

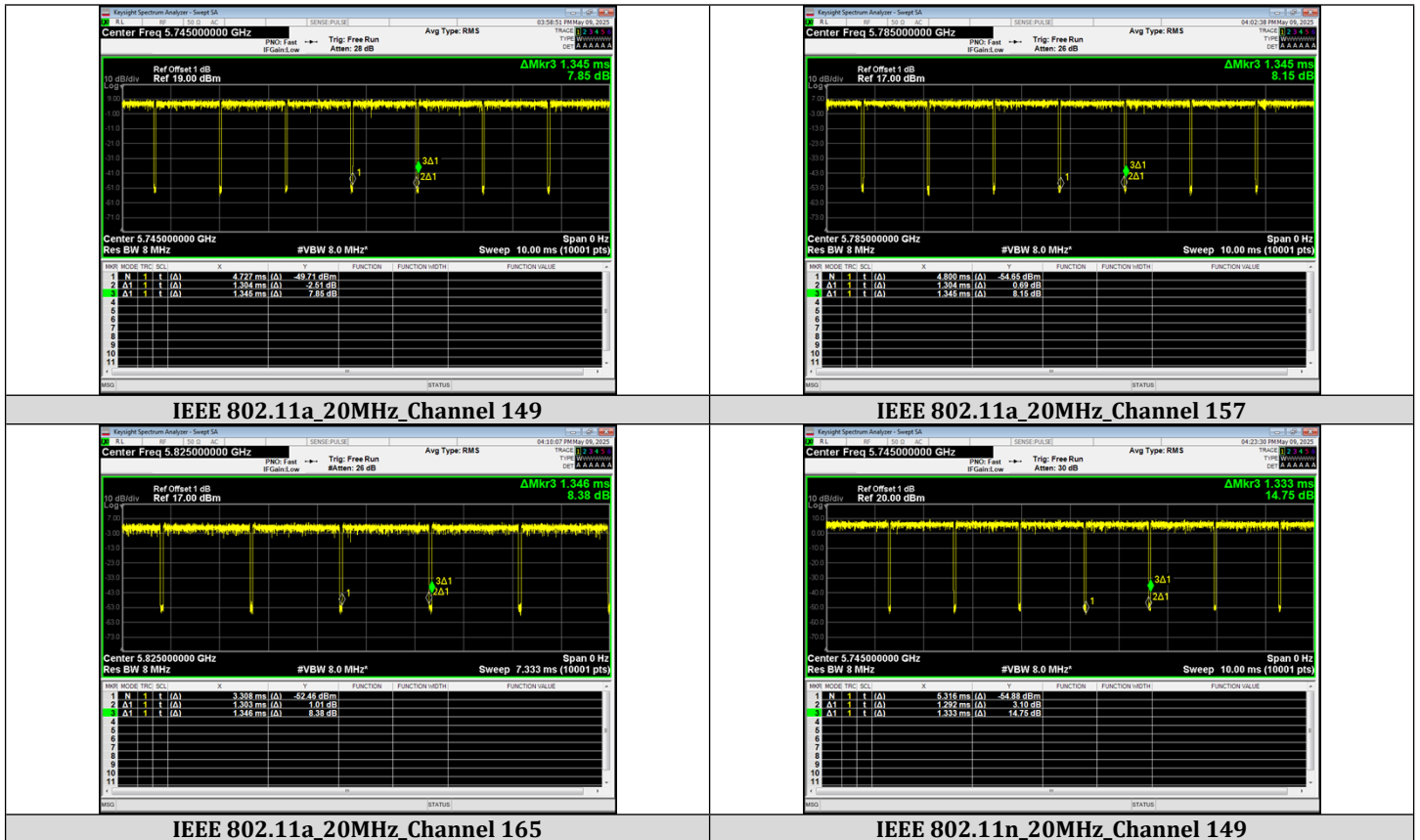
Appendix RF test data for 5G WIFI_NII band 1

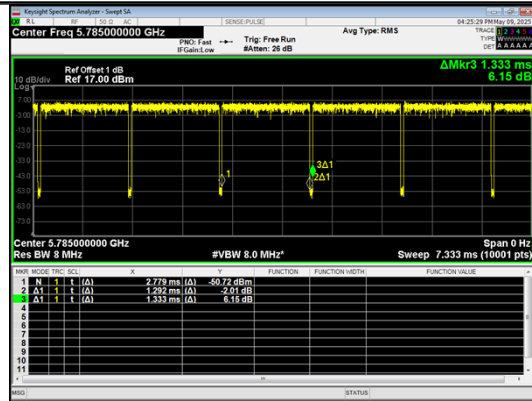


Duty Cycle Test Result

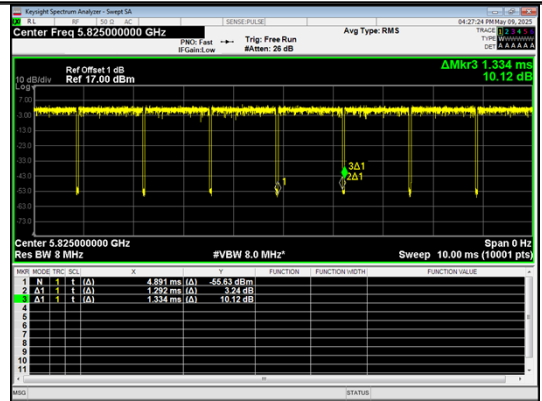
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11a	6	149	1	1.304	1.345	96.95	0.9695	0.1345	0.7669
		157		1.304	1.345	96.95	0.9695	0.1345	0.7669
		165		1.303	1.346	96.85	0.9685	0.139	0.7675
IEEE 802.11n_20	149	1.292		1.333	96.92	0.9692	0.1359	0.7740	
	157	1.292		1.333	96.88	0.9688	0.1377	0.7740	
	165	1.292		1.334	96.85	0.9685	0.139	0.7740	
IEEE 802.11n_40	151	0.638		0.681	93.76	0.9376	0.2798	1.5674	
	159	0.638		0.681	93.83	0.9383	0.2766	1.5674	
IEEE 802.11ac_20	MCS 0	149		1.316	1.358	96.91	0.9691	0.1363	0.7599
		157		1.316	1.358	96.91	0.9691	0.1363	0.7599
		165		1.316	1.357	96.98	0.9698	0.1332	0.7599
IEEE 802.11ac_40		151		0.655	0.697	93.97	0.9397	0.2701	1.5267
		159		0.654	0.697	93.90	0.9390	0.2733	1.5291
IEEE 802.11ac_80		155		0.325	0.369	88.17	0.8817	0.5468	3.0769

Test Graphs

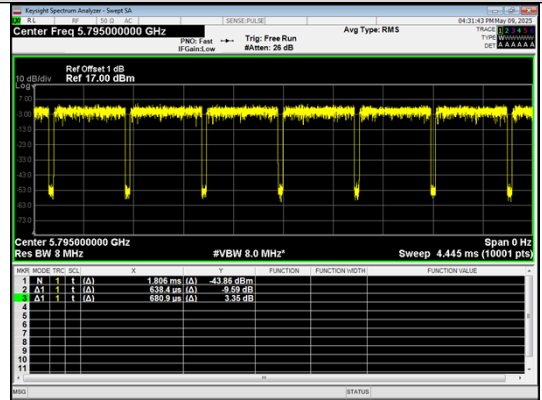
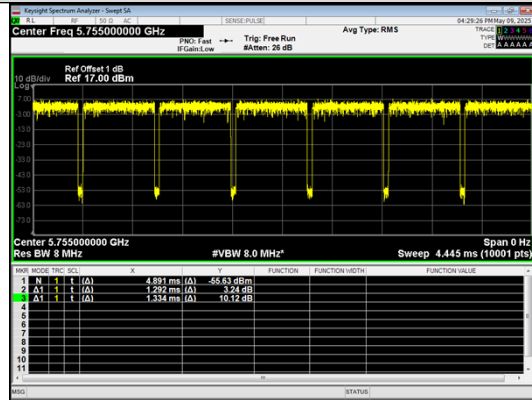




IEEE 802.11n_20MHz_Channel 157

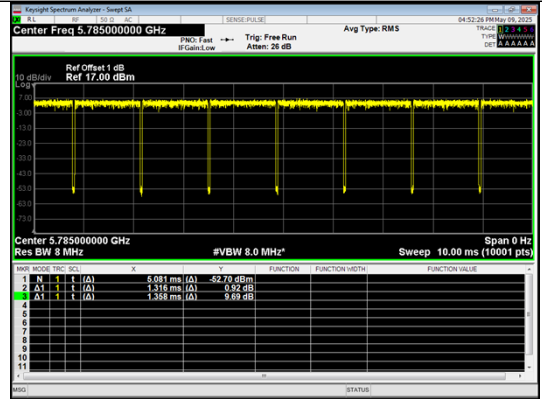
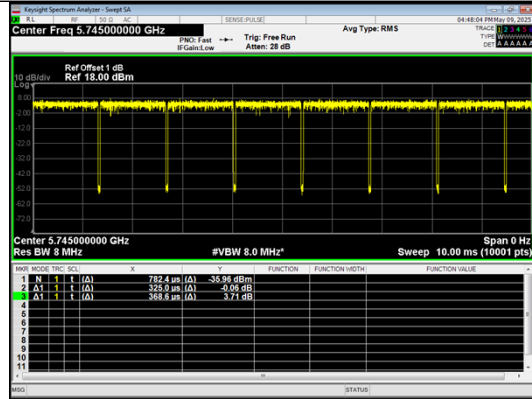


IEEE 802.11n_20MHz_Channel 165



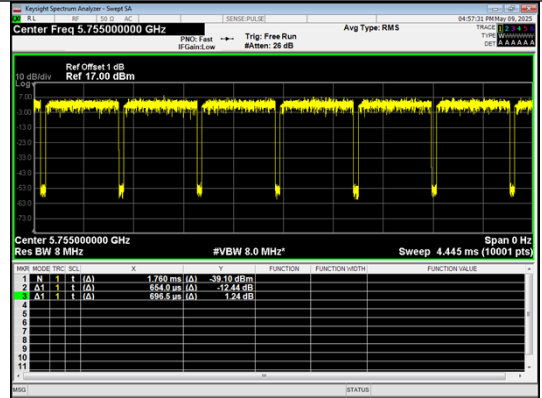
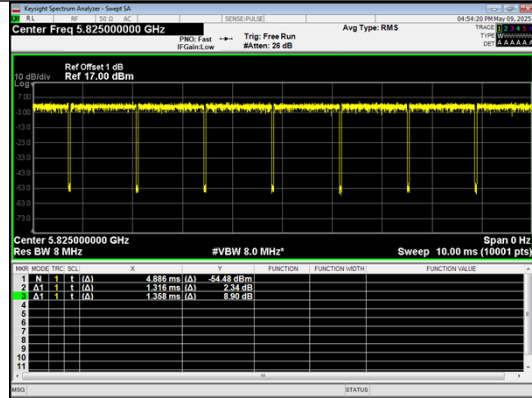
IEEE 802.11n_40MHz_Channel 151

IEEE 802.11n_40MHz_Channel 159



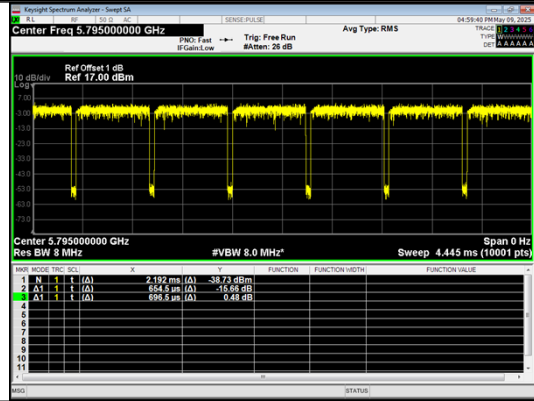
IEEE 802.11ac_20MHz_Channel 149

IEEE 802.11ac_20MHz_Channel 157

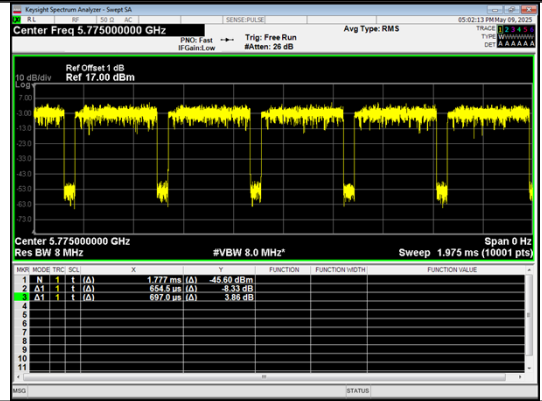


IEEE 802.11ac_20MHz_Channel 165

IEEE 802.11ac_40MHz_Channel 151



IEEE 802.11ac_40MHz_Channel 159

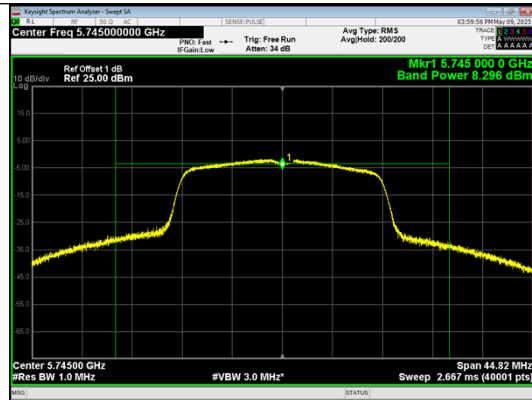


IEEE 802.11ac_80MHz_Channel 155

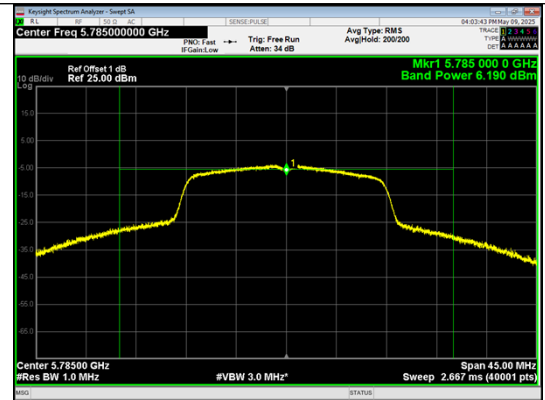
Conducted Output Power

Conducted output power

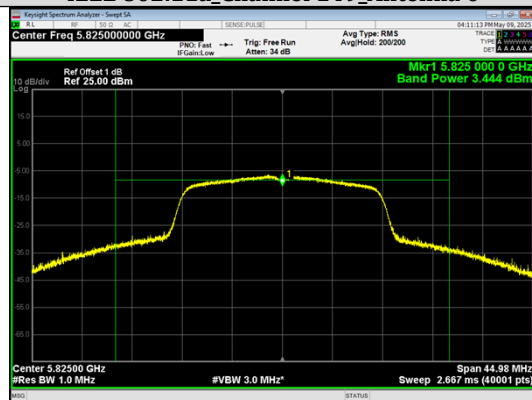
Mode	Channel	Ant. 0 (dBm)	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	149	8.296	8.43	≤30	PASS
	157	6.190	6.33	≤30	PASS
	165	3.444	3.58	≤30	PASS
IEEE 802.11n_20	149	8.230	8.37	≤30	PASS
	157	5.050	5.19	≤30	PASS
	165	3.218	3.36	≤30	PASS
IEEE 802.11n_40	151	7.729	8.01	≤30	PASS
	159	4.611	4.89	≤30	PASS
IEEE 802.11ac_20	149	6.355	6.49	≤30	PASS
	157	5.726	5.86	≤30	PASS
	165	3.308	3.44	≤30	PASS
IEEE 802.11ac_40	151	7.760	8.03	≤30	PASS
	159	4.554	4.83	≤30	PASS
IEEE 802.11ac_80	155	5.997	6.54	≤30	PASS



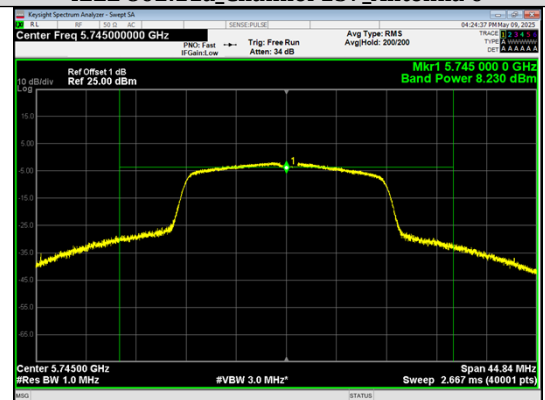
Conducted AVG output power
IEEE 802.11a_Channel 149_Antenna 0



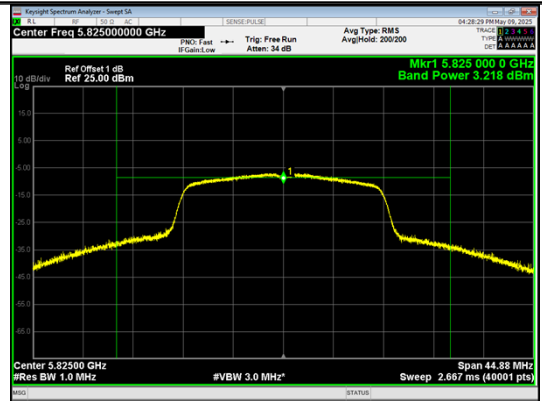
Conducted AVG output power
IEEE 802.11a_Channel 157_Antenna 0



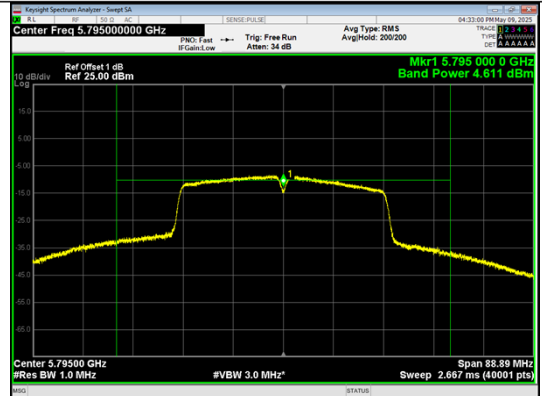
Conducted AVG output power
IEEE 802.11a_Channel 165_Antenna 0



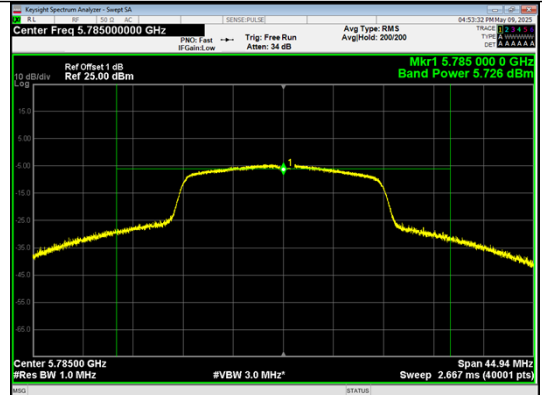
Conducted AVG output power
IEEE 802.11n_20_Channel 149_Antenna 0



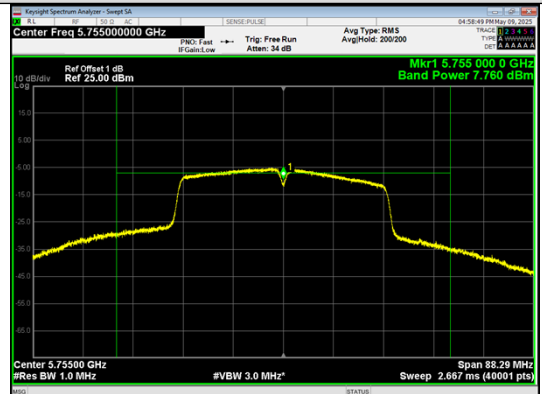
Conducted AVG output power
IEEE 802.11n_20_Channel 165_Antenna 0



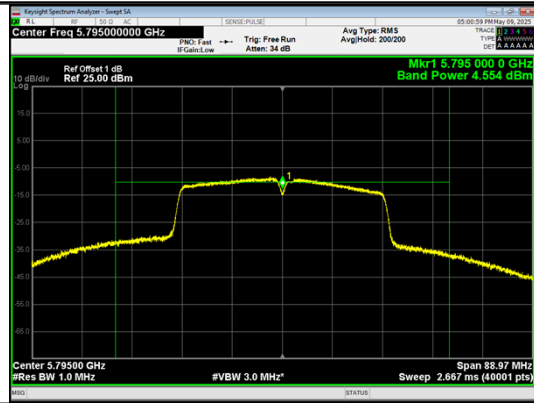
Conducted AVG output power
IEEE 802.11n_40_Channel 159_Antenna 0



Conducted AVG output power
IEEE 802.11ac_20_Channel 157_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

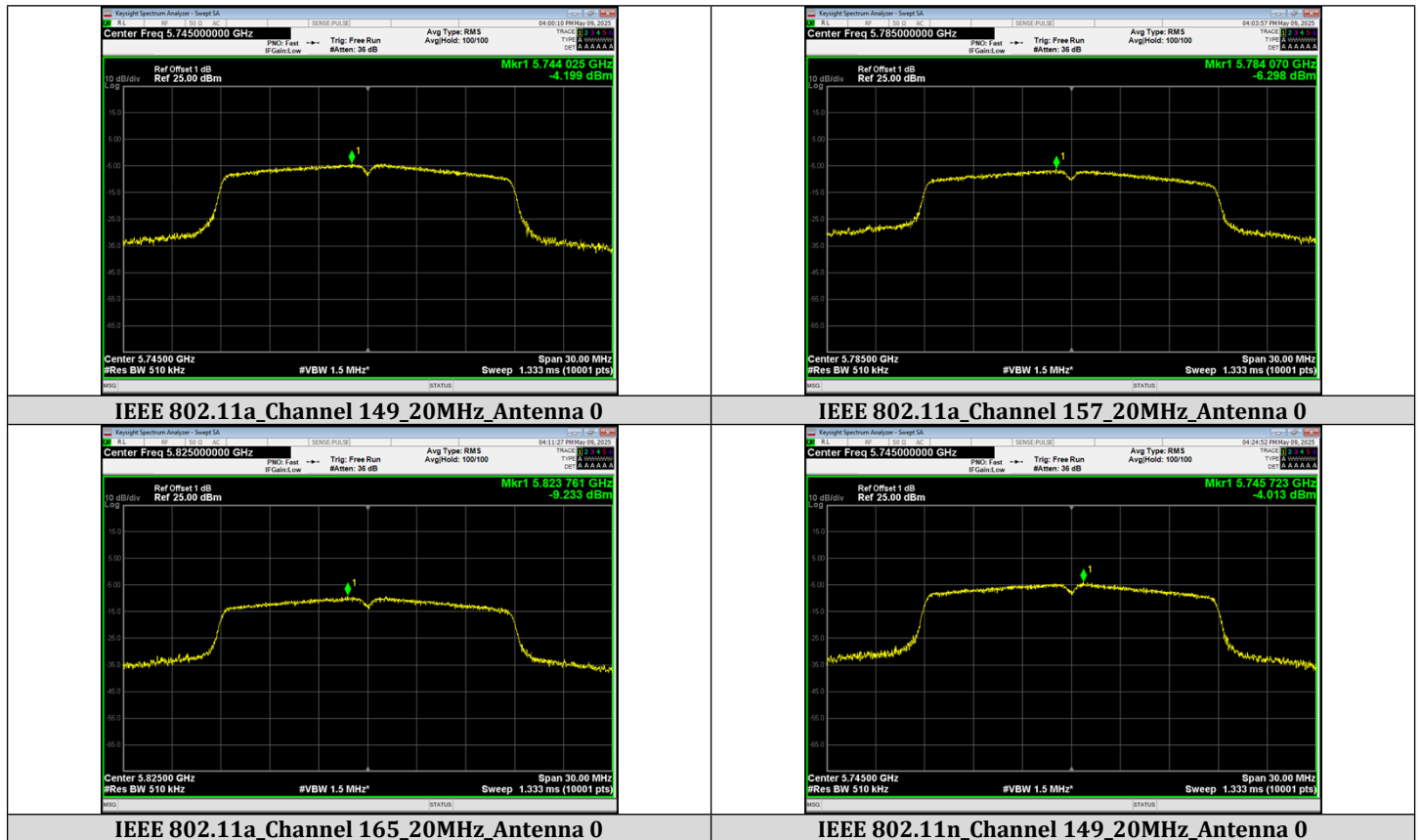


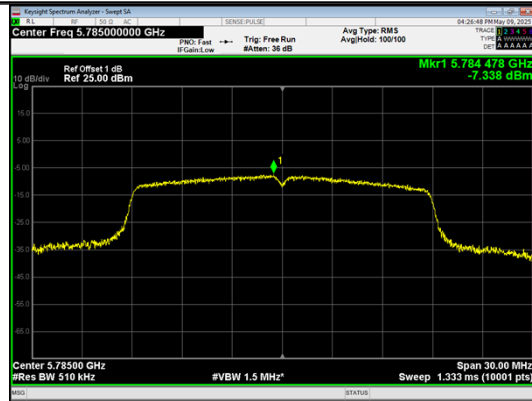
Peak Power Spectral Density

Test Result

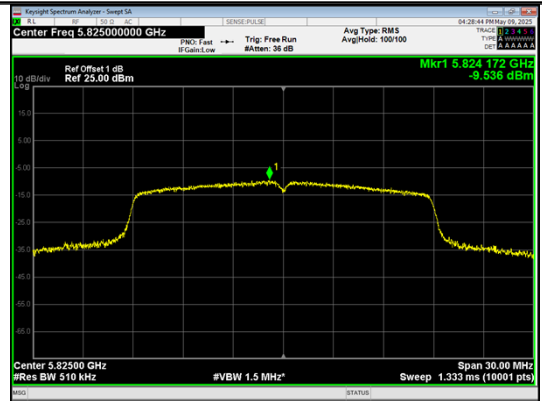
Mode	Channel	Ant. 0 Meas PSD (dBm/MHz or dBm/0.5MHz)	Ant. 0 Corr'd PSD (dBm/MHz or dBm/0.5MHz)	Limit (dBm/MHz or dBm/0.5MHz)	Result
IEEE 802.11a	149	-4.199	-4.06	30	PASS
	157	-6.298	-6.159		PASS
	165	-9.233	-9.094		PASS
IEEE 802.11n_20	149	-4.013	-3.874		PASS
	157	-7.338	-7.199		PASS
	165	-9.536	-9.397		PASS
IEEE 802.11n_40	151	-7.319	-7.042		PASS
	159	-10.740	-10.463		PASS
IEEE 802.11ac_20	149	-6.175	-6.042		PASS
	157	-6.695	-6.562		PASS
	165	-9.423	-9.29		PASS
IEEE 802.11ac_40	151	-7.559	-7.286		PASS
	159	-11.143	-10.87		PASS
IEEE 802.11ac_80	155	-12.458	-11.911		PASS

Test Graphs

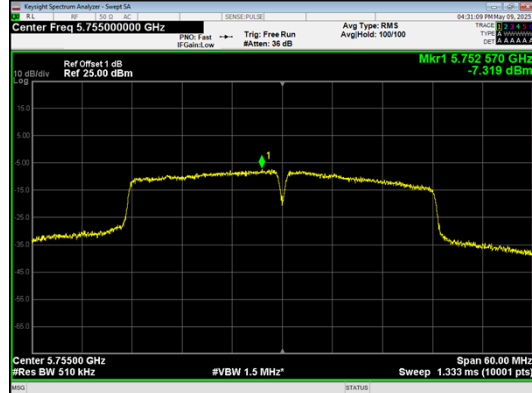




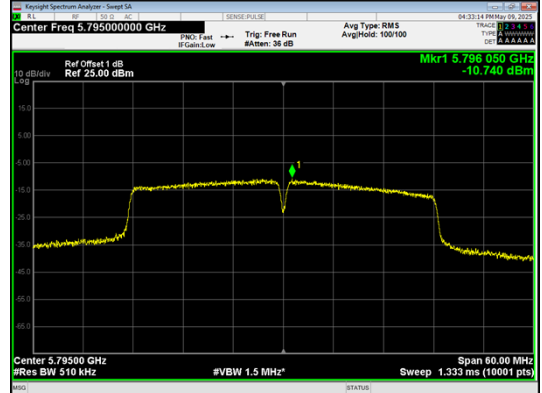
IEEE 802.11n_Channel 157_20MHz_Antenna 0



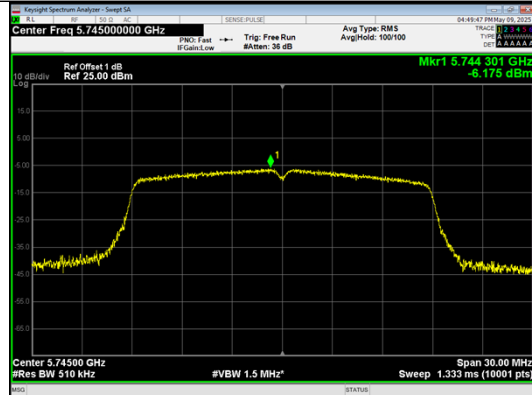
IEEE 802.11n_Channel 165_20MHz_Antenna 0



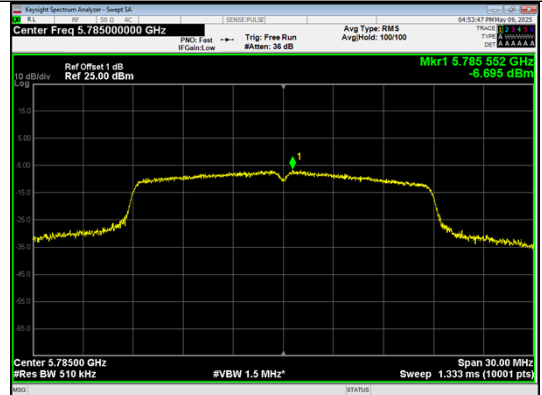
IEEE 802.11n_Channel 151_40MHz_Antenna 0



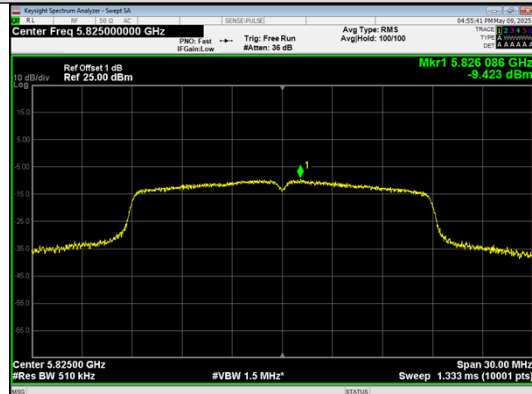
IEEE 802.11n_Channel 159_40MHz_Antenna 0



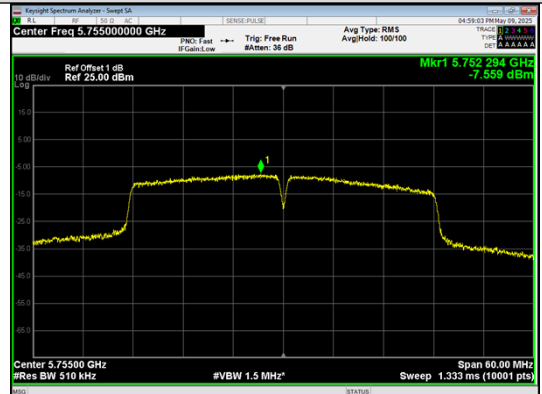
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



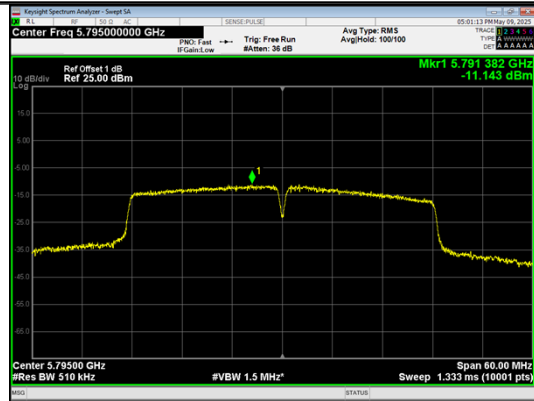
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



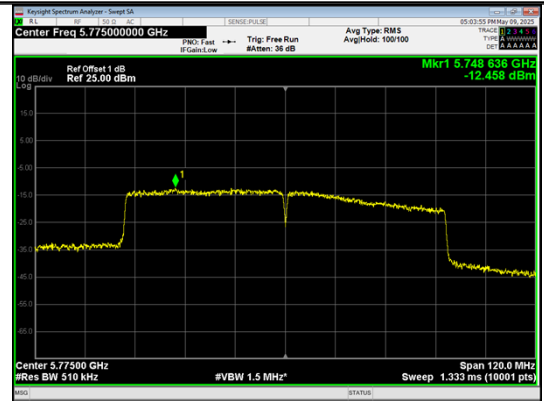
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



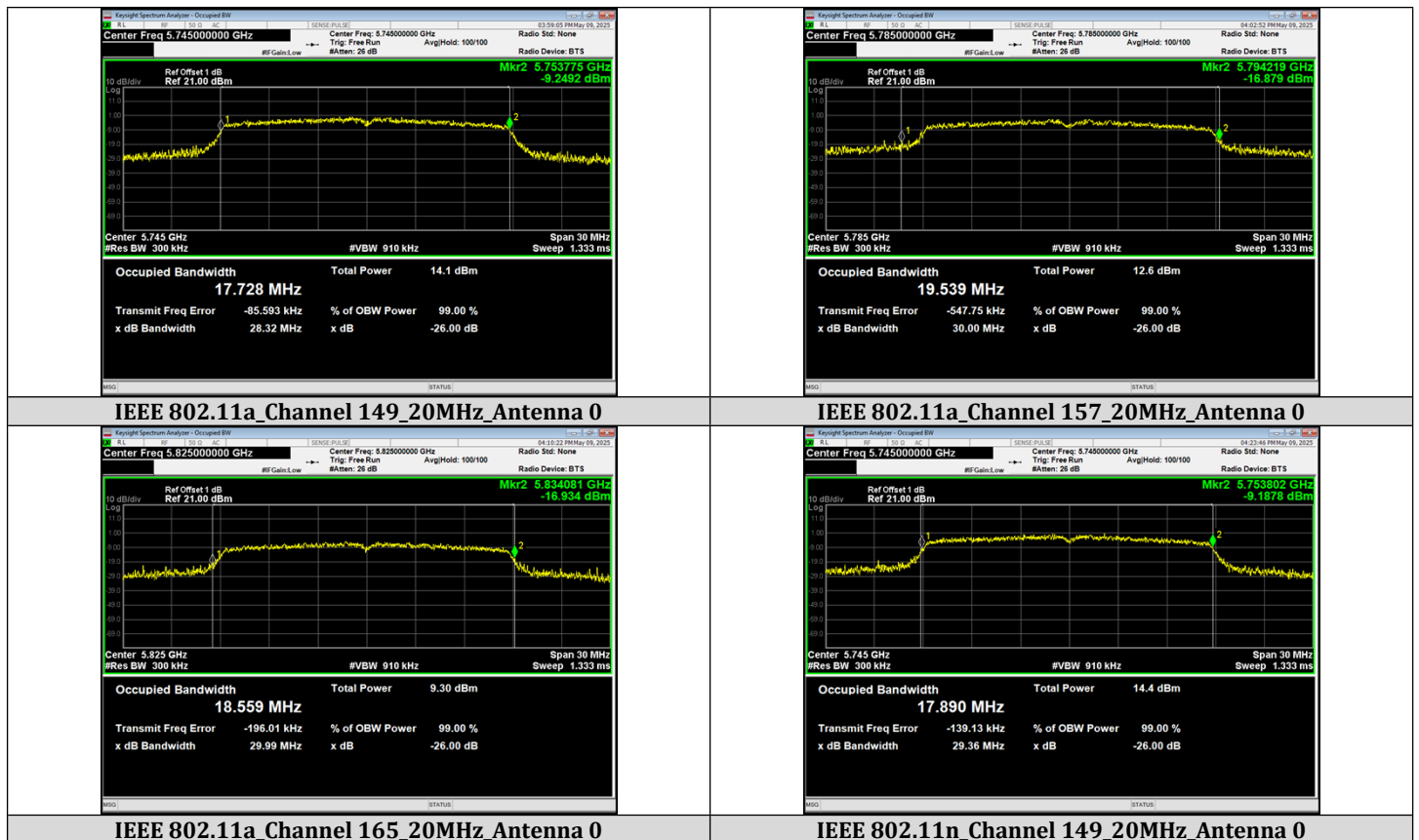
IEEE 802.11ac_Channel 159_40MHz_Antenna 0

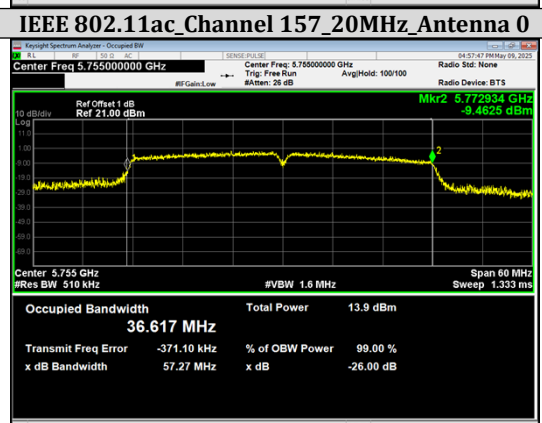
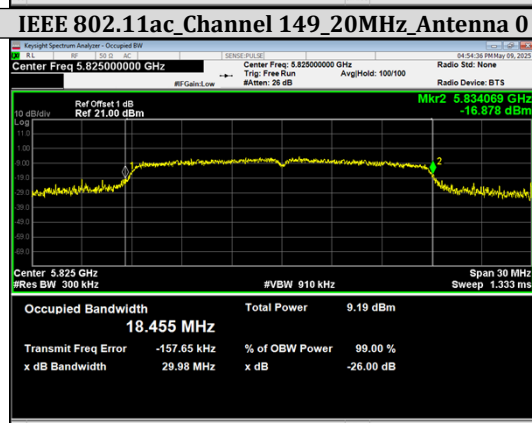
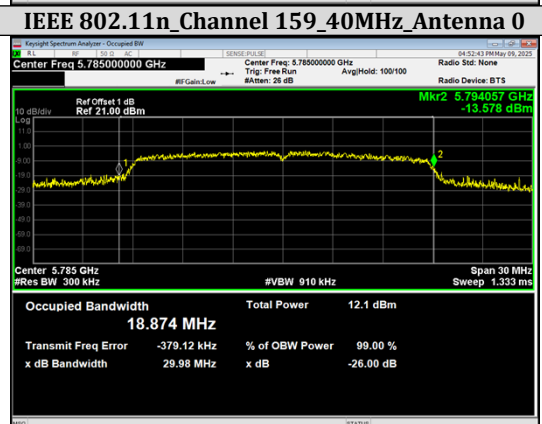
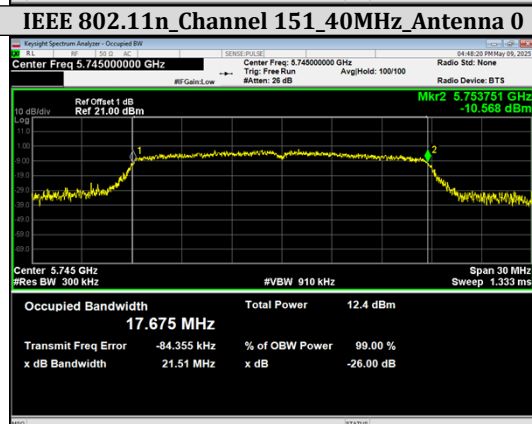
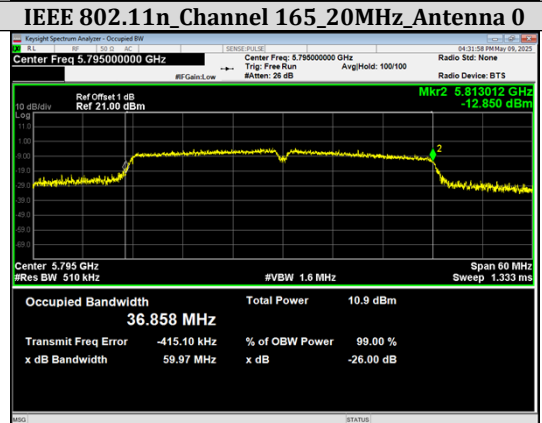
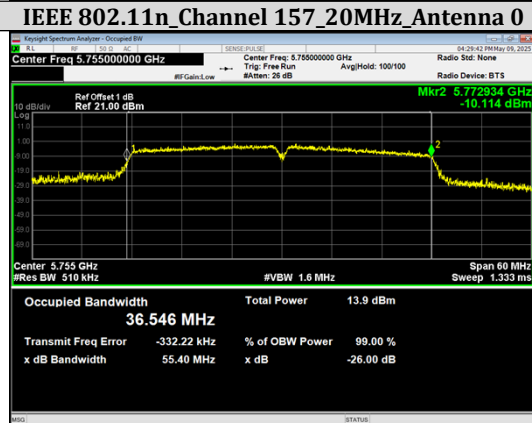
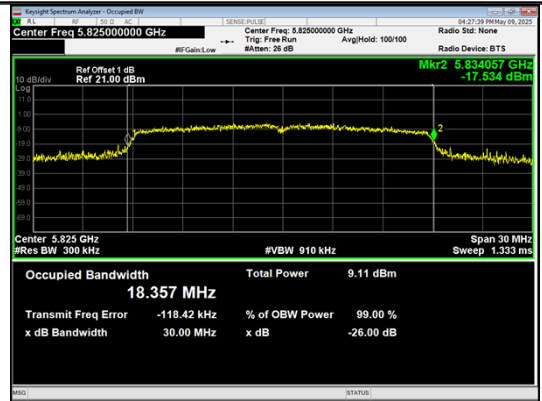
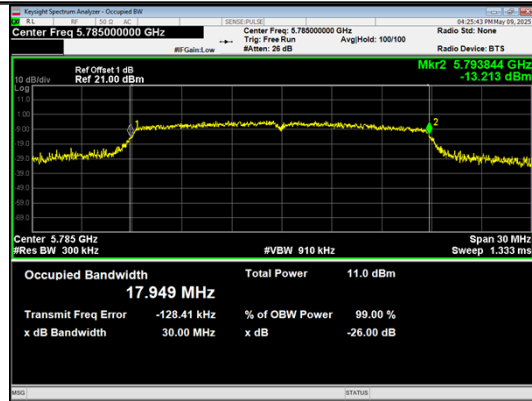


IEEE 802.11ac_Channel 155_80MHz_Antenna 0

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

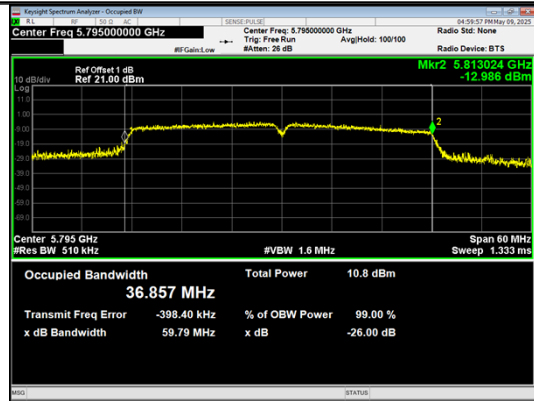
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	149	0	5745	17.728
	157		5785	19.539
	165		5825	18.559
IEEE 802.11n_20	149		5745	17.890
	157		5785	17.949
	165		5825	18.357
IEEE 802.11n_40	151		5755	36.546
	159		5795	36.858
IEEE 802.11ac_20	149		5745	17.675
	157		5785	18.874
	165		5825	18.455
IEEE 802.11ac_40	151		5755	36.617
	159		5795	36.857
IEEE 802.11ac_80	155		5775	79.381

Test Graphs

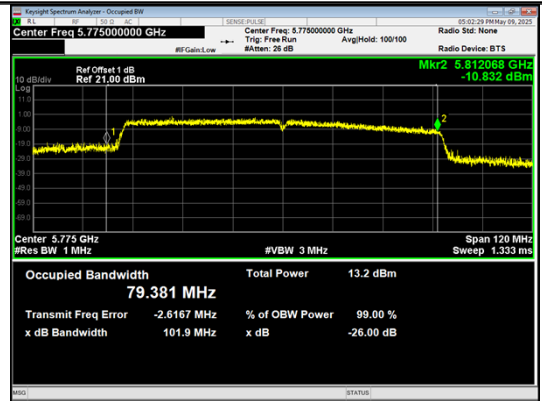


IEEE 802.11ac Channel 165 20MHz Antenna 0

IEEE 802.11ac Channel 151 40MHz Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



IEEE 802.11ac_Channel 155_80MHz_Antenna 0

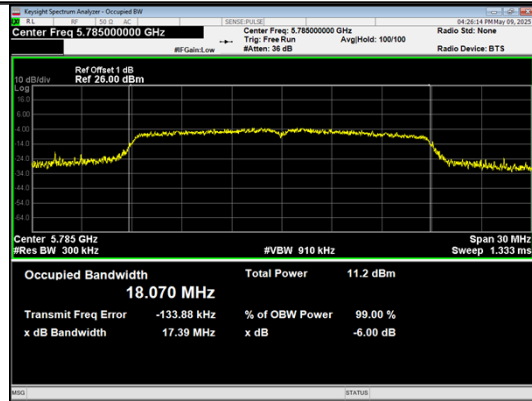
6dB Bandwidth

Test Result

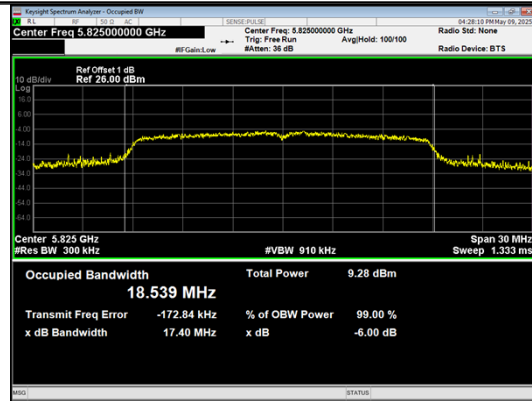
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11a	149	0	5745	17.10	≥0.5	PASS
	157		5785	17.05		PASS
	165		5825	17.36		PASS
IEEE 802.11n_20	149		5745	17.32		PASS
	157		5785	17.39		PASS
	165		5825	17.40		PASS
IEEE 802.11n_40	151		5755	35.22		PASS
	159		5795	35.51		PASS
IEEE 802.11ac_20	149		5745	17.09		PASS
	157		5785	17.50		PASS
	165		5825	17.42		PASS
IEEE 802.11ac_40	151		5755	33.29		PASS
	159		5795	35.54		PASS
IEEE 802.11ac_80	155		5775	59.57		PASS

Test Graphs

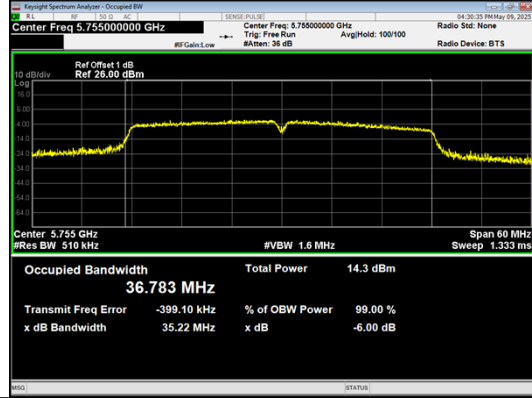




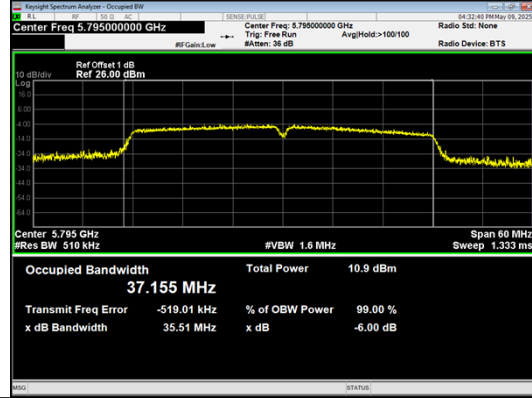
IEEE 802.11n_Channel 157_20MHz_Antenna 0



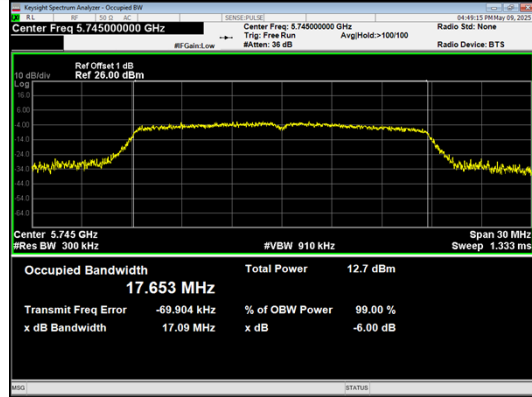
IEEE 802.11n_Channel 165_20MHz_Antenna 0



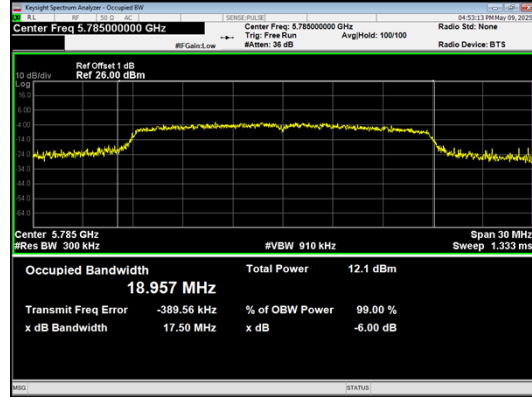
IEEE 802.11n_Channel 151_40MHz_Antenna 0



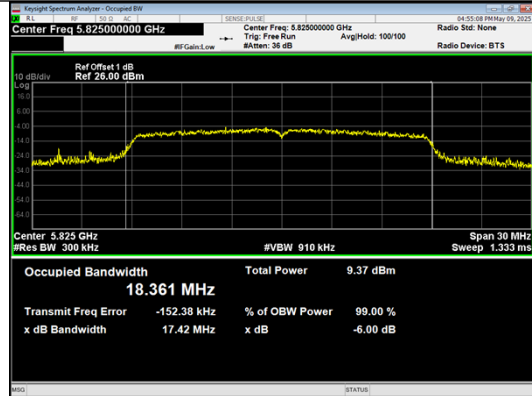
IEEE 802.11n_Channel 159_40MHz_Antenna 0



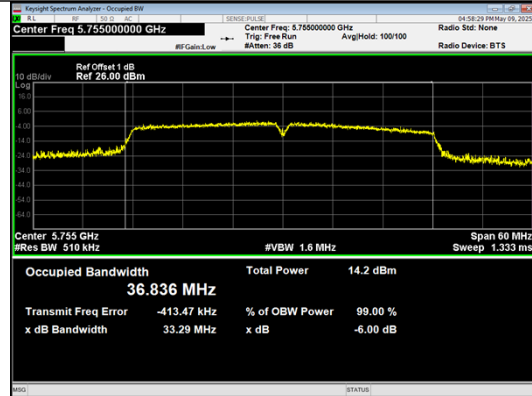
IEEE 802.11ac_Channel 149_20MHz_Antenna 0



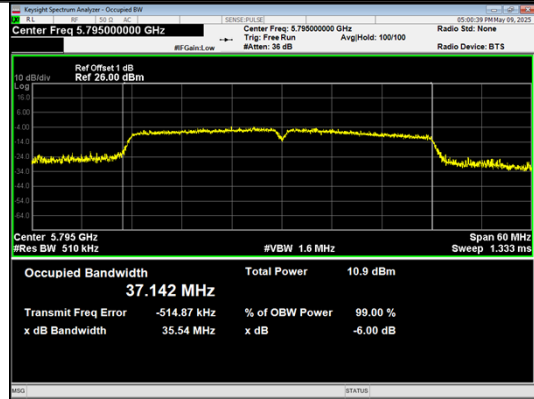
IEEE 802.11ac_Channel 157_20MHz_Antenna 0



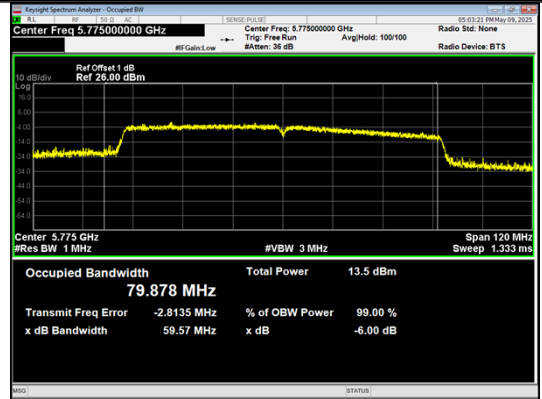
IEEE 802.11ac_Channel 165_20MHz_Antenna 0



IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



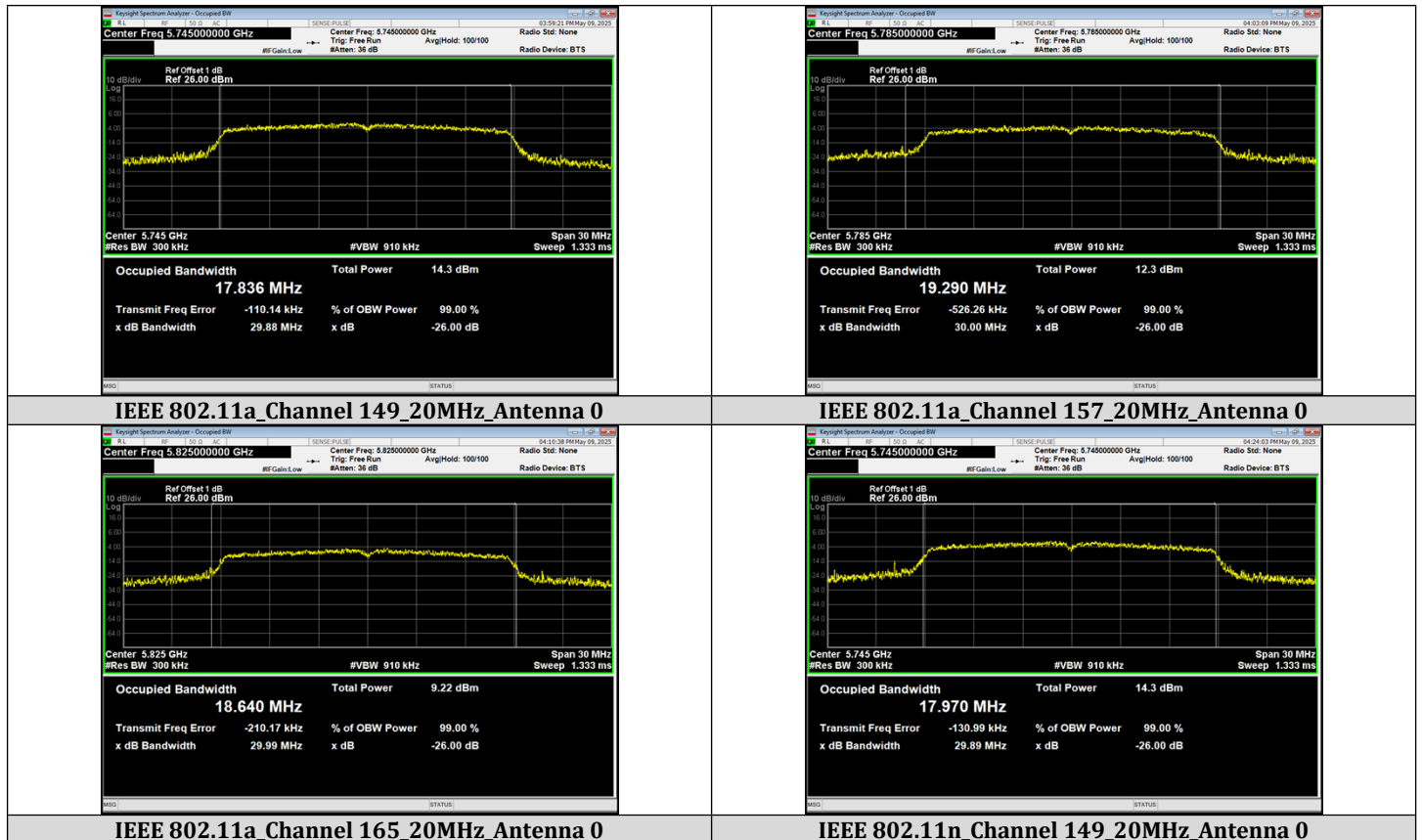
IEEE 802.11ac_Channel 155_80MHz_Antenna 0

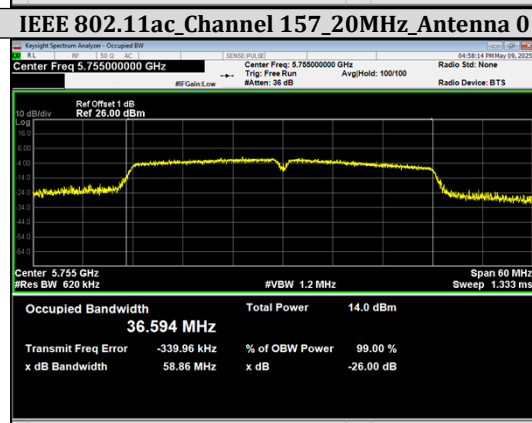
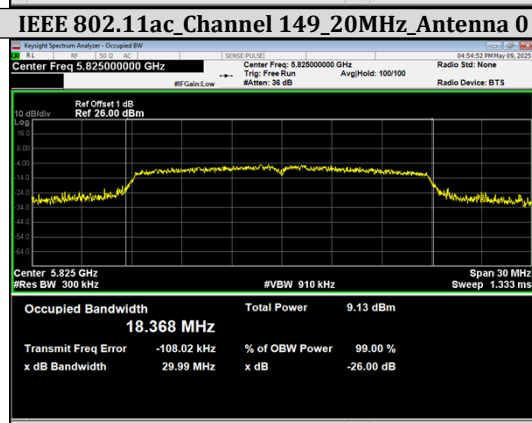
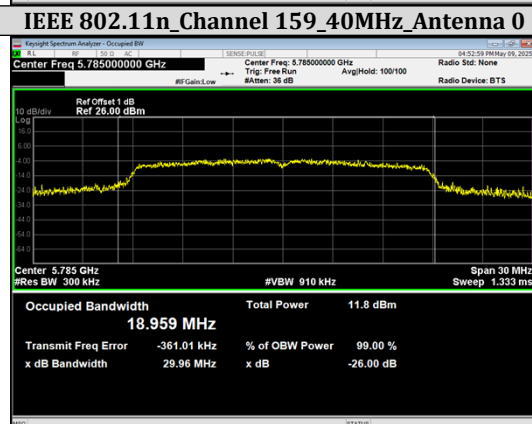
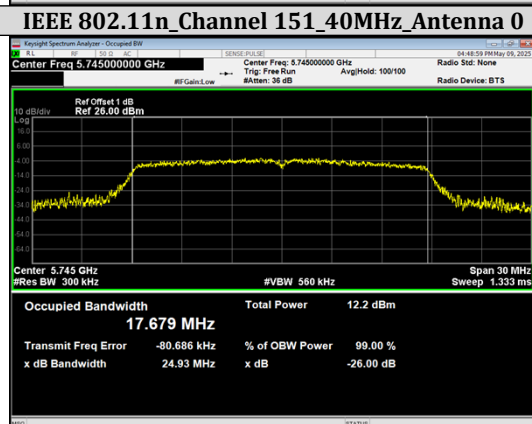
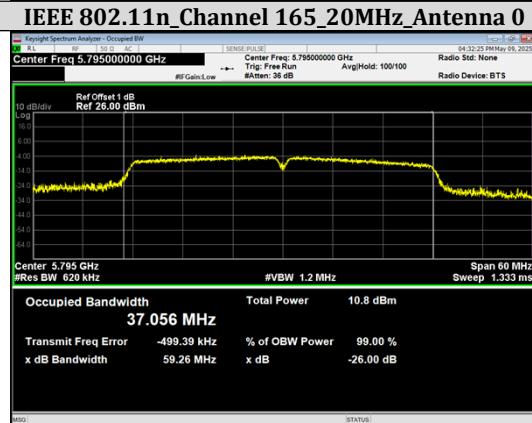
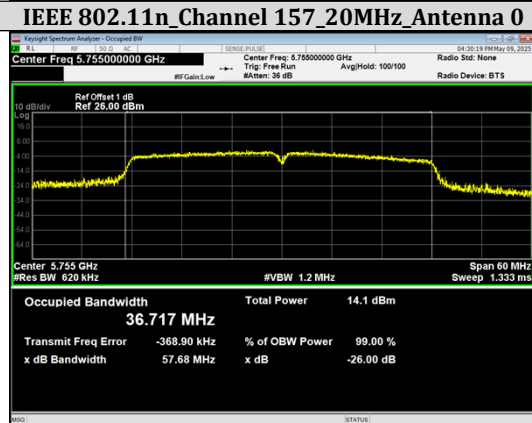
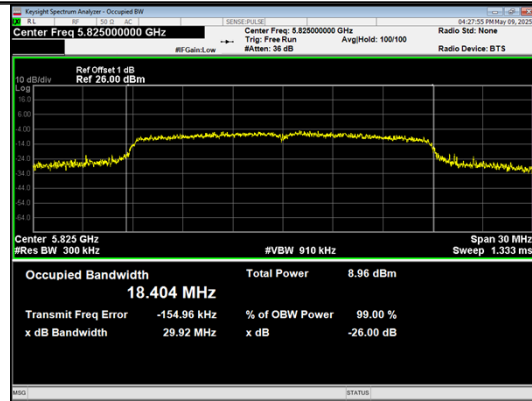
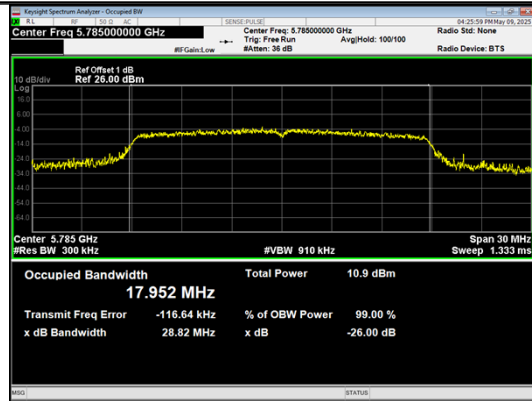
26dB Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	149	0	5745	29.88	1.0
	157		5785	30.00	1.0
	165		5825	29.99	1.0
IEEE 802.11n_20	149		5745	29.89	1.0
	157		5785	28.82	1.04
	165		5825	29.92	1.0
IEEE 802.11n_40	151		5755	57.68	1.07
	159		5795	59.26	1.04
IEEE 802.11ac_20	149		5745	24.93	1.16
	157		5785	29.96	1.0
	165		5825	29.99	1.0
IEEE 802.11ac_40	151		5755	58.86	1.04
	159		5795	59.31	1.04
IEEE 802.11ac_80	155		5775	113.80	1.07

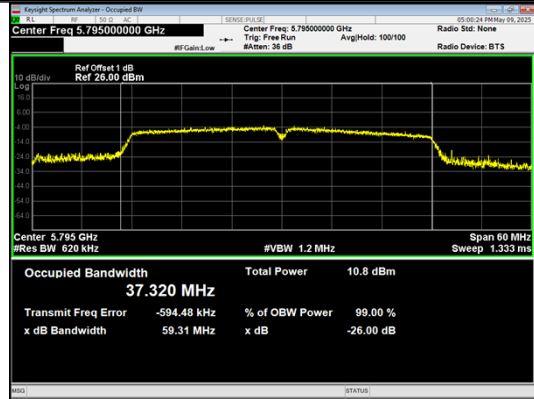
Test Graphs



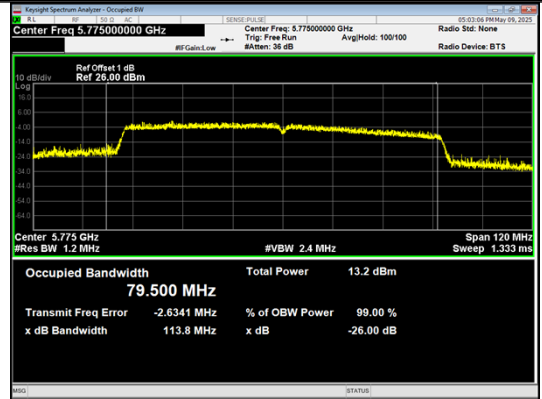


IEEE 802.11ac_Channel 165_20MHz_Antenna 0

IEEE 802.11ac_Channel 151_40MHz_Antenna 0



IEEE 802.11ac_Channel 159_40MHz_Antenna 0



IEEE 802.11ac_Channel 155_80MHz_Antenna 0

**Frequency Stability****Test Result**

Condition	Mode	Ch.	Antenna	Center Frequency (MHz)	Calculated Value of Center Frequency(MHz)	Result (ppm)	Limit (ppm)	State
NT/NV	IEEE 802.11a	149	0	5745.0	5744.976818	-4.04	Within authorized band	PASS
		157		5785.0	5784.973268	-4.62		PASS
		165		5825.0	5824.974906	-4.31		PASS
	IEEE 802.11n_20	149		5745.0	5744.970268	-5.18		PASS
		157		5785.0	5784.970168	-5.16		PASS
		165		5825.0	5824.970018	-5.15		PASS
	IEEE 802.11n_40	151		5755.0	5754.969943	-5.22		PASS
		159		5795.0	5794.969868	-5.2		PASS
	IEEE 802.11ac_20	149		5745.0	5744.969480	-5.31		PASS
		157		5785.0	5784.969455	-5.28		PASS
		165		5825.0	5824.969355	-5.26		PASS
	IEEE 802.11ac_40	151		5755.0	5754.969443	-5.31		PASS
		159		5795.0	5794.969455	-5.27		PASS
	IEEE 802.11ac_80	155		5775.0	5774.969680	-5.25		PASS

***** End of Report *****