

Appendix C

RF Test Data for 5.8G WIFI (Conducted Measurement)

Product Name: CPE
Trade Mark: ESPRESSObin-Ultra
Test Model: ESPRESSObin-Ultra

Environmental Conditions

Temperature:	22.6 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhuo Zhuo
Supervised by:	Tom.Liu

C.1 Duty Cycle

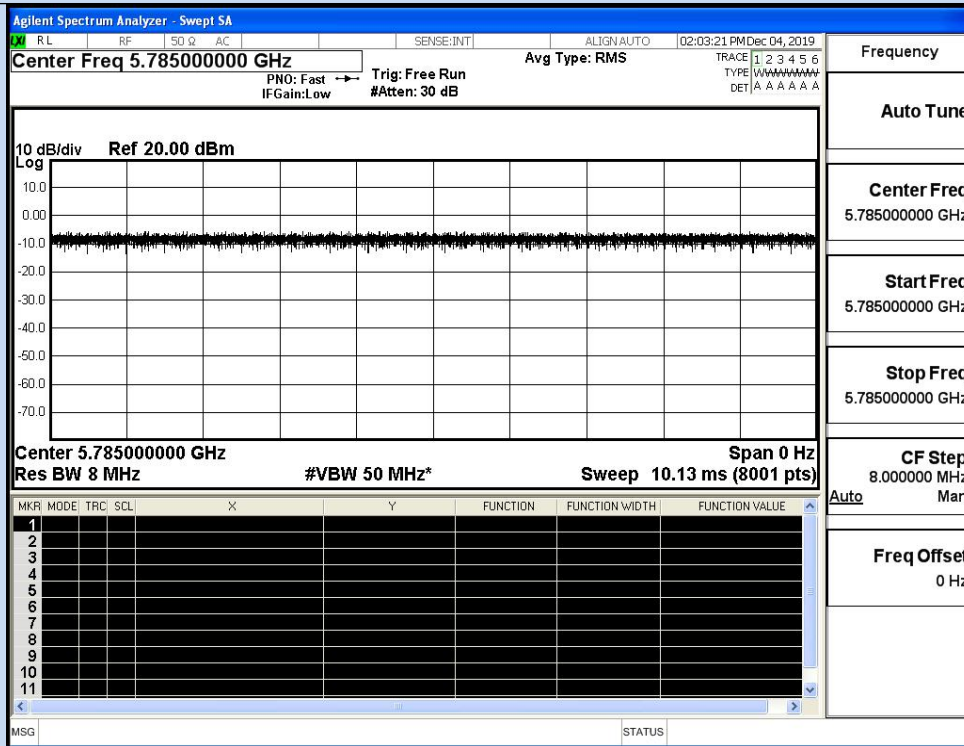
Antenna 0

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 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

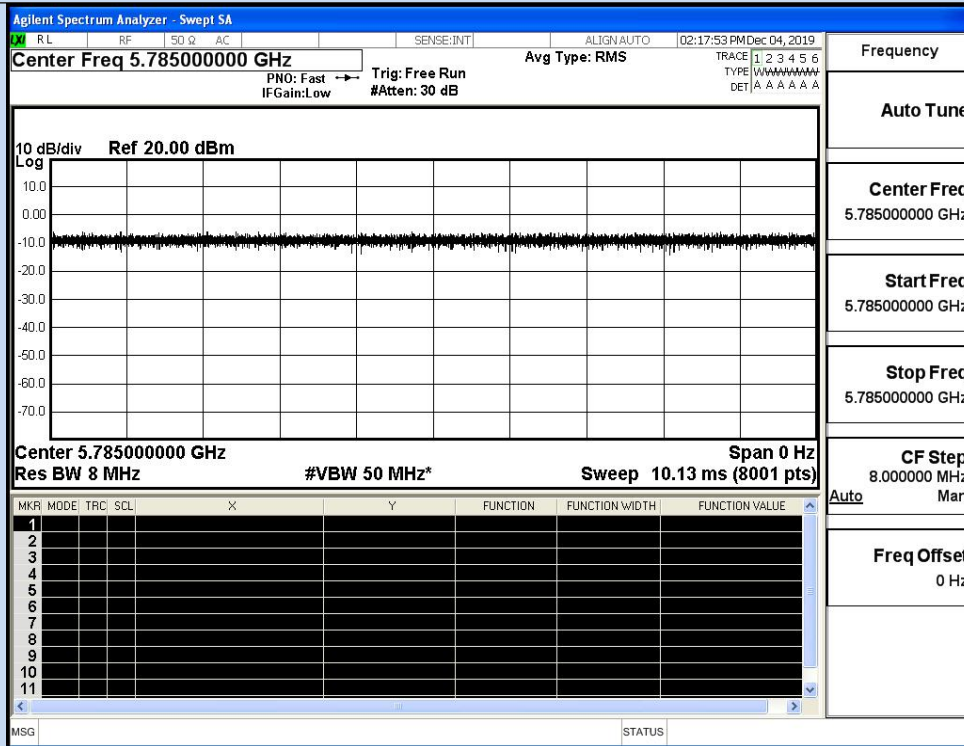
Antenna 1

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 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

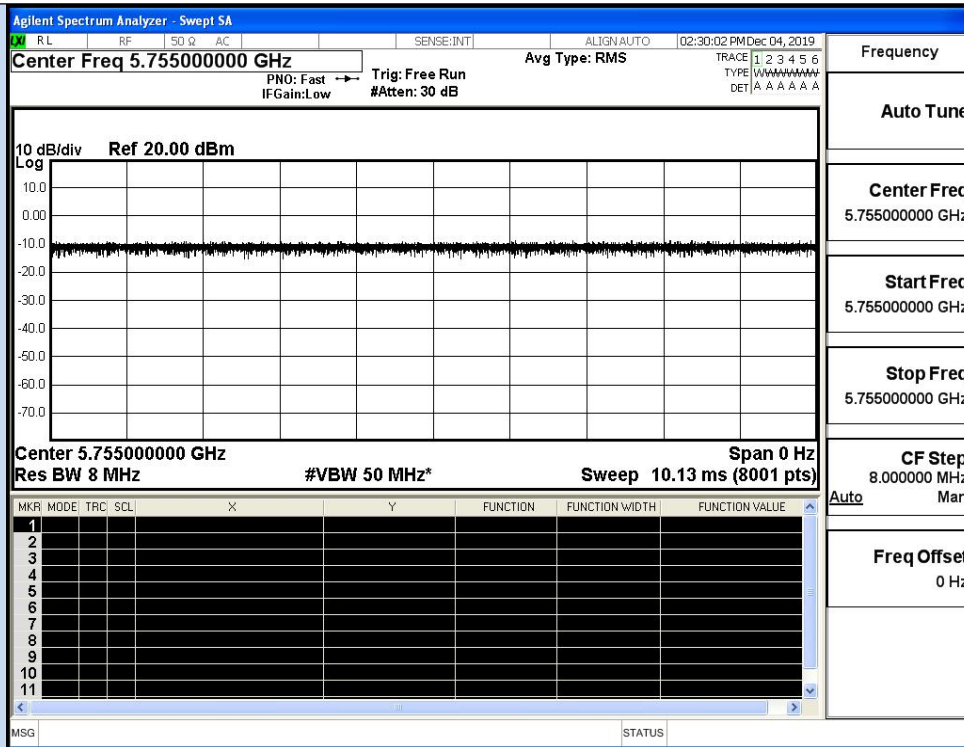
On Time and Duty Cycle(Antenna 0)



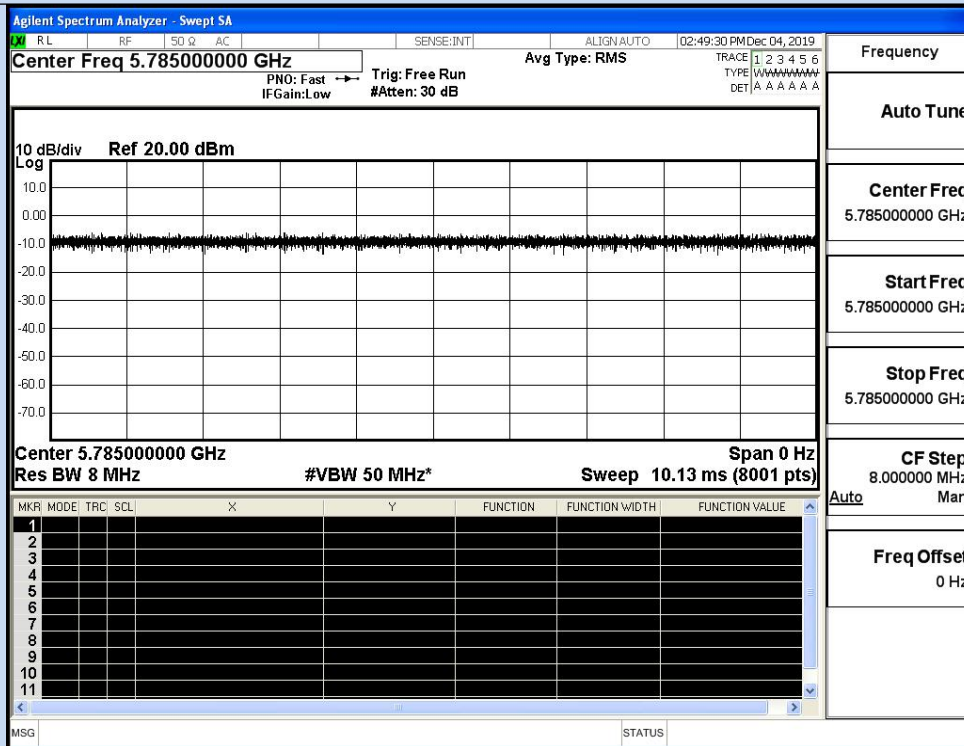
IEEE 802.11a



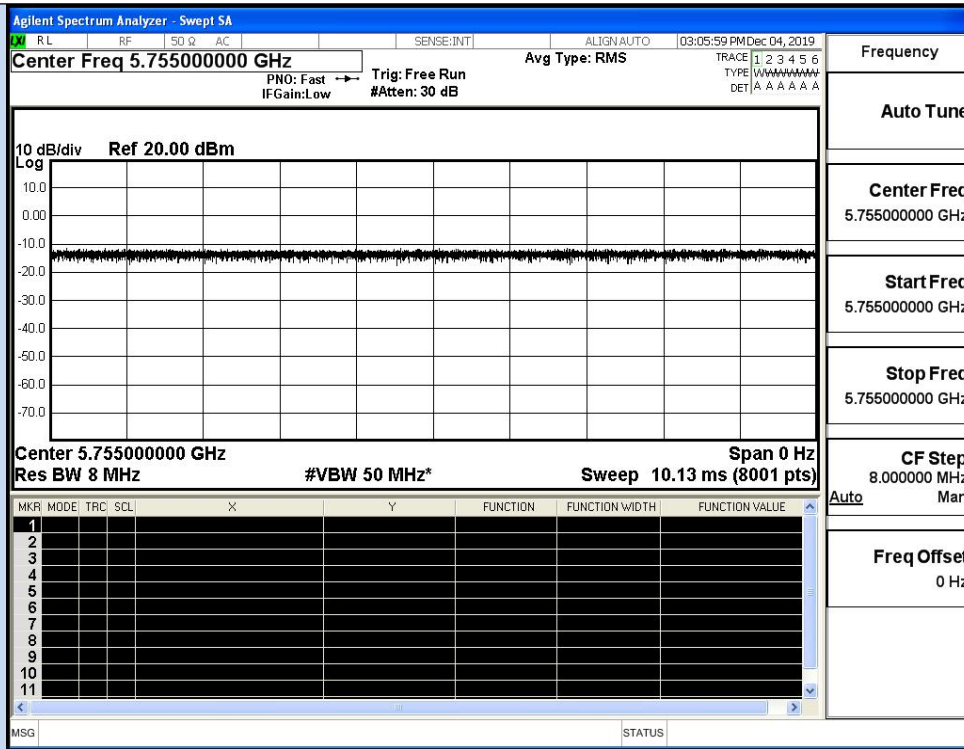
IEEE 802.11n HT20



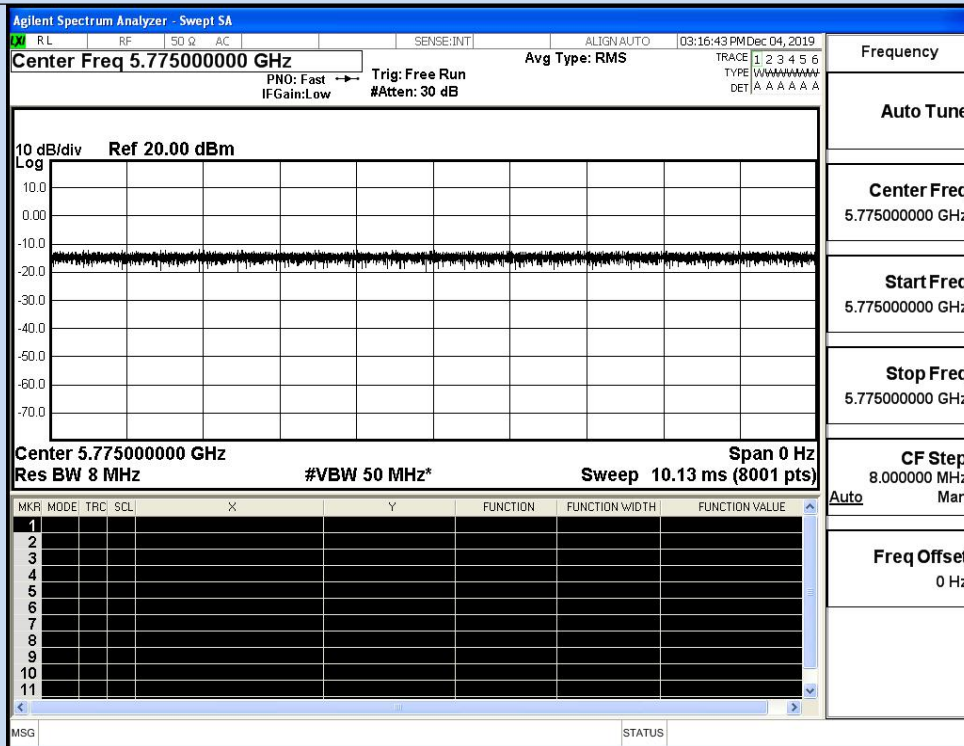
IEEE 802.11n HT40



IEEE 802.11AC20

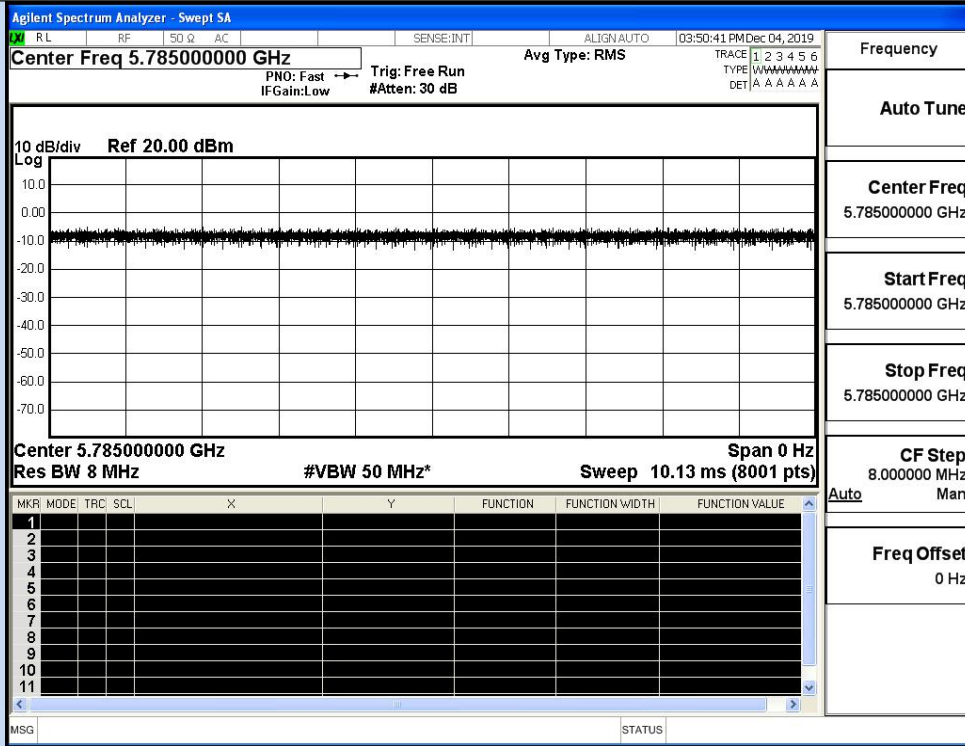


IEEE 802.11AC40

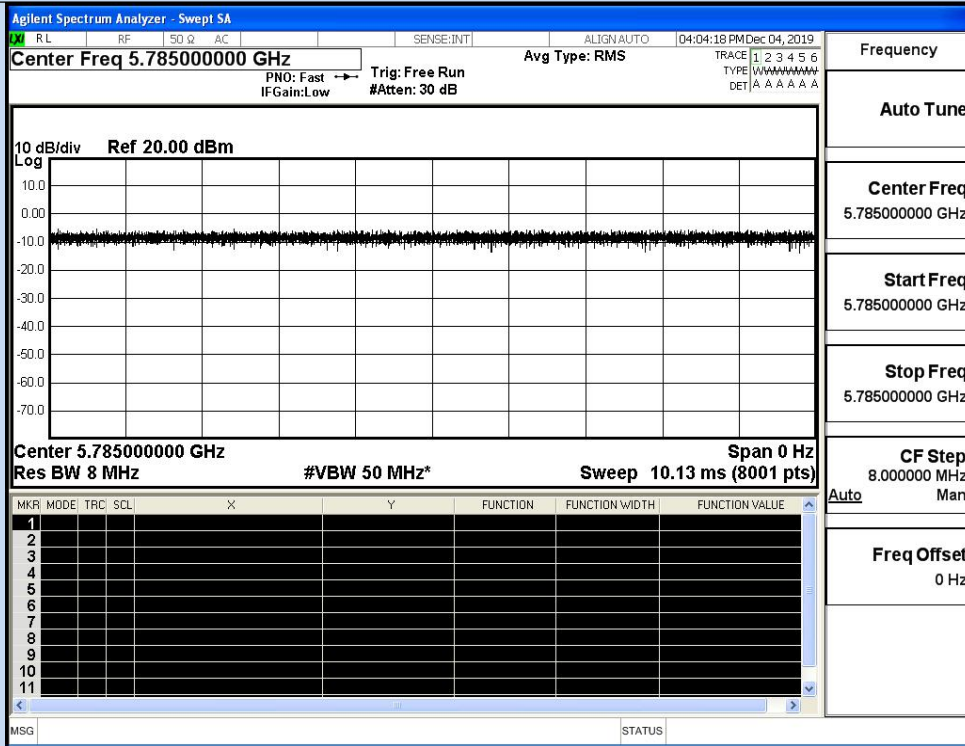


IEEE 802.11AC80

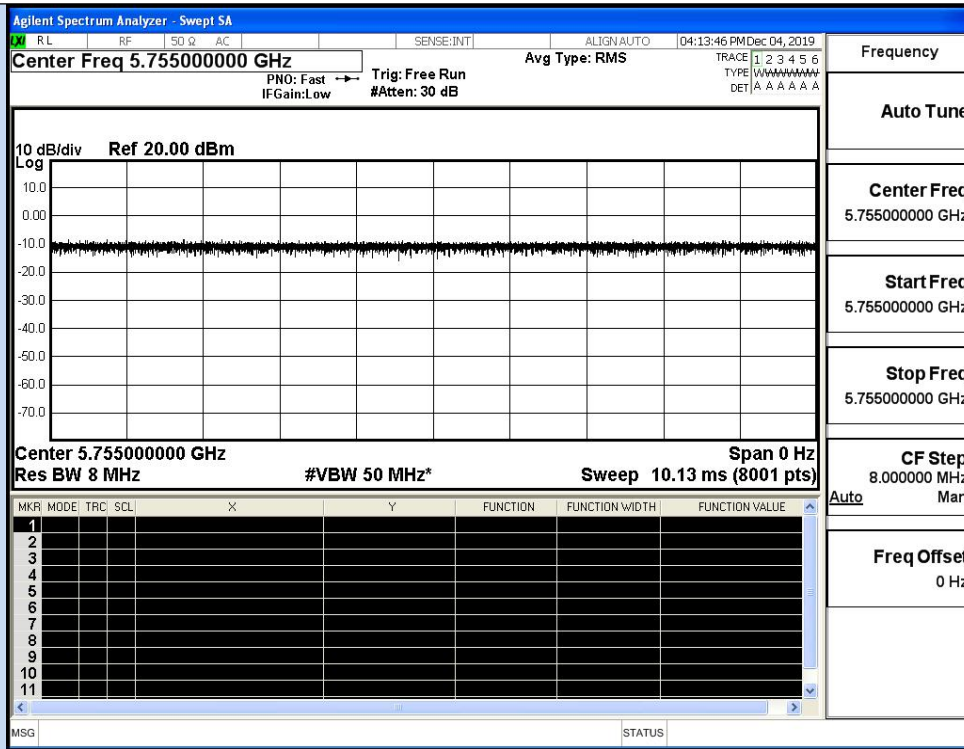
On Time and Duty Cycle(Antenna 1)



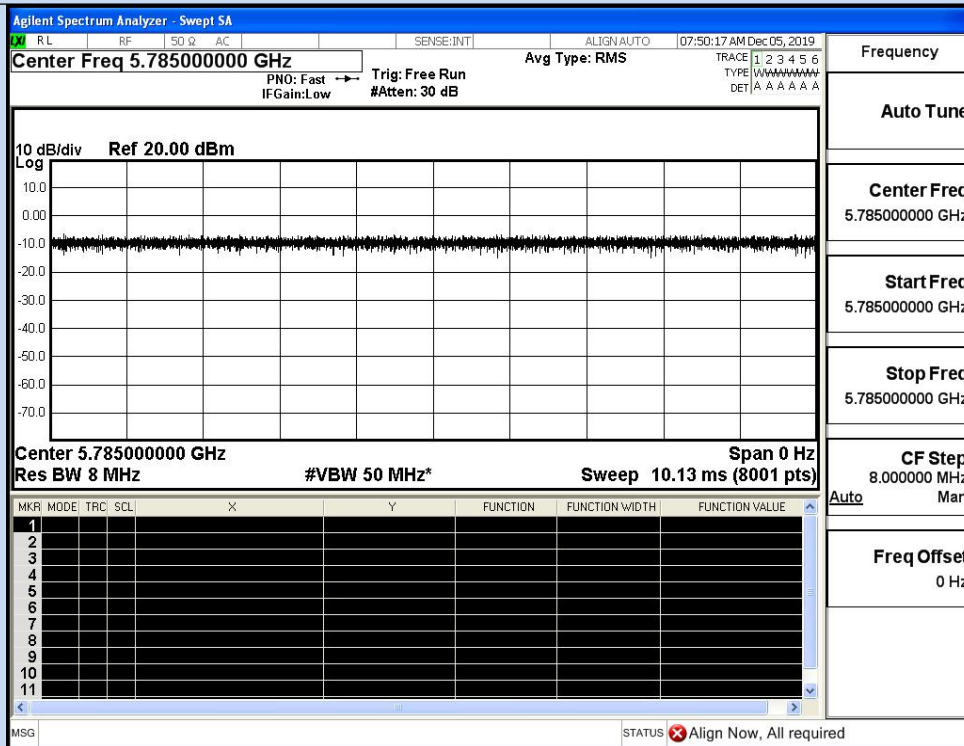
IEEE 802.11a



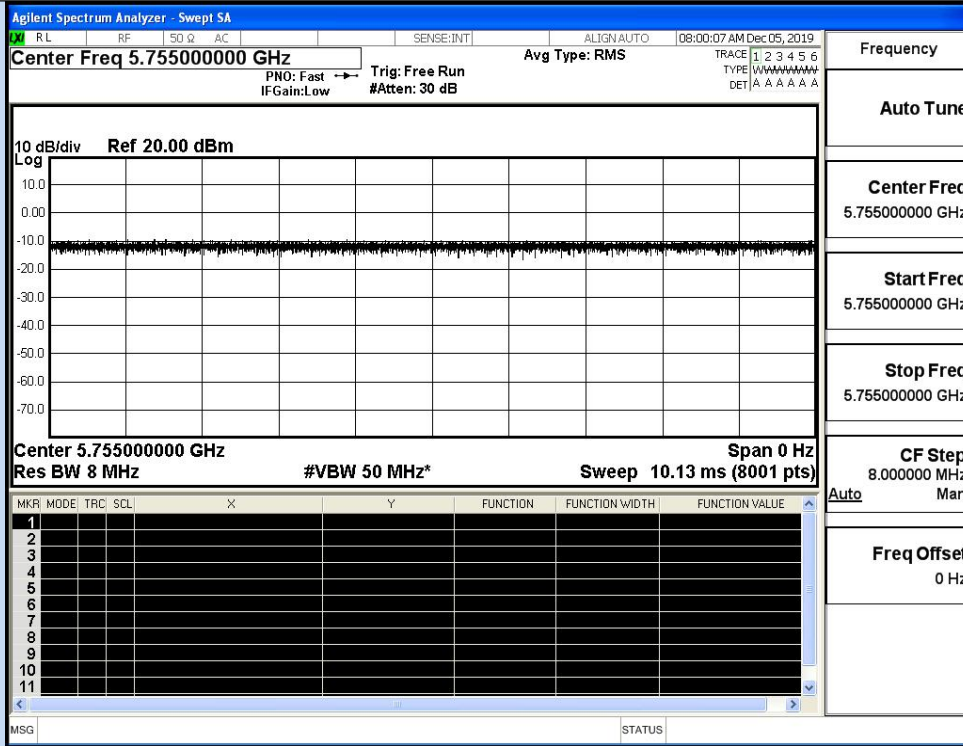
IEEE 802.11n HT20



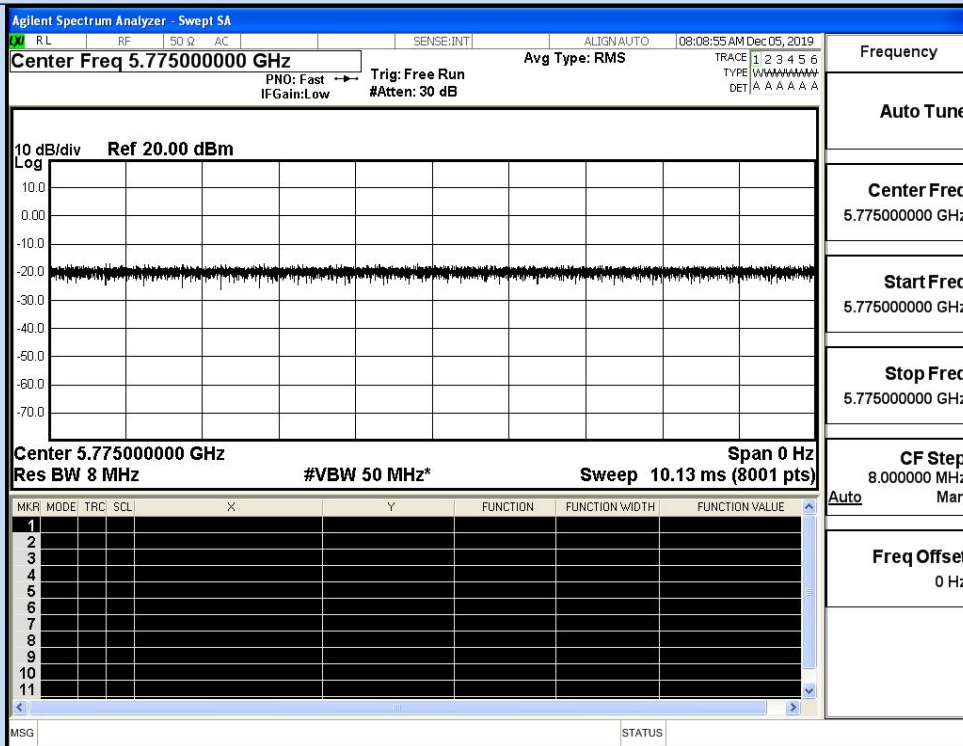
IEEE 802.11n HT40



IEEE 802.11AC20



IEEE 802.11AC40



IEEE 802.11AC80

C.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)	Verdict
11A	149	5745	9.04	0	9.04	30	Pass
	157	5785	8.58	0	8.58		Pass
	165	5825	7.94	0	7.94		Pass
11N20 SISO	149	5745	9.27	0	9.27	30	Pass
	157	5785	8.61	0	8.61		Pass
	165	5825	8	0	8		Pass
11N40 SISO	151	5755	9.65	0	9.65	30	Pass
	159	5795	11.26	0	11.26		Pass
11AC20 SISO	149	5745	9.55	0	9.55	30	Pass
	157	5785	10.36	0	10.36		Pass
	165	5825	9.29	0	9.29		Pass
11AC40 SISO	151	5755	11.04	0	11.04	30	Pass
	159	5795	10.02	0	10.02		Pass
11AC80 SISO	155	5775	10.72	0	10.72	30	Pass

Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor(dB)	Report Conducted Power(dBm)	Limit (dBm)	Verdict
11A	149	5745	9.45	0	9.45	30	Pass
	157	5785	8.83	0	8.83		Pass
	165	5825	8.4	0	8.4		Pass
11N20 SISO	149	5745	9.32	0	9.32	30	Pass
	157	5785	8.95	0	8.95		Pass
	165	5825	8.53	0	8.53		Pass
11N40 SISO	151	5755	9.98	0	9.98	30	Pass
	159	5795	9.77	0	9.77		Pass
11AC20 SISO	149	5745	7.98	0	7.98	30	Pass
	157	5785	9.4	0	9.4		Pass
	165	5825	10.98	0	10.98		Pass
11AC40 SISO	151	5755	9.65	0	9.65	30	Pass
	159	5795	11.01	0	11.01		Pass
11AC80 SISO	155	5775	7.77	0	7.77	30	Pass

ANT0+ANT1:

Test Mode	Channel	Frequency (MHz)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)			Limit (dBm)	Verdict
				Ant0	Ant1	Sum		
11N20 MIMO	149	5745	0	9.27	9.32	12.31	30	Pass
	157	5785	0	8.61	8.95	11.79		Pass
	165	5825	0	8	8.53	11.28		Pass
11N40 MIMO	151	5755	0	9.65	9.98	12.83	30	Pass
	159	5795	0	11.26	9.77	13.59		Pass
11AC20 MIMO	149	5745	0	9.55	7.98	11.85	30	Pass
	157	5785	0	10.36	9.4	12.92		Pass
	165	5825	0	9.29	10.98	13.23		Pass
11AC40 MIMO	151	5755	0	11.04	9.65	13.41	30	Pass
	159	5795	0	10.02	11.01	13.55		Pass
11AC80 MIMO	155	5775	0	10.72	7.77	12.50	30	Pass

C.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)	Verdict
11A	149	5745	-5.20	0	2.218	-2.99	30	Pass
	157	5785	-5.67	0	2.218	-3.45		Pass
	165	5825	-6.17	0	2.218	-3.95		Pass
11N20 SISO	149	5745	-5.67	0	2.218	-3.45	30	Pass
	157	5785	-6.15	0	2.218	-3.93		Pass
	165	5825	-6.21	0	2.218	-3.99		Pass
11N40 SISO	151	5755	-6.78	0	2.218	-4.57	30	Pass
	159	5795	-7.15	0	2.218	-4.94		Pass
11AC20 SISO	149	5745	-5.98	0	2.218	-3.76	30	Pass
	157	5785	-6.64	0	2.218	-4.42		Pass
	165	5825	-7.57	0	2.218	-5.35		Pass
11AC40 SISO	151	5755	-7.43	0	2.218	-5.21	30	Pass
	159	5795	-7.45	0	2.218	-5.24		Pass
11AC80 SISO	155	5775	-9.54	0	2.218	-7.32	30	Pass

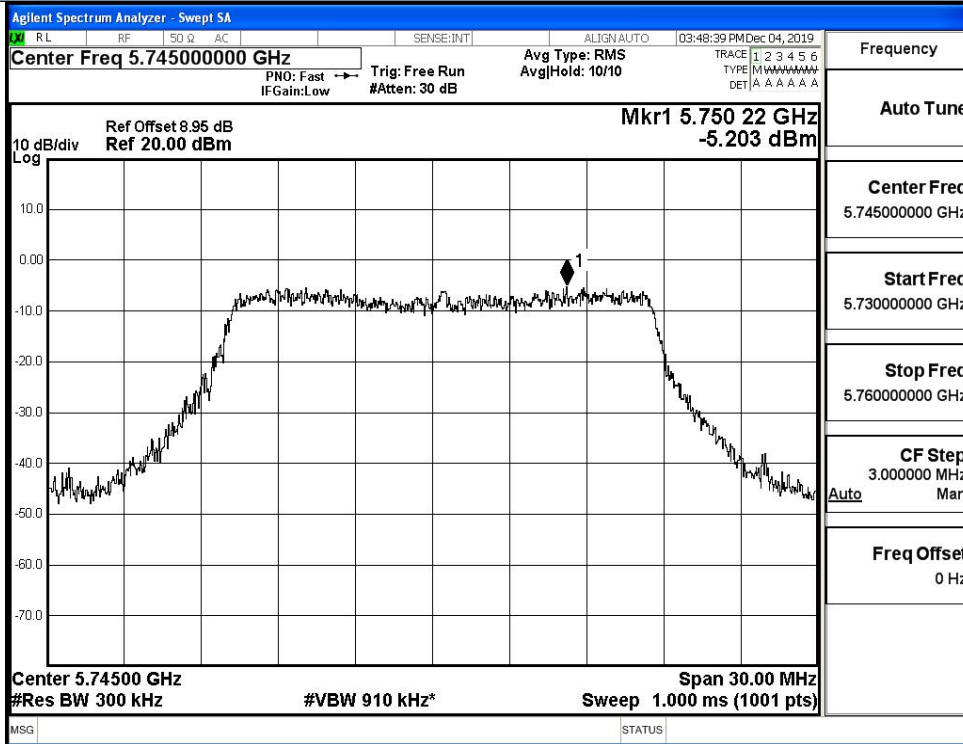
Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
11A	149	5745	-5.36	0	2.218	-3.14	30	Pass
	157	5785	-5.96	0	2.218	-3.74		Pass
	165	5825	-6.46	0	2.218	-4.24		Pass
11N20 SISO	149	5745	-5.53	0	2.218	-3.31	30	Pass
	157	5785	-6.42	0	2.218	-4.20		Pass
	165	5825	-6.49	0	2.218	-4.27		Pass
11N40 SISO	151	5755	-7.07	0	2.218	-4.85	30	Pass
	159	5795	-5.95	0	2.218	-3.73		Pass
11AC20 SISO	149	5745	-5.85	0	2.218	-3.63	30	Pass
	157	5785	-6.29	0	2.218	-4.08		Pass
	165	5825	-7.00	0	2.218	-4.78		Pass
11AC40 SISO	151	5755	-7.00	0	2.218	-4.78	30	Pass
	159	5795	-9.78	0	2.218	-7.56		Pass
11AC80 SISO	155	5775	-6.36	0	2.218	-4.14	30	Pass

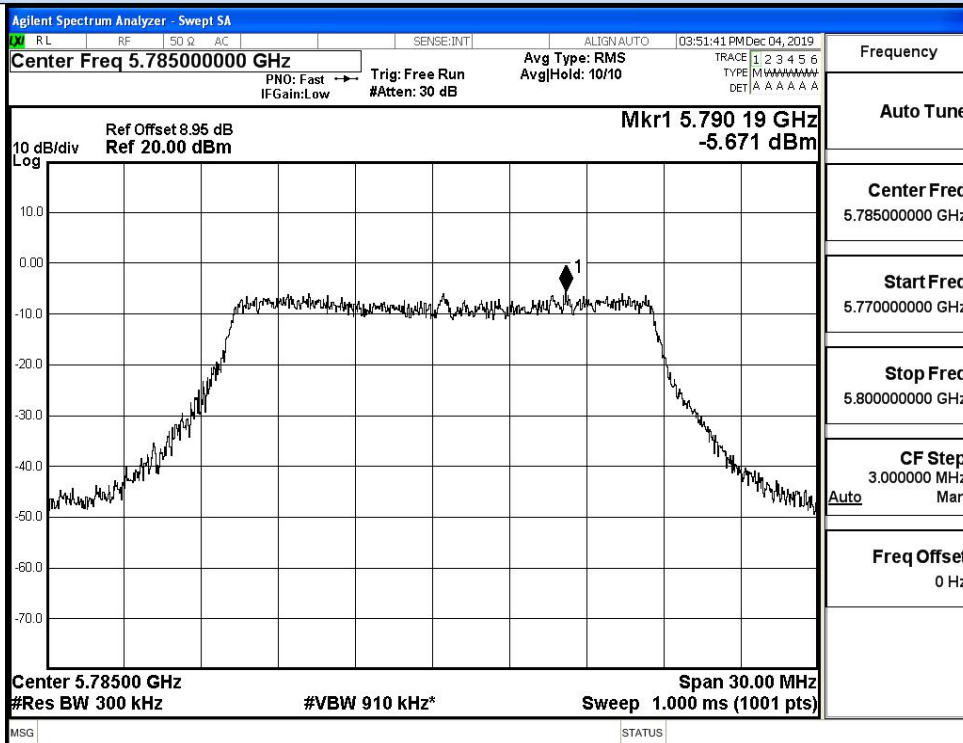
ANT0+ANT1:

Test Mode	Channel	Frequency (MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/500KHz)			Limit (dBm)	Verdict
				Ant0	Ant1	Sum		
11N20 MIMO	149	5745	0	-3.45	-3.31	-0.37	30	Pass
	157	5785	0	-3.93	-4.20	-1.05		Pass
	165	5825	0	-3.99	-4.27	-1.12		Pass
11N40 MIMO	151	5755	0	-4.57	-4.85	-1.70	30	Pass
	159	5795	0	-4.94	-3.73	-1.28		Pass
11AC20 MIMO	149	5745	0	-3.76	-3.63	-0.68	30	Pass
	157	5785	0	-4.42	-4.08	-1.24		Pass
	165	5825	0	-5.35	-4.78	-2.05		Pass
11AC40 MIMO	151	5755	0	-5.21	-4.78	-1.98	30	Pass
	159	5795	0	-5.24	-7.56	-3.24		Pass
11AC80 MIMO	155	5775	0	-7.32	-4.14	-2.43	30	Pass

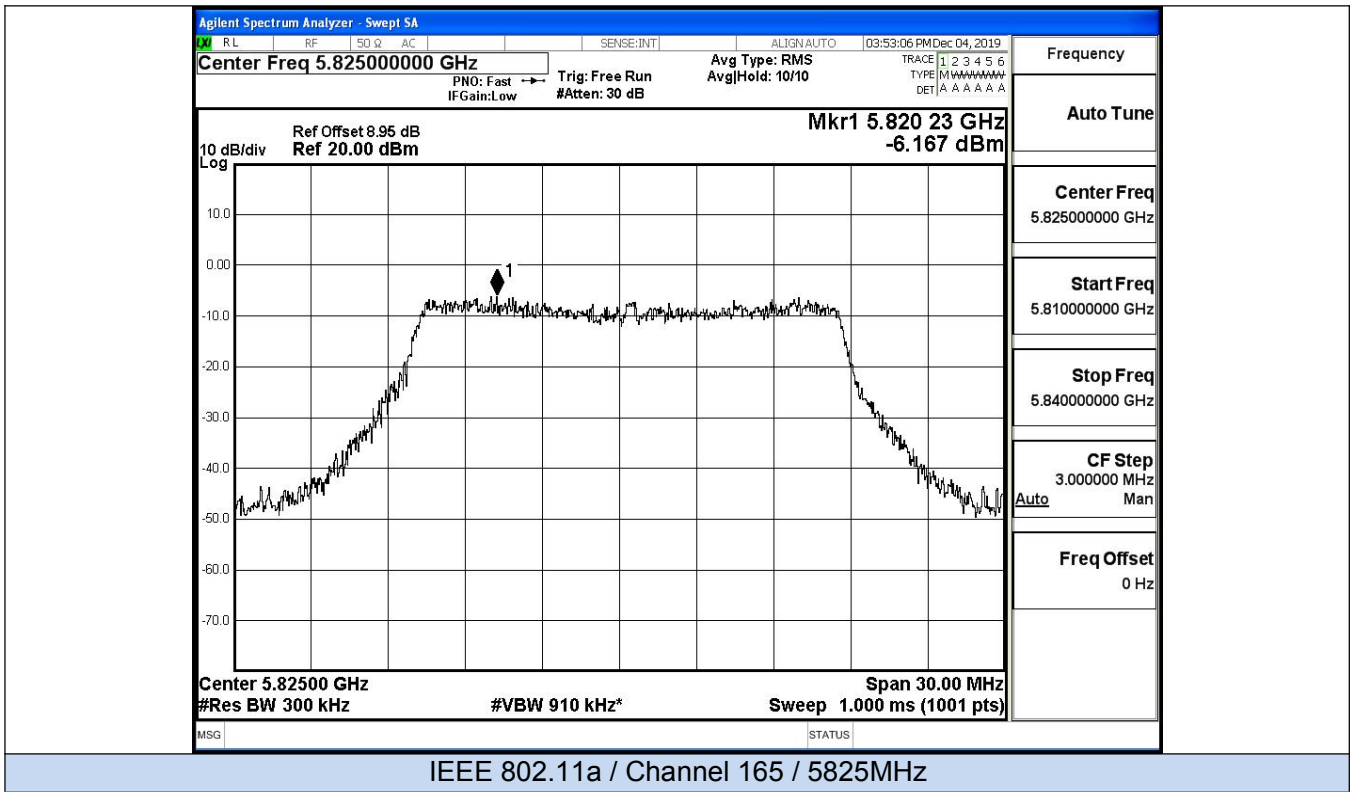
Power Spectral Density(Antenna 0)



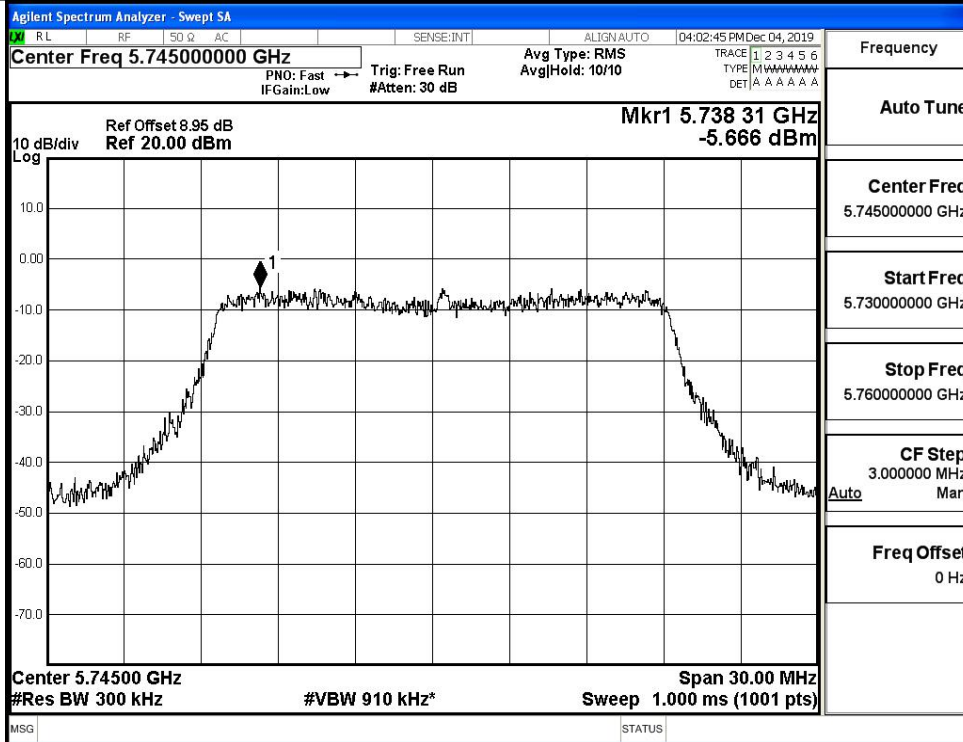
IEEE 802.11a / Channel 149 / 5745MHz



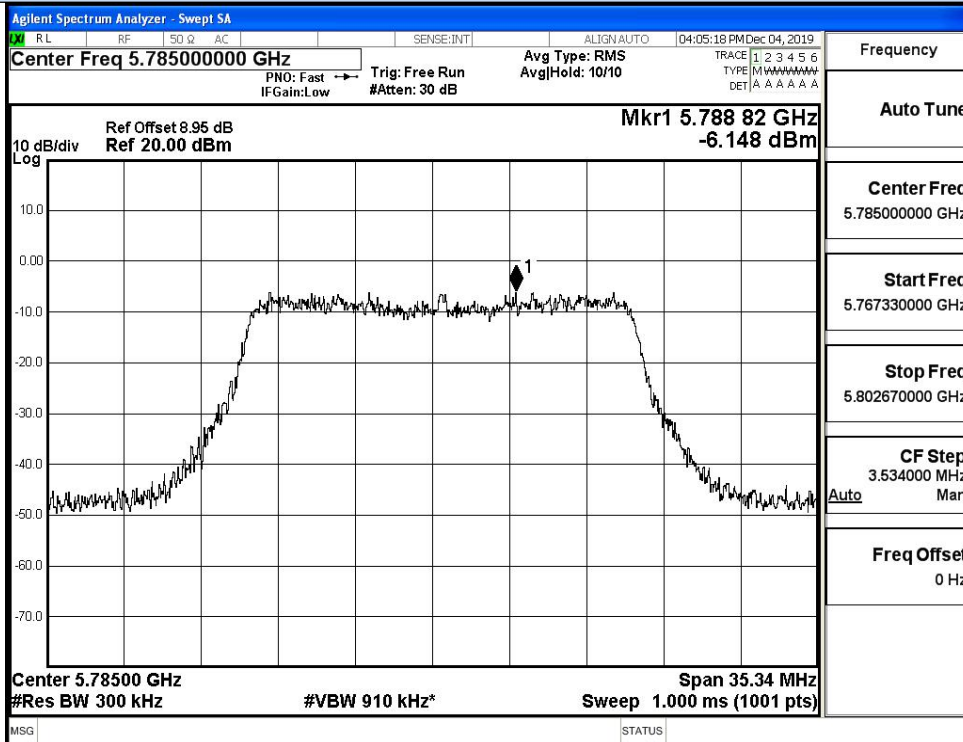
IEEE 802.11a / Channel 157 / 5785MHz



Power Spectral Density



IEEE 802.11n20 / Channel 149 / 5745MHz



IEEE 802.11n20 / Channel 157 / 5785MHz

