

Appendix C
RF Test Data for 5.2G WLAN (Conducted Measurement)
Product Name: X96Mate
Trade Mark: N/A
Test Model: X96Mate

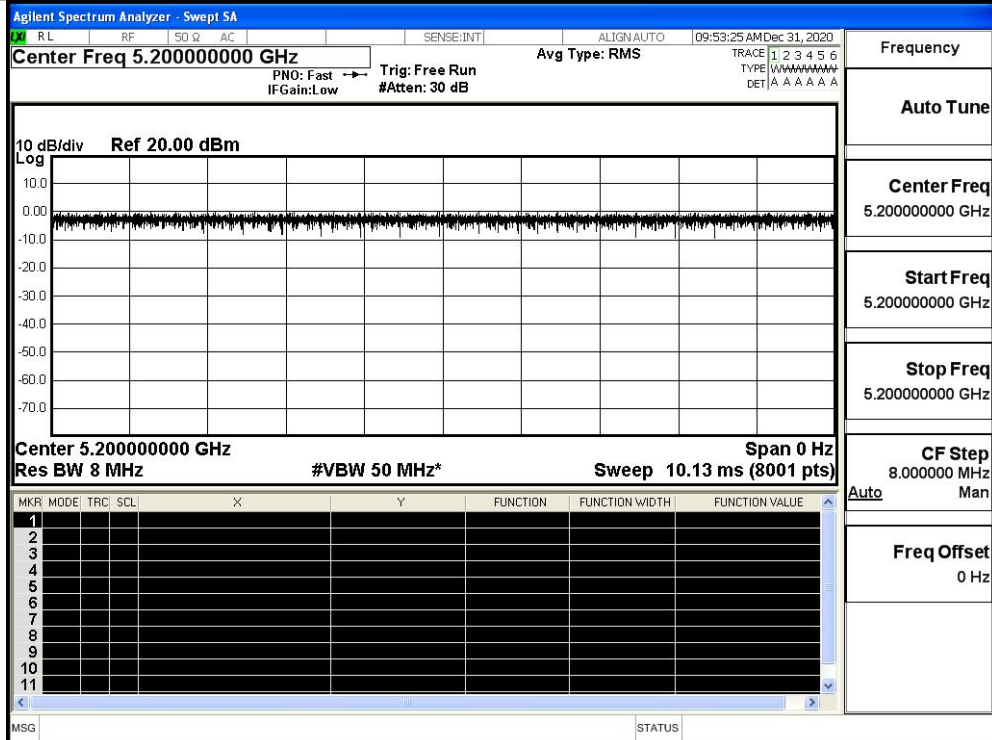
Environmental Conditions

Temperature:	23.4 ° C
Relative Humidity:	54.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Ken He
Supervised by:	Li Huan

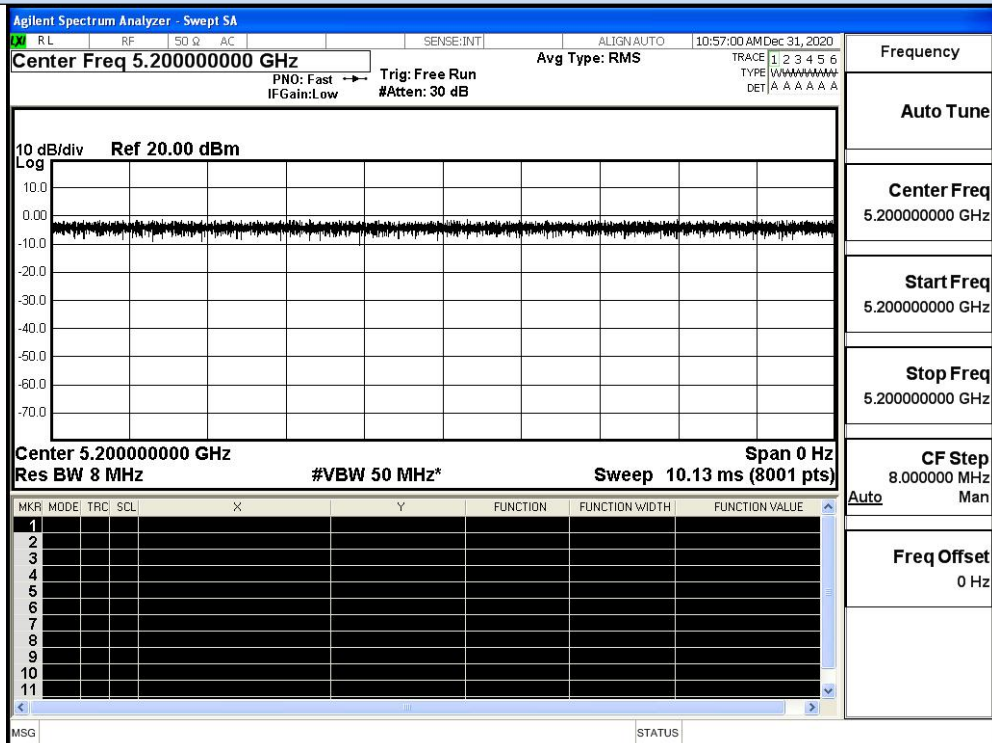
C.1 Duty Cycle

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



IEEE 802.11a



IEEE 802.11n HT20

[illegible]

Agilent Spectrum Analyzer - Swept SA

RL RF SQ ID AC SENSE:INT ALIGN AUTO 12:03:36 PM Dec 31, 2020
Center Freq 5.210000000 GHz Avg Type: RMS TRACE [1 2 3 4 5 6] PNO: Fast Trg: Free Run TYPE WWWWAAAA DET AAAAAA IF Gain: Low #Atten: 30 dB

10 dB/div Ref 20.00 dBm Log

The main plot area shows a spectrum analysis with a vertical axis from -70.0 to 10.0 dBm and a horizontal grid representing frequency. The signal consists of a dense band of noise centered around -15 dBm.

Center 5.210000000 GHz Span 0 Hz Res BW 8 MHz #VBW 50 MHz* Sweep 10.13 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
5.210000000 GHz

Start Freq
5.210000000 GHz

Stop Freq
5.210000000 GHz

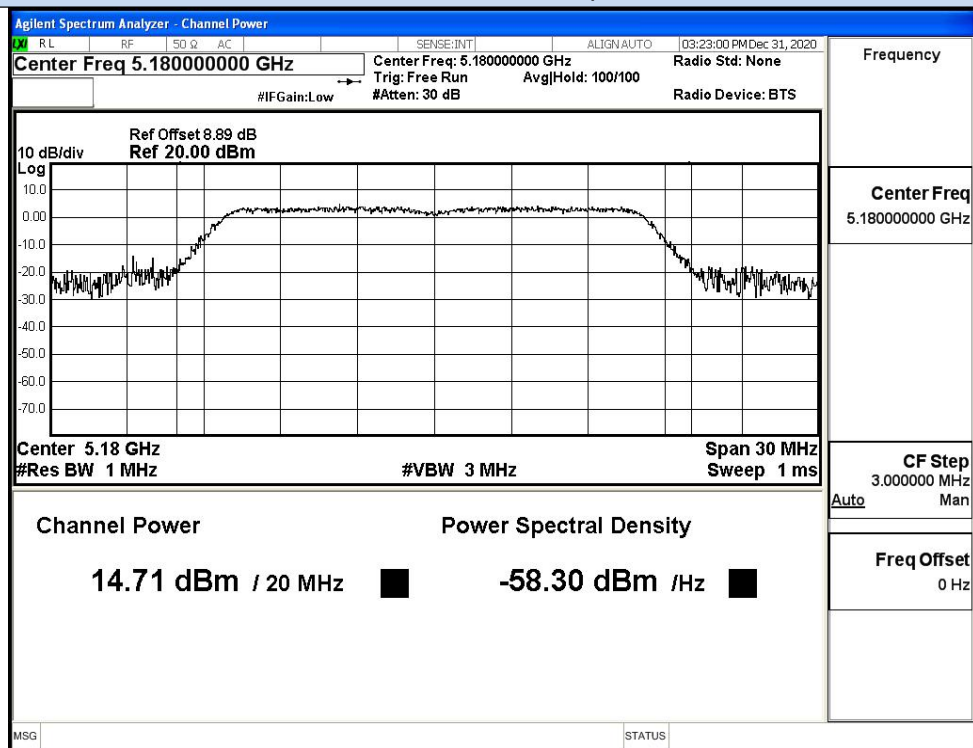
CF Step
8.000000 MHz Man

Freq Offset
0 Hz

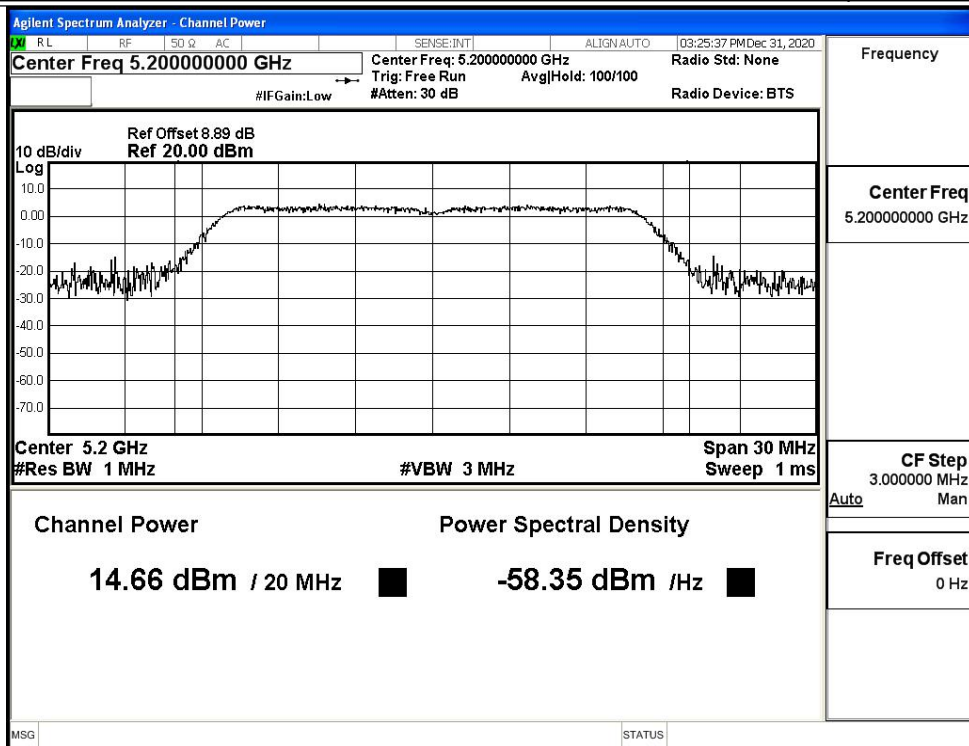
C.2 Maximum Conduct Output Power

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor(dB)	Report Conducted Power(dBm)	Limit (dBm)	Verdict
11A	36	5180	14.71	0	14.71	24	Pass
	40	5200	14.66	0	14.66		Pass
	48	5240	14.71	0	14.71		Pass
11N20 SISO	36	5180	12.9	0	12.9	24	Pass
	40	5200	13	0	13		Pass
	48	5240	13.04	0	13.04		Pass
11N40 SISO	38	5190	12.78	0	12.78	24	Pass
	46	5230	12.83	0	12.83		Pass
11AC20 SISO	36	5180	12.89	0	12.89	24	Pass
	40	5200	12.81	0	12.81		Pass
	48	5240	13.08	0	13.08		Pass
11AC40 SISO	38	5190	12.72	0	12.72	24	Pass
	46	5230	12.7	0	12.7		Pass
11AC80 SISO	42	5210	12.63	0	12.63	24	Pass

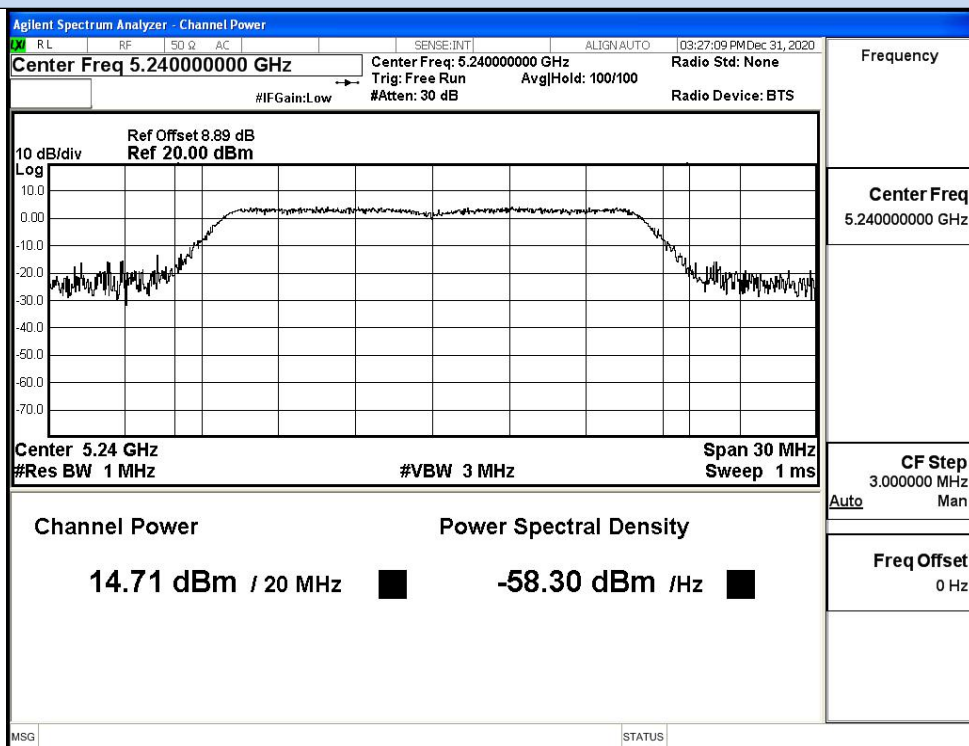
Maximum Conducted Output Power



IEEE 802.11a / Channel 36 / 5180MHz

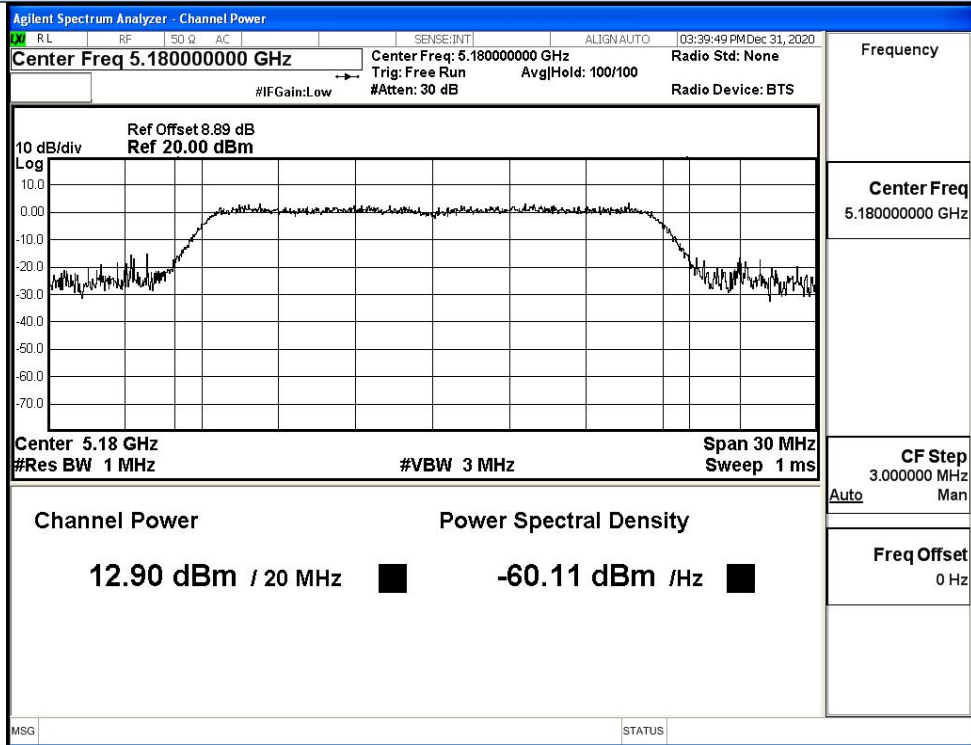


IEEE 802.11a / Channel 40 / 5200MHz

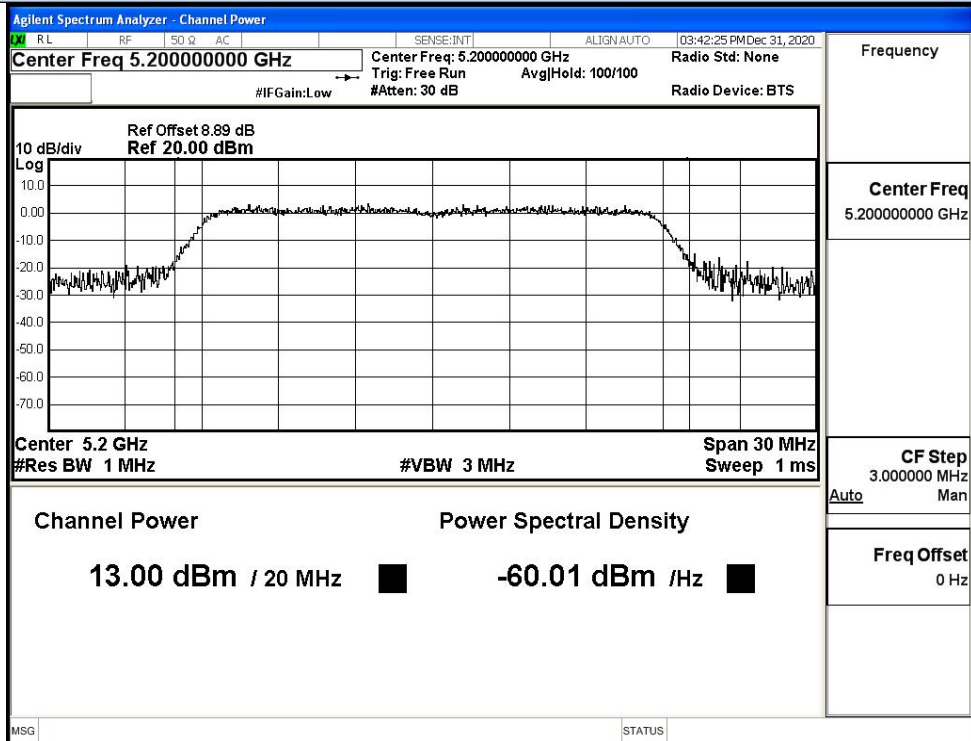


IEEE 802.11a / Channel 48 / 5240MHz

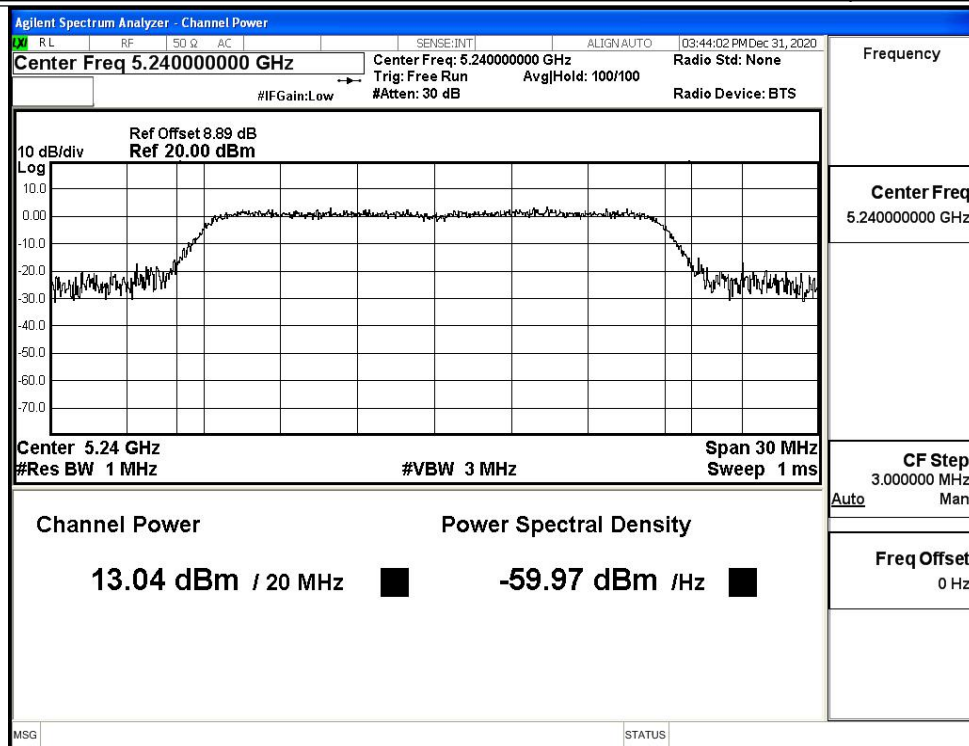
Maximum Conducted Output Power



IEEE 802.11n20 / Channel 36 / 5180MHz

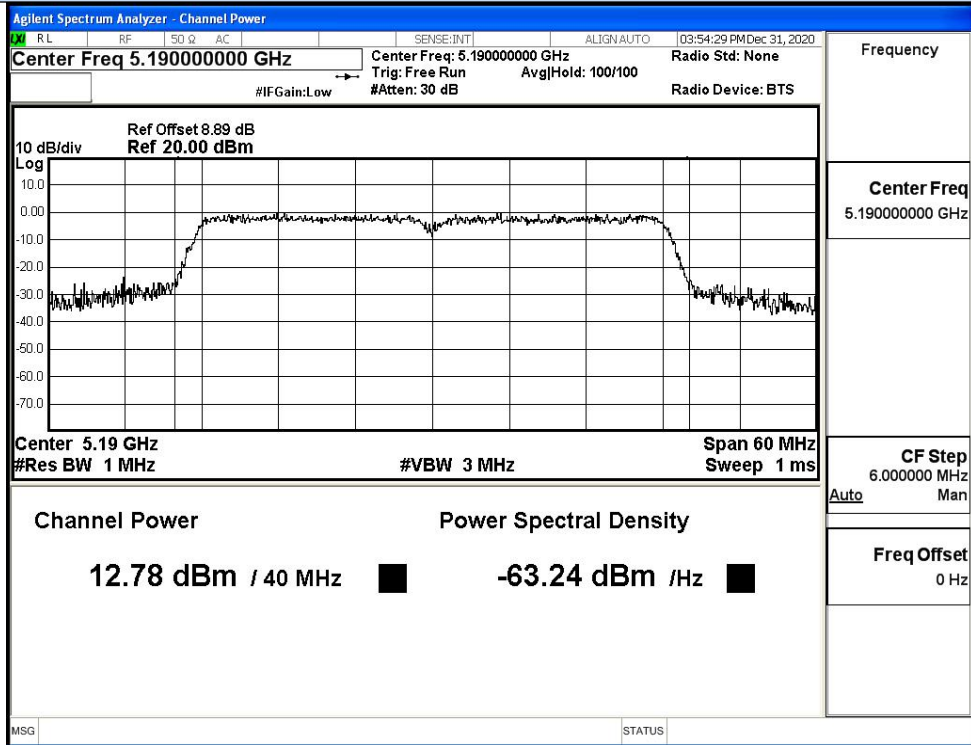


IEEE 802.11n20 / Channel 40 / 5200MHz

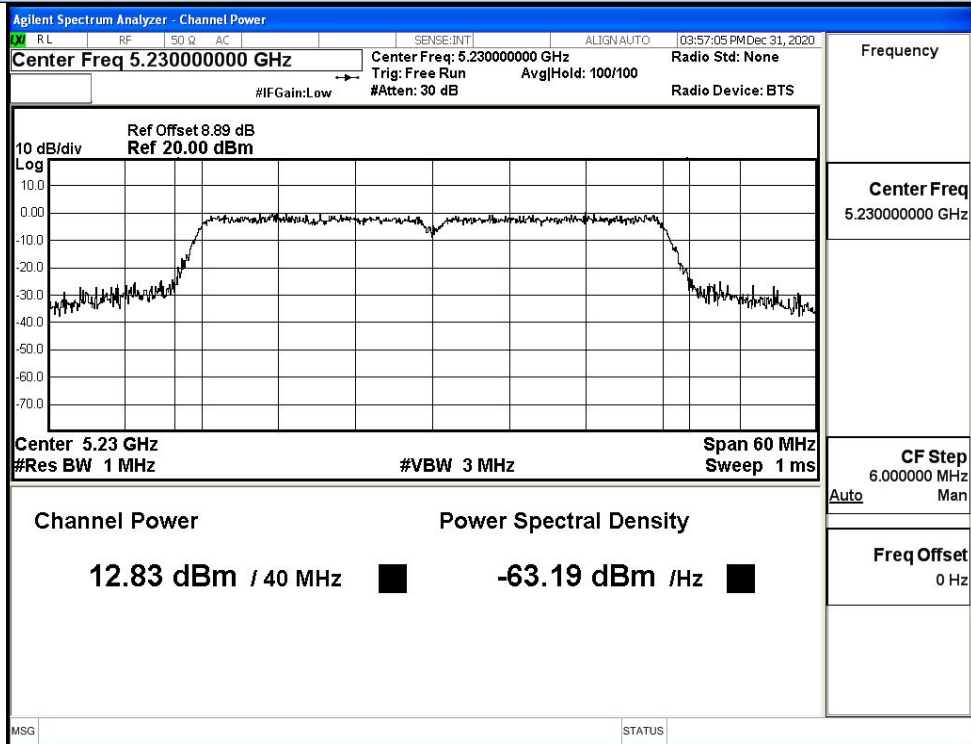


IEEE 802.11n20 / Channel 48 / 5240MHz

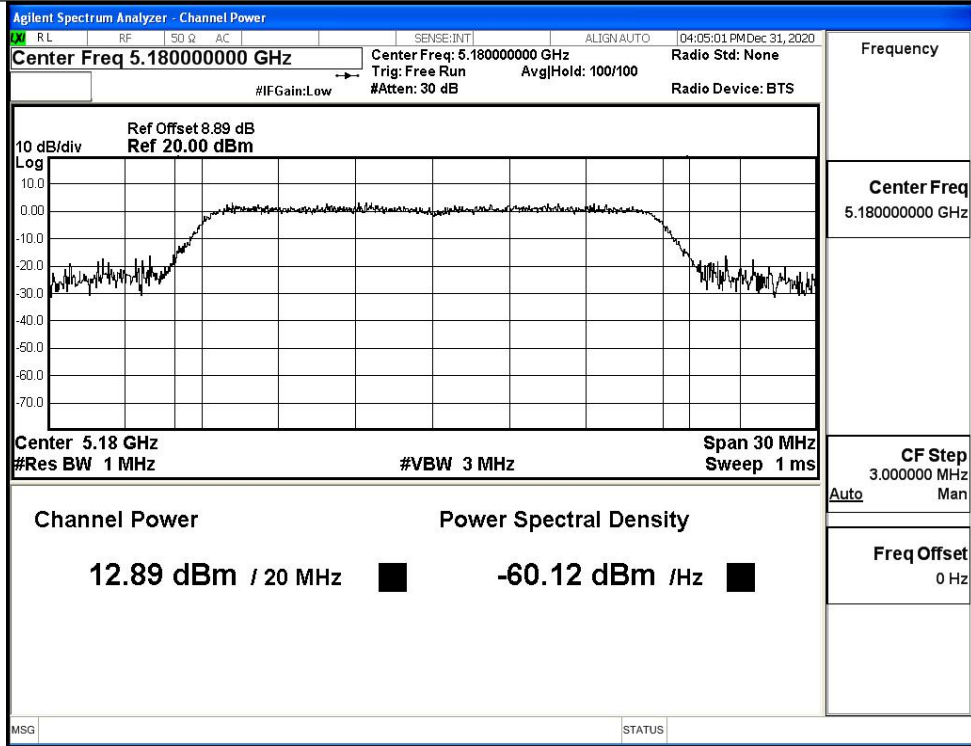
Maximum Conducted Output Power



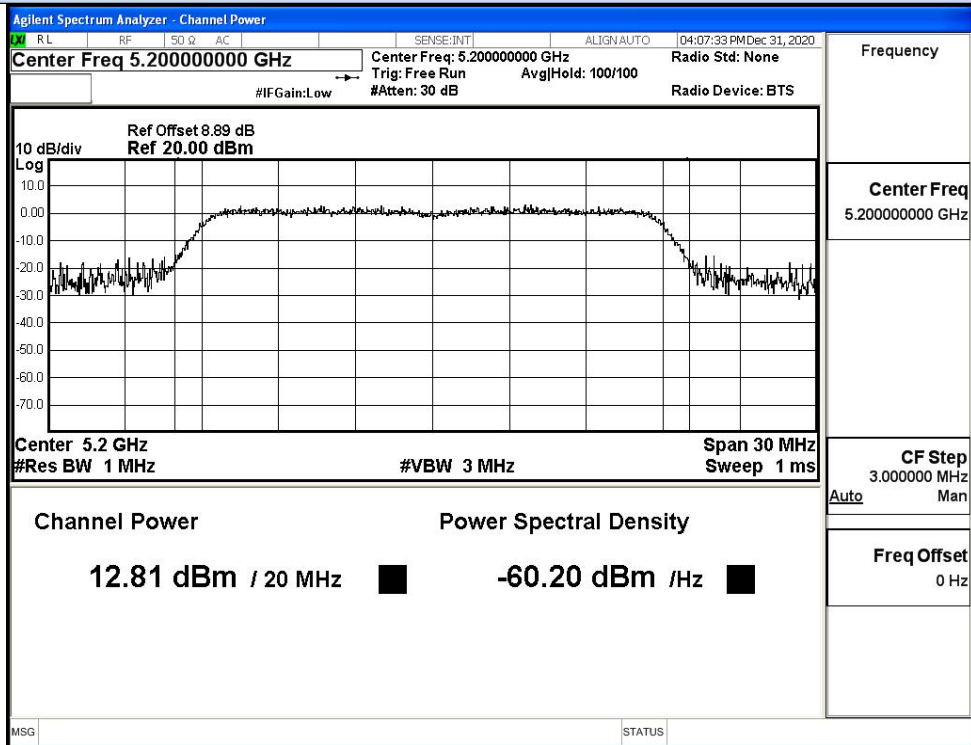
IEEE 802.11n40 / Channel 38 / 5190MHz



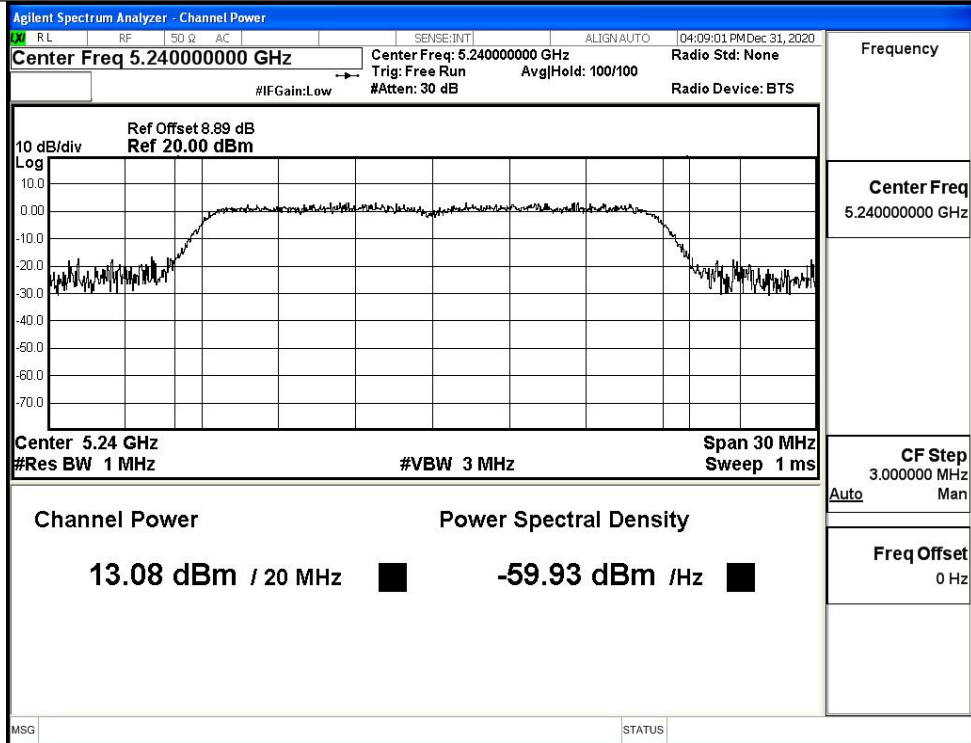
IEEE 802.11n40 / Channel 46 / 5230MHz



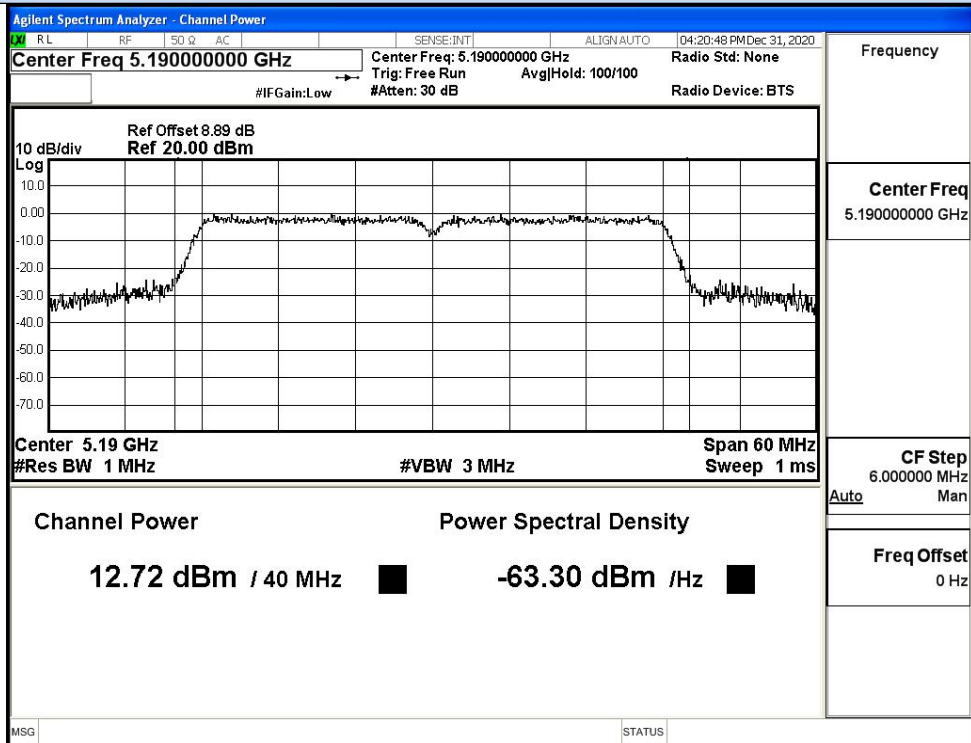
IEEE 802.11ac20 / Channel 36 / 5180MHz



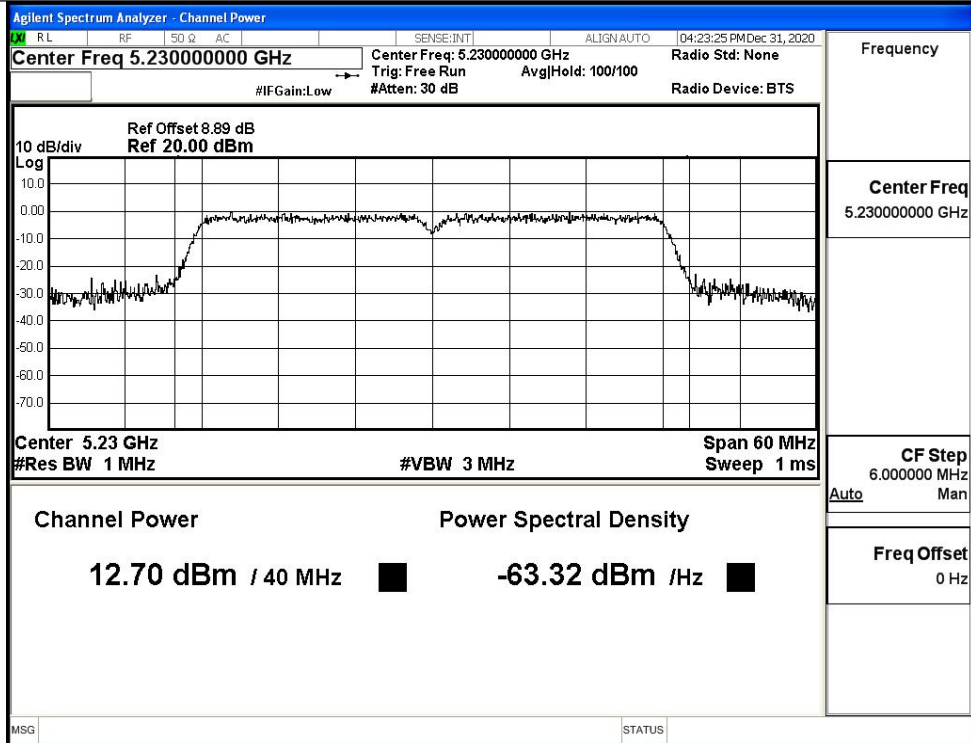
IEEE 802.11ac20 / Channel 40 / 5200MHz



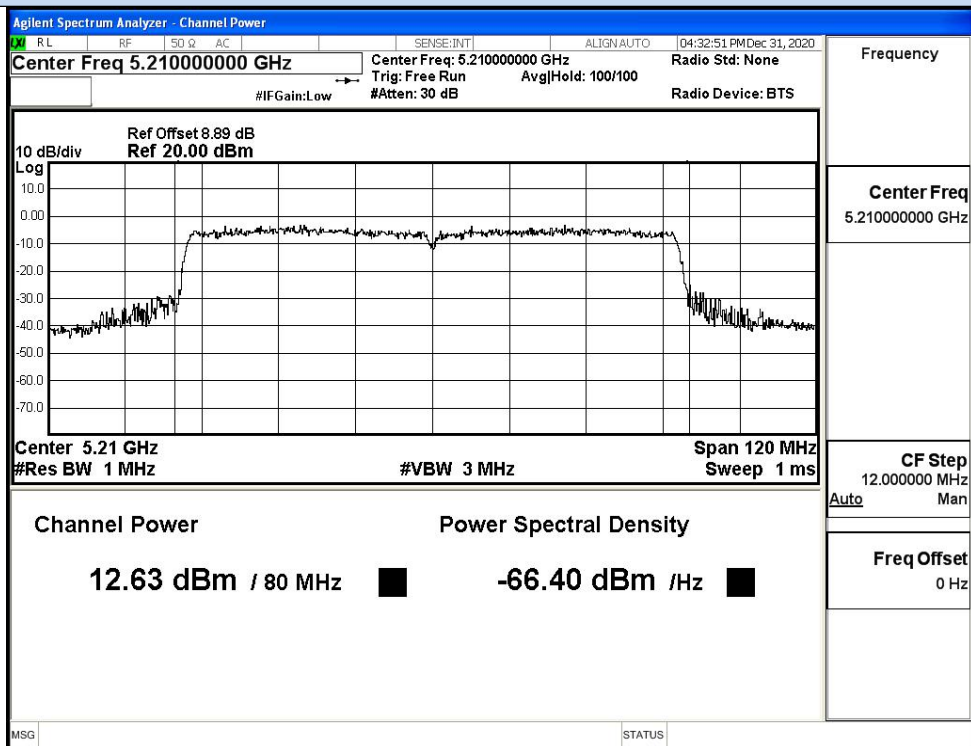
IEEE 802.11ac20 / Channel 48 / 5240MHz



IEEE 802.11ac40 / Channel 38 / 5190MHz



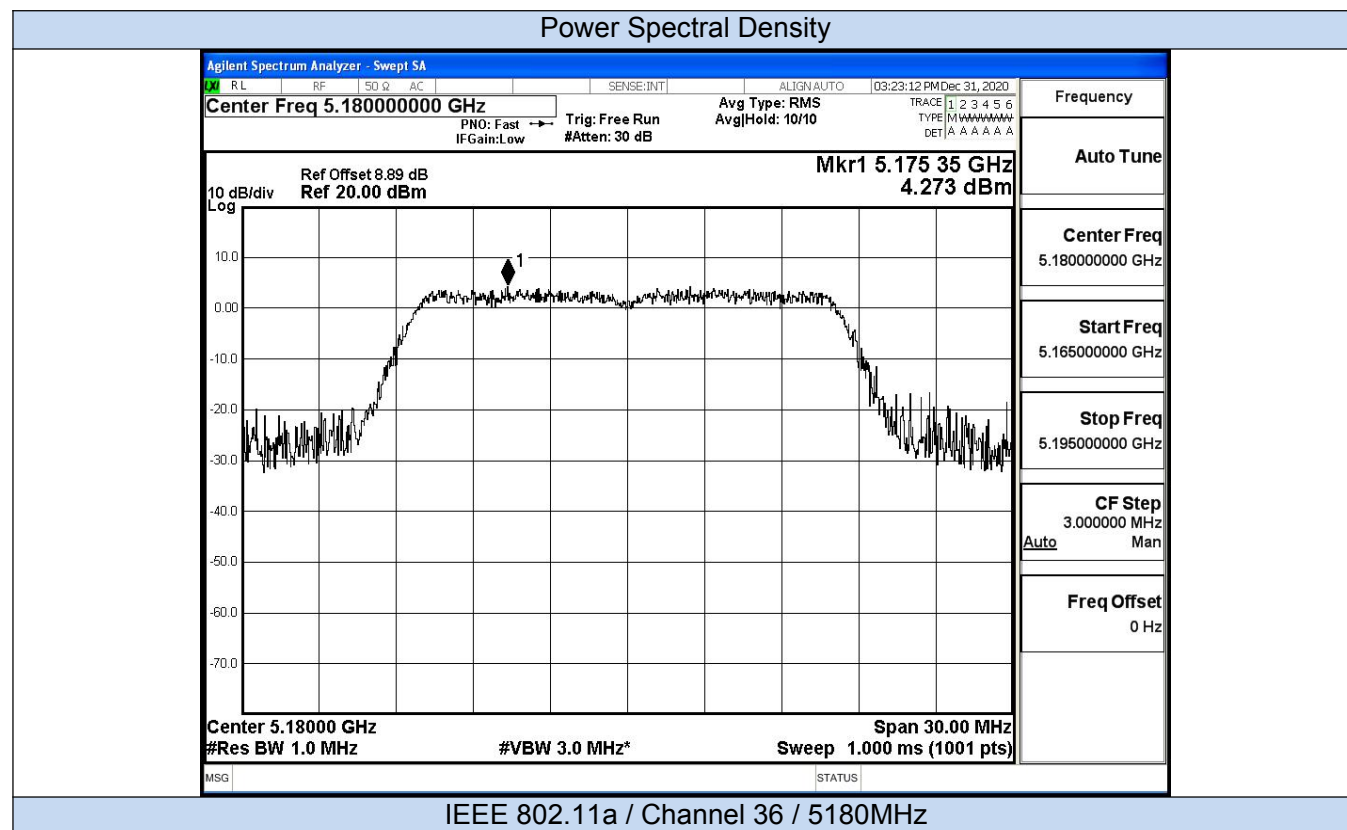
IEEE 802.11ac40 / Channel 46 / 5230MHz

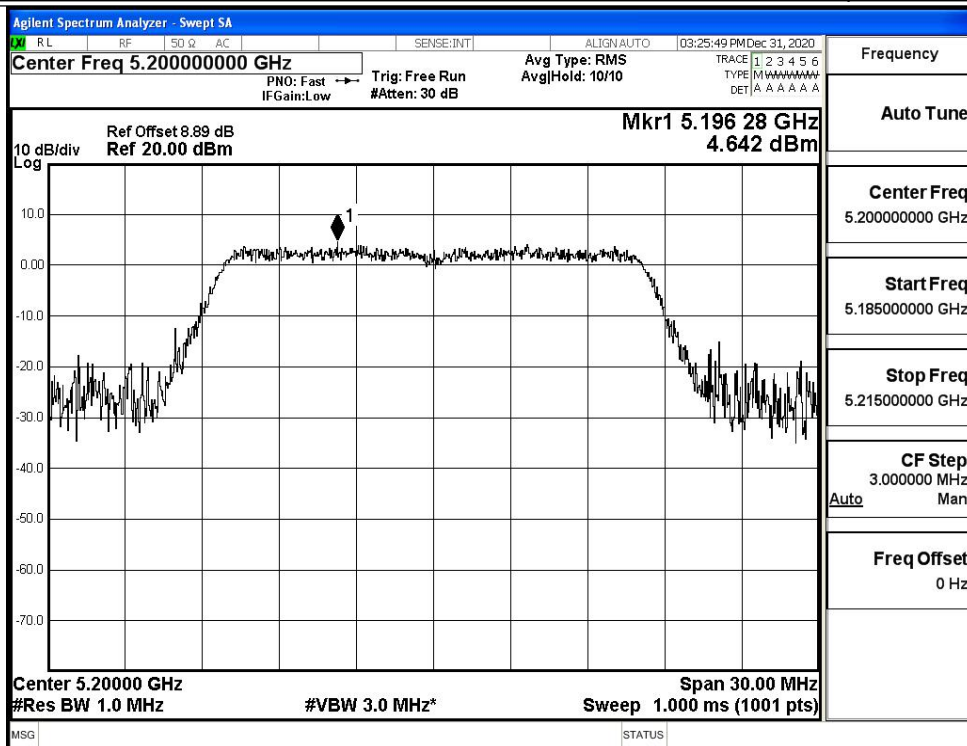


IEEE 802.11ac80 / Channel 42 / 5210MHz

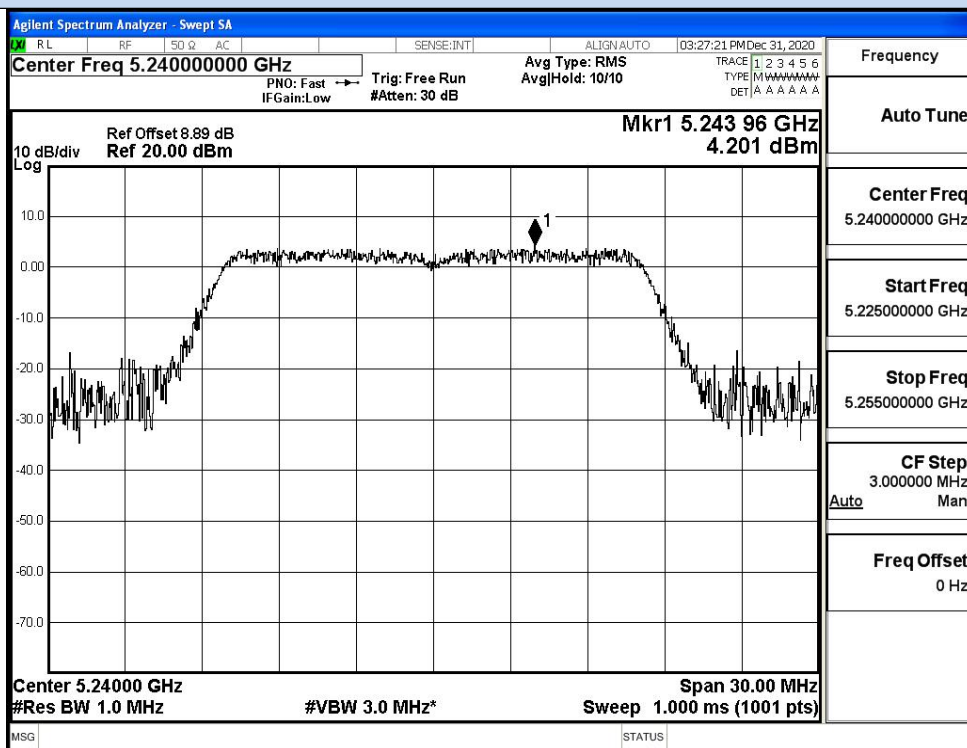
C.3 Power Spectral Density

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	4.27	0	4.27	11	Pass
	40	5200	4.64	0	4.64		Pass
	48	5240	4.20	0	4.20		Pass
11N20 SISO	36	5180	2.98	0	2.98	11	Pass
	40	5200	2.59	0	2.59		Pass
	48	5240	3.74	0	3.74		Pass
11N40 SISO	38	5190	-0.60	0	-0.60	11	Pass
	46	5230	1.00	0	1.00		Pass
11AC20 SISO	36	5180	2.54	0	2.54	11	Pass
	40	5200	2.33	0	2.33		Pass
	48	5240	3.26	0	3.26		Pass
11AC40 SISO	38	5190	-0.65	0	-0.65	11	Pass
	46	5230	-0.38	0	-0.38		Pass
11AC80 SISO	42	5210	-3.77	0	-3.77	11	Pass



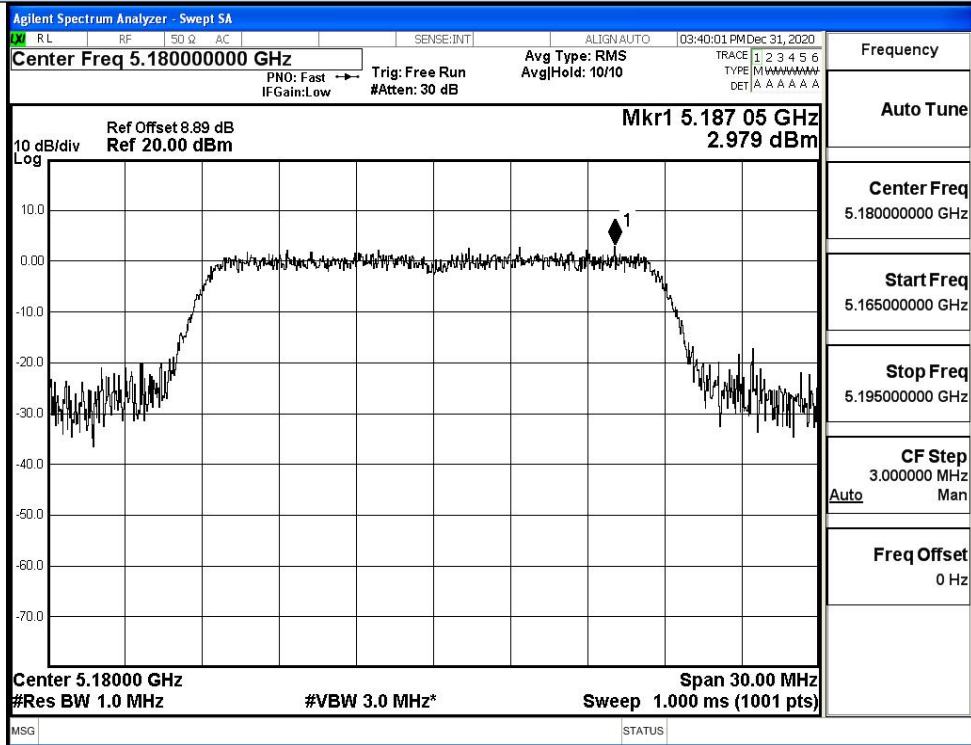


IEEE 802.11na / Channel 40 / 5200MHz

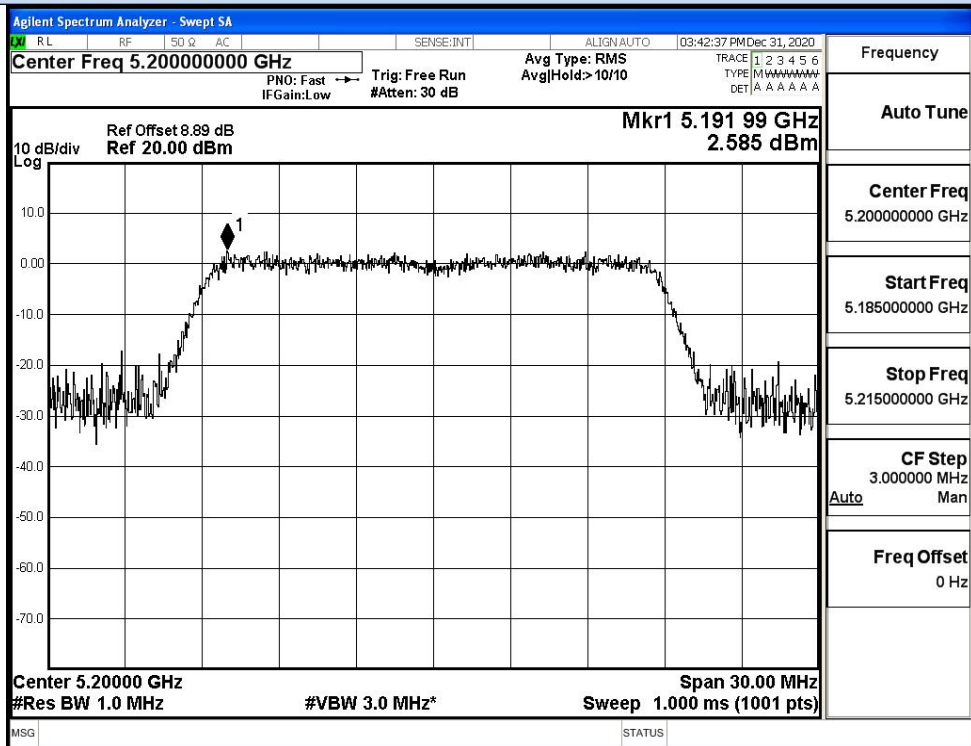


IEEE 802.11na / Channel 48 / 5240MHz

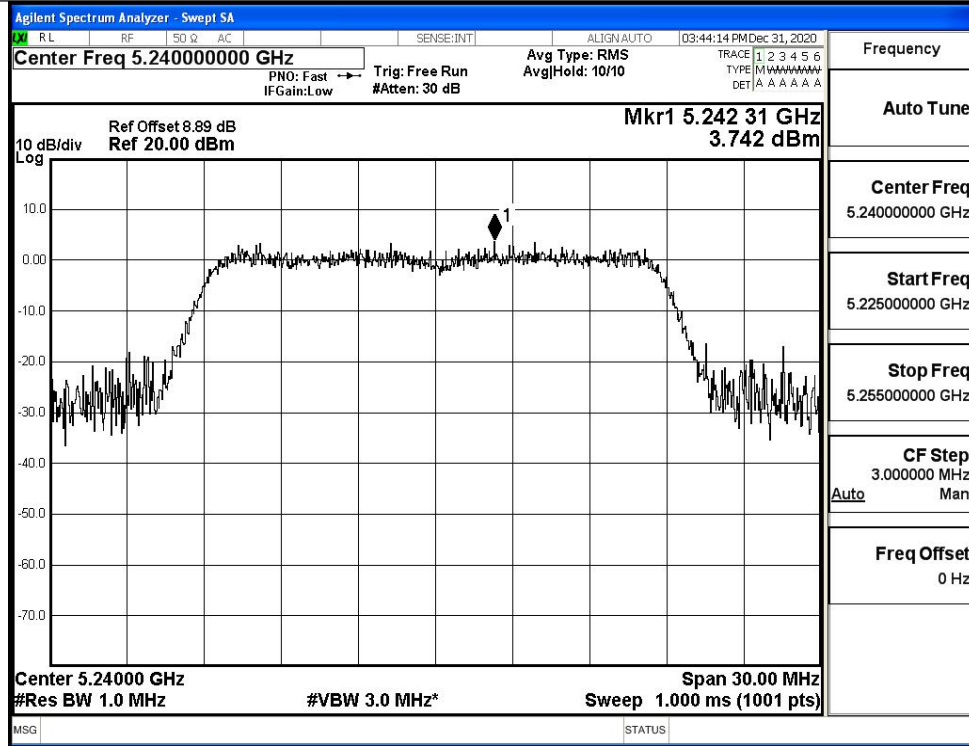
Power Spectral Density



IEEE 802.11n20 / Channel 36 / 5180MHz

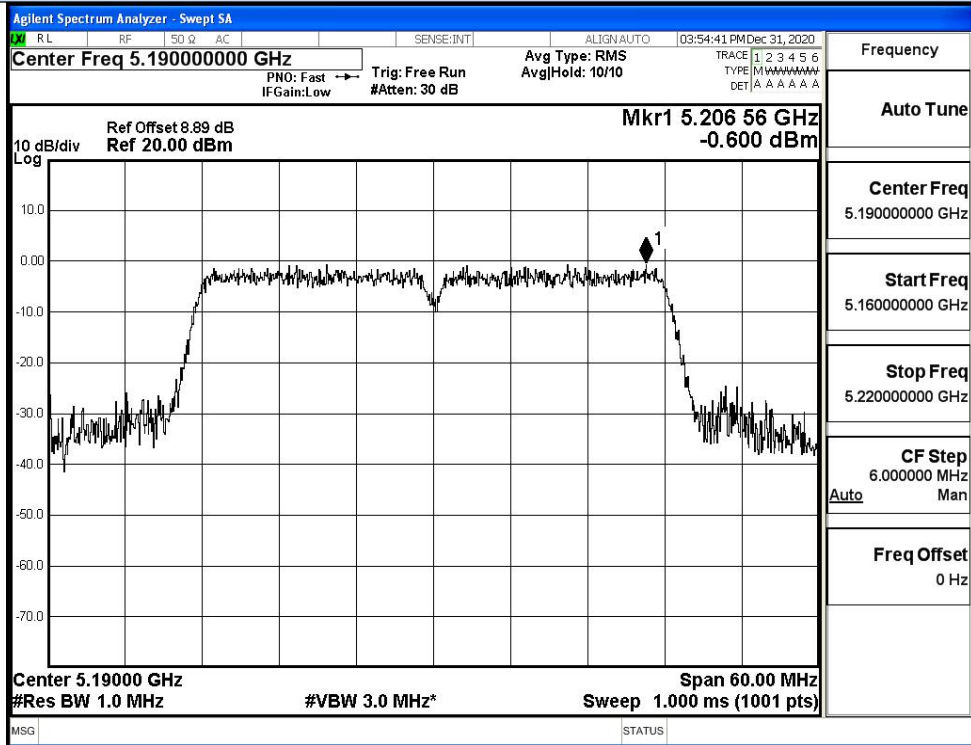


IEEE 802.11n20 / Channel 40 / 5200MHz

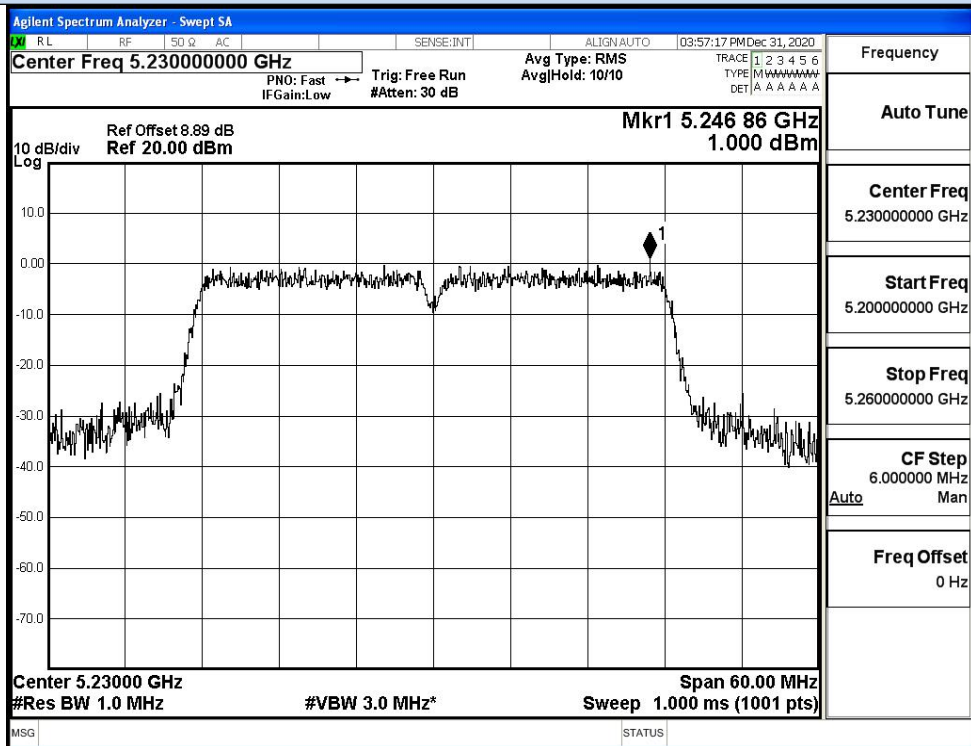


IEEE 802.11n20 / Channel 48 / 5240MHz

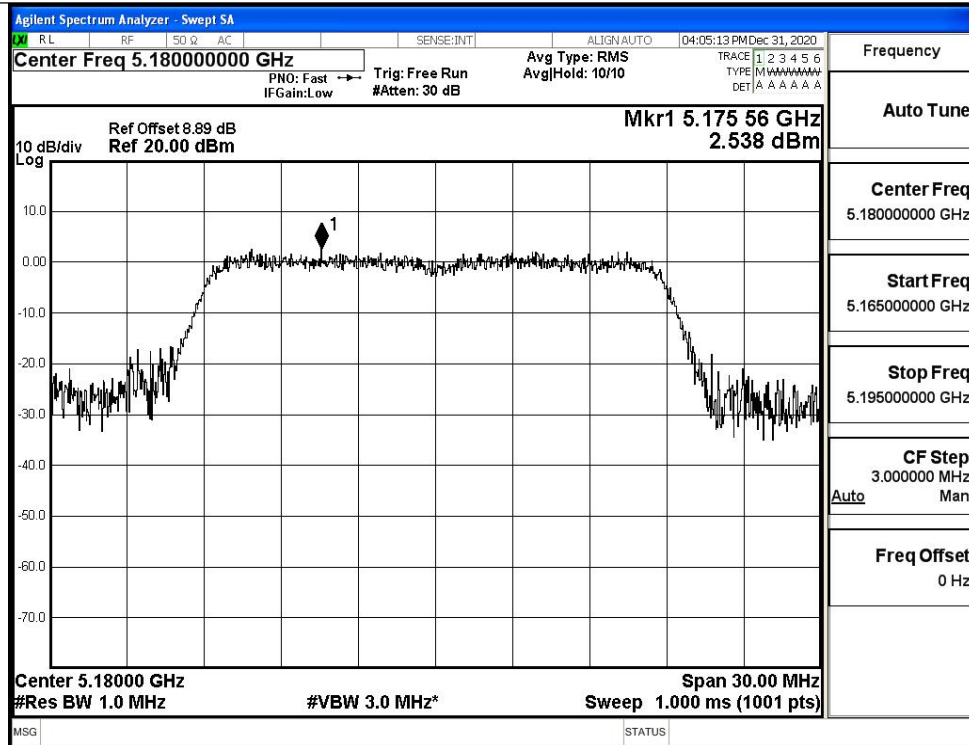
Power Spectral Density



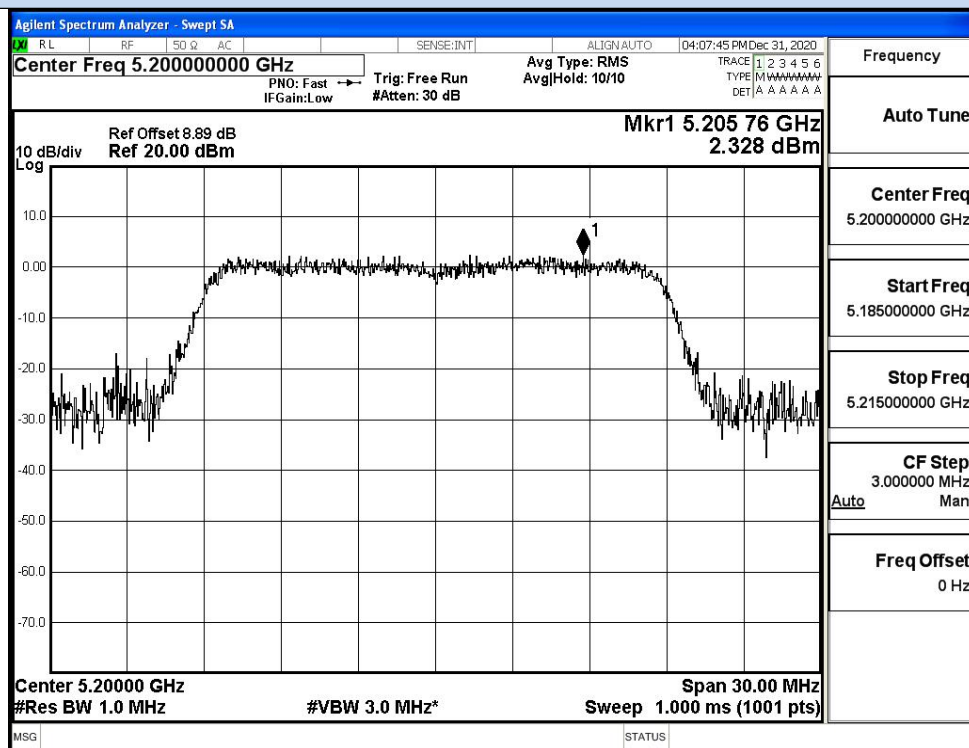
IEEE 802.11n40 / Channel 38 / 5190MHz



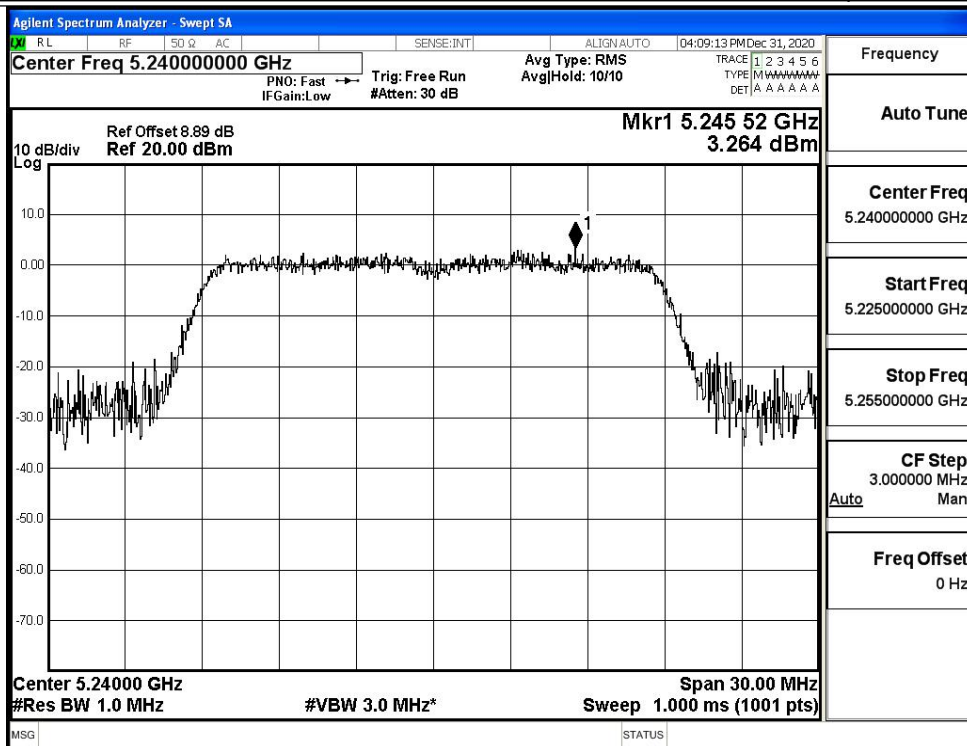
IEEE 802.11n40 / Channel 46 / 5230MHz



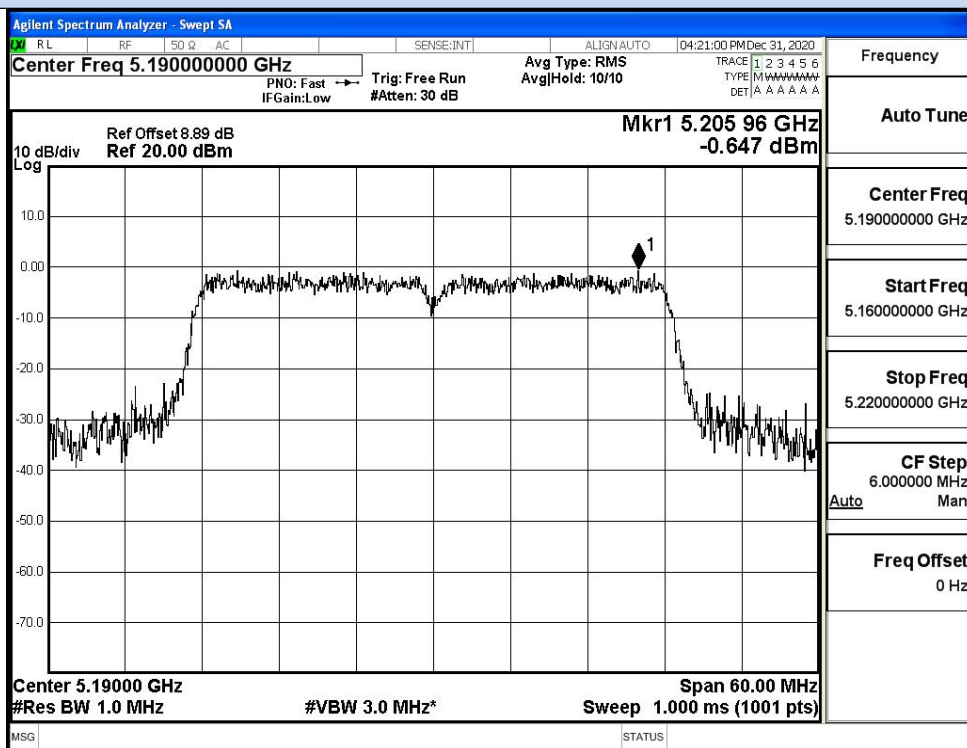
IEEE 802.11ac20 / Channel 36 / 5180MHz



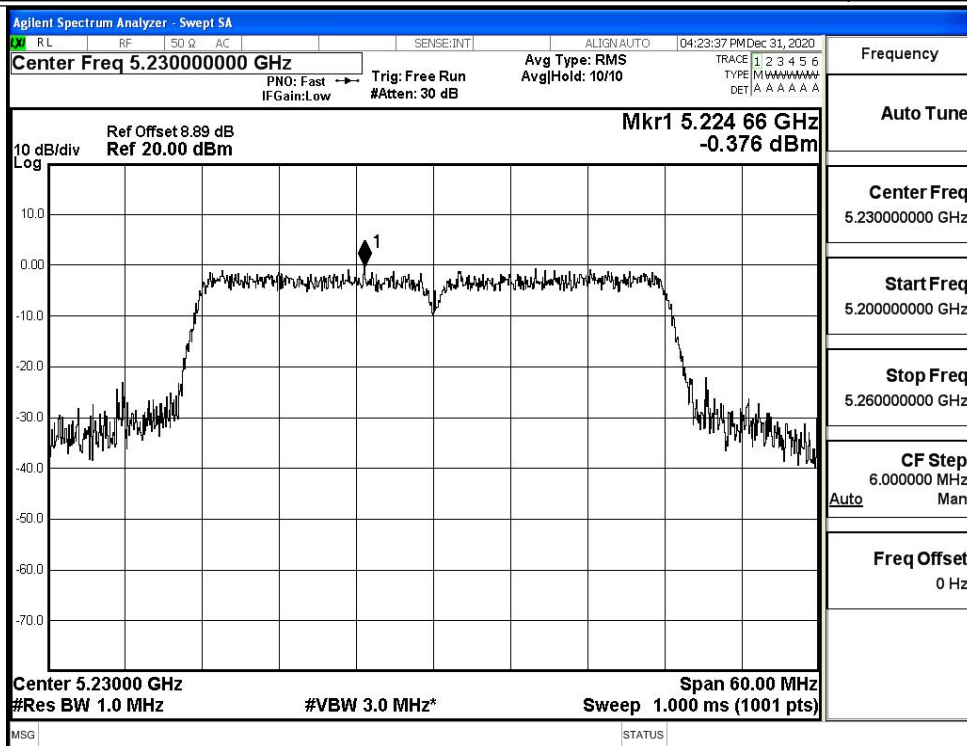
IEEE 802.11ac20 / Channel 40 / 5200MHz



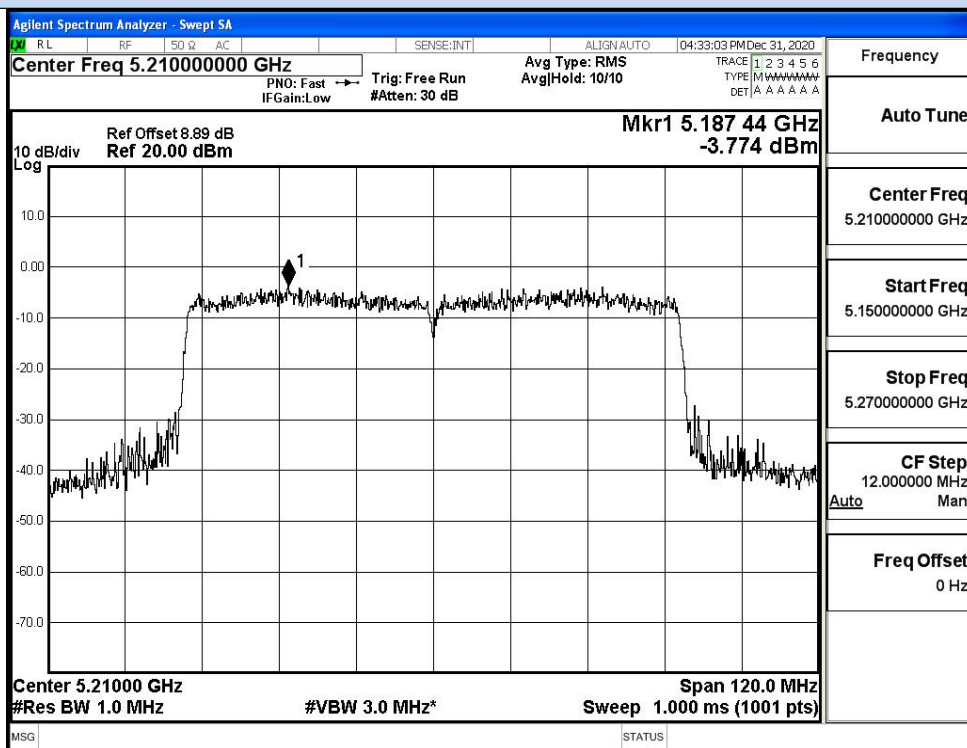
IEEE 802.11ac20 / Channel 48 / 5240MHz



IEEE 802.11ac40 / Channel 38 / 5190MHz



IEEE 802.11ac40 / Channel 46 / 5230MHz



IEEE 802.11ac80 / Channel 42 / 5210MHz