

Appendix E

RF Test Data for 5.3G WLAN (Conducted Measurement)

Product Name: RK3399 R Player

Trade Mark: STRATATACHE/SCALA

Test Model: SMPR

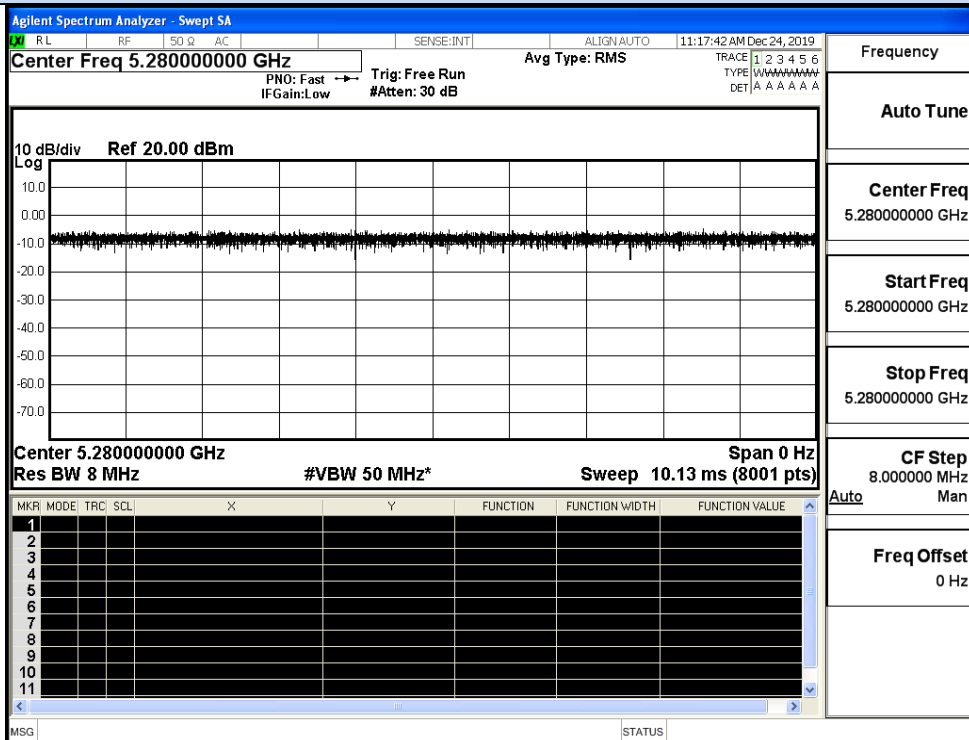
Environmental Conditions

Temperature:	25.1 °C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Scout Wu
Supervised by:	Tom.Liu

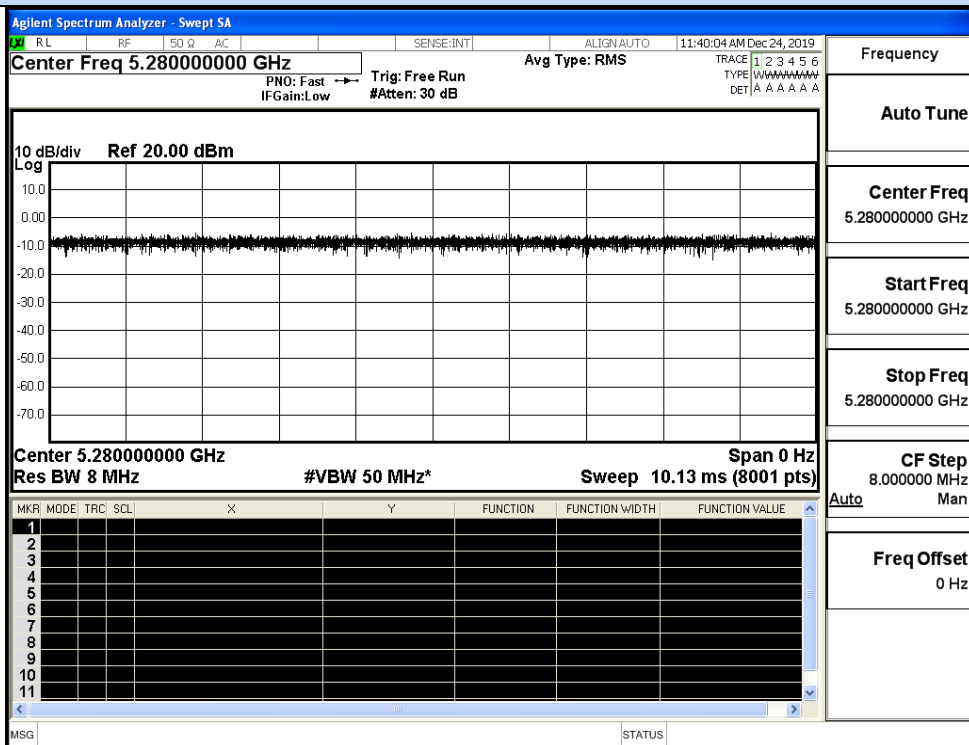
D.1 Duty Cycle

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11A	5280	100	0.00	0.01
11N20 SISO	5280	100	0.00	0.01
11N40 SISO	5270	100	0.00	0.01
11AC20 SISO	5280	100	0.00	0.01
11AC40 SISO	5270	100	0.00	0.01
11AC80 SISO	5290	100	0.00	0.01

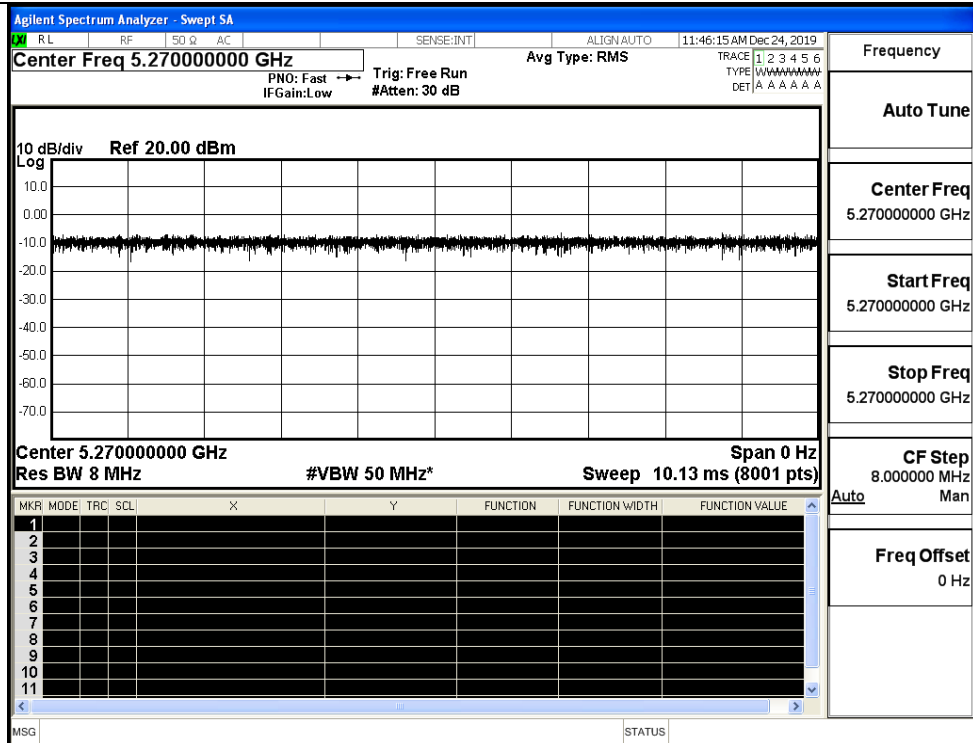
On Time and Duty Cycle



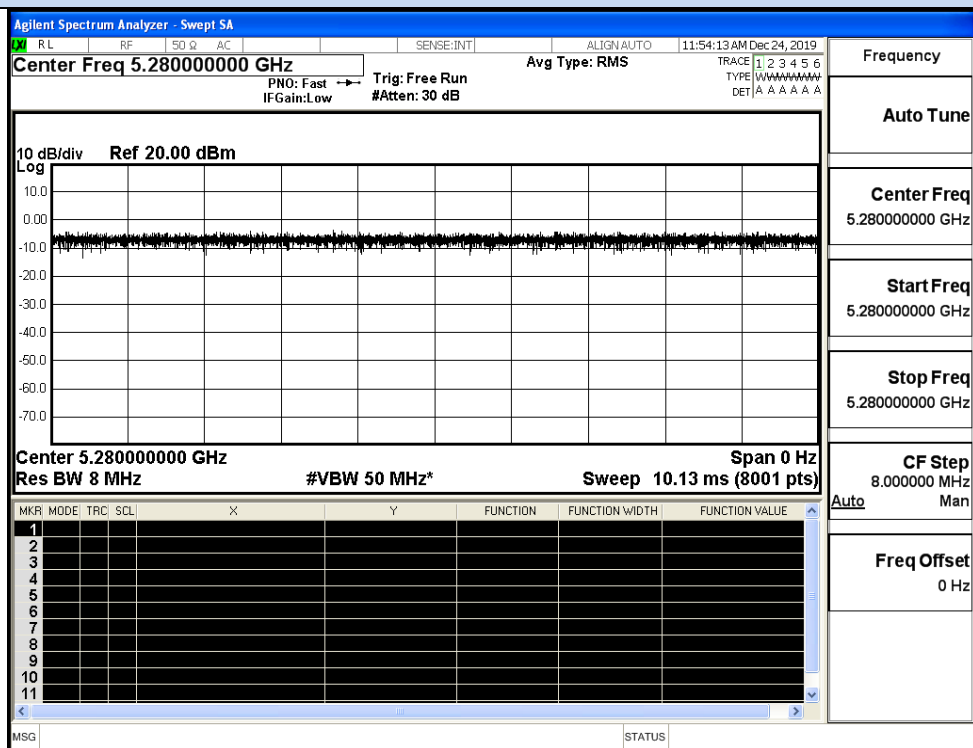
IEEE 802.11a



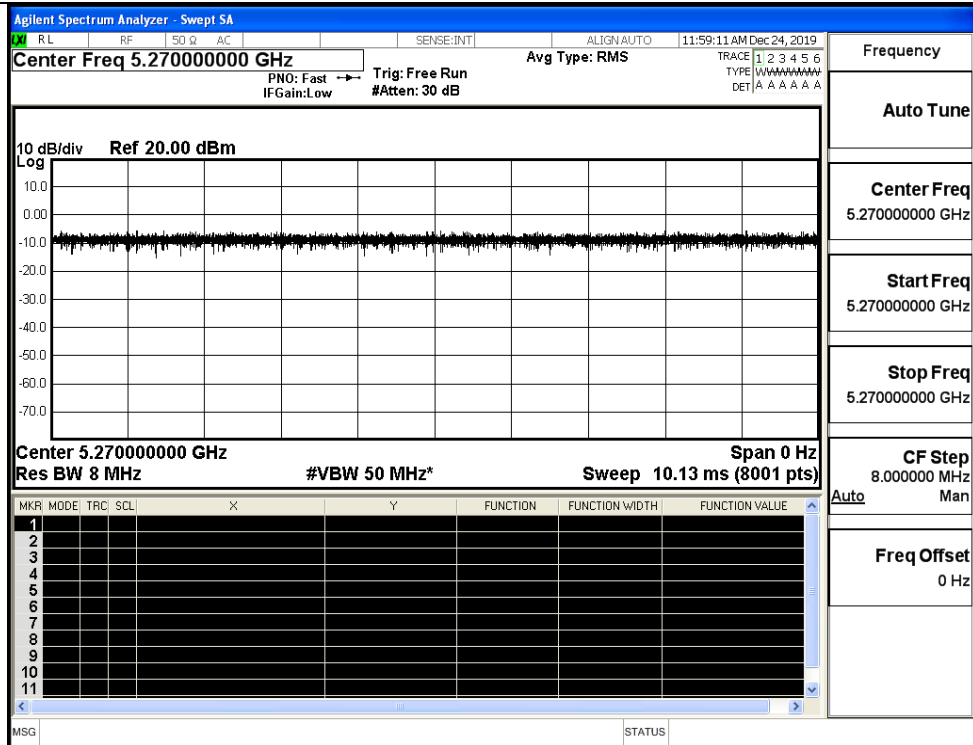
IEEE 802.11n HT20



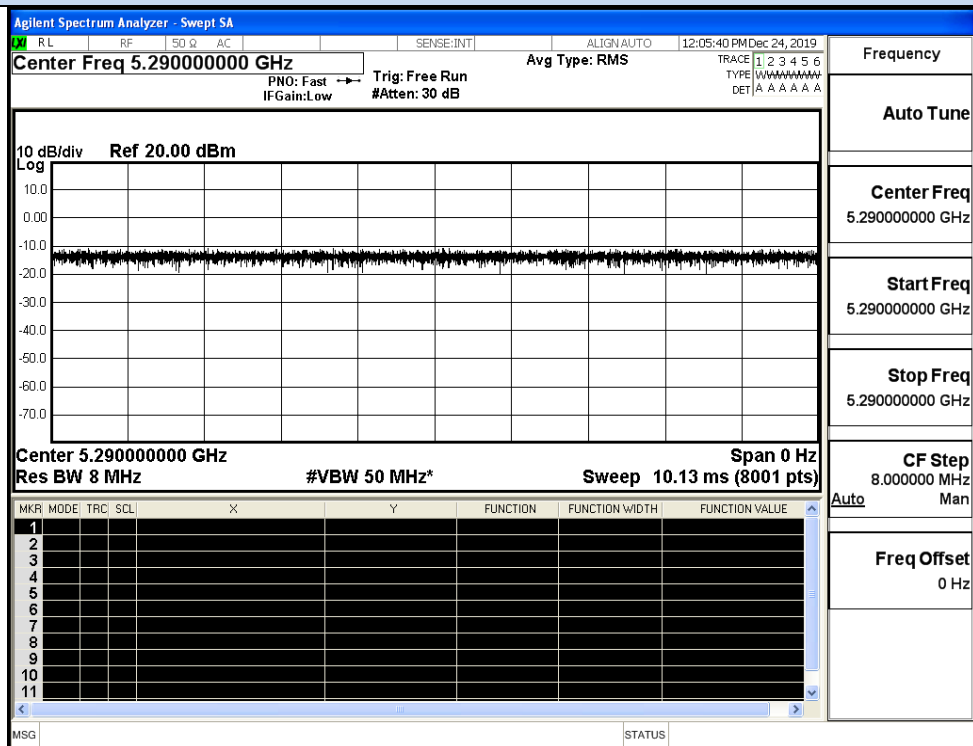
IEEE 802.11n HT40



IEEE 802.11AC20



IEEE 802.11 AC40



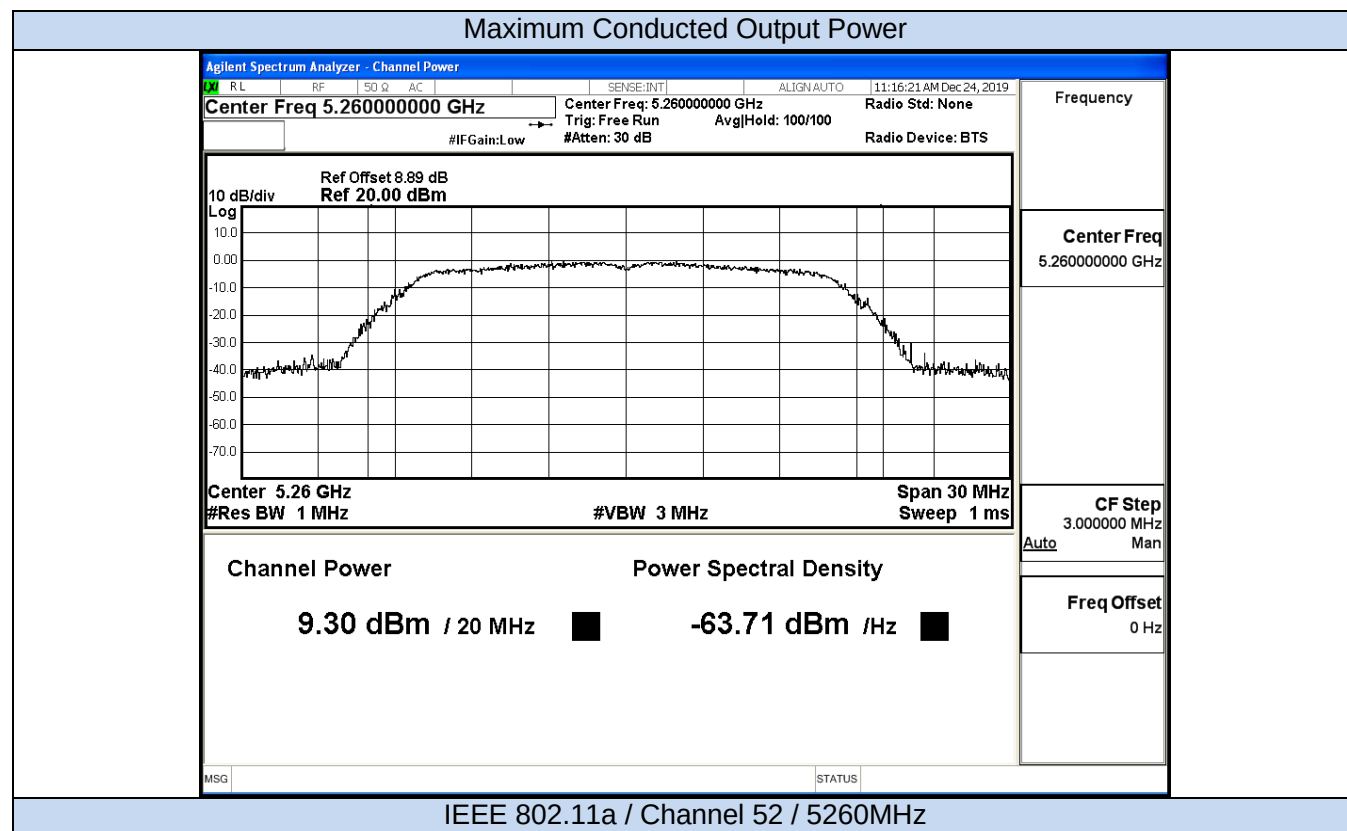
IEEE 802.11AC80

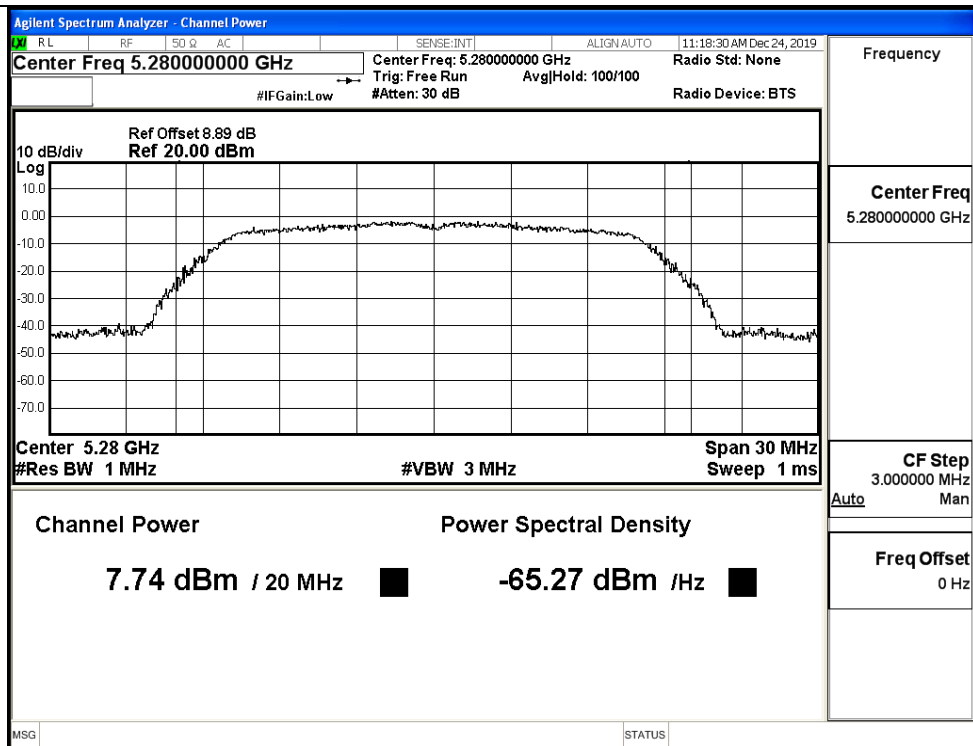
D.2 Maximum Conduct Output Power

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor(dB)	Report Conducted Power(dBm)	Limit (dBm)	Verdict
11A	52	5260	9.30	0	9.30	23.95	Pass
	56	5280	7.74	0	7.74	23.93	Pass
	64	5320	7.01	0	7.01	23.90	Pass
11N20 SISO	52	5260	9.71	0	9.71	24	Pass
	56	5280	8.13	0	8.13		Pass
	64	5320	9.21	0	9.21		Pass
11N40 SISO	54	5270	9.32	0	9.32	24	Pass
	62	5310	8.17	0	8.17		Pass
11AC20 SISO	52	5260	9.50	0	9.50	24	Pass
	56	5280	8.89	0	8.89		Pass
	64	5320	7.89	0	7.89		Pass
11AC40 SISO	54	5270	9.12	0	9.12	24	Pass
	62	5310	8.06	0	8.06		Pass
11AC80 SISO	58	5290	8.73	0	8.73	24	Pass

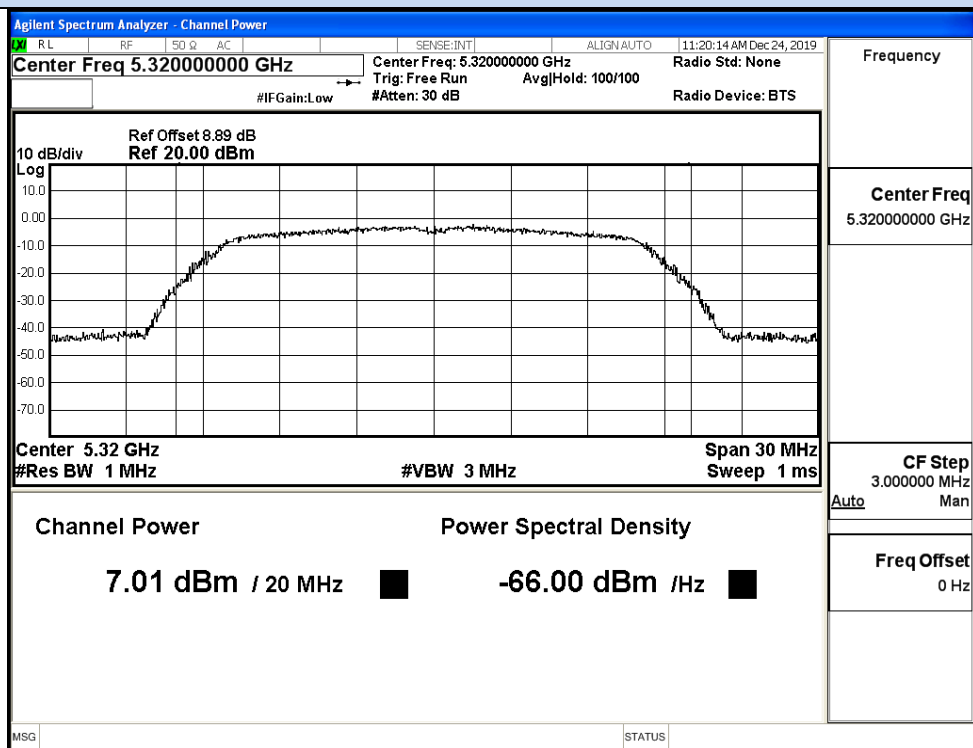
Note:

The maximum conducted output power shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.



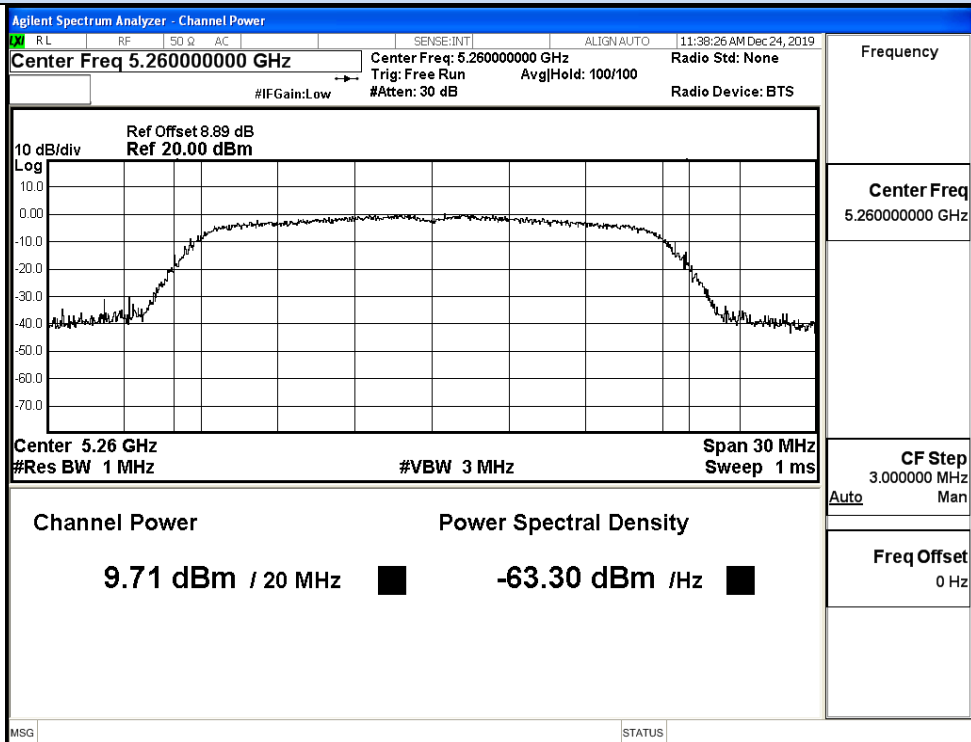


IEEE 802.11a / Channel 56 / 5280MHz

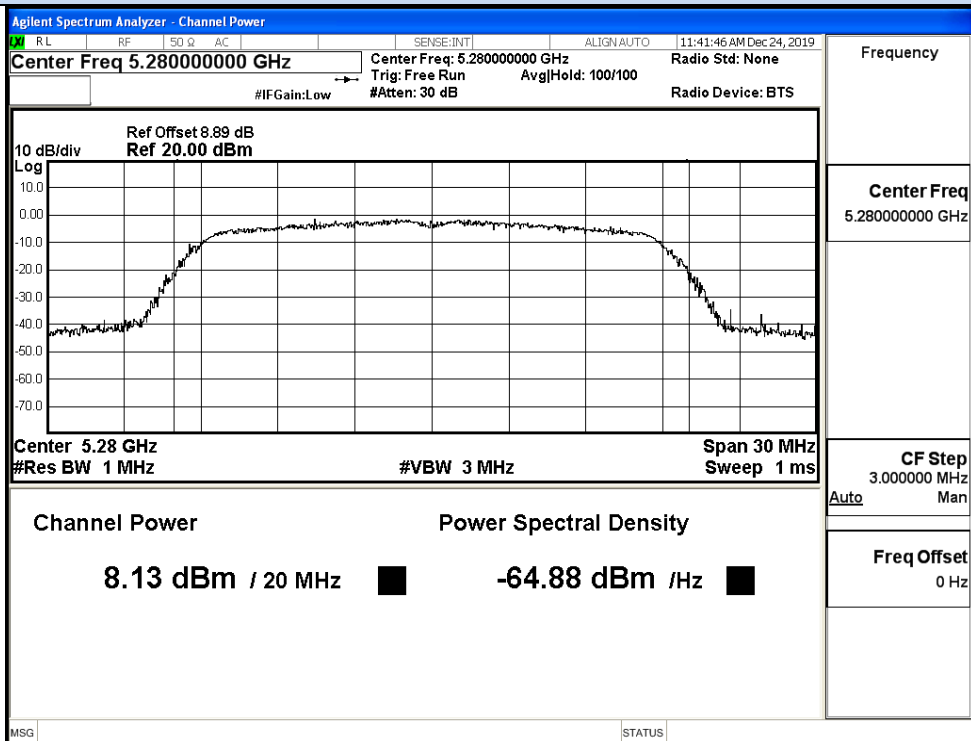


IEEE 802.11a / Channel 64 / 5320MHz

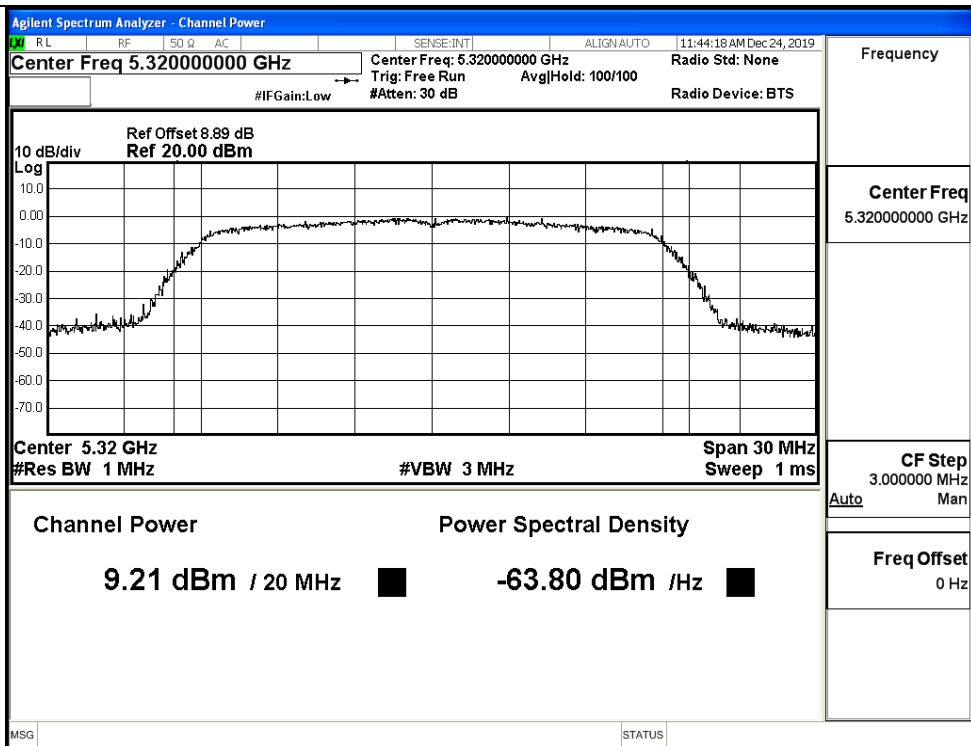
Maximum Conducted Output Power



IEEE 802.11n20 / Channel 52 / 5260MHz

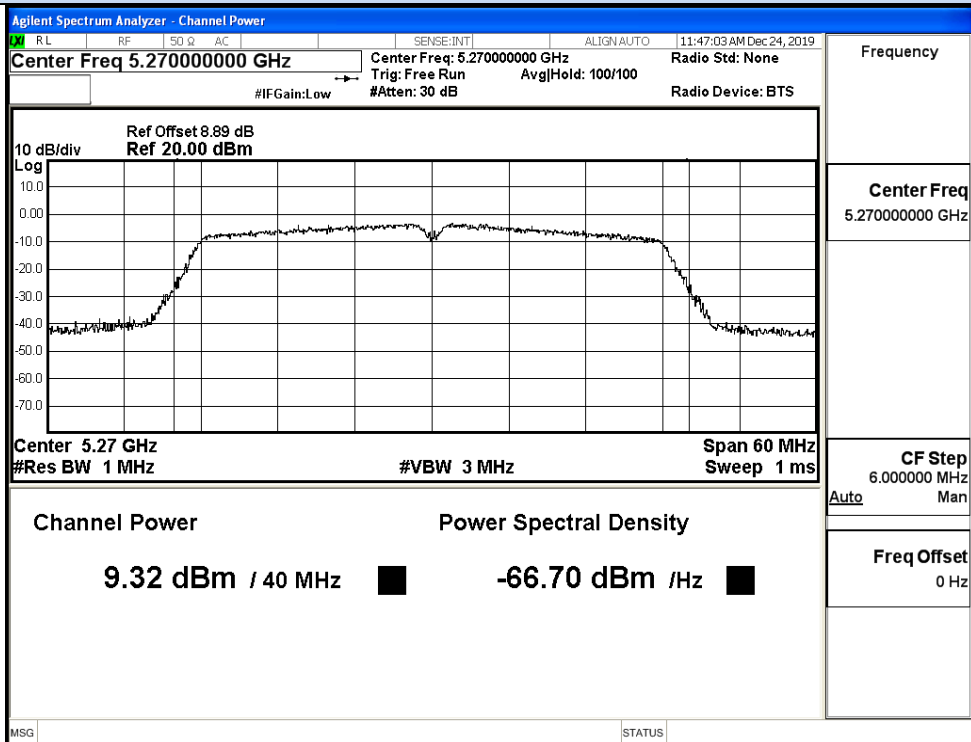


IEEE 802.11n20 / Channel 56 / 5280MHz

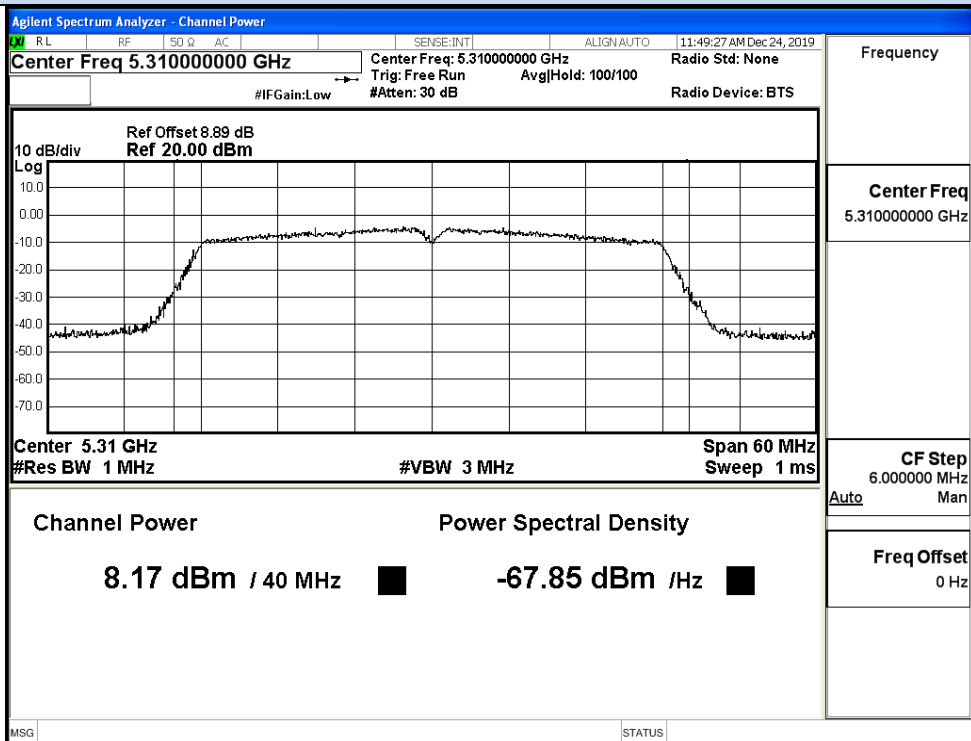


IEEE 802.11n20 / Channel 64 / 5320MHz

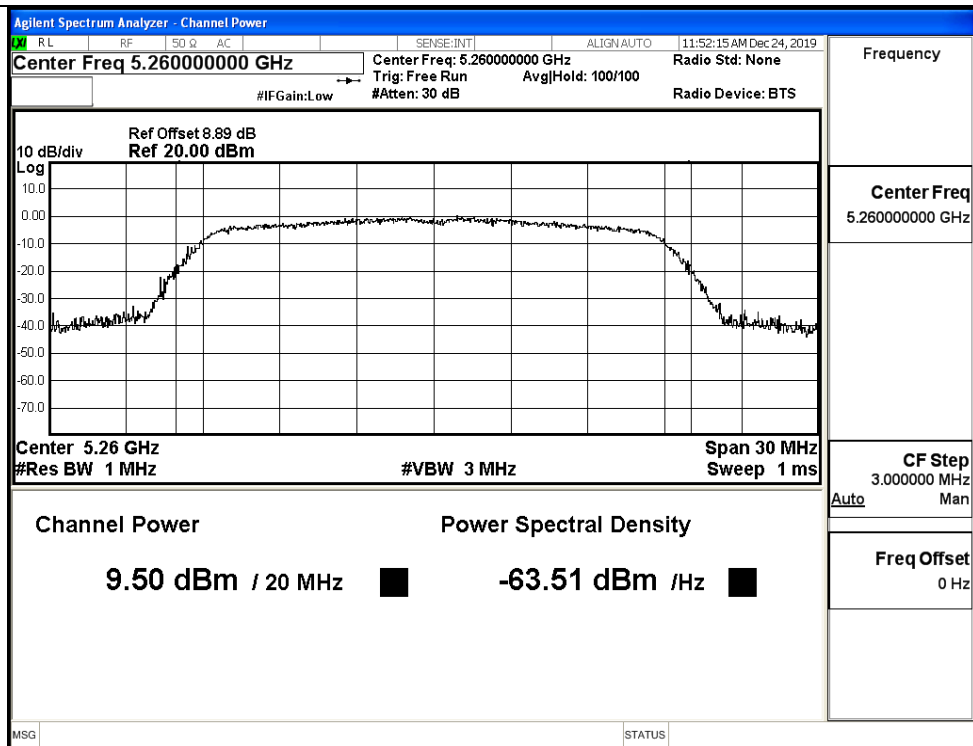
Maximum Conducted Output Power



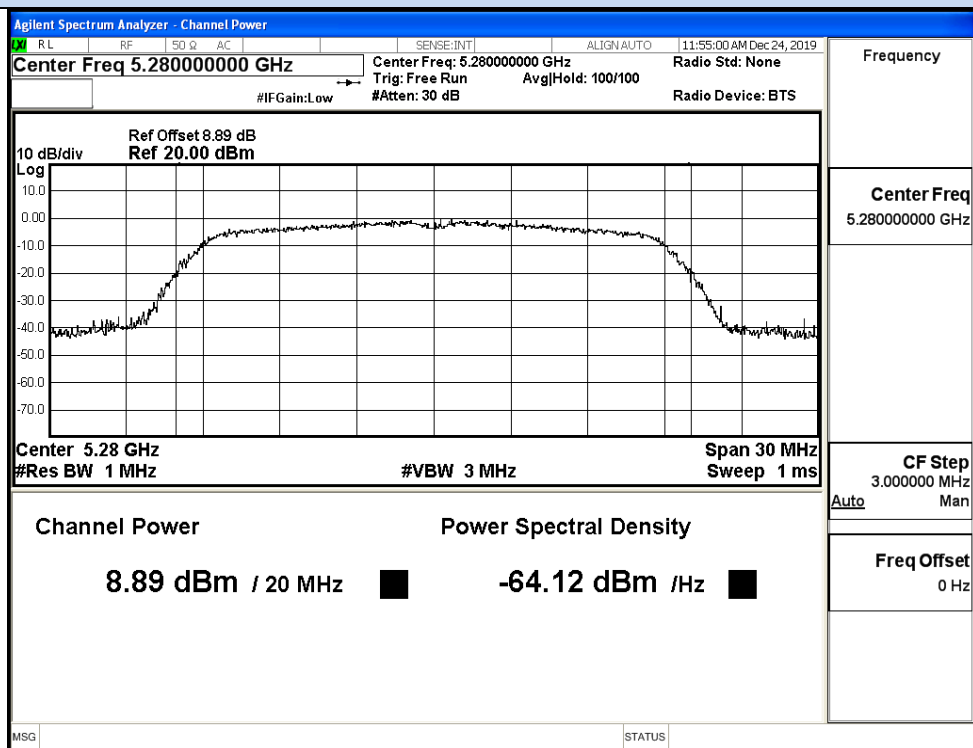
IEEE 802.11n40 / Channel 54 / 5270MHz



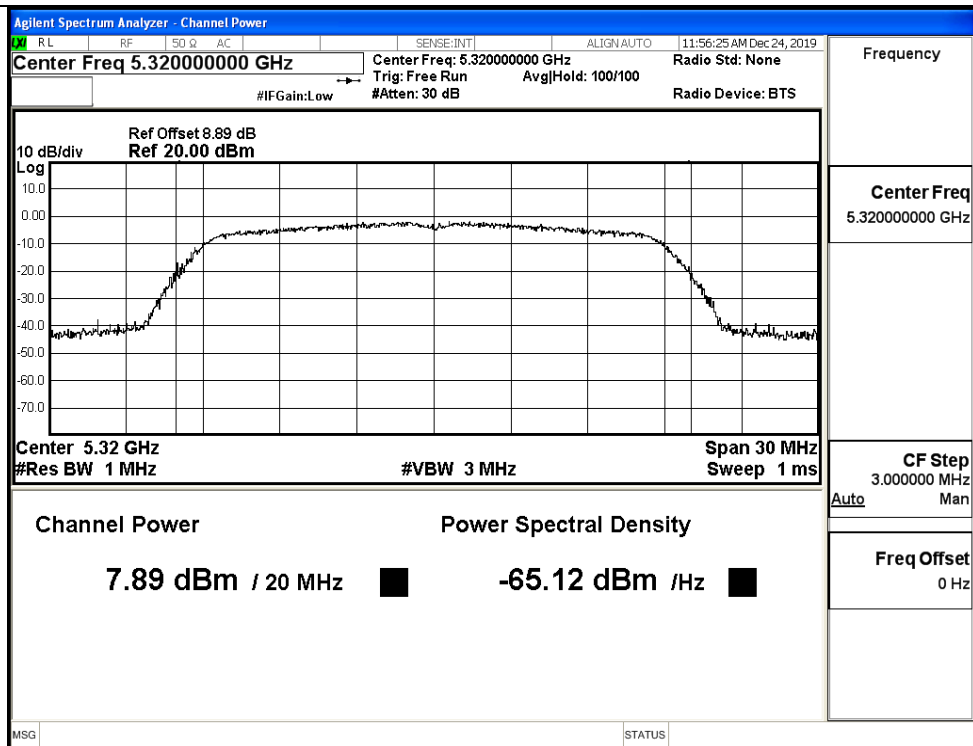
IEEE 802.11n40 / Channel 62 / 5310MHz



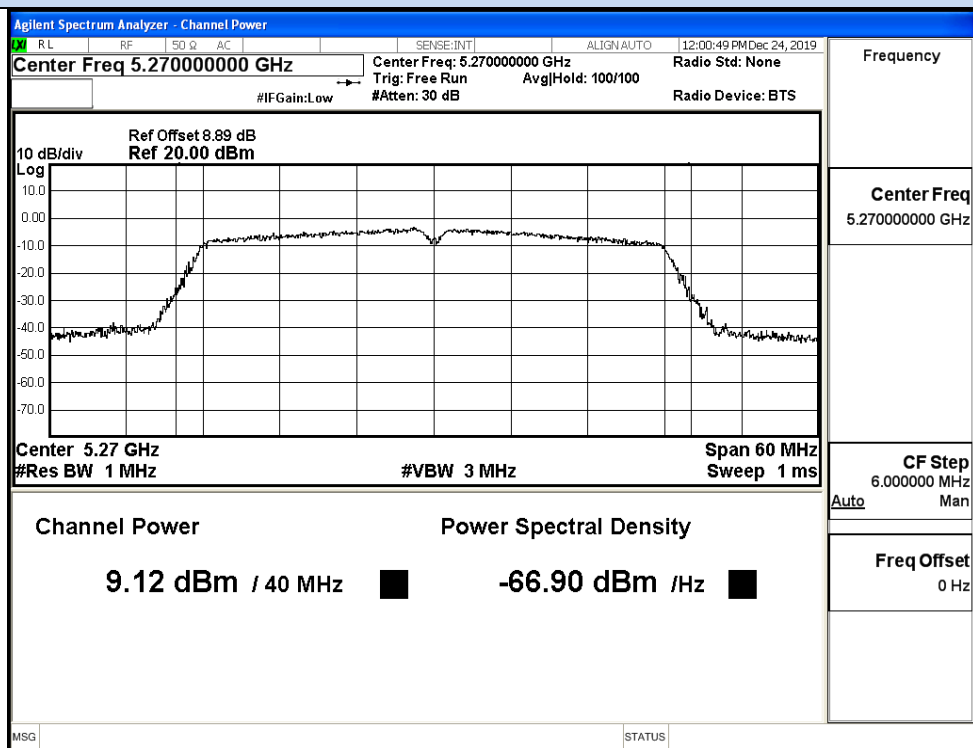
IEEE 802.11ac20 / Channel 52 / 5260MHz



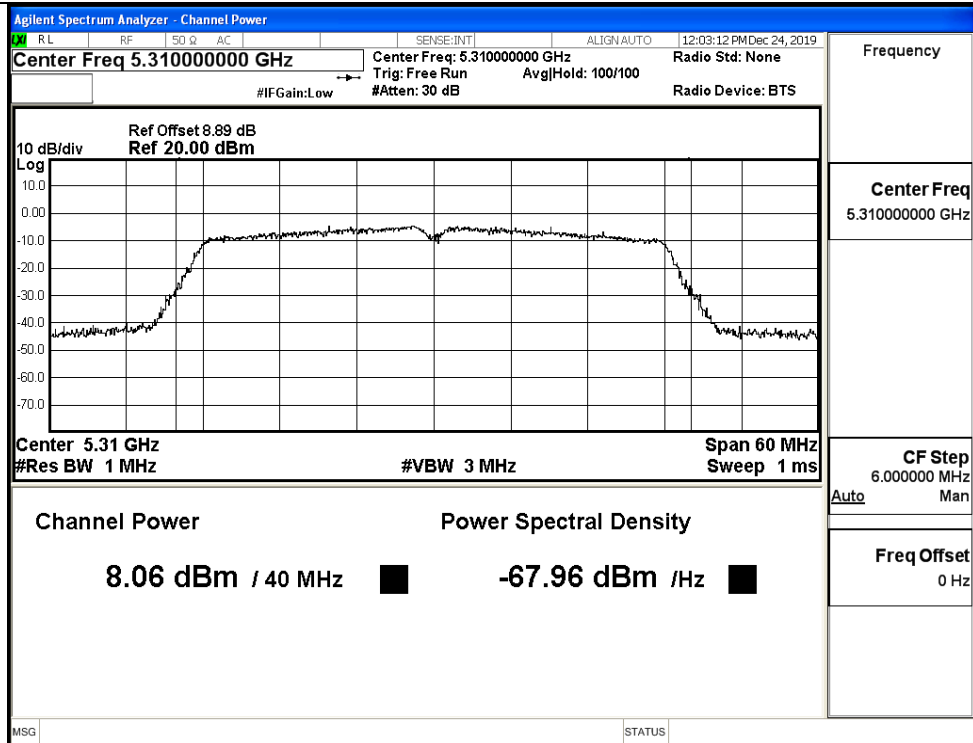
IEEE 802.11ac20 / Channel 56 / 5280MHz



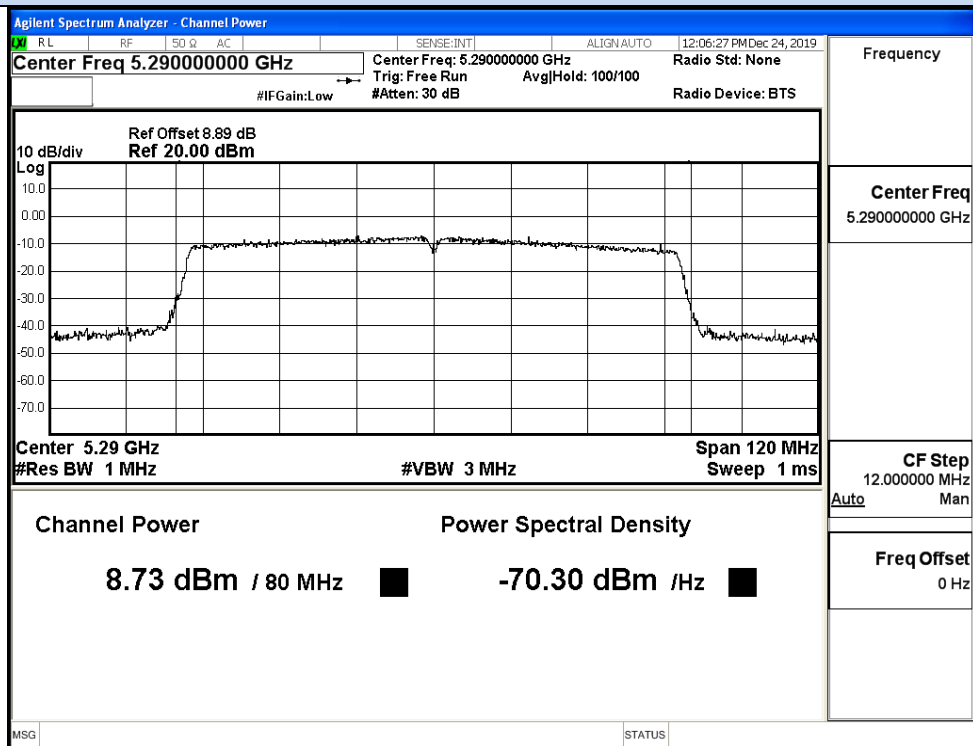
IEEE 802.11ac20 / Channel 64 / 5320MHz



IEEE 802.11ac40 / Channel 54 / 5270MHz



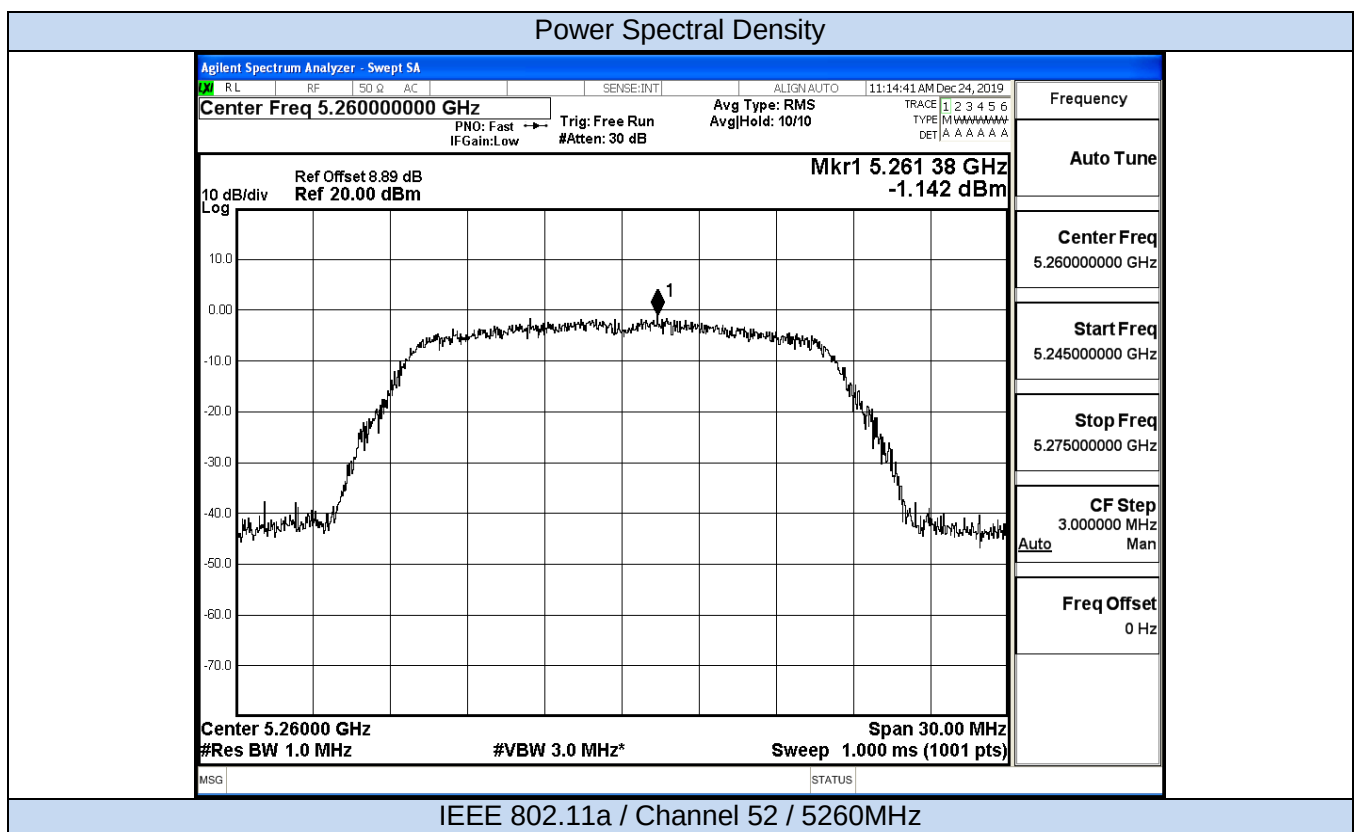
IEEE 802.11ac40 / Channel 62 / 5310MHz

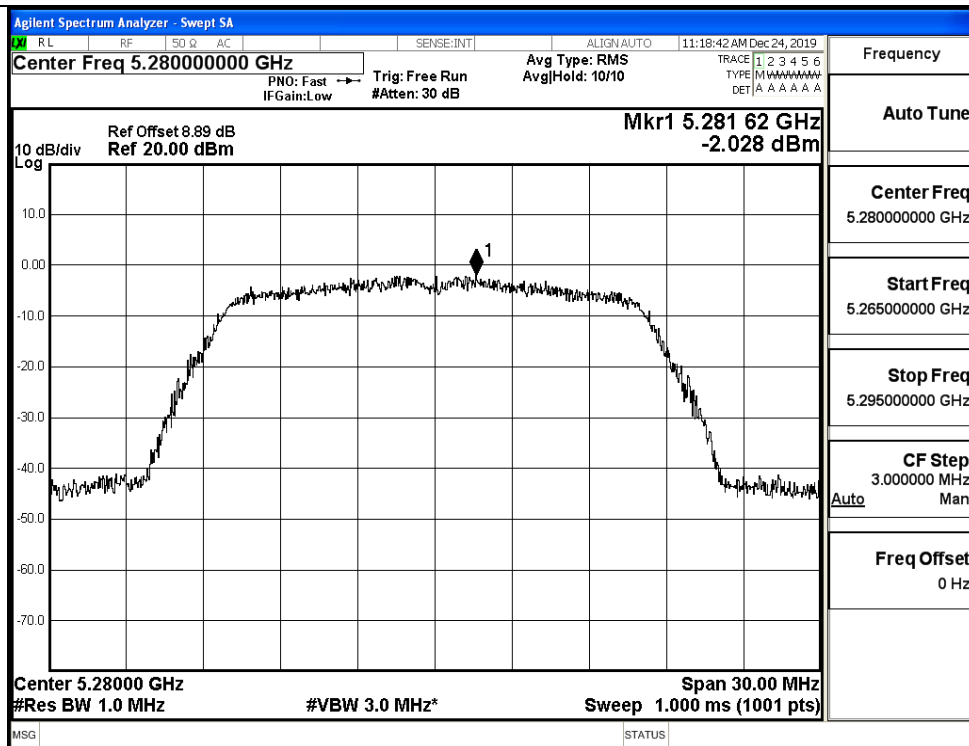


IEEE 802.11ac80 / Channel 58 / 5290MHz

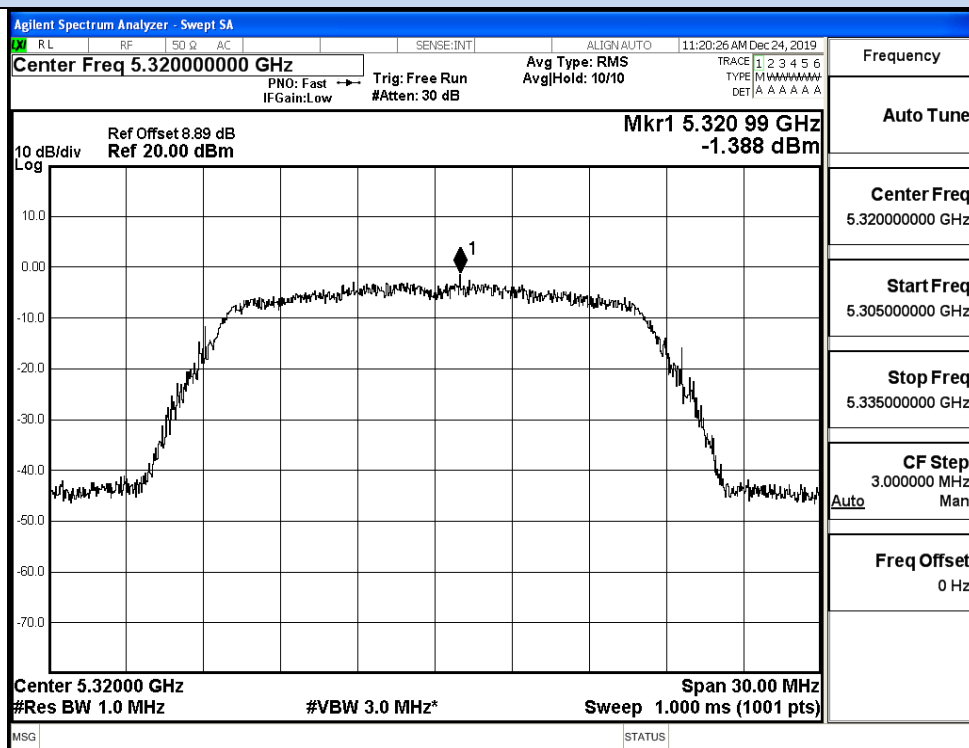
D.3 Power Spectral Density

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/MHz)	Limit (dBm/MHz)	Verdict
11A	52	5260	-1.14	11	Pass
	56	5280	-2.03		Pass
	64	5320	-1.39		Pass
11N20 SISO	52	5260	-0.23	11	Pass
	56	5280	-1.92		Pass
	64	5320	-1.19		Pass
11N40 SISO	54	5270	-3.72	11	Pass
	62	5310	-4.82		Pass
11AC20 SISO	52	5260	-0.39	11	Pass
	56	5280	-1.17		Pass
	64	5320	-2.16		Pass
11AC40 SISO	54	5270	-3.78	11	Pass
	62	5310	-4.87		Pass
11AC80 SISO	58	5290	-7.54	11	Pass



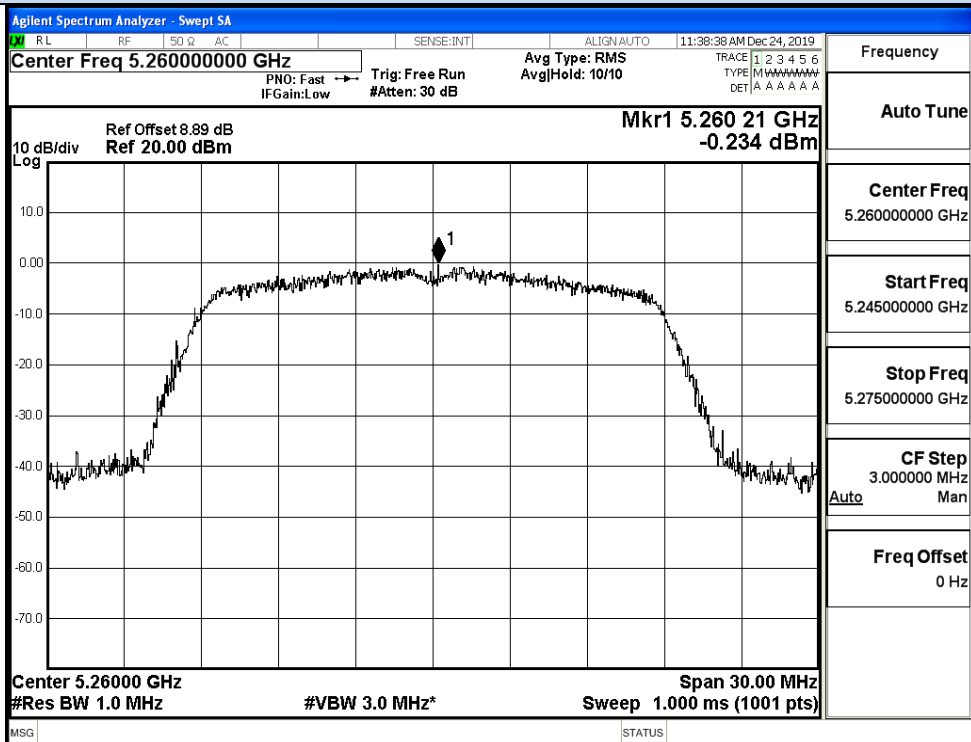


IEEE 802.11na / Channel 56 / 5280MHz

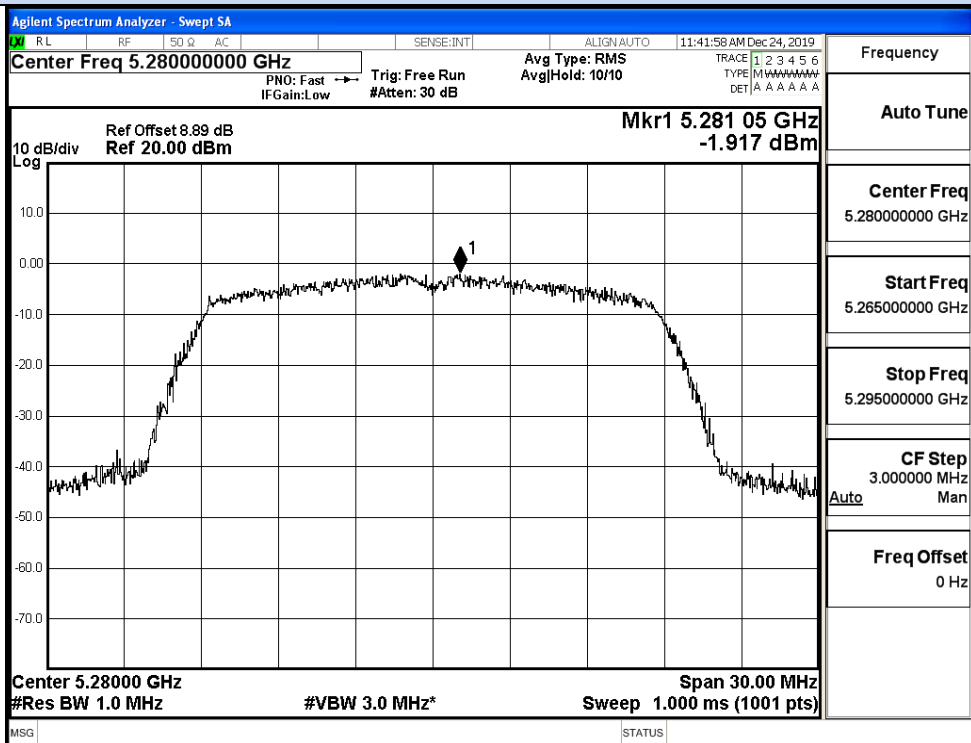


IEEE 802.11na / Channel 64 / 5320MHz

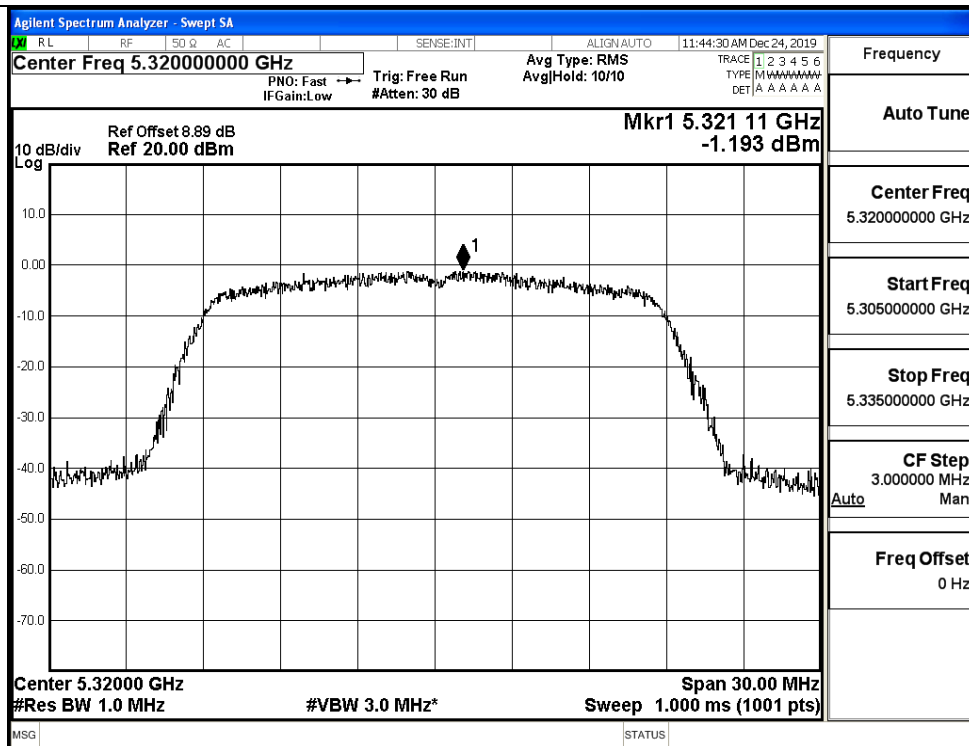
Power Spectral Density



IEEE 802.11n20 / Channel 52 / 5260MHz

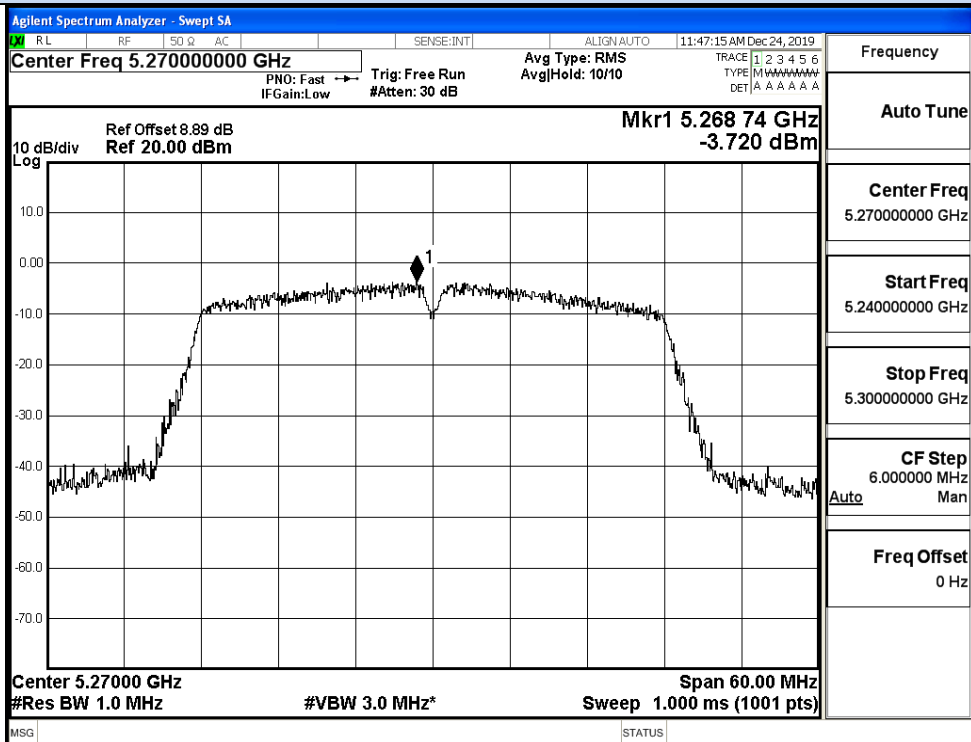


IEEE 802.11n20 / Channel 56 / 5280MHz

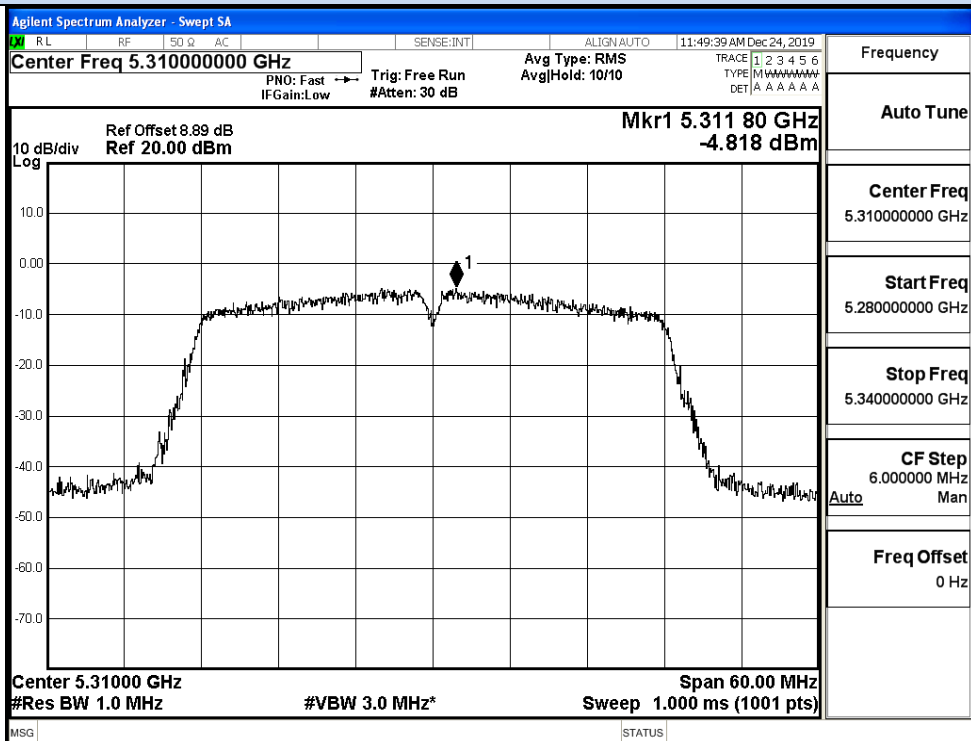


IEEE 802.11n20 / Channel 64 / 5320MHz

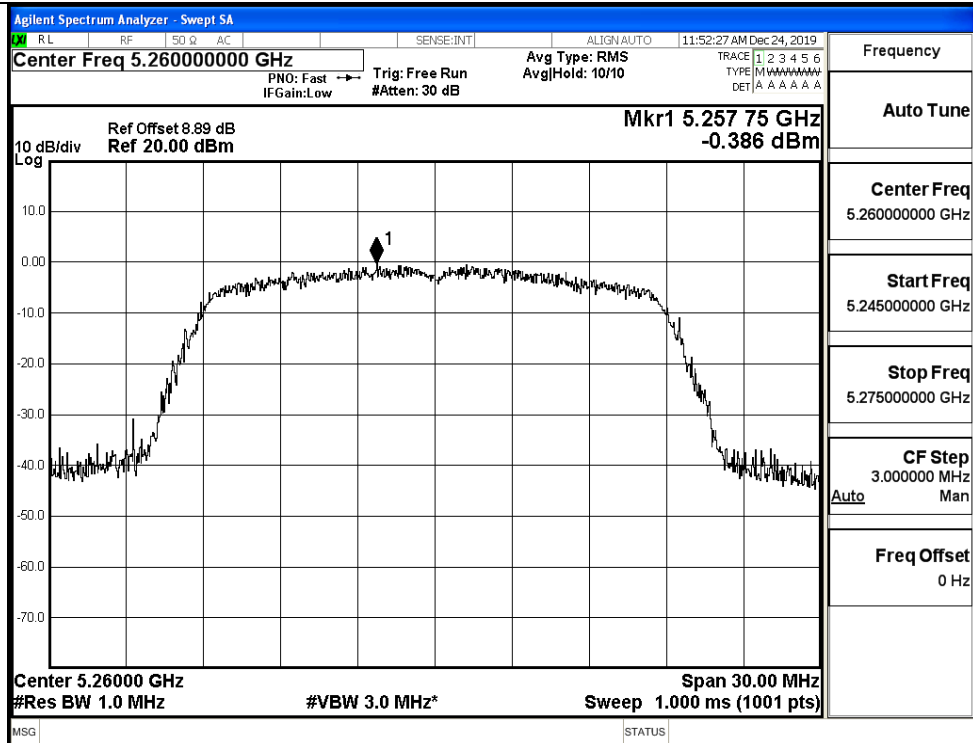
Power Spectral Density



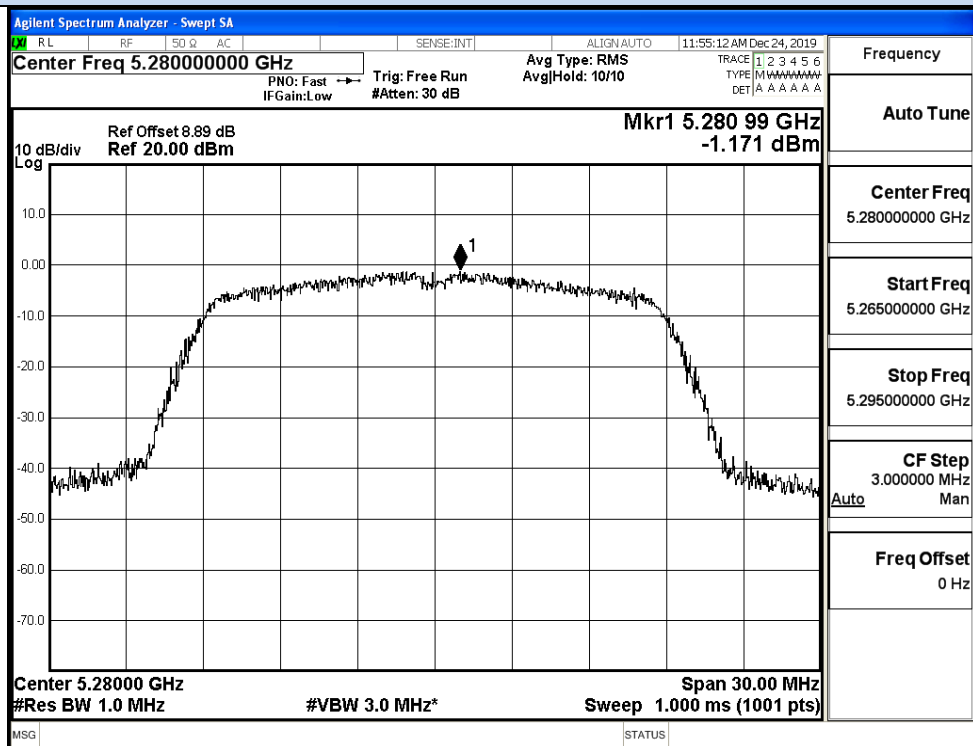
IEEE 802.11n40 / Channel 54 / 5270MHz



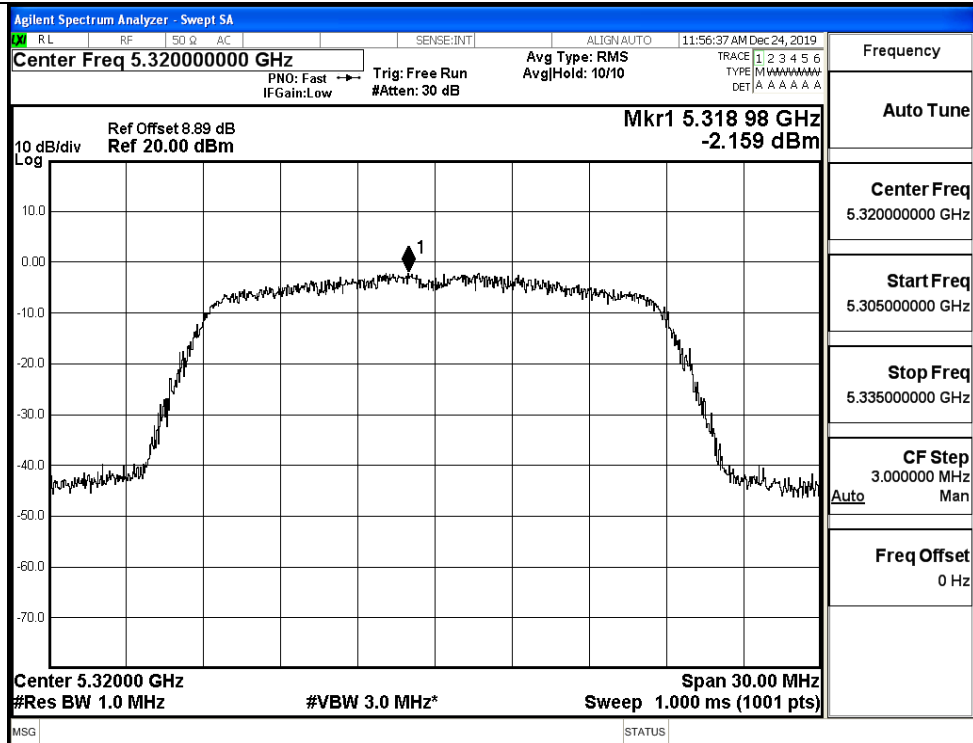
IEEE 802.11n40 / Channel 62 / 5310MHz



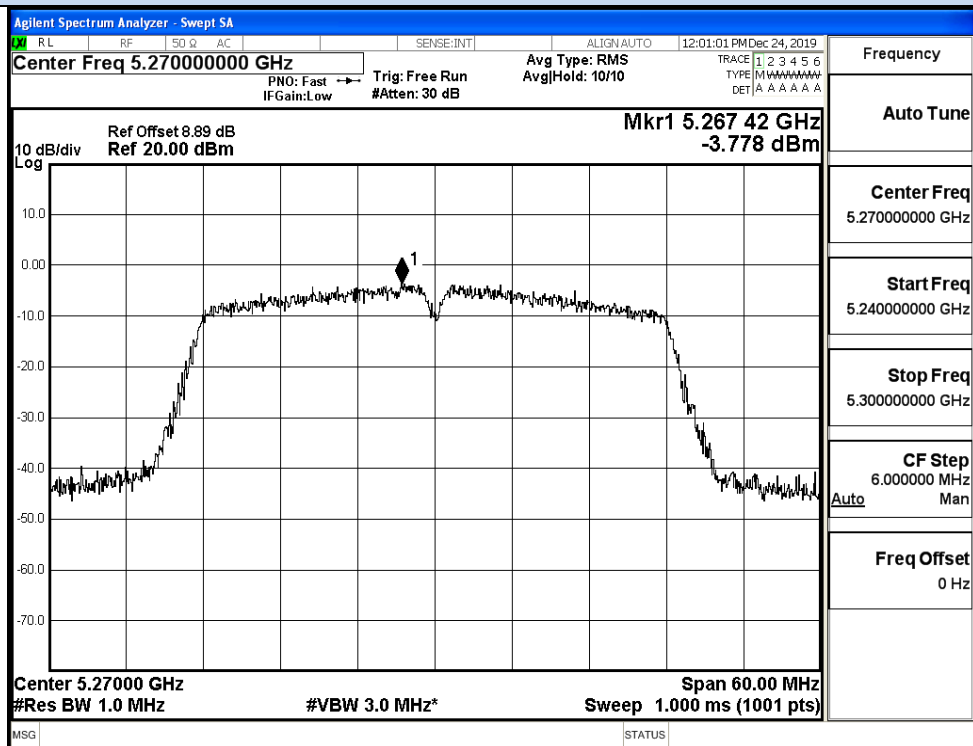
IEEE 802.11ac20 / Channel 52 / 5260MHz



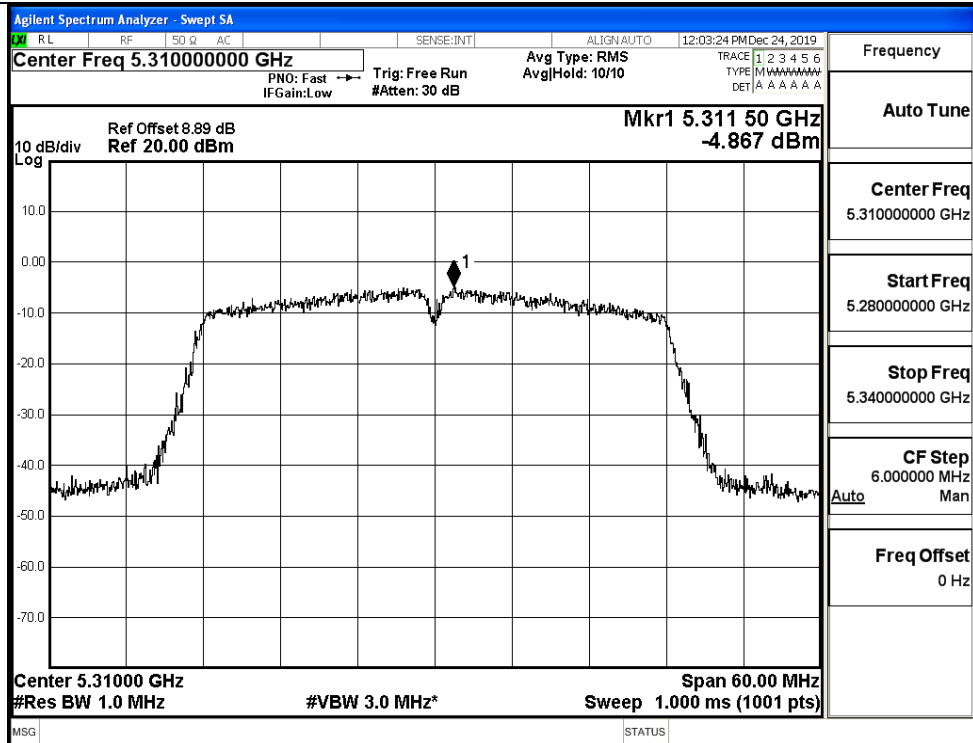
IEEE 802.11ac20 / Channel 56 / 5280MHz



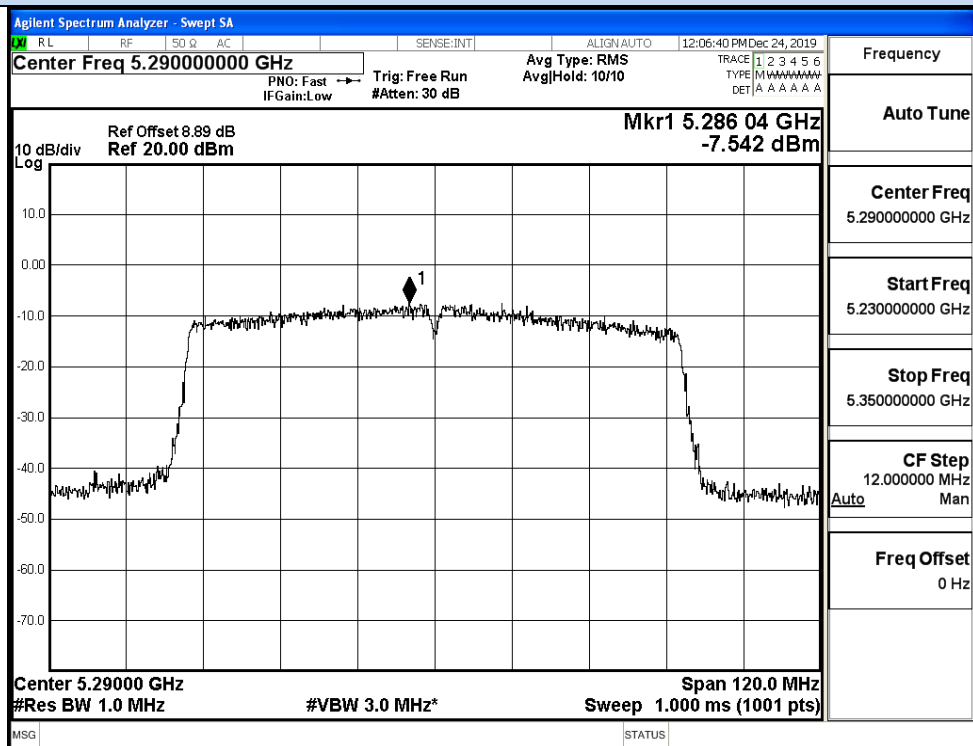
IEEE 802.11ac20 / Channel 64 / 5320MHz



IEEE 802.11ac40 / Channel 54 / 5270MHz



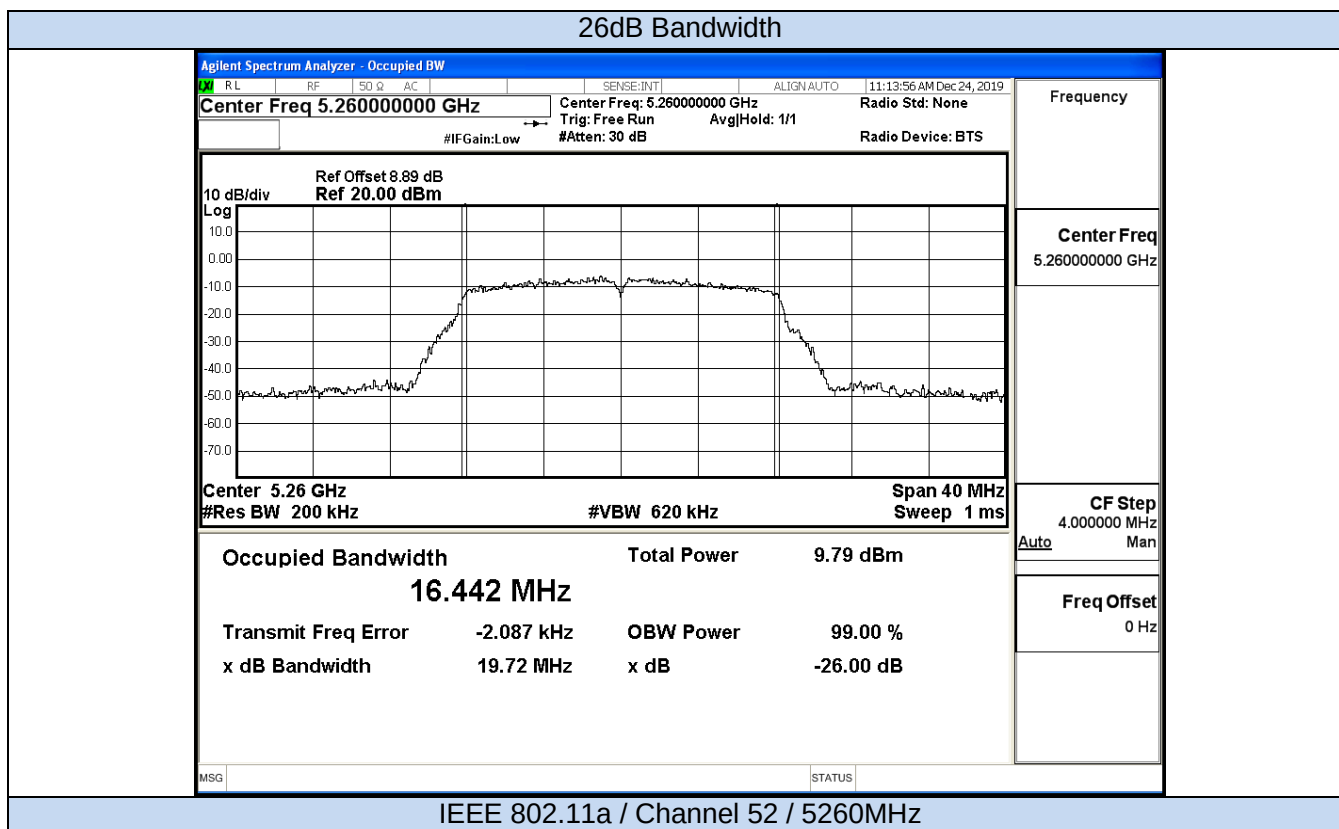
IEEE 802.11ac40 / Channel 62 / 5310MHz

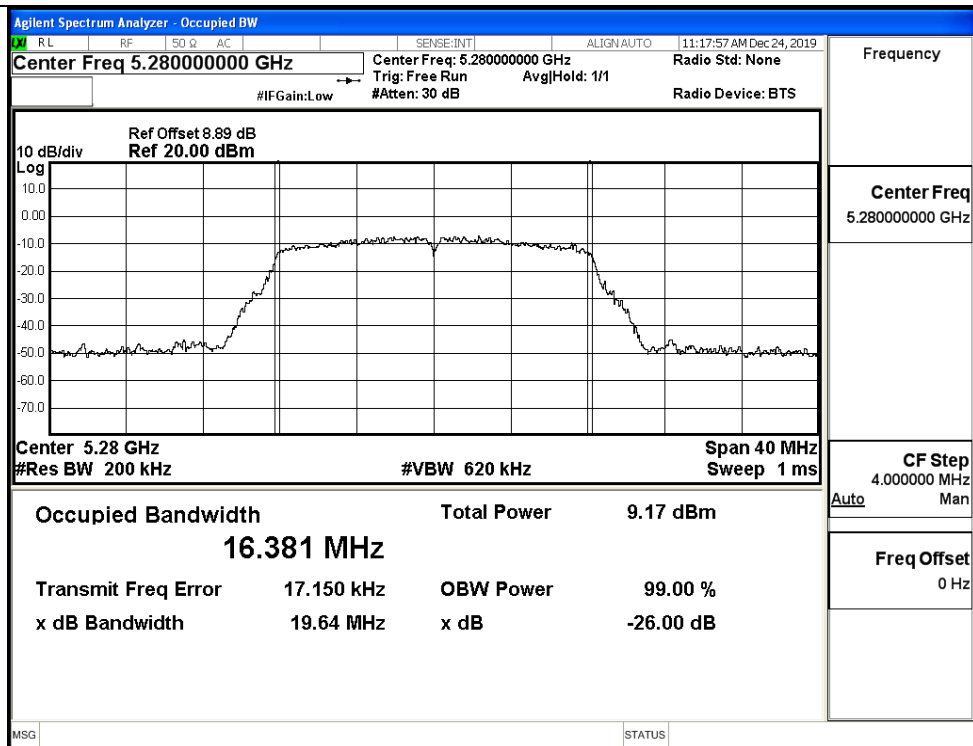


IEEE 802.11ac80 / Channel 58 / 5290MHz

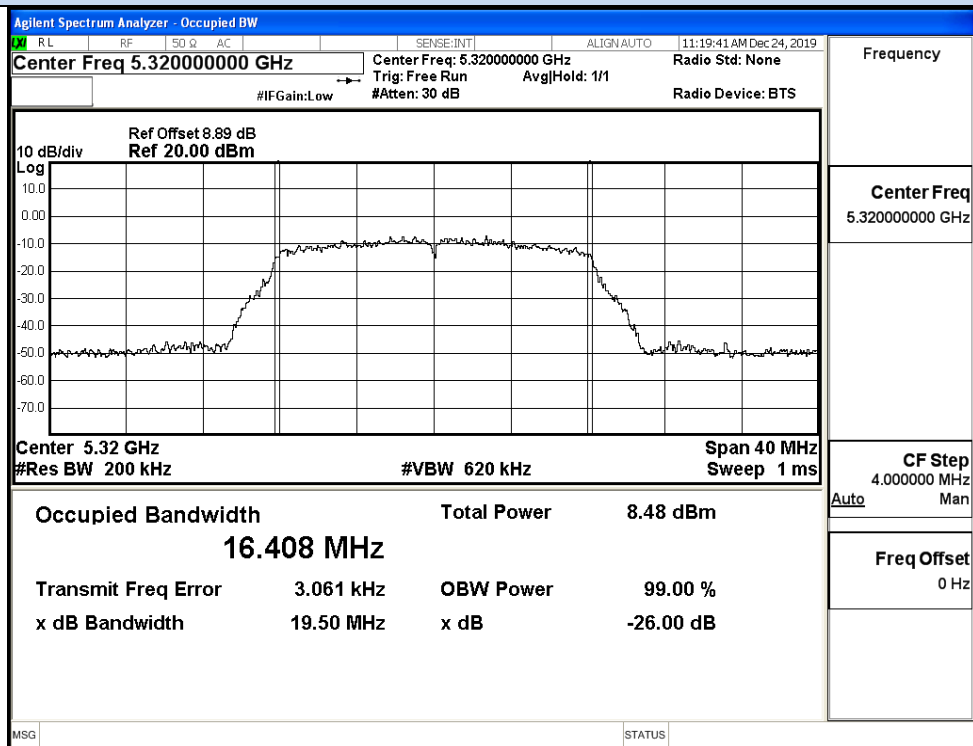
D.4 Emission Bandwidth

Test Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
11A	52	5260	19.72	No Limit	Pass
	56	5280	19.64		Pass
	64	5320	19.50		Pass
11N20 SISO	52	5260	20.05	No Limit	Pass
	56	5280	19.96		Pass
	64	5320	20.21		Pass
11N40 SISO	54	5270	40.20	No Limit	Pass
	62	5310	39.99		Pass
11AC20 SISO	52	5260	19.89	No Limit	Pass
	56	5280	19.97		Pass
	64	5320	20.16		Pass
11AC40 SISO	54	5270	40.29	No Limit	Pass
	62	5310	40.13		Pass
11AC80 SISO	58	5290	80.63	No Limit	Pass



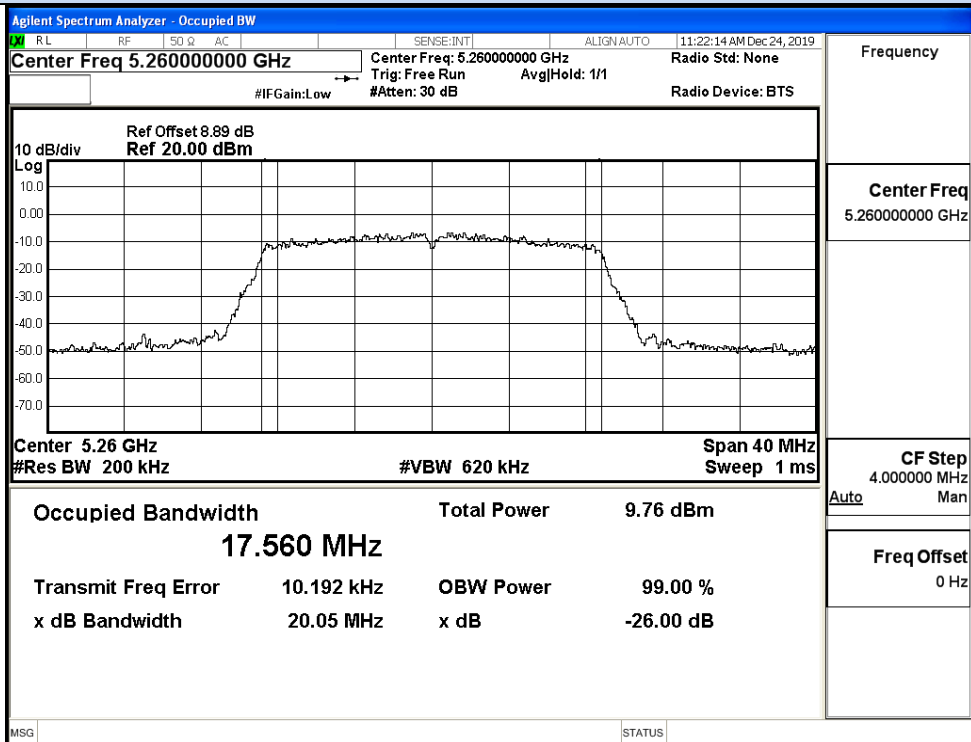


IEEE 802.11a / Channel 56 / 5280MHz

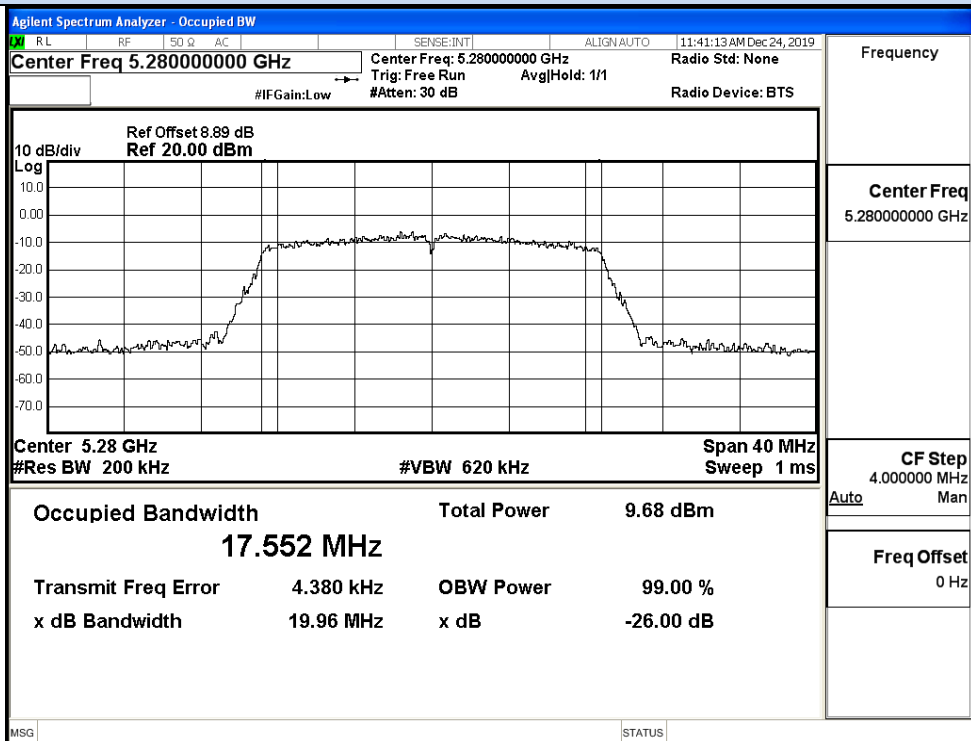


IEEE 802.11a / Channel 64 / 5320MHz

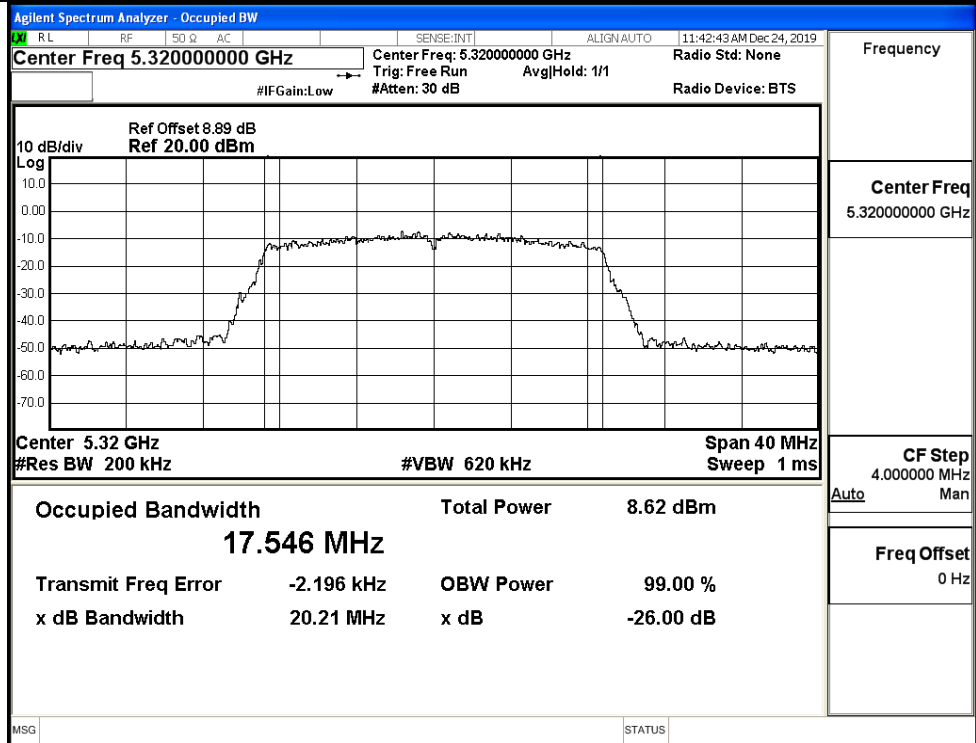
26dB Bandwidth



IEEE 802.11n20 / Channel 52 / 5260MHz

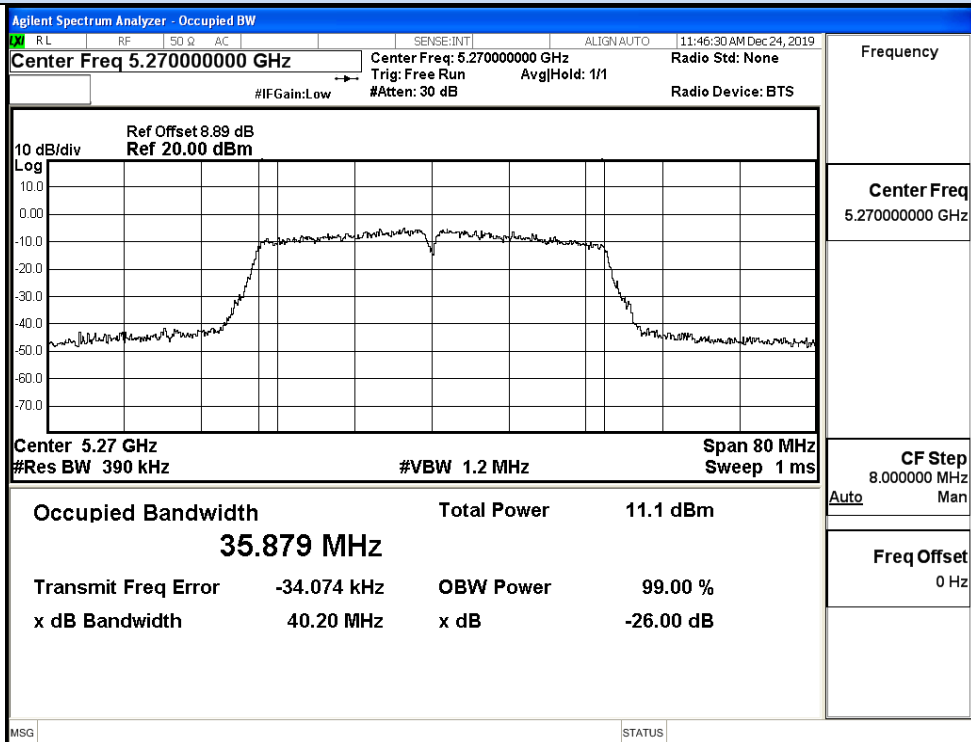


IEEE 802.11n20 / Channel 56 / 5280MHz

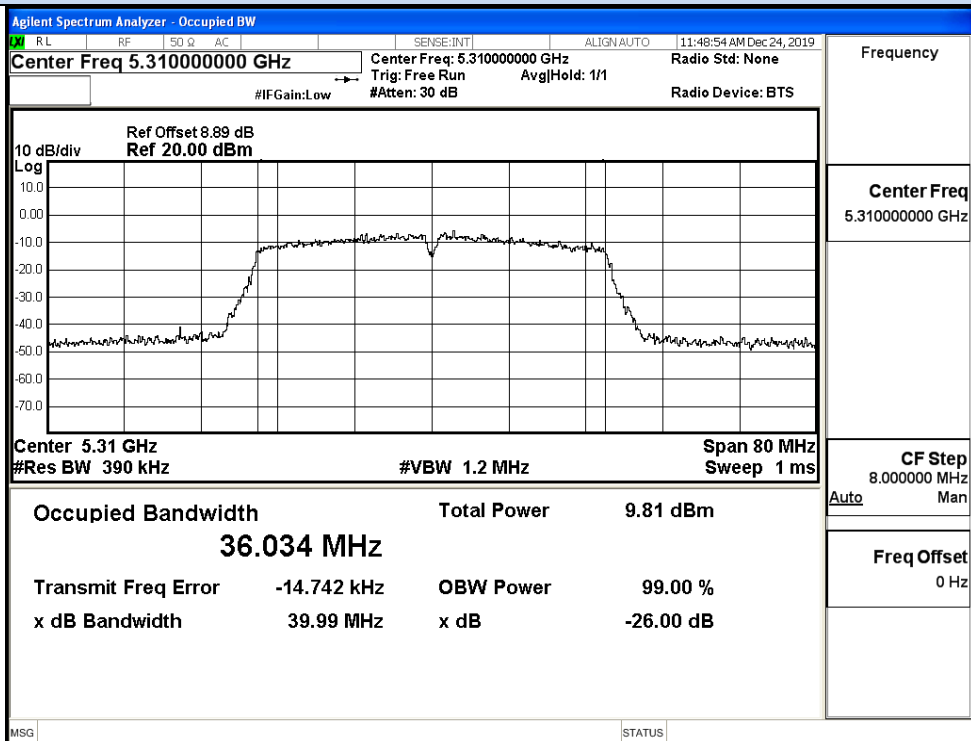


IEEE 802.11n20 / Channel 64 / 5320MHz

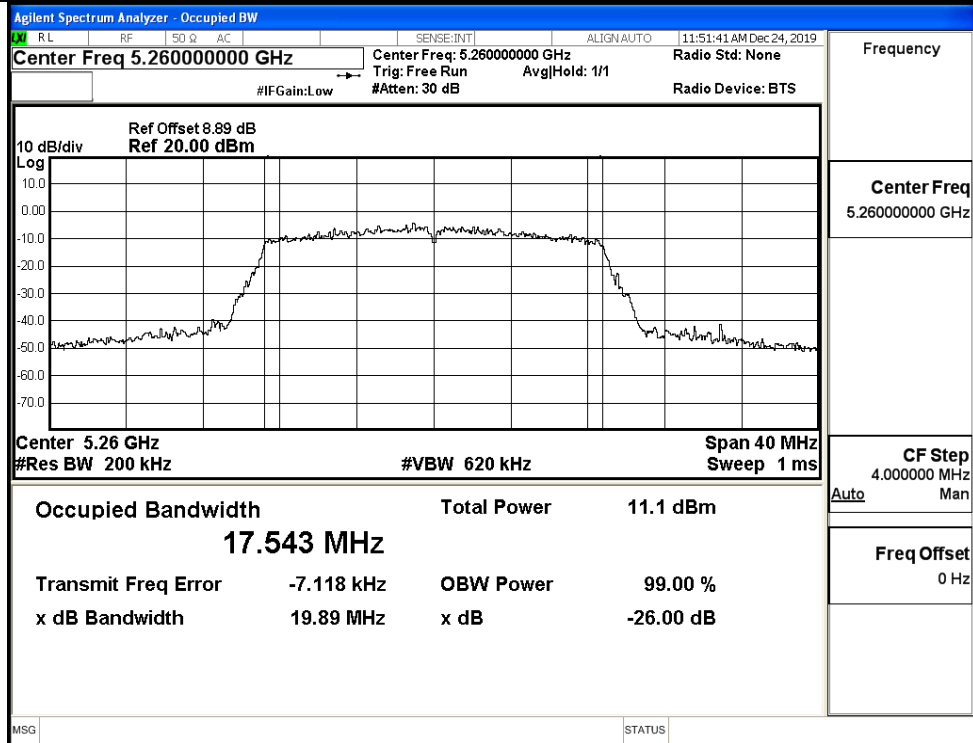
26dB Bandwidth



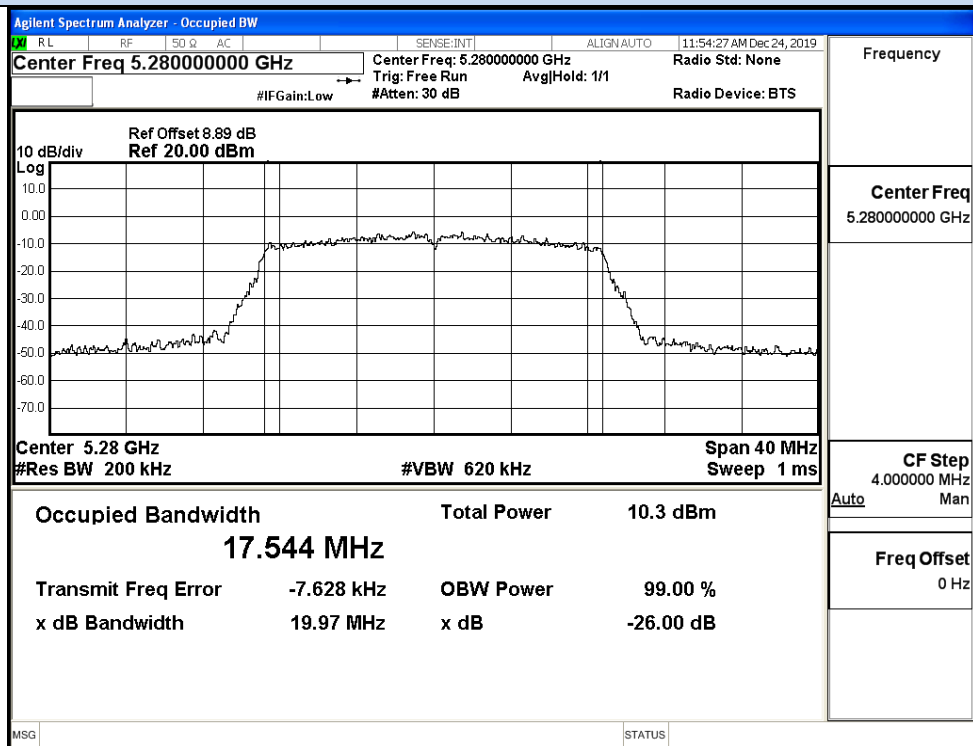
IEEE 802.11n40 / Channel 54 / 5270MHz



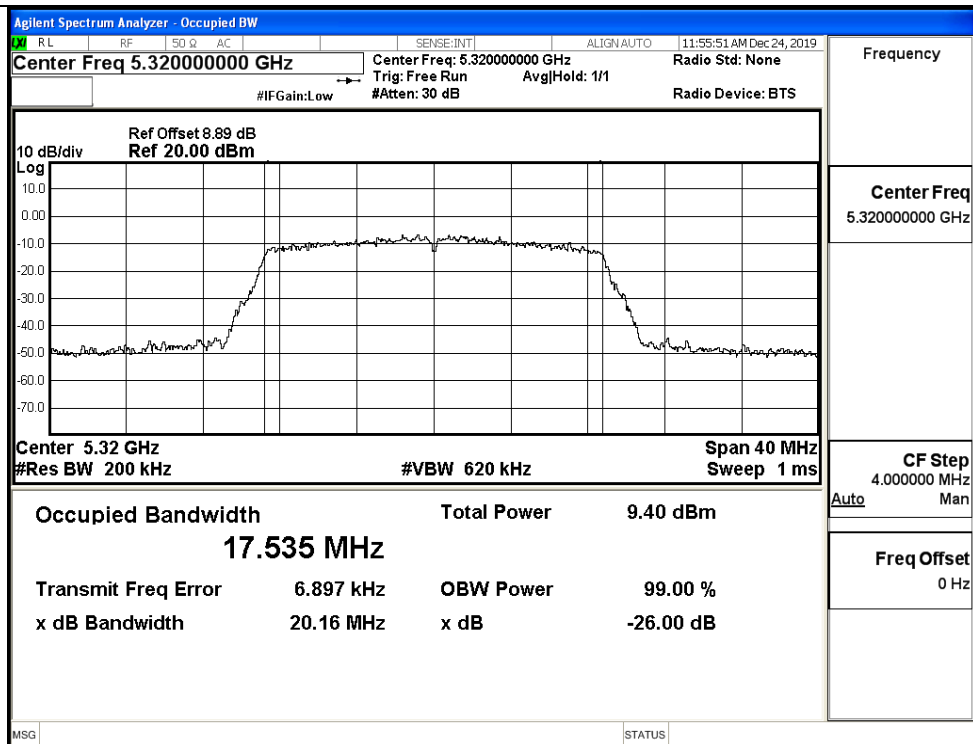
IEEE 802.11n40 / Channel 62 / 5310MHz



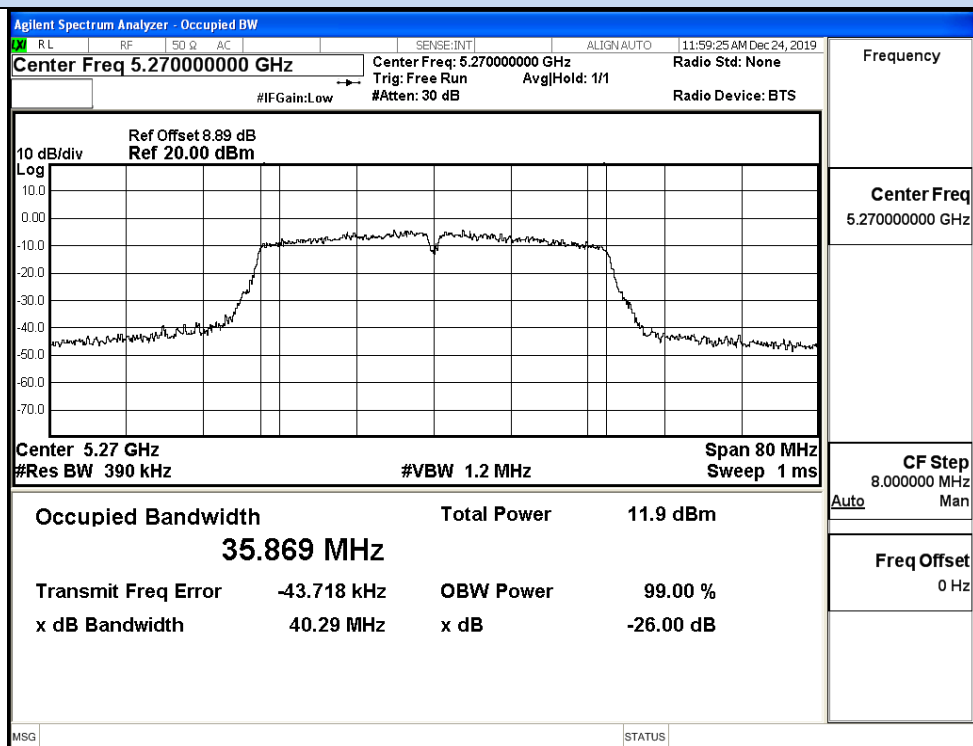
IEEE 802.11ac20 / Channel 52 / 5260MHz



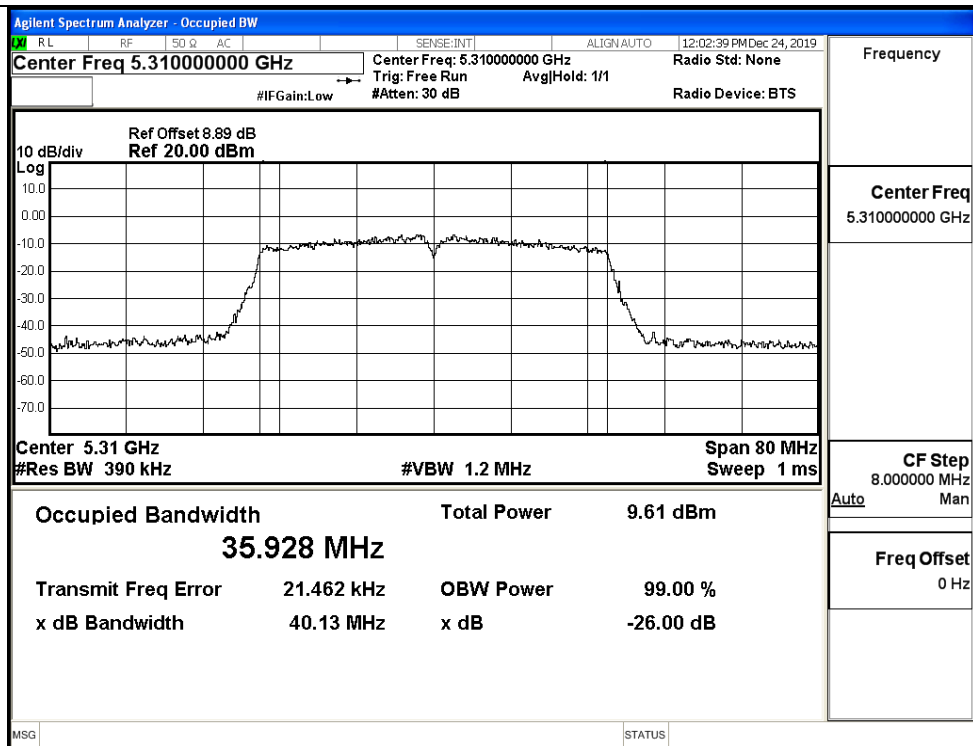
IEEE 802.11ac20 / Channel 56 / 5280MHz



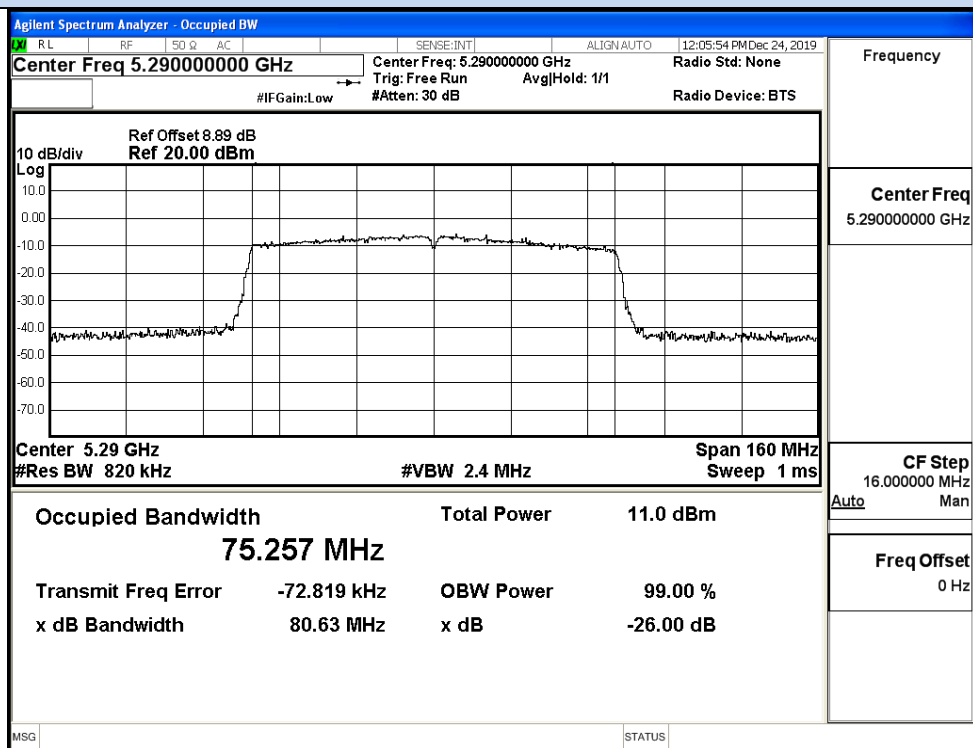
IEEE 802.11ac20 / Channel 64 / 5320MHz



IEEE 802.11ac40 / Channel 54 / 5270MHz



IEEE 802.11ac40 / Channel 62 / 5310MHz

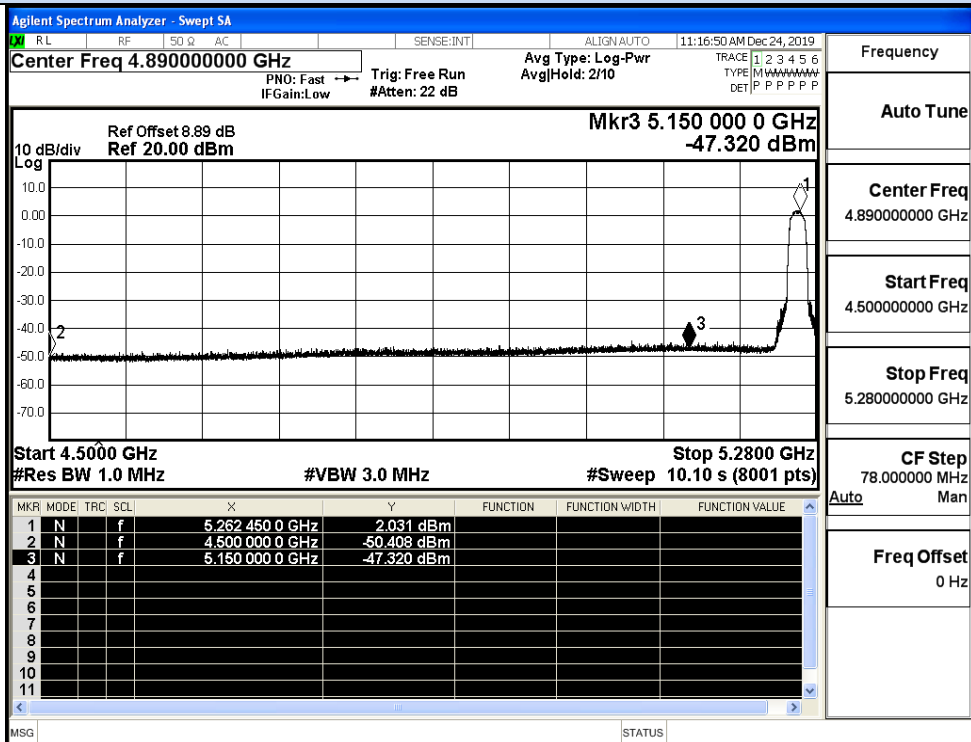


IEEE 802.11ac80 / Channel 58 / 5290MHz

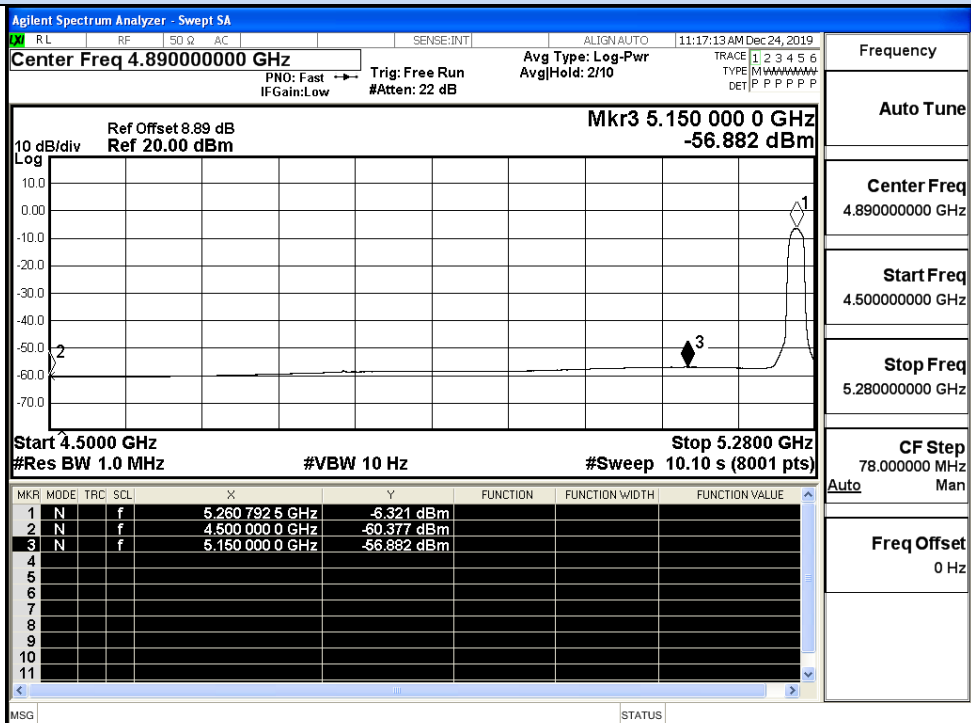
D.5 Undesirable Emissions Measurement

Test Mode	Channel	Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Ground Reflection Factor (dB)	Covert Radiated E Level At 3m (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
11A	52	4500.0	-50.41	2.00	0	46.82	Peak	68.20	Pass
		4500.0	-60.38	2.00	0	36.85	Average	54.00	Pass
		5150.0	-47.32	2.00	0	49.91	Peak	68.20	Pass
		5150.0	-56.88	2.00	0	40.35	Average	54.00	Pass
	64	5350.0	-48.32	2.00	0	48.91	Peak	68.20	Pass
		5350.0	-59.72	2.00	0	37.51	Average	54.00	Pass
		5460.0	-49.05	2.00	0	48.18	Peak	68.20	Pass
		5460.0	-59.96	2.00	0	37.27	Average	54.00	Pass
11N20 SISO	52	4500.0	-50.30	2.00	0	46.93	Peak	68.20	Pass
		4500.0	-60.35	2.00	0	36.88	Average	54.00	Pass
		5150.0	-46.30	2.00	0	50.93	Peak	68.20	Pass
		5150.0	-56.52	2.00	0	40.71	Average	54.00	Pass
	64	5350.0	-47.64	2.00	0	49.59	Peak	68.20	Pass
		5350.0	-59.23	2.00	0	38.00	Average	54.00	Pass
		5460.0	-47.63	2.00	0	49.60	Peak	68.20	Pass
		5460.0	-59.85	2.00	0	37.38	Average	54.00	Pass
11N40 SISO	54	4500.0	-49.79	2.00	0	47.43	Peak	68.20	Pass
		4500.0	-60.33	2.00	0	36.90	Average	54.00	Pass
		5150.0	-46.68	2.00	0	50.55	Peak	68.20	Pass
		5150.0	-56.70	2.00	0	40.53	Average	54.00	Pass
	62	5350.0	-47.63	2.00	0	49.59	Peak	68.20	Pass
		5350.0	-58.90	2.00	0	38.33	Average	54.00	Pass
		5460.0	-48.77	2.00	0	48.46	Peak	68.20	Pass
		5460.0	-59.73	2.00	0	37.50	Average	54.00	Pass
11AC20 SISO	52	4500.0	-50.39	2.00	0	46.84	Peak	68.20	Pass
		4500.0	-60.33	2.00	0	36.90	Average	54.00	Pass
		5150.0	-46.06	2.00	0	51.17	Peak	68.20	Pass
		5150.0	-56.64	2.00	0	40.59	Average	54.00	Pass
	64	4500.0	-50.39	2.00	0	46.84	Peak	68.20	Pass
		4500.0	-60.33	2.00	0	36.90	Average	54.00	Pass
		5150.0	-46.06	2.00	0	51.17	Peak	68.20	Pass
		5150.0	-56.64	2.00	0	40.59	Average	54.00	Pass
11AC40 SISO	54	4500.0	-49.19	2.00	0	48.04	Peak	68.20	Pass
		4500.0	-60.33	2.00	0	36.90	Average	54.00	Pass
		5150.0	-46.24	2.00	0	50.98	Peak	68.20	Pass
		5150.0	-56.77	2.00	0	40.46	Average	54.00	Pass
	62	5350.0	-47.64	2.00	0	49.59	Peak	68.20	Pass
		5350.0	-59.01	2.00	0	38.22	Average	54.00	Pass
		5460.0	-48.27	2.00	0	48.96	Peak	68.20	Pass
		5460.0	-59.74	2.00	0	37.48	Average	54.00	Pass
11AC80 SISO	58	4500.0	-45.11	2.00	0	52.12	Peak	68.20	Pass
		5150.0	-57.00	2.00	0	40.22	Average	54.00	Pass
		4500.0	-48.25	2.00	0	48.97	Peak	68.20	Pass
		5150.0	-59.51	2.00	0	37.72	Average	54.00	Pass
		5350.0	-45.11	2.00	0	52.12	Peak	68.20	Pass
		5460.0	-57.00	2.00	0	40.22	Average	54.00	Pass
		5350.0	-48.25	2.00	0	48.97	Peak	68.20	Pass
		5460.0	-59.51	2.00	0	37.72	Average	54.00	Pass

Undesirable Emissions Measurement

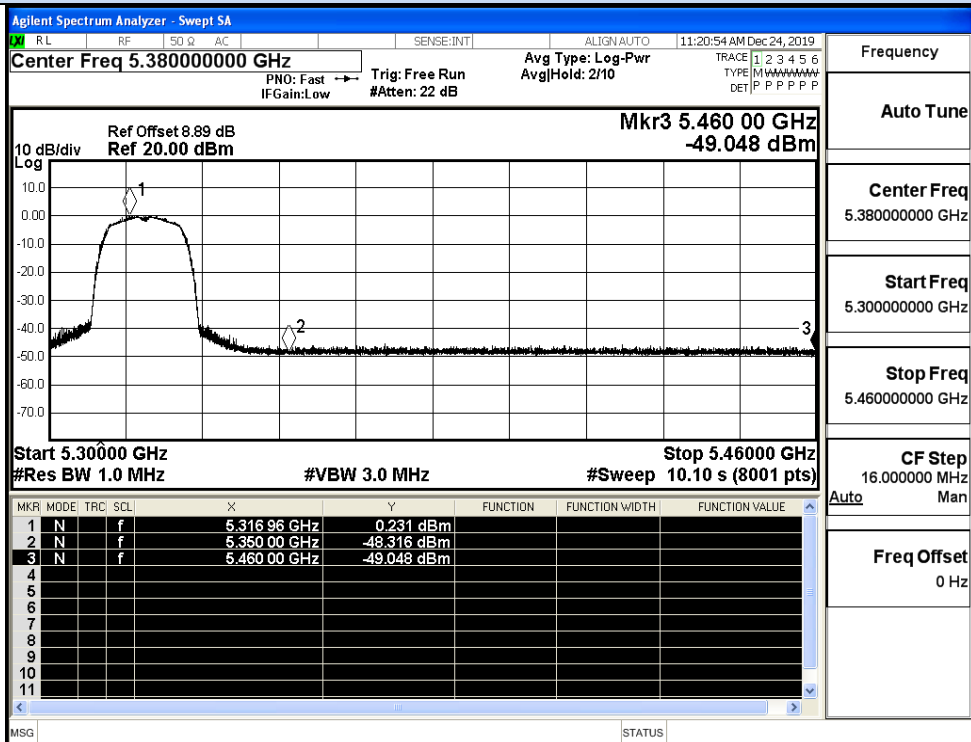


IEEE 802.11a / Channel 36 / 5260MHz / Peak

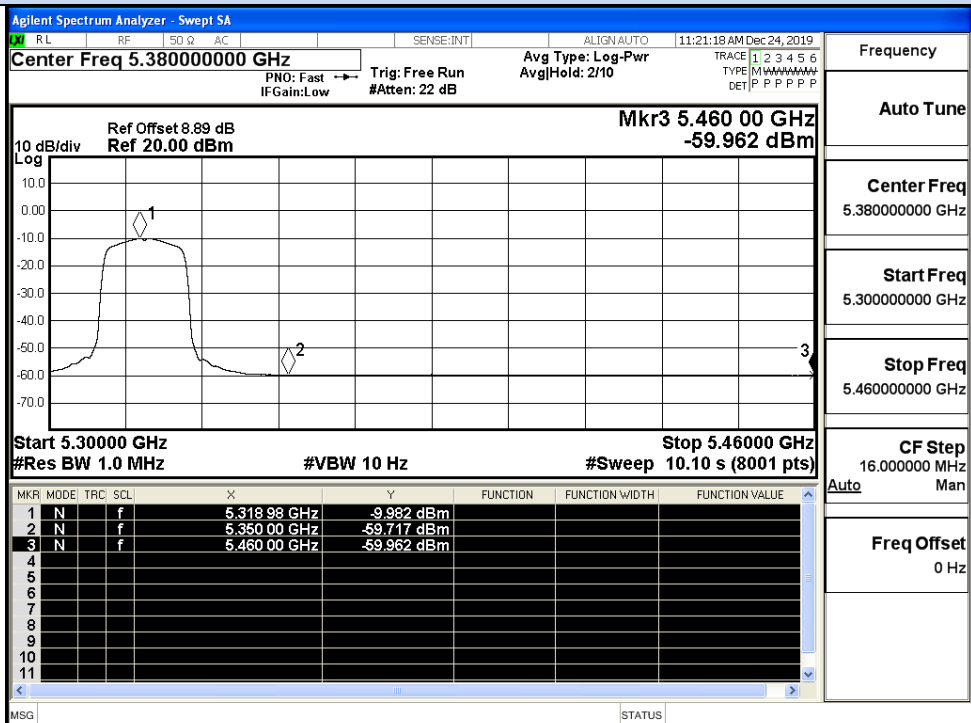


IEEE 802.11a / Channel 36 / 5260MHz / Average

Undesirable Emissions Measurement

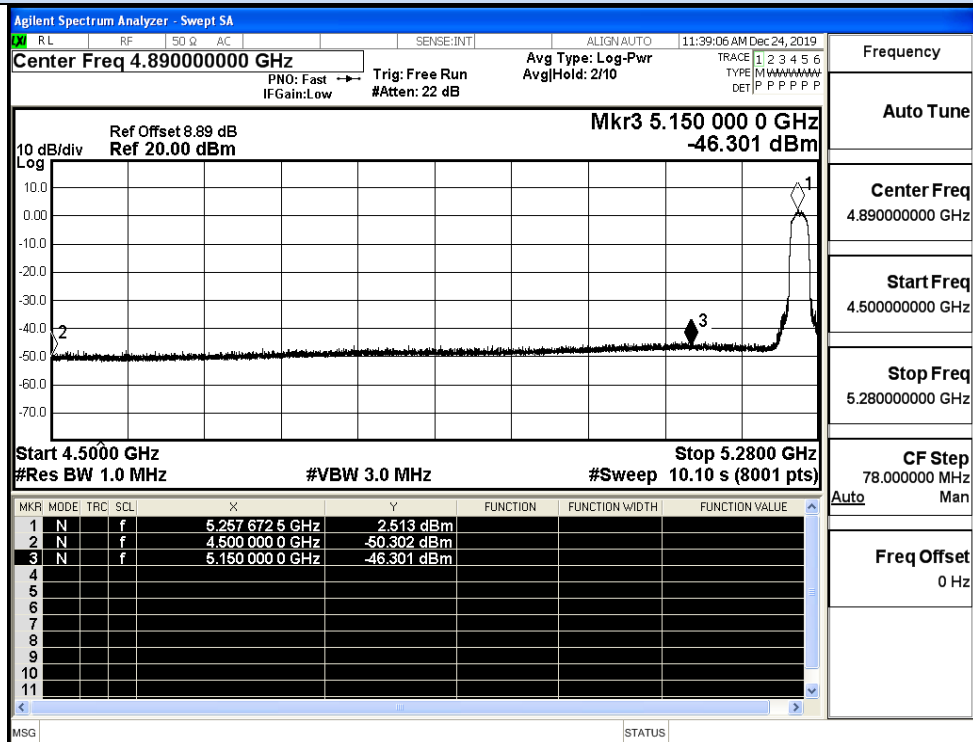


IEEE 802.11a / Channel 48 / 5320MHz / Peak

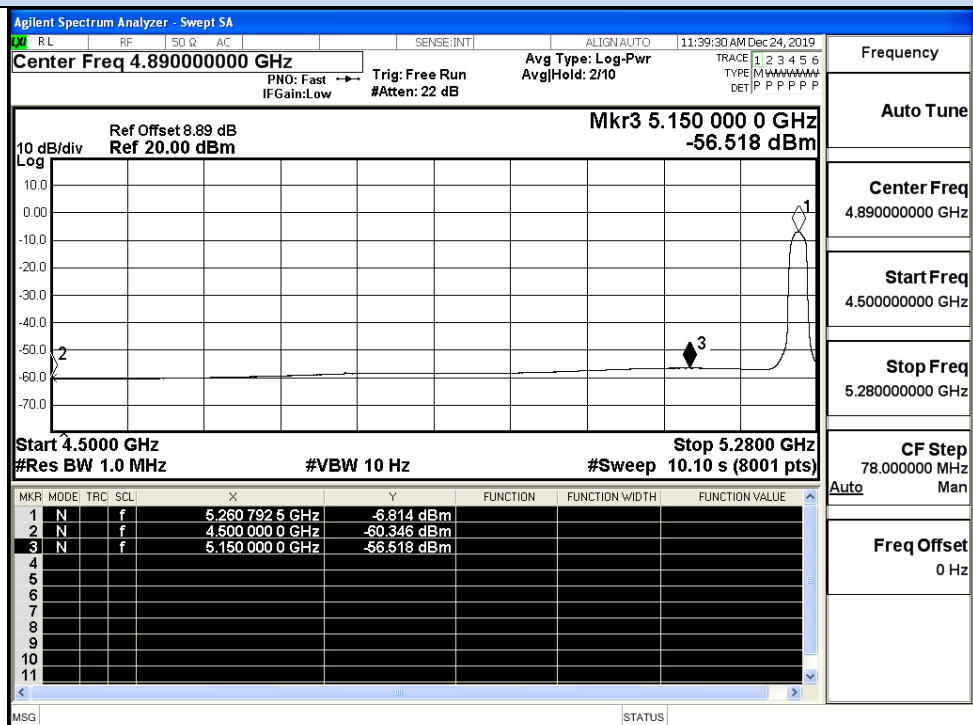


IEEE 802.11a / Channel 48 / 5320MHz / Average

Undesirable Emissions Measurement

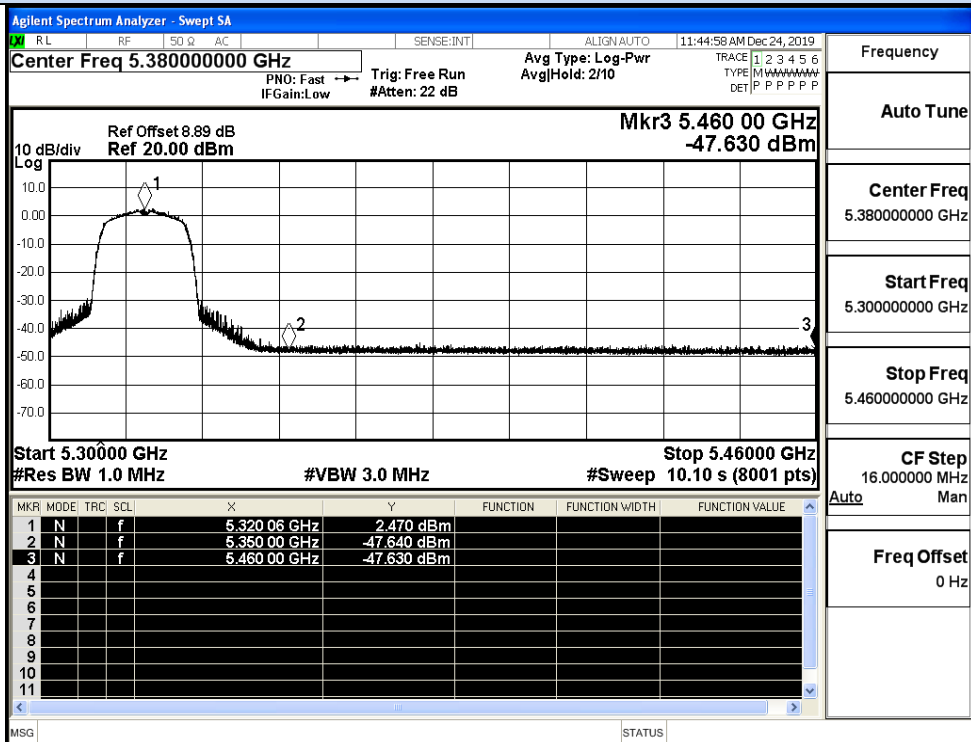


IEEE 802.11n20 / Channel 36 / 5260MHz / Peak

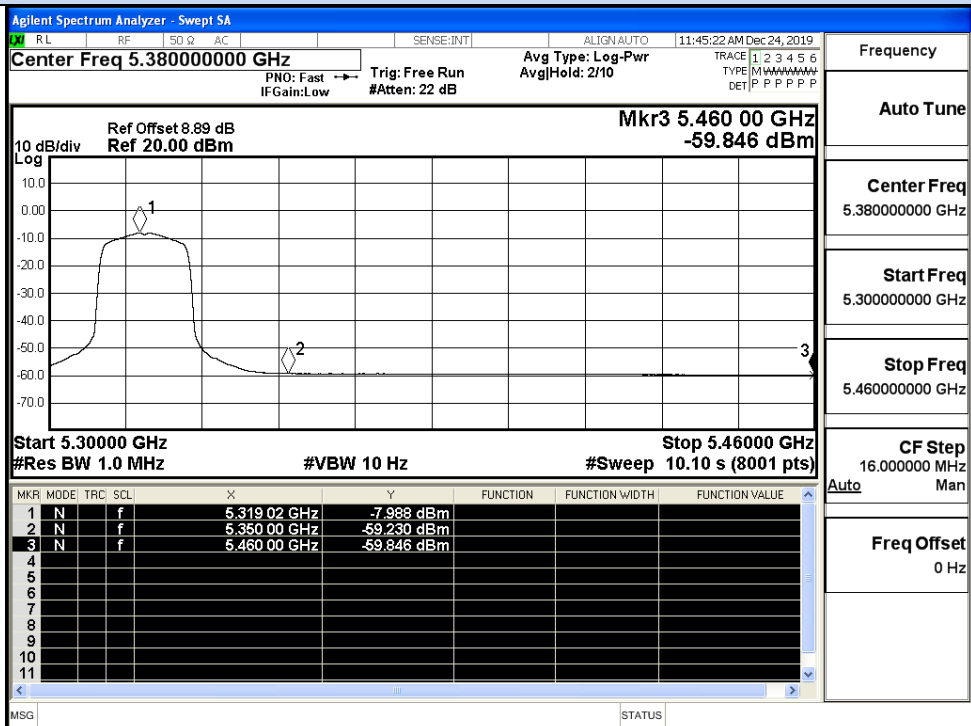


IEEE 802.11n20 / Channel 36 / 5260MHz / Average

Undesirable Emissions Measurement

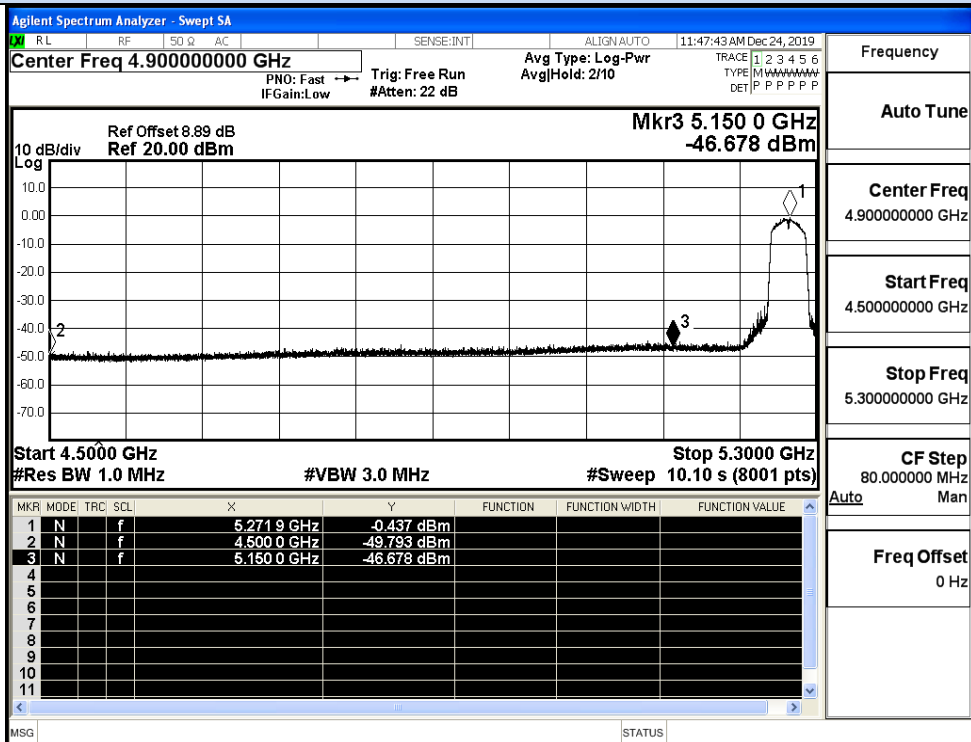


IEEE 802.11n20 / Channel 48 / 5320MHz / Peak

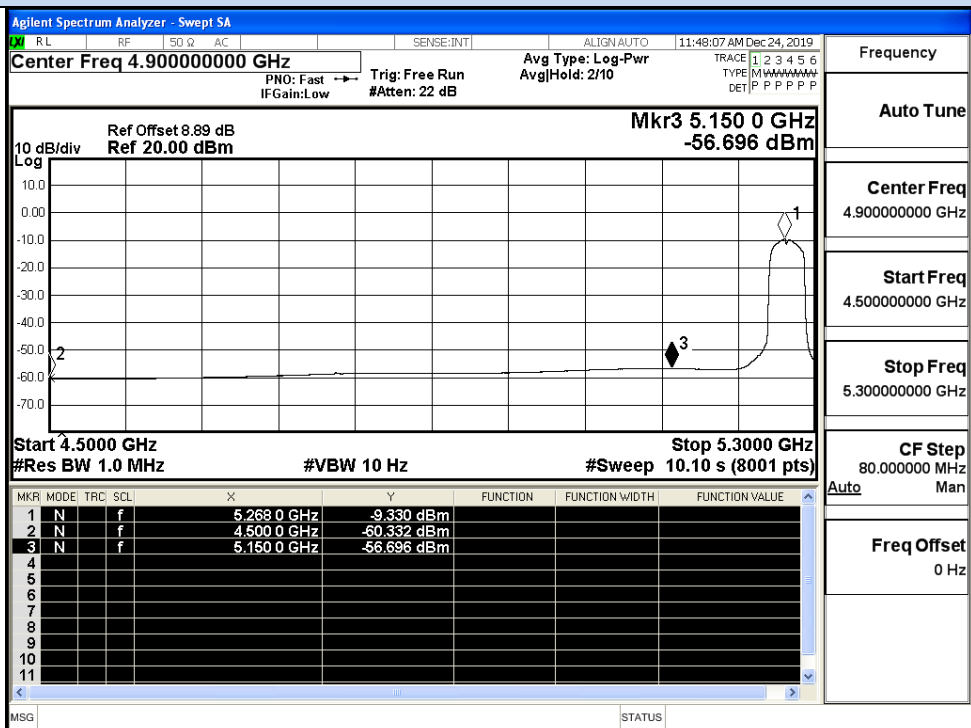


IEEE 802.11n20 / Channel 48 / 5320MHz / Average

Undesirable Emissions Measurement

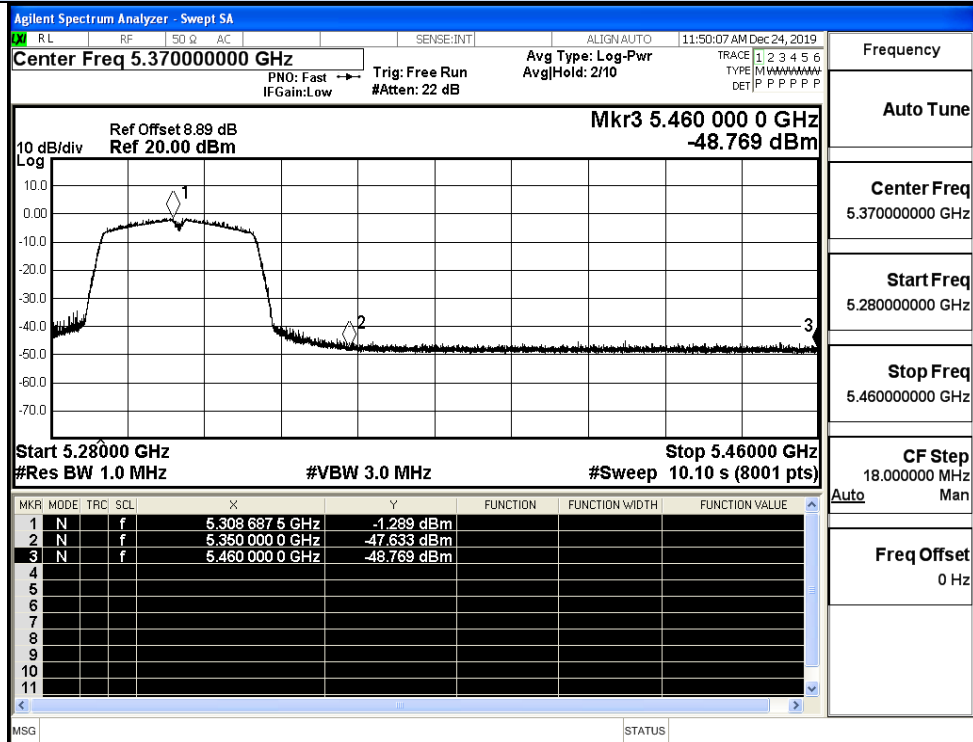


IEEE 802.11n40 / Channel 38 / 5270MHz / Peak

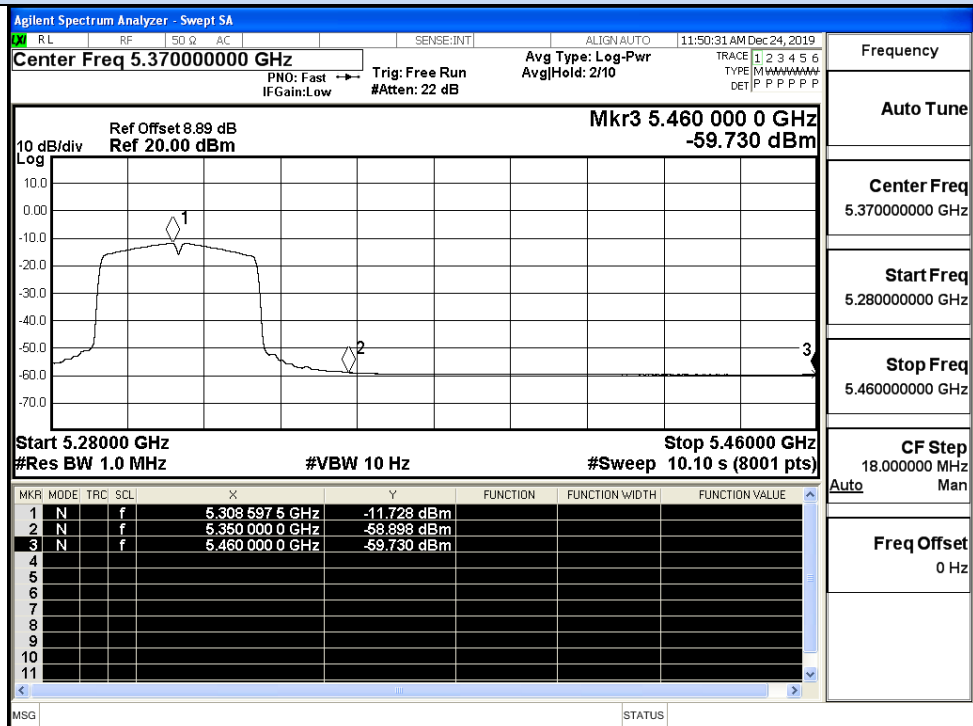


IEEE 802.11n40 / Channel 38 / 5270MHz / Average

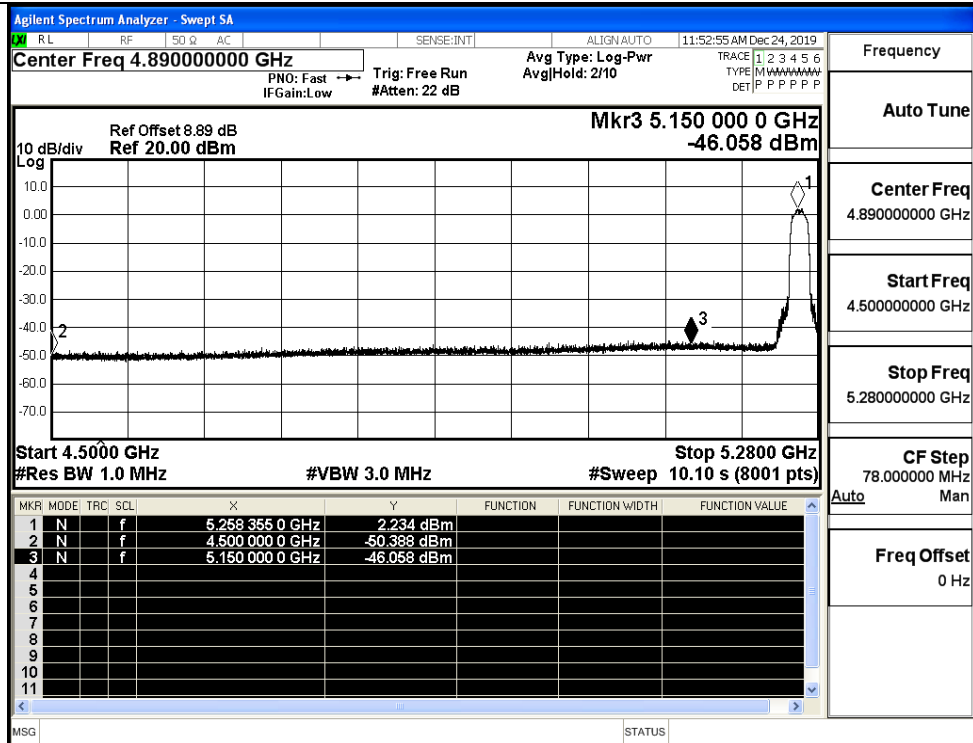
Undesirable Emissions Measurement



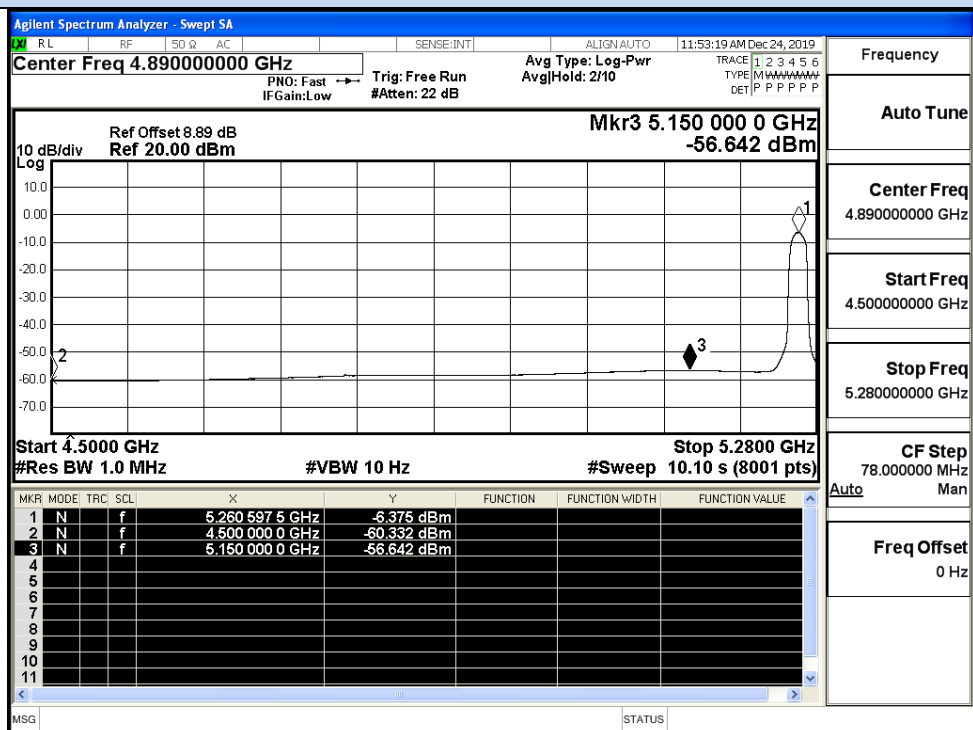
IEEE 802.11n40 / Channel 46 / 5310MHz / Peak



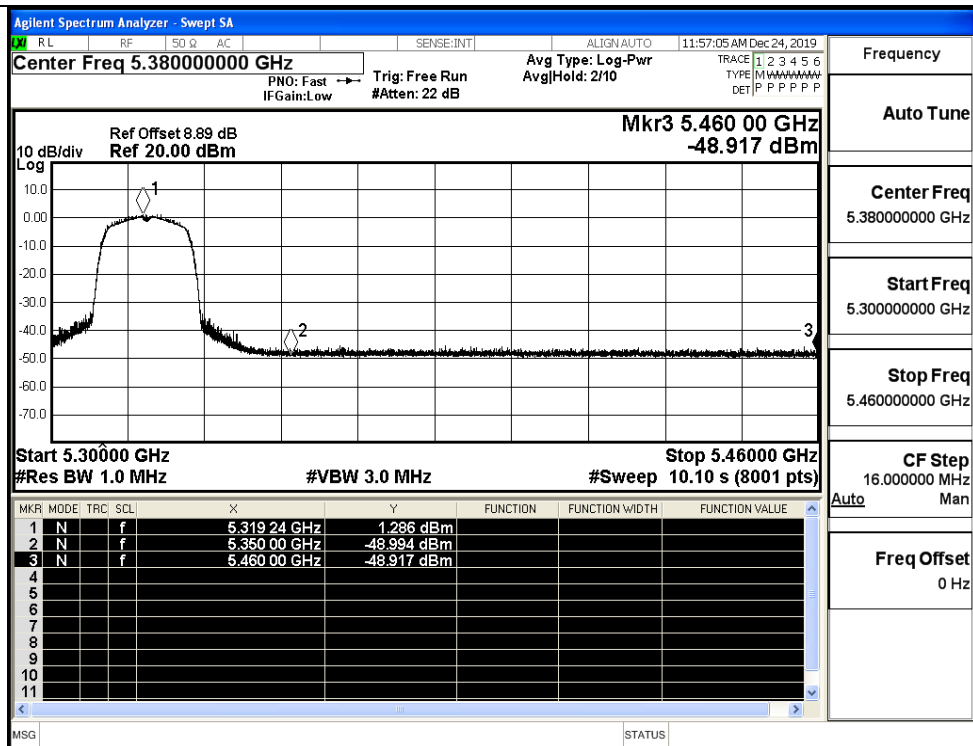
IEEE 802.11n40 / Channel 46 / 5310MHz / Average



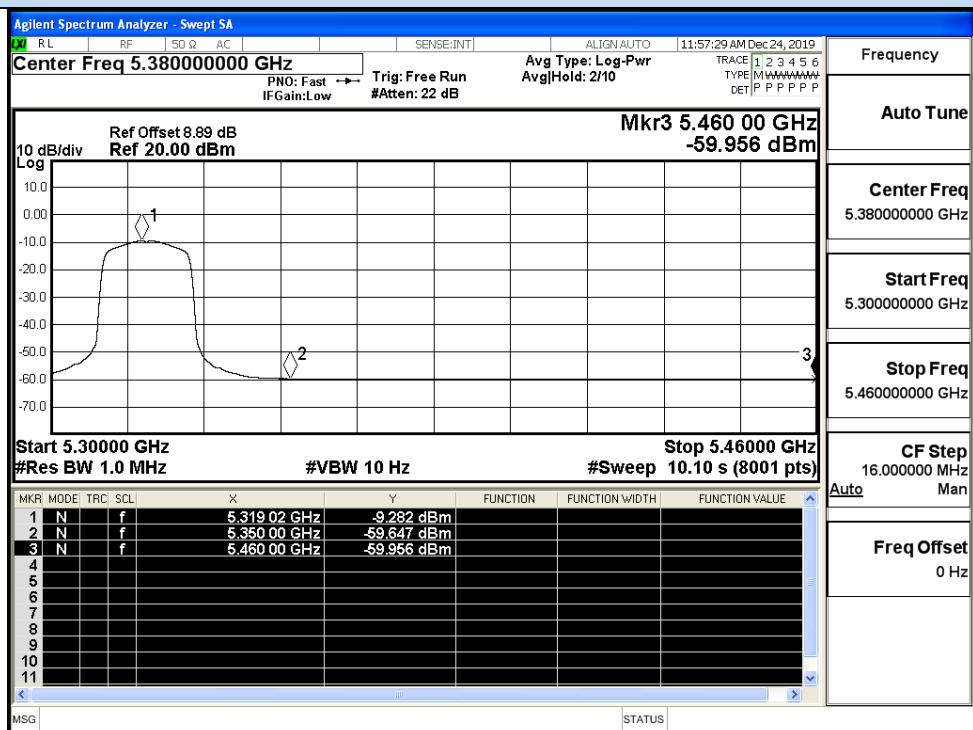
IEEE 802.11ac20 / Channel 36 / 5260MHz / Peak



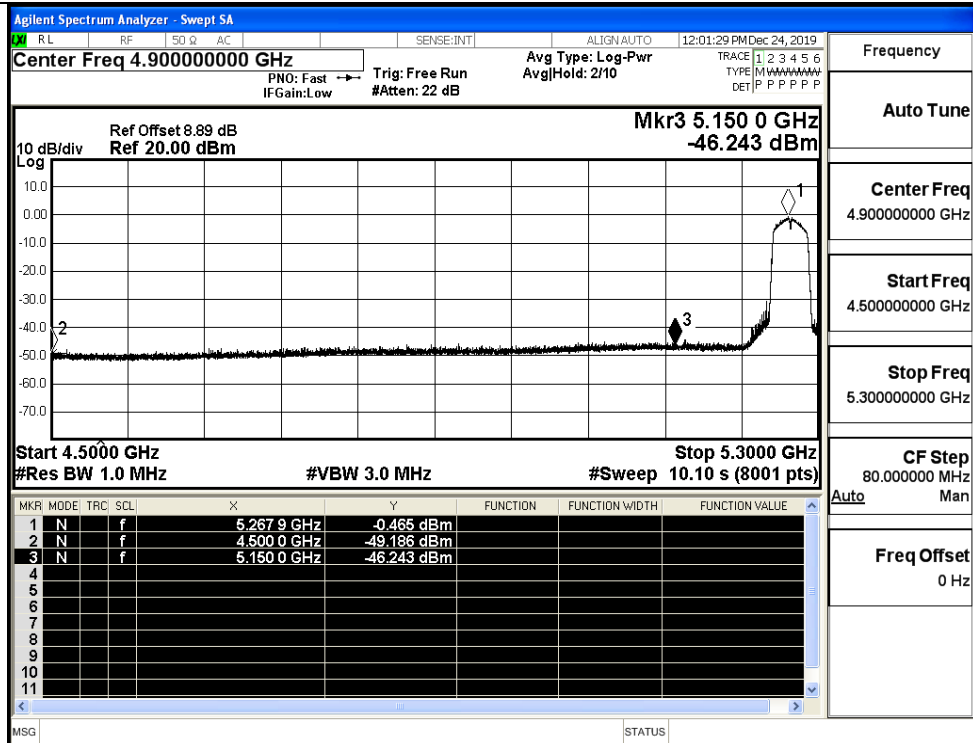
IEEE 802.11ac20 / Channel 36 / 5260MHz / Average



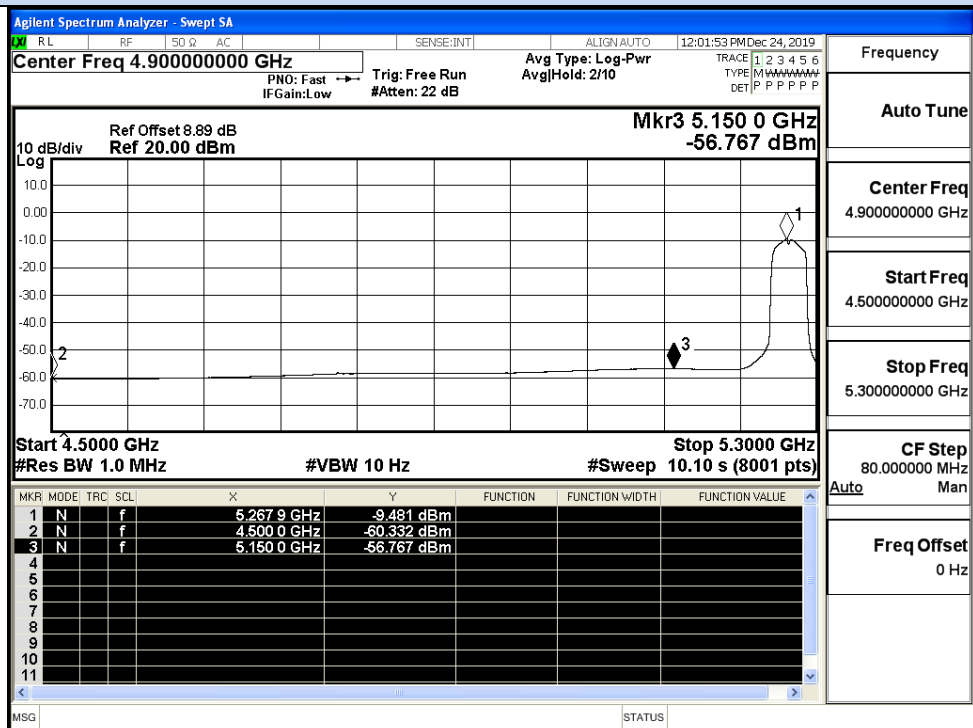
IEEE 802.11ac20 / Channel 48 / 5320MHz / Peak



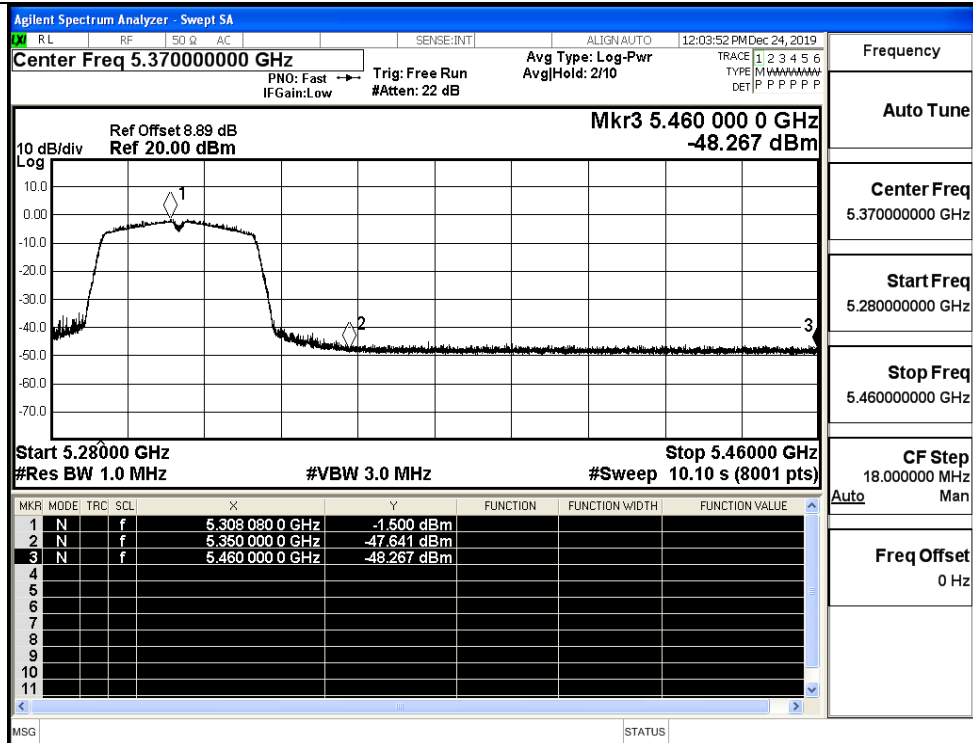
IEEE 802.11ac20 / Channel 48 / 5320MHz / Average



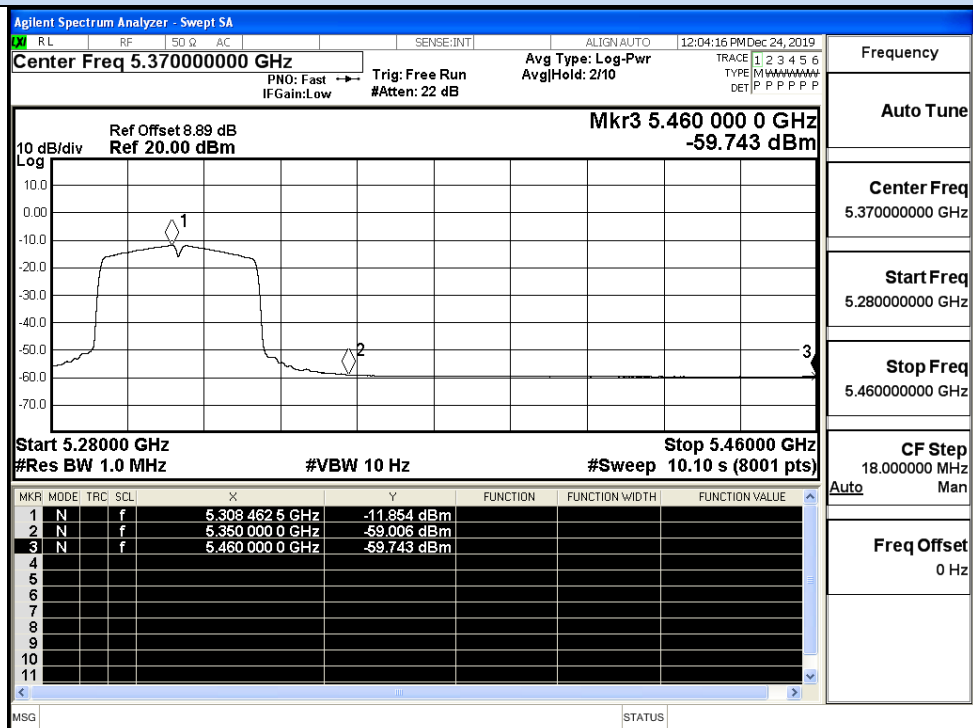
IEEE 802.11ac40 / Channel 38/ 5270MHz / Peak



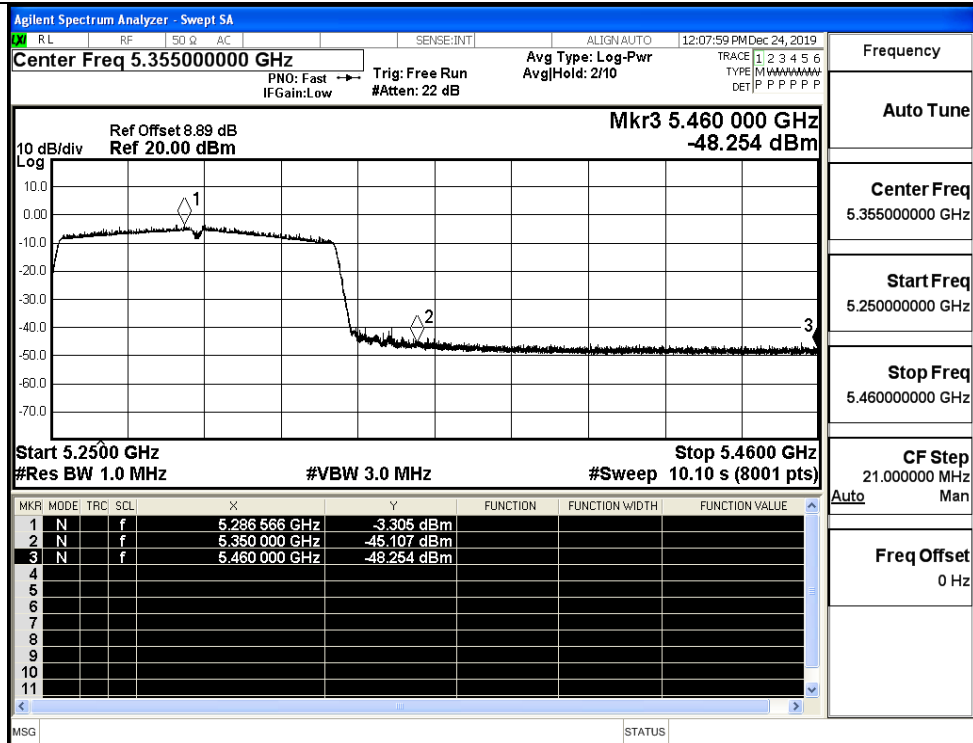
IEEE 802.11ac40 / Channel 38 / 5270MHz / Average



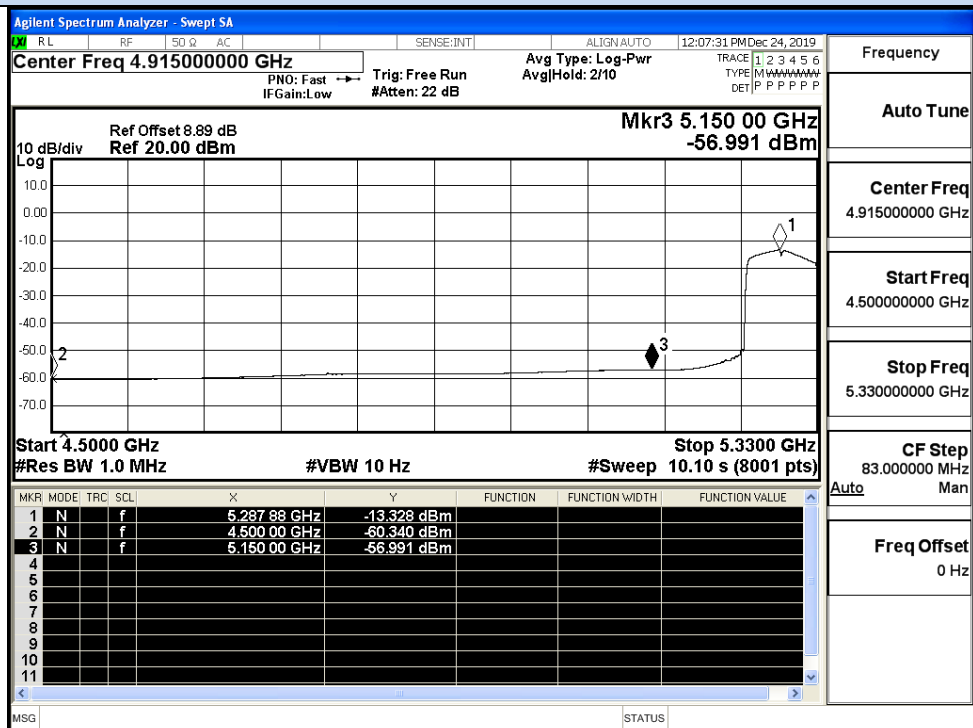
IEEE 802.11ac40 / Channel 46/ 5310MHz / Peak



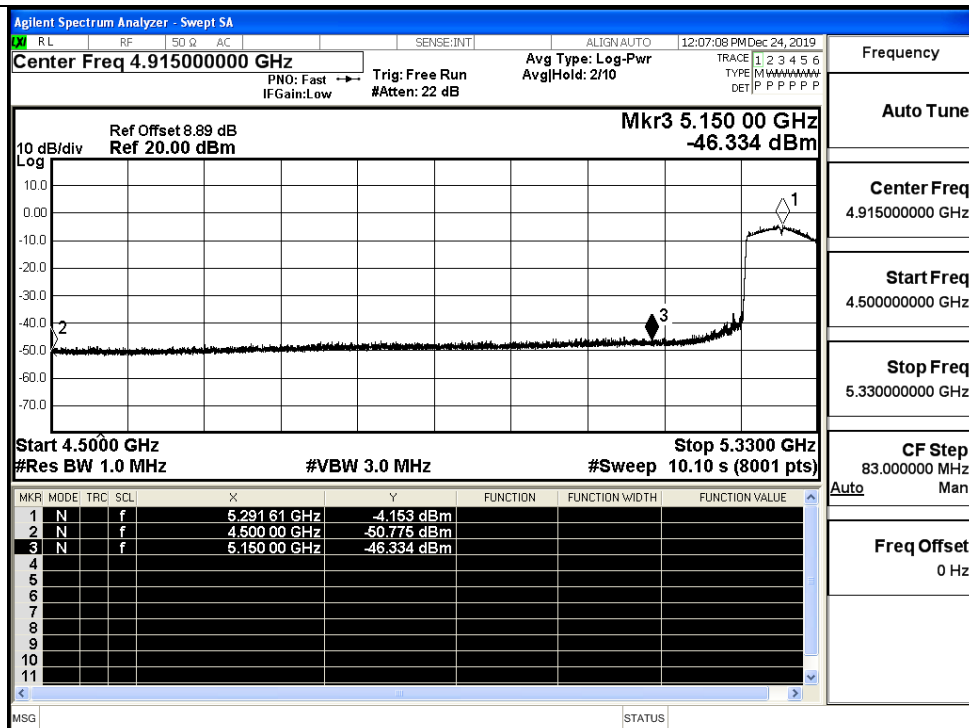
IEEE 802.11ac40 / Channel 46 / 5310MHz / Average



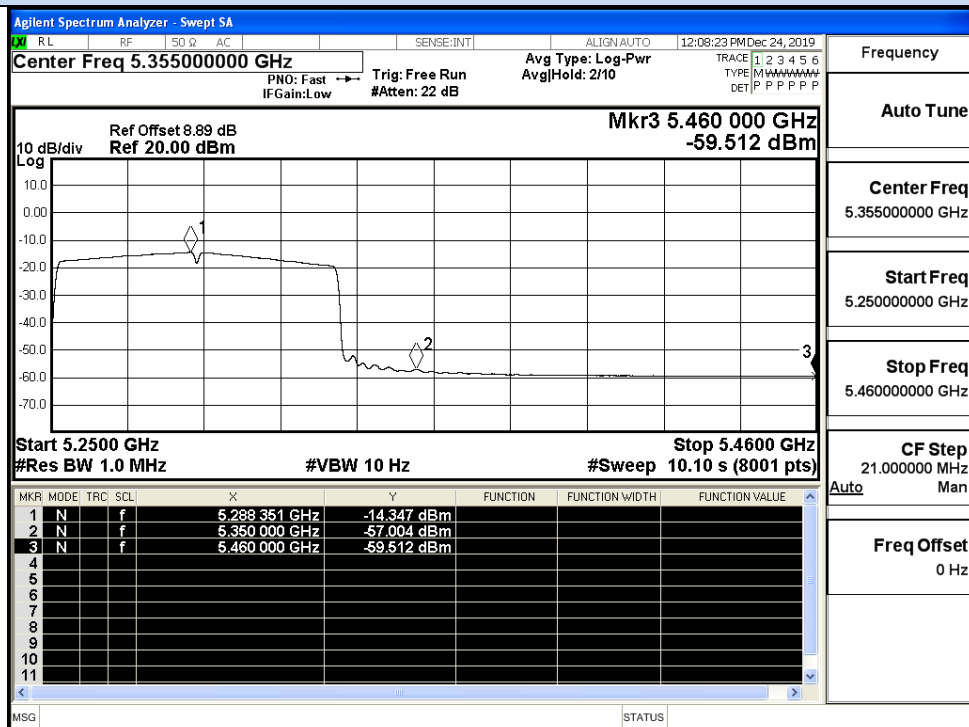
IEEE 802.11ac80 / Channel 42 / 5290MHz / Peak



IEEE 802.11ac80 / Channel 42 / 5290MHz / Average



IEEE 802.11ac80 / Channel 42/ 5290MHz / Peak



IEEE 802.11ac80 / Channel 42 / 5290MHz / Average