

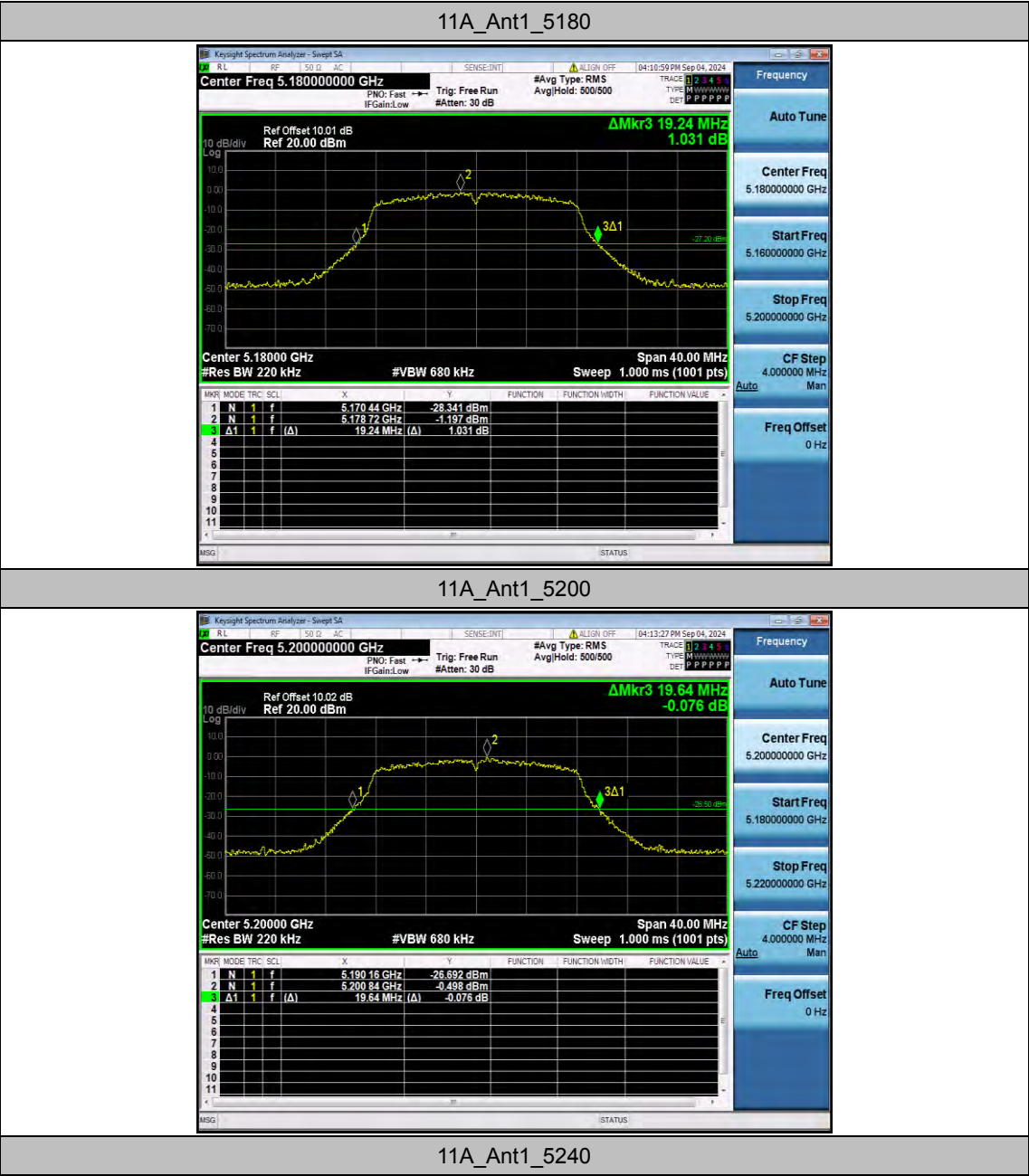
Case No. : <u>CTA24101702004</u>	
Ambient Condition: <u>23</u> °C, <u>52</u> %RH	
According Standard: ■Part15E	
Test Date: <u>2024.9.4</u>	Test Engineer: <u>Evan ouyang</u>

Appendix D.1: Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.240	5170.440	5189.680	---	---
		5200	19.640	5190.160	5209.800	---	---
		5240	19.520	5230.400	5249.920	---	---
11N20SISO	Ant1	5180	20.000	5169.920	5189.920	---	---
		5200	20.320	5189.800	5210.120	---	---
		5240	20.040	5230.000	5250.040	---	---
11N40SISO	Ant1	5190	38.080	5170.960	5209.040	---	---
		5230	38.080	5210.960	5249.040	---	---
11AC20SISO	Ant1	5180	19.400	5170.280	5189.680	---	---
		5200	19.320	5190.440	5209.760	---	---
		5240	18.960	5230.360	5249.320	---	---
11AC40SISO	Ant1	5190	40.640	5169.600	5210.240	---	---
		5230	40.320	5210.080	5250.400	---	---

Test Graphs



11A_Ant1_5200

Frequency

Auto Tune

Center Freq
5.20000000 GHzStart Freq
5.180000000 GHzStop Freq
5.220000000 GHzCF Step
4.000000 MHz
Auto ManFreq Offset
0 Hz

11A_Ant1_5240



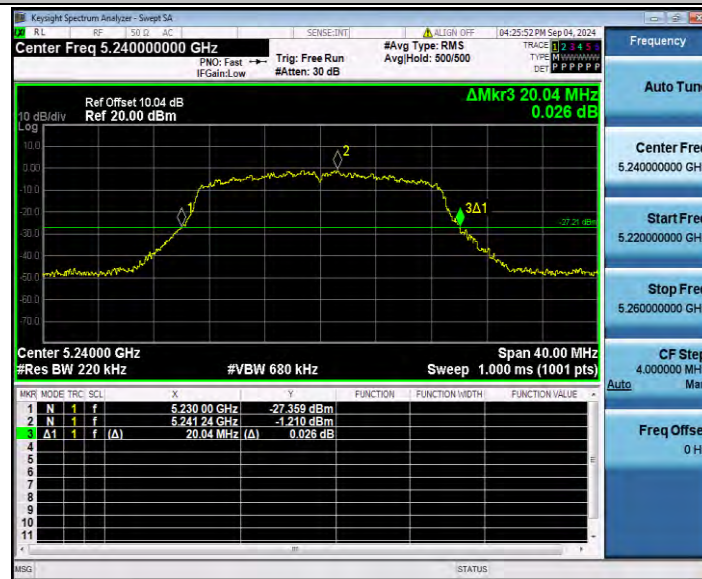
11N20SISO_Ant1_5180



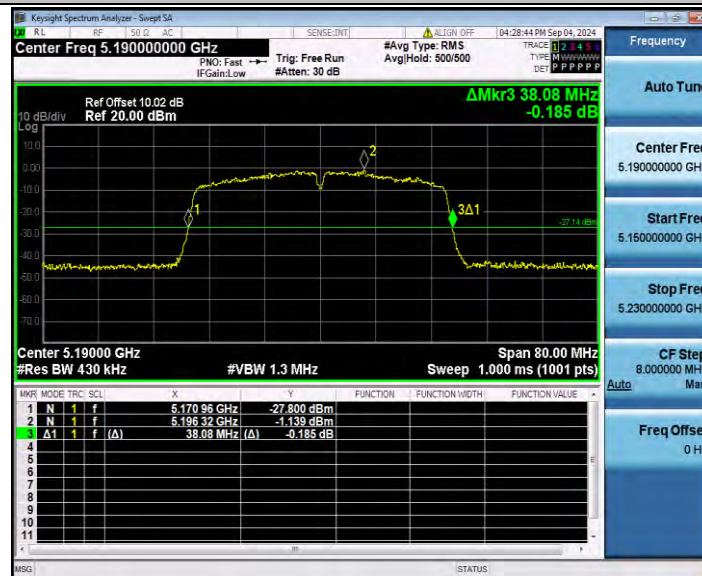
11N20SISO_Ant1_5200



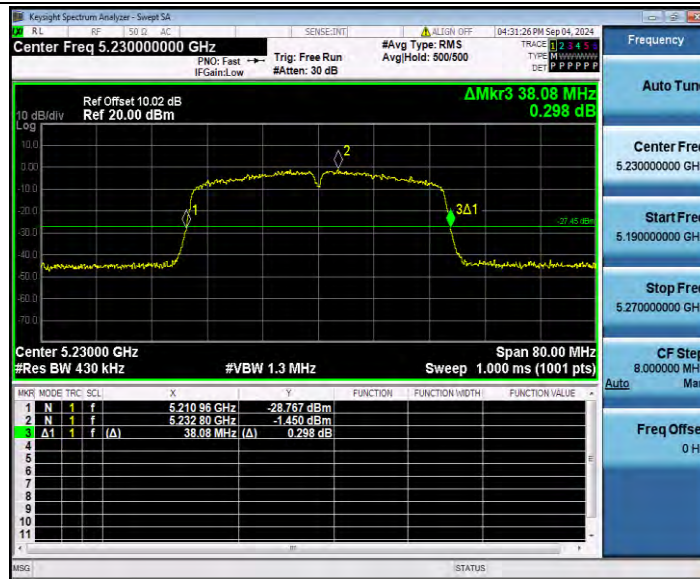
11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5200



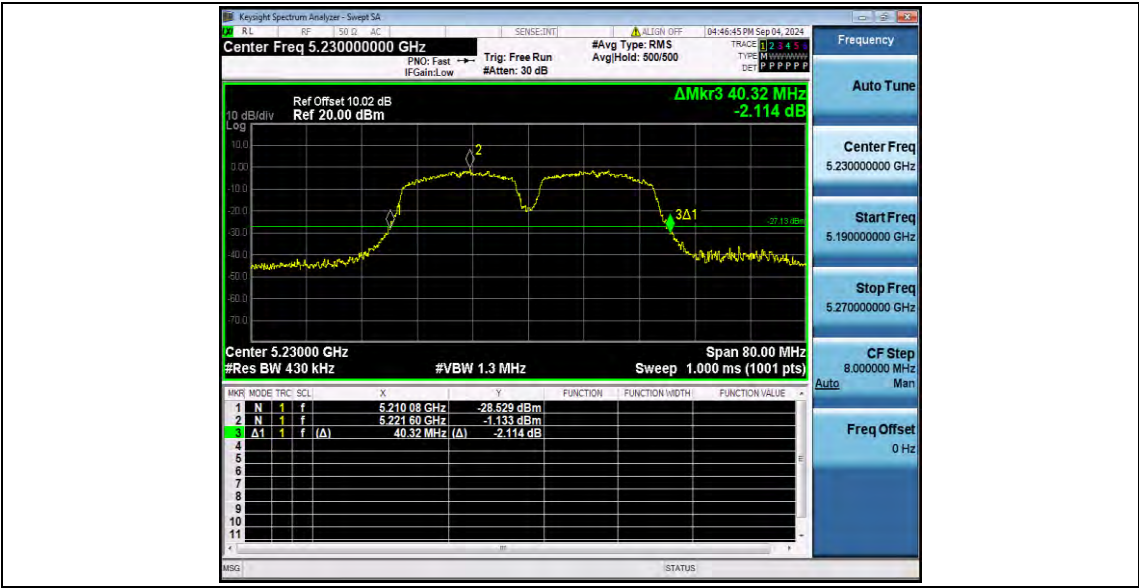
11AC20SISO_Ant1_5240



11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



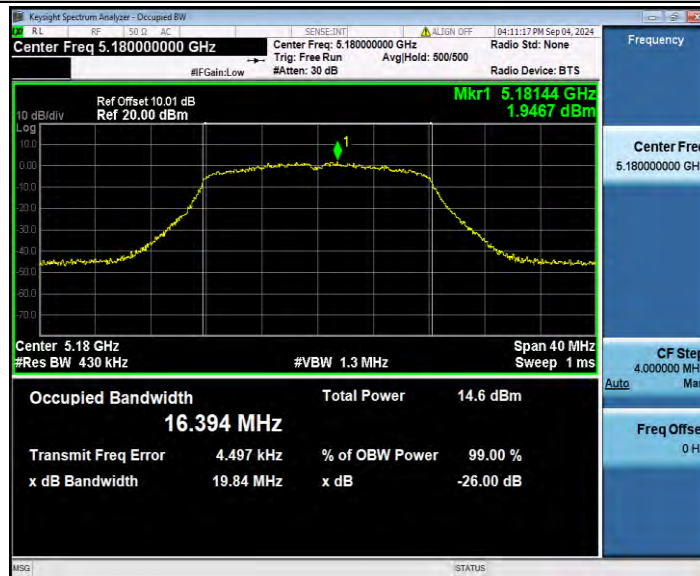
Appendix D.2: Occupied channel bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.394	5171.8075	5188.2015	---	---
		5200	16.549	5191.6827	5208.2317	---	---
		5240	16.492	5231.7164	5248.2084	---	---
11N20SISO	Ant1	5180	17.510	5171.2496	5188.7596	---	---
		5200	17.596	5191.1893	5208.7853	---	---
		5240	17.549	5231.2203	5248.7693	---	---
11N40SISO	Ant1	5190	35.243	5172.4091	5207.6521	---	---
		5230	35.158	5212.4307	5247.5887	---	---
11AC20SISO	Ant1	5180	16.545	5171.6779	5188.2229	---	---
		5200	16.467	5191.7752	5208.2422	---	---
		5240	16.515	5231.7233	5248.2383	---	---
11AC40SISO	Ant1	5190	35.923	5172.0773	5208.0003	---	---
		5230	35.862	5212.1047	5247.9667	---	---

Test Graphs

11A_Ant1_5180



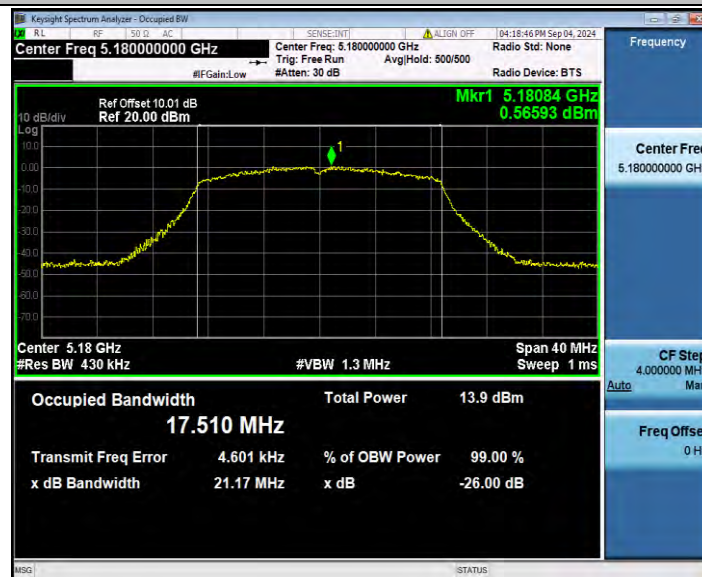
11A_Ant1_5200



11A_Ant1_5240



11N20SISO_Ant1_5180



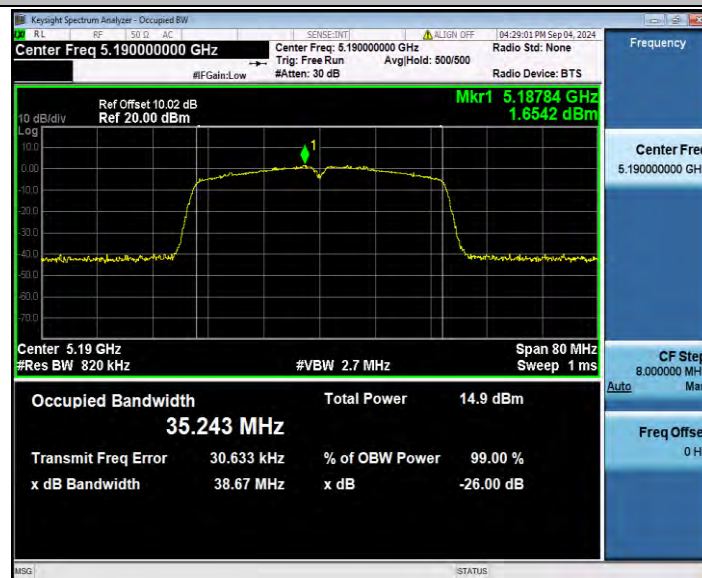
11N20SISO_Ant1_5200



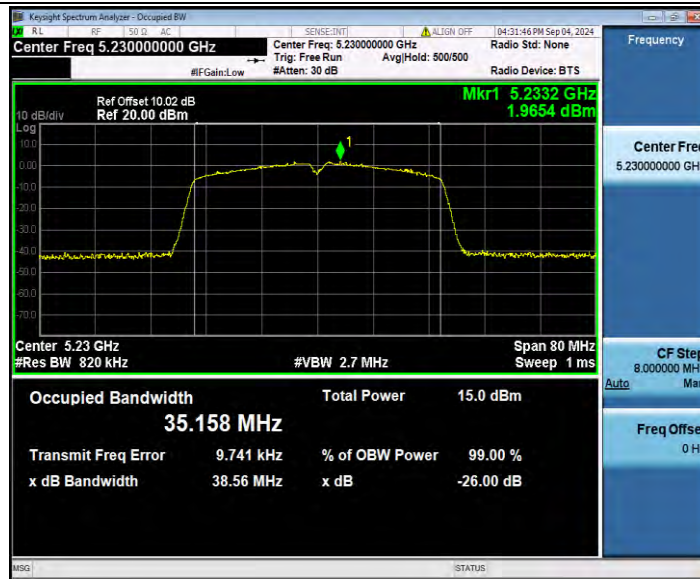
11N20SISO_Ant1_5240



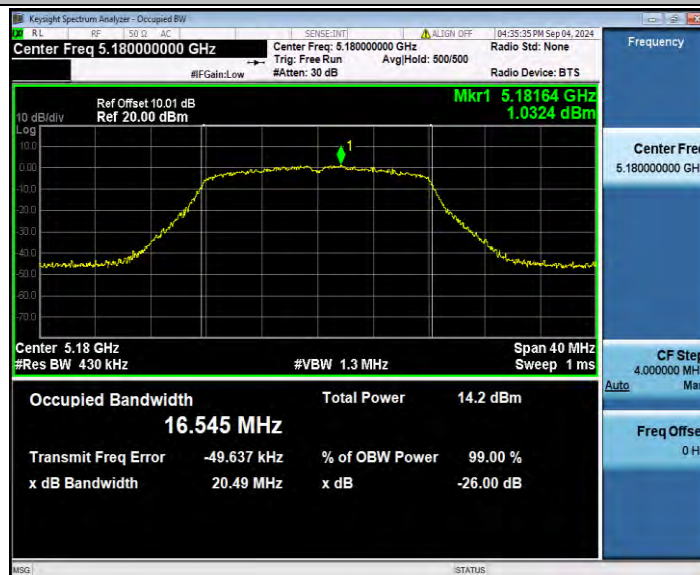
11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



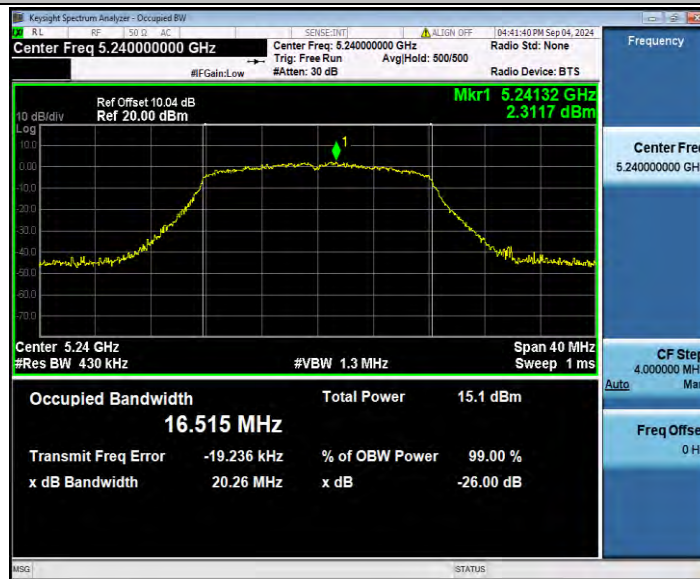
11AC20SISO_Ant1_5180



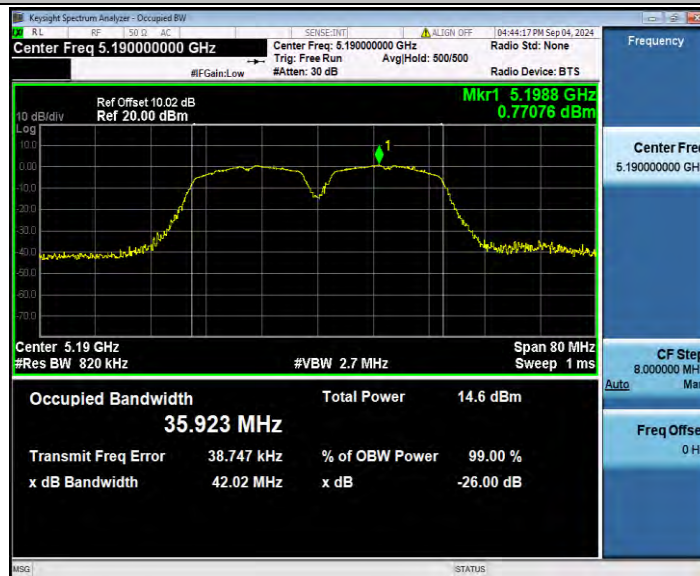
11AC20SISO_Ant1_5200



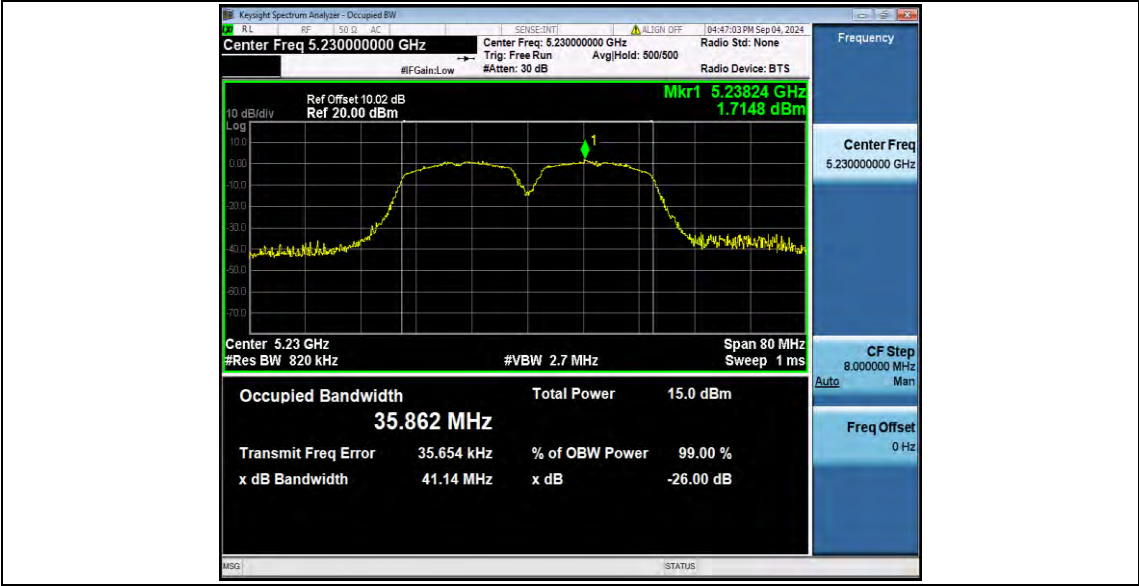
11AC20SISO_Ant1_5240



11AC40SISO_Ant1_5190



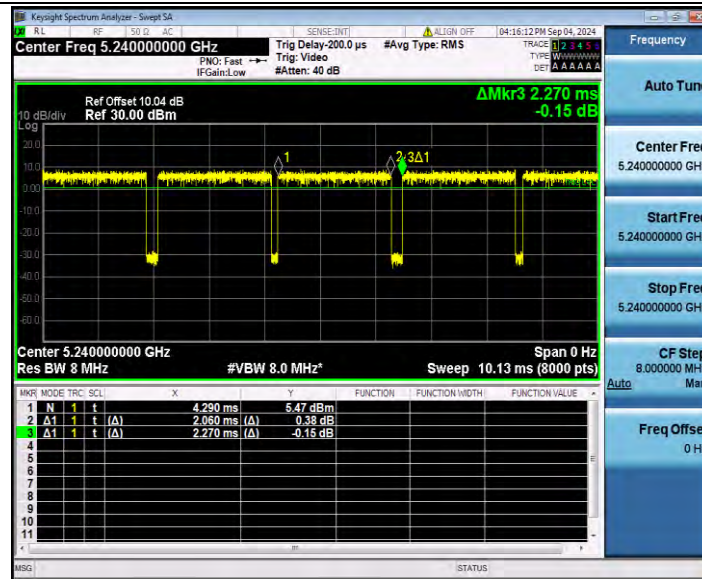
11AC40SISO_Ant1_5230



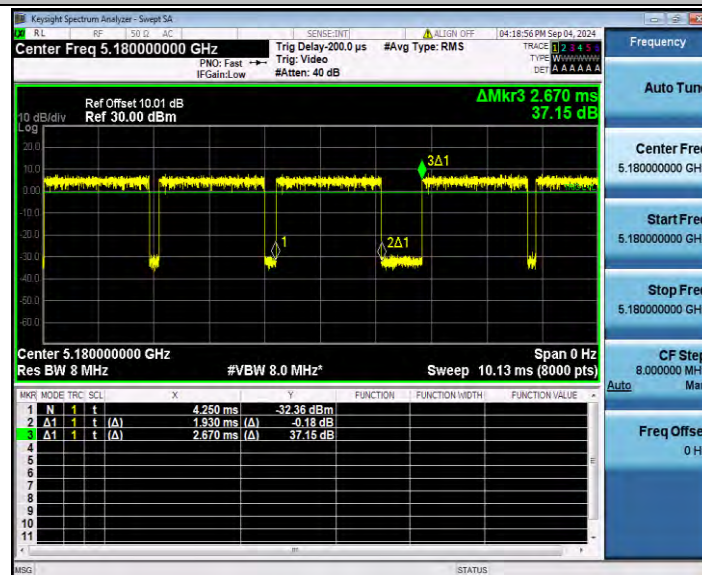
Appendix D.3: Duty Cycle

Test Result

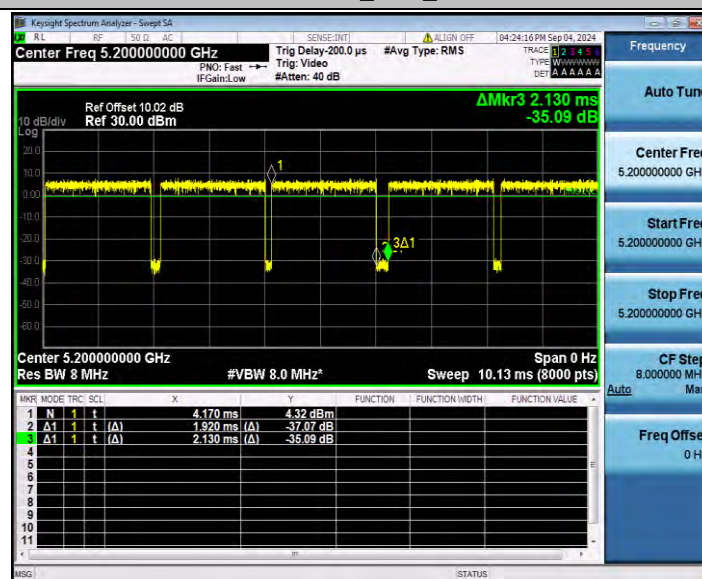
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[KHz]
11A	Ant1	5180	2.06	2.29	89.96	0.46	0.49
		5200	2.06	2.27	90.75	0.42	0.49
		5240	2.06	2.27	90.75	0.42	0.49
11N20SISO	Ant1	5180	1.93	2.67	72.28	1.41	0.52
		5200	1.92	2.13	90.14	0.45	0.52
		5240	1.92	2.13	90.14	0.45	0.52
11N40SISO	Ant1	5190	0.94	1.17	80.34	0.95	1.06
		5230	0.95	1.17	81.20	0.90	1.05
11AC20SISO	Ant1	5180	2.07	2.55	81.18	0.91	0.48
		5200	2.07	2.55	81.18	0.91	0.48
		5240	2.07	2.54	81.50	0.89	0.48
11AC40SISO	Ant1	5190	2.07	2.51	82.47	0.84	0.48
		5230	2.06	2.50	82.40	0.84	0.49



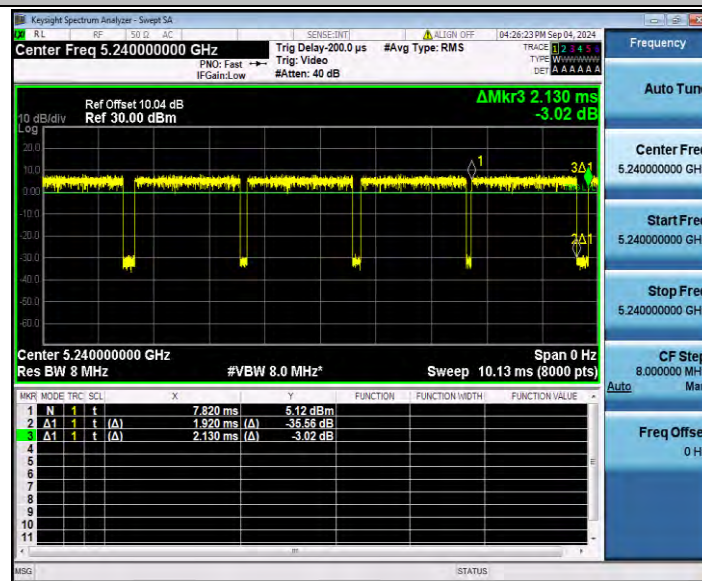
11N20SISO_Ant1_5180



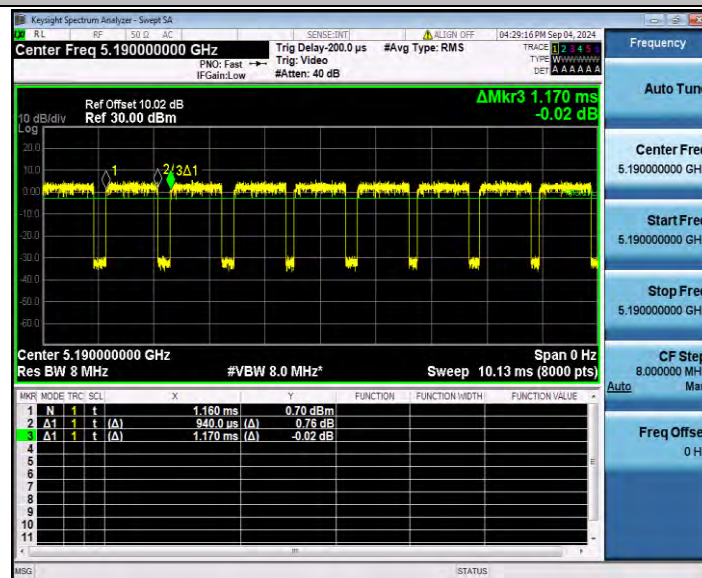
11N20SISO_Ant1_5200



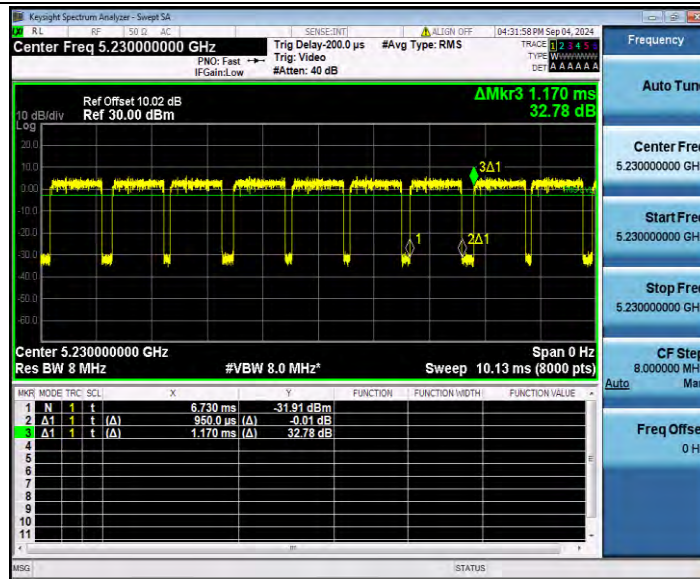
11N20SISO_Ant1_5240



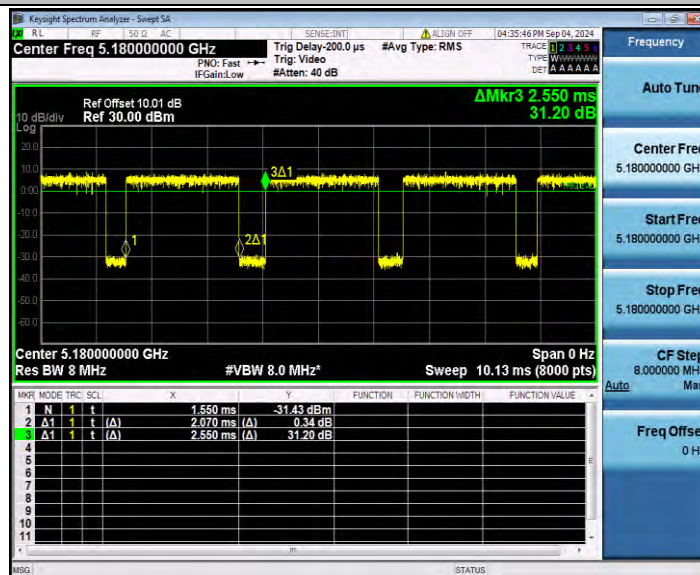
11N40SISO_Ant1_5190



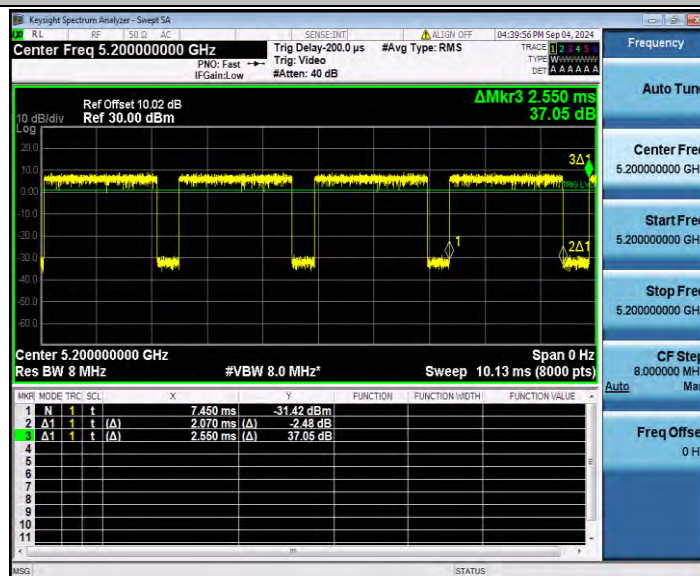
11N40SISO_Ant1_5230

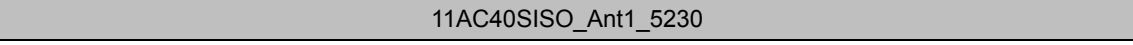
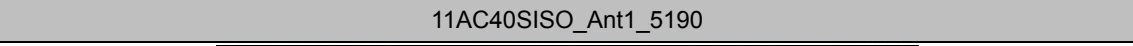


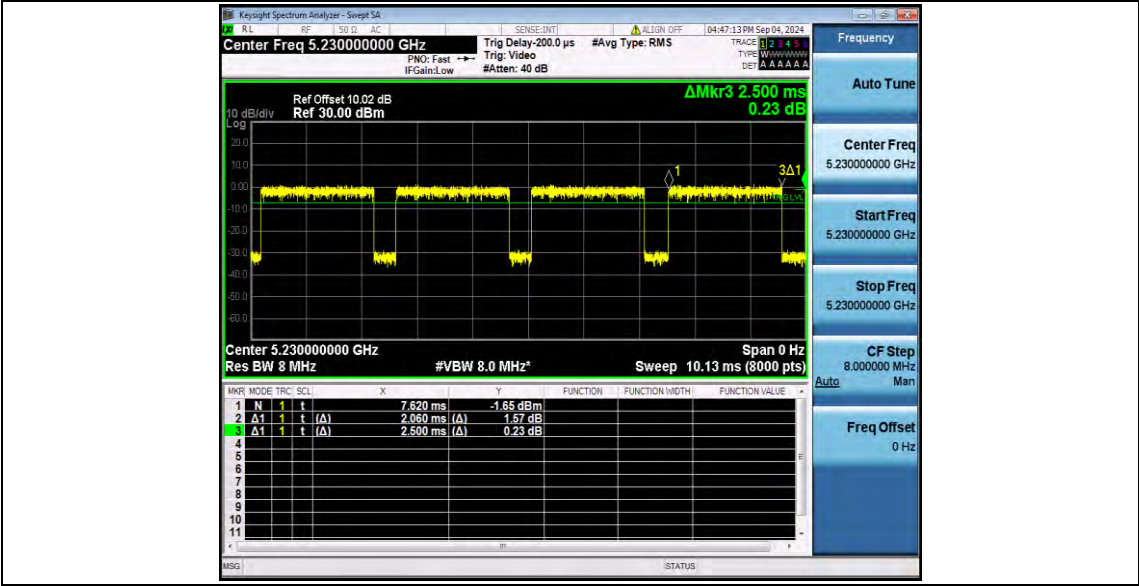
11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5200







Appendix D.4: Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	7.52	89.96	0.46	7.98	≤23.98	PASS
		5200	7.57	90.75	0.42	7.99	≤23.98	PASS
		5240	7.93	90.75	0.42	8.35	≤23.98	PASS
11N20SISO	Ant1	5180	6.88	72.28	1.41	8.29	≤23.98	PASS
		5200	6.83	90.14	0.45	7.28	≤23.98	PASS
		5240	7.27	90.14	0.45	7.72	≤23.98	PASS
11N40SISO	Ant1	5190	6.78	80.34	0.95	7.73	≤23.98	PASS
		5230	7.00	81.20	0.90	7.90	≤23.98	PASS
11AC20SISO	Ant1	5180	6.66	81.18	0.91	7.57	≤23.98	PASS
		5200	7.66	81.18	0.91	8.57	≤23.98	PASS
		5240	7.50	81.50	0.89	8.39	≤23.98	PASS
11AC40SISO	Ant1	5190	6.51	82.47	0.84	7.35	≤23.98	PASS
		5230	6.91	82.40	0.84	7.75	≤23.98	PASS

Appendix D.5: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-2.17	≤11.00	PASS
		5200	-2.03	≤11.00	PASS
		5240	-1.68	≤11.00	PASS
11N20SISO	Ant1	5180	-1.90	≤11.00	PASS
		5200	-2.87	≤11.00	PASS
		5240	-2.32	≤11.00	PASS
11N40SISO	Ant1	5190	-5.15	≤11.00	PASS
		5230	-4.83	≤11.00	PASS
11AC20SISO	Ant1	5180	-0.85	≤11.00	PASS
		5200	-1.02	≤11.00	PASS
		5240	-1.01	≤11.00	PASS
11AC40SISO	Ant1	5190	-4.80	≤11.00	PASS
		5230	-4.53	≤11.00	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

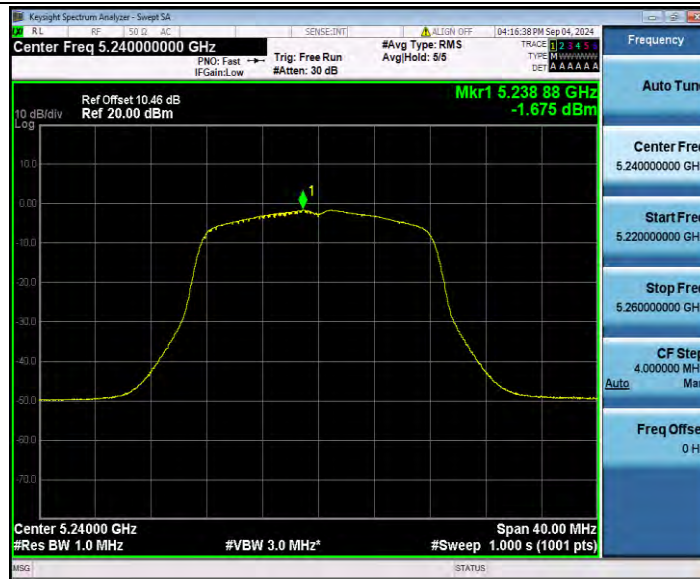
11A_Ant1_5180



11A_Ant1_5200



11A_Ant1_5240



11N20SISO_Ant1_5180



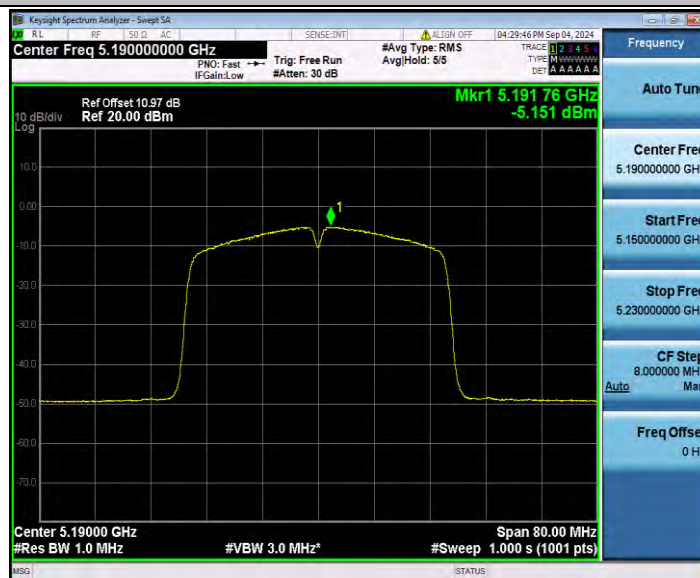
11N20SISO_Ant1_5200



11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



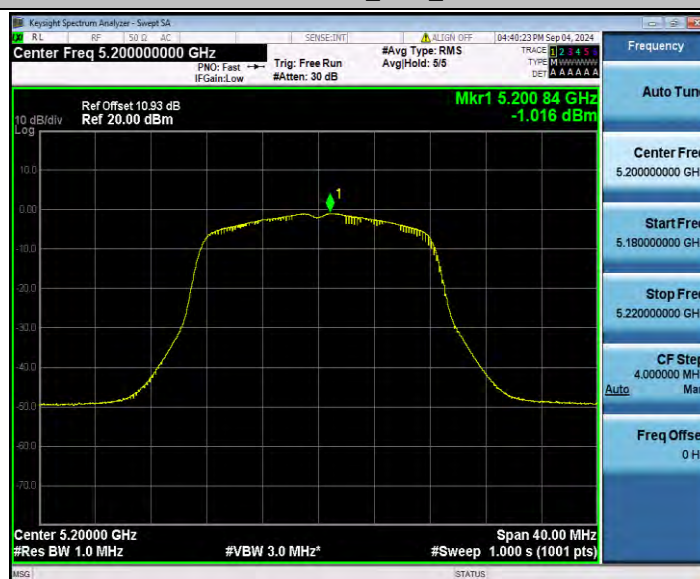
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5200



11AC20SISO_Ant1_5240



11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



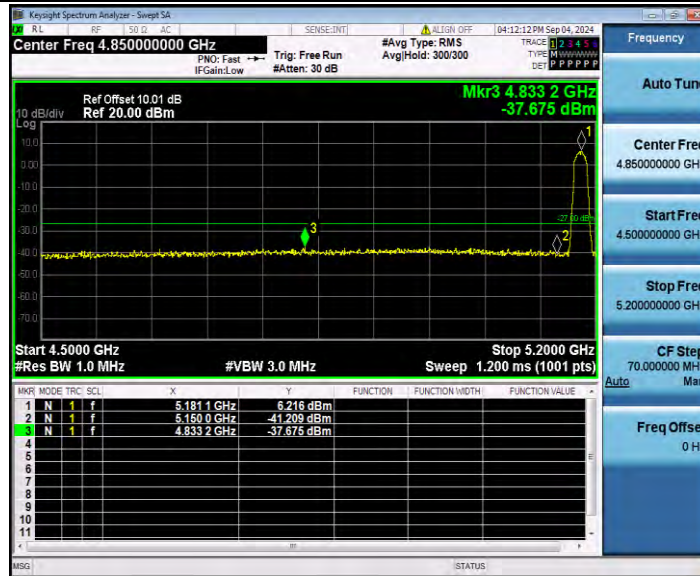
Appendix D.6: Band edge measurements

Test Result B1

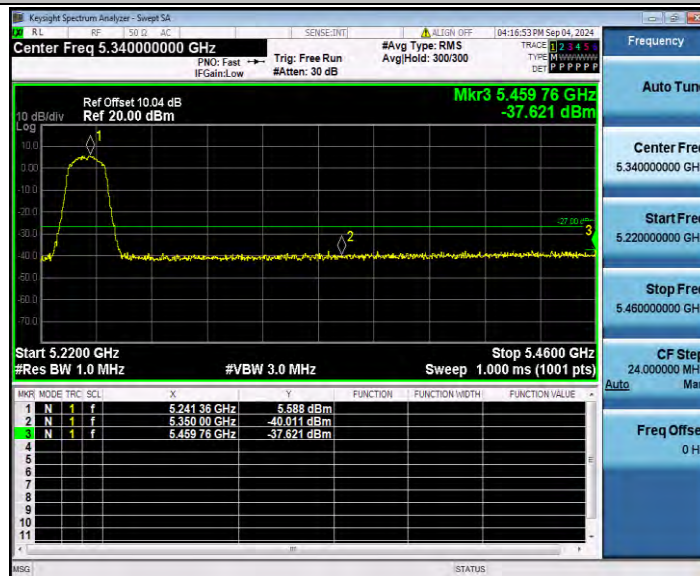
TestMode	Antenna	ChName	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-37.68	≤ -27	PASS
		High	5240	-37.62	≤ -27	PASS
11N20SISO	Ant1	Low	5180	-37.21	≤ -27	PASS
		High	5240	-37.73	≤ -27	PASS
11N40SISO	Ant1	Low	5190	-36.67	≤ -27	PASS
		High	5230	-37.28	≤ -27	PASS
11AC20SISO	Ant1	Low	5180	-36.23	≤ -27	PASS
		High	5240	-37.34	≤ -27	PASS
11AC40SISO	Ant1	Low	5190	-37.36	≤ -27	PASS
		High	5230	-37.06	≤ -27	PASS

Test Graphs B1

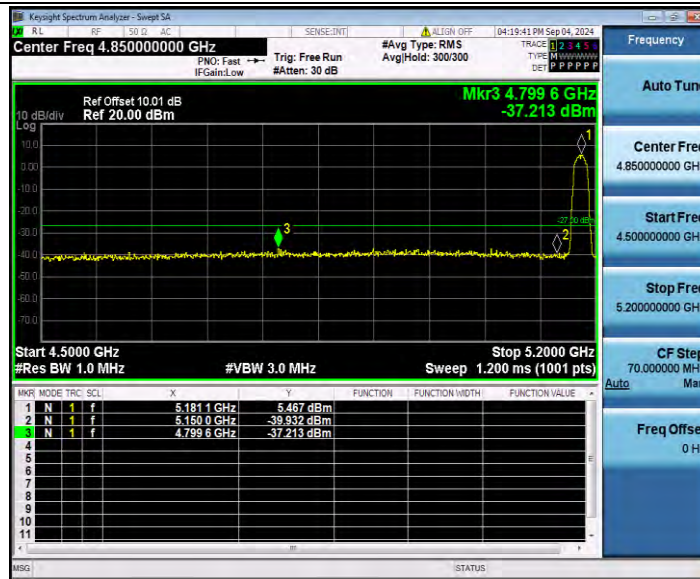
11A_Ant1_Low_5180



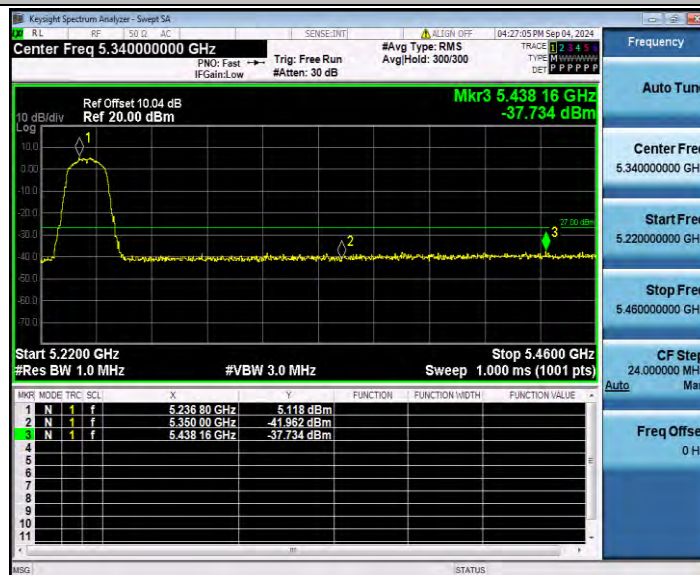
11A_Ant1_High_5240



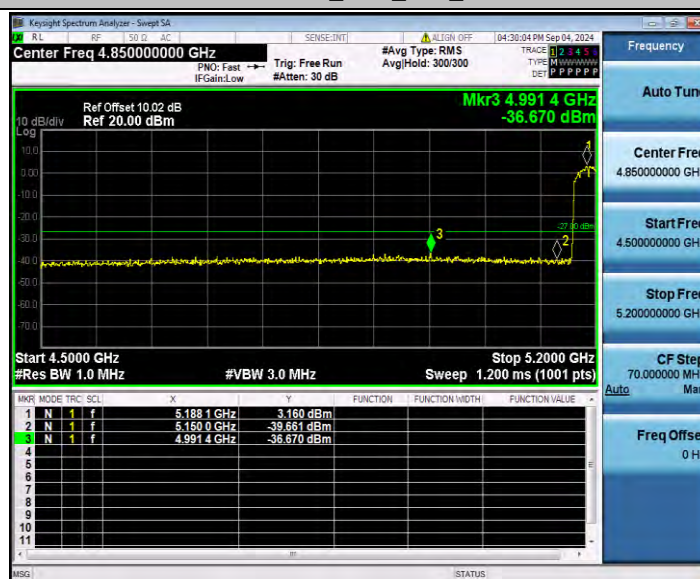
11N20SISO_Ant1_Low_5180

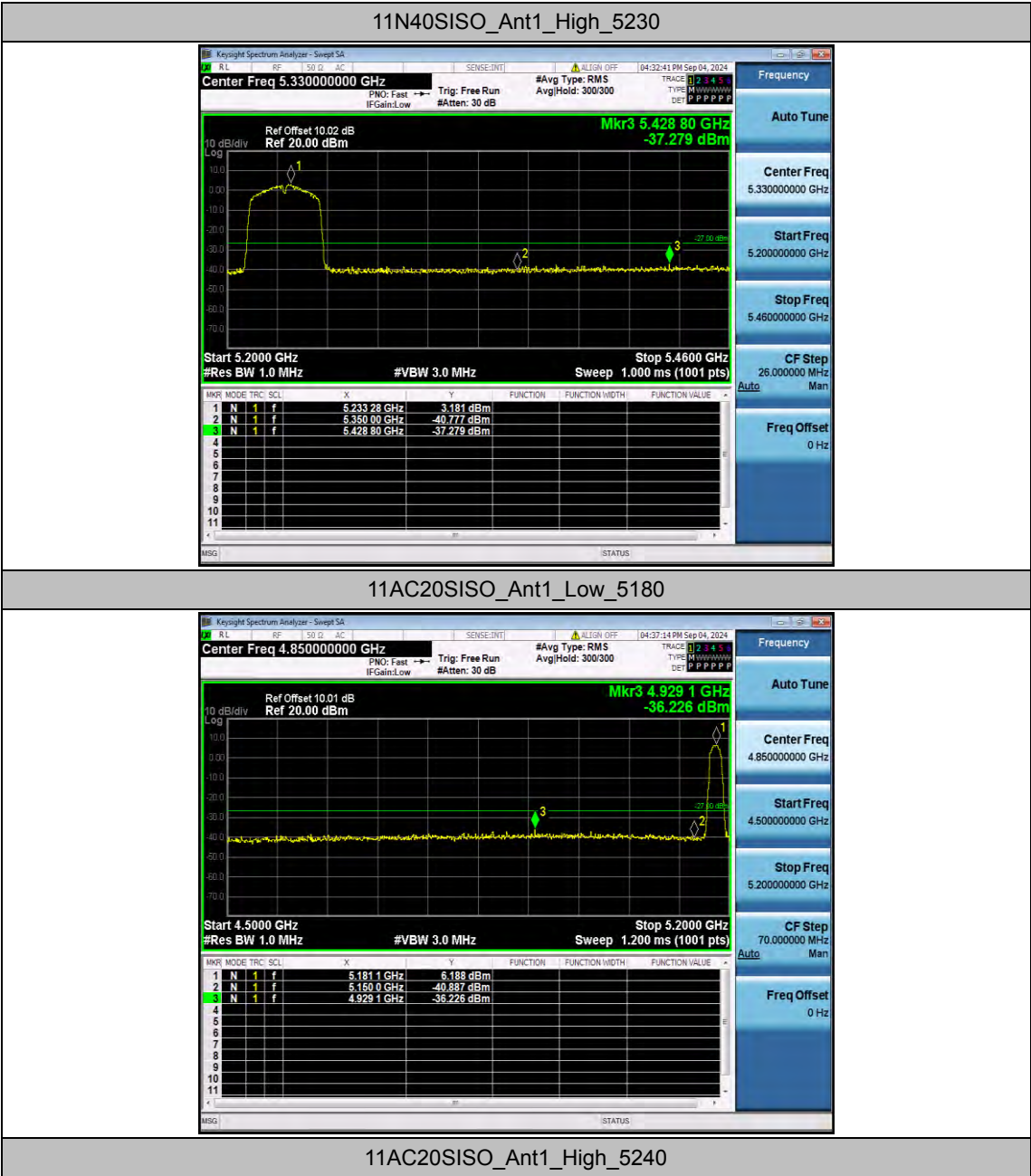


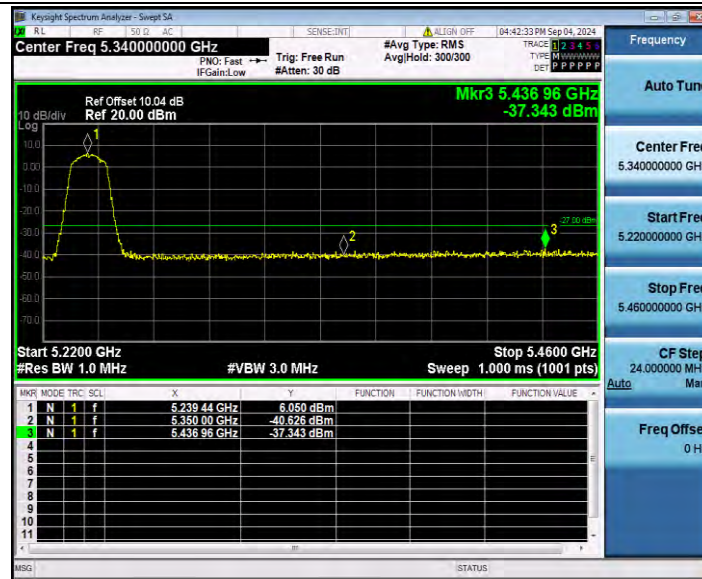
11N20SISO_Ant1_High_5240



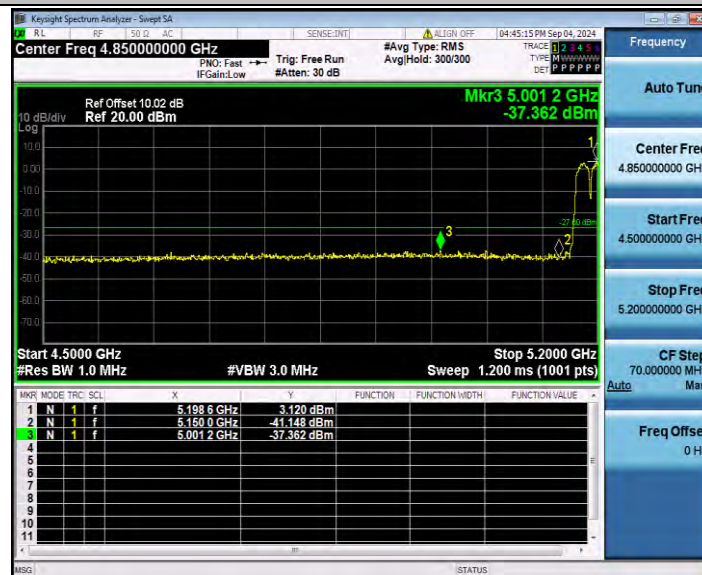
11N40SISO_Ant1_Low_5190



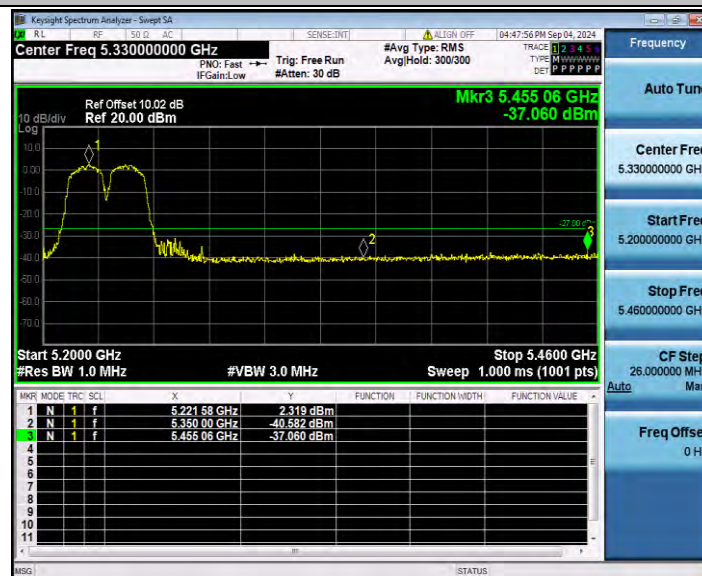




11AC40SISO_Ant1_Low_5190



11AC40SISO_Ant1_High_5230



Appendix D.7: Conducted Spurious Emission

Test Result

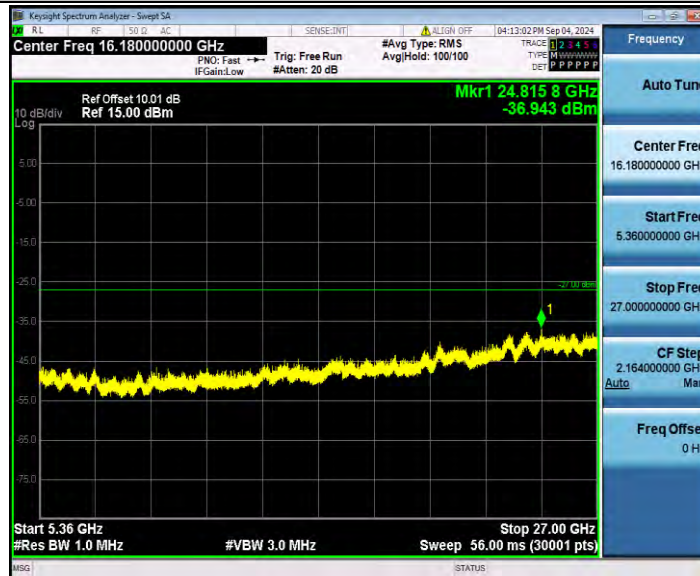
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	2644.45	-45.94	≤-27	PASS
			5360~27000	24815.8	-36.94	≤-27	PASS
		5200	30~5140	4880.07	-46.23	≤-27	PASS
			5360~27000	24240.9	-37.2	≤-27	PASS
		5240	30~5140	4950.59	-45.96	≤-27	PASS
			5360~27000	24272.64	-37.45	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	33.07	-46.15	≤-27	PASS
			5360~27000	24274.8	-37.61	≤-27	PASS
		5200	30~5140	824.78	-41.52	≤-27	PASS
			5360~27000	23512.35	-37.23	≤-27	PASS
		5240	30~5140	5029.96	-46.21	≤-27	PASS
			5360~27000	25040.14	-36.82	≤-27	PASS
11N40SISO	Ant1	5190	30~5140	34.6	-44.63	≤-27	PASS
			5360~27000	24265.43	-36.94	≤-27	PASS
		5230	30~5140	34.43	-42.53	≤-27	PASS
			5360~27000	25669.14	-36.82	≤-27	PASS
11AC20SISO	Ant1	5180	30~5140	34.77	-44.16	≤-27	PASS
			5360~27000	24866.3	-37.07	≤-27	PASS
		5200	30~5140	34.43	-44.5	≤-27	PASS
			5360~27000	26515.26	-37.29	≤-27	PASS
		5240	30~5140	33.92	-45.97	≤-27	PASS
			5360~27000	26525.36	-37.32	≤-27	PASS
11AC40SISO	Ant1	5190	30~5140	33.58	-45.15	≤-27	PASS
			5360~27000	24887.94	-36.93	≤-27	PASS
		5230	30~5140	34.26	-44.17	≤-27	PASS
			5360~27000	25236.34	-37.58	≤-27	PASS

Test Graphs

11A_Ant1_5180_30~5140



11A_Ant1_5180_5360~27000



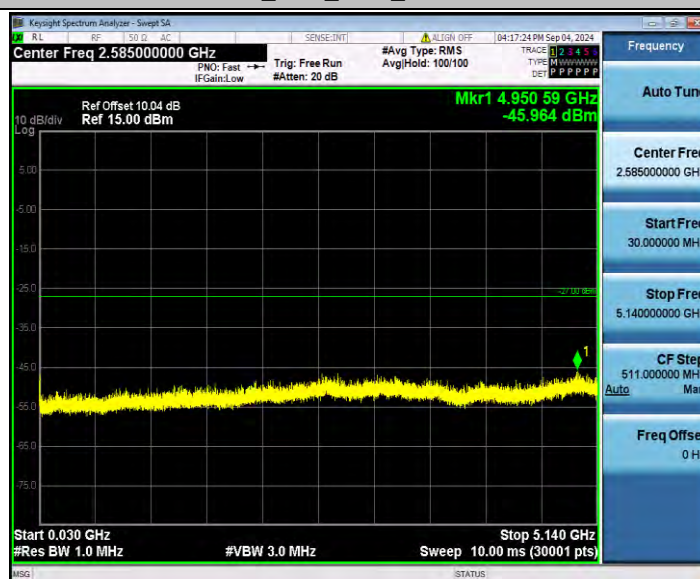
11A_Ant1_5200_30~5140



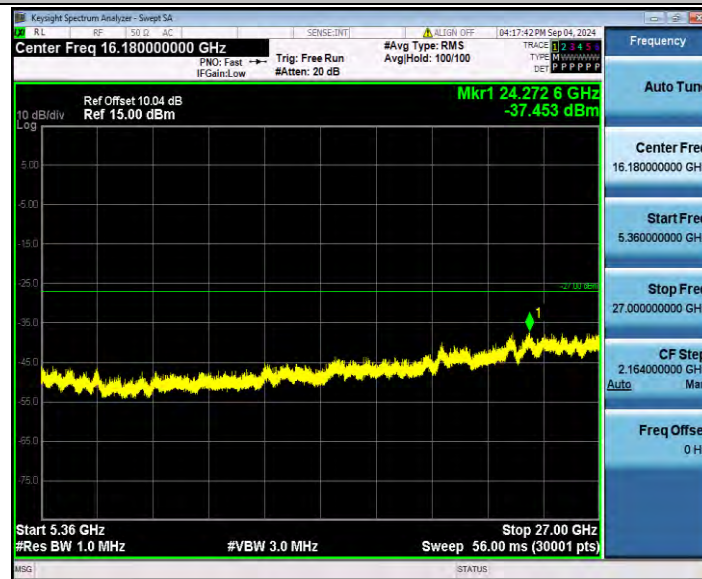
11A_Ant1_5200_5360~27000



11A_Ant1_5240_30~5140



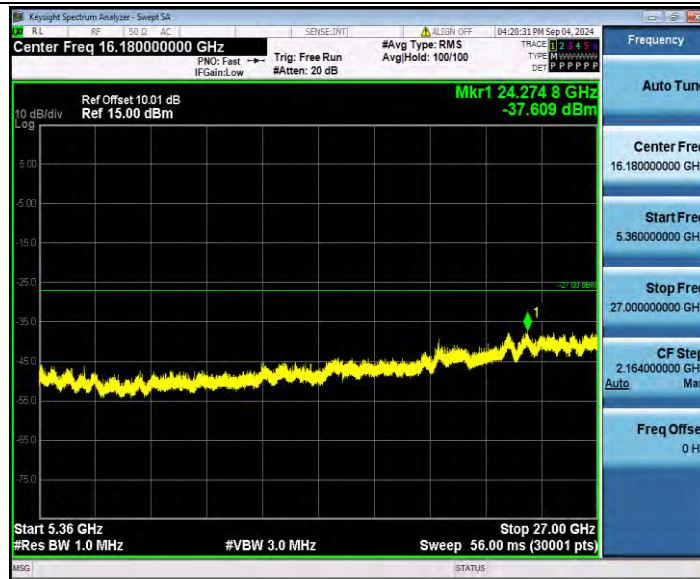
11A_Ant1_5240_5360~27000



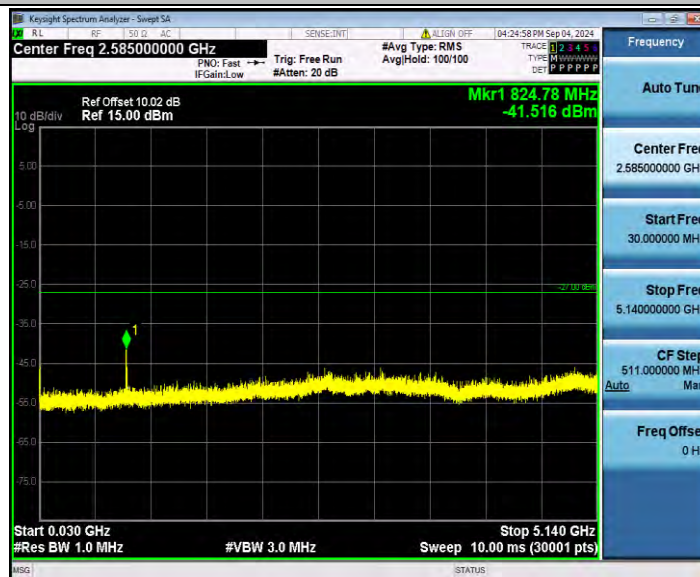
11N20SISO_Ant1_5180_30~5140



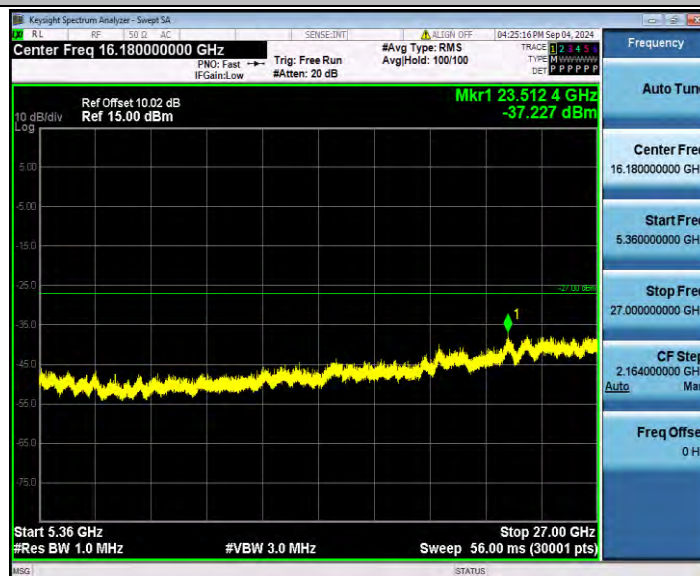
11N20SISO_Ant1_5180_5360~27000



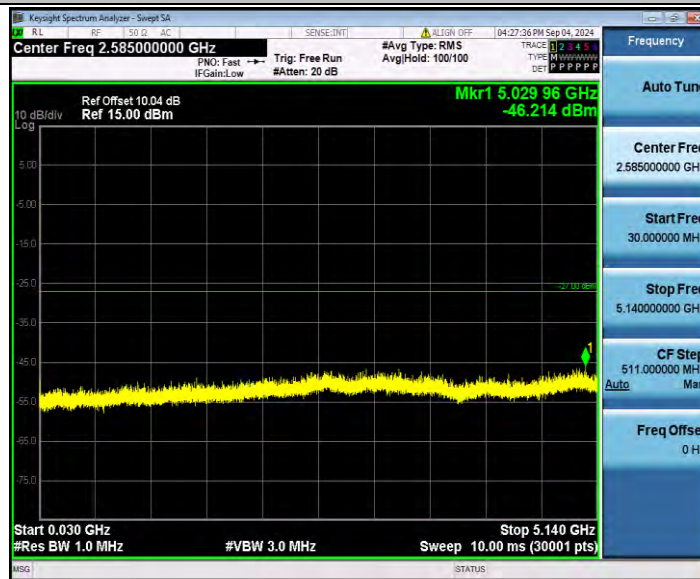
11N20SISO_Ant1_5200_30~5140



11N20SISO_Ant1_5200_5360~27000



11N20SISO_Ant1_5240_30~5140



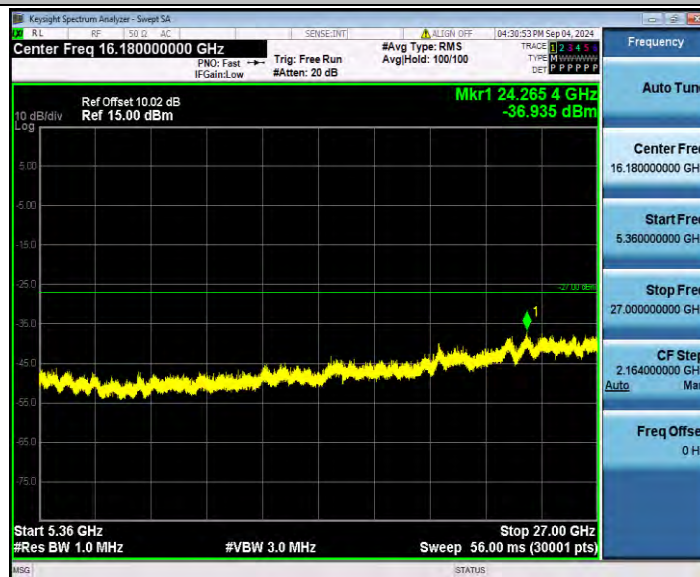
11N20SISO_Ant1_5240_5360~27000



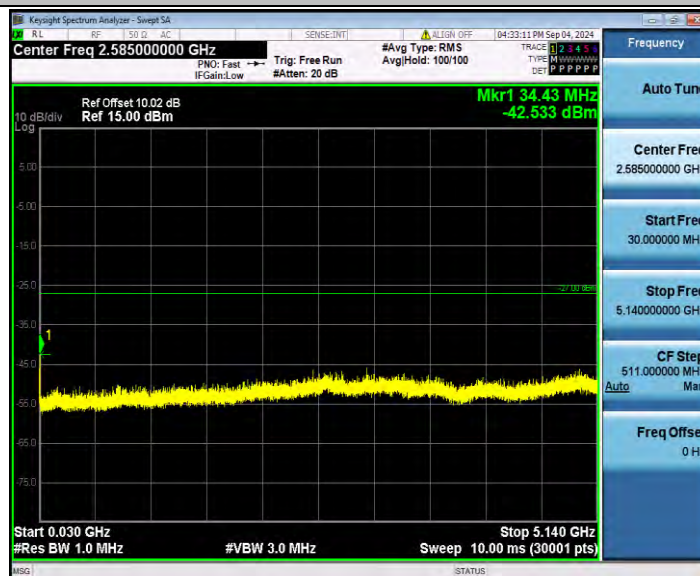
11N40SISO_Ant1_5190_30~5140

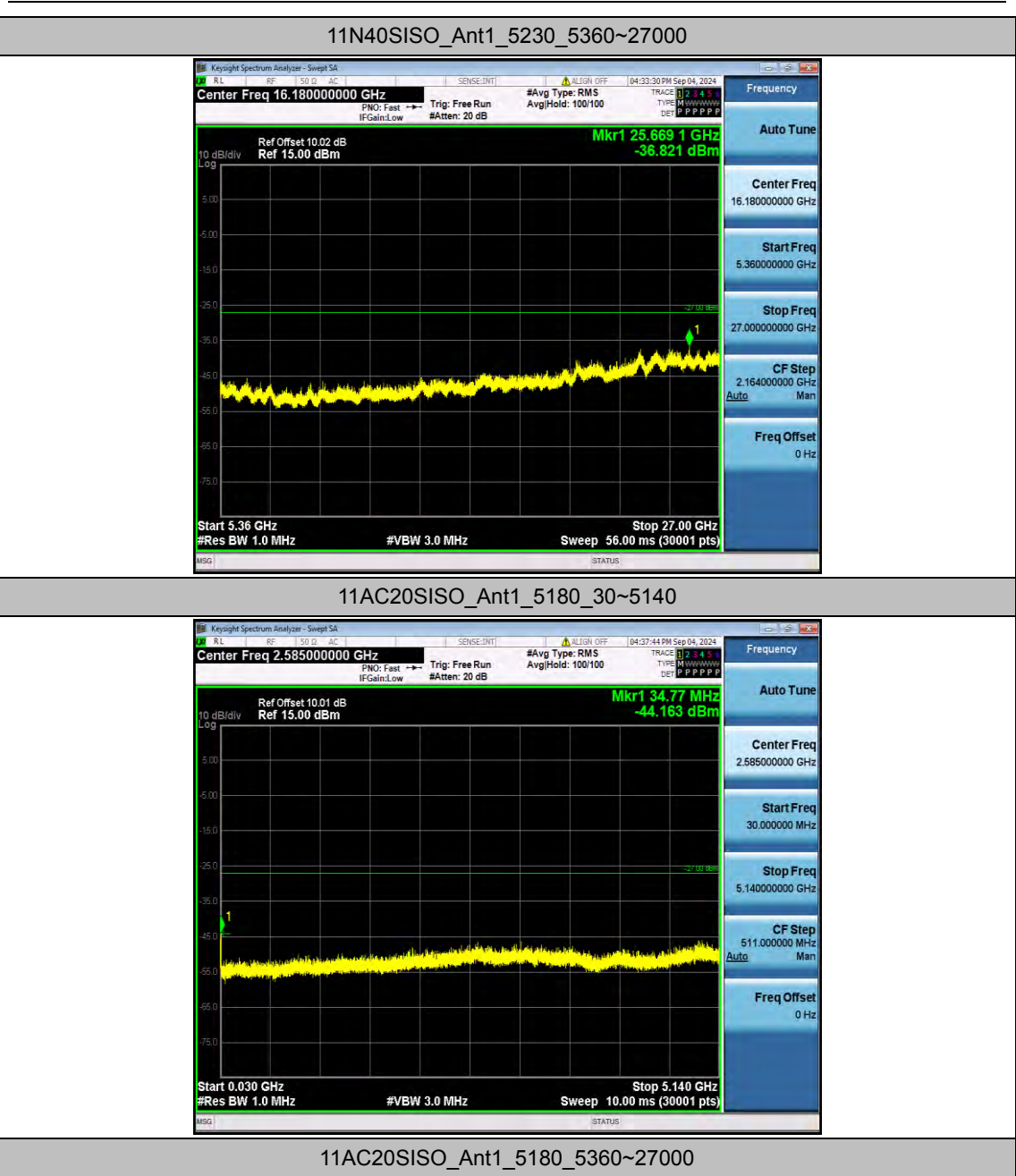


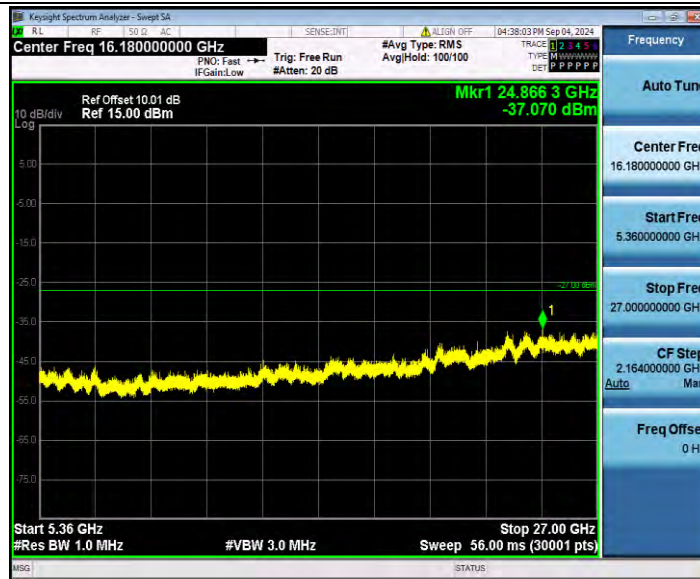
11N40SISO_Ant1_5190_5360~27000



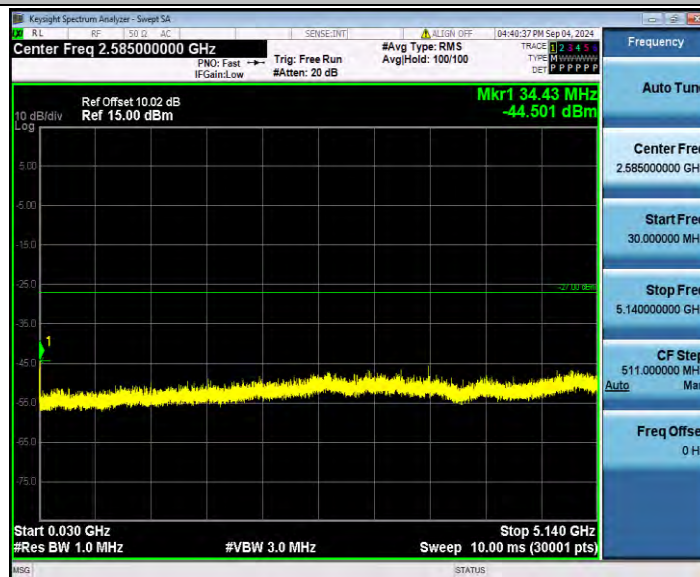
11N40SISO_Ant1_5230_30~5140



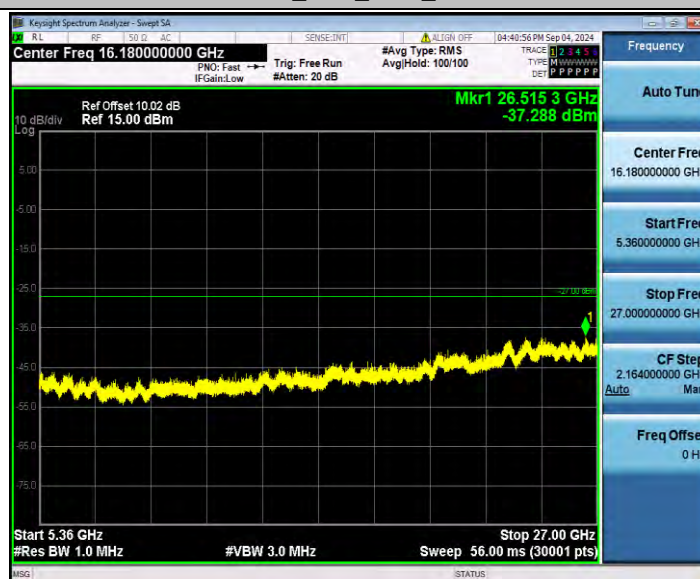




11AC20SISO_Ant1_5200_30~5140



11AC20SISO_Ant1_5200_5360~27000



11AC20SISO_Ant1_5240_30~5140



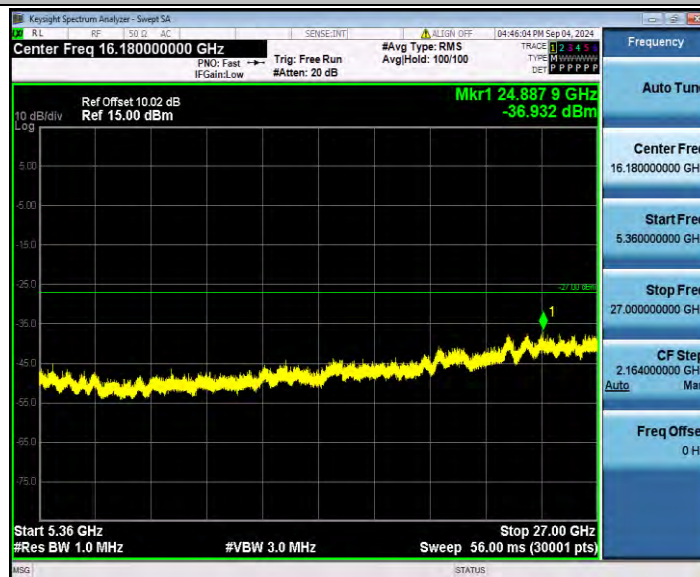
11AC20SISO_Ant1_5240_5360~27000



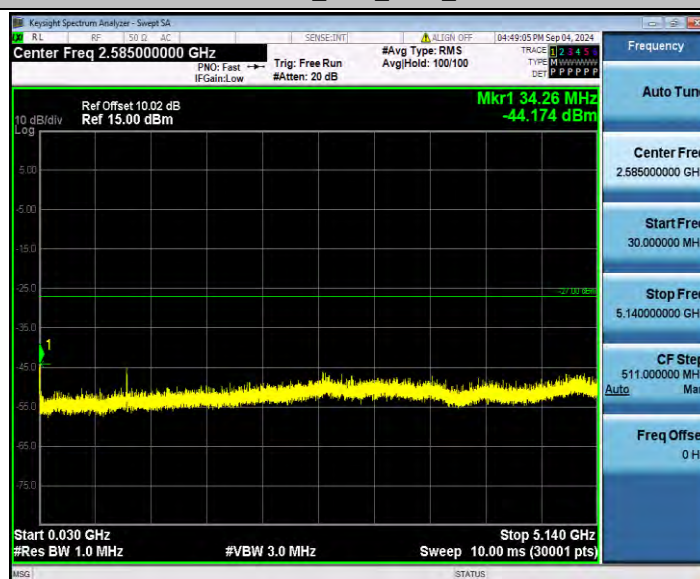
11AC40SISO_Ant1_5190_30~5140

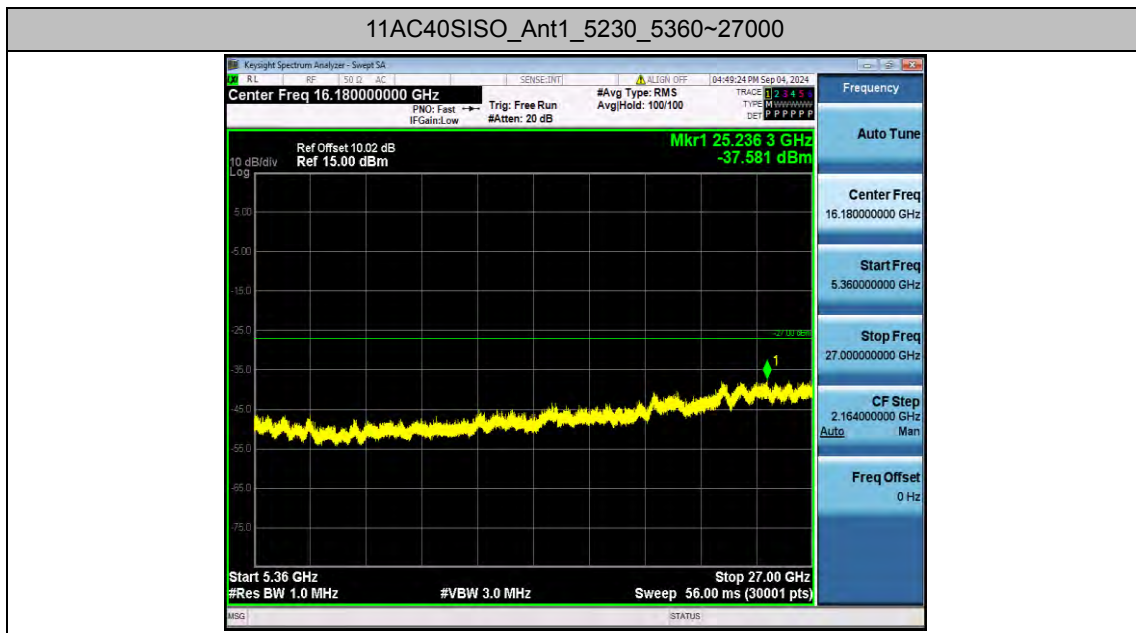


11AC40SISO_Ant1_5190_5360~27000



11AC40SISO_Ant1_5230_30~5140





Appendix D.8: Emissions in Restricted Bands

Test Result

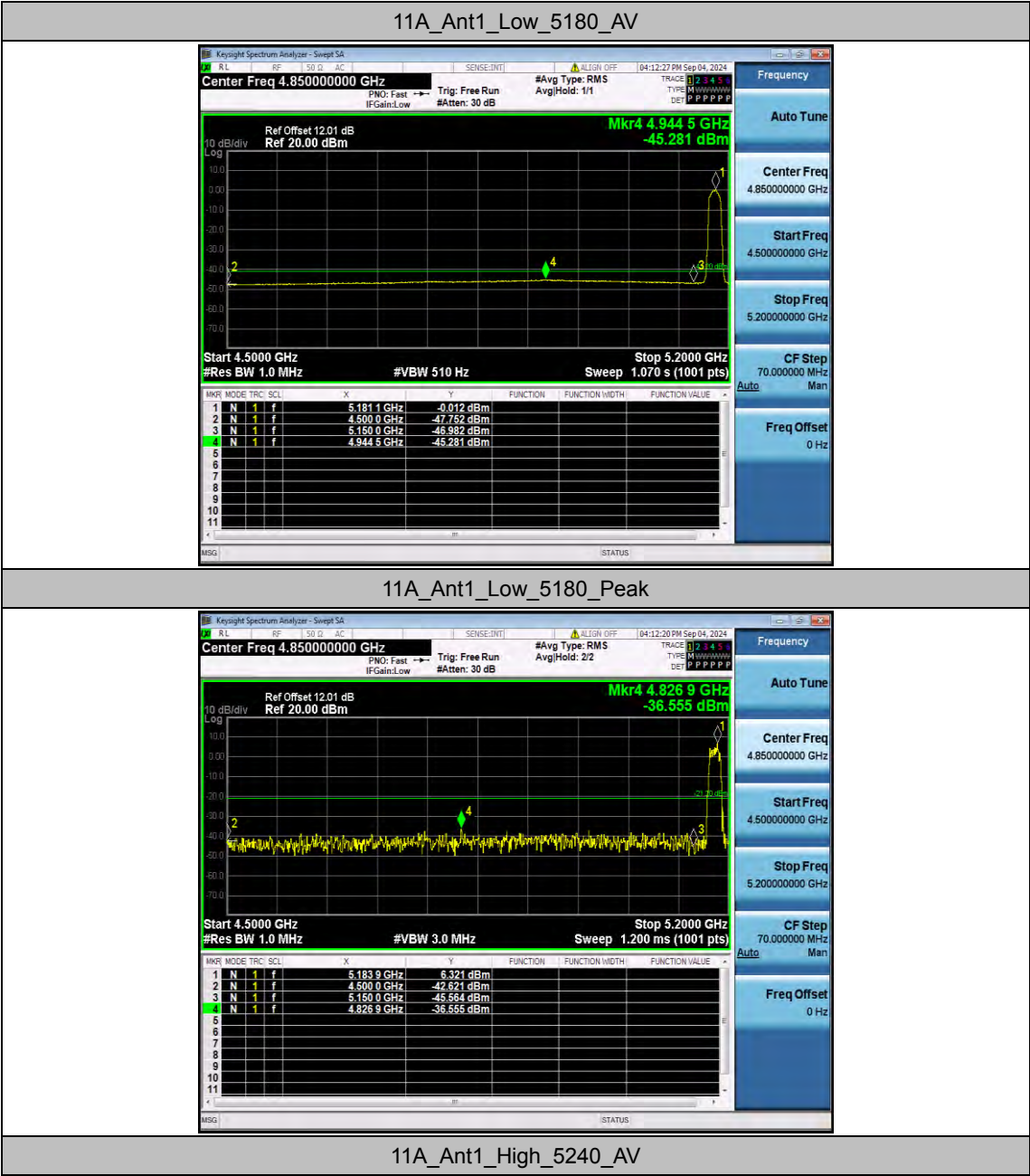
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11A	Ant1	Low	5180	AV	4500.000	-47.75	≤-41.20	47.45	≤54	PASS
				AV	4944.500	-45.28	≤-41.20	49.92	≤54	PASS
				AV	5150.000	-46.98	≤-41.20	48.22	≤54	PASS
				Peak	4500.000	-42.62	≤-21.20	52.58	≤74	PASS
				Peak	4826.900	-36.56	≤-21.20	58.64	≤74	PASS
				Peak	5150.000	-45.56	≤-21.20	49.64	≤74	PASS
		High	5240	AV	5350.000	-46.63	≤-41.20	48.57	≤54	PASS
				AV	5456.640	-45.5	≤-41.20	49.70	≤54	PASS
				AV	5460.000	-45.88	≤-41.20	49.32	≤54	PASS
				Peak	5350.000	-41.23	≤-21.20	53.97	≤74	PASS
				Peak	5359.680	-36.44	≤-21.20	58.76	≤74	PASS
				Peak	5460.000	-38.96	≤-21.20	56.24	≤74	PASS
11N20SIS O	Ant1	Low	5180	AV	4500.000	-47.81	≤-41.20	47.39	≤54	PASS
				AV	4945.200	-45.3	≤-41.20	49.90	≤54	PASS
				AV	5150.000	-46.85	≤-41.20	48.35	≤54	PASS
				Peak	4500.000	-44.12	≤-21.20	51.08	≤74	PASS
				Peak	4948.000	-37.54	≤-21.20	57.66	≤74	PASS
				Peak	5150.000	-43.66	≤-21.20	51.54	≤74	PASS
		High	5240	AV	5350.000	-46.71	≤-41.20	48.49	≤54	PASS
				AV	5458.080	-45.51	≤-41.20	49.69	≤54	PASS
				AV	5460.000	-45.71	≤-41.20	49.49	≤54	PASS
				Peak	5350.000	-41.36	≤-21.20	53.84	≤74	PASS
				Peak	5432.880	-35.78	≤-21.20	59.42	≤74	PASS
				Peak	5460.000	-44.01	≤-21.20	51.19	≤74	PASS
11N40SIS O	Ant1	Low	5190	AV	4500.000	-47.66	≤-41.20	47.54	≤54	PASS
				AV	4926.300	-44.93	≤-41.20	50.27	≤54	PASS
				AV	5150.000	-46.9	≤-41.20	48.30	≤54	PASS
				Peak	4500.000	-44.2	≤-21.20	51.00	≤74	PASS
				Peak	4883.600	-37.25	≤-21.20	57.95	≤74	PASS
				Peak	5150.000	-42.88	≤-21.20	52.32	≤74	PASS
		High	5230	AV	5350.000	-46.71	≤-41.20	48.49	≤54	PASS
				AV	5443.100	-45.28	≤-41.20	49.92	≤54	PASS
				AV	5460.000	-45.86	≤-41.20	49.34	≤54	PASS
				Peak	5350.000	-45.86	≤-21.20	49.34	≤74	PASS
				Peak	5410.600	-36.91	≤-21.20	58.29	≤74	PASS
				Peak	5460.000	-41.19	≤-21.20	54.01	≤74	PASS

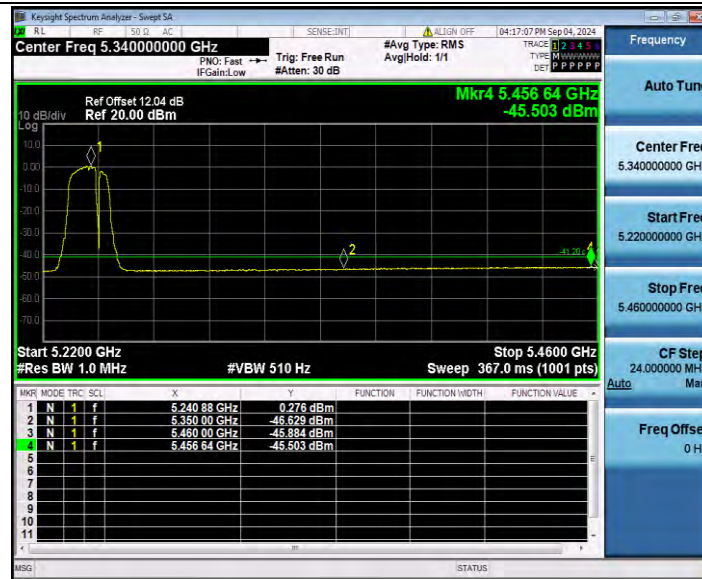
11AC20SI SO	Ant1	Low	5180	AV	4500.000	-47.84	≤ -41.20	47.36	≤ 54	PASS
				AV	4948.700	-45.27	≤ -41.20	49.93	≤ 54	PASS
				AV	5150.000	-47.03	≤ -41.20	48.17	≤ 54	PASS
				Peak	4500.000	-41.54	≤ -21.20	53.66	≤ 74	PASS
				Peak	4934.700	-36.01	≤ -21.20	59.19	≤ 74	PASS
				Peak	5150.000	-45.35	≤ -21.20	49.85	≤ 74	PASS
		High	5240	AV	5350.000	-46.96	≤ -41.20	48.24	≤ 54	PASS
				AV	5436.240	-45.57	≤ -41.20	49.63	≤ 54	PASS
				AV	5460.000	-45.88	≤ -41.20	49.32	≤ 54	PASS
				Peak	5350.000	-44.41	≤ -21.20	50.79	≤ 74	PASS
				Peak	5384.160	-37.06	≤ -21.20	58.14	≤ 74	PASS
				Peak	5460.000	-41.63	≤ -21.20	53.57	≤ 74	PASS
11AC40SI SO	Ant1	Low	5190	AV	4500.000	-47.72	≤ -41.20	47.48	≤ 54	PASS
				AV	4962.700	-45.28	≤ -41.20	49.92	≤ 54	PASS
				AV	5150.000	-46.99	≤ -41.20	48.21	≤ 54	PASS
				Peak	4500.000	-44.33	≤ -21.20	50.87	≤ 74	PASS
				Peak	5020.800	-36.69	≤ -21.20	58.51	≤ 74	PASS
				Peak	5150.000	-43.78	≤ -21.20	51.42	≤ 74	PASS
		High	5230	AV	5350.000	-46.86	≤ -41.20	48.34	≤ 54	PASS
				AV	5437.900	-45.59	≤ -41.20	49.61	≤ 54	PASS
				AV	5460.000	-46.02	≤ -41.20	49.18	≤ 54	PASS
				Peak	5350.000	-43.74	≤ -21.20	51.46	≤ 74	PASS
				Peak	5440.760	-38.01	≤ -21.20	57.19	≤ 74	PASS
				Peak	5460.000	-44.12	≤ -21.20	51.08	≤ 74	PASS

Note:

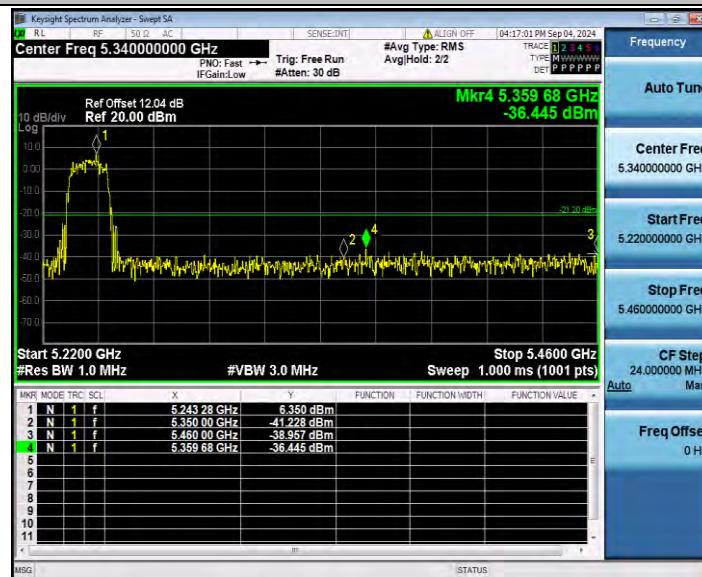
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs





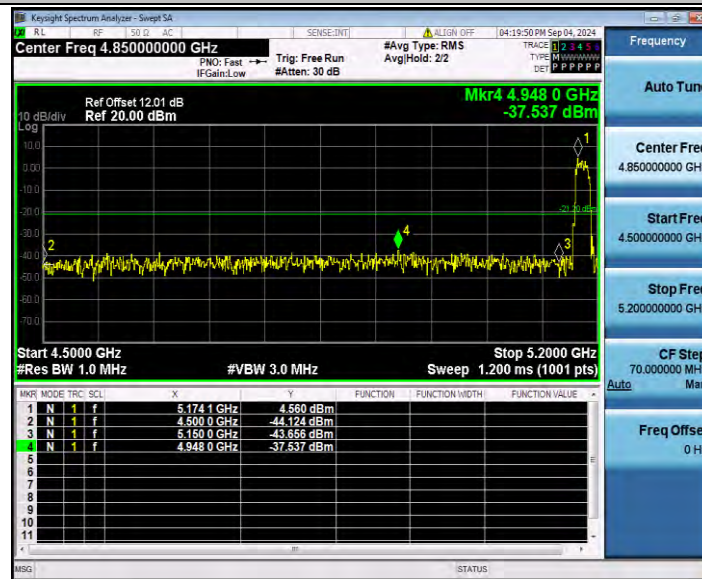
11A_Ant1_High_5240_Peak



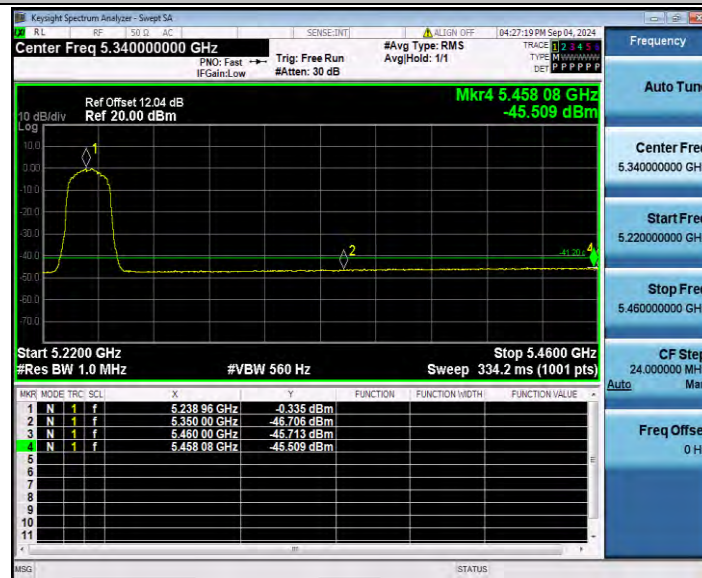
11N20SISO_Ant1_Low_5180_AV



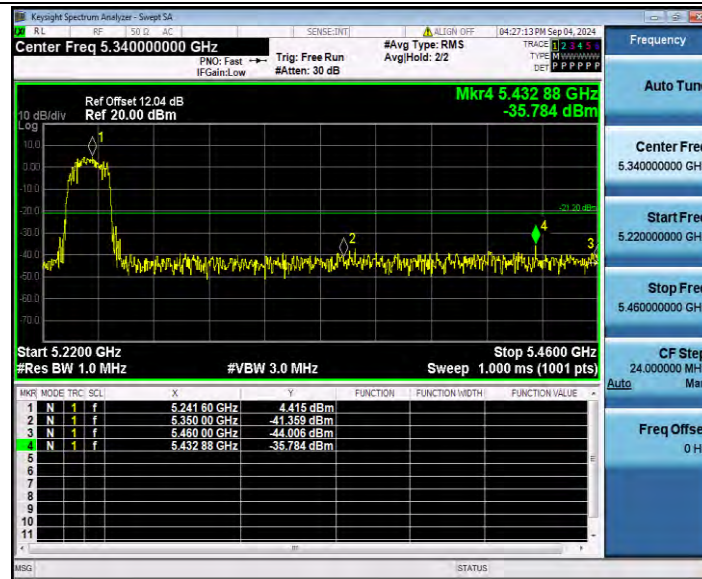
11N20SISO_Ant1_Low_5180_Peak



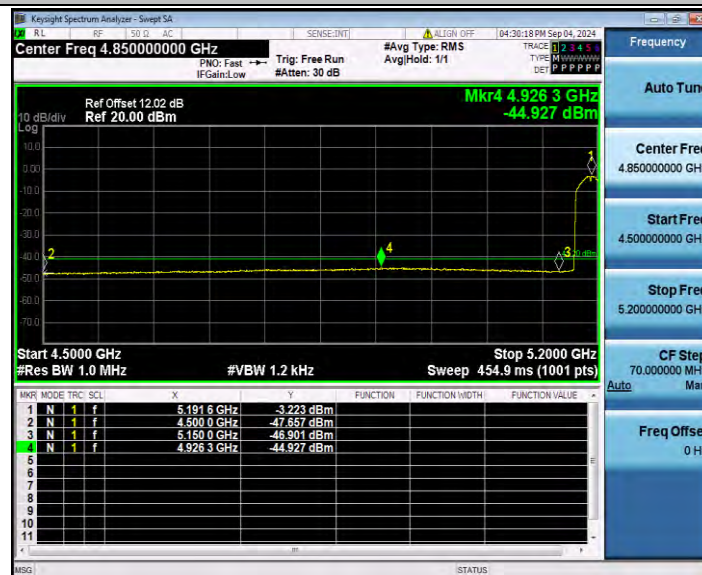
11N20SISO_Ant1_High_5240_AV



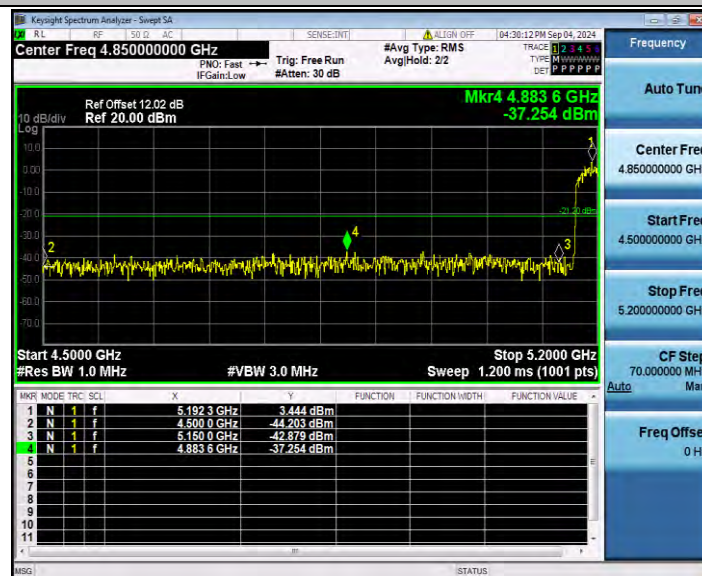
11N20SISO_Ant1_High_5240_Peak



11N40SISO_Ant1_Low_5190_AV



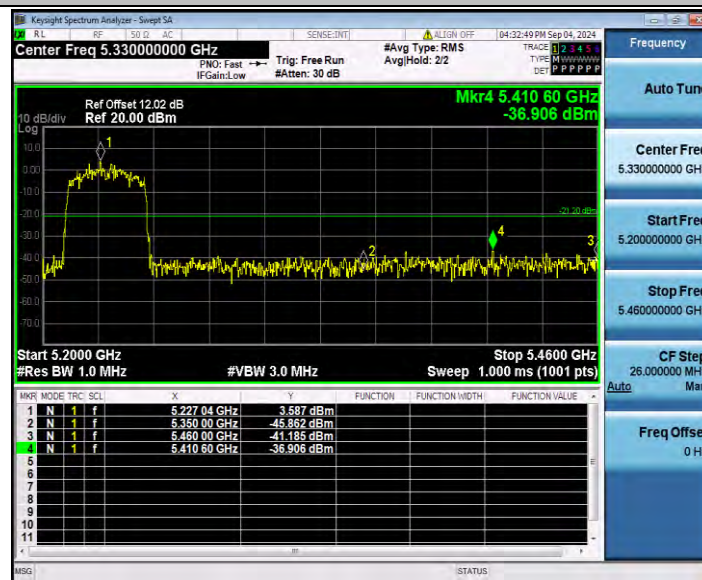
11N40SISO_Ant1_Low_5190_Peak



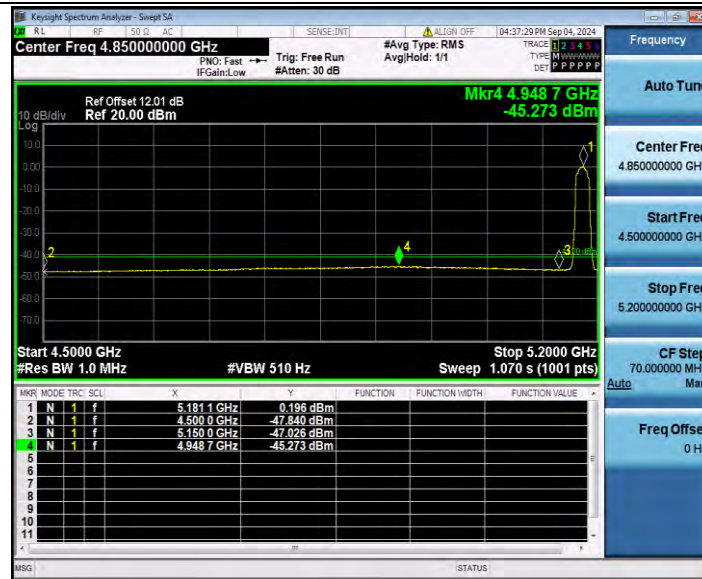
11N40SISO_Ant1_High_5230_AV



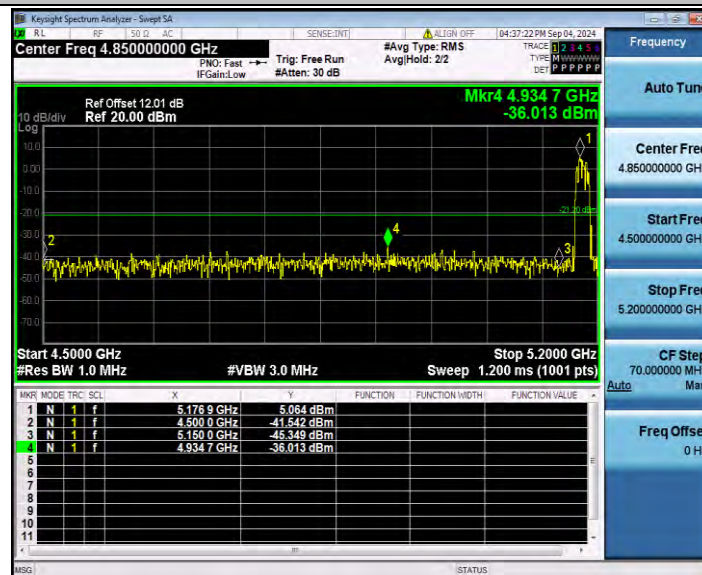
11N40SISO_Ant1_High_5230_Peak



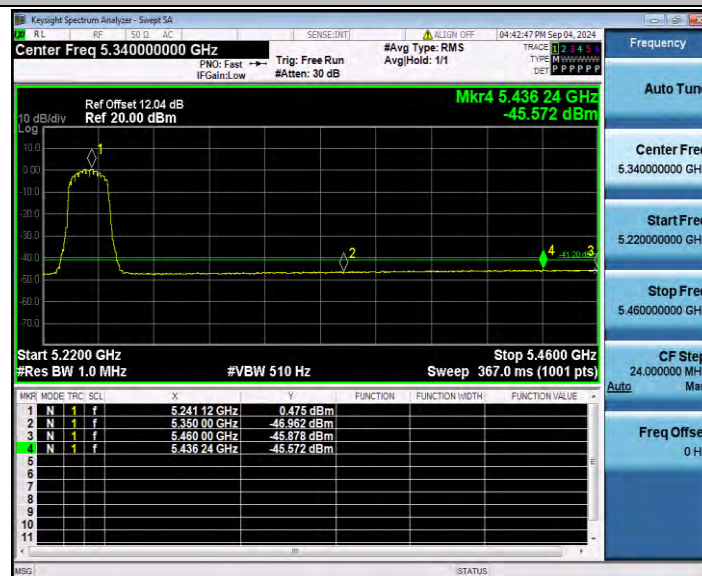
11AC20SISO_Ant1_Low_5180_AV



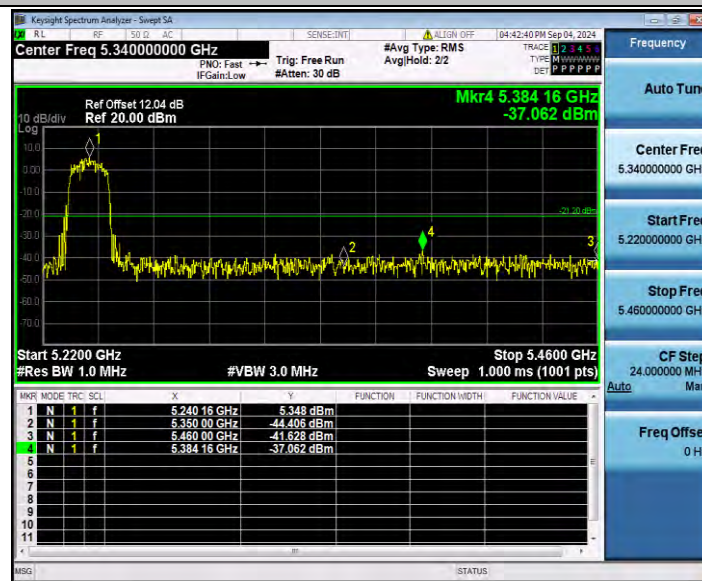
11AC20SISO_Ant1_Low_5180_Peak



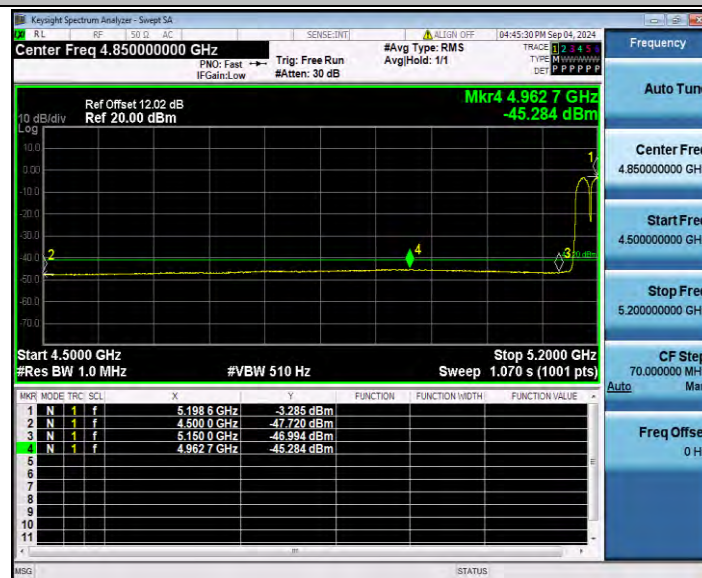
11AC20SISO_Ant1_High_5240_AV



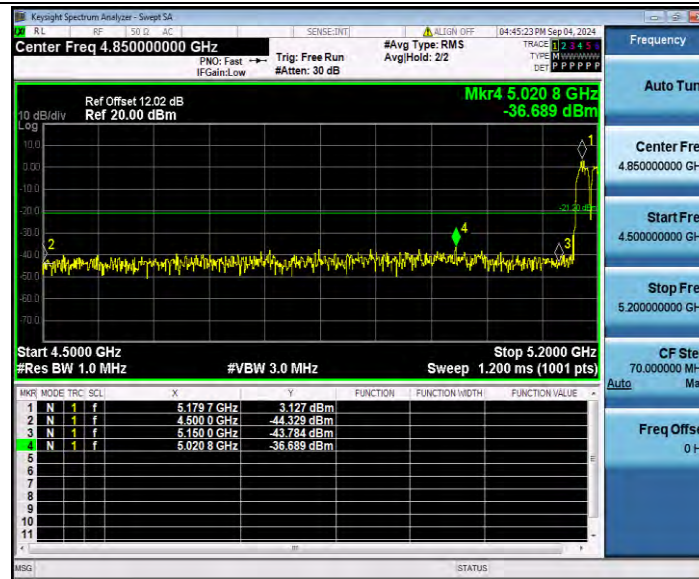
11AC20SISO_Ant1_High_5240_Peak



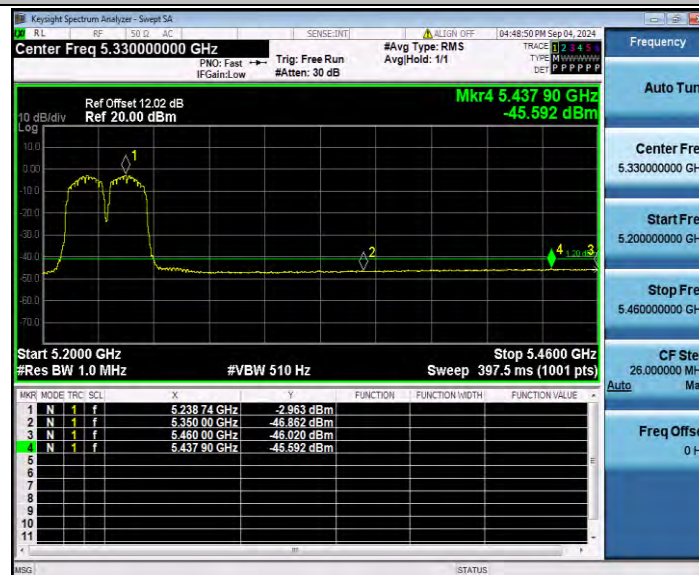
11AC40SISO_Ant1_Low_5190_AV



11AC40SISO_Ant1_Low_5190_Peak



11AC40SISO_Ant1_High_5230_AV



11AC40SISO_Ant1_High_5230_Peak

