

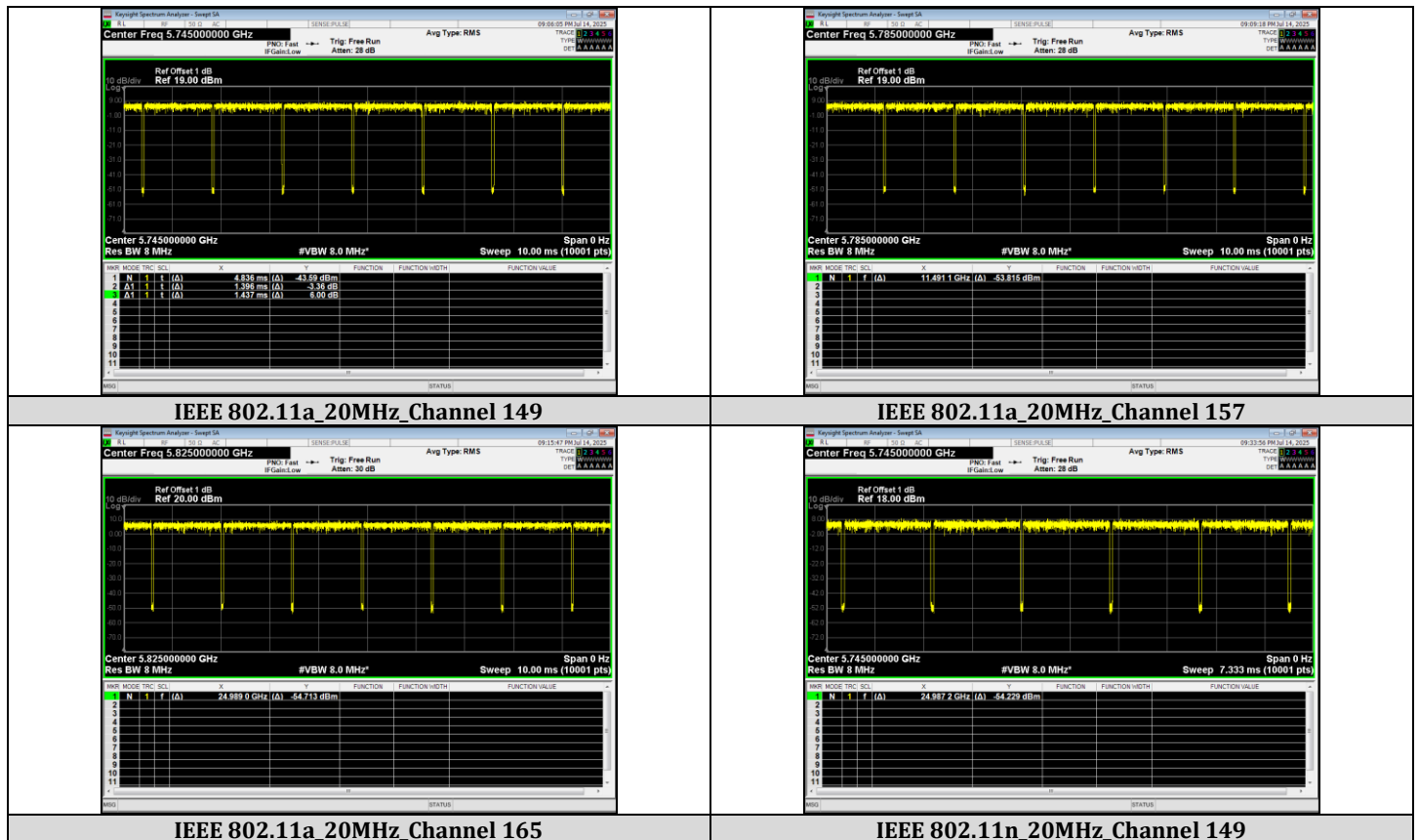
Appendix RF test data for 5G WIFI_NII band 3

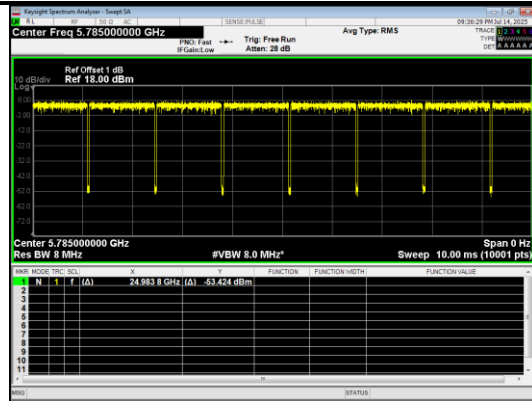


Duty Cycle Test Result

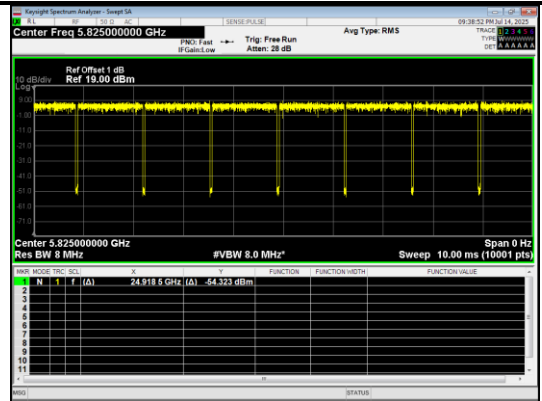
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11a	6	149	1	1.396	1.437	97.15	0.9715	0.1256	0.7163
		157		1.396	1.437	97.15	0.9715	0.1256	0.7163
		165		1.396	1.437	97.15	0.9715	0.1256	0.7163
IEEE 802.11n_20	149	1.303		1.345	96.89	0.9689	0.1372	0.7675	
	157	1.305		1.346	96.95	0.9695	0.1345	0.7663	
	165	1.305		1.346	96.95	0.9695	0.1345	0.7663	
IEEE 802.11n_40	151	0.650		0.693	93.84	0.9384	0.2761	1.5385	
	159	0.650		0.692	93.84	0.9384	0.2761	1.5385	
IEEE 802.11ac_20	MCS 0	149		1.316	1.357	96.92	0.9692	0.1359	0.7599
		157		1.316	1.358	96.91	0.9691	0.1363	0.7599
		165		1.316	1.358	96.91	0.9691	0.1363	0.7599
IEEE 802.11ac_40		151		0.654	0.697	93.88	0.9388	0.2743	1.5291
		159		0.654	0.697	93.88	0.9388	0.2743	1.5291
IEEE 802.11ac_80		155		0.325	0.369	88.21	0.8821	0.5448	3.0769

Test Graphs

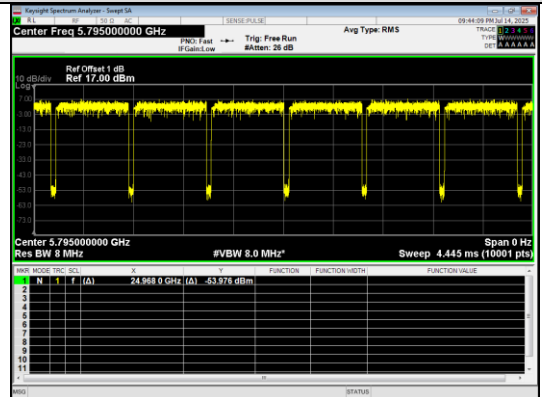
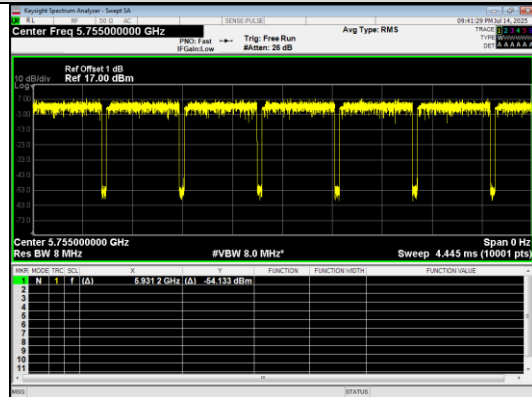




IEEE 802.11n 20MHz_Channel 157

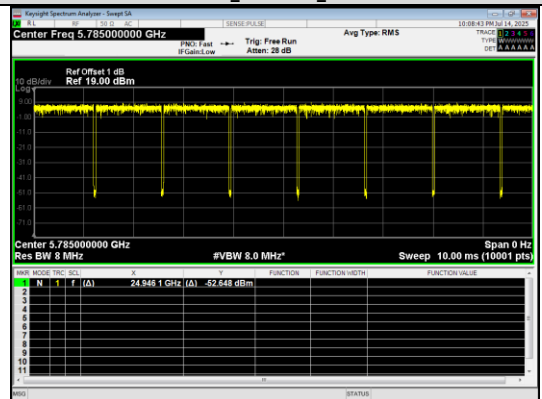
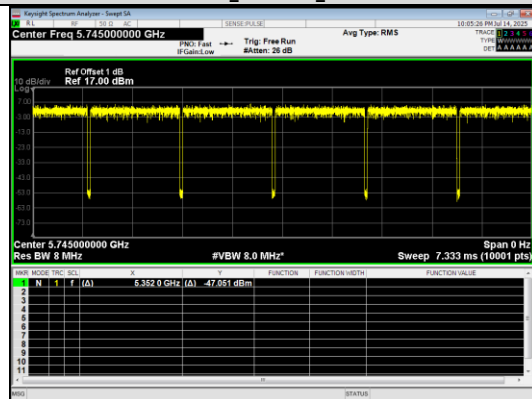


IEEE 802.11n 20MHz_Channel 165



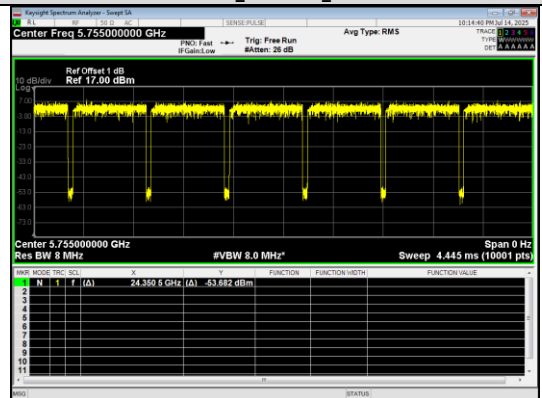
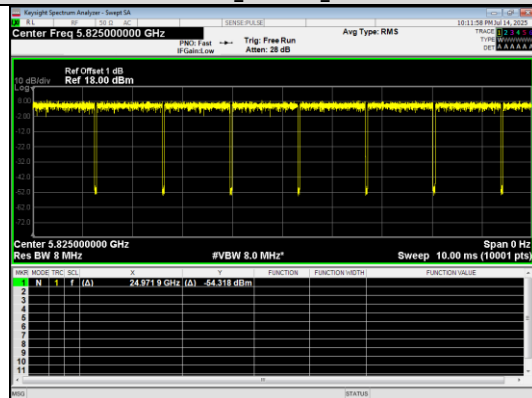
IEEE 802.11n 40MHz_Channel 151

IEEE 802.11n 40MHz_Channel 159



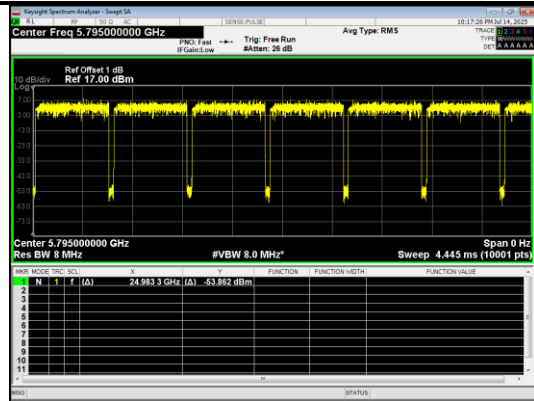
IEEE 802.11ac 20MHz_Channel 149

IEEE 802.11ac 20MHz_Channel 157

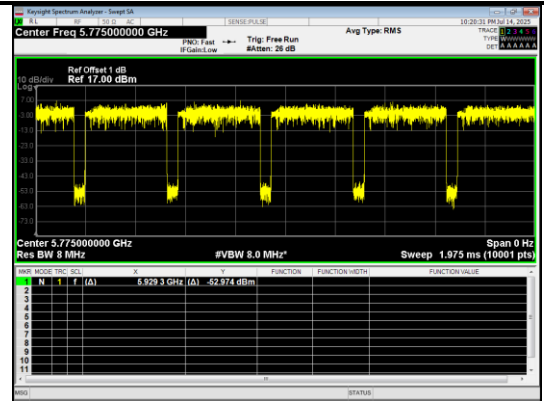


IEEE 802.11ac 20MHz_Channel 165

IEEE 802.11ac 40MHz_Channel 151



IEEE 802.11ac_40MHz_Channel 159



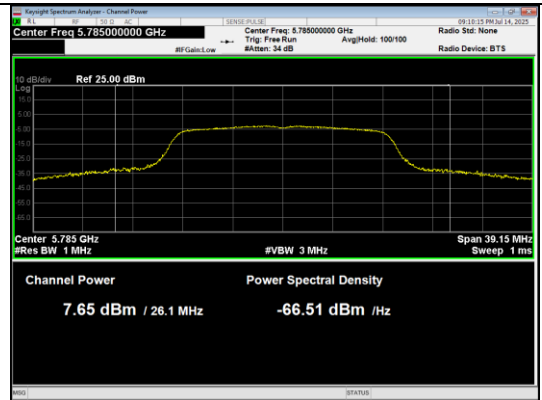
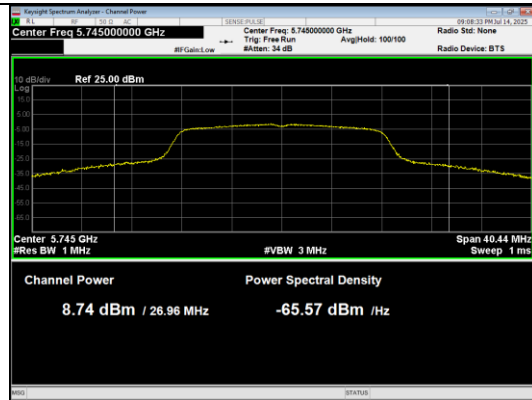
IEEE 802.11ac_80MHz_Channel 155

Conducted Output Power

Conducted output power

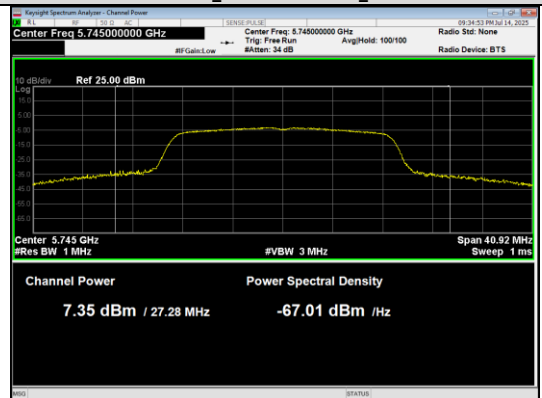
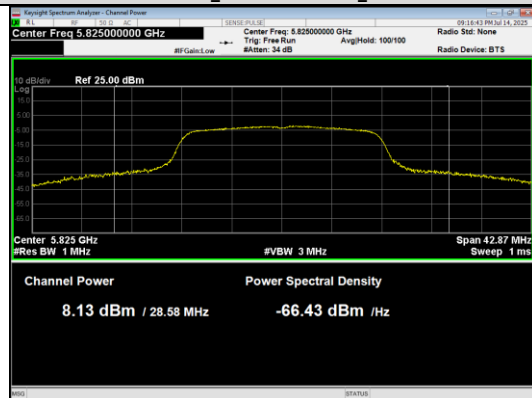
Mode	Channel	Ant. 0 (dBm)	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	149	8.74	8.87	≤30	PASS
	157	7.65	7.78	≤30	PASS
	165	8.13	8.26	≤30	PASS
IEEE 802.11n_20	149	7.35	7.49	≤30	PASS
	157	7.10	7.23	≤30	PASS
	165	7.63	7.76	≤30	PASS
IEEE 802.11n_40	151	7.75	8.03	≤30	PASS
	159	7.58	7.86	≤30	PASS
IEEE 802.11ac_20	149	7.86	8.00	≤30	PASS
	157	7.60	7.74	≤30	PASS
	165	7.71	7.85	≤30	PASS
IEEE 802.11ac_40	151	7.73	8.00	≤30	PASS
	159	7.57	7.84	≤30	PASS
IEEE 802.11ac_80	155	6.96	7.50	≤30	PASS

Note: Corr'd Value= Ant. 0 (dBm)+Duty cycle Factor.



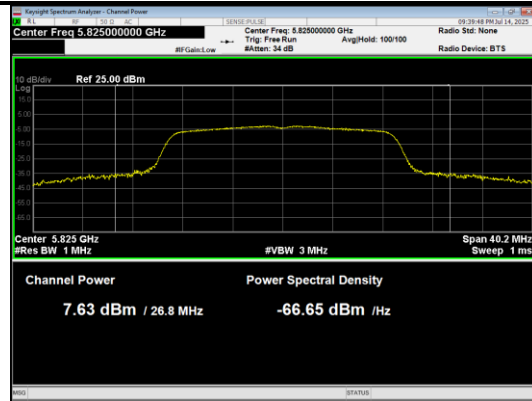
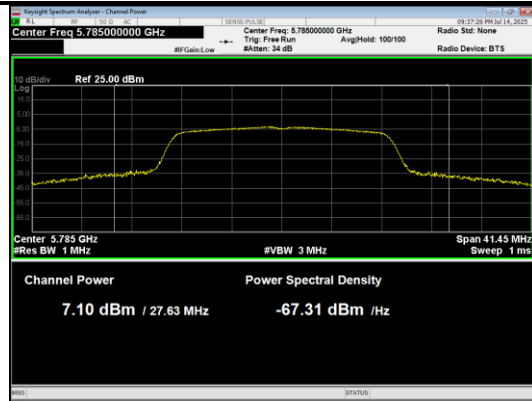
Conducted AVG output power
IEEE 802.11a_Channel 149_Antenna 0

Conducted AVG output power
IEEE 802.11a_Channel 157_Antenna 0



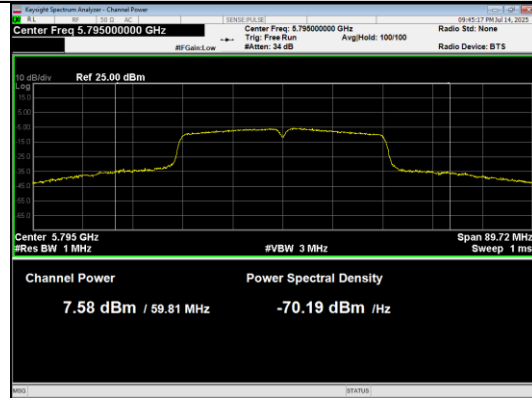
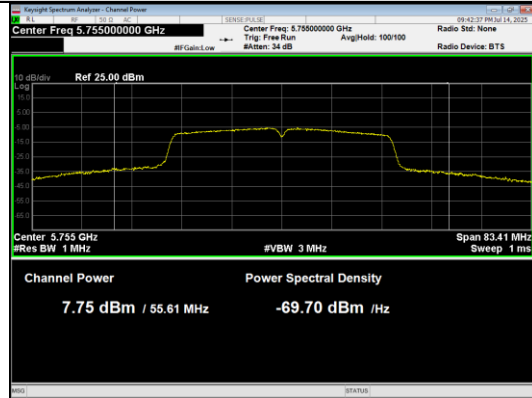
Conducted AVG output power
IEEE 802.11a_Channel 165_Antenna 0

Conducted AVG output power
IEEE 802.11n_20_Channel 149_Antenna 0



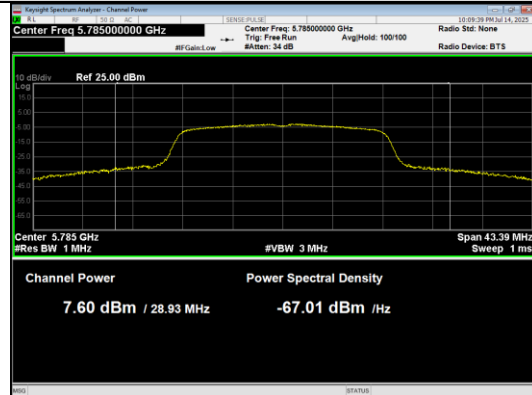
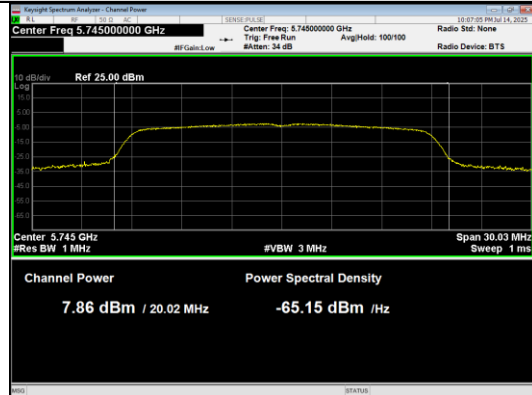
Conducted AVG output power
IEEE 802.11n_20_Channel 157_Antenna 0

Conducted AVG output power
IEEE 802.11n_20_Channel 165_Antenna 0



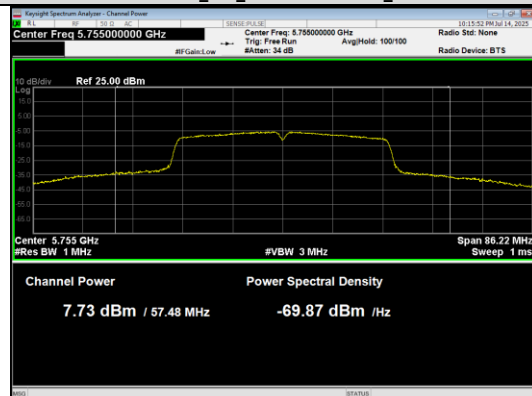
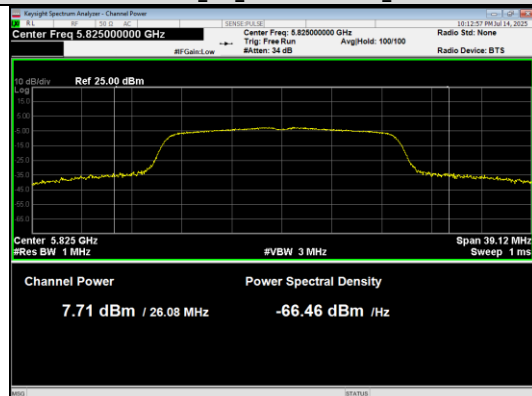
Conducted AVG output power
IEEE 802.11n_40_Channel 151_Antenna 0

Conducted AVG output power
IEEE 802.11n_40_Channel 159_Antenna 0



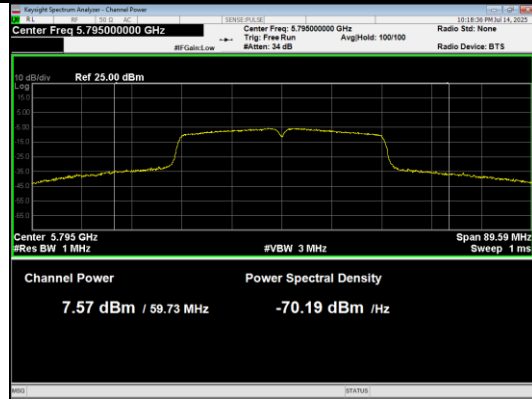
Conducted AVG output power
IEEE 802.11ac_20_Channel 149_Antenna 0

Conducted AVG output power
IEEE 802.11ac_20_Channel 157_Antenna 0

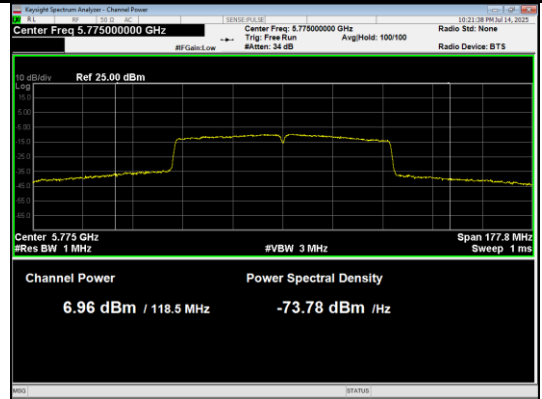


Conducted AVG output power
IEEE 802.11ac_20_Channel 165_Antenna 0

Conducted AVG output power
IEEE 802.11ac_40_Channel 151_Antenna 0



Conducted AVG output power
IEEE 802.11ac_40_Channel 159_Antenna 0



Conducted AVG output power
IEEE 802.11ac_80_Channel 155_Antenna 0



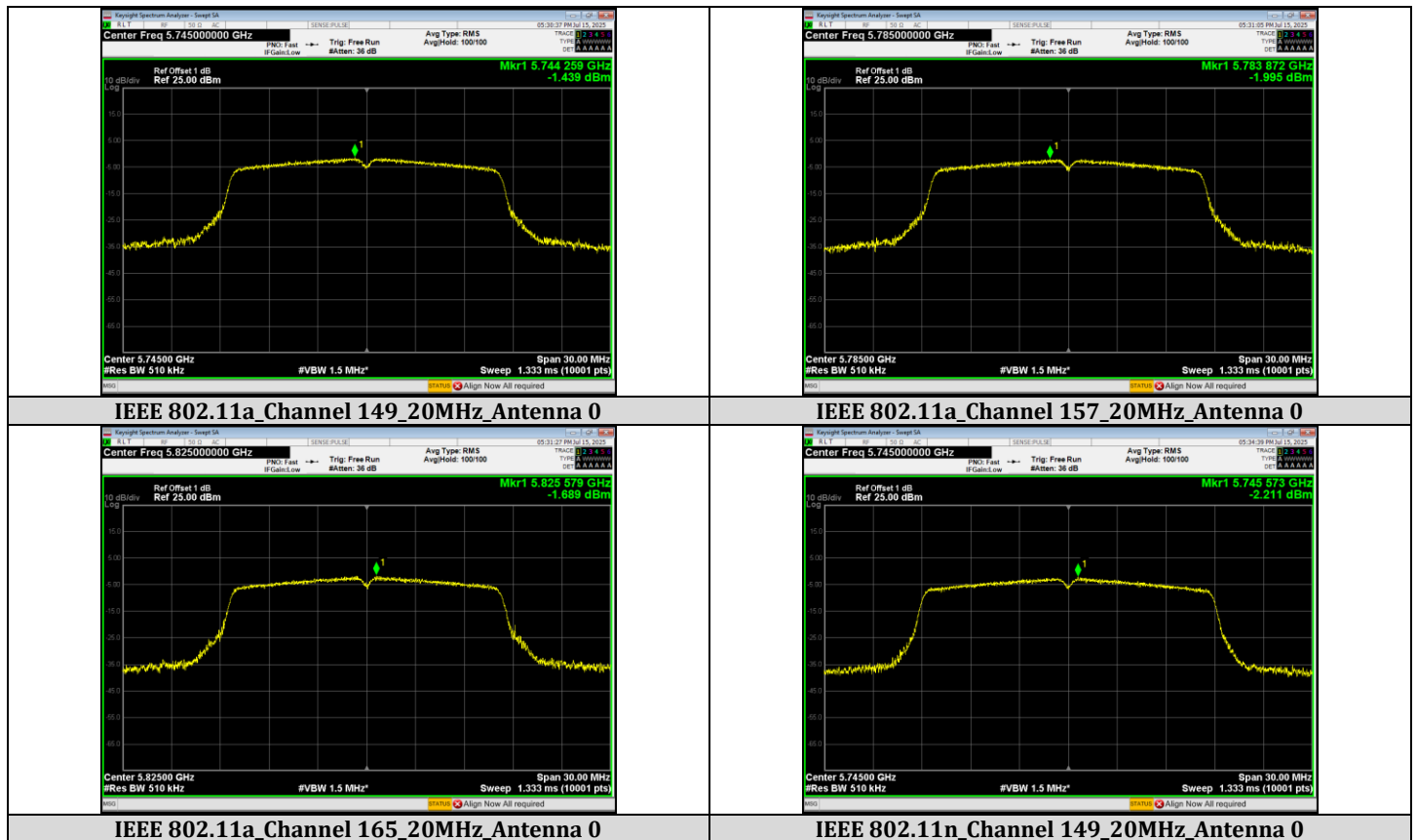
Peak Power Spectral Density

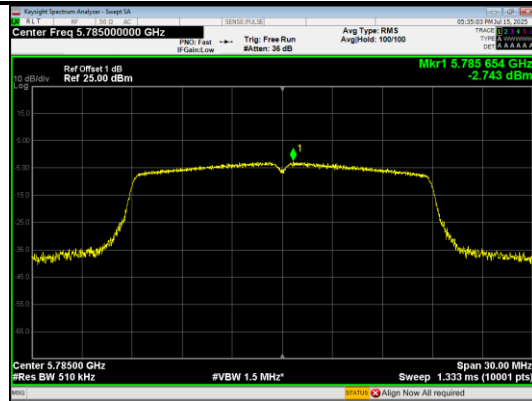
Test Result

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	-1.440	-1.400	30	PASS
	157	-2.000	-1.960		PASS
	165	-1.690	-1.650		PASS
IEEE 802.11n_20	149	-2.210	-2.159		PASS
	157	-2.740	-2.692		PASS
	165	-2.640	-2.592		PASS
IEEE 802.11n_40	151	-5.570	-5.380		PASS
	159	-5.800	-5.610		PASS
IEEE 802.11ac_20	149	-2.110	-2.060		PASS
	157	-2.870	-2.820		PASS
	165	-2.740	-2.690		PASS
IEEE 802.11ac_40	151	-5.400	-5.212		PASS
	159	-6.120	-5.932		PASS
IEEE 802.11ac_80	155	-12.699	-12.240		PASS

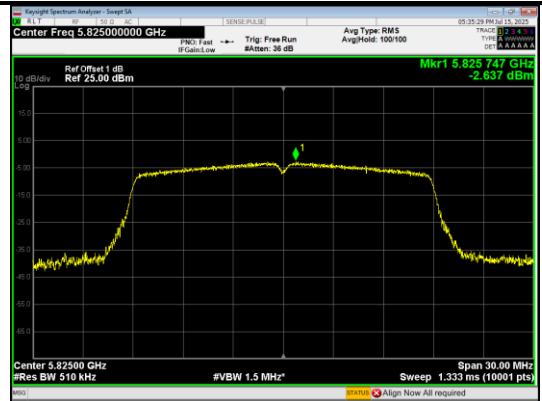
Note: Corr'd PSD = Meas PSD +Duty cycle Factor- BW factor($10 \cdot \log(510/500)$).

Test Graphs

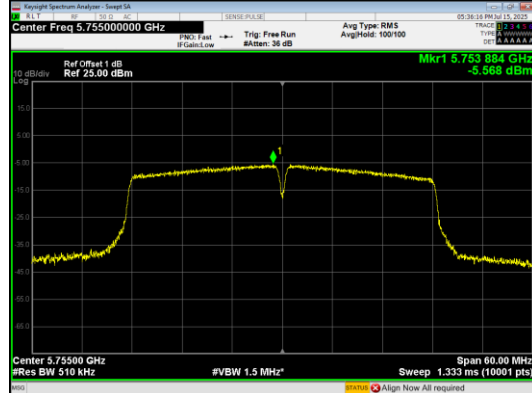




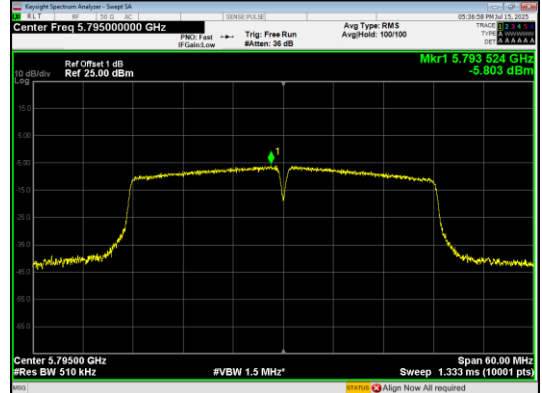
IEEE 802.11n_Channel 157_20MHz_Antenna 0



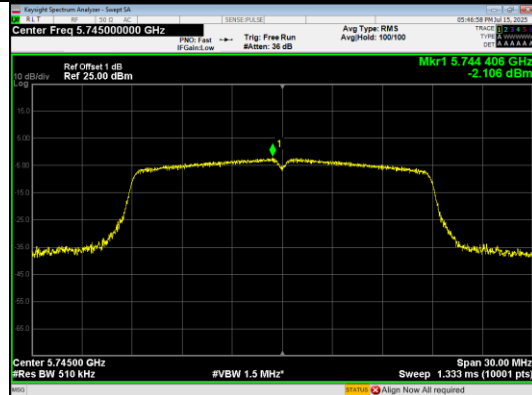
IEEE 802.11n_Channel 165_20MHz_Antenna 0



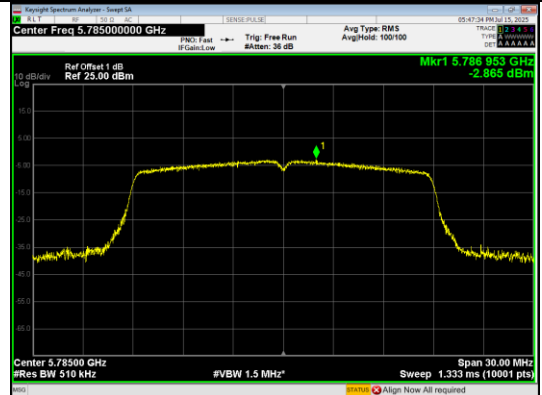
IEEE 802.11n_Channel 151_40MHz_Antenna 0



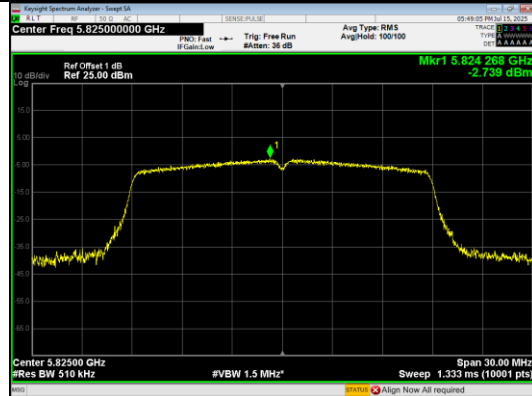
IEEE 802.11n_Channel 159_40MHz_Antenna 0



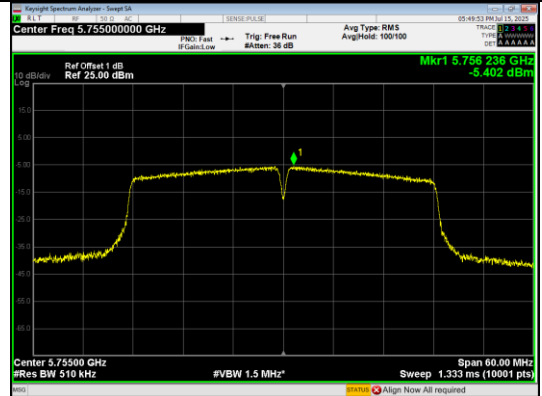
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



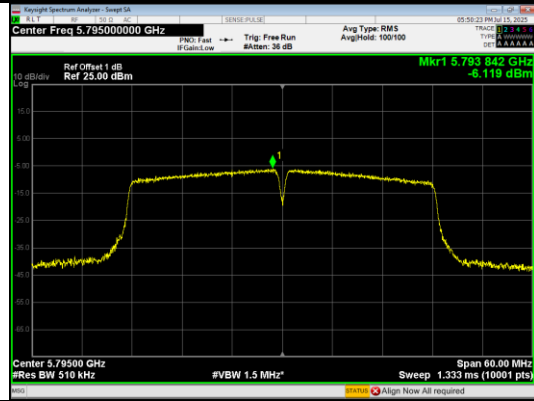
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



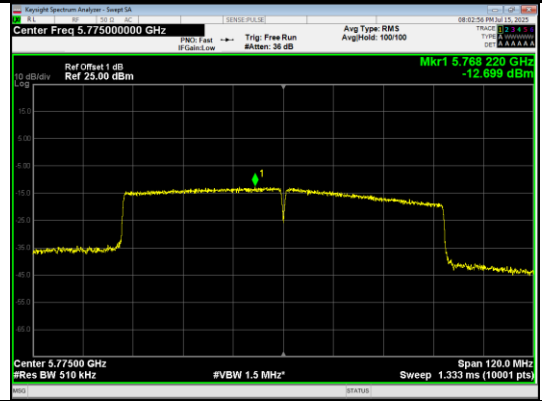
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



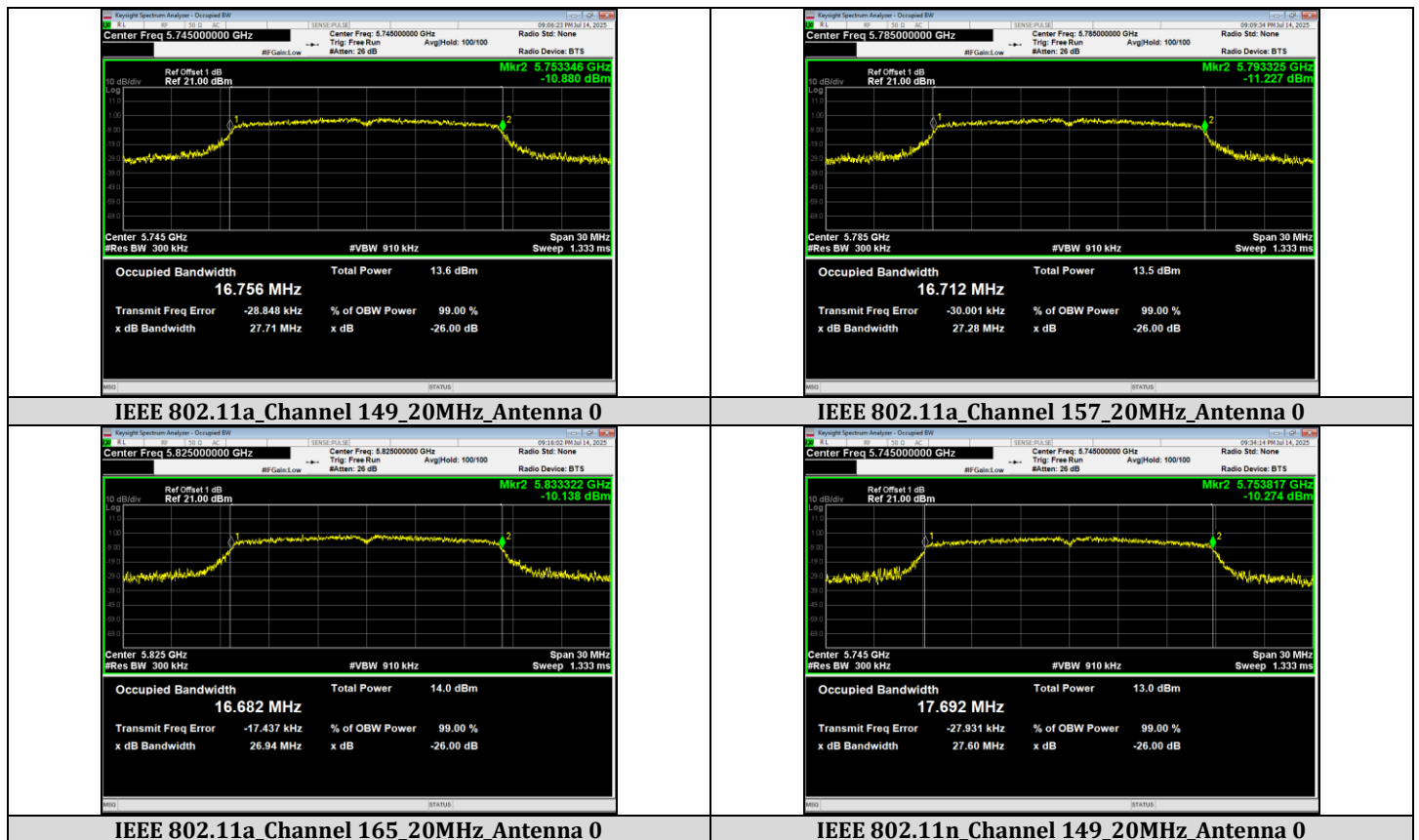
IEEE 802.11ac_Channel 159_40MHz_Antenna 0

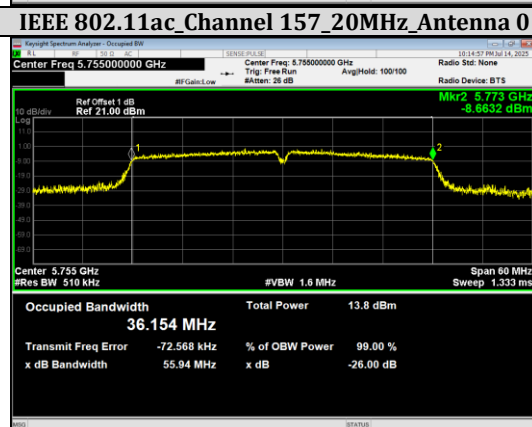
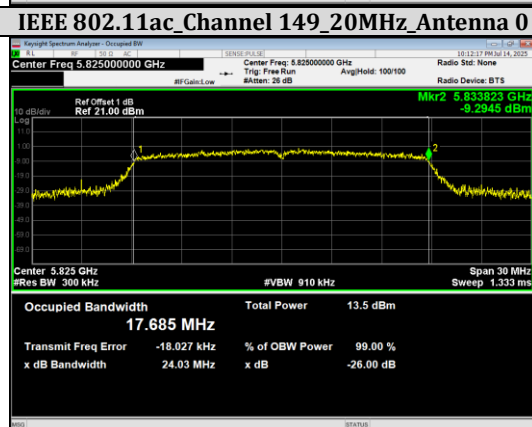
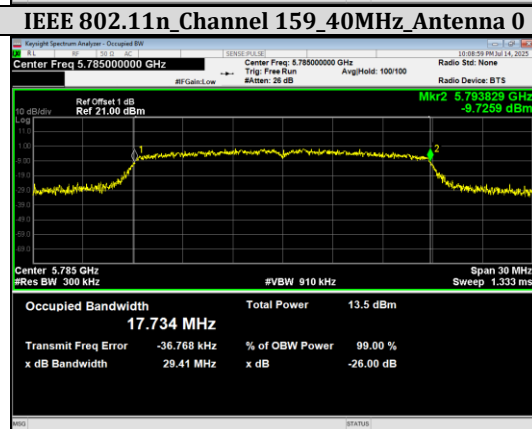
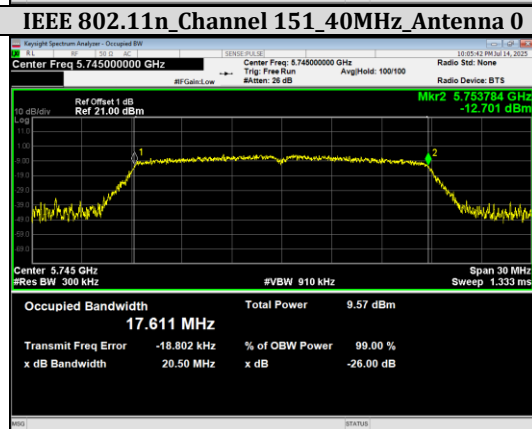
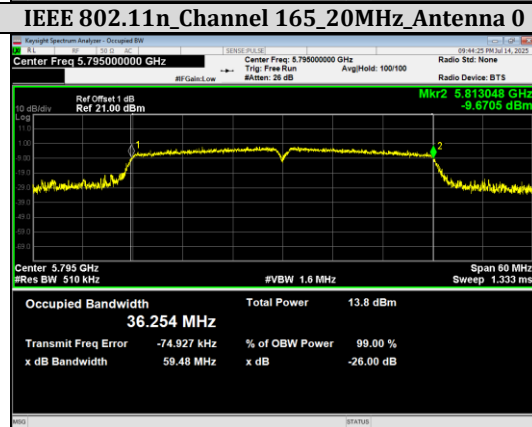
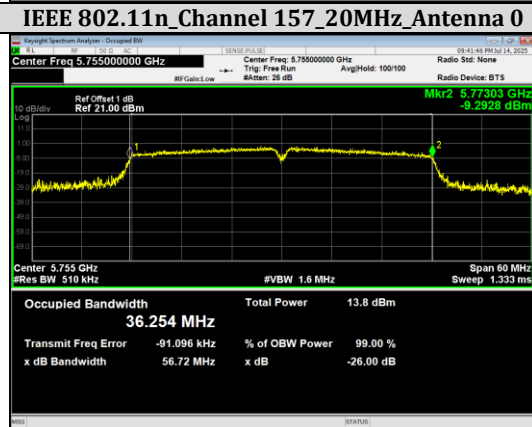
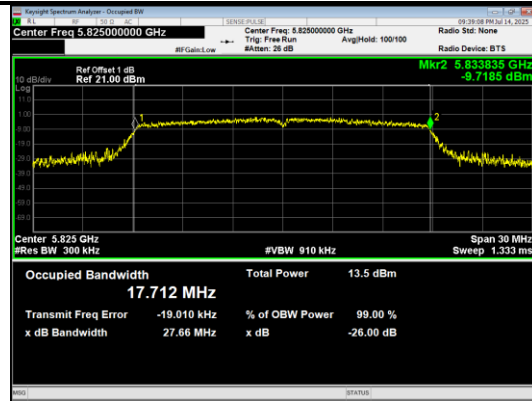
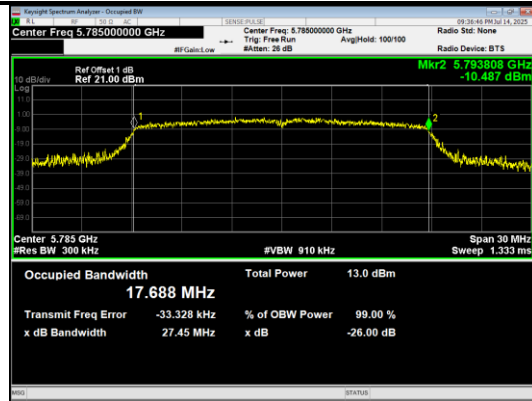


IEEE 802.11ac_Channel 155_80MHz_Antenna 0

**99% Bandwidth****Test Result**

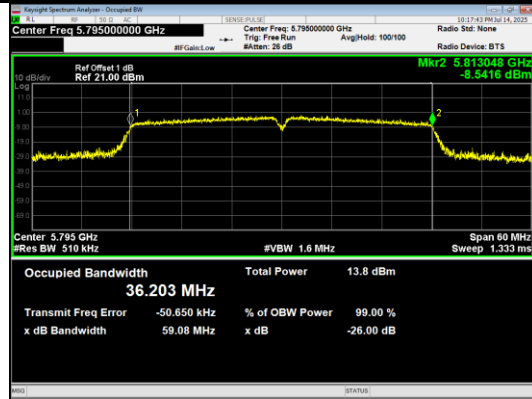
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	149	0	5745	16.756
	157		5785	16.712
	165		5825	16.682
IEEE 802.11n_20	149		5745	17.692
	157		5785	17.688
	165		5825	17.712
IEEE 802.11n_40	151		5755	36.254
	159		5795	36.254
IEEE 802.11ac_20	149		5745	17.611
	157		5785	17.734
	165		5825	17.685
IEEE 802.11ac_40	151		5755	36.154
	159		5795	36.203
IEEE 802.11ac_80	155		5775	75.531

Test Graphs

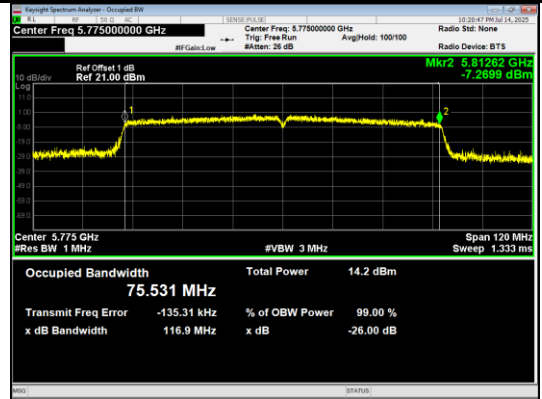


IEEE 802.11ac_Channel 165_20MHz_Antenna 0

IEEE 802.11ac_Channel 151_40MHz_Antenna 0



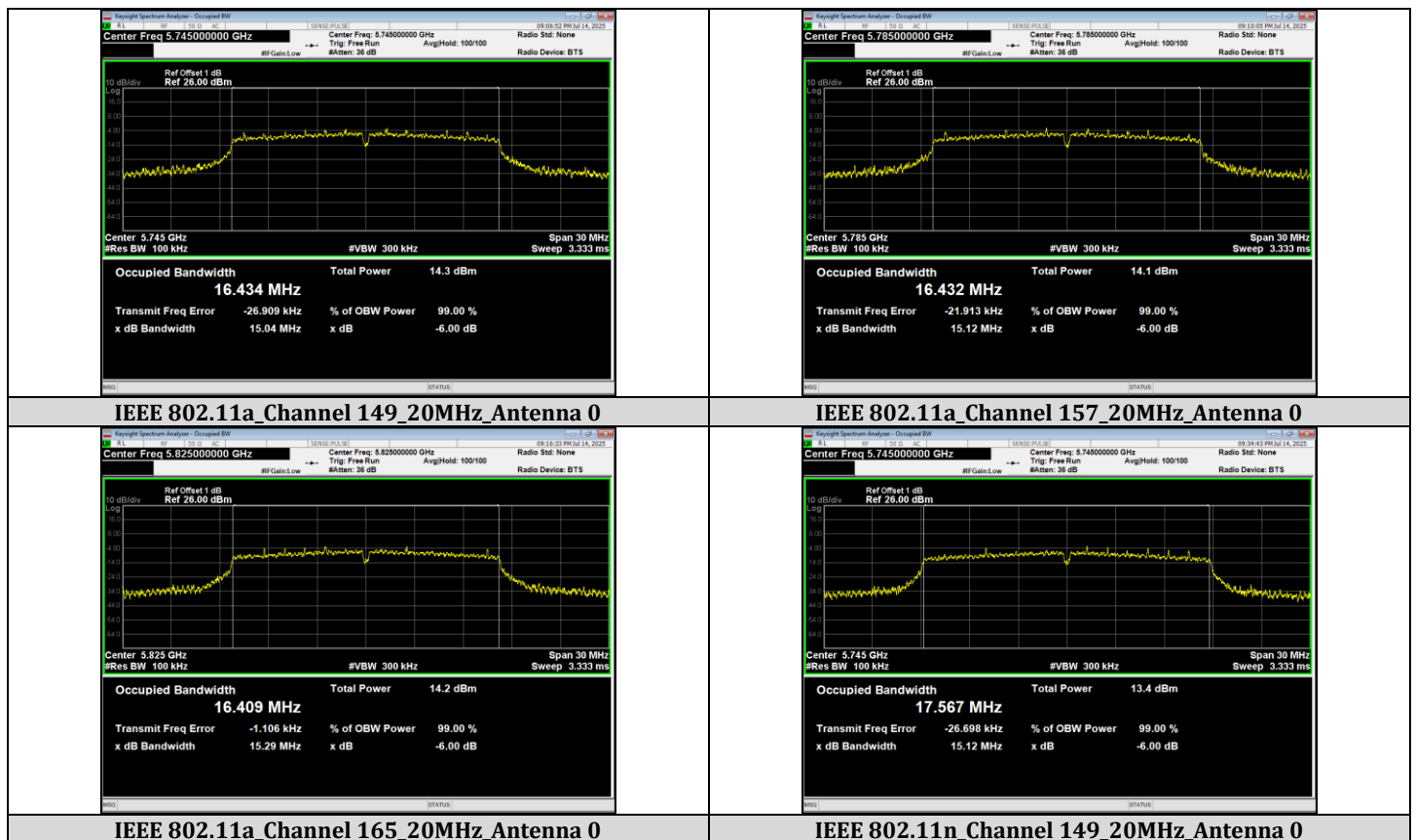
IEEE 802.11ac_Channel 159_40MHz_Antenna 0

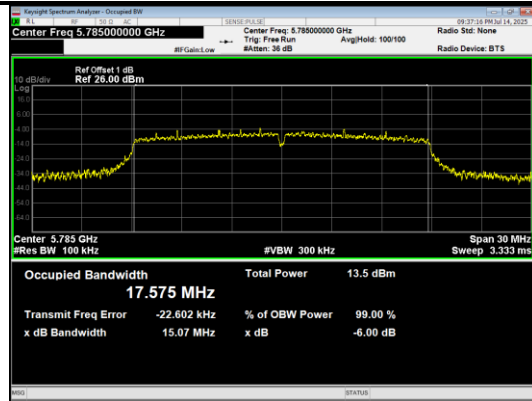


IEEE 802.11ac_Channel 155_80MHz_Antenna 0

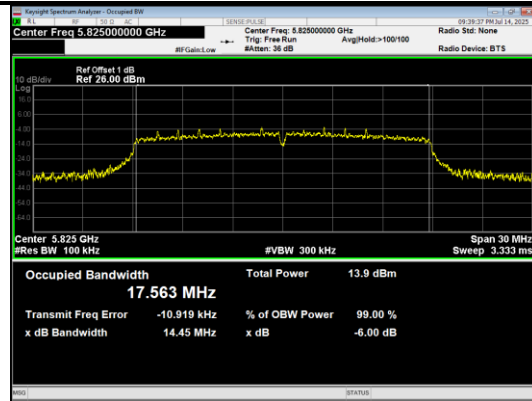
**6dB Bandwidth****Test Result**

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11a	149	0	5745	15.04	≥0.5	PASS
	157		5785	15.12		PASS
	165		5825	15.29		PASS
IEEE 802.11n_20	149		5745	15.12		PASS
	157		5785	15.07		PASS
	165		5825	14.45		PASS
IEEE 802.11n_40	151		5755	35.03		PASS
	159		5795	35.09		PASS
IEEE 802.11ac_20	149		5745	15.02		PASS
	157		5785	15.09		PASS
	165		5825	15.10		PASS
IEEE 802.11ac_40	151		5755	33.82		PASS
	159		5795	35.07		PASS
IEEE 802.11ac_80	155		5775	75.12		PASS

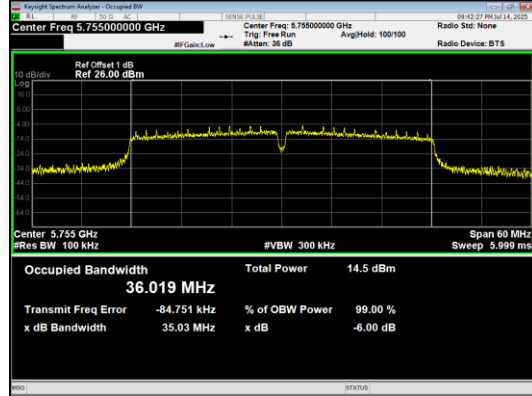
Test Graphs



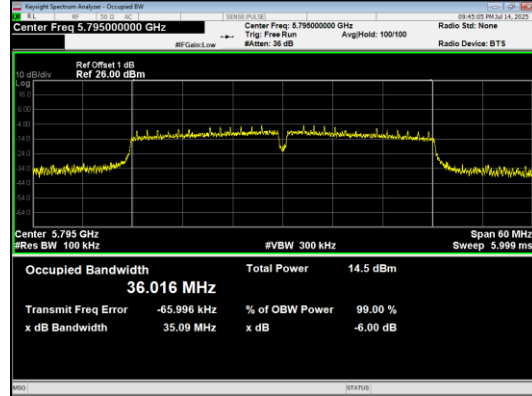
IEEE 802.11n_Channel 157_20MHz_Antenna 0



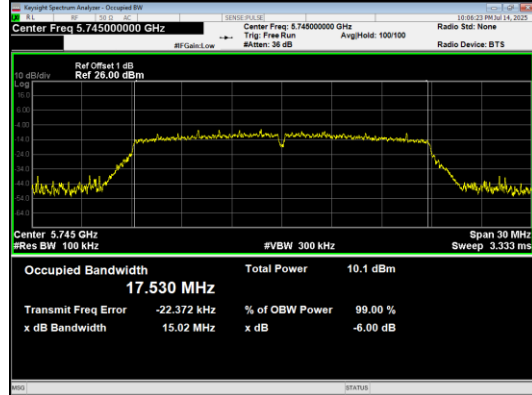
IEEE 802.11n_Channel 165_20MHz_Antenna 0



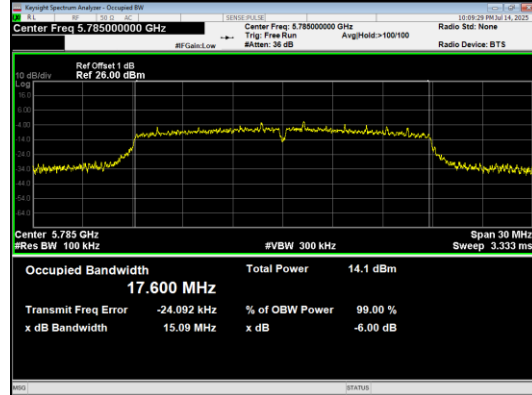
IEEE 802.11n_Channel 151_40MHz_Antenna 0



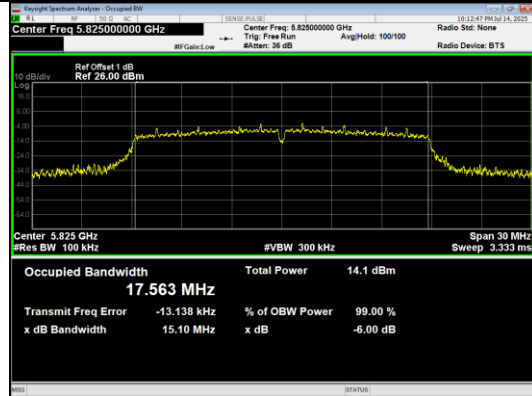
IEEE 802.11n_Channel 159_40MHz_Antenna 0



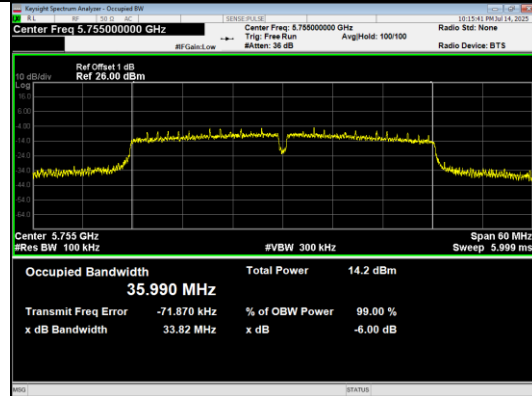
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



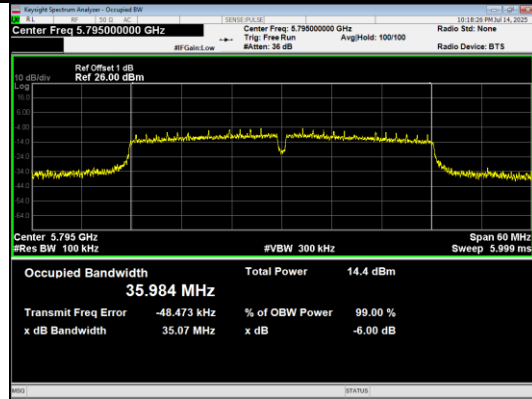
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



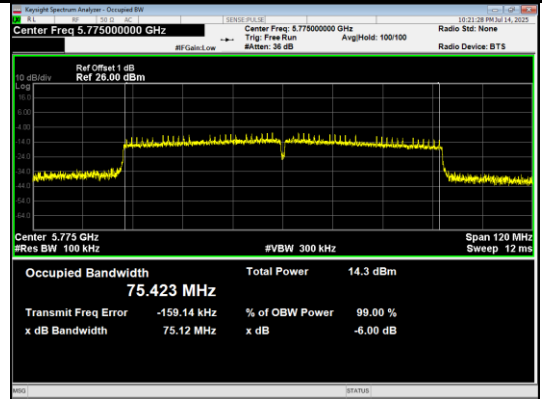
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



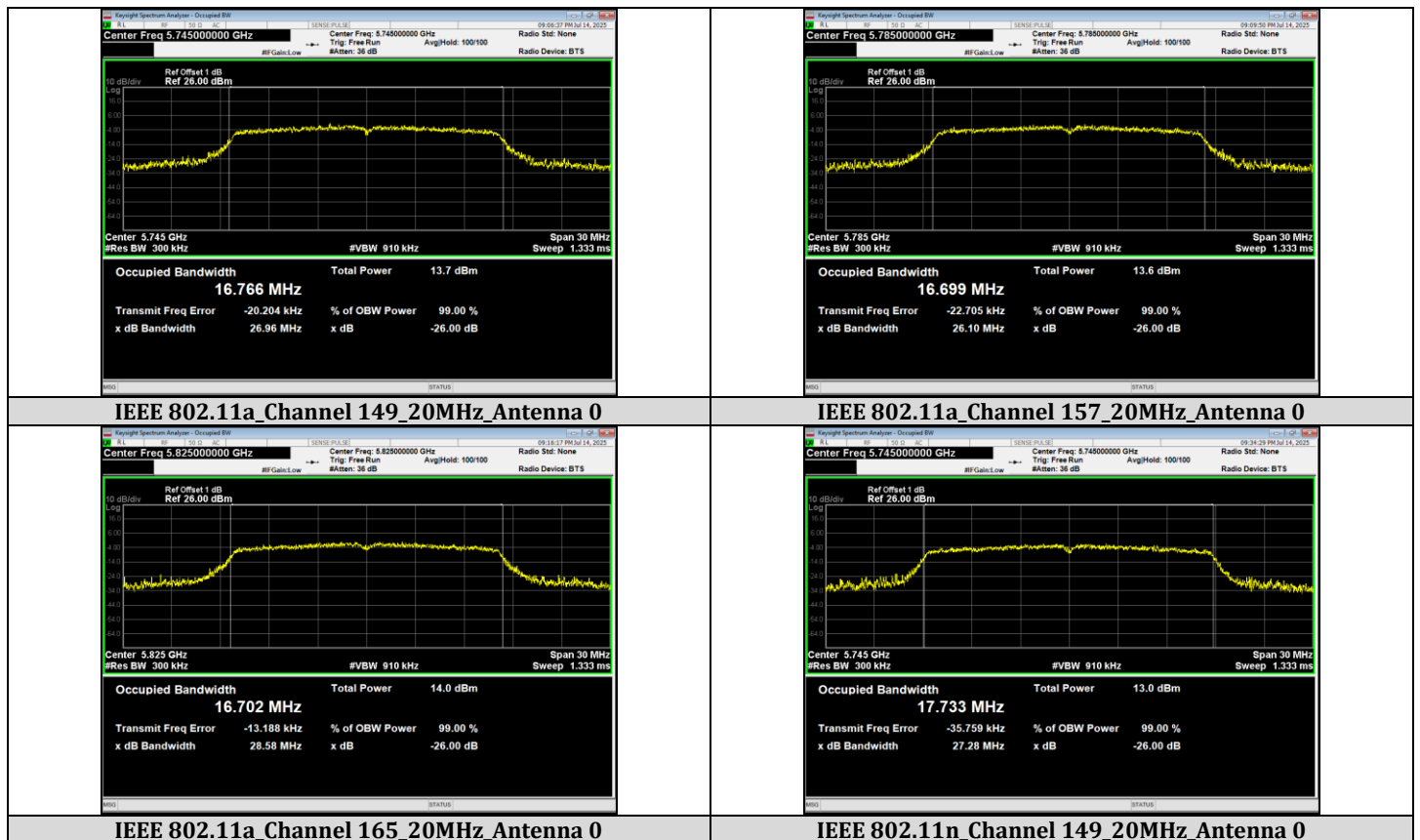
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

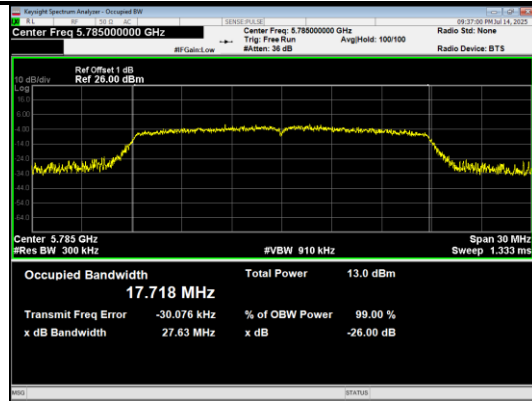
26dB Bandwidth

Test Result

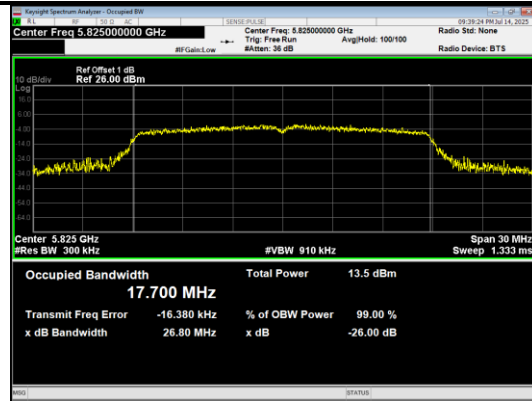
Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	149	0	5745	26.96	1.11
	157		5785	26.10	1.15
	165		5825	28.58	1.05
IEEE 802.11n_20	149		5745	27.28	1.1
	157		5785	27.63	1.09
	165		5825	26.80	1.12
IEEE 802.11n_40	151		5755	55.61	1.1
	159		5795	59.81	1.01
IEEE 802.11ac_20	149		5745	20.02	1.12
	157		5785	28.93	1.04
	165		5825	26.08	1.15
IEEE 802.11ac_40	151		5755	57.48	1.05
	159		5795	59.73	1.01
IEEE 802.11ac_80	155		5775	118.51	1.01

Test Graphs

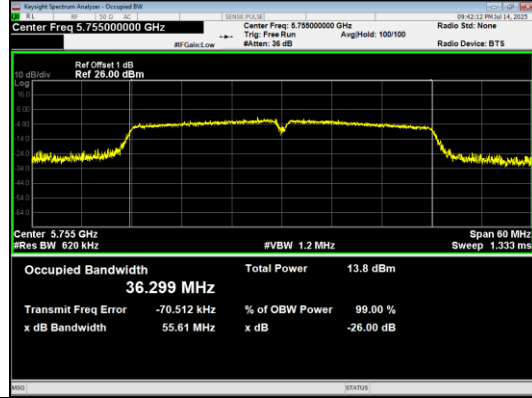




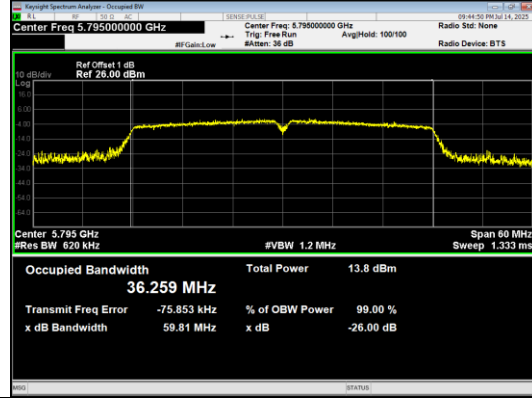
IEEE 802.11n_Channel 157_20MHz_Antenna 0



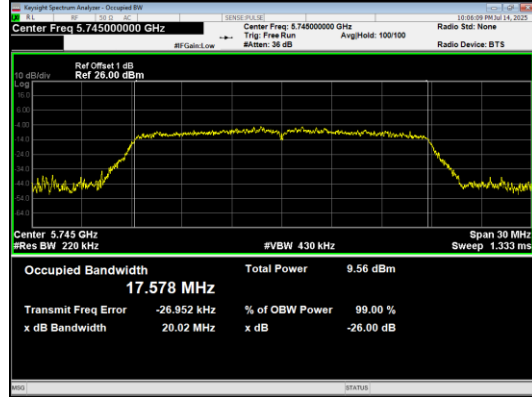
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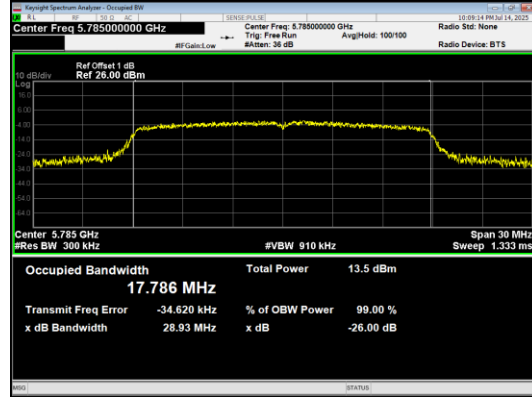
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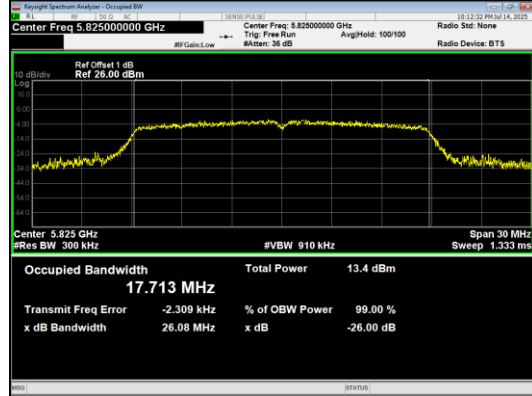
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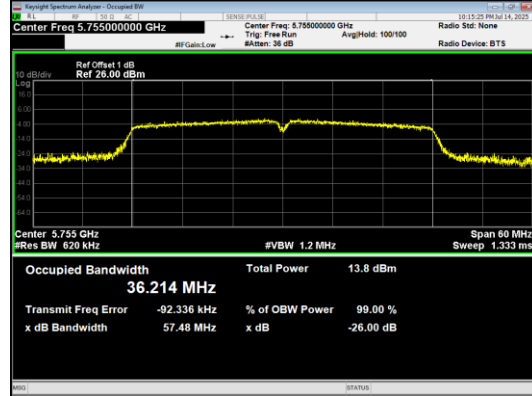
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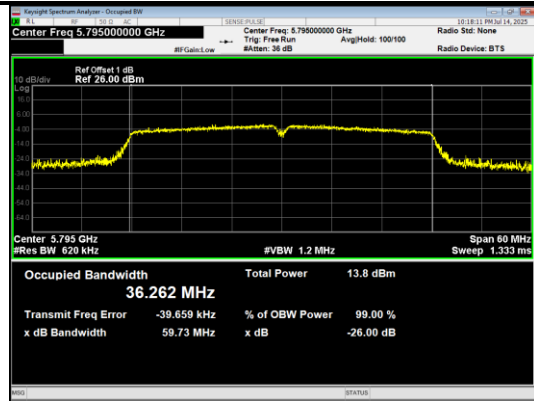
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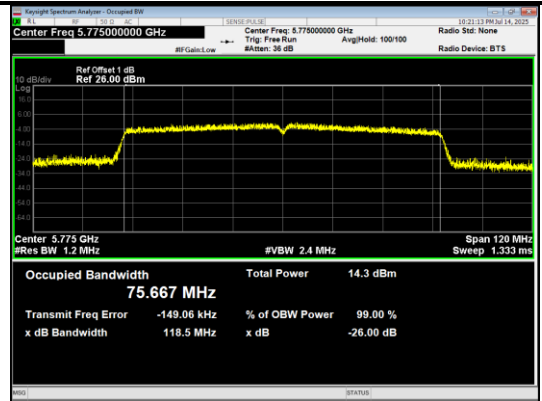
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



IEEE 802.11ac_Channel 155_80MHz_Antenna 0

Conducted Out Of Band Emission

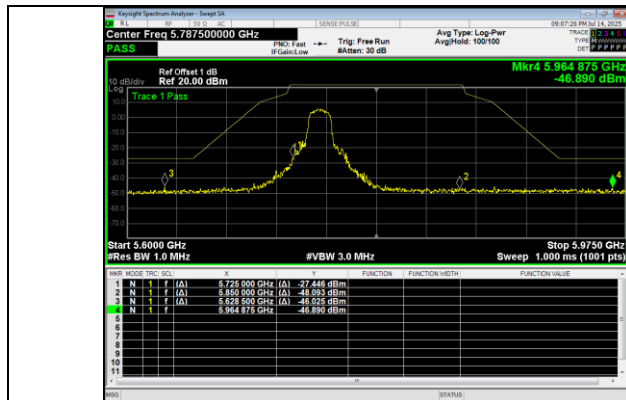
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11a	149	0	4595.41	-54.000	-27	-27.000	PASS
			5628.50	-46.025	-27	-19.025	PASS
			5725.00	-27.450	27	-54.450	PASS
			5850.00	-48.090	27	-75.090	PASS
			5964.88	-46.890	-27	-19.890	PASS
			11491.1	-53.810	-27	-26.810	PASS
	157		2453.34	-46.580	-27	-19.580	PASS
			5614.25	-47.196	-27	-20.196	PASS
			5725.00	-47.310	27	-74.310	PASS
			5850.00	-47.770	27	-74.770	PASS
			5945.38	-46.166	-27	-19.166	PASS
			24989.0	-54.710	-27	-27.710	PASS
	165		2459.53	-49.090	-27	-22.090	PASS
			5602.62	-47.339	-27	-20.339	PASS
			5725.00	-48.000	27	-75.000	PASS
			5850.00	-32.090	27	-59.090	PASS
			5936.75	-46.342	-27	-19.342	PASS
			24949.9	-53.620	-27	-26.620	PASS
IEEE 802.11n_20	149		5638.20	-55.480	-27	-28.480	PASS
			5646.88	-47.271	-27	-20.271	PASS
			5725.00	-27.810	27	-54.810	PASS
			5850.00	-48.320	27	-75.320	PASS
			5967.12	-46.910	-27	-19.910	PASS
			24983.8	-53.420	-27	-26.420	PASS
	157		4628.00	-54.470	-27	-27.470	PASS
			5604.50	-47.769	-27	-20.769	PASS
			5725.00	-47.040	27	-74.040	PASS
			5850.00	-47.960	27	-74.960	PASS
			5942.38	-46.748	-27	-19.747	PASS
			24918.5	-54.320	-27	-27.320	PASS
	165		4660.18	-51.690	-27	-24.690	PASS
			5631.50	-48.155	-27	-21.155	PASS
			5725.00	-48.430	27	-75.430	PASS
			5850.00	-34.920	27	-61.920	PASS
			5931.20	-54.130	-27	-27.130	PASS
			5939.38	-45.344	-27	-18.344	PASS
IEEE 802.11n_40	151		3406.64	-35.230	-27	-8.230	PASS
			5651.00	-44.980	9.815	-18.720	PASS
			5725.00	-21.120	27	-48.120	PASS
			5850.00	-45.660	27	-72.660	PASS
			5925.50	-47.120	-27	-20.120	PASS
			24968.0	-53.980	-27	-26.980	PASS
	159		3519.18	-43.070	-27	-16.070	PASS
			5607.88	-46.935	-27	-19.935	PASS
			5725.00	-38.890	27	-65.890	PASS
			5850.00	-38.210	27	-65.210	PASS
			5927.86	-49.300	-27	-22.300	PASS
			5940.12	-45.398	-27	-18.398	PASS
IEEE 802.11ac_20	149		2473.58	-41.900	-27	-14.900	PASS
			5609.38	-46.307	-27	-19.308	PASS
			5725.00	-27.750	27	-54.750	PASS
			5850.00	-48.450	27	-75.450	PASS
			5953.62	-46.797	-27	-19.797	PASS
			24946.1	-52.650	-27	-25.650	PASS
	157		5626.25	-46.929	-27	-19.929	PASS

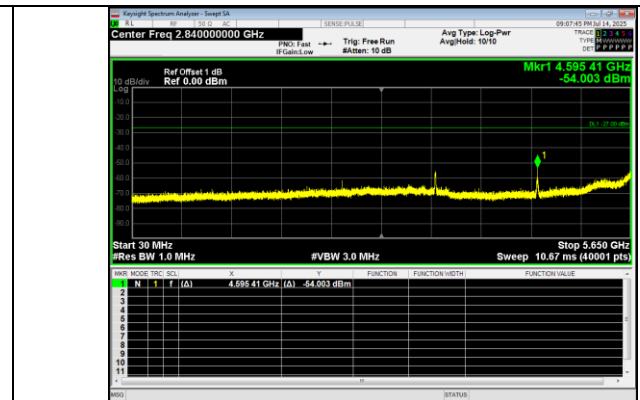


	165	5646.49	-53.630	-27	-26.630	PASS
		5725.00	-45.990	27	-72.990	PASS
		5850.00	-48.300	27	-75.300	PASS
		5937.88	-46.163	-27	-19.163	PASS
		24999.0	-53.510	-27	-26.510	PASS
		4660.04	-52.480	-27	-25.480	PASS
		5645.00	-47.357	-27	-20.357	PASS
		5725.00	-48.550	27	-75.550	PASS
		5850.00	-31.400	27	-58.400	PASS
		5957.38	-45.857	-27	-18.857	PASS
IEEE 802.11ac_40	151	24350.5	-53.680	-27	-26.680	PASS
		5627.38	-46.120	-27	-19.120	PASS
		5646.63	-52.160	-27	-25.160	PASS
		5725.00	-22.810	27	-49.810	PASS
		5850.00	-48.020	27	-75.020	PASS
	159	5940.50	-45.420	-27	-18.420	PASS
		24983.3	-53.860	-27	-26.860	PASS
		4636.29	-53.560	-27	-26.560	PASS
		5642.38	-46.897	-27	-19.897	PASS
		5725.00	-44.270	27	-71.270	PASS
IEEE 802.11ac_80	155	5850.00	-37.020	27	-64.020	PASS
		5929.25	-45.532	-27	-18.532	PASS
		5929.29	-52.970	-27	-25.970	PASS
		5639.38	-38.837	-27	-11.837	PASS
		5649.16	-41.270	-27	-14.270	PASS
		5725.00	-24.810	27	-51.810	PASS
		5850.00	-31.090	27	-58.090	PASS
		5927.38	-42.880	-27	-15.880	PASS
		5946.88	-40.853	-27	-13.853	PASS

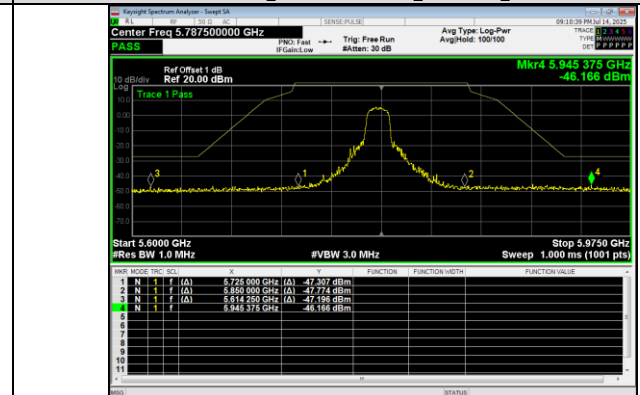
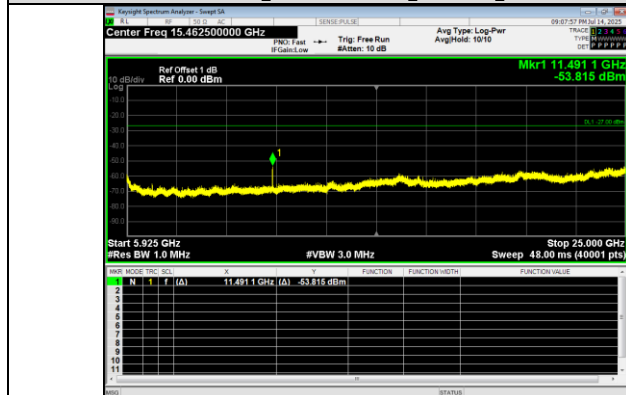
Test Graphs



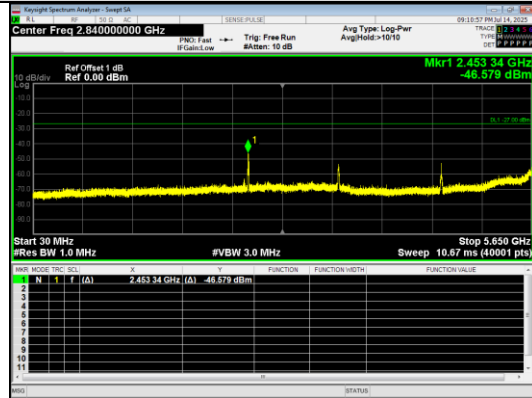
Out Of Band Emission
IEEE 802.11a_Channel 149_20MHz_Antenna 0



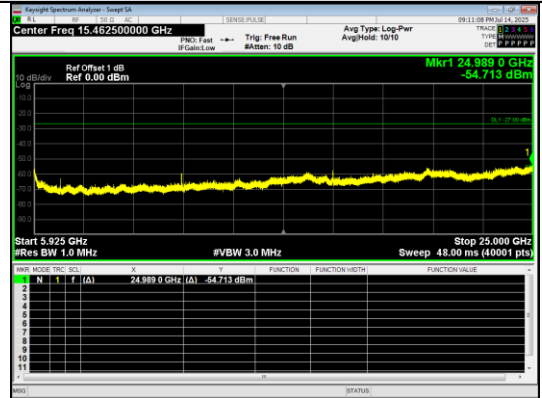
Spurious Emission:30.0~5650 MHz
IEEE 802.11a_Channel 149_20MHz_Antenna 0



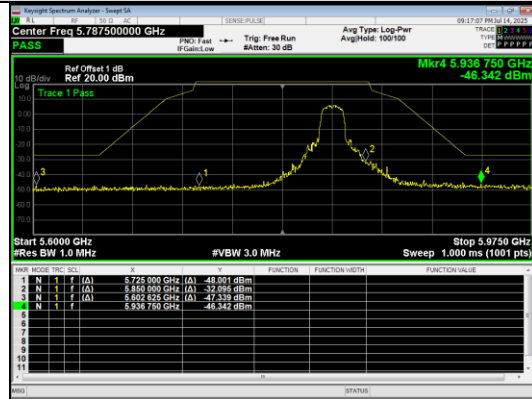
Spurious Emission:5925~25000.0 MHz IEEE 802.11a_Channel 149_20MHz_Antenna 0



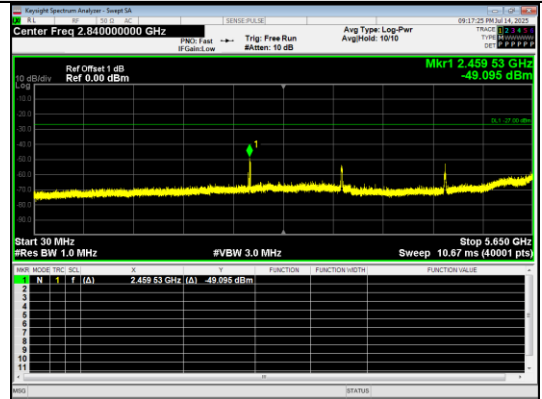
Out Of Band Emission IEEE 802.11a_Channel 157_20MHz_Antenna 0



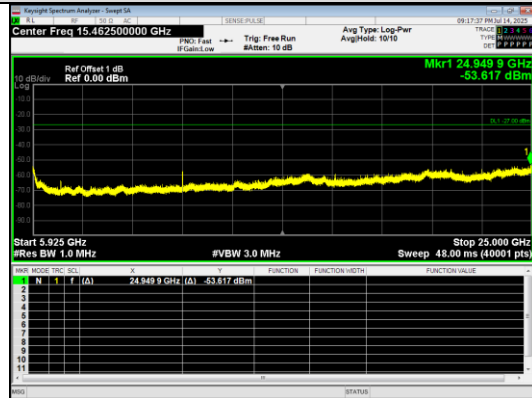
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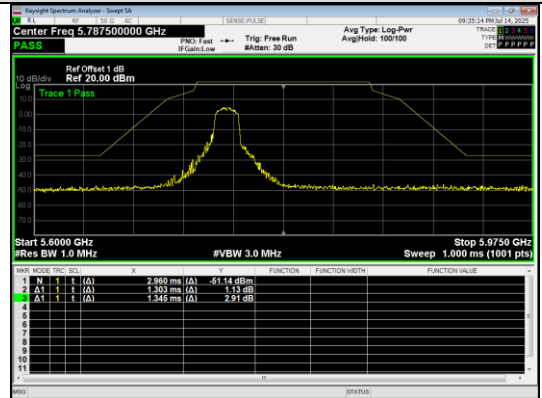
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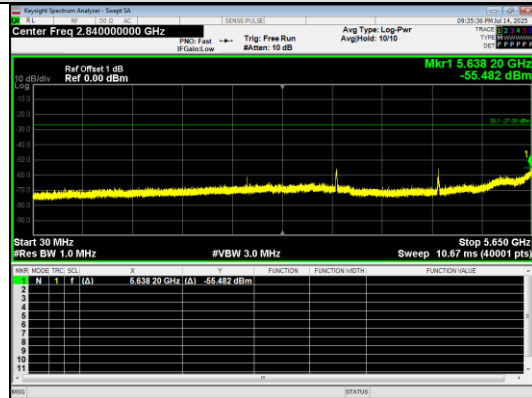
Out Of Band Emission IEEE 802.11a_Channel 165_20MHz_Antenna 0



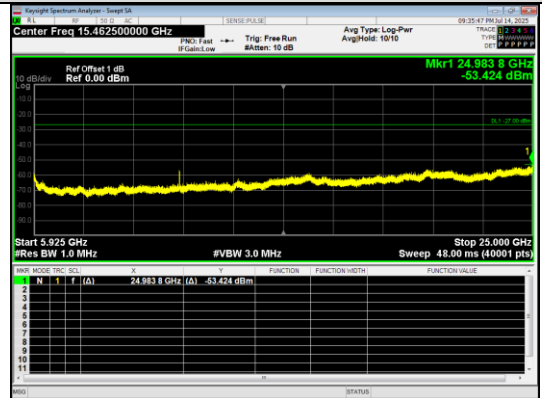
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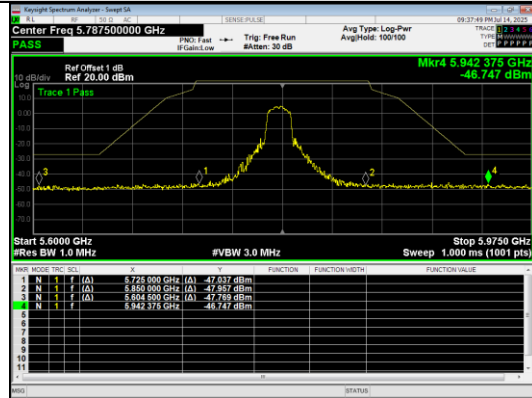
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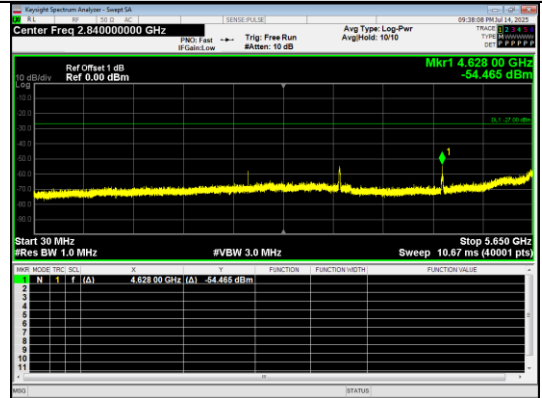
Out Of Band Emission IEEE 802.11n_Channel 149_20MHz_Antenna 0



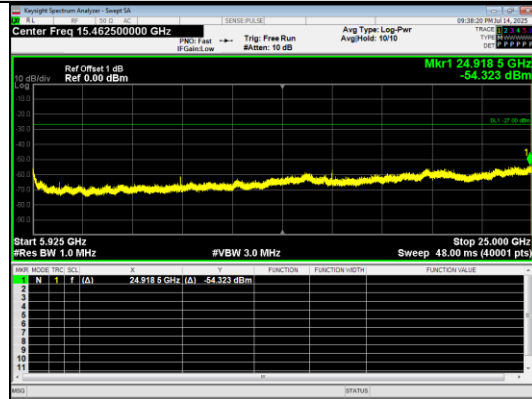
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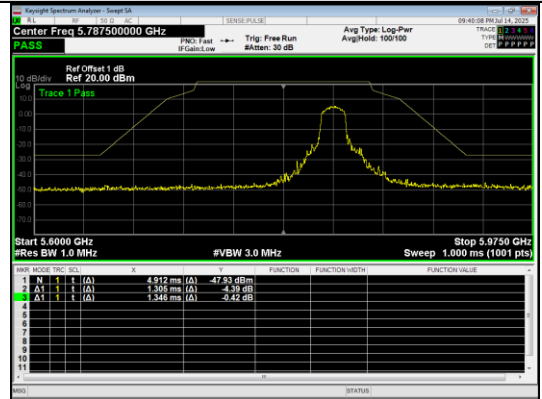
Spurious Emission:5925~25000.0 MHz IEEE 802.11n_Channel 149_20MHz_Antenna 0



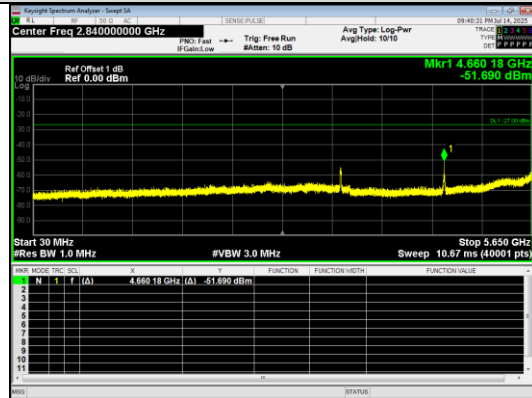
Out Of Band Emission IEEE 802.11n_Channel 157_20MHz_Antenna 0



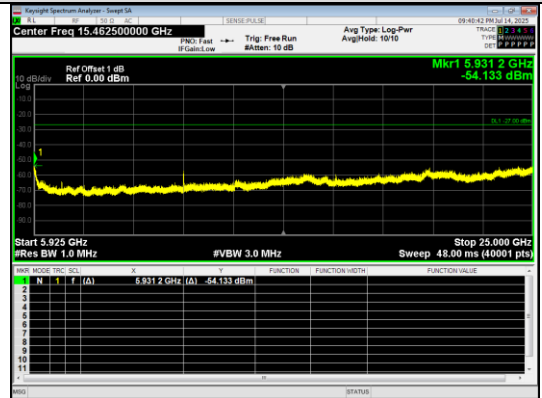
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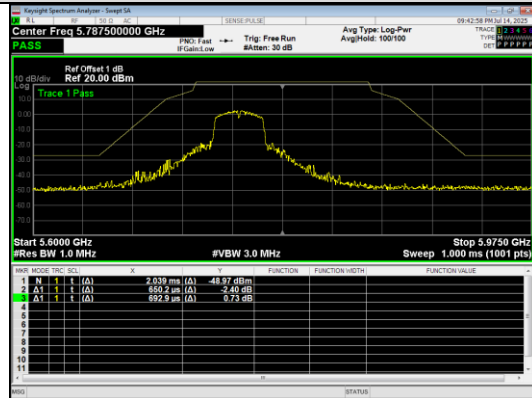
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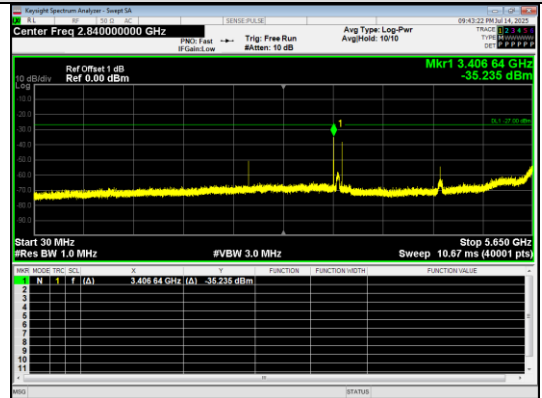
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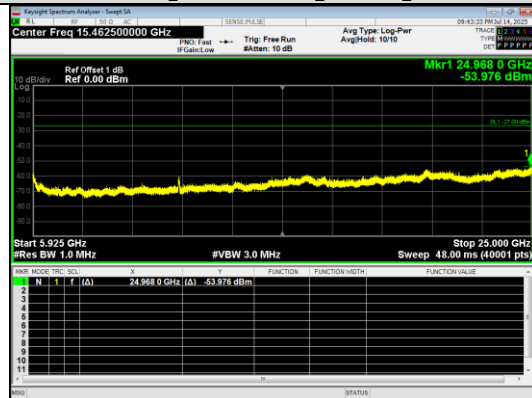
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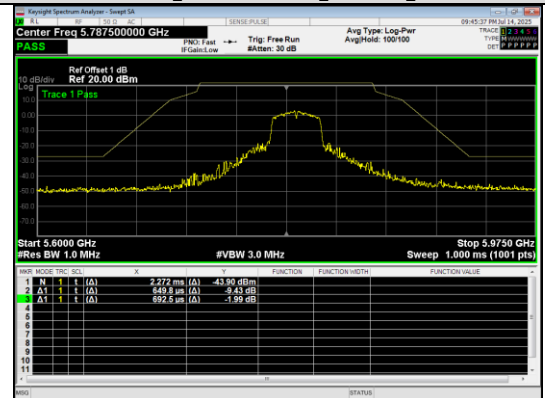
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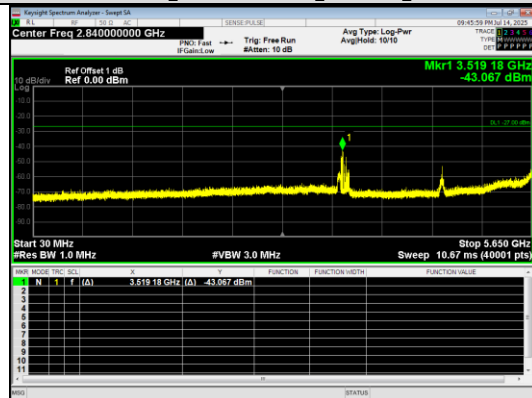
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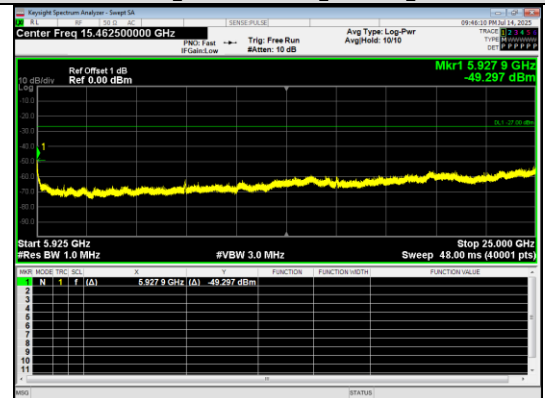
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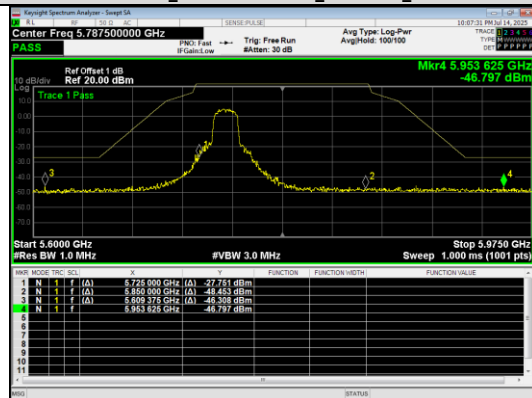
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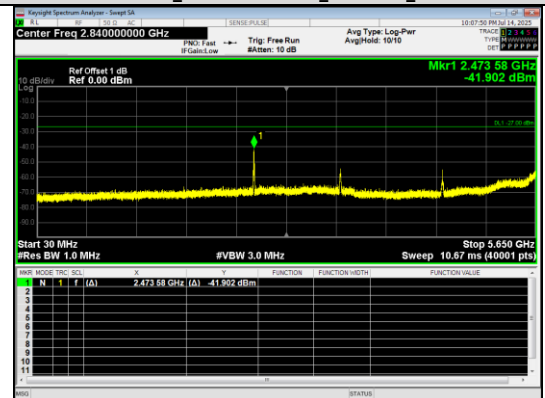
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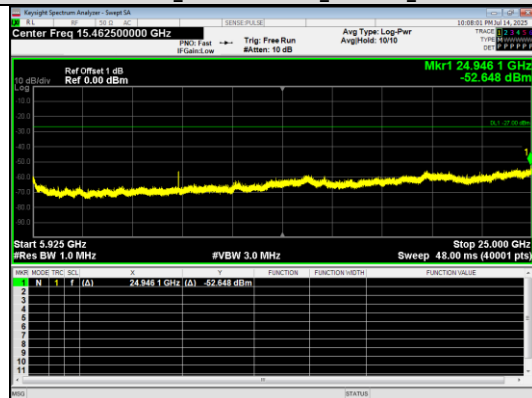
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Spurious Emission:5925~25000.0 MHz IEEE 802.11n_Channel 159_40MHz_Antenna 0



Out Of Band Emission IEEE 802.11ac_Channel 149_20MHz_Antenna 0



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

