

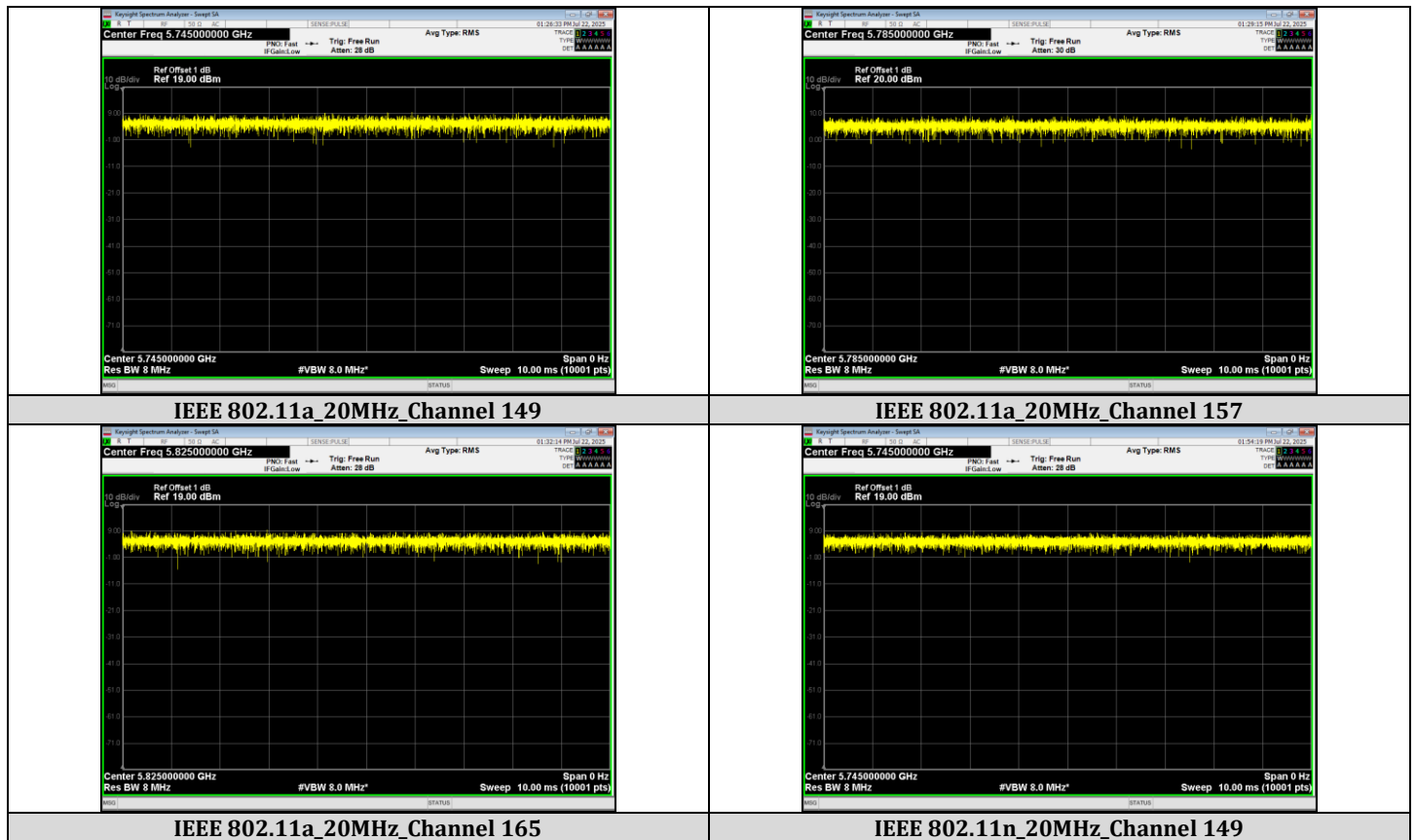
Appendix RF test data for 5G WIFI_NII band 3

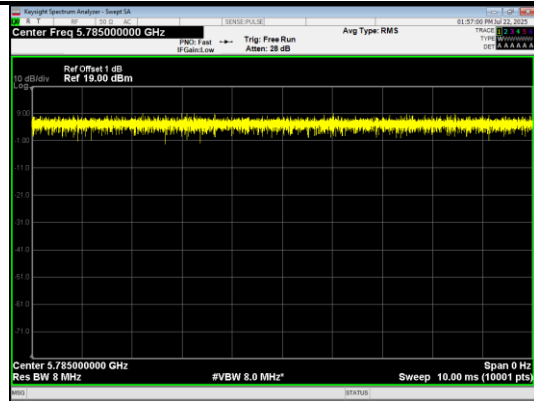


Duty Cycle Test Result

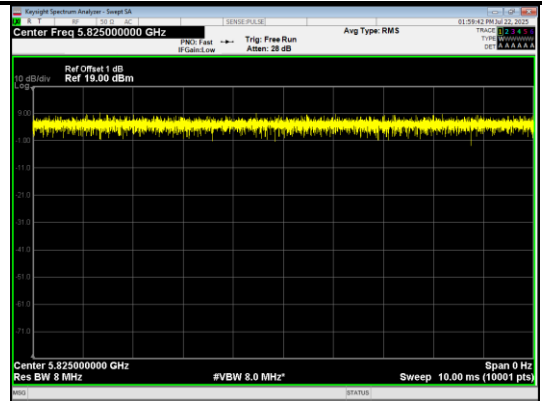
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11a	6	149	1	10.000	10.000	100	1	0.0	0.1000
		157		10.000	10.000	100	1	0.0	0.1000
		165		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11n_20	149	10.000		10.000	100	1	0.0	0.1000	
	157	10.000		10.000	100	1	0.0	0.1000	
	165	10.000		10.000	100	1	0.0	0.1000	
IEEE 802.11n_40	151	10.000		10.000	100	1	0.0	0.1000	
	159	10.000		10.000	100	1	0.0	0.1000	
IEEE 802.11ac_20	MCS 0	149		10.000	10.000	100	1	0.0	0.1000
		157		10.000	10.000	100	1	0.0	0.1000
		165		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11ac_40		151		10.000	10.000	100	1	0.0	0.1000
		159		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11ac_80		155		10.000	10.000	100	1	0.0	0.1000

Test Graphs

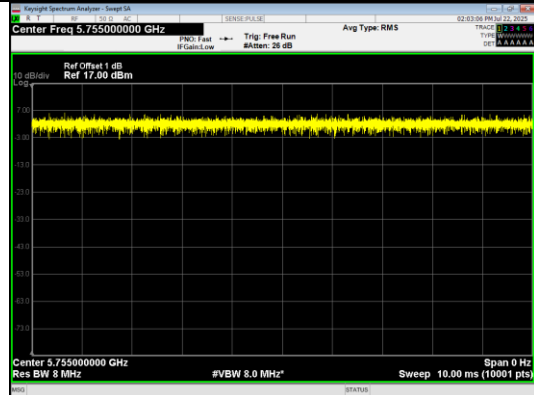




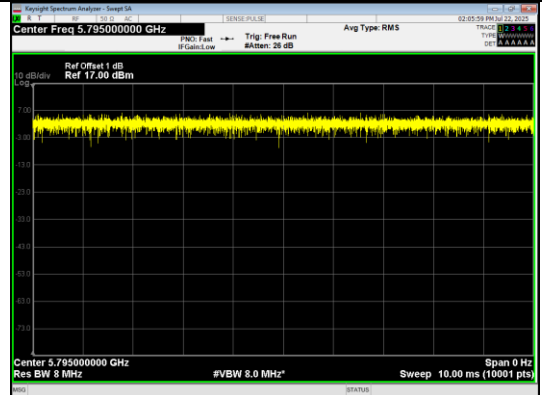
IEEE 802.11n 20MHz_Channel 157



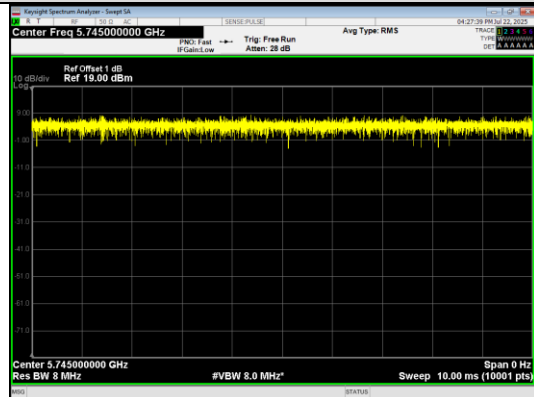
IEEE 802.11n 20MHz_Channel 165



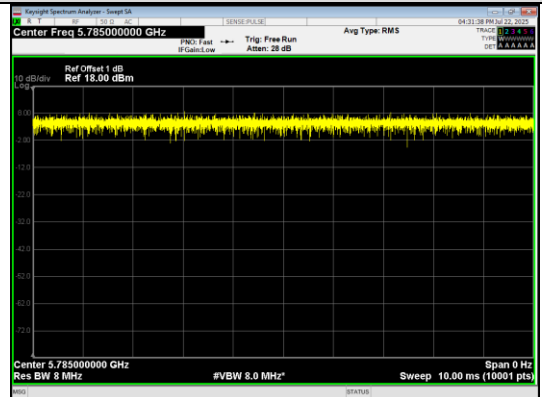
IEEE 802.11n 40MHz_Channel 151



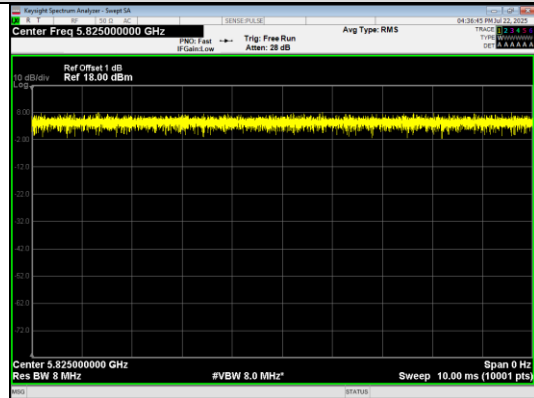
IEEE 802.11n 40MHz_Channel 159



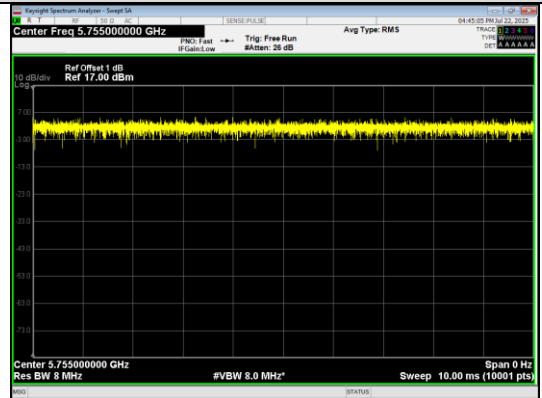
IEEE 802.11ac 20MHz_Channel 149



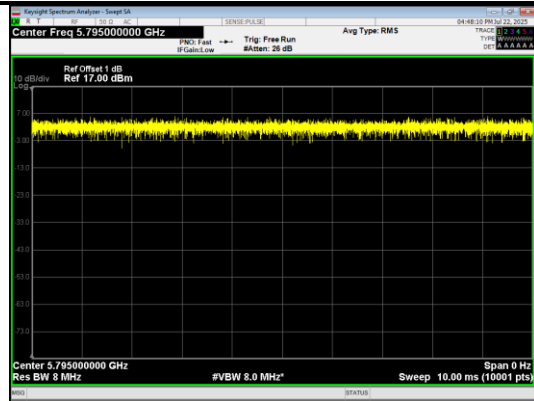
IEEE 802.11ac 20MHz_Channel 157



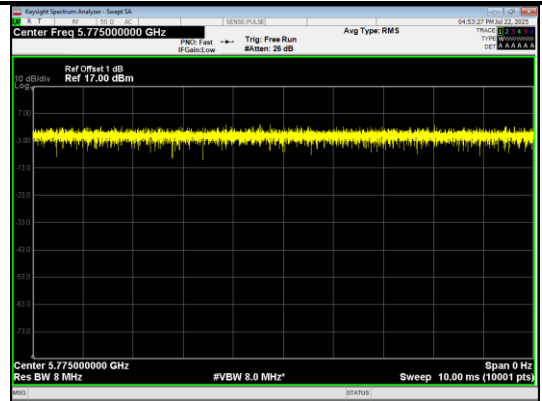
IEEE 802.11ac 20MHz_Channel 165



IEEE 802.11ac 40MHz_Channel 151



IEEE 802.11ac_40MHz_Channel 159



IEEE 802.11ac_80MHz_Channel 155

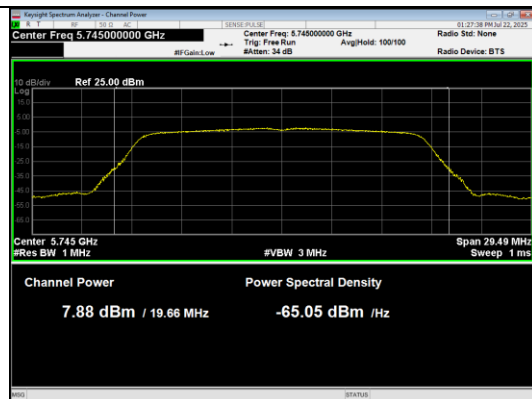


Conducted Output Power

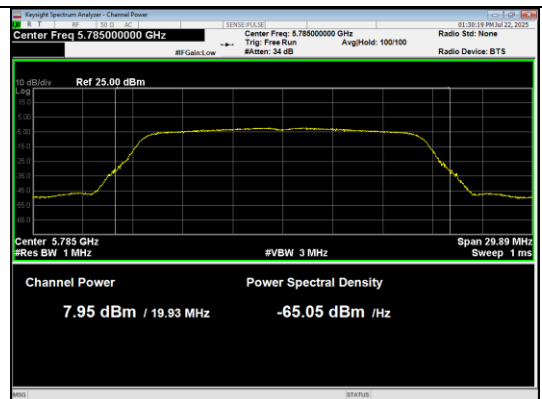
Conducted output power

Mode	Channel	Ant. 0 (dBm)	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	149	7.88	7.88	≤30	PASS
	157	7.95	7.95	≤30	PASS
	165	7.81	7.81	≤30	PASS
IEEE 802.11n_20	149	7.87	7.87	≤30	PASS
	157	7.91	7.91	≤30	PASS
	165	7.76	7.76	≤30	PASS
IEEE 802.11n_40	151	7.83	7.83	≤30	PASS
	159	7.90	7.9	≤30	PASS
IEEE 802.11ac_20	149	7.22	7.22	≤30	PASS
	157	7.20	7.2	≤30	PASS
	165	7.13	7.13	≤30	PASS
IEEE 802.11ac_40	151	7.28	7.28	≤30	PASS
	159	7.66	7.66	≤30	PASS
IEEE 802.11ac_80	155	7.64	7.64	≤30	PASS

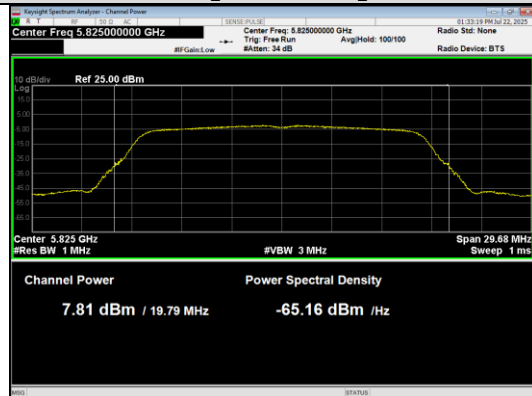
Note: Corr'd Value= Ant. 0 (dBm)+Duty cycle Factor.



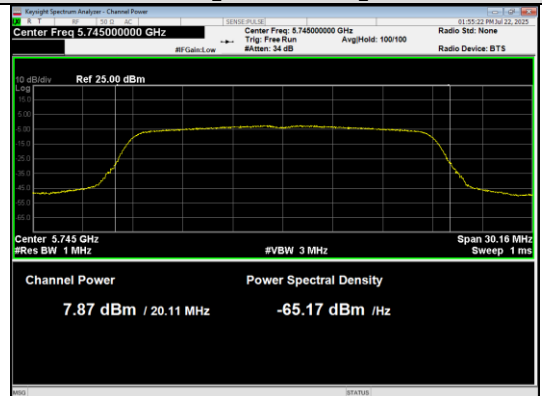
Conducted AVG output power
IEEE 802.11a_Channel 149_Antenna 0



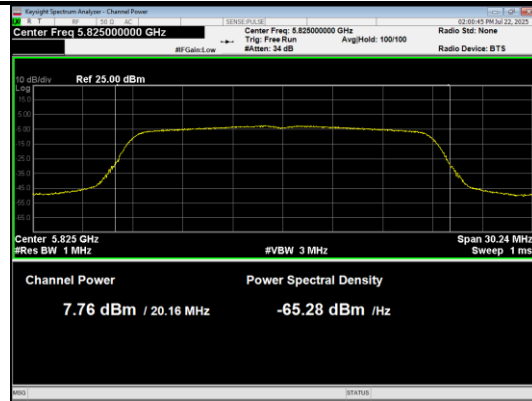
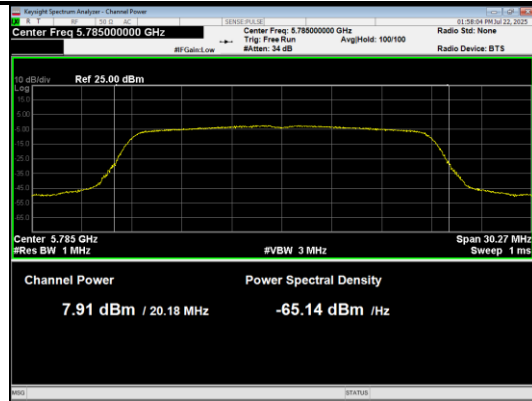
Conducted AVG output power
IEEE 802.11a_Channel 157_Antenna 0



Conducted AVG output power
IEEE 802.11a_Channel 165_Antenna 0

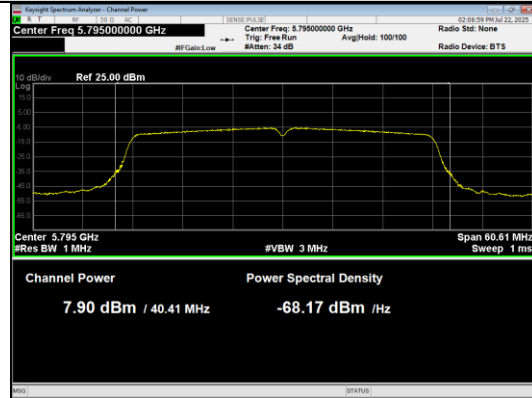
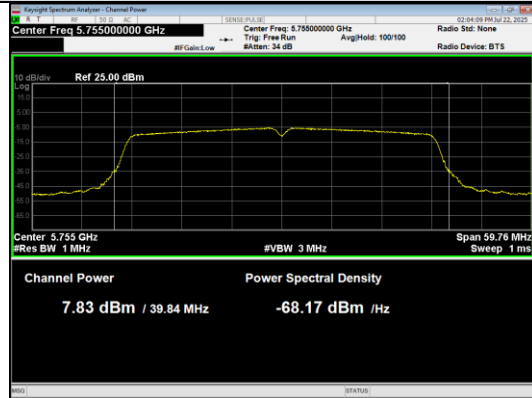


Conducted AVG output power
IEEE 802.11n_20_Channel 149_Antenna 0



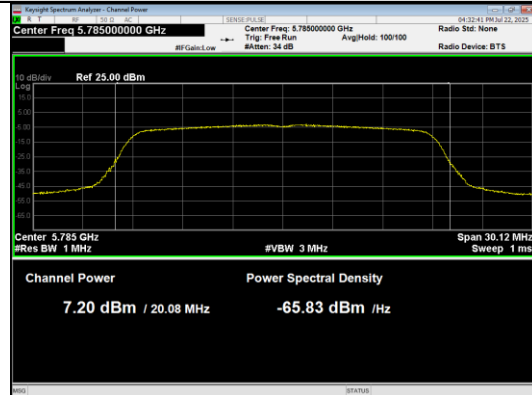
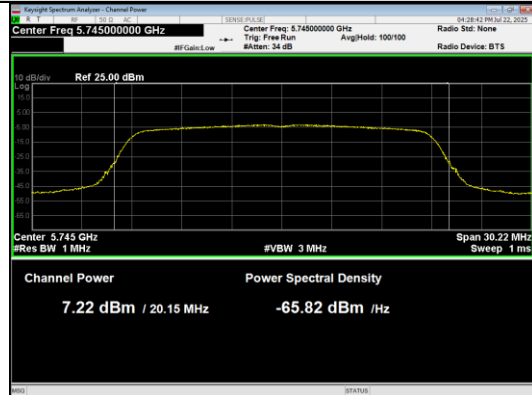
Conducted AVG output power
IEEE 802.11n_20_Channel 157_Antenna 0

Conducted AVG output power
IEEE 802.11n_20_Channel 165_Antenna 0



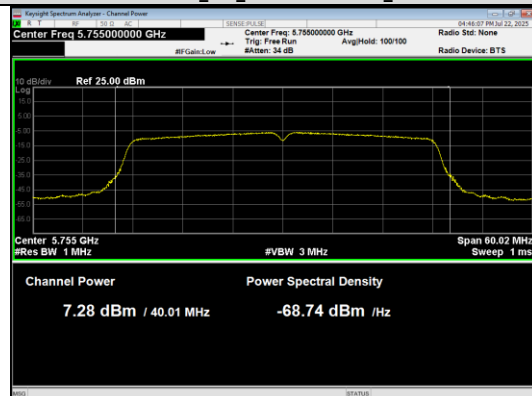
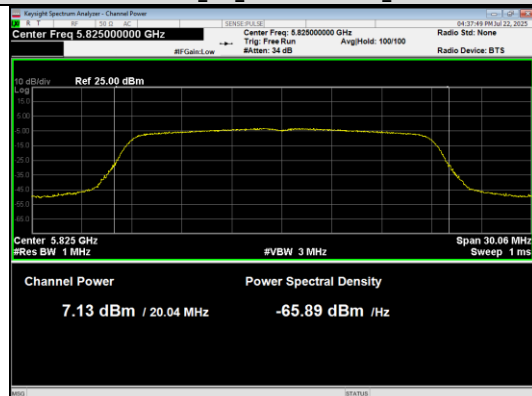
Conducted AVG output power
IEEE 802.11n_40_Channel 151_Antenna 0

Conducted AVG output power
IEEE 802.11n_40_Channel 159_Antenna 0



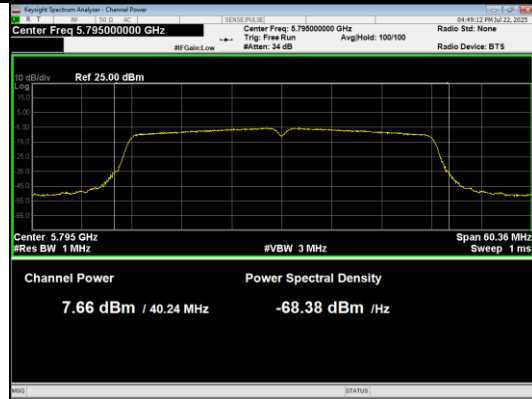
Conducted AVG output power
IEEE 802.11ac_20_Channel 149_Antenna 0

Conducted AVG output power
IEEE 802.11ac_20_Channel 157_Antenna 0

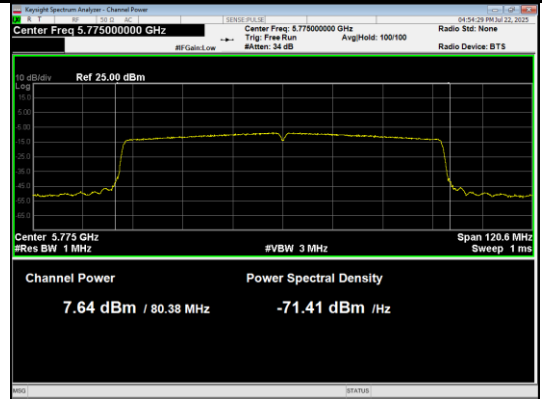


Conducted AVG output power
IEEE 802.11ac_20_Channel 165_Antenna 0

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

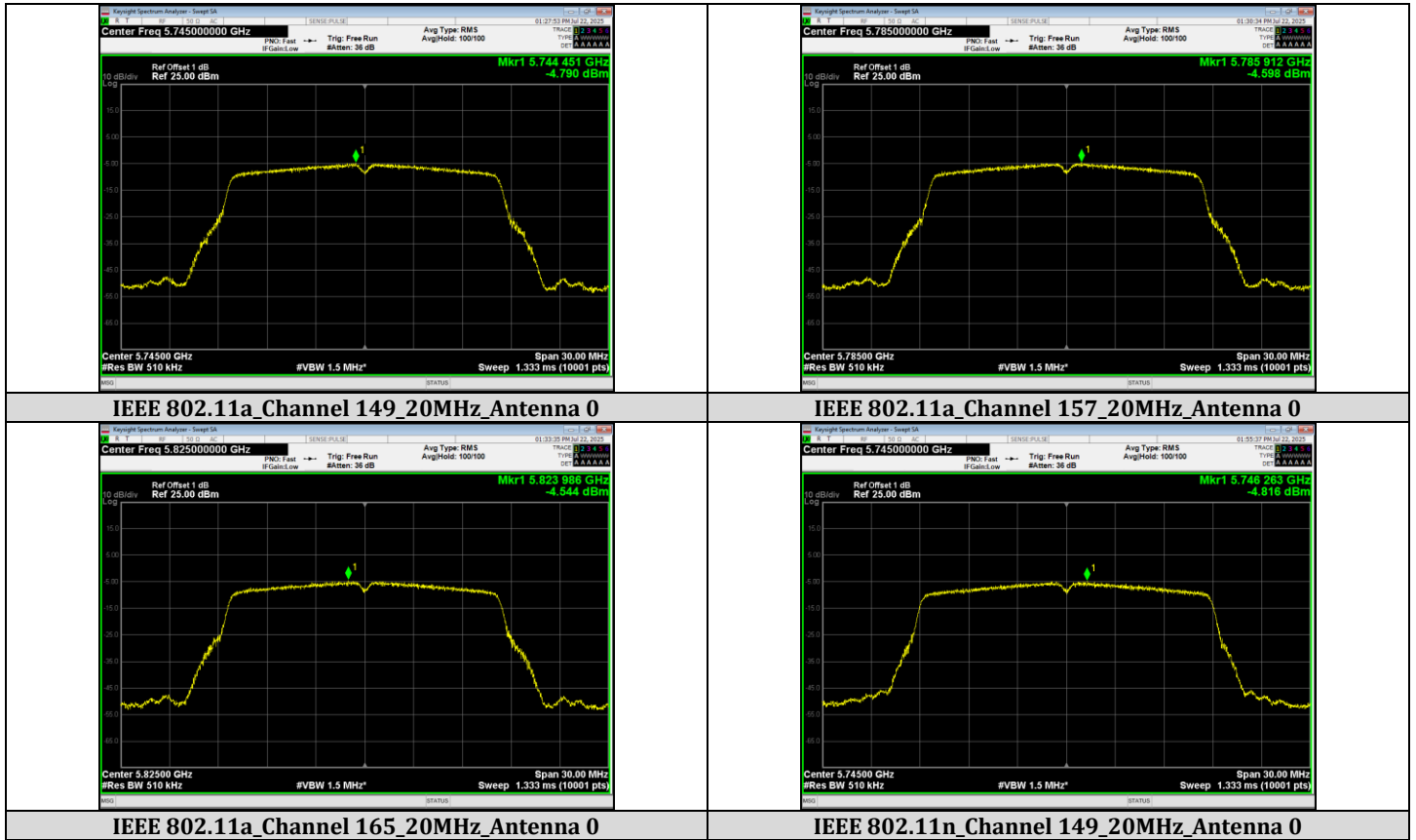
Peak Power Spectral Density

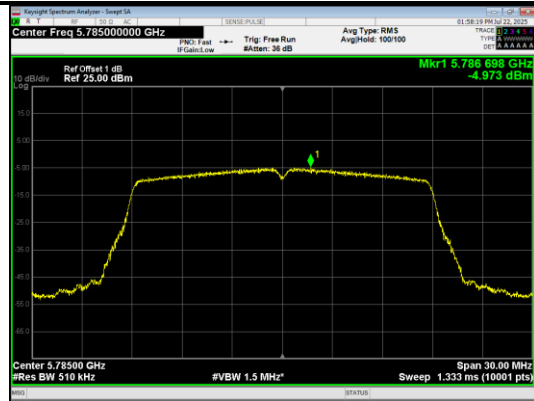
Test Result

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	-4.790	-4.88	30	PASS
	157	-4.600	-4.69		PASS
	165	-4.540	-4.63		PASS
IEEE 802.11n_20	149	-4.820	-4.91		PASS
	157	-4.970	-5.06		PASS
	165	-4.860	-4.95		PASS
IEEE 802.11n_40	151	-7.670	-7.76		PASS
	159	-7.870	-7.96		PASS
IEEE 802.11ac_20	149	-5.590	-5.68		PASS
	157	-5.460	-5.55		PASS
	165	-5.590	-5.68		PASS
IEEE 802.11ac_40	151	-8.370	-8.46		PASS
	159	-8.030	-8.12		PASS
IEEE 802.11ac_80	155	-11.310	-11.40		PASS

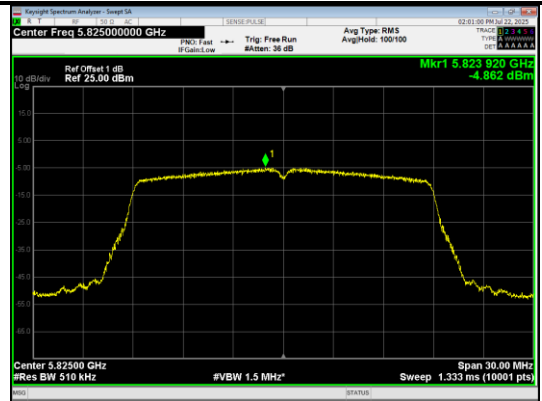
Note: Corr'd PSD = Meas PSD +Duty cycle Factor- BW factor($10 \cdot \log(510/500)$).

Test Graphs

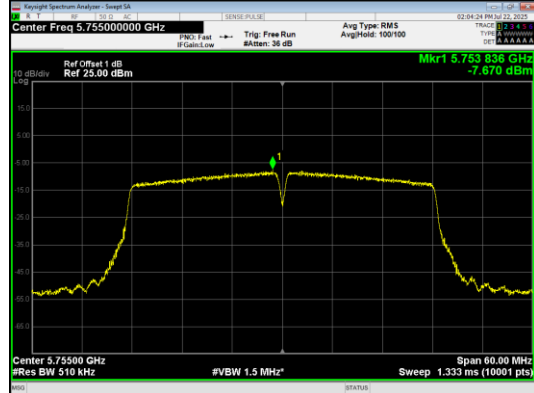




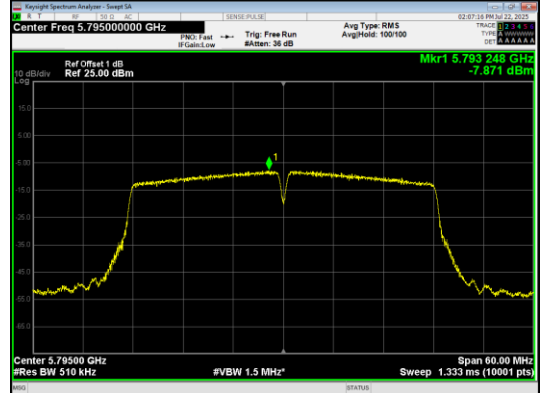
IEEE 802.11n_Channel 157_20MHz_Antenna 0



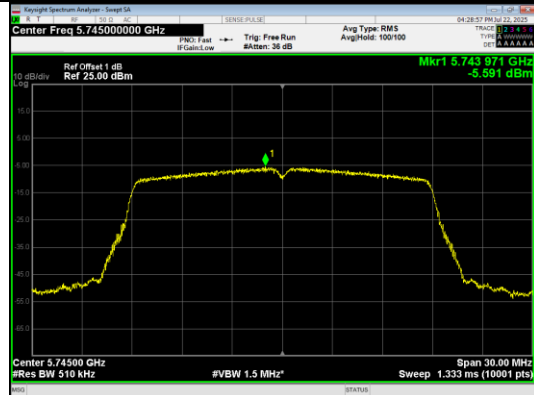
IEEE 802.11n_Channel 165_20MHz_Antenna 0



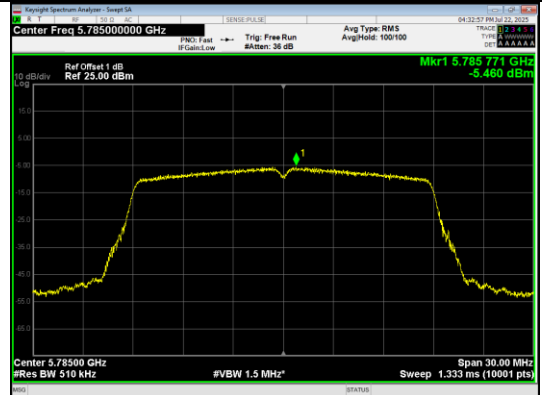
IEEE 802.11n_Channel 151_40MHz_Antenna 0



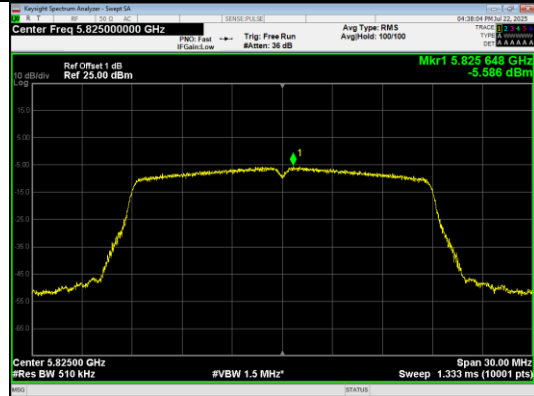
IEEE 802.11n_Channel 159_40MHz_Antenna 0



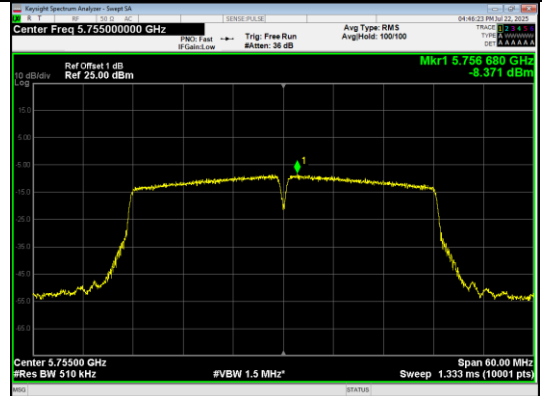
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



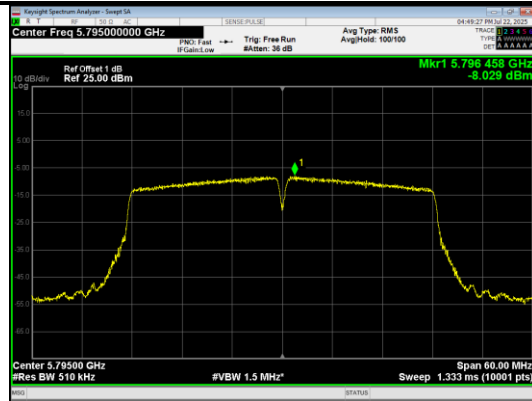
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



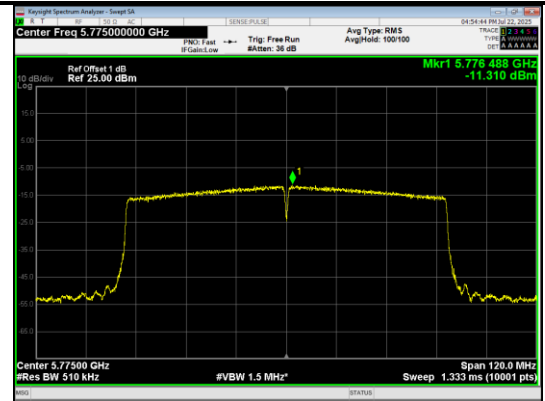
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



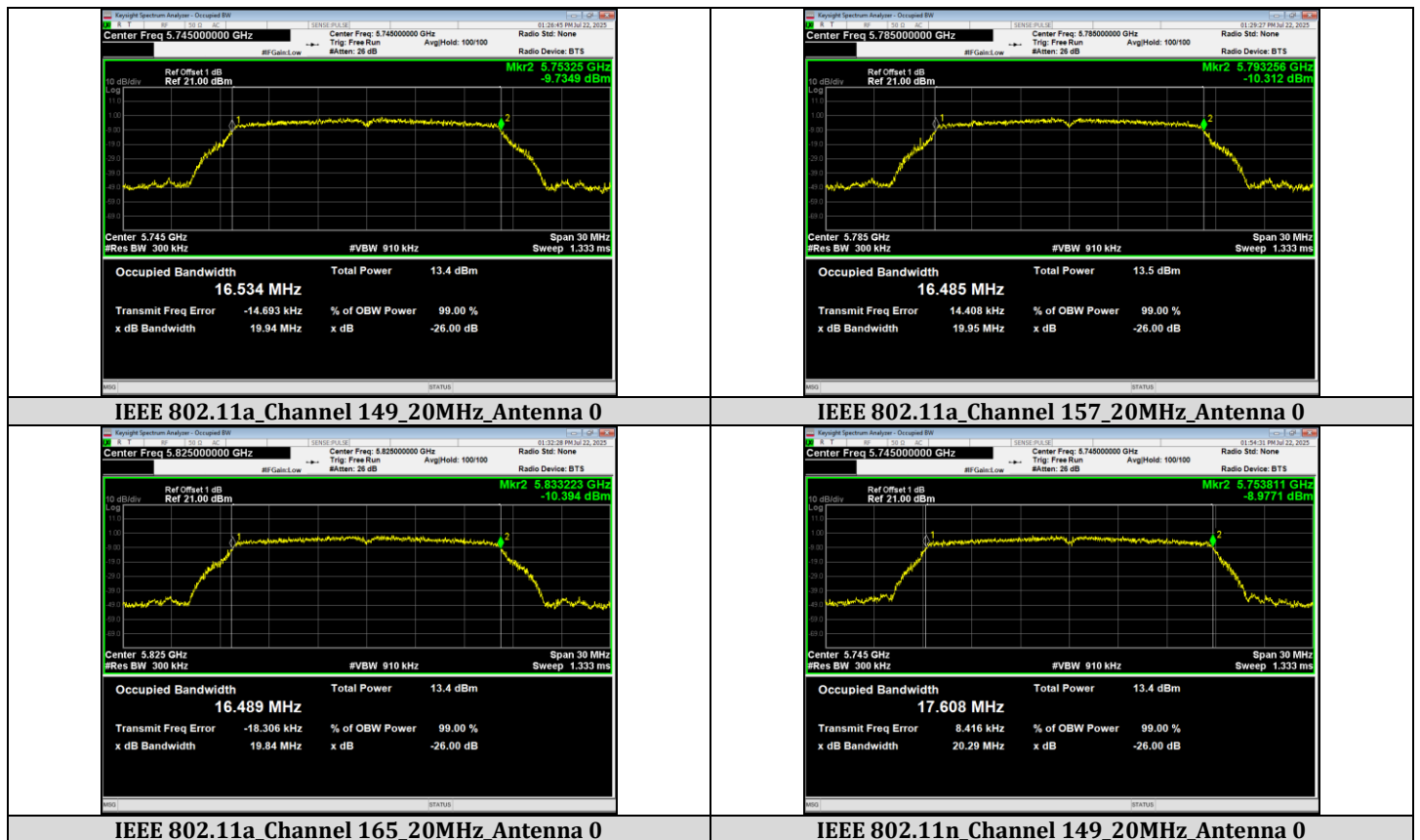
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

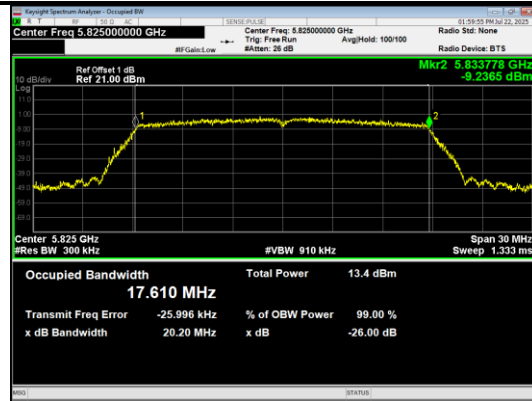
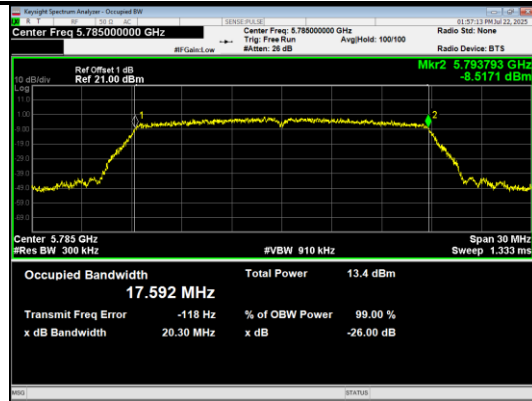
99% Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	149	0	5745	16.534
	157		5785	16.485
	165		5825	16.489
IEEE 802.11n_20	149		5745	17.608
	157		5785	17.592
	165		5825	17.610
IEEE 802.11n_40	151		5755	35.951
	159		5795	35.923
IEEE 802.11ac_20	149		5745	17.642
	157		5785	17.613
	165		5825	17.605
IEEE 802.11ac_40	151		5755	35.988
	159		5795	35.973
IEEE 802.11ac_80	155		5775	75.165

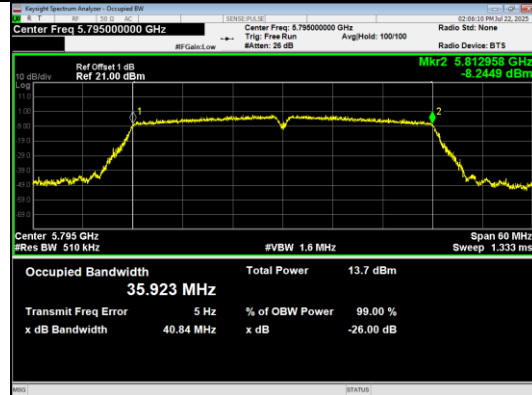
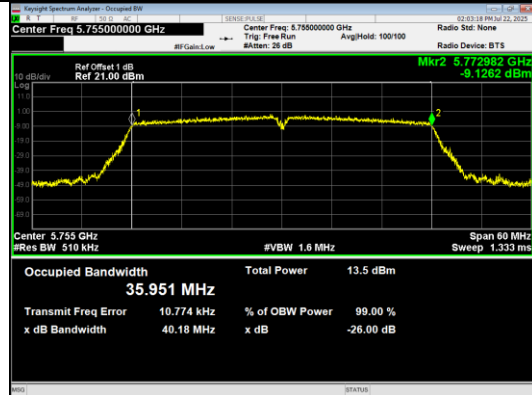
Test Graphs





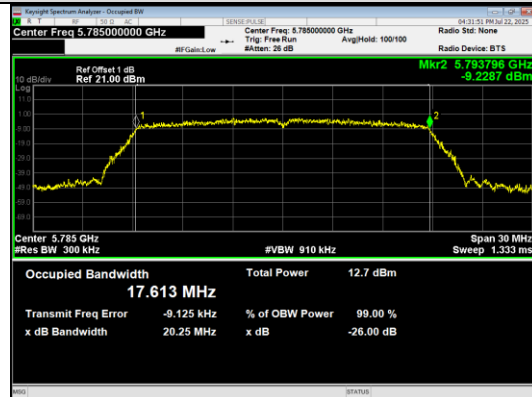
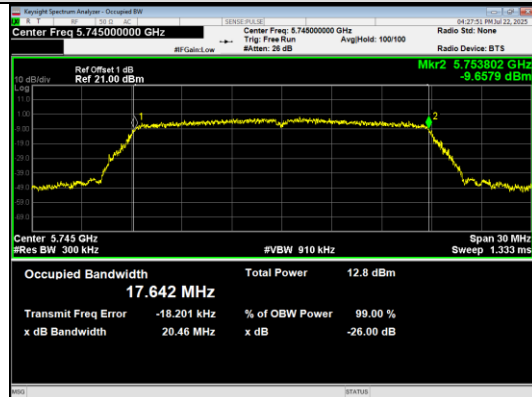
IEEE 802.11n_Channel 157_20MHz_Antenna 0

IEEE 802.11n_Channel 165_20MHz_Antenna 0



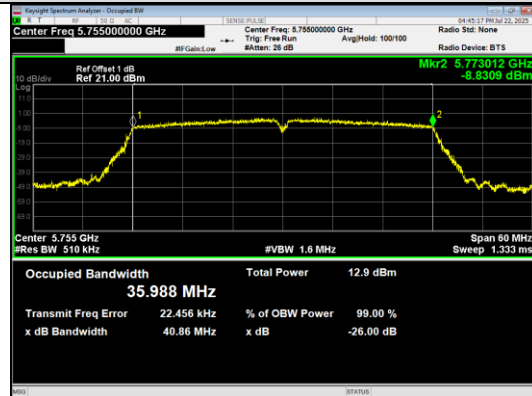
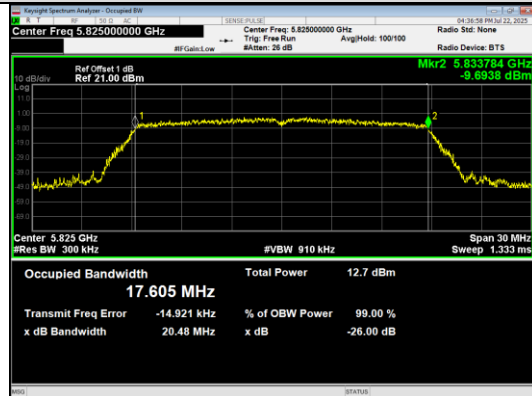
IEEE 802.11n_Channel 151_40MHz_Antenna 0

IEEE 802.11n_Channel 159_40MHz_Antenna 0



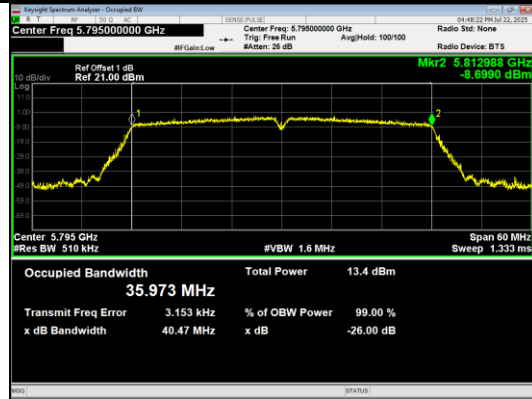
IEEE 802.11ac_Channel 149_20MHz_Antenna 0

IEEE 802.11ac_Channel 157_20MHz_Antenna 0

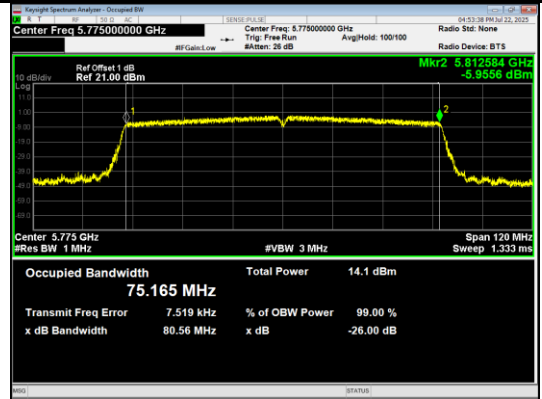


IEEE 802.11ac_Channel 165_20MHz_Antenna 0

IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



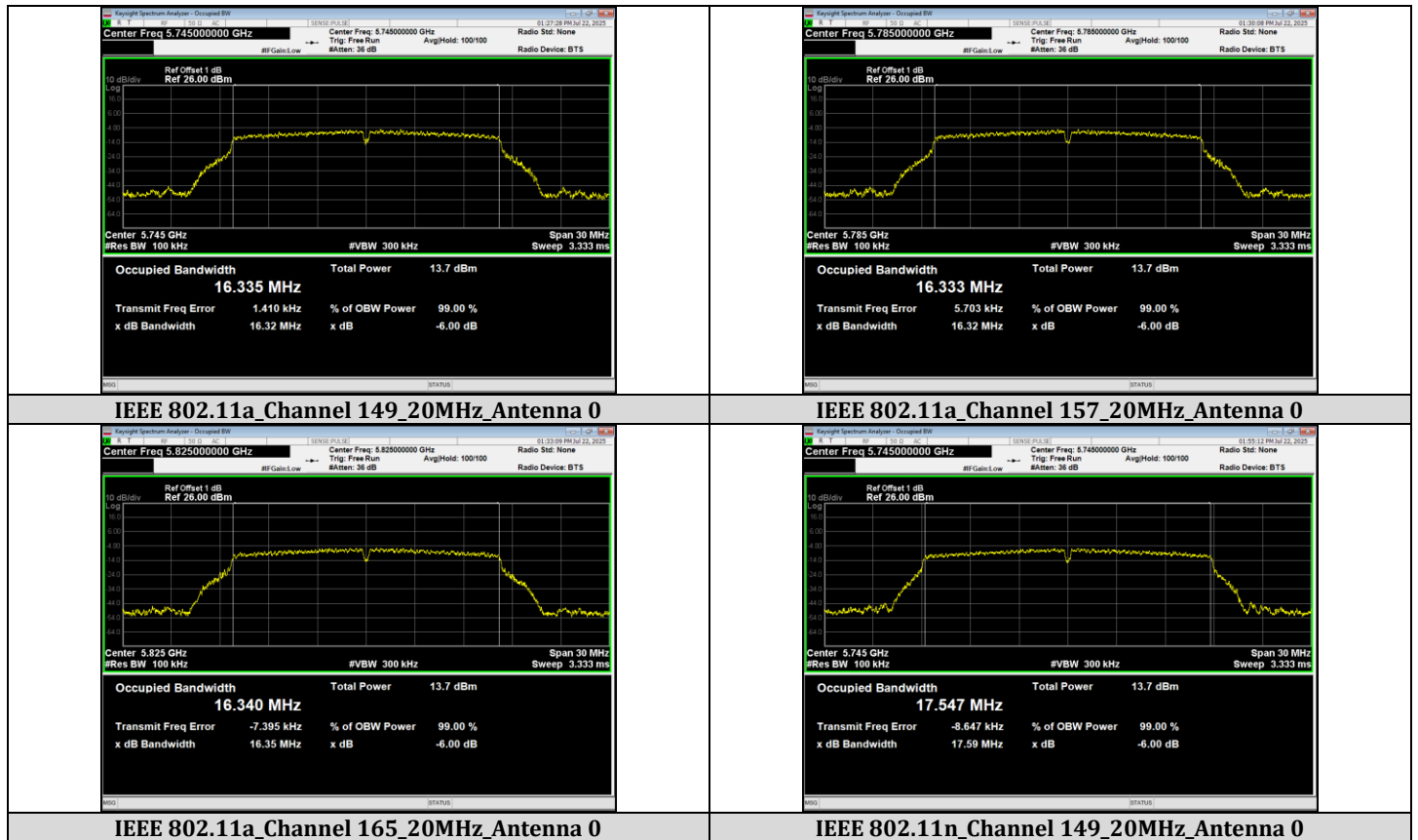
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

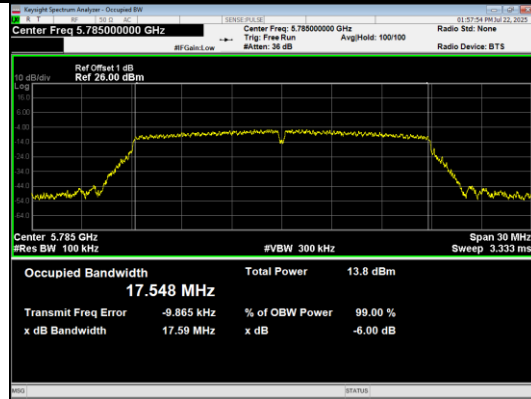
6dB Bandwidth

Test Result

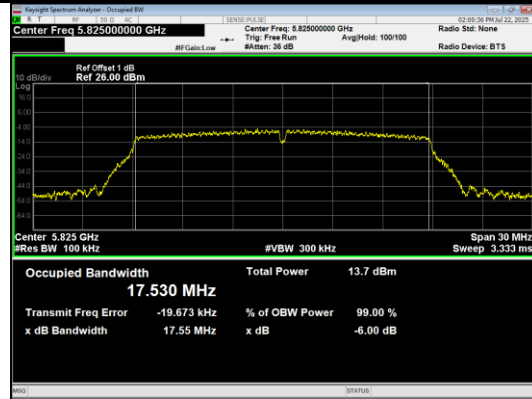
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11a	149	0	5745	16.32	≥0.5	PASS
	157		5785	16.32		PASS
	165		5825	16.35		PASS
IEEE 802.11n_20	149		5745	17.59		PASS
	157		5785	17.59		PASS
	165		5825	17.55		PASS
IEEE 802.11n_40	151		5755	36.06		PASS
	159		5795	36.05		PASS
IEEE 802.11ac_20	149		5745	17.61		PASS
	157		5785	17.58		PASS
	165		5825	17.58		PASS
IEEE 802.11ac_40	151		5755	36.04		PASS
	159		5795	36.30		PASS
IEEE 802.11ac_80	155		5775	76.07		PASS

Test Graphs

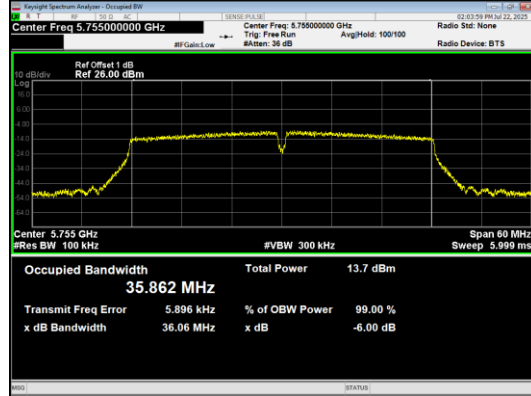




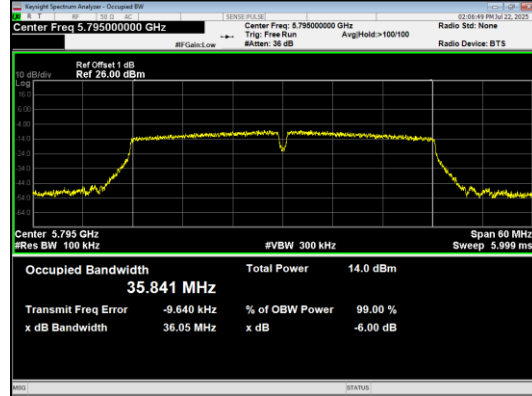
IEEE 802.11n_Channel 157_20MHz_Antenna 0



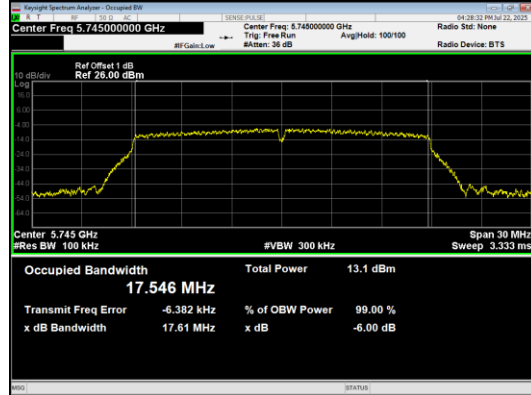
IEEE 802.11n_Channel 165_20MHz_Antenna 0



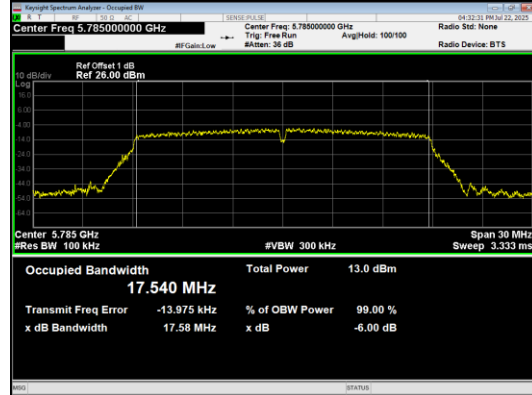
IEEE 802.11n_Channel 151_40MHz_Antenna 0



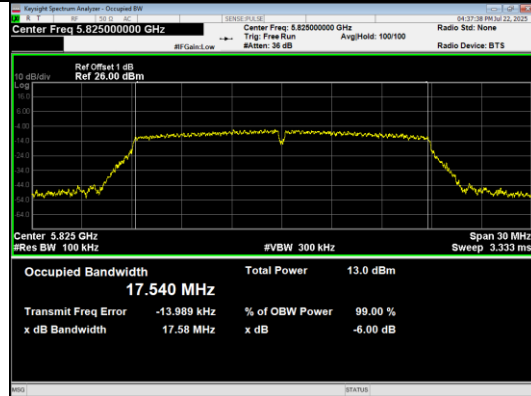
IEEE 802.11n_Channel 159_40MHz_Antenna 0



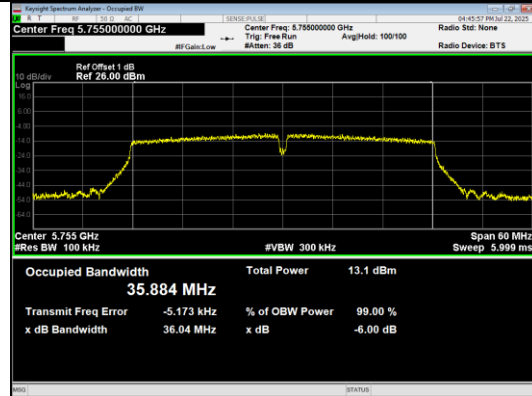
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



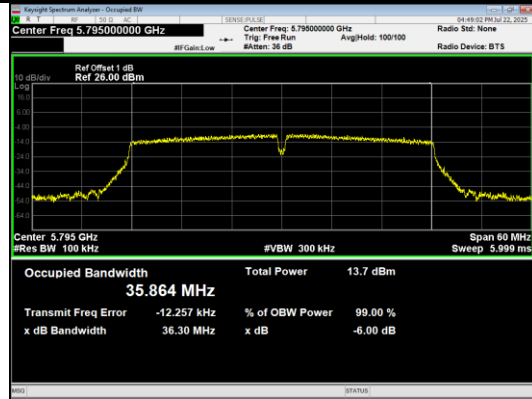
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



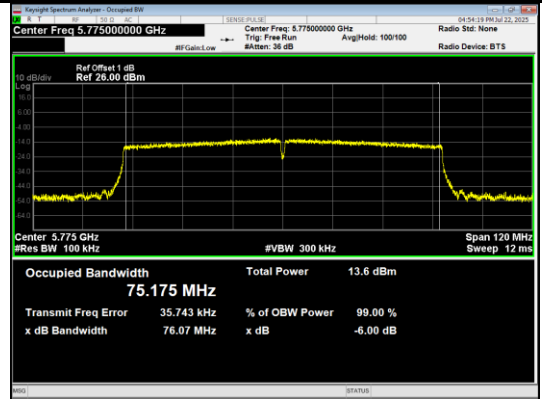
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



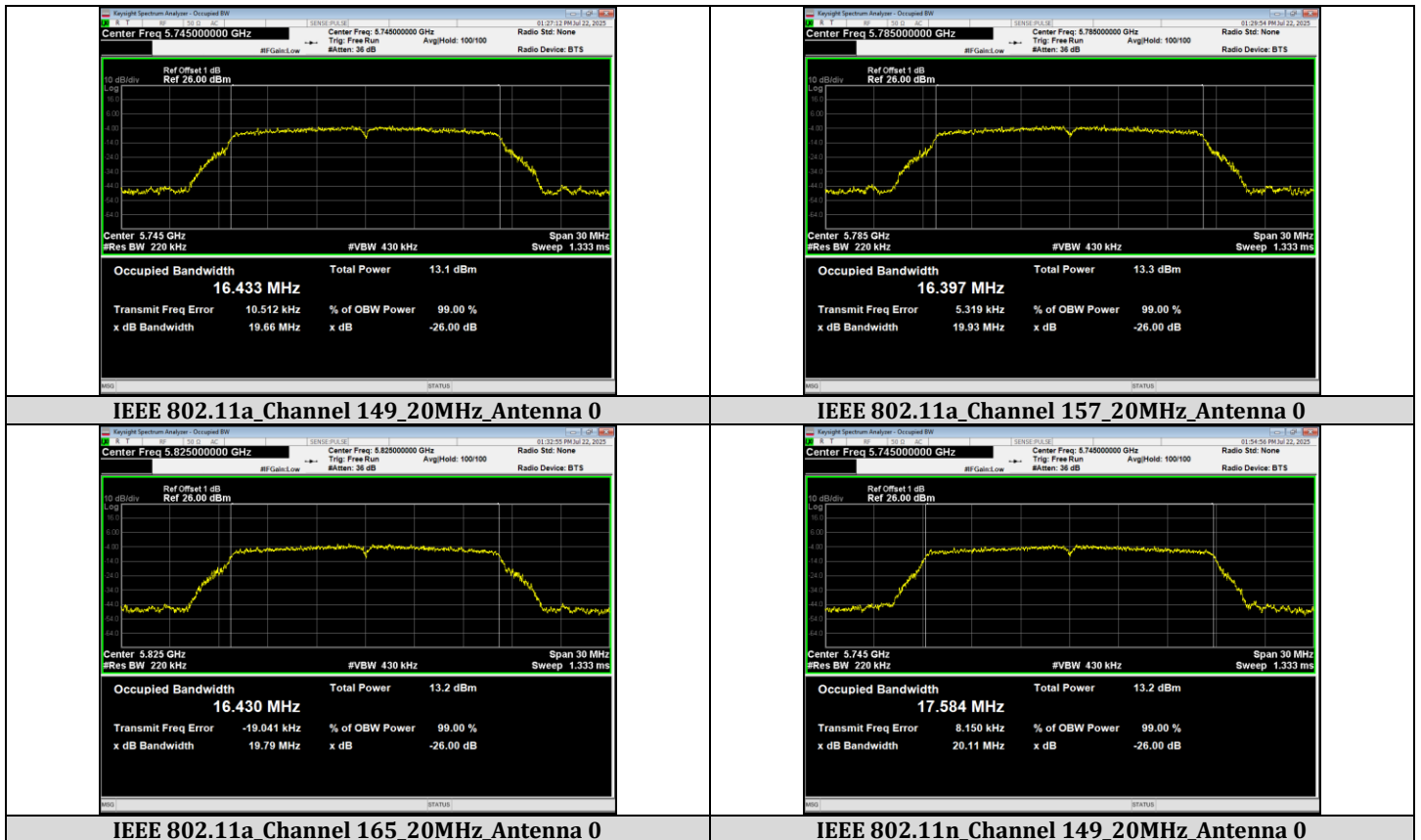
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

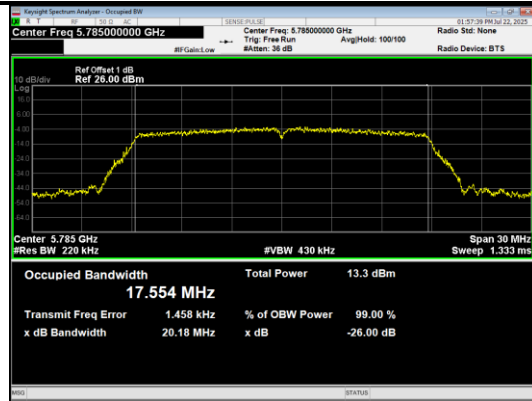
26dB Bandwidth

Test Result

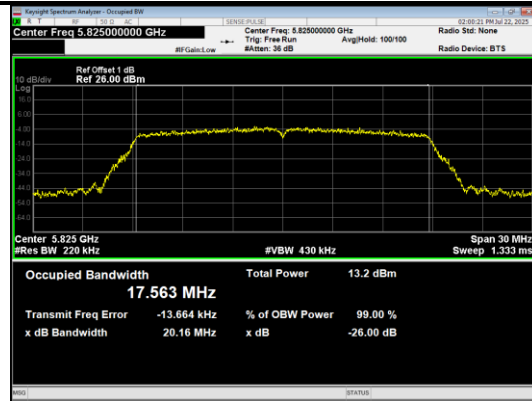
Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	149	0	5745	19.66	1.12
	157		5785	19.93	1.1
	165		5825	19.79	1.11
IEEE 802.11n_20	149		5745	20.11	1.1
	157		5785	20.18	1.1
	165		5825	20.16	1.1
IEEE 802.11n_40	151		5755	39.84	1.07
	159		5795	40.41	1.04
IEEE 802.11ac_20	149		5745	20.15	1.1
	157		5785	20.08	1.11
	165		5825	20.04	1.11
IEEE 802.11ac_40	151		5755	40.01	1.06
	159		5795	40.24	1.05
IEEE 802.11ac_80	155		5775	80.38	1.03

Test Graphs

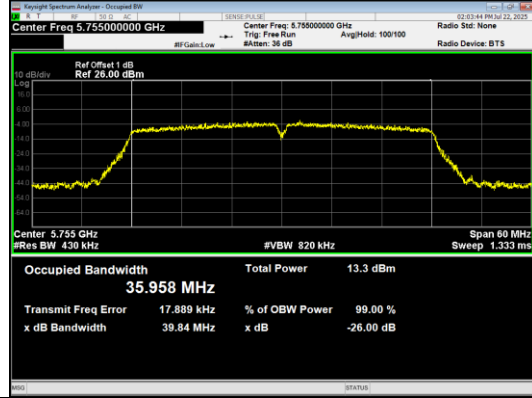




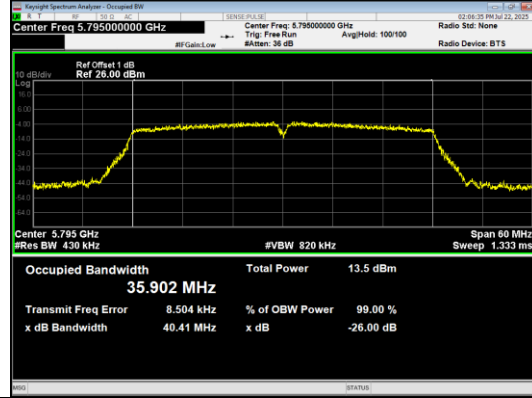
IEEE 802.11n_Channel 157_20MHz_Antenna 0



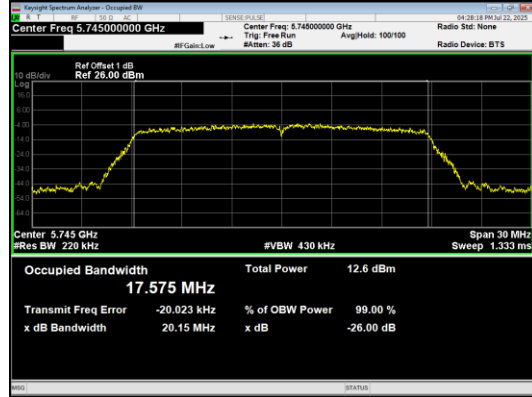
IEEE 802.11n_Channel 165_20MHz_Antenna 0



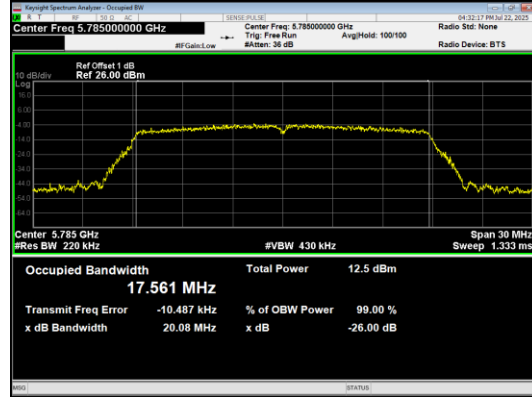
IEEE 802.11n_Channel 151_40MHz_Antenna 0



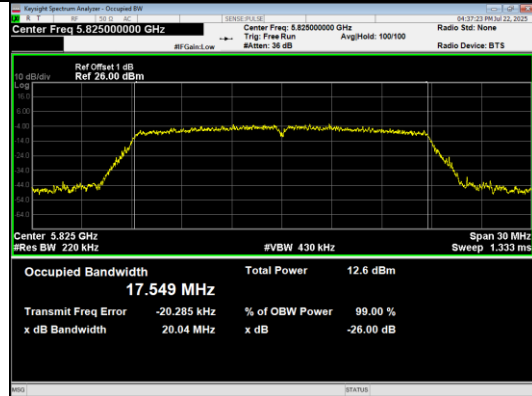
IEEE 802.11n_Channel 159_40MHz_Antenna 0



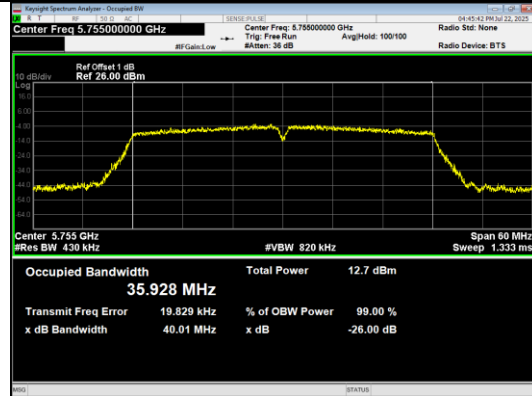
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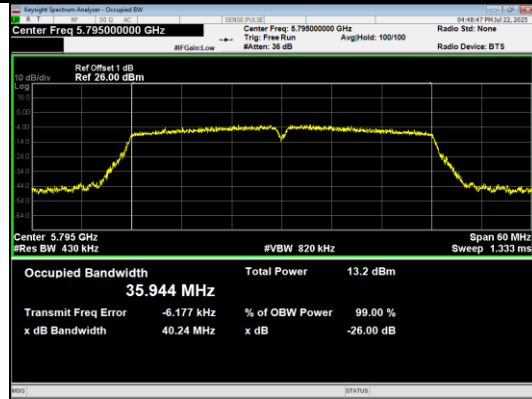
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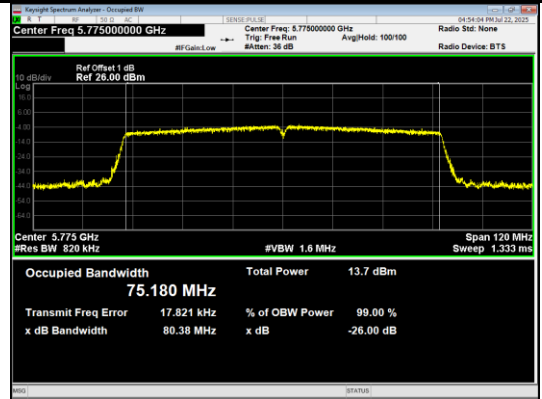
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



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

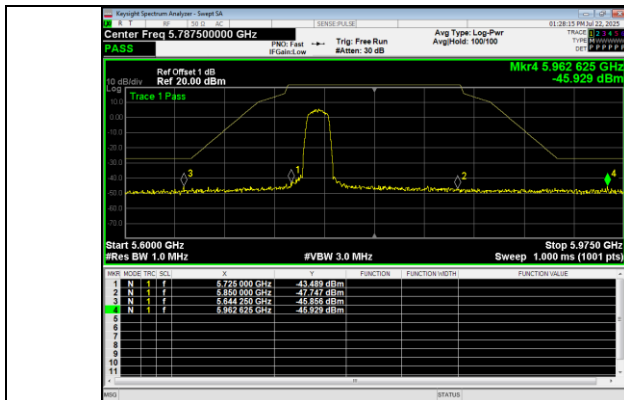
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11a	149	0	5644.25	-45.856	-27	-18.857	PASS
			5646.07	-53.530	-27	-26.530	PASS
			5725.00	-43.490	27	-70.490	PASS
			5850.00	-47.750	27	-74.750	PASS
			5962.62	-45.928	-27	-18.928	PASS
			24215.5	-54.550	-27	-27.550	PASS
	157		5618.25	-55.780	-27	-28.780	PASS
			5650.25	-46.583	9.815	-19.768	PASS
			5725.00	-47.730	27	-74.730	PASS
			5850.00	-47.600	27	-74.600	PASS
			5933.00	-46.076	-27	-19.076	PASS
			24933.7	-54.370	-27	-27.370	PASS
	165		5623.31	-57.060	-27	-30.060	PASS
			5637.50	-47.766	-27	-20.766	PASS
			5725.00	-48.910	27	-75.910	PASS
			5850.00	-46.080	27	-73.080	PASS
			5930.00	-46.510	-27	-19.510	PASS
			24996.7	-54.000	-27	-27.000	PASS
IEEE 802.11n_20	149		5646.77	-51.560	-27	-24.560	PASS
			5649.50	-46.545	-27	-19.545	PASS
			5725.00	-44.320	27	-71.320	PASS
			5850.00	-47.200	27	-74.200	PASS
			5967.88	-46.944	-27	-19.944	PASS
			24943.3	-53.580	-27	-26.580	PASS
	157		5636.38	-47.676	-27	-20.676	PASS
			5649.02	-54.830	-27	-27.830	PASS
			5725.00	-48.730	27	-75.730	PASS
			5850.00	-48.240	27	-75.240	PASS
			5945.00	-46.706	-27	-19.706	PASS
			24976.6	-54.410	-27	-27.410	PASS
	165		5643.82	-55.880	-27	-28.880	PASS
			5648.00	-47.761	-27	-20.761	PASS
			5725.00	-48.440	27	-75.440	PASS
			5850.00	-46.600	27	-73.600	PASS
			5928.88	-46.385	-27	-19.385	PASS
			24924.7	-53.710	-27	-26.710	PASS
IEEE 802.11n_40	151		5603.35	-52.900	-27	-25.900	PASS
			5639.38	-46.591	-27	-19.591	PASS
			5725.00	-41.810	27	-68.810	PASS
			5850.00	-47.370	27	-74.370	PASS
			5931.50	-46.486	-27	-19.485	PASS
			24970.0	-54.070	-27	-27.070	PASS
	159		5619.65	-55.030	-27	-28.030	PASS
			5636.38	-47.689	-27	-20.689	PASS
			5725.00	-48.040	27	-75.040	PASS
			5850.00	-46.510	27	-73.510	PASS
			5943.50	-46.833	-27	-19.833	PASS
			24951.8	-54.280	-27	-27.280	PASS
IEEE 802.11ac_20	149		5628.64	-53.230	-27	-26.230	PASS
			5636.75	-47.398	-27	-20.398	PASS
			5725.00	-44.640	27	-71.640	PASS
			5850.00	-47.660	27	-74.660	PASS
			5964.88	-47.035	-27	-20.035	PASS
			24987.6	-53.590	-27	-26.590	PASS
	157		5621.90	-55.840	-27	-28.840	PASS

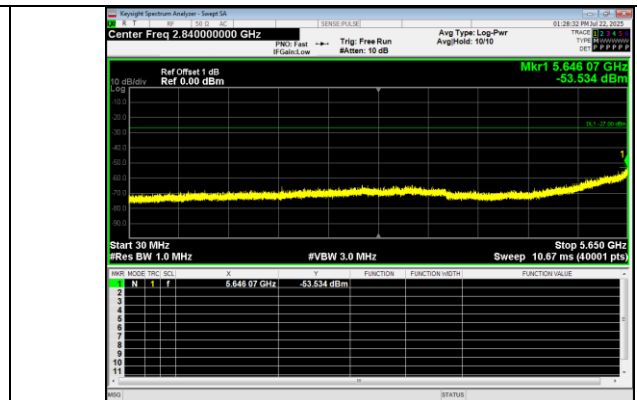
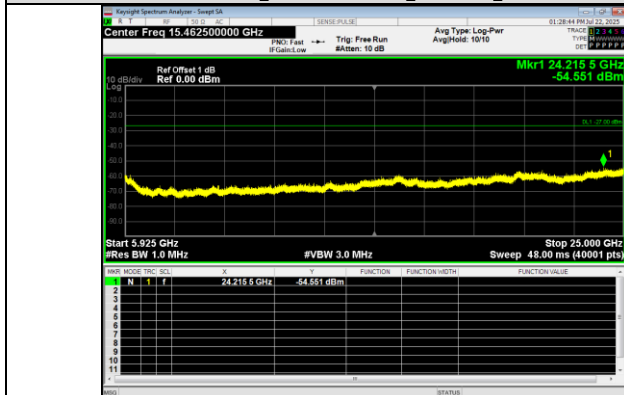


	165	5647.25	-47.390	-27	-20.390	PASS
		5725.00	-45.870	27	-72.870	PASS
		5850.00	-47.110	27	-74.110	PASS
		5953.62	-45.030	-27	-18.030	PASS
		24880.8	-54.760	-27	-27.760	PASS
		5641.57	-57.000	-27	-30.000	PASS
		5646.50	-48.262	-27	-21.262	PASS
		5725.00	-46.630	27	-73.630	PASS
		5850.00	-44.000	27	-71.000	PASS
		5933.75	-46.709	-27	-19.709	PASS
		24970.0	-53.620	-27	-26.620	PASS
IEEE 802.11ac_40	151	5631.88	-47.044	-27	-20.044	PASS
		5649.16	-54.240	-27	-27.240	PASS
		5725.00	-43.030	27	-70.030	PASS
		5850.00	-45.850	27	-72.850	PASS
		5931.88	-46.831	-27	-19.831	PASS
	159	24922.3	-54.240	-27	-27.240	PASS
		5638.48	-54.820	-27	-27.820	PASS
		5646.50	-47.426	-27	-20.426	PASS
		5725.00	-49.530	27	-76.530	PASS
		5850.00	-48.460	27	-75.460	PASS
		5951.00	-46.008	-27	-19.008	PASS
		24968.5	-53.950	-27	-26.950	PASS
		5609.00	-47.627	-27	-20.627	PASS
		5643.96	-53.070	-27	-26.070	PASS
		5725.00	-42.620	27	-69.620	PASS
IEEE 802.11ac_80	155	5850.00	-46.610	27	-73.610	PASS
		5969.75	-46.382	-27	-19.382	PASS
		24954.2	-54.540	-27	-27.540	PASS

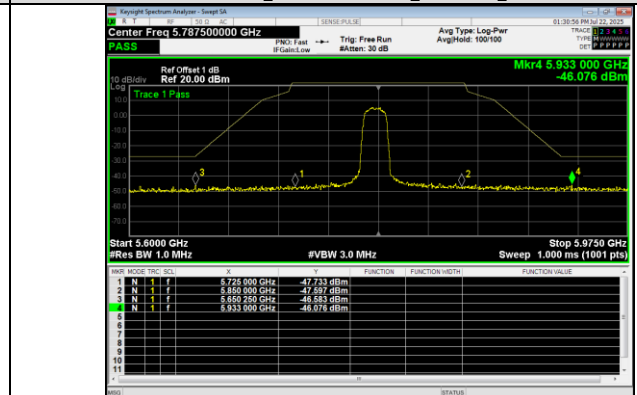
Test Graphs



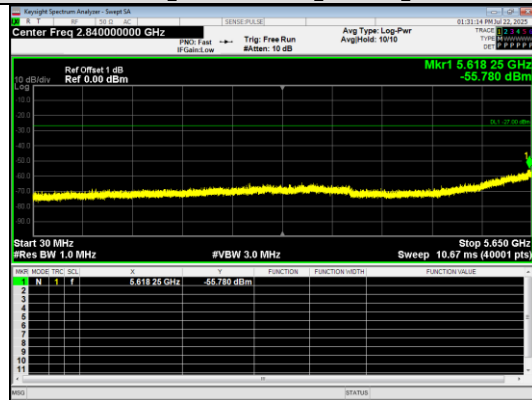
Out Of Band Emission
IEEE 802.11a_Channel 149_20MHz_Antenna 0



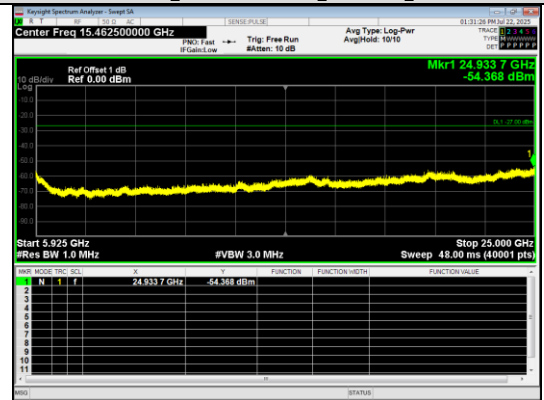
Spurious Emission:30.0~5650 MHz
IEEE 802.11a_Channel 149_20MHz_Antenna 0



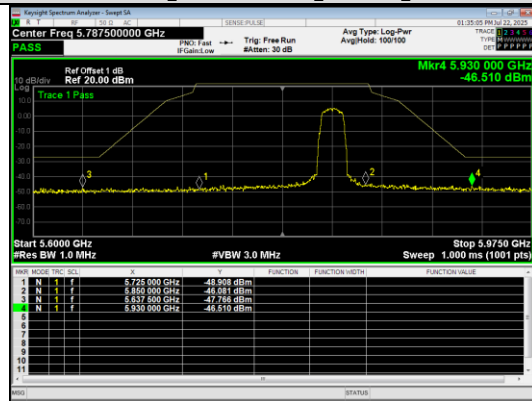
Spurious Emission:5925~25000.0 MHz IEEE 802.11a_Channel 149_20MHz_Antenna 0



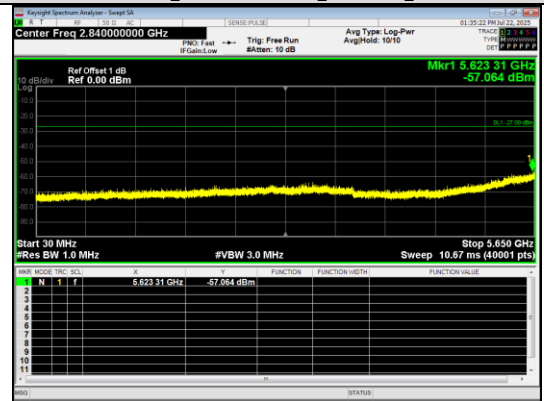
Out Of Band Emission IEEE 802.11a_Channel 157_20MHz_Antenna 0



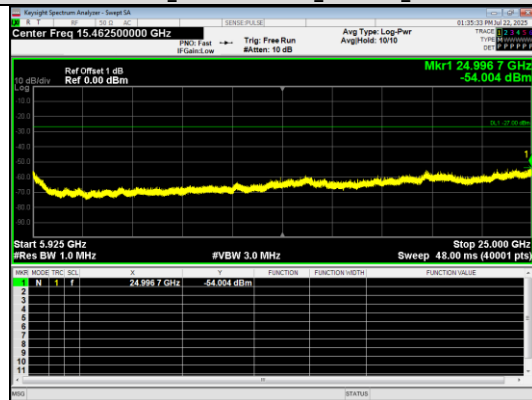
Spurious Emission:30.0~5650 MHz IEEE 802.11a_Channel 157_20MHz_Antenna 0



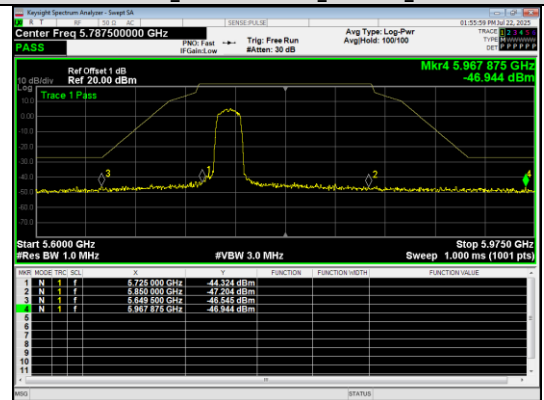
Spurious Emission:5925~25000.0 MHz IEEE 802.11a_Channel 157_20MHz_Antenna 0



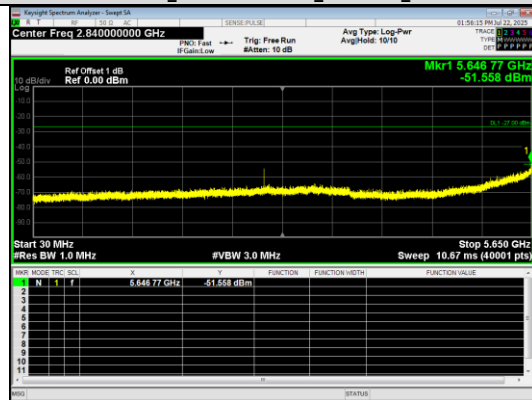
Out Of Band Emission IEEE 802.11a_Channel 165_20MHz_Antenna 0



Spurious Emission:30.0~5650 MHz 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

