



## Appendix B

### RF Test Data for 5.2G WIFI (Conducted Measurement)

Product Name: Dashcam

Test Model: LS07D

#### Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Taylor Hu</i> Taylor Hu
Supervised by:	<i>Li Huan</i> Li Huan





### A.1 Emission Bandwidth

#### Test Result

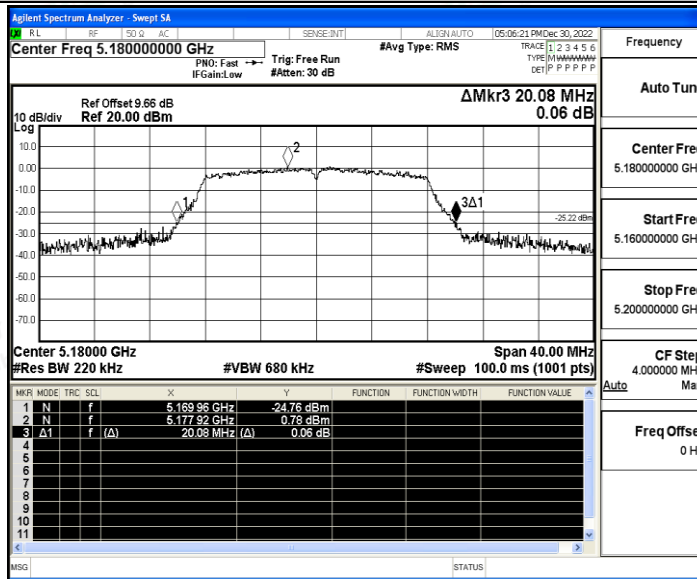
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	20.080	5169.960	5190.040	---	---
		5220	19.880	5210.080	5229.960	---	---
		5240	20.000	5229.960	5249.960	---	---
11N20SISO	Ant1	5180	20.240	5169.800	5190.040	---	---
		5220	20.280	5209.840	5230.120	---	---
		5240	20.160	5229.920	5250.080	---	---
11N40SISO	Ant1	5190	40.240	5169.920	5210.160	---	---
		5230	40.800	5209.440	5250.240	---	---
11AC20SISO	Ant1	5180	20.400	5169.760	5190.160	---	---
		5220	20.400	5209.800	5230.200	---	---
		5240	20.200	5229.920	5250.120	---	---
11AC40SISO	Ant1	5190	41.680	5169.440	5211.120	---	---
		5230	40.560	5209.760	5250.320	---	---
11AC80SISO	Ant1	5210	80.480	5169.520	5250.000	---	---



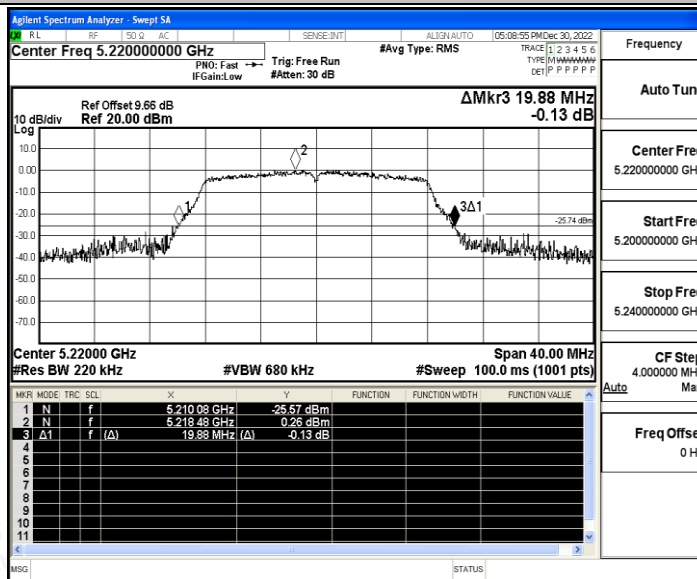


### Test Graphs

11A\_Ant1\_5180

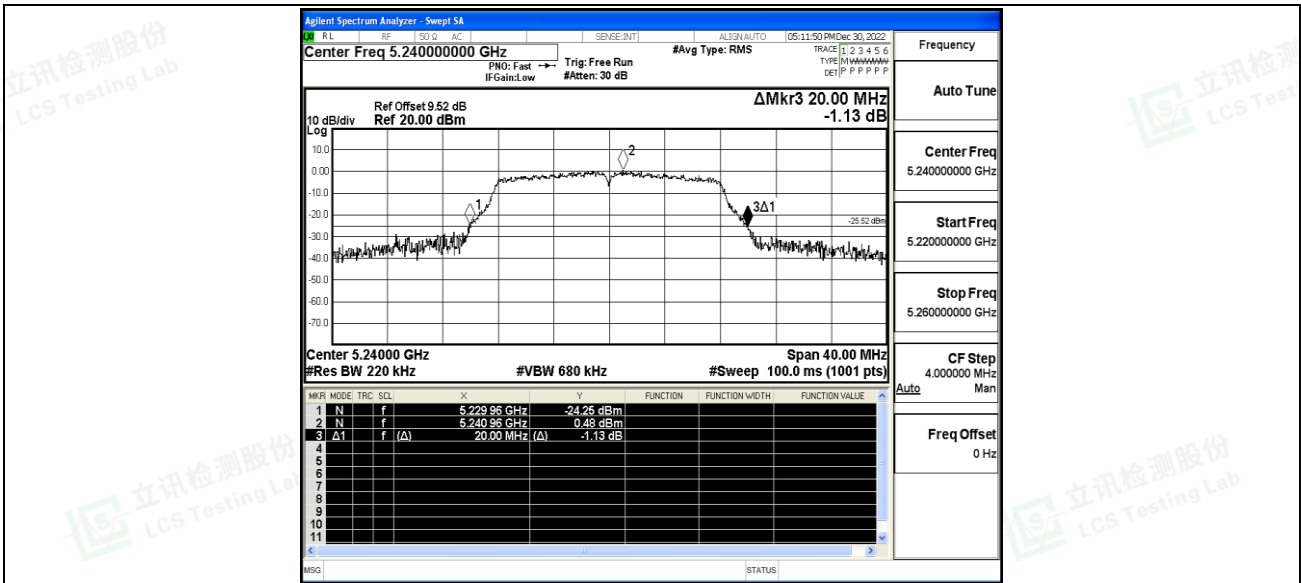


11A\_Ant1\_5220

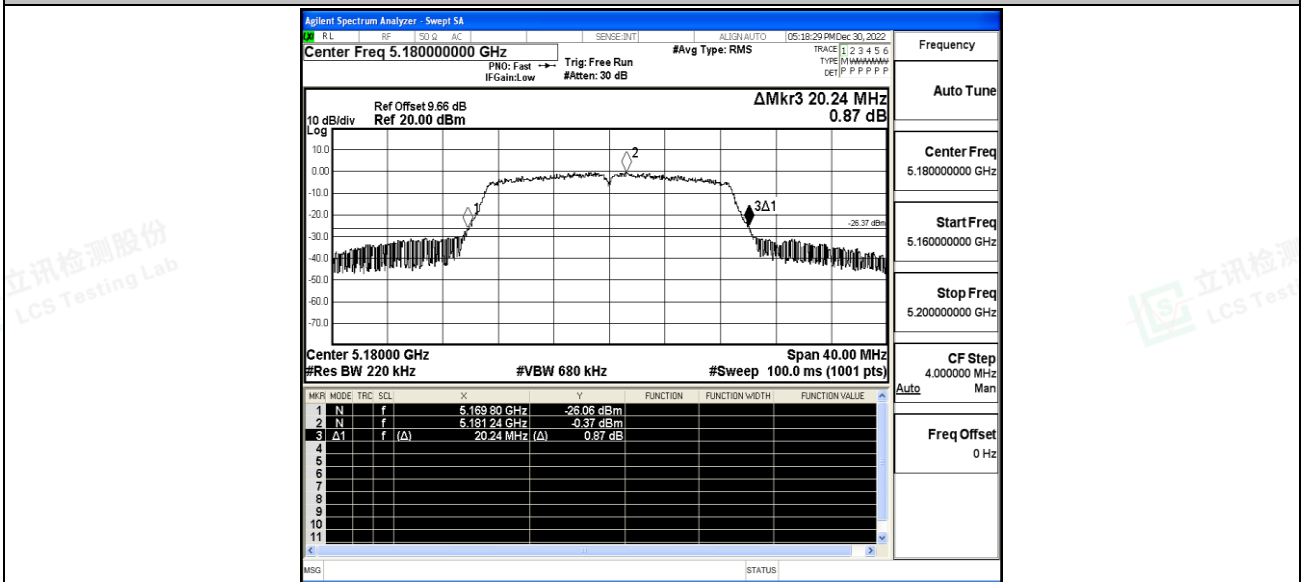


11A\_Ant1\_5240



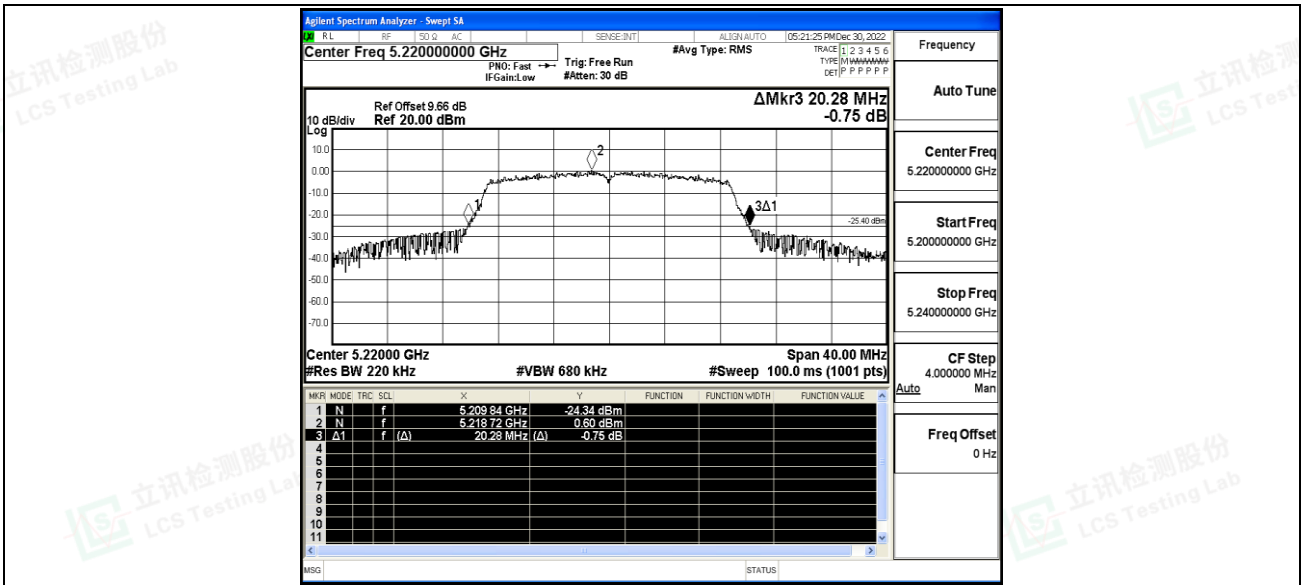


11N20SISO\_Ant1\_5180

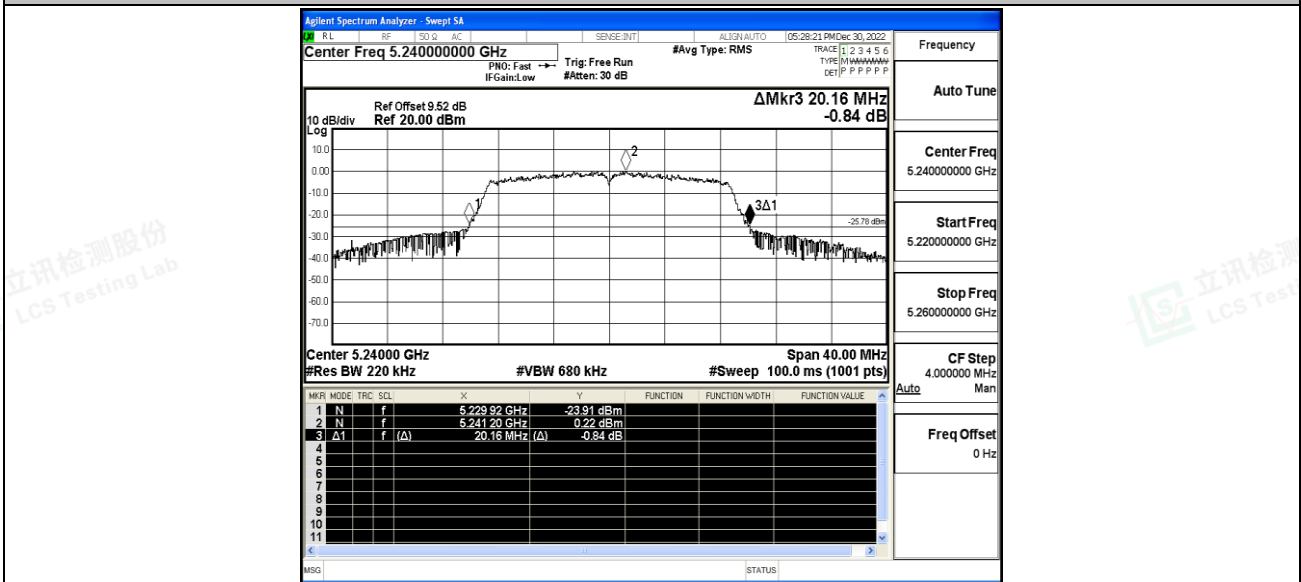


11N20SISO\_Ant1\_5220



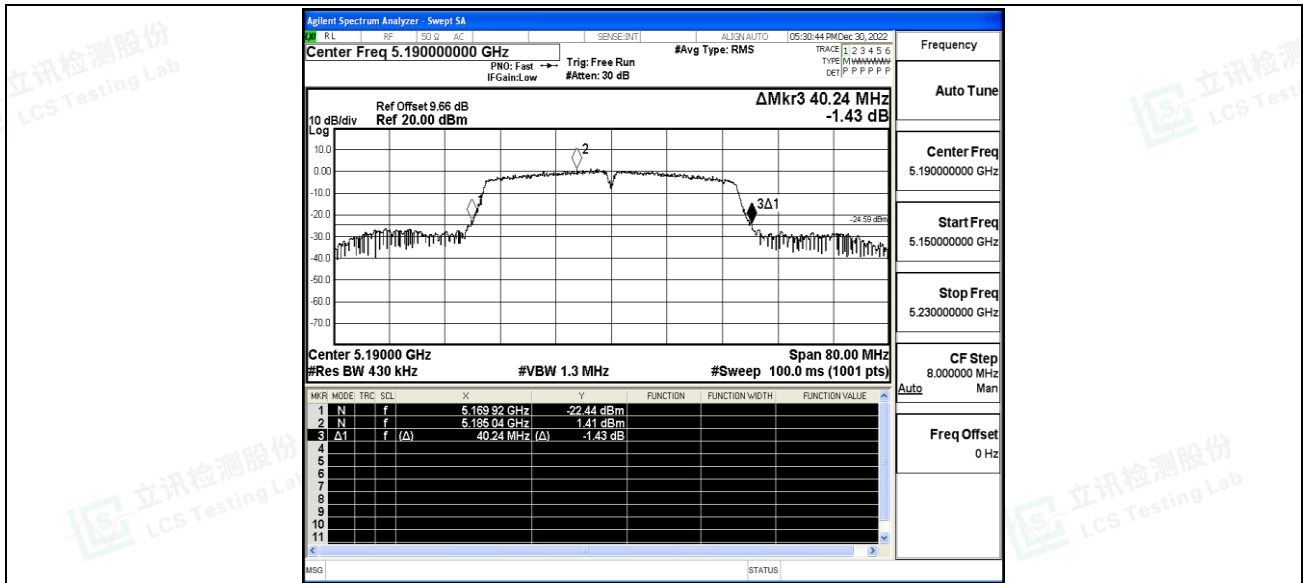


11N20SISO\_Ant1\_5240

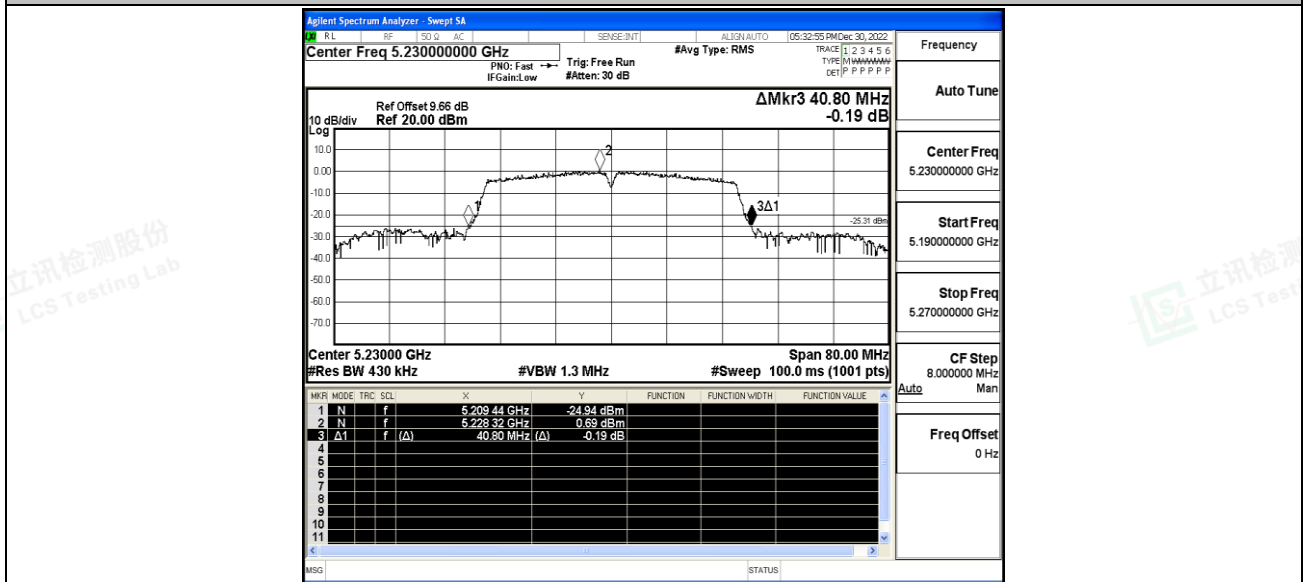


11N40SISO\_Ant1\_5190



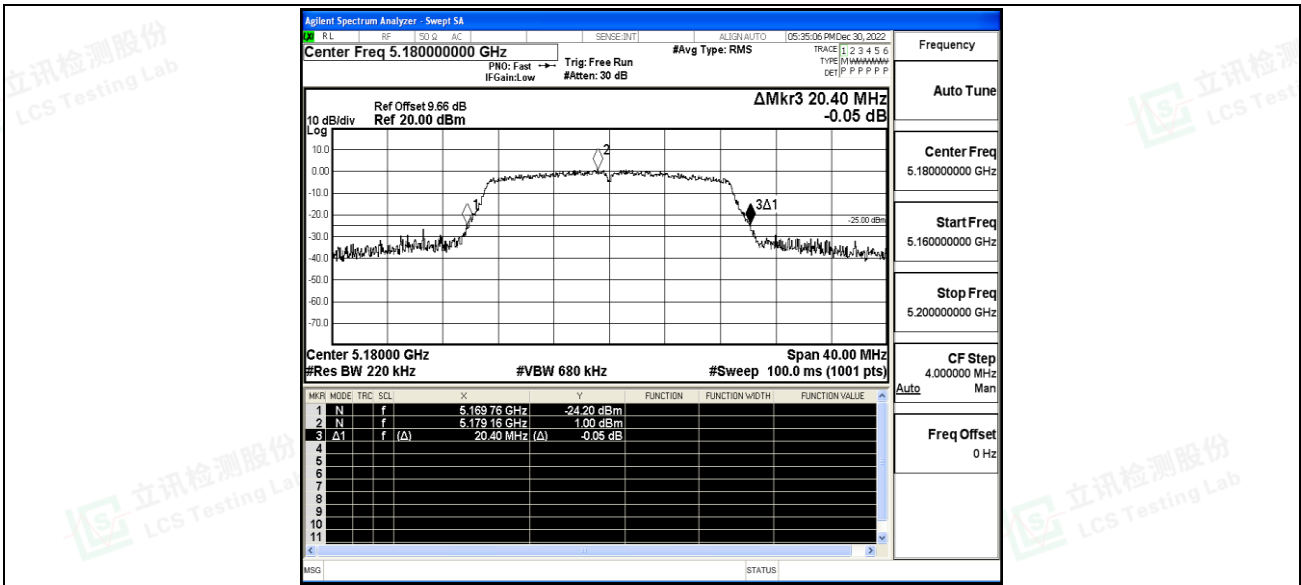


11N40SISO\_Ant1\_5230

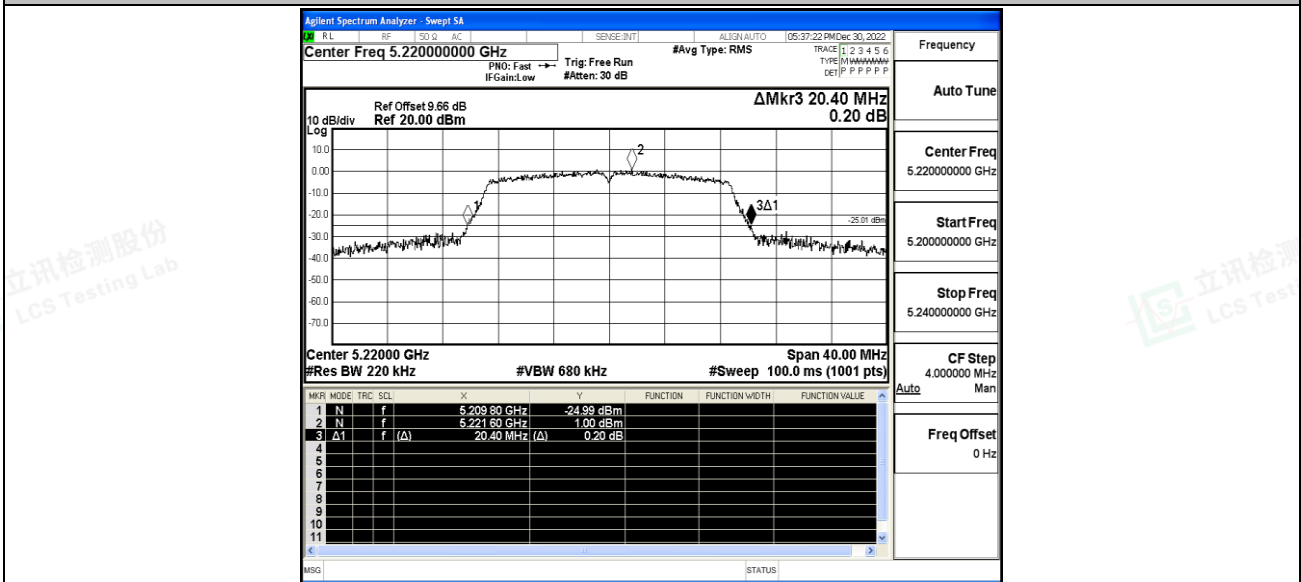


11AC20SISO\_Ant1\_5180



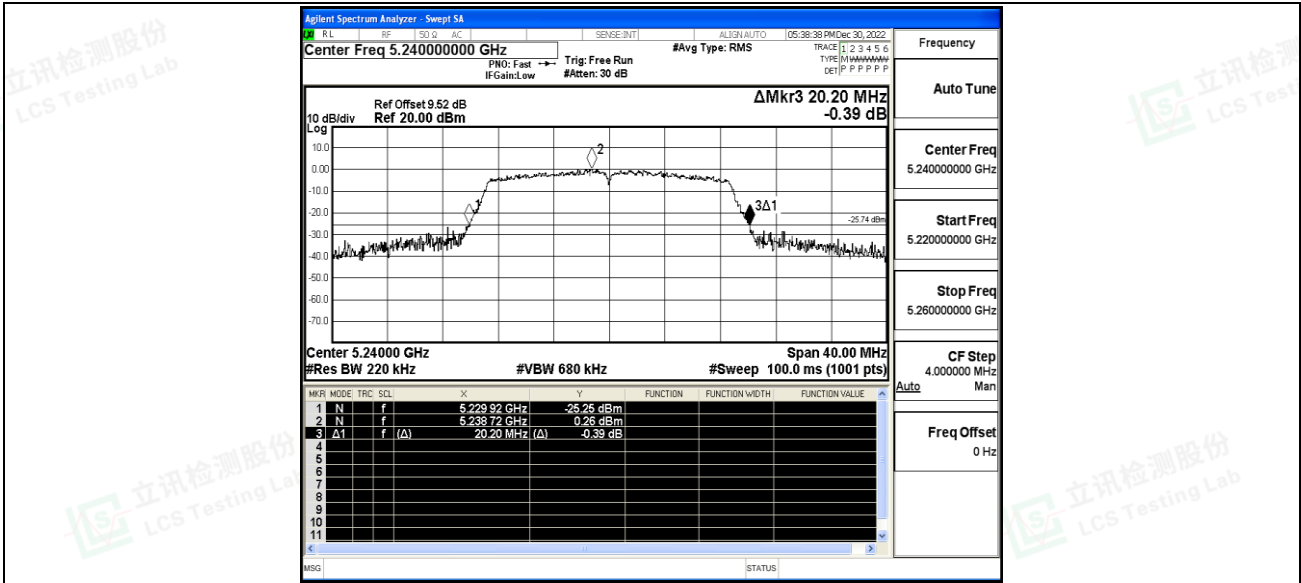


11AC20SISO\_Ant1\_5220

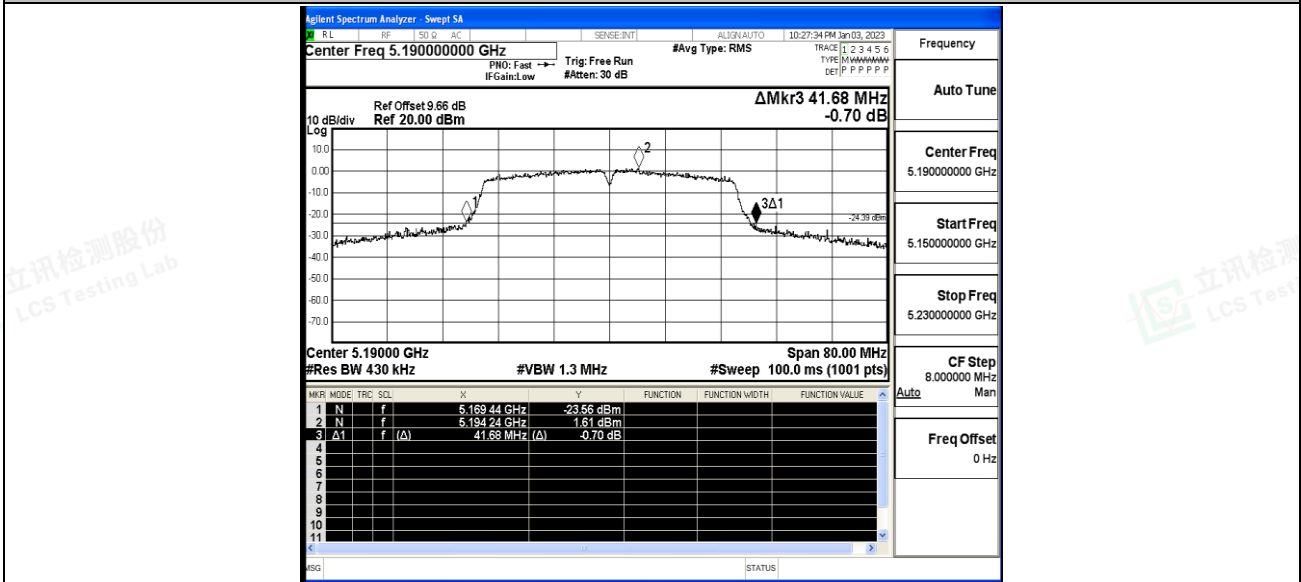


11AC20SISO\_Ant1\_5240





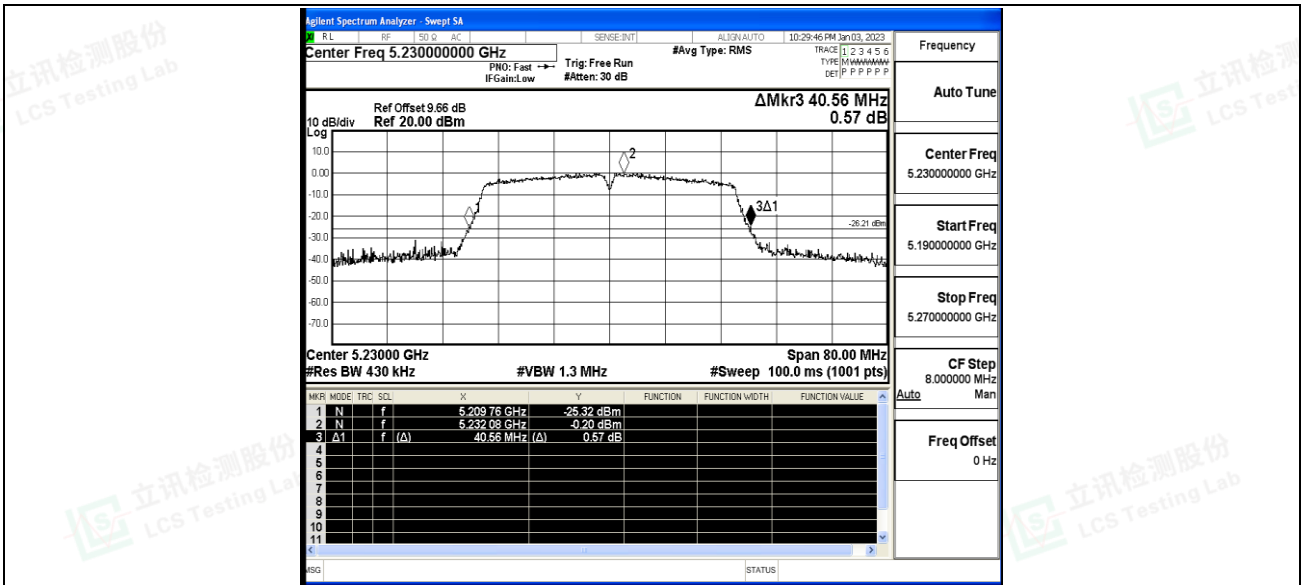
11AC40SISO\_Ant1\_5190



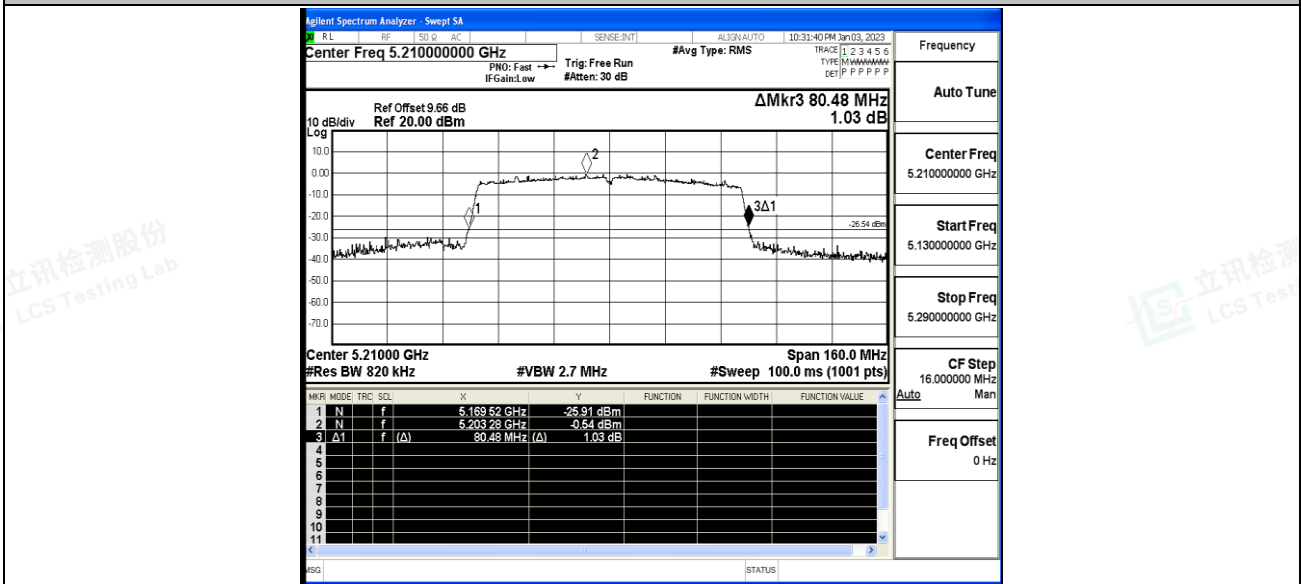
11AC40SISO\_Ant1\_5230







11AC80SISO\_Ant1\_5210





## A.2 Maximum conducted output power

### Test Result Channel Power

Test Mode	Antenna	Frequency [MHz]	Set Power	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	---	10.15	96.21	0.17	10.32	≤30	PASS
		5220	---	9.57	96.53	0.15	9.72	≤30	PASS
		5240	---	9.42	96.53	0.15	9.57	≤30	PASS
11N20SI SO	Ant1	5180	---	9.01	97.04	0.13	9.14	≤30	PASS
		5220	---	9.54	97.01	0.13	9.67	≤30	PASS
		5240	---	9.34	96.30	0.16	9.50	≤30	PASS
11N40SI SO	Ant1	5190	---	9.86	92.75	0.33	10.19	≤30	PASS
		5230	---	9.53	92.86	0.32	9.85	≤30	PASS
11AC20 SISO	Ant1	5180	---	10.20	96.32	0.16	10.36	≤30	PASS
		5220	---	9.62	96.32	0.16	9.78	≤30	PASS
		5240	---	9.32	97.04	0.13	9.45	≤30	PASS
11AC40 SISO	Ant1	5190	---	10.06	94.29	0.26	10.32	≤30	PASS
		5230	---	9.01	94.20	0.26	9.27	≤30	PASS
11AC80 SISO	Ant1	5210	---	7.79	89.19	0.50	8.29	≤30	PASS

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





### A.3 Maximum power spectral density

#### Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-0.41	≤17.00	PASS
		5220	-0.73	≤17.00	PASS
		5240	-0.86	≤17.00	PASS
11N20SISO	Ant1	5180	-1.44	≤17.00	PASS
		5220	-0.9	≤17.00	PASS
		5240	-1.04	≤17.00	PASS
11N40SISO	Ant1	5190	-3.27	≤17.00	PASS
		5230	-3.64	≤17.00	PASS
11AC20SISO	Ant1	5180	-0.26	≤17.00	PASS
		5220	-0.61	≤17.00	PASS
		5240	-1.07	≤17.00	PASS
11AC40SISO	Ant1	5190	-3.2	≤17.00	PASS
		5230	-4.68	≤17.00	PASS
11AC80SISO	Ant1	5210	-8.43	≤17.00	PASS

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

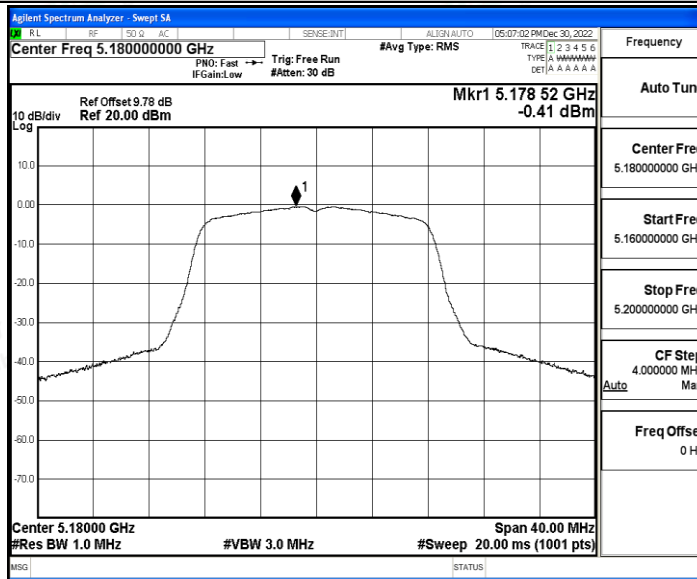
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.



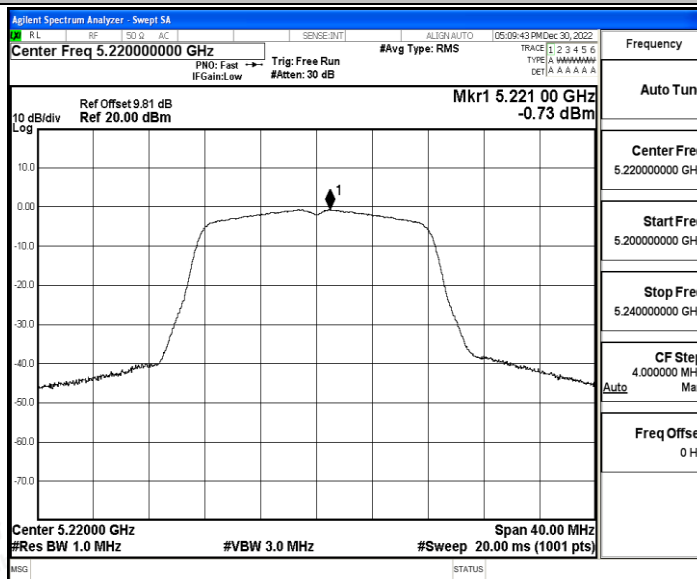


### Test Graphs

11A\_Ant1\_5180

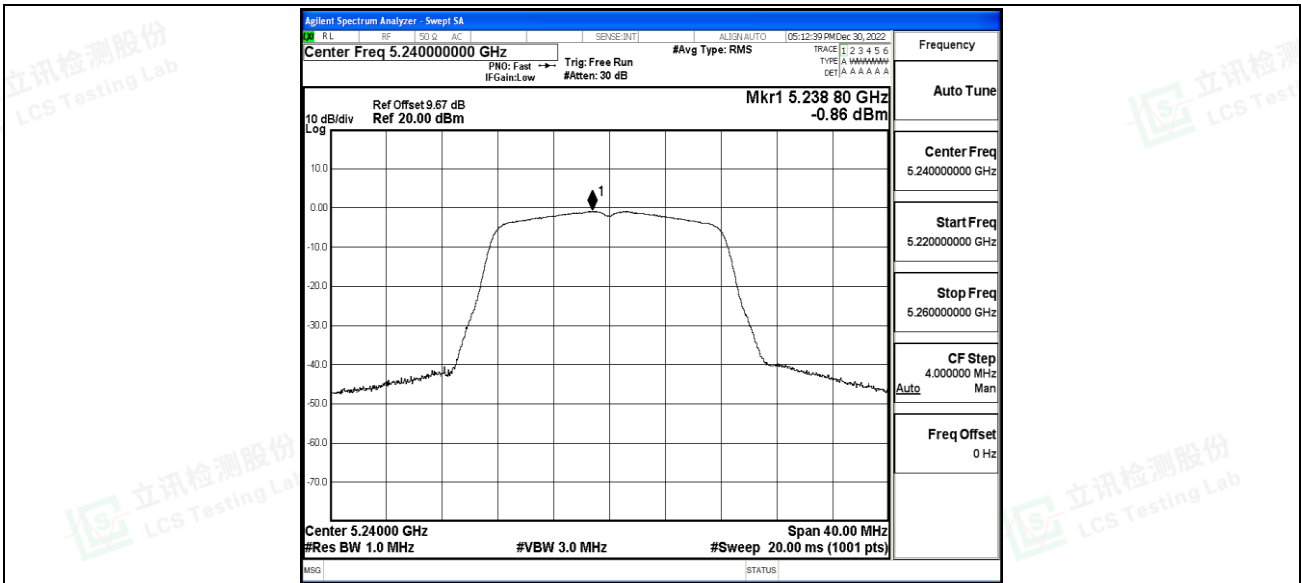


11A\_Ant1\_5220

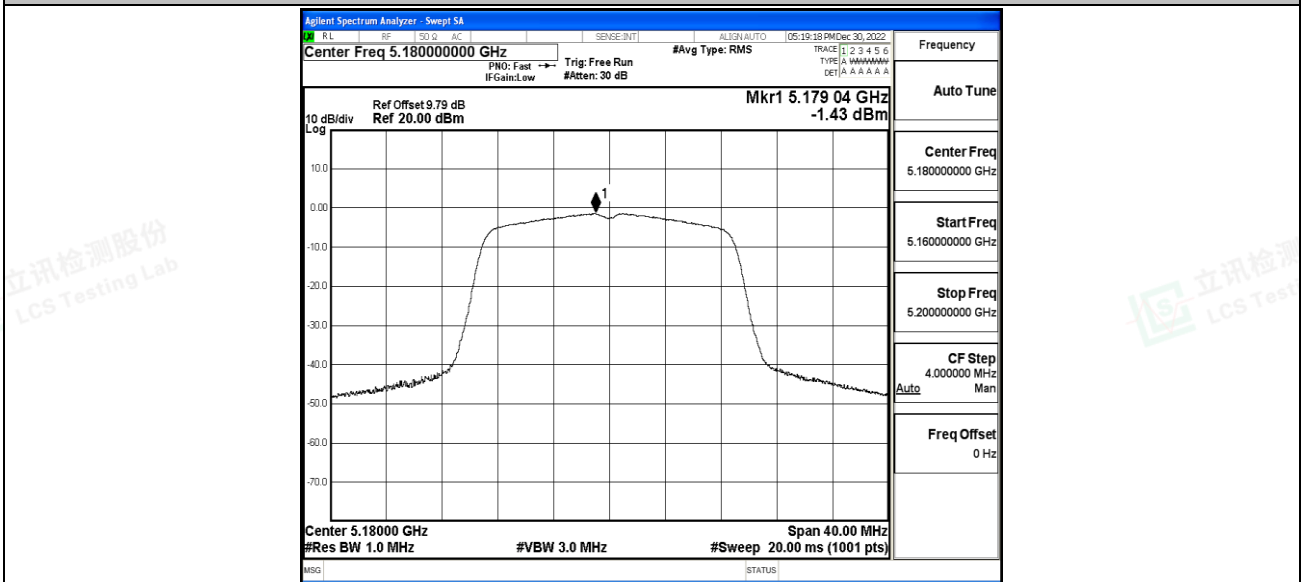


11A\_Ant1\_5240



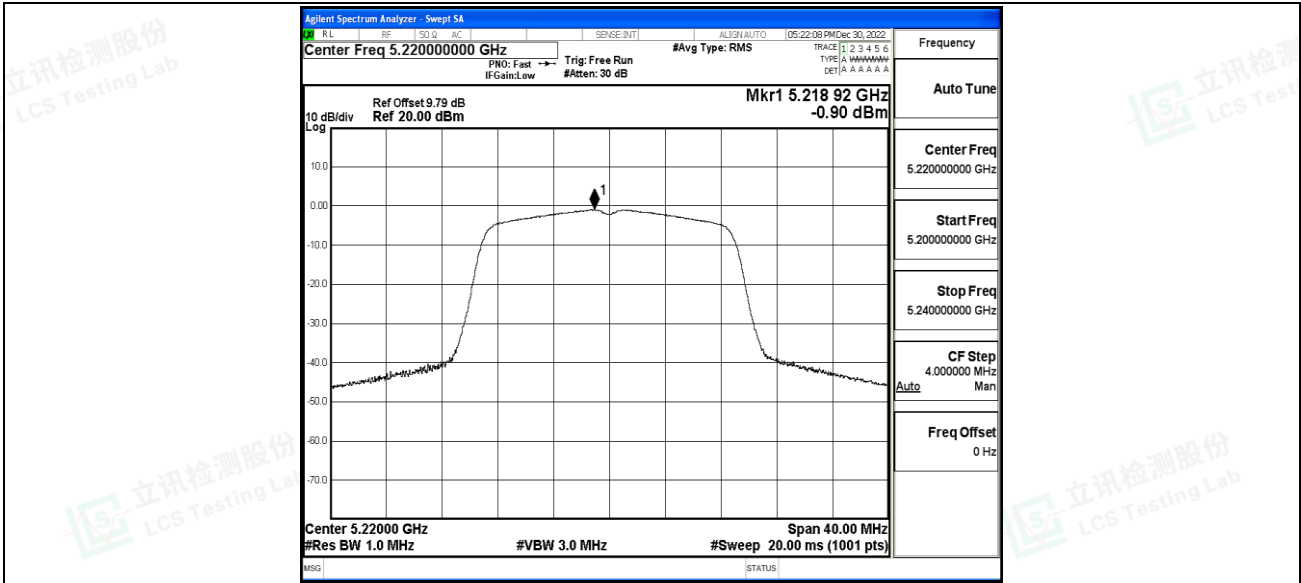


11N20SISO\_Ant1\_5180

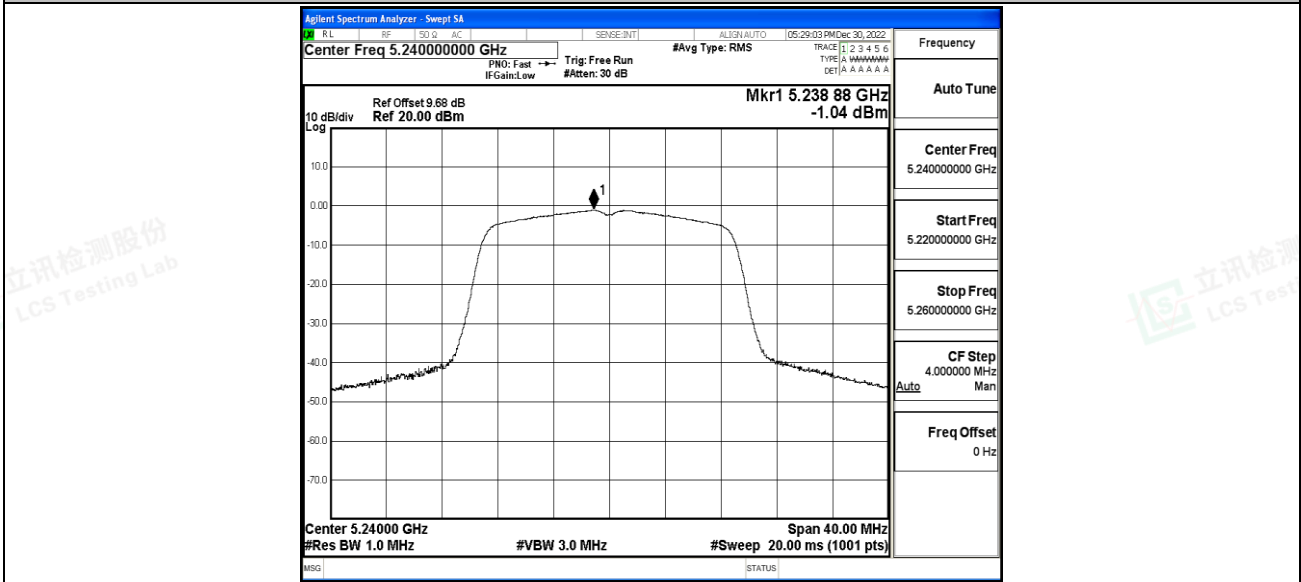


11N20SISO\_Ant1\_5220



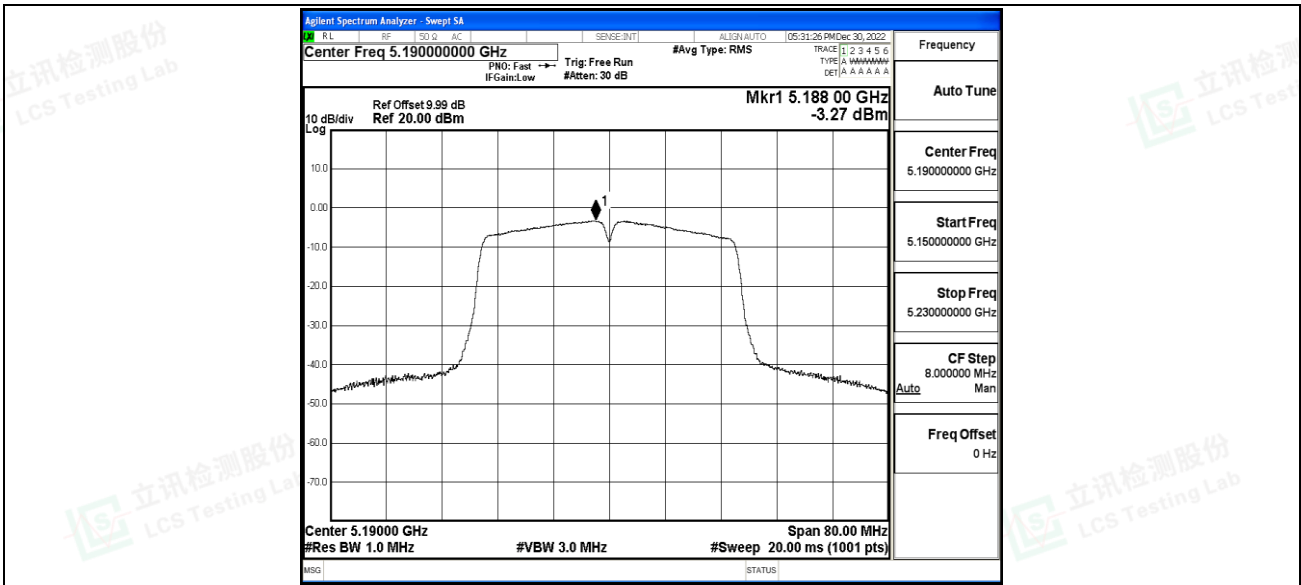


11N20SISO\_Ant1\_5240

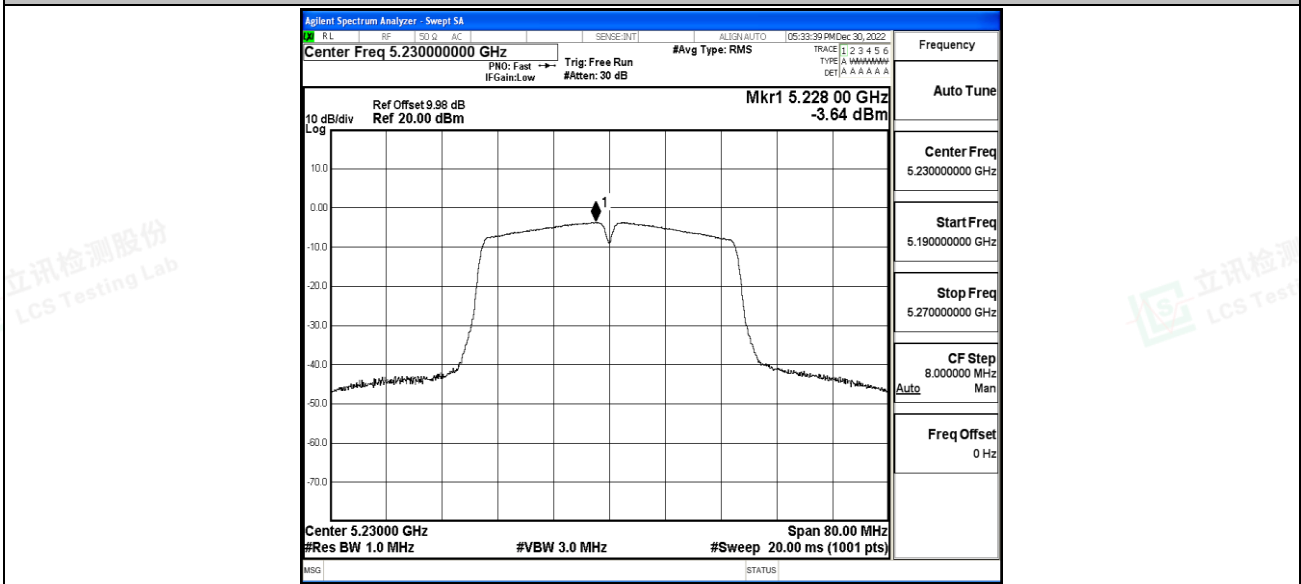


11N40SISO\_Ant1\_5190



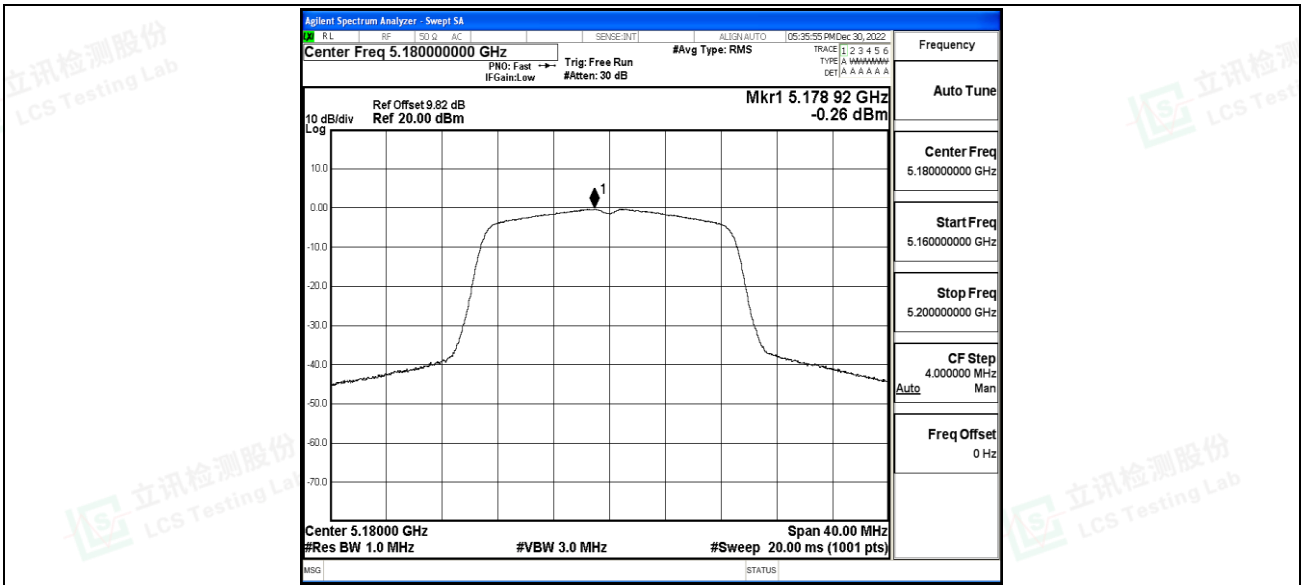


11N40SISO\_Ant1\_5230

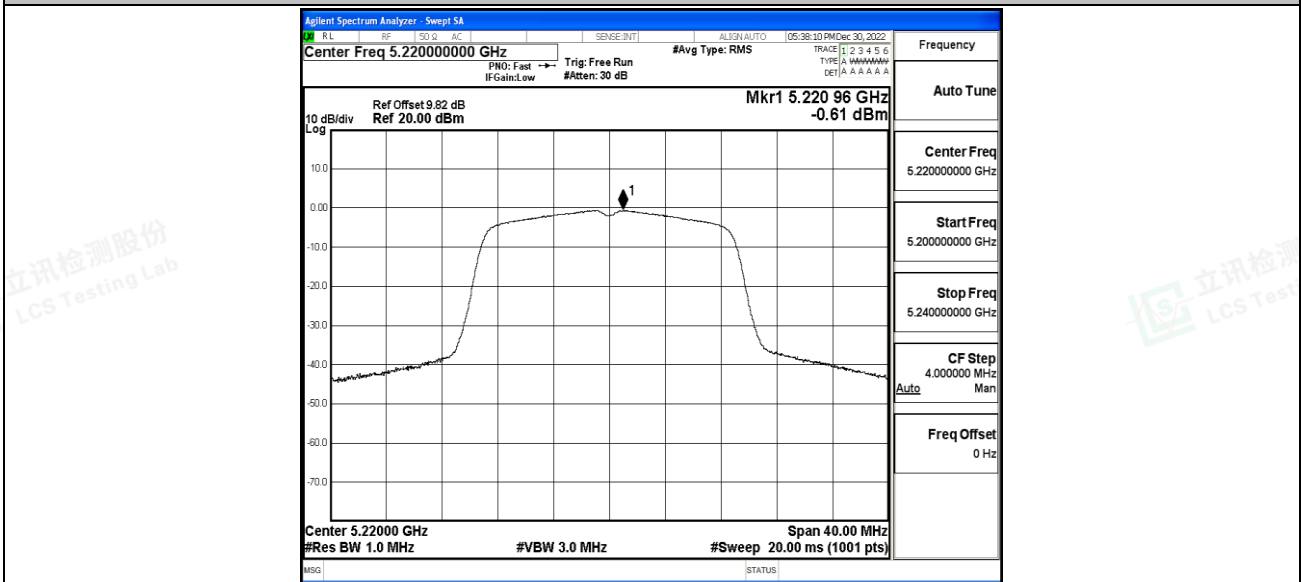


11AC20SISO\_Ant1\_5180





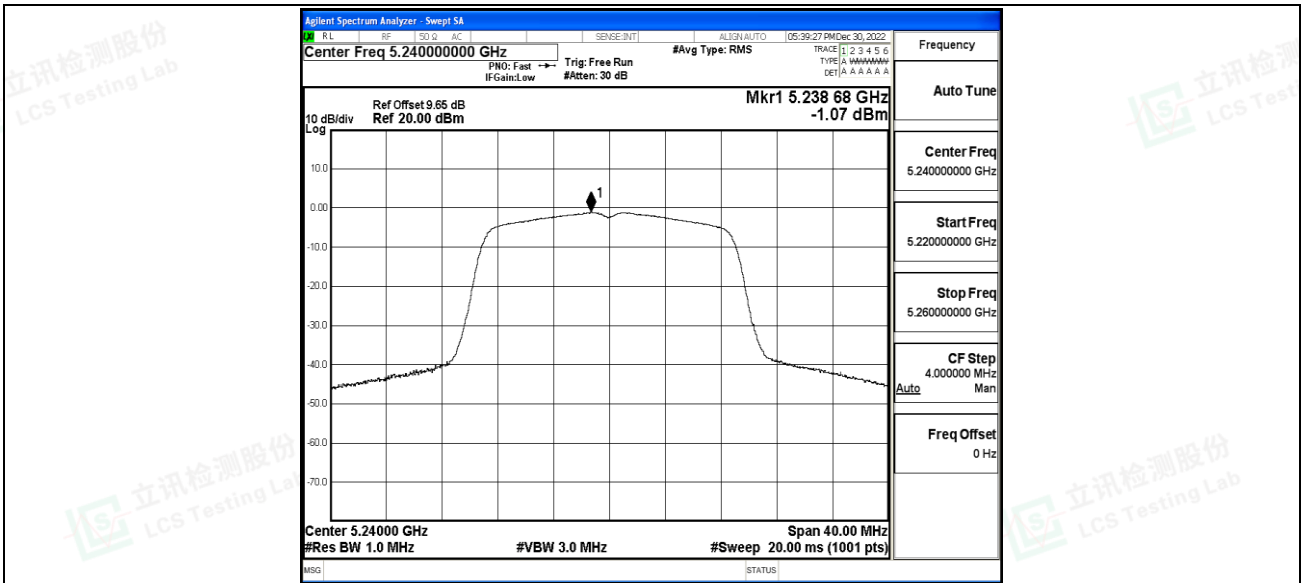
11AC20SISO\_Ant1\_5220



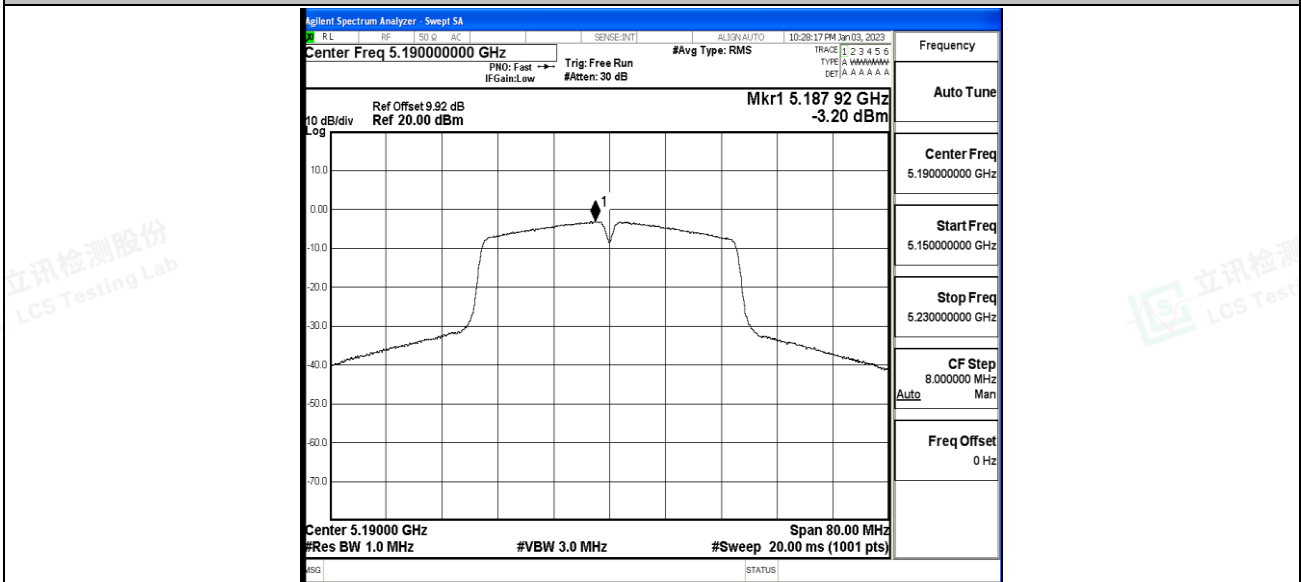
11AC20SISO\_Ant1\_5240





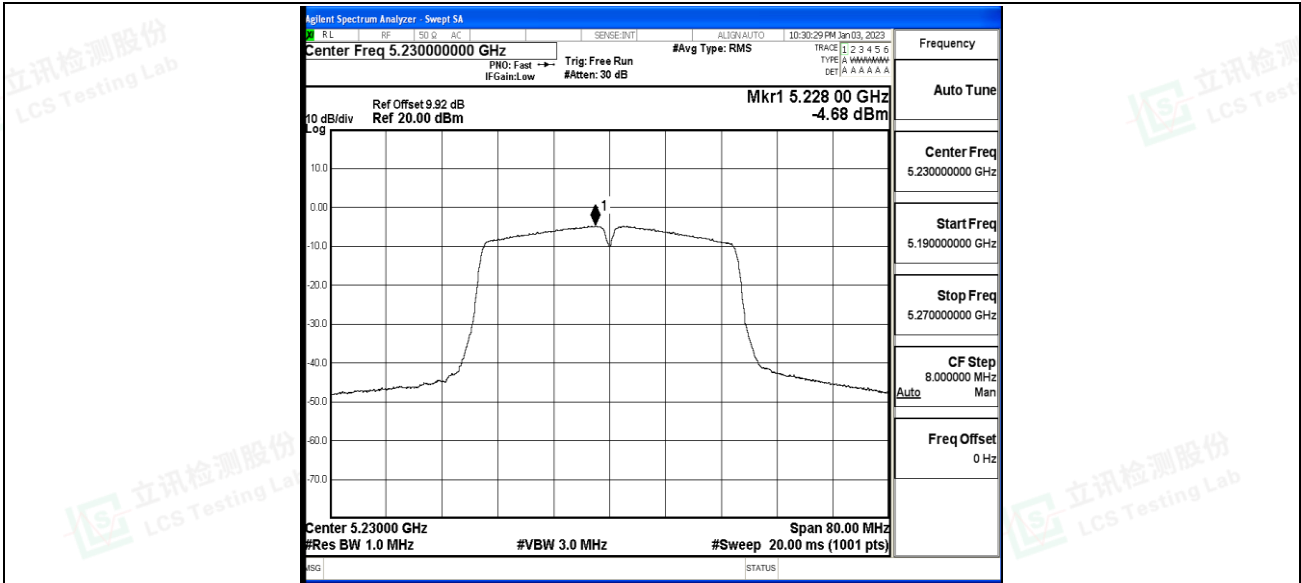


11AC40SISO\_Ant1\_5190

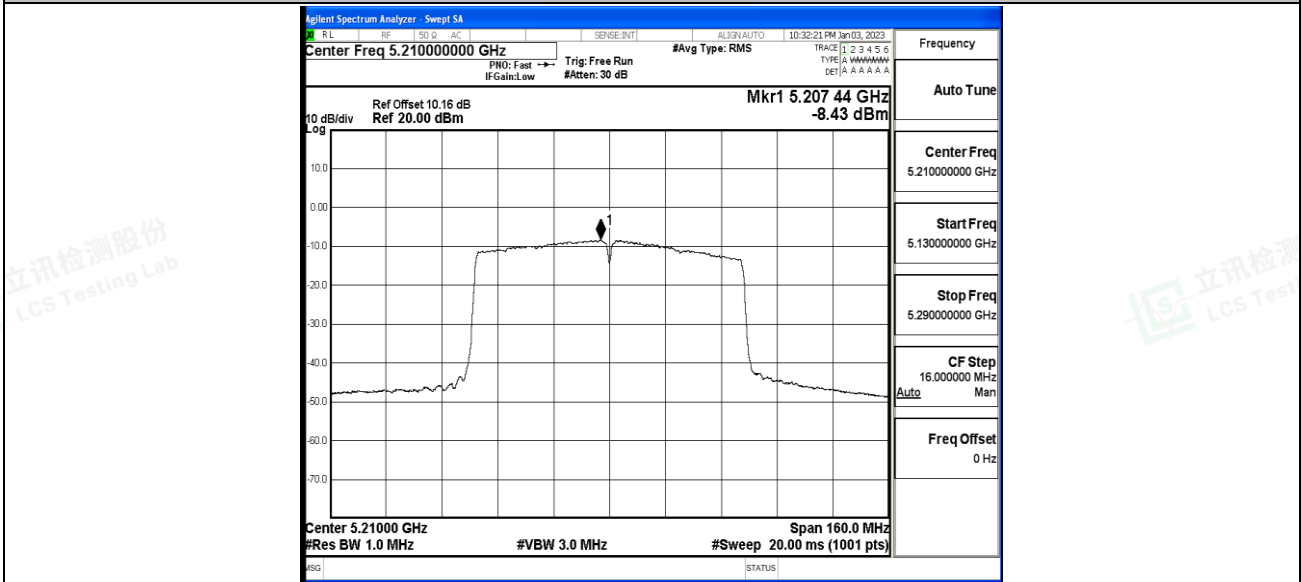


11AC40SISO\_Ant1\_5230





11AC80SISO\_Ant1\_5210





## A.4 Emissions in Restricted Bands

### Test Result

TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11A	Ant1	Low	5180	AV	4500.000	-48.85	≤-41.20	46.35	≤54	PASS
				AV	5148.900	-44.95	≤-41.20	50.25	≤54	PASS
				AV	5150.000	-44.6	≤-41.20	50.60	≤54	PASS
				Peak	4500.000	-45.74	≤-21.20	49.46	≤74	PASS
				Peak	4805.200	-38.85	≤-21.20	56.35	≤74	PASS
				Peak	5150.000	-45.66	≤-21.20	49.54	≤74	PASS
		High	5240	AV	5350.000	-47.58	≤-41.20	47.62	≤54	PASS
				AV	5367.840	-47.27	≤-41.20	47.93	≤54	PASS
				AV	5460.000	-47.78	≤-41.20	47.42	≤54	PASS
				Peak	5350.000	-45.02	≤-21.20	50.18	≤74	PASS
				Peak	5427.360	-39.11	≤-21.20	56.09	≤74	PASS
				Peak	5460.000	-45.04	≤-21.20	50.16	≤74	PASS
11N20SIS O	Ant1	Low	5180	AV	4500.000	-48.8	≤-41.20	46.40	≤54	PASS
				AV	5145.400	-46.14	≤-41.20	49.06	≤54	PASS
				AV	5150.000	-46.39	≤-41.20	48.81	≤54	PASS
				Peak	4500.000	-47	≤-21.20	48.20	≤74	PASS
				Peak	5133.500	-38.36	≤-21.20	56.84	≤74	PASS
				Peak	5150.000	-39.85	≤-21.20	55.35	≤74	PASS
		High	5240	AV	5350.000	-47.5	≤-41.20	47.70	≤54	PASS
				AV	5406.480	-47.22	≤-41.20	47.98	≤54	PASS
				AV	5460.000	-47.61	≤-41.20	47.59	≤54	PASS
				Peak	5350.000	-43.47	≤-21.20	51.73	≤74	PASS
				Peak	5360.640	-39.48	≤-21.20	55.72	≤74	PASS
				Peak	5460.000	-43.75	≤-21.20	51.45	≤74	PASS
11N40SIS O	Ant1	Low	5190	AV	4500.000	-48.55	≤-41.20	46.65	≤54	PASS
				AV	5149.600	-42.78	≤-41.20	52.42	≤54	PASS
				AV	5150.000	-42.83	≤-41.20	52.37	≤54	PASS
				Peak	4500.000	-43.58	≤-21.20	51.62	≤74	PASS
				Peak	5146.800	-37.17	≤-21.20	58.03	≤74	PASS
				Peak	5150.000	-39.99	≤-21.20	55.21	≤74	PASS
		High	5230	AV	5350.000	-47.36	≤-41.20	47.84	≤54	PASS
				AV	5415.800	-47.07	≤-41.20	48.13	≤54	PASS
				AV	5460.000	-47.48	≤-41.20	47.72	≤54	PASS
				Peak	5350.000	-43.99	≤-21.20	51.21	≤74	PASS
				Peak	5364.320	-39.32	≤-21.20	55.88	≤74	PASS
				Peak	5460.000	-43.14	≤-21.20	52.06	≤74	PASS





11AC20SI SO	Ant1	Low	5180	AV	4500.000	-48.87	≤-41.20	46.33	≤54	PASS
				AV	5149.600	-45.24	≤-41.20	49.96	≤54	PASS
				AV	5150.000	-45.42	≤-41.20	49.78	≤54	PASS
				Peak	4500.000	-45.89	≤-21.20	49.31	≤74	PASS
				Peak	5144.000	-36.96	≤-21.20	58.24	≤74	PASS
				Peak	5150.000	-43.05	≤-21.20	52.15	≤74	PASS
	High	5240	AV	5350.000	-47.91	≤-41.20	47.29	≤54	PASS	
			AV	5380.560	-47.37	≤-41.20	47.83	≤54	PASS	
			AV	5460.000	-47.75	≤-41.20	47.45	≤54	PASS	
			Peak	5350.000	-46.55	≤-21.20	48.65	≤74	PASS	
			Peak	5379.600	-38.1	≤-21.20	57.10	≤74	PASS	
			Peak	5460.000	-42.89	≤-21.20	52.31	≤74	PASS	
11AC40SI SO	Ant1	Low	5190	AV	4500.000	-49.09	≤-41.20	46.11	≤54	PASS
				AV	5148.200	-44.82	≤-41.20	50.38	≤54	PASS
				AV	5150.000	-45.07	≤-41.20	50.13	≤54	PASS
				Peak	4500.000	-44.94	≤-21.20	50.26	≤74	PASS
				Peak	5135.600	-37.59	≤-21.20	57.61	≤74	PASS
				Peak	5150.000	-46.3	≤-21.20	48.90	≤74	PASS
	High	5230	AV	5350.000	-47.59	≤-41.20	47.61	≤54	PASS	
			AV	5352.100	-47	≤-41.20	48.20	≤54	PASS	
			AV	5460.000	-47.38	≤-41.20	47.82	≤54	PASS	
			Peak	5350.000	-45.08	≤-21.20	50.12	≤74	PASS	
			Peak	5398.380	-38.65	≤-21.20	56.55	≤74	PASS	
			Peak	5460.000	-43.22	≤-21.20	51.98	≤74	PASS	
11AC80SI SO	Ant1	Low	5210	AV	4500.000	-48.27	≤-41.20	46.93	≤54	PASS
				AV	5145.000	-42.21	≤-41.20	52.99	≤54	PASS
				AV	5150.000	-43.56	≤-41.20	51.64	≤54	PASS
				Peak	4500.000	-45.58	≤-21.20	49.62	≤74	PASS
				Peak	5138.250	-31.57	≤-21.20	63.63	≤74	PASS
				Peak	5150.000	-39.34	≤-21.20	55.86	≤74	PASS
	High	5210	AV	5350.000	-47.11	≤-41.20	48.09	≤54	PASS	
			AV	5449.640	-46.33	≤-41.20	48.87	≤54	PASS	
			AV	5460.000	-46.93	≤-41.20	48.27	≤54	PASS	
			Peak	5350.000	-45.41	≤-21.20	49.79	≤74	PASS	
			Peak	5425.280	-39.08	≤-21.20	56.12	≤74	PASS	
			Peak	5460.000	-44.42	≤-21.20	50.78	≤74	PASS	

## Note:

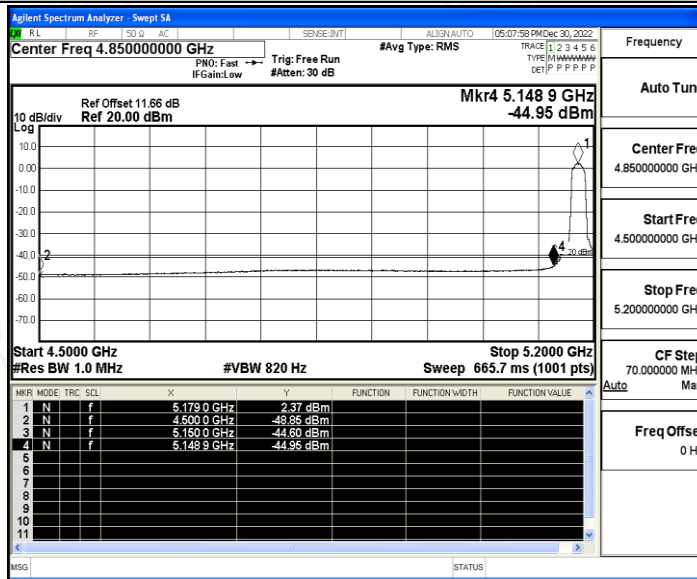
1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



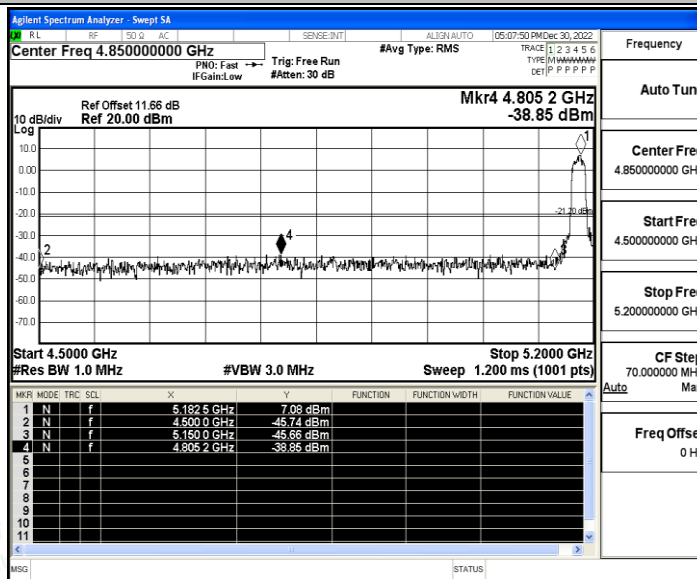


### Test Graphs

11A\_Ant1\_Low\_5180\_AV

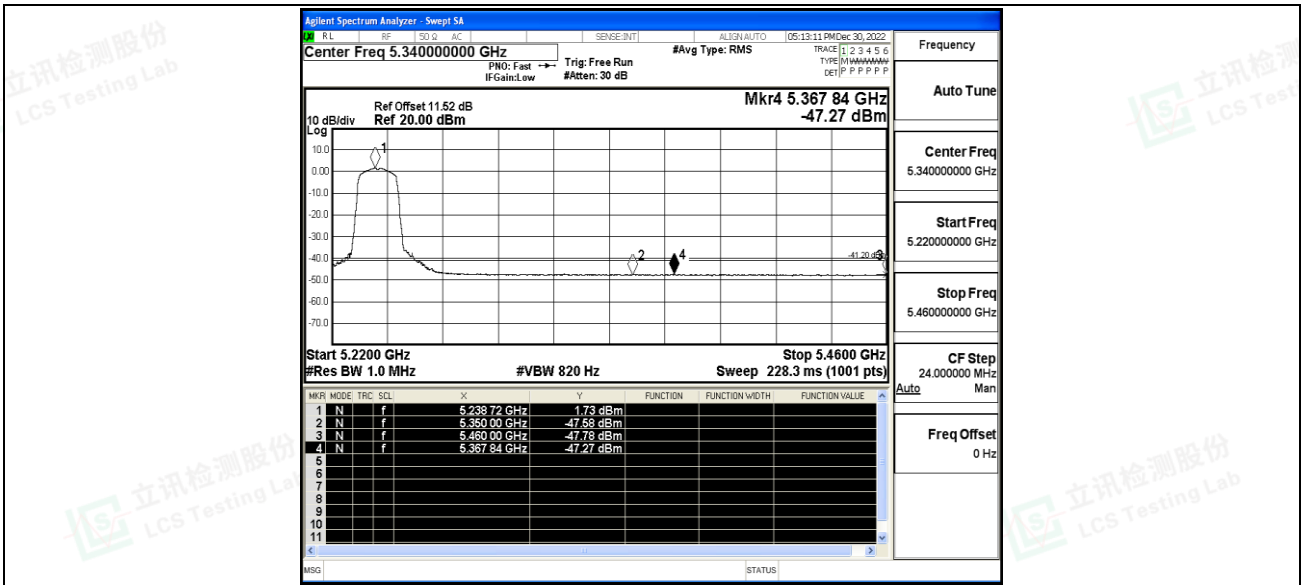


11A\_Ant1\_Low\_5180\_Peak

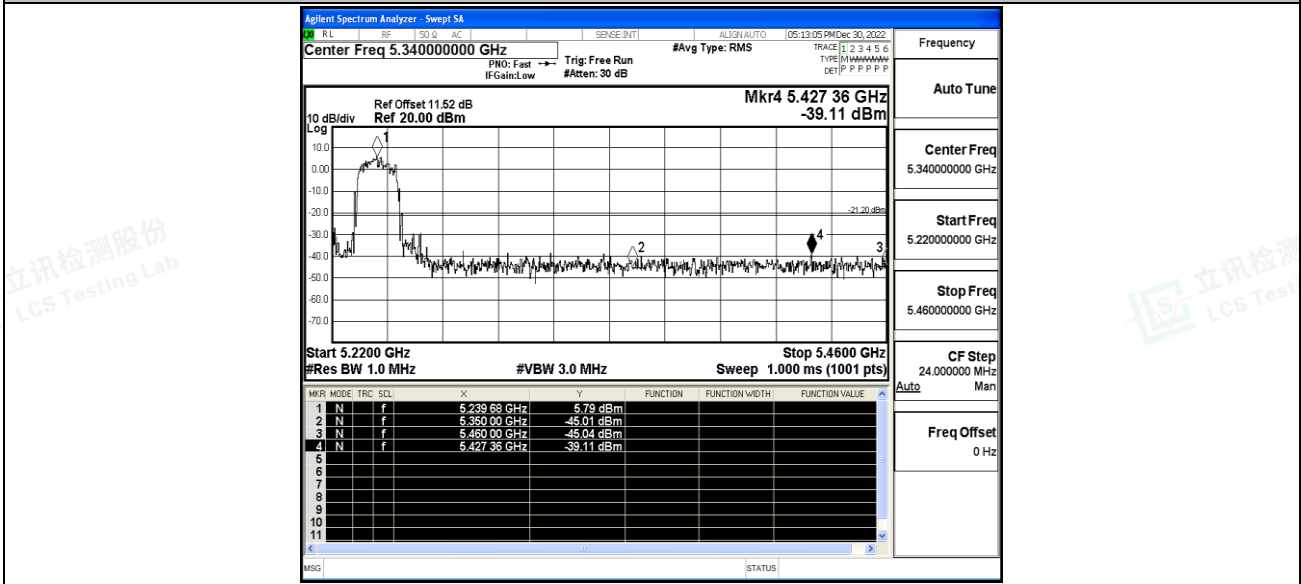


11A\_Ant1\_High\_5240\_AV



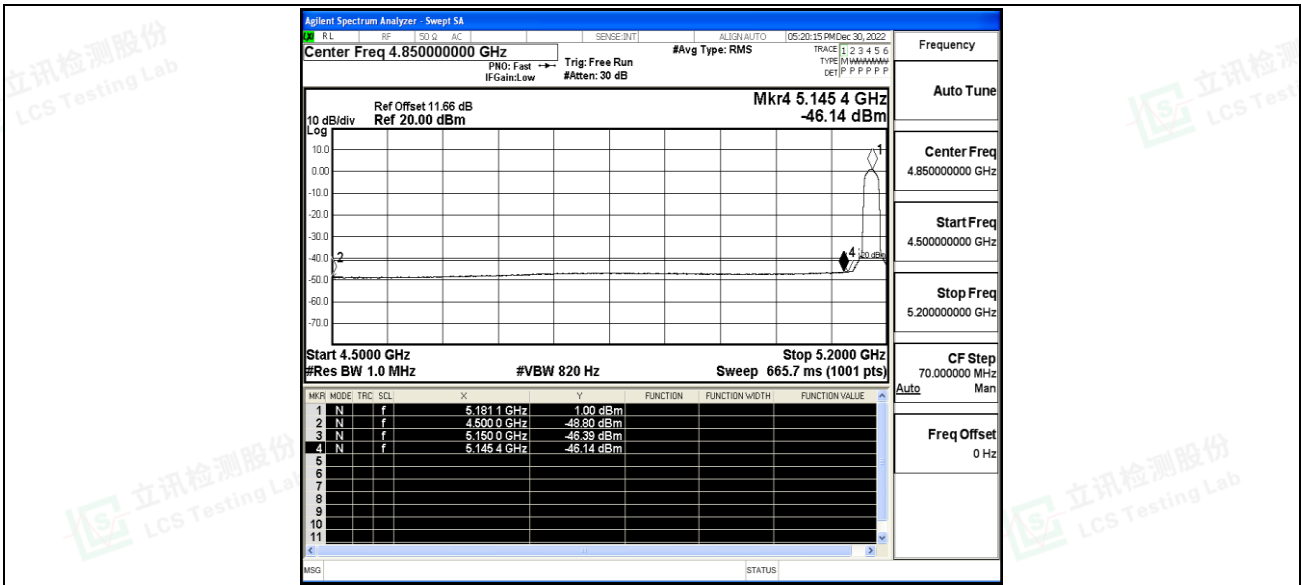


11A\_Ant1\_High\_5240\_Peak

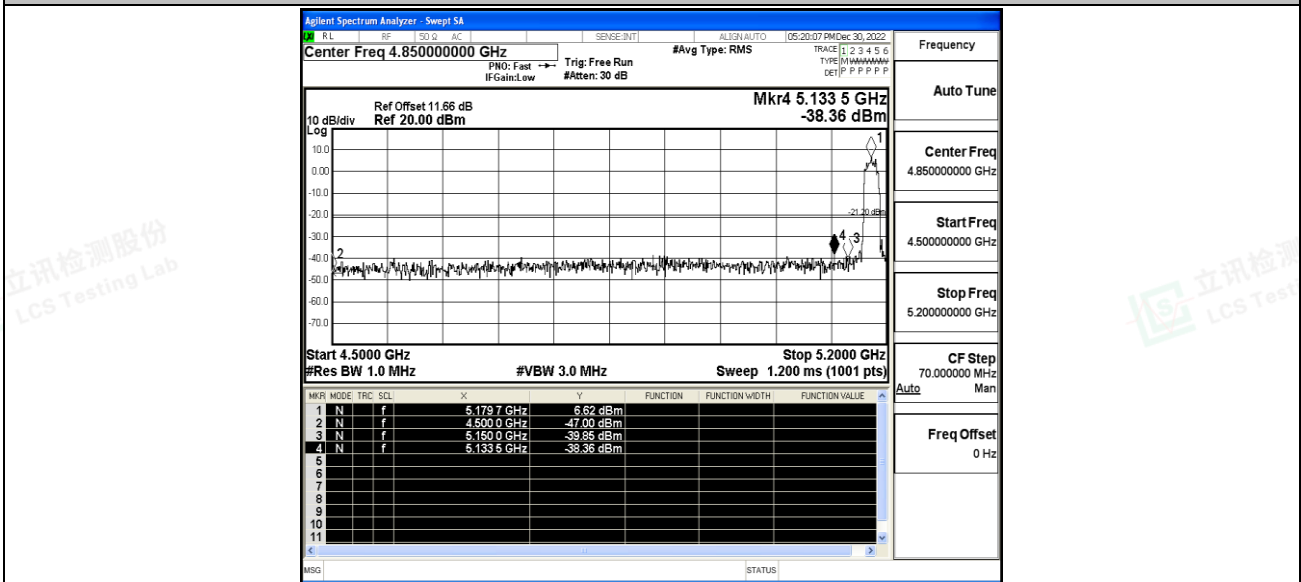


11N20SISO\_Ant1\_Low\_5180\_AV



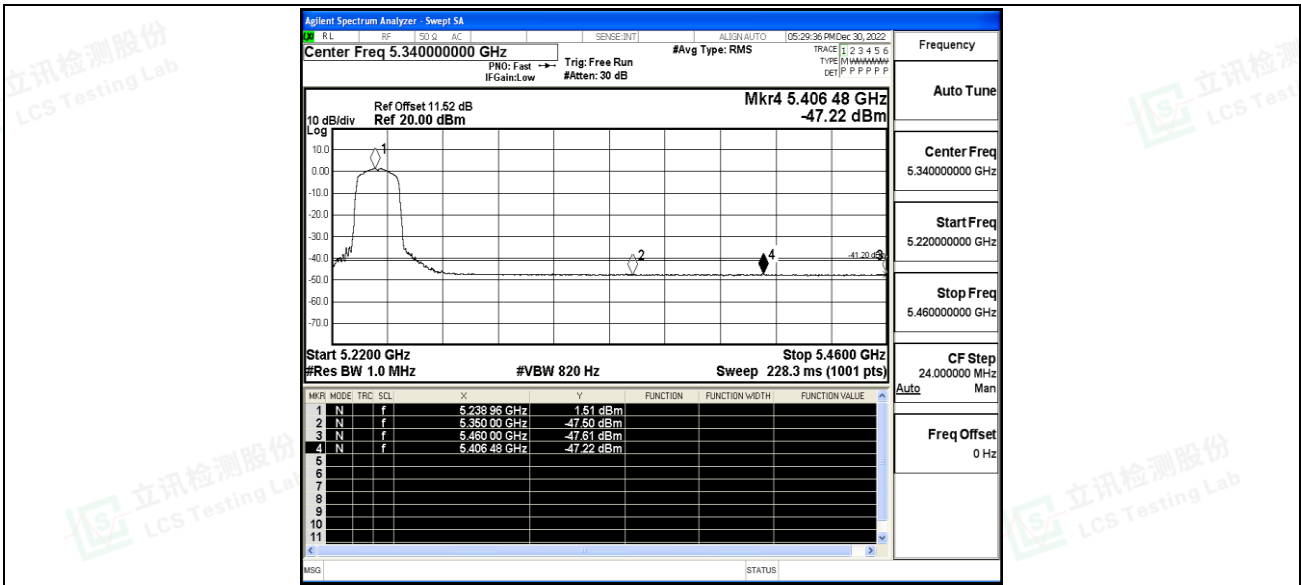


11N20SISO\_Ant1\_Low\_5180\_Peak

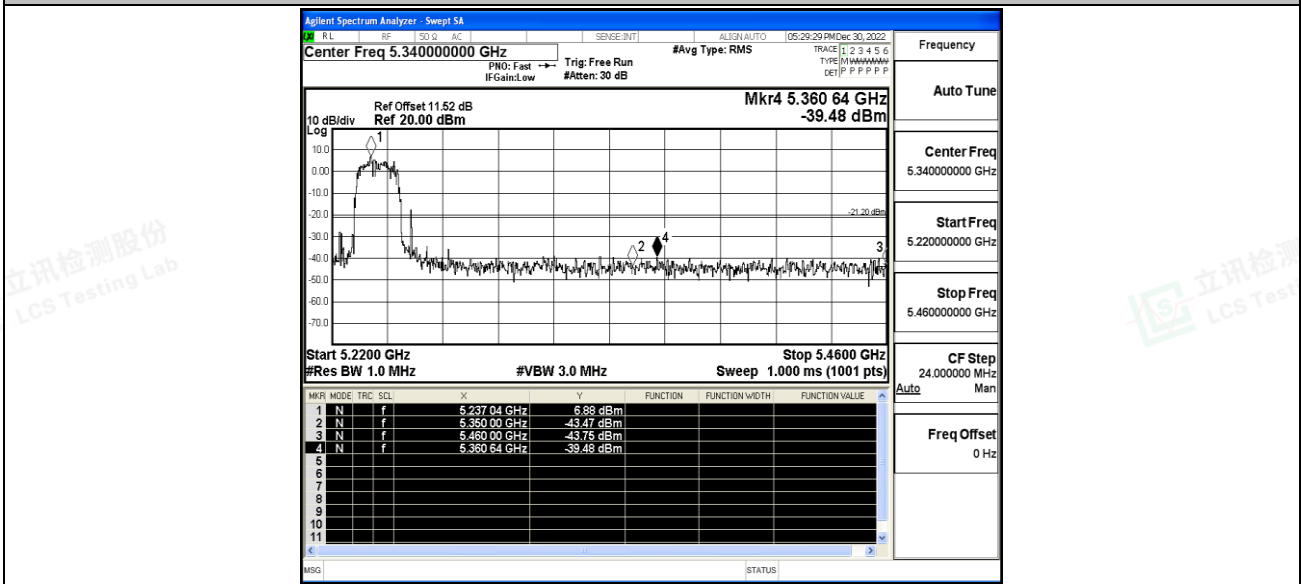


11N20SISO\_Ant1\_High\_5240\_AV





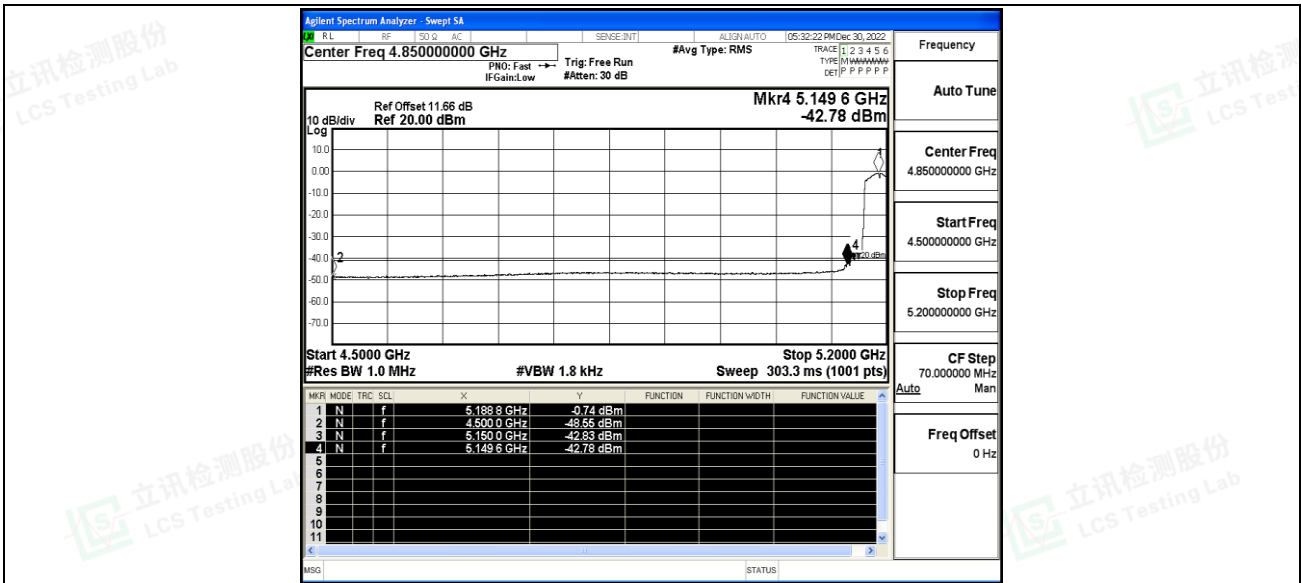
11N20ISO\_Ant1\_High\_5240\_Peak



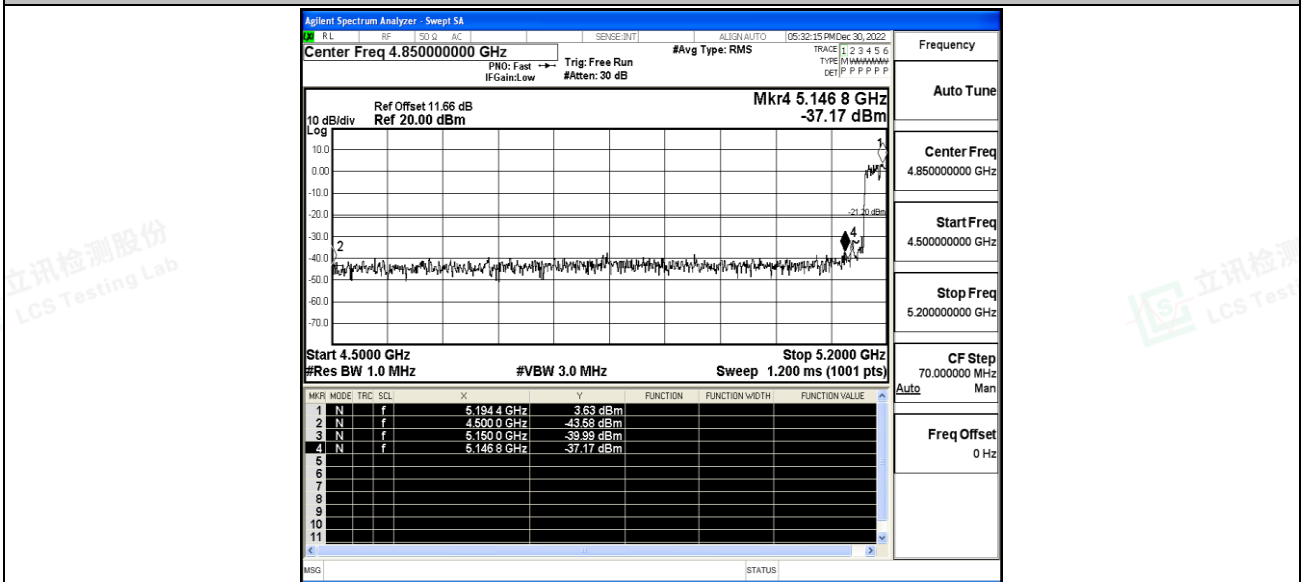
11N40SISO\_Ant1\_Low\_5190\_AV





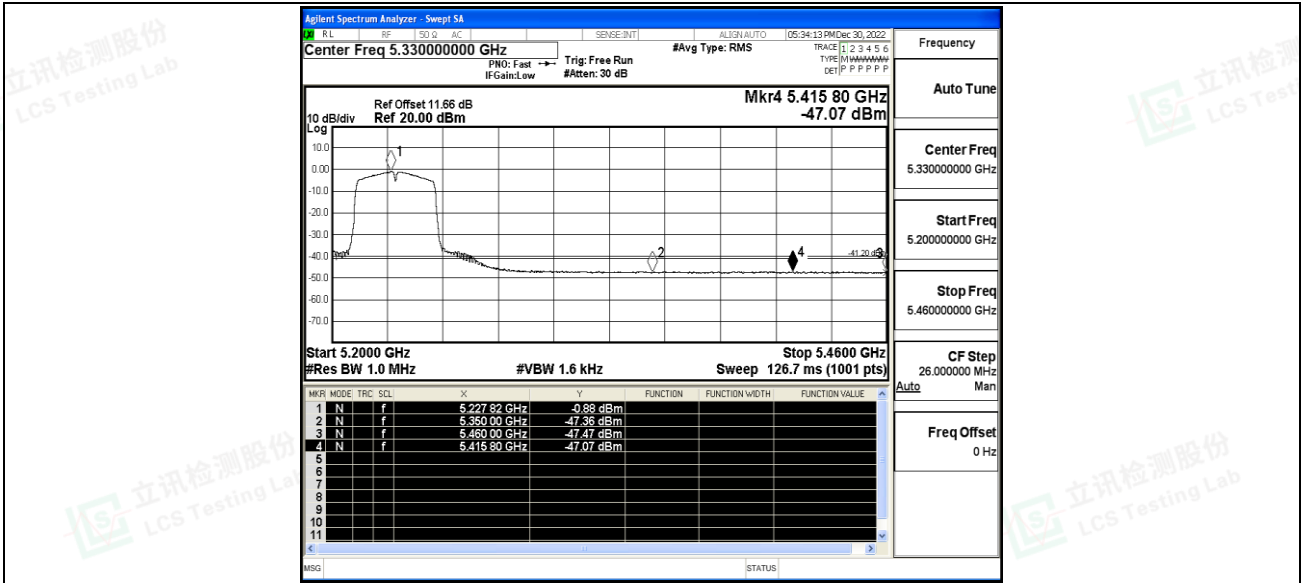


11N40SISO\_Ant1\_Low\_5190\_Peak

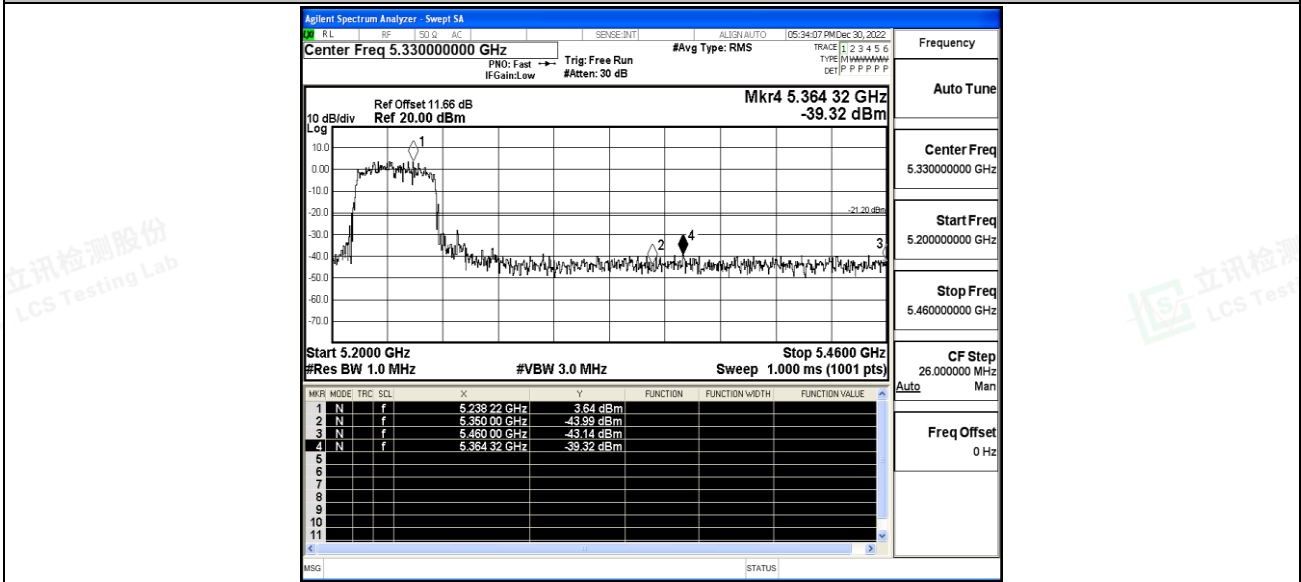


11N40SISO\_Ant1\_High\_5230\_AV



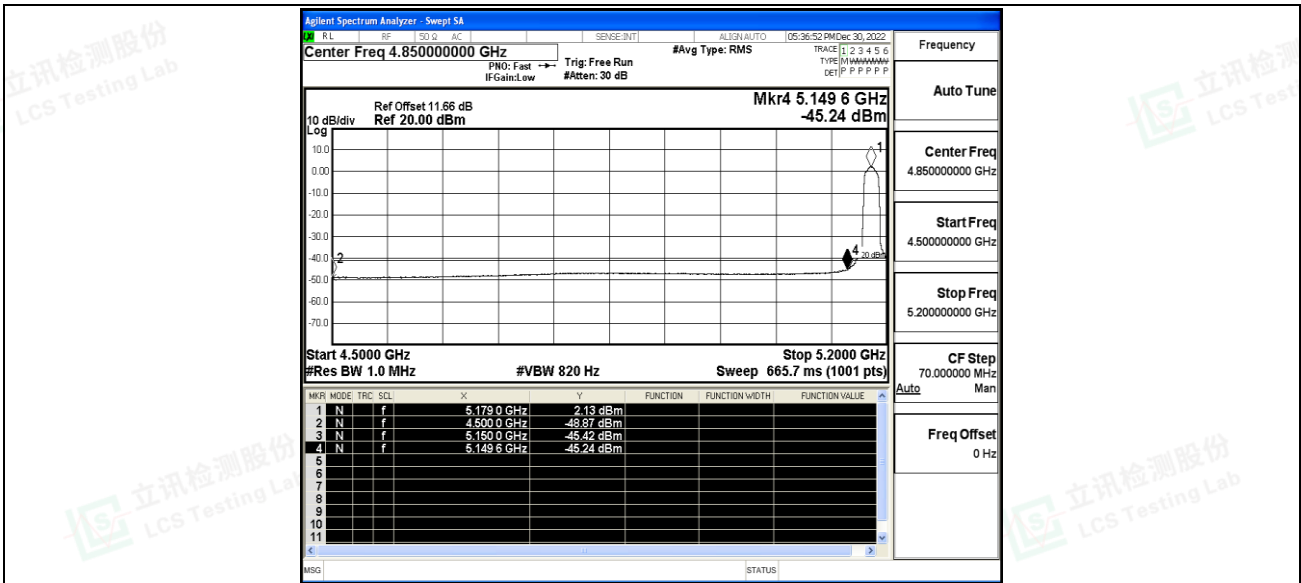


11N40SISO\_Ant1\_High\_5230\_Peak

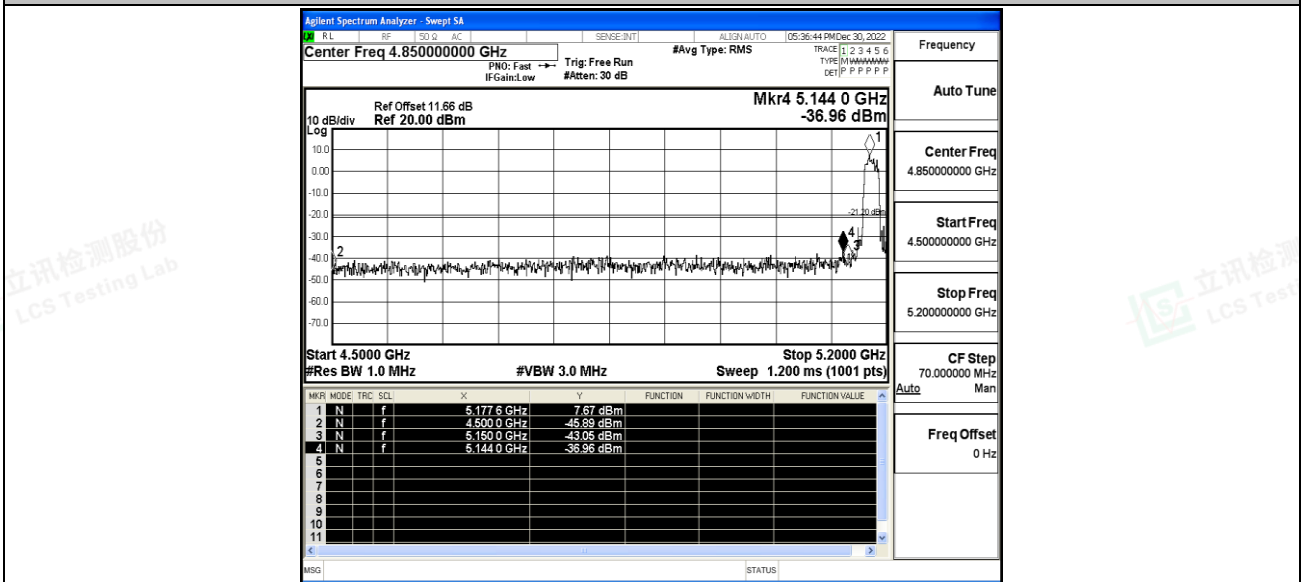


11AC20SISO\_Ant1\_Low\_5180\_AV



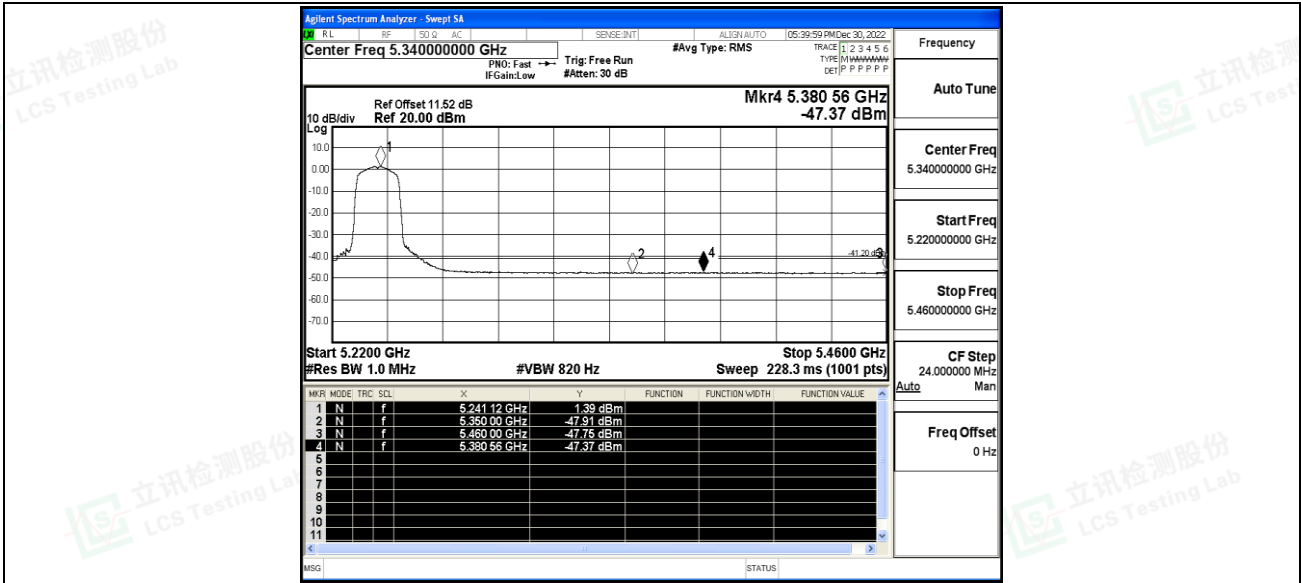


11AC20SISO\_Ant1\_Low\_5180\_Peak

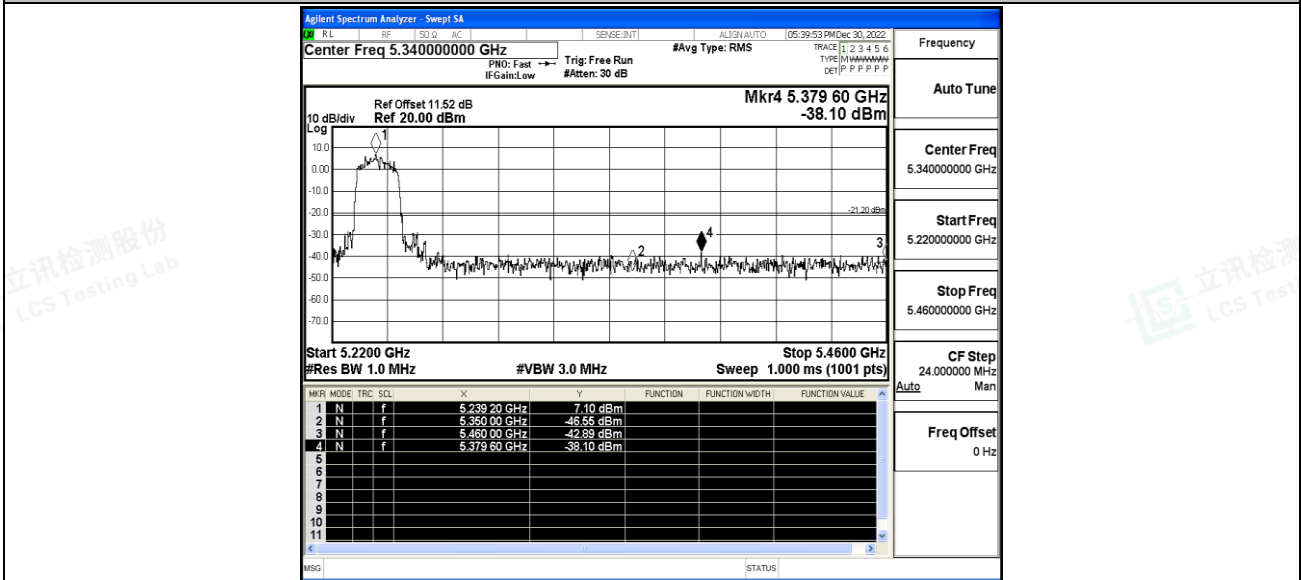


11AC20SISO\_Ant1\_High\_5240\_AV



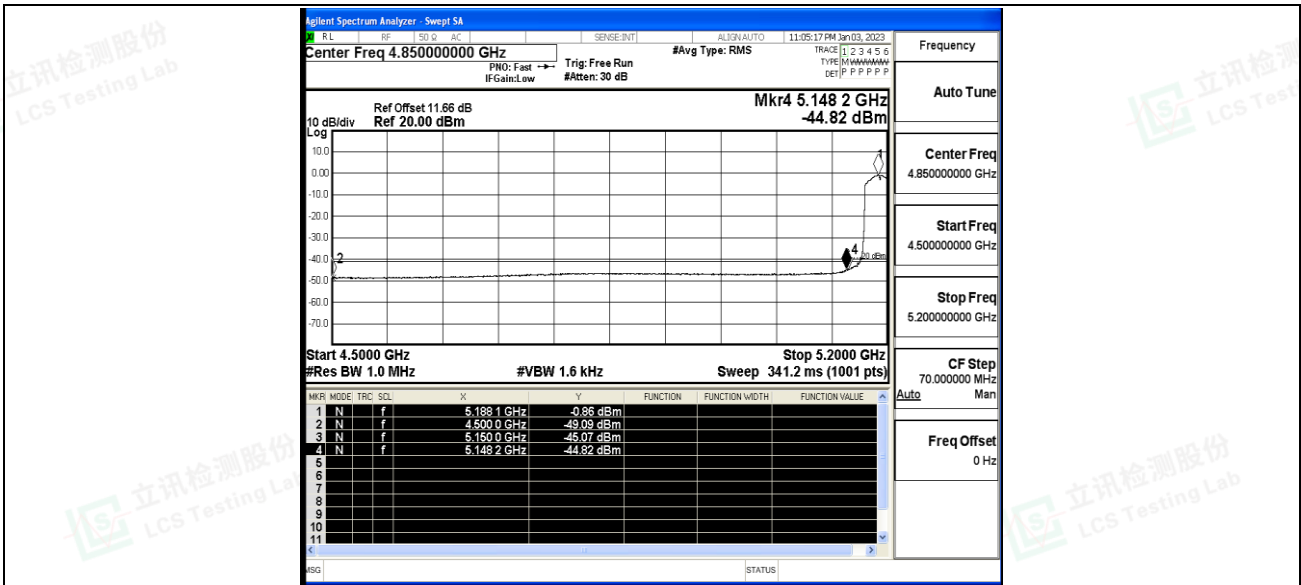


11AC20SISO\_Ant1\_High\_5240\_Peak

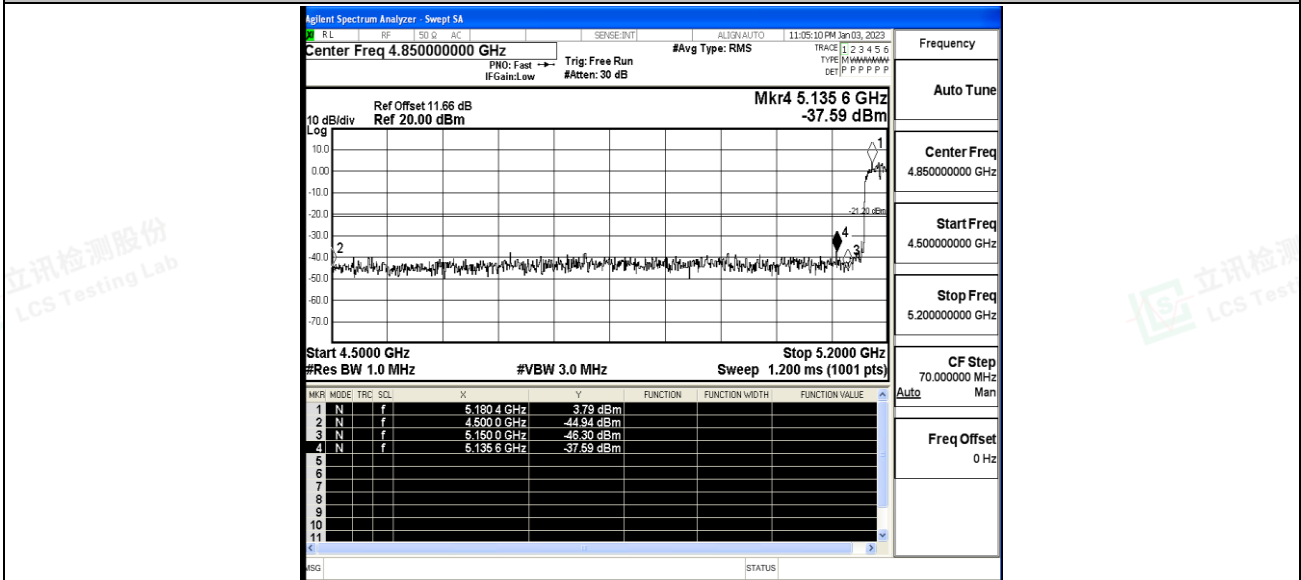


11AC40SISO\_Ant1\_Low\_5190\_AV



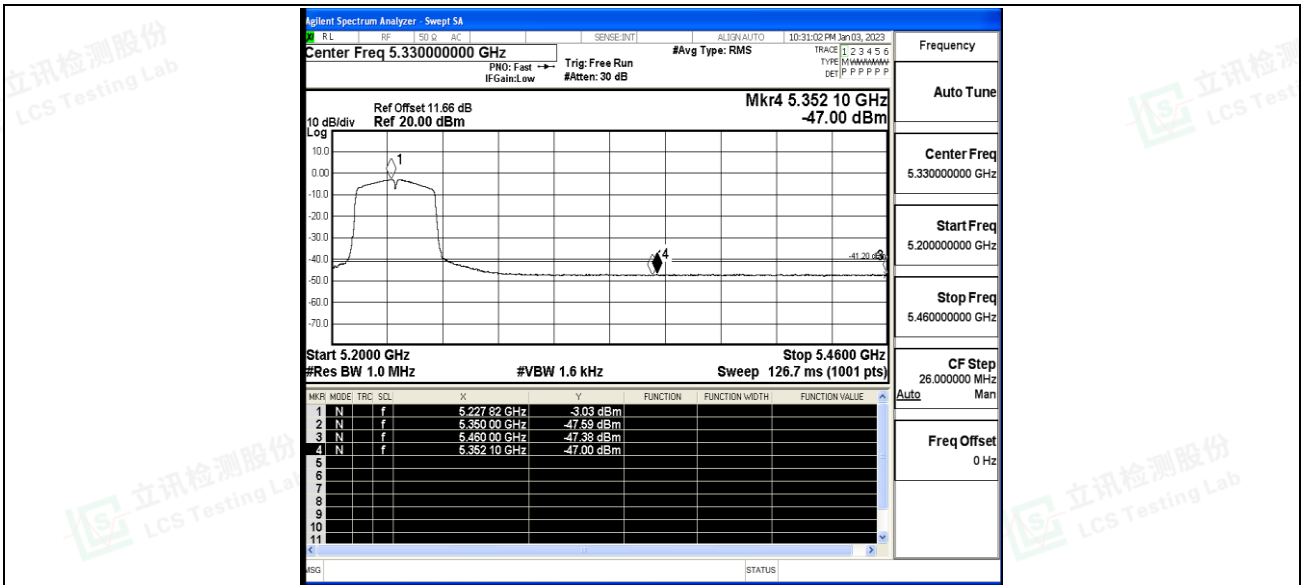


11AC40SISO\_Ant1\_Low\_5190\_Peak

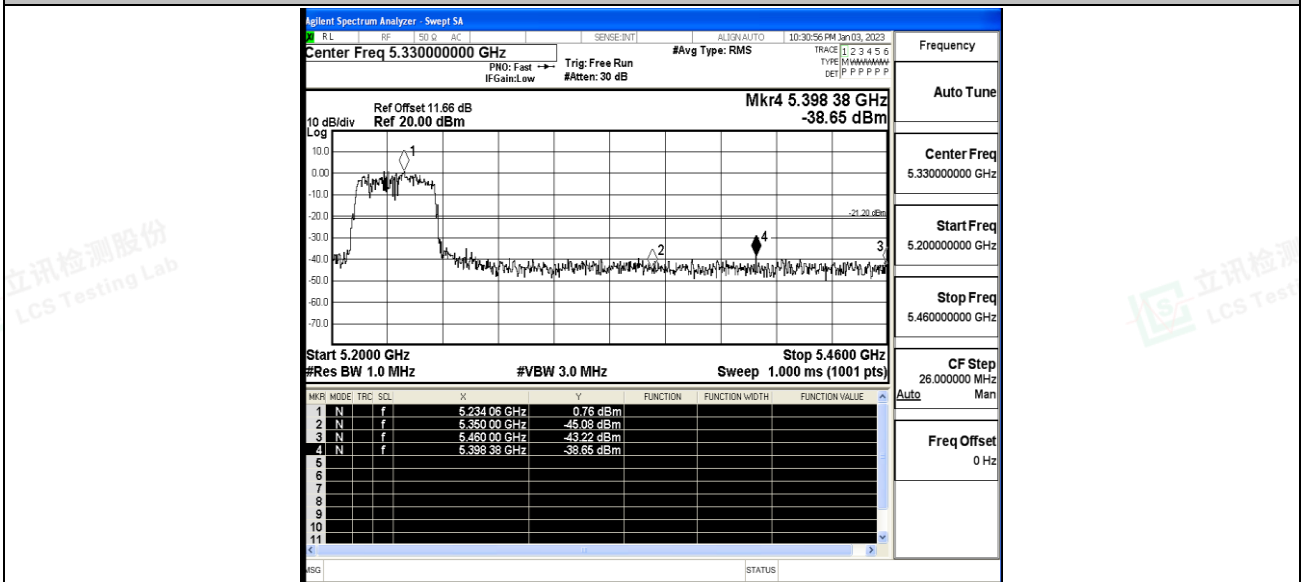


11AC40SISO\_Ant1\_High\_5230\_AV



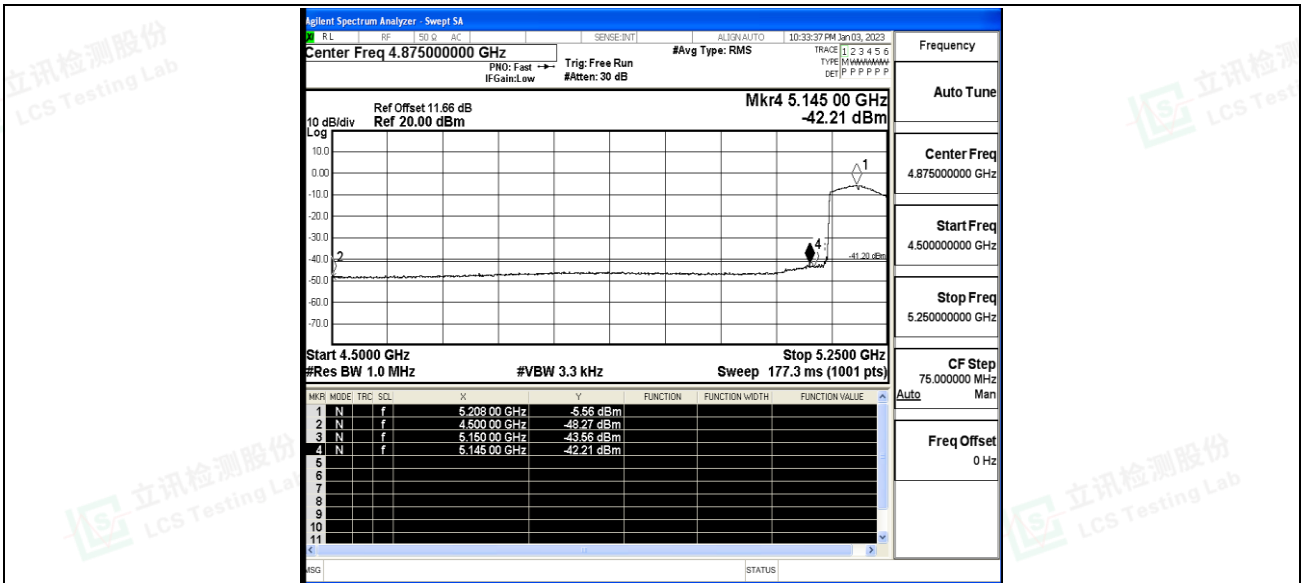


11AC40SISO\_Ant1\_High\_5230\_Peak

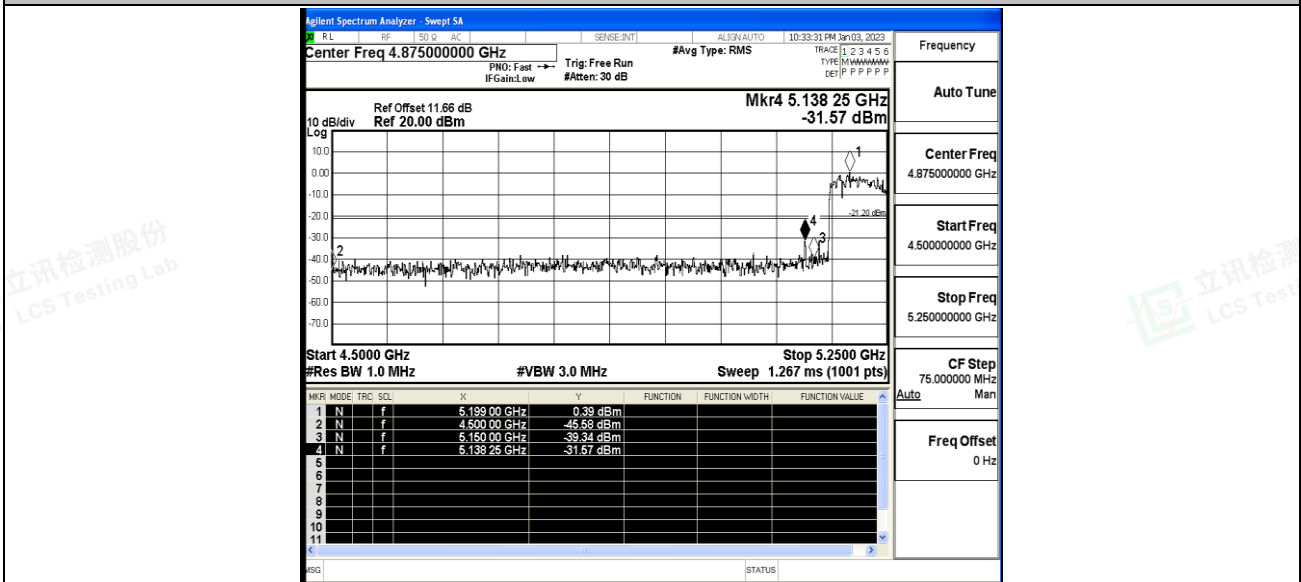


11AC80SISO\_Ant1\_Low\_5210\_AV



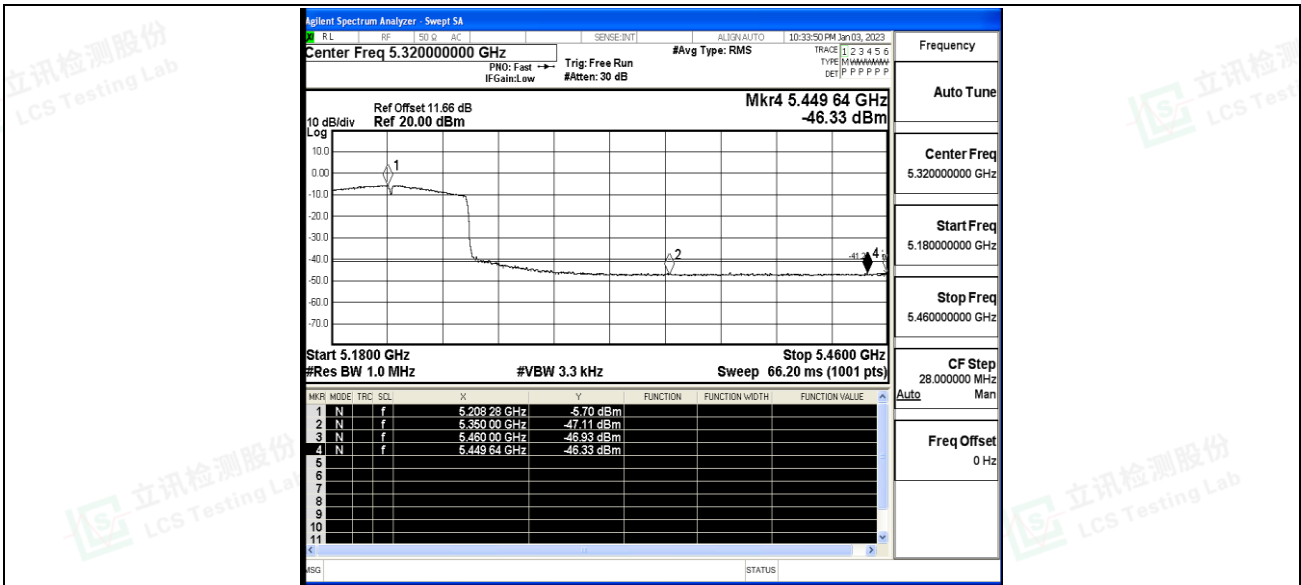


11AC80SISO\_Ant1\_Low\_5210\_Peak

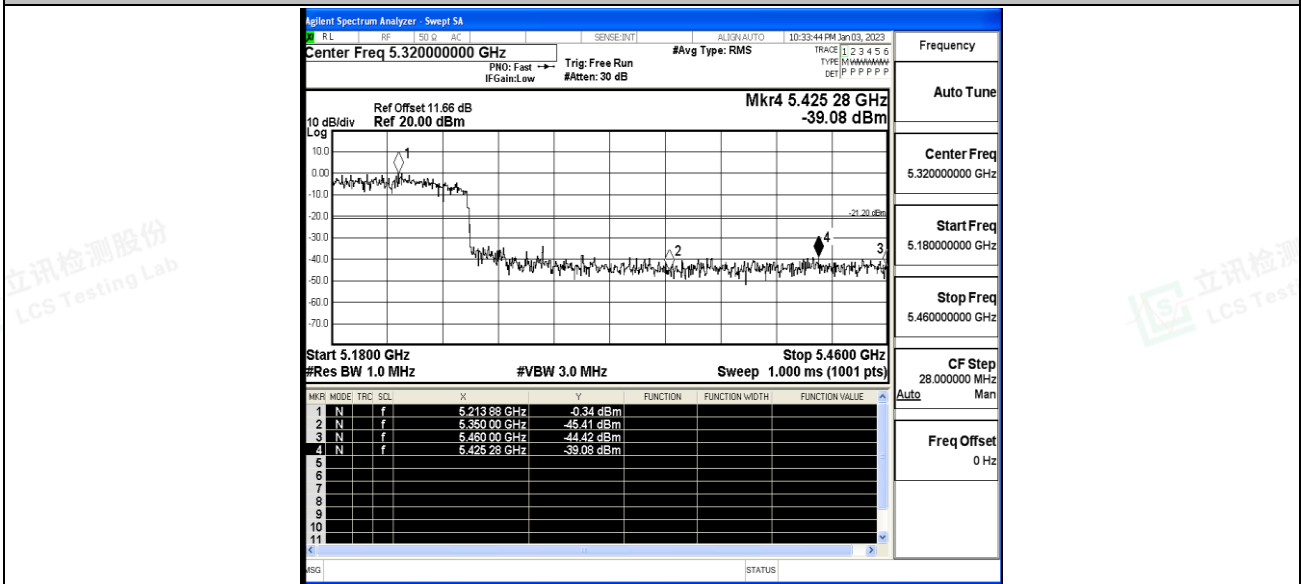


11AC80SISO\_Ant1\_High\_5210\_AV





11AC80SISO\_Ant1\_High\_5210\_Peak







## A.5 Frequency Stability

### Test Result

Voltage								
TestMode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20SIS O	Ant1	5180	NV	NT	-40000.00	-7.722008	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5220	NV	NT	-20000.00	-3.831418	20	PASS
			LV	NT	-40000.00	-7.662835	20	PASS
			HV	NT	-20000.00	-3.831418	20	PASS
		5240	NV	NT	-40000.00	-7.633588	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
11AC40SIS O	Ant1	5190	NV	NT	-80000.00	-15.414258	20	PASS
			LV	NT	-40000.00	-7.707129	20	PASS
			HV	NT	-80000.00	-15.414258	20	PASS
		5230	NV	NT	0.00	0.000000	20	PASS
			LV	NT	-80000.00	-15.296367	20	PASS
			HV	NT	-80000.00	-15.296367	20	PASS
11AC80SIS O	Ant1	5210	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-80000.00	-15.355086	20	PASS

Temperature								
TestMode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20SIS O	Ant1	5180	NV	-30	-40000.00	-7.722008	20	PASS
			NV	-20	-40000.00	-7.722008	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	-40000.00	-7.722008	20	PASS
			NV	10	-40000.00	-7.722008	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-40000.00	-7.722008	20	PASS
			NV	40	-40000.00	-7.722008	20	PASS
		5220	NV	-30	-60000.00	-11.494253	20	PASS
			NV	-20	-60000.00	-11.494253	20	PASS
			NV	-10	-40000.00	-7.662835	20	PASS
			NV	0	-20000.00	-3.831418	20	PASS





			NV	10	-40000.00	-7.662835	20	PASS
			NV	20	-60000.00	-11.494253	20	PASS
			NV	30	-40000.00	-7.662835	20	PASS
			NV	40	-20000.00	-3.831418	20	PASS
			NV	50	-40000.00	-7.662835	20	PASS
		5240	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-20000.00	-3.816794	20	PASS
			NV	0	-20000.00	-3.816794	20	PASS
			NV	10	-60000.00	-11.450382	20	PASS
			NV	20	-40000.00	-7.633588	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-40000.00	-7.633588	20	PASS
			NV	50	-20000.00	-3.816794	20	PASS
11AC40SIS O	Ant1	5190	NV	-30	-40000.00	-7.707129	20	PASS
			NV	-20	-80000.00	-15.414258	20	PASS
			NV	-10	-40000.00	-7.707129	20	PASS
			NV	0	-40000.00	-7.707129	20	PASS
			NV	10	-40000.00	-7.707129	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-40000.00	-7.707129	20	PASS
			NV	40	-40000.00	-7.707129	20	PASS
			NV	50	-40000.00	-7.707129	20	PASS
		5230	NV	-30	-40000.00	-7.648184	20	PASS
			NV	-20	-80000.00	-15.296367	20	PASS
			NV	-10	120000.00	22.944551	20	FAIL
			NV	0	-40000.00	-7.648184	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-40000.00	-7.648184	20	PASS
			NV	30	-40000.00	-7.648184	20	PASS
			NV	40	-40000.00	-7.648184	20	PASS
			NV	50	0.00	0.000000	20	PASS
11AC80SIS O	Ant1	5210	NV	-30	-80000.00	-15.355086	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-80000.00	-15.355086	20	PASS
			NV	20	-80000.00	-15.355086	20	PASS
			NV	30	-80000.00	-15.355086	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	-80000.00	-15.355086	20	PASS





### A.6 Duty Cycle

#### Test Result

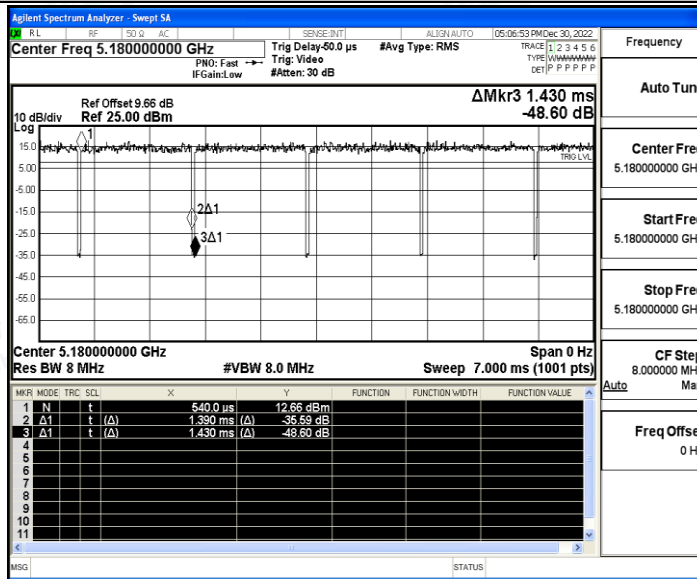
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11A	Ant1	5180	1.39	1.43	97.20	0.12
		5220	1.39	1.44	96.53	0.15
		5240	1.39	1.44	96.53	0.15
11N20SISO	Ant1	5180	1.31	1.35	97.04	0.13
		5220	1.30	1.34	97.01	0.13
		5240	1.30	1.35	96.30	0.16
11N40SISO	Ant1	5190	0.64	0.69	92.75	0.33
		5230	0.65	0.70	92.86	0.32
11AC20SISO	Ant1	5180	1.31	1.36	96.32	0.16
		5220	1.31	1.36	96.32	0.16
		5240	1.31	1.35	97.04	0.13
11AC40SISO	Ant1	5190	0.66	0.70	94.29	0.26
		5230	0.65	0.69	94.20	0.26
11AC80SISO	Ant1	5210	0.33	0.37	89.19	0.50



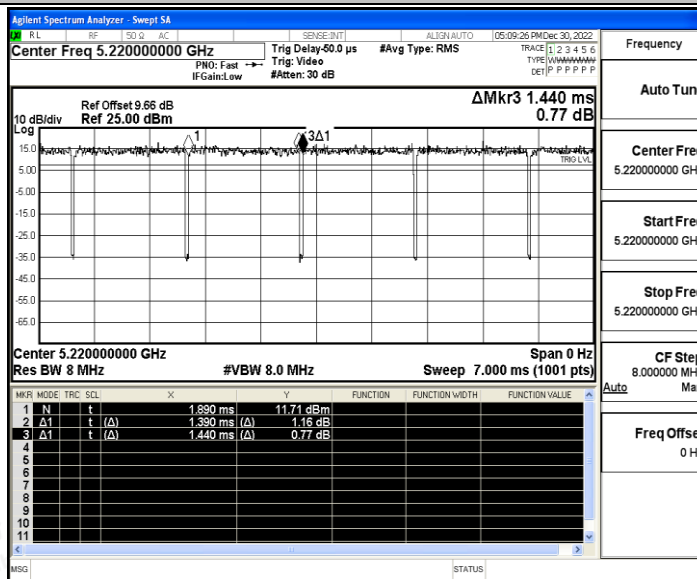


### Test Graphs

11A\_Ant1\_5180

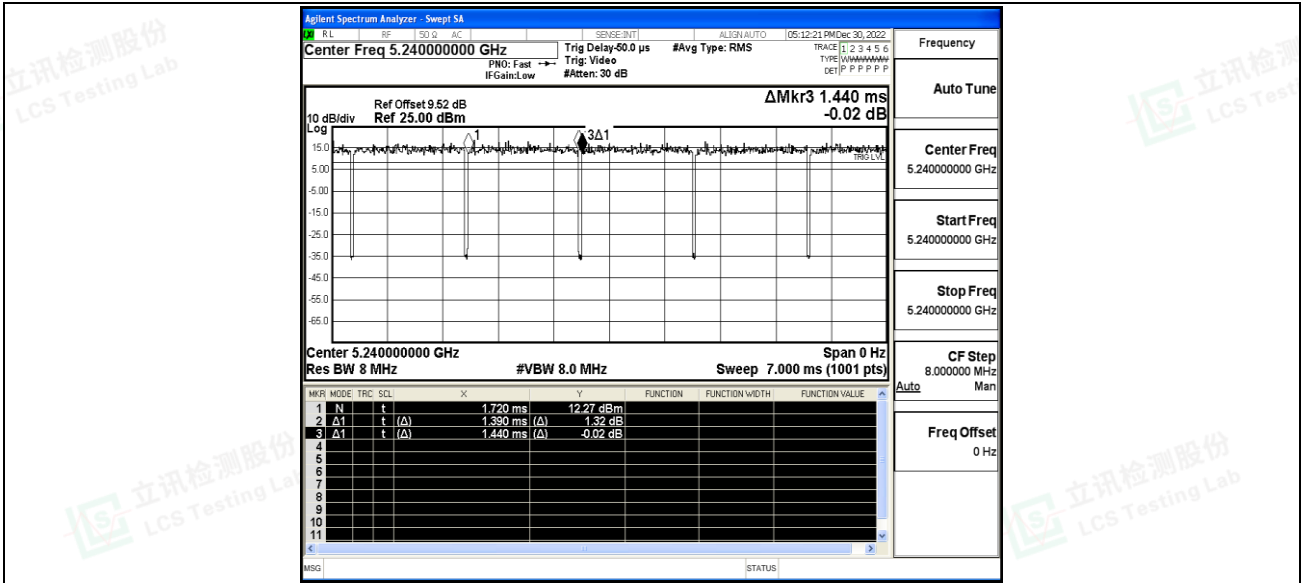


11A\_Ant1\_5220

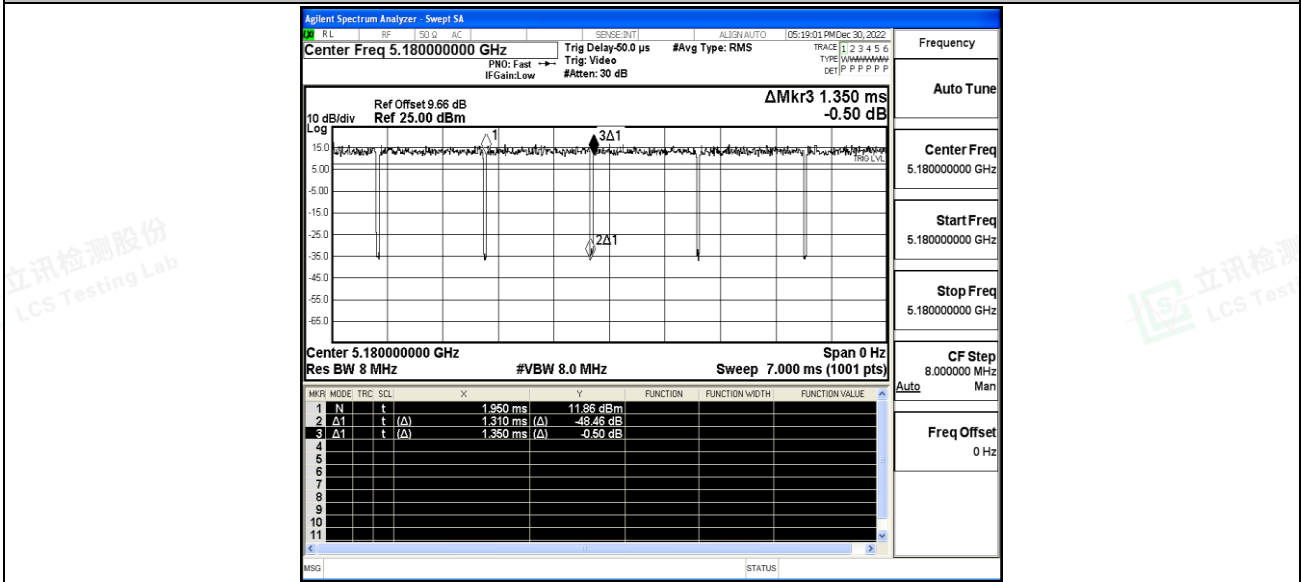


11A\_Ant1\_5240



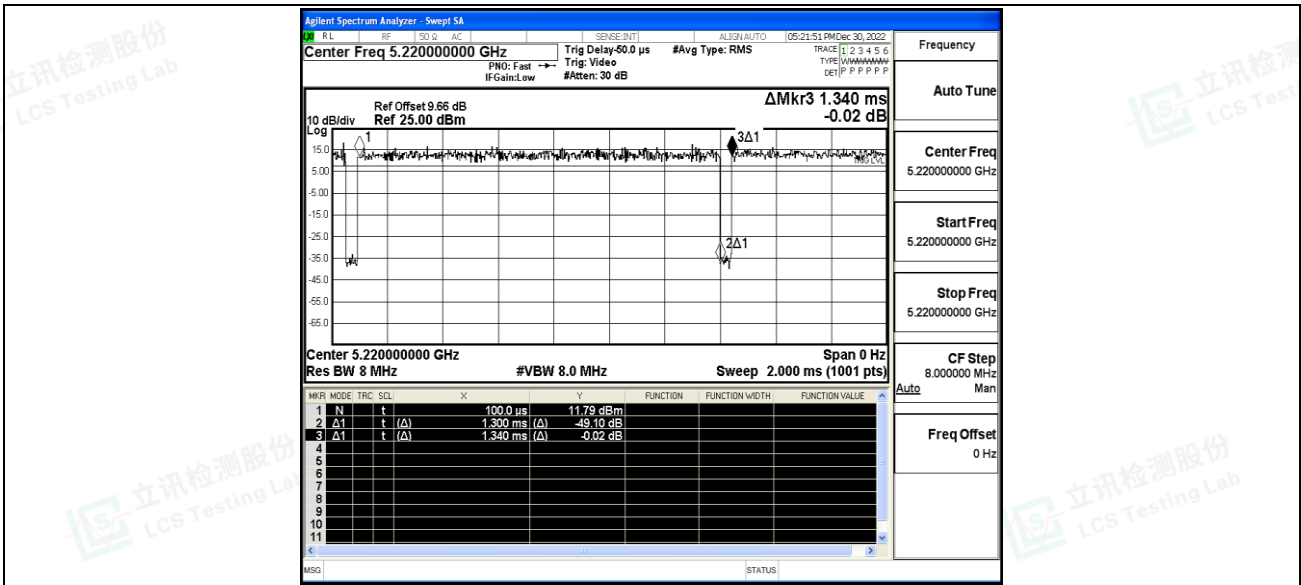


11N20SISO\_Ant1\_5180

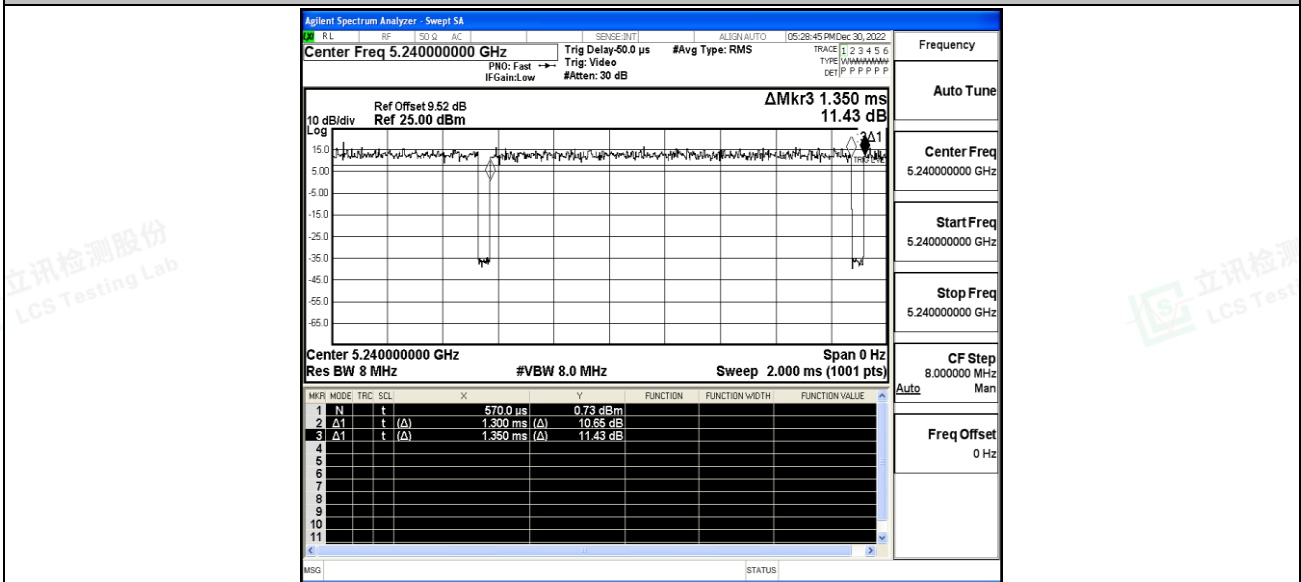


11N20SISO\_Ant1\_5220



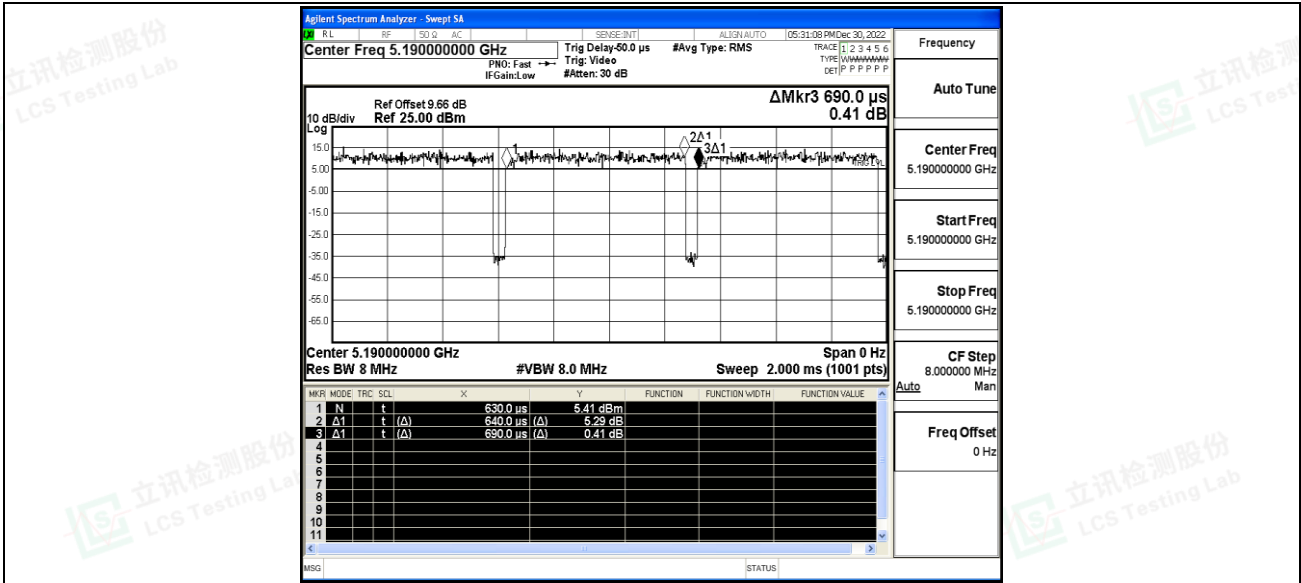


11N20SISO\_Ant1\_5240

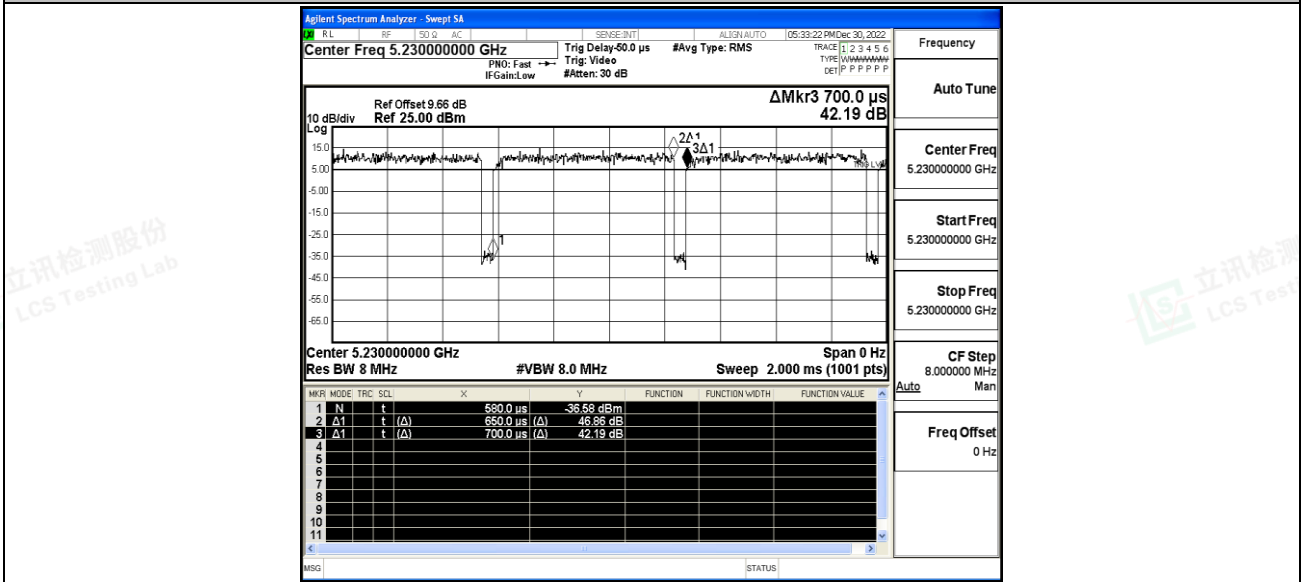


11N40SISO\_Ant1\_5190



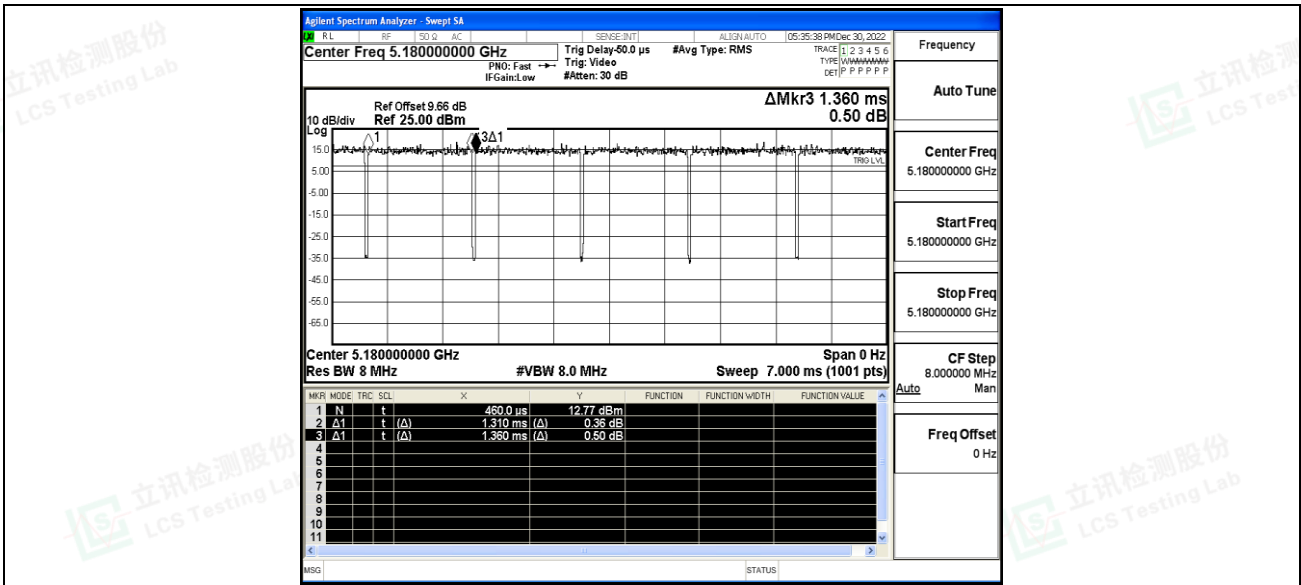


11N40SISO\_Ant1\_5230

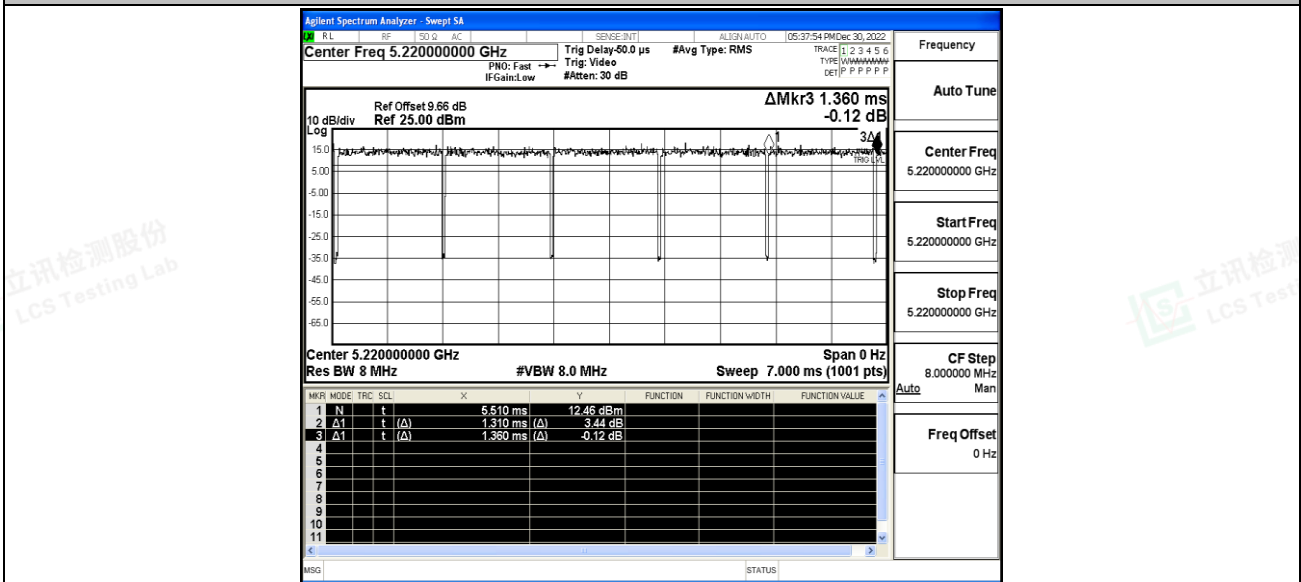


11AC20SISO\_Ant1\_5180





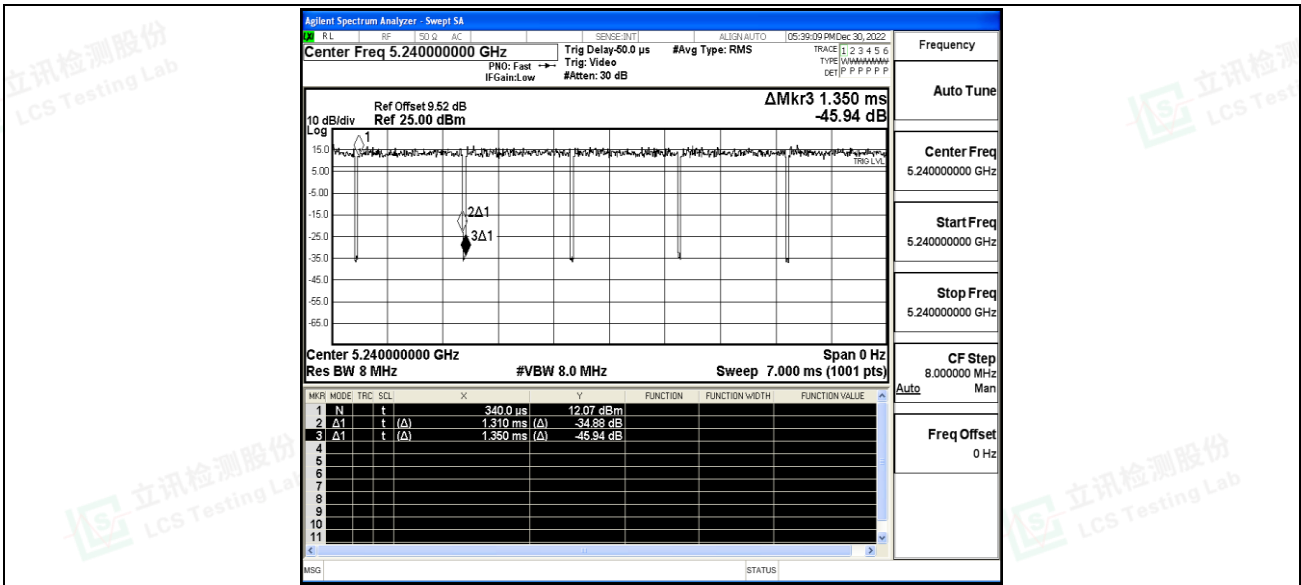
11AC20SISO\_Ant1\_5220



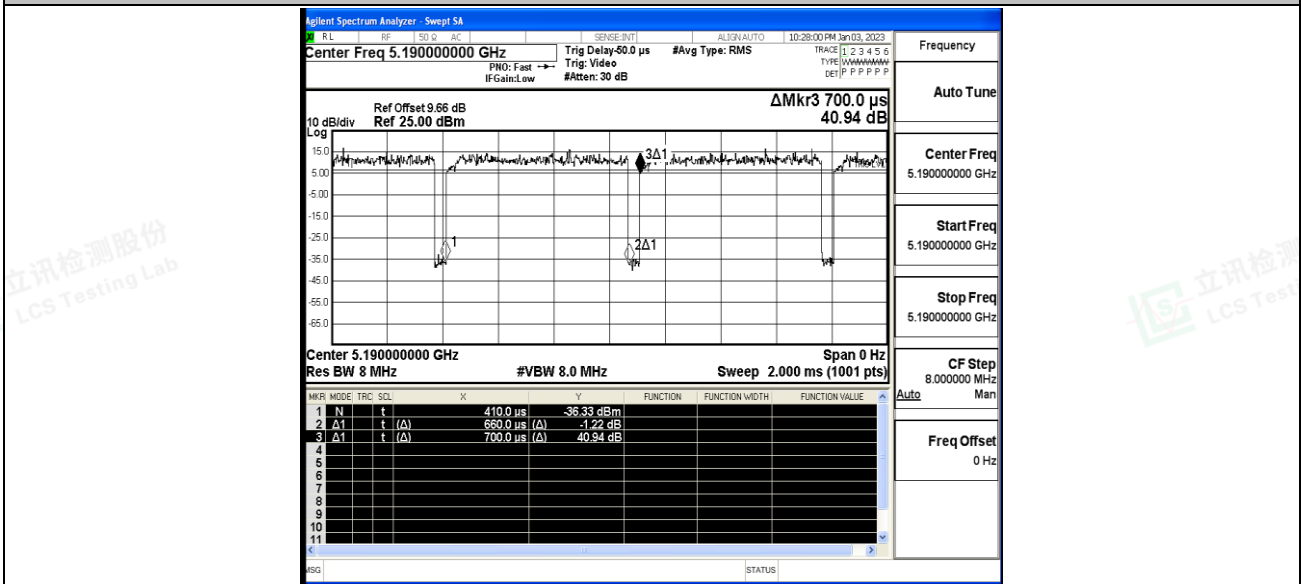
11AC20SISO\_Ant1\_5240





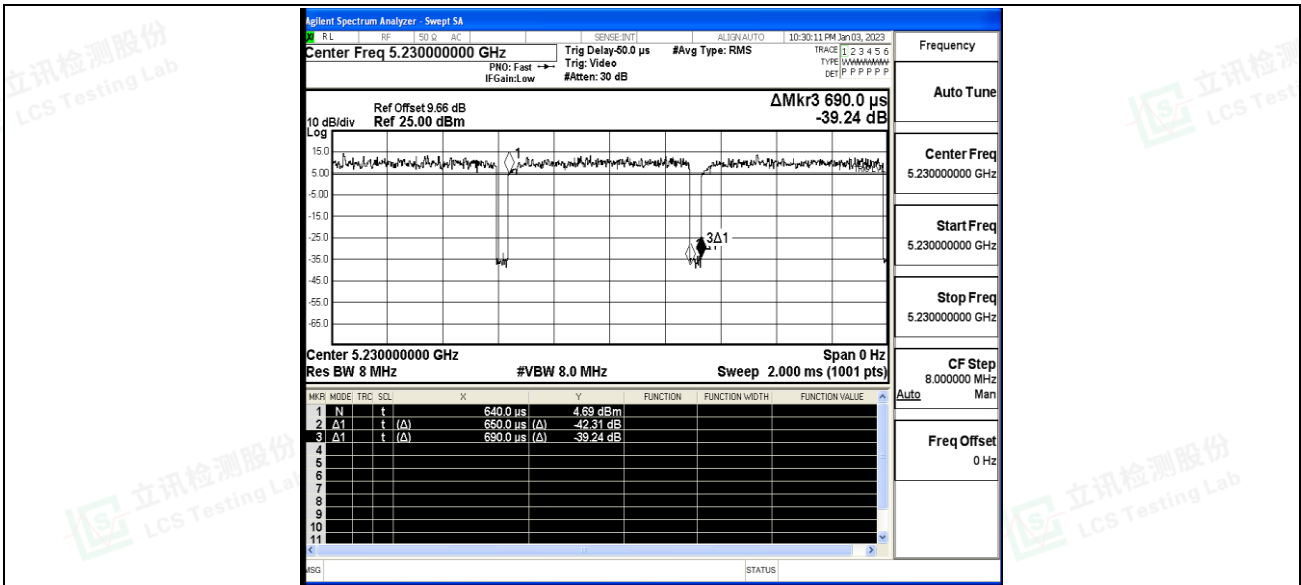


11AC40SISO\_Ant1\_5190



11AC40SISO\_Ant1\_5230





11AC80SISO\_Ant1\_5210

