



Appendix D

RF Test Data for 5.2G WIFI (Conducted Measurement)

Product Name: Aeye-P4

Test Model: JBV-ME20301A

Environmental Conditions

Temperature:	21.1 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Monkey Li
Supervised by:	Li Huan



D.1 26dB Bandwidth

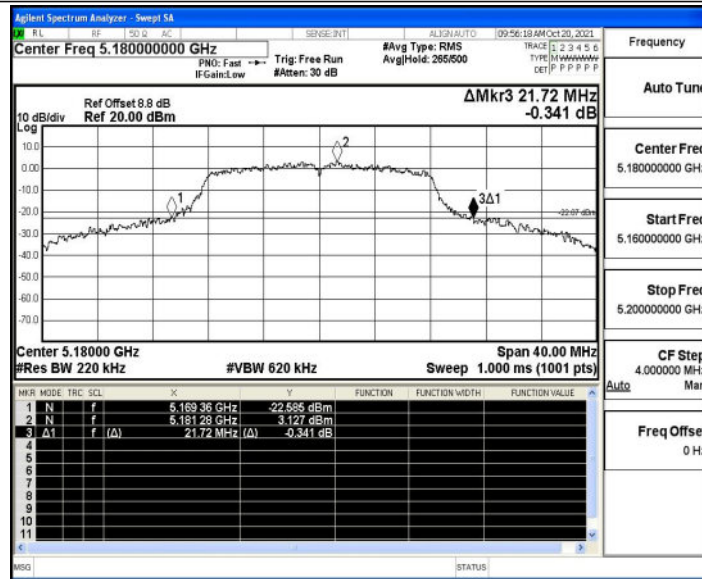
Test Result

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.720	5169.360	5191.080	---	PASS
		5200	23.360	5189.280	5212.640	---	PASS
		5240	24.520	5228.280	5252.800	---	PASS
11N20SISO	Ant1	5180	24.080	5168.160	5192.240	---	PASS
		5200	24.520	5187.880	5212.400	---	PASS
		5240	24.200	5228.160	5252.360	---	PASS
11N40SISO	Ant1	5190	40.640	5169.760	5210.400	---	PASS
		5230	40.720	5209.280	5250.000	---	PASS
11AC20SISO	Ant1	5180	21.720	5168.680	5190.400	---	PASS
		5200	21.800	5188.720	5210.520	---	PASS
		5240	22.920	5229.280	5252.200	---	PASS
11AC40SISO	Ant1	5190	40.640	5169.680	5210.320	---	PASS
		5230	40.640	5209.600	5250.240	---	PASS
11AC80SISO	Ant1	5210	81.600	5169.200	5250.800	---	PASS

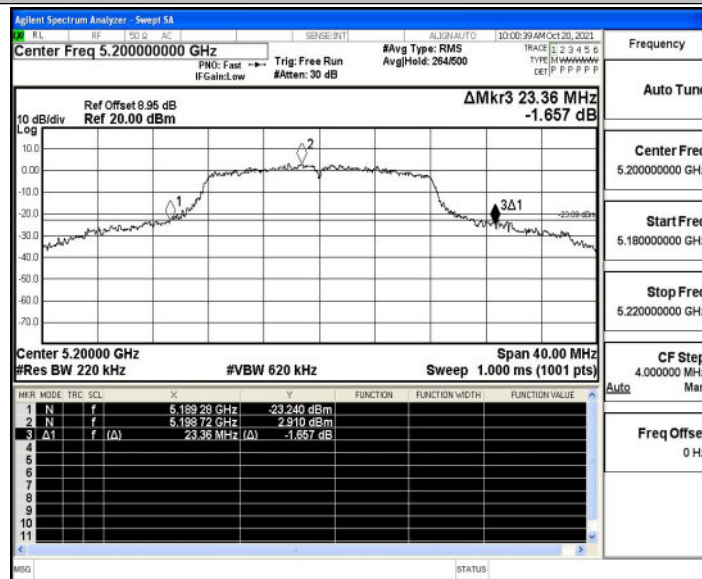


Test Graphs

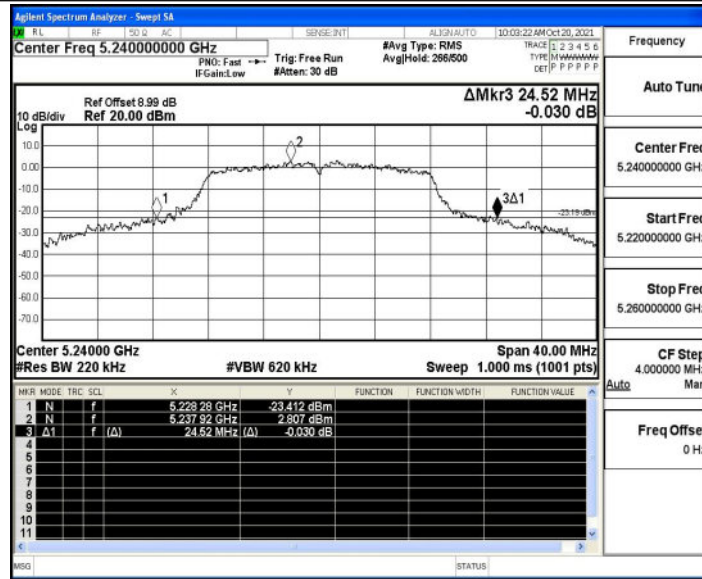
11A_Ant1_5180



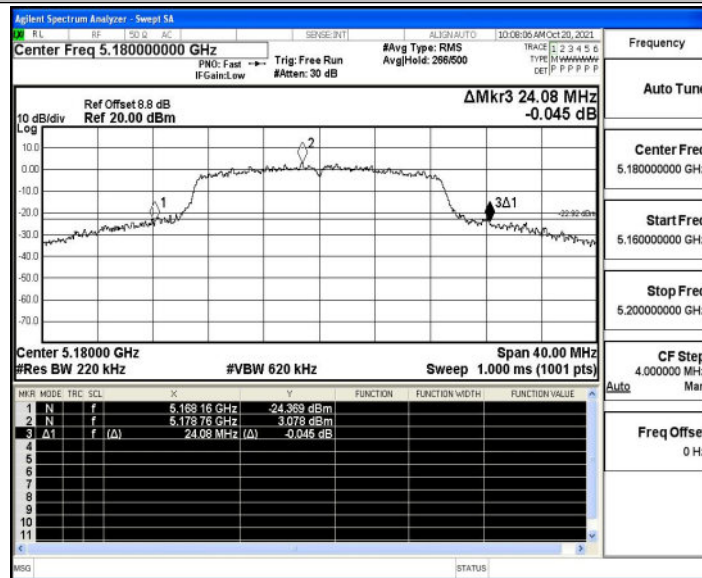
11A_Ant1_5200



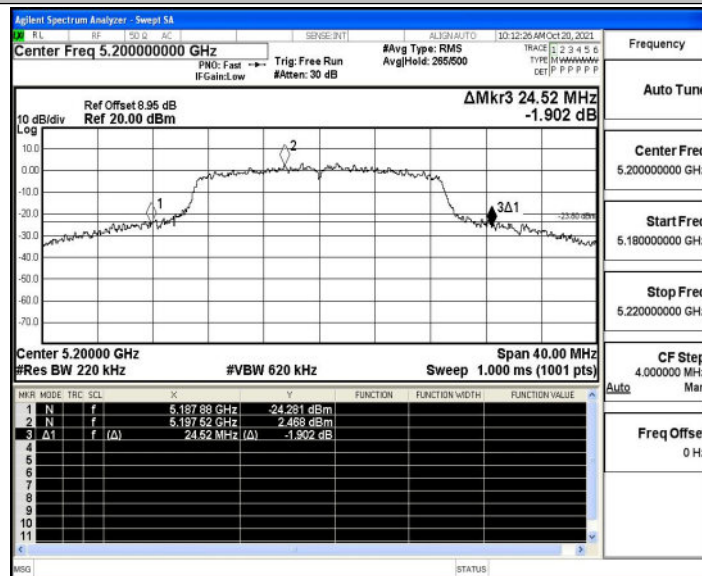
11A_Ant1_5240



11N20SISO_Ant1_5180

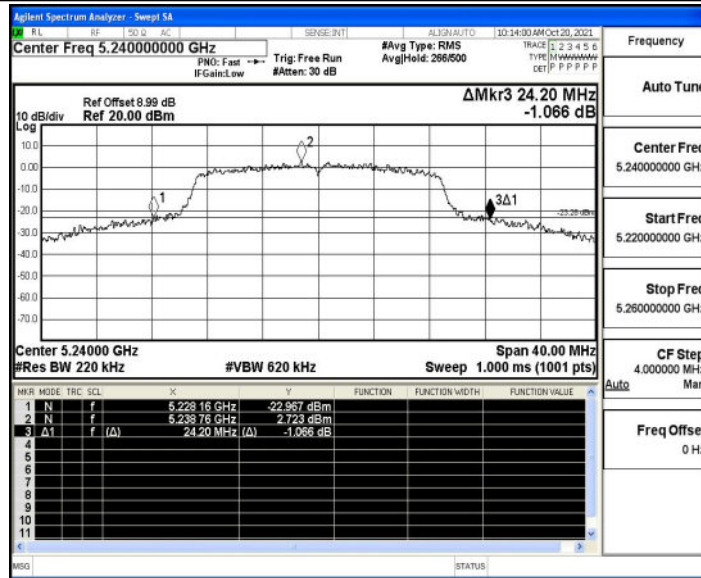


11N20SISO_Ant1_5200

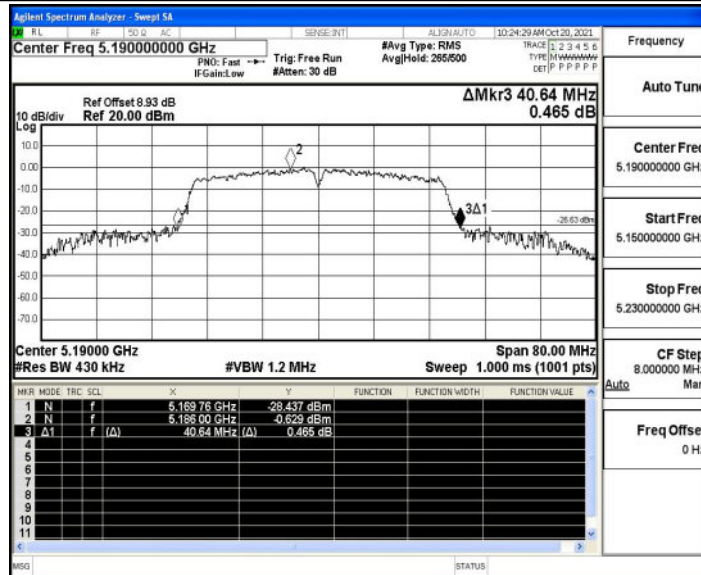




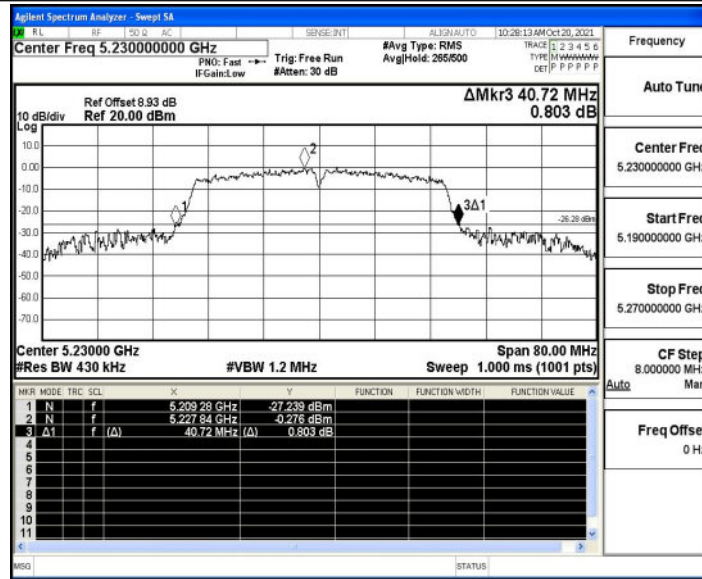
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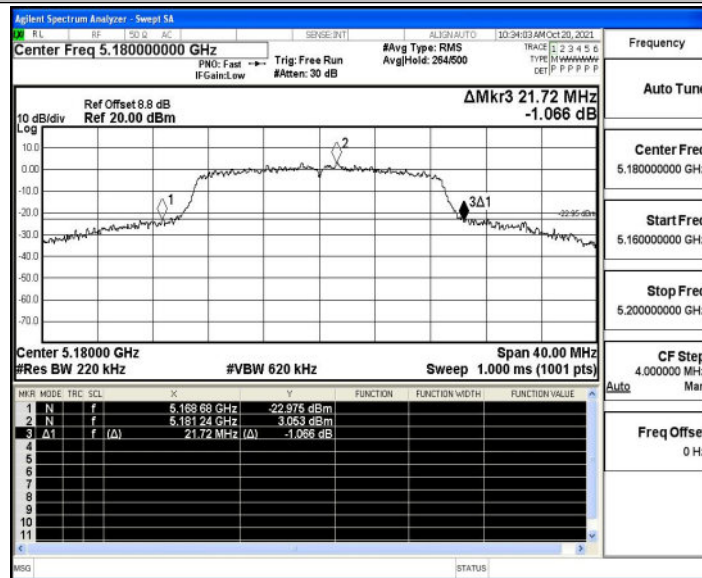
11N40SISO_Ant1_5190



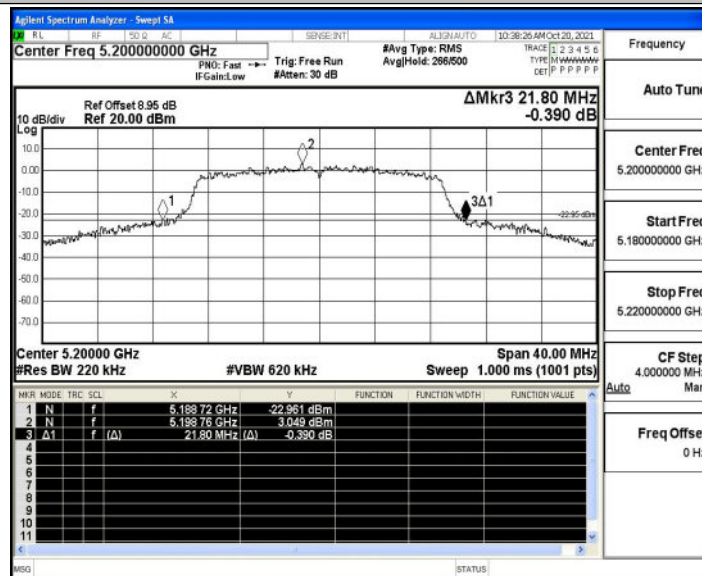
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

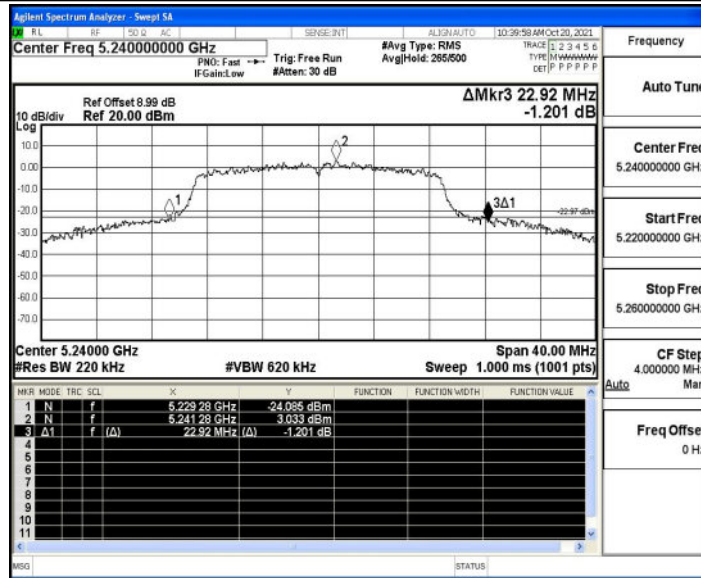


11AC20SISO_Ant1_5200

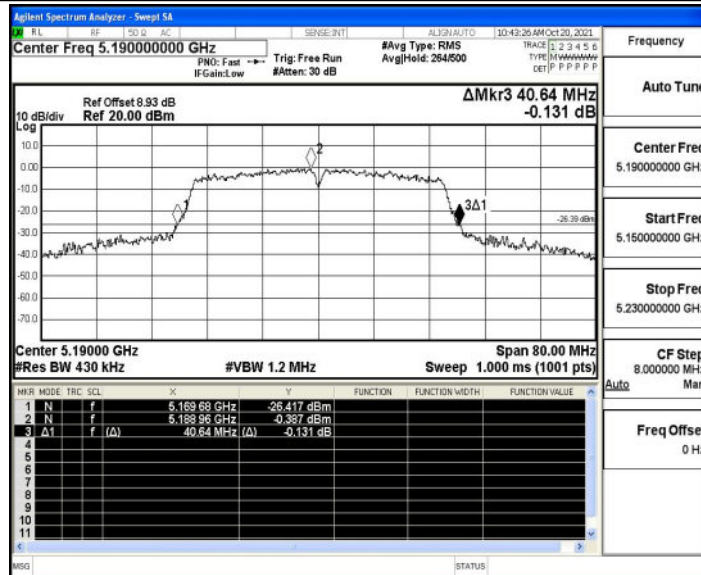




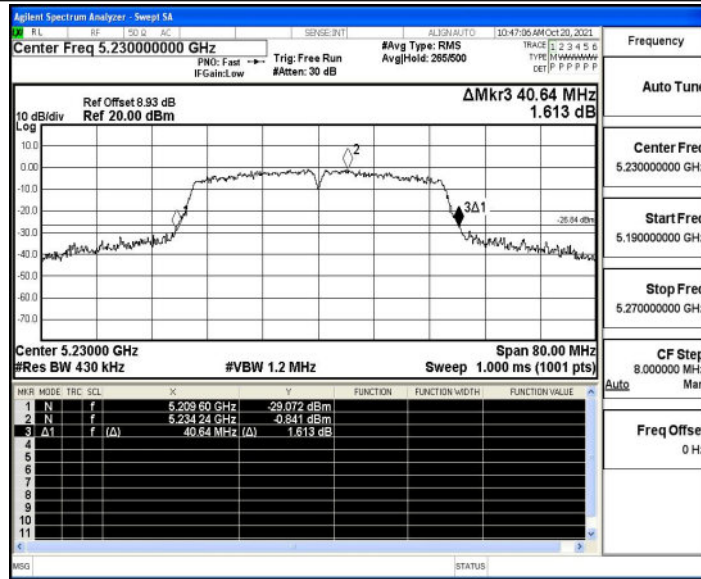
11AC20SISO_Ant1_5240



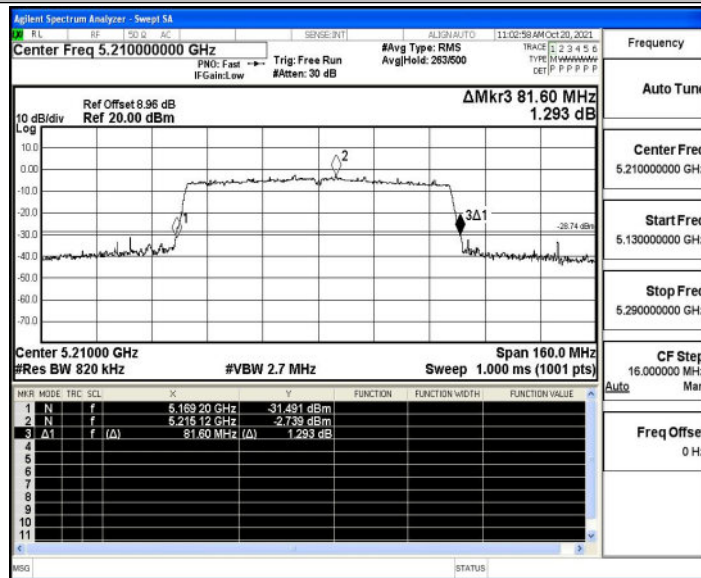
11AC40SISO_Ant1_5190



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	12.13	≤23.98	PASS
		5200	12.23	≤23.98	PASS
		5240	12.03	≤23.98	PASS
11N20SISO	Ant1	5180	12.01	≤23.98	PASS
		5200	11.95	≤23.98	PASS
		5240	11.86	≤23.98	PASS
11N40SISO	Ant1	5190	9.54	≤23.98	PASS
		5230	9.23	≤23.98	PASS
11AC20SISO	Ant1	5180	11.81	≤23.98	PASS
		5200	11.85	≤23.98	PASS
		5240	11.79	≤23.98	PASS
11AC40SISO	Ant1	5190	9.55	≤23.98	PASS
		5230	9.28	≤23.98	PASS
11AC80SISO	Ant1	5210	6.74	≤23.98	PASS

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



D.3 Maximum power spectral density

Test Result

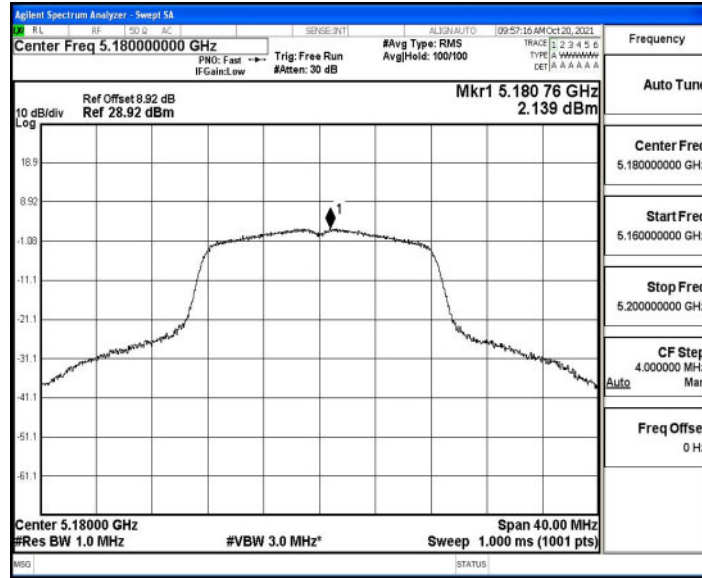
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	2.14	≤11	PASS
		5200	2.42	≤11	PASS
		5240	1.9	≤11	PASS
11N20SISO	Ant1	5180	1.83	≤11	PASS
		5200	2.08	≤11	PASS
		5240	1.88	≤11	PASS
11N40SISO	Ant1	5190	-3.48	≤11	PASS
		5230	-3.96	≤11	PASS
11AC20SISO	Ant1	5180	1.94	≤11	PASS
		5200	1.85	≤11	PASS
		5240	1.57	≤11	PASS
11AC40SISO	Ant1	5190	-3.57	≤11	PASS
		5230	-3.94	≤11	PASS
11AC80SISO	Ant1	5210	-9.79	≤11	PASS

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

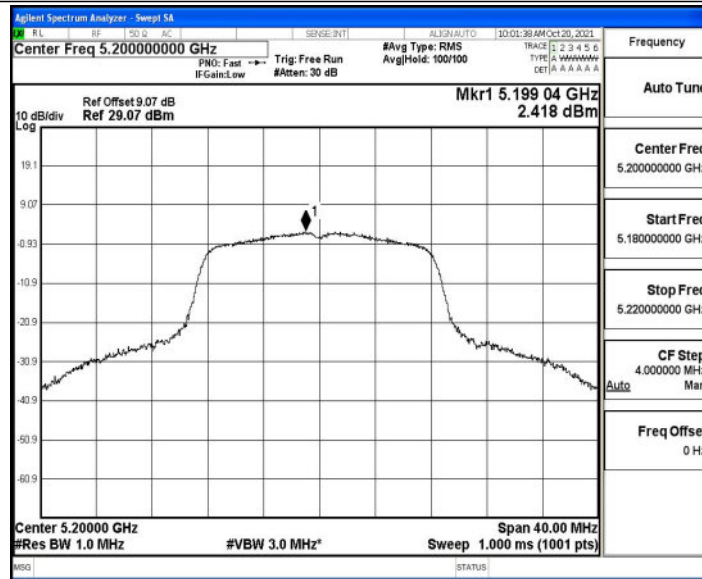


Test Graphs

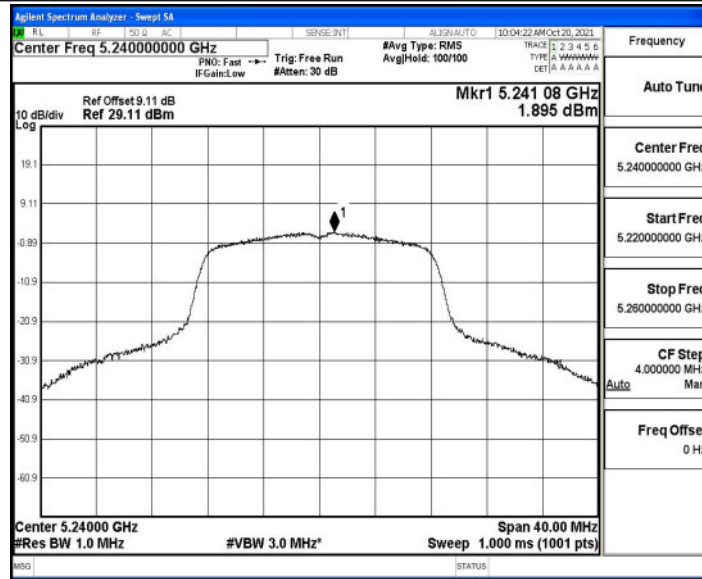
11A_Ant1_5180



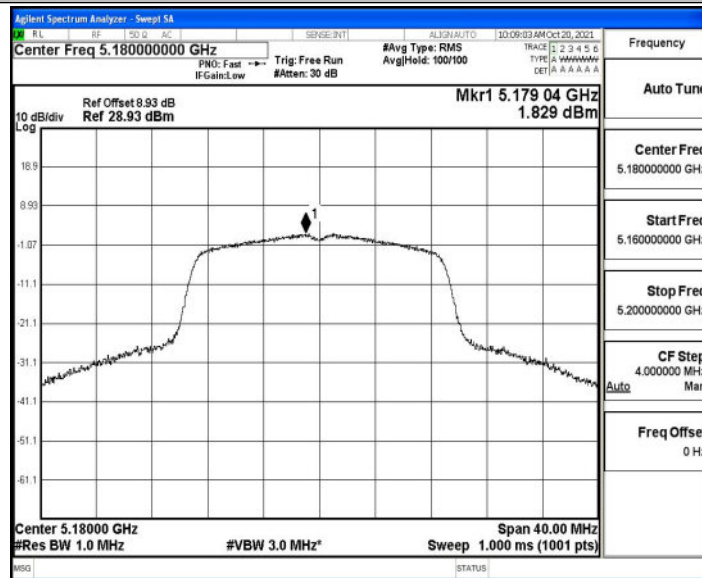
11A_Ant1_5200



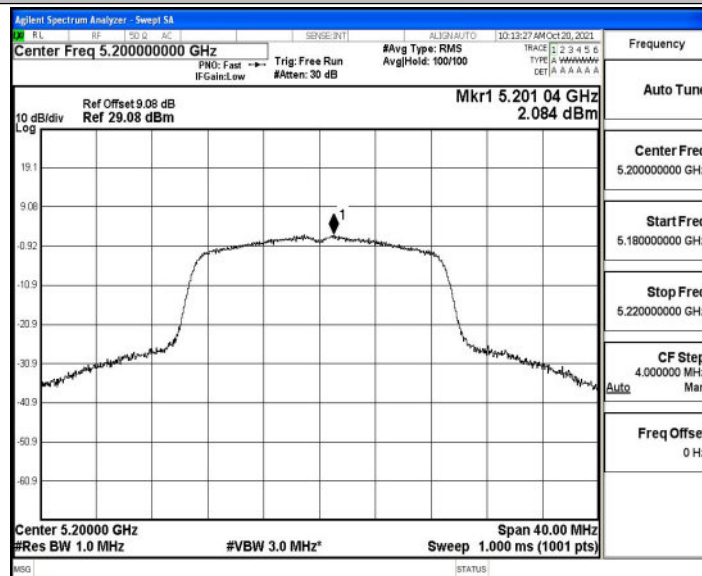
11A_Ant1_5240



11N20SISO_Ant1_5180

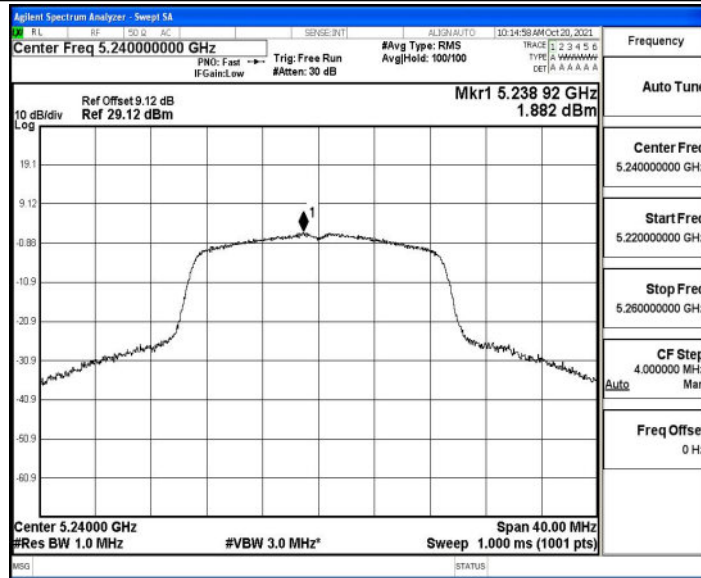


11N20SISO_Ant1_5200

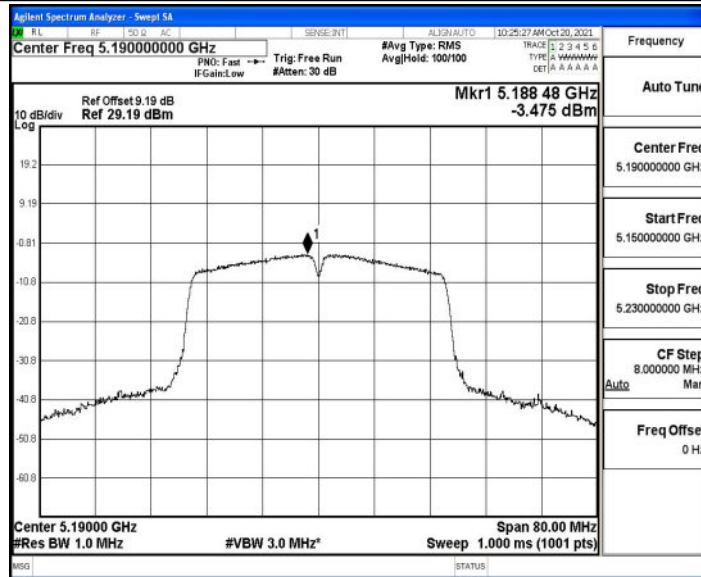




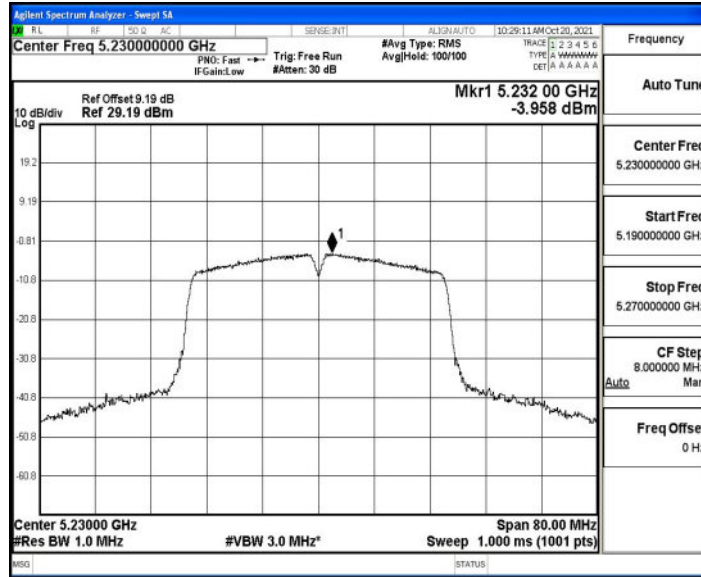
11N20SISO_Ant1_5240



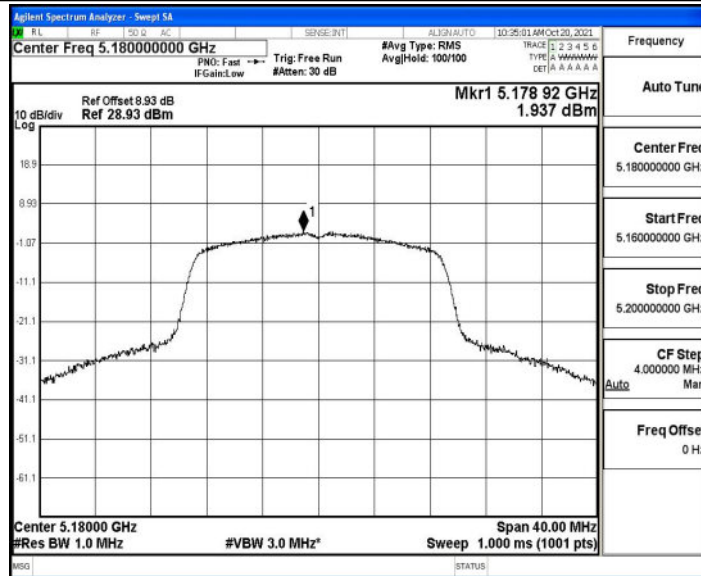
11N40SISO_Ant1_5190



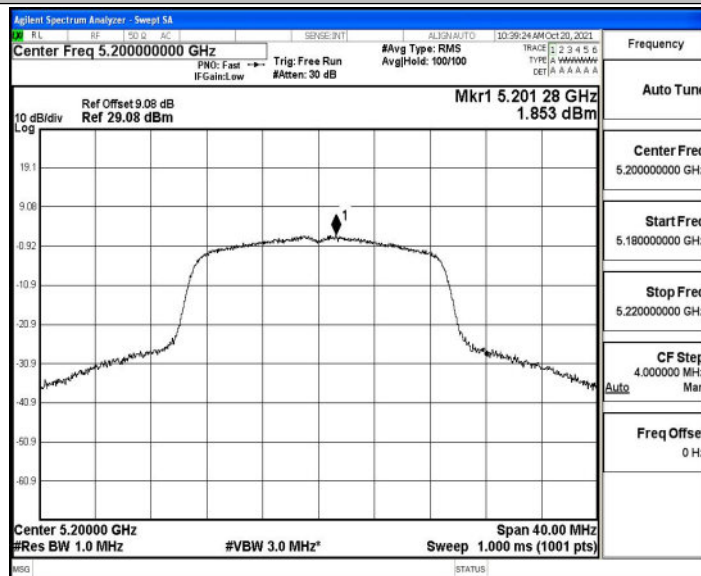
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

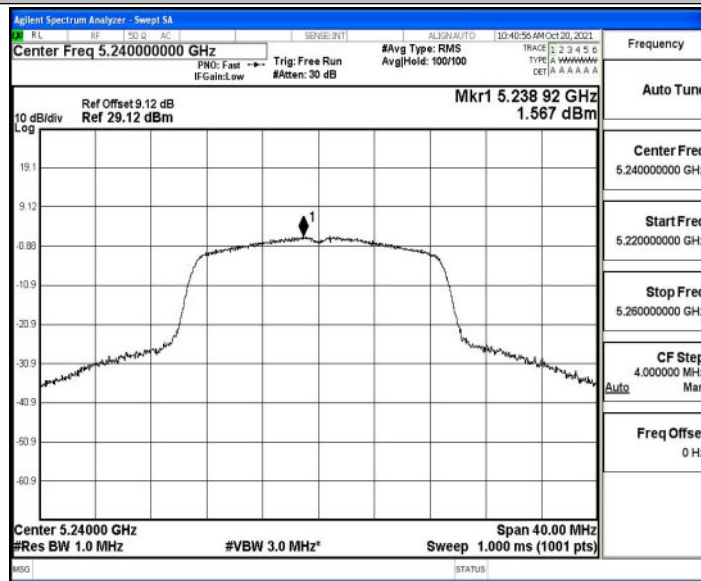


11AC20SISO_Ant1_5200

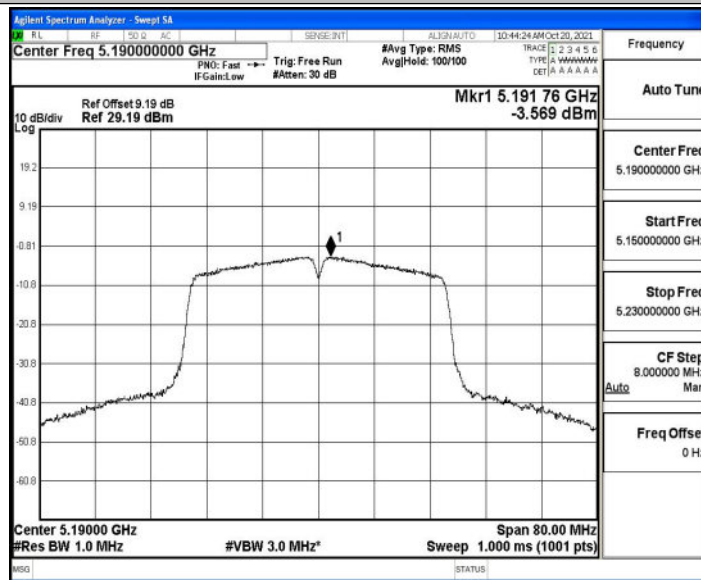




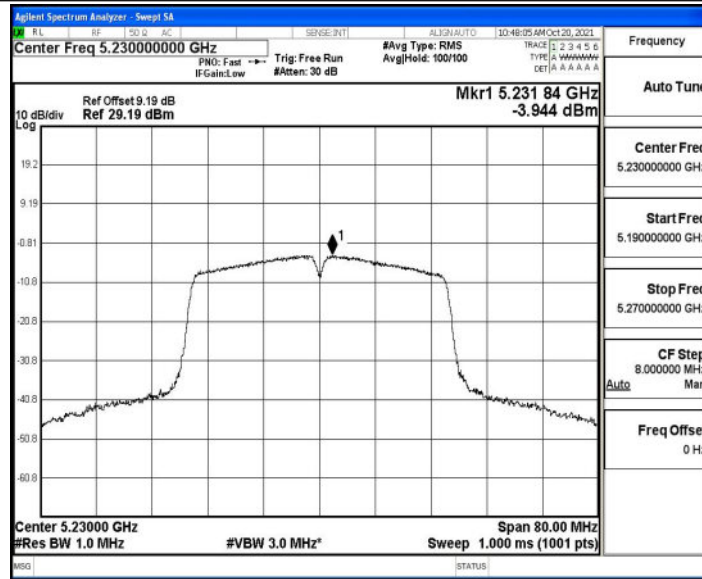
11AC20SISO_Ant1_5240



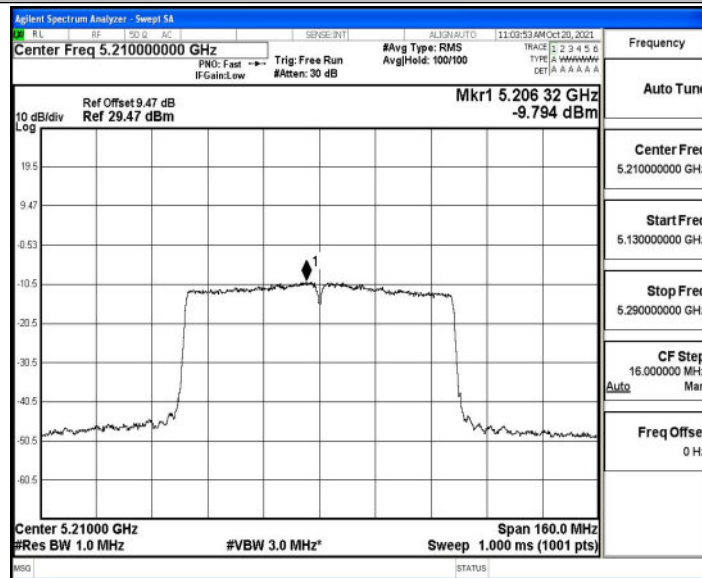
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



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	-49.37	≤-41.20	45.83	≤54	PASS
				AV	5149.600	-45.64	≤-41.20	49.56	≤54	PASS
				AV	5150.000	-45.36	≤-41.20	49.84	≤54	PASS
				Peak	4500.000	-42.3	≤-21.20	52.90	≤68.2	PASS
				Peak	5146.800	-36.93	≤-21.20	58.27	≤68.2	PASS
				Peak	5150.000	-39.58	≤-21.20	55.62	≤68.2	PASS
		High	5240	AV	5350.000	-47.52	≤-41.20	47.68	≤54	PASS
				AV	5406.720	-47.4	≤-41.20	47.80	≤54	PASS
				AV	5460.000	-48.09	≤-41.20	47.11	≤54	PASS
				Peak	5350.000	-40.73	≤-21.20	54.47	≤68.2	PASS
				Peak	5438.160	-38.03	≤-21.20	57.17	≤68.2	PASS
				Peak	5460.000	-41.04	≤-21.20	54.16	≤68.2	PASS
11N20SIS O	Ant1	Low	5180	AV	4500.000	-49.35	≤-41.20	45.85	≤54	PASS
				AV	5149.600	-45.7	≤-41.20	49.50	≤54	PASS
				AV	5150.000	-45.5	≤-41.20	49.70	≤54	PASS
				Peak	4500.000	-41.88	≤-21.20	53.32	≤68.2	PASS
				Peak	4903.200	-37.16	≤-21.20	58.04	≤68.2	PASS
				Peak	5150.000	-38.59	≤-21.20	56.61	≤68.2	PASS
		High	5240	AV	5350.000	-47.7	≤-41.20	47.50	≤54	PASS
				AV	5358.000	-47.46	≤-41.20	47.74	≤54	PASS
				AV	5460.000	-47.95	≤-41.20	47.25	≤54	PASS
				Peak	5350.000	-40.08	≤-21.20	55.12	≤68.2	PASS
				Peak	5369.280	-37.78	≤-21.20	57.42	≤68.2	PASS
				Peak	5460.000	-39.99	≤-21.20	55.21	≤68.2	PASS
11N40SIS O	Ant1	Low	5190	AV	4500.000	-49.03	≤-41.20	46.17	≤54	PASS
				AV	5149.600	-42.6	≤-41.20	52.60	≤54	PASS
				AV	5150.000	-41.57	≤-41.20	53.63	≤54	PASS
				Peak	4500.000	-41.59	≤-21.20	53.61	≤68.2	PASS
				Peak	5148.900	-31.64	≤-21.20	63.56	≤68.2	PASS
				Peak	5150.000	-34.74	≤-21.20	60.46	≤68.2	PASS
		High	5230	AV	5350.000	-47.48	≤-41.20	47.72	≤54	PASS
				AV	5352.100	-47.43	≤-41.20	47.77	≤54	PASS
				AV	5460.000	-47.75	≤-41.20	47.45	≤54	PASS
				Peak	5350.000	-41.12	≤-21.20	54.08	≤68.2	PASS
				Peak	5437.380	-38.37	≤-21.20	56.83	≤68.2	PASS
				Peak	5460.000	-40.96	≤-21.20	54.24	≤68.2	PASS



11AC20SI SO	Ant1	Low	5180	AV	4500.000	-49.34	≤-41.20	45.86	≤54	PASS
				AV	5149.600	-45.52	≤-41.20	49.68	≤54	PASS
				AV	5150.000	-45.48	≤-41.20	49.72	≤54	PASS
				Peak	4500.000	-42.57	≤-21.20	52.63	≤68.2	PASS
				Peak	4833.900	-36.56	≤-21.20	58.64	≤68.2	PASS
				Peak	5150.000	-35.15	≤-21.20	60.05	≤68.2	PASS
	Ant1	High	5240	AV	5350.000	-47.78	≤-41.20	47.42	≤54	PASS
				AV	5409.120	-47.51	≤-41.20	47.69	≤54	PASS
				AV	5460.000	-48.01	≤-41.20	47.19	≤54	PASS
				Peak	5350.000	-41.01	≤-21.20	54.19	≤68.2	PASS
				Peak	5450.160	-37.05	≤-21.20	58.15	≤68.2	PASS
				Peak	5460.000	-40.98	≤-21.20	54.22	≤68.2	PASS
11AC40SI SO	Ant1	Low	5190	AV	4500.000	-48.93	≤-41.20	46.27	≤54	PASS
				AV	5149.600	-42.24	≤-41.20	52.96	≤54	PASS
				AV	5150.000	-42.26	≤-41.20	52.94	≤54	PASS
				Peak	4500.000	-41.46	≤-21.20	53.74	≤68.2	PASS
				Peak	5147.500	-34.25	≤-21.20	60.95	≤68.2	PASS
				Peak	5150.000	-32.69	≤-21.20	62.51	≤68.2	PASS
	Ant1	High	5230	AV	5350.000	-47.8	≤-41.20	47.40	≤54	PASS
				AV	5396.560	-47.47	≤-41.20	47.73	≤54	PASS
				AV	5460.000	-47.96	≤-41.20	47.24	≤54	PASS
				Peak	5350.000	-41.52	≤-21.20	53.68	≤68.2	PASS
				Peak	5435.560	-37.7	≤-21.20	57.50	≤68.2	PASS
				Peak	5460.000	-41.14	≤-21.20	54.06	≤68.2	PASS
11AC80SI SO	Ant1	Low	5210	AV	4500.000	-48.91	≤-41.20	46.29	≤54	PASS
				AV	5149.500	-43.43	≤-41.20	51.77	≤54	PASS
				AV	5150.000	-43.76	≤-41.20	51.44	≤54	PASS
				Peak	4500.000	-43.43	≤-21.20	51.77	≤68.2	PASS
				Peak	5109.750	-34.89	≤-21.20	60.31	≤68.2	PASS
				Peak	5150.000	-37.44	≤-21.20	57.76	≤68.2	PASS
	Ant1	High	5210	AV	5350.000	-47.16	≤-41.20	48.04	≤54	PASS
				AV	5435.920	-46.35	≤-41.20	48.85	≤54	PASS
				AV	5460.000	-47.12	≤-41.20	48.08	≤54	PASS
				Peak	5350.000	-40.89	≤-21.20	54.31	≤68.2	PASS
				Peak	5436.200	-38.36	≤-21.20	56.84	≤68.2	PASS
				Peak	5460.000	-39.86	≤-21.20	55.34	≤68.2	PASS

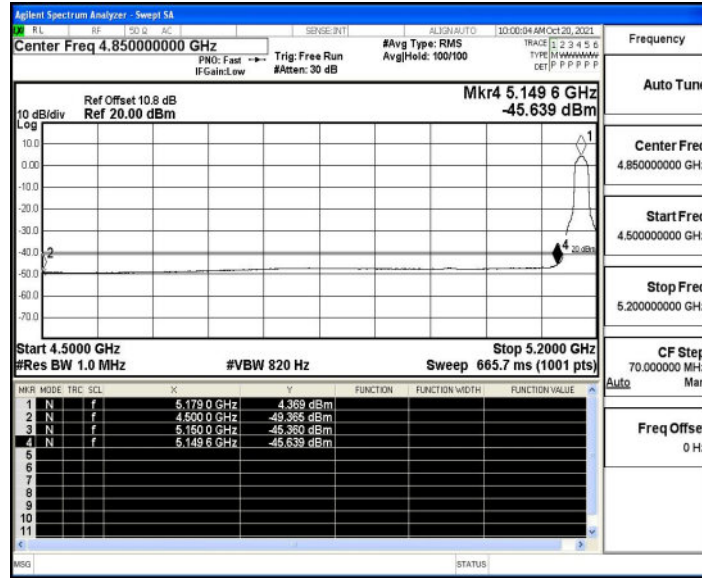
Note:

1. The Antenna Gain is compensated in the graph.
2. 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.
3. The Duty Cycle Factor is compensated in the graph

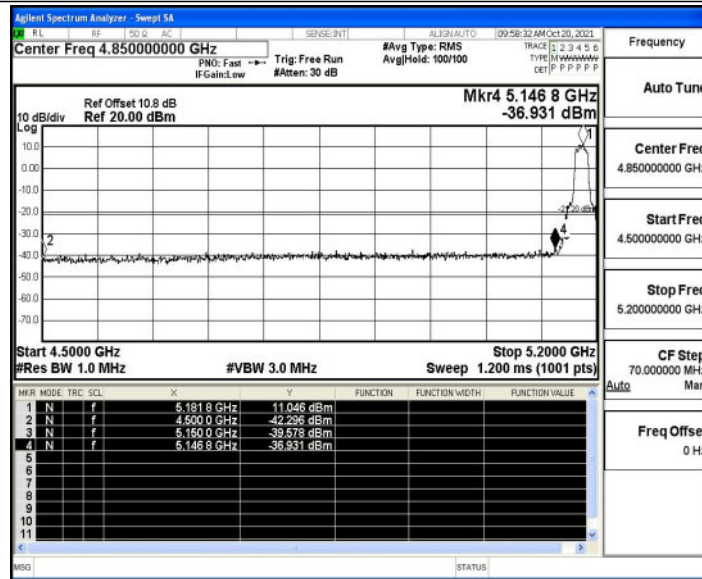


Test Graphs

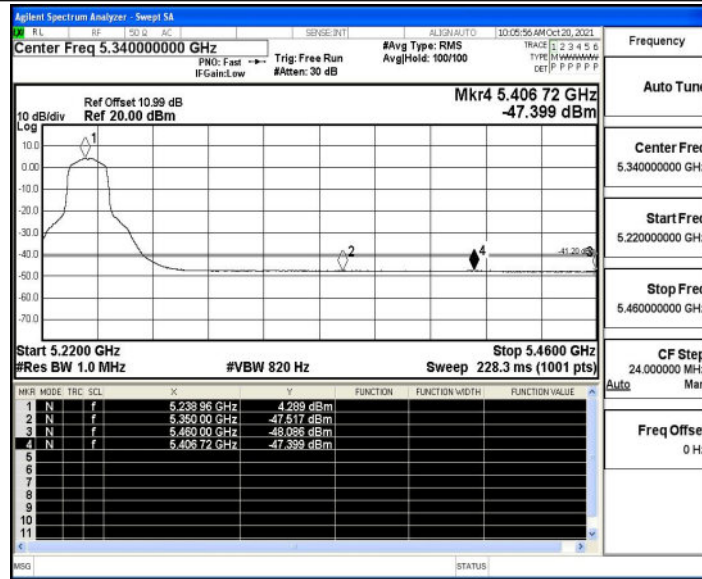
11A_Ant1_Low_5180_AV



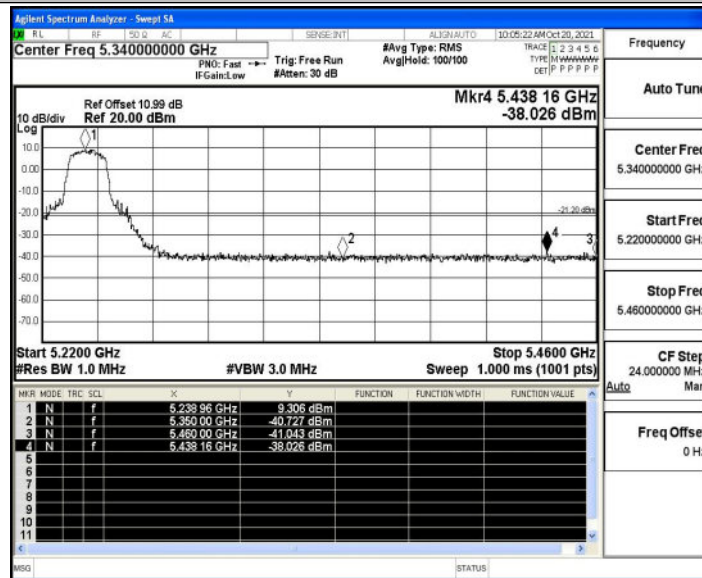
11A_Ant1_Low_5180_Peak



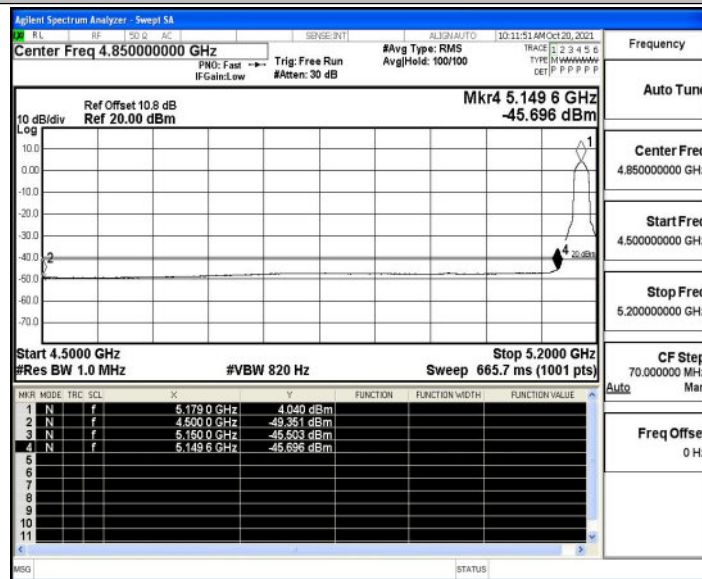
11A_Ant1_High_5240_AV



11A_Ant1_High_5240_Peak

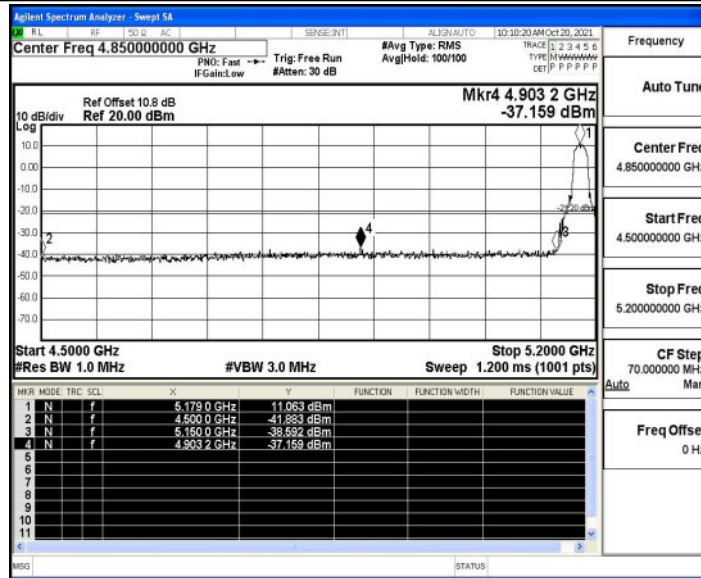


11N20SISO_Ant1_Low_5180_AV

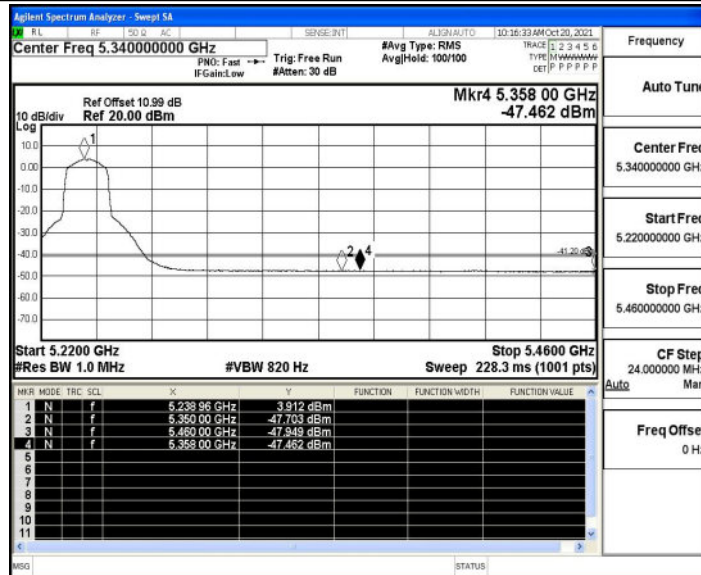




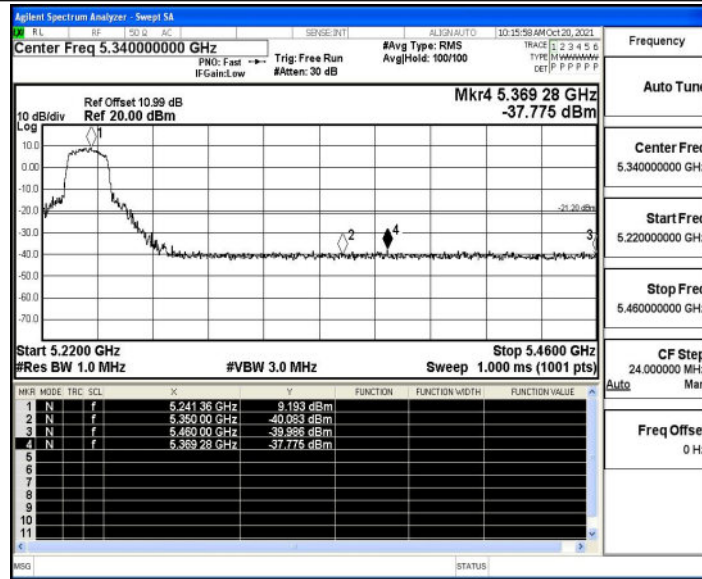
11N20SISO_Ant1_Low_5180_Peak



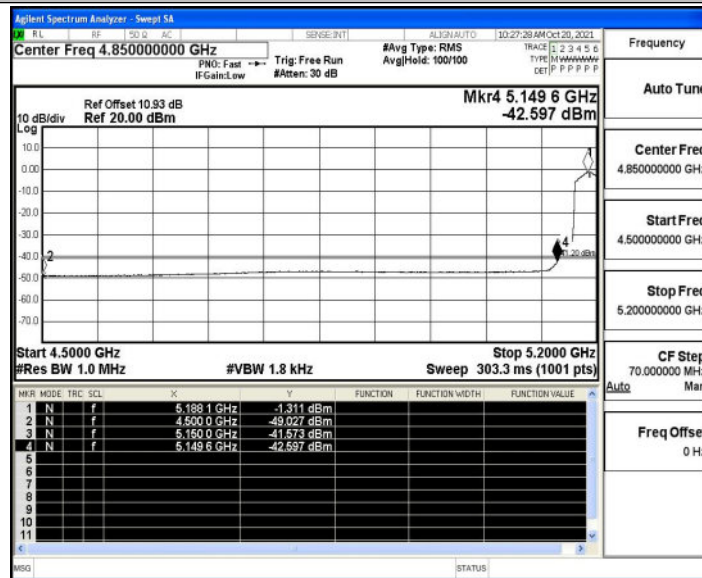
11N20SISO_Ant1_High_5240_AV



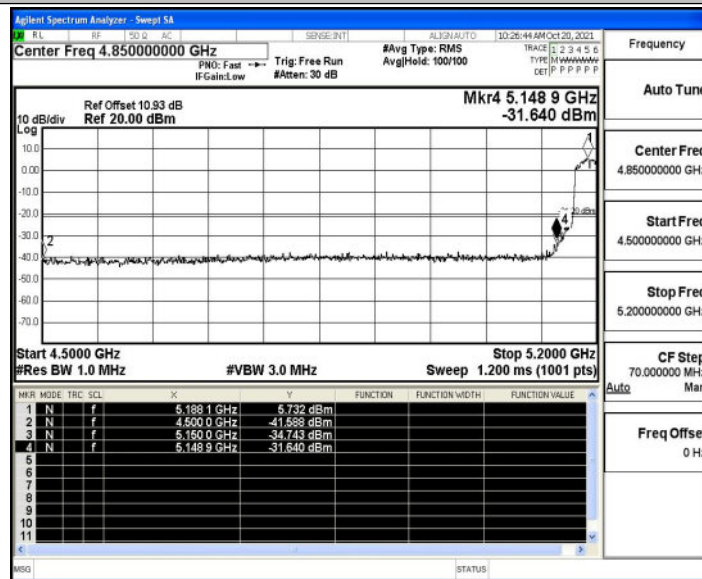
11N20SISO_Ant1_High_5240_Peak



11N40SISO_Ant1_Low_5190_AV

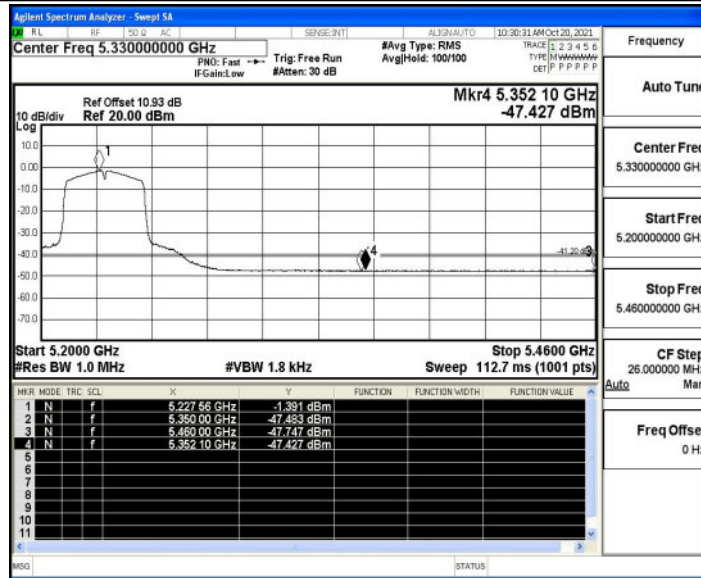


11N40SISO_Ant1_Low_5190_Peak

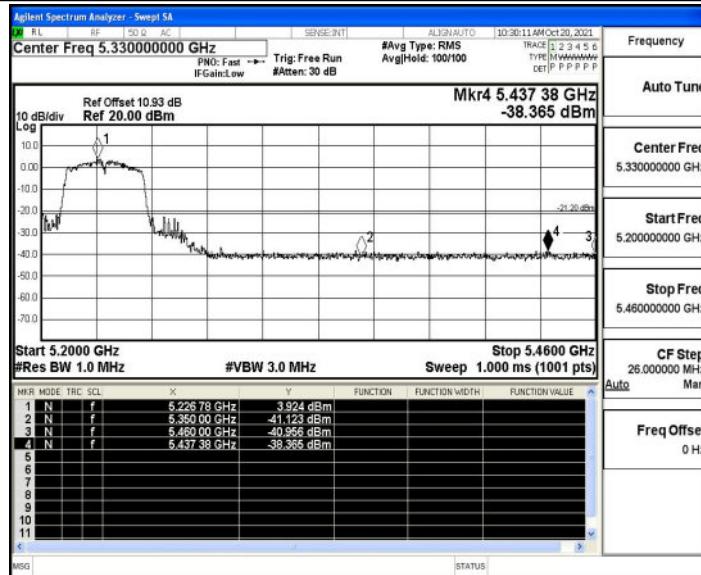




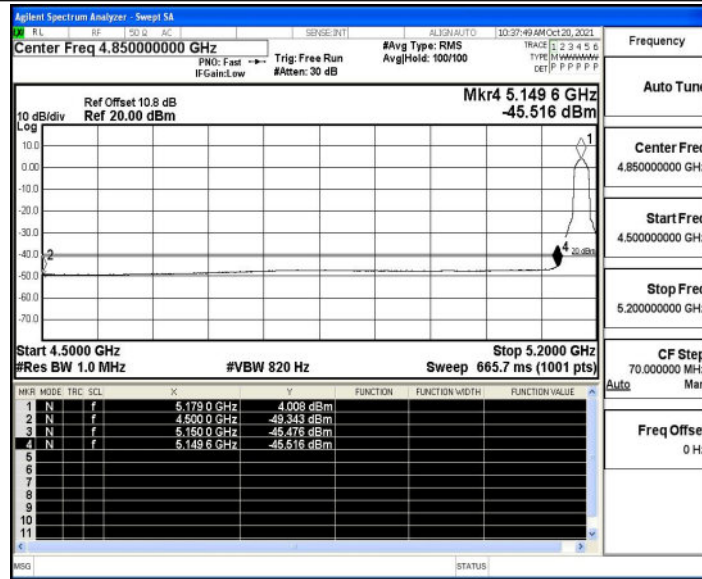
11N40SISO_Ant1_High_5230_AV



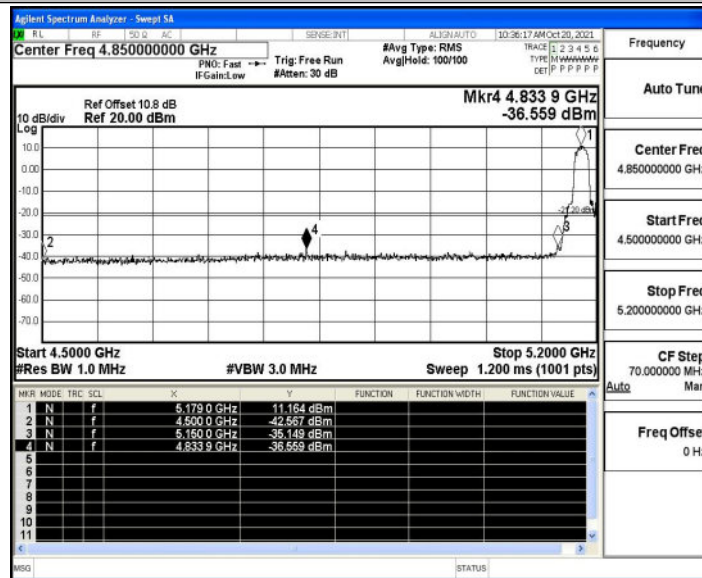
11N40SISO_Ant1_High_5230_Peak



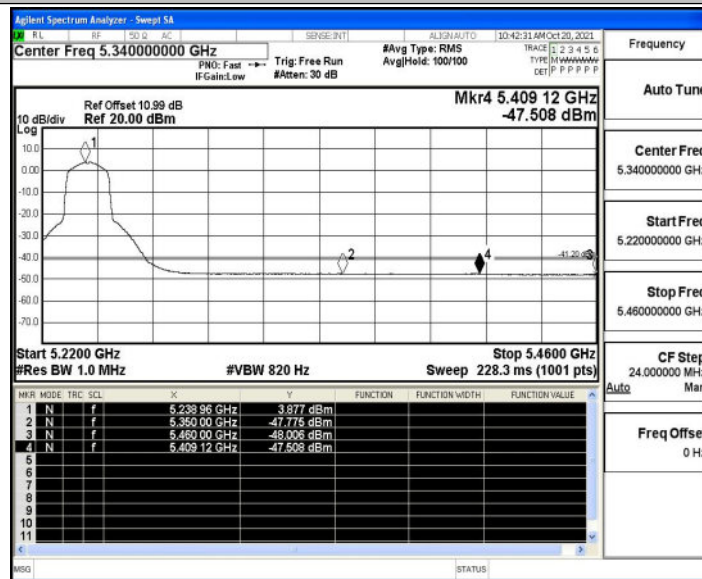
11AC20SISO_Ant1_Low_5180_AV



11AC20SISO_Ant1_Low_5180_Peak

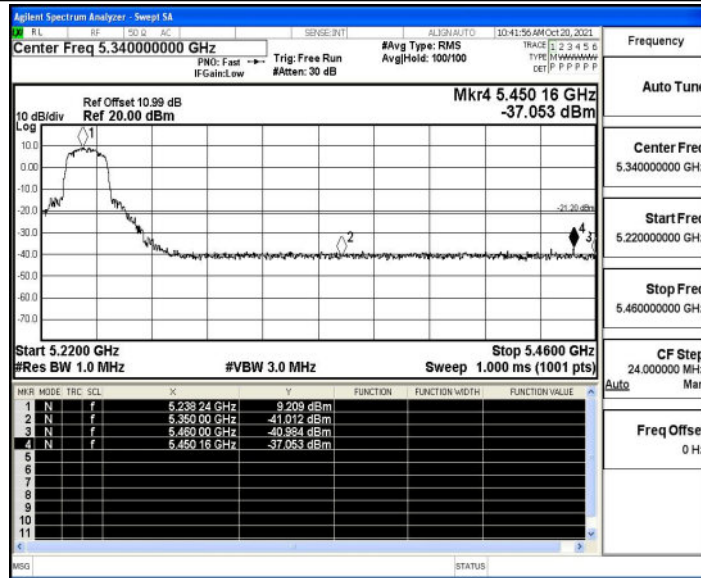


11AC20SISO_Ant1_High_5240_AV

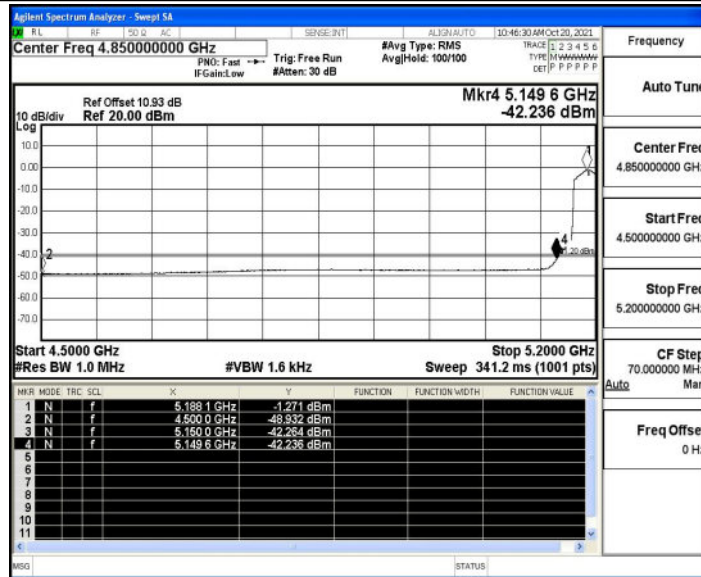




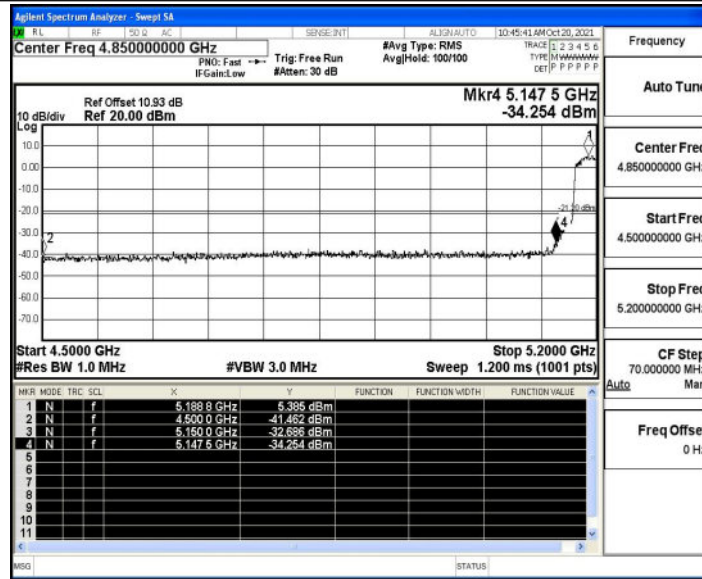
11AC20SISO_Ant1_High_5240_Peak



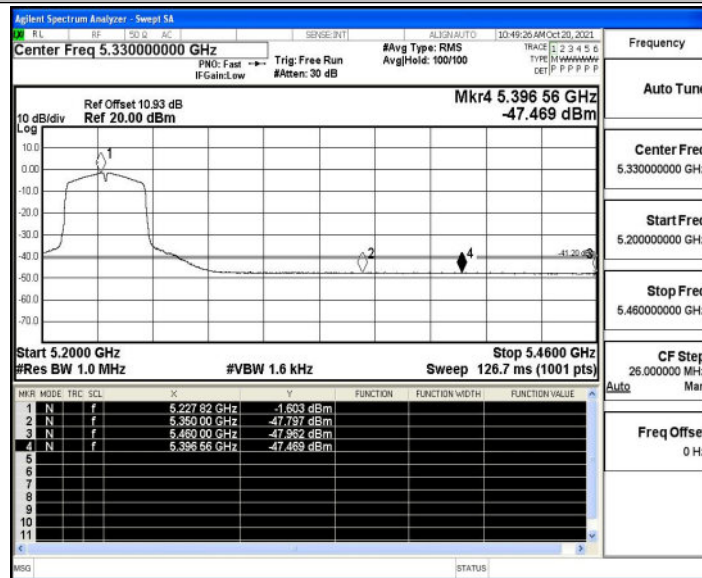
11AC40SISO_Ant1_Low_5190_AV



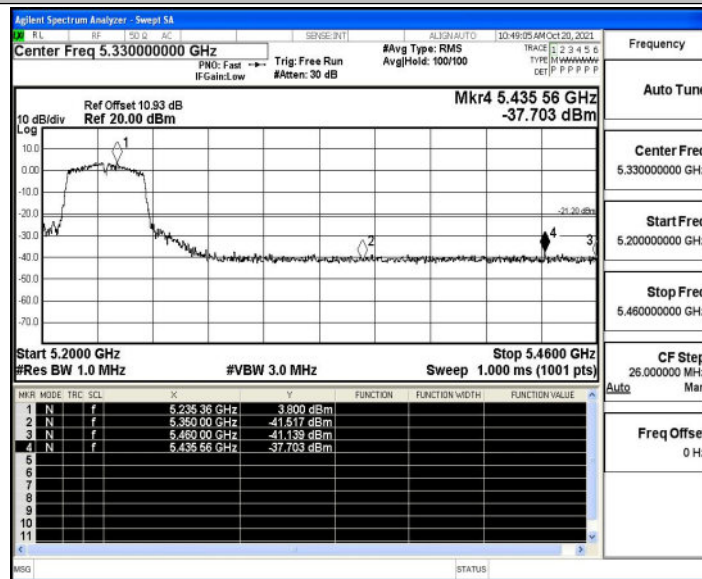
11AC40SISO_Ant1_Low_5190_Peak



11AC40SISO_Ant1_High_5230_AV

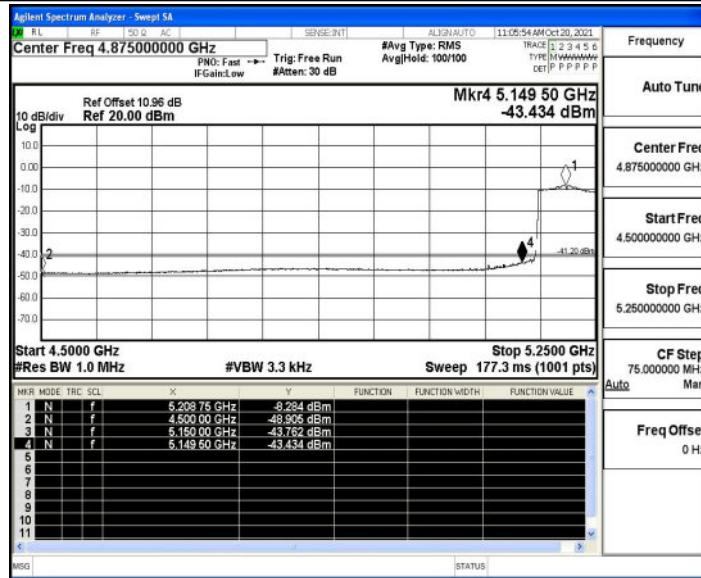


11AC40SISO_Ant1_High_5230_Peak

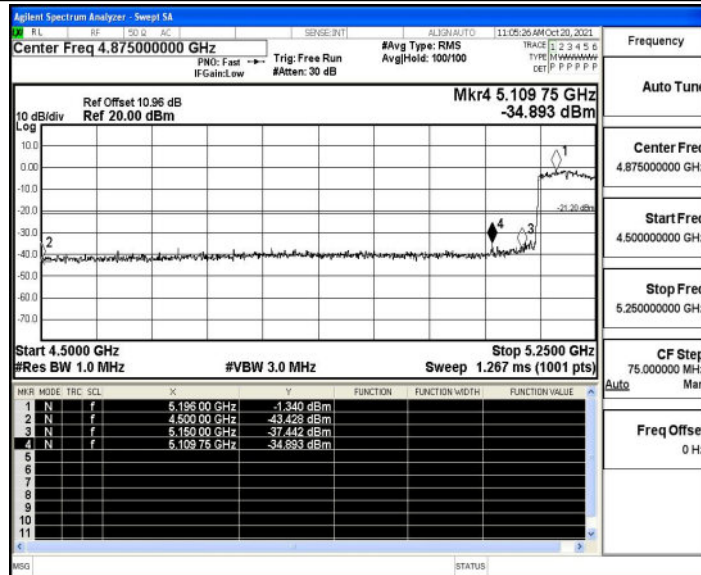




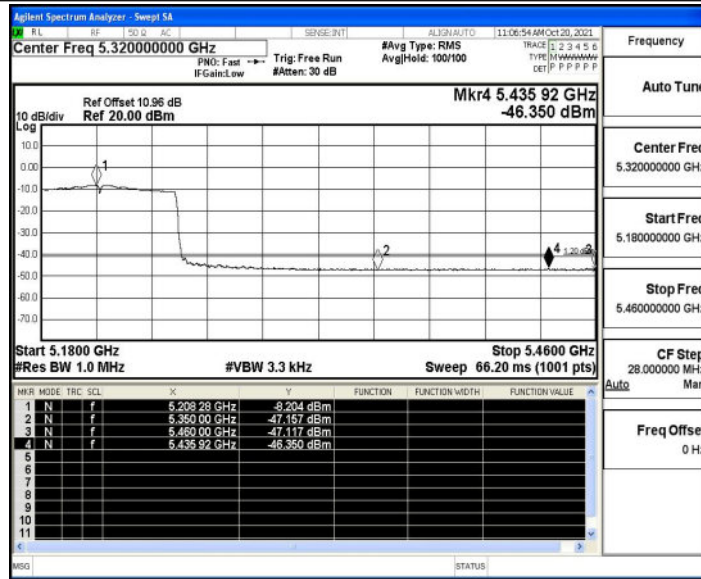
11AC80SISO_Ant1_Low_5210_AV



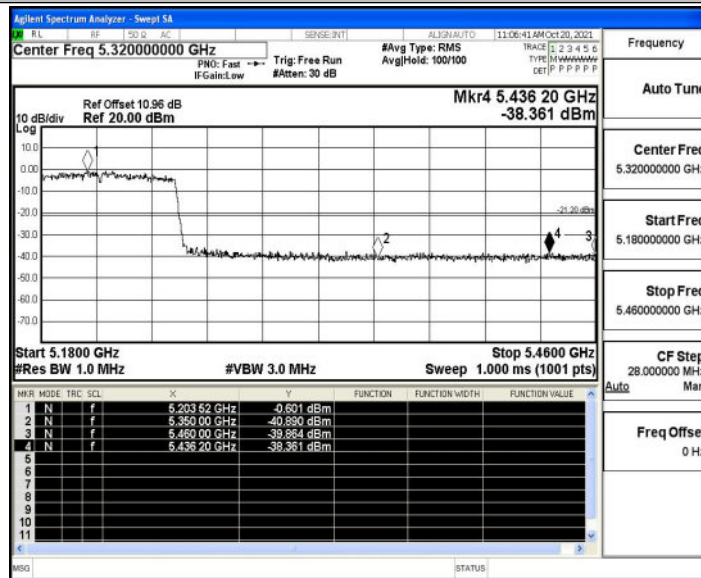
11AC80SISO_Ant1_Low_5210_Peak



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
11AC20SI SO	Ant1	5180	NV	NT	-4000	-0.772201	20	PASS
			LV	NT	-8000	-1.544402	20	PASS
			HV	NT	-10000	-1.930502	20	PASS
		5200	NV	NT	-14000	-2.692308	20	PASS
			LV	NT	-16000	-3.076923	20	PASS
			HV	NT	-17000	-3.269231	20	PASS
		5240	NV	NT	-19000	-3.625954	20	PASS
			LV	NT	-20000	-3.816794	20	PASS
			HV	NT	-21000	-4.007634	20	PASS
11AC40SI SO	Ant1	5190	NV	NT	-20000	-3.853565	20	PASS
			LV	NT	-22000	-4.238921	20	PASS
			HV	NT	-22000	-4.238921	20	PASS
		5230	NV	NT	-23000	-4.397706	20	PASS
			LV	NT	-24000	-4.58891	20	PASS
			HV	NT	-24000	-4.58891	20	PASS
11AC80SI SO	Ant1	5210	NV	NT	-24000	-4.606526	20	PASS
			LV	NT	-25000	-4.798464	20	PASS
			HV	NT	-25000	-4.798464	20	PASS

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20SI SO	Ant1	5180	NV	-30	-11000	-2.123552	20	PASS
			NV	-20	-12000	-2.316602	20	PASS
			NV	-10	-13000	-2.509653	20	PASS
			NV	0	-13000	-2.509653	20	PASS
			NV	10	-15000	-2.895753	20	PASS
			NV	20	-15000	-2.895753	20	PASS
			NV	30	-15000	-2.895753	20	PASS
			NV	40	-16000	-3.088803	20	PASS
			NV	50	-16000	-3.088803	20	PASS
		5200	NV	-30	-18000	-3.461538	20	PASS
			NV	-20	-18000	-3.461538	20	PASS
			NV	-10	-18000	-3.461538	20	PASS
			NV	0	-19000	-3.653846	20	PASS
			NV	0	-19000	-3.653846	20	PASS



			NV	10	-19000	-3.653846	20	PASS
			NV	20	-20000	-3.846154	20	PASS
			NV	30	-20000	-3.846154	20	PASS
			NV	40	-20000	-3.846154	20	PASS
			NV	50	-20000	-3.846154	20	PASS
		5240	NV	-30	-21000	-4.007634	20	PASS
			NV	-20	-21000	-4.007634	20	PASS
			NV	-10	-21000	-4.007634	20	PASS
			NV	0	-22000	-4.198473	20	PASS
			NV	10	-22000	-4.198473	20	PASS
			NV	20	-22000	-4.198473	20	PASS
			NV	30	-22000	-4.198473	20	PASS
			NV	40	-22000	-4.198473	20	PASS
			NV	50	-23000	-4.389313	20	PASS
11AC40SI SO	Ant1	5190	NV	-30	-23000	-4.431599	20	PASS
			NV	-20	-23000	-4.431599	20	PASS
			NV	-10	-23000	-4.431599	20	PASS
			NV	0	-23000	-4.431599	20	PASS
			NV	10	-23000	-4.431599	20	PASS
			NV	20	-23000	-4.431599	20	PASS
			NV	30	-23000	-4.431599	20	PASS
			NV	40	-24000	-4.624277	20	PASS
			NV	50	-24000	-4.624277	20	PASS
		5230	NV	-30	-24000	-4.58891	20	PASS
			NV	-20	-24000	-4.58891	20	PASS
			NV	-10	-24000	-4.58891	20	PASS
			NV	0	-24000	-4.58891	20	PASS
			NV	10	-25000	-4.780115	20	PASS
			NV	20	-25000	-4.780115	20	PASS
			NV	30	-25000	-4.780115	20	PASS
			NV	40	-25000	-4.780115	20	PASS
			NV	50	-25000	-4.780115	20	PASS
11AC80SI SO	Ant1	5210	NV	-30	-25000	-4.798464	20	PASS
			NV	-20	-25000	-4.798464	20	PASS
			NV	-10	-25000	-4.798464	20	PASS
			NV	0	-25000	-4.798464	20	PASS
			NV	10	-25000	-4.798464	20	PASS
			NV	20	-25000	-4.798464	20	PASS
			NV	30	-25000	-4.798464	20	PASS
			NV	40	-25000	-4.798464	20	PASS
			NV	50	-25000	-4.798464	20	PASS



D.6 Duty Cycle

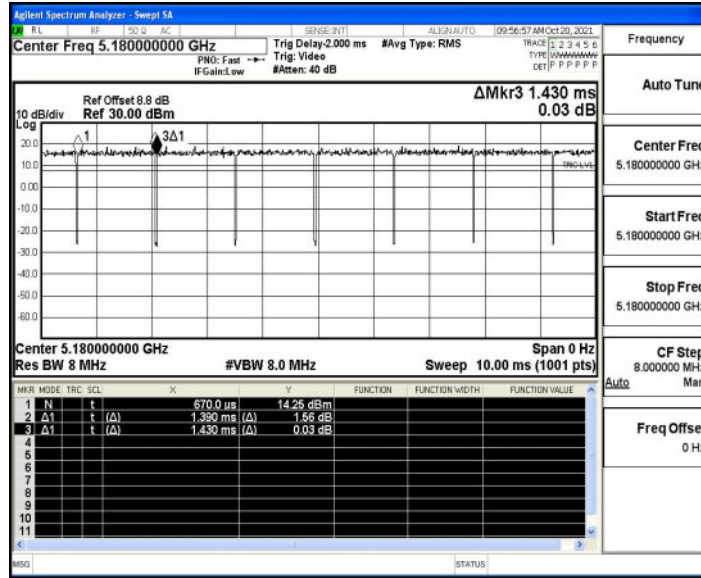
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[KHz]	xFactor
11A	Ant1	5180	1.39	1.43	97.20	0.72	0.12
		5200	1.39	1.43	97.20	0.72	0.12
		5240	1.39	1.43	97.20	0.72	0.12
11N20SISO	Ant1	5180	1.30	1.34	97.01	0.77	0.13
		5200	1.30	1.34	97.01	0.77	0.13
		5240	1.30	1.34	97.01	0.77	0.13
11N40SISO	Ant1	5190	0.64	0.68	94.12	1.57	0.26
		5230	0.64	0.68	94.12	1.57	0.26
11AC20SISO	Ant1	5180	1.31	1.35	97.04	0.77	0.13
		5200	1.31	1.35	97.04	0.77	0.13
		5240	1.31	1.35	97.04	0.77	0.13
11AC40SISO	Ant1	5190	0.65	0.69	94.20	1.54	0.26
		5230	0.65	0.69	94.20	1.54	0.26
11AC80SISO	Ant1	5210	0.32	0.36	88.89	3.13	0.51

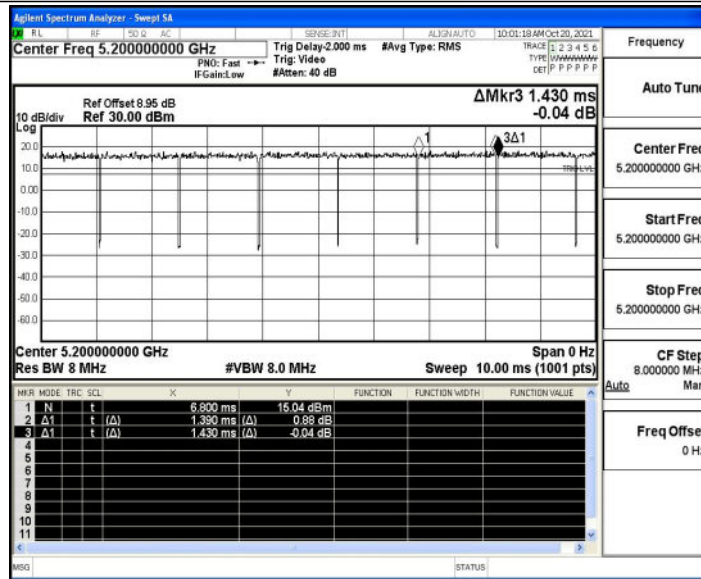


Test Graphs

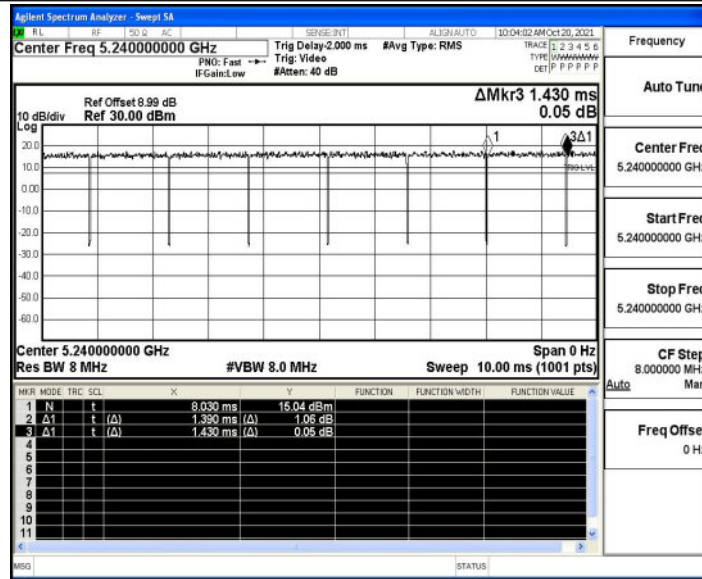
11A_Ant1_5180



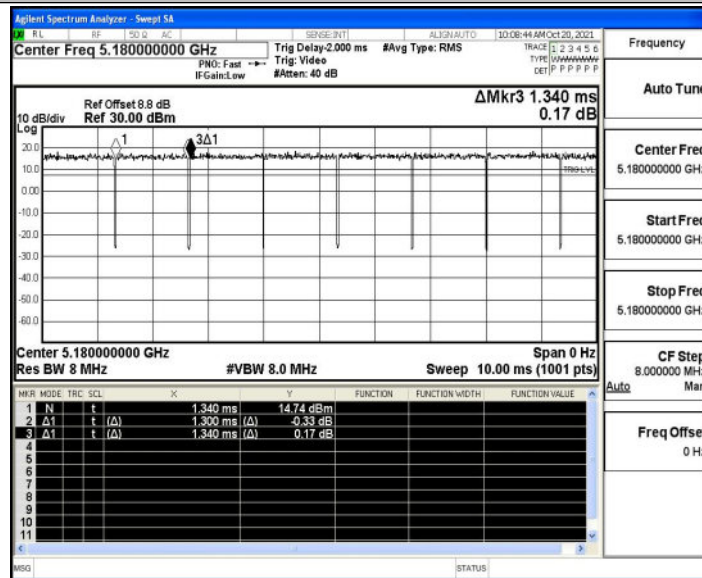
11A_Ant1_5200



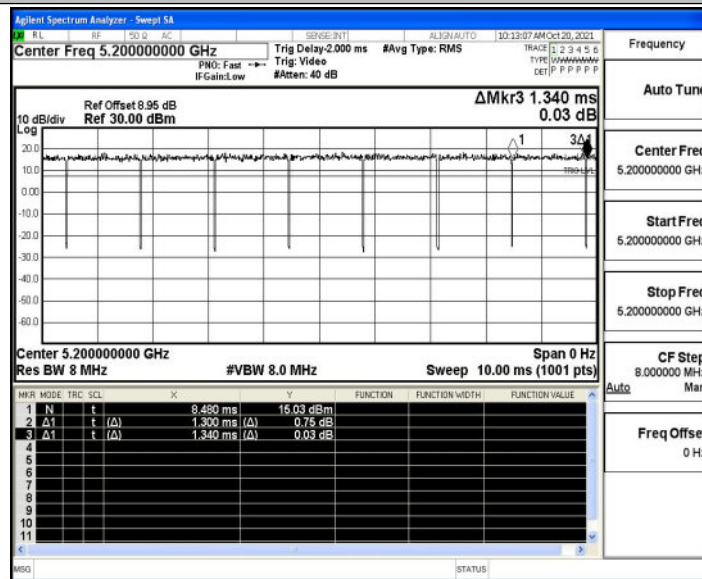
11A_Ant1_5240



11N20SISO_Ant1_5180

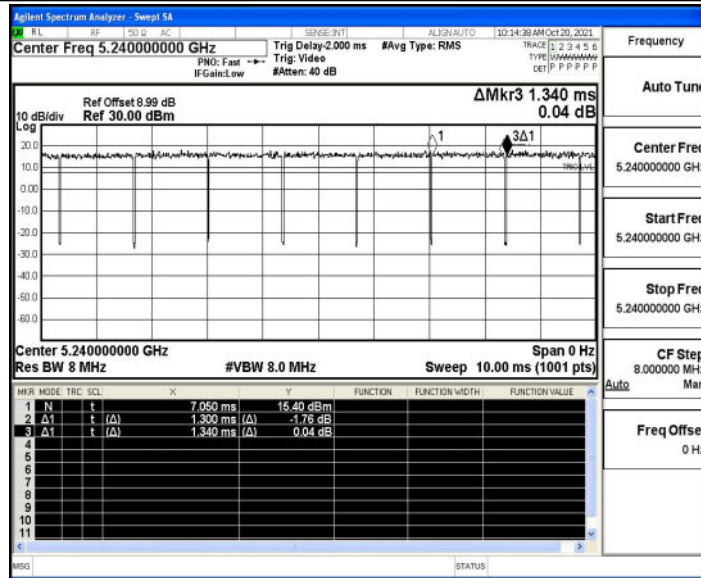


11N20SISO_Ant1_5200

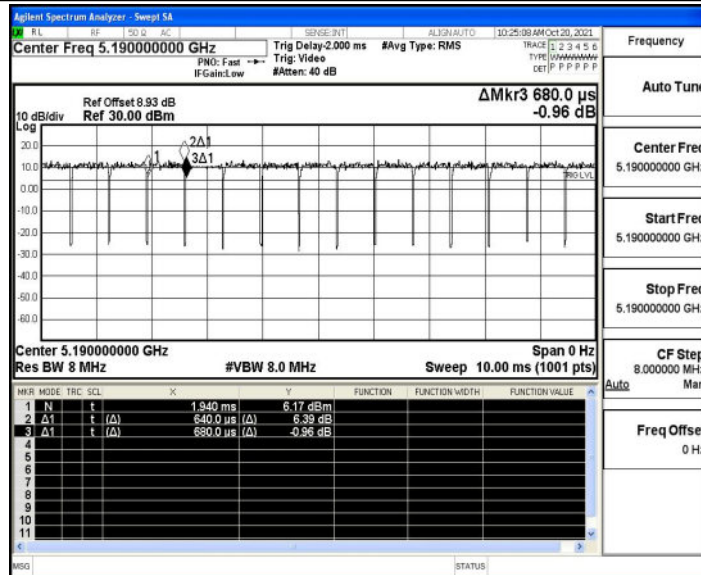




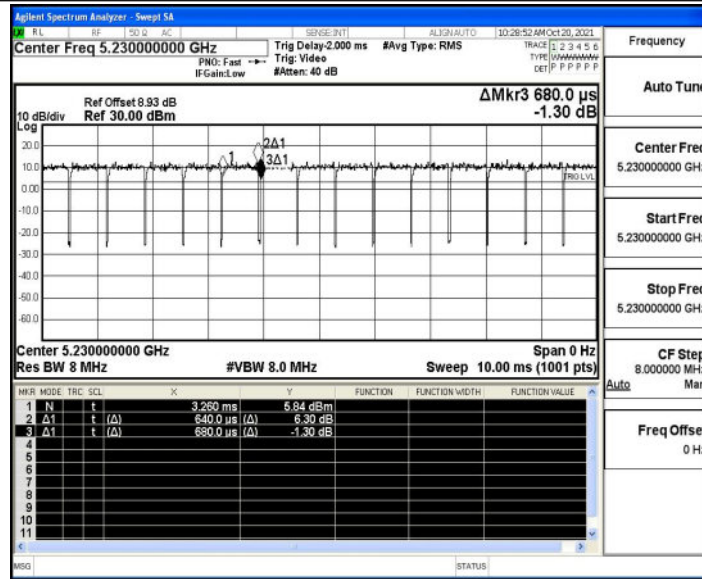
11N20SISO_Ant1_5240



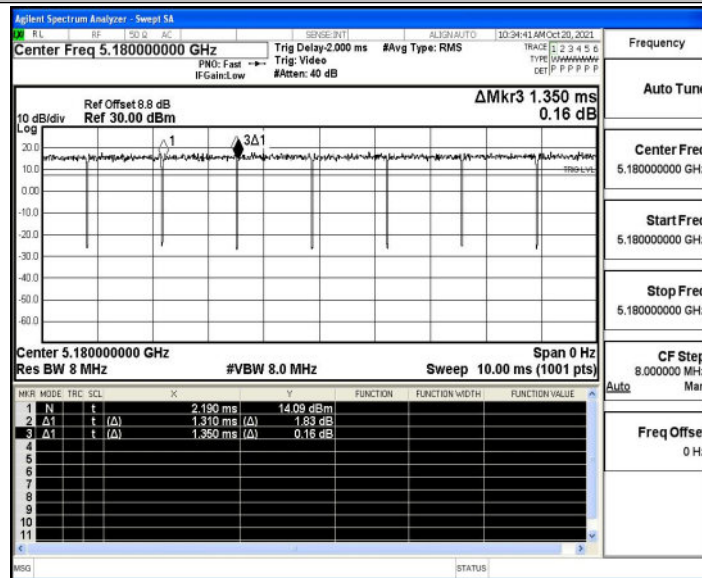
11N40SISO_Ant1_5190



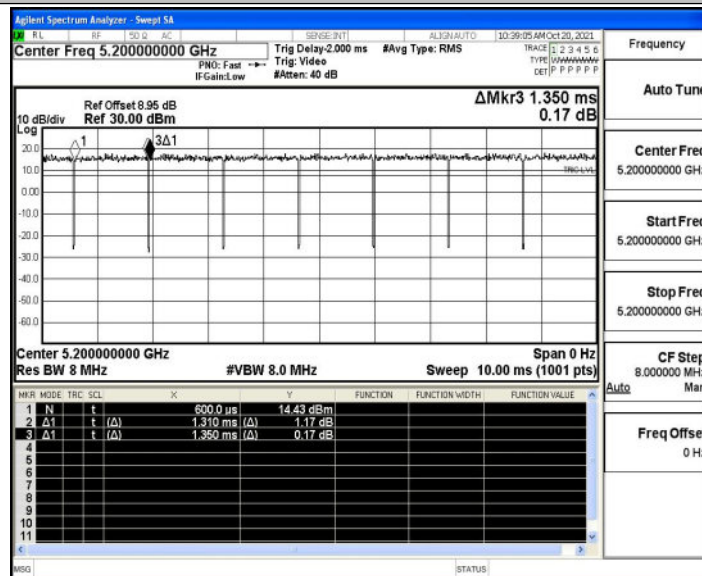
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

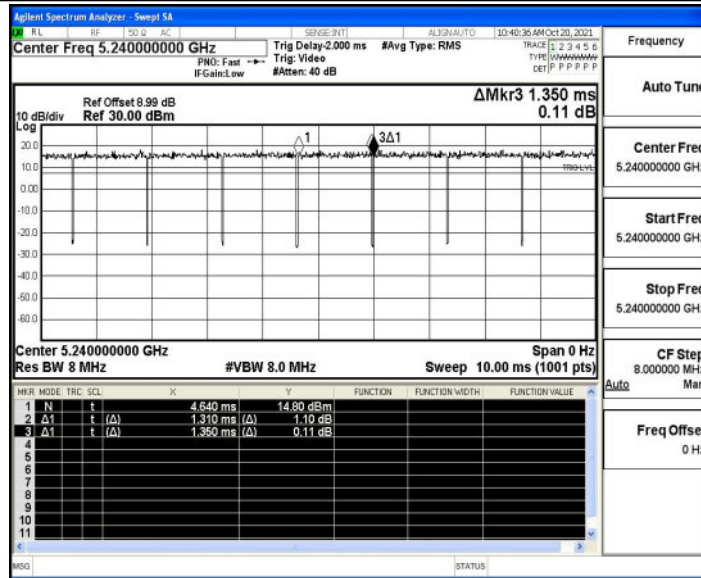


11AC20SISO_Ant1_5200

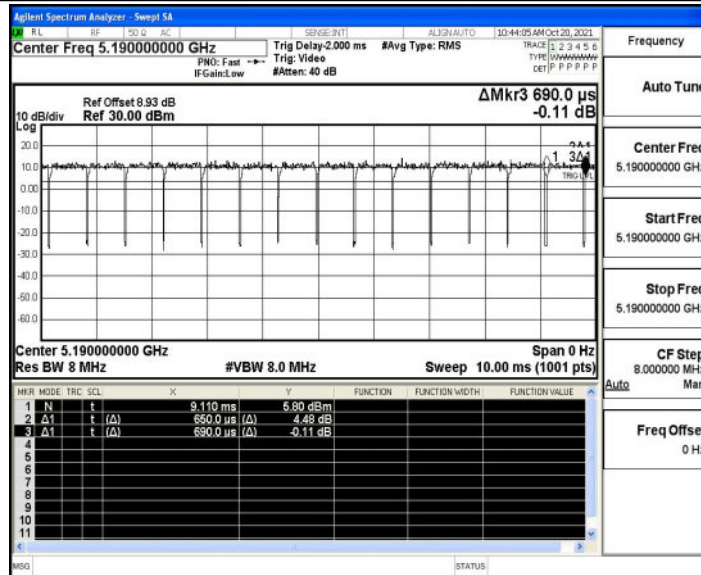




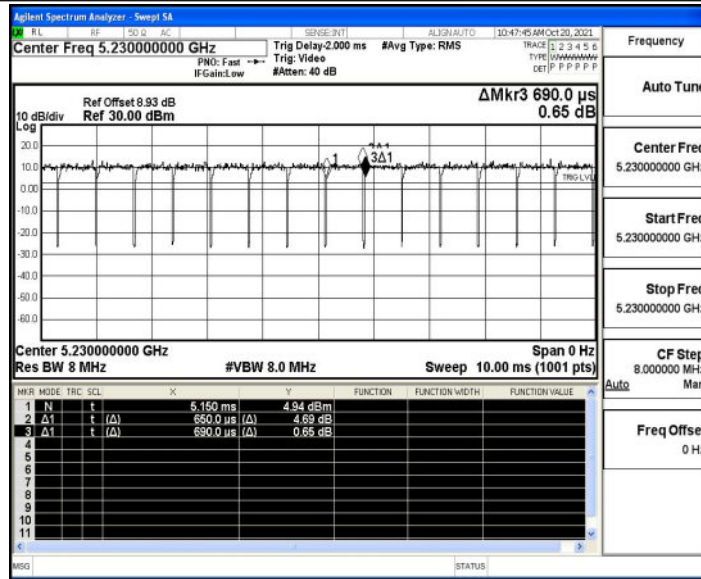
11AC20SISO_Ant1_5240



11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210

