

Appendix B

RF Test Data for 5.8G WLAN (Conducted Measurement)

Product Name: wireless transmission system

Trade Mark: Hollyland

Test Model: Mars300

Environmental Conditions

Temperature:	24.5 ° C
Relative Humidity:	52.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Jayden Zhuo

B.1 Duty Cycle

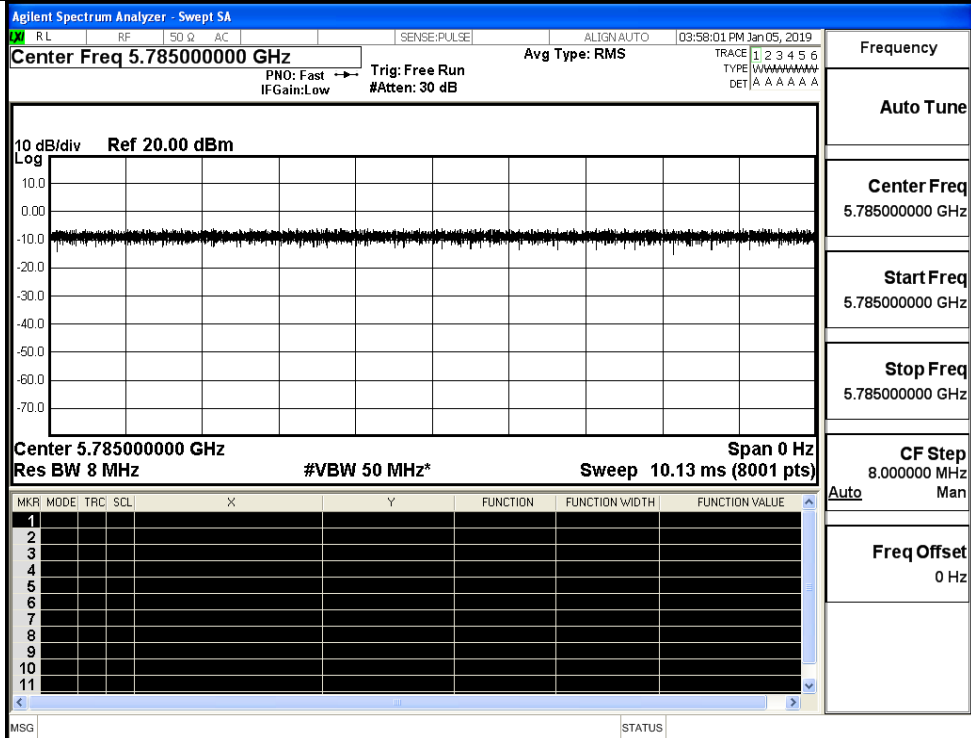
Antenna 0

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	5785	100	0.00	0.01
11N40	5755	100	0.00	0.01

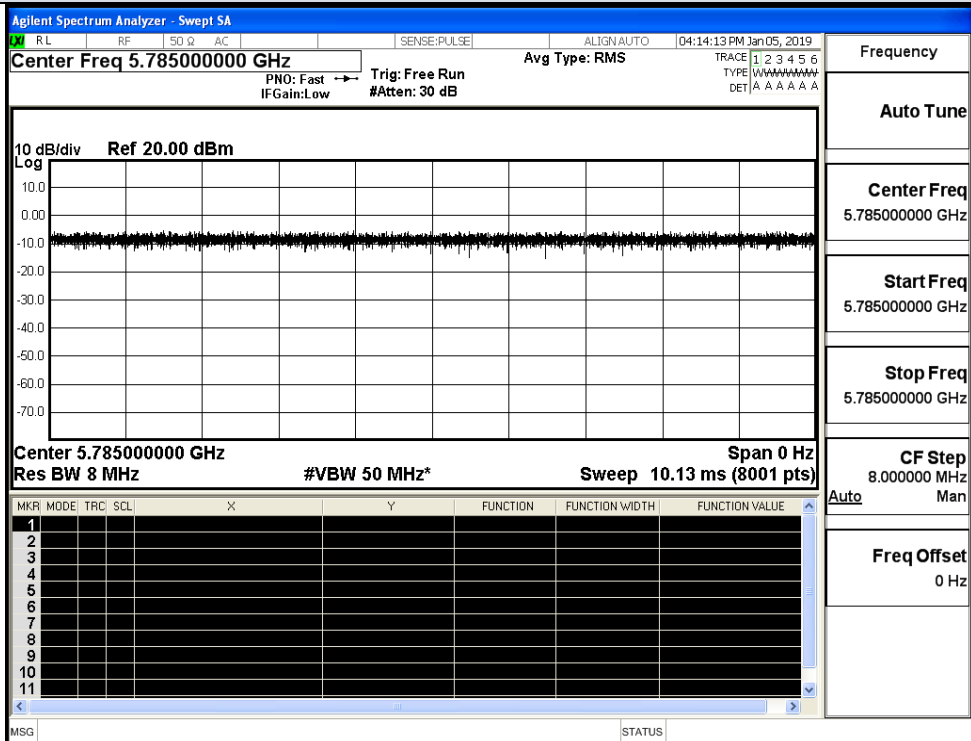
Antenna 1

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	5785	100	0.00	0.01
11N40	5755	100	0.00	0.01

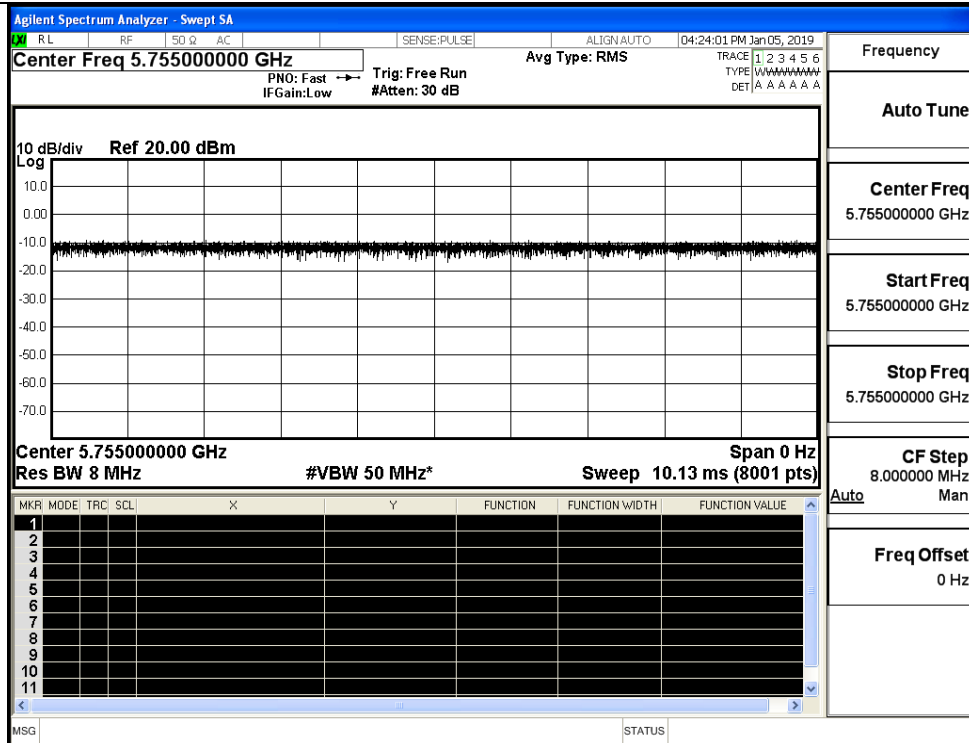
On Time and Duty Cycle_Ant0



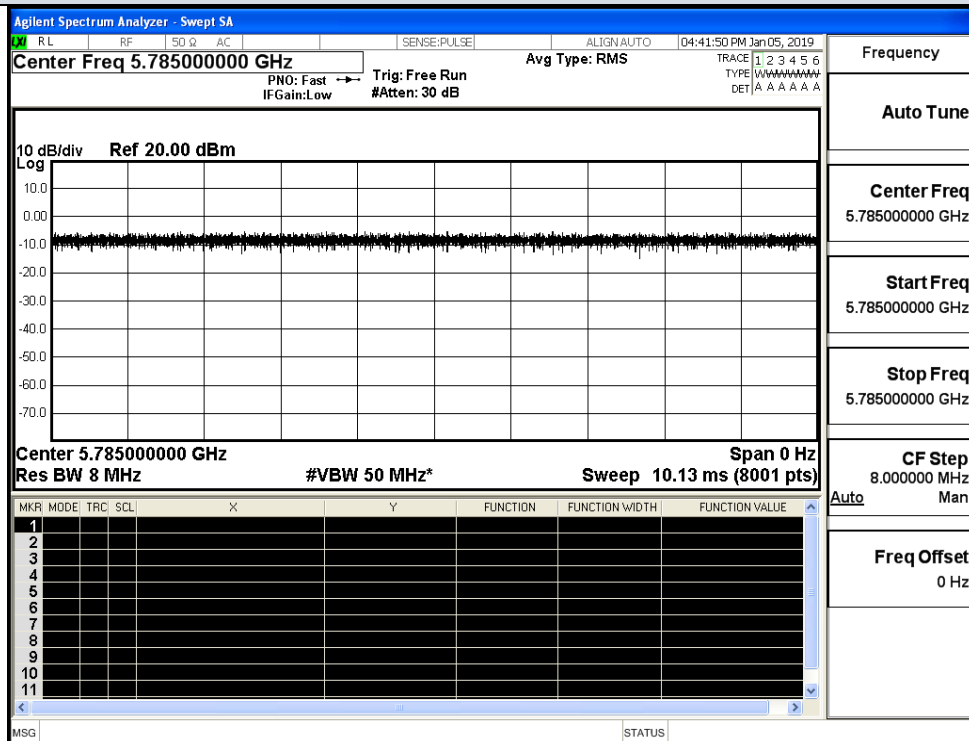
IEEE 802.11a_Ant0

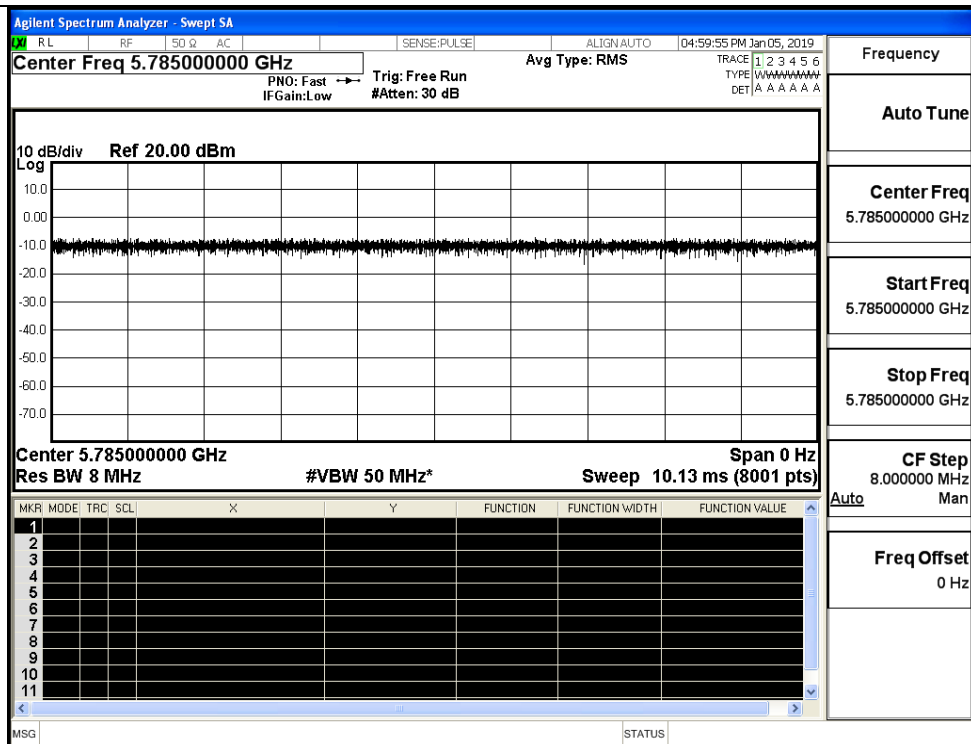


IEEE 802.11n HT20_Ant0

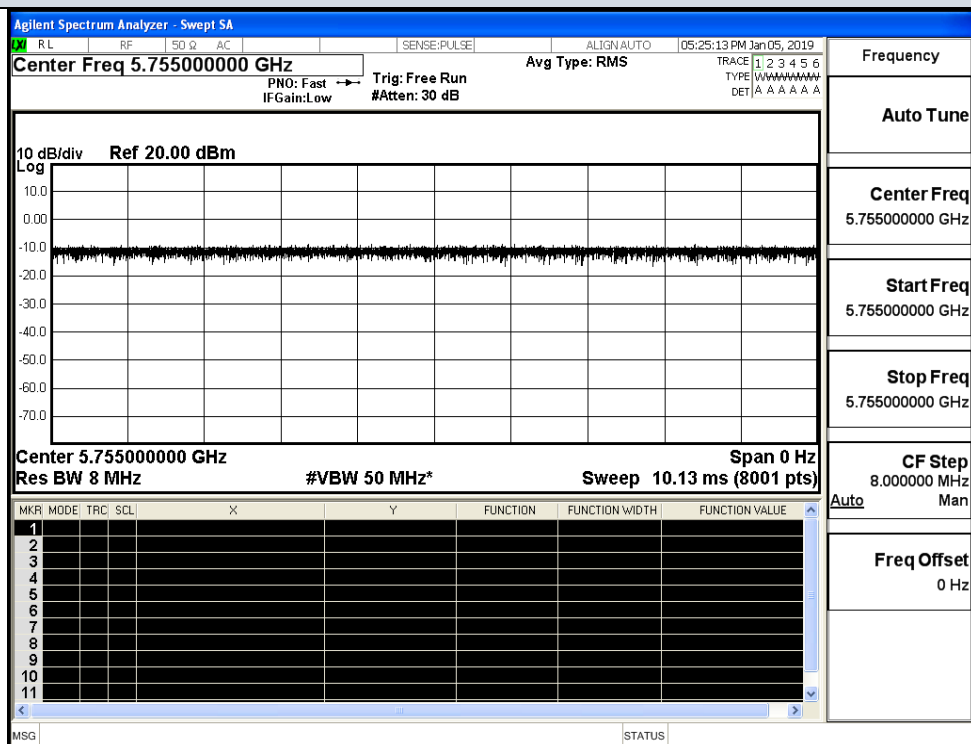


On Time and Duty Cycle_Ant1





IEEE 802.11n HT20_Ant1



IEEE 802.11n HT40_Ant1

B.2 Maximum Conduct Output Power**Antenna 0**

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
IEEE 802.11a	149	5745	16.75	0	16.75	30
	157	5785	16.93	0	16.93	
	165	5825	16.22	0	16.22	
IEEE 802.11n HT20	149	5745	15.81	0	15.81	30
	157	5785	15.41	0	15.41	
	165	5825	15.17	0	15.17	
IEEE 802.11n HT40	151	5755	14.73	0	14.73	30
	159	5795	14.45	0	14.45	

Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
IEEE 802.11a	149	5745	16.63	0	16.63	30
	157	5785	16.86	0	16.86	
	165	5825	16.49	0	16.49	
IEEE 802.11n HT20	149	5745	15.83	0	15.83	30
	157	5785	15.49	0	15.49	
	165	5825	15.28	0	15.28	
IEEE 802.11n HT40	151	5755	14.79	0	14.79	30
	159	5795	14.47	0	14.47	

Antenna 0+Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)			Duty Cycle Factor (dB)	Report Conducted Power (dBm)			Limit (dBm)
			Ant0	Ant1	Sum		Ant0	Ant1	Sum	
11N20	149	5745	15.81	15.83	18.83	0	15.81	15.83	18.83	30
	157	5785	15.41	15.49	18.46	0	15.41	15.49	18.46	
	165	5825	15.17	15.28	18.24	0	15.17	15.28	18.24	
11N40	151	5755	14.73	14.79	17.77	0	14.73	14.79	17.77	30
	159	5795	14.45	14.47	17.47	0	14.45	14.47	17.47	

B.3 Power Spectral Density**Antenna 0**

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	-7.827	0	2.218	-5.609	30
	157	5785	-7.399	0	2.218	-5.181	
	165	5825	-6.186	0	2.218	-3.968	
11N20	149	5745	-6.456	0	2.218	-4.238	30
	157	5785	-6.266	0	2.218	-4.048	
	165	5825	-3.932	0	2.218	-1.714	
11N40	151	5755	-9.990	0	2.218	-7.772	30
	159	5795	-10.348	0	2.218	-8.130	

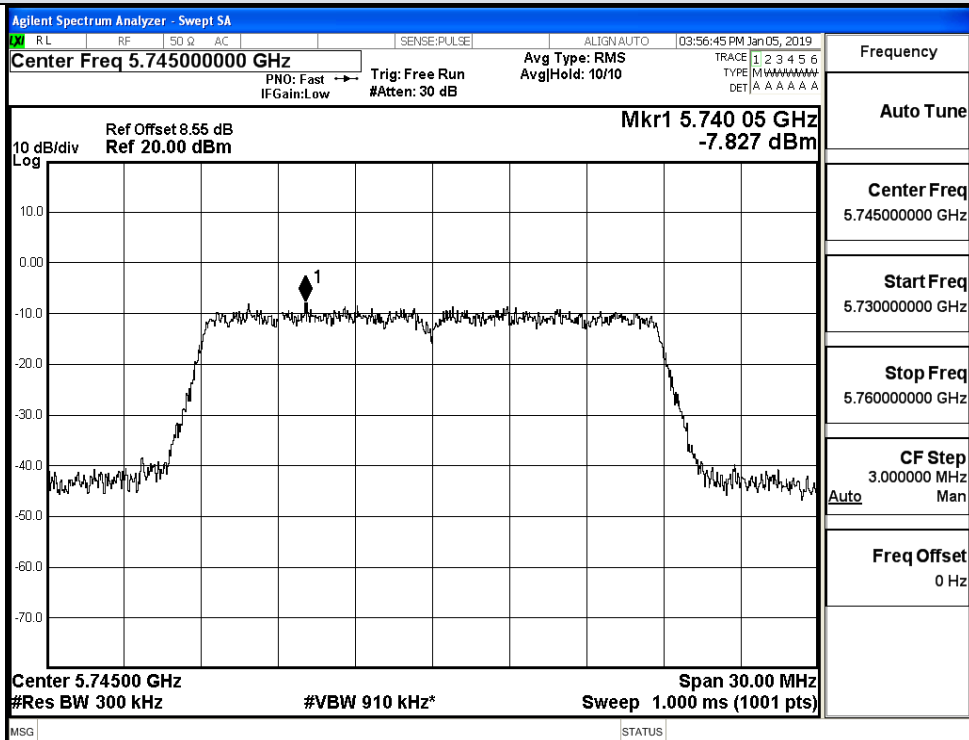
Antenna 1

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	-5.463	0	2.218	-3.245	30
	157	5785	-6.397	0	2.218	-4.179	
	165	5825	-6.759	0	2.218	-4.541	
11N20	149	5745	-5.875	0	2.218	-3.657	30
	157	5785	-7.931	0	2.218	-5.713	
	165	5825	-8.502	0	2.218	-6.284	
11N40	151	5755	-9.476	0	2.218	-7.258	30
	159	5795	-9.204	0	2.218	-6.986	

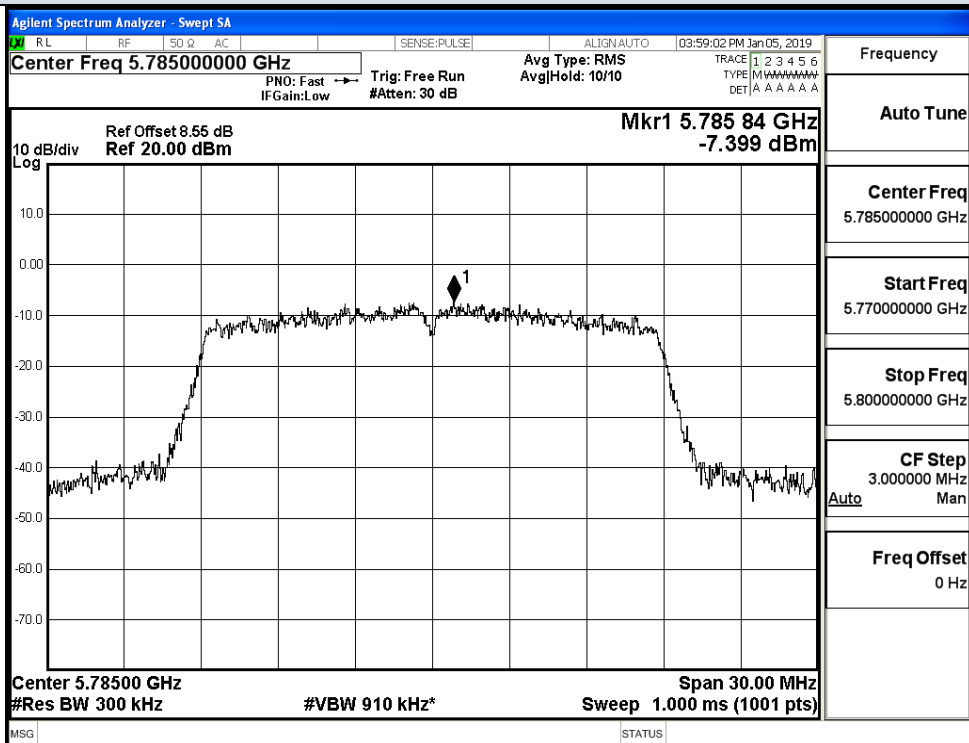
Antenna 0+Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)			Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)			Limit (dBm/500 KHz)
			Ant0	Ant1	Sum			Ant0	Ant1	Sum	
11N20	149	5745	-6.456	-5.875	-3.145	0	2.218	-4.238	-3.657	-0.927	30
	157	5785	-6.266	-7.931	-4.009	0	2.218	-4.048	-5.713	-1.791	
	165	5825	-3.932	-8.502	-2.631	0	2.218	-1.714	-6.284	-0.413	
11N40	151	5755	-9.990	-9.476	-6.715	0	2.218	-7.772	-7.258	-4.497	30
	159	5795	-10.348	-9.204	-6.728	0	2.218	-8.130	-6.986	-4.510	

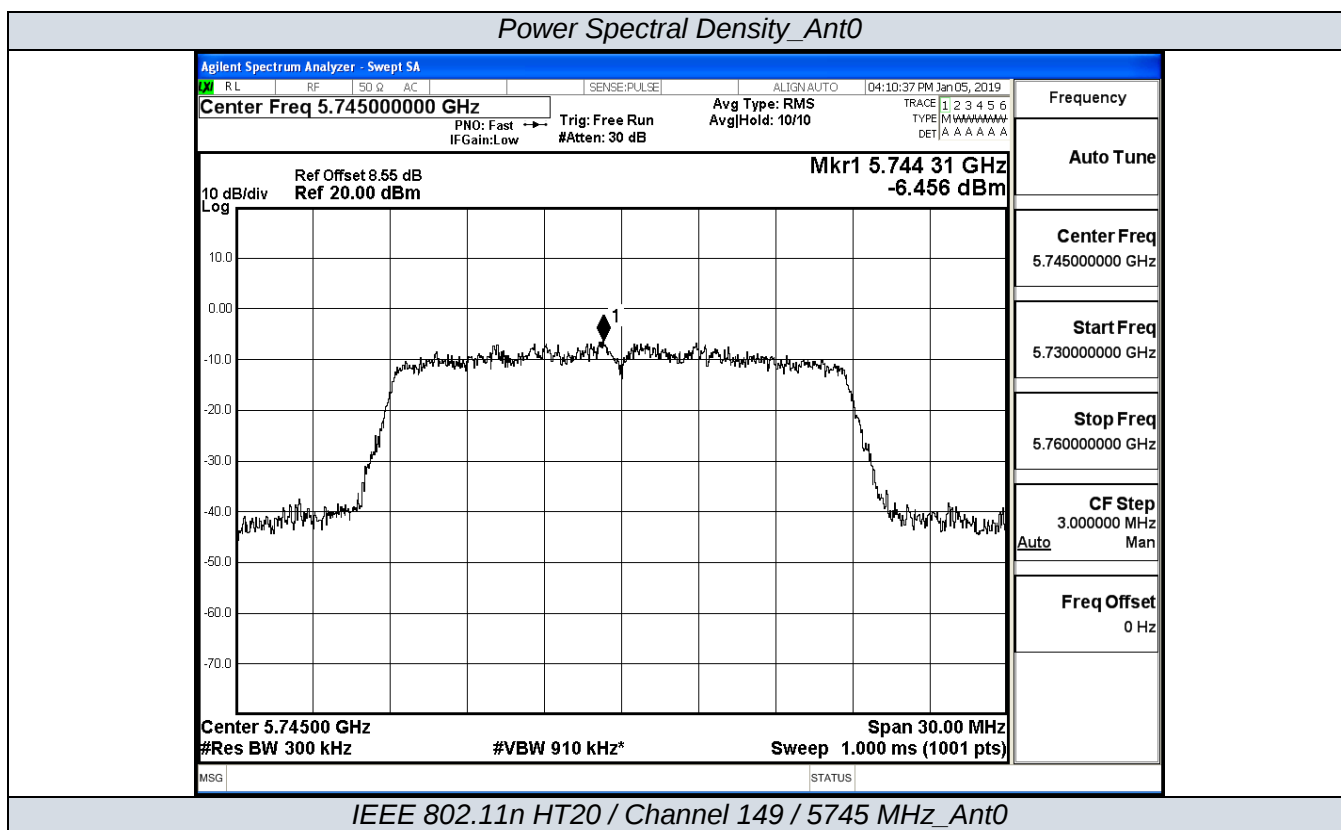
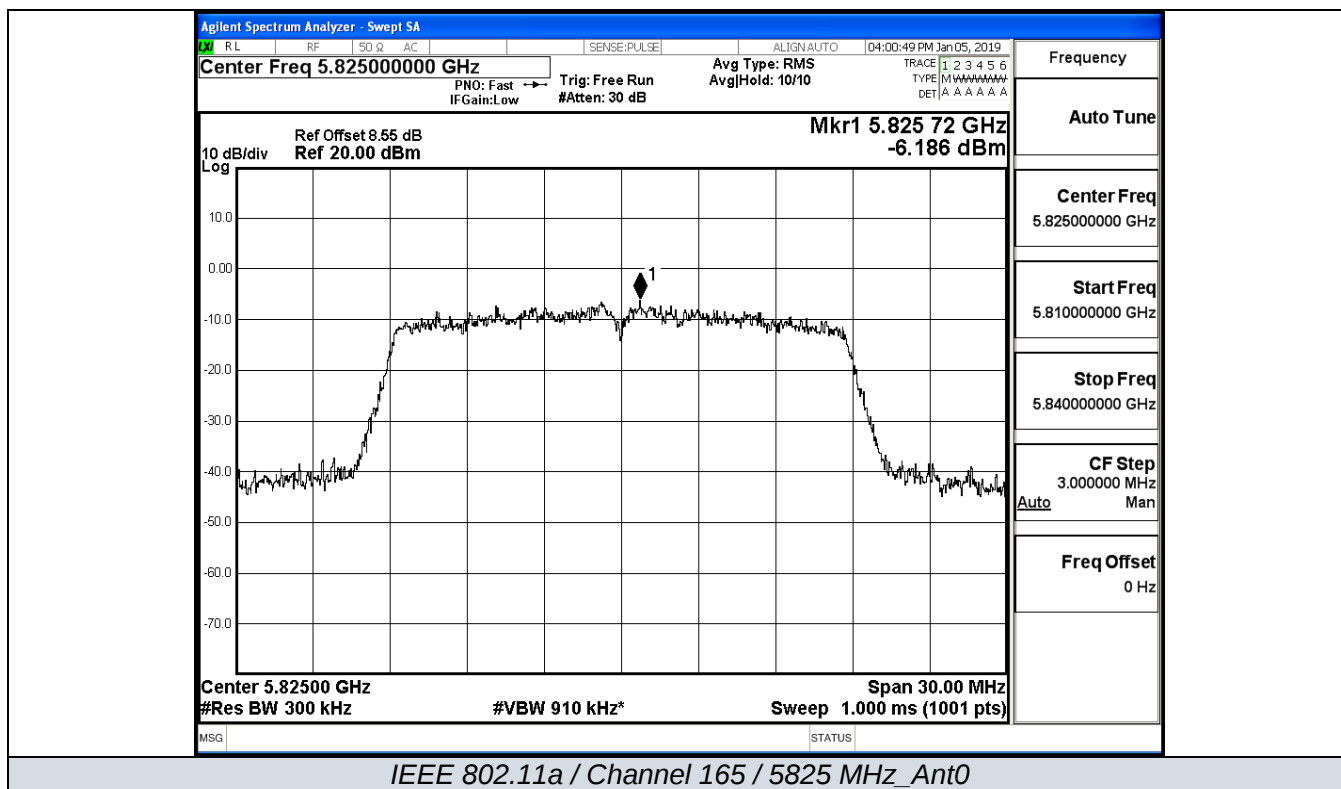
Power Spectral Density_Ant0

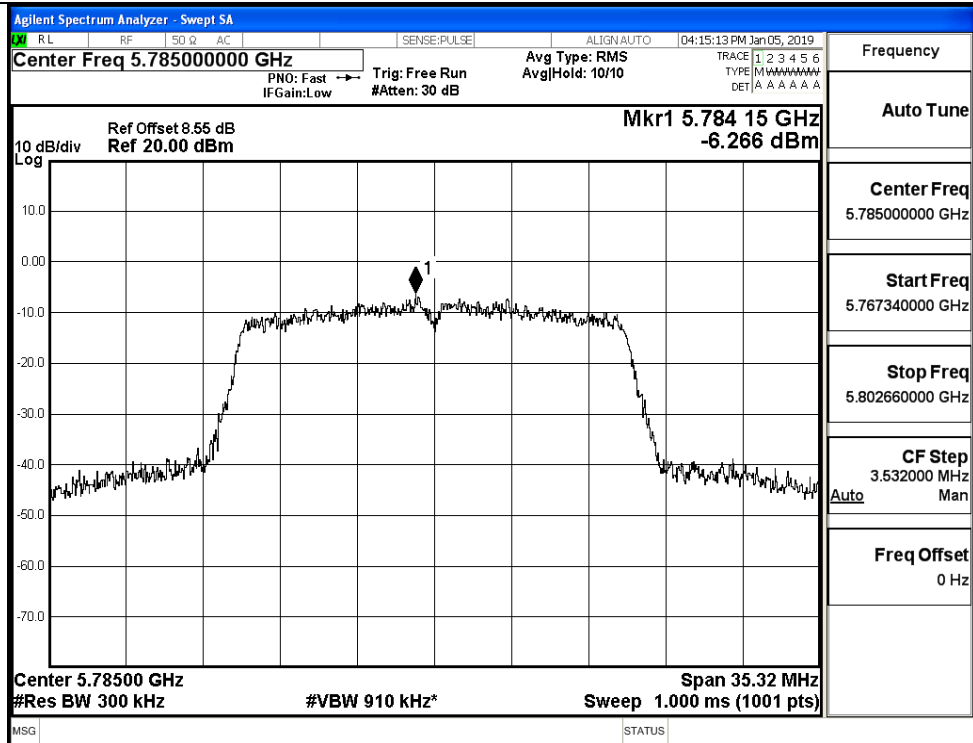


IEEE 802.11a / Channel 149 / 5745 MHz_Ant0

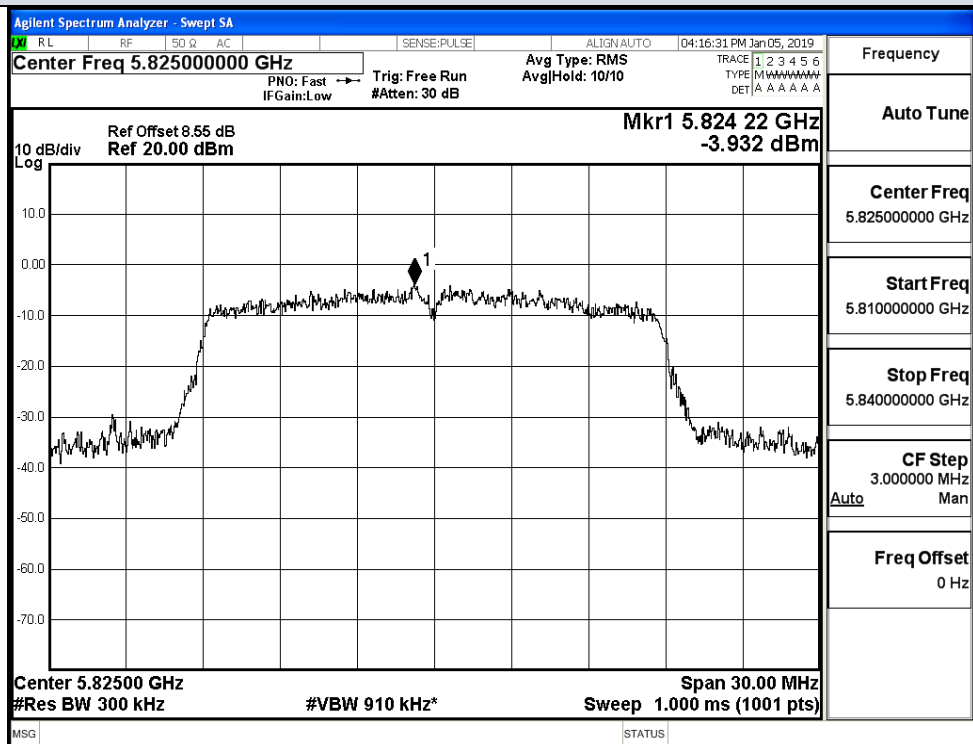


IEEE 802.11a / Channel 157 / 5785 MHz_Ant0



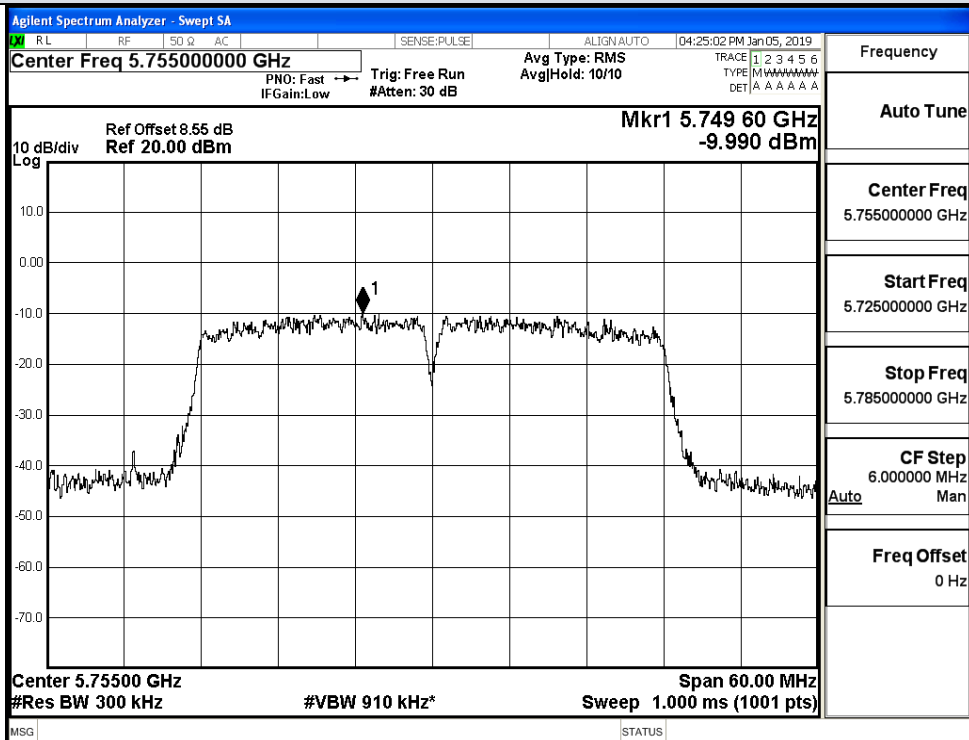


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant0

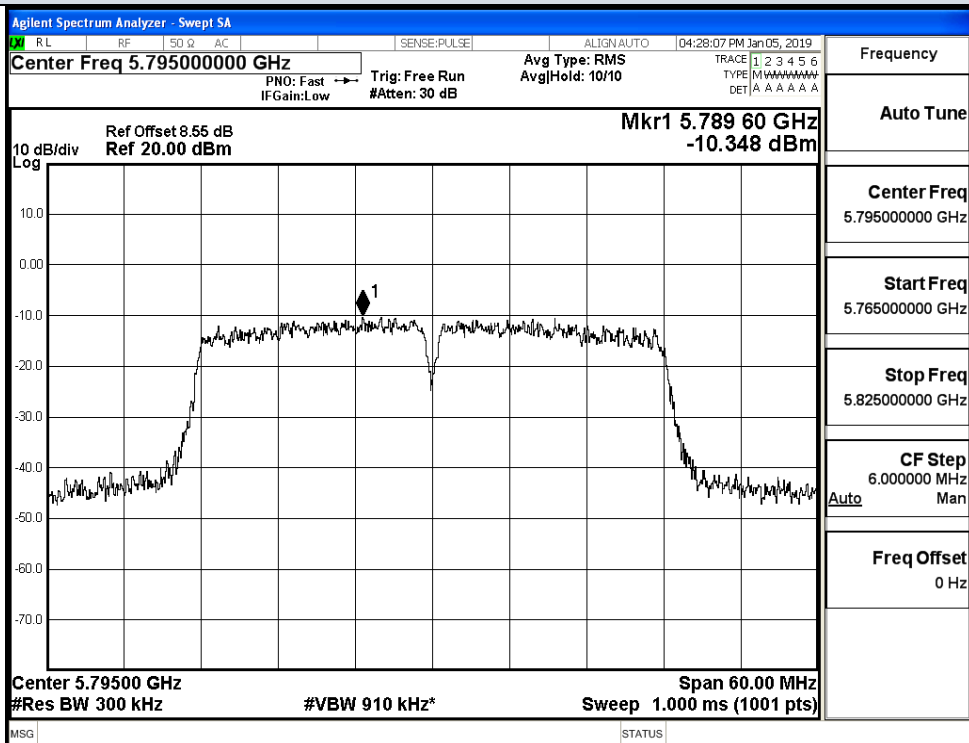


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant0

Power Spectral Density_Ant0

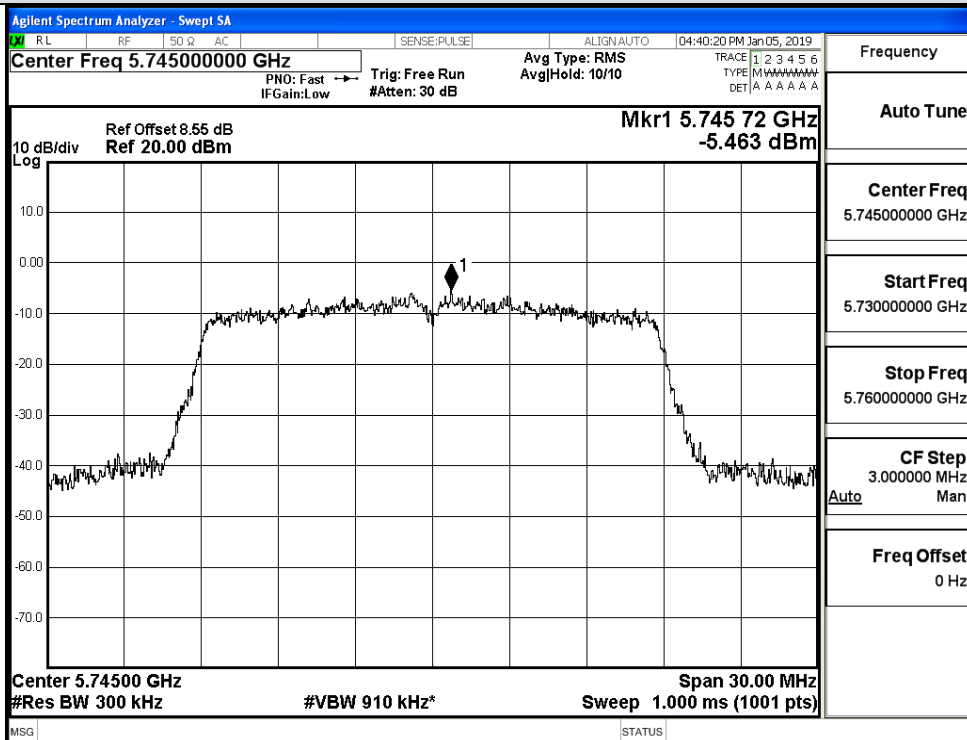


IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant0

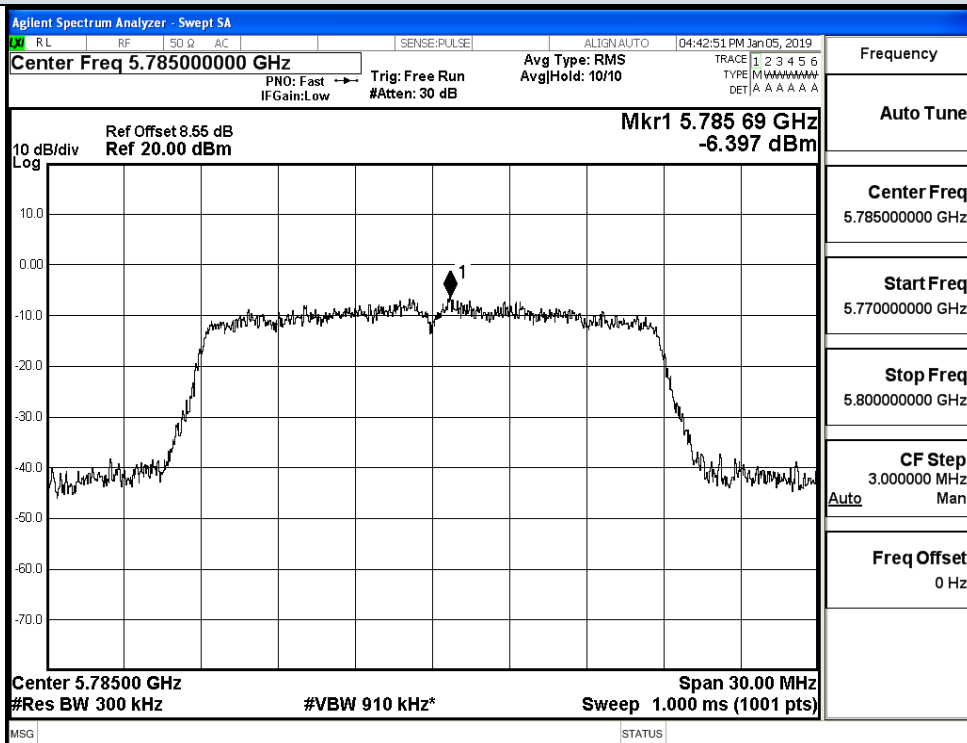


IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

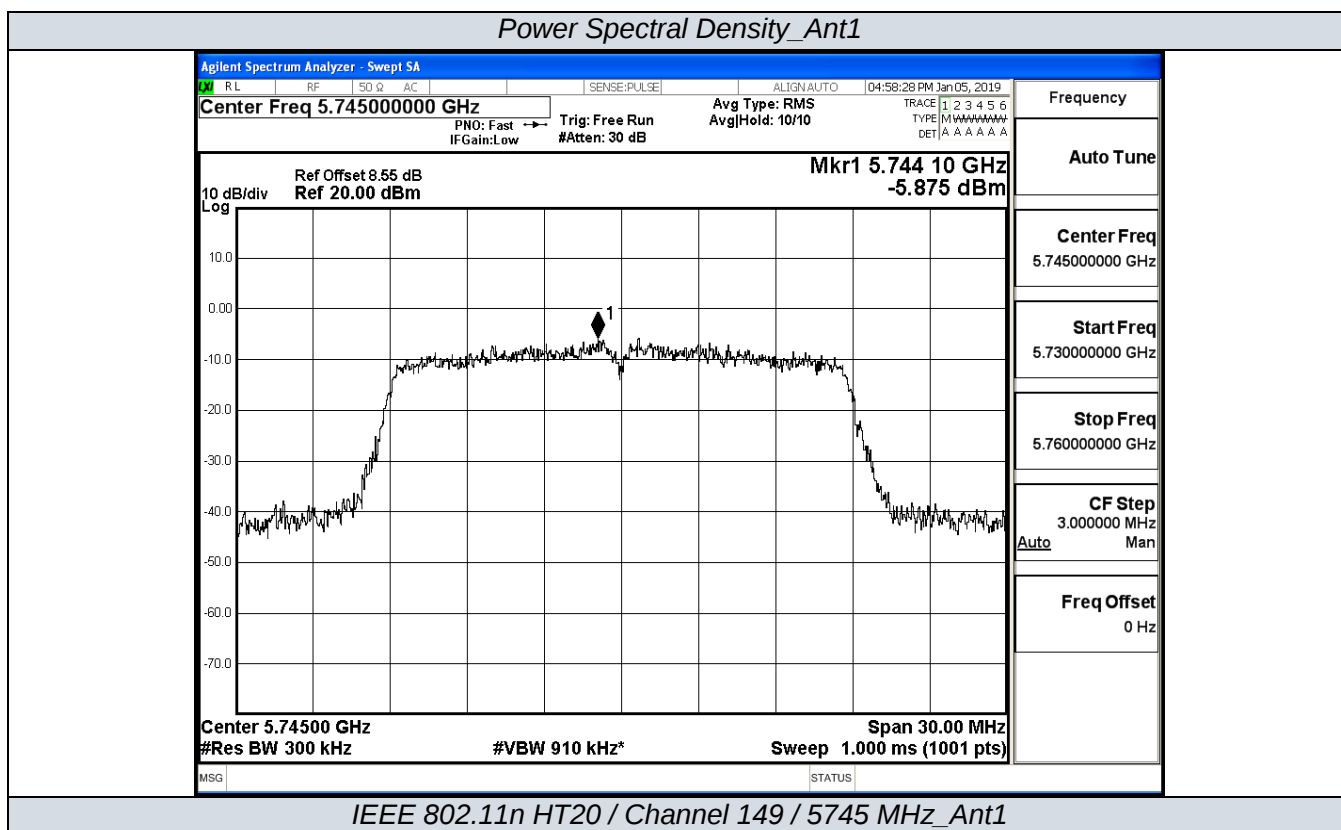
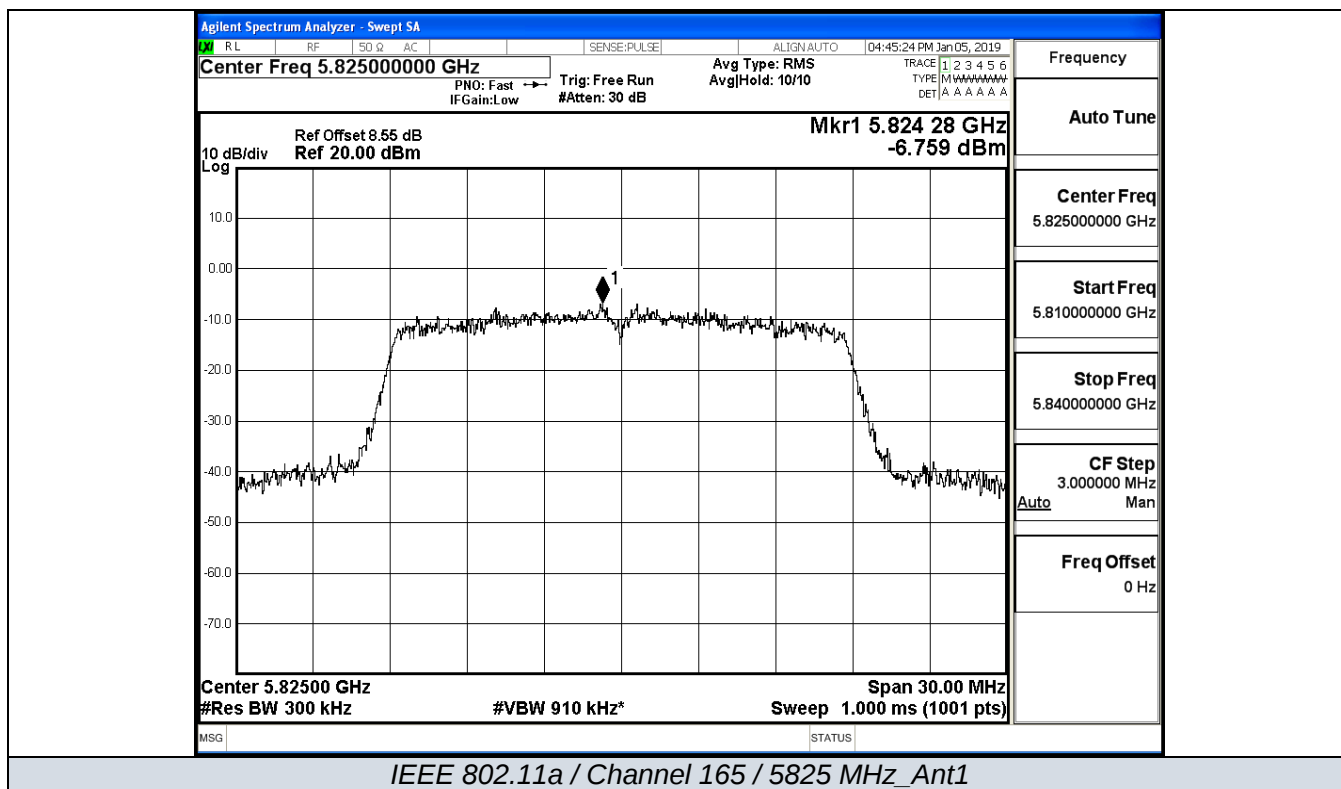
Power Spectral Density_Ant1

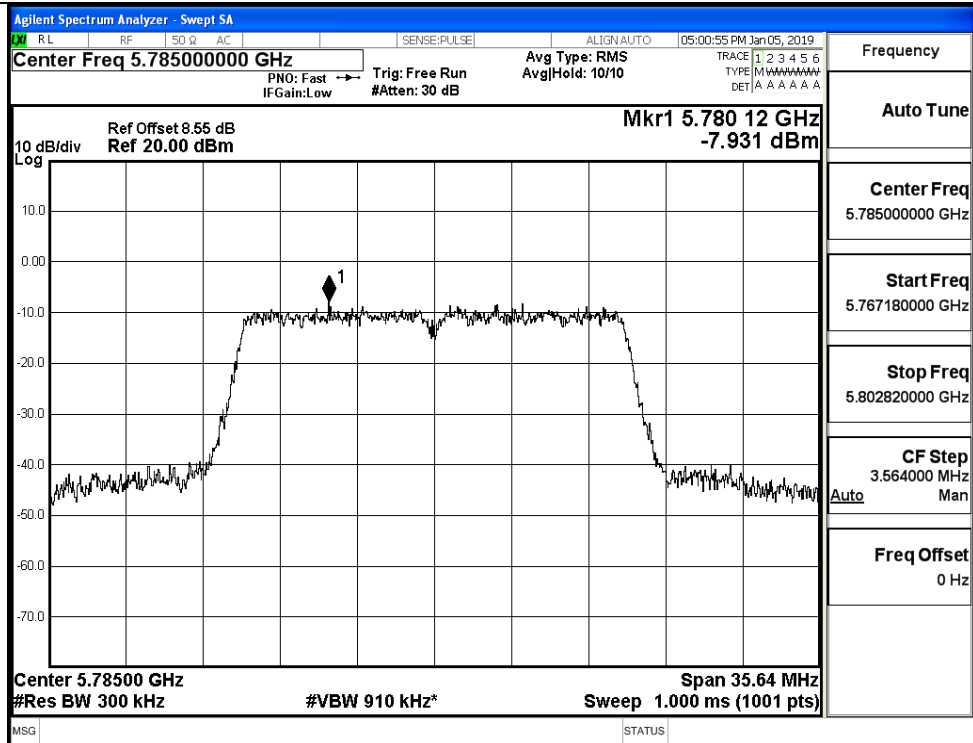


IEEE 802.11a / Channel 149 / 5745 MHz_Ant1

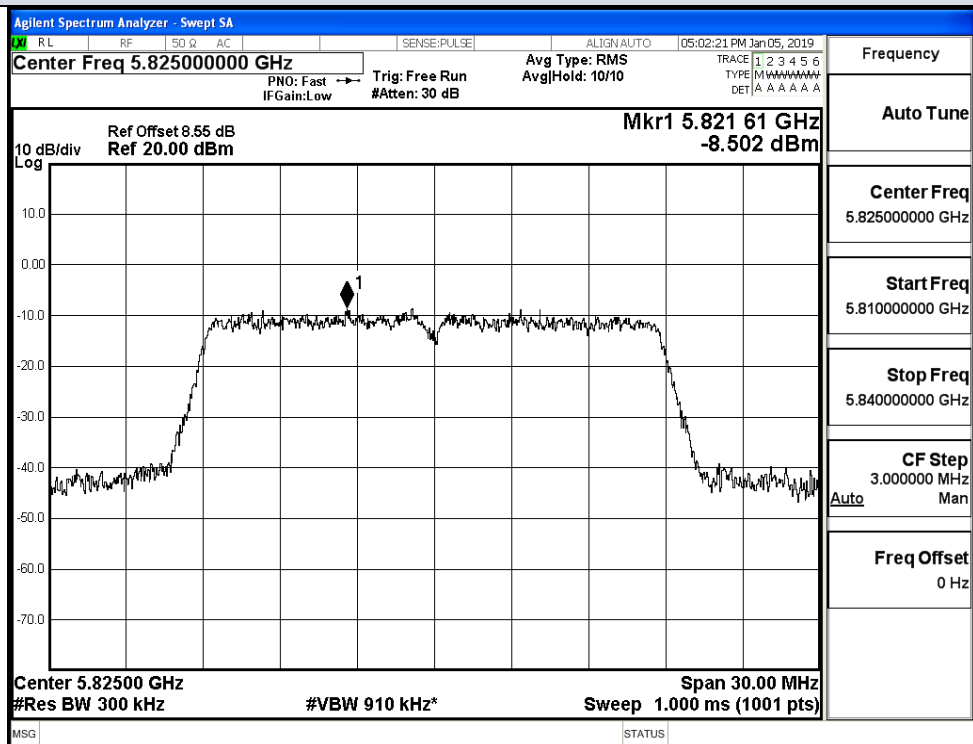


IEEE 802.11a / Channel 157 / 5785 MHz_Ant1



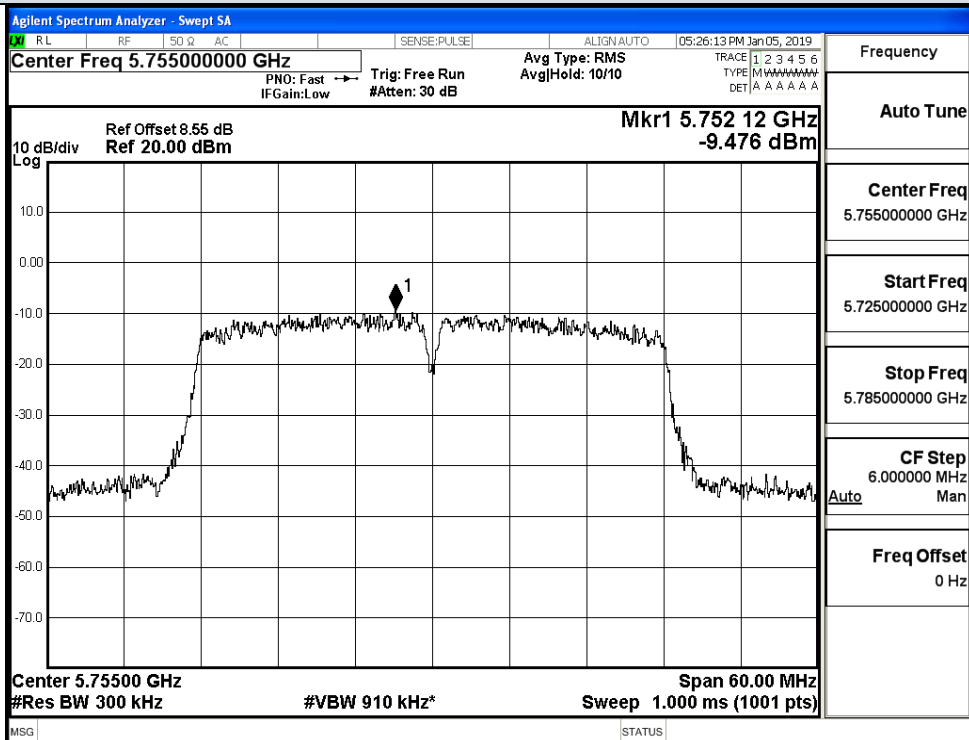


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant1

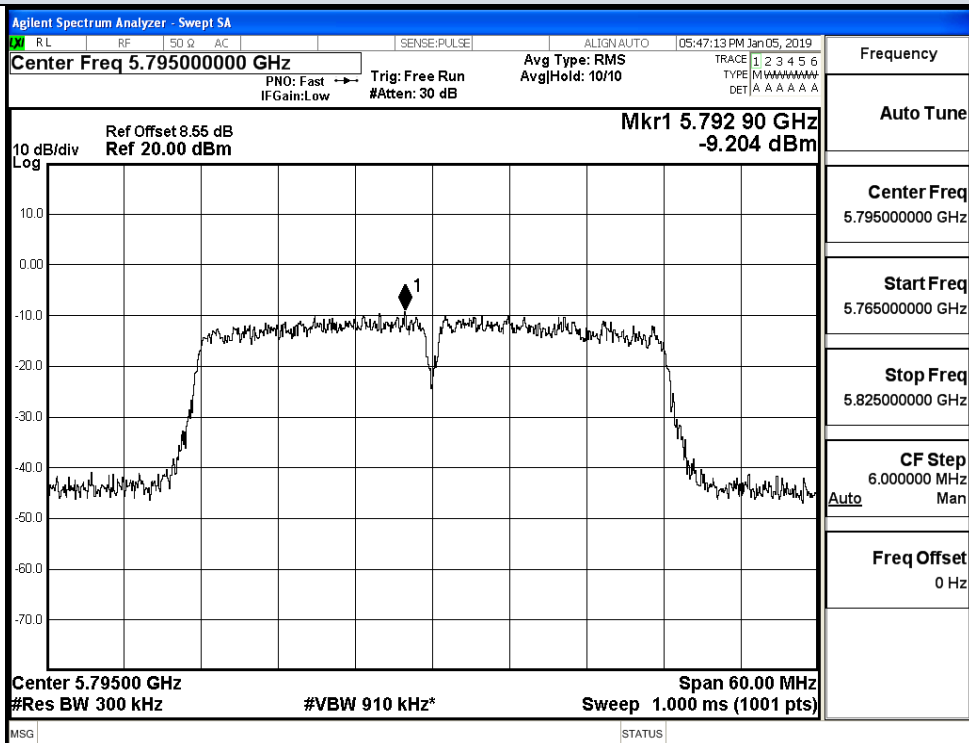


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant1

Power Spectral Density_Ant1



IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant1



IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant1

B.4 Emission Bandwidth

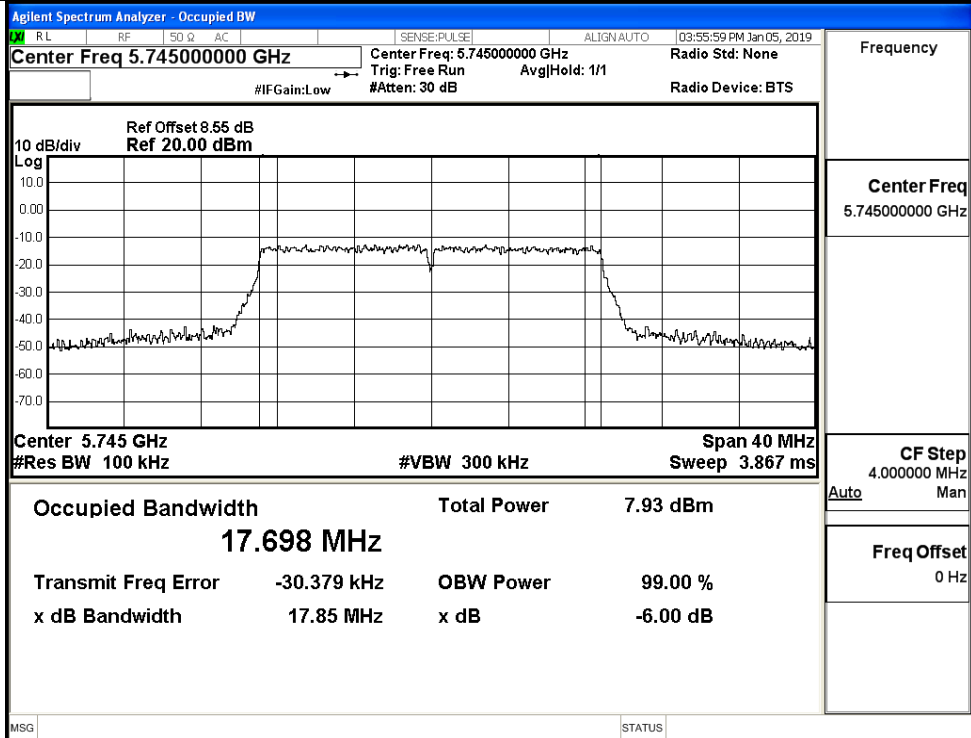
Antenna 0

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
IEEE 802.11a	149	5745	17.850	>=0.5
	157	5785	17.650	
	165	5825	17.640	
IEEE 802.11n HT20	149	5745	17.630	>=0.5
	157	5785	17.660	
	165	5825	17.630	
IEEE 802.11n HT40	151	5755	36.190	>=0.5
	159	5795	36.340	

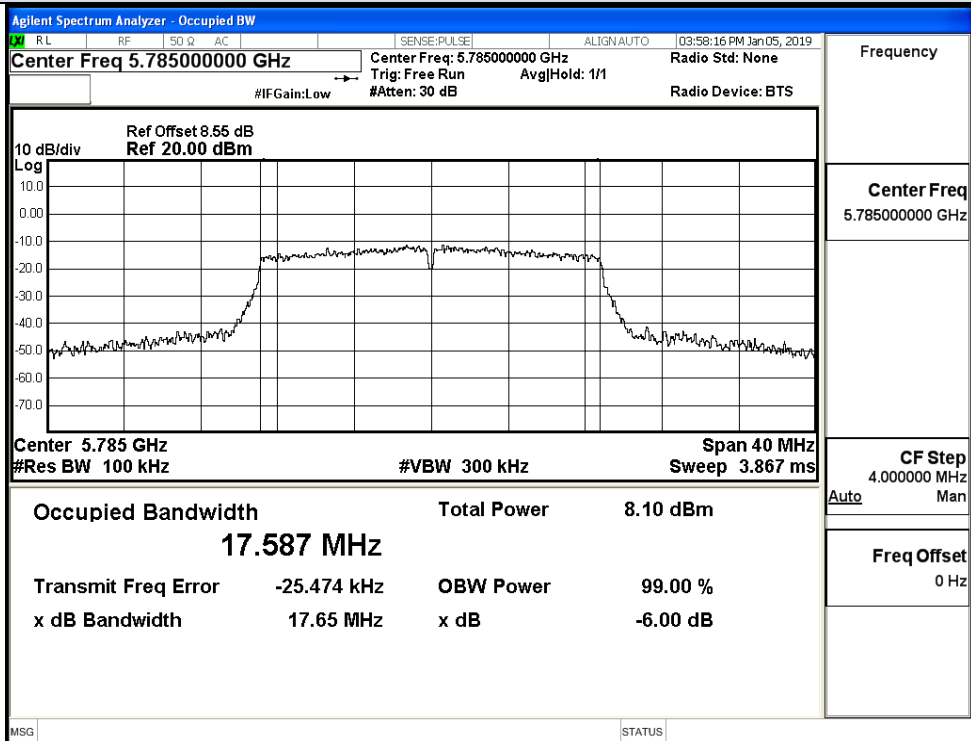
Antenna 1

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
IEEE 802.11a	149	5745	17.610	>=0.5
	157	5785	17.670	
	165	5825	17.650	
IEEE 802.11n HT20	149	5745	17.640	>=0.5
	157	5785	17.820	
	165	5825	17.790	
IEEE 802.11n HT40	151	5755	36.420	>=0.5
	159	5795	36.290	

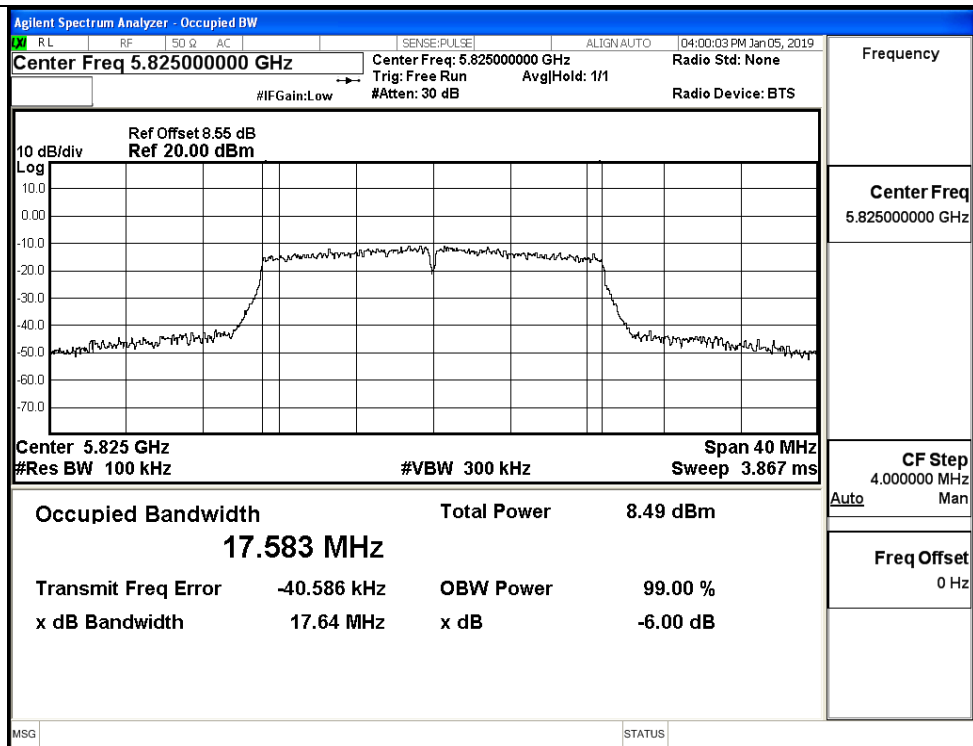
6dB Bandwidth_Ant0



IEEE 802.11a / Channel 149 / 5745 MHz_Ant0

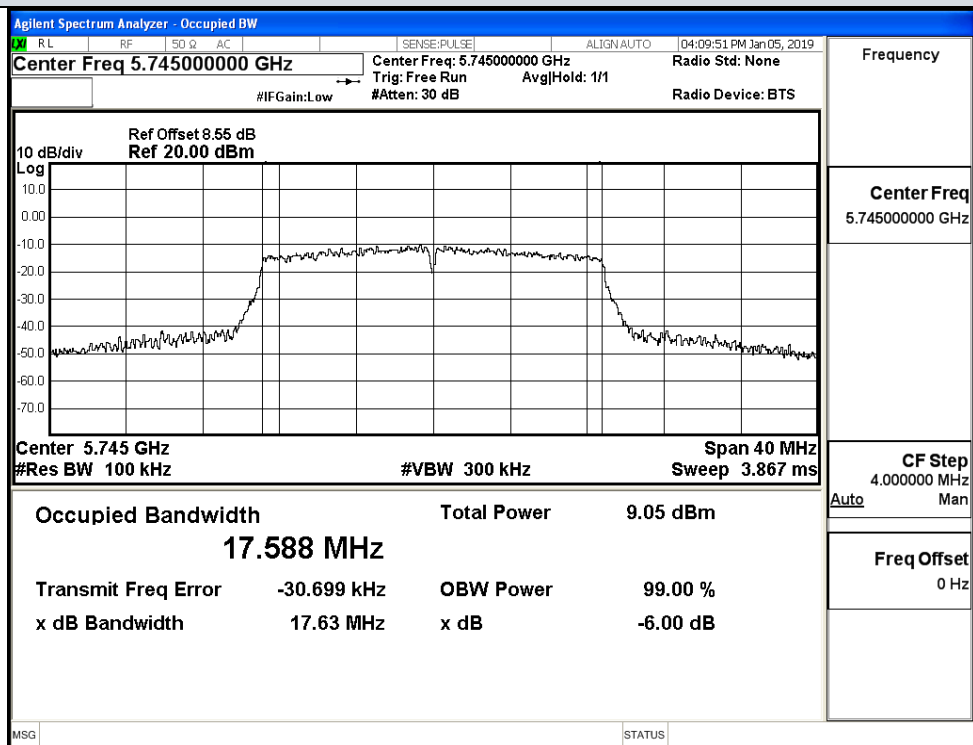


IEEE 802.11a / Channel 157 / 5785 MHz_Ant0

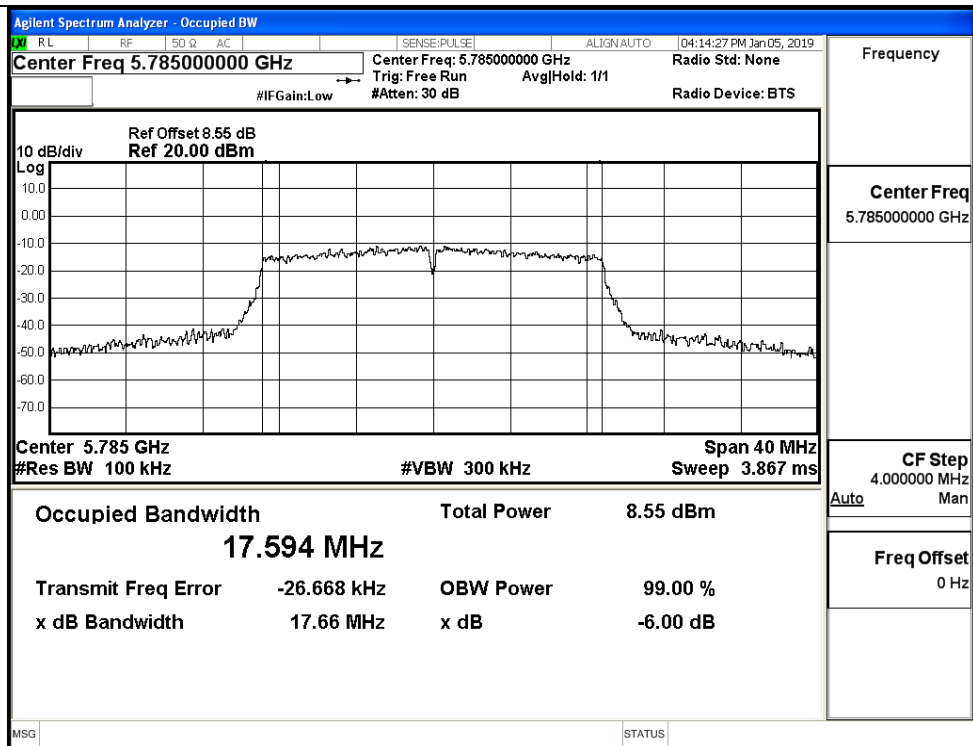


IEEE 802.11a / Channel 165 / 5825 MHz_Ant0

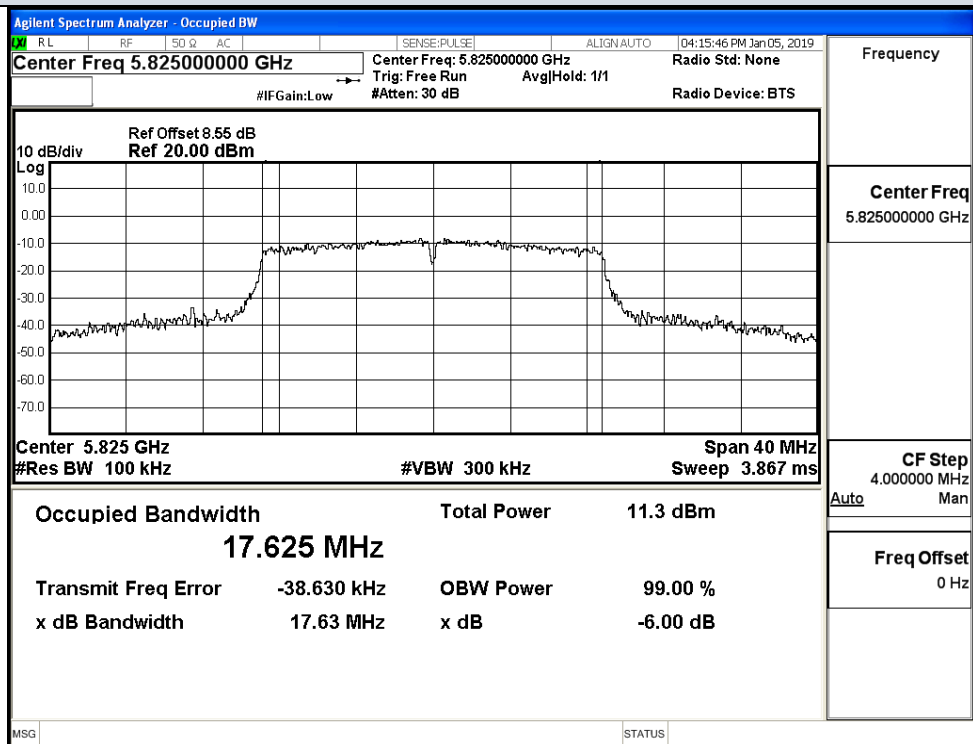
6dB Bandwidth_Ant0



IEEE 802.11n HT20 / Channel 149 / 5745 MHz_Ant0

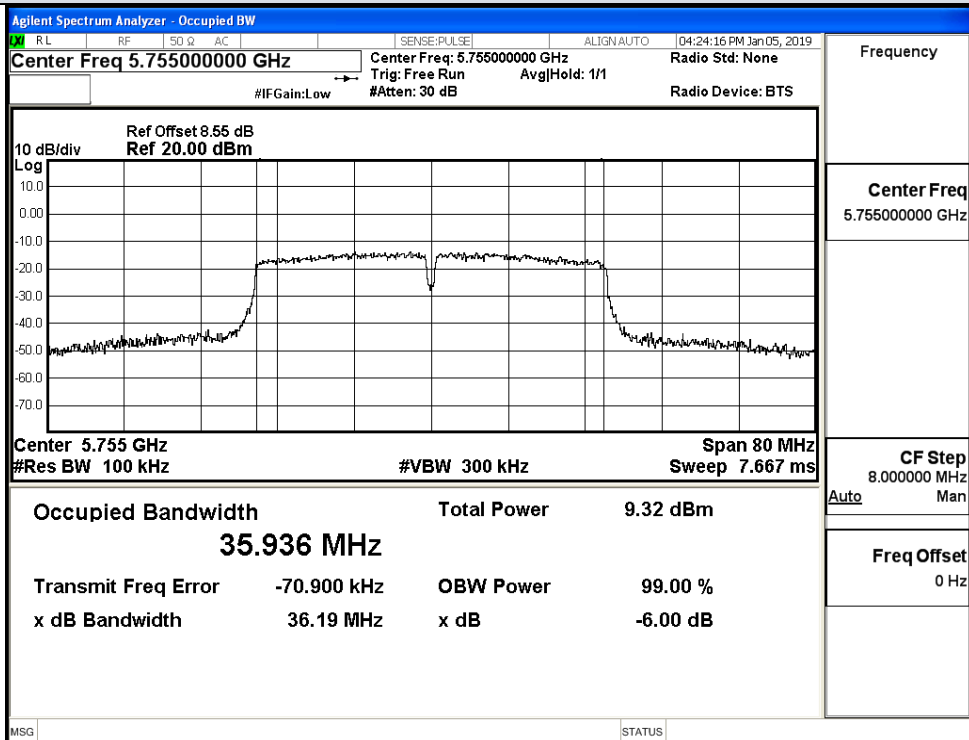


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant0

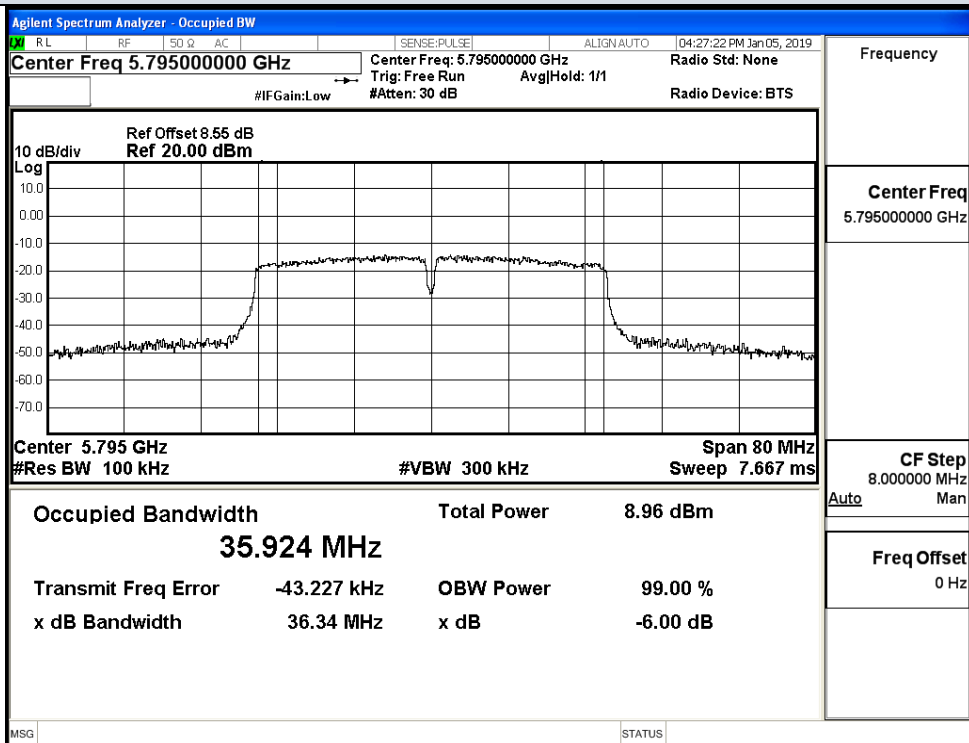


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant0

6dB Bandwidth_Ant0

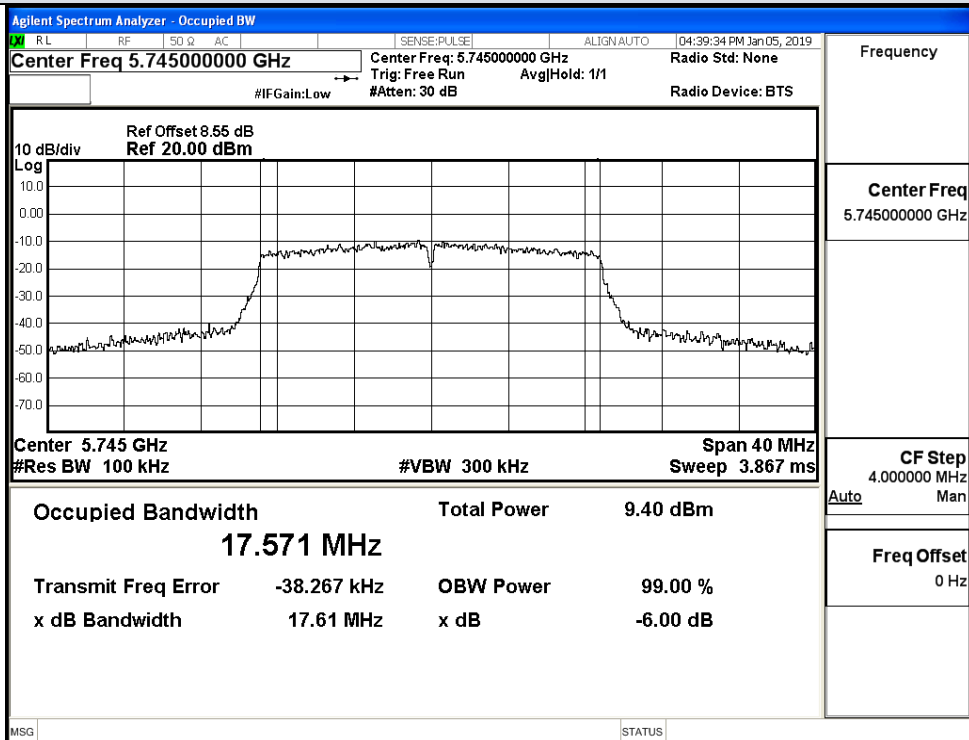


IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant0

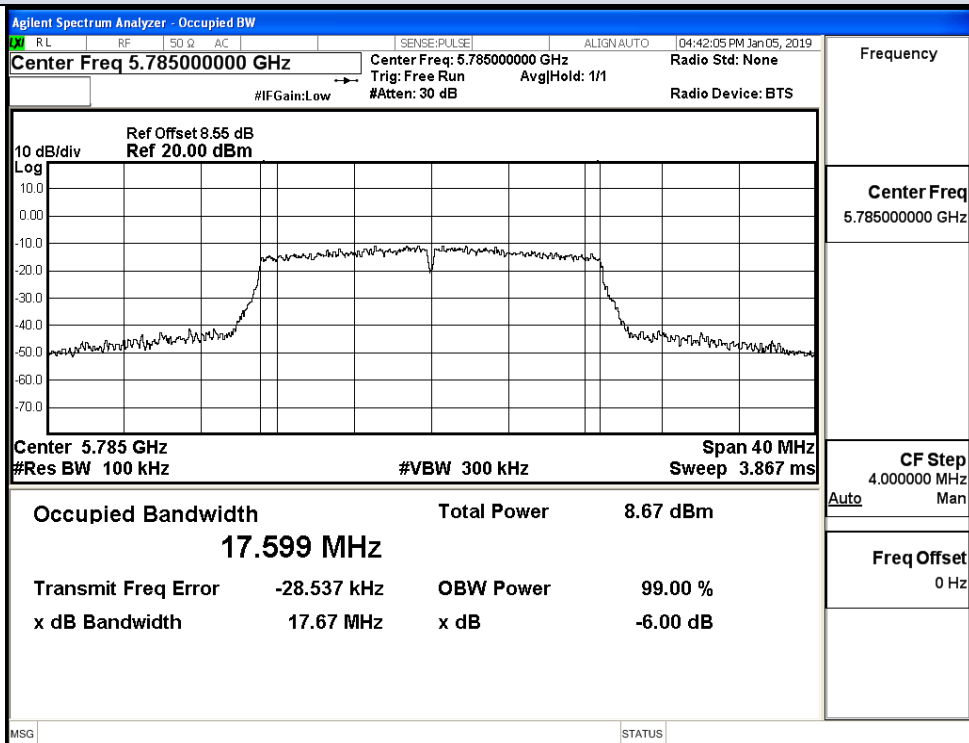


IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

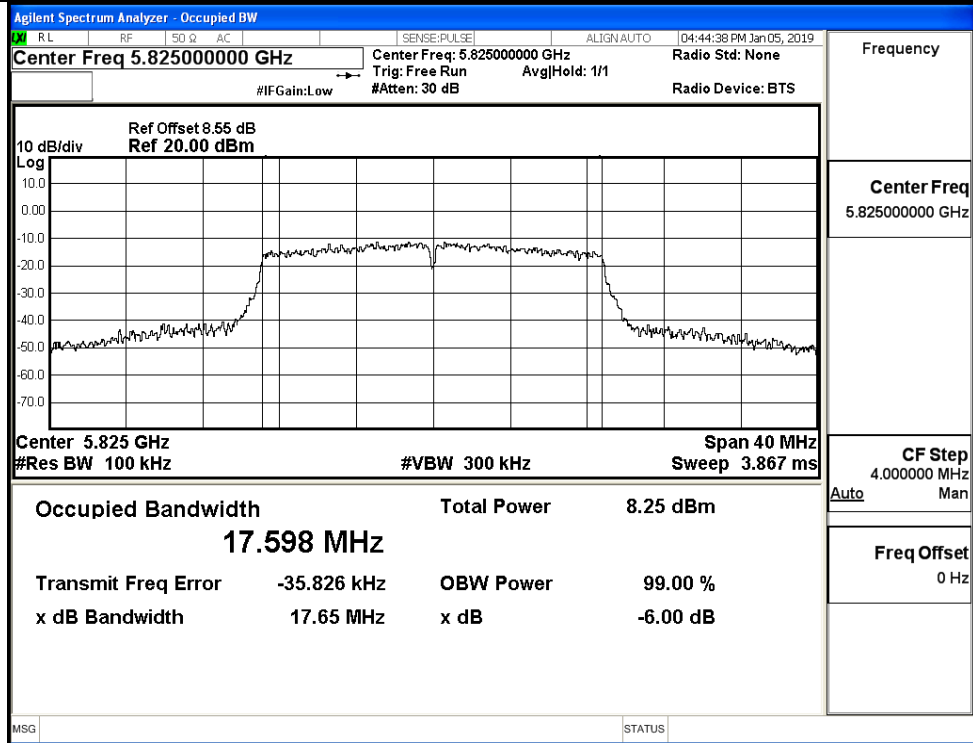
6dB Bandwidth_Ant1



IEEE 802.11a / Channel 149 / 5745 MHz_Ant1

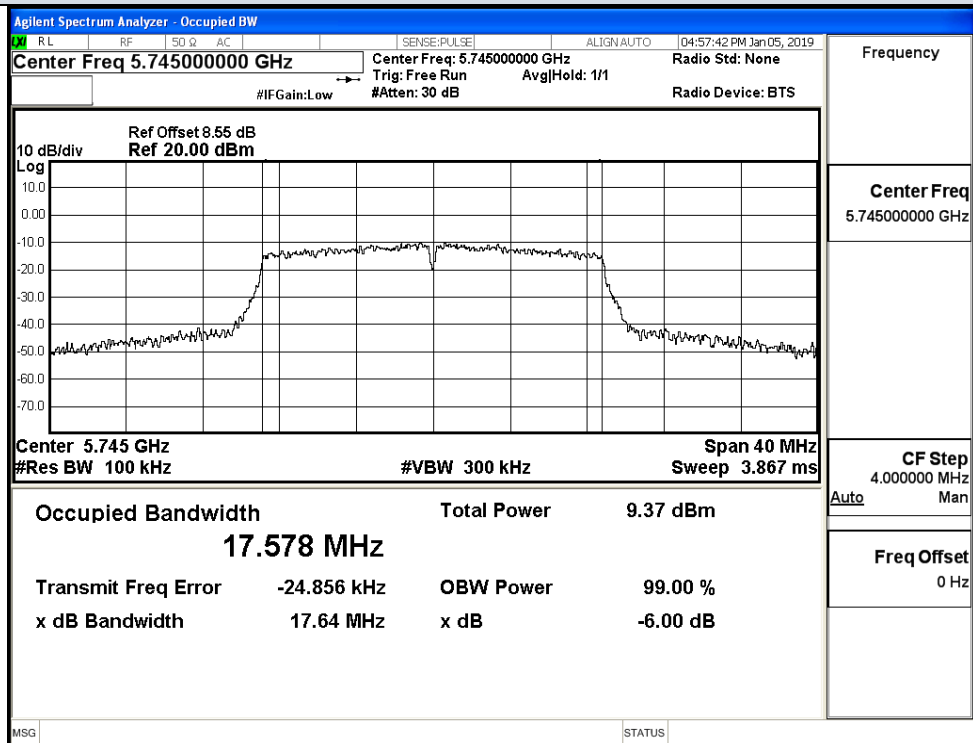


IEEE 802.11a / Channel 157 / 5785 MHz_Ant1

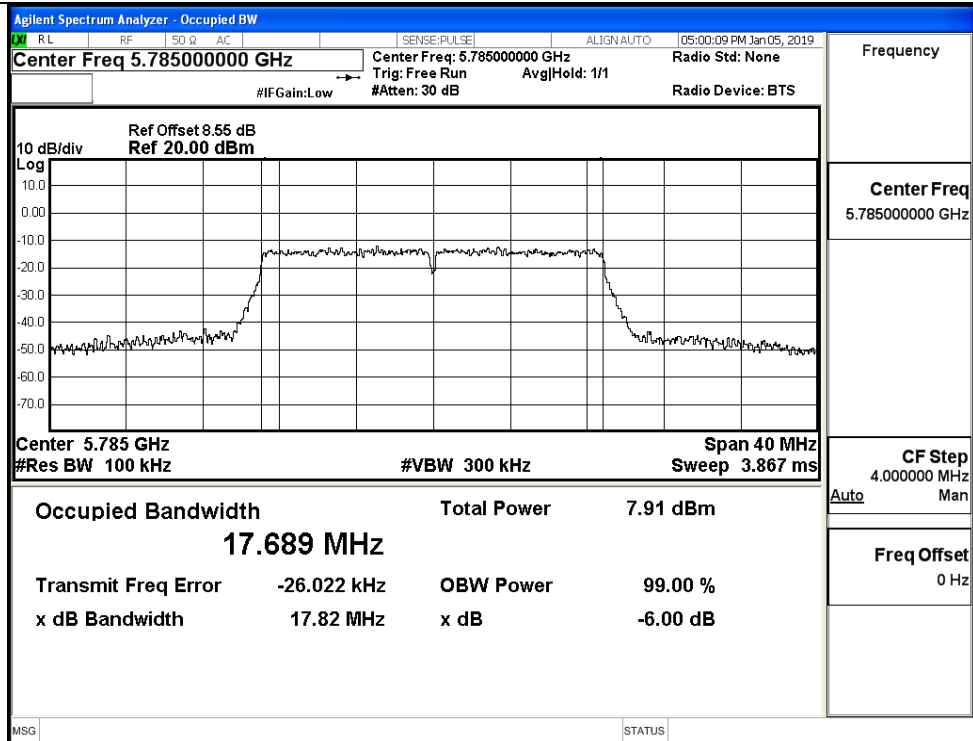


IEEE 802.11a / Channel 165 / 5825 MHz_Ant1

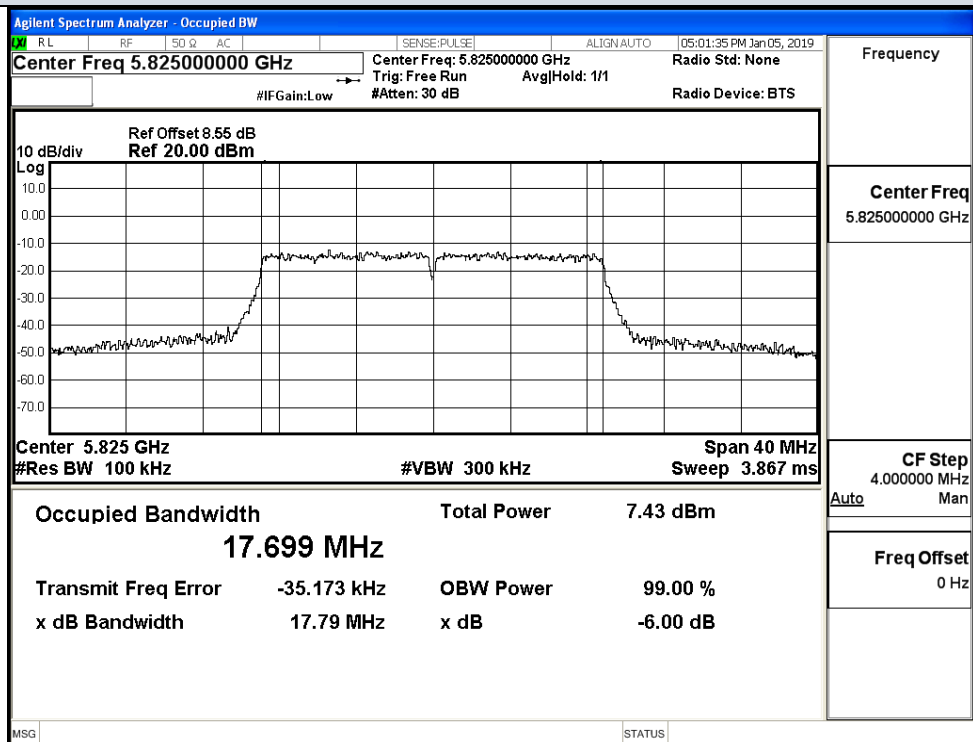
6dB Bandwidth_Ant1



IEEE 802.11n HT20 / Channel 149 / 5745 MHz_Ant1

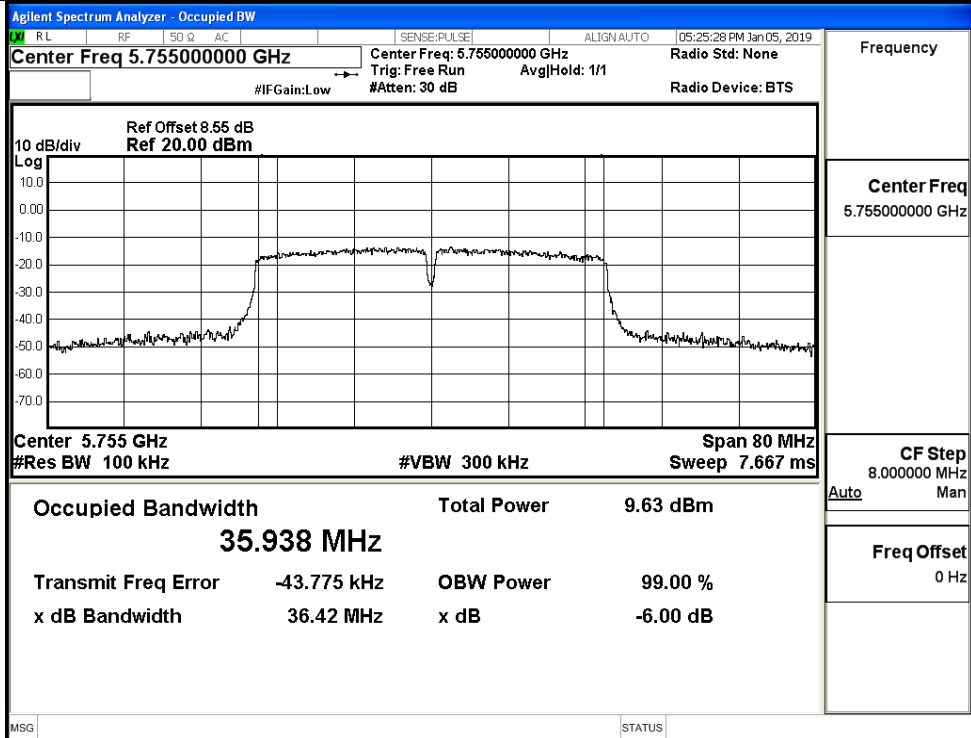


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant1

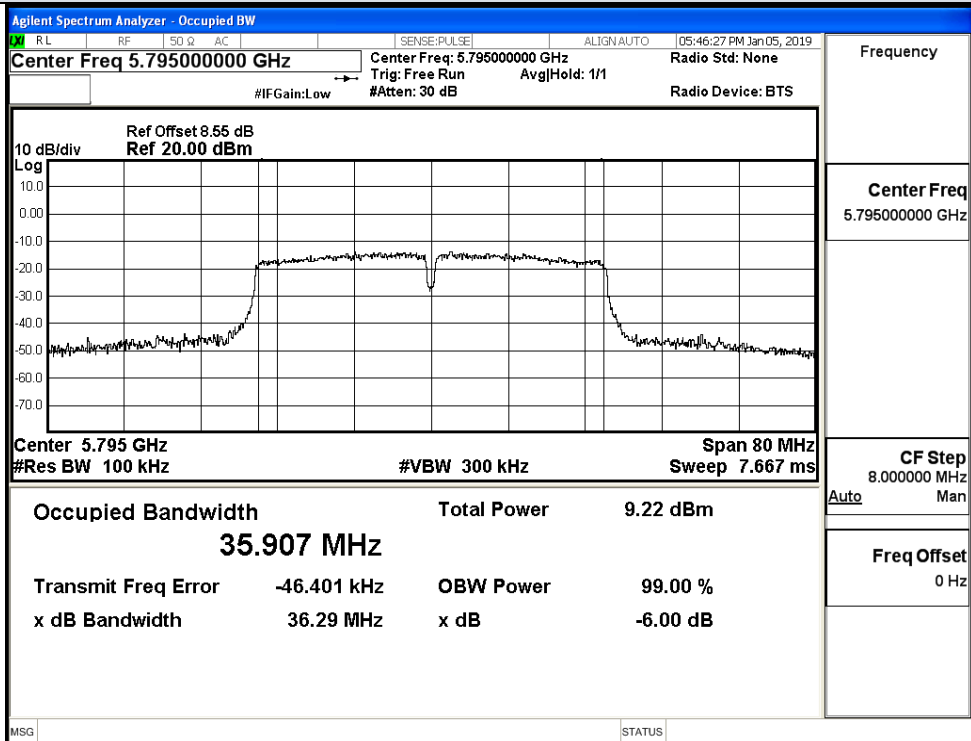


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant1

6dB Bandwidth_Ant1



IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant1



IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant1

B.5 Undesirable Emissions Measurement

Antenna 0

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
11A	149	5650.0	-49.791	2.00	-47.791	Peak	-27.0
		5700.0	-47.939	2.00	-45.939	Peak	10.0
		5720.0	-41.377	2.00	-39.377	Peak	15.6
		5725.0	-36.185	2.00	-34.185	Peak	27.0
	165	5850.0	-41.569	2.00	-39.569	Peak	27.0
		5855.0	-46.816	2.00	-44.816	Peak	15.6
		5875.0	-48.482	2.00	-46.482	Peak	10.0
		5925.0	-50.679	2.00	-48.679	Peak	-27.0
11N20	149	5650.0	-49.371	2.00	-47.371	Peak	-27.0
		5700.0	-48.952	2.00	-46.952	Peak	10.0
		5720.0	-40.810	2.00	-38.810	Peak	15.6
		5725.0	-36.425	2.00	-34.425	Peak	27.0
	165	5850.0	-35.165	2.00	-33.165	Peak	27.0
		5855.0	-38.531	2.00	-36.531	Peak	15.6
		5875.0	-48.402	2.00	-46.402	Peak	10.0
		5925.0	-49.397	2.00	-47.397	Peak	-27.0
11N40	151	5650.0	-49.426	2.00	-47.426	Peak	-27.0
		5700.0	-45.949	2.00	-43.949	Peak	10.0
		5720.0	-35.559	2.00	-33.559	Peak	15.6
		5725.0	-35.609	2.00	-33.609	Peak	27.0
	159	5850.0	-46.198	2.00	-44.198	Peak	27.0
		5855.0	-47.122	2.00	-45.122	Peak	15.6
		5875.0	-48.701	2.00	-46.701	Peak	10.0
		5925.0	-50.091	2.00	-48.091	Peak	-27.0

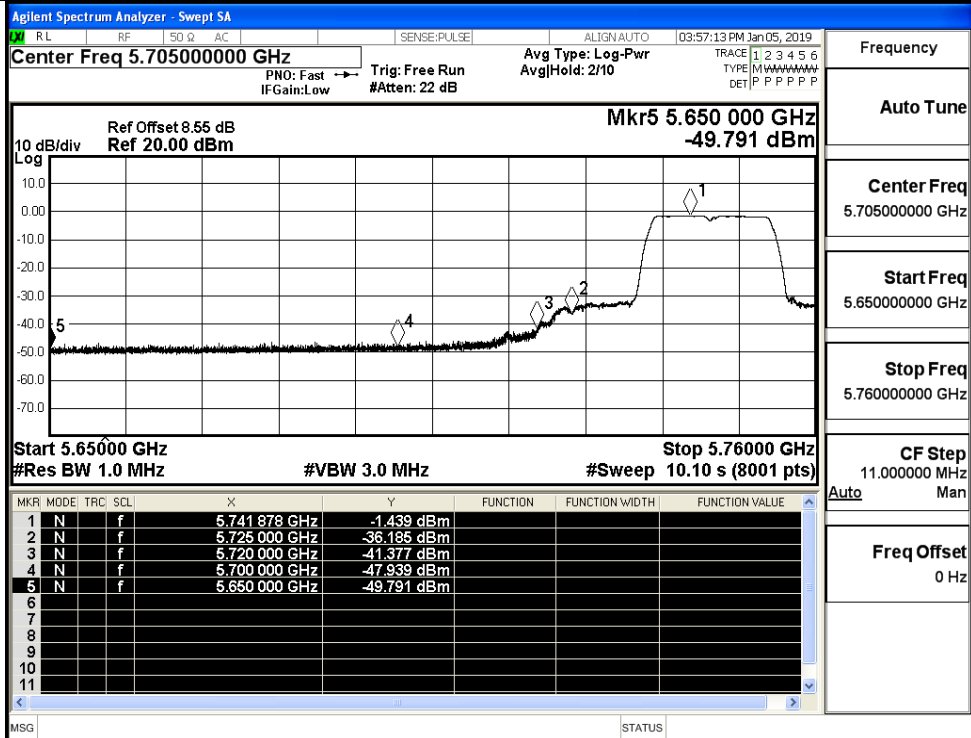
Antenna 1

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
11A	149	5650.0	-48.808	2.00	-46.808	Peak	-27.0
		5700.0	-47.655	2.00	-45.655	Peak	10.0
		5720.0	-40.449	2.00	-38.449	Peak	15.6
		5725.0	-35.634	2.00	-33.634	Peak	27.0
	165	5850.0	-43.315	2.00	-41.315	Peak	27.0
		5855.0	-47.106	2.00	-45.106	Peak	15.6
		5875.0	-48.494	2.00	-46.494	Peak	10.0
		5925.0	-49.865	2.00	-47.865	Peak	-27.0
11N20	149	5650.0	-49.003	2.00	-47.003	Peak	-27.0
		5700.0	-47.175	2.00	-45.175	Peak	10.0
		5720.0	-41.949	2.00	-39.949	Peak	15.6
		5725.0	-35.532	2.00	-33.532	Peak	27.0
	165	5850.0	-42.039	2.00	-40.039	Peak	27.0
		5855.0	-47.866	2.00	-45.866	Peak	15.6
		5875.0	-49.873	2.00	-47.873	Peak	10.0
		5925.0	-50.175	2.00	-48.175	Peak	-27.0
11N40	151	5650.0	-48.667	2.00	-46.667	Peak	-27.0
		5700.0	-45.832	2.00	-43.832	Peak	10.0
		5720.0	-38.600	2.00	-36.600	Peak	15.6
		5725.0	-36.453	2.00	-34.453	Peak	27.0
	159	5850.0	-46.594	2.00	-44.594	Peak	27.0
		5855.0	-46.029	2.00	-44.029	Peak	15.6
		5875.0	-49.241	2.00	-47.241	Peak	10.0
		5925.0	-49.335	2.00	-47.335	Peak	-27.0

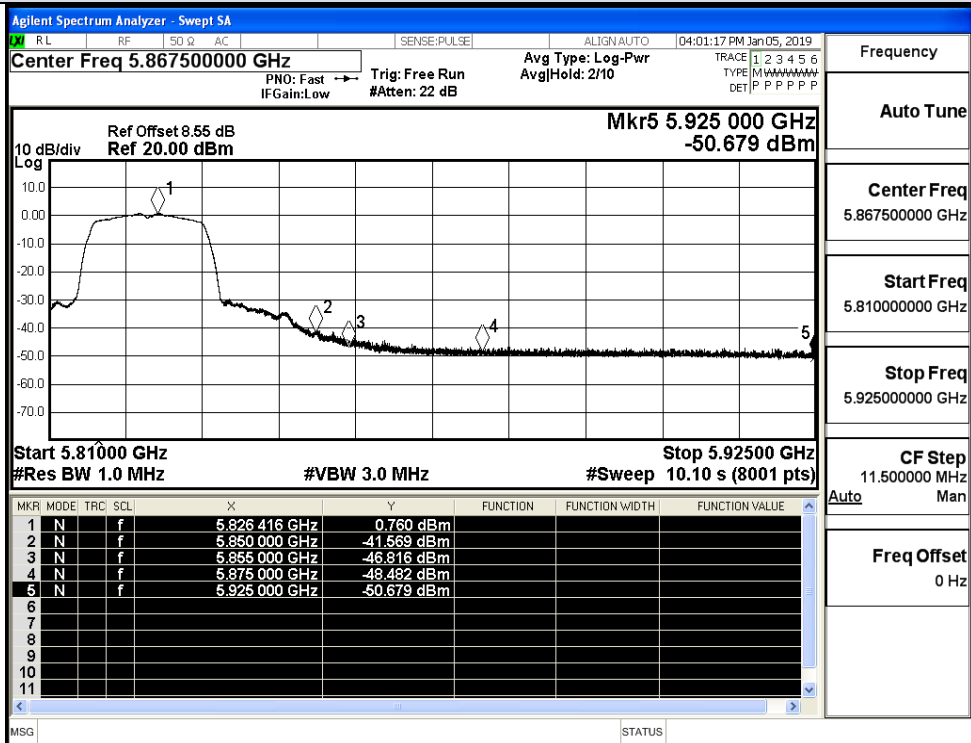
Antenna 0+Antenn 1

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)			Directional Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
			Ant0	Ant1	Sum				
11N20	149	5650.0	-49.371	-49.003	-46.173	5.01	-41.163	Peak	-27.0
		5700.0	-48.952	-47.175	-44.963	5.01	-39.953	Peak	10.0
		5720.0	-40.810	-41.949	-38.332	5.01	-33.322	Peak	15.6
		5725.0	-36.425	-35.532	-32.945	5.01	-27.935	Peak	27.0
	165	5850.0	-35.165	-42.039	-34.354	5.01	-29.344	Peak	27.0
		5855.0	-38.531	-47.866	-38.052	5.01	-33.042	Peak	15.6
		5875.0	-48.402	-49.873	-46.065	5.01	-41.055	Peak	10.0
		5925.0	-49.397	-50.175	-46.758	5.01	-41.748	Peak	-27.0
11N40	151	5650.0	-49.426	-48.667	-46.020	5.01	-41.010	Peak	-27.0
		5700.0	-45.949	-45.832	-42.880	5.01	-37.870	Peak	10.0
		5720.0	-35.559	-38.600	-33.808	5.01	-28.798	Peak	15.6
		5725.0	-35.609	-36.453	-33.000	5.01	-27.990	Peak	27.0
	159	5850.0	-46.198	-46.594	-43.381	5.01	-38.371	Peak	27.0
		5855.0	-47.122	-46.029	-43.531	5.01	-38.521	Peak	15.6
		5875.0	-48.701	-49.241	-45.952	5.01	-40.942	Peak	10.0
		5925.0	-50.091	-49.335	-46.686	5.01	-41.676	Peak	-27.0

Undesirable Emissions Measurement_Ant0

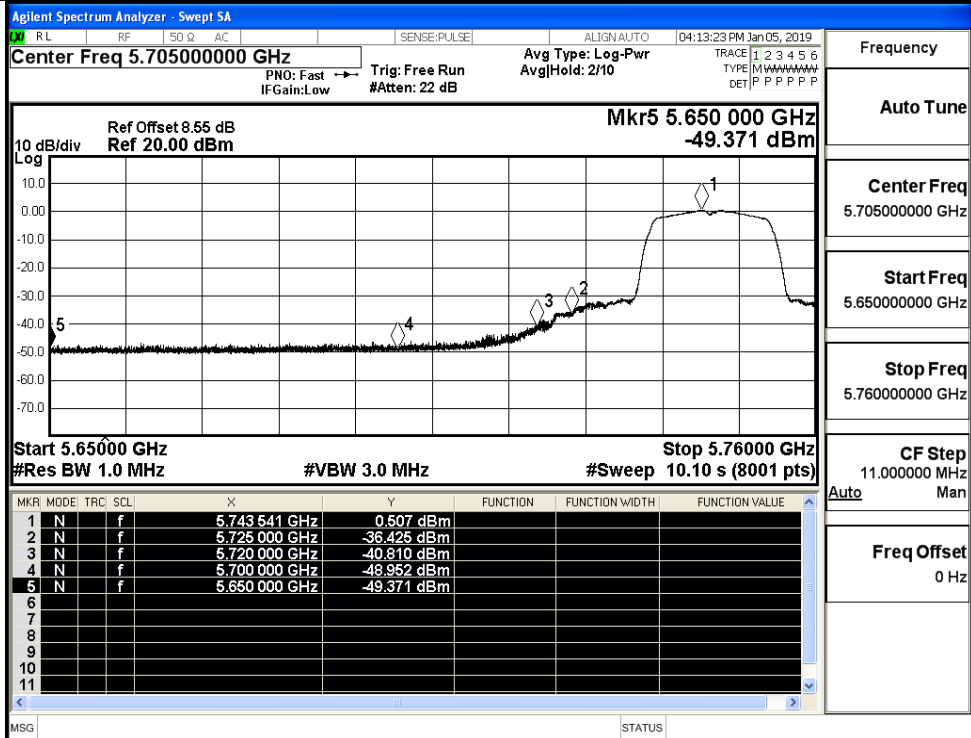


IEEE 802.11a / Channel 149 / 5745 MHz / Peak_Ant0

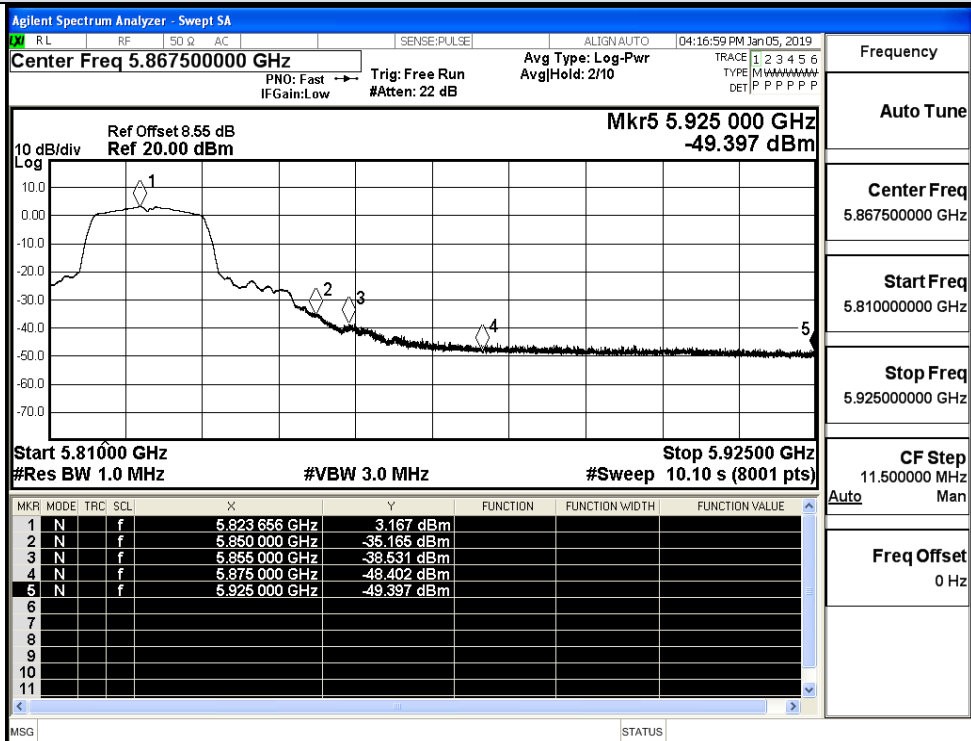


IEEE 802.11a / Channel 165 / 5825 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant0

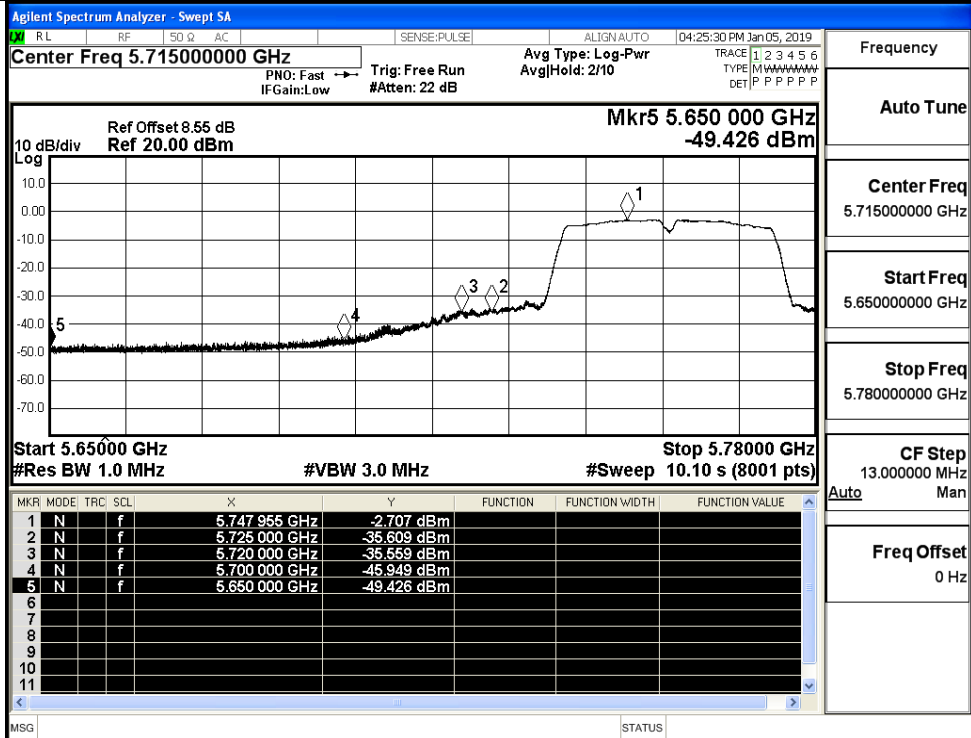


IEEE 802.11n HT20 / Channel 149 / 5745MHz / Peak_Ant0

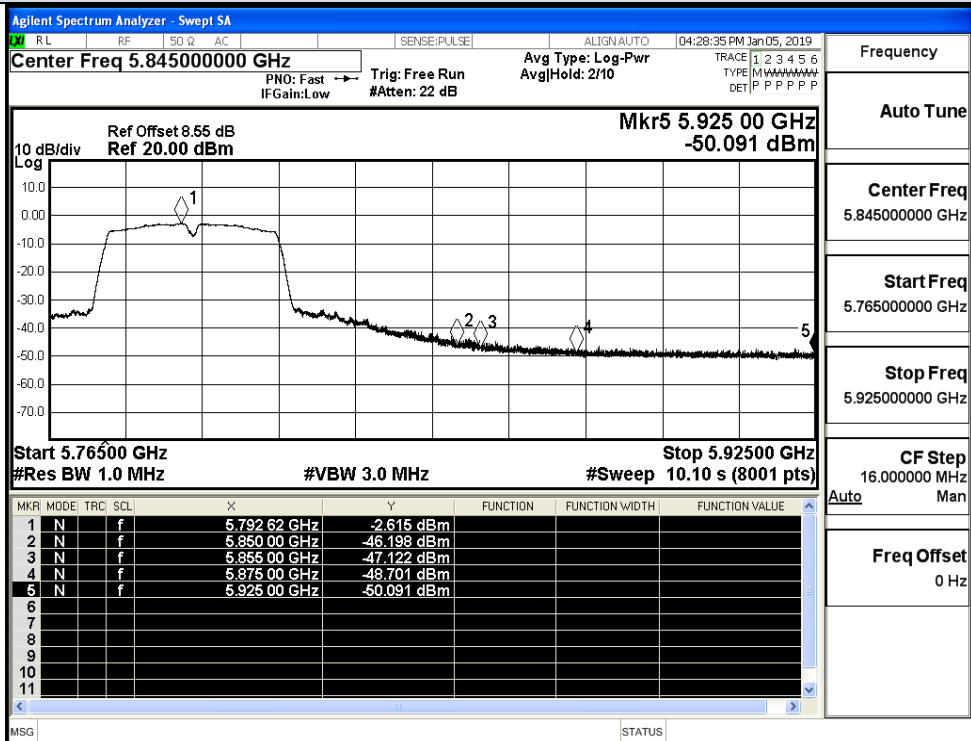


IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant0

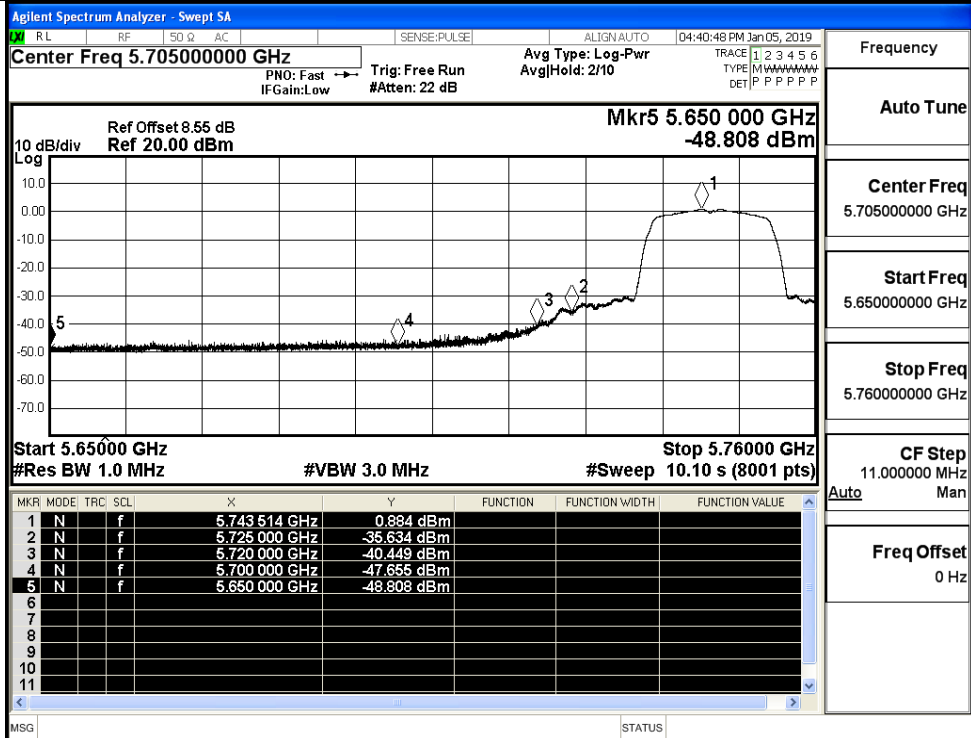


IEEE 802.11n HT40 / Channel 151 / 5755 MHz / Peak_Ant0

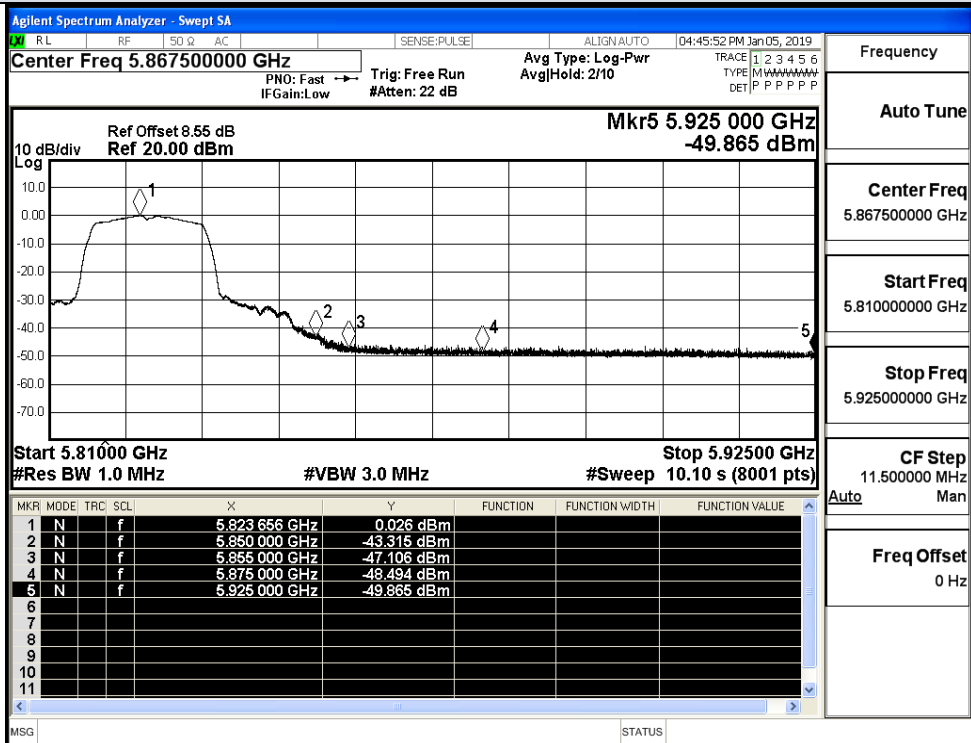


IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant1

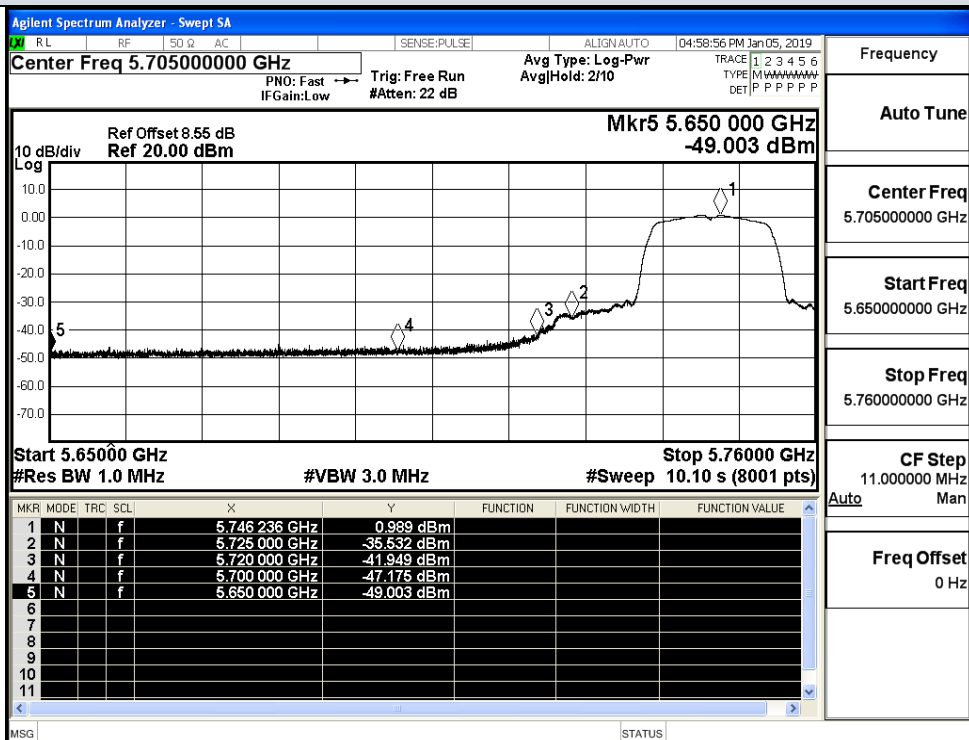


IEEE 802.11a / Channel 149 / 5745 MHz / Peak_Ant1

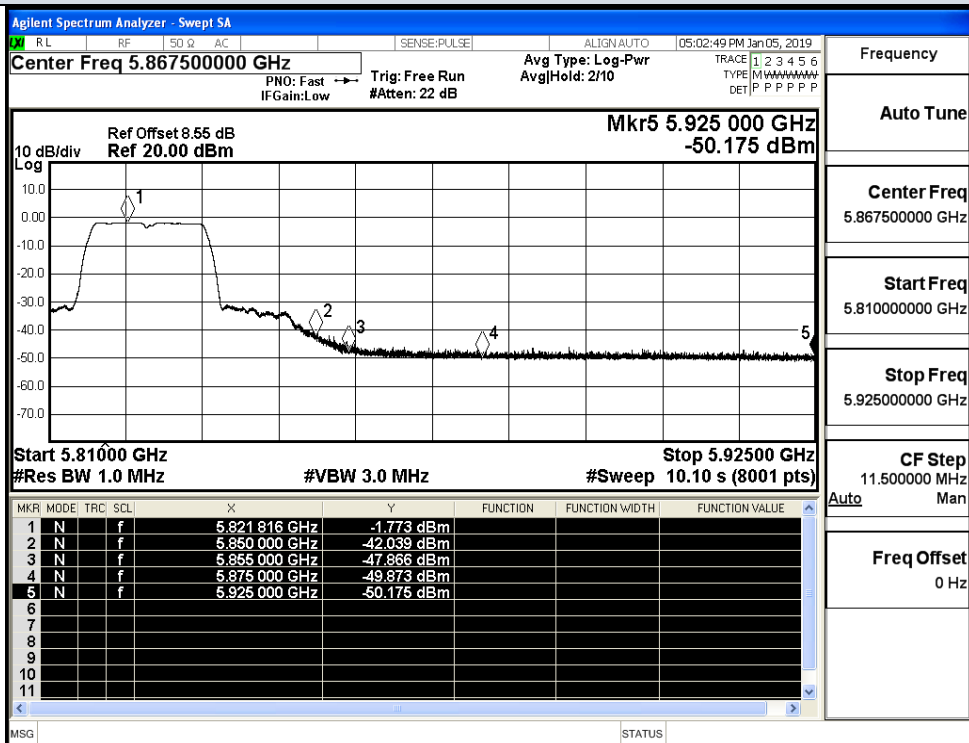


IEEE 802.11a / Channel 165 / 5825 MHz / Peak_Ant1

Undesirable Emissions Measurement_Ant1

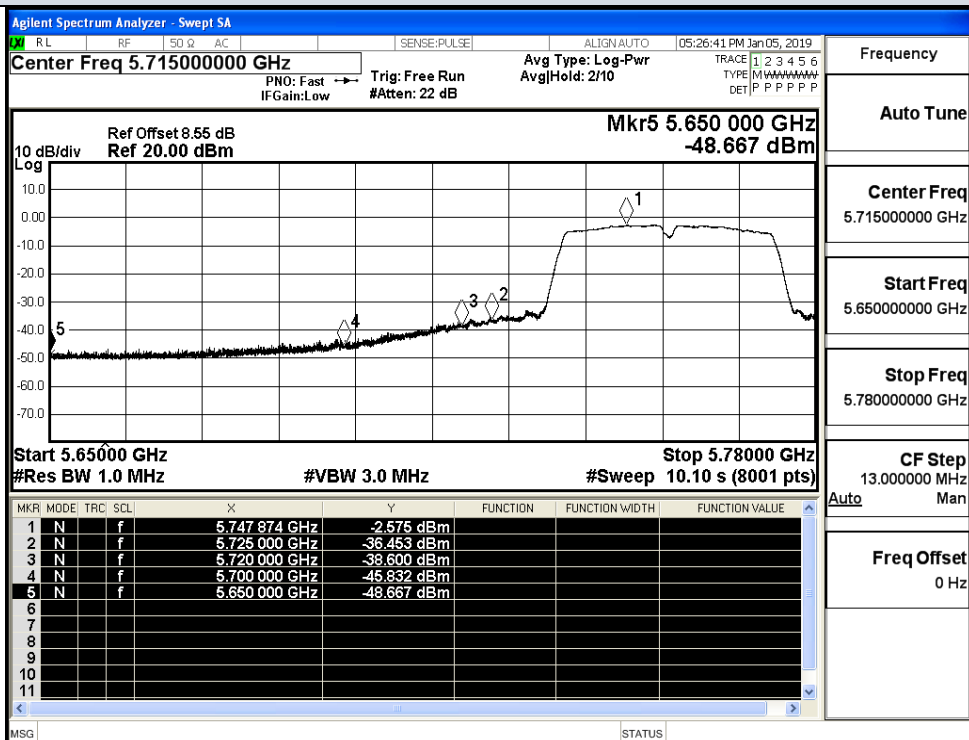


IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak_Ant1

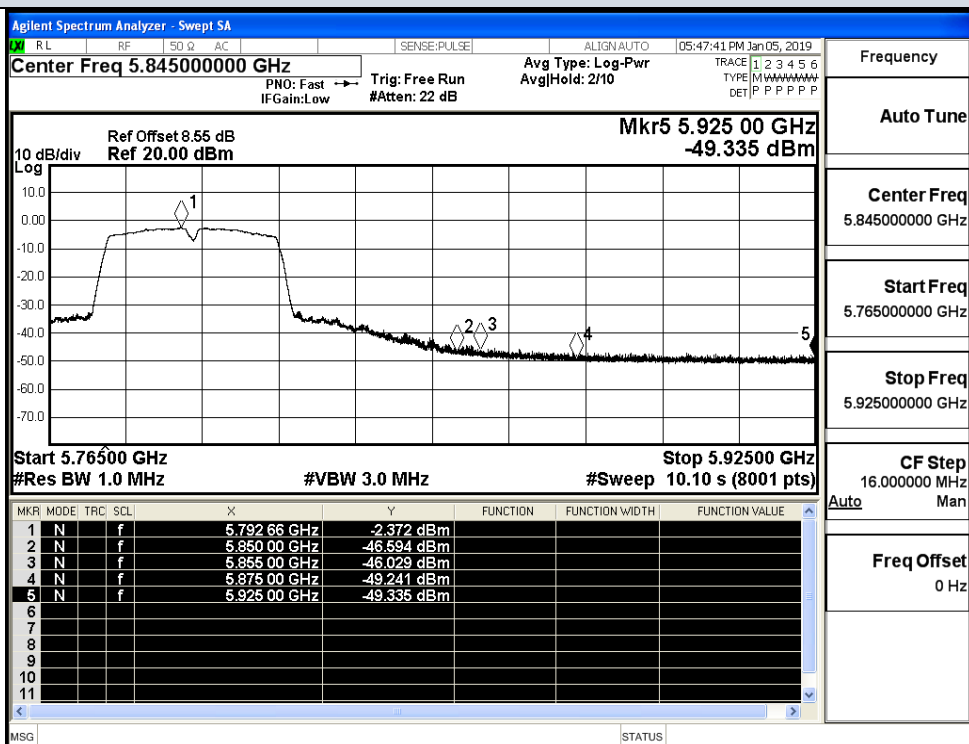


IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak_Ant1

Undesirable Emissions Measurement_Ant1



IEEE 802.11n HT40 / Channel 151 / 5755 MHz / Peak_Ant1



IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak_Ant1