



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: FM Transmitter

Test Model: BT25

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

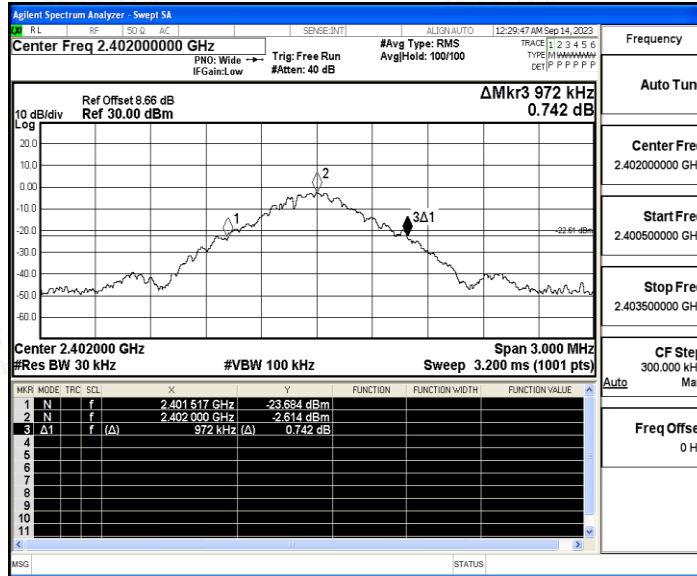
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant1	2402	0.972	2401.517	2402.489	---
		2441	1.023	2440.460	2441.483	---
		2480	1.017	2479.457	2480.474	---
2DH5	Ant1	2402	1.296	2401.349	2402.645	---
		2441	1.287	2440.352	2441.639	---
		2480	1.287	2479.358	2480.645	---
3DH5	Ant1	2402	1.299	2401.334	2402.633	---
		2441	1.287	2440.340	2441.627	---
		2480	1.293	2479.343	2480.636	---



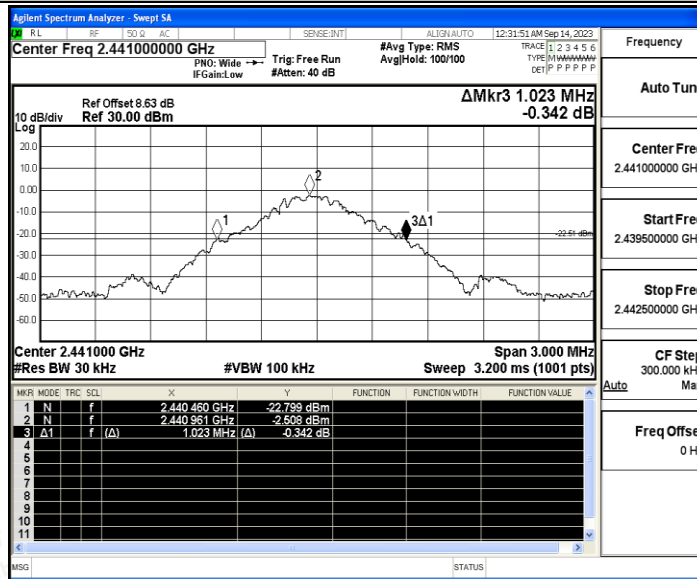


Test Graphs

DH5_Ant1_2402

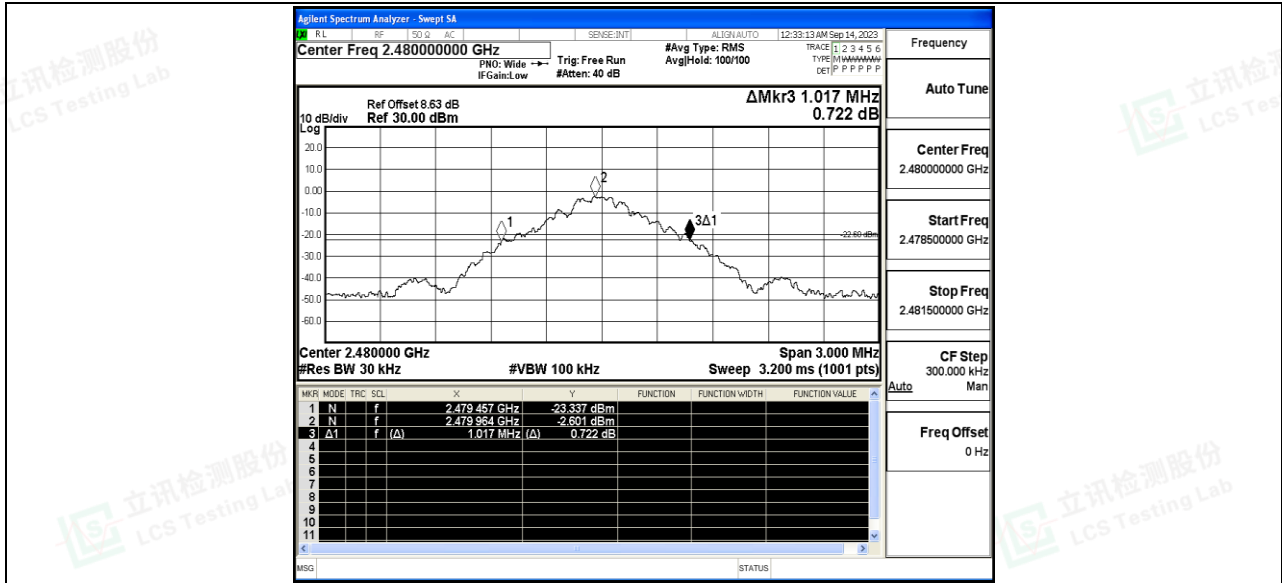


DH5_Ant1_2441

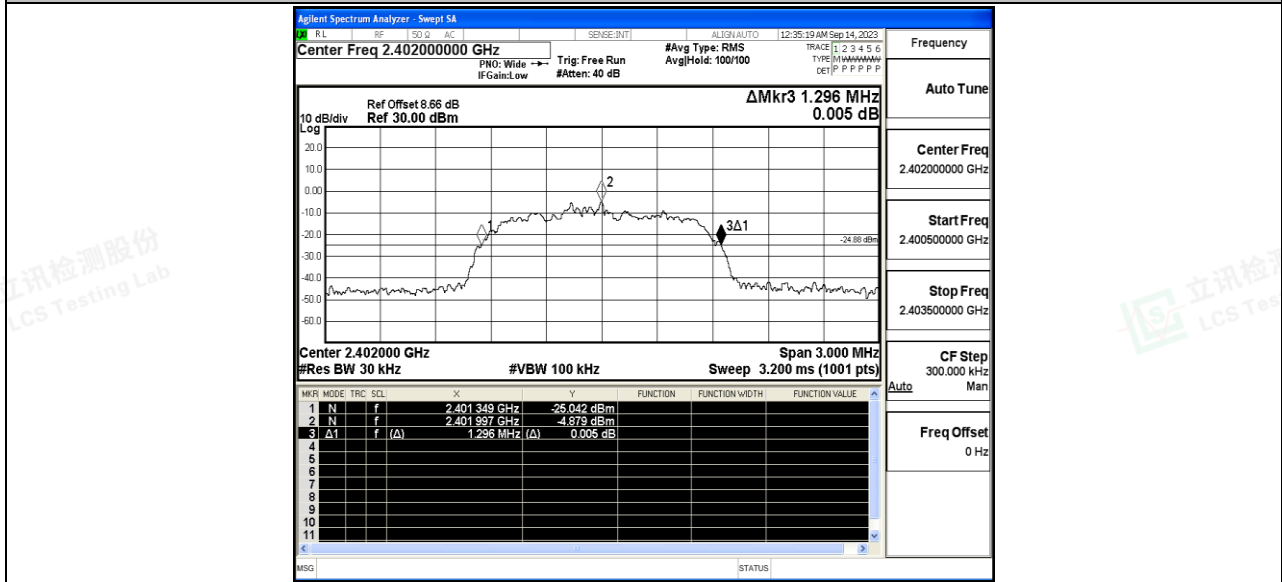


DH5_Ant1_2480



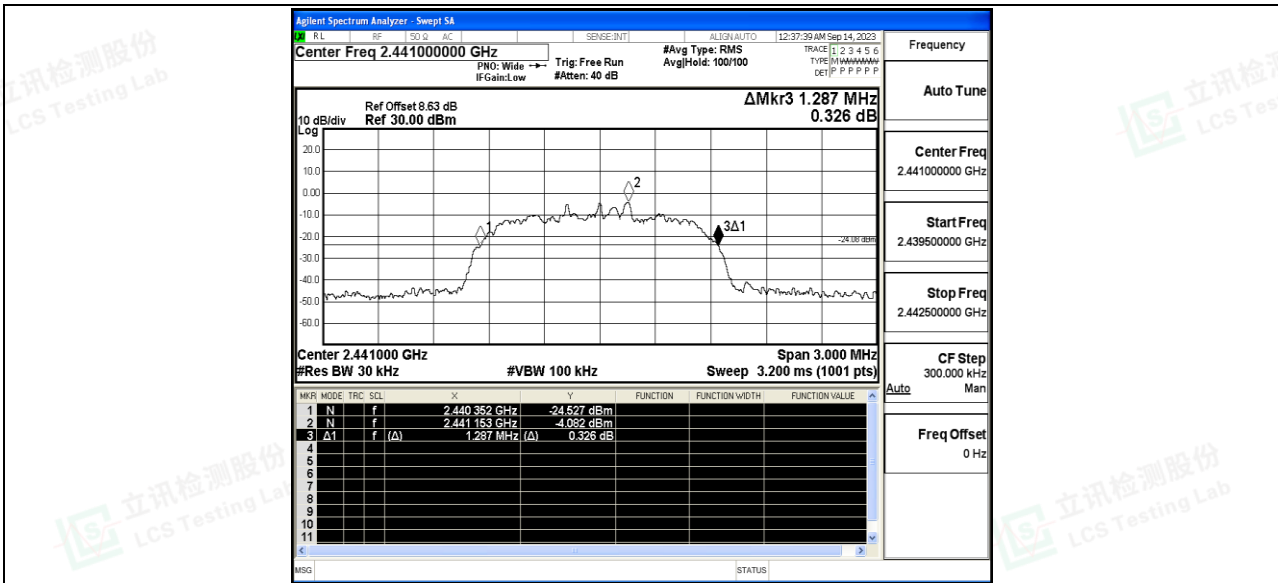


2DH5_Ant1_2402

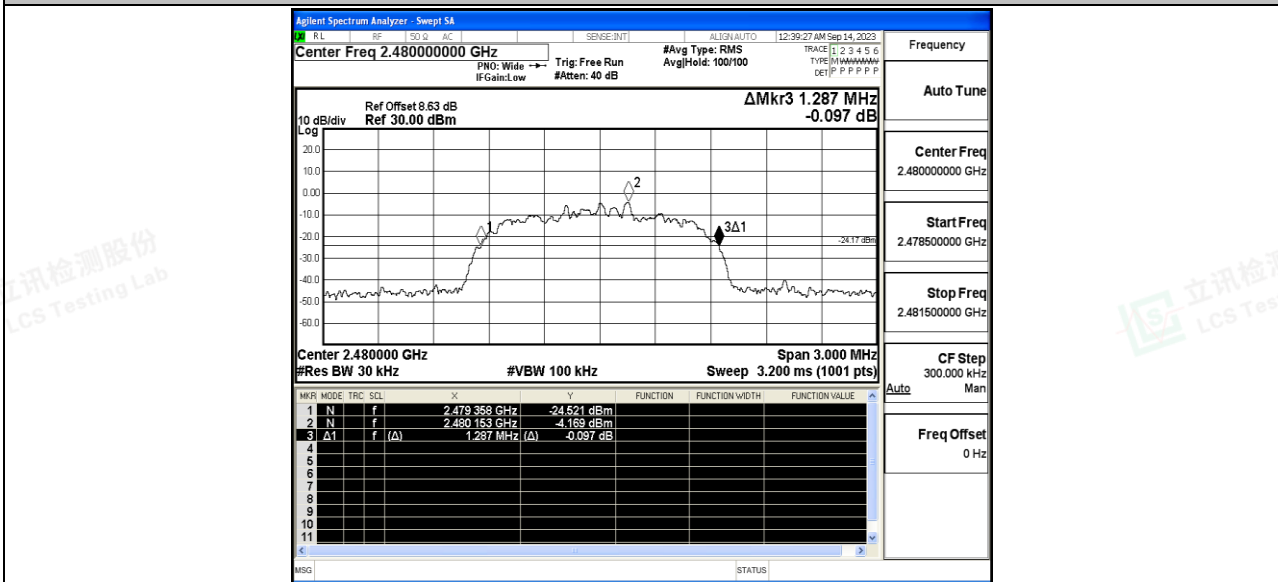


2DH5_Ant1_2441



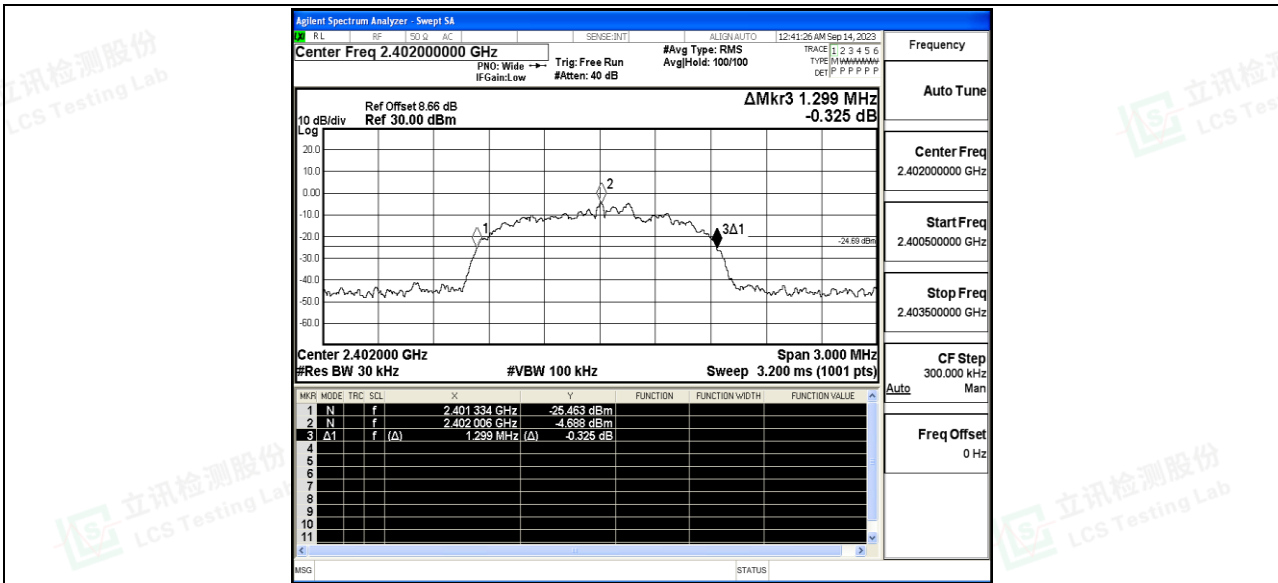


2DH5_Ant1_2480

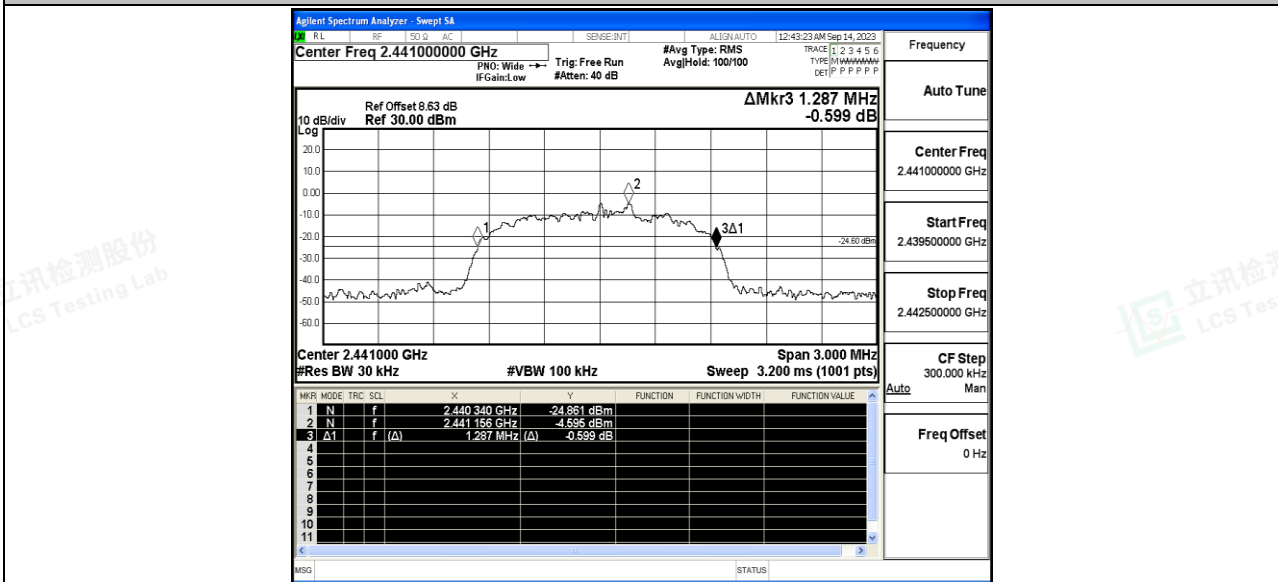


3DH5_Ant1_2402



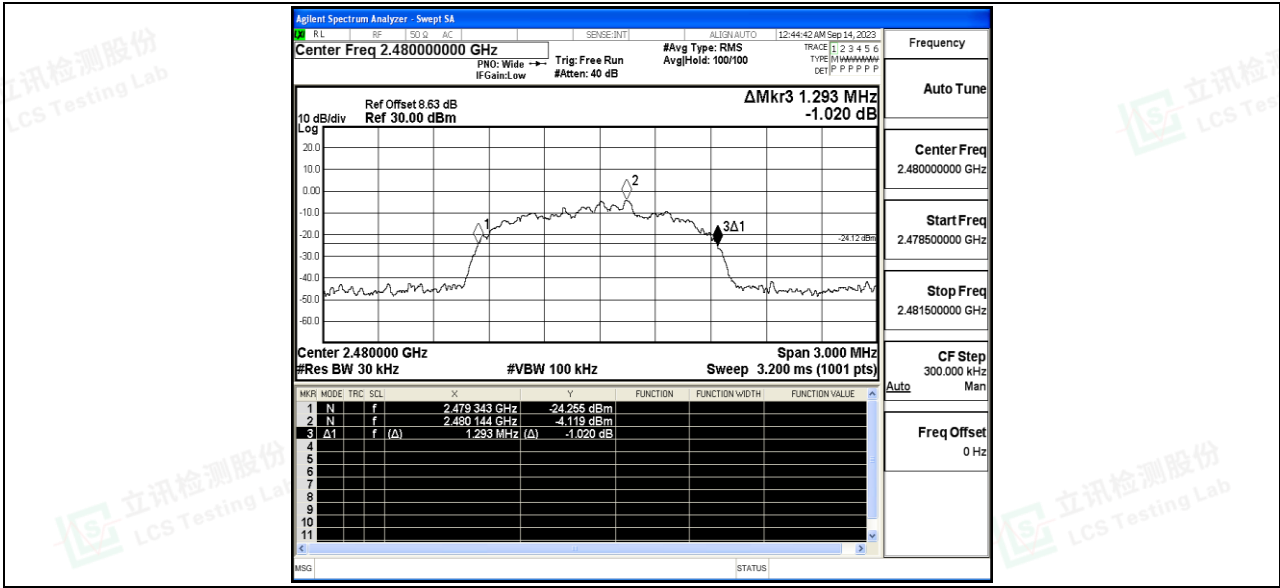


3DH5_Ant1_2441



3DH5_Ant1_2480







A.2 Maximum conducted output power

Test Result

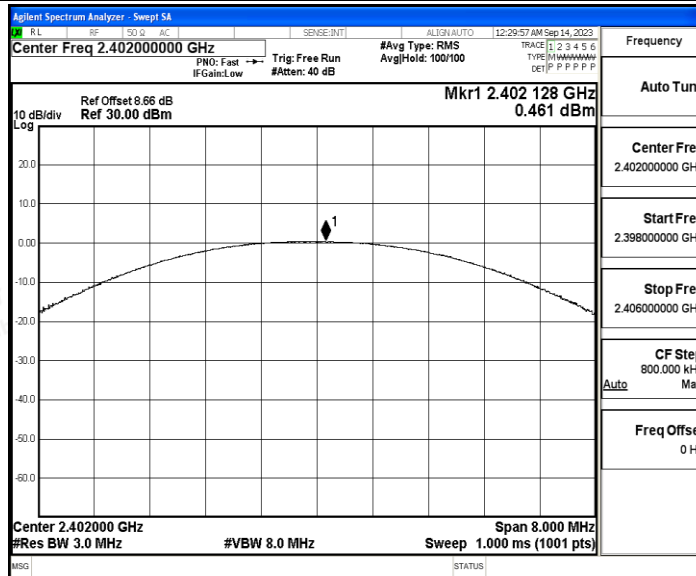
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	0.46	≤20.97	PASS
		2441	0.61	≤20.97	PASS
		2480	0.51	≤20.97	PASS
2DH5	Ant1	2402	0.14	≤20.97	PASS
		2441	0.23	≤20.97	PASS
		2480	0.23	≤20.97	PASS
3DH5	Ant1	2402	0.32	≤20.97	PASS
		2441	0.37	≤20.97	PASS
		2480	0.42	≤20.97	PASS



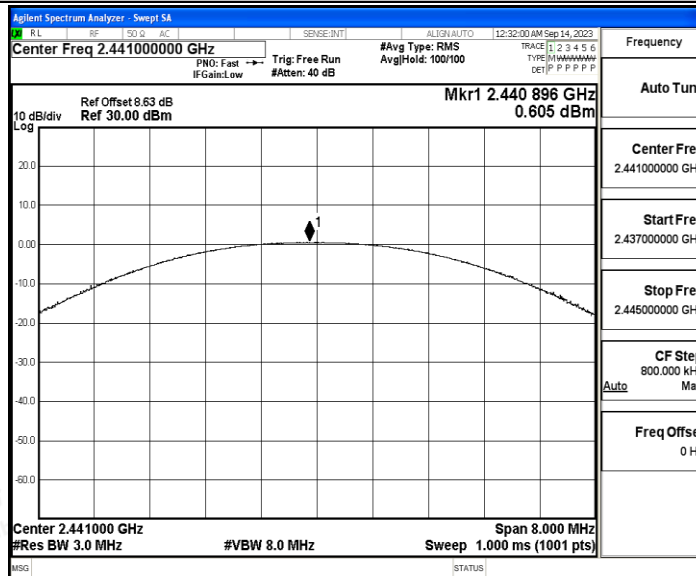


Test Graphs

DH5_Ant1_2402

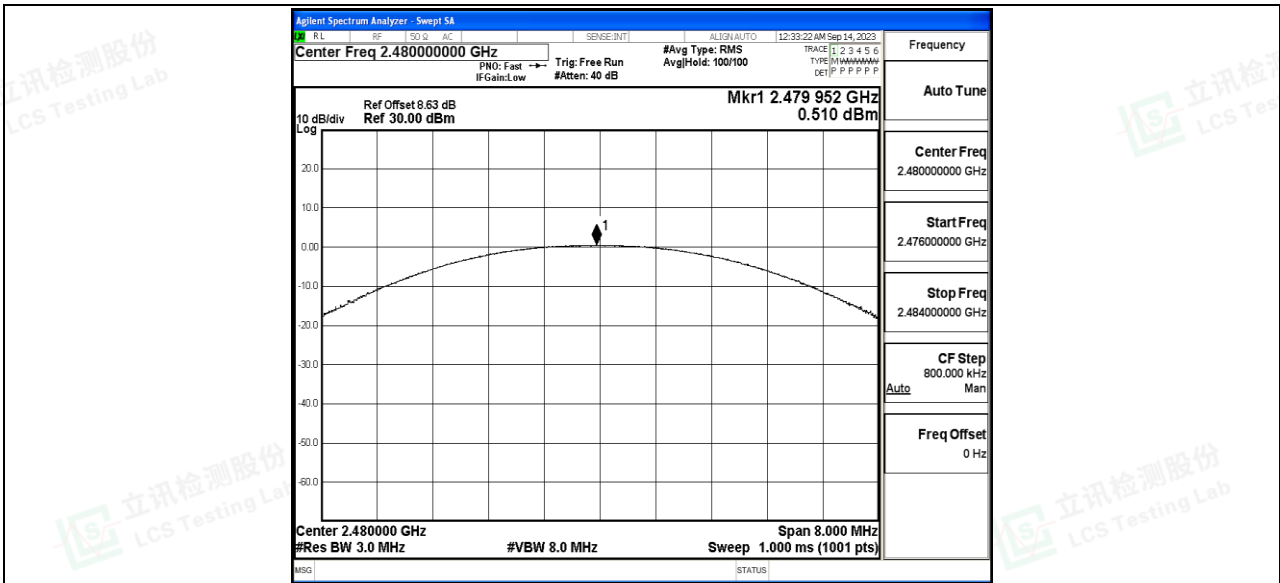


DH5_Ant1_2441

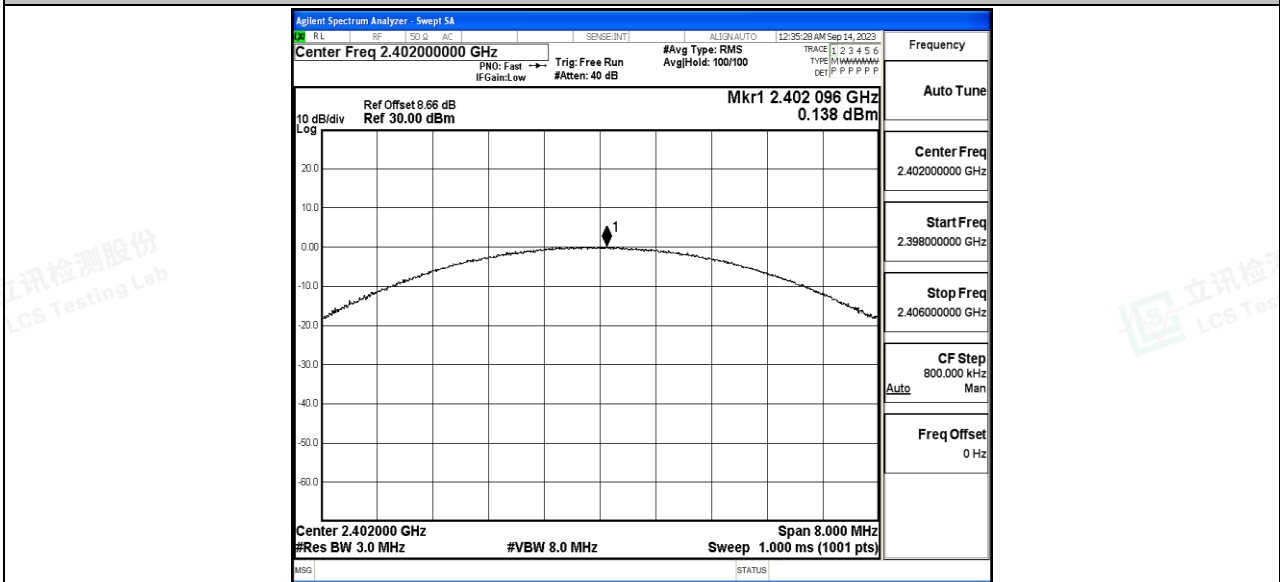


DH5_Ant1_2480





2DH5_Ant1_2402



2DH5_Ant1_2441

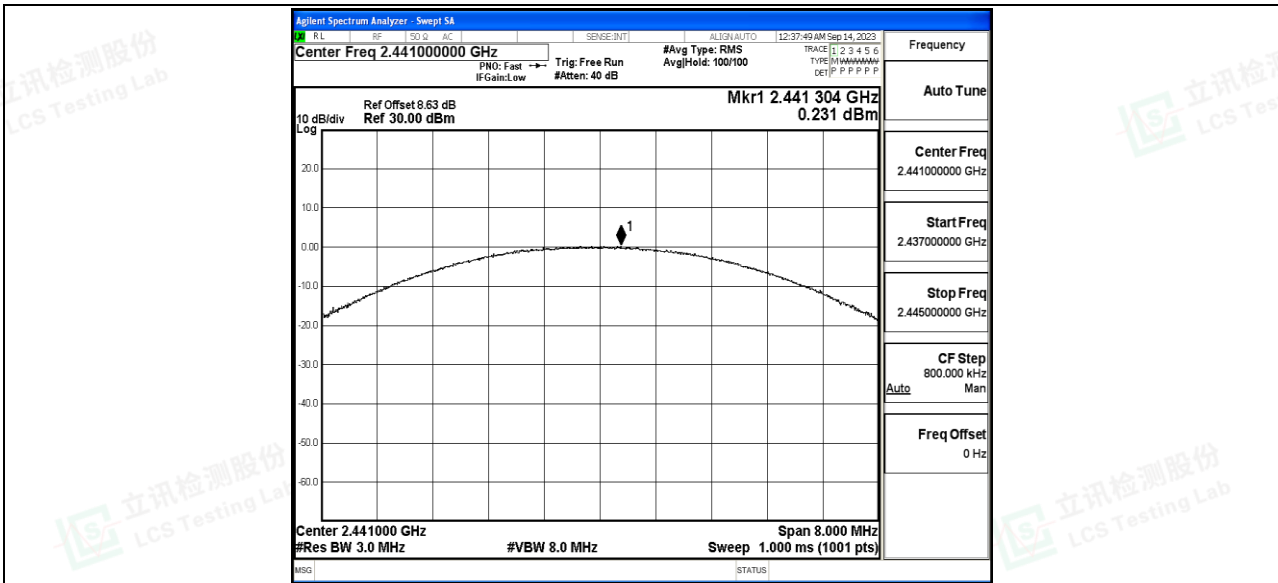


Shenzhen LCS Compliance Testing Laboratory Ltd.

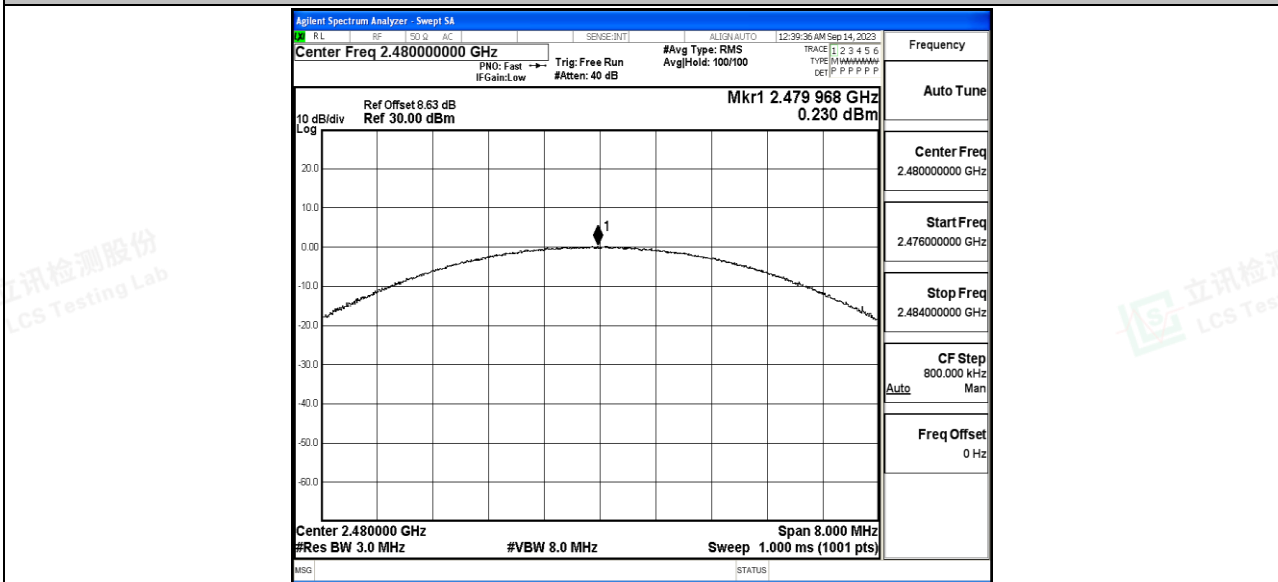
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

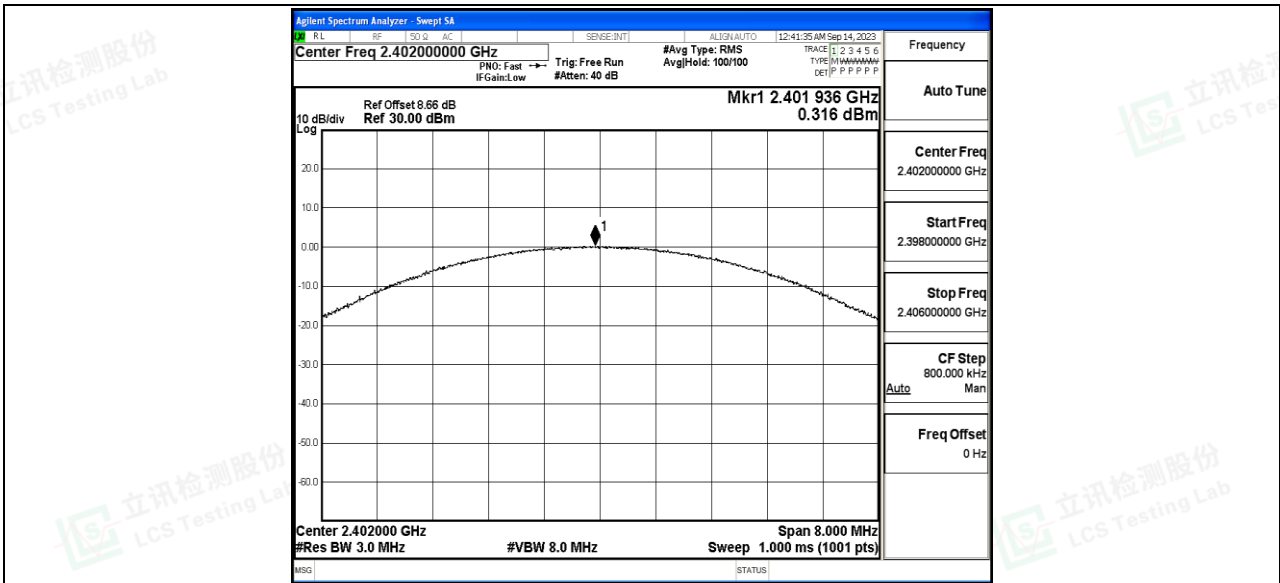


2DH5_Ant1_2480

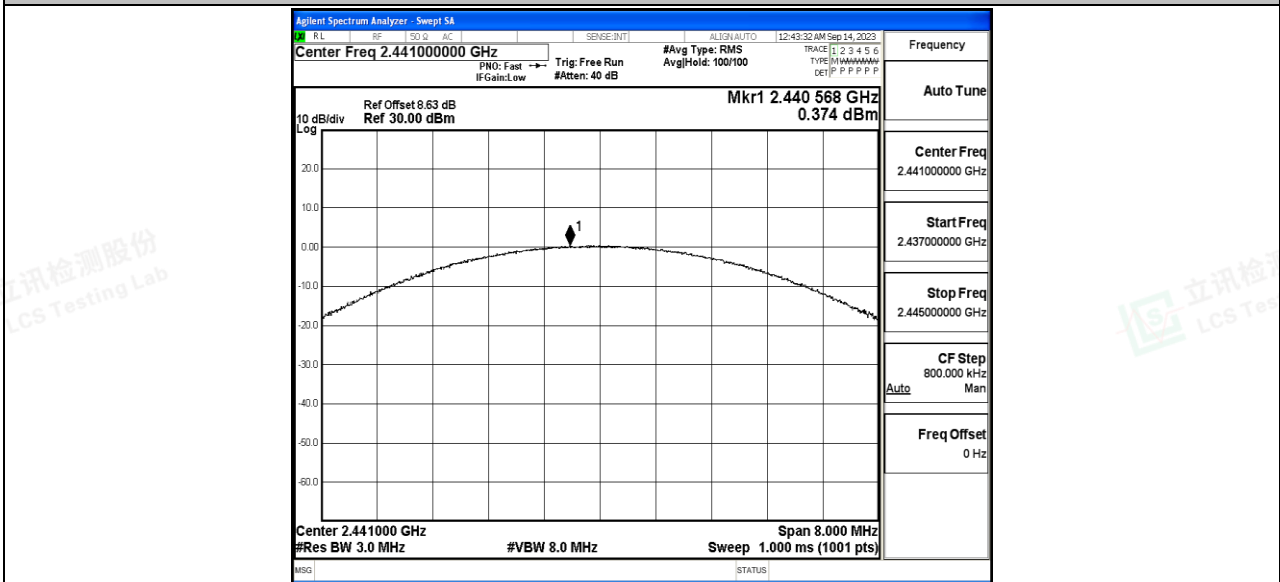


3DH5_Ant1_2402



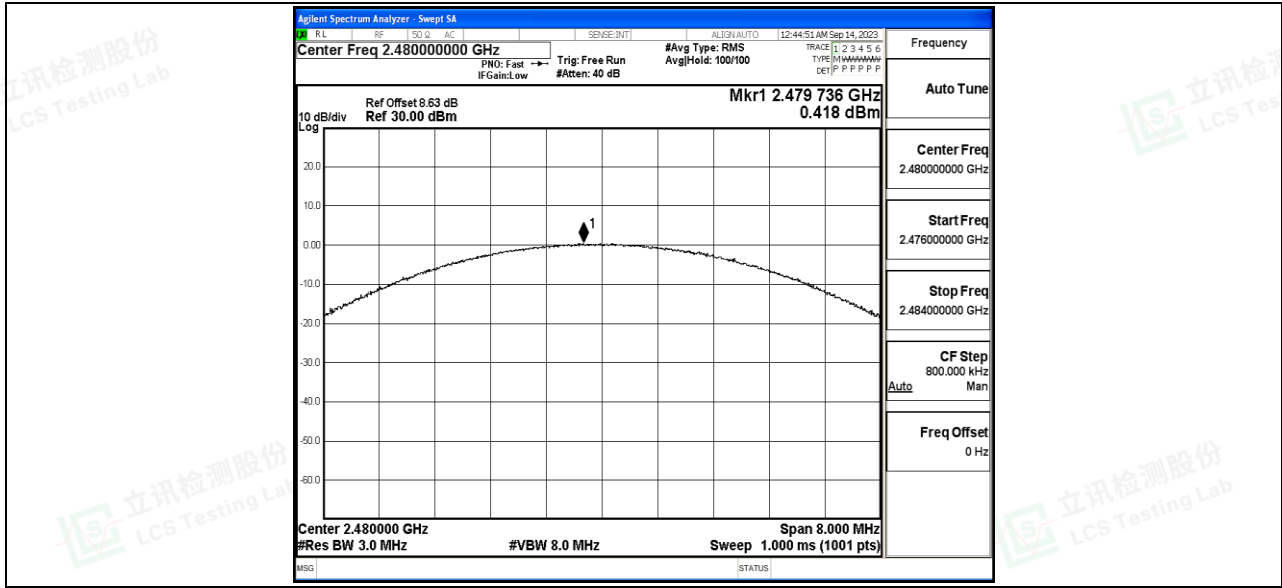


3DH5_Ant1_2441



3DH5_Ant1_2480







A.3 Carrier frequency separation

Test Result

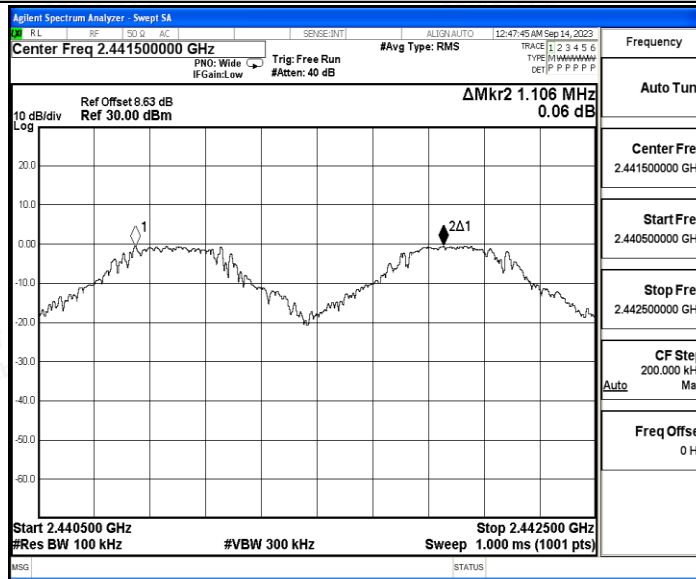
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.106	≥0.682	PASS
2DH5	Ant1	Hop	1.01	≥0.864	PASS
3DH5	Ant1	Hop	1.178	≥0.866	PASS



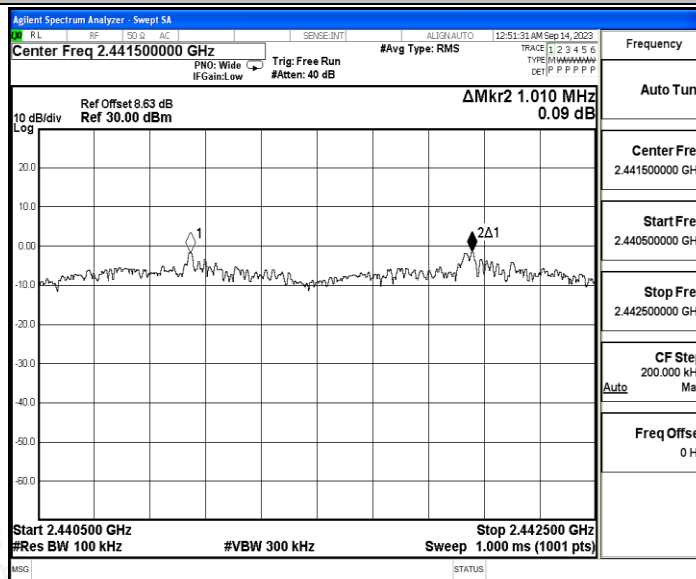


Test Graphs

DH5_Ant1_Hop

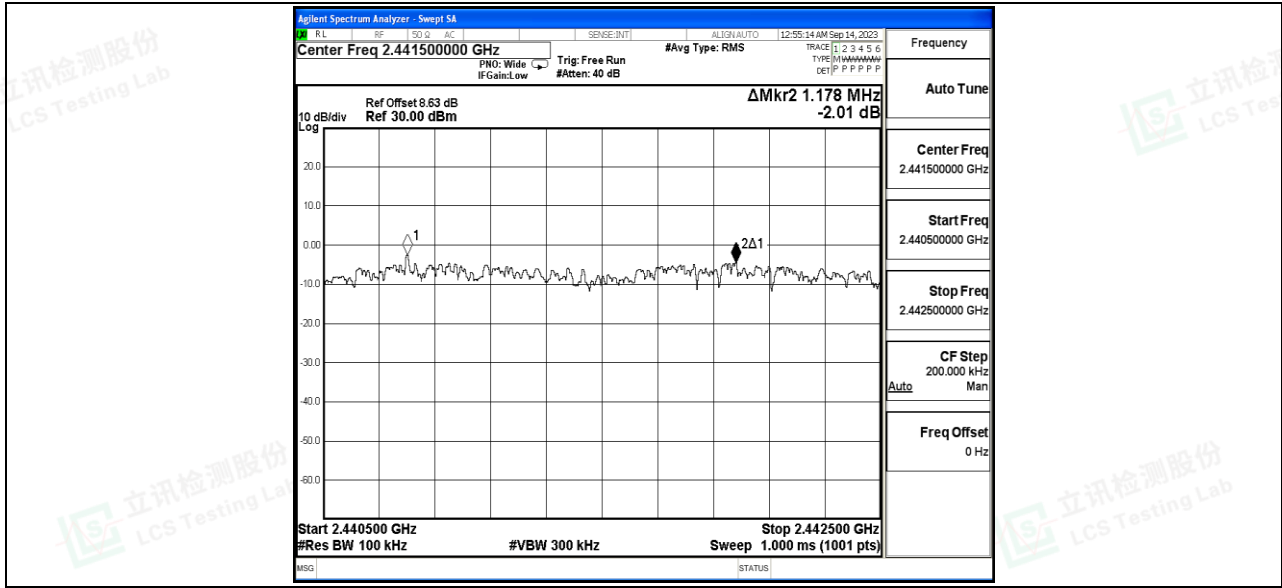


2DH5_Ant1_Hop



3DH5_Ant1_Hop







A.4 Time of occupancy

Test Result

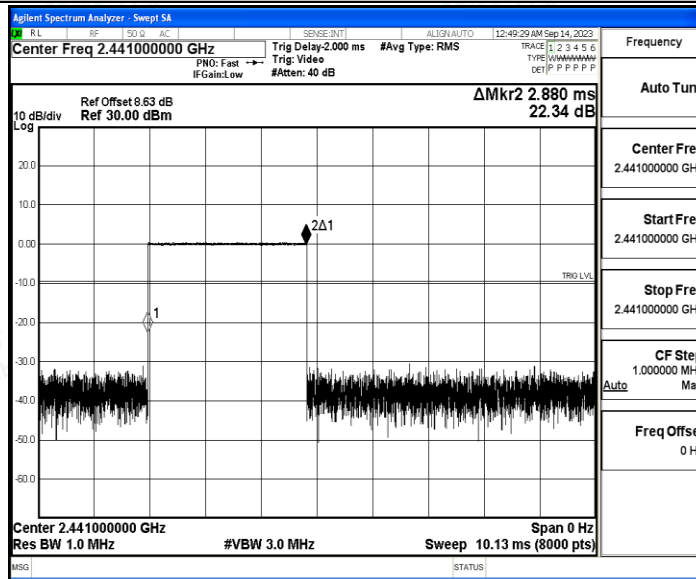
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.884	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.885	106.67	0.308	≤0.4	PASS



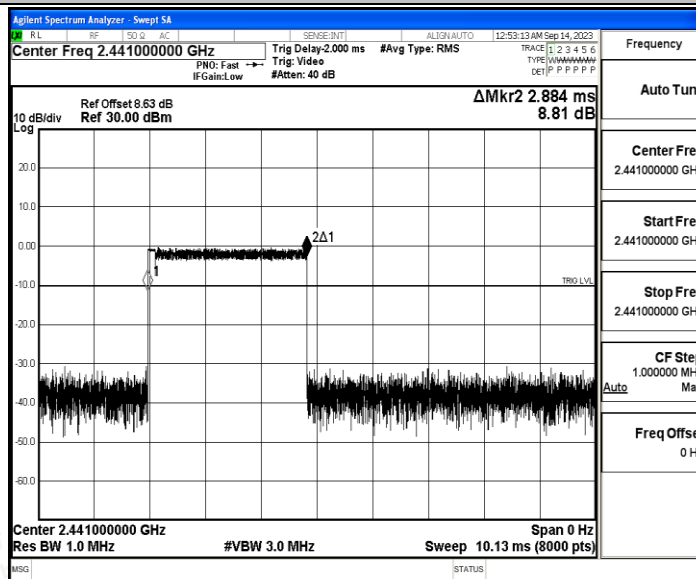


Test Graphs

DH5_Ant1_Hop

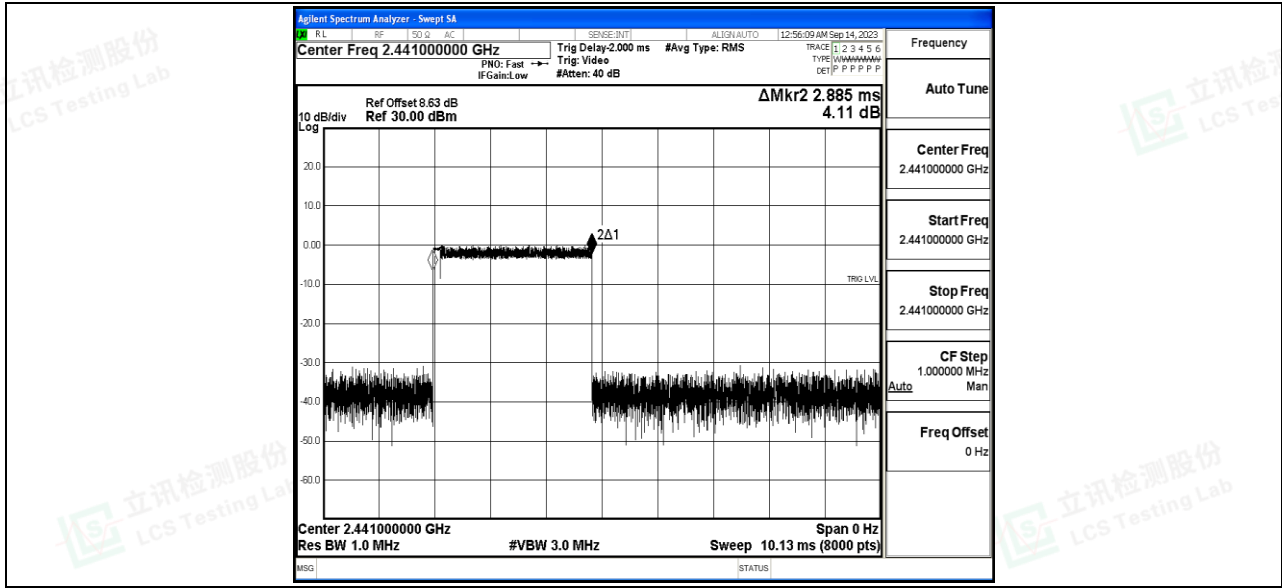


2DH5_Ant1_Hop



3DH5_Ant1_Hop







A.5 Number of hopping channels

Test Result

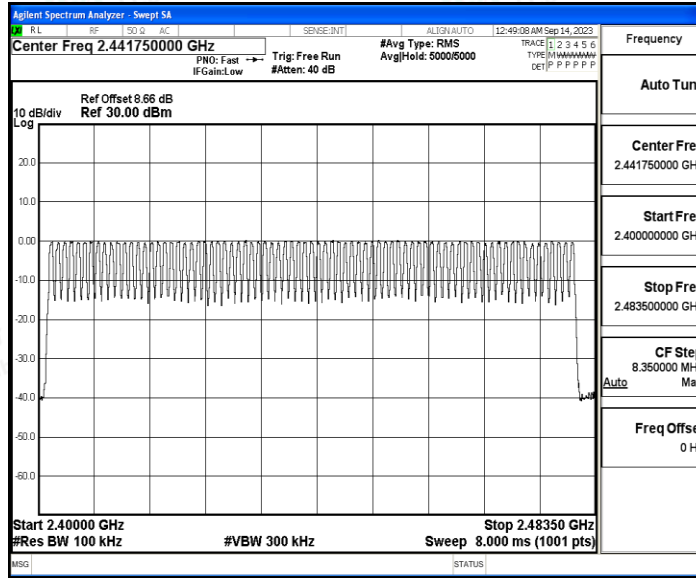
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS



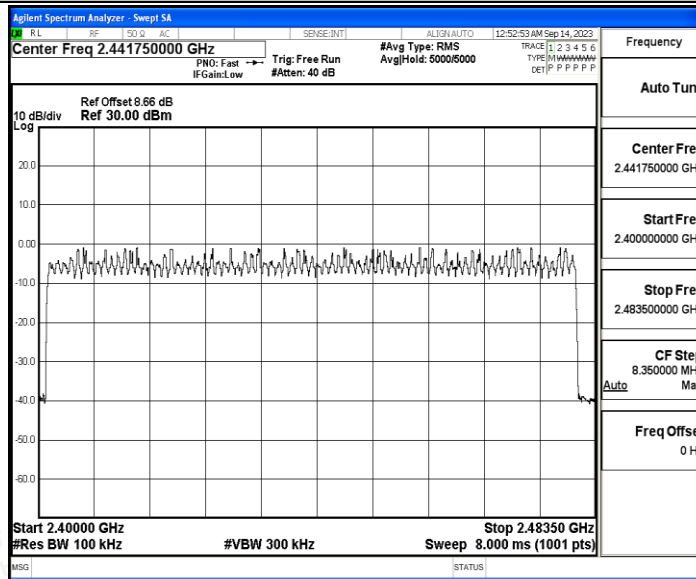


Test Graphs

DH5_Ant1_Hop

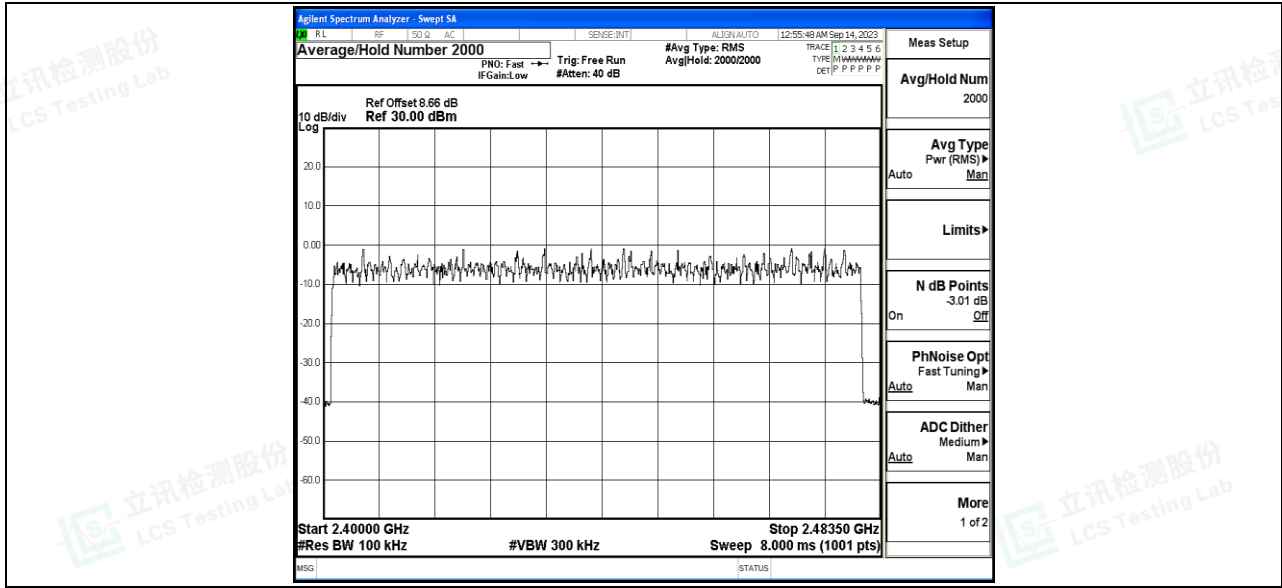


2DH5_Ant1_Hop



3DH5_Ant1_Hop







A.6 Band edge measurements

Test Result

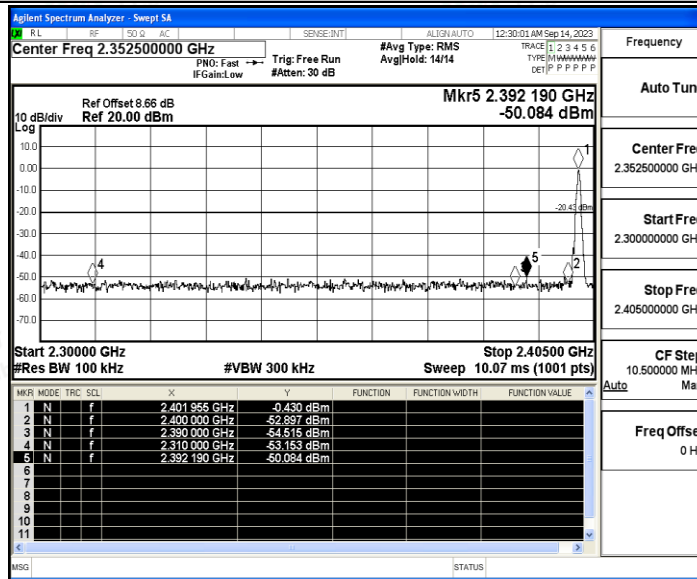
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.43	-50.08	≤-20.43	PASS
		High	2480	-1.00	-49.39	≤-21	PASS
		Low	Hop_2402	-1.00	-48.52	≤-21	PASS
		High	Hop_2480	-0.11	-47.83	≤-20.11	PASS
2DH5	Ant1	Low	2402	-4.69	-49.82	≤-24.69	PASS
		High	2480	-4.14	-49.12	≤-24.14	PASS
		Low	Hop_2402	-5.57	-48.89	≤-25.57	PASS
		High	Hop_2480	-1.13	-46.95	≤-21.13	PASS
3DH5	Ant1	Low	2402	-4.33	-49.52	≤-24.33	PASS
		High	2480	-2.87	-48.4	≤-22.87	PASS
		Low	Hop_2402	-4.86	-48.99	≤-24.86	PASS
		High	Hop_2480	-1.10	-47.46	≤-21.1	PASS



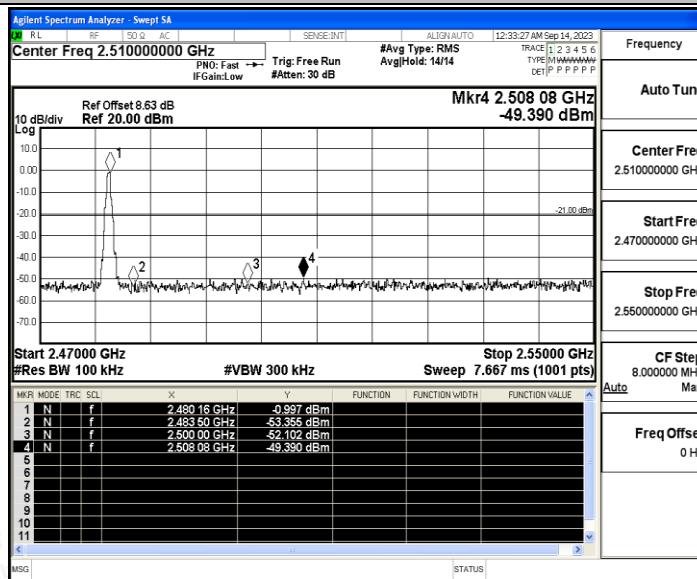


Test Graphs

DH5_Ant1_Low_2402

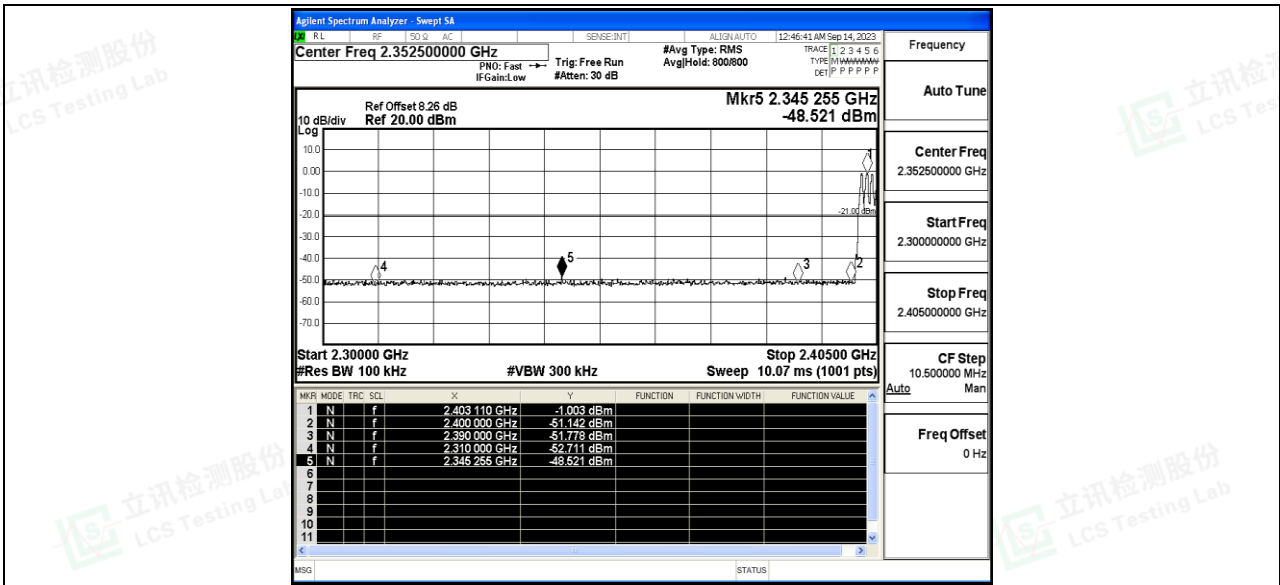


DH5_Ant1_High_2480

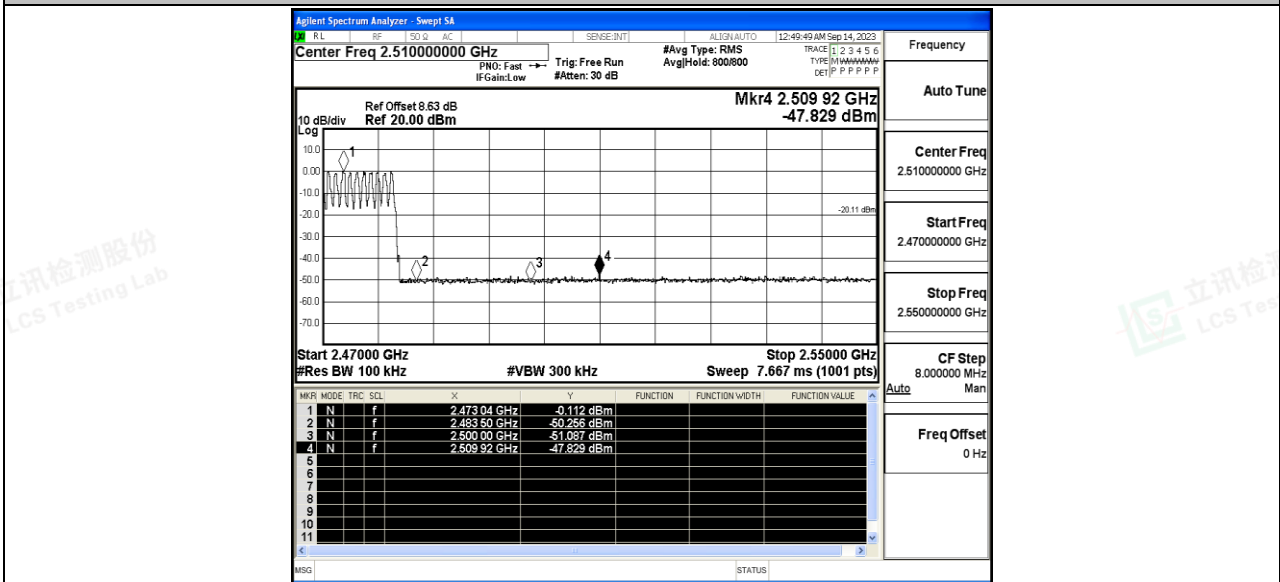


DH5_Ant1_Low_Hop_2402



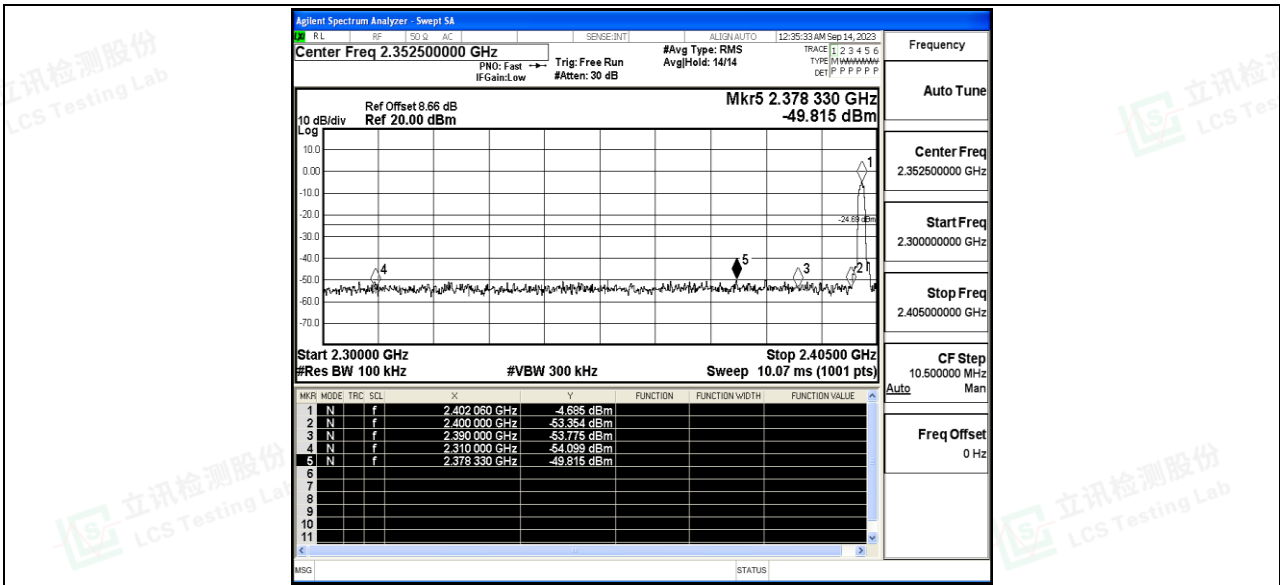


DH5_Ant1_High_Hop_2480

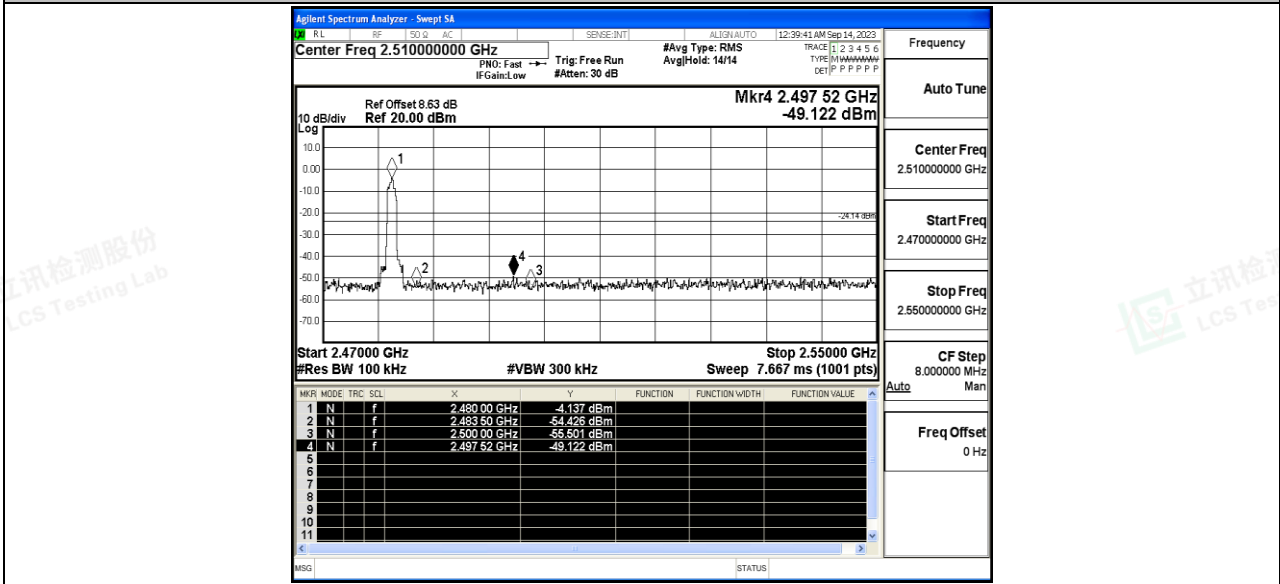


2DH5_Ant1_Low_2402



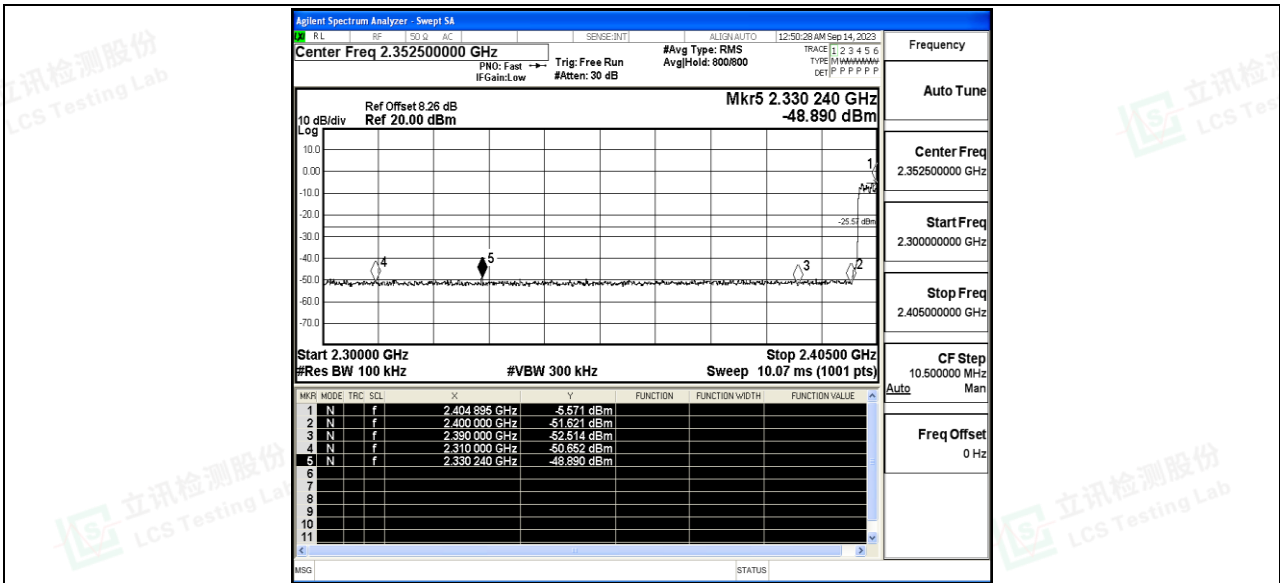


2DH5_Ant1_High_2480

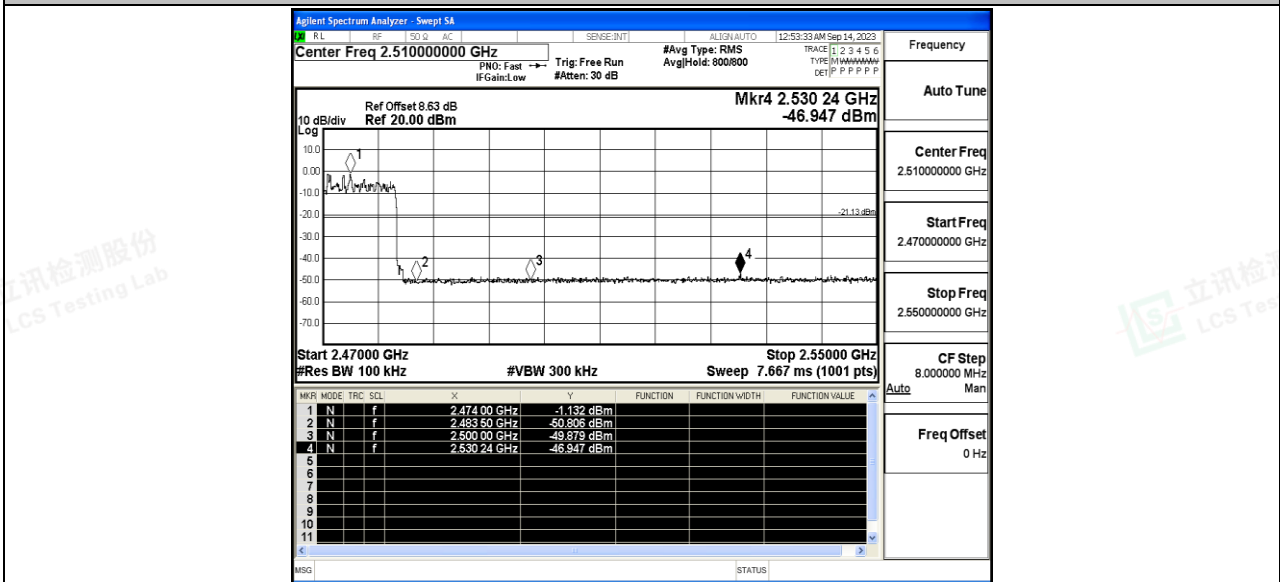


2DH5_Ant1_Low_Hop_2402



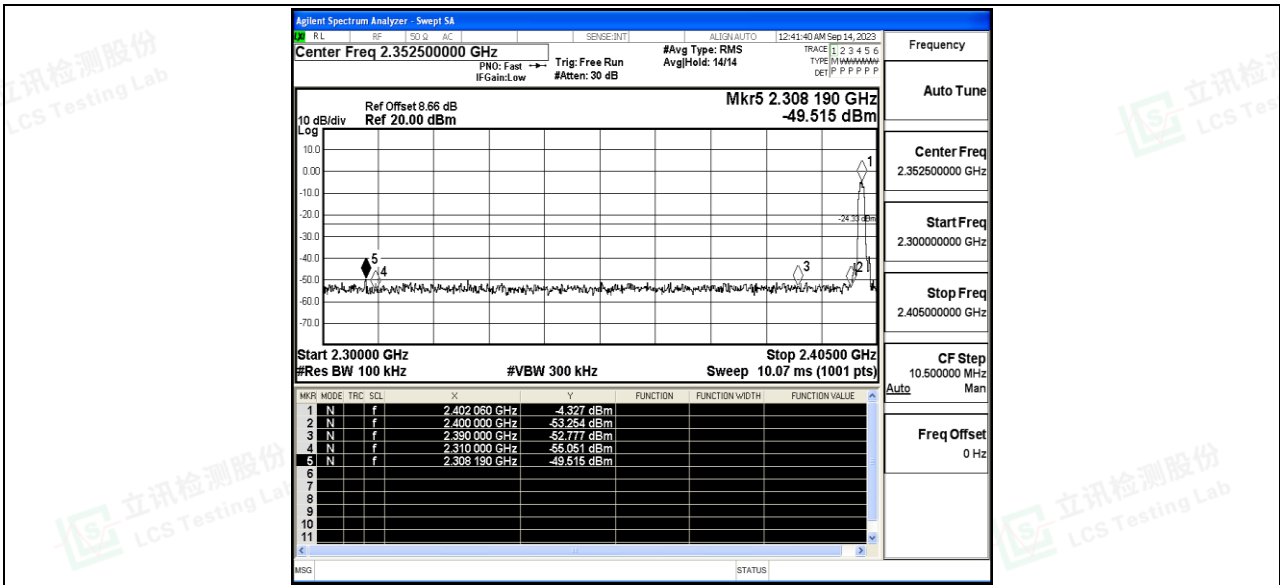


2DH5_Ant1_High_Hop_2480

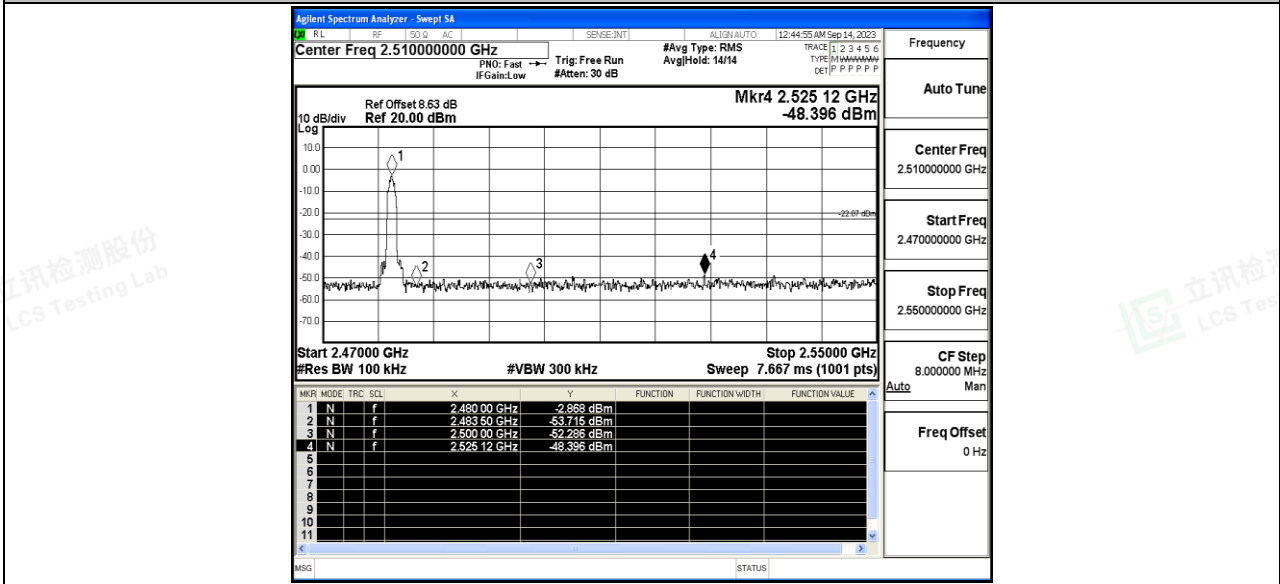


3DH5_Ant1_Low_2402



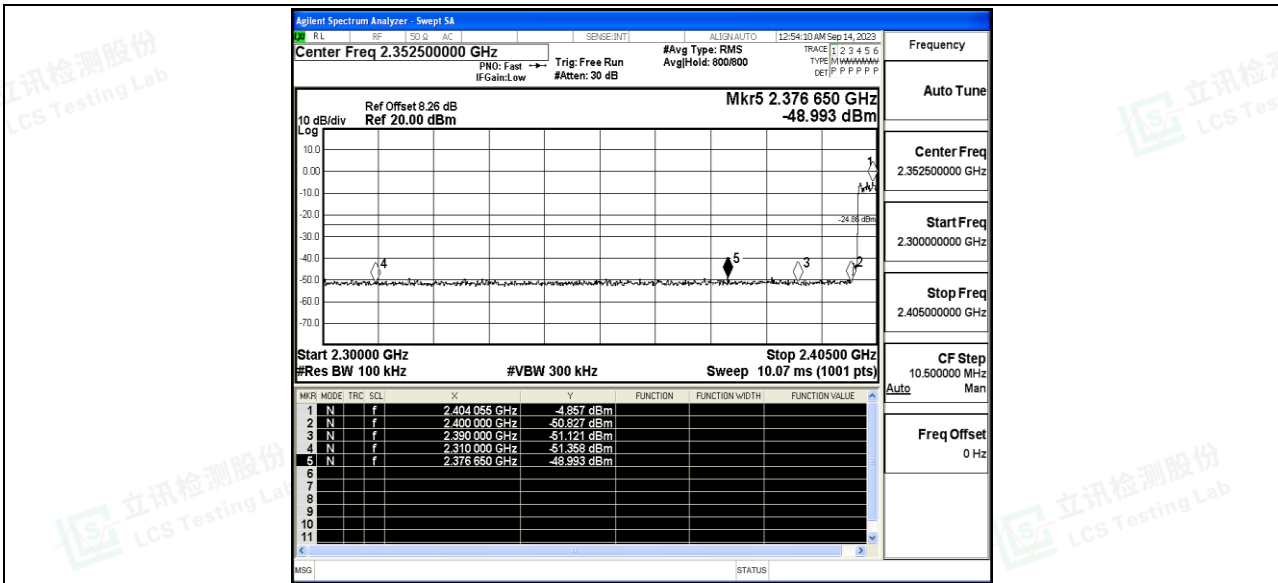


3DH5_Ant1_High_2480

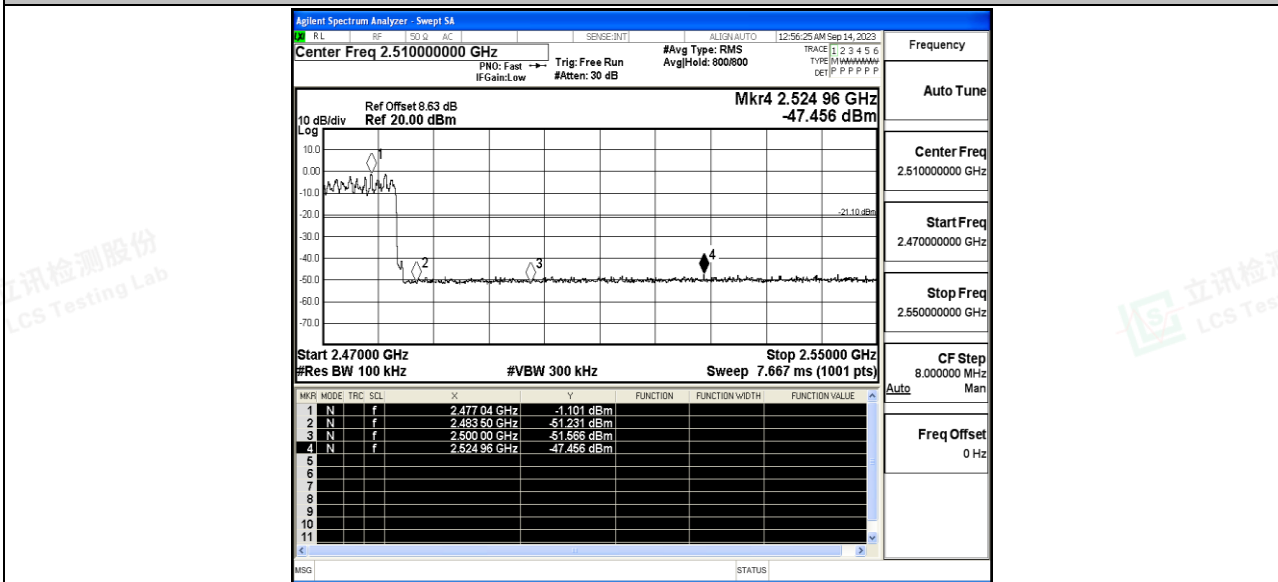


3DH5_Ant1_Low_Hop_2402





3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

Test Result

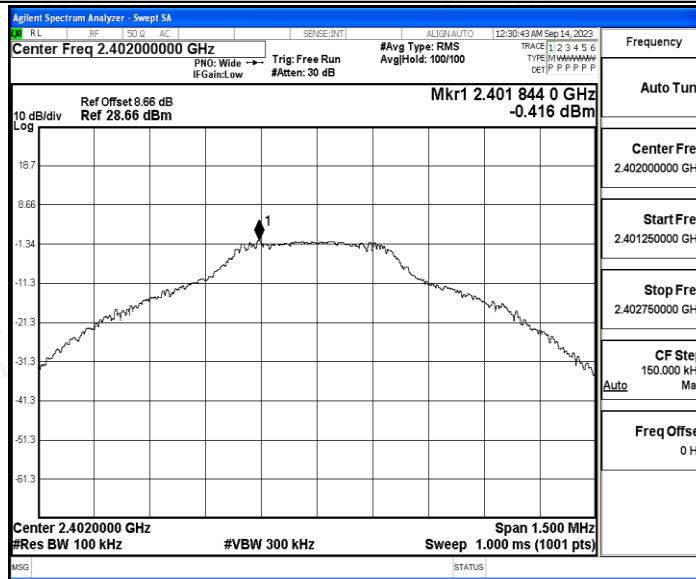
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.42	-0.42	---	PASS
			30~1000	-0.42	-60.85	≤-20.42	PASS
			1000~26500	-0.42	-46.59	≤-20.42	PASS
		2441	Reference	-0.12	-0.12	---	PASS
			30~1000	-0.12	-60.76	≤-20.12	PASS
			1000~26500	-0.12	-46.5	≤-20.12	PASS
		2480	Reference	-0.63	-0.63	---	PASS
			30~1000	-0.63	-60.74	≤-20.63	PASS
			1000~26500	-0.63	-46.69	≤-20.63	PASS
2DH5	Ant1	2402	Reference	-1.40	-1.40	---	PASS
			30~1000	-1.40	-60.69	≤-21.4	PASS
			1000~26500	-1.40	-46.21	≤-21.4	PASS
		2441	Reference	-1.77	-1.77	---	PASS
			30~1000	-1.77	-60.49	≤-21.77	PASS
			1000~26500	-1.77	-45.81	≤-21.77	PASS
		2480	Reference	-1.87	-1.87	---	PASS
			30~1000	-1.87	-60.83	≤-21.87	PASS
			1000~26500	-1.87	-46.41	≤-21.87	PASS
3DH5	Ant1	2402	Reference	-1.52	-1.52	---	PASS
			30~1000	-1.52	-60.64	≤-21.52	PASS
			1000~26500	-1.52	-45.94	≤-21.52	PASS
		2441	Reference	-1.06	-1.06	---	PASS
			30~1000	-1.06	-60.83	≤-21.06	PASS
			1000~26500	-1.06	-46.69	≤-21.06	PASS
		2480	Reference	-1.08	-1.08	---	PASS
			30~1000	-1.08	-60.44	≤-21.08	PASS
			1000~26500	-1.08	-46.31	≤-21.08	PASS



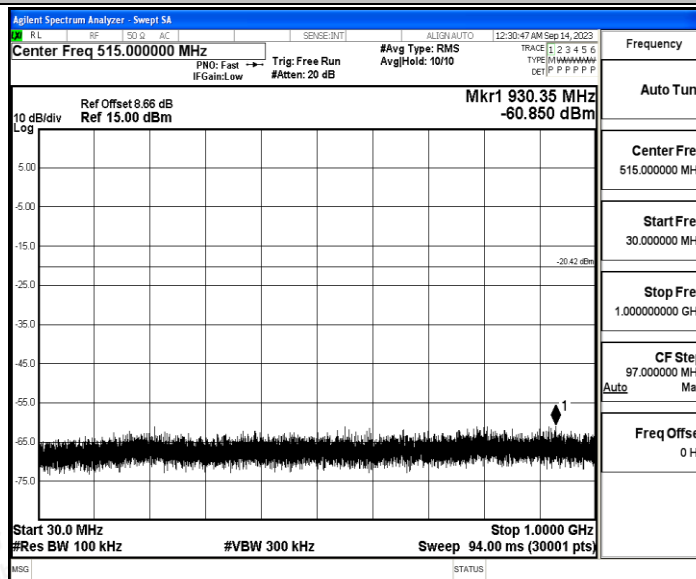


Test Graphs

DH5_Ant1_2402_0~Reference

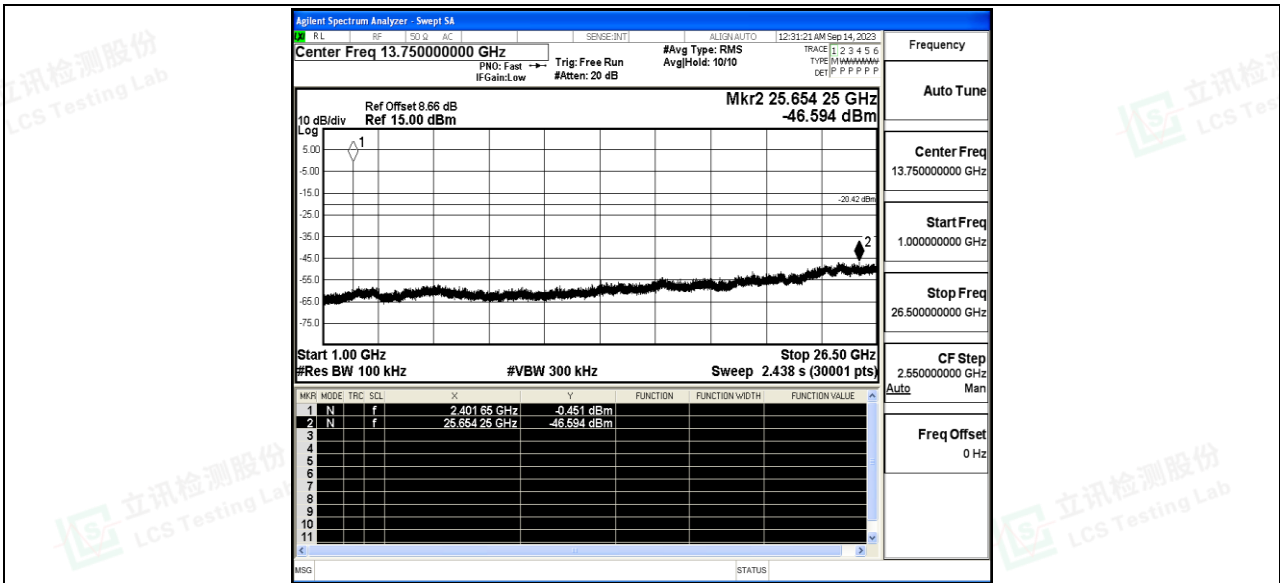


DH5_Ant1_2402_30~1000

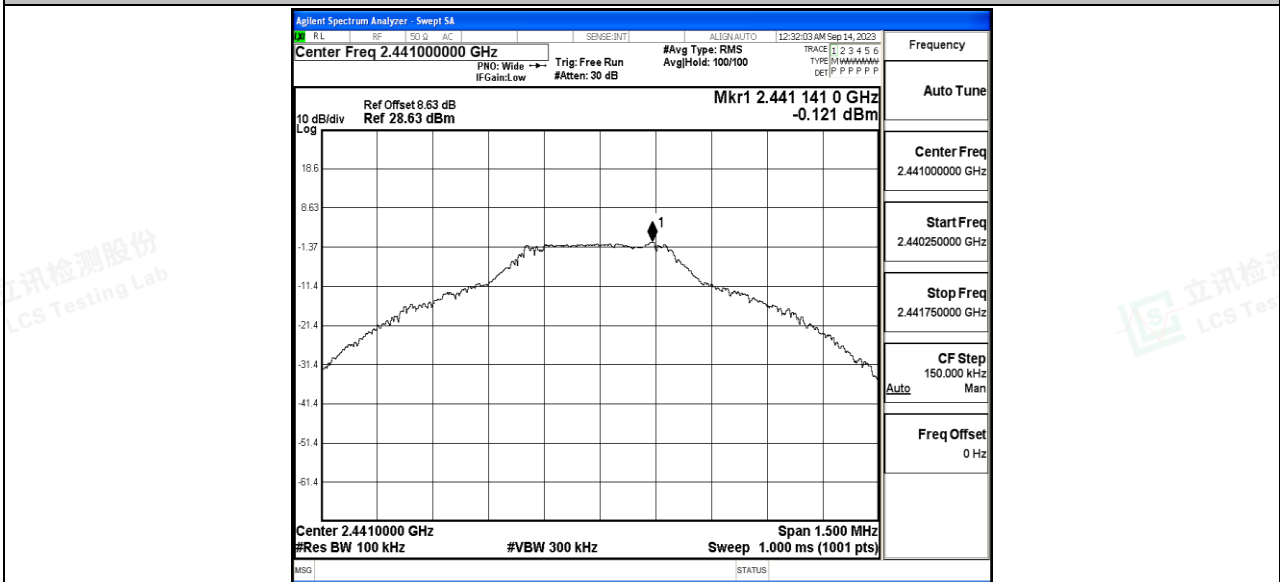


DH5_Ant1_2402_1000~26500



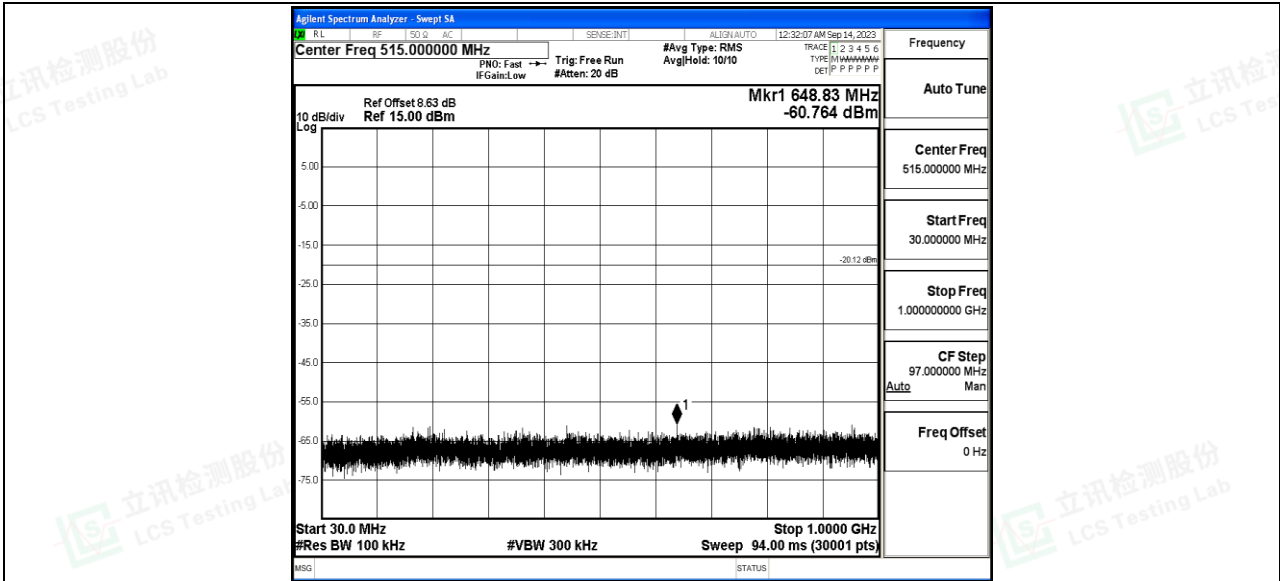


DH5_Ant1_2441_0-Reference

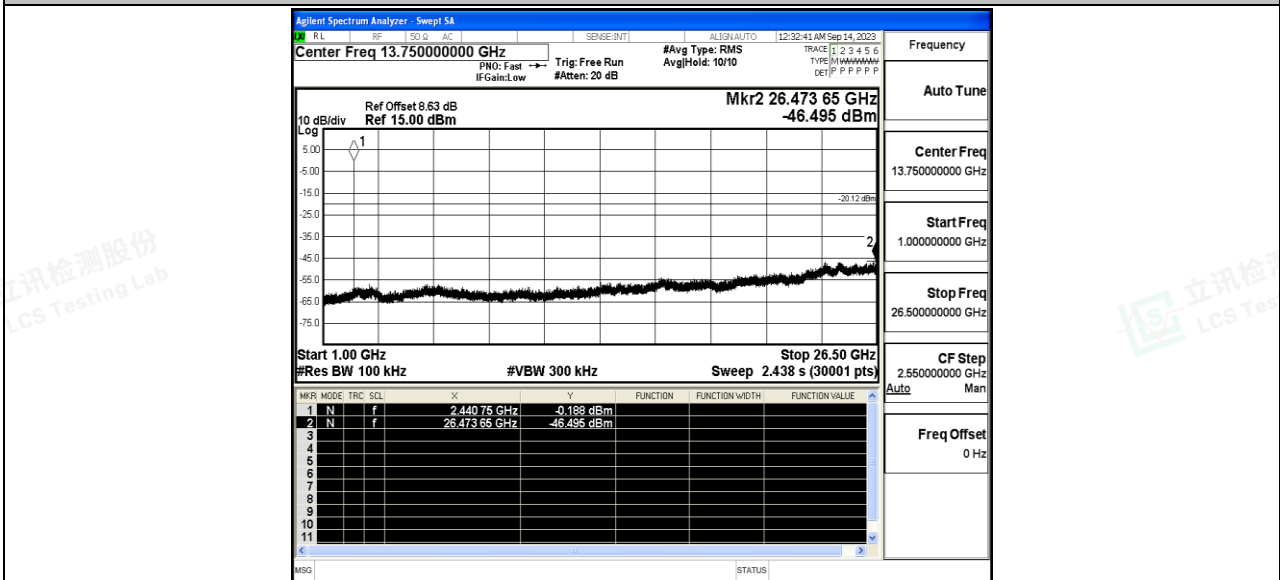


DH5_Ant1_2441_30-1000



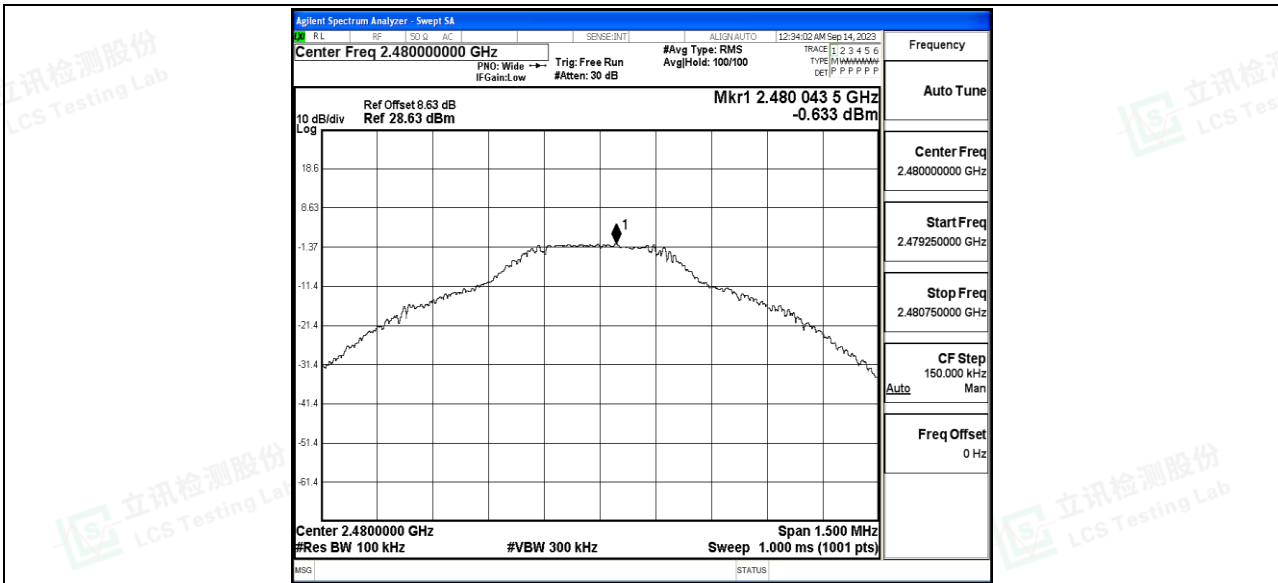


DH5_Ant1_2441_1000~26500

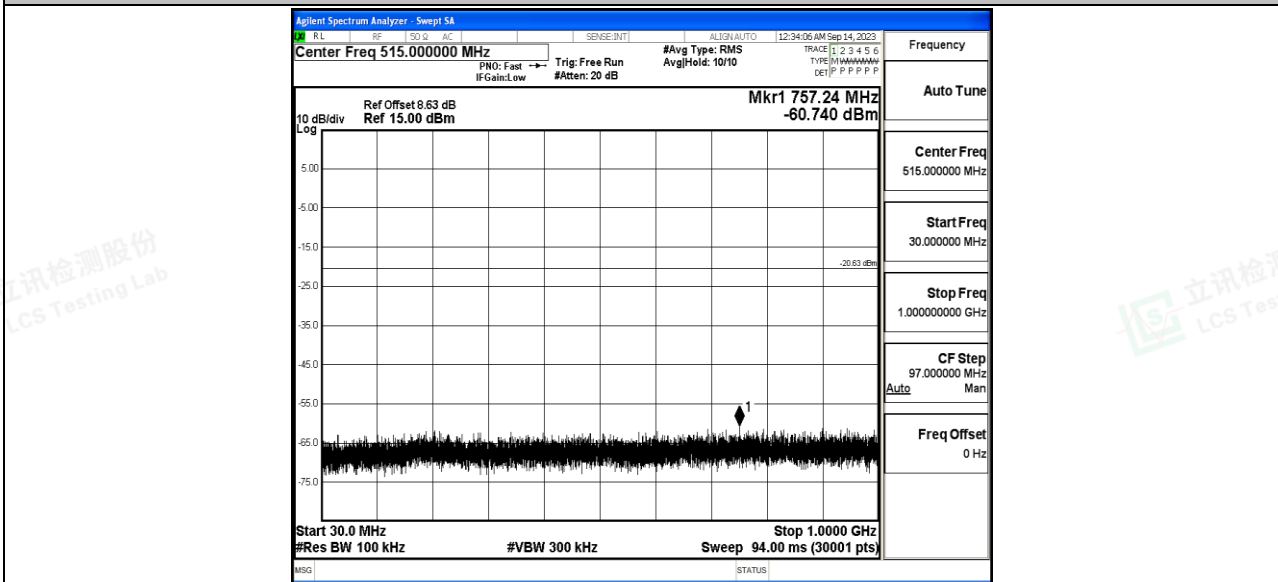


DH5_Ant1_2480_0~Reference



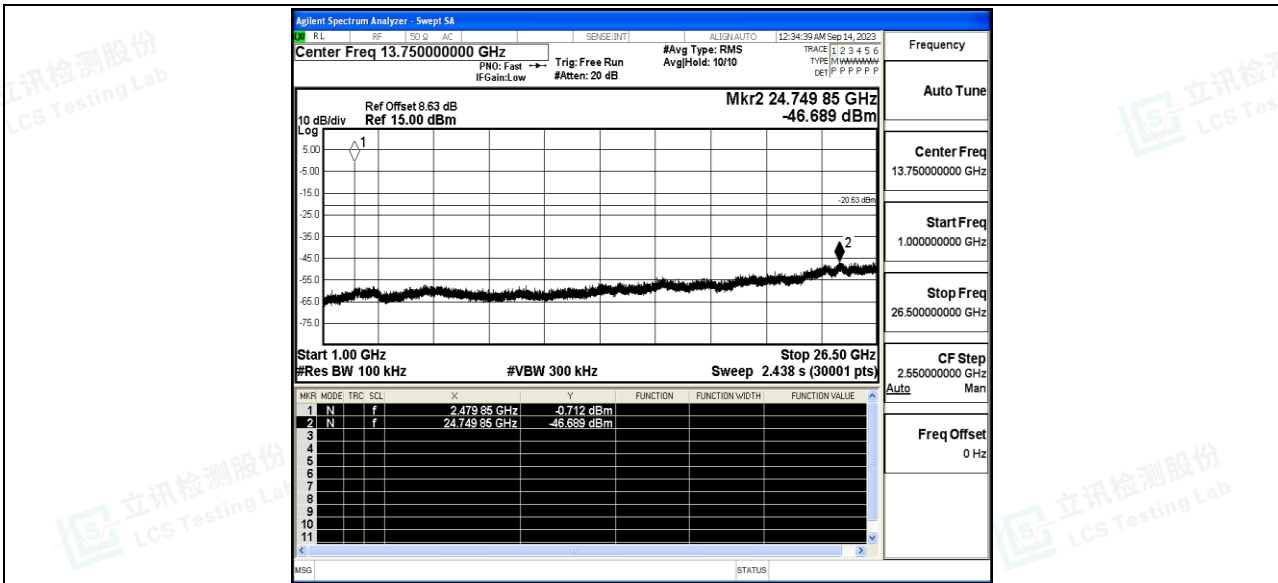


DH5_Ant1_2480_30~1000

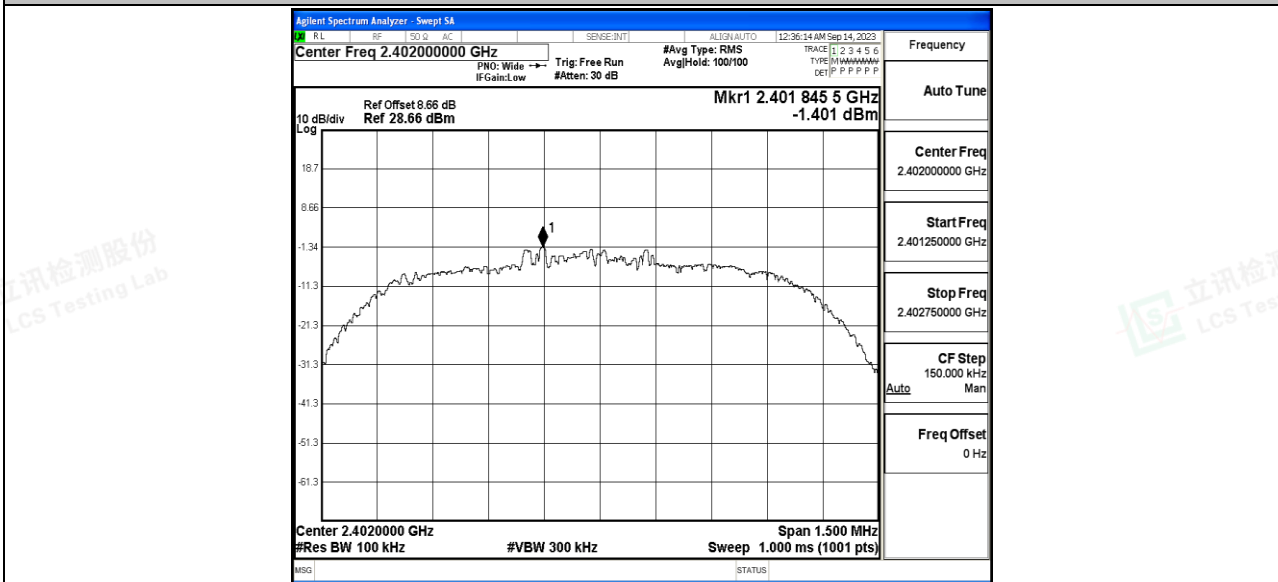


DH5_Ant1_2480_1000~26500



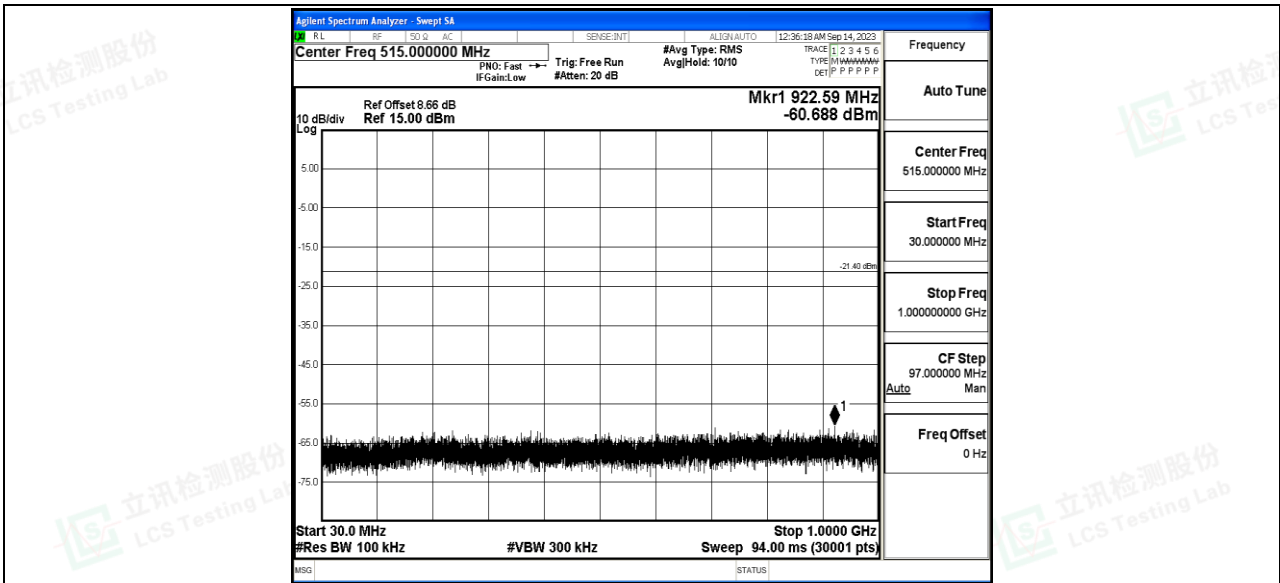


2DH5_Ant1_2402_0~Reference

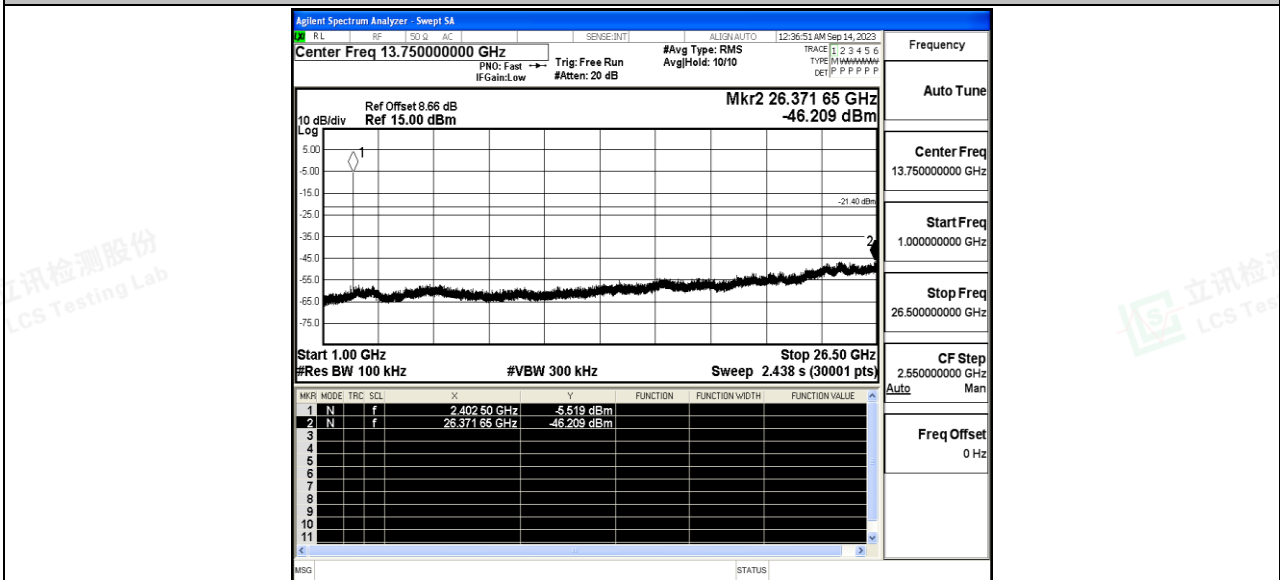


2DH5_Ant1_2402_30~1000



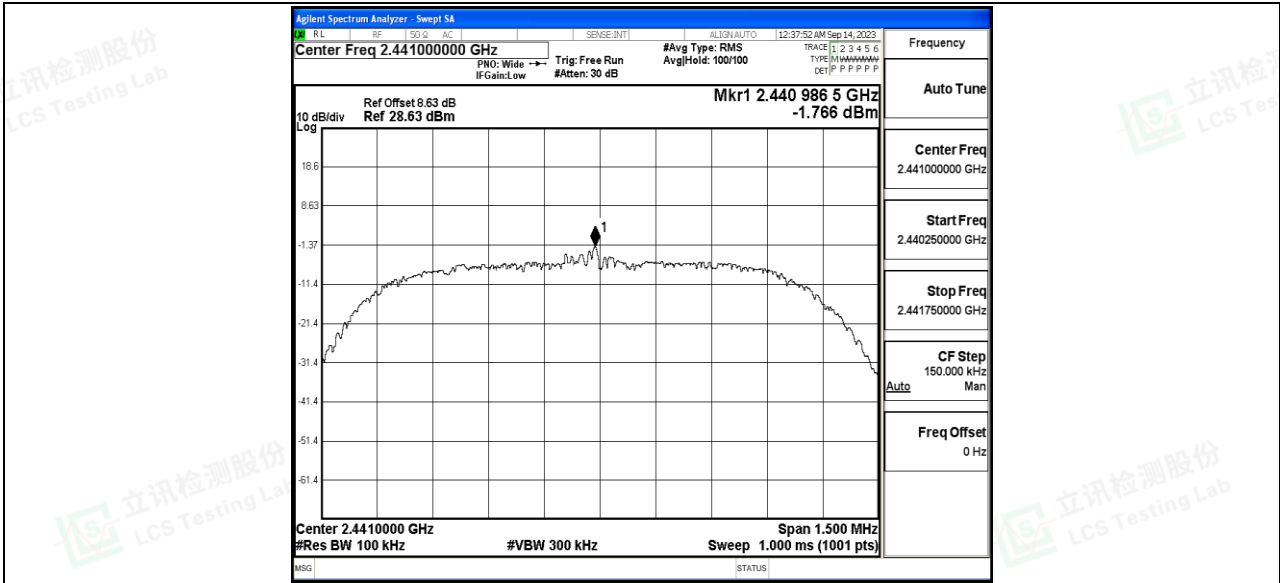


2DH5_Ant1_2402_1000~26500

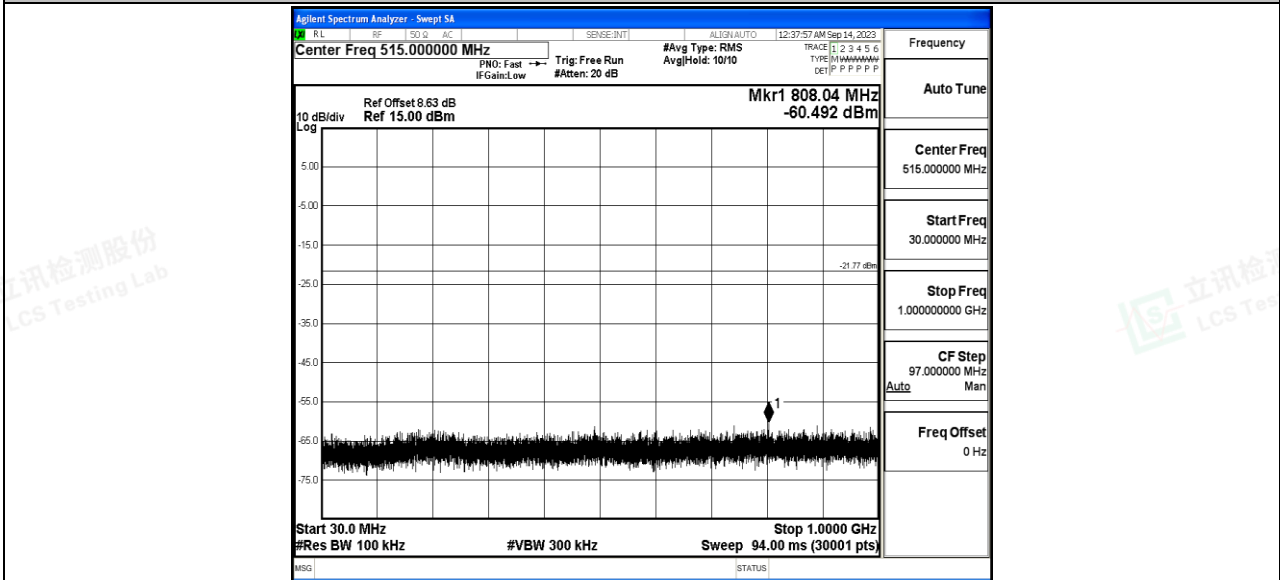


2DH5_Ant1_2441_0~Reference



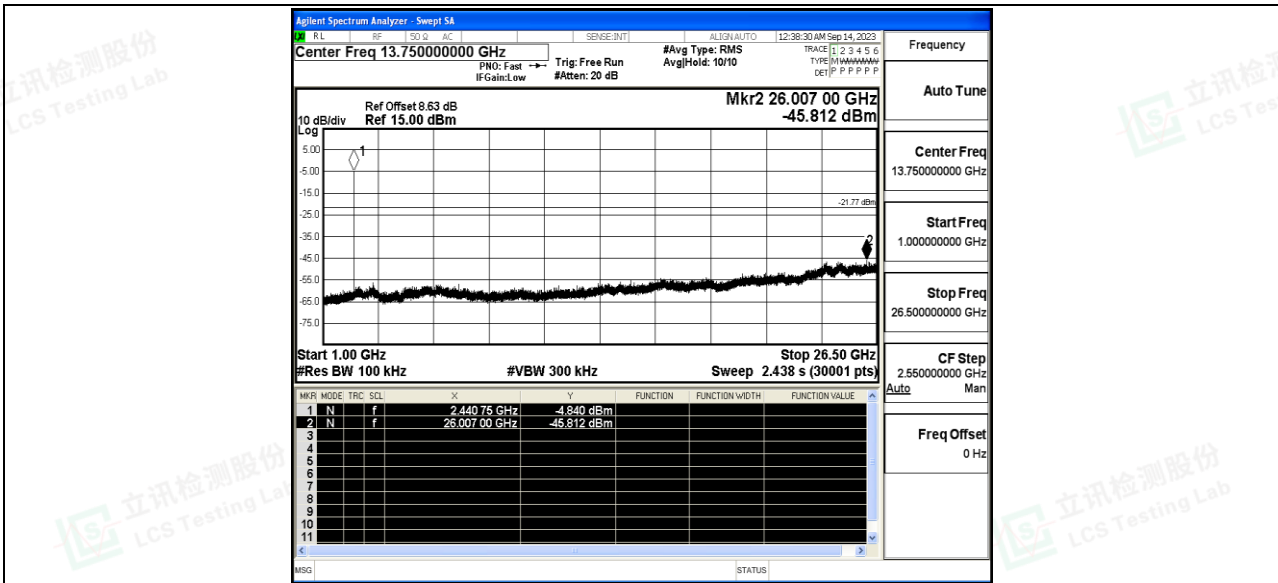


2DH5_Ant1_2441_30~1000

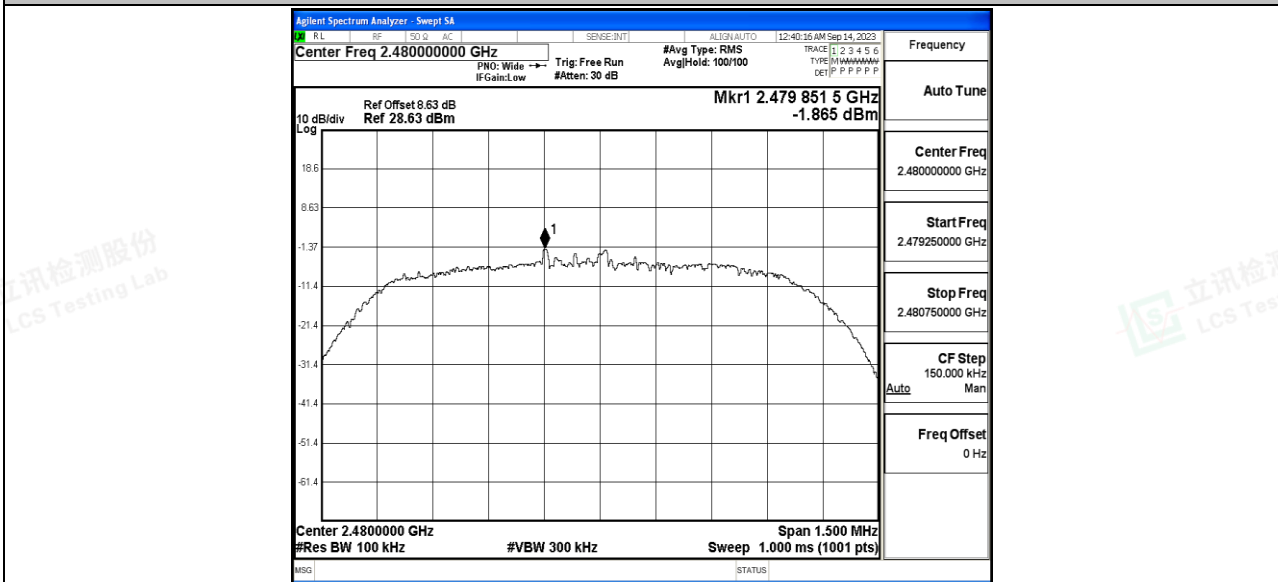


2DH5_Ant1_2441_1000~26500



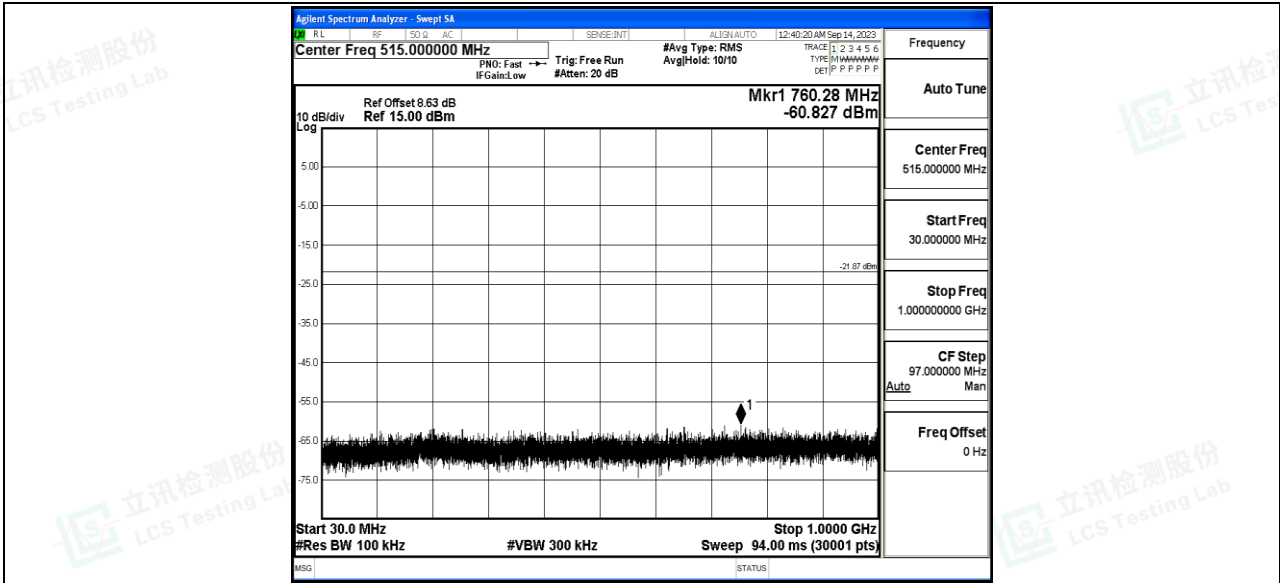


2DH5_Ant1_2480_0~Reference

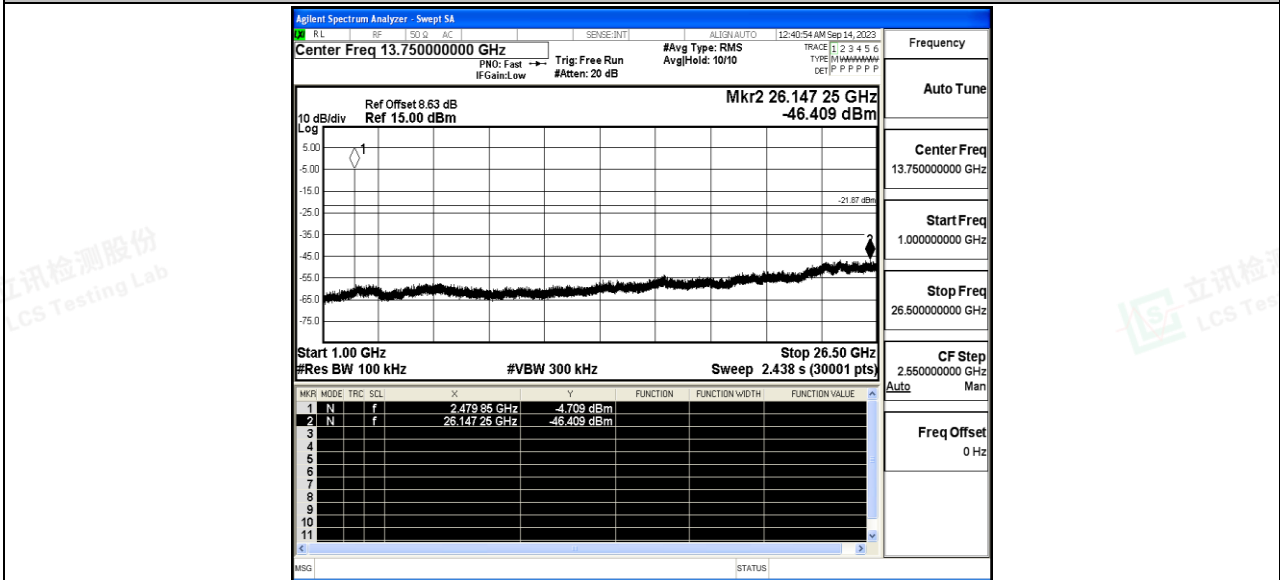


2DH5_Ant1_2480_30~1000



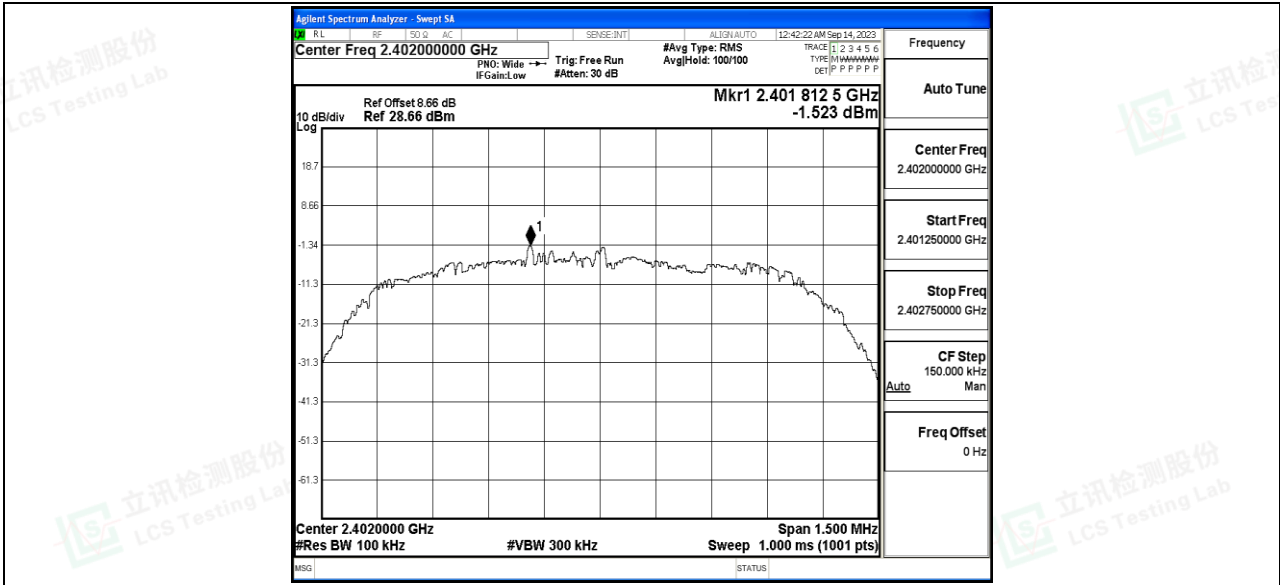


2DH5_Ant1_2480_1000~26500

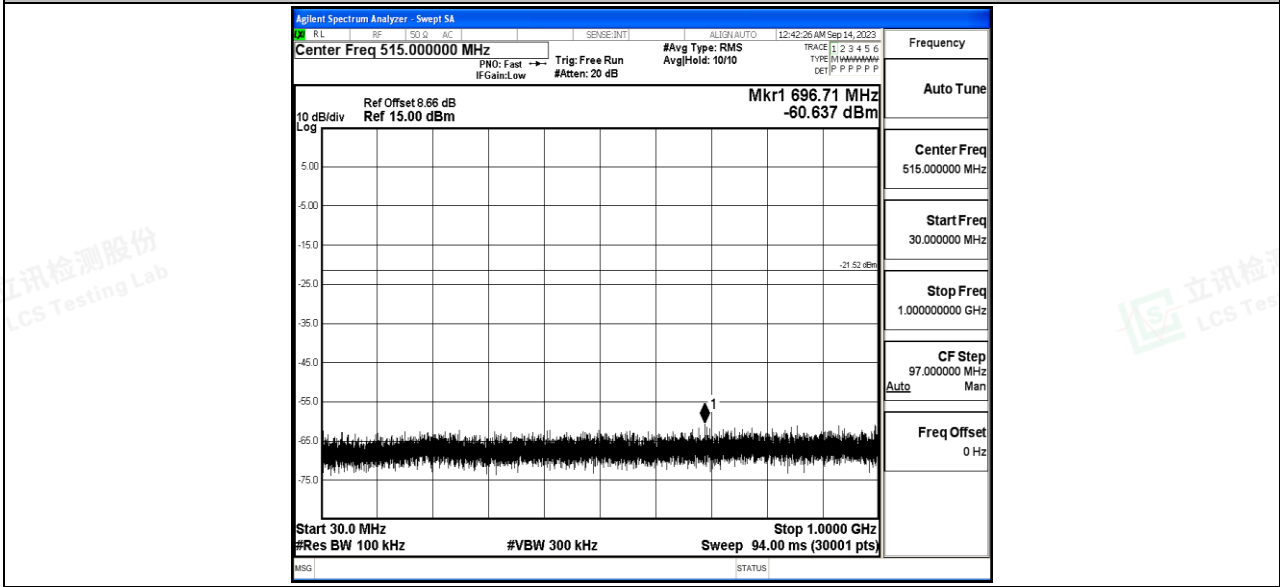


3DH5_Ant1_2402_0~Reference



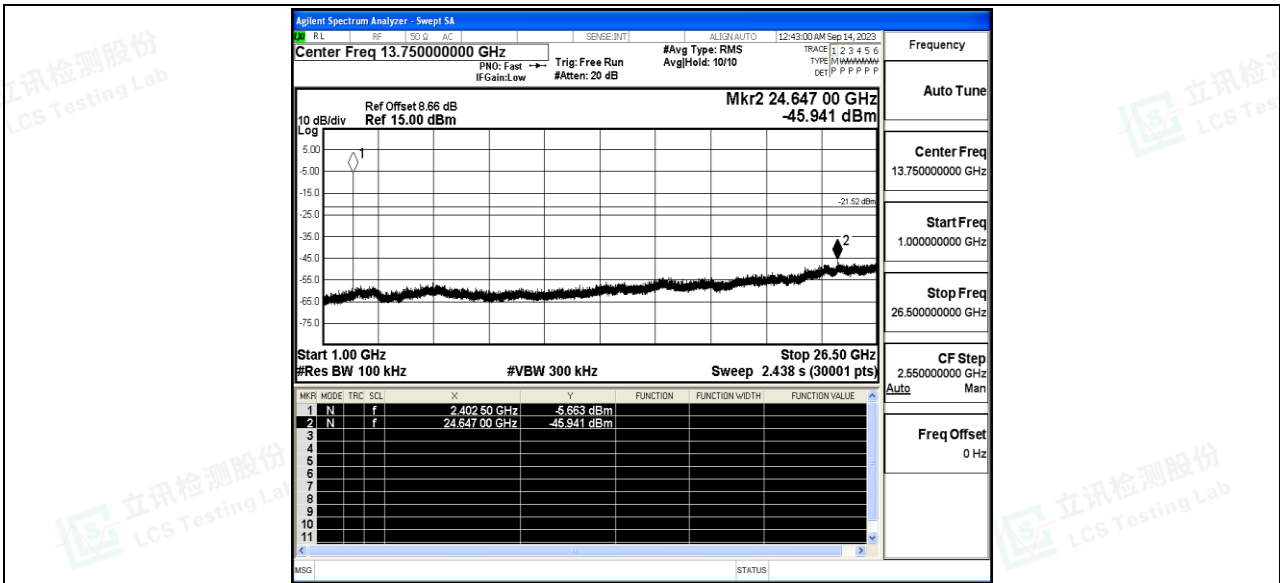


3DH5_Ant1_2402_30~1000

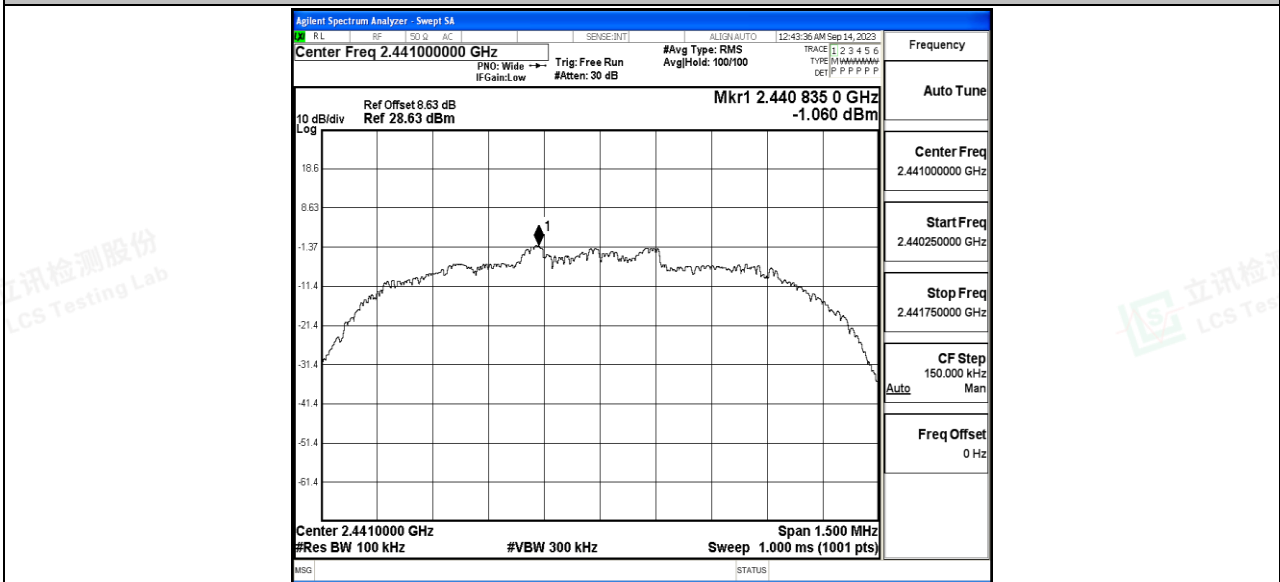


3DH5_Ant1_2402_1000~26500



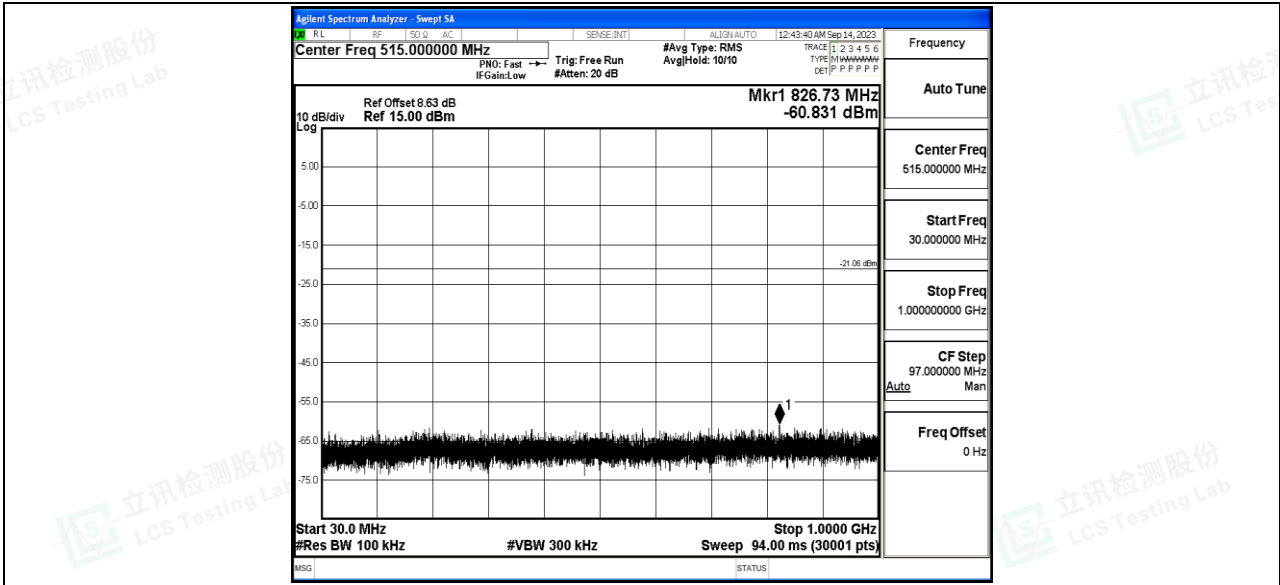


3DH5_Ant1_2441_0~Reference

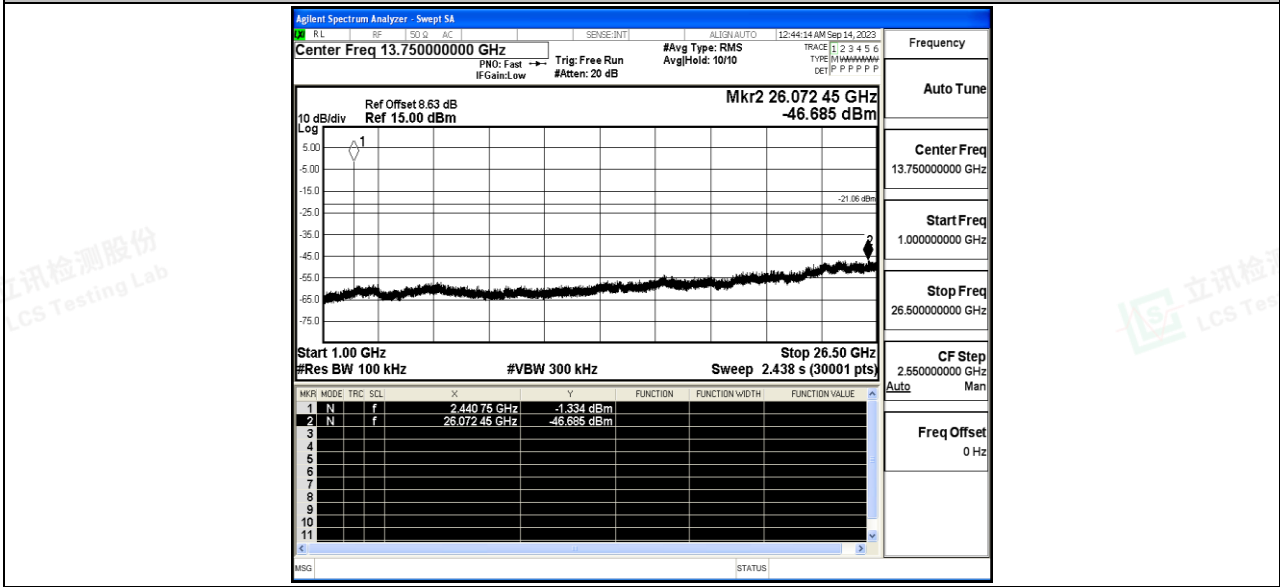


3DH5_Ant1_2441_30~1000



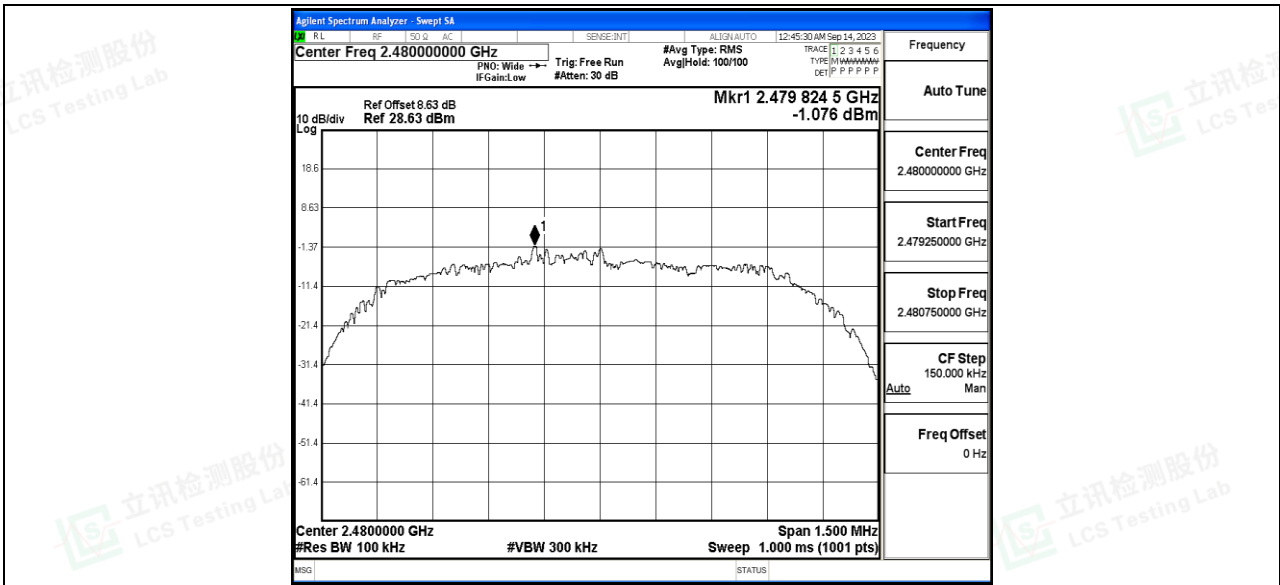


3DH5_Ant1_2441_1000~26500

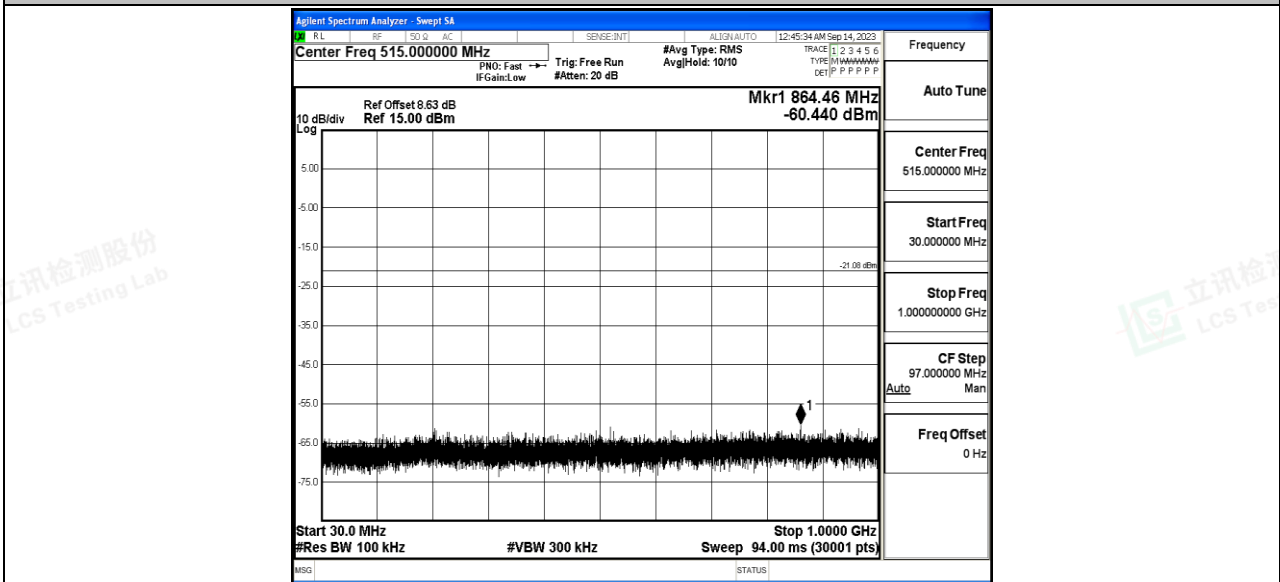


3DH5_Ant1_2480_0~Reference



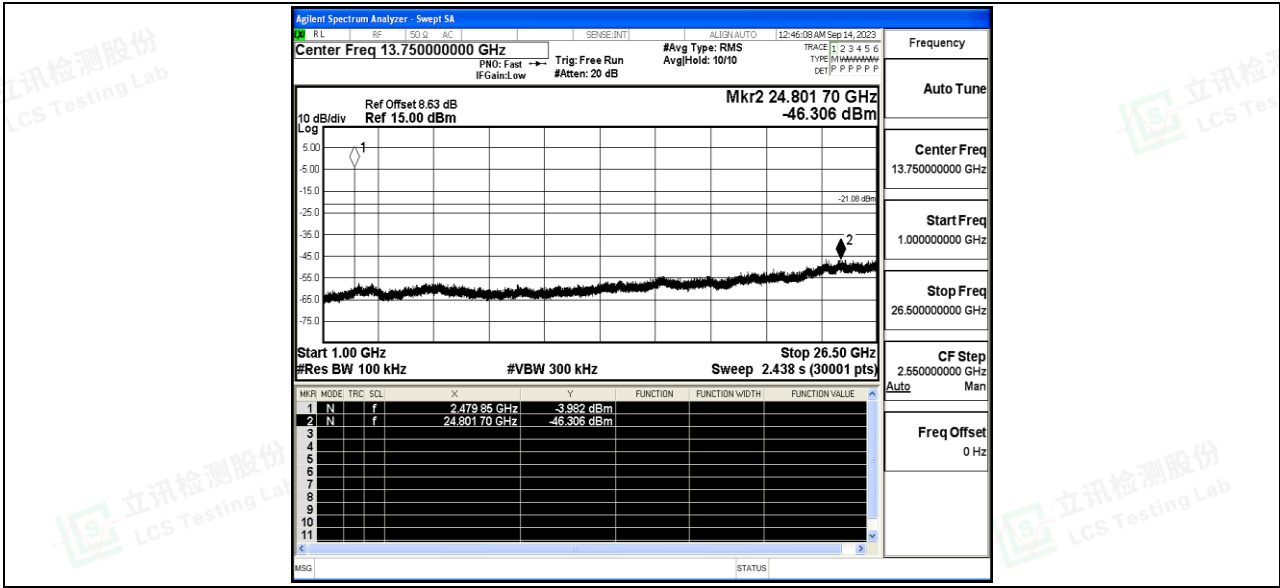


3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500







A.8 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.23	≤-41.20	46.97	≤54	PASS
				AV	2389.775	-47.53	≤-41.20	47.67	≤54	PASS
				AV	2390.000	-47.76	≤-41.20	47.44	≤54	PASS
				Peak	2310.000	-43.44	≤-21.20	51.76	≤74	PASS
				Peak	2339.270	-39.33	≤-21.20	55.87	≤74	PASS
				Peak	2390.000	-42.98	≤-21.20	52.22	≤74	PASS
		High	2480	AV	2483.500	-47.2	≤-41.20	48.00	≤54	PASS
				AV	2498.160	-47.06	≤-41.20	48.14	≤54	PASS
				AV	2500.000	-47.26	≤-41.20	47.94	≤54	PASS
				Peak	2483.500	-40.97	≤-21.20	54.23	≤74	PASS
				Peak	2484.720	-38.78	≤-21.20	56.42	≤74	PASS
				Peak	2500.000	-40.39	≤-21.20	54.81	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-39.82	≤-21.20	55.38	≤74	PASS
				Peak	2332.025	-37.72	≤-21.20	57.48	≤74	PASS
				Peak	2390.000	-40.45	≤-21.20	54.75	≤74	PASS
		High	Hop_2480	Peak	2483.500	-38.29	≤-21.20	56.91	≤74	PASS
				Peak	2492.000	-36.96	≤-21.20	58.24	≤74	PASS
				Peak	2500.000	-39.01	≤-21.20	56.19	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.09	≤-41.20	47.11	≤54	PASS
				AV	2387.150	-47.64	≤-41.20	47.56	≤54	PASS
				AV	2390.000	-47.82	≤-41.20	47.38	≤54	PASS
				Peak	2310.000	-43.52	≤-21.20	51.68	≤74	PASS
				Peak	2384.105	-38.02	≤-21.20	57.18	≤74	PASS
				Peak	2390.000	-44.52	≤-21.20	50.68	≤74	PASS
		High	2480	AV	2483.500	-47.21	≤-41.20	47.99	≤54	PASS
				AV	2499.600	-47.07	≤-41.20	48.13	≤54	PASS
				AV	2500.000	-47.29	≤-41.20	47.91	≤54	PASS
				Peak	2483.500	-40.21	≤-21.20	54.99	≤74	PASS
				Peak	2491.280	-37.25	≤-21.20	57.95	≤74	PASS
				Peak	2500.000	-41.3	≤-21.20	53.90	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.27	≤-21.20	54.93	≤74	PASS
				Peak	2359.745	-37.54	≤-21.20	57.66	≤74	PASS
				Peak	2390.000	-40.05	≤-21.20	55.15	≤74	PASS
		High	Hop_2480	Peak	2483.500	-39.4	≤-21.20	55.80	≤74	PASS
				Peak	2494.400	-36.8	≤-21.20	58.40	≤74	PASS
				Peak	2500.000	-38.58	≤-21.20	56.62	≤74	PASS





3DH5	Ant1	Low	2402	AV	2310.000	-48.17	≤-41.20	47.03	≤54	PASS
				AV	2385.365	-47.61	≤-41.20	47.59	≤54	PASS
				AV	2390.000	-47.78	≤-41.20	47.42	≤54	PASS
				Peak	2310.000	-43.65	≤-21.20	51.55	≤74	PASS
				Peak	2322.050	-38.35	≤-21.20	56.85	≤74	PASS
				Peak	2390.000	-39.83	≤-21.20	55.37	≤74	PASS
		High	2480	AV	2483.500	-47.11	≤-41.20	48.09	≤54	PASS
				AV	2497.680	-47.07	≤-41.20	48.13	≤54	PASS
				AV	2500.000	-47.21	≤-41.20	47.99	≤54	PASS
				Peak	2483.500	-41.62	≤-21.20	53.58	≤74	PASS
				Peak	2484.560	-37.77	≤-21.20	57.43	≤74	PASS
				Peak	2500.000	-39.48	≤-21.20	55.72	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-40.19	≤-21.20	55.01	≤74	PASS
				Peak	2369.090	-37.09	≤-21.20	58.11	≤74	PASS
				Peak	2390.000	-40.24	≤-21.20	54.96	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-39.26	≤-21.20	55.94	≤74	PASS
				Peak	2489.760	-36.83	≤-21.20	58.37	≤74	PASS
				Peak	2500.000	-37.72	≤-21.20	57.48	≤74	PASS

Note:

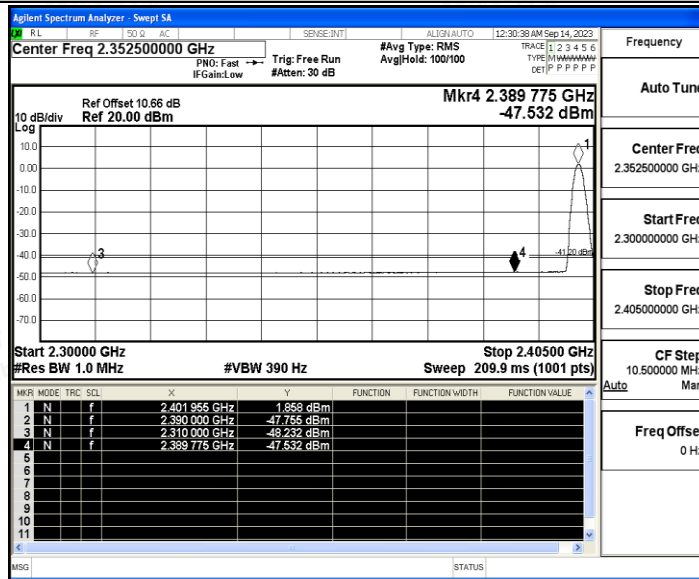
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



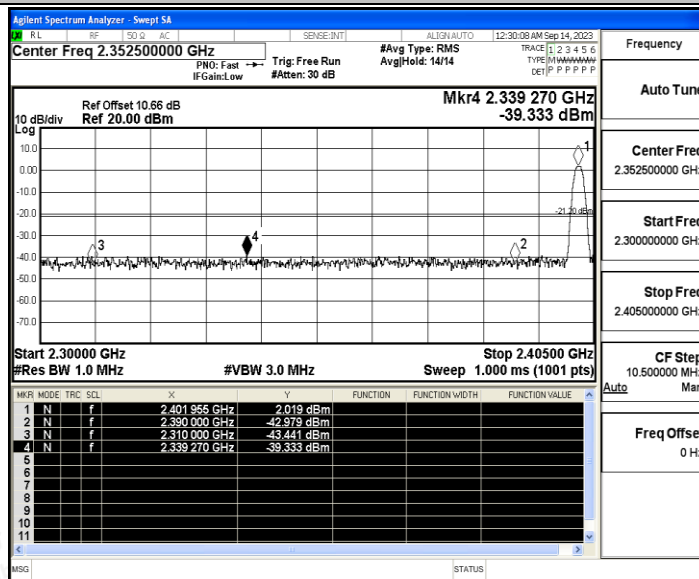


Test Graphs

DH5_Ant1_Low_2402_AV

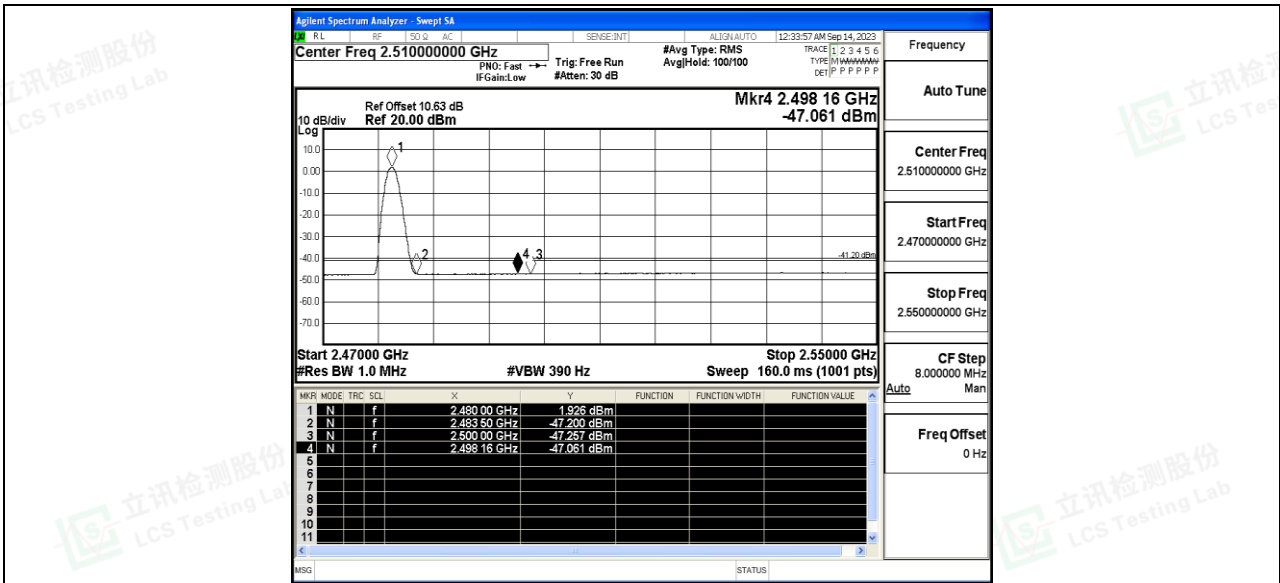


DH5_Ant1_Low_2402_Peak

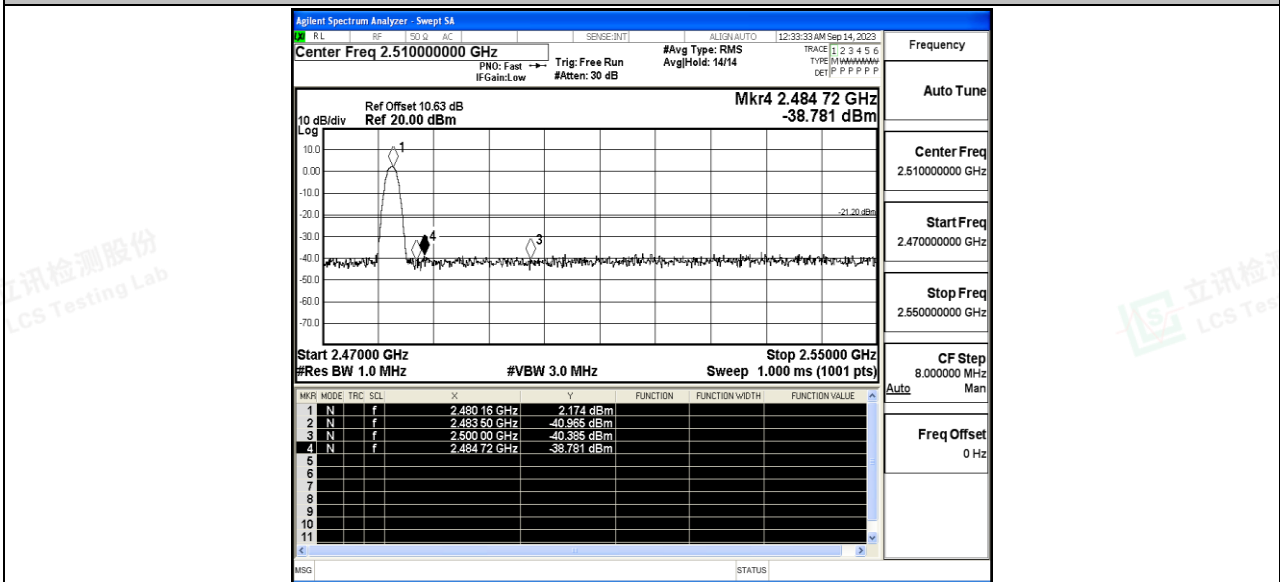


DH5_Ant1_High_2480_AV



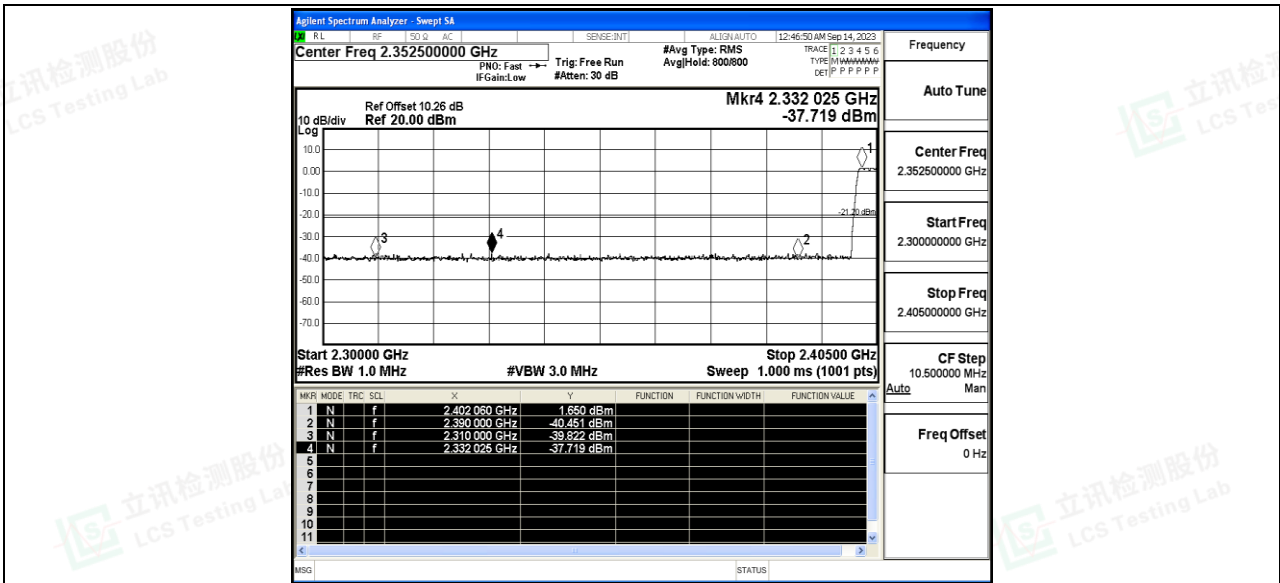


DH5_Ant1_High_2480_Peak

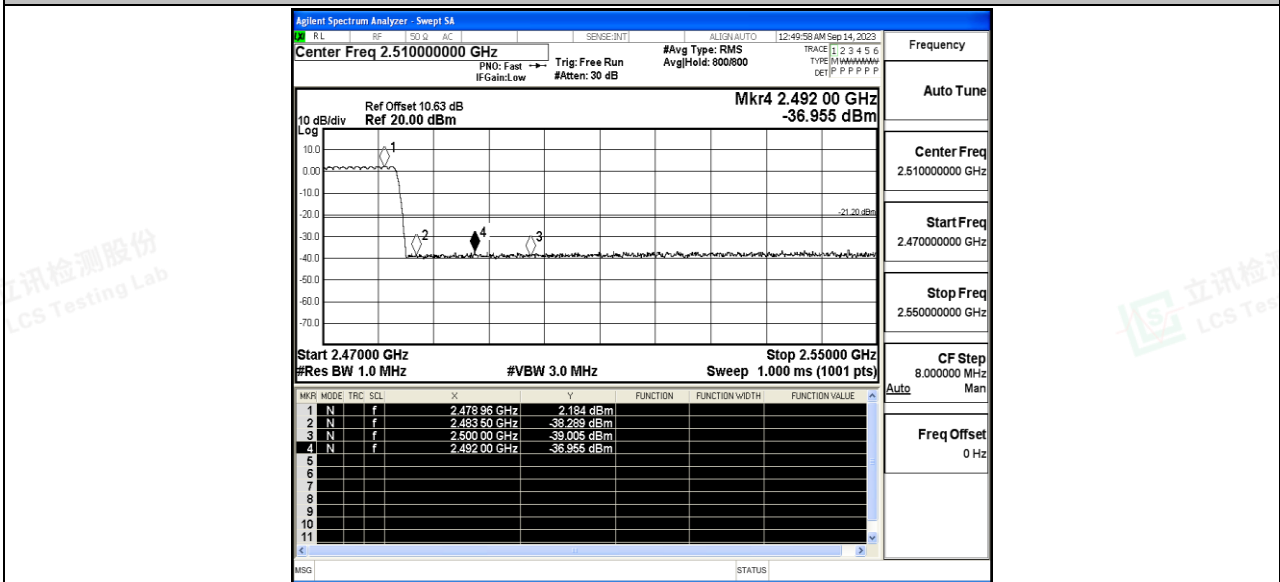


DH5_Ant1_Low_Hop_2402_Peak



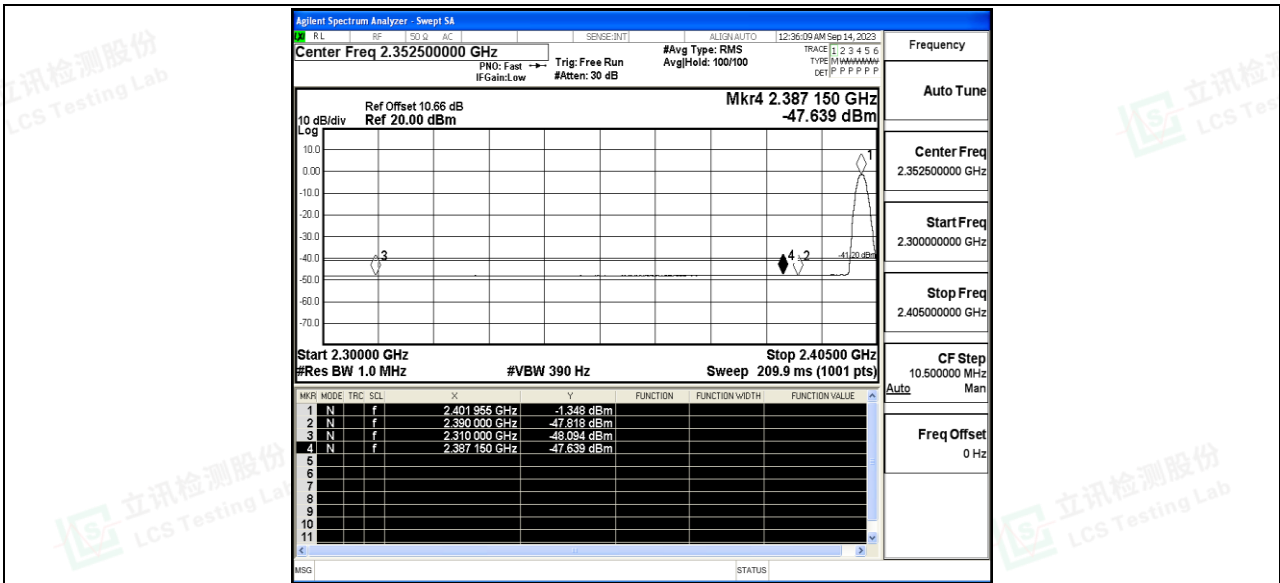


DH5_Ant1_High_Hop_2480_Peak

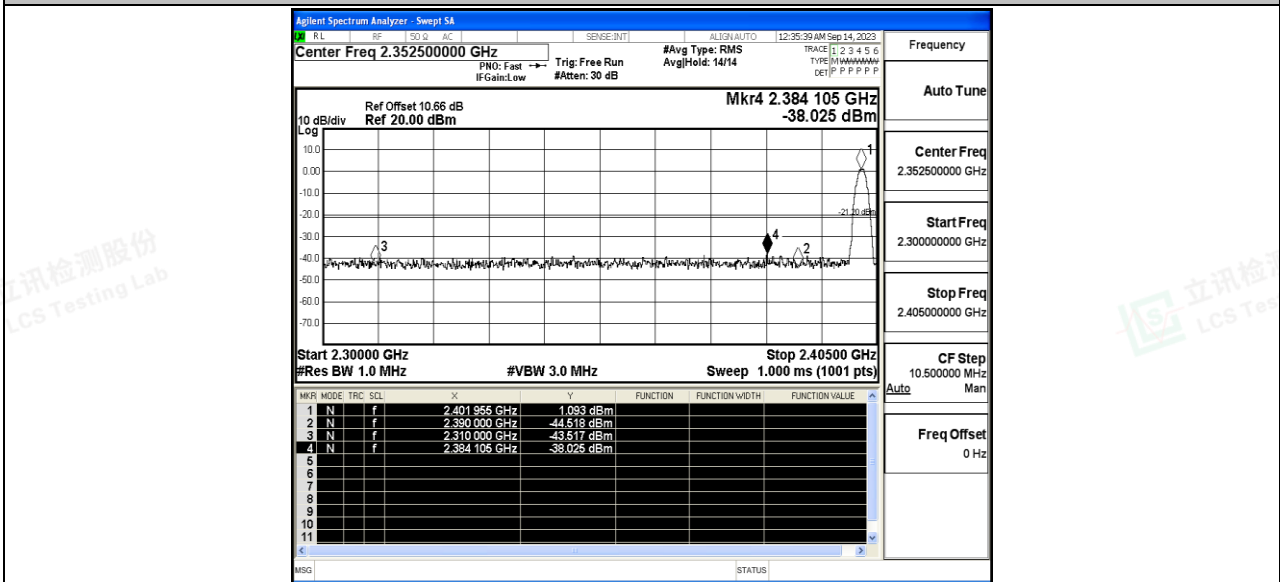


2DH5_Ant1_Low_2402_AV



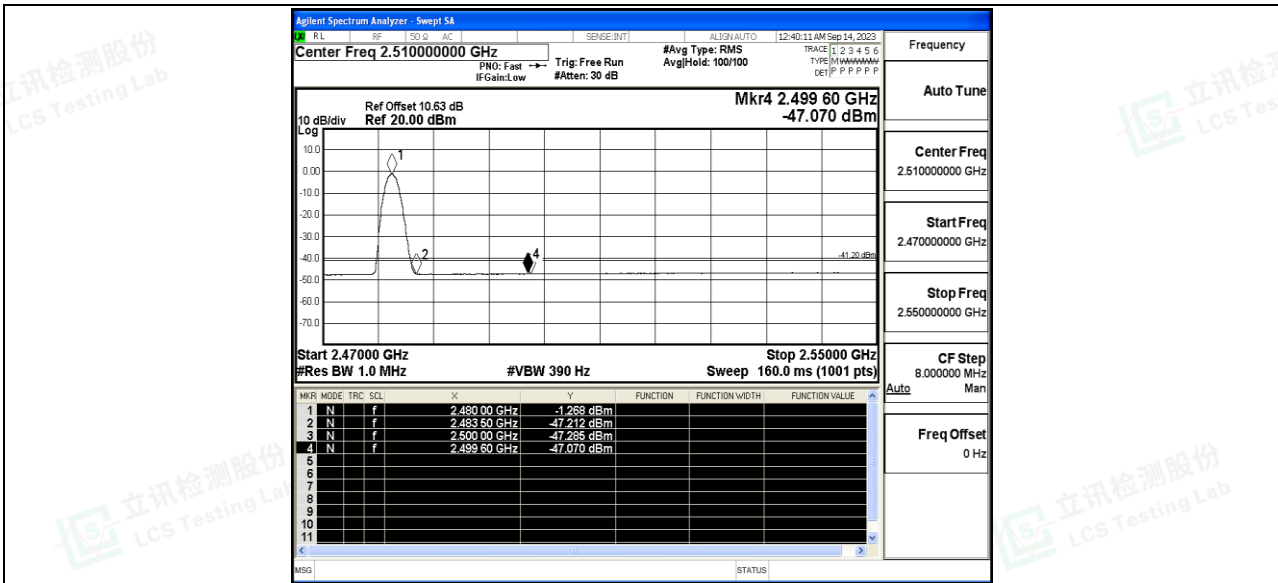


2DH5_Ant1_Low_2402_Peak

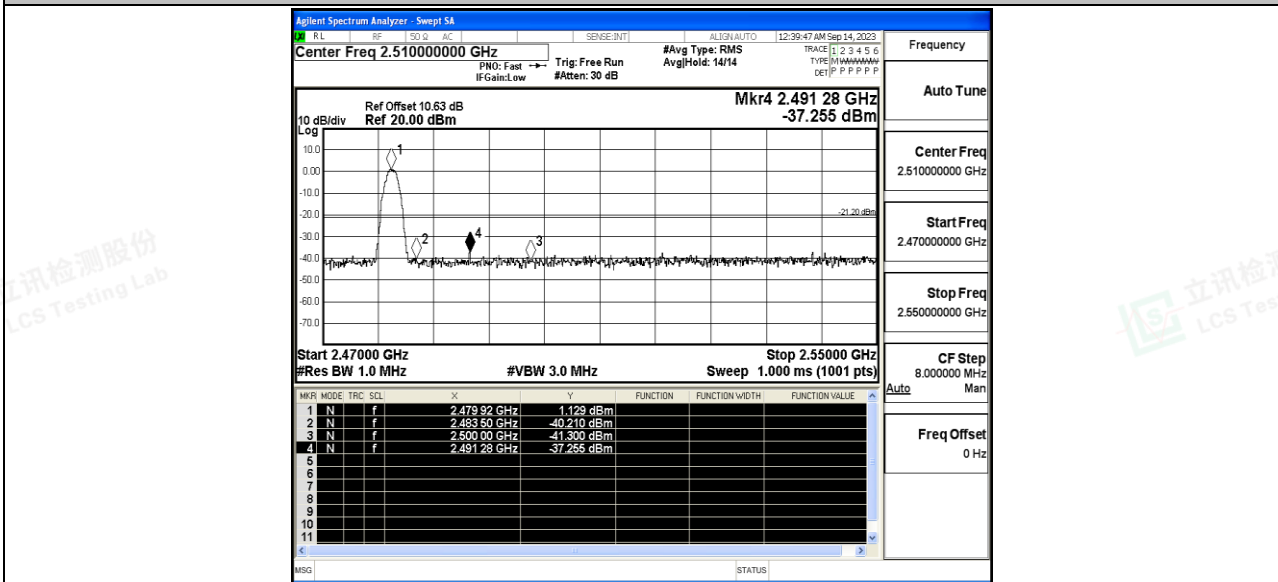


2DH5_Ant1_High_2480_AV



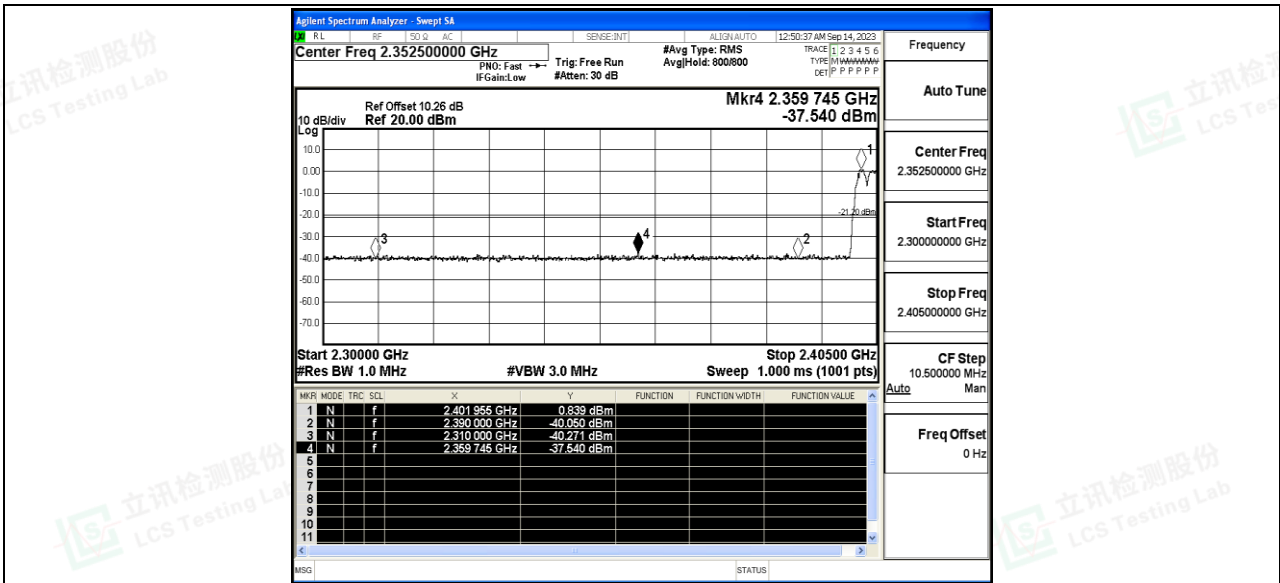


2DH5_Ant1_High_2480_Peak

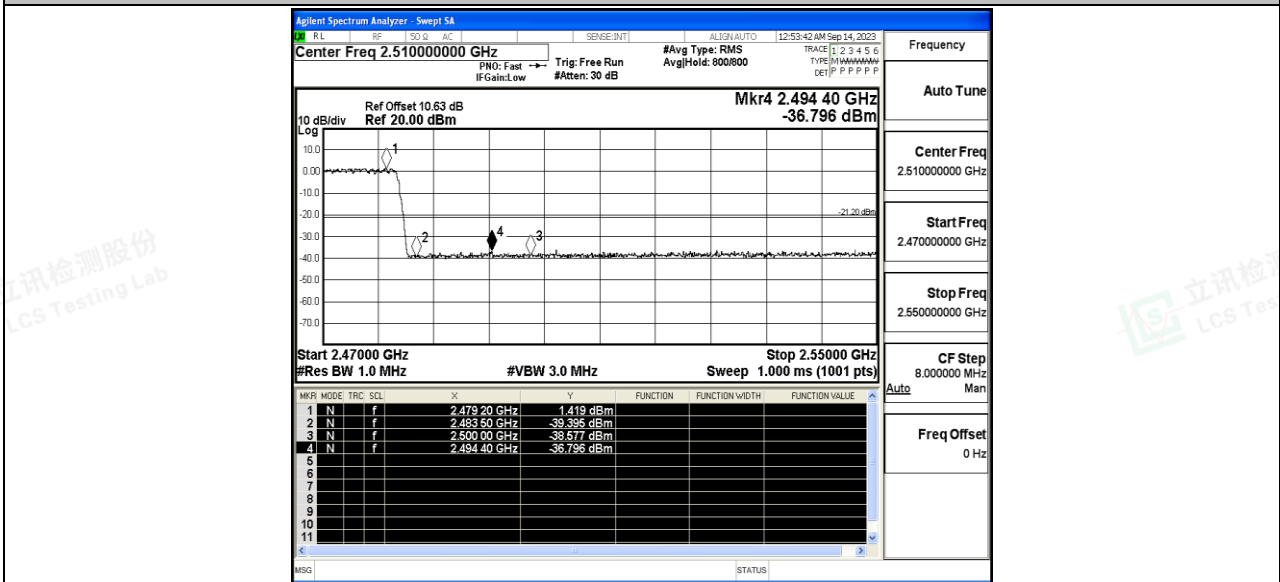


2DH5_Ant1_Low_Hop_2402_Peak



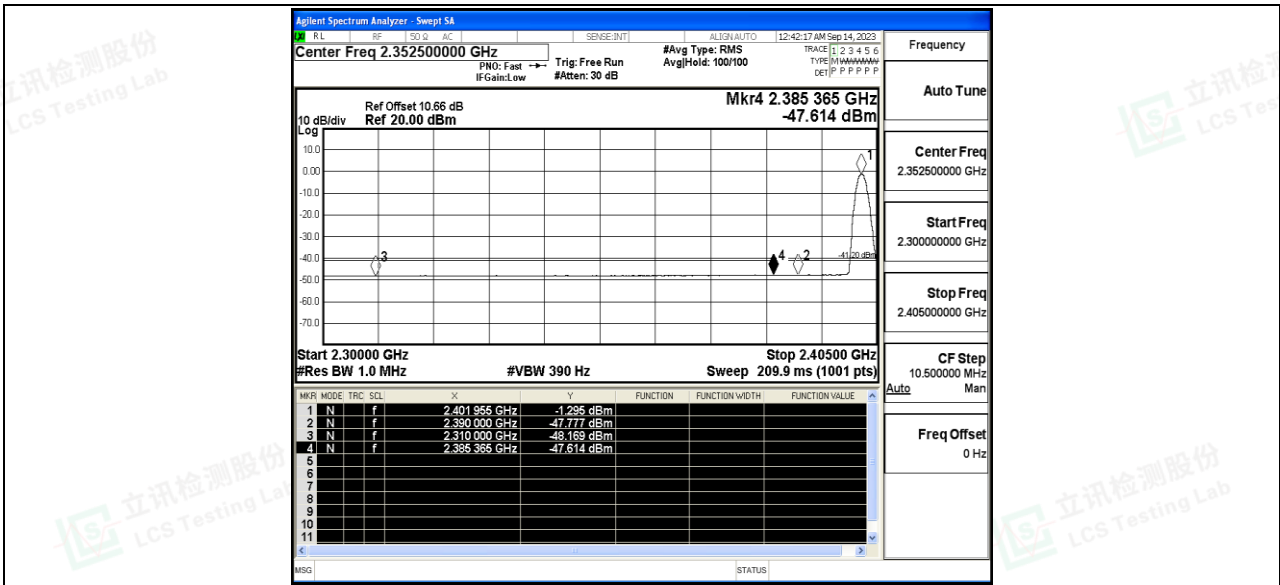


2DH5_Ant1_High_Hop_2480_Peak

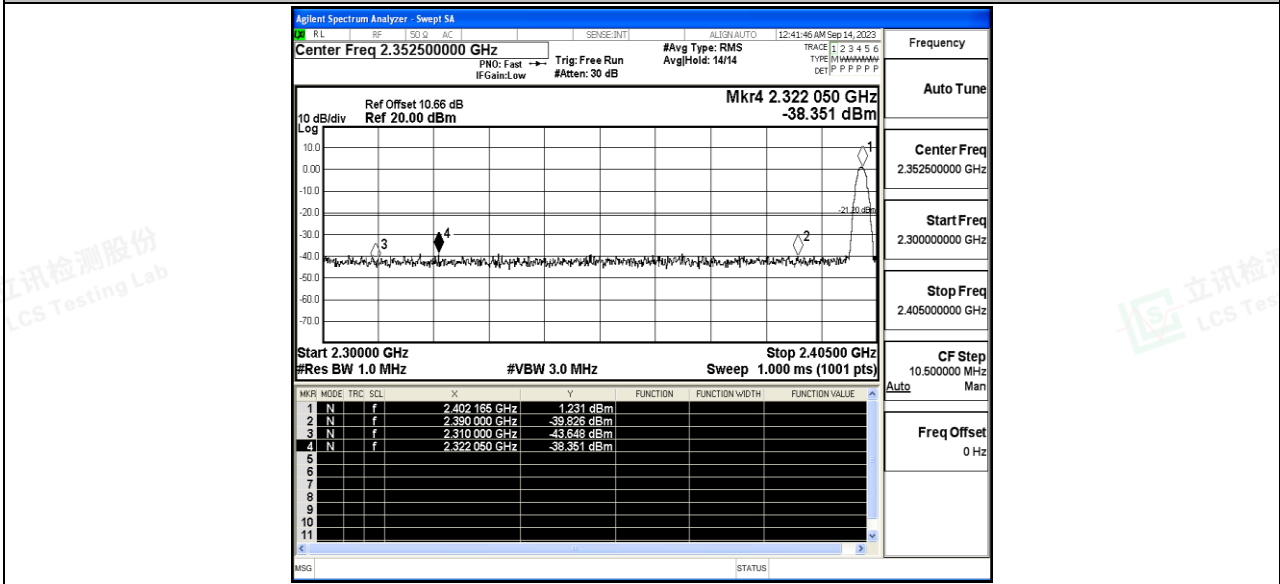


3DH5_Ant1_Low_2402_AV



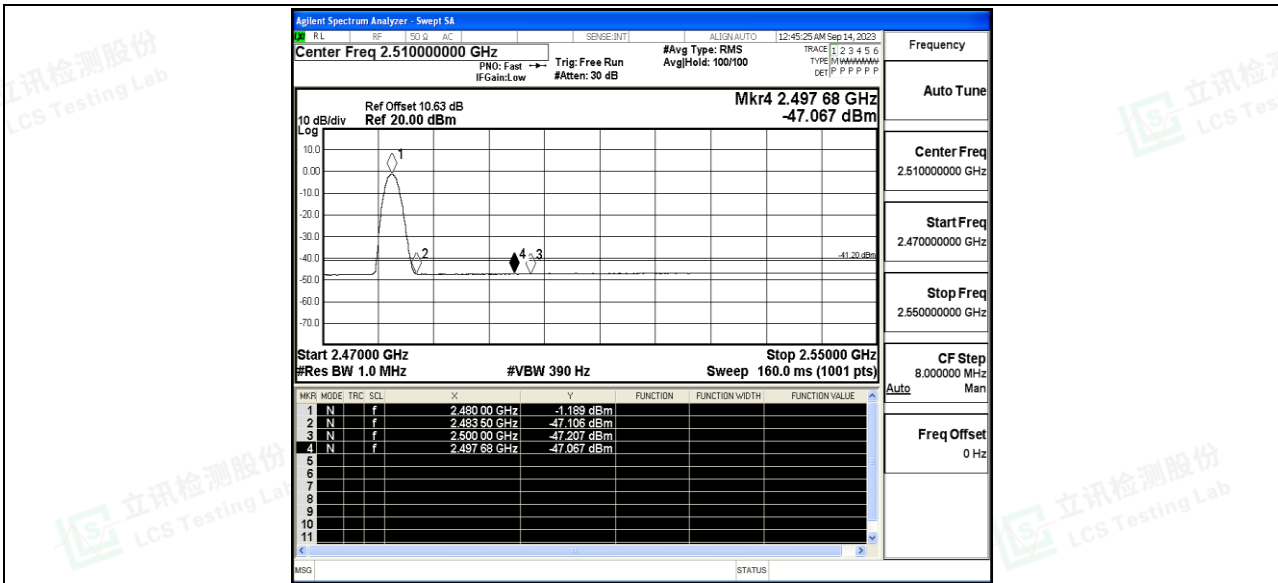


3DH5_Ant1_Low_2402_Peak

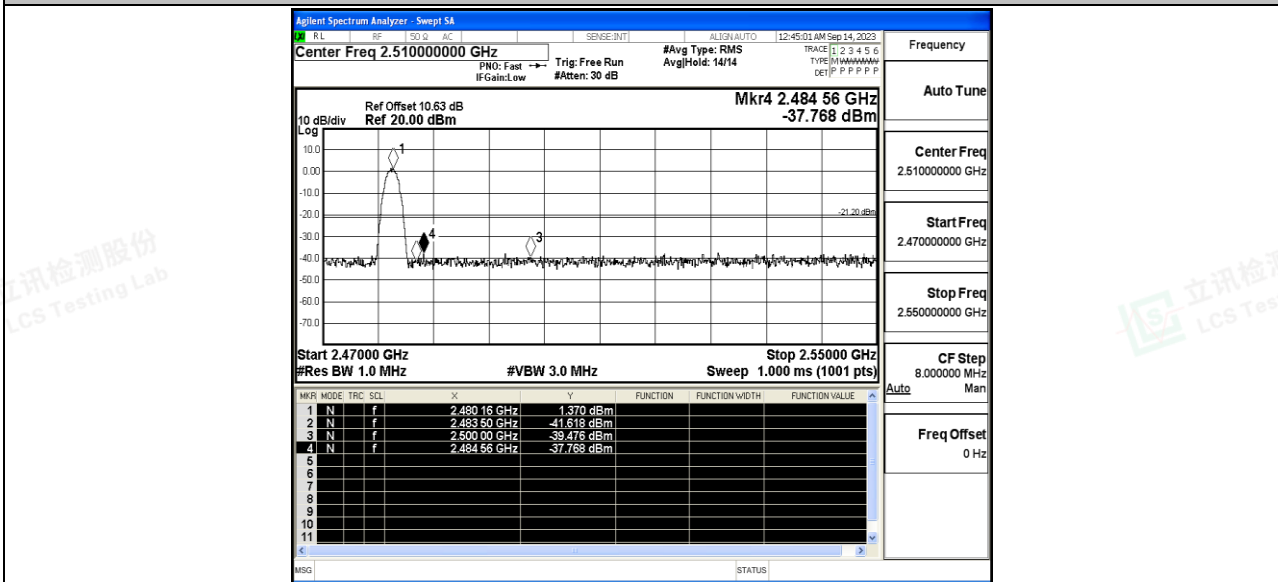


3DH5_Ant1_High_2480_AV



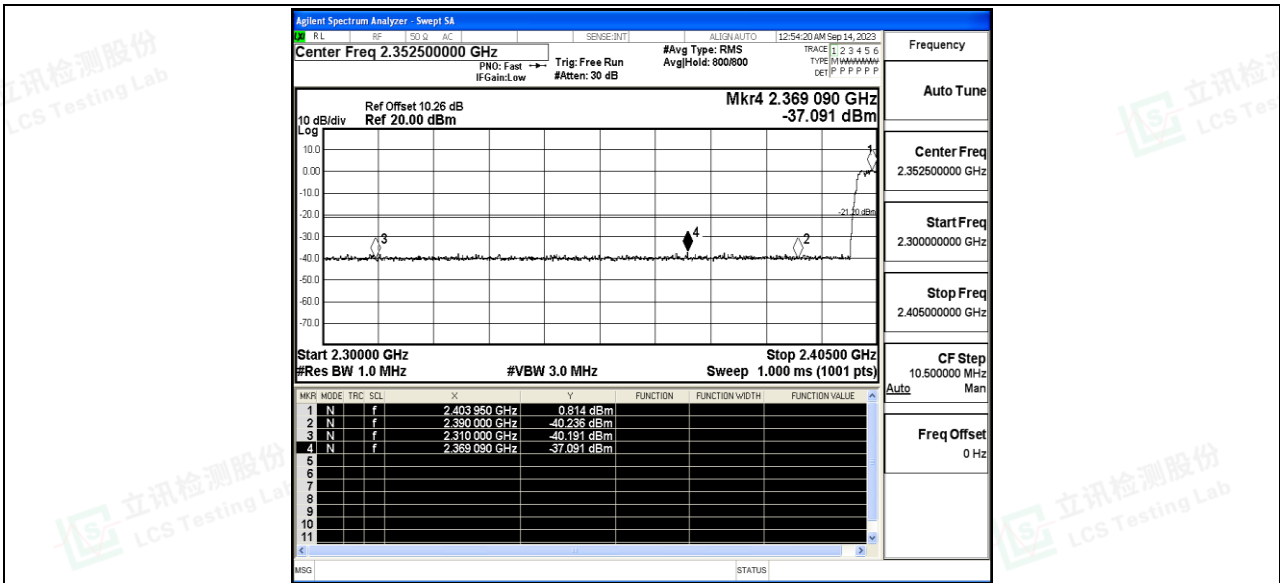


3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak





3DH5_Ant1_High_Hop_2480_Peak

