

Appendix B

RF Test Data for 5.8G WLAN (Conducted Measurement)

Product Name: WIRELESS HDMI EXTENDER

Trade Mark: HOLLYLAND

Test Model: HLWH200B

Environmental Conditions

Temperature:	24.1° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	WangChuang
Supervised by:	Jayden Zhuo

B.1 Duty Cycle

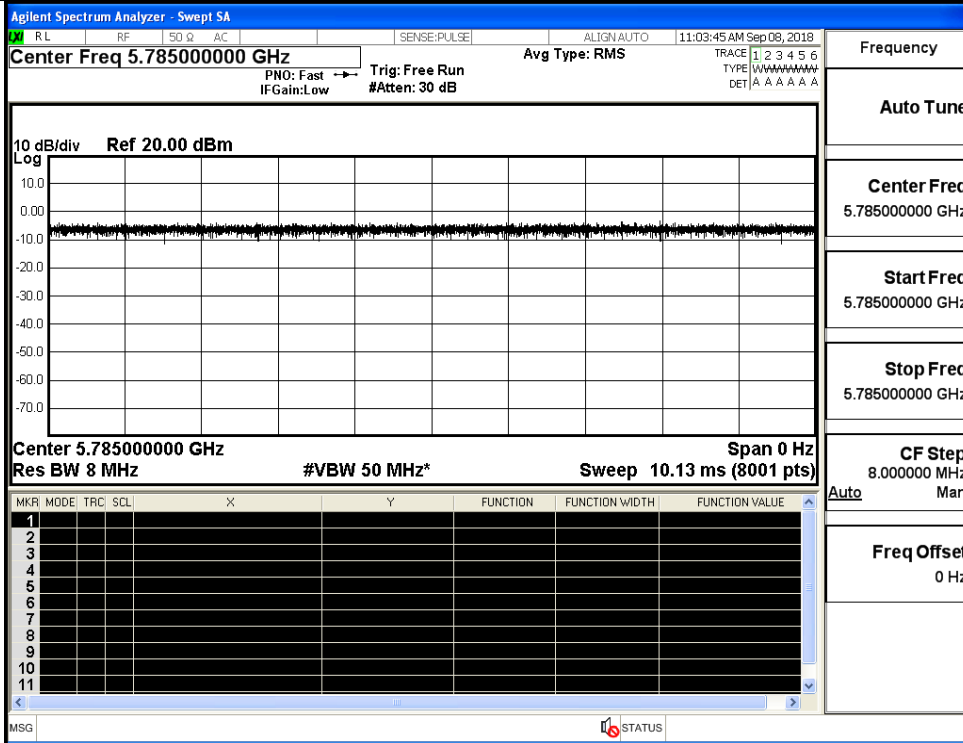
Antenna 0

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

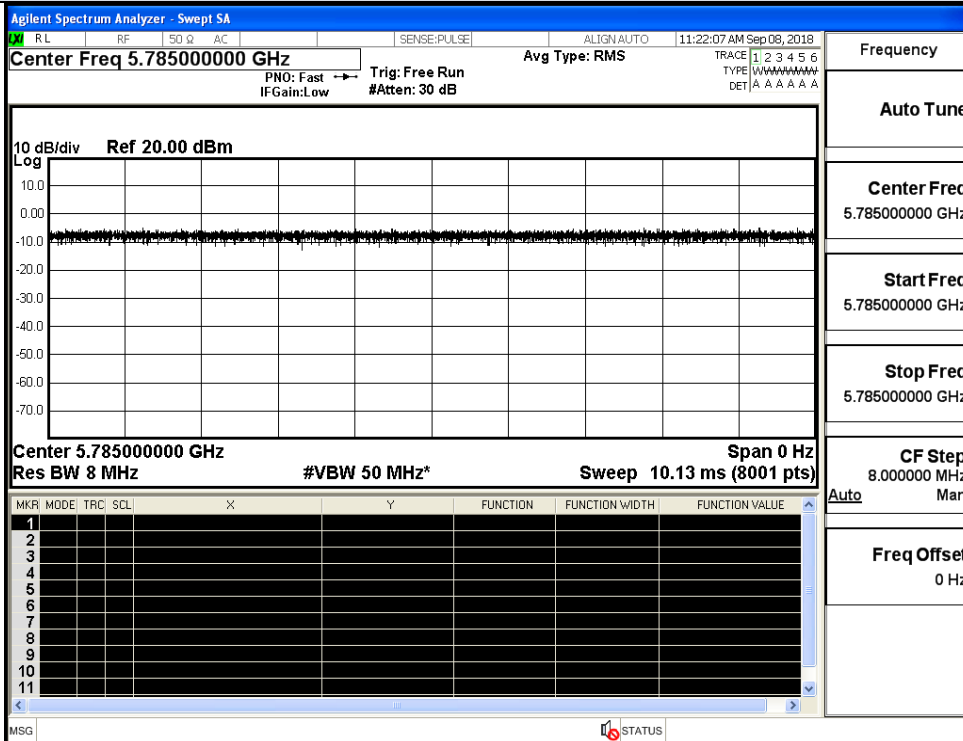
Antenna 1

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

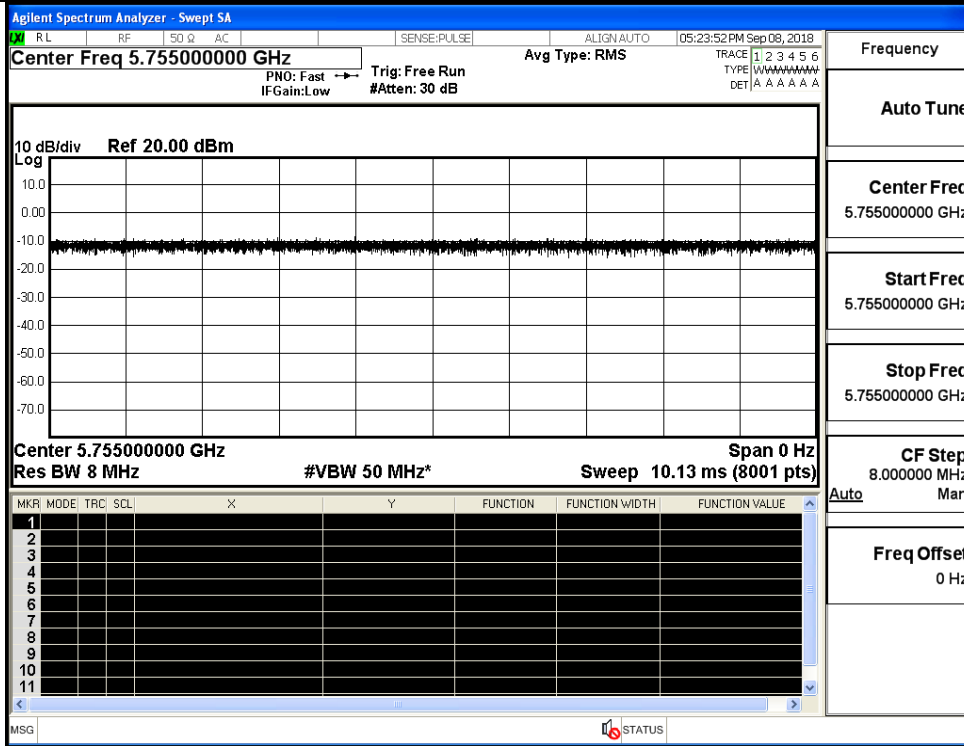
On Time and Duty Cycle_Ant0



IEEE 802.11a_Ant0

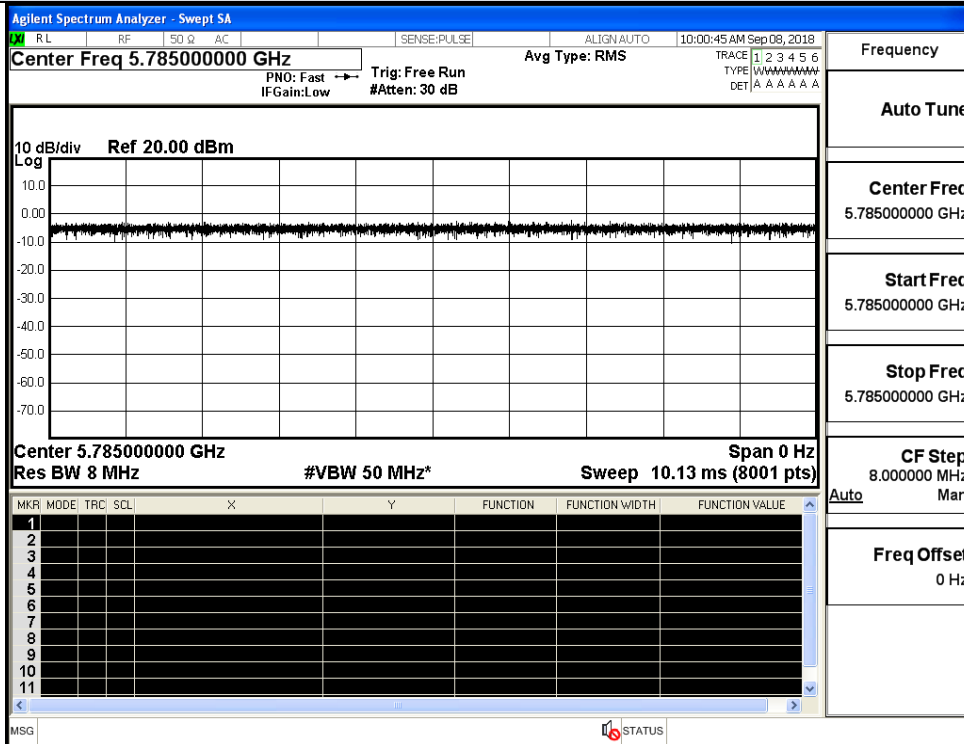


IEEE 802.11n HT20_Ant0

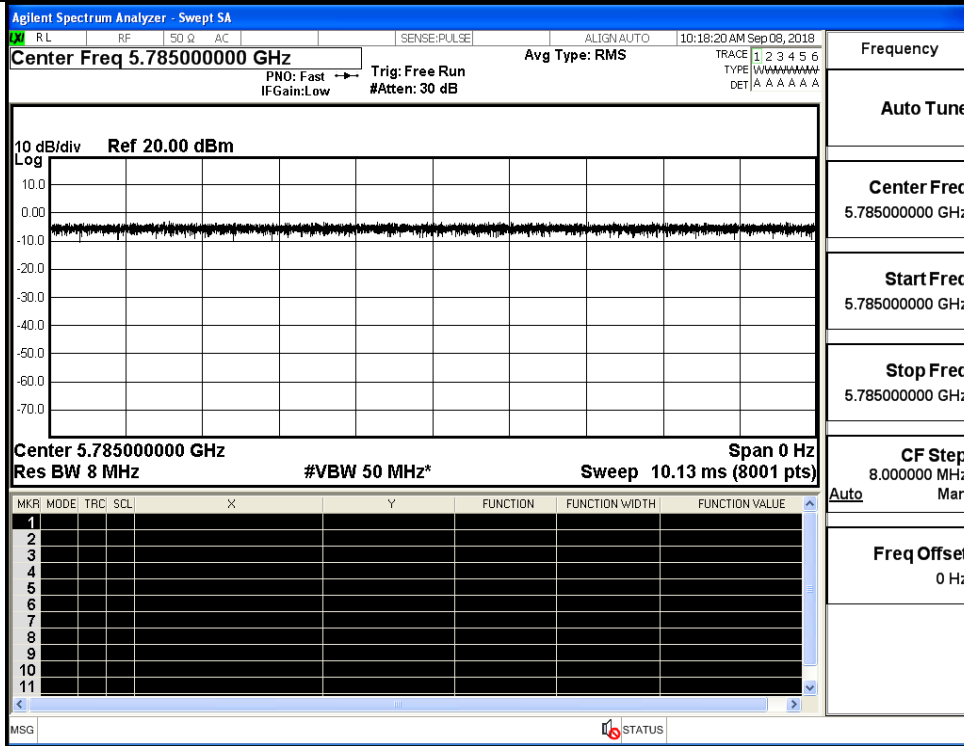


IEEE 802.11n HT40_Ant0

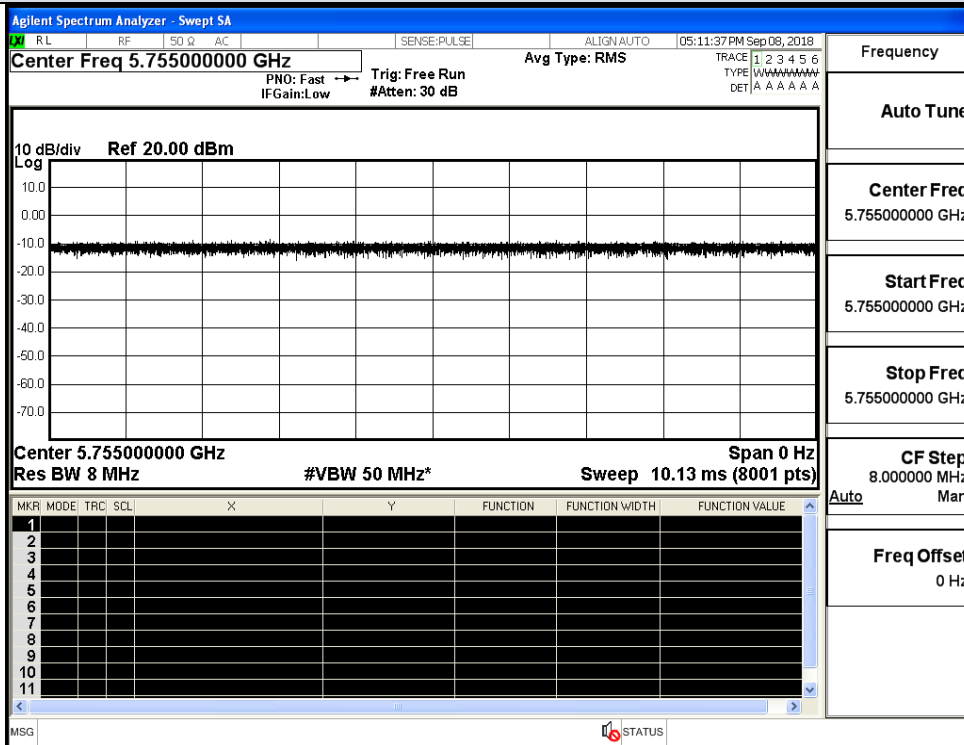
On Time and Duty Cycle_Ant1



IEEE 802.11a_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)
11A	149	5745	14.57	0	14.57	30
	157	5785	14.94	0	14.94	
	165	5825	14.57	0	14.57	
11N20	149	5745	13.55	0	13.55	30
	157	5785	13.76	0	13.76	
	165	5825	13.67	0	13.67	
11N40	151	5755	12.41	0	12.41	30
	159	5795	12.67	0	12.67	

Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11A	149	5745	14.84	0	14.84	30
	157	5785	15.04	0	15.04	
	165	5825	14.91	0	14.91	
11N20	149	5745	13.79	0	13.79	30
	157	5785	13.87	0	13.87	
	165	5825	13.52	0	13.52	
11N40	151	5755	12.32	0	12.32	30
	159	5795	12.29	0	12.29	

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	13.55	13.79	16.68	0	13.55	13.79	16.68	30
	157	5785	13.76	13.87	16.83	0	13.76	13.87	16.83	
	165	5825	13.67	13.52	16.61	0	13.67	13.52	16.61	
11N40	151	5755	12.41	12.32	15.38	0	12.41	12.32	15.38	30
	159	5795	12.67	12.29	15.49	0	12.67	12.29	15.49	

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	-3.944	0	2.218	-1.726	30
	157	5785	-3.773	0	2.218	-1.555	
	165	5825	-4.855	0	2.218	-2.637	
11N20	149	5745	-4.318	0	2.218	-2.100	30
	157	5785	-6.239	0	2.218	-4.021	
	165	5825	-5.925	0	2.218	-3.707	
11N40	151	5755	-14.483	0	2.218	-12.265	30
	159	5795	-13.400	0	2.218	-11.182	

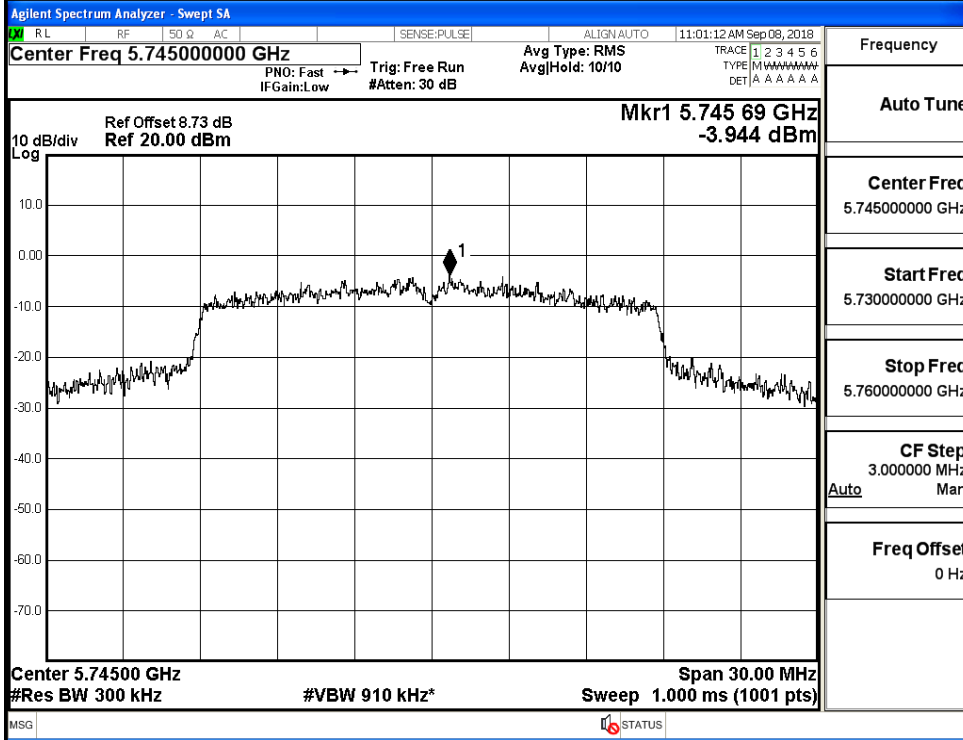
Antenna 1

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	-2.839	0	2.218	-0.621	30
	157	5785	-1.701	0	2.218	0.517	
	165	5825	-3.121	0	2.218	-0.903	
11N20	149	5745	-2.578	0	2.218	-0.360	30
	157	5785	-3.630	0	2.218	-1.412	
	165	5825	-3.550	0	2.218	-1.332	
11N40	151	5755	-8.875	0	2.218	-6.657	30
	159	5795	-13.295	0	2.218	-11.077	

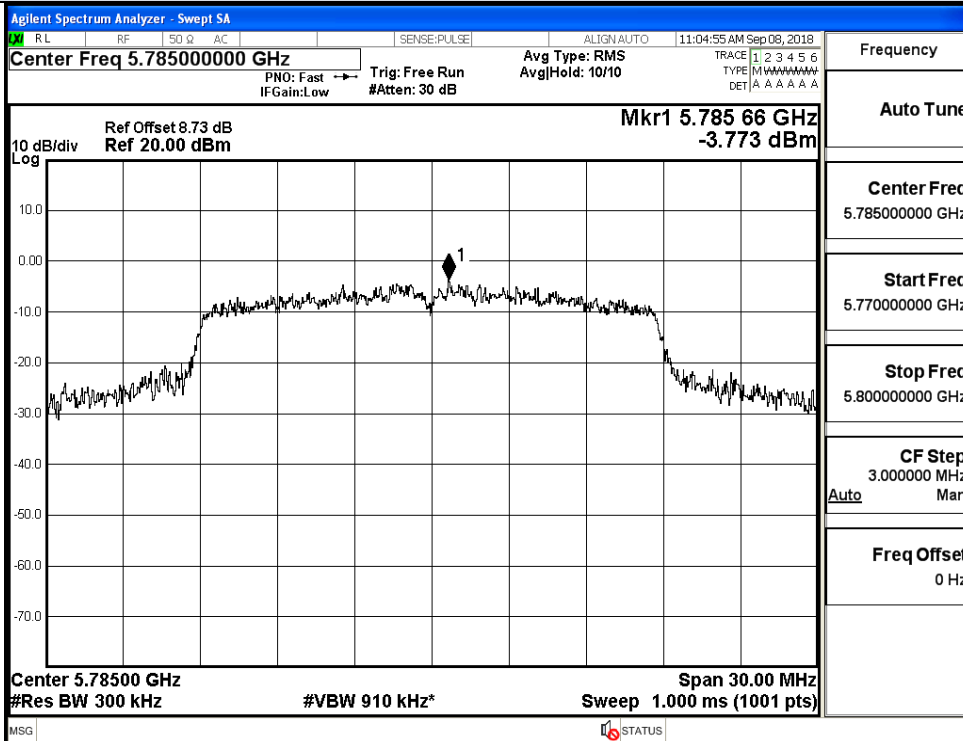
Antenna 0+Antenna 1

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	-4.318	-2.578	-0.351	0	2.218	-2.100	-0.360	1.867	27.99
	157	5785	-6.239	-3.630	-1.731	0	2.218	-4.021	-1.412	0.487	
	165	5825	-5.925	-3.550	-1.567	0	2.218	-3.707	-1.332	0.651	
11N40	151	5755	-14.483	-8.875	-7.820	0	2.218	-12.265	-6.657	-5.602	27.99
	159	5795	-13.400	-13.295	-10.337	0	2.218	-11.182	-11.077	-8.119	

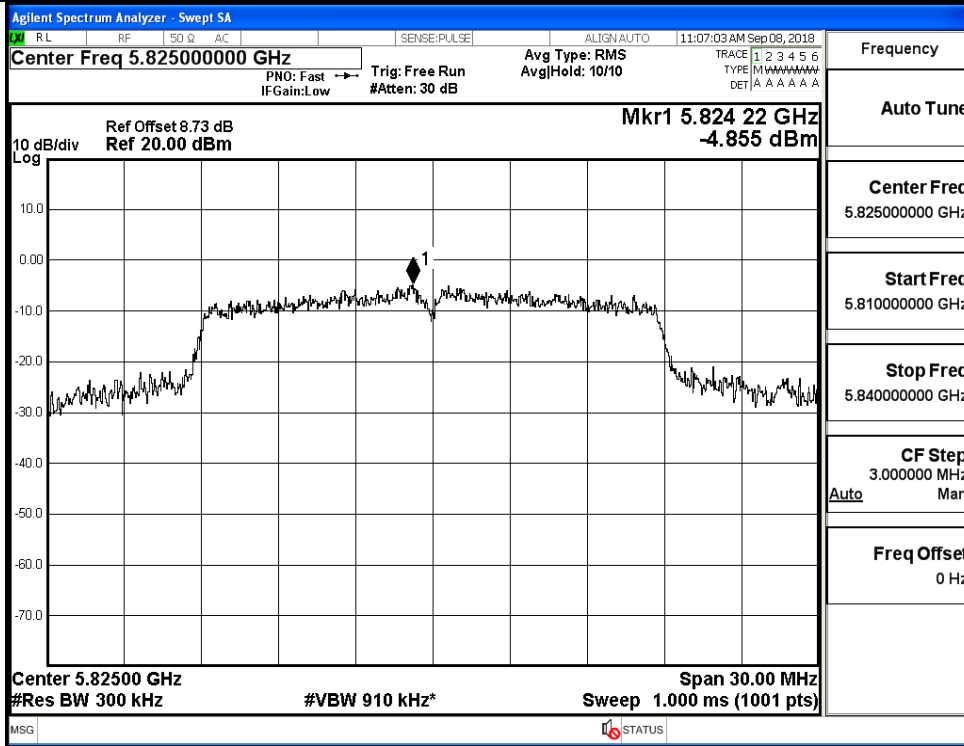
Power Spectral Density_Ant0



IEEE 802.11a / Channel 149 / 5745 MHz_Ant0

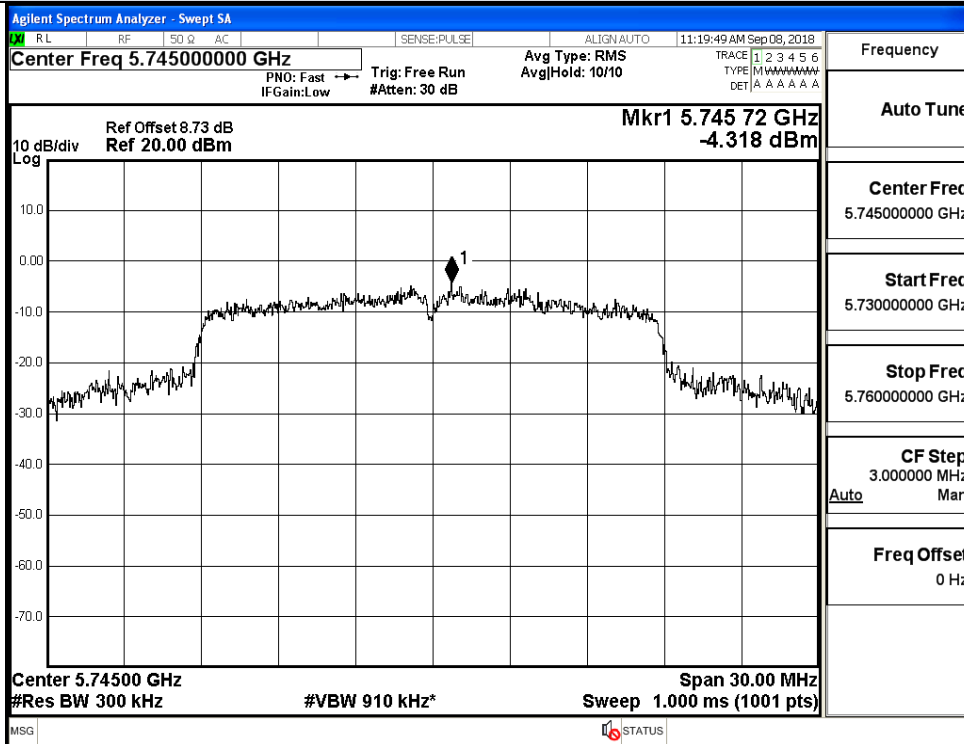


IEEE 802.11a / Channel 157 / 5785 MHz_Ant0

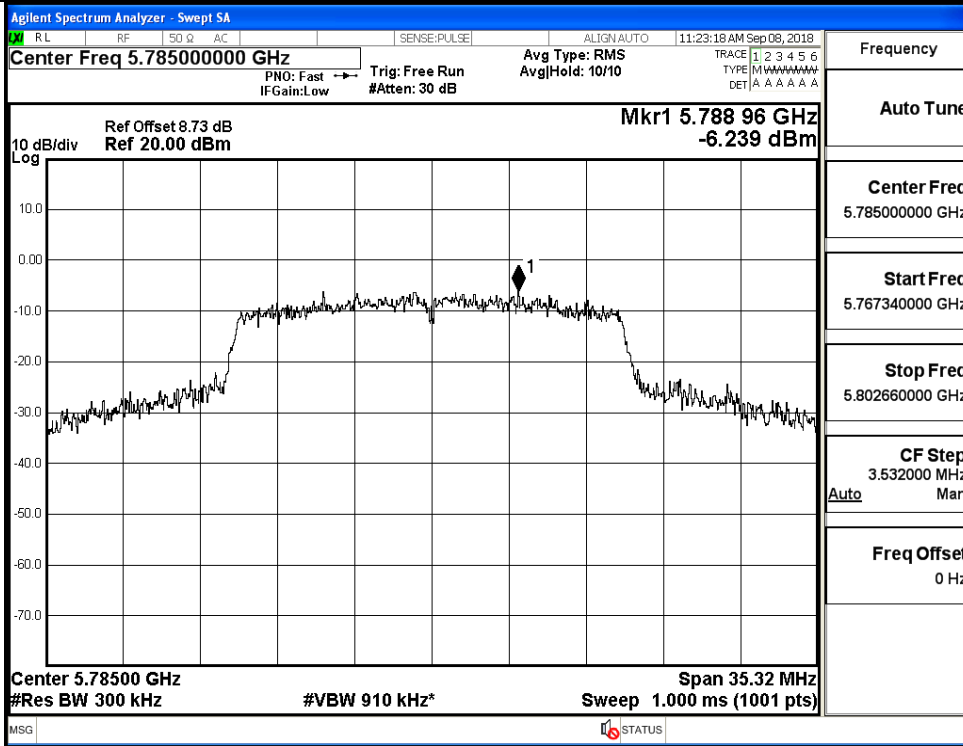


IEEE 802.11a / Channel 165 / 5825 MHz_Ant0

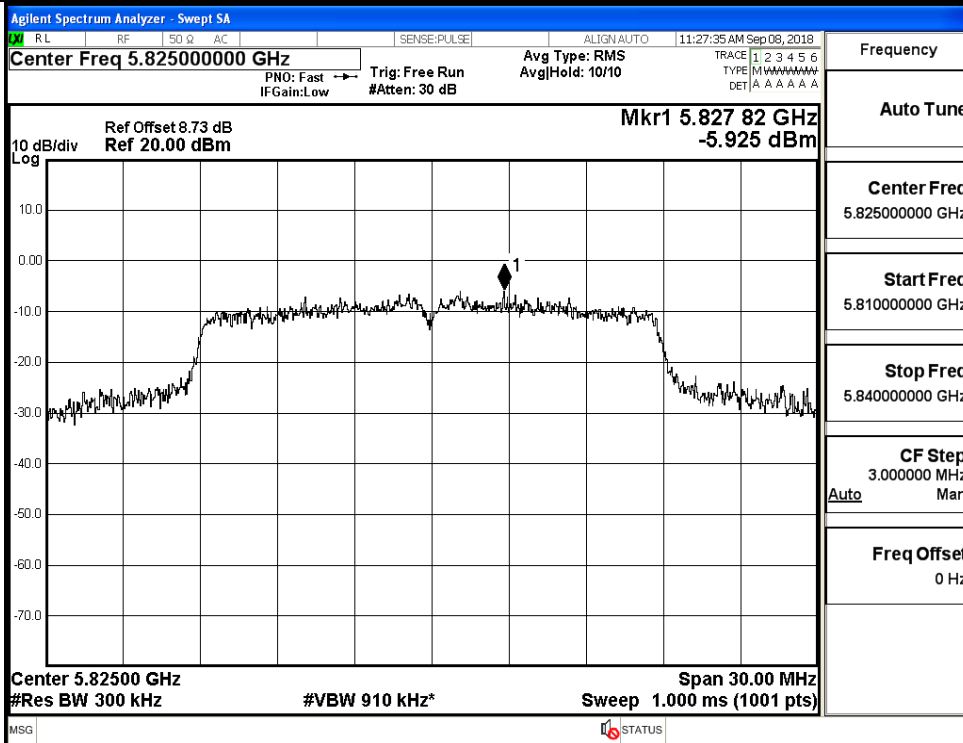
Power Spectral Density_Ant0



IEEE 802.11n HT20 / Channel 149 / 5745 MHz_Ant0

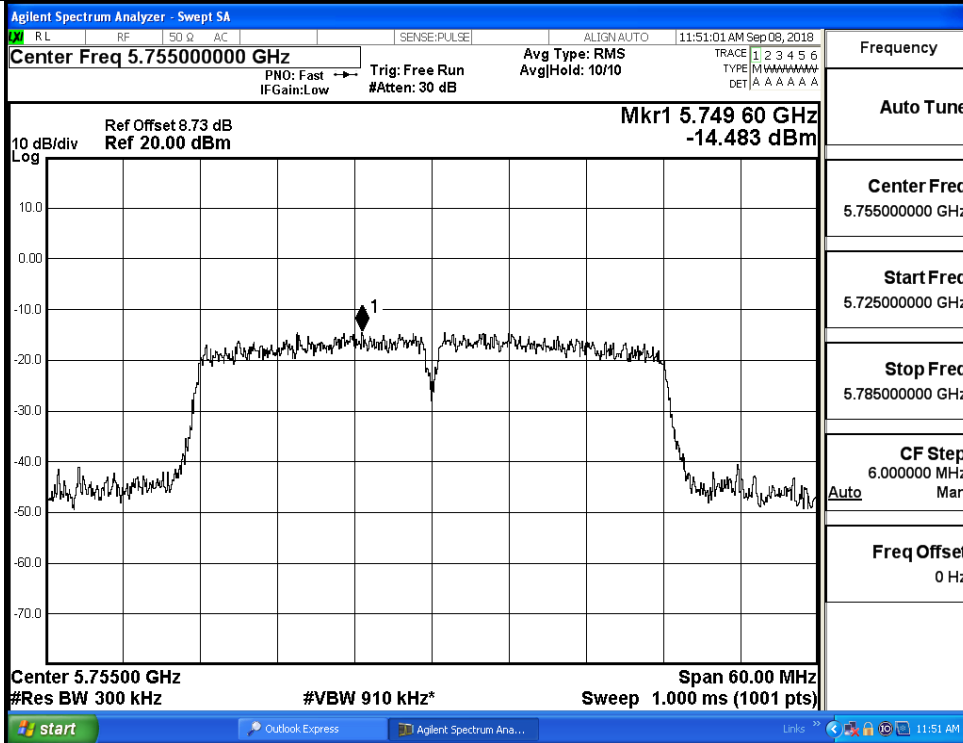


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant0

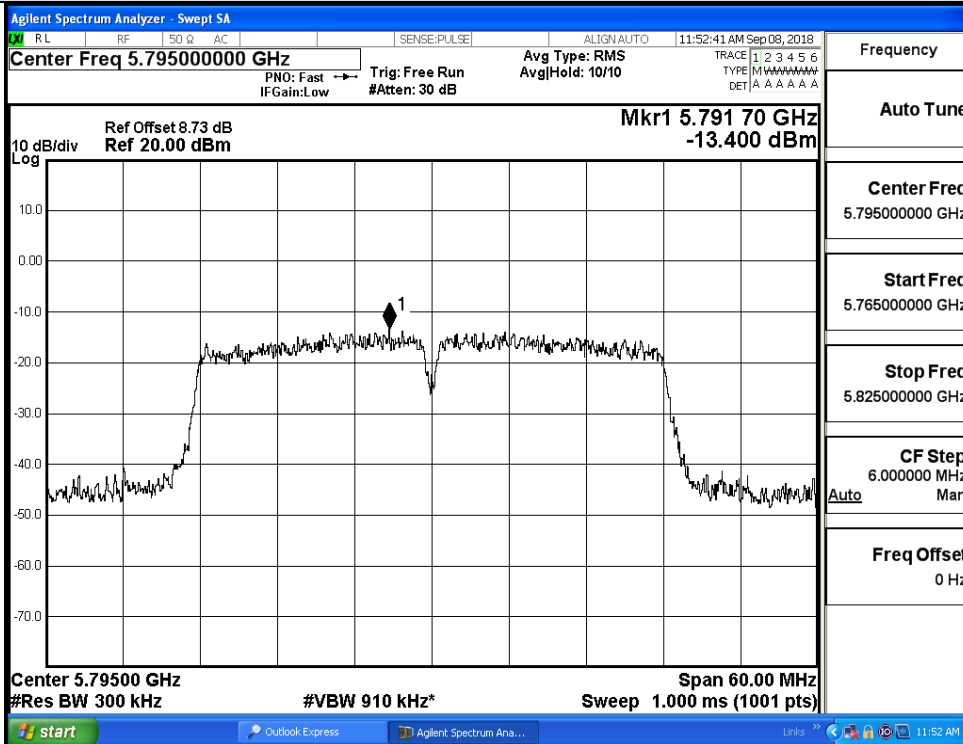


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant0

Power Spectral Density_Ant0

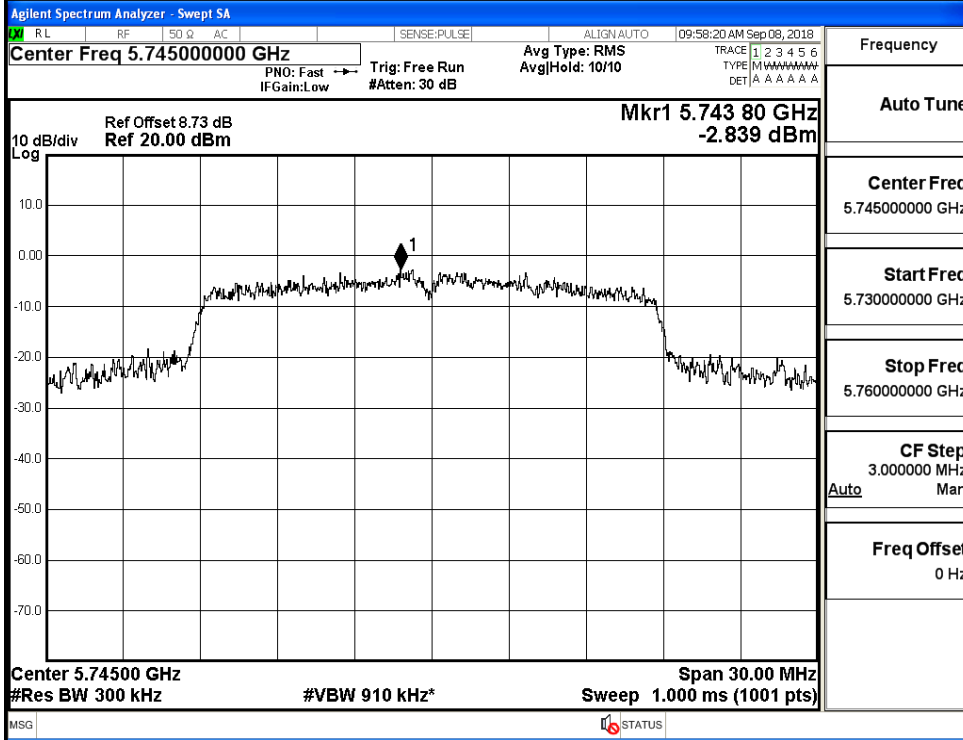


IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant0

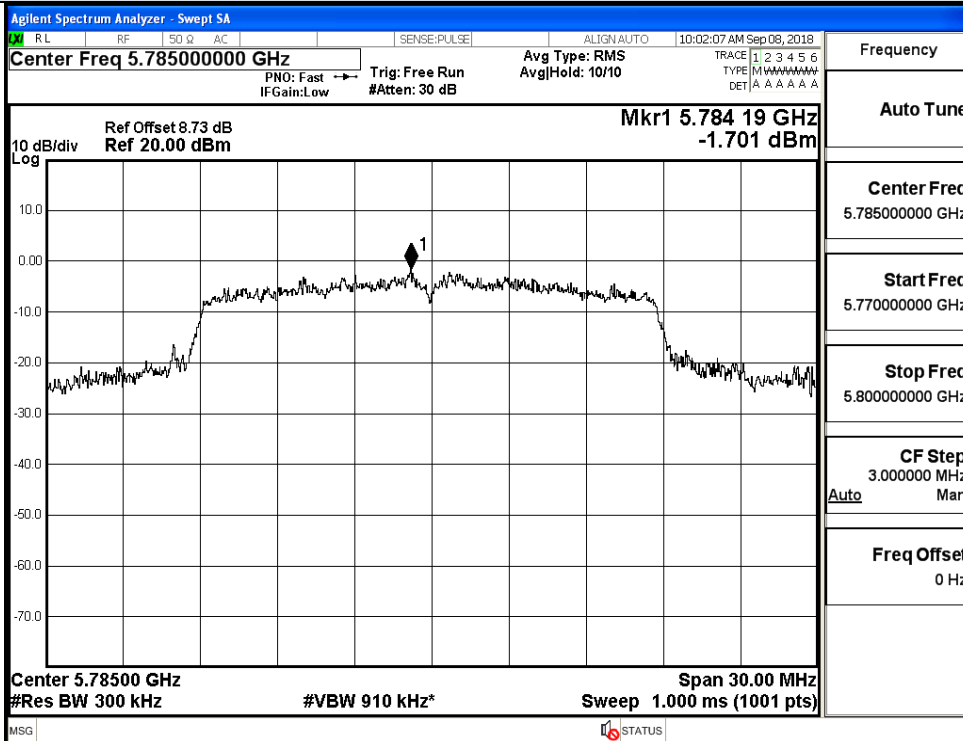


IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

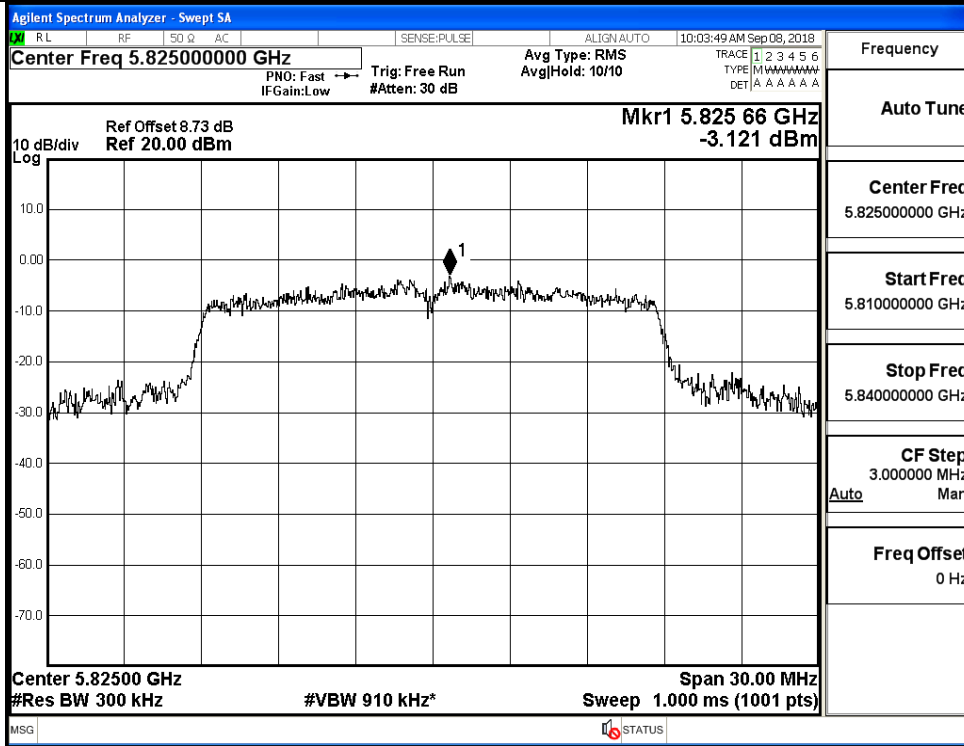
Power Spectral Density_Ant1



IEEE 802.11a / Channel 149 / 5745 MHz_Ant1

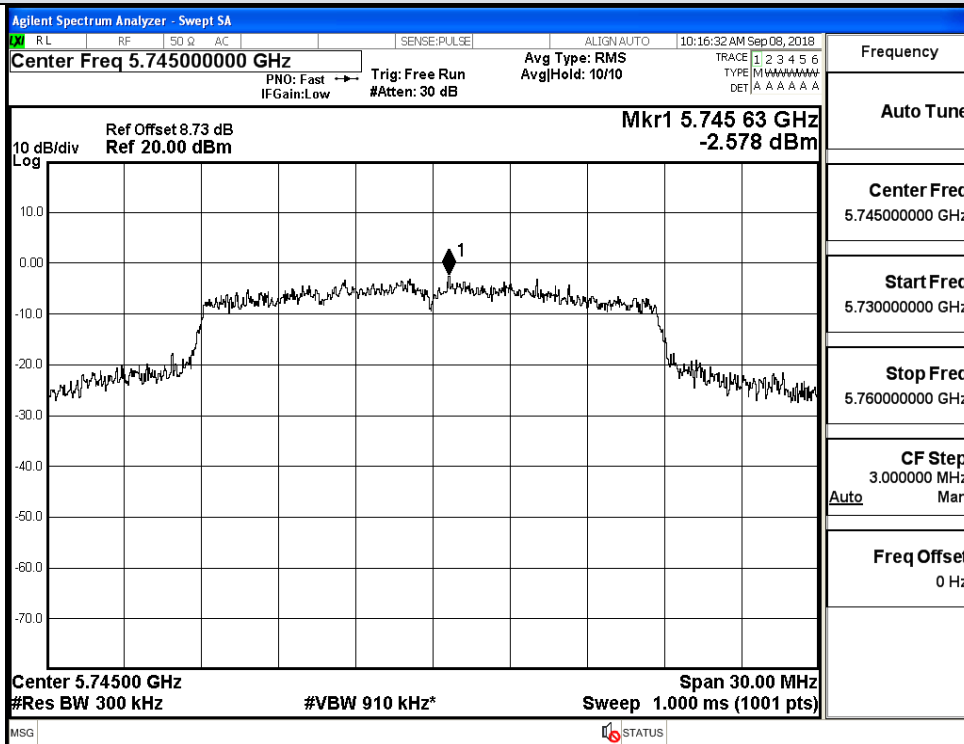


IEEE 802.11a / Channel 157 / 5785 MHz_Ant1

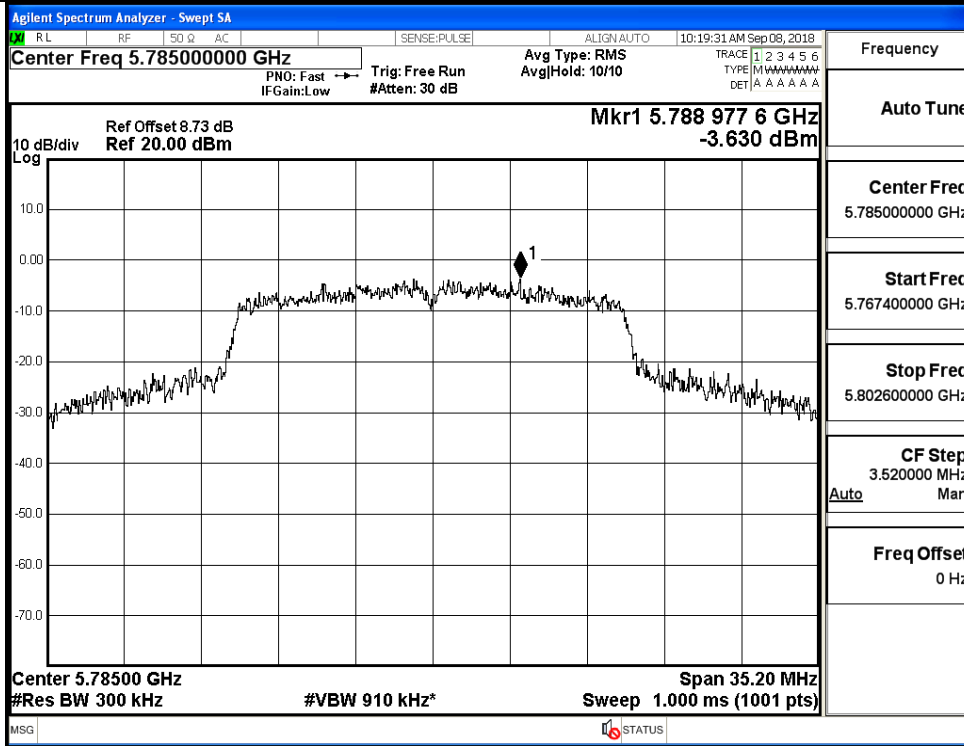


IEEE 802.11a / Channel 165 / 5825 MHz_Ant1

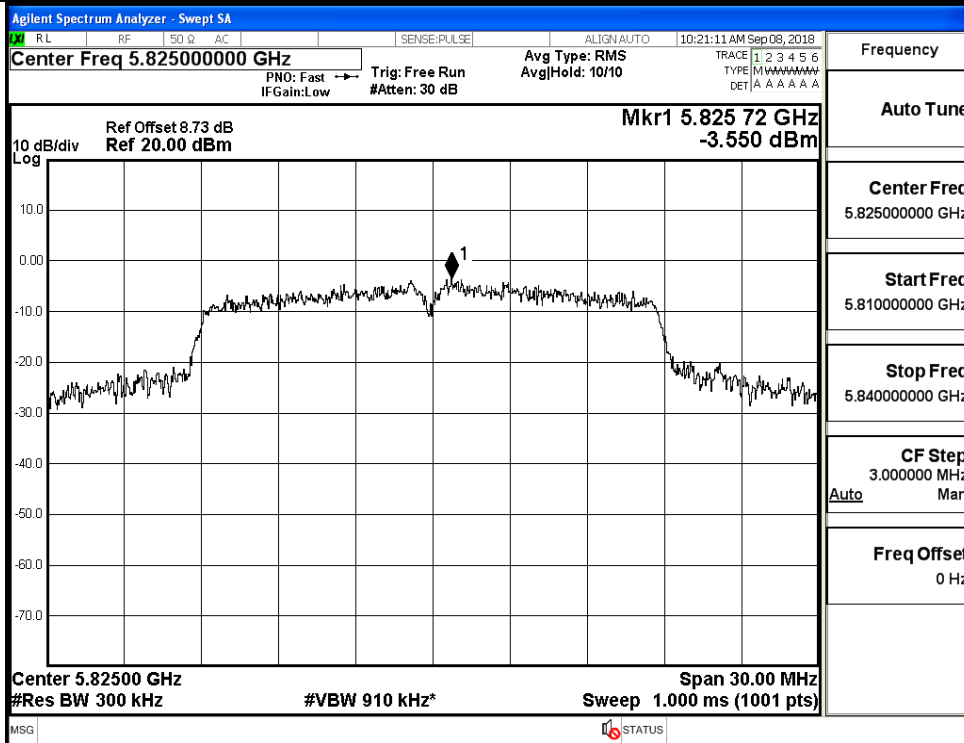
Power Spectral Density_Ant1



IEEE 802.11n HT20 / Channel 149 / 5745 MHz_Ant1

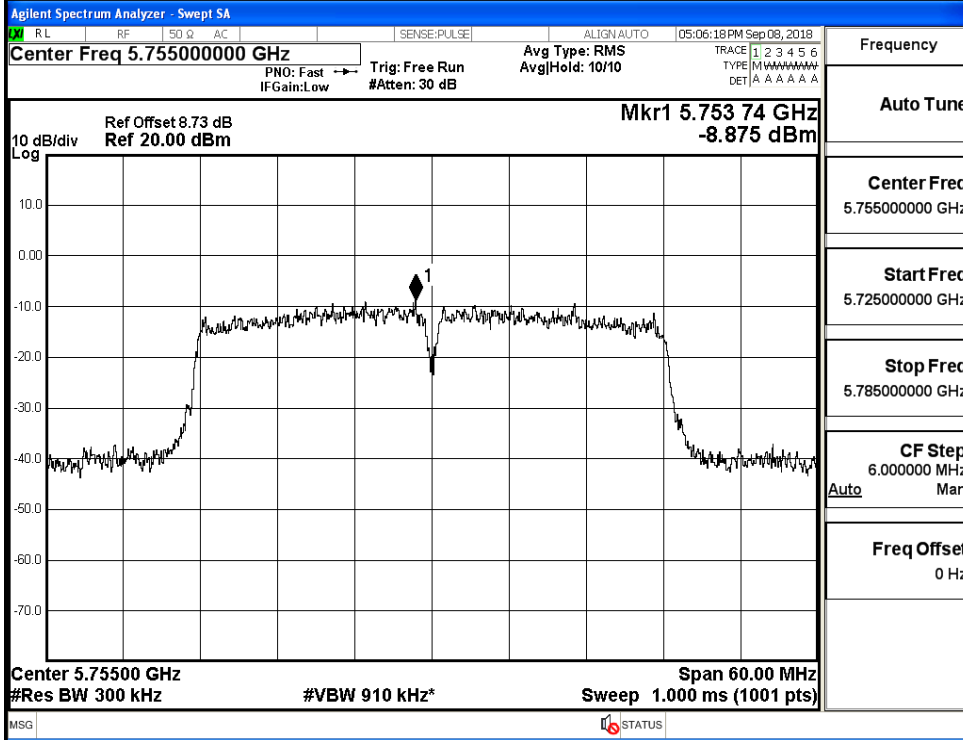


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant1

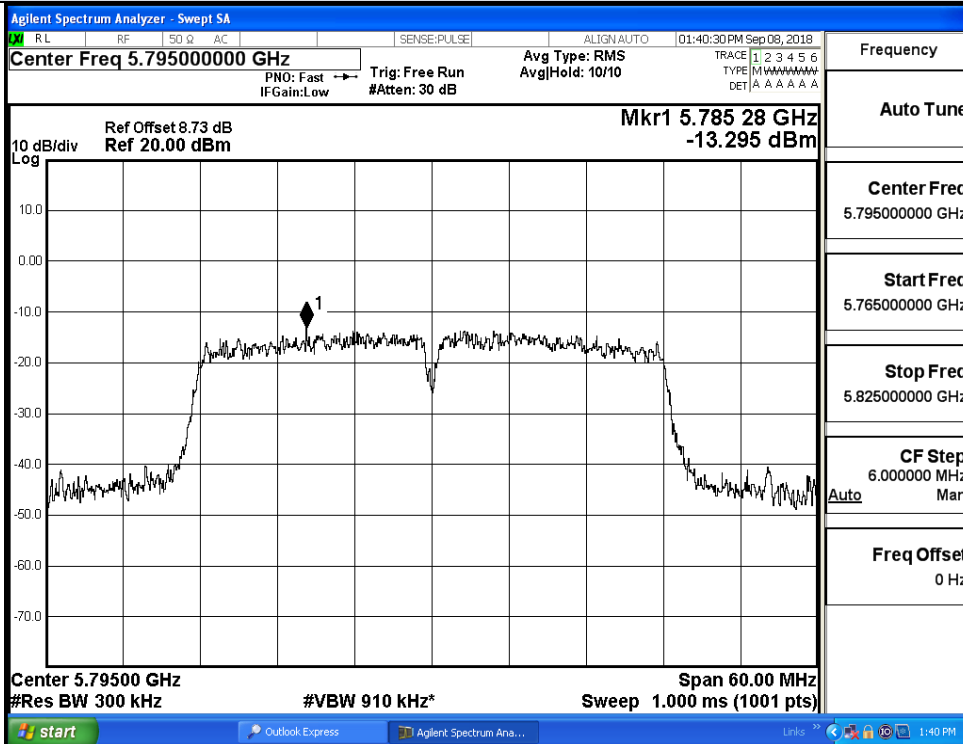


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant1

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)
11A	149	5745	17.630	≥0.5
	157	5785	17.660	
	165	5825	17.660	
11N20	149	5745	17.660	≥0.5
	157	5785	17.660	
	165	5825	17.650	
11N40	151	5755	36.230	≥0.5
	159	5795	36.070	

Antenna 1

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
11A	149	5745	17.610	≥0.5
	157	5785	17.650	
	165	5825	17.620	
11N20	149	5745	17.690	≥0.5
	157	5785	17.600	
	165	5825	17.700	
11N40	151	5755	36.400	≥0.5
	159	5795	36.090	

6dB Bandwidth_Ant0

Agilent Spectrum Analyzer - Occupied BW

Center Freq 5.74500000 GHz

Center Freq: 5.74500000 GHz
Trig: Free Run Avg|Hold: 1/1

Radio Std: None
Radio Device: BTS

Ref Offset 8.73 dB
Ref 20.00 dBm

Center 5.745 GHz Span 40 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 3.867 ms

Occupied Bandwidth	Total Power	11.4 dBm
23.752 MHz		
Transmit Freq Error	-175.15 kHz	OBW Power 99.00 %
x dB Bandwidth	17.63 MHz	x dB -6.00 dB

Frequency: 5.74500000 GHz

CF Step: 4.000000 MHz (Auto)

Freq Offset: 0 Hz

IEEE 802.11a / Channel 149 / 5745 MHz_Ant0

Agilent Spectrum Analyzer - Occupied BW

Center Freq 5.78500000 GHz

Center Freq: 5.78500000 GHz
Trig: Free Run Avg|Hold: 1/1

Radio Std: None
Radio Device: BTS

Ref Offset 8.73 dB
Ref 20.00 dBm

Center 5.785 GHz Span 40 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 3.867 ms

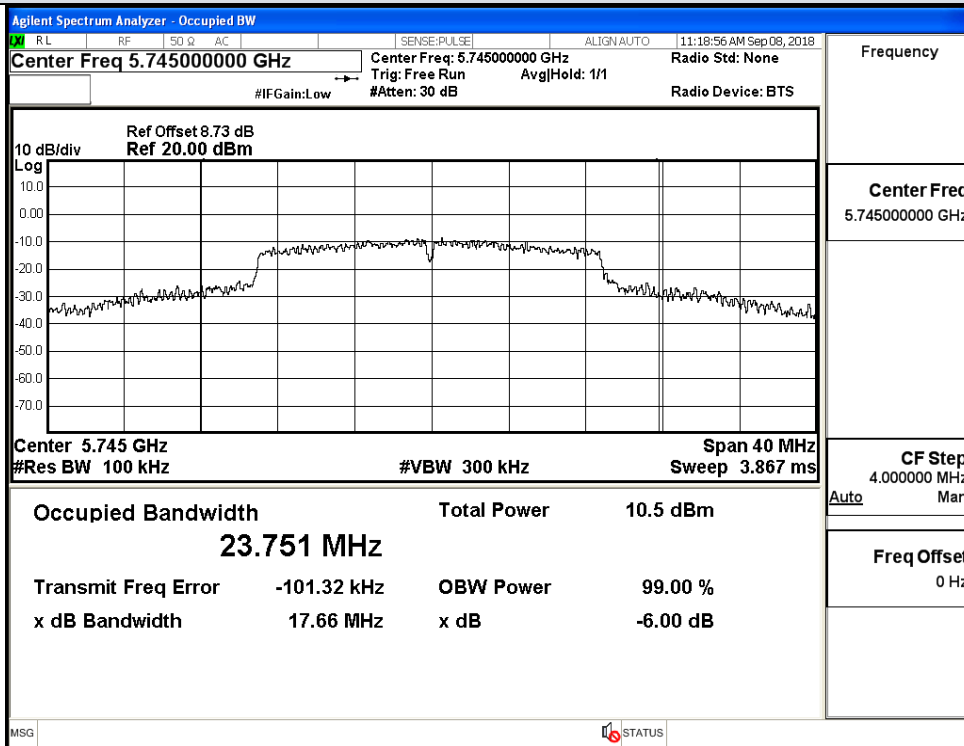
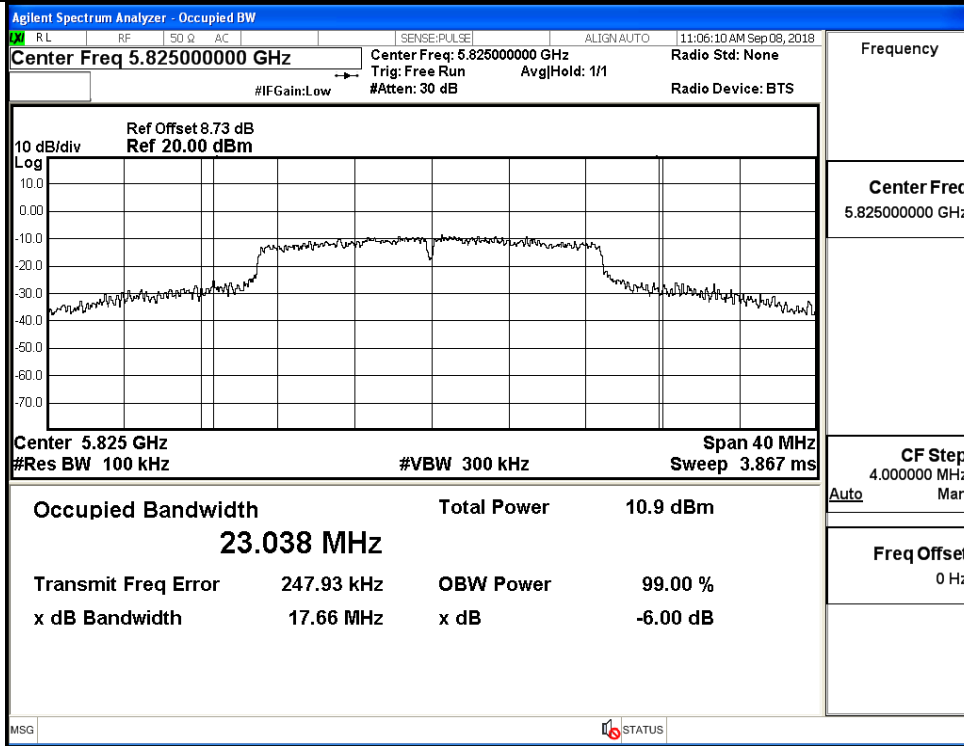
Occupied Bandwidth	Total Power	11.3 dBm
22.240 MHz		
Transmit Freq Error	82.758 kHz	OBW Power 99.00 %
x dB Bandwidth	17.66 MHz	x dB -6.00 dB

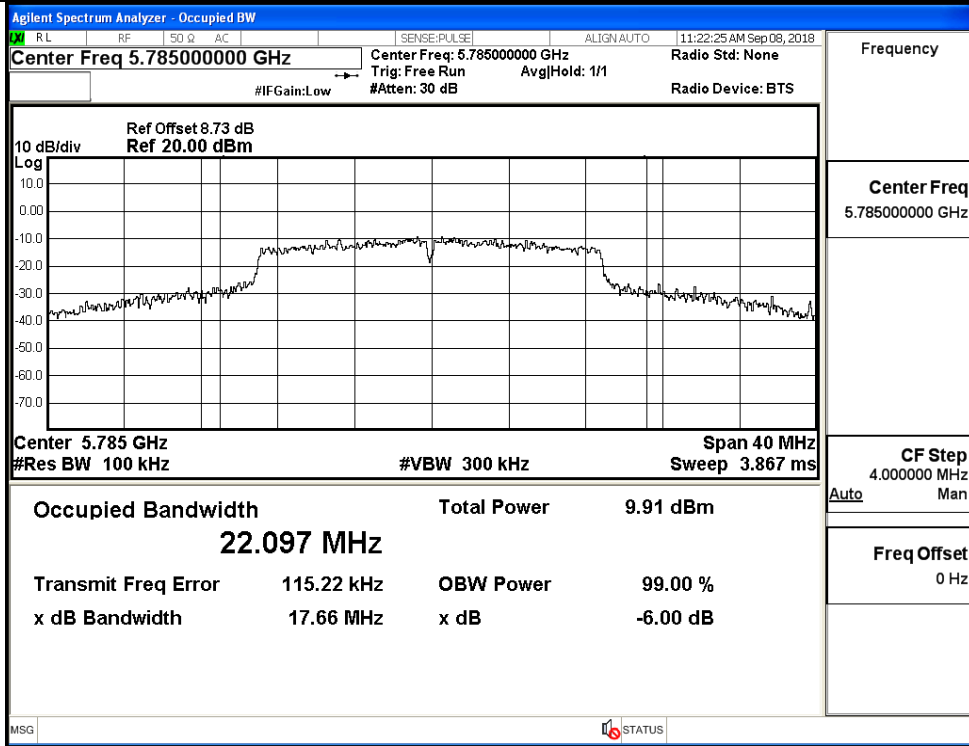
Frequency: 5.78500000 GHz

CF Step: 4.000000 MHz (Auto)

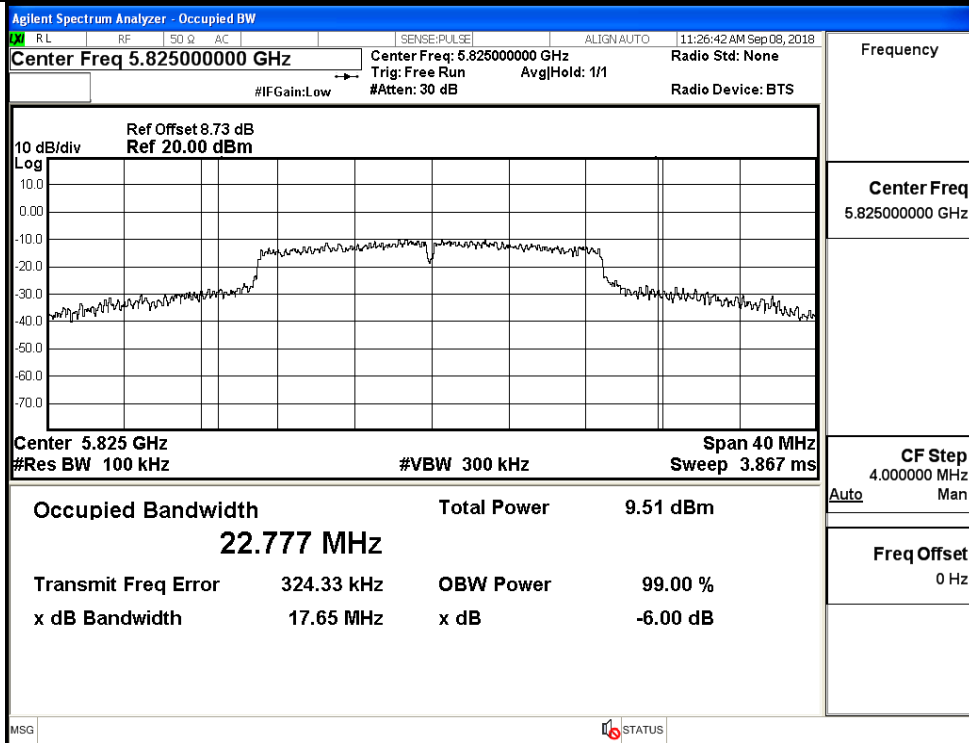
Freq Offset: 0 Hz

IEEE 802.11a / Channel 157 / 5785 MHz_Ant0



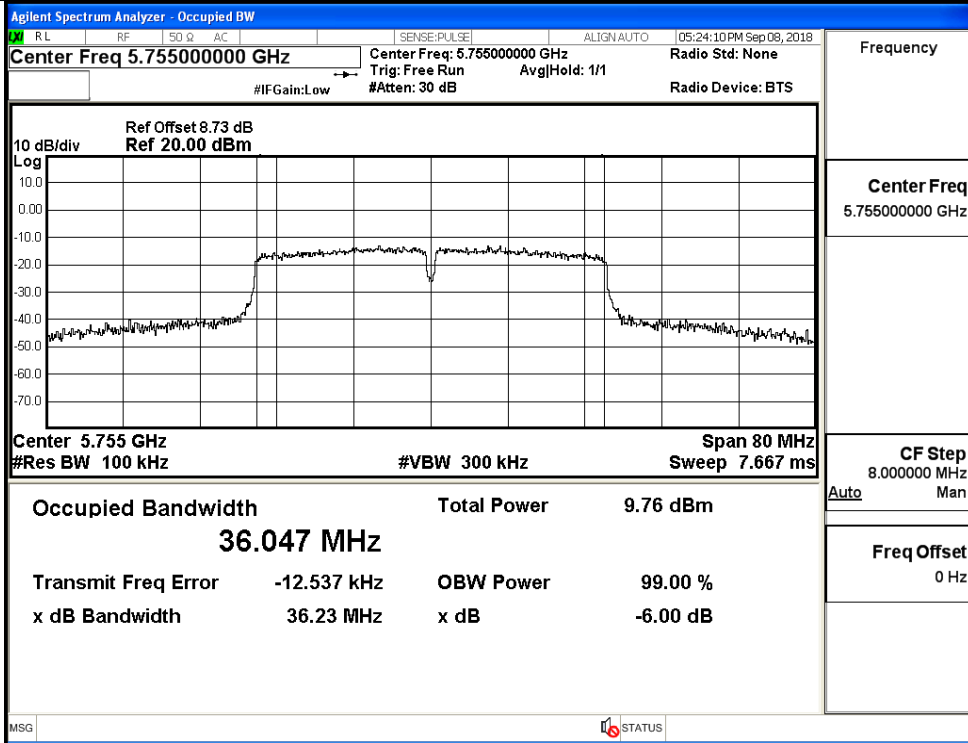


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant0

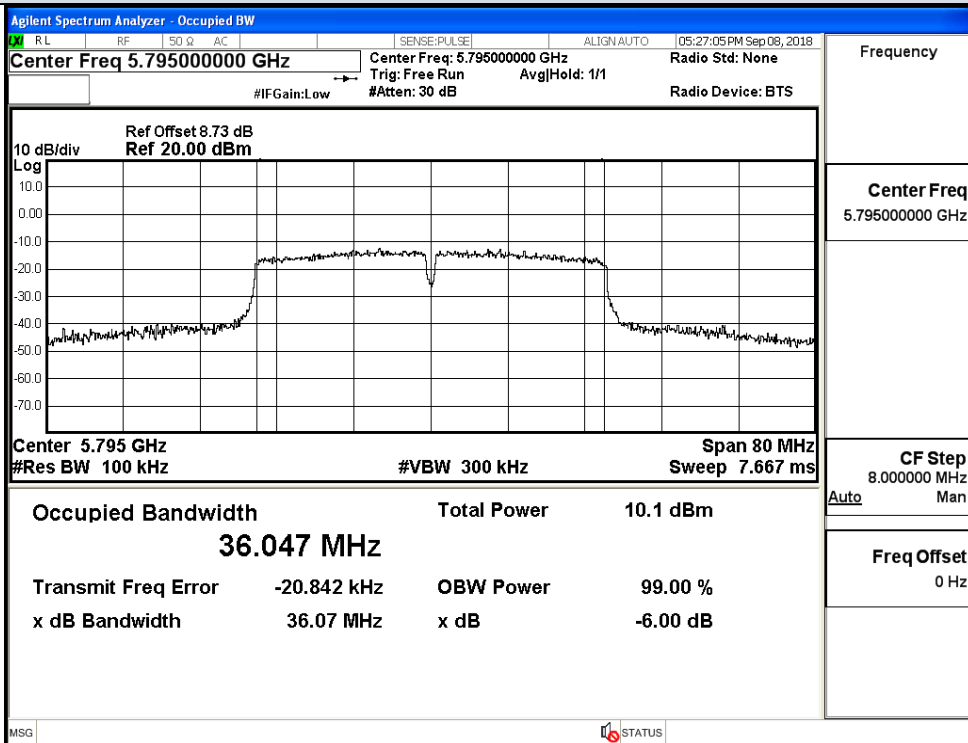


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant0

6dB Bandwidth_Ant0

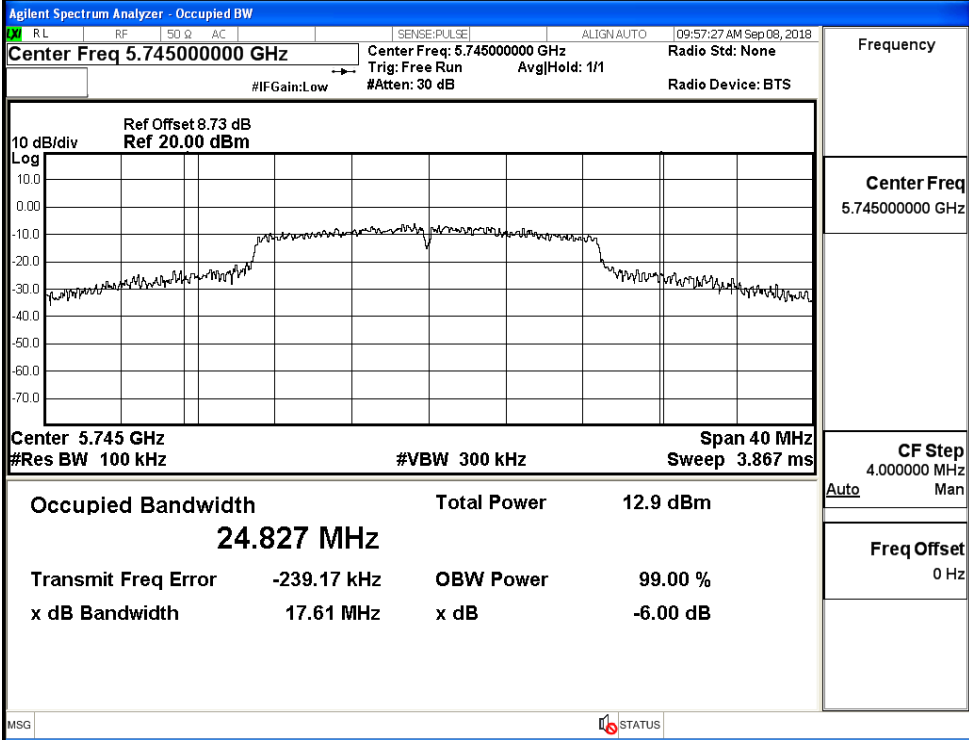


IEEE 802.11n HT40 / Channel 151 / 5755 MHz_Ant0

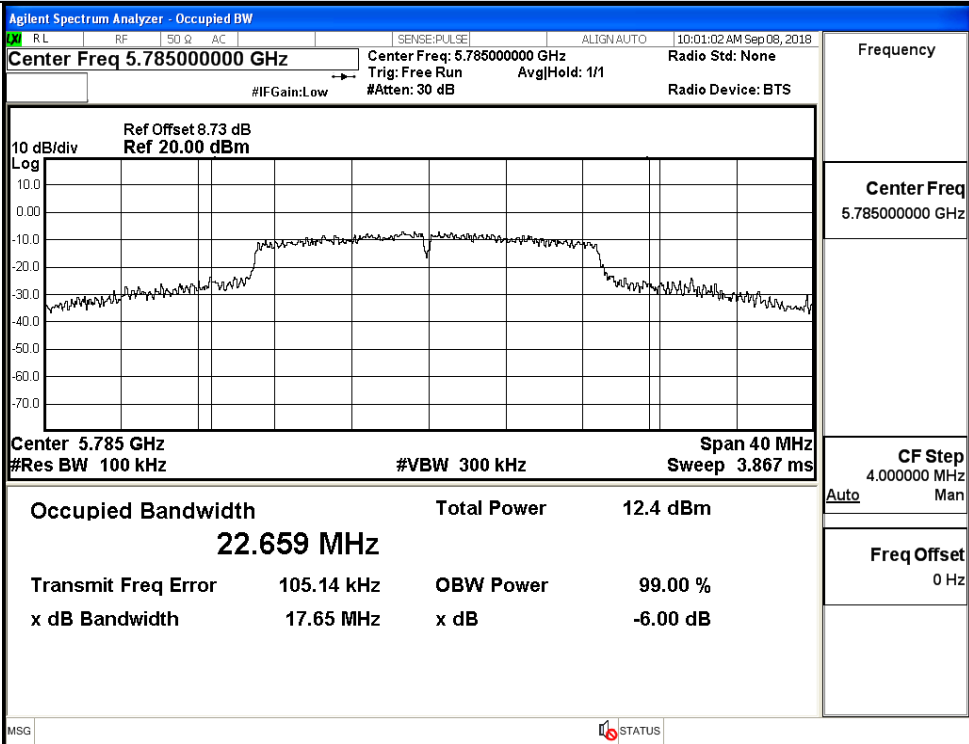


IEEE 802.11n HT40 / Channel 159 / 5795 MHz_Ant0

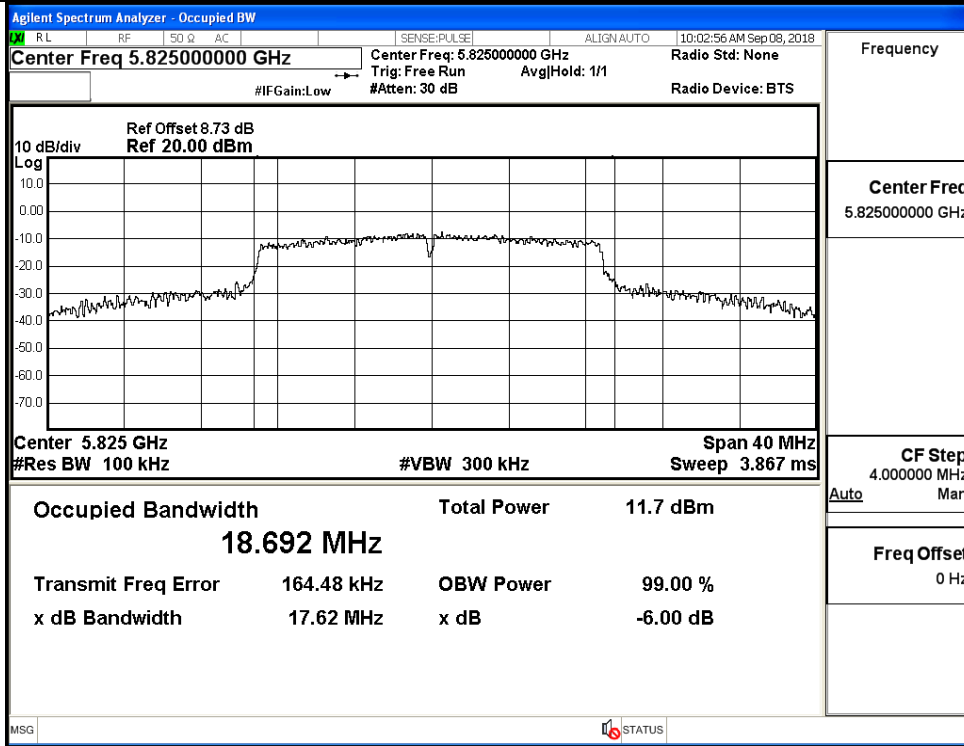
6dB Bandwidth_Ant1



IEEE 802.11a / Channel 149 / 5745 MHz_Ant1

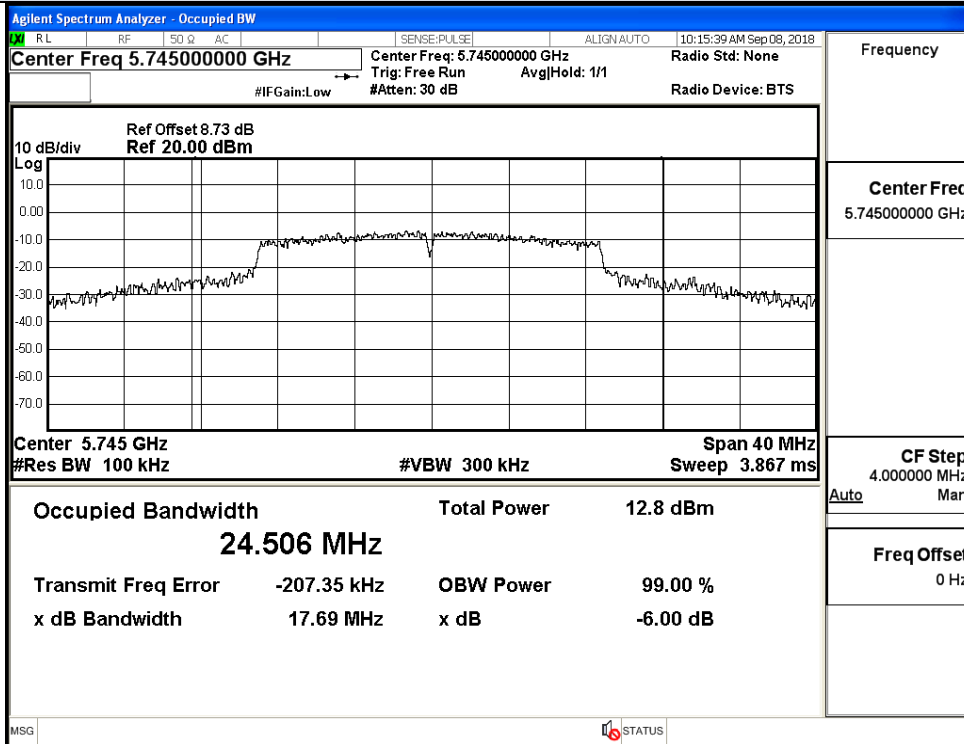


IEEE 802.11a / Channel 157 / 5785 MHz_Ant1

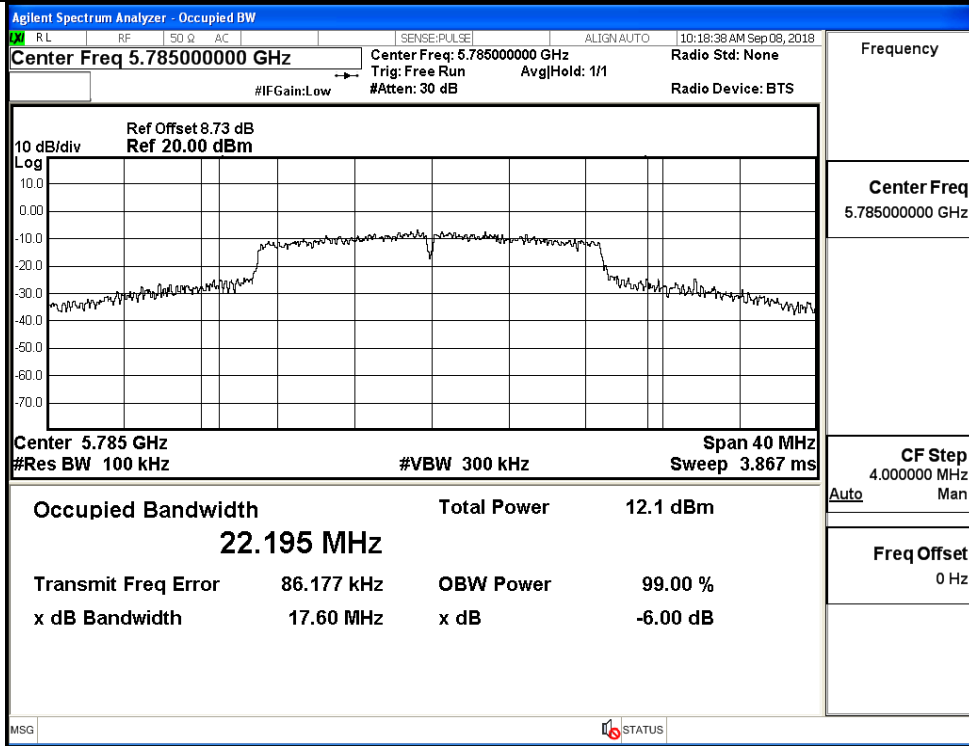


IEEE 802.11a / Channel 165 / 5825 MHz_Ant1

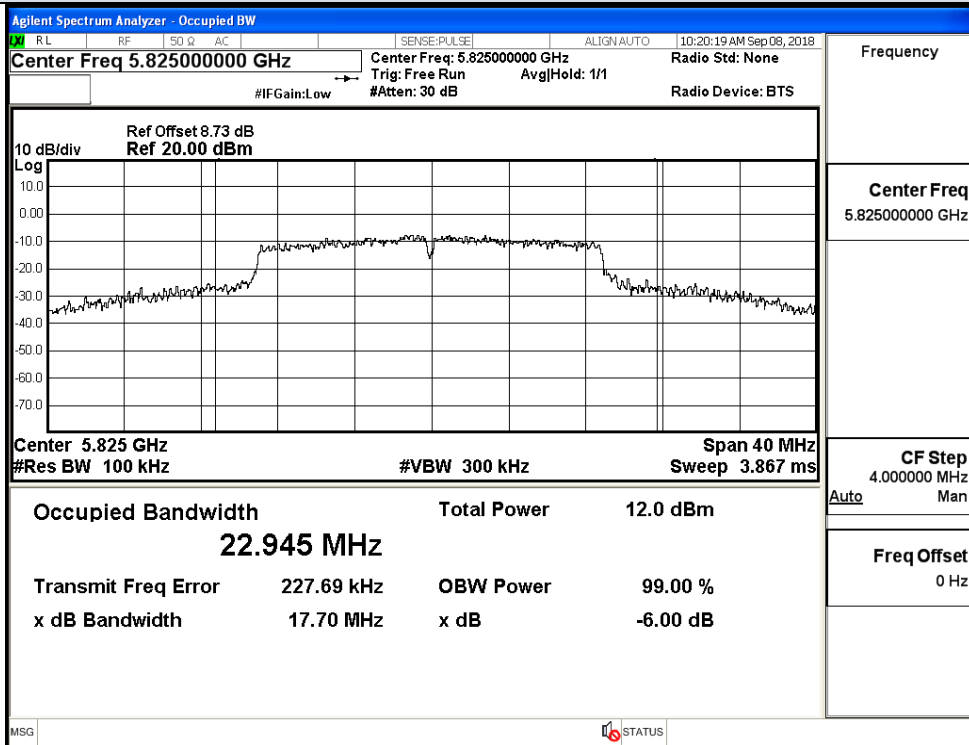
6dB Bandwidth_Ant1



IEEE 802.11n HT20 / Channel 149 / 5745 MHz_Ant1

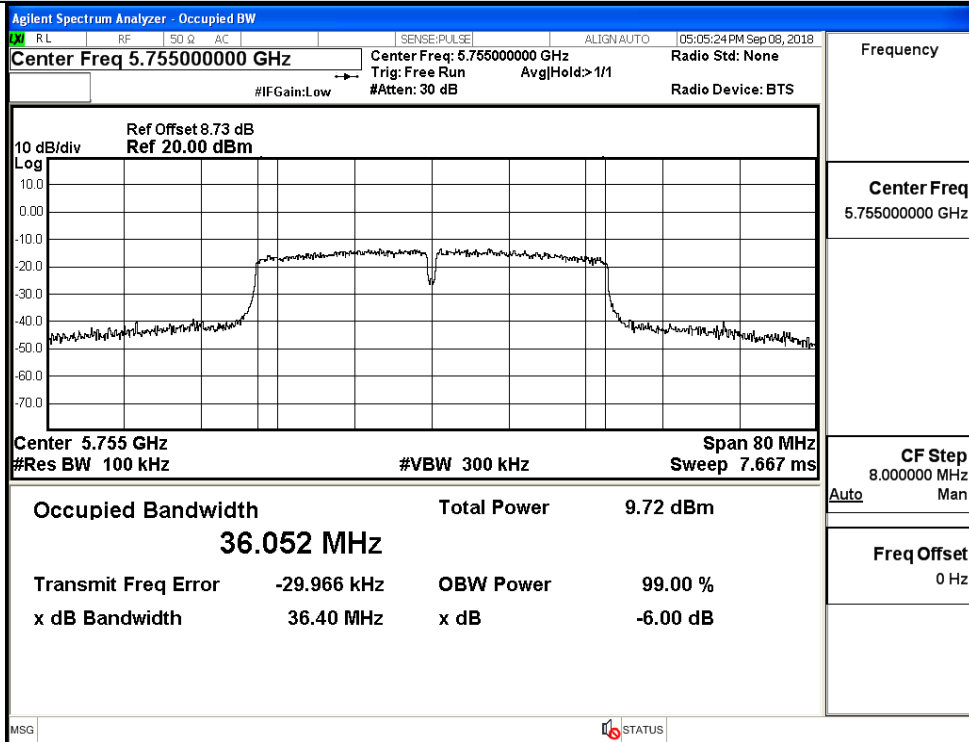


IEEE 802.11n HT20 / Channel 157 / 5785 MHz_Ant1

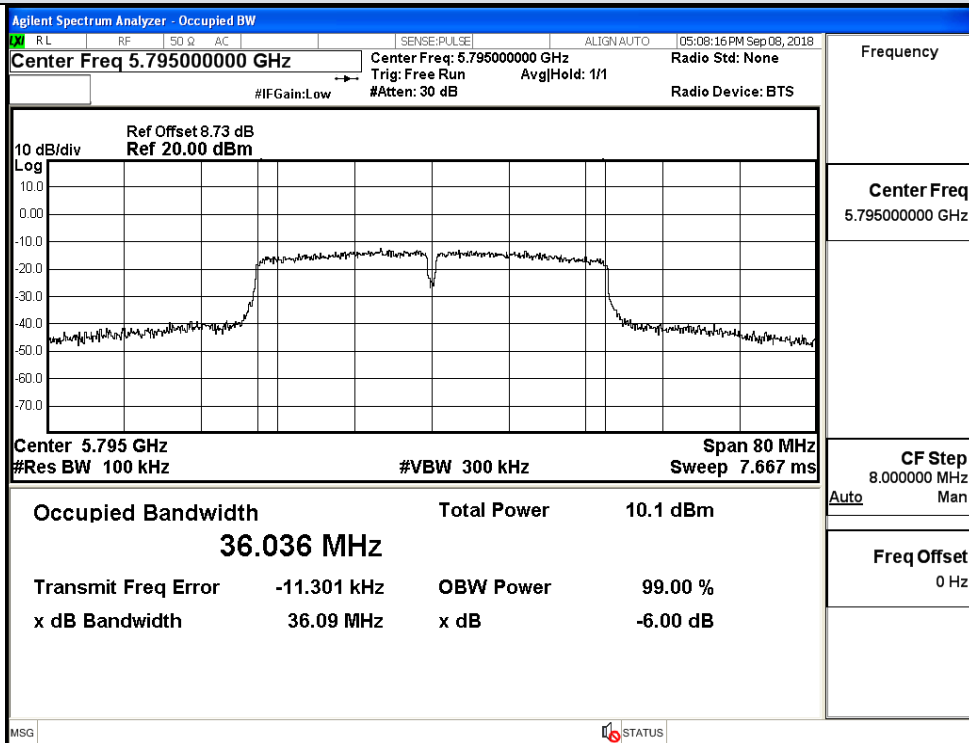


IEEE 802.11n HT20 / Channel 165 / 5825 MHz_Ant1

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	-50.394	5.00	-45.394	Peak	-27.0
		5700.0	-49.397	5.00	-44.397	Peak	10.0
		5720.0	-42.540	5.00	-37.540	Peak	15.6
		5725.0	-34.777	5.00	-29.777	Peak	27.0
	165	5850.0	-28.649	5.00	-23.649	Peak	27.0
		5855.0	-32.390	5.00	-27.390	Peak	15.6
		5875.0	-46.594	5.00	-41.594	Peak	10.0
		5925.0	-48.937	5.00	-43.937	Peak	-27.0
11N20	149	5650.0	-49.968	5.00	-44.968	Peak	-27.0
		5700.0	-49.716	5.00	-44.716	Peak	10.0
		5720.0	-43.897	5.00	-38.897	Peak	15.6
		5725.0	-38.043	5.00	-33.043	Peak	27.0
	165	5850.0	-30.707	5.00	-25.707	Peak	27.0
		5855.0	-35.028	5.00	-30.028	Peak	15.6
		5875.0	-48.345	5.00	-43.345	Peak	10.0
		5925.0	-49.123	5.00	-44.123	Peak	-27.0
11N40	151	5650.0	-49.594	5.00	-44.594	Peak	-27.0
		5700.0	-48.841	5.00	-43.841	Peak	10.0
		5720.0	-36.837	5.00	-31.837	Peak	15.6
		5725.0	-34.710	5.00	-29.710	Peak	27.0
	159	5850.0	-47.811	5.00	-42.811	Peak	27.0
		5855.0	-49.592	5.00	-44.592	Peak	15.6
		5875.0	-49.038	5.00	-44.038	Peak	10.0
		5925.0	-50.002	5.00	-45.002	Peak	-27.0

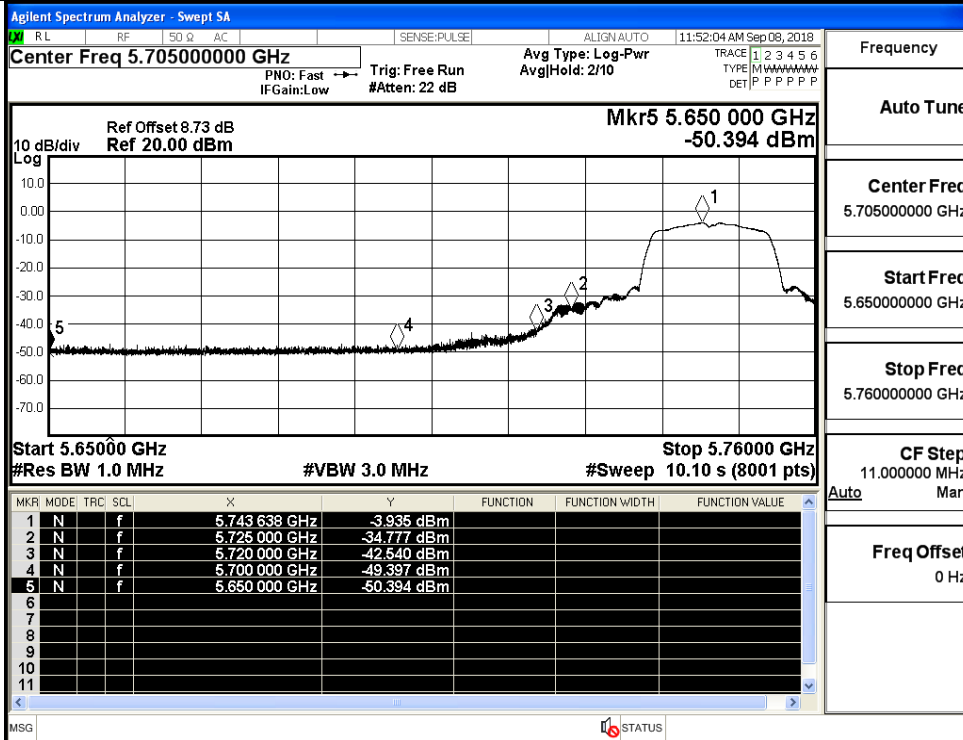
Antenna 1

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
11A	149	5650.0	-48.984	5.00	-43.984	Peak	-27.0
		5700.0	-45.841	5.00	-40.841	Peak	10.0
		5720.0	-39.359	5.00	-34.359	Peak	15.6
		5725.0	-30.252	5.00	-25.252	Peak	27.0
	165	5850.0	-28.462	5.00	-23.462	Peak	27.0
		5855.0	-34.646	5.00	-29.646	Peak	15.6
		5875.0	-42.525	5.00	-37.525	Peak	10.0
11N20	149	5650.0	-49.223	5.00	-44.223	Peak	-27.0
		5700.0	-47.590	5.00	-42.590	Peak	10.0
		5720.0	-38.971	5.00	-33.971	Peak	15.6
		5725.0	-30.454	5.00	-25.454	Peak	27.0
	165	5850.0	-27.198	5.00	-22.198	Peak	27.0
		5855.0	-30.164	5.00	-25.164	Peak	15.6
		5875.0	-45.087	5.00	-40.087	Peak	10.0
11N40	151	5650.0	-49.884	5.00	-44.884	Peak	-27.0
		5700.0	-45.893	5.00	-40.893	Peak	10.0
		5720.0	-35.570	5.00	-30.570	Peak	15.6
		5725.0	-34.355	5.00	-29.355	Peak	27.0
	159	5850.0	-48.831	5.00	-43.831	Peak	27.0
		5855.0	-49.295	5.00	-44.295	Peak	15.6
		5875.0	-49.368	5.00	-44.368	Peak	10.0
		5925.0	-49.648	5.00	-44.648	Peak	-27.0

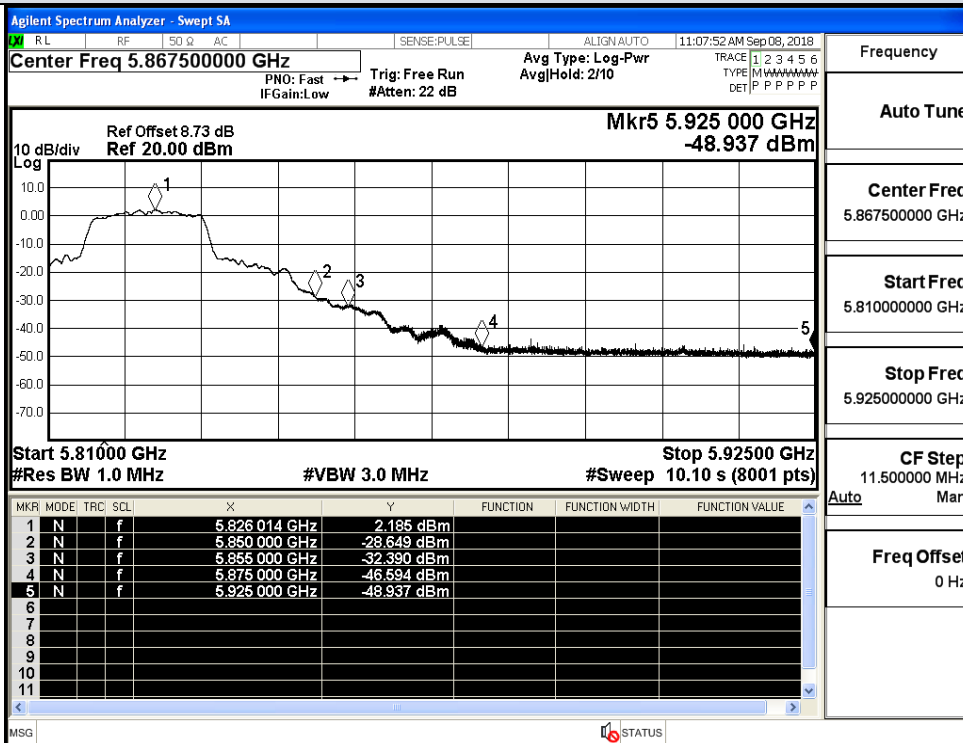
Antenna 0+Antenn 1

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)			Antenna Gain (dBi)	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
			Ant0	Ant1	Sum				
11N20	149	5650.0	-49.968	-49.223	-46.569	8.01	-38.559	Peak	-27.0
		5700.0	-49.716	-47.590	-45.514	8.01	-37.504	Peak	10.0
		5720.0	-43.897	-38.971	-37.760	8.01	-29.750	Peak	15.6
		5725.0	-38.043	-30.454	-29.757	8.01	-21.747	Peak	27.0
	165	5850.0	-30.707	-27.198	-25.597	8.01	-17.587	Peak	27.0
		5855.0	-35.028	-30.164	-28.938	8.01	-20.928	Peak	15.6
		5875.0	-48.345	-45.087	-43.407	8.01	-35.397	Peak	10.0
		5925.0	-49.123	-49.987	-46.523	8.01	-38.513	Peak	-27.0
11N40	151	5650.0	-49.594	-49.884	-46.726	8.01	-38.716	Peak	-27.0
		5700.0	-48.841	-45.893	-44.111	8.01	-36.101	Peak	10.0
		5720.0	-36.837	-35.570	-33.147	8.01	-25.137	Peak	15.6
		5725.0	-34.710	-34.355	-31.519	8.01	-23.509	Peak	27.0
	159	5850.0	-47.811	-48.831	-45.281	8.01	-37.271	Peak	27.0
		5855.0	-49.592	-49.295	-46.431	8.01	-38.421	Peak	15.6
		5875.0	-49.038	-49.368	-46.190	8.01	-38.180	Peak	10.0
		5925.0	-50.002	-49.648	-46.811	8.01	-38.801	Peak	-27.0

Undesirable Emissions Measurement_Ant0

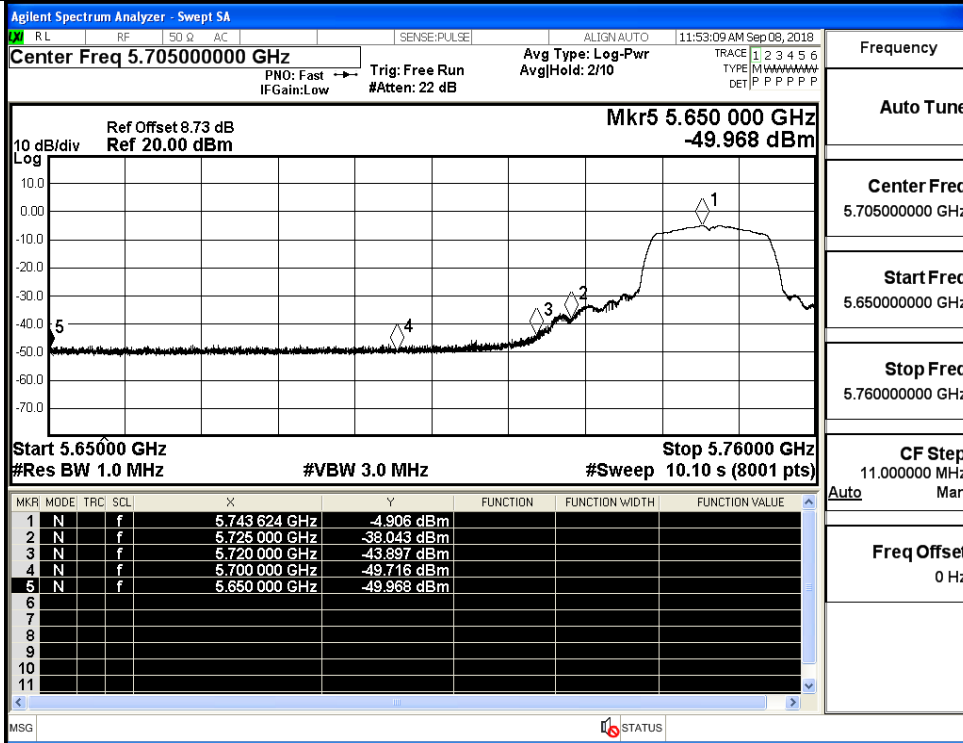


IEEE 802.11a / Channel 149 / 5745 MHz / Peak_Ant0

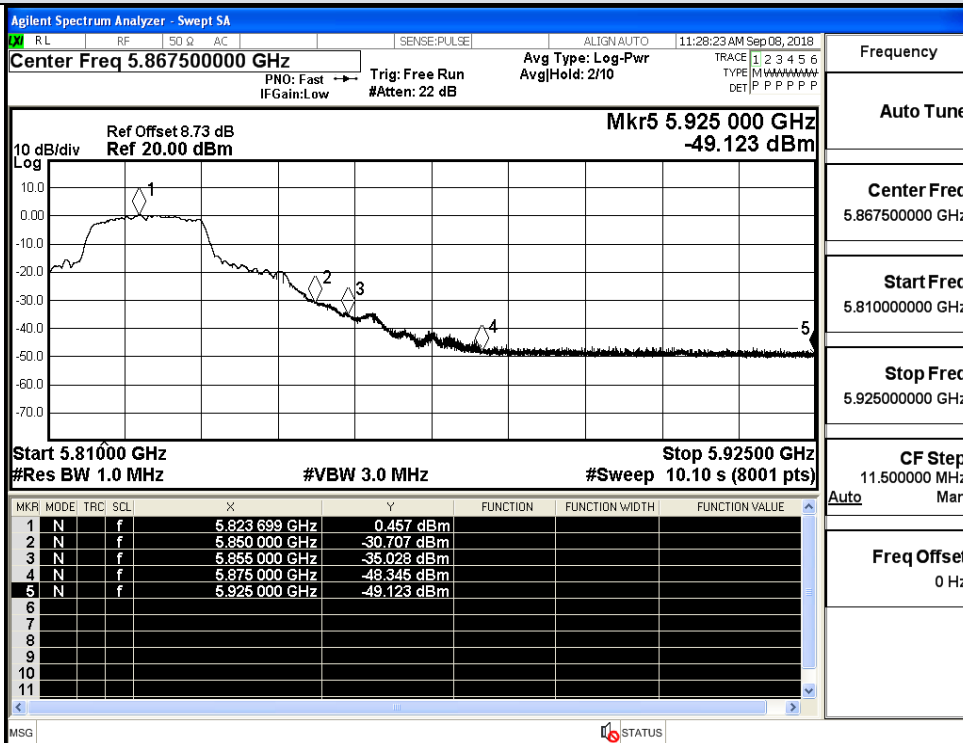


IEEE 802.11a / Channel 165 / 5825 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant0

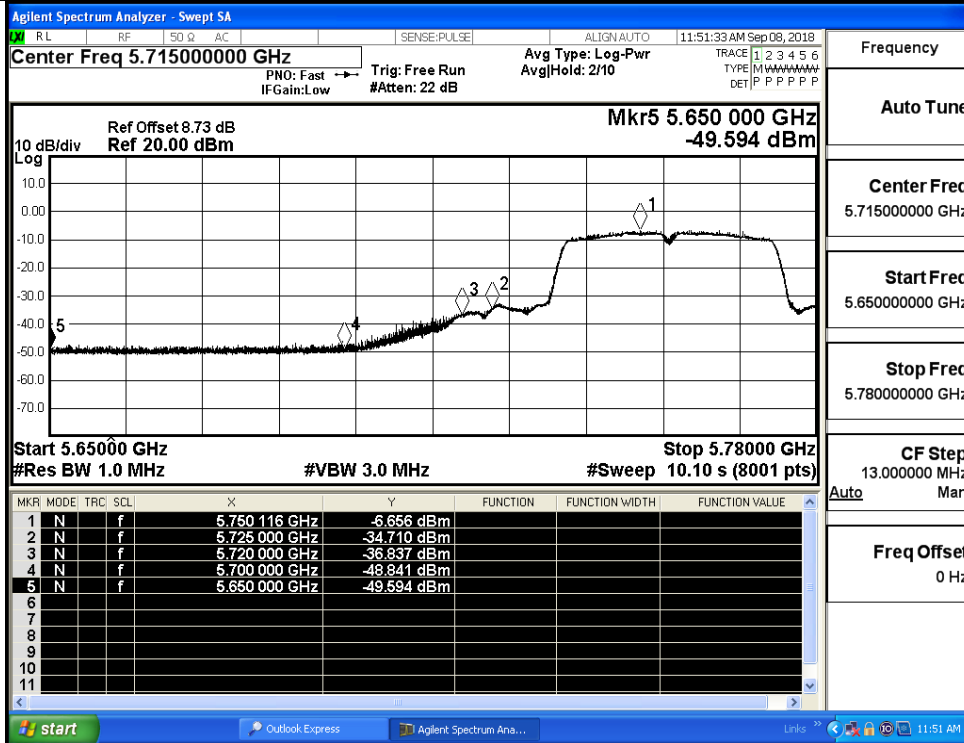


IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak_Ant0

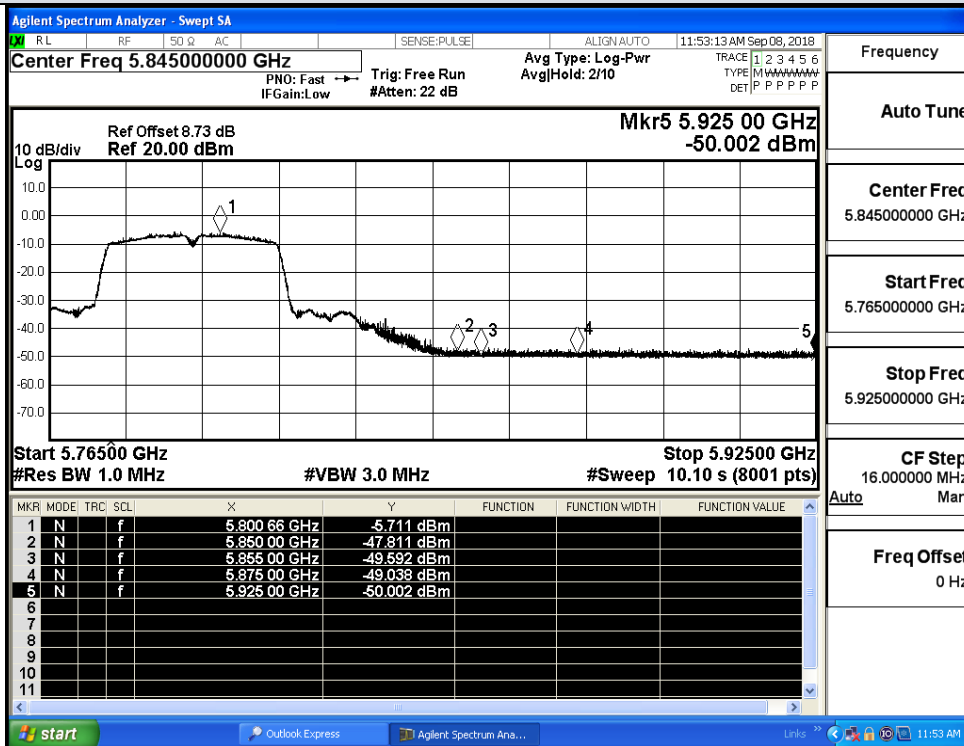


IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant0

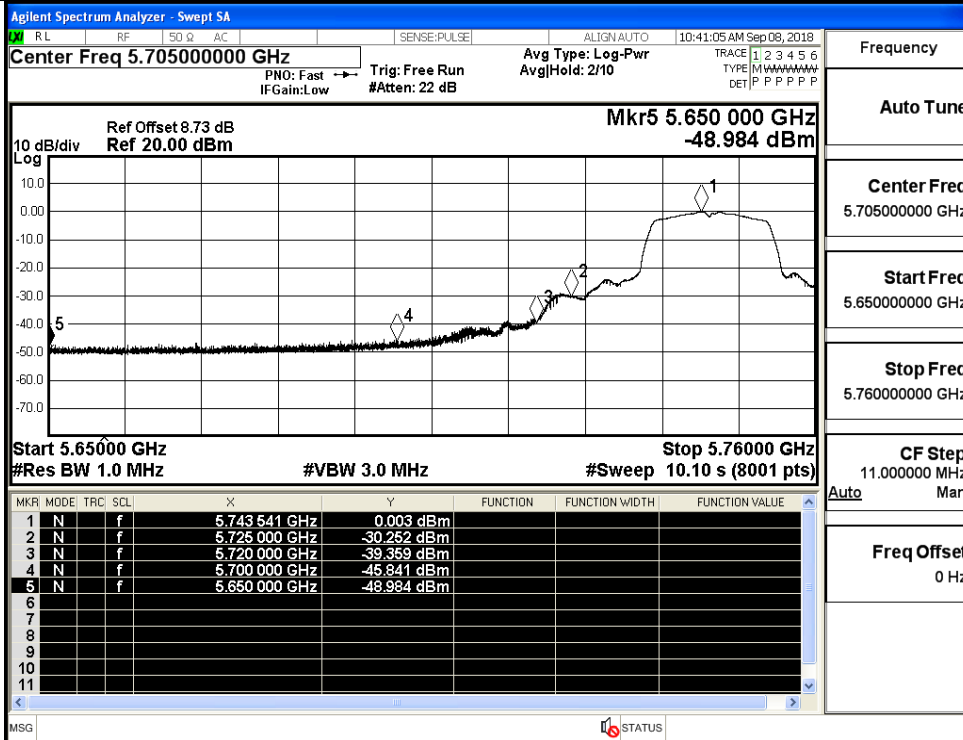


IEEE 802.11n HT40 / Channel 151 / 5755 MHz / Peak_Ant0

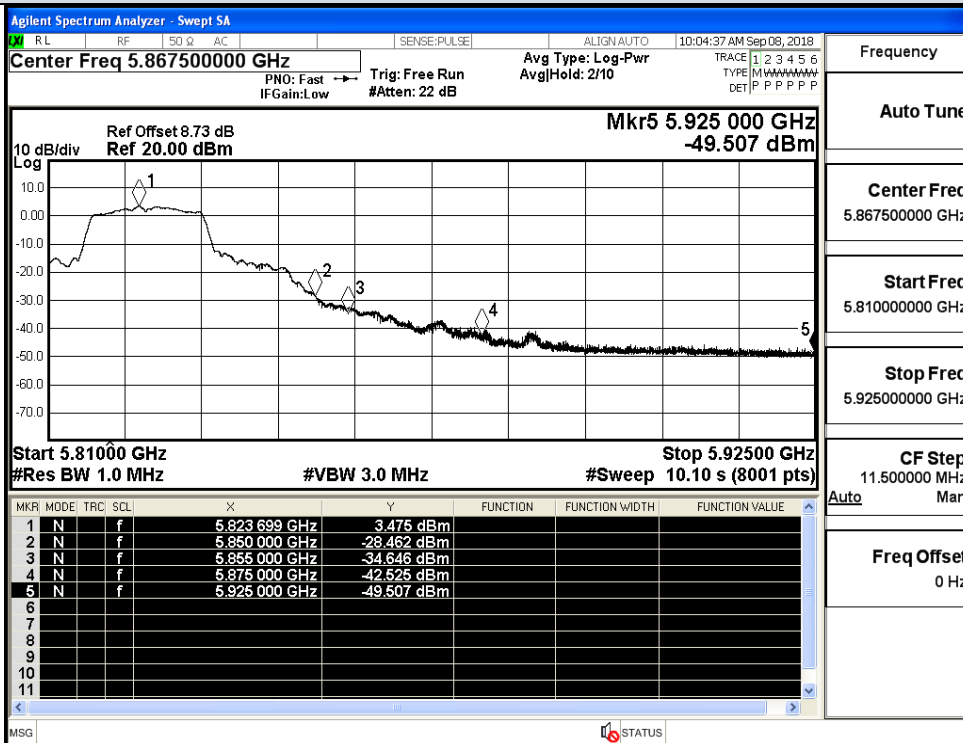


IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak_Ant0

Undesirable Emissions Measurement_Ant1

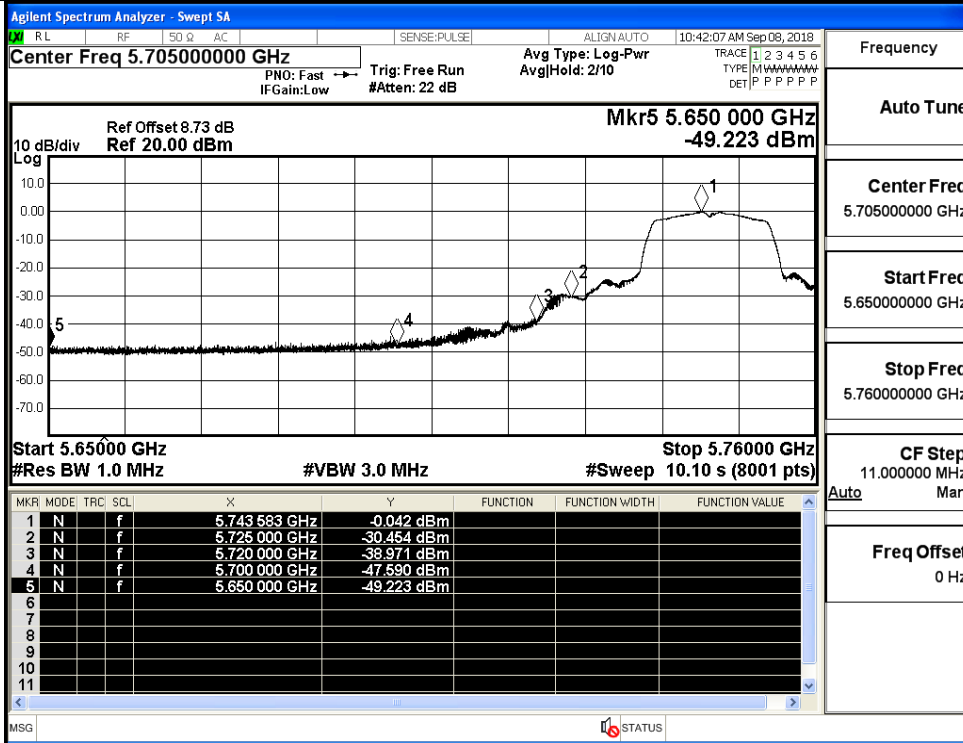


IEEE 802.11a / Channel 149 / 5745 MHz / Peak_Ant1

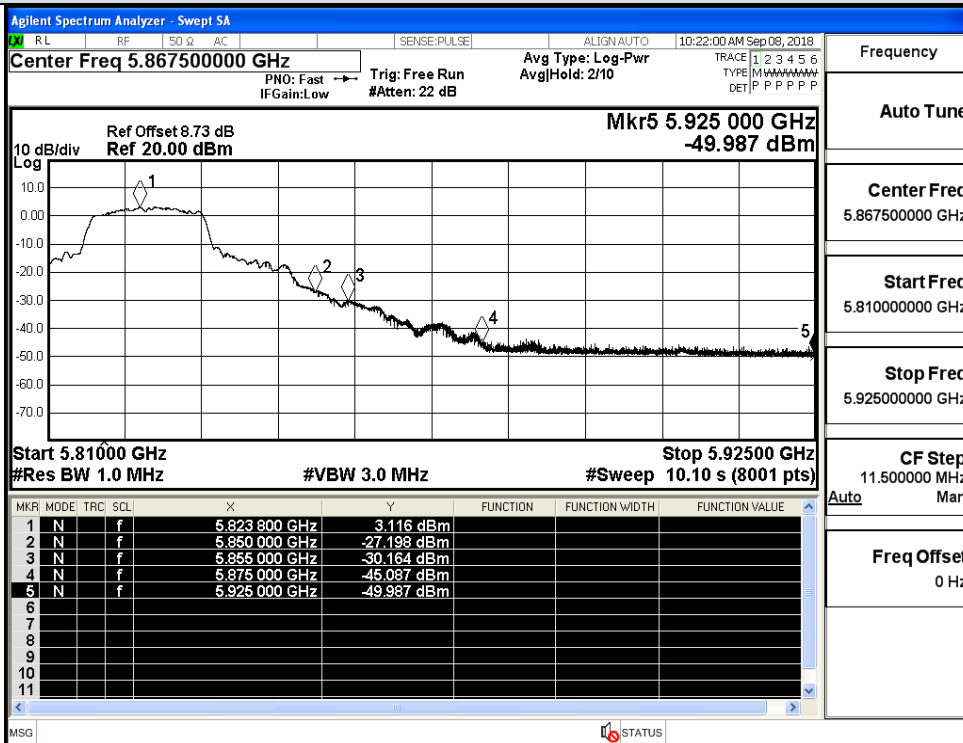


IEEE 802.11a / Channel 165 / 5825 MHz / Peak_Ant1

Undesirable Emissions Measurement_Ant1

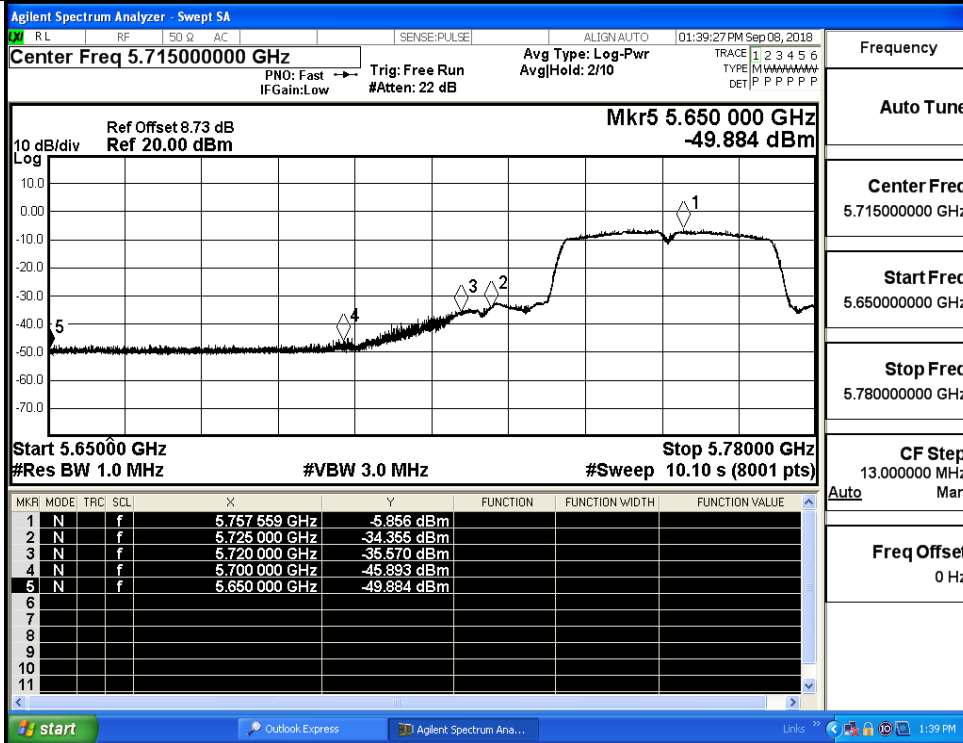


IEEE 802.11n HT20 / Channel 149 / 5745 MHz / Peak_Ant1

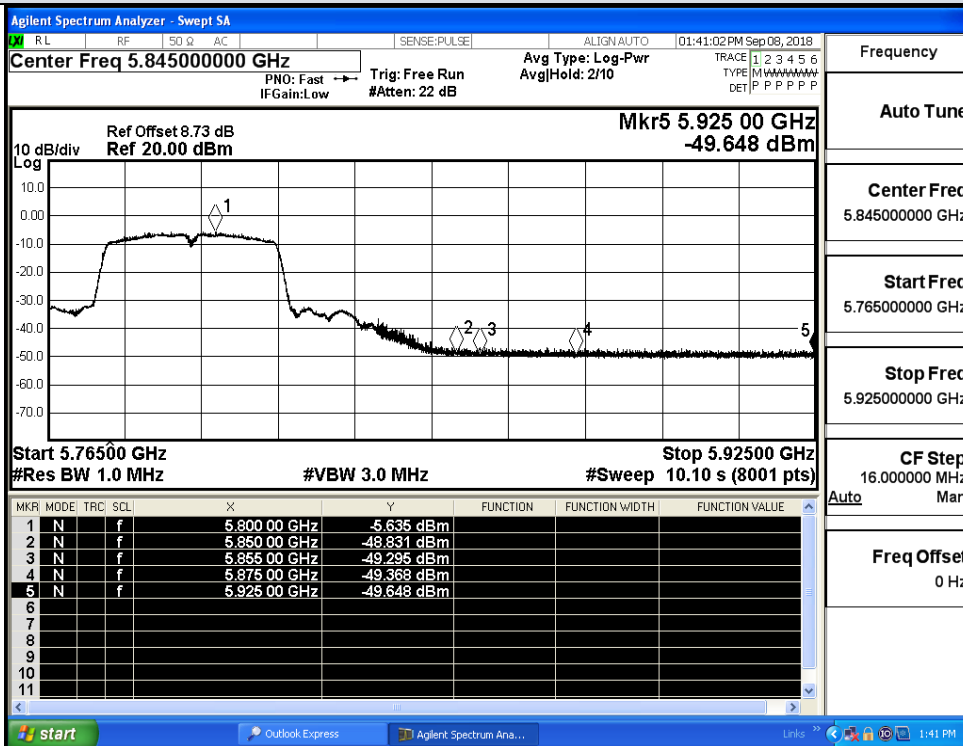


IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak_Ant1

Undesirable Emissions Measurement_Ant1



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



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