 MHz

Freq Offset: 0 Hz

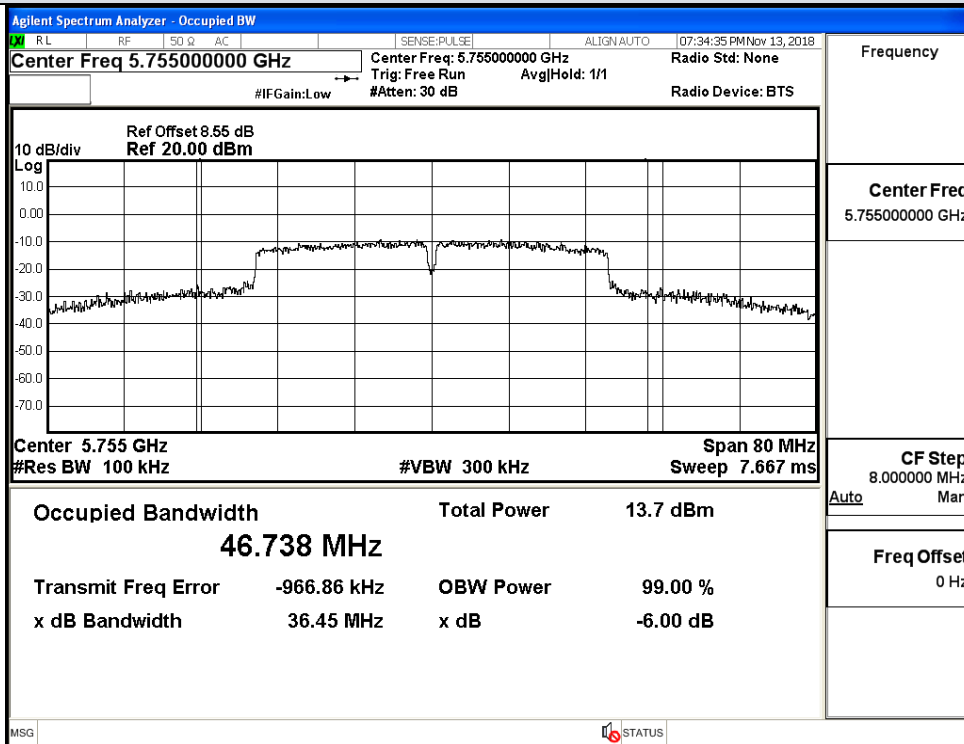
IEEE 802.11n HT20 / Channel 157 / 5785 MHz



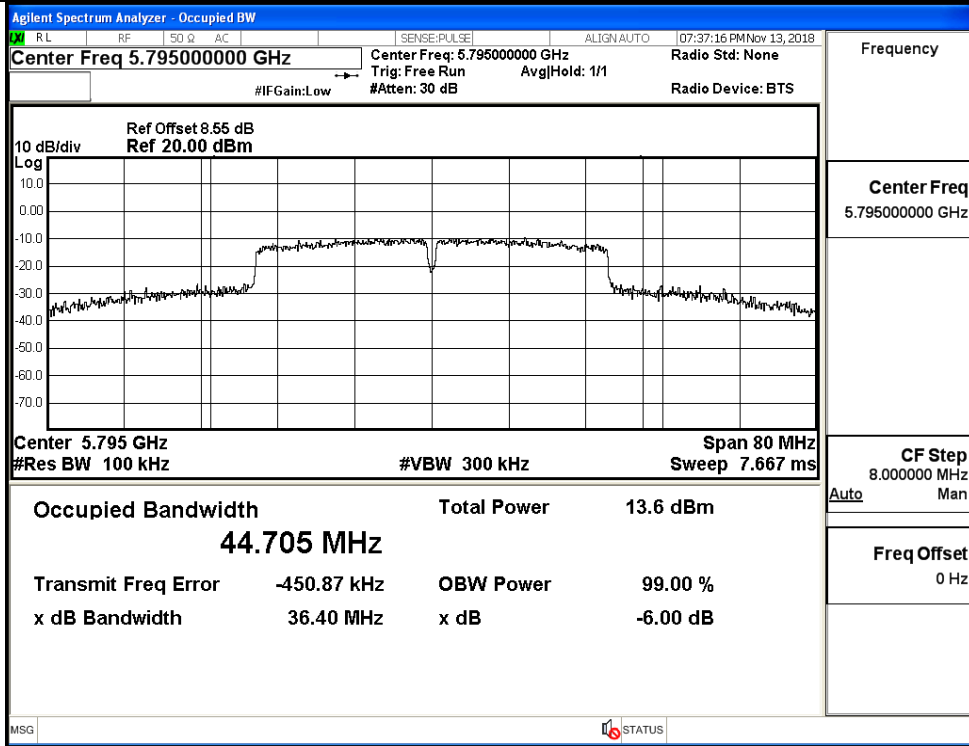


IEEE 802.11n HT20 / Channel 165 / 5825 MHz

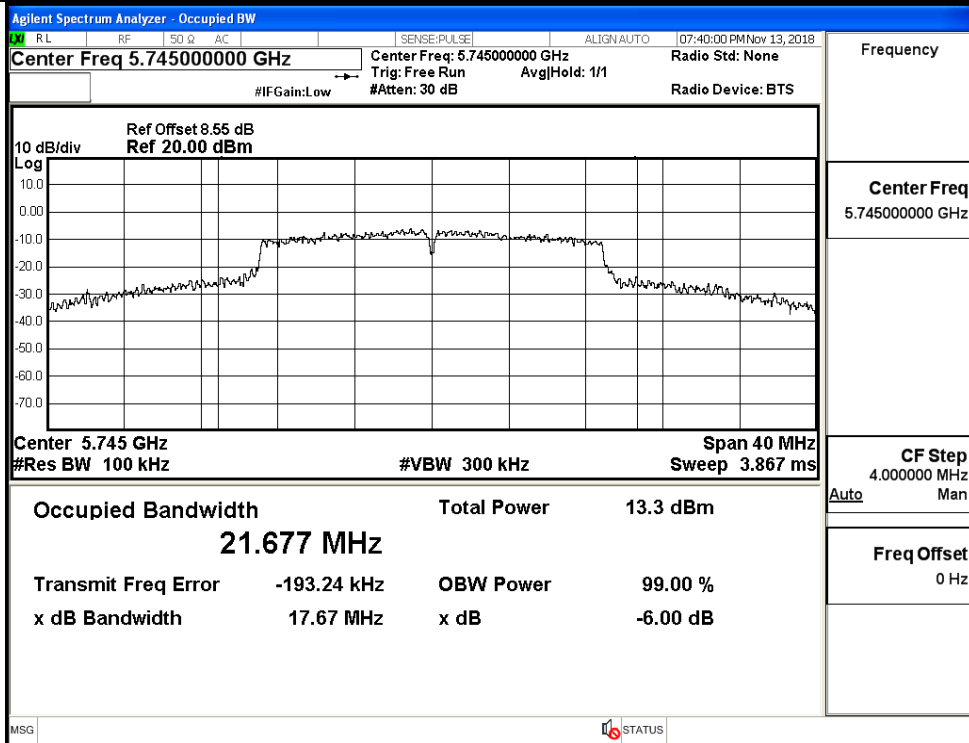
6dB Bandwidth



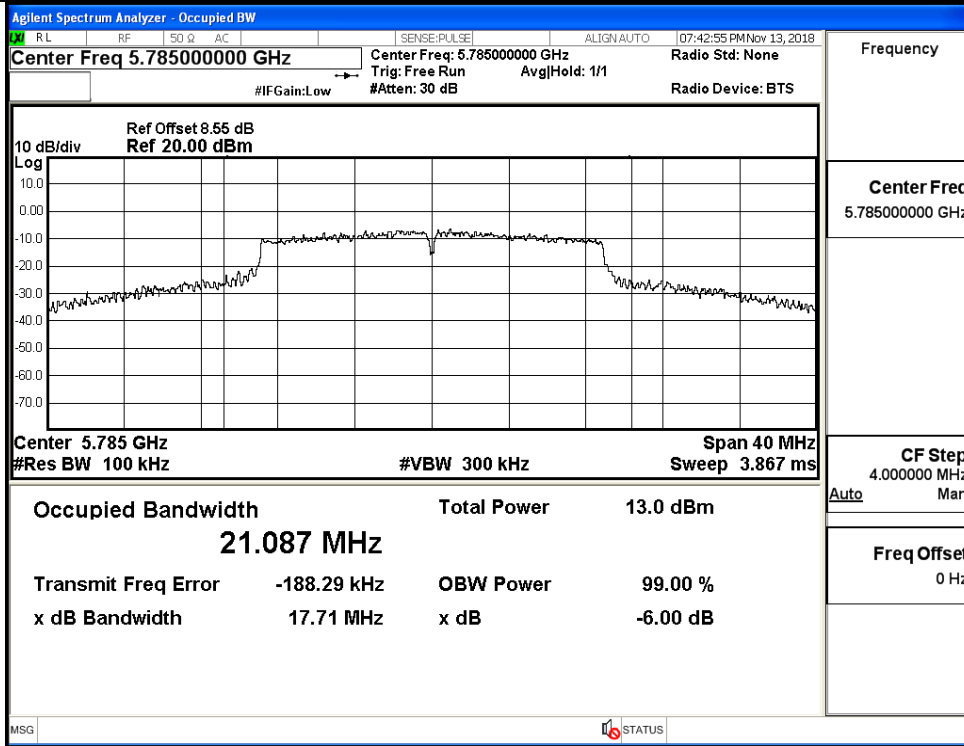
IEEE 802.11n HT40 / Channel 151 / 5755 MHz



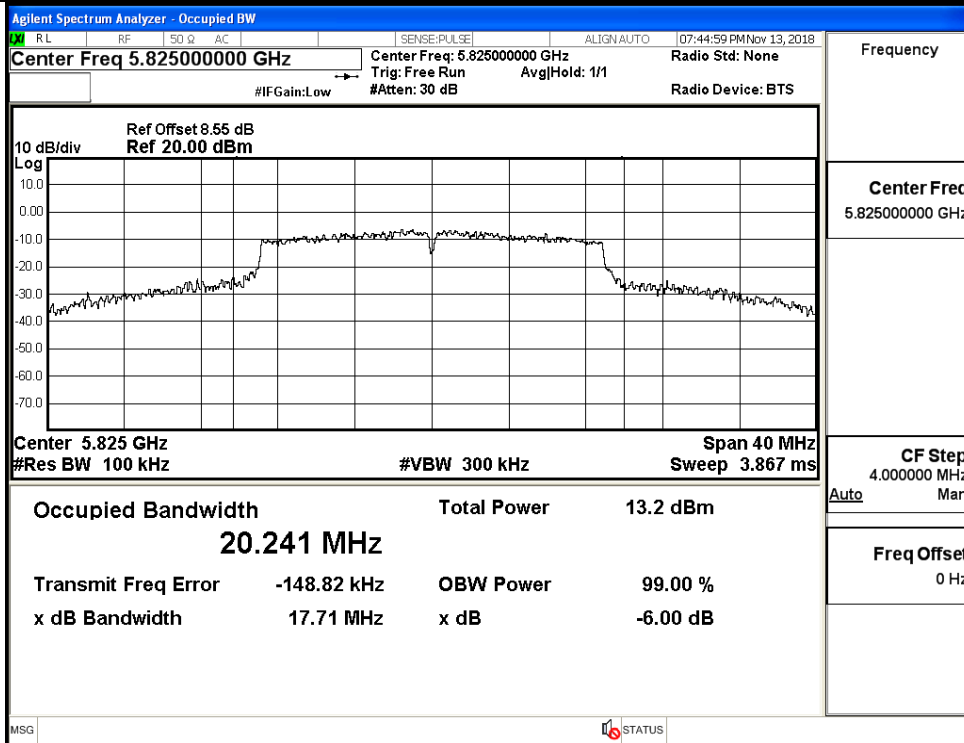
IEEE 802.11n HT40 / Channel 159 / 5795 MHz



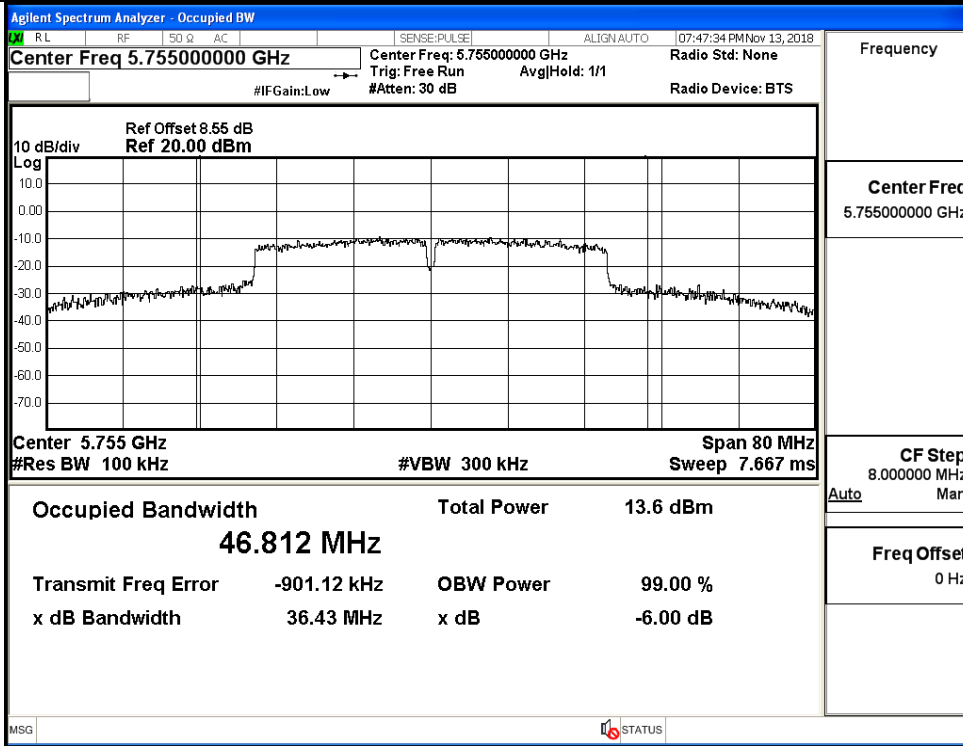
IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



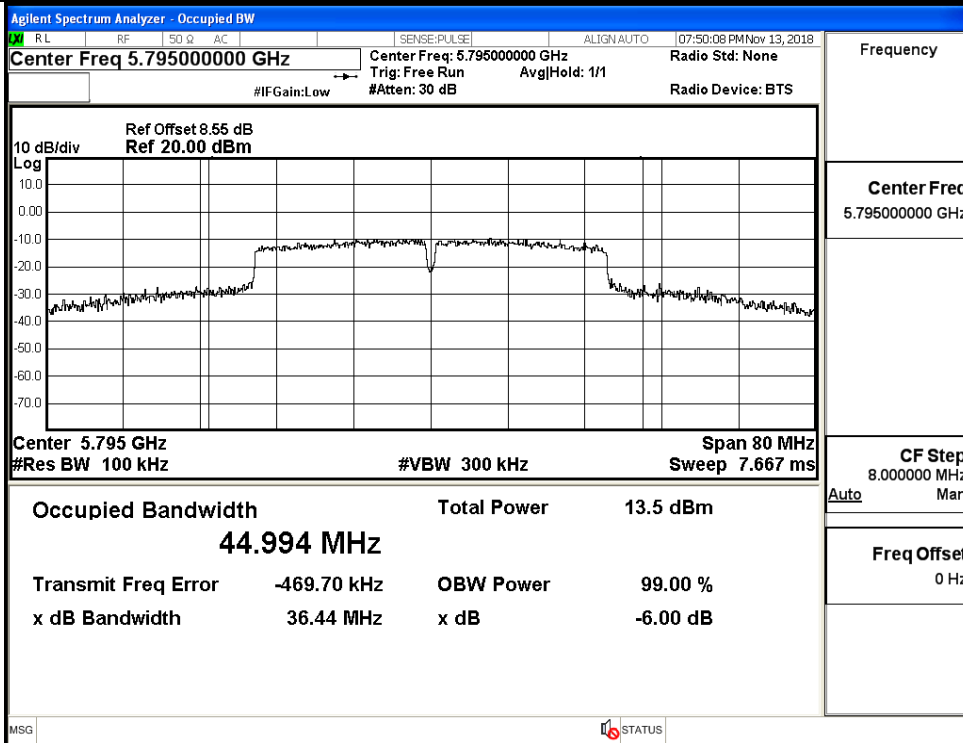
IEEE 802.11ac VHT20 / Channel 157 / 5785 MHz



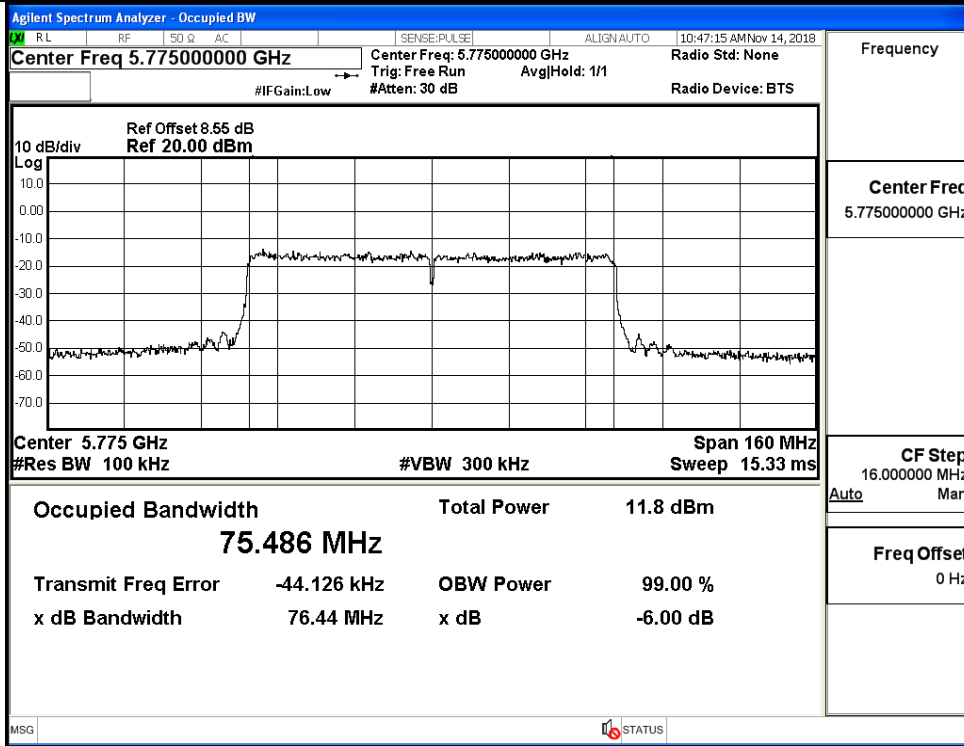
IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz



IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz



IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz



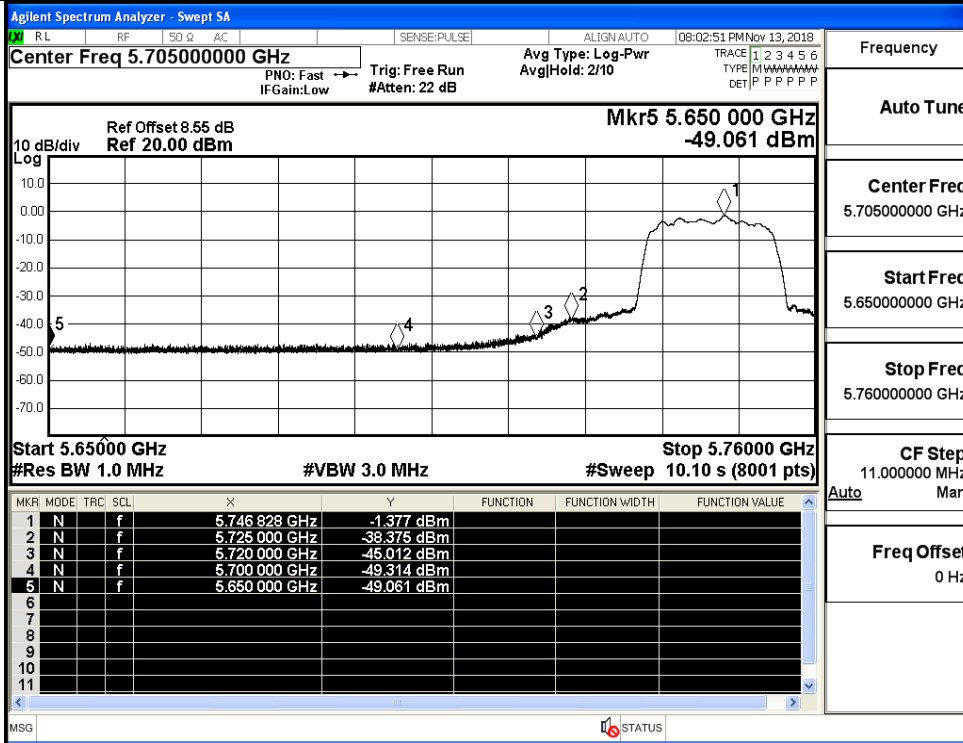
IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz

**B.5 Undesirable Emissions Measurement**

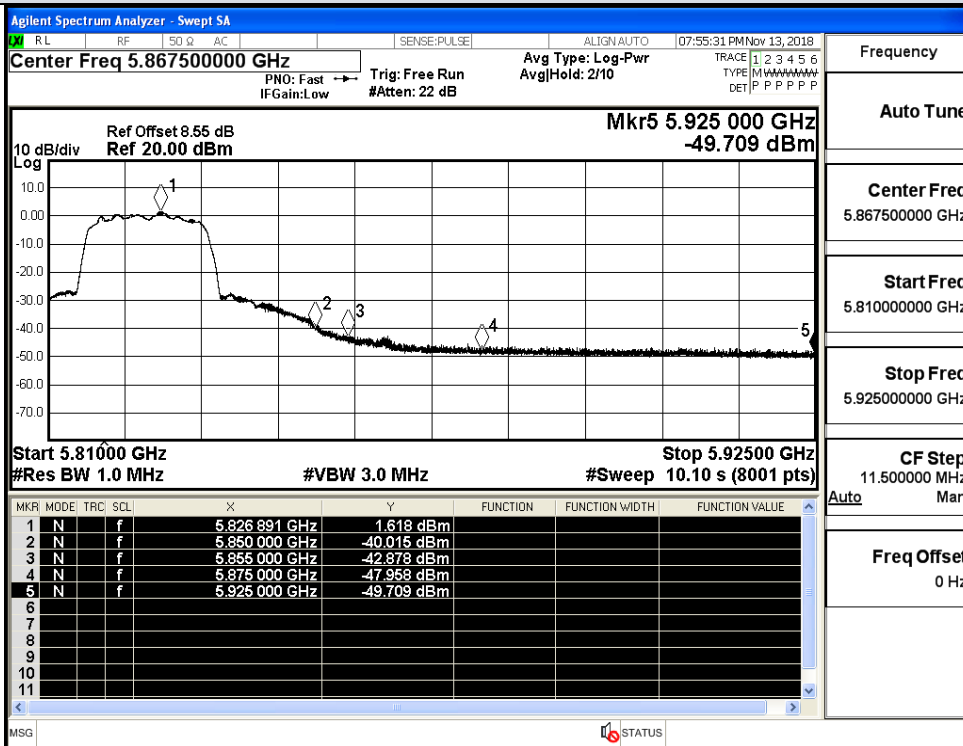
Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
11A	149	5650.0	-49.061	2.00	-47.061	Peak	-27.0
		5700.0	-49.314	2.00	-47.314	Peak	10.0
		5720.0	-45.012	2.00	-43.012	Peak	15.6
		5725.0	-38.375	2.00	-36.375	Peak	27.0
	165	5850.0	-40.015	2.00	-38.015	Peak	27.0
		5855.0	-42.878	2.00	-40.878	Peak	15.6
		5875.0	-47.958	2.00	-45.958	Peak	10.0
		5925.0	-49.709	2.00	-47.709	Peak	-27.0
11N20 SISO	149	5650.0	-49.800	2.00	-47.800	Peak	-27.0
		5700.0	-45.666	2.00	-43.666	Peak	10.0
		5720.0	-41.818	2.00	-39.818	Peak	15.6
		5725.0	-34.592	2.00	-32.592	Peak	27.0
	165	5850.0	-29.617	2.00	-27.617	Peak	27.0
		5855.0	-31.907	2.00	-29.907	Peak	15.6
		5875.0	-48.270	2.00	-46.270	Peak	10.0
		5925.0	-49.955	2.00	-47.955	Peak	-27.0
11N40 SISO	151	5650.0	-48.612	2.00	-46.612	Peak	-27.0
		5700.0	-44.452	2.00	-42.452	Peak	10.0
		5720.0	-34.659	2.00	-32.659	Peak	15.6
		5725.0	-33.858	2.00	-31.858	Peak	27.0
	159	5850.0	-34.824	2.00	-32.824	Peak	27.0
		5855.0	-36.725	2.00	-34.725	Peak	15.6
		5875.0	-45.708	2.00	-43.708	Peak	10.0
		5925.0	-50.049	2.00	-48.049	Peak	-27.0
11AC20 SISO	149	5650.0	-50.113	2.00	-48.113	Peak	-27.0
		5700.0	-48.127	2.00	-46.127	Peak	10.0
		5720.0	-40.736	2.00	-38.736	Peak	15.6
		5725.0	-35.093	2.00	-33.093	Peak	27.0
	165	5850.0	-29.149	2.00	-27.149	Peak	27.0
		5855.0	-32.835	2.00	-30.835	Peak	15.6
		5875.0	-46.890	2.00	-44.890	Peak	10.0
		5925.0	-50.093	2.00	-48.093	Peak	-27.0
11AC40 SISO	151	5650.0	-48.566	2.00	-46.566	Peak	-27.0
		5700.0	-44.073	2.00	-42.073	Peak	10.0
		5720.0	-35.681	2.00	-33.681	Peak	15.6
		5725.0	-34.447	2.00	-32.447	Peak	27.0
	159	5850.0	-35.021	2.00	-33.021	Peak	27.0
		5855.0	-37.631	2.00	-35.631	Peak	15.6
		5875.0	-45.365	2.00	-43.365	Peak	10.0
		5925.0	-50.178	2.00	-48.178	Peak	-27.0
11AC80 SISO	155	5650.0	-51.610	2.00	-49.610	Peak	-27.0
		5700.0	-44.021	2.00	-42.021	Peak	10.0
		5720.0	-42.765	2.00	-40.765	Peak	15.6
		5725.0	-40.463	2.00	-38.463	Peak	27.0
		5850.0	-46.626	2.00	-44.626	Peak	27.0

		5855.0	-47.387	2.00	-45.387	Peak	15.6
		5875.0	-49.099	2.00	-47.099	Peak	10.0
		5925.0	-49.572	2.00	-47.572	Peak	-27.0

Undesirable Emissions Measurement



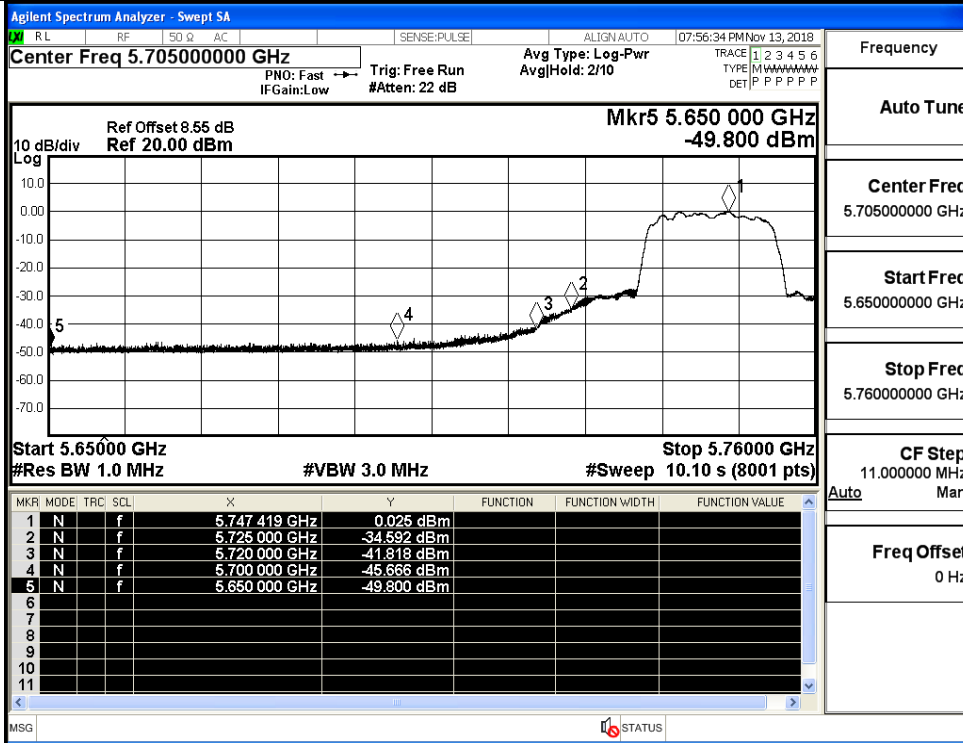
IEEE 802.11a / Channel 149 / 5745 MHz / Peak



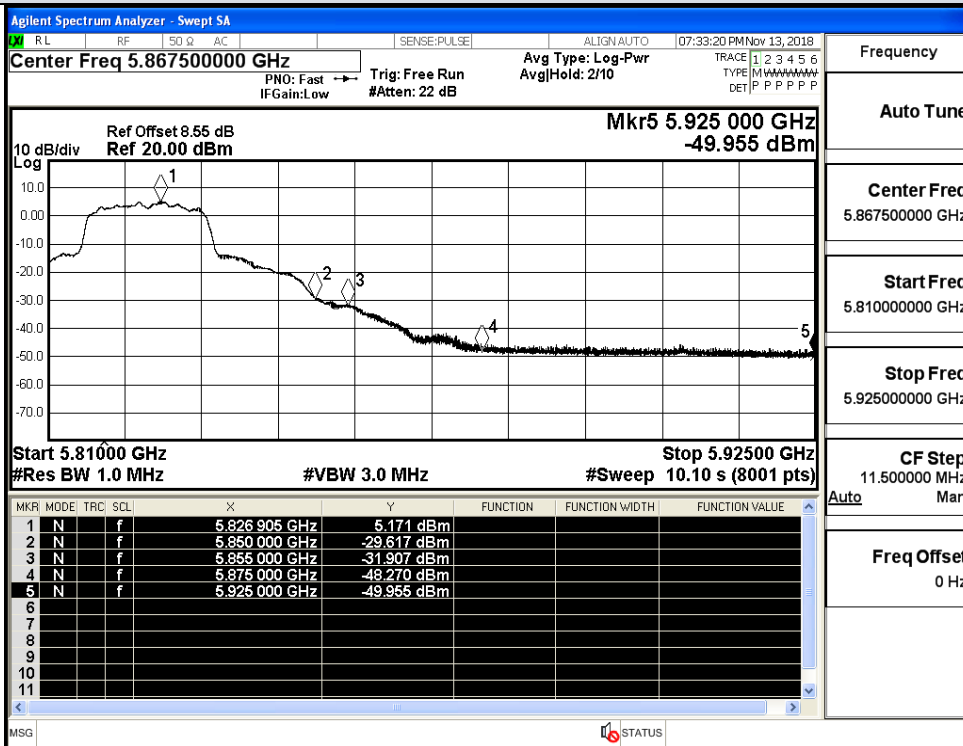
IEEE 802.11a / Channel 165 / 5825 MHz / Peak



Undesirable Emissions Measurement

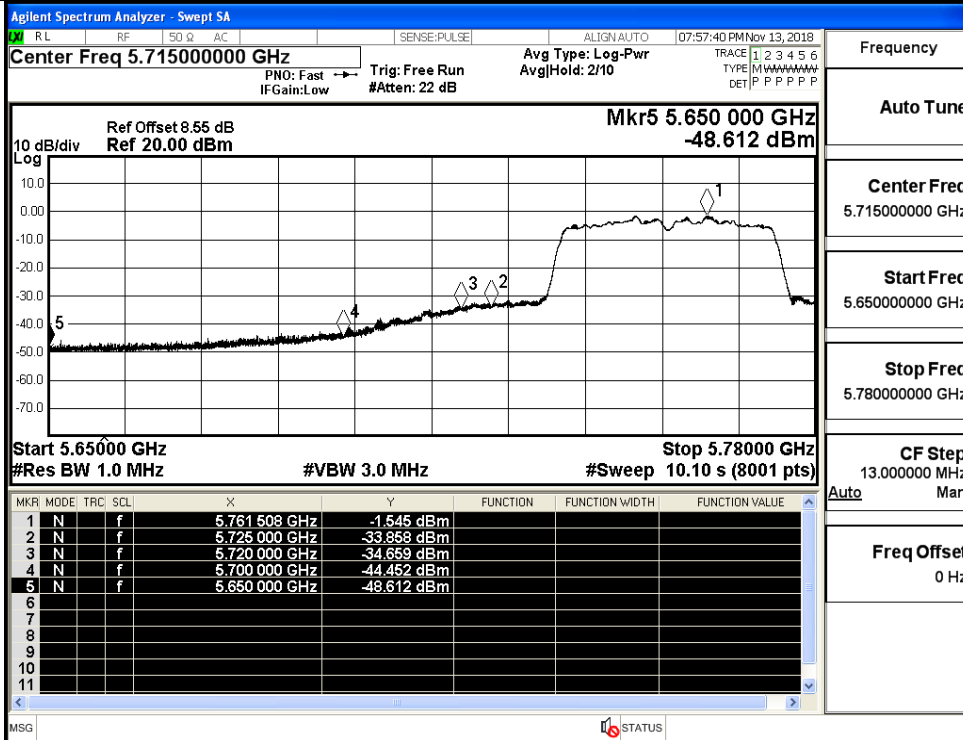


IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak

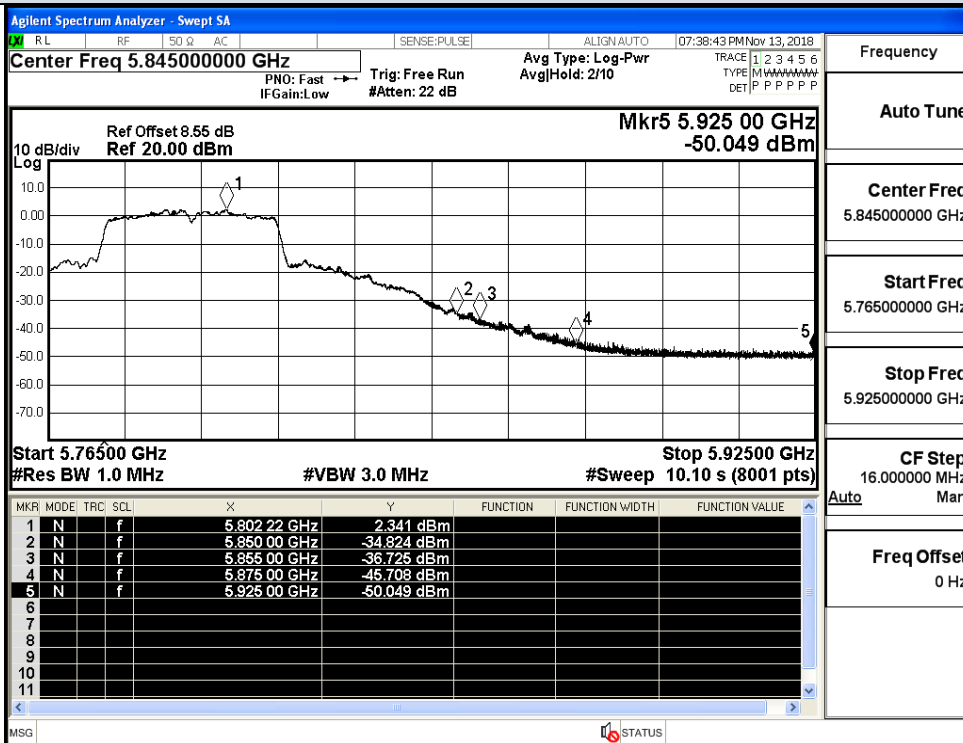


IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak

Undesirable Emissions Measurement

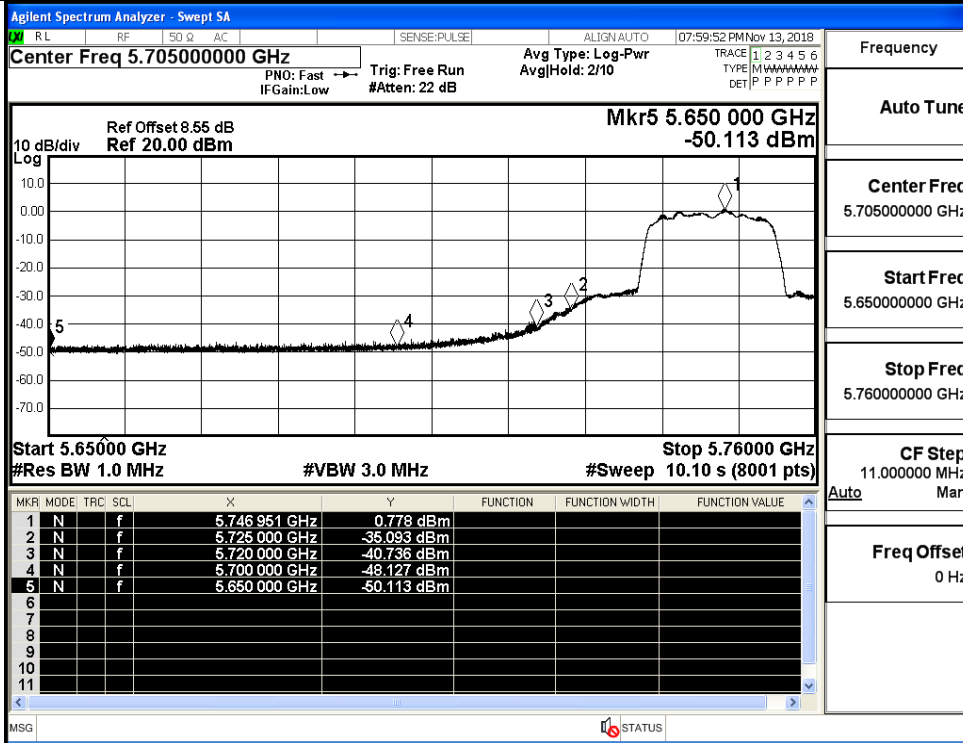


IEEE 802.11n HT40 / Channel 151 / 5755 MHz / Peak

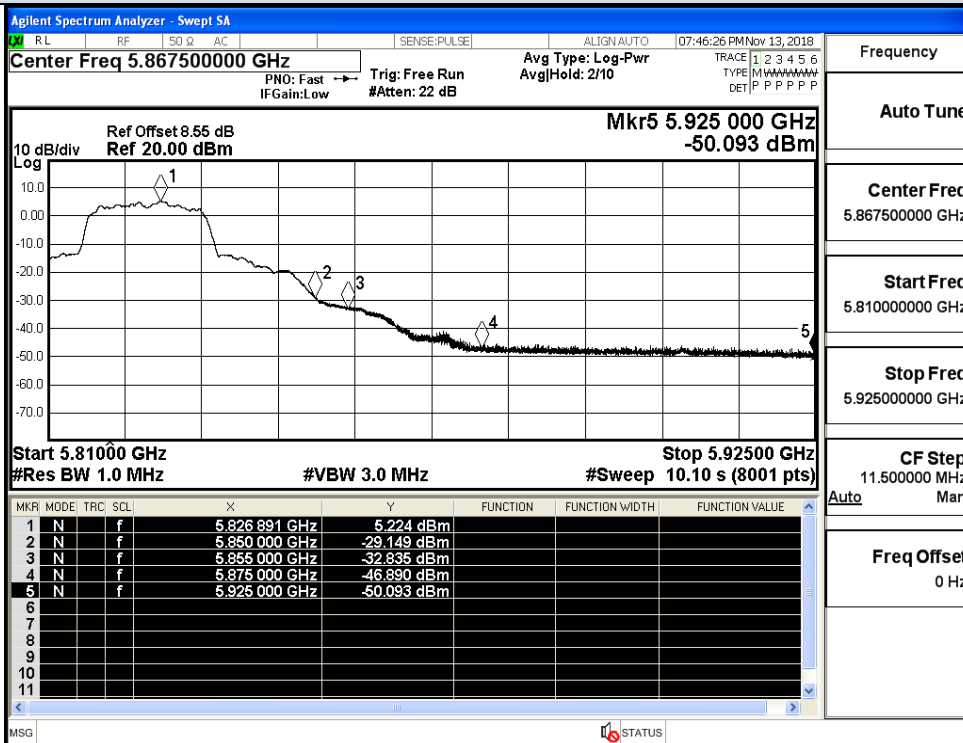


IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak

Undesirable Emissions Measurement

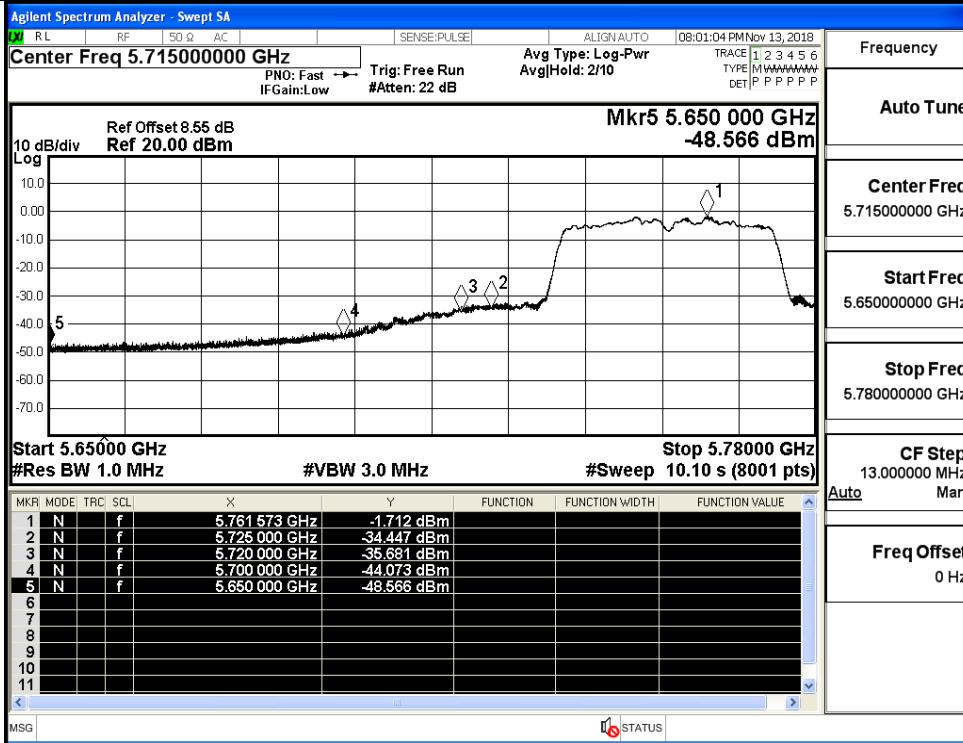


IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz / Peak

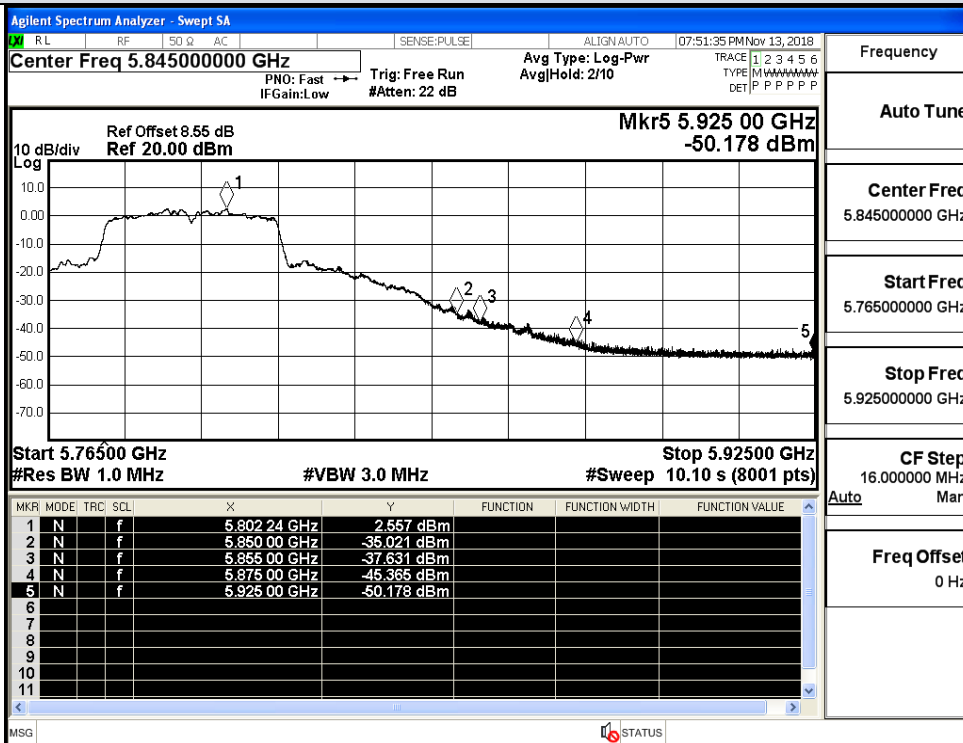


IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz / Peak

Undesirable Emissions Measurement

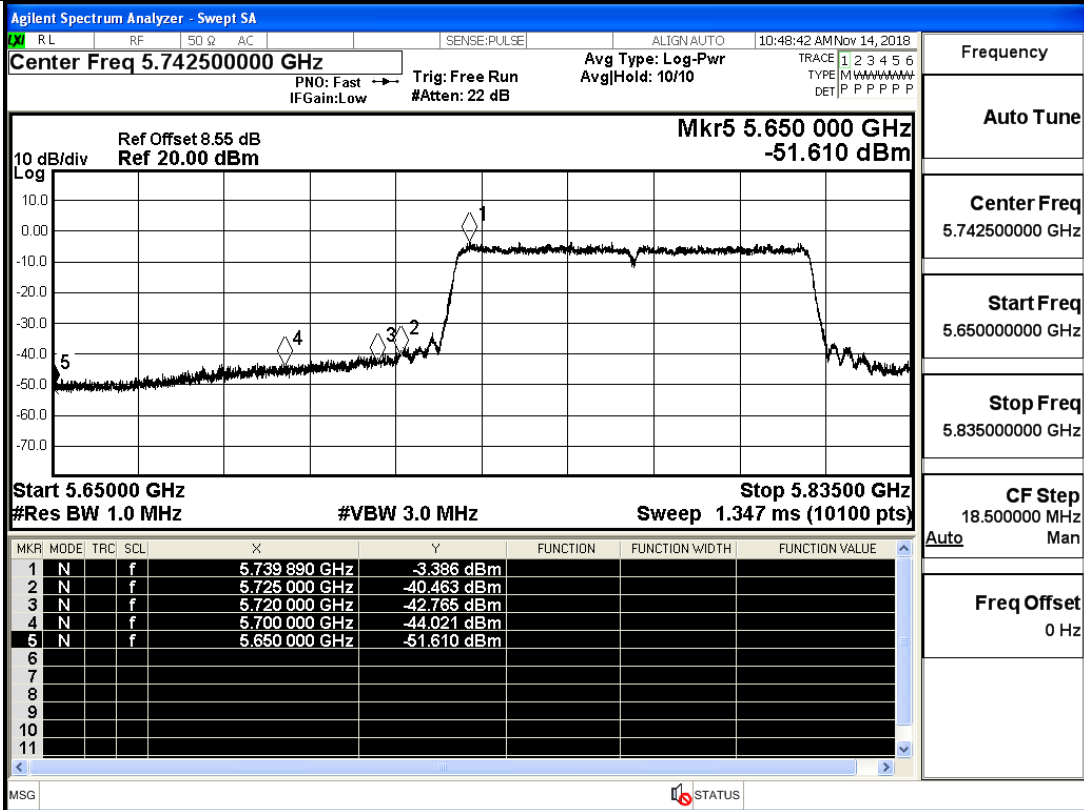


IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz / Peak

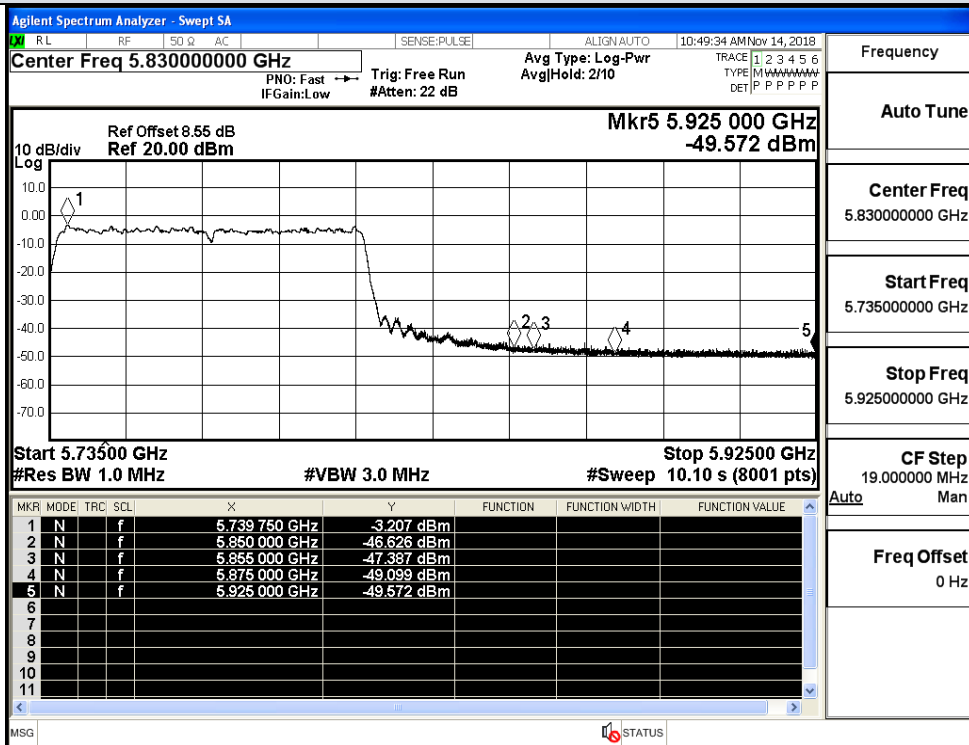


IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz / Peak

Undesirable Emissions Measurement



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



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