

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:	23.5 ° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom Liu
Supervised by:	Jayden Zhuo

B.1 Duty Cycle

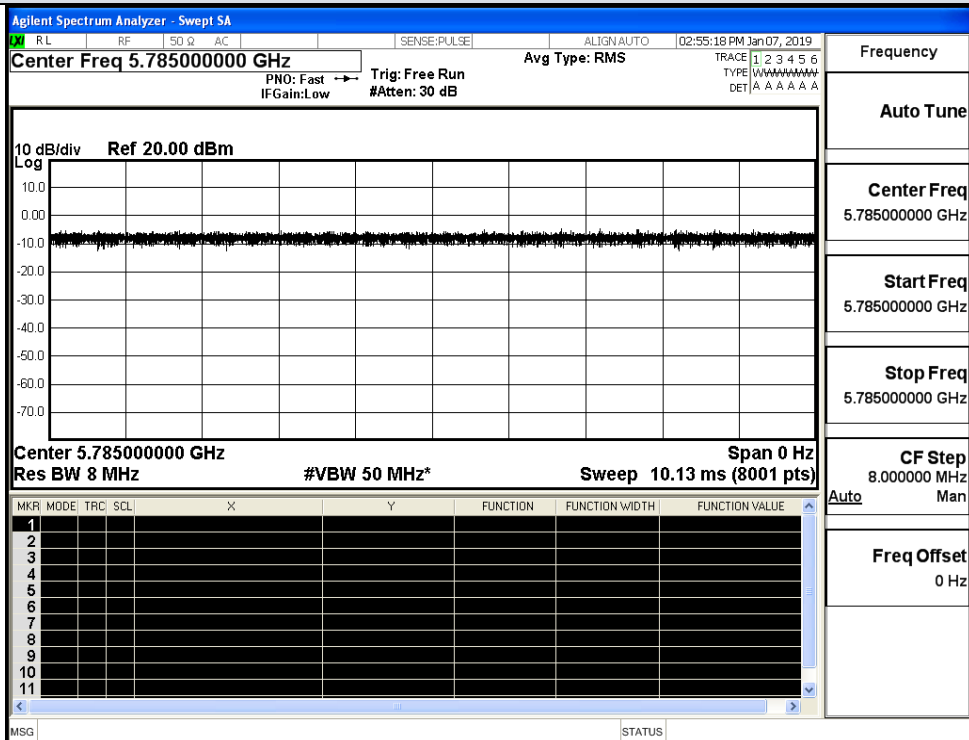
Antenna 0

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

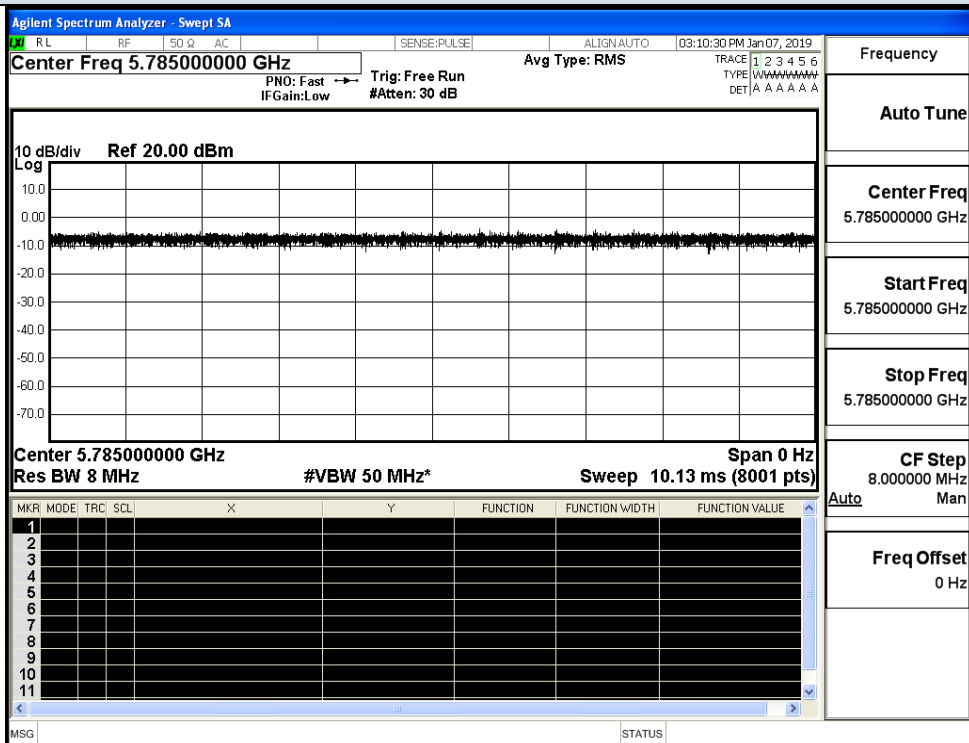
Antenna 1

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

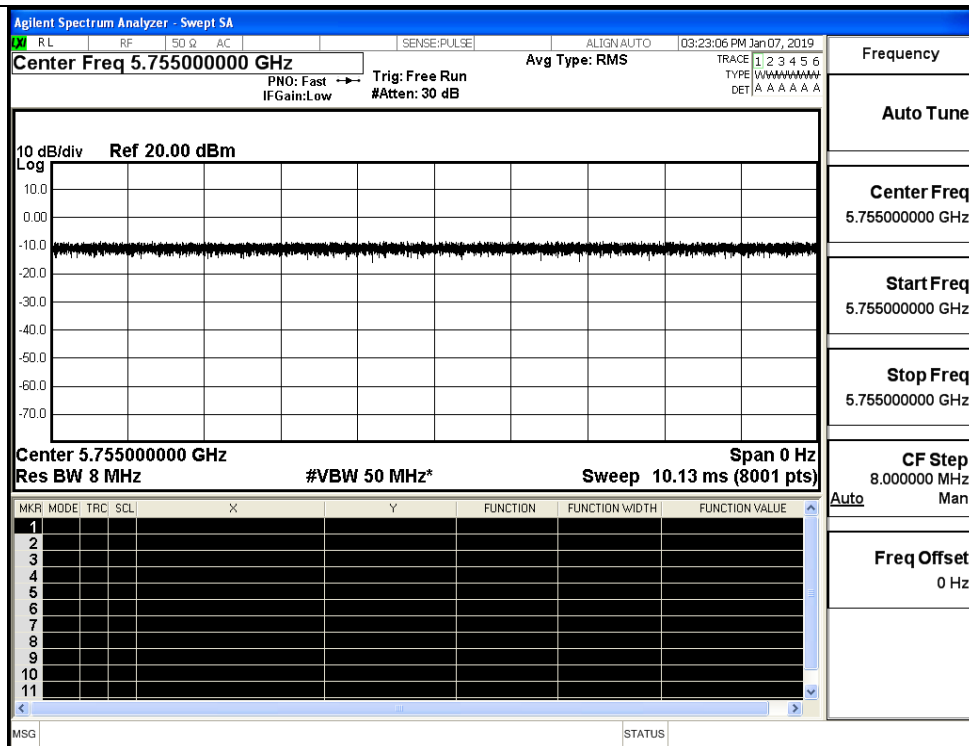
On Time and Duty Cycle_Ant0



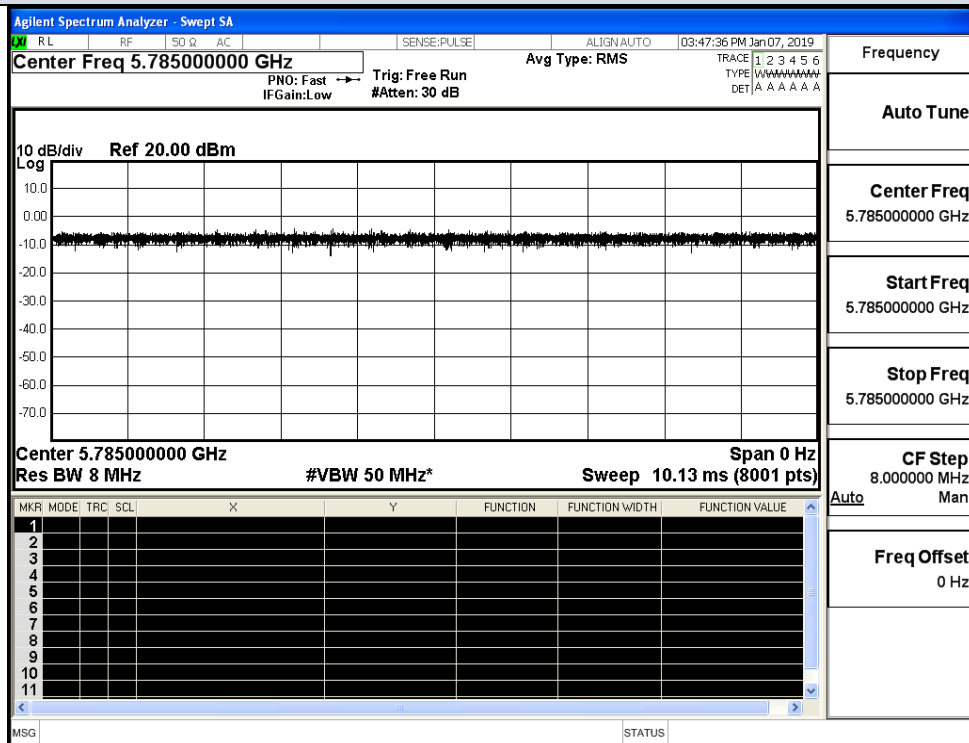
IEEE 802.11a_Ant0

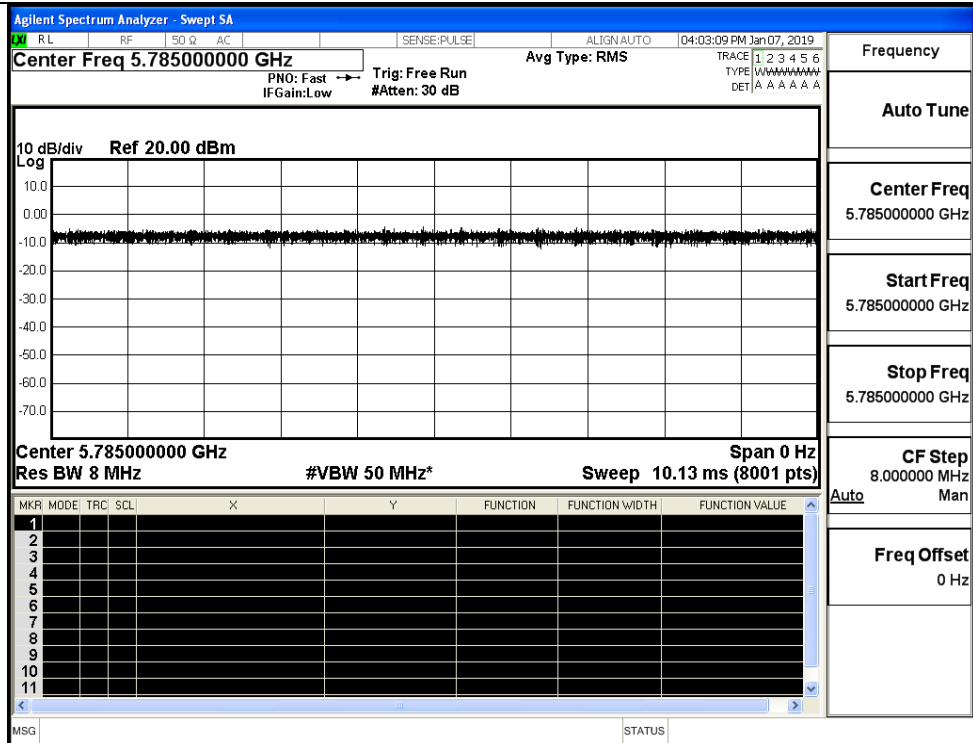


IEEE 802.11n HT20_Ant0

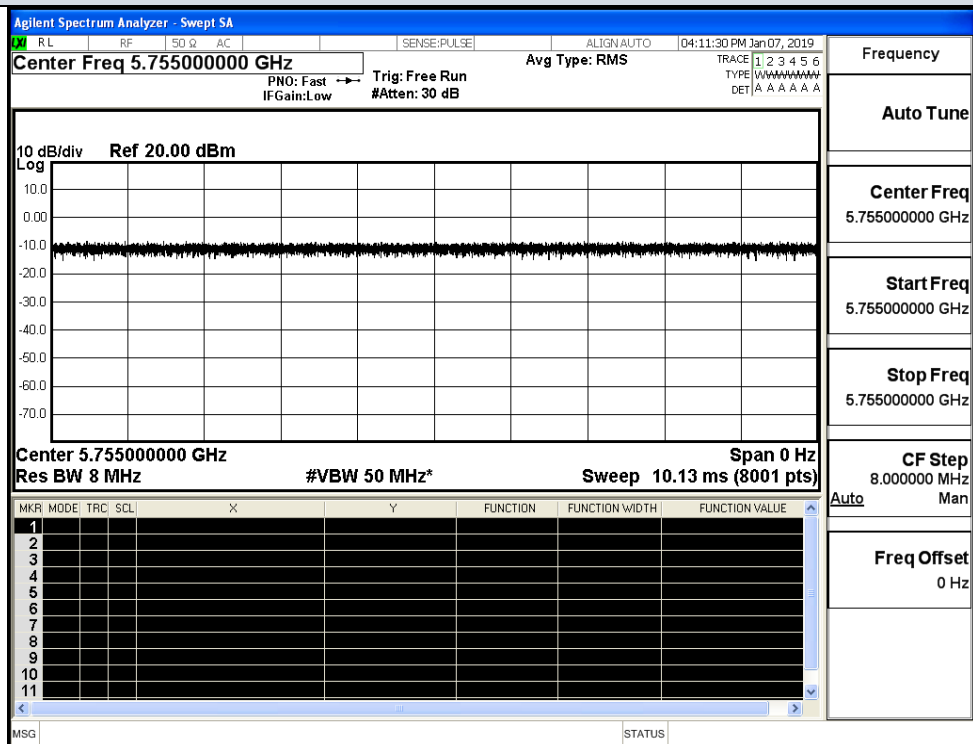


On Time and Duty Cycle_Ant1





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	16.58	0	16.58	30
	157	5785	16.76	0	16.76	
	165	5825	16.03	0	16.03	
IEEE 802.11n HT20	149	5745	15.60	0	15.60	30
	157	5785	15.20	0	15.20	
	165	5825	14.99	0	14.99	
IEEE 802.11n HT40	151	5755	14.52	0	14.52	30
	159	5795	14.26	0	14.26	

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	16.41	0	16.41	30
	157	5785	16.68	0	16.68	
	165	5825	16.29	0	16.29	
IEEE 802.11n HT20	149	5745	15.64	0	15.64	30
	157	5785	15.30	0	15.30	
	165	5825	15.09	0	15.09	
IEEE 802.11n HT40	151	5755	14.61	0	14.61	30
	159	5795	14.29	0	14.29	

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	15.60	15.64	18.63	0	15.60	15.64	18.63	30
	157	5785	15.20	15.30	18.26	0	15.20	15.30	18.26	
	165	5825	14.99	15.09	18.05	0	14.99	15.09	18.05	
11N40	151	5755	14.52	14.61	17.58	0	14.52	14.61	17.58	30
	159	5795	14.26	14.29	17.29	0	14.26	14.29	17.29	

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)
IEEE 802.11a	149	5745	-5.955	0	2.218	-3.737	30
	157	5785	-5.999	0	2.218	-3.781	
	165	5825	-5.370	0	2.218	-3.152	
IEEE 802.11n HT20	149	5745	-6.240	0	2.218	-4.022	30
	157	5785	-5.522	0	2.218	-3.304	
	165	5825	-5.575	0	2.218	-3.357	
IEEE 802.11n HT40	151	5755	-8.529	0	2.218	-6.311	30
	159	5795	-8.440	0	2.218	-6.222	

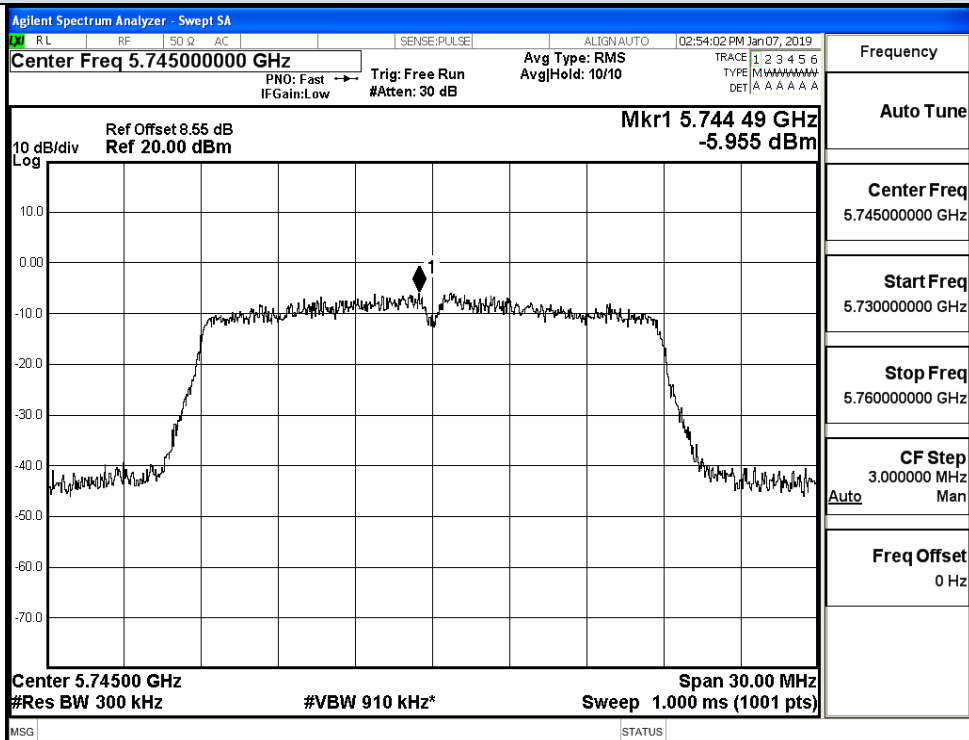
Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit (dBm/500KHz)
IEEE 802.11a	149	5745	-6.059	0	2.218	-3.841	30
	157	5785	-5.953	0	2.218	-3.735	
	165	5825	-5.509	0	2.218	-3.291	
IEEE 802.11n HT20	149	5745	-5.892	0	2.218	-3.674	30
	157	5785	-6.422	0	2.218	-4.204	
	165	5825	-5.873	0	2.218	-3.655	
IEEE 802.11n HT40	151	5755	-8.494	0	2.218	-6.276	30
	159	5795	-8.367	0	2.218	-6.149	

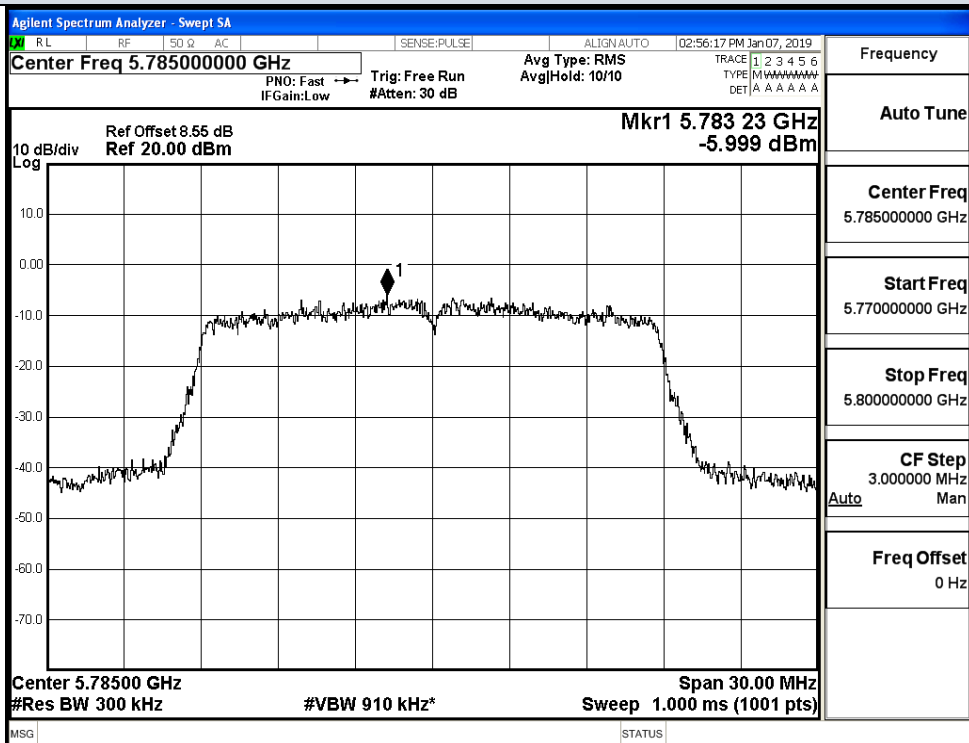
Antenna 0+Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)			Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)			Limit (dBm/500KHz)
			Ant0	Ant1	Sum			Ant0	Ant1	Sum	
11N20	149	5745	-6.240	-5.892	-3.052	0	2.218	-4.022	-3.674	-0.834	30
	157	5785	-5.522	-6.422	-2.938	0	2.218	-3.304	-4.204	-0.720	
	165	5825	-5.575	-5.873	-2.711	0	2.218	-3.357	-3.655	-0.493	
11N40	151	5755	-8.529	-8.494	-5.501	0	2.218	-6.311	-6.276	-3.283	30
	159	5795	-8.440	-8.367	-5.393	0	2.218	-6.222	-6.149	-3.175	

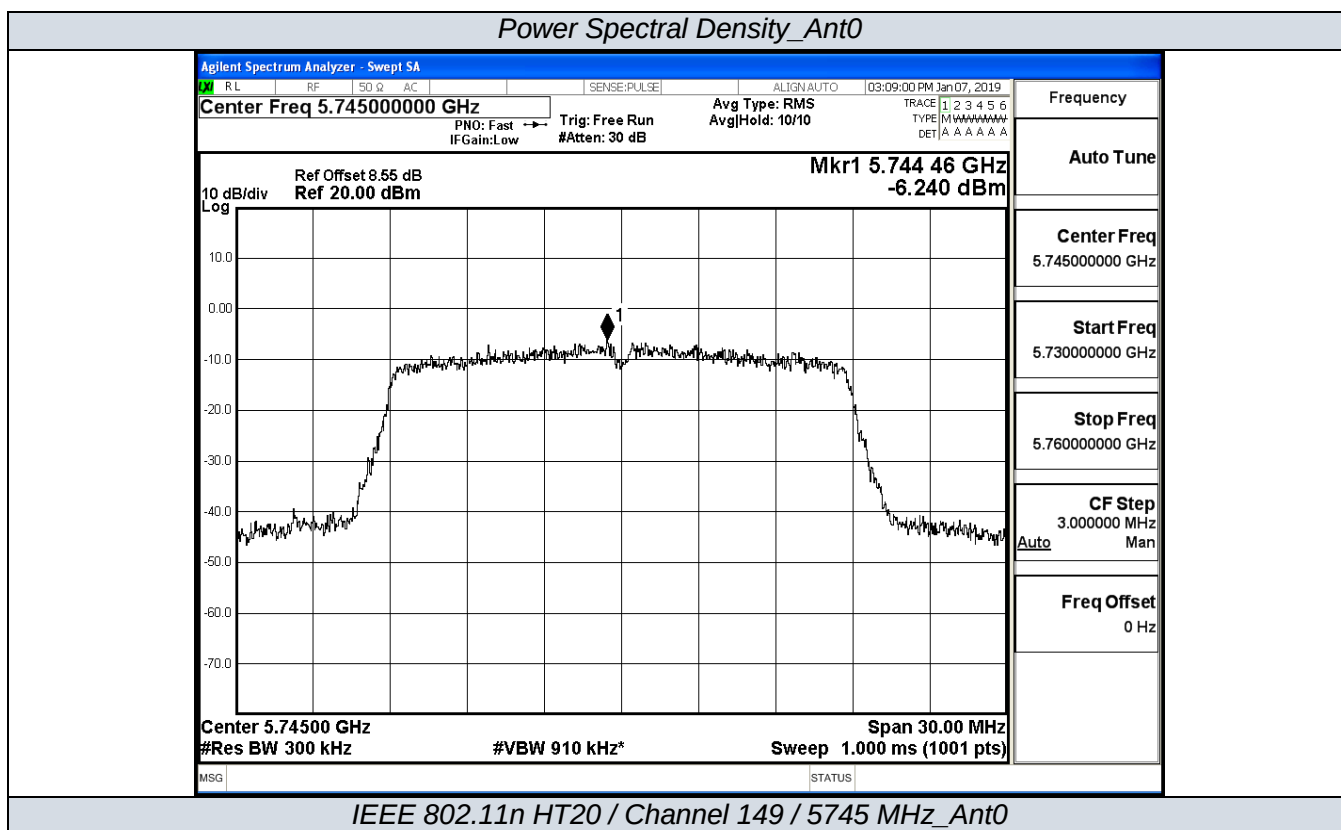
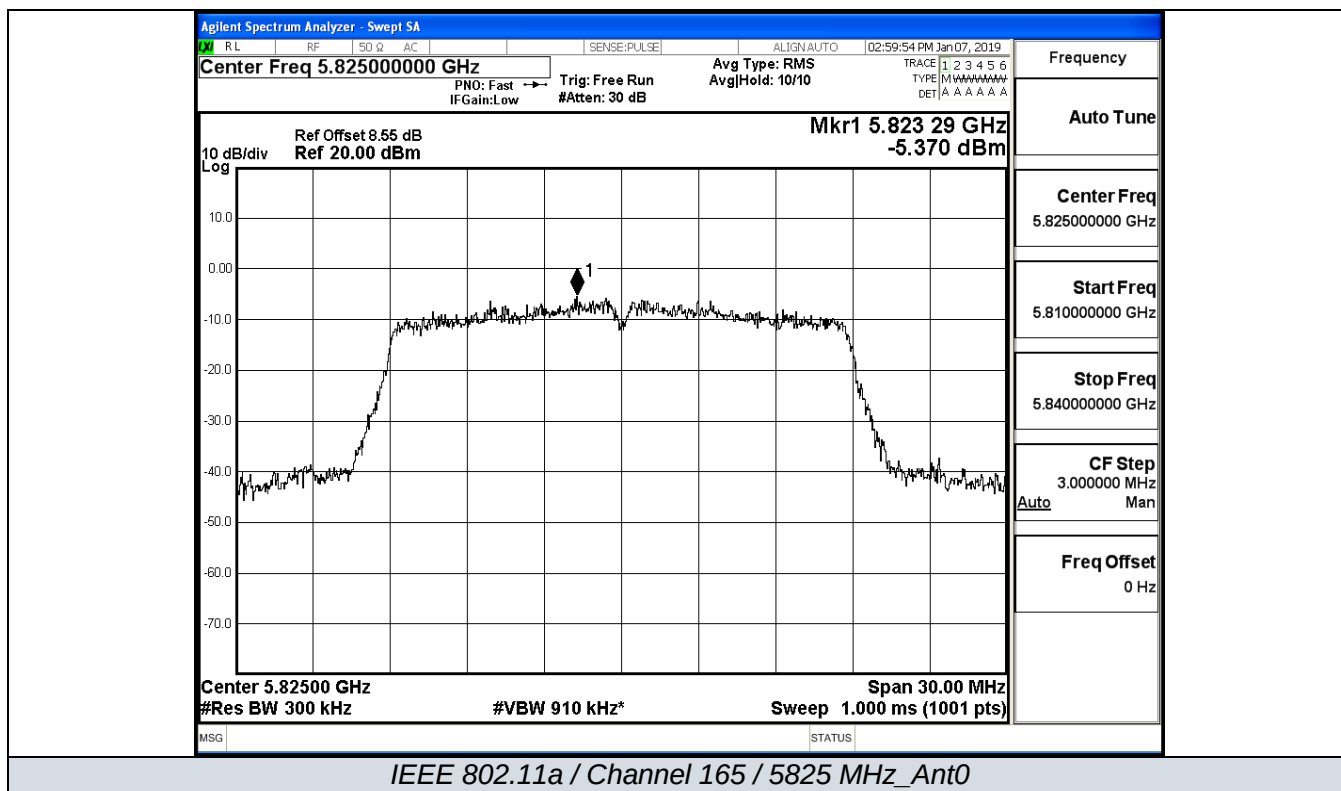
Power Spectral Density_Ant0

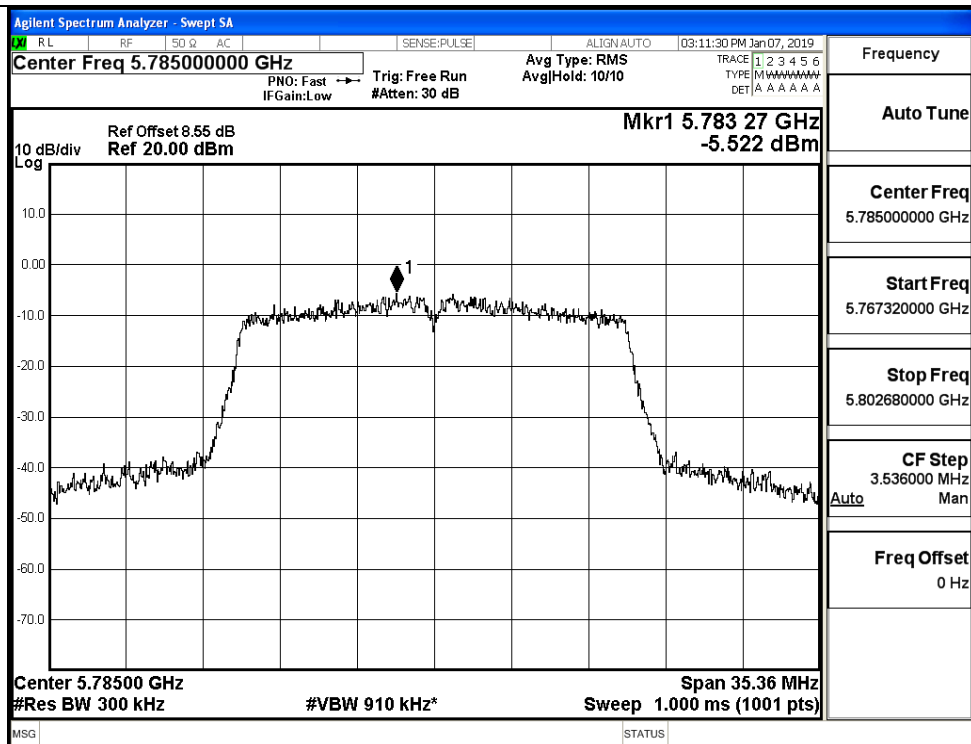


IEEE 802.11a / Channel 149 / 5745 MHz_Ant0

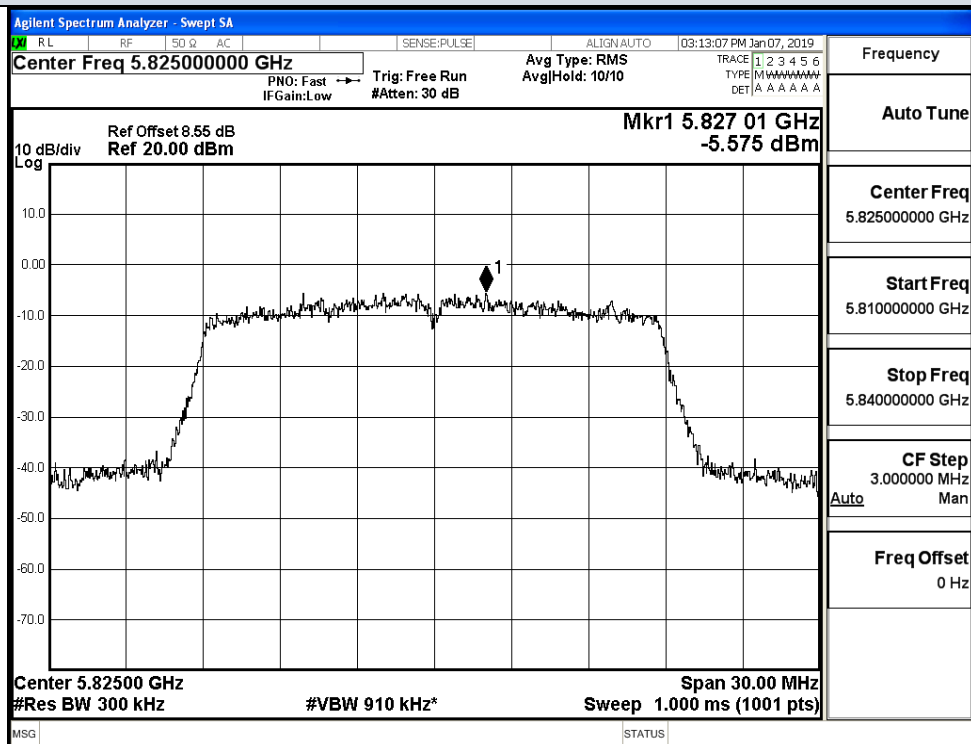


IEEE 802.11a / Channel 157 / 5785 MHz_Ant0



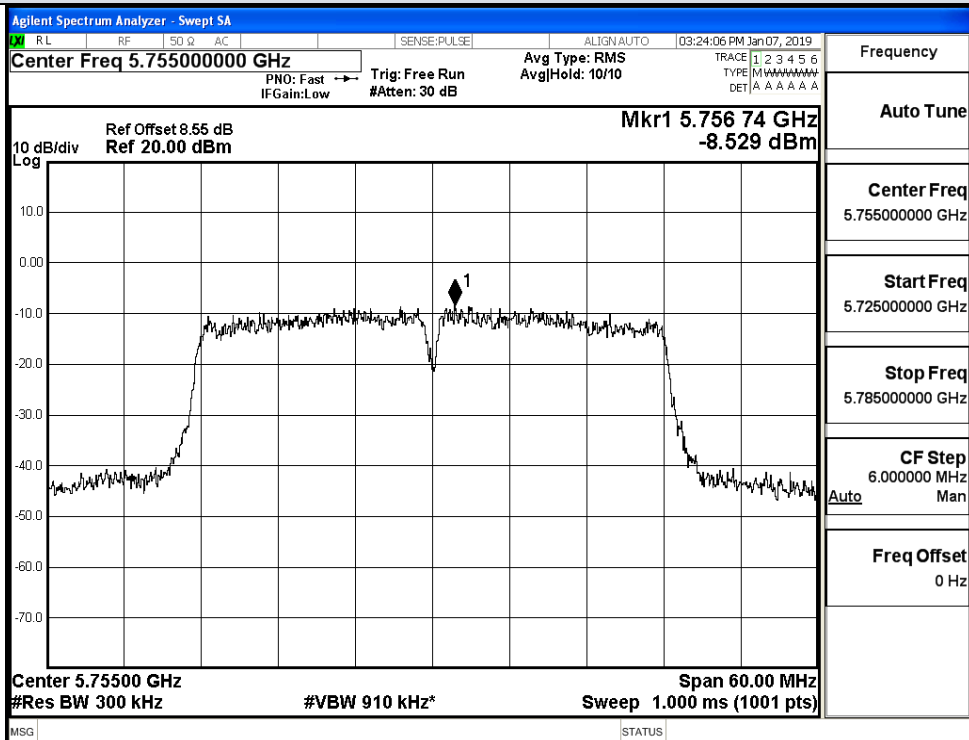


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant0

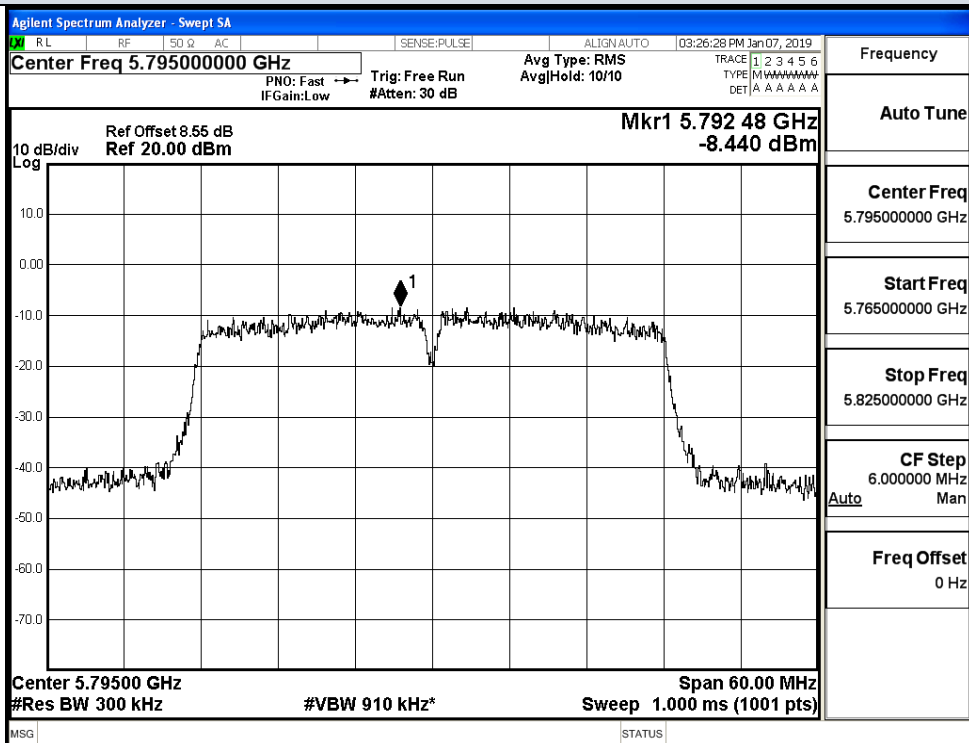


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant0

Power Spectral Density_Ant0

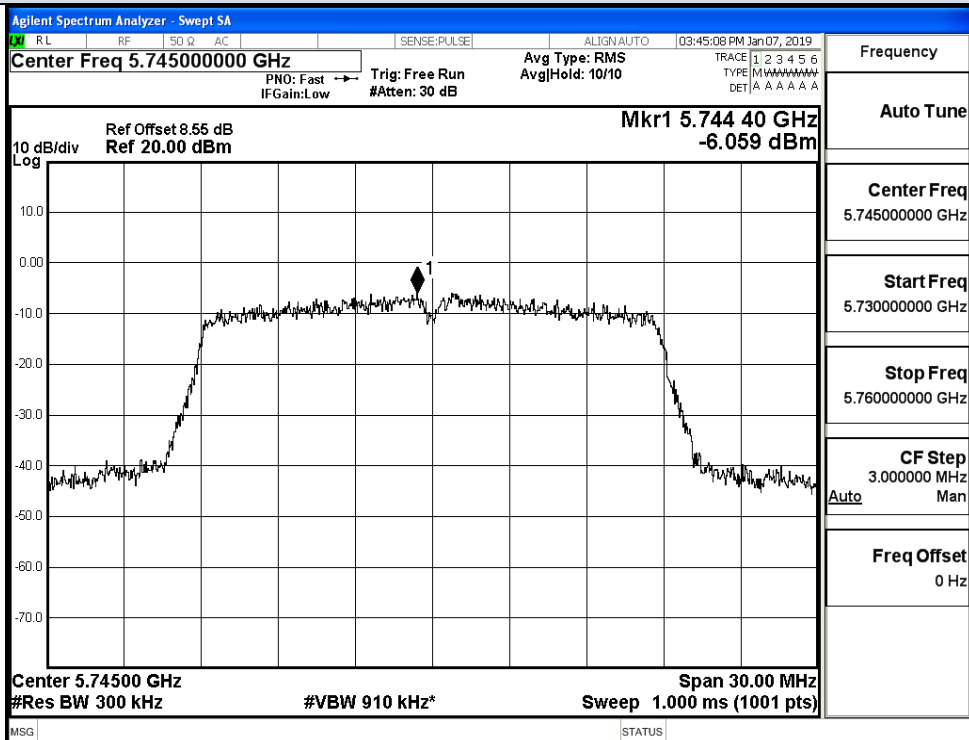


IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant0

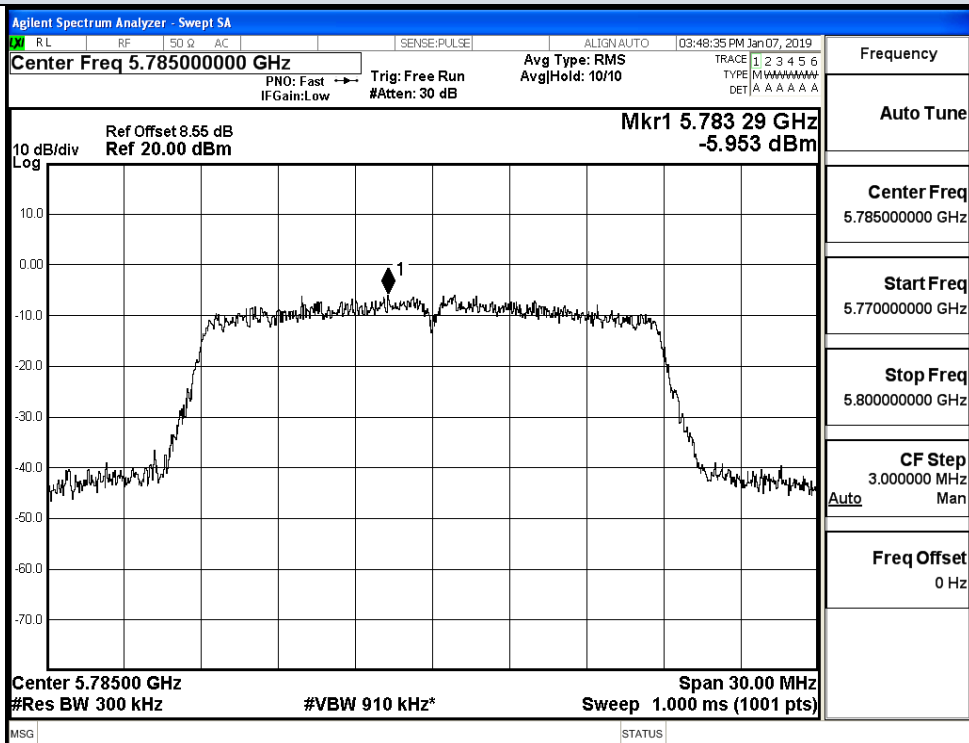


IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

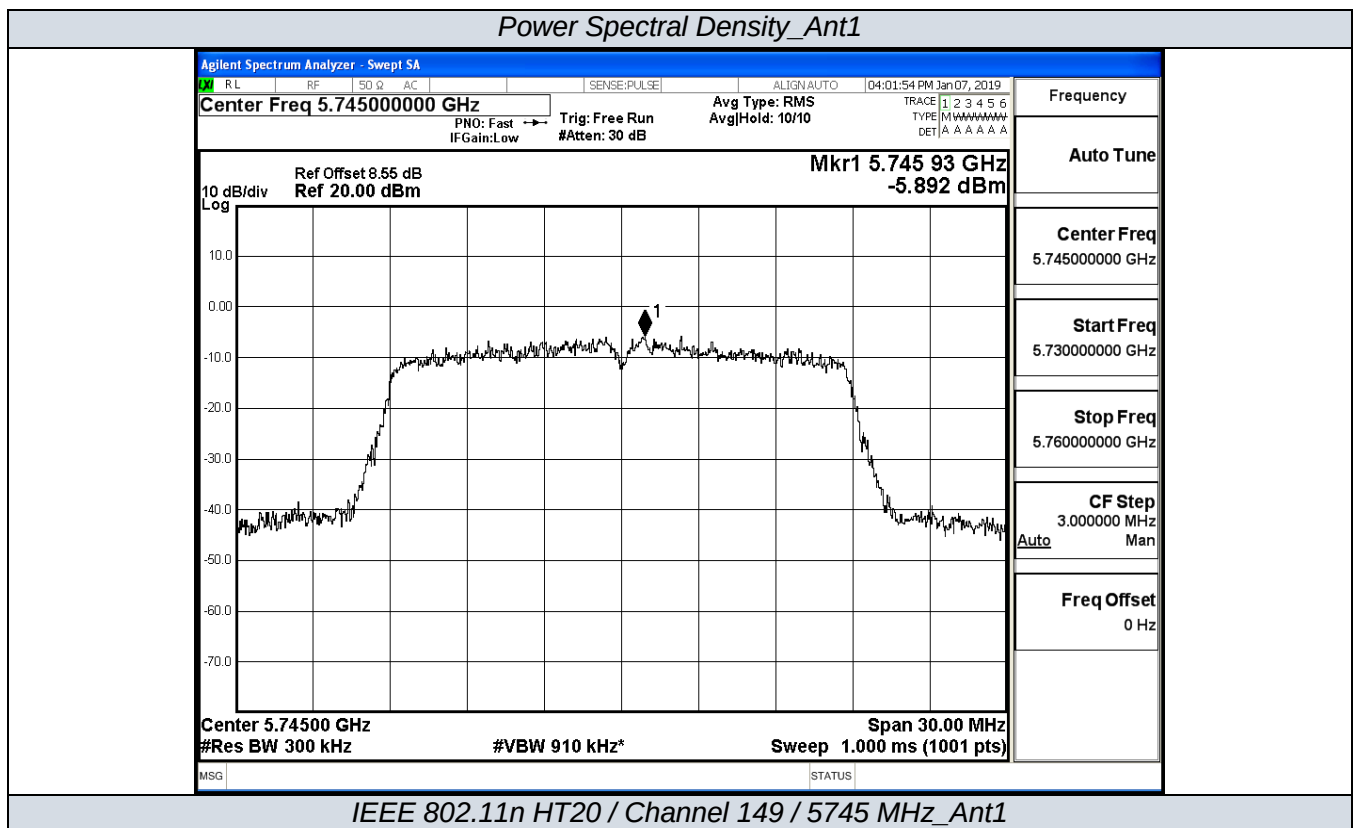
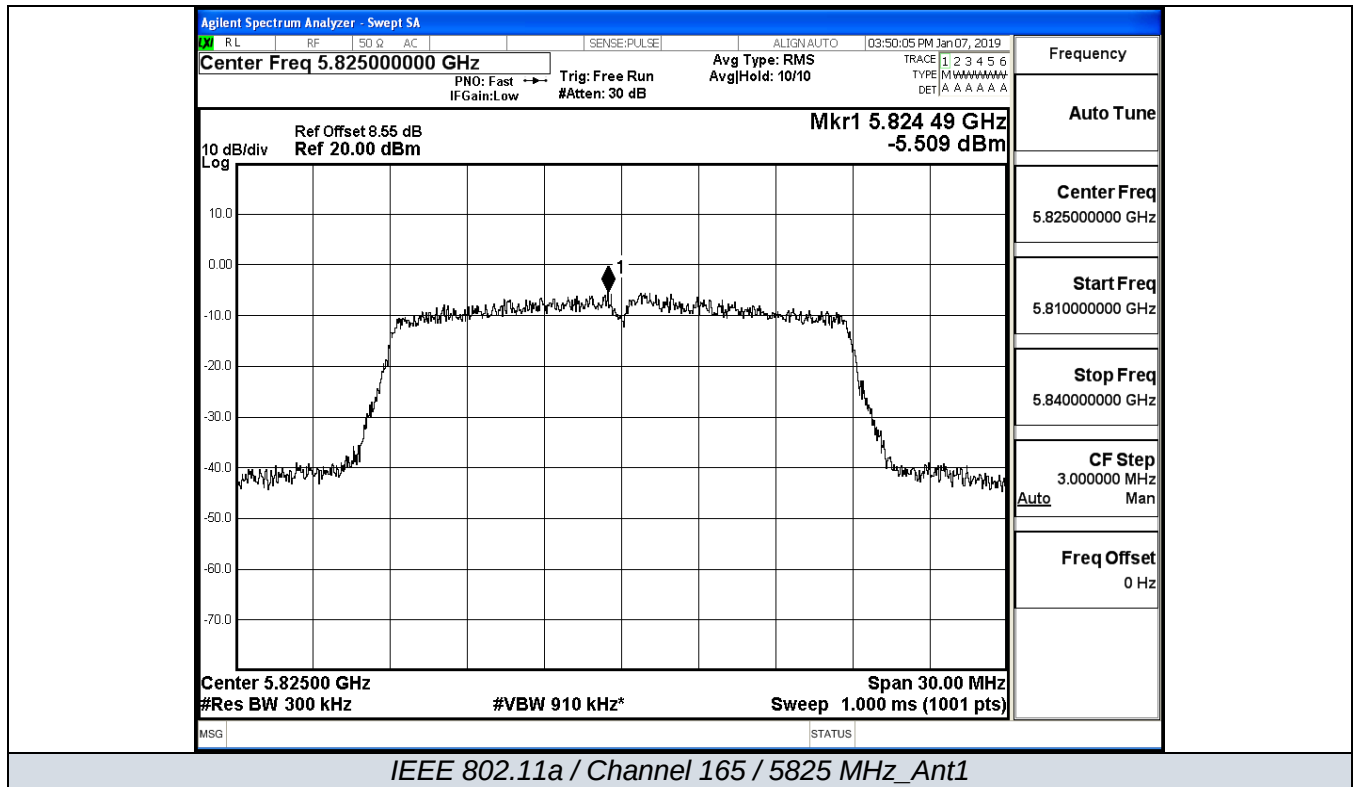
Power Spectral Density_Ant1

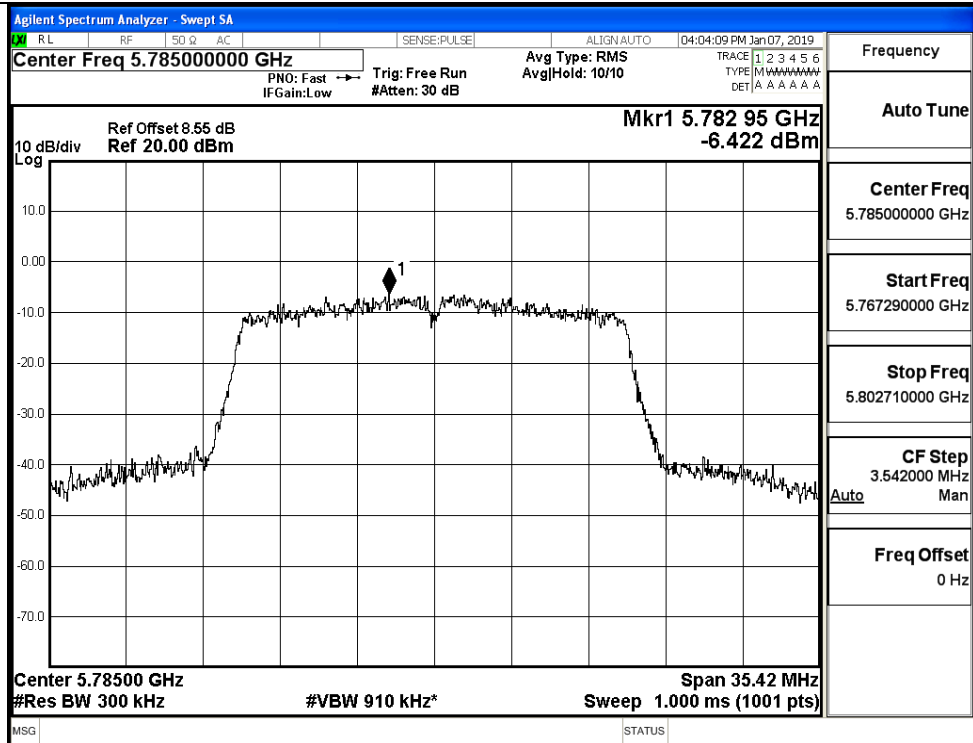


IEEE 802.11a / Channel 149 / 5745 MHz_Ant1

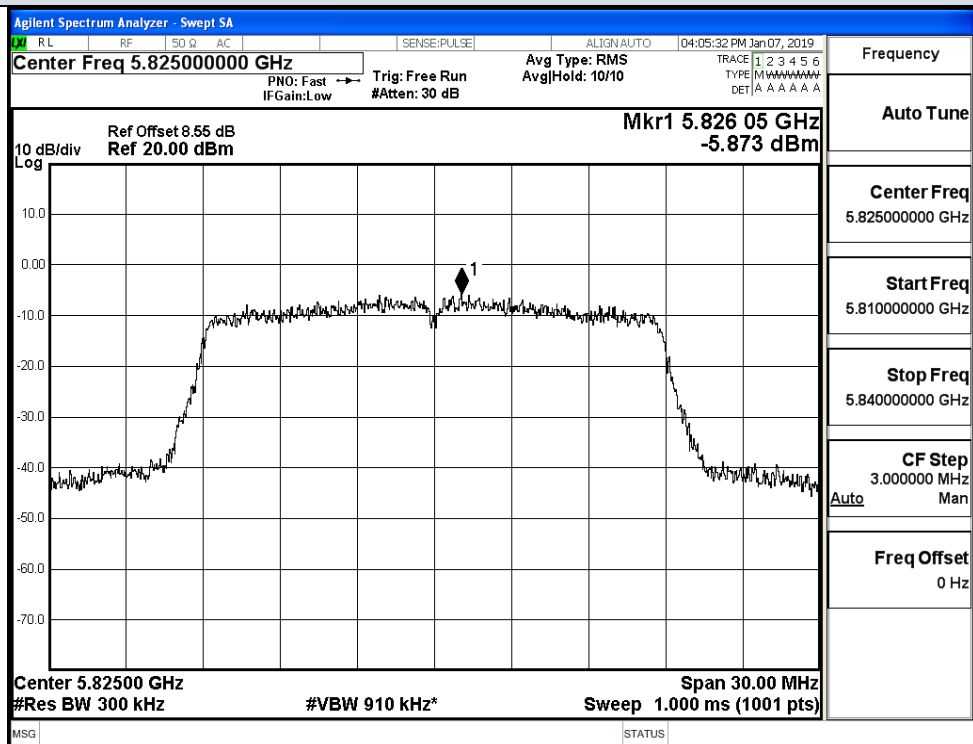


IEEE 802.11a / Channel 157 / 5785 MHz_Ant1



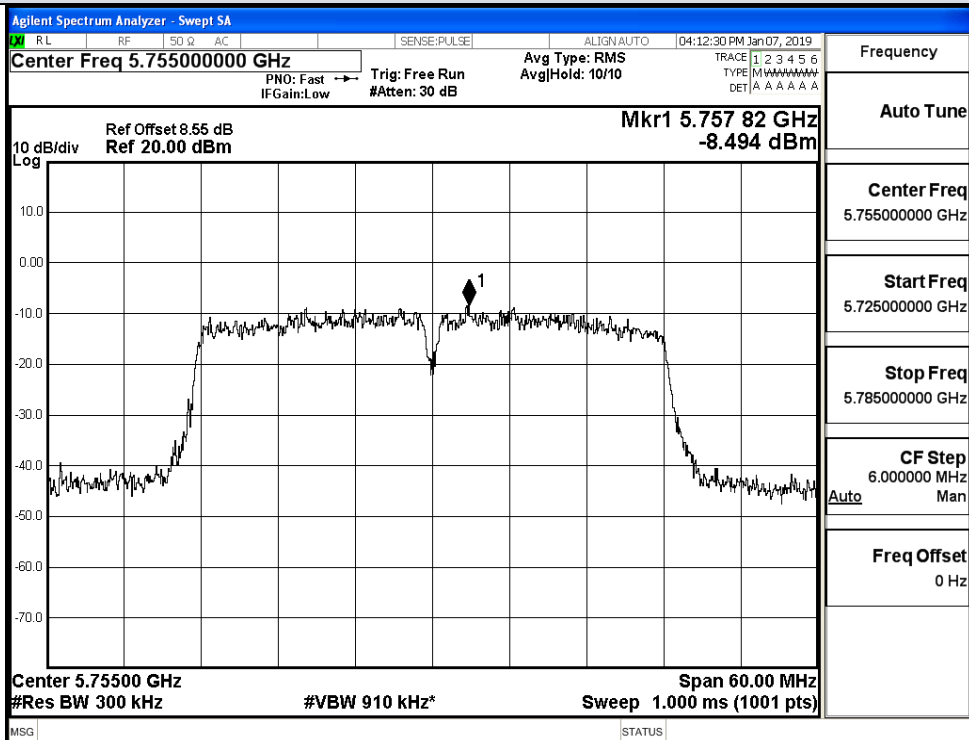


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant1

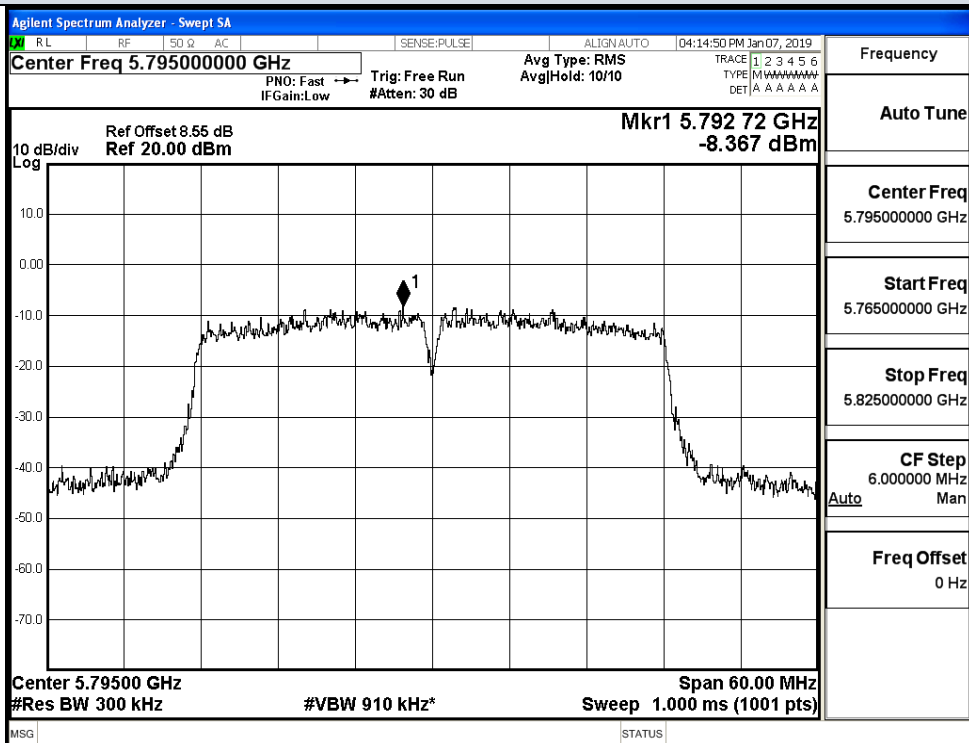


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant1

Power Spectral Density_Ant1



IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant1



IEEE 802.11n HT40 / Channel 159 / 579 5MHz_Ant1

B.4 Emission Bandwidth

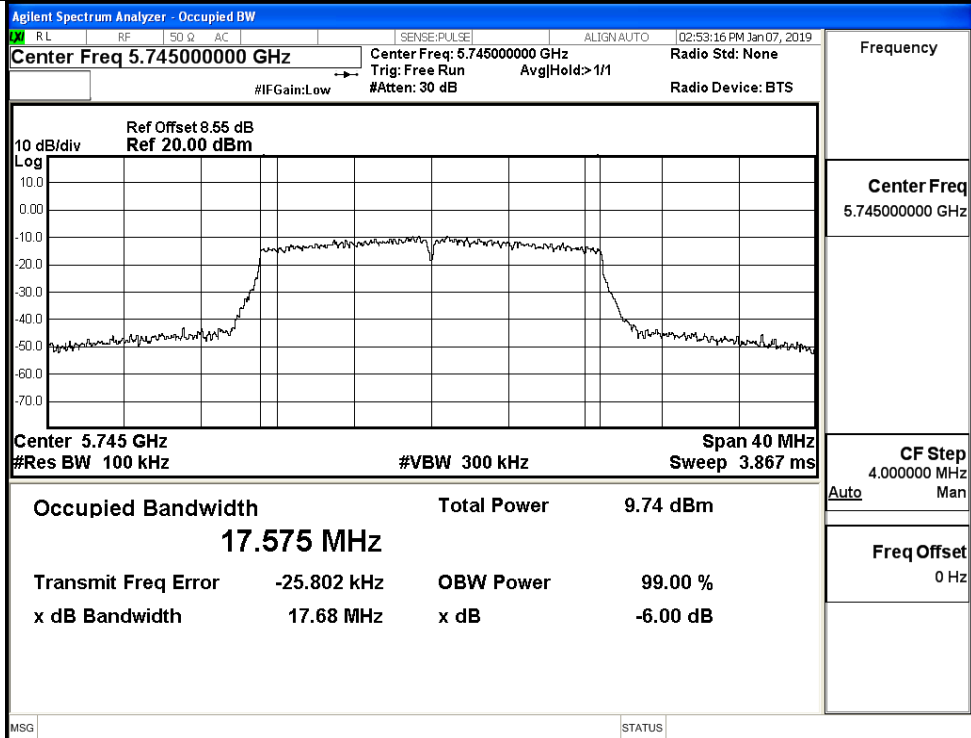
Antenna 0

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
IEEE 802.11a	149	5745	17.680	>=0.5
	157	5785	17.670	
	165	5825	17.680	
IEEE 802.11n HT20	149	5745	17.690	>=0.5
	157	5785	17.680	
	165	5825	17.690	
IEEE 802.11n HT40	151	5755	36.350	>=0.5
	159	5795	36.440	

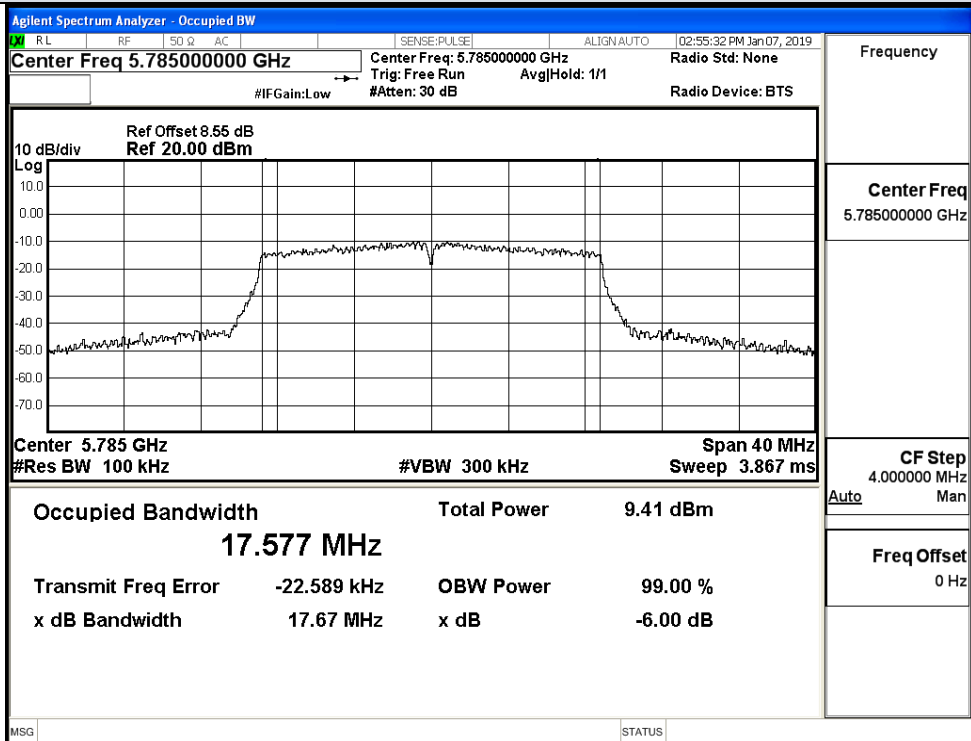
Antenna 1

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
IEEE 802.11a	149	5745	17.690	>=0.5
	157	5785	17.670	
	165	5825	17.710	
IEEE 802.11n HT20	149	5745	17.710	>=0.5
	157	5785	17.710	
	165	5825	17.680	
IEEE 802.11n HT40	151	5755	36.350	>=0.5
	159	5795	36.440	

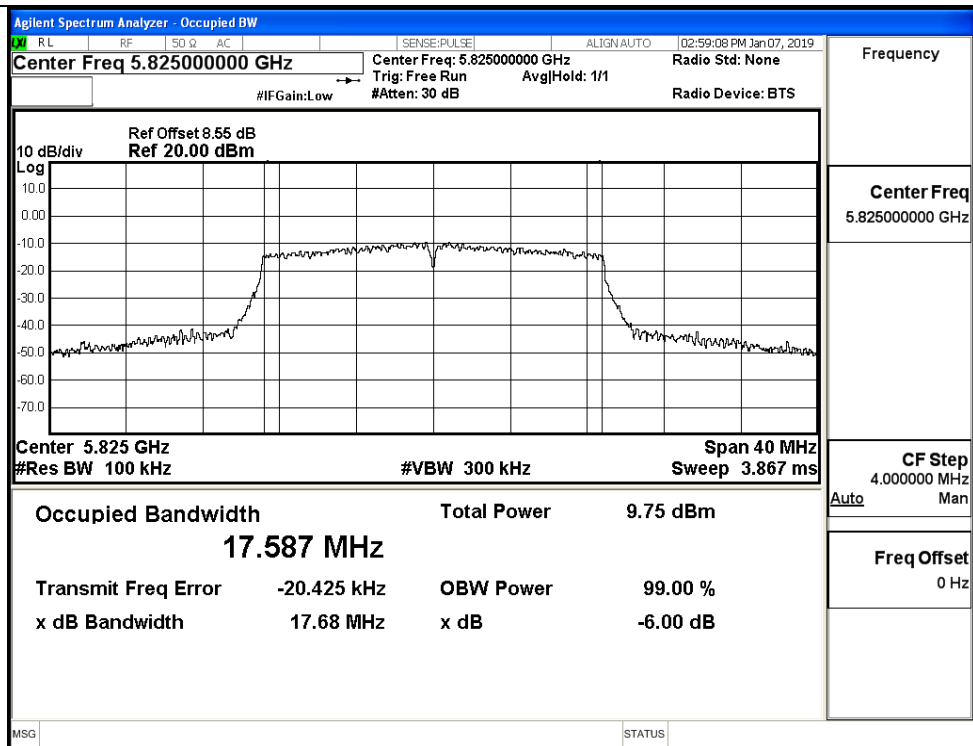
6dB Bandwidth_Ant0



IEEE 802.11a / Channel 149 / 5745 MHz_Ant0

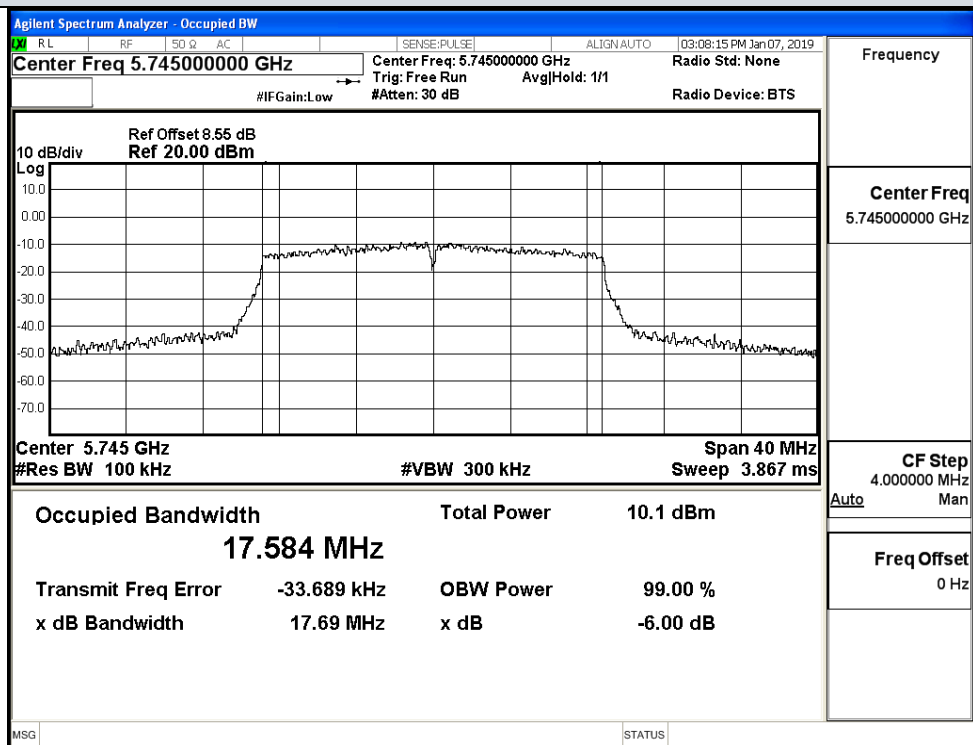


IEEE 802.11a / Channel 157 / 5785 MHz_Ant0

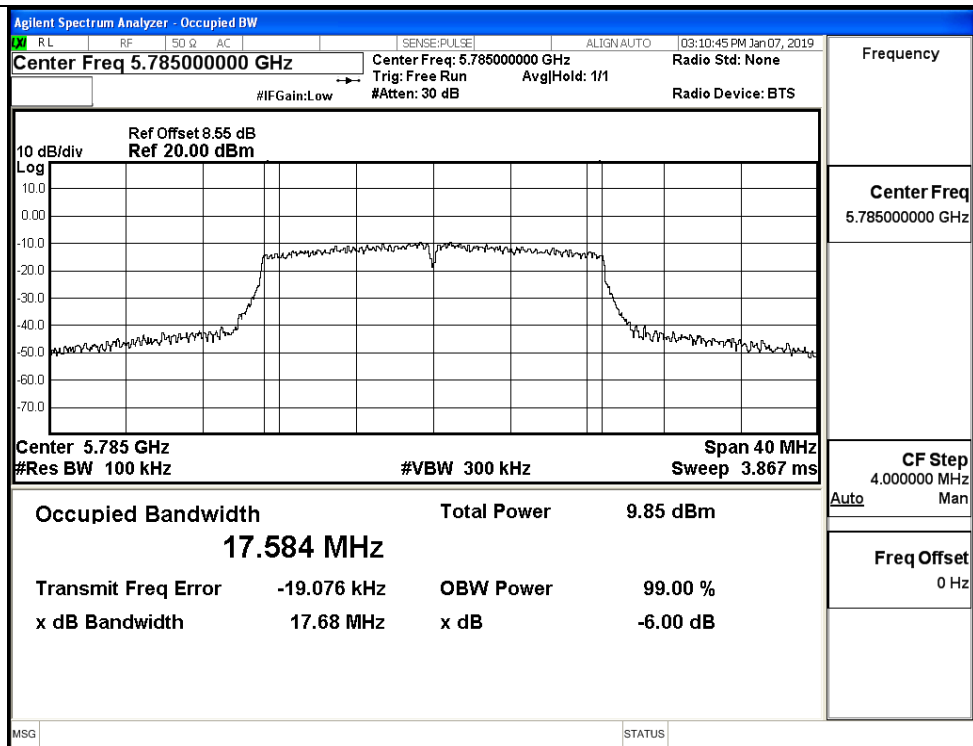


IEEE 802.11a / Channel 165 / 5825 MHz_Ant0

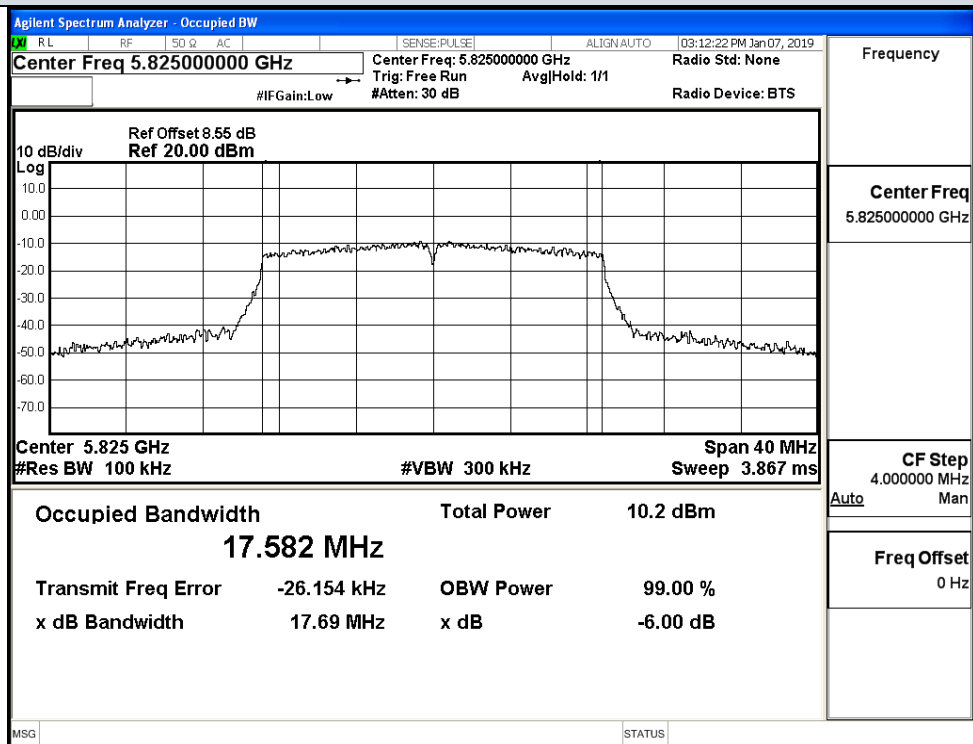
6dB Bandwidth_Ant0



IEEE 802.11n HT20 / Channel 149 / 5745 MHz_Ant0

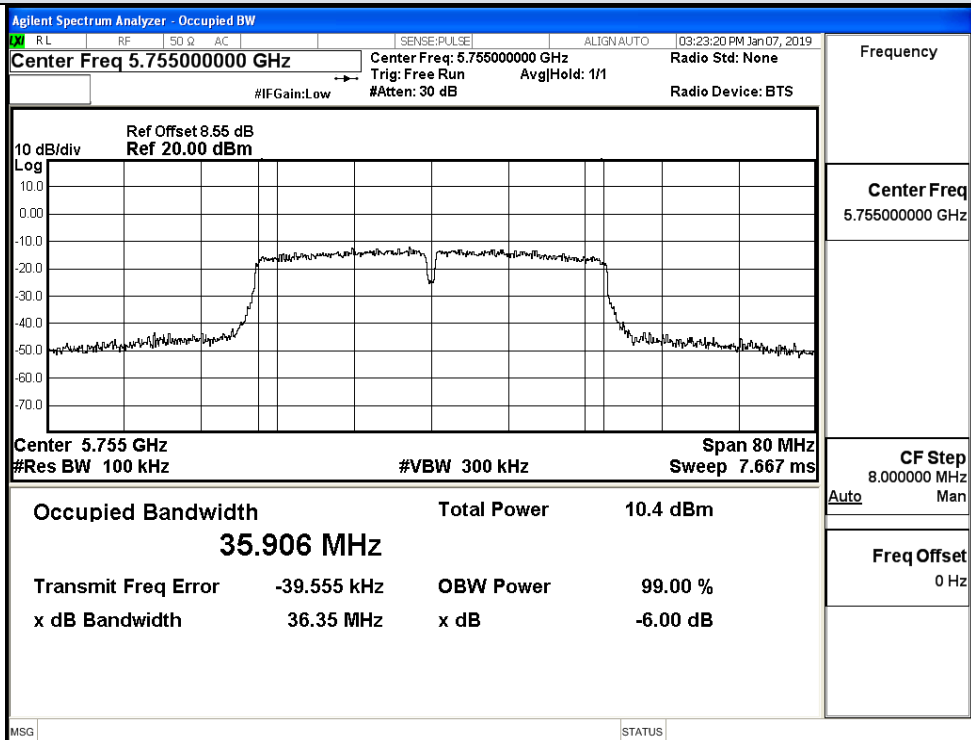


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant0

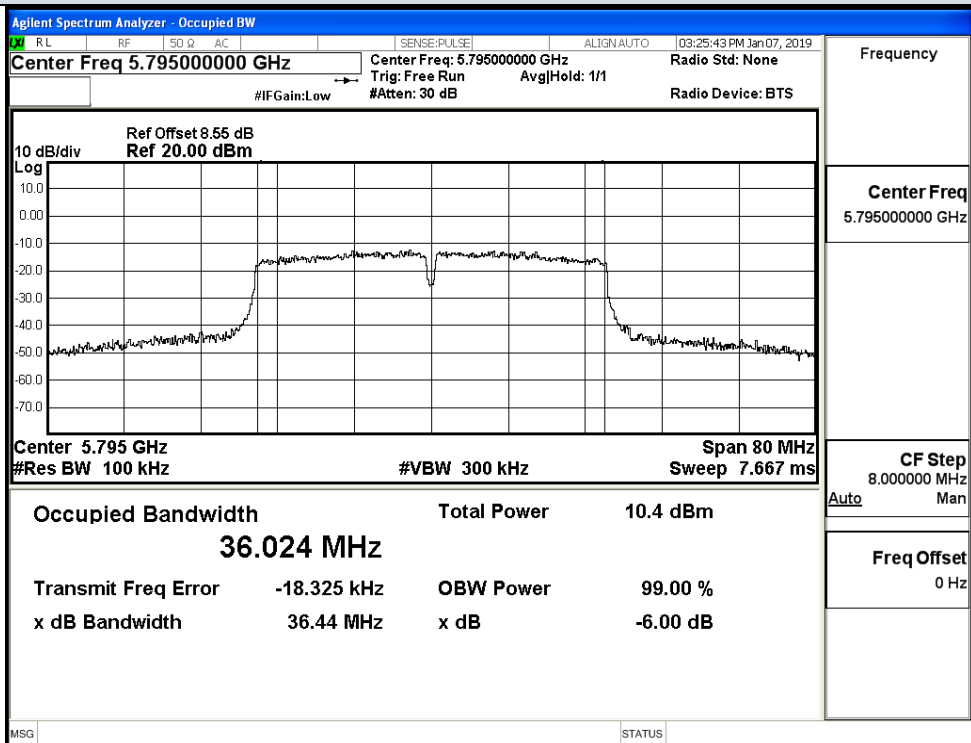


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant0

6dB Bandwidth_Ant0

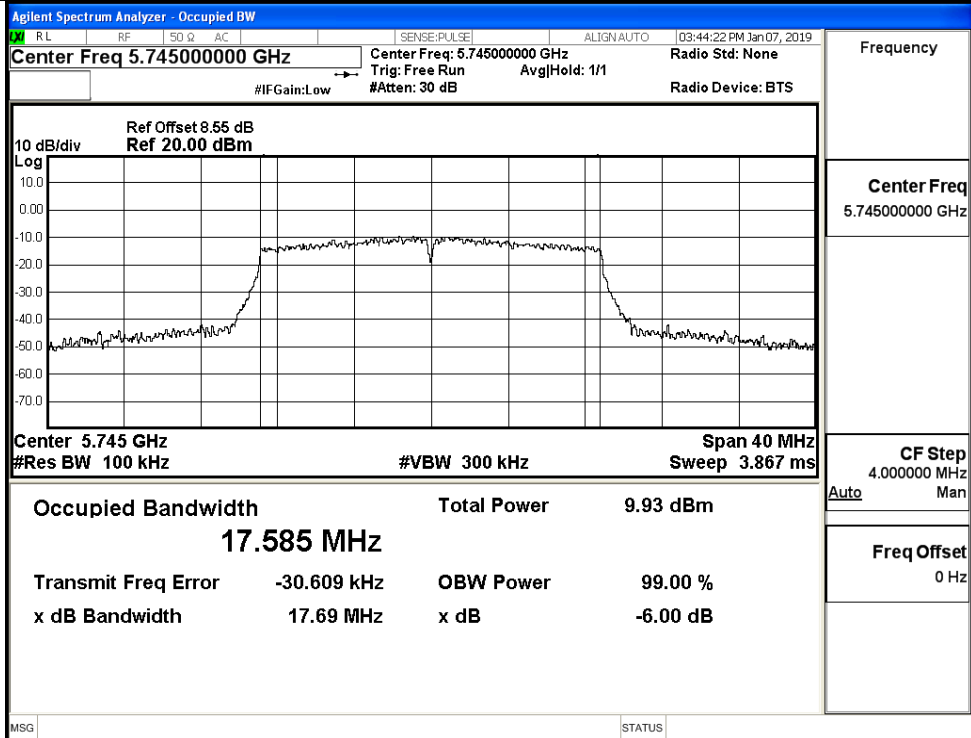


IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant0

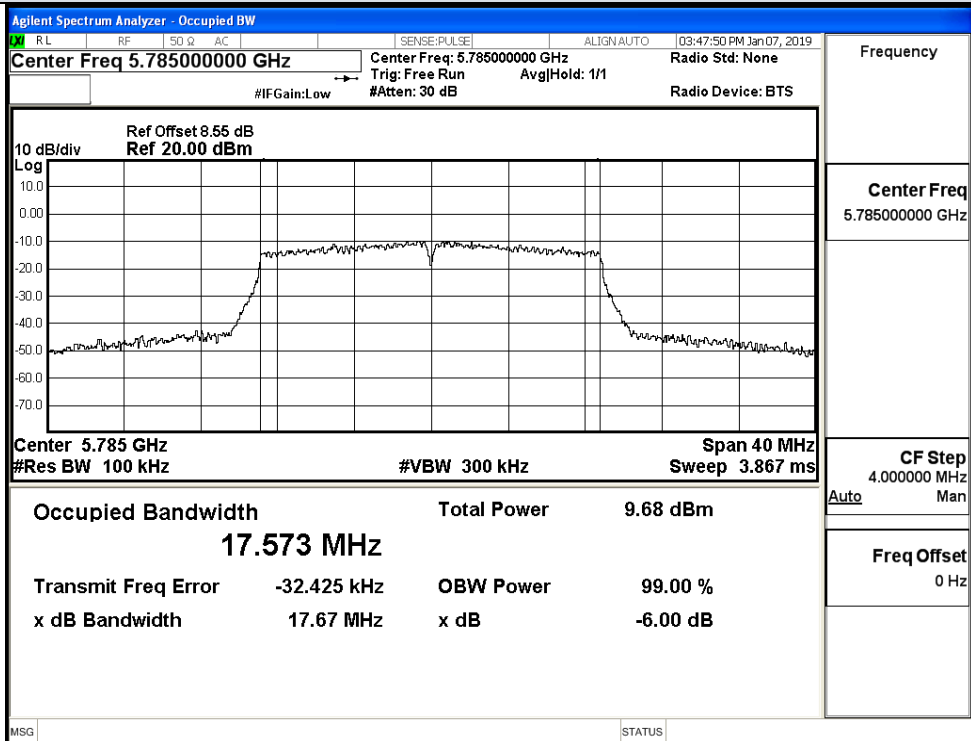


IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

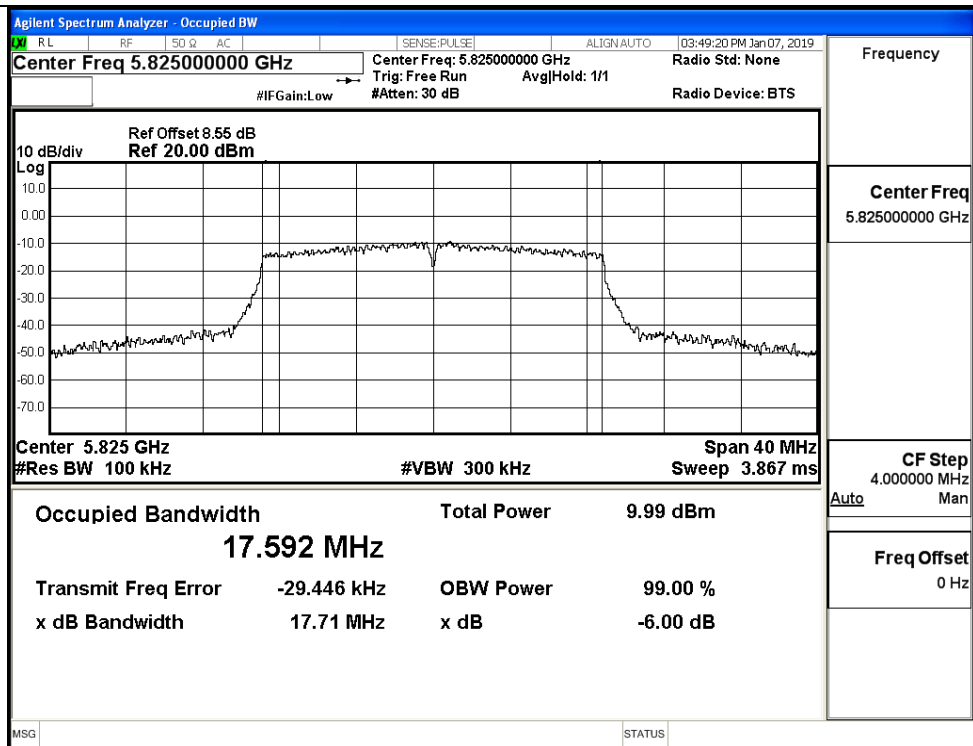
6dB Bandwidth_Ant1



IEEE 802.11a / Channel 149 / 5745 MHz_Ant1

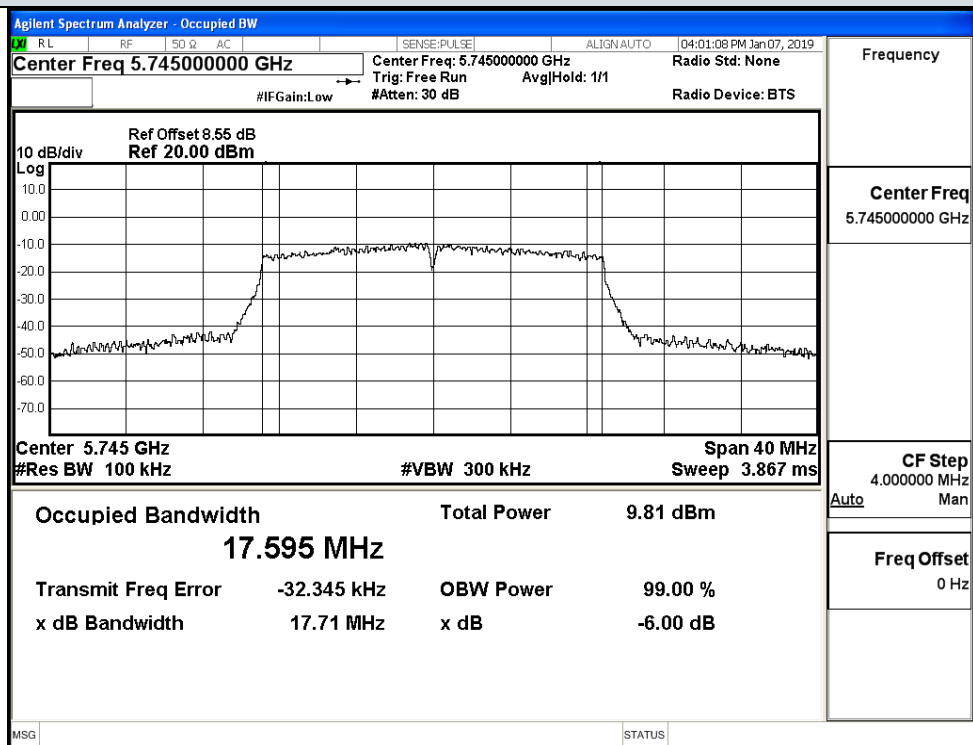


IEEE 802.11a / Channel 157 / 5785 MHz_Ant1

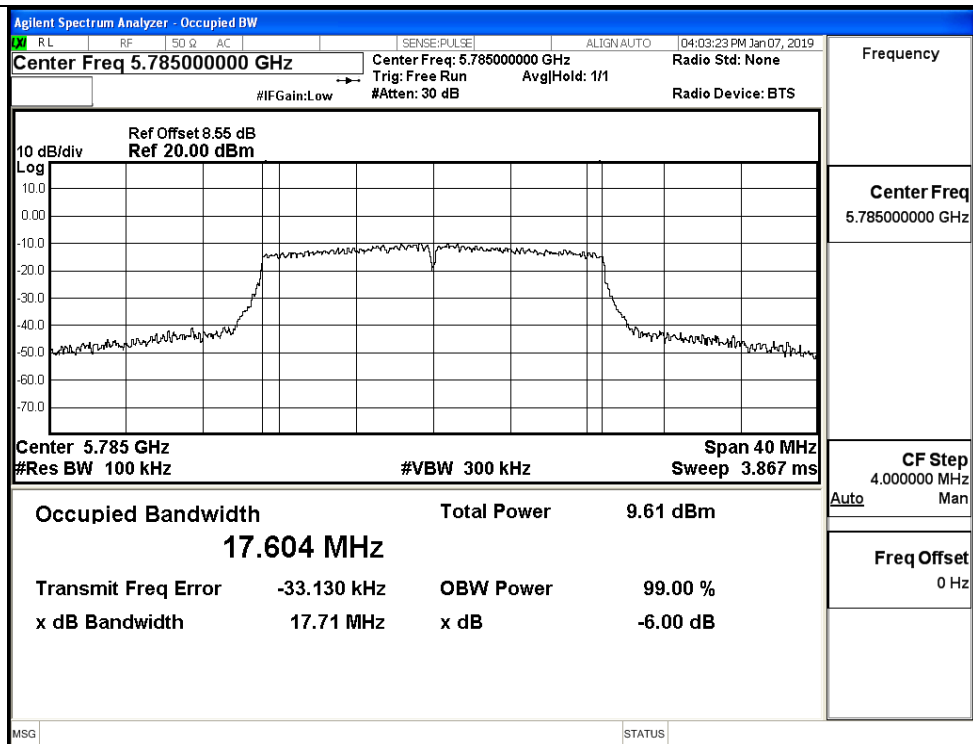


IEEE 802.11a / Channel 165 / 5825 MHz_Ant1

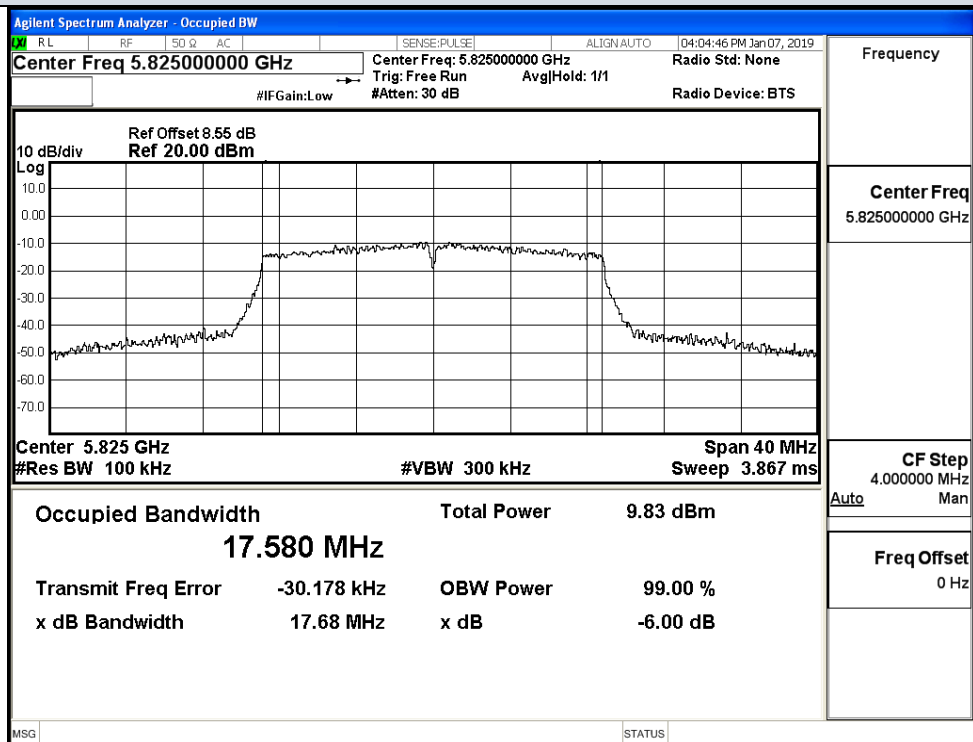
6dB Bandwidth_Ant1



IEEE 802.11n HT20 / Channel 149 / 5745 MHz_Ant1

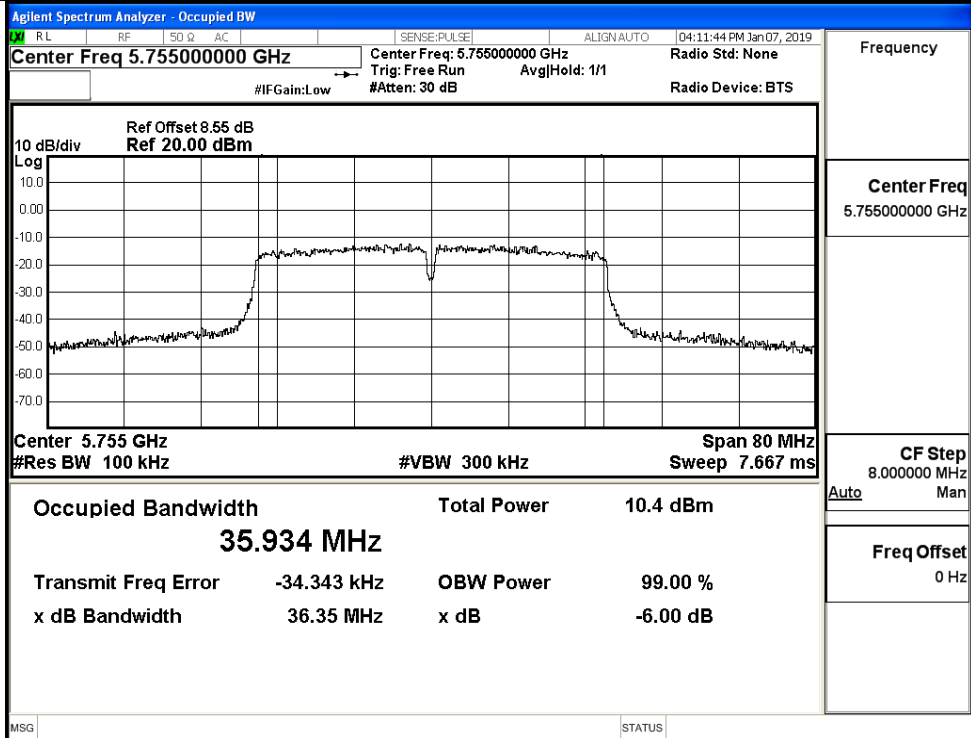


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant1

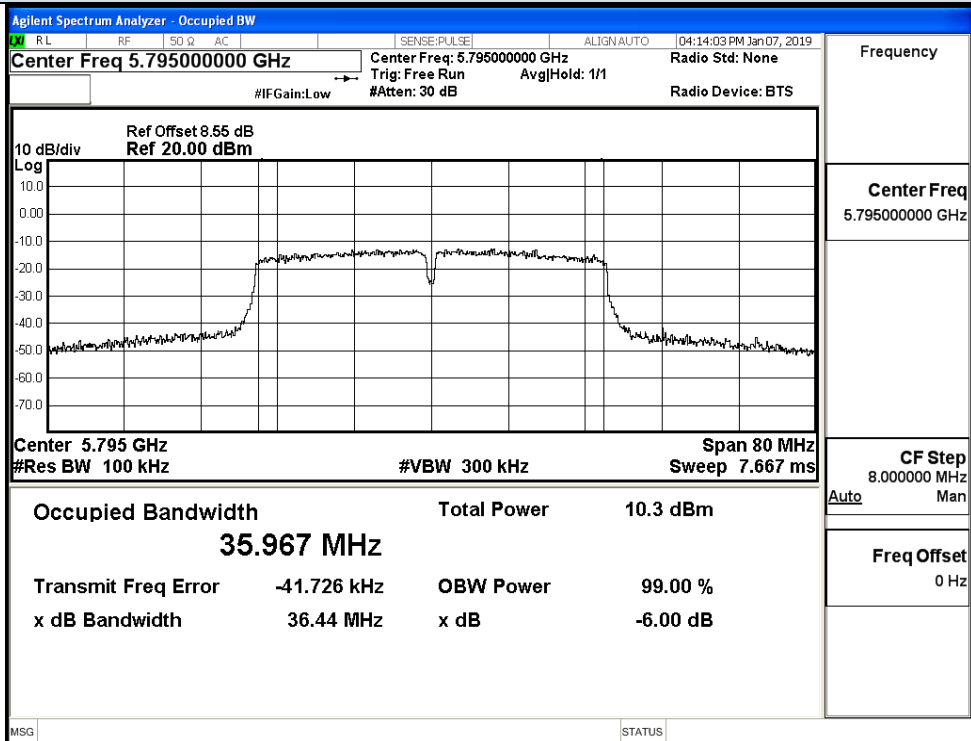


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant1

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	-49.027	2.00	-47.027	Peak	-27.0
		5700.0	-48.755	2.00	-46.755	Peak	10.0
		5720.0	-43.941	2.00	-41.941	Peak	15.6
		5725.0	-38.322	2.00	-36.322	Peak	27.0
	165	5850.0	-43.592	2.00	-41.592	Peak	27.0
		5855.0	-47.175	2.00	-45.175	Peak	15.6
		5875.0	-48.128	2.00	-46.128	Peak	10.0
		5925.0	-49.091	2.00	-47.091	Peak	-27.0
11N20	149	5650.0	-49.713	2.00	-47.713	Peak	-27.0
		5700.0	-48.785	2.00	-46.785	Peak	10.0
		5720.0	-43.800	2.00	-41.800	Peak	15.6
		5725.0	-37.066	2.00	-35.066	Peak	27.0
	165	5850.0	-43.631	2.00	-41.631	Peak	27.0
		5855.0	-46.381	2.00	-44.381	Peak	15.6
		5875.0	-46.894	2.00	-44.894	Peak	10.0
		5925.0	-48.829	2.00	-46.829	Peak	-27.0
11N40	151	5650.0	-50.011	2.00	-48.011	Peak	-27.0
		5700.0	-44.209	2.00	-42.209	Peak	10.0
		5720.0	-35.953	2.00	-33.953	Peak	15.6
		5725.0	-35.645	2.00	-33.645	Peak	27.0
	159	5850.0	-46.152	2.00	-44.152	Peak	27.0
		5855.0	-45.879	2.00	-43.879	Peak	15.6
		5875.0	-48.121	2.00	-46.121	Peak	10.0
		5925.0	-49.024	2.00	-47.024	Peak	-27.0

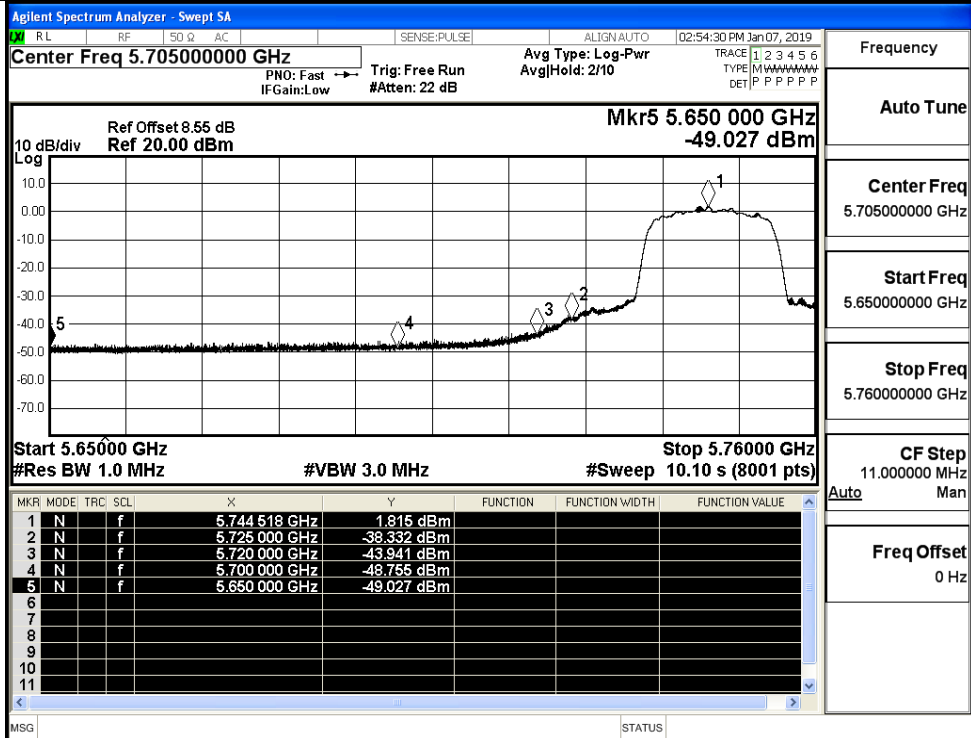
Antenna 1

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
11A	149	5650.0	-46.675	2.00	-44.675	Peak	-27.0
		5700.0	-48.012	2.00	-46.012	Peak	10.0
		5720.0	-42.382	2.00	-40.382	Peak	15.6
		5725.0	-37.344	2.00	-35.344	Peak	27.0
	165	5850.0	-41.771	2.00	-39.771	Peak	27.0
		5855.0	-46.440	2.00	-44.440	Peak	15.6
		5875.0	-47.519	2.00	-45.519	Peak	10.0
		5925.0	-49.068	2.00	-47.068	Peak	-27.0
11N20	149	5650.0	-49.259	2.00	-47.259	Peak	-27.0
		5700.0	-47.600	2.00	-45.600	Peak	10.0
		5720.0	-42.510	2.00	-40.510	Peak	15.6
		5725.0	-38.115	2.00	-36.115	Peak	27.0
	165	5850.0	-44.071	2.00	-42.071	Peak	27.0
		5855.0	-44.959	2.00	-42.959	Peak	15.6
		5875.0	-46.373	2.00	-44.373	Peak	10.0
		5925.0	-49.319	2.00	-47.319	Peak	-27.0
11N40	151	5650.0	-48.900	2.00	-46.900	Peak	-27.0
		5700.0	-46.502	2.00	-44.502	Peak	10.0
		5720.0	-35.417	2.00	-33.417	Peak	15.6
		5725.0	-35.798	2.00	-33.798	Peak	27.0
	159	5850.0	-45.873	2.00	-43.873	Peak	27.0
		5855.0	-47.590	2.00	-45.590	Peak	15.6
		5875.0	-48.414	2.00	-46.414	Peak	10.0
		5925.0	-48.894	2.00	-46.894	Peak	-27.0

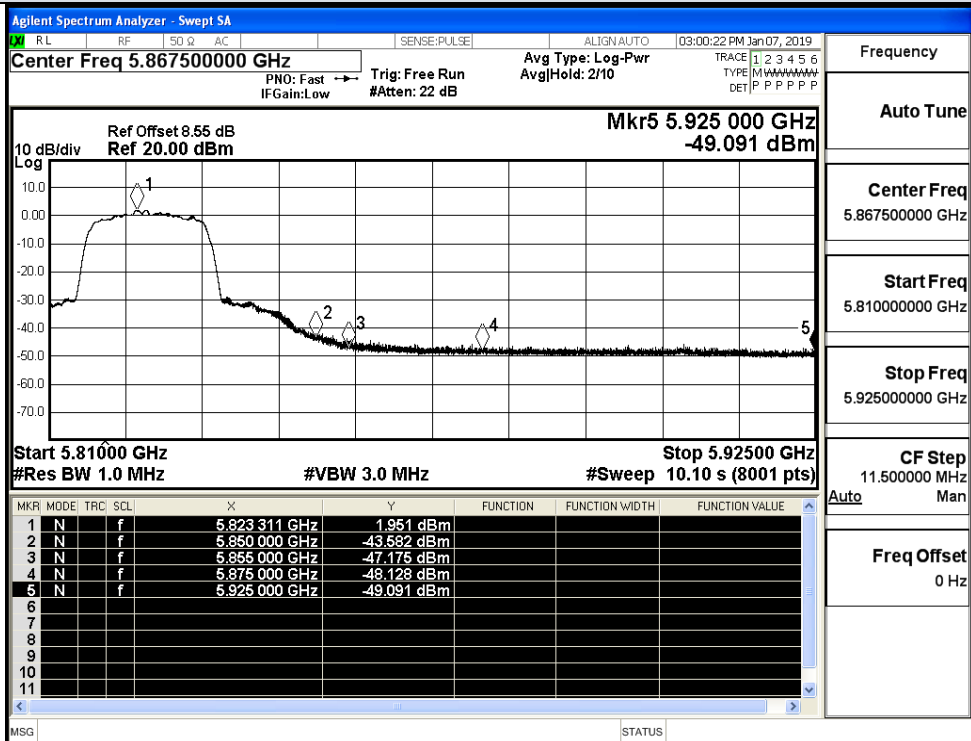
Antenna 0+Antenn 1

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	-49.713	-49.259	-46.470	5.01	-41.460	Peak	-27.0
		5700.0	-48.785	-47.600	-45.142	5.01	-40.132	Peak	10.0
		5720.0	-43.800	-42.510	-40.097	5.01	-35.087	Peak	15.6
		5725.0	-37.066	-38.115	-34.549	5.01	-29.539	Peak	27.0
	165	5850.0	-43.631	-44.071	-40.835	5.01	-35.825	Peak	27.0
		5855.0	-46.381	-44.959	-42.602	5.01	-37.592	Peak	15.6
		5875.0	-46.894	-46.373	-43.615	5.01	-38.605	Peak	10.0
		5925.0	-48.829	-49.319	-46.057	5.01	-41.047	Peak	-27.0
11N40	151	5650.0	-50.011	-48.900	-46.410	5.01	-41.400	Peak	-27.0
		5700.0	-44.209	-46.502	-42.196	5.01	-37.186	Peak	10.0
		5720.0	-35.953	-35.417	-32.666	5.01	-27.656	Peak	15.6
		5725.0	-35.645	-35.798	-32.711	5.01	-27.701	Peak	27.0
	159	5850.0	-46.152	-45.873	-43.000	5.01	-37.990	Peak	27.0
		5855.0	-45.879	-47.590	-43.640	5.01	-38.630	Peak	15.6
		5875.0	-48.121	-48.414	-45.255	5.01	-40.245	Peak	10.0
		5925.0	-49.024	-48.894	-45.948	5.01	-40.938	Peak	-27.0

Undesirable Emissions Measurement_Ant0

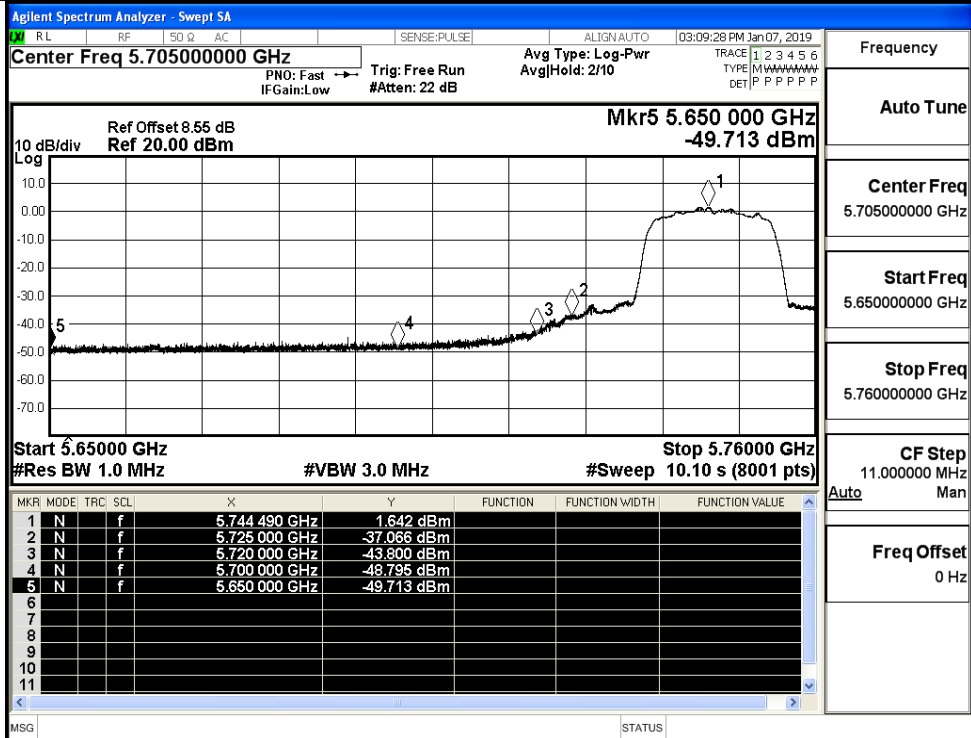


IEEE 802.11a / Channel 149 / 5745 MHz / Peak_Ant0

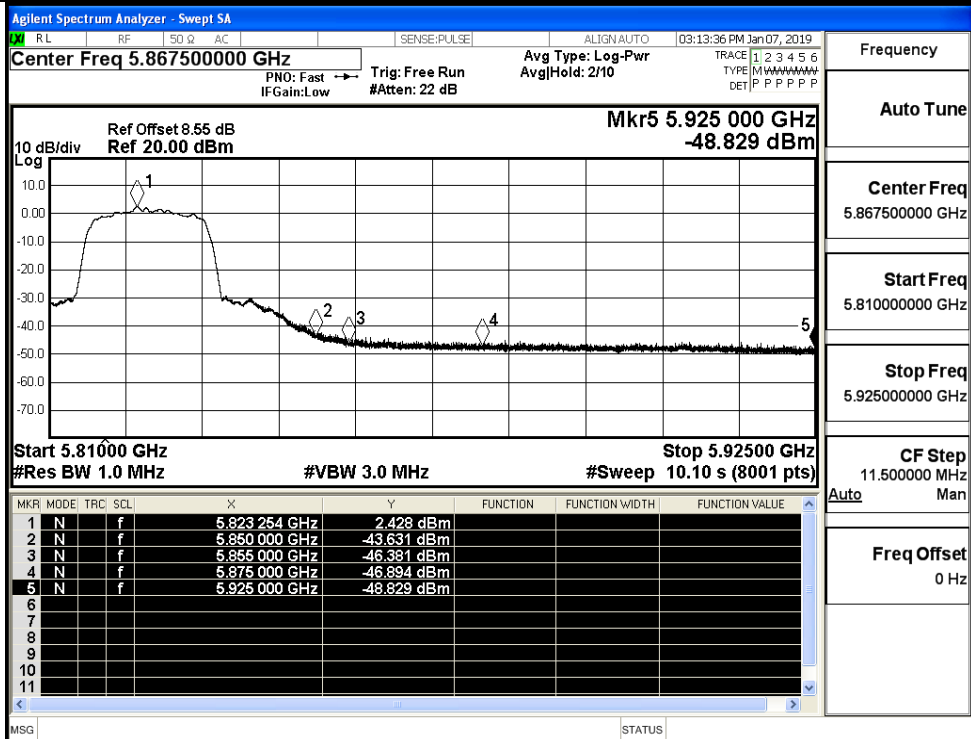


IEEE 802.11a / Channel 165 / 5825 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant0

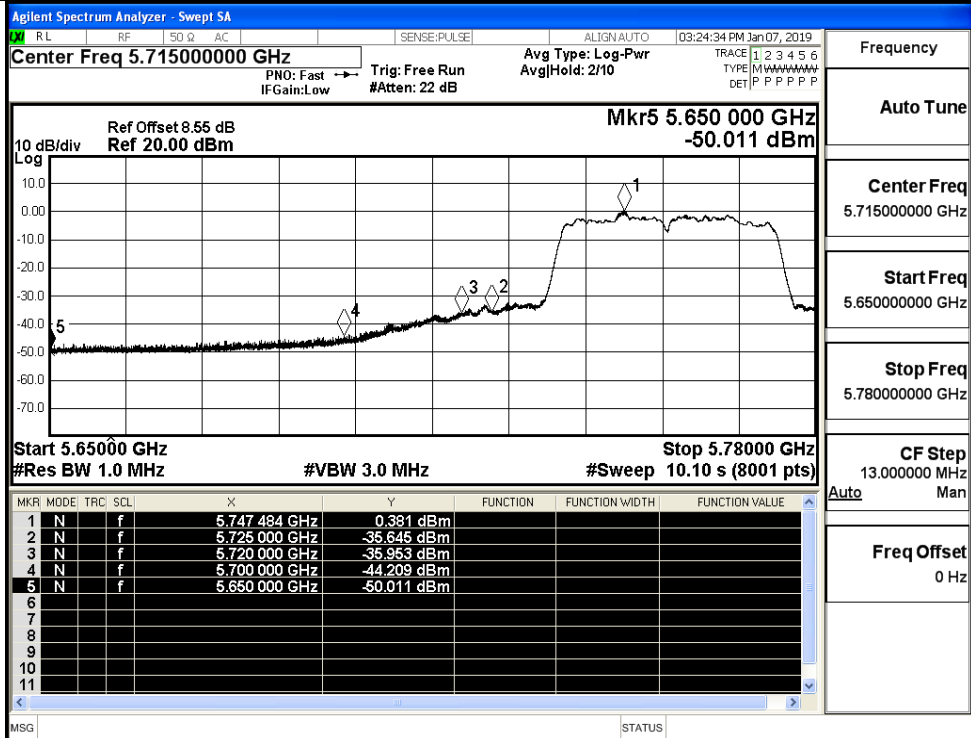


IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak_Ant0

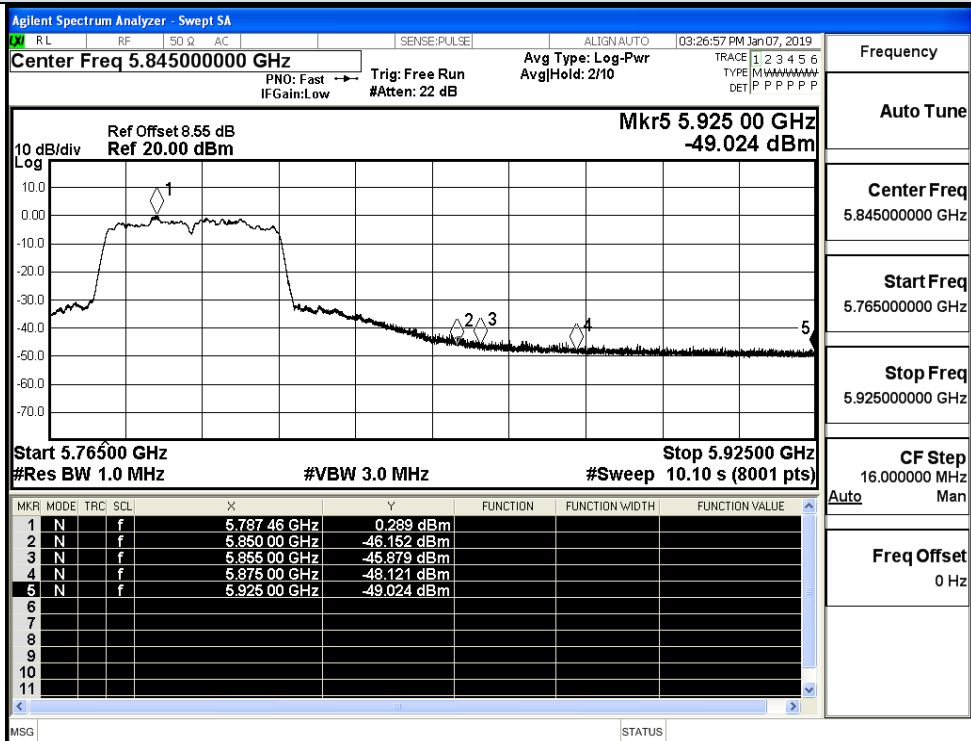


IEEE 802.11 n HT20 / Channel 165 / 5825 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant0

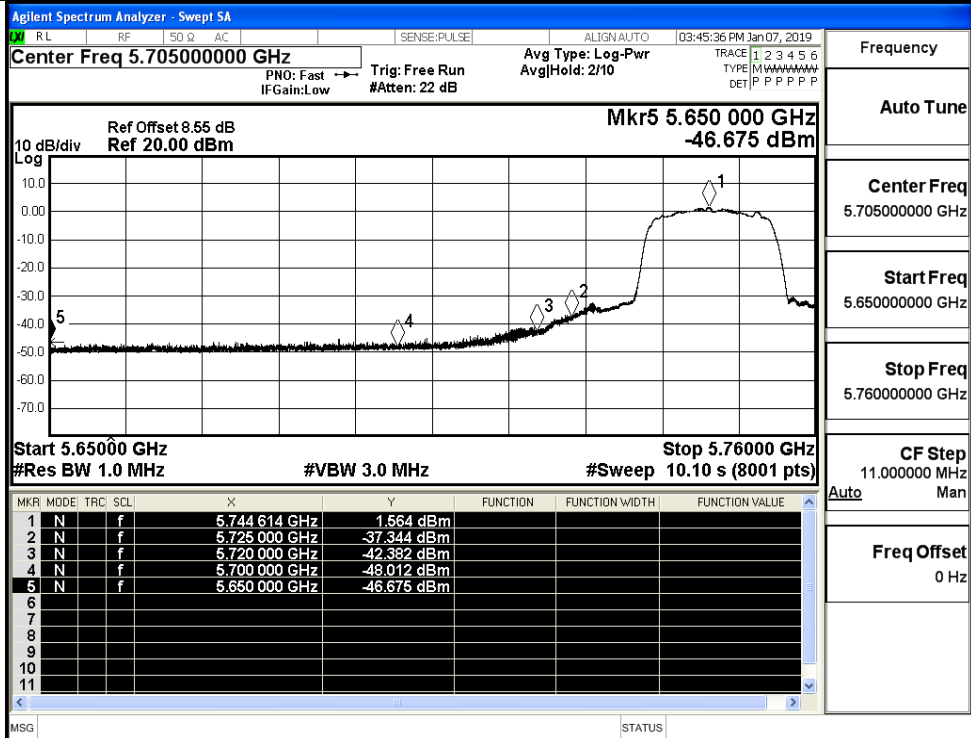


IEEE 802.11n HT40 / Channel 151 / 5755 MHz / Peak_Ant0

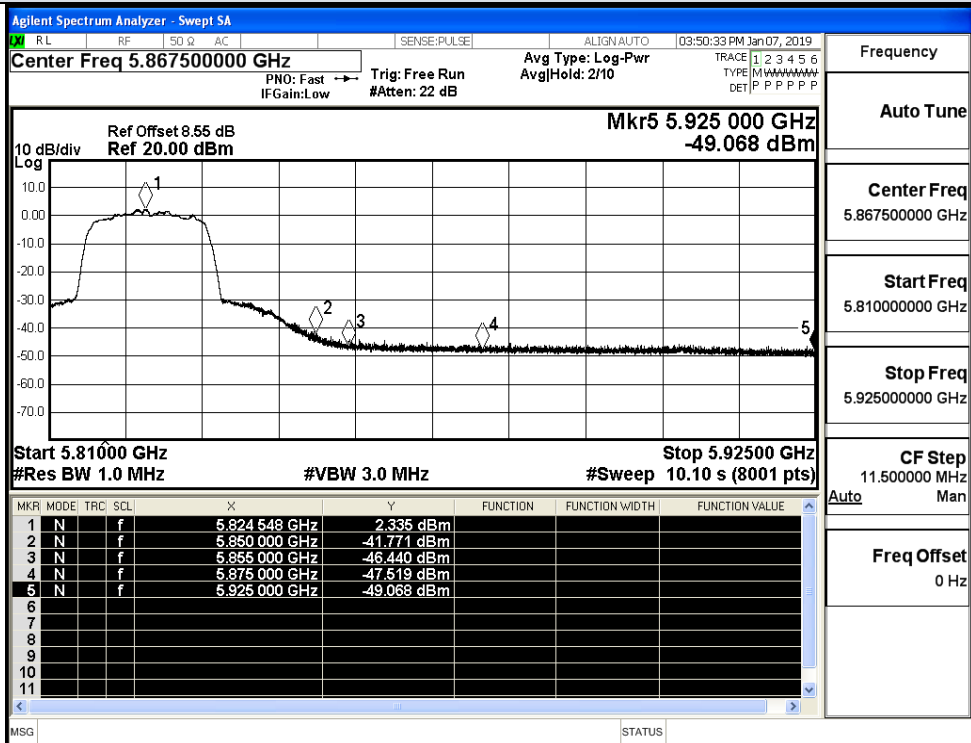


IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant1

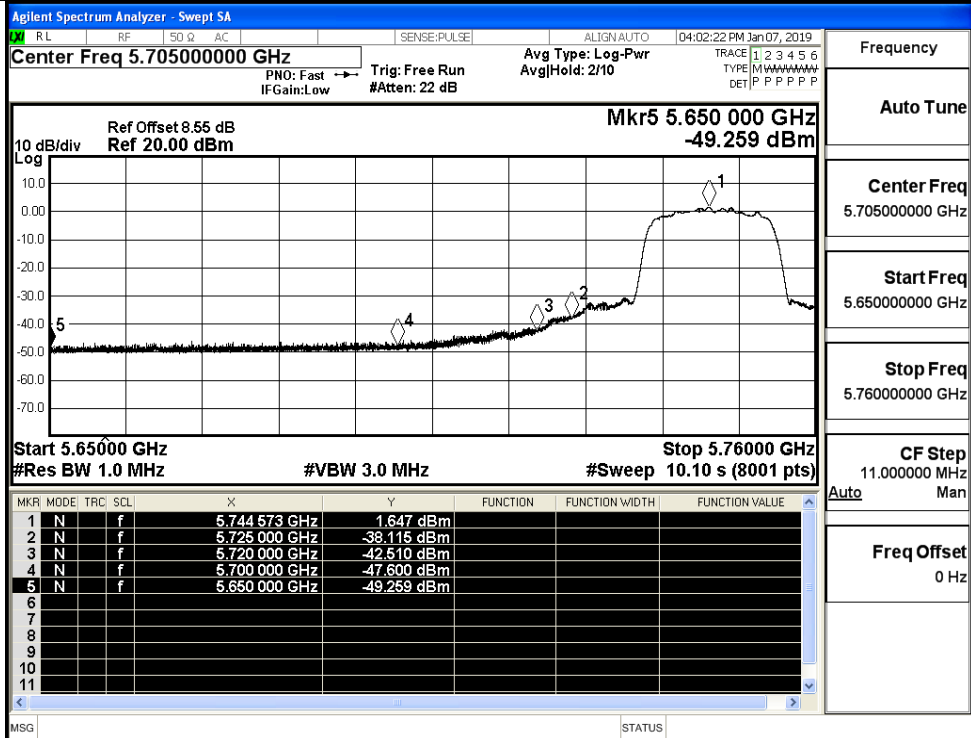


IEEE 802.11a / Channel 149 / 5745 MHz / Peak_Ant1

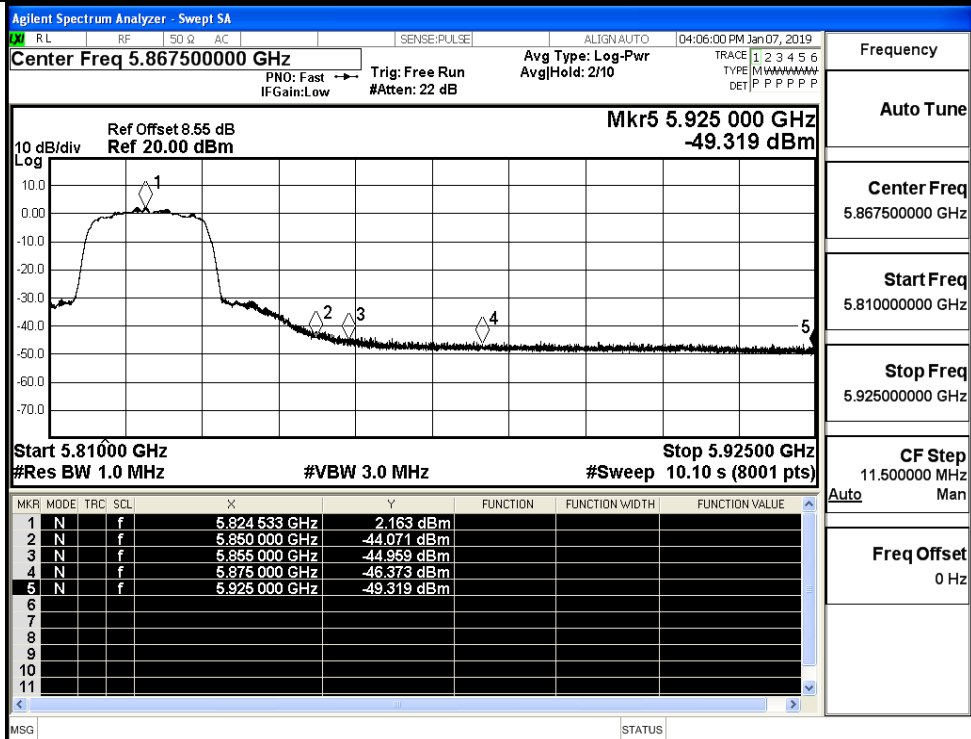


IEEE 802.11a / Channel 165 / 5825 MHz / Peak_Ant1

Undesirable Emissions Measurement_Ant1

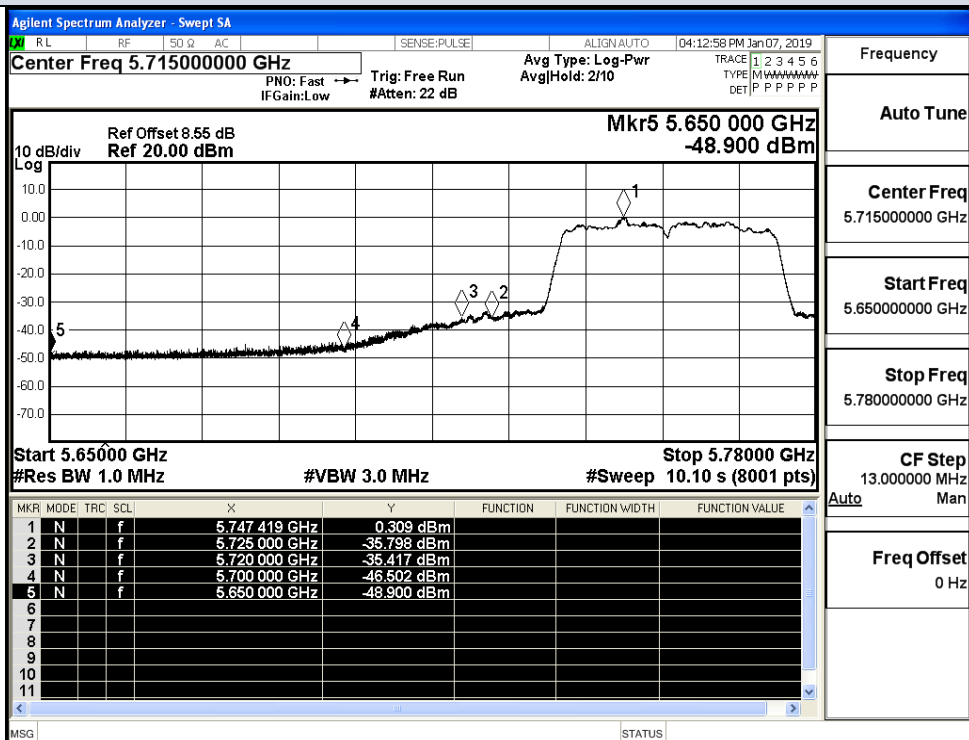


IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak_Ant1

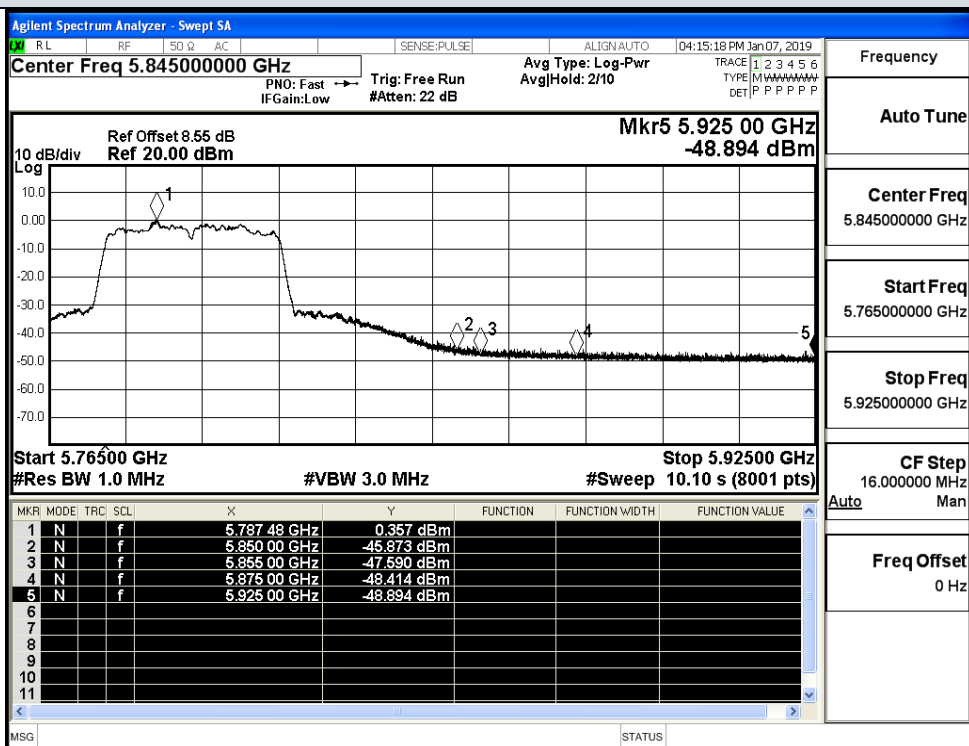


IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak_Ant1

Undesirable Emissions Measurement_Ant1



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



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