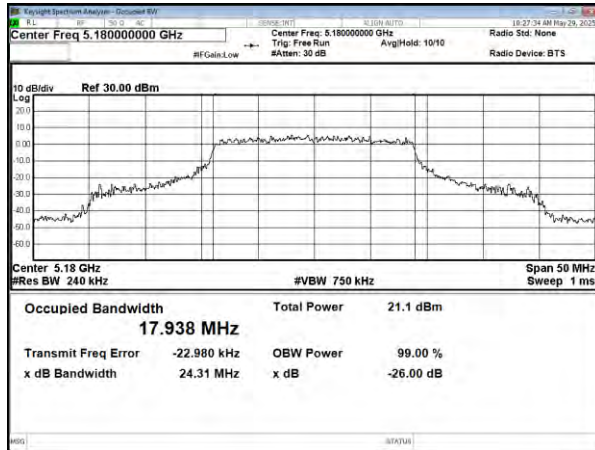
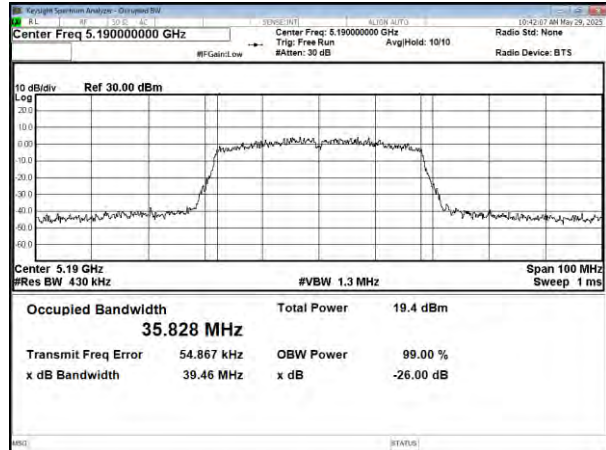




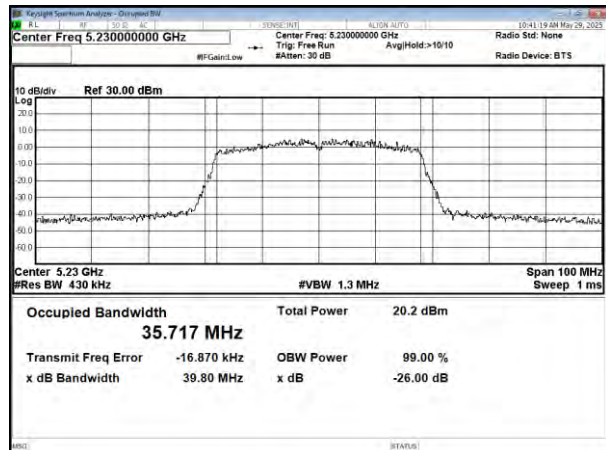
26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

MIMO-ANT BModulation Standard: 802.11ac VHT20
CH36Modulation Standard: 802.11ac VHT40
CH38

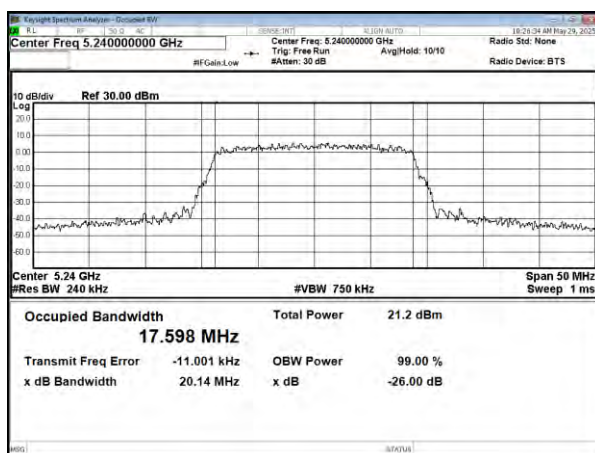
CH44



CH46

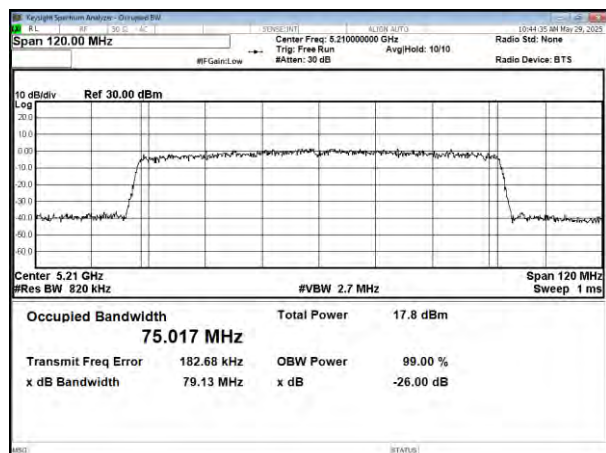


CH48



Modulation Standard: 802.11ac VHT80

CH42

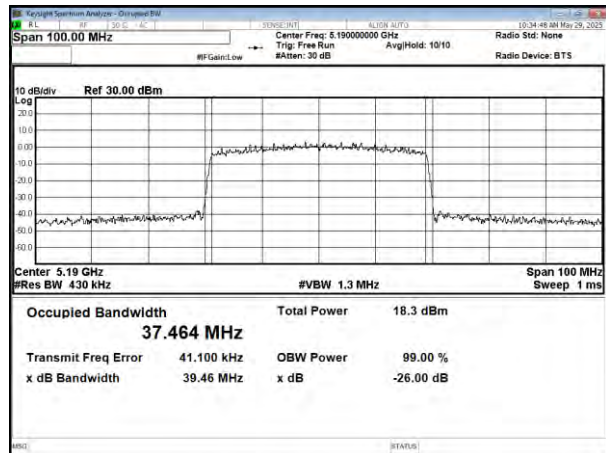




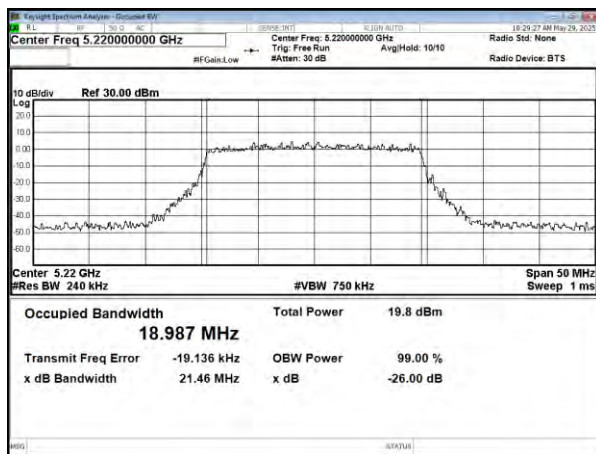
Modulation Standard: 802.11 ax HE20
CH36



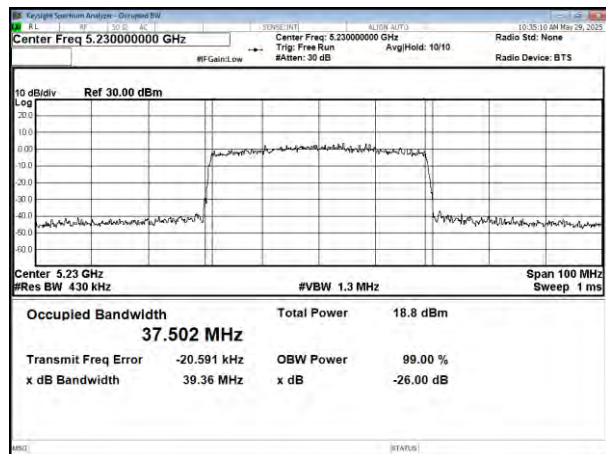
Modulation Standard: 802.11 ax HE40
CH38



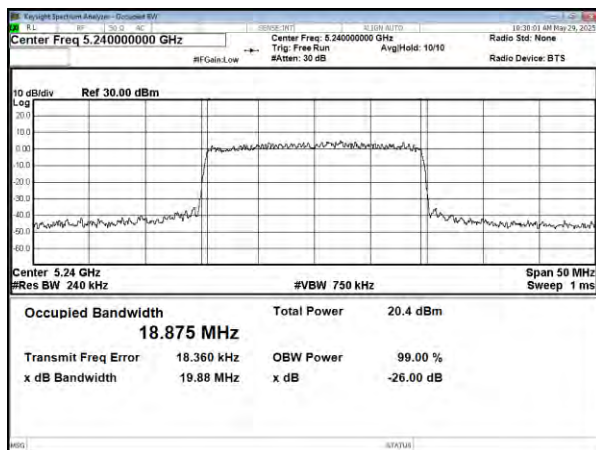
CH44



CH46

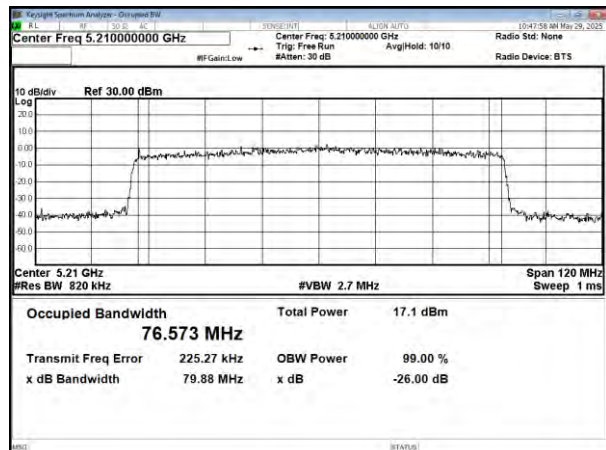


CH48



Modulation Standard: 802.11 ax HE80

CH42



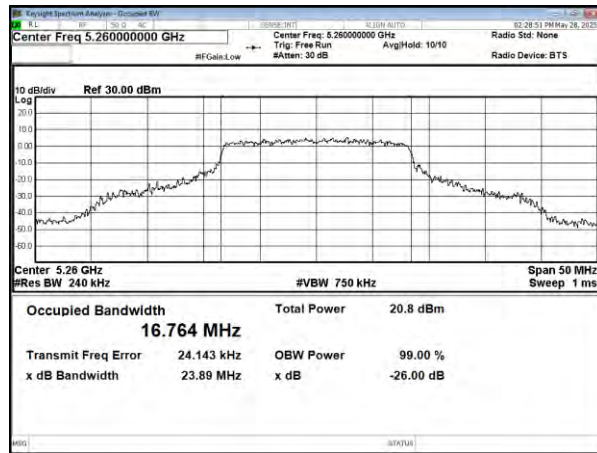


26dB Bandwidth & 99% Occupied Bandwidth, UNII-2A

SISO-ANT A

Modulation Standard: 802.11a

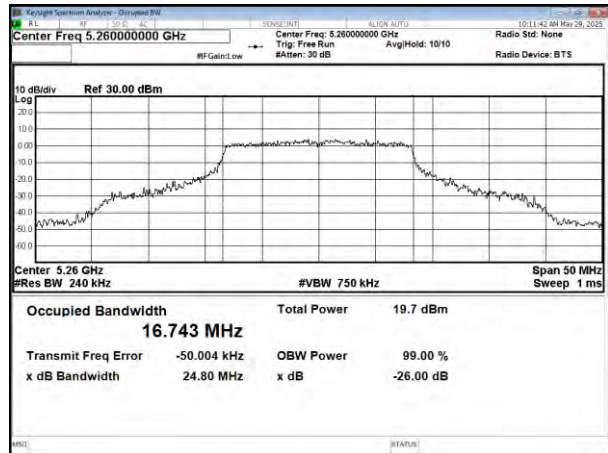
CH52



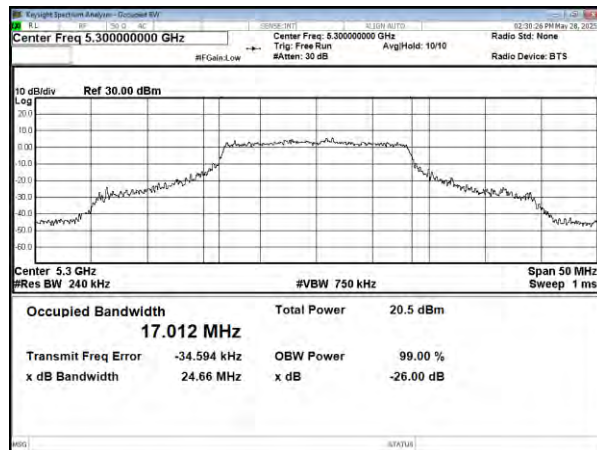
SISO-ANT B

Modulation Standard: 802.11a

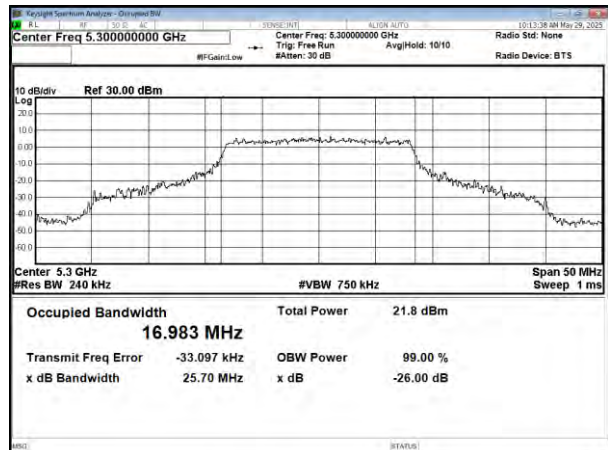
CH52



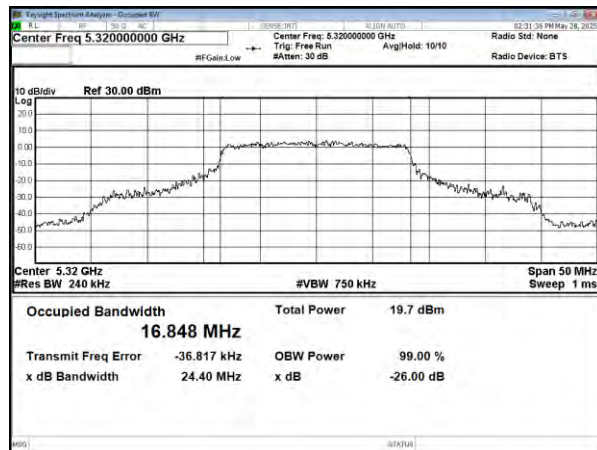
CH60



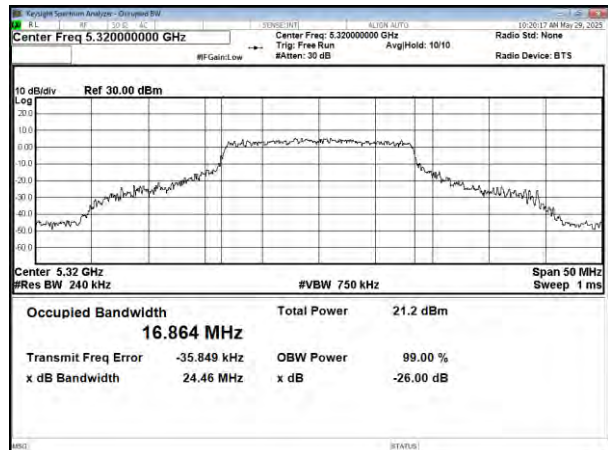
CH60



CH64



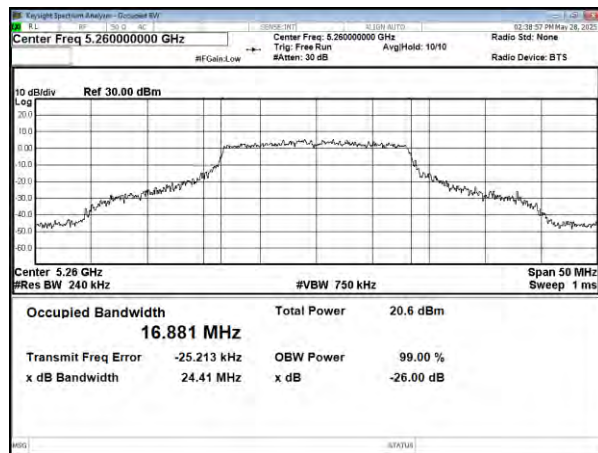
CH64



**MIMO-ANT A**

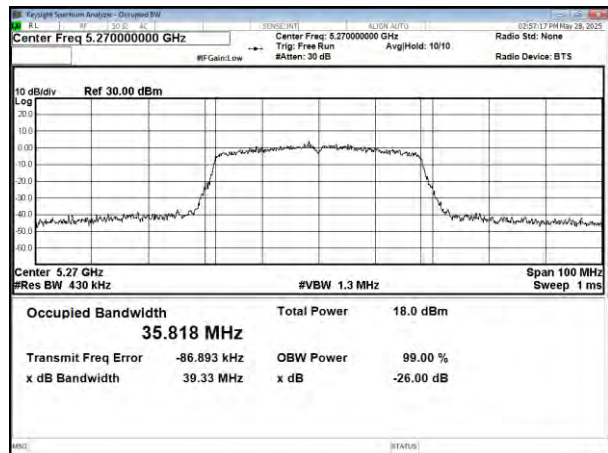
Modulation Standard: 802.11ac VHT20

CH52

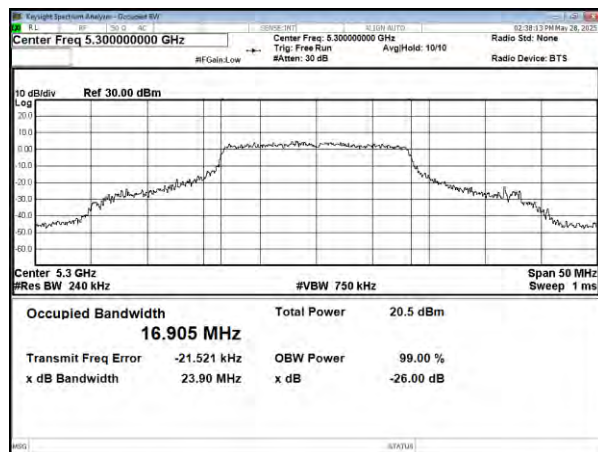


Modulation Standard: 802.11ac VHT40

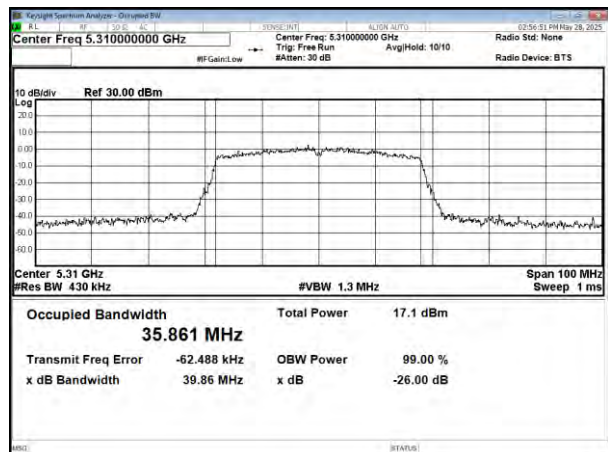
CH54



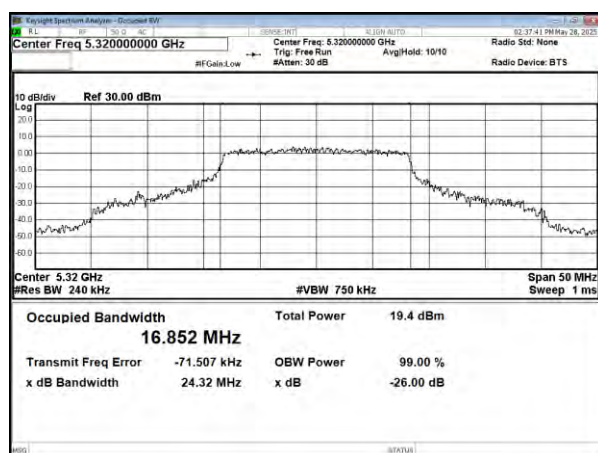
CH60



CH62

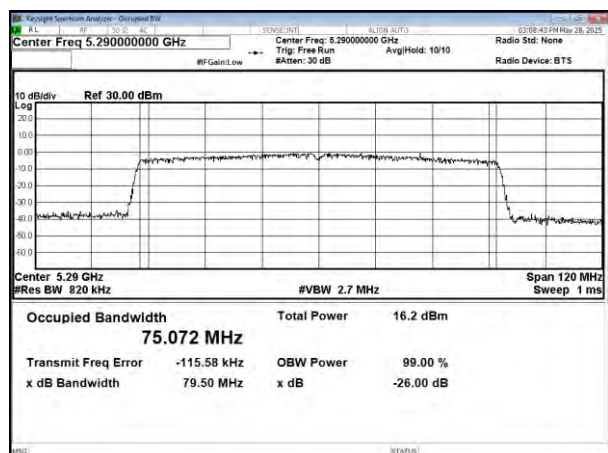


CH64



Modulation Standard: 802.11ac VHT80

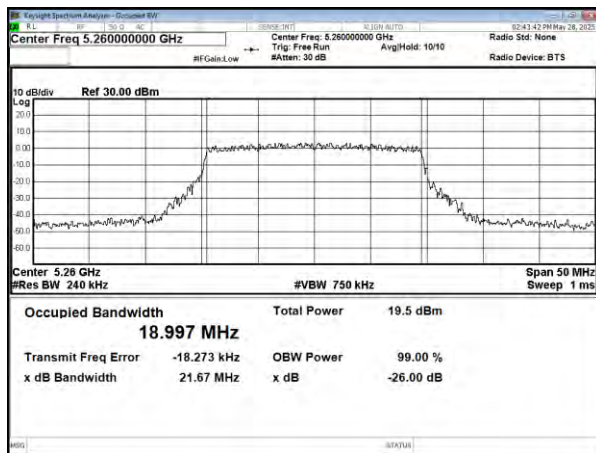
CH58





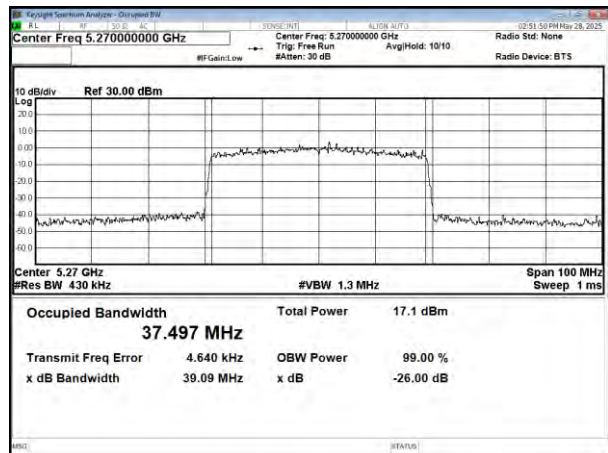
Modulation Standard: 802.11 ax HE20

CH52

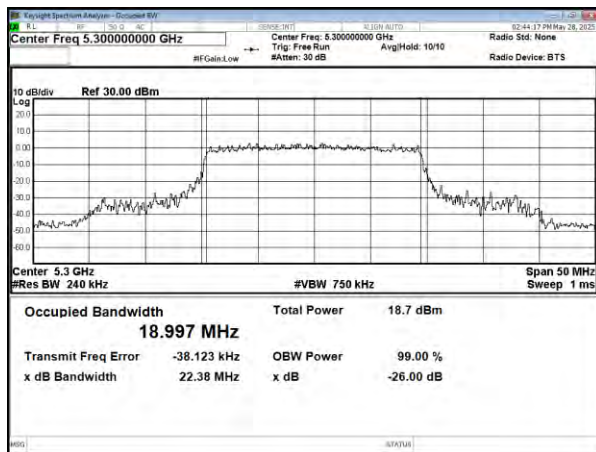


Modulation Standard: 802.11 ax HE40

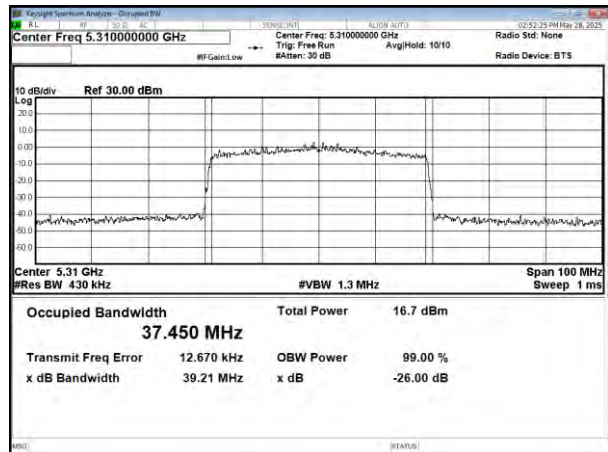
CH54



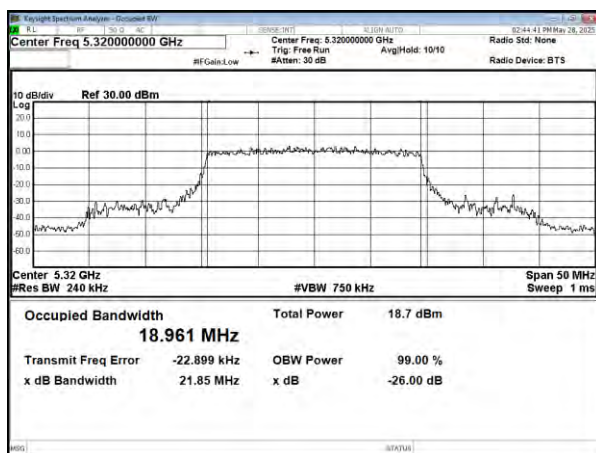
CH60



CH62

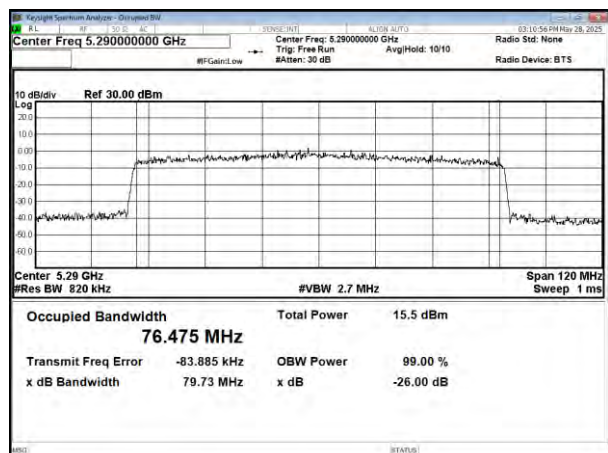


CH64



Modulation Standard: 802.11 ax HE80

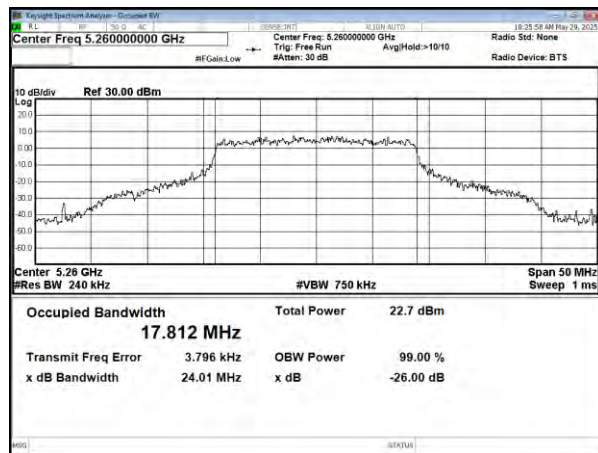
CH58



**MIMO-ANT B**

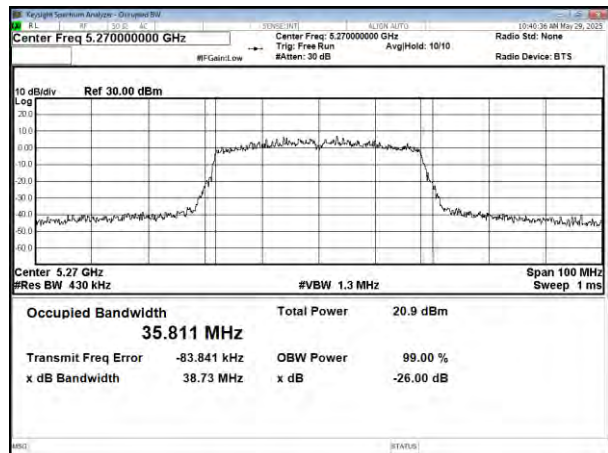
Modulation Standard: 802.11ac VHT20

CH52

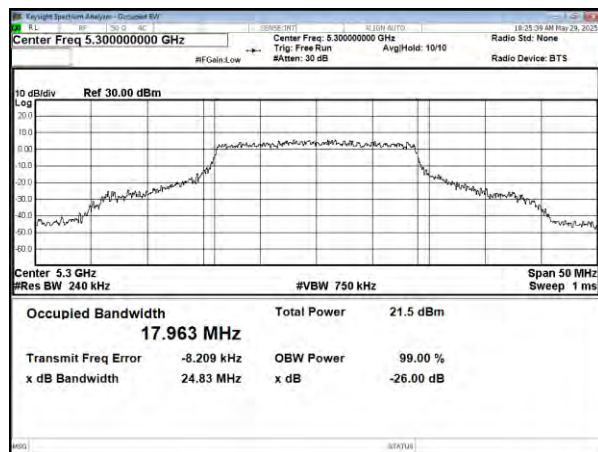


Modulation Standard: 802.11ac VHT40

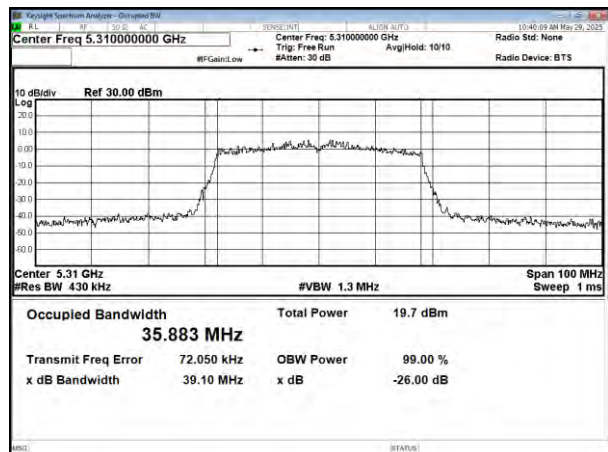
CH54



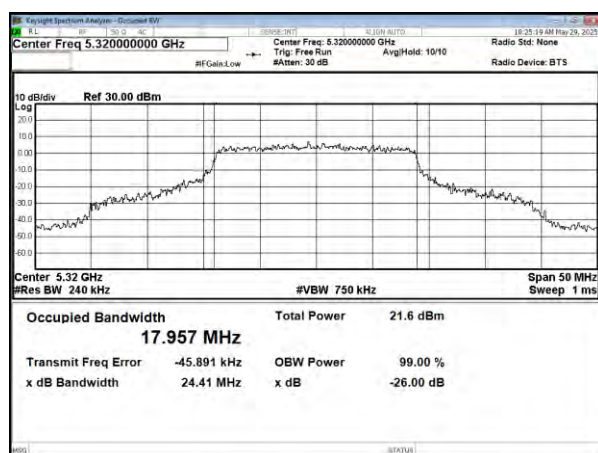
CH60



CH62

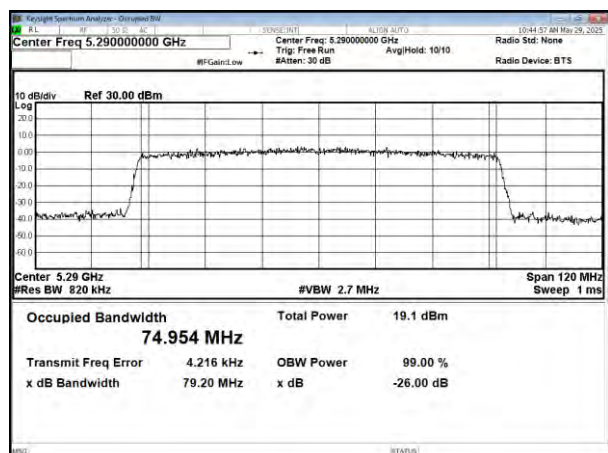


CH64



Modulation Standard: 802.11ac VHT80

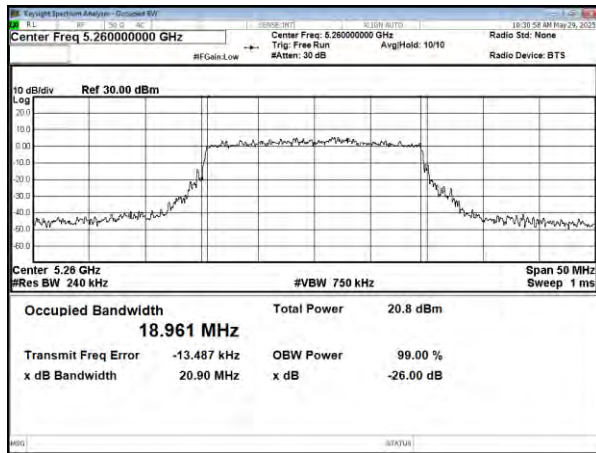
CH58





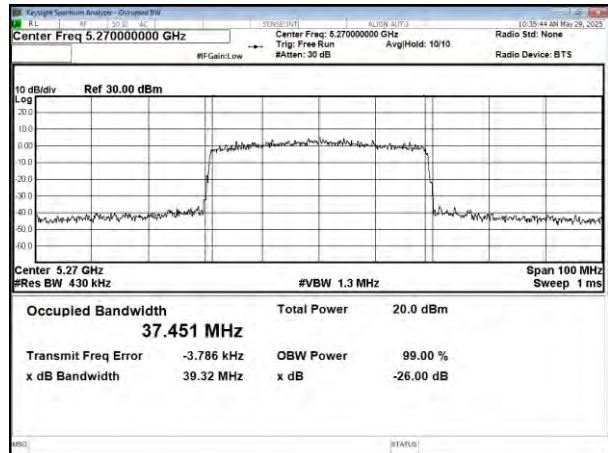
Modulation Standard: 802.11 ax HE20

CH52

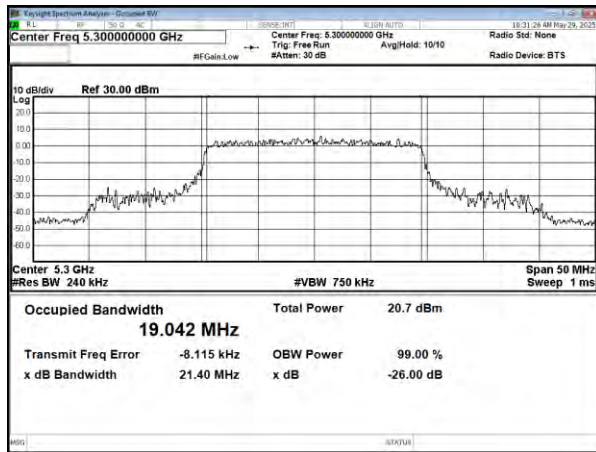


Modulation Standard: 802.11 ax HE40

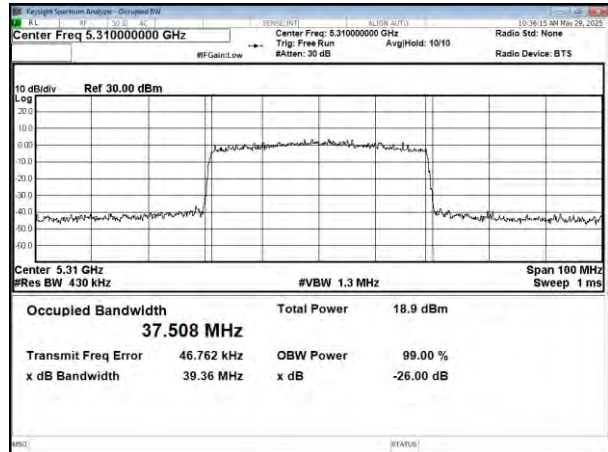
CH54



CH60



CH62

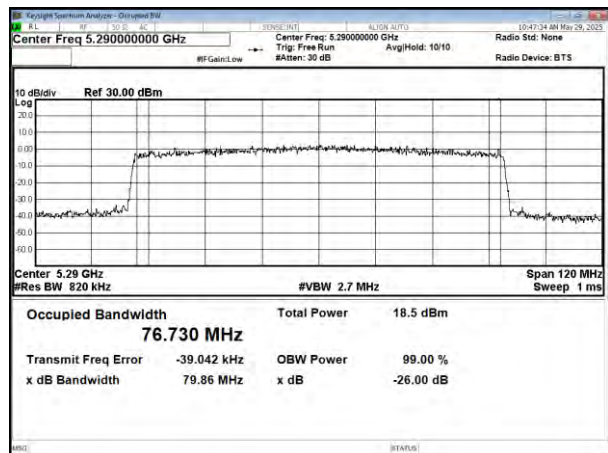


CH64



Modulation Standard: 802.11 ax HE80

CH58



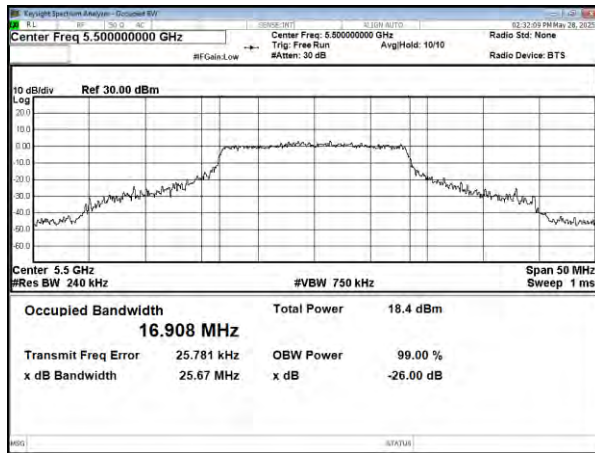


26dB Bandwidth & 99% Occupied Bandwidth, UNII-2C

SISO-ANT A

Modulation Standard: 802.11a

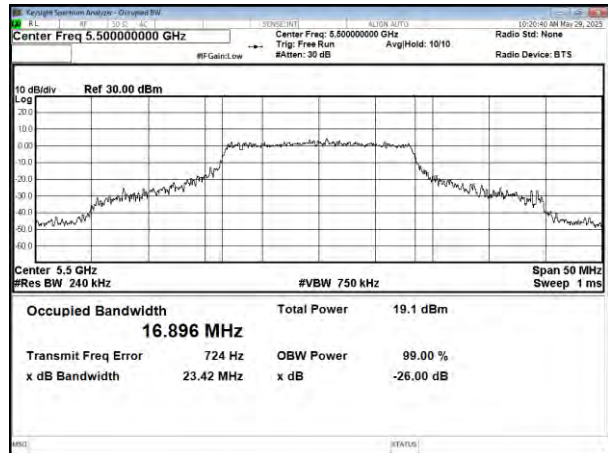
CH100



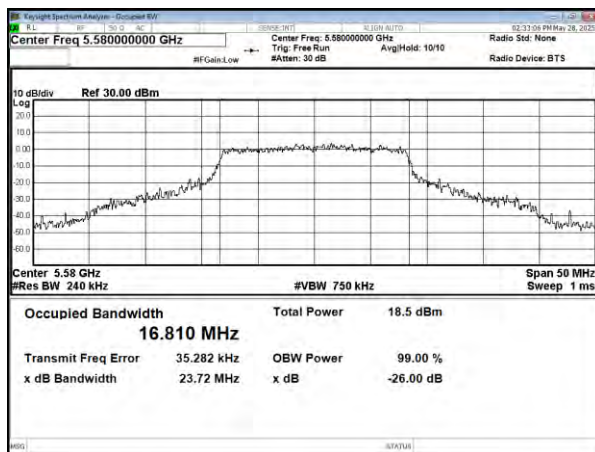
SISO-ANT B

Modulation Standard: 802.11a

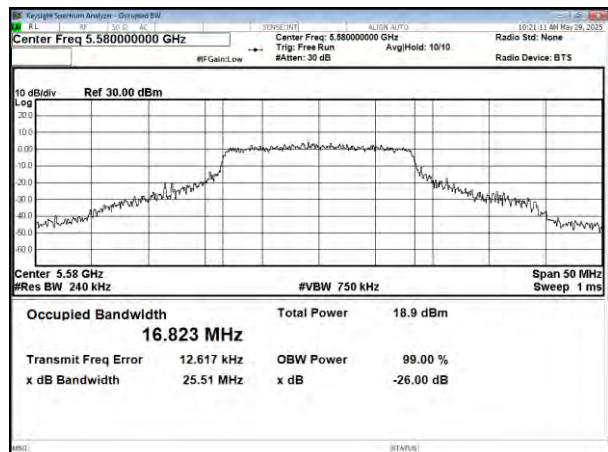
CH100



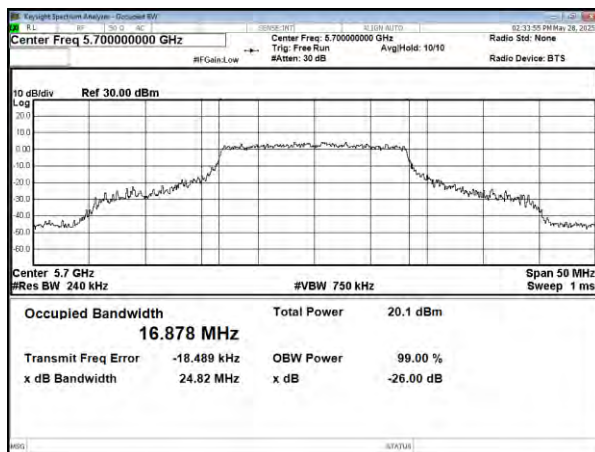
CH116



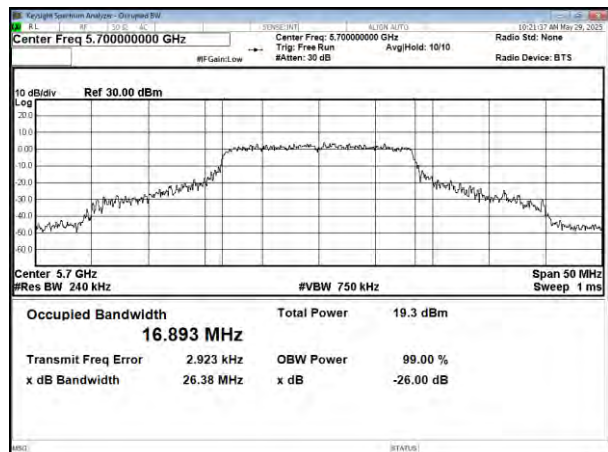
CH116



CH140



CH140





MIMO-ANT A

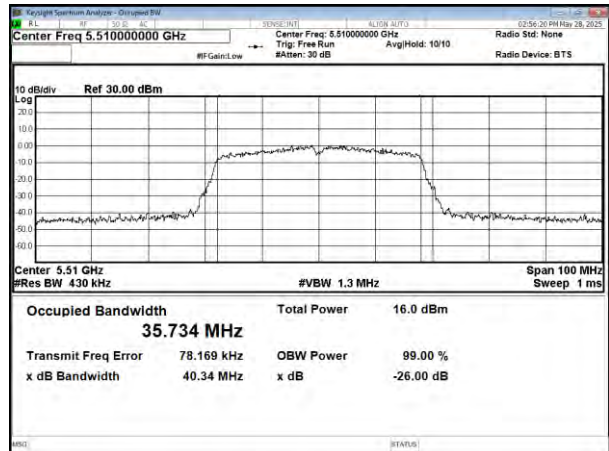
Modulation Standard: 802.11ac VHT20

CH100

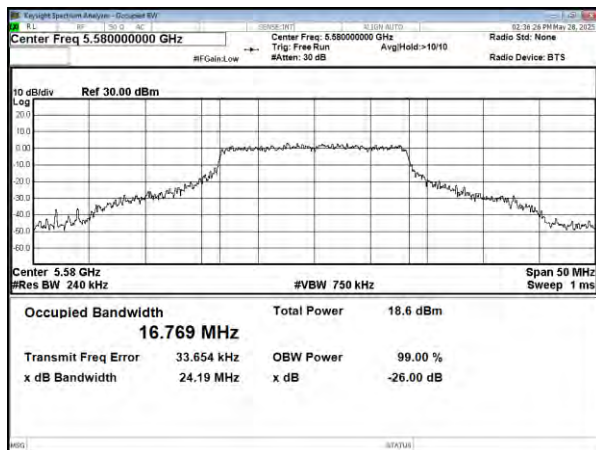


Modulation Standard: 802.11ac VHT40

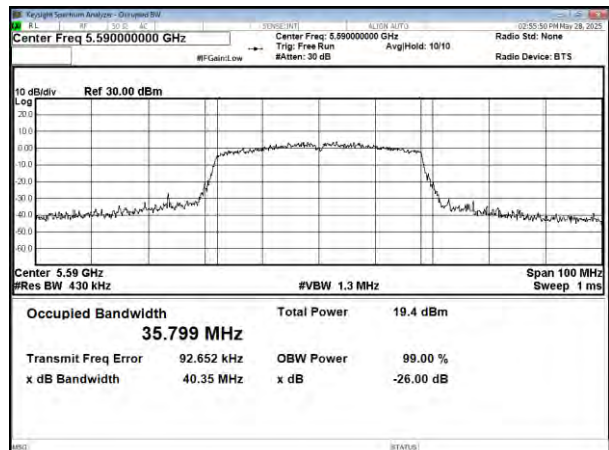
CH102



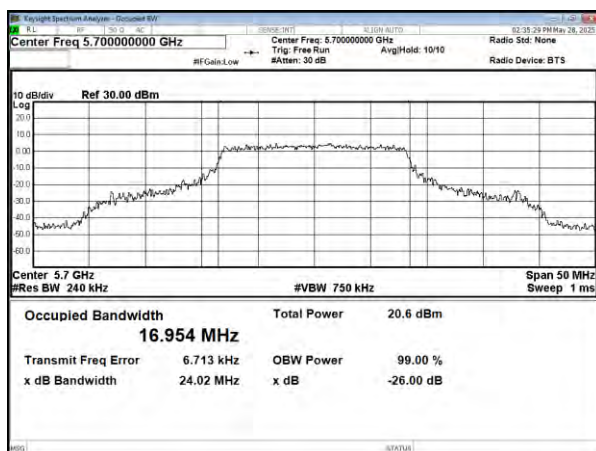
CH116



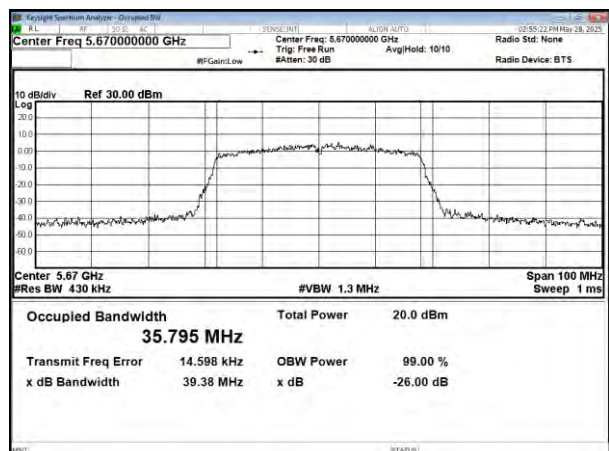
CH118



CH140



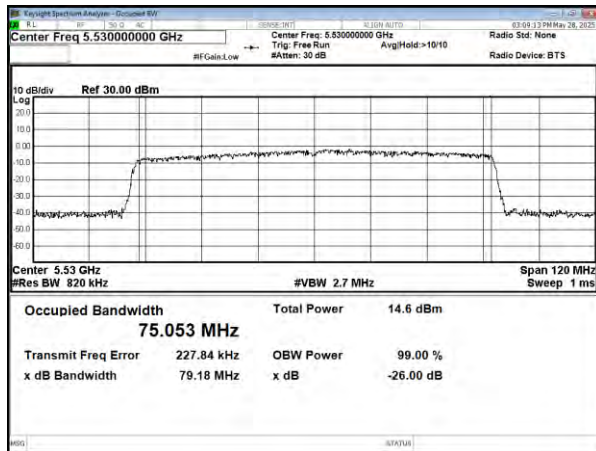
CH134





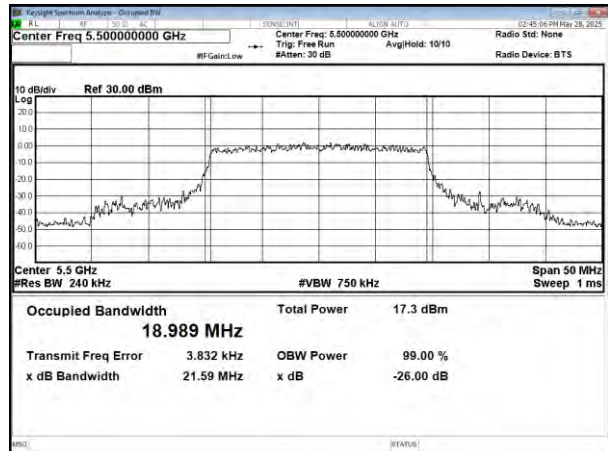
Modulation Standard: 802.11ac VHT80

CH106

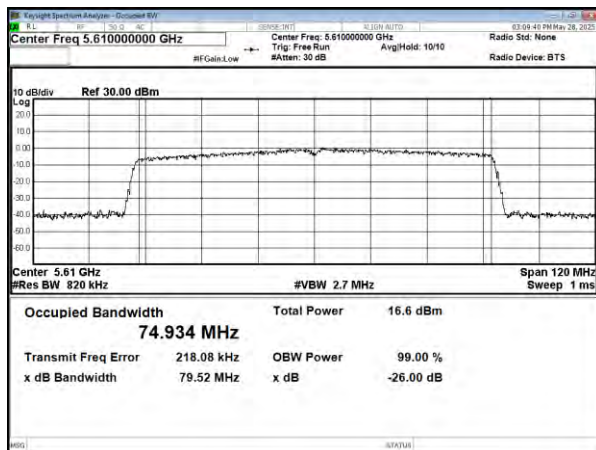


Modulation Standard: 802.11 ax HE20

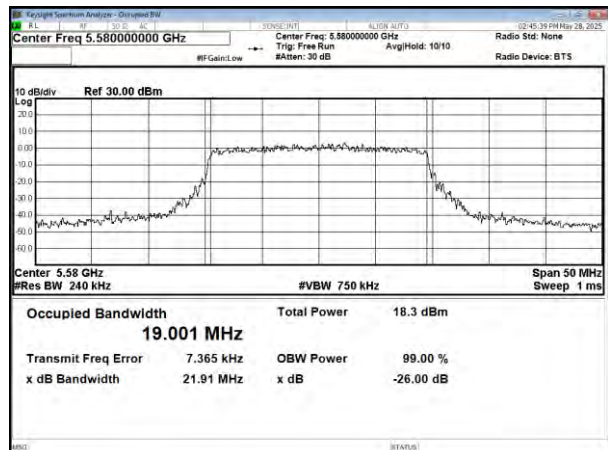
CH100



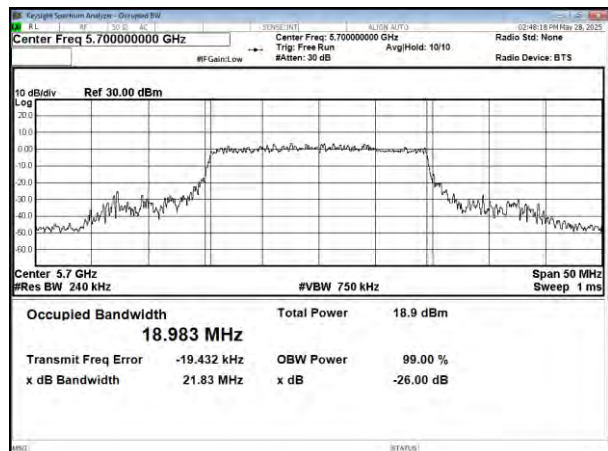
CH122



CH116



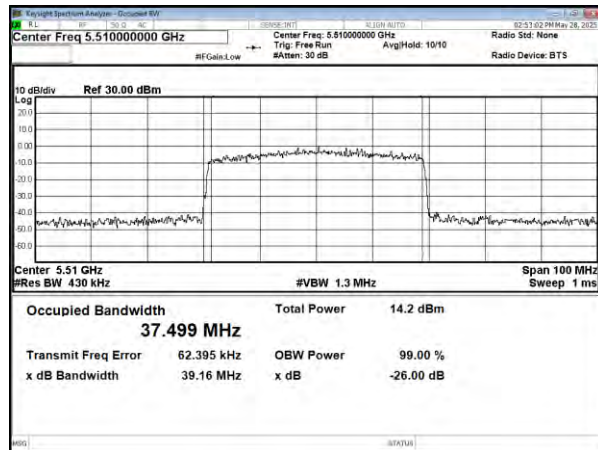
CH140





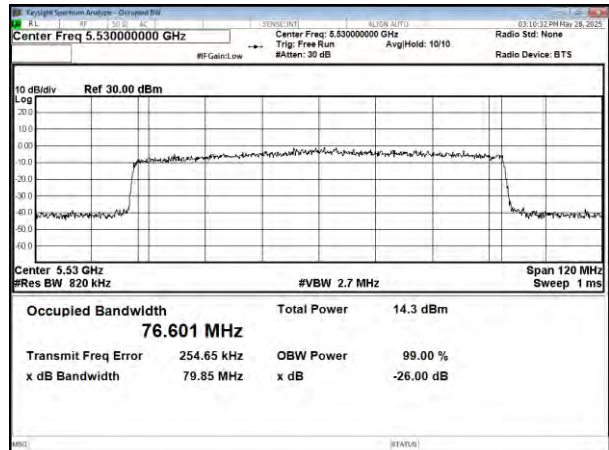
Modulation Standard: 802.11 ax HE40

CH102

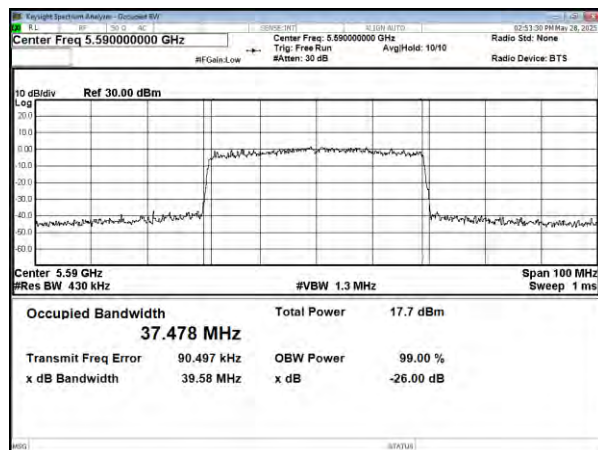


Modulation Standard: 802.11 ax HE80

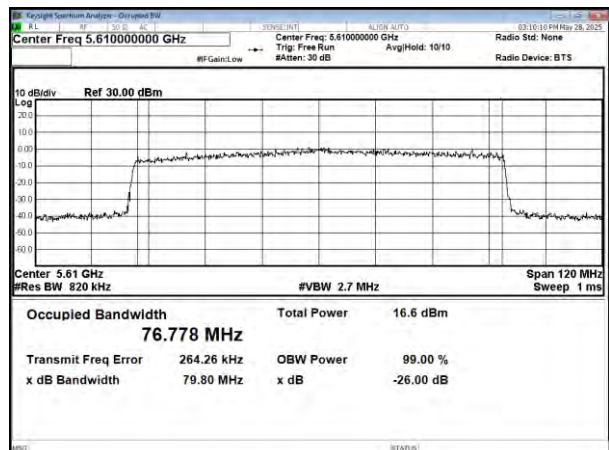
CH106



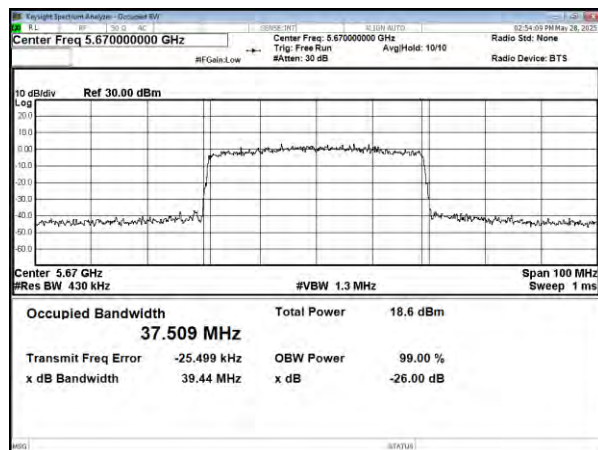
CH118



CH122



CH134



**MIMO-ANT B**

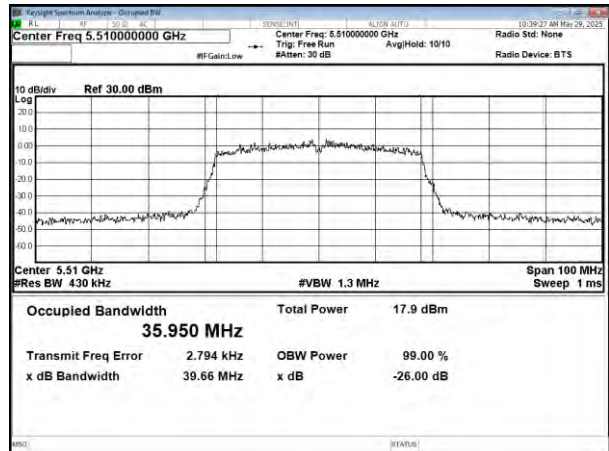
Modulation Standard: 802.11ac VHT20

CH100

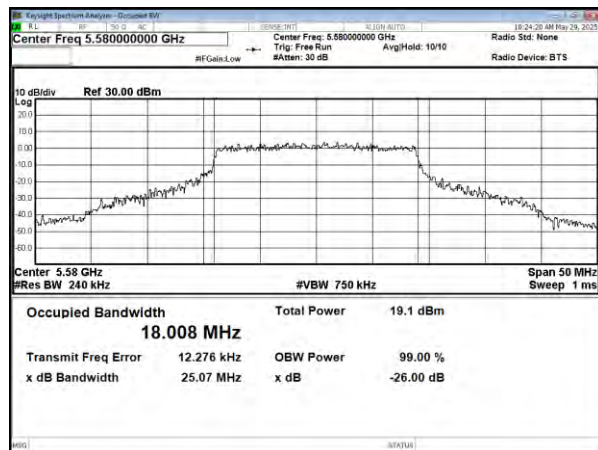


Modulation Standard: 802.11ac VHT40

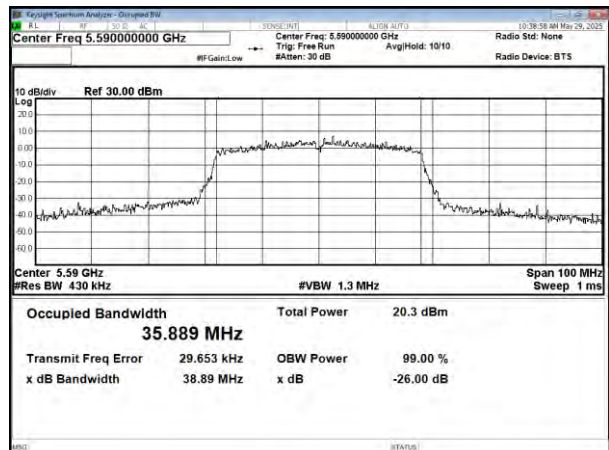
CH102



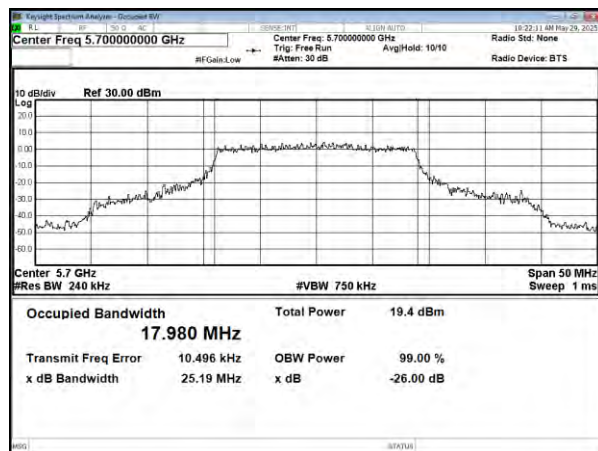
CH116



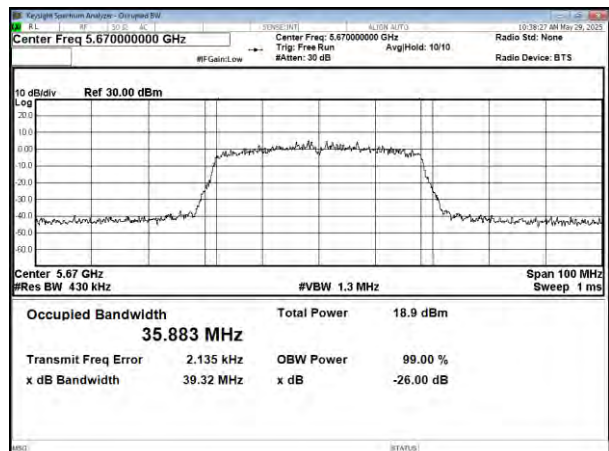
CH118



CH140



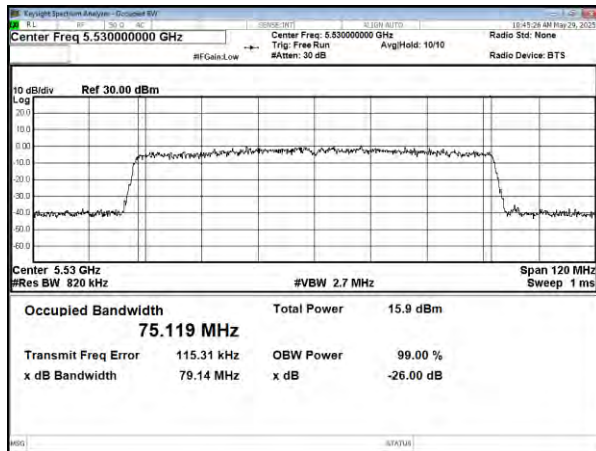
CH134





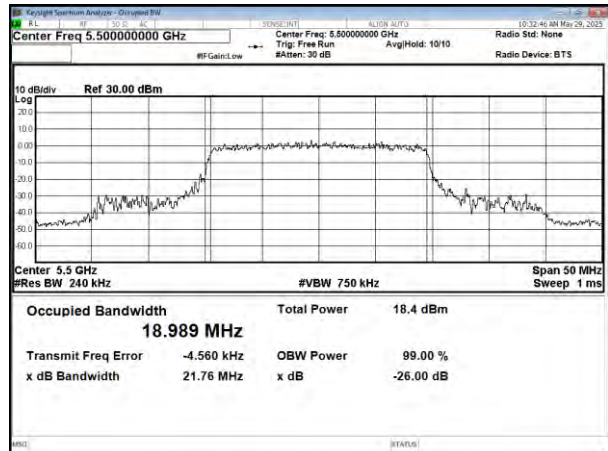
Modulation Standard: 802.11ac VHT80

CH106

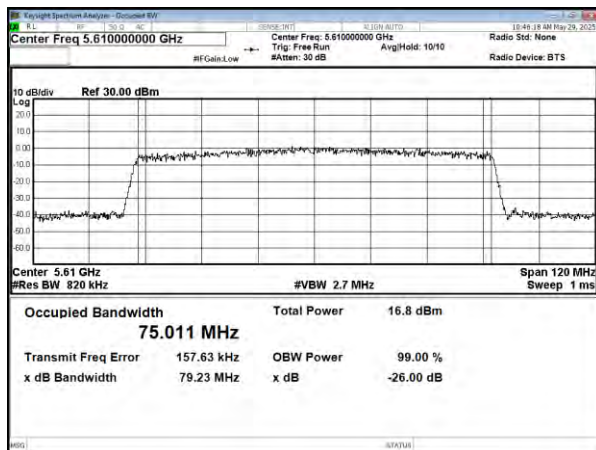


Modulation Standard: 802.11 ax HE20

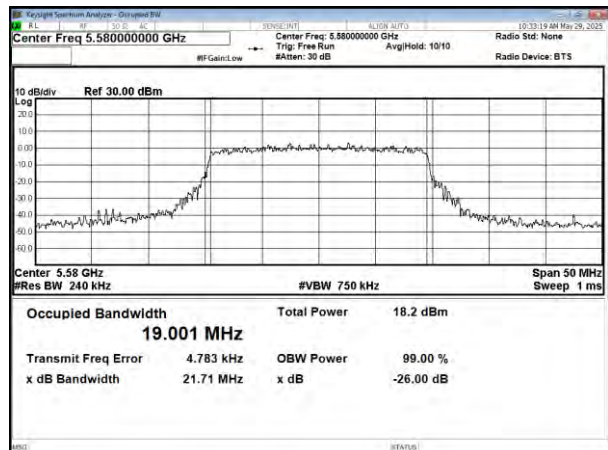
CH100



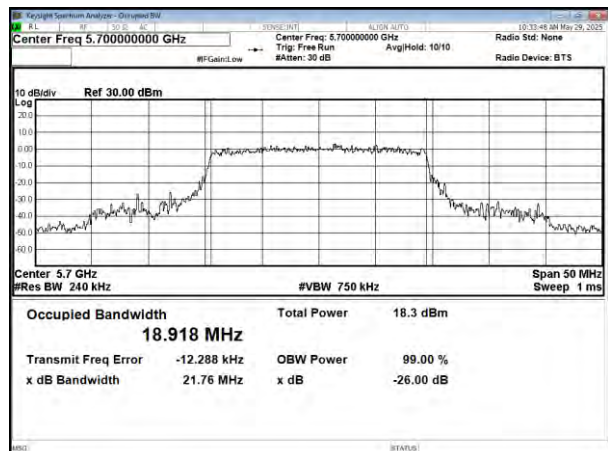
CH122



CH116



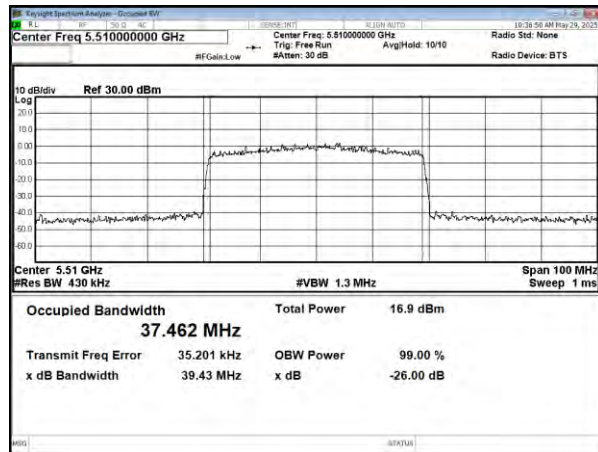
CH140





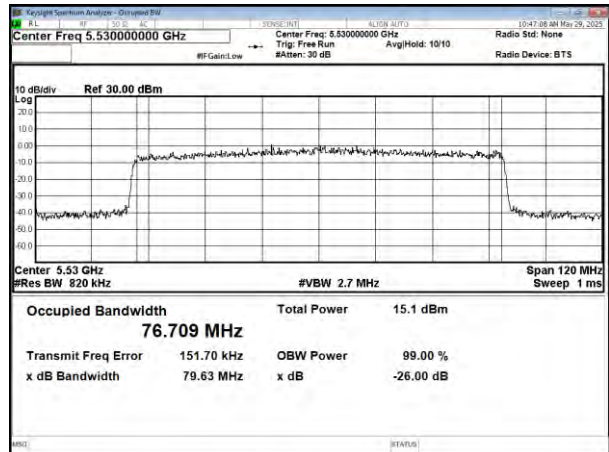
Modulation Standard: 802.11 ax HE40

CH102

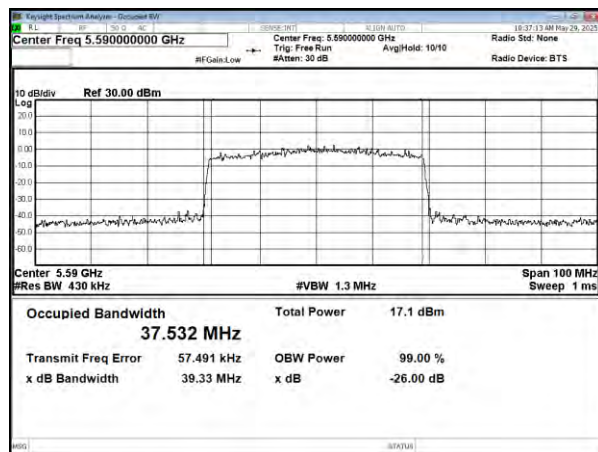


Modulation Standard: 802.11 ax HE80

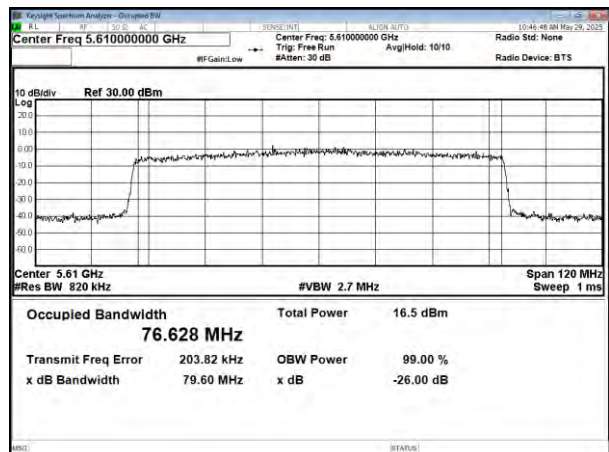
CH106



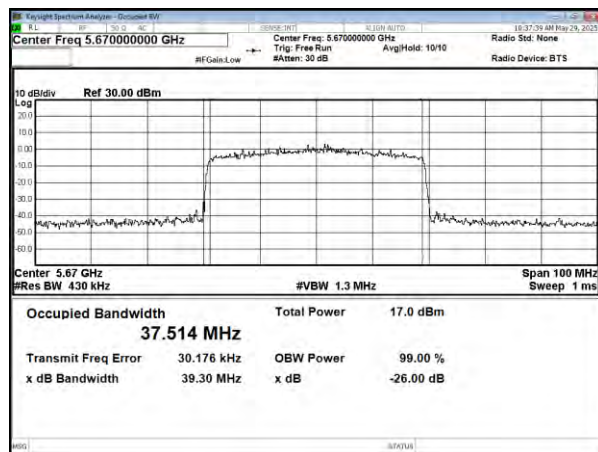
CH118



CH122



CH134





10. Average Power

10.1. Test Limit

Output Power:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).
☐	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
☐	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
☒	client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



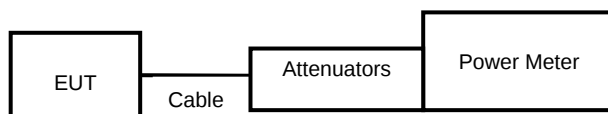
Frequency Band		Limit
☒	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
☒	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

10.2. Test Procedure

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

10.3. Test Setup Layout





10.4. Test Result and Data

SISO-ANTA

In the 5.2G Band

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	36	5180	15.040	31.915	23.49
11a	6 Mbps	44	5220	15.080	32.211	23.49
11a	6 Mbps	48	5240	15.100	32.359	23.49

In the 5.3G Band

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	52	5260	14.880	30.761	23.49
11a	6 Mbps	60	5300	14.400	27.542	23.49
11a	6 Mbps	64	5320	14.070	25.527	23.49

In the 5.5G Band

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	100	5500	12.220	16.672	24.00
11a	6 Mbps	116	5580	12.880	19.409	24.00
11a	6 Mbps	140	5700	14.550	28.510	24.00

In the 5.8G Band

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	149	5745	14.510	28.249	30.00
11a	6 Mbps	157	5785	14.470	27.990	30.00
11a	6 Mbps	165	5825	14.570	28.642	30.00

**SISO-ANTB****In the 5.2G Band**

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	36	5180	15.750	37.584	23.72
11a	6 Mbps	44	5220	15.830	38.282	23.72
11a	6 Mbps	48	5240	15.860	38.548	23.72

In the 5.3G Band

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	52	5260	17.300	53.703	23.70
11a	6 Mbps	60	5300	16.250	42.170	23.70
11a	6 Mbps	64	5320	16.150	41.210	23.70

In the 5.5G Band

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	100	5500	13.790	23.933	23.74
11a	6 Mbps	116	5580	14.130	25.882	23.74
11a	6 Mbps	140	5700	14.920	31.046	23.74

In the 5.8G Band

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)	Total power (mW)	FCC Limit (dBm)
11a	6 Mbps	149	5745	14.880	30.761	29.84
11a	6 Mbps	157	5785	14.850	30.549	29.84
11a	6 Mbps	165	5825	15.810	38.107	29.84

**MIMO****In the 5.2G Band**

Modulation Type	Data Rate	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	A+B	A+B	
11n HT20	MCS 0	5180	14.430	14.510	17.480	55.982	23.49
11n HT20	MCS 0	5220	14.250	14.330	17.300	53.709	23.49
11n HT20	MCS 0	5240	14.330	14.510	17.431	55.351	23.49
11n HT40	MCS 0	5190	11.010	12.270	14.696	29.484	23.49
11n HT40	MCS 0	5230	11.250	12.370	14.856	30.594	23.49
11ac VHT20	NSS1-MCS0	5180	15.020	15.250	18.147	65.265	23.49
11ac VHT20	NSS1-MCS0	5220	15.180	15.630	18.421	69.520	23.49
11ac VHT20	NSS1-MCS0	5240	15.030	15.910	18.503	70.836	23.49
11ac VHT40	NSS1-MCS0	5190	12.830	13.540	16.210	41.781	23.49
11ac VHT40	NSS1-MCS0	5230	12.860	13.990	16.472	44.381	23.49
11ac VHT80	NSS1-MCS0	5210	10.440	11.250	13.874	24.401	23.49
11ax HE20	NSS1-MCS0	5180	13.130	13.260	16.206	41.743	23.49
11ax HE20	NSS1-MCS0	5220	13.230	13.610	16.434	43.999	23.49
11ax HE20	NSS1-MCS0	5240	13.270	14.050	16.688	46.642	23.49
11ax HE40	NSS1-MCS0	5190	10.650	11.540	14.128	25.871	23.49
11ax HE40	NSS1-MCS0	5230	10.980	12.140	14.609	28.900	23.49
11ax HE80	NSS1-MCS0	5210	9.700	10.390	13.069	20.272	23.49

In the 5.3G Band

Modulation Type	Data Rate	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	A+B	A+B	
11n HT20	MCS 0	5260	13.360	16.640	18.313	67.809	23.49
11n HT20	MCS 0	5300	13.520	15.380	17.559	57.005	23.49
11n HT20	MCS 0	5320	13.010	14.330	16.730	47.101	23.49
11n HT40	MCS 0	5270	13.070	14.730	16.989	49.993	23.49
11n HT40	MCS 0	5310	10.670	13.860	15.562	35.990	23.49
11ac VHT20	NSS1-MCS0	5260	14.930	17.190	19.216	83.477	23.49
11ac VHT20	NSS1-MCS0	5300	14.270	16.150	18.321	67.940	23.49
11ac VHT20	NSS1-MCS0	5320	14.080	15.910	18.101	64.580	23.49
11ac VHT40	NSS1-MCS0	5270	14.410	15.300	17.888	61.490	23.49
11ac VHT40	NSS1-MCS0	5310	11.740	14.200	16.152	41.231	23.49
11ac VHT80	NSS1-MCS0	5290	10.580	12.700	14.778	30.050	23.49
11ax HE20	NSS1-MCS0	5260	13.050	15.250	17.298	53.680	23.49
11ax HE20	NSS1-MCS0	5300	12.310	14.270	16.410	43.752	23.49
11ax HE20	NSS1-MCS0	5320	11.990	14.170	16.226	41.934	23.49
11ax HE40	NSS1-MCS0	5270	10.460	13.380	15.171	32.894	23.49
11ax HE40	NSS1-MCS0	5310	10.690	12.230	14.538	28.433	23.49
11ax HE80	NSS1-MCS0	5290	9.860	11.660	13.863	24.338	23.49

**In the 5.5G Band**

Modulation Type	Data Rate	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	A+B	A+B	
11n HT20	MCS 0	5500	11.170	12.360	14.816	30.311	23.74
11n HT20	MCS 0	5580	13.360	13.110	16.247	42.141	23.74
11n HT20	MCS 0	5700	13.020	13.420	16.235	42.023	23.74
11n HT40	MCS 0	5510	9.970	11.870	14.033	25.313	23.74
11n HT40	MCS 0	5590	10.050	11.670	13.945	24.805	23.74
11n HT40	MCS 0	5670	10.110	11.770	14.029	25.288	23.74
11ac VHT20	NSS1-MCS0	5500	12.610	13.920	16.325	42.899	23.74
11ac VHT20	NSS1-MCS0	5580	14.100	14.390	17.258	53.183	23.74
11ac VHT20	NSS1-MCS0	5700	14.350	14.480	17.426	55.281	23.74
11ac VHT40	NSS1-MCS0	5510	10.170	12.040	14.215	26.395	23.74
11ac VHT40	NSS1-MCS0	5590	11.720	12.580	15.182	32.973	23.74
11ac VHT40	NSS1-MCS0	5670	11.750	12.400	15.097	32.340	23.74
11ac VHT80	NSS1-MCS0	5530	10.210	9.640	12.945	19.700	23.74
11ac VHT80	NSS1-MCS0	5610	11.260	10.390	13.857	24.306	23.74
11ax HE20	NSS1-MCS0	5500	10.750	12.040	14.453	27.881	23.74
11ax HE20	NSS1-MCS0	5580	12.070	12.510	15.306	33.930	23.74
11ax HE20	NSS1-MCS0	5700	12.500	12.520	15.520	35.648	23.74
11ax HE40	NSS1-MCS0	5510	10.370	10.250	13.321	21.482	23.74
11ax HE40	NSS1-MCS0	5590	10.200	10.660	13.446	22.113	23.74
11ax HE40	NSS1-MCS0	5670	10.560	10.420	13.501	22.392	23.74
11ax HE80	NSS1-MCS0	5530	9.410	8.570	12.021	15.924	23.74
11ax HE80	NSS1-MCS0	5610	10.300	9.450	12.906	19.526	23.74

In the 5.8G Band

Modulation Type	Data Rate	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	A+B	A+B	
11n HT20	MCS 0	5745	13.380	13.260	16.331	42.961	29.84
11n HT20	MCS 0	5785	13.640	14.330	17.009	50.223	29.84
11n HT20	MCS 0	5825	13.840	14.510	17.198	52.459	29.84
11n HT40	MCS 0	5755	11.660	12.070	14.880	30.762	29.84
11n HT40	MCS 0	5795	11.010	12.340	14.736	29.758	29.84
11ac VHT20	NSS1-MCS0	5745	14.970	14.490	17.747	59.524	29.84
11ac VHT20	NSS1-MCS0	5785	15.250	15.040	18.157	65.412	29.84
11ac VHT20	NSS1-MCS0	5825	15.150	15.850	18.524	71.193	29.84
11ac VHT40	NSS1-MCS0	5755	12.620	12.780	15.711	37.248	29.84
11ac VHT40	NSS1-MCS0	5795	12.800	13.110	15.968	39.519	29.84
11ac VHT80	NSS1-MCS0	5775	10.290	10.770	13.547	22.630	29.84
11ax HE20	NSS1-MCS0	5745	12.990	12.560	15.791	37.937	29.84
11ax HE20	NSS1-MCS0	5785	13.350	13.170	16.271	42.376	29.84
11ax HE20	NSS1-MCS0	5825	13.170	14.160	16.703	46.811	29.84
11ax HE40	NSS1-MCS0	5755	10.860	11.030	13.956	24.866	29.84
11ax HE40	NSS1-MCS0	5795	10.920	11.490	14.225	26.452	29.84
11ax HE80	NSS1-MCS0	5775	9.510	9.730	12.632	18.330	29.84



11. Maximum Power Spectral Density

11.1. Test Limit

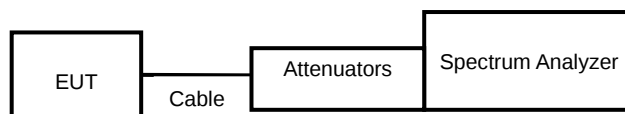
PSD:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	17 dBm/MHz
☐	Indoor access point	17 dBm/MHz
☐	Fixed point-to-point access points	17 dBm/MHz
☒	client devices	11 dBm/MHz
☒	5.250~5.350 GHz	11 dBm/MHz
☒	5.470~5.725 GHz	11 dBm/MHz
☒	5.725~5.85 GHz	30 dBm/500kHz

11.2. Test Procedure

Reference to KDB789033 v02r01 General UNII Test Procedures New Rules.

11.3. Test Setup Layout





11.4. Test Result and Data

SISO-ANT A

In the 5.2G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	36	5180	4.352	0.00	4.352	10.49
11a	44	5220	4.810	0.00	4.810	10.49
11a	48	5240	4.947	0.00	4.947	10.49

In the 5.3G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	52	5260	4.267	0.00	4.267	10.49
11a	60	5300	3.880	0.00	3.880	10.49
11a	64	5320	3.417	0.00	3.417	10.49

In the 5.5G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	100	5500	2.009	0.00	2.009	11.00
11a	116	5580	3.229	0.00	3.229	11.00
11a	140	5700	3.623	0.00	3.623	11.00

In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	10log (500KHz/RBW) CF (dB)	Total Corr'd PPSD (dBm/500kHz)	PPSD Limit (dBm/500kHz)
11a	149	5745	4.355	0.00	-3.010	1.34	30.00
11a	157	5785	4.437	0.00	-3.010	1.43	30.00
11a	165	5825	4.427	0.00	-3.010	1.42	30.00

**SISO-ANT B****In the 5.2G Band**

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	36	5180	4.688	0.00	4.688	10.72
11a	44	5220	5.150	0.00	5.150	10.72
11a	48	5240	5.864	0.00	5.864	10.72

In the 5.3G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	52	5260	6.338	0.00	6.338	10.70
11a	60	5300	5.640	0.00	5.640	10.70
11a	64	5320	5.536	0.00	5.536	10.70

In the 5.5G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	100	5500	3.222	0.00	3.222	10.74
11a	116	5580	3.384	0.00	3.384	10.74
11a	140	5700	3.497	0.00	3.497	10.74

In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)	Duty Cycle CF(dB)	10log (500KHz/RBW) CF (dB)	Total Corr'd PPSD (dBm/500kHz)	PPSD Limit (dBm/500kHz)
11a	149	5745	4.004	0.00	-3.010	0.99	29.84
11a	157	5785	4.222	0.00	-3.010	1.21	29.84
11a	165	5825	5.021	0.00	-3.010	2.01	29.84

MIMO**In the 5.2G Band**

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
			ANT A	ANT B				
11ac VHT20	36	5180	4.214	3.873	7.057	0.00	7.057	7.59
11ac VHT20	44	5220	4.059	4.835	7.475	0.00	7.475	7.59
11ac VHT20	48	5240	3.529	4.411	7.003	0.00	7.003	7.59
11ac VHT40	38	5190	-0.425	0.296	2.961	0.00	2.961	7.59
11ac VHT40	46	5230	-0.167	1.018	3.476	0.00	3.476	7.59
11ac VHT80	42	5210	-6.152	-5.353	-2.724	0.61	-2.114	7.59
11ax HE20	36	5180	2.017	2.321	5.182	0.00	5.182	7.59
11ax HE20	44	5220	2.553	2.350	5.463	0.00	5.463	7.59
11ax HE20	48	5240	2.393	3.144	5.795	0.00	5.795	7.59
11ax HE40	38	5190	-2.440	-1.402	1.120	0.00	1.120	7.59
11ax HE40	46	5230	-2.802	-0.996	1.205	0.00	1.205	7.59
11ax HE80	42	5210	-6.075	-5.783	-2.916	0.00	-2.916	7.59

**In the 5.3G Band**

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
			ANT A	ANT B				
11ac VHT20	52	5260	3.867	5.108	7.542	0.00	7.542	7.58
11ac VHT20	60	5300	3.570	5.157	7.446	0.00	7.446	7.58
11ac VHT20	64	5320	3.354	5.038	7.287	0.00	7.287	7.58
11ac VHT40	54	5270	-0.539	2.405	4.188	0.00	4.188	7.58
11ac VHT40	62	5310	-1.293	1.109	3.082	0.00	3.082	7.58
11ac VHT80	58	5290	-6.470	-3.983	-2.041	0.00	-2.041	7.58
11ax HE20	52	5260	1.786	4.092	6.101	0.00	6.101	7.58
11ax HE20	60	5300	1.528	2.716	5.173	0.00	5.173	7.58
11ax HE20	64	5320	0.888	2.733	4.918	0.00	4.918	7.58
11ax HE40	54	5270	-2.456	0.672	2.394	0.00	2.394	7.58
11ax HE40	62	5310	-3.217	-0.830	1.149	0.00	1.149	7.58
11ax HE80	58	5290	-7.173	-3.941	-2.253	0.00	-2.253	7.58

In the 5.5G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSD (dBm/MHz)	PPSD Limit (dBm/MHz)
			ANT A	ANT B				
11ac VHT20	100	5500	1.701	2.913	5.359	0.00	5.359	8.02
11ac VHT20	116	5580	3.520	3.366	6.454	0.00	6.454	8.02
11ac VHT20	140	5700	3.540	3.269	6.417	0.00	6.417	8.02
11ac VHT40	102	5510	-2.602	-0.989	1.289	0.00	1.289	8.02
11ac VHT40	118	5590	-0.894	-0.498	2.319	0.00	2.319	8.02
11ac VHT40	134	5670	-1.026	-0.727	2.136	0.00	2.136	8.02
11ac VHT80	106	5530	-7.988	-6.860	-4.377	0.00	-4.377	8.02
11ac VHT80	122	5610	-5.970	-5.877	-2.913	0.00	-2.913	8.02
11ax HE20	100	5500	-0.362	0.591	3.151	0.00	3.151	8.02
11ax HE20	116	5580	1.186	0.857	4.035	0.00	4.035	8.02
11ax HE20	140	5700	1.372	1.319	4.356	0.00	4.356	8.02
11ax HE40	102	5510	-4.821	-3.572	-1.141	0.00	-1.141	8.02
11ax HE40	118	5590	-3.254	-2.320	0.248	0.00	0.248	8.02
11ax HE40	134	5670	-3.488	-2.416	0.091	0.00	0.091	8.02
11ax HE80	106	5530	-8.580	-7.784	-5.153	0.00	-5.153	8.02
11ax HE80	122	5610	-6.010	-5.959	-2.974	0.00	-2.974	8.02

**In the 5.8G Band**

Modulation Type	CH	Freq. (MHz)	Meas PPSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log(500K Hz/RBW) CF (dB)	Total Corr'd PPSD (dBm/500kHz)	PPSD Limit (dBm/500kHz)
			ANT A	ANT B					
11ac VHT20	149	5745	4.300	3.652	6.998	0.00	-3.010	3.99	27.10
11ac VHT20	157	5785	4.515	4.284	7.411	0.00	-3.010	4.40	27.10
11ac VHT20	165	5825	4.421	5.176	7.825	0.00	-3.010	4.81	27.10
11ac VHT40	151	5755	-0.148	0.094	2.985	0.00	-3.010	-0.03	27.10
11ac VHT40	159	5795	-0.169	0.409	3.140	0.00	-3.010	0.13	27.10
11ac VHT80	155	5775	-5.914	-5.721	-2.806	0.00	-3.010	-5.82	27.10
11ax HE20	149	5745	1.990	1.508	4.766	0.00	-3.010	1.76	27.10
11ax HE20	157	5785	1.932	2.182	5.069	0.00	-3.010	2.06	27.10
11ax HE20	165	5825	2.329	3.193	5.793	0.00	-3.010	2.78	27.10
11ax HE40	151	5755	-2.434	-2.286	0.651	0.00	-3.010	-2.36	27.10
11ax HE40	159	5795	-2.137	-1.883	1.002	0.00	-3.010	-2.01	27.10
11ax HE80	155	5775	-6.714	-5.291	-2.934	0.00	-3.010	-5.94	27.10

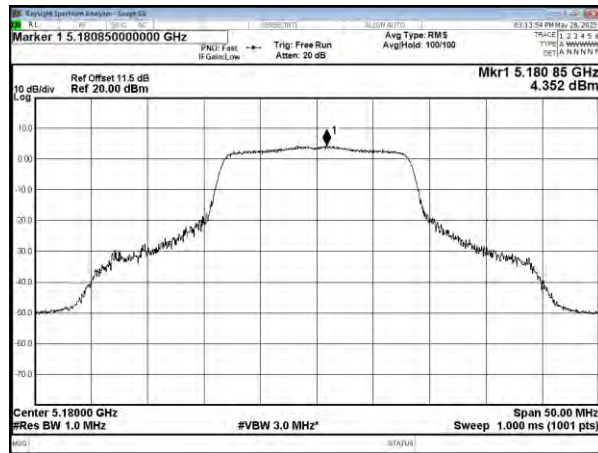


UNII-1

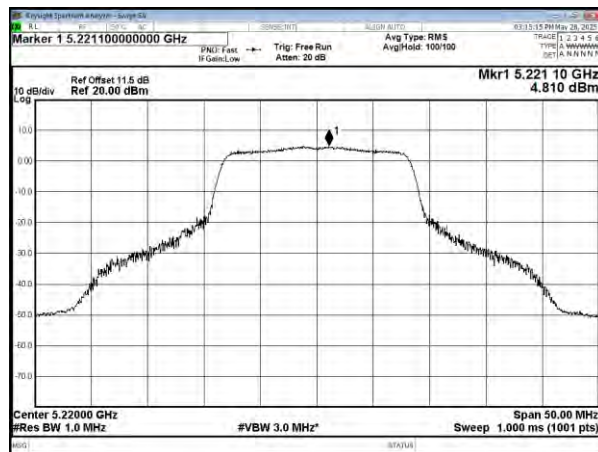
SISO-ANT A

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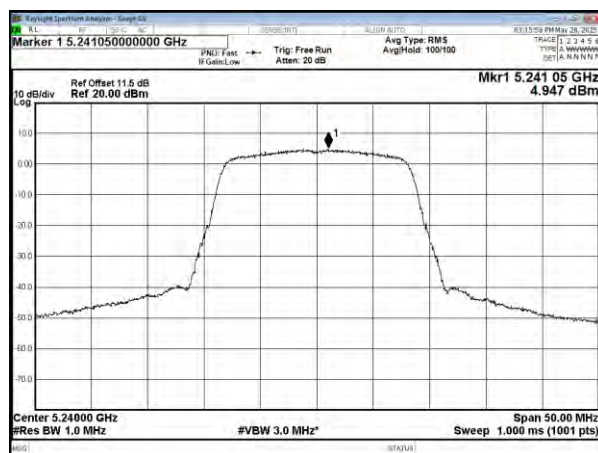
CH36



CH44



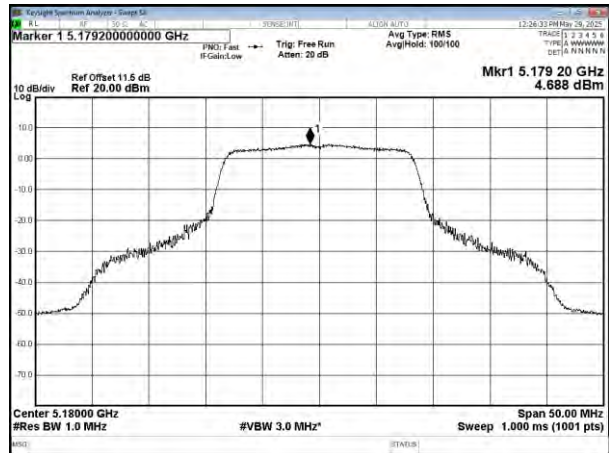
CH48



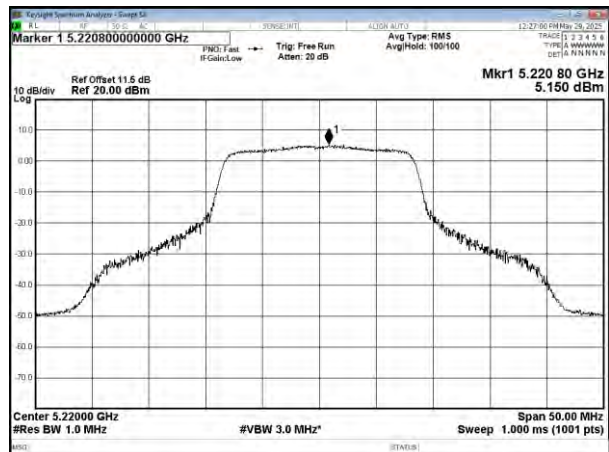
SISO-ANT B

Modulation Standard: 802.11a

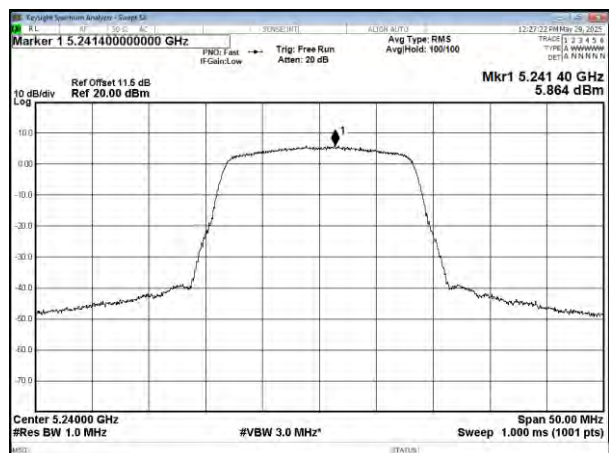
CH36

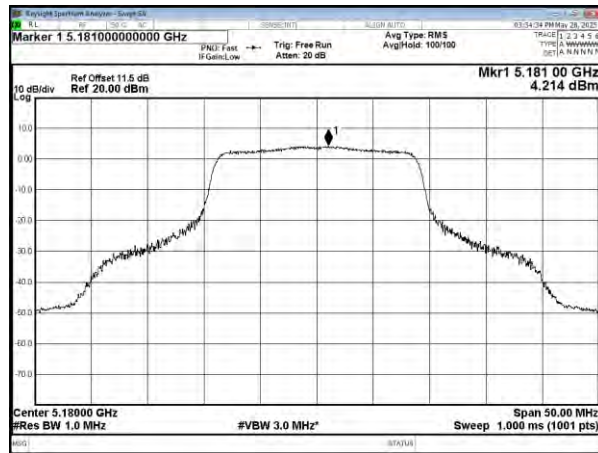
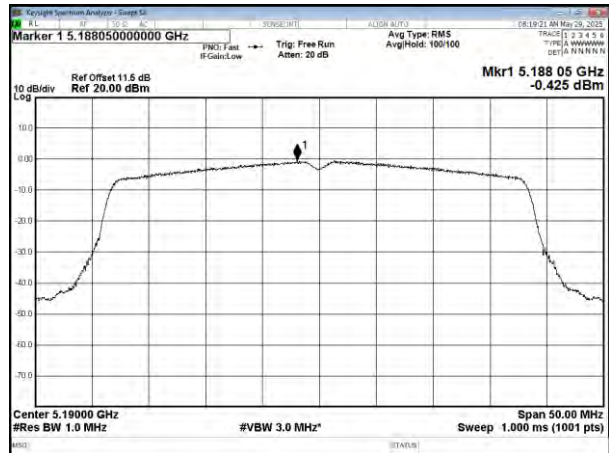
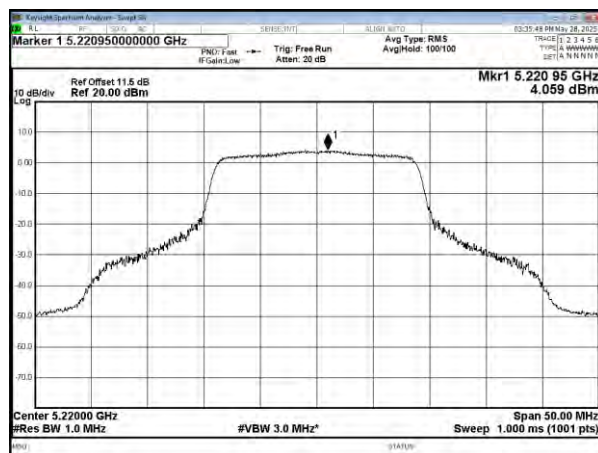
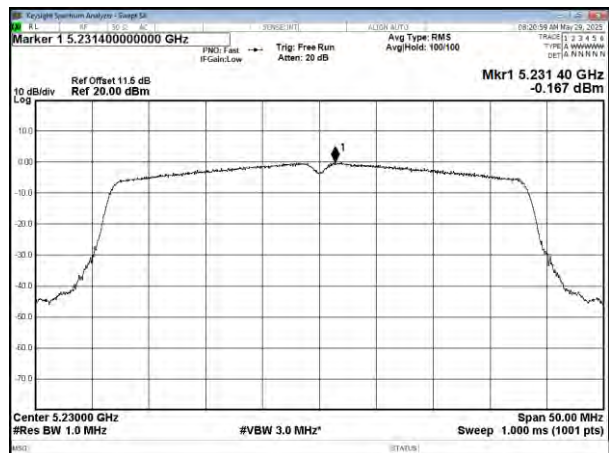
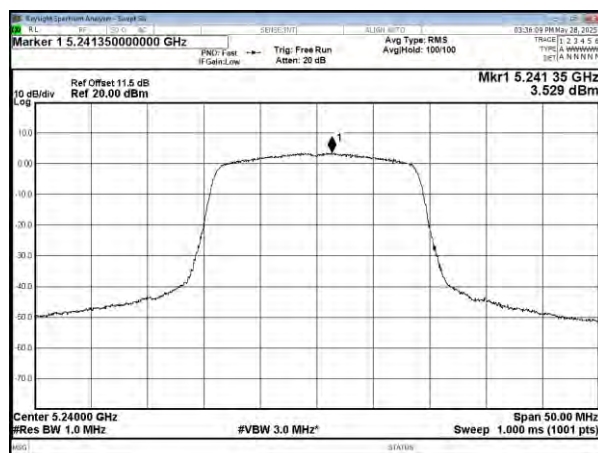


CH44

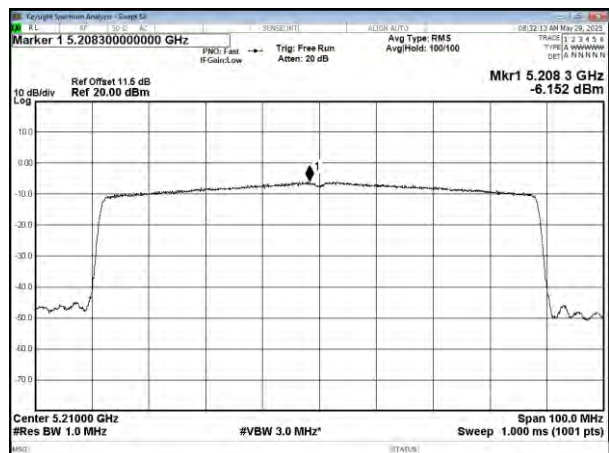


CH48



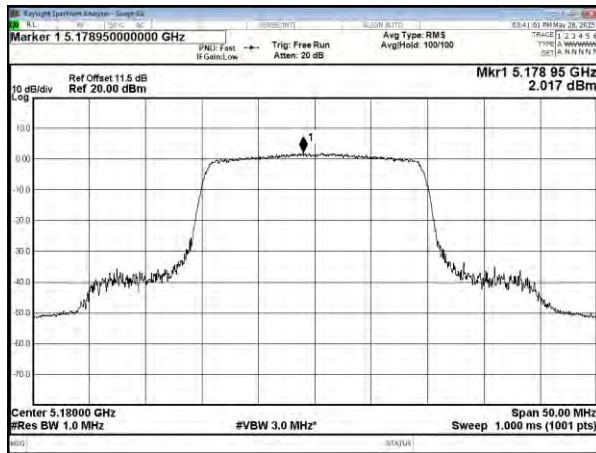
**MIMO-ANT A**Modulation Standard: 802.11ac VHT20
CH36Modulation Standard: 802.11ac VHT40
CH38**CH44****CH46****CH48**

Modulation Standard: 802.11ac VHT80

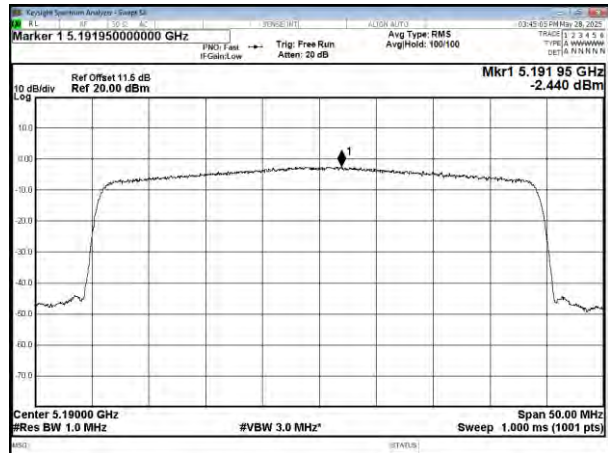
CH42



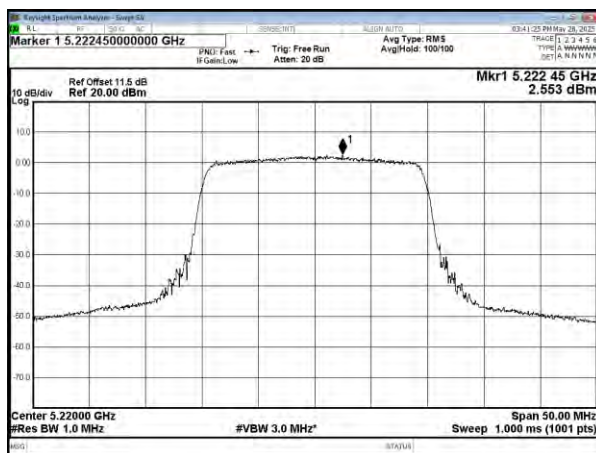
Modulation Standard: 802.11 ax HE20
CH36



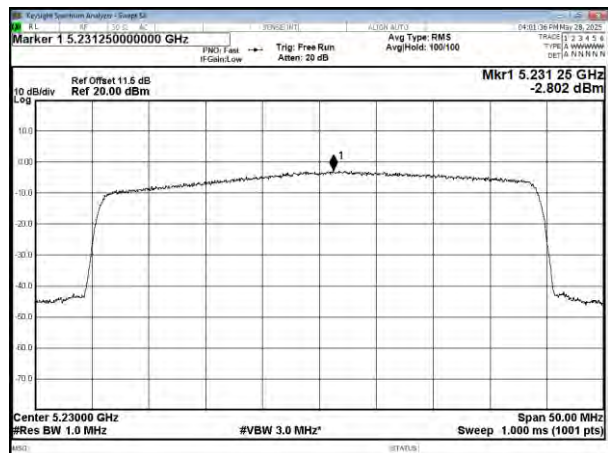
Modulation Standard: 802.11 ax HE40
CH38



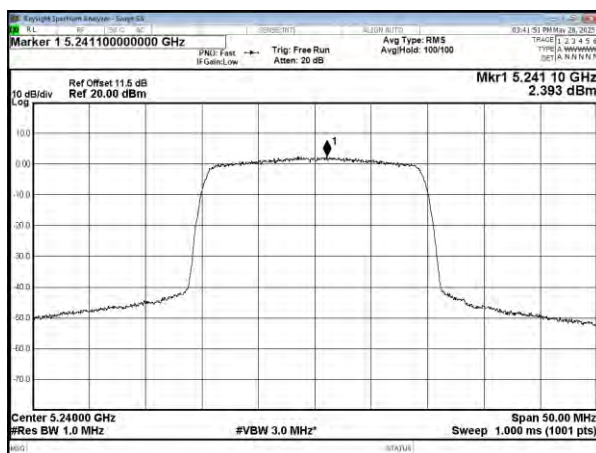
CH44



CH46

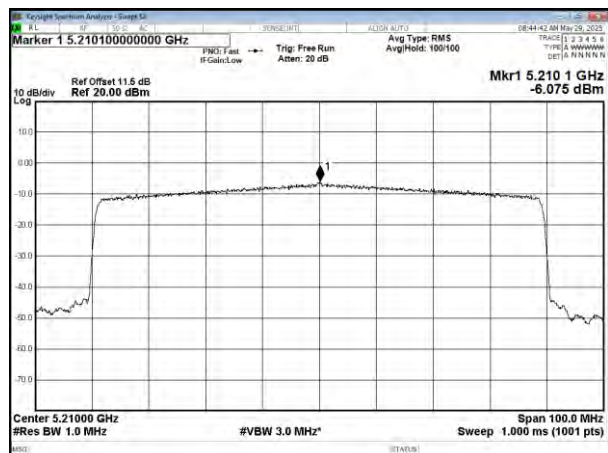


CH48



Modulation Standard: 802.11 ax HE80

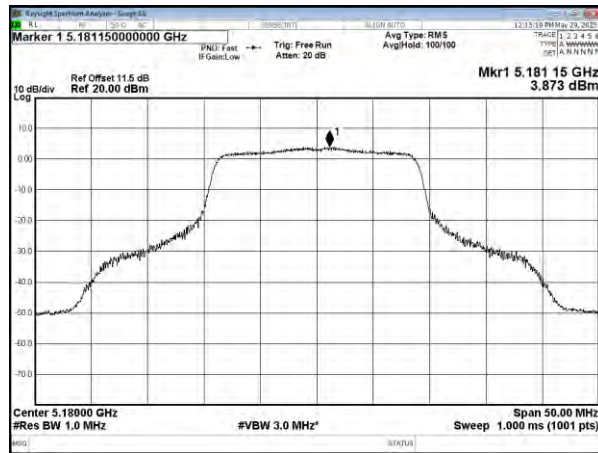
CH42



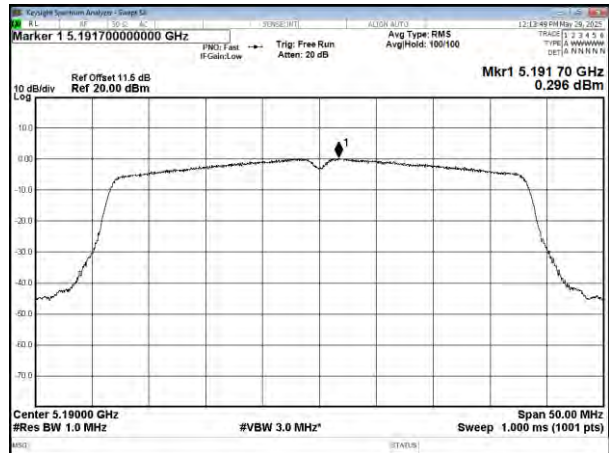


MIMO-ANT B

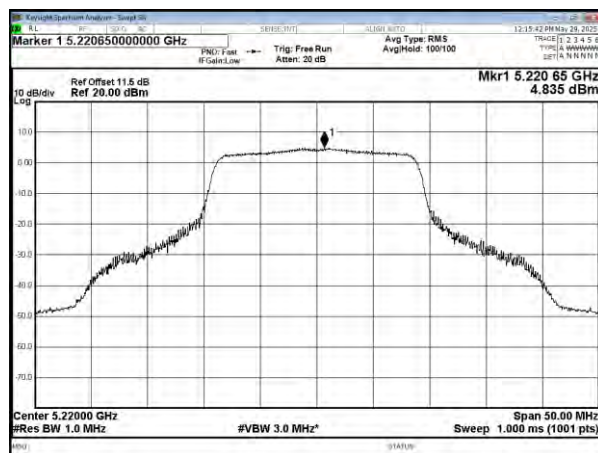
Modulation Standard: 802.11ac VHT20
CH36



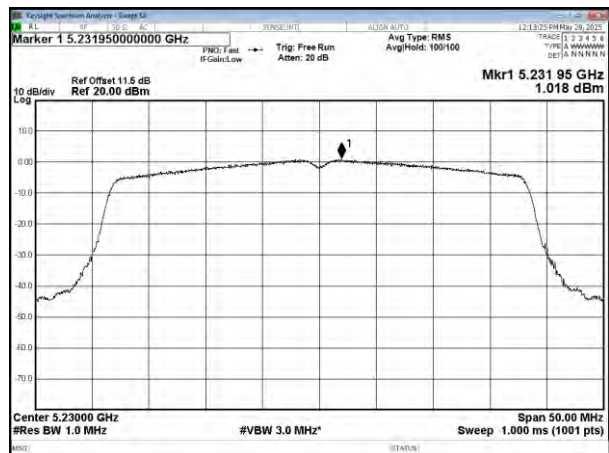
Modulation Standard: 802.11ac VHT40
CH38



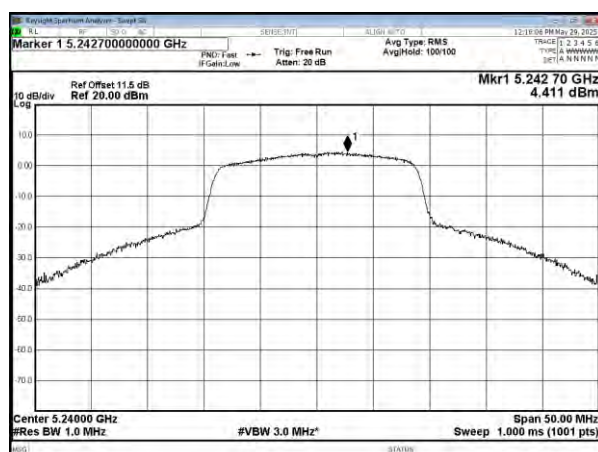
CH44



CH46

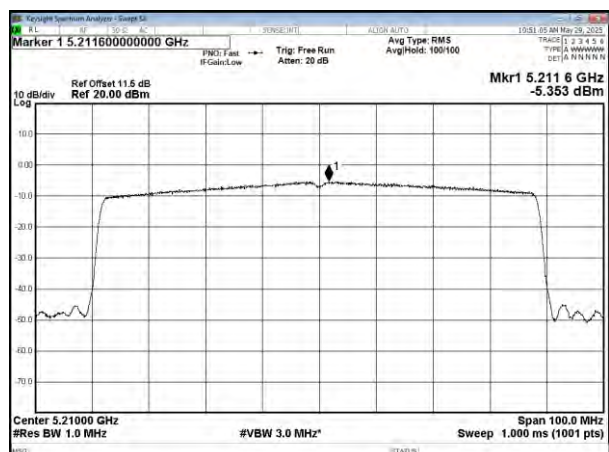


CH48



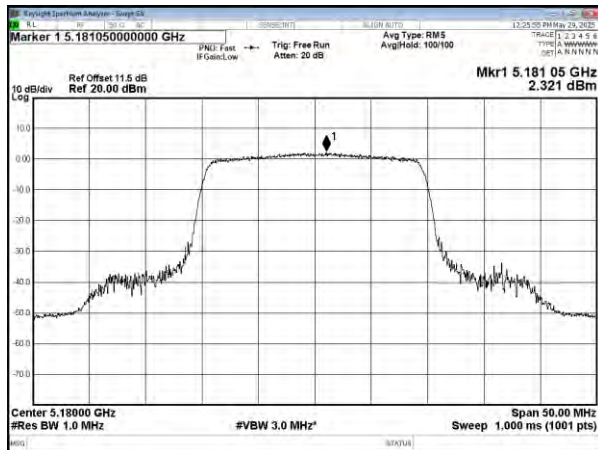
Modulation Standard: 802.11ac VHT80

CH42

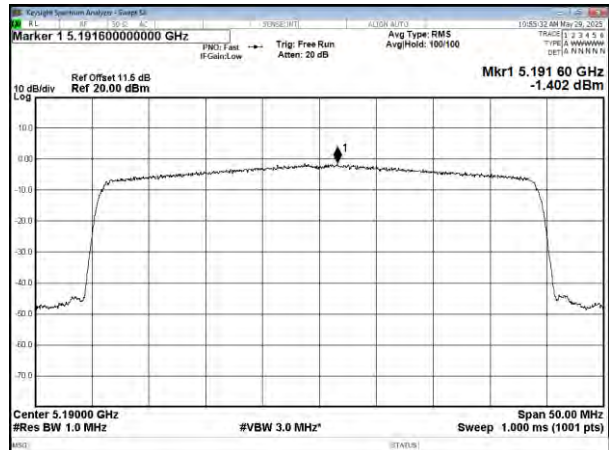




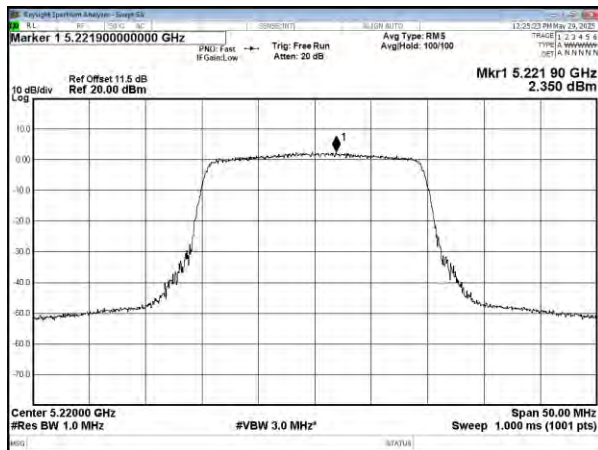
Modulation Standard: 802.11 ax HE20
CH36



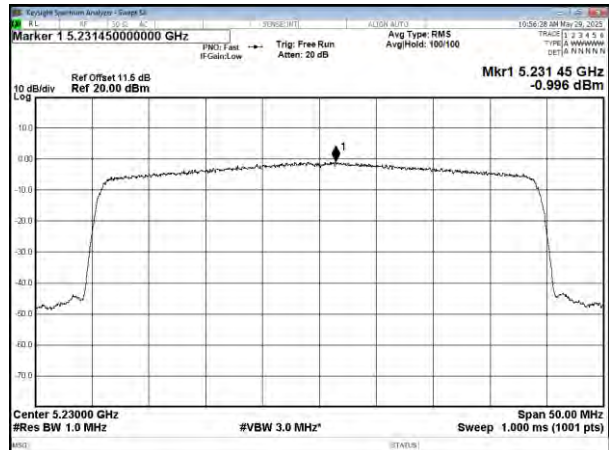
Modulation Standard: 802.11 ax HE40
CH38



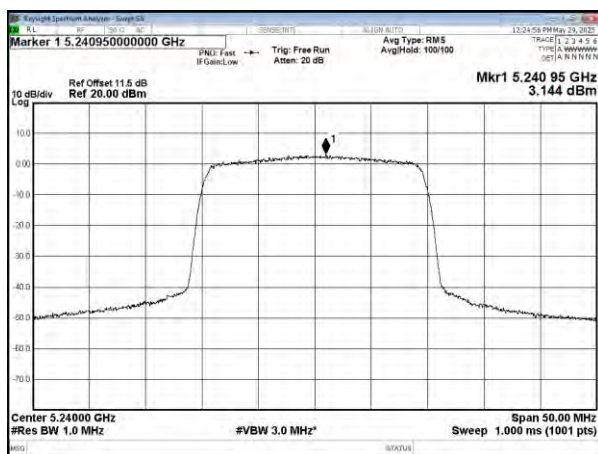
CH44



CH46

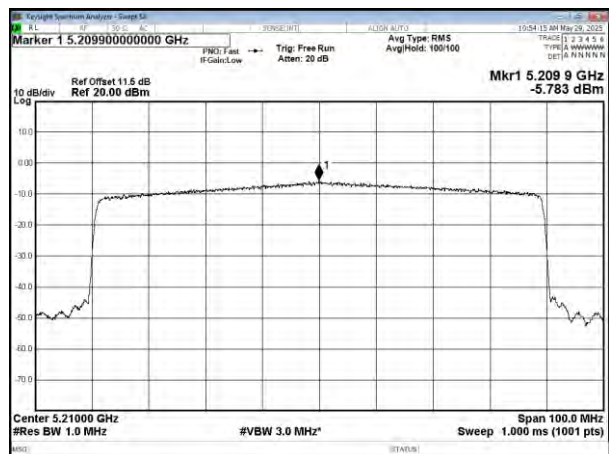


CH48



Modulation Standard: 802.11 ax HE80

CH42



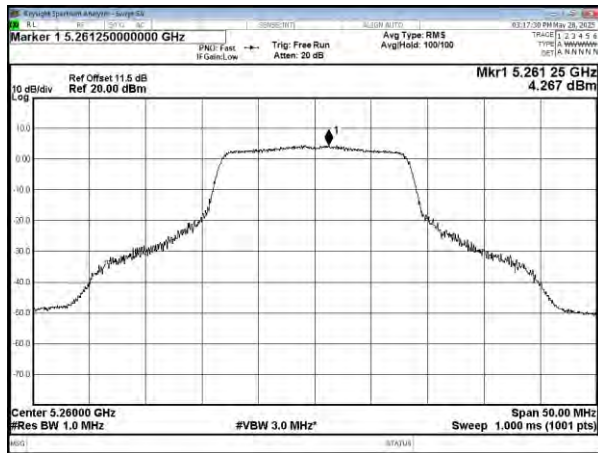


UNII-2A

SISO-ANT A

Modulation Standard: 802.11a

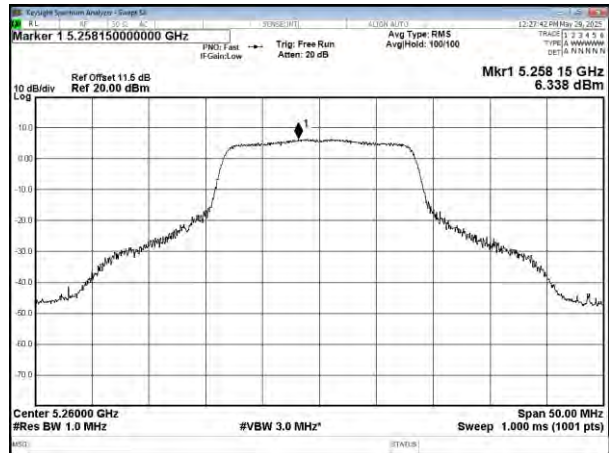
CH52



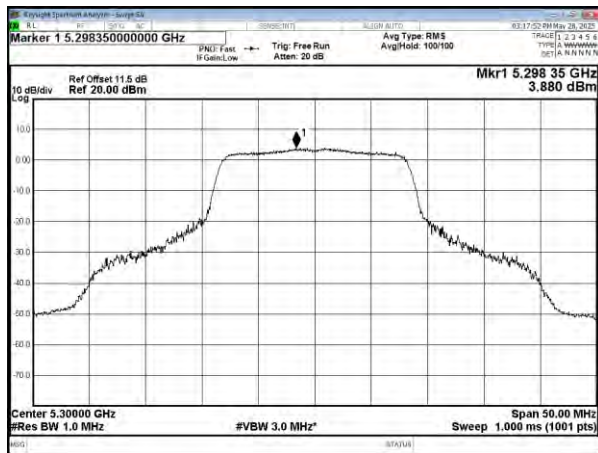
SISO-ANT B

Modulation Standard: 802.11a

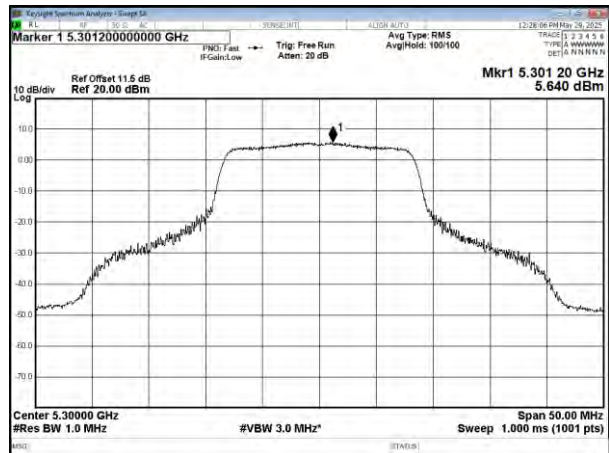
CH52



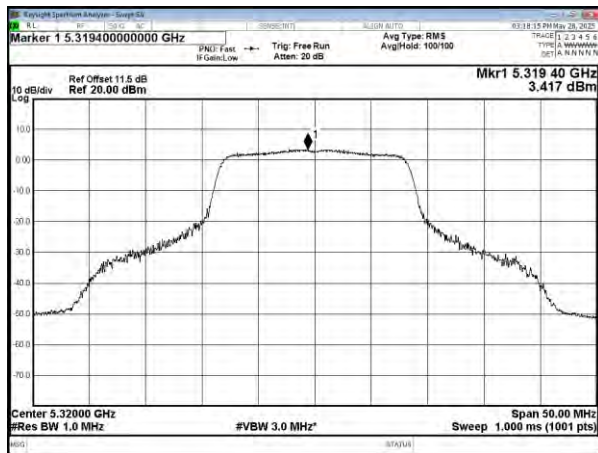
CH60



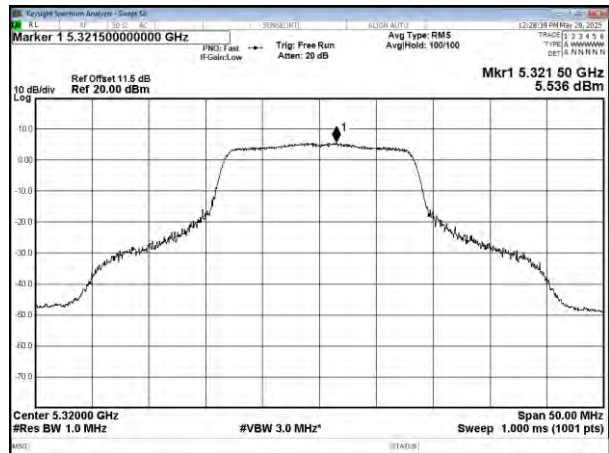
CH60



CH64



CH64

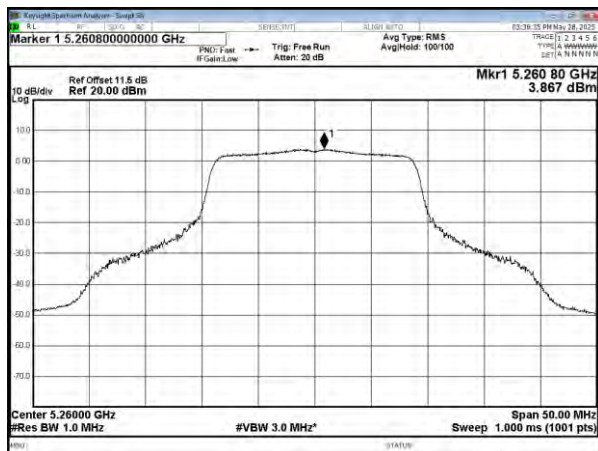




MIMO-ANT A

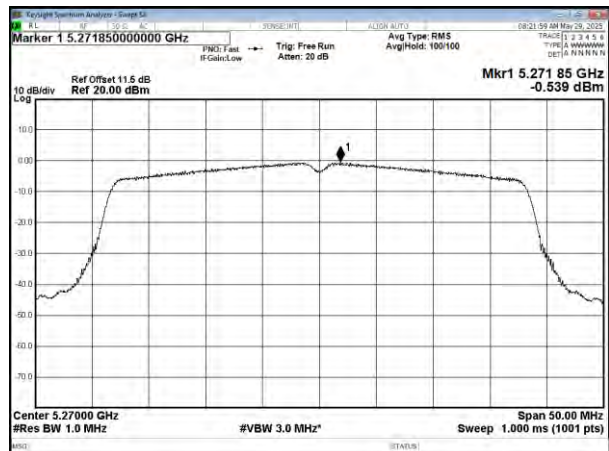
Modulation Standard: 802.11ac VHT20

CH52

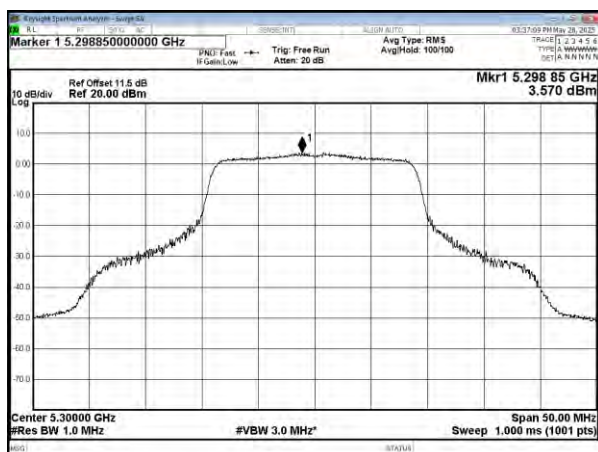


Modulation Standard: 802.11ac VHT40

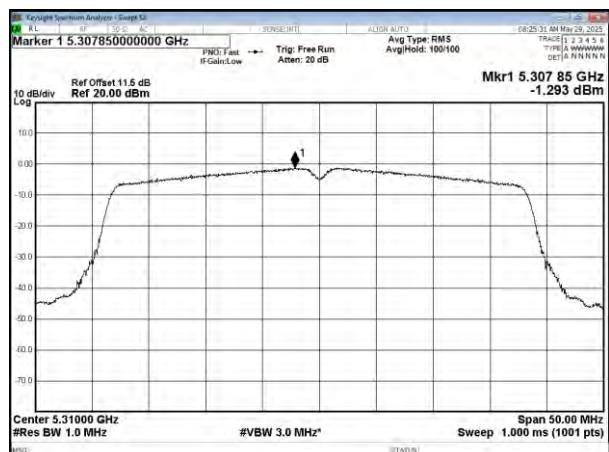
CH54



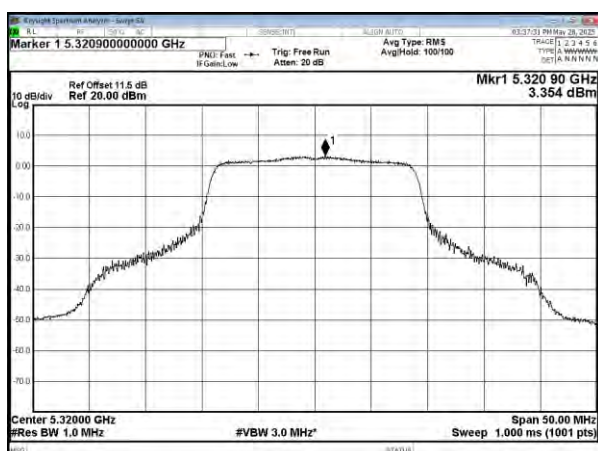
CH60



CH62

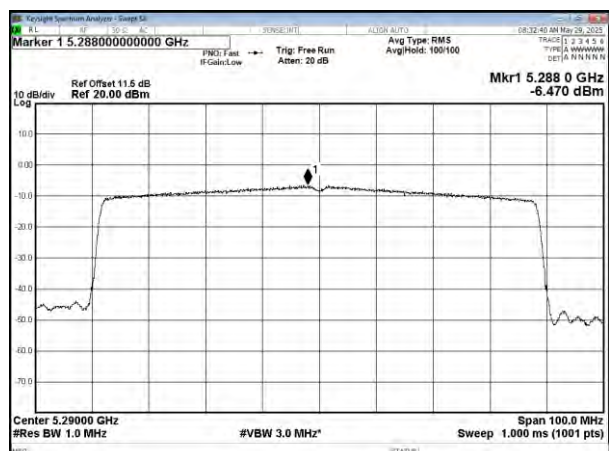


CH64



Modulation Standard: 802.11ac VHT80

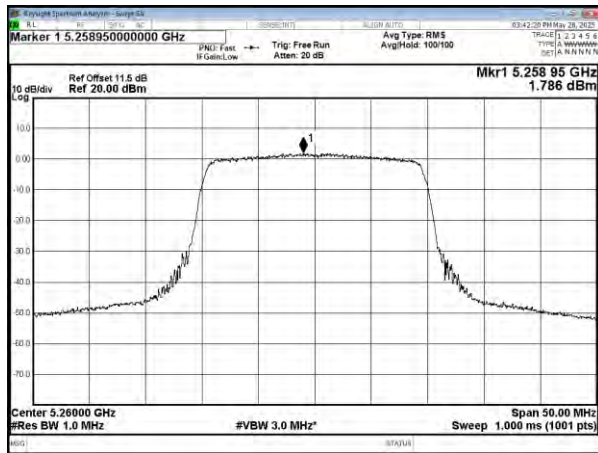
CH58





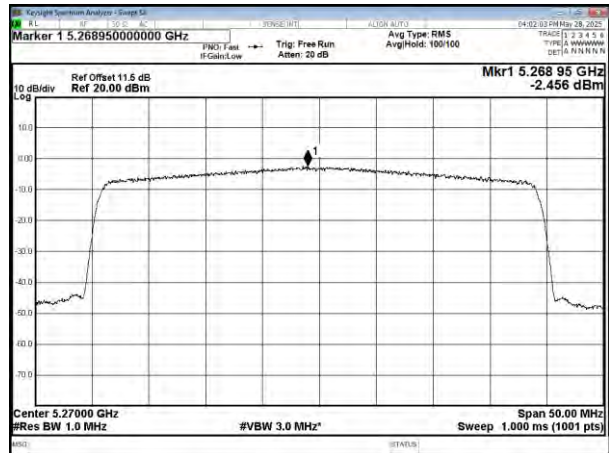
Modulation Standard: 802.11 ax HE20

CH52

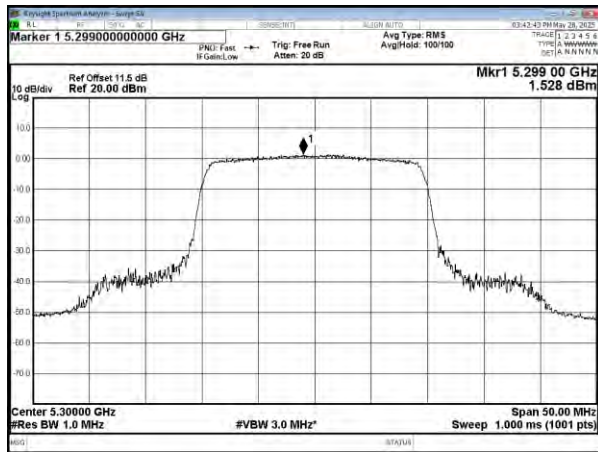


Modulation Standard: 802.11 ax HE40

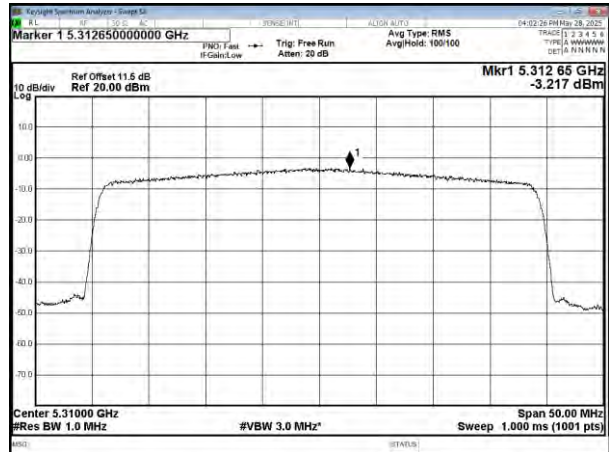
CH54



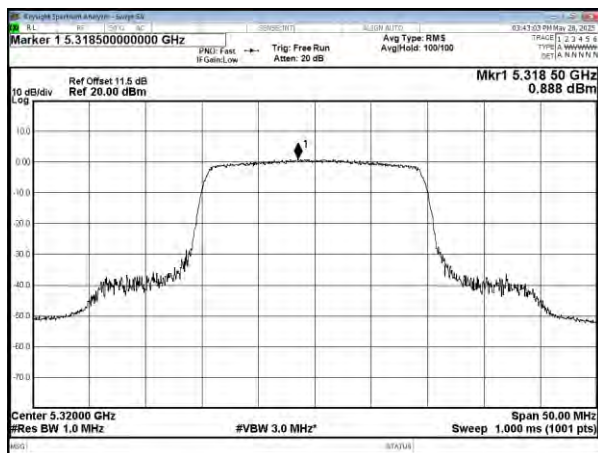
CH60



CH62

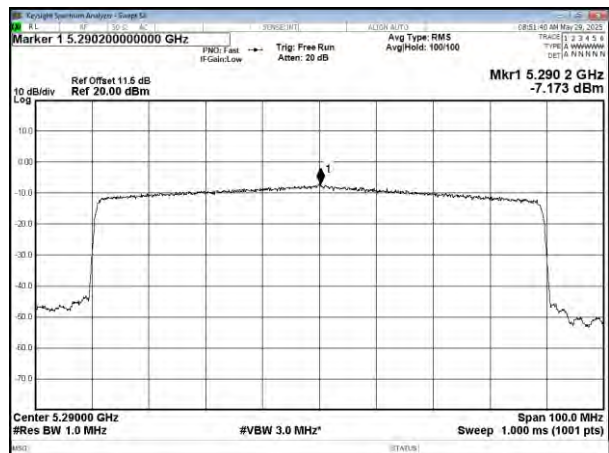


CH64



Modulation Standard: 802.11 ax HE80

CH58

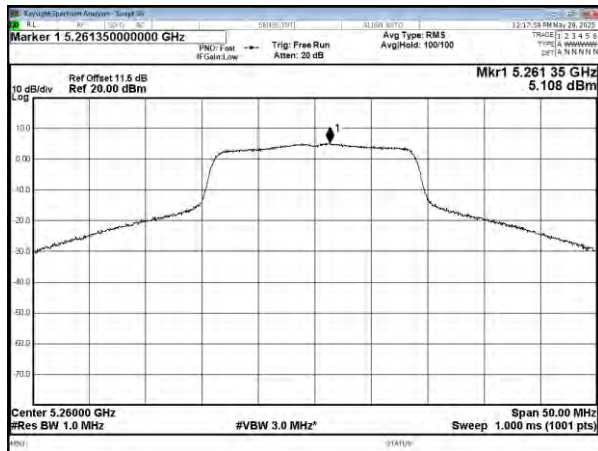




MIMO-ANT B

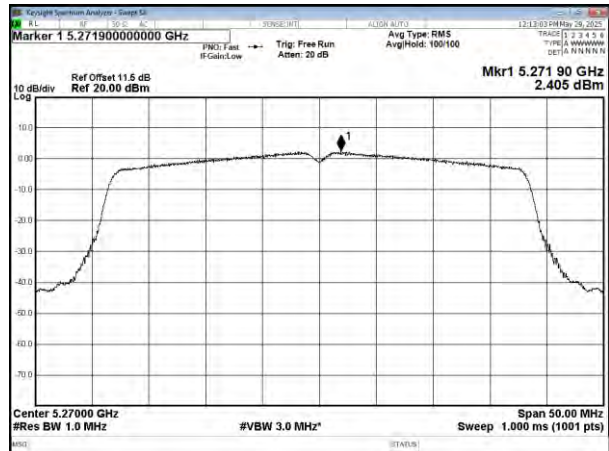
Modulation Standard: 802.11ac VHT20

CH52

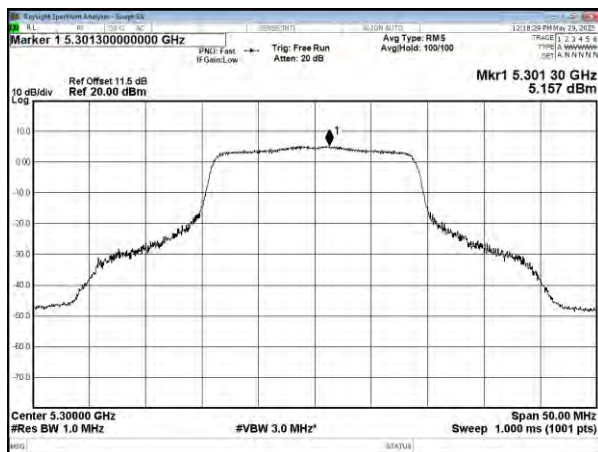


Modulation Standard: 802.11ac VHT40

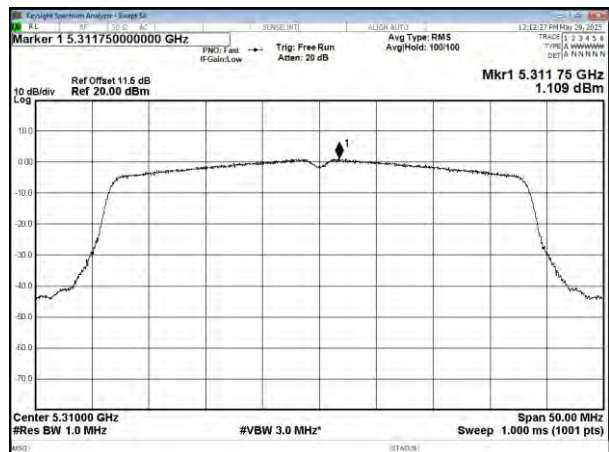
CH54



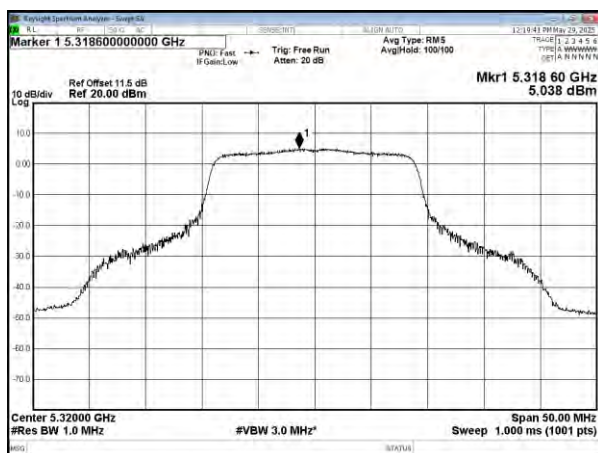
CH60



CH62

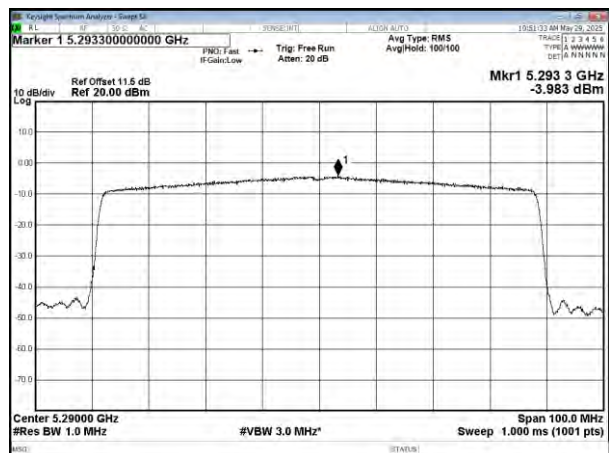


CH64



Modulation Standard: 802.11ac VHT80

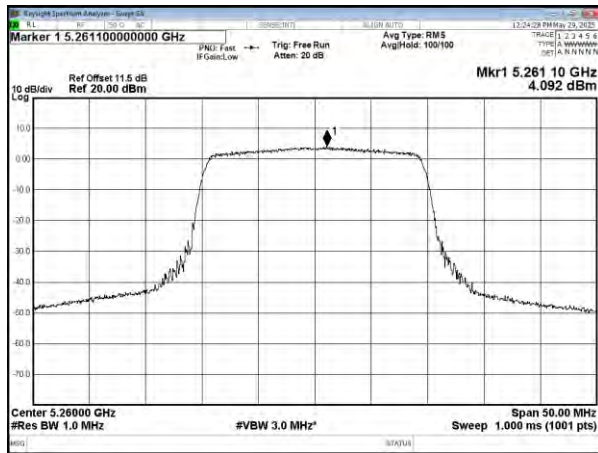
CH58





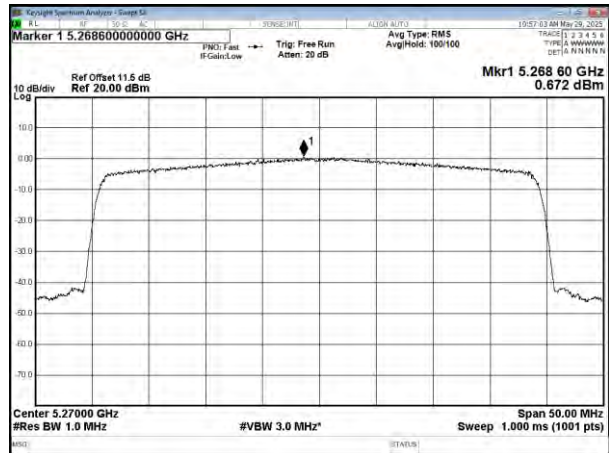
Modulation Standard: 802.11 ax HE20

CH52

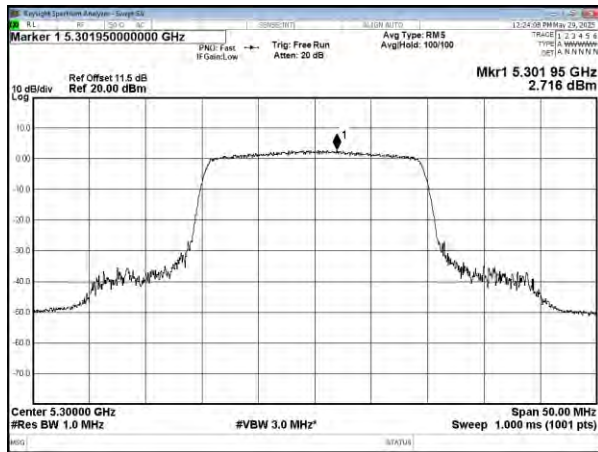


Modulation Standard: 802.11 ax HE40

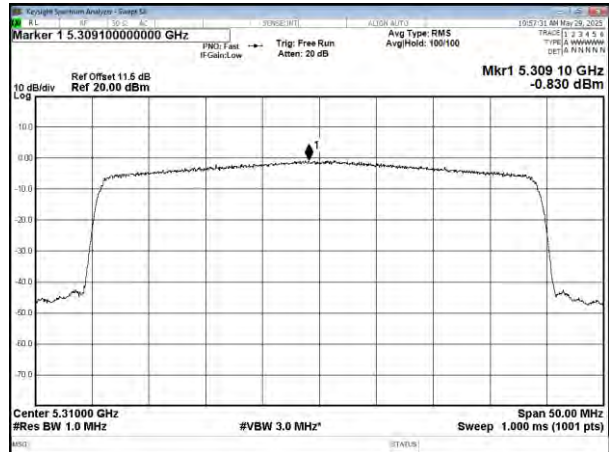
CH54



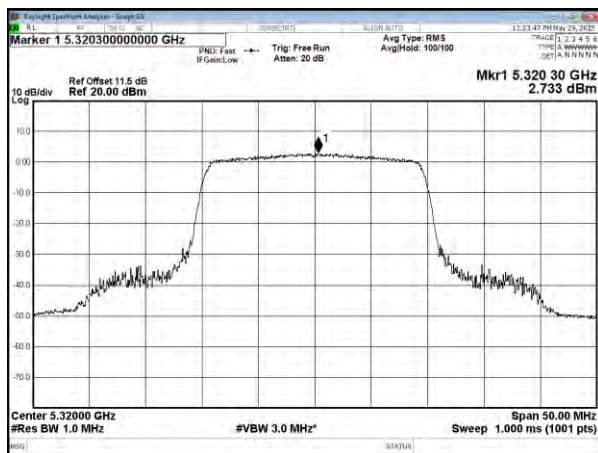
CH60



CH62

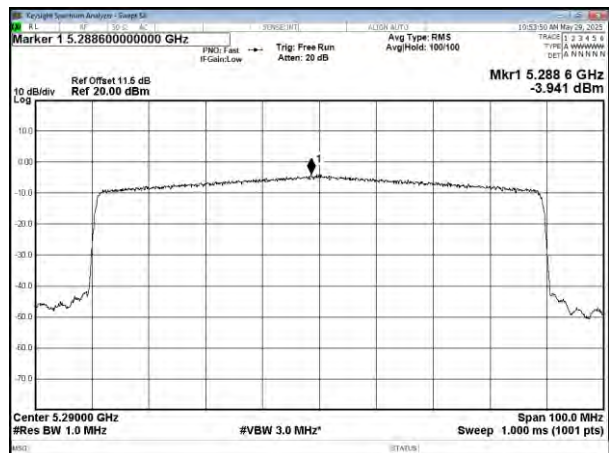


CH64



Modulation Standard: 802.11 ax HE80

CH58



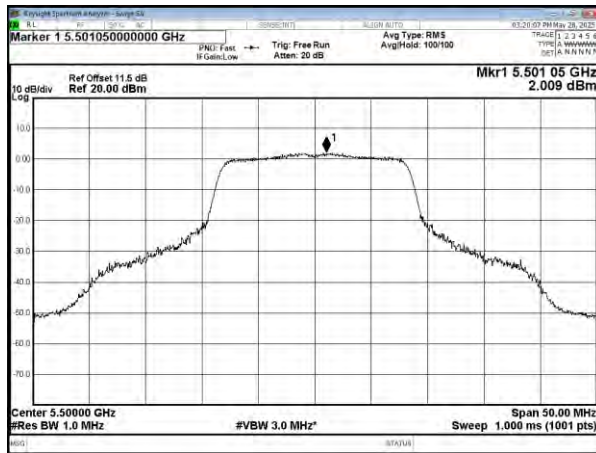


UNII-2C

SISO-ANT A

Modulation Standard: 802.11a

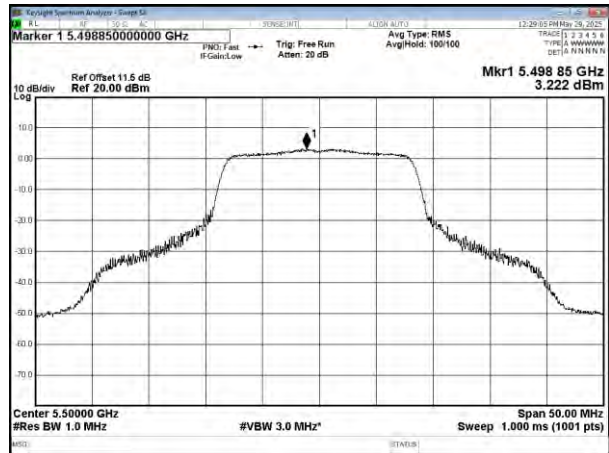
CH100



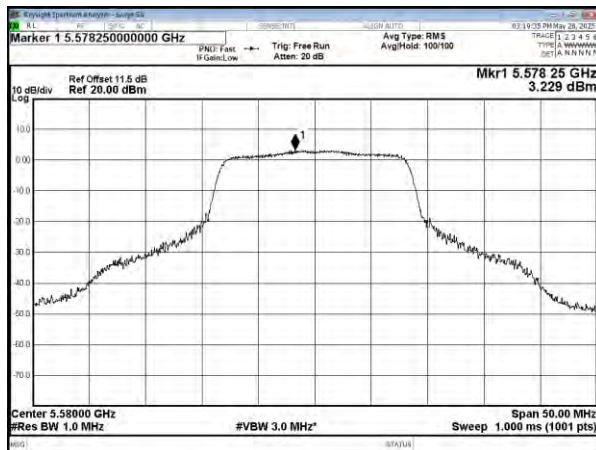
SISO-ANT B

Modulation Standard: 802.11a

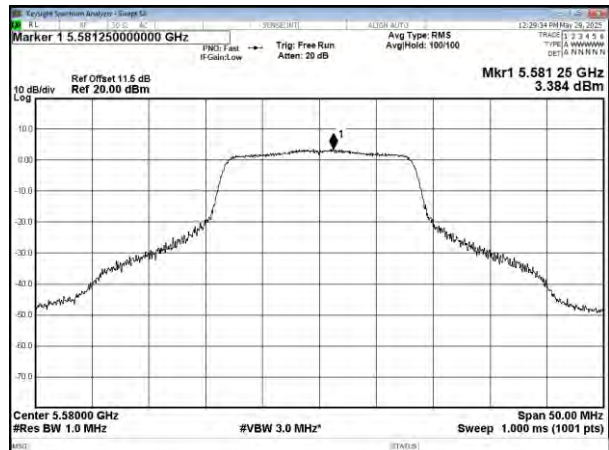
CH100



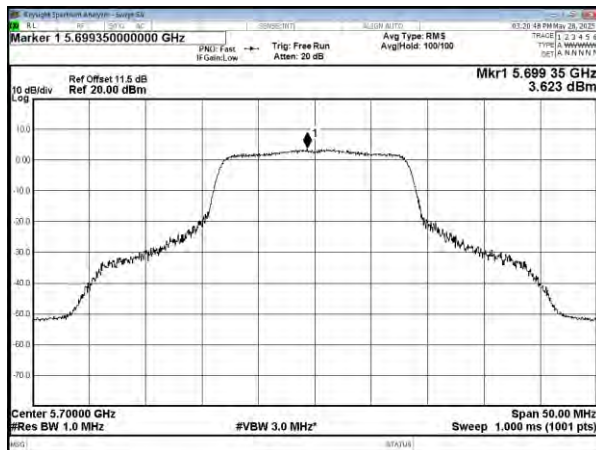
CH116



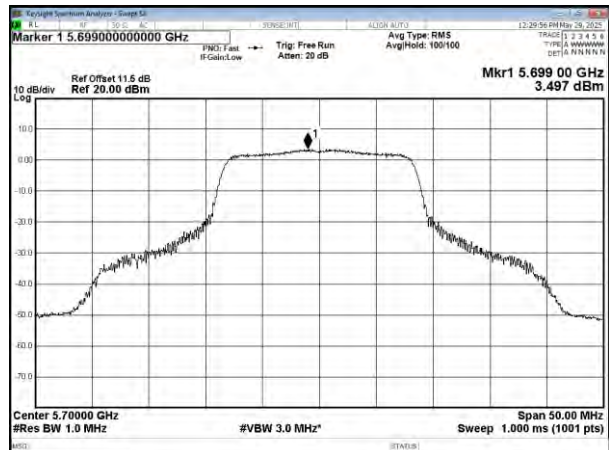
CH116



CH140



CH140

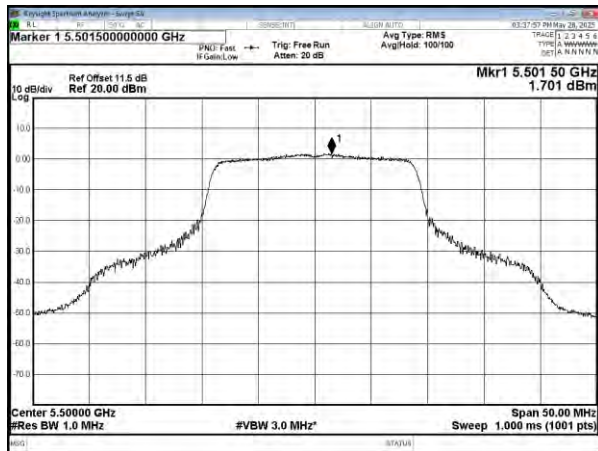




MIMO-ANT A

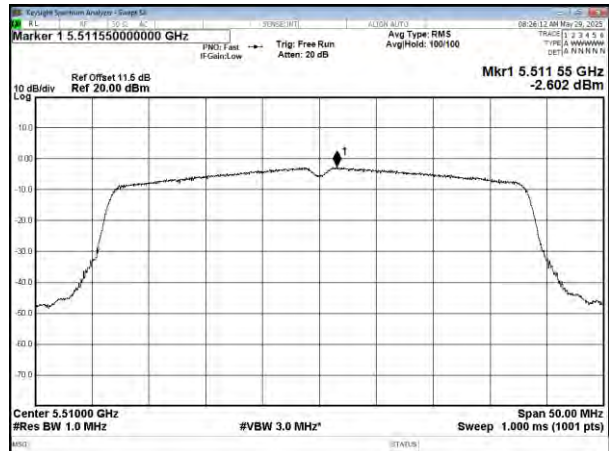
Modulation Standard: 802.11ac VHT20

CH100

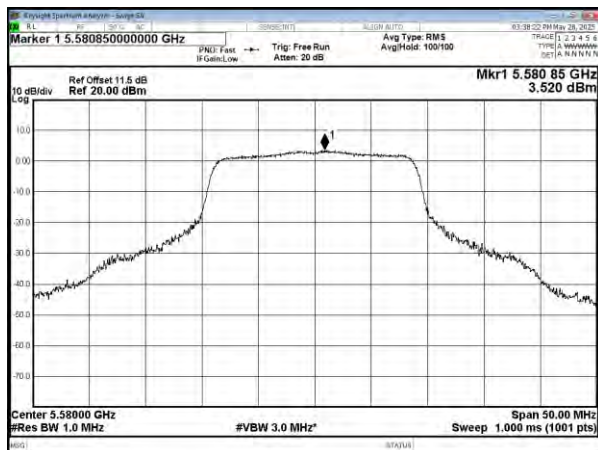


Modulation Standard: 802.11ac VHT40

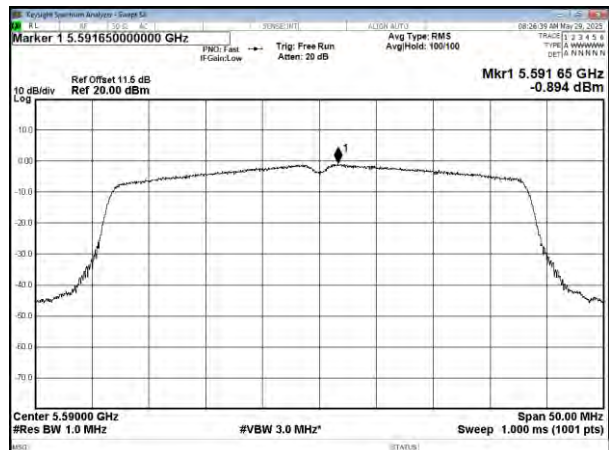
CH102



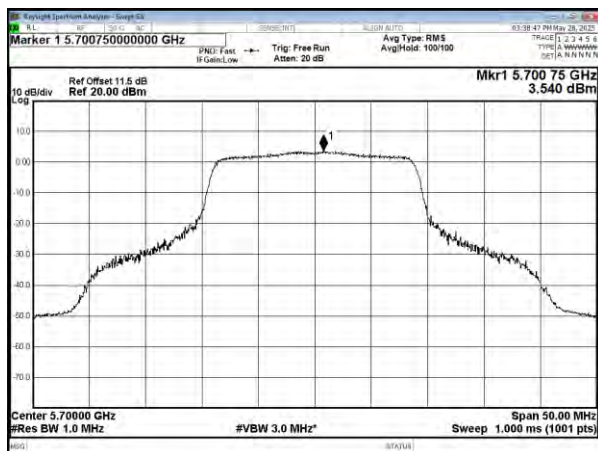
CH116



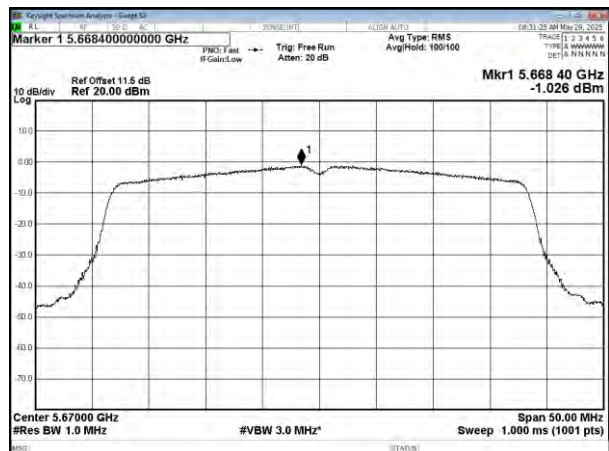
CH118



CH140



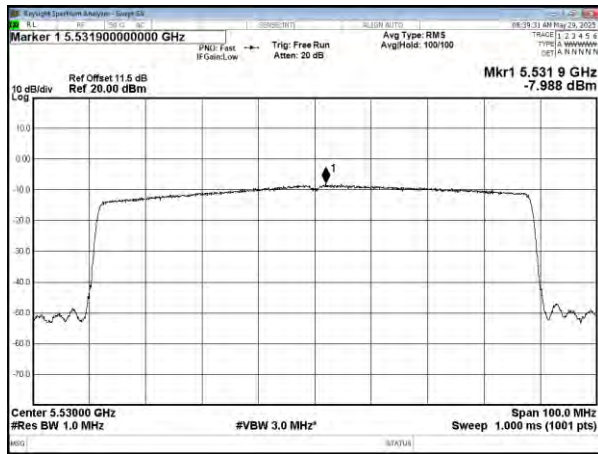
CH134





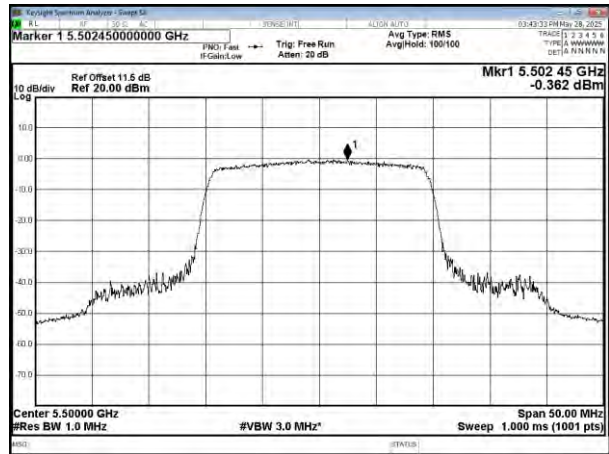
Modulation Standard: 802.11ac VHT80

CH106

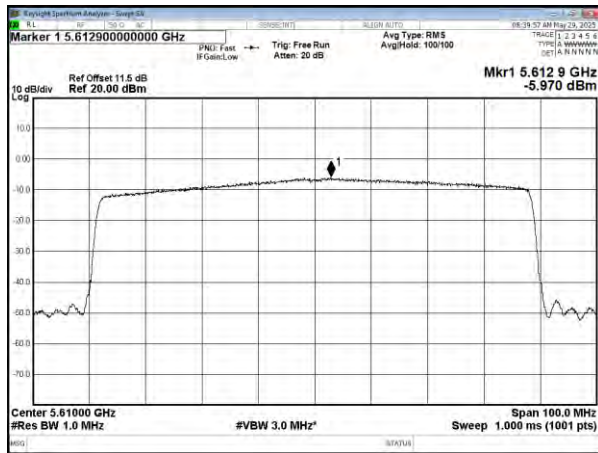


Modulation Standard: 802.11 ax HE20

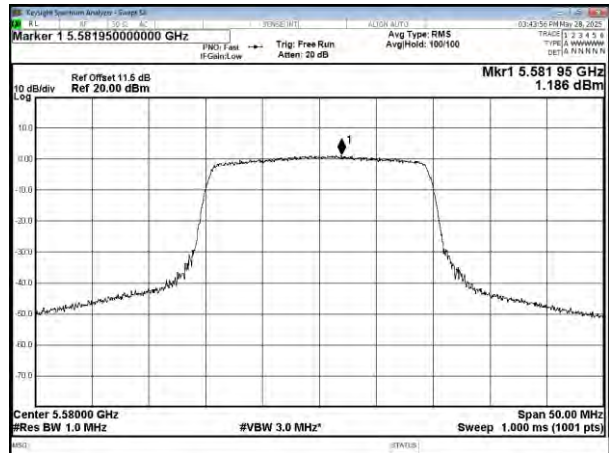
CH100



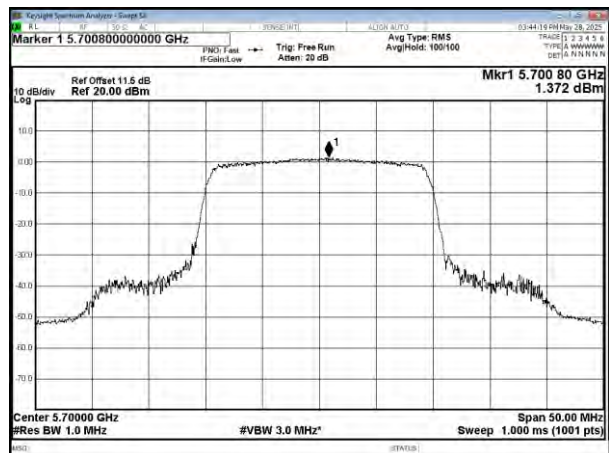
CH122



CH116



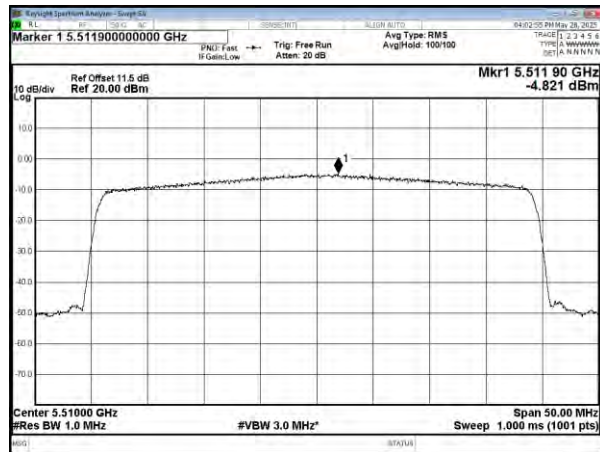
CH140





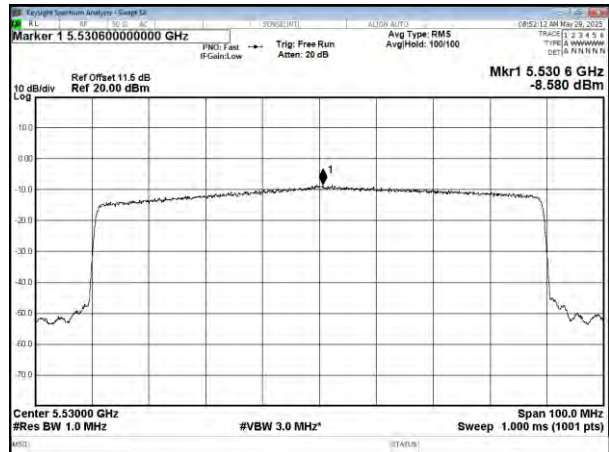
Modulation Standard: 802.11 ax HE40

CH102

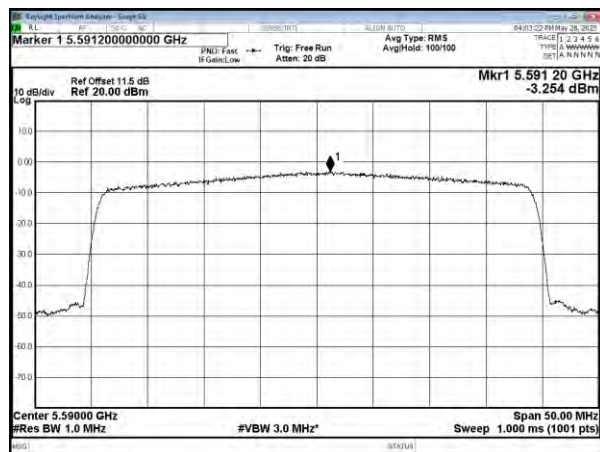


Modulation Standard: 802.11 ax HE80

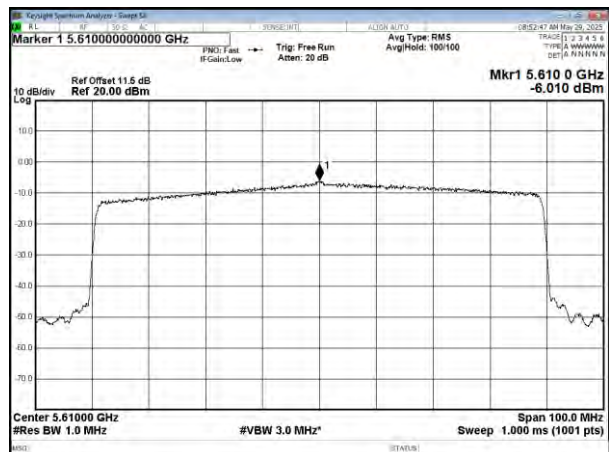
CH106



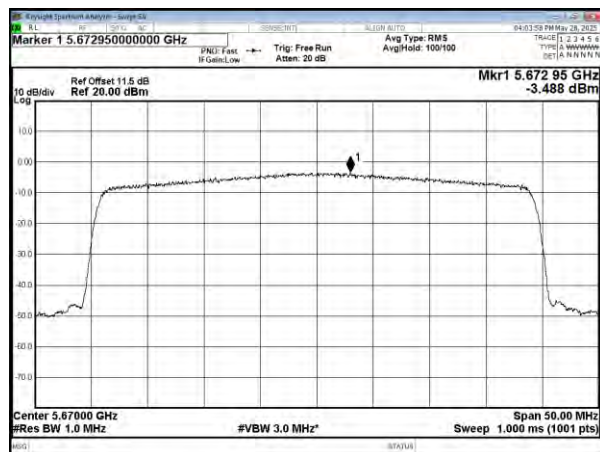
CH118



CH122



CH134

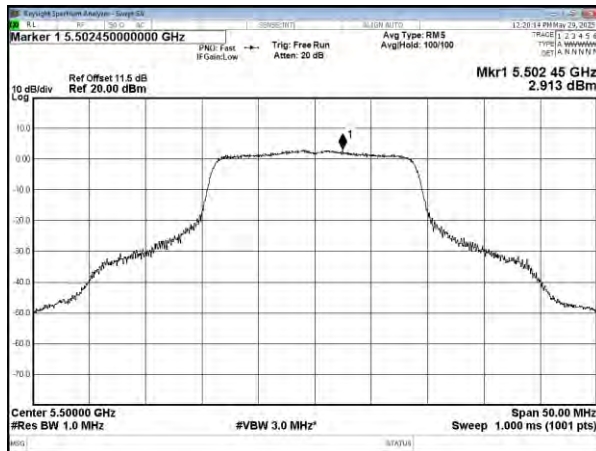




MIMO-ANT B

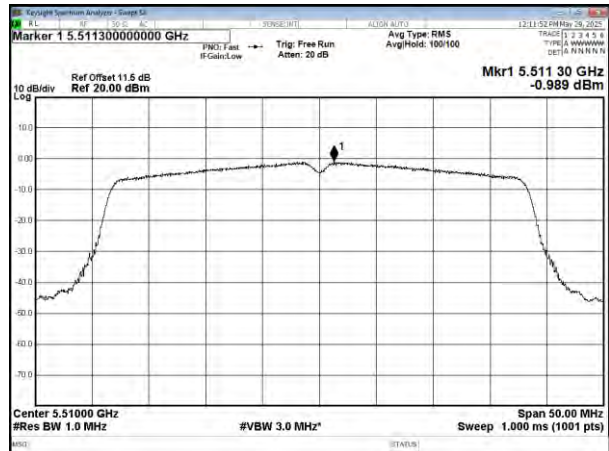
Modulation Standard: 802.11ac VHT20

CH100

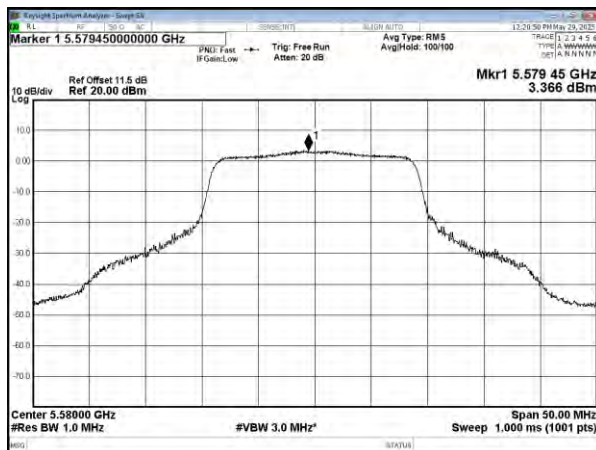


Modulation Standard: 802.11ac VHT40

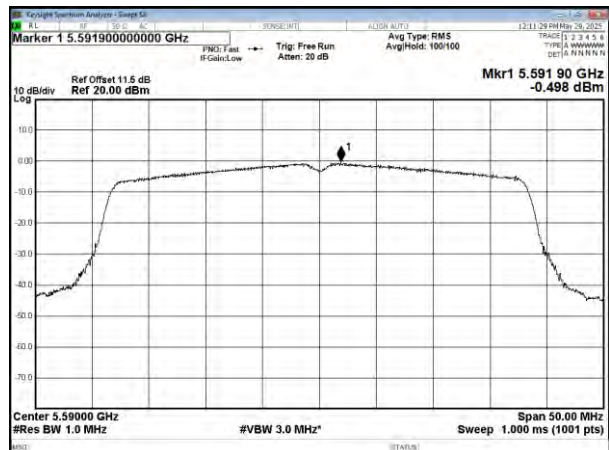
CH102



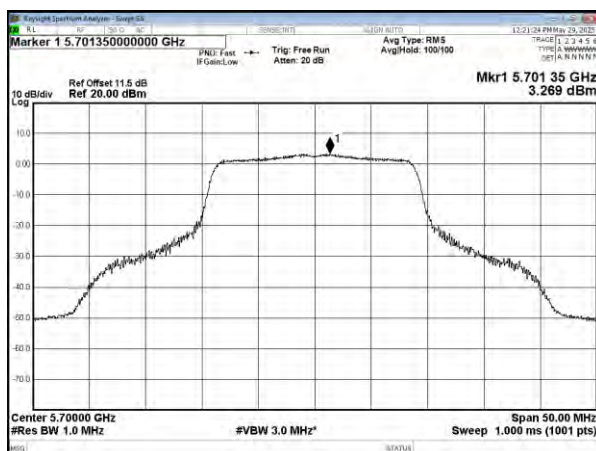
CH116



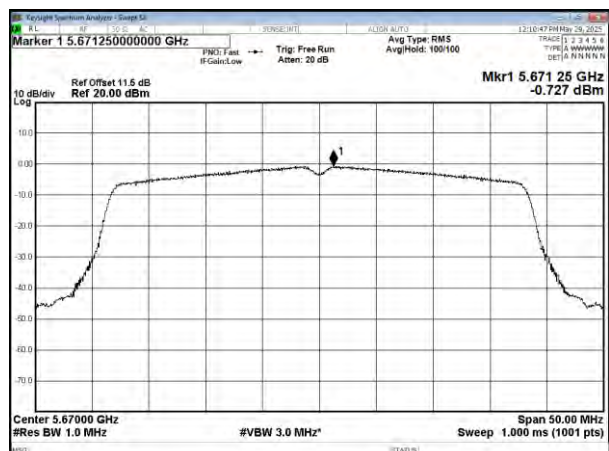
CH118



CH140



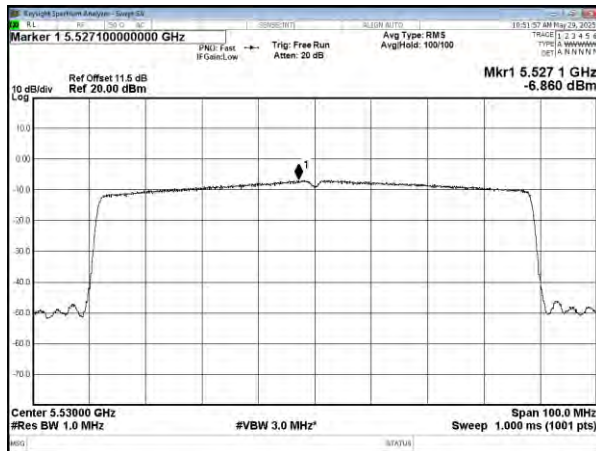
CH134





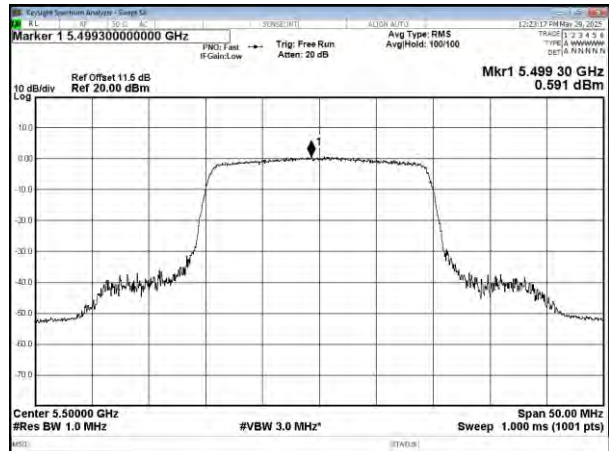
Modulation Standard: 802.11ac VHT80

CH106

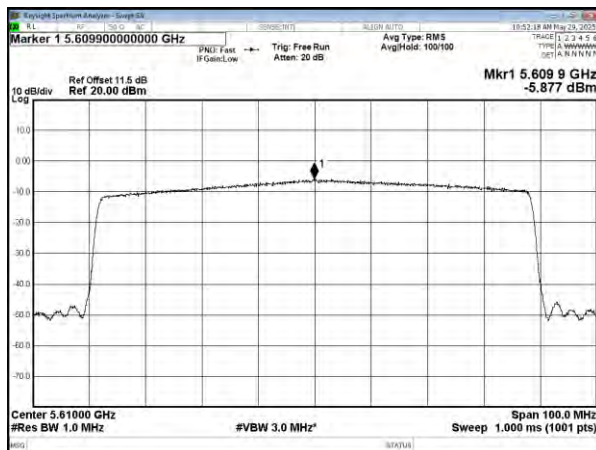


Modulation Standard: 802.11 ax HE20

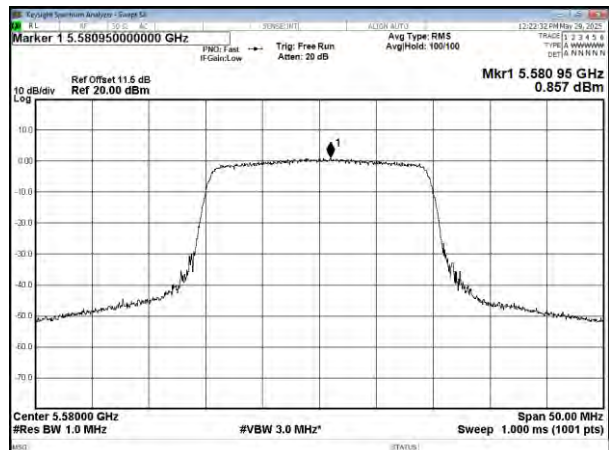
CH100



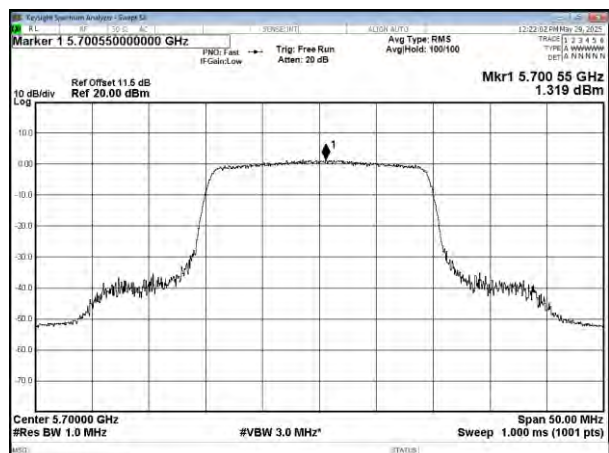
CH122



CH116



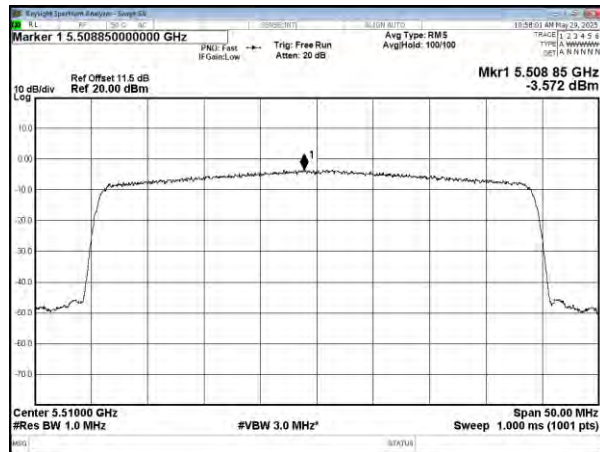
CH140





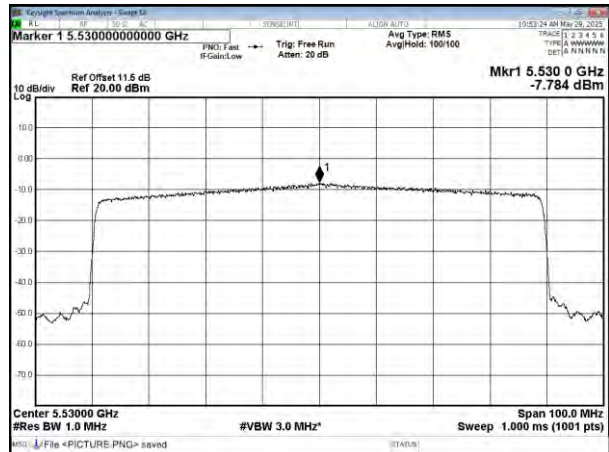
Modulation Standard: 802.11 ax HE40

CH102

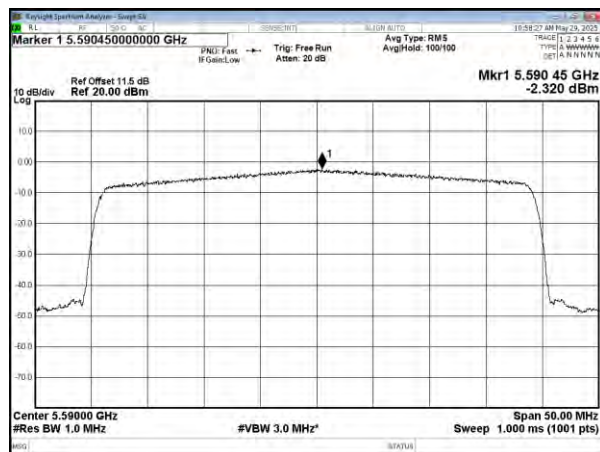


Modulation Standard: 802.11 ax HE80

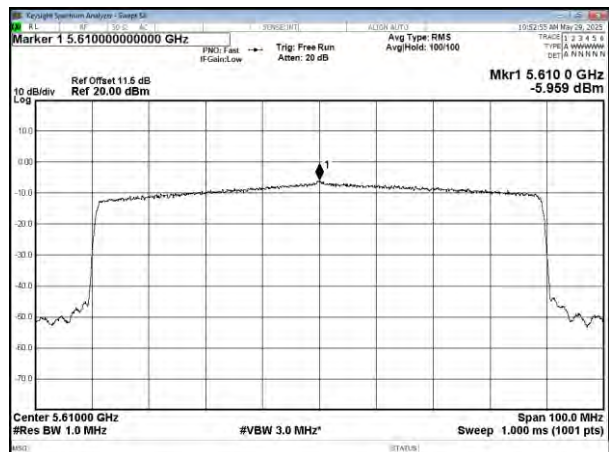
CH106



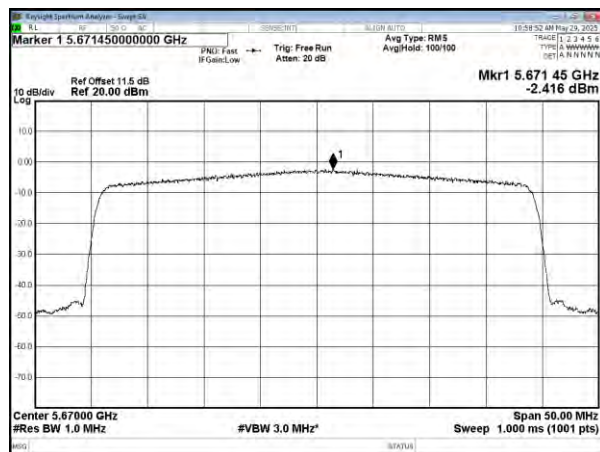
CH118



CH122

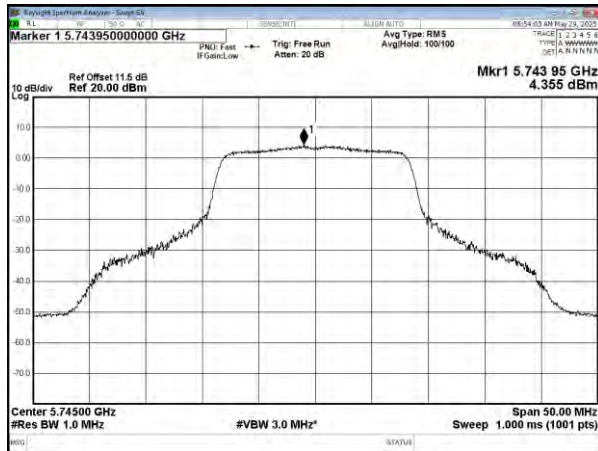


CH134

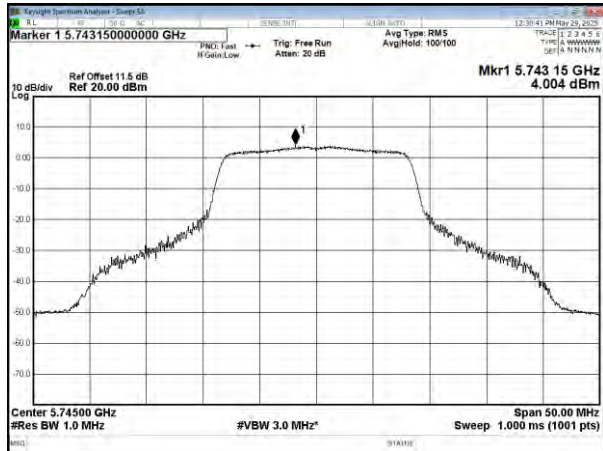




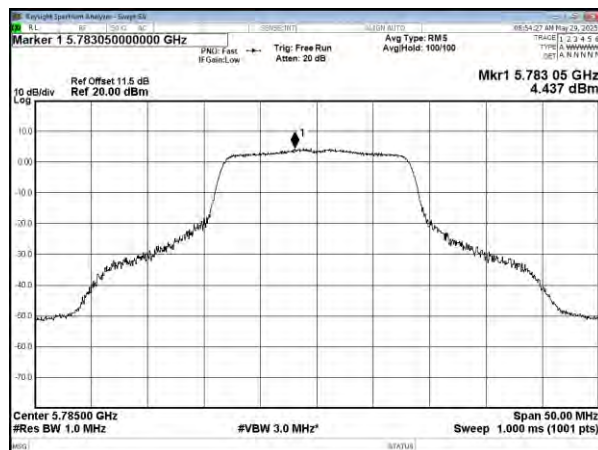
UNII-3
SISO-ANT A
Modulation Type: 802.11a
CH149



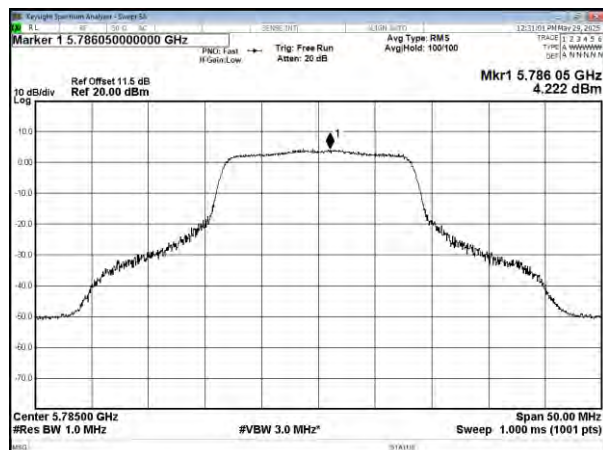
SISO-ANT B
Modulation Type: 802.11a
CH149



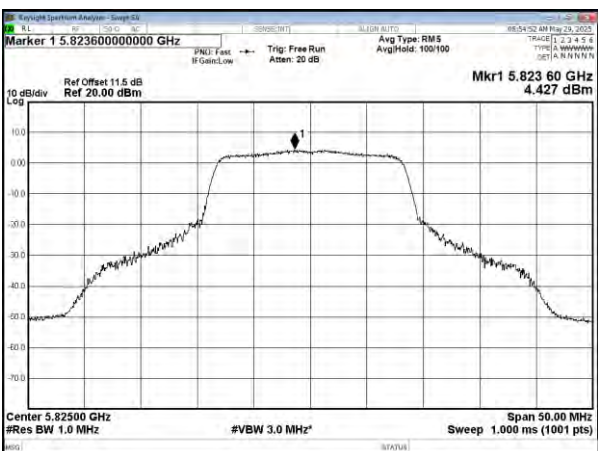
CH157



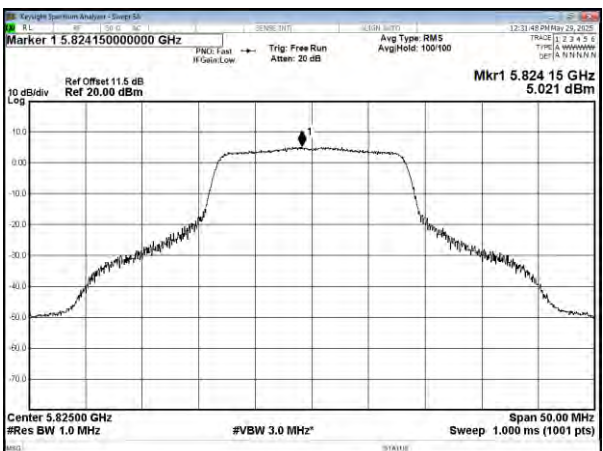
CH157



CH165

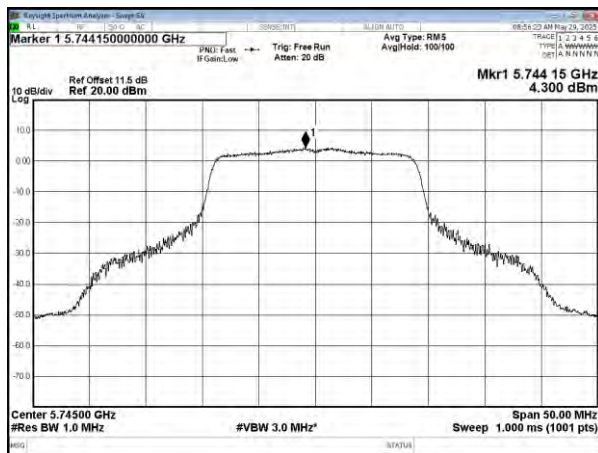


CH165

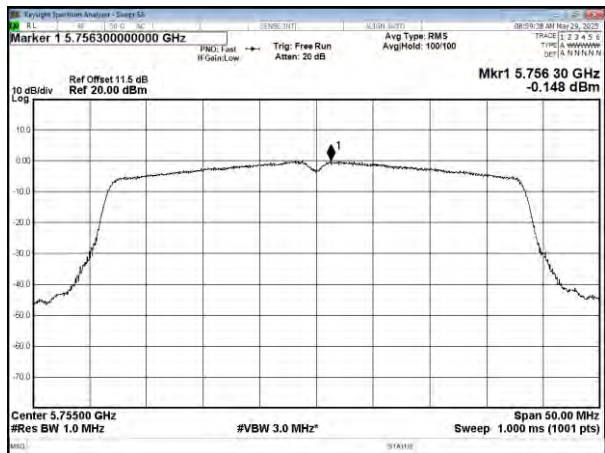




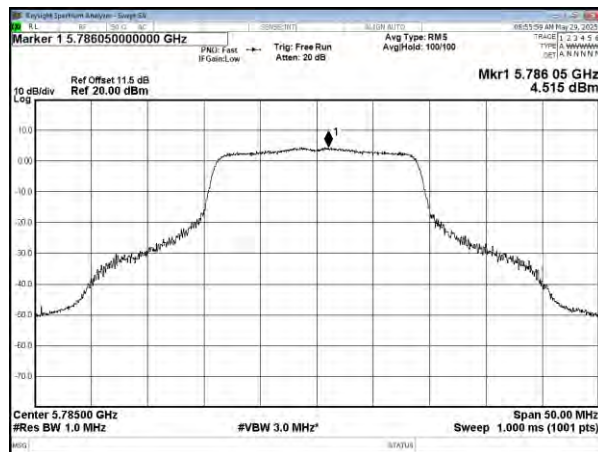
MIMO (ANT A)
Modulation Type: 802.11ac, VHT20
CH149



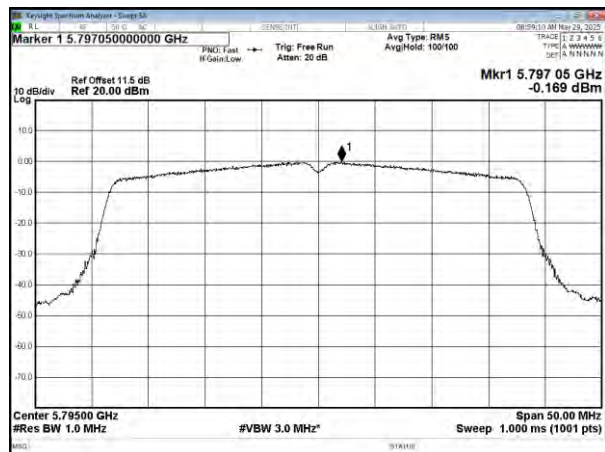
Modulation Type: 802.11ac, VHT40
CH151



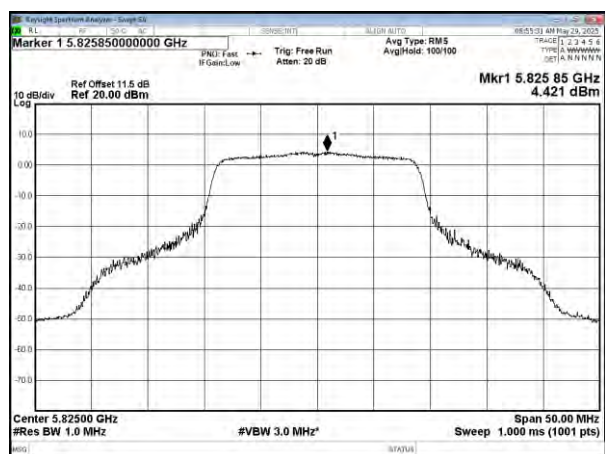
CH157



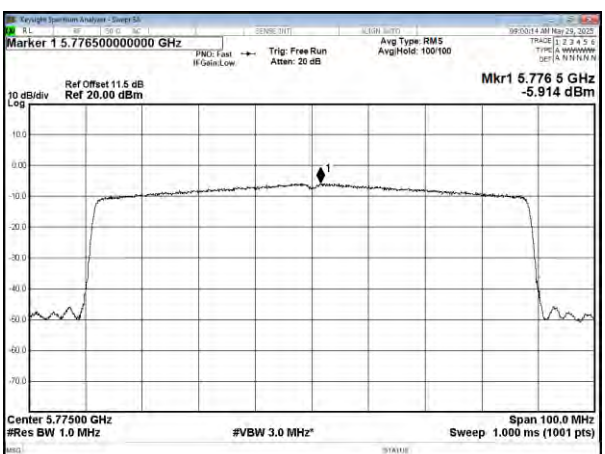
CH159



CH165

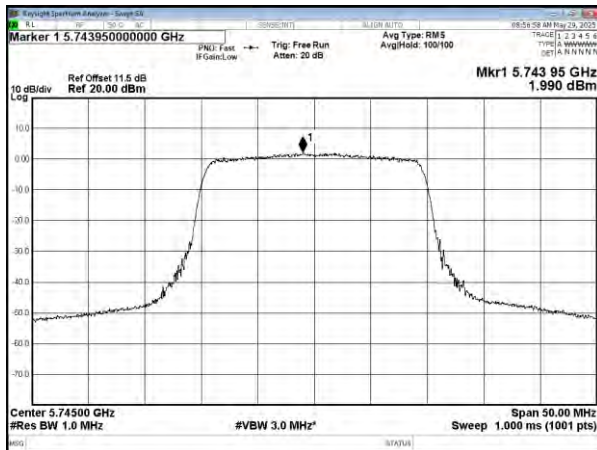


Modulation Type: 802.11ac, VHT80
CH155

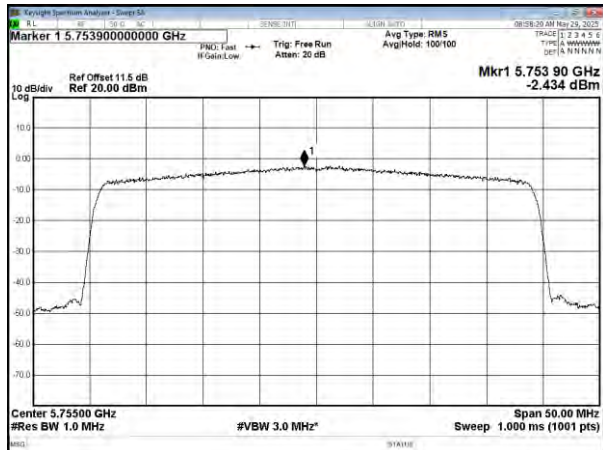




Modulation Type: 802.11ax, HE20
CH149



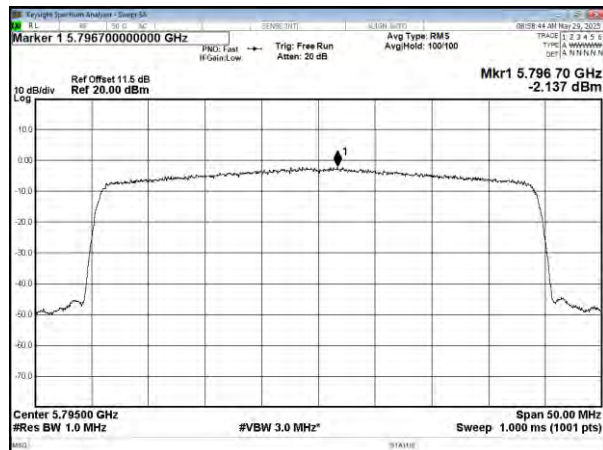
Modulation Type: 802.11ax, HE40
CH151



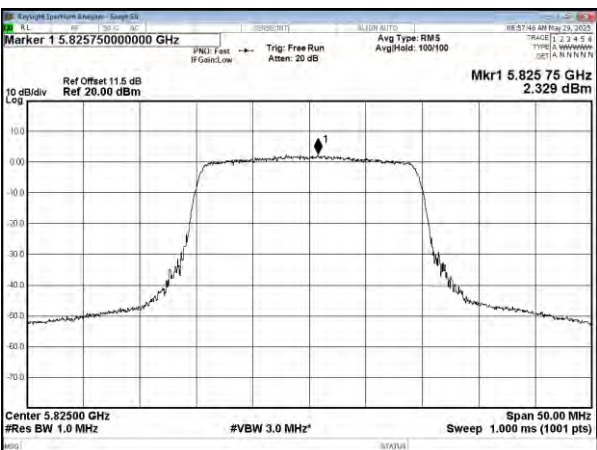
CH157



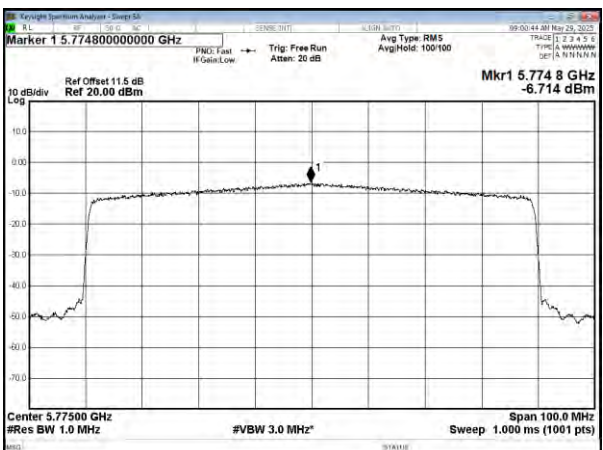
CH159



CH165

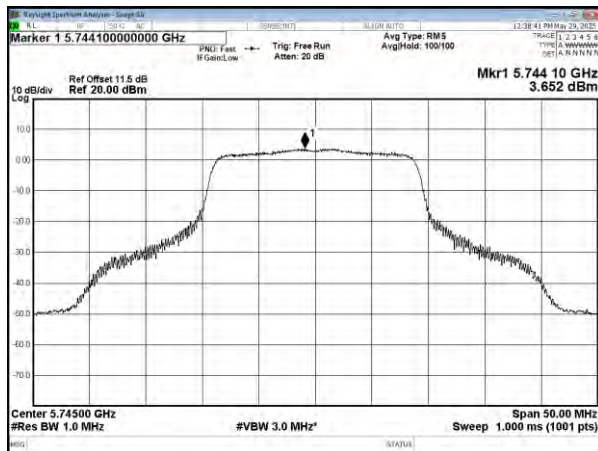


Modulation Type: 802.11ax, HE80
CH155

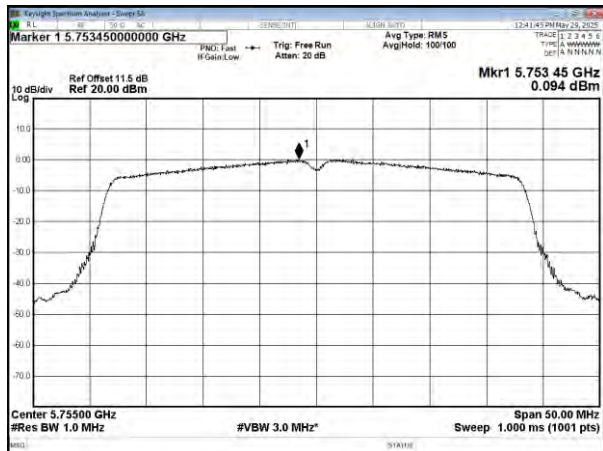




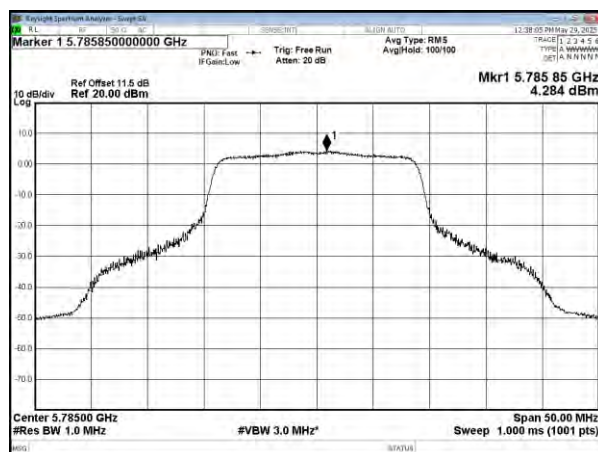
MIMO (ANT B)
Modulation Type: 802.11ac, VHT20
CH149



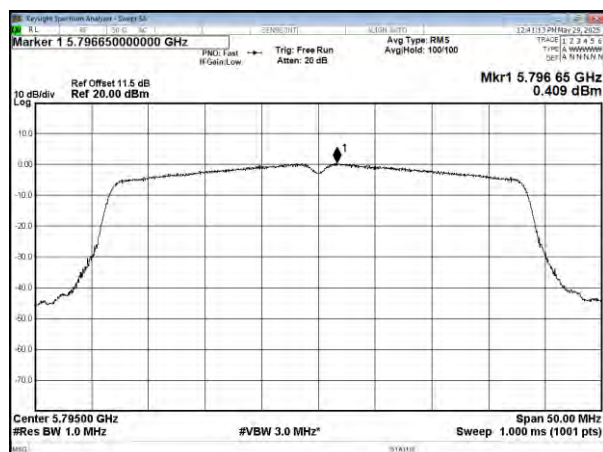
Modulation Type: 802.11ac, VHT40
CH151



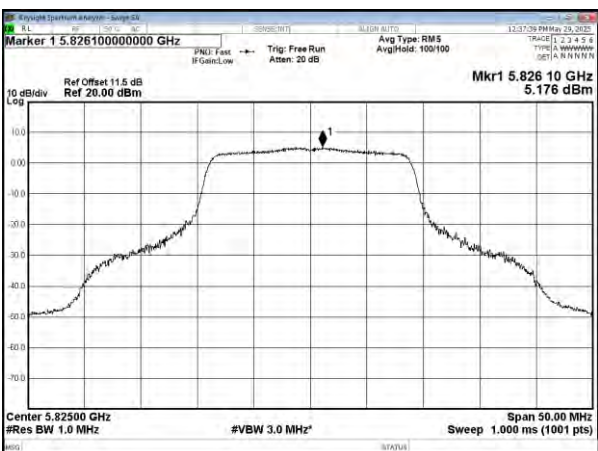
CH157



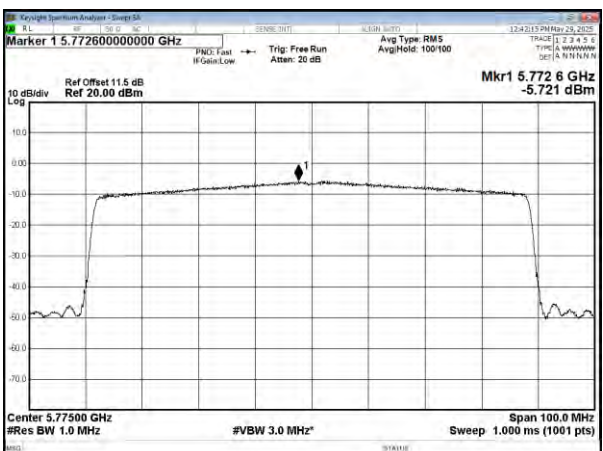
CH159



CH165

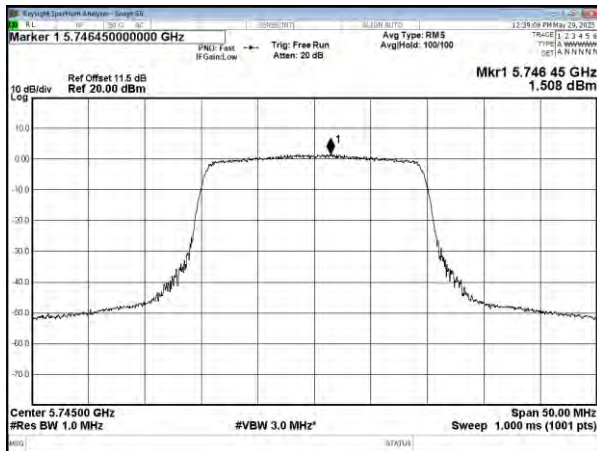


Modulation Type: 802.11ac, VHT80
CH155

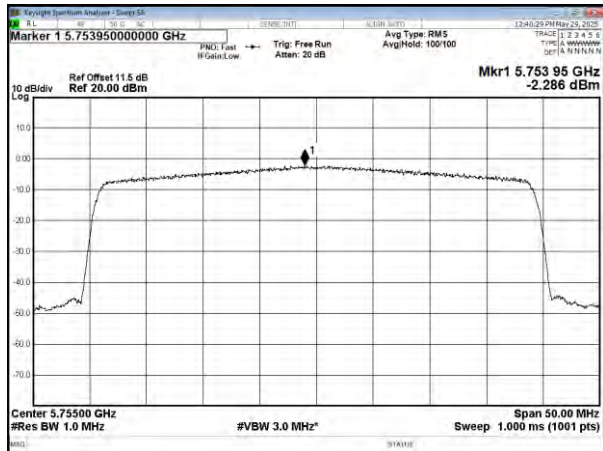




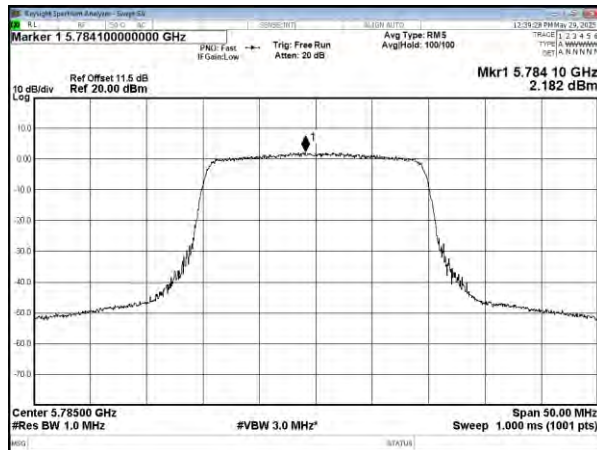
Modulation Type: 802.11ax, HE20
CH149



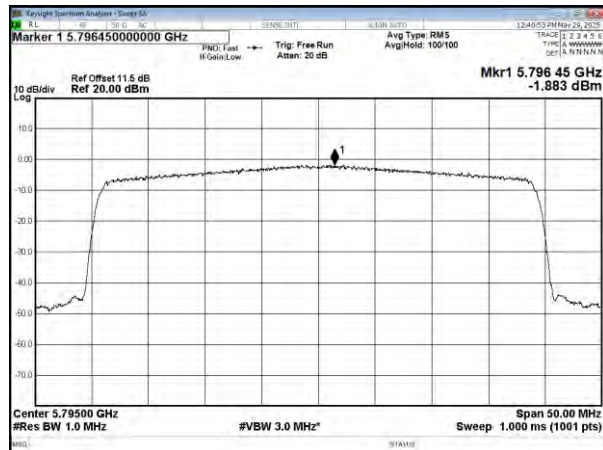
Modulation Type: 802.11ax, HE40
CH151



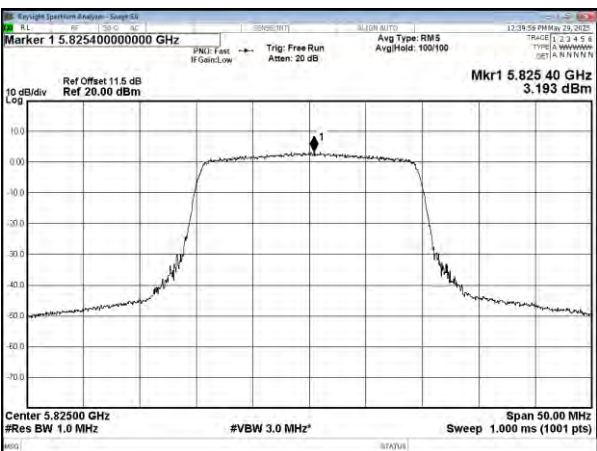
CH157



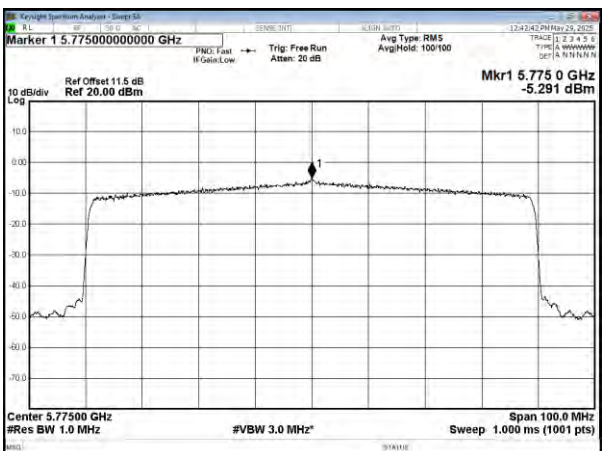
CH159



CH165



Modulation Type: 802.11ax, HE80
CH155



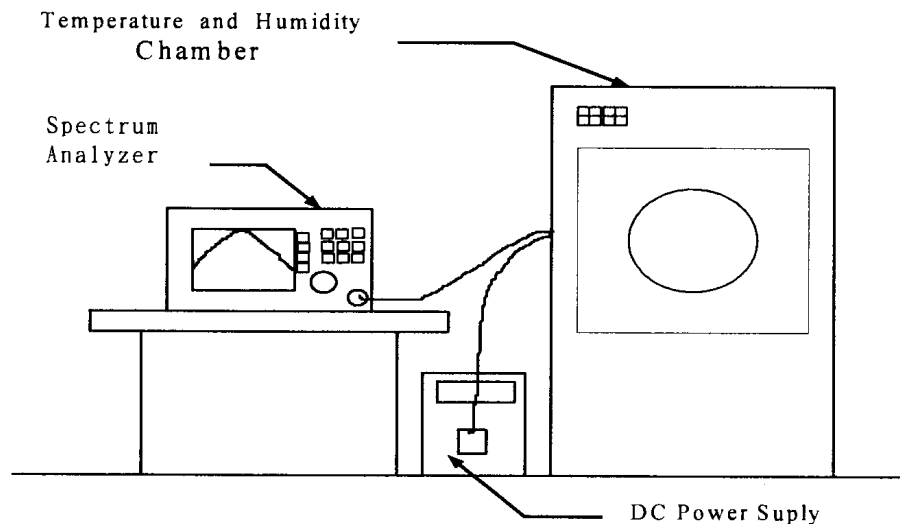


12. Frequency Stability

12.1. Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

12.2. Test Setup Layout



**12.3. Test Result and Data**

Operating frequency: 5180 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
60	5.5	5179.9931	-0.000133	5179.9934	-0.000127	5179.9935	-0.000125
	5	5179.9928	-0.000139	5179.9931	-0.000133	5179.9933	-0.000129
	4.5	5179.9925	-0.000145	5179.9928	-0.000139	5179.9931	-0.000133
40	5.5	5179.9923	-0.000149	5179.9926	-0.000143	5179.9929	-0.000137
	5	5179.9919	-0.000156	5179.9921	-0.000153	5179.9921	-0.000153
	4.5	5179.9921	-0.000153	5179.9923	-0.000149	5179.9925	-0.000145
20	5.5	5179.9925	-0.000145	5179.9927	-0.000141	5179.9928	-0.000139
	5	5179.9929	-0.000137	5179.9934	-0.000127	5179.9936	-0.000124
	4.5	5179.9931	-0.000133	5179.9936	-0.000124	5179.9938	-0.000120
0	5.5	5179.9933	-0.000129	5179.9938	-0.000120	5179.994	-0.000116
	5	5179.9935	-0.000125	5179.9939	-0.000118	5179.9941	-0.000114
	4.5	5179.9939	-0.000118	5179.9941	-0.000114	5179.9944	-0.000108

Operating frequency: 5260 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
60	5.5	5259.9949	-0.000098	5259.9955	-0.000087	5259.9957	-0.000083
	5	5259.9946	-0.000104	5259.9951	-0.000095	5259.9952	-0.000093
	4.5	5259.9944	-0.000108	5259.9948	-0.000100	5259.9949	-0.000098
40	5.5	5259.9941	-0.000114	5259.9946	-0.000104	5259.9947	-0.000102
	5	5259.994	-0.000116	5259.9944	-0.000108	5259.9946	-0.000104
	4.5	5259.9942	-0.000112	5259.9945	-0.000106	5259.9948	-0.000100
20	5.5	5259.9945	-0.000106	5259.9947	-0.000102	5259.995	-0.000097
	5	5259.9948	-0.000100	5259.9949	-0.000098	5259.9951	-0.000095
	4.5	5259.9951	-0.000095	5259.9951	-0.000095	5259.9955	-0.000087
0	5.5	5259.9953	-0.000091	5259.9954	-0.000089	5259.9957	-0.000083
	5	5259.9955	-0.000087	5259.9957	-0.000083	5259.9961	-0.000075
	4.5	5259.9957	-0.000083	5259.9961	-0.000075	5259.9963	-0.000071



Operating frequency: 5500 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
60	5.5	5499.9955	-0.000087	5499.9956	-0.000085	5499.9958	-0.000081
	5	5499.9951	-0.000095	5499.9953	-0.000091	5499.9955	-0.000087
	4.5	5499.9948	-0.000100	5499.9949	-0.000098	5499.995	-0.000097
40	5.5	5499.9944	-0.000108	5499.9946	-0.000104	5499.9948	-0.000100
	5	5499.994	-0.000116	5499.9943	-0.000110	5499.9945	-0.000106
	4.5	5499.9943	-0.000110	5499.9946	-0.000104	5499.9949	-0.000098
20	5.5	5499.9946	-0.000104	5499.9949	-0.000098	5499.9951	-0.000095
	5	5499.9949	-0.000098	5499.9951	-0.000095	5499.9954	-0.000089
	4.5	5499.9952	-0.000093	5499.9954	-0.000089	5499.9957	-0.000083
0	5.5	5499.9955	-0.000087	5499.9957	-0.000083	5499.9959	-0.000079
	5	5499.9958	-0.000081	5499.9961	-0.000075	5499.9963	-0.000071
	4.5	5499.9961	-0.000075	5499.9964	-0.000069	5499.9967	-0.000064

Operating frequency: 5745 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
60	5.5	5744.9955	-0.000087	5744.9958	-0.000081	5744.9961	-0.000075
	5	5744.9951	-0.000095	5744.9952	-0.000093	5744.9955	-0.000087
	4.5	5744.9946	-0.000104	5744.9947	-0.000102	5744.9952	-0.000093
40	5.5	5744.9942	-0.000112	5744.9943	-0.000110	5744.9949	-0.000098
	5	5744.9939	-0.000118	5744.9942	-0.000112	5744.9946	-0.000104
	4.5	5744.9942	-0.000112	5744.9944	-0.000108	5744.995	-0.000097
20	5.5	5744.9944	-0.000108	5744.9947	-0.000102	5744.9951	-0.000095
	5	5744.9947	-0.000102	5744.9951	-0.000095	5744.9953	-0.000091
	4.5	5744.9951	-0.000095	5744.9953	-0.000091	5744.9955	-0.000087
0	5.5	5744.9953	-0.000091	5744.9956	-0.000085	5744.9958	-0.000081
	5	5744.9956	-0.000085	5744.9958	-0.000081	5744.9961	-0.000075
	4.5	5744.9959	-0.000079	5744.9962	-0.000073	5744.9964	-0.000069

Limit:

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

-----End of the report -----