Appendix C

Report No.:	CISRR24040804703
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/5745MHz~5825MHz/ 5745 MHz

Enviroment Temperature(Dregree)	Voltage(v)	Center Frequency (MHz)	Calculated Value of Center Frequency(MHz)	Limit (ppm)	State
20	HV	5745.0	5744.982989	5745~5825	PASS
20	LV	5745.0	5744.982745		PASS
50	NV	5745.0	5744.9835996		PASS
40	NV	5745.0	5744.983945		PASS
30	NV	5745.0	5744.982825		PASS
20	NV	5745.0	5744.982148		PASS
10	NV	5745.0	5744.983495		PASS
0	NV	5745.0	5744.983356		PASS
-10	NV	5745.0	5744.983865		PASS
-20	NV	5745.0	5744.983347		PASS
-30	NV	5745.0	5744.982822		PASS

IEEE 802.11a Mode/5745MHz~5825MHz/ 5825 MHz

Enviroment Temperature(Dregree)	Voltage(v)	Center Frequency (MHz)	Calculated Value of Center Frequency(MHz)	Limit (ppm)	State
20	HV	5825.0	5824.998375	5745~5825	PASS
20	LV	5825.0	5824.997869		PASS
50	NV	5825.0	5824.998411		PASS
40	NV	5825.0	5824.998689		PASS
30	NV	5825.0	5824.999878		PASS
20	NV	5825.0	5824.999823		PASS
10	NV	5825.0	5824.997462		PASS
0	NV	5825.0	5824.999887		PASS
-10	NV	5825.0	5824.997830		PASS
-20	NV	5825.0	5824.998284		PASS
-30	NV	5825.0	5824.998765		PASS

Conducted Peak Output Power

Conducted output power

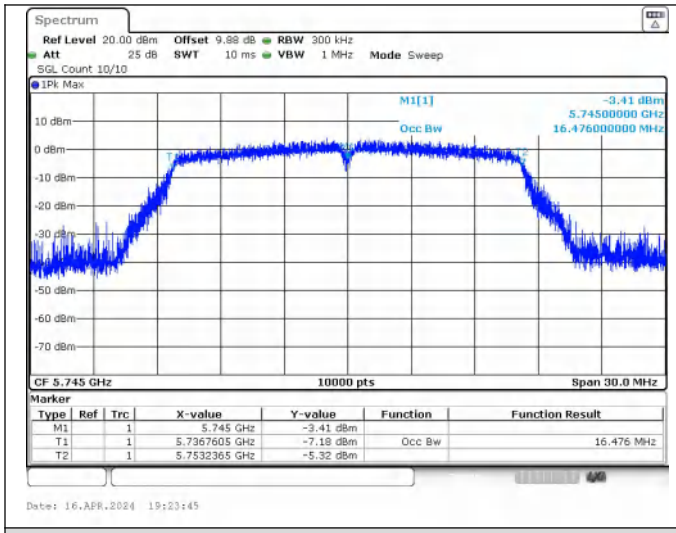
Mode	Channel	Power(dBm)	Limit(dBm)	Result
IEEE 802.11a	149	12.87	30	PASS
	157	13.58	30	PASS
	165	14.45	30	PASS
IEEE 802.11n_20	149	12.51	30	PASS
	157	12.75	30	PASS
	165	14.26	30	PASS
IEEE 802.11n_40	151	12.64	30	PASS
	159	12.99	30	PASS
IEEE 802.11ac_20	149	12.56	30	PASS
	157	12.72	30	PASS
	165	14.15	30	PASS
IEEE 802.11ac_40	151	12.4	30	PASS
	159	12.77	30	PASS
IEEE 802.11ac_80	155	11.46	30	PASS

99% Bandwidth

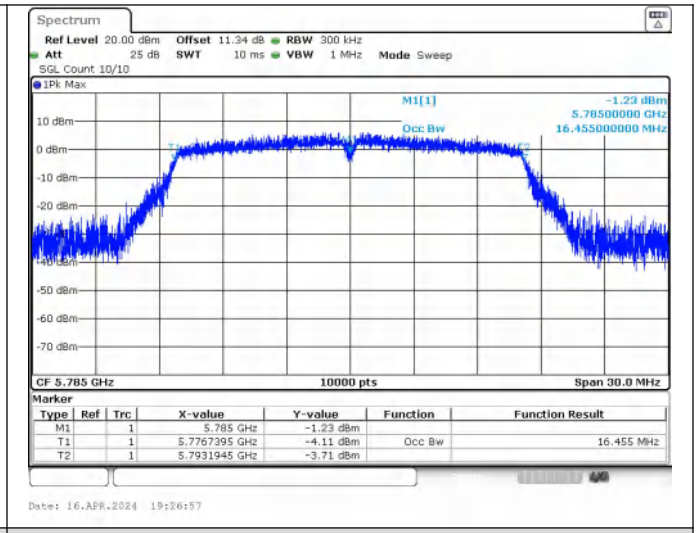
Test Result

Mode	Channel	Ant.	99% BW (MHz)
IEEE 802.11a	149	0	16.480
	157		16.450
	165		16.450
IEEE 802.11n_20	149		17.590
	157		17.600
	165		17.600
IEEE 802.11n_40	151		35.840
	159		35.960
IEEE 802.11ac_20	149		17.590
	157		17.580
	165		17.600
IEEE 802.11ac_40	151		35.830
	159		35.950
IEEE 802.11ac_80	155		75.200

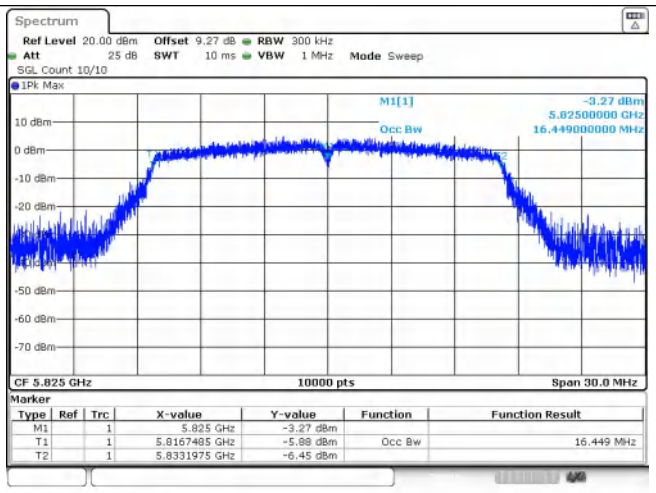
Test Graphs



IEEE 802.11a_Channel 149_20MHz_Antenna 0



IEEE 802.11a_Channel 157_20MHz_Antenna 0



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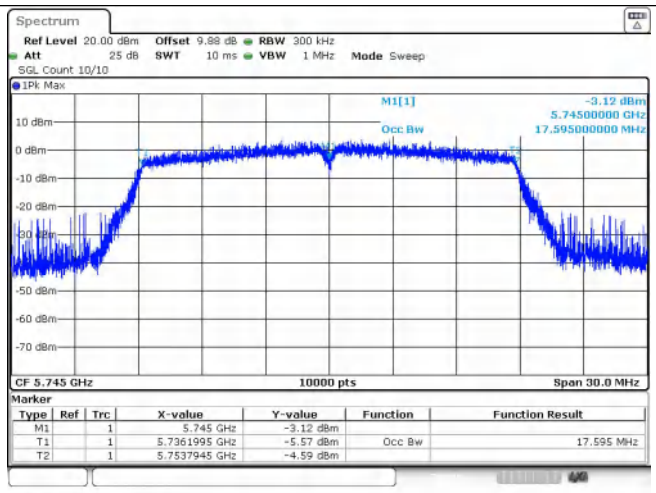
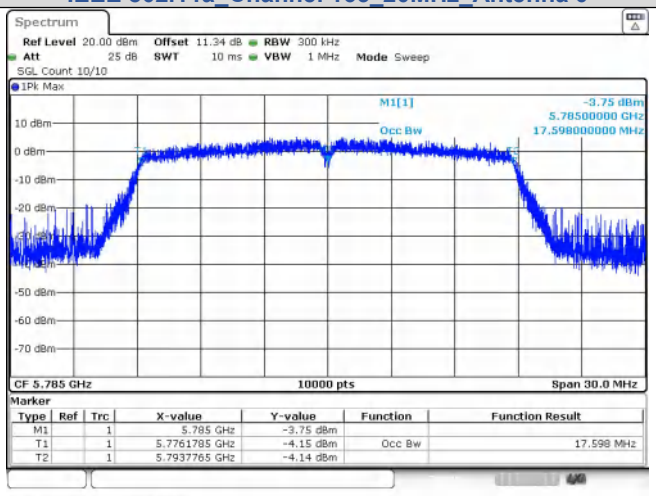


IEEE 802.11n_Channel 149_20MHz_Antenna 0



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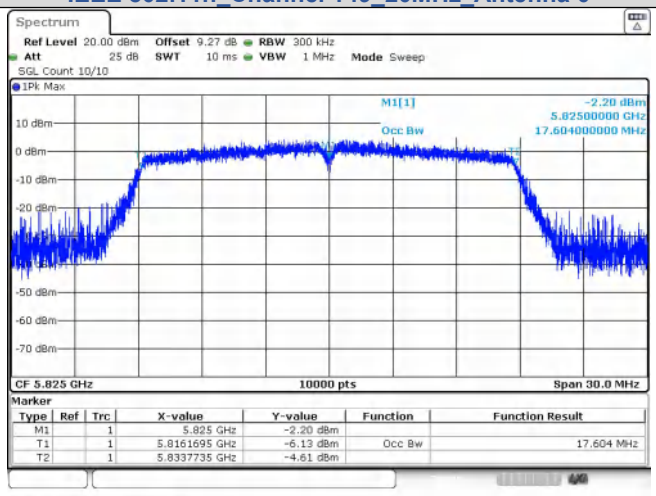

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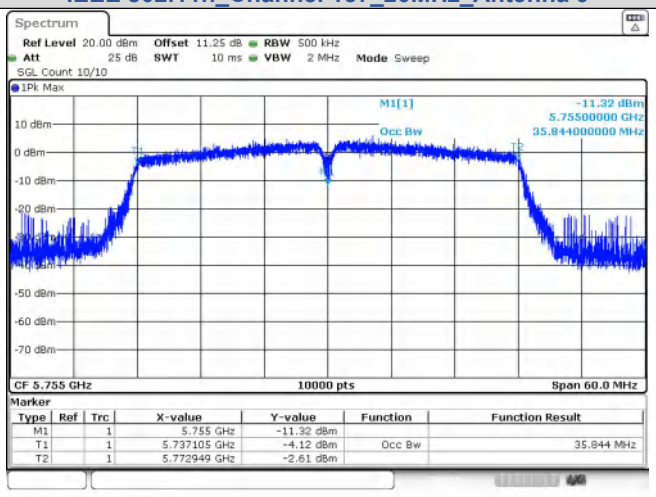
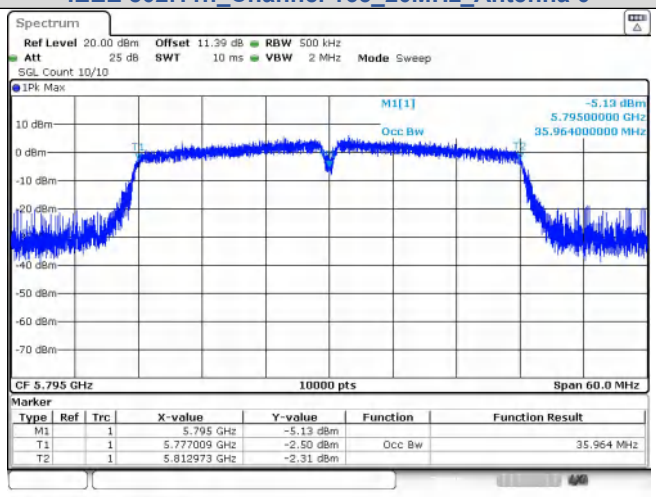


IEEE 802.11n_Channel 151_40MHz_Antenna 0



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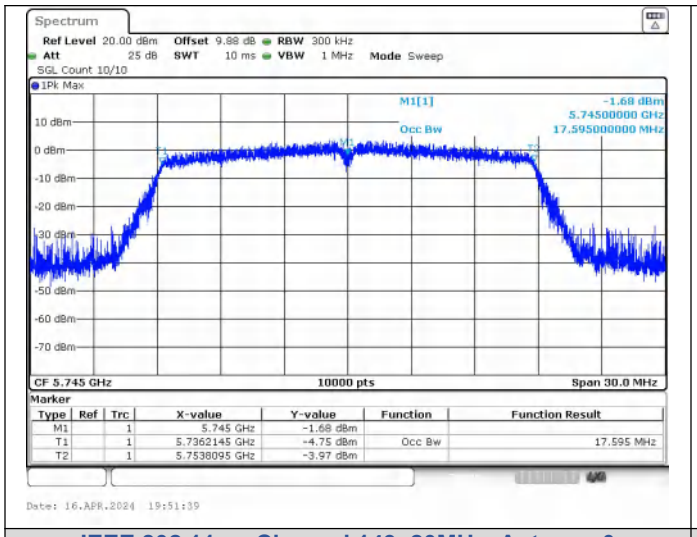
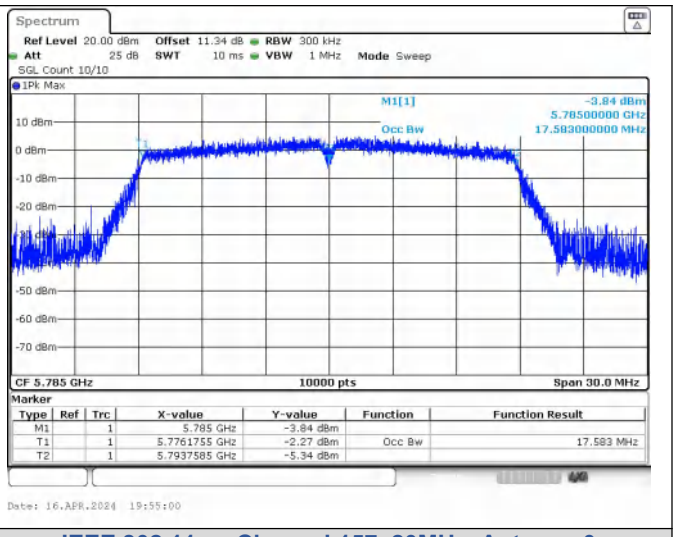
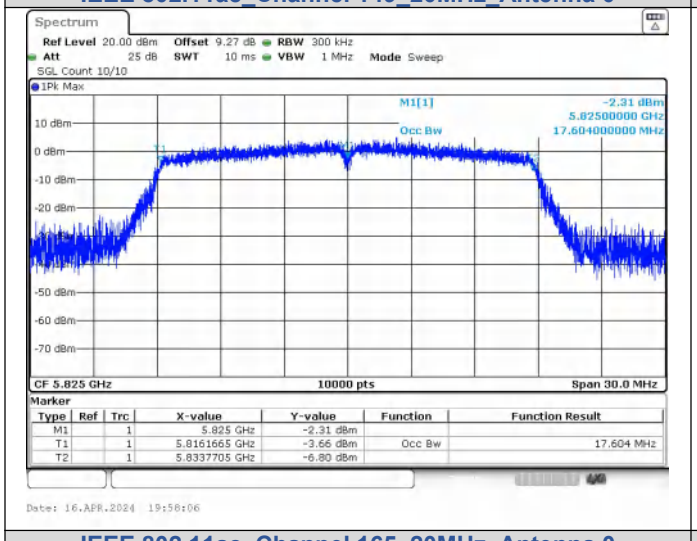


IEEE 802.11ac_Channel 149_20MHz_Antenna 0



IEEE 802.11ac_Channel 157_20MHz_Antenna 0



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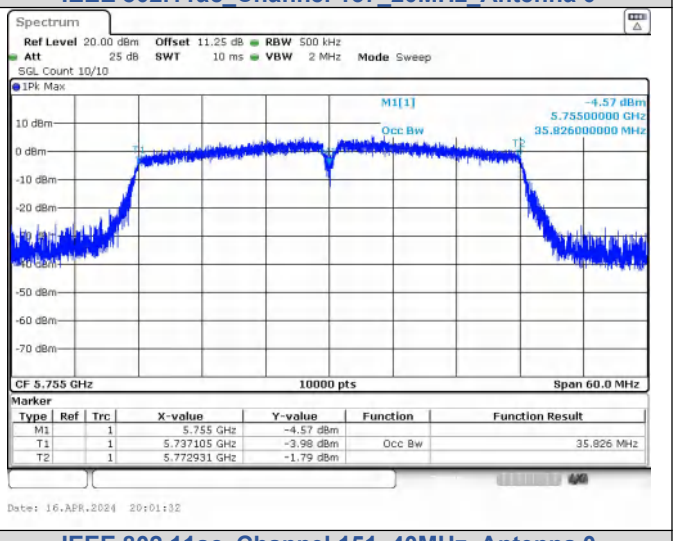
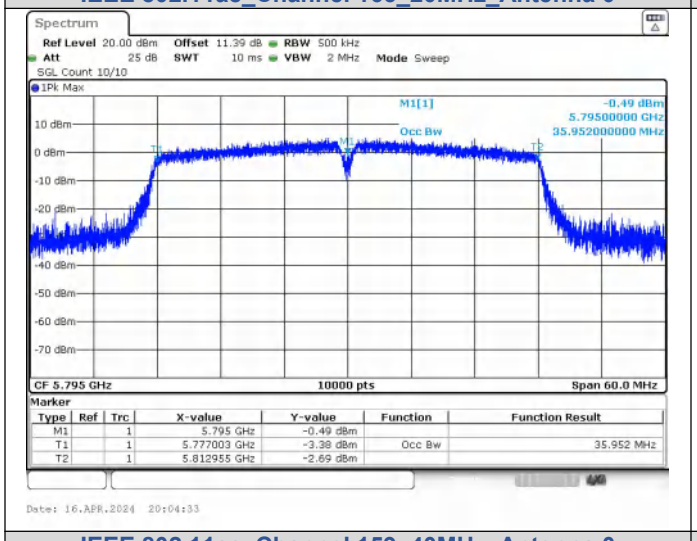
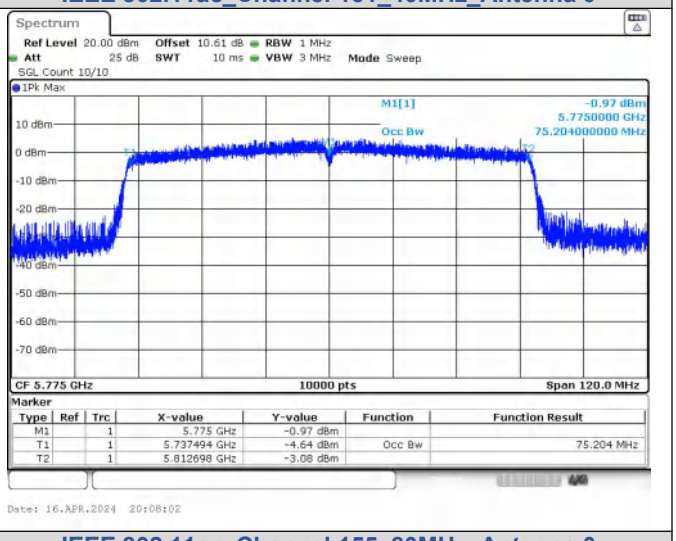


IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



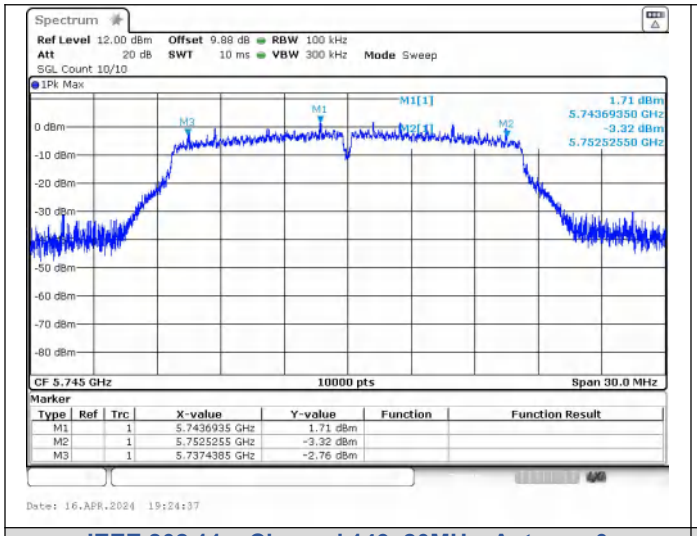
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

6dB Bandwidth

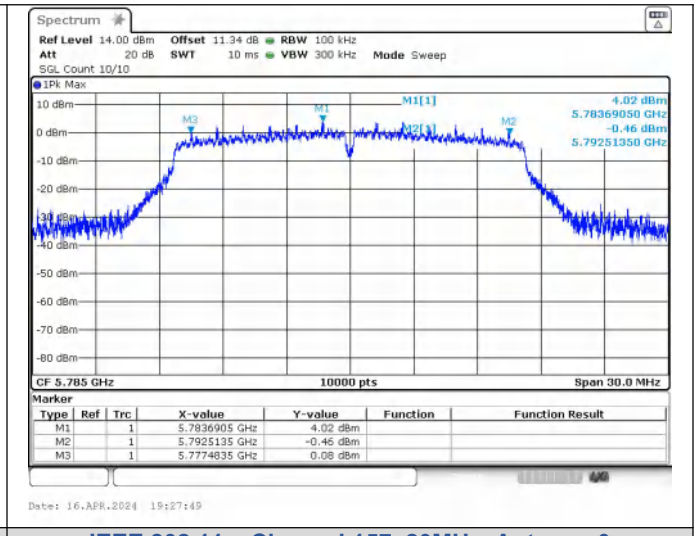
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11a	149	0	5745	15.09	0.5	PASS
	157		5785	15.03		PASS
	165		5825	15.10		PASS
IEEE 802.11n_20	149		5745	15.03		PASS
	157		5785	15.10		PASS
	165		5825	15.07		PASS
IEEE 802.11n_40	151		5755	35.01		PASS
	159		5795	35.09		PASS
IEEE 802.11ac_20	149		5745	15.07		PASS
	157		5785	15.07		PASS
	165		5825	15.09		PASS
IEEE 802.11ac_40	151		5755	35.02		PASS
	159		5795	35.08		PASS
IEEE 802.11ac_80	155		5775	75.06		PASS

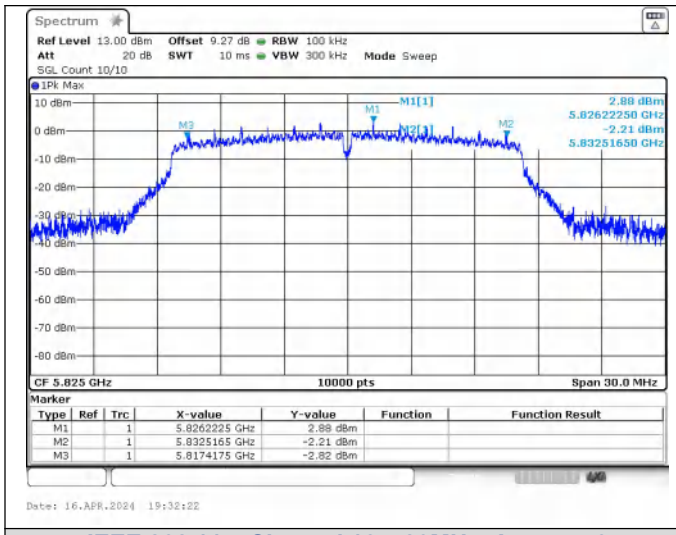
Test Graphs



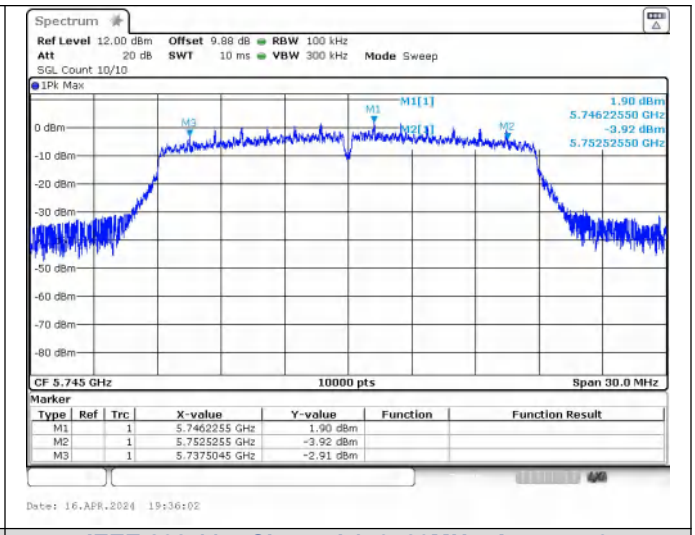
IEEE 802.11a_Channel 149_20MHz_Antenna 0



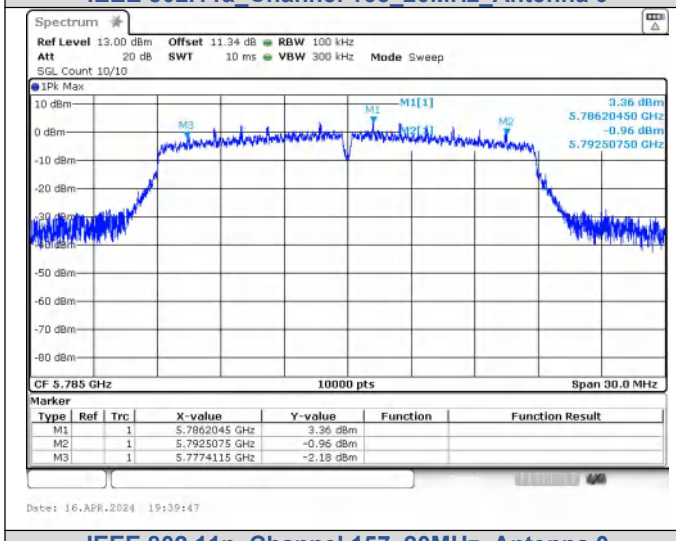
IEEE 802.11a_Channel 157_20MHz_Antenna 0



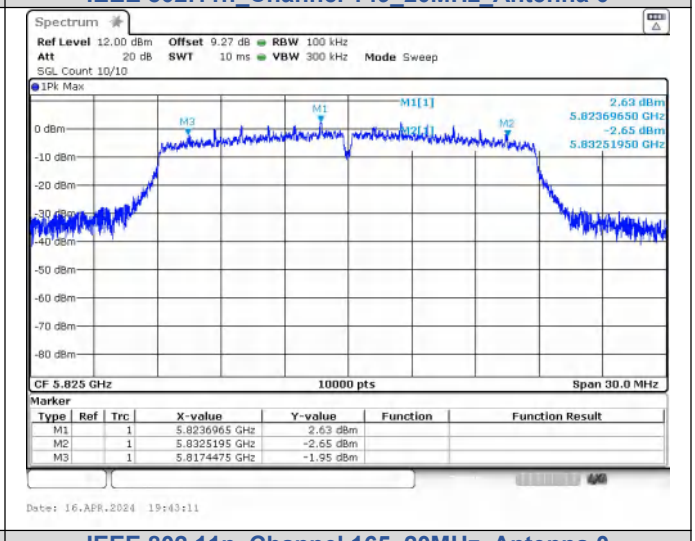
IEEE 802.11a_Channel 165_20MHz_Antenna 0



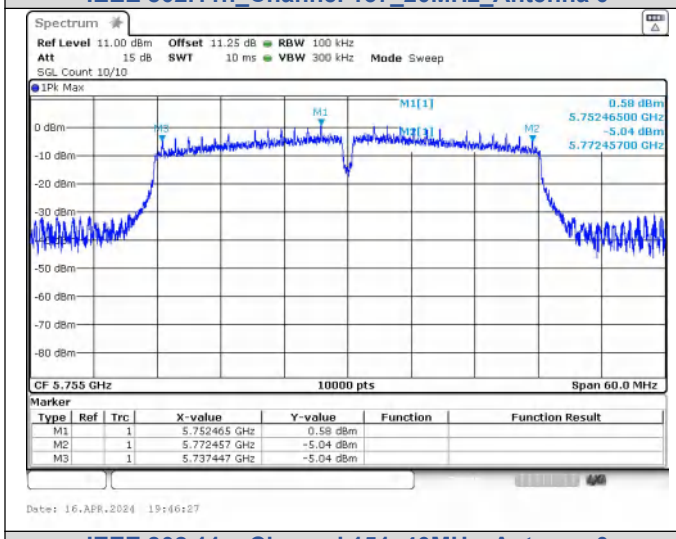
IEEE 802.11n_Channel 149_20MHz_Antenna 0



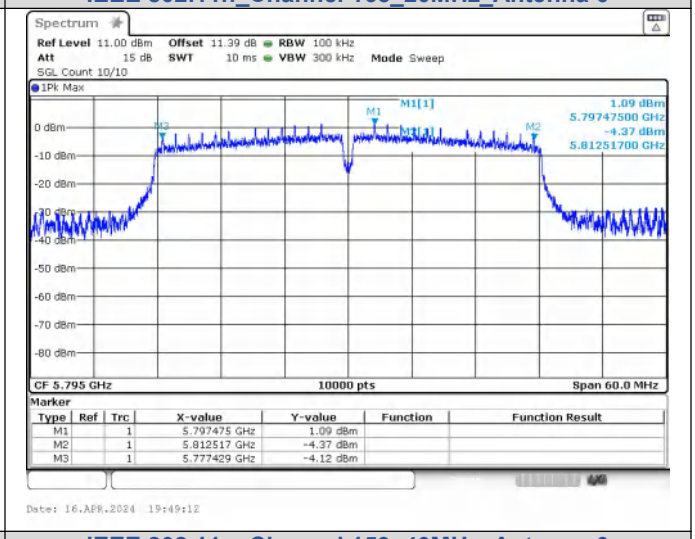
IEEE 802.11n_Channel 157_20MHz_Antenna 0



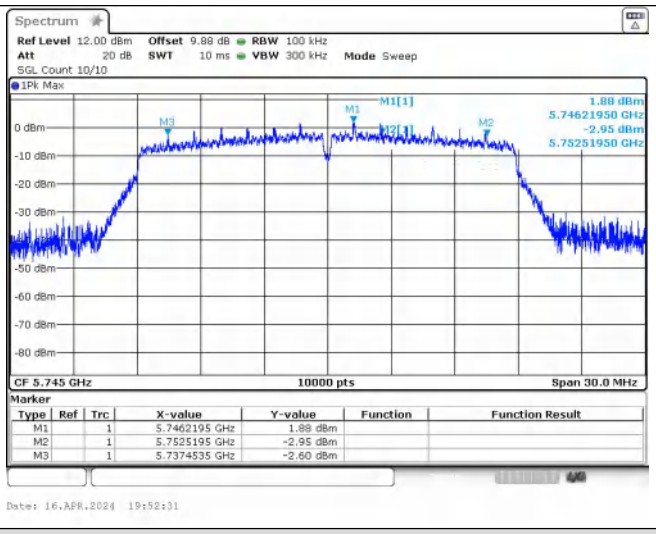
IEEE 802.11n_Channel 165_20MHz_Antenna 0



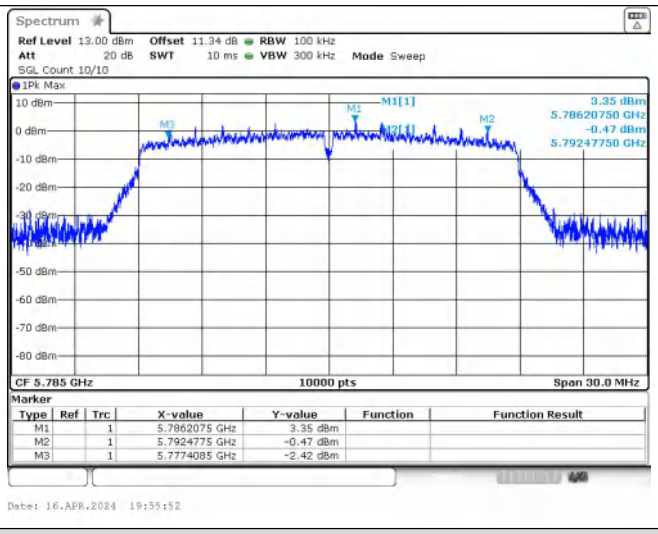
IEEE 802.11n_Channel 151_40MHz_Antenna 0



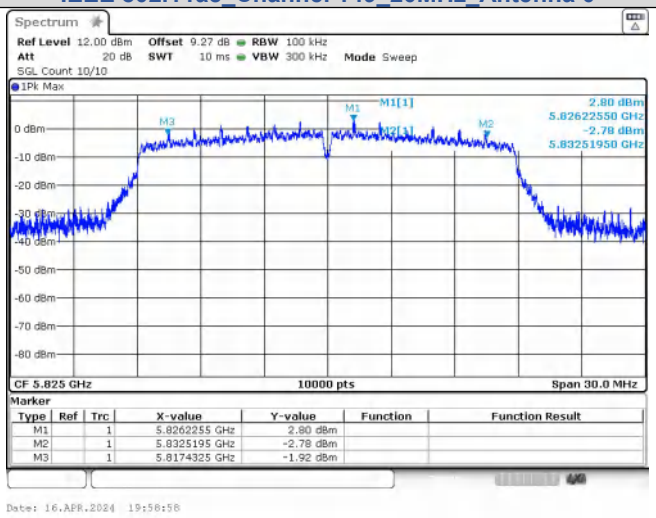
IEEE 802.11n_Channel 159_40MHz_Antenna 0



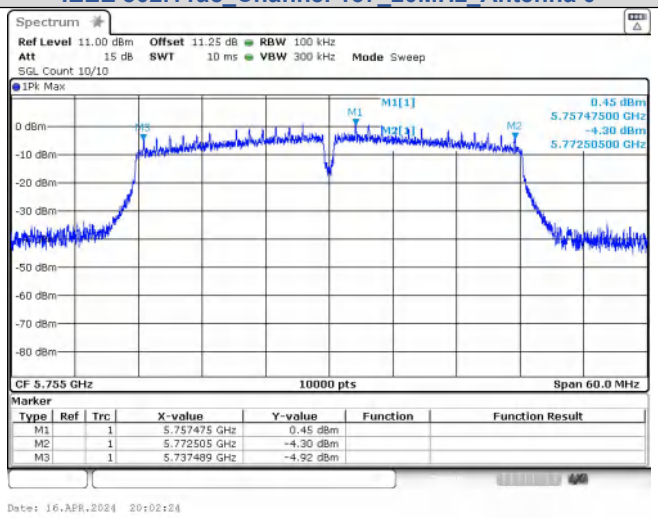
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



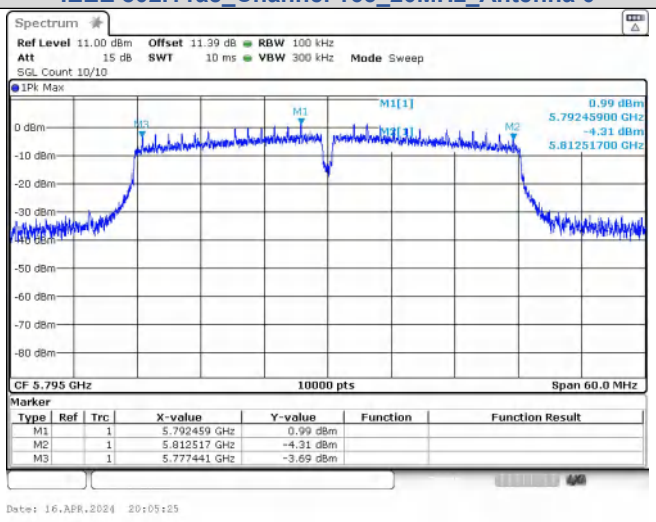
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



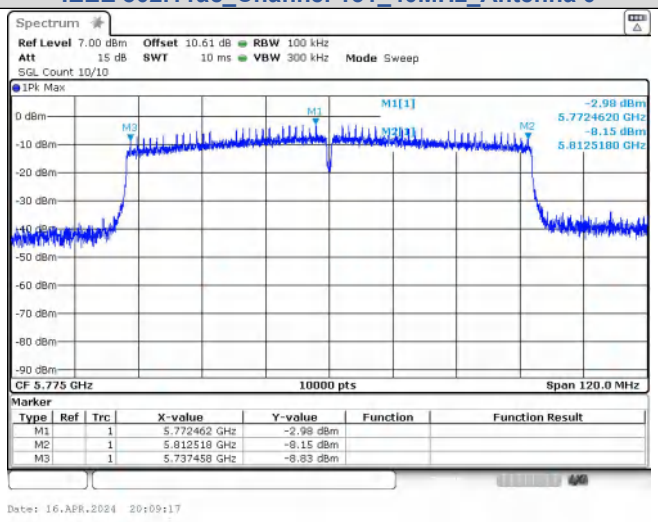
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



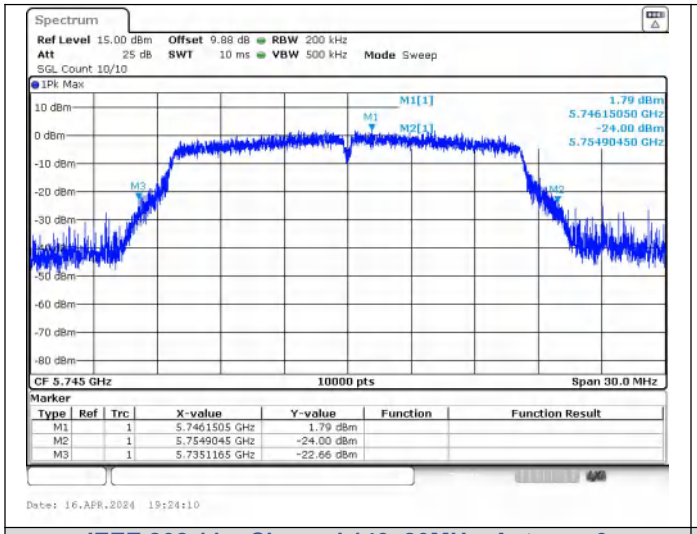
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

26dB Bandwidth

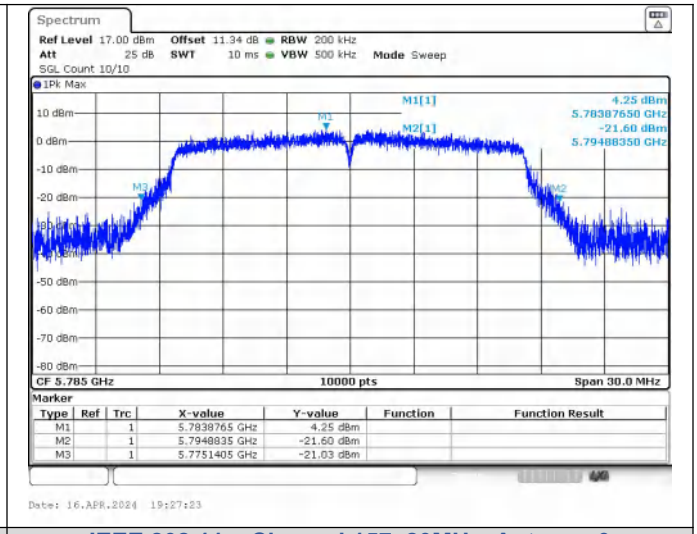
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	149	0	5745	19.78	1.1
	157		5785	19.74	1.12
	165		5825	21.72	1.01
IEEE 802.11n_20	149		5745	20.00	1.1
	157		5785	20.90	1.13
	165		5825	22.66	1.14
IEEE 802.11n_40	151		5755	40.83	1.04
	159		5795	49.59	1.03
IEEE 802.11ac_20	149		5745	19.71	1.13
	157		5785	19.70	1.14
	165		5825	19.89	1.18
IEEE 802.11ac_40	151		5755	40.32	1.04
	159		5795	40.38	1.06
IEEE 802.11ac_80	155		5775	81.66	1.16

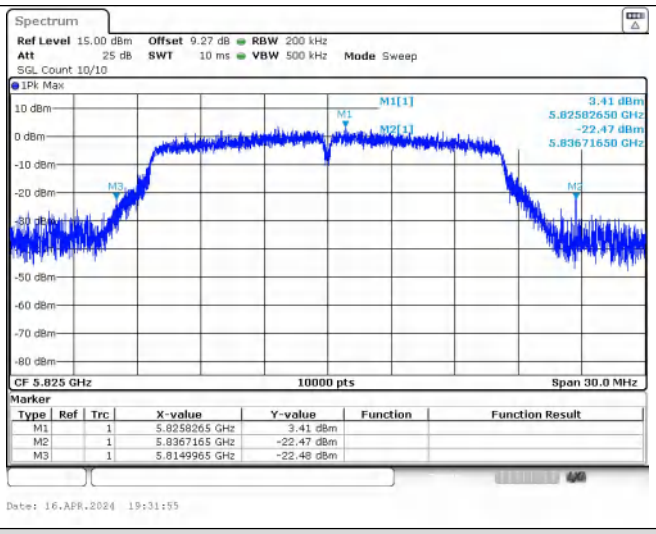
Test Graphs



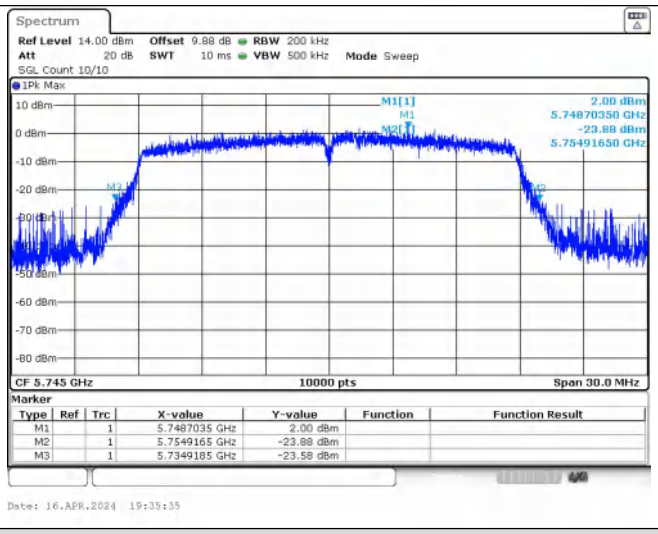
IEEE 802.11a_Channel 149_20MHz_Antenna 0



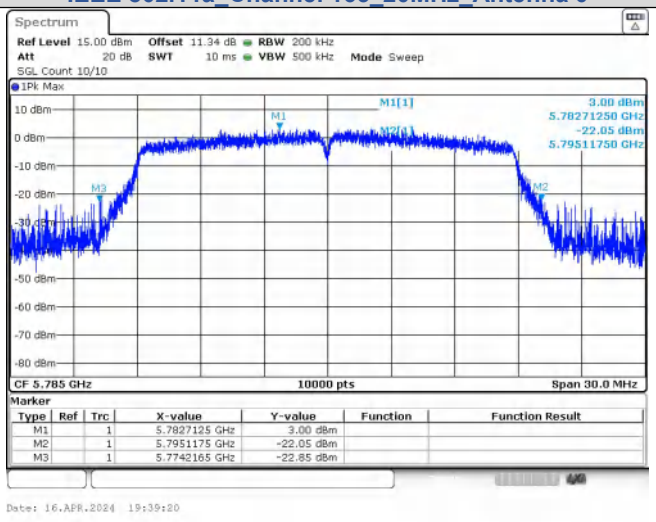
IEEE 802.11a_Channel 157_20MHz_Antenna 0



IEEE 802.11a_Channel 165_20MHz_Antenna 0



IEEE 802.11n_Channel 149_20MHz_Antenna 0



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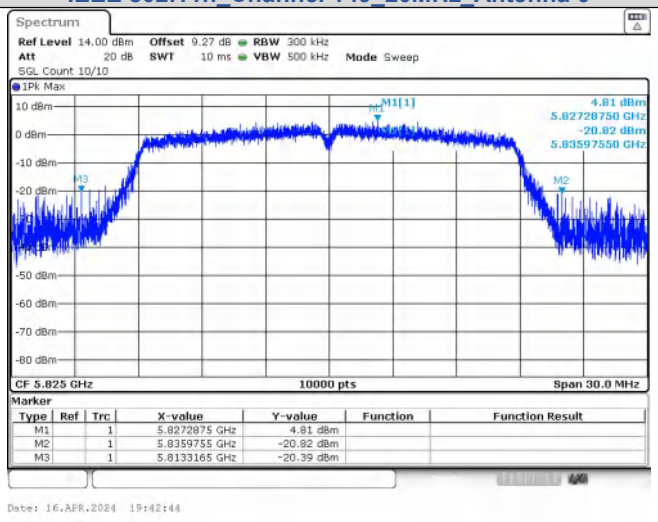
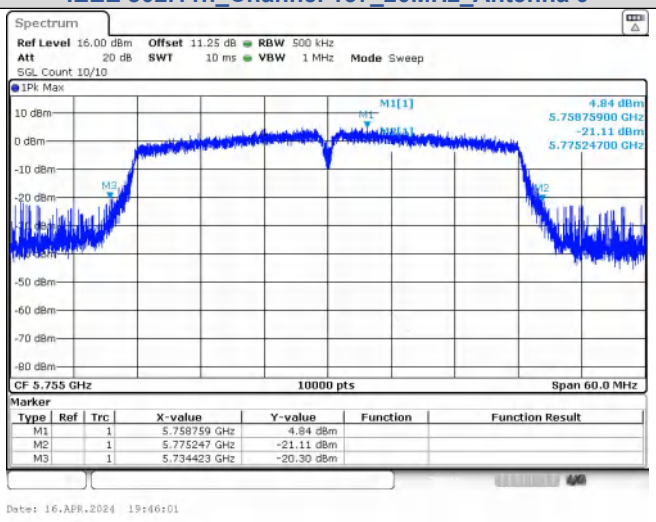
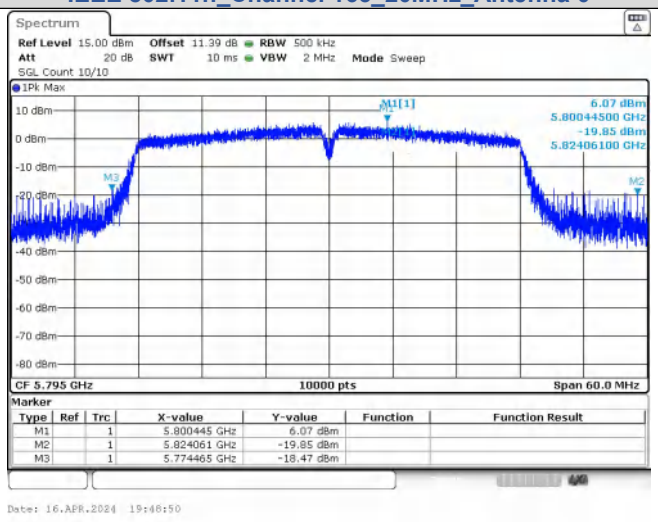


IEEE 802.11n_Channel 165_20MHz_Antenna 0



IEEE 802.11n_Channel 151_40MHz_Antenna 0



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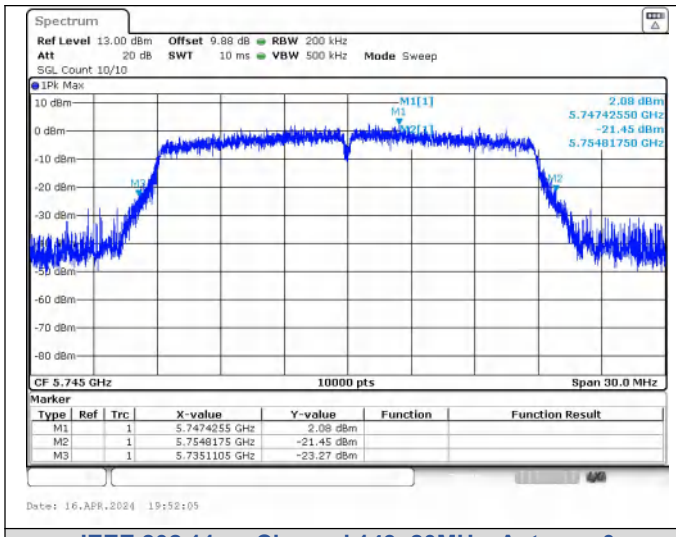
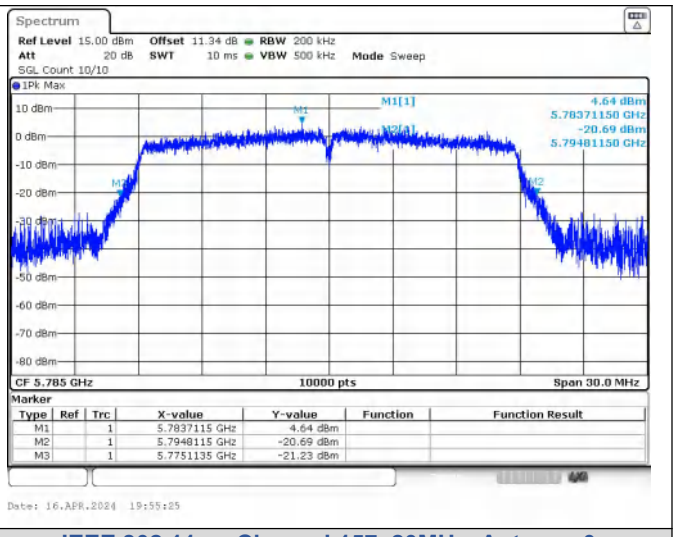


IEEE 802.11ac_Channel 149_20MHz_Antenna 0



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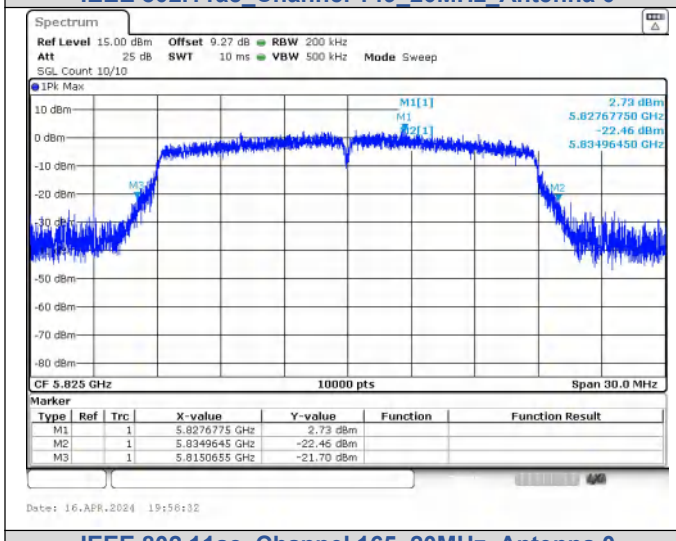

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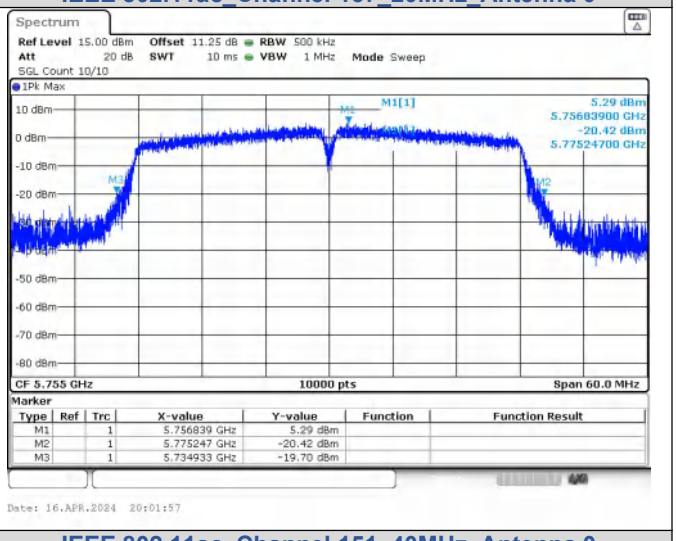
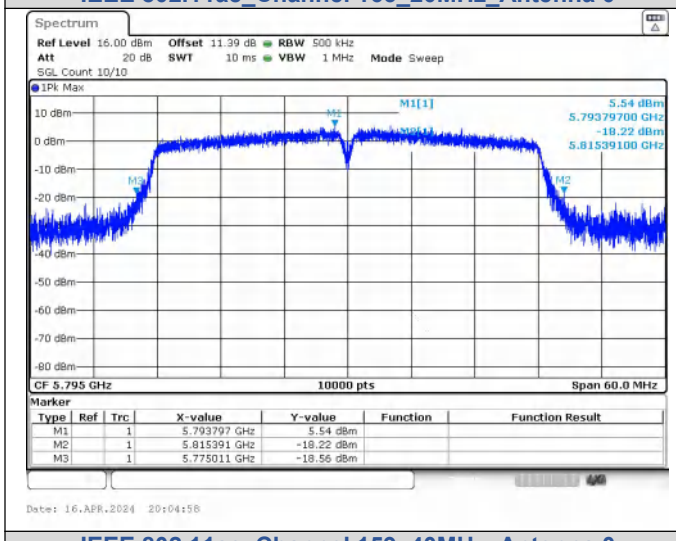
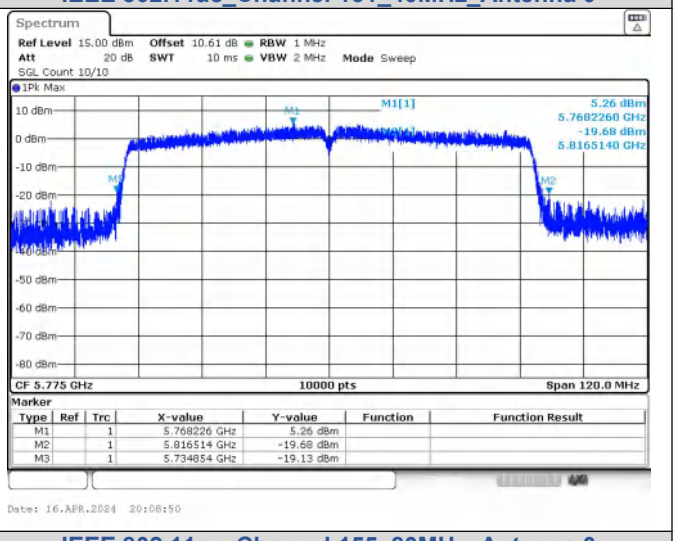


IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



IEEE 802.11ac_Channel 155_80MHz_Antenna 0

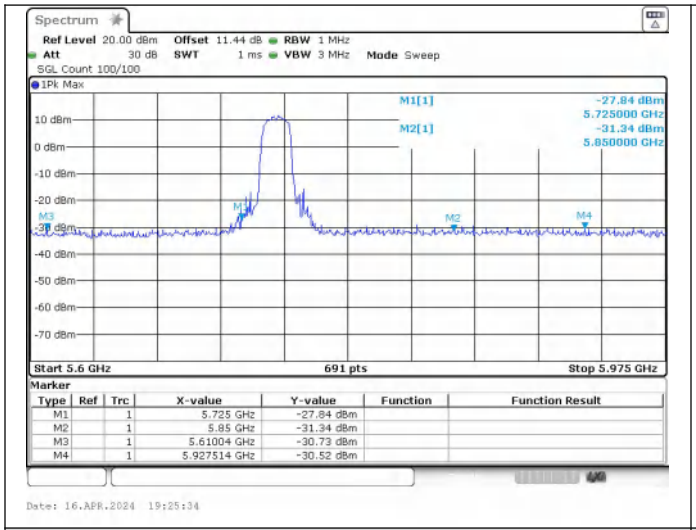
Conducted Out Of Band Emission

Test Result

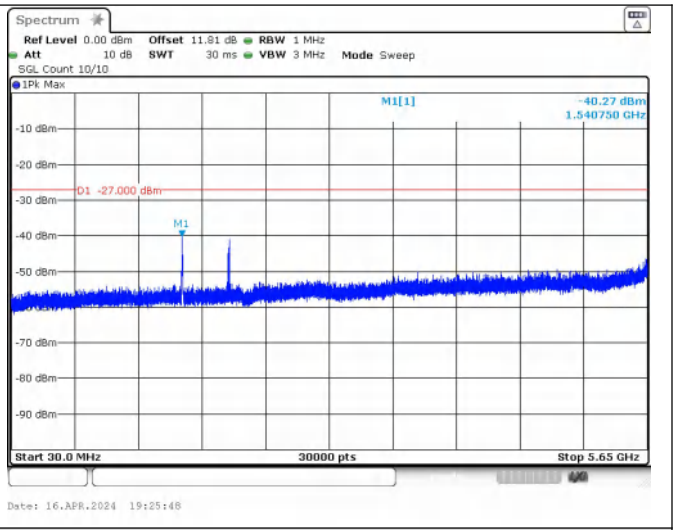
Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11a	149	0	1540.75	-40.270	-27	-13.270	PASS
			5610.04	-30.729	-27	-3.729	PASS
			5725.00	-27.836	27	-54.840	PASS
			5850.00	-31.345	27	-58.340	PASS
			5927.51	-30.518	-27	-3.518	PASS
			22055.1	-47.469	-27	-20.470	PASS
	157		1953.07	-32.438	-27	-5.440	PASS
			5637.72	-30.318	-27	-3.318	PASS
			5725.00	-32.747	27	-59.750	PASS
			5850.00	-31.211	27	-58.210	PASS
			5925.89	-30.479	-27	-3.479	PASS
			5946.30	-46.536	-27	-19.540	PASS
	165		1619.24	-38.236	-27	-11.240	PASS
			5615.47	-30.169	-27	-3.169	PASS
			5725.00	-31.900	27	-58.900	PASS
			5850.00	-26.890	27	-53.890	PASS
			5942.49	-46.994	-27	-19.990	PASS
			5951.94	-29.679	-27	-2.679	PASS
IEEE 802.11n_20	149		1940.89	-37.652	-27	-10.650	PASS
			5633.92	-29.522	-27	-2.522	PASS
			5725.00	-24.791	27	-51.790	PASS
			5850.00	-31.659	27	-58.660	PASS
			5932.94	-30.600	-27	-3.600	PASS
			17918.4	-47.298	-27	-20.300	PASS
	157		1584.21	-41.279	-27	-14.280	PASS
			5625.24	-30.696	-27	-3.696	PASS
			5725.00	-31.772	27	-58.770	PASS
			5850.00	-32.733	27	-59.730	PASS
			5949.76	-30.421	-27	-3.421	PASS
			16340.9	-47.897	-27	-20.900	PASS
	165		1622.80	-39.456	-27	-12.460	PASS
			5600.81	-30.352	-27	-3.352	PASS
			5725.00	-31.910	27	-58.910	PASS
			5850.00	-26.136	27	-53.140	PASS
			5937.28	-30.094	-27	-3.094	PASS
			5945.66	-46.612	-27	-19.610	PASS
IEEE 802.11n_40	151		5648.03	-30.478	-27	-3.478	PASS
			5649.72	-42.507	-27	-15.510	PASS
			5725.00	-21.946	27	-48.950	PASS
			5850.00	-32.558	27	-59.560	PASS
			5948.14	-28.322	-27	-1.322	PASS
			17621.5	-47.579	-27	-20.580	PASS
	159		2413.35	-40.884	-27	-13.880	PASS
			5607.87	-31.144	-27	-4.144	PASS
			5725.00	-29.914	27	-56.910	PASS
			5850.00	-30.726	27	-57.730	PASS
			5942.49	-47.535	-27	-20.540	PASS
			5953.02	-29.542	-27	-2.542	PASS
IEEE 802.11ac_20	149		1540.75	-40.105	-27	-13.110	PASS
			5624.15	-30.380	-27	-3.380	PASS
			5725.00	-25.562	27	-52.560	PASS

			5850.00	-31.539	27	-58.540	PASS
			5973.64	-30.977	-27	-3.977	PASS
			15906.0	-47.477	-27	-20.480	PASS
	157		1941.27	-39.051	-27	-12.050	PASS
			5610.58	-30.788	-27	-3.788	PASS
			5725.00	-32.497	27	-59.500	PASS
			5850.00	-32.070	27	-59.070	PASS
			5950.85	-29.947	-27	-2.947	PASS
			16568.5	-47.674	-27	-20.670	PASS
	165		1619.99	-39.437	-27	-12.440	PASS
			5623.06	-30.480	-27	-3.480	PASS
			5725.00	-32.981	27	-59.980	PASS
			5850.00	-26.695	27	-53.700	PASS
			5939.31	-45.835	-27	-18.830	PASS
			5960.62	-29.504	-27	-2.504	PASS
IEEE 802.11ac_40	151		2413.91	-40.484	-27	-13.480	PASS
			5626.32	-31.274	-27	-4.274	PASS
			5725.00	-23.663	27	-50.660	PASS
			5850.00	-31.257	27	-58.260	PASS
			5947.05	-29.227	-27	-2.227	PASS
			22057.0	-46.801	-27	-19.800	PASS
	159		1945.95	-43.056	-27	-16.060	PASS
			5624.15	-30.599	-27	-3.599	PASS
			5725.00	-30.869	27	-57.870	PASS
			5850.00	-30.495	27	-57.500	PASS
			5940.58	-47.445	-27	-20.450	PASS
			5948.14	-30.697	-27	-3.697	PASS
IEEE 802.11ac_80	155		5638.80	-30.841	-27	-3.841	PASS
			5639.23	-36.894	-27	-9.890	PASS
			5725.00	-24.672	27	-51.670	PASS
			5850.00	-24.680	27	-51.680	PASS
			5945.03	-42.375	-27	-15.380	PASS
			5969.84	-30.283	-27	-3.283	PASS

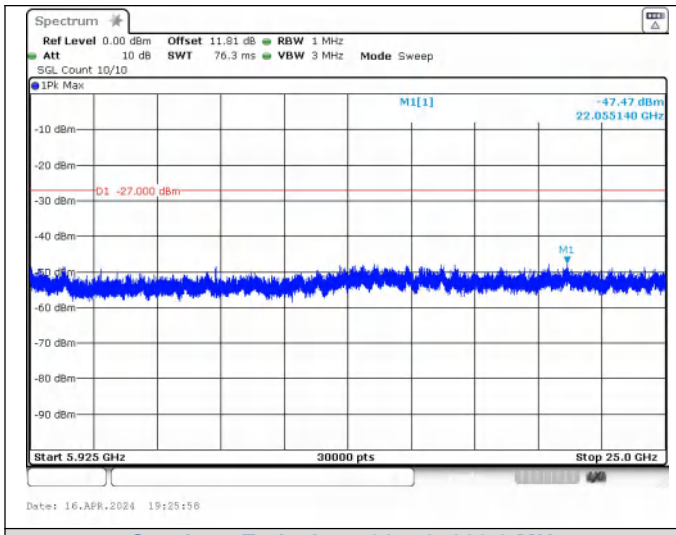
Test Graphs



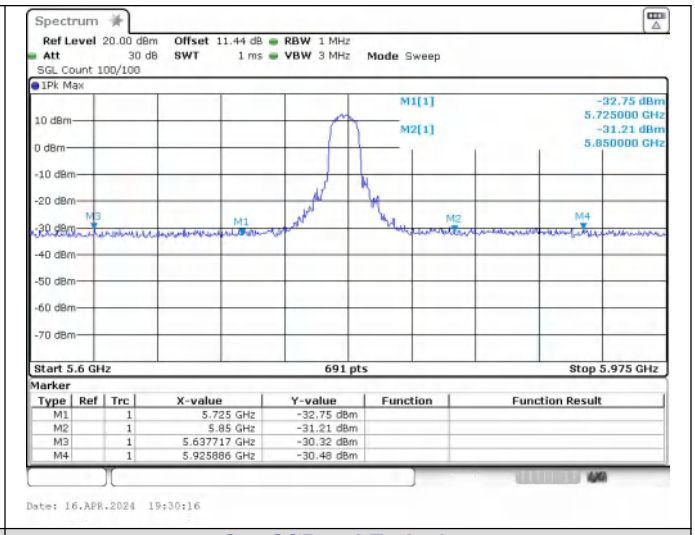
Out Of Band Emission
IEEE 802.11a_Channel 149_20MHz_Antenna 0



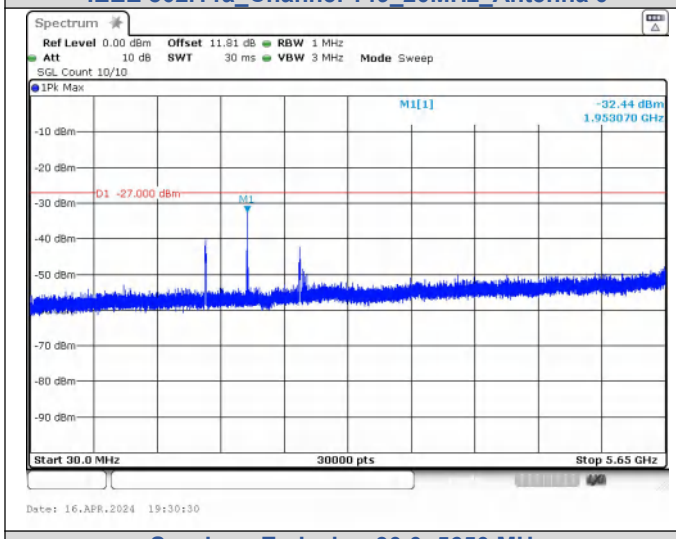
Spurious Emission:30.0~5650 MHz
IEEE 802.11a_Channel 149_20MHz_Antenna 0



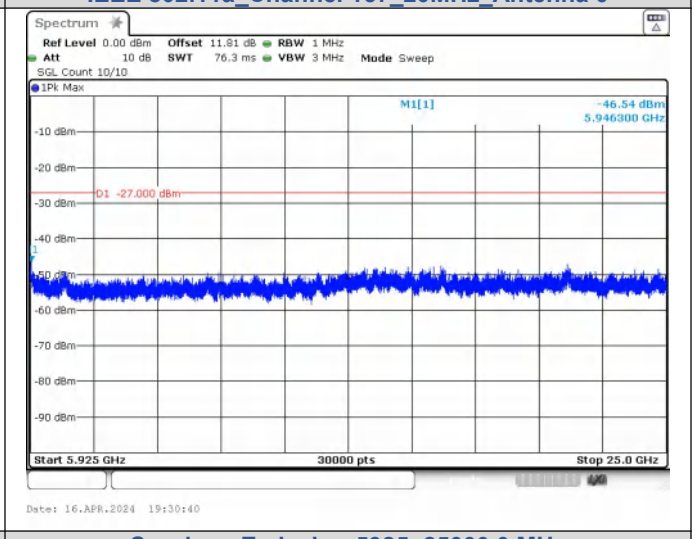
Spurious Emission:5925~25000.0 MHz
IEEE 802.11a_Channel 149_20MHz_Antenna 0



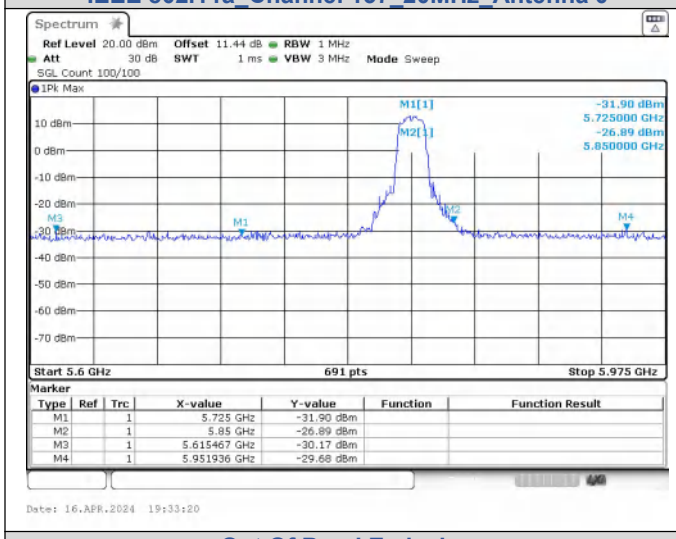
Out Of Band Emission
IEEE 802.11a_Channel 157_20MHz_Antenna 0



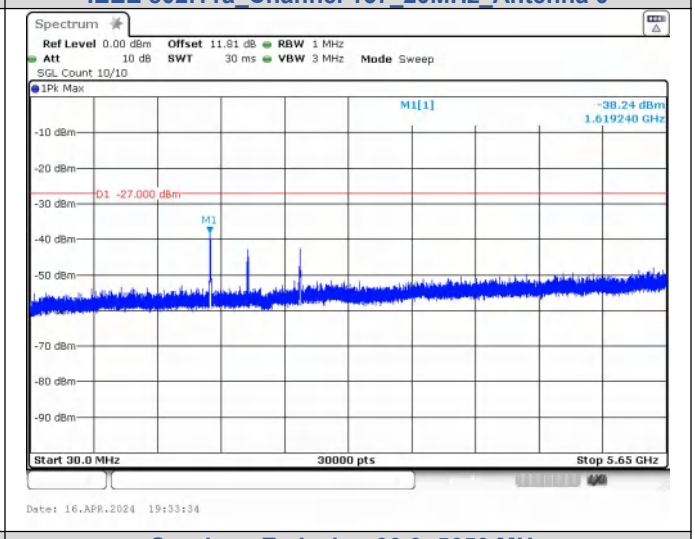
Spurious Emission:30.0~5650 MHz
IEEE 802.11a_Channel 157_20MHz_Antenna 0



Spurious Emission:5925~25000.0 MHz
IEEE 802.11a_Channel 157_20MHz_Antenna 0

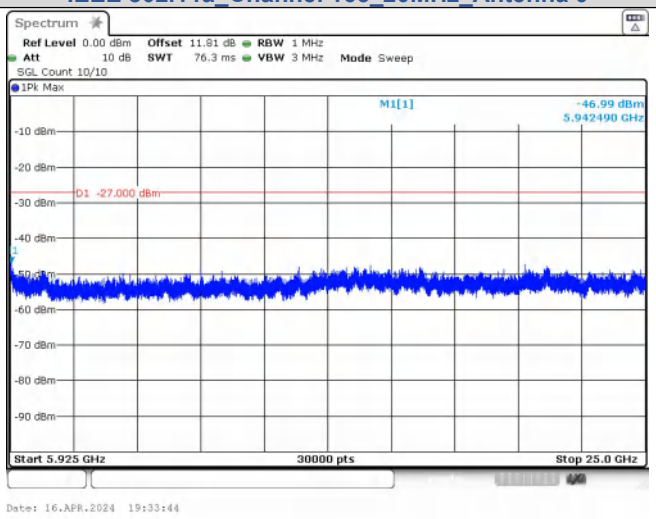


Out Of Band Emission

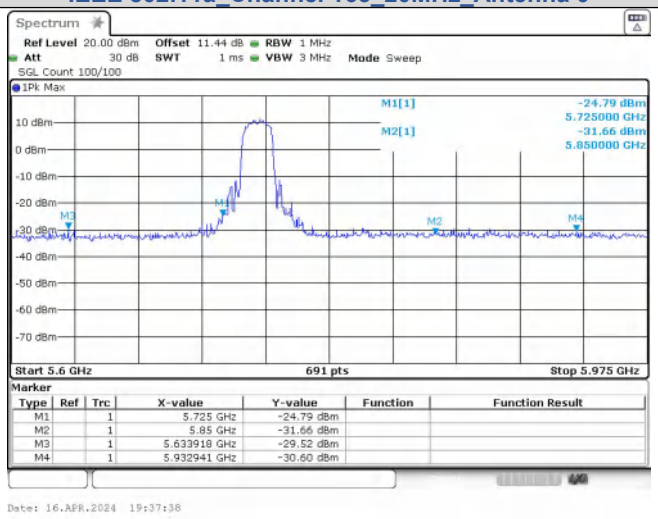


Spurious Emission:30.0~5650 MHz

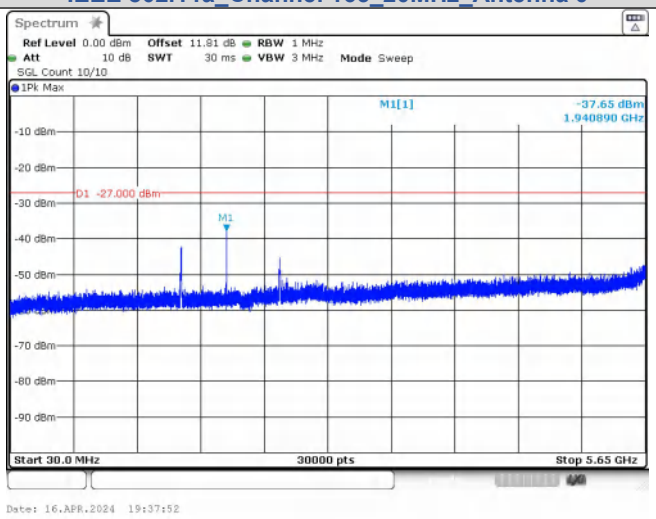
IEEE 802.11a_Channel 165_20MHz_Antenna 0



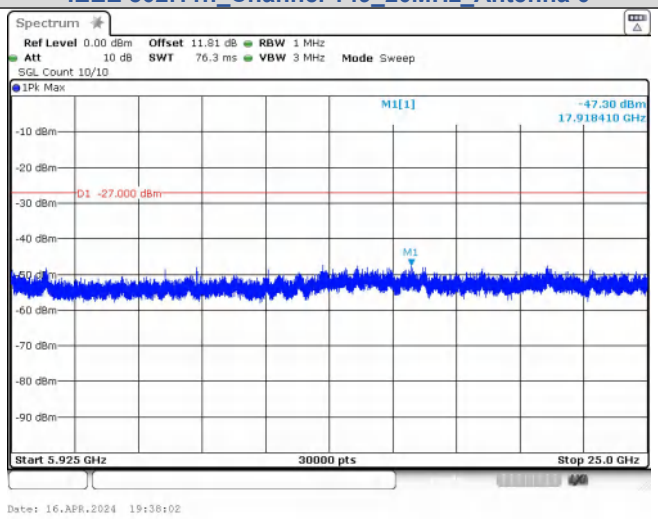
IEEE 802.11a_Channel 165_20MHz_Antenna 0



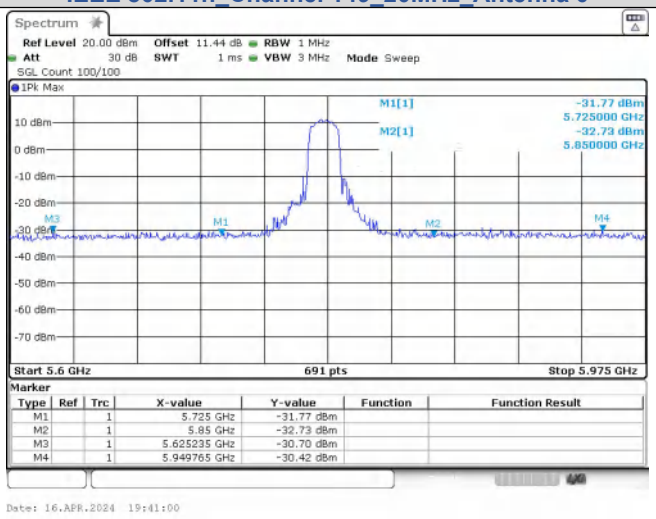
Spurious Emission:5925~25000.0 MHz
IEEE 802.11a_Channel 165_20MHz_Antenna 0



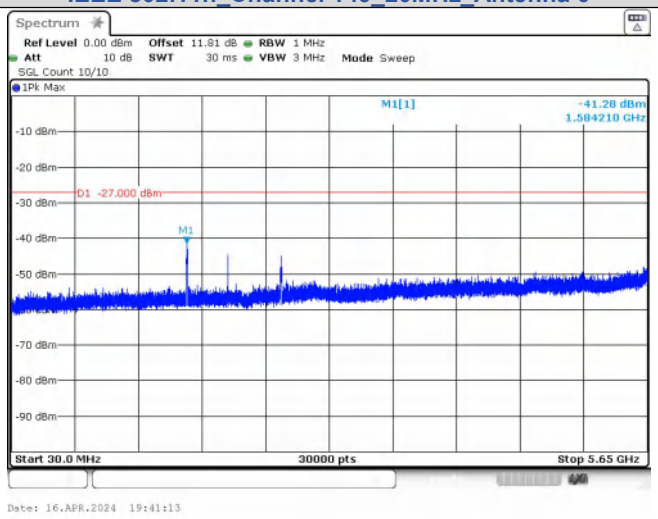
Out Of Band Emission
IEEE 802.11n_Channel 149_20MHz_Antenna 0



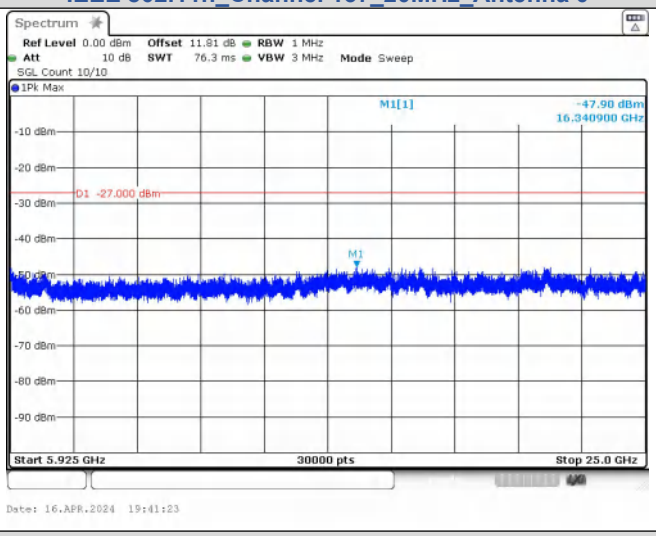
Spurious Emission:30.0~5650 MHz
IEEE 802.11n_Channel 149_20MHz_Antenna 0



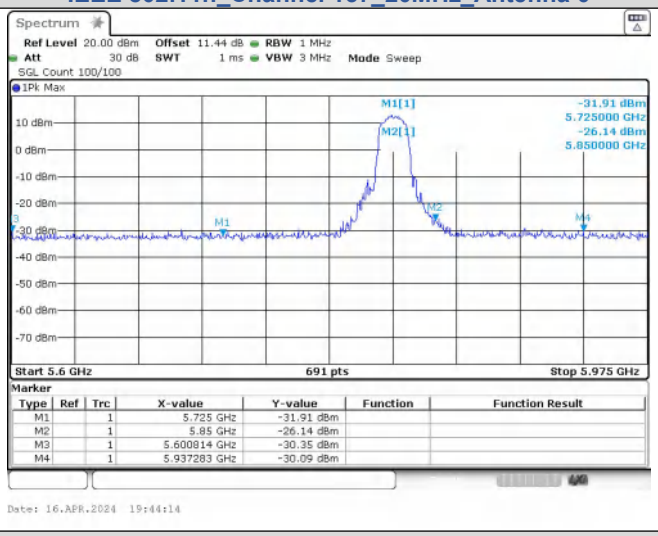
Spurious Emission:5925~25000.0 MHz
IEEE 802.11n_Channel 149_20MHz_Antenna 0



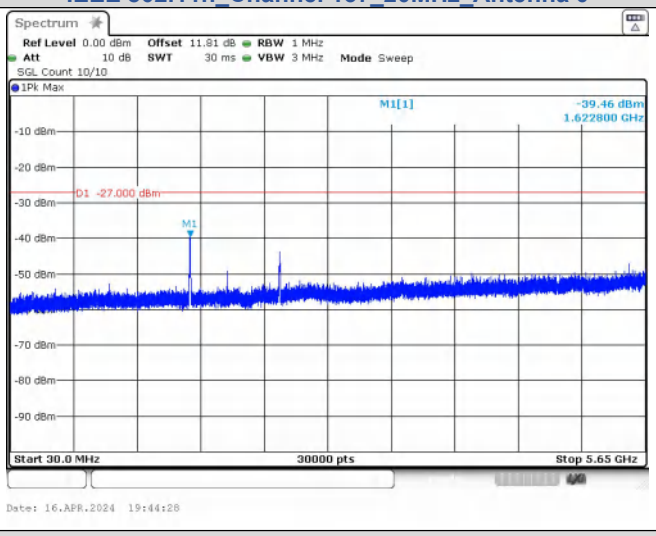
Out Of Band Emission
IEEE 802.11n_Channel 157_20MHz_Antenna 0



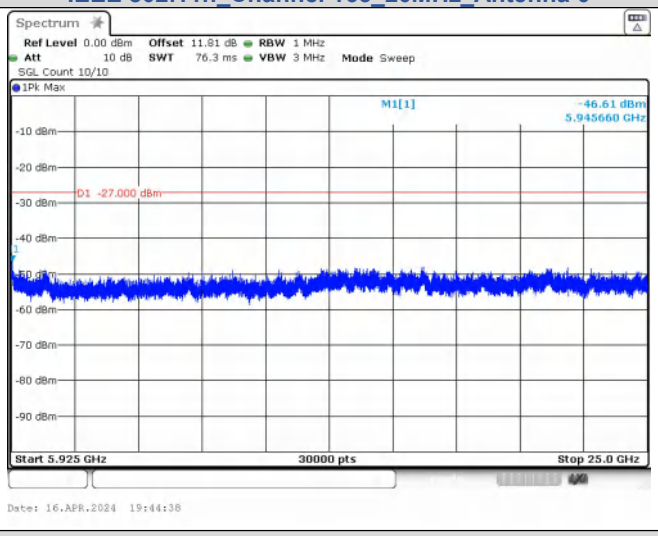
Spurious Emission:30.0~5650 MHz
IEEE 802.11n_Channel 157_20MHz_Antenna 0



Spurious Emission:5925~25000.0 MHz
IEEE 802.11n_Channel 157_20MHz_Antenna 0

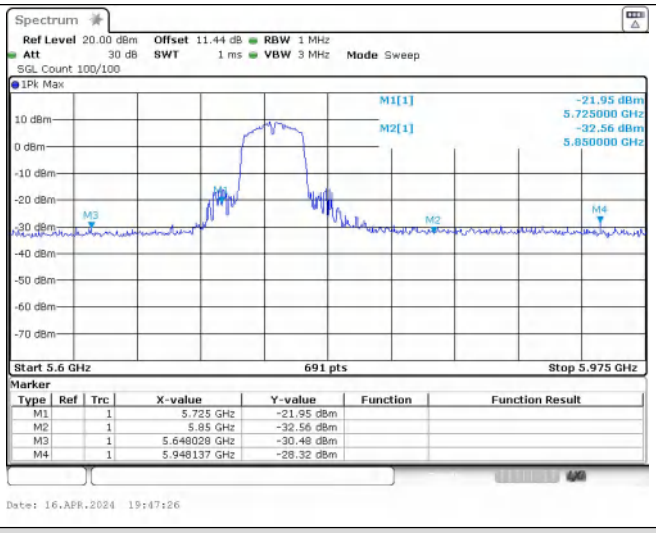


Out Of Band Emission
IEEE 802.11n_Channel 165_20MHz_Antenna 0

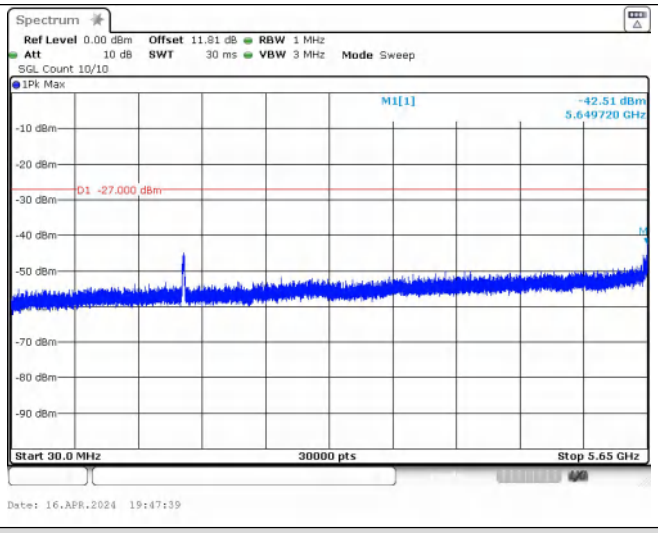


Spurious Emission:30.0~5650 MHz
IEEE 802.11n_Channel 165_20MHz_Antenna 0

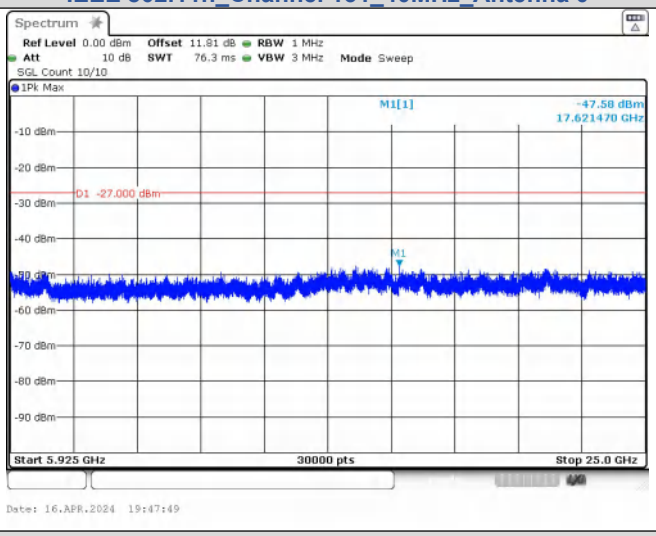
Spurious Emission:5925~25000.0 MHz
IEEE 802.11n_Channel 165_20MHz_Antenna 0



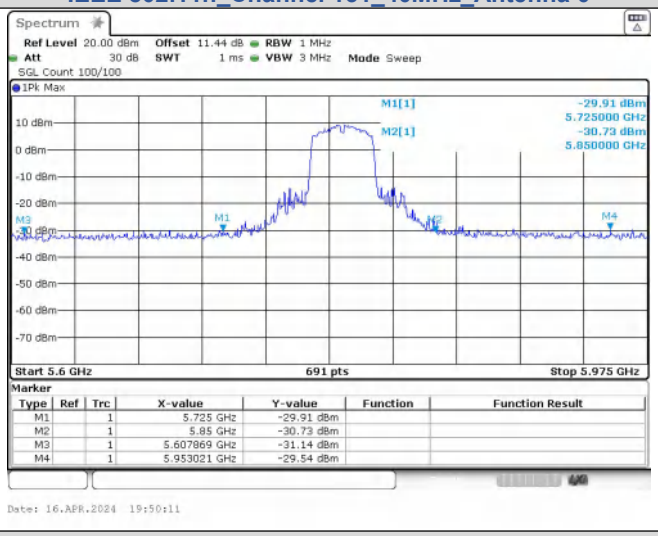
Out Of Band Emission
IEEE 802.11n_Channel 151_40MHz_Antenna 0



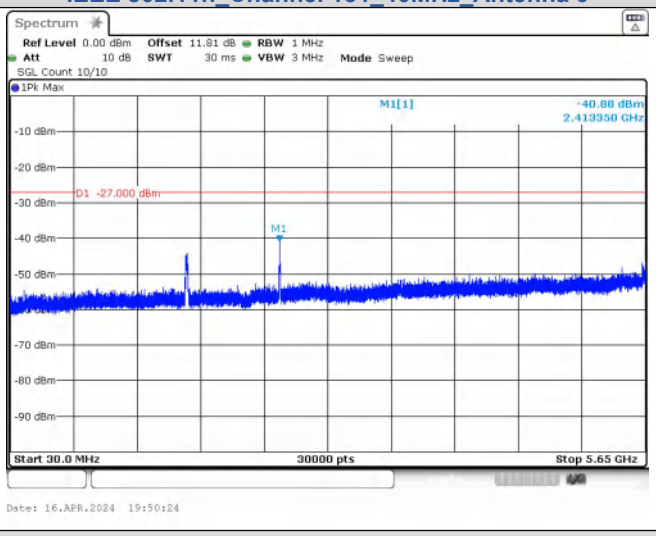
Spurious Emission:30.0~5650 MHz
IEEE 802.11n_Channel 151_40MHz_Antenna 0



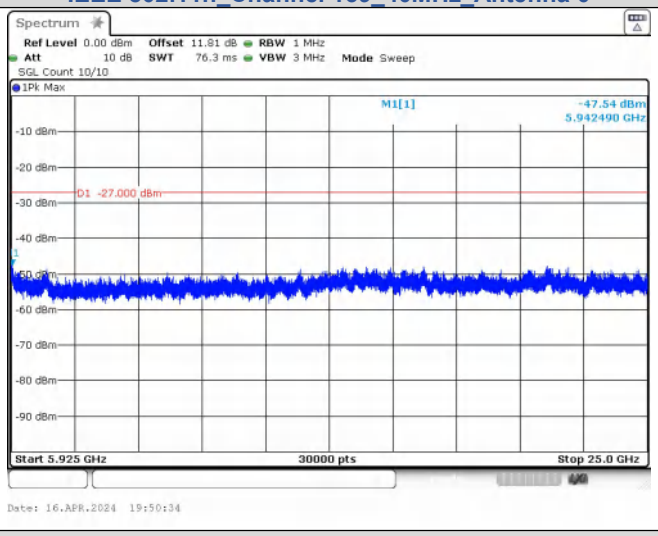
Spurious Emission:5925~25000.0 MHz
IEEE 802.11n_Channel 151_40MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 159_40MHz_Antenna 0

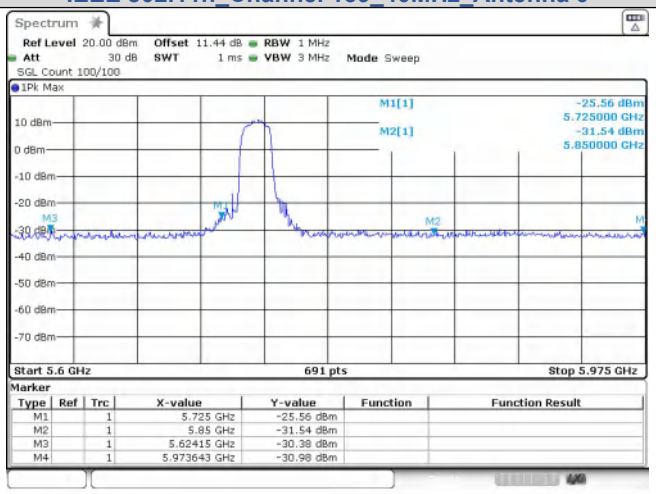


Spurious Emission:30.0~5650 MHz



Spurious Emission:5925~25000.0 MHz

IEEE 802.11n_Channel 159_40MHz_Antenna 0

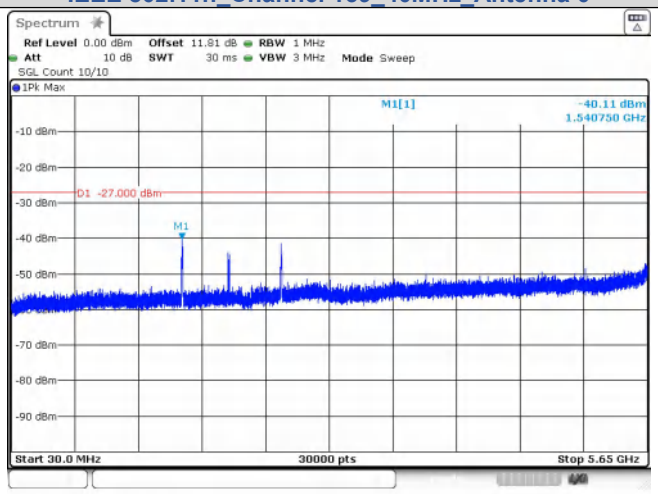


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.725 GHz	-25.56 dBm		
M2		1	5.85 GHz	-31.54 dBm		
M3		1	5.62415 GHz	-30.38 dBm		
M4		1	5.973643 GHz	-30.98 dBm		

Date: 16.APR.2024 19:53:40

IEEE 802.11n_Channel 159_40MHz_Antenna 0



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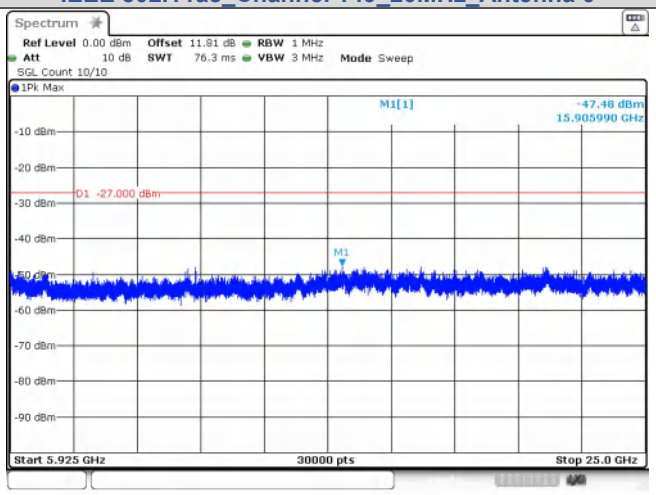
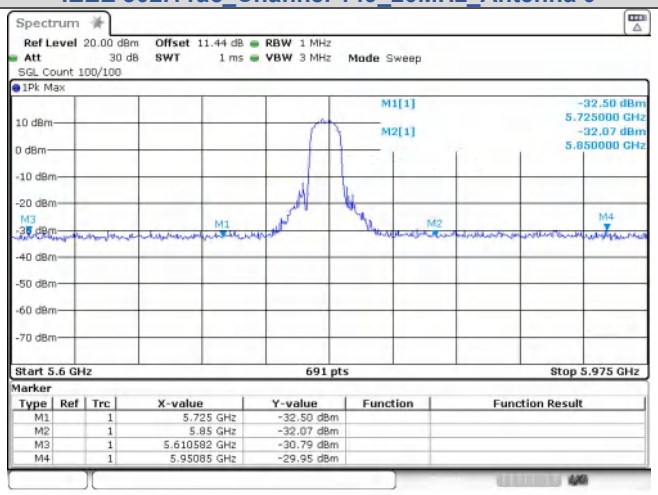
Out Of Band Emission
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



Date: 16.APR.2024 19:54:03

Spurious Emission:30.0~5650 MHz
IEEE 802.11ac_Channel 149_20MHz_Antenna 0

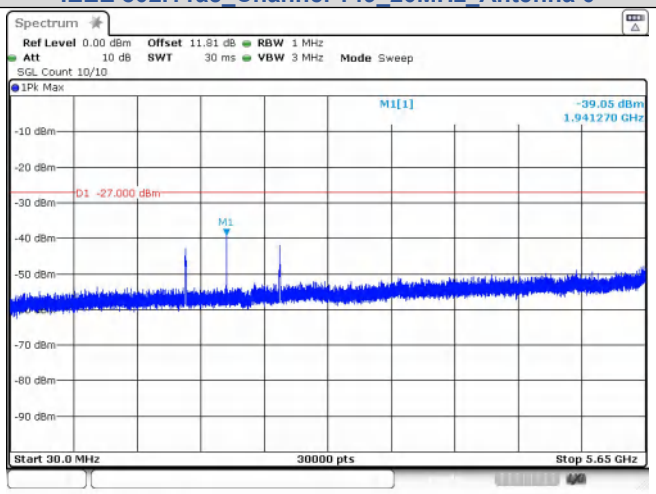


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.725 GHz	-32.50 dBm		
M2		1	5.85 GHz	-32.07 dBm		
M3		1	5.610582 GHz	-30.79 dBm		
M4		1	5.95085 GHz	-29.95 dBm		

Date: 16.APR.2024 19:56:56

Spurious Emission:5925~25000.0 MHz
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



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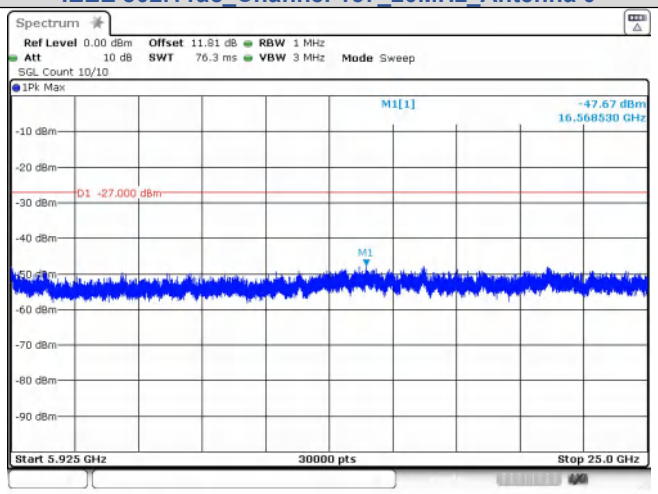
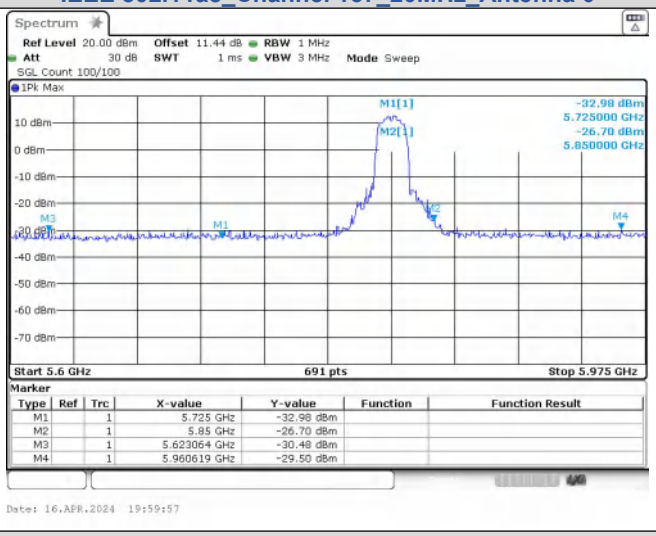
Out Of Band Emission
IEEE 802.11ac_Channel 157_20MHz_Antenna 0

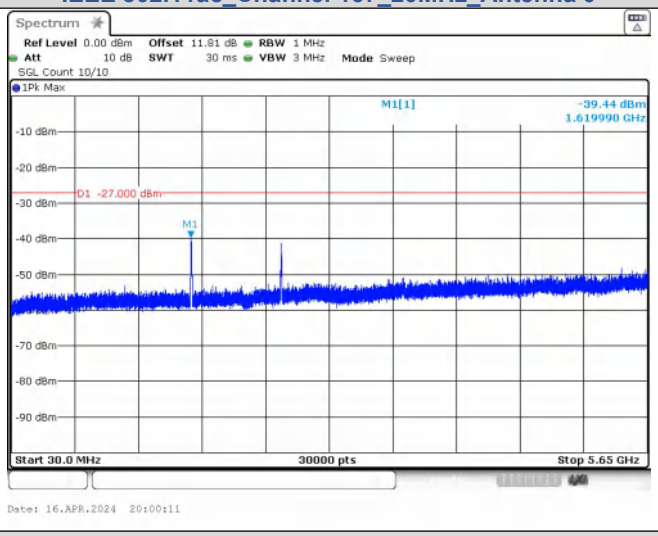


Date: 16.APR.2024 19:57:19

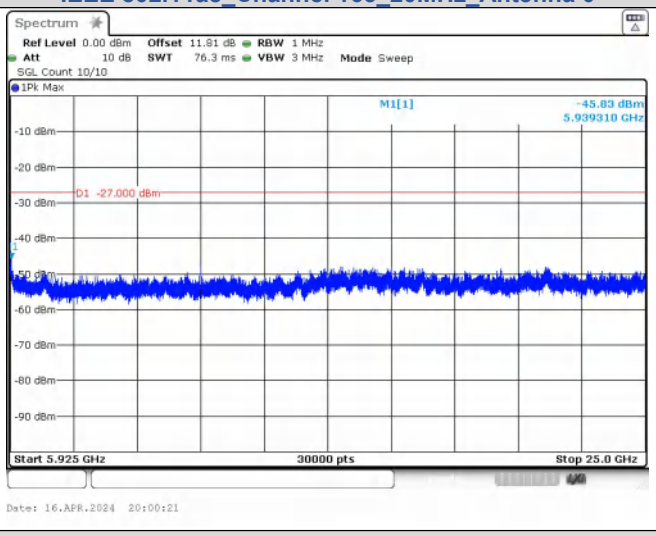
Spurious Emission:30.0~5650 MHz
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



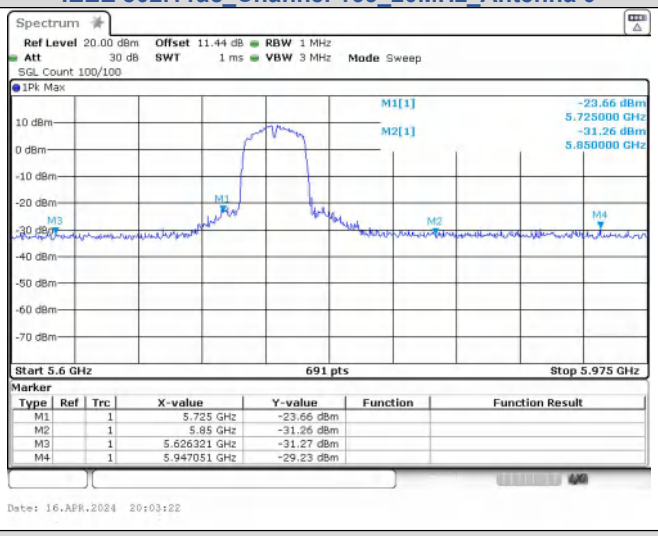
Spurious Emission:5925~25000.0 MHz
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11ac_Channel 165_20MHz_Antenna 0

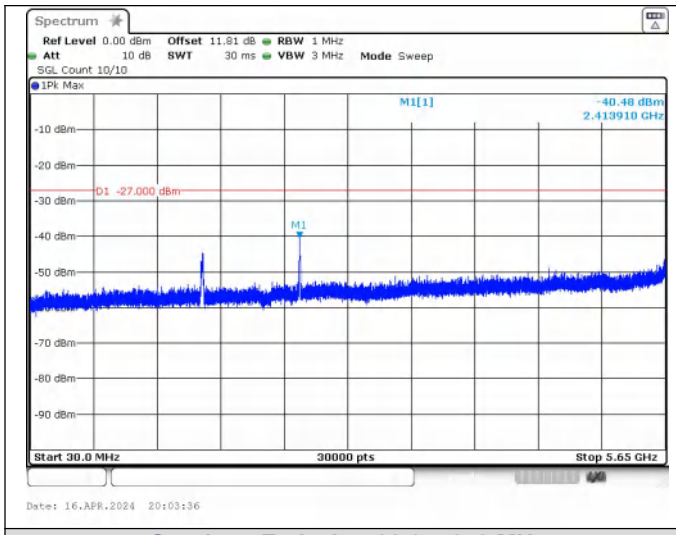


Spurious Emission:30.0~5650 MHz
IEEE 802.11ac_Channel 165_20MHz_Antenna 0

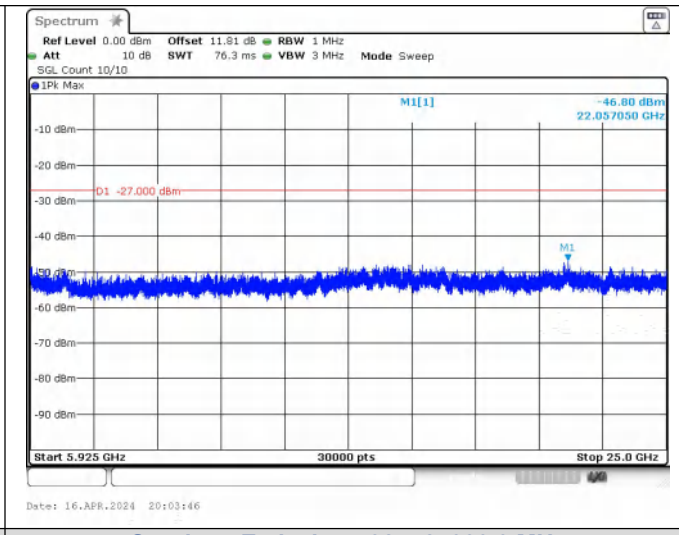


Spurious Emission:5925~25000.0 MHz
IEEE 802.11ac_Channel 165_20MHz_Antenna 0

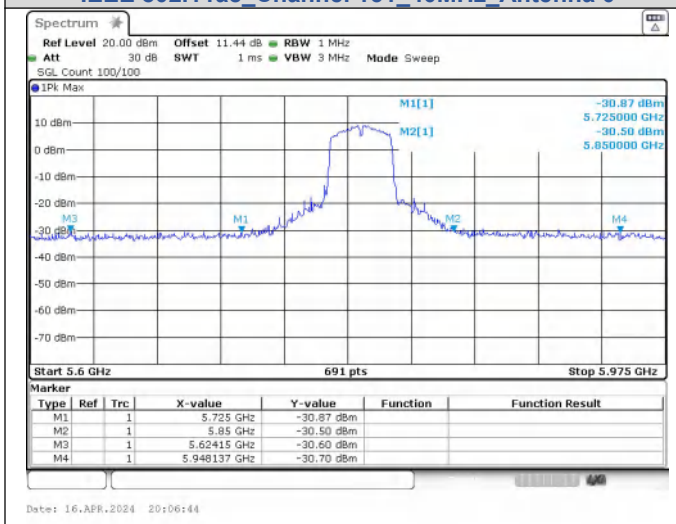
Out Of Band Emission
IEEE 802.11ac_Channel 151_40MHz_Antenna 0



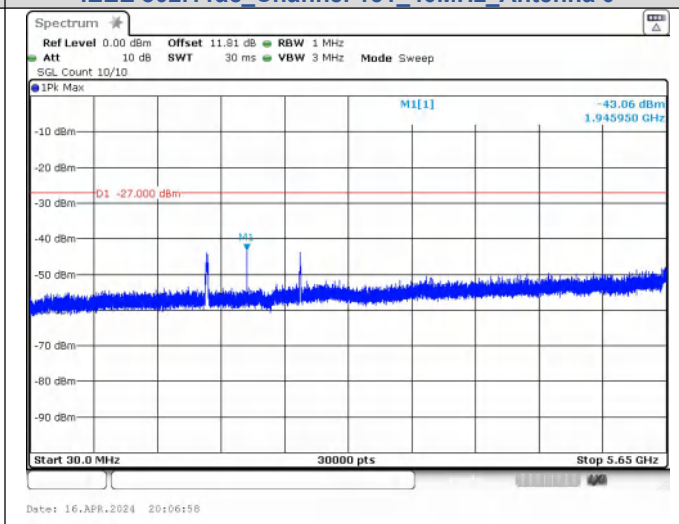
Spurious Emission:30.0~5650 MHz
IEEE 802.11ac_Channel 151_40MHz_Antenna 0



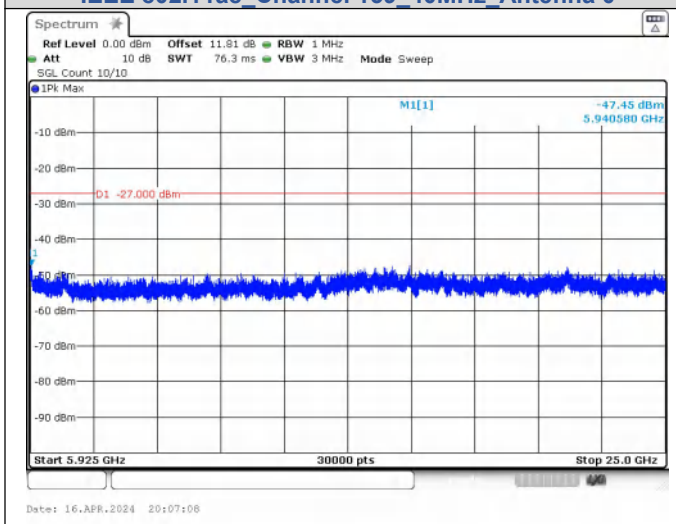
Spurious Emission:5925~25000.0 MHz
IEEE 802.11ac_Channel 151_40MHz_Antenna 0



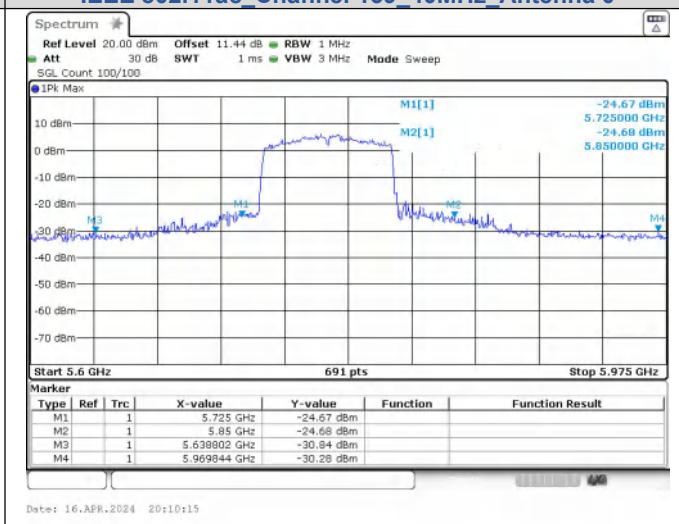
Out Of Band Emission
IEEE 802.11ac_Channel 159_40MHz_Antenna 0



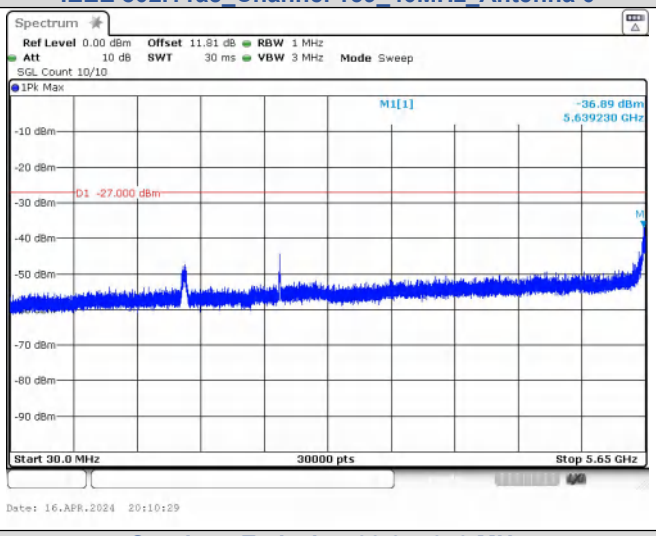
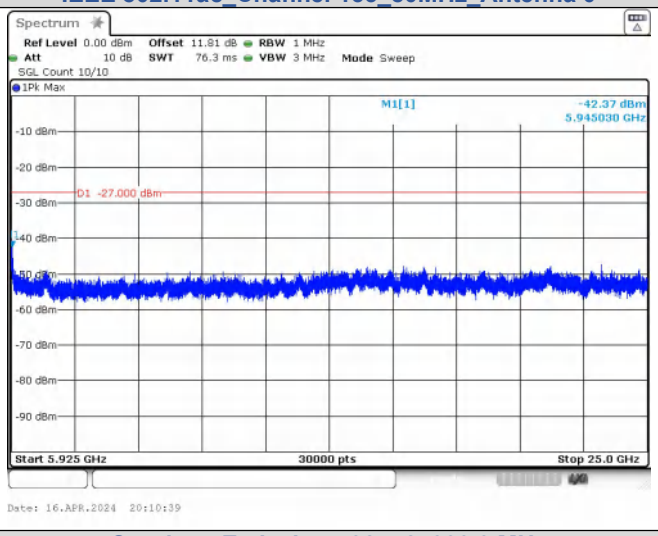
Spurious Emission:30.0~5650 MHz
IEEE 802.11ac_Channel 159_40MHz_Antenna 0



Spurious Emission:5925~25000.0 MHz



Out Of Band Emission

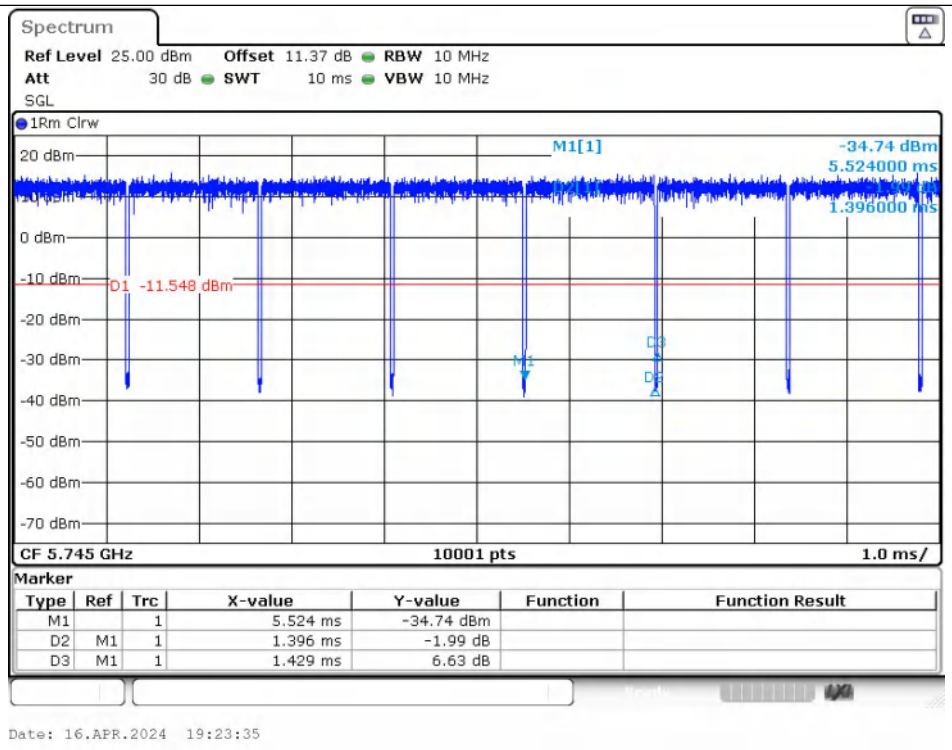
IEEE 802.11ac_Channel 159_40MHz_Antenna 0	IEEE 802.11ac_Channel 155_80MHz_Antenna 0
	
Spurious Emission:30.0~5650 MHz IEEE 802.11ac_Channel 155_80MHz_Antenna 0	Spurious Emission:5925~25000.0 MHz IEEE 802.11ac_Channel 155_80MHz_Antenna 0

Duty Cycle

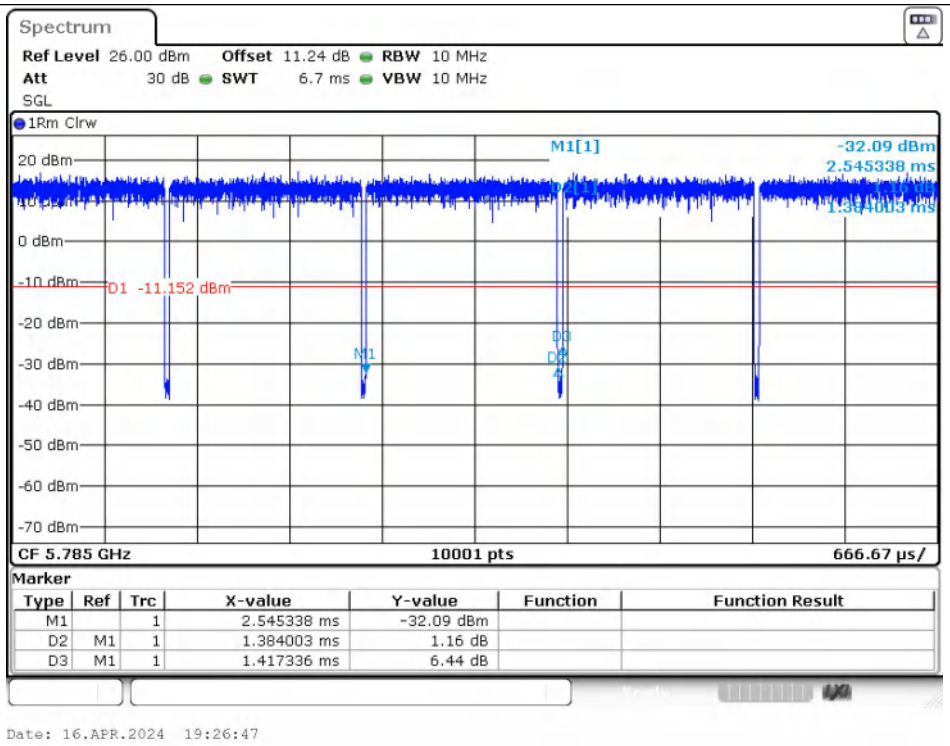
Test Result

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	149	0	1.396	1.429	97.69	0.9769	0.1015	0.72
		157		1.384	1.417	97.65	0.9765	0.1033	0.72
		165		1.396	1.429	97.69	0.9769	0.1015	0.72
IEEE 802.11n_20	MCS 0	149		1.293	1.326	97.49	0.9749	0.1104	0.77
		157		1.304	1.336	97.60	0.9760	0.1055	0.77
		165		1.304	1.337	97.53	0.9753	0.1086	0.77
IEEE 802.11n_40		151		0.650	0.683	95.12	0.9512	0.2173	1.54
		159		0.650	0.684	95.06	0.9506	0.22	1.54
IEEE 802.11ac_20		149		1.316	1.349	97.55	0.9755	0.1077	0.76
		157		1.316	1.349	97.55	0.9755	0.1077	0.76
		165		1.316	1.349	97.55	0.9755	0.1077	0.76
IEEE 802.11ac_40		151		0.654	0.688	95.15	0.9515	0.2159	1.53
		159		0.654	0.688	95.09	0.9509	0.2187	1.53
IEEE 802.11ac_80		155		0.325	0.359	90.53	0.9053	0.4321	3.08

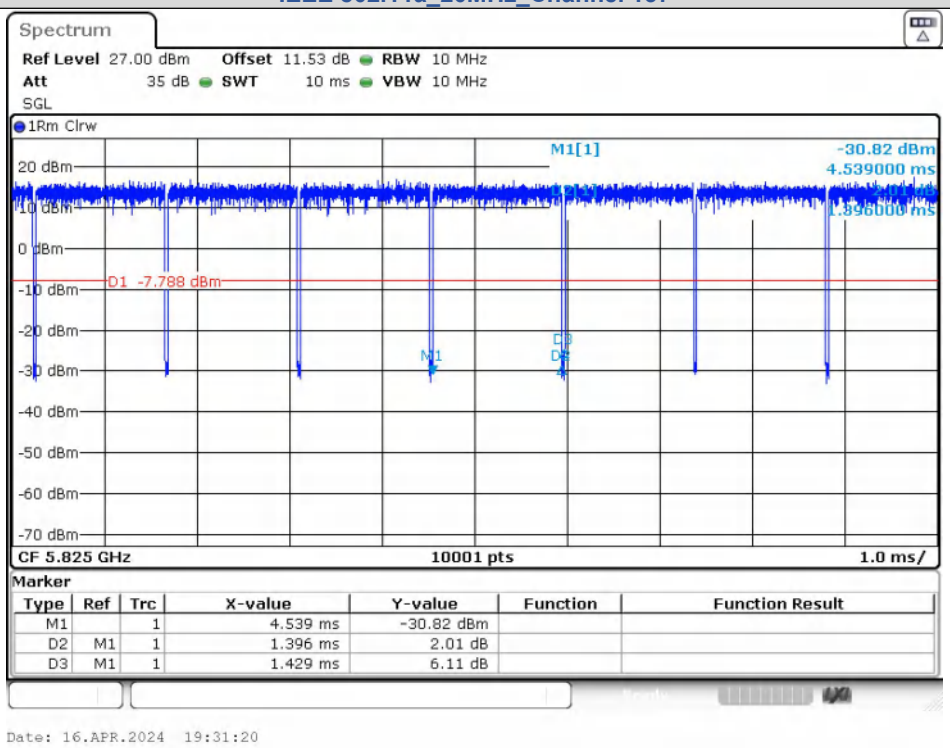
Test Graphs



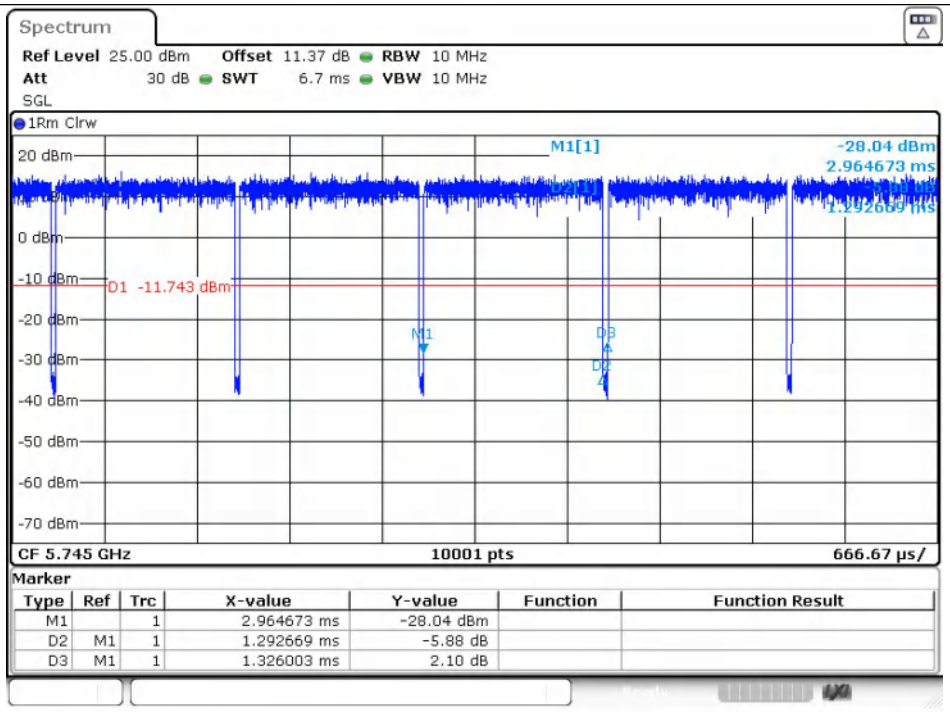
IEEE 802.11a_20MHz_Channel 149



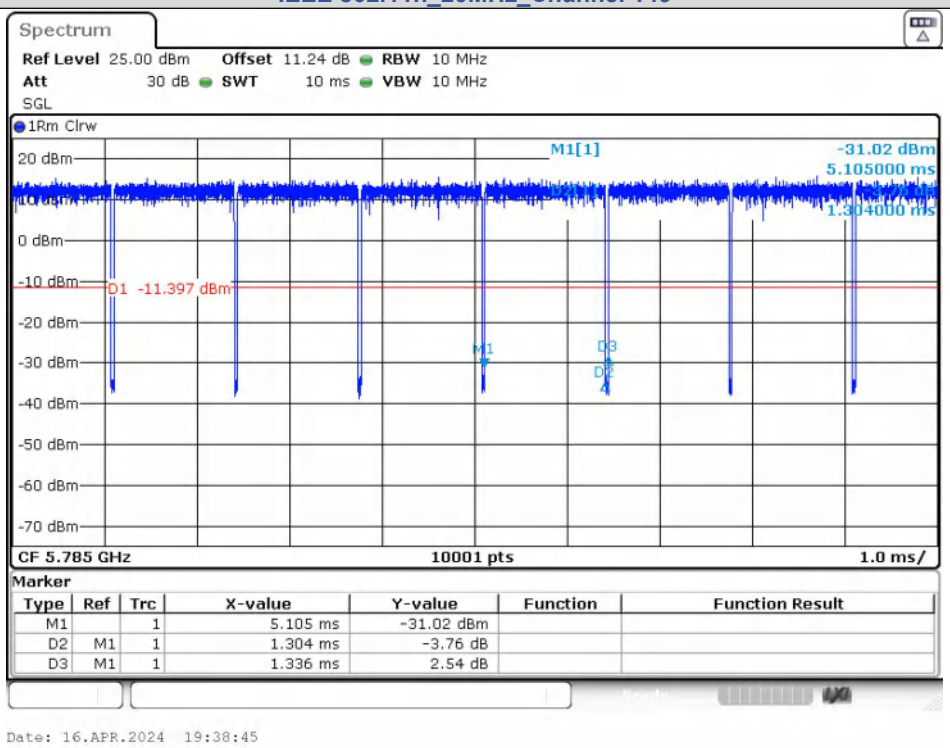
IEEE 802.11a_20MHz_Channel 157



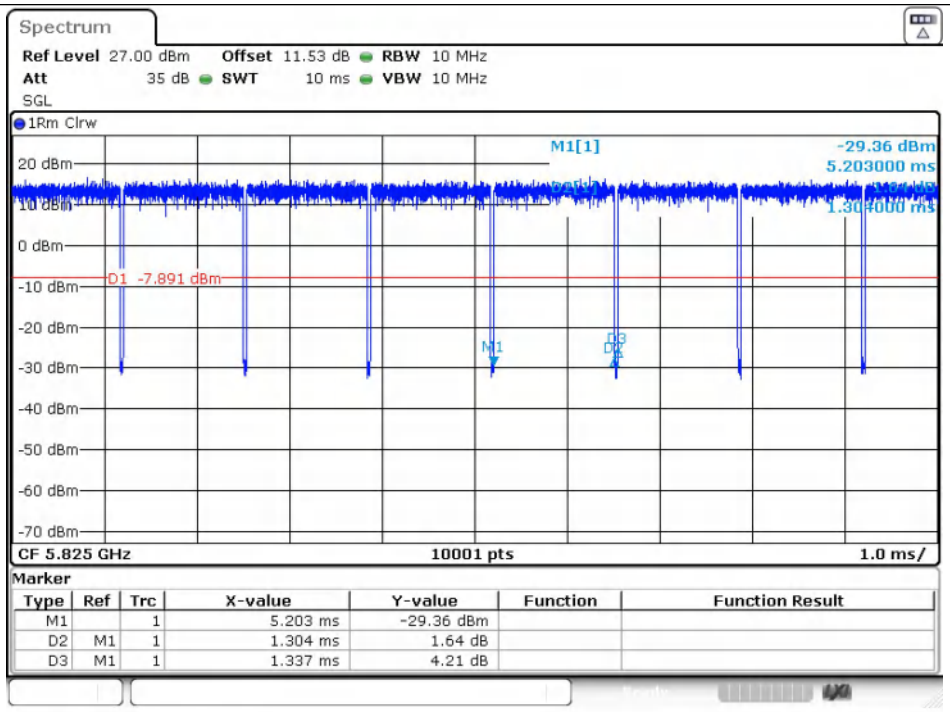
IEEE 802.11a_20MHz_Channel 165



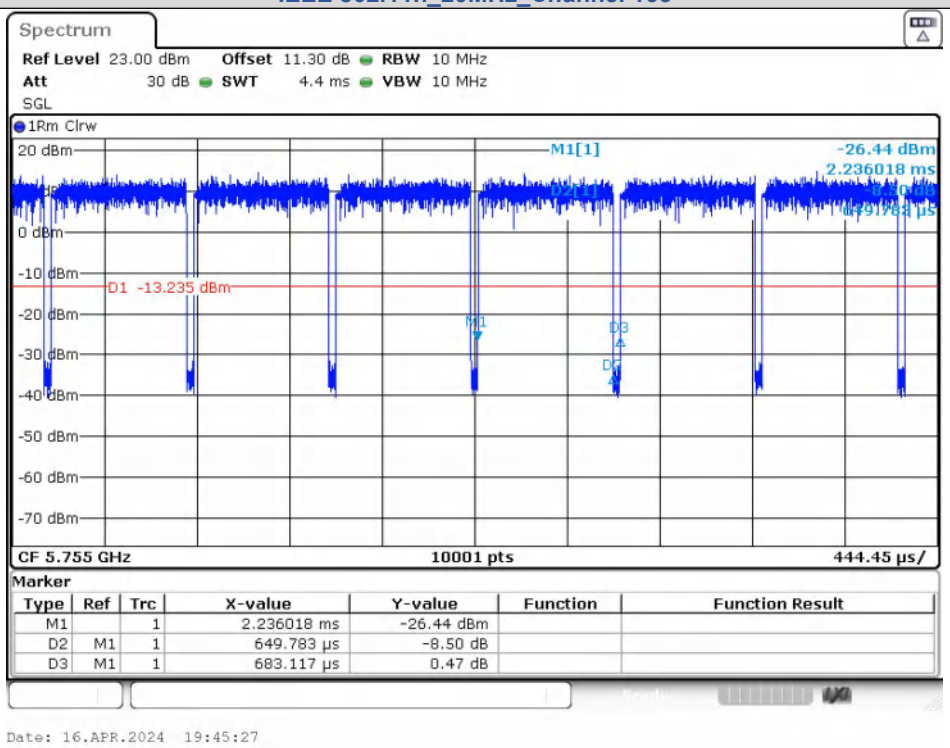
IEEE 802.11n_20MHz_Channel 149



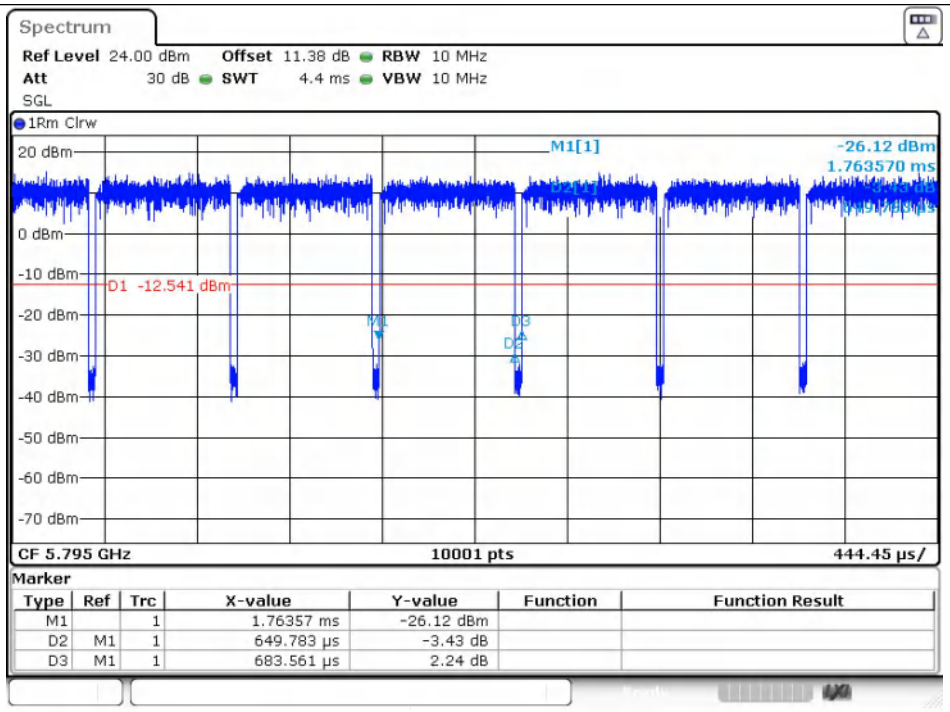
IEEE 802.11n_20MHz_Channel 157



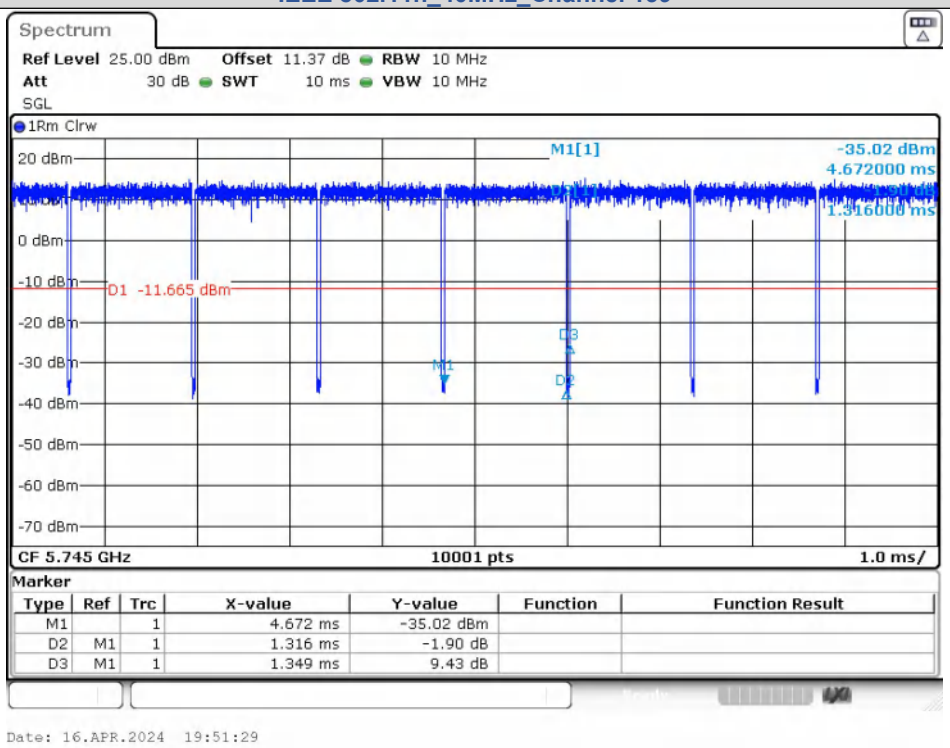
IEEE 802.11n_20MHz_Channel 165



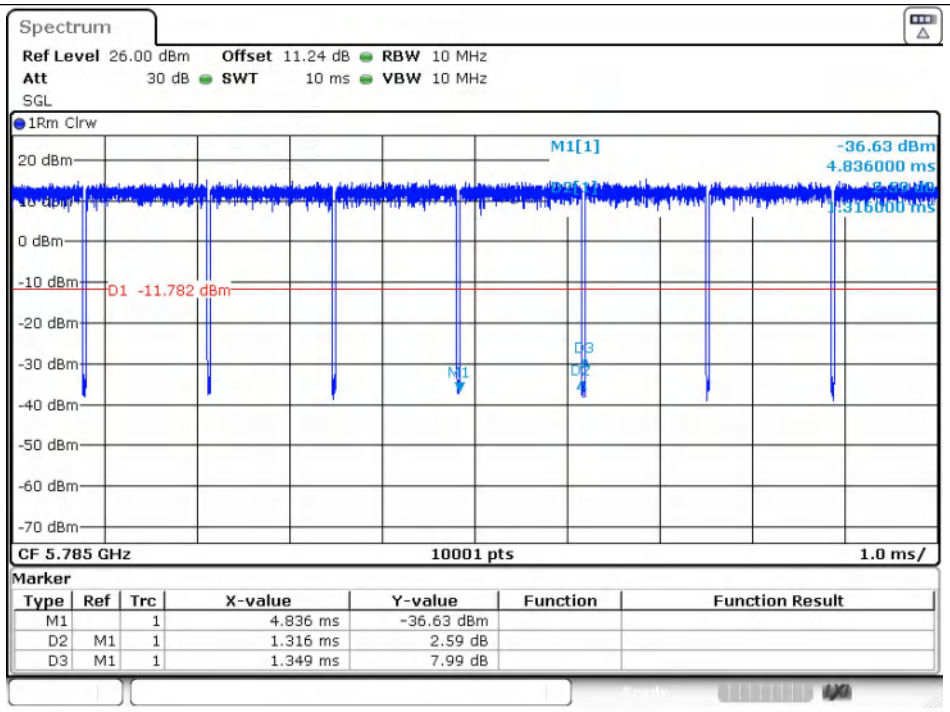
IEEE 802.11n_40MHz_Channel 151



IEEE 802.11n_40MHz_Channel 159

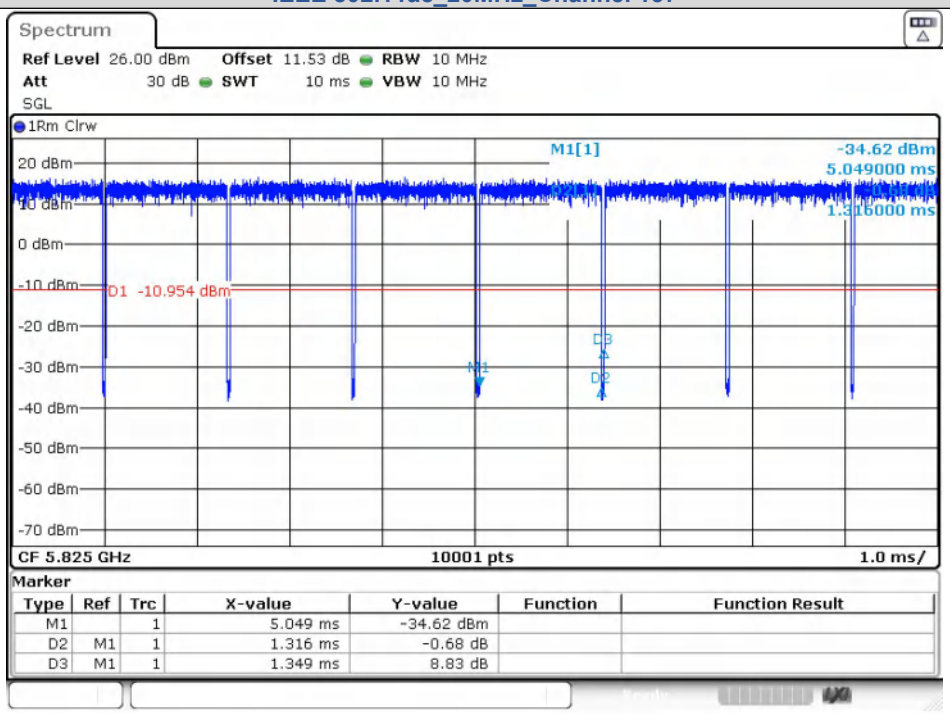


IEEE 802.11ac_20MHz_Channel 149



Date: 16.APR.2024 19:54:50

IEEE 802.11ac_20MHz_Channel 157



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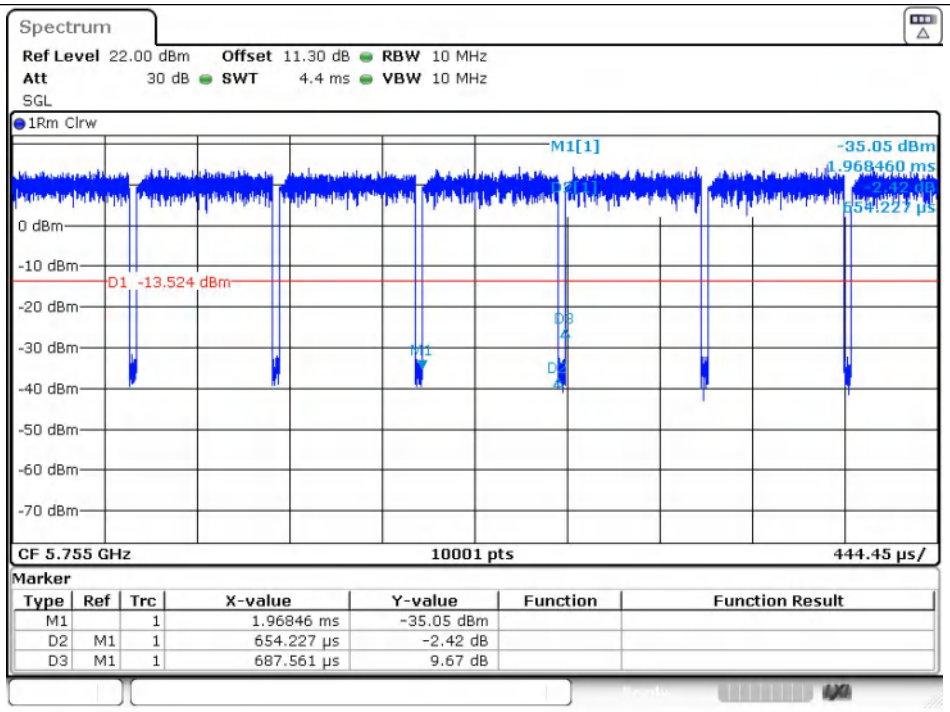
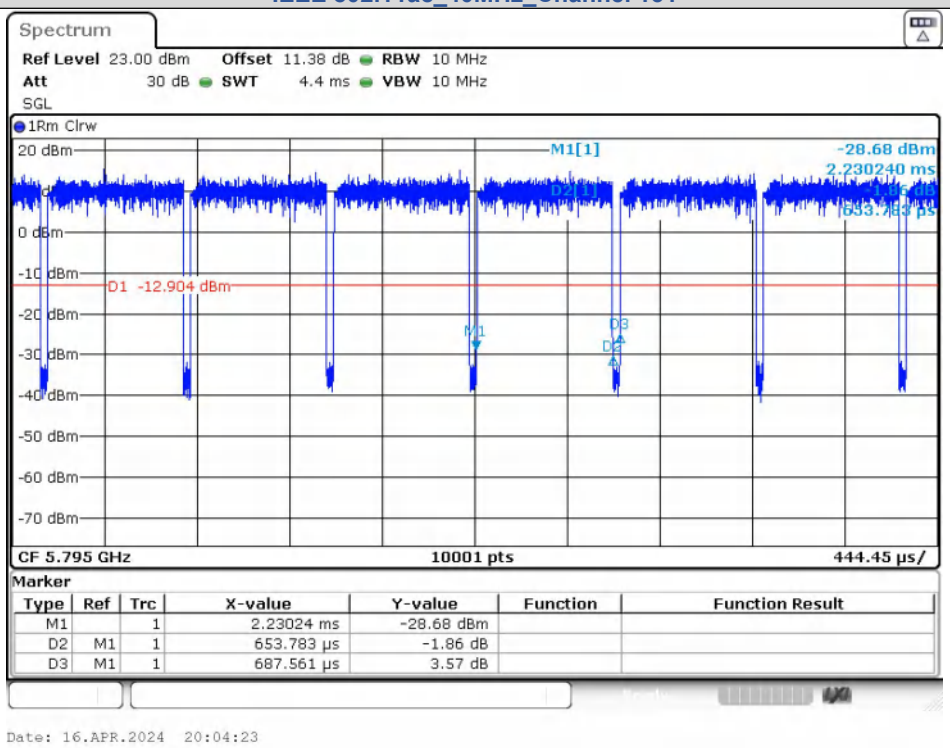
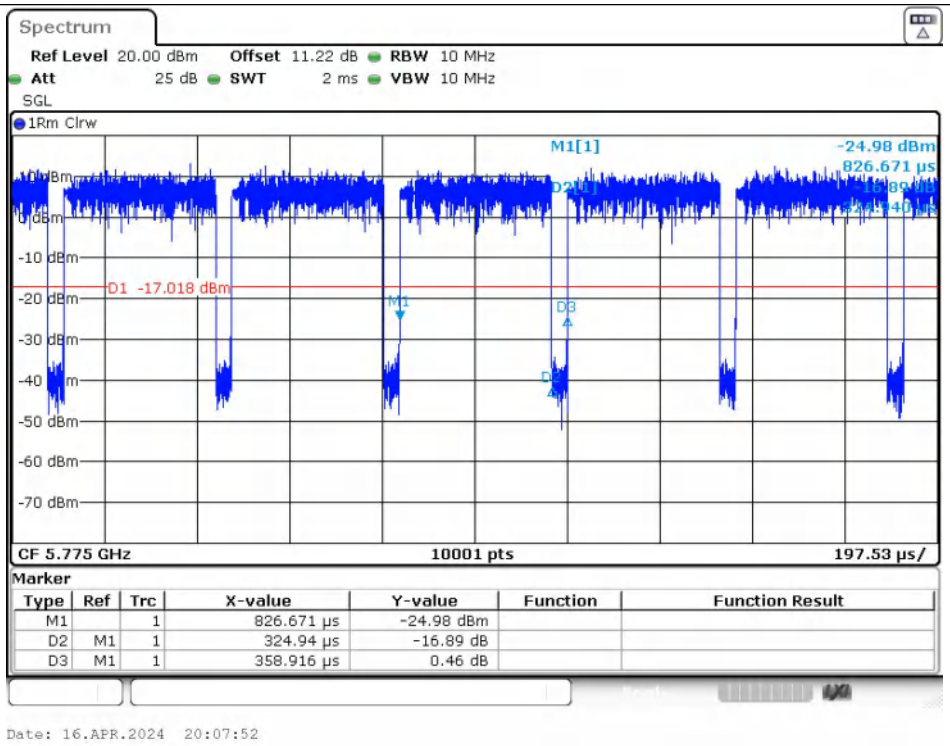
IEEE 802.11ac_20MHz_Channel 165



IEEE 802.11ac_40MHz_Channel 151



IEEE 802.11ac_40MHz_Channel 159



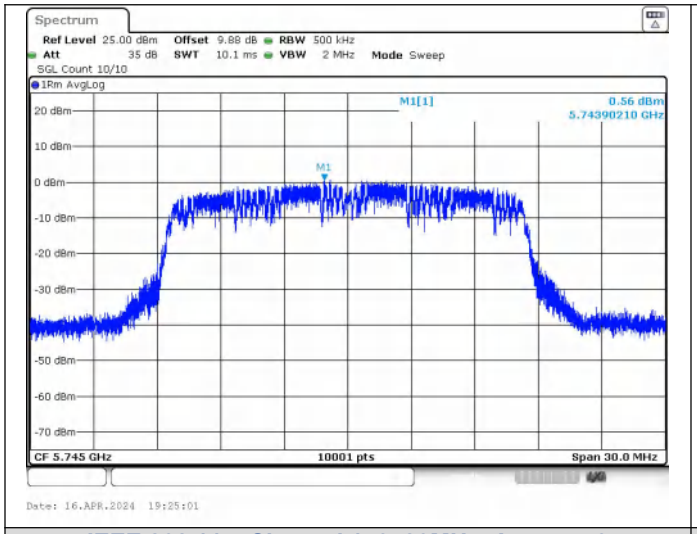
IEEE 802.11ac_80MHz_Channel 155

Peak Power Spectral Density

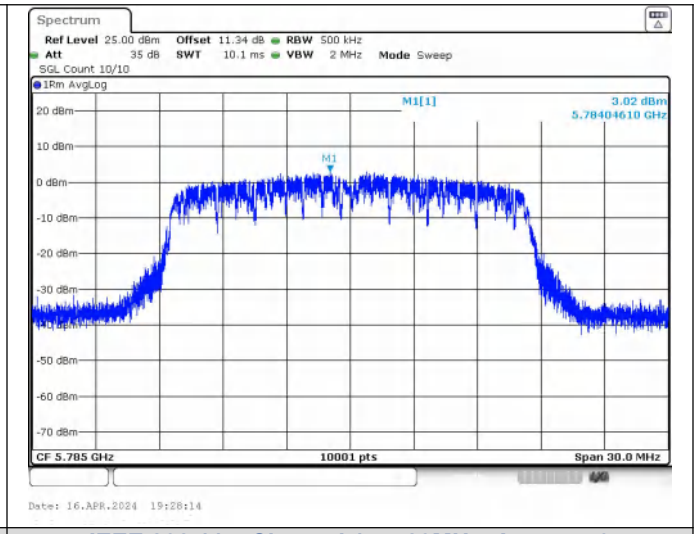
Test Result

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	149	0.563	0.664	30	PASS
	157	3.023	3.124		PASS
	165	1.676	1.778		PASS
IEEE 802.11n_20	149	0.356	0.465		PASS
	157	2.146	2.255		PASS
	165	1.184	1.292		PASS
IEEE 802.11n_40	151	-0.652	-0.432		PASS
	159	-0.685	-0.465		PASS
IEEE 802.11ac_20	149	-0.128	-0.021		PASS
	157	1.763	1.87		PASS
	165	1.248	1.356		PASS
IEEE 802.11ac_40	151	-1.003	-0.785		PASS
	159	-0.714	-0.495		PASS
IEEE 802.11ac_80	155	-5.416	-4.984		PASS

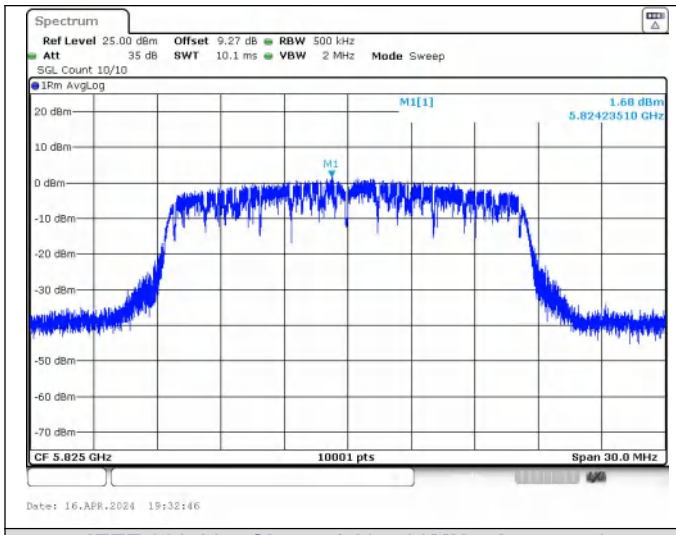
Test Graphs



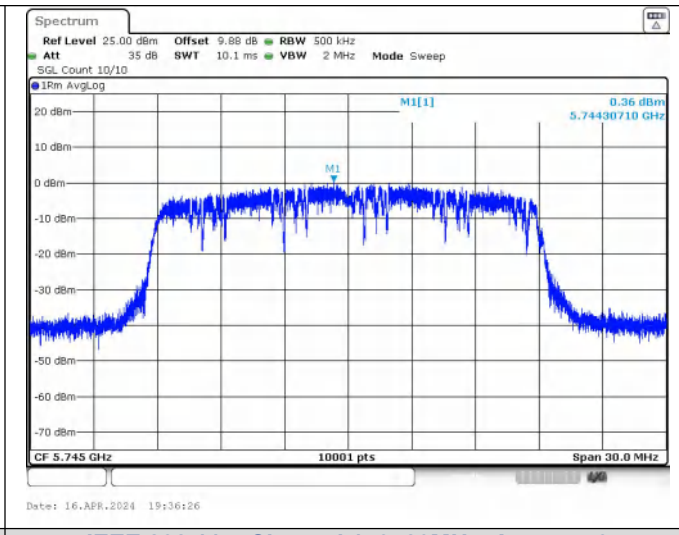
IEEE 802.11a_Channel 149_20MHz_Antenna 0



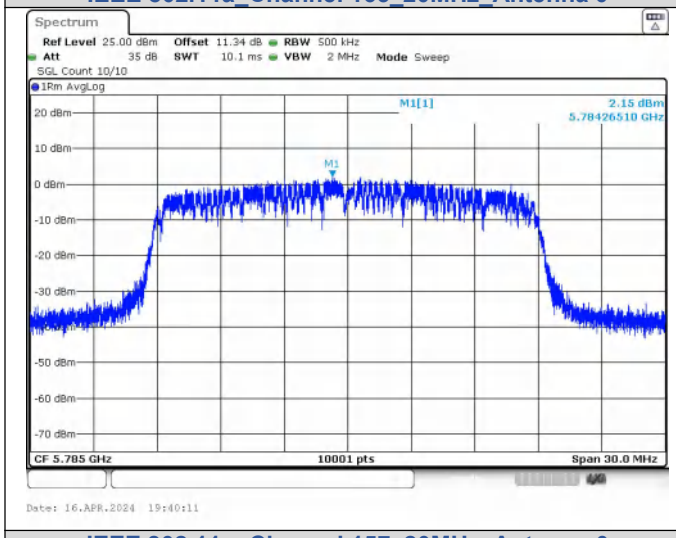
IEEE 802.11a_Channel 157_20MHz_Antenna 0



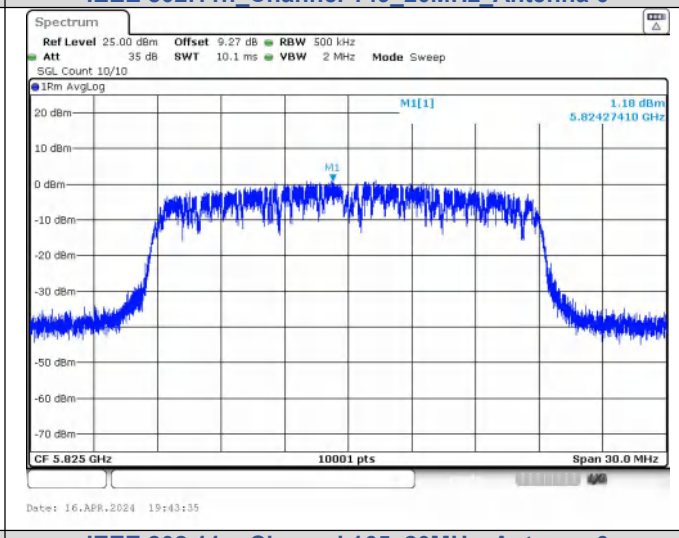
IEEE 802.11a_Channel 165_20MHz_Antenna 0



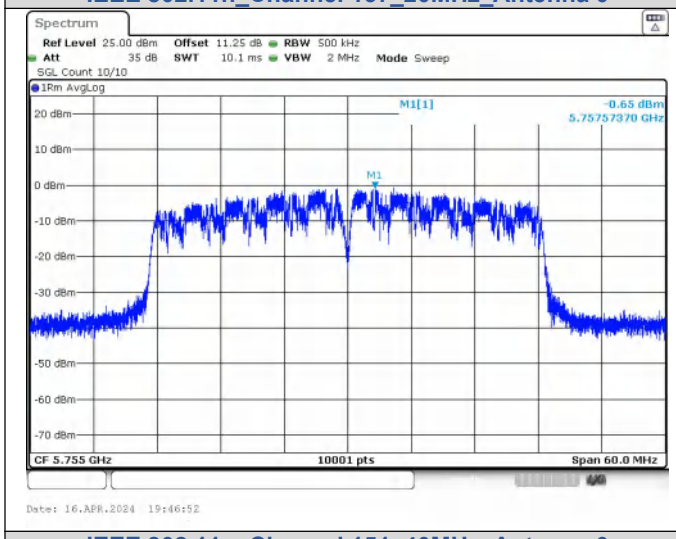
IEEE 802.11n_Channel 149_20MHz_Antenna 0



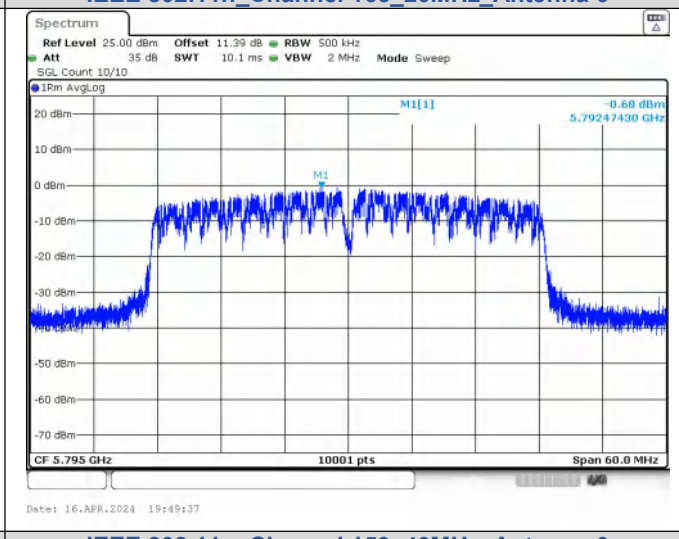
IEEE 802.11n_Channel 157_20MHz_Antenna 0



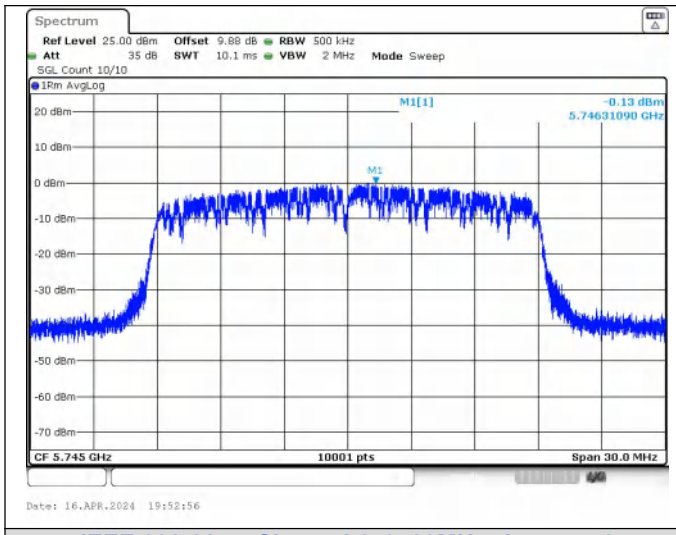
IEEE 802.11n_Channel 165_20MHz_Antenna 0



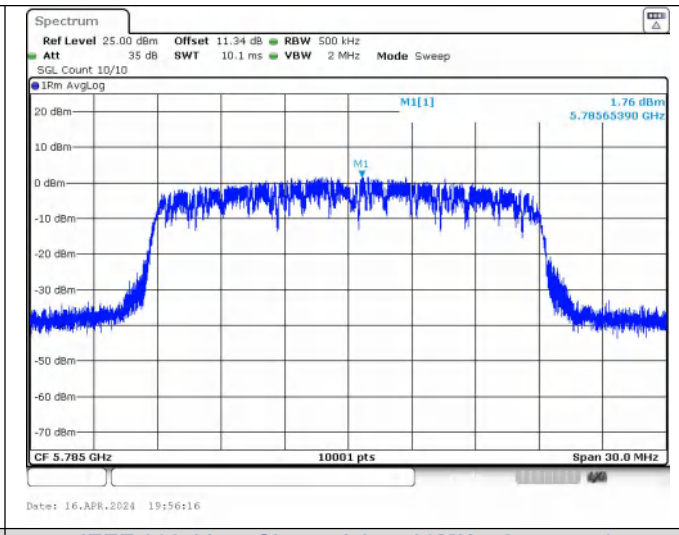
IEEE 802.11n_Channel 151_40MHz_Antenna 0



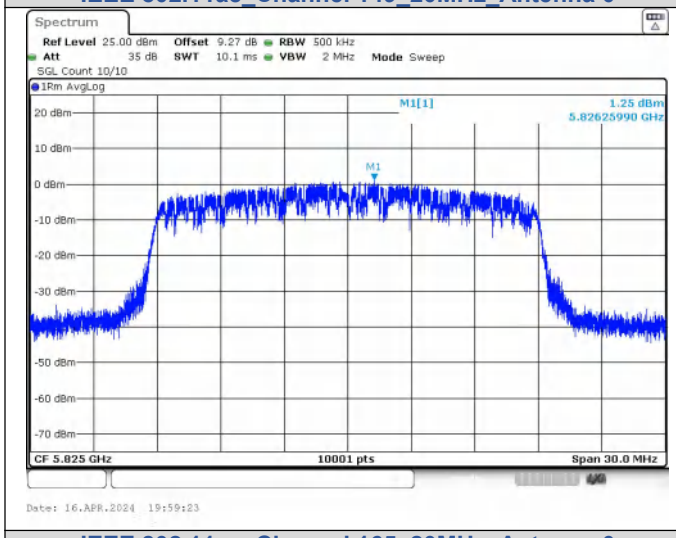
IEEE 802.11n_Channel 159_40MHz_Antenna 0



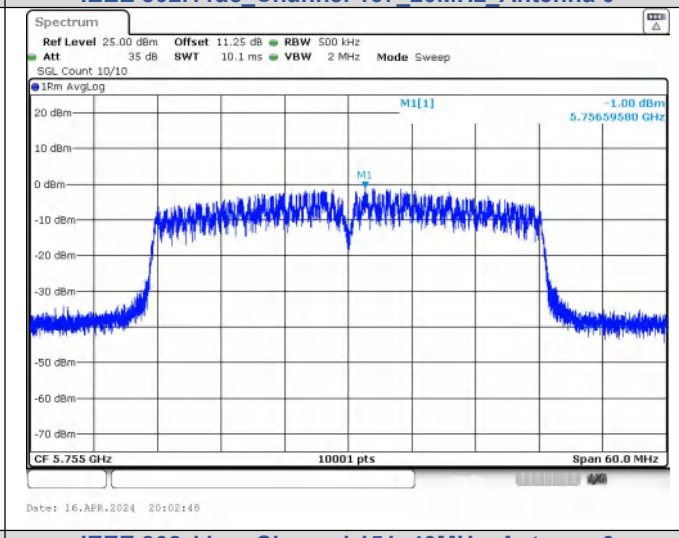
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



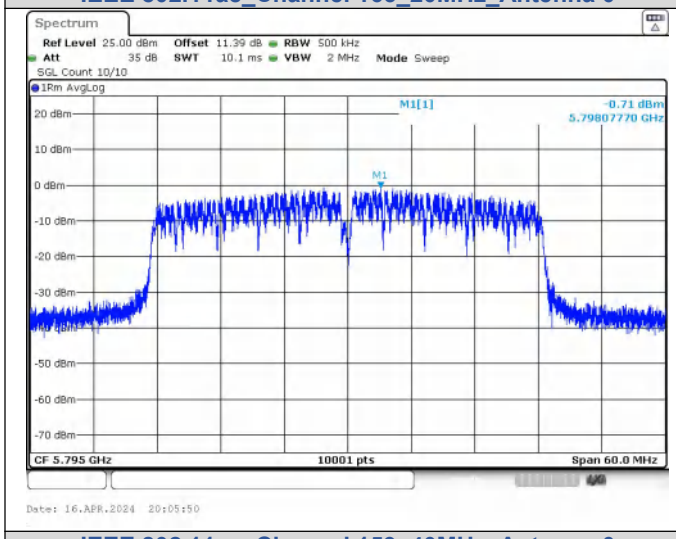
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



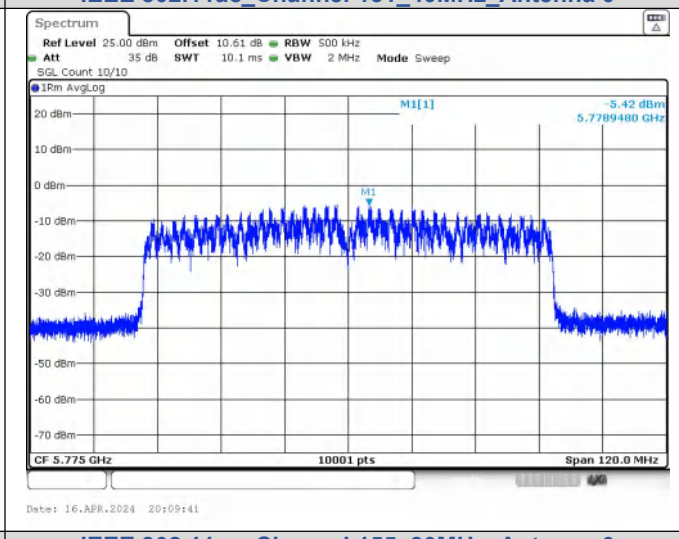
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



IEEE 802.11ac_Channel 155_80MHz_Antenna 0