

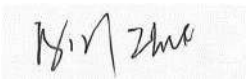
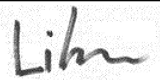


Appendix D

RF Test Data for 5.2G WIFI (Conducted Measurement)

Product Name: Smart TV Box
Test Model: T95PLUS

Environmental Conditions

Temperature:	22.8° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	 Bill Zhu
Supervised by:	 Li Huan



D.1 Emission Bandwidth

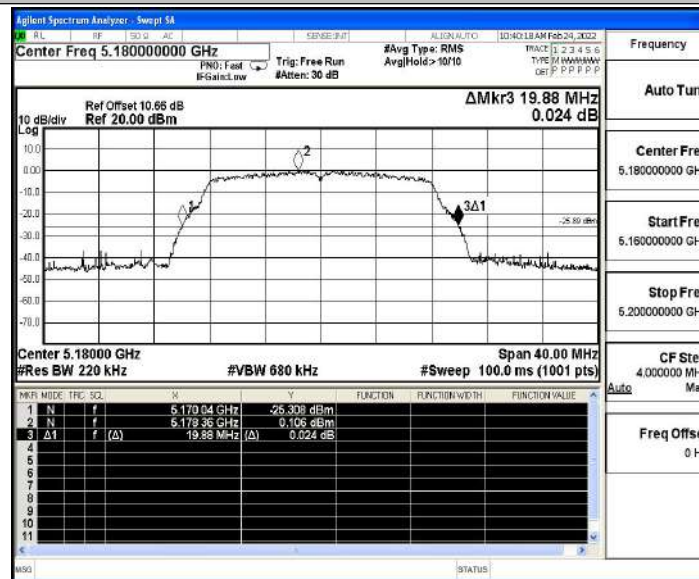
Test Result

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.880	5170.040	5189.920	---	---
		5220	20.360	5209.800	5230.160	---	---
		5240	20.040	5229.960	5250.000	---	---
11N20SISO	Ant1	5180	20.240	5169.840	5190.080	---	---
		5220	20.360	5209.800	5230.160	---	---
		5240	20.320	5229.840	5250.160	---	---
11N40SISO	Ant1	5190	40.640	5169.680	5210.320	---	---
		5230	40.640	5209.600	5250.240	---	---
11AC20SISO	Ant1	5180	20.280	5169.800	5190.080	---	---
		5220	20.360	5209.760	5230.120	---	---
		5240	20.280	5229.800	5250.080	---	---
11AC40SISO	Ant1	5190	40.480	5169.680	5210.160	---	---
		5230	40.320	5209.760	5250.080	---	---
11AC80SISO	Ant1	5210	80.960	5169.520	5250.480	---	---

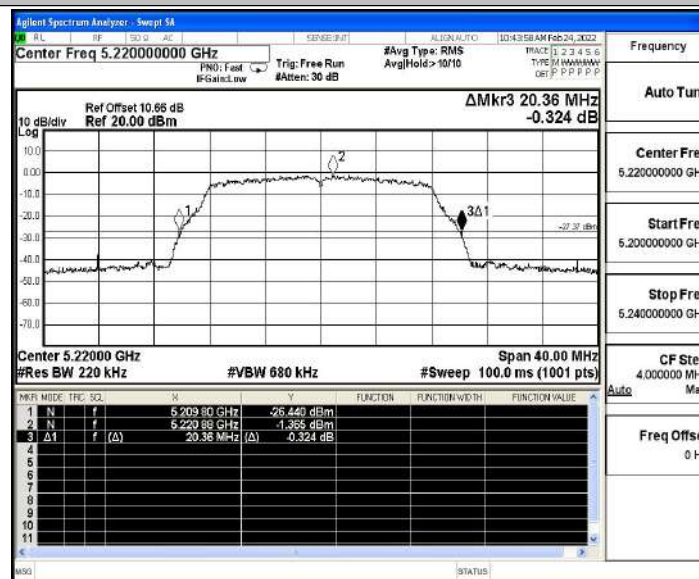


Test Graphs

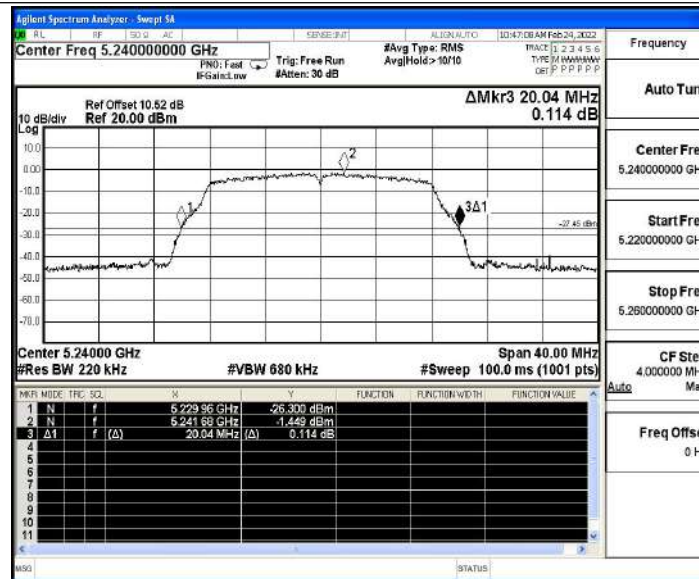
11A_Ant1_5180



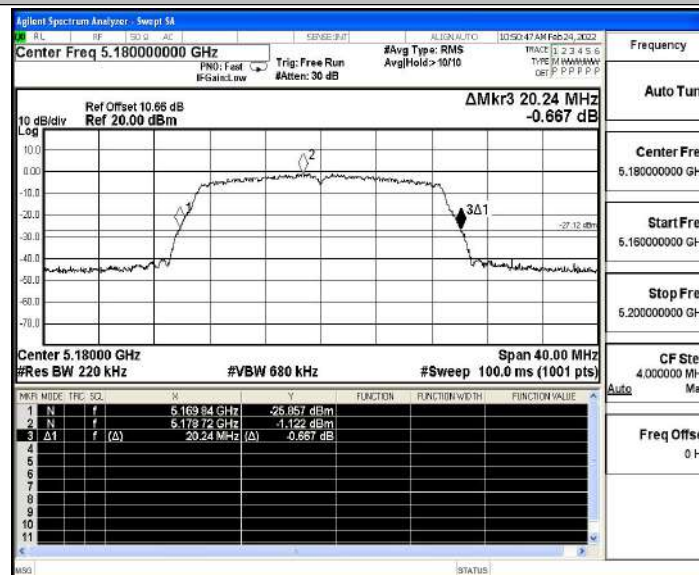
11A_Ant1_5220



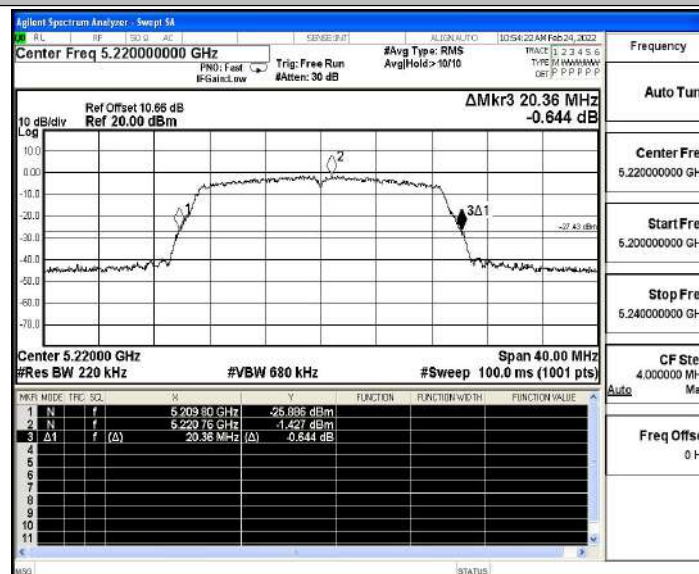
11A_Ant1_5240



11N20SISO_Ant1_5180

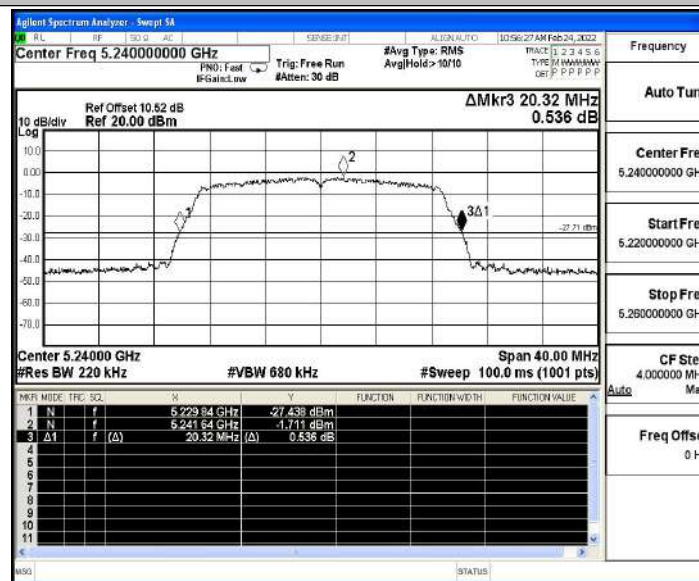


11N20SISO_Ant1_5220

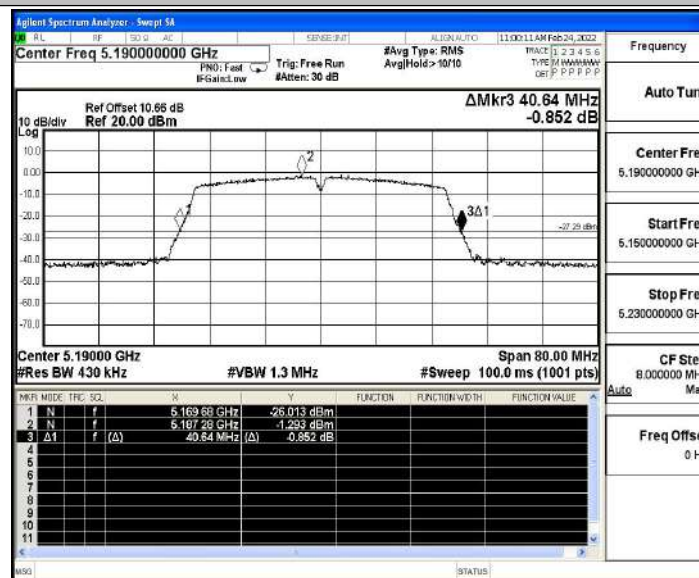




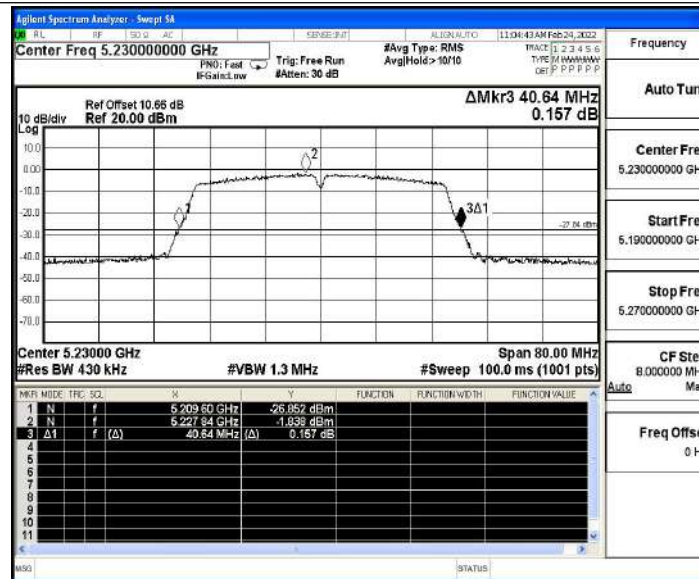
11N20SISO_Ant1_5240



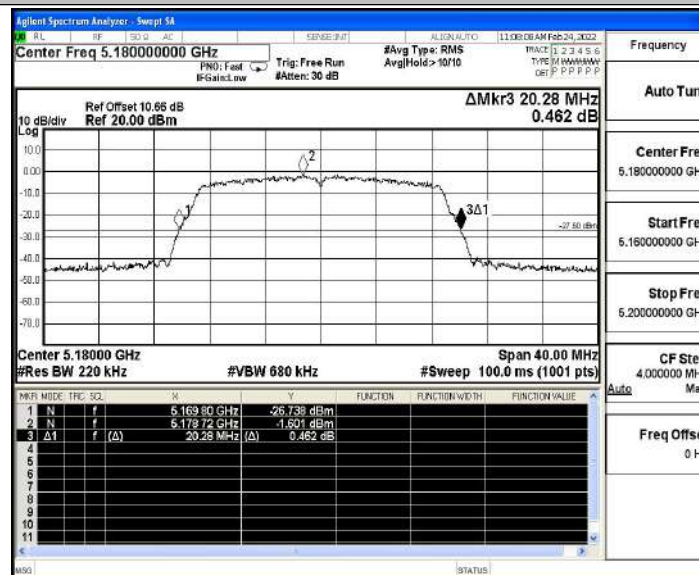
11N40SISO_Ant1_5190



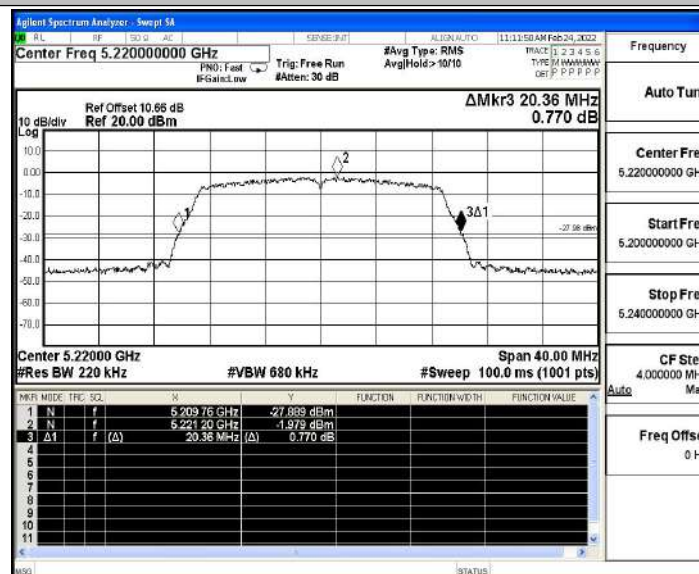
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

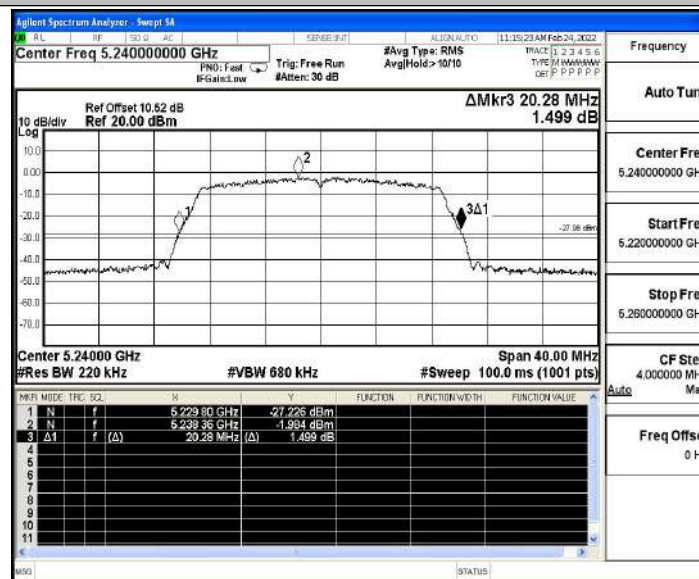


11AC20SISO_Ant1_5220

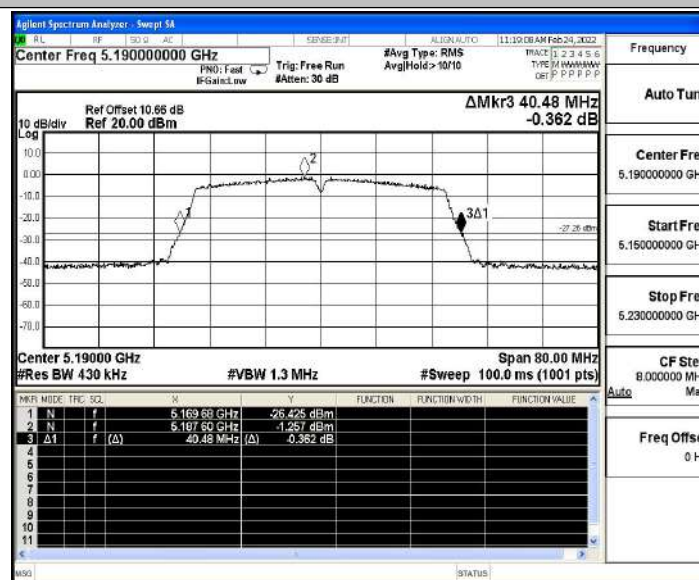




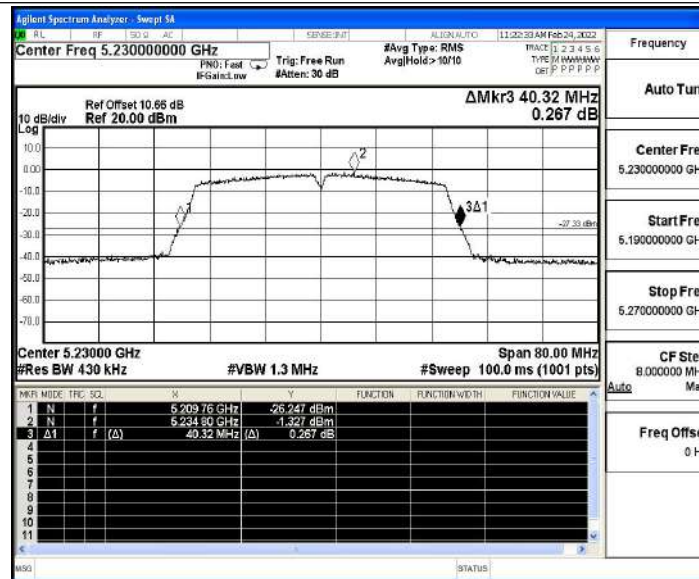
11AC20SISO_Ant1_5240



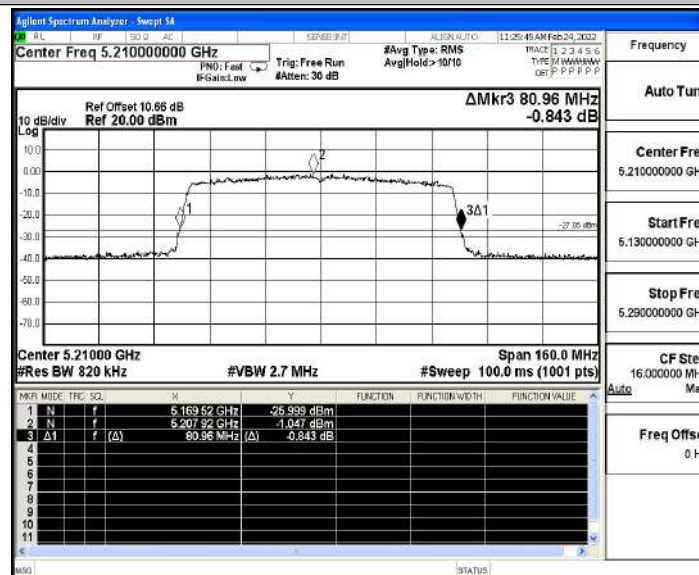
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210





D.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5180	8.17	≤ 23.98	PASS
		5220	7.62	≤ 23.98	PASS
		5240	7.78	≤ 23.98	PASS
11N20SISO	Ant1	5180	8.08	≤ 23.98	PASS
		5220	7.59	≤ 23.98	PASS
		5240	7.10	≤ 23.98	PASS
11N40SISO	Ant1	5190	7.54	≤ 23.98	PASS
		5230	7.25	≤ 23.98	PASS
11AC20SISO	Ant1	5180	7.58	≤ 23.98	PASS
		5220	7.13	≤ 23.98	PASS
		5240	7.16	≤ 23.98	PASS
11AC40SISO	Ant1	5190	7.54	≤ 23.98	PASS
		5230	7.25	≤ 23.98	PASS
11AC80SISO	Ant1	5210	7.42	≤ 23.98	PASS

Note: The Duty Cycle Factor is compensated in the graph.



D.3 Maximum power spectral density

Test Result

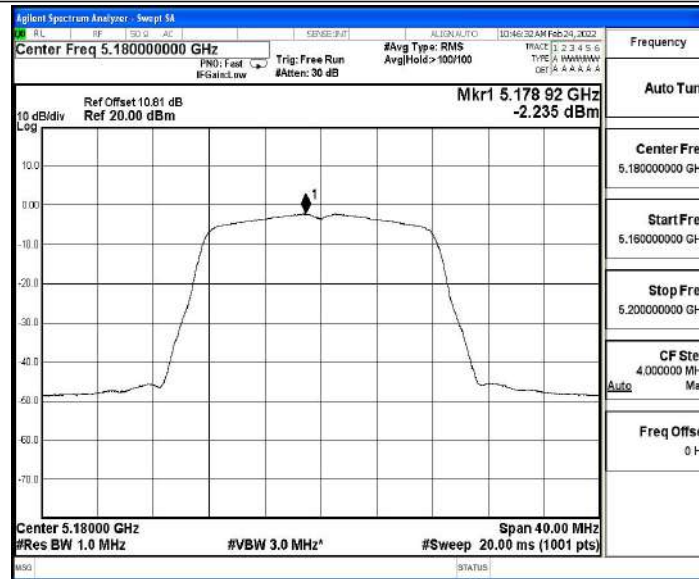
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-2.22	≤ 11.00	PASS
		5220	-2.69	≤ 11.00	PASS
		5240	-2.66	≤ 11.00	PASS
11N20SISO	Ant1	5180	-2.48	≤ 11.00	PASS
		5220	-3.56	≤ 11.00	PASS
		5240	-3.49	≤ 11.00	PASS
11N40SISO	Ant1	5190	-6.04	≤ 11.00	PASS
		5230	-6.29	≤ 11.00	PASS
11AC20SISO	Ant1	5180	-3.04	≤ 11.00	PASS
		5220	-3.47	≤ 11.00	PASS
		5240	-3.52	≤ 11.00	PASS
11AC40SISO	Ant1	5190	-5.87	≤ 11.00	PASS
		5230	-6.39	≤ 11.00	PASS
11AC80SISO	Ant1	5210	-9.35	≤ 11.00	PASS

Note: 1.The Duty Cycle Factor and RBW Factor is compensated in the graph.

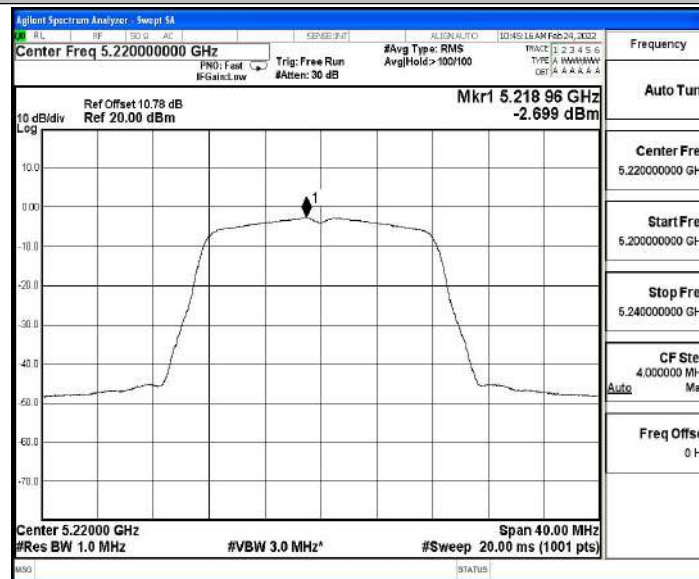


Test Graphs

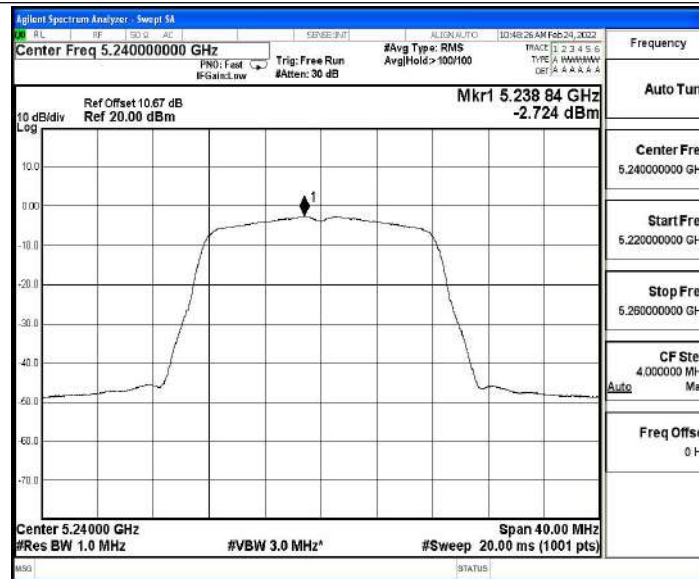
11A_Ant1_5180



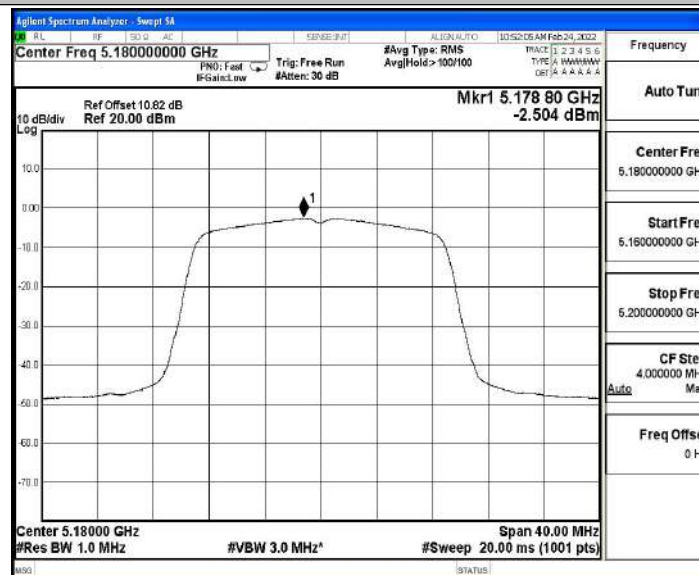
11A_Ant1_5220



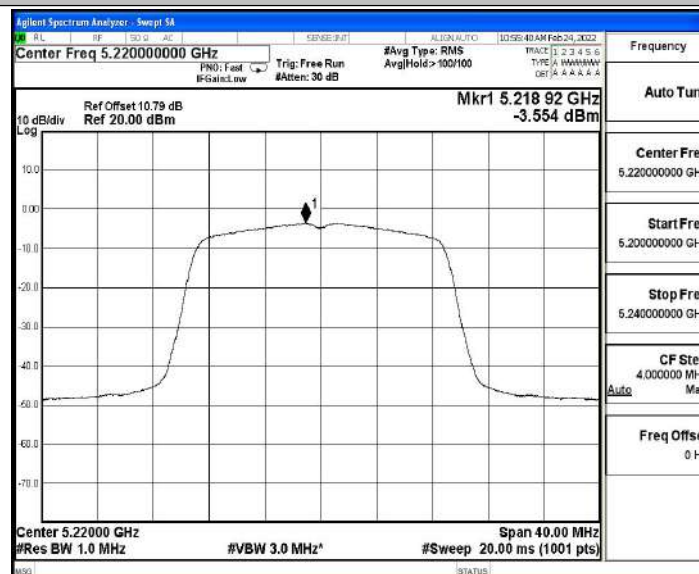
11A_Ant1_5240



11N20SISO_Ant1_5180

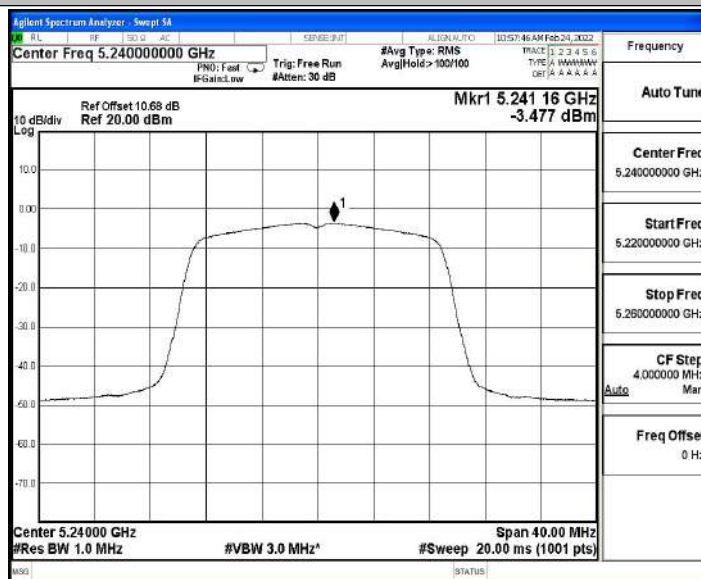


11N20SISO_Ant1_5220

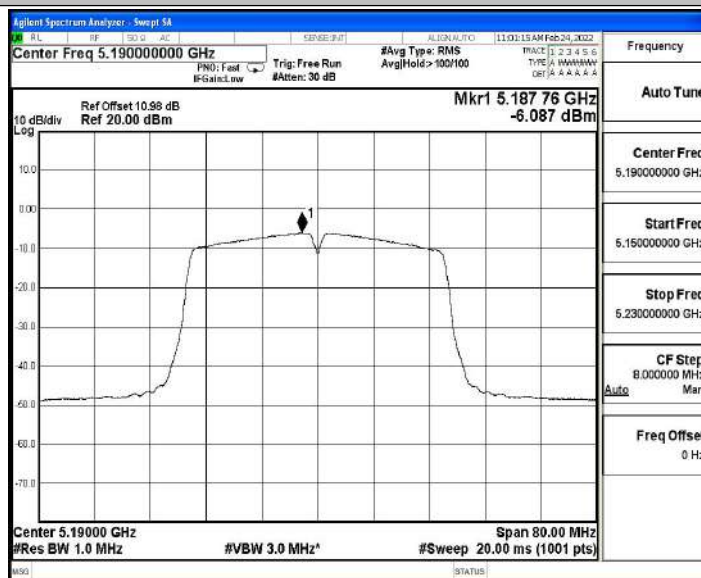




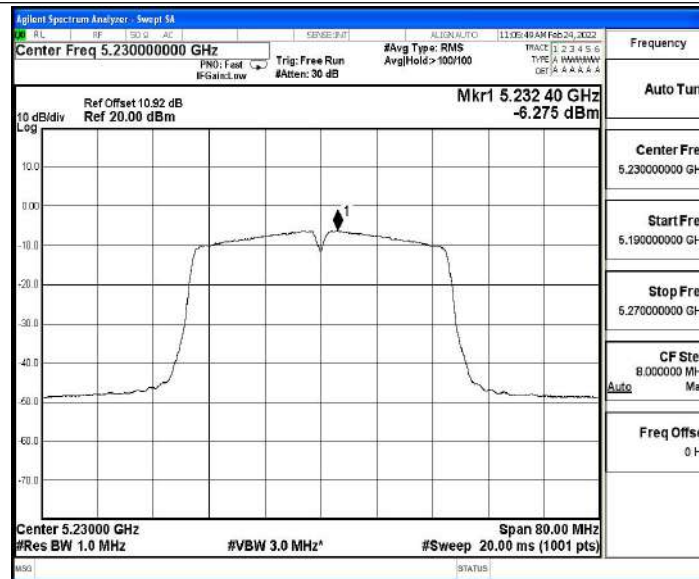
11N20SISO_Ant1_5240



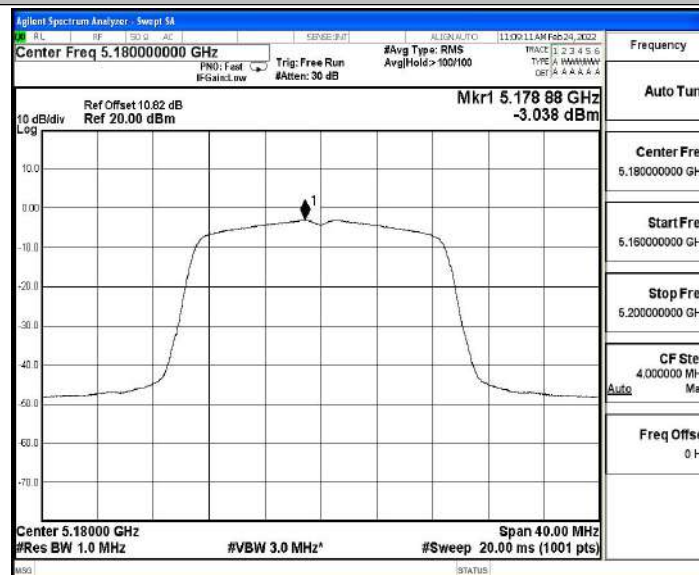
11N40SISO_Ant1_5190



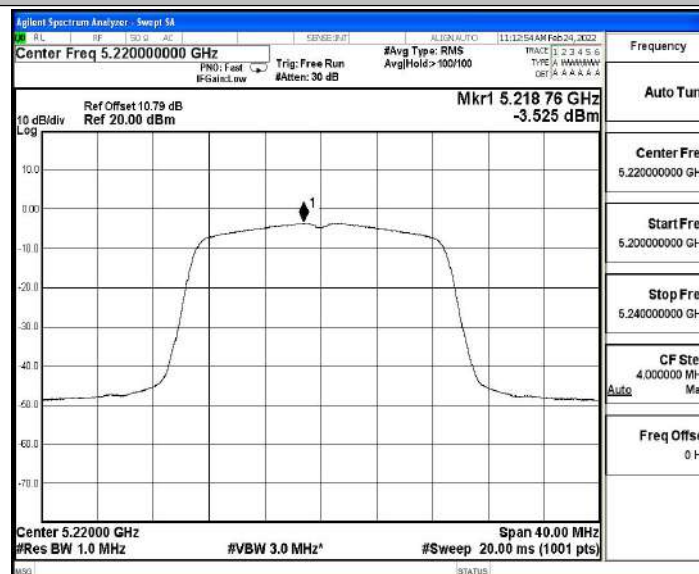
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

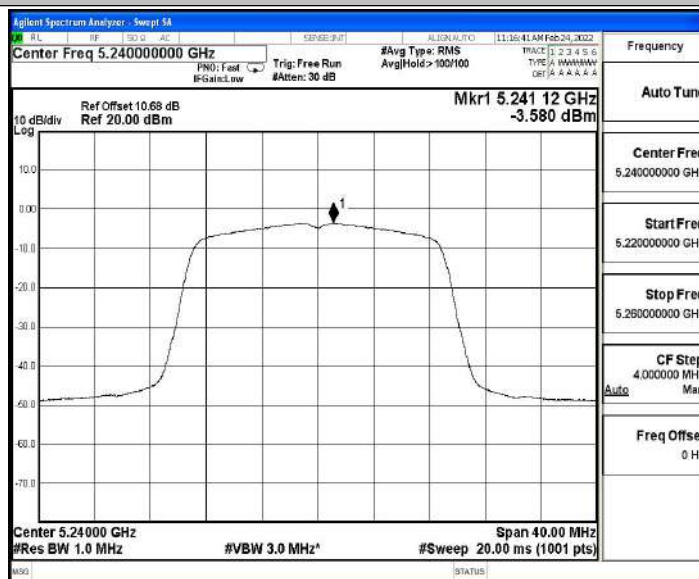


11AC20SISO_Ant1_5220

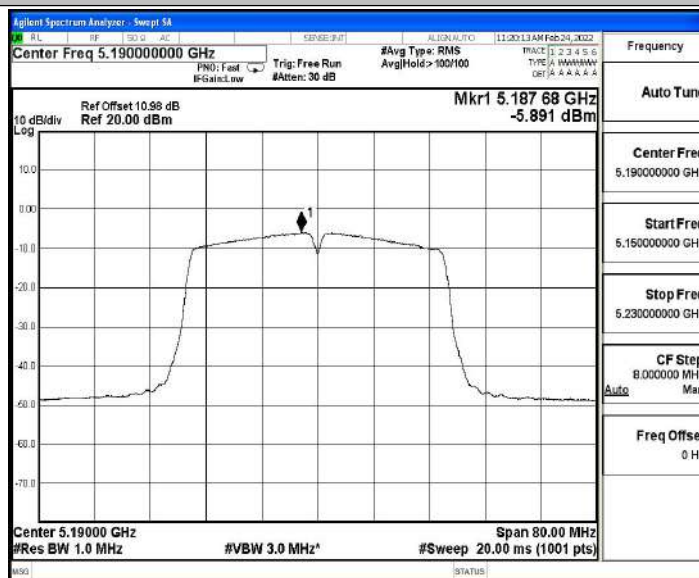




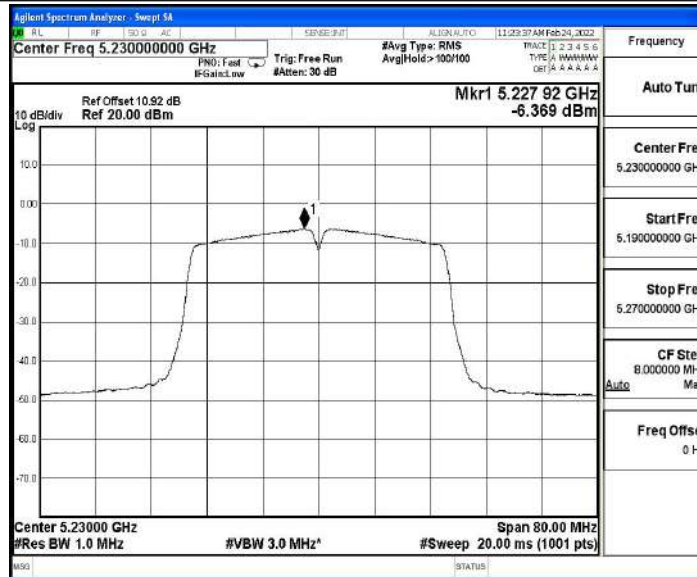
11AC20SISO_Ant1_5240



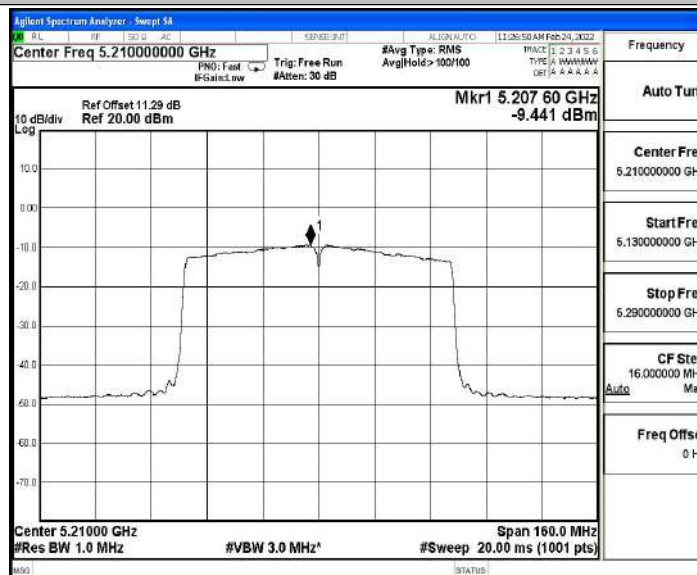
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210





D.4 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11A	Ant1	Low	5180	AV	4500.000	-47.78	≤-41.20	47.42	≤54	PASS
				AV	5144.700	-45.47	≤-41.20	49.73	≤54	PASS
				AV	5150.000	-45.65	≤-41.20	49.55	≤54	PASS
				Peak	4500.000	-39.32	≤-21.20	55.88	≤68.2	PASS
				Peak	5094.300	-35.35	≤-21.20	59.85	≤68.2	PASS
				Peak	5150.000	-37.58	≤-21.20	57.62	≤68.2	PASS
		High	5240	AV	5350.000	-46.25	≤-41.20	48.95	≤54	PASS
				AV	5360.880	-45.91	≤-41.20	49.29	≤54	PASS
				AV	5460.000	-46.03	≤-41.20	49.17	≤54	PASS
				Peak	5350.000	-37.51	≤-21.20	57.69	≤68.2	PASS
				Peak	5417.040	-35.85	≤-21.20	59.35	≤68.2	PASS
				Peak	5460.000	-38.53	≤-21.20	56.67	≤68.2	PASS
11N20SI SO	Ant1	Low	5180	AV	4500.000	-47.68	≤-41.20	47.52	≤54	PASS
				AV	4852.100	-45.54	≤-41.20	49.66	≤54	PASS
				AV	5150.000	-45.9	≤-41.20	49.30	≤54	PASS
				Peak	4500.000	-39.2	≤-21.20	56.00	≤68.2	PASS
				Peak	4793.300	-35.19	≤-21.20	60.01	≤68.2	PASS
				Peak	5150.000	-36.16	≤-21.20	59.04	≤68.2	PASS
		High	5240	AV	5350.000	-46.15	≤-41.20	49.05	≤54	PASS
				AV	5439.120	-45.9	≤-41.20	49.30	≤54	PASS
				AV	5460.000	-46.21	≤-41.20	48.99	≤54	PASS
				Peak	5350.000	-37.37	≤-21.20	57.83	≤68.2	PASS
				Peak	5407.440	-34.84	≤-21.20	60.36	≤68.2	PASS
				Peak	5460.000	-38.15	≤-21.20	57.05	≤68.2	PASS
11N40SI SO	Ant1	Low	5190	AV	4500.000	-47.72	≤-41.20	47.48	≤54	PASS
				AV	5148.200	-45.26	≤-41.20	49.94	≤54	PASS
				AV	5150.000	-45.5	≤-41.20	49.70	≤54	PASS
				Peak	4500.000	-38.12	≤-21.20	57.08	≤68.2	PASS
				Peak	4803.100	-35.16	≤-21.20	60.04	≤68.2	PASS
				Peak	5150.000	-37.34	≤-21.20	57.86	≤68.2	PASS
		High	5230	AV	5350.000	-45.69	≤-41.20	49.51	≤54	PASS
				AV	5452.460	-45.49	≤-41.20	49.71	≤54	PASS
				AV	5460.000	-45.93	≤-41.20	49.27	≤54	PASS
				Peak	5350.000	-36.42	≤-21.20	58.78	≤68.2	PASS
				Peak	5431.920	-34.91	≤-21.20	60.29	≤68.2	PASS
				Peak	5460.000	-37.99	≤-21.20	57.21	≤68.2	PASS
11AC20S	Ant1	Low	5180	AV	4500.000	-47.91	≤-41.20	47.29	≤54	PASS



ISO				AV	4829.000	-45.63	≤ -41.20	49.57	≤ 54	PASS
				AV	5150.000	-45.69	≤ -41.20	49.51	≤ 54	PASS
				Peak	4500.000	-39.68	≤ -21.20	55.52	≤ 68.2	PASS
				Peak	5006.800	-35.1	≤ -21.20	60.10	≤ 68.2	PASS
				Peak	5150.000	-36.97	≤ -21.20	58.23	≤ 68.2	PASS
		High	5240	AV	5350.000	-46.15	≤ -41.20	49.05	≤ 54	PASS
				AV	5382.240	-45.93	≤ -41.20	49.27	≤ 54	PASS
				AV	5460.000	-46.32	≤ -41.20	48.88	≤ 54	PASS
				Peak	5350.000	-37.52	≤ -21.20	57.68	≤ 68.2	PASS
				Peak	5388.240	-35.44	≤ -21.20	59.76	≤ 68.2	PASS
				Peak	5460.000	-37.9	≤ -21.20	57.30	≤ 68.2	PASS
11AC40S ISO	Ant1	Low	5190	AV	4500.000	-47.58	≤ -41.20	47.62	≤ 54	PASS
				AV	4881.500	-45.22	≤ -41.20	49.98	≤ 54	PASS
				AV	5150.000	-45.31	≤ -41.20	49.89	≤ 54	PASS
				Peak	4500.000	-38.27	≤ -21.20	56.93	≤ 68.2	PASS
				Peak	4819.200	-35	≤ -21.20	60.20	≤ 68.2	PASS
				Peak	5150.000	-37.1	≤ -21.20	58.10	≤ 68.2	PASS
		High	5230	AV	5350.000	-45.59	≤ -41.20	49.61	≤ 54	PASS
				AV	5378.360	-45.42	≤ -41.20	49.78	≤ 54	PASS
				AV	5460.000	-45.76	≤ -41.20	49.44	≤ 54	PASS
				Peak	5350.000	-36.81	≤ -21.20	58.39	≤ 68.2	PASS
				Peak	5380.960	-35.57	≤ -21.20	59.63	≤ 68.2	PASS
				Peak	5460.000	-38.15	≤ -21.20	57.05	≤ 68.2	PASS
11AC80S ISO	Ant1	Low	5210	AV	4500.000	-47.3	≤ -41.20	47.90	≤ 54	PASS
				AV	5149.500	-44.3	≤ -41.20	50.90	≤ 54	PASS
				AV	5150.000	-44.33	≤ -41.20	50.87	≤ 54	PASS
				Peak	4500.000	-39.31	≤ -21.20	55.89	≤ 68.2	PASS
				Peak	4896.750	-34.77	≤ -21.20	60.43	≤ 68.2	PASS
				Peak	5150.000	-35.22	≤ -21.20	59.98	≤ 68.2	PASS
		High	5210	AV	5350.000	-45.26	≤ -41.20	49.94	≤ 54	PASS
				AV	5370.120	-45.02	≤ -41.20	50.18	≤ 54	PASS
				AV	5460.000	-45.55	≤ -41.20	49.65	≤ 54	PASS
				Peak	5350.000	-37.79	≤ -21.20	57.41	≤ 68.2	PASS
				Peak	5424.160	-34.99	≤ -21.20	60.21	≤ 68.2	PASS
				Peak	5460.000	-37.69	≤ -21.20	57.51	≤ 68.2	PASS

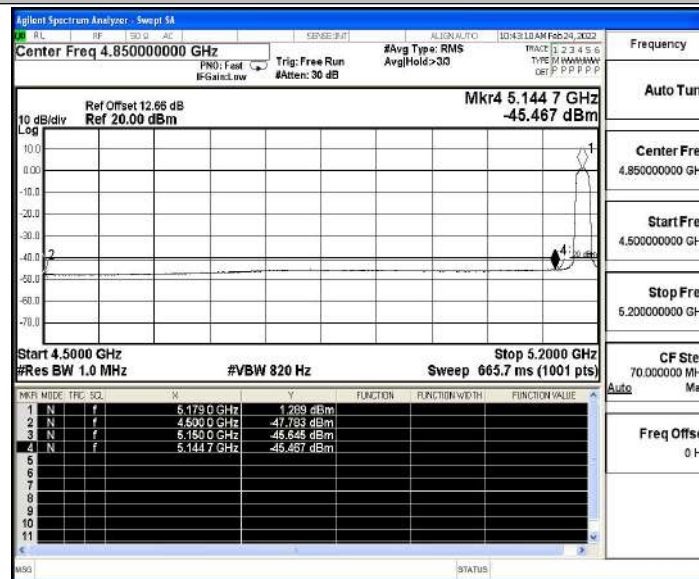
Note:

1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5350 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a).

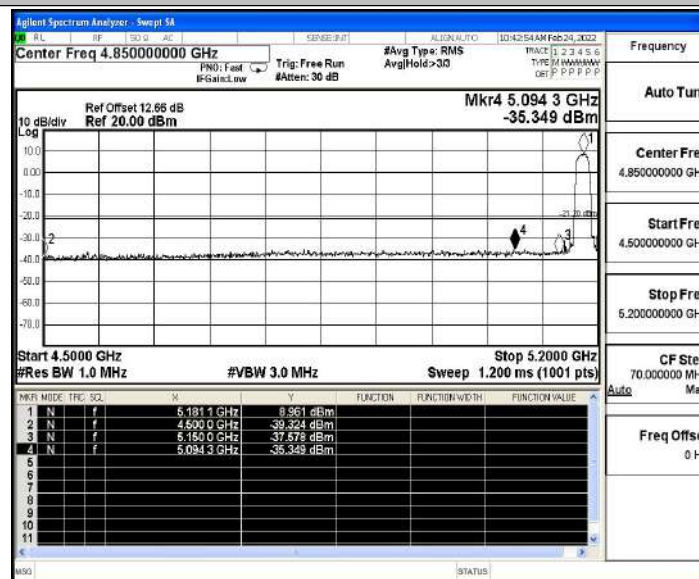


Test Graphs

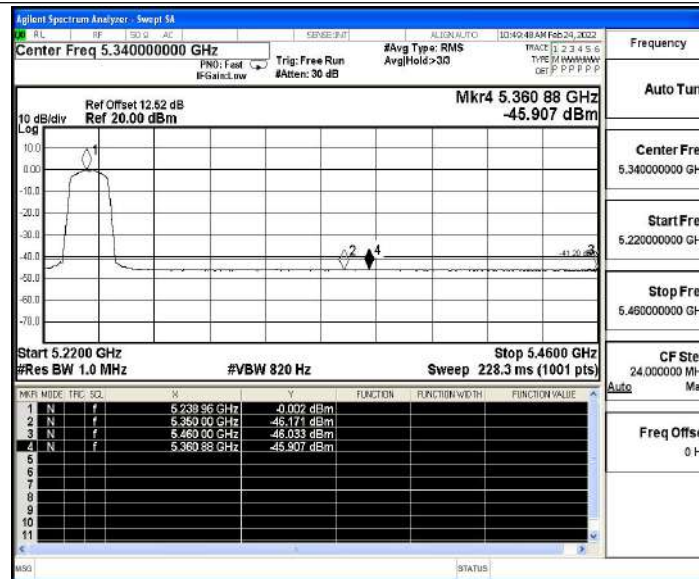
11A_Ant1_Low_5180_AV



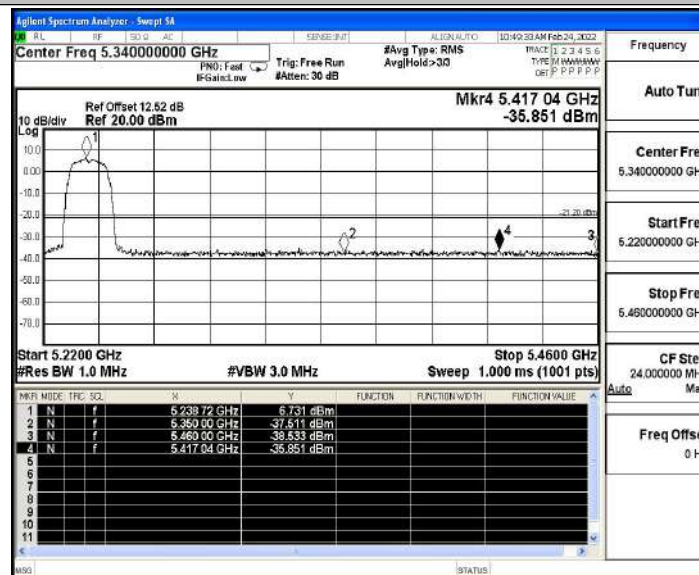
11A_Ant1_Low_5180_Peak



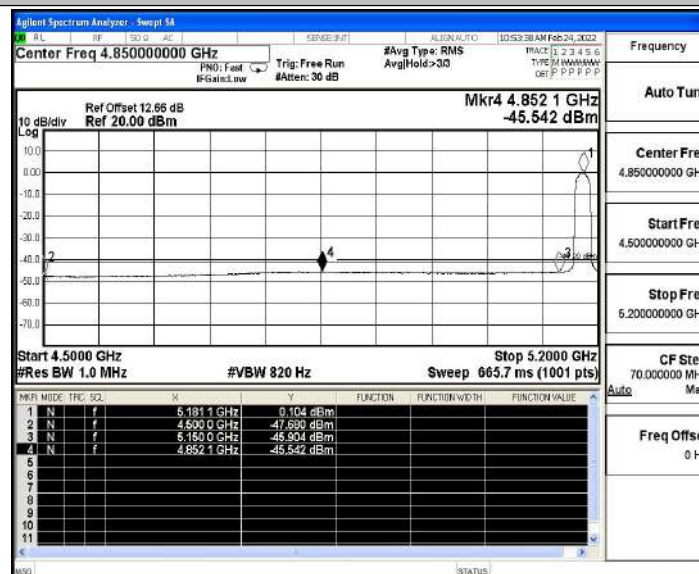
11A_Ant1_High_5240_AV



11A_Ant1_High_5240_Peak

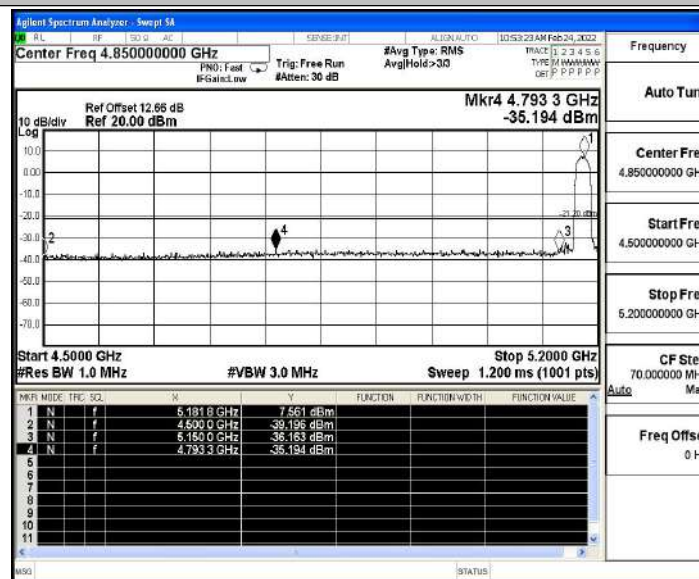


11N20SISO_Ant1_Low_5180_AV

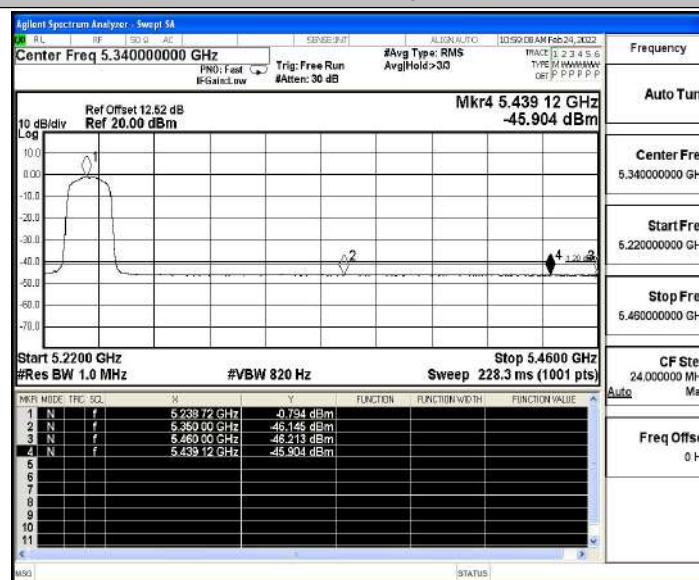




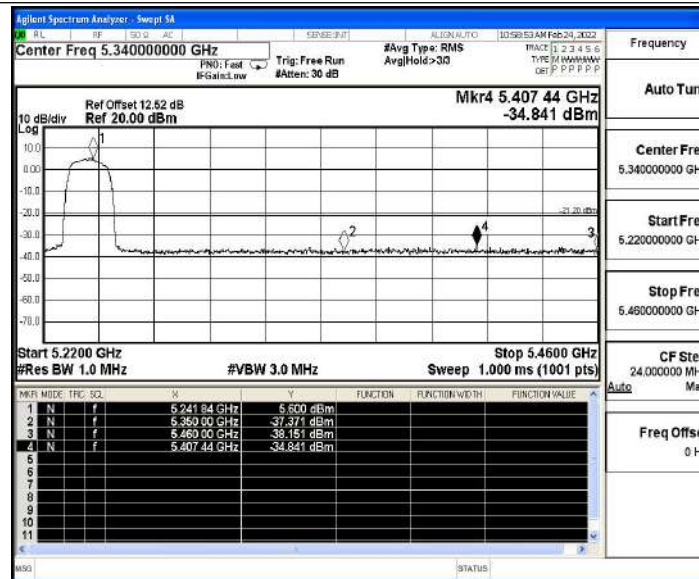
11N20SISO_Ant1_Low_5180_Peak



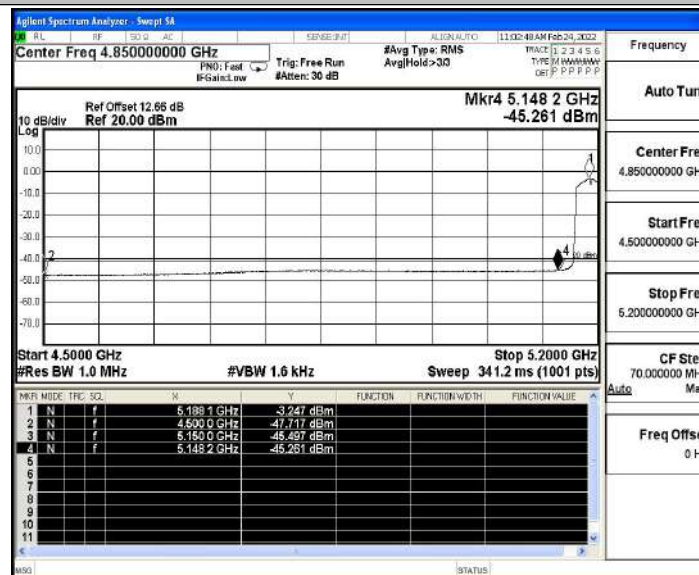
11N20SISO_Ant1_High_5240_AV



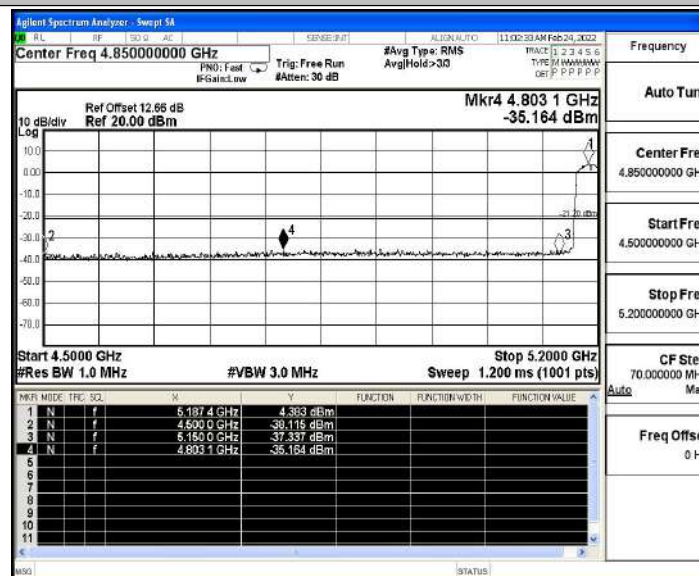
11N20SISO_Ant1_High_5240_Peak



11N40SISO_Ant1_Low_5190_AV

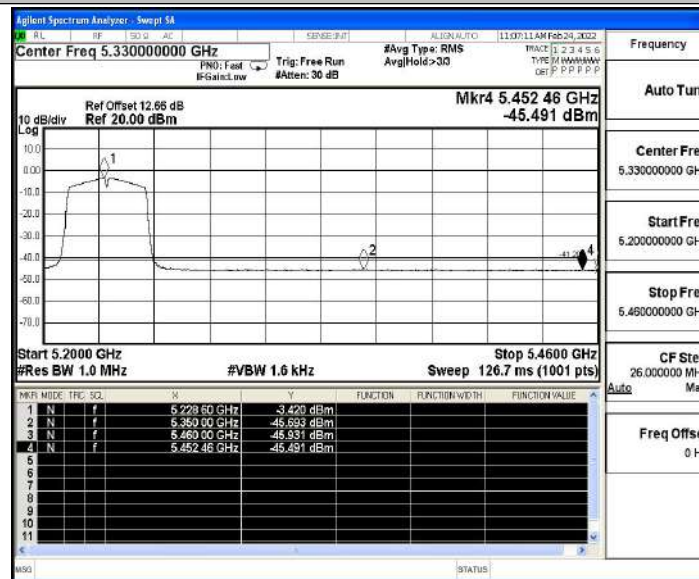


11N40SISO_Ant1_Low_5190_Peak

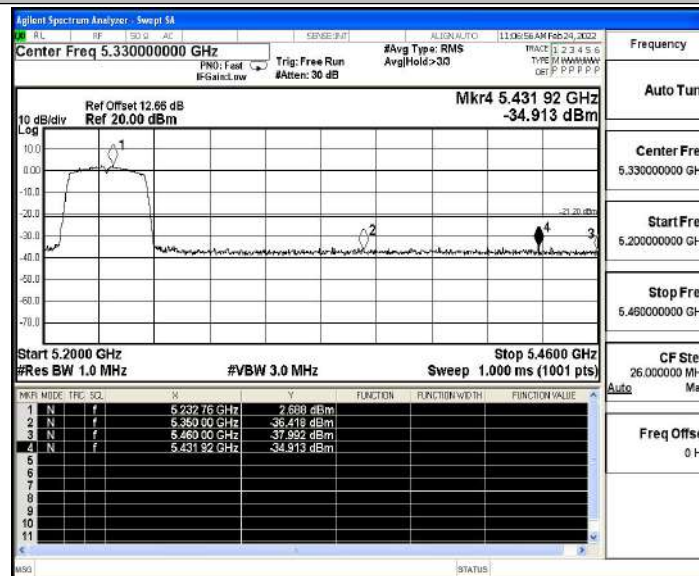




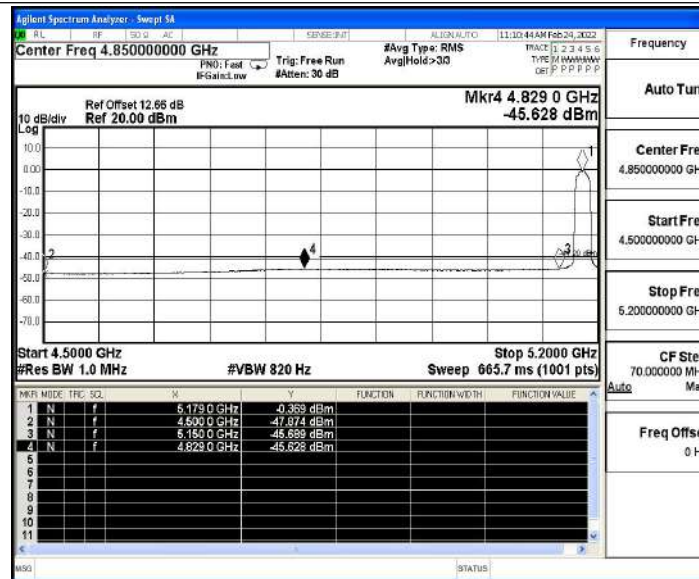
11N40SISO_Ant1_High_5230_AV



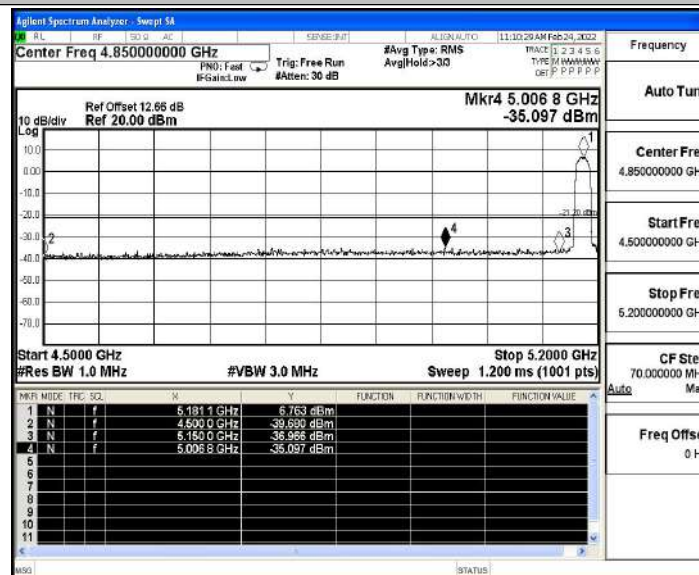
11N40SISO_Ant1_High_5230_Peak



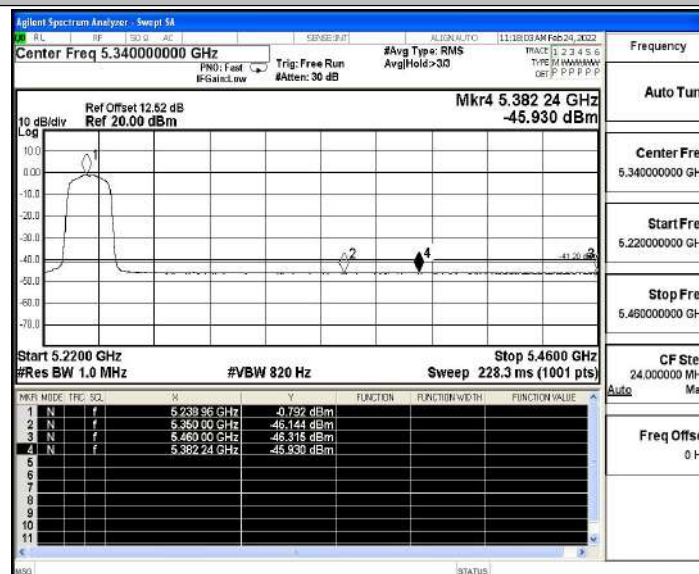
11AC20SISO_Ant1_Low_5180_AV



11AC20SISO_Ant1_Low_5180_Peak

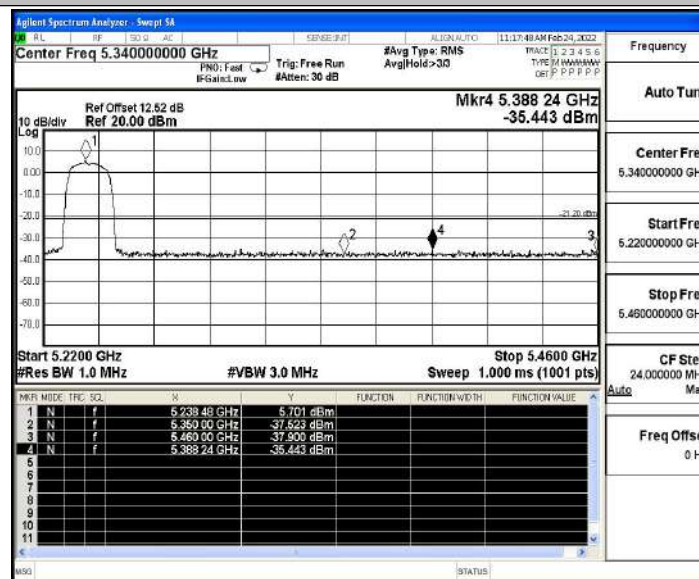


11AC20SISO_Ant1_High_5240_AV

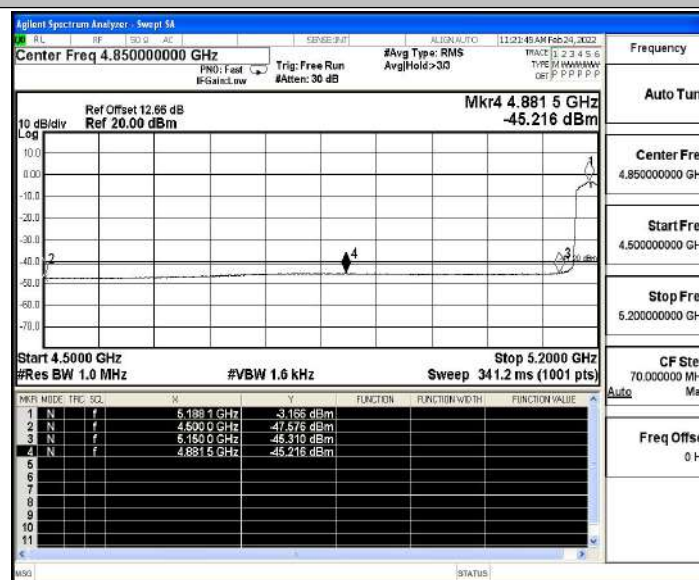




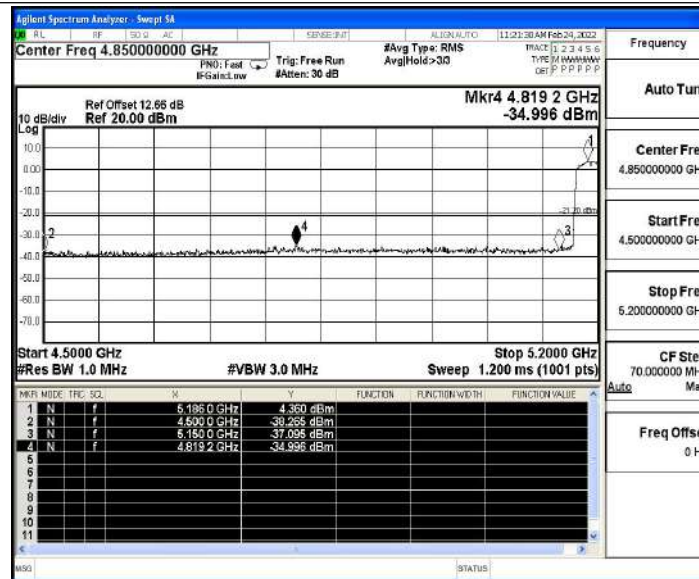
11AC20SISO_Ant1_High_5240_Peak



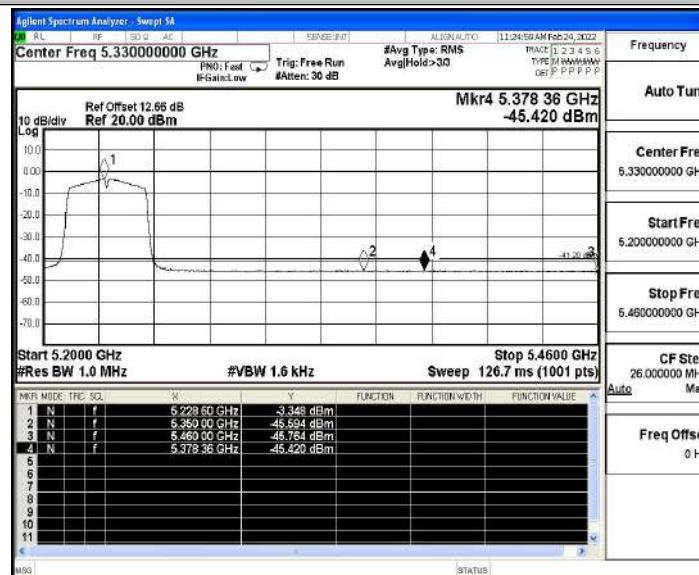
11AC40SISO_Ant1_Low_5190_AV



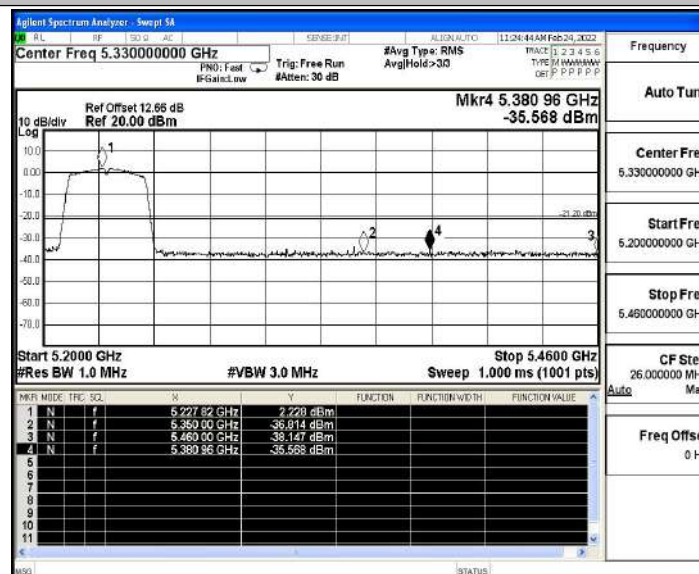
11AC40SISO_Ant1_Low_5190_Peak



11AC40ISO_Ant1_High_5230_AV

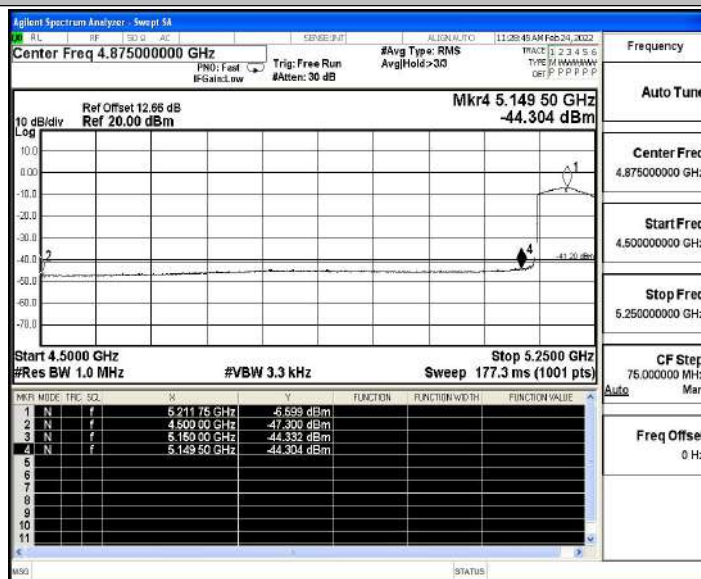


11AC40ISO_Ant1_High_5230_Peak

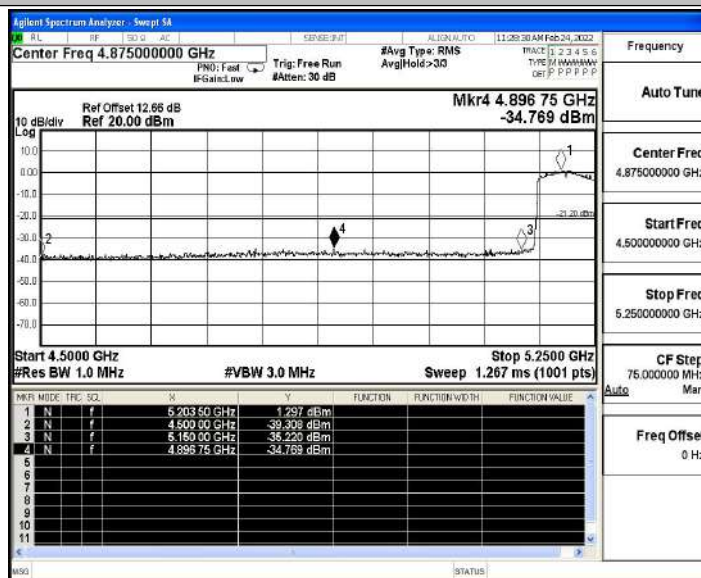




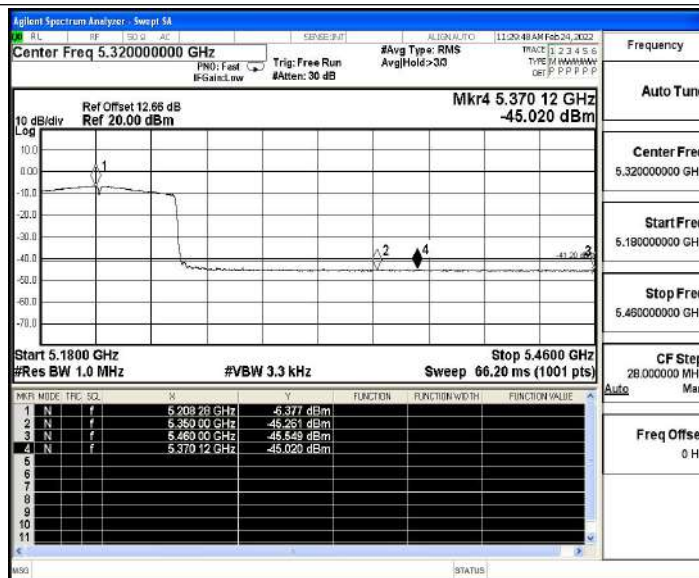
11AC80SISO_Ant1_Low_5210_AV



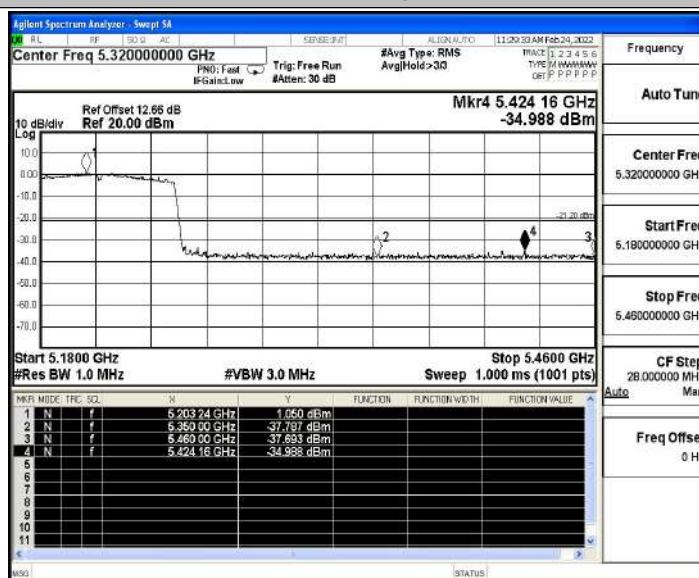
11AC80SISO_Ant1_Low_5210_Peak



11AC80SISO_Ant1_High_5210_AV



11AC80SISO_Ant1_High_5210_Peak





D.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20SISO	Ant1	5180	NV	NT	-16000	-3.088803	20	PASS
			LV	NT	-18000	-3.474903	20	PASS
			HV	NT	-19000	-3.667954	20	PASS
		5220	NV	NT	-20000	-3.831418	20	PASS
			LV	NT	-20000	-3.831418	20	PASS
			HV	NT	-20000	-3.831418	20	PASS
		5240	NV	NT	-20000	-3.816794	20	PASS
			LV	NT	-20000	-3.816794	20	PASS
			HV	NT	-20000	-3.816794	20	PASS
11AC40SISO	Ant1	5190	NV	NT	-20000	-3.853565	20	PASS
			LV	NT	-20000	-3.853565	20	PASS
			HV	NT	-20000	-3.853565	20	PASS
		5230	NV	NT	-20000	-3.824092	20	PASS
			LV	NT	-20000	-3.824092	20	PASS
			HV	NT	-20000	-3.824092	20	PASS
11AC80SISO	Ant1	5210	NV	NT	-21000	-4.03071	20	PASS
			LV	NT	-20000	-3.838772	20	PASS
			HV	NT	-20000	-3.838772	20	PASS

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20SISO	Ant1	5180	NV	-30	-19000	-3.667954	20	PASS
			NV	-20	-19000	-3.667954	20	PASS
			NV	-10	-19000	-3.667954	20	PASS
			NV	0	-19000	-3.667954	20	PASS
			NV	10	-20000	-3.861004	20	PASS
			NV	20	-20000	-3.861004	20	PASS
			NV	30	-20000	-3.861004	20	PASS
			NV	40	-20000	-3.861004	20	PASS
			NV	50	-20000	-3.861004	20	PASS
		5220	NV	-30	-20000	-3.831418	20	PASS
			NV	-20	-20000	-3.831418	20	PASS
			NV	-10	-20000	-3.831418	20	PASS
			NV	0	-20000	-3.831418	20	PASS
			NV	10	-20000	-3.831418	20	PASS
			NV	20	-20000	-3.831418	20	PASS



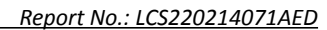
			NV	20	-20000	-3.831418	20	PASS
			NV	30	-20000	-3.831418	20	PASS
			NV	40	-20000	-3.831418	20	PASS
			NV	50	-20000	-3.831418	20	PASS
		5240	NV	-30	-20000	-3.816794	20	PASS
			NV	-20	-20000	-3.816794	20	PASS
			NV	-10	-20000	-3.816794	20	PASS
			NV	0	-20000	-3.816794	20	PASS
			NV	10	-20000	-3.816794	20	PASS
			NV	20	-20000	-3.816794	20	PASS
			NV	30	-20000	-3.816794	20	PASS
			NV	40	-20000	-3.816794	20	PASS
			NV	50	-20000	-3.816794	20	PASS
11AC40SIS O	Ant1	5190	NV	-30	-20000	-3.853565	20	PASS
			NV	-20	-20000	-3.853565	20	PASS
			NV	-10	-20000	-3.853565	20	PASS
			NV	0	-20000	-3.853565	20	PASS
			NV	10	-20000	-3.853565	20	PASS
			NV	20	-20000	-3.853565	20	PASS
			NV	30	-20000	-3.853565	20	PASS
			NV	40	-20000	-3.853565	20	PASS
		5230	NV	50	-20000	-3.853565	20	PASS
			NV	-30	-20000	-3.824092	20	PASS
			NV	-20	-20000	-3.824092	20	PASS
			NV	-10	-20000	-3.824092	20	PASS
			NV	0	-20000	-3.824092	20	PASS
			NV	10	-20000	-3.824092	20	PASS
			NV	20	-20000	-3.824092	20	PASS
			NV	30	-20000	-3.824092	20	PASS
11AC80SIS O	Ant1	5210	NV	40	-20000	-3.824092	20	PASS
			NV	50	-20000	-3.824092	20	PASS
			NV	-30	-20000	-3.838772	20	PASS
			NV	-20	-20000	-3.838772	20	PASS
			NV	-10	-20000	-3.838772	20	PASS
			NV	0	-20000	-3.838772	20	PASS
			NV	10	-20000	-3.838772	20	PASS
			NV	20	-20000	-3.838772	20	PASS
			NV	30	-20000	-3.838772	20	PASS
			NV	40	-20000	-3.838772	20	PASS
			NV	50	-20000	-3.838772	20	PASS

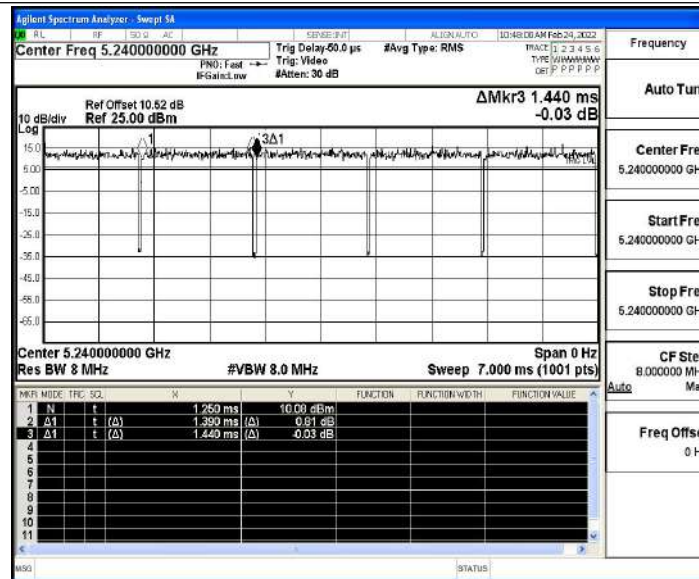


D.6 Duty Cycle

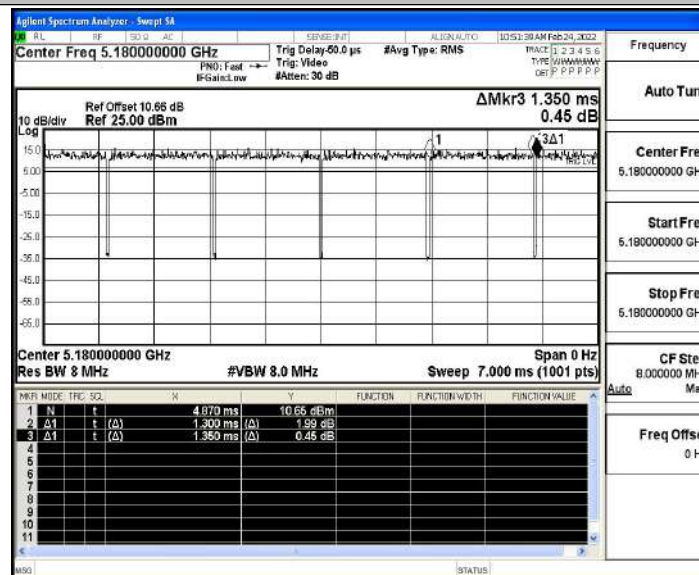
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
11A	Ant1	5180	1.39	1.44	96.53	0.72
		5220	1.39	1.43	97.20	0.72
		5240	1.39	1.44	96.53	0.72
11N20SISO	Ant1	5180	1.30	1.35	96.30	0.77
		5220	1.31	1.35	97.04	0.77
		5240	1.30	1.35	96.30	0.77
11N40SISO	Ant1	5190	0.65	0.70	92.86	1.54
		5230	0.65	0.69	94.20	1.54
11AC20SISO	Ant1	5180	1.31	1.36	96.32	0.77
		5220	1.31	1.35	97.04	0.77
		5240	1.31	1.36	96.32	0.77
11AC40SISO	Ant1	5190	0.65	0.70	92.86	1.54
		5230	0.65	0.69	94.20	1.54
11AC80SISO	Ant1	5210	0.32	0.37	86.49	3.13

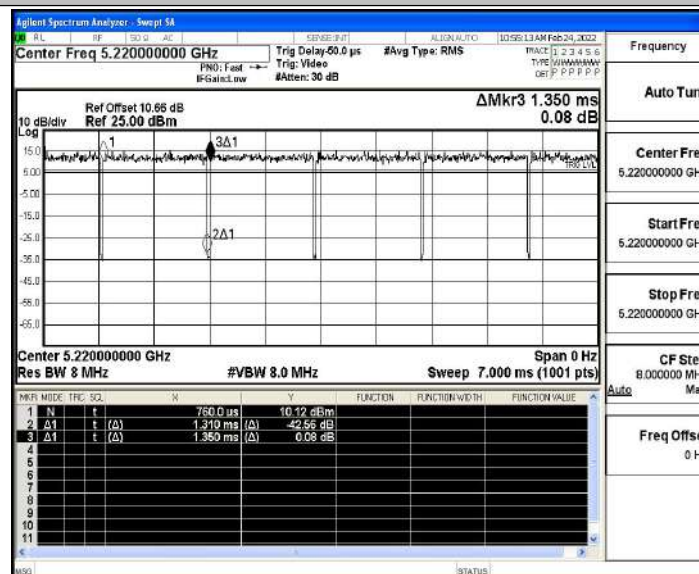




11N20SISO_Ant1_5180

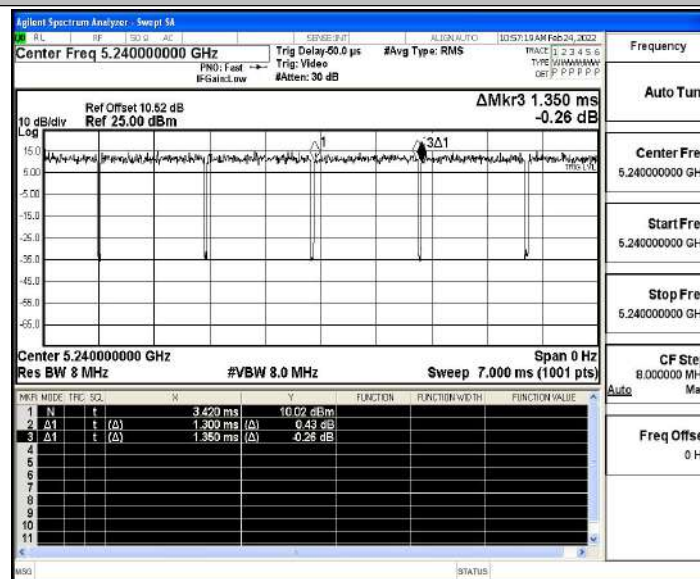


11N20SISO_Ant1_5220

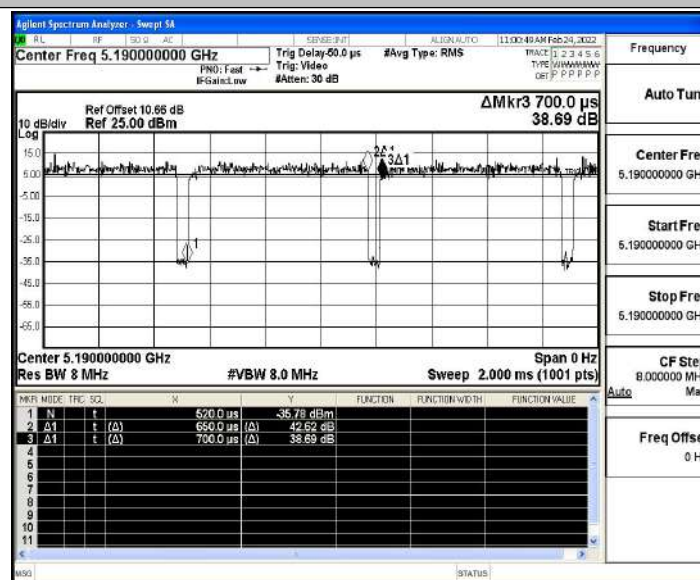




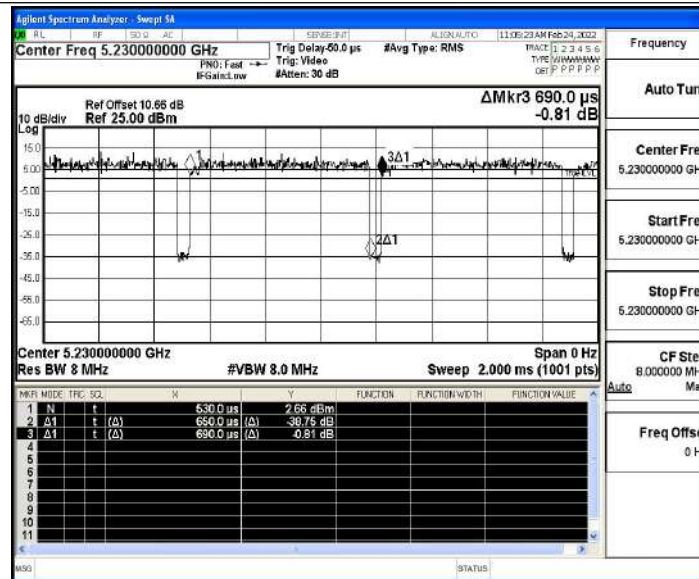
11N20SISO_Ant1_5240



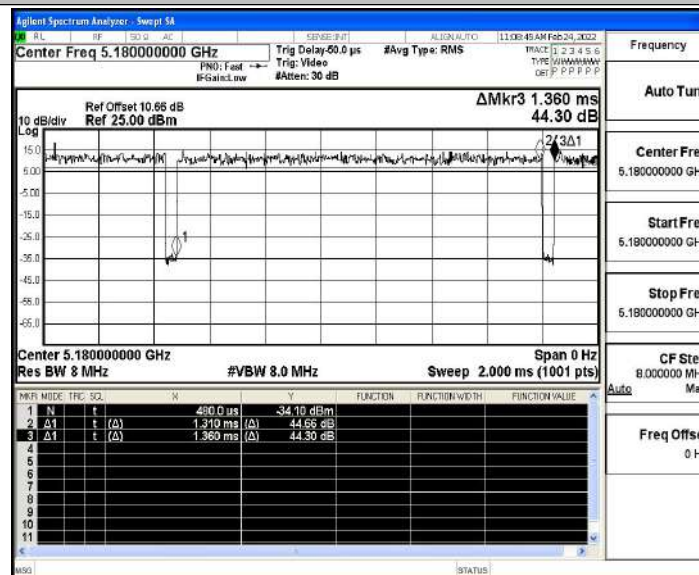
11N40SISO_Ant1_5190



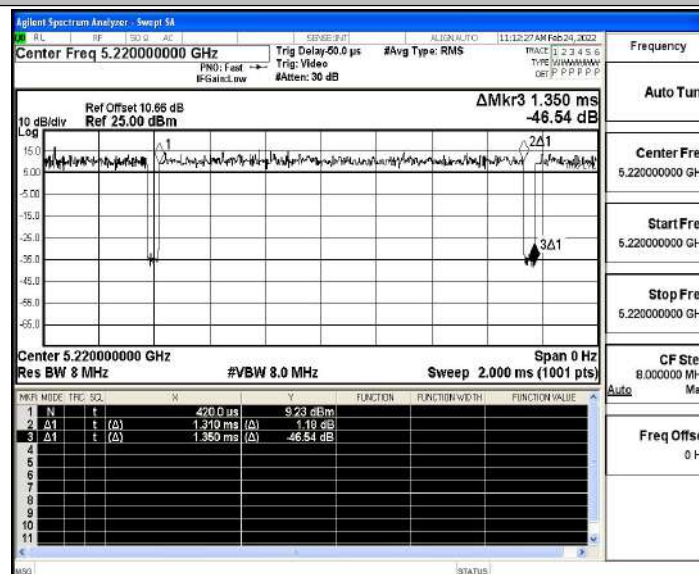
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

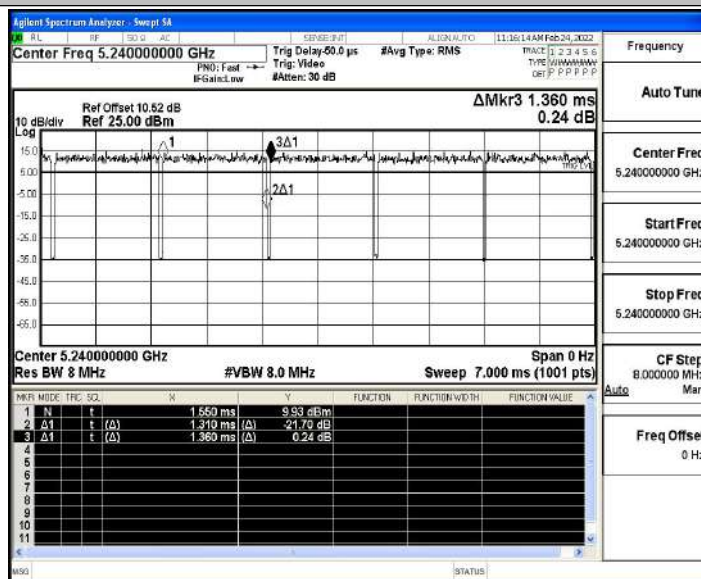


11AC20SISO_Ant1_5220

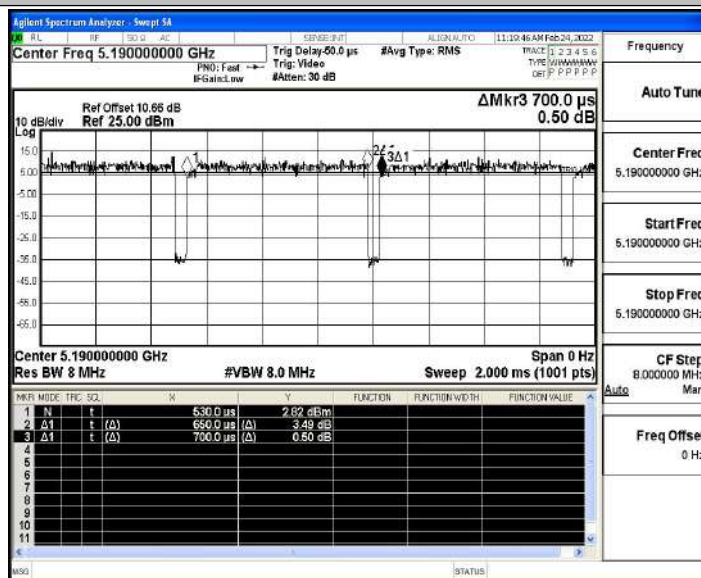




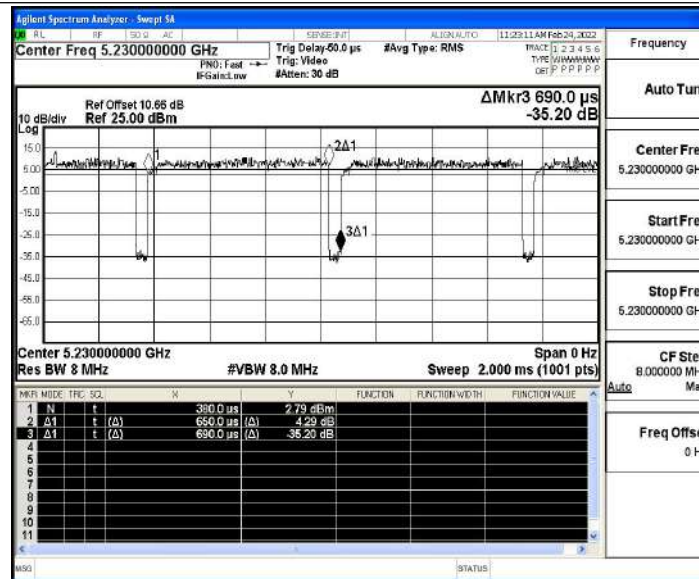
11AC20SISO_Ant1_5240



11AC40SISO_Ant1_5190



11AC40SISO Ant1 5230



11AC80SISO_Ant1_5210

