



Appendix E

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: Smartphone

Test Model: Hyline Pro

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 Min emission bandwidth

Test Result

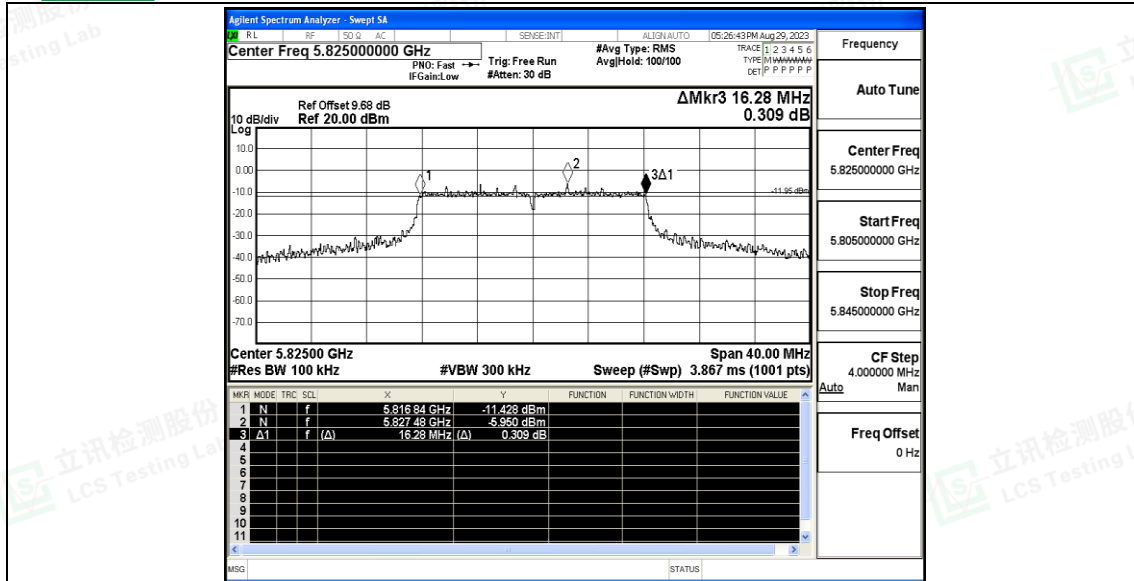
TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.360	5736.800	5753.160	0.5	PASS
		5785	16.360	5776.800	5793.160	0.5	PASS
		5825	16.280	5816.840	5833.120	0.5	PASS
11N20SISO	Ant1	5745	16.920	5736.400	5753.320	0.5	PASS
		5785	17.160	5776.400	5793.560	0.5	PASS
		5825	17.000	5816.360	5833.360	0.5	PASS
11N40SISO	Ant1	5755	35.600	5736.920	5772.520	0.5	PASS
		5795	35.520	5777.400	5812.920	0.5	PASS



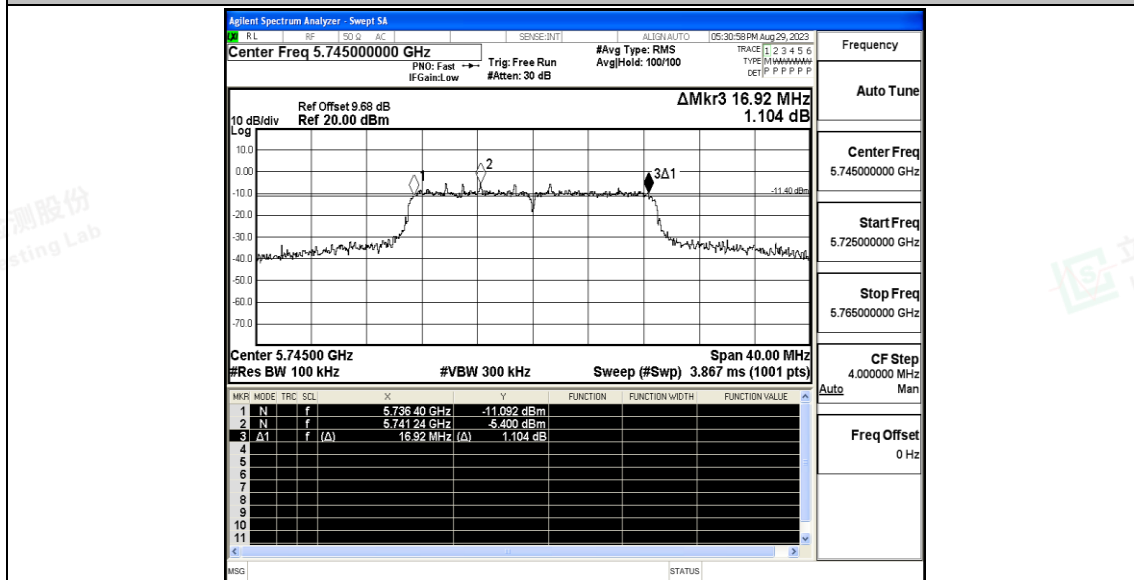


Test Graphs



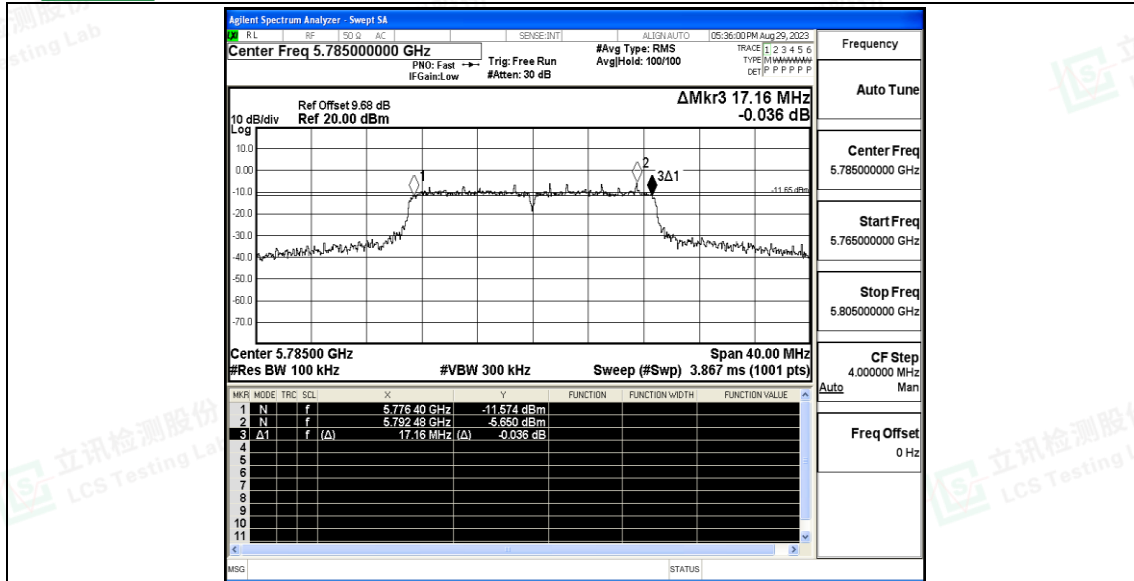


11N20SISO_Ant1_5745

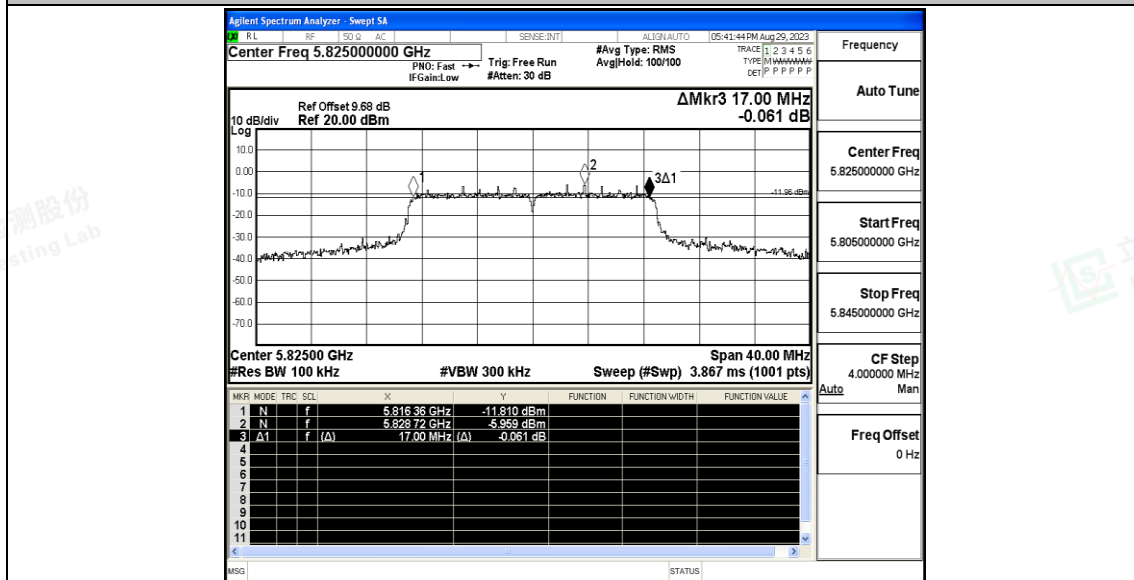


11N20SISO_Ant1_5785



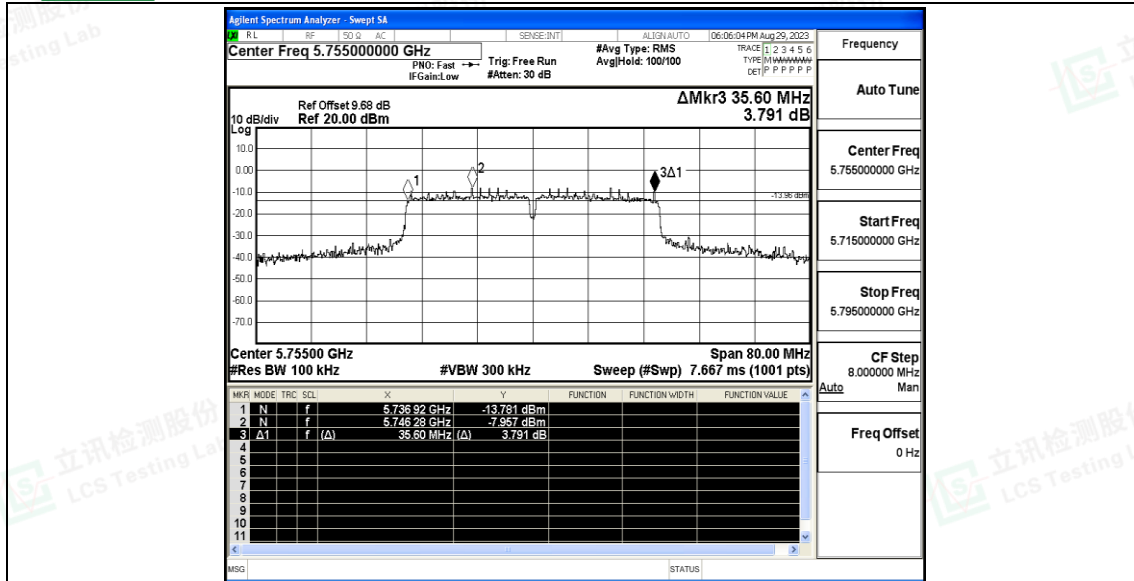


11N20SISO_Ant1_5825

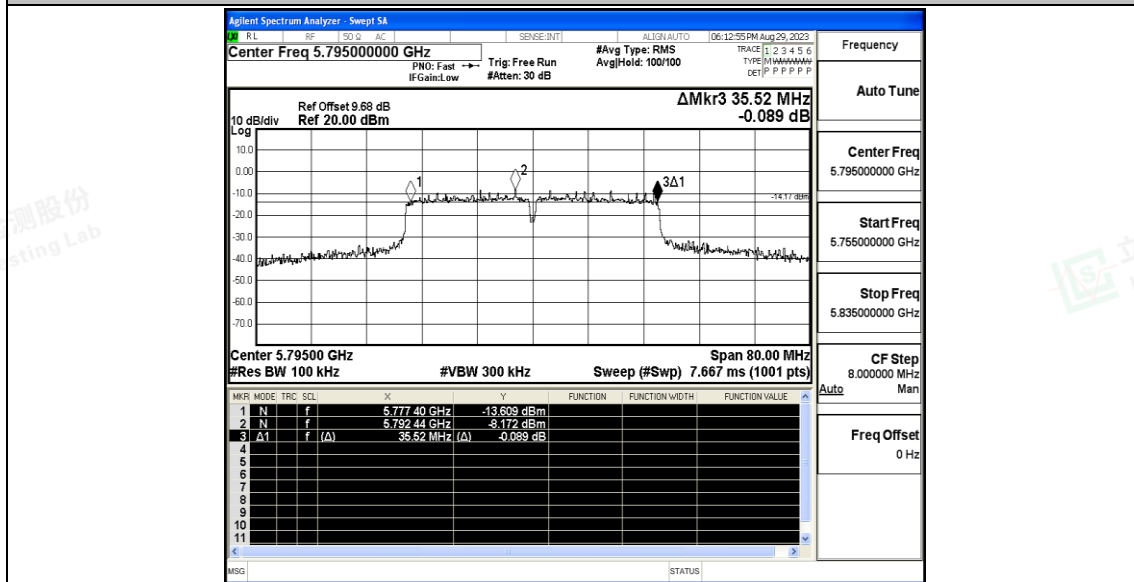


11N40SISO_Ant1_5755





11N40SISO_Ant1_5795





E.2 Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	10.93	≤30.00	PASS
		5785	10.84	≤30.00	PASS
		5825	10.48	≤30.00	PASS
11N20SISO	Ant1	5745	10.17	≤30.00	PASS
		5785	10.24	≤30.00	PASS
		5825	10.31	≤30.00	PASS
11N40SISO	Ant1	5755	10.90	≤30.00	PASS
		5795	10.51	≤30.00	PASS

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





E.3 Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/500KHz]	Limit[dBm/500KHz]	Verdict
11A	Ant1	5745	-8.47	≤30.00	PASS
		5785	-8.87	≤30.00	PASS
		5825	-8.94	≤30.00	PASS
11N20SISO	Ant1	5745	-8.93	≤30.00	PASS
		5785	-9.16	≤30.00	PASS
		5825	-9.44	≤30.00	PASS
11N40SISO	Ant1	5755	-10.78	≤30.00	PASS
		5795	-11.03	≤30.00	PASS

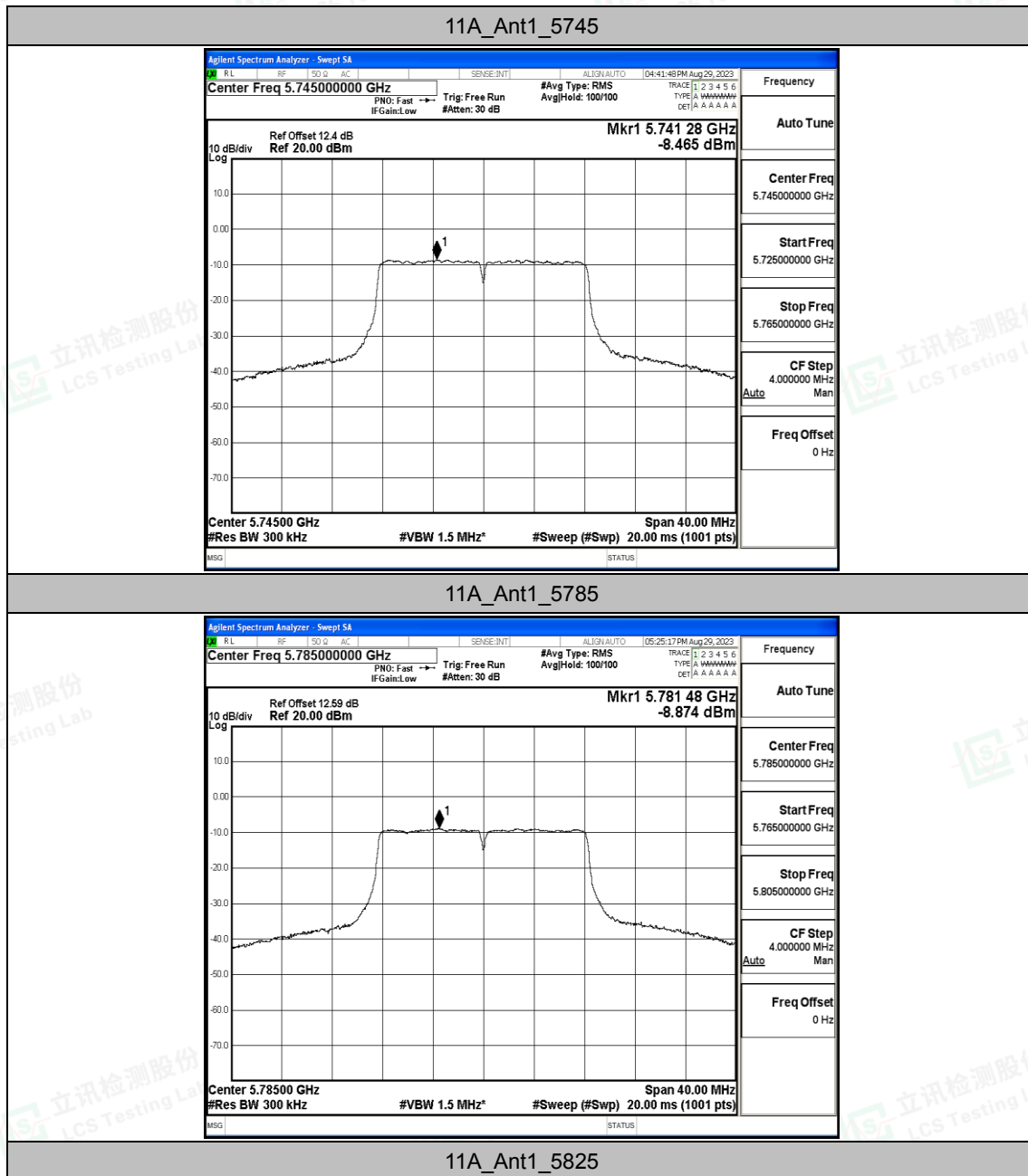
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

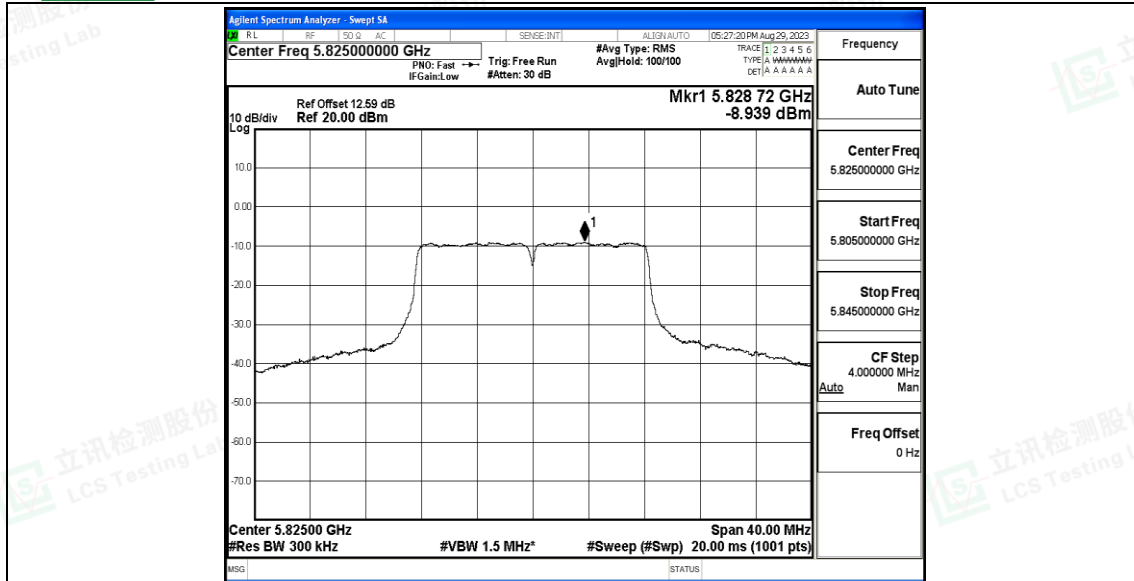
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.



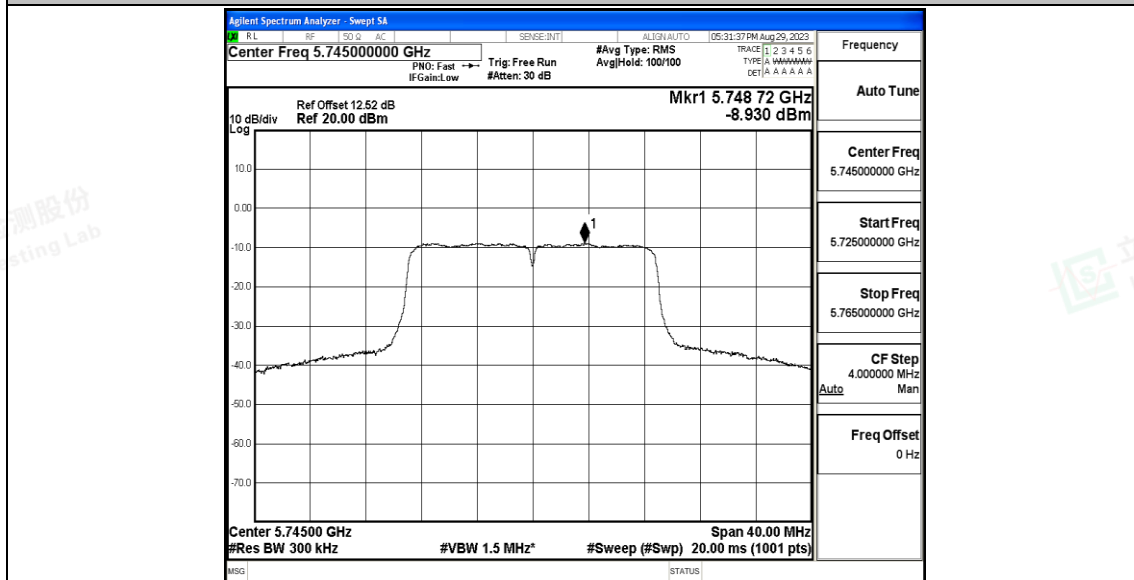


Test Graphs



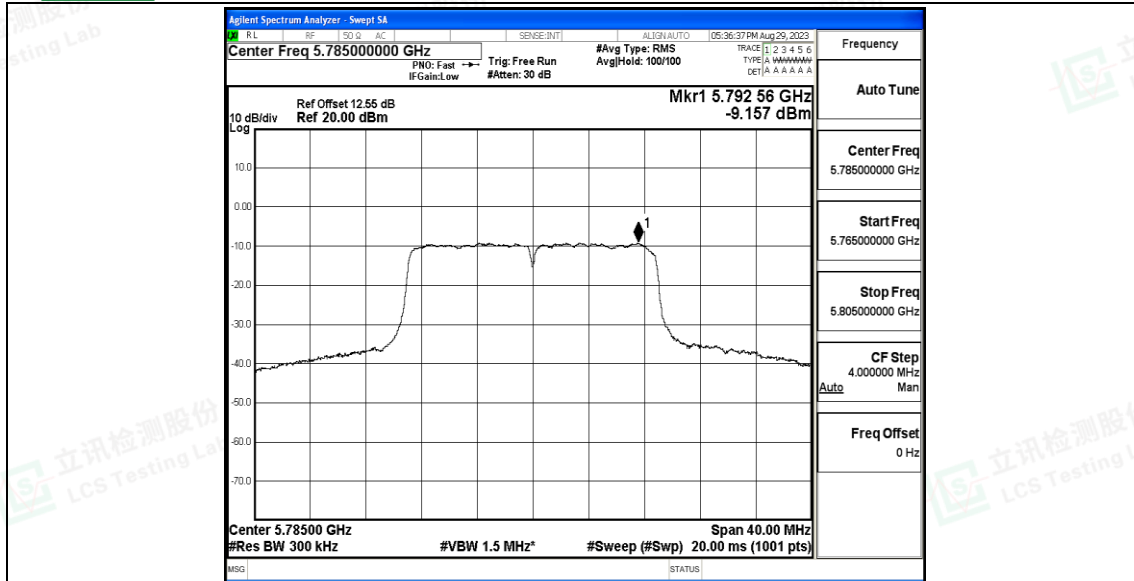


11N20SISO_Ant1_5745

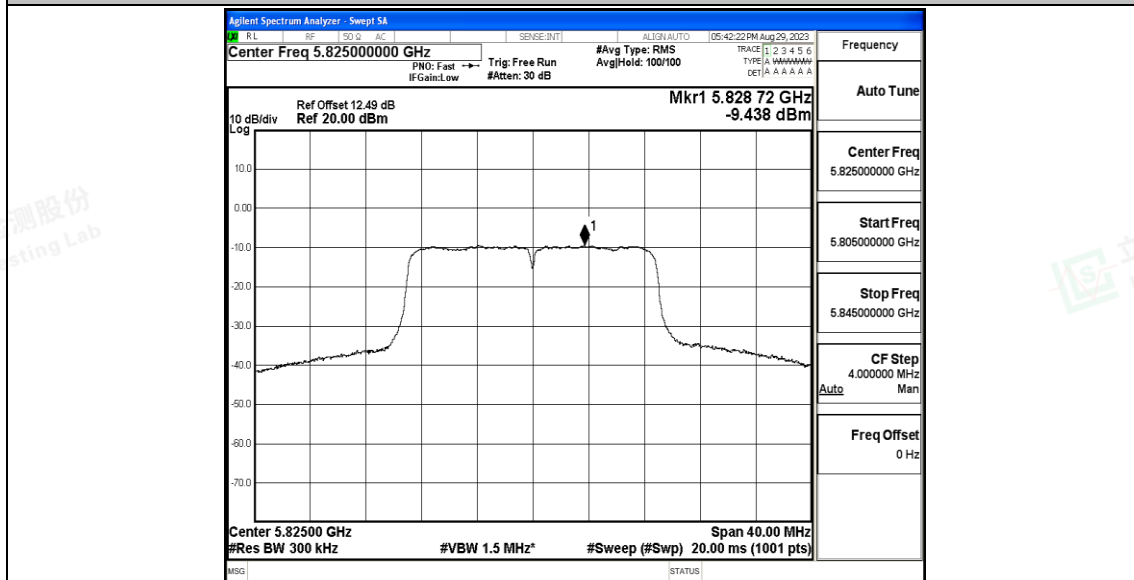


11N20SISO_Ant1_5785



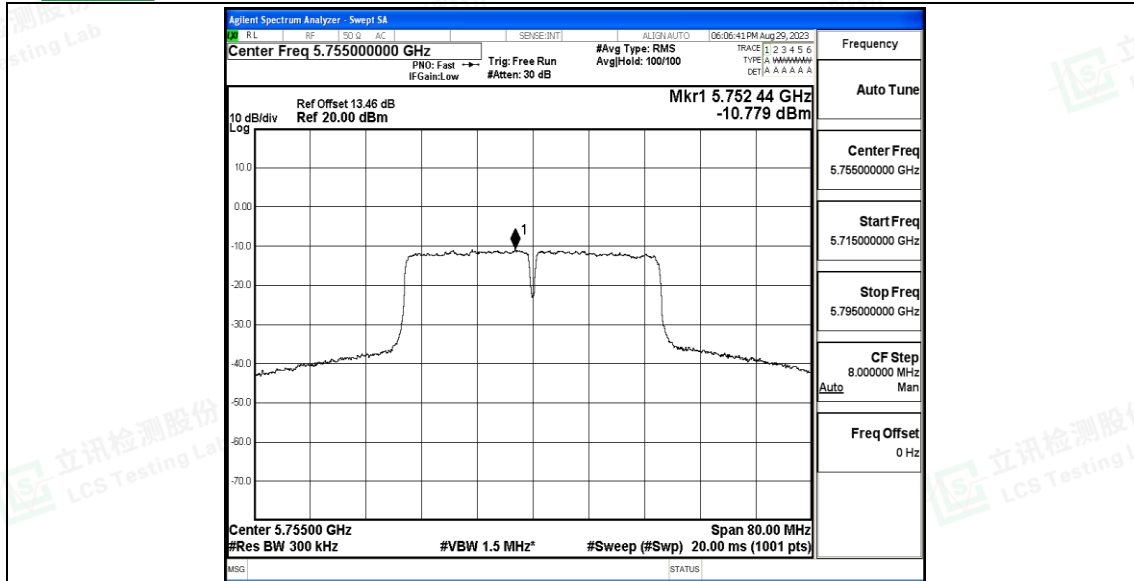


11N20SISO_Ant1_5825

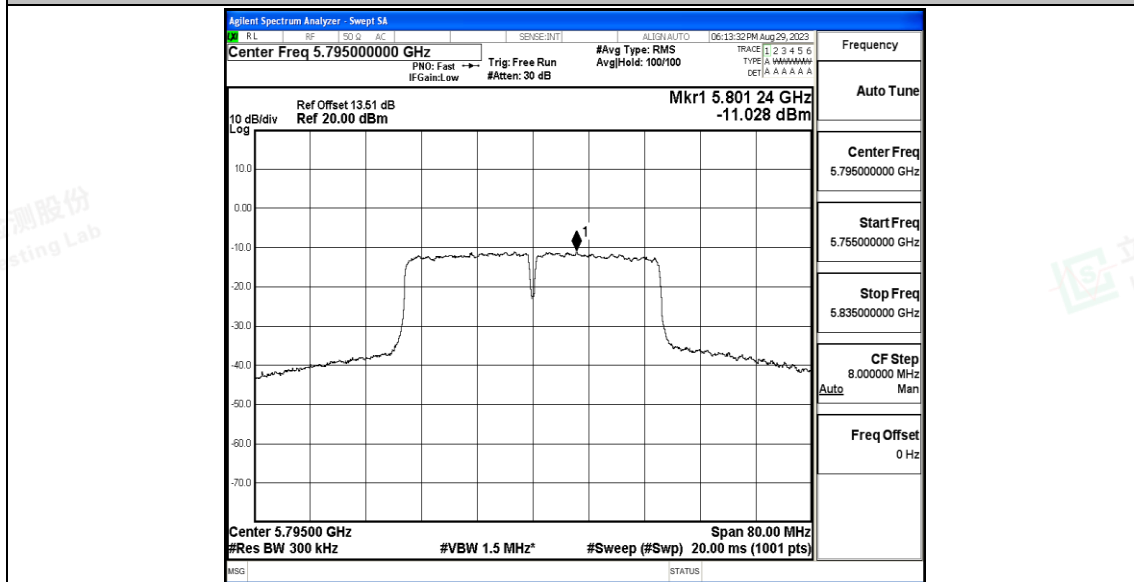


11N40SISO_Ant1_5755





11N40SISO_Ant1_5795





E.4 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11A	Ant1	Low	5745	Peak	5650.000	-51.20 1	≤-27.00	---	---	PASS
				Peak	5700.000	-43.09	≤10.00	---	---	PASS
				Peak	5720.000	-35.92	≤15.60	---	---	PASS
				Peak	5725.000	-30.16	≤27.00	---	---	PASS
		High	5825	Peak	5850.000	-33.53 2	≤15.60	---	---	PASS
				Peak	5855.000	-35.4	≤27.00	---	---	PASS
				Peak	5875.000	-47.39	≤15.60	---	---	PASS
				Peak	5925.000	-49.8	≤10.00	---	---	PASS
11N20SIS O	Ant1	Low	5745	Peak	5650.000	-50.011	≤-27.00	---	---	PASS
				Peak	5700.000	-44.82	≤10.00	---	---	PASS
				Peak	5720.000	-32.33	≤15.60	---	---	PASS
				Peak	5725.000	-31.06	≤27.00	---	---	PASS
		High	5825	Peak	5850.000	-30.29 8	≤15.60	---	---	PASS
				Peak	5855.000	-33.74	≤27.00	---	---	PASS
				Peak	5875.000	-48.3	≤15.60	---	---	PASS
				Peak	5925.000	-50.28	≤10.00	---	---	PASS
11N40SIS O	Ant1	Low	5755	Peak	5650.000	-48.18	≤-27.00	---	---	PASS
				Peak	5700.000	-38.09	≤10.00	---	---	PASS
				Peak	5720.000	-29.47	≤15.60	---	---	PASS
				Peak	5725.000	-23.98	≤27.00	---	---	PASS
		High	5795	Peak	5850.000	-35.47 3	≤15.60	---	---	PASS
				Peak	5855.000	-38.24	≤27.00	---	---	PASS
				Peak	5875.000	-42.1	≤15.60	---	---	PASS
				Peak	5925.000	-49.76	≤10.00	---	---	PASS

Note:

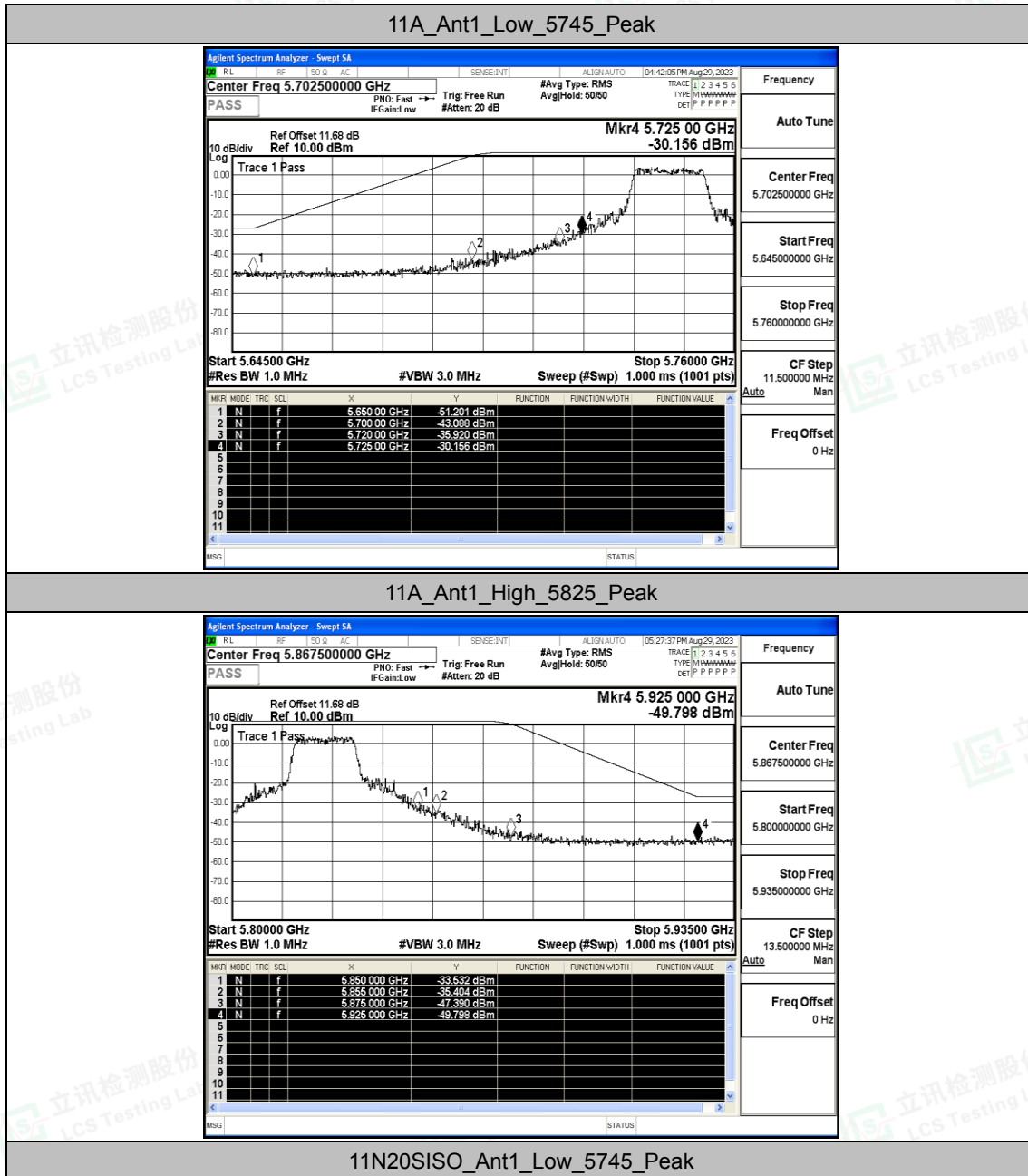
1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

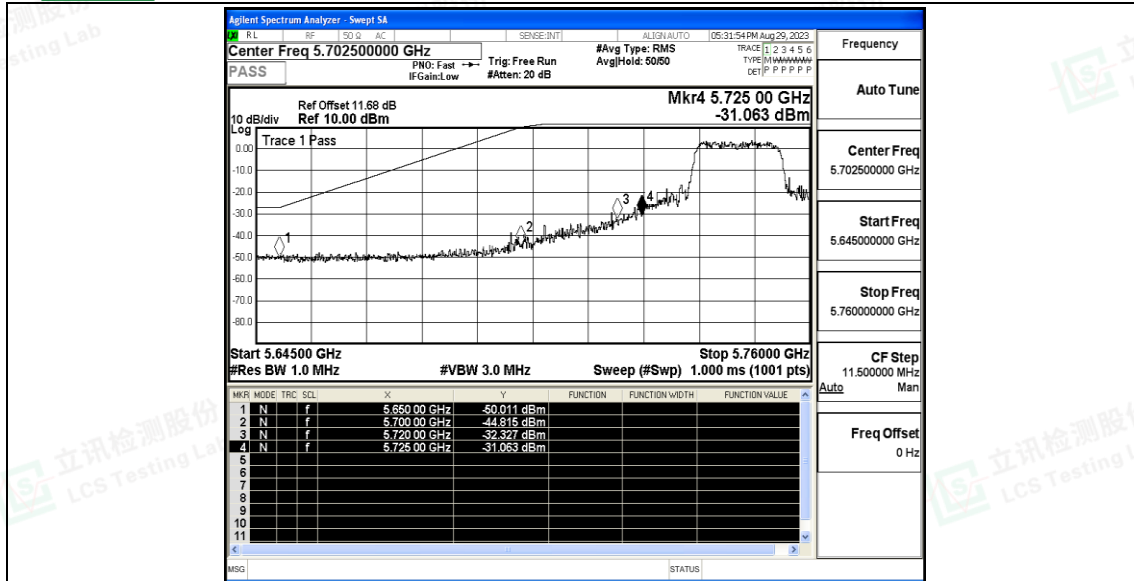


Shenzhen LCS Compliance Testing Laboratory Ltd.
 Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,
 518000, China
 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
 Scan code to check authenticity

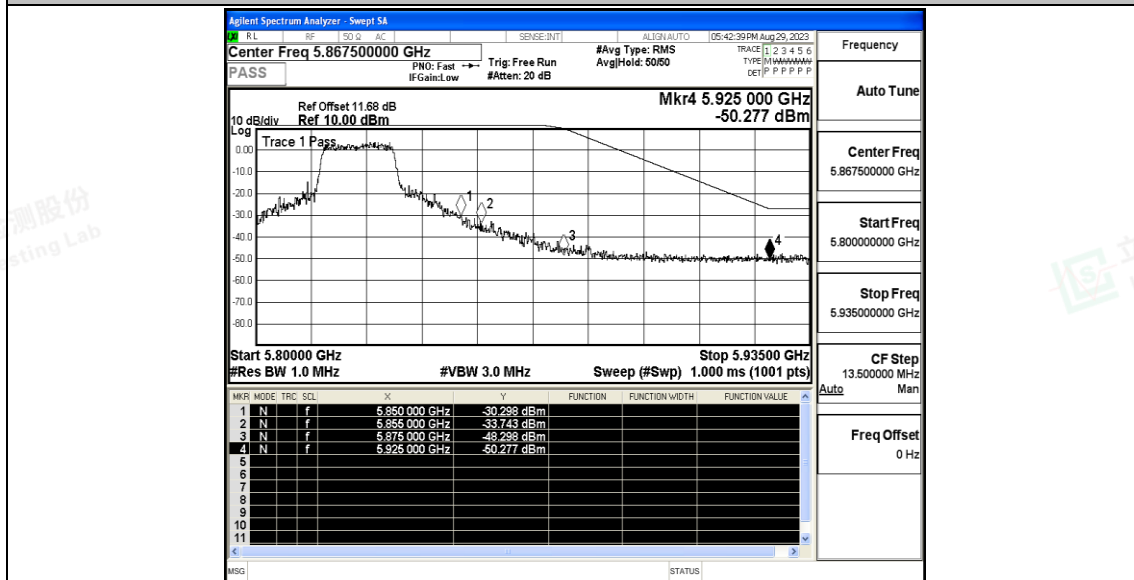


Test Graphs



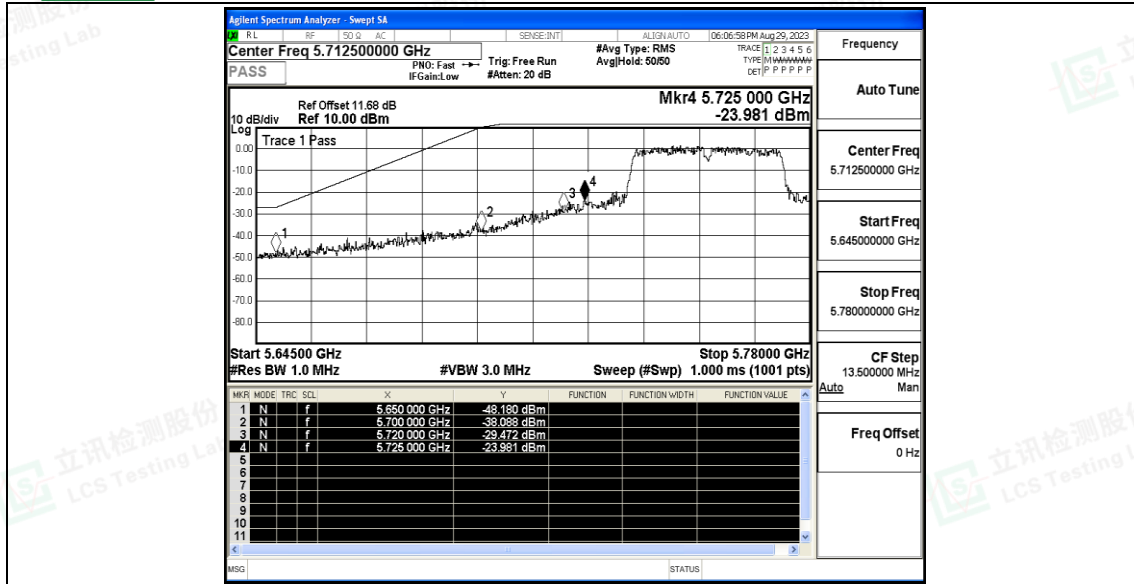


11N20SISO_Ant1_High_5825_Peak

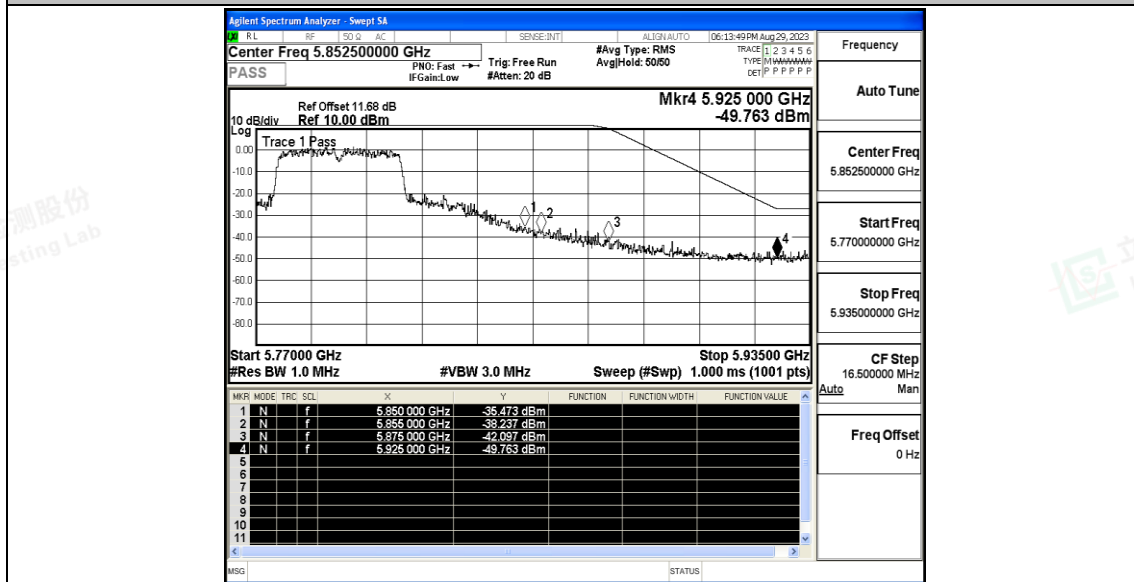


11N40SISO_Ant1_Low_5755_Peak





11N40SISO_Ant1_High_5795_Peak





E.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Frequen cy[MHz]	Voltage [Vdc]	Temper ature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SI SO	Ant1	5745	NV	NT	-40000.00	-6.962576	20	PASS
			LV	NT	-40000.00	-6.962576	20	PASS
			HV	NT	-40000.00	-6.962576	20	PASS
		5785	NV	NT	-20000.00	-3.457217	20	PASS
			LV	NT	-20000.00	-3.457217	20	PASS
			HV	NT	-20000.00	-3.457217	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
11N40SI SO	Ant1	5755	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-40000.00	-6.950478	20	PASS
		5795	NV	NT	-40000.00	-6.902502	20	PASS
			LV	NT	-40000.00	-6.902502	20	PASS
			HV	NT	0.00	0.000000	20	PASS

Temperature								
TestMode	Antenna	Frequen cy[MHz]	Voltage [Vdc]	Temper ature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SI SO	Ant1	5745	NV	-30	-40000.00	-6.962576	20	PASS
			NV	-20	-40000.00	-6.962576	20	PASS
			NV	-10	-20000.00	-3.481288	20	PASS
			NV	0	-20000.00	-3.481288	20	PASS
			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	-20000.00	-3.481288	20	PASS
			NV	30	-20000.00	-3.481288	20	PASS
			NV	40	-40000.00	-6.962576	20	PASS
			NV	50	-20000.00	-3.481288	20	PASS
		5785	NV	-30	-40000.00	-6.914434	20	PASS
			NV	-20	-20000.00	-3.457217	20	PASS
			NV	-10	-20000.00	-3.457217	20	PASS
			NV	0	-40000.00	-6.914434	20	PASS
			NV	10	-60000.00	-10.371651	20	PASS





			NV	20	-20000.00	-3.457217	20	PASS
			NV	30	-20000.00	-3.457217	20	PASS
			NV	40	-20000.00	-3.457217	20	PASS
			NV	50	-20000.00	-3.457217	20	PASS
		5825	NV	-30	-40000.00	-6.866953	20	PASS
			NV	-20	-20000.00	-3.433476	20	PASS
			NV	-10	-20000.00	-3.433476	20	PASS
			NV	0	-40000.00	-6.866953	20	PASS
			NV	10	-20000.00	-3.433476	20	PASS
			NV	20	-40000.00	-6.866953	20	PASS
			NV	30	-40000.00	-6.866953	20	PASS
			NV	40	-40000.00	-6.866953	20	PASS
			NV	50	-20000.00	-3.433476	20	PASS
11N40SI SO	Ant1	5755	NV	-30	-40000.00	-6.950478	20	PASS
			NV	-20	-40000.00	-6.950478	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-40000.00	-6.950478	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-40000.00	-6.950478	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5795	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	0.00	0.000000	20	PASS
			NV	20	-80000.00	-13.805004	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-40000.00	-6.902502	20	PASS
			NV	50	-80000.00	-13.805004	20	PASS





E.6 Duty Cycle

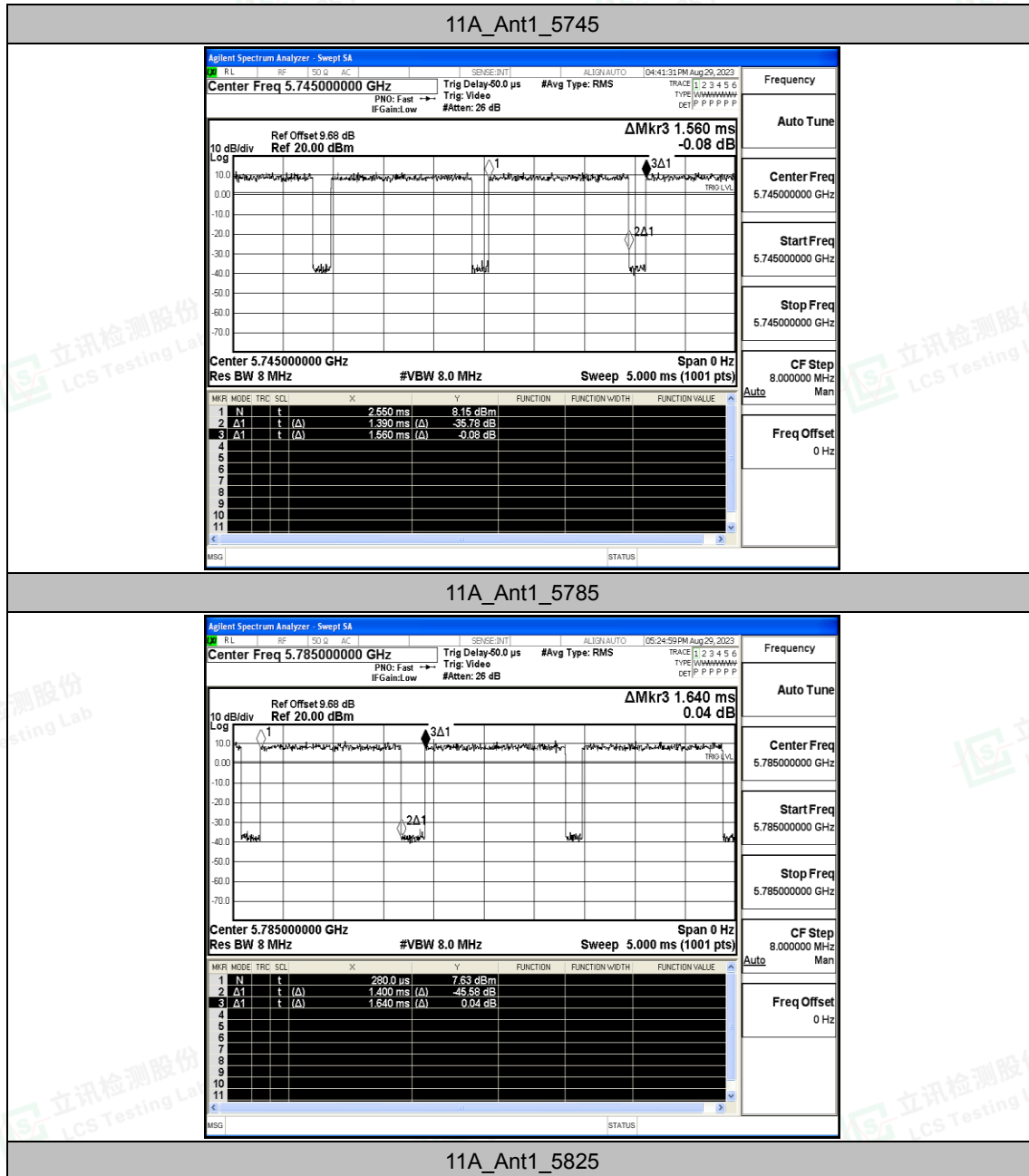
Test Result

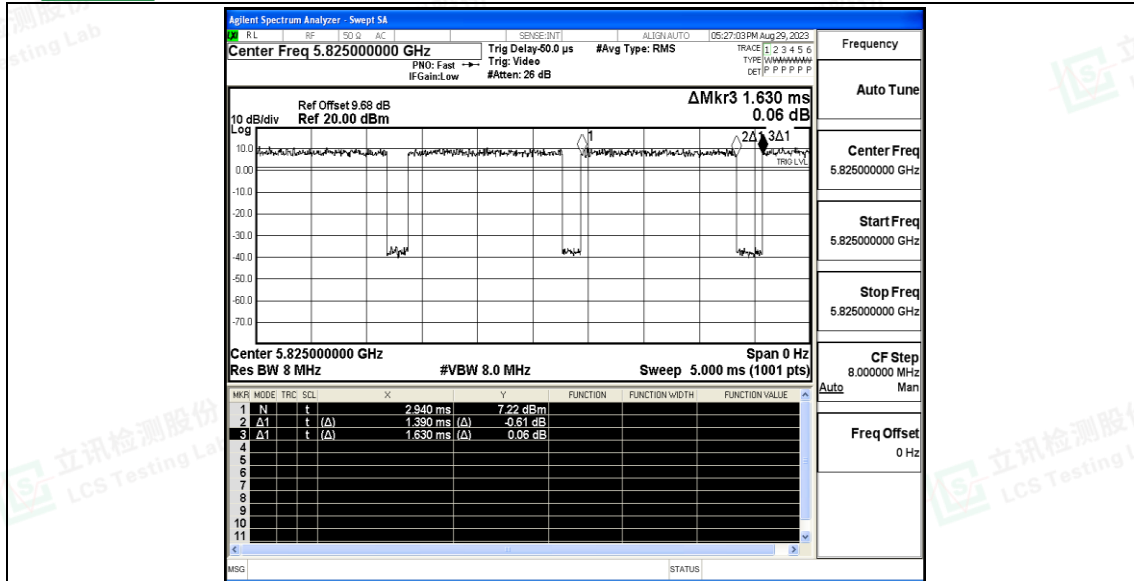
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5745	1.39	1.56	89.10
		5785	1.40	1.64	85.37
		5825	1.39	1.63	85.28
11N20SISO	Ant1	5745	1.17	1.35	86.67
		5785	1.18	1.37	86.13
		5825	1.17	1.34	87.31
11N40SISO	Ant1	5755	0.58	0.83	69.88
		5795	0.58	0.84	69.05



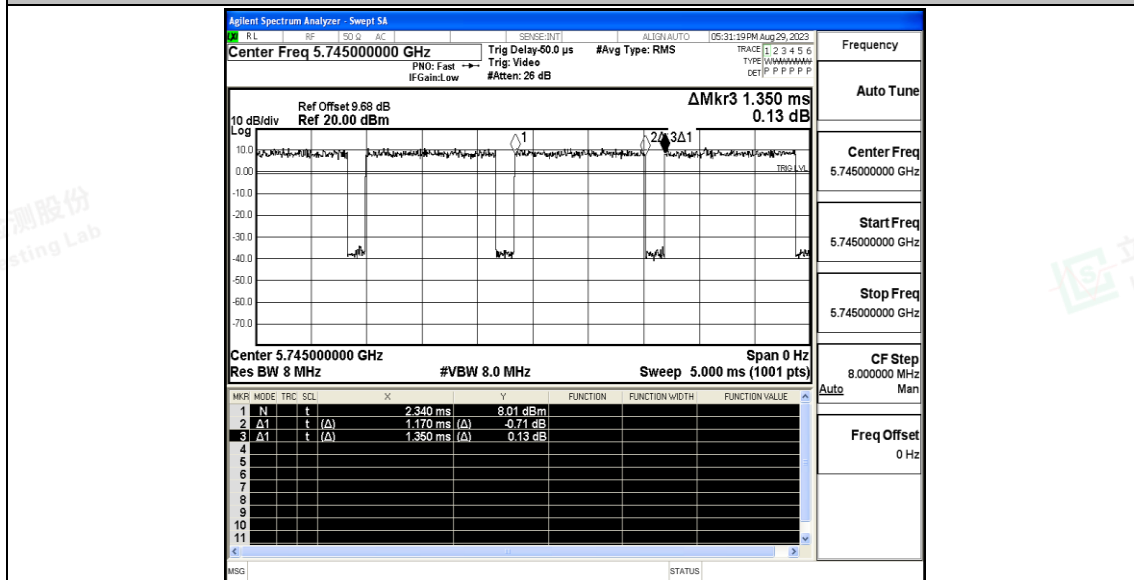


Test Graphs



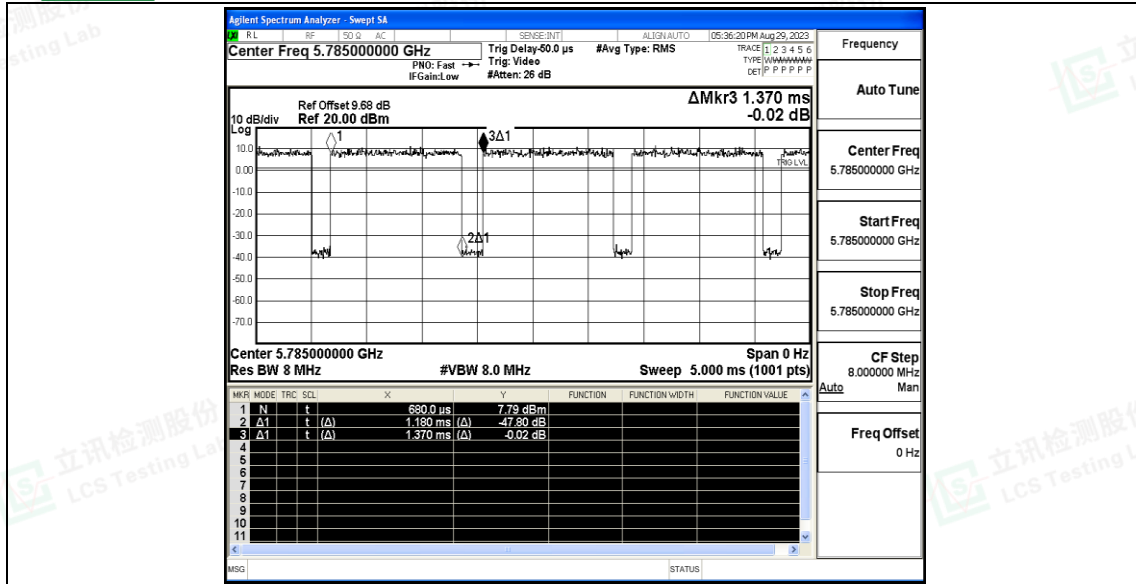


11N20SISO_Ant1_5745

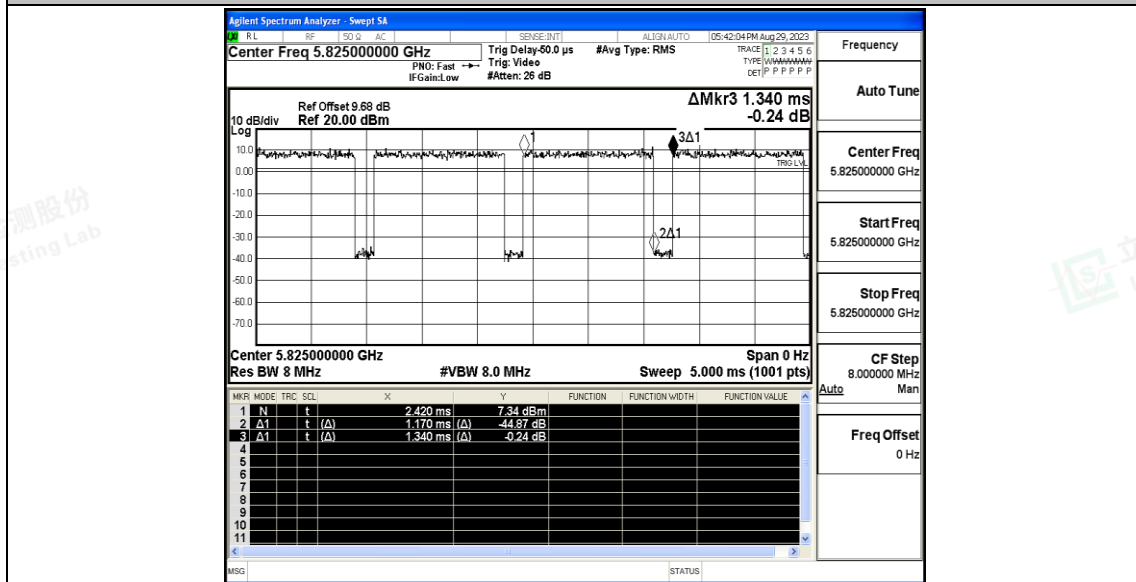


11N20SISO_Ant1_5785



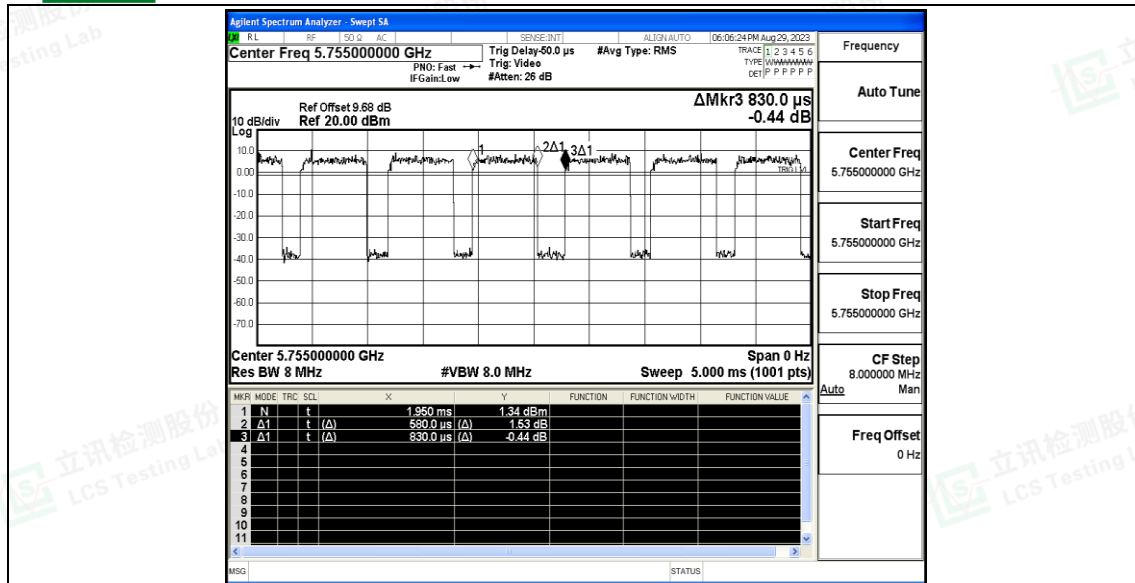


11N20SISO_Ant1_5825



11N40SISO_Ant1_5755





11N40SISO_Ant1_5795

