

Appendix B

Report No.:	CISRR24040804702
FCC ID:	2BFQ8-YIIOT-T23
Product Name:	camera
Model No.:	YIIOT-T23
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

Frequency Stability

Measured all conditions and recorded worst case.

IEEE 802.11a Mode/5180-5240 MHz/ 5180 MHz

Environment Temperature(Degree)	Voltage(v)	Center Frequency (MHz)	Calculated Value of Center Frequency(MHz)	Limit (ppm)	State
20	HV	5180.0	5179.982797	5150-5250	PASS
20	LV	5180.0	5179.982088		PASS
50	NV	5180.0	5179.982995		PASS
40	NV	5180.0	5179.983578		PASS
30	NV	5180.0	5179.982147		PASS
20	NV	5180.0	5179.983385		PASS
10	NV	5180.0	5179.982247		PASS
0	NV	5180.0	5179.983566		PASS
-10	NV	5180.0	5179.983687		PASS
-20	NV	5180.0	5179.983095		PASS
-30	NV	5180.0	5179.982797		PASS

IEEE 802.11a Mode/5180-5240 MHz/ 5240 MHz

Environment Temperature(Degree)	Voltage(v)	Center Frequency (MHz)	Calculated Value of Center Frequency(MHz)	Limit (ppm)	State
20	HV	5240.0	5239.998689	5150-5250	PASS
20	LV	5240.0	5239.999545		PASS
50	NV	5240.0	5239.999598		PASS
40	NV	5240.0	5239.999290		PASS
30	NV	5240.0	5239.998152		PASS
20	NV	5240.0	5239.999037		PASS
10	NV	5240.0	5239.998089		PASS
0	NV	5240.0	5239.997569		PASS
-10	NV	5240.0	5239.999270		PASS
-20	NV	5240.0	5239.998495		PASS
-30	NV	5240.0	5239.998858		PASS

Conducted Peak Output Power

Conducted output power

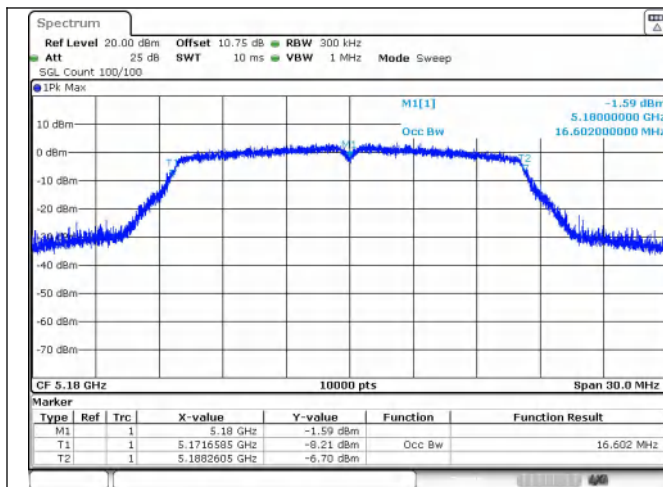
Mode	Channel	RU & Index	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	36	N/A	10.46	24	PASS
	40		11.06	24	PASS
	48		10.71	24	PASS
IEEE 802.11n_20	36		10.79	24	PASS
	40		11.65	24	PASS
	48		11.83	24	PASS
IEEE 802.11n_40	38		11.85	24	PASS
	46		11.69	24	PASS
IEEE 802.11ac_20	36		12.44	24	PASS
	40		10.99	24	PASS
	48		10.92	24	PASS
IEEE 802.11ac_40	38		10.06	24	PASS
	46		10.01	24	PASS
IEEE 802.11ac_80	42		9.12	24	PASS

99% Bandwidth

Test Result

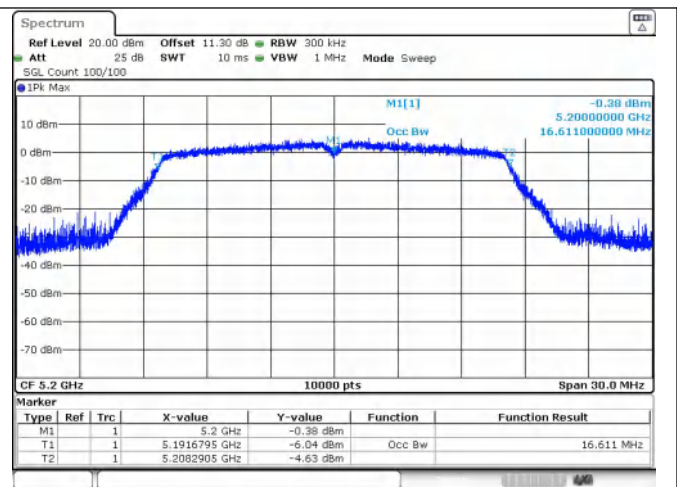
Mode	Channel	Ant.	99% BW (MHz)
IEEE 802.11a	36	0	16.600
	40		16.610
	48		16.600
IEEE 802.11n_20	36		17.680
	40		17.680
	48		17.680
IEEE 802.11n_40	38		36.070
	46		36.140
IEEE 802.11ac_20	36		17.640
	40		17.670
	48		17.690
IEEE 802.11ac_40	38		35.980
	46	36.070	
IEEE 802.11ac_80	42	75.110	

Test Graphs



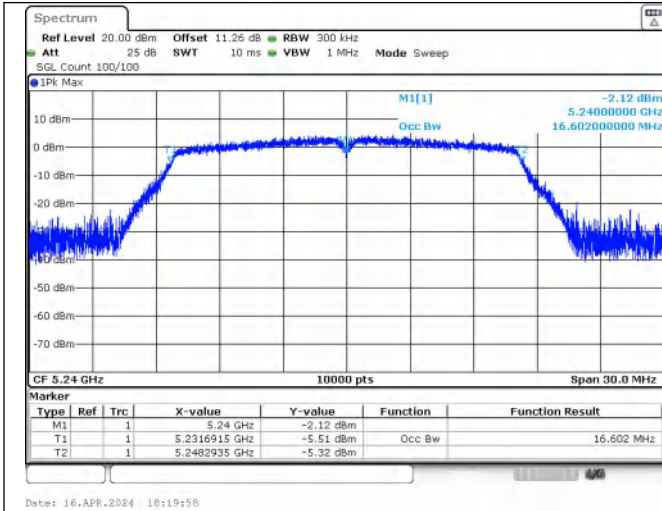
Date: 16.APR.2024 18:09:15

IEEE 802.11a_Channel 36_20MHz_Antenna 0

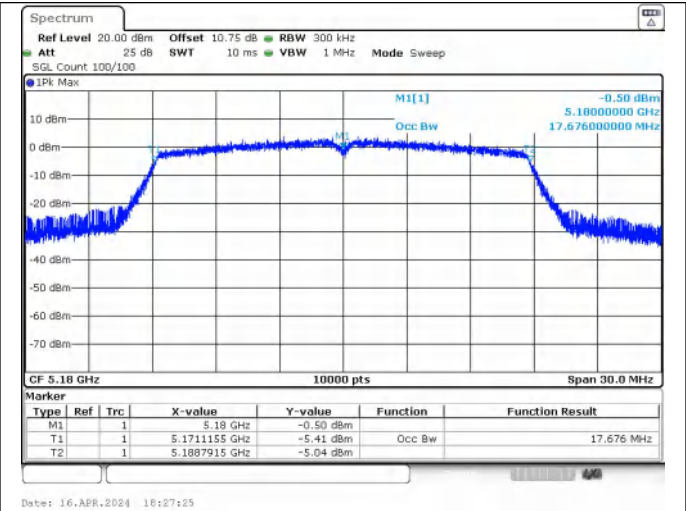


Date: 16.APR.2024 18:14:02

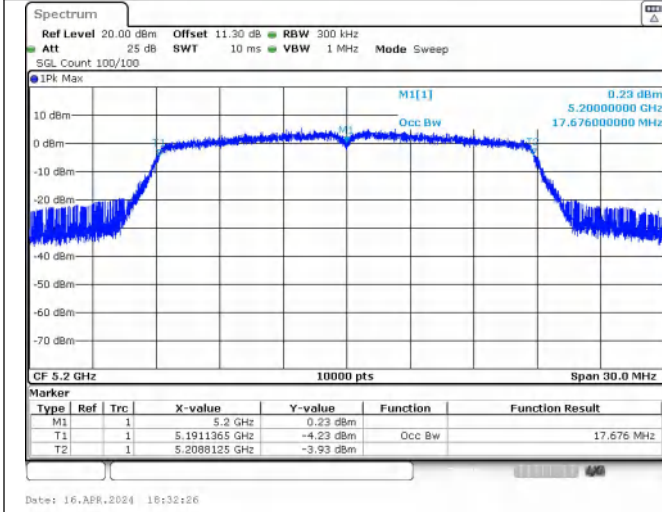
IEEE 802.11a_Channel 40_20MHz_Antenna 0



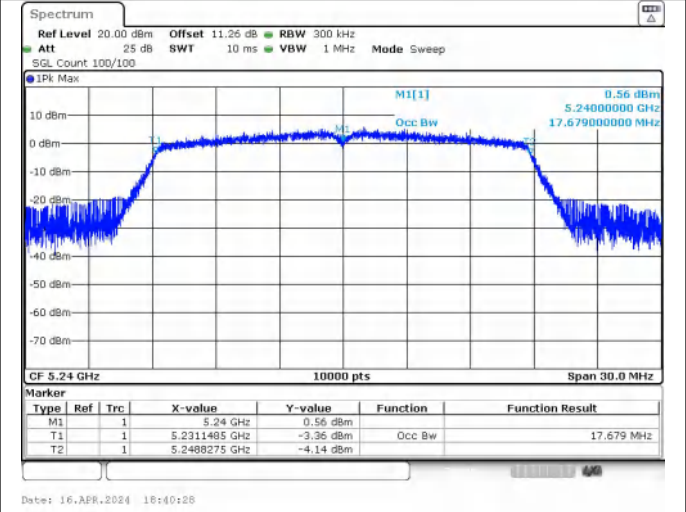
IEEE 802.11a Channel 48 20MHz Antenna 0



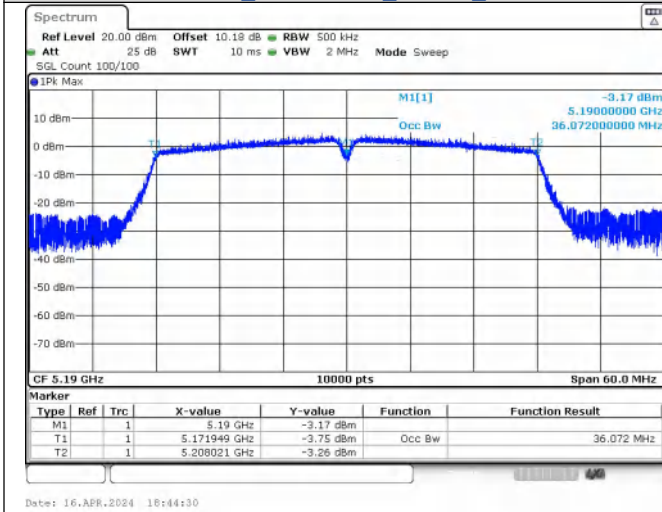
IEEE 802.11n Channel 36 20MHz Antenna 0



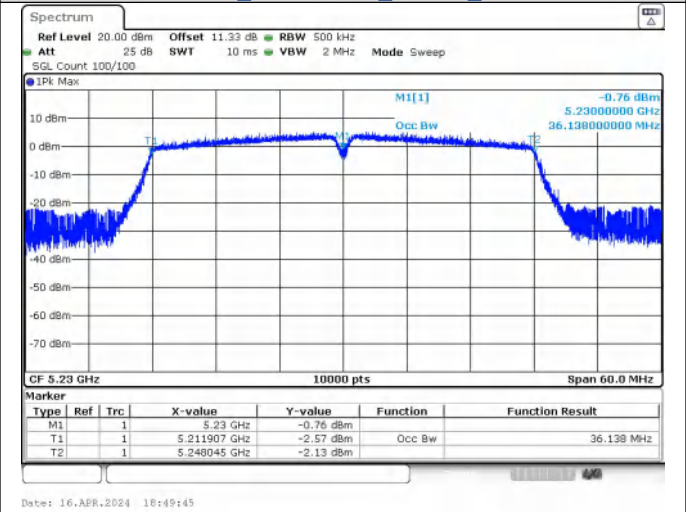
IEEE 802.11a Channel 40 20MHz Antenna 0



IEEE 802.11n Channel 48 20MHz Antenna 0



IEEE 802.11n Channel 40 20MHz Antenna 0



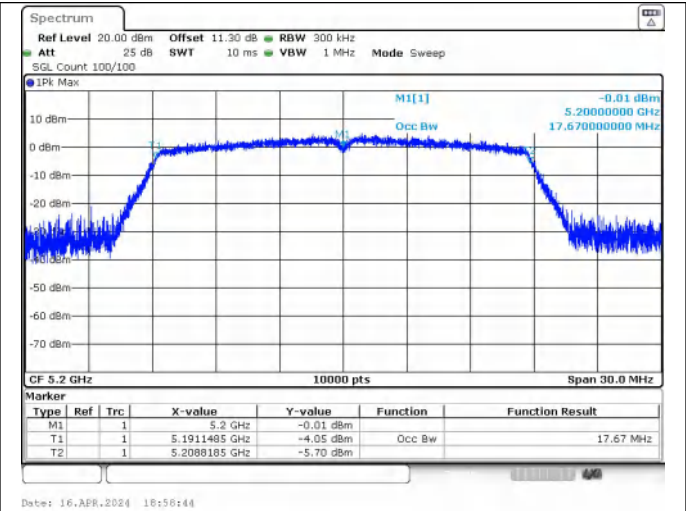
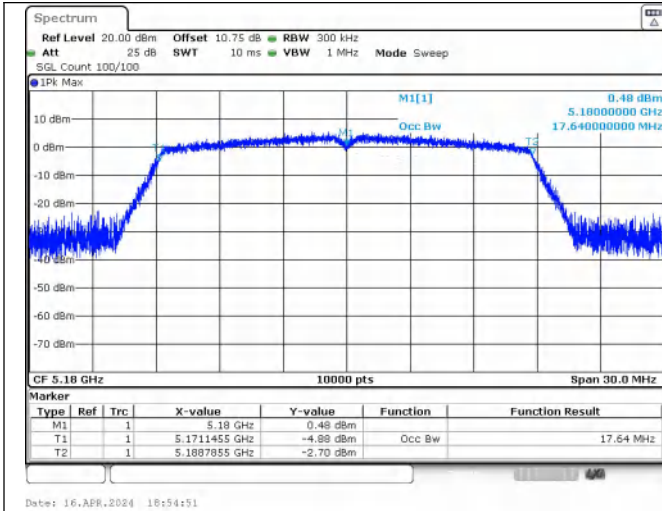
IEEE 802.11n Channel 48 20MHz Antenna 0



IEEE 802.11n Channel 38 40MHz Antenna 0

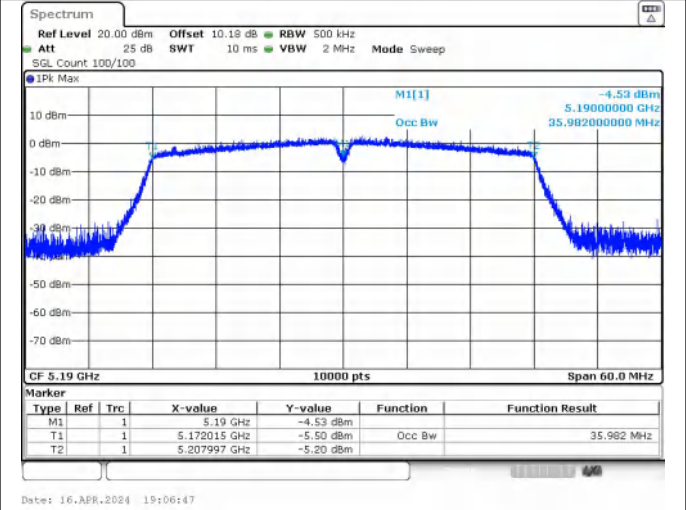
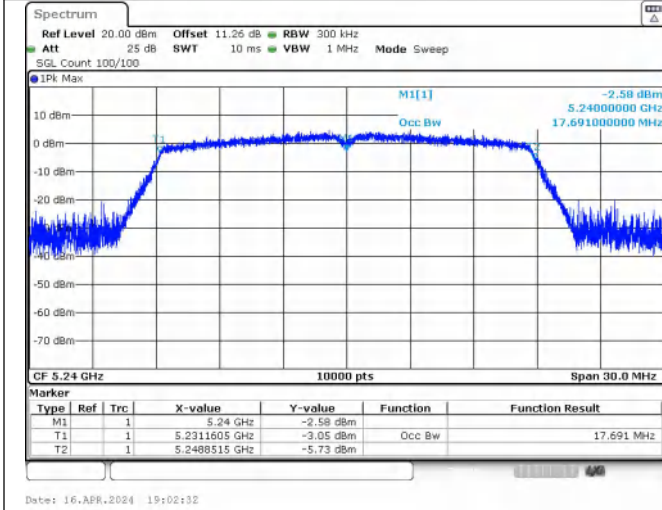


IEEE 802.11n Channel 46 40MHz Antenna 0



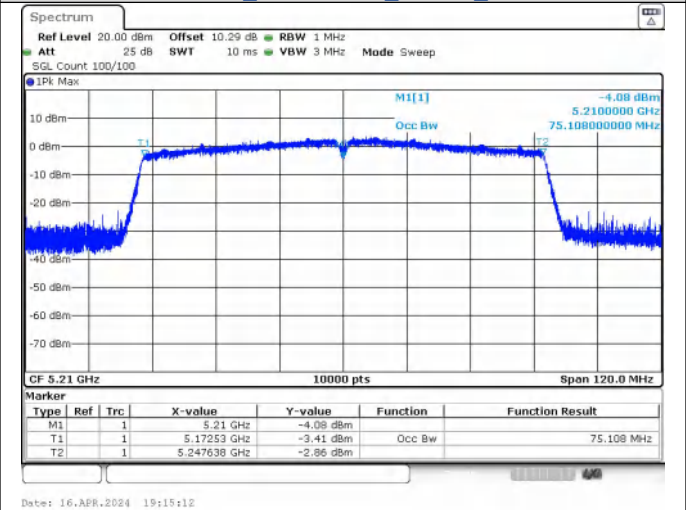
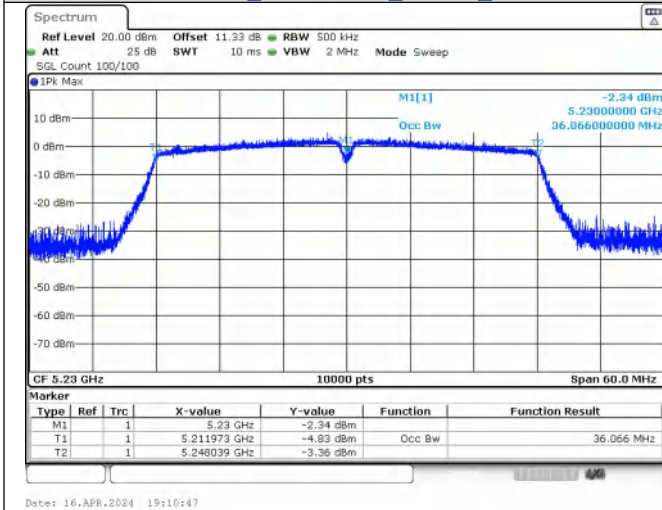
IEEE 802.11ac_Channel 36_20MHz_Antenna 0

IEEE 802.11ac_Channel 40_20MHz_Antenna 0



IEEE 802.11ac_Channel 48_20MHz_Antenna 0

IEEE 802.11ac_Channel 38_40MHz_Antenna 0



IEEE 802.11ac_Channel 46_40MHz_Antenna 0

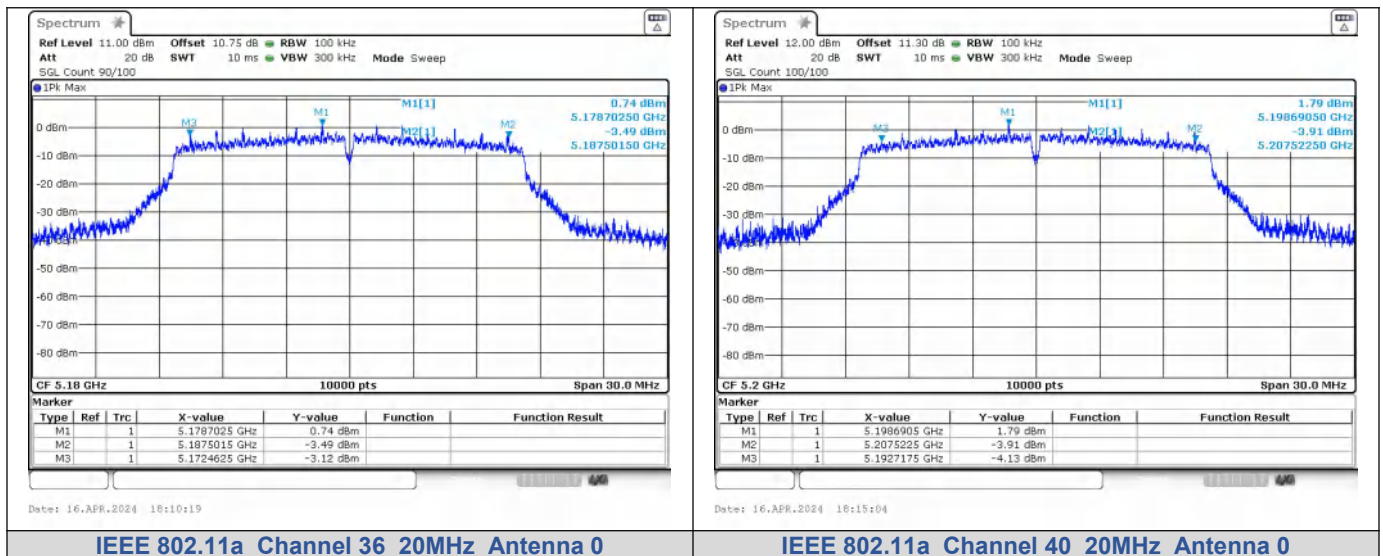
IEEE 802.11ac_Channel 42_80MHz_Antenna 0

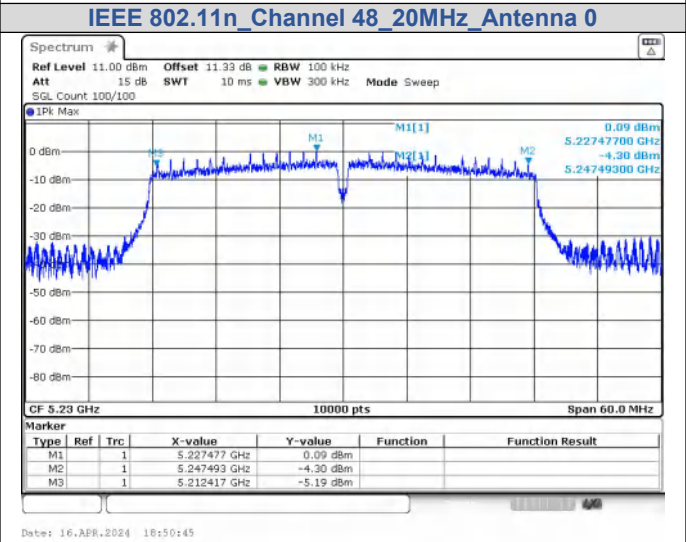
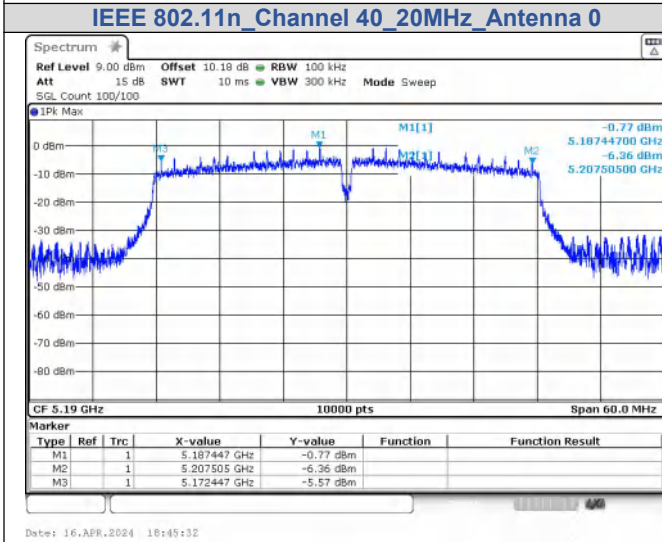
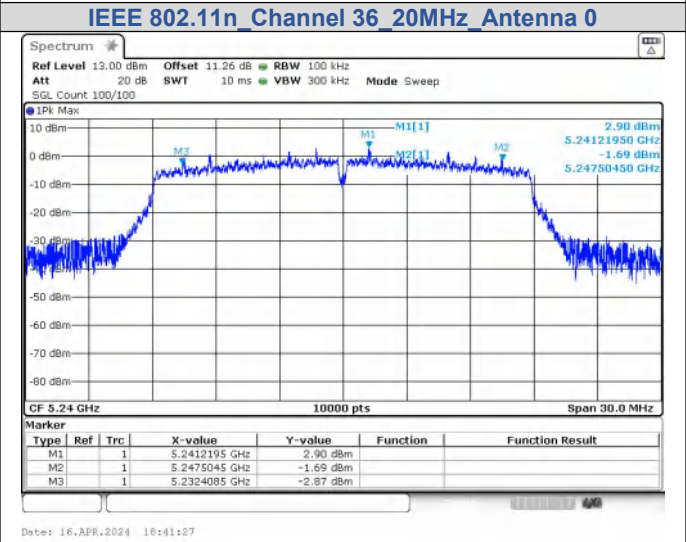
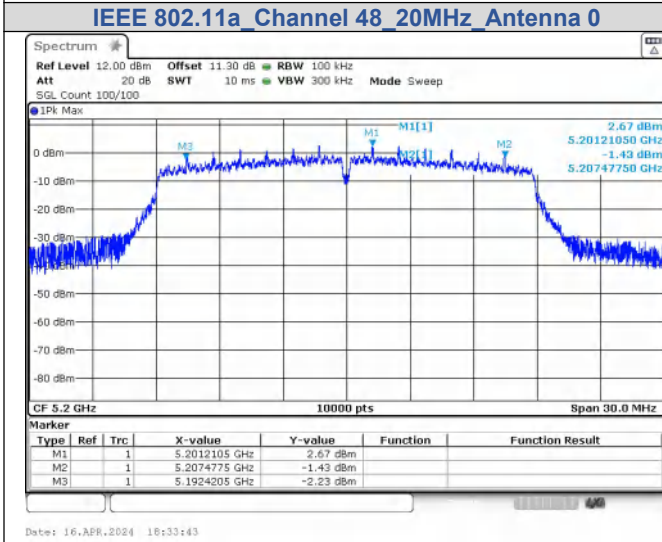
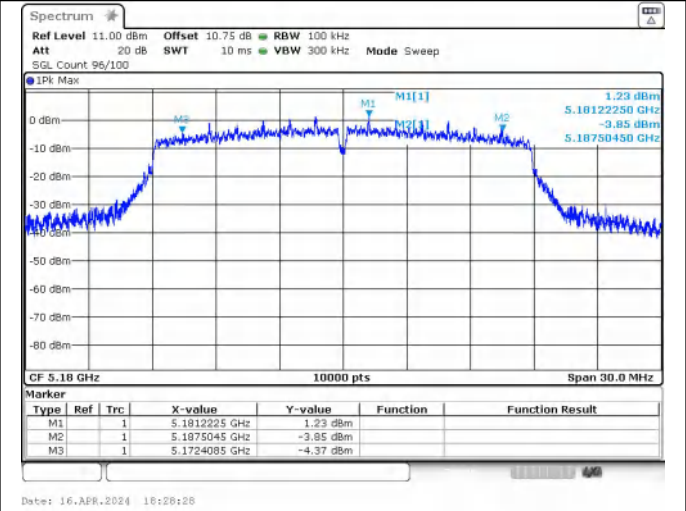
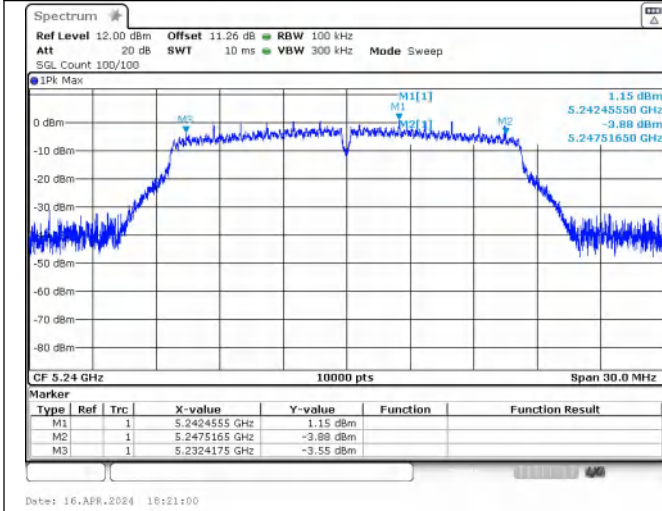
6dB Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11a	36	0	5180	15.04	0.5	PASS
	40		5200	14.80		PASS
	48		5240	15.10		PASS
IEEE 802.11n_20	36		5180	15.09		PASS
	40		5200	15.06		PASS
	48		5240	15.09		PASS
IEEE 802.11n_40	38		5190	35.06		PASS
	46		5230	35.07		PASS
IEEE 802.11ac_20	36		5180	14.16		PASS
	40		5200	15.07		PASS
	48		5240	15.08		PASS
IEEE 802.11ac_40	38		5190	35.04		PASS
	46		5230	35.09		PASS
IEEE 802.11ac_80	42		5210	75.05		PASS

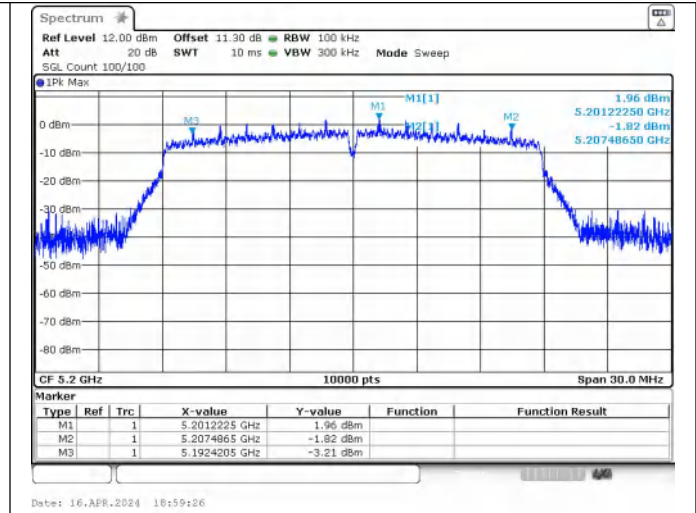
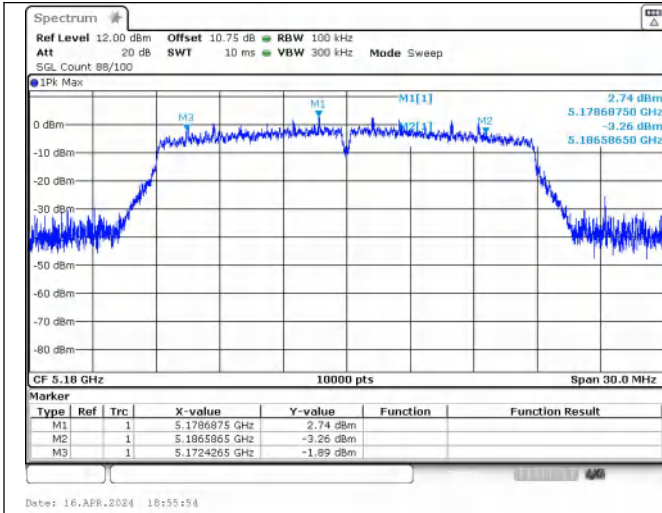
Test Graphs





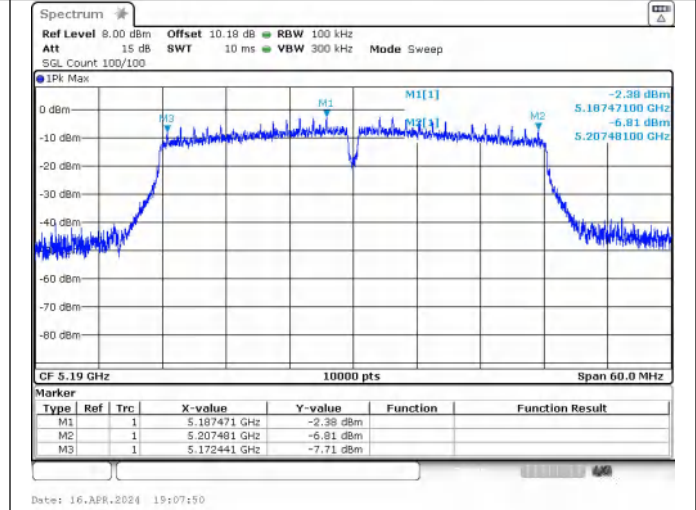
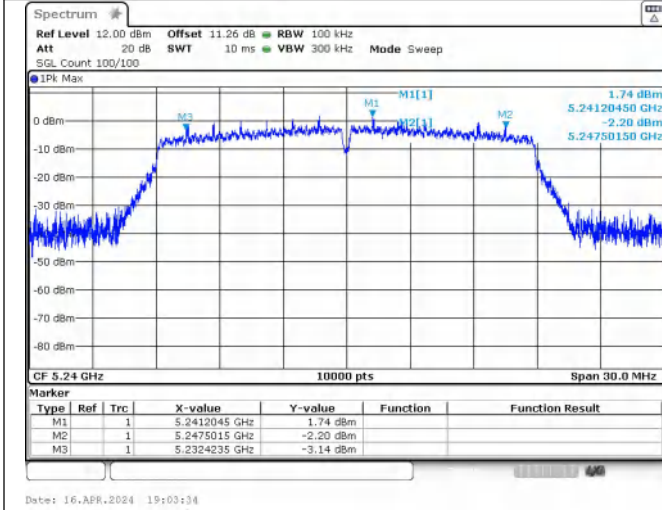
IEEE 802.11n Channel 38 40MHz Antenna 0

IEEE 802.11n Channel 46 40MHz Antenna 0



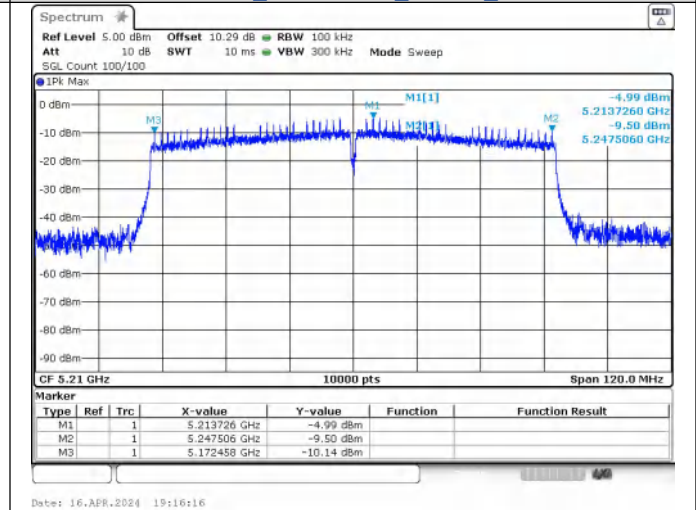
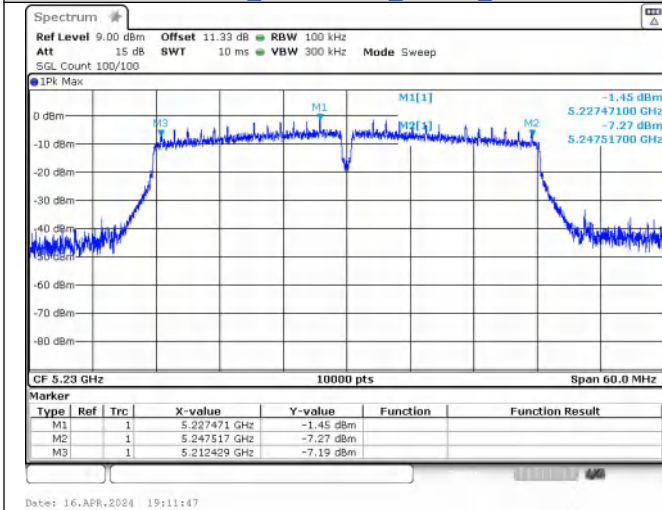
IEEE 802.11ac_Channel 36_20MHz_Antenna 0

IEEE 802.11ac_Channel 40_20MHz_Antenna 0



IEEE 802.11ac_Channel 48_20MHz_Antenna 0

IEEE 802.11ac_Channel 38_40MHz_Antenna 0



IEEE 802.11ac_Channel 46_40MHz_Antenna 0

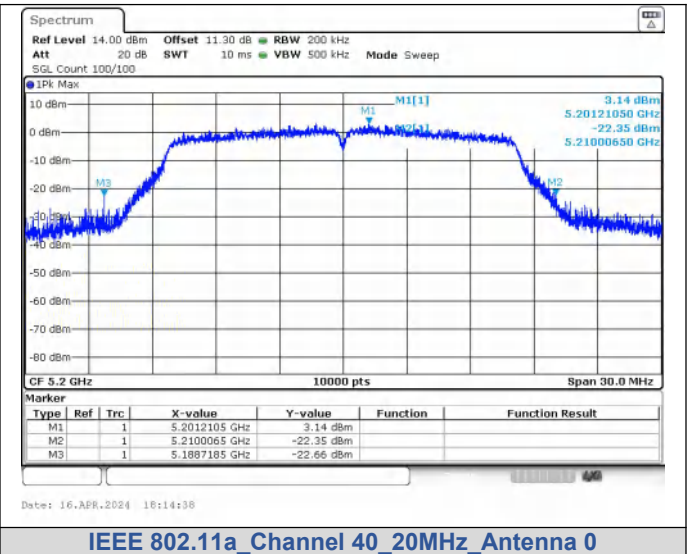
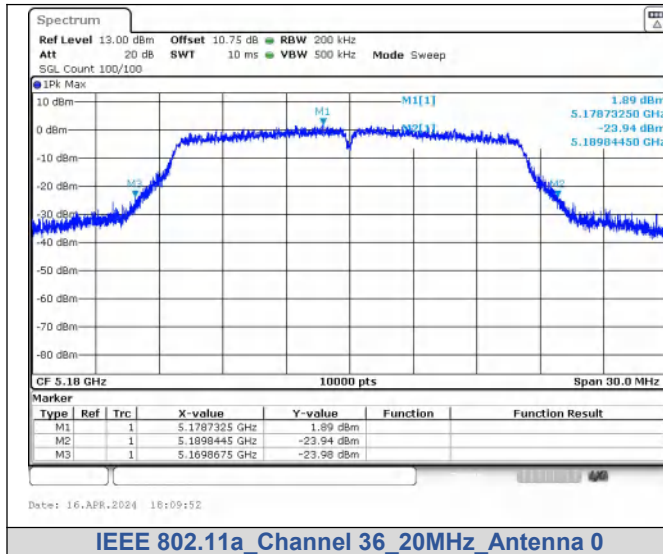
IEEE 802.11ac_Channel 42_80MHz_Antenna 0

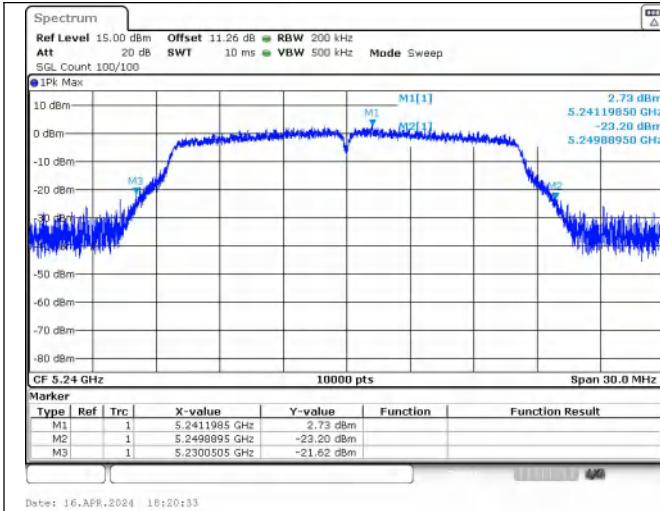
26dB Bandwidth

Test Result

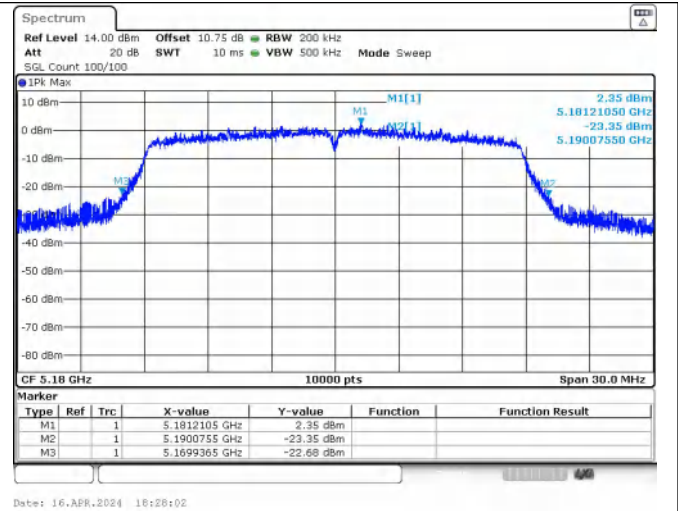
Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	36	0	5180	19.97	1.12
	40		5200	21.29	1.06
	48		5240	19.84	1.11
IEEE 802.11n_20	36		5180	20.14	1.19
	40		5200	20.11	1.1
	48		5240	23.04	1.14
IEEE 802.11n_40	38		5190	41.80	1.02
	46		5230	40.80	1.08
	36		5180	20.15	1.12
IEEE 802.11ac_20	40		5200	25.33	1.18
	48		5240	20.17	1.12
	38		5190	40.60	1.06
IEEE 802.11ac_40	46		5230	40.51	1.05
	42		5210	80.97	1.03

Test Graphs

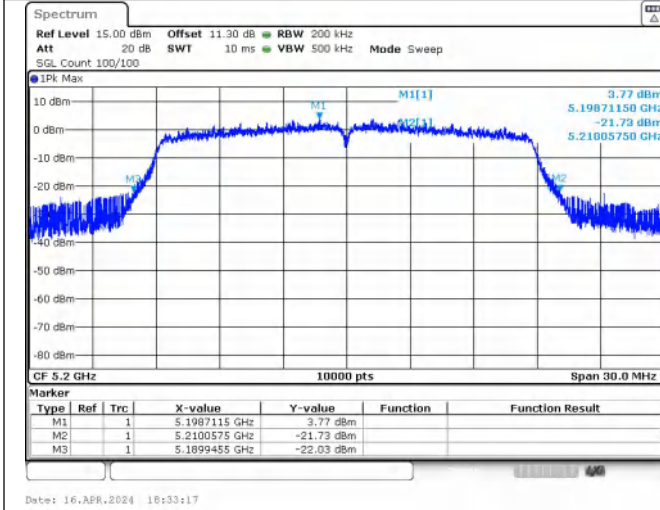




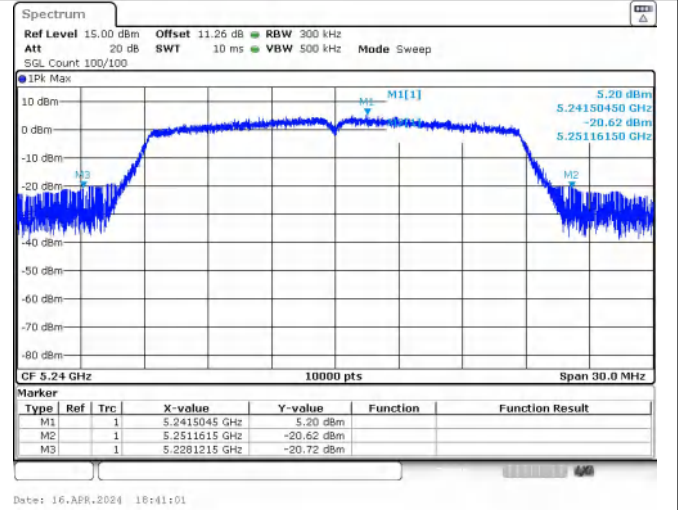
IEEE 802.11a_Channel 48_20MHz_Antenna 0



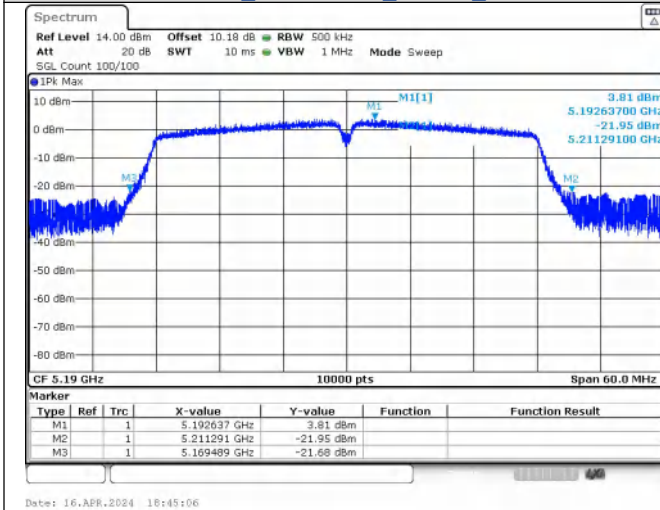
IEEE 802.11n_Channel 36_20MHz_Antenna 0



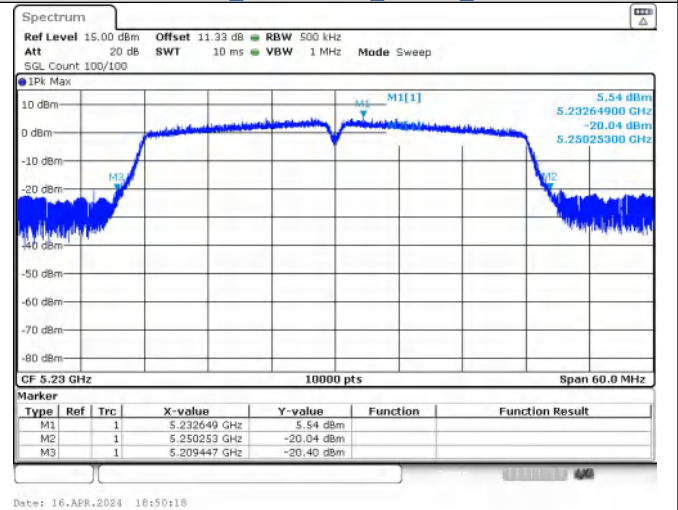
IEEE 802.11a_Channel 40_20MHz_Antenna 0



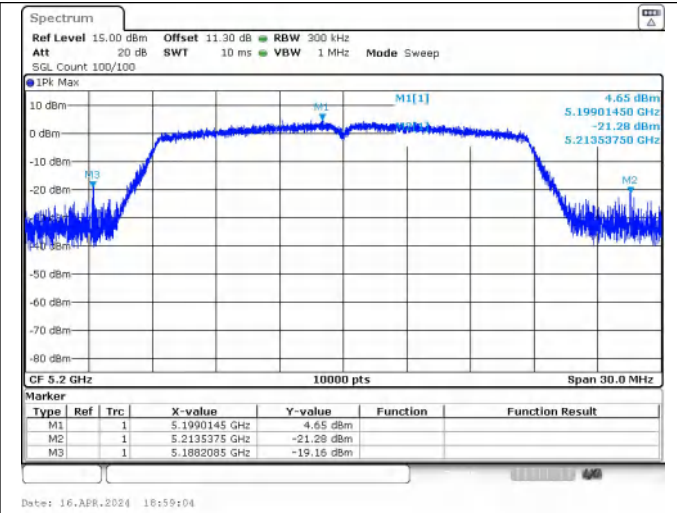
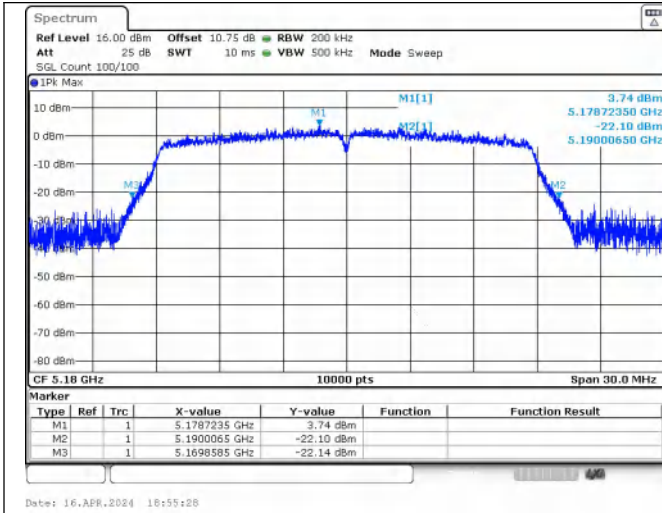
IEEE 802.11n_Channel 36_20MHz_Antenna 0



IEEE 802.11n_Channel 40_40MHz_Antenna 0

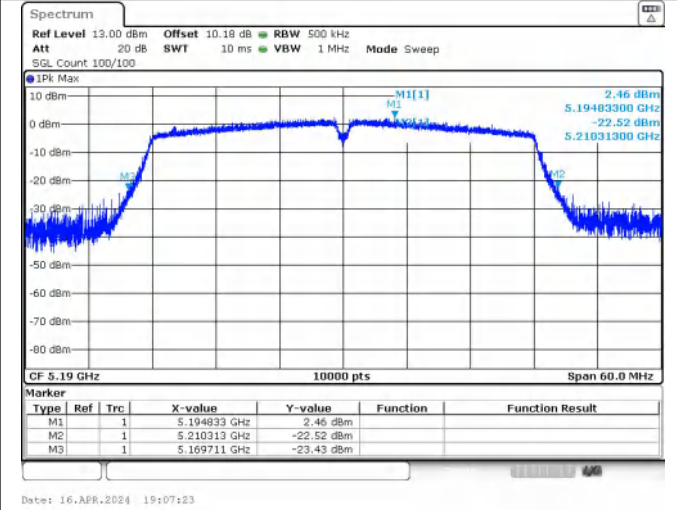
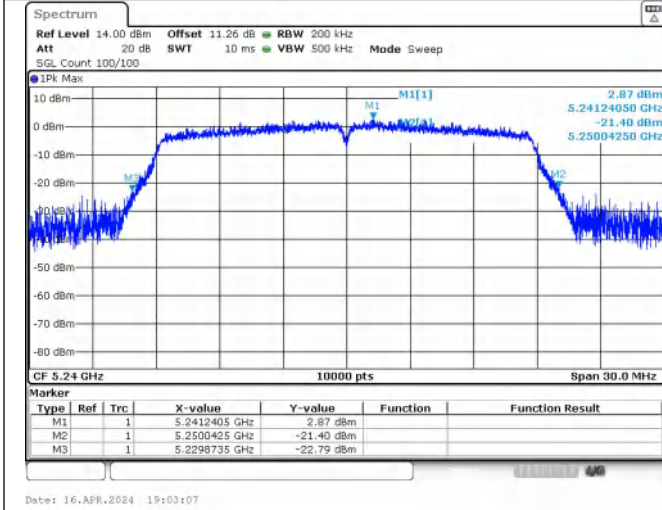


IEEE 802.11n_Channel 48_40MHz_Antenna 0



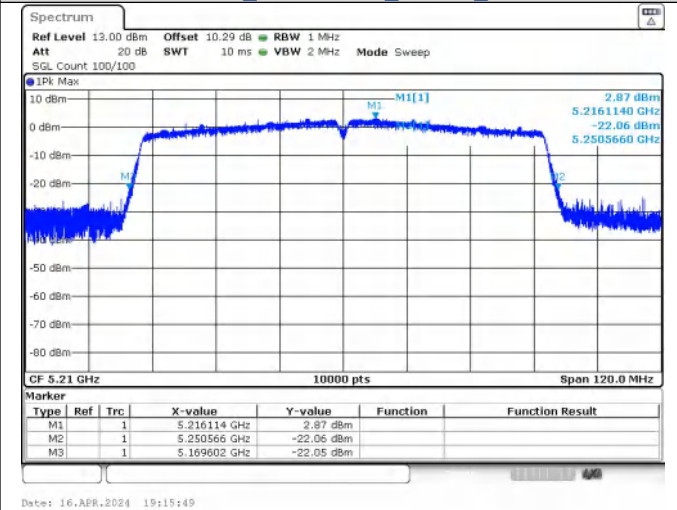
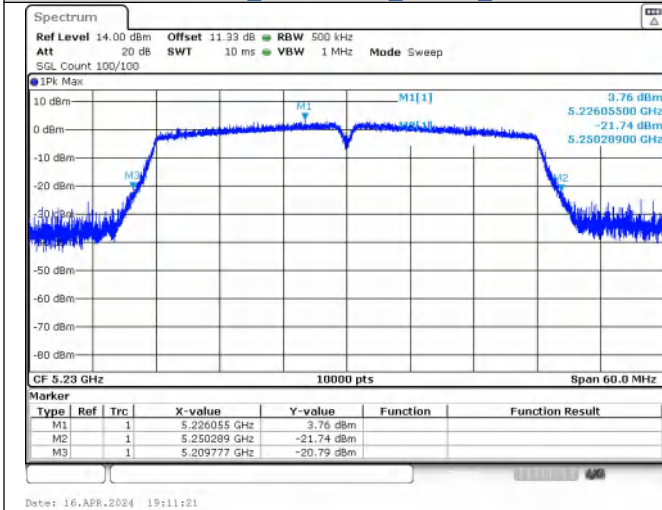
IEEE 802.11ac Channel 36 20MHz Antenna 0

IEEE 802.11ac Channel 40 20MHz Antenna 0



IEEE 802.11ac Channel 48 20MHz Antenna 0

IEEE 802.11ac Channel 38 40MHz Antenna 0



IEEE 802.11ac Channel 46 40MHz Antenna 0

IEEE 802.11ac Channel 42 80MHz Antenna 0

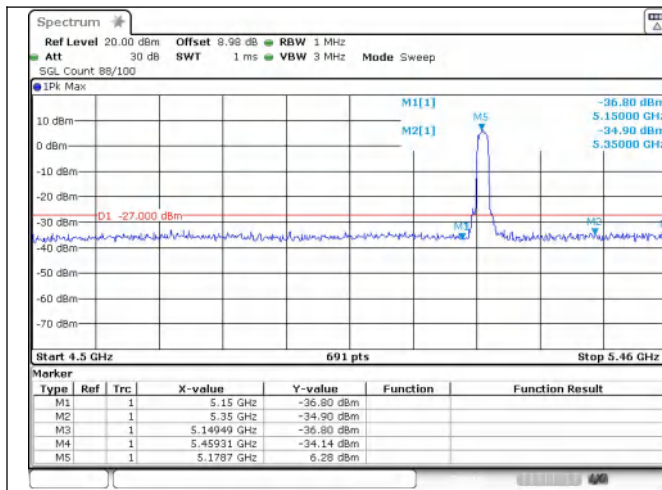
Conducted Out Of Band Emission

Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11a	36	0	5147.53	-36.264	-27	-9.260	PASS
			5149.49	-36.796	-27	-10	PASS
			5150.00	-36.796	-27	-10	PASS
			5350.00	-34.905	-27	-8	PASS
			5459.31	-34.138	-27	-7	PASS
	15538.9		-43.721	-27	-16.720	PASS	
	40		5145.33	-35.252	-27	-8	PASS
			5147.70	-45.215	-27	-18.220	PASS
			5150.00	-35.908	-27	-9	PASS
			5350.00	-36.475	-27	-9	PASS
			5459.31	-34.350	-27	-7	PASS
	48		15600.4	-41.114	-27	-14.110	PASS
			5136.94	-47.845	-27	-20.840	PASS
			5149.49	-34.921	-27	-8	PASS
			5150.00	-34.921	-27	-8	PASS
5350.00		-34.202	-27	-7	PASS		
IEEE 802.11n_20	36	5453.75	-33.909	-27	-7	PASS	
		15719.0	-40.612	-27	-13.610	PASS	
		5141.72	-35.882	-27	-8.880	PASS	
		5148.10	-35.414	-27	-8	PASS	
		5150.00	-35.752	-27	-9	PASS	
	40	5350.00	-35.938	-27	-9	PASS	
		5459.31	-35.841	-27	-9	PASS	
		15534.9	-44.660	-27	-17.660	PASS	
		5145.33	-34.413	-27	-7	PASS	
		5149.91	-39.721	-27	-12.720	PASS	
	48	5150.00	-36.515	-27	-10	PASS	
		5350.00	-36.557	-27	-10	PASS	
		5459.31	-34.750	-27	-8	PASS	
		15599.8	-41.236	-27	-14.240	PASS	
		5127.39	-46.909	-27	-19.910	PASS	
IEEE 802.11n_40	38	5149.49	-36.057	-27	-9	PASS	
		5150.00	-36.057	-27	-9	PASS	
		5350.00	-36.320	-27	-9	PASS	
		5459.31	-34.827	-27	-8	PASS	
		15715.0	-40.597	-27	-13.600	PASS	
	46	5147.87	-27.184	-27	-0.180	PASS	
		5148.10	-32.716	-27	-6	PASS	
		5150.00	-32.983	-27	-6	PASS	
		5350.00	-35.225	-27	-8	PASS	
		5455.14	-32.574	-27	-6	PASS	
	36	15592.6	-45.486	-27	-18.490	PASS	
		5145.82	-35.655	-27	-8.660	PASS	
		5149.49	-35.973	-27	-9	PASS	
		5150.00	-35.973	-27	-9	PASS	
		5350.00	-36.934	-27	-10	PASS	
IEEE 802.11ac_20	36	5459.31	-34.722	-27	-8	PASS	
		15683.6	-42.518	-27	-15.520	PASS	
		5145.33	-35.605	-27	-9	PASS	
			5145.65	-29.590	-27	-2.590	PASS
			5150.00	-35.695	-27	-9	PASS

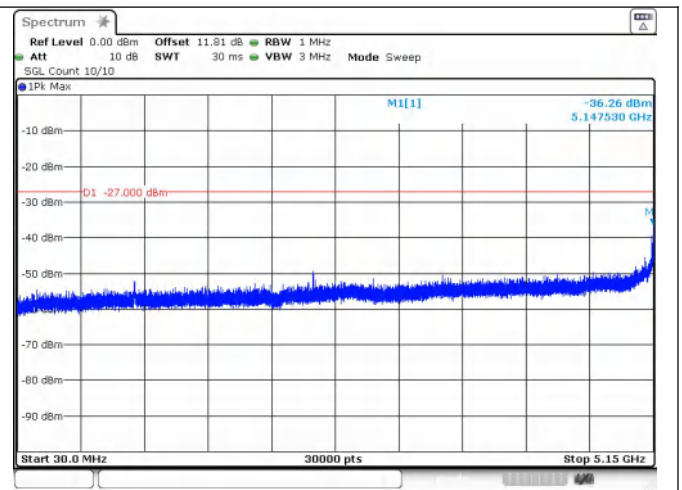
	40	5350.00	-34.643	-27	-8	PASS
		5438.47	-34.573	-27	-8	PASS
		15544.1	-42.554	-27	-15.550	PASS
		5144.11	-41.739	-27	-14.740	PASS
		5149.49	-37.209	-27	-10	PASS
		5150.00	-37.209	-27	-10	PASS
		5350.00	-36.203	-27	-9	PASS
	48	5457.92	-35.696	-27	-9	PASS
		15601.7	-39.905	-27	-12.910	PASS
		2413.96	-42.521	-27	-15.520	PASS
		5149.49	-35.057	-27	-8	PASS
		5150.00	-35.057	-27	-8	PASS
		5350.00	-35.906	-27	-9	PASS
		5457.92	-33.670	-27	-7	PASS
		15722.9	-40.924	-27	-13.920	PASS
IEEE 802.11ac_40	38	5146.50	-29.326	-27	-2.330	PASS
		5148.10	-34.700	-27	-8	PASS
		5150.00	-34.977	-27	-8	PASS
		5350.00	-36.752	-27	-10	PASS
		5459.31	-34.644	-27	-8	PASS
	46	15561.1	-44.172	-27	-17.170	PASS
		2413.62	-42.040	-27	-15.040	PASS
		5149.49	-36.910	-27	-10	PASS
		5150.00	-36.910	-27	-10	PASS
		5350.00	-35.632	-27	-9	PASS
		5456.53	-34.883	-27	-8	PASS
		15680.3	-43.093	-27	-16.090	PASS
		5146.50	-28.613	-27	-1.610	PASS
		5149.49	-32.462	-27	-5	PASS
		5150.00	-32.462	-27	-5	PASS
IEEE 802.11ac_80	42	5350.00	-35.342	-27	-8	PASS
		5352.95	-43.368	-27	-16.370	PASS
		5459.31	-34.601	-27	-8	PASS

Test Graphs



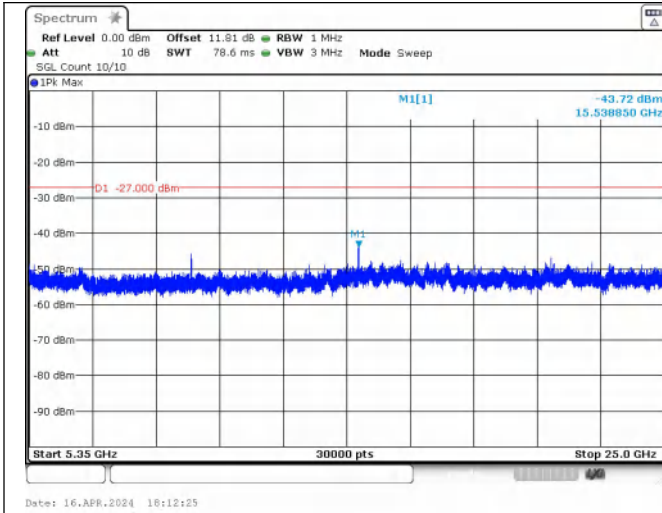
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Out Of Band Emission
 IEEE 802.11a Channel 36 20MHz Antenna 0

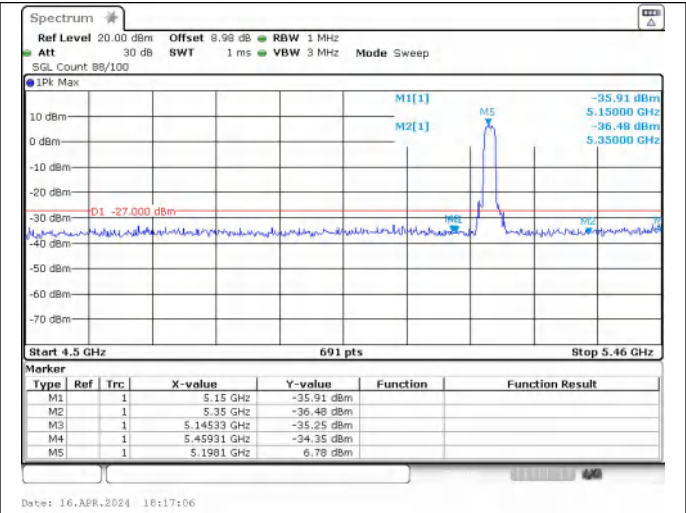


Date: 16.APR.2024 16:12:15

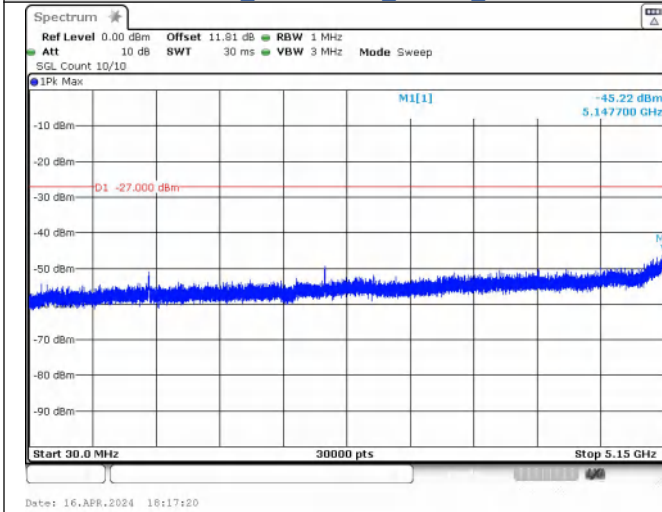
Spurious Emission:30.0~5150 MHz
 IEEE 802.11a Channel 36 20MHz Antenna 0



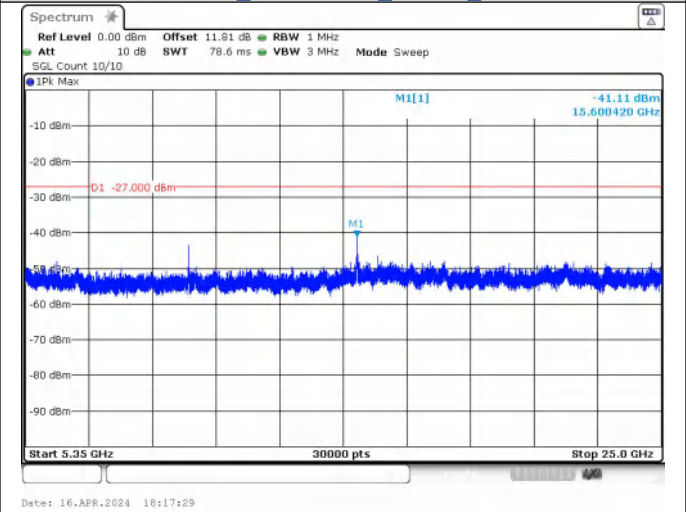
Spurious Emission:5350~25000.0 MHz
IEEE 802.11a_Channel 36_20MHz_Antenna 0



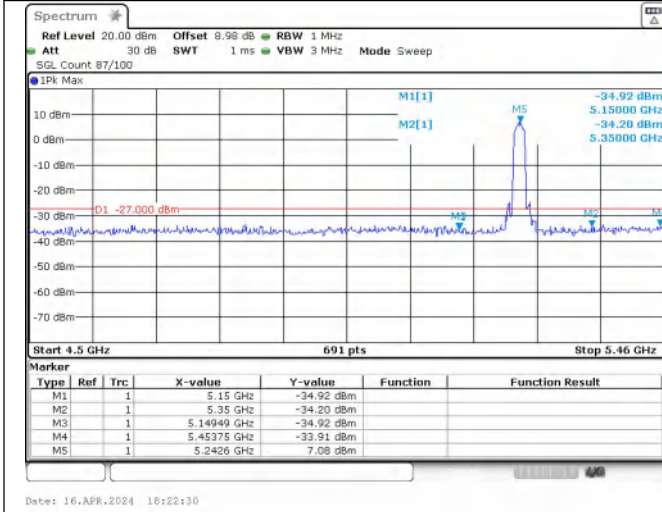
Out Of Band Emission
IEEE 802.11a_Channel 40_20MHz_Antenna 0



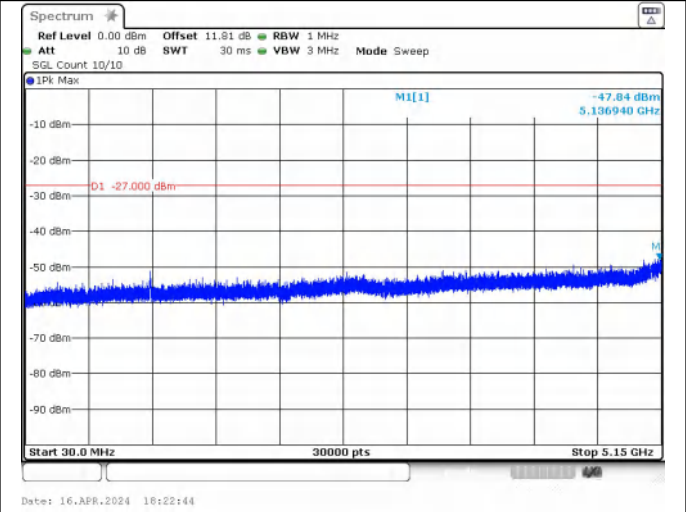
Spurious Emission:30.0~5150 MHz
IEEE 802.11a_Channel 40_20MHz_Antenna 0



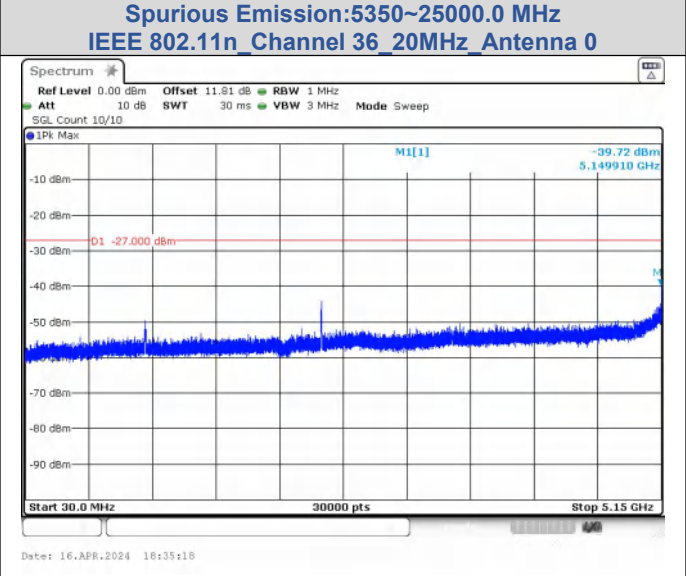
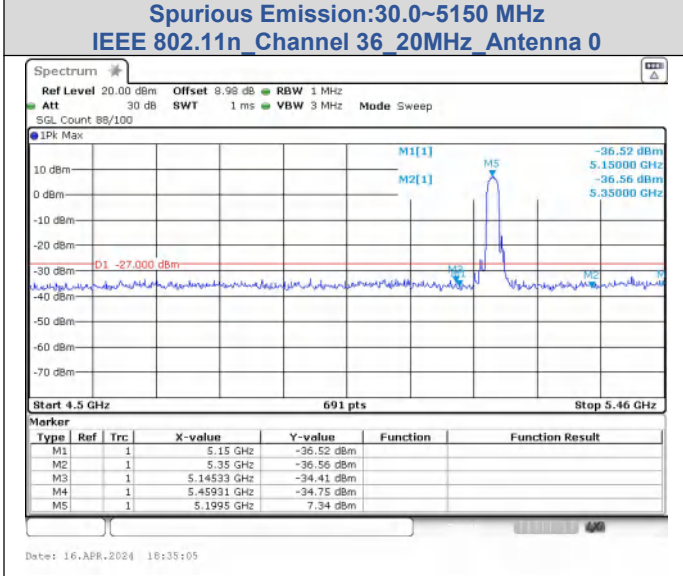
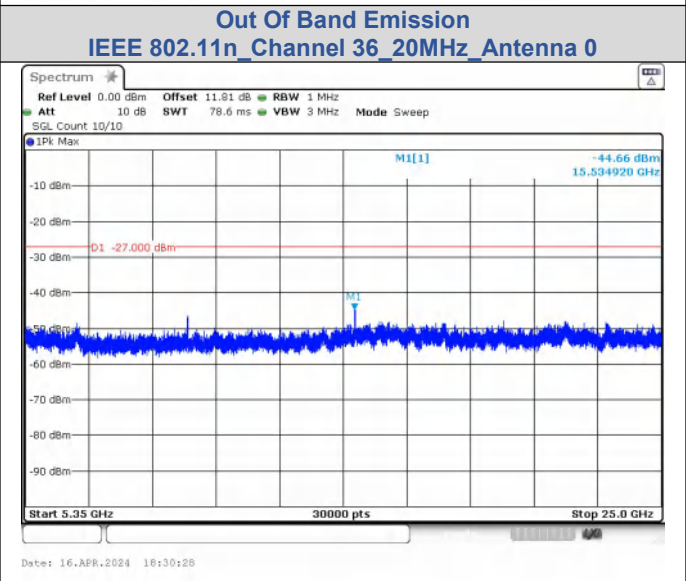
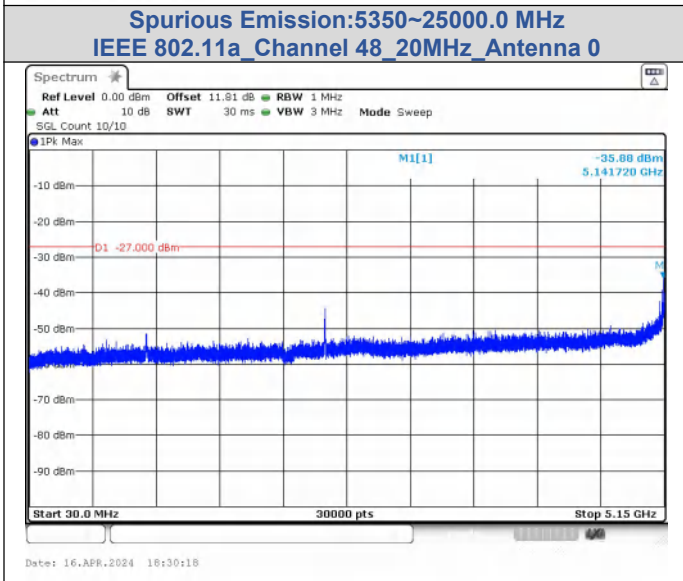
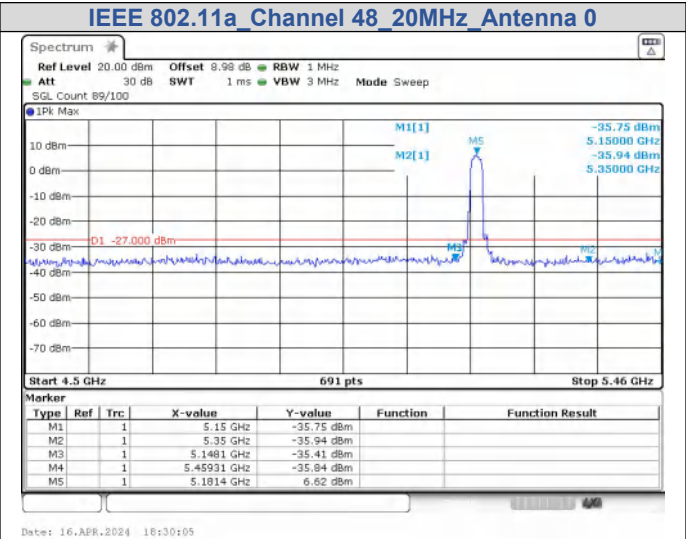
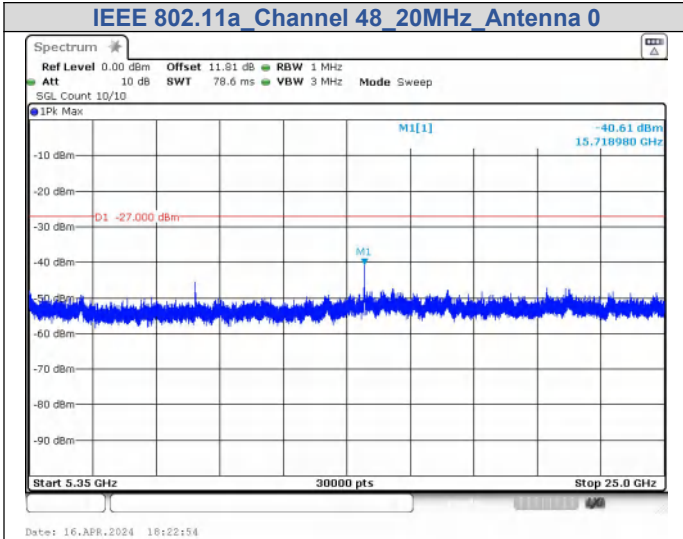
Spurious Emission:5350~25000.0 MHz
IEEE 802.11a_Channel 40_20MHz_Antenna 0

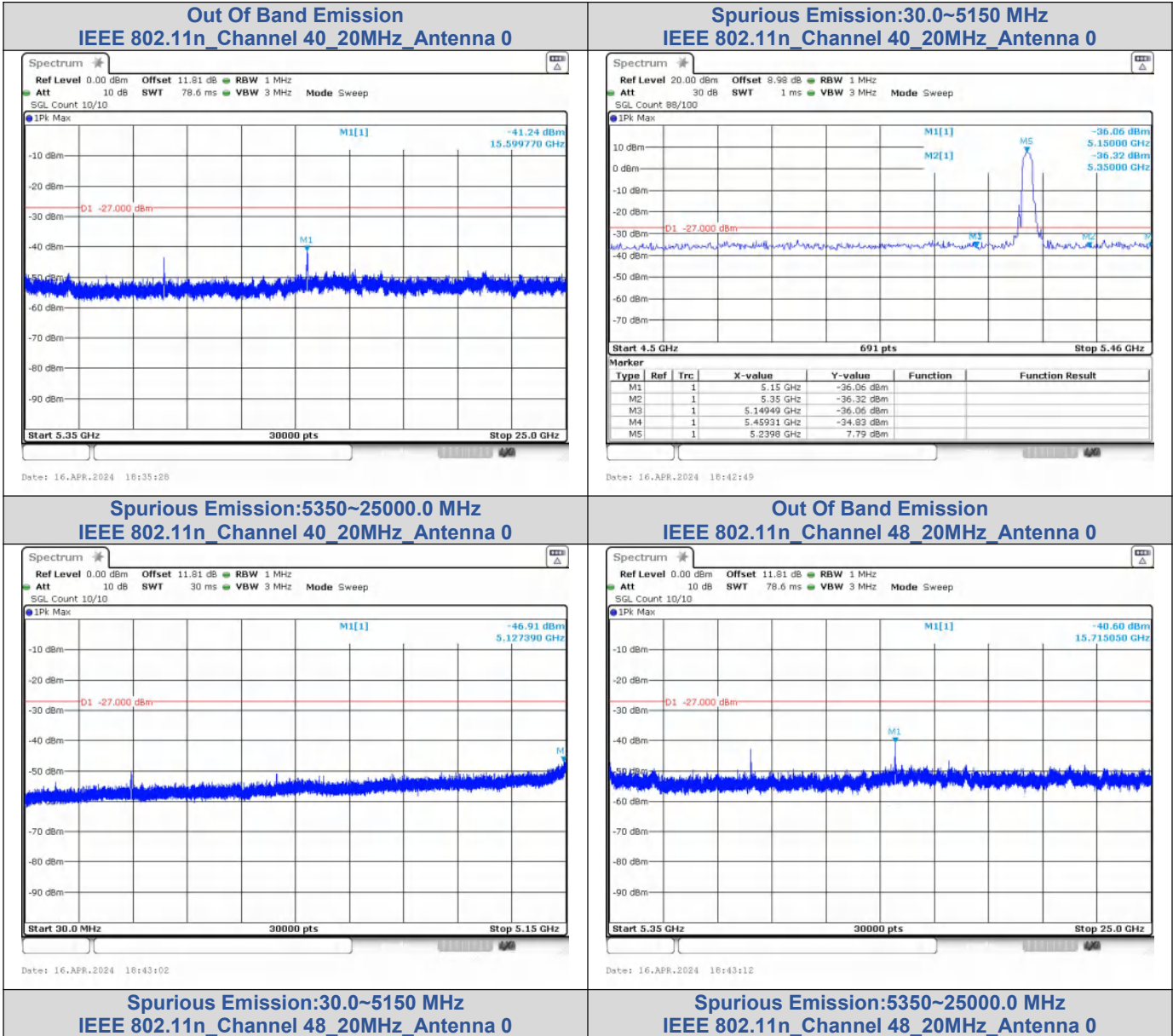


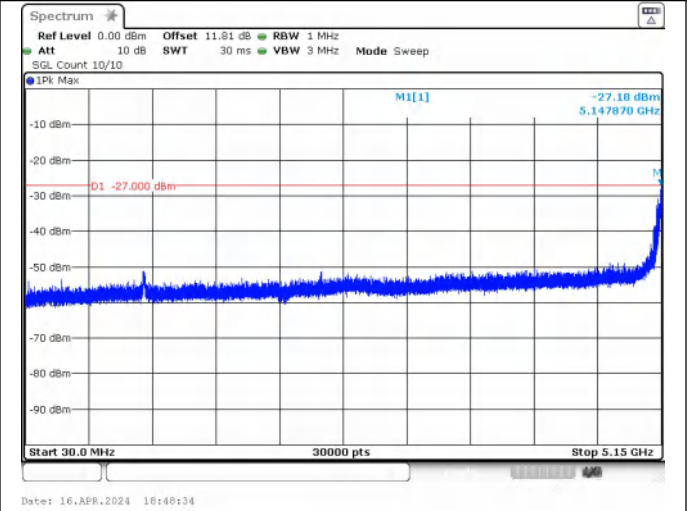
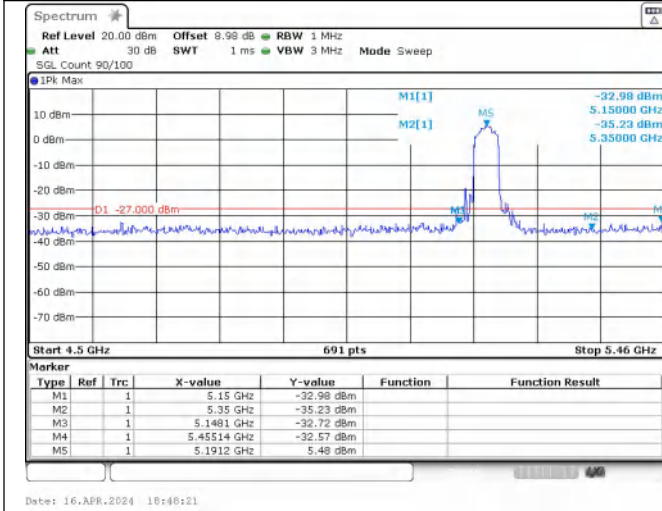
Out Of Band Emission



Spurious Emission:30.0~5150 MHz

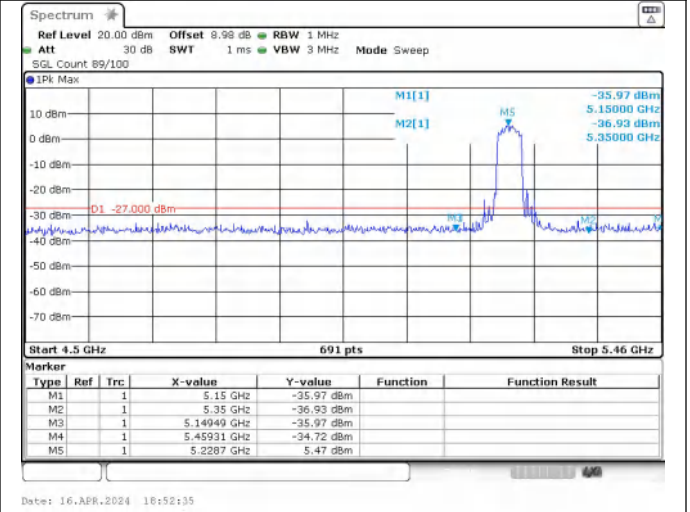
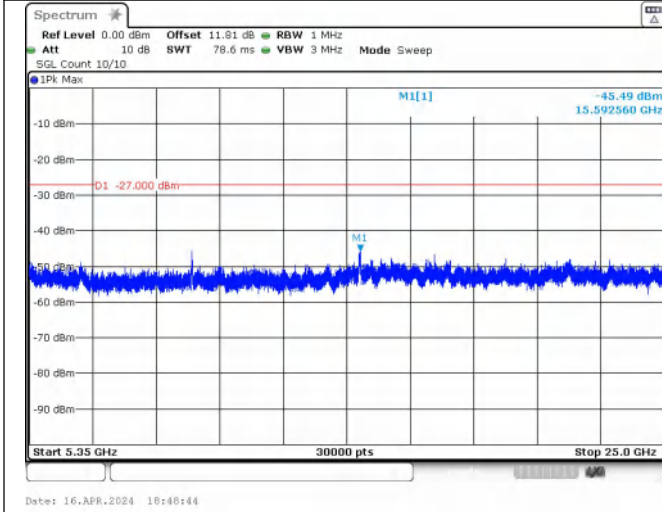






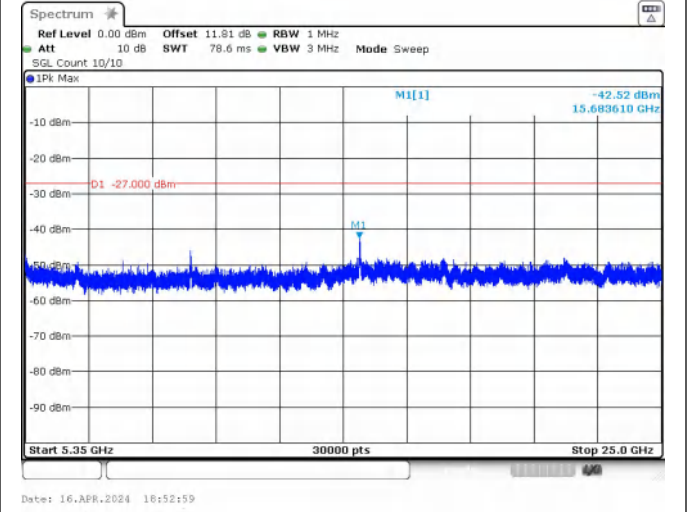
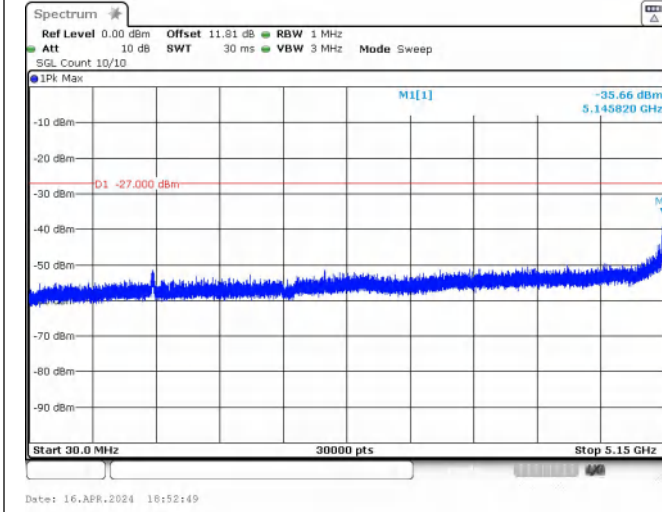
**Out Of Band Emission
IEEE 802.11n Channel 38 40MHz Antenna 0**

**Spurious Emission:30.0~5150 MHz
IEEE 802.11n Channel 38 40MHz Antenna 0**



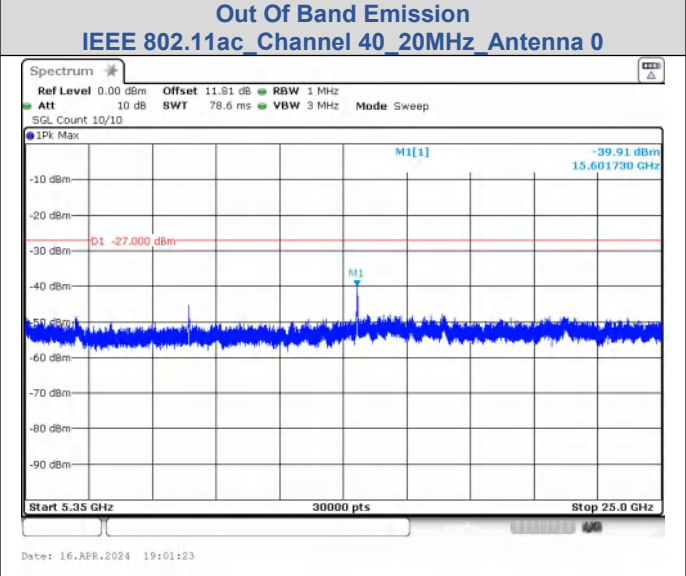
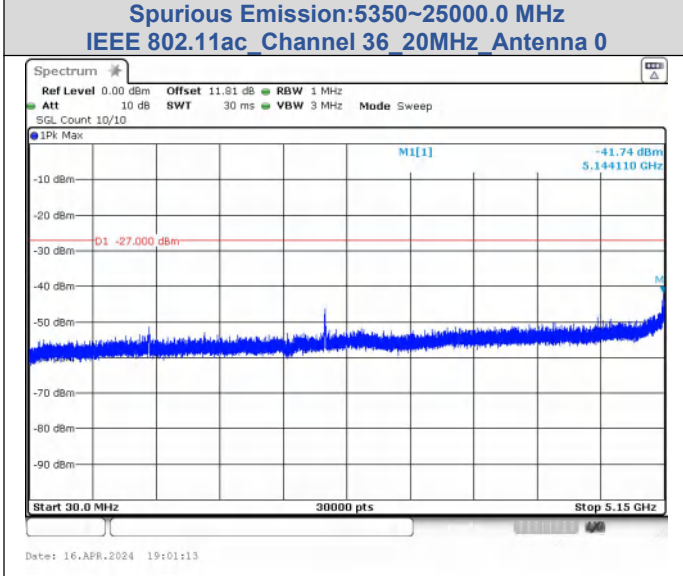
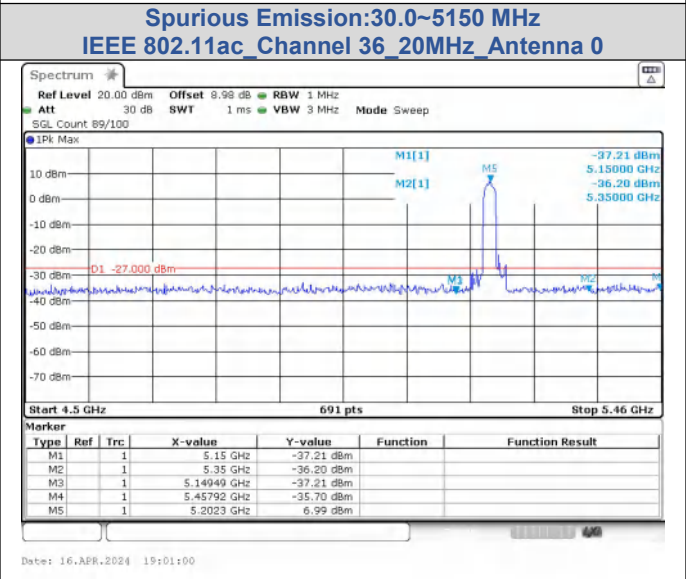
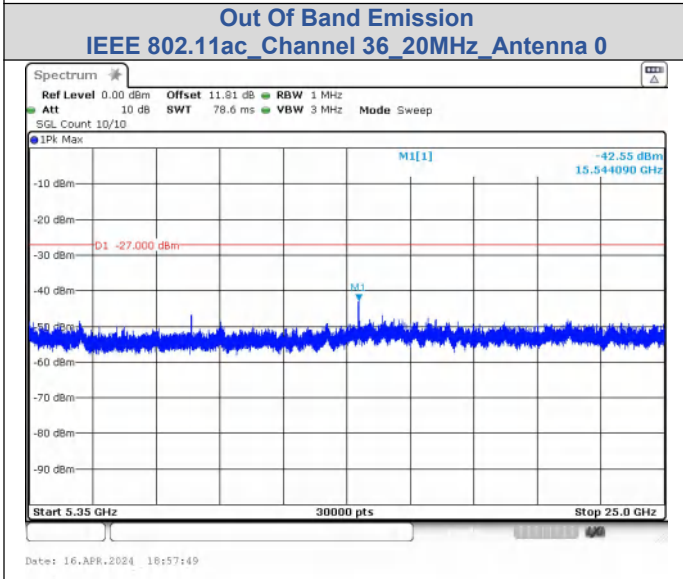
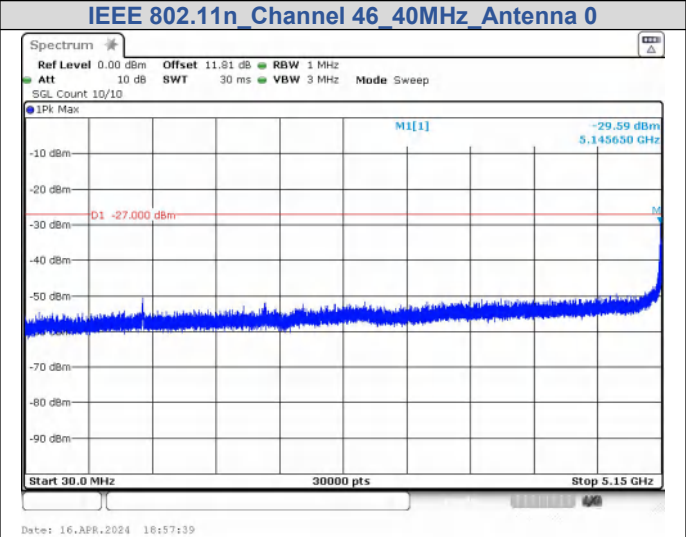
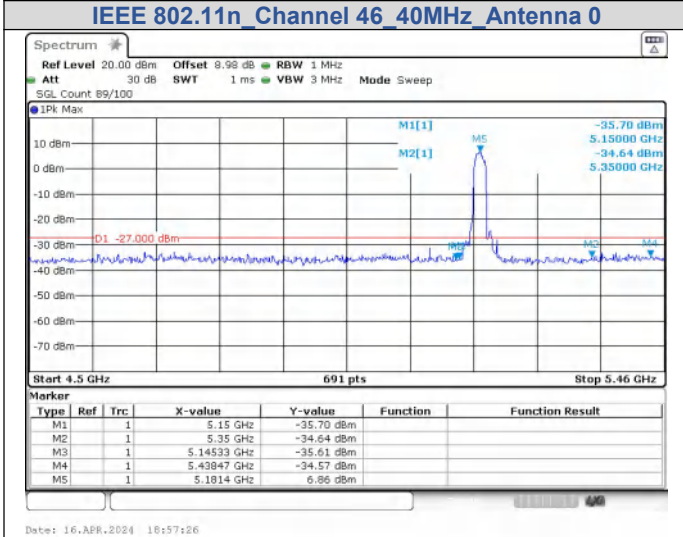
**Spurious Emission:5350~25000.0 MHz
IEEE 802.11n Channel 38 40MHz Antenna 0**

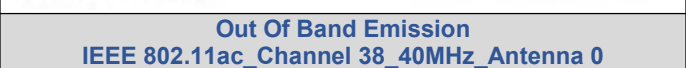
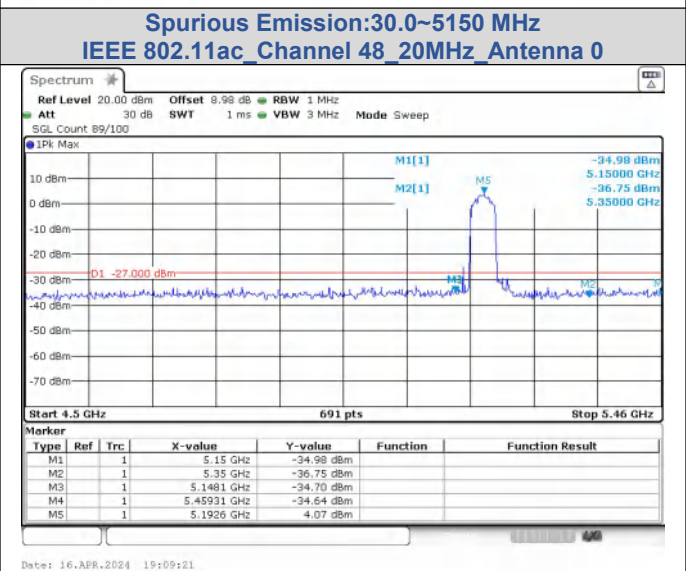
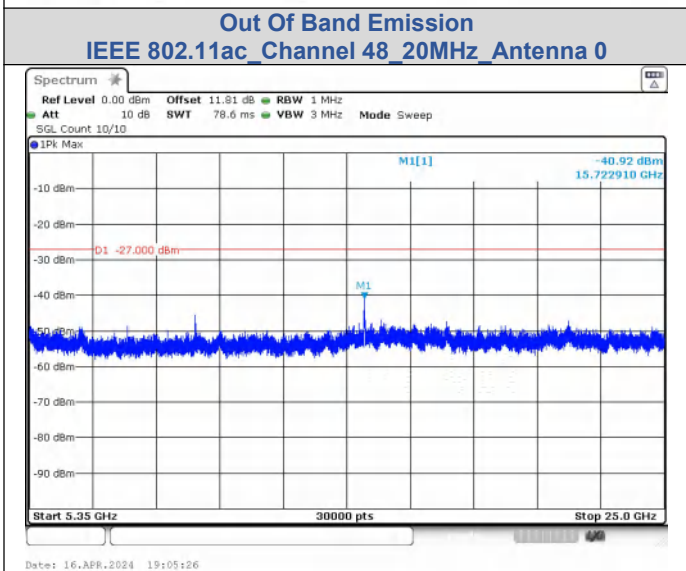
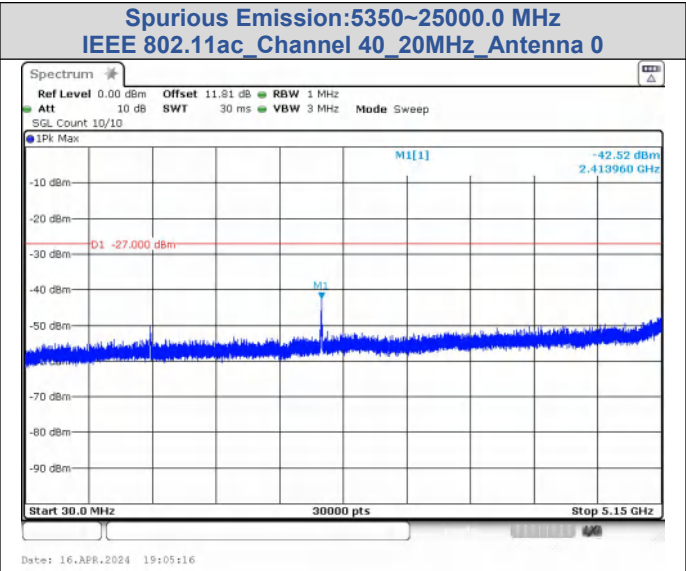
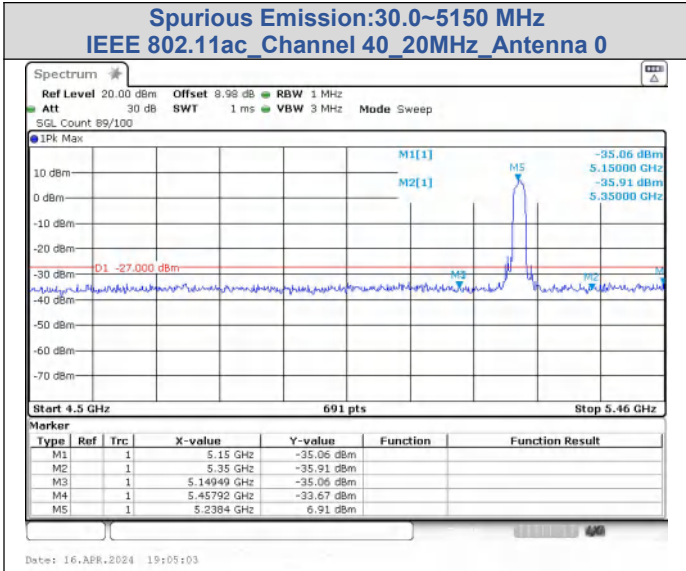
**Out Of Band Emission
IEEE 802.11n Channel 46 40MHz Antenna 0**

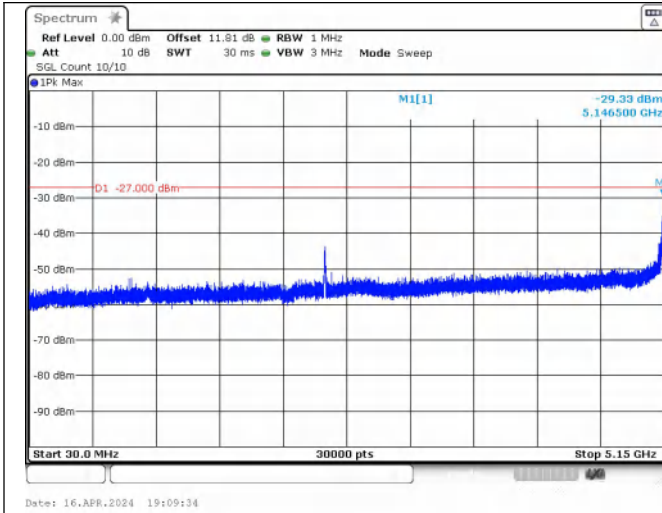


Spurious Emission:30.0~5150 MHz

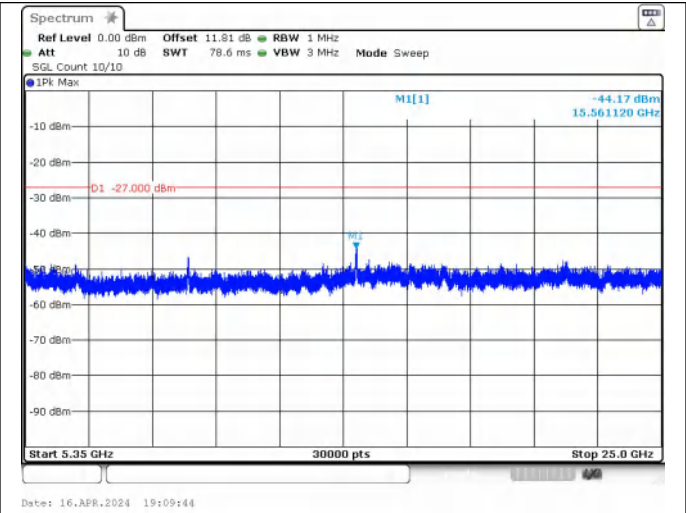
Spurious Emission:5350~25000.0 MHz



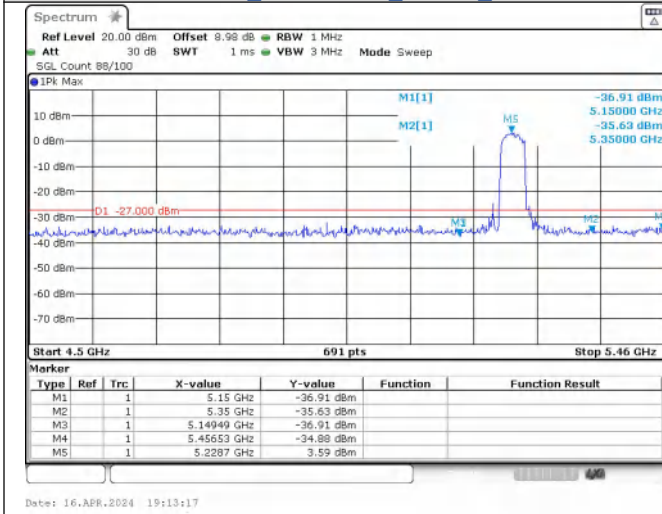




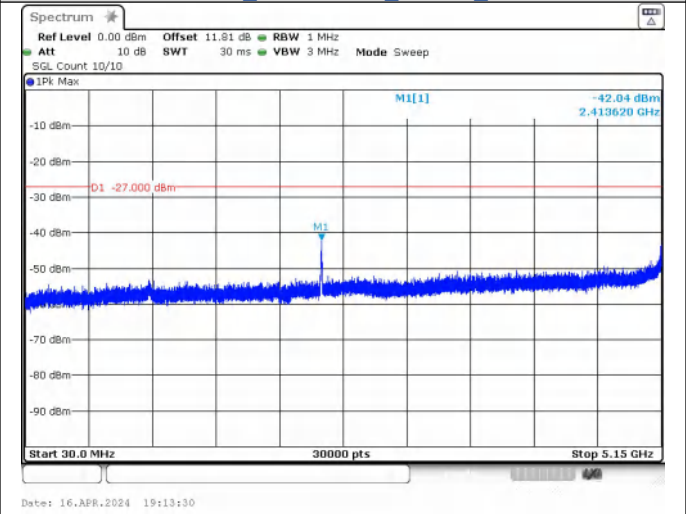
Spurious Emission:30.0~5150 MHz
IEEE 802.11ac_Channel 38_40MHz_Antenna 0



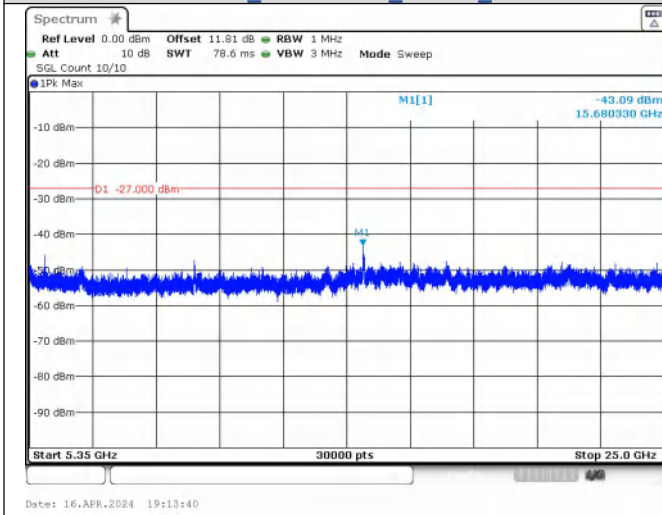
Spurious Emission:5350~25000.0 MHz
IEEE 802.11ac_Channel 38_40MHz_Antenna 0



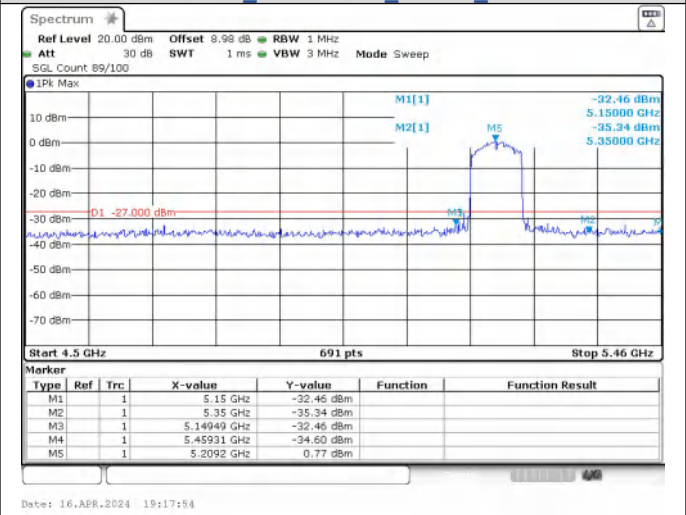
Out Of Band Emission
IEEE 802.11ac_Channel 46_40MHz_Antenna 0



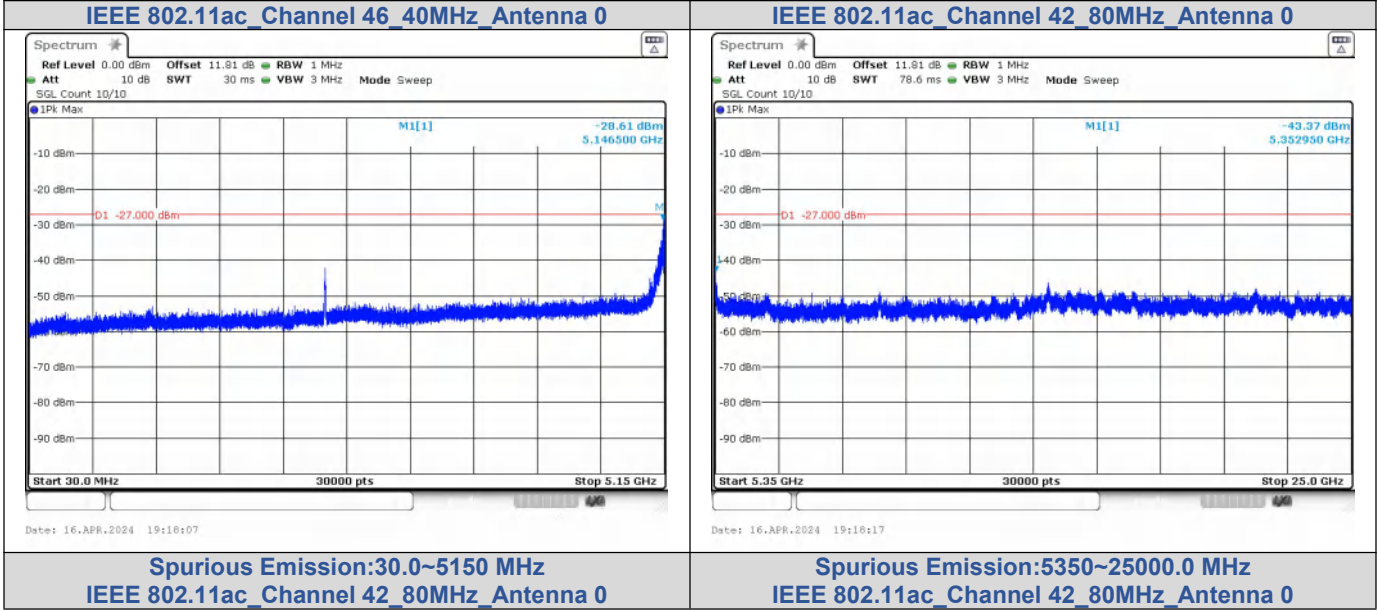
Spurious Emission:30.0~5150 MHz
IEEE 802.11ac_Channel 46_40MHz_Antenna 0



Spurious Emission:5350~25000.0 MHz



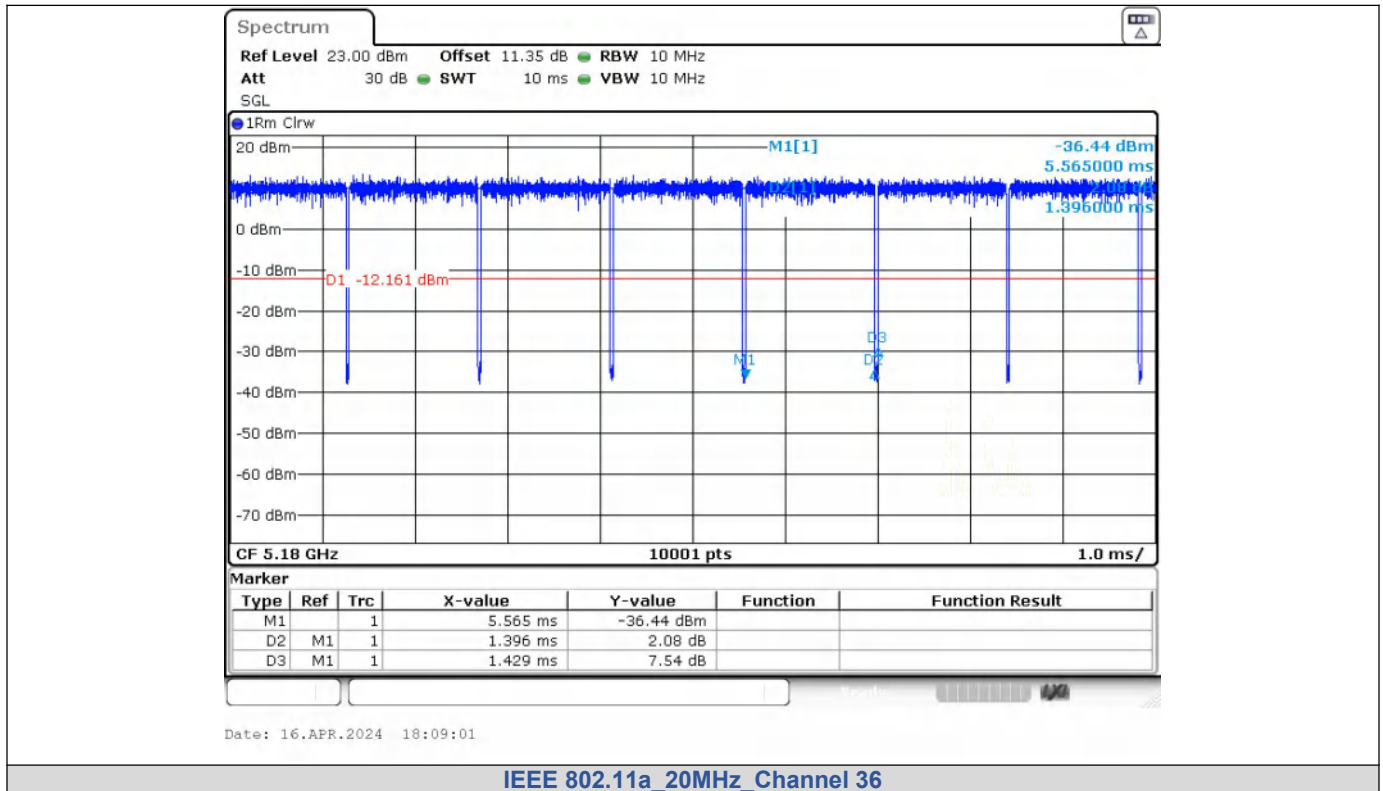
Out Of Band Emission

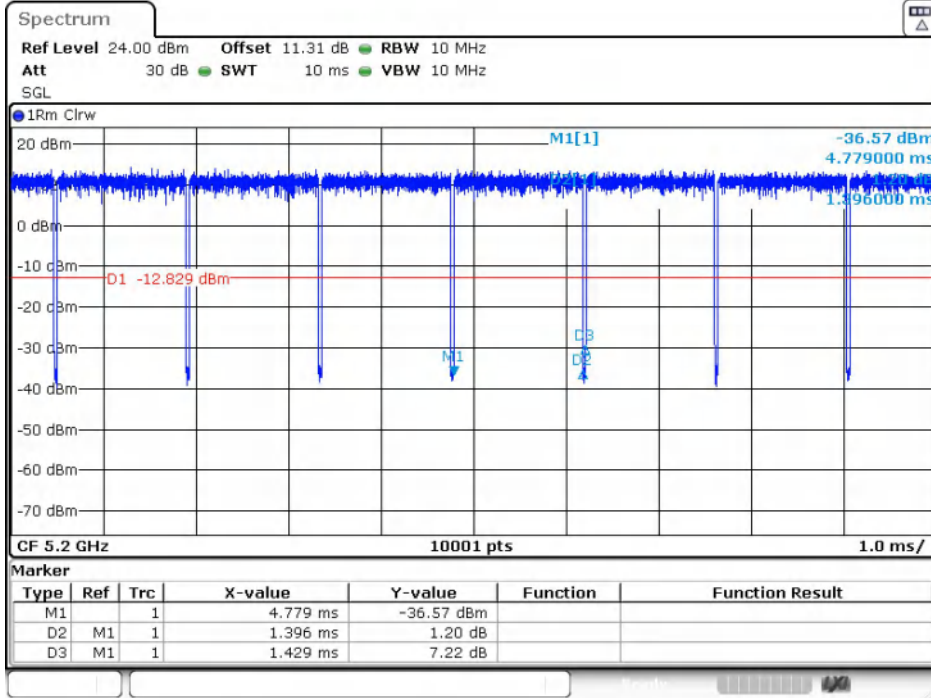


Duty Cycle Test Result

Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11a	6	36	0	1.396	1.429	97.69	0.9769	0.1015	0.72
		40		1.396	1.429	97.69	0.9769	0.1015	0.72
		48		1.396	1.428	97.76	0.9776	0.0984	0.72
IEEE 802.11n_20	MCS 0	36		1.304	1.337	97.53	0.9753	0.1086	0.77
		40		1.293	1.327	97.44	0.9744	0.1126	0.77
		48		1.304	1.337	97.53	0.9753	0.1086	0.77
IEEE 802.11n_40	MCS 0	38		0.650	0.683	95.12	0.9512	0.2173	1.54
		46		0.650	0.684	95.06	0.9506	0.22	1.54
IEEE 802.11ac_20	MCS 0	36		1.316	1.349	97.55	0.9755	0.1077	0.76
		40		1.305	1.338	97.51	0.9751	0.1095	0.77
		48		1.316	1.349	97.55	0.9755	0.1077	0.76
IEEE 802.11ac_40	MCS 0	38		0.654	0.688	95.15	0.9515	0.2159	1.53
		46	0.654	0.688	95.09	0.9509	0.2187	1.53	
IEEE 802.11ac_80		42		0.325	0.359	90.53	0.9053	0.4321	3.08

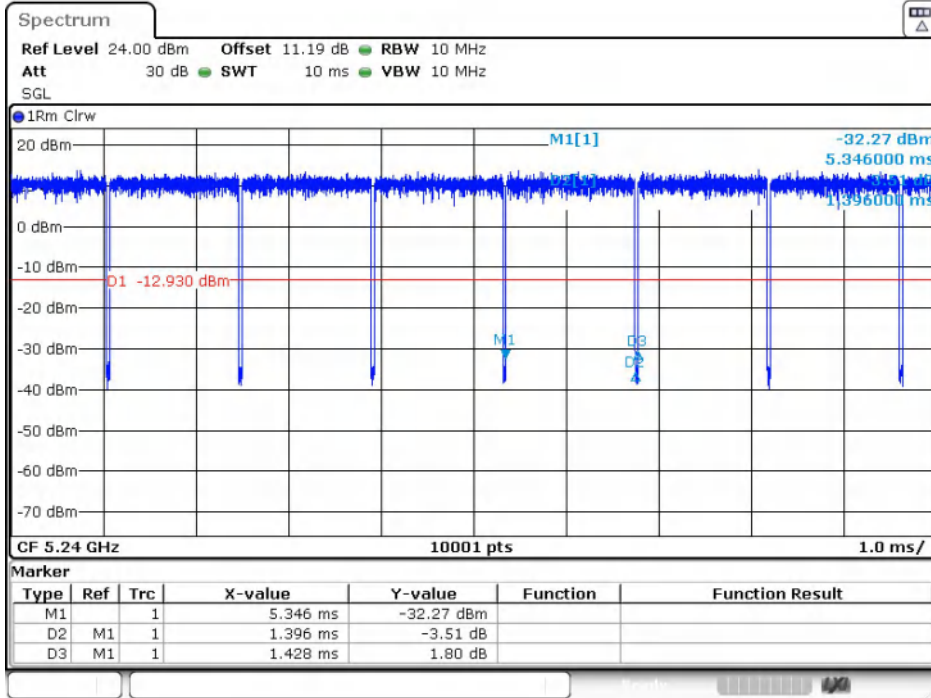
Test Graphs





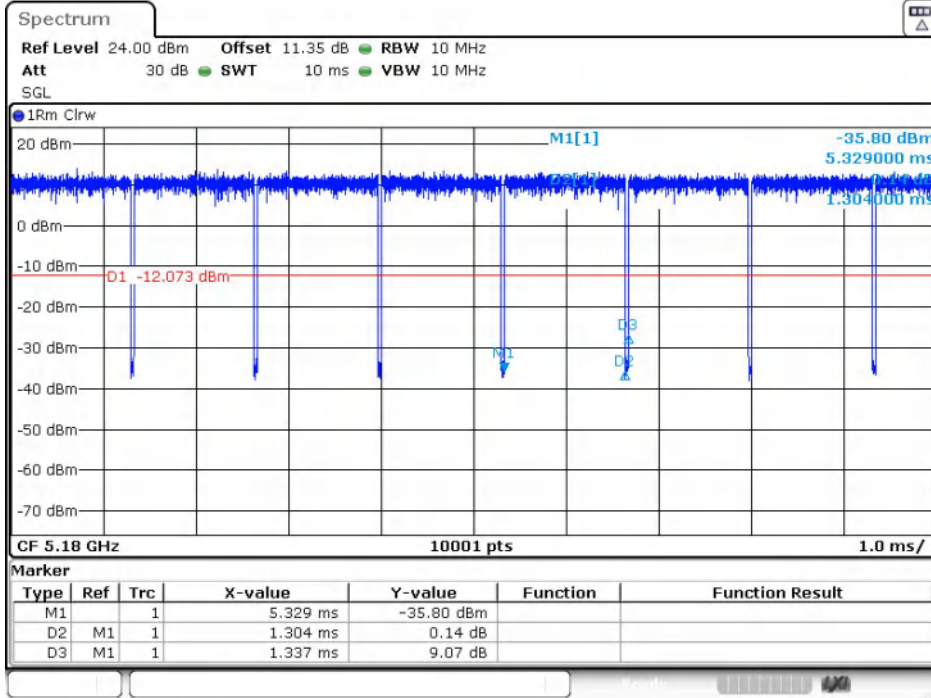
Date: 16.APR.2024 18:13:48

IEEE 802.11a_20MHz_Channel 40



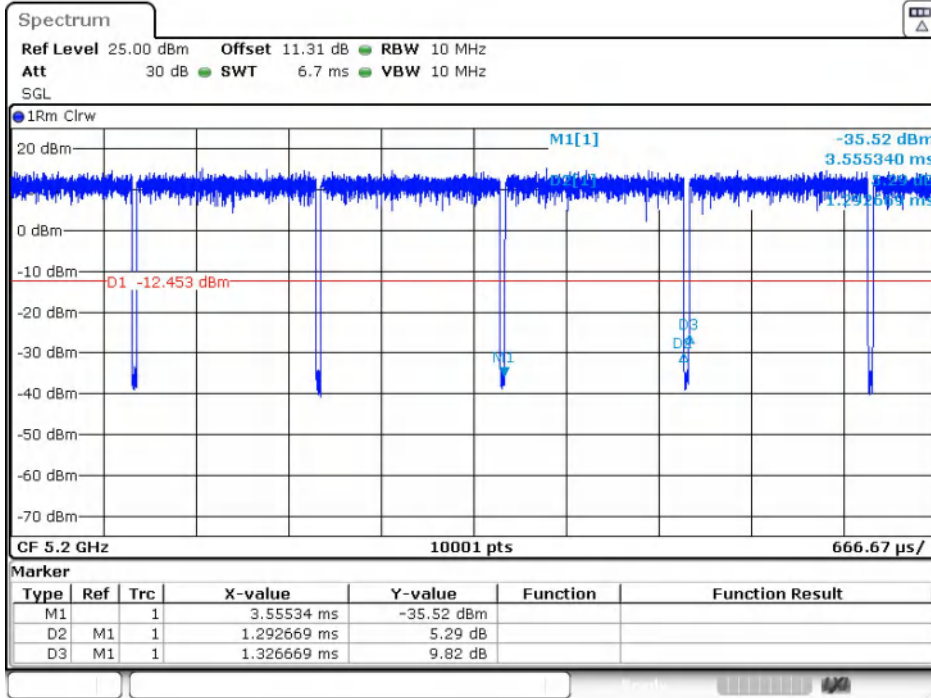
Date: 16.APR.2024 18:19:44

IEEE 802.11a_20MHz_Channel 48



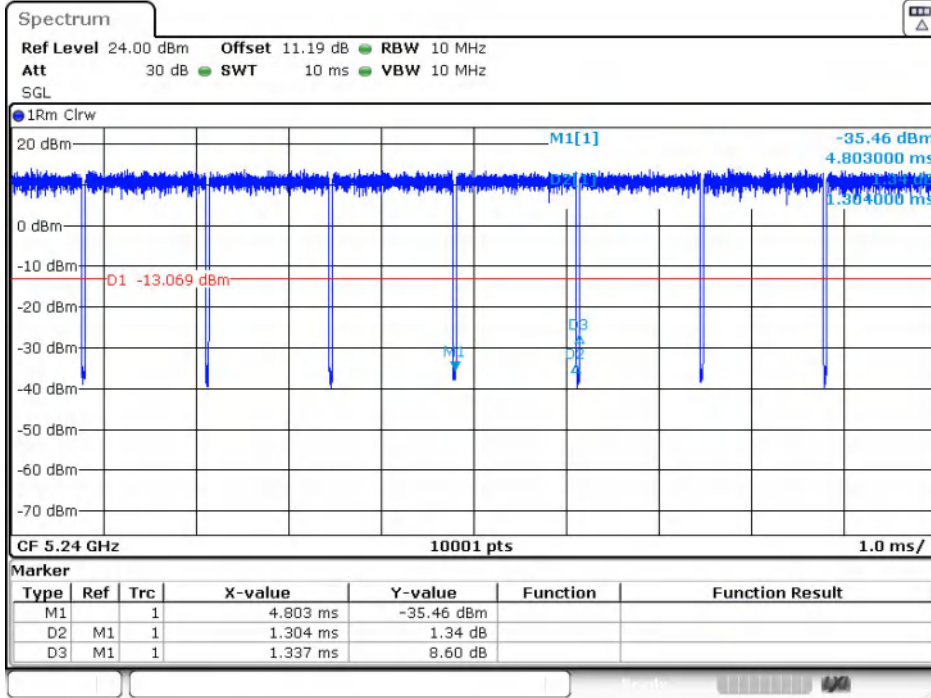
Date: 16.APR.2024 18:27:11

IEEE 802.11n_20MHz_Channel 36



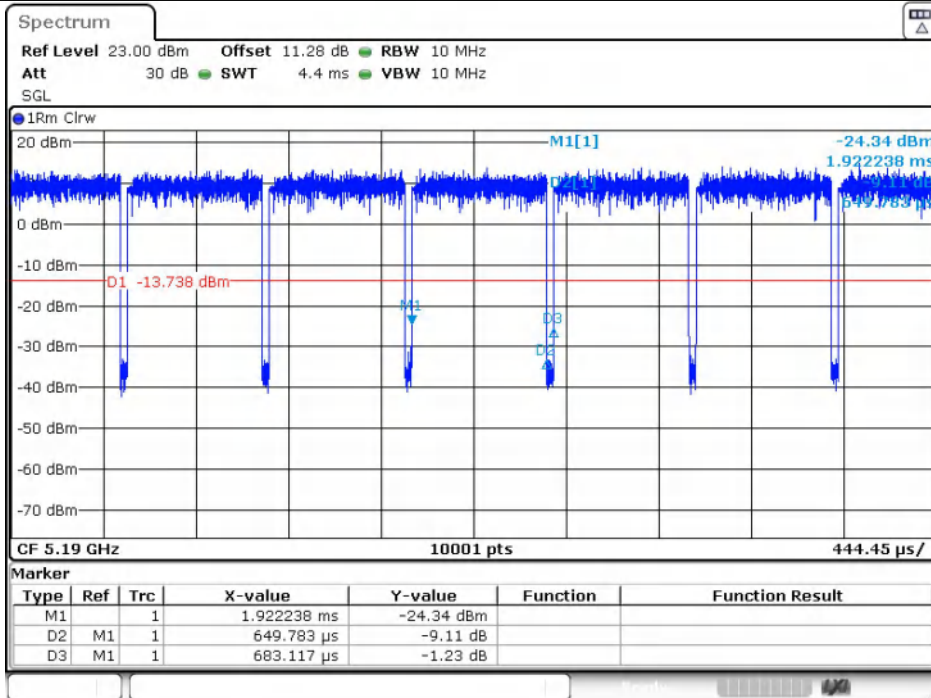
Date: 16.APR.2024 18:32:12

IEEE 802.11n_20MHz_Channel 40



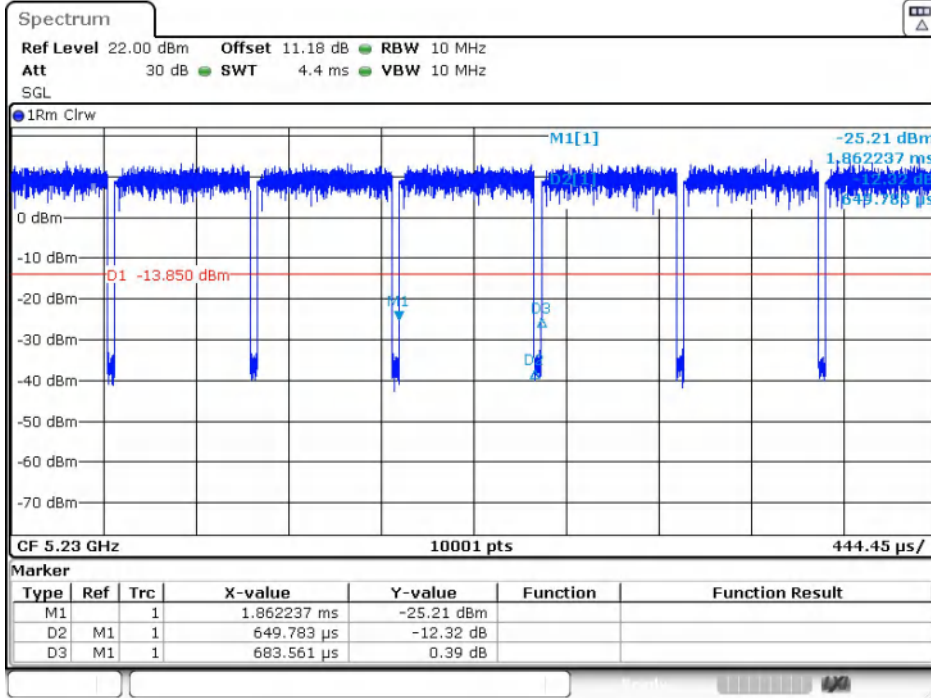
Date: 16.APR.2024 18:40:14

IEEE 802.11n_20MHz_Channel 48



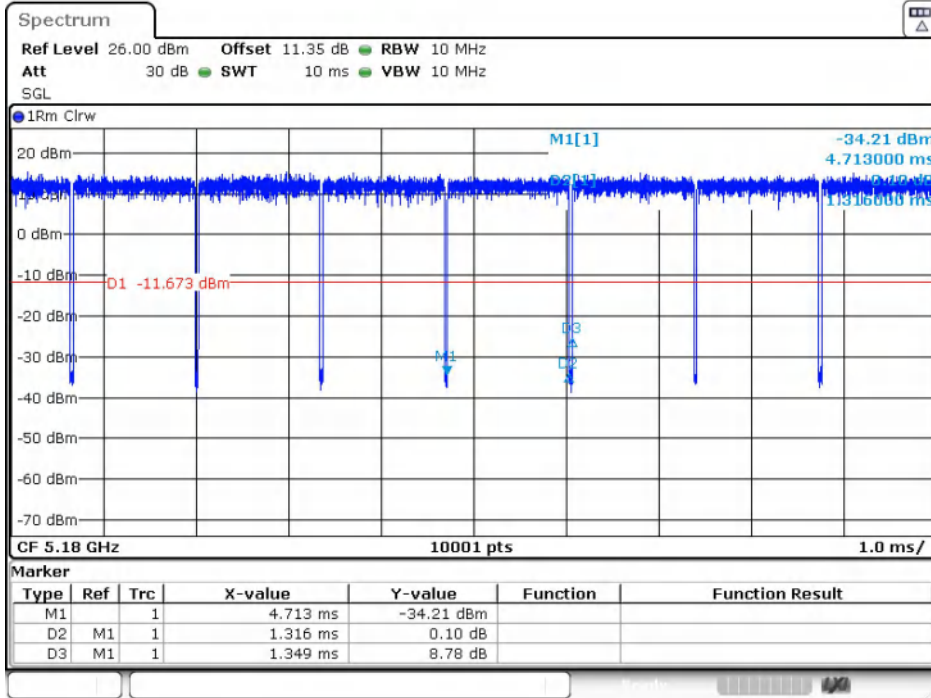
Date: 16.APR.2024 18:44:11

IEEE 802.11n_40MHz_Channel 38



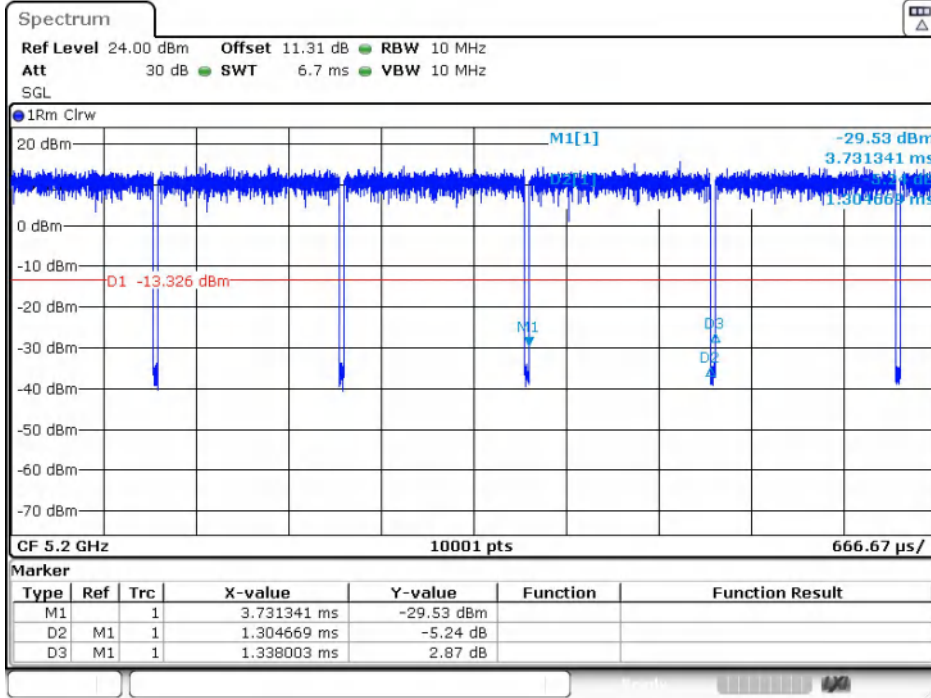
Date: 16.APR.2024 18:49:31

IEEE 802.11n_40MHz_Channel 46



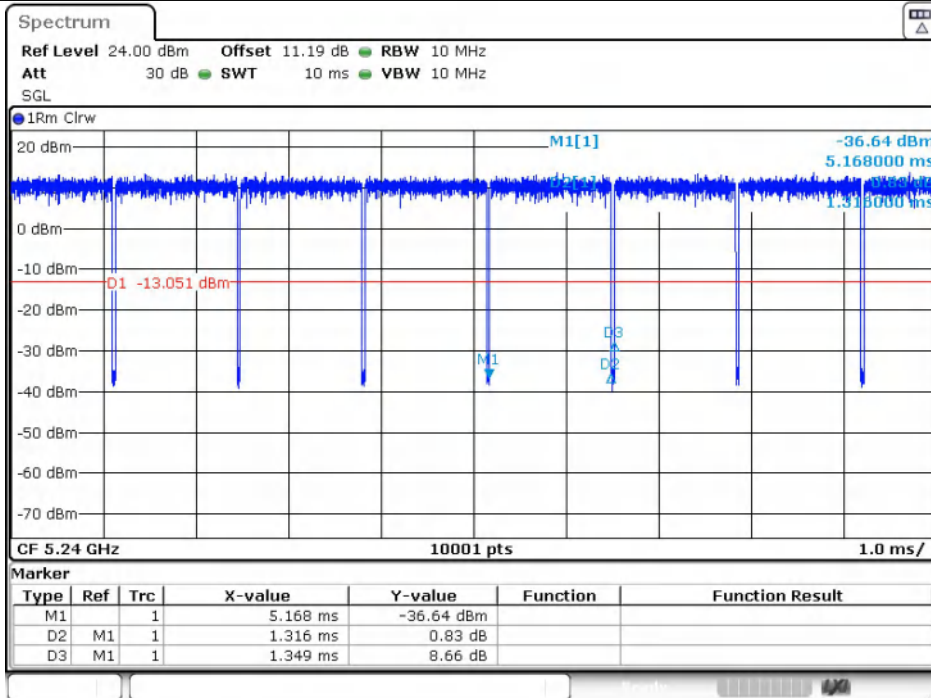
Date: 16.APR.2024 18:54:36

IEEE 802.11ac_20MHz_Channel 36



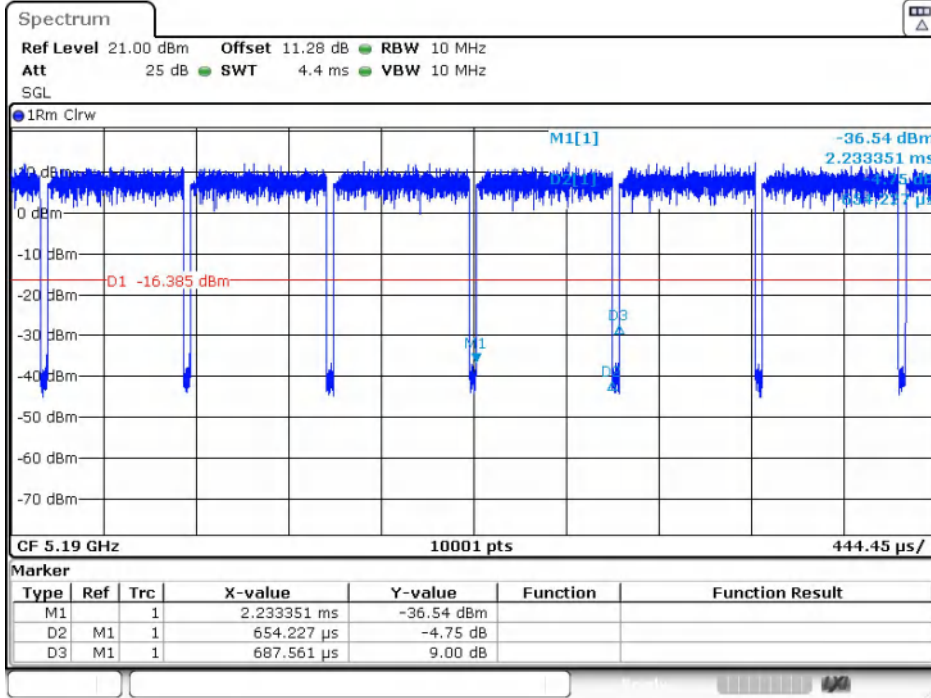
Date: 16.APR.2024 18:58:30

IEEE 802.11ac_20MHz_Channel 40



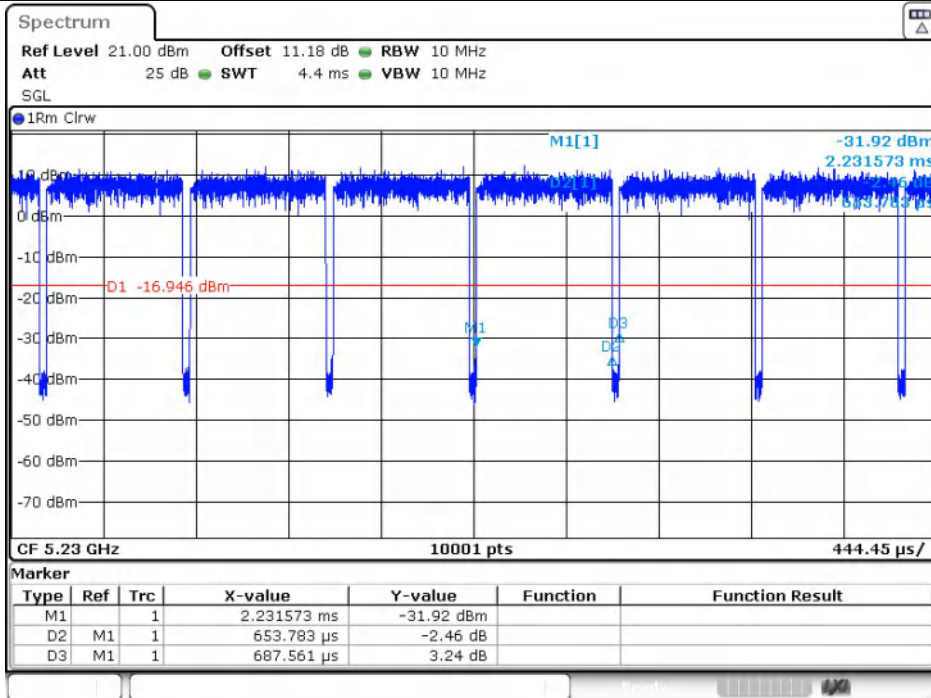
Date: 16.APR.2024 19:02:18

IEEE 802.11ac_20MHz_Channel 48



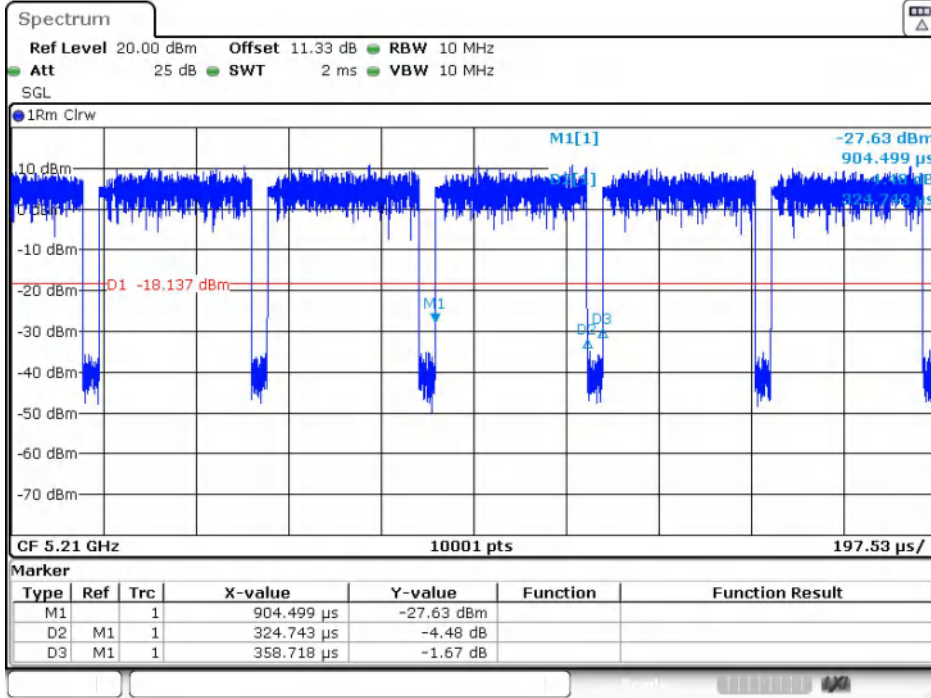
Date: 16.APR.2024 19:06:33

IEEE 802.11ac_40MHz_Channel 38



Date: 16.APR.2024 19:10:33

IEEE 802.11ac_40MHz_Channel 46



Date: 16.APR.2024 19:14:57

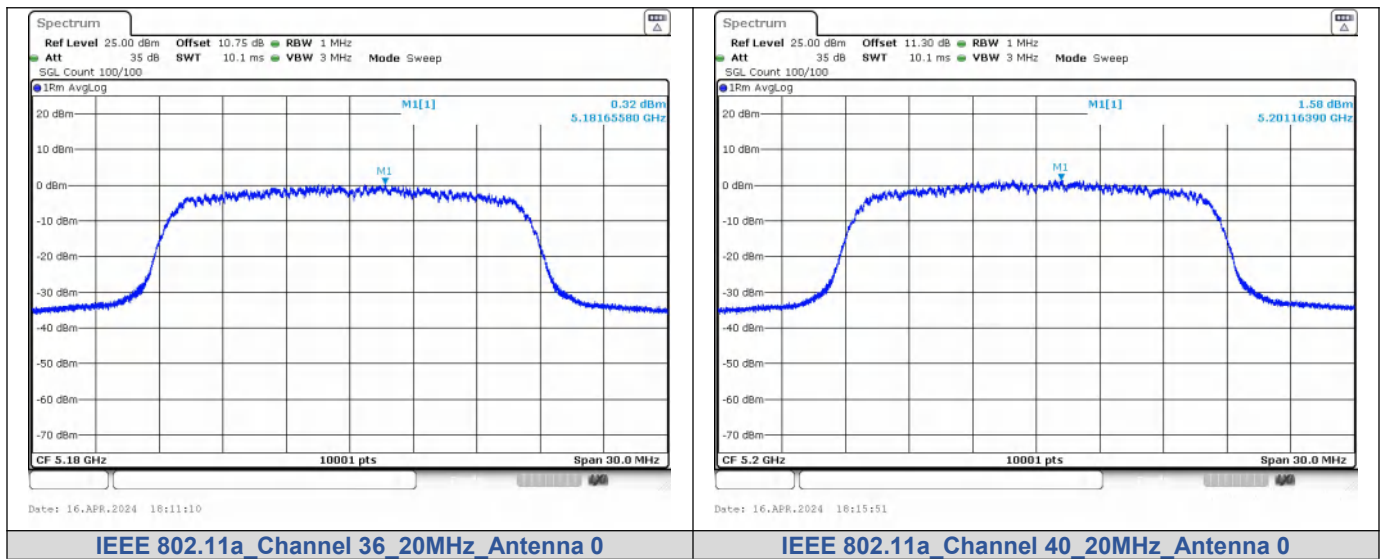
IEEE 802.11ac_80MHz_Channel 42

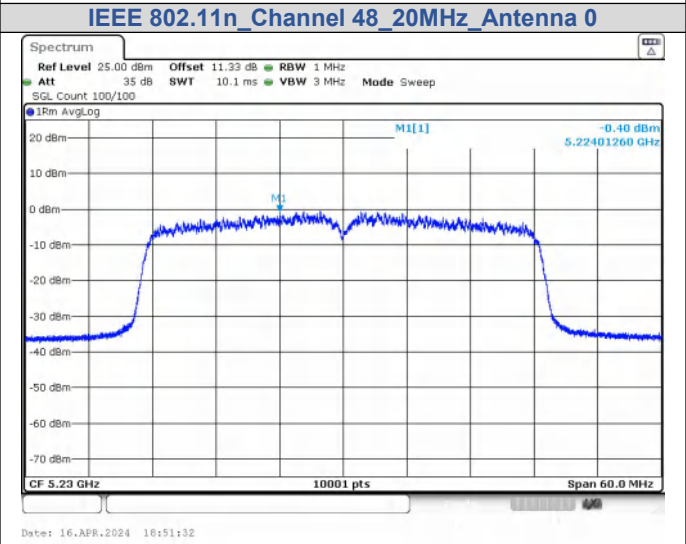
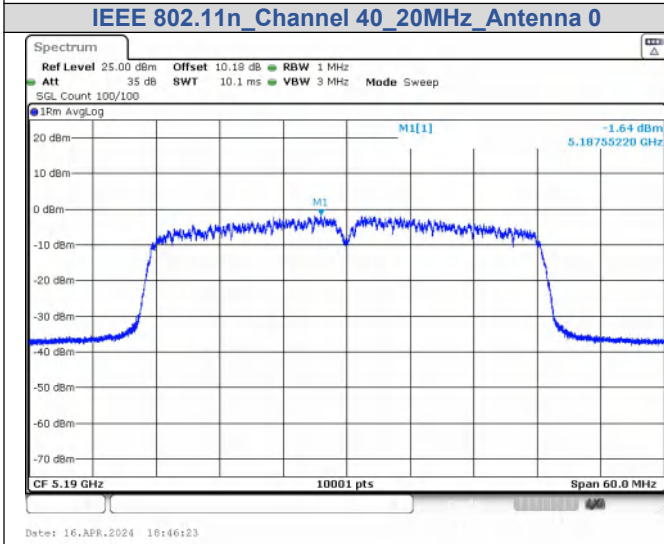
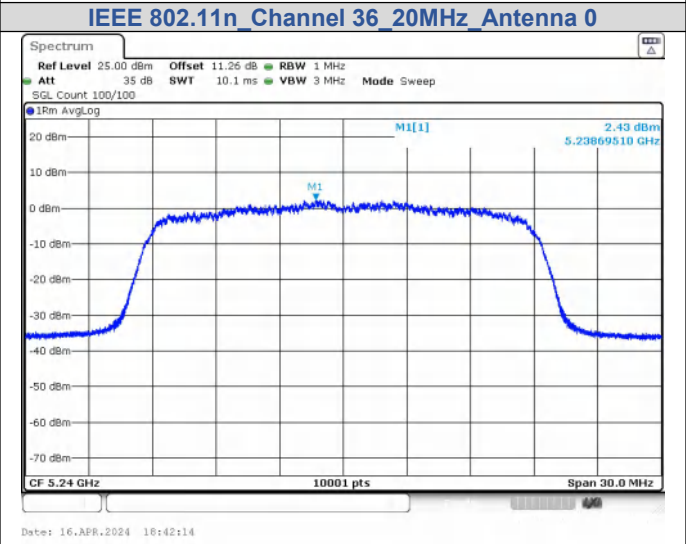
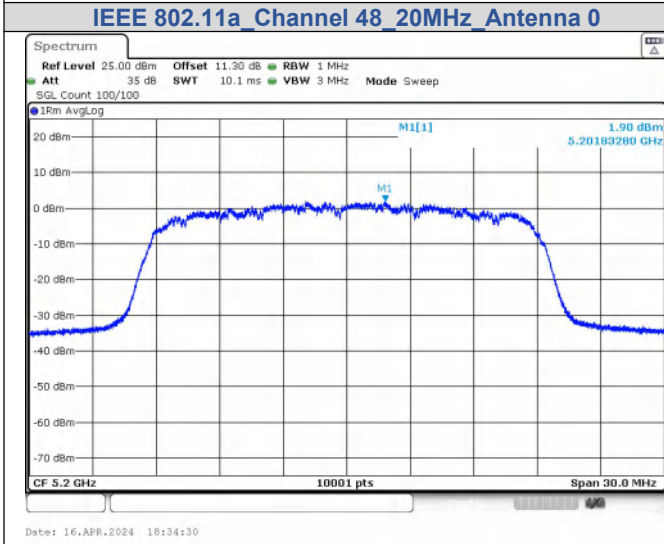
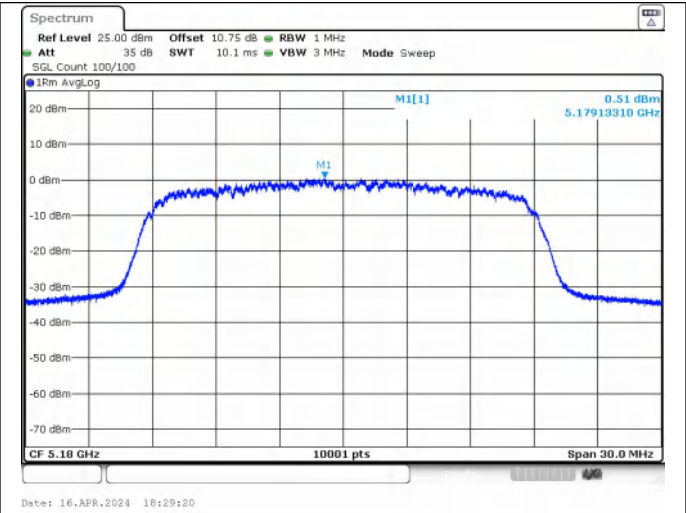
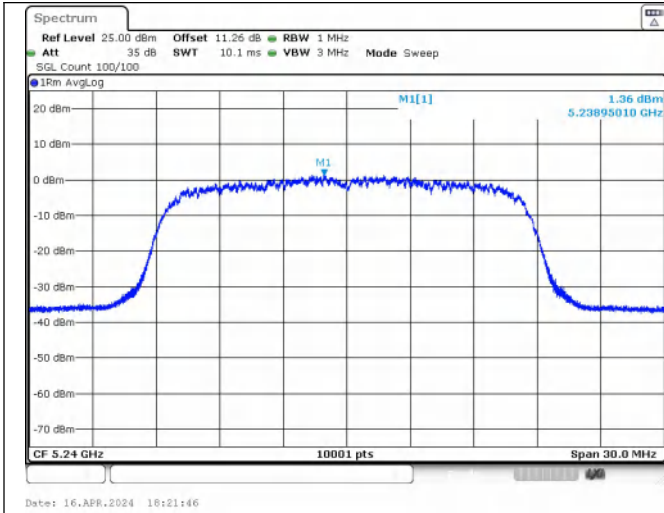
Peak Power Spectral Density

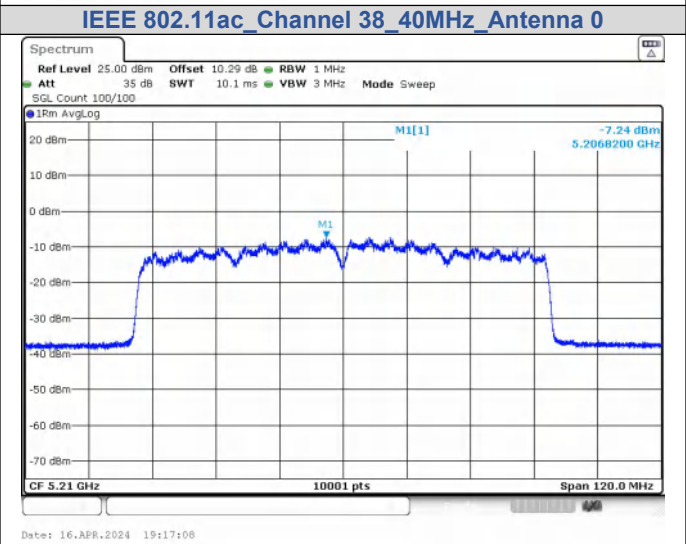
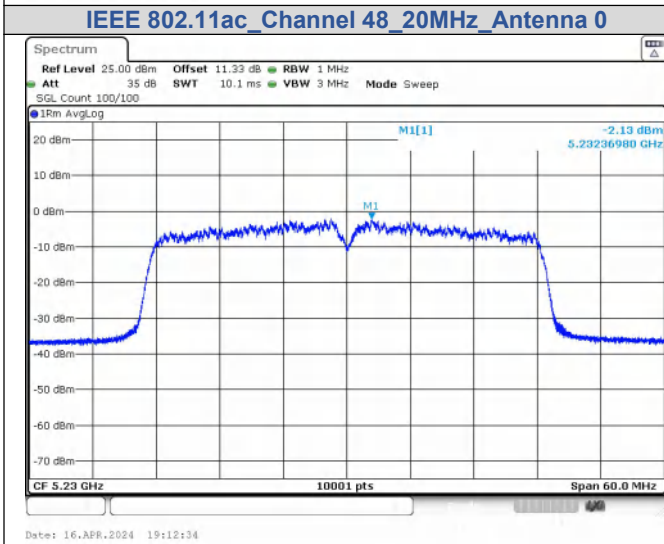
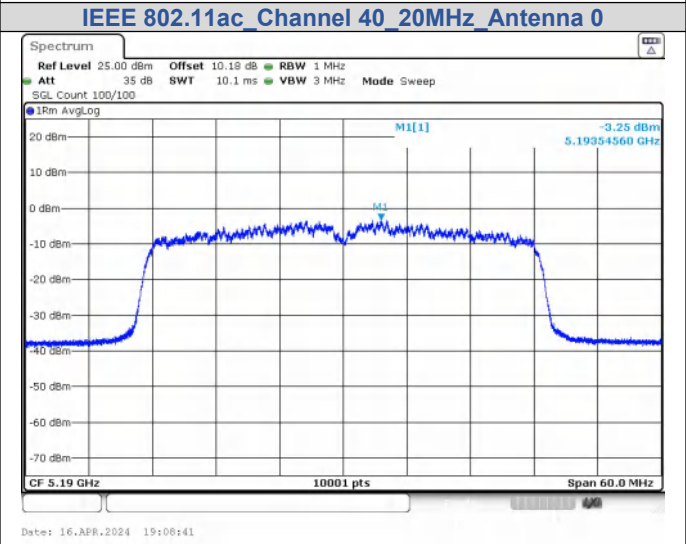
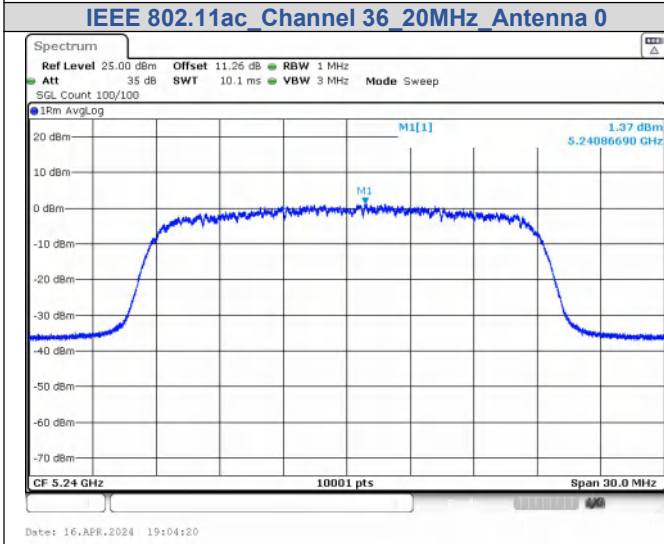
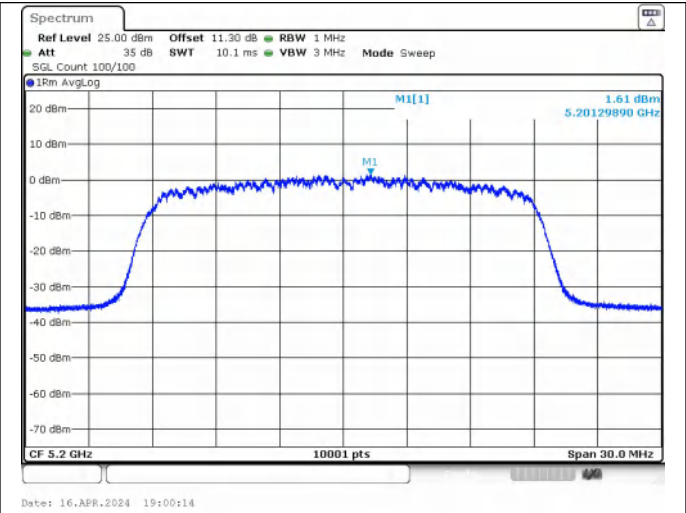
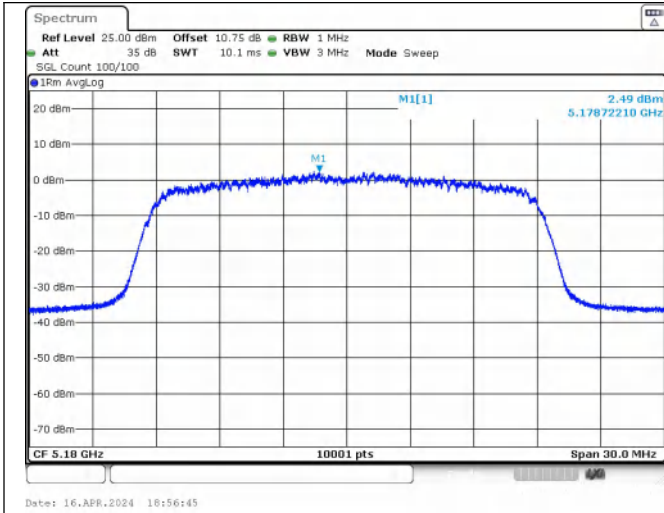
Test Result

Mode	Channel	Ant. 0 Meas PSD (dBm/MHz or dBm/0.5MHz)	Ant. 0 Corr'd PSD (dBm/MHz or dBm/0.5MHz)	Limit (dBm/MHz or dBm/0.5MHz)	Result
IEEE 802.11a	36	0.323	0.422	11	PASS
	40	1.575	1.674		PASS
	48	1.363	1.462		PASS
IEEE 802.11n_20	36	0.513	0.622		PASS
	40	1.904	2.012		PASS
	48	2.427	2.536		PASS
IEEE 802.11n_40	38	-1.636	-1.416		PASS
	46	-0.404	-0.184		PASS
IEEE 802.11ac_20	36	2.487	2.595		PASS
	40	1.612	1.719		PASS
	48	1.372	1.479		PASS
IEEE 802.11ac_40	38	-3.252	-3.033		PASS
	46	-2.127	-1.909		PASS
IEEE 802.11ac_80	42	-7.244	-6.812		PASS

Test Graphs







IEEE 802.11ac_Channel 46_40MHz_Antenna 0

IEEE 802.11ac_Channel 42_80MHz_Antenna 0