



Appendix D

RF Test Data for 5.8G WIFI (Conducted Measurement)

Product Name: LAVA ME3

Test Model: LAVA ME3

Environmental Conditions

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



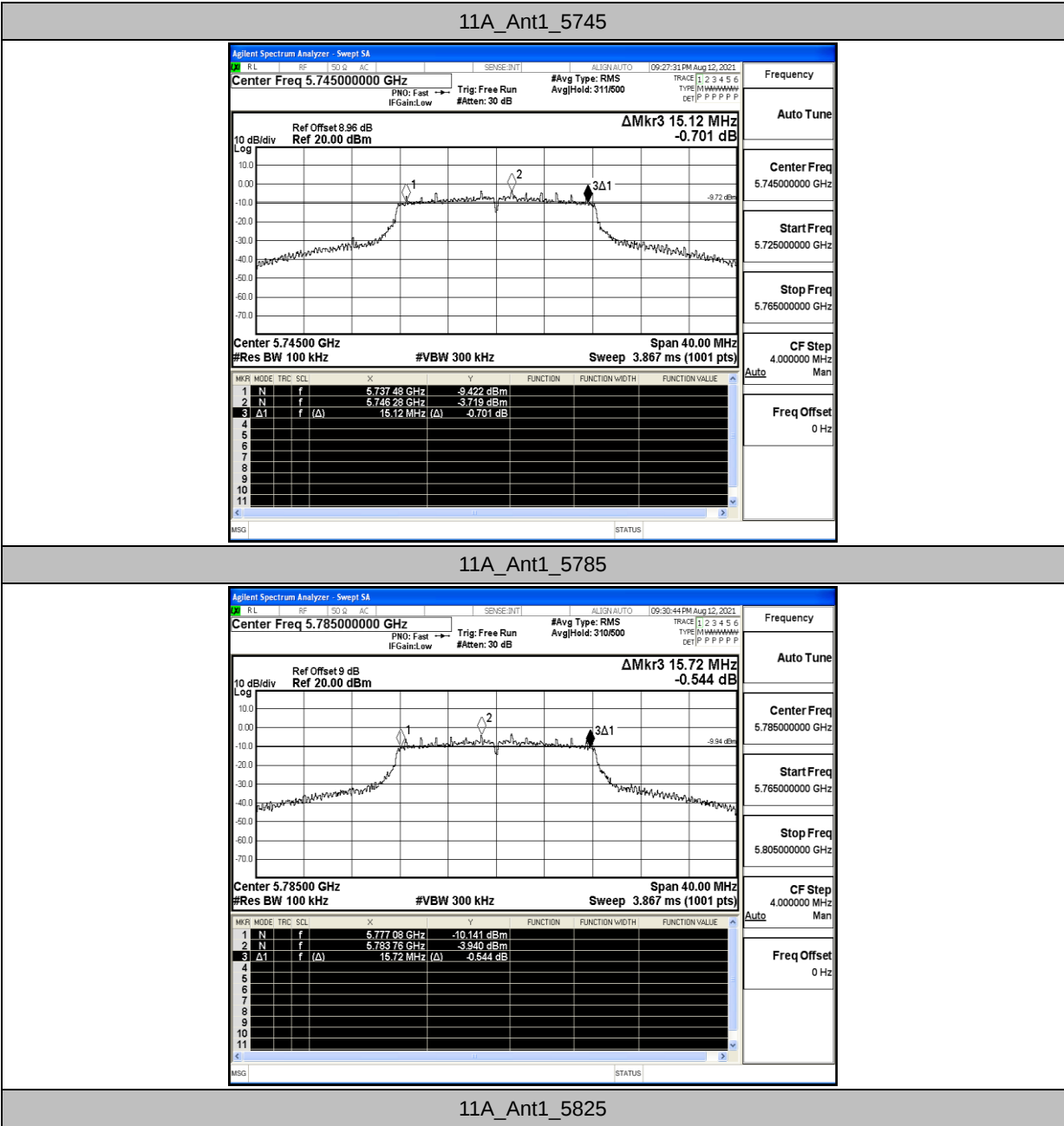
D.1 6dB bandwidth

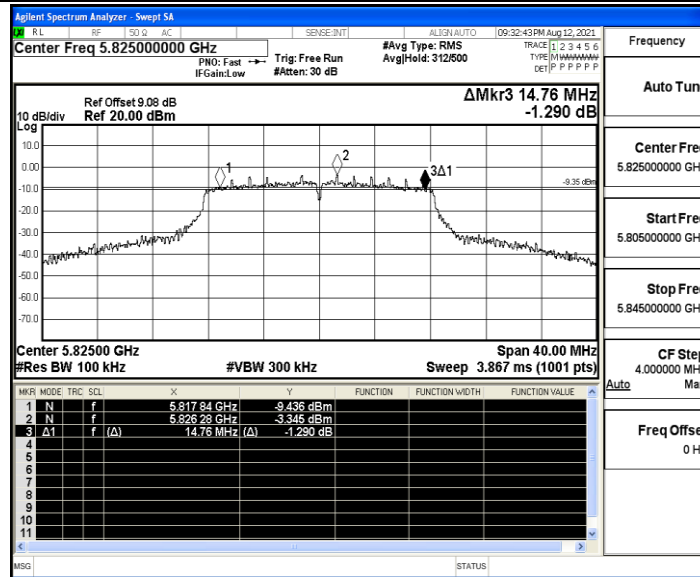
Test Result

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	15.120	5737.480	5752.600	0.5	PASS
		5785	15.720	5777.080	5792.800	0.5	PASS
		5825	14.760	5817.840	5832.600	0.5	PASS
11N20SISO	Ant1	5745	15.160	5737.440	5752.600	0.5	PASS
		5785	14.480	5778.080	5792.560	0.5	PASS
		5825	15.200	5817.400	5832.600	0.5	PASS
11N40SISO	Ant1	5755	35.280	5737.400	5772.680	0.5	PASS
		5795	35.360	5777.320	5812.680	0.5	PASS
11AC20SISO	Ant1	5745	16.680	5736.800	5753.480	0.5	PASS
		5785	15.200	5777.400	5792.600	0.5	PASS
		5825	16.000	5817.400	5833.400	0.5	PASS
11AC40SISO	Ant1	5755	35.360	5737.320	5772.680	0.5	PASS
		5795	35.280	5777.400	5812.680	0.5	PASS
11AC80SISO	Ant1	5775	75.520	5737.240	5812.760	0.5	PASS

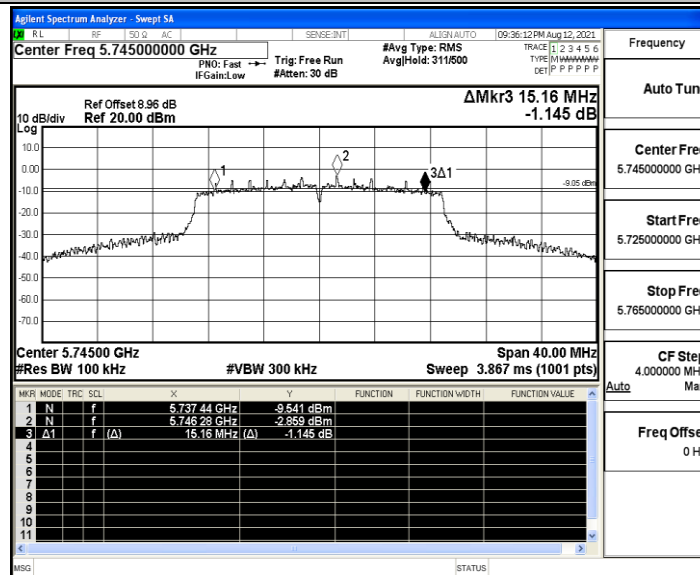


Test Graphs

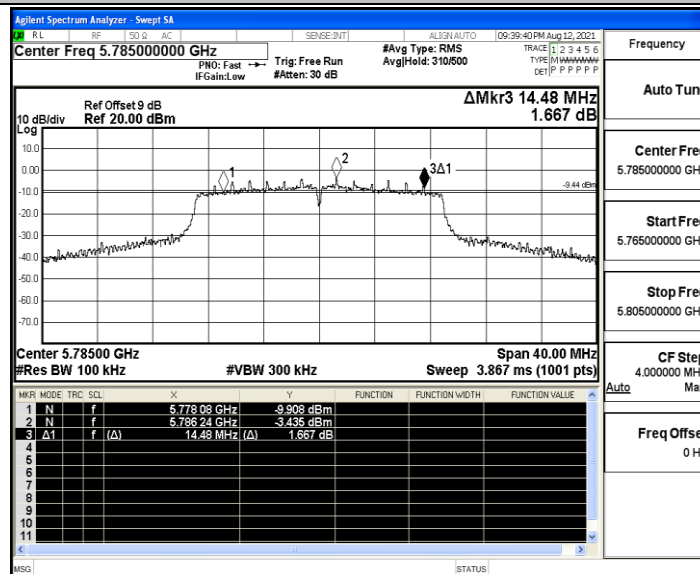




11N20SISO_Ant1_5745

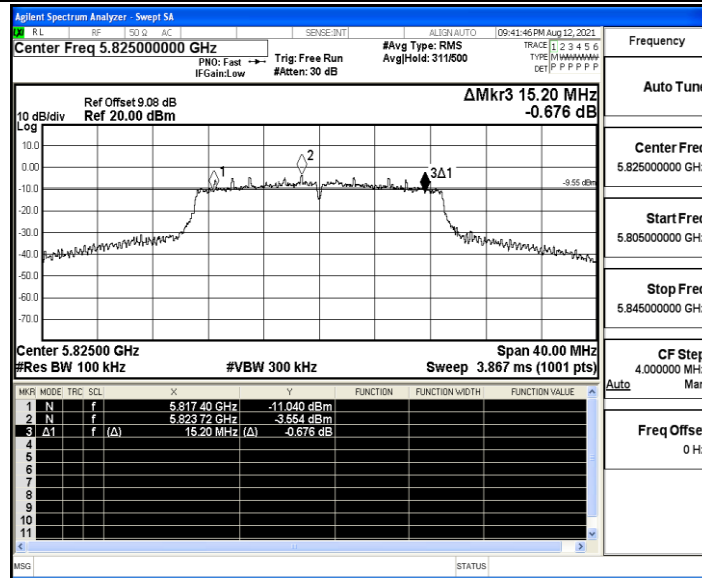


11N20SISO_Ant1_5785

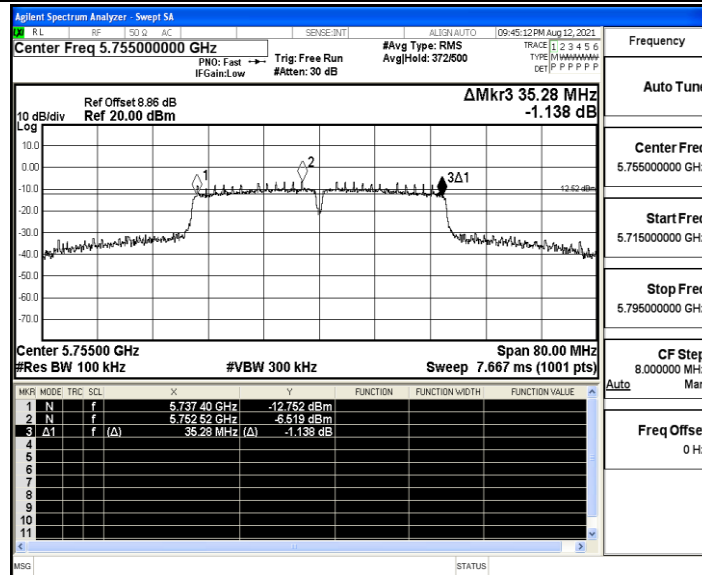




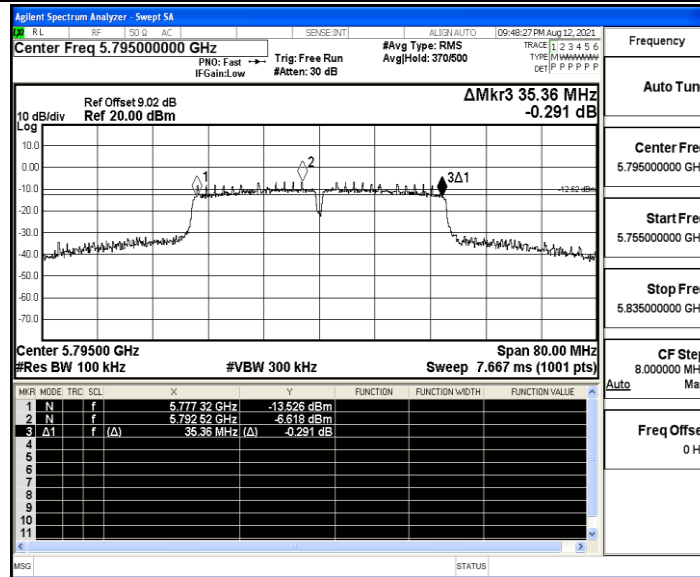
11N20SISO_Ant1_5825



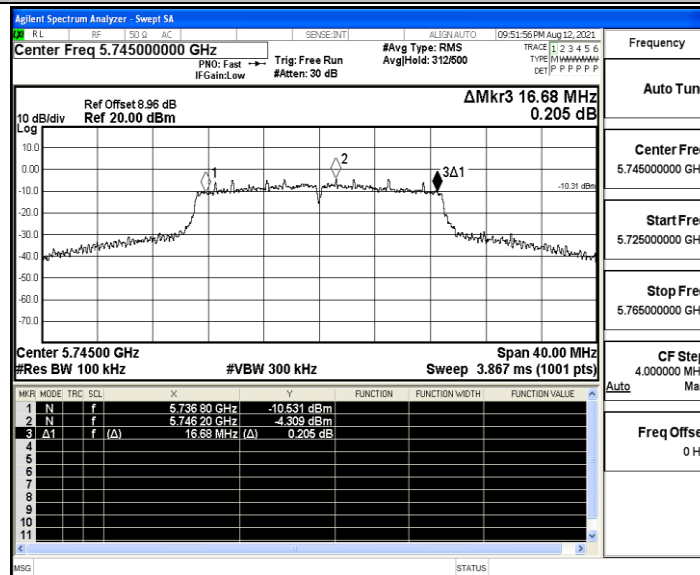
11N40SISO_Ant1_5755



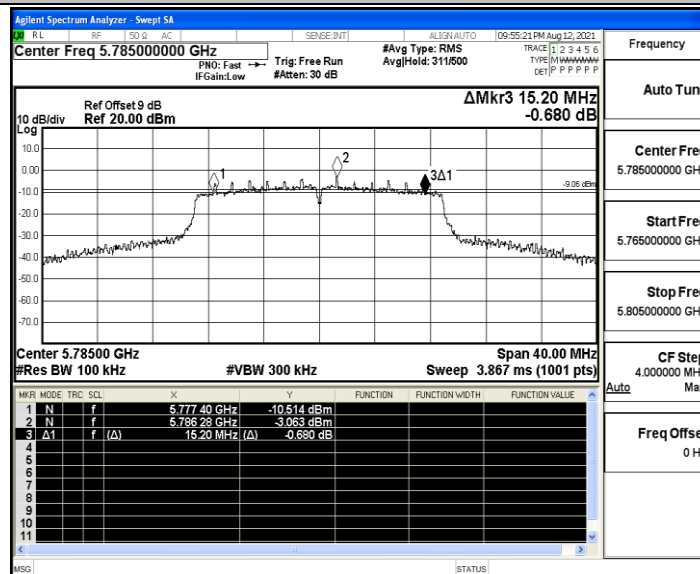
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5745

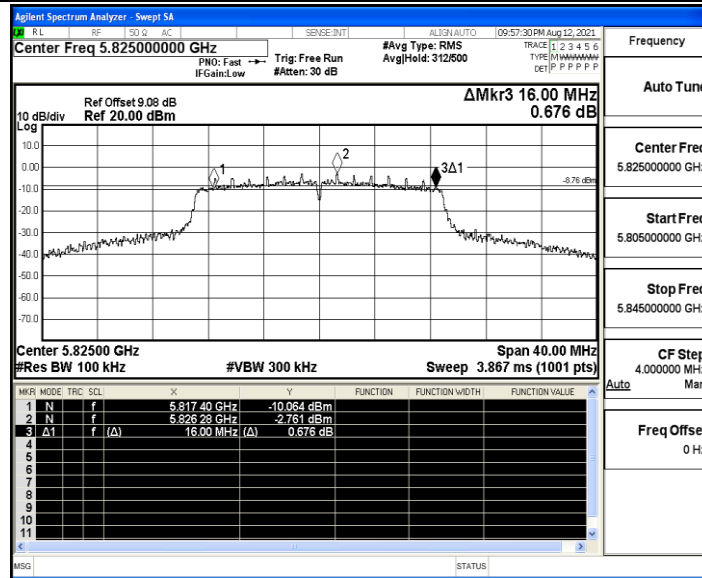


11AC20SISO_Ant1_5785

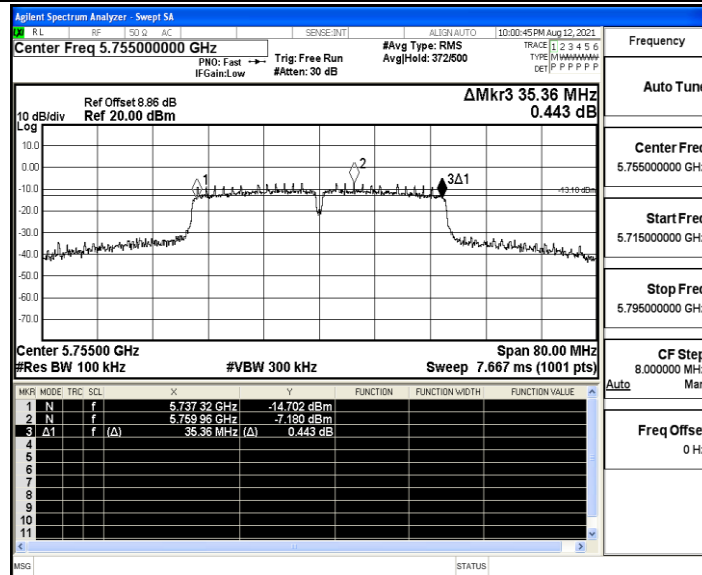




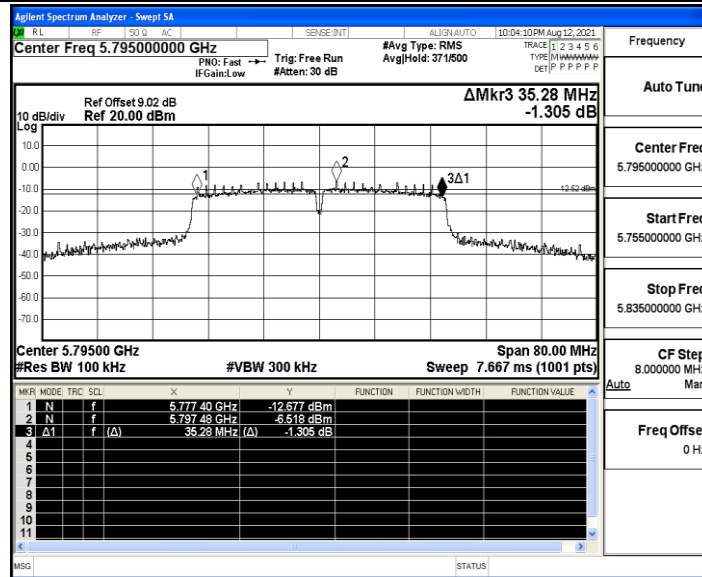
11AC20SISO_Ant1_5825



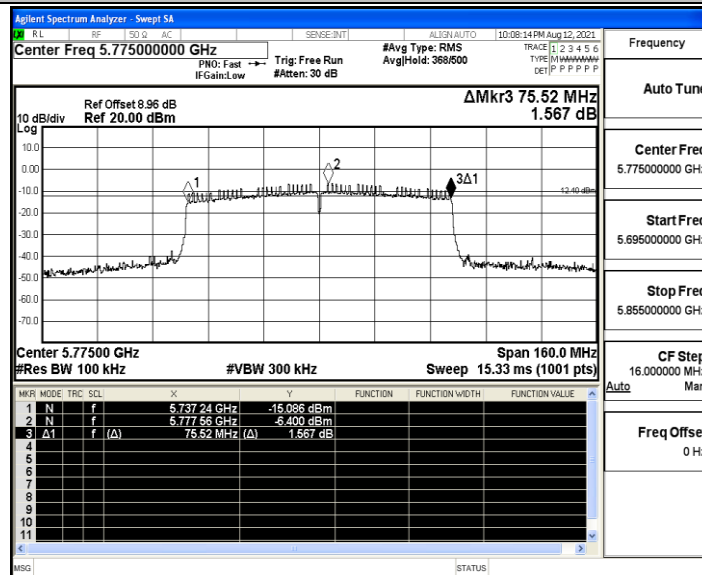
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775





D.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	5745	6.88	≤30	PASS
		5785	6.62	≤30	PASS
		5825	7.06	≤30	PASS
11N20SISO	Ant1	5745	6.91	≤30	PASS
		5785	6.77	≤30	PASS
		5825	7.18	≤30	PASS
11N40SISO	Ant1	5755	7.30	≤30	PASS
		5795	7.33	≤30	PASS
11AC20SISO	Ant1	5745	6.82	≤30	PASS
		5785	6.65	≤30	PASS
		5825	7.55	≤30	PASS
11AC40SISO	Ant1	5755	6.67	≤30	PASS
		5795	7.34	≤30	PASS
11AC80SISO	Ant1	5775	7.58	≤30	PASS

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



D.3 Maximum power spectral density

Test Result

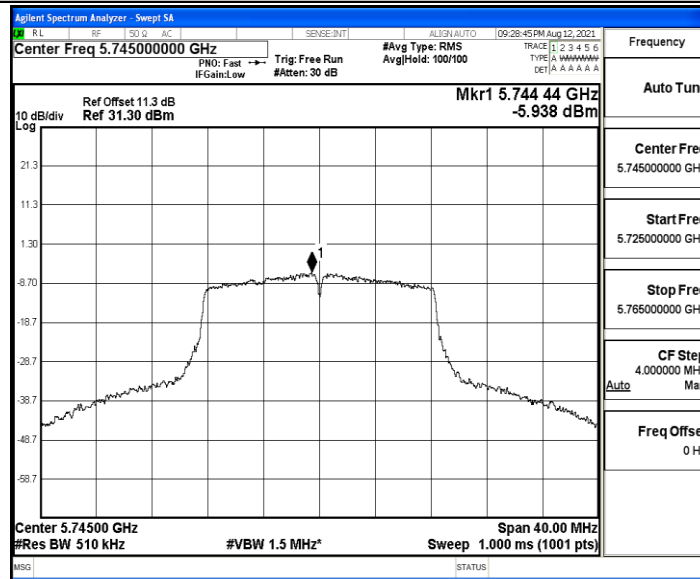
TestMode	Antenna	Channel	Result [dBm/500 kHz]	Limit[dBm/500 kHz]	Verdict
11A	Ant1	5745	-5.94	≤30	PASS
		5785	-6.42	≤30	PASS
		5825	-6.04	≤30	PASS
11N20SISO	Ant1	5745	-6.08	≤30	PASS
		5785	-6.38	≤30	PASS
		5825	-5.98	≤30	PASS
11N40SISO	Ant1	5755	-9.28	≤30	PASS
		5795	-9.34	≤30	PASS
11AC20SISO	Ant1	5745	-6.26	≤30	PASS
		5785	-6.34	≤30	PASS
		5825	-5.74	≤30	PASS
11AC40SISO	Ant1	5755	-10	≤30	PASS
		5795	-9.37	≤30	PASS
11AC80SISO	Ant1	5775	-9.49	≤30	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

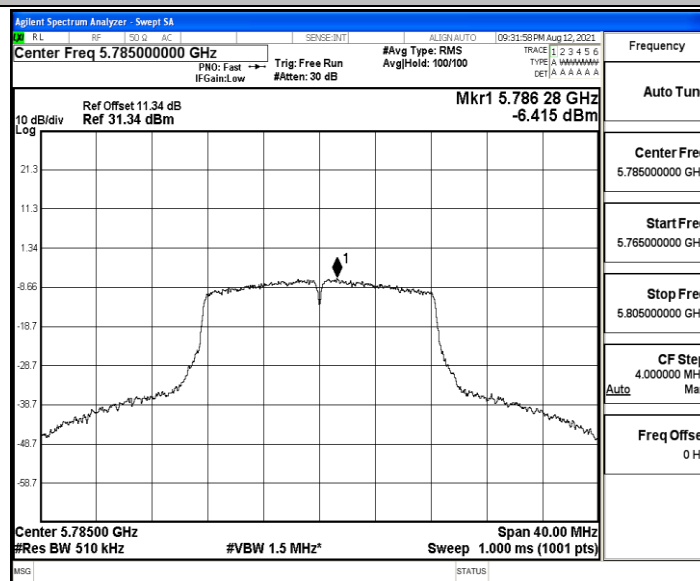


Test Graphs

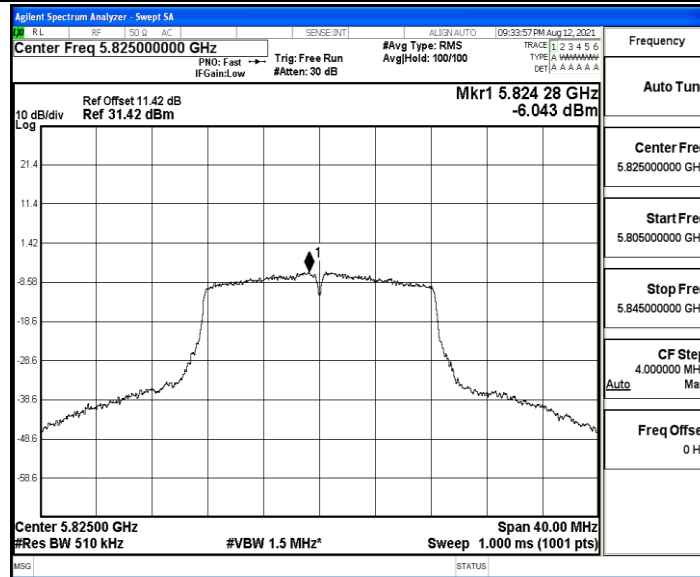
11A_Ant1_5745



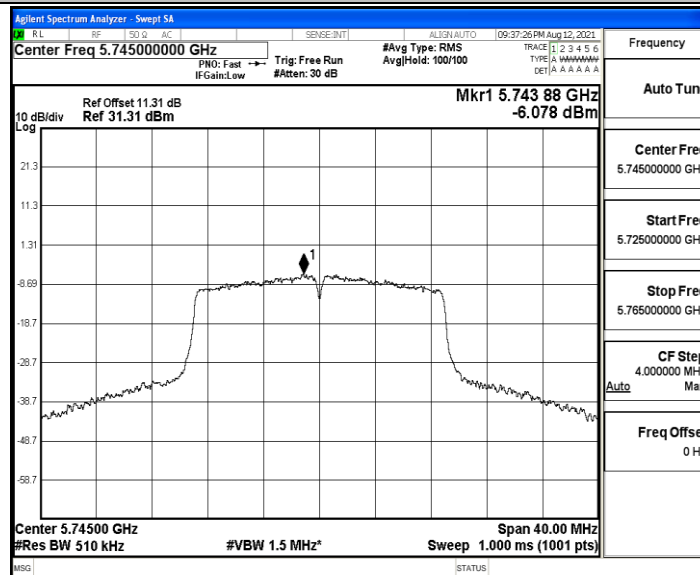
11A_Ant1_5785



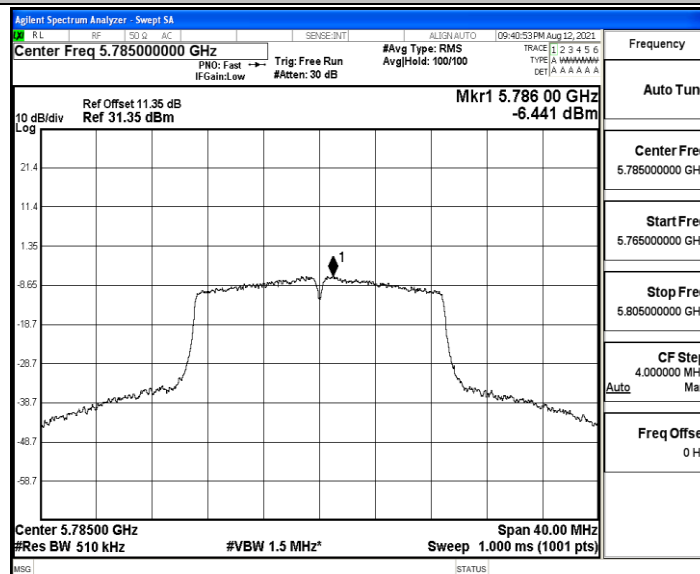
11A_Ant1_5825



11N20SISO_Ant1_5745

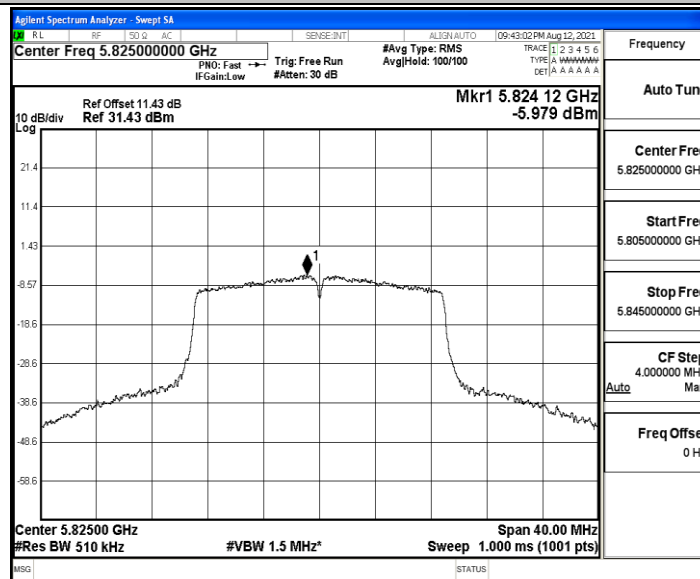


11N20SISO_Ant1_5785

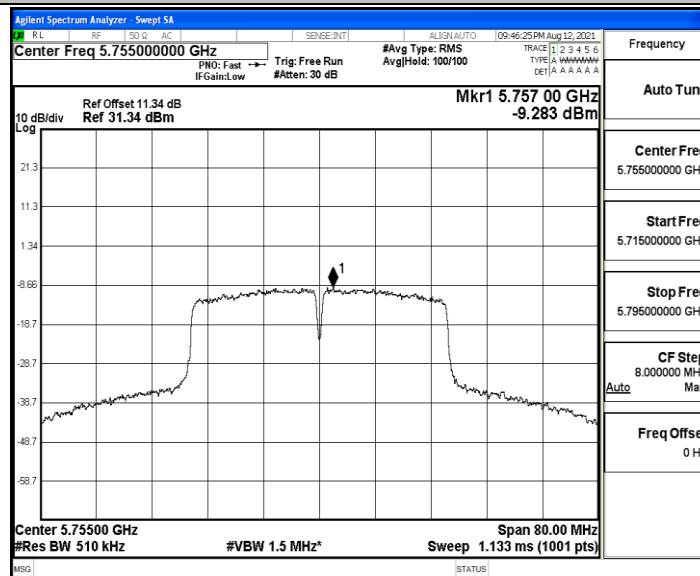




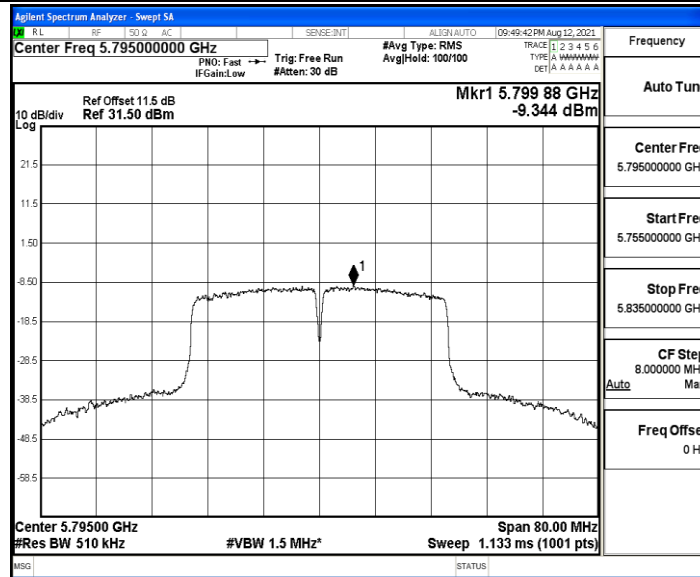
11N20SISO_Ant1_5825



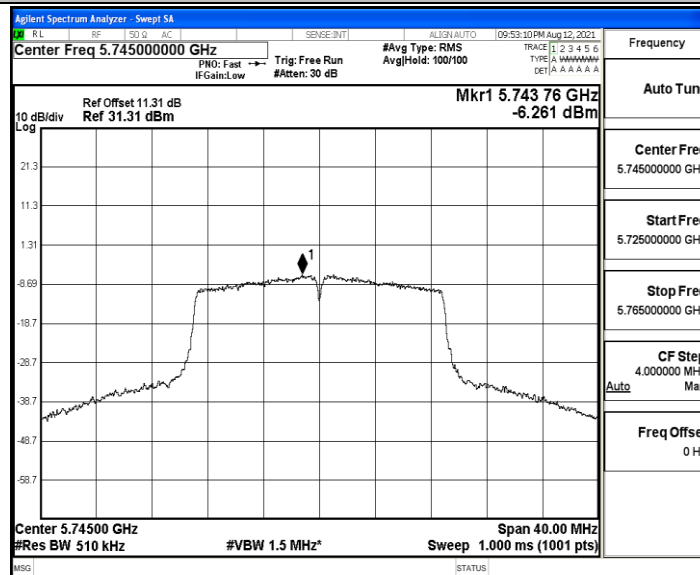
11N40SISO_Ant1_5755



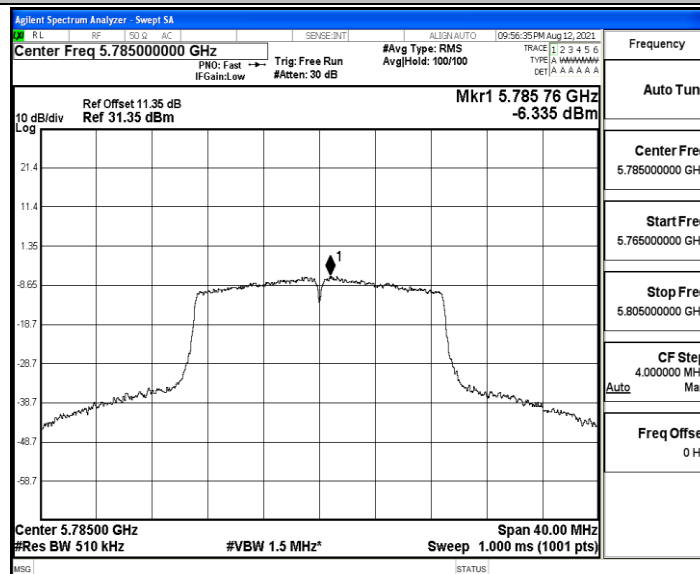
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5745

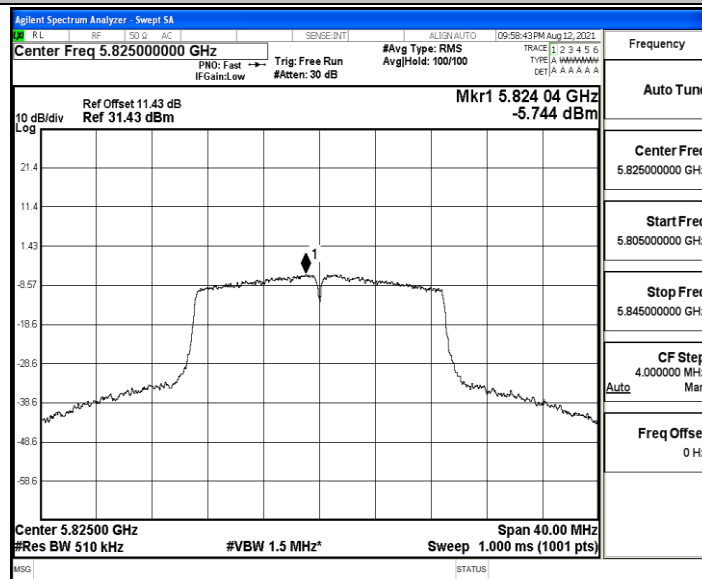


11AC20SISO_Ant1_5785

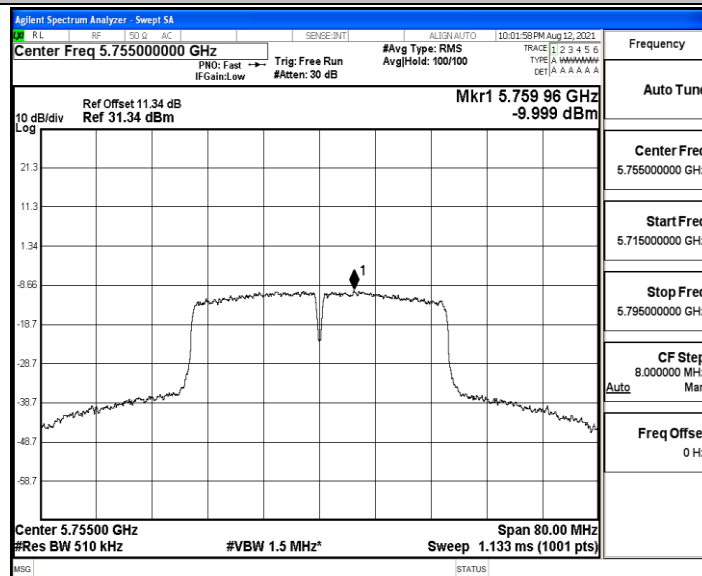




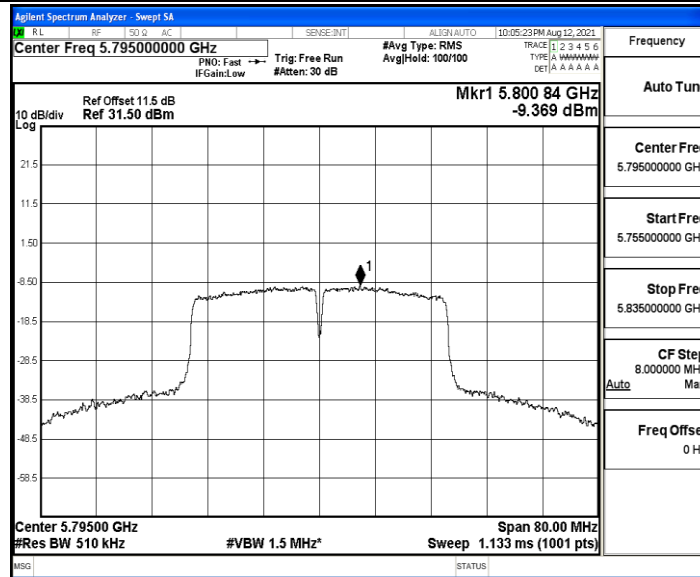
11AC20SISO_Ant1_5825



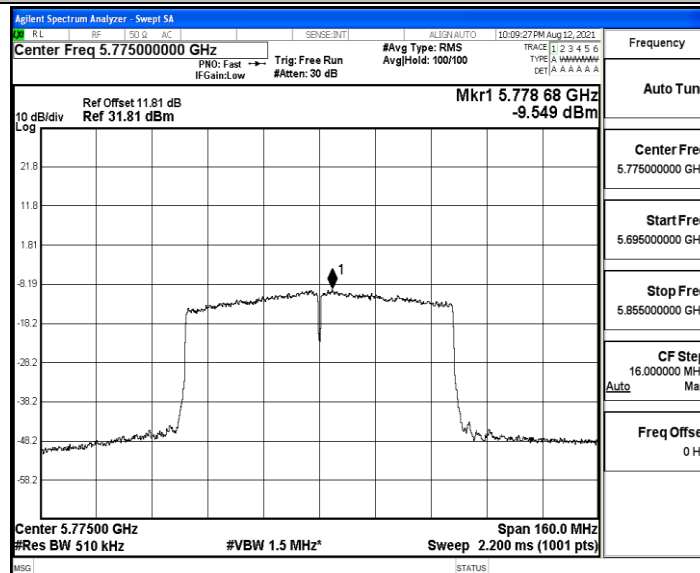
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775





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	5745	Peak	5650.000	-40.751	≤-27.00	---	---	PASS
				Peak	5700.000	-39.29	≤10.00	---	---	PASS
				Peak	5720.000	-39.92	≤15.60	---	---	PASS
				Peak	5725.000	-30.4	≤27.00	- - -	- - -	PASS
		High	5825	Peak	5850.000	-39.403	≤15.60	---	---	PASS
				Peak	5855.000	-39.31	≤27.00	---	---	PASS
				Peak	5875.000	-39.18	≤15.60	---	---	PASS
				Peak	5925.000	-41.43	≤10.00	- - -	- - -	PASS
11N20SISO	Ant1	Low	5745	Peak	5650.000	-39.531	≤-27.00	---	---	PASS
				Peak	5700.000	-41.86	≤10.00	---	---	PASS
				Peak	5720.000	-36.17	≤15.60	---	---	PASS
				Peak	5725.000	-27.33	≤27.00	- - -	- - -	PASS
		High	5825	Peak	5850.000	-36.146	≤15.60	---	---	PASS
				Peak	5855.000	-39.46	≤27.00	---	---	PASS
				Peak	5875.000	-39.32	≤15.60	---	---	PASS
				Peak	5925.000	-40.87	≤10.00	- - -	- - -	PASS
11N40SISO	Ant1	Low	5755	Peak	5650.000	-41.011	≤-27.00	---	---	PASS
				Peak	5700.000	-39.7	≤10.00	---	---	PASS
				Peak	5720.000	-26.44	≤15.60	---	---	PASS
				Peak	5725.000	-24.15	≤27.00	- - -	- - -	PASS
		High	5795	Peak	5850.000	-37.635	≤15.60	---	---	PASS
				Peak	5855.000	-38.82	≤27.00	---	---	PASS
				Peak	5875.000	-39.35	≤15.60	---	---	PASS
				Peak	5925.000	-39.83	≤10.00	- - -	- - -	PASS
11AC20SISO	Ant1	Low	5745	Peak	5650.000	-40.002	≤-27.00	---	---	PASS
				Peak	5700.000	-39.28	≤10.00	---	---	PASS
				Peak	5720.000	-30.72	≤15.60	---	---	PASS
				Peak	5725.000	-26.11	≤27.00	- - -	- - -	PASS
		High	5825	Peak	5850.000	-35.407	≤15.60	---	---	PASS
				Peak	5855.000	-38.94	≤27.00	---	---	PASS
				Peak	5875.000	-40.32	≤15.60	---	---	PASS
				Peak	5925.000	-40.82	≤10.00	- - -	- - -	PASS
11AC40SISO	Ant1	Low	5755	Peak	5650.000	-39.619	≤-27.00	---	---	PASS
				Peak	5700.000	-38.56	≤10.00	---	---	PASS
				Peak	5720.000	-28.23	≤15.60	---	---	PASS
				Peak	5725.000	-23.52	≤27.00	- - -	- - -	PASS



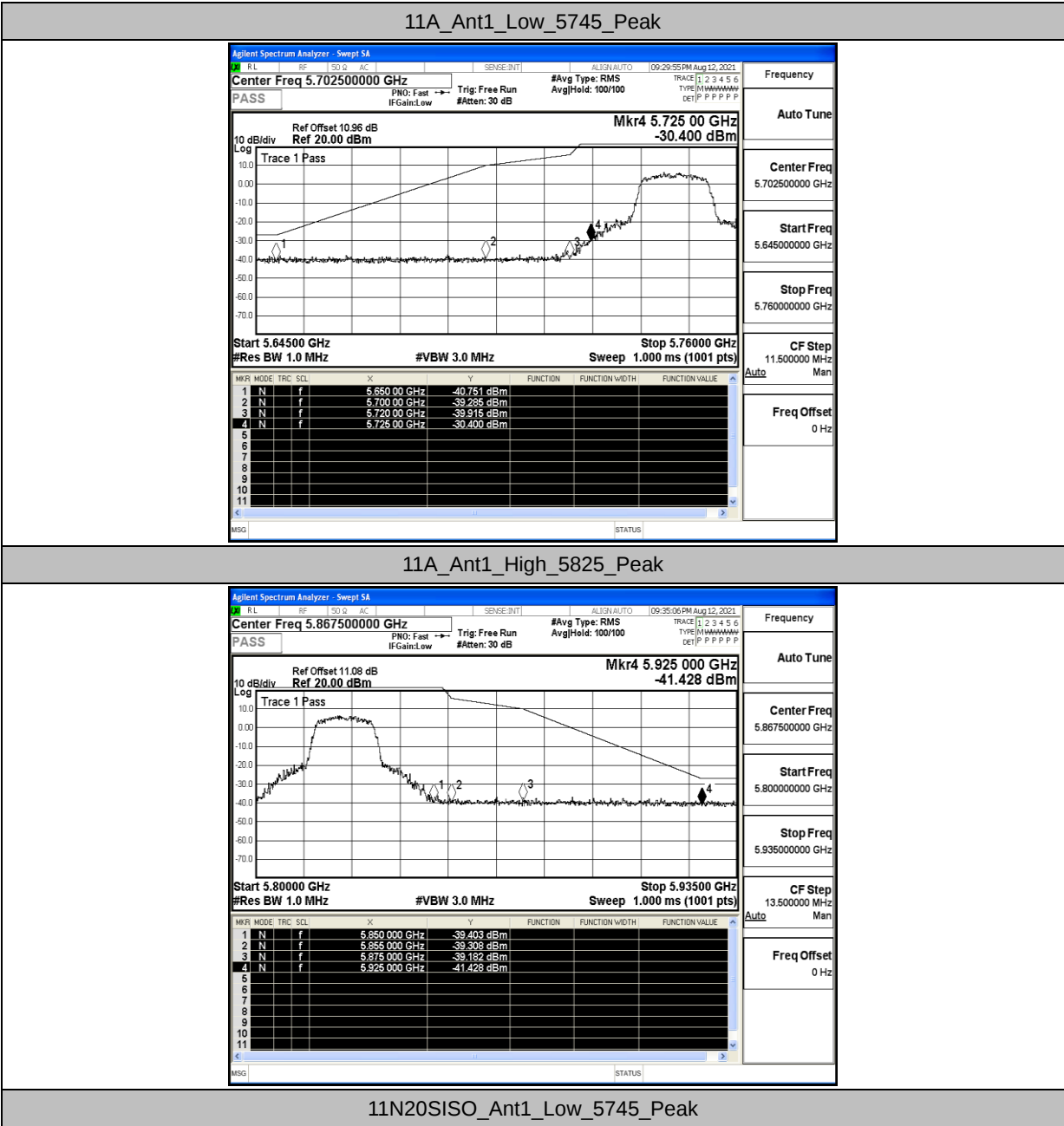
11AC80SISO	Ant1	High	5795	Peak	5850.000	-38.765	≤15.60	---	---	PASS
				Peak	5855.000	-39.37	≤27.00	---	---	PASS
				Peak	5875.000	-39.49	≤15.60	---	---	PASS
				Peak	5925.000	-38.46	≤10.00	- -	- -	PASS
		Low	5775	Peak	5650.000	-39.883	≤-27.00	---	---	PASS
				Peak	5700.000	-36.29	≤10.00	---	---	PASS
				Peak	5720.000	-32.19	≤15.60	---	---	PASS
				Peak	5725.000	-34.62	≤27.00	- -	- -	PASS
		High	5775	Peak	5850.000	-27.583	≤15.60	---	---	PASS
				Peak	5855.000	-36.64	≤27.00	---	---	PASS
				Peak	5875.000	-37.3	≤15.60	---	---	PASS
				Peak	5925.000	-40.96	≤10.00	- -	- -	PASS

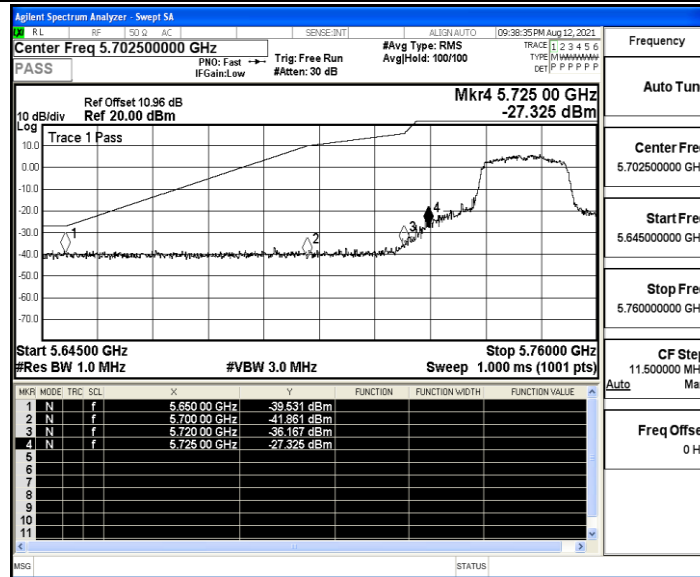
Note:

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.

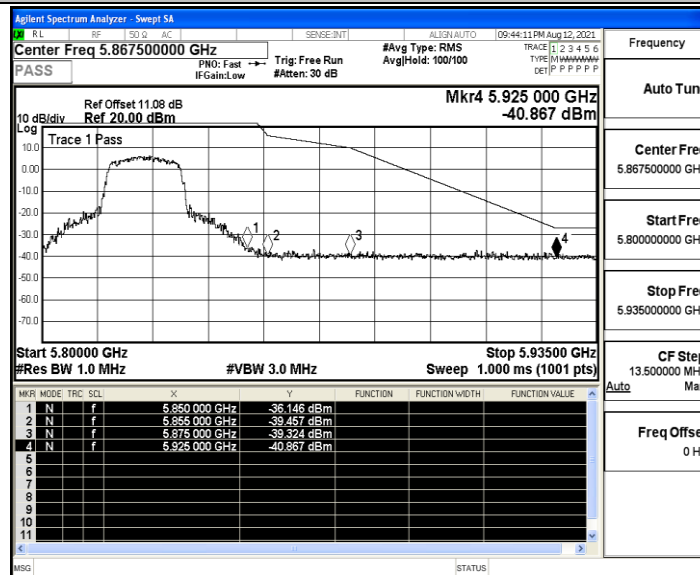


Test Graphs

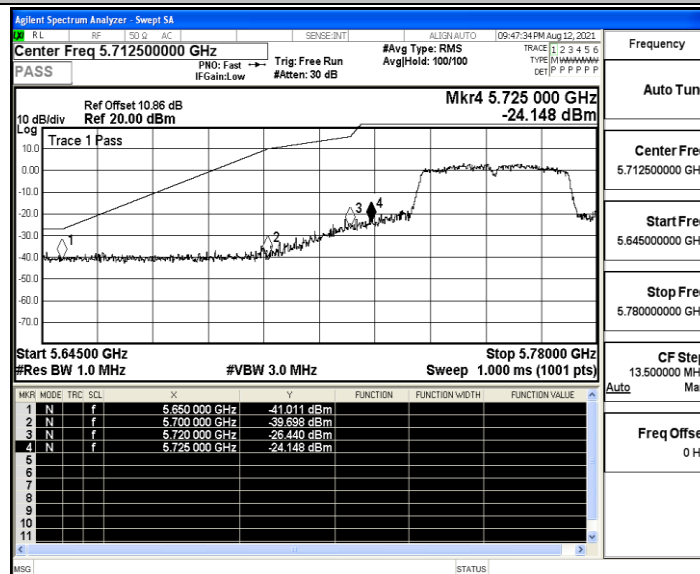




11N20SISO_Ant1_High_5825_Peak

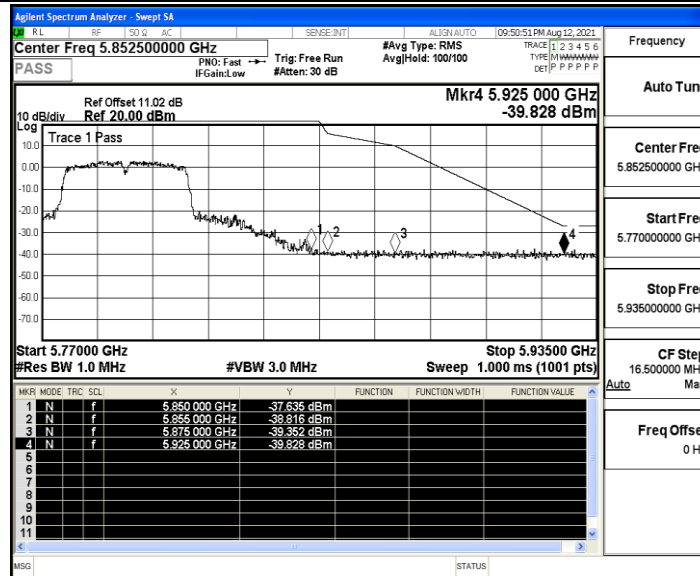


11N40SISO_Ant1_Low_5755_Peak

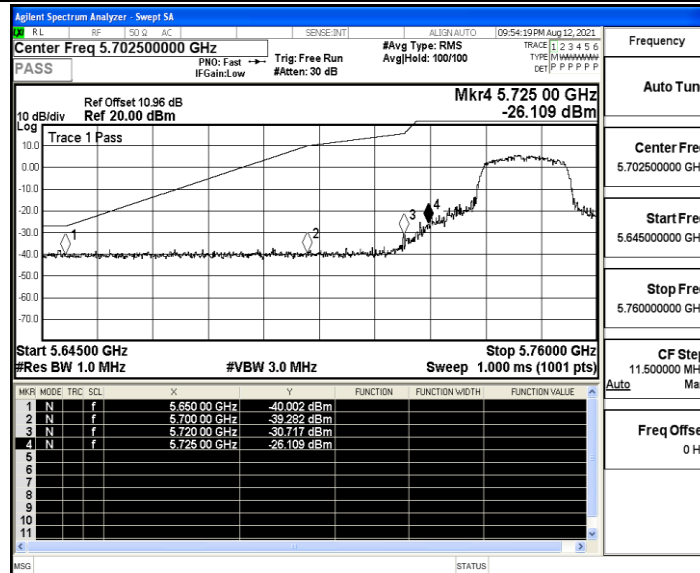




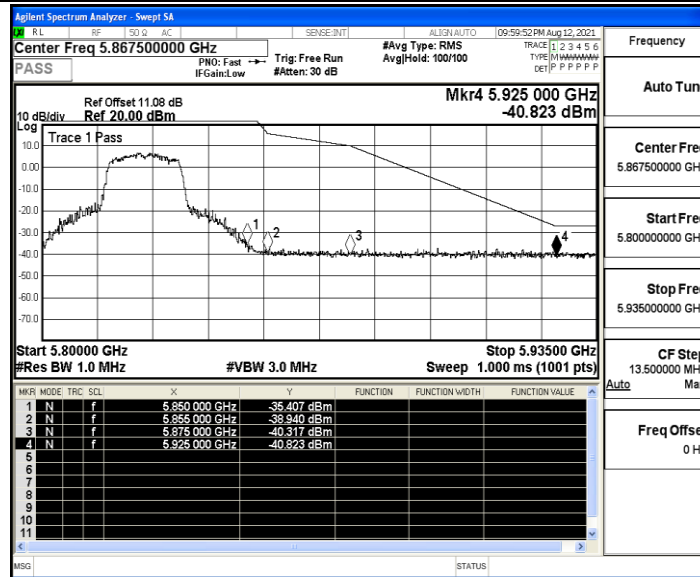
11N40SISO_Ant1_High_5795_Peak



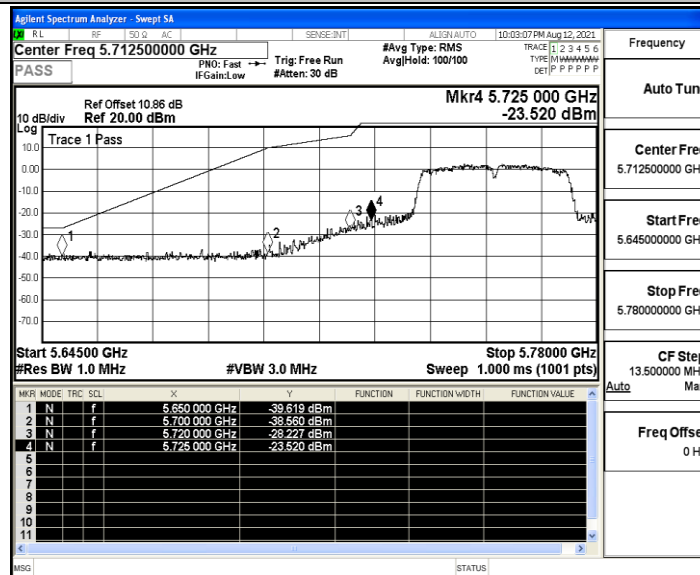
11AC20SISO_Ant1_Low_5745_Peak



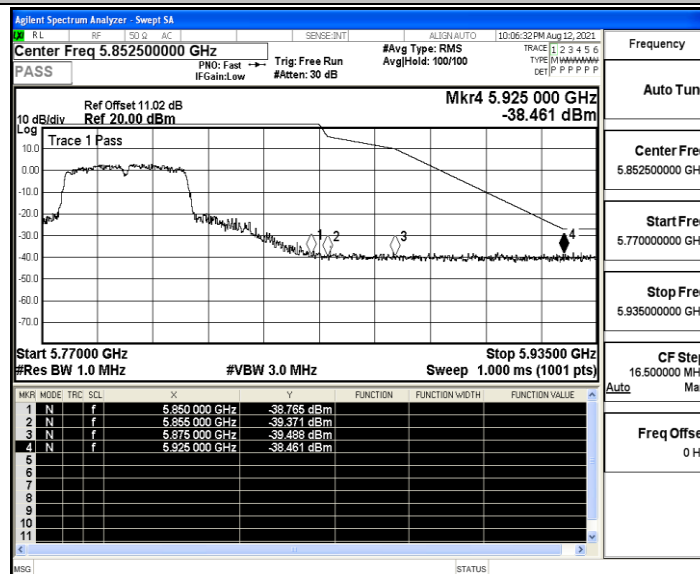
11AC20SISO_Ant1_High_5825_Peak



11AC40SISO_Ant1_Low_5755_Peak



11AC40SISO_Ant1_High_5795_Peak





D.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	-5000	-0.870322	20	PASS
			LV	NT	-5000	-0.870322	20	PASS
			HV	NT	-6000	-1.044386	20	PASS
		5785	NV	NT	-9000	-1.555748	20	PASS
			LV	NT	-10000	-1.728608	20	PASS
			HV	NT	-10000	-1.728608	20	PASS
		5825	NV	NT	-12000	-2.060086	20	PASS
			LV	NT	-13000	-2.23176	20	PASS
			HV	NT	-13000	-2.23176	20	PASS
11N20SISO	Ant1	5745	NV	NT	-11000	-1.914708	20	PASS
			LV	NT	-11000	-1.914708	20	PASS
			HV	NT	-12000	-2.088773	20	PASS
		5785	NV	NT	-15000	-2.592913	20	PASS
			LV	NT	-15000	-2.592913	20	PASS
			HV	NT	-15000	-2.592913	20	PASS
		5825	NV	NT	-16000	-2.746781	20	PASS
			LV	NT	-17000	-2.918455	20	PASS
			HV	NT	-17000	-2.918455	20	PASS
11N40SISO	Ant1	5755	NV	NT	-16000	-2.780191	20	PASS
			LV	NT	-16000	-2.780191	20	PASS
			HV	NT	-16000	-2.780191	20	PASS
		5795	NV	NT	-17000	-2.933563	20	PASS
			LV	NT	-17000	-2.933563	20	PASS
			HV	NT	-17000	-2.933563	20	PASS
11AC20SISO	Ant1	5745	NV	NT	-16000	-2.78503	20	PASS
			LV	NT	-16000	-2.78503	20	PASS
			HV	NT	-17000	-2.959095	20	PASS
		5785	NV	NT	-17000	-2.938634	20	PASS
			LV	NT	-18000	-3.111495	20	PASS
			HV	NT	-17000	-2.938634	20	PASS
		5825	NV	NT	-18000	-3.090129	20	PASS
			LV	NT	-18000	-3.090129	20	PASS
			HV	NT	-18000	-3.090129	20	PASS
11AC40SISO	Ant1	5755	NV	NT	-15000	-2.606429	20	PASS
			LV	NT	-16000	-2.780191	20	PASS



		5795	HV	NT	-16000	-2.780191	20	PASS
			NV	NT	-18000	-3.106126	20	PASS
			LV	NT	-18000	-3.106126	20	PASS
			HV	NT	-18000	-3.106126	20	PASS
11AC80SI SO	Ant1	5775	NV	NT	-17000	-2.943723	20	PASS
			LV	NT	-17000	-2.943723	20	PASS
			HV	NT	-18000	-3.116883	20	PASS

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	-30	-6000	-1.044386	20	PASS
			NV	-20	-7000	-1.218451	20	PASS
			NV	-10	-7000	-1.218451	20	PASS
			NV	0	-7000	-1.218451	20	PASS
			NV	10	-8000	-1.392515	20	PASS
			NV	20	-8000	-1.392515	20	PASS
			NV	30	-8000	-1.392515	20	PASS
			NV	40	-9000	-1.56658	20	PASS
			NV	50	-9000	-1.56658	20	PASS
		5785	NV	-30	-11000	-1.901469	20	PASS
			NV	-20	-11000	-1.901469	20	PASS
			NV	-10	-12000	-2.07433	20	PASS
			NV	0	-12000	-2.07433	20	PASS
			NV	10	-12000	-2.07433	20	PASS
			NV	20	-13000	-2.247191	20	PASS
			NV	30	-13000	-2.247191	20	PASS
			NV	40	-13000	-2.247191	20	PASS
			NV	50	-13000	-2.247191	20	PASS
		5825	NV	-30	-13000	-2.23176	20	PASS
			NV	-20	-13000	-2.23176	20	PASS
			NV	-10	-14000	-2.403433	20	PASS
			NV	0	-14000	-2.403433	20	PASS
			NV	10	-14000	-2.403433	20	PASS
			NV	20	-15000	-2.575107	20	PASS
			NV	30	-14000	-2.403433	20	PASS
			NV	40	-14000	-2.403433	20	PASS
			NV	50	-15000	-2.575107	20	PASS
11N20SIS O	Ant1	5745	NV	-30	-13000	-2.262837	20	PASS
			NV	-20	-13000	-2.262837	20	PASS
			NV	-10	-14000	-2.436902	20	PASS
			NV	0	-14000	-2.436902	20	PASS
			NV	10	-14000	-2.436902	20	PASS



			NV	20	-14000	-2.436902	20	PASS
			NV	30	-15000	-2.610966	20	PASS
			NV	40	-15000	-2.610966	20	PASS
			NV	50	-15000	-2.610966	20	PASS
		5785	NV	-30	-16000	-2.765774	20	PASS
			NV	-20	-16000	-2.765774	20	PASS
			NV	-10	-16000	-2.765774	20	PASS
			NV	0	-16000	-2.765774	20	PASS
			NV	10	-16000	-2.765774	20	PASS
			NV	20	-16000	-2.765774	20	PASS
			NV	30	-16000	-2.765774	20	PASS
			NV	40	-16000	-2.765774	20	PASS
			NV	50	-16000	-2.765774	20	PASS
		5825	NV	-30	-17000	-2.918455	20	PASS
			NV	-20	-17000	-2.918455	20	PASS
			NV	-10	-17000	-2.918455	20	PASS
			NV	0	-17000	-2.918455	20	PASS
			NV	10	-17000	-2.918455	20	PASS
			NV	20	-17000	-2.918455	20	PASS
			NV	30	-17000	-2.918455	20	PASS
			NV	40	-17000	-2.918455	20	PASS
			NV	50	-17000	-2.918455	20	PASS
11N40SIS O	Ant1	5755	NV	-30	-16000	-2.780191	20	PASS
			NV	-20	-16000	-2.780191	20	PASS
			NV	-10	-17000	-2.953953	20	PASS
			NV	0	-17000	-2.953953	20	PASS
			NV	10	-17000	-2.953953	20	PASS
			NV	20	-17000	-2.953953	20	PASS
			NV	30	-17000	-2.953953	20	PASS
			NV	40	-17000	-2.953953	20	PASS
			NV	50	-17000	-2.953953	20	PASS
		5795	NV	-30	-18000	-3.106126	20	PASS
			NV	-20	-17000	-2.933563	20	PASS
			NV	-10	-18000	-3.106126	20	PASS
			NV	0	-18000	-3.106126	20	PASS
			NV	10	-18000	-3.106126	20	PASS
			NV	20	-18000	-3.106126	20	PASS
			NV	30	-18000	-3.106126	20	PASS
			NV	40	-18000	-3.106126	20	PASS
			NV	50	-18000	-3.106126	20	PASS
11AC20SI SO	Ant1	5745	NV	-30	-17000	-2.959095	20	PASS
			NV	-20	-17000	-2.959095	20	PASS
			NV	-10	-17000	-2.959095	20	PASS



			NV	0	-17000	-2.959095	20	PASS
			NV	10	-17000	-2.959095	20	PASS
			NV	20	-17000	-2.959095	20	PASS
			NV	30	-17000	-2.959095	20	PASS
			NV	40	-17000	-2.959095	20	PASS
			NV	50	-18000	-3.133159	20	PASS
		5785	NV	-30	-18000	-3.111495	20	PASS
			NV	-20	-18000	-3.111495	20	PASS
			NV	-10	-18000	-3.111495	20	PASS
			NV	0	-18000	-3.111495	20	PASS
			NV	10	-18000	-3.111495	20	PASS
			NV	20	-18000	-3.111495	20	PASS
			NV	30	-18000	-3.111495	20	PASS
			NV	40	-18000	-3.111495	20	PASS
			NV	50	-18000	-3.111495	20	PASS
		5825	NV	-30	-18000	-3.090129	20	PASS
			NV	-20	-18000	-3.090129	20	PASS
			NV	-10	-18000	-3.090129	20	PASS
			NV	0	-18000	-3.090129	20	PASS
			NV	10	-18000	-3.090129	20	PASS
			NV	20	-18000	-3.090129	20	PASS
			NV	30	-18000	-3.090129	20	PASS
			NV	40	-18000	-3.090129	20	PASS
			NV	50	-18000	-3.090129	20	PASS
11AC40SI SO	Ant1	5755	NV	-30	-17000	-2.953953	20	PASS
			NV	-20	-17000	-2.953953	20	PASS
			NV	-10	-17000	-2.953953	20	PASS
			NV	0	-17000	-2.953953	20	PASS
			NV	10	-17000	-2.953953	20	PASS
			NV	20	-17000	-2.953953	20	PASS
			NV	30	-17000	-2.953953	20	PASS
			NV	40	-17000	-2.953953	20	PASS
			NV	50	-17000	-2.953953	20	PASS
		5795	NV	-30	-18000	-3.106126	20	PASS
			NV	-20	-18000	-3.106126	20	PASS
			NV	-10	-18000	-3.106126	20	PASS
			NV	0	-18000	-3.106126	20	PASS
			NV	10	-18000	-3.106126	20	PASS
			NV	20	-18000	-3.106126	20	PASS
			NV	30	-18000	-3.106126	20	PASS
			NV	40	-18000	-3.106126	20	PASS
			NV	50	-18000	-3.106126	20	PASS
11AC80SI	Ant1	5775	NV	-30	-18000	-3.116883	20	PASS



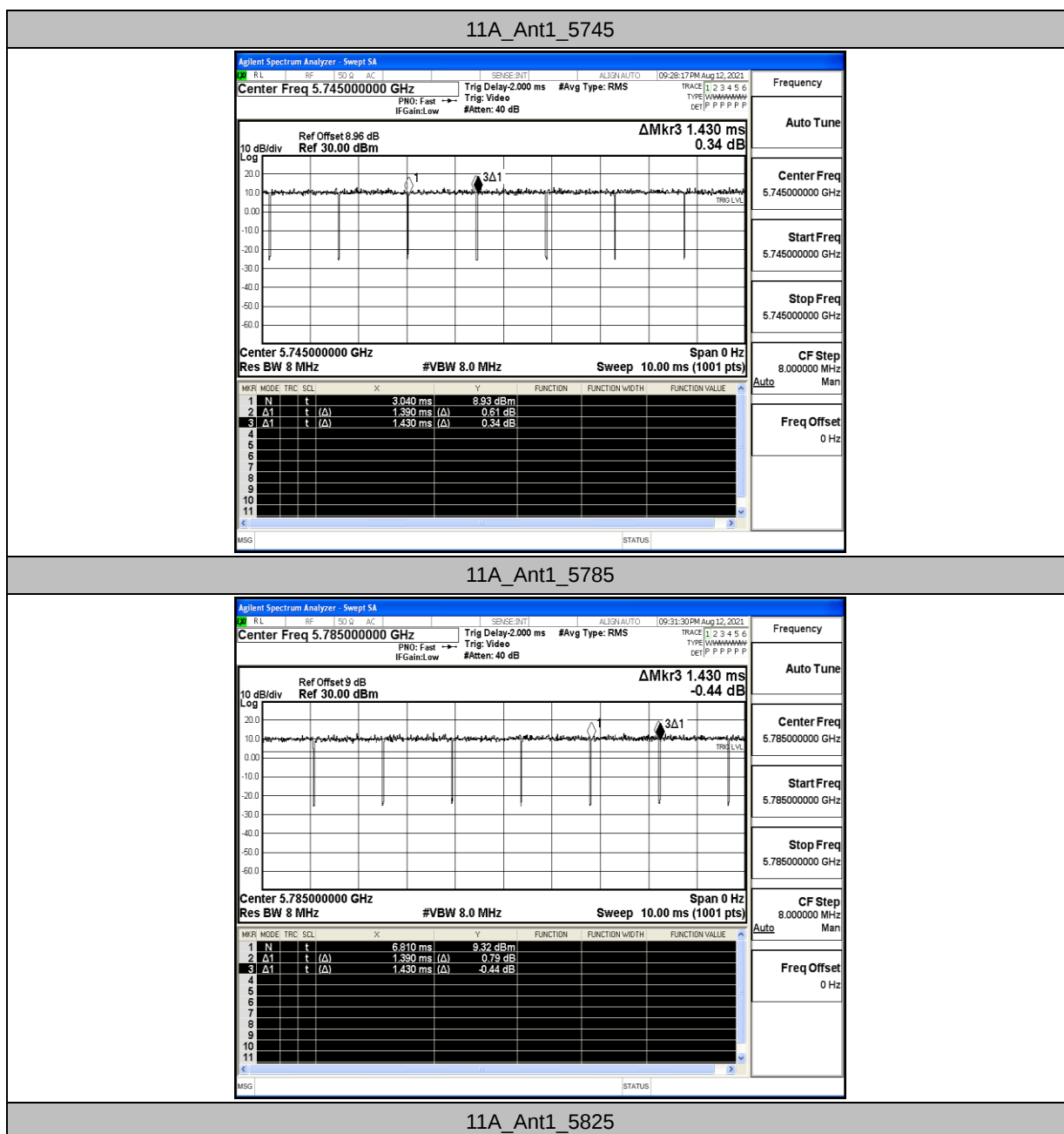
SO			NV	-20	-18000	-3.116883	20	PASS
			NV	-10	-18000	-3.116883	20	PASS
			NV	0	-18000	-3.116883	20	PASS
			NV	10	-18000	-3.116883	20	PASS
			NV	20	-18000	-3.116883	20	PASS
			NV	30	-18000	-3.116883	20	PASS
			NV	40	-18000	-3.116883	20	PASS
			NV	50	-18000	-3.116883	20	PASS

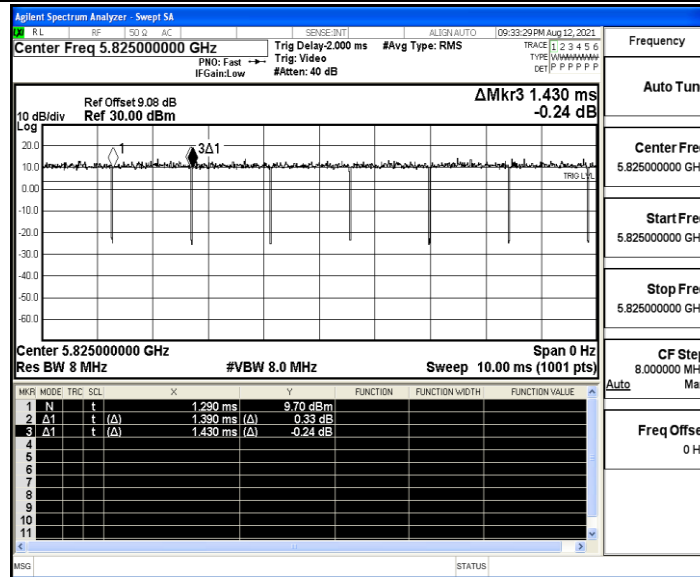


D.6 Duty Cycle

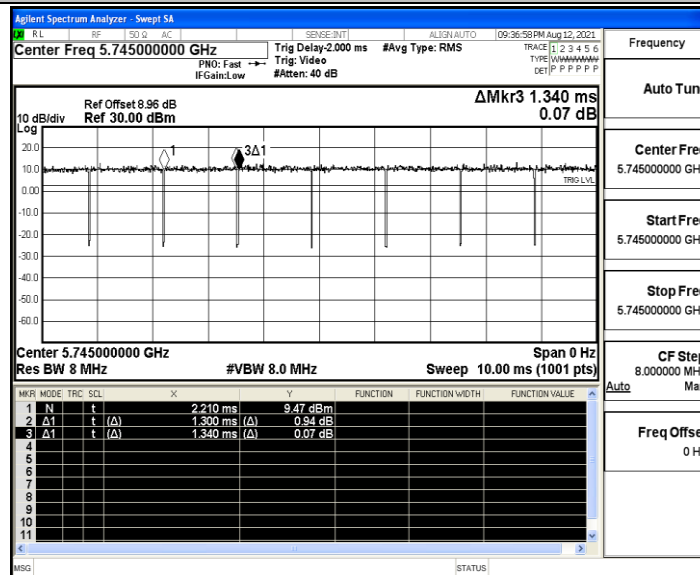
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11A	Ant1	5745	1.39	1.43	97.20	---	PASS
		5785	1.39	1.43	97.20	---	PASS
		5825	1.39	1.43	97.20	---	PASS
11N20SISO	Ant1	5745	1.30	1.34	97.01	---	PASS
		5785	1.30	1.34	97.01	---	PASS
		5825	1.30	1.34	97.01	---	PASS
11N40SISO	Ant1	5755	0.64	0.68	94.12	---	PASS
		5795	0.64	0.68	94.12	---	PASS
11AC20SISO	Ant1	5745	1.30	1.34	97.01	---	PASS
		5785	1.30	1.34	97.01	---	PASS
		5825	1.30	1.34	97.01	---	PASS
11AC40SISO	Ant1	5755	0.64	0.68	94.12	---	PASS
		5795	0.64	0.68	94.12	---	PASS
11AC80SISO	Ant1	5775	0.32	0.37	86.49	---	PASS

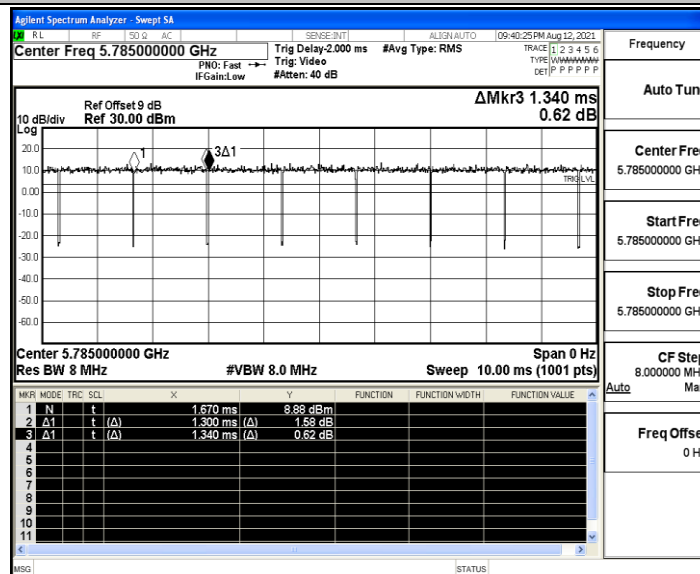




11N20SISO_Ant1_5745

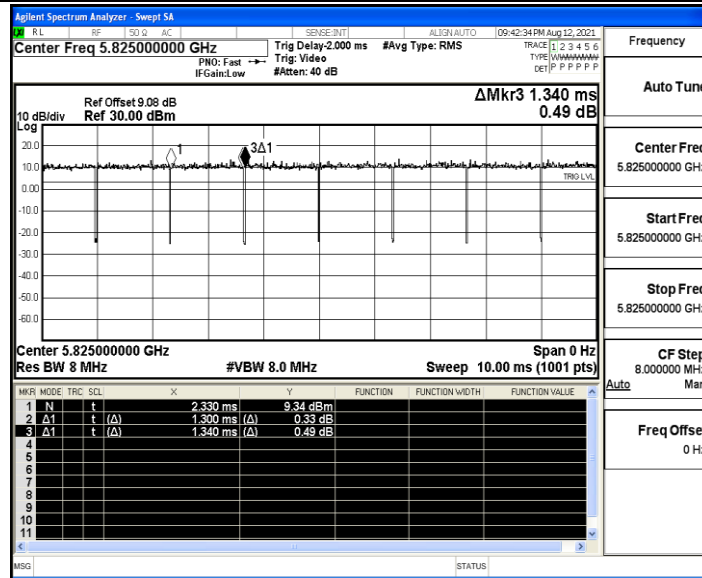


11N20SISO_Ant1_5785

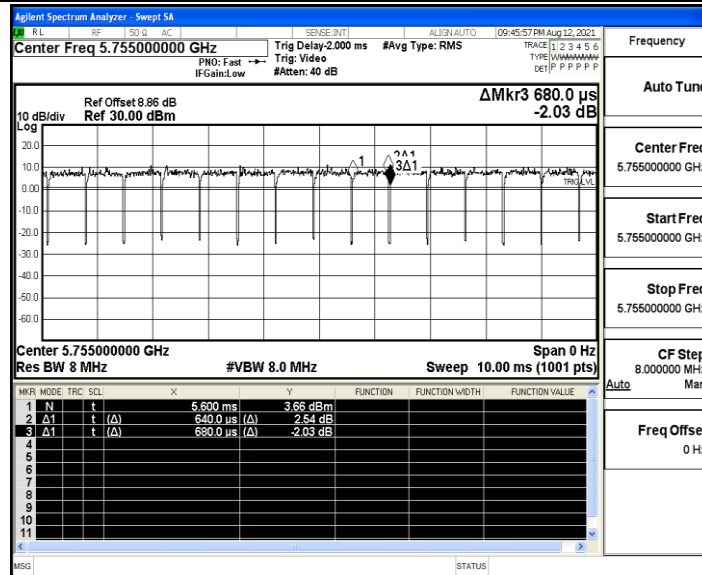




11N20SISO_Ant1_5825



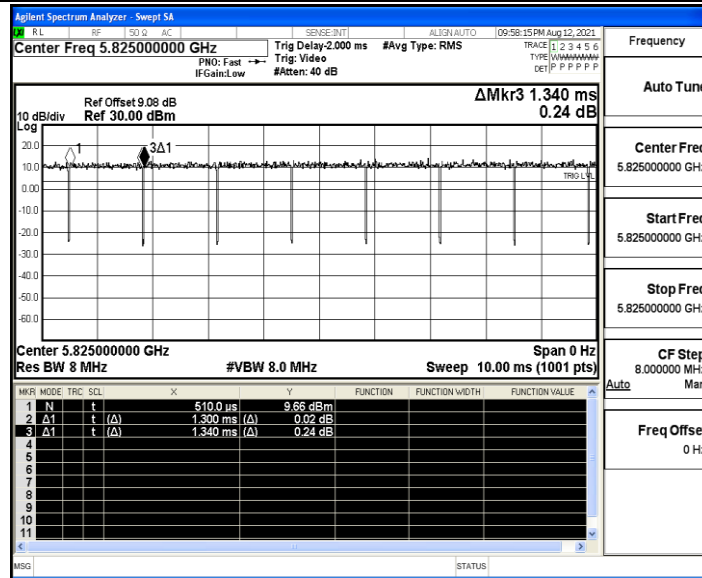
11N40SISO_Ant1_5755



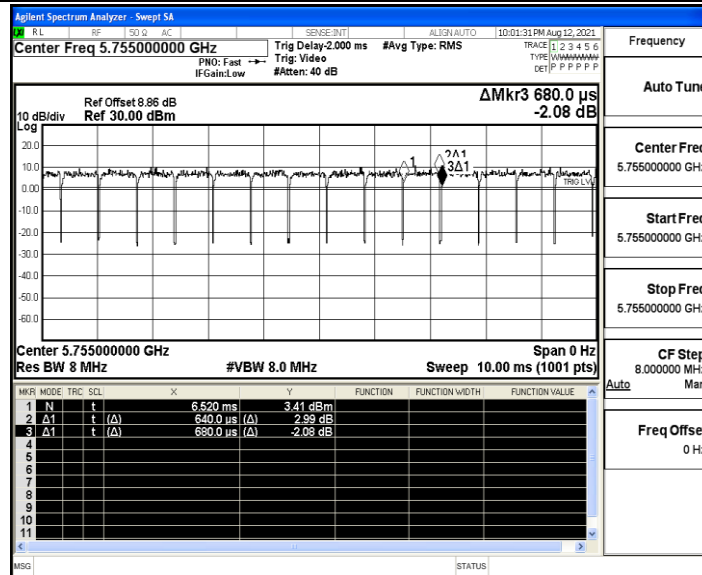
11N40SISO_Ant1_5795



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795

