



Appendix B

RF Test Data for 5.2G WIFI (Conducted Measurement)

Product Name: 600Mbps usb wifi adapter

Test Model: FX-600AC

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Monkey Li
Supervised by:	Li huan



B.1 Emission Bandwidth

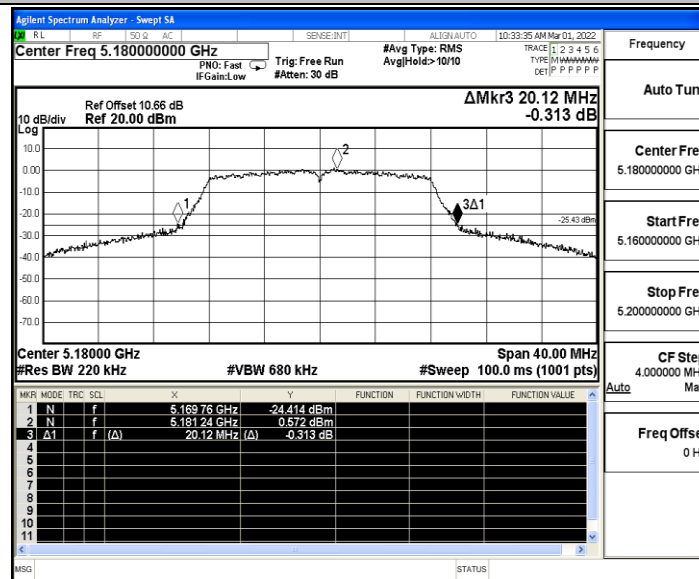
Test Result

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant	5180	20.120	5169.760	5189.880	---	---
		5220	27.600	5205.800	5233.400	---	---
		5240	26.040	5226.560	5252.600	---	---
11N20SISO	Ant	5180	30.440	5164.320	5194.760	---	---
		5220	28.400	5205.680	5234.080	---	---
		5240	26.840	5226.560	5253.400	---	---
11N40SISO	Ant	5190	58.960	5159.040	5218.000	---	---
		5230	58.320	5198.800	5257.120	---	---
11AC20SISO	Ant	5180	27.200	5166.560	5193.760	---	---
		5220	25.920	5207.840	5233.760	---	---
		5240	22.320	5228.360	5250.680	---	---
11AC40SISO	Ant	5190	63.200	5159.280	5222.480	---	---
		5230	53.040	5201.520	5254.560	---	---
11AC80SISO	Ant	5210	130.240	5144.560	5274.800	---	---

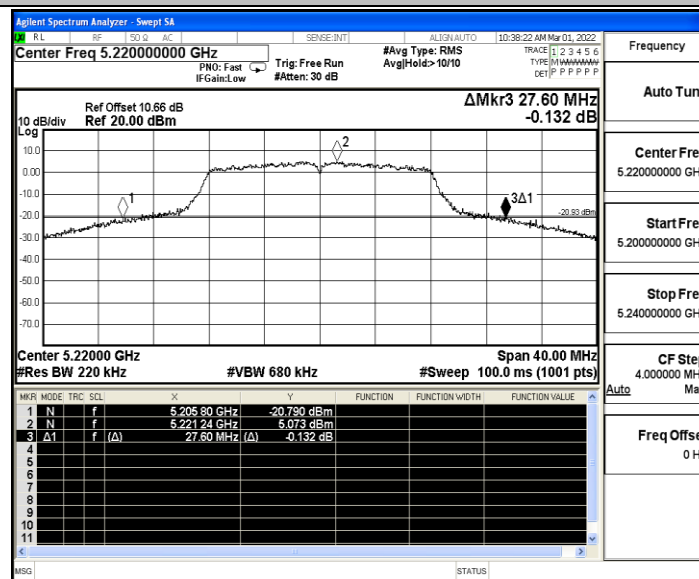


Test Graphs

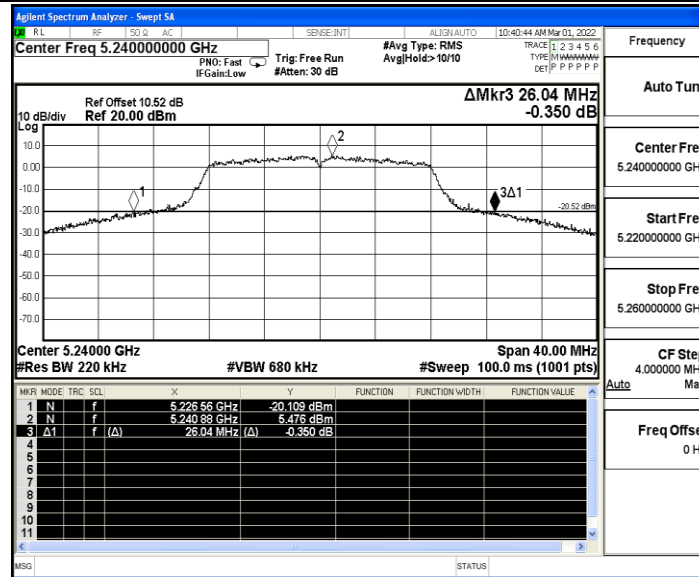
11A_Ant_5180



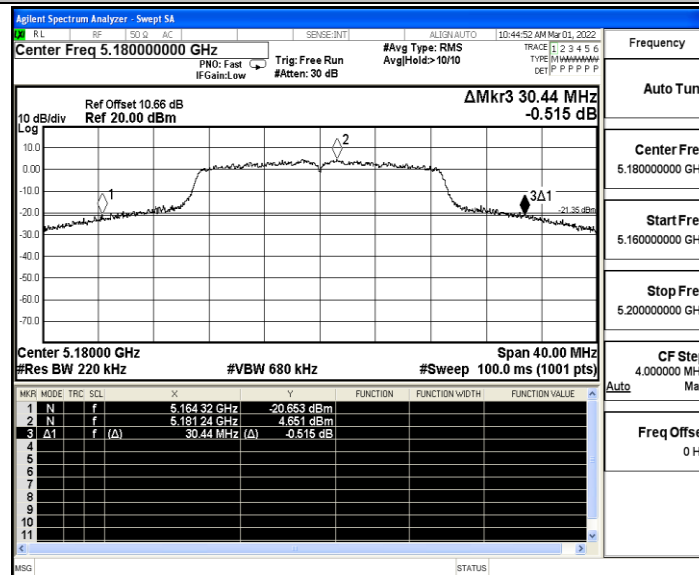
11A_Ant_5220



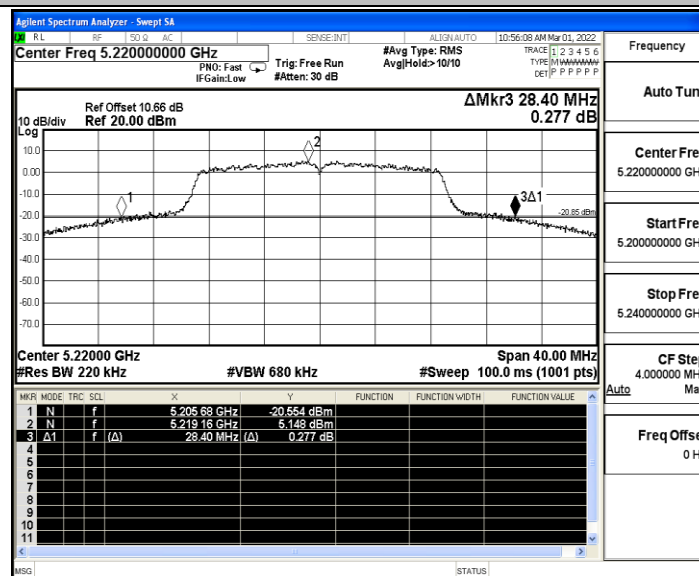
11A_Ant_5240



11N20SISO_Ant_5180

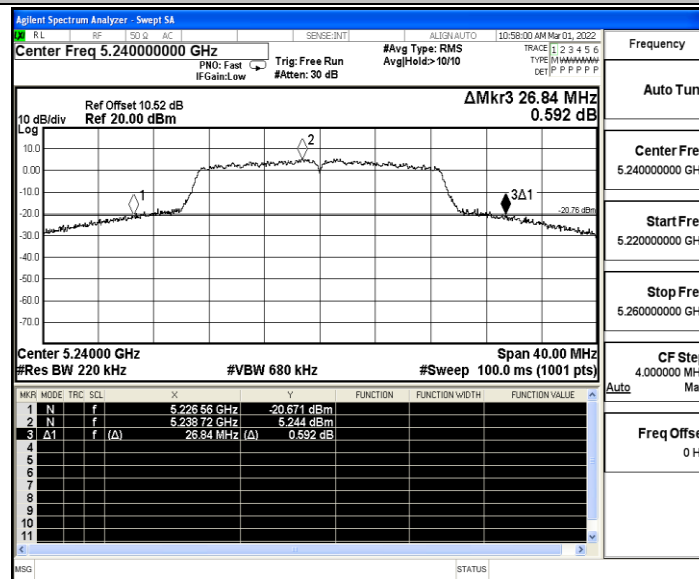


11N20SISO_Ant_5220

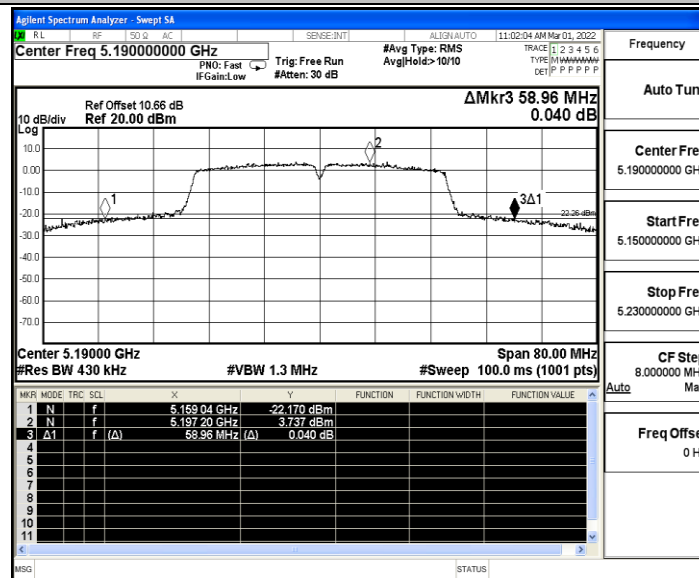




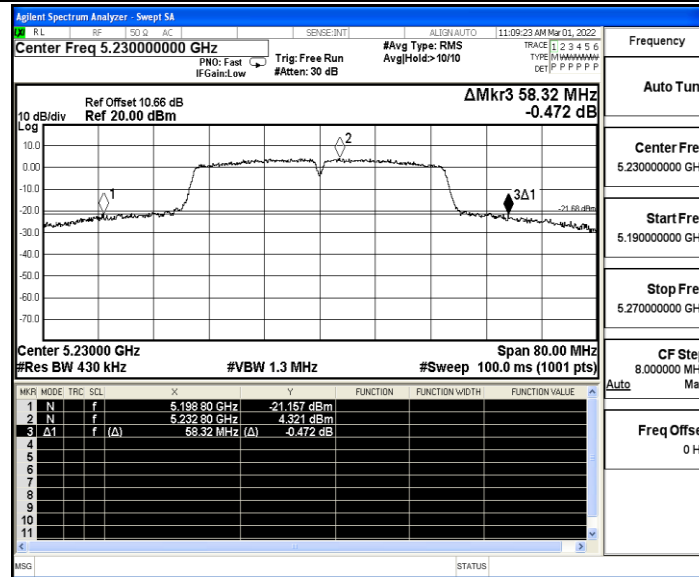
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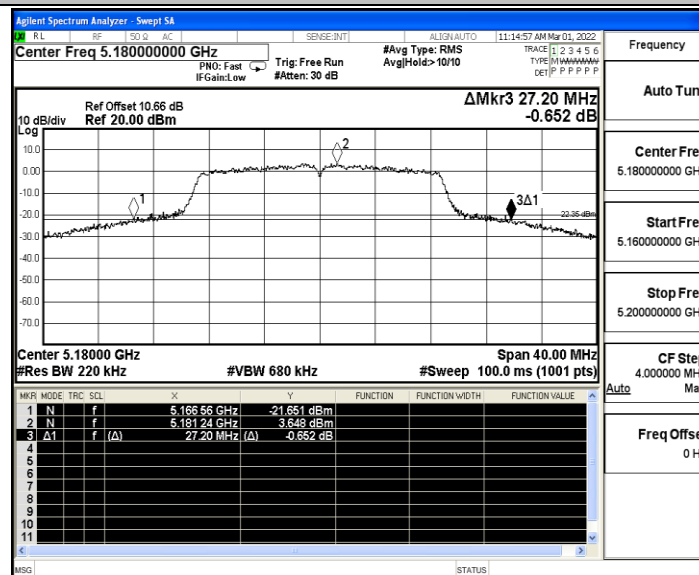
11N40SISO_Ant_5190



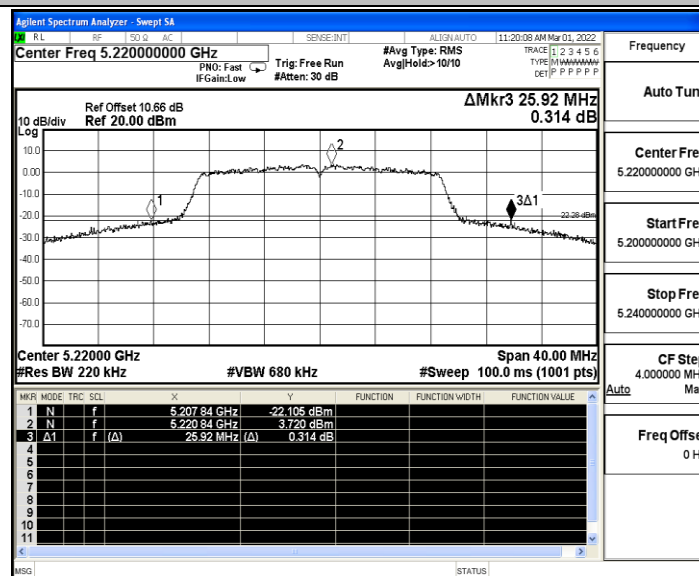
11N40SISO_Ant_5230



11AC20SISO_Ant_5180

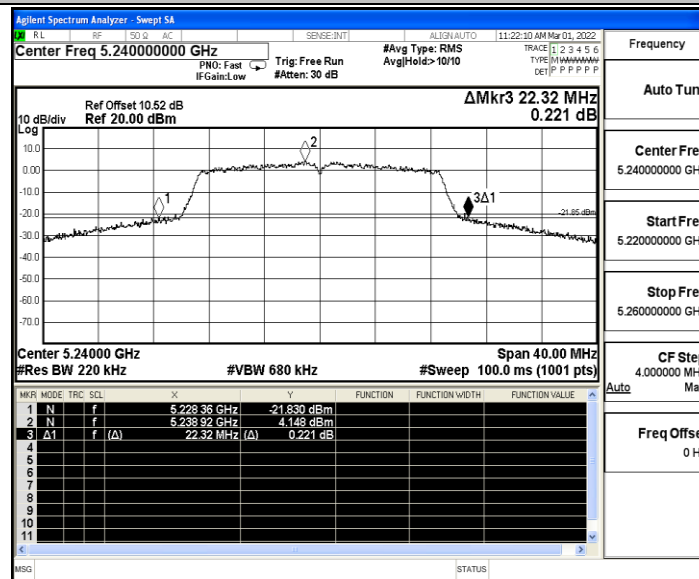


11AC20SISO_Ant_5220

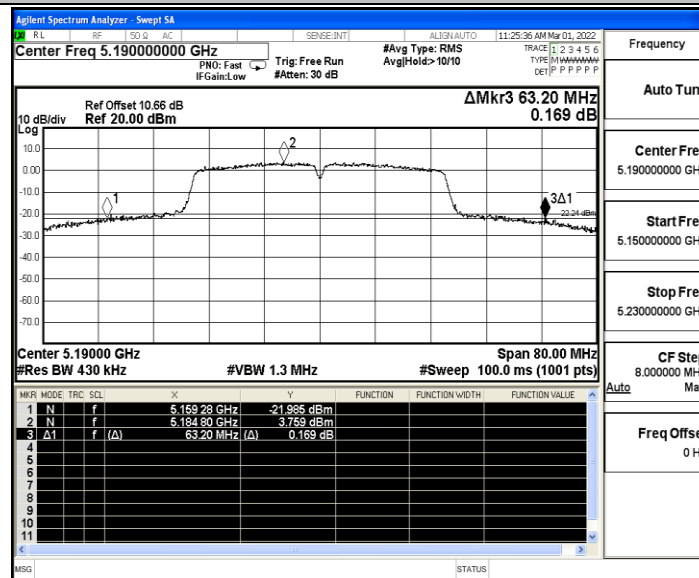




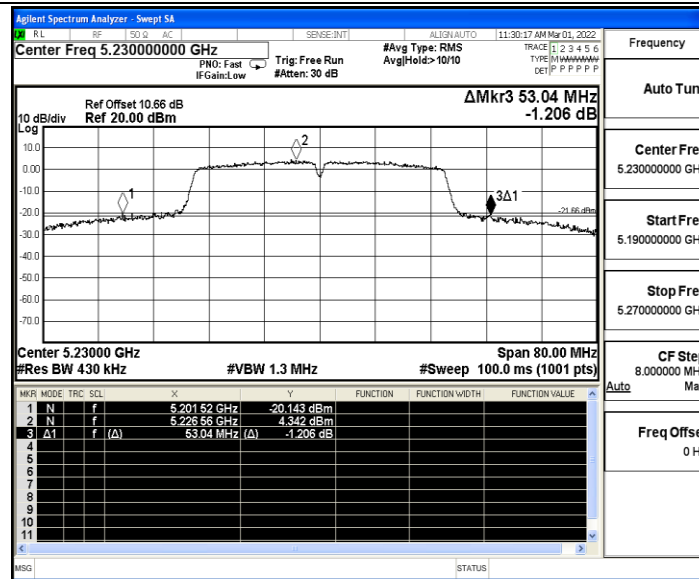
11AC20SISO_Ant_5240



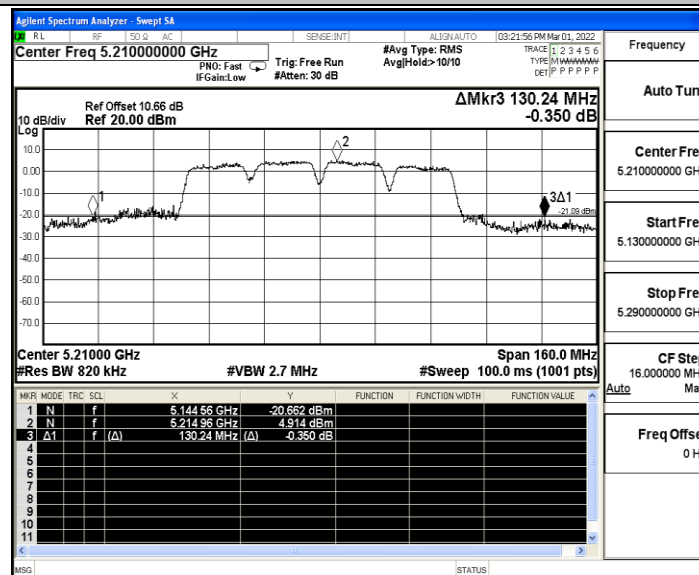
11AC40SISO_Ant_5190



11AC40SISO_Ant_5230



11AC80SISO_Ant_5210





B.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant	5180	13.54	≤ 23.98	PASS
		5220	13.94	≤ 23.98	PASS
		5240	14.22	≤ 23.98	PASS
11N20SISO	Ant	5180	13.60	≤ 23.98	PASS
		5220	14.09	≤ 23.98	PASS
		5240	14.32	≤ 23.98	PASS
11N40SISO	Ant	5190	13.02	≤ 23.98	PASS
		5230	13.43	≤ 23.98	PASS
11AC20SISO	Ant	5180	12.64	≤ 23.98	PASS
		5220	12.85	≤ 23.98	PASS
		5240	12.81	≤ 23.98	PASS
11AC40SISO	Ant	5190	13.07	≤ 23.98	PASS
		5230	13.68	≤ 23.98	PASS
11AC80SISO	Ant	5210	13.62	≤ 23.98	PASS

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



B.3 Maximum power spectral density

Test Result

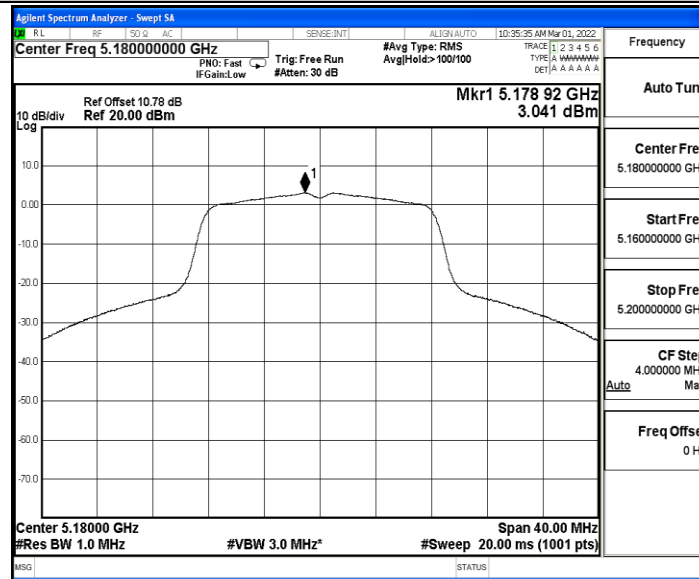
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant	5180	3.09	≤ 11.00	PASS
		5220	3.72	≤ 11.00	PASS
		5240	3.72	≤ 11.00	PASS
11N20SISO	Ant	5180	3.08	≤ 11.00	PASS
		5220	3.46	≤ 11.00	PASS
		5240	3.65	≤ 11.00	PASS
11N40SISO	Ant	5190	-1.01	≤ 11.00	PASS
		5230	-0.45	≤ 11.00	PASS
11AC20SISO	Ant	5180	2.02	≤ 11.00	PASS
		5220	2.19	≤ 11.00	PASS
		5240	2.21	≤ 11.00	PASS
11AC40SISO	Ant	5190	-1.04	≤ 11.00	PASS
		5230	-0.43	≤ 11.00	PASS
11AC80SISO	Ant	5210	-2.70	≤ 11.00	PASS

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

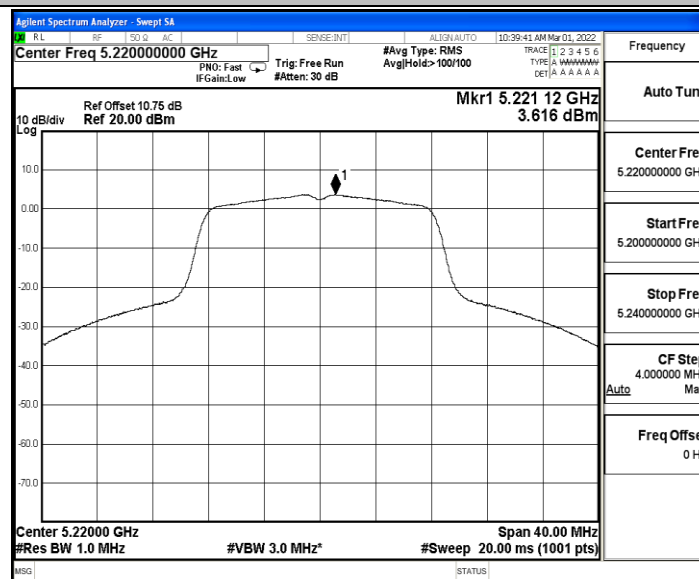


Test Graphs

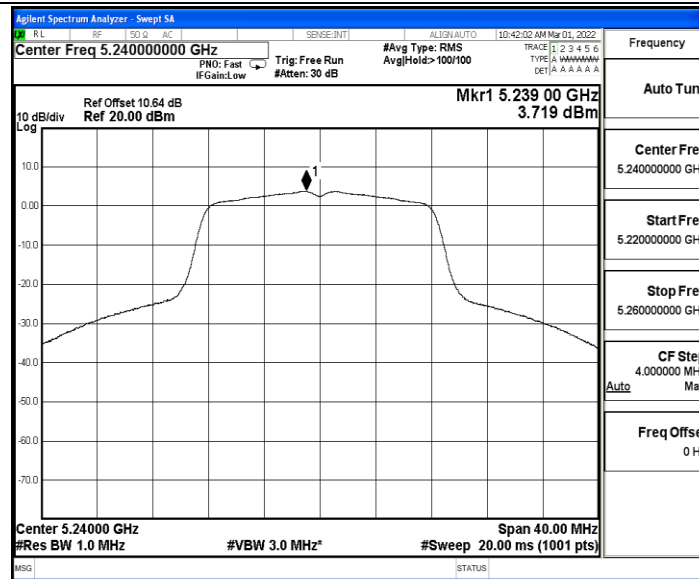
11A_Ant_5180



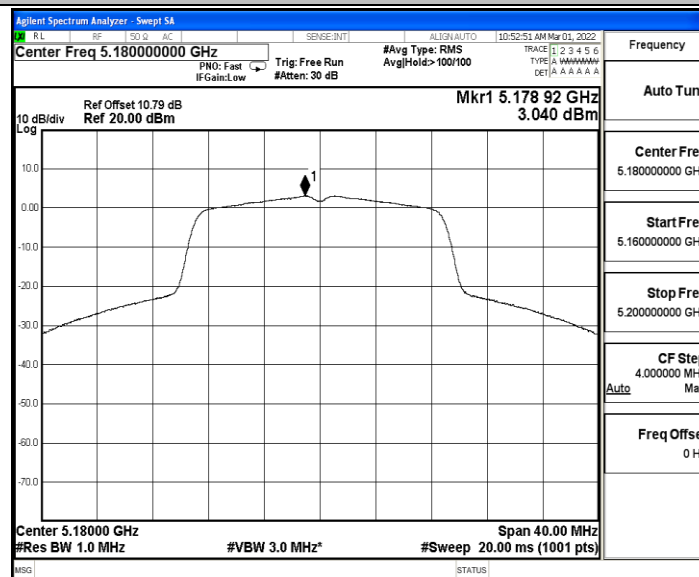
11A_Ant_5220



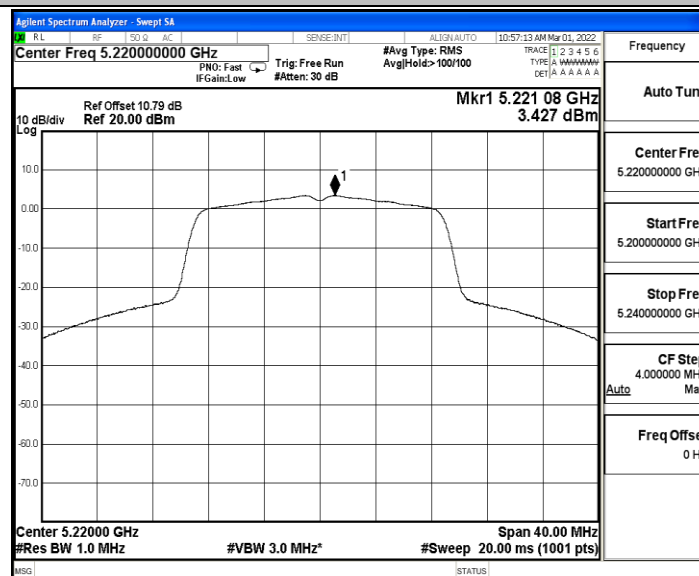
11A_Ant_5240



11N20SISO_Ant_5180

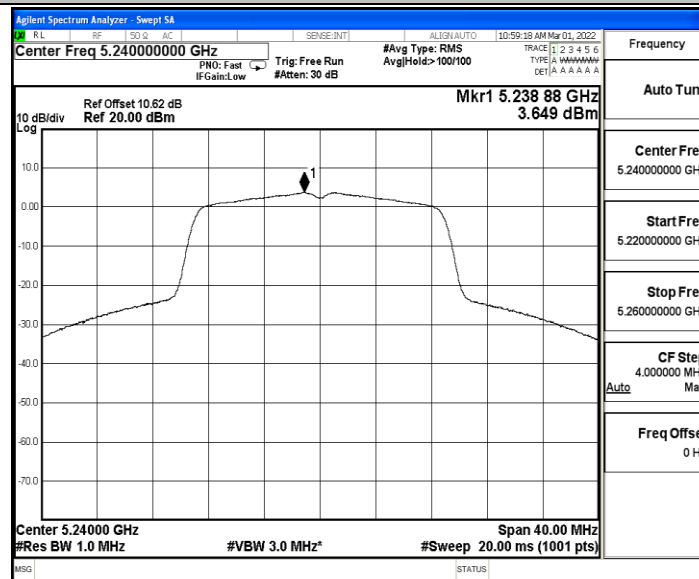


11N20SISO_Ant_5220

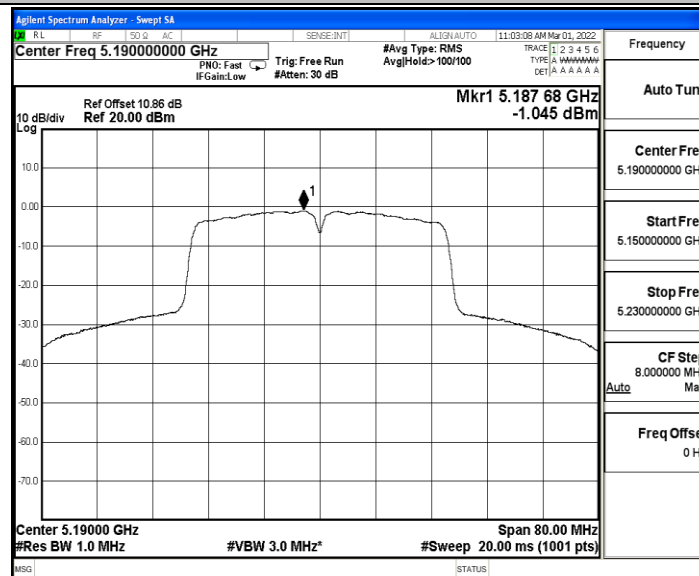




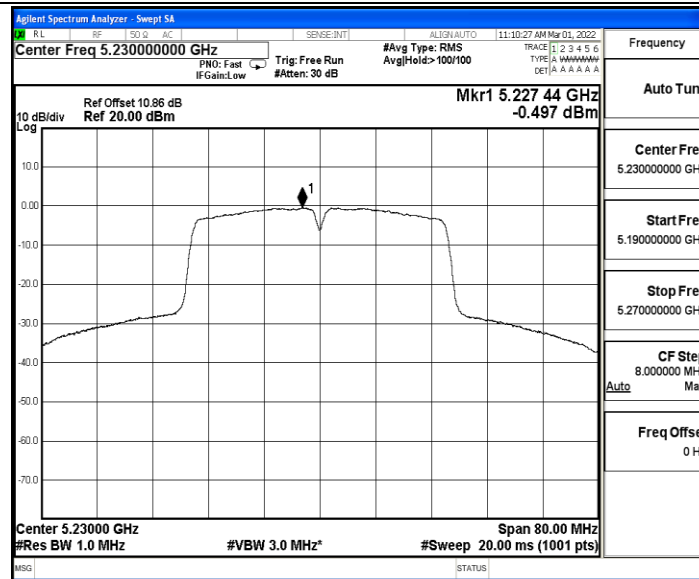
11N20SISO_Ant_5240



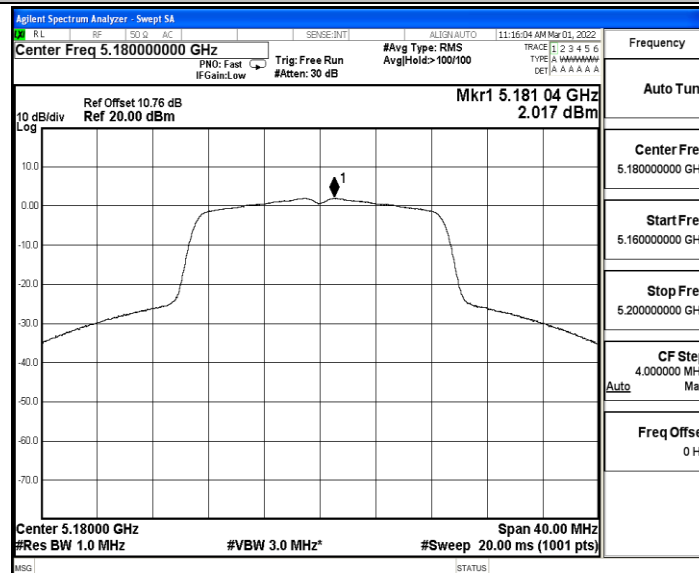
11N40SISO_Ant_5190



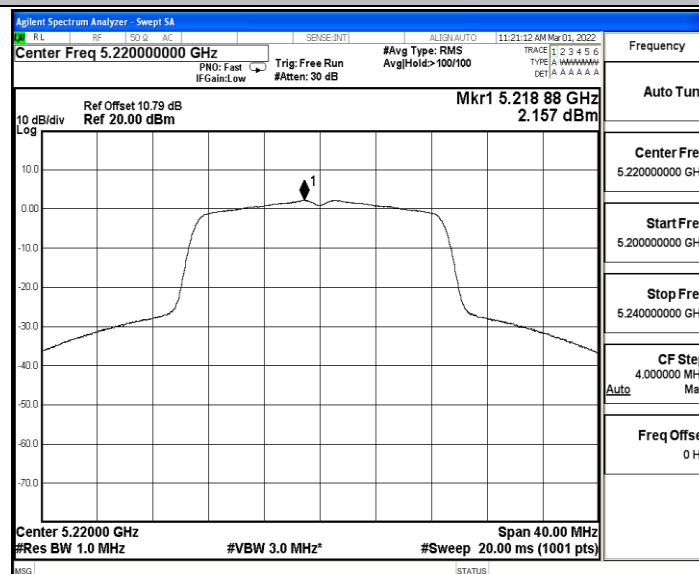
11N40SISO_Ant_5230



11AC20SISO_Ant_5180

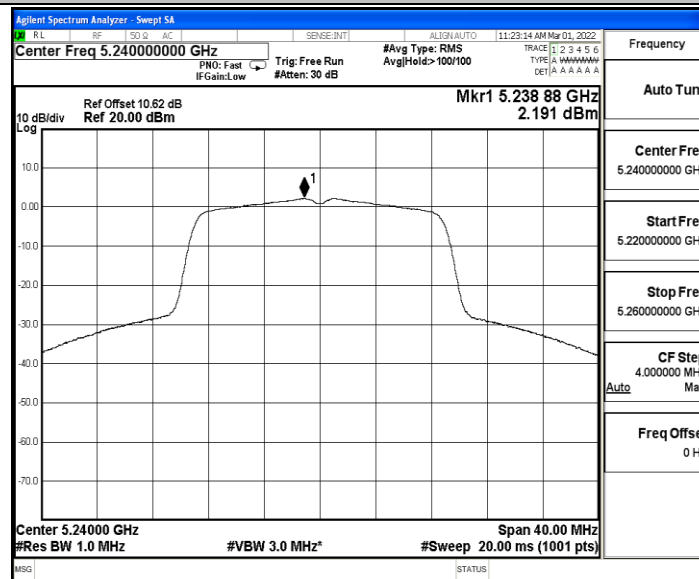


11AC20SISO_Ant_5220

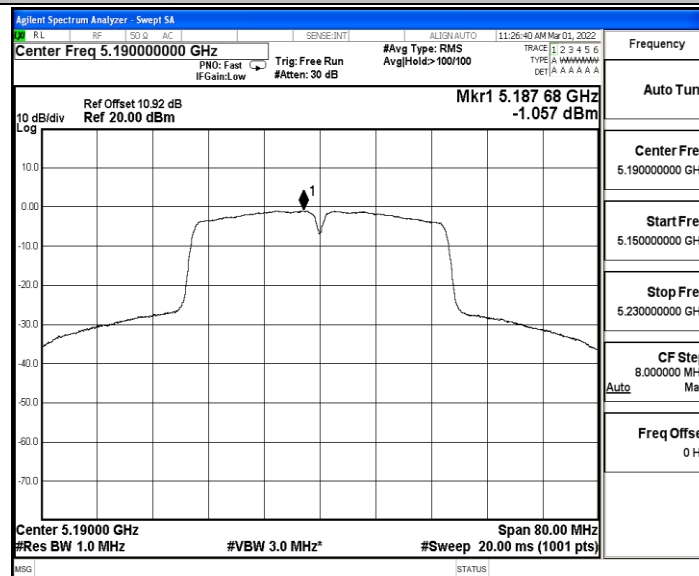




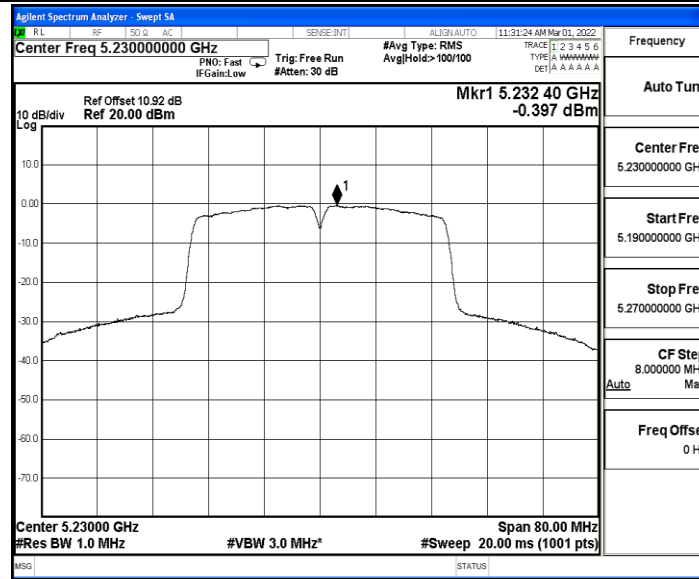
11AC20SISO_Ant_5240



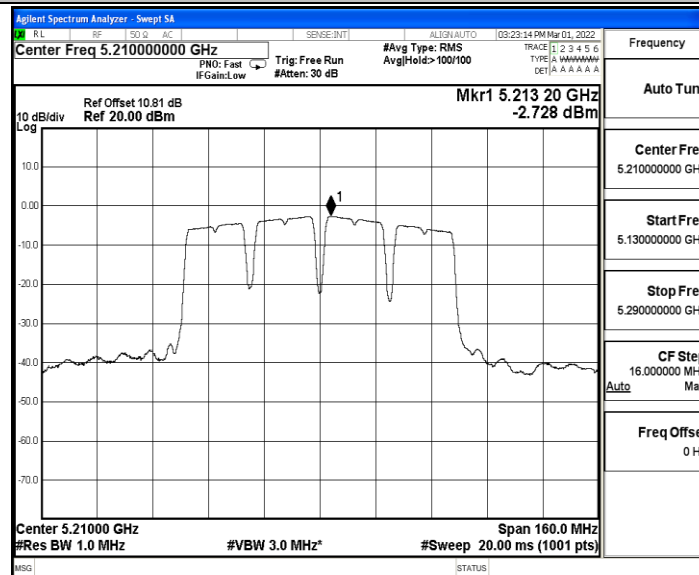
11AC40SISO_Ant_5190



11AC40SISO_Ant_5230



11AC80SISO_Ant_5210





B.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	Ant	Low	5180	AV	4500.000	-47.73	≤-41.20	47.47	≤54	PASS
				AV	5149.600	-43.28	≤-41.20	51.92	≤54	PASS
				AV	5150.000	-43.01	≤-41.20	52.19	≤54	PASS
				Peak	4500.000	-38.7	≤-21.20	56.50	≤68.2	PASS
				Peak	5149.600	-28.47	≤-21.20	66.73	≤68.2	PASS
				Peak	5150.000	-32.86	≤-21.20	62.34	≤68.2	PASS
		High	5240	AV	5350.000	-46.08	≤-41.20	49.12	≤54	PASS
				AV	5370.000	-45.38	≤-41.20	49.82	≤54	PASS
				AV	5460.000	-46.51	≤-41.20	48.69	≤54	PASS
				Peak	5350.000	-37.76	≤-21.20	57.44	≤68.2	PASS
				Peak	5355.840	-35.92	≤-21.20	59.28	≤68.2	PASS
				Peak	5460.000	-38.46	≤-21.20	56.74	≤68.2	PASS
11N20SIS O	Ant	Low	5180	AV	4500.000	-47.84	≤-41.20	47.36	≤54	PASS
				AV	5149.600	-42.45	≤-41.20	52.75	≤54	PASS
				AV	5150.000	-42.16	≤-41.20	53.04	≤54	PASS
				Peak	4500.000	-39.72	≤-21.20	55.48	≤68.2	PASS
				Peak	5149.600	-30.73	≤-21.20	64.47	≤68.2	PASS
				Peak	5150.000	-32.05	≤-21.20	63.15	≤68.2	PASS
		High	5240	AV	5350.000	-45.76	≤-41.20	49.44	≤54	PASS
				AV	5370.000	-45.1	≤-41.20	50.10	≤54	PASS
				AV	5460.000	-46.14	≤-41.20	49.06	≤54	PASS
				Peak	5350.000	-37.27	≤-21.20	57.93	≤68.2	PASS
				Peak	5367.840	-35.4	≤-21.20	59.80	≤68.2	PASS
				Peak	5460.000	-37.55	≤-21.20	57.65	≤68.2	PASS
11N40SIS O	Ant	Low	5190	AV	4500.000	-47.59	≤-41.20	47.61	≤54	PASS
				AV	5149.600	-41.35	≤-41.20	53.85	≤54	PASS
				AV	5150.000	-41.34	≤-41.20	53.86	≤54	PASS
				Peak	4500.000	-38.68	≤-21.20	56.52	≤68.2	PASS
				Peak	5147.500	-29.87	≤-21.20	65.33	≤68.2	PASS
				Peak	5150.000	-31.58	≤-21.20	63.62	≤68.2	PASS
		High	5230	AV	5350.000	-45.57	≤-41.20	49.63	≤54	PASS
				AV	5380.960	-45.12	≤-41.20	50.08	≤54	PASS
				AV	5460.000	-45.84	≤-41.20	49.36	≤54	PASS
				Peak	5350.000	-37.37	≤-21.20	57.83	≤68.2	PASS
				Peak	5421.260	-35.51	≤-21.20	59.69	≤68.2	PASS
				Peak	5460.000	-37.49	≤-21.20	57.71	≤68.2	PASS
11AC20SI	Ant	Low	5180	AV	4500.000	-47.79	≤-41.20	47.41	≤54	PASS



SO				AV	5149.600	-44.05	≤ -41.20	51.15	≤ 54	PASS
				AV	5150.000	-44.05	≤ -41.20	51.15	≤ 54	PASS
				Peak	4500.000	-39.41	≤ -21.20	55.79	≤ 68.2	PASS
				Peak	5148.900	-33.86	≤ -21.20	61.34	≤ 68.2	PASS
				Peak	5150.000	-34.53	≤ -21.20	60.67	≤ 68.2	PASS
		High	5240	AV	5350.000	-45.97	≤ -41.20	49.23	≤ 54	PASS
				AV	5369.760	-45.37	≤ -41.20	49.83	≤ 54	PASS
				AV	5460.000	-46.12	≤ -41.20	49.08	≤ 54	PASS
				Peak	5350.000	-37.46	≤ -21.20	57.74	≤ 68.2	PASS
				Peak	5449.680	-34.77	≤ -21.20	60.43	≤ 68.2	PASS
				Peak	5460.000	-36.52	≤ -21.20	58.68	≤ 68.2	PASS
11AC40SI SO	Ant	Low	5190	AV	4500.000	-47.6	≤ -41.20	47.60	≤ 54	PASS
				AV	5149.600	-42.48	≤ -41.20	52.72	≤ 54	PASS
				AV	5150.000	-42.52	≤ -41.20	52.68	≤ 54	PASS
				Peak	4500.000	-39.27	≤ -21.20	55.93	≤ 68.2	PASS
				Peak	5148.900	-30.32	≤ -21.20	64.88	≤ 68.2	PASS
				Peak	5150.000	-31.79	≤ -21.20	63.41	≤ 68.2	PASS
		High	5230	AV	5350.000	-45.68	≤ -41.20	49.52	≤ 54	PASS
				AV	5376.020	-44.75	≤ -41.20	50.45	≤ 54	PASS
				AV	5460.000	-45.6	≤ -41.20	49.60	≤ 54	PASS
				Peak	5350.000	-37.72	≤ -21.20	57.48	≤ 68.2	PASS
				Peak	5351.060	-35.22	≤ -21.20	59.98	≤ 68.2	PASS
				Peak	5460.000	-36.95	≤ -21.20	58.25	≤ 68.2	PASS
11AC80SI SO	Ant	Low	5210	AV	4500.000	-47.84	≤ -41.20	47.36	≤ 54	PASS
				AV	5145.750	-45.42	≤ -41.20	49.78	≤ 54	PASS
				AV	5150.000	-45.88	≤ -41.20	49.32	≤ 54	PASS
				Peak	4500.000	-38.51	≤ -21.20	56.69	≤ 68.2	PASS
				Peak	4866.750	-35.05	≤ -21.20	60.15	≤ 68.2	PASS
				Peak	5150.000	-35.84	≤ -21.20	59.36	≤ 68.2	PASS
		High	5210	AV	5350.000	-45.21	≤ -41.20	49.99	≤ 54	PASS
				AV	5352.480	-45.03	≤ -41.20	50.17	≤ 54	PASS
				AV	5460.000	-45.92	≤ -41.20	49.28	≤ 54	PASS
				Peak	5350.000	-36.99	≤ -21.20	58.21	≤ 68.2	PASS
				Peak	5376.560	-34.3	≤ -21.20	60.90	≤ 68.2	PASS
				Peak	5460.000	-37.25	≤ -21.20	57.95	≤ 68.2	PASS

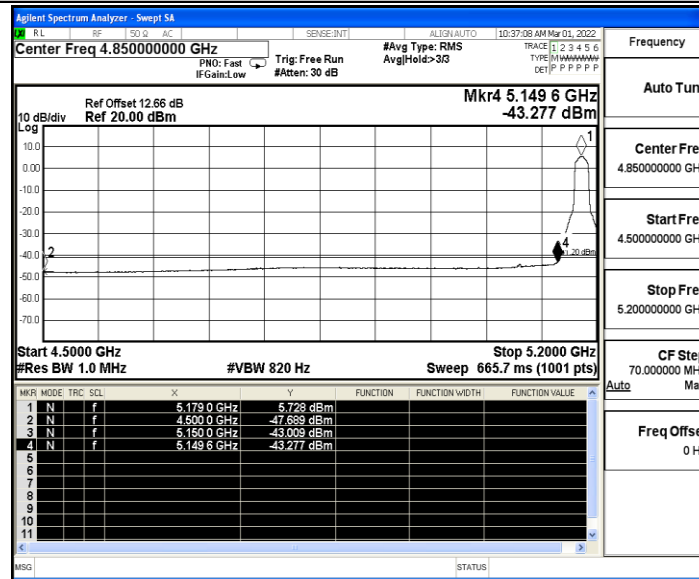
Note:

1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5250 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.

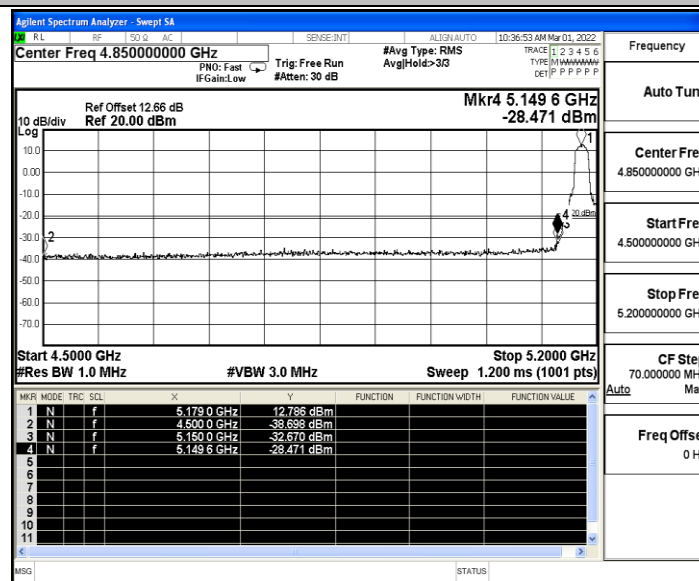


Test Graphs

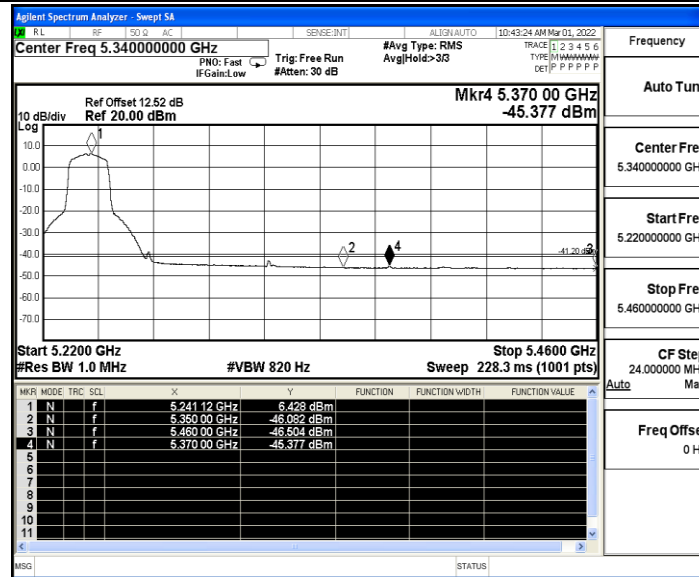
11A_Ant_Low_5180_AV



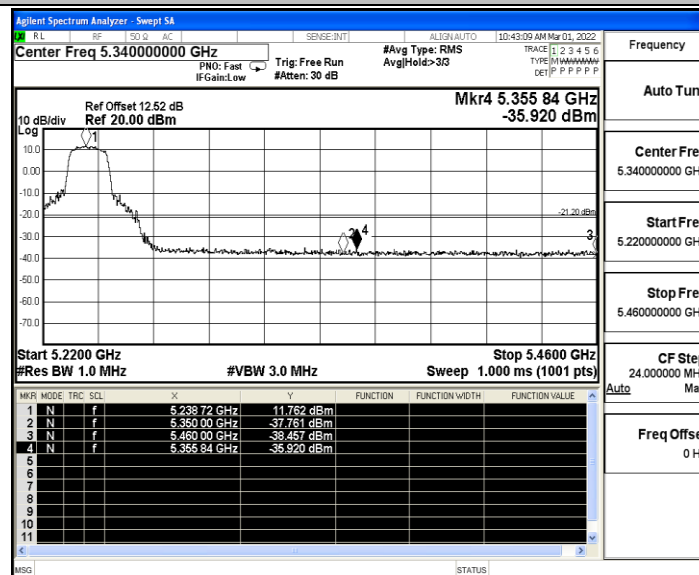
11A_Ant_Low_5180_Peak



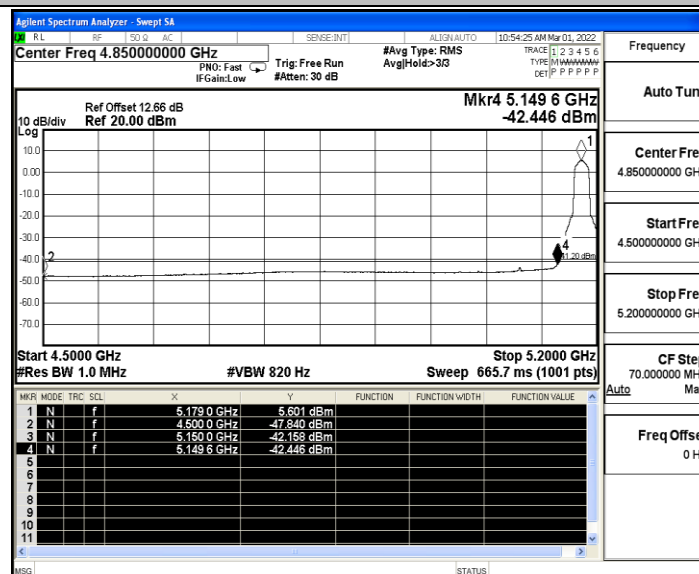
11A_Ant_High_5240_AV



11A_Ant_High_5240_Peak

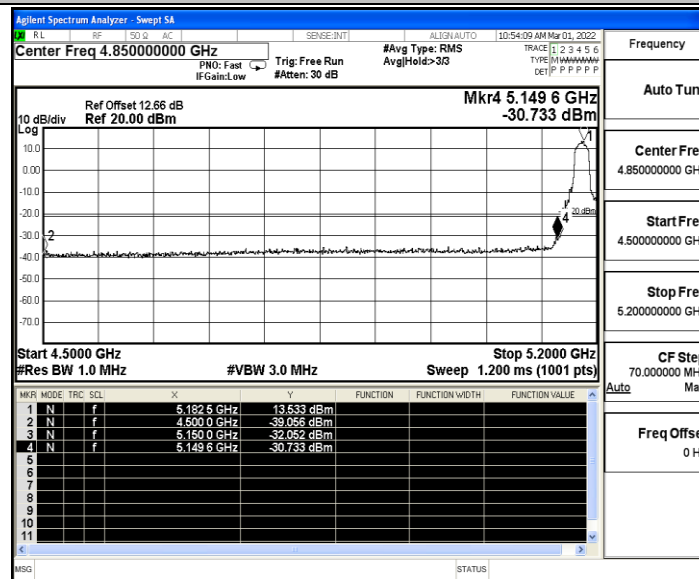


11N20SISO_Ant_Low_5180_AV

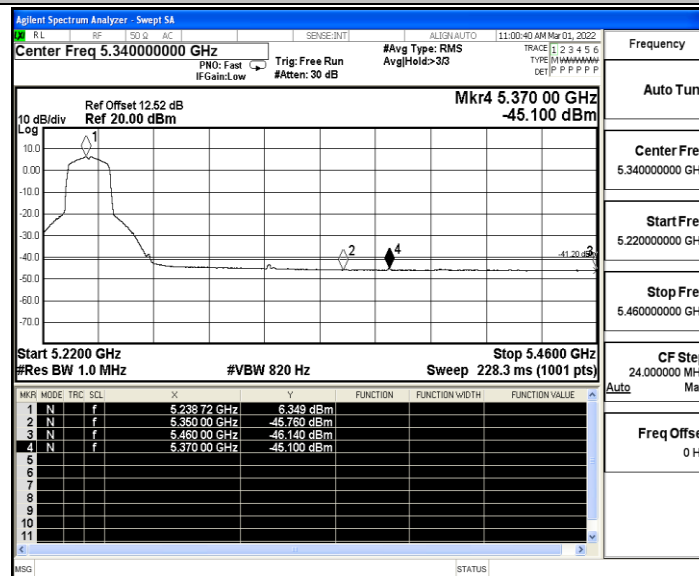




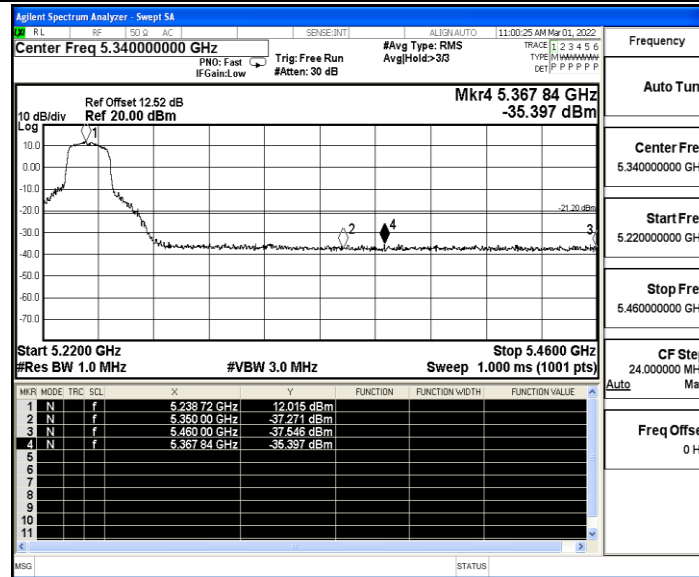
11N20SISO_Ant_Low_5180_Peak



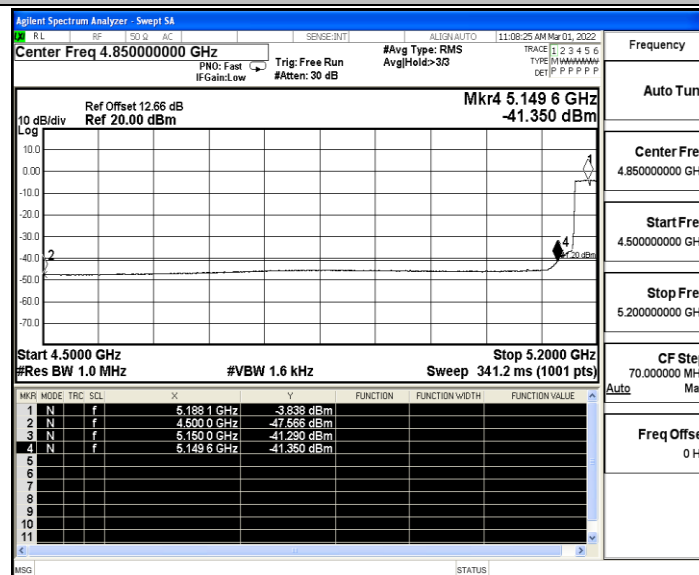
11N20SISO_Ant_High_5240_AV



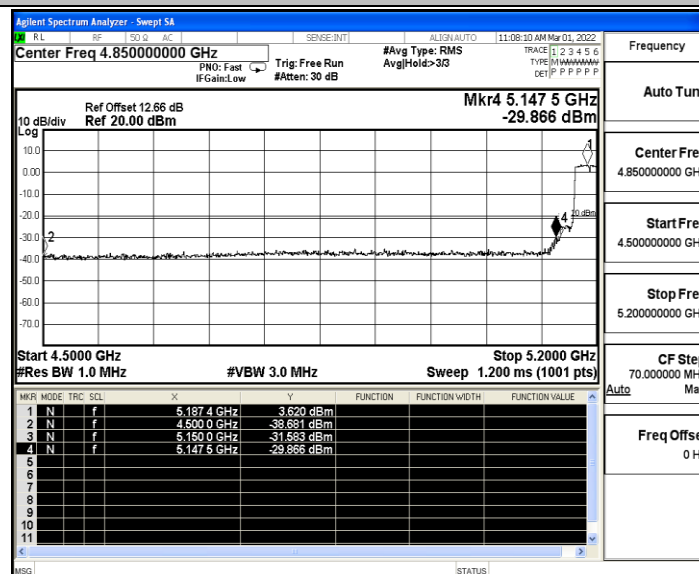
11N20SISO_Ant_High_5240_Peak



11N40SISO_Ant_Low_5190_AV

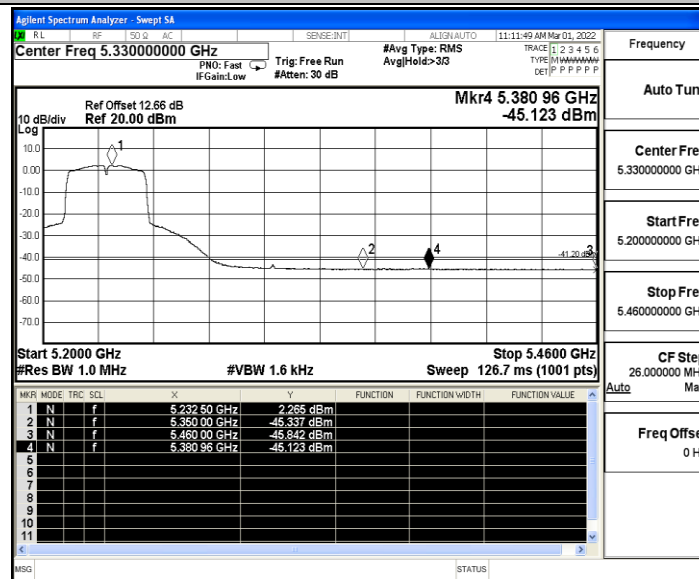


11N40SISO_Ant_Low_5190_Peak

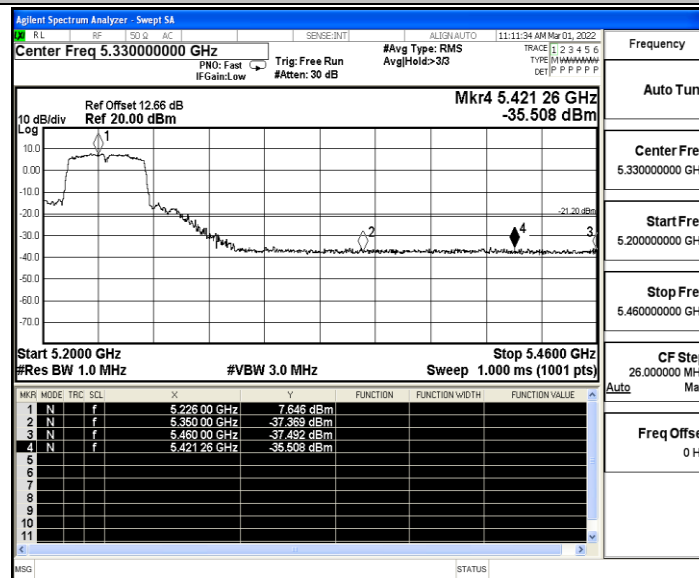




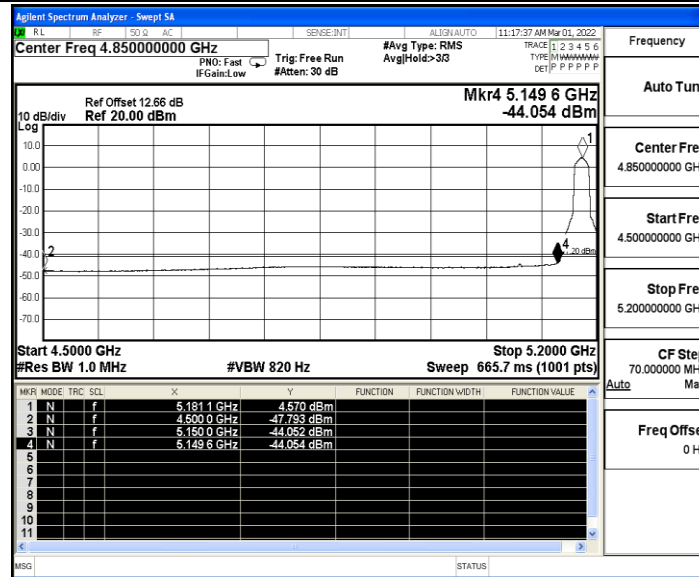
11N40SISO_Ant_High_5230_AV



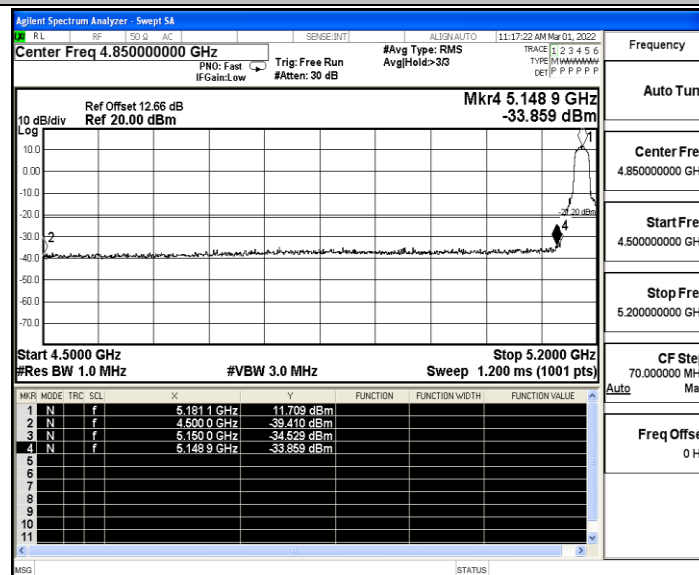
11N40SISO_Ant_High_5230_Peak



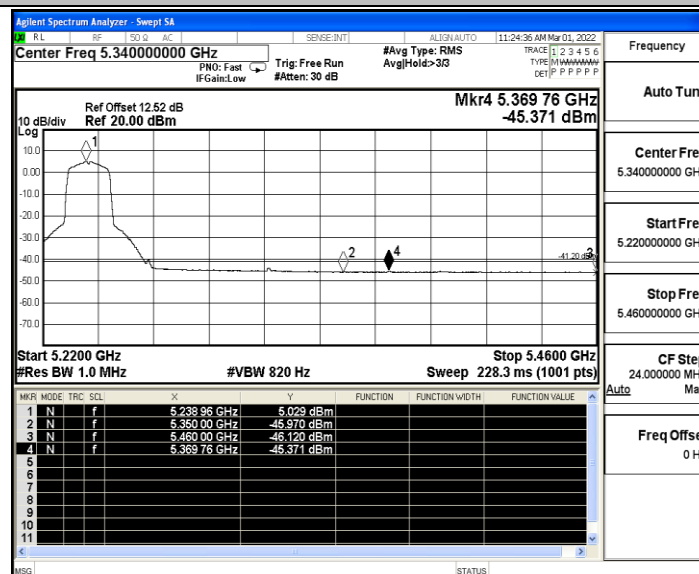
11AC20SISO_Ant_Low_5180_AV



11AC20SISO_Ant_Low_5180_Peak

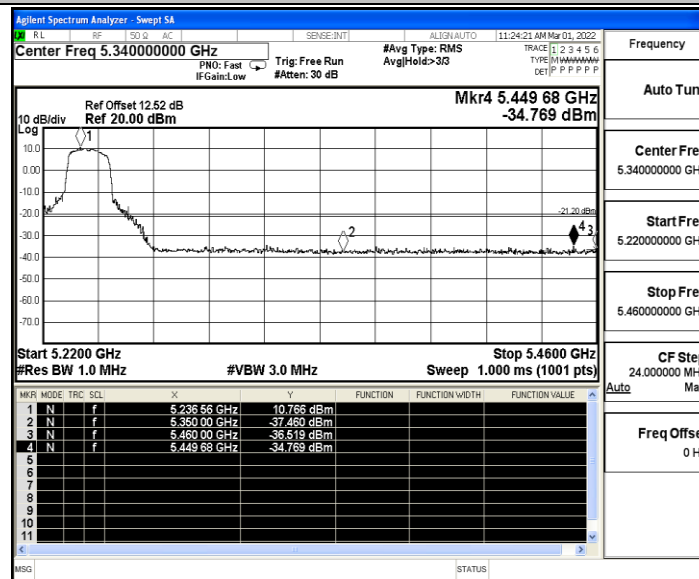


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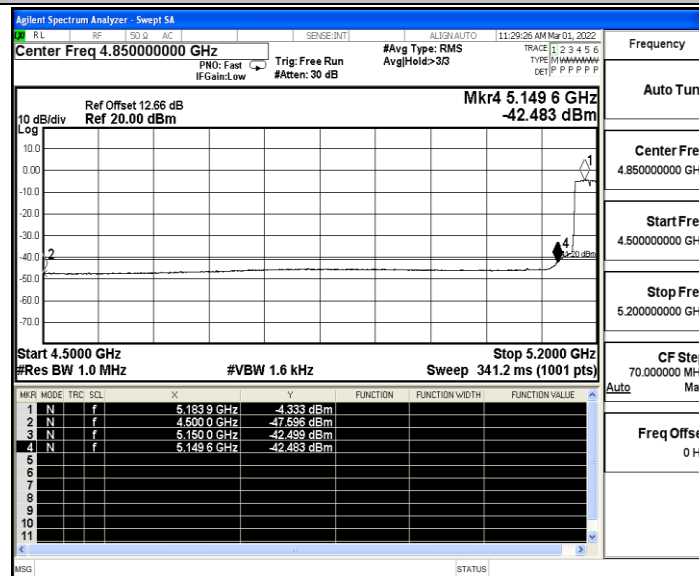




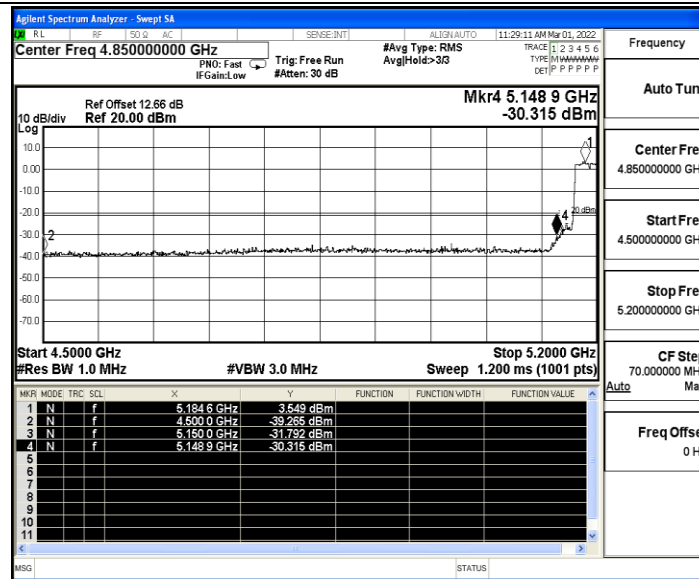
11AC20SISO_Ant_High_5240_Peak



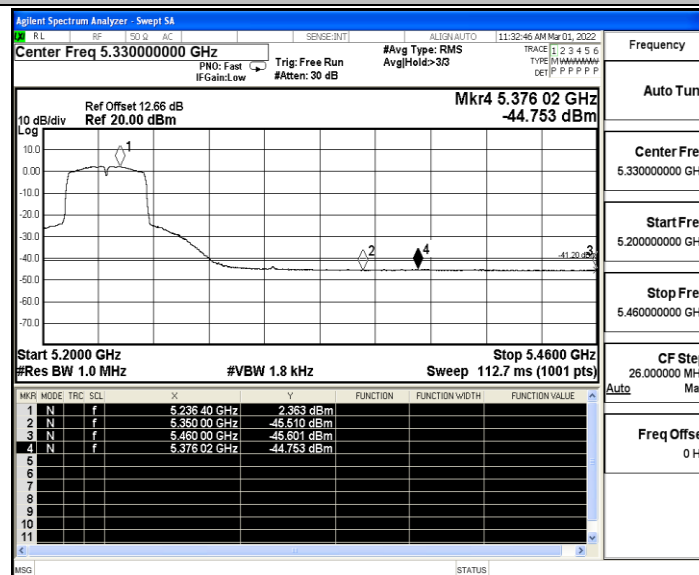
11AC40SISO_Ant_Low_5190_AV



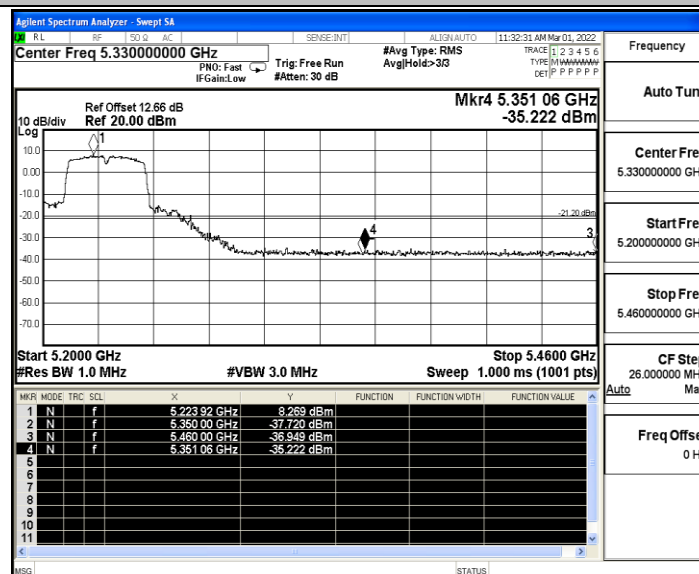
11AC40SISO_Ant_Low_5190_Peak



11AC40SISO_Ant_High_5230_AV

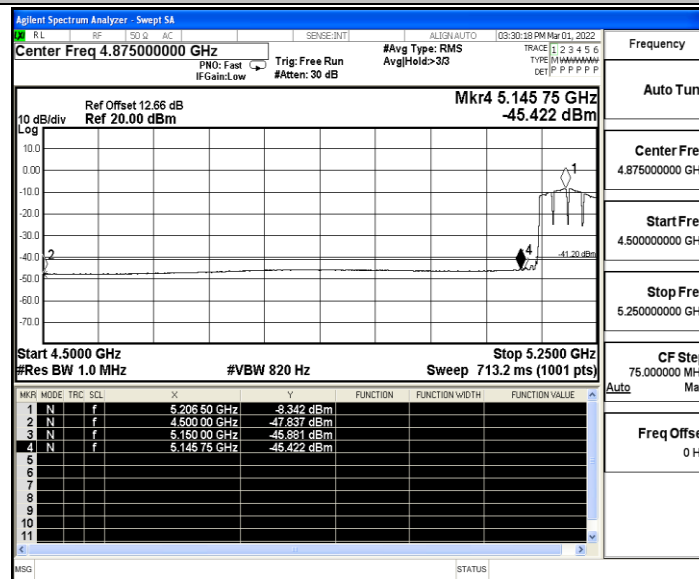


11AC40SISO_Ant_High_5230_Peak

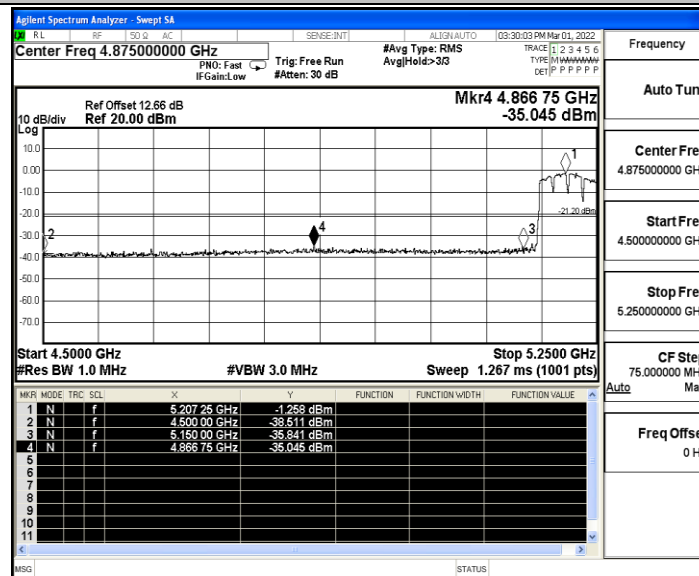




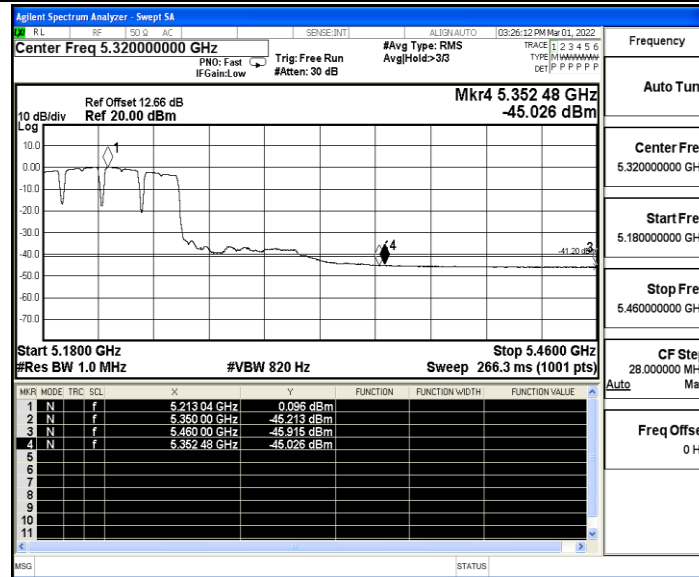
11AC80SISO_Ant_Low_5210_AV



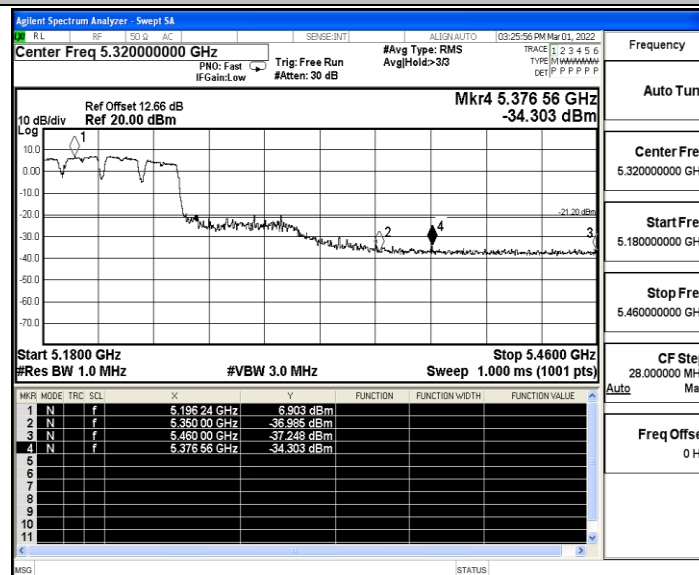
11AC80SISO_Ant_Low_5210_Peak



11AC80SISO_Ant_High_5210_AV



11AC80SISO_Ant_High_5210_Peak





B.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20SI SO	Ant	5180	NV	NT	-11000	-2.123552	20	PASS
			LV	NT	-13000	-2.509653	20	PASS
			HV	NT	-14000	-2.702703	20	PASS
		5220	NV	NT	-16000	-3.065134	20	PASS
			LV	NT	-17000	-3.256705	20	PASS
			HV	NT	-18000	-3.448276	20	PASS
		5240	NV	NT	-18000	-3.435115	20	PASS
			LV	NT	-18000	-3.435115	20	PASS
			HV	NT	-18000	-3.435115	20	PASS
11AC40SI SO	Ant	5190	NV	NT	-16000	-3.082852	20	PASS
			LV	NT	-17000	-3.27553	20	PASS
			HV	NT	-18000	-3.468208	20	PASS
		5230	NV	NT	-17000	-3.250478	20	PASS
			LV	NT	-18000	-3.441683	20	PASS
			HV	NT	-18000	-3.441683	20	PASS
11AC80SI SO	Ant	5210	NV	NT	-17000	-3.262956	20	PASS
			LV	NT	-18000	-3.454894	20	PASS
			HV	NT	-18000	-3.454894	20	PASS

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20SI SO	Ant	5180	NV	-30	-15000	-2.895753	20	PASS
			NV	-20	-16000	-3.088803	20	PASS
			NV	-10	-16000	-3.088803	20	PASS
			NV	0	-17000	-3.281853	20	PASS
			NV	10	-17000	-3.281853	20	PASS
			NV	20	-17000	-3.281853	20	PASS
			NV	30	-17000	-3.281853	20	PASS
			NV	40	-18000	-3.474903	20	PASS
			NV	50	-18000	-3.474903	20	PASS
		5220	NV	-30	-18000	-3.448276	20	PASS
			NV	-20	-18000	-3.448276	20	PASS
			NV	-10	-18000	-3.448276	20	PASS
			NV	0	-18000	-3.448276	20	PASS
			NV	10	-18000	-3.448276	20	PASS
			NV					



			NV	20	-18000	-3.448276	20	PASS
			NV	30	-19000	-3.639847	20	PASS
			NV	40	-18000	-3.448276	20	PASS
			NV	50	-18000	-3.448276	20	PASS
		5240	NV	-30	-19000	-3.625954	20	PASS
			NV	-20	-19000	-3.625954	20	PASS
			NV	-10	-19000	-3.625954	20	PASS
			NV	0	-19000	-3.625954	20	PASS
			NV	10	-19000	-3.625954	20	PASS
			NV	20	-19000	-3.625954	20	PASS
			NV	30	-19000	-3.625954	20	PASS
			NV	40	-19000	-3.625954	20	PASS
			NV	50	-19000	-3.625954	20	PASS
11AC40SI SO	Ant	5190	NV	-30	-18000	-3.468208	20	PASS
			NV	-20	-18000	-3.468208	20	PASS
			NV	-10	-18000	-3.468208	20	PASS
			NV	0	-18000	-3.468208	20	PASS
			NV	10	-19000	-3.660886	20	PASS
			NV	20	-19000	-3.660886	20	PASS
			NV	30	-18000	-3.468208	20	PASS
			NV	40	-19000	-3.660886	20	PASS
		5230	NV	50	-19000	-3.660886	20	PASS
			NV	-30	-18000	-3.441683	20	PASS
			NV	-20	-19000	-3.632887	20	PASS
			NV	-10	-18000	-3.441683	20	PASS
			NV	0	-19000	-3.632887	20	PASS
			NV	10	-19000	-3.632887	20	PASS
			NV	20	-19000	-3.632887	20	PASS
			NV	30	-19000	-3.632887	20	PASS
11AC80SI SO	Ant	5210	NV	40	-19000	-3.632887	20	PASS
			NV	50	-19000	-3.632887	20	PASS
			NV	-30	-19000	-3.646833	20	PASS
			NV	-20	-19000	-3.646833	20	PASS
			NV	-10	-19000	-3.646833	20	PASS
			NV	0	-19000	-3.646833	20	PASS
			NV	10	-19000	-3.646833	20	PASS
			NV	20	-19000	-3.646833	20	PASS
			NV	30	-19000	-3.646833	20	PASS
			NV	40	-19000	-3.646833	20	PASS
			NV	50	-19000	-3.646833	20	PASS
			NV	-30	-19000	-3.646833	20	PASS
			NV	-20	-19000	-3.646833	20	PASS
			NV	-10	-19000	-3.646833	20	PASS
			NV	0	-19000	-3.646833	20	PASS
			NV	10	-19000	-3.646833	20	PASS



B.6 Duty Cycle

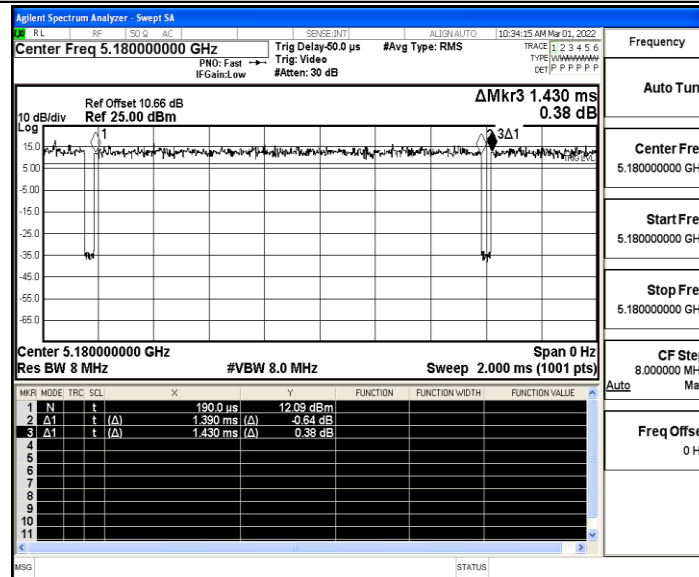
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11A	Ant	5180	1.39	1.43	97.20	---	---
		5220	1.40	1.43	97.90	---	---
		5240	1.39	1.43	97.20	---	---
11N20SISO	Ant	5180	1.30	1.34	97.01	---	---
		5220	1.30	1.34	97.01	---	---
		5240	1.30	1.33	97.74	---	---
11N40SISO	Ant	5190	0.65	0.68	95.59	---	---
		5230	0.65	0.68	95.59	---	---
11AC20SISO	Ant	5180	1.30	1.33	97.74	---	---
		5220	1.30	1.34	97.01	---	---
		5240	1.30	1.33	97.74	---	---
11AC40SISO	Ant	5190	0.65	0.69	94.20	---	---
		5230	0.64	0.68	94.12	---	---
11AC80SISO	Ant	5210	1.39	1.44	96.53	---	---

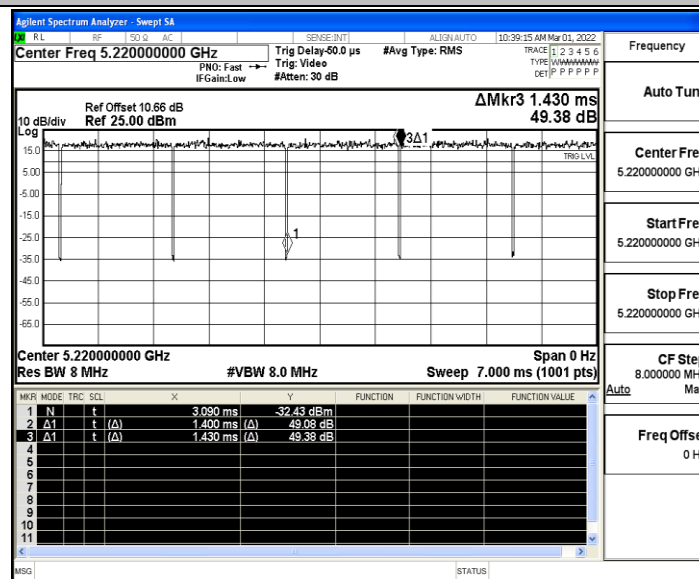


Test Graphs

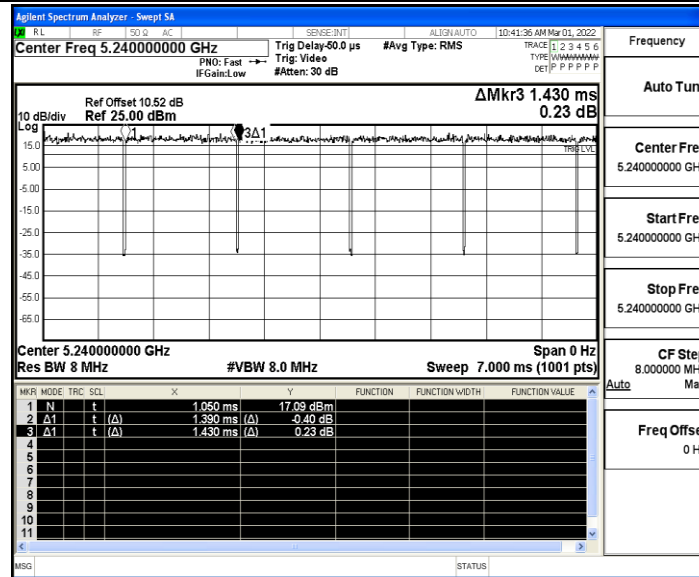
11A_Ant_5180



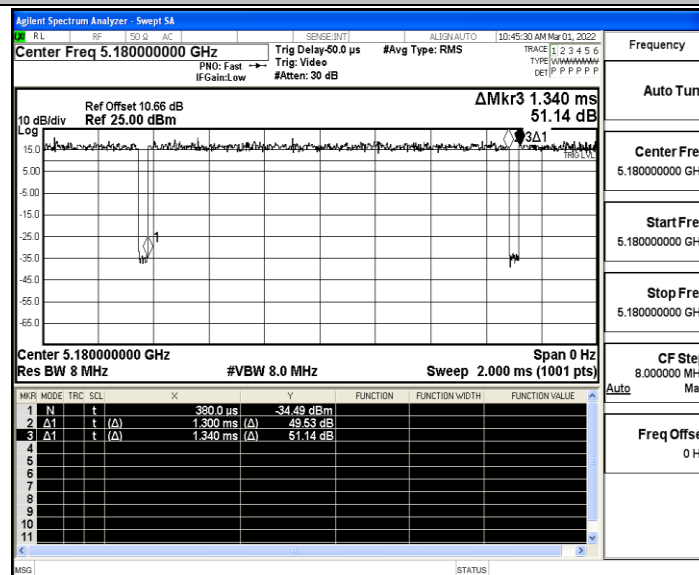
11A_Ant_5220



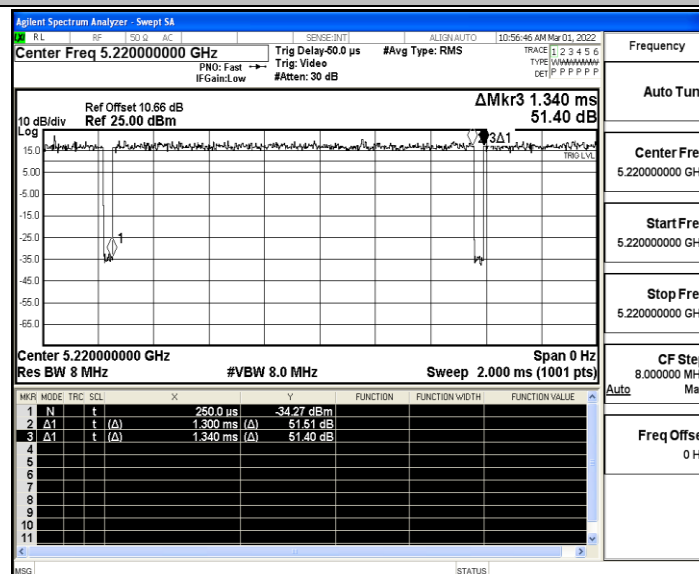
11A_Ant_5240



11N20SISO_Ant_5180

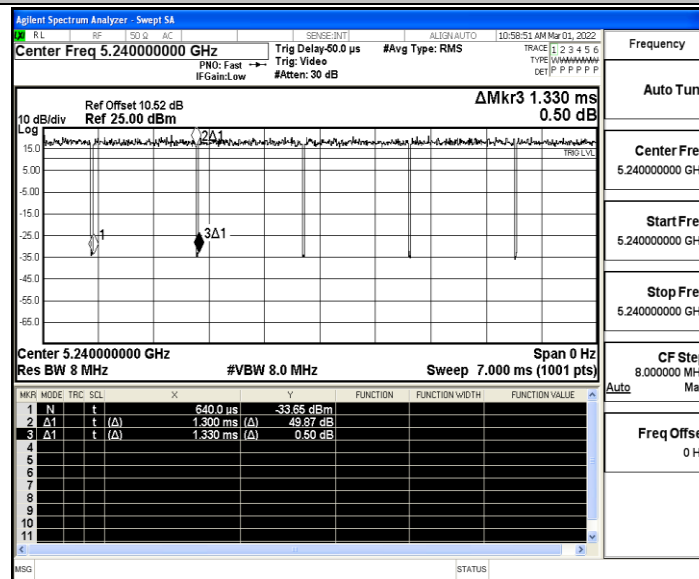


11N20SISO_Ant_5220

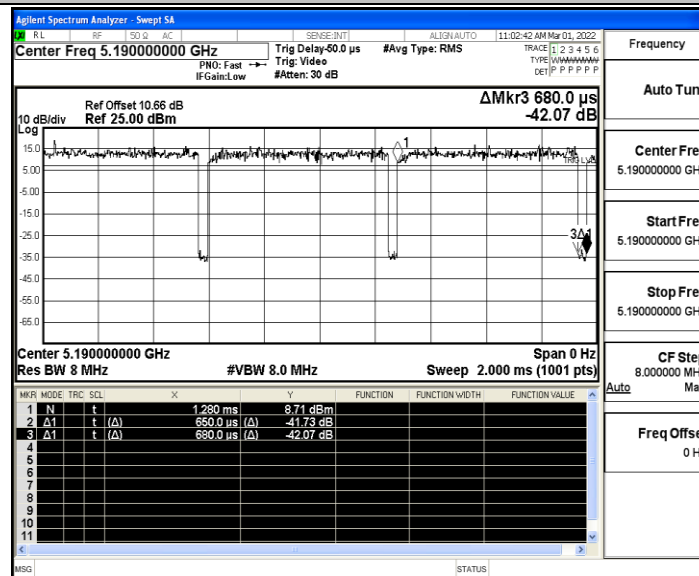




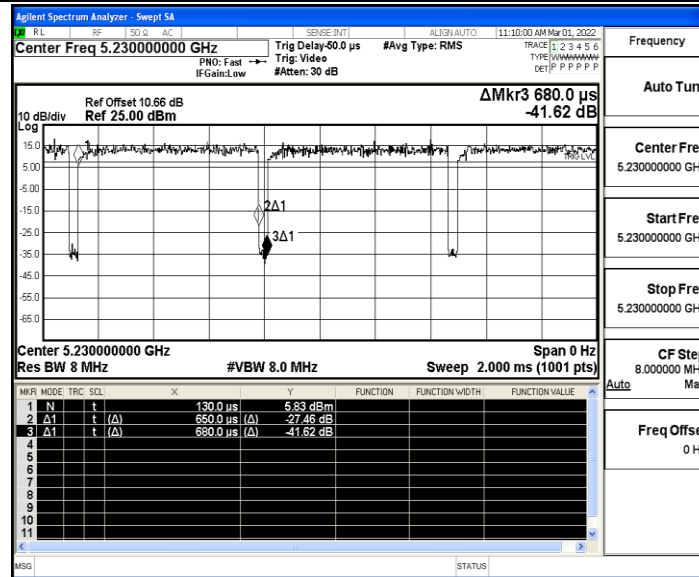
11N20SISO_Ant_5240



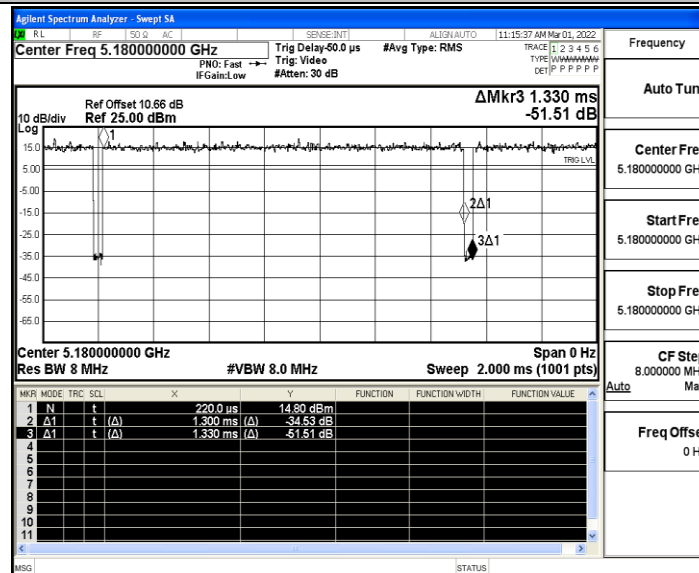
11N40SISO_Ant_5190



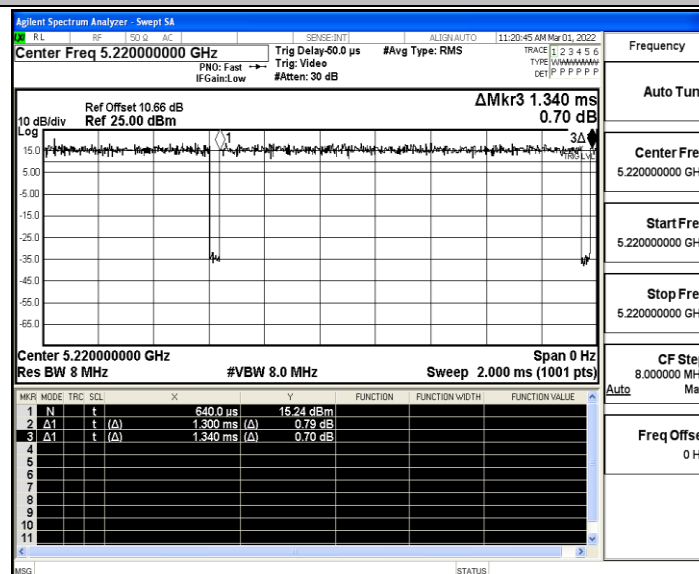
11N40SISO_Ant_5230



11AC20SISO_Ant_5180

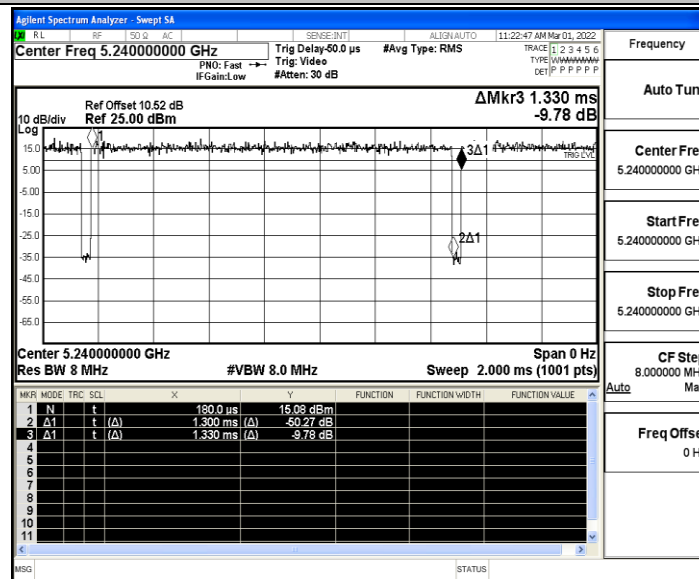


11AC20SISO_Ant_5220

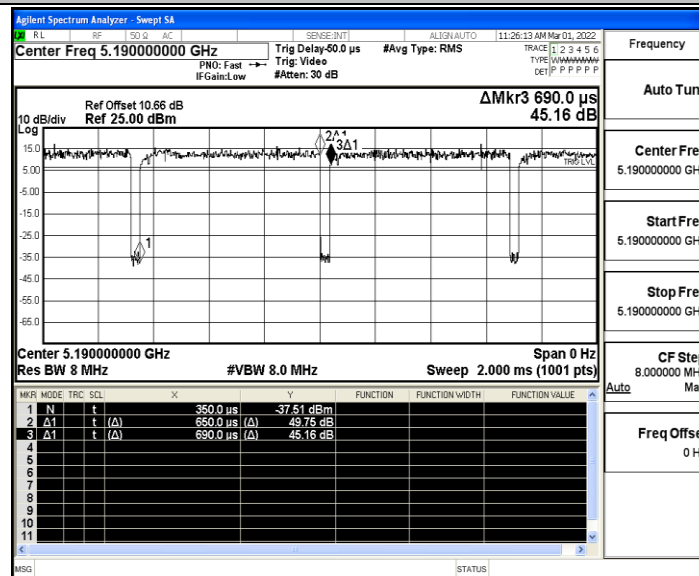




11AC20SISO_Ant_5240



11AC40SISO_Ant_5190



11AC40SISO_Ant_5230

