Appendix B

RF Test Data for 5.2G WLAN (Conducted Measurement)

Product Name: ETH Wi-Fi Bridge

Trade Mark: N/A

Test Model: ALXB10

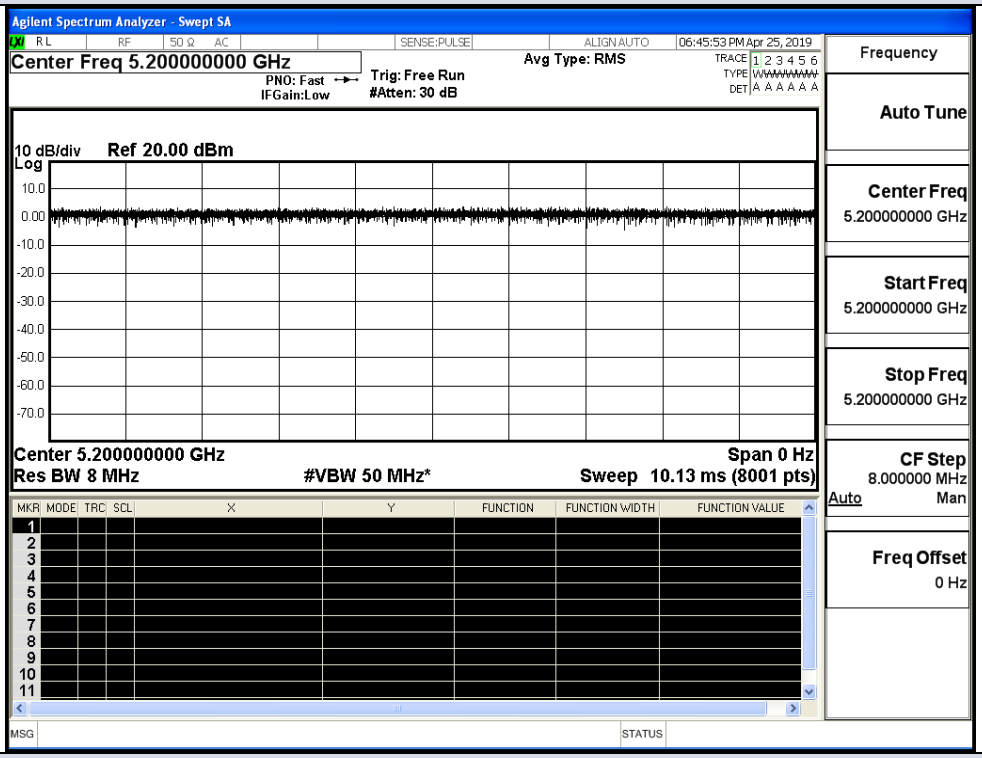
Environmental Conditions

Temperature:	24.6 ° C
Relative Humidity:	52.9%
ATM Pressure:	100.0 kPa
Test Engineer:	SCENT HU
Supervised by:	Tom.Liu

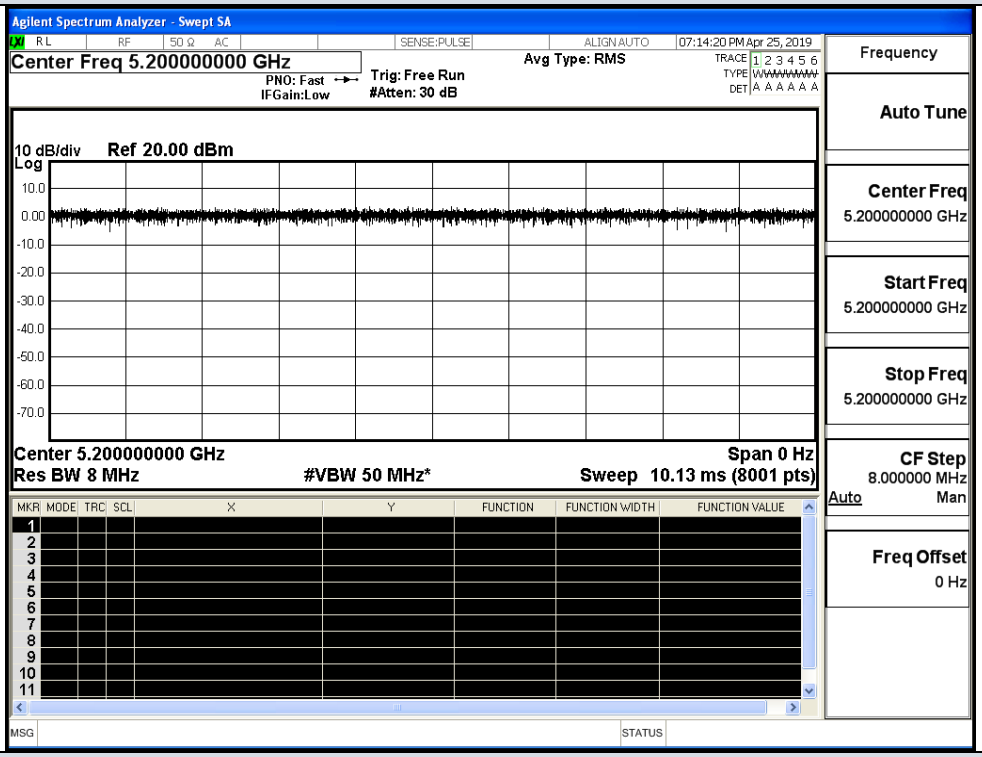
B.1 Duty Cycle

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW (KHz)
IEEE 802.11a	5200	100	0.00	0.01
IEEE 802.11n HT20	5200	100	0.00	0.01

On Time and Duty Cycle



IEEE 802.11a



IEEE 802.11n HT20

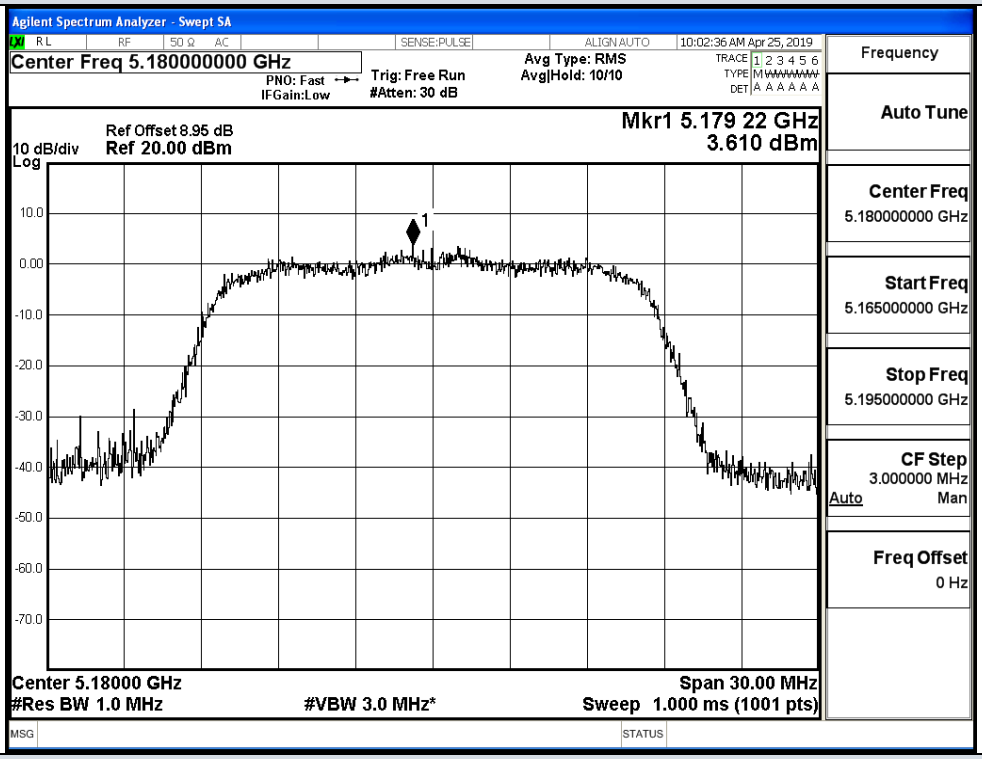
B.2 Maximum Conduct Output Power

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
IEEE 802.11a	36	5180	12.01	0	12.01	30
	40	5200	12.14	0	12.14	
	48	5240	11.92	0	11.92	
IEEE 802.11n HT20	36	5180	12.04	0	12.04	30
	40	5200	12.15	0	12.15	
	48	5240	11.93	0	11.93	

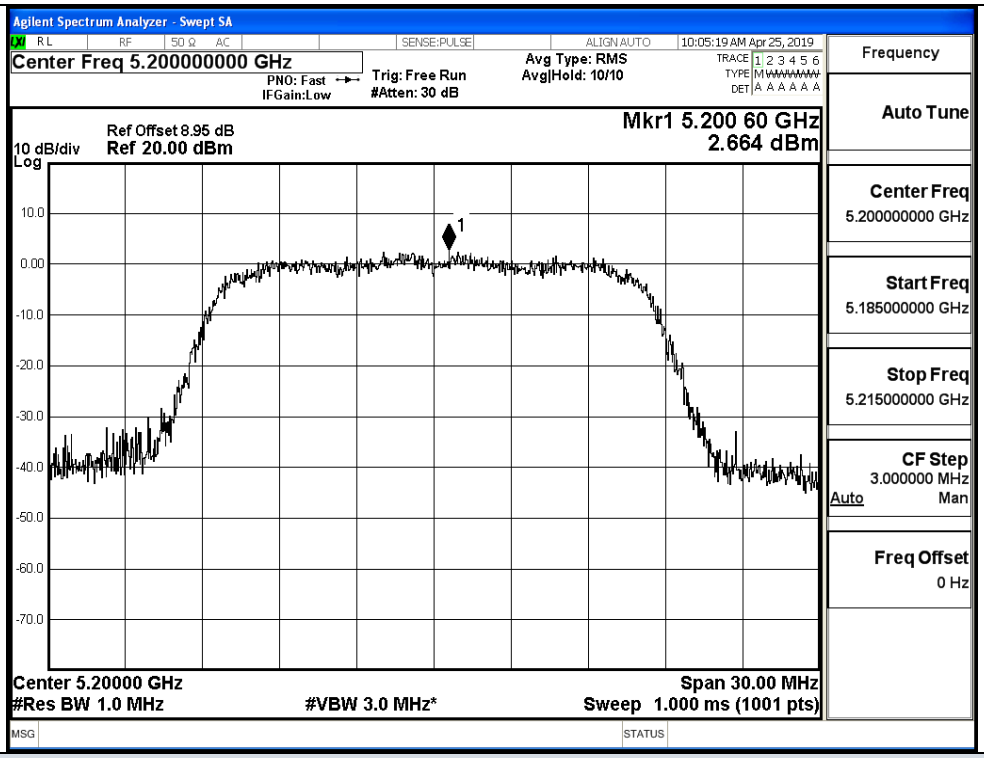
B.3 Power Spectral Density

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/MHz)	Limit (dBm/MHz)
IEEE 802.11a	36	5180	3.610	0	3.610	17
	40	5200	2.664	0	2.664	
	48	5240	2.713	0	2.713	
IEEE 802.11n HT20	36	5180	4.156	0	4.156	17
	40	5200	4.563	0	4.563	
	48	5240	3.287	0	3.287	

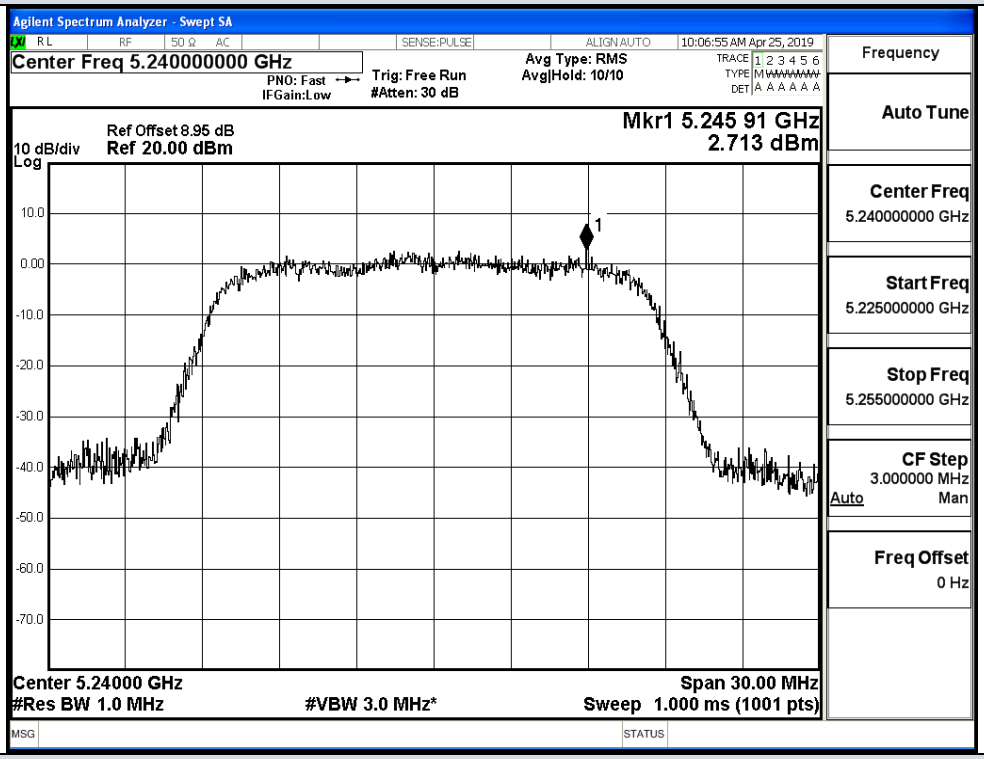
Power Spectral Density



IEEE 802.11a / Channel 36 / 5180 MHz

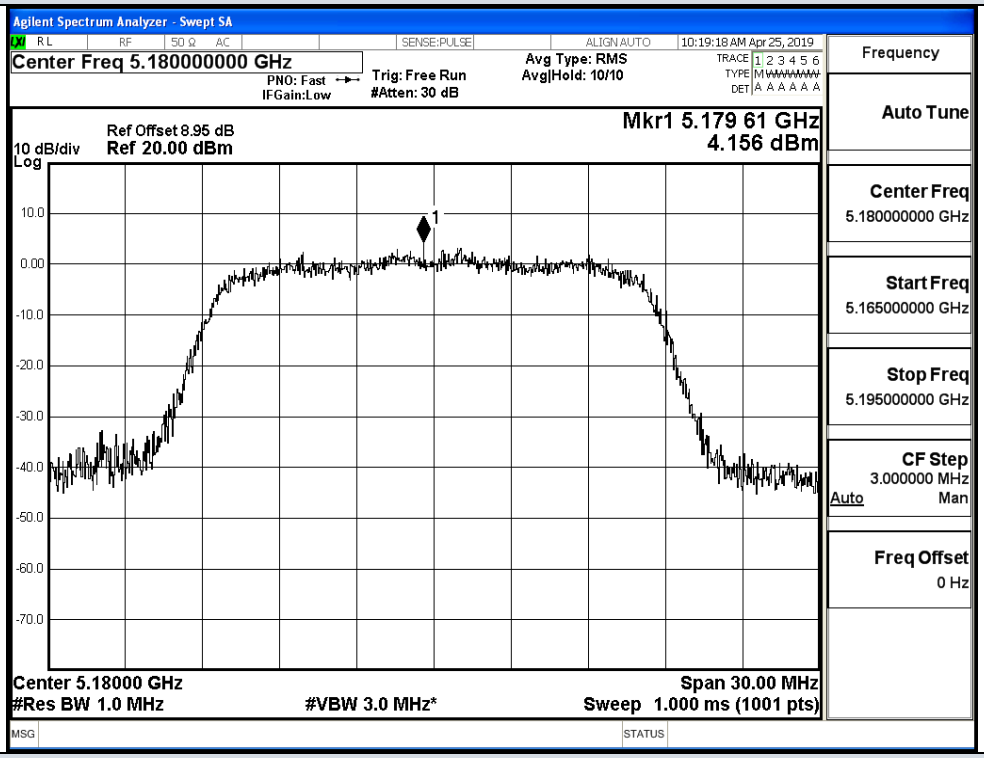


IEEE 802.11a / Channel 40 / 5200 MHz

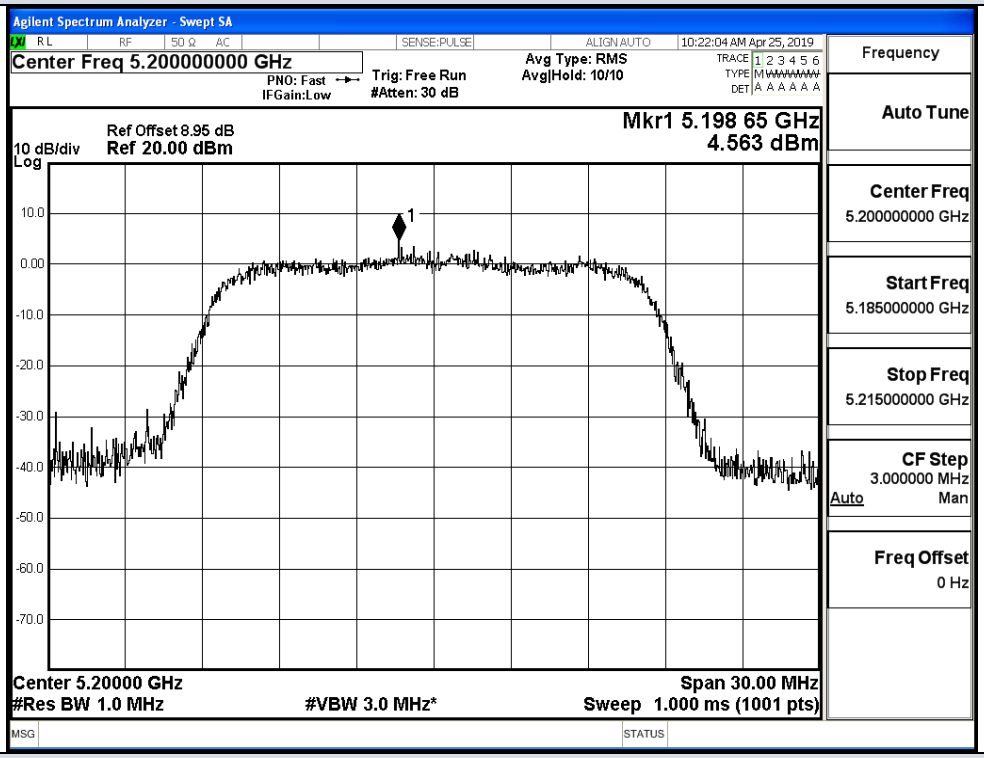


IEEE 802.11a / Channel 48 / 5240 MHz

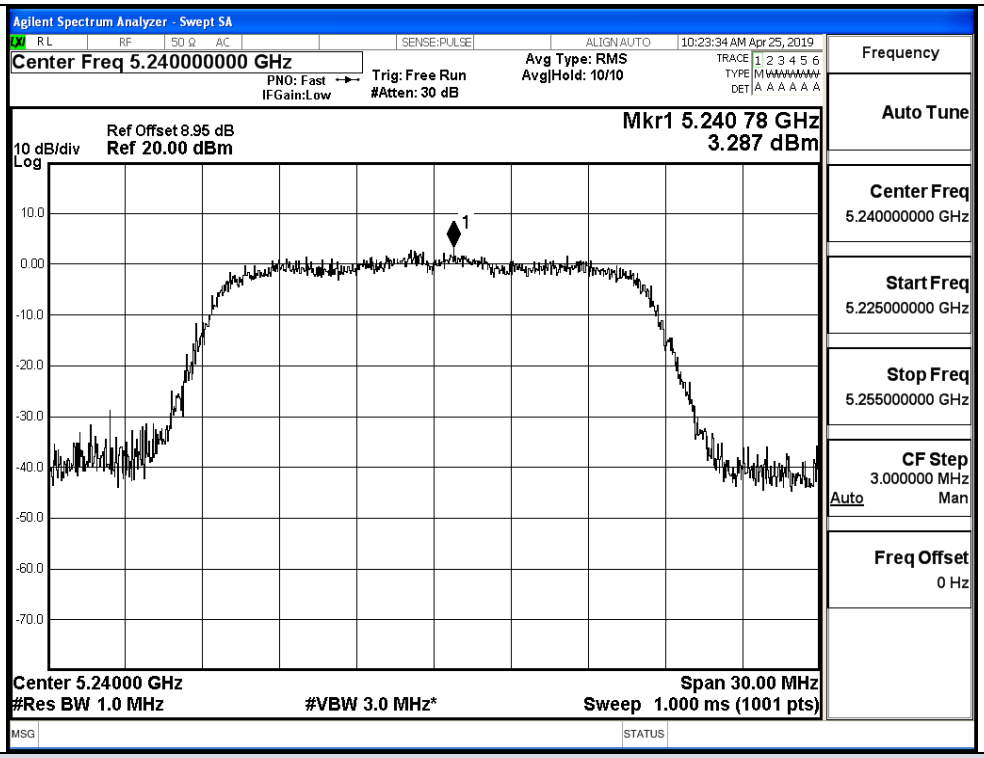
Power Spectral Density



IEEE 802.11n HT20 / Channel 36 / 5180 MHz



IEEE 802.11n HT20 / Channel 40 / 5200 MHz

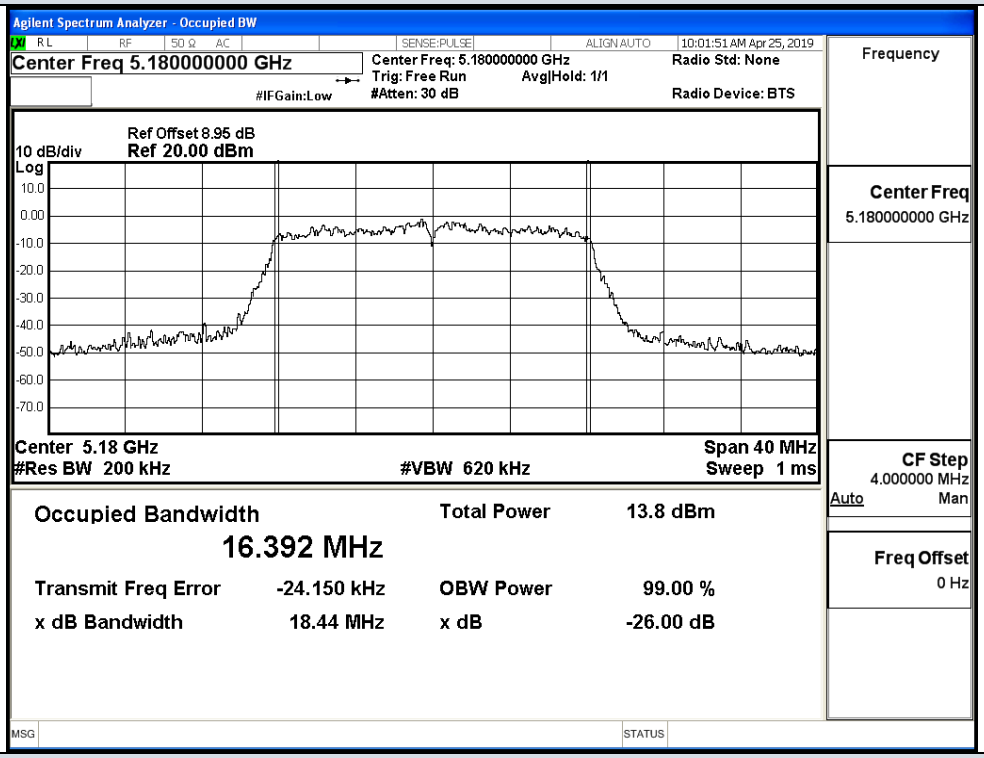


IEEE 802.11n HT20 / Channel 48 / 5240 MHz

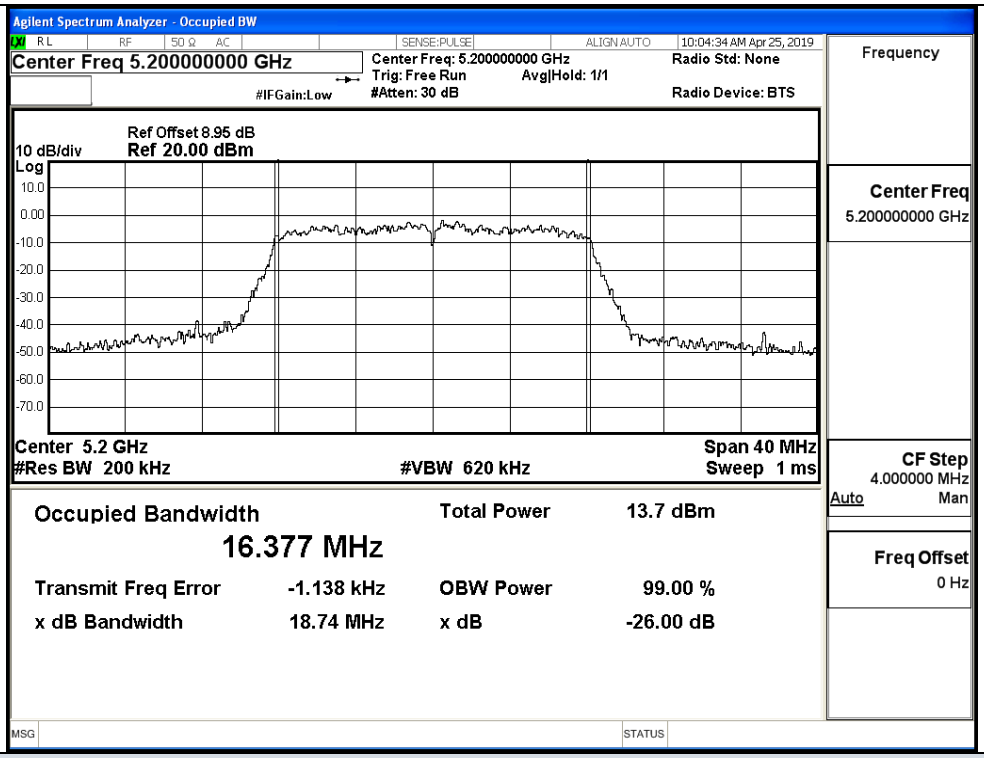
B.4 Emission Bandwidth

Test Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)
IEEE 802.11a	36	5180	16.392	18.440	No Limit
	40	5200	16.377	18.740	
	48	5240	16.373	18.440	
IEEE 802.11n HT20	36	5180	16.368	18.580	No Limit
	40	5200	16.401	18.490	
	48	5240	16.388	18.610	

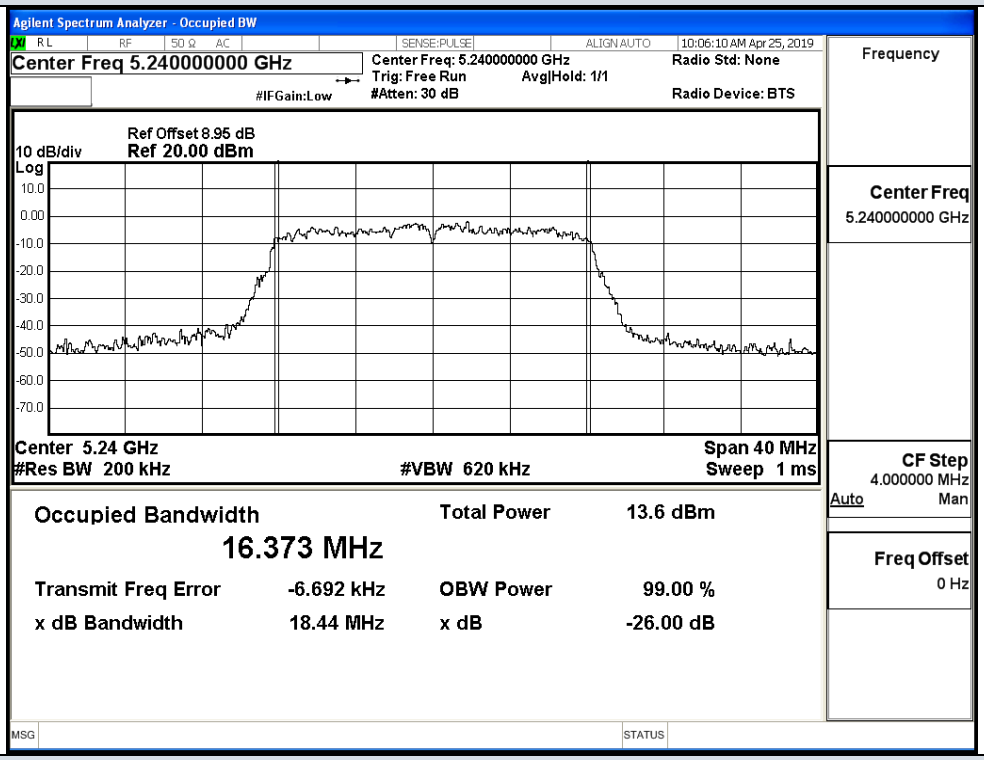
99% and 26dB Bandwidth



IEEE 802.11a / Channel 36 / 5180 MHz

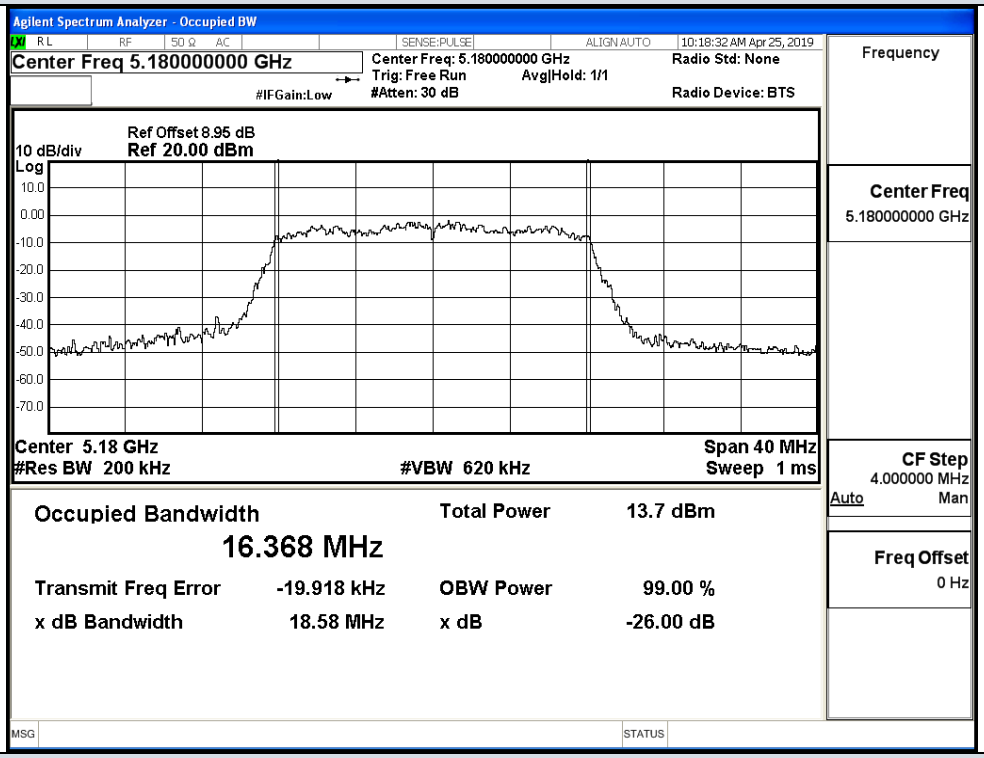


IEEE 802.11a / Channel 40 / 5200 MHz

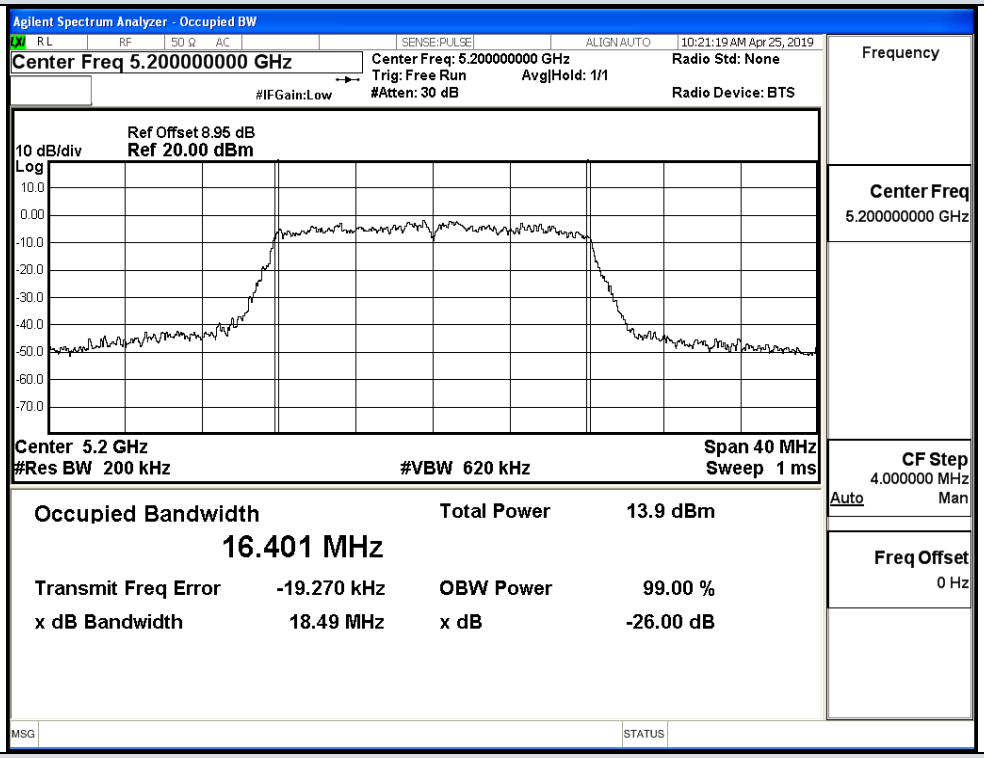


IEEE 802.11a / Channel 48 / 5240 MHz

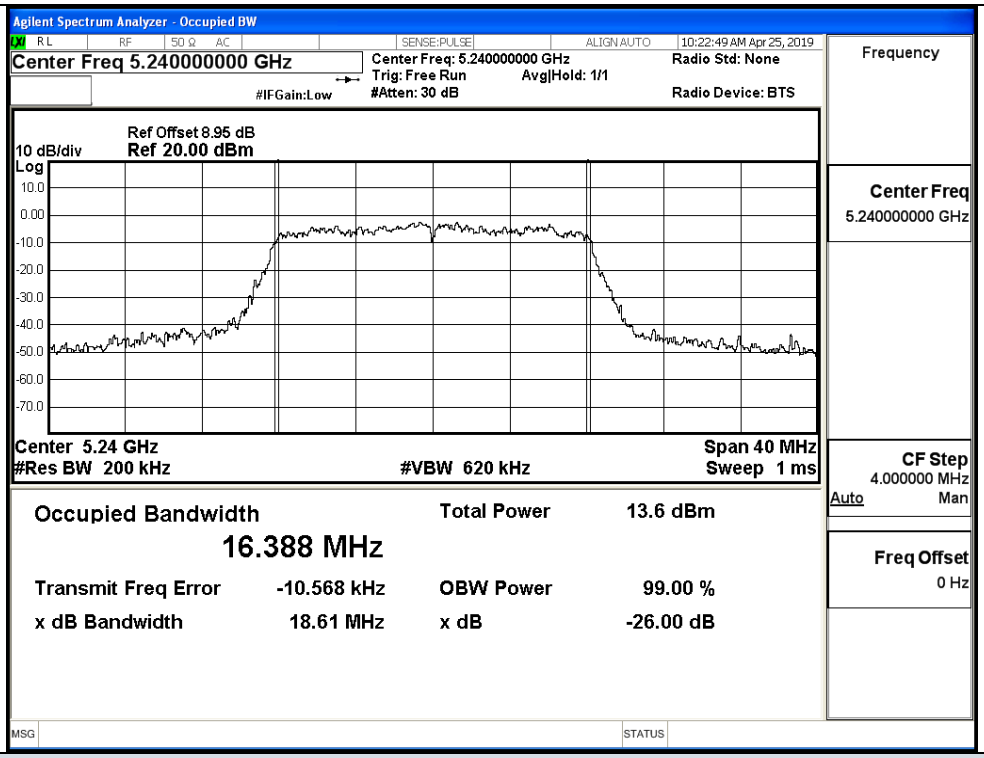
99% and 26dB Bandwidth



IEEE 802.11n HT20 / Channel 36 / 5180 MHz



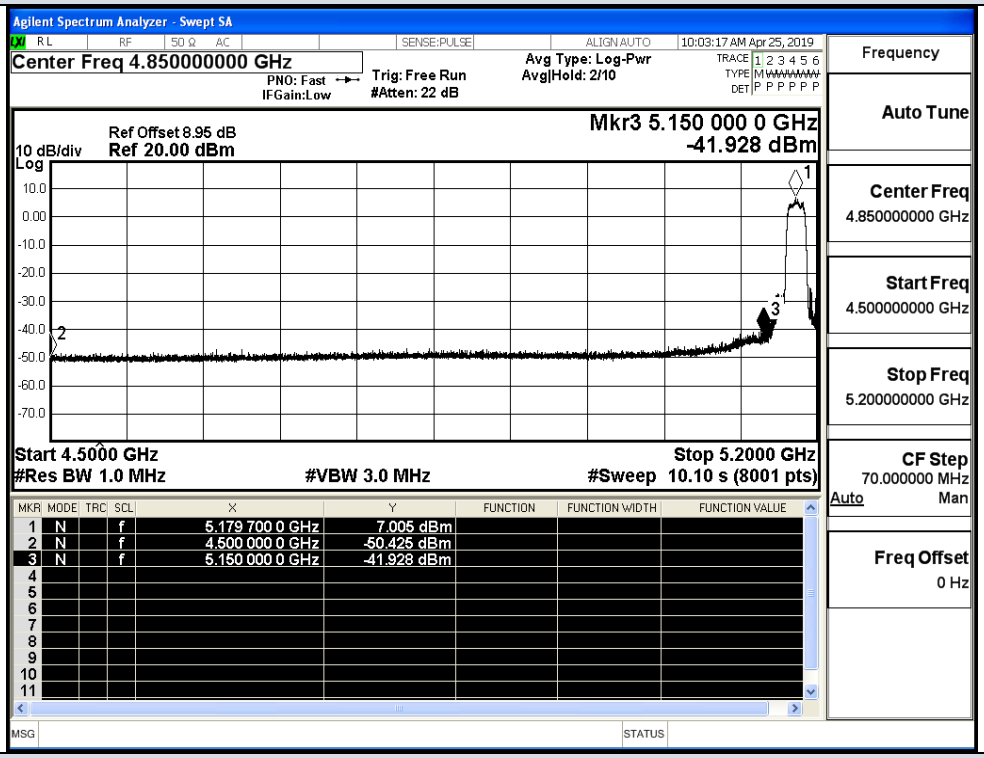
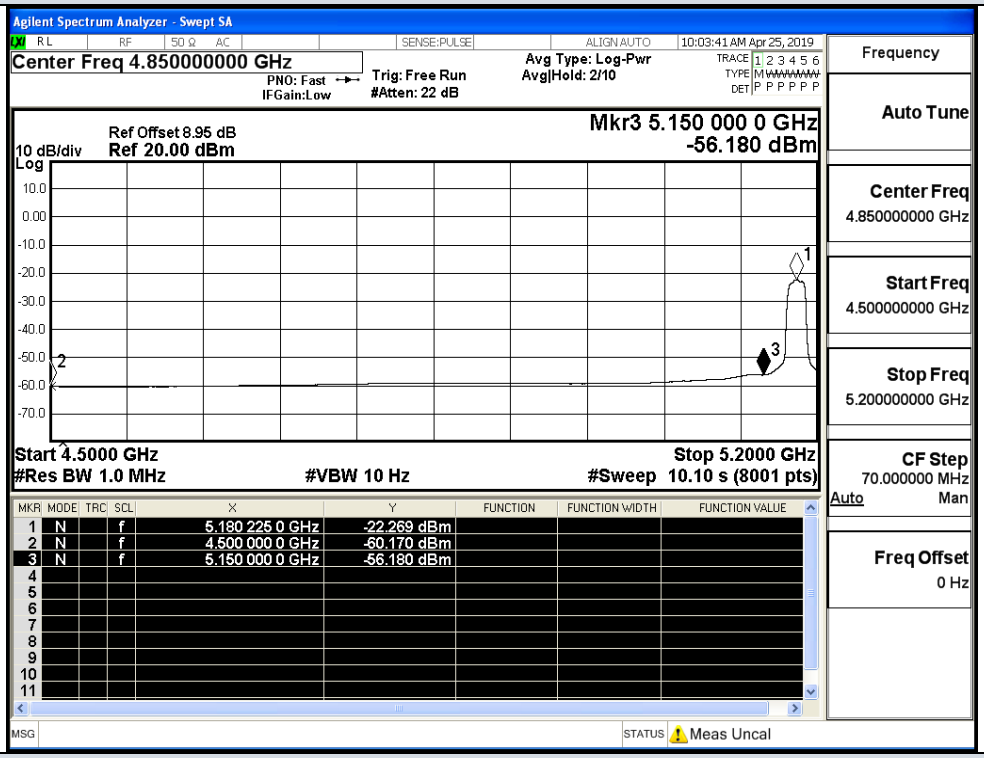
IEEE 802.11n HT20 / Channel 40 / 5200 MHz

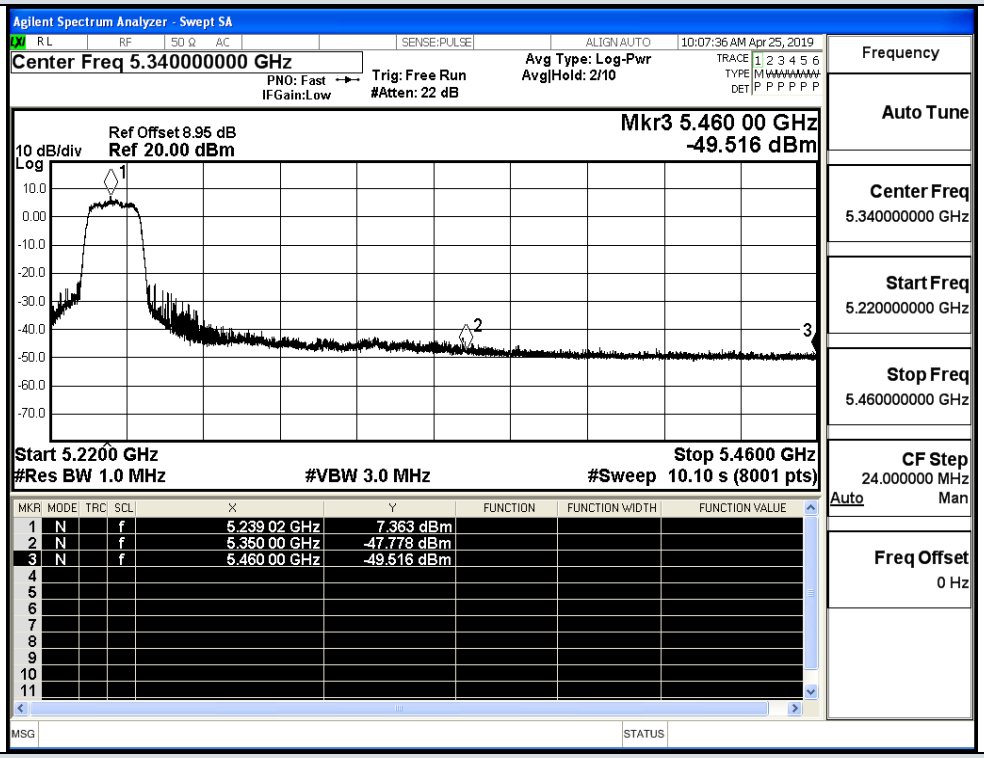
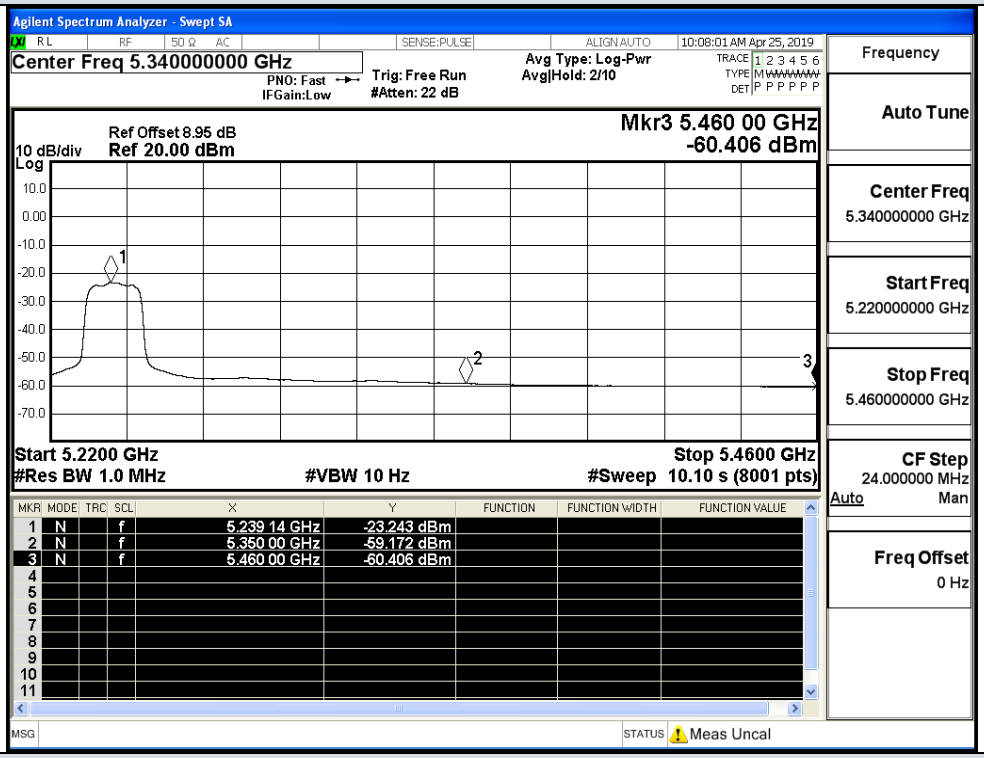


IEEE 802.11n HT20 / Channel 48 / 5240 MHz

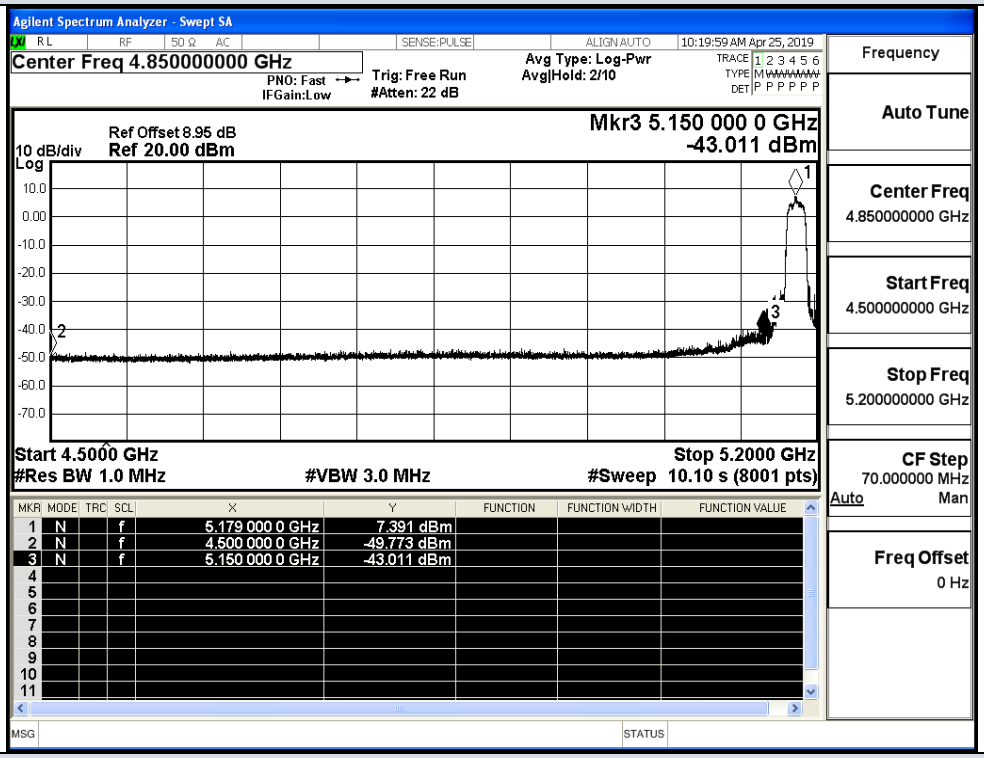
B.5 Undesirable Emissions Measurement

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)
IEEE 802.11a	36	4500.0	-50.425	5.00	0	49.803	Peak	68.20
		4500.0	-60.170	5.00	0	40.058	Average	54.00
		5150.0	-41.928	5.00	0	58.300	Peak	68.20
		5150.0	-56.180	5.00	0	44.048	Average	54.00
	48	5350.0	-47.778	5.00	0	52.450	Peak	68.20
		5350.0	-59.172	5.00	0	41.056	Average	54.00
		5460.0	-49.516	5.00	0	50.712	Peak	68.20
		5460.0	-60.406	5.00	0	39.822	Average	54.00
IEEE 802.11n HT20	36	4500.0	-49.773	5.00	0	50.455	Peak	68.20
		4500.0	-60.191	5.00	0	40.037	Average	54.00
		5150.0	-43.011	5.00	0	57.217	Peak	68.20
		5150.0	-56.182	5.00	0	44.046	Average	54.00
	48	5350.0	-47.611	5.00	0	52.617	Peak	68.20
		5350.0	-59.205	5.00	0	41.023	Average	54.00
		5460.0	-48.553	5.00	0	51.675	Peak	68.20
		5460.0	-60.404	5.00	0	39.824	Average	54.00

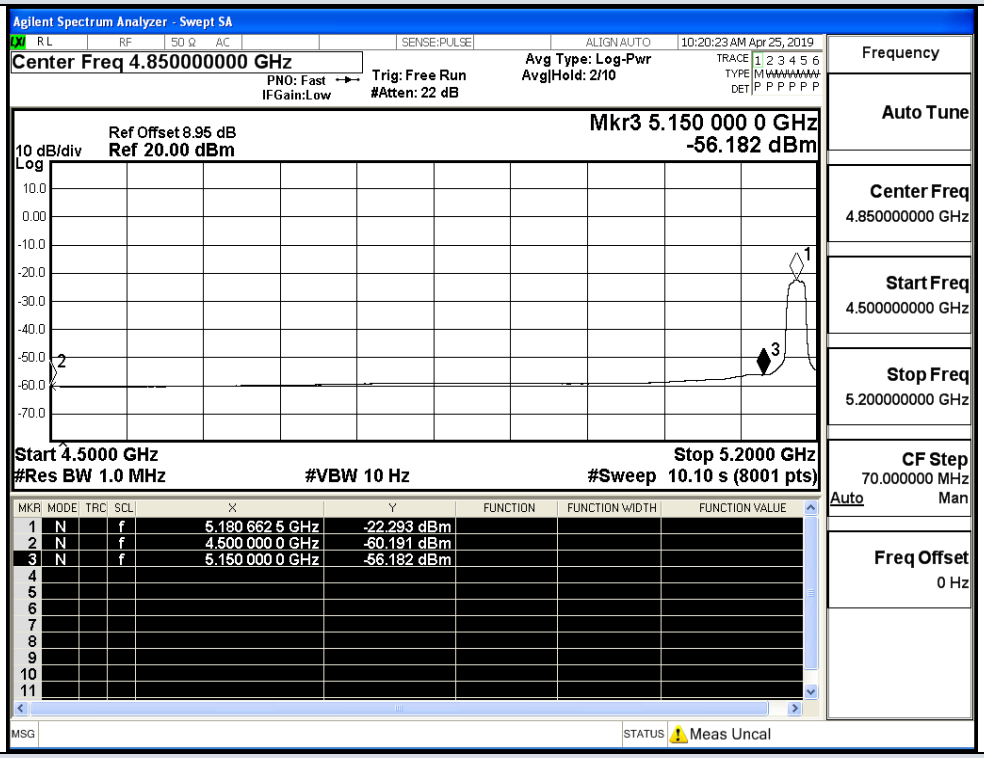
Undesirable Emissions Measurement

IEEE 802.11a / Channel 36 / 5180 MHz / Peak

IEEE 802.11a / Channel 36 / 5180 MHz / Average

Undesirable Emissions Measurement

IEEE 802.11a / Channel 48 / 5240 MHz / Peak

IEEE 802.11a / Channel 48 / 5240 MHz / Average

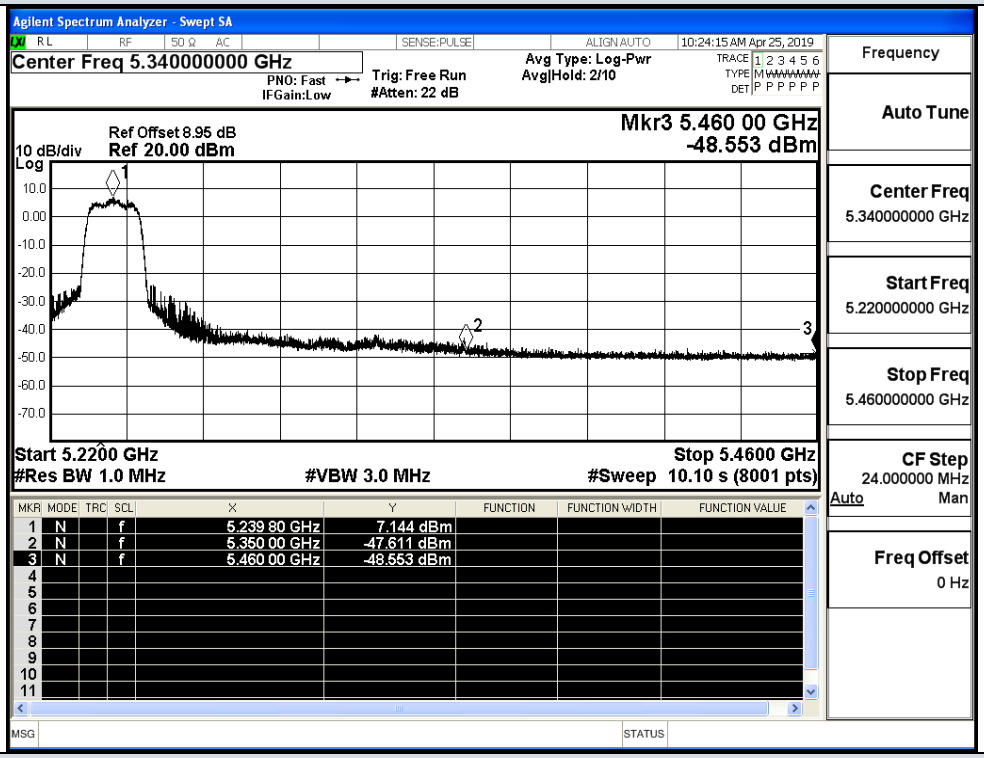
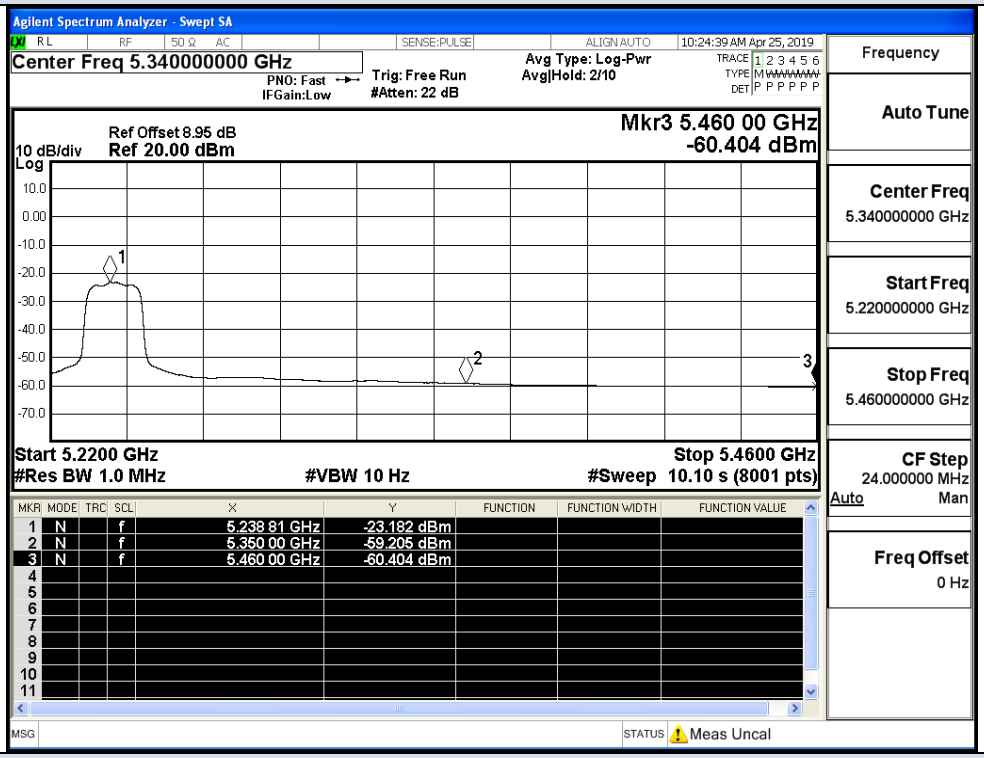
Undesirable Emissions Measurement



IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Peak



IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Average

Undesirable Emissions Measurement

IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Peak

IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Average