

Appendix A

RF Test Data for 5.2G WLAN (Conducted Measurement)

Product Name: wireless video transmitter system

Trade Mark: N/A

Test Model: 7103&3103

Environmental Conditions

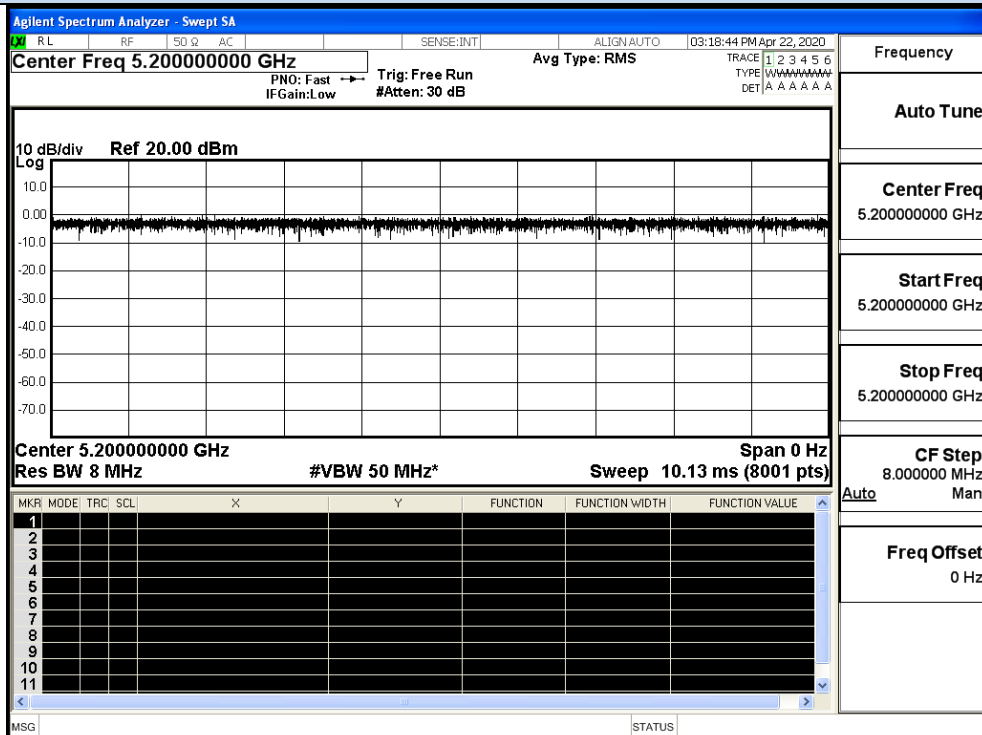
Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Jack Liu
Supervised by:	Li Huan

A.1 Duty Cycle

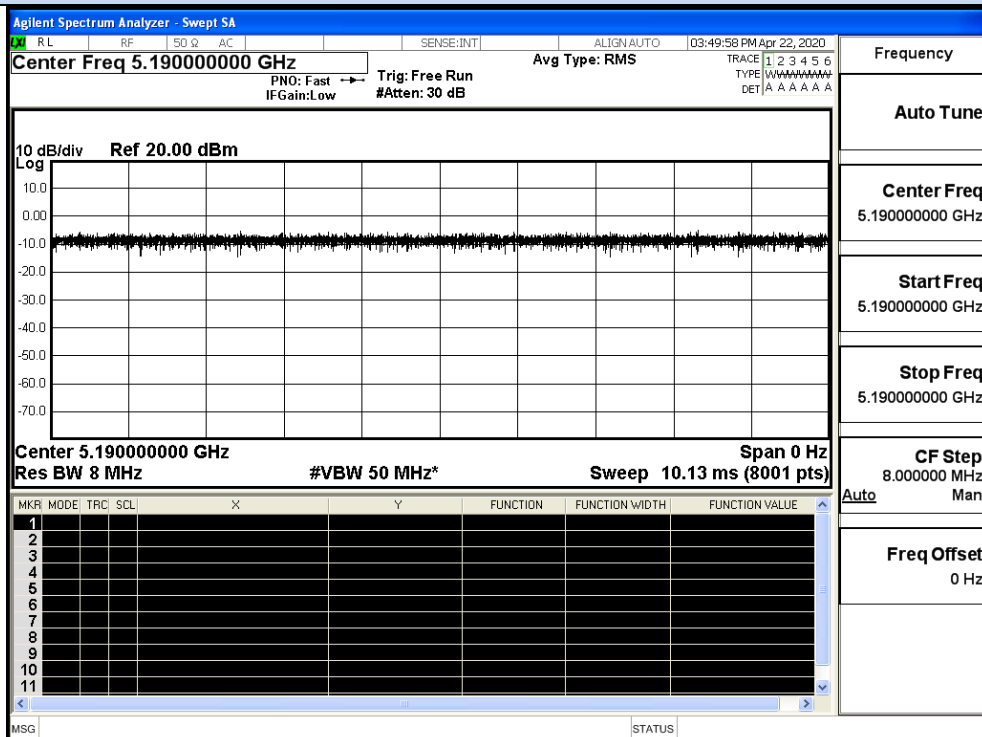
Antenna 0

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11N20 SISO	5200	100	0	0.01
11N40 SISO	5190	100	0	0.01

On Time and Duty Cycle



IEEE 802.11n HT20

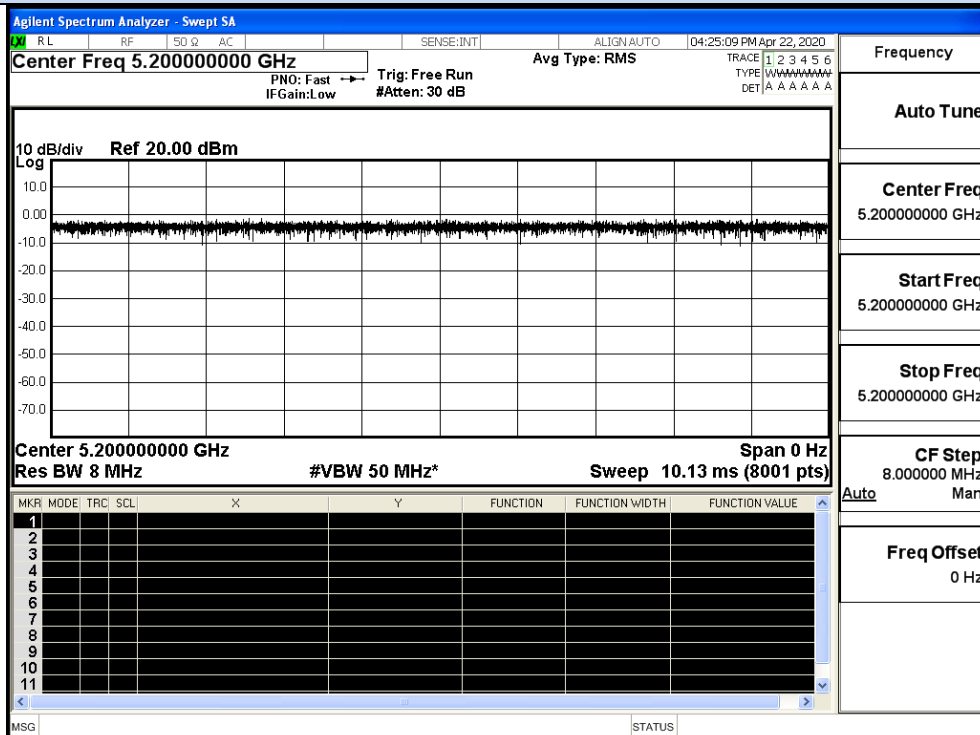


IEEE 802.11n HT40

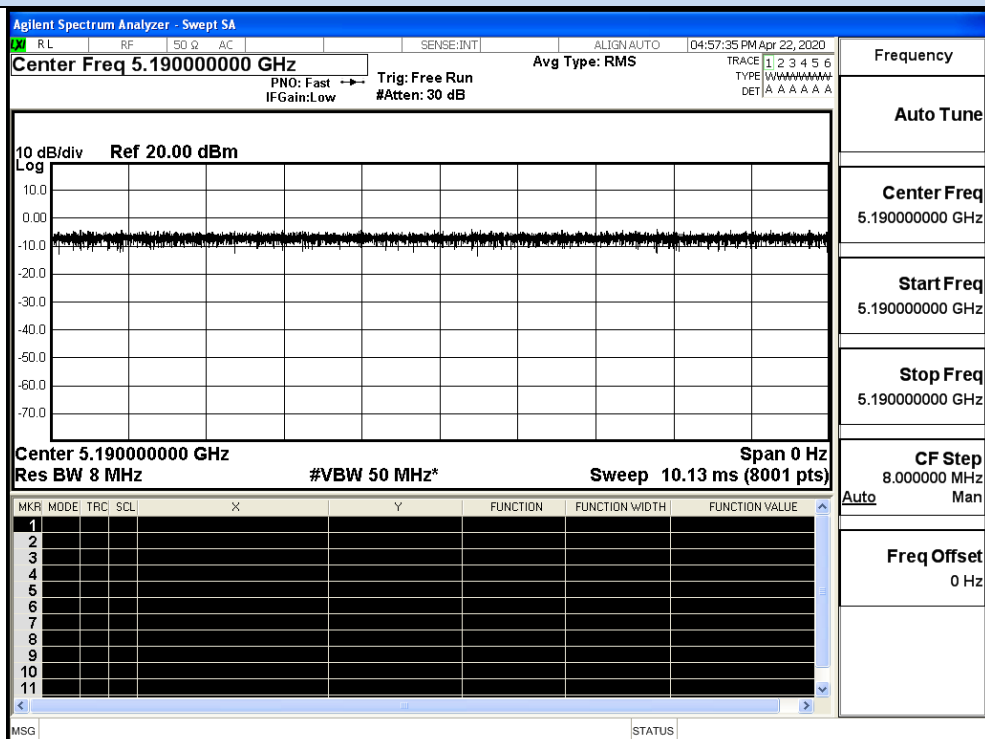
Antenna 1

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW(KHz)
11N20 SISO	5200	100	0	0.01
11N40 SISO	5190	100	0	0.01

On Time and Duty Cycle



IEEE 802.11n HT20



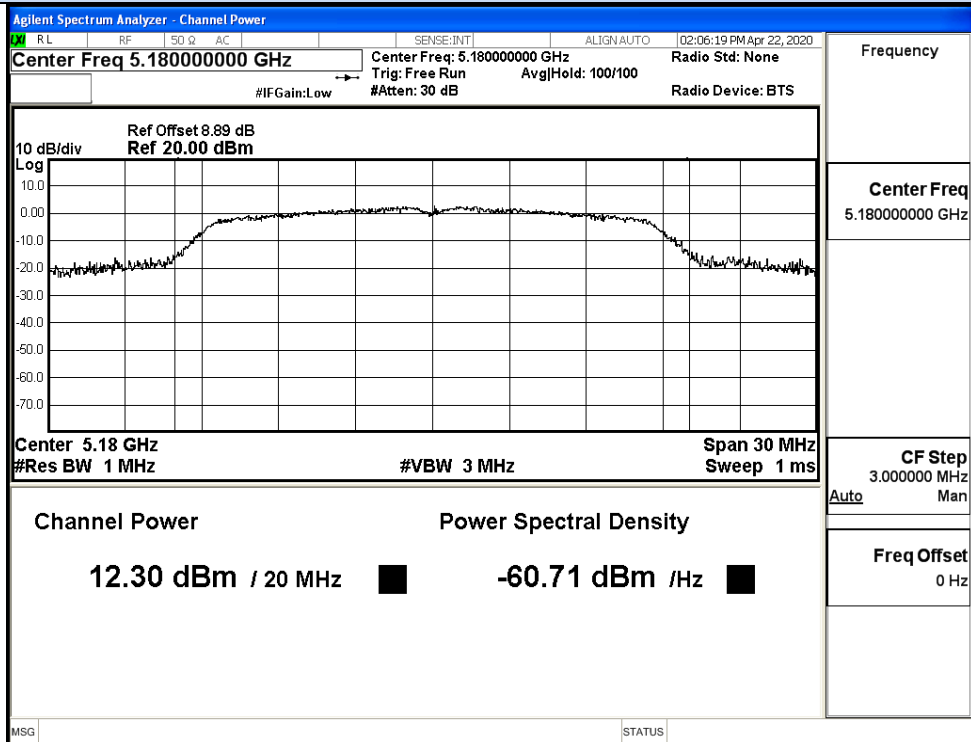
IEEE 802.11n HT40

A.2 Maximum Conduct Output Power

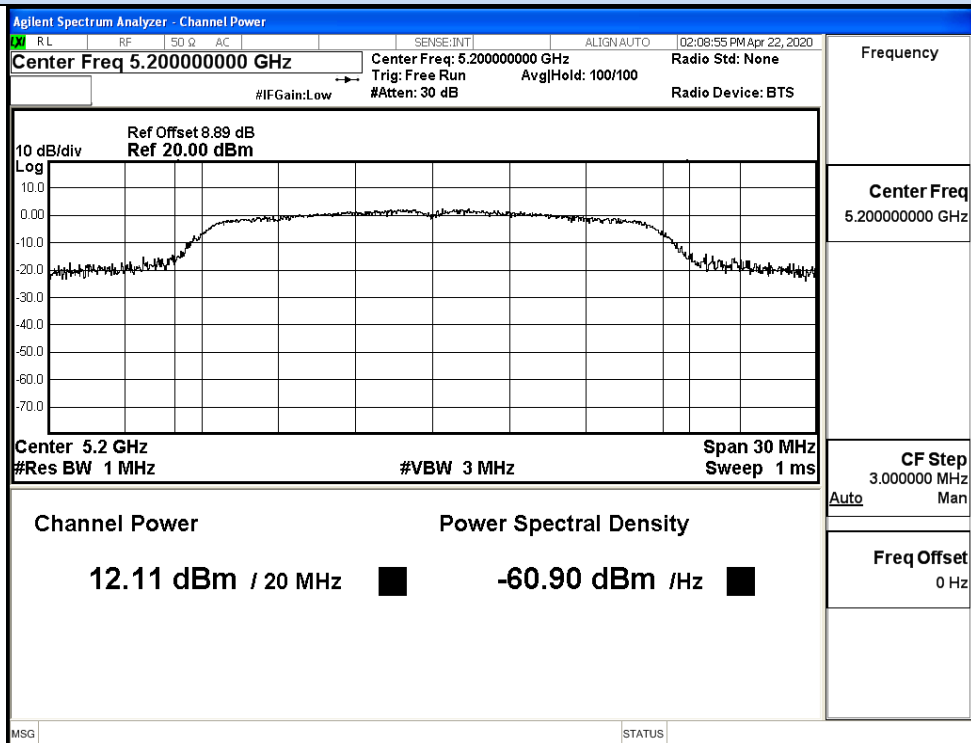
Antenna 0

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor(dB)	Report Conducted Power(dBm)	Limit (dBm)	Verdict
11N20 SISO	36	5180	12.3	0.00	12.3	24	Pass
	40	5200	12.11	0.00	12.11		Pass
	48	5240	11.46	0.00	11.46		Pass
11N40 SISO	38	5190	9.95	0.00	9.95	24	Pass
	46	5230	9.93	0.00	9.93		Pass

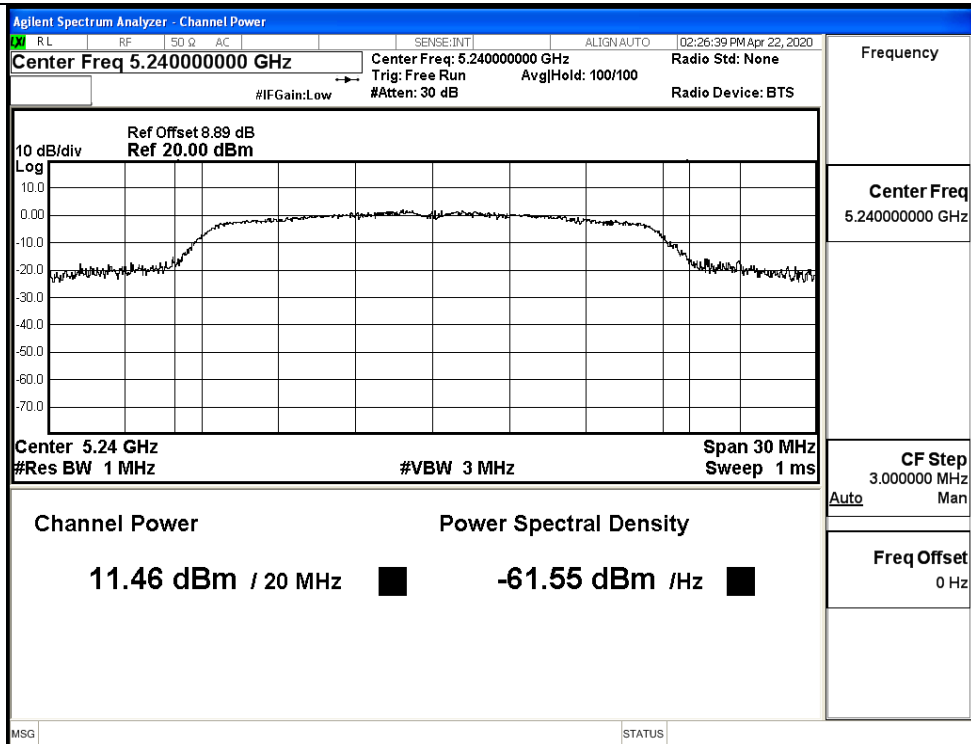
Maximum Conducted Output Power



IEEE 802.11n20 / Channel 36 / 5180MHz

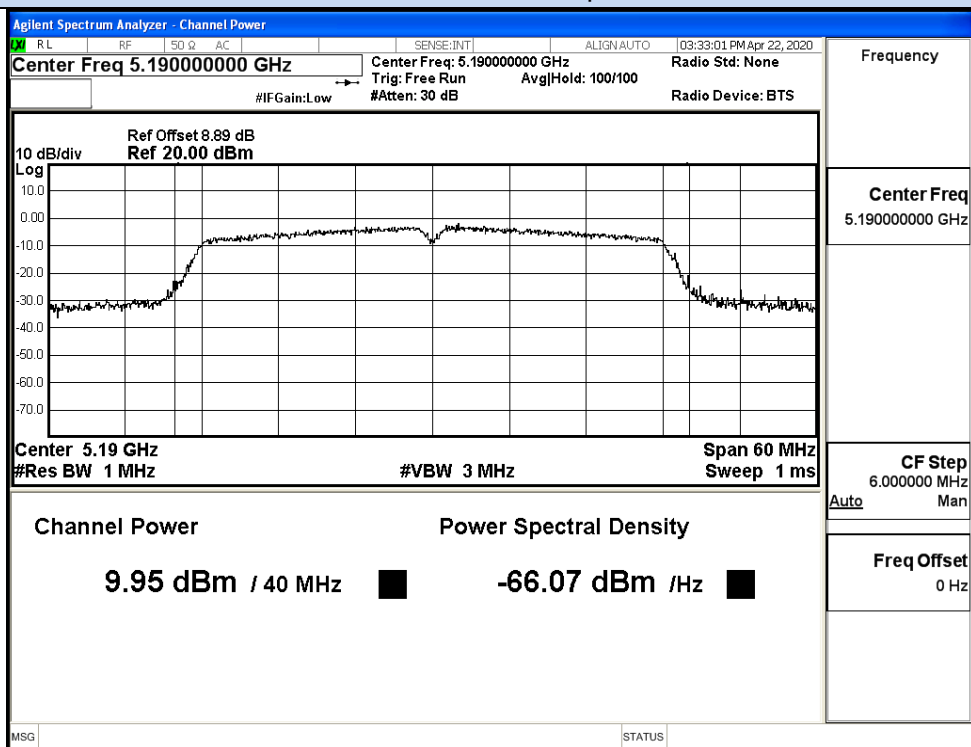


IEEE 802.11n20 / Channel 40 / 5200MHz

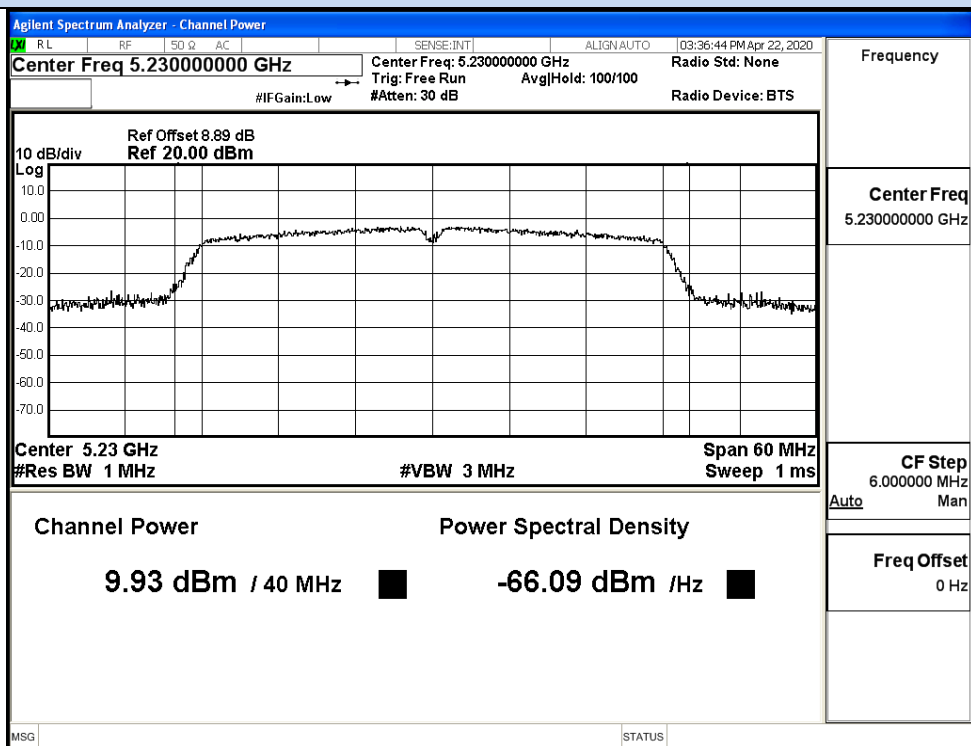


IEEE 802.11n20 / Channel 48 / 5240MHz

Maximum Conducted Output Power



IEEE 802.11n40 / Channel 38 / 5190MHz

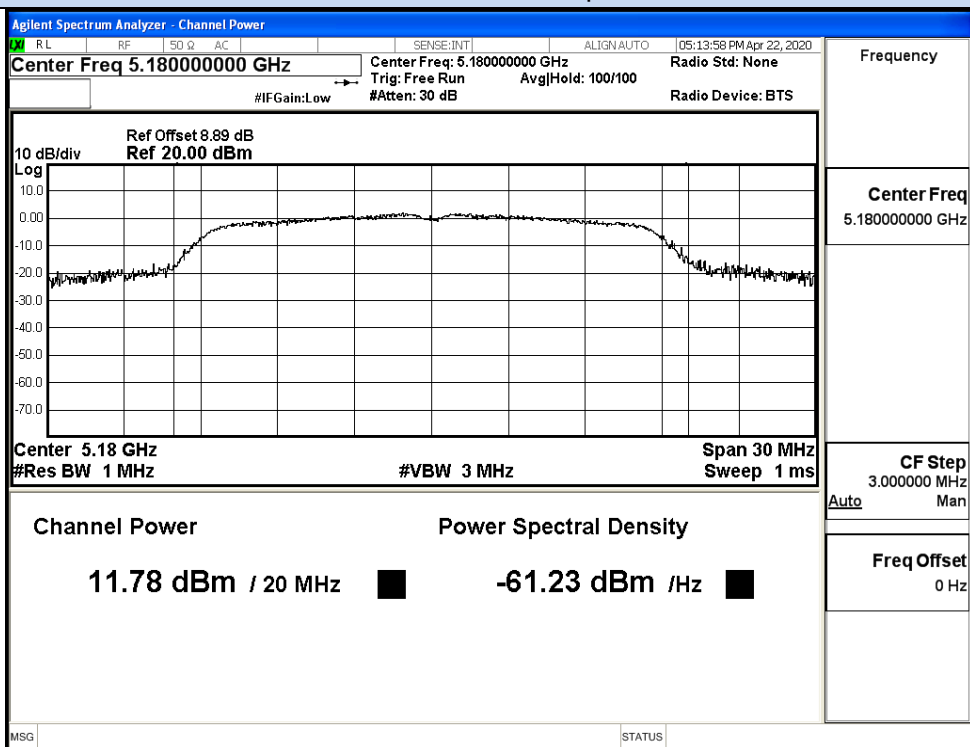


IEEE 802.11n40 / Channel 46 / 5230MHz

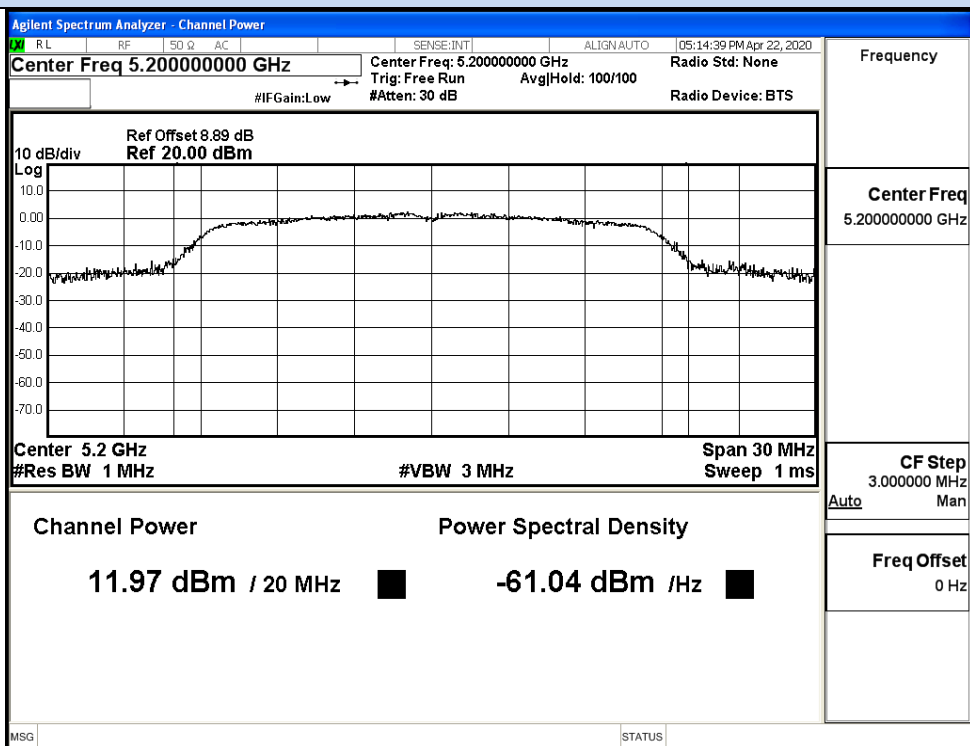
Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor(dB)	Report Conducted Power(dBm)	Limit (dBm)	Verdict
11N20 SISO	36	5180	11.78	0	11.78	24	Pass
	40	5200	11.97	0	11.97		Pass
	48	5240	10.63	0	10.63		Pass
11N40 SISO	38	5190	6.5	0	6.5	24	Pass
	46	5230	6.17	0	6.17		Pass

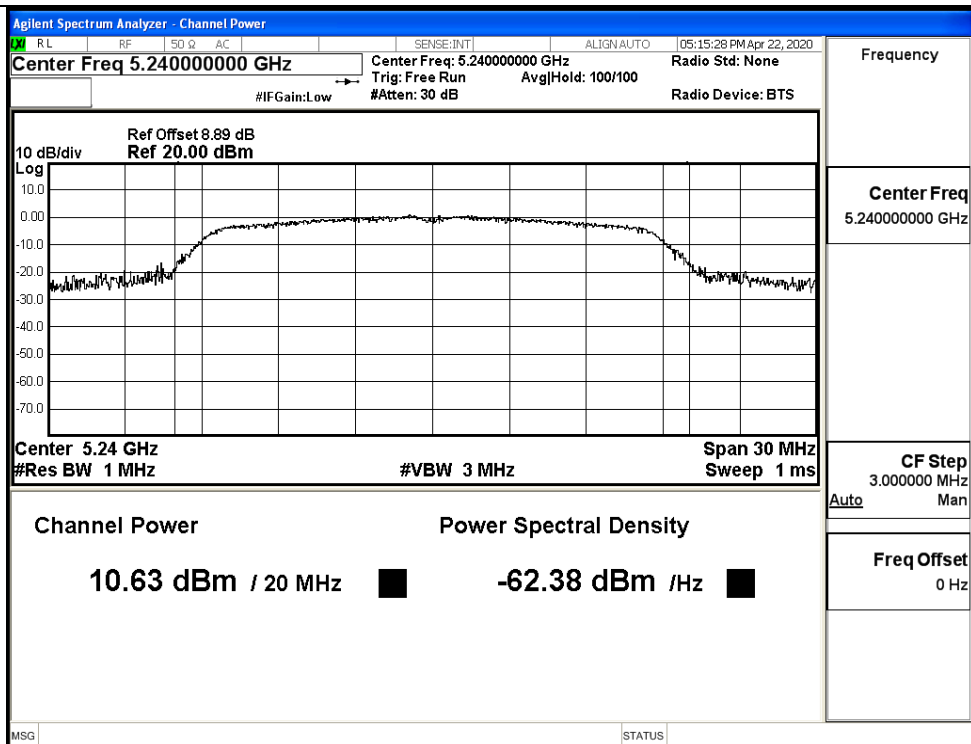
Maximum Conducted Output Power



IEEE 802.11n20 / Channel 36 / 5180MHz

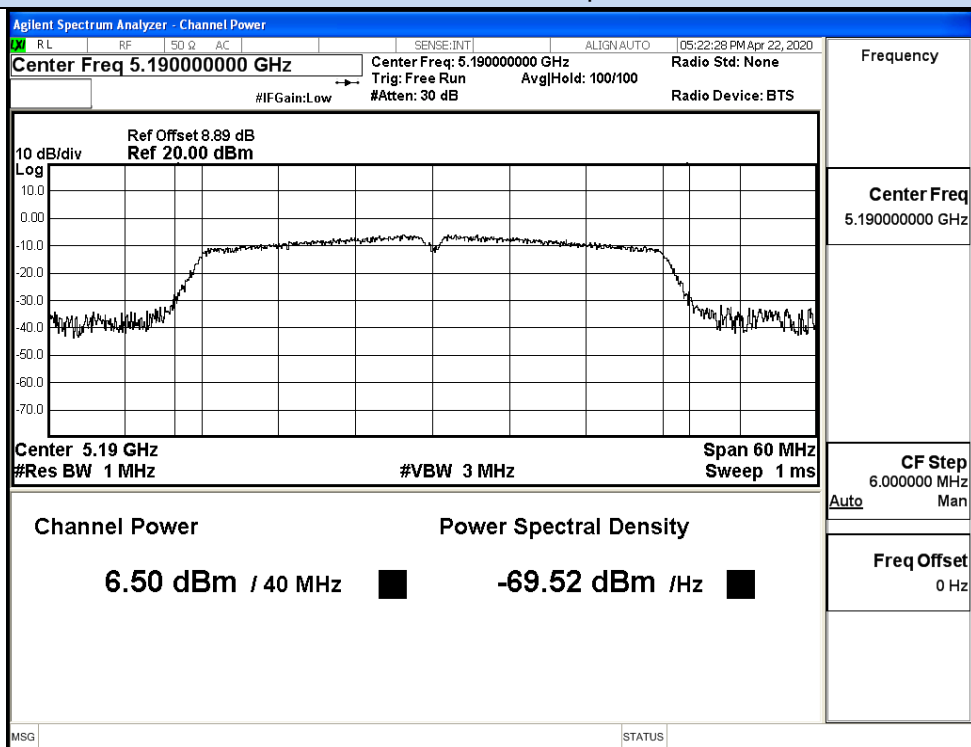


IEEE 802.11n20 / Channel 40 / 5200MHz

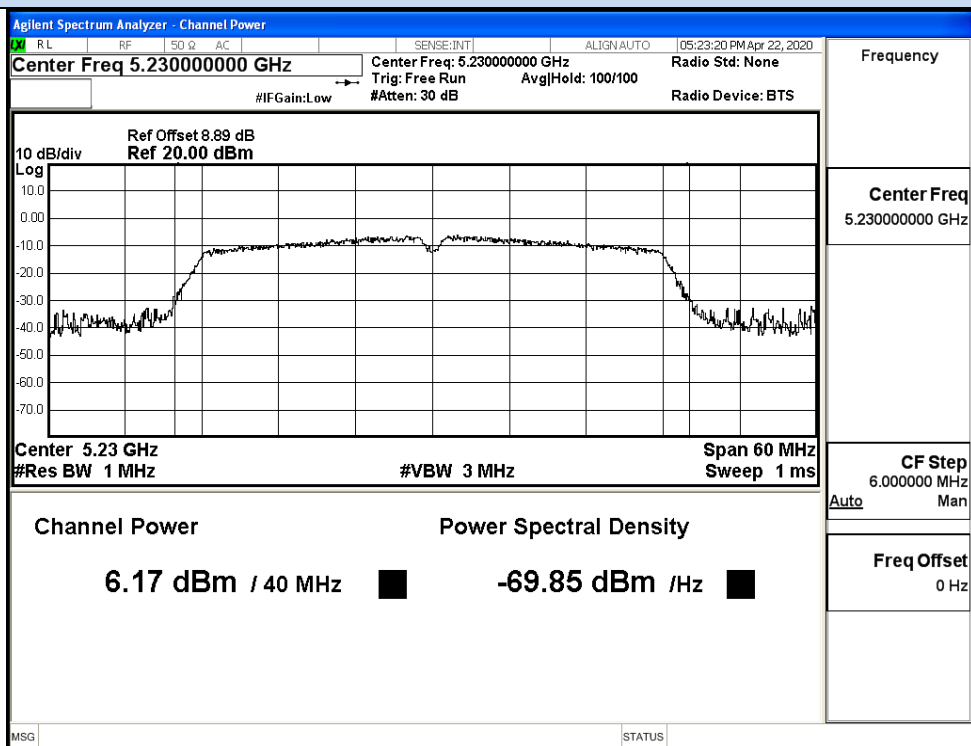


IEEE 802.11n20 / Channel 48 / 5240MHz

Maximum Conducted Output Power



IEEE 802.11n40 / Channel 38 / 5190MHz



IEEE 802.11n40 / Channel 46 / 5230MHz

Ant0+1

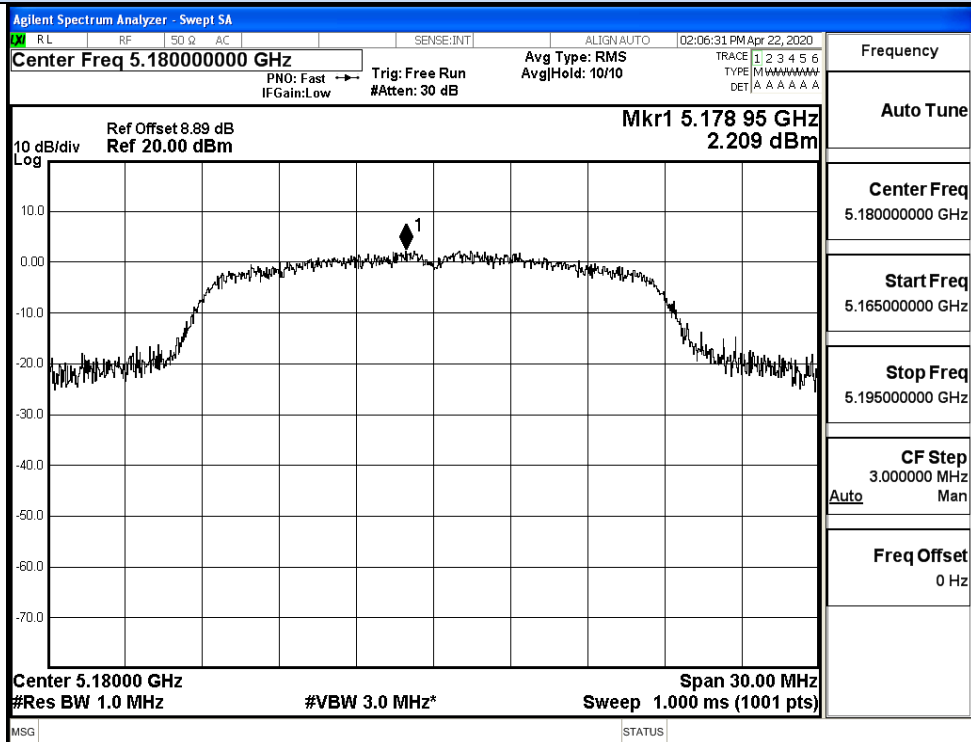
Test Mode	Channel	Frequency (MHz)	ANT 0 AVG Conducted Power (dBm)	ANT 1 AVG Conducted Power (dBm)	ANT 0+1 AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)	Verdict
11N20 SISO	36	5180	12.3	11.78	15.06	0	15.06	24	Pass
	40	5200	12.11	11.97	15.05	0	15.05		Pass
	48	5240	11.46	10.63	14.08	0	14.08		Pass
11N40 SISO	38	5190	9.95	6.5	11.57	0	11.57	24	Pass
	46	5230	9.93	6.17	11.46	0	11.46		Pass

A.3 Power Spectral Density

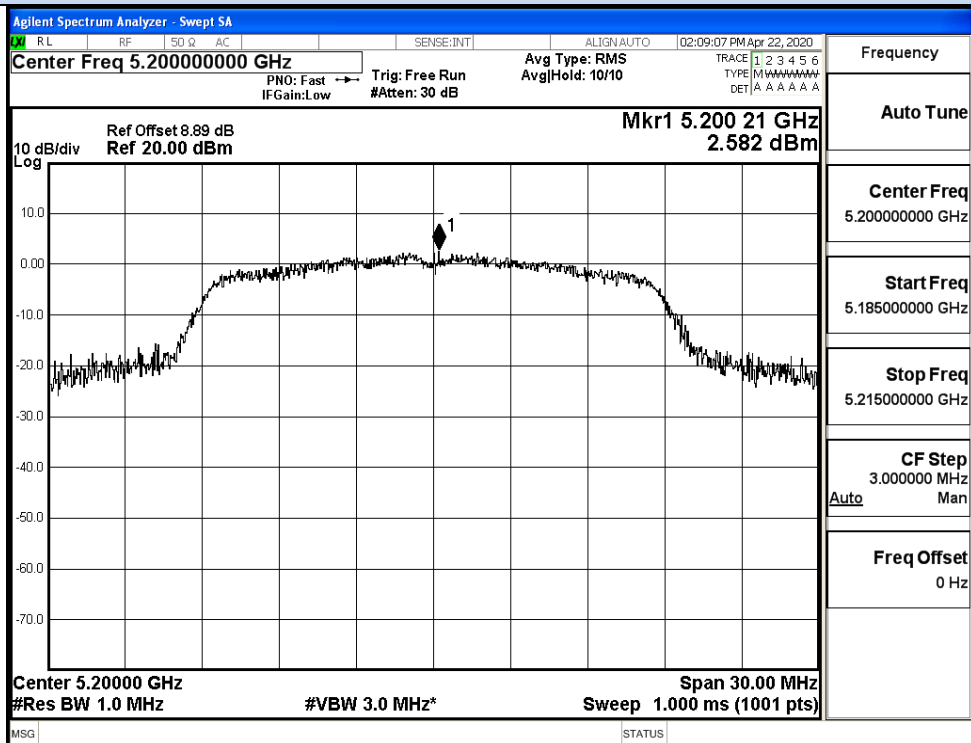
Antenna 0

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/MHz)	Limit (dBm/MHz)	Verdict
11N2 0 SISO	36	5180	2.21	0	2.21	11	Pass
	40	5200	2.58	0	2.58		Pass
	48	5240	1.65	0	1.65		Pass
11N4 0 SISO	38	5190	-2.85	0	-2.85	11	Pass
	46	5230	-3.06	0	-3.06		Pass

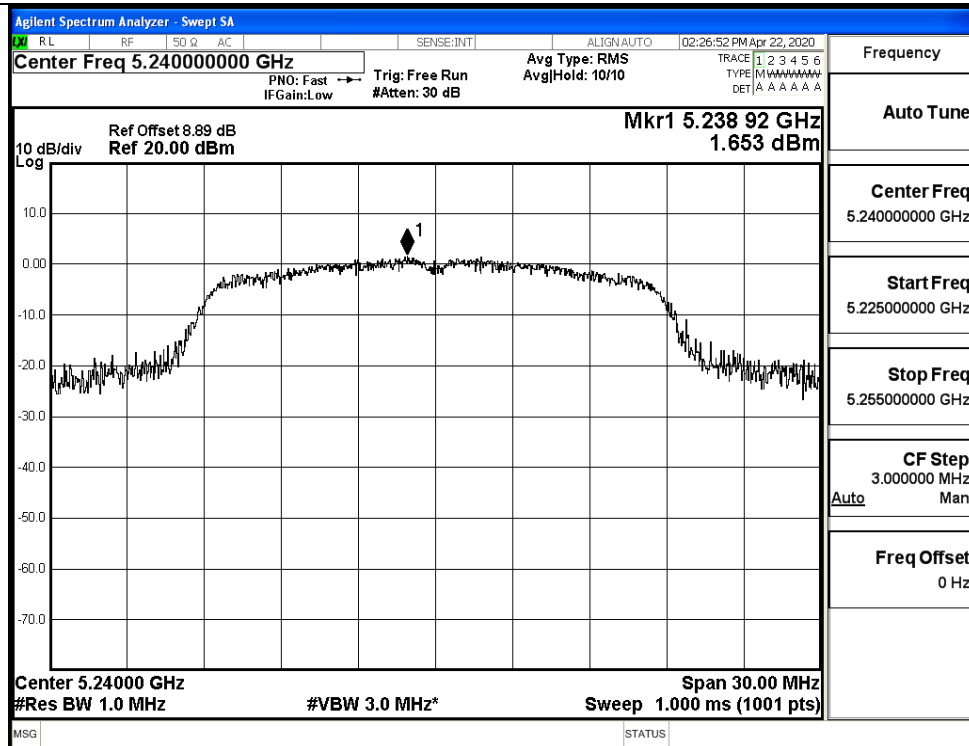
Power Spectral Density



IEEE 802.11n20 / Channel 36 / 5180MHz

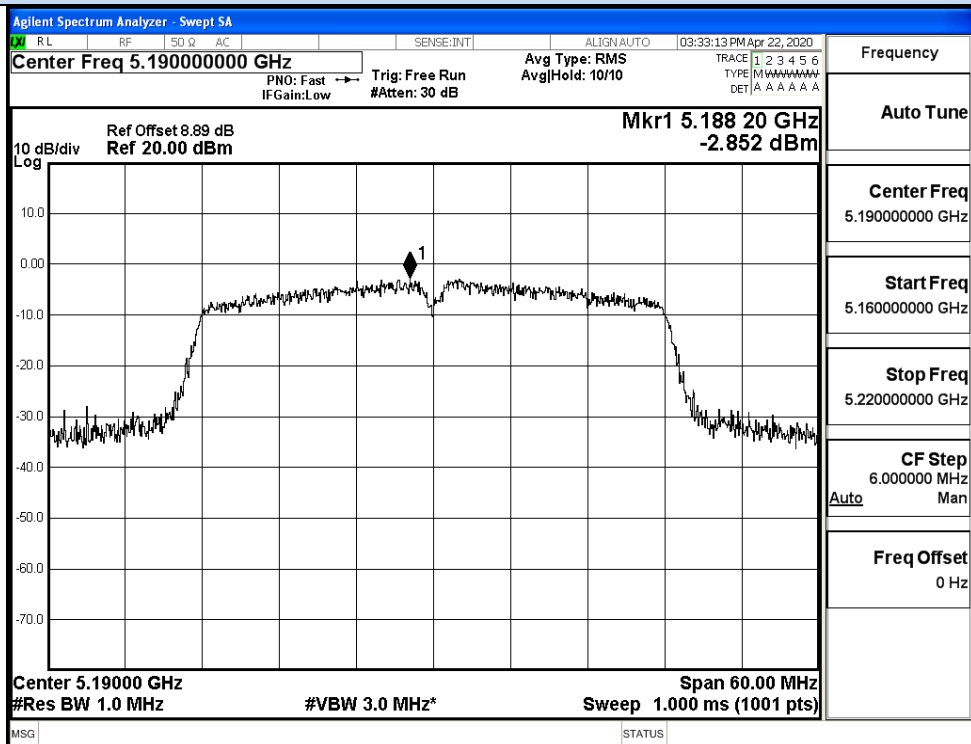


IEEE 802.11n20 / Channel 40 / 5200MHz

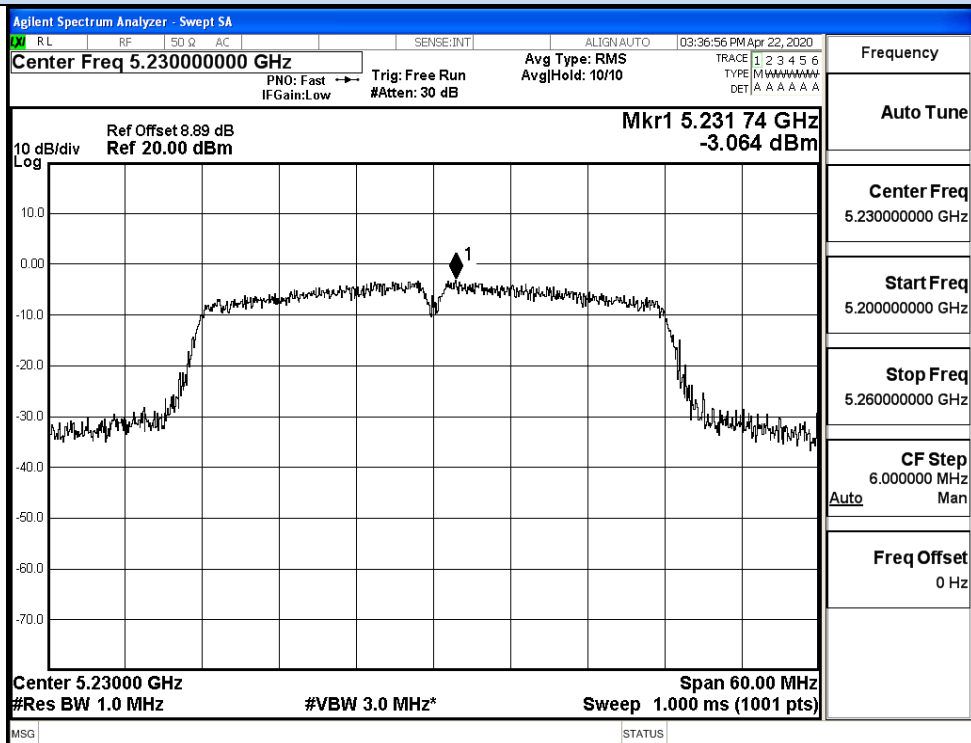


IEEE 802.11n20 / Channel 48 / 5240MHz

Power Spectral Density



IEEE 802.11n40 / Channel 38 / 5190MHz

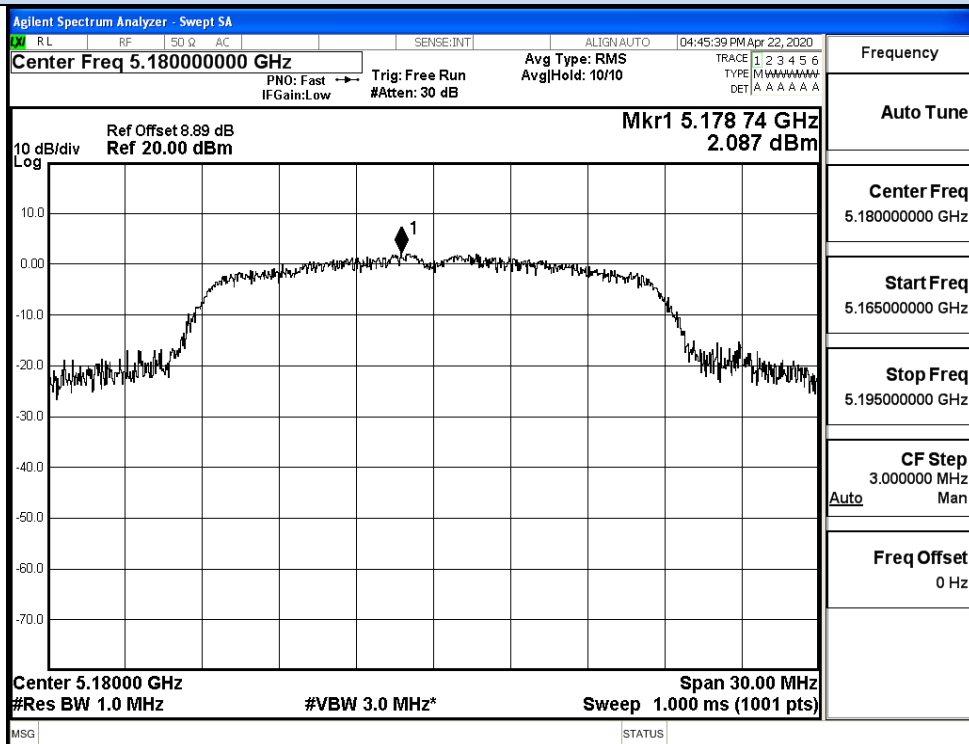


IEEE 802.11n40 / Channel 46 / 5230MHz

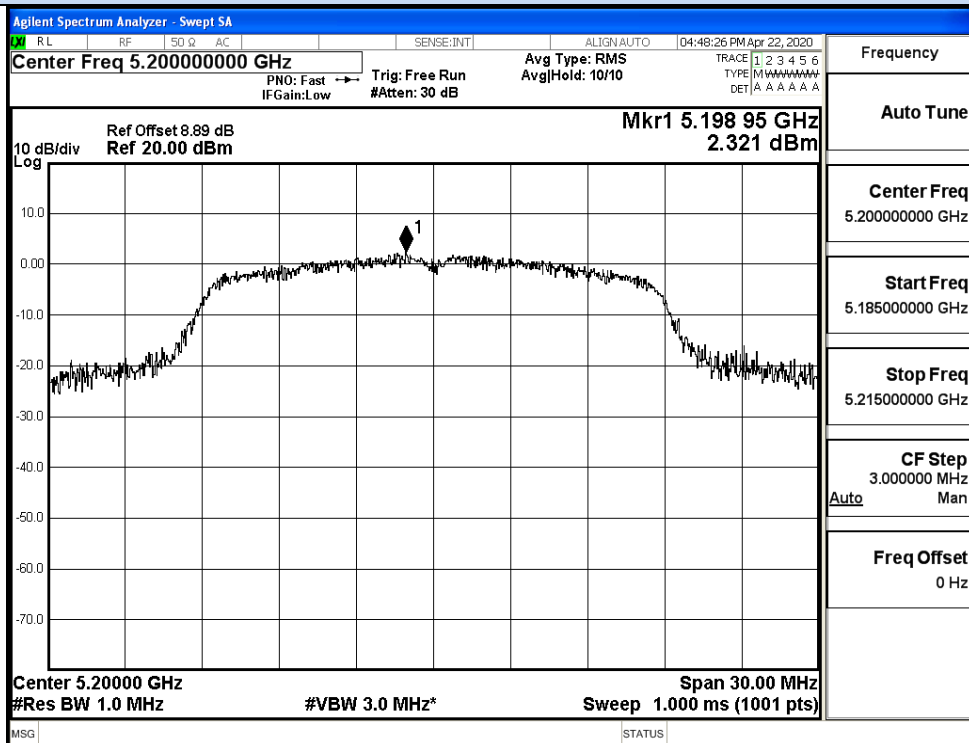
Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/MHz)	Limit (dBm/MHz)	Verdict
11N20 SISO	36	5180	2.09	0	2.09	11	Pass
	40	5200	2.32	0	2.32		Pass
	48	5240	1.91	0	1.91		Pass
11N40 SISO	38	5190	-0.35	0	-0.35	11	Pass
	46	5230	-0.70	0	-0.70		Pass

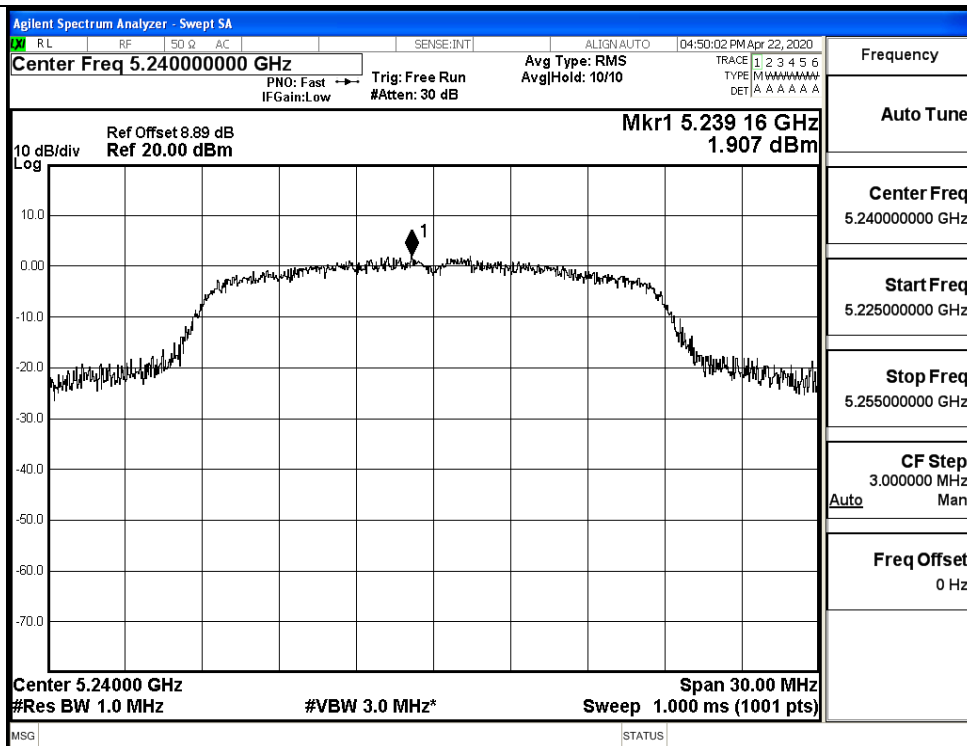
Power Spectral Density



IEEE 802.11n20 / Channel 36 / 5180MHz

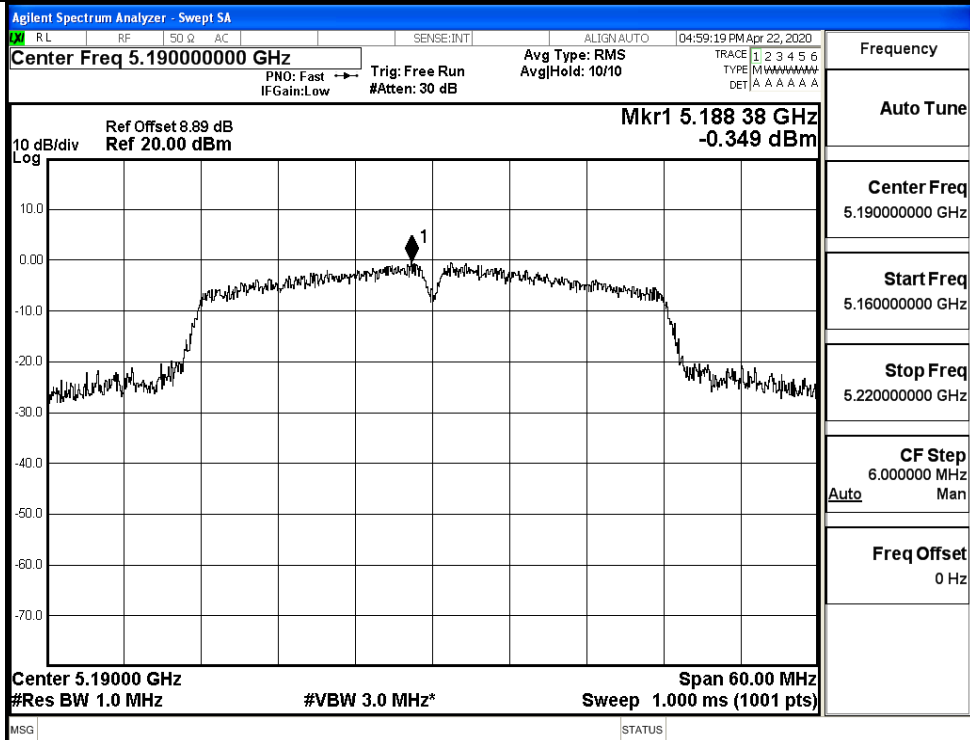


IEEE 802.11n20 / Channel 40 / 5200MHz

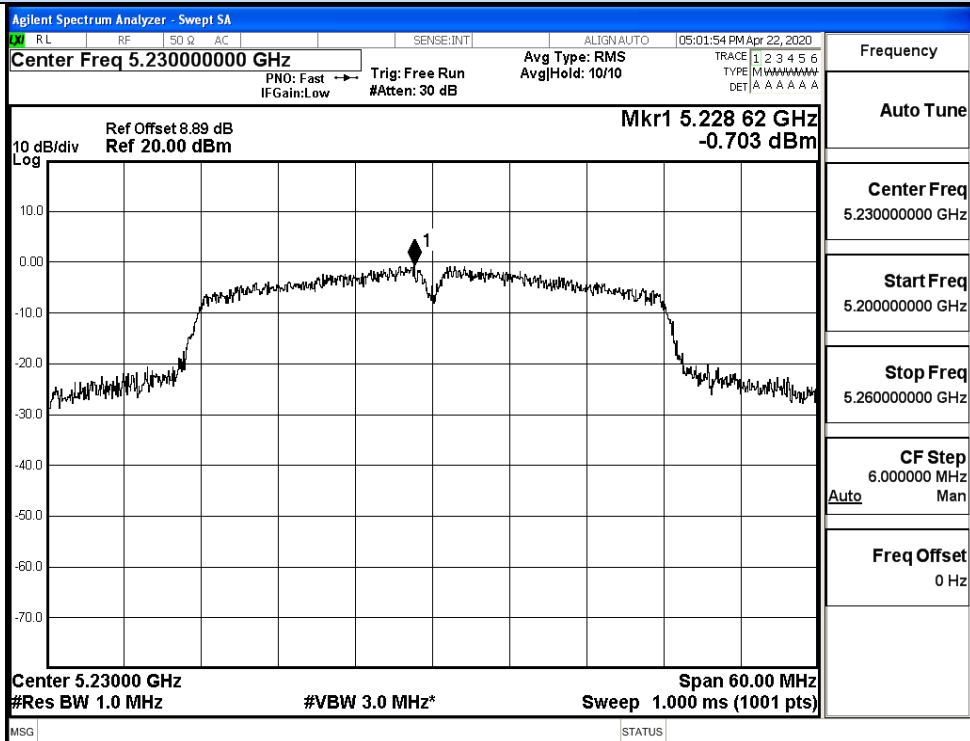


IEEE 802.11n20 / Channel 48 / 5240MHz

Power Spectral Density



IEEE 802.11n40 / Channel 38 / 5190MHz



IEEE 802.11n40 / Channel 46 / 5230MHz

Ant0+1

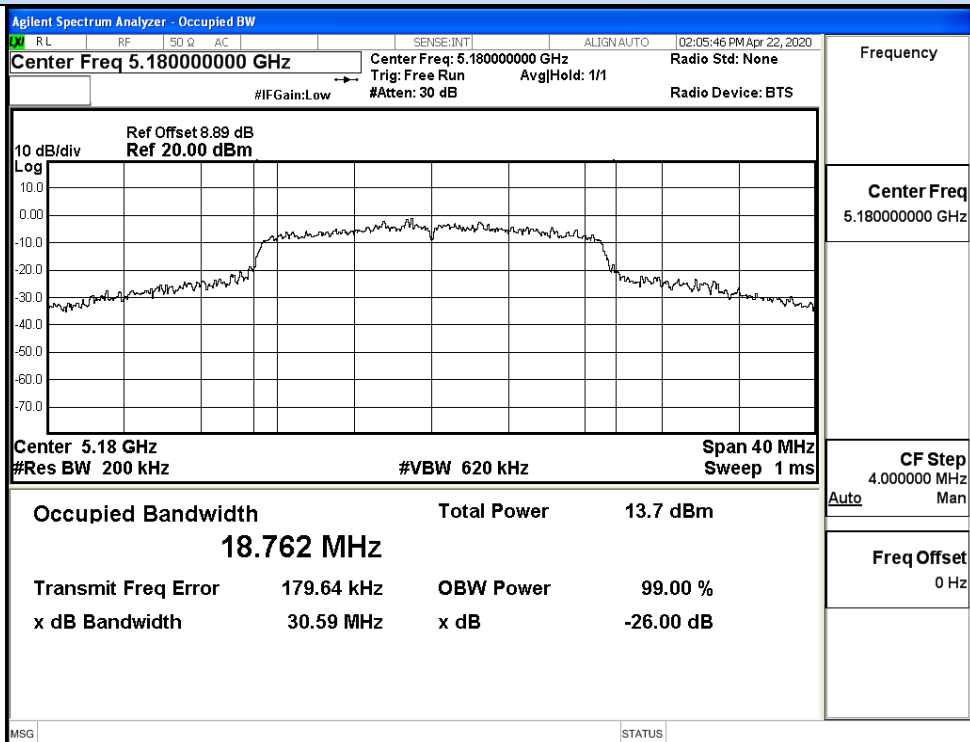
Test Mode	Channel	Frequency (MHz)	ANT 0 Power Density (dBm/MHz)	ANT 1 Power Density (dBm/MHz)	ANT 0+1 Power Density (dBm/MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/MHz)	Limit (dBm/MHz)	Verdict
11N20 SISO	36	5180	2.21	2.09	5.16	0	5.16	11	Pass
	40	5200	2.58	2.32	5.46	0	5.46		Pass
	48	5240	1.65	1.91	4.79	0	4.79		Pass
11N40 SISO	38	5190	-2.85	-0.35	1.59	0	1.59	11	Pass
	46	5230	-3.06	-0.70	1.29	0	1.29		Pass

A.4 Emission Bandwidth

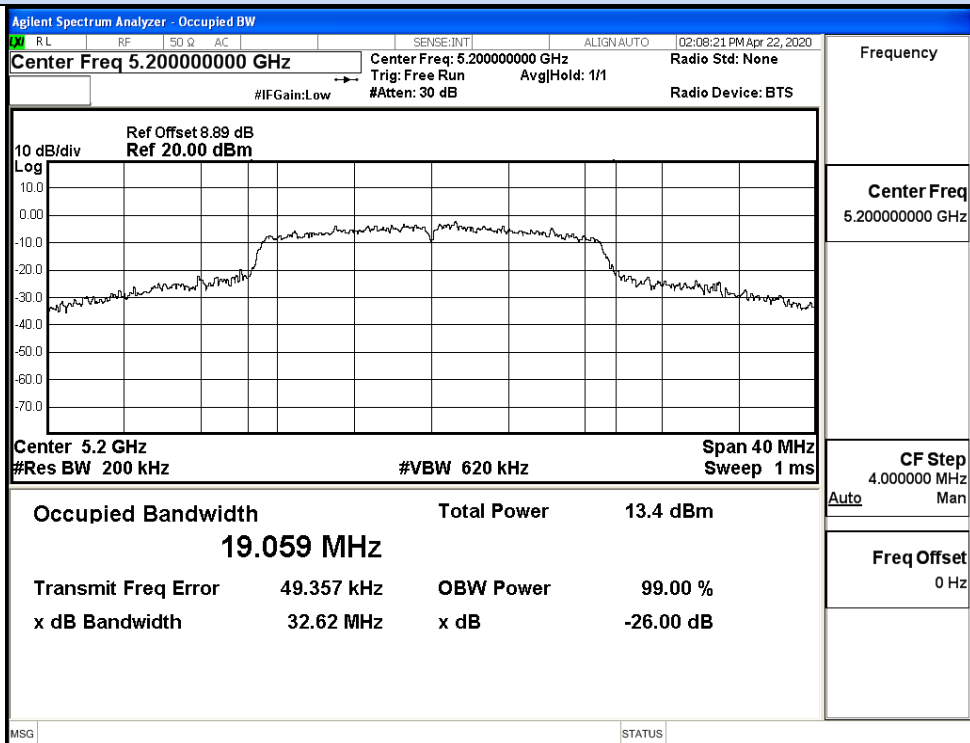
Antenna 0

Test Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
11N20 SISO	36	5180	30.59	No Limit	Pass
	40	5200	32.62		Pass
	48	5240	31.72		Pass
11N40 SISO	38	5190	46.12	No Limit	Pass
	46	5230	45.39		Pass

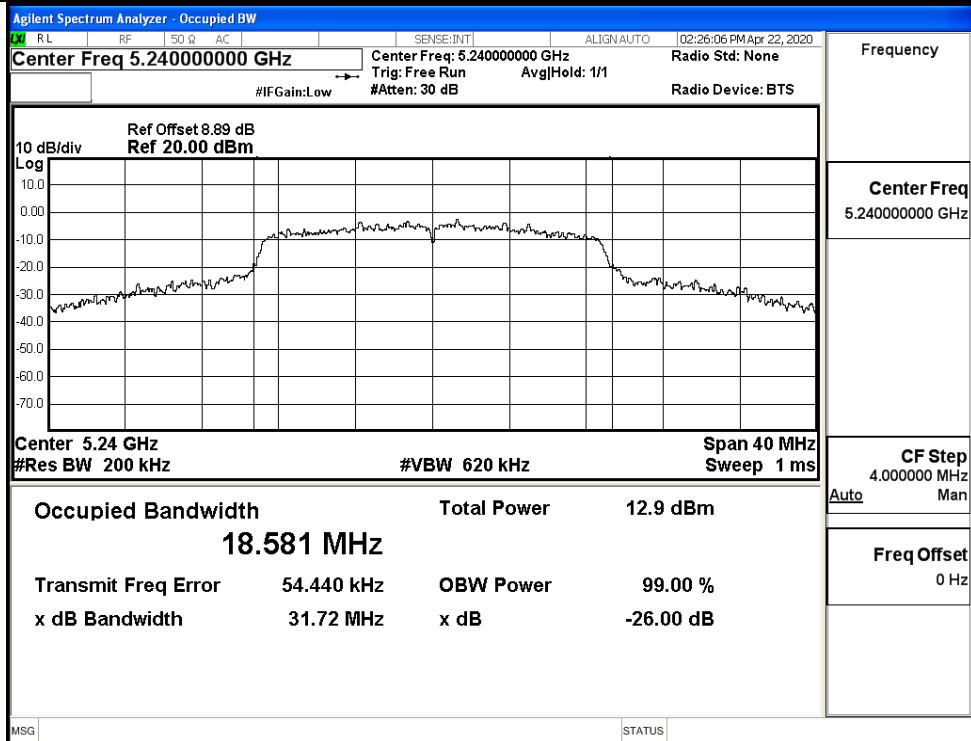
26dB Bandwidth



IEEE 802.11n20 / Channel 36 / 5180MHz

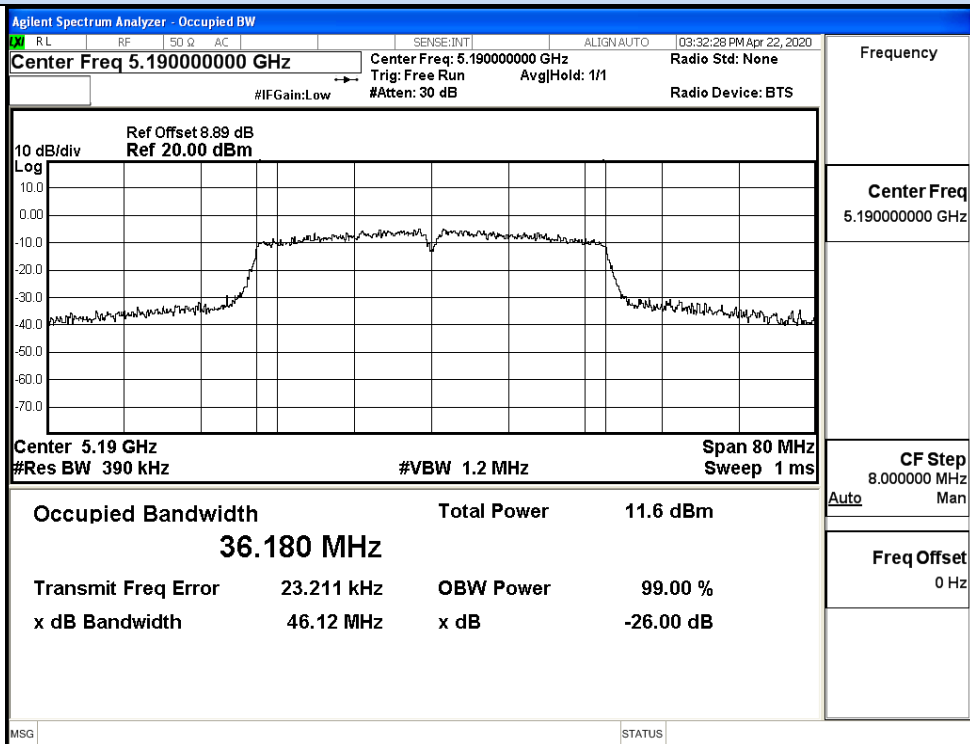


IEEE 802.11n20 / Channel 40 / 5200MHz

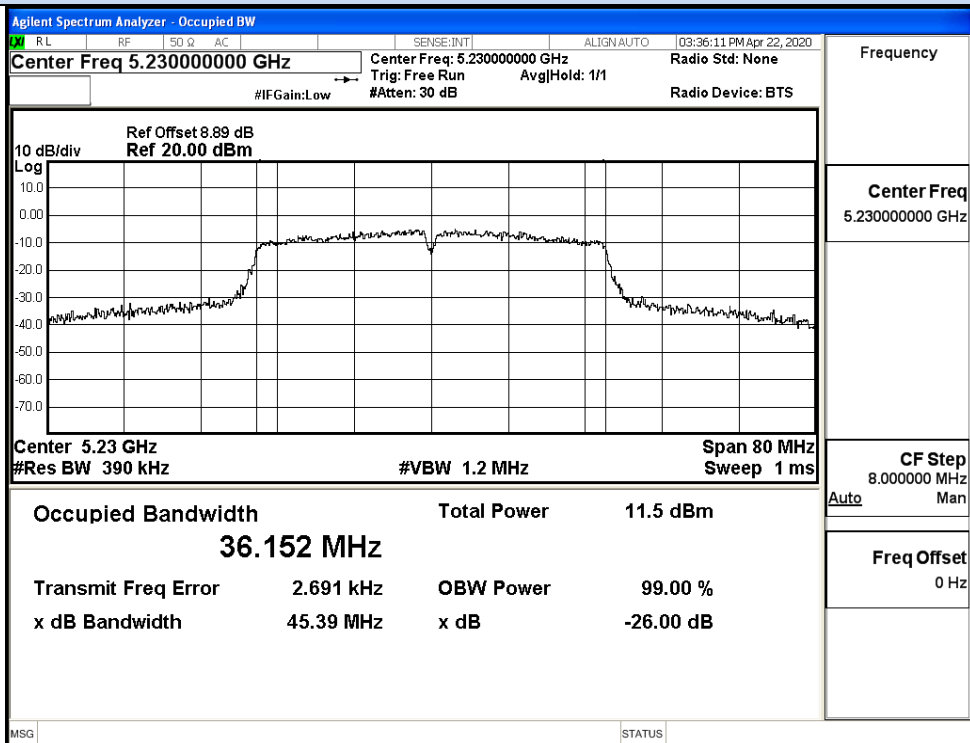


IEEE 802.11n20 / Channel 48 / 5240MHz

26dB Bandwidth



IEEE 802.11n40 / Channel 38 / 5190MHz

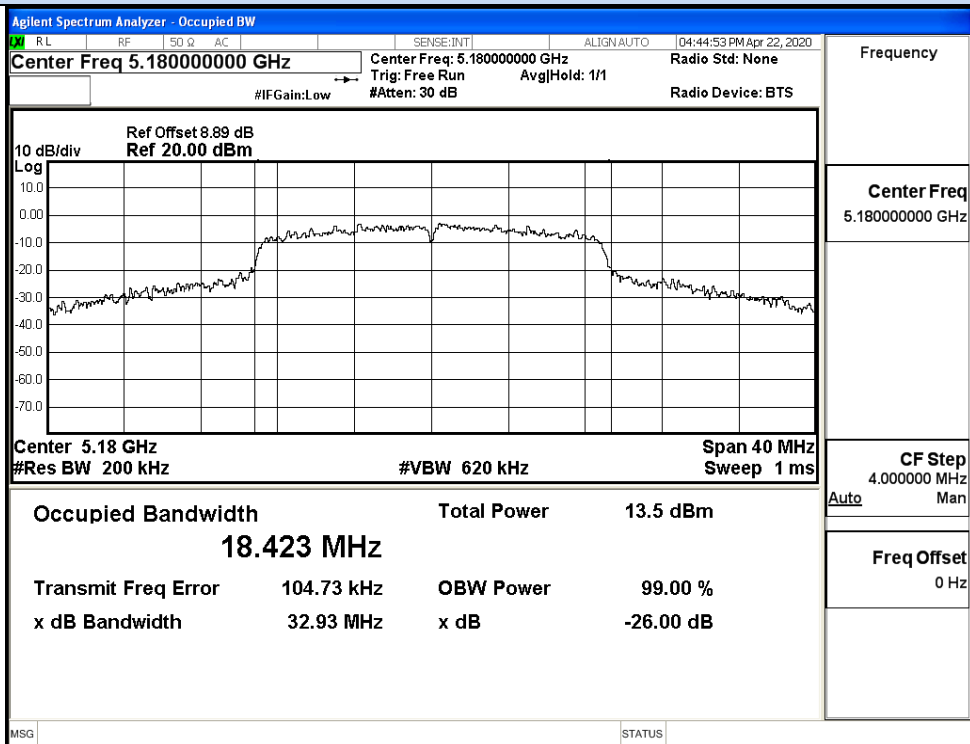


IEEE 802.11n40 / Channel 46 / 5230MHz

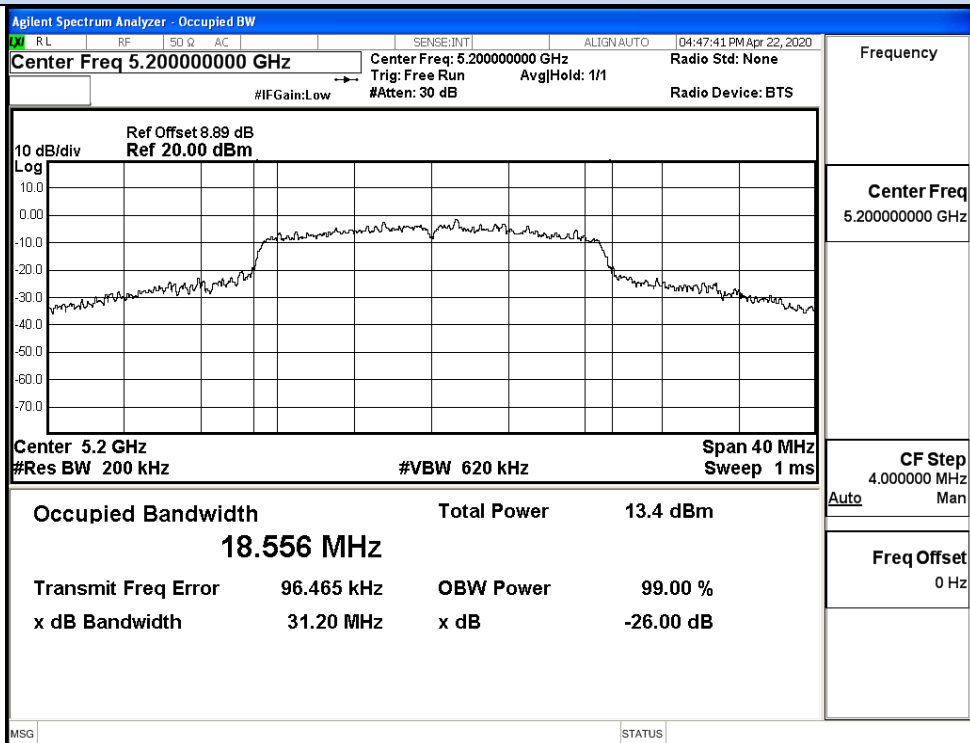
Antenna 1

Test Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
11N20 SISO	36	5180	32.93	No Limit	Pass
	40	5200	31.20		Pass
	48	5240	34.69		Pass
11N40 SISO	38	5190	68.70	No Limit	Pass
	46	5230	66.99		Pass

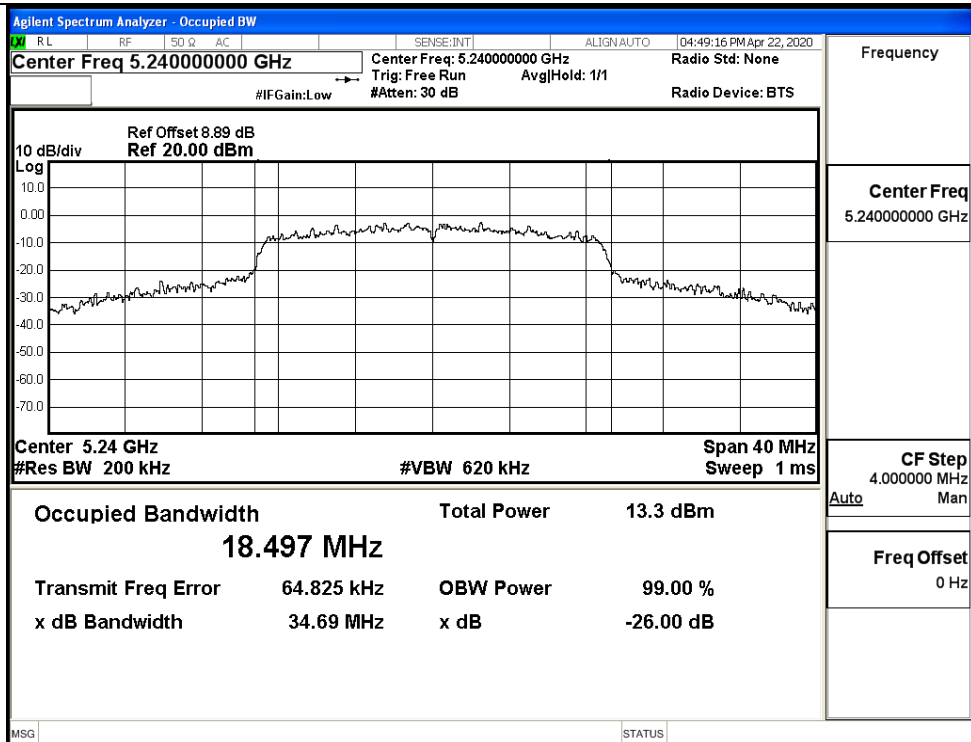
26dB Bandwidth



IEEE 802.11n20 / Channel 36 / 5180MHz

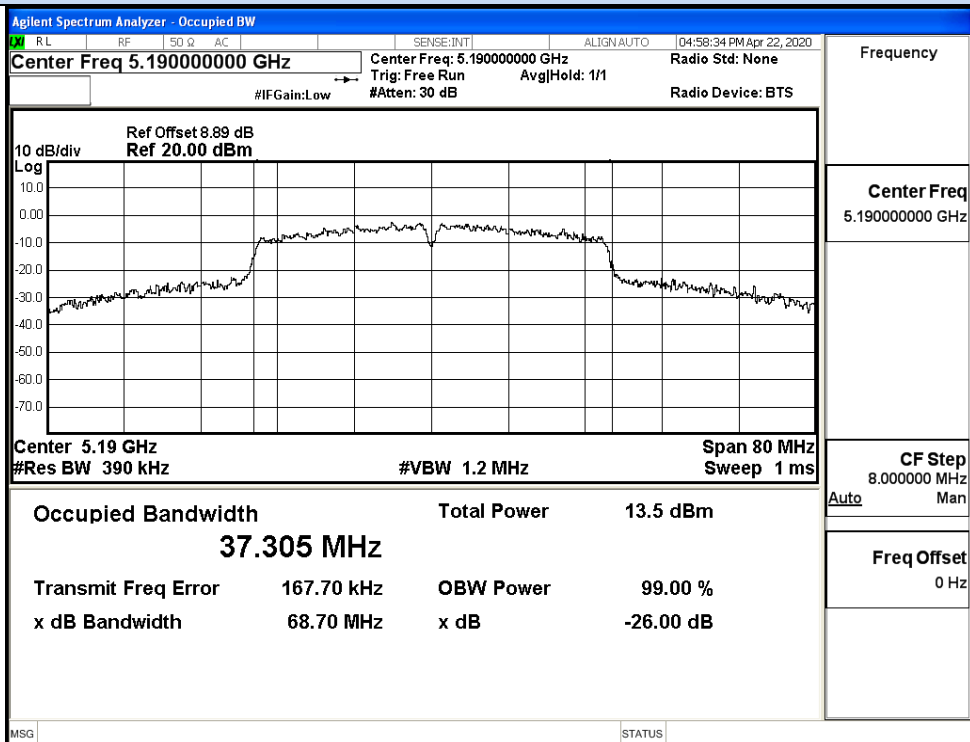


IEEE 802.11n20 / Channel 40 / 5200MHz

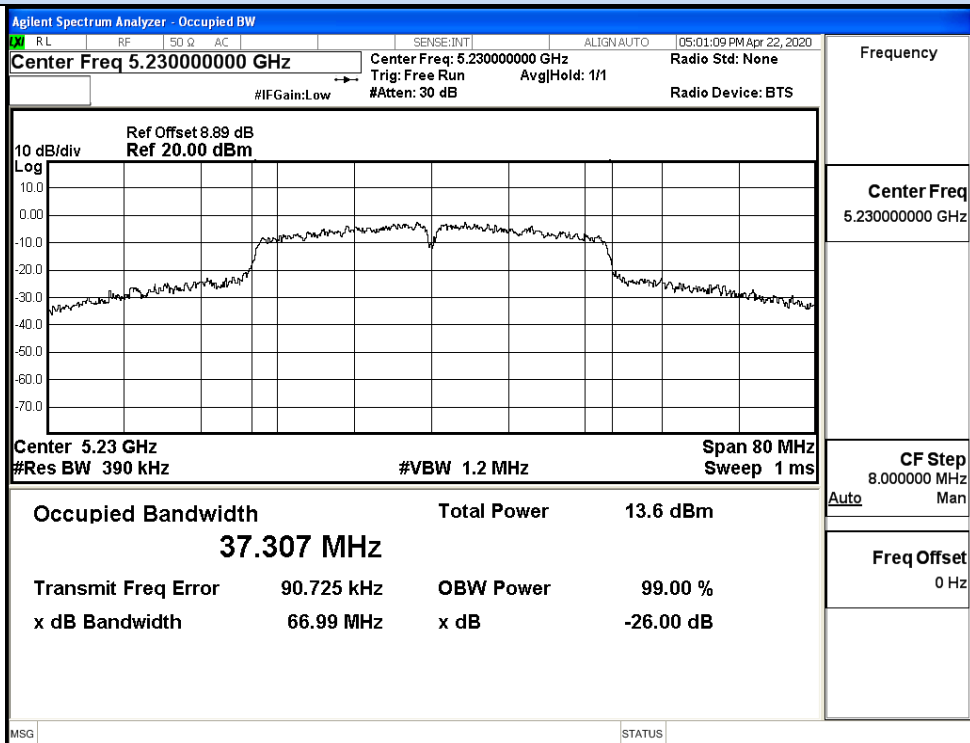


IEEE 802.11n20 / Channel 48 / 5240MHz

26dB Bandwidth



IEEE 802.11n40 / Channel 38 / 5190MHz



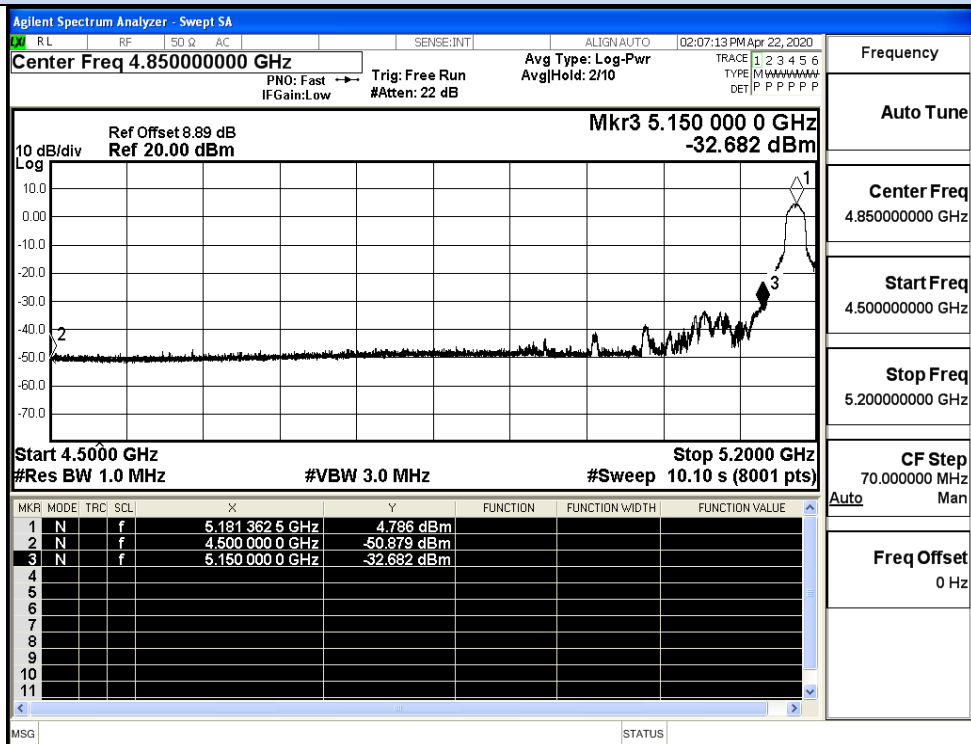
IEEE 802.11n40 / Channel 46 / 5230MHz

A.5 Undesirable Emissions Measurement

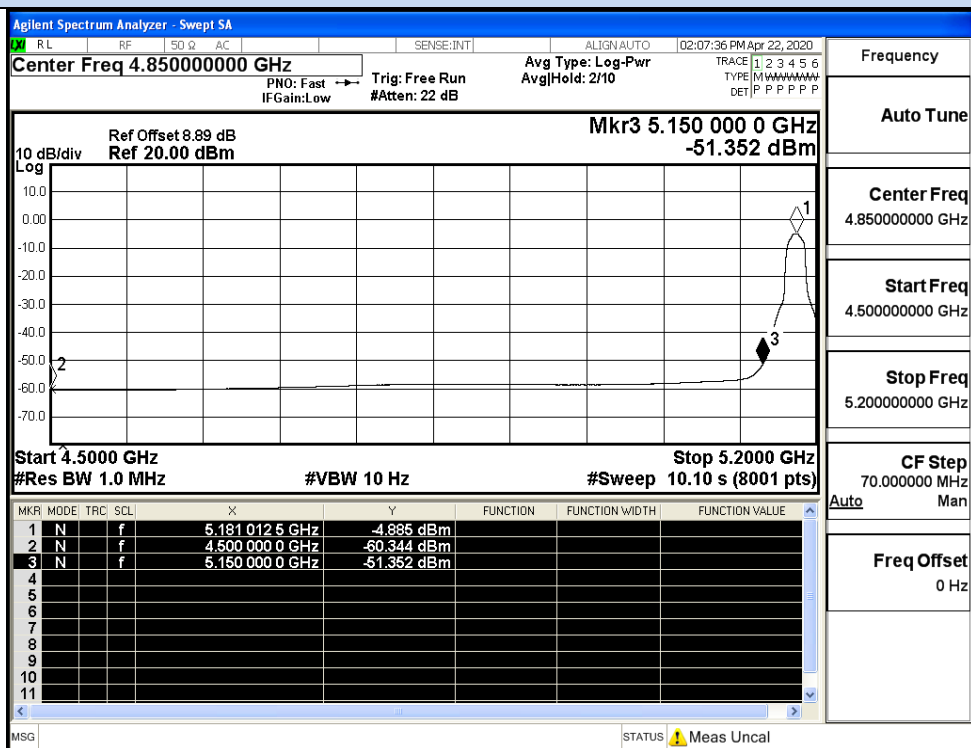
Antenna 0

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
11N2 0 SISO	36	4500.0	-50.88	2.50	0	44.85	Peak	68.20	Pass
		4500.0	-60.34	2.50	0	35.38	Average	54.00	Pass
		5150.0	-32.68	2.50	0	63.05	Peak	68.20	Pass
		5150.0	-51.35	2.50	0	44.38	Average	54.00	Pass
	48	5350.0	-43.89	2.50	0	51.84	Peak	68.20	Pass
		5350.0	-58.22	2.50	0	37.51	Average	54.00	Pass
		5460.0	-48.61	2.50	0	47.12	Peak	68.20	Pass
		5460.0	-59.03	2.50	0	36.70	Average	54.00	Pass
11N4 0 SISO	38	4500.0	-50.19	2.50	0	45.54	Peak	68.20	Pass
		4500.0	-59.62	2.50	0	36.10	Average	54.00	Pass
		5150.0	-32.14	2.50	0	63.59	Peak	68.20	Pass
		5150.0	-44.36	2.50	0	51.37	Average	54.00	Pass
	46	5350.0	-48.20	2.50	0	47.53	Peak	68.20	Pass
		5350.0	-58.77	2.50	0	36.96	Average	54.00	Pass
		5460.0	-47.83	2.50	0	47.90	Peak	68.20	Pass
		5460.0	-59.22	2.50	0	36.51	Average	54.00	Pass

Undesirable Emissions Measurement

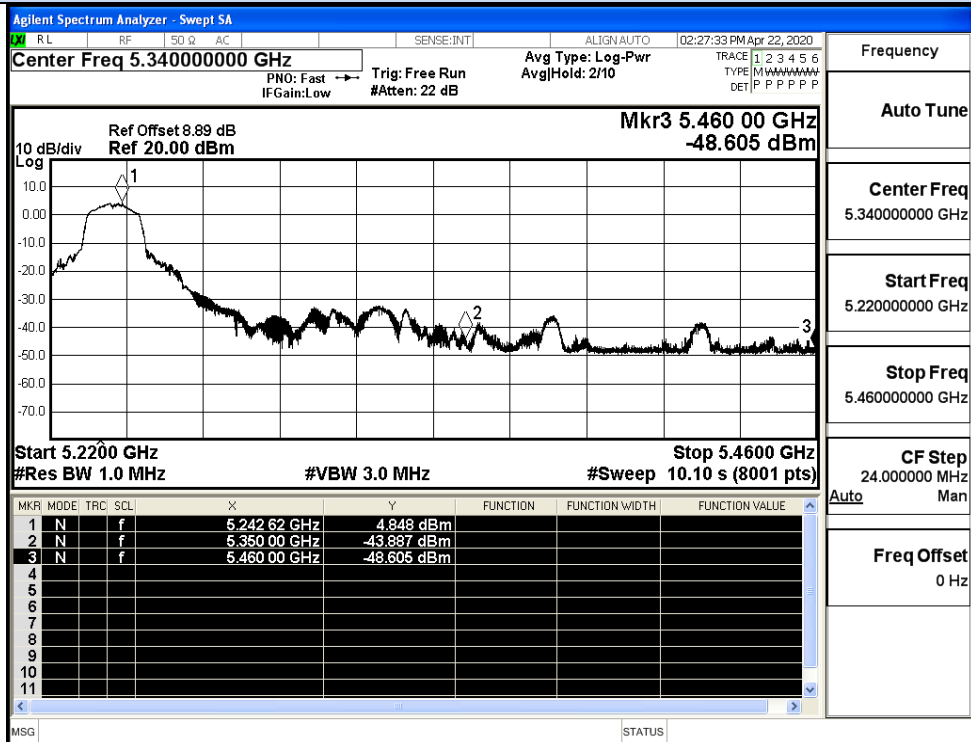


IEEE 802.11n20 / Channel 36 / 5180MHz / Peak

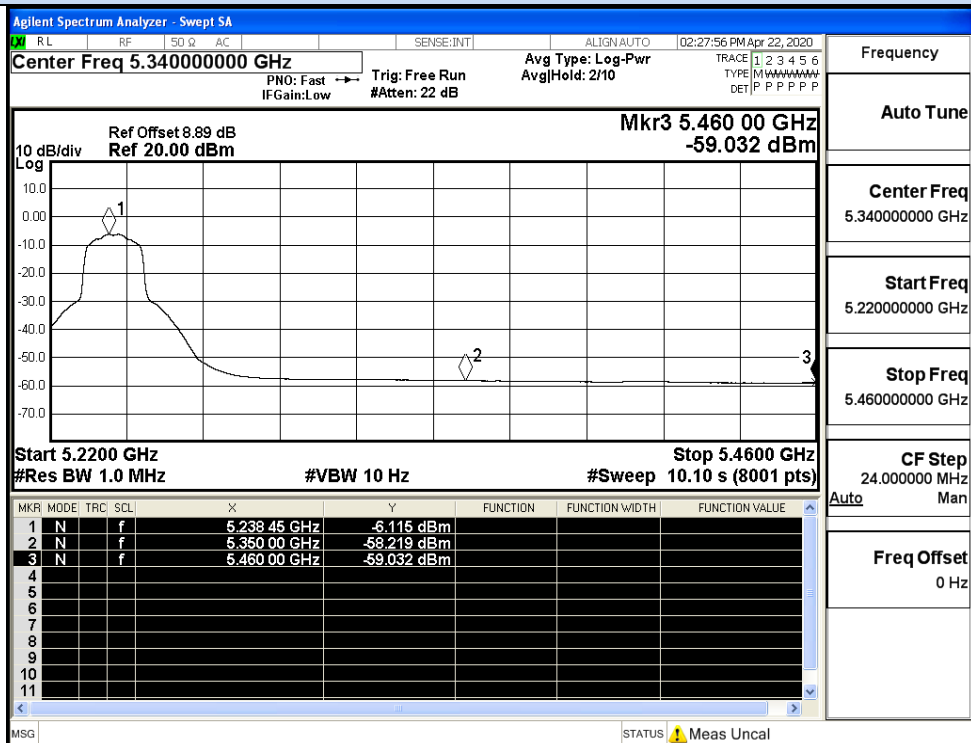


IEEE 802.11n20 / Channel 36 / 5180MHz / Average

Undesirable Emissions Measurement

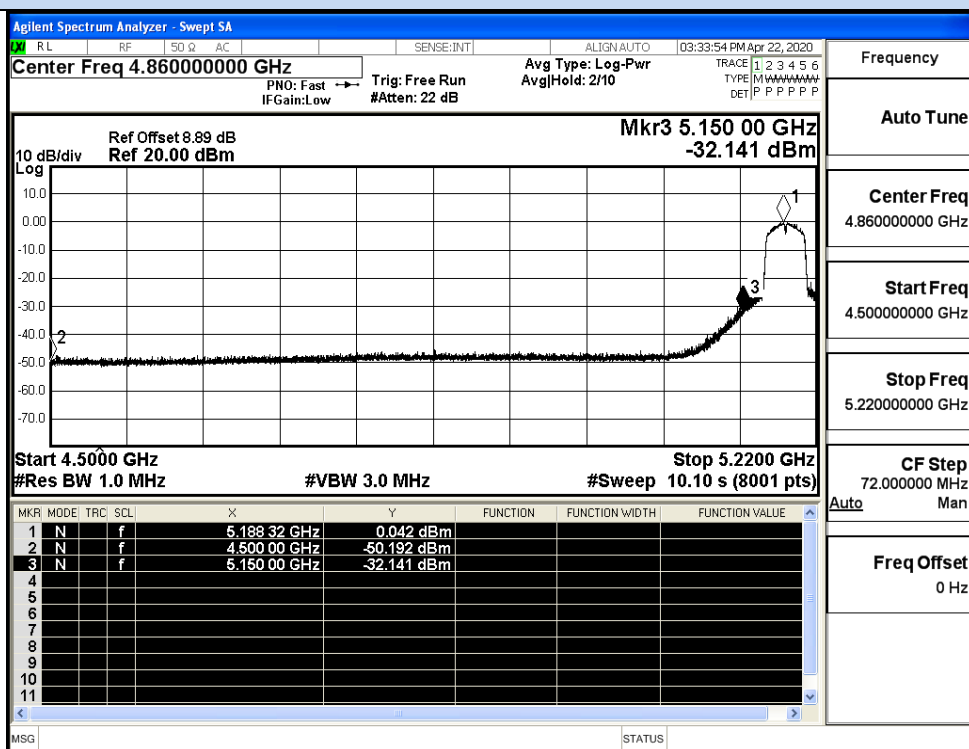


IEEE 802.11n20 / Channel 48 / 5240MHz / Peak

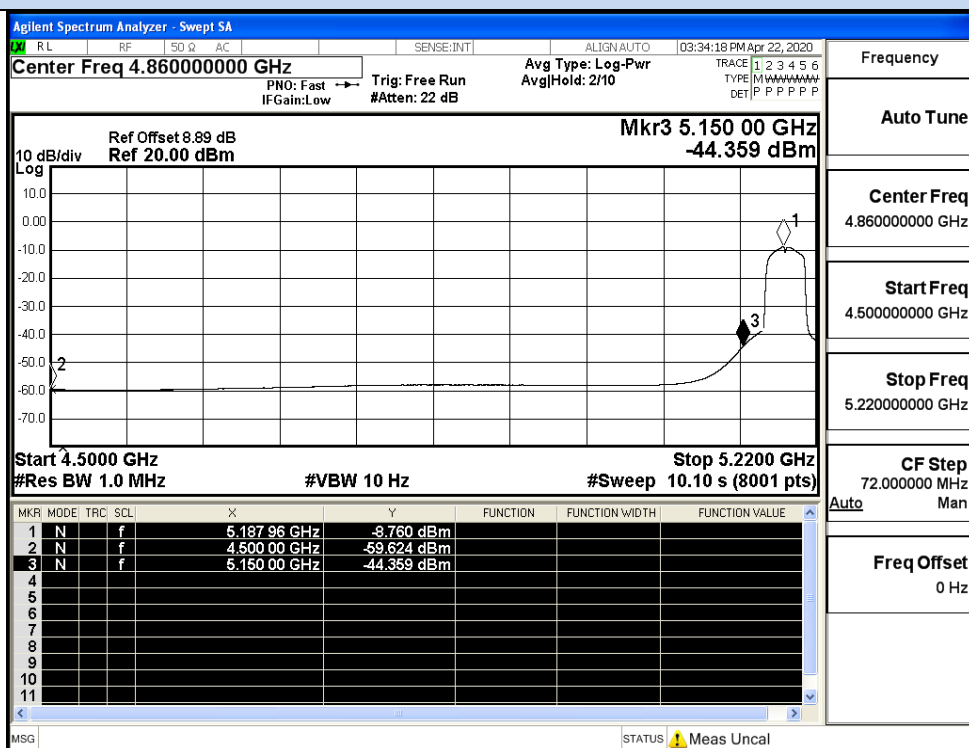


IEEE 802.11n20 / Channel 48 / 5240MHz / Average

Undesirable Emissions Measurement

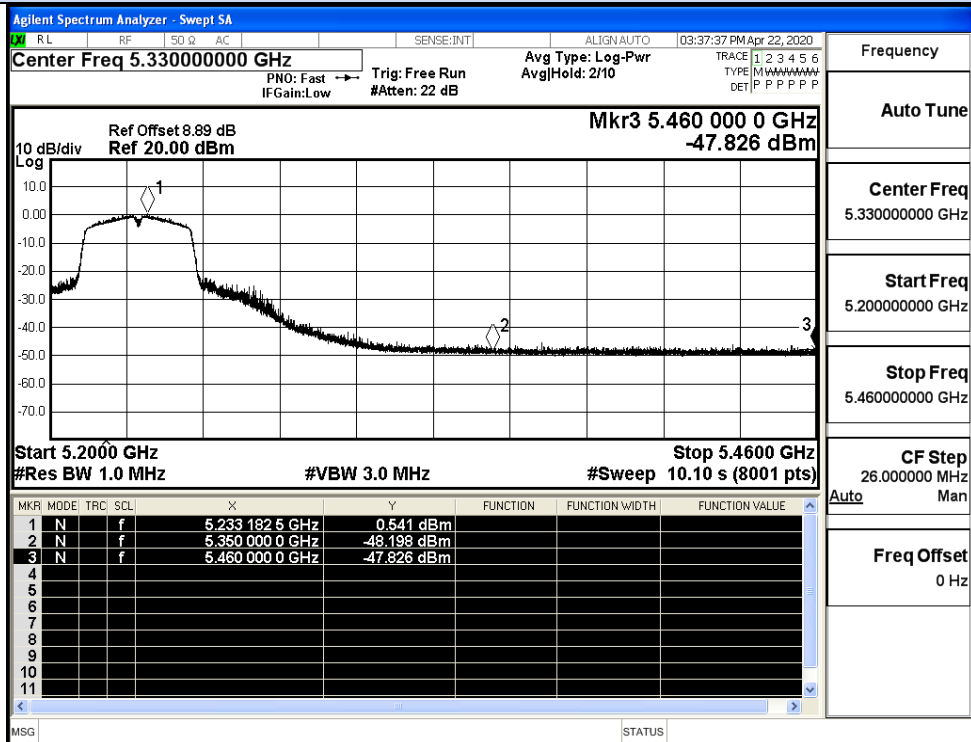


IEEE 802.11n40 / Channel 38 / 5190MHz / Peak

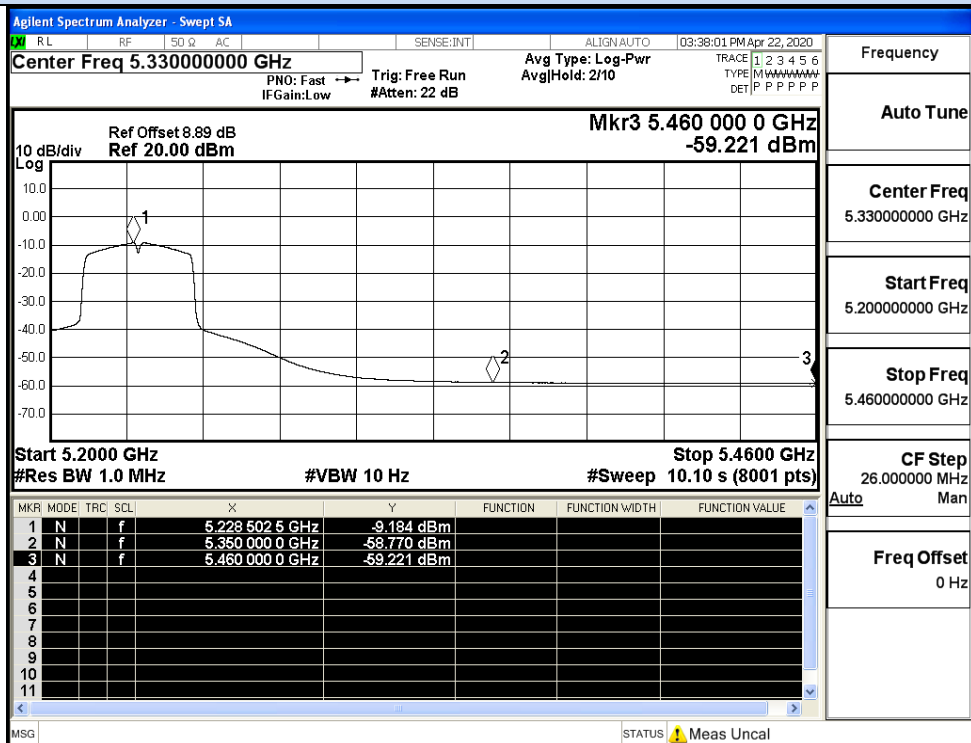


IEEE 802.11n40 / Channel 38 / 5190MHz / Average

Undesirable Emissions Measurement



IEEE 802.11n40 / Channel 46 / 5230MHz / Peak

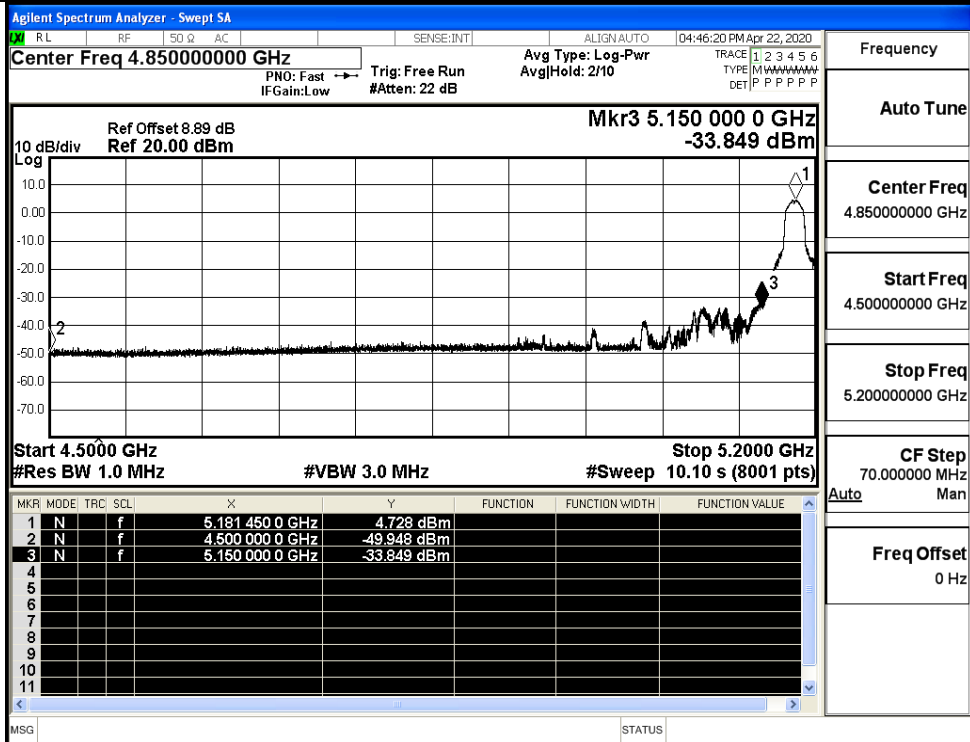


IEEE 802.11n40 / Channel 46 / 5230MHz / Average

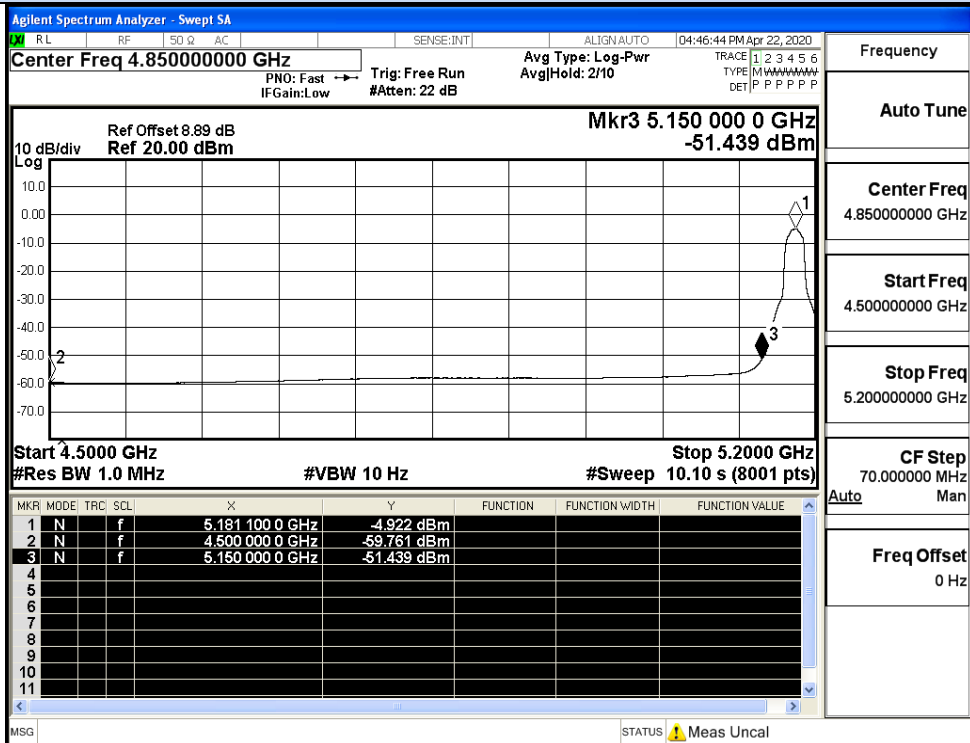
Antenna 1

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
11N2 0 SISO	36	4500.0	-49.95	2.50	0	-49.45	Peak	68.20	Pass
		4500.0	-59.76	2.50	0	-59.26	Average	54.00	Pass
		5150.0	-33.85	2.50	0	-33.35	Peak	68.20	Pass
		5150.0	-51.44	2.50	0	-50.94	Average	54.00	Pass
	48	5350.0	-44.36	2.50	0	-43.86	Peak	68.20	Pass
		5350.0	-58.27	2.50	0	-57.77	Average	54.00	Pass
		5460.0	-47.88	2.50	0	-47.38	Peak	68.20	Pass
		5460.0	-59.34	2.50	0	-58.84	Average	54.00	Pass
11N4 0 SISO	38	4500.0	-50.23	2.50	0	-49.73	Peak	68.20	Pass
		4500.0	-59.79	2.50	0	-59.29	Average	54.00	Pass
		5150.0	-26.20	2.50	0	-25.70	Peak	68.20	Pass
		5150.0	-41.75	2.50	0	-41.25	Average	54.00	Pass
	46	5350.0	-44.48	2.50	0	-43.98	Peak	68.20	Pass
		5350.0	-58.00	2.50	0	-57.50	Average	54.00	Pass
		5460.0	-45.48	2.50	0	-44.98	Peak	68.20	Pass
		5460.0	-59.01	2.50	0	-58.51	Average	54.00	Pass

Undesirable Emissions Measurement

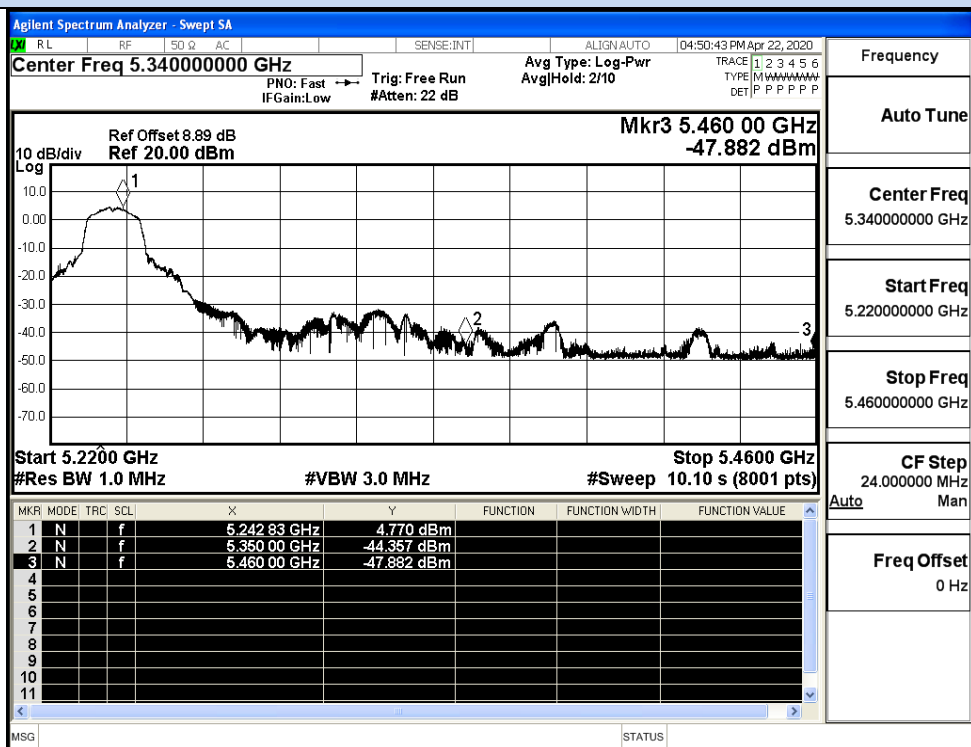


IEEE 802.11n20 / Channel 36 / 5180MHz / Peak

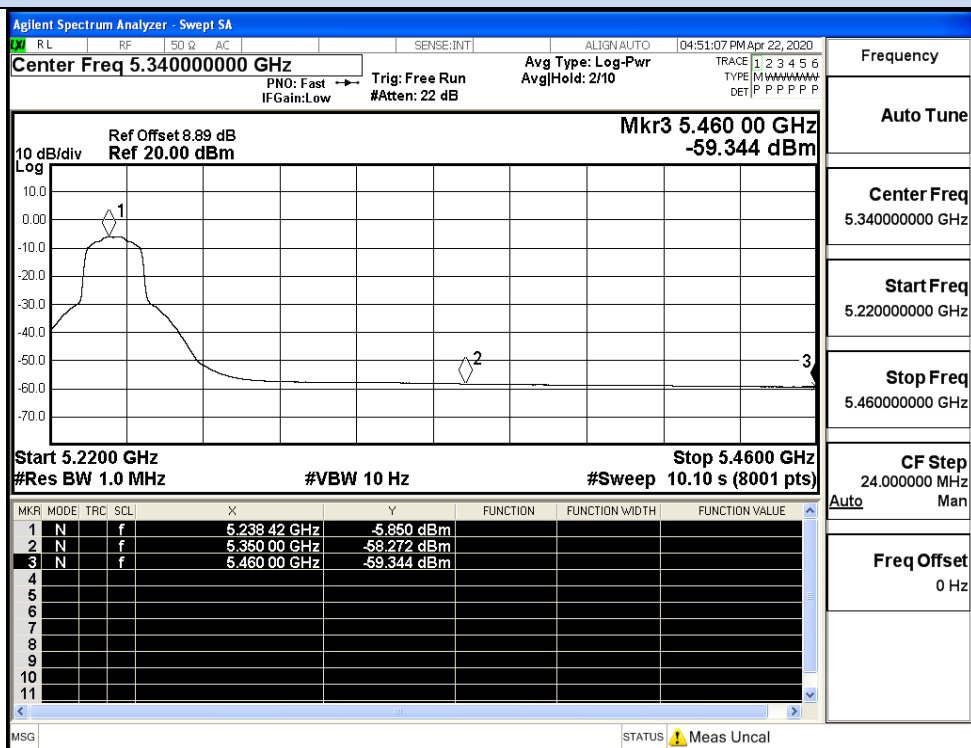


IEEE 802.11n20 / Channel 36 / 5180MHz / Average

Undesirable Emissions Measurement

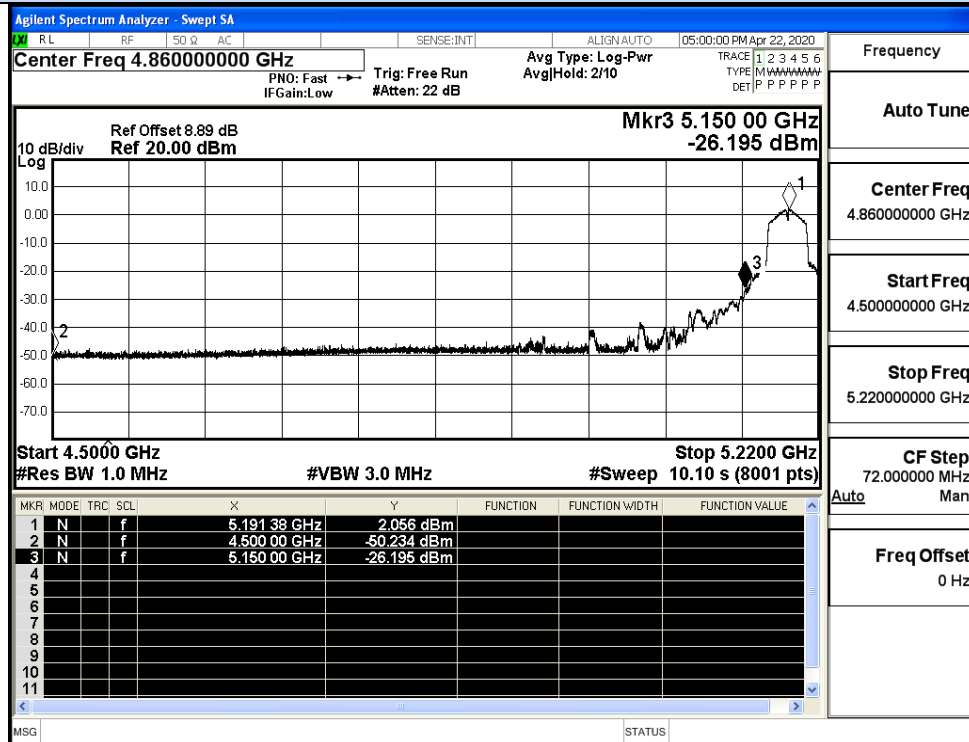


IEEE 802.11n20 / Channel 48 / 5240MHz / Peak

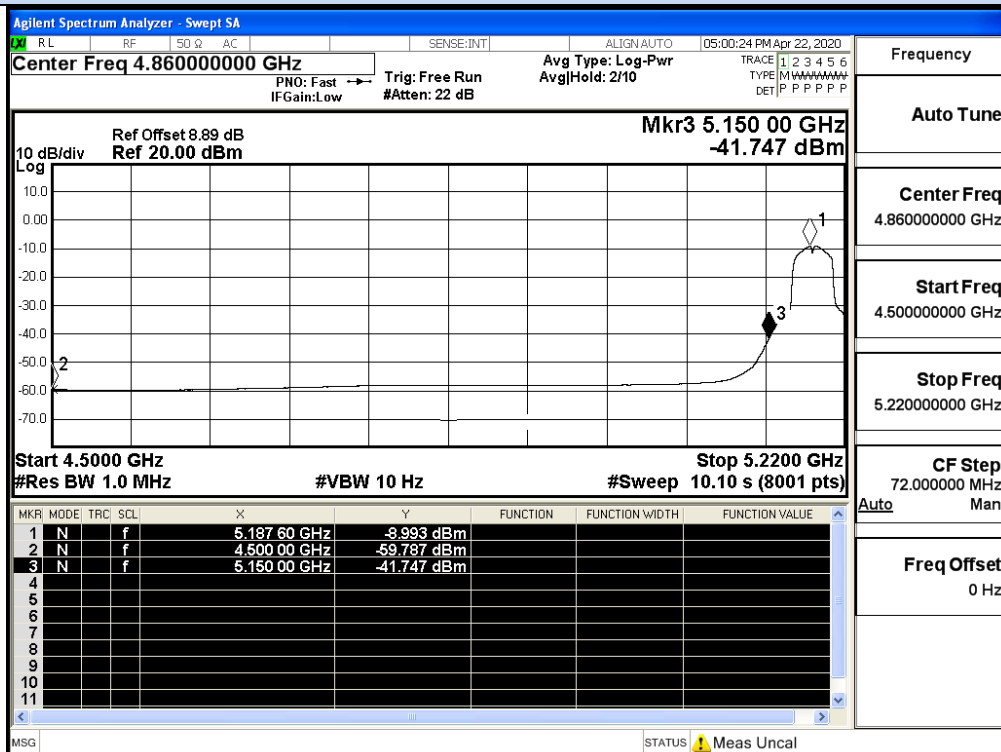


IEEE 802.11n20 / Channel 48 / 5240MHz / Average

Undesirable Emissions Measurement

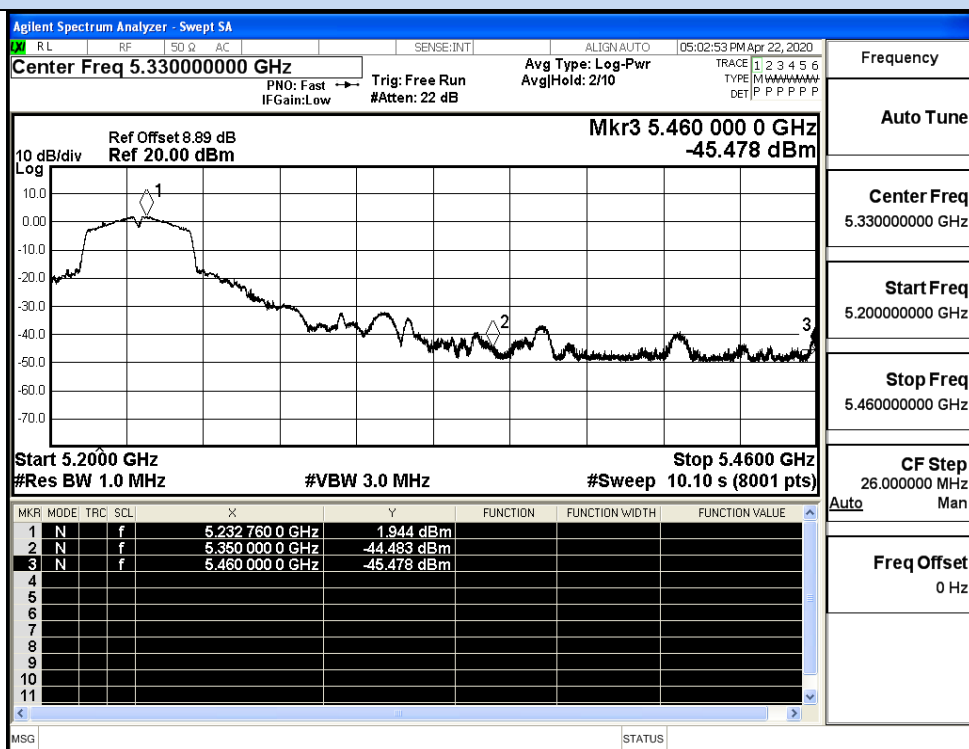


IEEE 802.11n40 / Channel 38 / 5190MHz / Peak

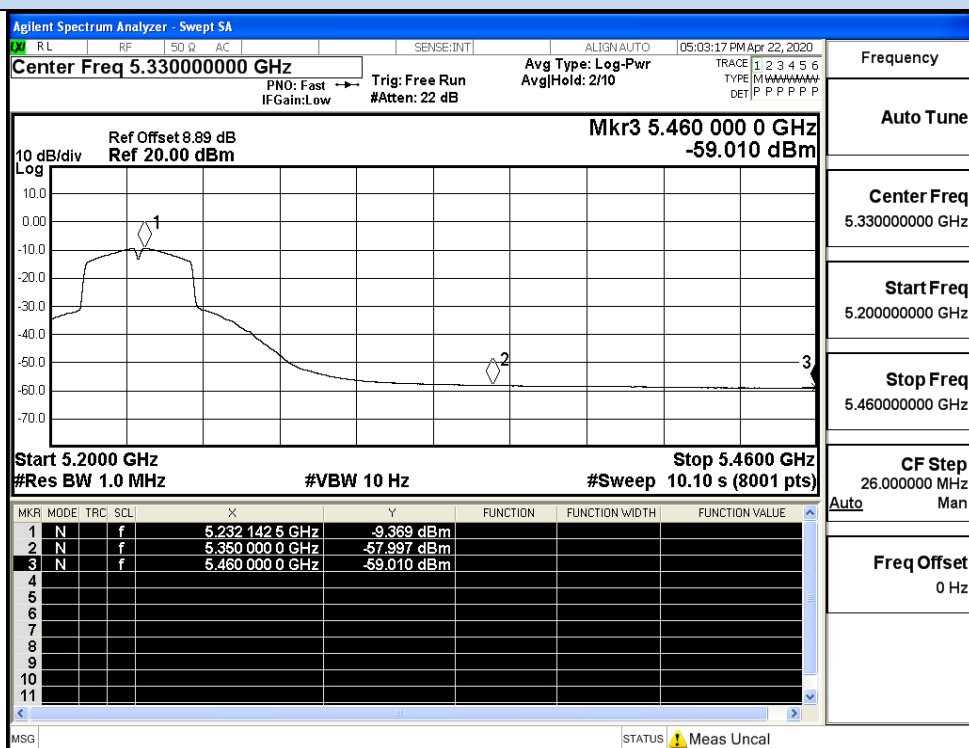


IEEE 802.11n40 / Channel 38 / 5190MHz / Average

Undesirable Emissions Measurement



IEEE 802.11n40 / Channel 46 / 5230MHz / Peak



IEEE 802.11n40 / Channel 46 / 5230MHz / Average

Ant 0+1

Test Mode	Channel	Frequency (MHz)	ANT 0 Conducted Power (dBm)	ANT 1 Conducted Power (dBm)	ANT 0+1 Conducted Power (dBm)	Antenna Gain (dBi)	Ground Reflection Factor (dB)	Covert Radiated E Level At 3m (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
11N20 SISO	36	4500.0	-50.88	-49.95	-47.38	5.51	0	51.89	Peak	68.20	Pass
		4500.0	-60.34	-59.76	-57.03	5.51	0	42.24	Average	54.00	Pass
		5150.0	-32.68	-33.85	-30.22	5.51	0	66.05	Peak	68.20	Pass
		5150.0	-51.35	-51.44	-48.38	5.51	0	50.89	Average	54.00	Pass
	48	5350.0	-43.89	-44.36	-41.11	5.51	0	58.16	Peak	68.20	Pass
		5350.0	-58.22	-58.27	-55.23	5.51	0	44.04	Average	54.00	Pass
		5460.0	-48.61	-47.88	-45.22	5.51	0	54.05	Peak	68.20	Pass
		5460.0	-59.03	-59.34	-56.17	5.51	0	43.10	Average	54.00	Pass
11N40 SISO	38	4500.0	-50.19	-50.23	-47.20	5.51	0	52.07	Peak	68.20	Pass
		4500.0	-59.62	-59.79	-56.69	5.51	0	42.58	Average	54.00	Pass
		5150.0	-32.14	-26.20	-25.21	5.51	0	64.06	Peak	68.20	Pass
		5150.0	-44.36	-41.75	-39.85	5.51	0	52.42	Average	54.00	Pass
	46	5350.0	-48.20	-44.48	-42.94	5.51	0	56.33	Peak	68.20	Pass
		5350.0	-58.77	-58.00	-55.36	5.51	0	43.91	Average	54.00	Pass
		5460.0	-47.83	-45.48	-43.49	5.51	0	55.78	Peak	68.20	Pass
		5460.0	-59.22	-59.01	-56.10	5.51	0	43.17	Average	54.00	Pass