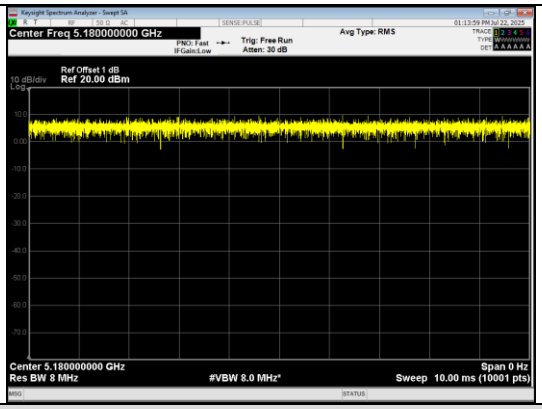
Appendix RF test data for 5G WIFI_NII band 1

Duty Cycle

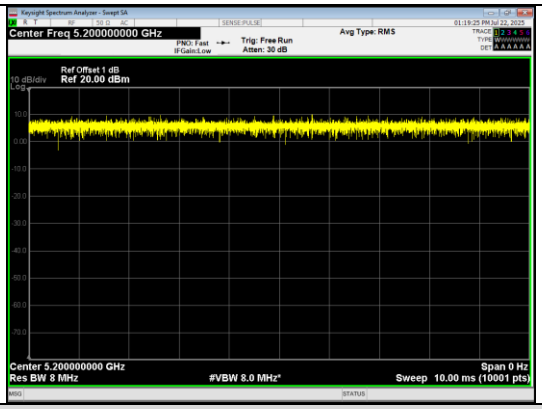
Test Result

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	36	1	10.000	10.000	100	1	0.0	0.1000
		40		10.000	10.000	100	1	0.0	0.1000
		48		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11n_20	MCS 0	36		10.000	10.000	100	1	0.0	0.1000
		40		10.000	10.000	100	1	0.0	0.1000
		48		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11n_40		38		10.000	10.000	100	1	0.0	0.1000
		46		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11ac_20		36		10.000	10.000	100	1	0.0	0.1000
		40		10.000	10.000	100	1	0.0	0.1000
		48		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11ac_40		38		10.000	10.000	100	1	0.0	0.1000
		46		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11ac_80		42		10.000	10.000	100	1	0.0	0.1000

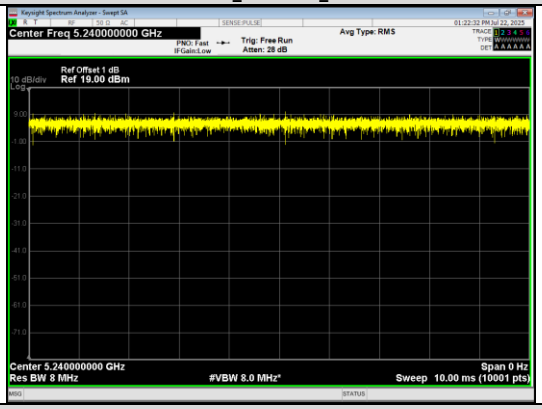
Test Graphs



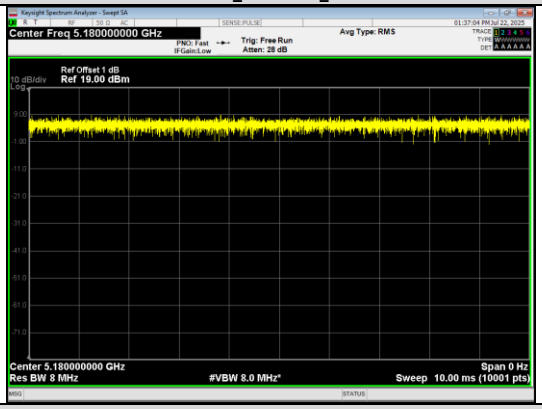
IEEE 802.11a_20MHz_Channel 36



IEEE 802.11a_20MHz_Channel 40



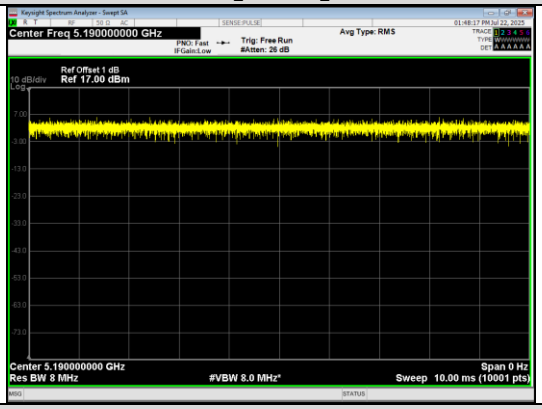
IEEE 802.11a_20MHz_Channel 48



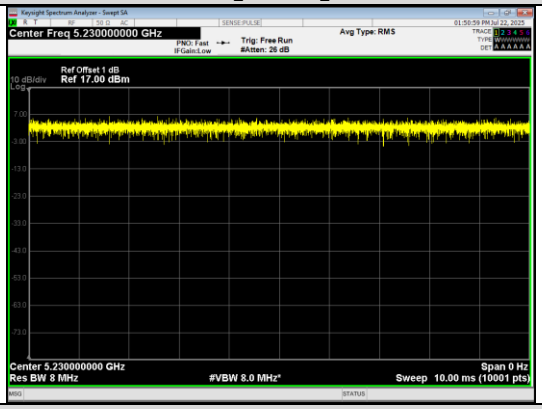
IEEE 802.11n_20MHz_Channel 36

IEEE 802.11n_20MHz_Channel 40

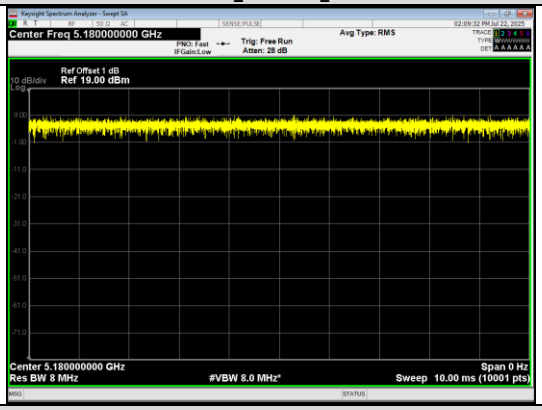
IEEE 802.11n_20MHz_Channel 48



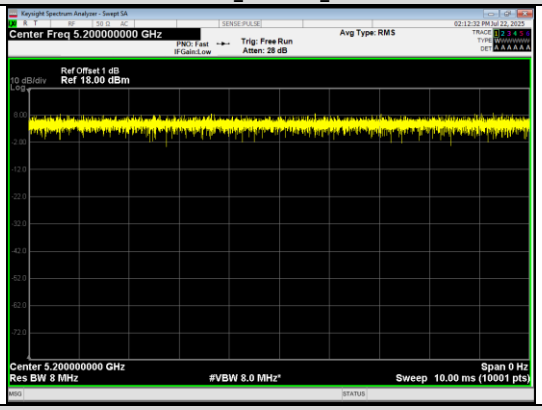
IEEE 802.11n_40MHz_Channel 38



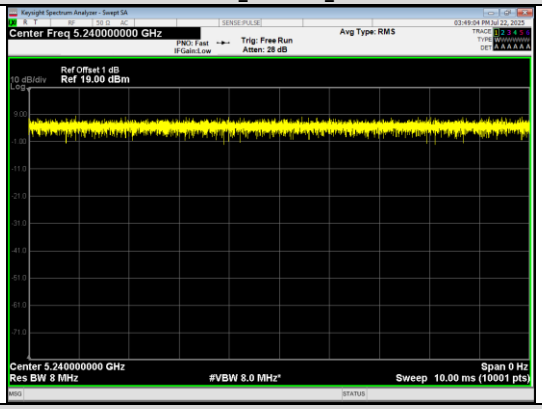
IEEE 802.11n_40MHz_Channel 46



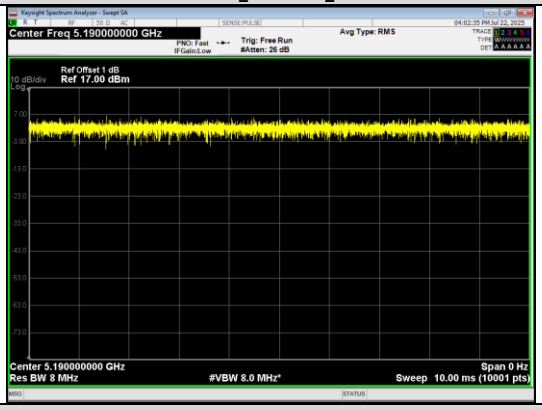
IEEE 802.11ac_20MHz_Channel 36



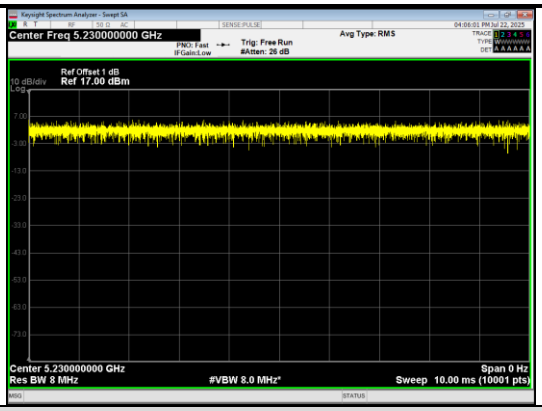
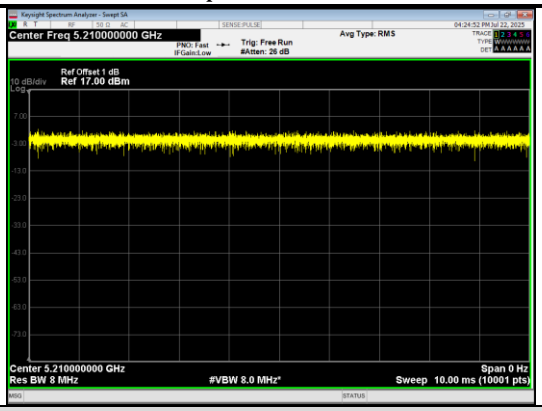
IEEE 802.11ac_20MHz_Channel 40



IEEE 802.11ac_20MHz_Channel 48



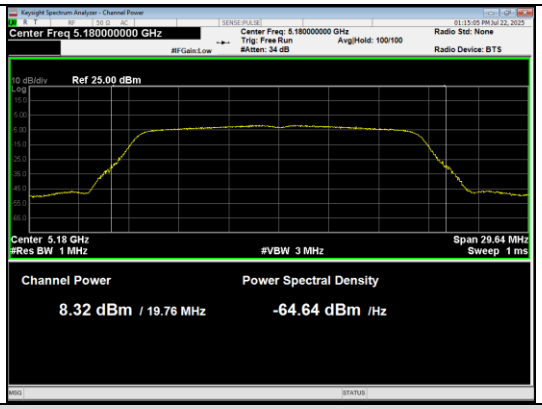
IEEE 802.11ac_40MHz_Channel 38

	
IEEE 802.11ac_40MHz_Channel 46	**IEEE 802.11ac_80MHz_Channel 42**

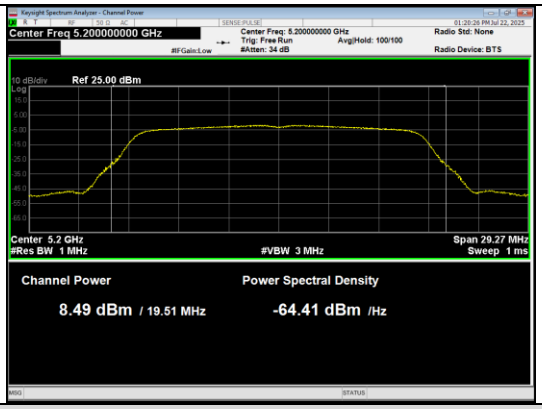
Conducted Output Power

Conducted output power

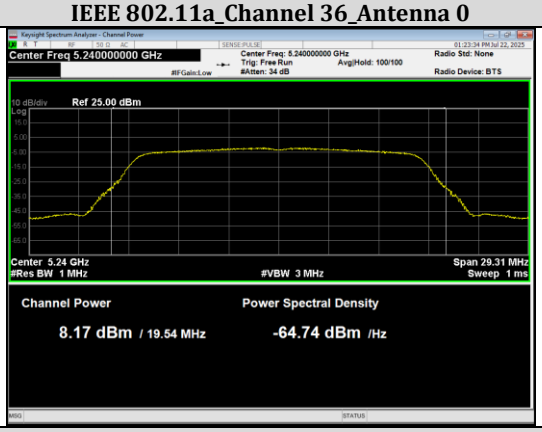
Mode	Channel	Ant. 0 (dBm)	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	36	8.32	8.32	≤24	PASS
	40	8.49	8.49	≤24	PASS
	48	8.17	8.17	≤24	PASS
IEEE 802.11n_20	36	8.18	8.18	≤24	PASS
	40	8.23	8.23	≤24	PASS
	48	7.94	7.94	≤24	PASS
IEEE 802.11n_40	38	8.11	8.11	≤24	PASS
	46	7.97	7.97	≤24	PASS
IEEE 802.11ac_20	36	8.27	8.27	≤24	PASS
	40	7.62	7.62	≤24	PASS
	48	7.21	7.21	≤24	PASS
IEEE 802.11ac_40	38	7.97	7.97	≤24	PASS
	46	7.51	7.51	≤24	PASS
IEEE 802.11ac_80	42	7.44	7.44	≤24	PASS
Note: Corr'd Value= Ant. 0 (dBm)+Duty cycle Factor.					



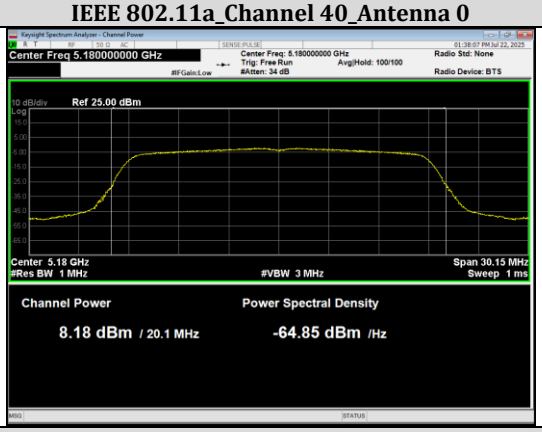
Conducted AVG output power
IEEE 802.11a_Channel 36_Antenna 0



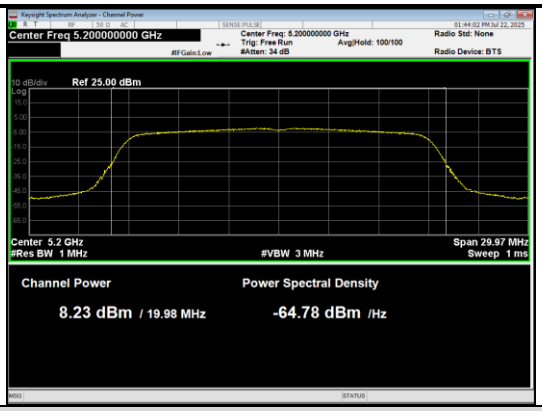
Conducted AVG output power
IEEE 802.11a_Channel 40_Antenna 0



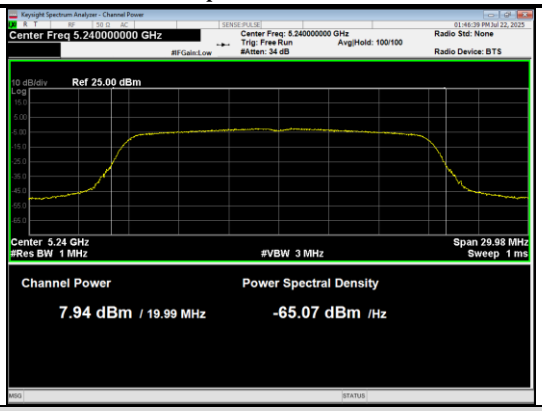
Conducted AVG output power
IEEE 802.11a_Channel 48_Antenna 0



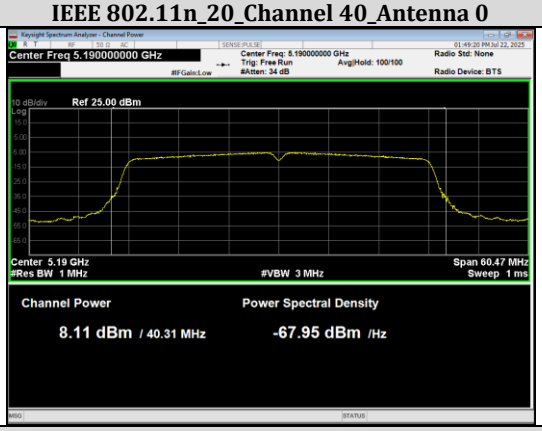
Conducted AVG output power
IEEE 802.11n_20_Channel 36_Antenna 0



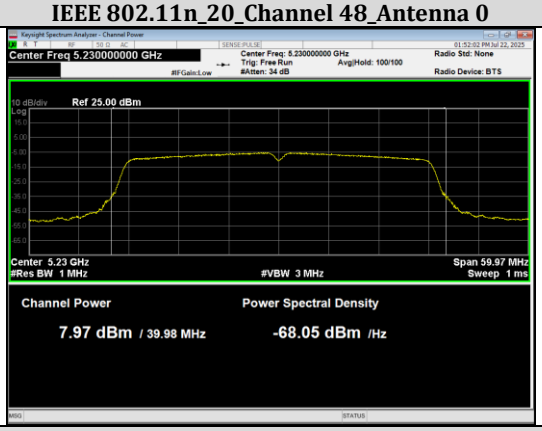
Conducted AVG output power
IEEE 802.11n_20_Channel 40_Antenna 0



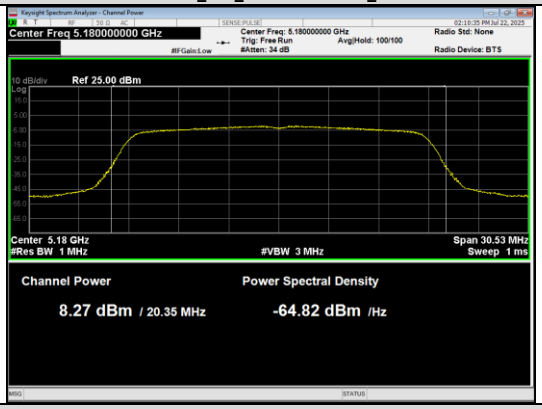
Conducted AVG output power
IEEE 802.11n_20_Channel 48_Antenna 0



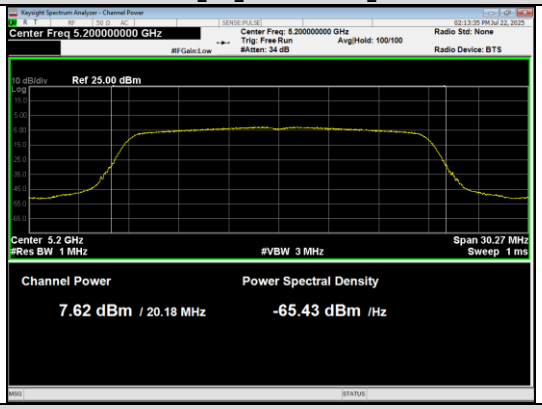
Conducted AVG output power
IEEE 802.11n_40_Channel 38_Antenna 0



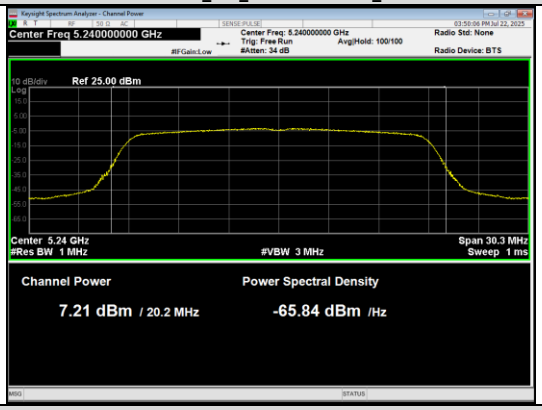
Conducted AVG output power
IEEE 802.11n_40_Channel 46_Antenna 0



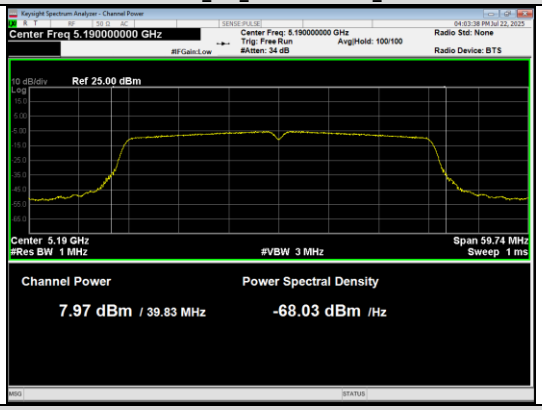
Conducted AVG output power
IEEE 802.11ac_20_Channel 36_Antenna 0



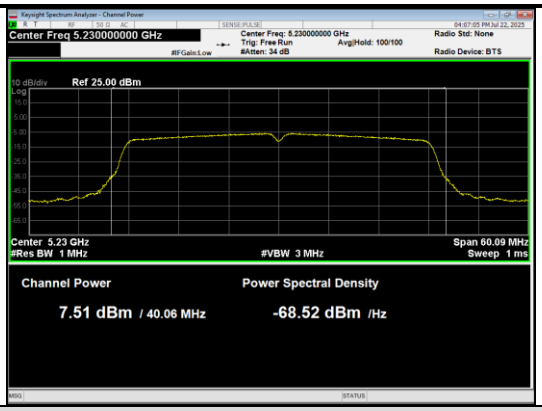
Conducted AVG output power
IEEE 802.11ac_20_Channel 40_Antenna 0



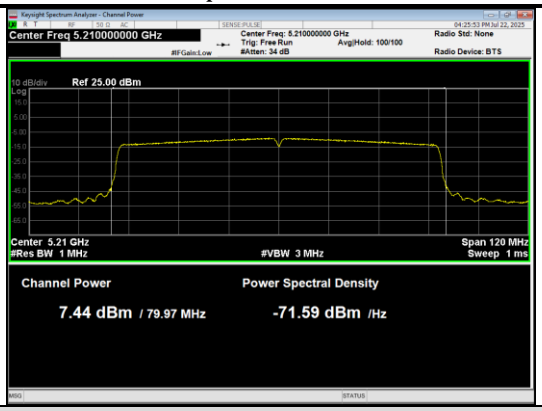
Conducted AVG output power
IEEE 802.11ac_20_Channel 48_Antenna 0



Conducted AVG output power
IEEE 802.11ac_40_Channel 38_Antenna 0



Conducted AVG output power
IEEE 802.11ac_40_Channel 46_Antenna 0



Conducted AVG output power
IEEE 802.11ac_80_Channel 42_Antenna 0

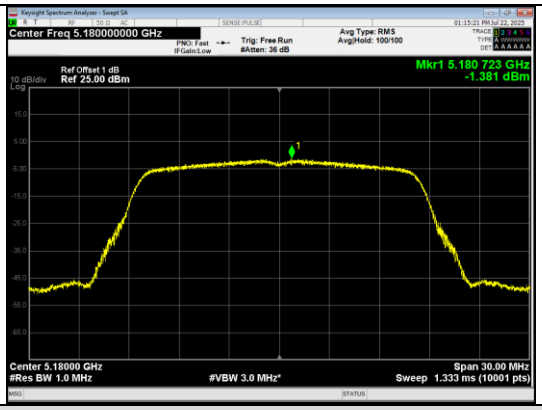
Peak Power Spectral Density

Test Result

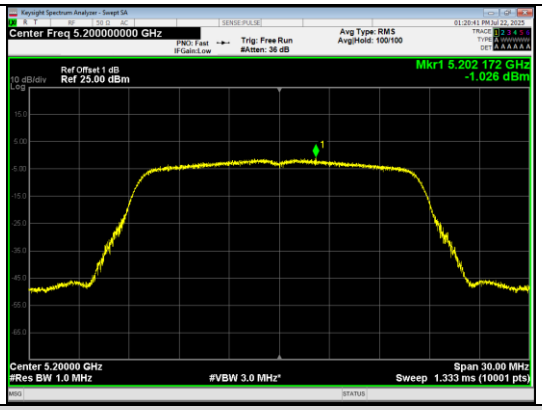
Mode	Channel	Ant. 0 Meas PSD (dBm/MHz or dBm/0.5MHz)	Ant. 0 Corr'd PSD (dBm/MHz or dBm/0.5MHz)	Limit (dBm/MHz or dBm/0.5MHz)	Result
IEEE 802.11a	36	-1.380	-1.38	11	PASS
	40	-1.030	-1.03		PASS
	48	-1.350	-1.35		PASS
IEEE 802.11n_20	36	-1.700	-1.7		PASS
	40	-1.580	-1.58		PASS
	48	-1.660	-1.66		PASS
IEEE 802.11n_40	38	-4.700	-4.7		PASS
	46	-4.540	-4.54		PASS
IEEE 802.11ac_20	36	-1.730	-1.73		PASS
	40	-2.340	-2.34		PASS
	48	-2.540	-2.54		PASS
IEEE 802.11ac_40	38	-4.660	-4.66		PASS
	46	-5.100	-5.1		PASS
IEEE 802.11ac_80	42	-8.350	-8.35		PASS

Note: Corr'd PSD = Meas PSD +Duty cycle Factor.

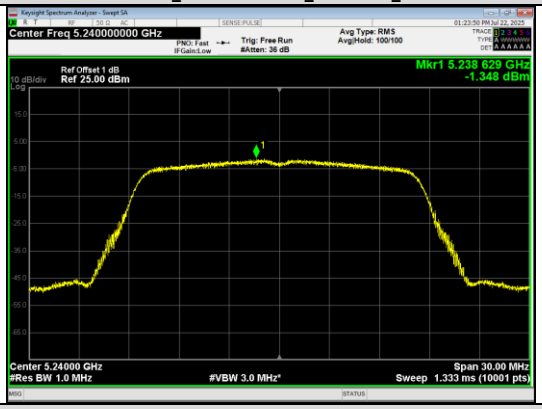
Test Graphs



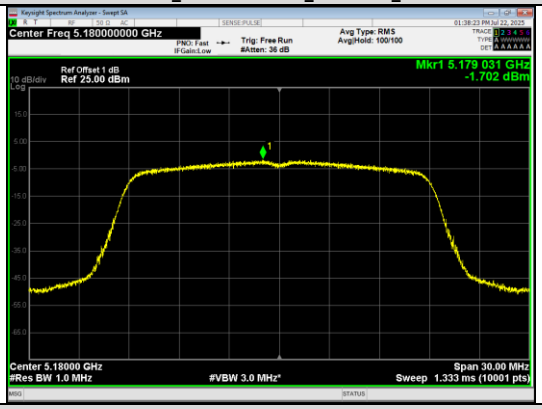
IEEE 802.11a_Channel 36_20MHz_Antenna 0



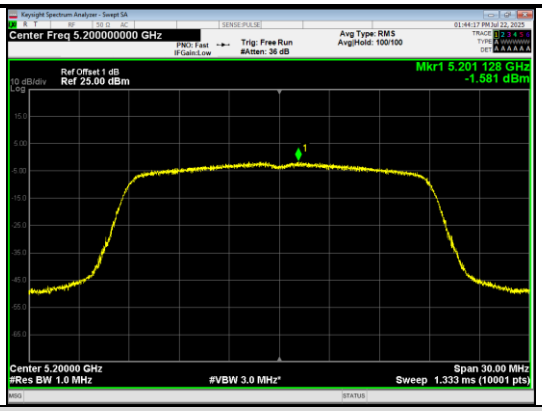
IEEE 802.11a_Channel 40_20MHz_Antenna 0



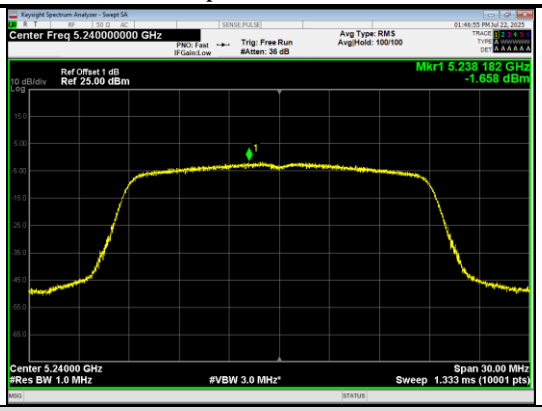
IEEE 802.11a_Channel 48_20MHz_Antenna 0



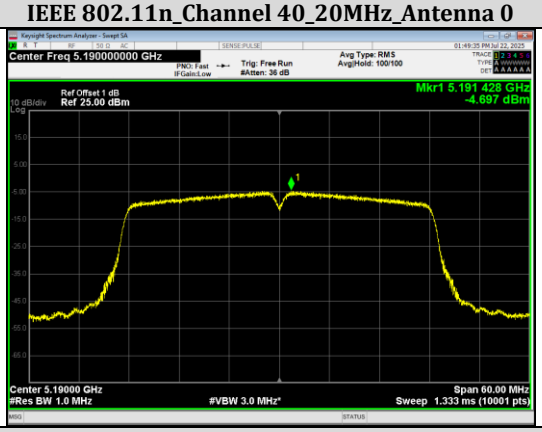
IEEE 802.11n_Channel 36_20MHz_Antenna 0



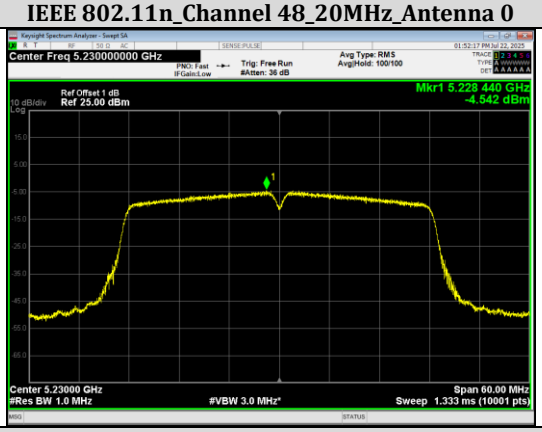
IEEE 802.11n_Channel 40_20MHz_Antenna 0



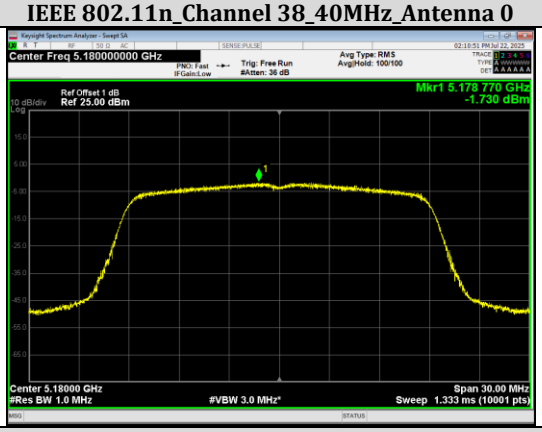
IEEE 802.11n_Channel 48_20MHz_Antenna 0



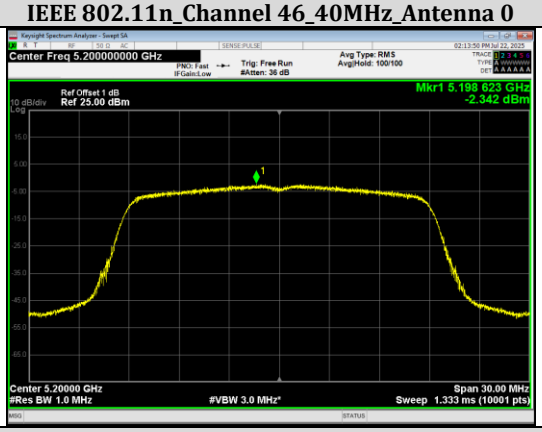
IEEE 802.11n_Channel 38_40MHz_Antenna 0



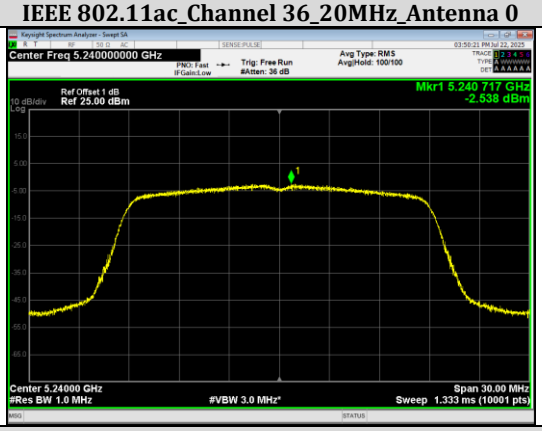
IEEE 802.11n_Channel 46_40MHz_Antenna 0



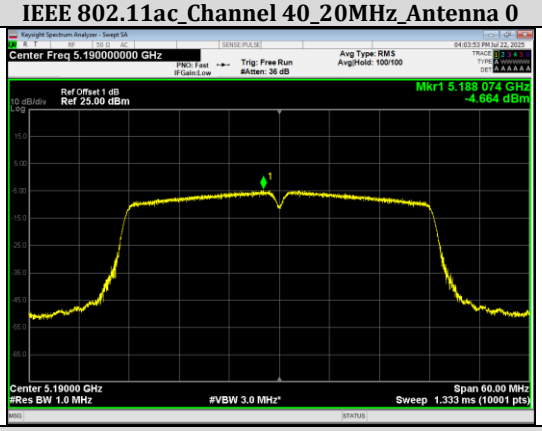
IEEE 802.11ac_Channel 36_20MHz_Antenna 0



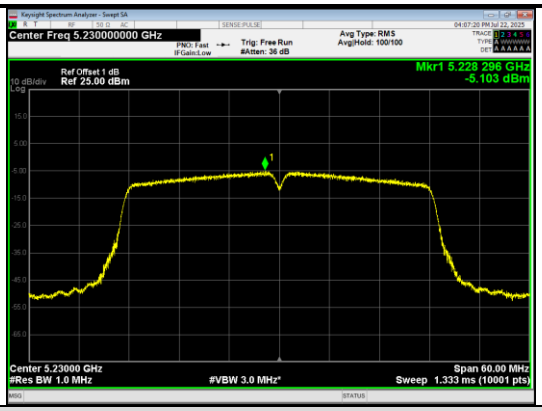
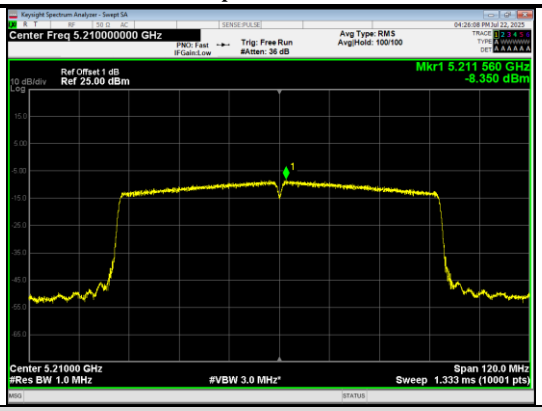
IEEE 802.11ac_Channel 40_20MHz_Antenna 0



IEEE 802.11ac_Channel 48_20MHz_Antenna 0



IEEE 802.11ac_Channel 38_40MHz_Antenna 0

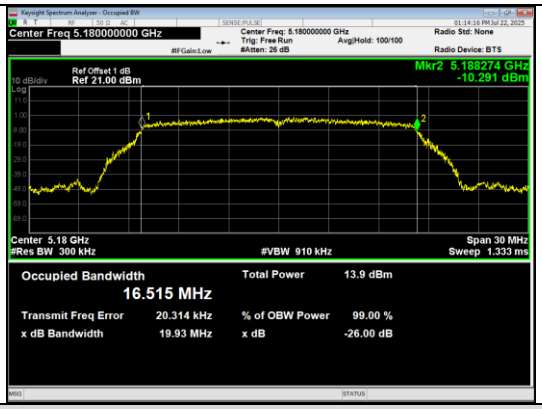
	
IEEE 802.11ac_Channel 46_40MHz_Antenna 0	**IEEE 802.11ac_Channel 42_80MHz_Antenna 0**

99% Bandwidth

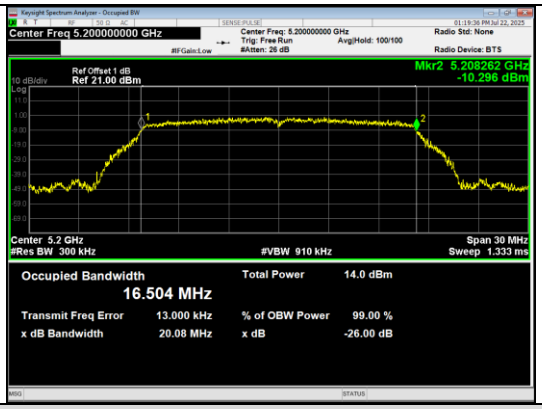
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	36	0	5180	16.515
	40		5200	16.504
	48		5240	16.515
IEEE 802.11n_20	36		5180	17.592
	40		5200	17.626
	48		5240	17.620
IEEE 802.11n_40	38		5190	35.975
	46		5230	35.957
IEEE 802.11ac_20	36		5180	17.579
	40		5200	17.627
	48		5240	17.603
IEEE 802.11ac_40	38		5190	35.980
	46		5230	35.955
IEEE 802.11ac_80	42		5210	75.200

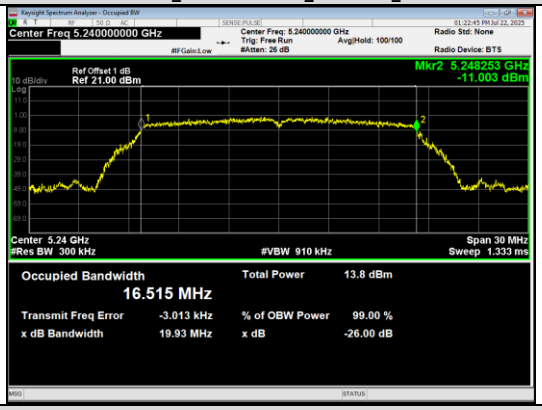
Test Graphs



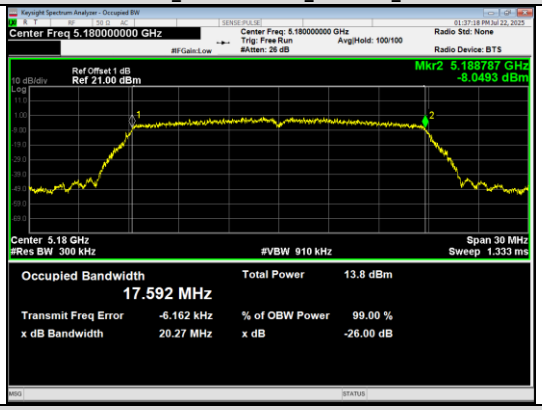
IEEE 802.11a_Channel 36_20MHz_Antenna 0



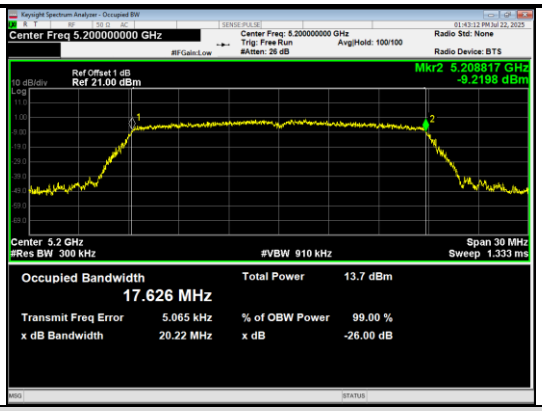
IEEE 802.11a_Channel 40_20MHz_Antenna 0



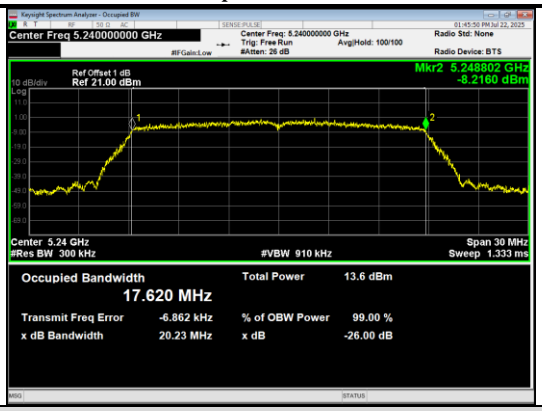
IEEE 802.11a_Channel 48_20MHz_Antenna 0



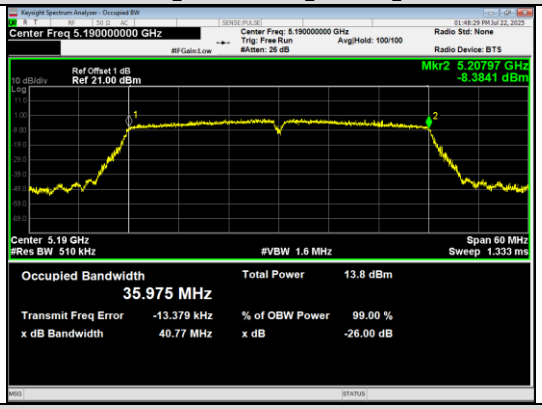
IEEE 802.11n_Channel 36_20MHz_Antenna 0



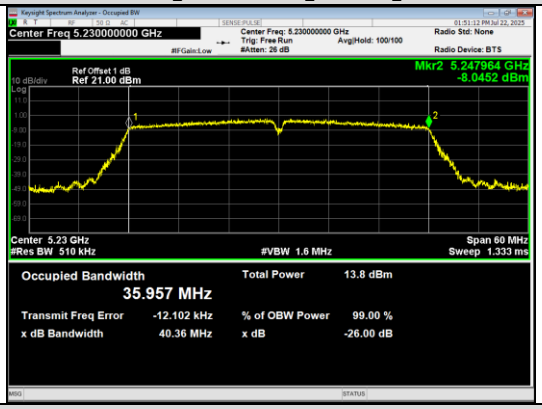
IEEE 802.11n_Channel 40_20MHz_Antenna 0



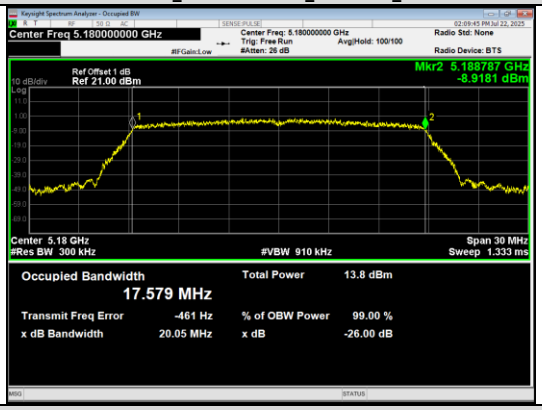
IEEE 802.11n_Channel 48_20MHz_Antenna 0



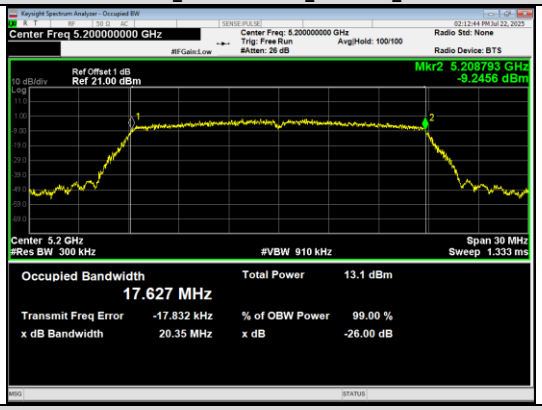
IEEE 802.11n_Channel 38_40MHz_Antenna 0



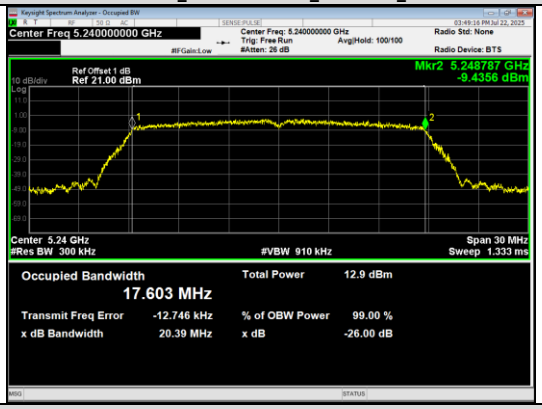
IEEE 802.11n_Channel 46_40MHz_Antenna 0



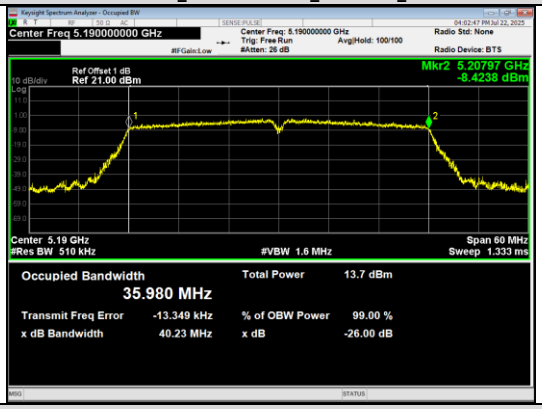
IEEE 802.11ac_Channel 36_20MHz_Antenna 0



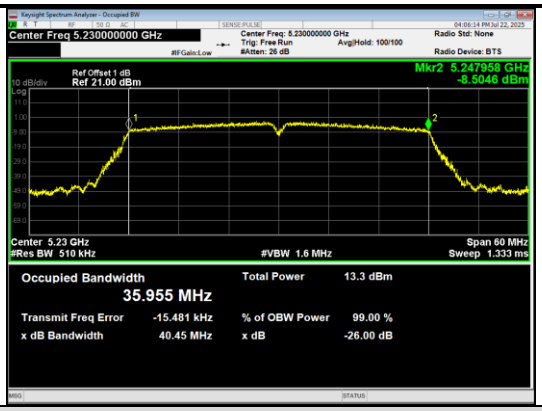
IEEE 802.11ac_Channel 40_20MHz_Antenna 0



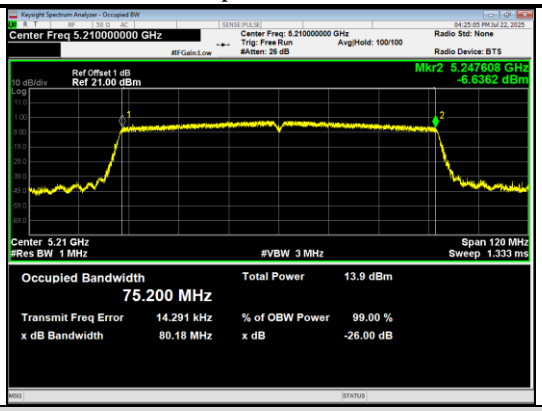
IEEE 802.11ac_Channel 48_20MHz_Antenna 0



IEEE 802.11ac_Channel 38_40MHz_Antenna 0



IEEE 802.11ac_Channel 46_40MHz_Antenna 0



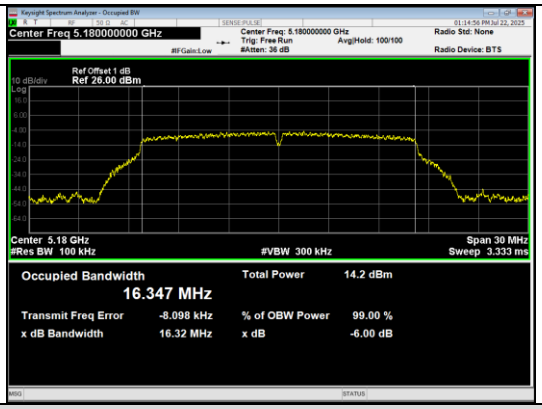
IEEE 802.11ac_Channel 42_80MHz_Antenna 0

6dB Bandwidth

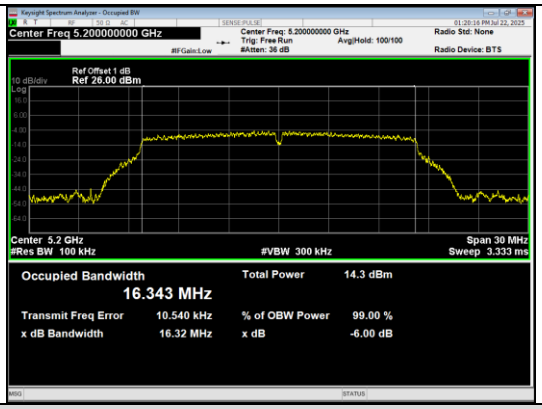
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11a	36	0	5180	16.32	≥0.5	PASS
	40		5200	16.32		PASS
	48		5240	16.32		PASS
IEEE 802.11n_20	36		5180	17.58		PASS
	40		5200	17.60		PASS
	48		5240	17.57		PASS
IEEE 802.11n_40	38		5190	36.30		PASS
	46		5230	36.30		PASS
IEEE 802.11ac_20	36		5180	17.56		PASS
	40		5200	17.57		PASS
	48		5240	17.58		PASS
IEEE 802.11ac_40	38		5190	36.16		PASS
	46		5230	36.29		PASS
IEEE 802.11ac_80	42		5210	76.30		PASS

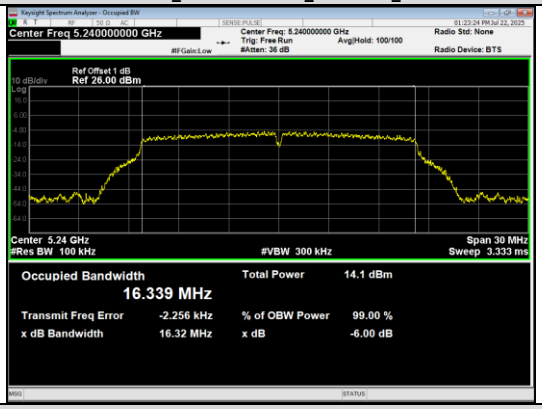
Test Graphs



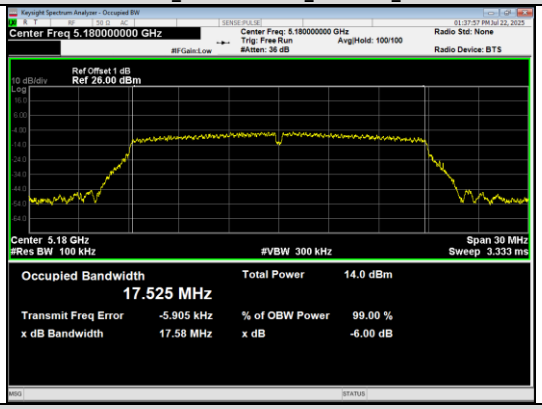
IEEE 802.11a_Channel 36_20MHz_Antenna 0



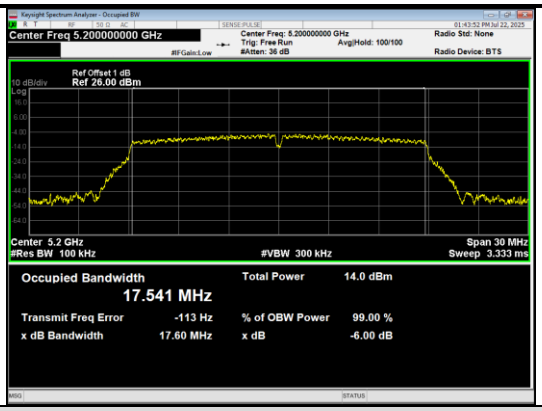
IEEE 802.11a_Channel 40_20MHz_Antenna 0



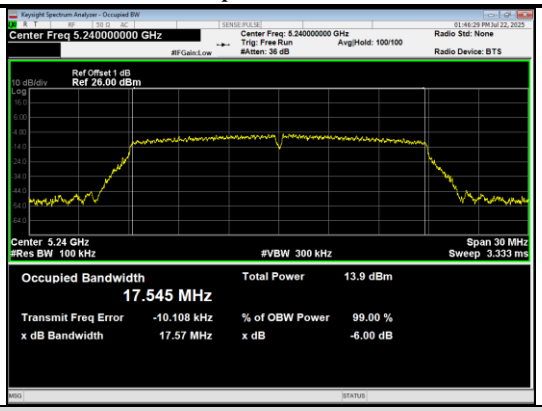
IEEE 802.11a_Channel 48_20MHz_Antenna 0



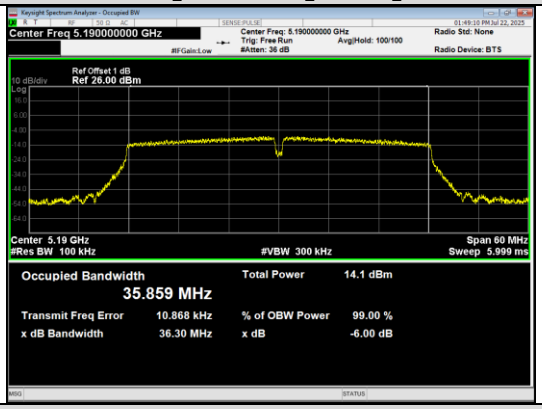
IEEE 802.11n_Channel 36_20MHz_Antenna 0



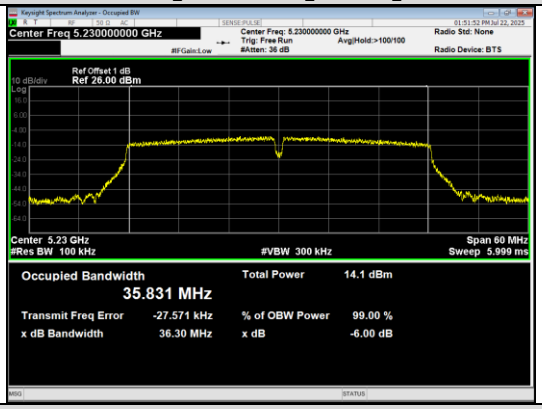
IEEE 802.11n_Channel 40_20MHz_Antenna 0



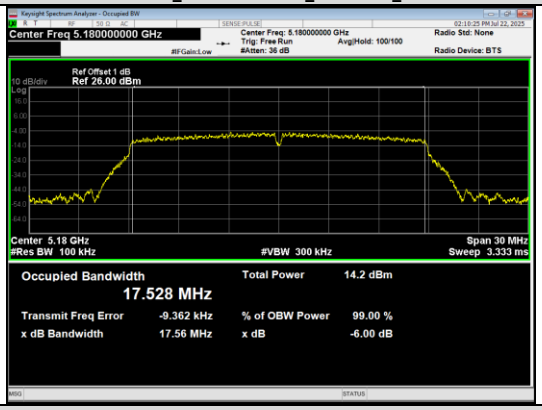
IEEE 802.11n_Channel 48_20MHz_Antenna 0



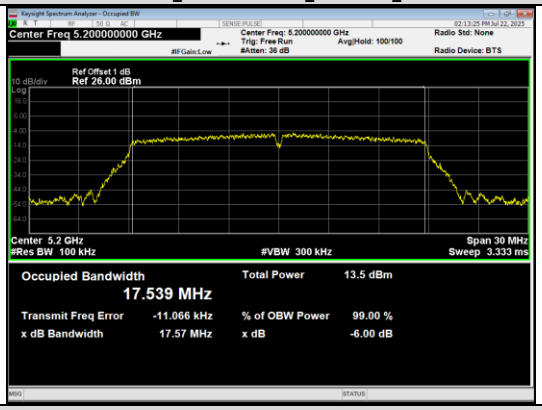
IEEE 802.11n_Channel 38_40MHz_Antenna 0



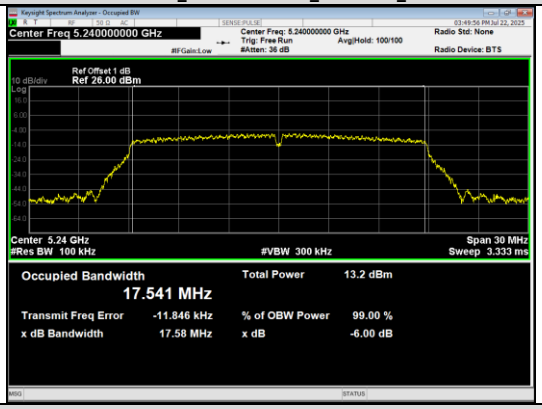
IEEE 802.11n_Channel 46_40MHz_Antenna 0



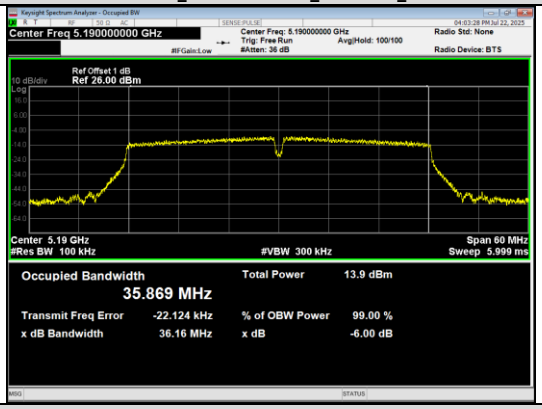
IEEE 802.11ac_Channel 36_20MHz_Antenna 0



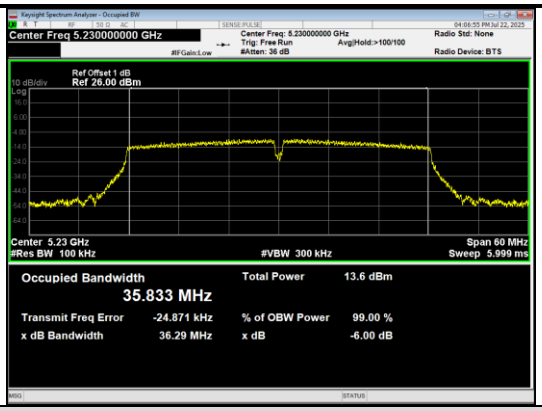
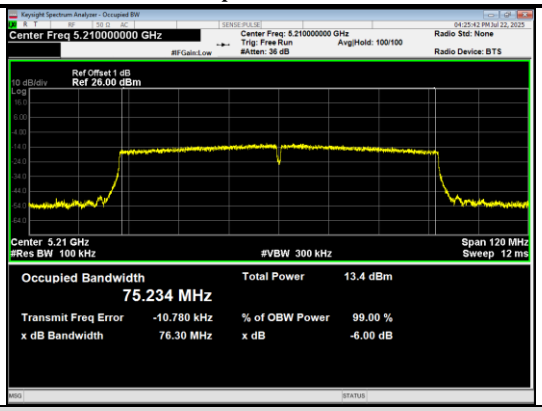
IEEE 802.11ac_Channel 40_20MHz_Antenna 0



IEEE 802.11ac_Channel 48_20MHz_Antenna 0



IEEE 802.11ac_Channel 38_40MHz_Antenna 0

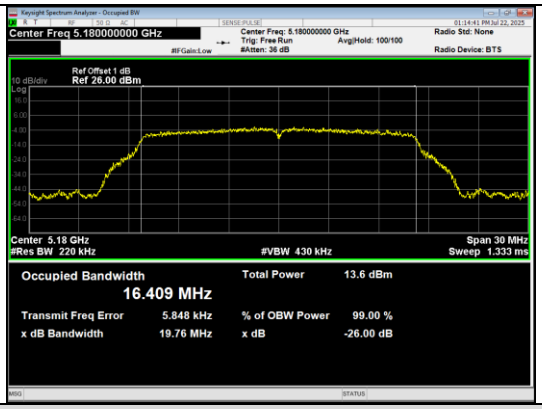
	
IEEE 802.11ac_Channel 46_40MHz_Antenna 0	**IEEE 802.11ac_Channel 42_80MHz_Antenna 0**

26dB Bandwidth

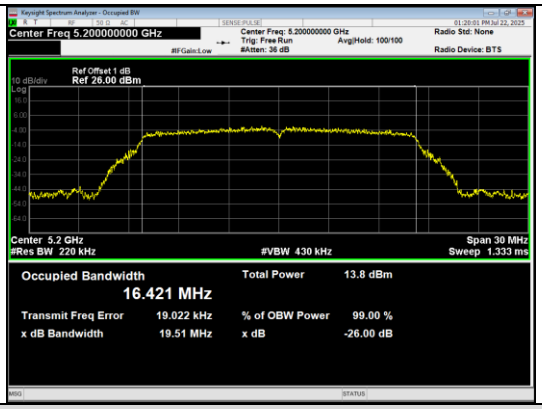
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	36	0	5180	19.76	1.11
	40		5200	19.51	1.13
	48		5240	19.54	1.13
IEEE 802.11n_20	36		5180	20.10	1.12
	40		5200	19.98	1.12
	48		5240	19.99	1.12
IEEE 802.11n_40	38		5190	40.31	1.06
	46		5230	39.98	1.05
IEEE 802.11ac_20	36		5180	20.35	1.1
	40		5200	20.18	1.11
	48		5240	20.20	1.1
IEEE 802.11ac_40	38		5190	39.83	1.07
	46		5230	40.06	1.05
IEEE 802.11ac_80	42		5210	79.97	1.04

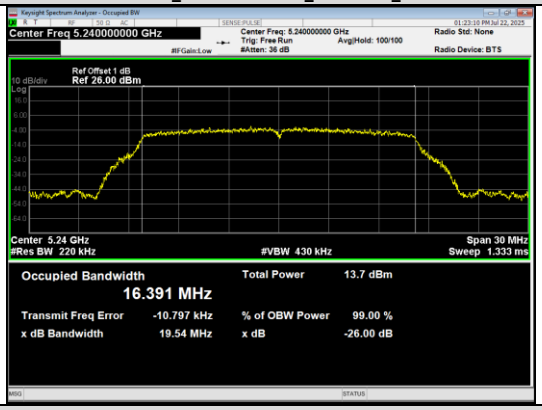
Test Graphs



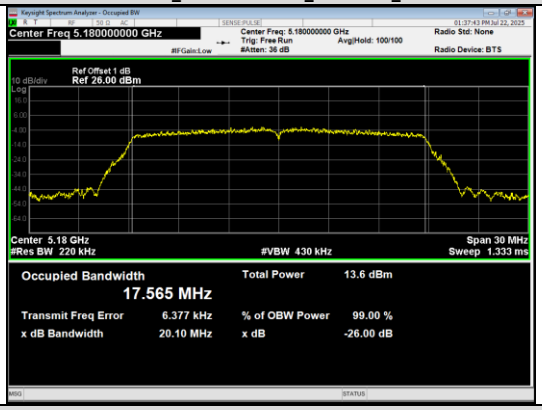
IEEE 802.11a_Channel 36_20MHz_Antenna 0



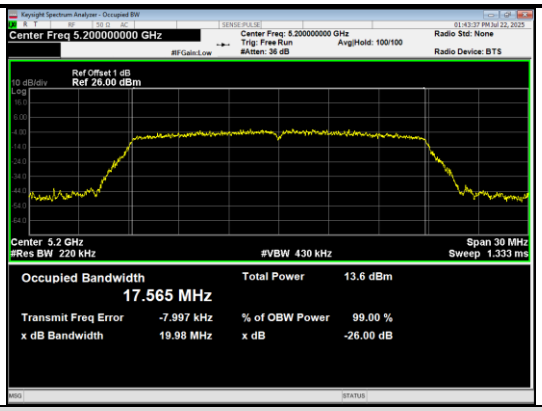
IEEE 802.11a_Channel 40_20MHz_Antenna 0



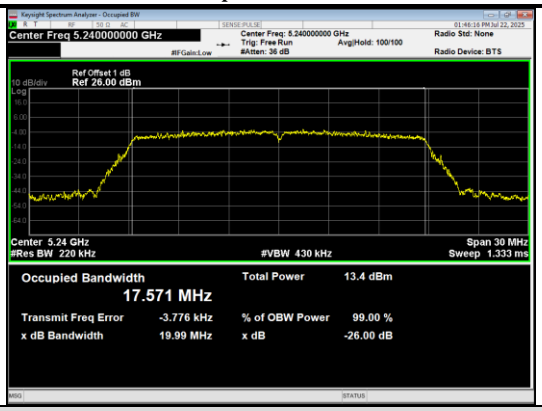
IEEE 802.11a_Channel 48_20MHz_Antenna 0



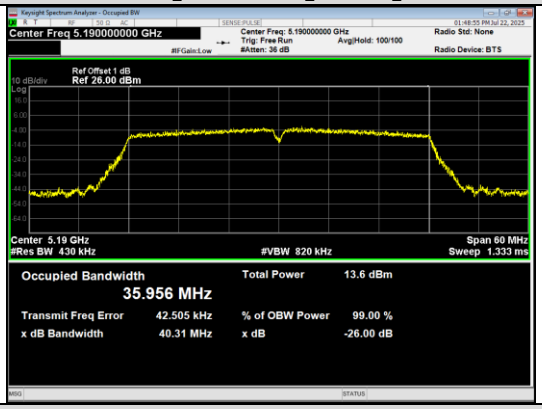
IEEE 802.11n_Channel 36_20MHz_Antenna 0



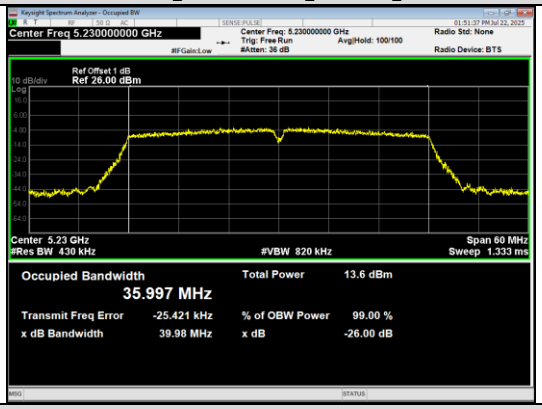
IEEE 802.11n_Channel 40_20MHz_Antenna 0



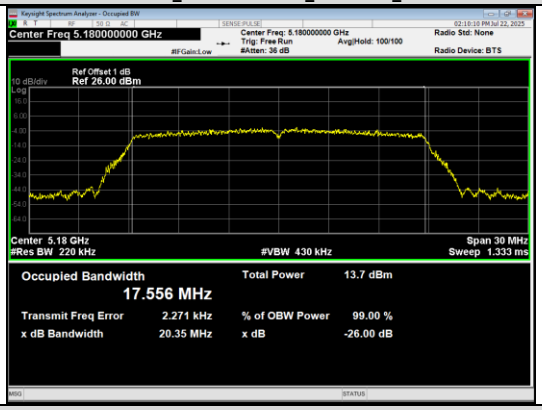
IEEE 802.11n_Channel 48_20MHz_Antenna 0



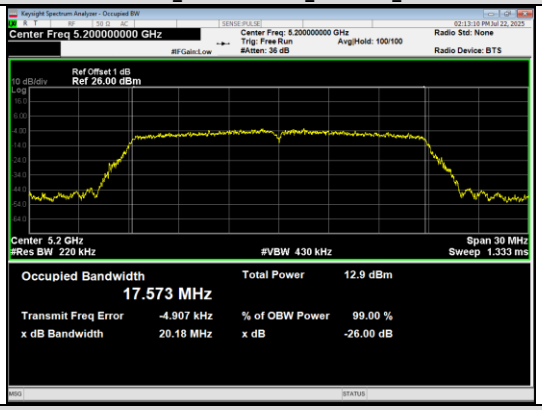
IEEE 802.11n_Channel 38_40MHz_Antenna 0



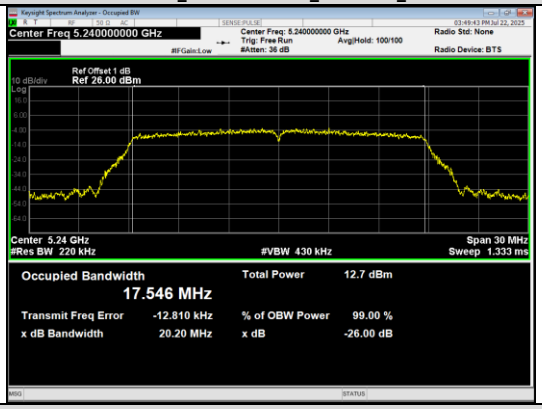
IEEE 802.11n_Channel 46_40MHz_Antenna 0



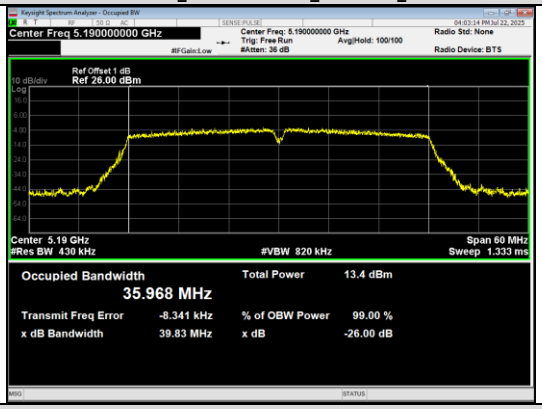
IEEE 802.11ac_Channel 36_20MHz_Antenna 0



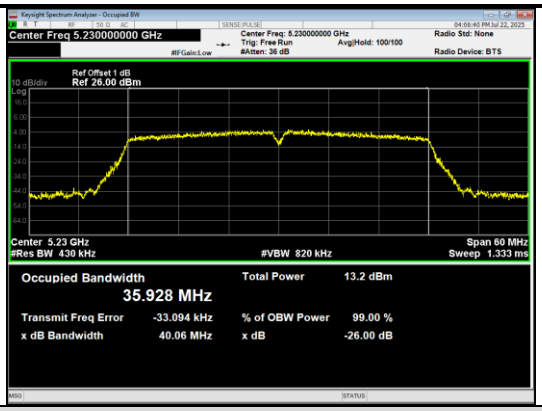
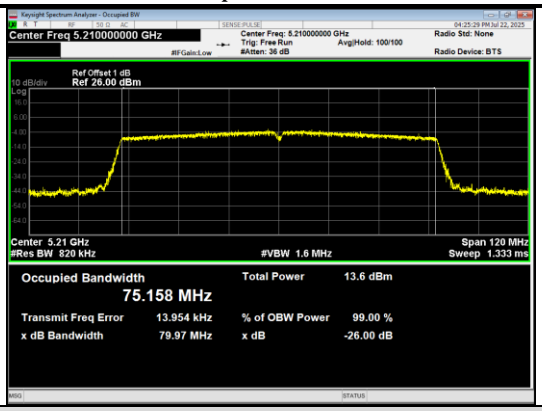
IEEE 802.11ac_Channel 40_20MHz_Antenna 0



IEEE 802.11ac_Channel 48_20MHz_Antenna 0



IEEE 802.11ac_Channel 38_40MHz_Antenna 0

	
IEEE 802.11ac_Channel 46_40MHz_Antenna 0	**IEEE 802.11ac_Channel 42_80MHz_Antenna 0**

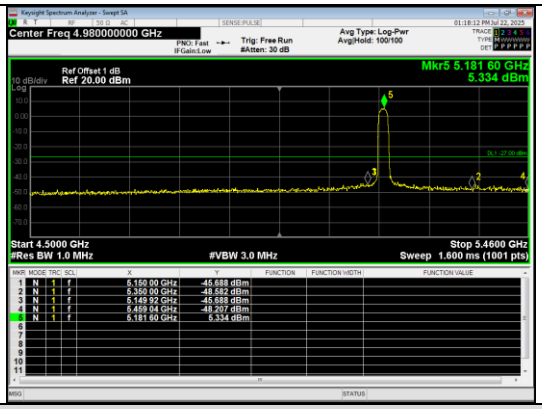
Conducted Out Of Band Emission

Test Result

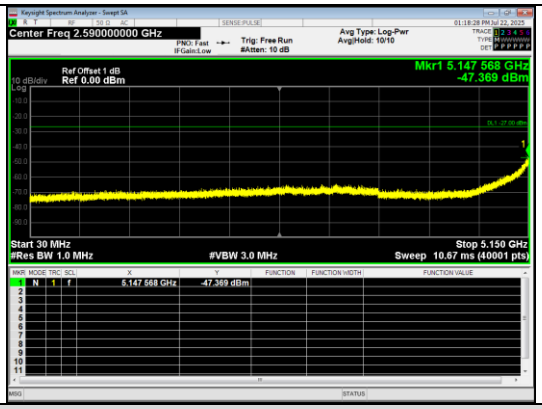
Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11a	36	0	5147.57	-47.370	-27	-20.370	PASS
			5149.92	-45.688	-27	-19.000	PASS
			5150.00	-45.690	-27	-19.000	PASS
			5350.00	-48.580	-27	-22.000	PASS
			5459.04	-48.207	-27	-21.000	PASS
			24927.8	-53.440	-27	-26.440	PASS
	40		5145.39	-48.310	-27	-21.310	PASS
			5148.00	-45.342	-27	-18.000	PASS
			5150.00	-45.690	-27	-19.000	PASS
			5350.00	-48.500	-27	-22.000	PASS
			5460.00	-46.759	-27	-20.000	PASS
			24975.9	-51.850	-27	-24.850	PASS
	48		5146.08	-47.030	-27	-20.000	PASS
			5146.67	-51.150	-27	-24.150	PASS
			5150.00	-47.480	-27	-20.000	PASS
			5350.00	-47.770	-27	-21.000	PASS
			5366.21	-53.110	-27	-26.110	PASS
			5460.00	-47.611	-27	-21.000	PASS
IEEE 802.11n_20	36		5148.21	-47.050	-27	-20.050	PASS
			5149.92	-45.437	-27	-18.000	PASS
			5150.00	-45.440	-27	-18.000	PASS
			5350.00	-47.660	-27	-21.000	PASS
			5456.16	-47.417	-27	-20.000	PASS
			24923.4	-54.270	-27	-27.270	PASS
	40		5146.67	-47.690	-27	-20.690	PASS
			5150.00	-45.290	-27	-18.000	PASS
			5350.00	-47.620	-27	-21.000	PASS
			5367.69	-53.510	-27	-26.510	PASS
			5460.00	-47.606	-27	-21.000	PASS
	48		5147.31	-50.450	-27	-23.450	PASS
			5149.92	-48.559	-27	-22.000	PASS
			5150.00	-48.560	-27	-22.000	PASS
			5350.00	-47.150	-27	-20.000	PASS
			5454.24	-47.004	-27	-20.000	PASS
			24362.8	-53.690	-27	-26.690	PASS
IEEE 802.11n_40	38		5147.70	-48.890	-27	-21.890	PASS
			5150.00	-44.500	-27	-18.000	PASS
			5350.00	-47.120	-27	-20.000	PASS
			5437.92	-46.754	-27	-20.000	PASS
			24253.8	-54.520	-27	-27.520	PASS
	46		3598.26	-49.170	-27	-22.170	PASS
			5149.92	-46.498	-27	-19.000	PASS
			5150.00	-46.500	-27	-20.000	PASS
			5350.00	-47.320	-27	-20.000	PASS
			5358.84	-52.290	-27	-25.290	PASS
			5446.56	-45.321	-27	-18.000	PASS
IEEE 802.11ac_20	36		5149.92	-45.509	-27	-19.000	PASS
			5150.00	-45.510	-27	-19.000	PASS
			5150.00	-45.460	-27	-18.460	PASS
			5350.00	-47.610	-27	-21.000	PASS
			5451.36	-47.521	-27	-21.000	PASS
			24969.1	-53.260	-27	-26.260	PASS
	40		5147.18	-51.960	-27	-24.960	PASS
			5148.96	-46.937	-27	-20.000	PASS
			5150.00	-47.080	-27	-20.000	PASS

			5350.00	-47.800	-27	-21.000	PASS
			5432.16	-46.688	-27	-20.000	PASS
			24938.6	-54.460	-27	-27.460	PASS
	48		5110.96	-52.230	-27	-25.230	PASS
			5142.24	-45.718	-27	-19.000	PASS
			5150.00	-46.800	-27	-20.000	PASS
			5350.00	-48.580	-27	-22.000	PASS
			5366.21	-52.960	-27	-25.960	PASS
			5459.04	-48.429	-27	-21.000	PASS
IEEE 802.11ac_40	38		5147.06	-47.790	-27	-20.790	PASS
			5148.96	-45.422	-27	-18.000	PASS
			5150.00	-45.800	-27	-19.000	PASS
			5350.00	-47.990	-27	-21.000	PASS
			5358.84	-54.050	-27	-27.050	PASS
			5459.04	-47.538	-27	-21.000	PASS
	46		5146.03	-50.320	-27	-23.320	PASS
			5149.92	-48.050	-27	-21.000	PASS
			5150.00	-48.050	-27	-21.000	PASS
			5350.00	-47.940	-27	-21.000	PASS
			5359.33	-53.240	-27	-26.240	PASS
			5459.04	-47.481	-27	-20.000	PASS
IEEE 802.11ac_80	42		5146.08	-45.485	-27	-18.000	PASS
			5149.87	-46.540	-27	-19.540	PASS
			5150.00	-45.540	-27	-19.000	PASS
			5350.00	-47.680	-27	-21.000	PASS
			5456.16	-47.520	-27	-21.000	PASS
			24951.9	-53.860	-27	-26.860	PASS

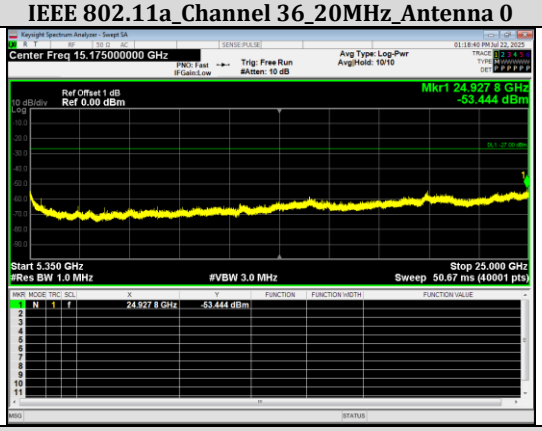
Test Graphs



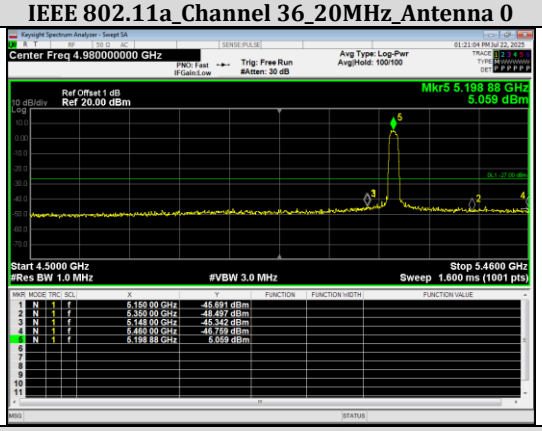
Out Of Band Emission
IEEE 802.11a_Channel 36_20MHz_Antenna 0



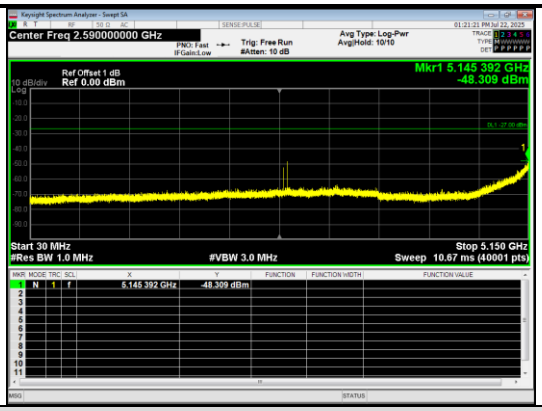
Spurious Emission:30.0~5150 MHz
IEEE 802.11a_Channel 36_20MHz_Antenna 0



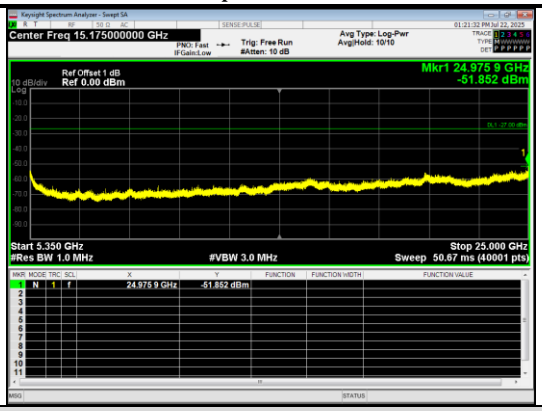
Spurious Emission:5350~25000.0 MHz
IEEE 802.11a_Channel 36_20MHz_Antenna 0



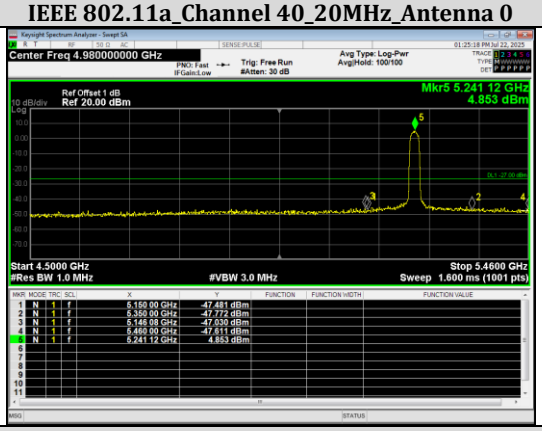
Out Of Band Emission
IEEE 802.11a_Channel 40_20MHz_Antenna 0



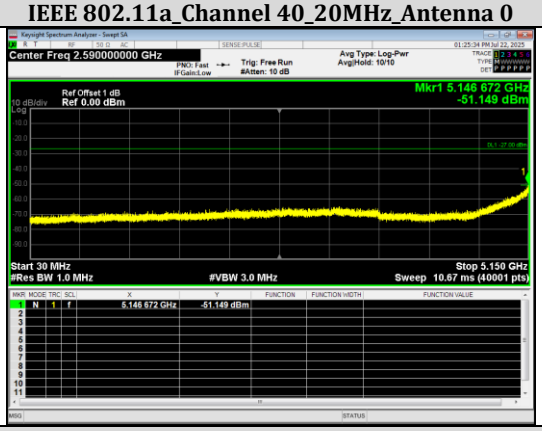
Spurious Emission:30.0~5150 MHz
IEEE 802.11a_Channel 40_20MHz_Antenna 0



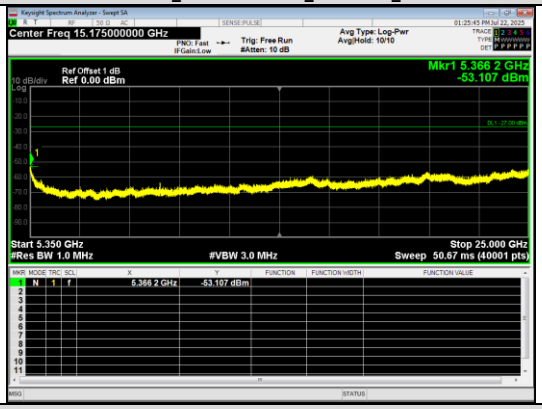
Spurious Emission:5350~25000.0 MHz
IEEE 802.11a_Channel 40_20MHz_Antenna 0



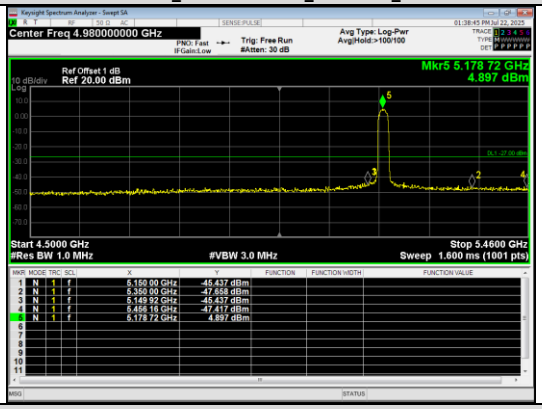
Out Of Band Emission
IEEE 802.11a_Channel 48_20MHz_Antenna 0



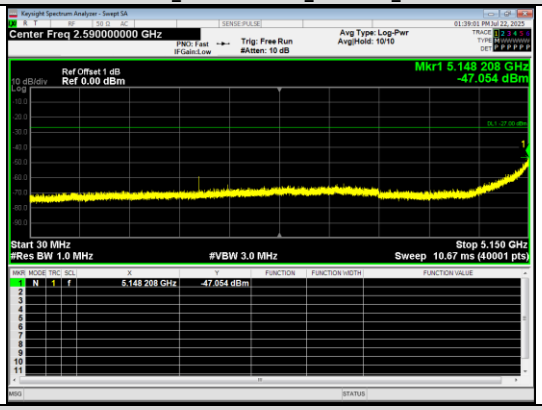
Spurious Emission:30.0~5150 MHz
IEEE 802.11a_Channel 48_20MHz_Antenna 0



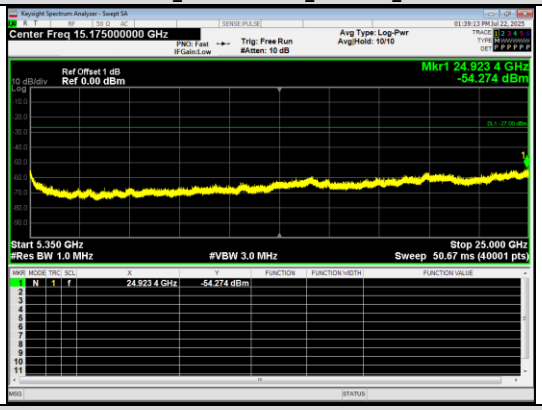
Spurious Emission:5350~25000.0 MHz
IEEE 802.11a_Channel 48_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 36_20MHz_Antenna 0



Spurious Emission:30.0~5150 MHz
IEEE 802.11n_Channel 36_20MHz_Antenna 0



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