

Appendix A

RF Test Data for 5.2G WLAN (Conducted Measurement)

Product Name: WIRELESS HDMI EXTENDER

Trade Mark: HOLLYLAND

Test Model: HLWH200B

Environmental Conditions

Temperature:	24.1° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	WangChuang
Supervised by:	Jayden Zhuo

A.1 Duty Cycle

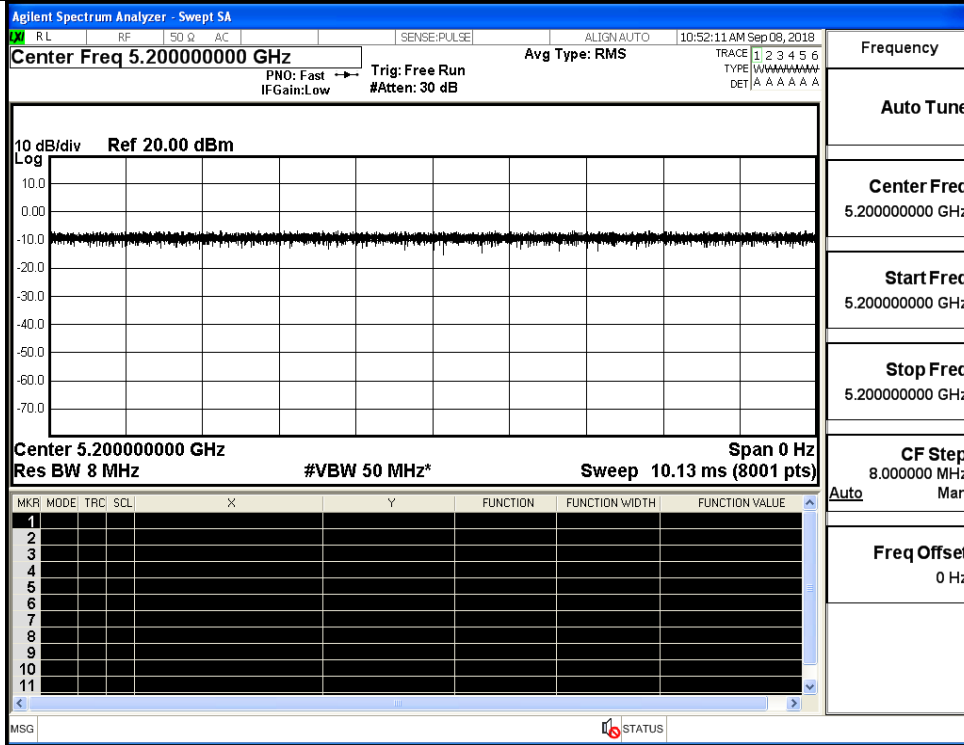
Antenna 0

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	5200	100	0.00	0.01
11N40	5190	100	0.00	0.01

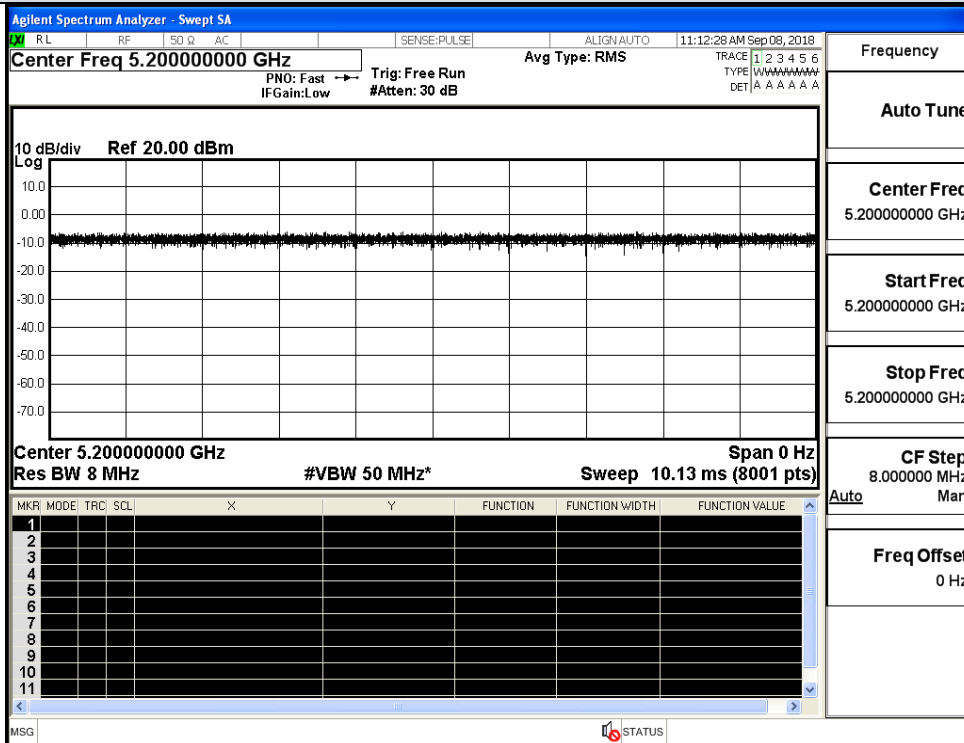
Antenna 1

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	5200	100	0.00	0.01
11N40	5190	100	0.00	0.01

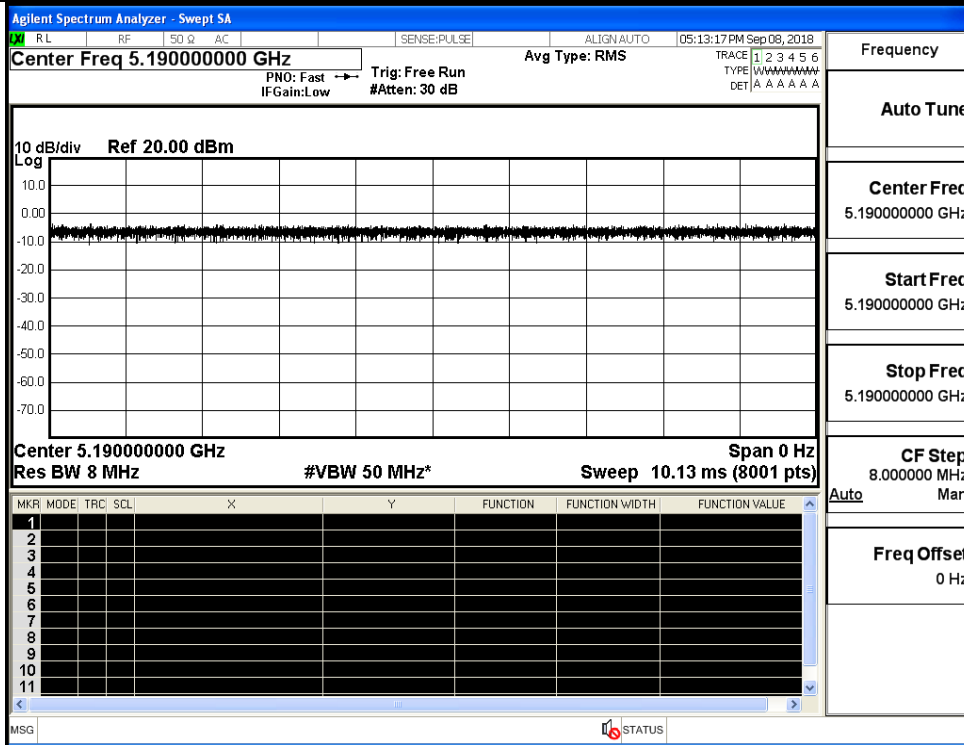
On Time and Duty Cycle_Ant0



IEEE 802.11a_Ant0

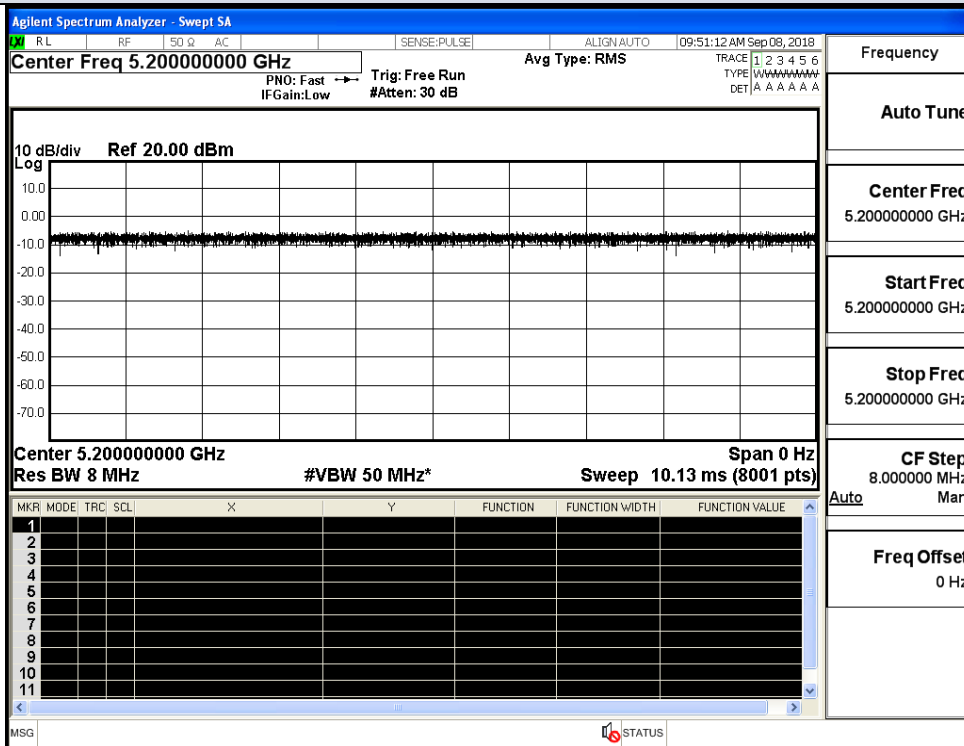


IEEE 802.11n HT20_Ant0

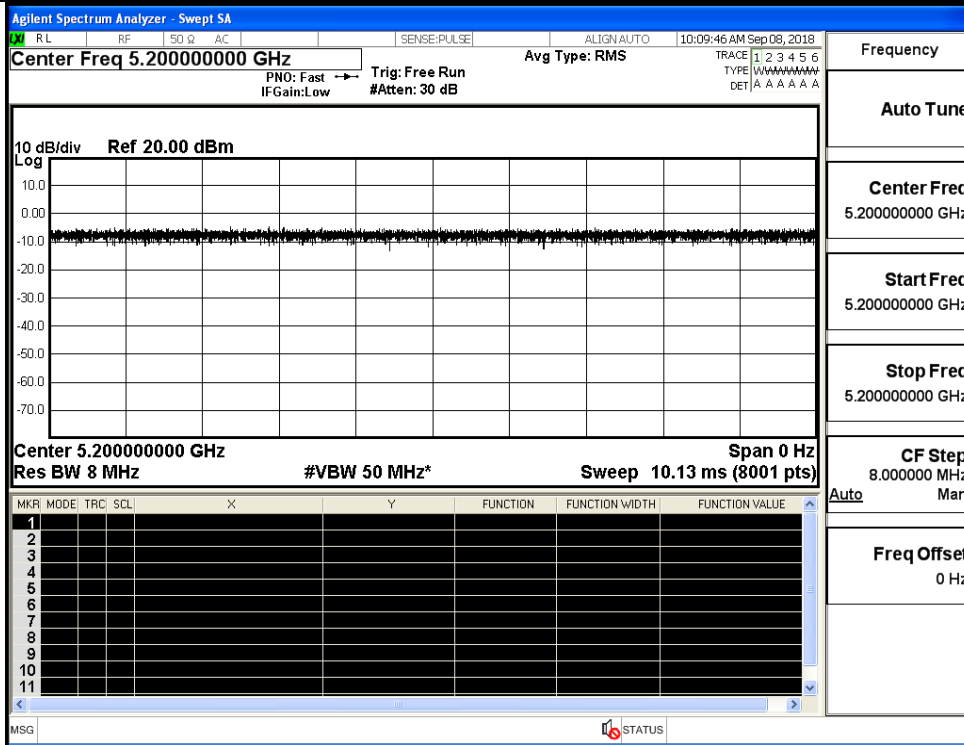


IEEE 802.11n HT40_Ant0

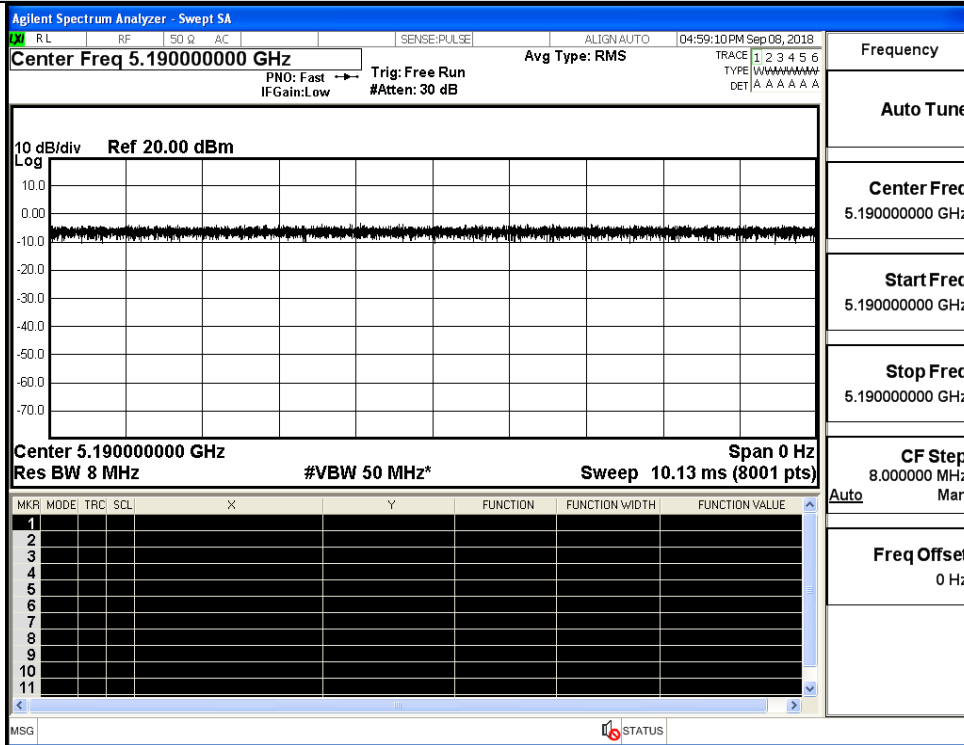
On Time and Duty Cycle_Ant1



IEEE 802.11a_Ant1



IEEE 802.11n HT20_Ant1



IEEE 802.11n HT40_Ant1

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)
11A	36	5180	13.45	0	13.45	30.00
	40	5200	13.14	0	13.14	
	48	5240	13.21	0	13.21	
11N20	36	5180	12.89	0	12.89	30.00
	40	5200	12.74	0	12.74	
	48	5240	12.62	0	12.62	
11N40	38	5190	11.32	0	11.32	30.00
	46	5230	11.09	0	11.09	

Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)	Duty Cycle Factor (dB)	Report Conducted Power (dBm)	Limit (dBm)
11A	36	5180	13.11	0	13.11	30.00
	40	5200	13.29	0	13.29	
	48	5240	13.47	0	13.47	
11N20	36	5180	12.92	0	12.92	30.00
	40	5200	12.86	0	12.86	
	48	5240	12.71	0	12.71	
11N40	38	5190	11.54	0	11.54	30.00
	46	5230	11.22	0	11.22	

Antenna 0+Antenna 1

Test Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)			Duty Cycle Factor (dB)	Report Conducted Power(dBm)			Limit (dBm)
			Ant0	Ant1	Sum		Ant0	Ant1	Sum	
11N20	36	5180	12.89	12.92	15.92	0	12.89	12.92	15.92	30.00
	40	5200	12.74	12.86	15.81	0	12.74	12.86	15.81	
	48	5240	12.62	12.71	15.68	0	12.62	12.71	15.68	
11N40	38	5190	11.32	11.54	14.44	0	11.32	11.54	14.44	30.00
	46	5230	11.09	11.22	14.17	0	11.09	11.22	14.17	

A.3 Power Spectral Density

Antenna 0

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/1MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/1MHz)	Limit (dBm/1MHz)
11A	36	5180	-3.520	0	-3.520	17
	40	5200	-2.981	0	-2.981	
	48	5240	-0.373	0	-0.373	
11N20	36	5180	-2.722	0	-2.722	17
	40	5200	-2.573	0	-2.573	
	48	5240	-0.369	0	-0.369	
11N40	38	5190	-6.321	0	-6.321	17
	46	5230	-6.220	0	-6.220	

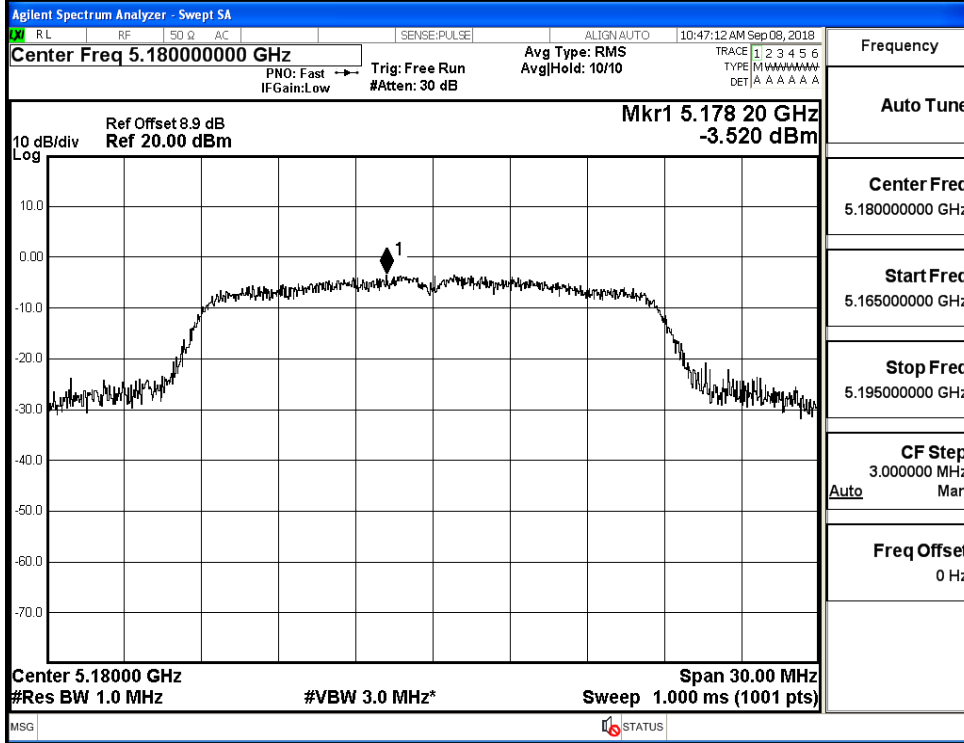
Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/1MHz)	Duty Cycle Factor (dB)	Report Power Density (dBm/1MHz)	Limit (dBm/MHz)
11A	36	5180	-1.725	0	-1.725	17
	40	5200	-1.645	0	-1.645	
	48	5240	1.227	0	1.227	
11N20	36	5180	-1.995	0	-1.995	17
	40	5200	-1.452	0	-1.452	
	48	5240	-1.380	0	-1.380	
11N40	38	5190	-6.523	0	-6.523	17
	46	5230	-5.325	0	-5.325	

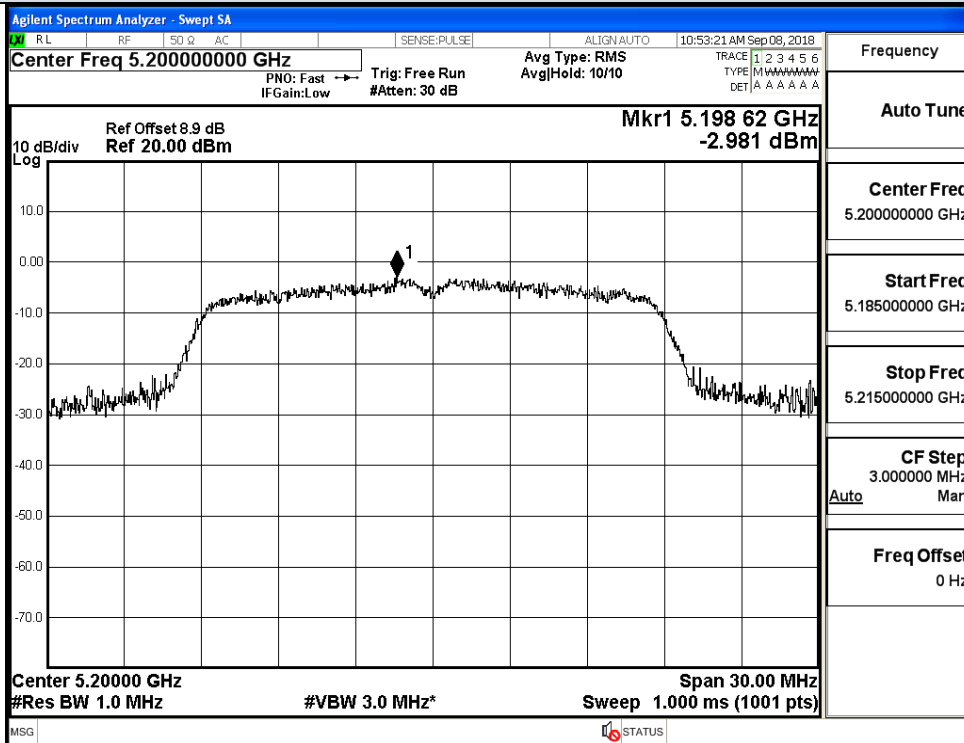
Antenna 0+Antenna 1

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/1MHz)			Duty Cycle Factor (dB)	Report Power Density (dBm/1MHz)			Limit (dBm/1MHz)
			Ant0	Ant1	Sum		Ant0	Ant1	Sum	
11N20	36	5180	-2.722	-1.995	0.667	0	-2.722	-1.995	0.667	14.99
	40	5200	-2.573	-1.452	1.034	0	-2.573	-1.452	1.034	
	48	5240	-0.369	-1.380	2.165	0	-0.369	-1.380	2.165	
11N40	38	5190	-6.321	-6.523	-3.411	0	-6.321	-6.523	-3.411	14.99
	46	5230	-6.220	-5.325	0.667	0	-6.220	-5.325	0.667	

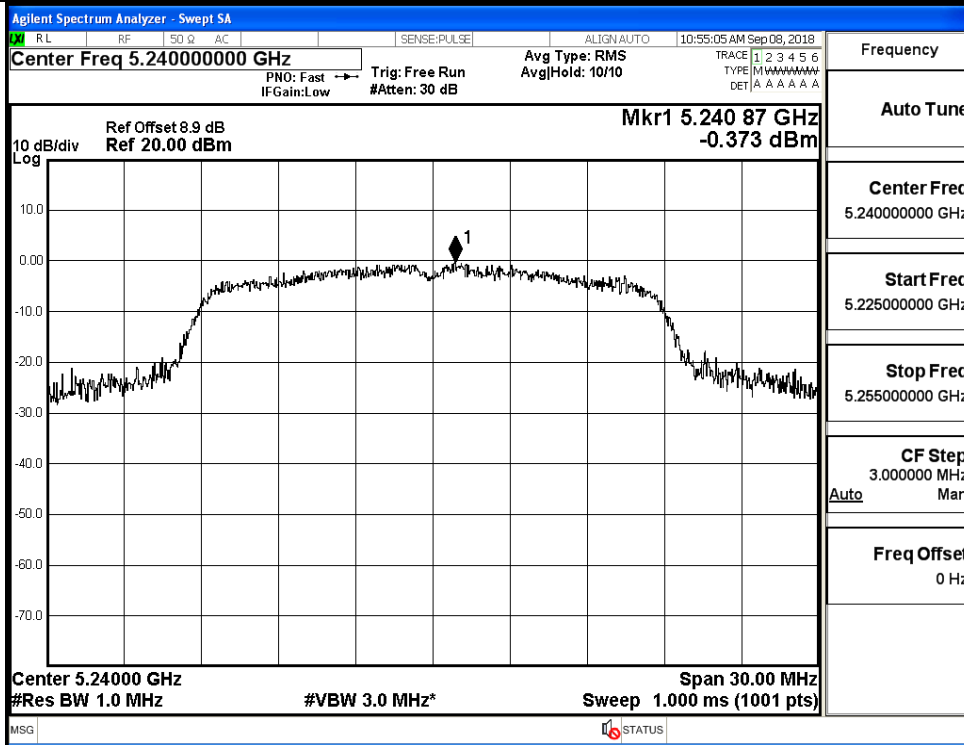
Power Spectral Density_Ant0



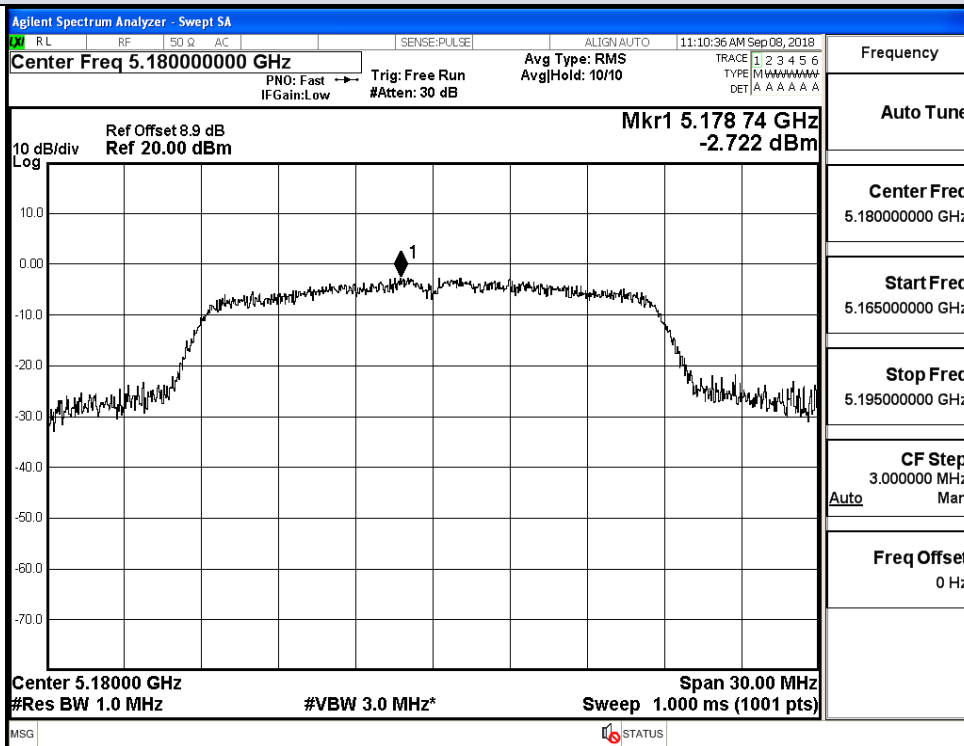
IEEE 802.11a / Channel 36 / 5180 MHz_Ant0



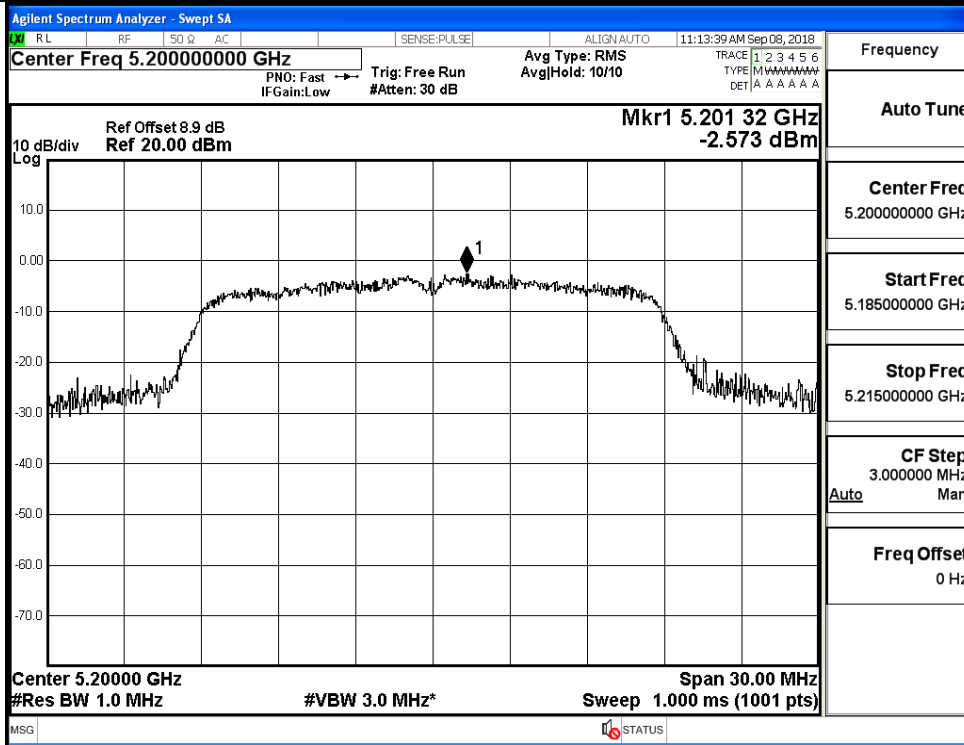
IEEE 802.11a / Channel 40 / 5200 MHz_Ant0



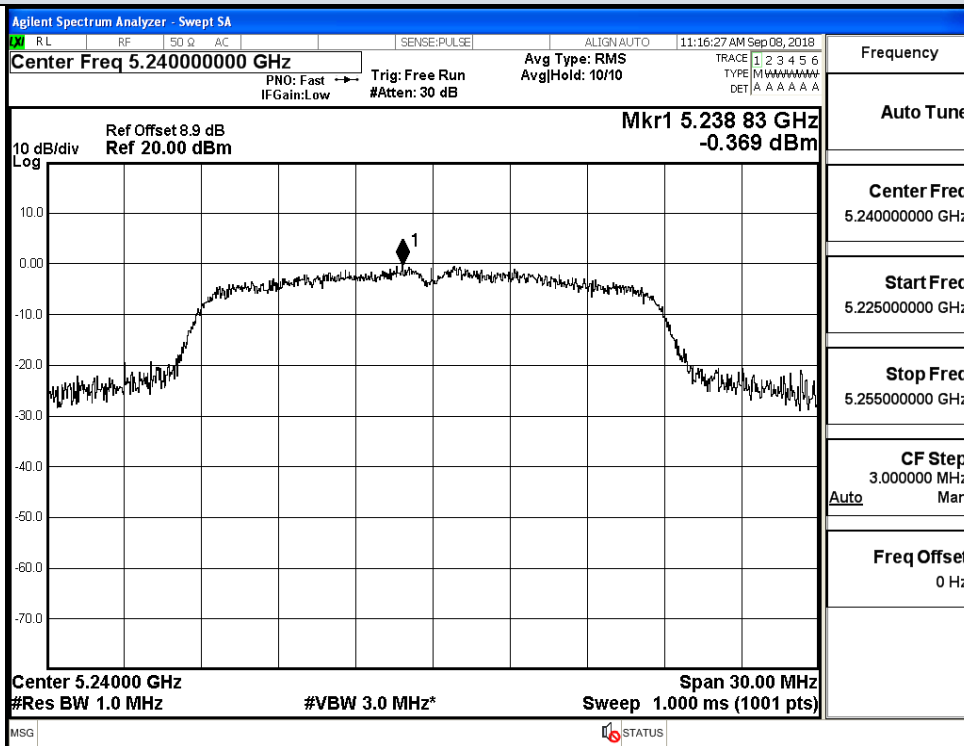
IEEE 802.11a / Channel 48 / 5240 MHz_Ant0



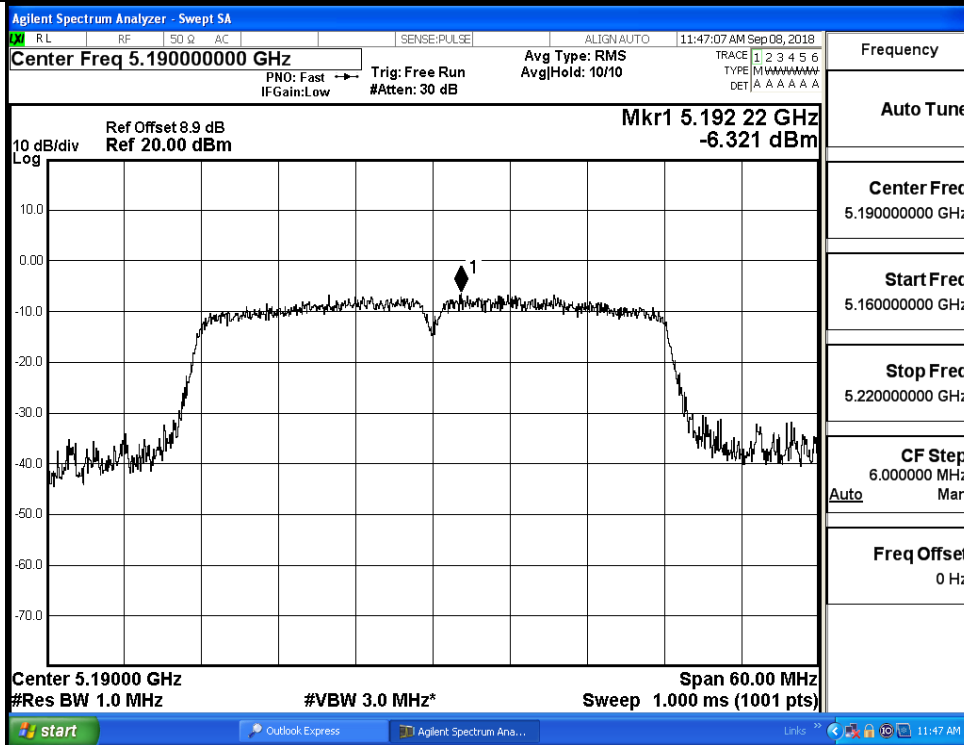
IEEE 802.11n HT20 / Channel 36 / 5180 MHz_Ant0



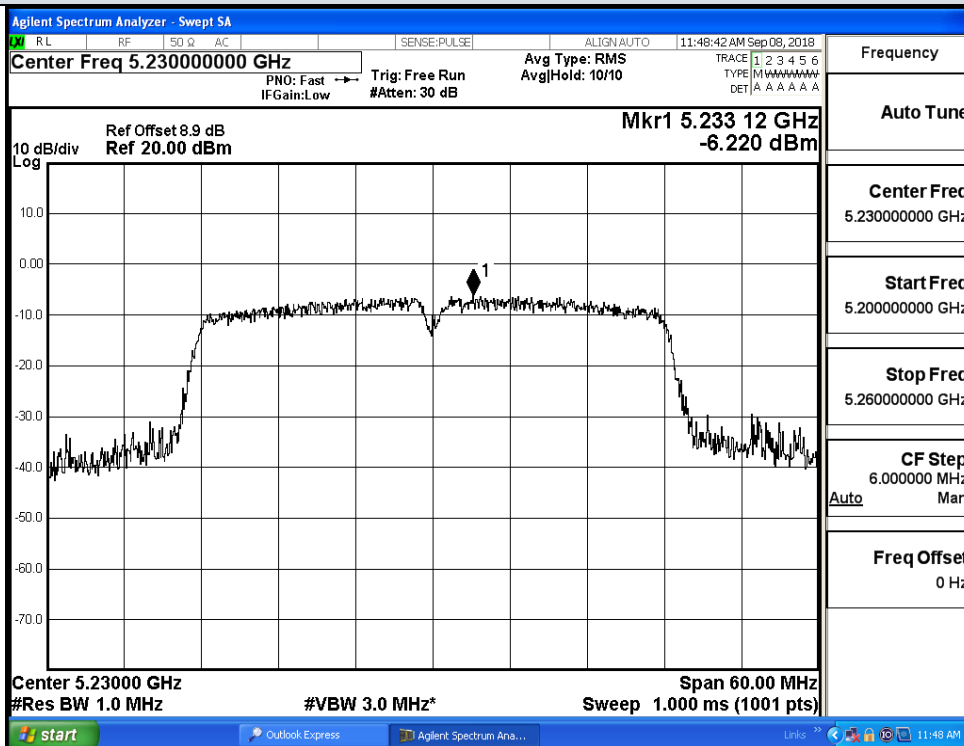
IEEE 802.11n HT20 / Channel 40 / 5200 MHz_Ant0



IEEE 802.11n HT20 / Channel 48 / 5240 MHz_Ant0

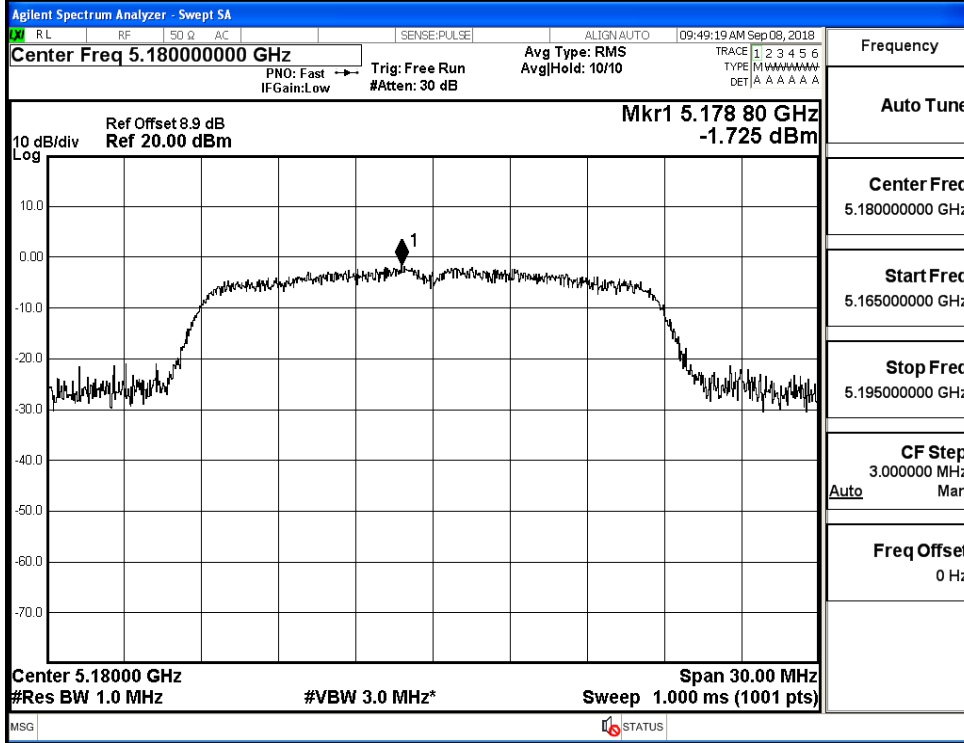


IEEE 802.11n HT40 / Channel 38 / 5190 MHz_Ant0

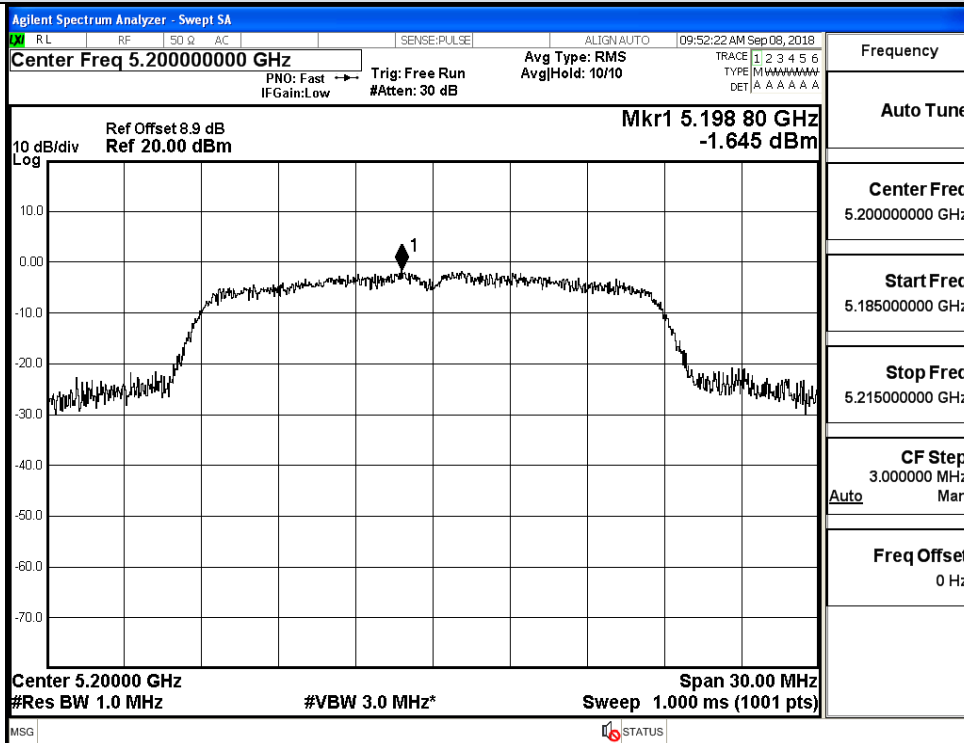


IEEE 802.11n HT40 / Channel 46 / 5230 MHz_Ant0

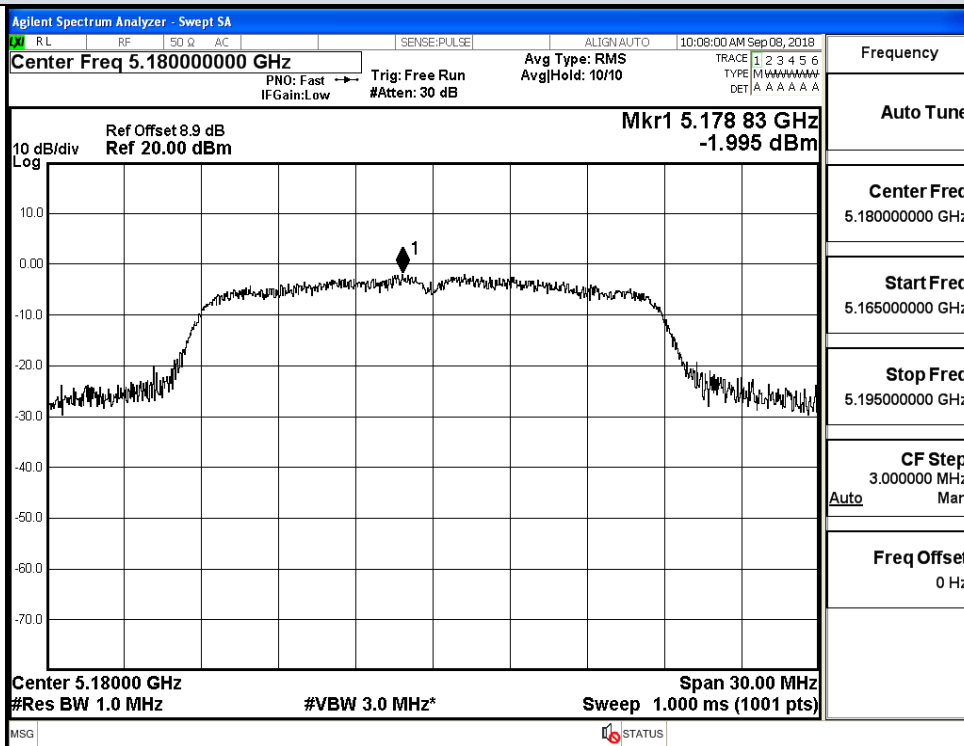
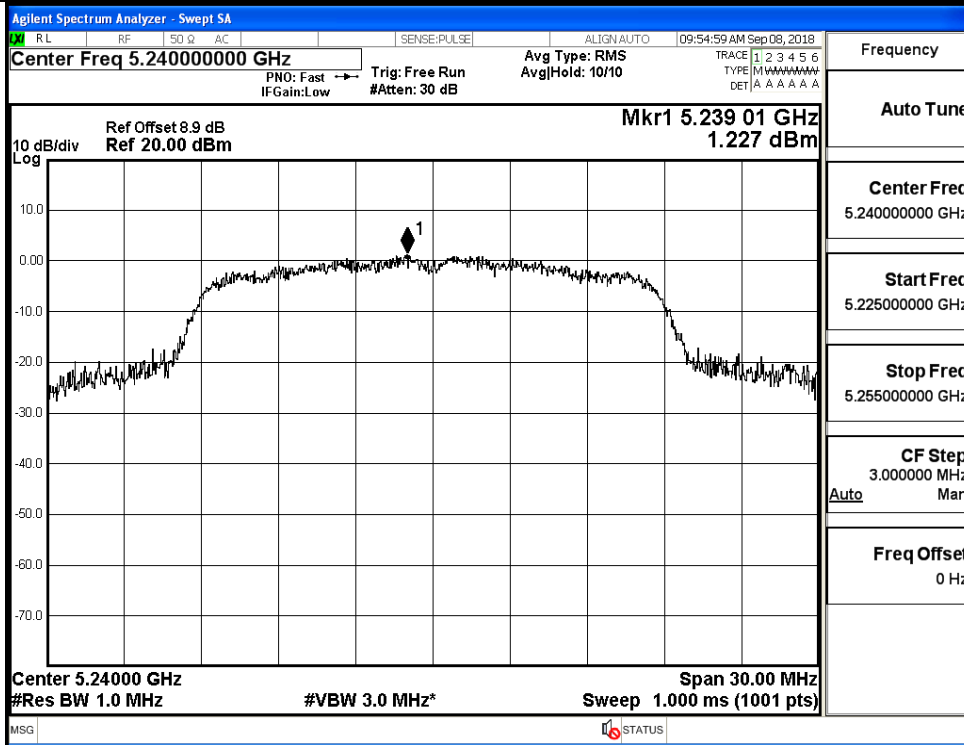
Power Spectral Density_Ant1

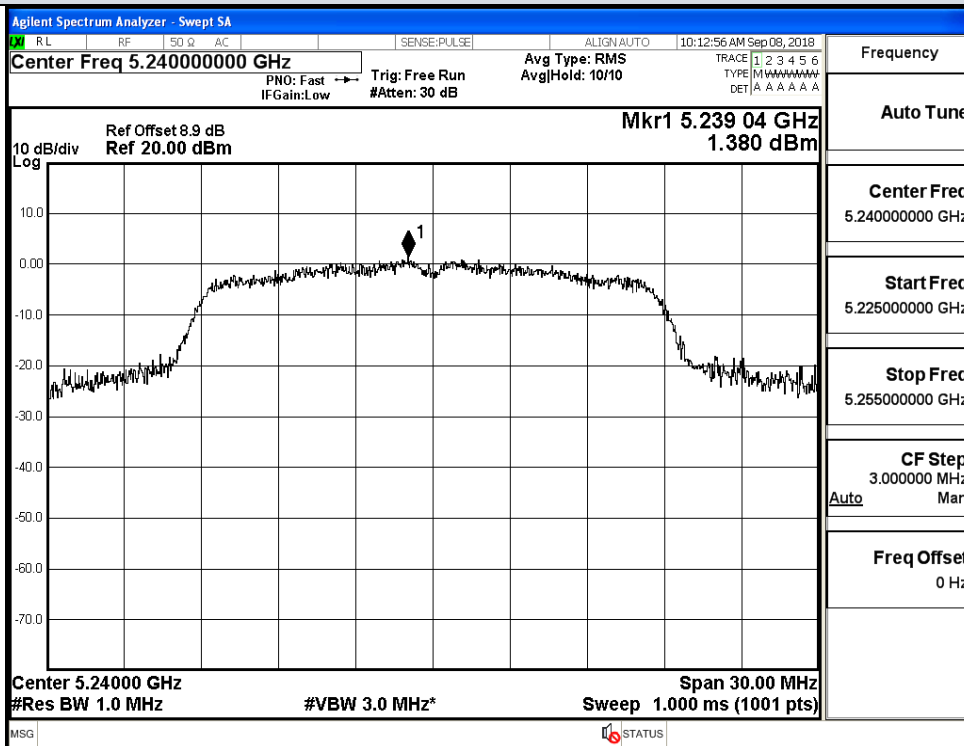
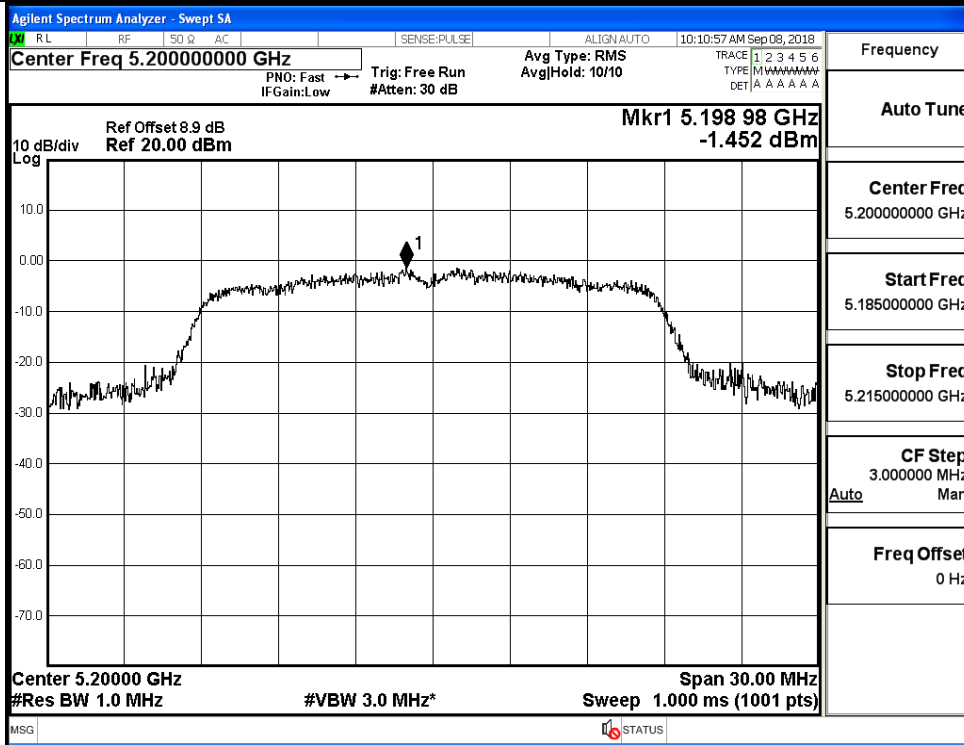


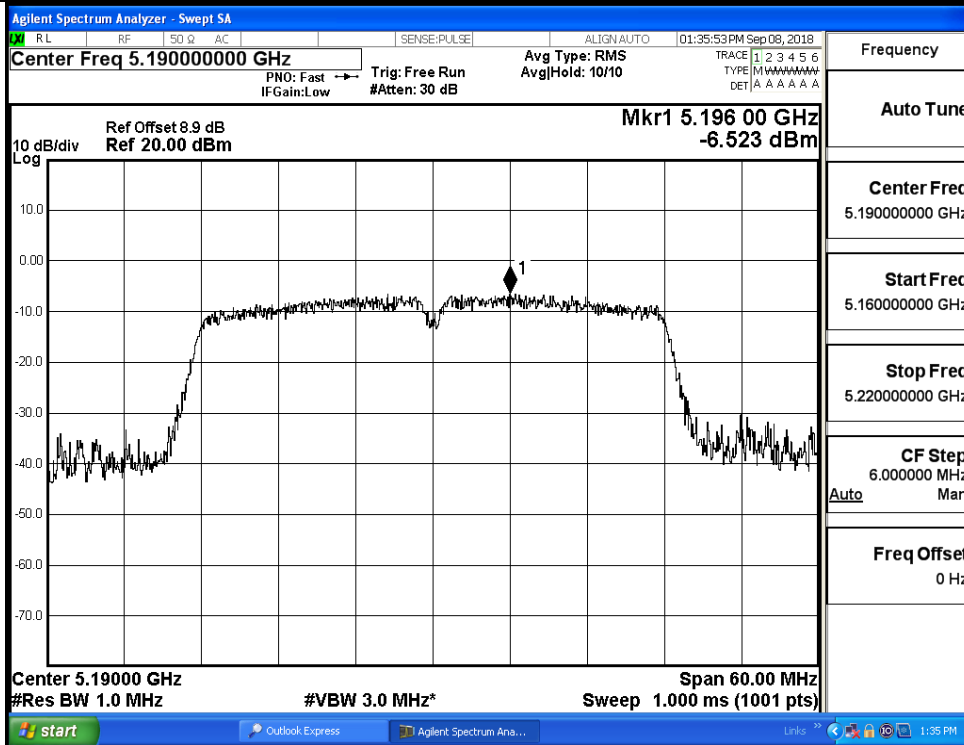
IEEE 802.11a / Channel 36 / 5180 MHz_Ant1



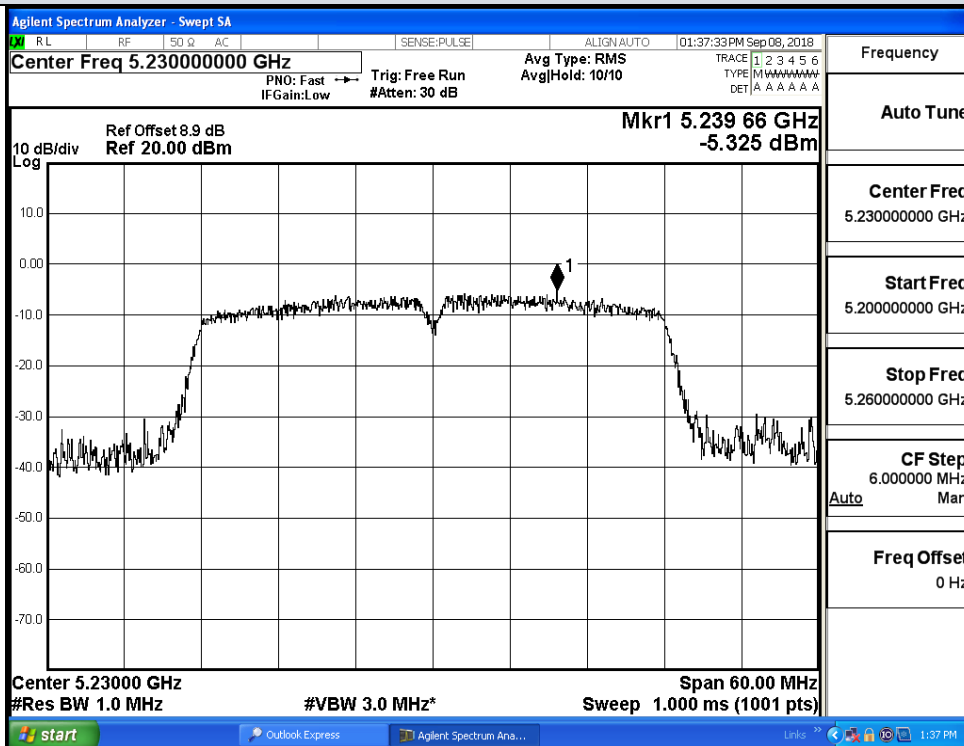
IEEE 802.11a / Channel 40 / 5200 MHz_Ant1







IEEE 802.11n HT40 / Channel 38 / 5190 MHz_Ant1



IEEE 802.11n HT40 / Channel 46 / 5230 MHz_Ant1

A.4 Emission Bandwidth

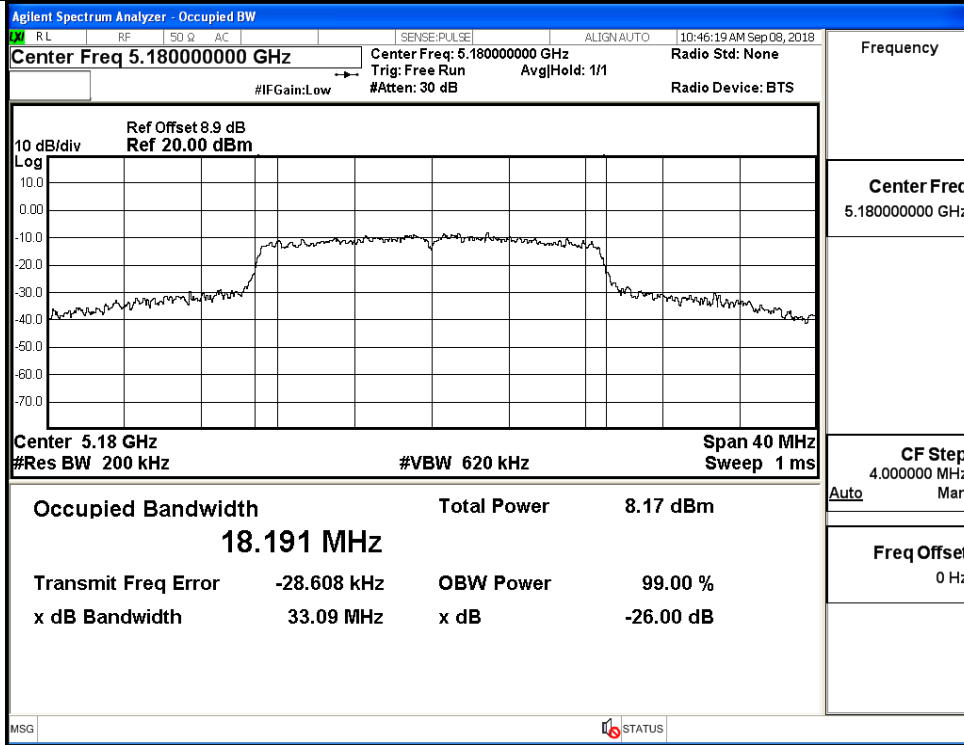
Antenna 0

Test Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)
11A	36	5180	18.191	33.090	No Limit
	40	5200	18.189	32.360	
	48	5240	18.219	33.500	
11N20	36	5180	18.108	32.340	No Limit
	40	5200	18.290	33.150	
	48	5240	18.206	31.720	
11N40	38	5190	36.018	39.580	No Limit
	46	5230	35.997	40.010	

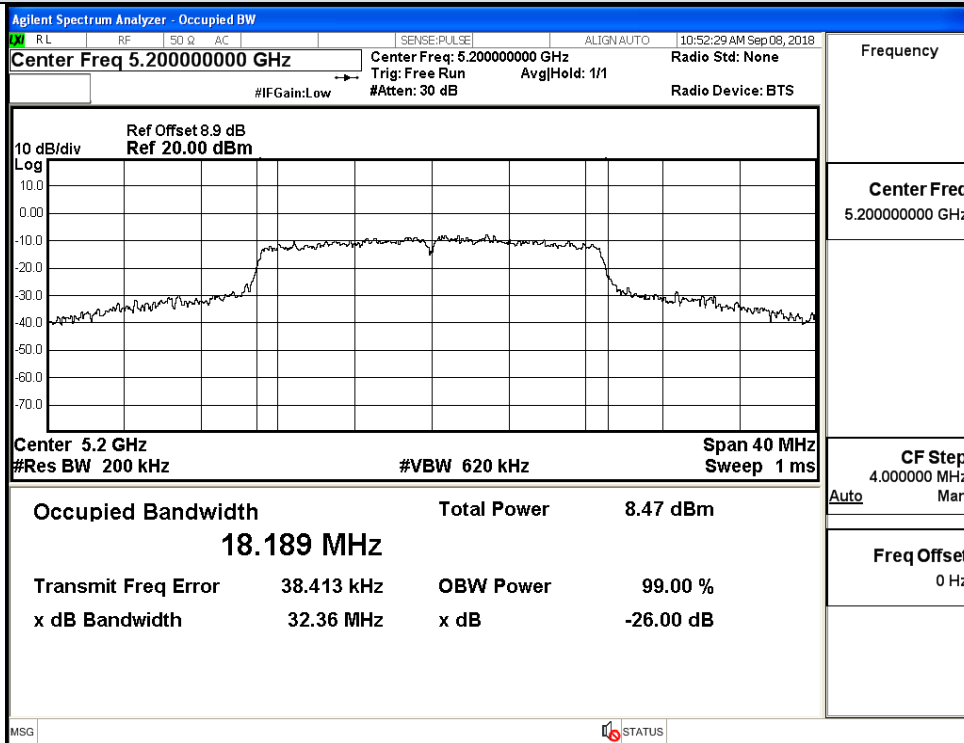
Antenna 1

Test Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)
11A	36	5180	18.014	34.240	No Limit
	40	5200	18.345	33.560	
	48	5240	18.345	32.890	
11N20	36	5180	18.350	33.790	No Limit
	40	5200	18.279	34.210	
	48	5240	18.526	34.140	
11N40	38	5190	35.989	39.270	No Limit
	46	5230	35.940	39.170	

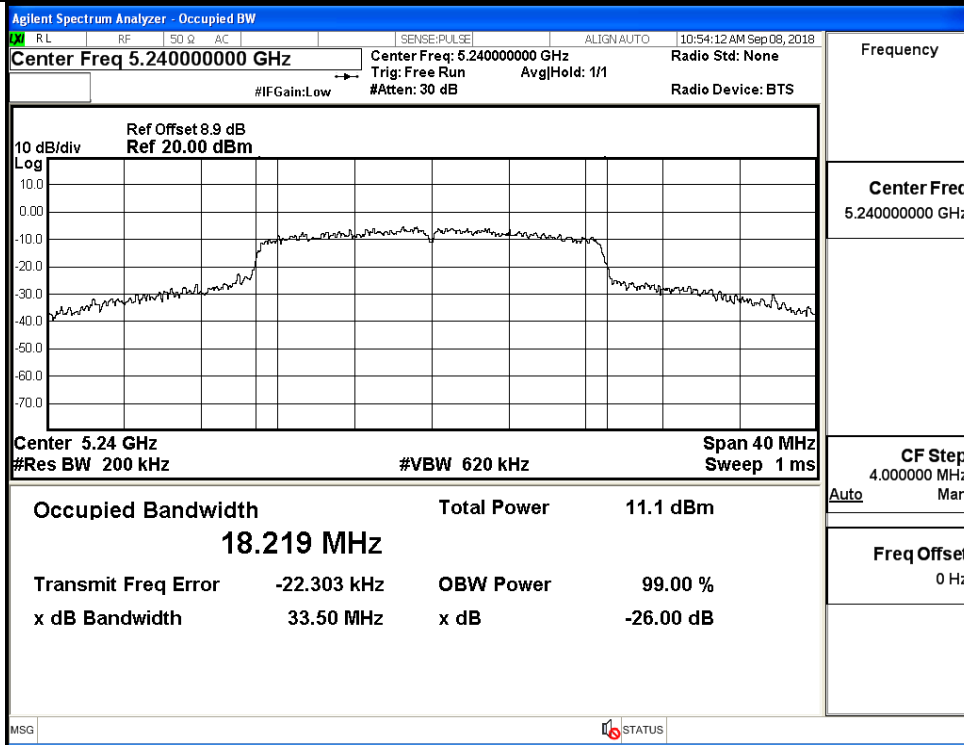
99% and 26dB Bandwidth_Ant0



IEEE 802.11a / Channel 36 / 5180 MHz_Ant0

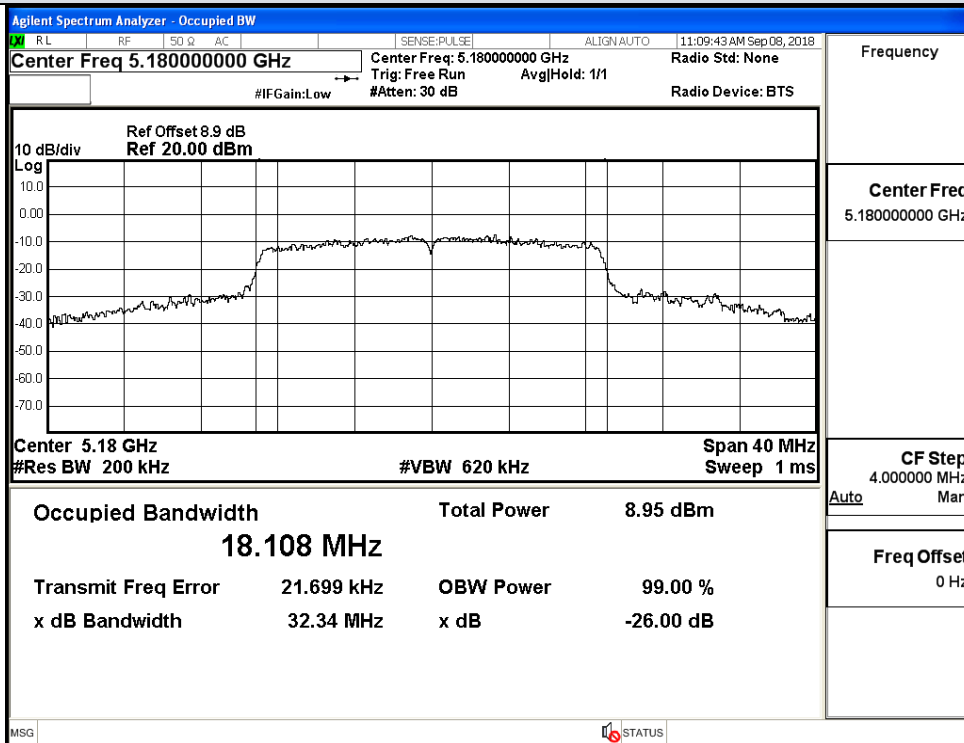


IEEE 802.11a / Channel 40 / 5200 MHz_Ant0

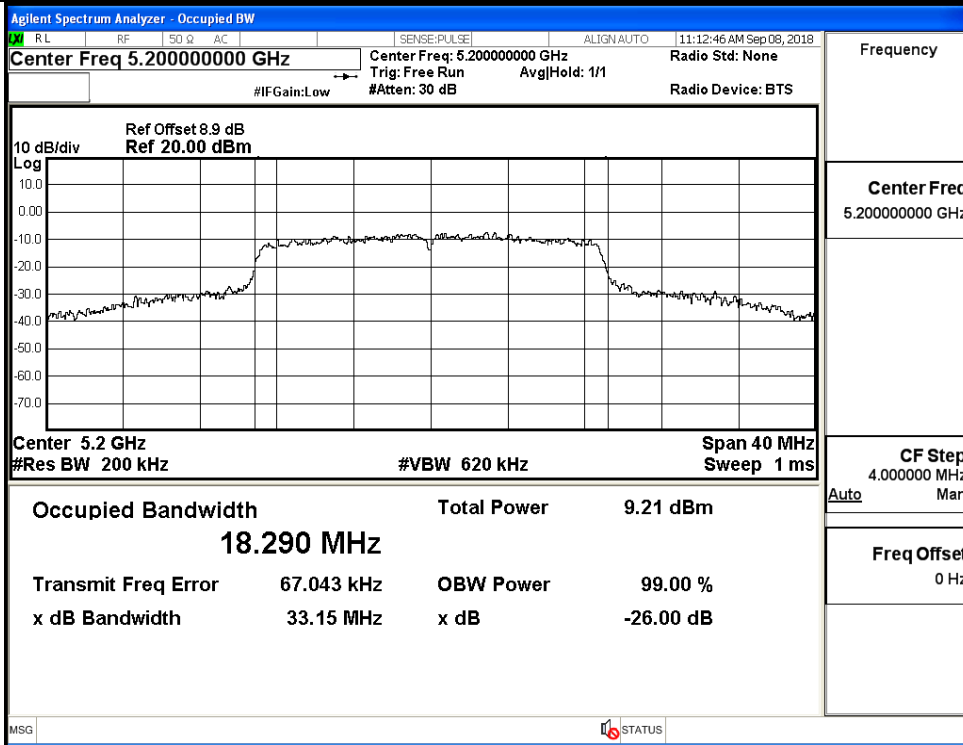


IEEE 802.11a / Channel 48 / 5240 MHz_Ant0

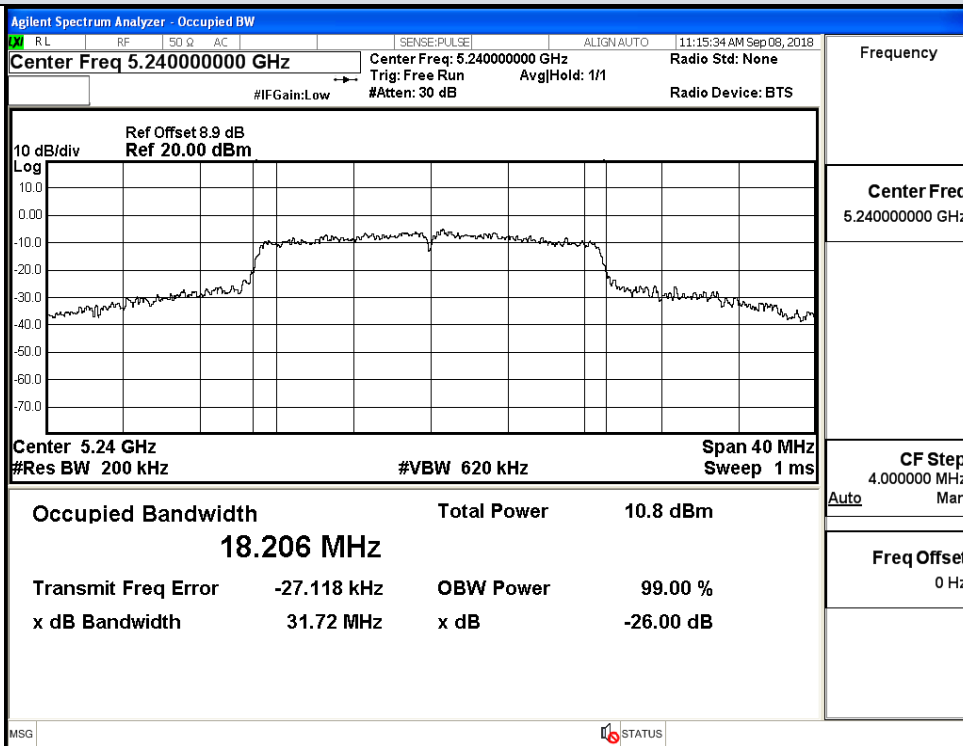
99% and 26dB Bandwidth_Ant0



IEEE 802.11n HT20 / Channel 36 / 5180 MHz_Ant0

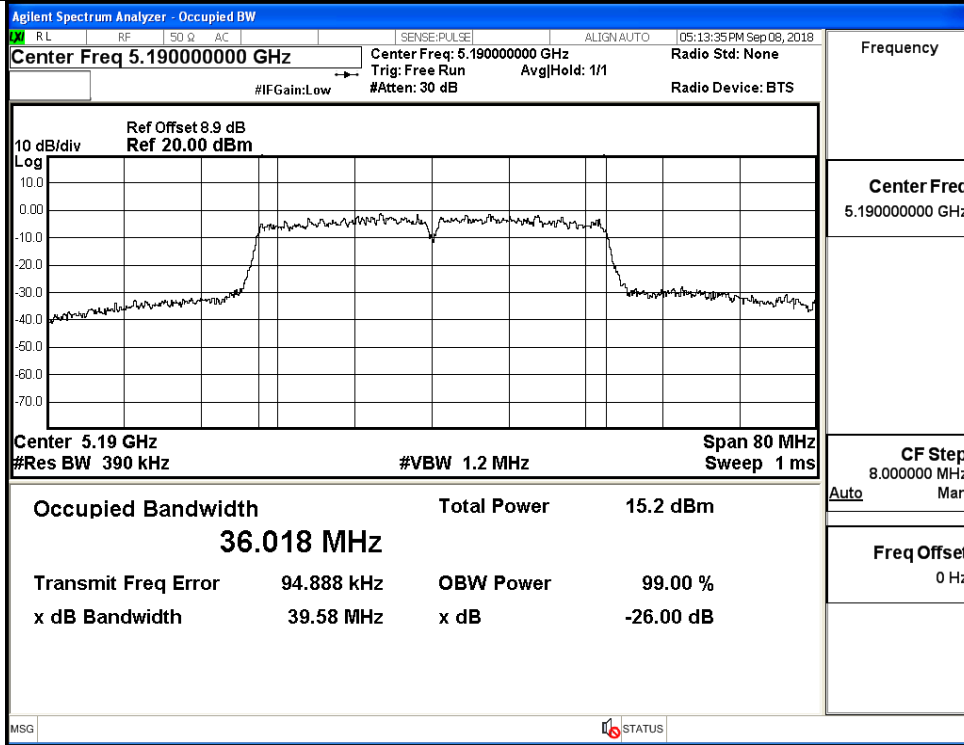


IEEE 802.11n HT20 / Channel 40 / 5200 MHz_Ant0

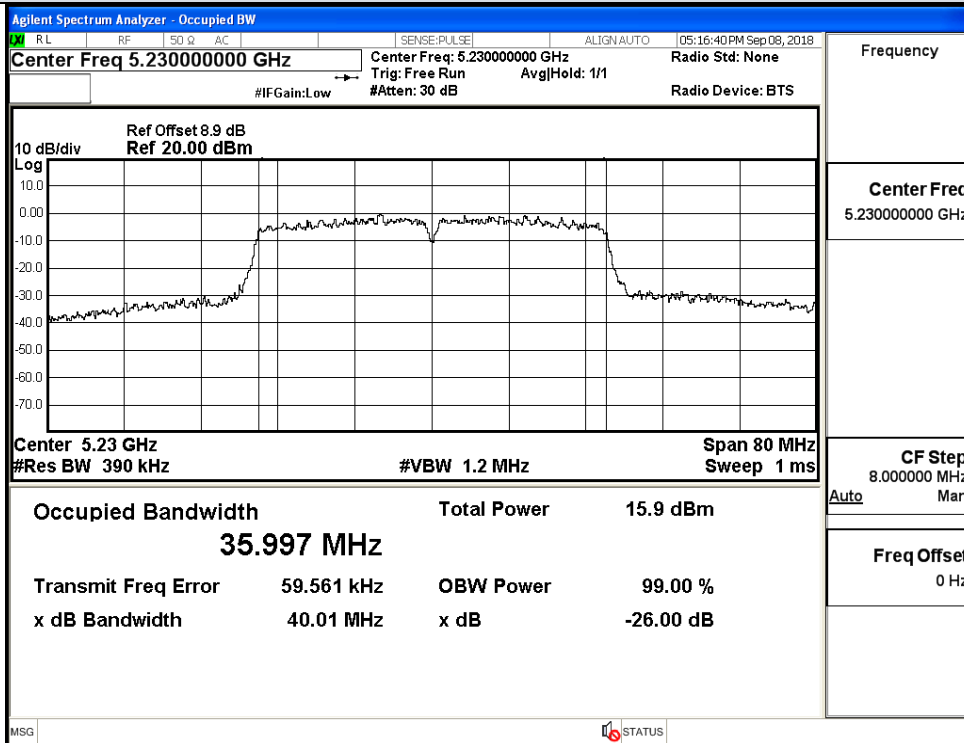


IEEE 802.11n HT20 / Channel 48 / 5240 MHz_Ant0

99% and 26dB Bandwidth_Ant0

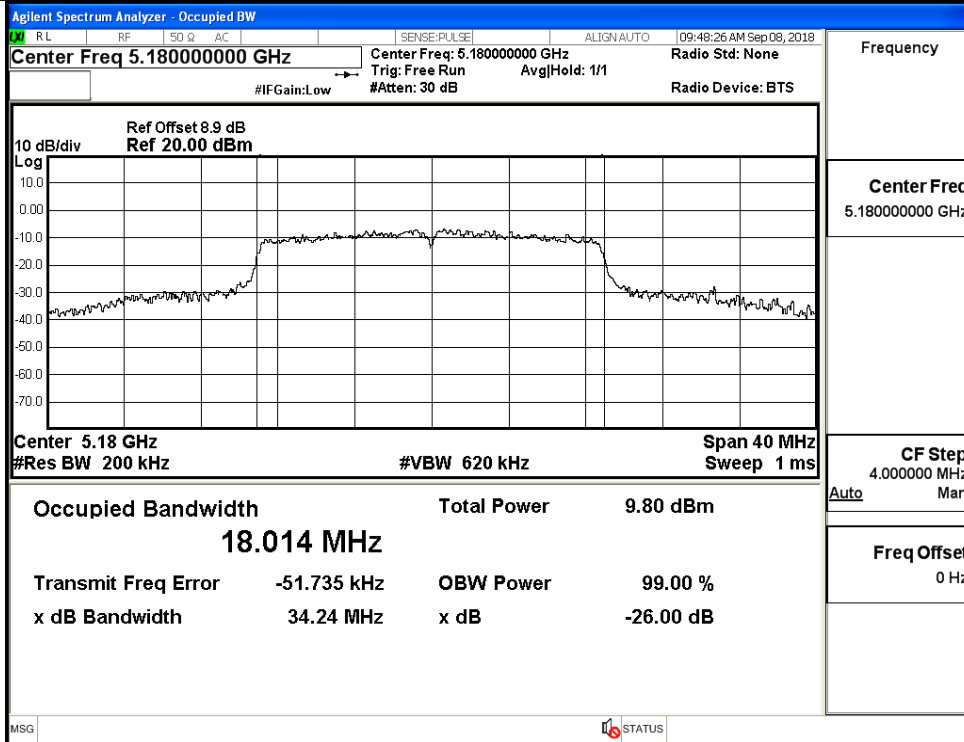


IEEE 802.11n HT40 / Channel 38 / 5190 MHz_Ant0

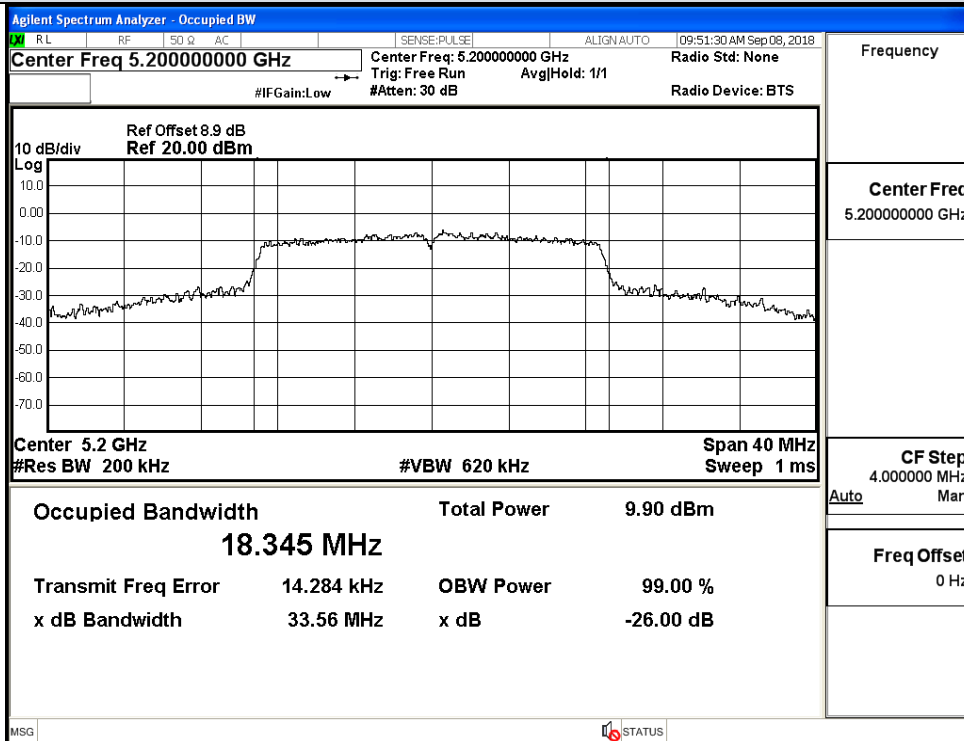


IEEE 802.11n HT40 / Channel 46 / 5230 MHz_Ant0

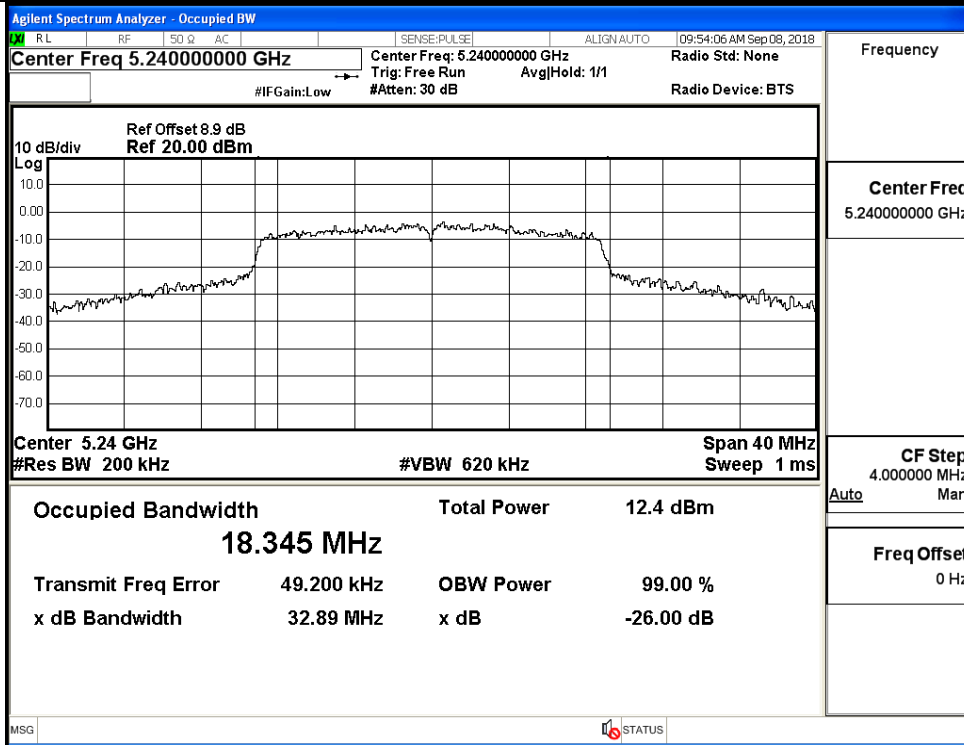
99% and 26dB Bandwidth_Ant1



IEEE 802.11a / Channel 36 / 5180 MHz_Ant1

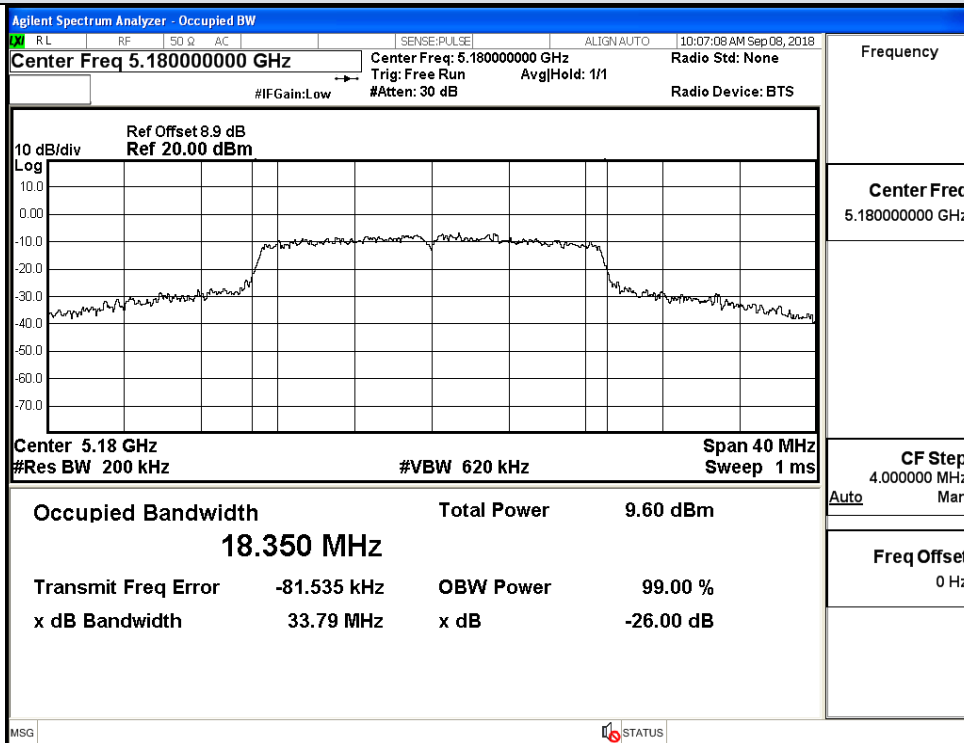


IEEE 802.11a / Channel 40 / 5200 MHz_Ant1

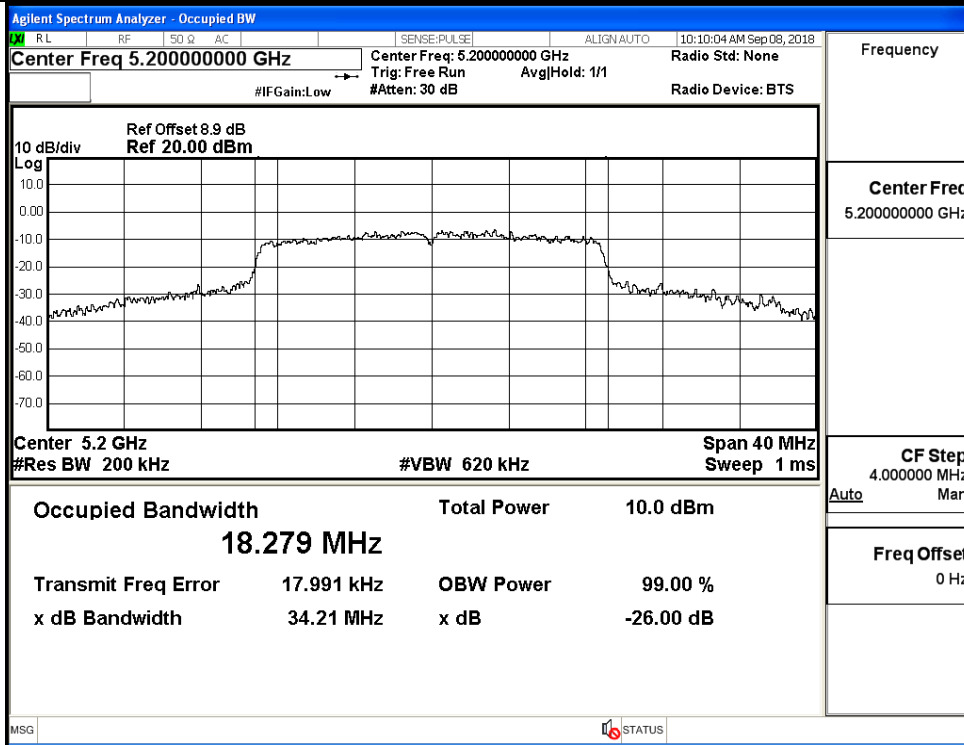


IEEE 802.11a / Channel 48 / 5240 MHz_Ant1

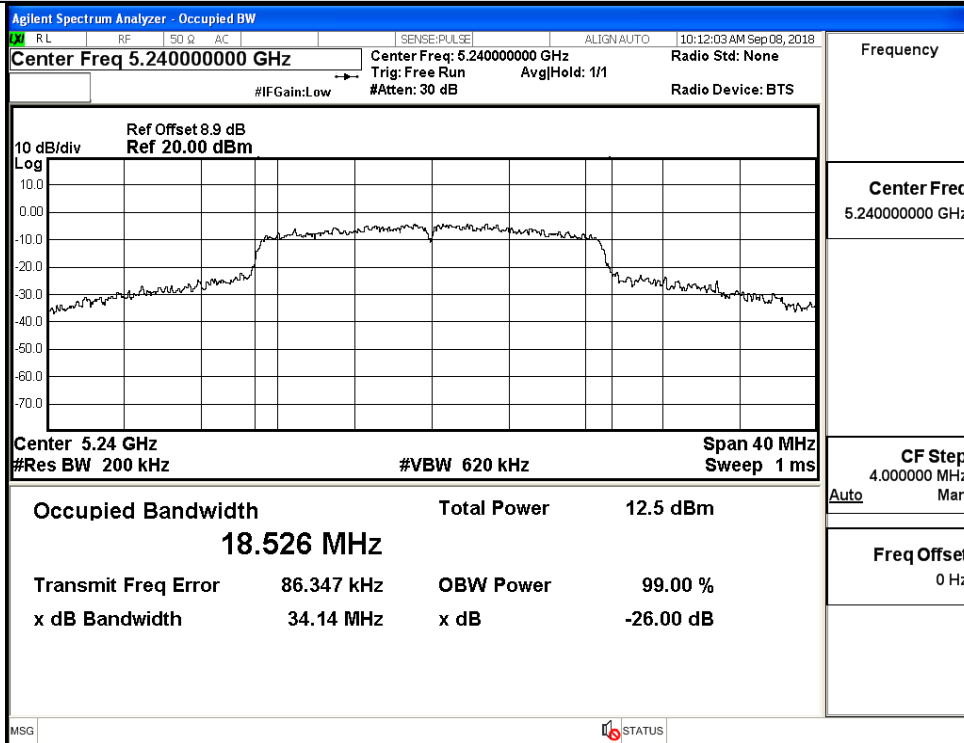
99% and 26dB Bandwidth_Ant1



IEEE 802.11n HT20 / Channel 36 / 5180 MHz_Ant1

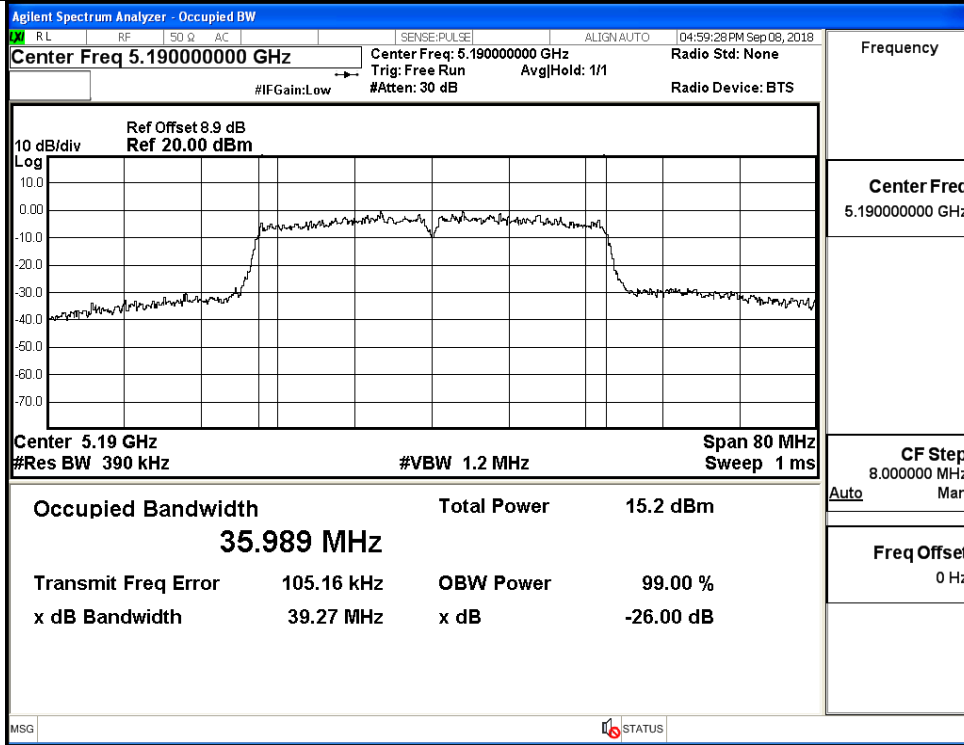


IEEE 802.11n HT20 / Channel 40 / 5200 MHz_Ant1

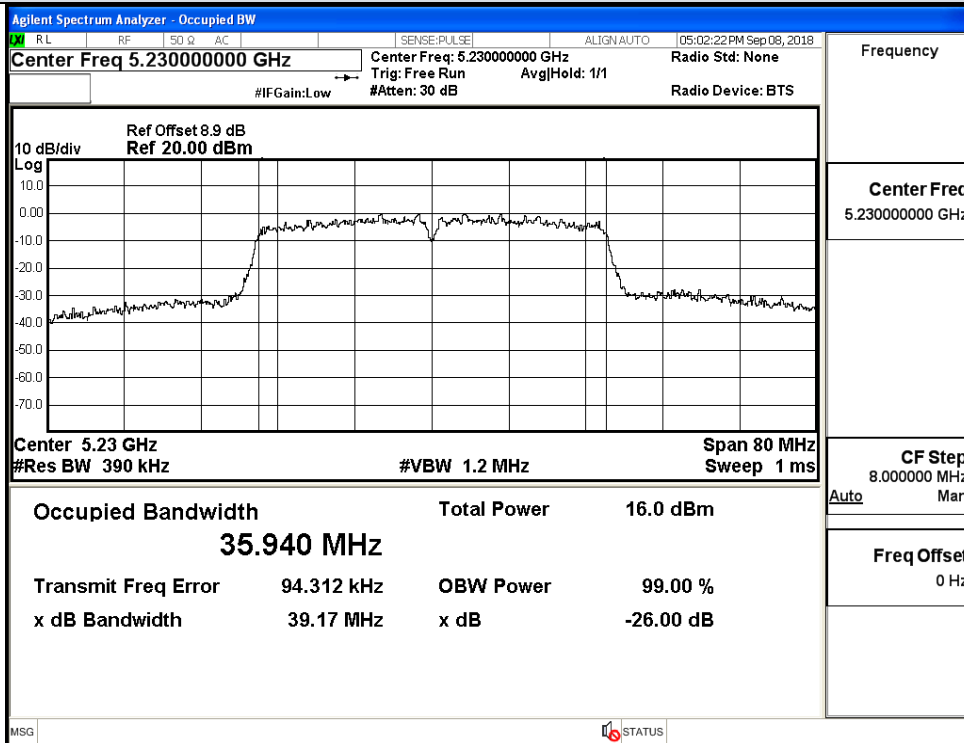


IEEE 802.11n HT20 / Channel 48 / 5240 MHz_Ant1

99% and 26dB Bandwidth_Ant1



IEEE 802.11n HT40 / Channel 38 / 5190 MHz_Ant1



IEEE 802.11n HT40 / Channel 46 / 5230 MHz_Ant1

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)
11A	36	4500.0	-50.057	5.0	0	50.171	Peak	74.00
		4500.0	-60.091	5.0	0	40.137	Average	54.00
		5150.0	-41.391	5.0	0	58.837	Peak	74.00
		5150.0	-54.886	5.0	0	45.342	Average	54.00
	48	5350.0	-51.130	5.0	0	49.098	Peak	74.00
		5350.0	-60.093	5.0	0	40.135	Average	54.00
		5460.0	-50.601	5.0	0	49.627	Peak	74.00
		5460.0	-60.393	5.0	0	39.835	Average	54.00
11N20	36	4500.0	-51.038	5.0	0	49.190	Peak	74.00
		4500.0	-60.108	5.0	0	40.120	Average	54.00
		5150.0	-41.633	5.0	0	58.595	Peak	74.00
		5150.0	-55.135	5.0	0	45.093	Average	54.00
	48	5350.0	-49.751	5.0	0	50.477	Peak	74.00
		5350.0	-60.132	5.0	0	40.096	Average	54.00
		5460.0	-49.896	5.0	0	50.332	Peak	74.00
		5460.0	-60.392	5.0	0	39.836	Average	54.00
11N40	38	4500.0	-50.454	5.0	0	49.774	Peak	74.00
		4500.0	-60.099	5.0	0	40.129	Average	54.00
		5150.0	-37.881	5.0	0	62.347	Peak	74.00
		5150.0	-54.093	5.0	0	46.135	Average	54.00
	46	5350.0	-48.854	5.0	0	51.374	Peak	74.00
		5350.0	-59.240	5.0	0	40.988	Average	54.00
		5460.0	-50.415	5.0	0	49.813	Peak	74.00
		5460.0	-59.870	5.0	0	40.358	Average	54.00

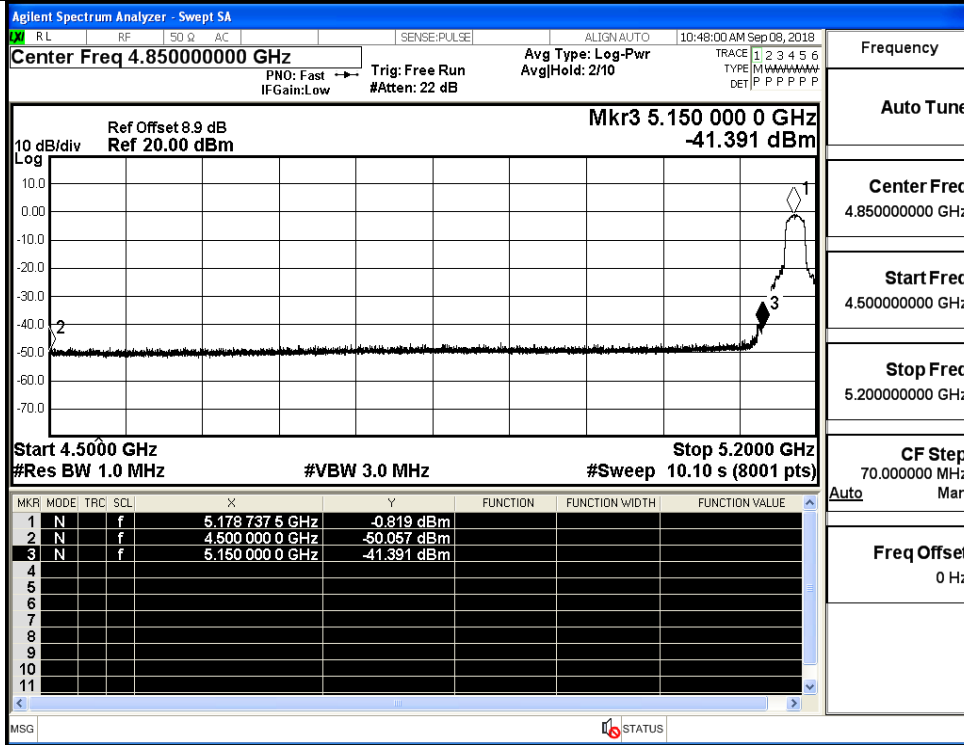
Antenna 1

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)
11A	36	4500.0	-50.222	5.0	0	50.006	Peak	74.00
		4500.0	-60.141	5.0	0	40.087	Average	54.00
		5150.0	-35.500	5.0	0	64.728	Peak	74.00
		5150.0	-52.016	5.0	0	48.212	Average	54.00
	48	5350.0	-50.330	5.0	0	49.898	Peak	74.00
		5350.0	-60.132	5.0	0	40.096	Average	54.00
		5460.0	-49.673	5.0	0	50.555	Peak	74.00
		5460.0	-60.430	5.0	0	39.798	Average	54.00
11N20	36	4500.0	-50.438	5.0	0	49.790	Peak	74.00
		4500.0	-60.078	5.0	0	40.150	Average	54.00
		5150.0	-38.658	5.0	0	61.570	Peak	74.00
		5150.0	-53.742	5.0	0	46.486	Average	54.00
	48	5350.0	-49.527	5.0	0	50.701	Peak	74.00
		5350.0	-60.131	5.0	0	40.097	Average	54.00
		5460.0	-49.891	5.0	0	50.337	Peak	74.00
		5460.0	-60.405	5.0	0	39.823	Average	54.00
11N40	38	4500.0	-50.808	5.0	0	49.420	Peak	74.00
		4500.0	-60.086	5.0	0	40.142	Average	54.00
		5150.0	-39.266	5.0	0	60.962	Peak	74.00
		5150.0	-54.235	5.0	0	45.993	Average	54.00
	46	5350.0	-48.774	5.0	0	51.454	Peak	74.00
		5350.0	-59.224	5.0	0	41.004	Average	54.00
		5460.0	-49.854	5.0	0	50.374	Peak	74.00
		5460.0	-59.852	5.0	0	40.376	Average	54.00

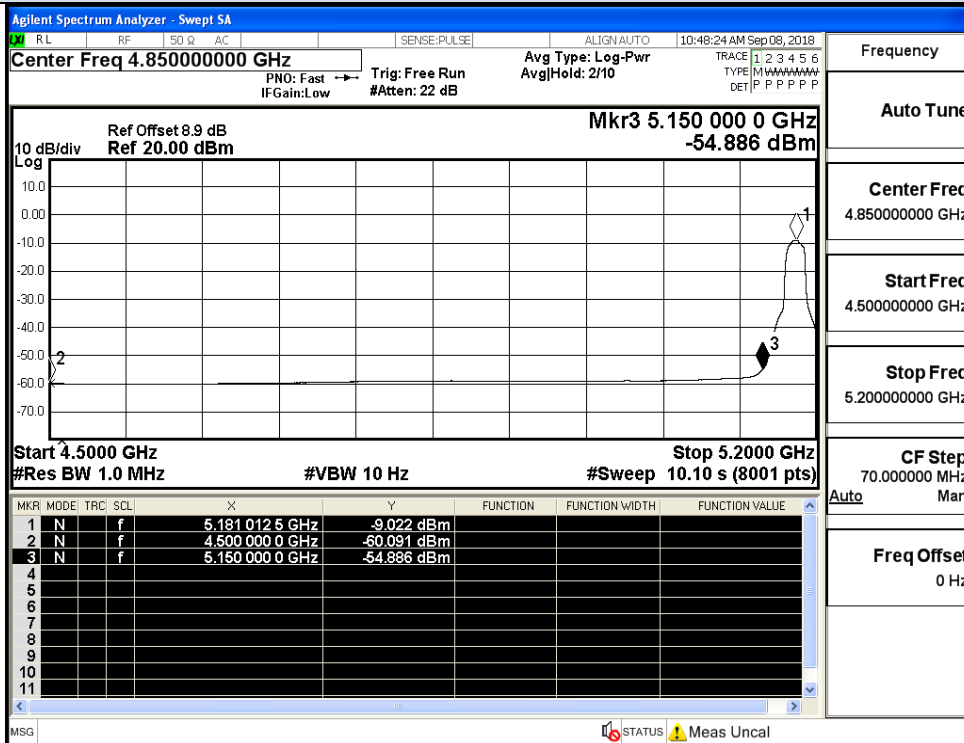
Antenna 0+Antenna 1

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)
			Ant0	Ant1	Sum					
11N20	36	4500.0	-51.038	-50.438	-47.717	8.01	0	55.521	Peak	74.00
		4500.0	-60.108	-60.078	-57.083	8.01	0	46.155	Average	54.00
		5150.0	-41.633	-38.658	-36.885	8.01	0	66.353	Peak	74.00
		5150.0	-55.135	-53.742	-51.373	8.01	0	51.865	Average	54.00
	48	5350.0	-49.751	-49.527	-46.627	8.01	0	56.611	Peak	74.00
		5350.0	-60.132	-60.131	-57.121	8.01	0	46.117	Average	54.00
		5460.0	-49.896	-49.891	-46.883	8.01	0	56.355	Peak	74.00
		5460.0	-60.392	-60.405	-57.388	8.01	0	45.850	Average	54.00
11N40	38	4500.0	-50.454	-50.808	-47.617	8.01	0	55.621	Peak	74.00
		4500.0	-60.099	-60.086	-57.082	8.01	0	46.156	Average	54.00
		5150.0	-37.881	-39.266	-35.508	8.01	0	67.730	Peak	74.00
		5150.0	-54.093	-54.235	-51.153	8.01	0	52.085	Average	54.00
	46	5350.0	-48.854	-48.774	-45.804	8.01	0	57.434	Peak	74.00
		5350.0	-59.240	-59.224	-56.222	8.01	0	47.016	Average	54.00
		5460.0	-50.415	-49.854	-47.115	8.01	0	56.123	Peak	74.00
		5460.0	-59.870	-59.852	-56.851	8.01	0	46.387	Average	54.00

Undesirable Emissions Measurement_Ant0

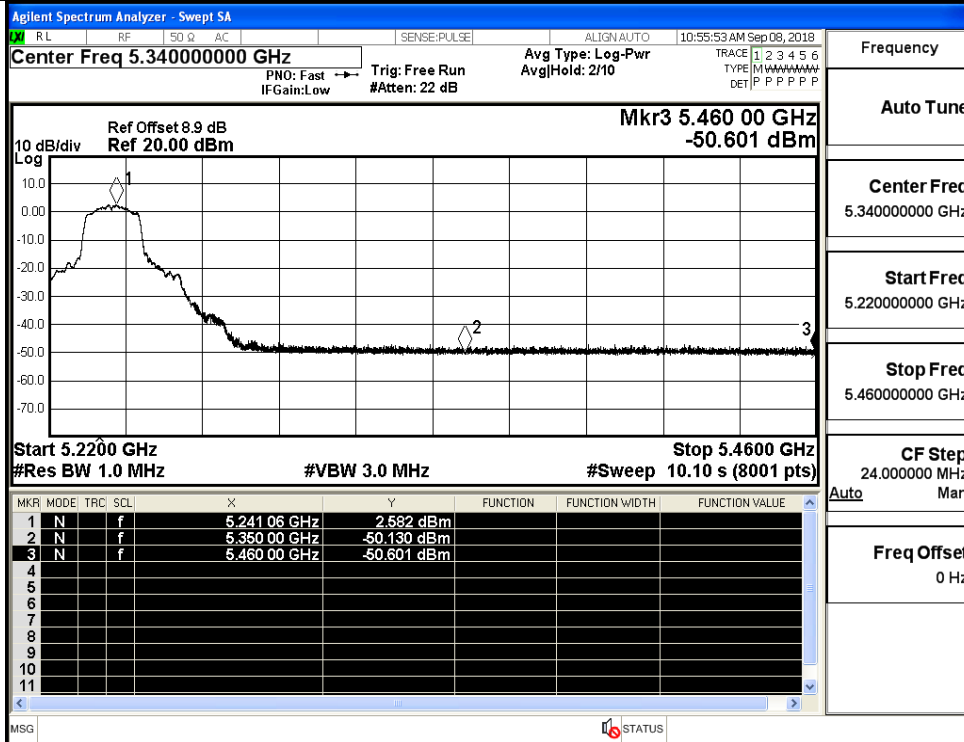


IEEE 802.11a / Channel 36 / 5180 MHz / Peak_Ant0

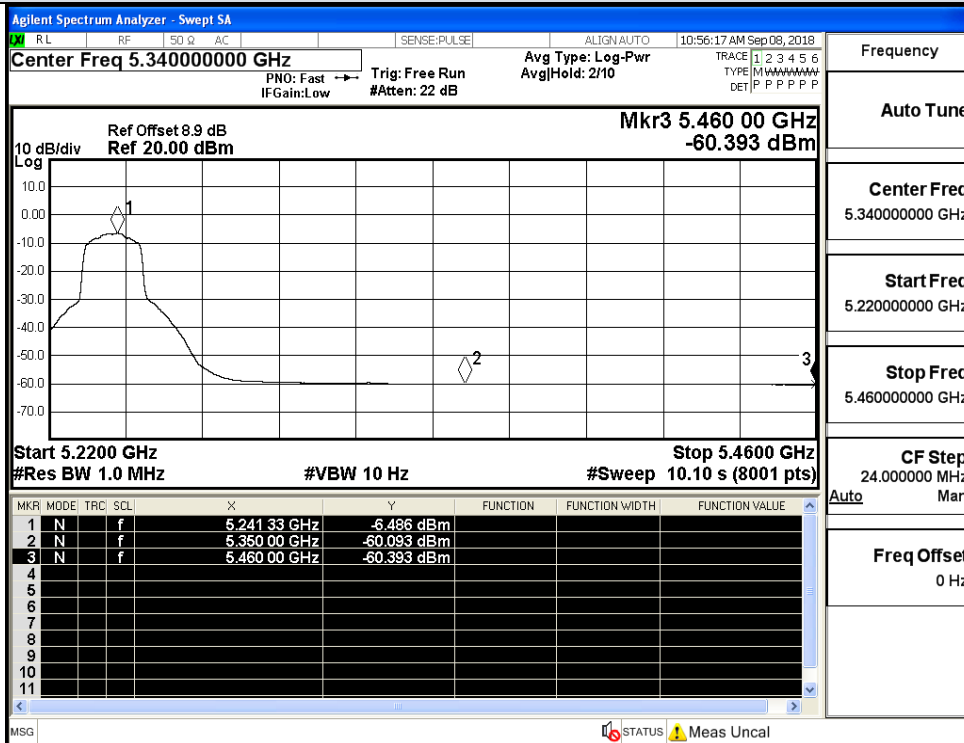


IEEE 802.11a / Channel 36 / 5180 MHz / Average_Ant0

Undesirable Emissions Measurement_Ant0

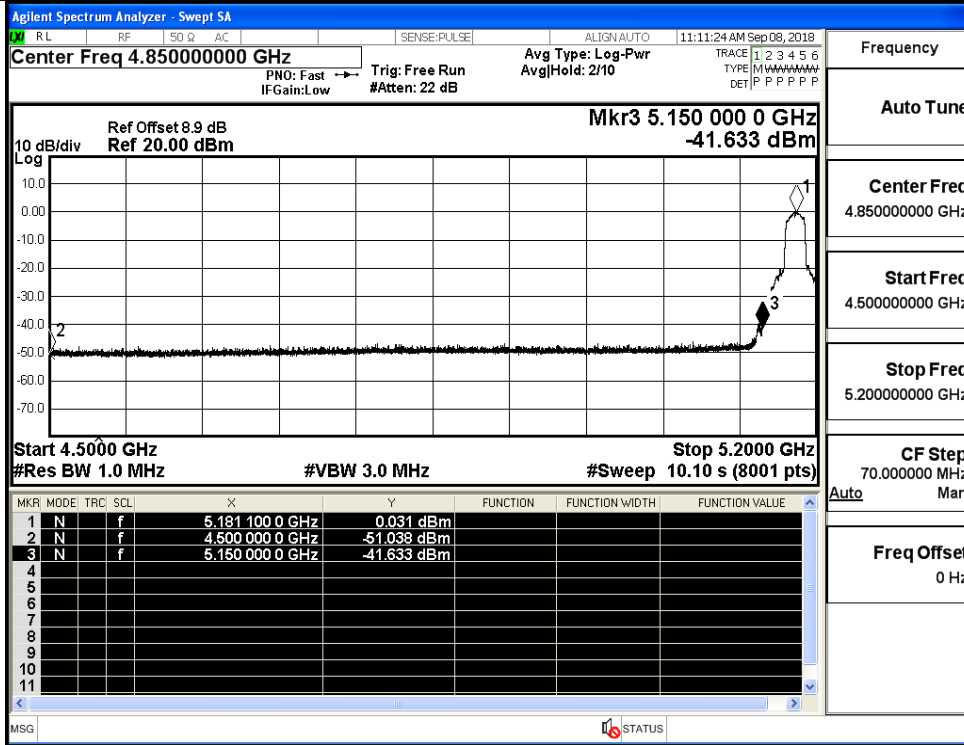


IEEE 802.11a / Channel 48 / 5240 MHz / Peak_Ant0

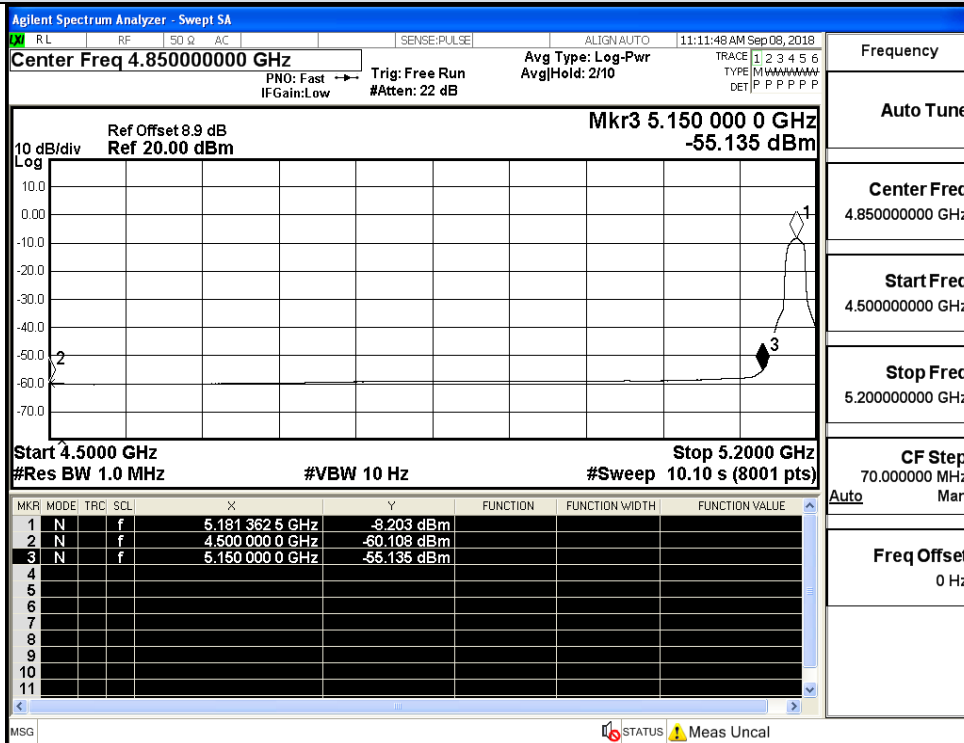


IEEE 802.11a / Channel 48 / 5240 MHz / Average_Ant0

Undesirable Emissions Measurement_Ant0

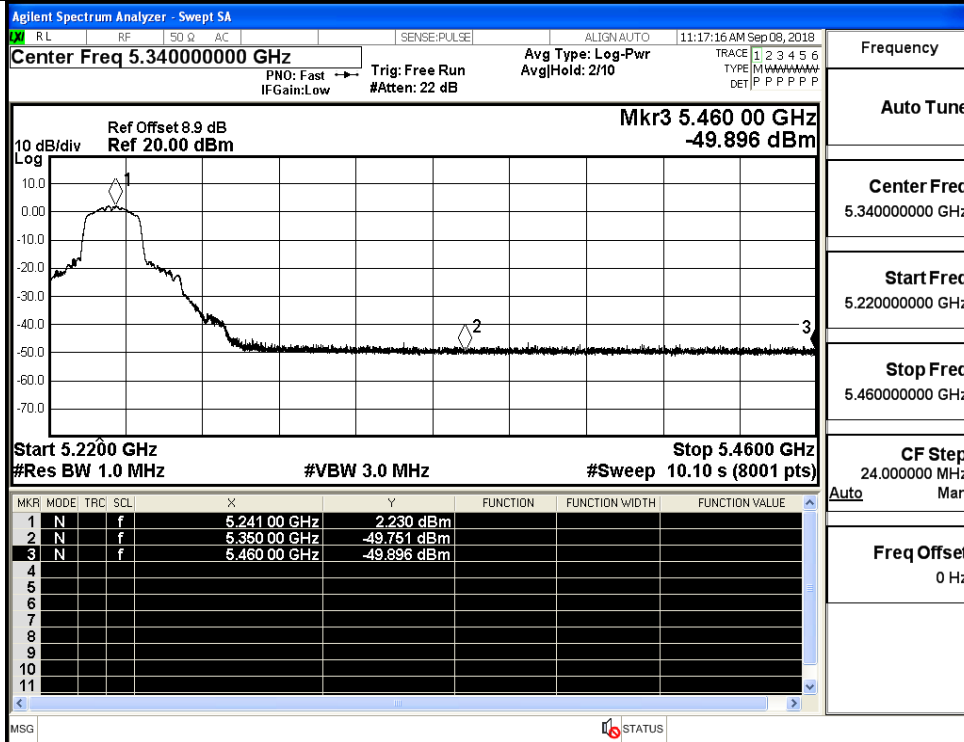


IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Peak_Ant0

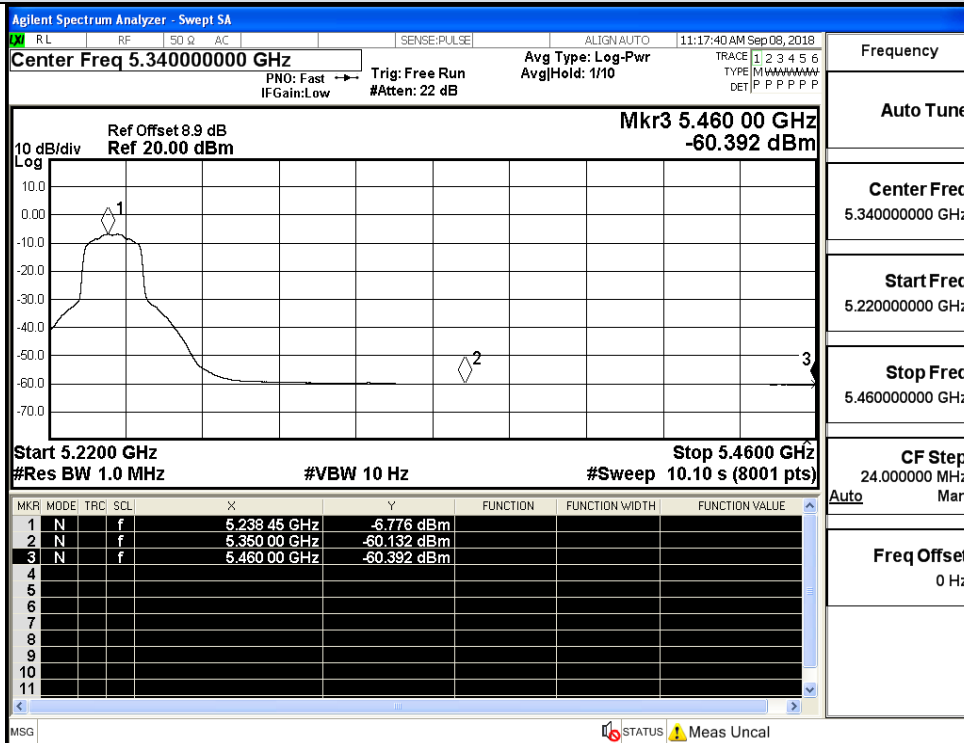


IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Average_Ant0

Undesirable Emissions Measurement_Ant0

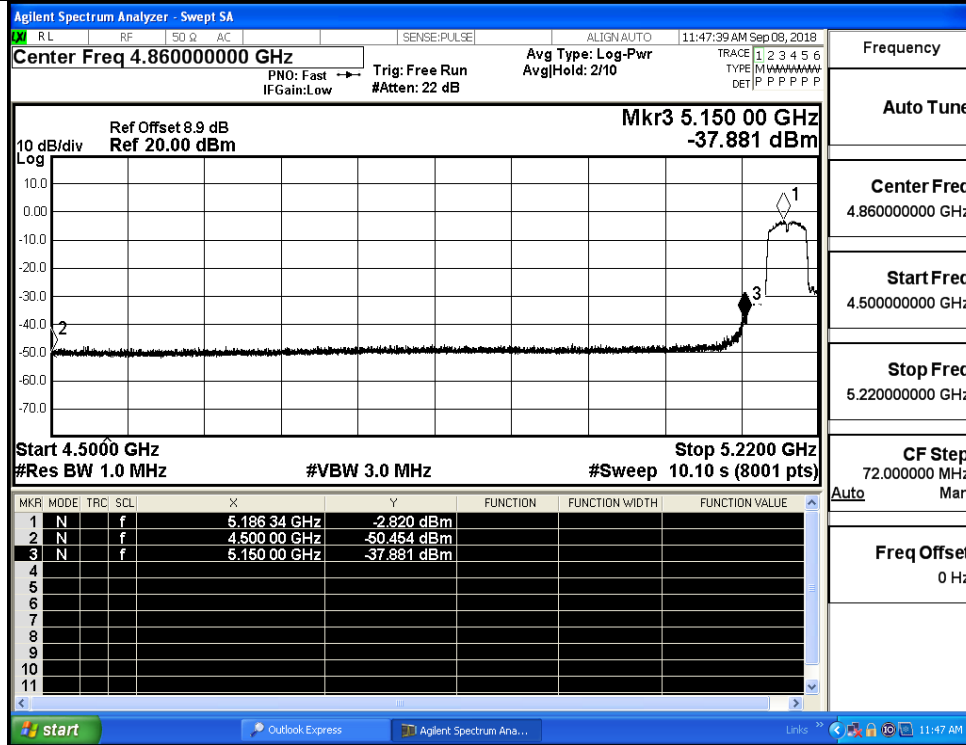


IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Peak_Ant0

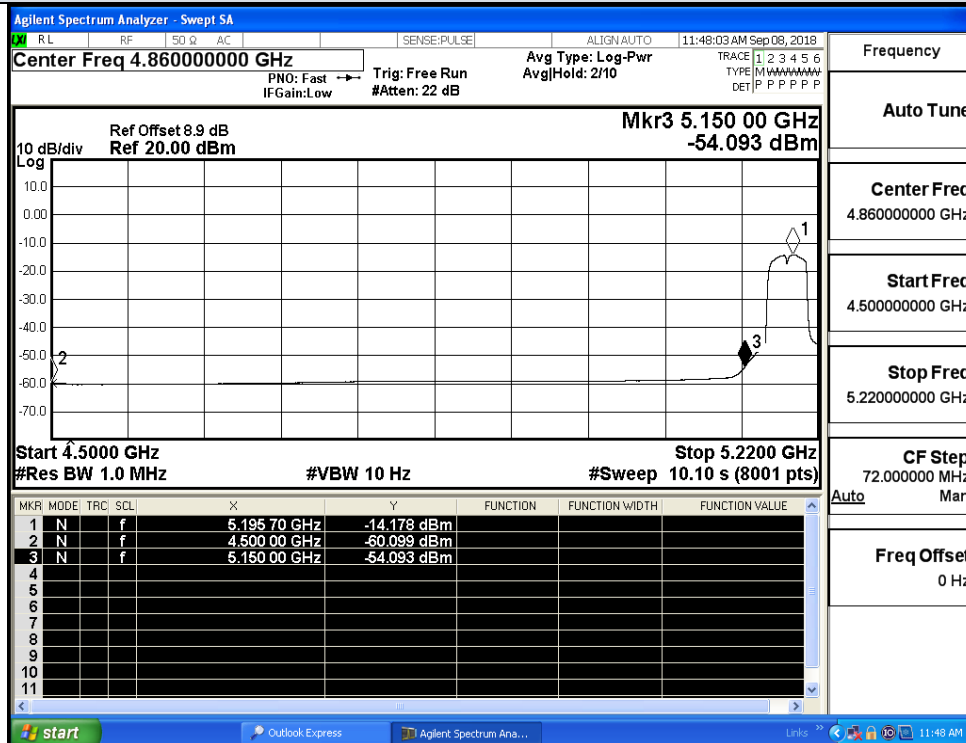


IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Average_Ant0

Undesirable Emissions Measurement_Ant0

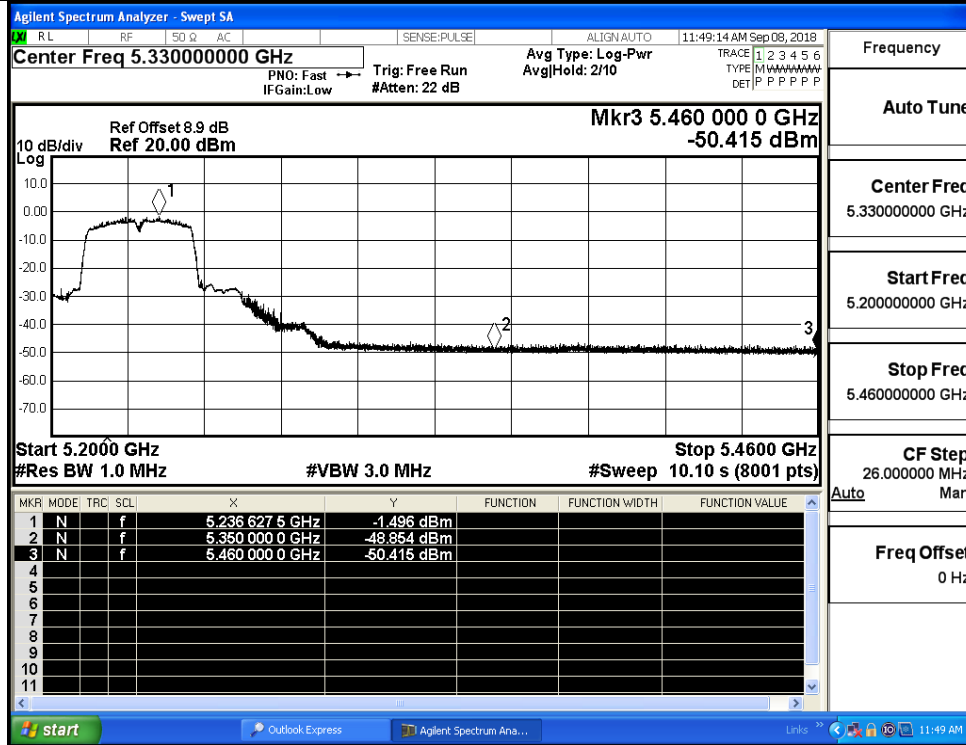


IEEE 802.11n HT40 / Channel 38 / 5190 MHz / Peak_Ant0

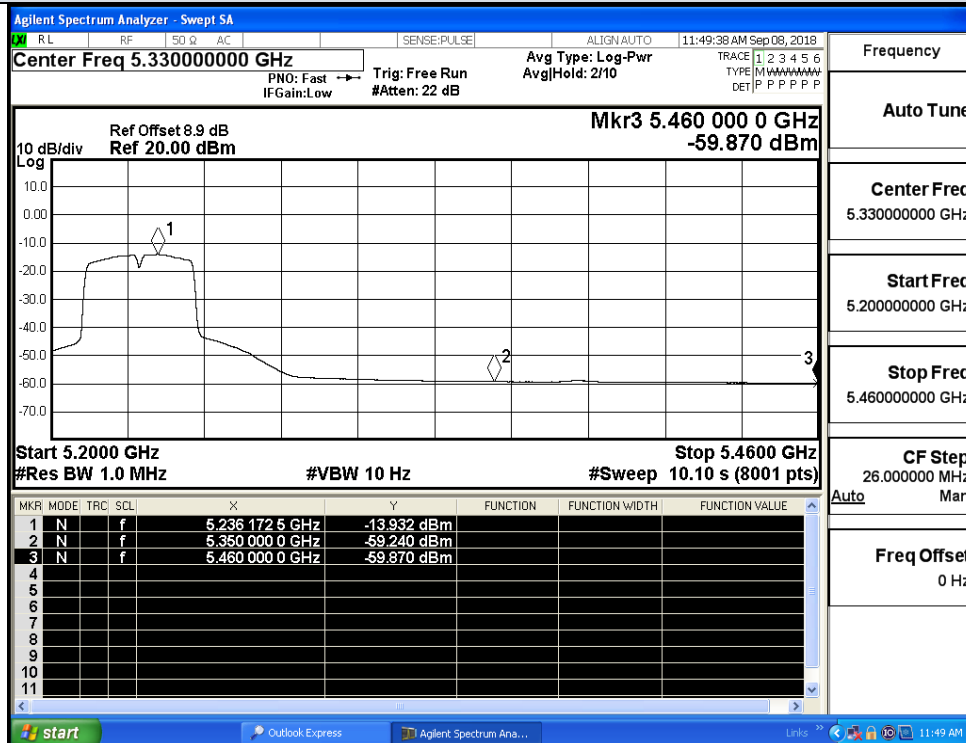


IEEE 802.11n HT40 / Channel 38 / 5190 MHz / Average_Ant0

Undesirable Emissions Measurement_Ant0

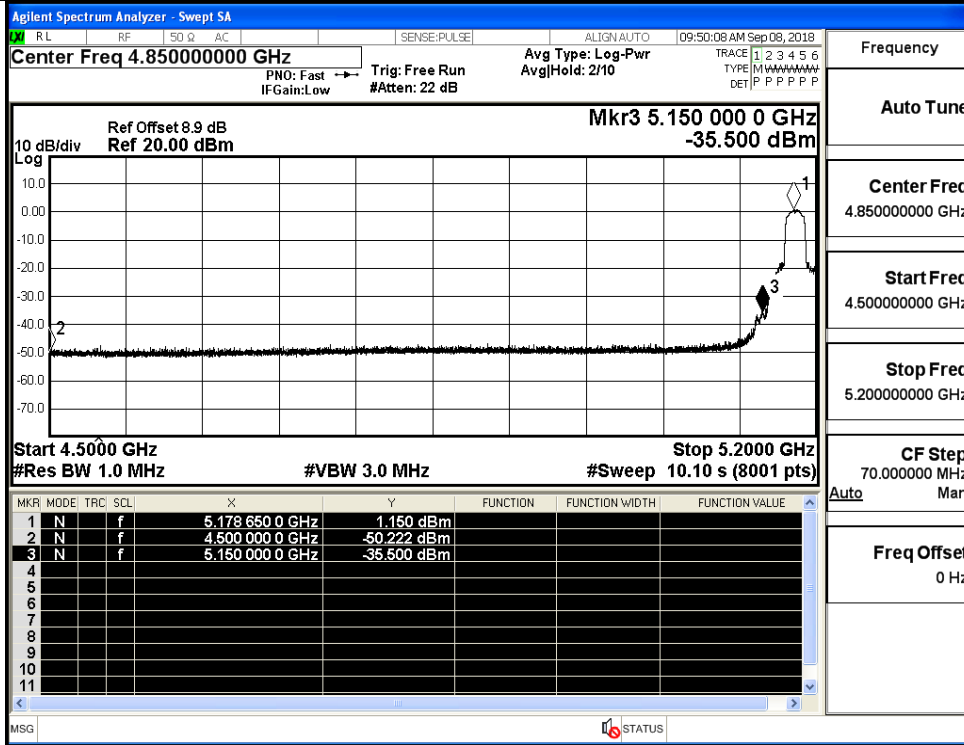


IEEE 802.11n HT40 / Channel 46 / 5230 MHz / Peak_Ant0

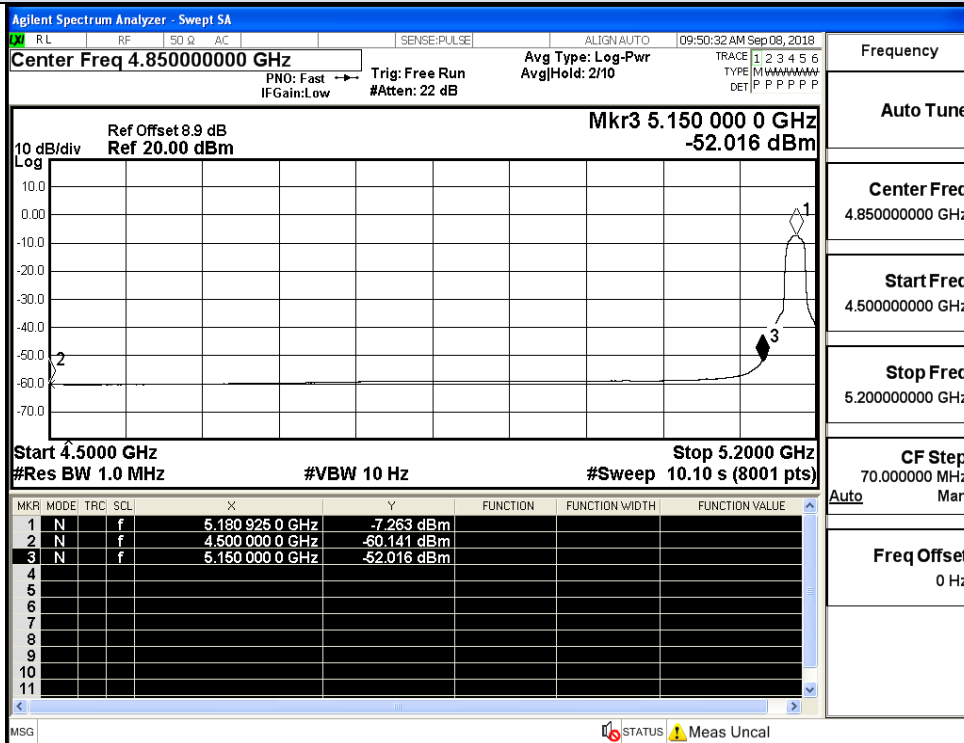


IEEE 802.11n HT40 / Channel 46 / 5230 MHz / Average_Ant0

Undesirable Emissions Measurement_Ant1

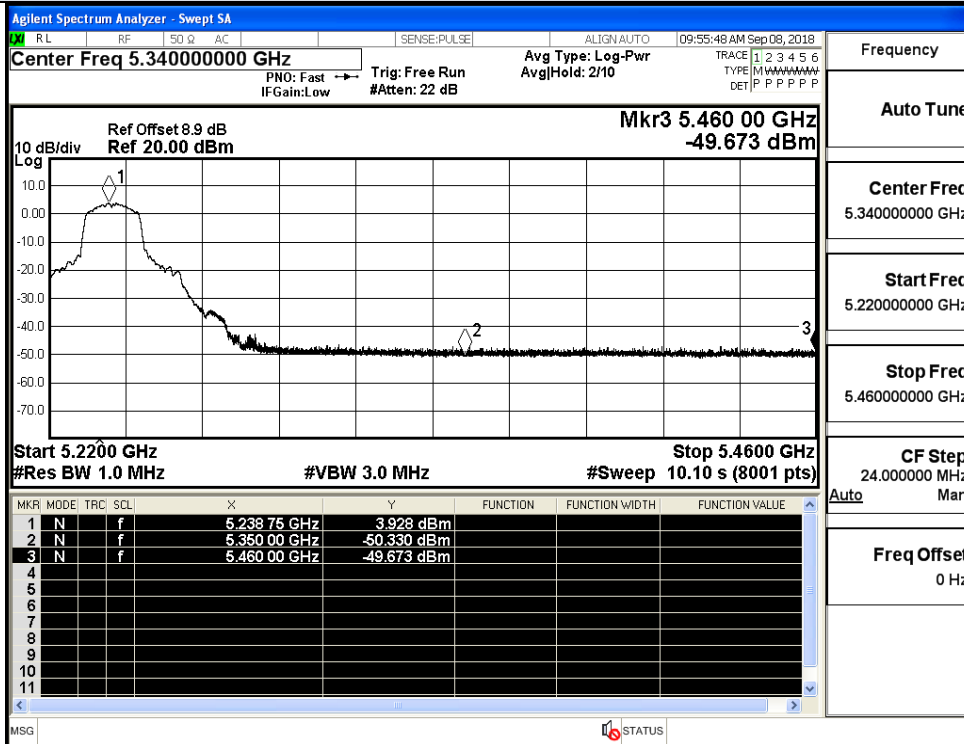


IEEE 802.11a / Channel 36 / 5180 MHz / Peak_Ant1

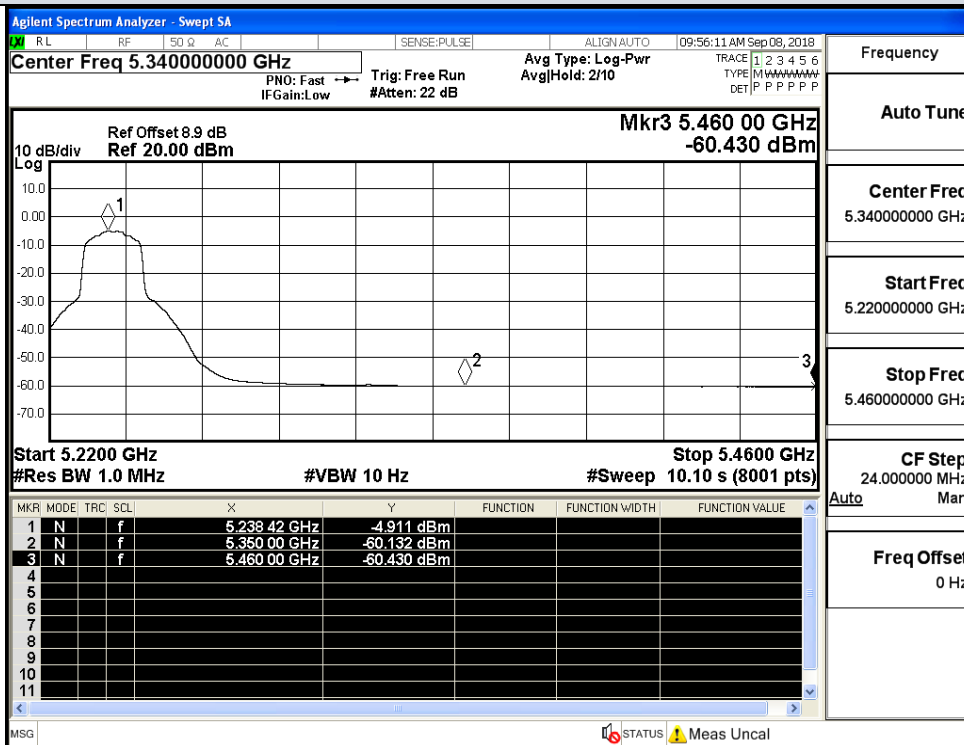


IEEE 802.11a / Channel 36 / 5180 MHz / Average_Ant1

Undesirable Emissions Measurement_Ant1

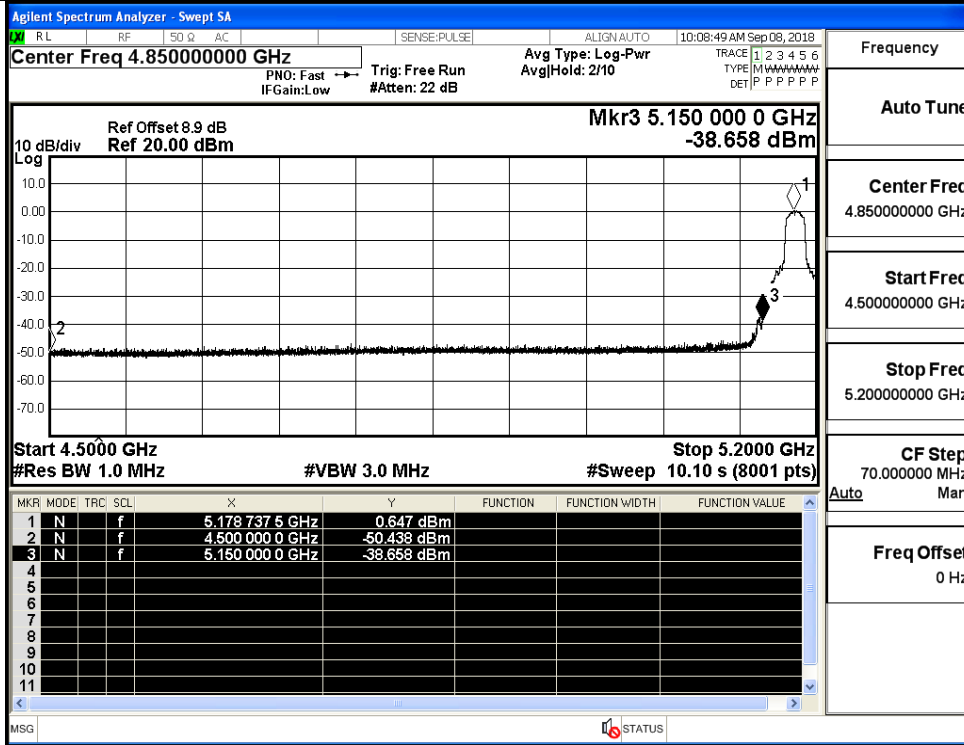


IEEE 802.11a / Channel 48 / 5240 MHz / Peak_Ant1

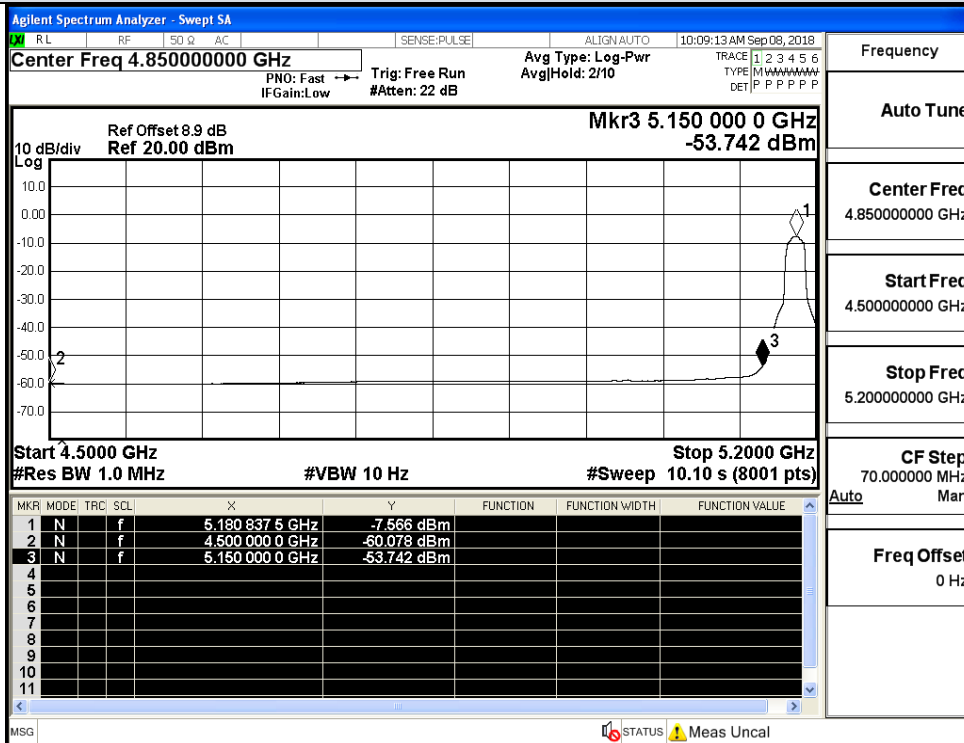


IEEE 802.11a / Channel 48 / 5240 MHz / Average_Ant1

Undesirable Emissions Measurement_Ant1

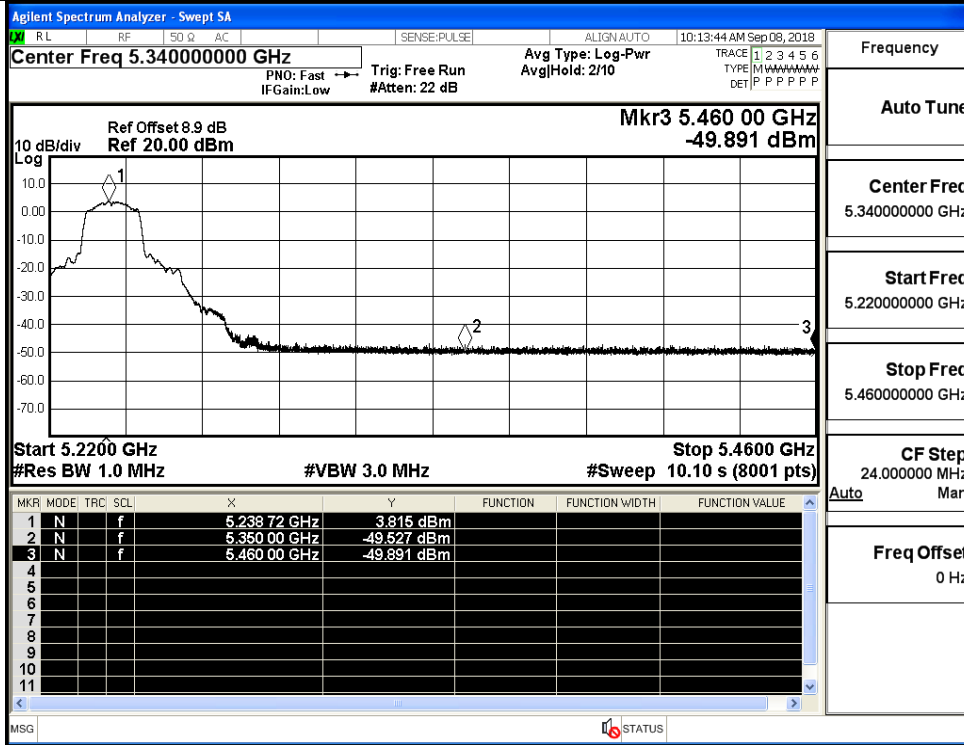


IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Peak_Ant1

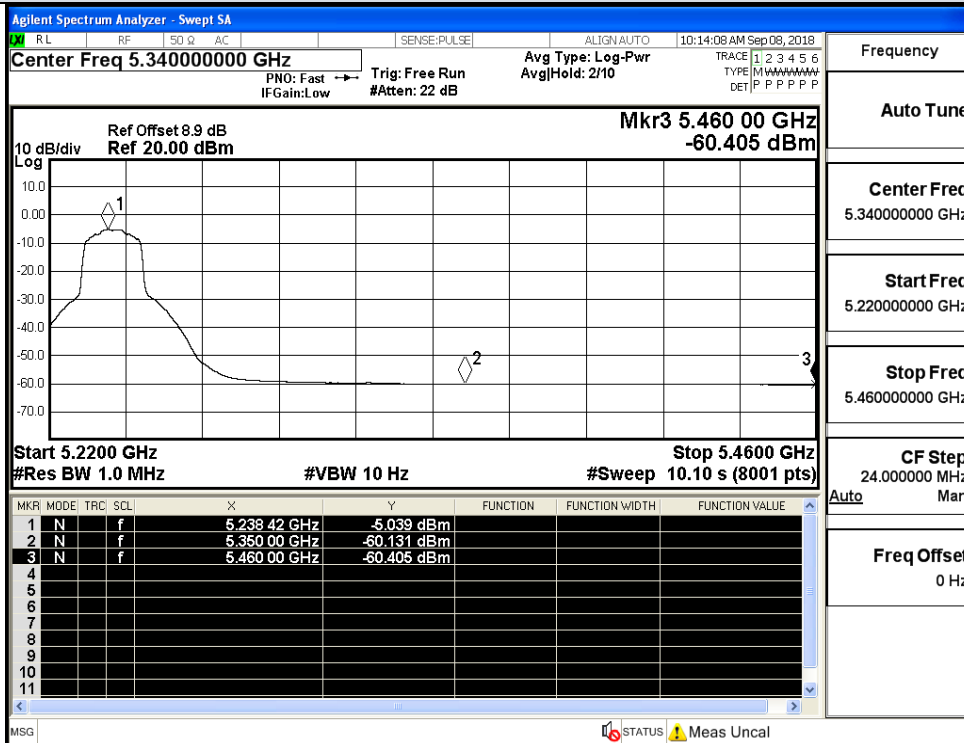


IEEE 802.11n HT20 / Channel 36 / 5180 MHz / Average_Ant1

Undesirable Emissions Measurement_Ant1

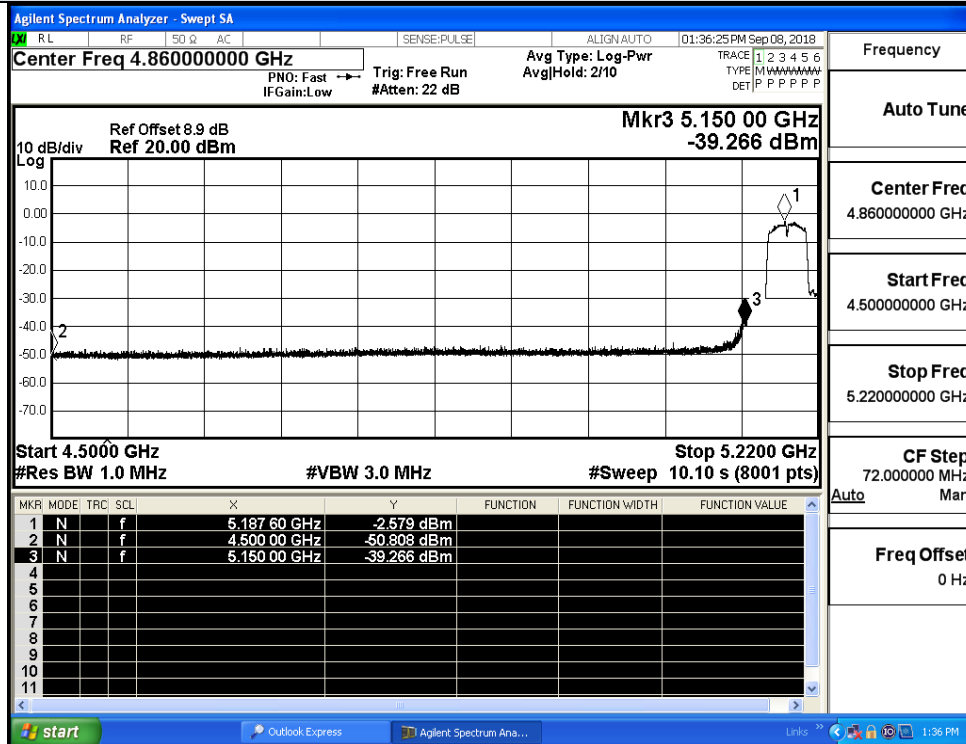


IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Peak_Ant1

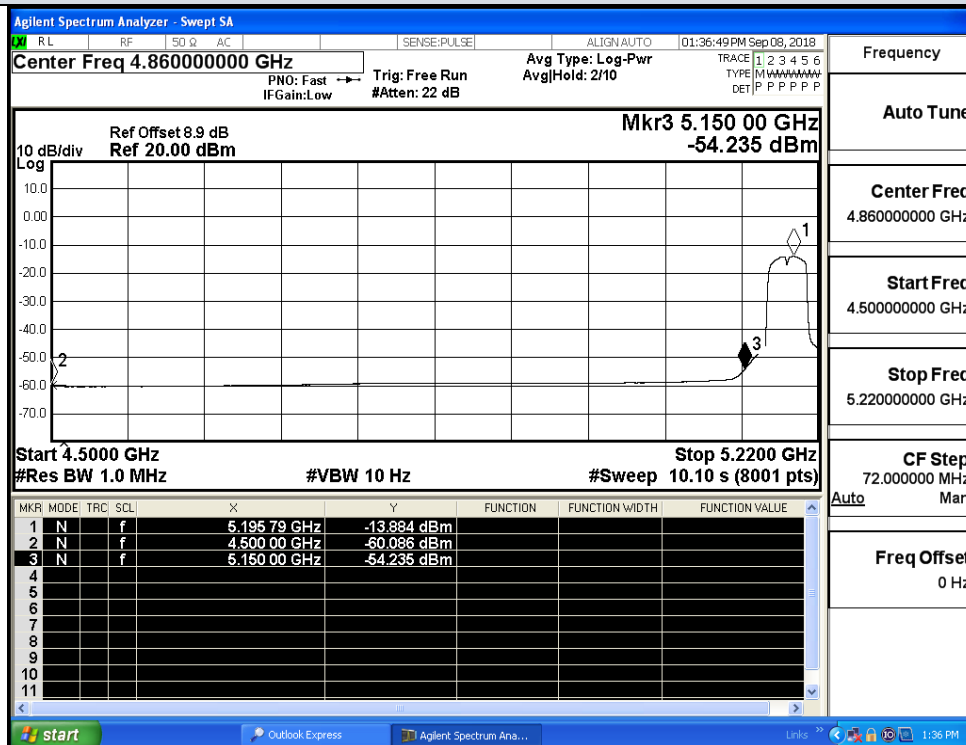


IEEE 802.11n HT20 / Channel 48 / 5240 MHz / Average_Ant1

Undesirable Emissions Measurement_Ant1

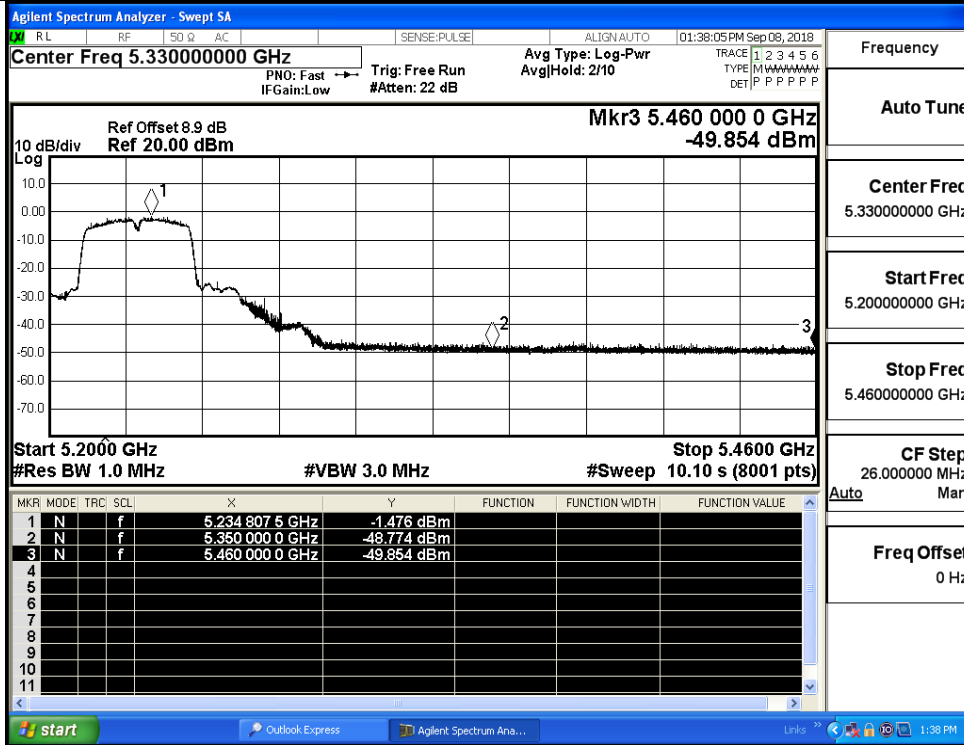


IEEE 802.11n HT40 / Channel 38 / 5190 MHz / Peak_Ant1

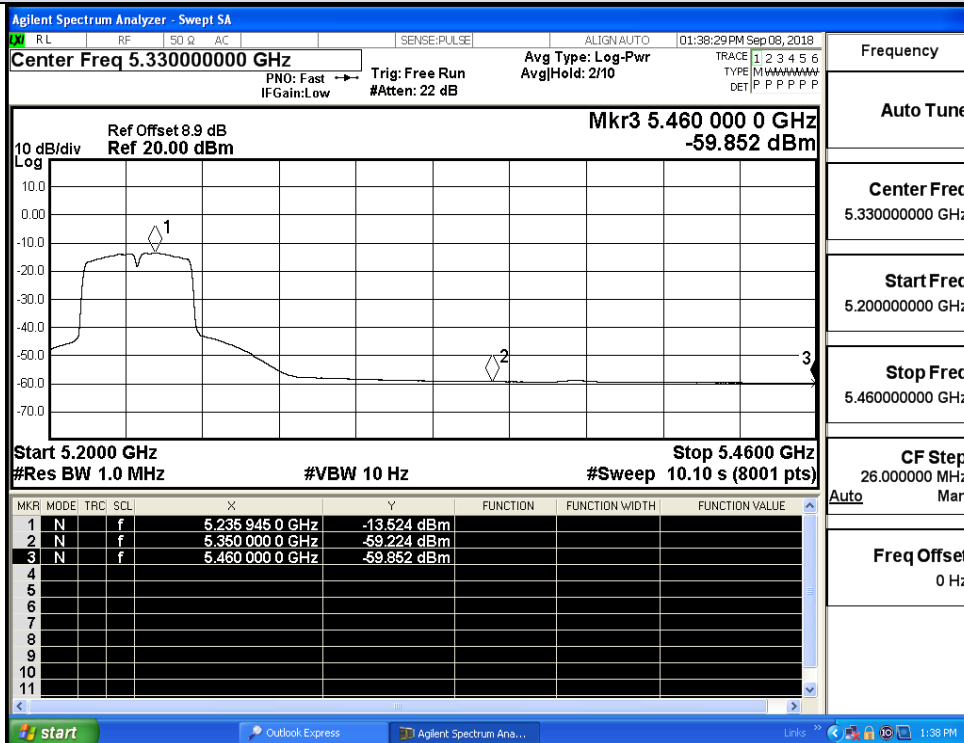


IEEE 802.11n HT40 / Channel 38 / 5190 MHz / Average_Ant1

Undesirable Emissions Measurement_Ant1



IEEE 802.11n HT40 / Channel 46 / 5230 MHz / Peak_Ant1



IEEE 802.11n HT40 / Channel 46 / 5230 MHz / Average_Ant1