



Appendix F

RF Test Data for 5.8G WIFI (Conducted Measurement)

Product Name: OF2021 Control Center

Test Model: UR200878-CB

Environmental Conditions

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



F.1 6dB Bandwidth

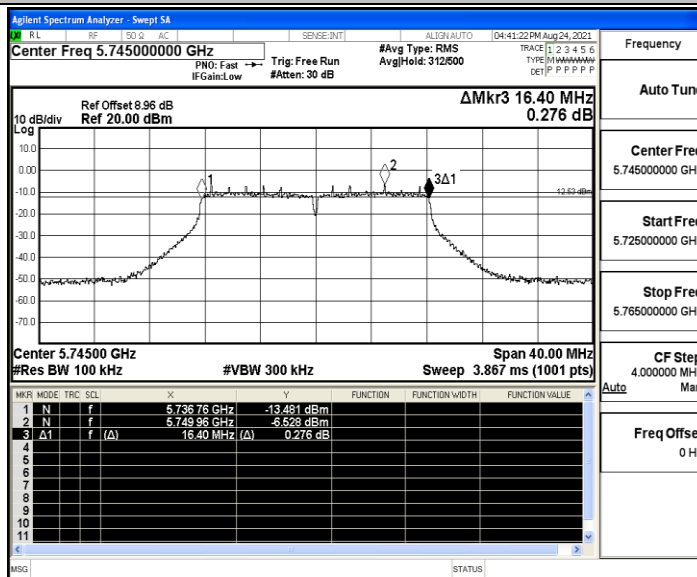
Test Result

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.400	5736.760	5753.160	0.5	PASS
		5785	16.400	5776.760	5793.160	0.5	PASS
		5825	16.400	5816.760	5833.160	0.5	PASS
11N20SISO	Ant1	5745	17.360	5736.400	5753.760	0.5	PASS
		5785	17.160	5776.400	5793.560	0.5	PASS
		5825	16.920	5816.520	5833.440	0.5	PASS
11N40SISO	Ant1	5755	35.440	5737.160	5772.600	0.5	PASS
		5795	36.000	5777.160	5813.160	0.5	PASS
11AC20SISO	Ant1	5745	17.280	5736.480	5753.760	0.5	PASS
		5785	17.600	5776.160	5793.760	0.5	PASS
		5825	17.120	5816.400	5833.520	0.5	PASS
11AC40SISO	Ant1	5755	35.520	5737.160	5772.680	0.5	PASS
		5795	35.600	5777.320	5812.920	0.5	PASS
11AC80SISO	Ant1	5775	75.520	5737.240	5812.760	0.5	PASS

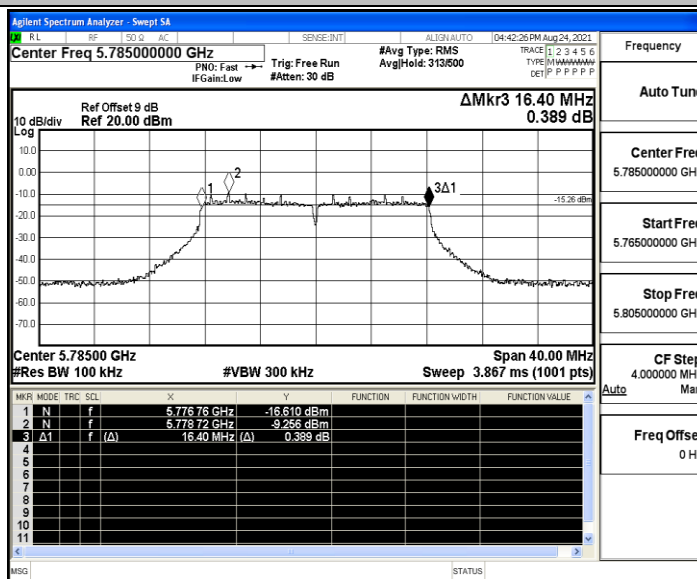


Test Graphs

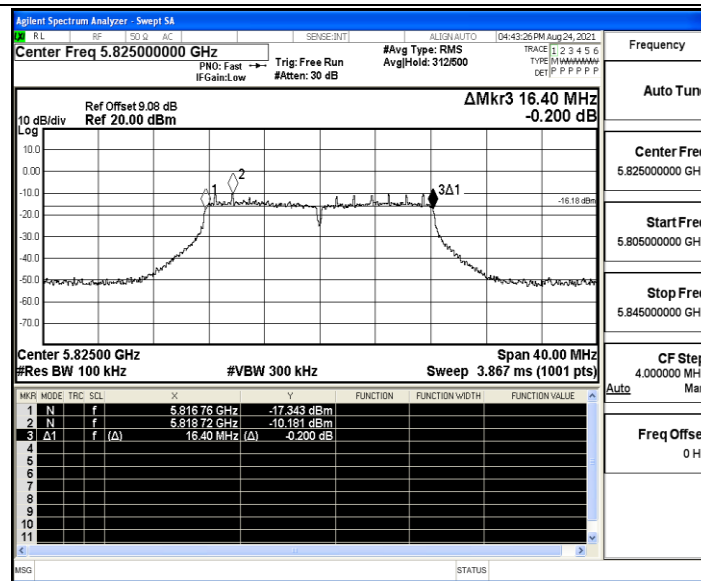
11A_Ant1_5745



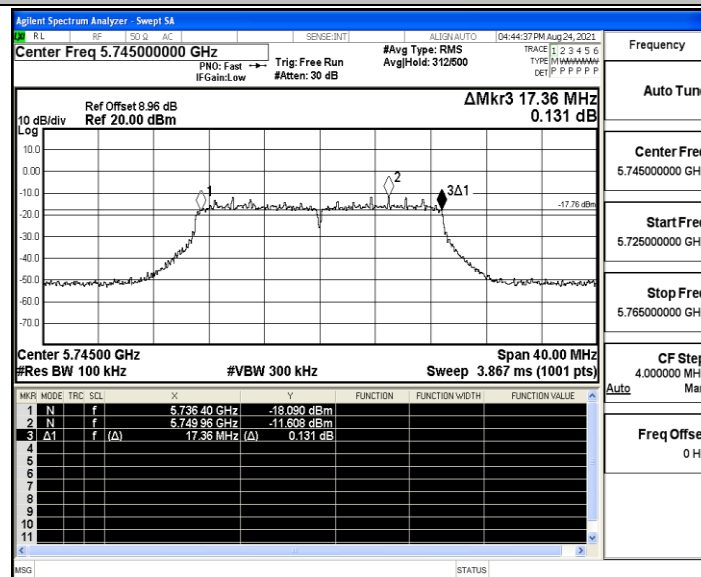
11A_Ant1_5785



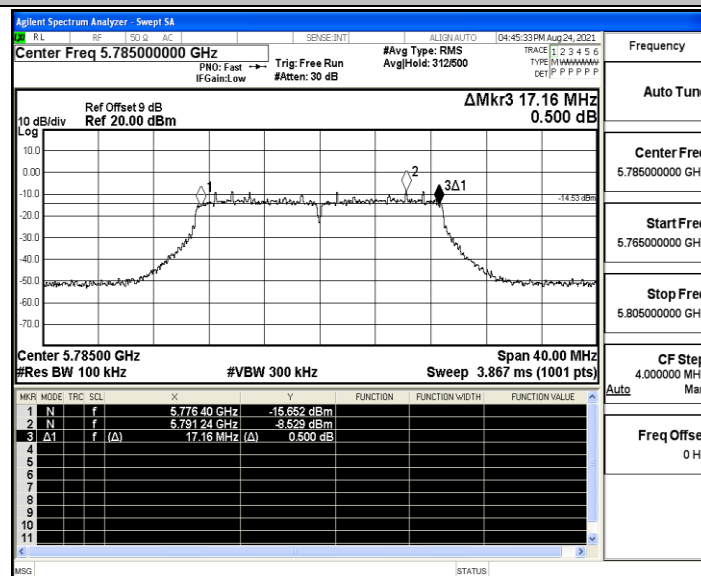
11A_Ant1_5825



11N20SISO_Ant1_5745

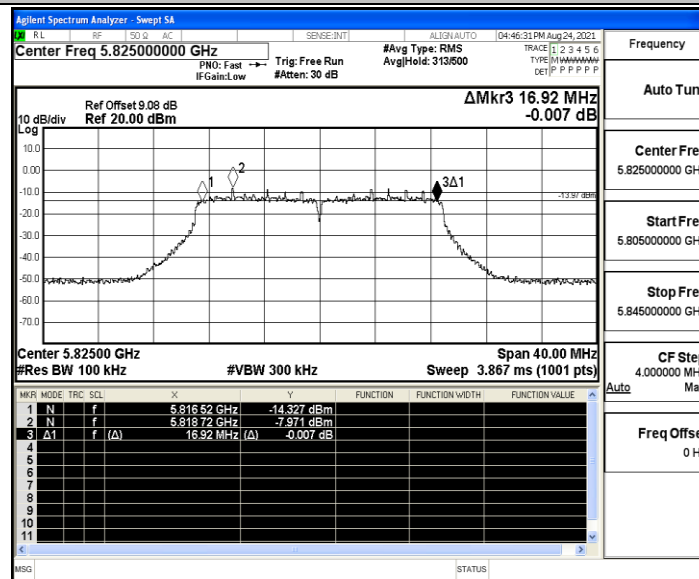


11N20SISO_Ant1_5785

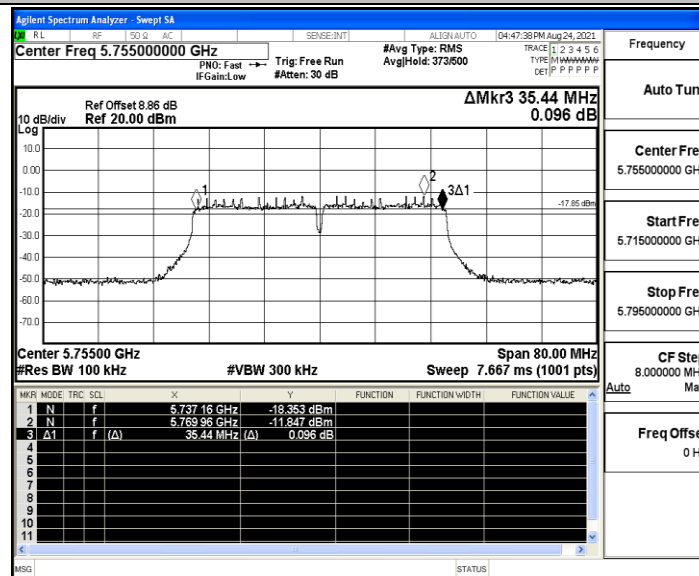




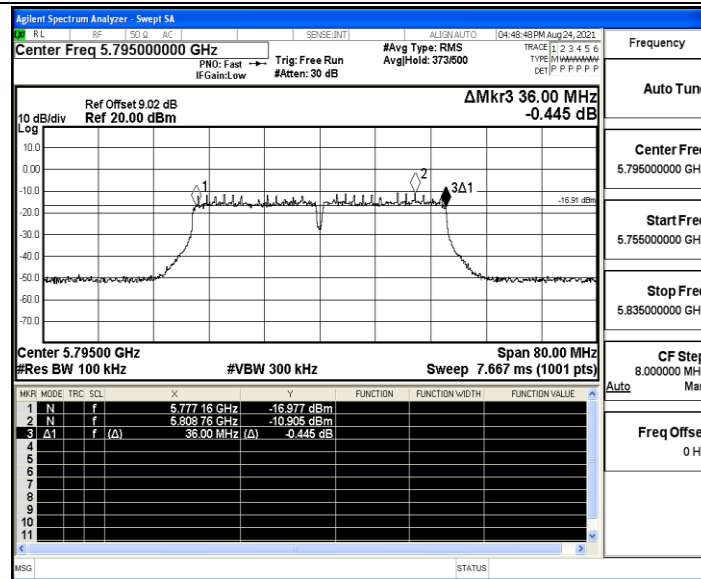
11N20SISO_Ant1_5825



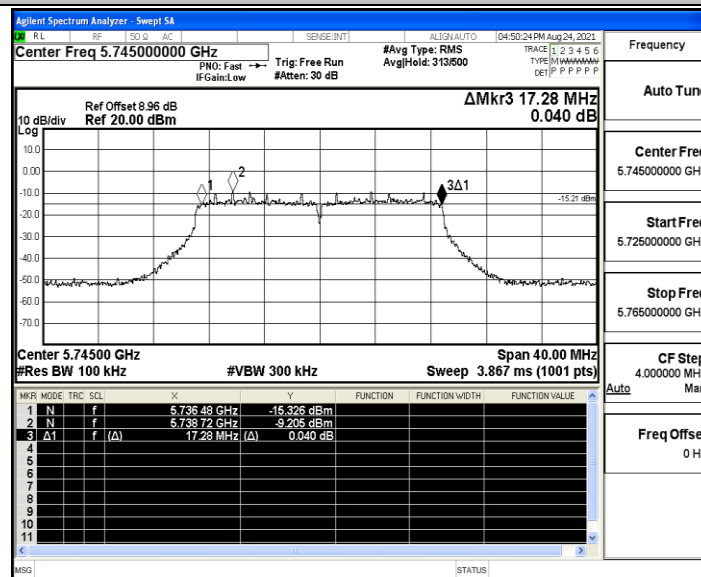
11N40SISO_Ant1_5755



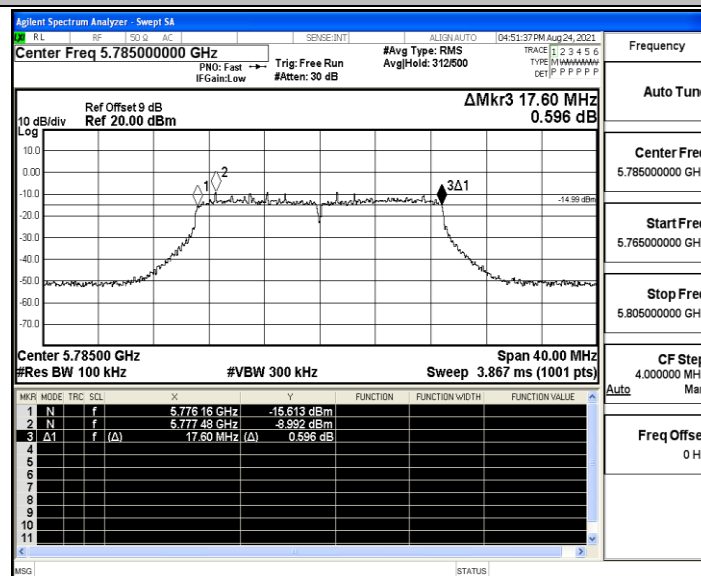
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5745

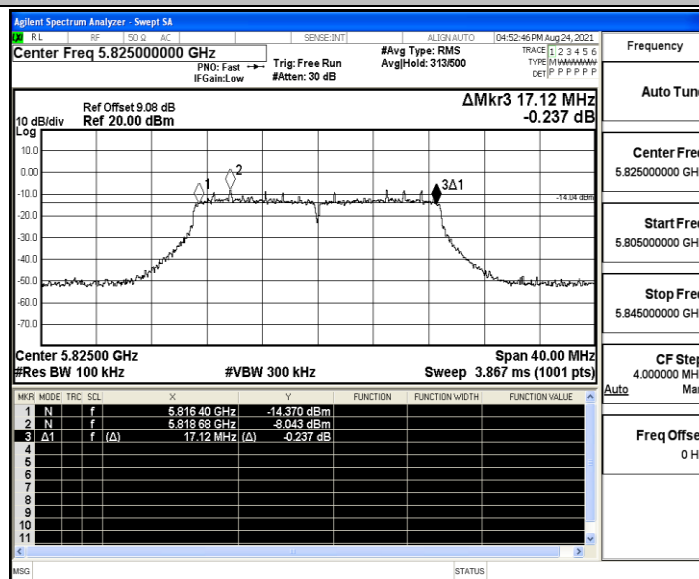


11AC20SISO_Ant1_5785

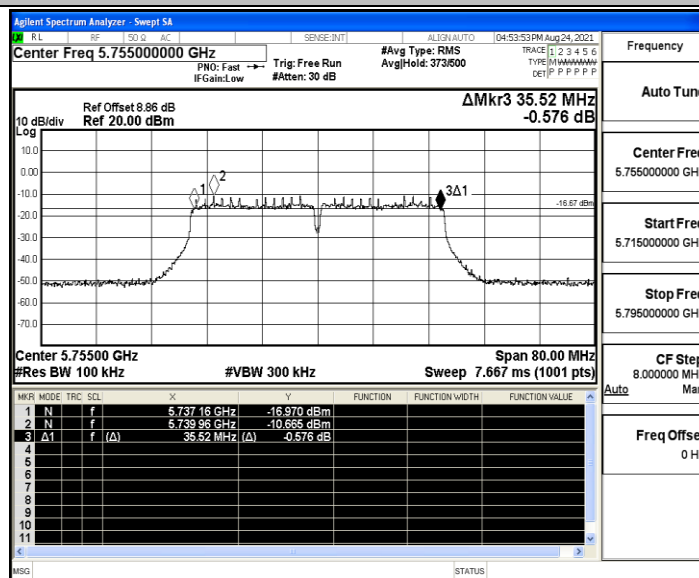




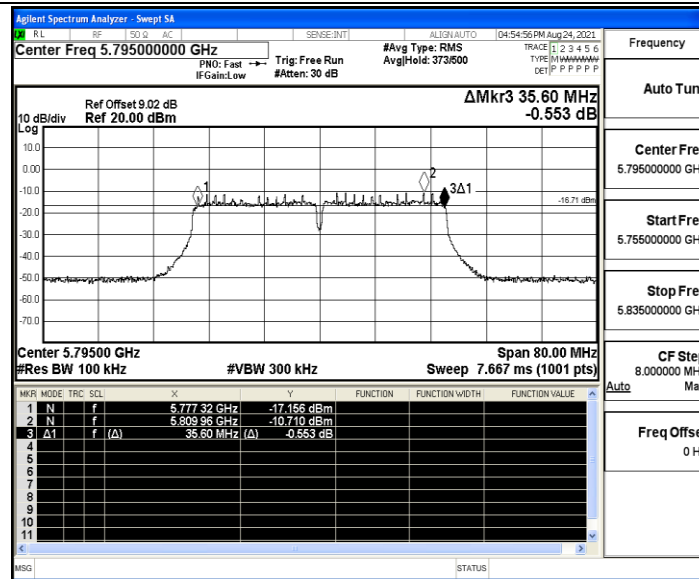
11AC20SISO_Ant1_5825



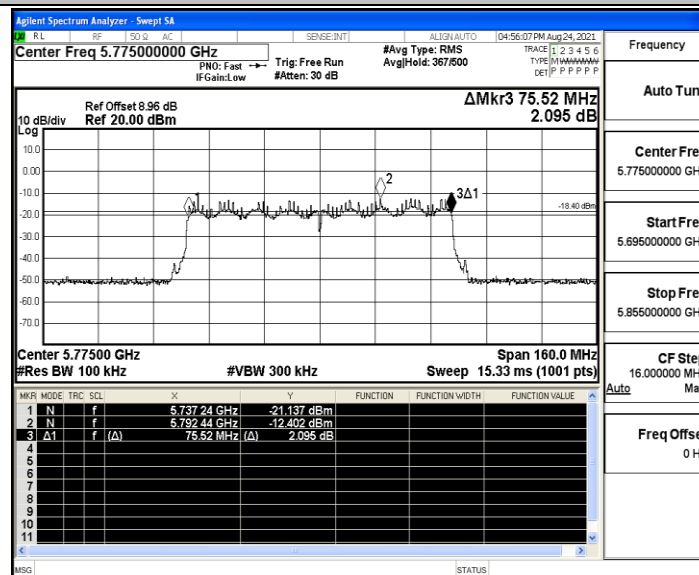
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775





F.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5745	10.53	≤30	PASS
		5785	11.94	≤30	PASS
		5825	10.66	≤30	PASS
11N20SISO	Ant1	5745	12.26	≤30	PASS
		5785	11.76	≤30	PASS
		5825	10.62	≤30	PASS
11N40SISO	Ant1	5755	10.22	≤30	PASS
		5795	10.33	≤30	PASS
11AC20SISO	Ant1	5745	12.45	≤30	PASS
		5785	10.79	≤30	PASS
		5825	10.77	≤30	PASS
11AC40SISO	Ant1	5755	12.17	≤30	PASS
		5795	12.65	≤30	PASS
11AC80SISO	Ant1	5775	12.09	≤30	PASS

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

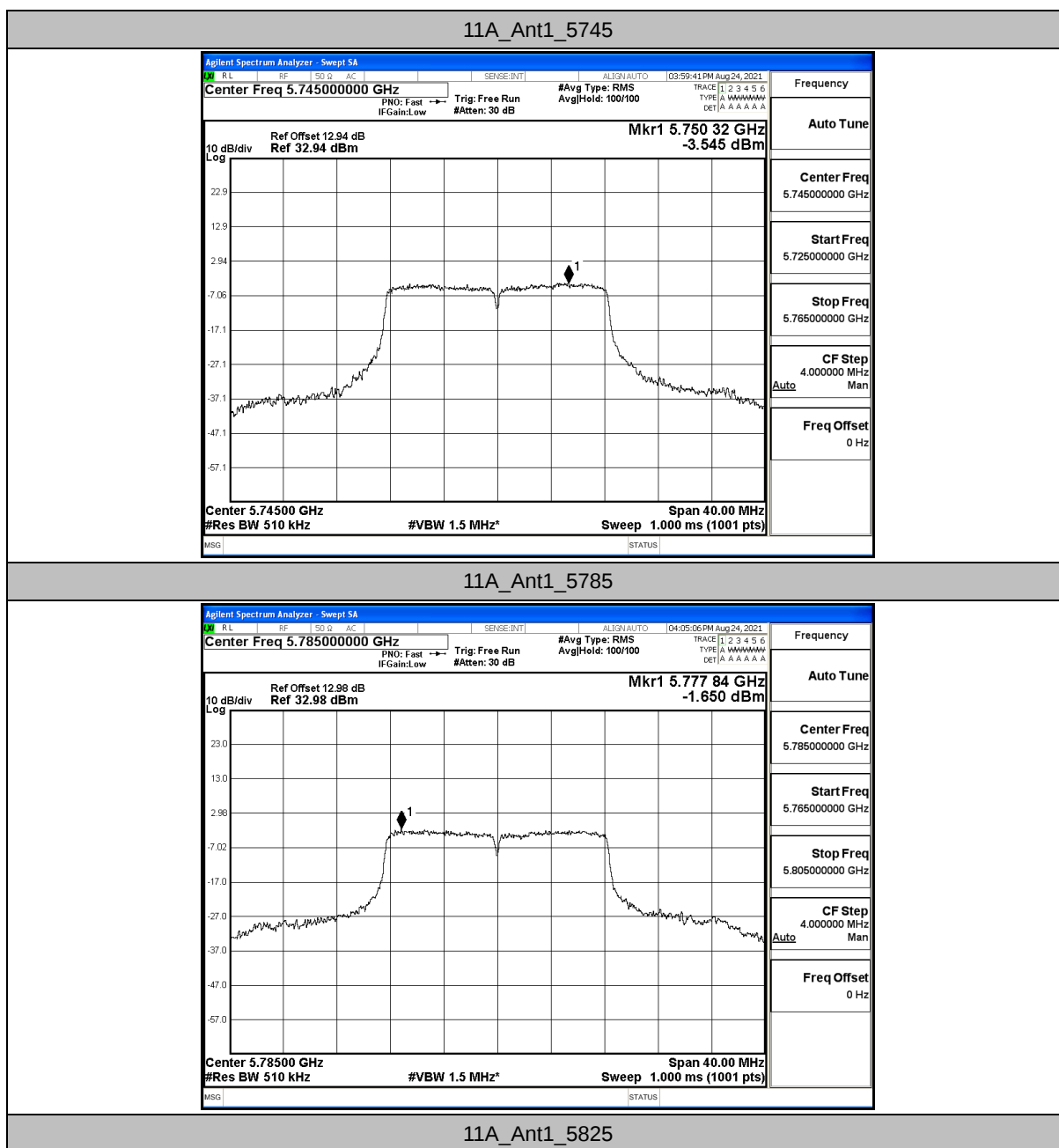


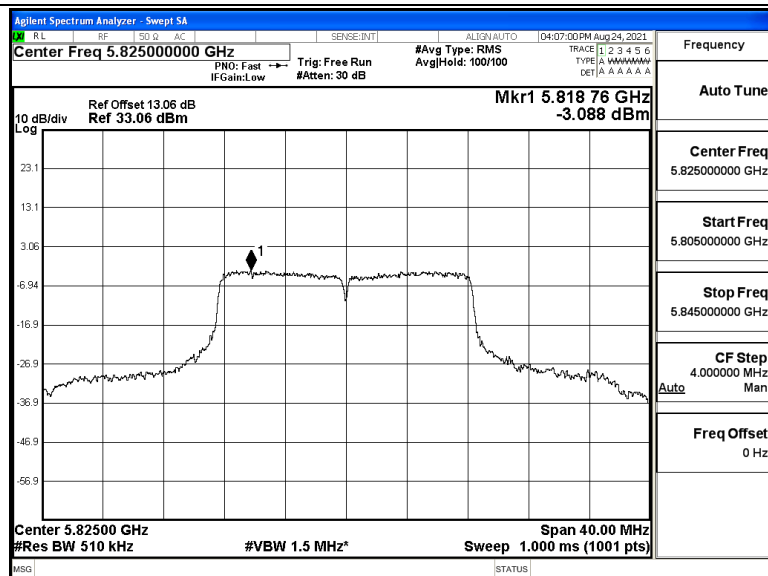
F.3 Maximum power spectral density

Test Result

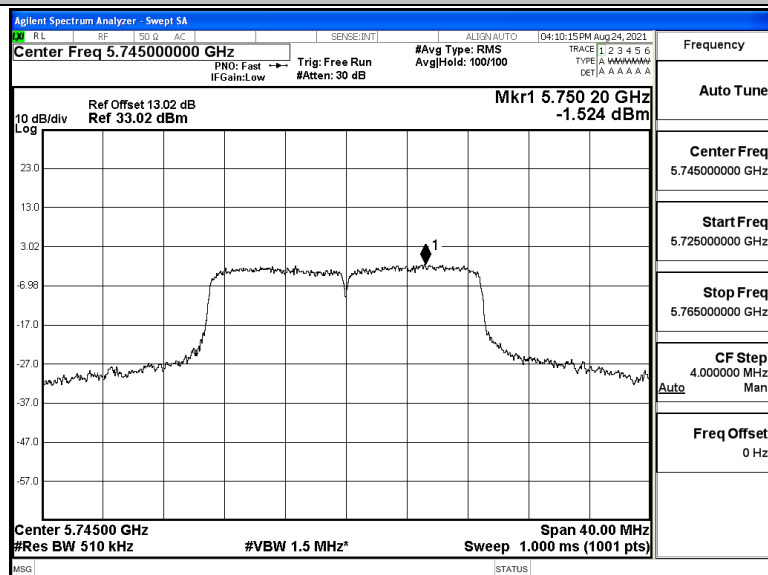
TestMode	Antenna	Channel	Result [dBm/500kHz]	Limit[dBm/500kHz]	Verdict
11A	Ant1	5745	-3.55	≤30	PASS
		5785	-1.66	≤30	PASS
		5825	-3.09	≤30	PASS
11N20SISO	Ant1	5745	-1.52	≤30	PASS
		5785	-2.06	≤30	PASS
		5825	-3.61	≤30	PASS
11N40SISO	Ant1	5755	-6.05	≤30	PASS
		5795	-6.06	≤30	PASS
11AC20SISO	Ant1	5745	-1.15	≤30	PASS
		5785	-2.77	≤30	PASS
		5825	-3.75	≤30	PASS
11AC40SISO	Ant1	5755	-4.62	≤30	PASS
		5795	-4.06	≤30	PASS
11AC80SISO	Ant1	5775	-5.72	≤30	PASS

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

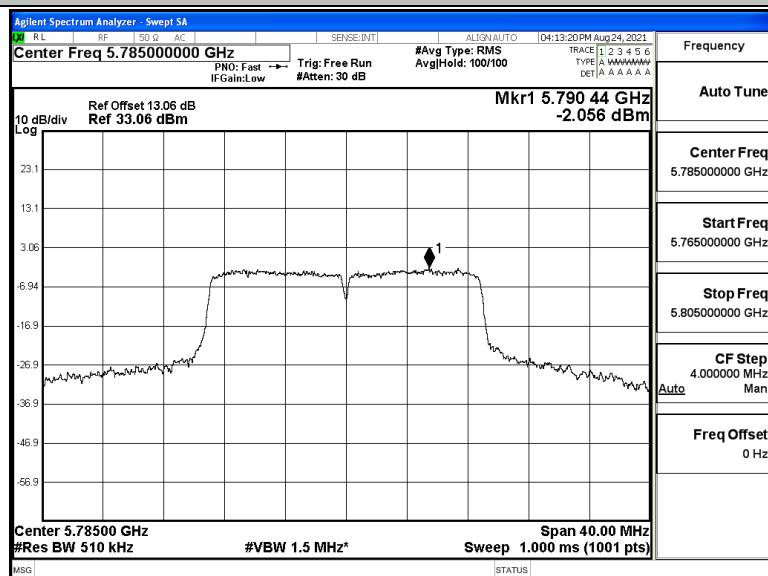




11N20SISO_Ant1_5745

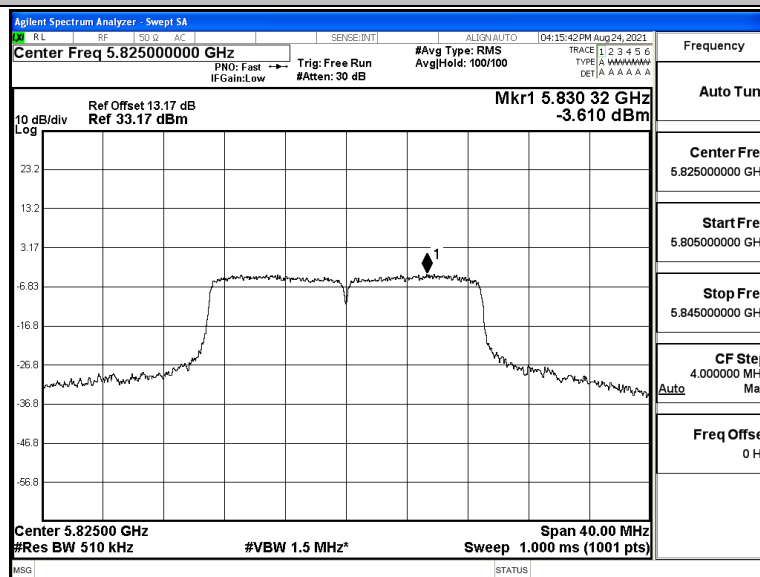


11N20SISO_Ant1_5785

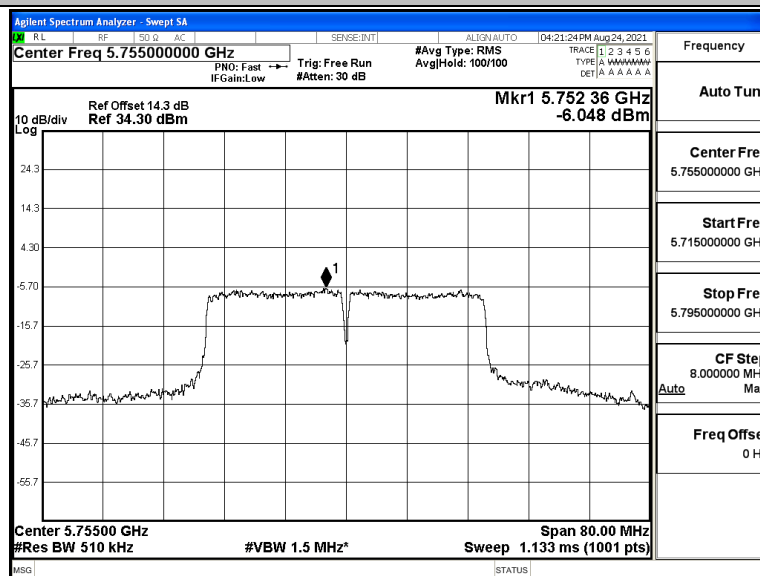




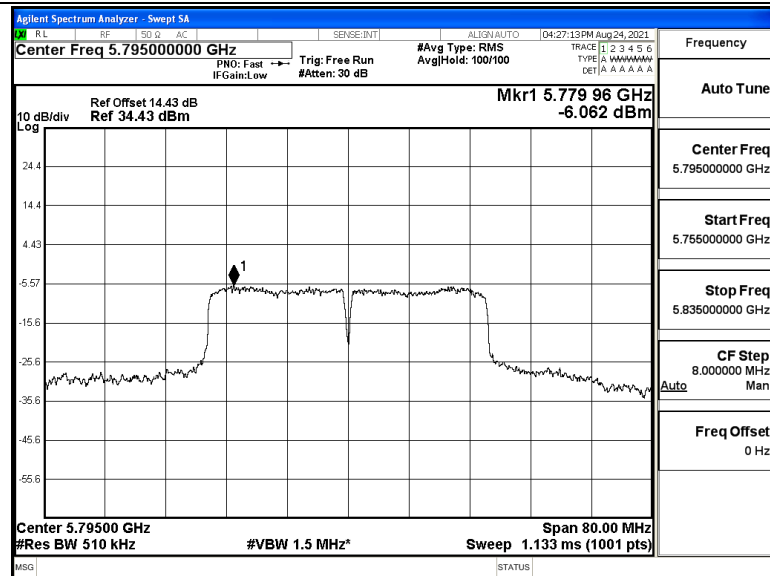
11N20SISO_Ant1_5825



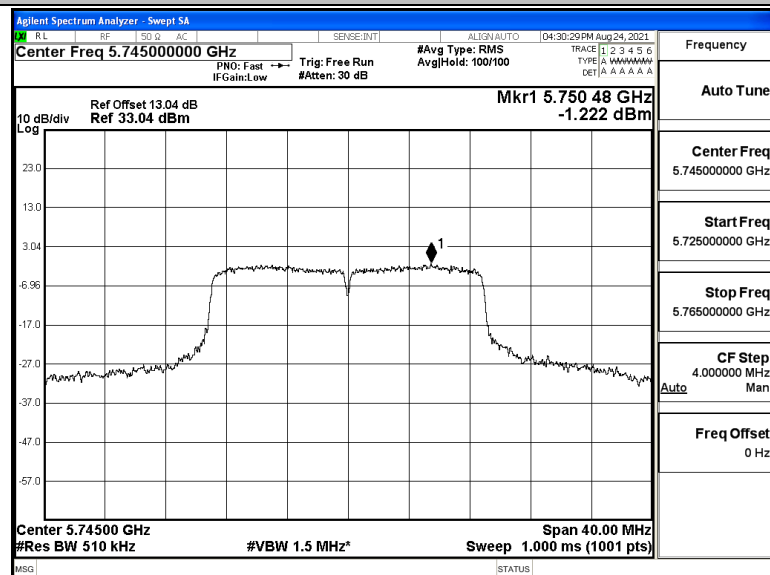
11N40SISO_Ant1_5755



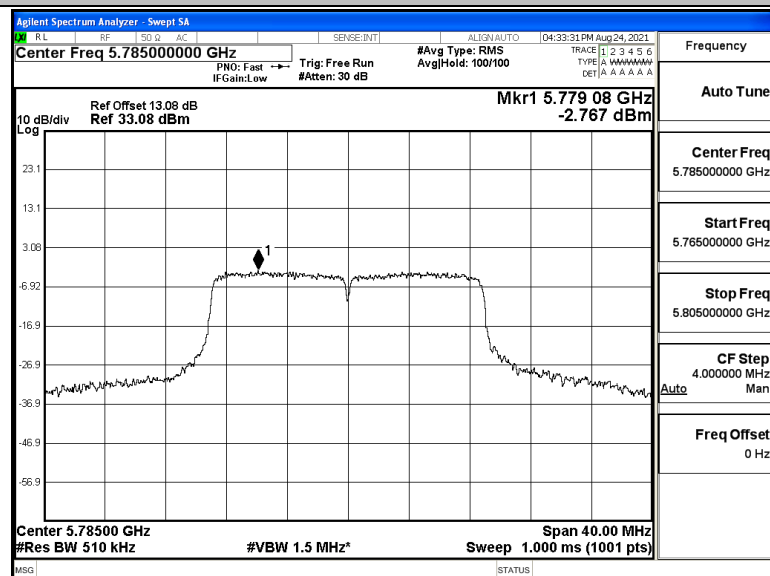
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5745

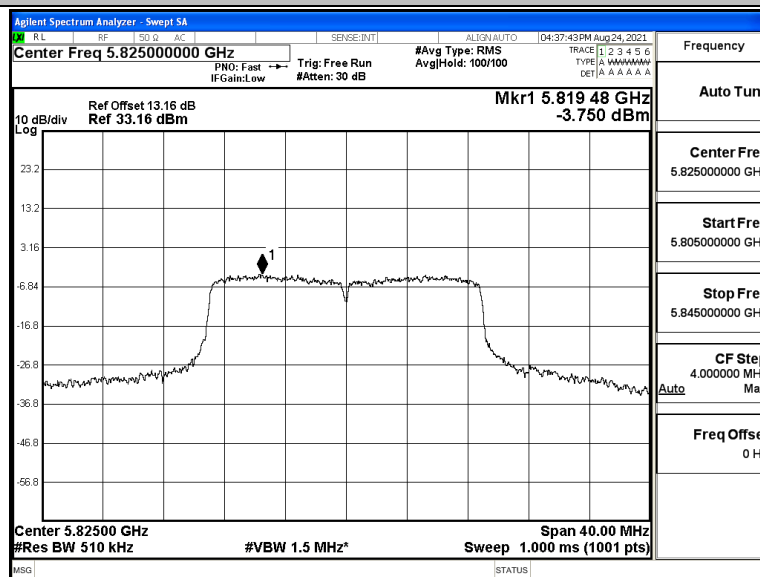


11AC20SISO_Ant1_5785

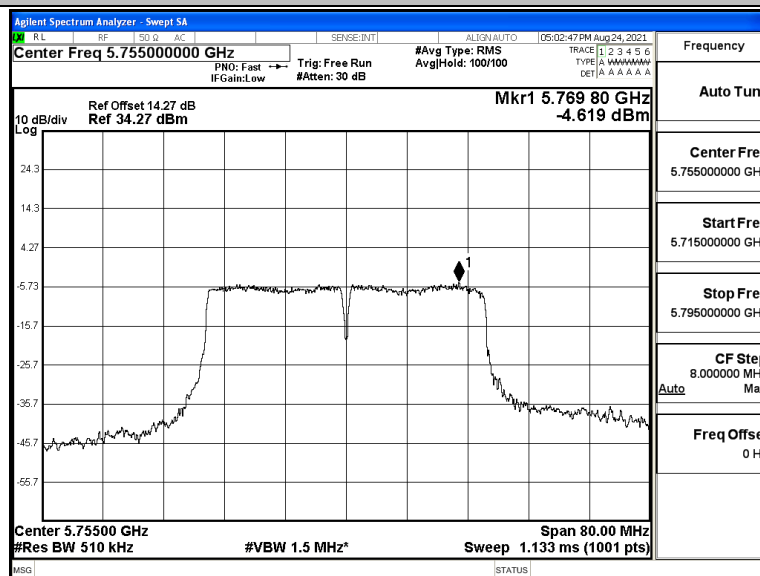




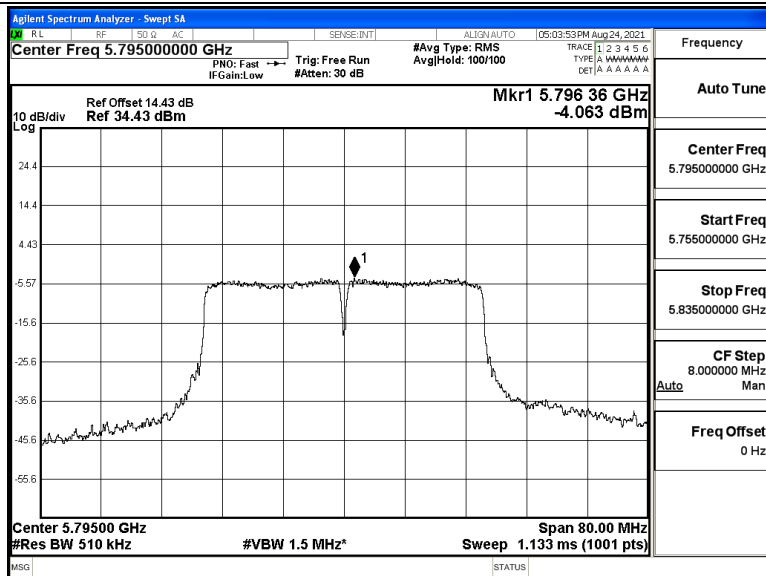
11AC20SISO_Ant1_5825



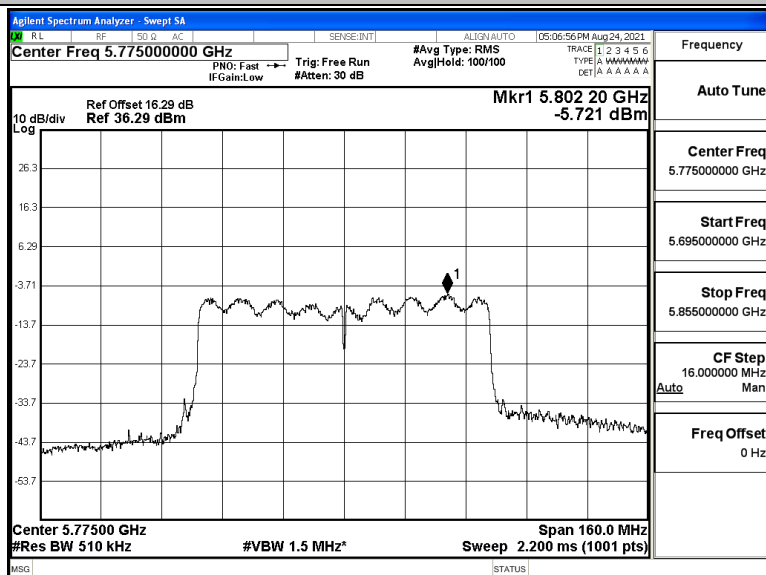
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775





F.4 Emissions in Restricted Bands

Test Result

TestMode	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	5745	Peak	5650.000	-37.889	≤-27.00	PASS
		Peak	5700.000	-39.6	≤10.00	PASS
		Peak	5720.000	-38.7	≤15.60	PASS
		Peak	5725.000	-32.24	≤27.00	PASS
	5825	Peak	5850.000	-34.19	≤15.60	PASS
		Peak	5855.000	-35.96	≤27.00	PASS
		Peak	5875.000	-41.09	≤15.60	PASS
		Peak	5925.000	-39.9	≤10.00	PASS
11N20SISO	5745	Peak	5650.000	-41.405	≤-27.00	PASS
		Peak	5700.000	-39.02	≤10.00	PASS
		Peak	5720.000	-29.59	≤15.60	PASS
		Peak	5725.000	-22.92	≤27.00	PASS
	5825	Peak	5850.000	-37.187	≤15.60	PASS
		Peak	5855.000	-40.21	≤27.00	PASS
		Peak	5875.000	-41.15	≤15.60	PASS
		Peak	5925.000	-40.74	≤10.00	PASS
11N40SISO	5755	Peak	5650.000	-39.358	≤-27.00	PASS
		Peak	5700.000	-35.47	≤10.00	PASS
		Peak	5720.000	-26.76	≤15.60	PASS
		Peak	5725.000	-24.6	≤27.00	PASS
	5795	Peak	5850.000	-37.049	≤15.60	PASS
		Peak	5855.000	-38.84	≤27.00	PASS
		Peak	5875.000	-40.37	≤15.60	PASS
		Peak	5925.000	-38.59	≤10.00	PASS
11AC20SISO	5745	Peak	5650.000	-39.601	≤-27.00	PASS
		Peak	5700.000	-38.26	≤10.00	PASS
		Peak	5720.000	-28.71	≤15.60	PASS
		Peak	5725.000	-23.3	≤27.00	PASS
	5825	Peak	5850.000	-37.471	≤15.60	PASS
		Peak	5855.000	-38.55	≤27.00	PASS
		Peak	5875.000	-40.87	≤15.60	PASS
		Peak	5925.000	-40.74	≤10.00	PASS
11AC40SISO	5755	Peak	5650.000	-40.951	≤-27.00	PASS
		Peak	5700.000	-27.29	≤10.00	PASS
		Peak	5720.000	-14.29	≤15.60	PASS
		Peak	5725.000	-13.15	≤27.00	PASS
	5795	Peak	5850.000	-33.309	≤15.60	PASS



		Peak	5855.000	-41.04	≤27.00	PASS
		Peak	5875.000	-40.05	≤15.60	PASS
		Peak	5925.000	-39.57	≤10.00	PASS
11AC80SISO	5775	Peak	5650.000	-39.762	≤-27.00	PASS
		Peak	5700.000	-31.29	≤10.00	PASS
		Peak	5720.000	-28.56	≤15.60	PASS
		Peak	5725.000	-28.18	≤27.00	PASS
	5775	Peak	5850.000	-27.993	≤15.60	PASS
		Peak	5855.000	-27.49	≤27.00	PASS
		Peak	5875.000	-29.1	≤15.60	PASS
		Peak	5925.000	-40.31	≤10.00	PASS

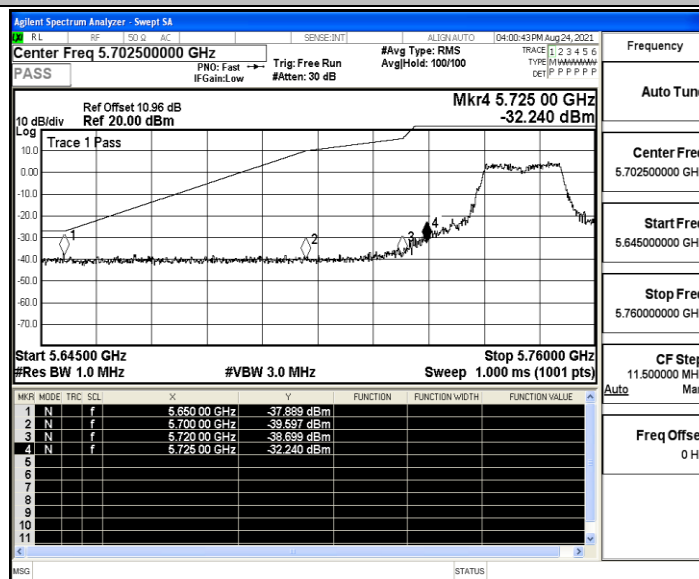
Note:

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.

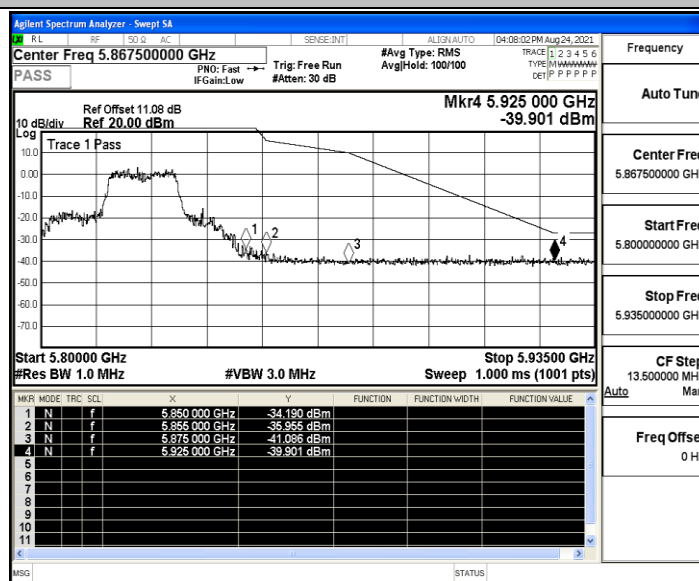


Test Graphs

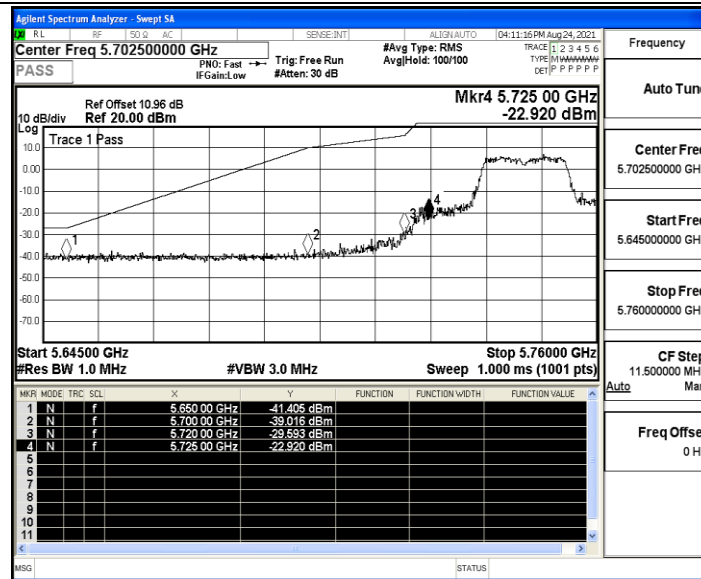
11A_Ant1_Low_5745_Peak



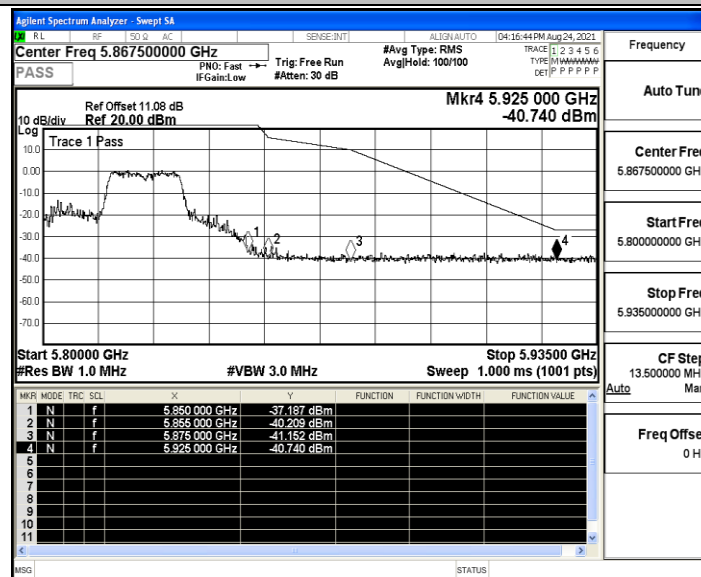
11A_Ant1_High_5825_Peak



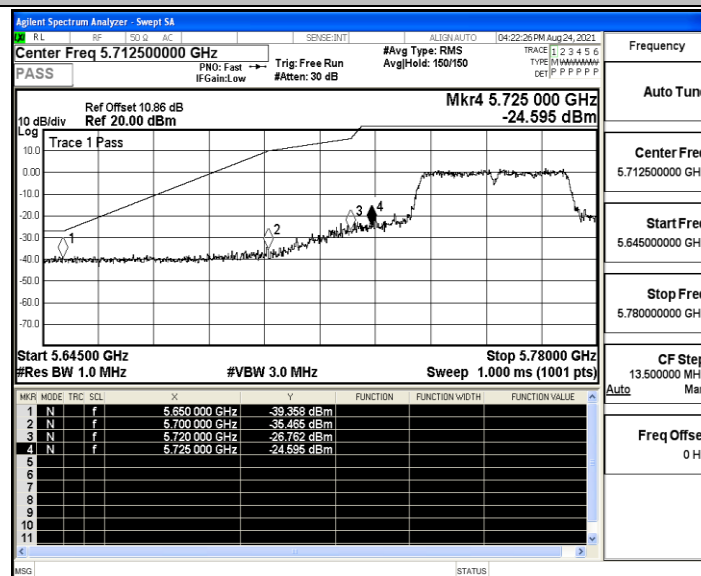
11N20SISO_Ant1_Low_5745_Peak



11N20SISO_Ant1_High_5825_Peak

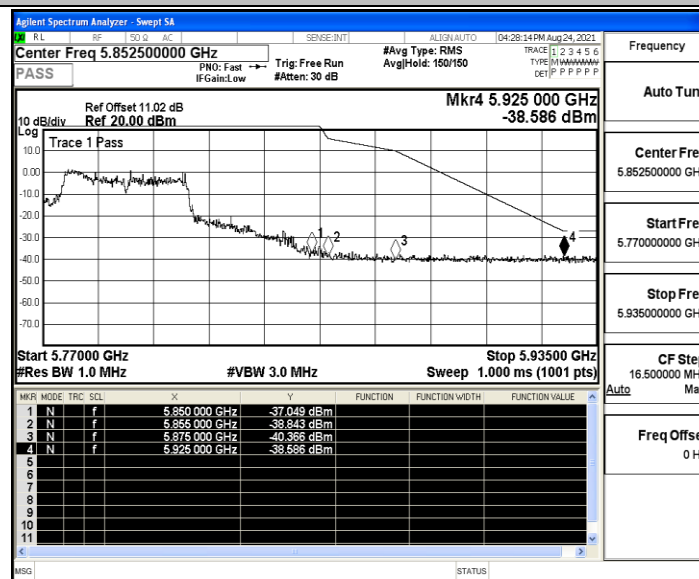


11N40SISO_Ant1_Low_5755_Peak

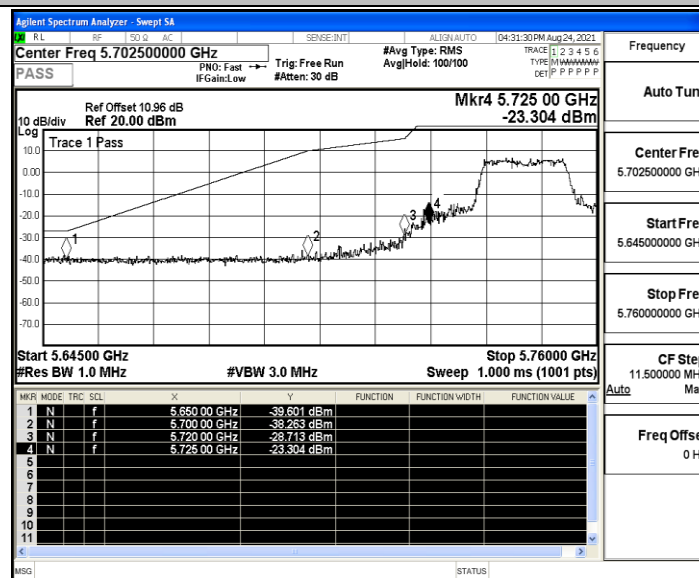




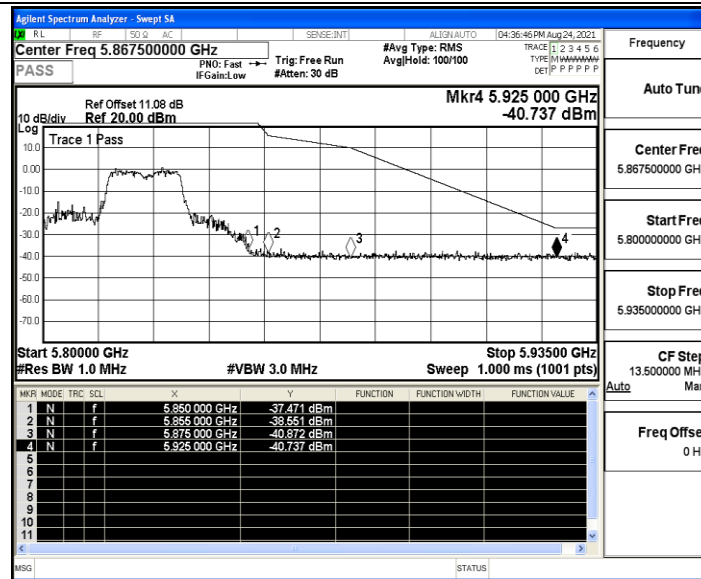
11N40SISO_Ant1_High_5795_Peak



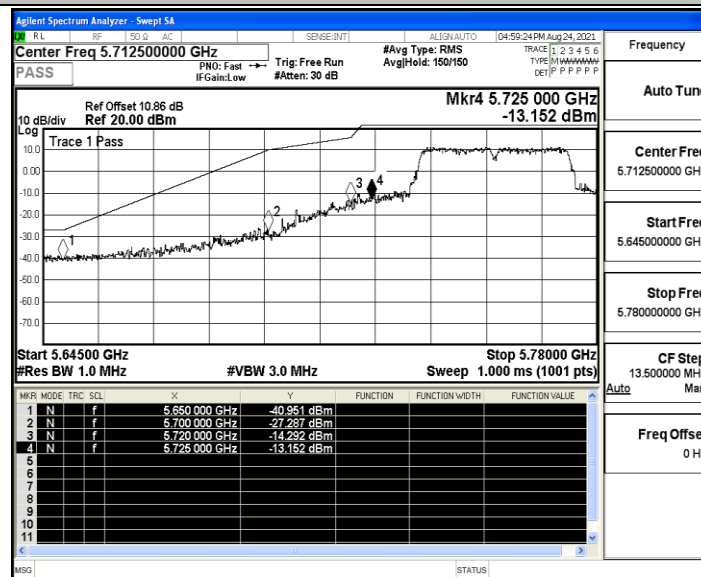
11AC20SISO_Ant1_Low_5745_Peak



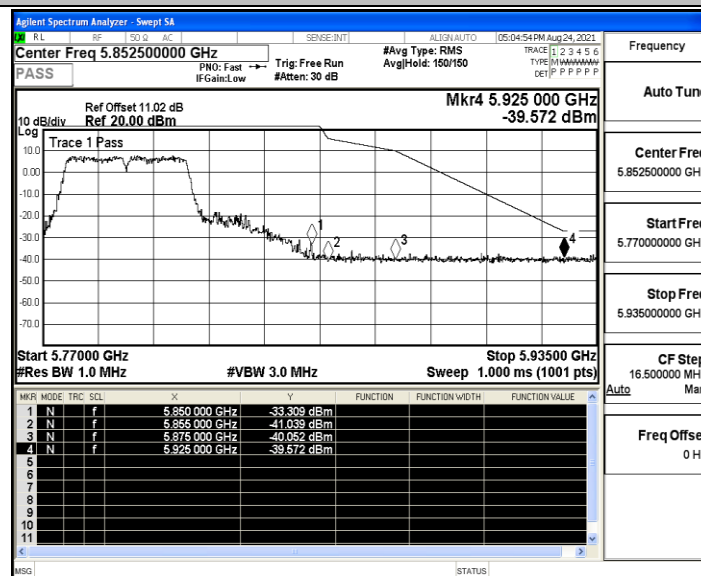
11AC20SISO_Ant1_High_5825_Peak



11AC40SISO_Ant1_Low_5755_Peak

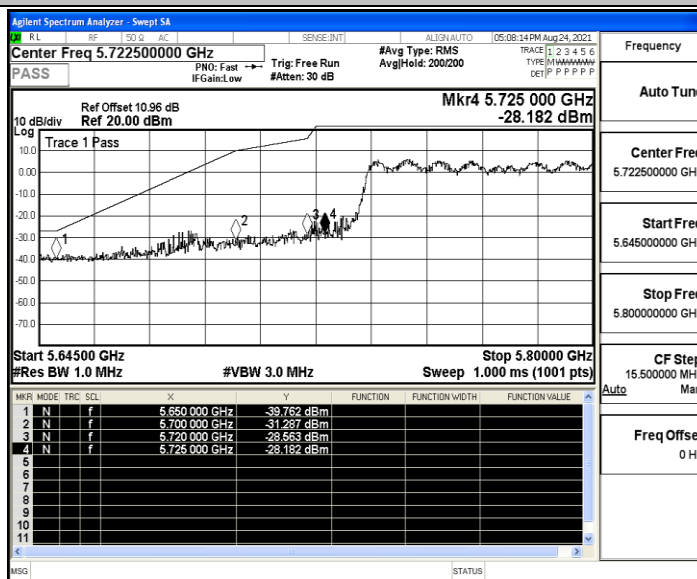


11AC40SISO_Ant1_High_5795_Peak

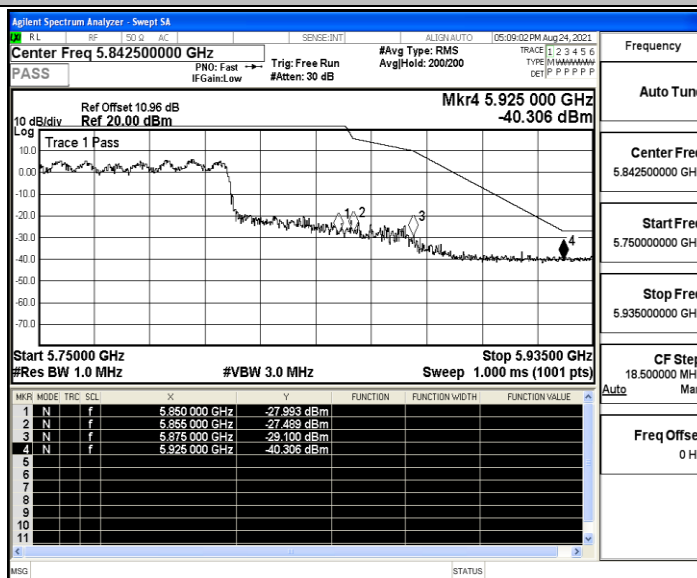




11AC80SISO_Ant1_Low_5775_Peak



11AC80SISO_Ant1_High_5775_Peak





F.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	NT	-40000	-6.962576	20	PASS
			LV	NT	-42000	-7.310705	20	PASS
			HV	NT	-42000	-7.310705	20	PASS
		5785	NV	NT	-42000	-7.260156	20	PASS
			LV	NT	-43000	-7.433016	20	PASS
			HV	NT	-44000	-7.605877	20	PASS
		5825	NV	NT	-43000	-7.381974	20	PASS
			LV	NT	-44000	-7.553648	20	PASS
			HV	NT	-44000	-7.553648	20	PASS
11N20SISO	Ant1	5745	NV	NT	-42000	-7.310705	20	PASS
			LV	NT	-43000	-7.484769	20	PASS
			HV	NT	-44000	-7.658834	20	PASS
		5785	NV	NT	-44000	-7.605877	20	PASS
			LV	NT	-44000	-7.605877	20	PASS
			HV	NT	-44000	-7.605877	20	PASS
		5825	NV	NT	-44000	-7.553648	20	PASS
			LV	NT	-44000	-7.553648	20	PASS
			HV	NT	-45000	-7.725322	20	PASS
11N40SISO	Ant1	5755	NV	NT	-42000	-7.298002	20	PASS
			LV	NT	-44000	-7.645526	20	PASS
			HV	NT	-44000	-7.645526	20	PASS
		5795	NV	NT	-43000	-7.42019	20	PASS
			LV	NT	-44000	-7.592752	20	PASS
			HV	NT	-44000	-7.592752	20	PASS
11AC20SISO	Ant1	5745	NV	NT	-42000	-7.310705	20	PASS
			LV	NT	-43000	-7.484769	20	PASS
			HV	NT	-43000	-7.484769	20	PASS
		5785	NV	NT	-44000	-7.605877	20	PASS
			LV	NT	-45000	-7.778738	20	PASS
			HV	NT	-45000	-7.778738	20	PASS
		5825	NV	NT	-45000	-7.725322	20	PASS
			LV	NT	-45000	-7.725322	20	PASS
			HV	NT	-45000	-7.725322	20	PASS
11AC40SISO	Ant1	5755	NV	NT	-43000	-7.471764	20	PASS
			LV	NT	-44000	-7.645526	20	PASS



		5795	HV	NT	-44000	-7.645526	20	PASS
			NV	NT	-44000	-7.592752	20	PASS
			LV	NT	-44000	-7.592752	20	PASS
			HV	NT	-45000	-7.765315	20	PASS
11AC80SI SO	Ant1	5775	NV	NT	-43000	-7.445887	20	PASS
			LV	NT	-44000	-7.619048	20	PASS
			HV	NT	-44000	-7.619048	20	PASS

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	-30	-43000	-7.484769	20	PASS
			NV	-20	-43000	-7.484769	20	PASS
			NV	-10	-43000	-7.484769	20	PASS
			NV	0	-43000	-7.484769	20	PASS
			NV	10	-43000	-7.484769	20	PASS
			NV	20	-43000	-7.484769	20	PASS
			NV	30	-43000	-7.484769	20	PASS
			NV	40	-43000	-7.484769	20	PASS
			NV	50	-43000	-7.484769	20	PASS
		5785	NV	-30	-44000	-7.605877	20	PASS
			NV	-20	-44000	-7.605877	20	PASS
			NV	-10	-44000	-7.605877	20	PASS
			NV	0	-44000	-7.605877	20	PASS
			NV	10	-44000	-7.605877	20	PASS
			NV	20	-44000	-7.605877	20	PASS
			NV	30	-44000	-7.605877	20	PASS
			NV	40	-44000	-7.605877	20	PASS
			NV	50	-44000	-7.605877	20	PASS
		5825	NV	-30	-44000	-7.553648	20	PASS
			NV	-20	-44000	-7.553648	20	PASS
			NV	-10	-44000	-7.553648	20	PASS
			NV	0	-44000	-7.553648	20	PASS
			NV	10	-44000	-7.553648	20	PASS
			NV	20	-44000	-7.553648	20	PASS
			NV	30	-44000	-7.553648	20	PASS
			NV	40	-44000	-7.553648	20	PASS
			NV	50	-44000	-7.553648	20	PASS
11N20SIS O	Ant1	5745	NV	-30	-44000	-7.658834	20	PASS
			NV	-20	-43000	-7.484769	20	PASS
			NV	-10	-44000	-7.658834	20	PASS
			NV	0	-43000	-7.484769	20	PASS
			NV	10	-44000	-7.658834	20	PASS



			NV	20	-44000	-7.658834	20	PASS
			NV	30	-44000	-7.658834	20	PASS
			NV	40	-43000	-7.484769	20	PASS
			NV	50	-44000	-7.658834	20	PASS
		5785	NV	-30	-44000	-7.605877	20	PASS
			NV	-20	-44000	-7.605877	20	PASS
			NV	-10	-44000	-7.605877	20	PASS
			NV	0	-44000	-7.605877	20	PASS
			NV	10	-44000	-7.605877	20	PASS
			NV	20	-44000	-7.605877	20	PASS
			NV	30	-44000	-7.605877	20	PASS
			NV	40	-44000	-7.605877	20	PASS
			NV	50	-44000	-7.605877	20	PASS
		5825	NV	-30	-45000	-7.725322	20	PASS
			NV	-20	-45000	-7.725322	20	PASS
			NV	-10	-45000	-7.725322	20	PASS
			NV	0	-45000	-7.725322	20	PASS
			NV	10	-44000	-7.553648	20	PASS
			NV	20	-45000	-7.725322	20	PASS
			NV	30	-45000	-7.725322	20	PASS
			NV	40	-44000	-7.553648	20	PASS
			NV	50	-45000	-7.725322	20	PASS
11N40SIS O	Ant1	5755	NV	-30	-44000	-7.645526	20	PASS
			NV	-20	-44000	-7.645526	20	PASS
			NV	-10	-44000	-7.645526	20	PASS
			NV	0	-44000	-7.645526	20	PASS
			NV	10	-44000	-7.645526	20	PASS
			NV	20	-44000	-7.645526	20	PASS
			NV	30	-44000	-7.645526	20	PASS
			NV	40	-44000	-7.645526	20	PASS
			NV	50	-44000	-7.645526	20	PASS
		5795	NV	-30	-44000	-7.592752	20	PASS
			NV	-20	-44000	-7.592752	20	PASS
			NV	-10	-44000	-7.592752	20	PASS
			NV	0	-44000	-7.592752	20	PASS
			NV	10	-44000	-7.592752	20	PASS
			NV	20	-44000	-7.592752	20	PASS
			NV	30	-44000	-7.592752	20	PASS
			NV	40	-44000	-7.592752	20	PASS
			NV	50	-44000	-7.592752	20	PASS
11AC20Si SO	Ant1	5745	NV	-30	-44000	-7.658834	20	PASS
			NV	-20	-44000	-7.658834	20	PASS
			NV	-10	-44000	-7.658834	20	PASS



			NV	0	-44000	-7.658834	20	PASS
			NV	10	-44000	-7.658834	20	PASS
			NV	20	-44000	-7.658834	20	PASS
			NV	30	-44000	-7.658834	20	PASS
			NV	40	-44000	-7.658834	20	PASS
			NV	50	-44000	-7.658834	20	PASS
		5785	NV	-30	-45000	-7.778738	20	PASS
			NV	-20	-45000	-7.778738	20	PASS
			NV	-10	-45000	-7.778738	20	PASS
			NV	0	-46000	-7.951599	20	PASS
			NV	10	-46000	-7.951599	20	PASS
			NV	20	-46000	-7.951599	20	PASS
			NV	30	-46000	-7.951599	20	PASS
			NV	40	-46000	-7.951599	20	PASS
			NV	50	-46000	-7.951599	20	PASS
		5825	NV	-30	-45000	-7.725322	20	PASS
			NV	-20	-45000	-7.725322	20	PASS
			NV	-10	-45000	-7.725322	20	PASS
			NV	0	-45000	-7.725322	20	PASS
			NV	10	-45000	-7.725322	20	PASS
			NV	20	-45000	-7.725322	20	PASS
			NV	30	-45000	-7.725322	20	PASS
			NV	40	-45000	-7.725322	20	PASS
			NV	50	-46000	-7.896996	20	PASS
11AC40SI SO	Ant1	5755	NV	-30	-44000	-7.645526	20	PASS
			NV	-20	-44000	-7.645526	20	PASS
			NV	-10	-44000	-7.645526	20	PASS
			NV	0	-44000	-7.645526	20	PASS
			NV	10	-44000	-7.645526	20	PASS
			NV	20	-44000	-7.645526	20	PASS
			NV	30	-44000	-7.645526	20	PASS
			NV	40	-44000	-7.645526	20	PASS
			NV	50	-44000	-7.645526	20	PASS
		5795	NV	-30	-44000	-7.592752	20	PASS
			NV	-20	-44000	-7.592752	20	PASS
			NV	-10	-44000	-7.592752	20	PASS
			NV	0	-45000	-7.765315	20	PASS
			NV	10	-45000	-7.765315	20	PASS
			NV	20	-45000	-7.765315	20	PASS
			NV	30	-44000	-7.592752	20	PASS
			NV	40	-45000	-7.765315	20	PASS
			NV	50	-45000	-7.765315	20	PASS
11AC80SI	Ant1	5775	NV	-30	-44000	-7.619048	20	PASS



SO			NV	-20	-44000	-7.619048	20	PASS
			NV	-10	-44000	-7.619048	20	PASS
			NV	0	-44000	-7.619048	20	PASS
			NV	10	-44000	-7.619048	20	PASS
			NV	20	-44000	-7.619048	20	PASS
			NV	30	-44000	-7.619048	20	PASS
			NV	40	-44000	-7.619048	20	PASS
			NV	50	-44000	-7.619048	20	PASS



F.6 Duty Cycle

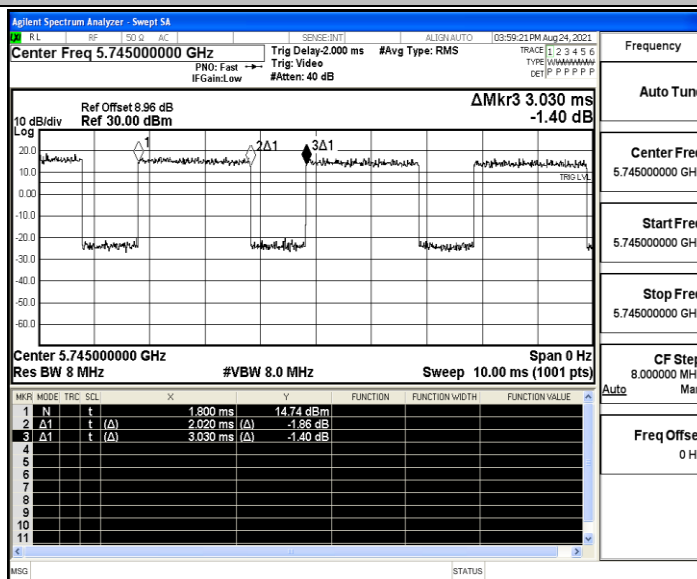
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11A	Ant1	5745	2.02	3.03	66.67	---	PASS
		5785	2.02	3.03	66.67	---	PASS
		5825	2.02	3.03	66.67	---	PASS
11N20SISO	Ant1	5745	1.89	2.89	65.40	---	PASS
		5785	1.89	2.89	65.40	---	PASS
		5825	1.88	2.89	65.05	---	PASS
11N40SISO	Ant1	5755	0.92	1.93	47.67	---	PASS
		5795	0.93	1.94	47.94	---	PASS
11AC20SISO	Ant1	5745	1.89	2.90	65.17	---	PASS
		5785	1.89	2.90	65.17	---	PASS
		5825	1.89	2.90	65.17	---	PASS
11AC40SISO	Ant1	5755	0.93	1.94	47.94	---	PASS
		5795	0.93	1.94	47.94	---	PASS
11AC80SISO	Ant1	5775	0.45	1.46	30.82	---	PASS

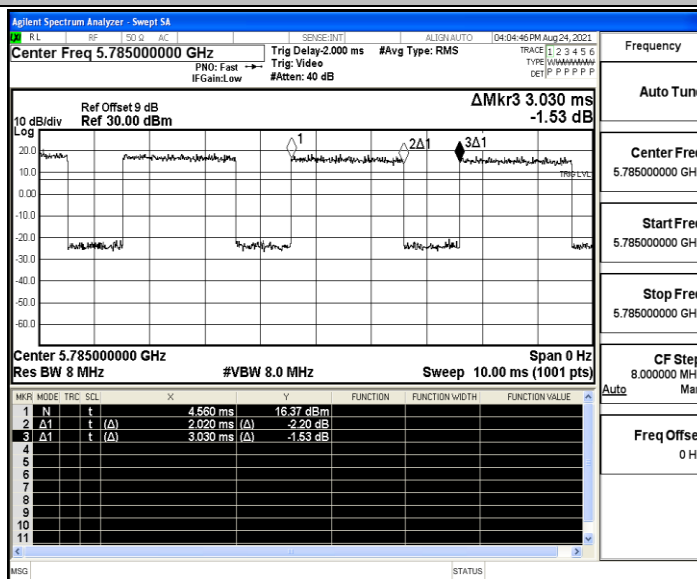


Test Graphs

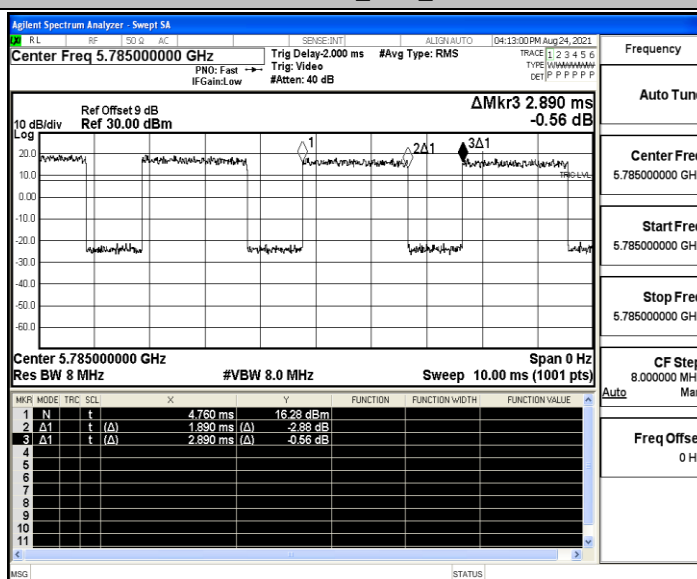
11A_Ant1_5745



11A_Ant1_5785

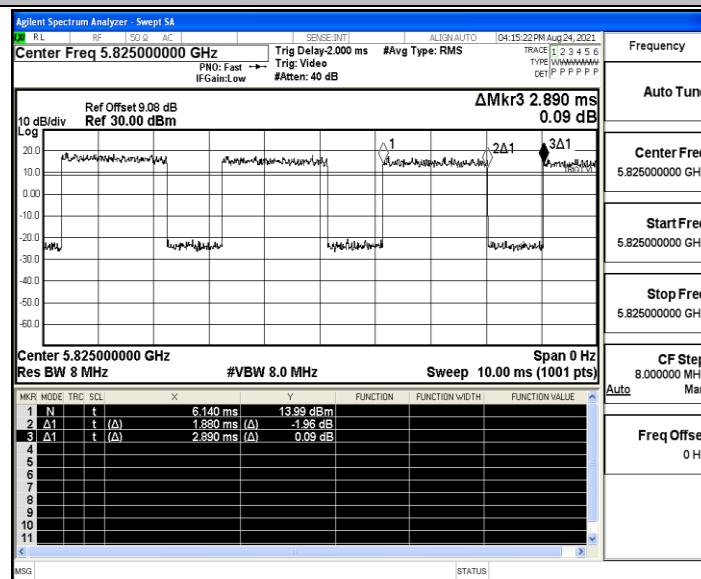


11A_Ant1_5825

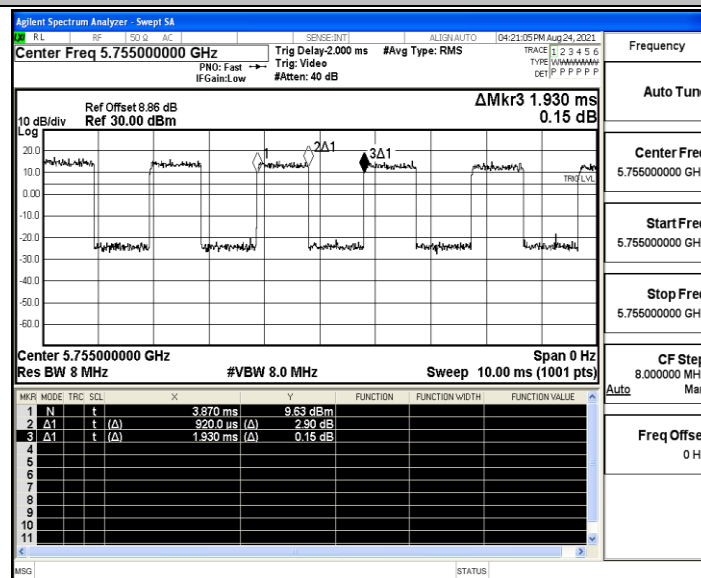




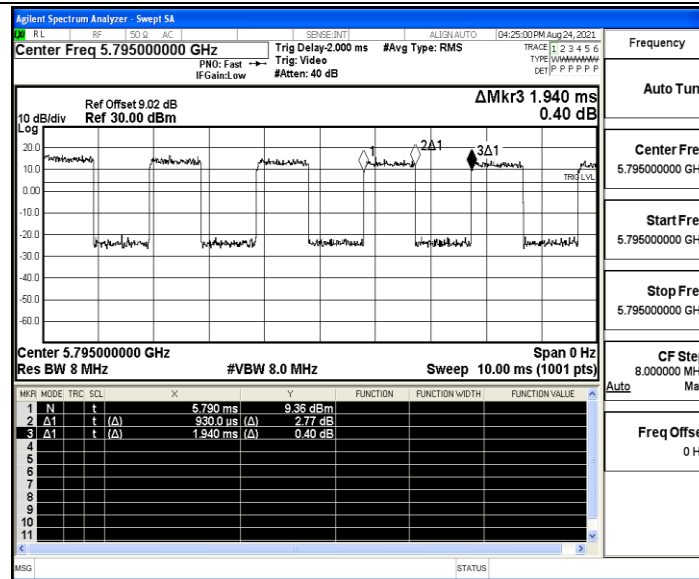
11N20SISO_Ant1_5825



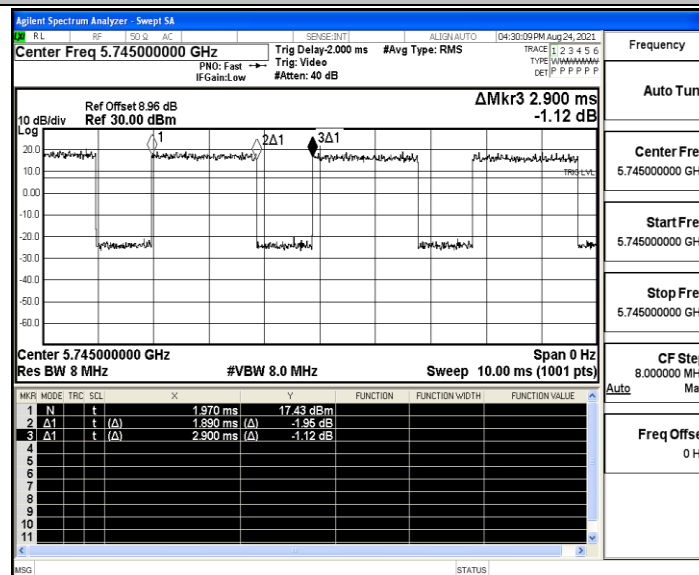
11N40SISO_Ant1_5755



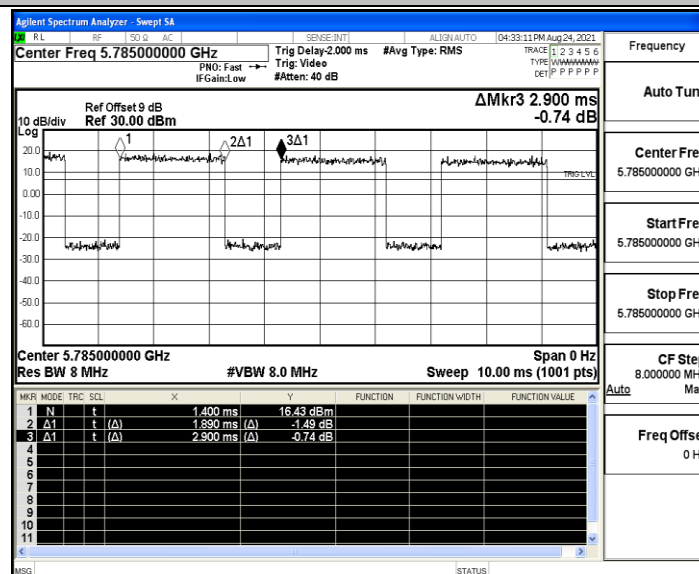
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5745

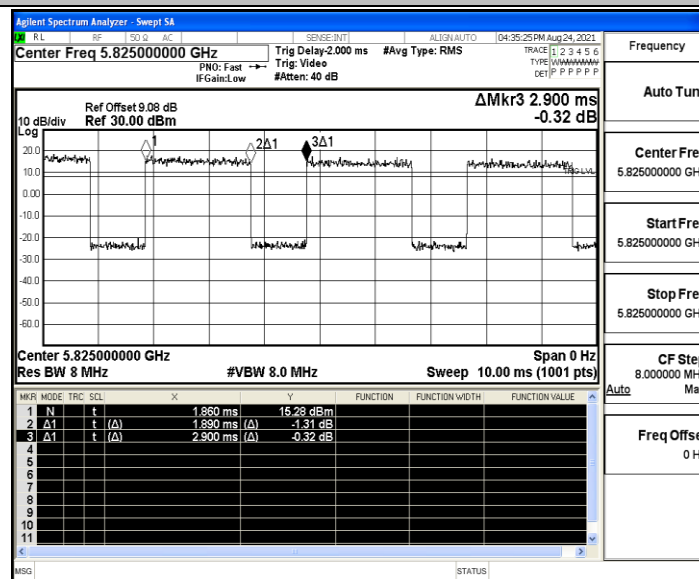


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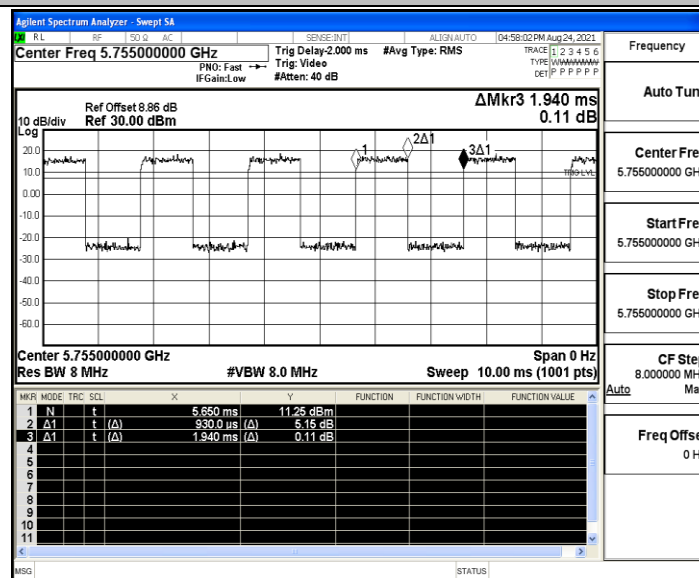




11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795

