

5.2G WIFI

Conducted Output Power

Conducted output power

Mode	Channel	Ant. 0 (dBm)	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	36	13.54	13.67	≤24	PASS
	40	13.53	13.66	≤24	PASS
	48	13.58	13.7	≤24	PASS
IEEE 802.11n_20	36	13.28	13.41	≤24	PASS
	40	13.36	13.5	≤24	PASS
	48	13.17	13.31	≤24	PASS
IEEE 802.11n_40	38	15.38	15.66	≤24	PASS
	46	14.63	14.91	≤24	PASS
IEEE 802.11ac_20	36	13.25	13.39	≤24	PASS
	40	13.28	13.41	≤24	PASS
	48	13.16	13.3	≤24	PASS
IEEE 802.11ac_40	38	15.42	15.7	≤24	PASS
	46	15.20	15.48	≤24	PASS
IEEE 802.11ac_80	42	14.75	15.29	≤24	PASS

Note: Corrected Value = Antenna Power + Duty Cycle Factor.

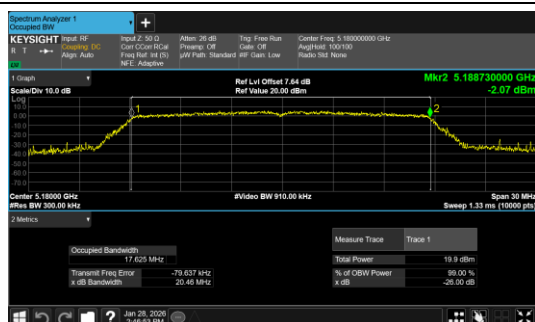
99% Bandwidth

Test Result

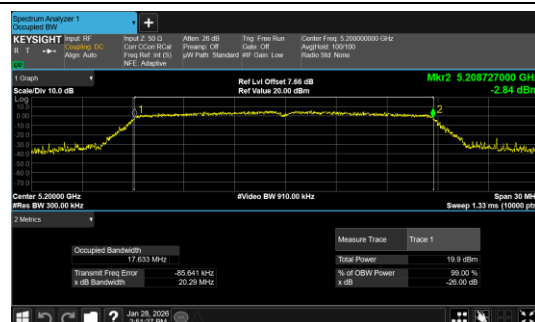
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	36	0	5180	16.520
	40		5200	16.480
	48		5240	16.517
IEEE 802.11n_20	36		5180	17.611
	40		5200	17.640
	48		5240	17.626
IEEE 802.11n_40	38		5190	35.994
	46		5230	35.990
IEEE 802.11ac_20	36		5180	17.625
	40		5200	17.633
	48		5240	17.624
IEEE 802.11ac_40	38		5190	35.987
	46		5230	35.918
IEEE 802.11ac_80	42		5210	75.185

Test Graphs





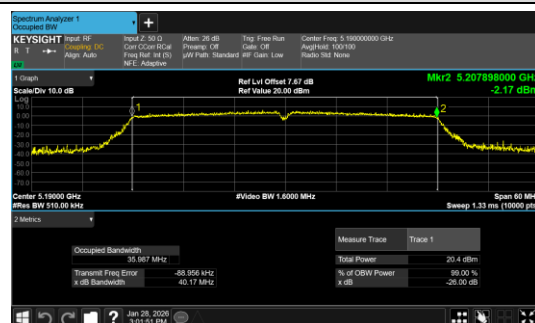
IEEE 802.11ac_Channel 36_20MHz_Antenna 0



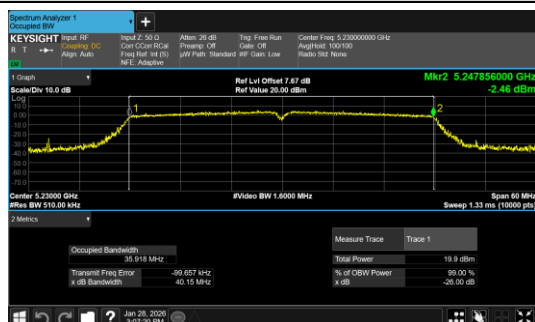
IEEE 802.11ac_Channel 40_20MHz_Antenna 0



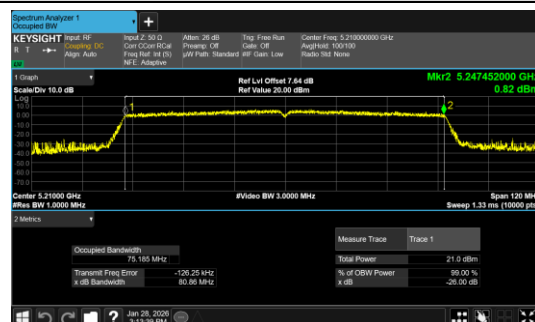
IEEE 802.11ac_Channel 48_20MHz_Antenna 0



IEEE 802.11ac_Channel 38_40MHz_Antenna 0



IEEE 802.11ac_Channel 46_40MHz_Antenna 0



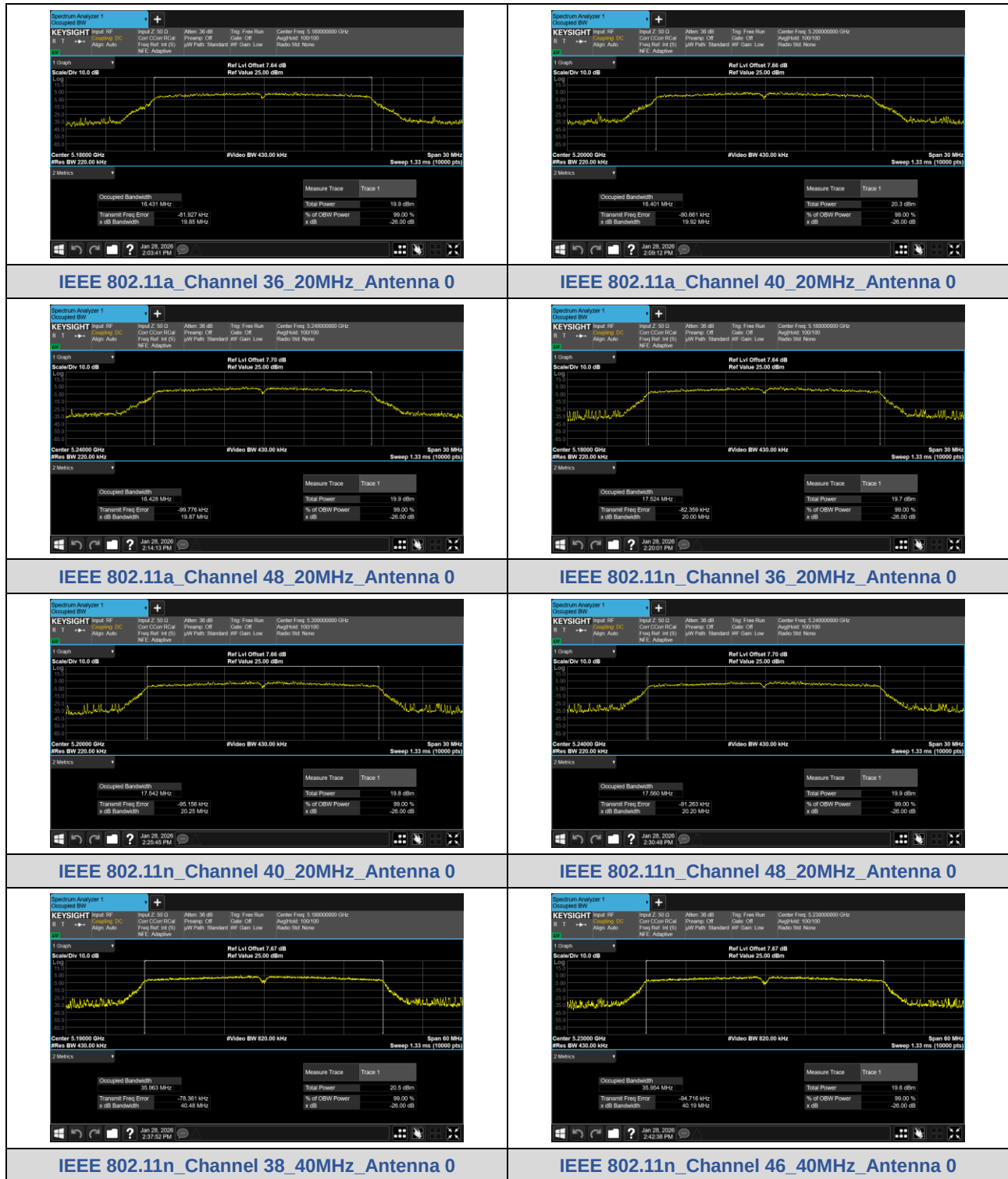
IEEE 802.11ac_Channel 42_80MHz_Antenna 0

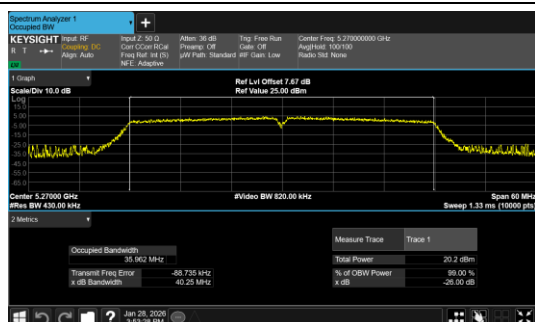
26dB Bandwidth

Test Result

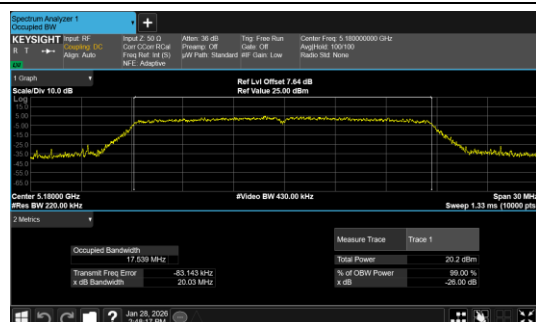
Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	36	0	5180	19.85	1.09
	40		5200	19.92	1.1
	48		5240	19.87	1.1
IEEE 802.11n_20	36		5180	20.00	1.12
	40		5200	20.25	1.1
	48		5240	20.20	1.11
IEEE 802.11n_40	38		5190	40.48	1.05
	46		5230	40.19	1.06
	54		5270	40.25	1.06
IEEE 802.11ac_20	36		5180	20.03	1.11
	40		5200	20.03	1.12
	48		5240	20.10	1.11
IEEE 802.11ac_40	38		5190	40.20	1.04
	46		5230	40.11	1.07
IEEE 802.11ac_80	42		5210	80.44	1.02

Test Graphs





IEEE 802.11n_Channel 54_40MHz_Antenna 0



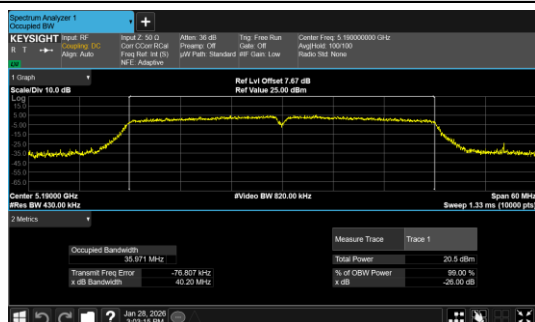
IEEE 802.11ac_Channel 36_20MHz_Antenna 0



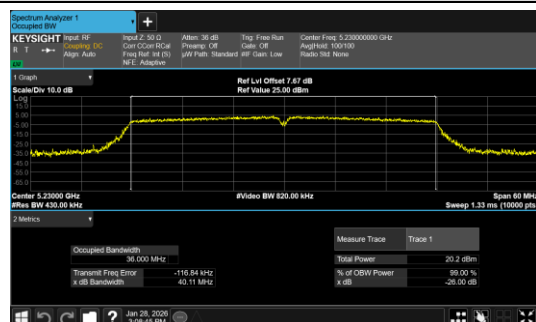
IEEE 802.11ac_Channel 40_20MHz_Antenna 0



IEEE 802.11ac_Channel 48_20MHz_Antenna 0



IEEE 802.11ac_Channel 38_40MHz_Antenna 0



IEEE 802.11ac_Channel 46_40MHz_Antenna 0



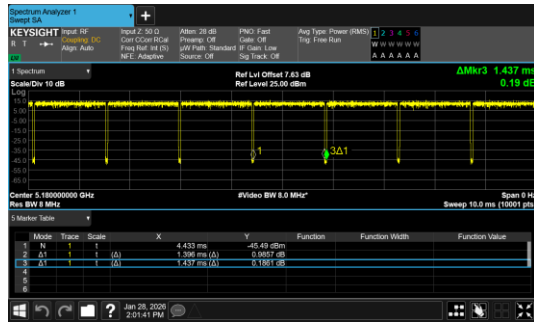
IEEE 802.11ac_Channel 42_80MHz_Antenna 0

Duty Cycle

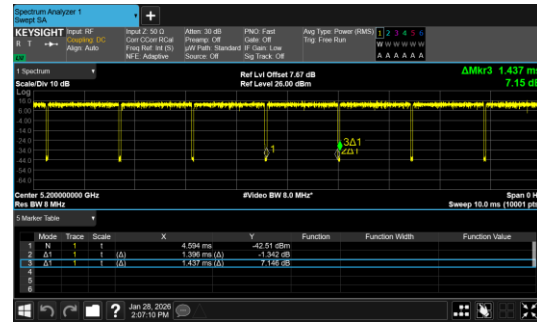
Test Result

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	1.396	1.437	97.15	0.9715	0.1256	0.7163
		40		1.396	1.437	97.15	0.9715	0.1256	0.7163
		48		1.396	1.437	97.15	0.9715	0.1256	0.7163
IEEE 802.11n_20	36	1.304		1.345	96.95	0.9695	0.1345	0.7669	
	40	1.304		1.346	96.88	0.9688	0.1377	0.7669	
	48	1.303		1.345	96.89	0.9689	0.1372	0.7675	
IEEE 802.11n_40	38	0.650		0.692	93.84	0.9384	0.2761	1.5385	
	46	0.650		0.692	93.90	0.9390	0.2733	1.5385	
IEEE 802.11ac_20	MCS 0	36		1.316	1.357	96.98	0.9698	0.1332	0.7599
		40		1.316	1.357	96.98	0.9698	0.1332	0.7599
		48		1.316	1.358	96.91	0.9691	0.1363	0.7599
IEEE 802.11ac_40		38		0.654	0.697	93.88	0.9388	0.2743	1.5291
		46		0.654	0.696	93.87	0.9387	0.2747	1.5291
IEEE 802.11ac_80		42		0.325	0.369	88.26	0.8826	0.5424	3.0769

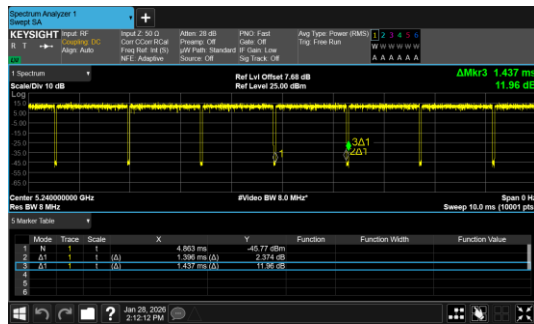
Test Graphs



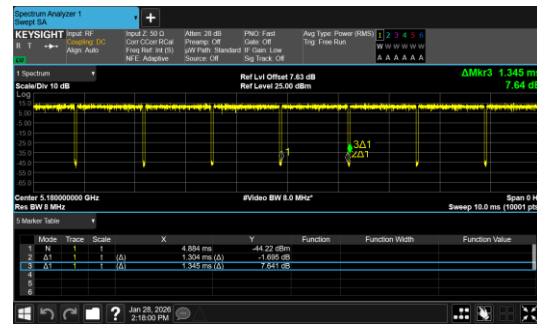
IEEE 802.11a_20MHz_Channel 36



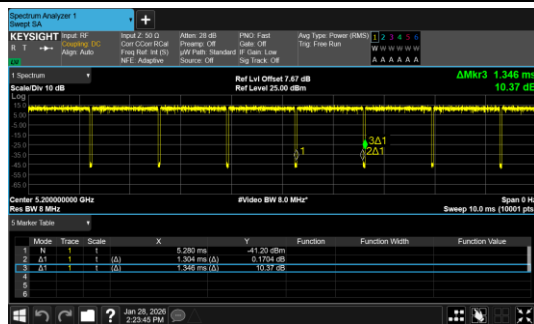
IEEE 802.11a_20MHz_Channel 40



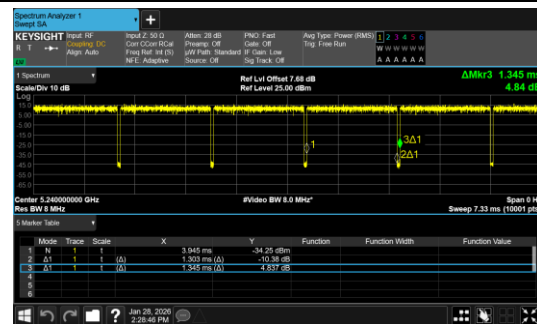
IEEE 802.11a_20MHz_Channel 48



IEEE 802.11n_20MHz_Channel 36



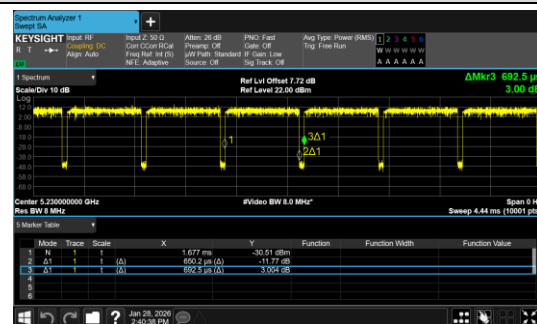
IEEE 802.11n_20MHz_Channel 40



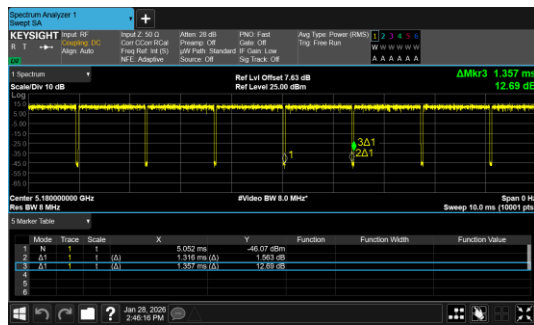
IEEE 802.11n_20MHz_Channel 48



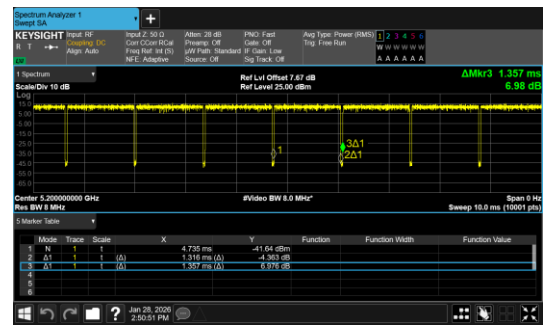
IEEE 802.11n_40MHz_Channel 38



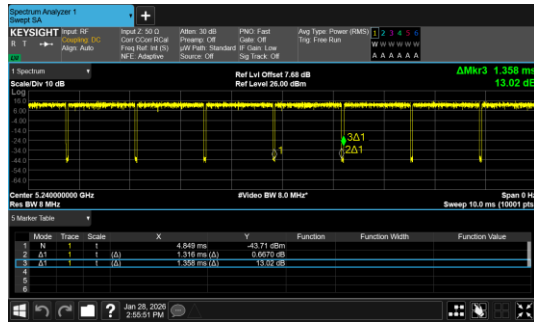
IEEE 802.11n_40MHz_Channel 46



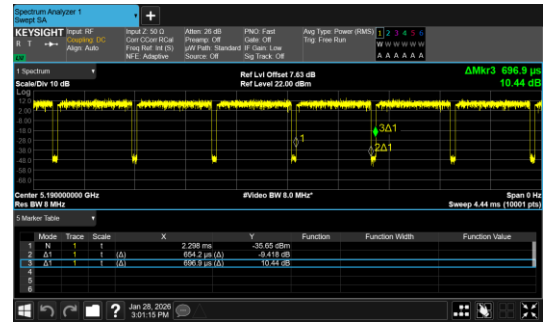
IEEE 802.11ac 20MHz_Channel 36



IEEE 802.11ac 20MHz_Channel 40



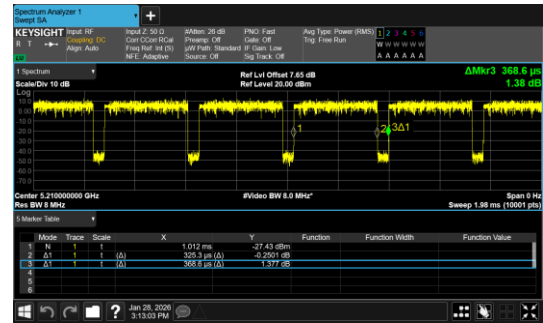
IEEE 802.11ac 20MHz_Channel 48



IEEE 802.11ac 40MHz_Channel 38



IEEE 802.11ac 40MHz_Channel 46



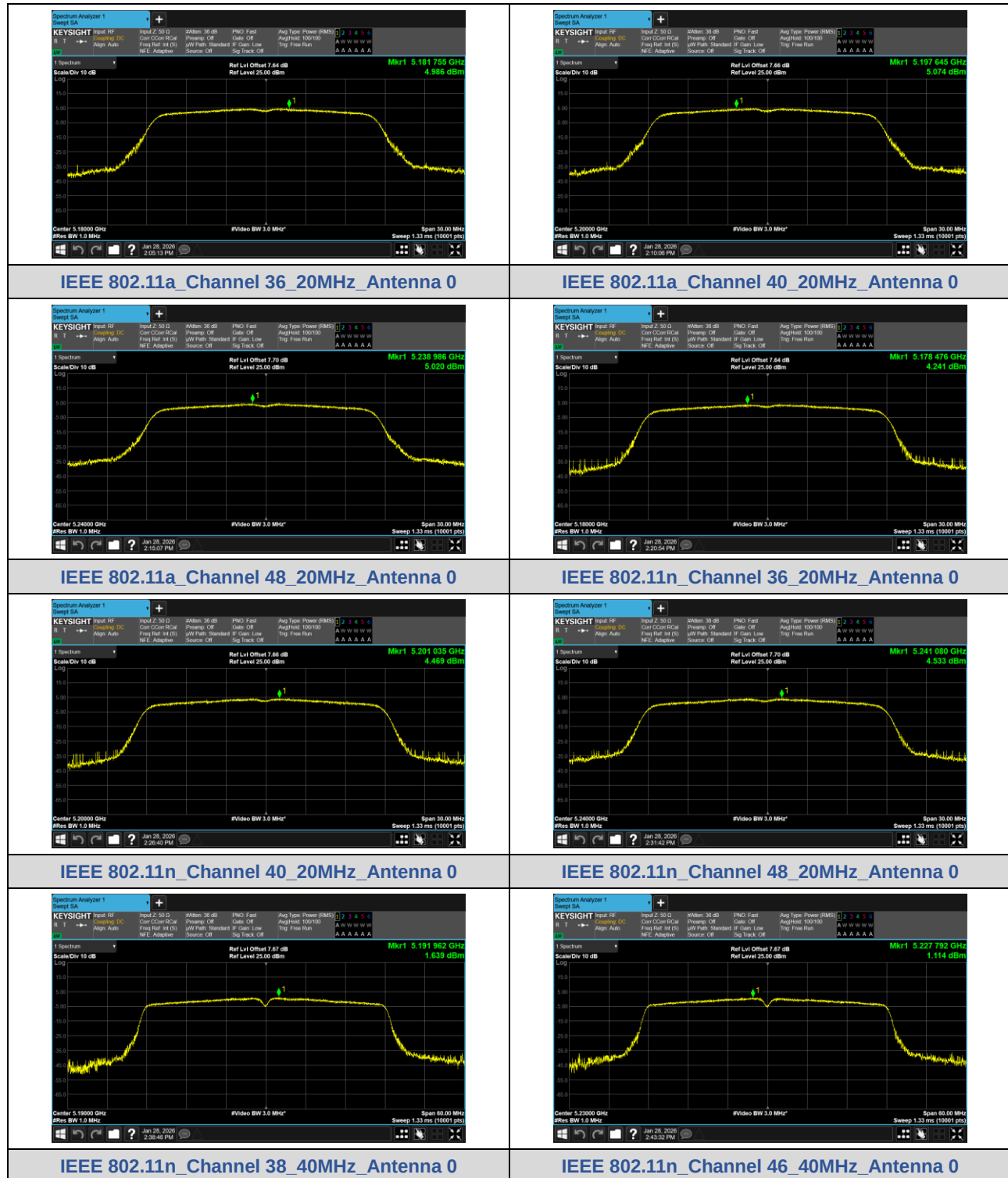
IEEE 802.11ac 80MHz_Channel 42

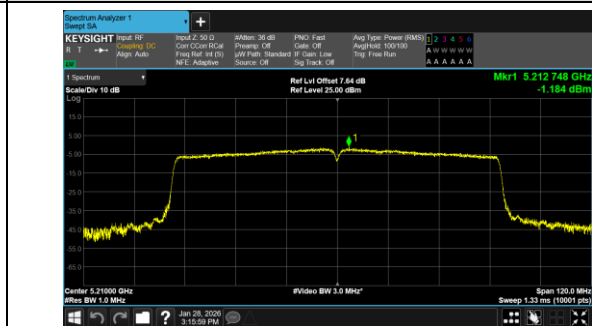
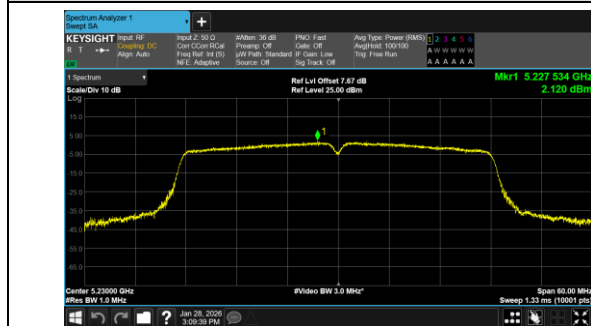
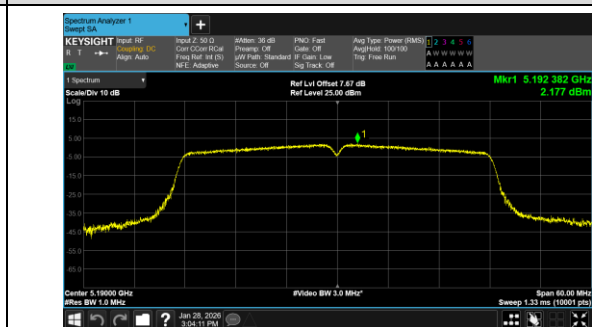
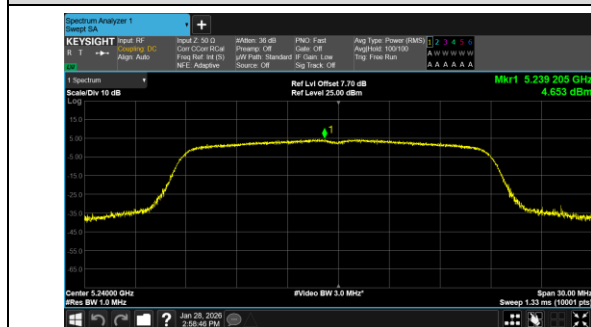
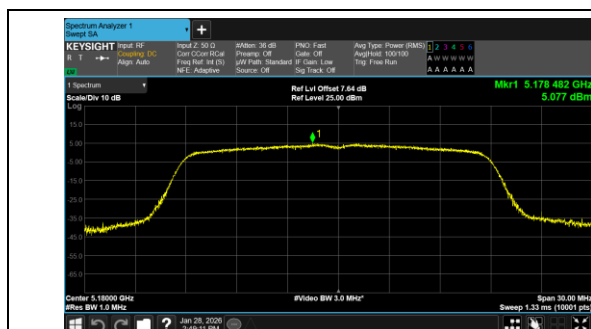
Power Spectral Density

Test Result

Mode	Channel	Ant. 0 Meas PSD (dBm/MHz)	Ant. 0 Corr'd PSD (dBm/MHz)	Limit (dBm/MHz)	Result
IEEE 802.11a	36	4.986	5.115	11	PASS
	40	5.074	5.203		PASS
	48	5.020	5.149		PASS
IEEE 802.11n_20	36	4.241	4.375		PASS
	40	4.469	4.604		PASS
	48	4.533	4.668		PASS
IEEE 802.11n_40	38	1.639	1.915		PASS
	46	1.114	1.39		PASS
IEEE 802.11ac_20	36	5.077	5.215		PASS
	40	4.975	5.113		PASS
	48	4.653	4.791		PASS
IEEE 802.11ac_40	38	2.177	2.452		PASS
	46	2.120	2.395		PASS
IEEE 802.11ac_80	42	-1.184	-0.642		PASS

Test Graphs





5.3G WIFI

Conducted Output Power

Conducted output power

Mode	Channel	Ant. 0 (dBm)	Corr'd Value Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	52	13.63	13.76	23.97	PASS
	56	13.54	13.67	23.95	PASS
	64	13.20	13.32	23.94	PASS
IEEE 802.11n_20	52	12.85	12.99	24.00	PASS
	56	12.64	12.78	24.00	PASS
	64	12.87	13.0	23.99	PASS
IEEE 802.11n_40	54	15.17	15.45	24.00	PASS
	62	15.16	15.44	24.00	PASS
IEEE 802.11ac_20	52	13.29	13.43	24.00	PASS
	56	13.17	13.31	24.00	PASS
	64	12.75	12.89	24.00	PASS
IEEE 802.11ac_40	54	14.08	14.36	24.00	PASS
	62	14.08	14.35	24.00	PASS
IEEE 802.11ac_80	58	13.40	13.95	24.00	PASS

Note: Corrected Value = Antenna Power + Duty Cycle Factor.

ISED EIRP

Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11a	52	13.76	≤27	PASS
	56	13.67	≤27	PASS
	64	13.32	≤27	PASS
IEEE 802.11n_20	52	12.99	≤27	PASS
	56	12.78	≤27	PASS
	64	13.0	≤27	PASS
IEEE 802.11n_40	54	15.45	≤27	PASS
	62	15.44	≤27	PASS
IEEE 802.11ac_20	52	13.43	≤27	PASS
	56	13.31	≤27	PASS
	64	12.89	≤27	PASS
IEEE 802.11ac_40	54	14.36	≤27	PASS
	62	14.35	≤27	PASS
IEEE 802.11ac_80	58	13.95	≤27	PASS

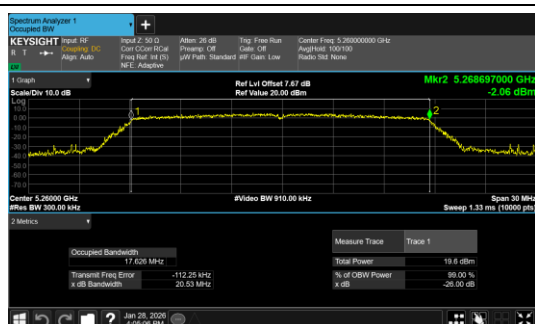
99% Bandwidth

Test Result

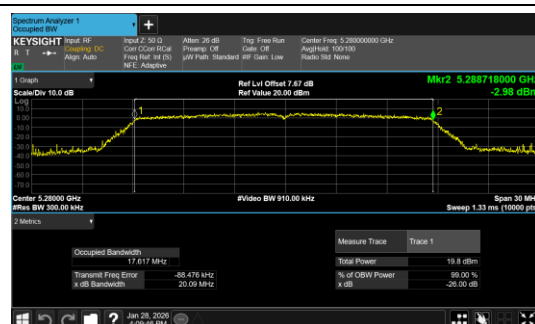
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	52	0	5260	16.515
	56		5280	16.518
	64		5320	16.557
IEEE 802.11n_20	52		5260	17.634
	56		5280	17.620
	64		5320	17.637
IEEE 802.11n_40	54		5270	35.946
	62		5310	35.967
IEEE 802.11ac_20	52		5260	17.626
	56		5280	17.617
	64		5320	17.605
IEEE 802.11ac_40	54		5270	35.982
	62		5310	35.966
IEEE 802.11ac_80	58		5290	75.177

Test Graphs





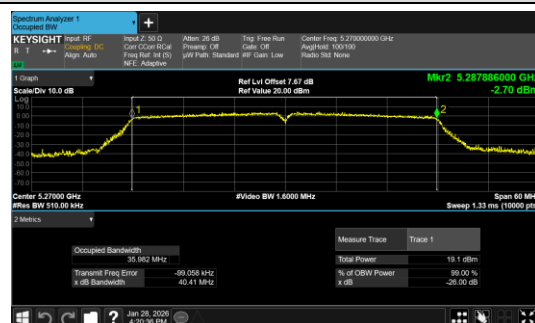
IEEE 802.11ac_Channel 52_20MHz_Antenna 0



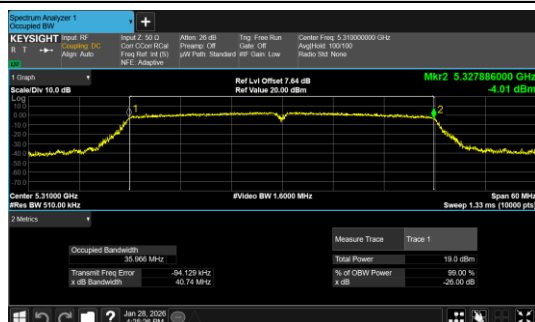
IEEE 802.11ac_Channel 56_20MHz_Antenna 0



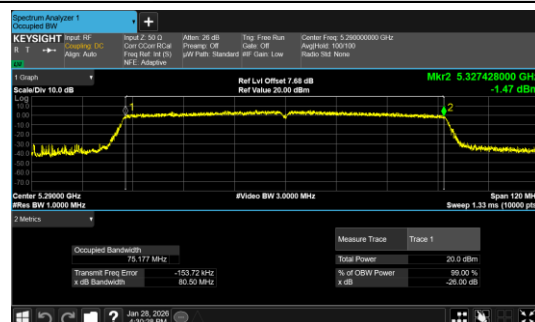
IEEE 802.11ac_Channel 64_20MHz_Antenna 0



IEEE 802.11ac_Channel 54_40MHz_Antenna 0



IEEE 802.11ac_Channel 62_40MHz_Antenna 0



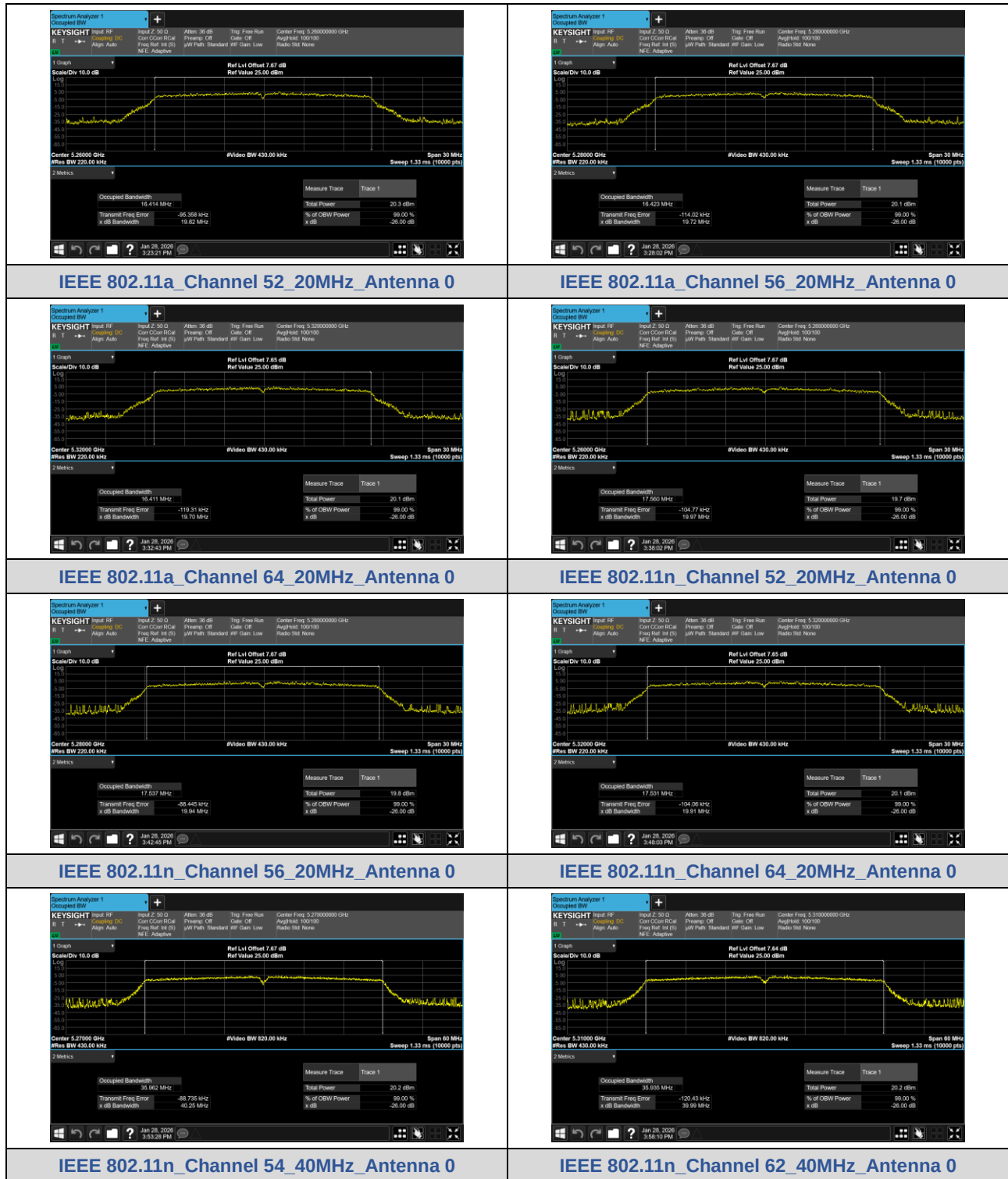
IEEE 802.11ac_Channel 58_80MHz_Antenna 0

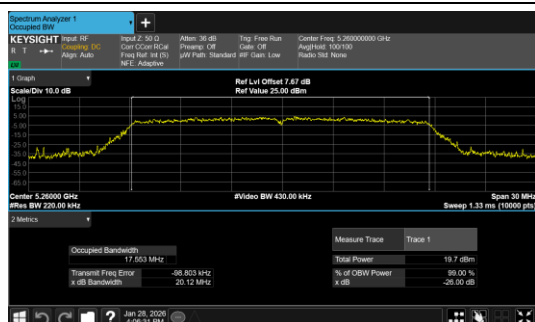
26dB Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	52	0	5260	19.82	1.12
	56		5280	19.72	1.11
	64		5320	19.70	1.1
IEEE 802.11n_20	52		5260	19.97	1.13
	56		5280	19.94	1.12
	64		5320	19.91	1.12
IEEE 802.11n_40	54		5270	40.25	1.06
	62		5310	39.99	1.07
IEEE 802.11ac_20	52		5260	20.12	1.12
	56		5280	19.95	1.11
	64		5320	20.28	1.1
IEEE 802.11ac_40	54		5270	40.20	1.05
	62		5310	40.40	1.05
IEEE 802.11ac_80	58		5290	80.27	1.02

Test Graphs





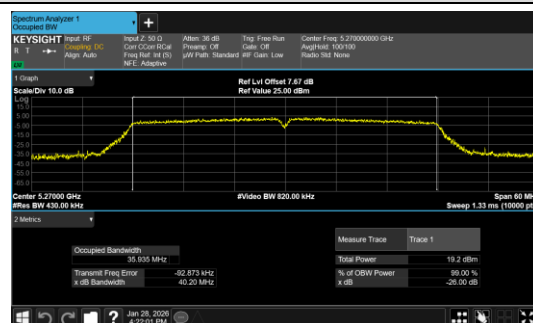
IEEE 802.11ac_Channel 52_20MHz_Antenna 0



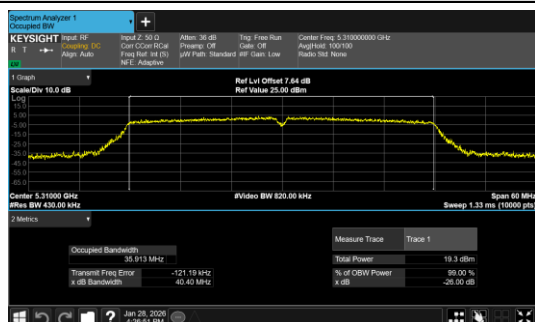
IEEE 802.11ac_Channel 56_20MHz_Antenna 0



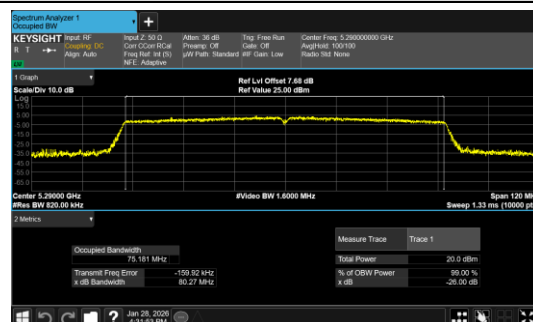
IEEE 802.11ac_Channel 64_20MHz_Antenna 0



IEEE 802.11ac_Channel 54_40MHz_Antenna 0



IEEE 802.11ac_Channel 62_40MHz_Antenna 0



IEEE 802.11ac_Channel 58_80MHz_Antenna 0

Conducted Spurious & Band Edge Emission

Test Result

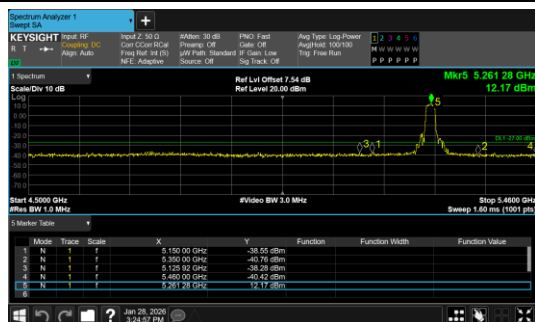
Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11a	52	0	5125.92	-38.278	-27	-11.000	PASS
			5143.47	-45.945	-27	-18.950	PASS
			5150.00	-38.549	-27	-12.000	PASS
			5350.00	-40.764	-27	-14.000	PASS
			5355.40	-45.417	-27	-18.420	PASS
			5460.00	-40.420	-27	-13.000	PASS
	56		5134.77	-46.092	-27	-19.090	PASS
			5149.92	-40.851	-27	-14.000	PASS
			5150.00	-40.851	-27	-14.000	PASS
			5350.00	-38.989	-27	-12.000	PASS
			5352.46	-42.004	-27	-15.000	PASS
			5455.20	-38.949	-27	-12.000	PASS
	64		5145.26	-48.707	-27	-21.710	PASS
			5149.92	-40.260	-27	-13.000	PASS
			5150.00	-40.260	-27	-13.000	PASS
			5350.00	-37.504	-27	-11.000	PASS
			5375.52	-37.293	-27	-10.000	PASS
			5378.98	-39.389	-27	-12.390	PASS
IEEE 802.11n_20	52		5135.15	-45.380	-27	-18.380	PASS
			5145.12	-38.892	-27	-12.000	PASS
			5150.00	-39.687	-27	-13.000	PASS
			5350.00	-39.591	-27	-13.000	PASS
			5352.95	-45.650	-27	-18.650	PASS
			5460.00	-38.556	-27	-12.000	PASS
	56	5146.16	-46.830	-27	-19.830	PASS	
		5147.04	-39.014	-27	-12.000	PASS	
		5150.00	-40.427	-27	-13.000	PASS	
		5350.00	-40.758	-27	-14.000	PASS	
		5350.00	-43.838	-27	-16.840	PASS	
		5460.00	-39.017	-27	-12.000	PASS	
	64	5148.34	-47.047	-27	-20.050	PASS	
		5149.92	-40.071	-27	-13.000	PASS	
		5150.00	-40.071	-27	-13.000	PASS	
		5350.00	-34.646	-27	-8.000	PASS	
		5351.52	-31.838	-27	-5.000	PASS	

			5366.70	-32.928	-27	-5.930	PASS
IEEE 802.11n_40	54		5145.78	-44.925	-27	-17.920	PASS
			5149.92	-39.950	-27	-13.000	PASS
			5150.00	-39.950	-27	-13.000	PASS
			5350.00	-40.413	-27	-13.000	PASS
			5351.47	-36.005	-27	-9.010	PASS
			5460.00	-40.060	-27	-13.000	PASS
	62		5137.33	-47.348	-27	-20.350	PASS
			5148.96	-38.966	-27	-12.000	PASS
			5150.00	-40.722	-27	-14.000	PASS
			5350.00	-36.959	-27	-10.000	PASS
			5360.81	-27.960	-27	-0.960	PASS
			5375.52	-35.544	-27	-9.000	PASS
IEEE 802.11ac_20	52		5143.86	-45.394	-27	-18.390	PASS
			5149.92	-38.813	-27	-12.000	PASS
			5150.00	-38.813	-27	-12.000	PASS
			5350.00	-40.630	-27	-14.000	PASS
			5360.81	-43.713	-27	-16.710	PASS
			5459.04	-40.380	-27	-13.000	PASS
	56		5105.46	-47.395	-27	-20.400	PASS
			5149.92	-39.725	-27	-13.000	PASS
			5150.00	-39.725	-27	-13.000	PASS
			5350.00	-41.230	-27	-14.000	PASS
			5356.39	-42.976	-27	-15.980	PASS
			5460.00	-40.595	-27	-14.000	PASS
	64		5149.74	-47.104	-27	-20.100	PASS
			5149.92	-40.004	-27	-13.000	PASS
			5150.00	-40.004	-27	-13.000	PASS
			5350.00	-34.865	-27	-8.000	PASS
			5350.98	-35.476	-27	-8.480	PASS
IEEE 802.11ac_40	54		5128.11	-46.159	-27	-19.160	PASS
			5149.92	-40.312	-27	-13.000	PASS
			5150.00	-40.313	-27	-13.000	PASS
			5350.00	-40.459	-27	-13.000	PASS
			5352.46	-44.269	-27	-17.270	PASS
			5460.00	-38.714	-27	-12.000	PASS
	62		5148.21	-45.930	-27	-18.930	PASS
			5149.92	-40.321	-27	-13.000	PASS
			5150.00	-40.321	-27	-13.000	PASS
			5350.00	-27.875	-27	-1.000	PASS
IEEE 802.11ac_80	58		5351.97	-38.560	-27	-11.560	PASS
			5143.60	-44.220	-27	-17.220	PASS
			5145.12	-40.432	-27	-13.000	PASS

			5150.00	-40.539	-27	-14.000	PASS
			5350.00	-34.816	-27	-8.000	PASS
			5373.58	-27.905	-27	-0.910	PASS
			5387.04	-33.366	-27	-6.000	PASS

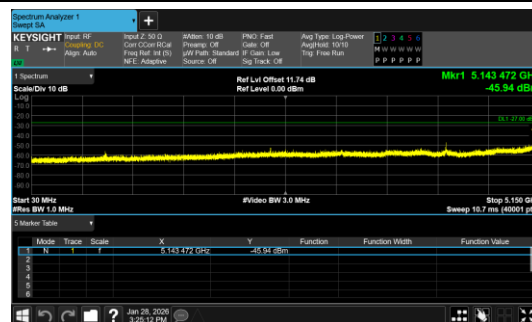
Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs



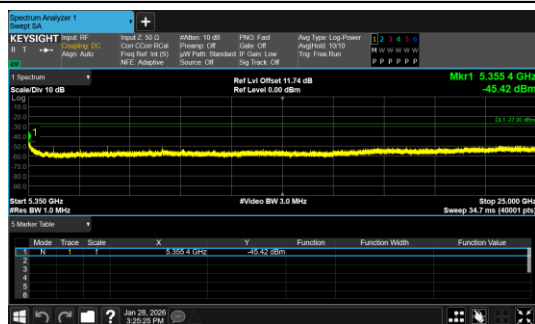
Out Of Band Emission

IEEE 802.11a_Channel 52_20MHz_Antenna 0



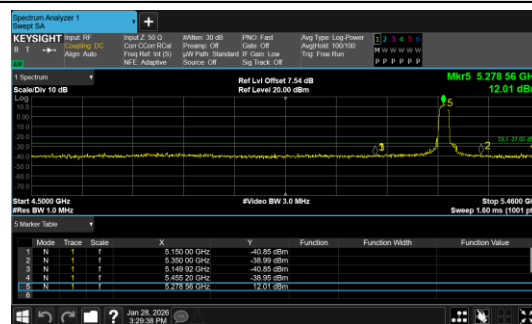
Spurious Emission:30.0~5150 MHz

IEEE 802.11a_Channel 52_20MHz_Antenna 0



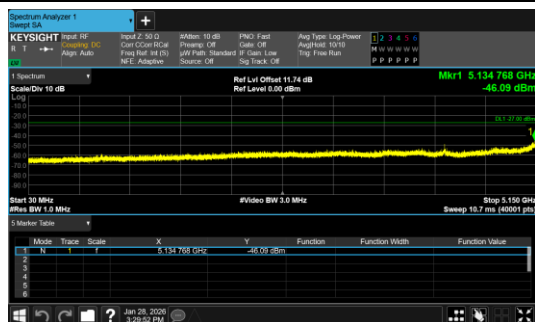
Spurious Emission:5350~25000.0 MHz

IEEE 802.11a_Channel 52_20MHz_Antenna 0



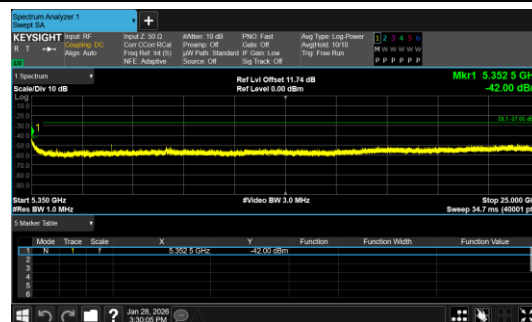
Out Of Band Emission

IEEE 802.11a_Channel 56_20MHz_Antenna 0



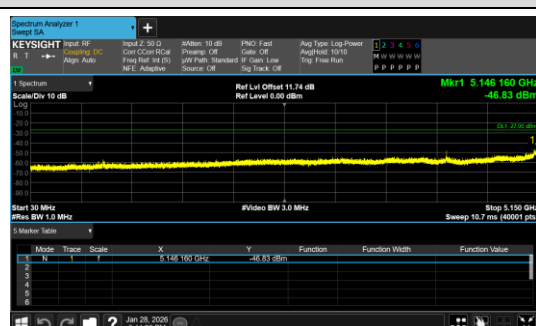
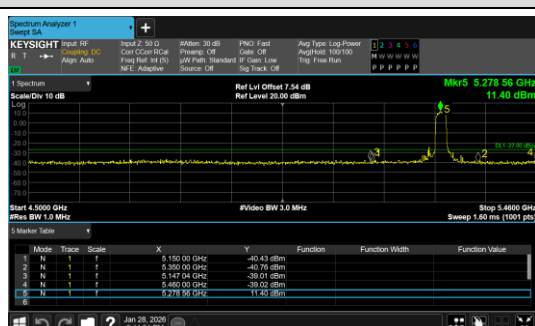
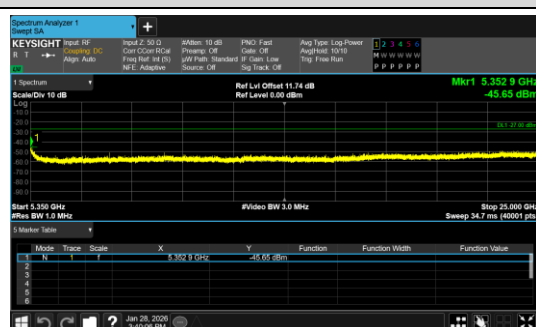
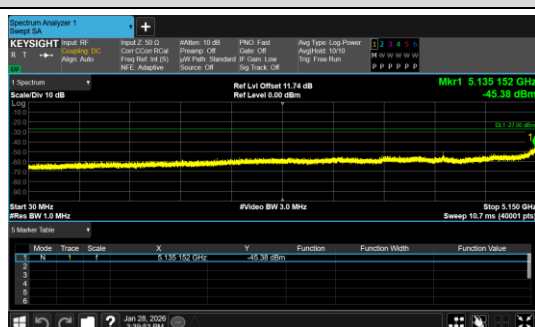
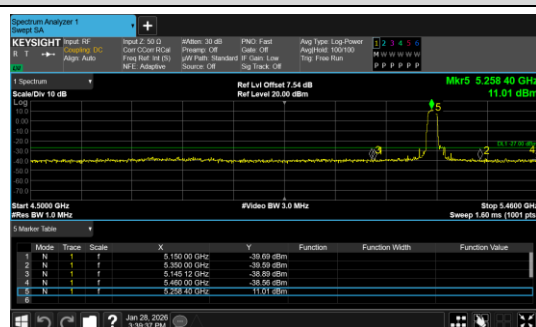
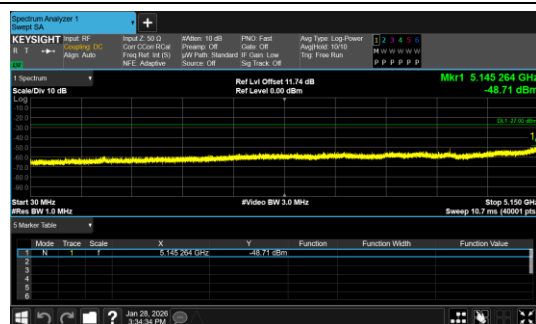
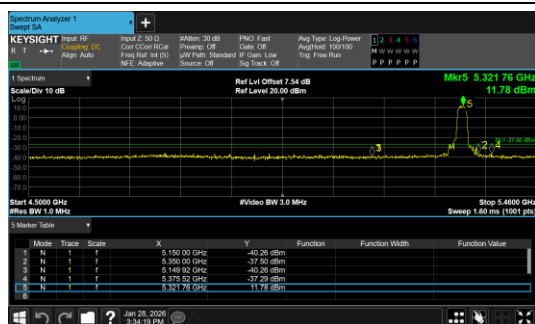
Spurious Emission:30.0~5150 MHz

IEEE 802.11a_Channel 56_20MHz_Antenna 0



Spurious Emission:5350~25000.0 MHz

IEEE 802.11a_Channel 56_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 56_20MHz_Antenna 0

Spurious Emission:30.0~5150 MHz
IEEE 802.11n_Channel 56_20MHz_Antenna 0