

Appendix B

RF Test Data for 5.2G 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

B.1 Duty Cycle

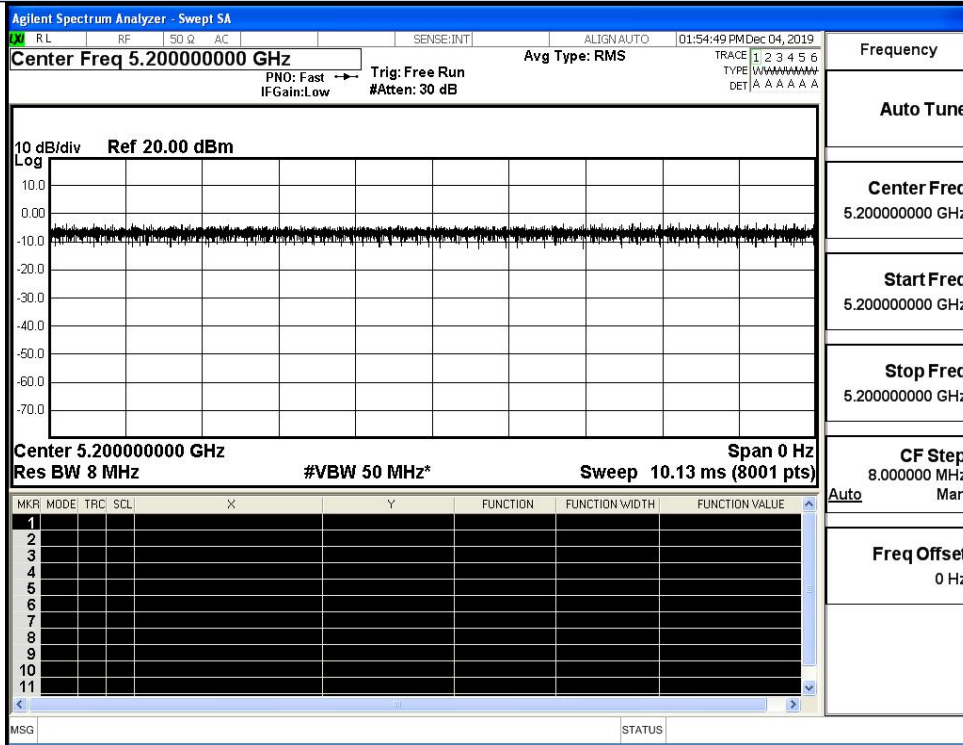
Antenna 0

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11A	5200	100	0.00	0.01
11N20 SISO	5200	100	0.00	0.01
11N40 SISO	5190	100	0.00	0.01
11AC20 SISO	5200	100	0.00	0.01
11AC40 SISO	5190	100	0.00	0.01
11AC80 SISO	5210	100	0.00	0.01

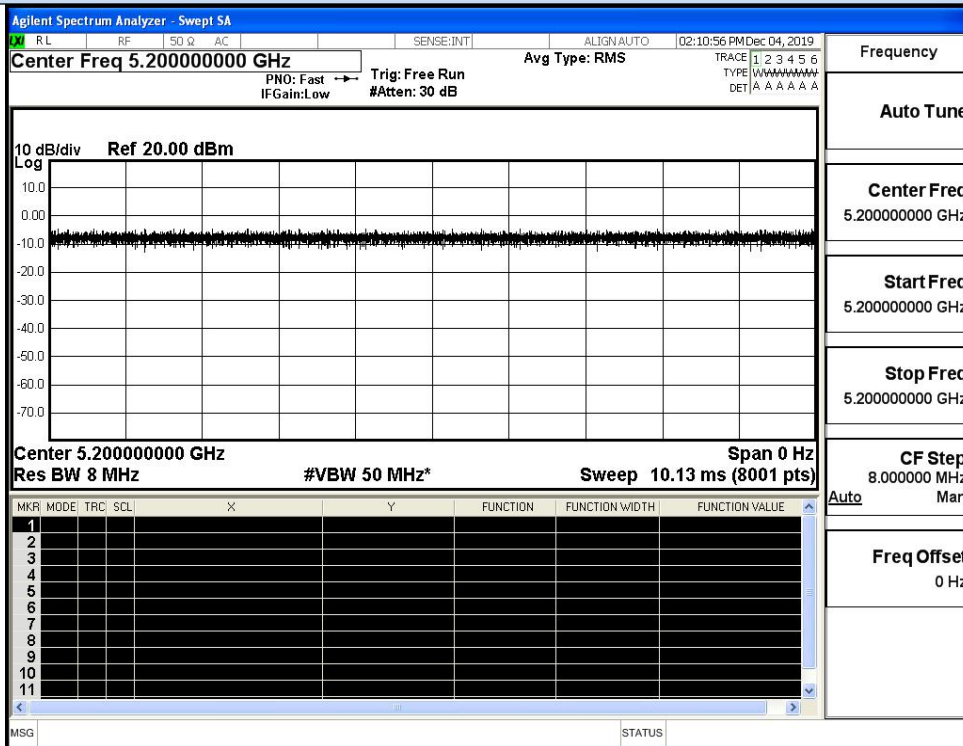
Antenna 1

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11A	5200	100	0.00	0.01
11N20 SISO	5200	100	0.00	0.01
11N40 SISO	5190	100	0.00	0.01
11AC20 SISO	5200	100	0.00	0.01
11AC40 SISO	5190	100	0.00	0.01
11AC80 SISO	5210	100	0.00	0.01

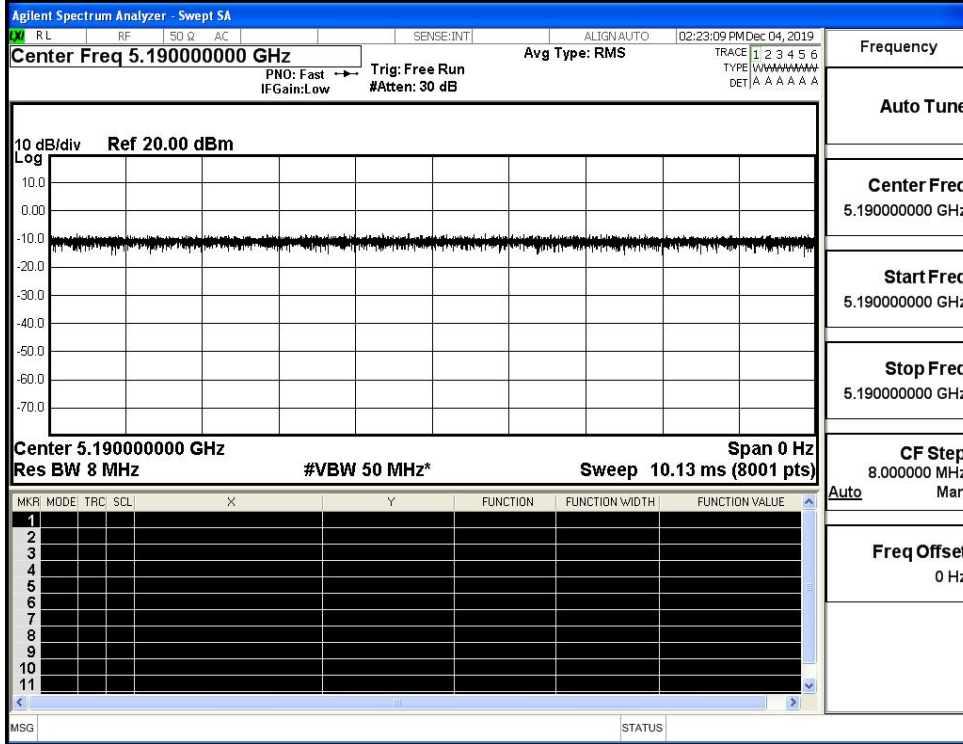
On Time and Duty Cycle ANT0



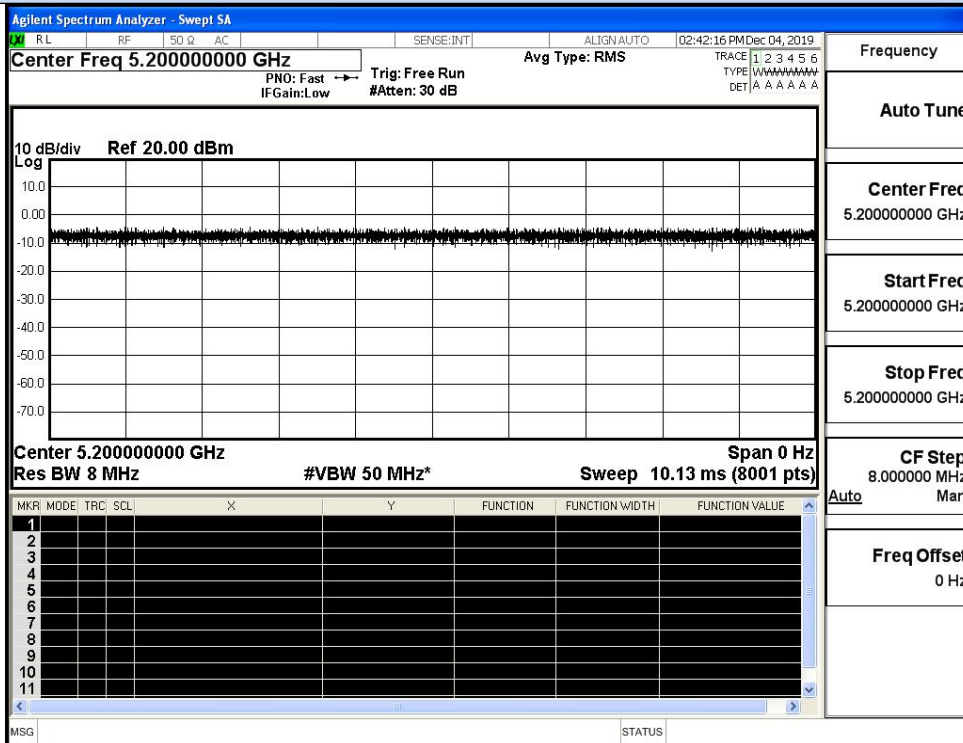
IEEE 802.11a



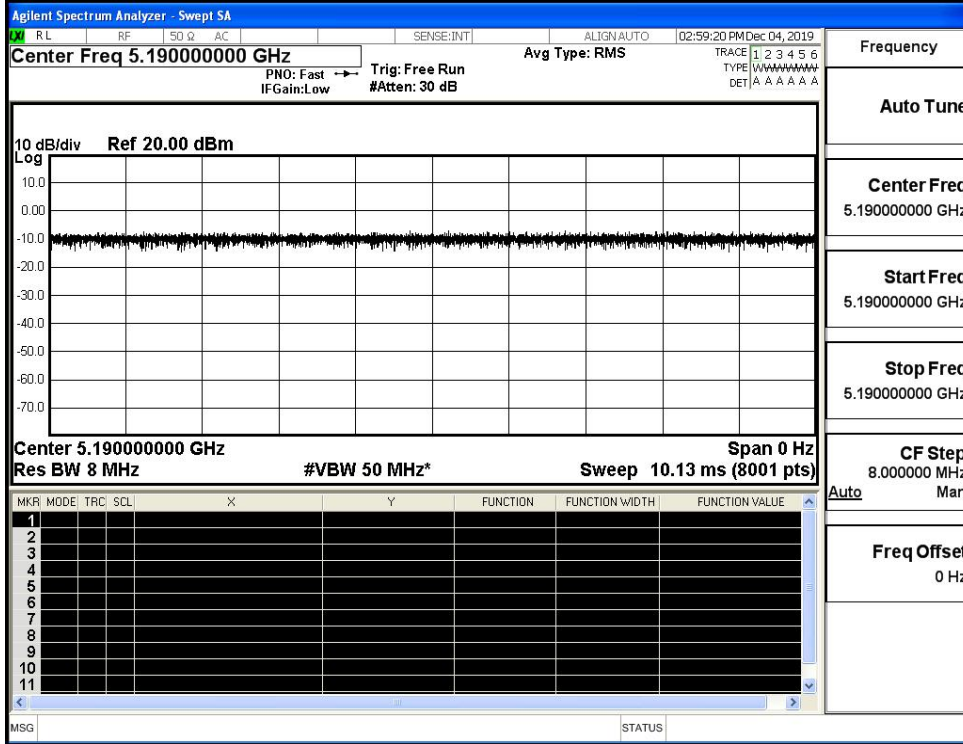
IEEE 802.11n HT20



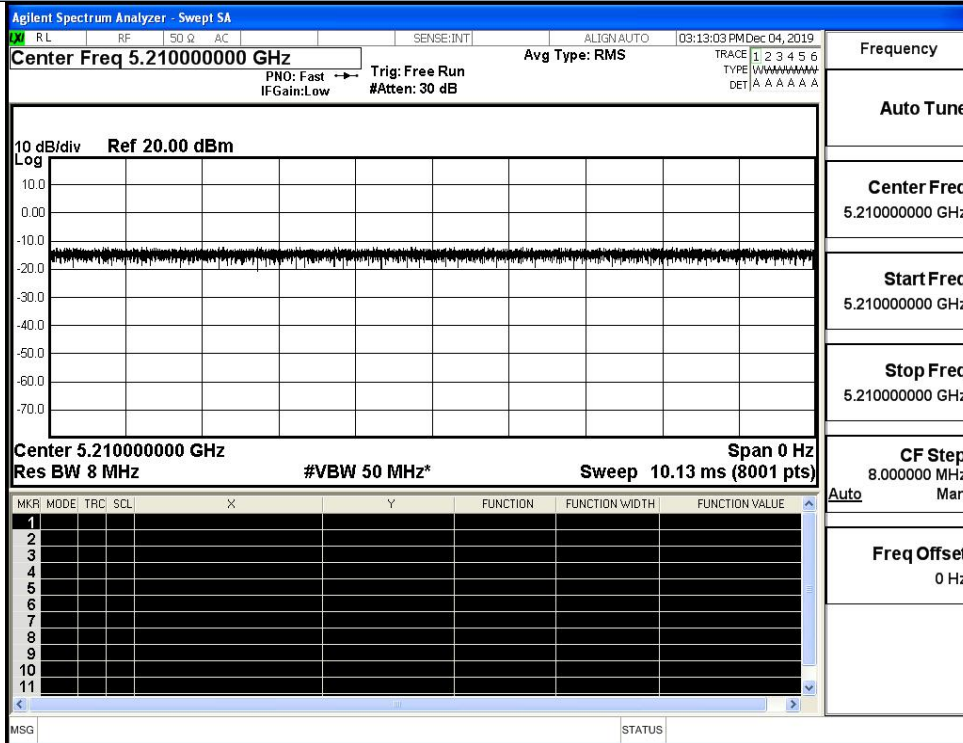
IEEE 802.11n HT40



IEEE 802.11AC20

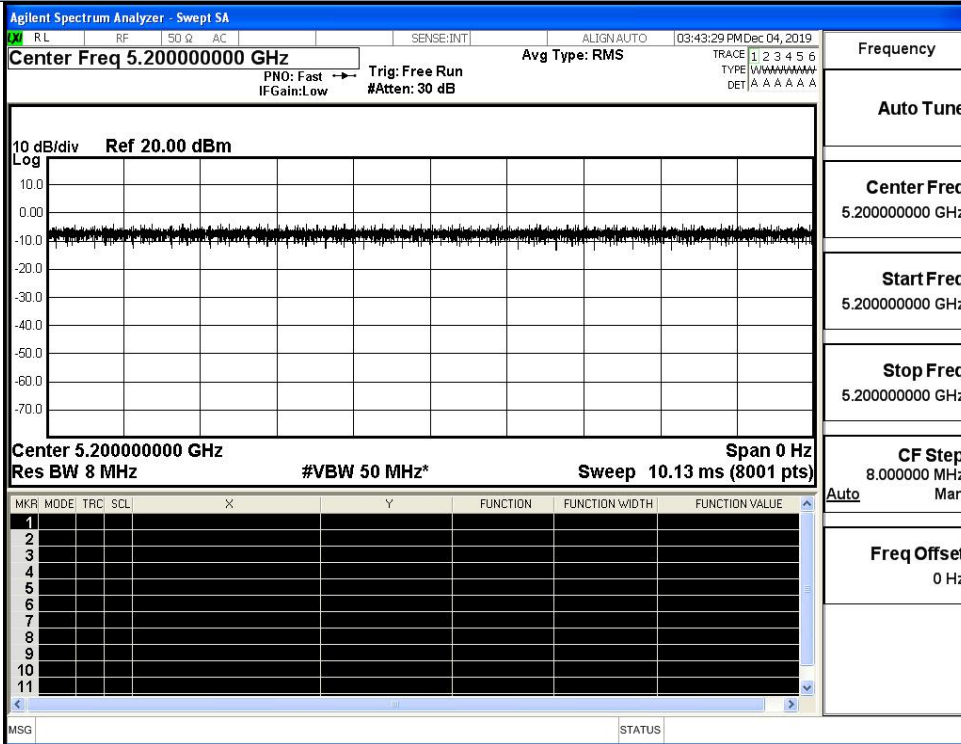


IEEE 802.11 AC40

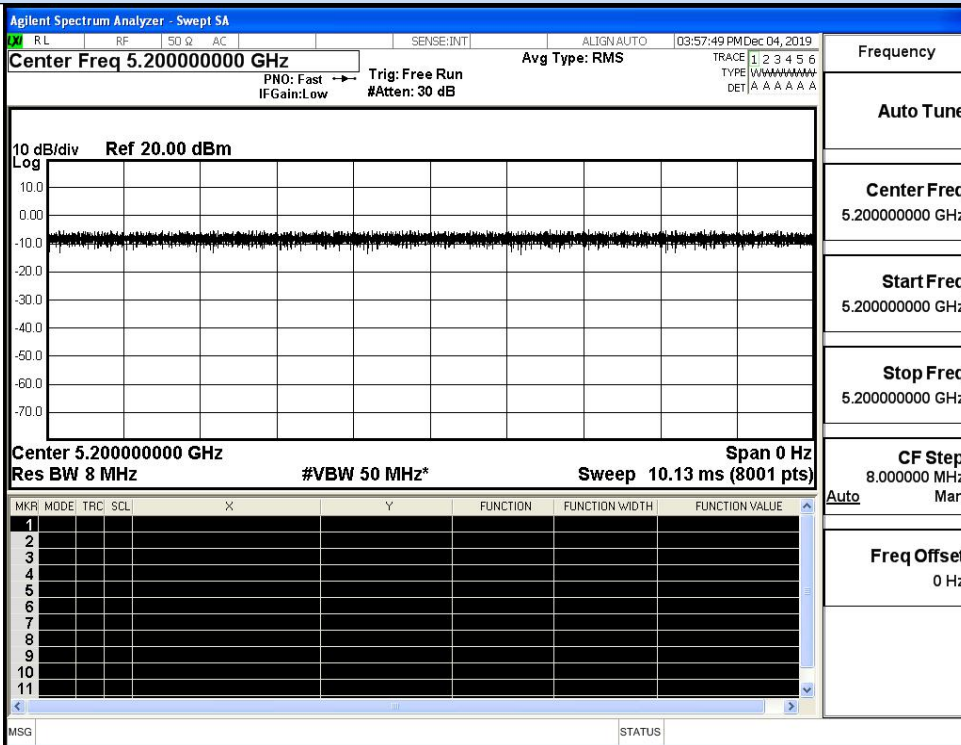


IEEE 802.11AC80

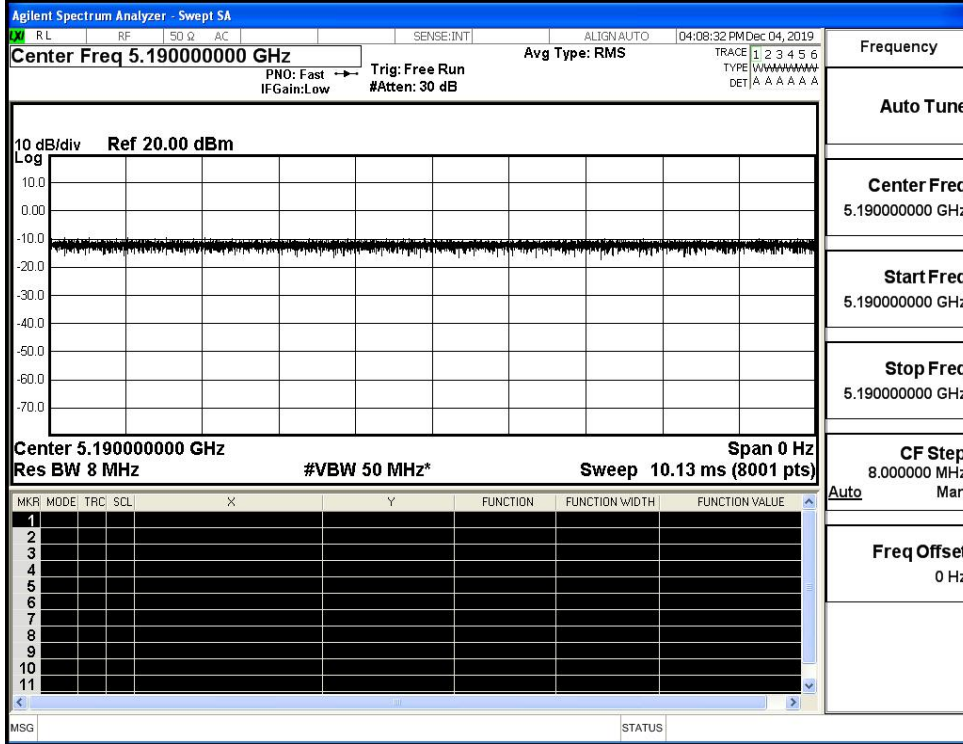
On Time and Duty Cycle AN1



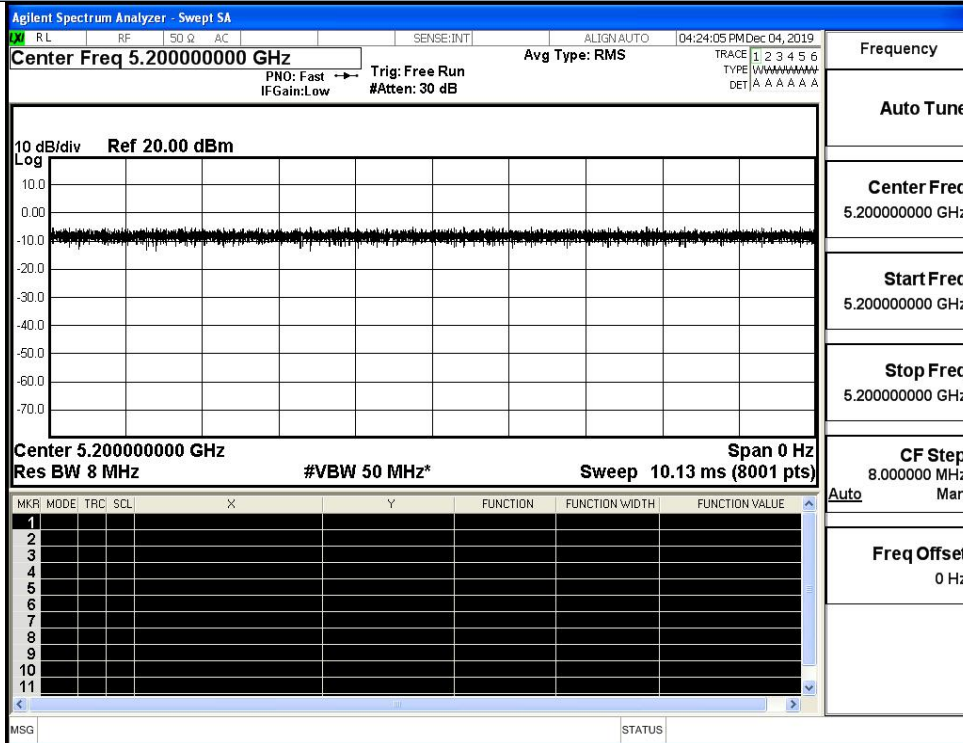
IEEE 802.11a



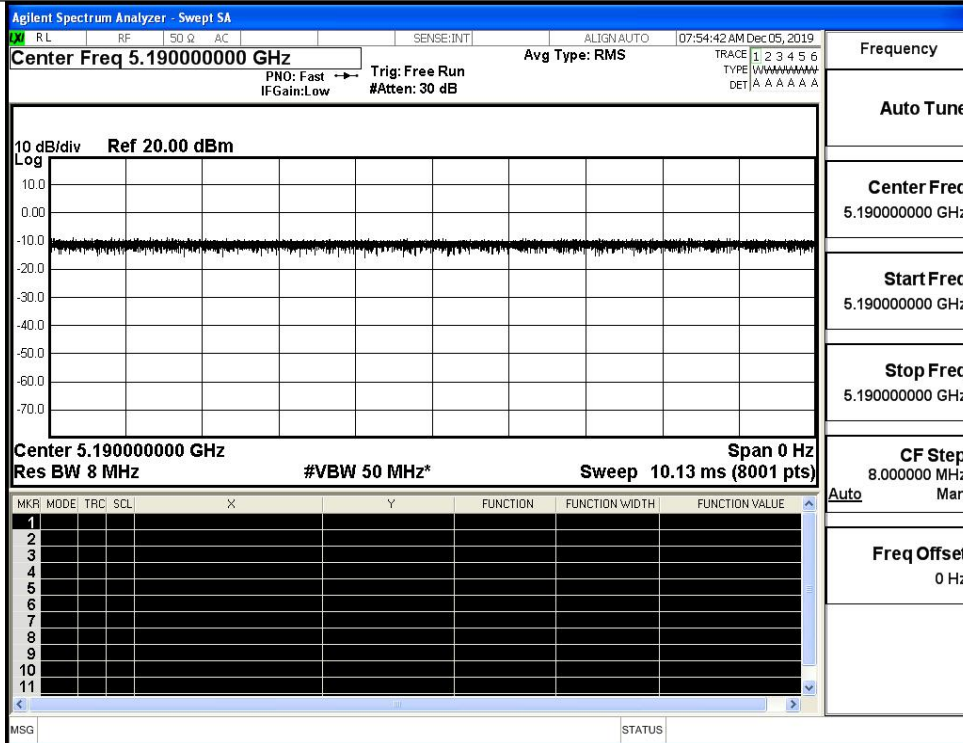
IEEE 802.11n HT20



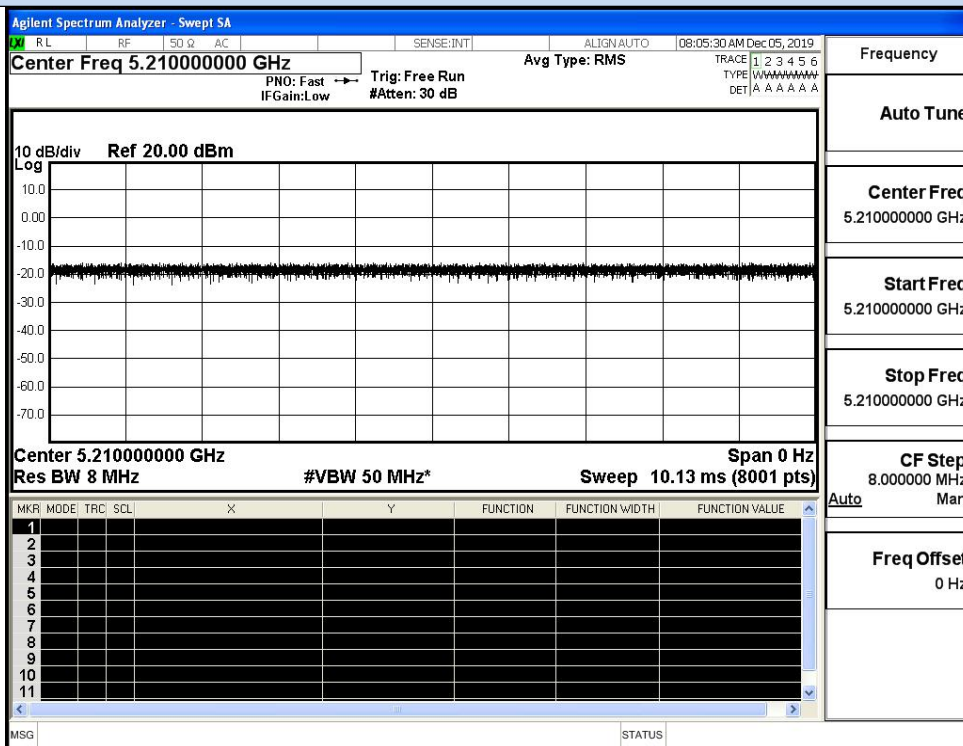
IEEE 802.11n HT40



IEEE 802.11AC20



IEEE 802.11 AC40



IEEE 802.11AC80

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)	Verdict
11A	36	5180	10.65	0	10.65	30	Pass
	40	5200	10.16	0	10.16		Pass
	48	5240	8.92	0	8.92		Pass
11N20 SISO	36	5180	8.79	0	8.79	30	Pass
	40	5200	9.86	0	9.86		Pass
	48	5240	8.79	0	8.79		Pass
11N40 SISO	38	5190	9.69	0	9.69	30	Pass
	46	5230	9.42	0	9.42		Pass
11AC20 SISO	36	5180	9.55	0	9.55	30	Pass
	40	5200	10.36	0	10.36		Pass
	48	5240	9.29	0	9.29		Pass
11AC40 SISO	38	5190	11.04	0	11.04	30	Pass
	46	5230	10.02	0	10.02		Pass
11AC80 SISO	42	5210	10.9	0	10.9	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	36	5180	10.85	0	10.85	30	Pass
	40	5200	9.81	0	9.81		Pass
	48	5240	9.15	0	9.15		Pass
11N20 SISO	36	5180	7.96	0	7.96	30	Pass
	40	5200	9.44	0	9.44		Pass
	48	5240	8.9	0	8.9		Pass
11N40 SISO	38	5190	8.74	0	8.74	30	Pass
	46	5230	9.44	0	9.44		Pass
11AC20 SISO	36	5180	7.98	0	7.98	30	Pass
	40	5200	9.4	0	9.4		Pass
	48	5240	10.98	0	10.98		Pass
11AC40 SISO	38	5190	9.65	0	9.65	30	Pass
	46	5230	11.01	0	11.01		Pass
11AC80 SISO	42	5210	7.96	0	7.96	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	36	5180	0	8.79	7.96	11.41	30	Pass
	40	5200	0	9.86	9.44	12.67		Pass
	48	5240	0	8.79	8.9	11.86		Pass
11N40 MIMO	38	5190	0	9.69	8.74	12.25	30	Pass
	46	5230	0	9.42	9.44	12.44		Pass
11AC20 MIMO	36	5180	0	9.55	7.98	11.85	30	Pass
	40	5200	0	10.36	9.4	12.92		Pass
	48	5240	0	9.29	10.98	13.23		Pass
11AC40 MIMO	38	5190	0	11.04	9.65	13.41	30	Pass
	46	5230	0	10.02	11.01	13.55		Pass
11AC80 MIMO	42	5210	0	10.9	7.96	12.68	30	Pass

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

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/MHz)	Duty Cycle Factor(dB)	Report Power Density (dBm/MHz)	Limit (dBm/MHz)	Verdict
11A	36	5180	0.08	0	0.08	17	Pass
	40	5200	-0.47	0	-0.47		Pass
	48	5240	-1.79	0	-1.79		Pass
11N20 SISO	36	5180	-2.20	0	-2.20	17	Pass
	40	5200	-1.06	0	-1.06		Pass
	48	5240	-2.11	0	-2.11		Pass
11N40 SISO	38	5190	-3.48	0	-3.48	17	Pass
	46	5230	-2.86	0	-2.86		Pass
11AC20 SISO	36	5180	-1.51	0	-1.51	17	Pass
	40	5200	-0.70	0	-0.70		Pass
	48	5240	-1.50	0	-1.50		Pass
11AC40 SISO	38	5190	-1.68	0	-1.68	17	Pass
	46	5230	-2.75	0	-2.75		Pass
11AC80 SISO	42	5210	-2.59	0	-2.59	17	Pass

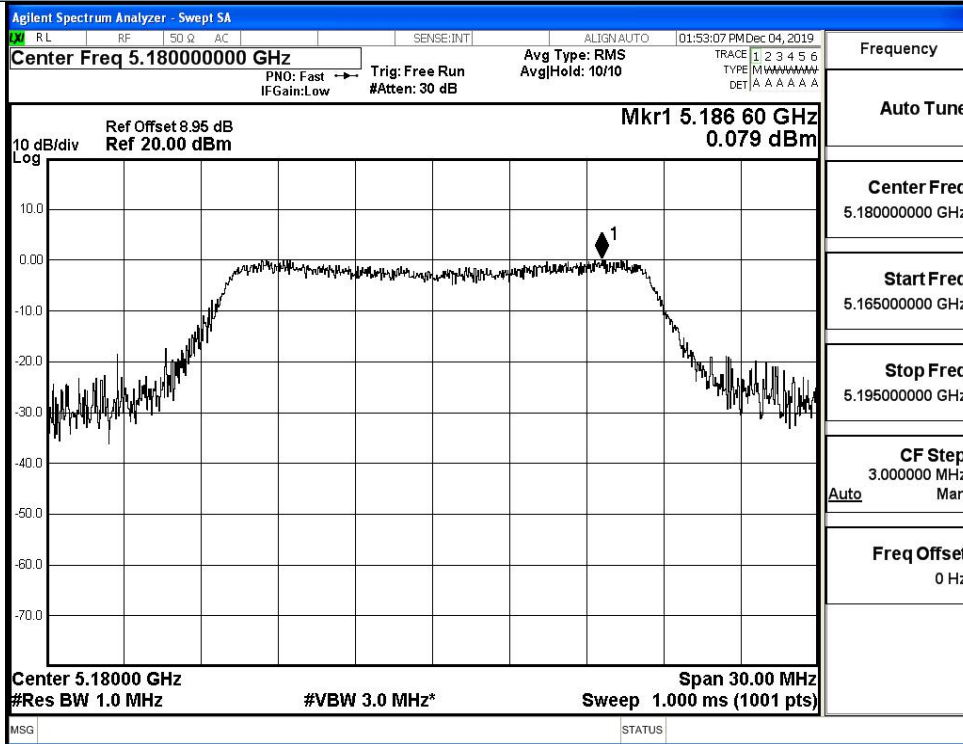
Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/MHz)	Duty Cycle Factor(dB)	Report Power Density (dBm/MHz)	Limit (dBm/MHz)	Verdict
11A	36	5180	0.04	0	0.04	17	Pass
	40	5200	-0.73	0	-0.73		Pass
	48	5240	-1.49	0	-1.49		Pass
11N20 SISO	36	5180	-2.88	0	-2.88	17	Pass
	40	5200	-1.14	0	-1.14		Pass
	48	5240	-2.02	0	-2.02		Pass
11N40 SISO	38	5190	-3.93	0	-3.93	17	Pass
	46	5230	-3.26	0	-3.26		Pass
11AC20 SISO	36	5180	-3.06	0	-3.06	17	Pass
	40	5200	-1.43	0	-1.43		Pass
	48	5240	-0.24	0	-0.24		Pass
11AC40 SISO	38	5190	-3.23	0	-3.23	17	Pass
	46	5230	-1.78	0	-1.78		Pass
11AC80 SISO	42	5210	-4.45	0	-4.45	17	Pass

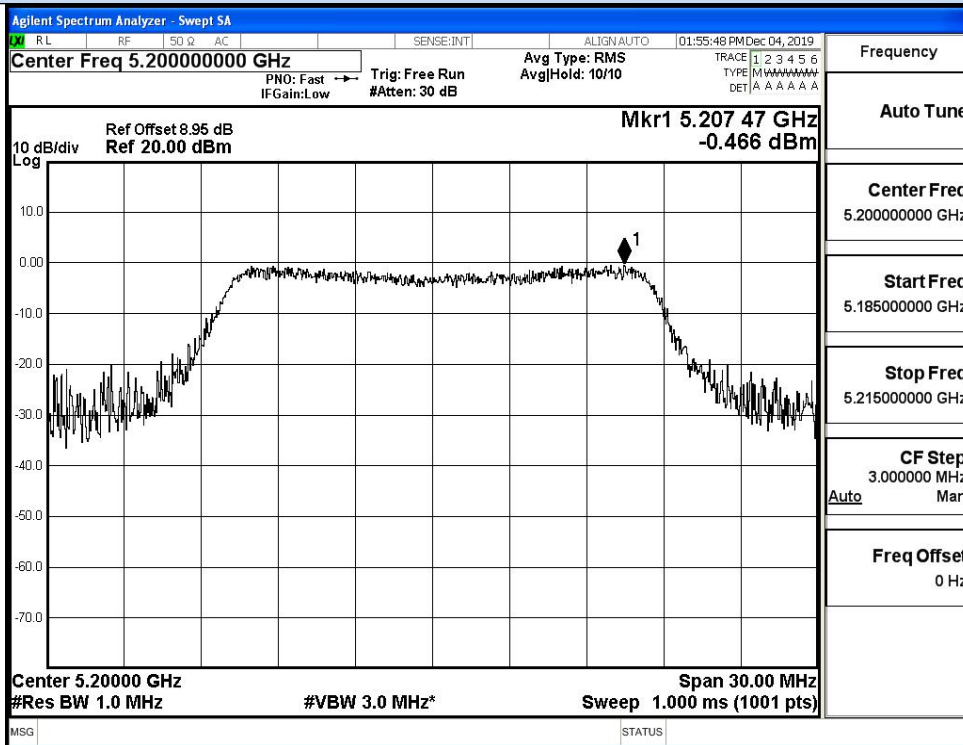
ANT0+ANT1:

Test Mode	Channel	Frequency (MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/MHz)			Limit (dBm)
				Ant0	Ant1	Sum	
11N20 MIMO	36	5180	0	-2.20	-2.88	0.48	17
	40	5200	0	-1.06	-1.14	1.91	
	48	5240	0	-2.11	-2.02	0.95	
11N40 MIMO	38	5190	0	-3.48	-3.93	-0.69	17
	46	5230	0	-2.86	-3.26	-0.05	
11AC20 MIMO	36	5180	0	-1.51	-3.06	0.79	17
	40	5200	0	-0.70	-1.43	1.96	
	48	5240	0	-1.50	-0.24	2.19	
11AC40 MIMO	38	5190	0	-1.68	-3.23	0.62	17
	46	5230	0	-2.75	-1.78	0.77	
11AC80 MIMO	42	5210	0	-2.59	-4.45	-0.41	17

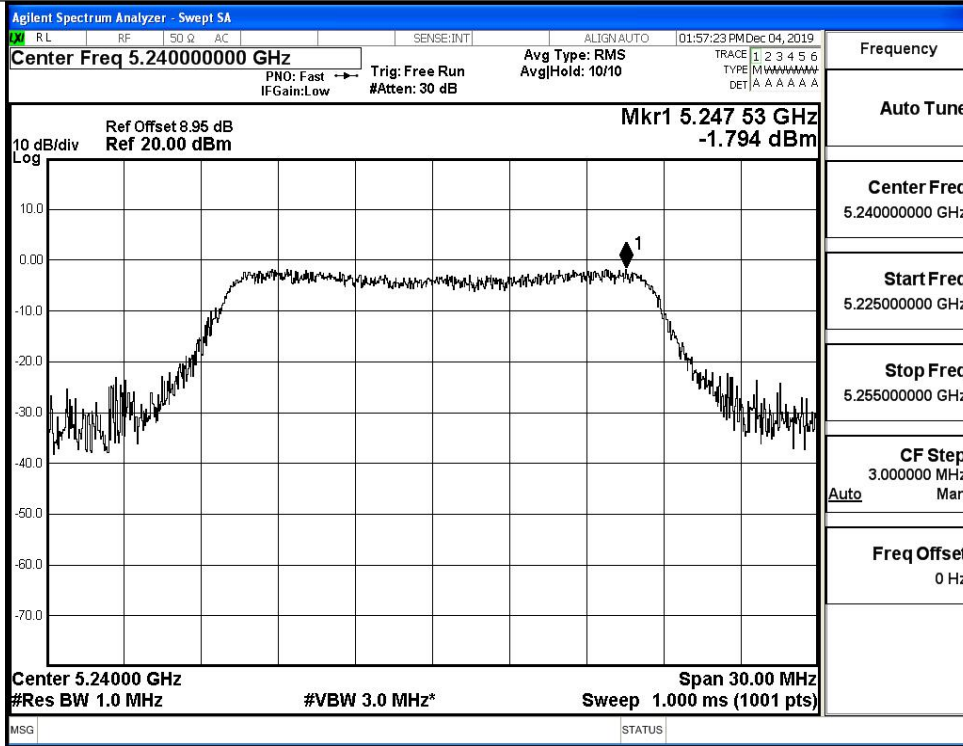
Power Spectral Density(Antenna 0)



IEEE 802.11a / Channel 36 / 5180MHz

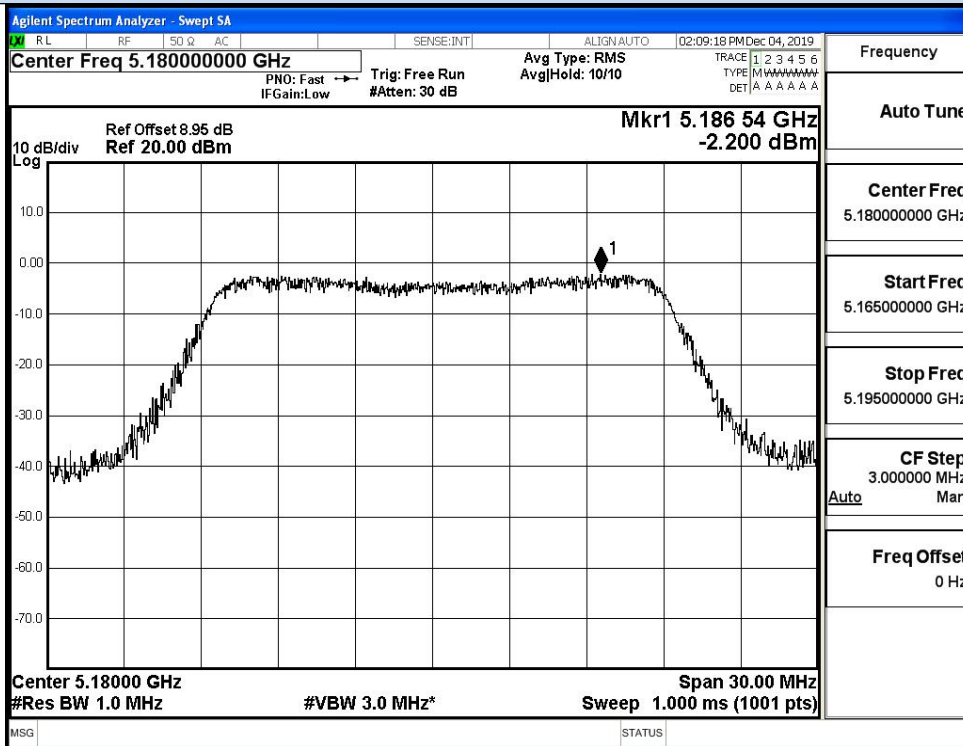


IEEE 802.11a / Channel 40 / 5200MHz

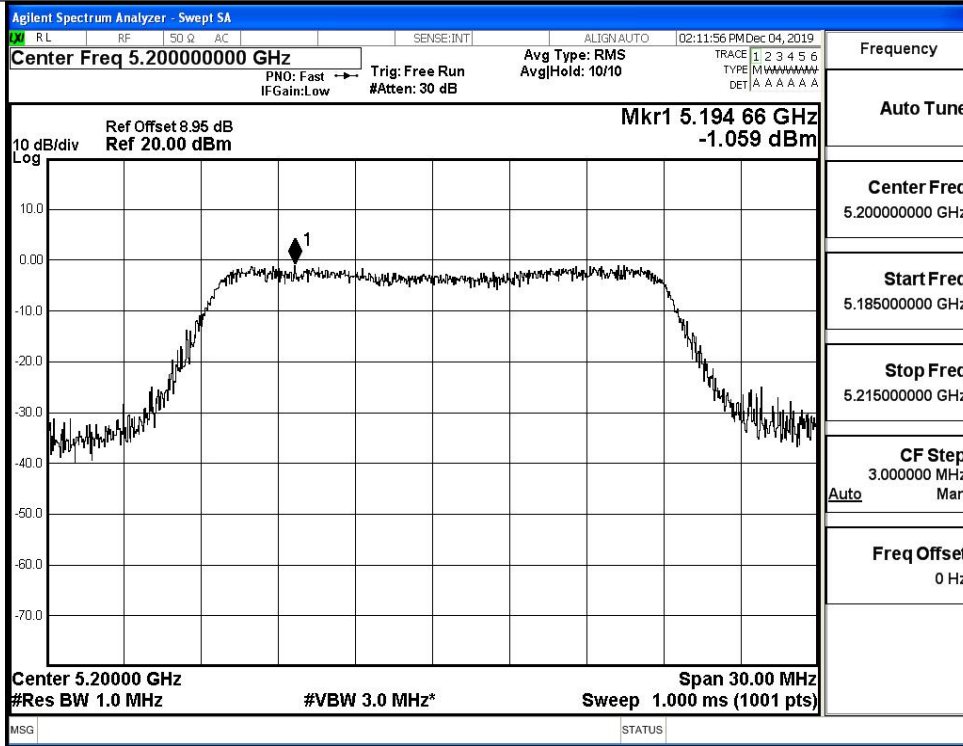


IEEE 802.11a / Channel 48 / 5240MHz

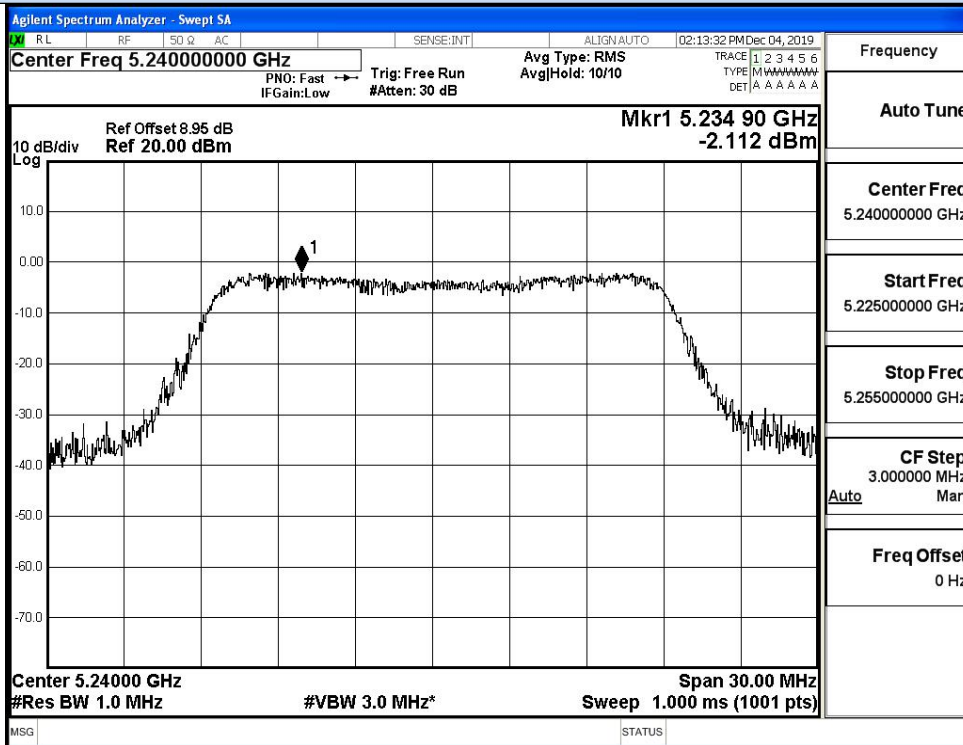
Power Spectral Density(Antenna 0)



IEEE 802.11n20 / Channel 36 / 5180MHz



IEEE 802.11n20 / Channel 40 / 5200MHz



IEEE 802.11n20 / Channel 48 / 5240MHz