



Appendix E

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: HYbook

Test Model: HT14CCIC46EG

Environmental Conditions

Temperature:	23.8 °C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Ling Zhu





E.1 Emission Bandwidth

Test Result

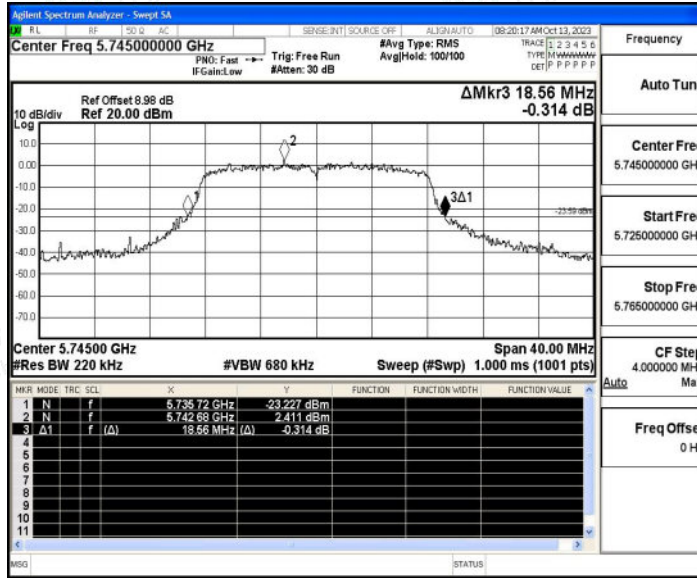
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	18.560	5735.720	5754.280	---	---
		5785	18.640	5775.800	5794.440	---	---
		5825	19.480	5815.360	5834.840	---	---
11N20SISO	Ant1	5745	20.120	5734.680	5754.800	---	---
		5785	19.640	5775.160	5794.800	---	---
		5825	19.400	5815.320	5834.720	---	---
11N40SISO	Ant1	5755	39.840	5735.080	5774.920	---	---
		5795	39.680	5775.160	5814.840	---	---
11AC20SISO	Ant1	5745	20.240	5734.680	5754.920	---	---
		5785	19.360	5775.320	5794.680	---	---
		5825	19.760	5815.080	5834.840	---	---
11AC40SISO	Ant1	5755	40.480	5735.000	5775.480	---	---
		5795	40.400	5774.840	5815.240	---	---
11AC80SISO	Ant1	5775	82.080	5733.720	5815.800	---	---



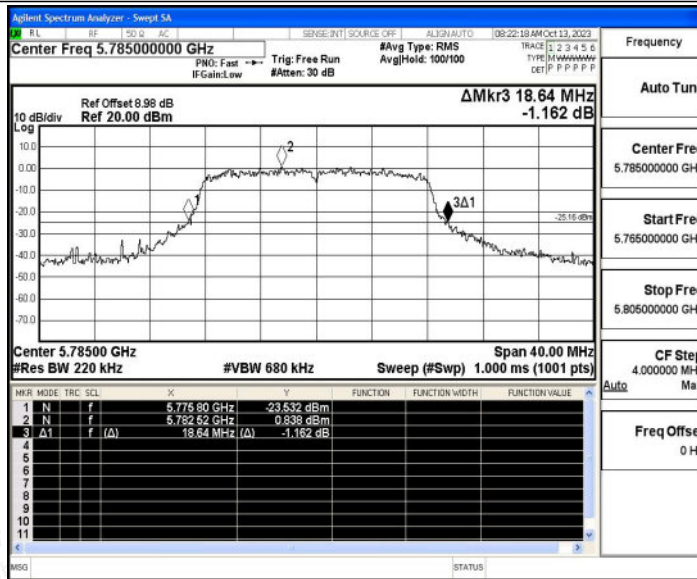


Test Graphs

11A_Ant1_5745

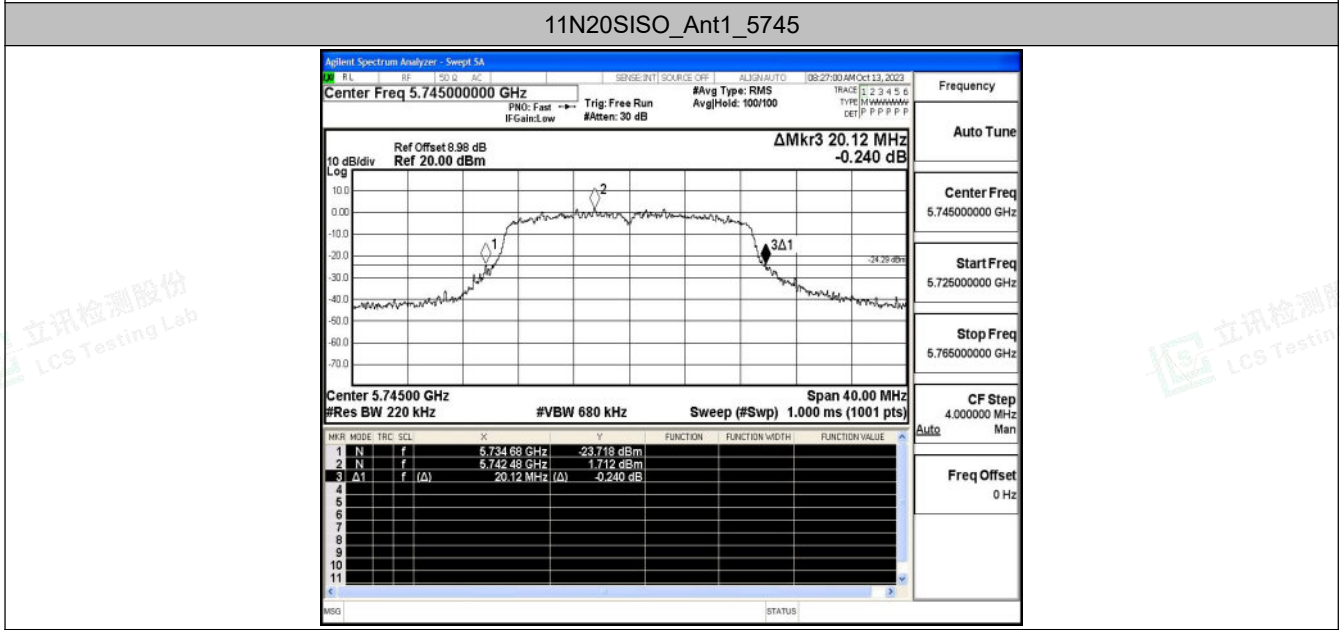
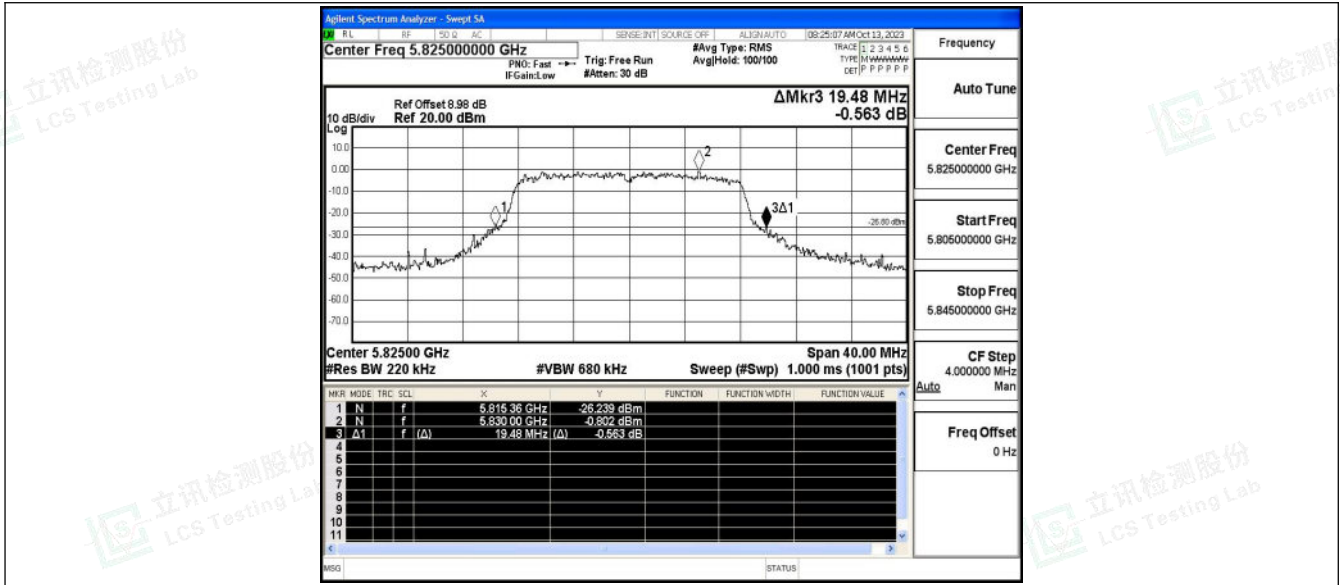


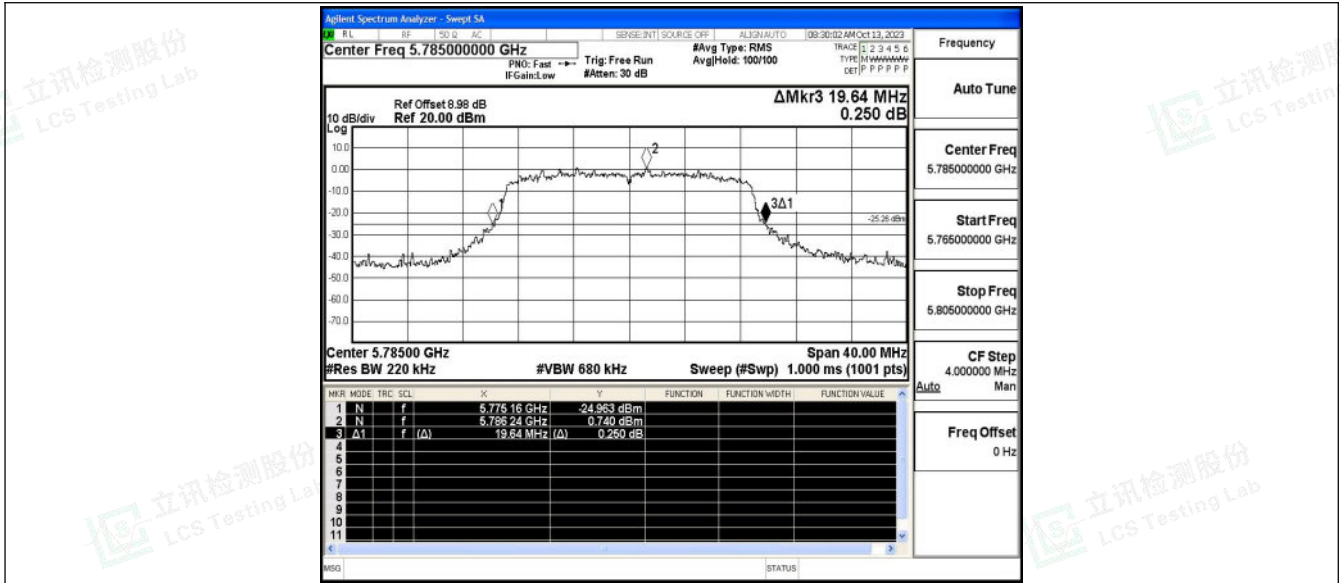
11A_Ant1_5785



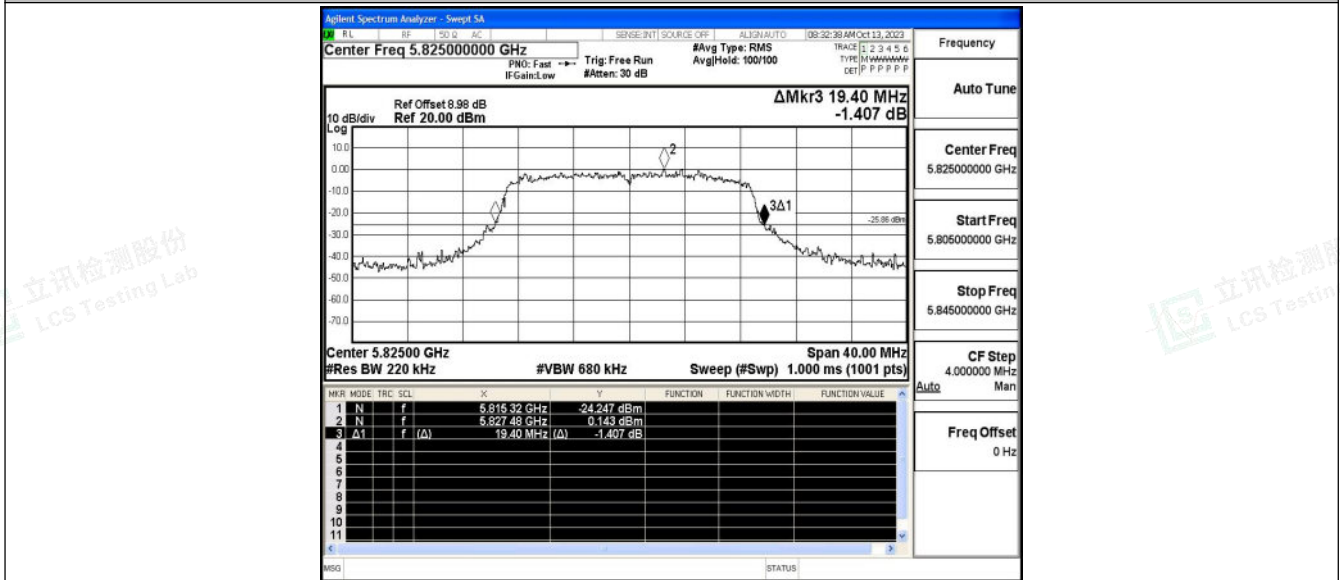
11A_Ant1_5825





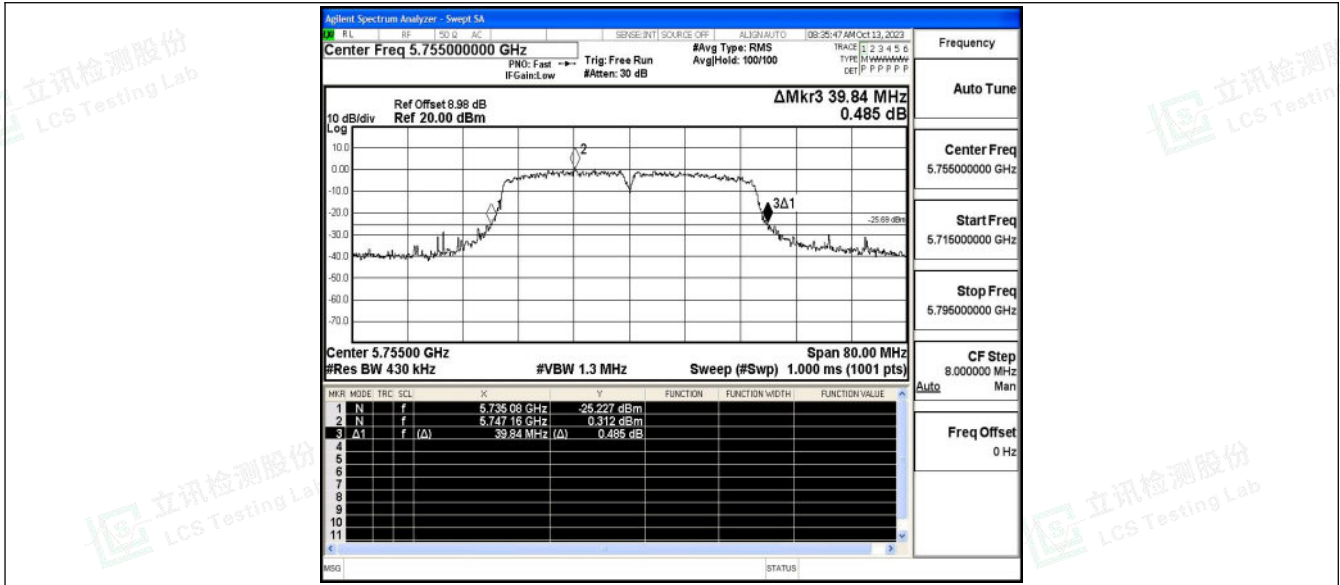


11N20SISO_Ant1_5825

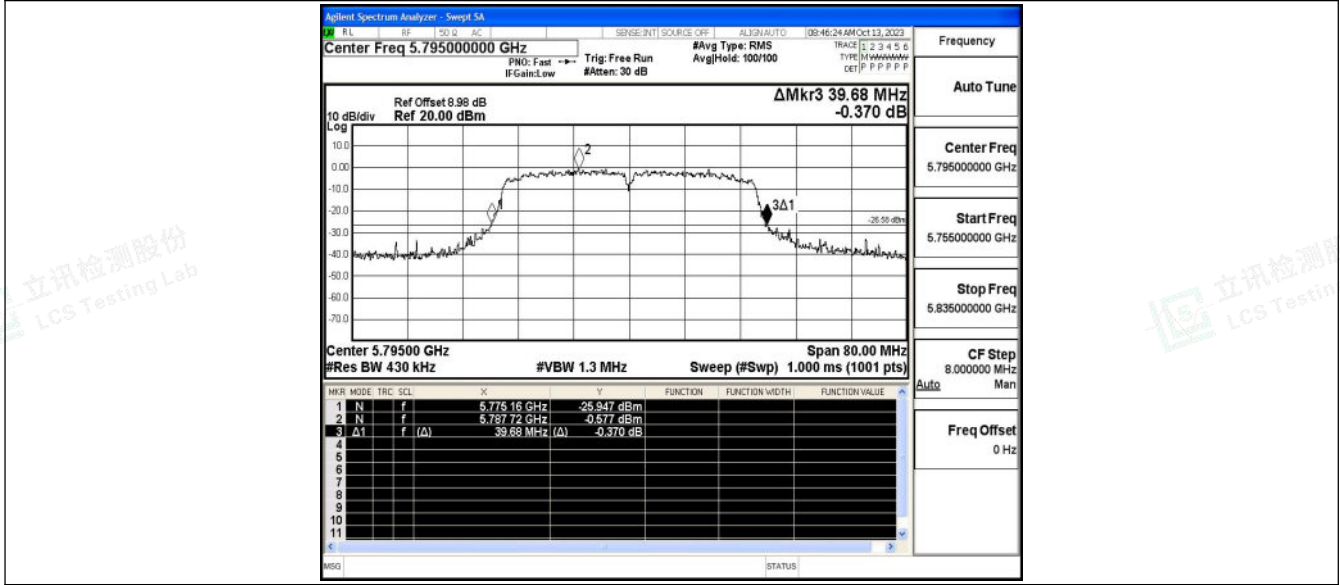


11N40SISO_Ant1_5755



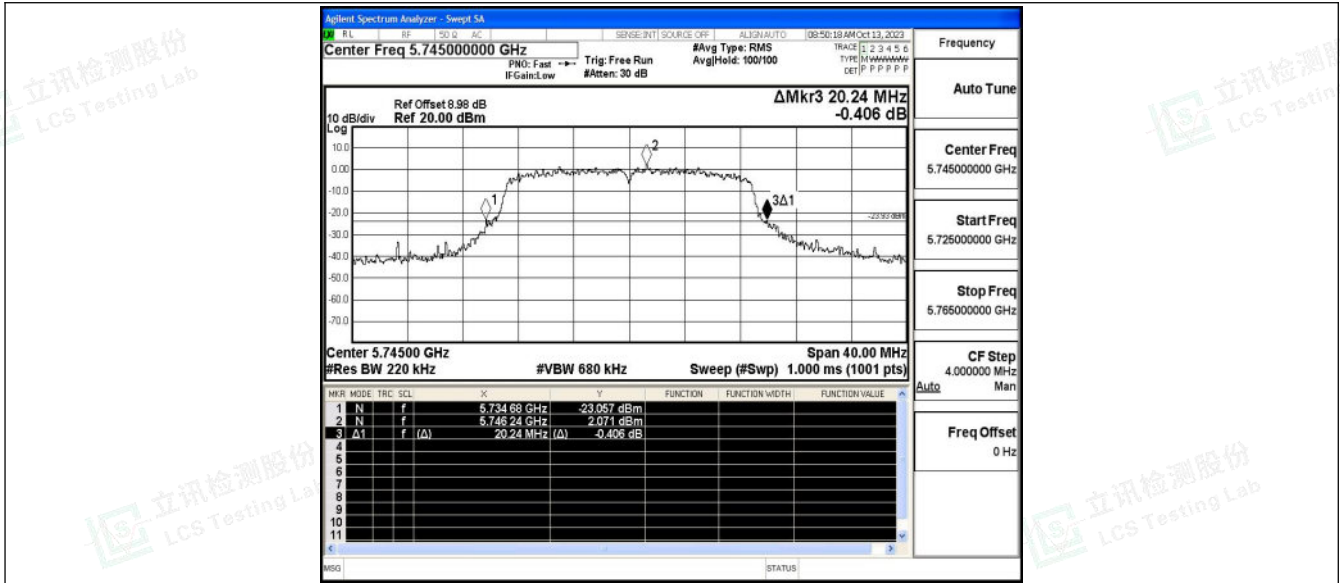


11N40SISO_Ant1_5795

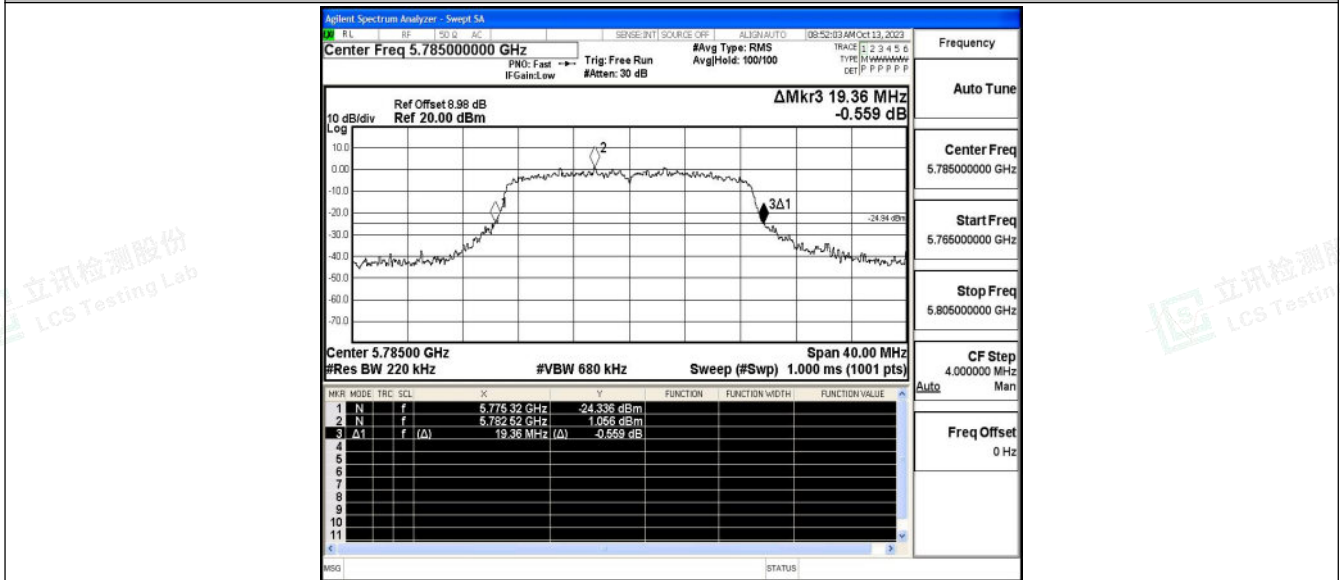


11AC20SISO_Ant1_5745



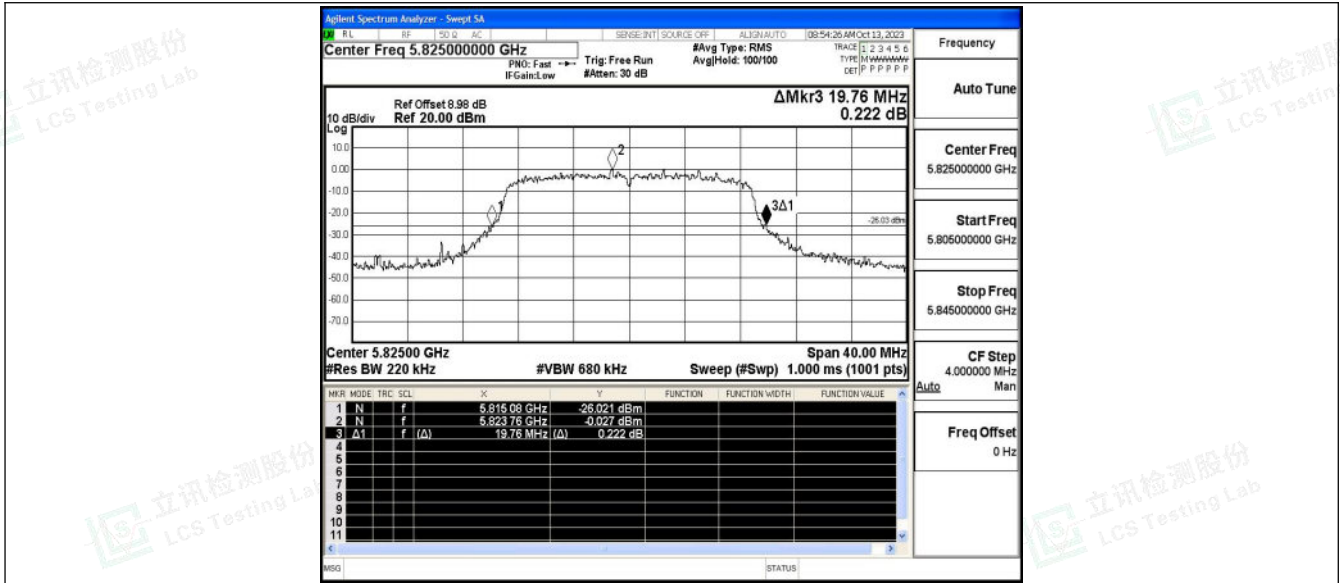


11AC20SISO_Ant1_5785

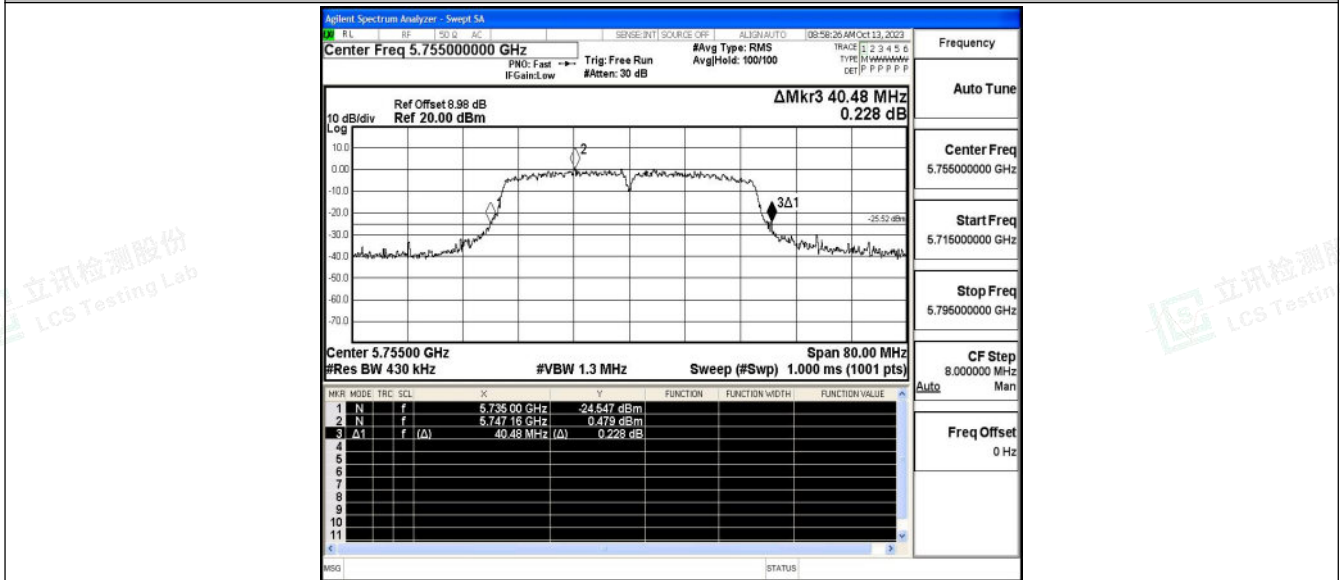


11AC20SISO_Ant1_5825



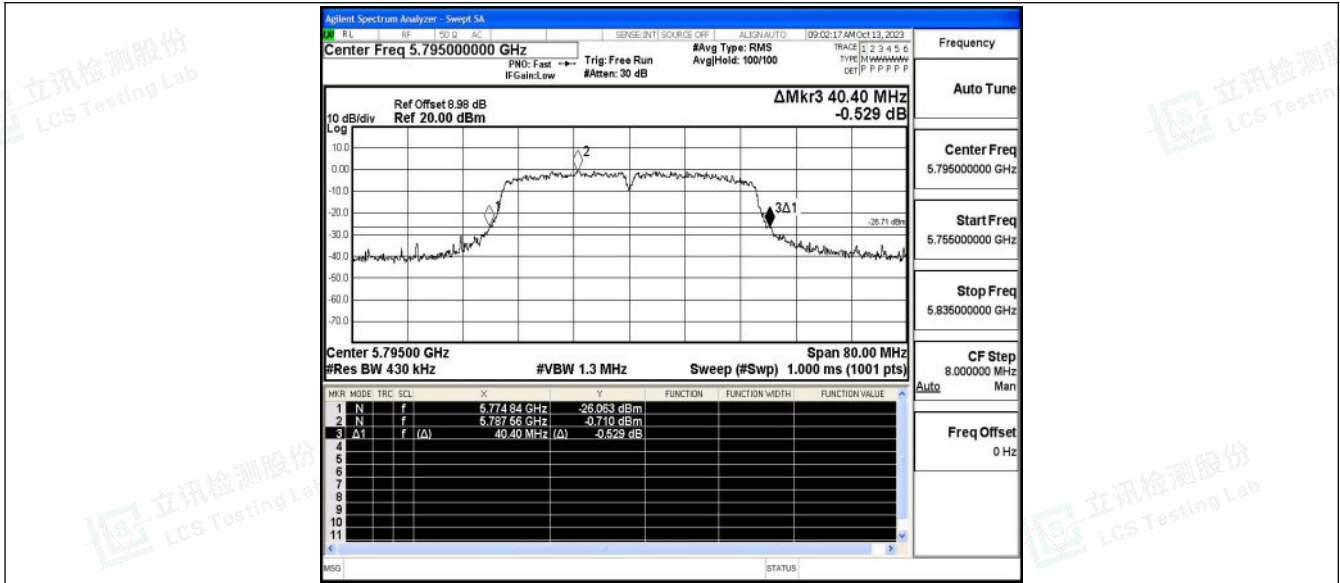


11AC40SISO_Ant1_5755

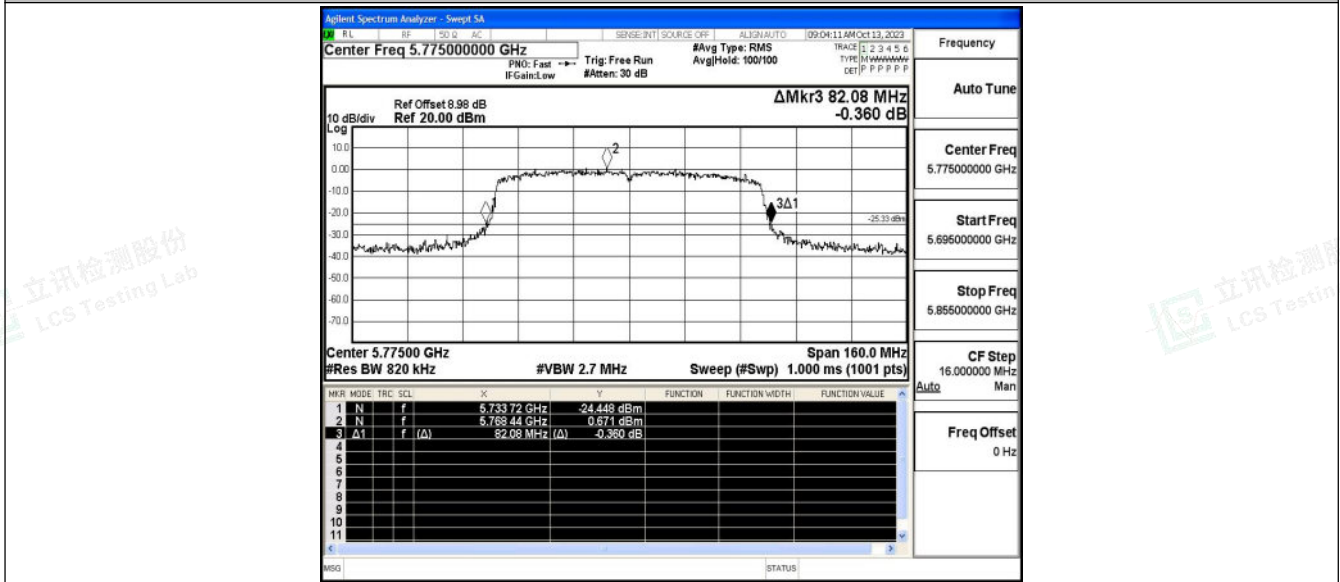


11AC40SISO_Ant1_5795





11AC80SISO_Ant1_5775





E.2 Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	11.06	≤30.00	PASS
		5785	9.97	≤30.00	PASS
		5825	9.13	≤30.00	PASS
11N20SISO	Ant1	5745	10.45	≤30.00	PASS
		5785	9.79	≤30.00	PASS
		5825	9.25	≤30.00	PASS
11N40SISO	Ant1	5755	10.57	≤30.00	PASS
		5795	10.00	≤30.00	PASS
11AC20SISO	Ant1	5745	10.93	≤30.00	PASS
		5785	9.95	≤30.00	PASS
		5825	9.06	≤30.00	PASS
11AC40SISO	Ant1	5755	10.56	≤30.00	PASS
		5795	10.11	≤30.00	PASS
11AC80SISO	Ant1	5775	10.58	≤30.00	PASS





E.3 Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/500 kHz]	Limit[dBm/500 kHz]	Verdict
11A	Ant1	5745	-2.79	≤30.00	PASS
		5785	-3.93	≤30.00	PASS
		5825	-4.64	≤30.00	PASS
11N20SISO	Ant1	5745	-3.72	≤30.00	PASS
		5785	-4.31	≤30.00	PASS
		5825	-4.85	≤30.00	PASS
11N40SISO	Ant1	5755	-6.38	≤30.00	PASS
		5795	-7.13	≤30.00	PASS
11AC20SISO	Ant1	5745	-3.19	≤30.00	PASS
		5785	-4.22	≤30.00	PASS
		5825	-4.95	≤30.00	PASS
11AC40SISO	Ant1	5755	-6.59	≤30.00	PASS
		5795	-7.06	≤30.00	PASS
11AC80SISO	Ant1	5775	-9.48	≤30.00	PASS

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

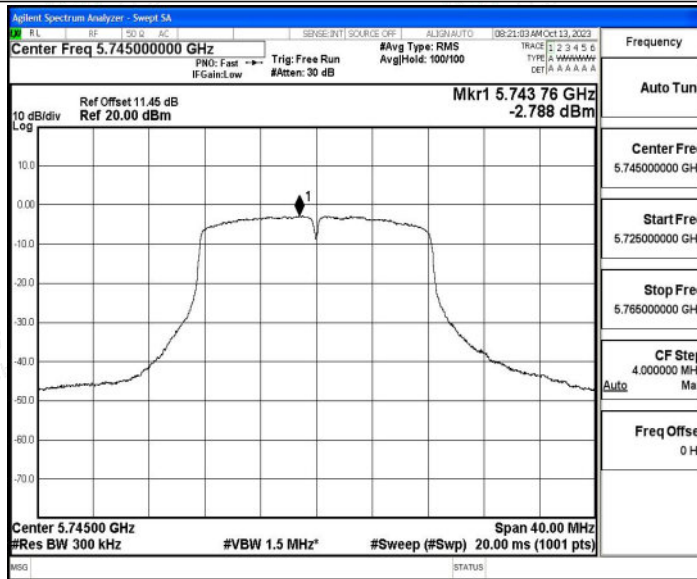
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.



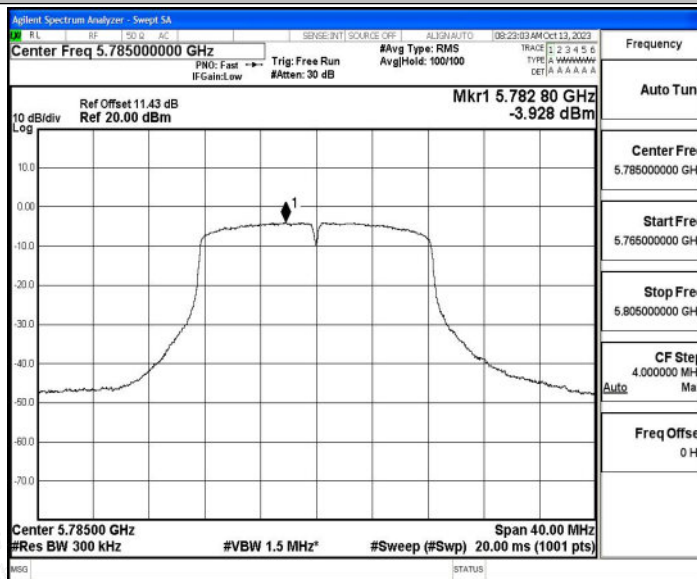


Test Graphs

11A_Ant1_5745

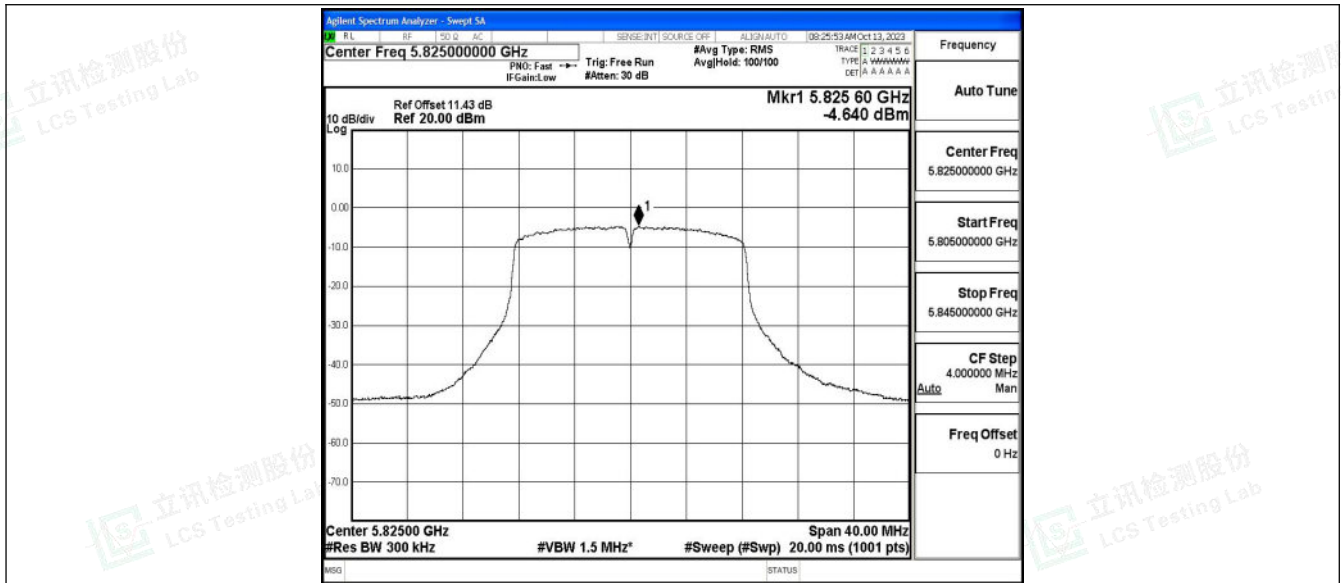


11A_Ant1_5785

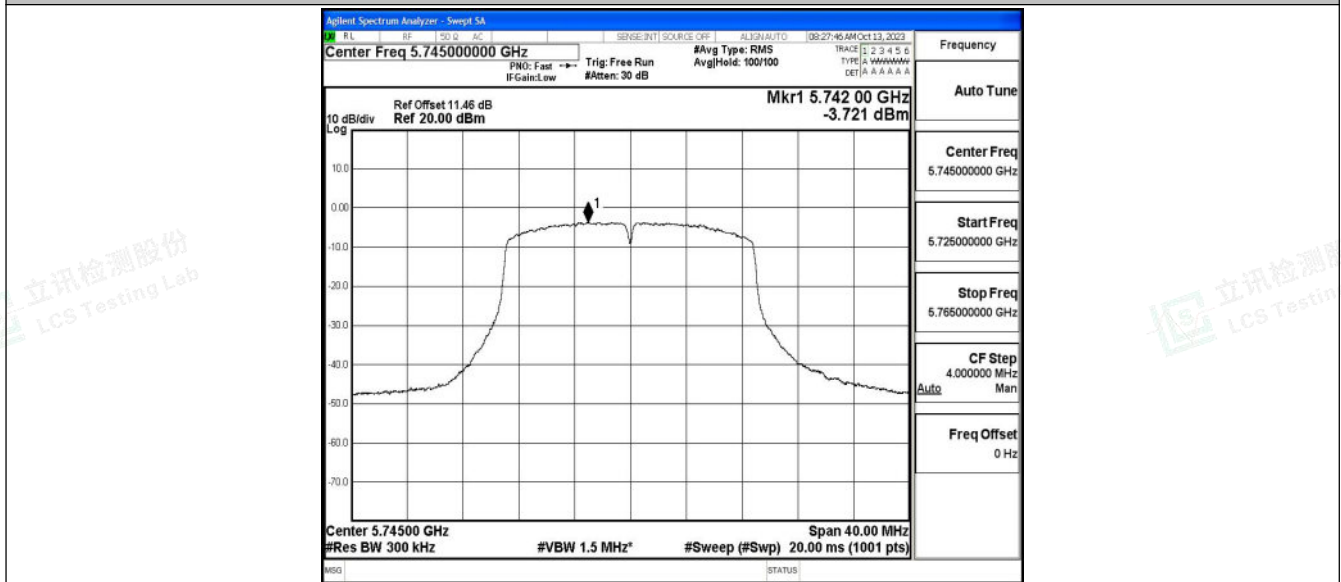


11A_Ant1_5825



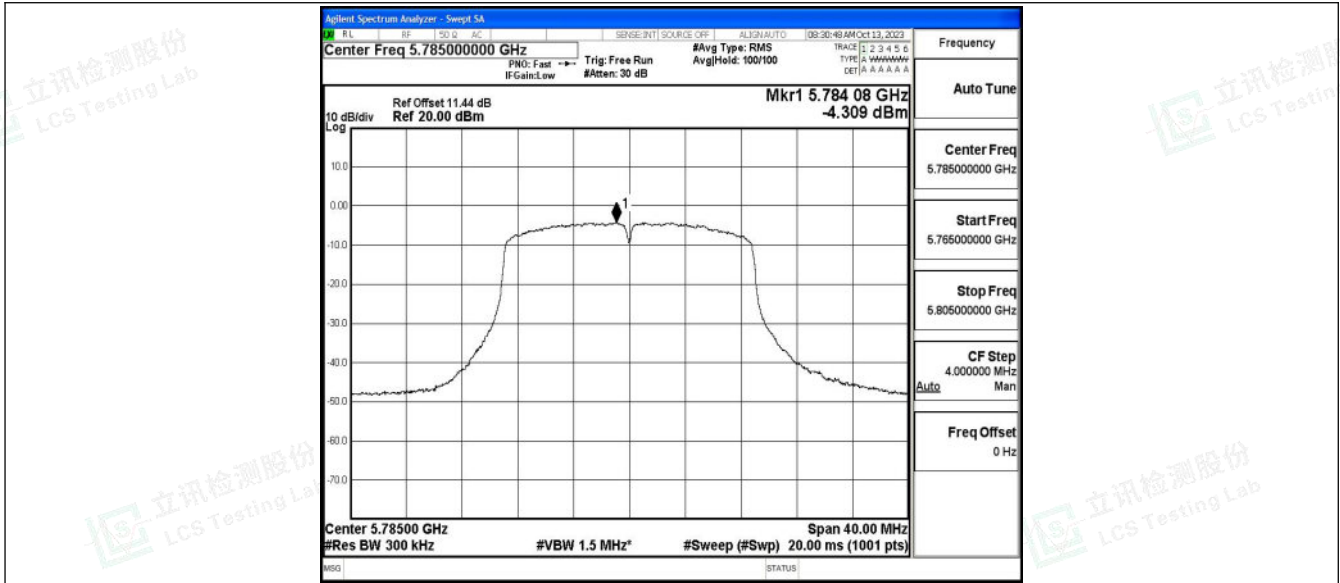


11N20SISO_Ant1_5745

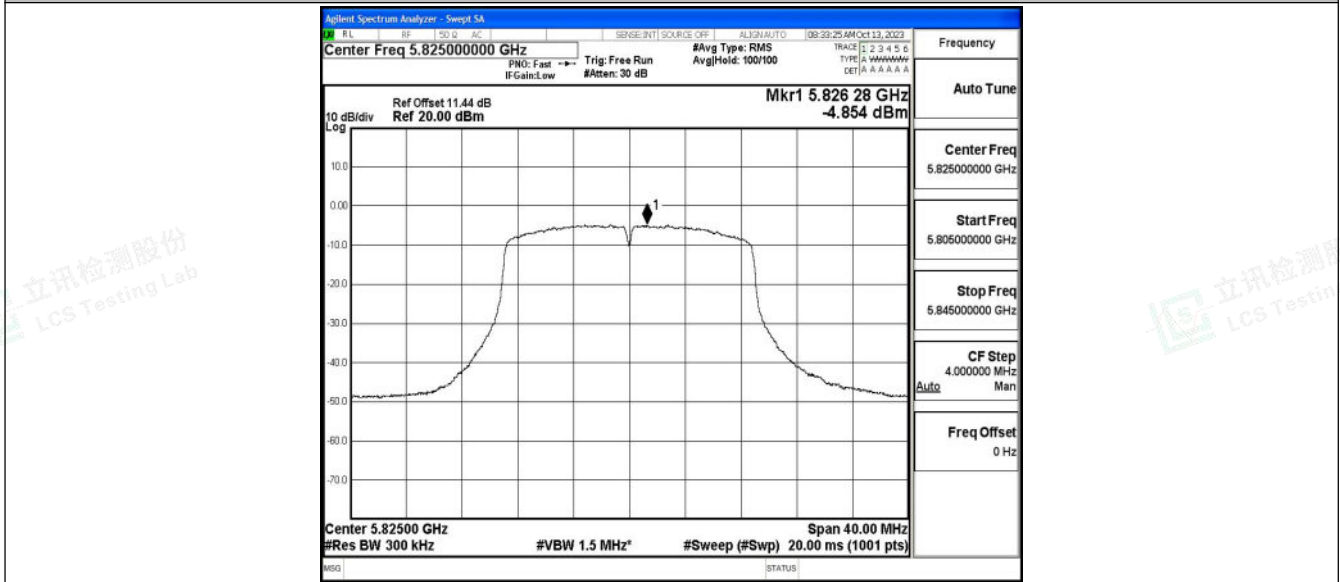


11N20SISO_Ant1_5785



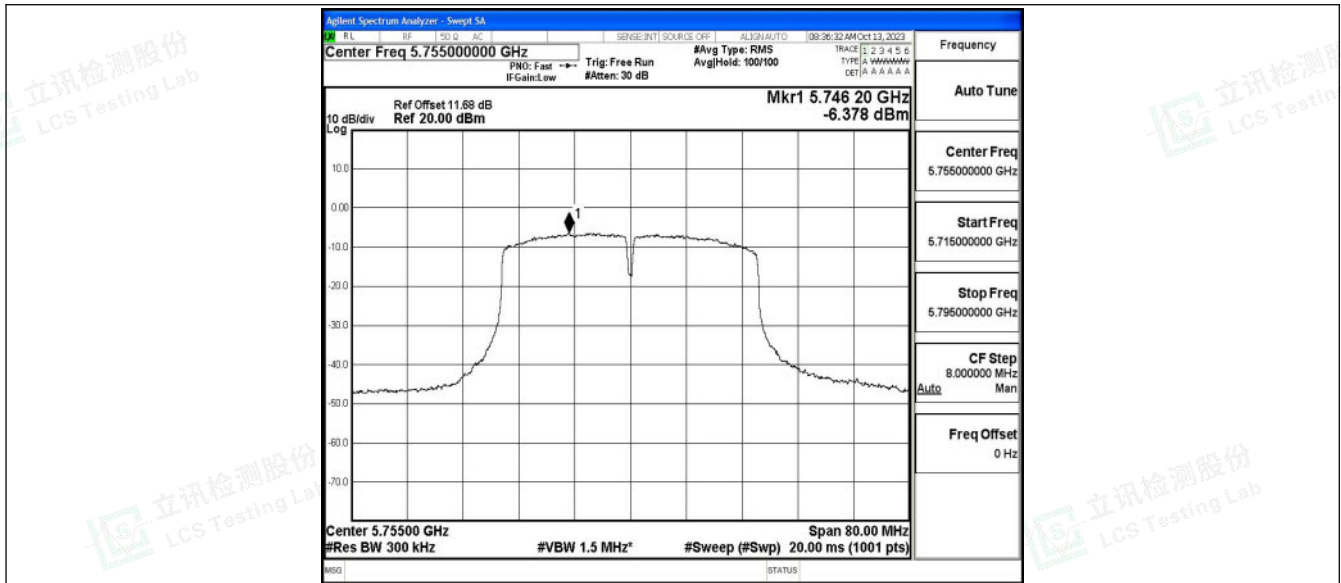


11N20SISO_Ant1_5825

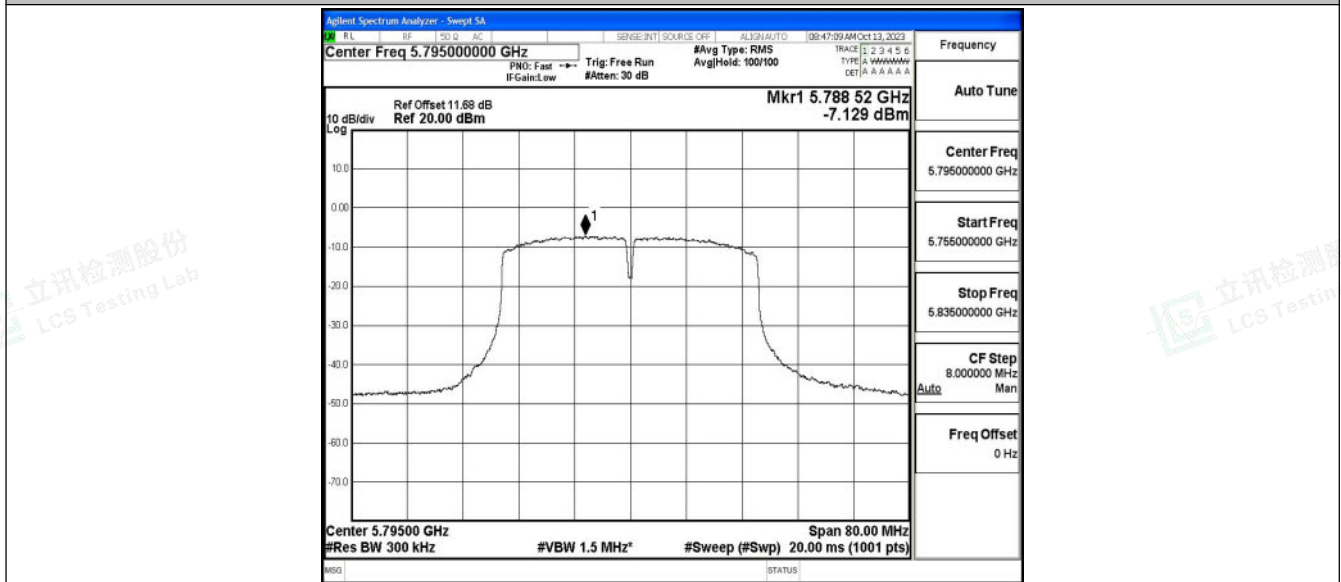


11N40SISO_Ant1_5755



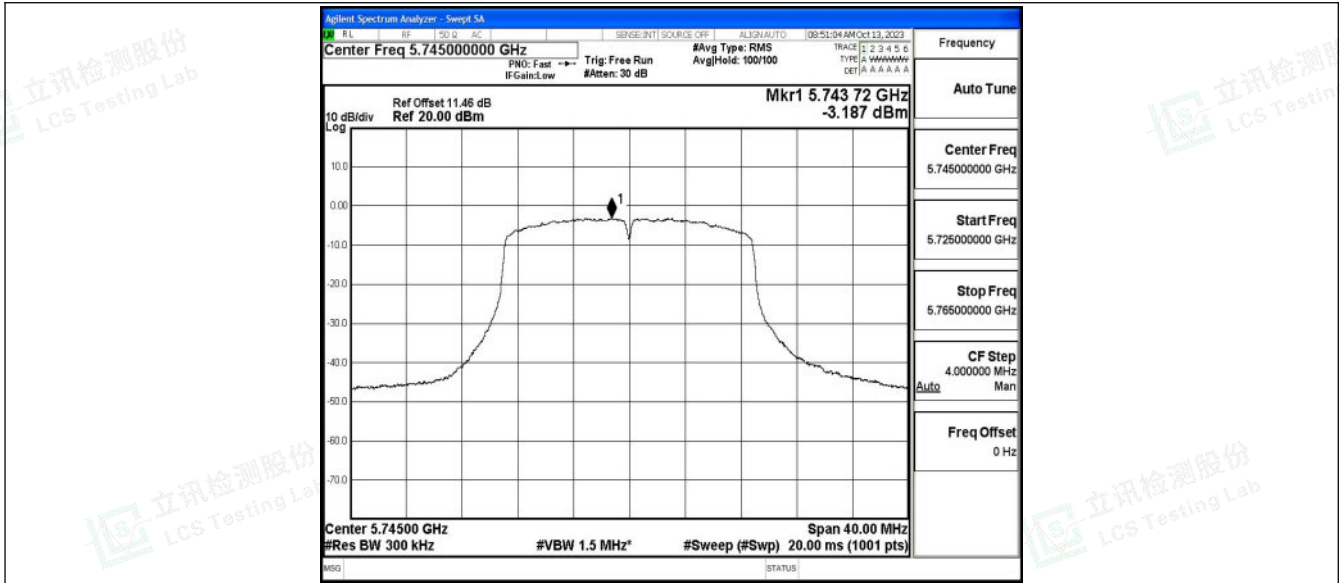


11N40SISO_Ant1_5795

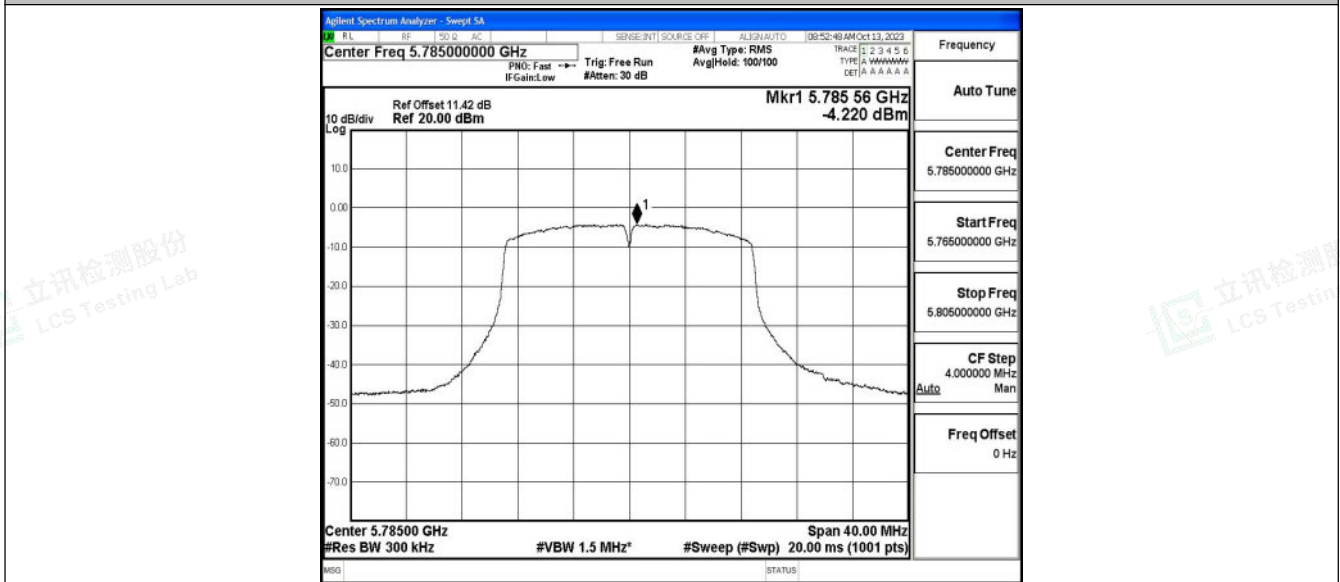


11AC20SISO_Ant1_5745



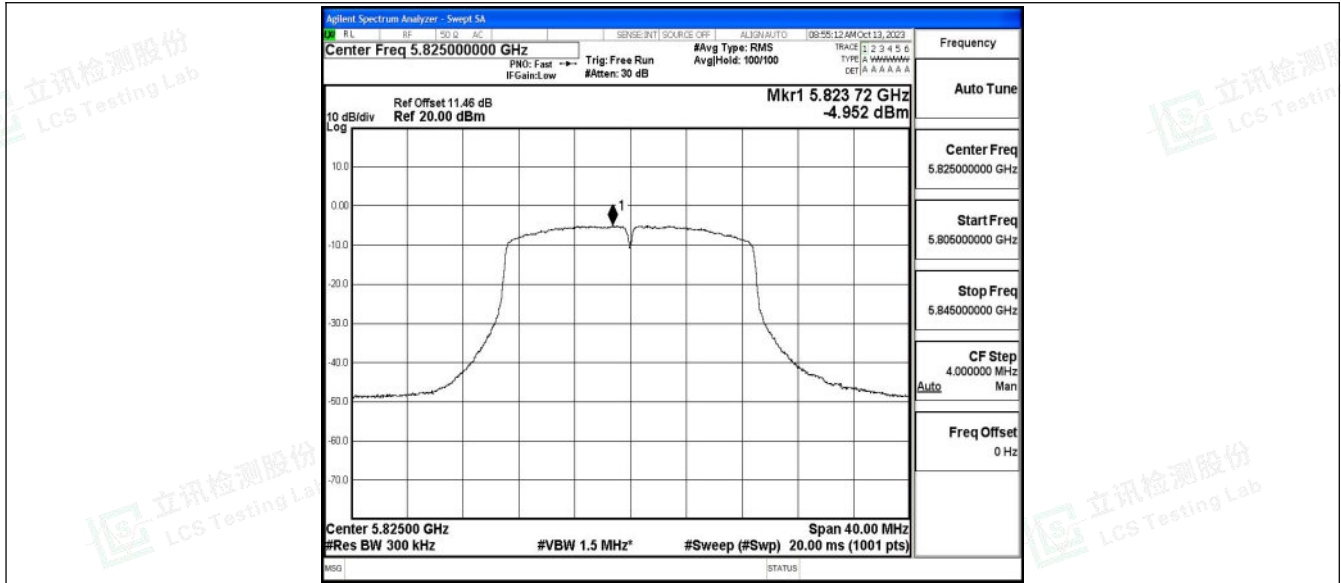


11AC20SISO_Ant1_5785

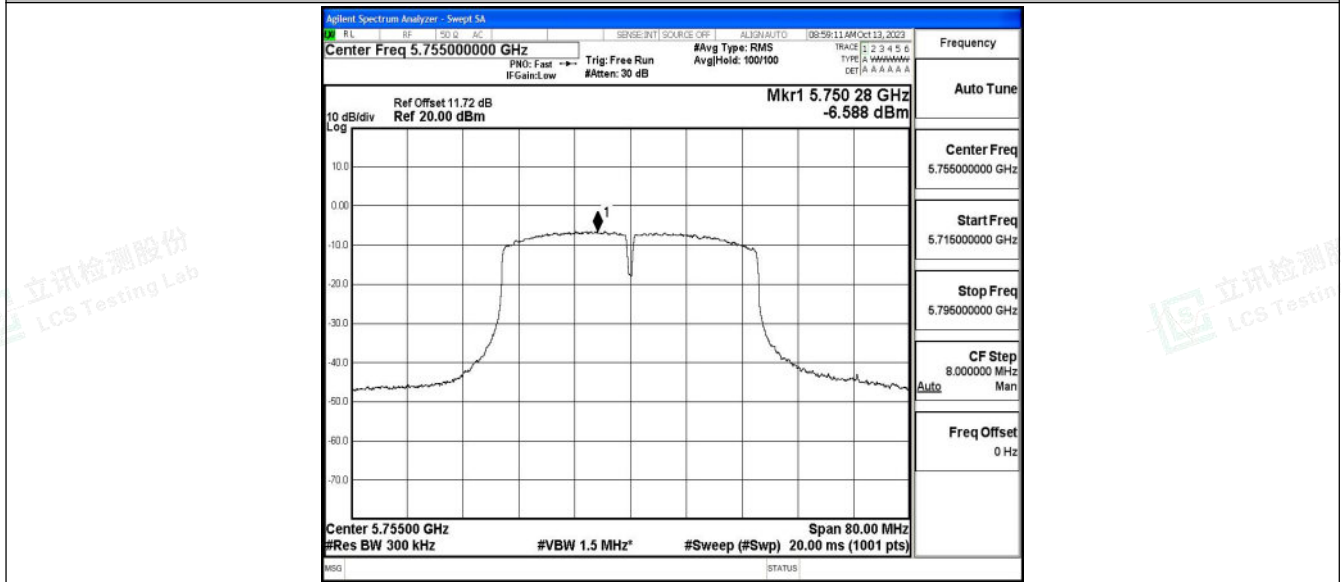


11AC20SISO_Ant1_5825



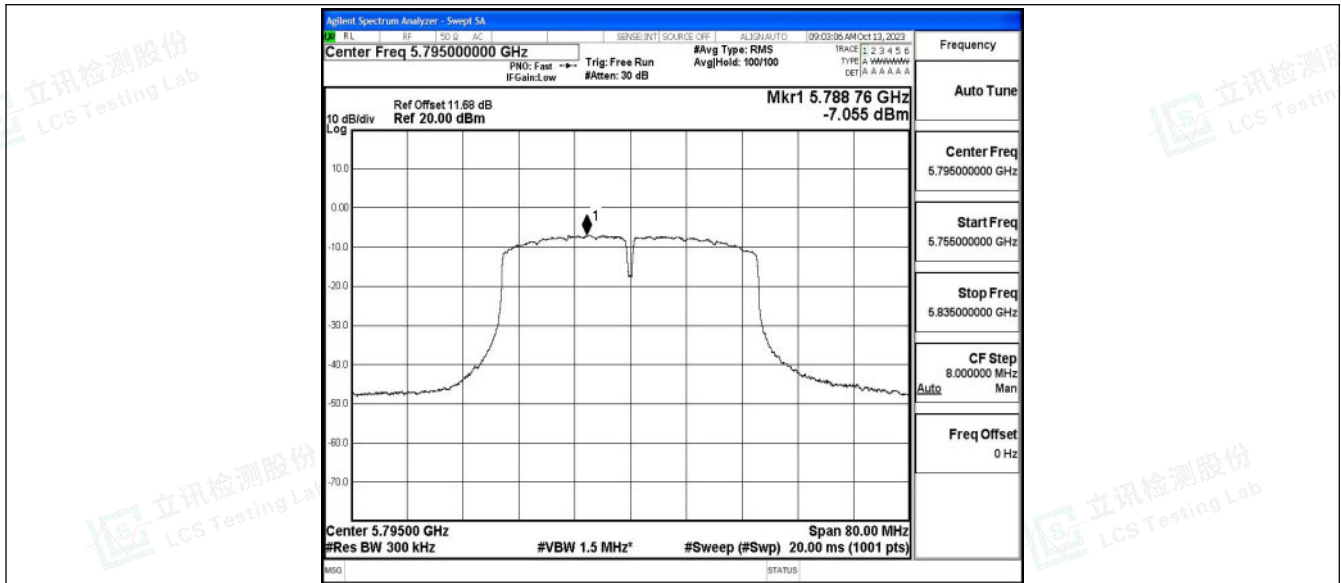


11AC40SISO_Ant1_5755

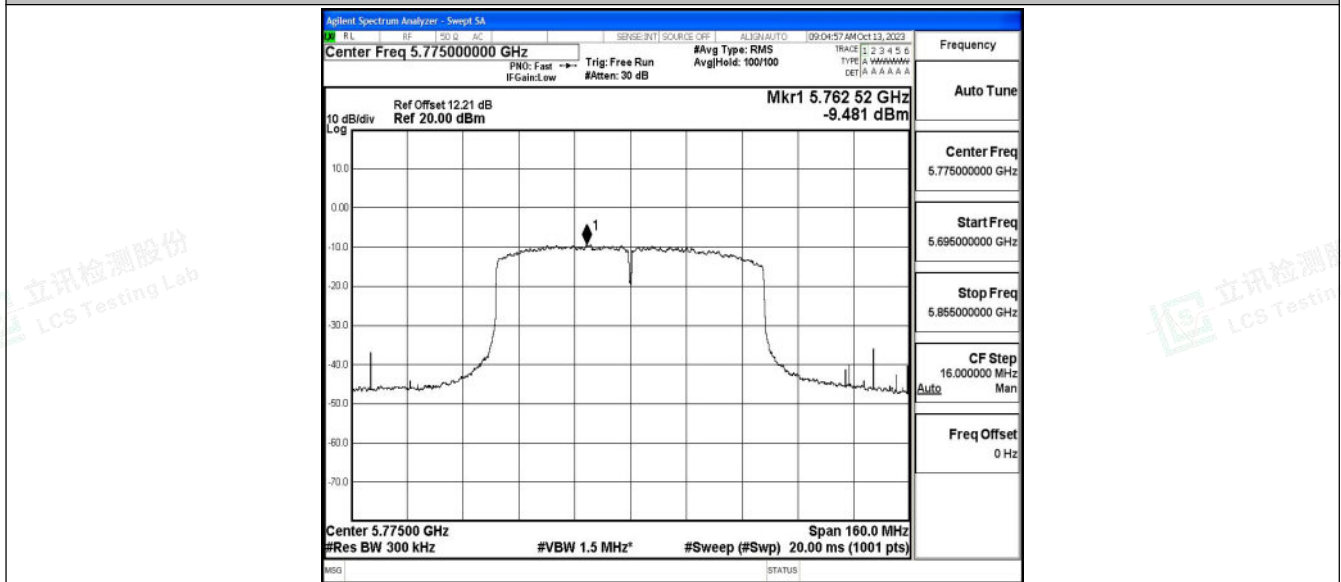


11AC40SISO_Ant1_5795





11AC80SISO_Ant1_5775





E.4 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-48.692	≤-27.00	PASS
				Peak	5700.000	-44.33	≤10.00	PASS
				Peak	5720.000	-37.65	≤15.60	PASS
				Peak	5725.000	-38.46	≤27.00	PASS
		High	5825	Peak	5850.000	-44.31	≤27.00	PASS
				Peak	5855.000	-43.4	≤15.60	PASS
				Peak	5875.000	-45.31	≤10.00	PASS
				Peak	5925.000	-49.81	≤-27.00	PASS
11N20SIS O	Ant1	Low	5745	Peak	5650.000	-47.802	≤-27.00	PASS
				Peak	5700.000	-43.72	≤10.00	PASS
				Peak	5720.000	-40.18	≤15.60	PASS
				Peak	5725.000	-35.99	≤27.00	PASS
		High	5825	Peak	5850.000	-43.043	≤27.00	PASS
				Peak	5855.000	-44.61	≤15.60	PASS
				Peak	5875.000	-47.82	≤10.00	PASS
				Peak	5925.000	-49.88	≤-27.00	PASS
11N40SIS O	Ant1	Low	5755	Peak	5650.000	-47.515	≤-27.00	PASS
				Peak	5700.000	-40.86	≤10.00	PASS
				Peak	5720.000	-35.73	≤15.60	PASS
				Peak	5725.000	-36.26	≤27.00	PASS
		High	5795	Peak	5850.000	-45.357	≤27.00	PASS
				Peak	5855.000	-45.18	≤15.60	PASS
				Peak	5875.000	-48.73	≤10.00	PASS
				Peak	5925.000	-50.34	≤-27.00	PASS
11AC20SI SO	Ant1	Low	5745	Peak	5650.000	-48.484	≤-27.00	PASS
				Peak	5700.000	-45.22	≤10.00	PASS
				Peak	5720.000	-37.36	≤15.60	PASS
				Peak	5725.000	-36.61	≤27.00	PASS
		High	5825	Peak	5850.000	-43.202	≤27.00	PASS
				Peak	5855.000	-45.98	≤15.60	PASS
				Peak	5875.000	-47.37	≤10.00	PASS
				Peak	5925.000	-50.47	≤-27.00	PASS
11AC40SI SO	Ant1	Low	5755	Peak	5650.000	-48.261	≤-27.00	PASS
				Peak	5700.000	-40.77	≤10.00	PASS
				Peak	5720.000	-36.86	≤15.60	PASS
				Peak	5725.000	-33.77	≤27.00	PASS
		High	5795	Peak	5850.000	-46.18	≤27.00	PASS





11AC80SI SO	Ant1	Low	5775	Peak	5855.000	-44.02	≤15.60	PASS
				Peak	5875.000	-47.2	≤10.00	PASS
				Peak	5925.000	-48.52	≤-27.00	PASS
				Peak	5650.000	-40.172	≤-27.00	PASS
		High	5775	Peak	5700.000	-35.92	≤10.00	PASS
				Peak	5720.000	-36.24	≤15.60	PASS
				Peak	5725.000	-33.43	≤27.00	PASS
				Peak	5850.000	-36.388	≤27.00	PASS
				Peak	5855.000	-38.25	≤15.60	PASS
				Peak	5875.000	-42.21	≤10.00	PASS
				Peak	5925.000	-48.36	≤-27.00	PASS

Note:

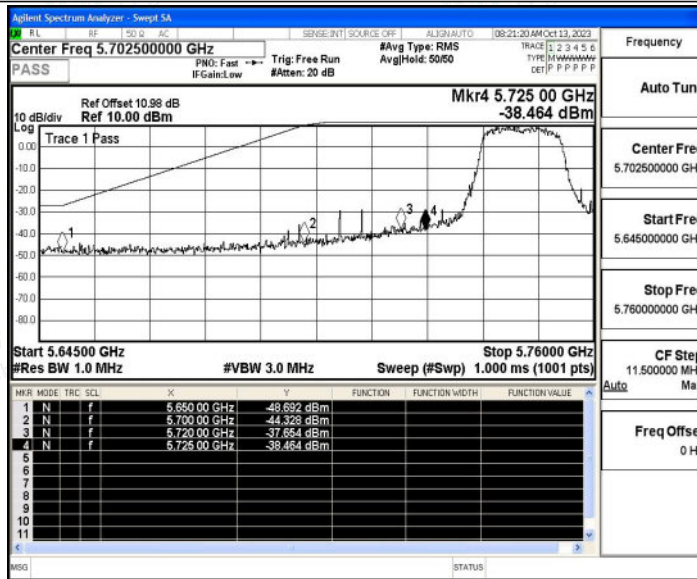
1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



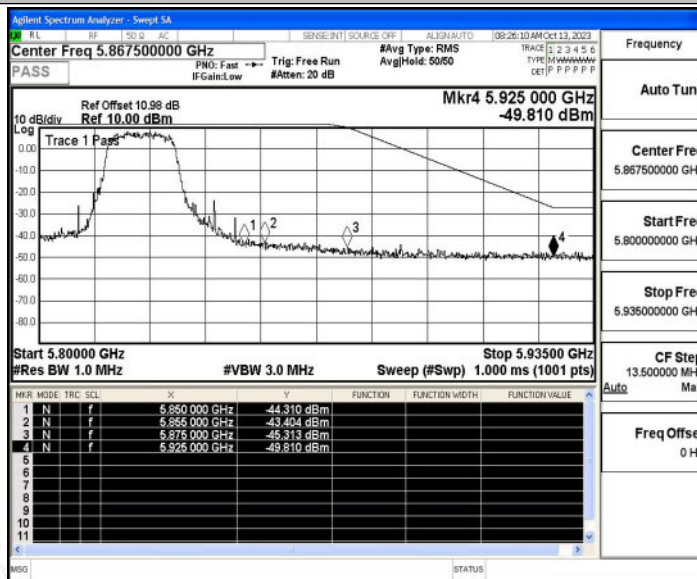


Test Graphs

11A_Ant1_Low_5745_Peak

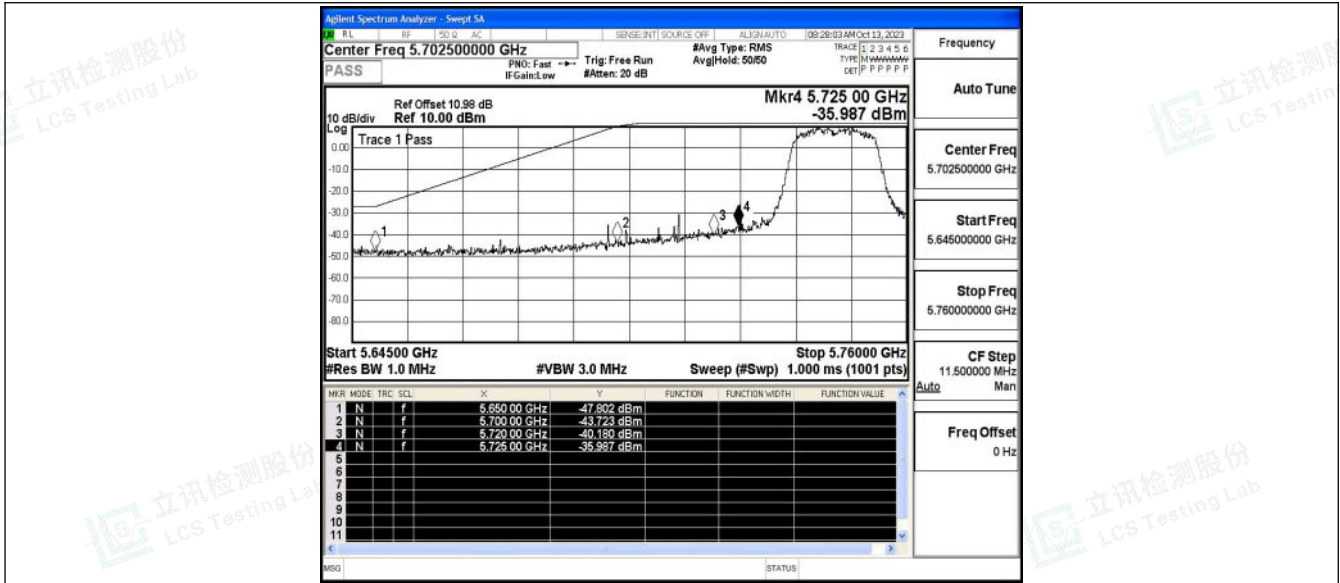


11A_Ant1_High_5825_Peak

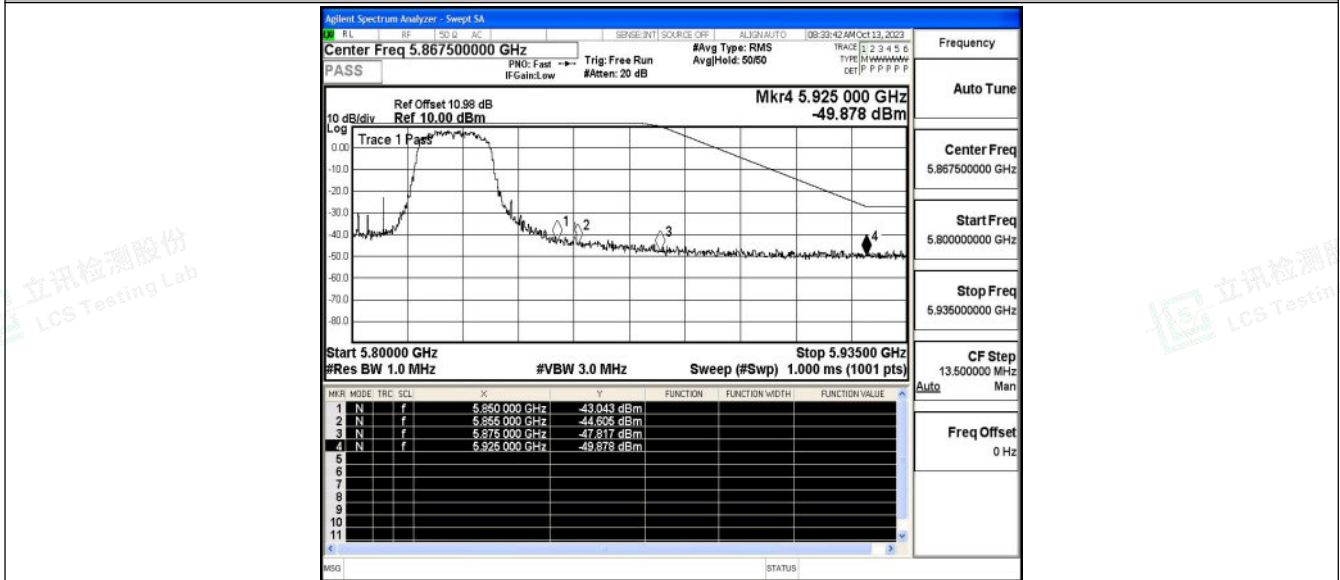


11N20SISO_Ant1_Low_5745_Peak



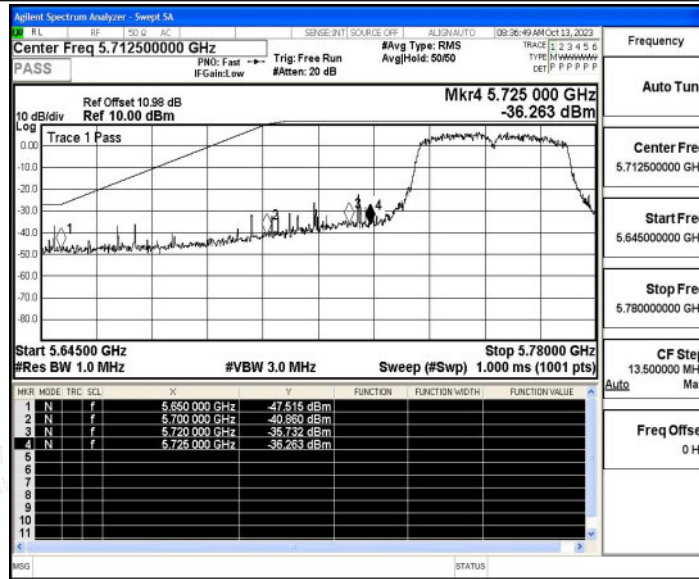


11N20SISO_Ant1_High_5825_Peak

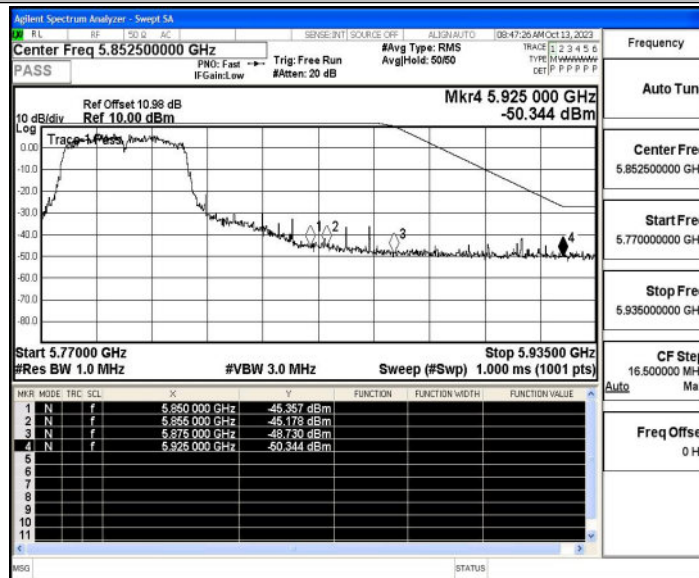


11N40SISO_Ant1_Low_5755_Peak



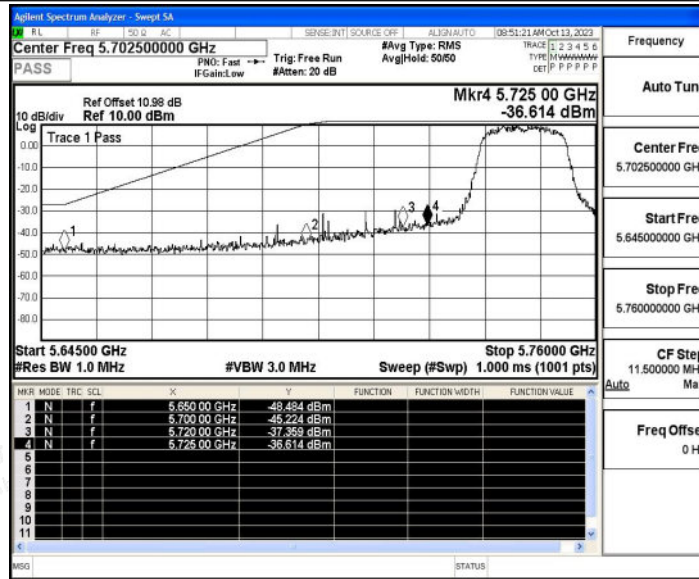


11N40SISO_Ant1_High_5795_Peak

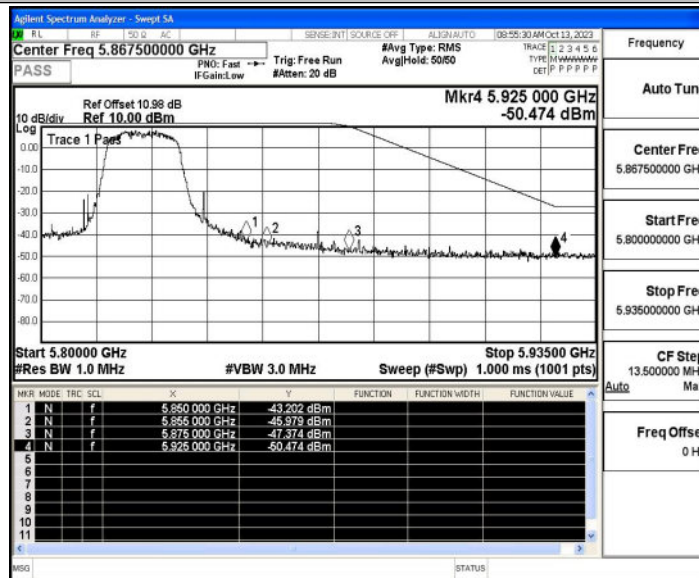


11AC20SISO_Ant1_Low_5745_Peak



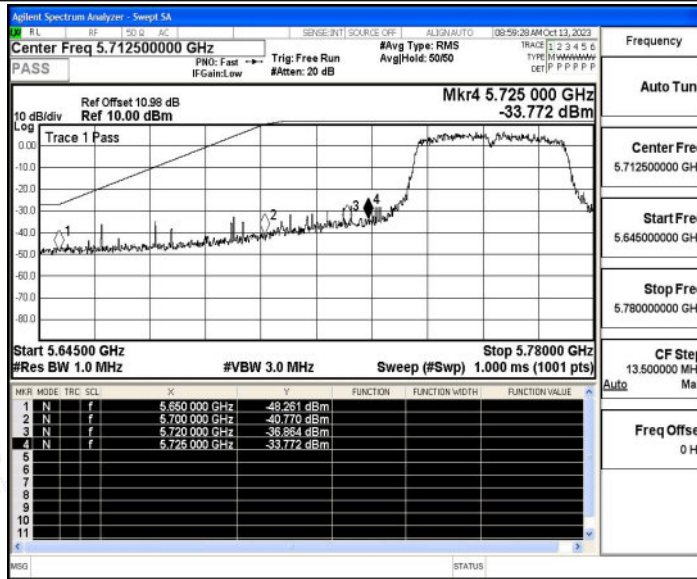


11AC20SISO_Ant1_High_5825_Peak

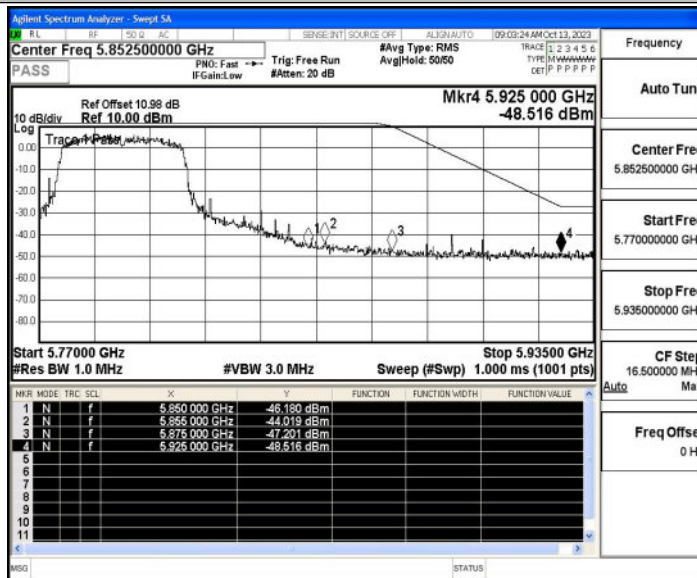


11AC40SISO_Ant1_Low_5755_Peak



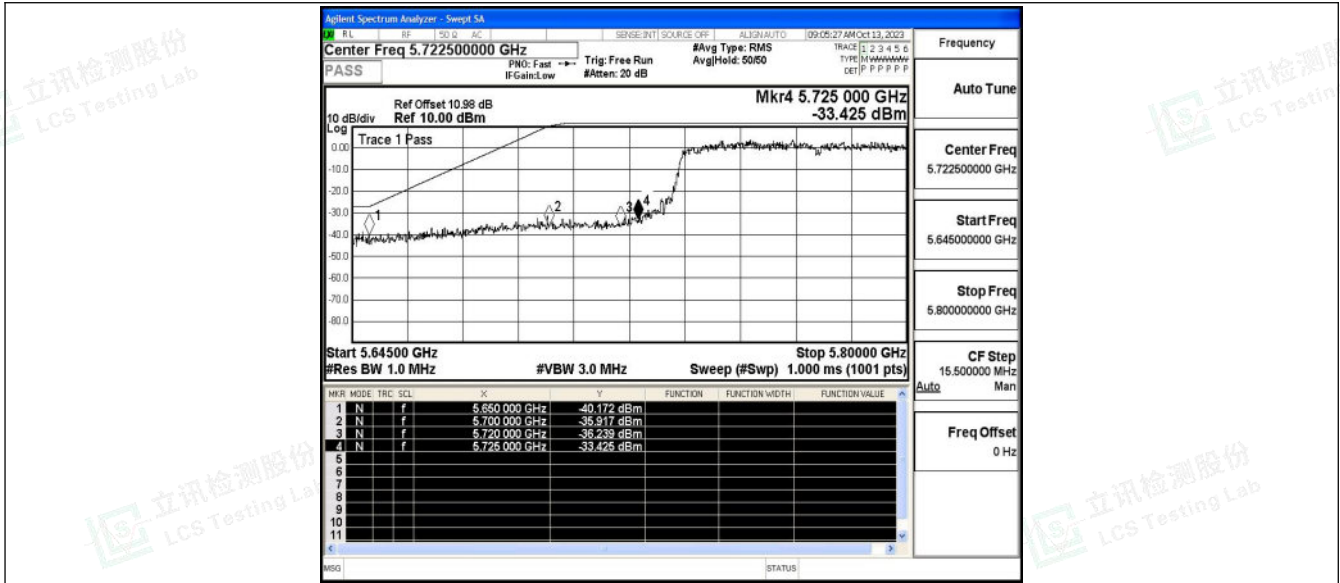


11AC40SISO_Ant1_High_5795_Peak

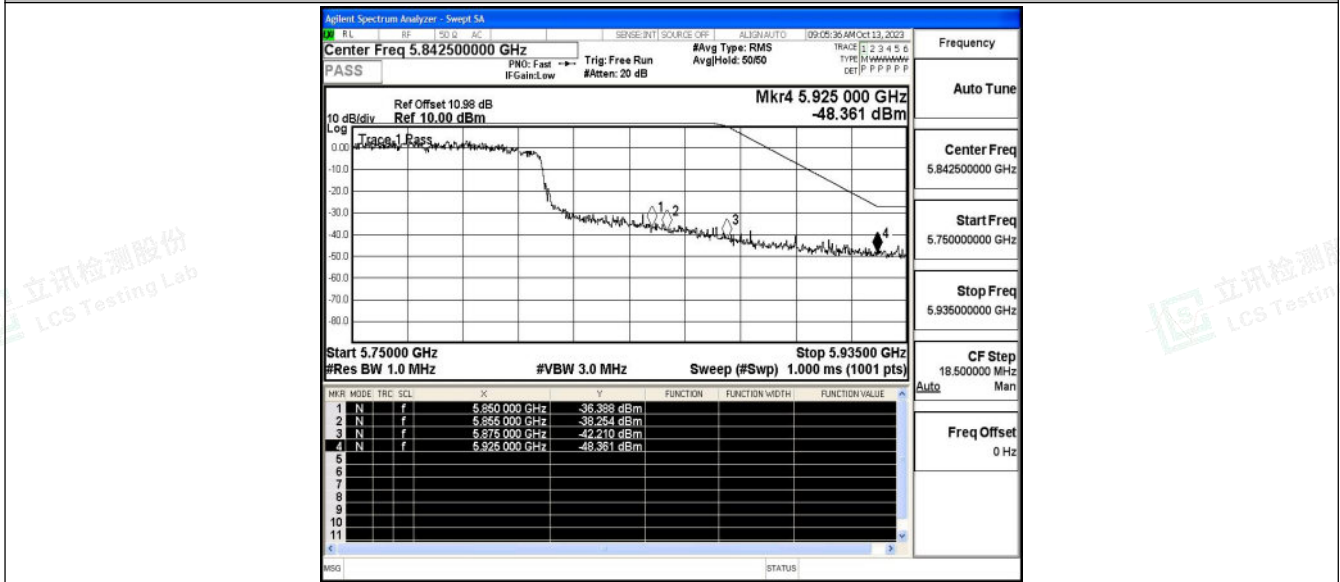


11AC80SISO_Ant1_Low_5775_Peak





11AC80SISO_Ant1_High_5775_Peak





E.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SISO	Ant1	5745	NV	NT	-20000.00	-3.481288	20	PASS
			LV	NT	-20000.00	-3.481288	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5785	NV	NT	-20000.00	-3.457217	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5825	NV	NT	-20000.00	-3.433476	20	PASS
			LV	NT	-20000.00	-3.433476	20	PASS
			HV	NT	-40000.00	-6.866953	20	PASS
11N40SISO	Ant1	5755	NV	NT	-40000.00	-6.950478	20	PASS
			LV	NT	-40000.00	-6.950478	20	PASS
			HV	NT	-40000.00	-6.950478	20	PASS
		5795	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-40000.00	-6.902502	20	PASS
11AC80SISO	Ant1	5775	NV	NT	0.00	0.000000	20	PASS
			LV	NT	80000.00	13.852814	20	PASS
			HV	NT	-80000.00	-13.852814	20	PASS

Temperature								
TestMode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SISO	Ant1	5745	NV	-30	-20000.00	-3.481288	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-20000.00	-3.481288	20	PASS
			NV	0	-20000.00	-3.481288	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-20000.00	-3.481288	20	PASS
			NV	30	-40000.00	-6.962576	20	PASS
			NV	40	-20000.00	-3.481288	20	PASS
			NV	50	-20000.00	-3.481288	20	PASS
		5785	NV	-30	-20000.00	-3.457217	20	PASS
			NV	-20	-40000.00	-6.914434	20	PASS
			NV	-10	-40000.00	-6.914434	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-20000.00	-3.457217	20	PASS





		5825	NV	20	0.00	0.000000	20	PASS
			NV	30	-20000.00	-3.457217	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	-20000.00	-3.457217	20	PASS
			NV	-30	0.00	0.000000	20	PASS
			NV	-20	-20000.00	-3.433476	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-20000.00	-3.433476	20	PASS
			NV	20	-20000.00	-3.433476	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-20000.00	-3.433476	20	PASS
			NV	50	-20000.00	-3.433476	20	PASS
11N40SISO	Ant1	5755	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-40000.00	-6.950478	20	PASS
			NV	-10	-40000.00	-6.950478	20	PASS
			NV	0	-40000.00	-6.950478	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-40000.00	-6.950478	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
		5795	NV	50	-40000.00	-6.950478	20	PASS
			NV	-30	-40000.00	-6.902502	20	PASS
			NV	-20	40000.00	6.902502	20	PASS
			NV	-10	-40000.00	-6.902502	20	PASS
			NV	0	-40000.00	-6.902502	20	PASS
			NV	10	-40000.00	-6.902502	20	PASS
			NV	20	40000.00	6.902502	20	PASS
			NV	30	0.00	0.000000	20	PASS
11AC80SIS O	Ant1	5775	NV	-30	-80000.00	-13.852814	20	PASS
			NV	-20	-80000.00	-13.852814	20	PASS
			NV	-10	-80000.00	-13.852814	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-80000.00	-13.852814	20	PASS
			NV	20	-80000.00	-13.852814	20	PASS
			NV	30	-80000.00	-13.852814	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS





E.6 Duty Cycle

Test Result

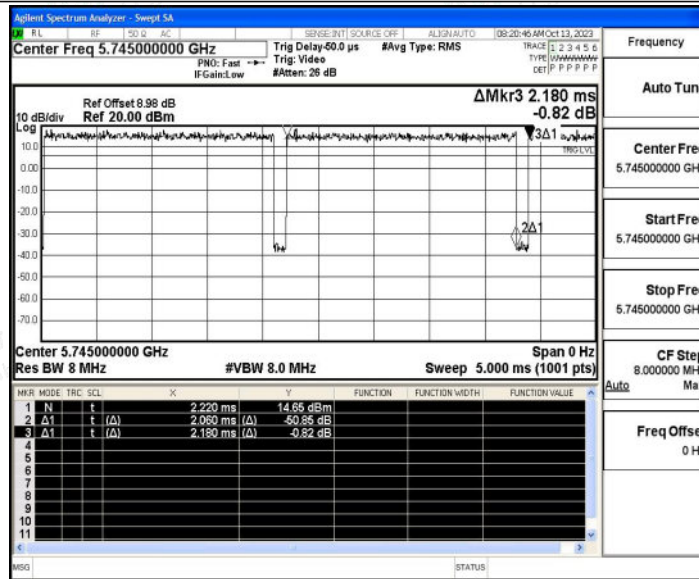
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5745	2.06	2.18	94.50
		5785	2.06	2.17	94.93
		5825	2.06	2.17	94.93
11N20SISO	Ant1	5745	1.93	2.05	94.15
		5785	1.93	2.04	94.61
		5825	1.92	2.03	94.58
11N40SISO	Ant1	5755	0.95	1.06	89.62
		5795	0.95	1.06	89.62
11AC20SISO	Ant1	5745	1.93	2.05	94.15
		5785	1.94	2.04	95.10
		5825	1.93	2.05	94.15
11AC40SISO	Ant1	5755	0.95	1.07	88.79
		5795	0.95	1.06	89.62
11AC80SISO	Ant1	5775	0.46	0.58	79.31



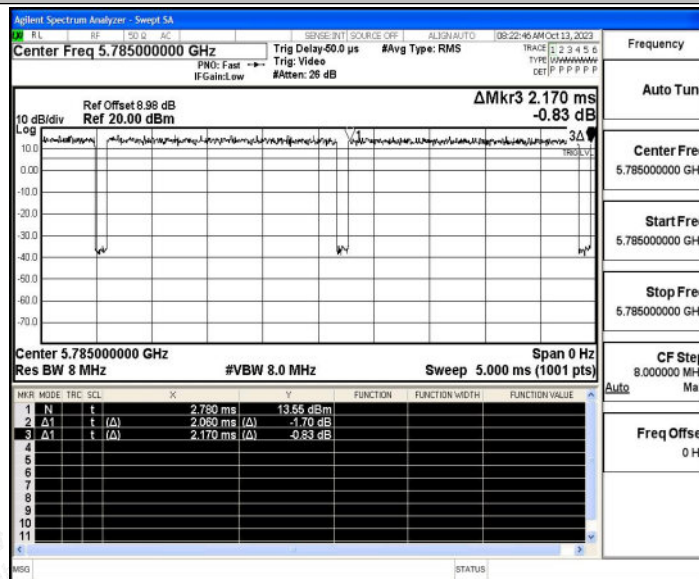


Test Graphs

11A_Ant1_5745

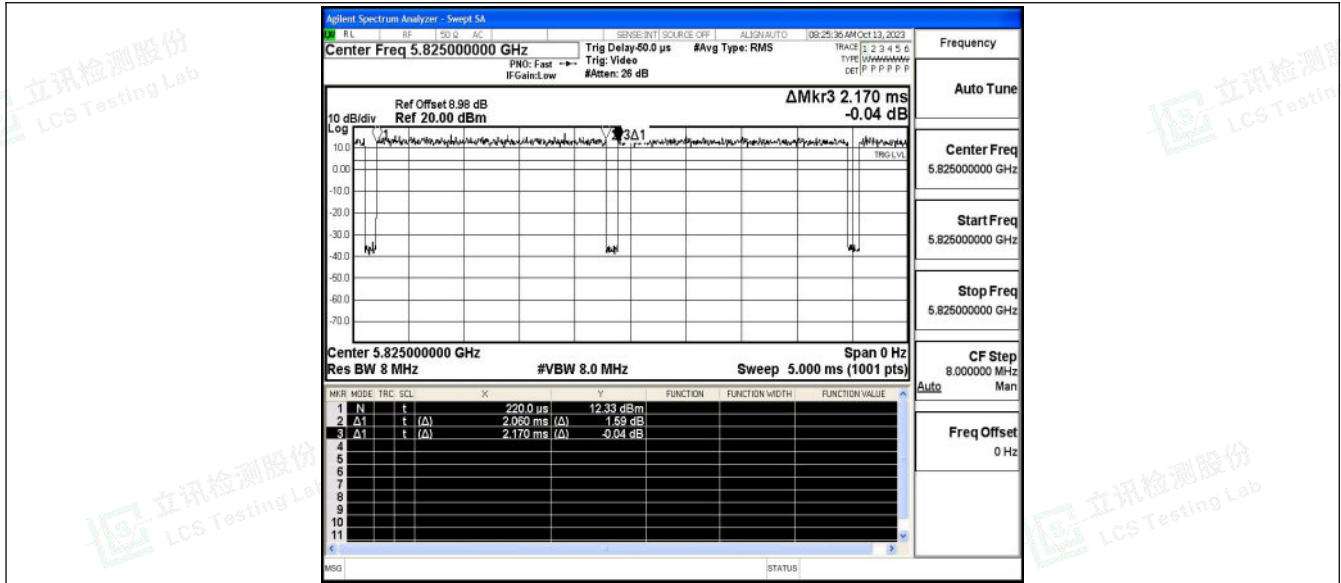


11A_Ant1_5785

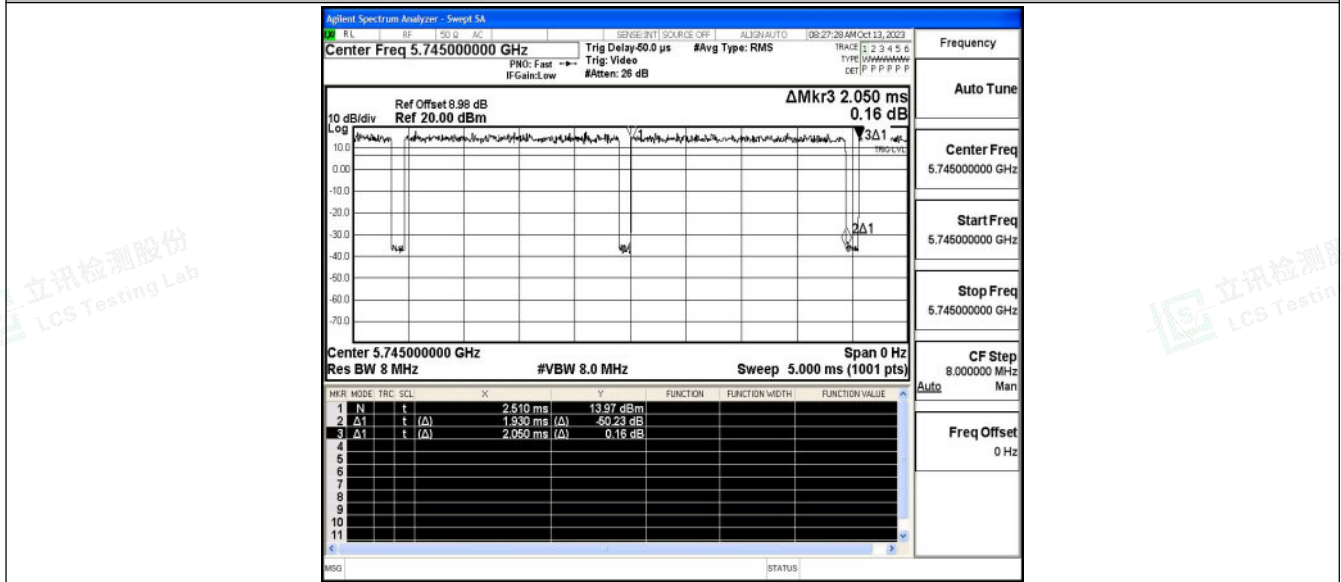


11A_Ant1_5825



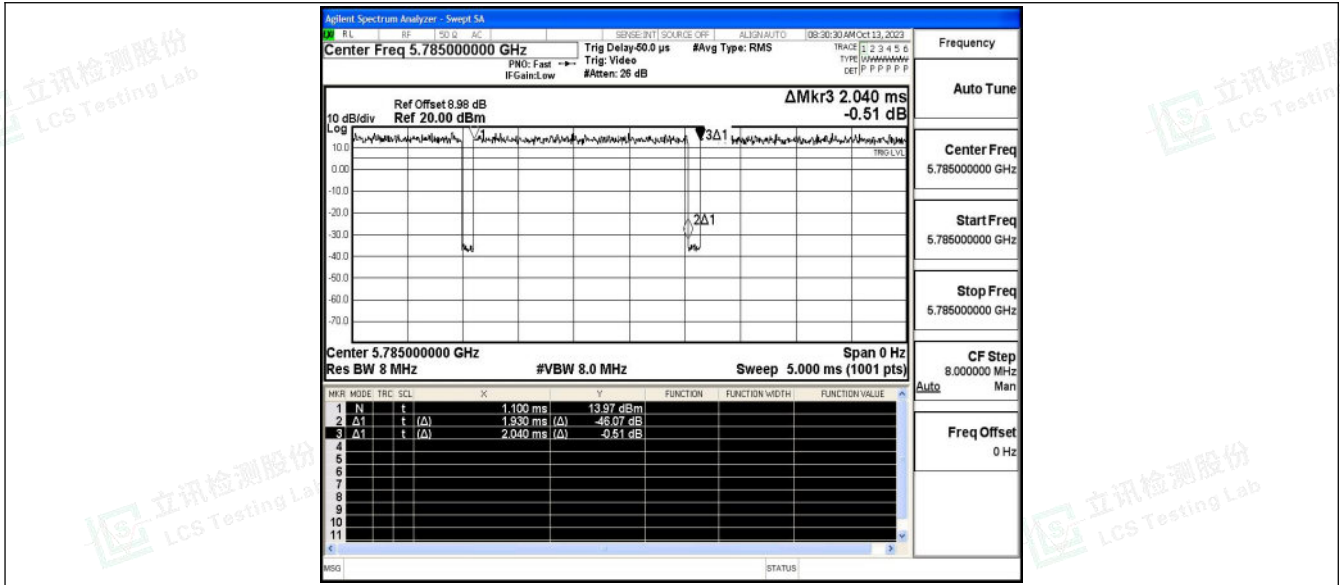


11N20SISO_Ant1_5745

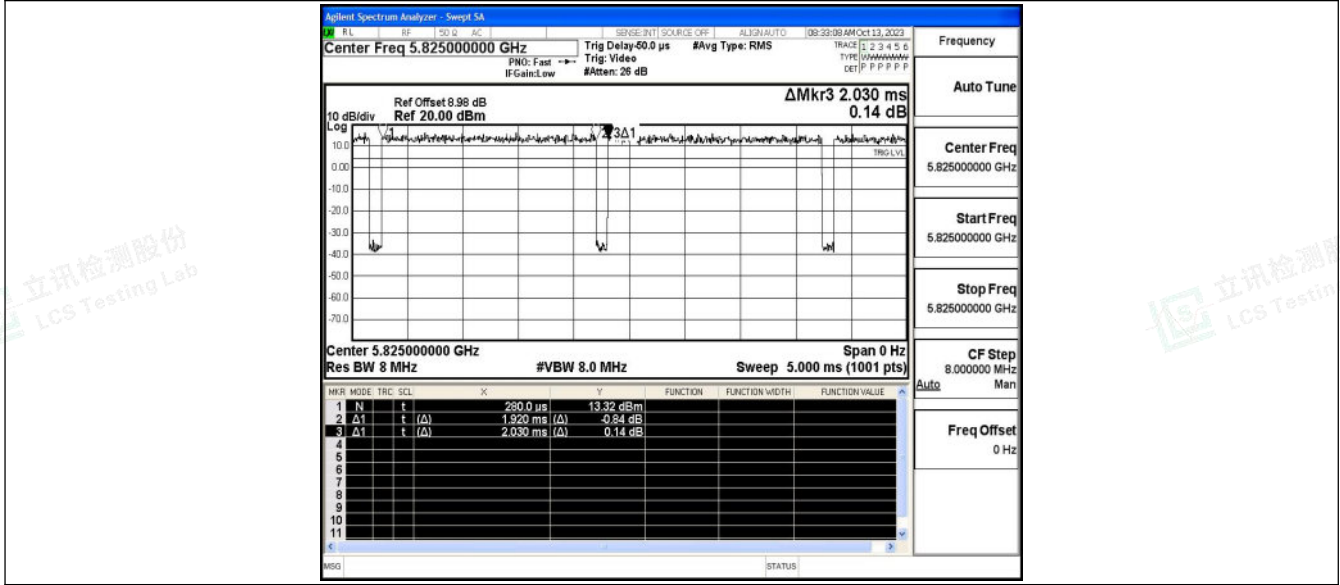


11N20SISO_Ant1_5785



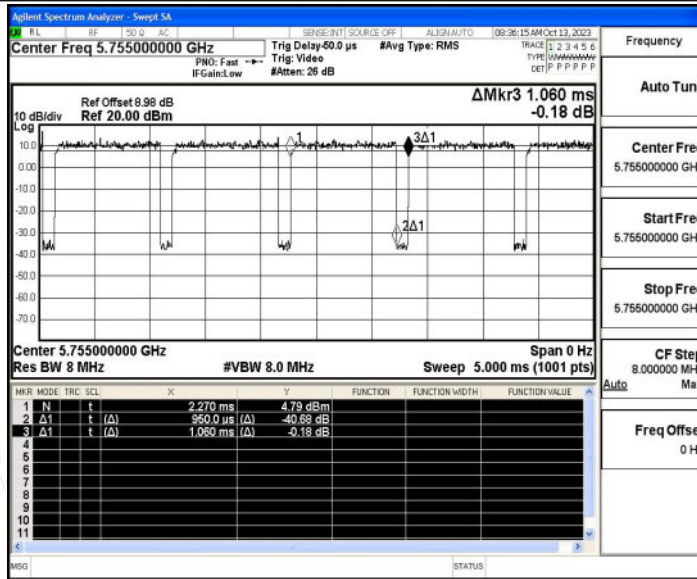


11N20SISO_Ant1_5825

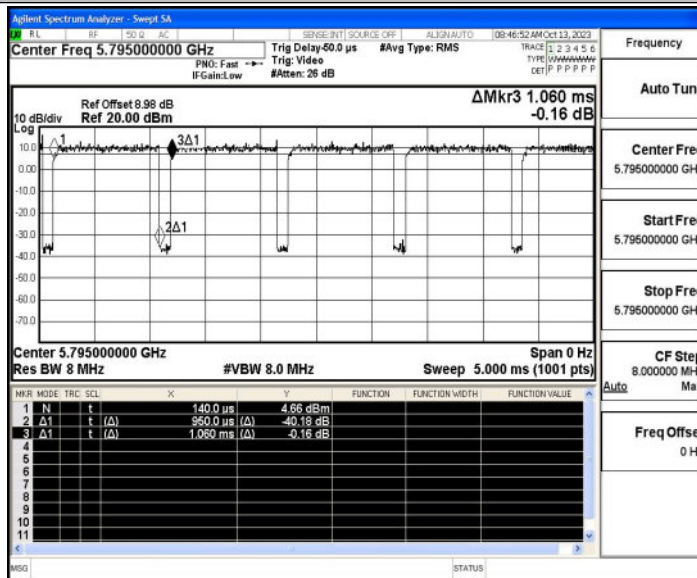


11N40SISO_Ant1_5755



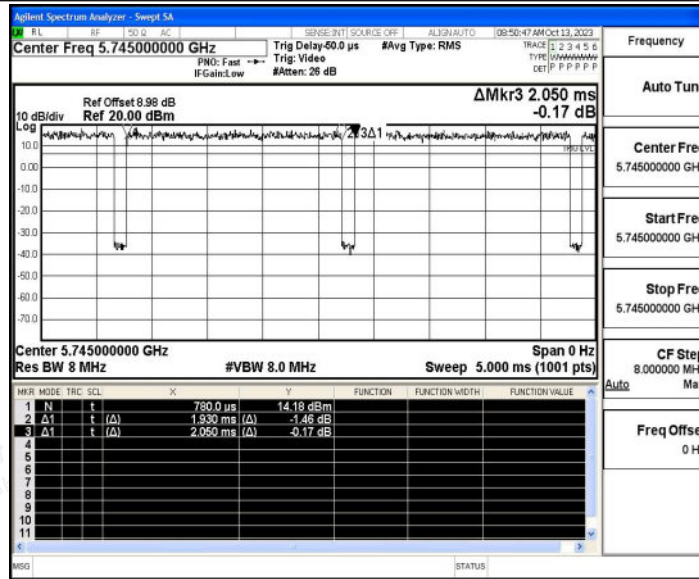


11N40SISO_Ant1_5795

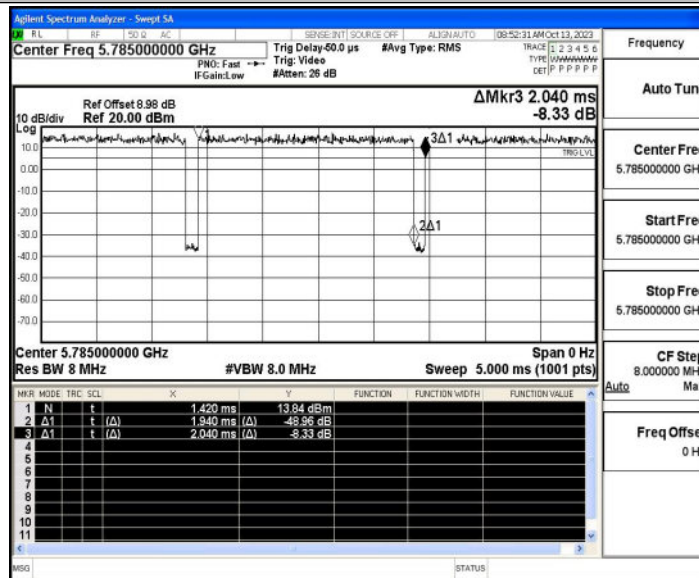


11AC20SISO_Ant1_5745



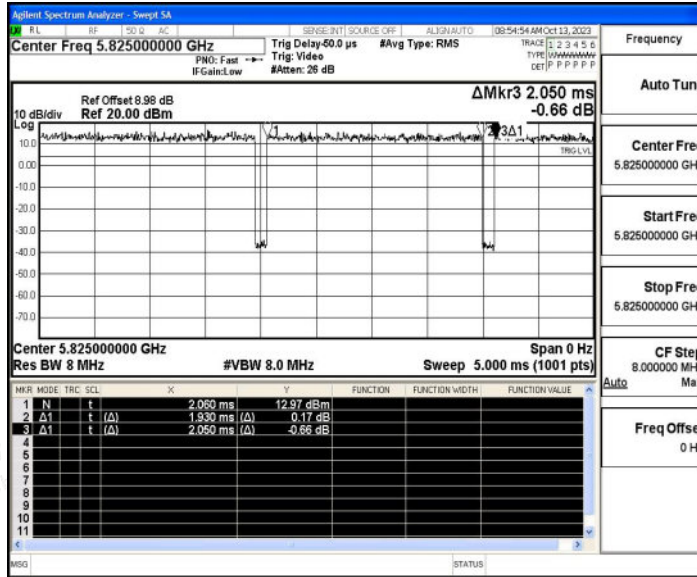


11AC20SISO_Ant1_5785

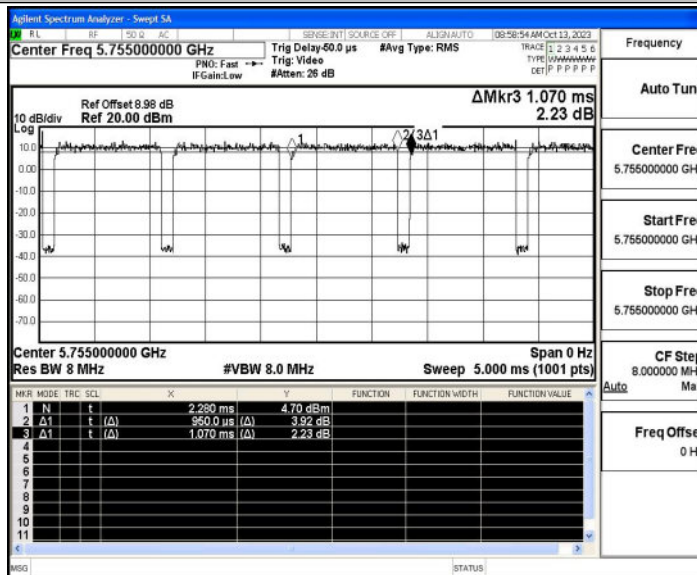


11AC20SISO_Ant1_5825



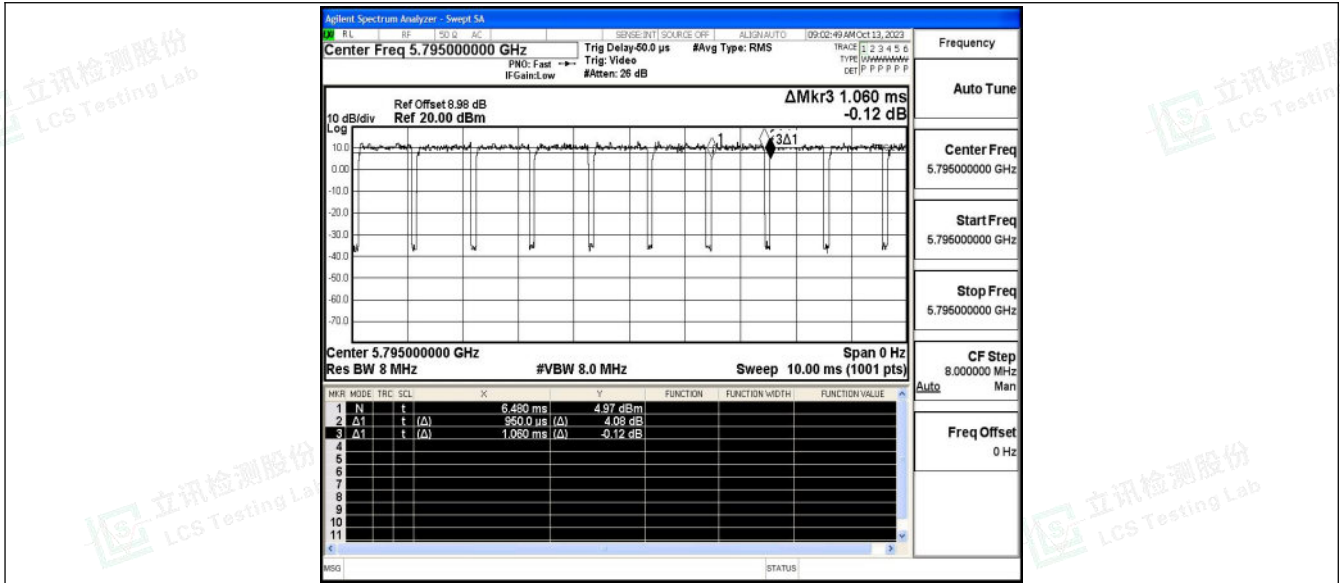


11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795





11AC80SISO_Ant1_5775

