

Appendix D

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Portable Wireless Display Monitor
Test Model: MVT89PDBW

Environmental Conditions

Temperature:	24.9°C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang Hai
Supervised by:	Fengliu Tang

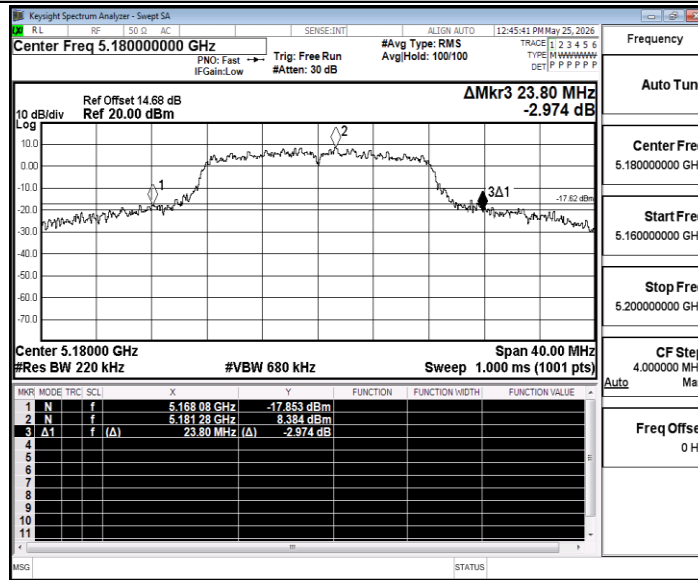
D.1 Emission Bandwidth

Test Result

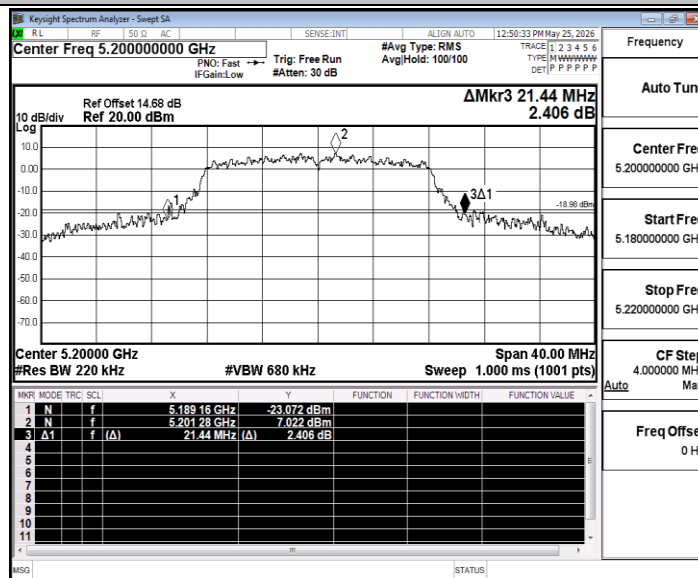
TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	23.800	5168.080	5191.880	---	---
		5200	21.440	5189.160	5210.600	---	---
		5240	23.320	5227.920	5251.240	---	---
11N20SISO	Ant1	5180	20.040	5169.880	5189.920	---	---
		5200	21.200	5188.880	5210.080	---	---
		5240	20.160	5229.960	5250.120	---	---
11N40SISO	Ant1	5190	50.160	5164.160	5214.320	---	---
		5230	48.720	5205.840	5254.560	---	---

Test Graphs

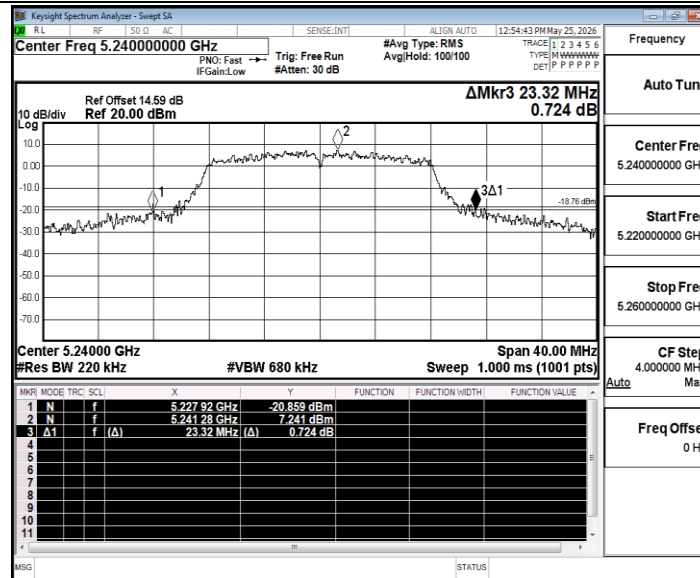
11A_Ant1_5180



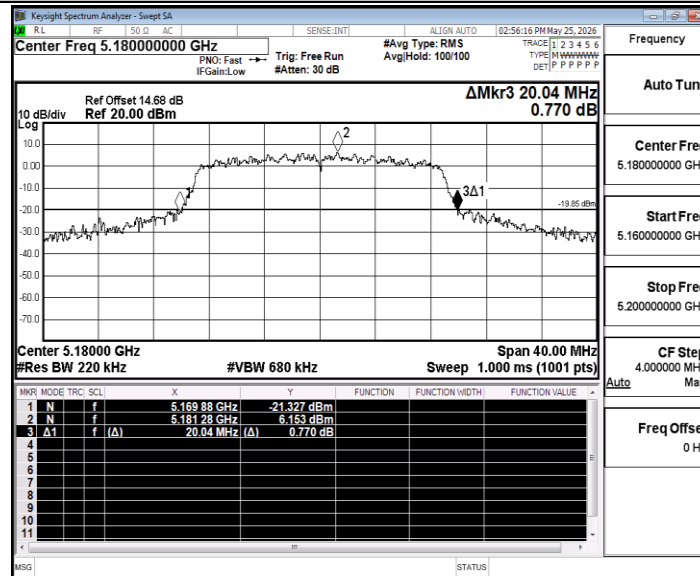
11A_Ant1_5200



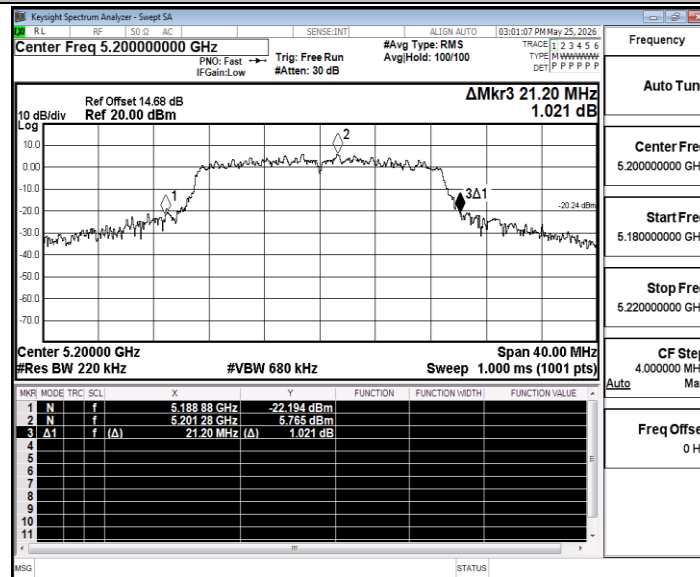
11A_Ant1_5240



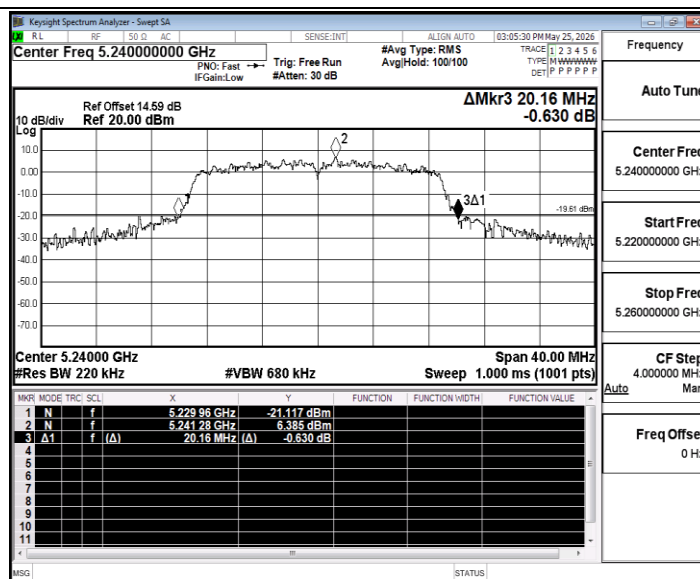
11N20SISO_Ant1_5180



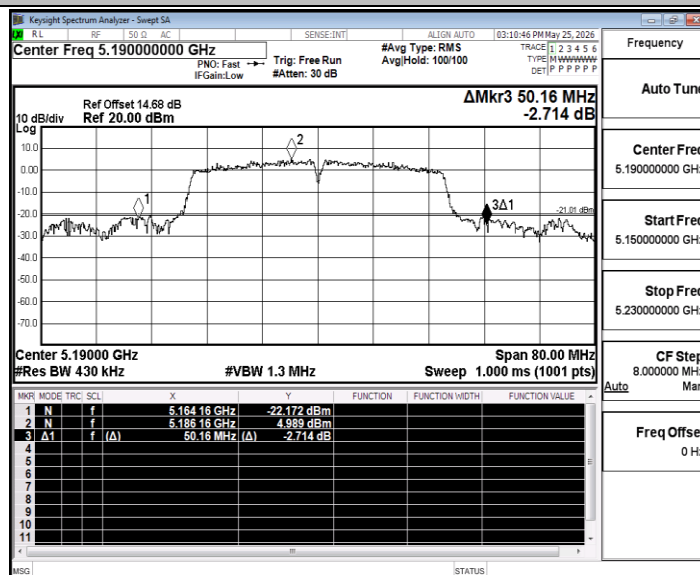
11N20SISO_Ant1_5200



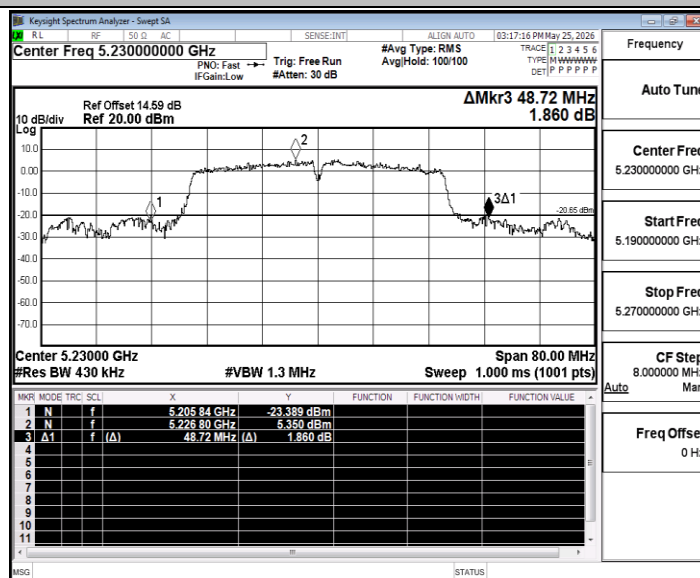
11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



D.2 Maximum conducted output power

Test Mode	Antenna	Freq(MHz)	Measured Power [dBm]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	15.11	1.63	16.74	24	PASS
		5200	15.9	1.35	17.25	24	PASS
		5240	15.13	1.63	16.76	24	PASS
11N20SISO	Ant1	5180	15.09	1.25	16.34	24	PASS
		5200	14.86	1.51	16.37	24	PASS
		5240	15.22	1.25	16.47	24	PASS
11N40SISO	Ant1	5190	14.27	1.76	16.03	24	PASS
		5230	14.28	2.34	16.62	24	PASS

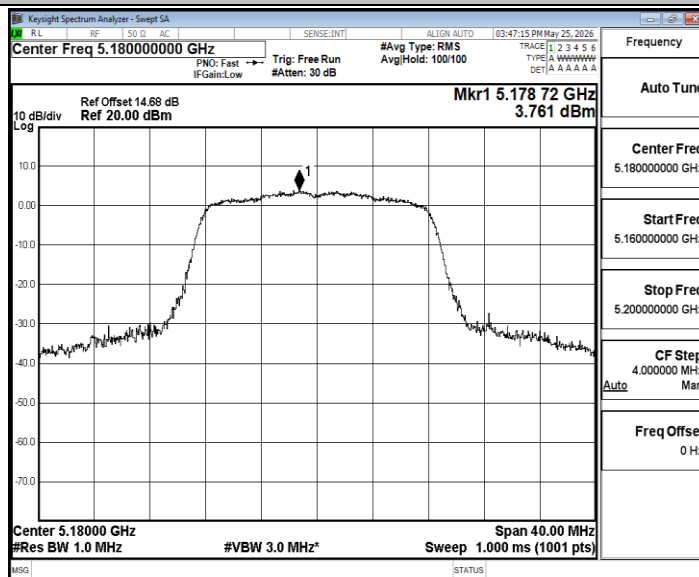
D.3 Maximum power spectral density

Test Result

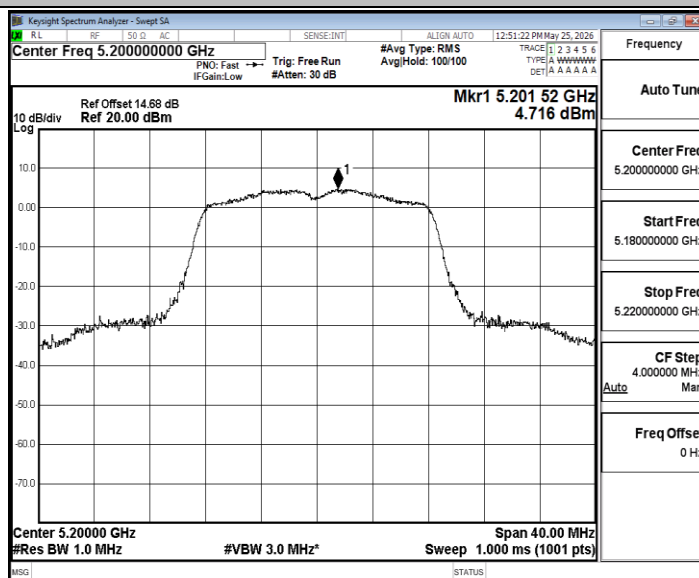
TestMode	Antenna	Freq (MHz)	Raw Data [dBm/MHz]	DC Factor	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	3.76	1.63	5.39	≤11.00	PASS
		5200	4.72	1.35	6.07	≤11.00	PASS
		5240	4.22	1.63	5.85	≤11.00	PASS
11N20SIS O	Ant1	5180	3.75	1.25	5	≤11.00	PASS
		5200	3.39	1.51	4.9	≤11.00	PASS
		5240	4.11	1.25	5.36	≤11.00	PASS
11N40SIS O	Ant1	5190	0.3	1.76	2.06	≤11.00	PASS
		5230	0.31	2.34	2.65	≤11.00	PASS

Test Graphs

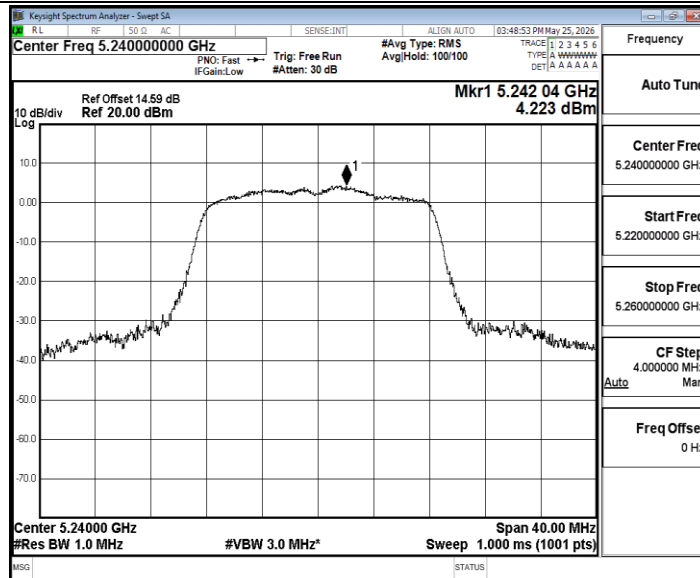
11A_Ant1_5180



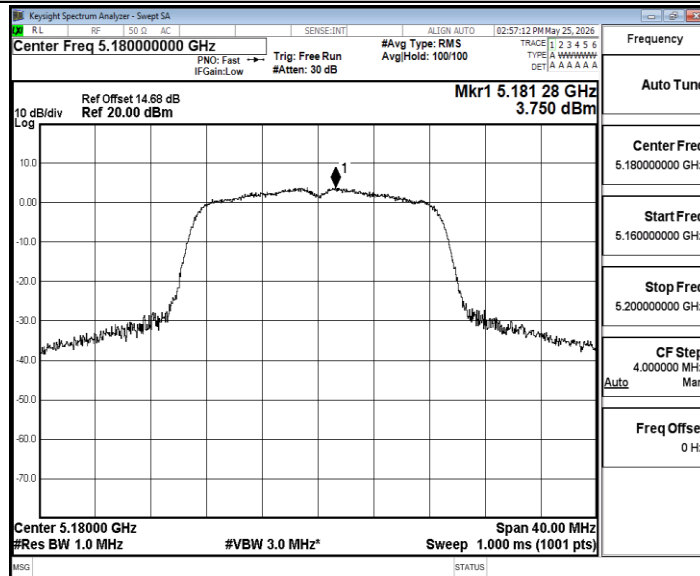
11A_Ant1_5200



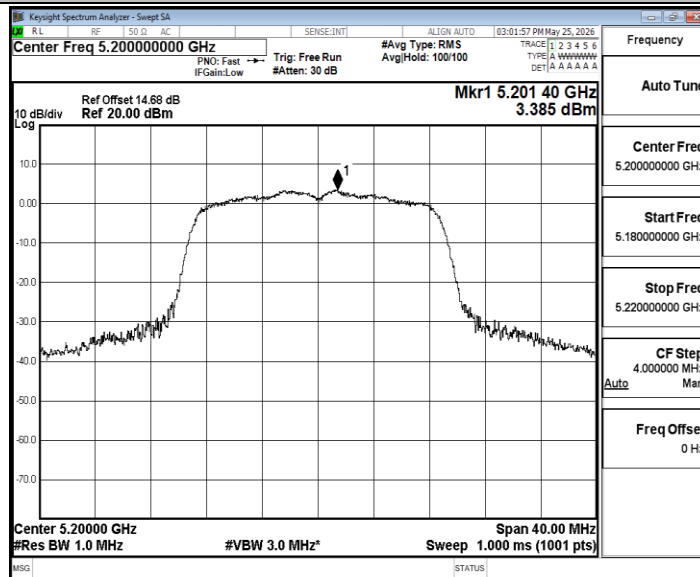
11A_Ant1_5240



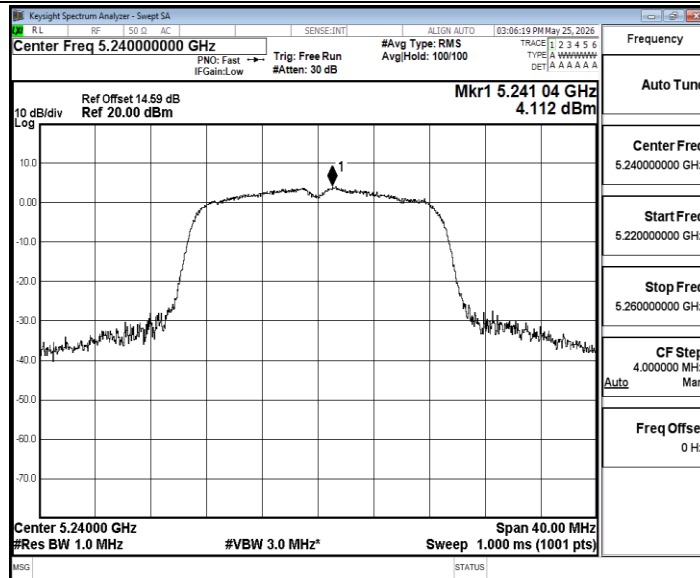
11N20SISO_Ant1_5180



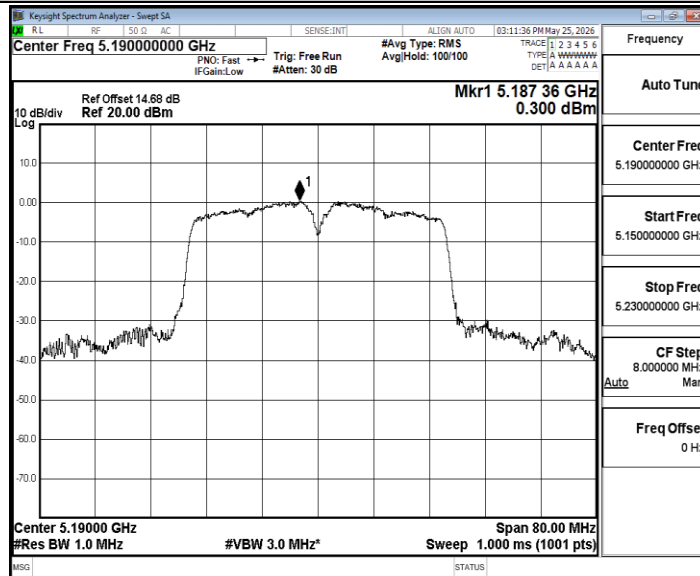
11N20SISO_Ant1_5200



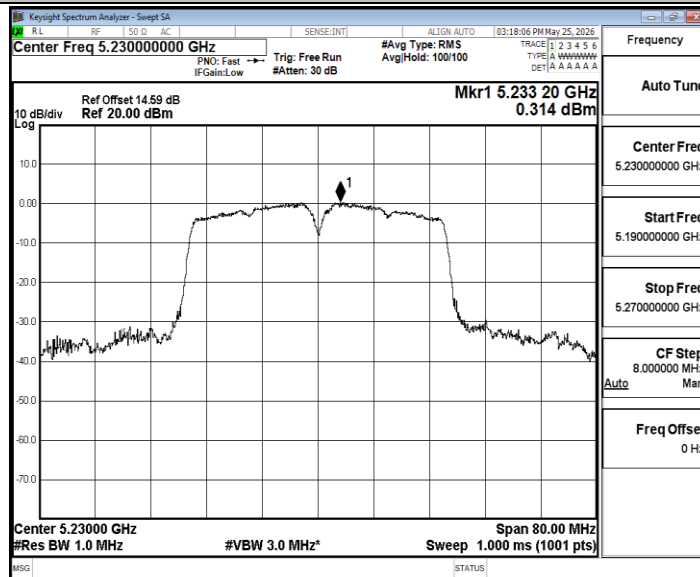
11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



D.4 Emissions in Restricted Bands

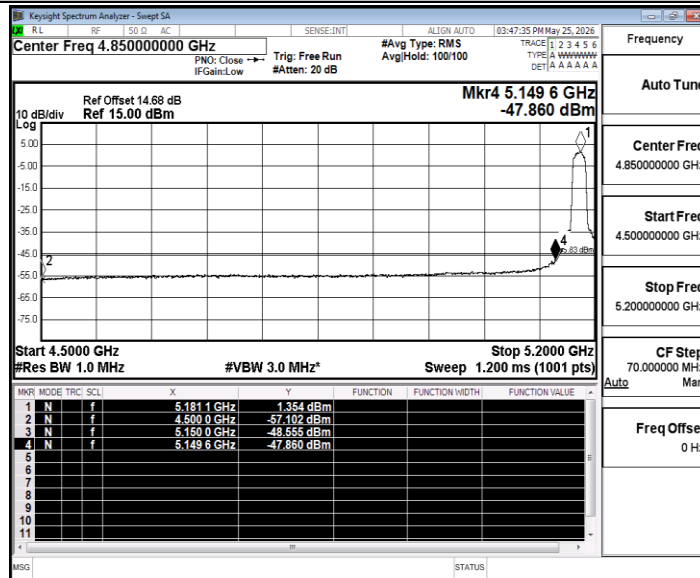
Test Mode	Antenna	Channel Name	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11A	Ant1	Low	5180	AV	4500.000	-57.1	≤-45.83	3.15	1.63	42.91	≤54	PASS
				AV	5149.600	-47.86	≤-45.83	3.15	1.63	52.15	≤54	PASS
				AV	5150.000	-48.56	≤-45.83	3.15	1.63	51.45	≤54	PASS
				Peak	4500.000	-47.86	≤-30.00	3.15	0	50.52	≤68.2	PASS
				Peak	5149.600	-32.96	≤-30.00	3.15	0	65.42	≤68.2	PASS
				Peak	5150.000	-33.14	≤-30.00	3.15	0	65.24	≤68.2	PASS
		High	5240	AV	5350.000	-53.95	≤-45.83	3.15	1.63	46.06	≤54	PASS
				AV	5352.720	-53.37	≤-45.83	3.15	1.63	46.64	≤54	PASS
				AV	5460.000	-56.04	≤-45.83	3.15	1.63	43.97	≤54	PASS
				Peak	5350.000	-46.86	≤-30.00	3.15	0	51.52	≤68.2	PASS
				Peak	5362.320	-43.48	≤-30.00	3.15	0	54.90	≤68.2	PASS
				Peak	5460.000	-48.8	≤-30.00	3.15	0	49.58	≤68.2	PASS
11N2 OSIS O	Ant1	Low	5180	AV	4500.000	-56.31	≤-45.45	3.15	1.25	43.32	≤54	PASS
				AV	5149.600	-46.44	≤-45.45	3.15	1.25	53.19	≤54	PASS
				AV	5150.000	-46.18	≤-45.45	3.15	1.25	53.45	≤54	PASS
				Peak	4500.000	-47.31	≤-30.00	3.15	0	51.07	≤68.2	PASS
				Peak	5149.600	-30.5	≤-30.00	3.15	0	67.88	≤68.2	PASS
				Peak	5150.000	-36.96	≤-30.00	3.15	0	61.42	≤68.2	PASS
		High	5240	AV	5350.000	-54.72	≤-45.45	3.15	1.25	44.91	≤54	PASS
				AV	5351.760	-53.78	≤-45.45	3.15	1.25	45.85	≤54	PASS
				AV	5460.000	-55.65	≤-45.45	3.15	1.25	43.98	≤54	PASS
				Peak	5350.000	-46.31	≤-30.00	3.15	0	52.07	≤68.2	PASS
				Peak	5357.760	-43.5	≤-30.00	3.15	0	54.88	≤68.2	PASS
				Peak	5460.000	-47.53	≤-30.00	3.15	0	50.85	≤68.2	PASS
11N4 OSIS O	Ant1	Low	5190	AV	4500.000	-56.74	≤-45.96	3.15	1.76	43.40	≤54	PASS
				AV	5146.800	-49.96	≤-45.96	3.15	1.76	50.18	≤54	PASS
				AV	5150.000	-50.58	≤-45.96	3.15	1.76	49.56	≤54	PASS
				Peak	4500.000	-47.39	≤-30.00	3.15	0	50.99	≤68.2	PASS
				Peak	5146.800	-34.3	≤-30.00	3.15	0	64.08	≤68.2	PASS
				Peak	5150.000	-41.82	≤-30.00	3.15	0	56.56	≤68.2	PASS
		High	5230	AV	5350.000	-54.3	≤-46.54	3.15	2.34	46.42	≤54	PASS
				AV	5356.520	-53.46	≤-46.54	3.15	2.34	47.26	≤54	PASS
				AV	5460.000	-55.54	≤-46.54	3.15	2.34	45.18	≤54	PASS
				Peak	5350.000	-44.08	≤-30.00	3.15	0	54.30	≤68.2	PASS
				Peak	5353.400	-42.91	≤-30.00	3.15	0	55.47	≤68.2	PASS
				Peak	5460.000	-48.55	≤-30.00	3.15	0	49.83	≤68.2	PASS

Note:

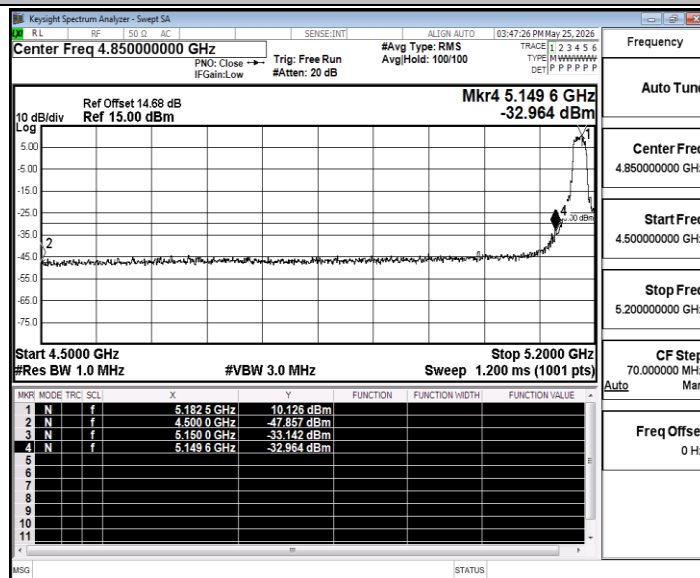
1. The Antenna Gain is compensated in the graph.

Test Graphs

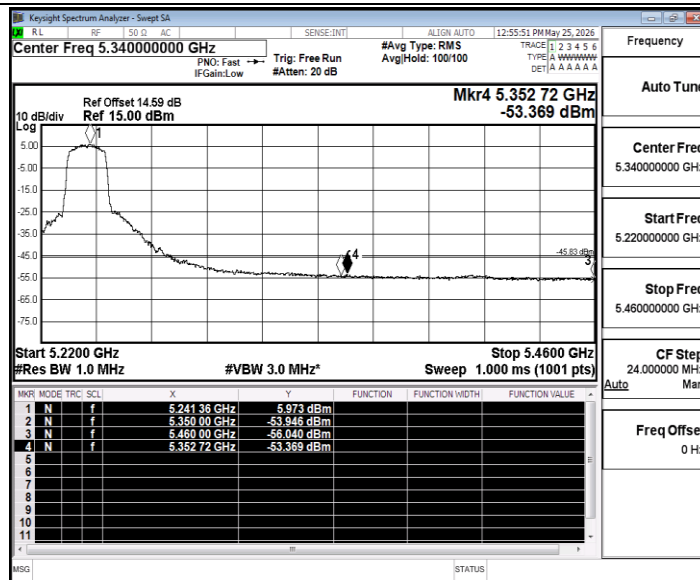
11A_Ant1_Low_5180_AV



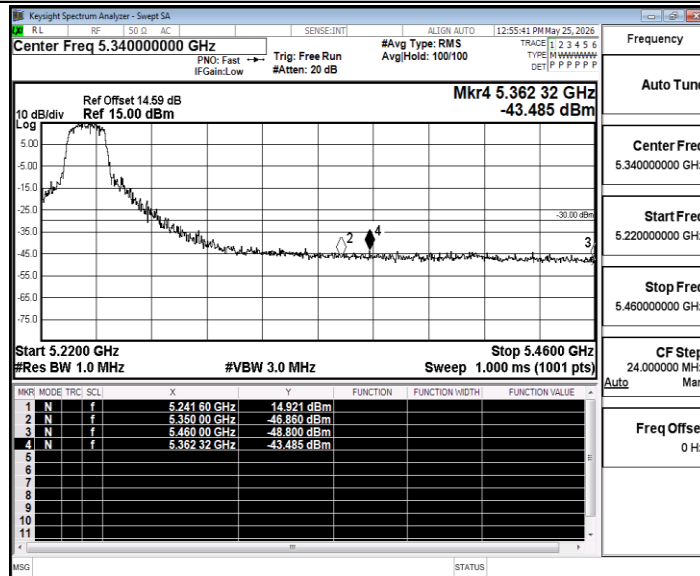
11A_Ant1_Low_5180_Peak



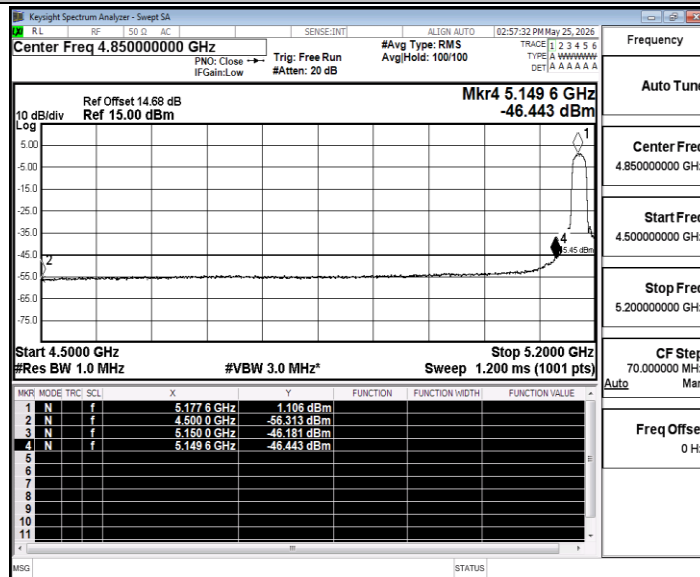
11A_Ant1_High_5240_AV



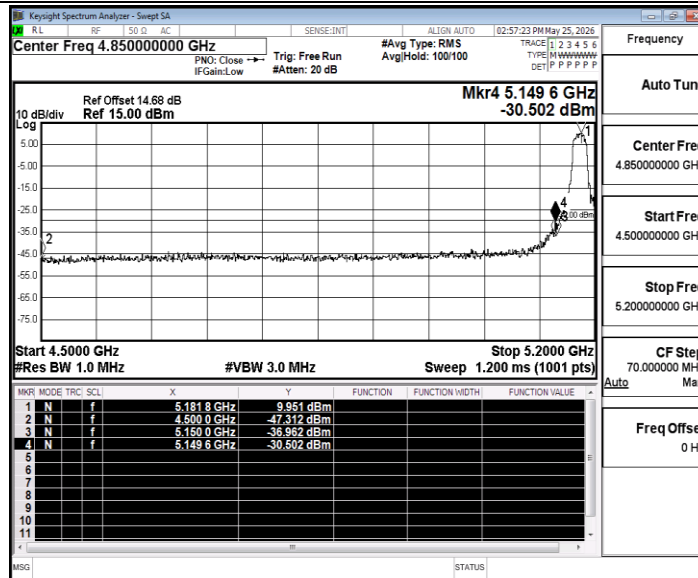
11A_Ant1_High_5240_Peak



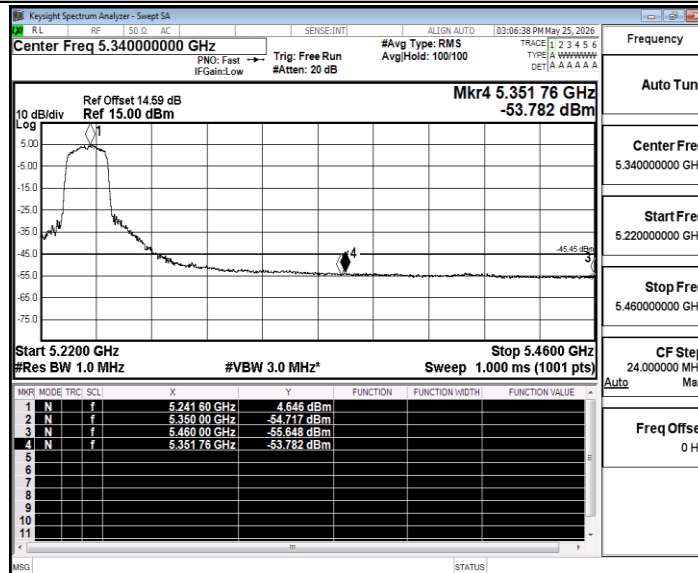
11N20SISO_Ant1_Low_5180_AV



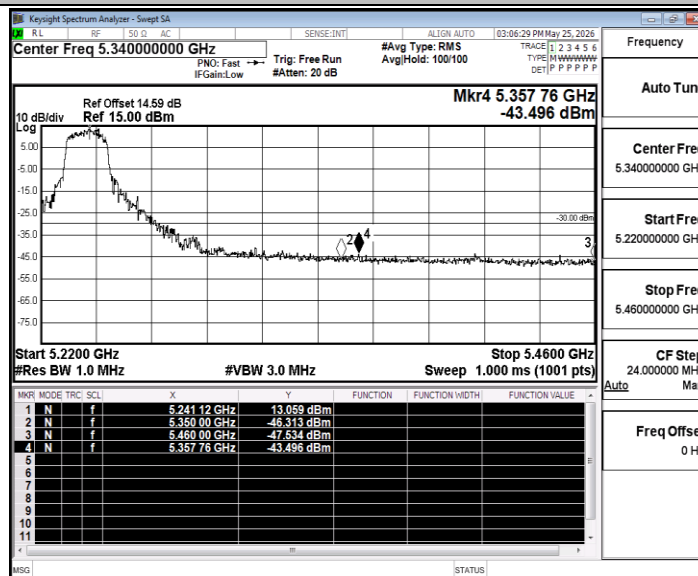
11N20SISO_Ant1_Low_5180_Peak



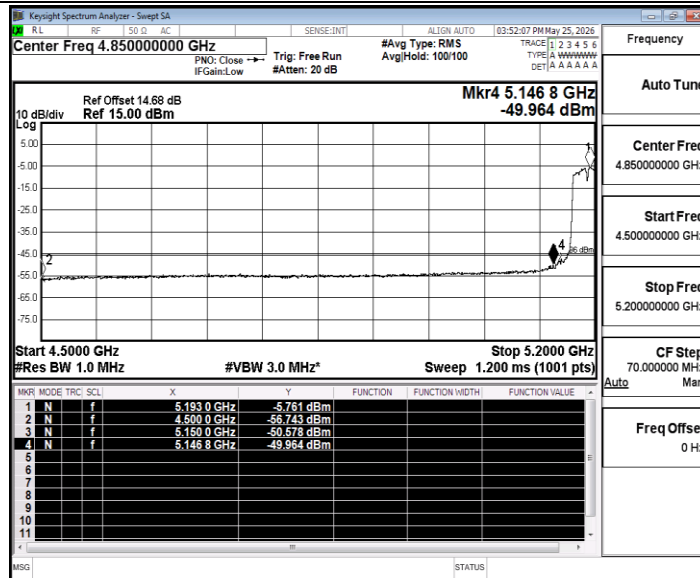
11N20SISO_Ant1_High_5240_AV



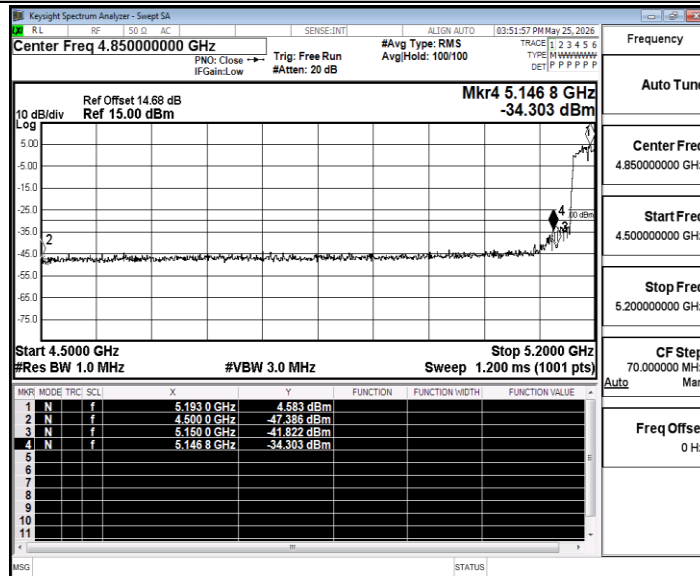
11N20SISO_Ant1_High_5240_Peak



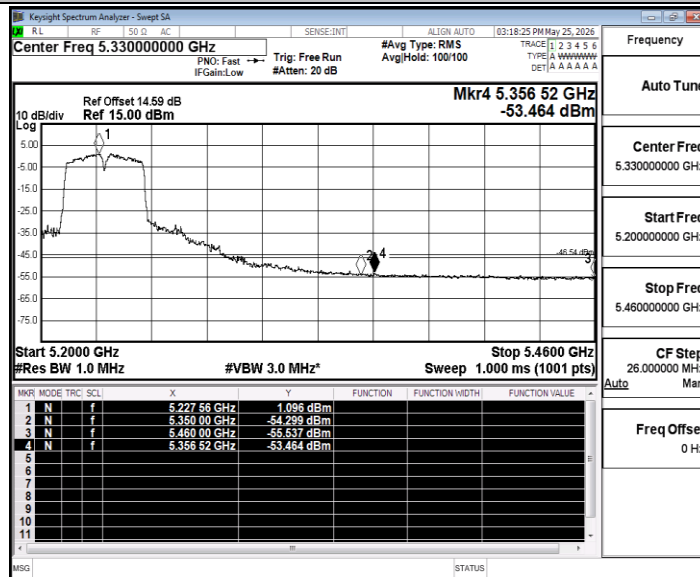
11N40SISO_Ant1_Low_5190_AV



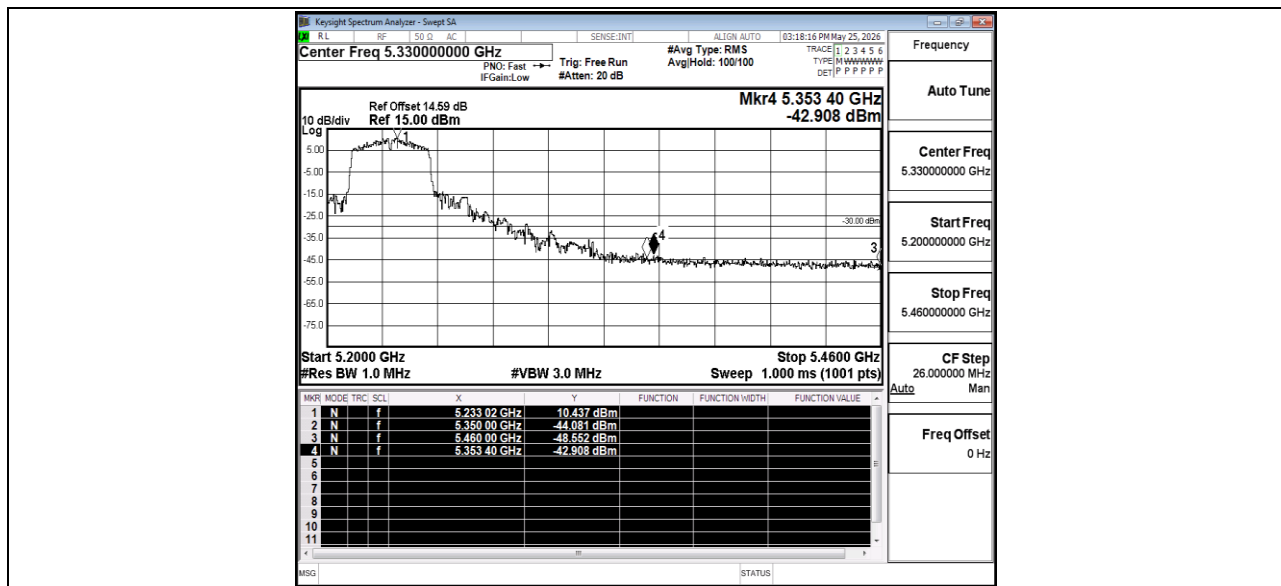
11N40SISO_Ant1_Low_5190_Peak



11N40SISO_Ant1_High_5230_AV



11N40SISO_Ant1_High_5230_Peak



D.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Freq(MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	NT	0.00	0.000000	20	PASS
			LV	NT	-20000.00	-3.861004	20	PASS
			HV	NT	-20000.00	-3.861004	20	PASS
		5200	NV	NT	0.00	0.000000	20	PASS
			LV	NT	-20000.00	-3.846154	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5240	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-20000.00	-3.816794	20	PASS
11N20SISO	Ant1	5180	NV	NT	0.00	0.000000	20	PASS
			LV	NT	-20000.00	-3.861004	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5200	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-20000.00	-3.846154	20	PASS
		5240	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-20000.00	-3.816794	20	PASS
11N40SISO	Ant1	5190	NV	NT	40000.00	7.707129	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5230	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS

Temperature								
TestMode	Antenna	Freq(MHz)	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-20000.00	-3.861004	20	PASS
			NV	-10	20000.00	3.861004	20	PASS
			NV	0	-20000.00	-3.861004	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-20000.00	-3.861004	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS

		5200	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-20000.00	-3.846154	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-20000.00	-3.846154	20	PASS
			NV	40	-20000.00	-3.846154	20	PASS
			NV	50	20000.00	3.846154	20	PASS
		5240	NV	-30	20000.00	3.816794	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	-20000.00	-3.816794	20	PASS
			NV	10	-20000.00	-3.816794	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-20000.00	-3.816794	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS
11N20SIS O	Ant1	5180	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-40000.00	-7.722008	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-20000.00	-3.861004	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-20000.00	-3.861004	20	PASS
			NV	50	20000.00	3.861004	20	PASS
		5200	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-40000.00	-7.692308	20	PASS
			NV	-10	-20000.00	-3.846154	20	PASS
			NV	0	-40000.00	-7.692308	20	PASS
			NV	10	40000.00	7.692308	20	PASS
			NV	20	40000.00	7.692308	20	PASS
			NV	30	-20000.00	-3.846154	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	-20000.00	-3.846154	20	PASS
		5240	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-20000.00	-3.816794	20	PASS
			NV	-10	20000.00	3.816794	20	PASS
			NV	0	-40000.00	-7.633588	20	PASS
			NV	10	-20000.00	-3.816794	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-20000.00	-3.816794	20	PASS

11N40SIS O	Ant1		NV	40	20000.00	3.816794	20	PASS
			NV	50	20000.00	3.816794	20	PASS
		5190	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	40000.00	7.707129	20	PASS
			NV	0	40000.00	7.707129	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	40000.00	7.707129	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5230	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-40000.00	-7.648184	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	40000.00	7.648184	20	PASS
			NV	50	40000.00	7.648184	20	PASS

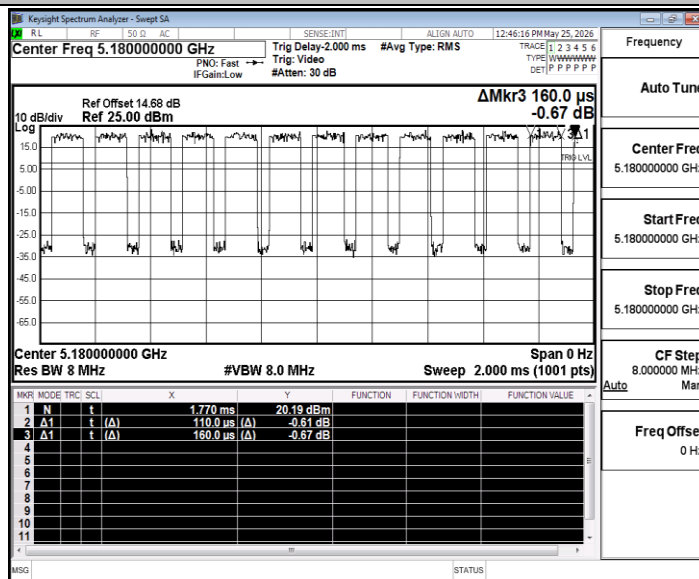
D.6 Duty Cycle

Test Result

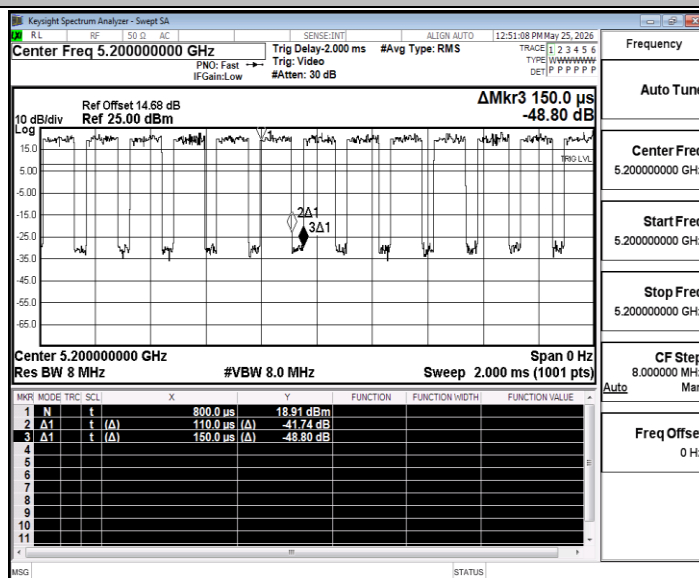
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor	Limit	Verdict
11A	Ant1	5180	0.11	0.16	68.75	1.63	---	---
		5200	0.11	0.15	73.33	1.35	---	---
		5240	0.11	0.16	68.75	1.63	---	---
11N20SISO	Ant1	5180	0.12	0.16	75.00	1.25	---	---
		5200	0.12	0.17	70.59	1.51	---	---
		5240	0.12	0.16	75.00	1.25	---	---
11N40SISO	Ant1	5190	0.08	0.12	66.67	1.76	---	---
		5230	0.07	0.12	58.33	2.34	---	---

Test Graphs

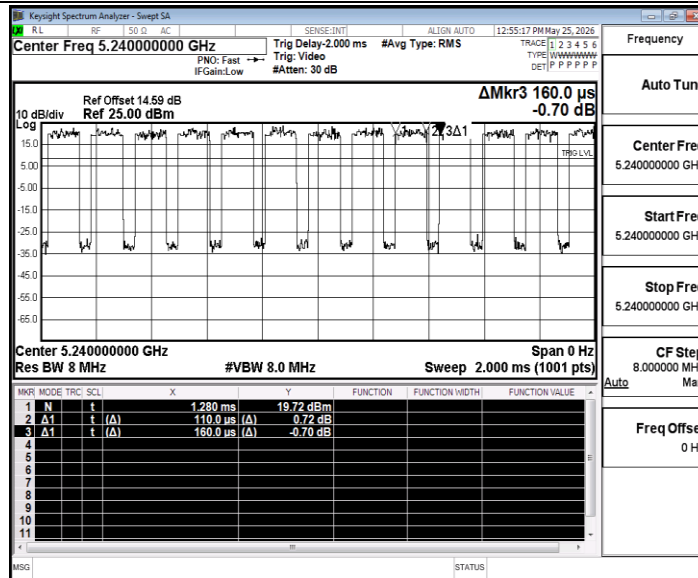
11A_Ant1_5180



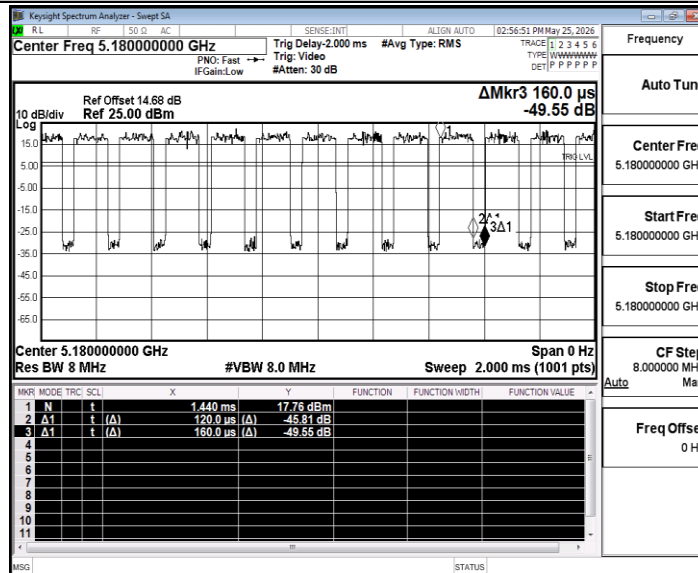
11A_Ant1_5200



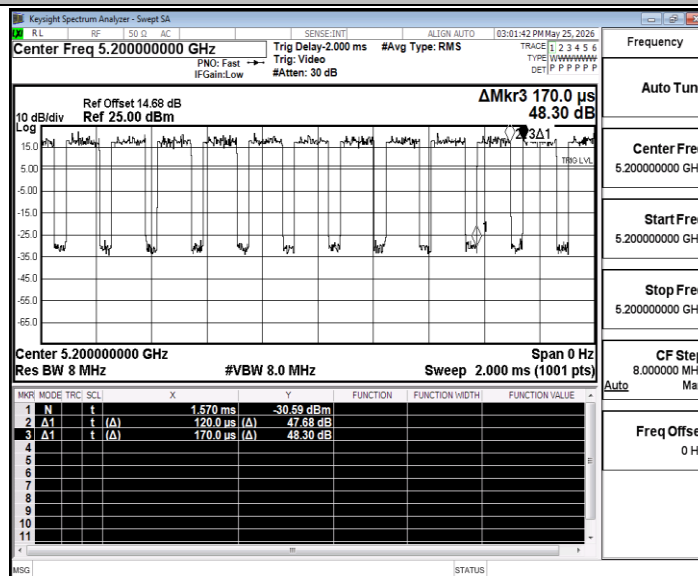
11A_Ant1_5240



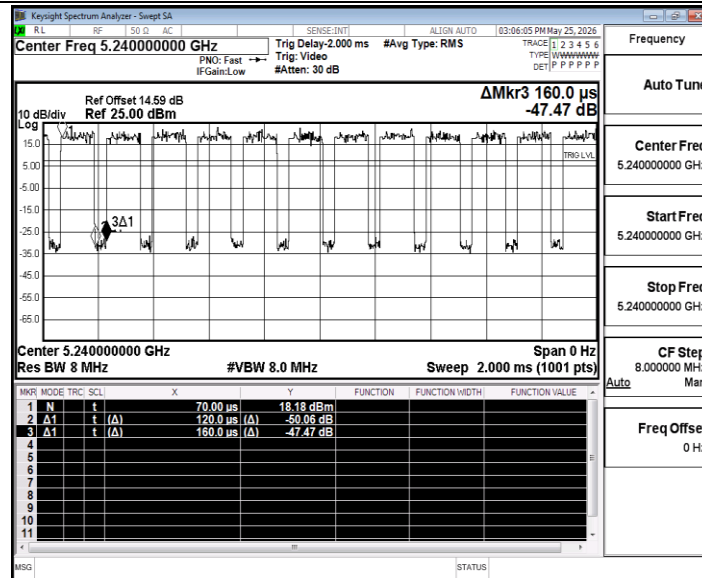
11N20SISO_Ant1_5180



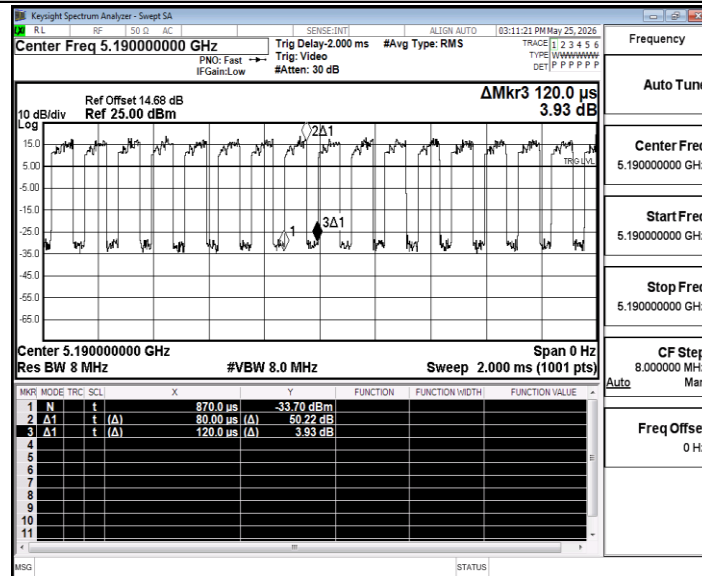
11N20SISO_Ant1_5200



11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230

