



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: FM Transmitter

Test Model: T70

Environmental Conditions

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





A.1 20dB Emission Bandwidth

Test Result

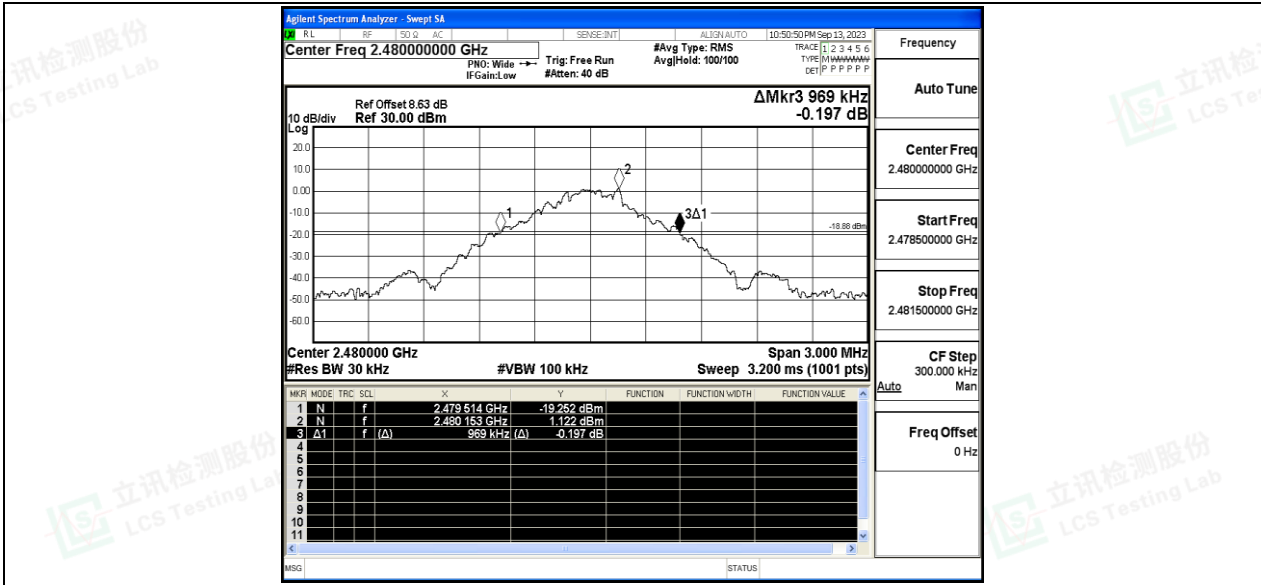
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant1	2402	1.026	2401.454	2402.480	---
		2441	1.029	2440.454	2441.483	---
		2480	0.969	2479.514	2480.483	---
2DH5	Ant1	2402	1.287	2401.352	2402.639	---
		2441	1.314	2440.331	2441.645	---
		2480	1.308	2479.331	2480.639	---
3DH5	Ant1	2402	1.344	2401.319	2402.663	---
		2441	1.281	2440.349	2441.630	---
		2480	1.314	2479.334	2480.648	---



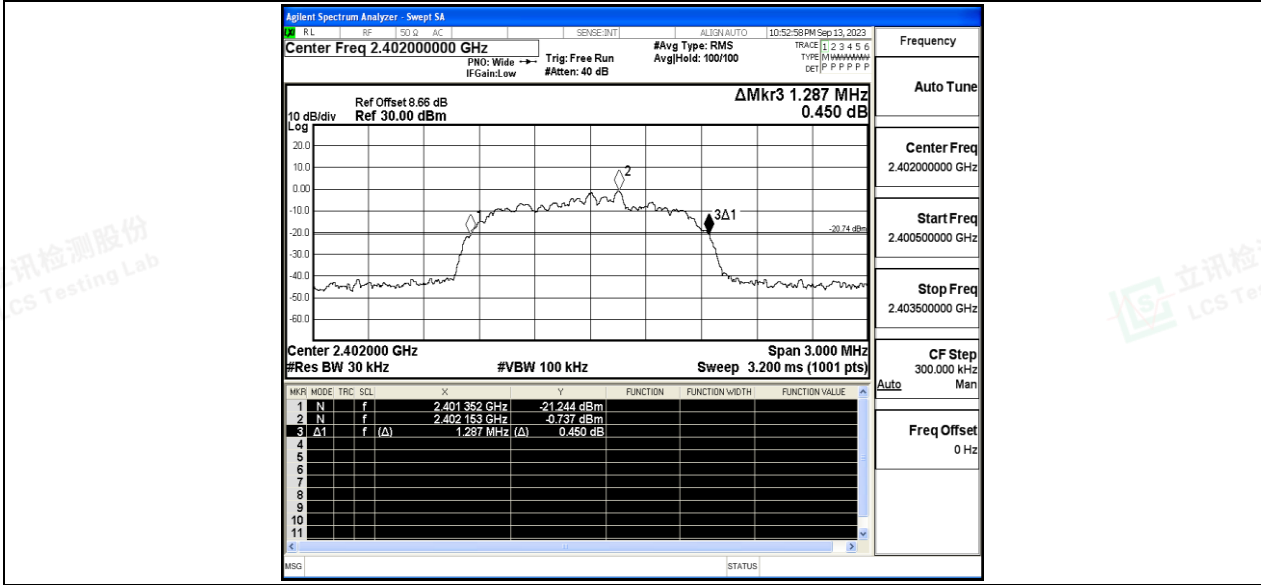


Test Graphs



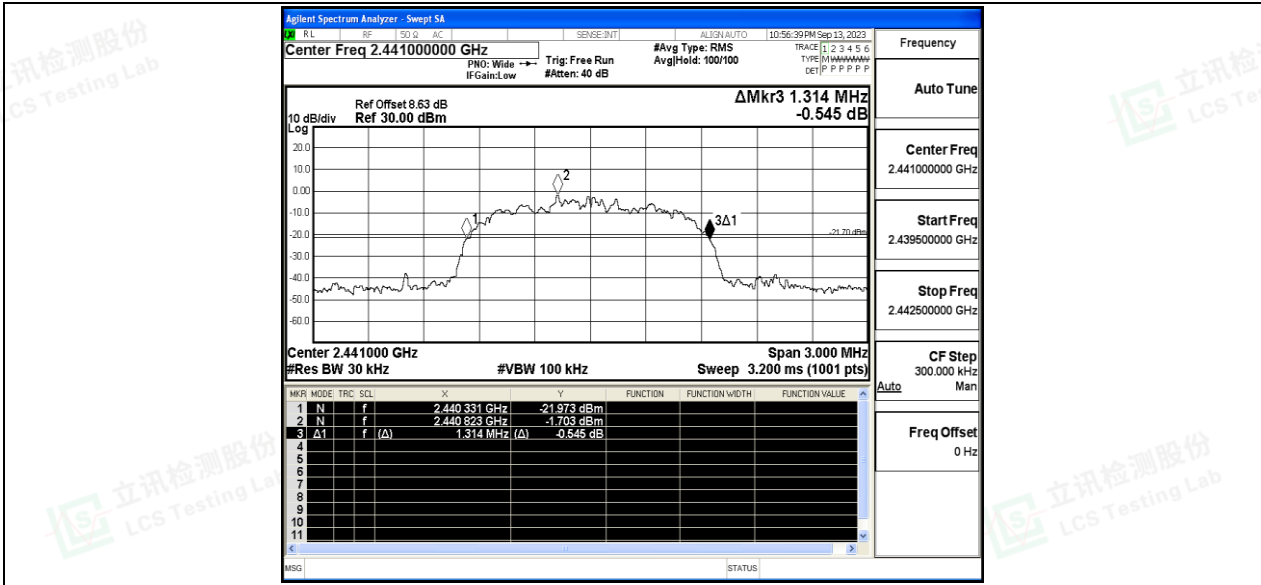


2DH5_Ant1_2402

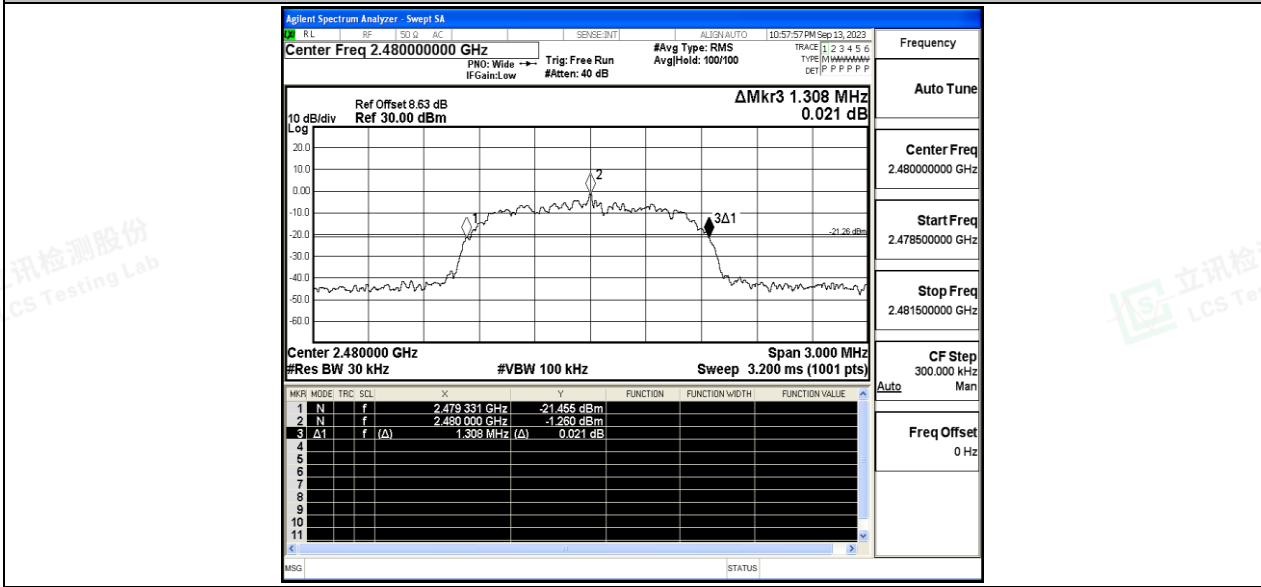


2DH5_Ant1_2441



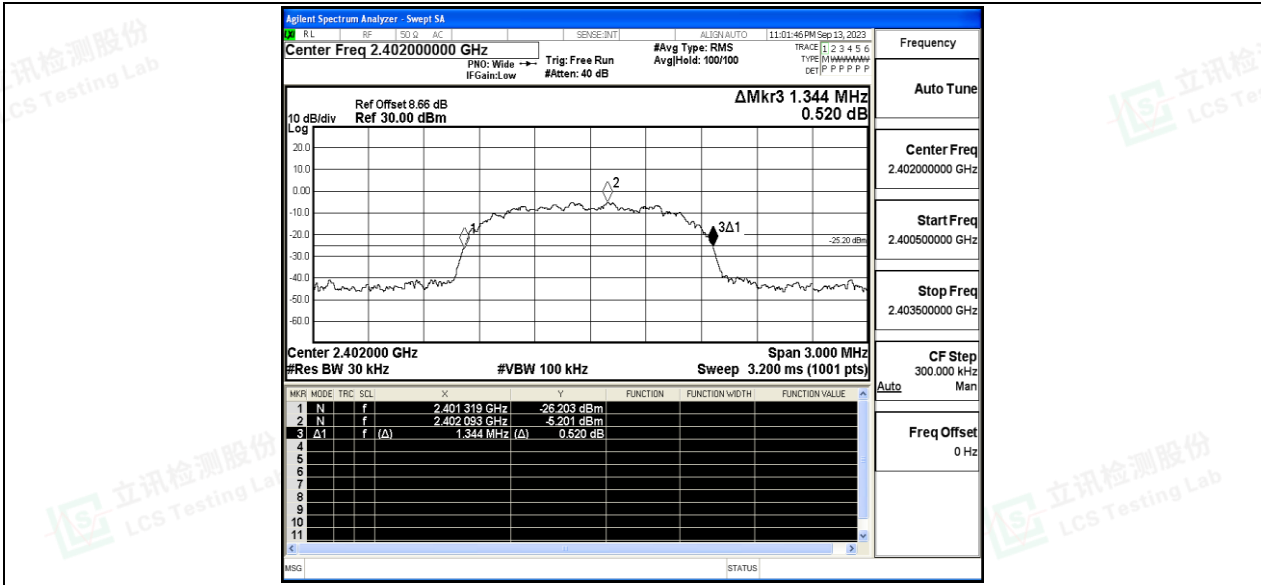


2DH5_Ant1_2480

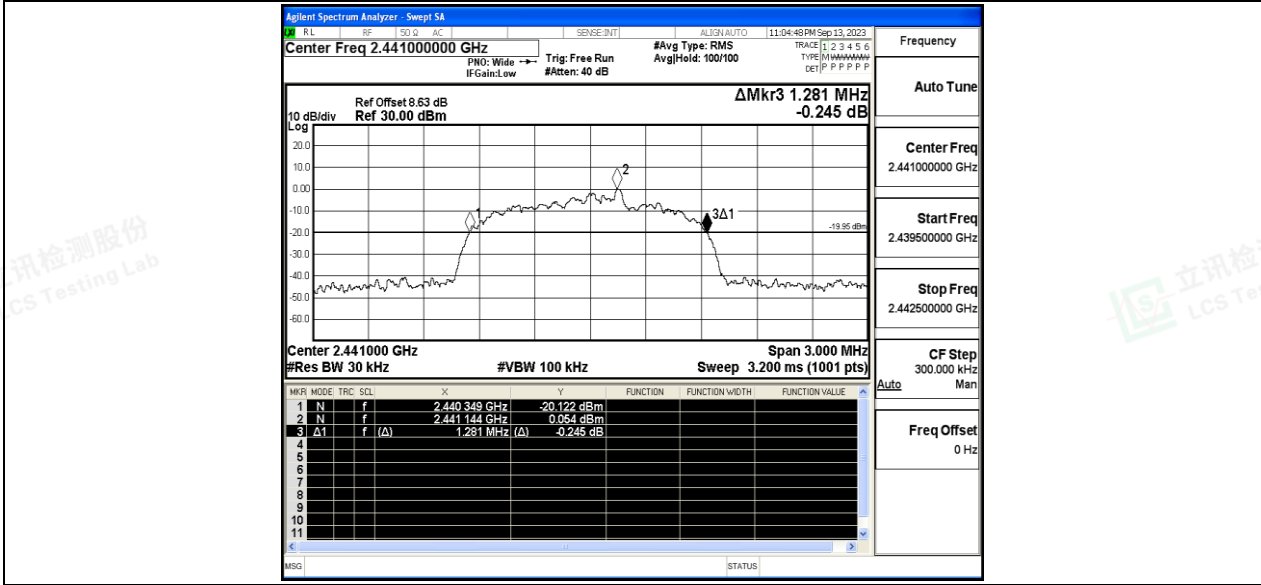


3DH5_Ant1_2402



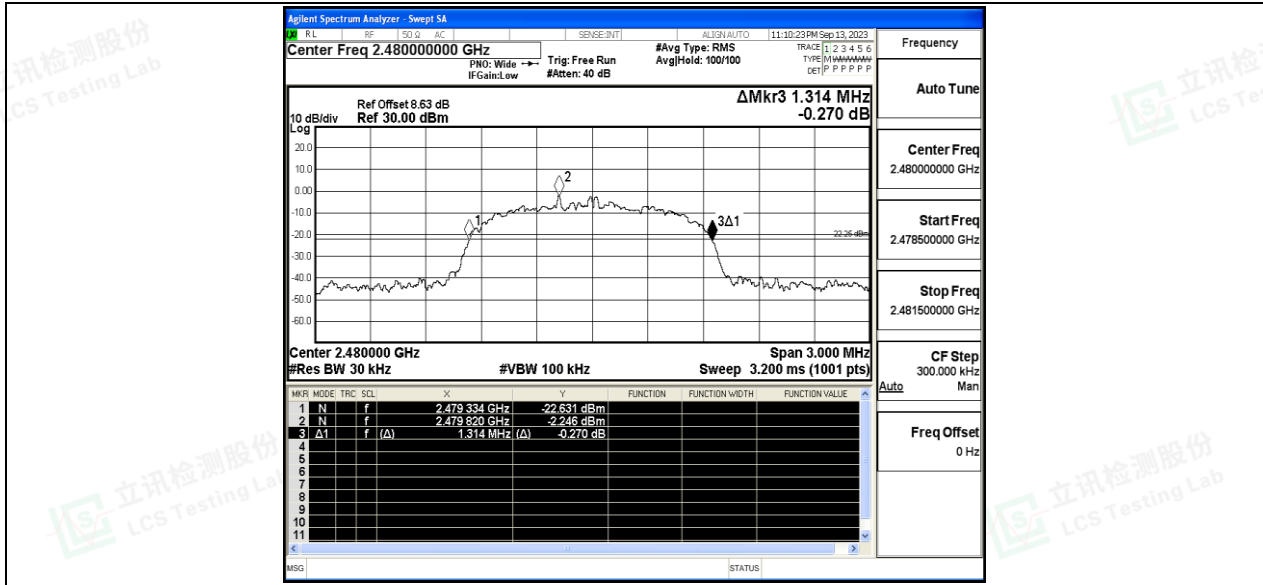


3DH5_Ant1_2441



3DH5_Ant1_2480





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



A.2 Maximum conducted output power

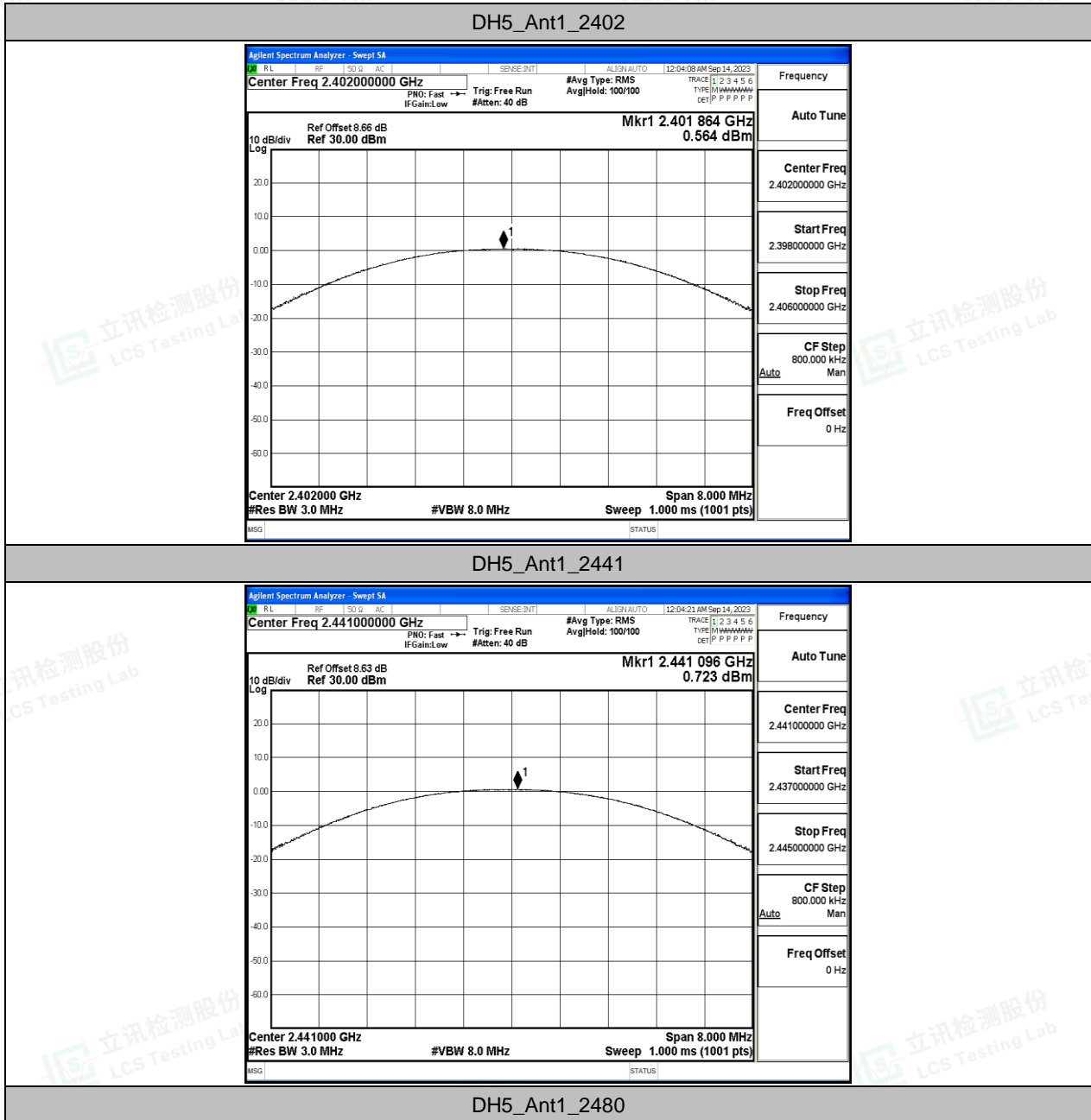
Test Result

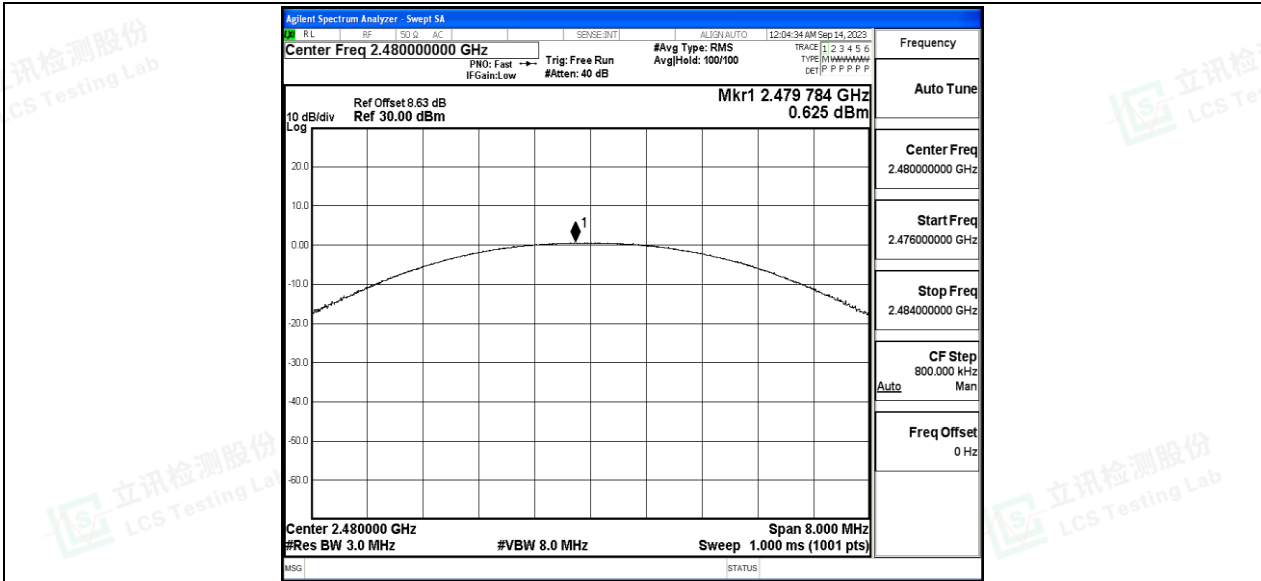
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	0.56	≤ 20.97	PASS
		2441	0.72	≤ 20.97	PASS
		2480	0.63	≤ 20.97	PASS
2DH5	Ant1	2402	0.26	≤ 20.97	PASS
		2441	0.39	≤ 20.97	PASS
		2480	0.24	≤ 20.97	PASS
3DH5	Ant1	2402	0.26	≤ 20.97	PASS
		2441	0.41	≤ 20.97	PASS
		2480	0.48	≤ 20.97	PASS



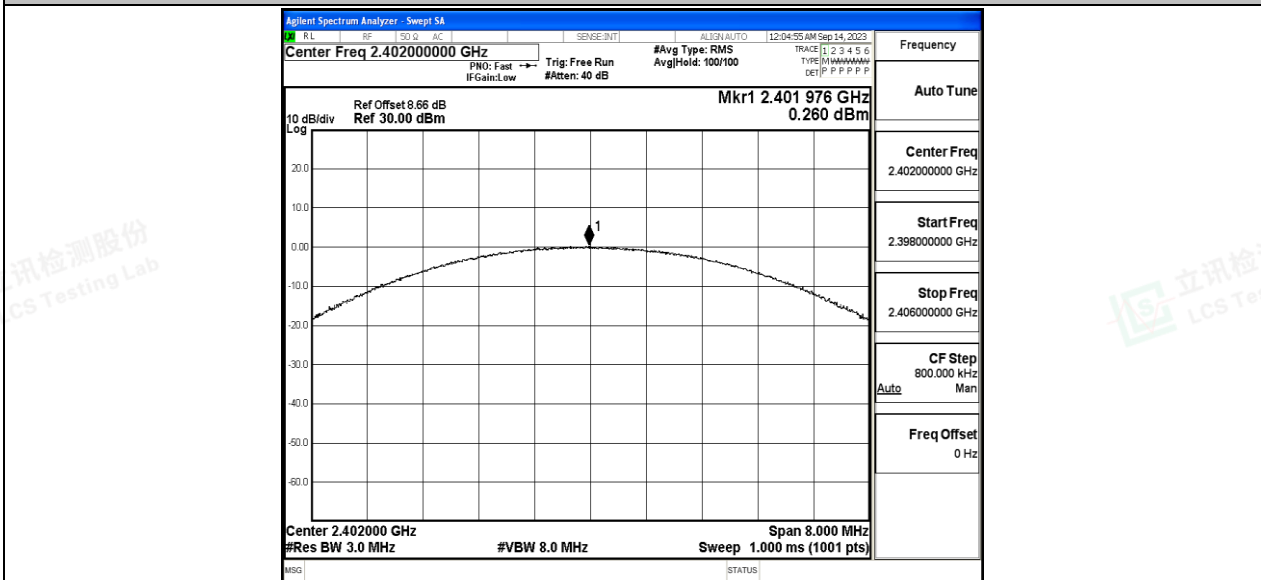


Test Graphs



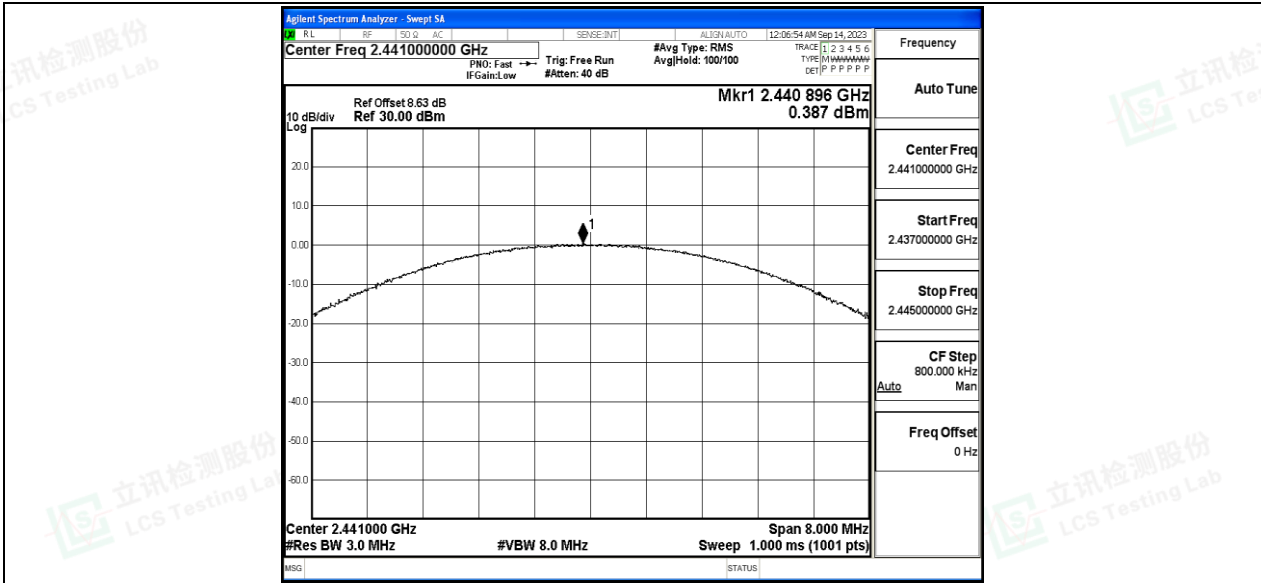


2DH5_Ant1_2402

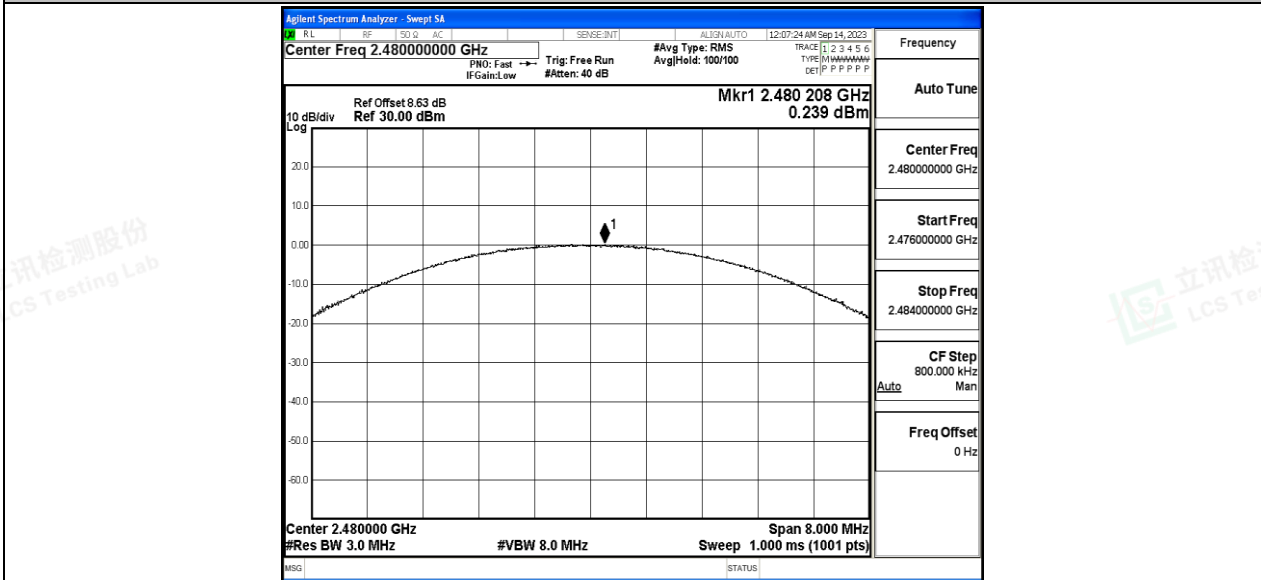


2DH5_Ant1_2441



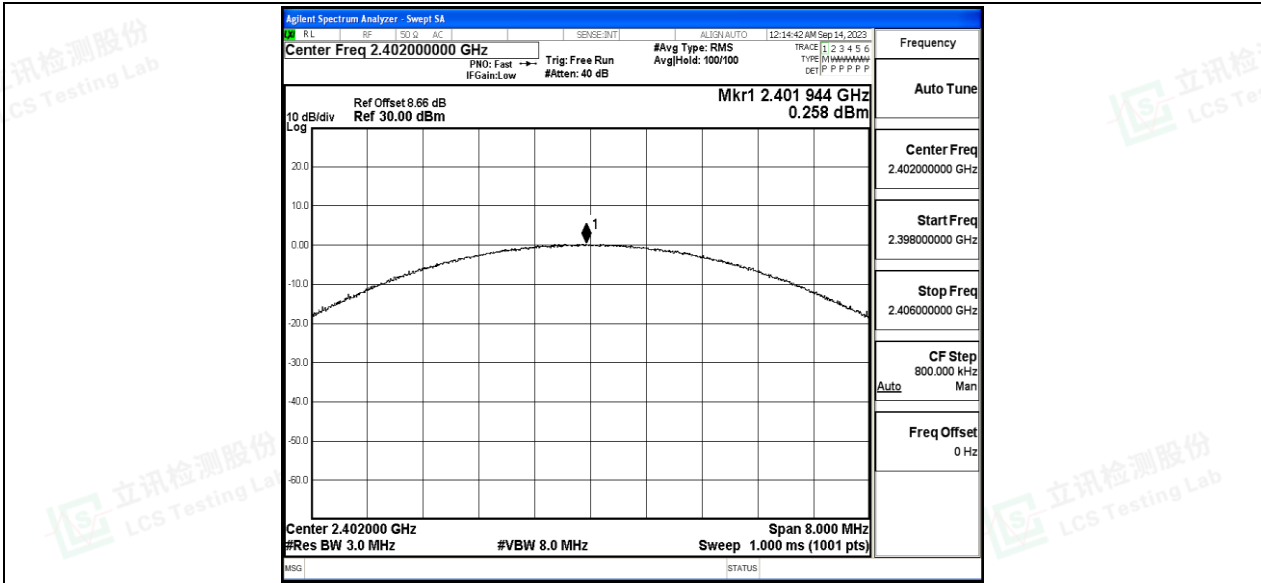


2DH5_Ant1_2480

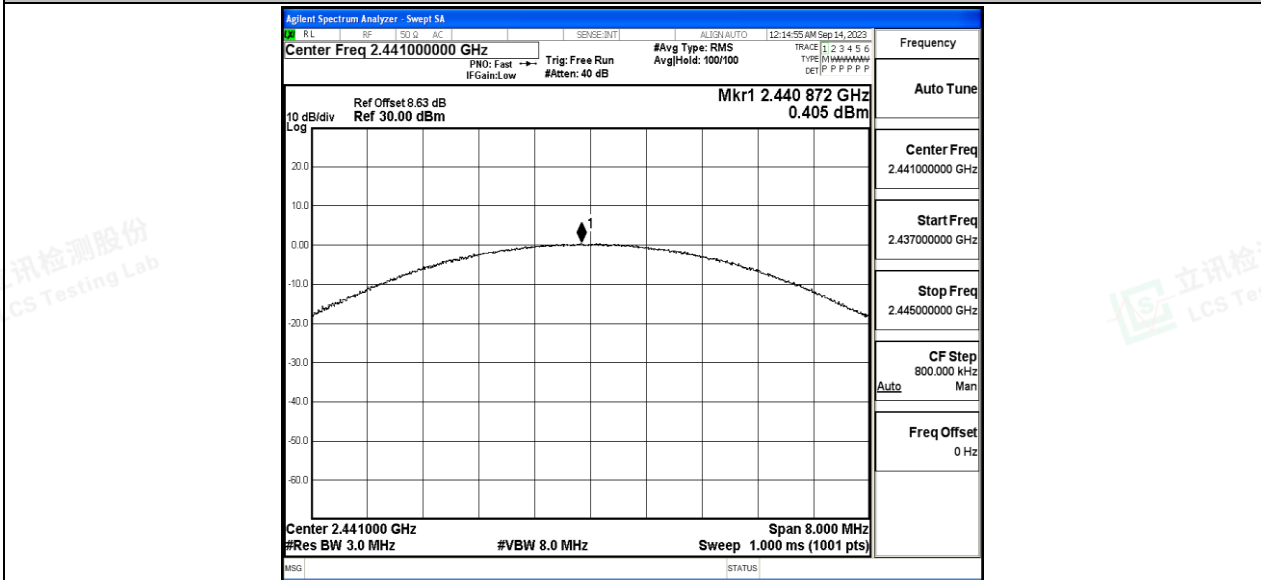


3DH5_Ant1_2402



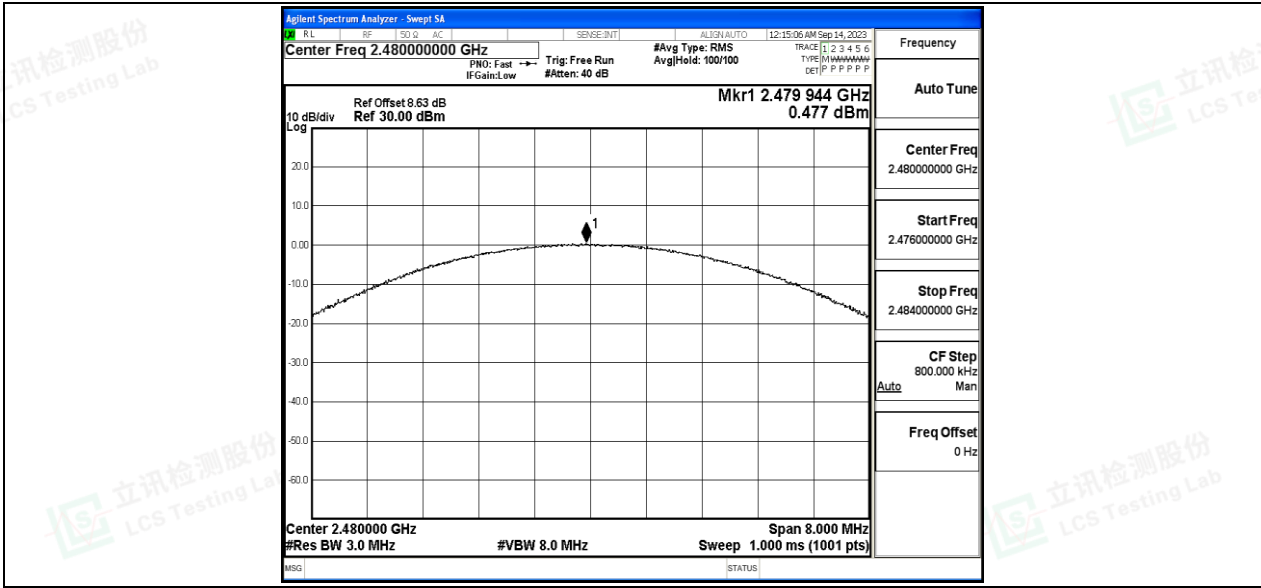


3DH5_Ant1_2441



3DH5_Ant1_2480







A.3 Carrier frequency separation

Test Result

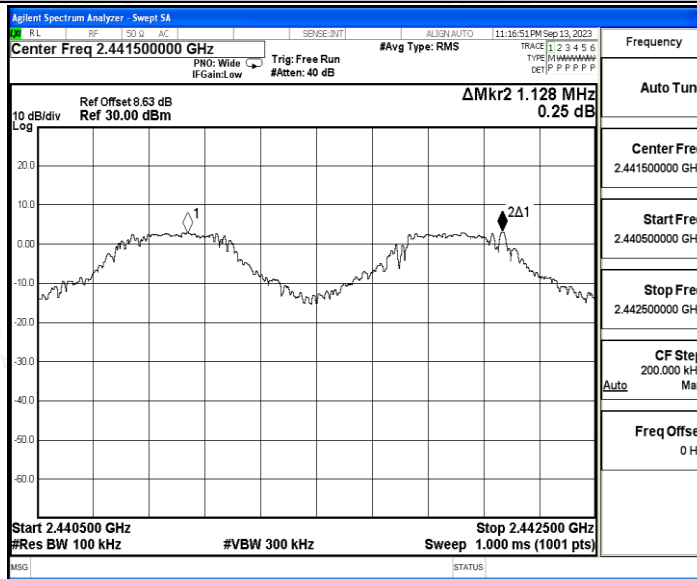
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.128	≥1.029	PASS
2DH5	Ant1	Hop	1.206	≥0.876	PASS
3DH5	Ant1	Hop	1.002	≥0.896	PASS



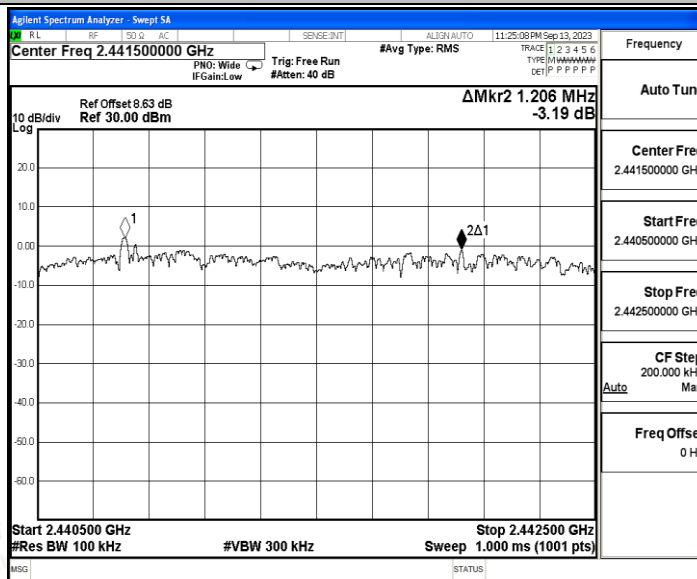


Test Graphs

DH5_Ant1_Hop

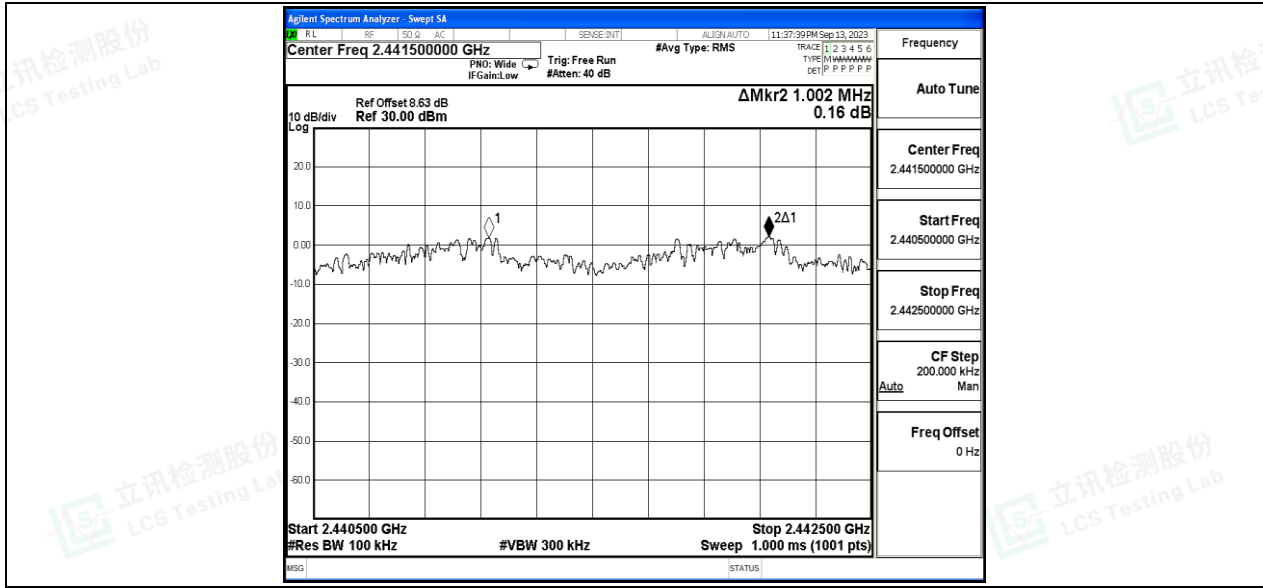


2DH5_Ant1_Hop



3DH5_Ant1_Hop







A.4 Time of occupancy

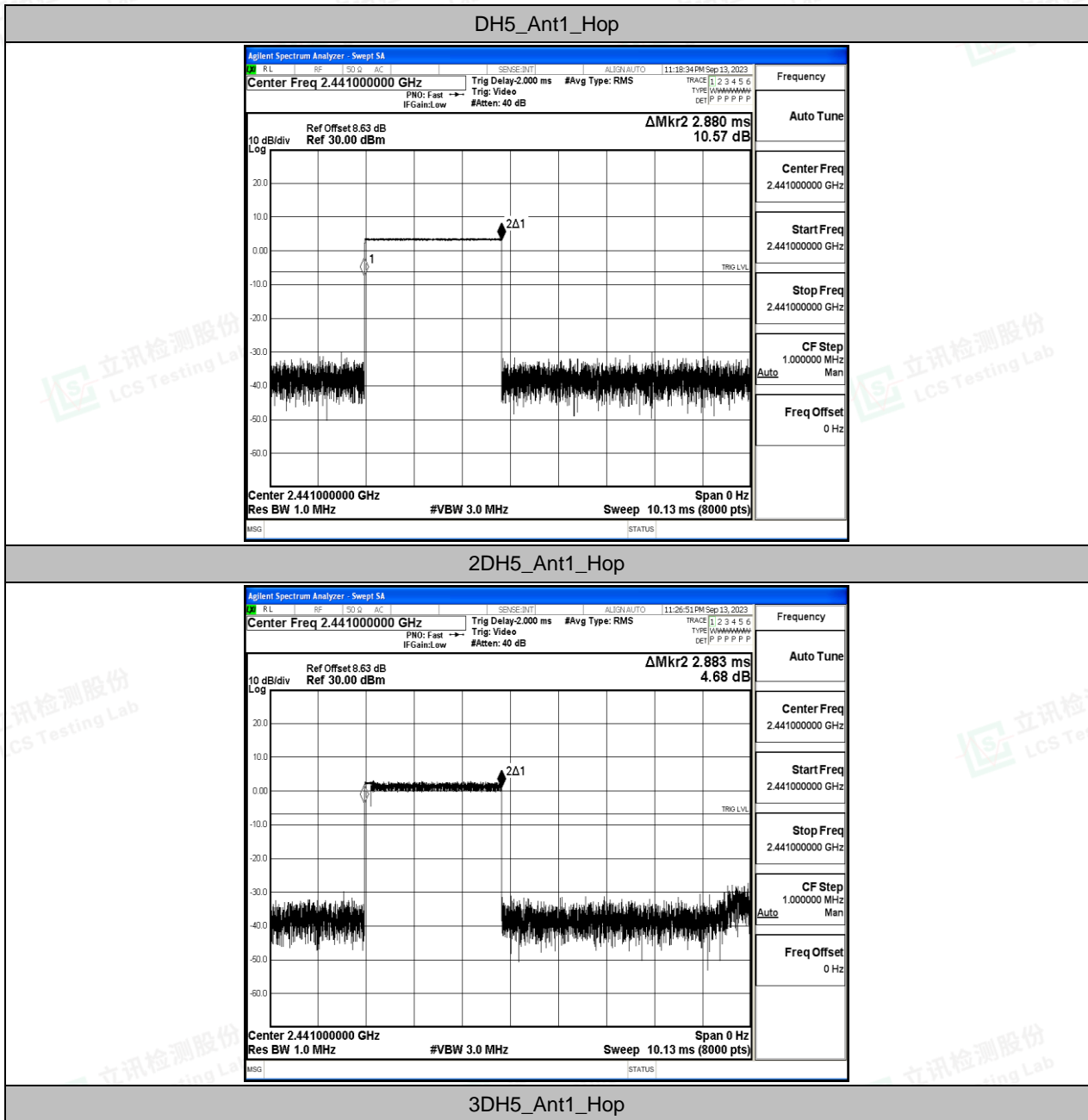
Test Result

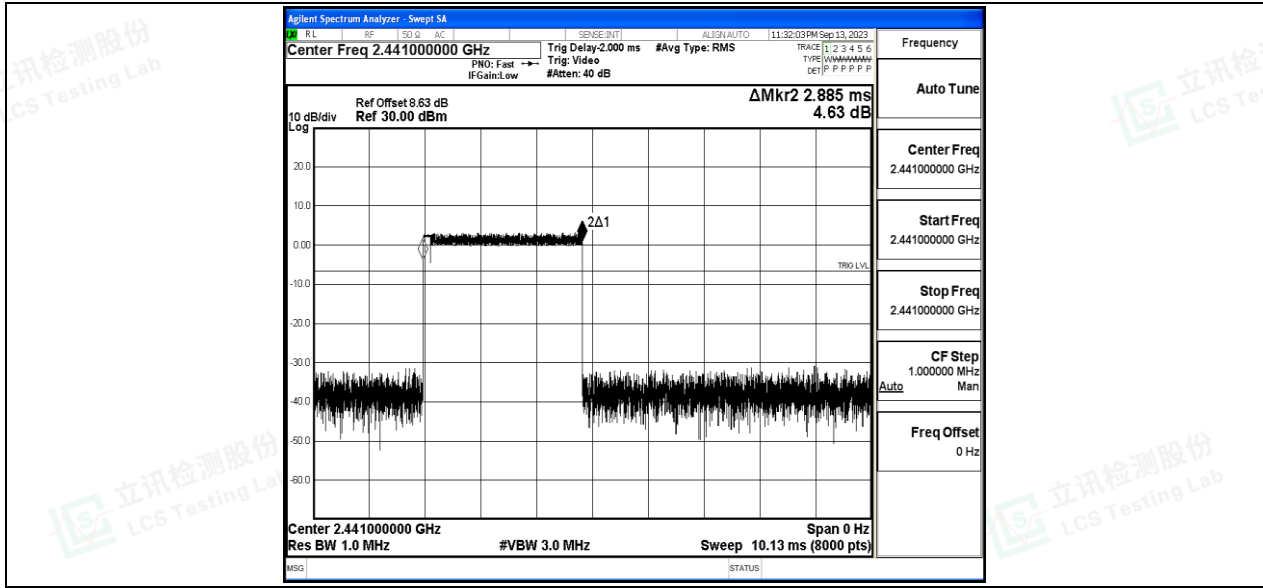
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.883	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.885	106.67	0.308	≤0.4	PASS





Test Graphs







A.5 Number of hopping channels

Test Result

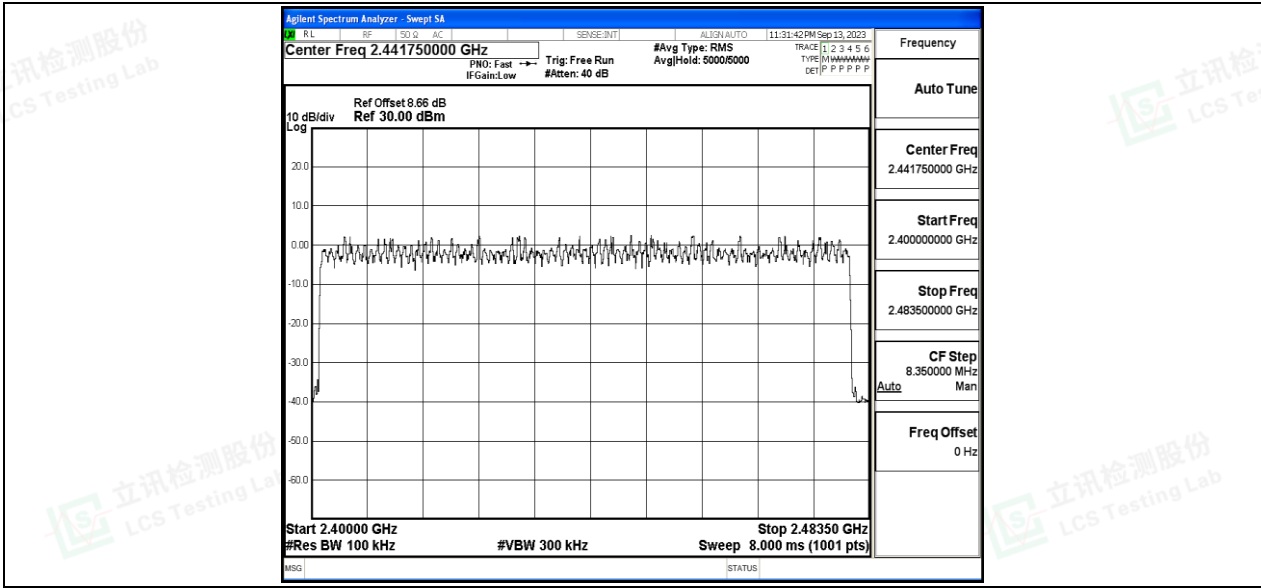
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS





Test Graphs







A.6 Band edge measurements

Test Result

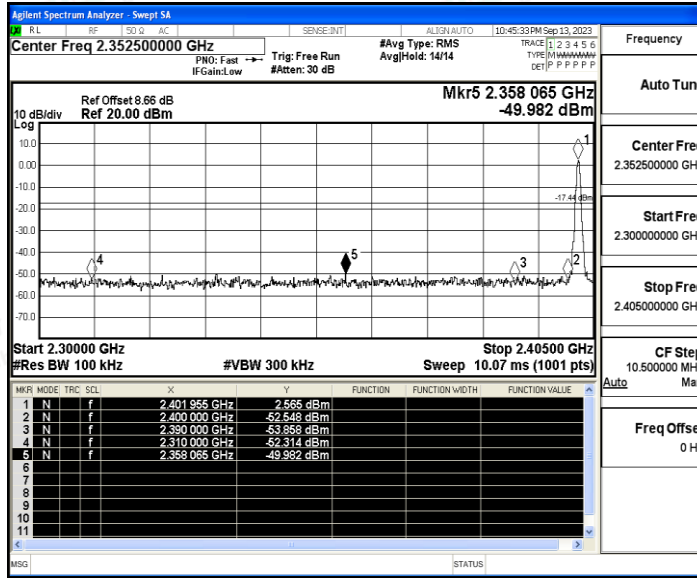
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	2.57	-49.98	≤-17.44	PASS
		High	2480	2.49	-49.41	≤-17.51	PASS
		Low	Hop_2402	2.47	-49.22	≤-17.53	PASS
		High	Hop_2480	3.38	-47.7	≤-16.62	PASS
2DH5	Ant1	Low	2402	-0.17	-50.24	≤-20.17	PASS
		High	2480	-1.96	-49.11	≤-21.96	PASS
		Low	Hop_2402	-2.03	-48.01	≤-22.03	PASS
		High	Hop_2480	1.95	-47.79	≤-18.05	PASS
3DH5	Ant1	Low	2402	-0.59	-50.28	≤-20.59	PASS
		High	2480	-1.44	-48.97	≤-21.44	PASS
		Low	Hop_2402	1.57	-48.88	≤-18.43	PASS
		High	Hop_2480	-0.10	-47.98	≤-20.1	PASS



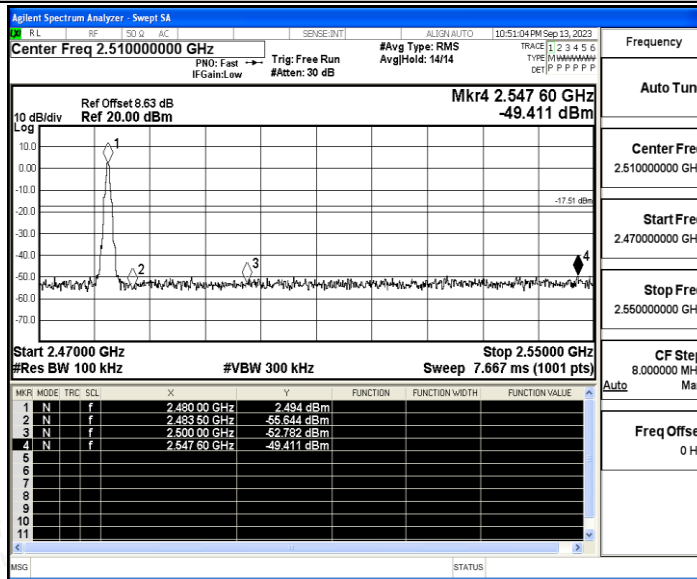


Test Graphs

DH5_Ant1_Low_2402

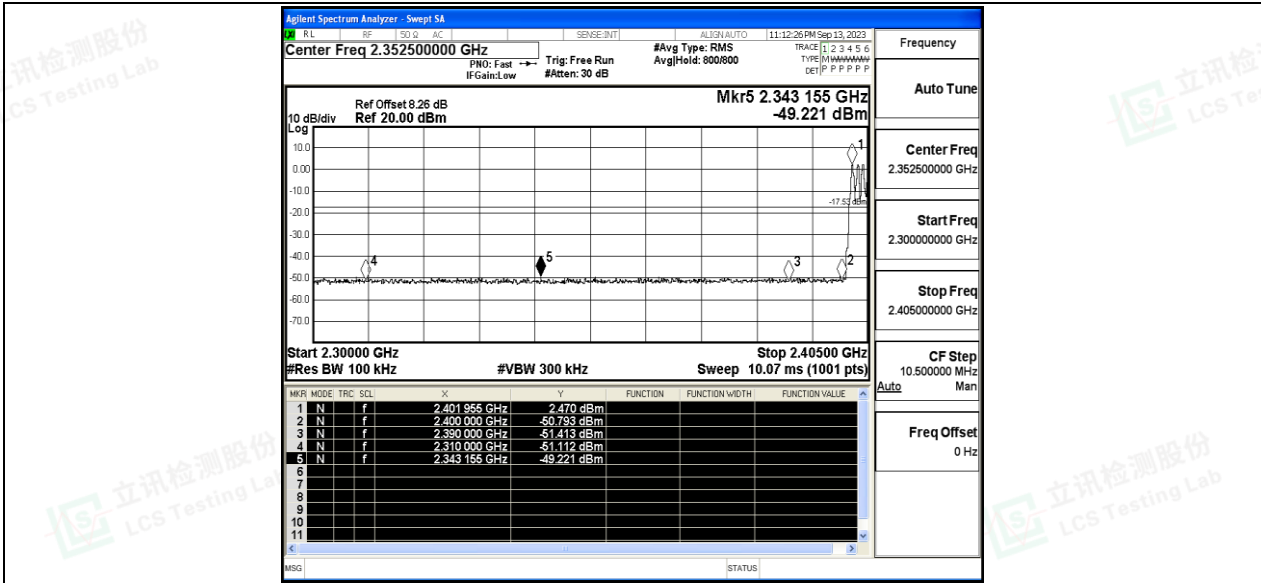


DH5_Ant1_High_2480

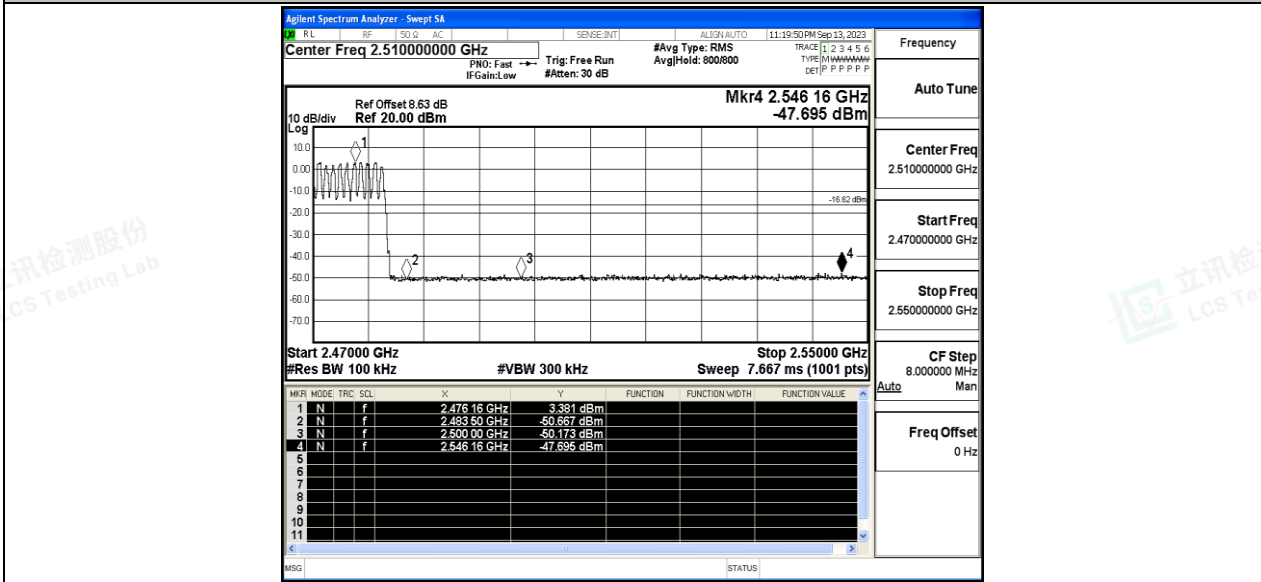


DH5_Ant1_Low_Hop_2402



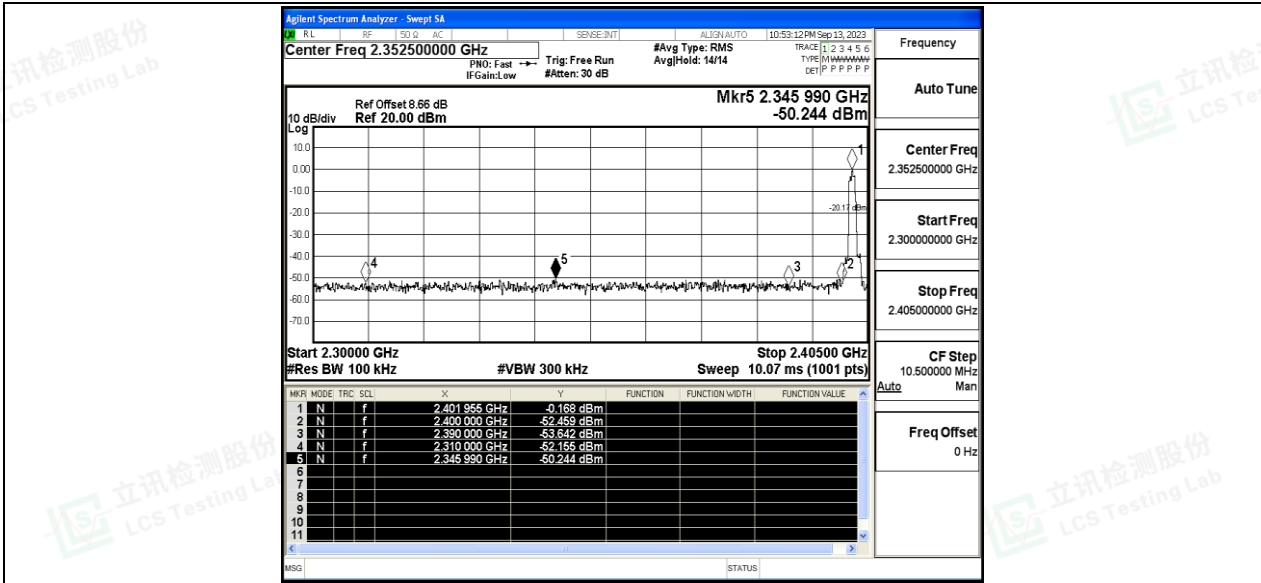


DH5_Ant1_High_Hop_2480

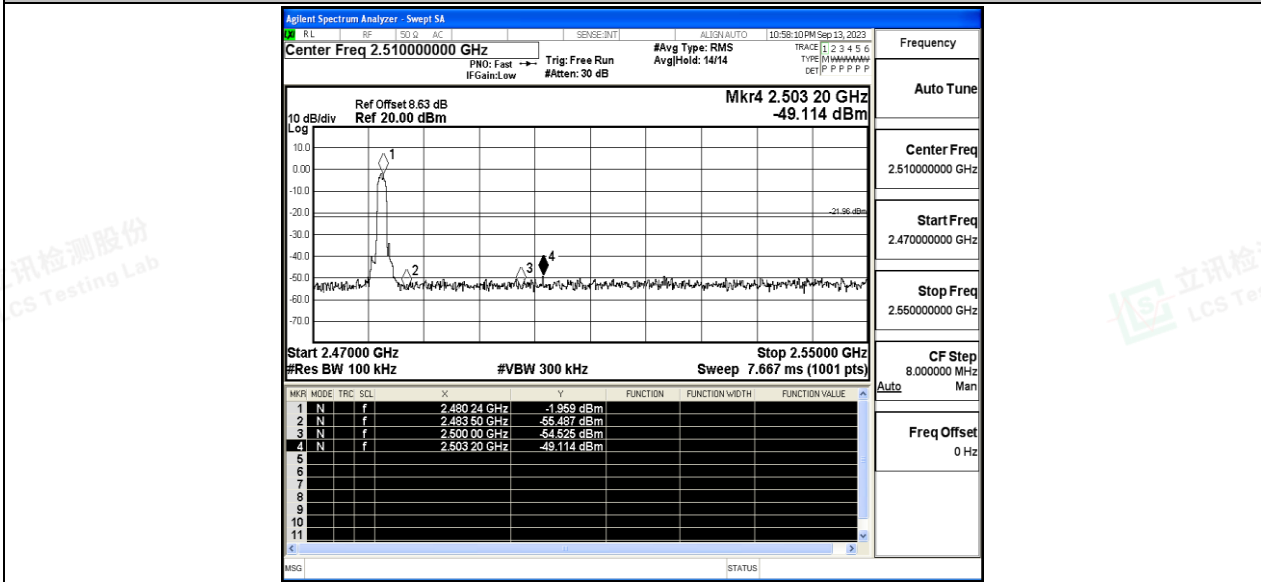


2DH5_Ant1_Low_2402



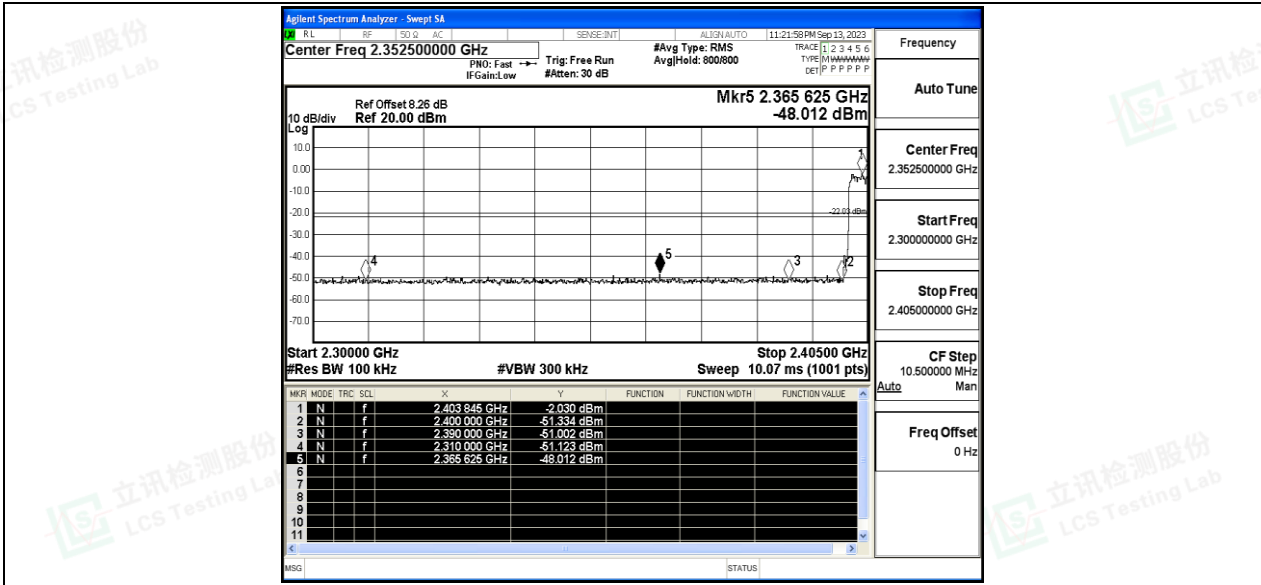


2DH5_Ant1_High_2480

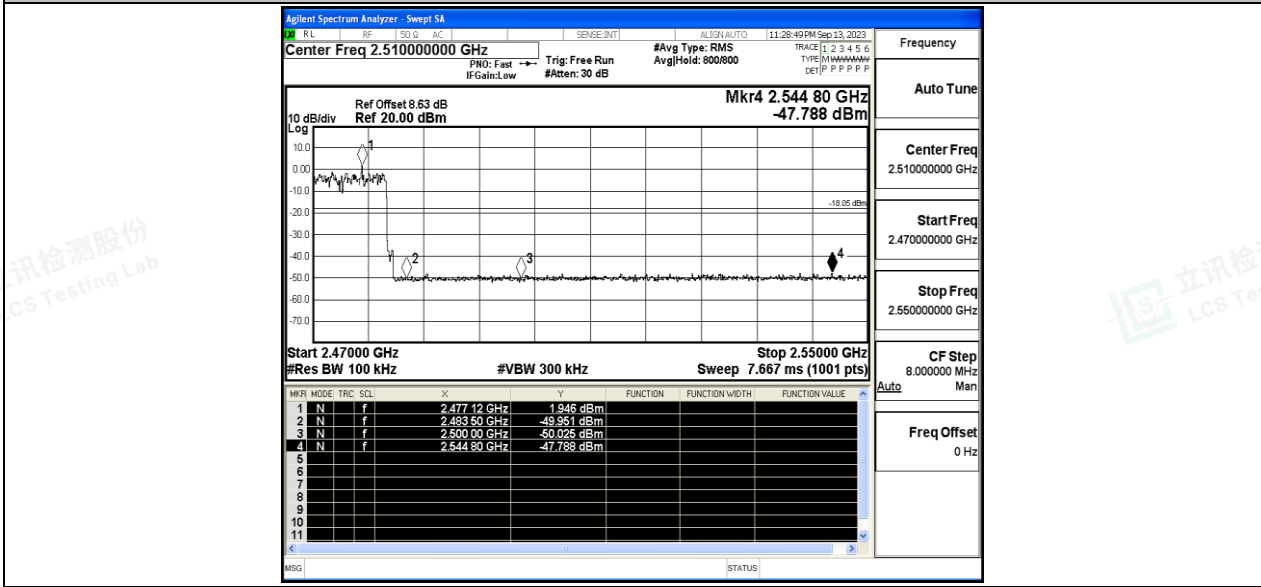


2DH5_Ant1_Low_Hop_2402



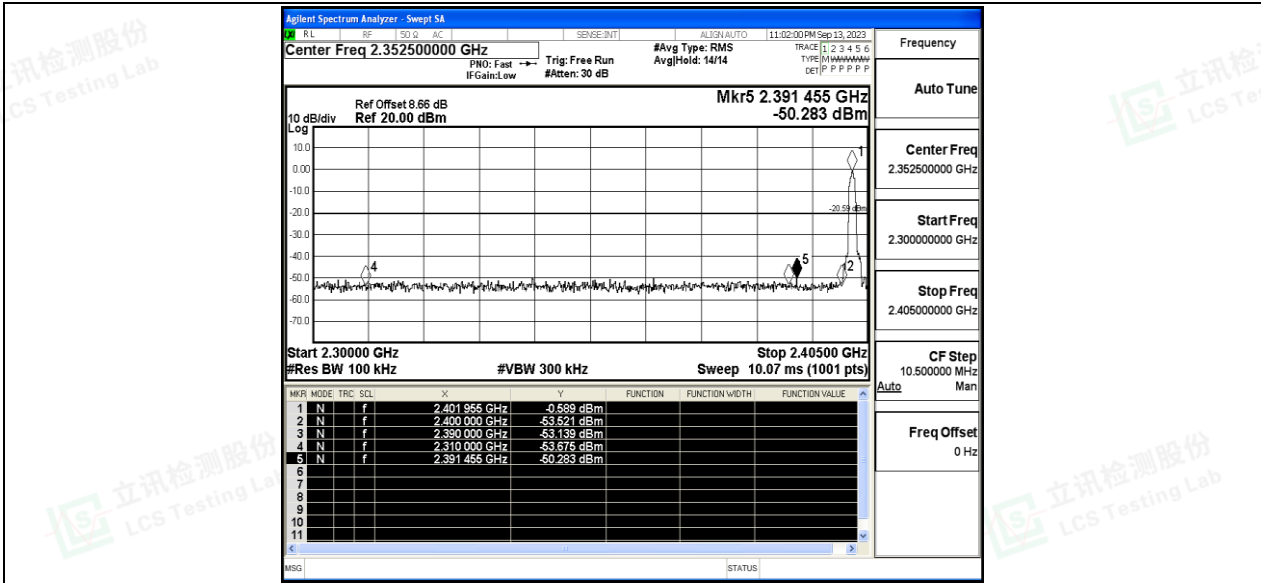


2DH5_Ant1_High_Hop_2480

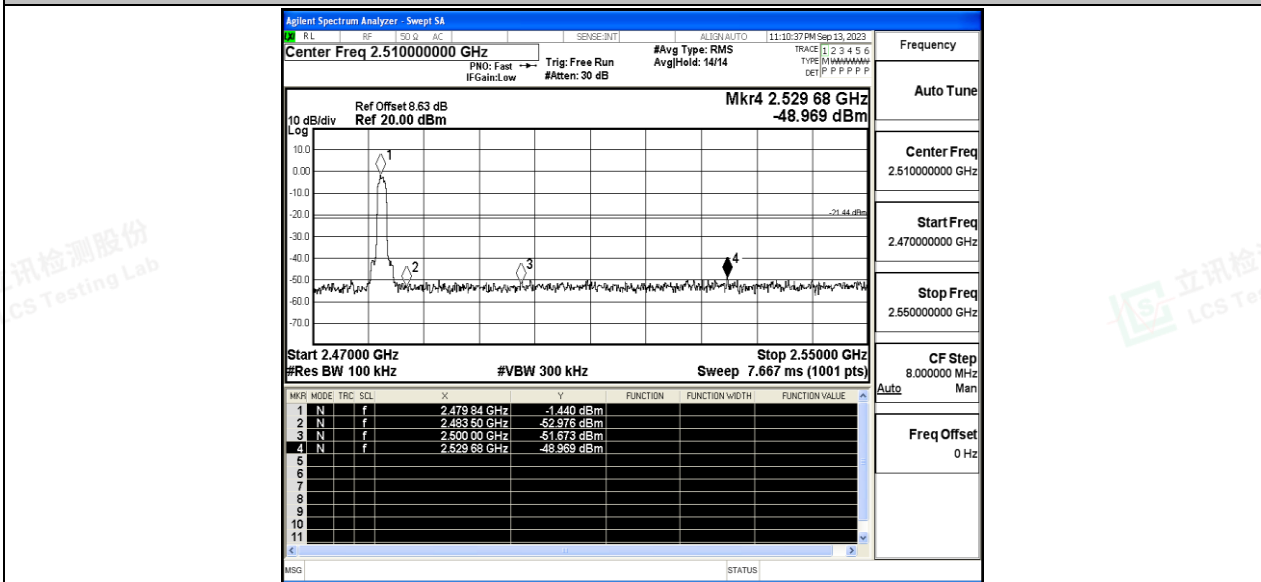


3DH5_Ant1_Low_2402



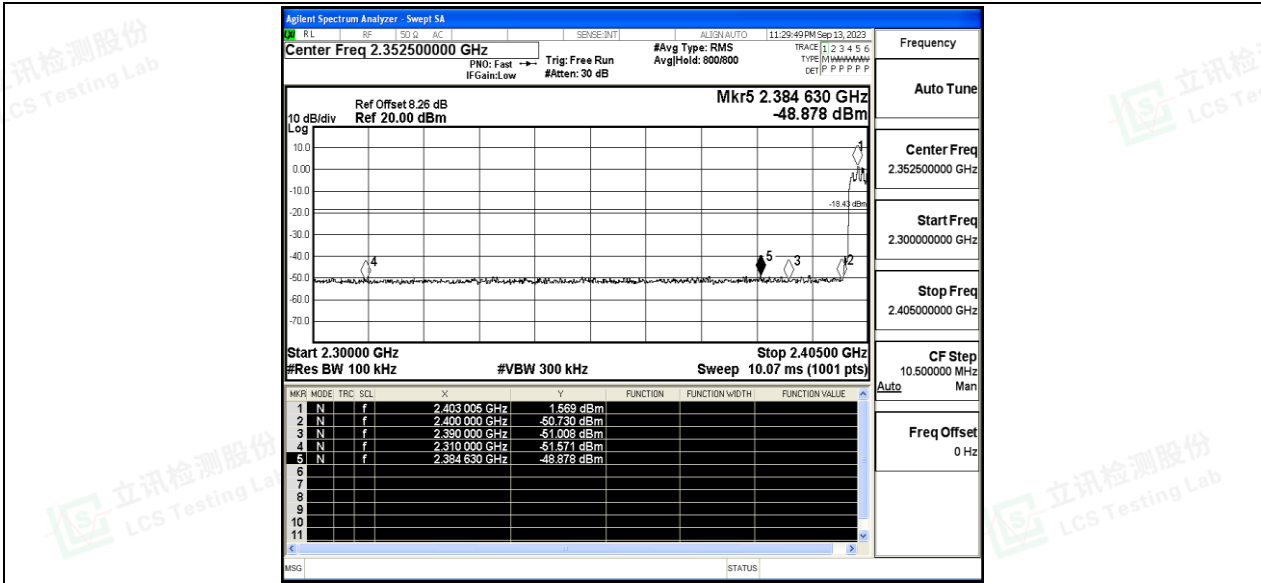


3DH5_Ant1_High_2480

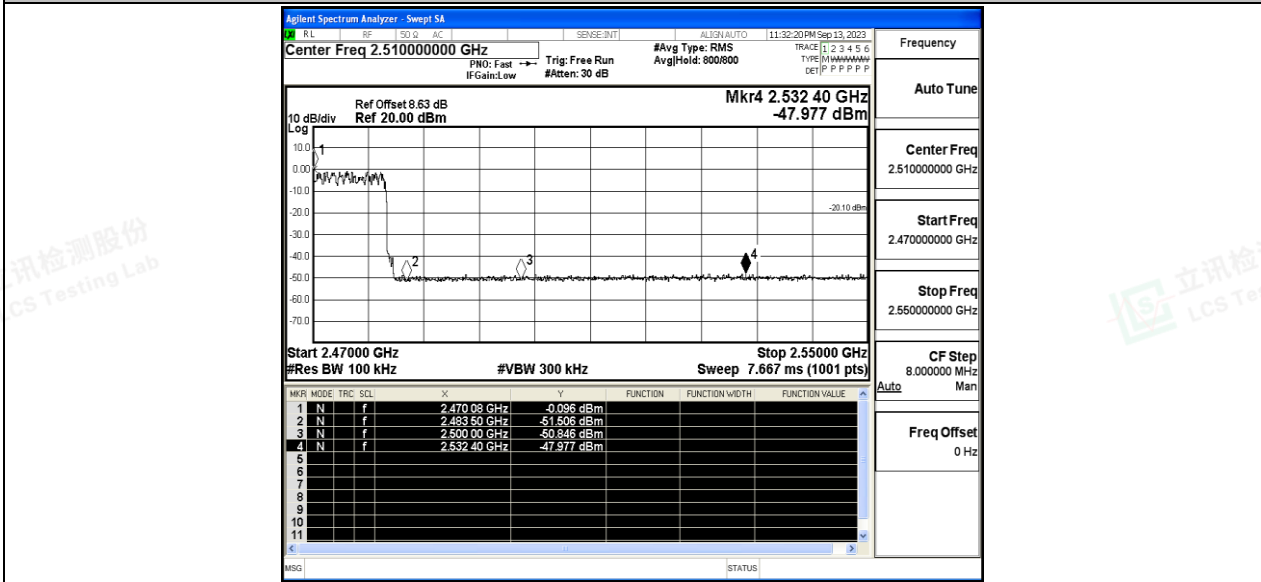


3DH5_Ant1_Low_Hop_2402





3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

Test Result

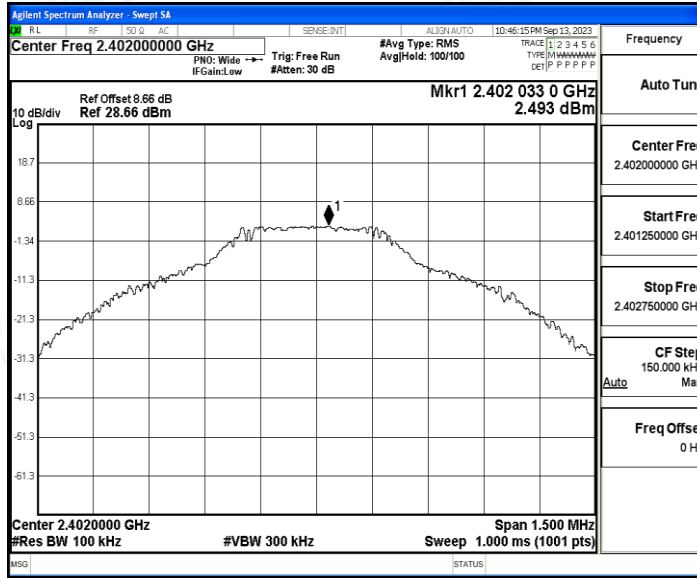
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	2.49	2.49	---	PASS
			30~1000	2.49	-60.54	≤-17.51	PASS
			1000~26500	2.49	-45.82	≤-17.51	PASS
		2441	Reference	2.72	2.72	---	PASS
			30~1000	2.72	-60.75	≤-17.28	PASS
			1000~26500	2.72	-46.76	≤-17.28	PASS
		2480	Reference	2.74	2.74	---	PASS
			30~1000	2.74	-61	≤-17.26	PASS
			1000~26500	2.74	-46.1	≤-17.26	PASS
2DH5	Ant1	2402	Reference	-0.21	-0.21	---	PASS
			30~1000	-0.21	-61.16	≤-20.21	PASS
			1000~26500	-0.21	-46.82	≤-20.21	PASS
		2441	Reference	1.87	1.87	---	PASS
			30~1000	1.87	-60.15	≤-18.13	PASS
			1000~26500	1.87	-46.59	≤-18.13	PASS
		2480	Reference	2.20	2.20	---	PASS
			30~1000	2.20	-60.7	≤-17.8	PASS
			1000~26500	2.20	-46.38	≤-17.8	PASS
3DH5	Ant1	2402	Reference	1.53	1.53	---	PASS
			30~1000	1.53	-61.21	≤-18.47	PASS
			1000~26500	1.53	-45.72	≤-18.47	PASS
		2441	Reference	2.29	2.29	---	PASS
			30~1000	2.29	-61.48	≤-17.71	PASS
			1000~26500	2.29	-46.64	≤-17.71	PASS
		2480	Reference	2.23	2.23	---	PASS
			30~1000	2.23	-60.45	≤-17.77	PASS
			1000~26500	2.23	-46.59	≤-17.77	PASS



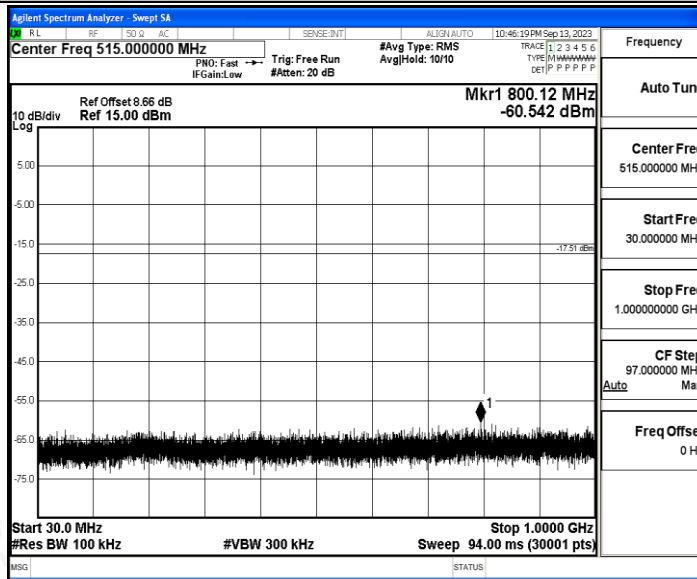


Test Graphs

DH5_Ant1_2402_0~Reference

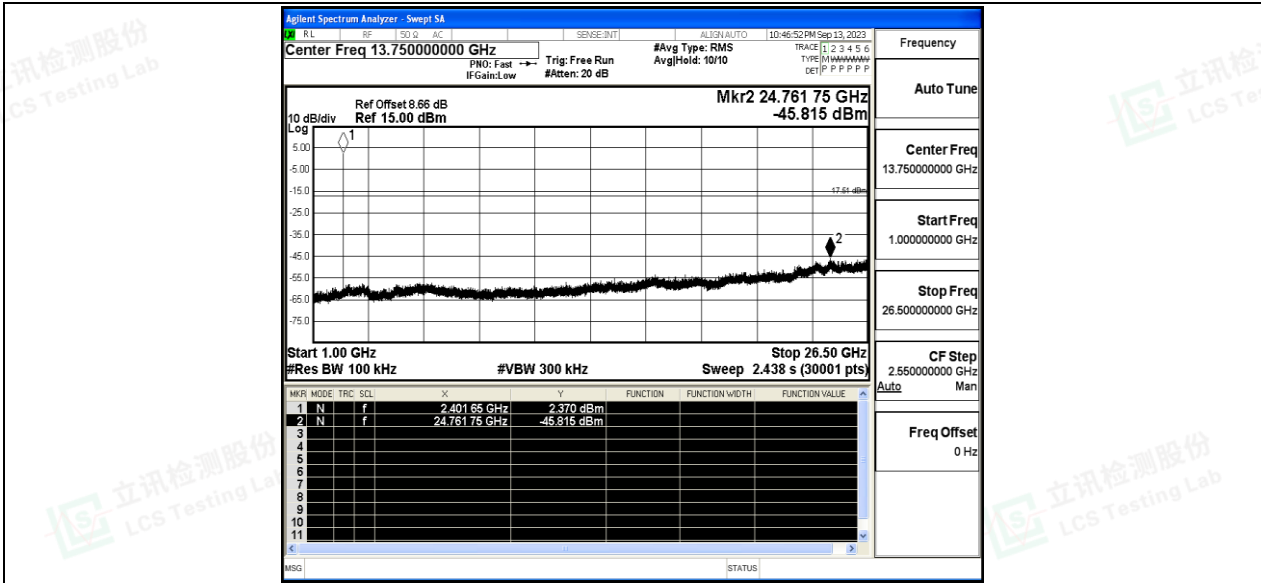


DH5_Ant1_2402_30~1000

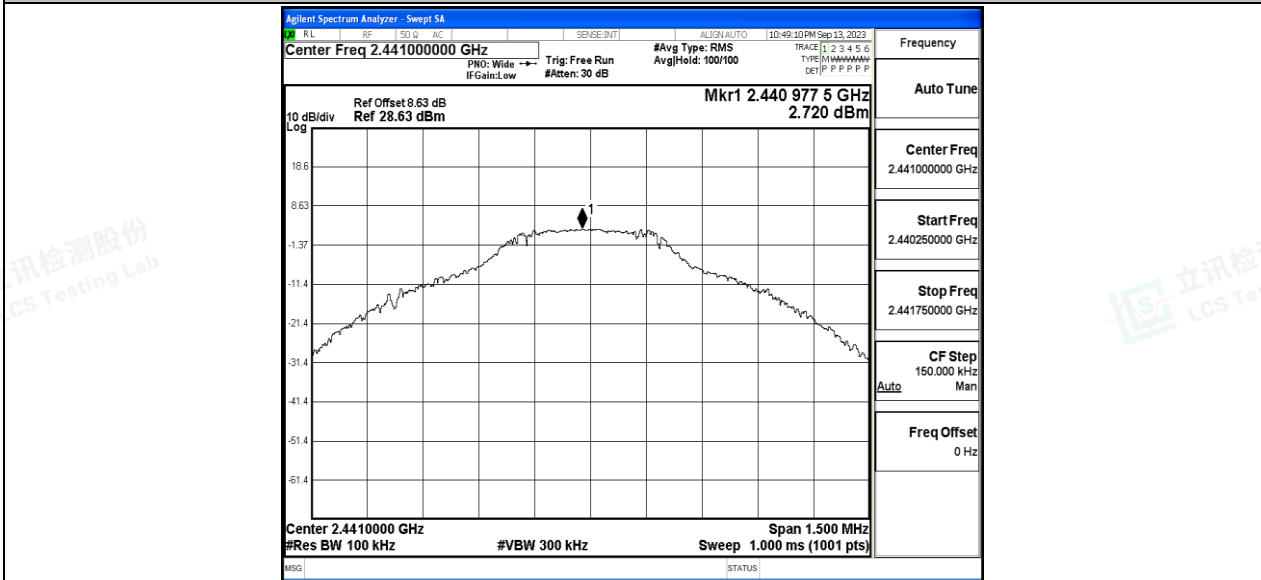


DH5_Ant1_2402_1000~26500



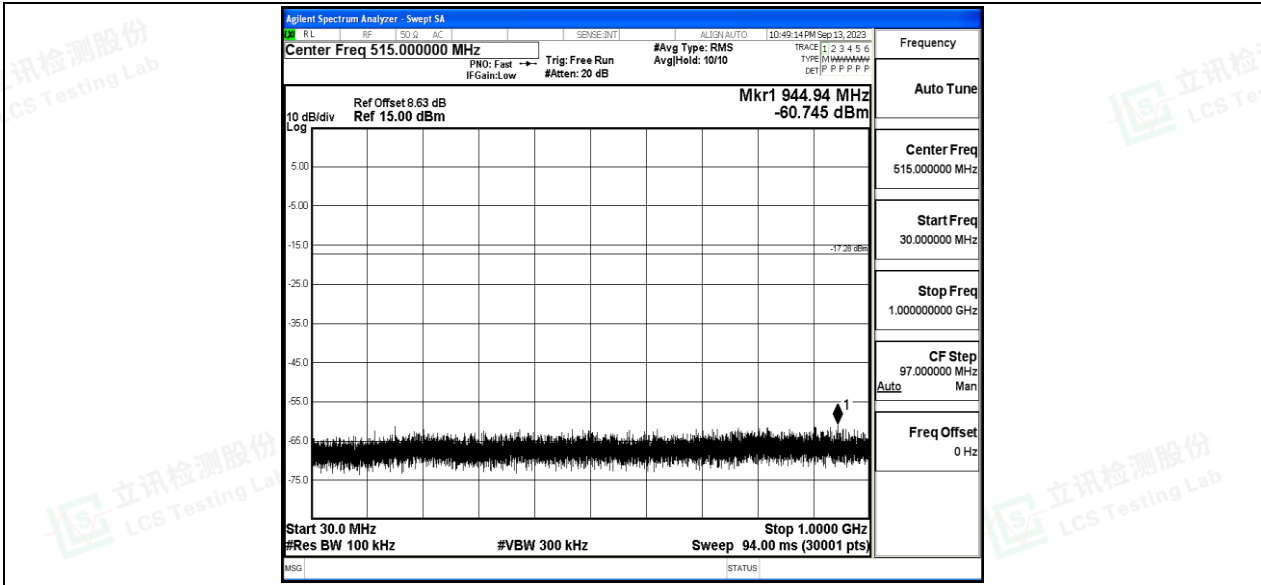


DH5_Ant1_2441_0~Reference

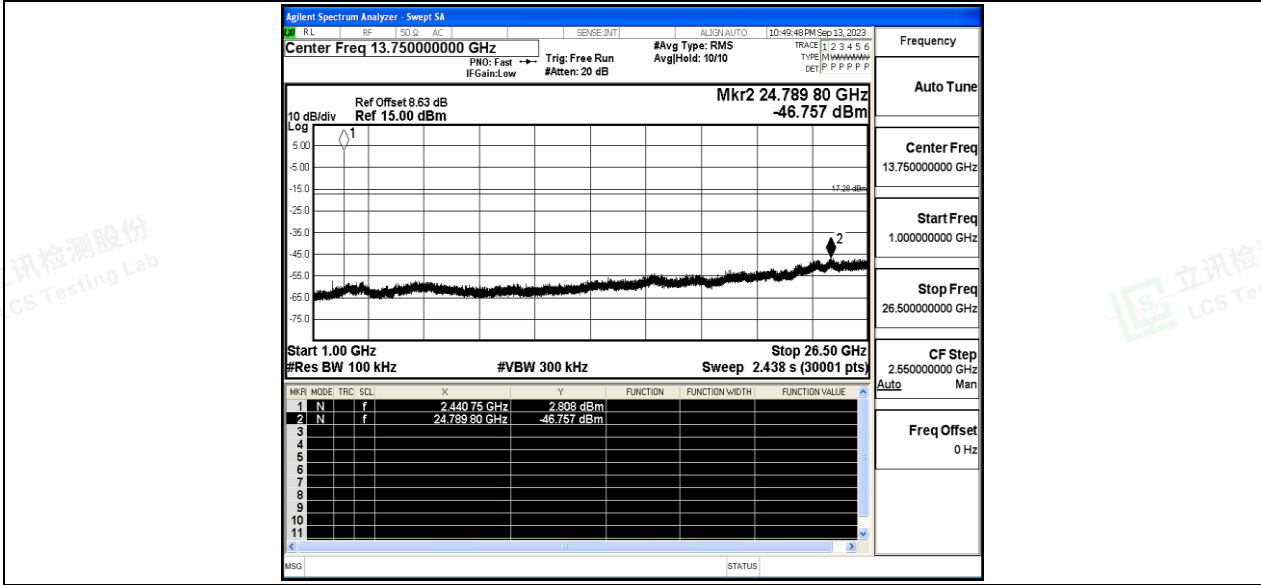


DH5_Ant1_2441_30~1000



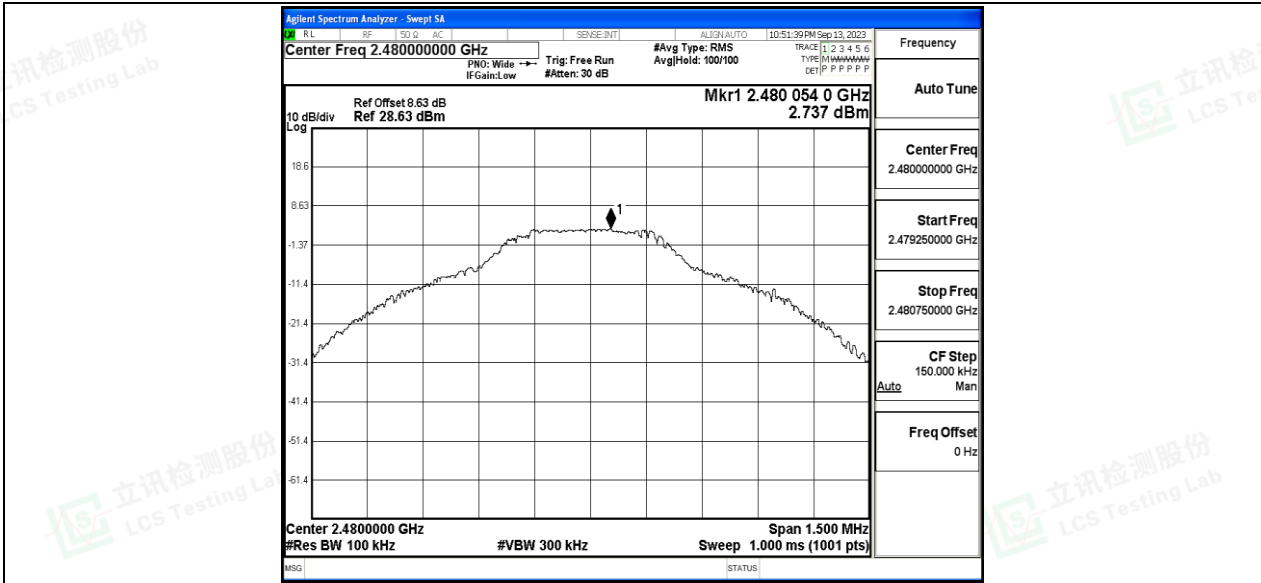


DH5_Ant1_2441_1000~26500

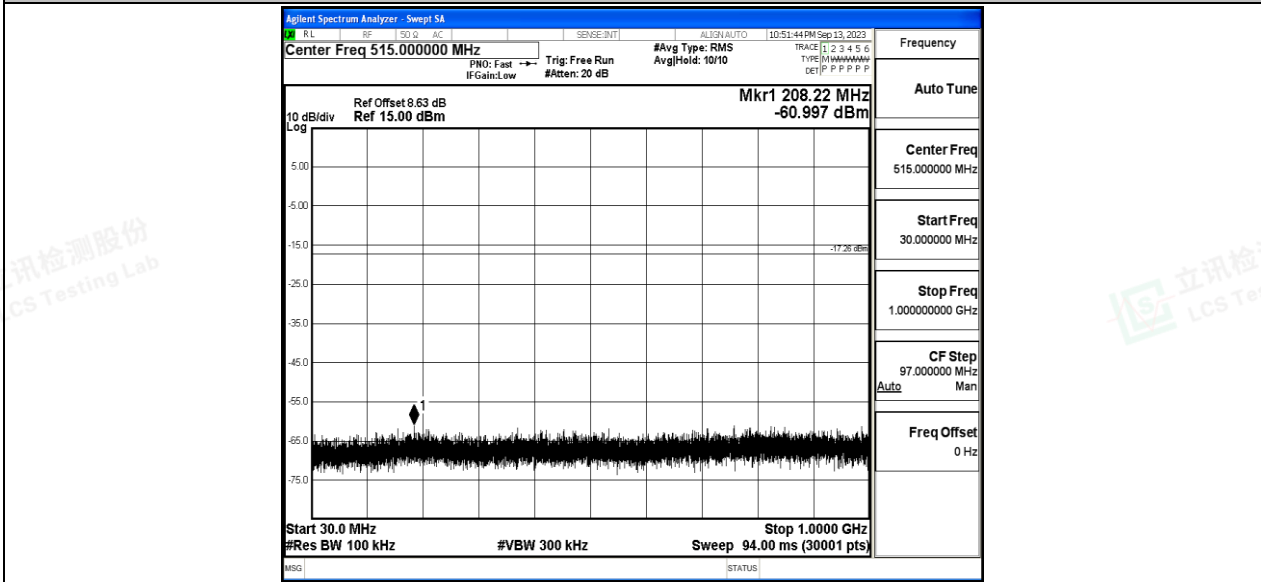


DH5_Ant1_2480_0~Reference



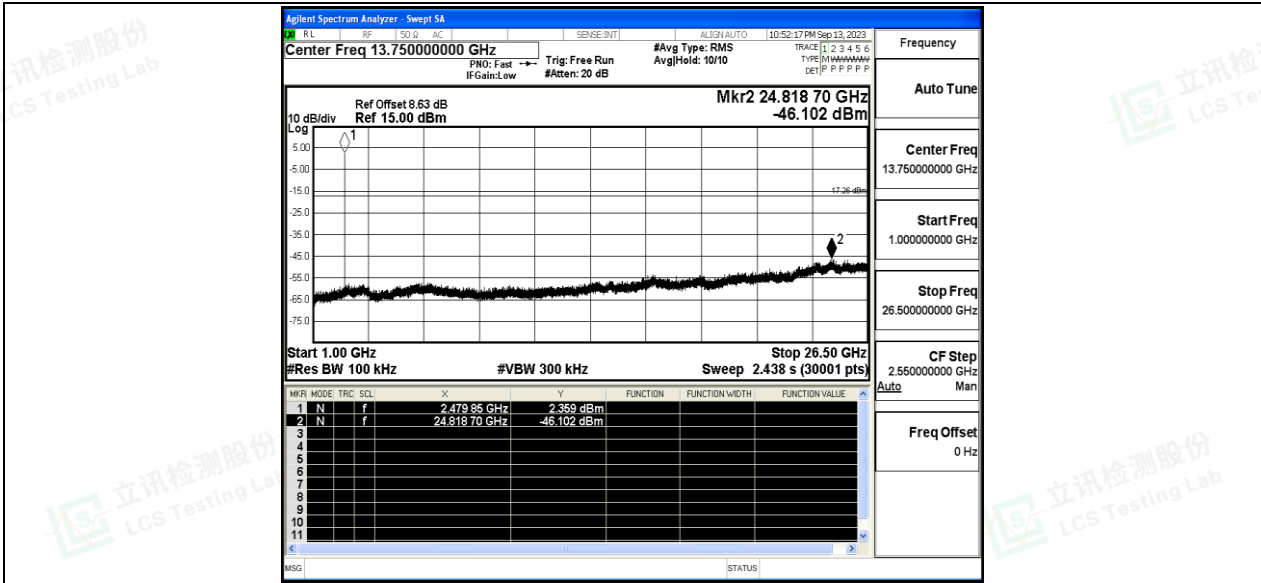


DH5_Ant1_2480_30~1000

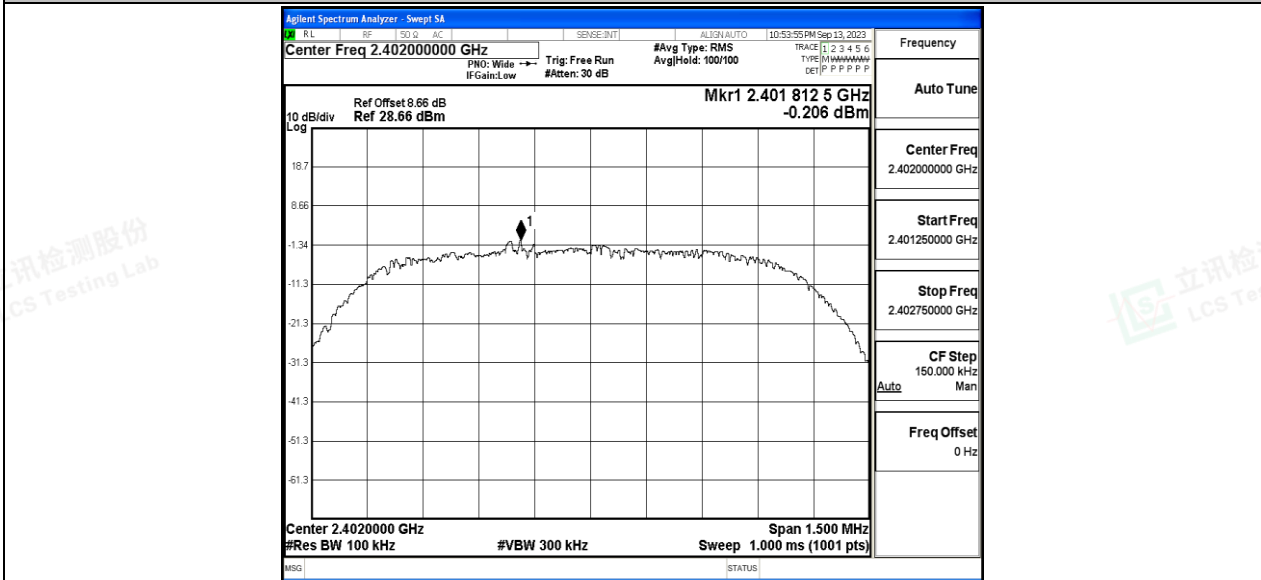


DH5_Ant1_2480_1000~26500



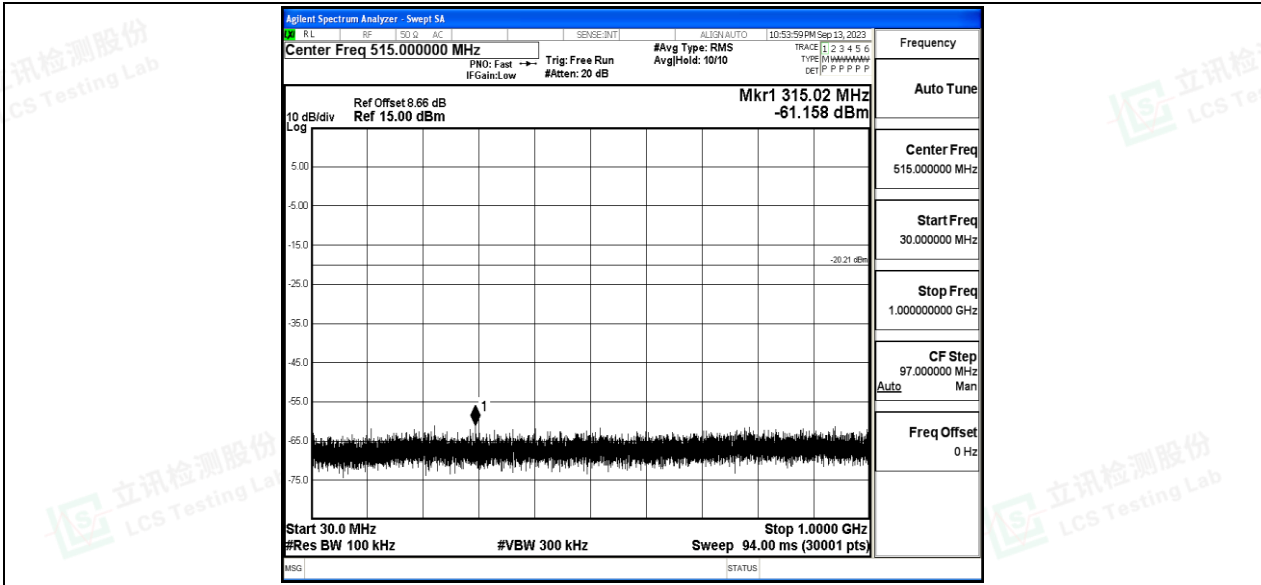


2DH5_Ant1_2402_0-Reference

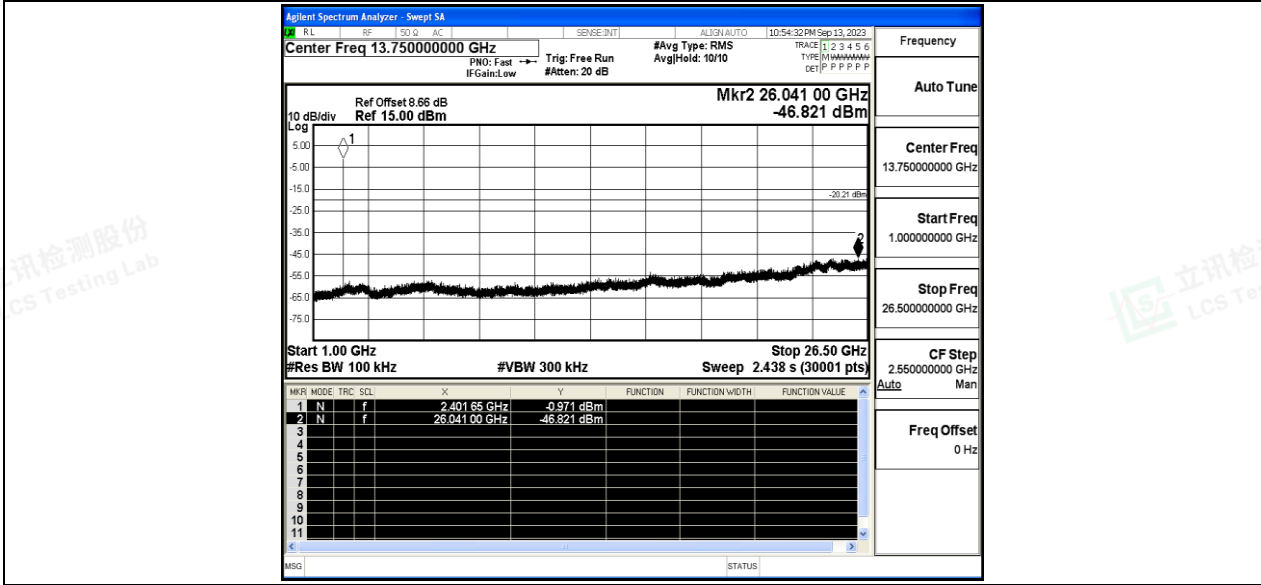


2DH5_Ant1_2402_30-1000



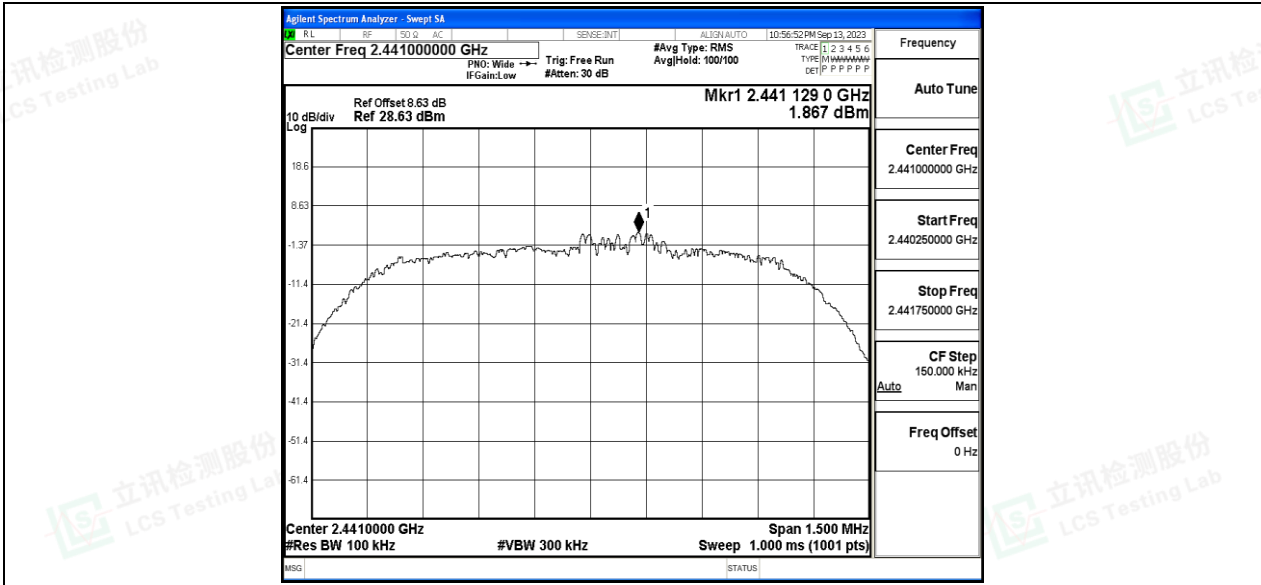


2DH5_Ant1_2402_1000~26500

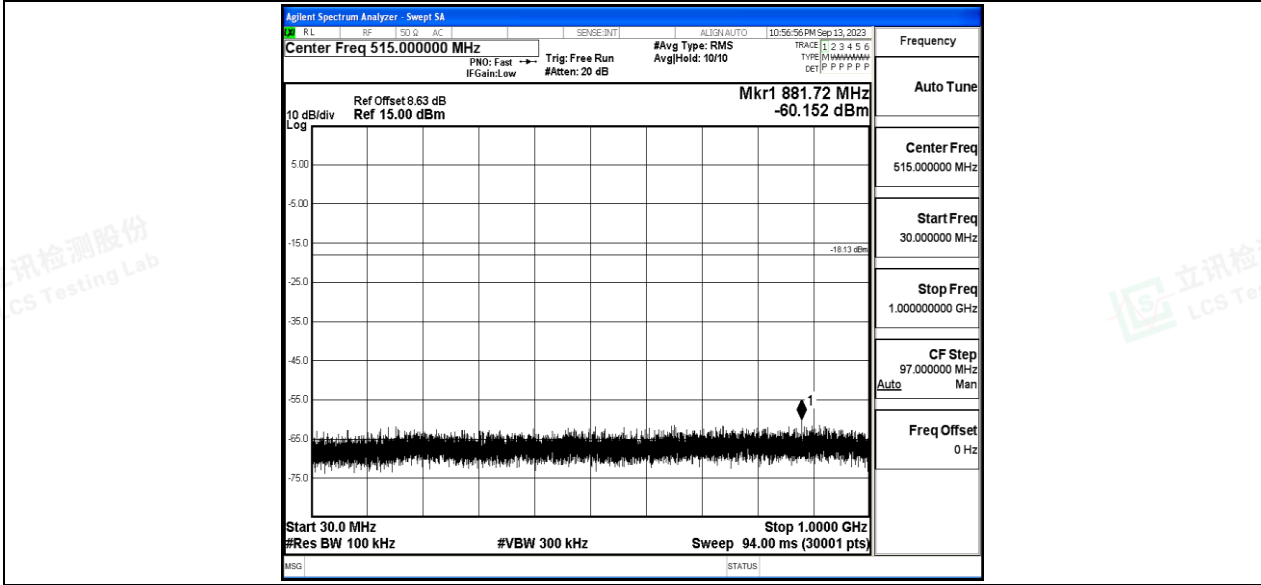


2DH5_Ant1_2441_0~Reference



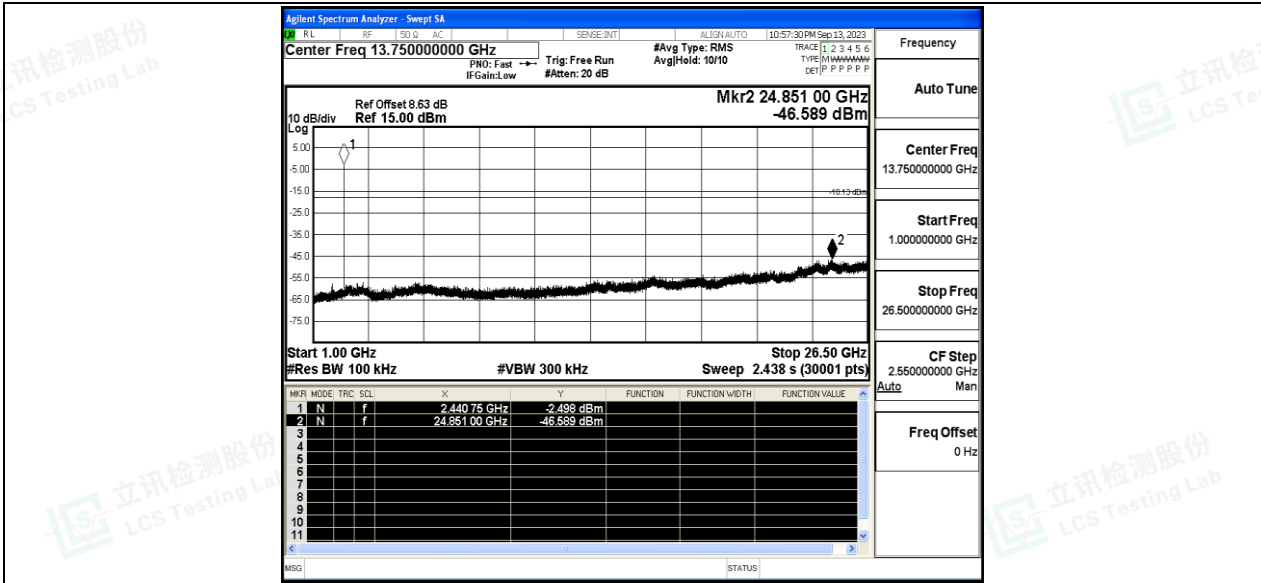


2DH5_Ant1_2441_30~1000

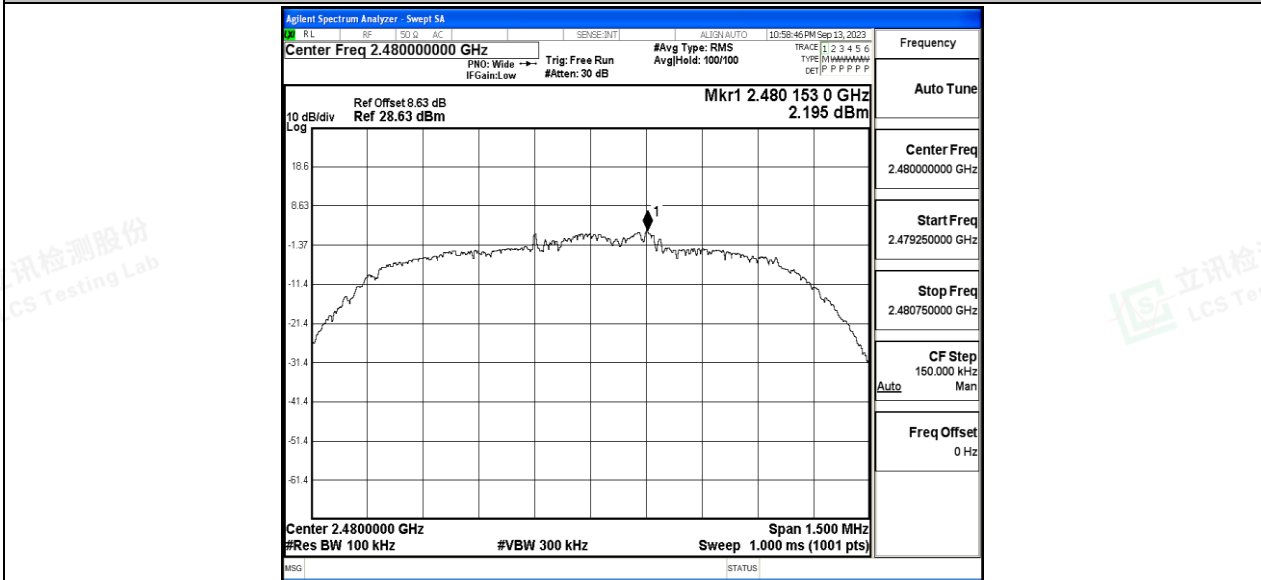


2DH5_Ant1_2441_1000~26500



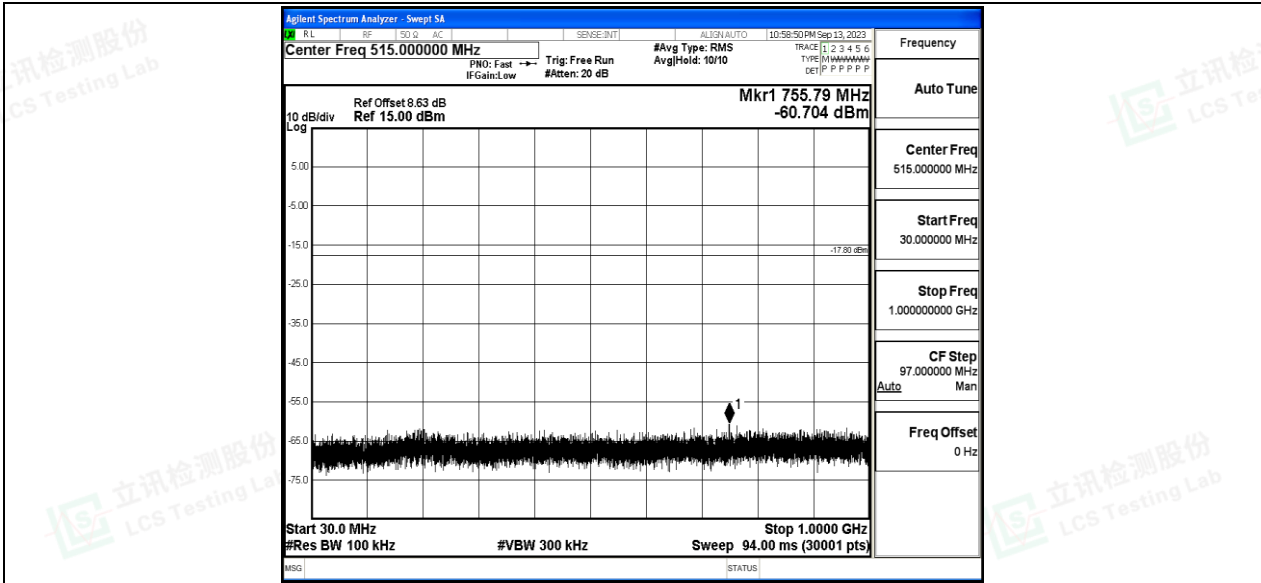


2DH5_Ant1_2480_0-Reference

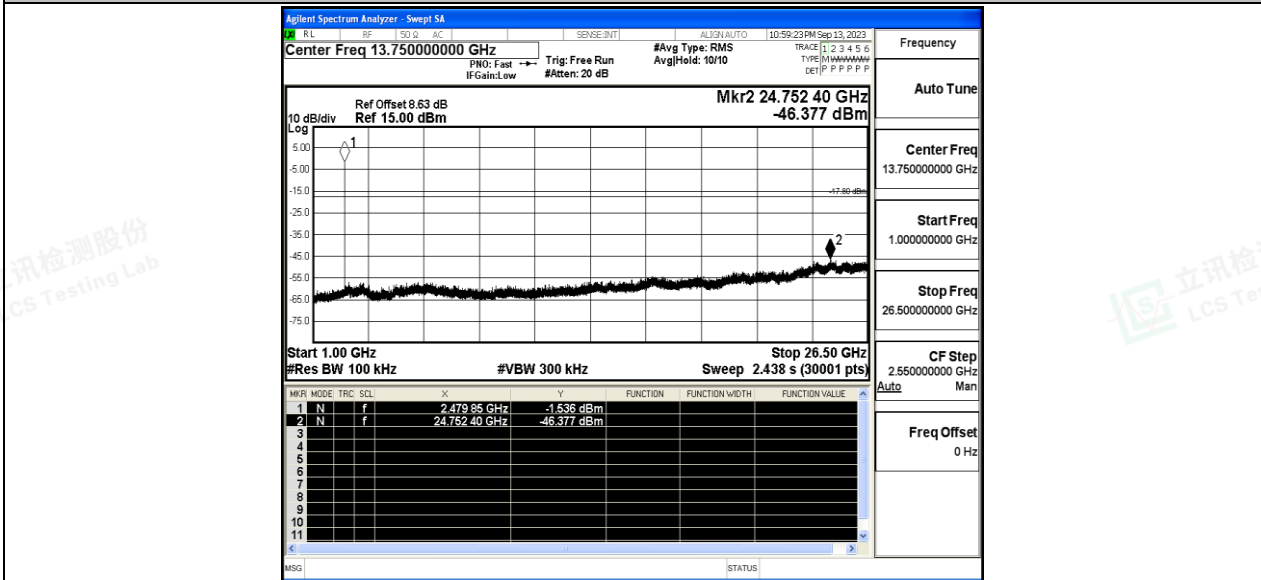


2DH5_Ant1_2480_30-1000



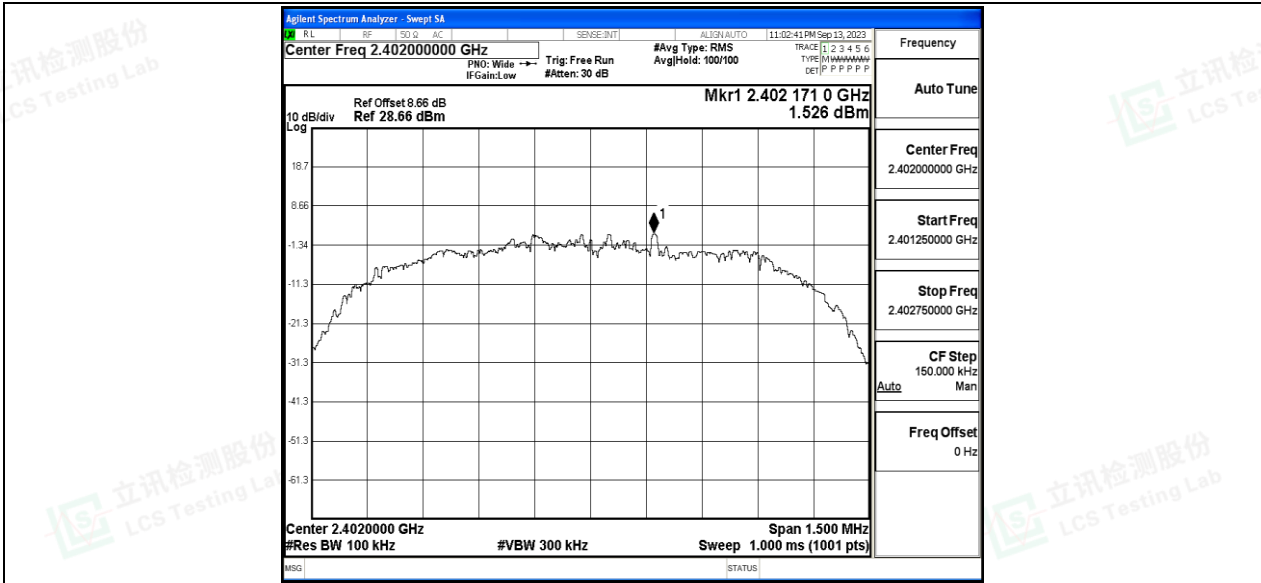


2DH5_Ant1_2480_1000~26500

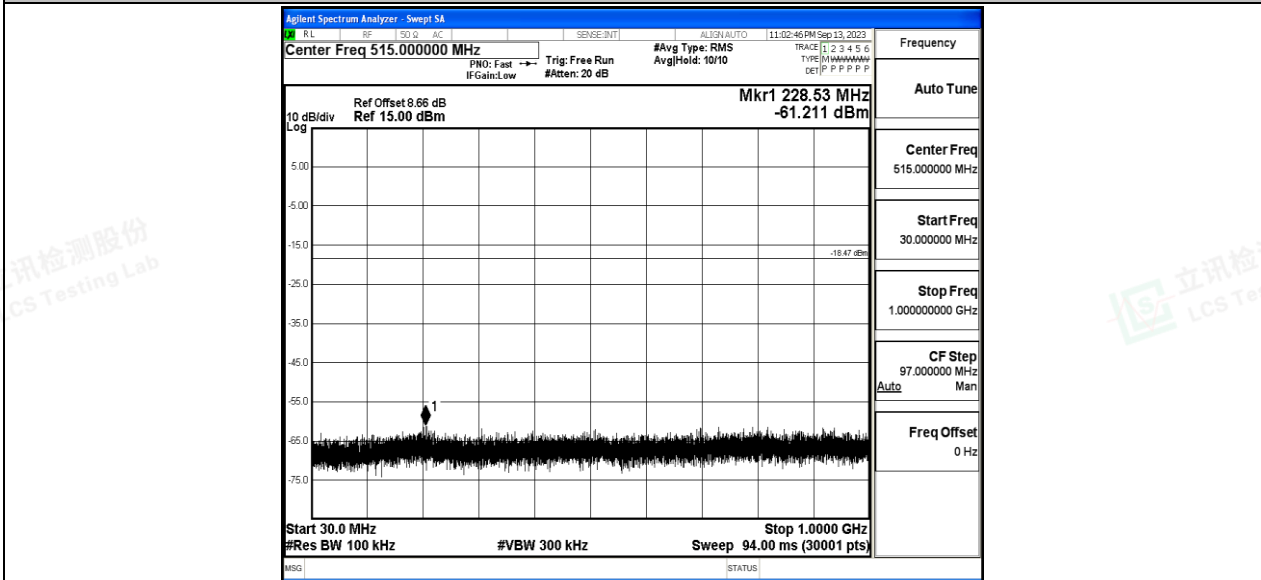


3DH5_Ant1_2402_0~Reference



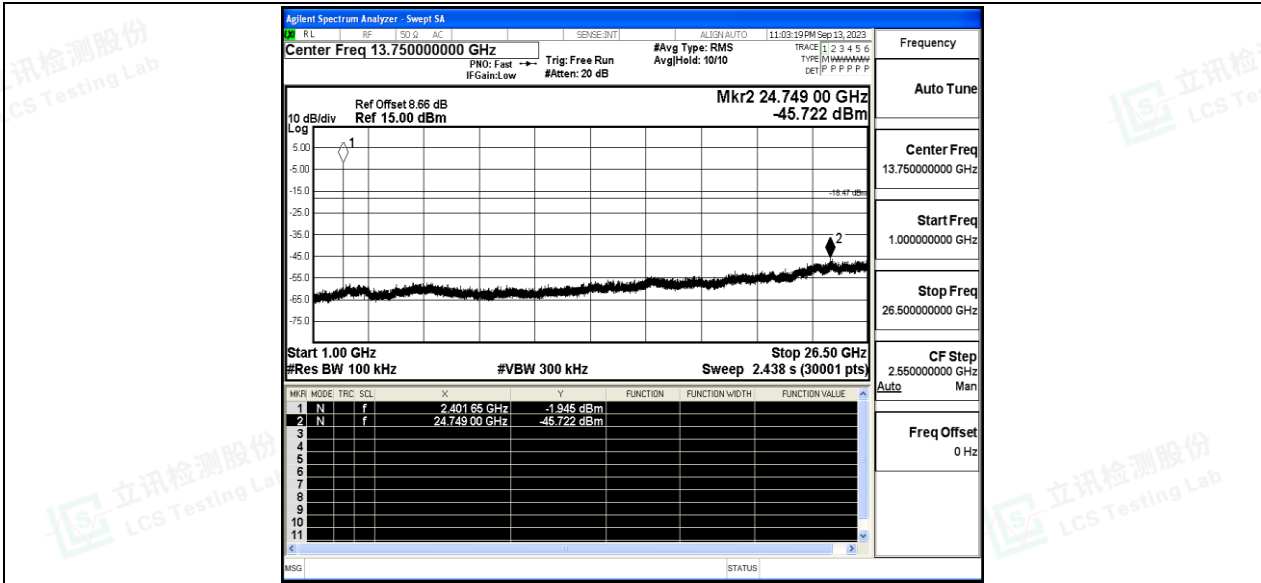


3DH5_Ant1_2402_30~1000

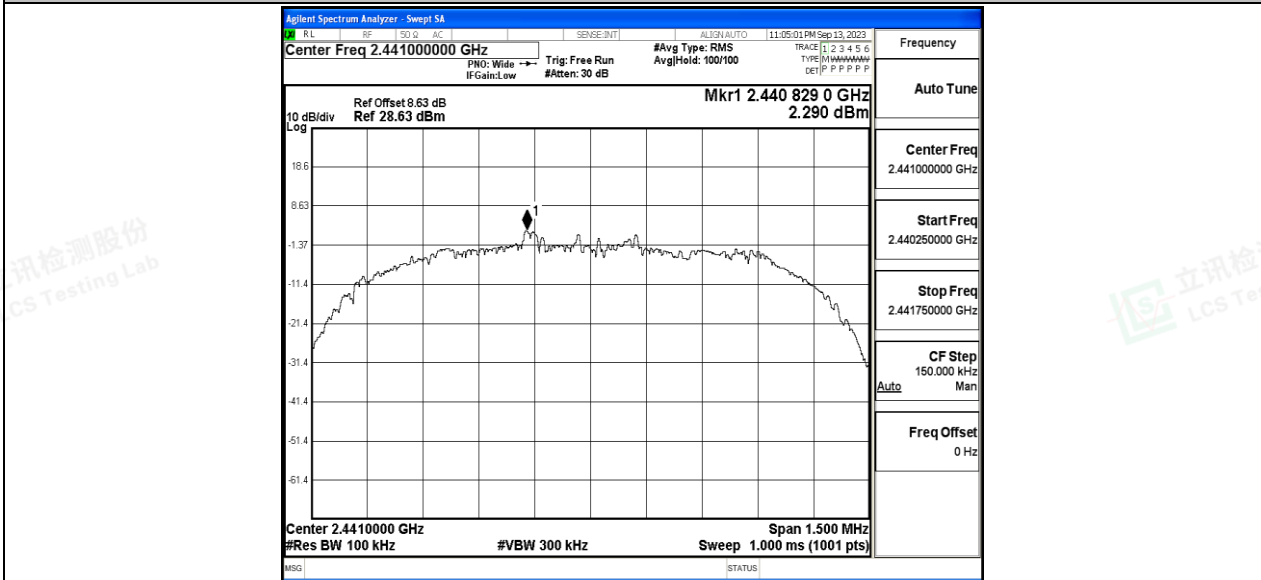


3DH5_Ant1_2402_1000~26500



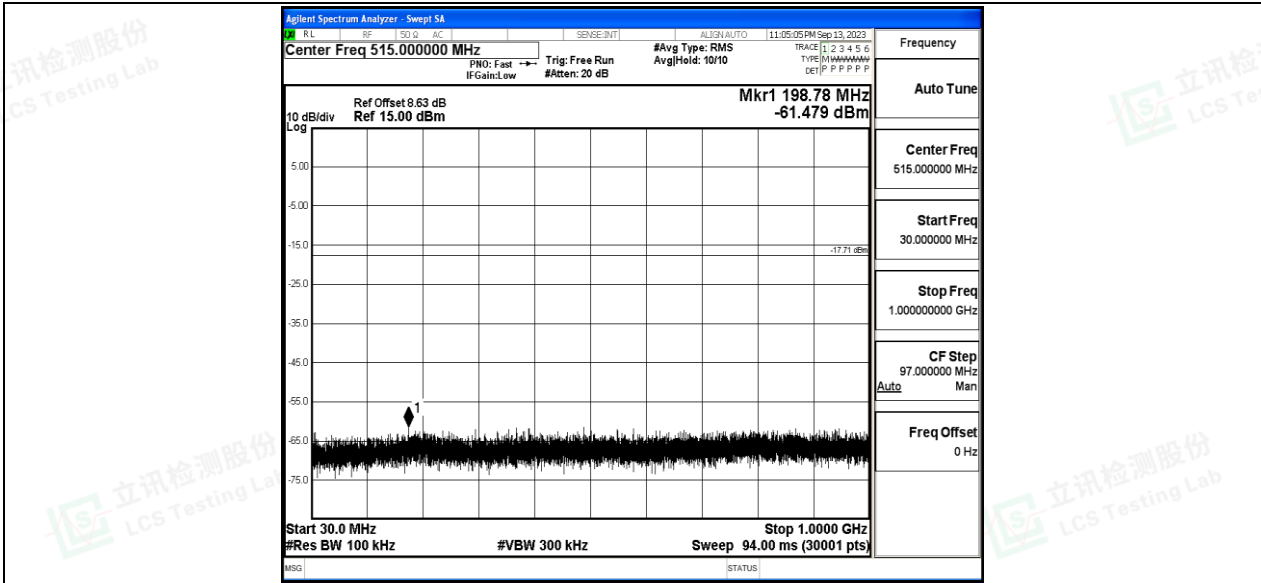


3DH5_Ant1_2441_0-Reference

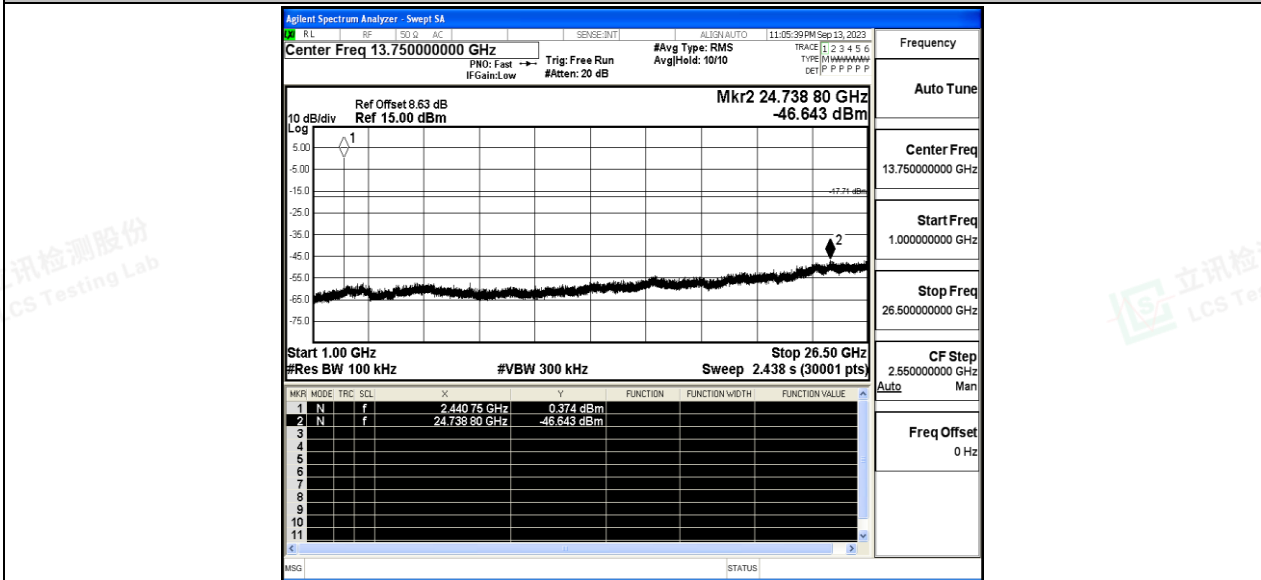


3DH5_Ant1_2441_30-1000



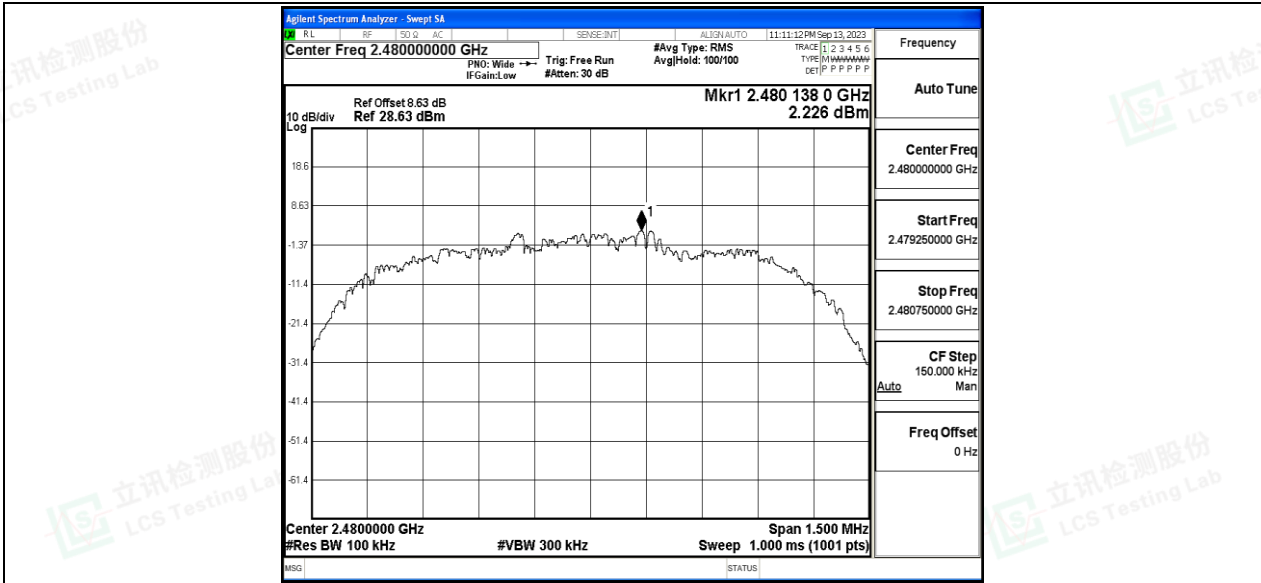


3DH5_Ant1_2441_1000~26500

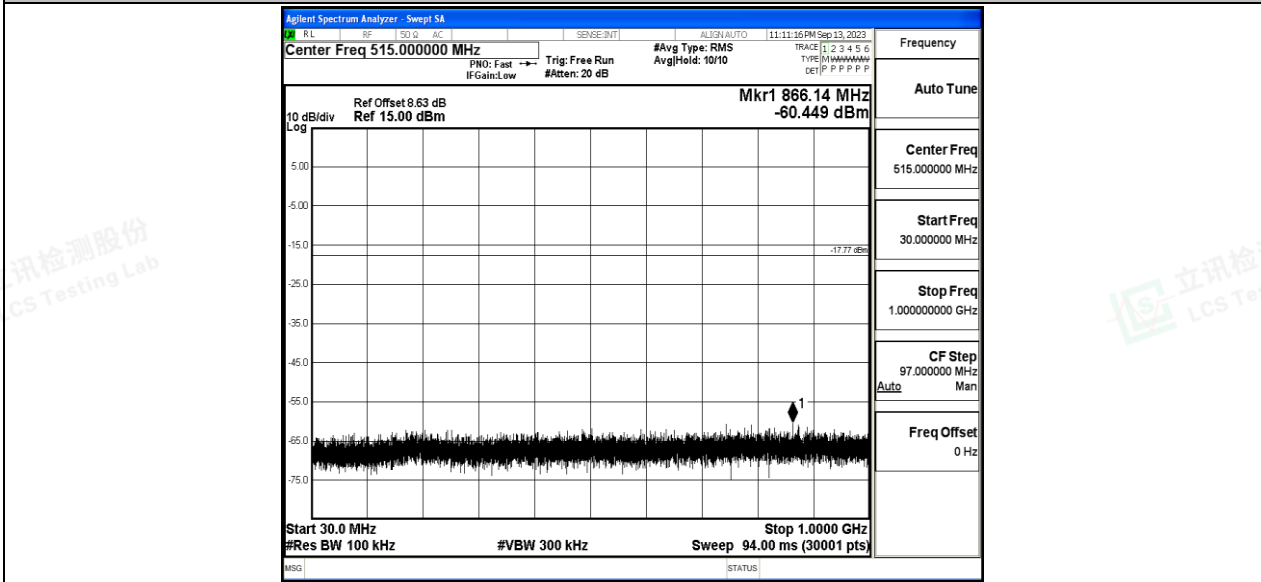


3DH5_Ant1_2480_0~Reference



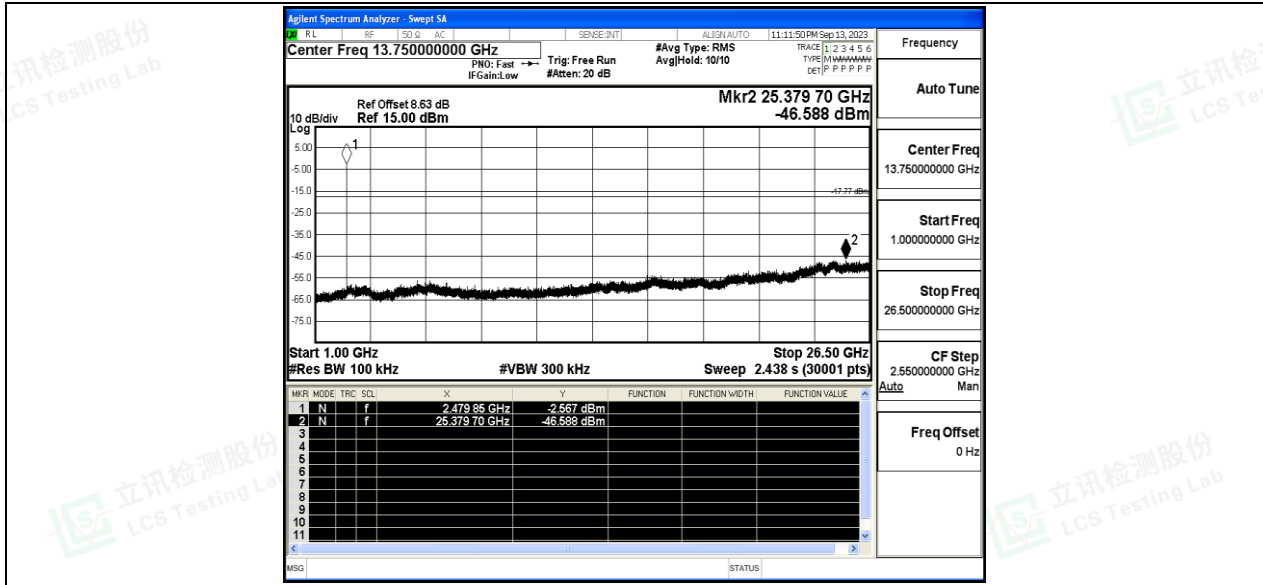


3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500







A.8 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Gain (dBi)	E (dBuV/m)	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.12	2.3	49.44	≤54	PASS
				AV	2388.725	-47.58	2.3	49.98	≤54	PASS
				AV	2390.000	-47.81	2.3	49.75	≤54	PASS
				Peak	2310.000	-42.55	2.3	55.01	≤74	PASS
				Peak	2368.985	-37.71	2.3	59.85	≤74	PASS
				Peak	2390.000	-42.49	2.3	55.07	≤74	PASS
		High	2480	AV	2483.500	-46.93	2.3	50.63	≤54	PASS
				AV	2483.520	-46.93	2.3	50.63	≤54	PASS
				AV	2500.000	-47.21	2.3	50.35	≤54	PASS
				Peak	2483.500	-44.88	2.3	52.68	≤74	PASS
				Peak	2485.360	-39.11	2.3	58.45	≤74	PASS
				Peak	2500.000	-41.13	2.3	56.43	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.98	2.3	56.58	≤74	PASS
				Peak	2351.135	-37.8	2.3	59.76	≤74	PASS
				Peak	2390.000	-38.42	2.3	59.14	≤74	PASS
		High	Hop_2480	Peak	2483.500	-39.45	2.3	58.11	≤74	PASS
				Peak	2492.720	-36.51	2.3	61.05	≤74	PASS
				Peak	2500.000	-38.22	2.3	59.34	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-47.99	2.3	49.57	≤54	PASS
				AV	2379.695	-47.67	2.3	49.89	≤54	PASS
				AV	2390.000	-47.82	2.3	49.74	≤54	PASS
				Peak	2310.000	-42.62	2.3	54.94	≤74	PASS
				Peak	2381.165	-37.92	2.3	59.64	≤74	PASS
				Peak	2390.000	-43.54	2.3	54.02	≤74	PASS
		High	2480	AV	2483.500	-46.93	2.3	50.63	≤54	PASS
				AV	2483.520	-46.93	2.3	50.63	≤54	PASS
				AV	2500.000	-47.18	2.3	50.38	≤54	PASS
				Peak	2483.500	-41.37	2.3	56.19	≤74	PASS
				Peak	2491.840	-38.1	2.3	59.46	≤74	PASS
				Peak	2500.000	-39.76	2.3	57.80	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-41.15	2.3	56.41	≤74	PASS
				Peak	2369.195	-37.56	2.3	60.00	≤74	PASS
				Peak	2390.000	-39.57	2.3	57.99	≤74	PASS
		High	Hop_2480	Peak	2483.500	-37.11	2.3	60.45	≤74	PASS
				Peak	2500.000	-38.98	2.3	58.58	≤74	PASS





3DH5	Ant1	Low	2402	AV	2310.000	-48.1	2.3	49.46	≤54	PASS
				AV	2376.860	-47.62	2.3	49.94	≤54	PASS
				AV	2390.000	-47.68	2.3	49.88	≤54	PASS
				Peak	2310.000	-43.16	2.3	54.40	≤74	PASS
				Peak	2330.870	-38.92	2.3	58.64	≤74	PASS
				Peak	2390.000	-43.12	2.3	54.44	≤74	PASS
		High	2480	AV	2483.500	-46.96	2.3	50.60	≤54	PASS
				AV	2483.520	-46.95	2.3	50.61	≤54	PASS
				AV	2500.000	-47.27	2.3	50.29	≤54	PASS
				Peak	2483.500	-41.16	2.3	56.40	≤74	PASS
				Peak	2492.160	-38.54	2.3	59.02	≤74	PASS
				Peak	2500.000	-40.78	2.3	56.78	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-40.35	2.3	57.21	≤74	PASS
				Peak	2355.860	-37.62	2.3	59.94	≤74	PASS
				Peak	2390.000	-39.51	2.3	58.05	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-38.77	2.3	58.79	≤74	PASS
				Peak	2498.080	-36.66	2.3	60.90	≤74	PASS
				Peak	2500.000	-39.57	2.3	57.99	≤74	PASS

Note:

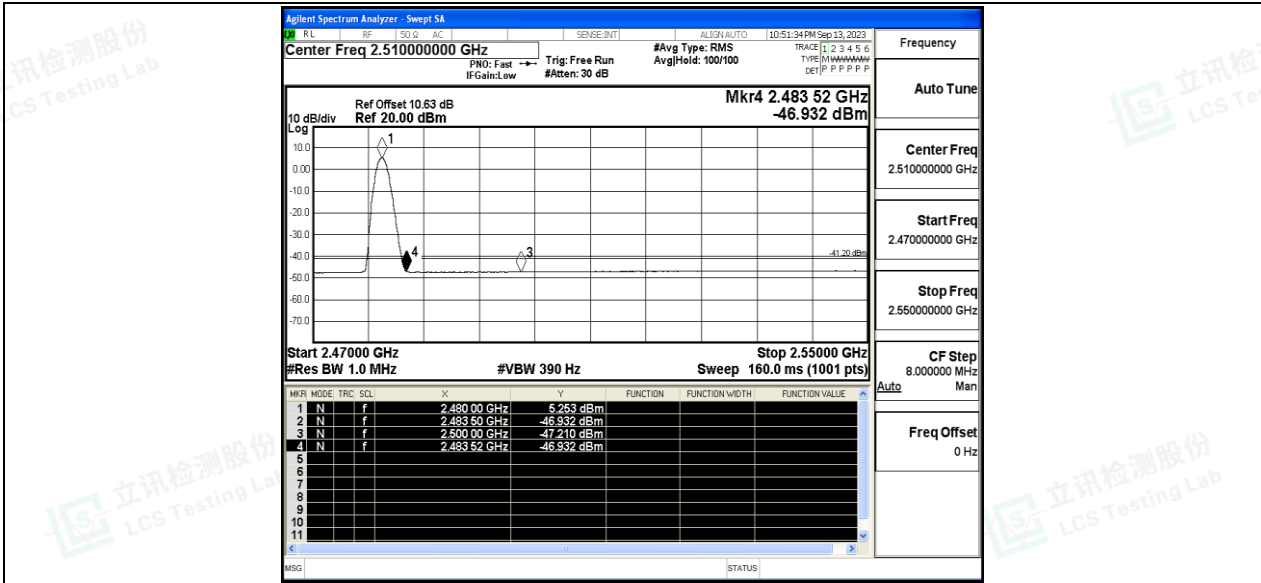
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



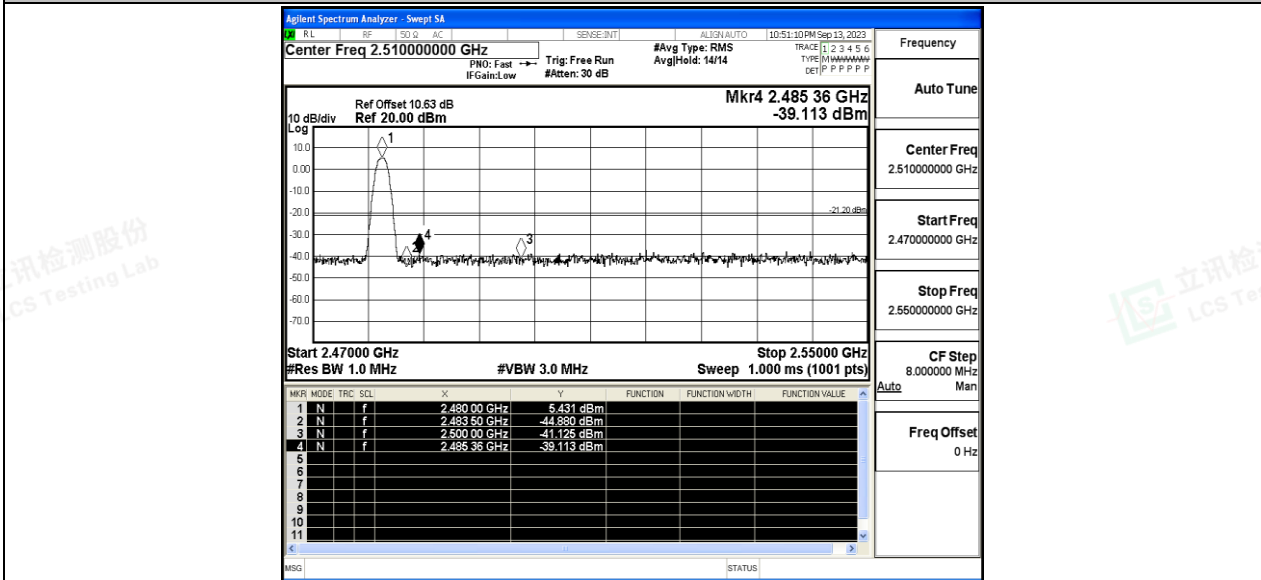


Test Graphs



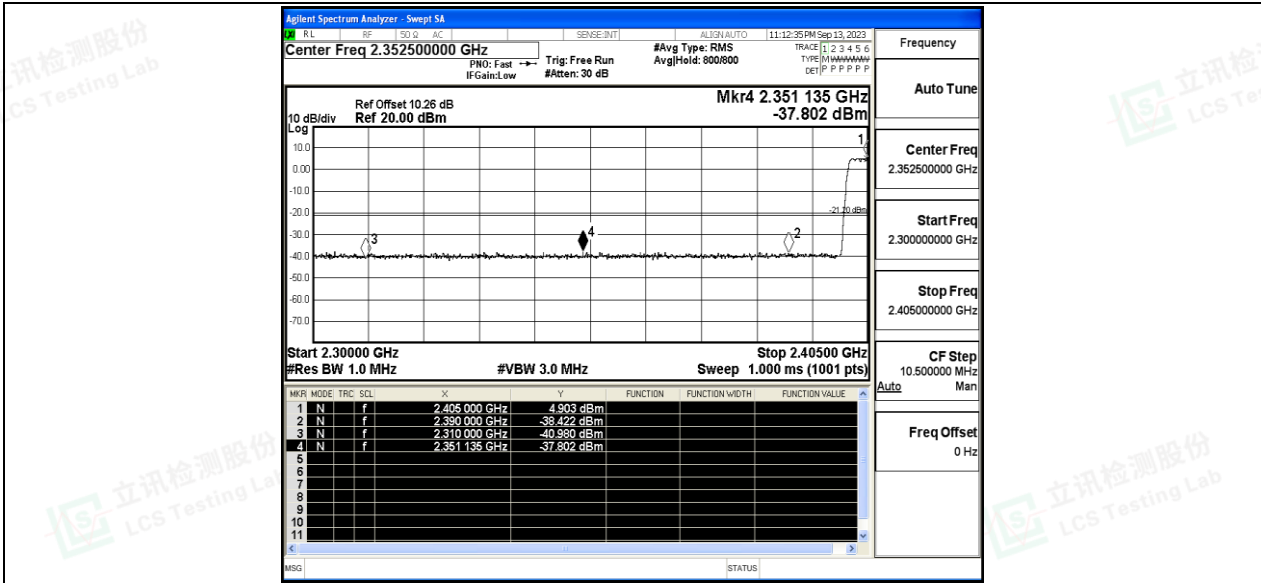


DH5_Ant1_High_2480_Peak

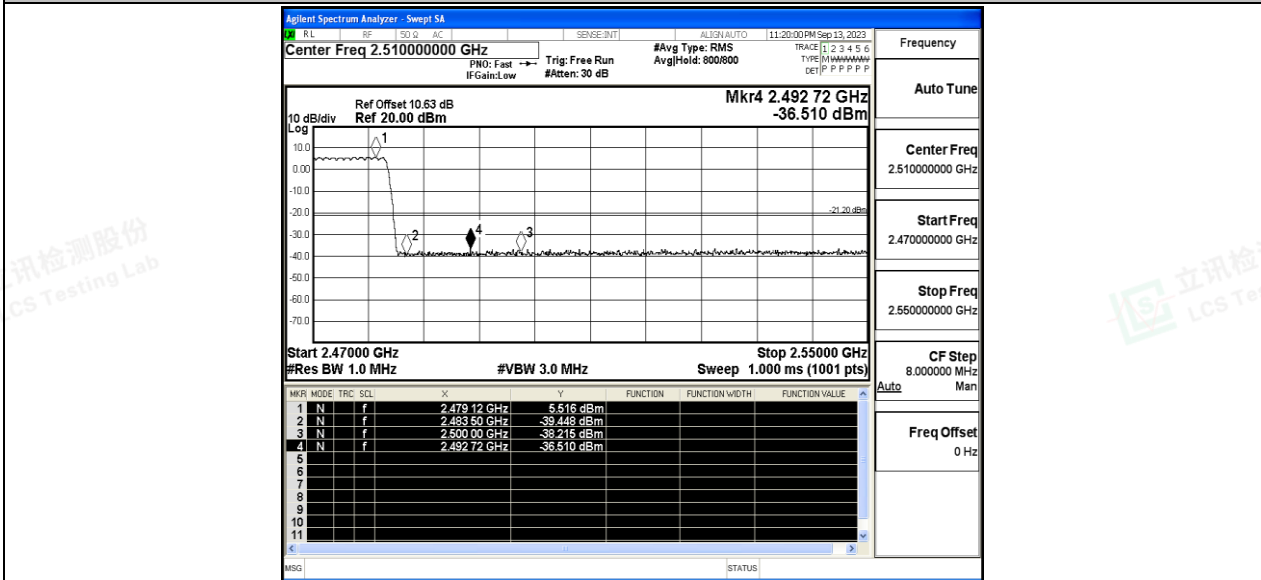


DH5_Ant1_Low_Hop_2402_Peak



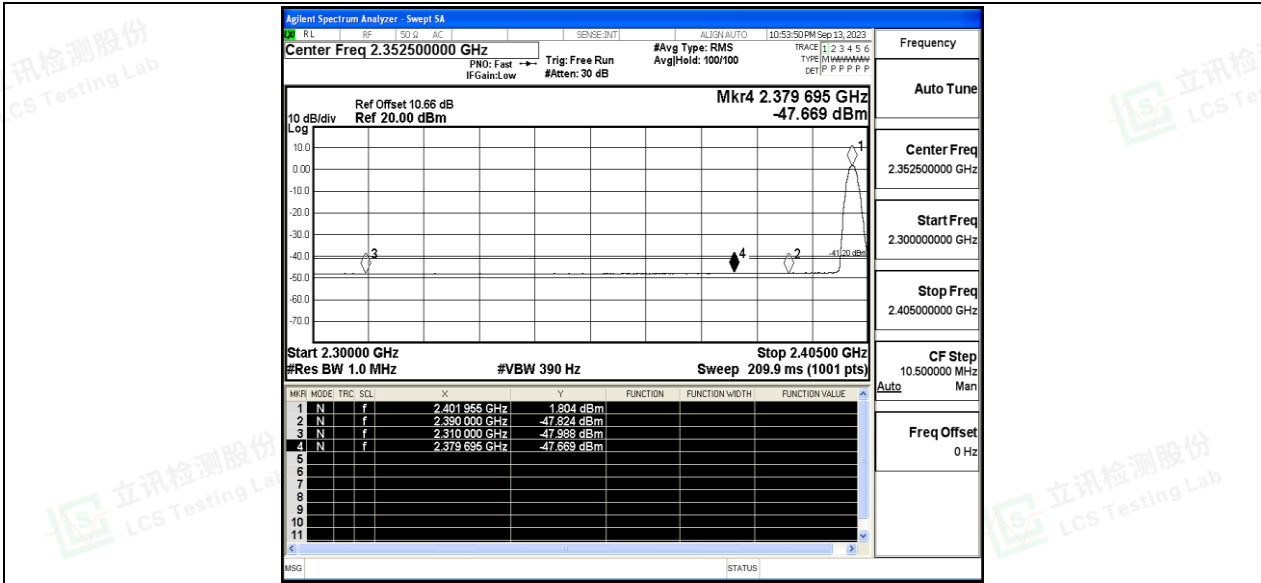


DH5_Ant1_High_Hop_2480_Peak

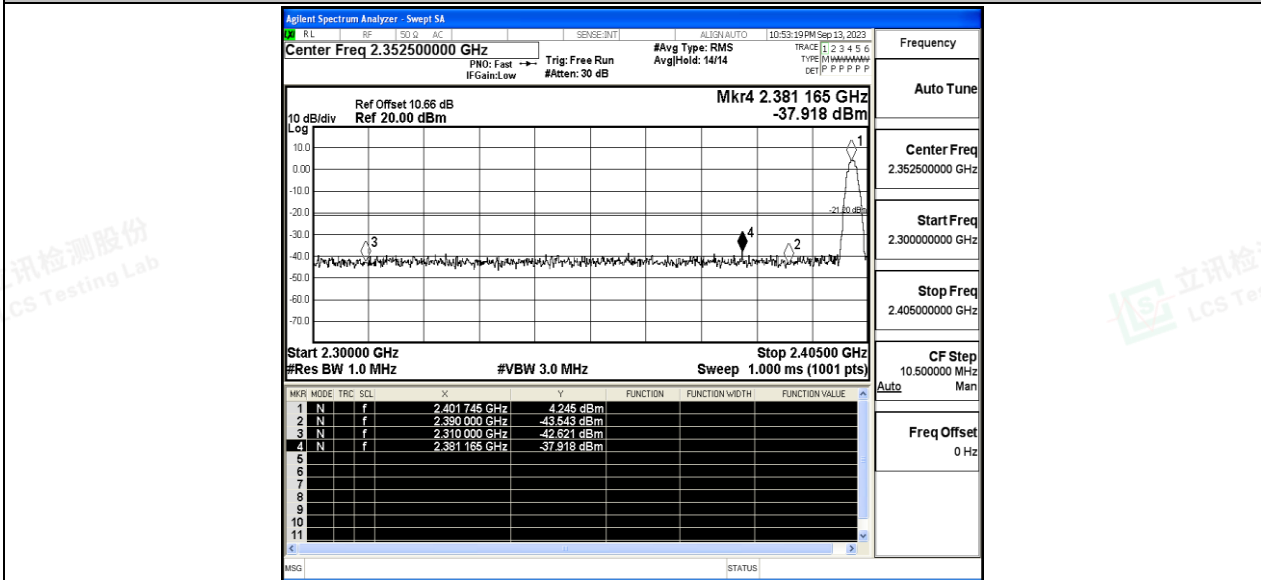


2DH5_Ant1_Low_2402_AV



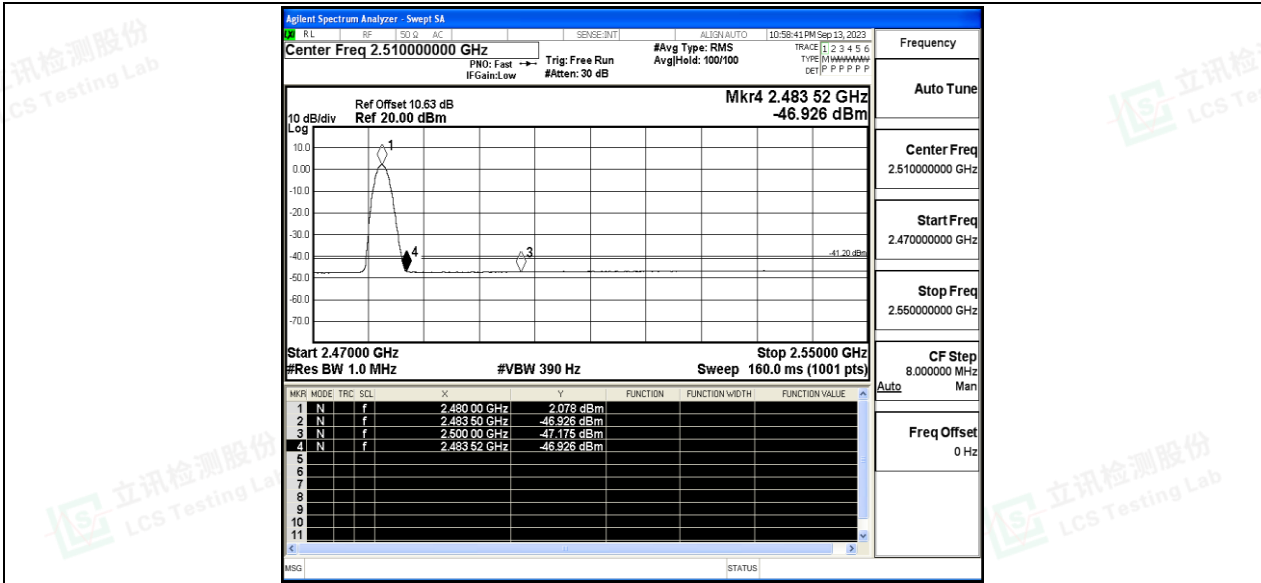


2DH5_Ant1_Low_2402_Peak

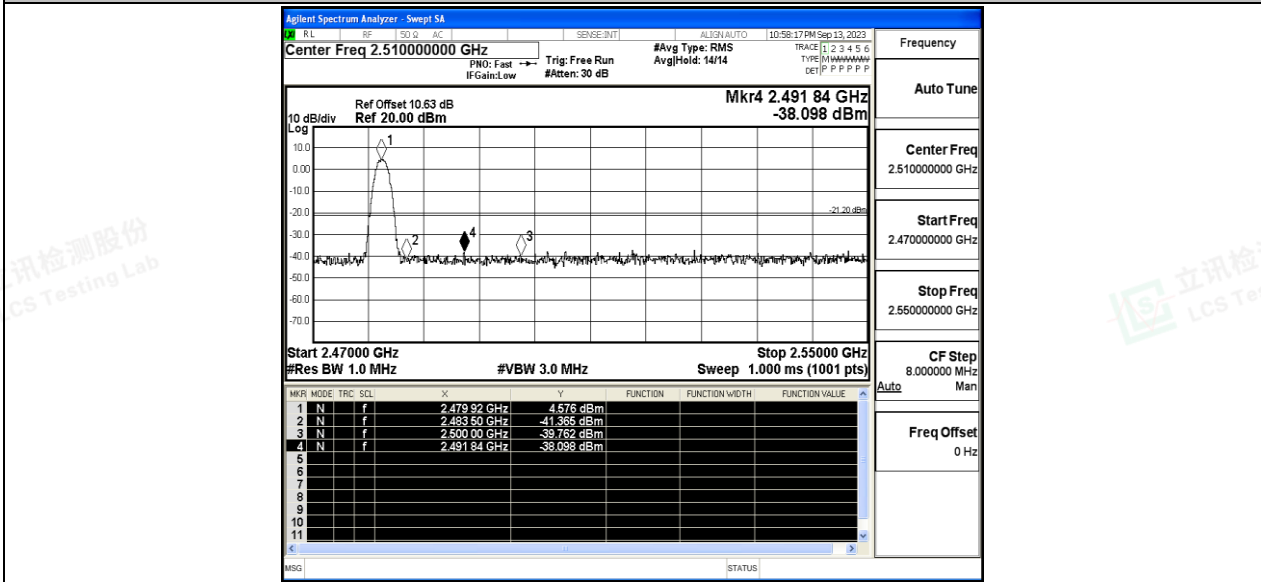


2DH5_Ant1_High_2480_AV



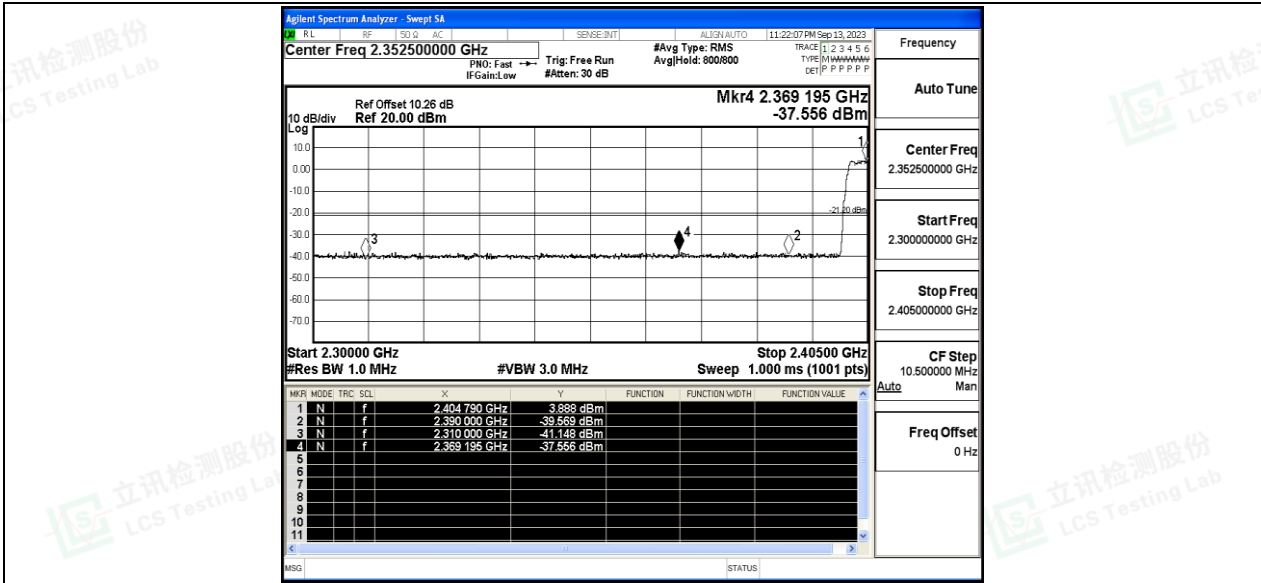


2DH5_Ant1_High_2480_Peak

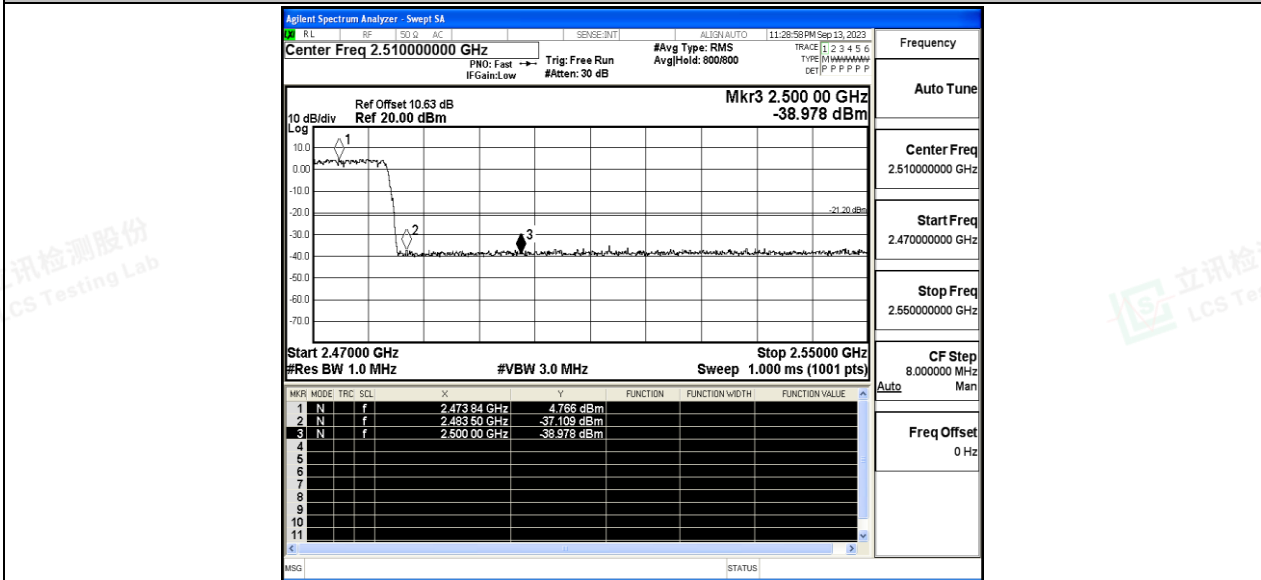


2DH5_Ant1_Low_Hop_2402_Peak



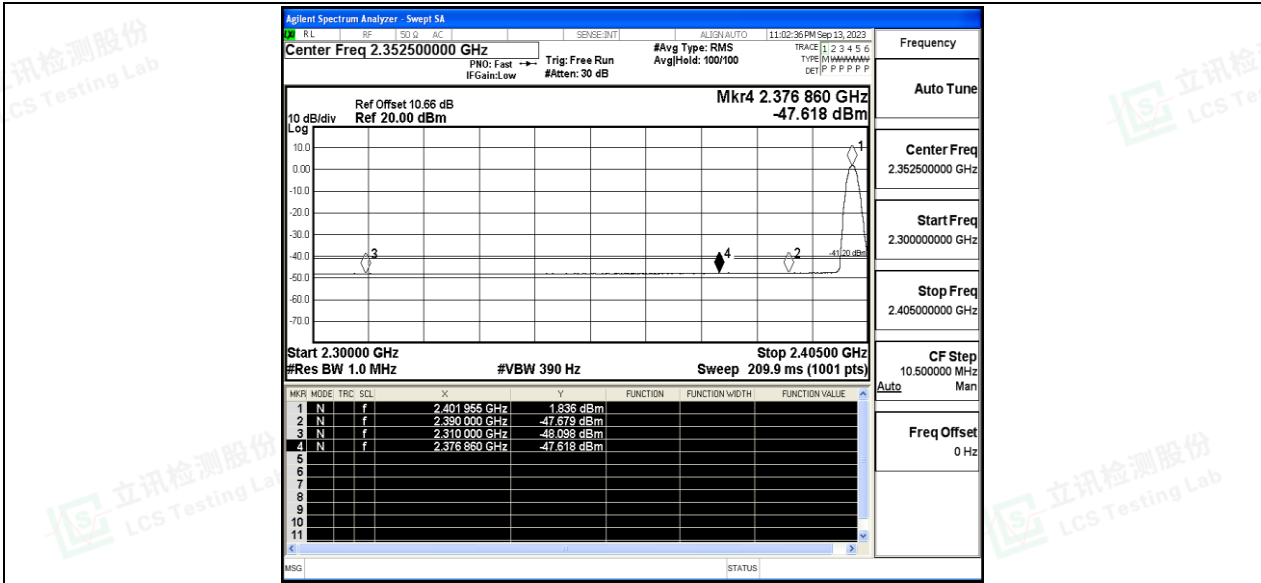


2DH5_Ant1_High_Hop_2480_Peak

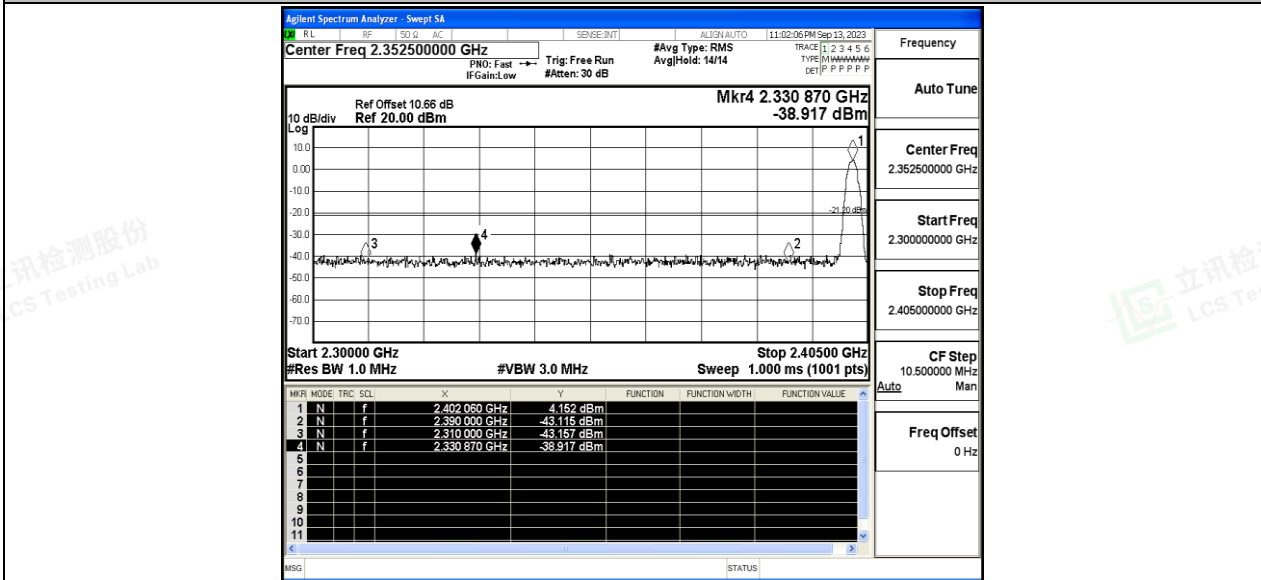


3DH5_Ant1_Low_2402_AV



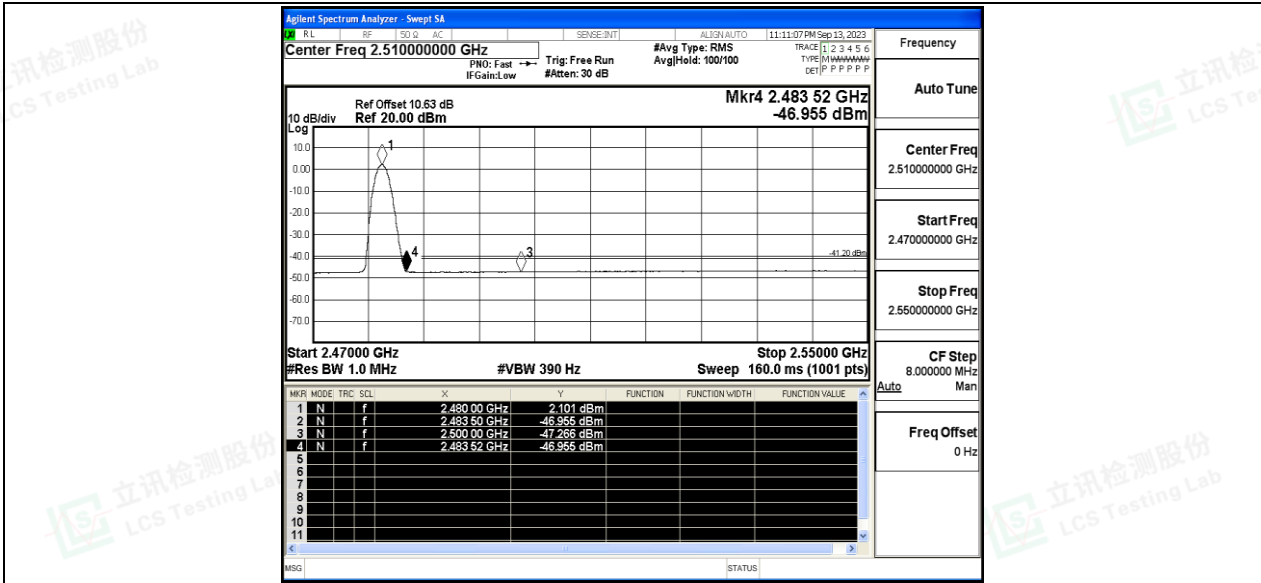


3DH5_Ant1_Low_2402_Peak

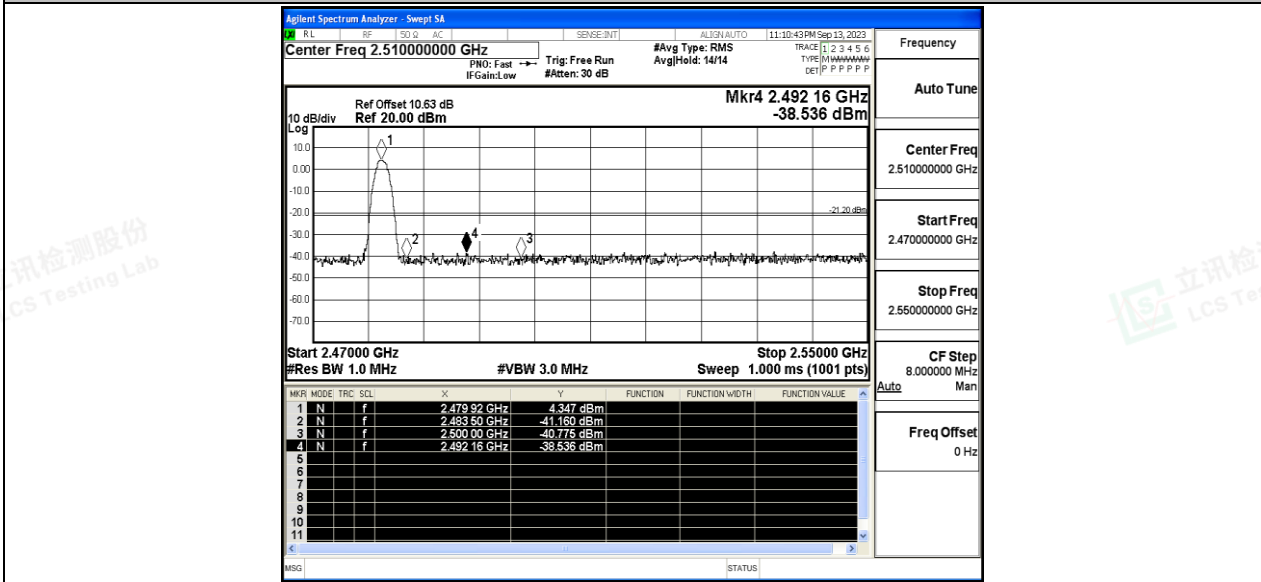


3DH5_Ant1_High_2480_AV



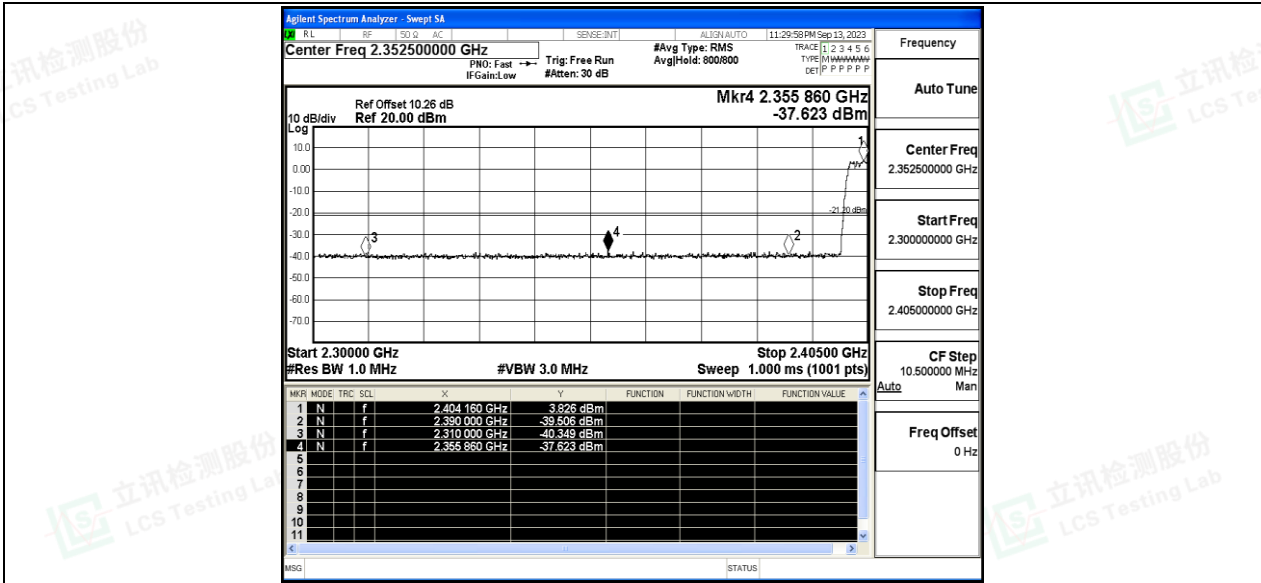


3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak





3DH5_Ant1_High_Hop_2480_Peak

