



## Appendix A

### RF Test Data for BT (Conducted Measurement)

Product Name: PROFESSIONAL SPEAKER

Test Model: MPD1241-XB

#### Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Jack Cheng





### A.1 20dB Emission Bandwidth

#### Test Result

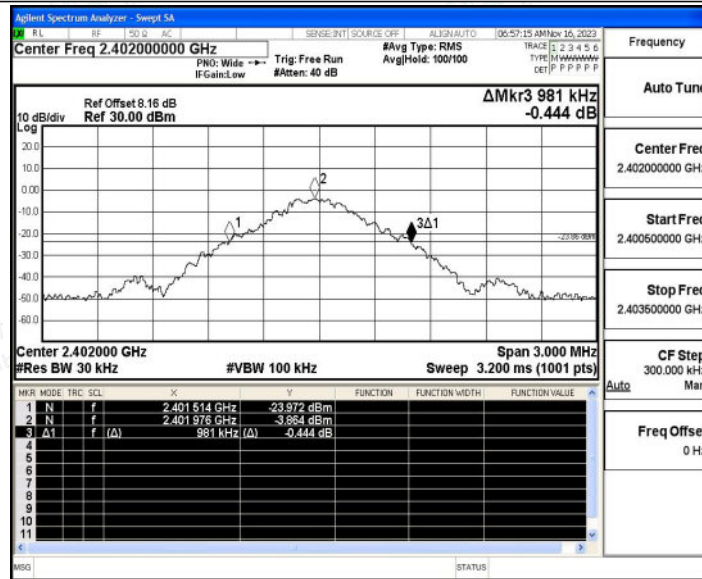
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant1	2402	0.981	2401.514	2402.495	---
		2441	1.044	2440.451	2441.495	---
		2480	1.023	2479.457	2480.480	---
2DH5	Ant1	2402	1.341	2401.316	2402.657	---
		2441	1.296	2440.349	2441.645	---
		2480	1.293	2479.349	2480.642	---



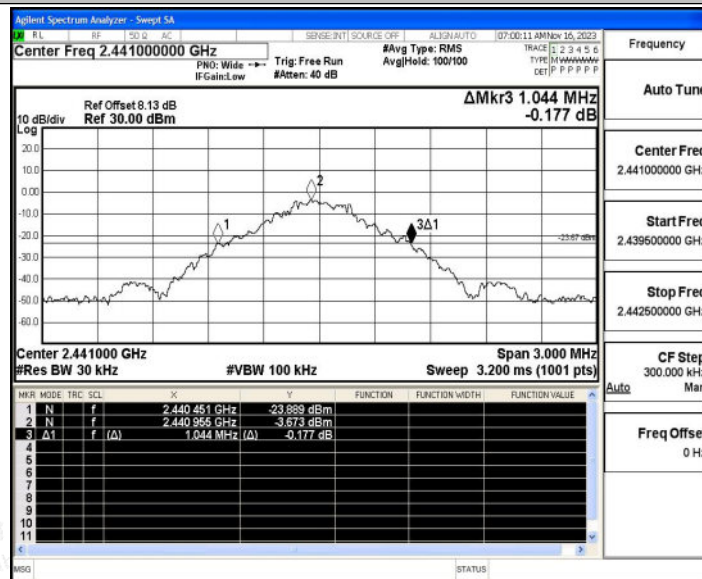


### Test Graphs

DH5\_Ant1\_2402

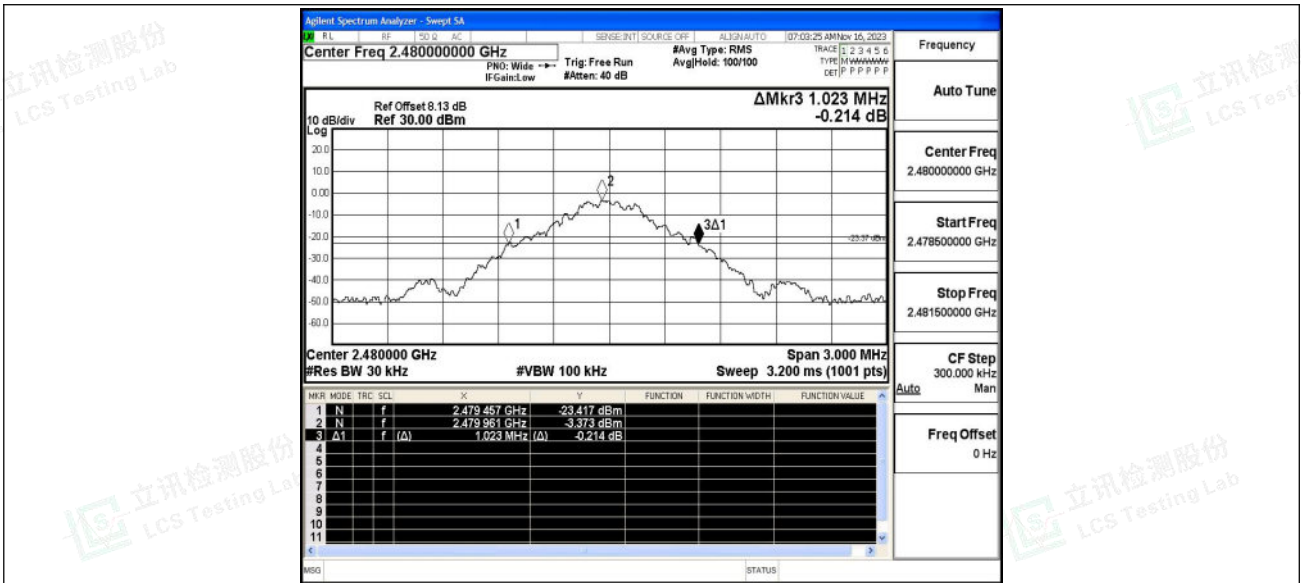


DH5\_Ant1\_2441

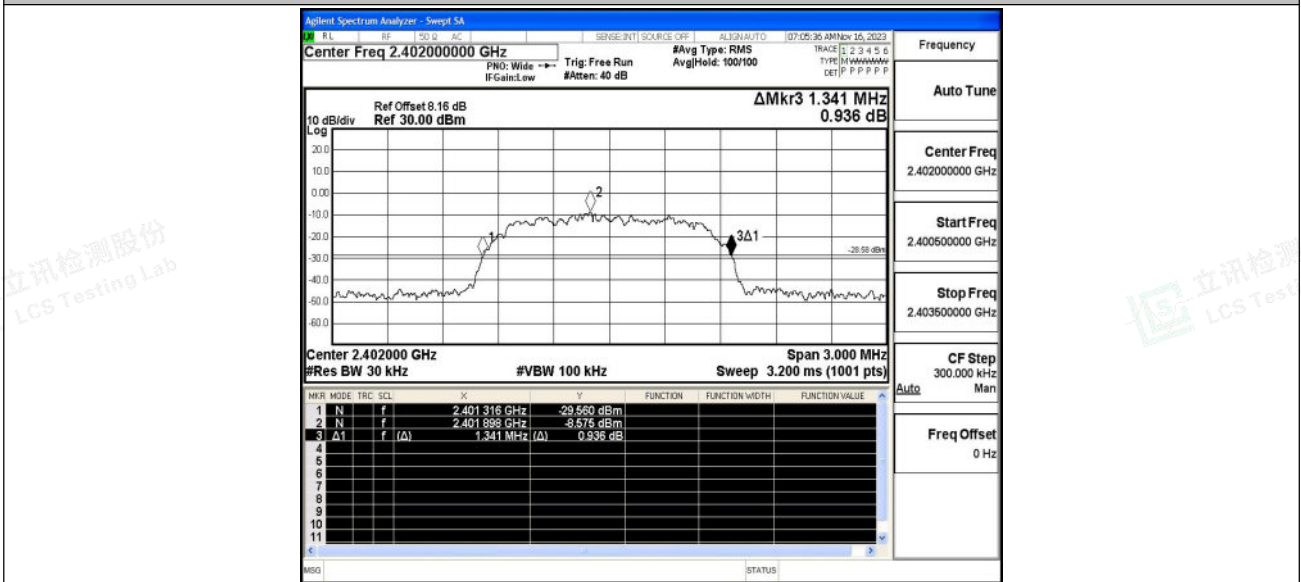


DH5\_Ant1\_2480



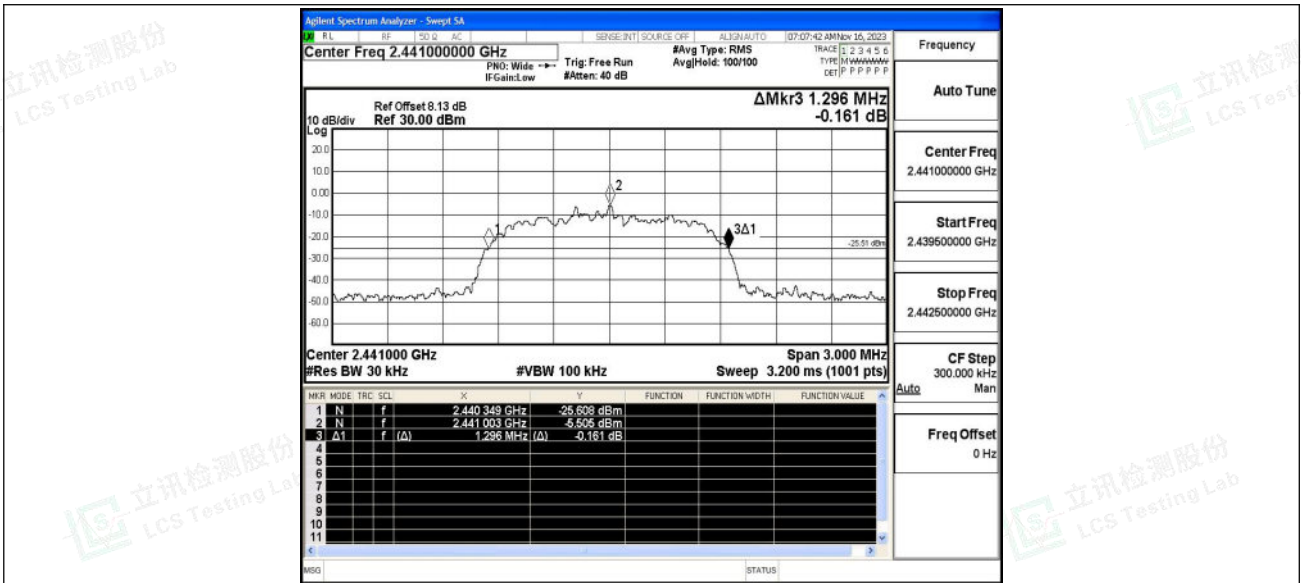


2DH5\_Ant1\_2402

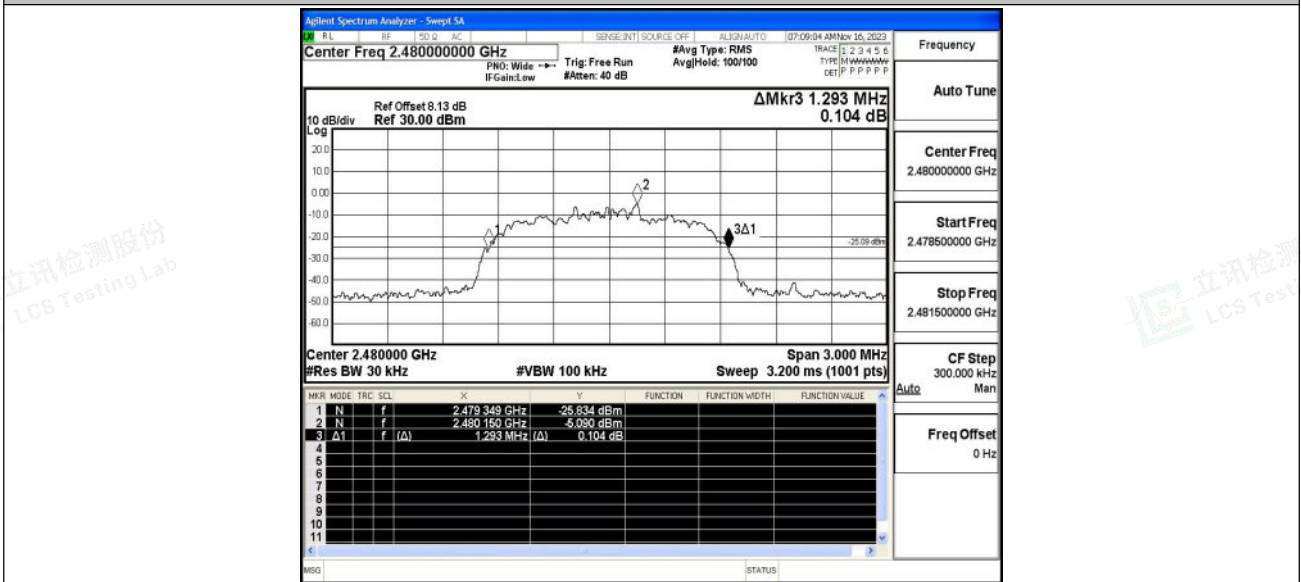


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





## A.2 Maximum conducted output power

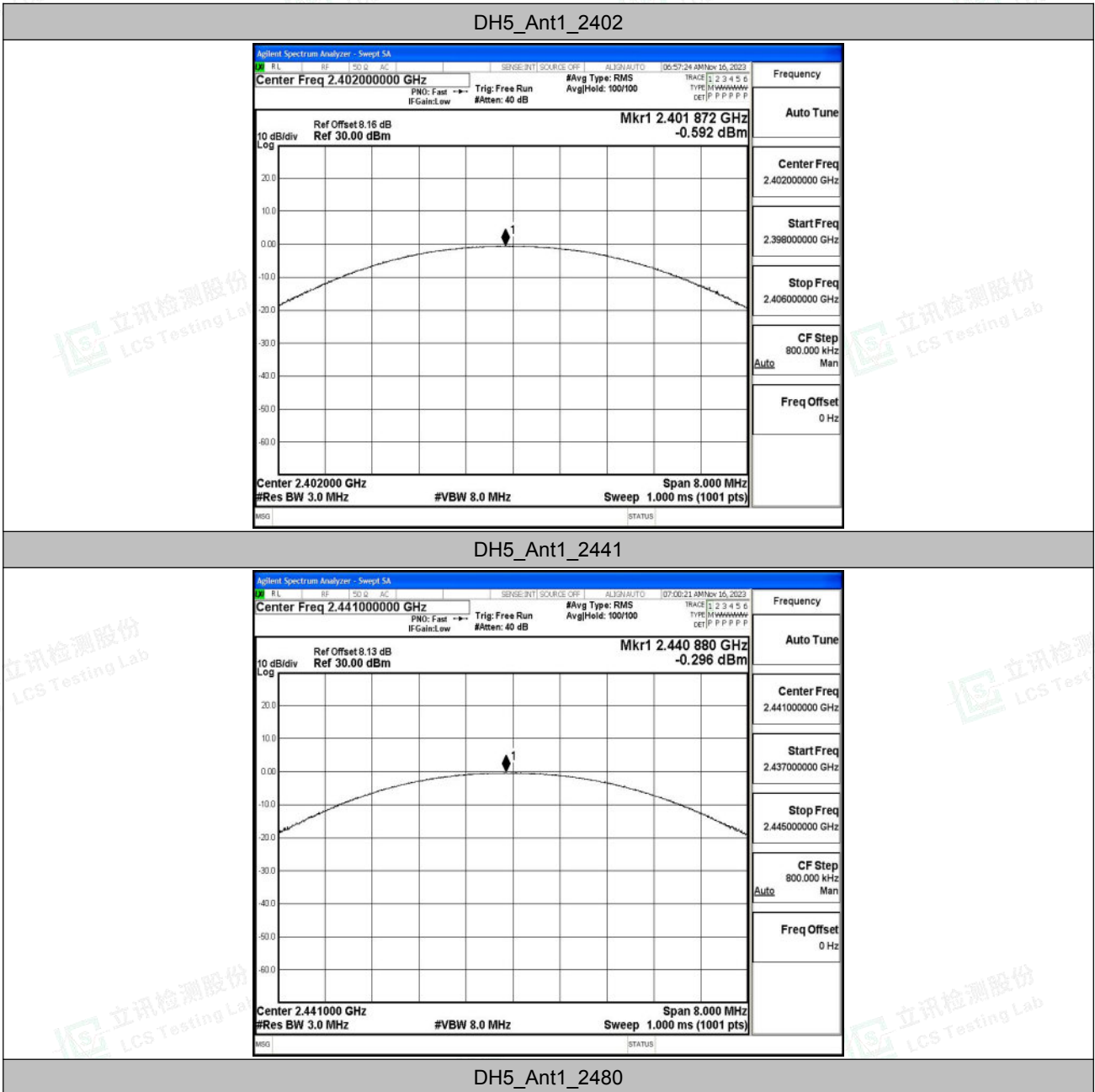
### Test Result

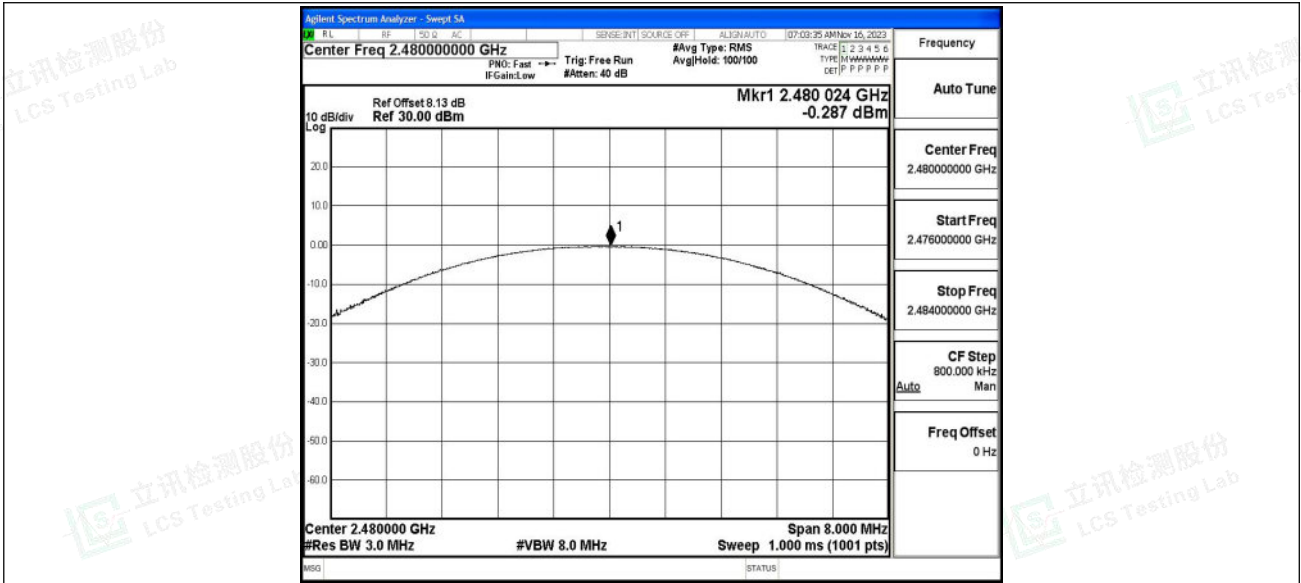
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-0.59	≤20.97	PASS
		2441	-0.3	≤20.97	PASS
		2480	-0.29	≤20.97	PASS
2DH5	Ant1	2402	-0.82	≤20.97	PASS
		2441	-0.69	≤20.97	PASS
		2480	-0.62	≤20.97	PASS



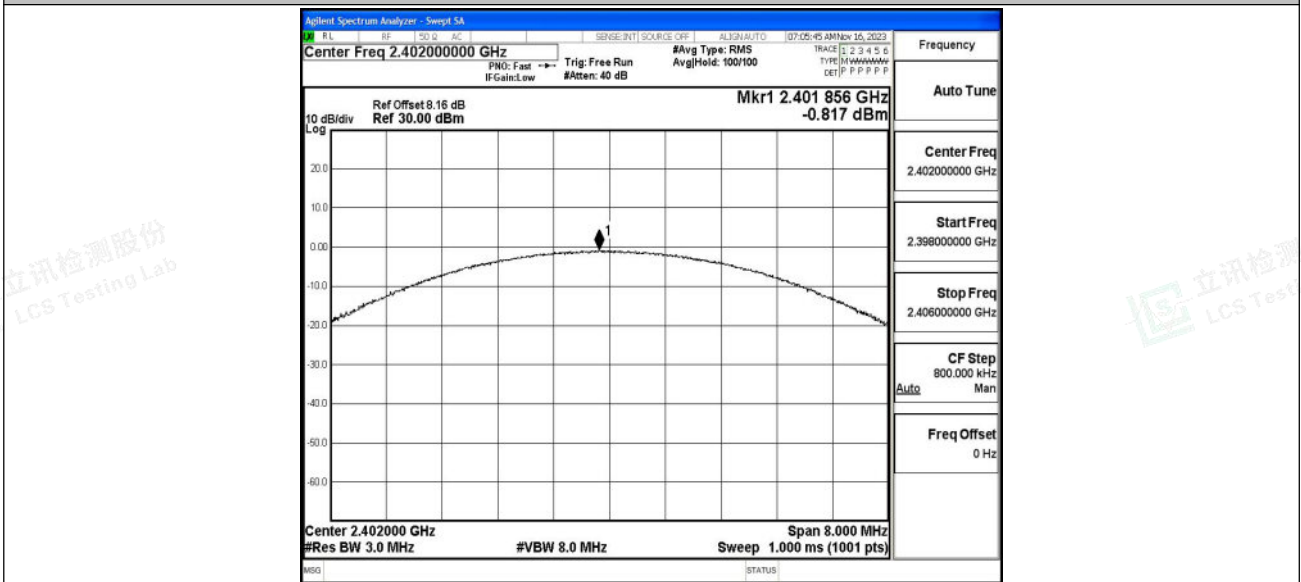


### Test Graphs





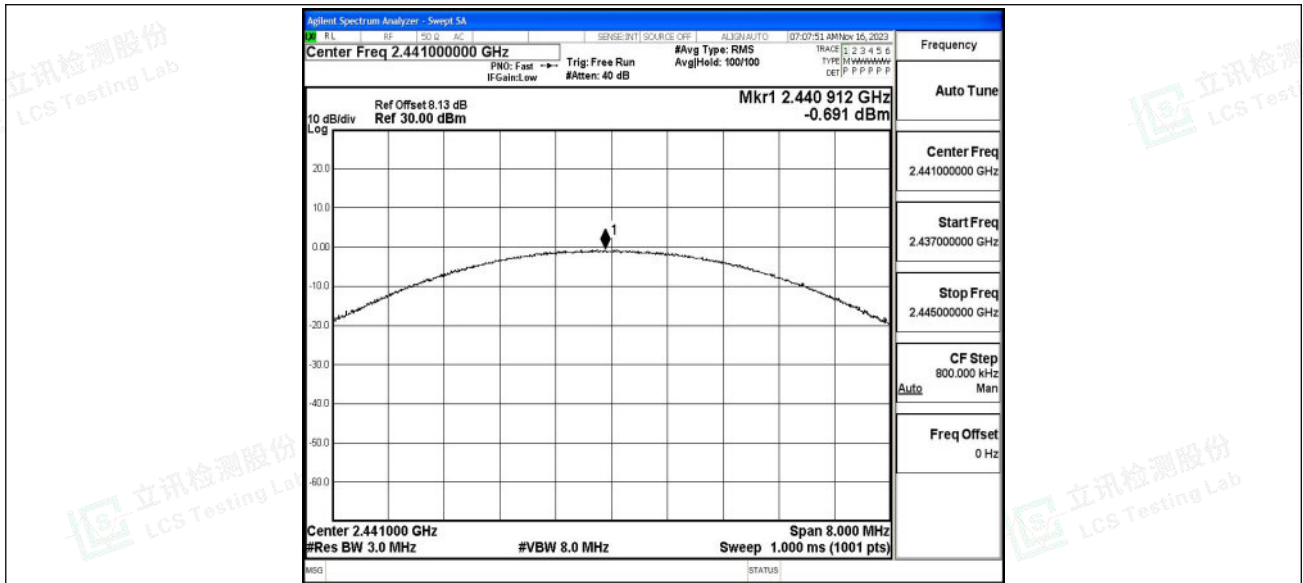
2DH5\_Ant1\_2402



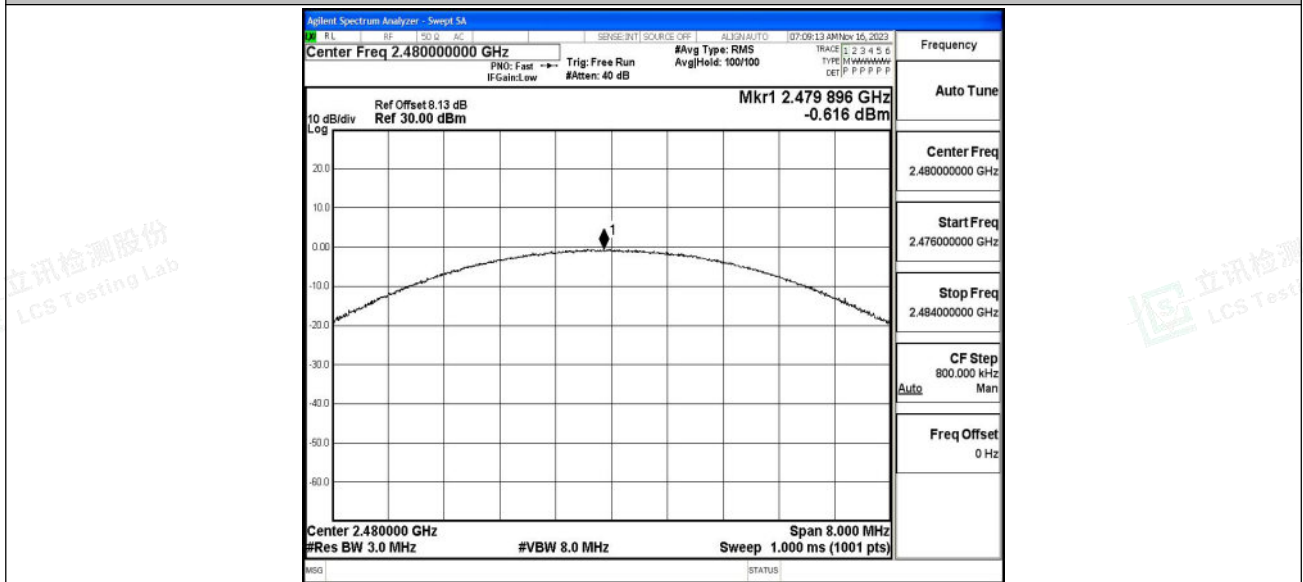
2DH5\_Ant1\_2441







2DH5\_Ant1\_2480





### A.3 Carrier frequency separation

#### Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.14	≥0.696	PASS
2DH5	Ant1	Hop	1.14	≥0.894	PASS





### Test Graphs





## A.4 Time of occupancy

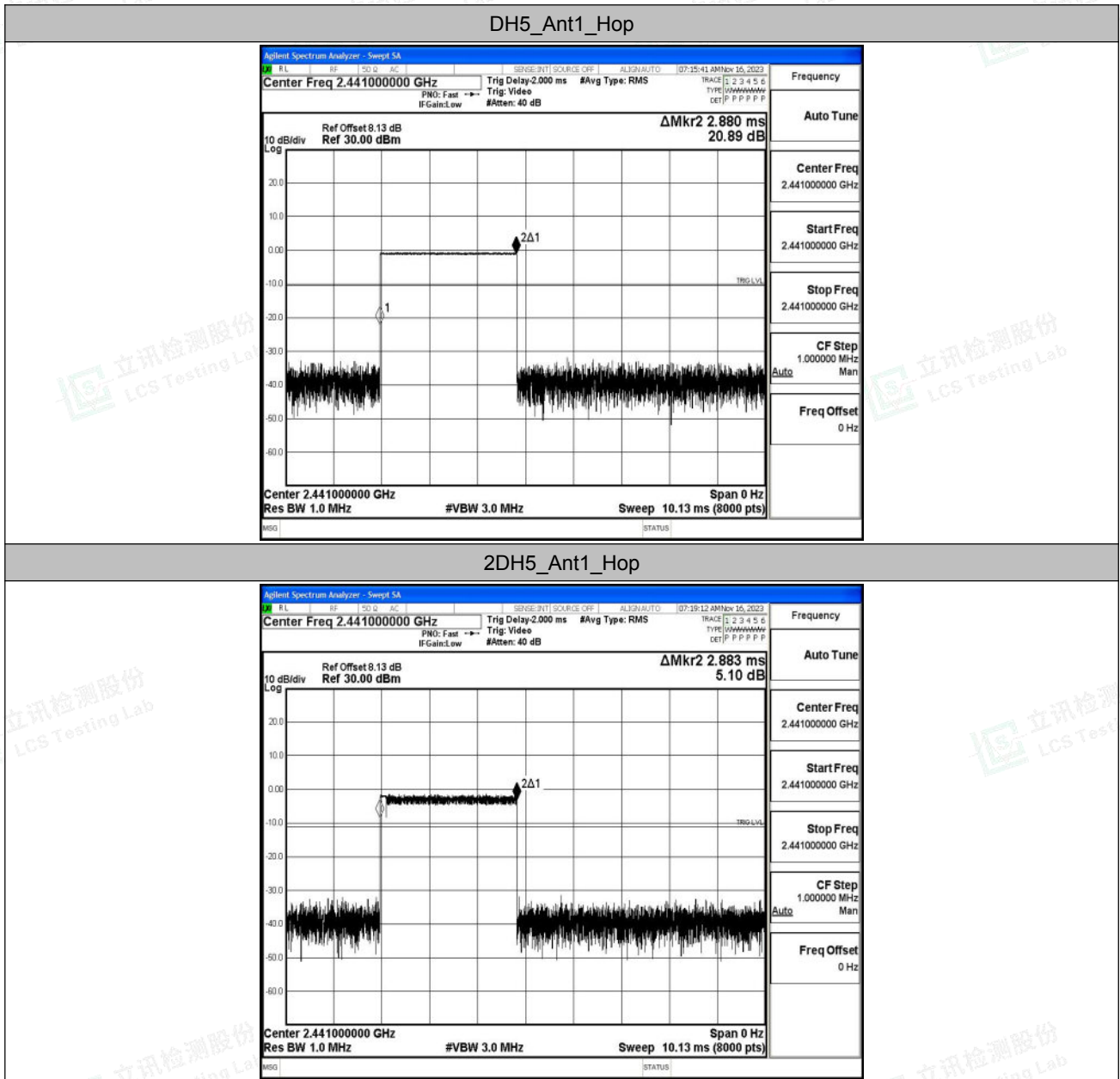
### Test Result

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





### Test Graphs





## A.5 Number of hopping channels

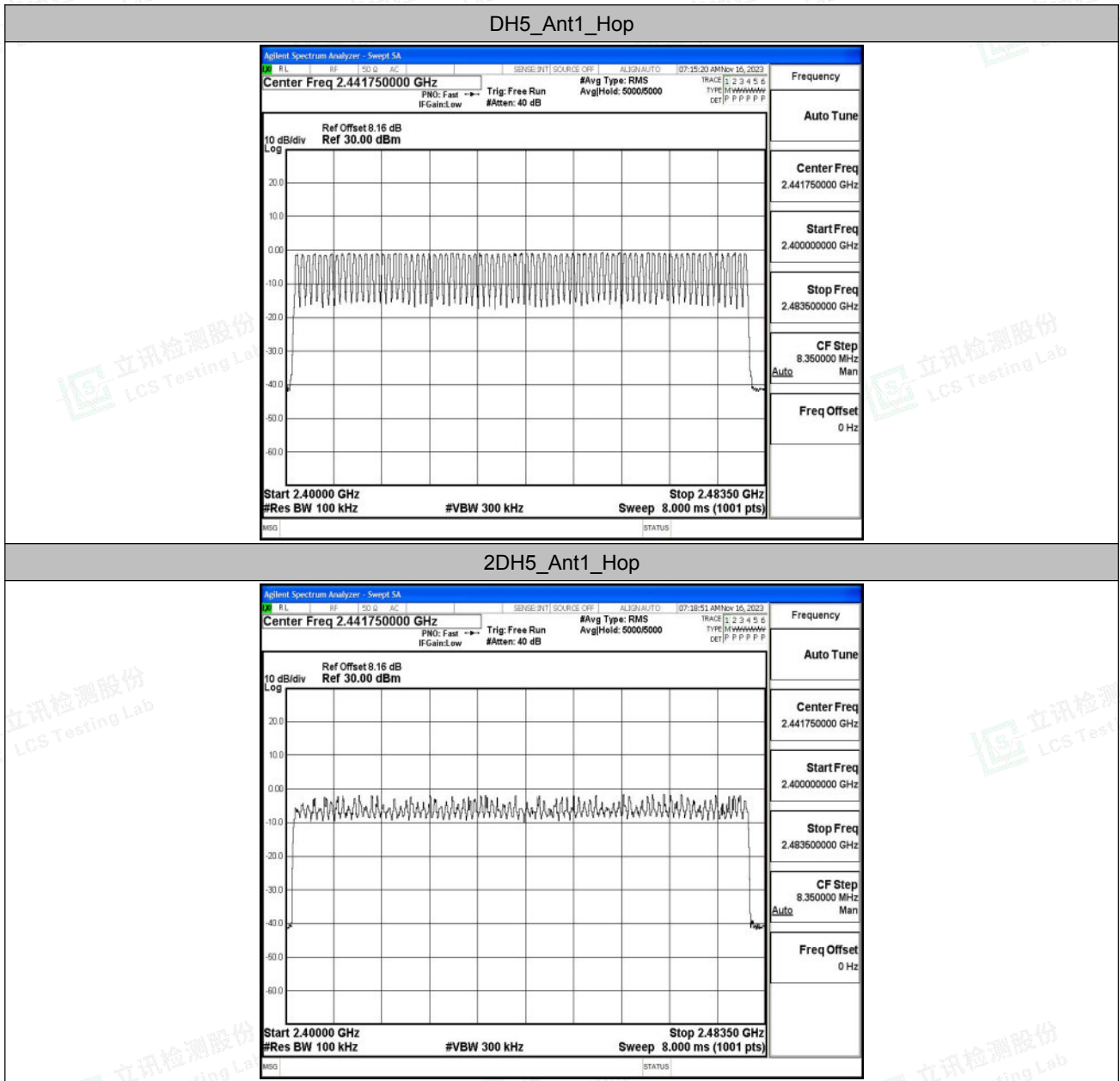
### Test Result

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





### Test Graphs





### A.6 Band edge measurements

#### Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-1.15	-50.98	≤-21.15	PASS
		High	2480	-1.20	-49.98	≤-21.2	PASS
		Low	Hop_2402	-1.49	-50.05	≤-21.49	PASS
		High	Hop_2480	-1.04	-49.76	≤-21.04	PASS
2DH5	Ant1	Low	2402	-4.23	-51.07	≤-24.23	PASS
		High	2480	-6.40	-50.9	≤-26.4	PASS
		Low	Hop_2402	-5.79	-49.65	≤-25.79	PASS
		High	Hop_2480	-2.25	-49.28	≤-22.25	PASS

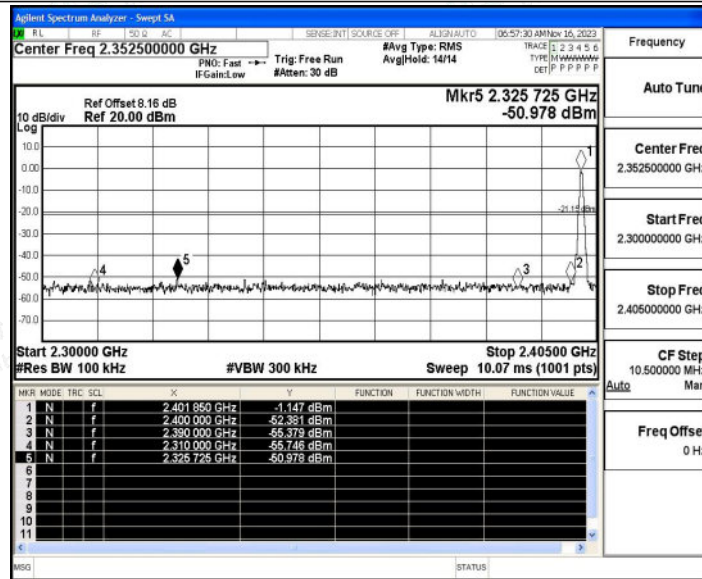




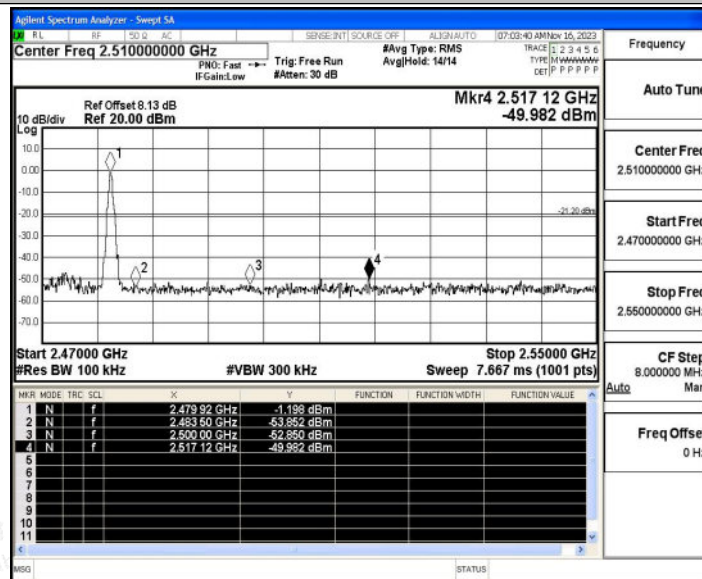


### Test Graphs

#### DH5\_Ant1\_Low\_2402

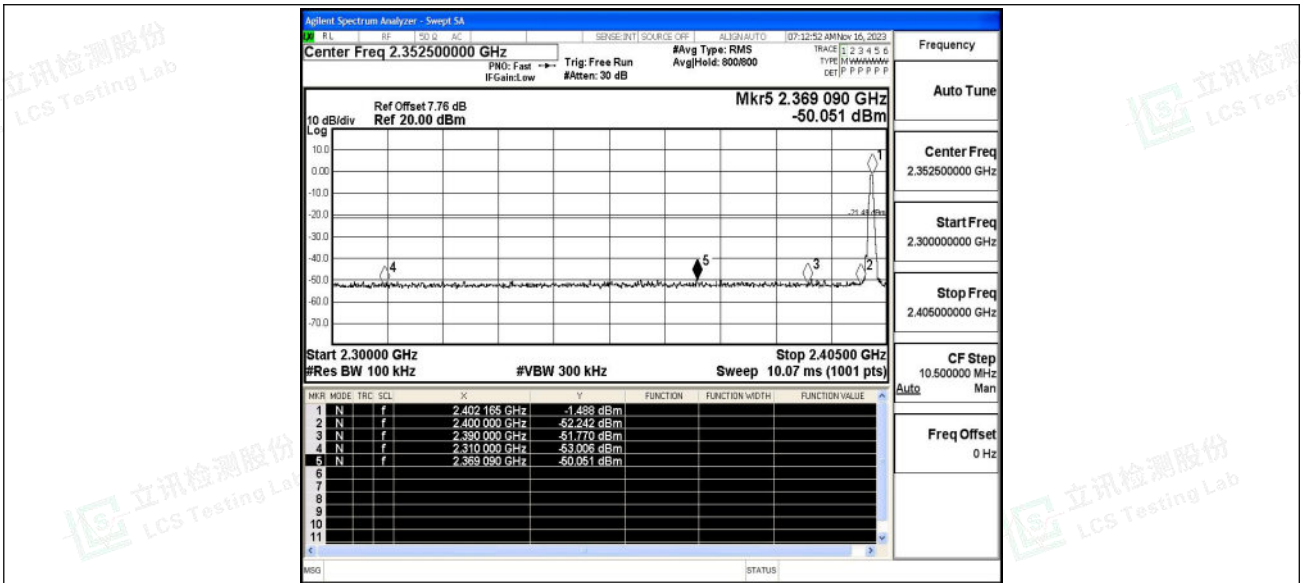


#### DH5\_Ant1\_High\_2480

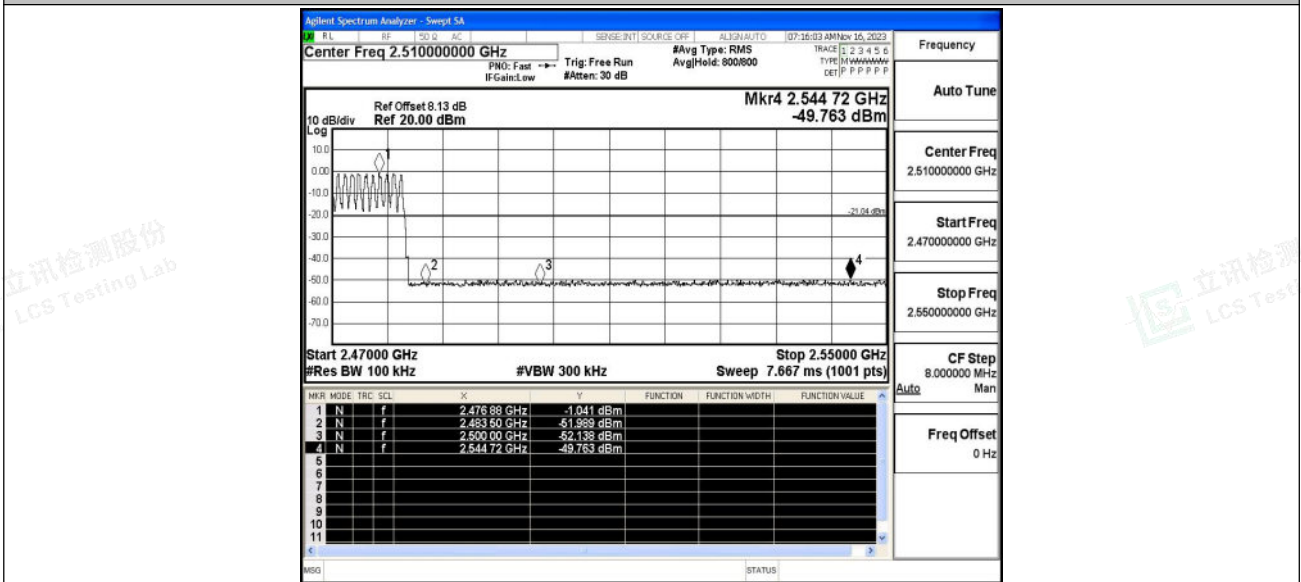


#### DH5\_Ant1\_Low\_Hop\_2402



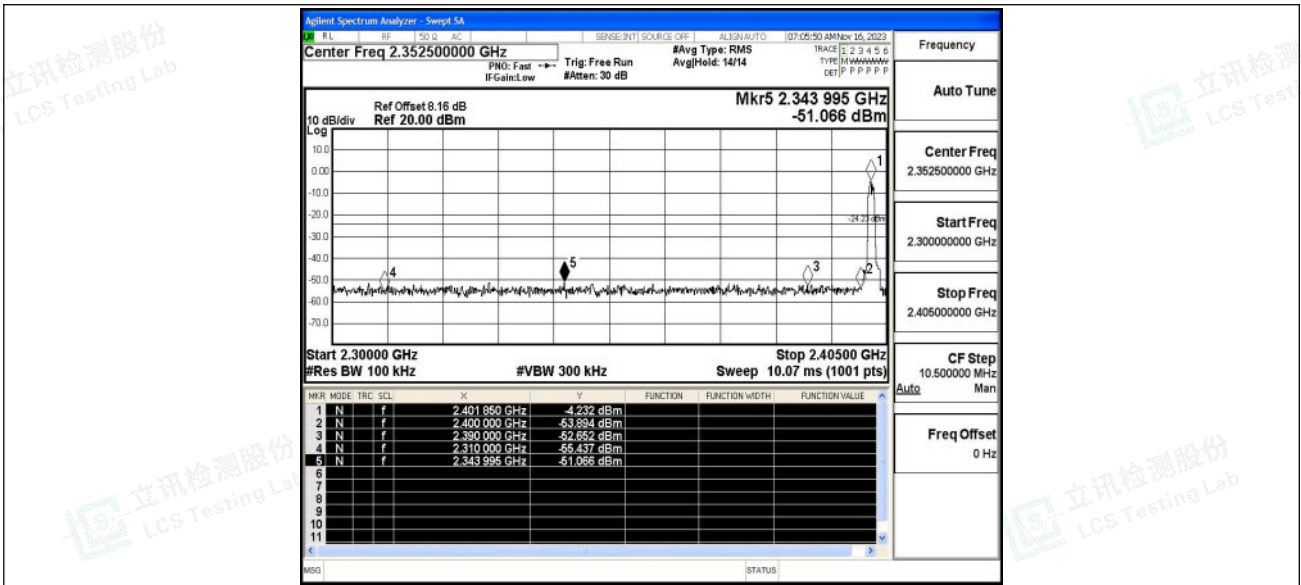


DH5\_Ant1\_High\_Hop\_2480

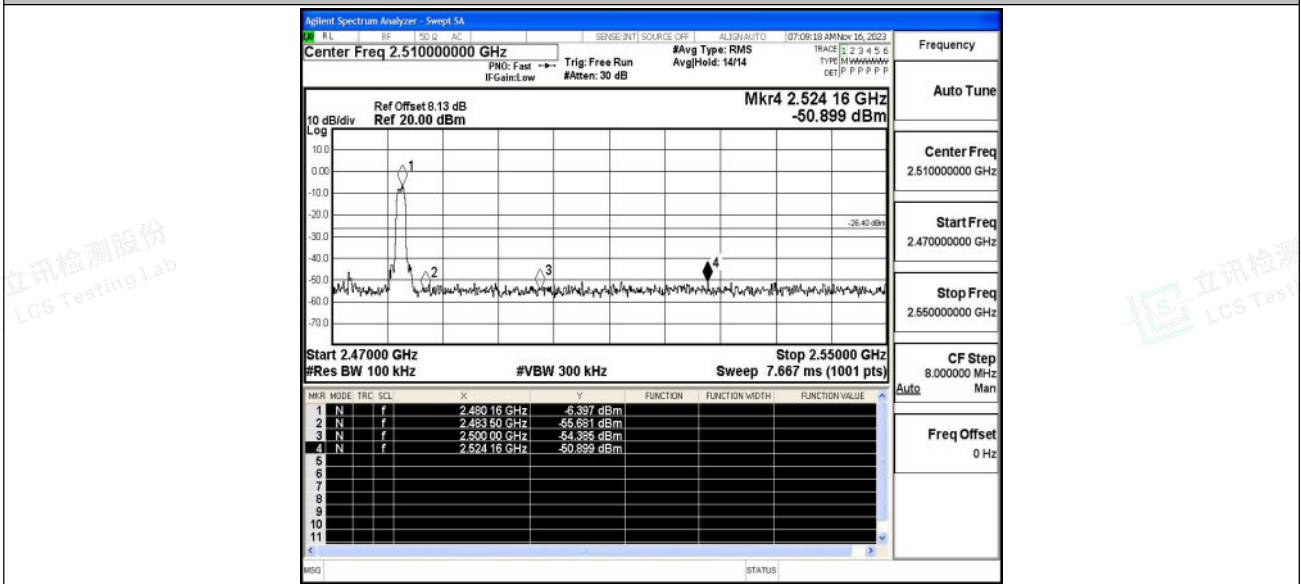


2DH5\_Ant1\_Low\_2402



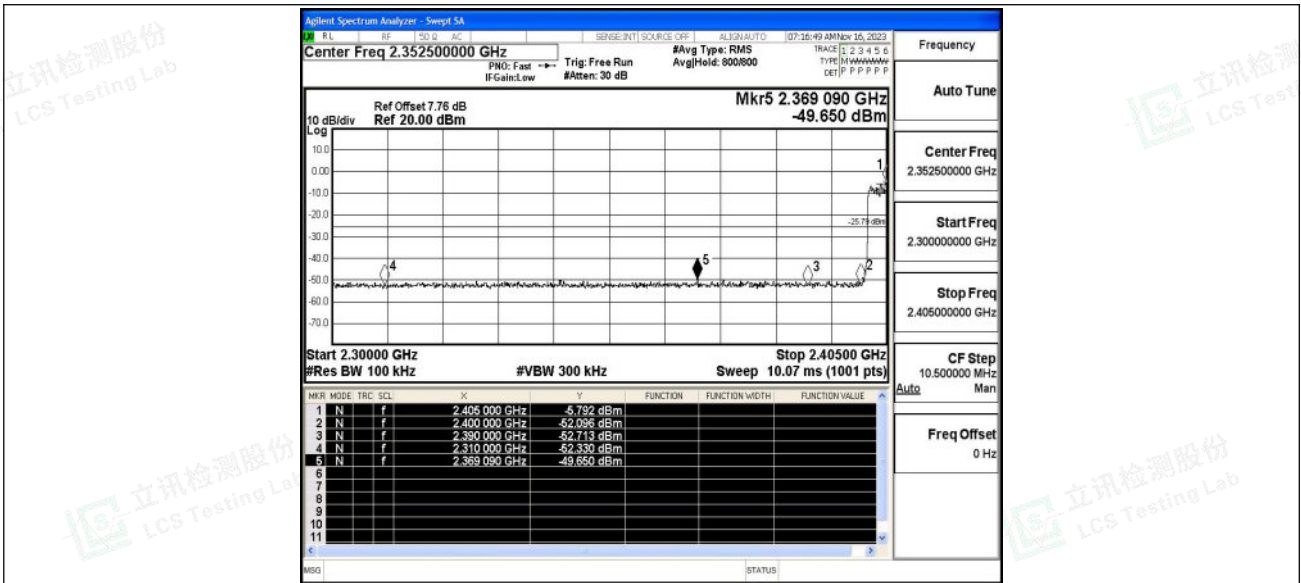


2DH5\_Ant1\_High\_2480

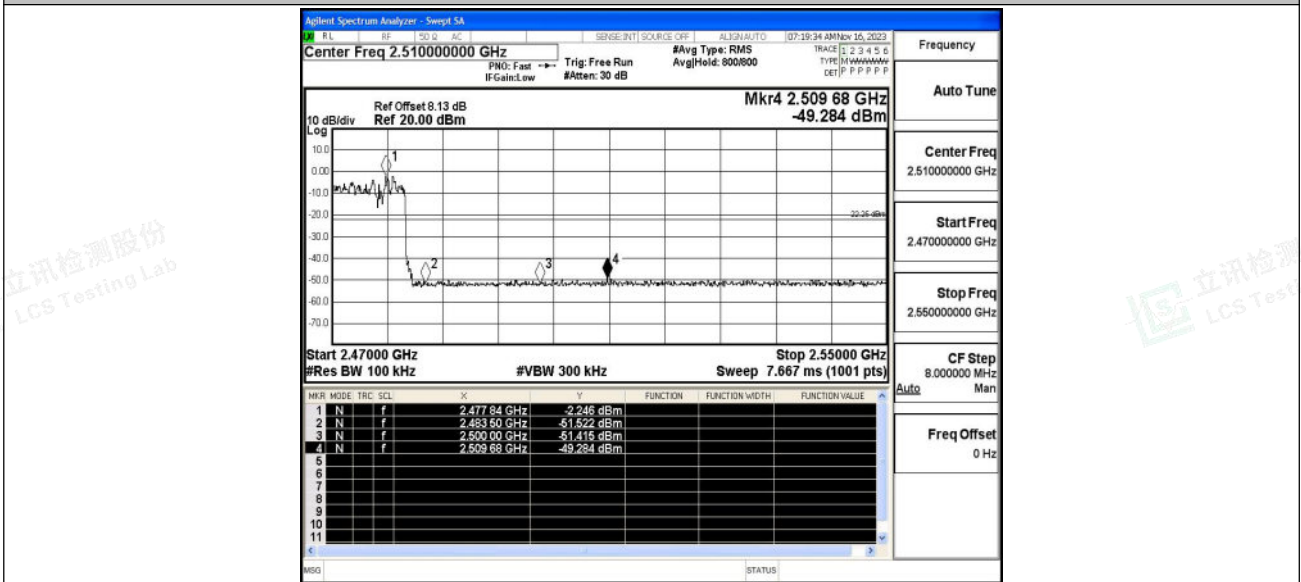


2DH5\_Ant1\_Low\_Hop\_2402





2DH5\_Ant1\_High\_Hop\_2480





## A.7 Conducted Spurious Emission

### Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.60	-1.60	---	PASS
			30~1000	-1.60	-61.32	≤-21.6	PASS
			1000~26500	-1.60	-49.43	≤-21.6	PASS
		2441	Reference	-1.52	-1.52	---	PASS
			30~1000	-1.52	-61.28	≤-21.52	PASS
			1000~26500	-1.52	-48.52	≤-21.52	PASS
		2480	Reference	-1.44	-1.44	---	PASS
			30~1000	-1.44	-61.26	≤-21.44	PASS
			1000~26500	-1.44	-49.03	≤-21.44	PASS
2DH5	Ant1	2402	Reference	-2.22	-2.22	---	PASS
			30~1000	-2.22	-61.31	≤-22.22	PASS
			1000~26500	-2.22	-49.13	≤-22.22	PASS
		2441	Reference	-2.68	-2.68	---	PASS
			30~1000	-2.68	-61.92	≤-22.68	PASS
			1000~26500	-2.68	-49.55	≤-22.68	PASS
		2480	Reference	-1.78	-1.78	---	PASS
			30~1000	-1.78	-61.8	≤-21.78	PASS
			1000~26500	-1.78	-49.2	≤-21.78	PASS



Shenzhen LCS Compliance Testing Laboratory Ltd.

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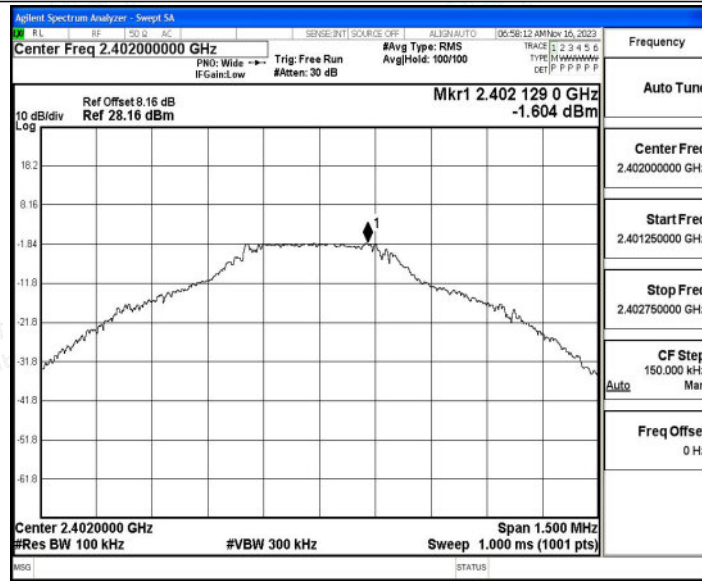
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

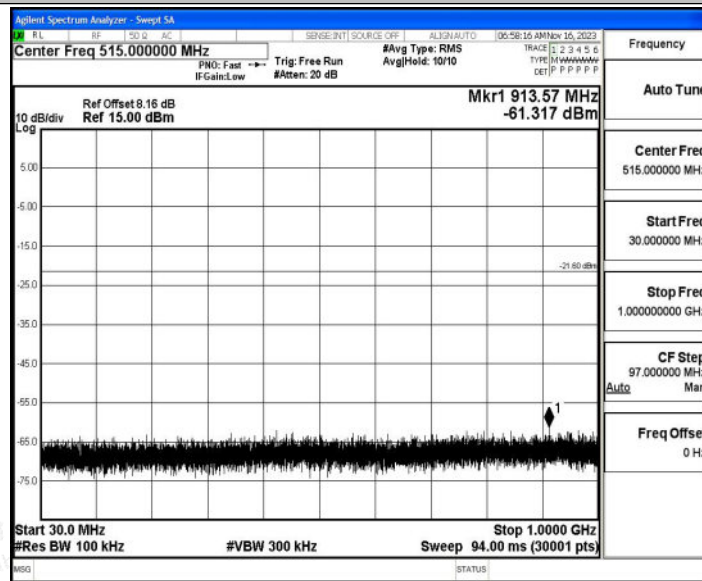


### Test Graphs

DH5\_Ant1\_2402\_0~Reference

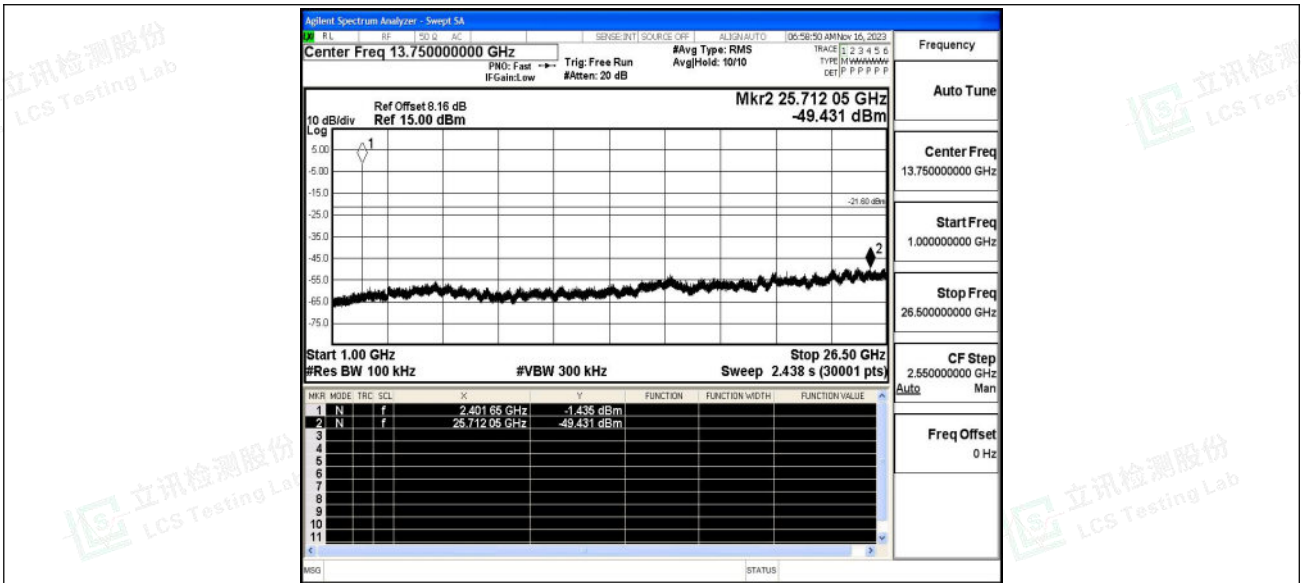


DH5\_Ant1\_2402\_30~1000

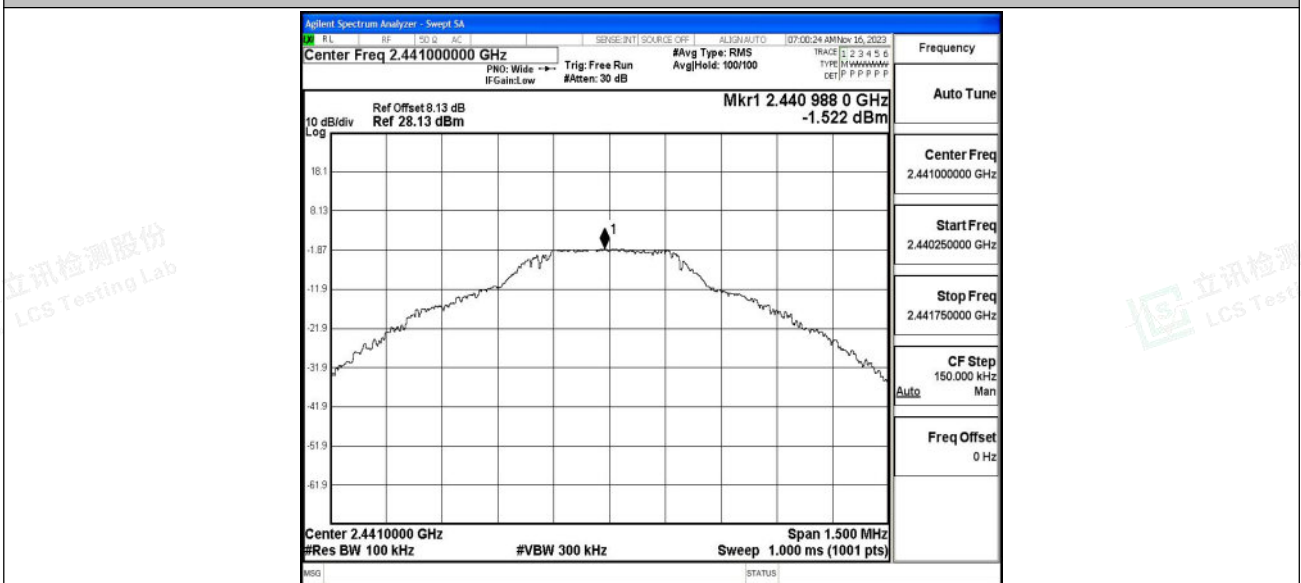


DH5\_Ant1\_2402\_1000~26500



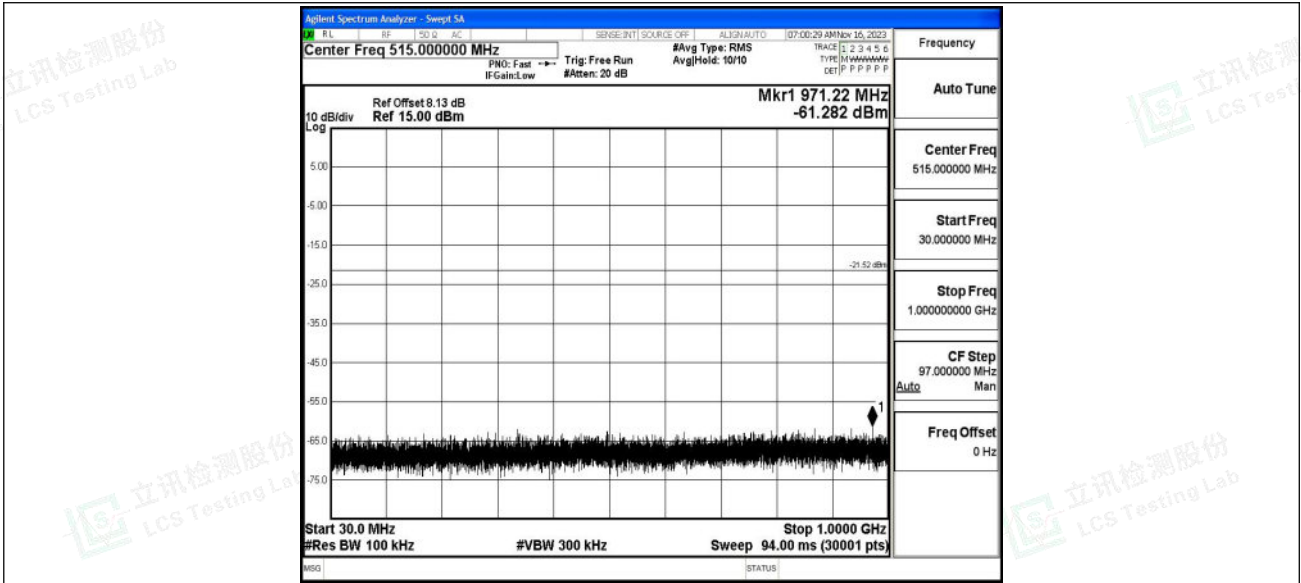


DH5\_Ant1\_2441\_0~Reference

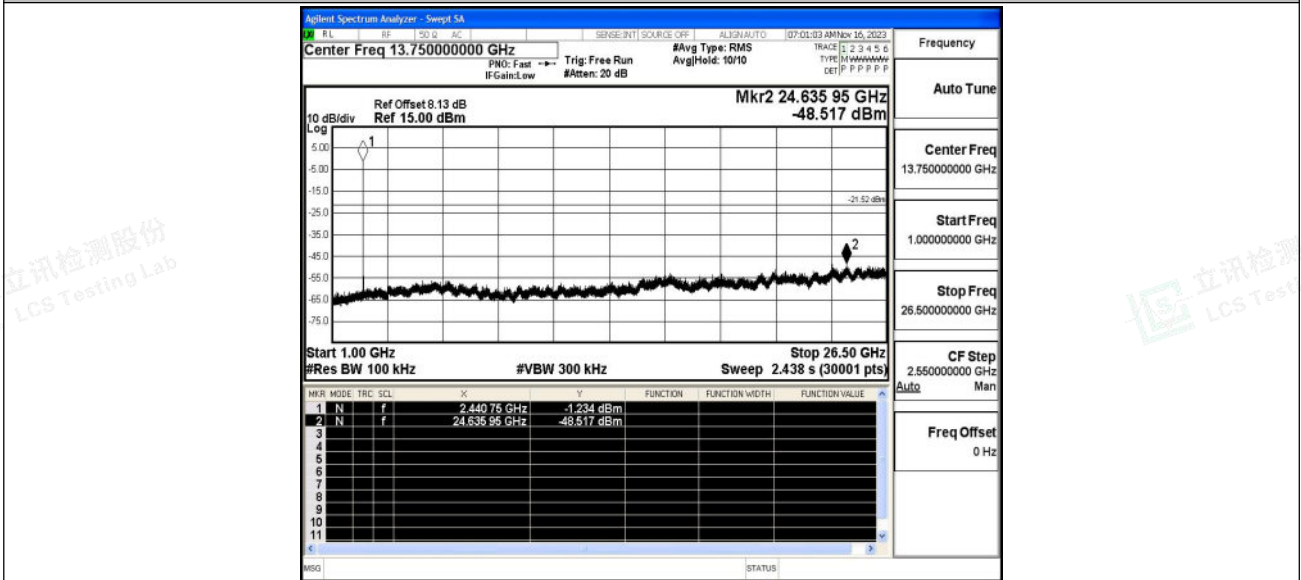


DH5\_Ant1\_2441\_30~1000





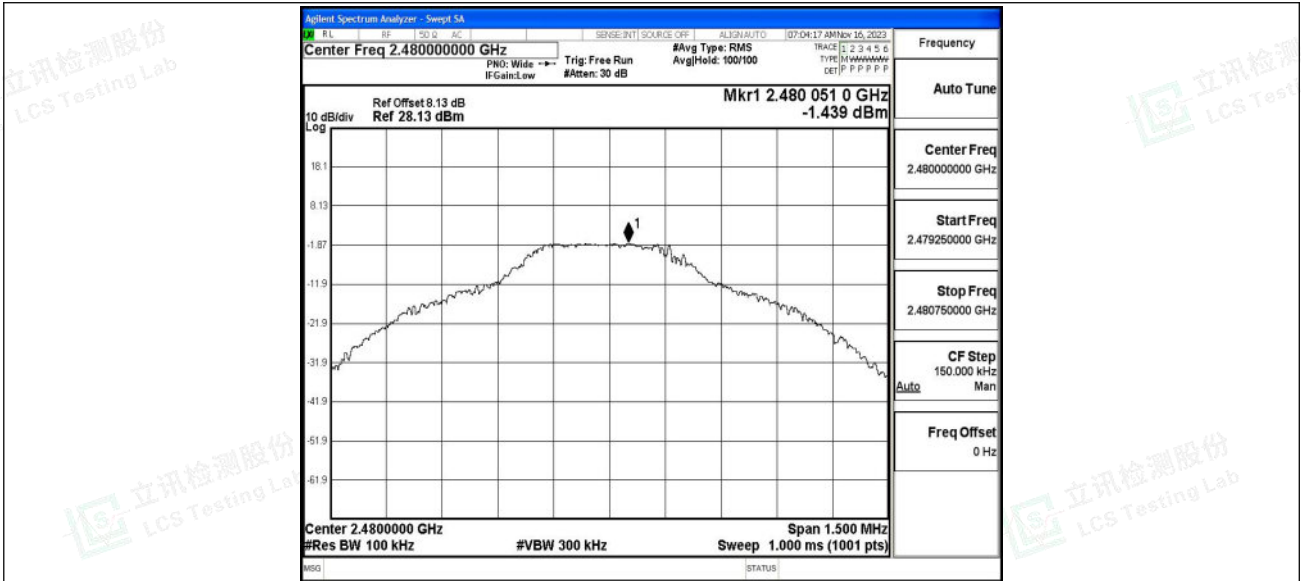
DH5\_Ant1\_2441\_1000~26500



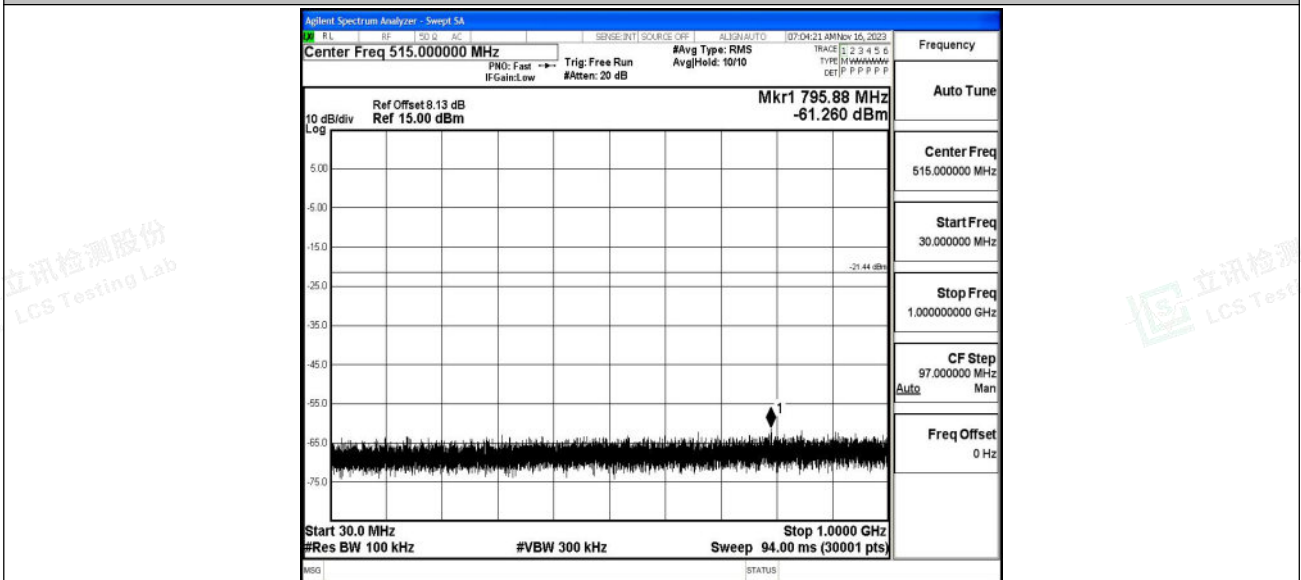
DH5\_Ant1\_2480\_0~Reference





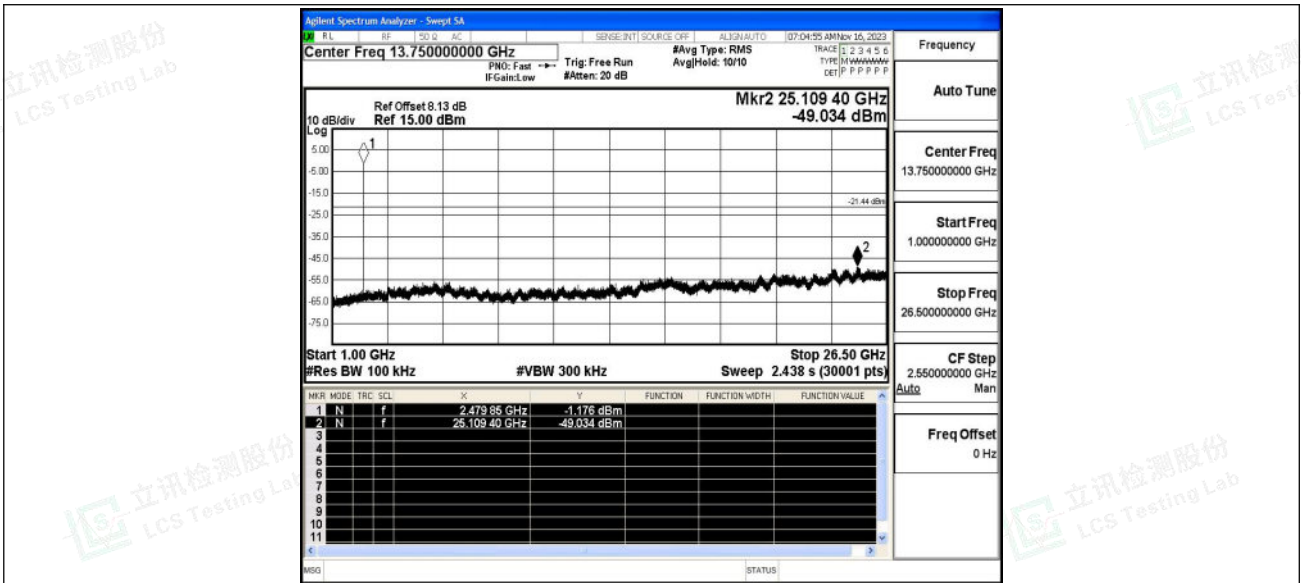


DH5\_Ant1\_2480\_30~1000

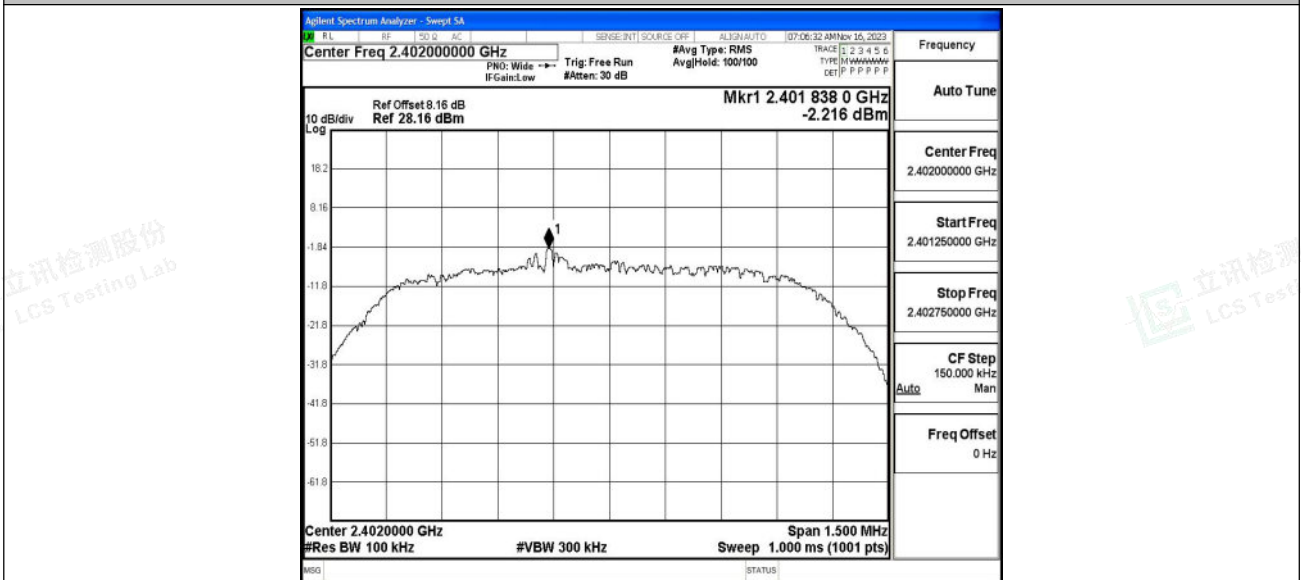


DH5\_Ant1\_2480\_1000~26500



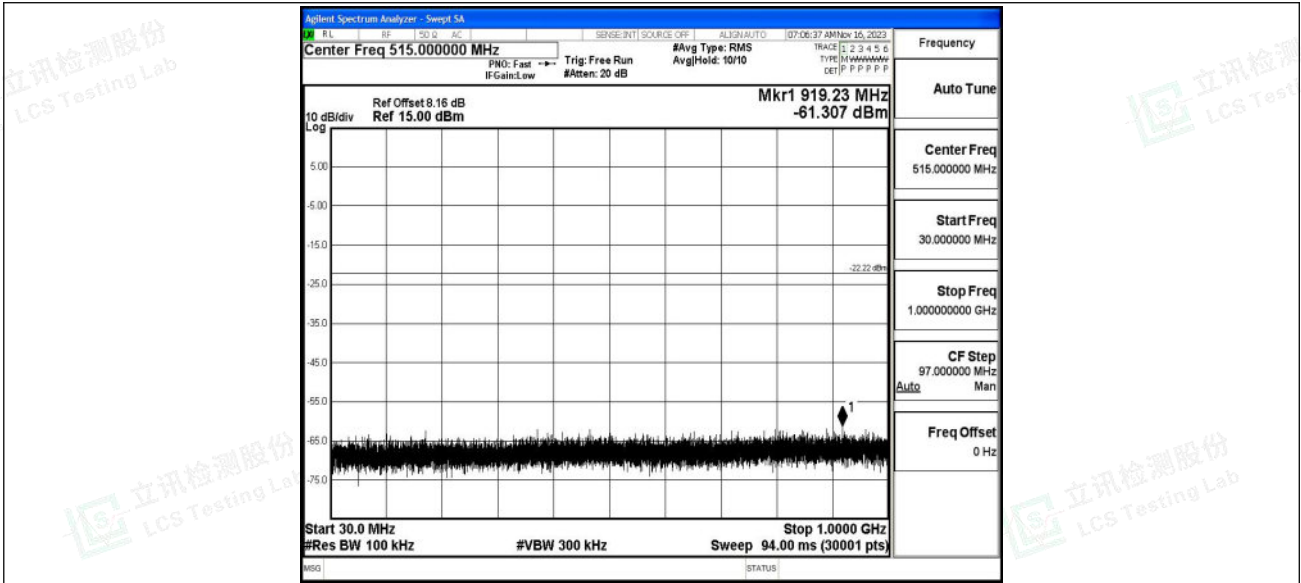


2DH5\_Ant1\_2402\_0~Reference

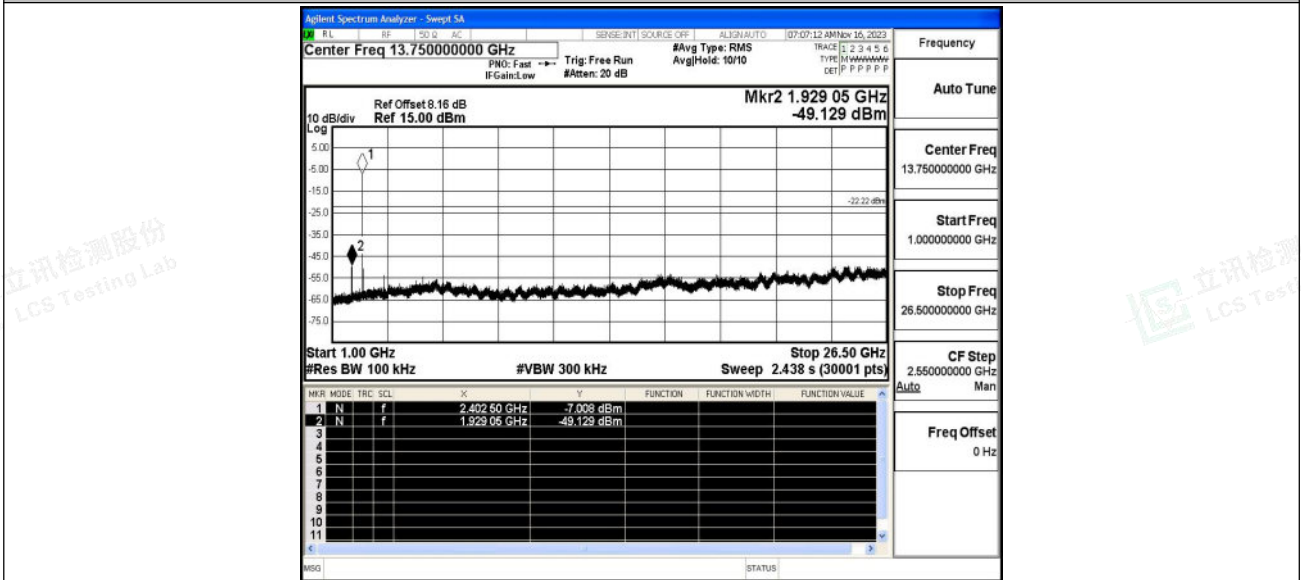


2DH5\_Ant1\_2402\_30~1000



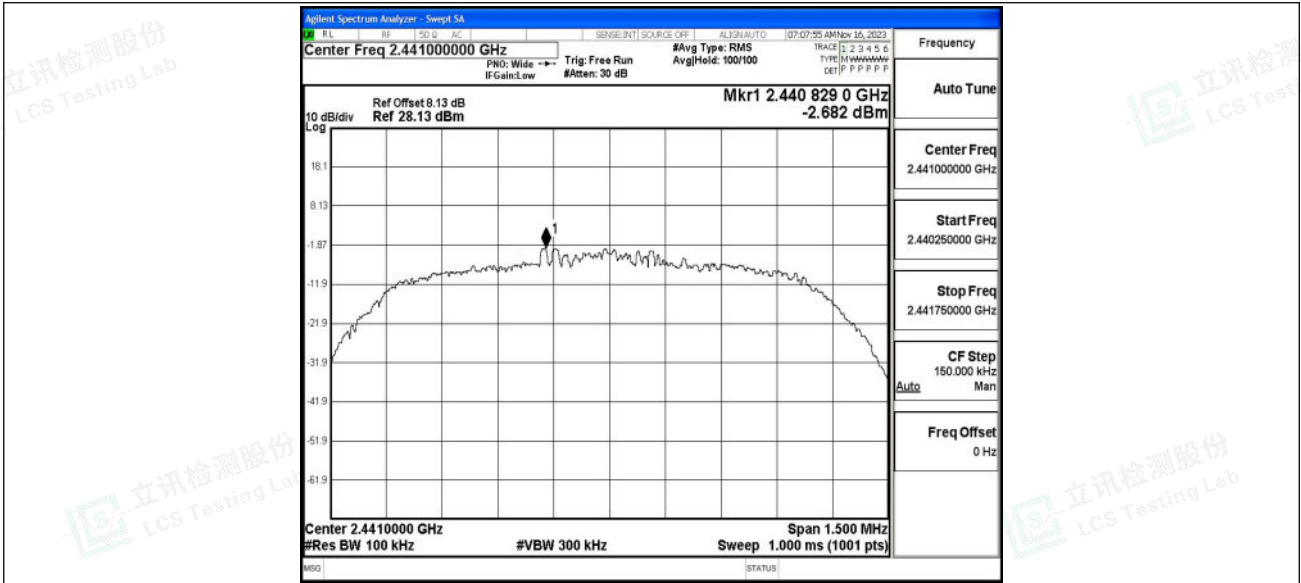


2DH5\_Ant1\_2402\_1000~26500

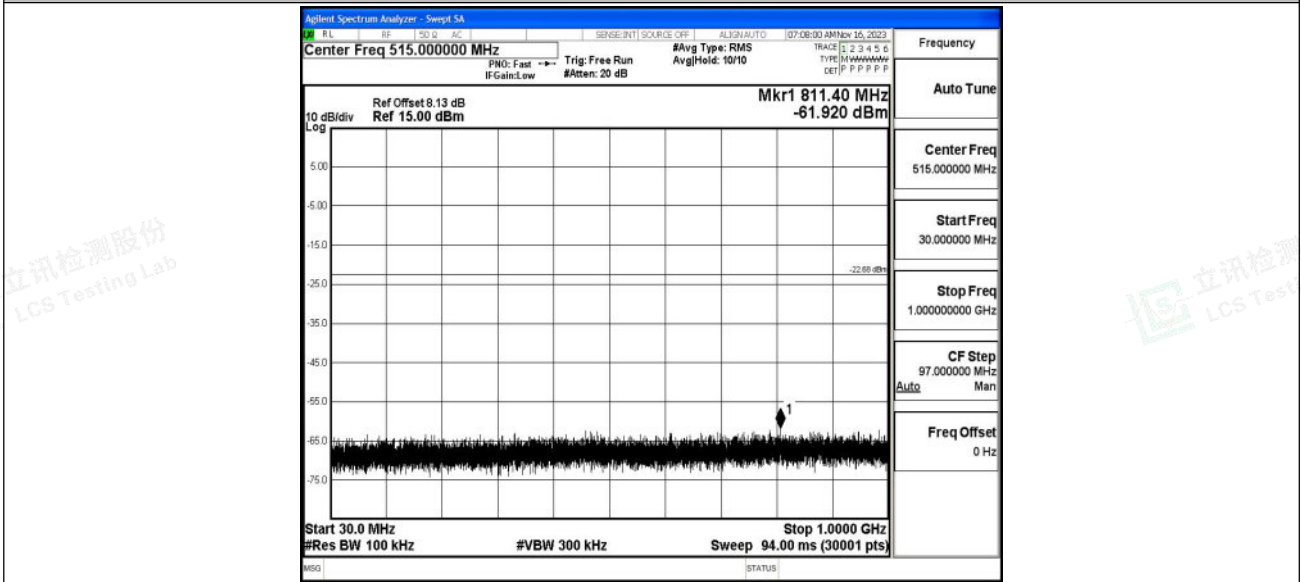


2DH5\_Ant1\_2441\_0~Reference



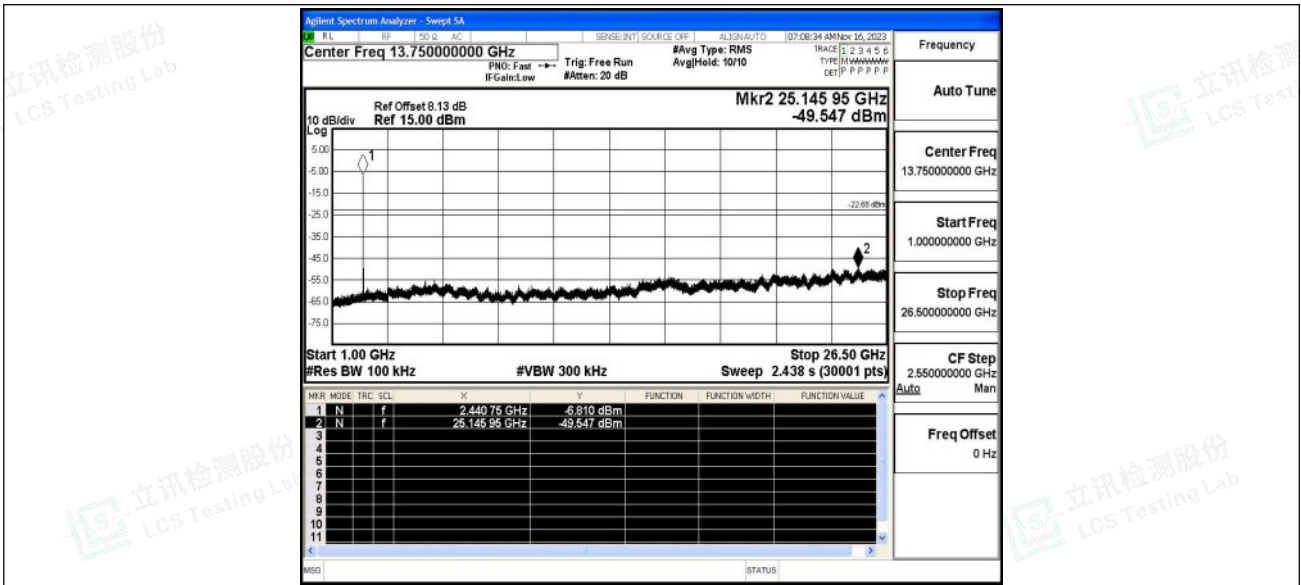


2DH5\_Ant1\_2441\_30~1000

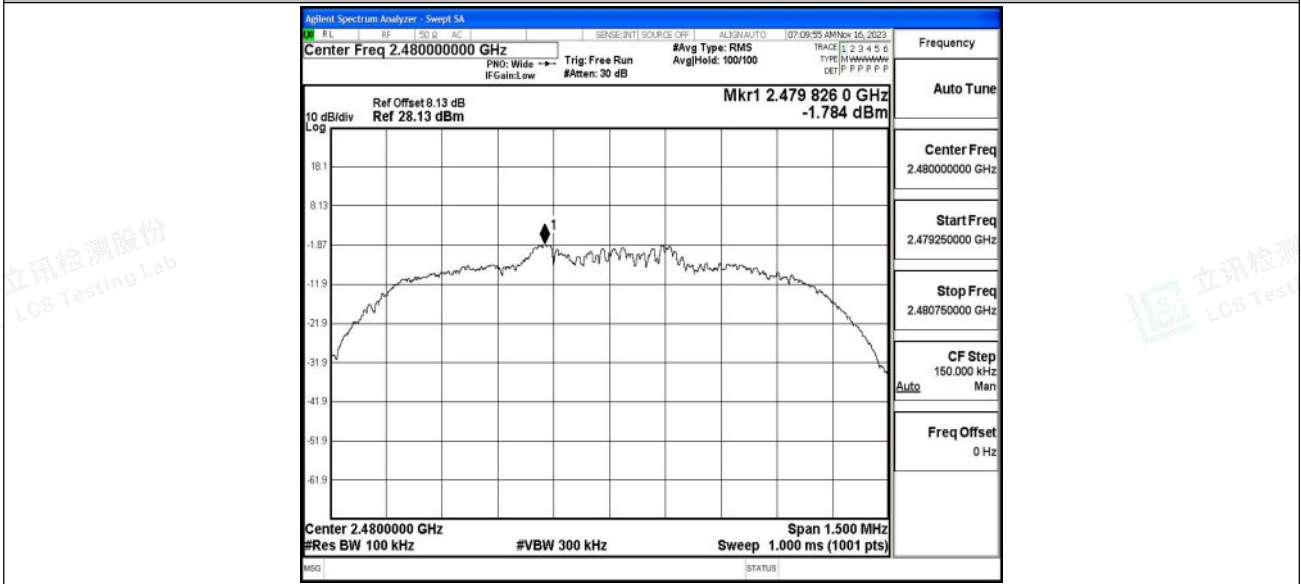


2DH5\_Ant1\_2441\_1000~26500



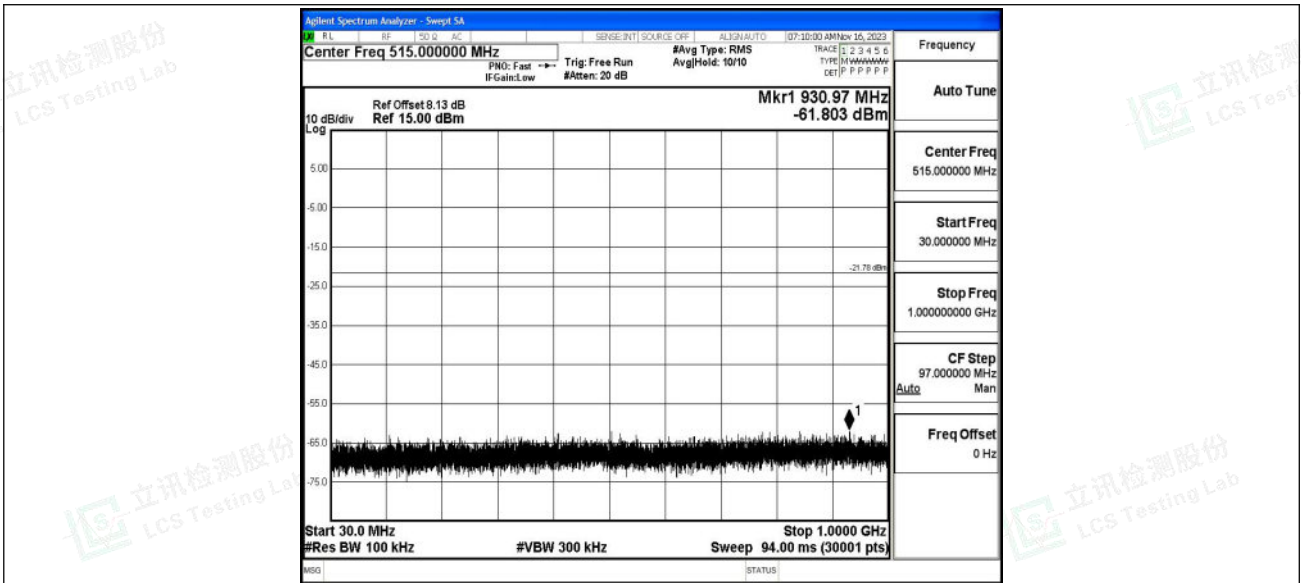


2DH5\_Ant1\_2480\_0~Reference

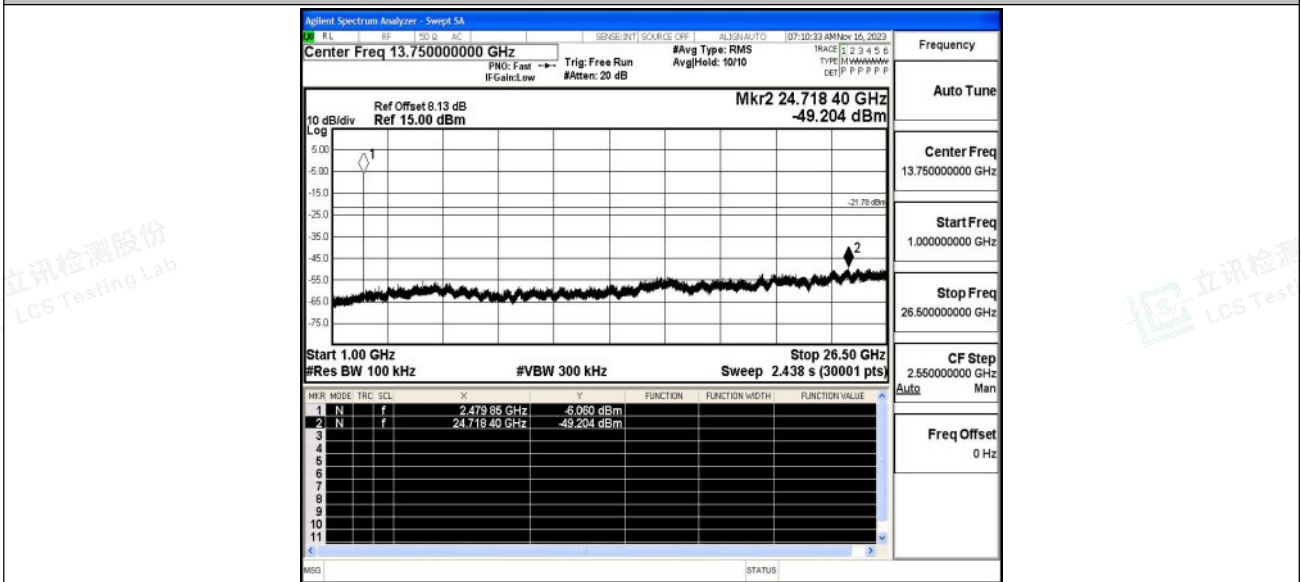


2DH5\_Ant1\_2480\_30~1000





2DH5\_Ant1\_2480\_1000~26500





## A.8 Emissions in Restricted Bands

### Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict		
DH5	Ant1	Low	2402	AV	2310.000	-49.12	≤-41.20	46.08	≤54	PASS		
				AV	2388.830	-48.59	≤-41.20	46.61	≤54	PASS		
				AV	2390.000	-48.84	≤-41.20	46.36	≤54	PASS		
				Peak	2310.000	-43.28	≤-21.20	51.92	≤74	PASS		
				Peak	2371.820	-39.66	≤-21.20	55.54	≤74	PASS		
				Peak	2390.000	-44.3	≤-21.20	50.90	≤74	PASS		
		High	2480	AV	2483.500	-48.45	≤-41.20	46.75	≤54	PASS		
				AV	2483.520	-48.45	≤-41.20	46.75	≤54	PASS		
				AV	2500.000	-48.57	≤-41.20	46.63	≤54	PASS		
				Peak	2483.500	-42.27	≤-21.20	52.93	≤74	PASS		
				Peak	2484.000	-40	≤-21.20	55.20	≤74	PASS		
				Peak	2500.000	-44.54	≤-21.20	50.66	≤74	PASS		
		Low	Hop_2402	Peak	2310.000	-40.92	≤-21.20	54.28	≤74	PASS		
				Peak	2384.105	-38.85	≤-21.20	56.35	≤74	PASS		
				Peak	2390.000	-40.2	≤-21.20	55.00	≤74	PASS		
		High	Hop_2480	Peak	2483.500	-39.53	≤-21.20	55.67	≤74	PASS		
				Peak	2496.000	-38.09	≤-21.20	57.11	≤74	PASS		
				Peak	2500.000	-39.91	≤-21.20	55.29	≤74	PASS		
		2DH5	Ant1	Low	2402	AV	2310.000	-49.09	≤-41.20	46.11	≤54	PASS
						AV	2372.660	-48.59	≤-41.20	46.61	≤54	PASS
						AV	2390.000	-48.79	≤-41.20	46.41	≤54	PASS
Peak	2310.000					-40.54	≤-21.20	54.66	≤74	PASS		
Peak	2389.775					-38.49	≤-21.20	56.71	≤74	PASS		
Peak	2390.000					-43.61	≤-21.20	51.59	≤74	PASS		
High	2480			AV	2483.500	-48.49	≤-41.20	46.71	≤54	PASS		
				AV	2498.960	-48.47	≤-41.20	46.73	≤54	PASS		
				AV	2500.000	-48.64	≤-41.20	46.56	≤54	PASS		
				Peak	2483.500	-44.76	≤-21.20	50.44	≤74	PASS		
				Peak	2496.720	-39.34	≤-21.20	55.86	≤74	PASS		
				Peak	2500.000	-42.4	≤-21.20	52.80	≤74	PASS		
Low	Hop_2402			Peak	2310.000	-41.1	≤-21.20	54.10	≤74	PASS		
				Peak	2341.160	-38.62	≤-21.20	56.58	≤74	PASS		
				Peak	2390.000	-41.06	≤-21.20	54.14	≤74	PASS		
High	Hop_2480			Peak	2483.500	-38.86	≤-21.20	56.34	≤74	PASS		
				Peak	2494.480	-37.68	≤-21.20	57.52	≤74	PASS		



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				Peak	2500.000	-41.22	≤-21.20	53.98	≤74	PASS
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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.

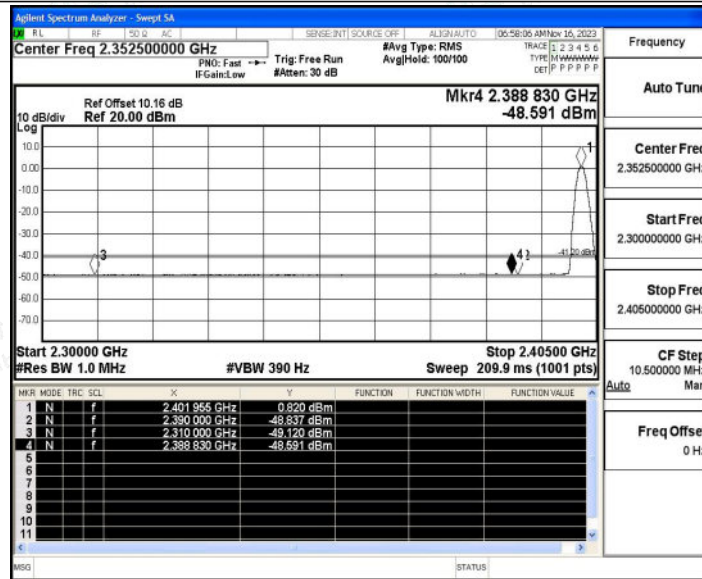




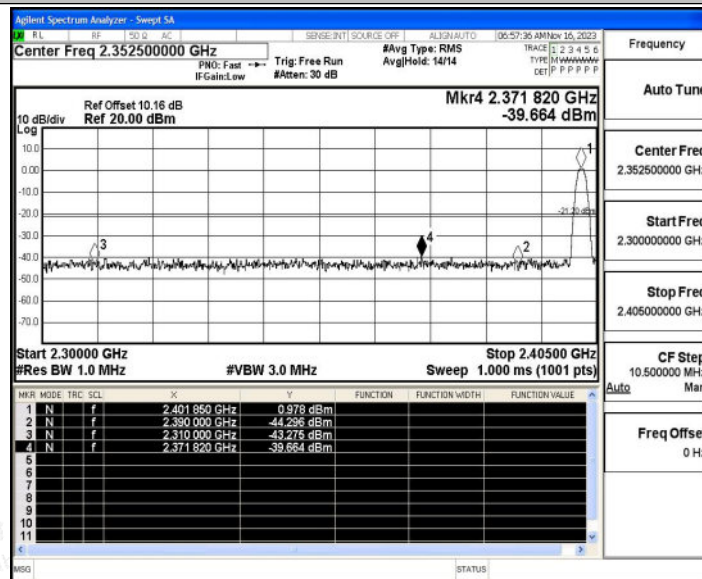


### Test Graphs

#### DH5\_Ant1\_Low\_2402\_AV

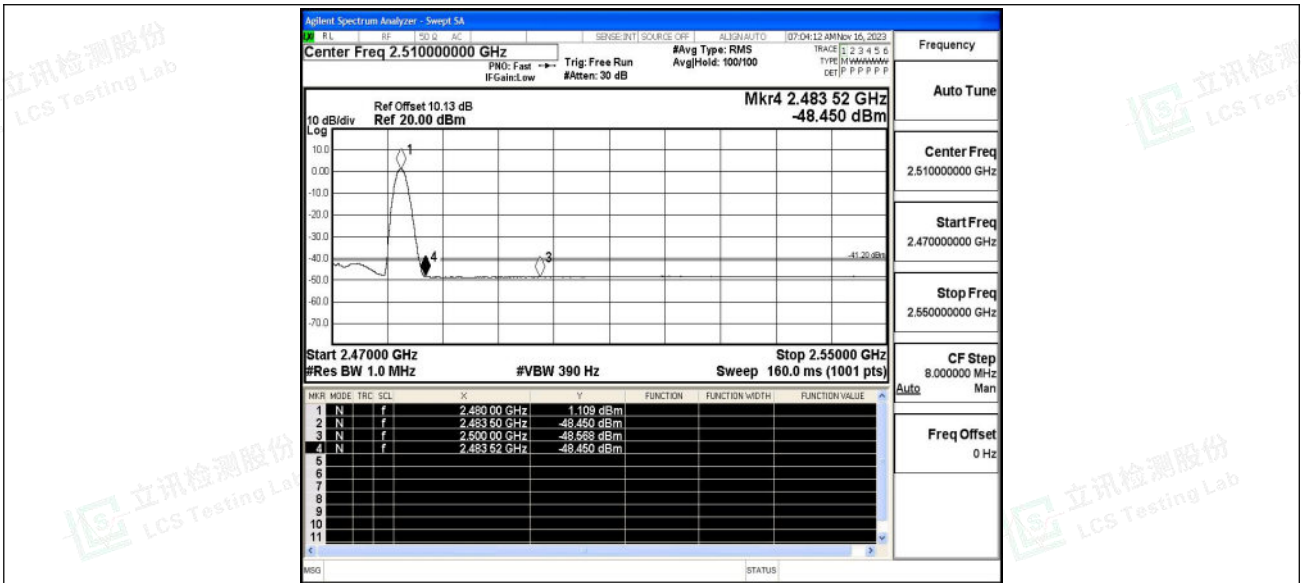


#### DH5\_Ant1\_Low\_2402\_Peak

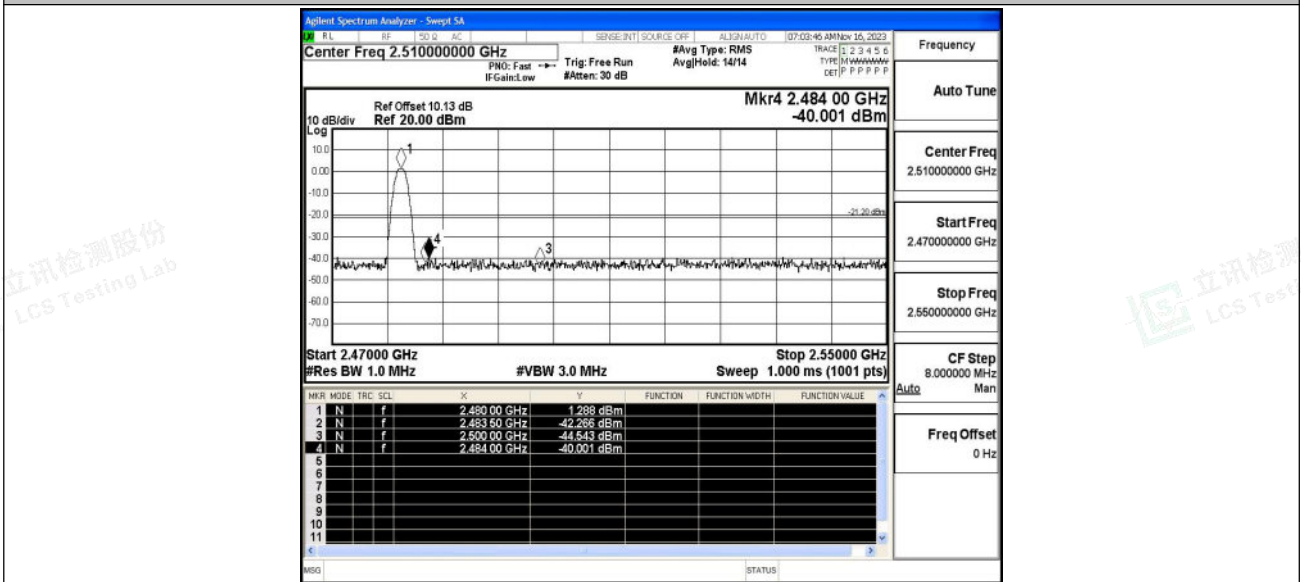


#### DH5\_Ant1\_High\_2480\_AV



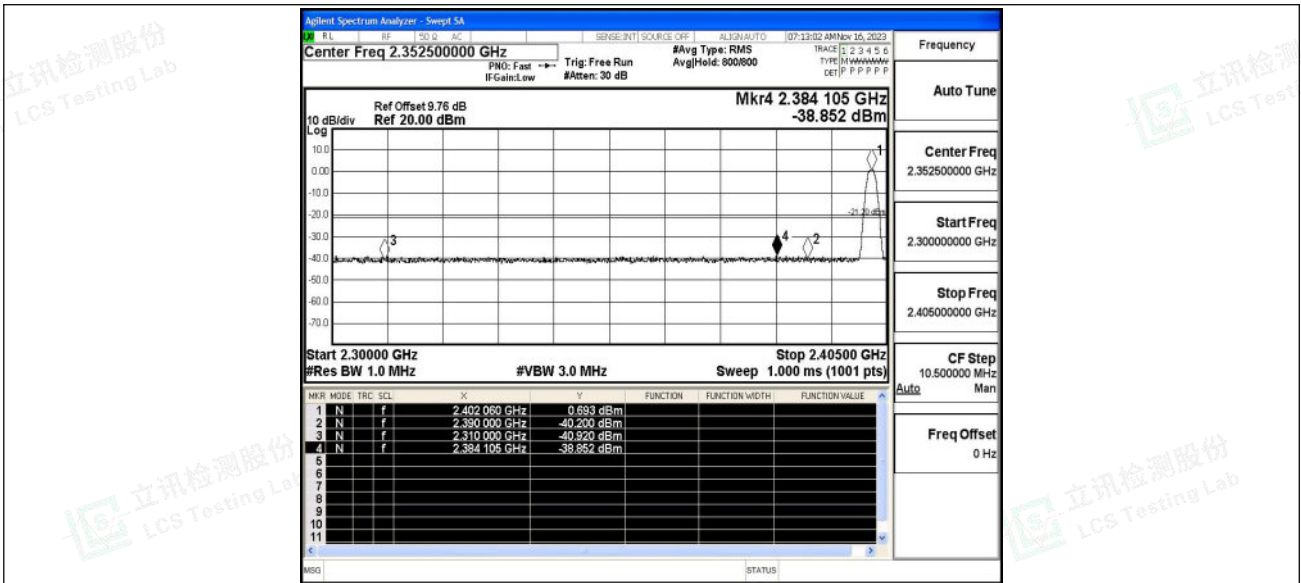


DH5\_Ant1\_High\_2480\_Peak

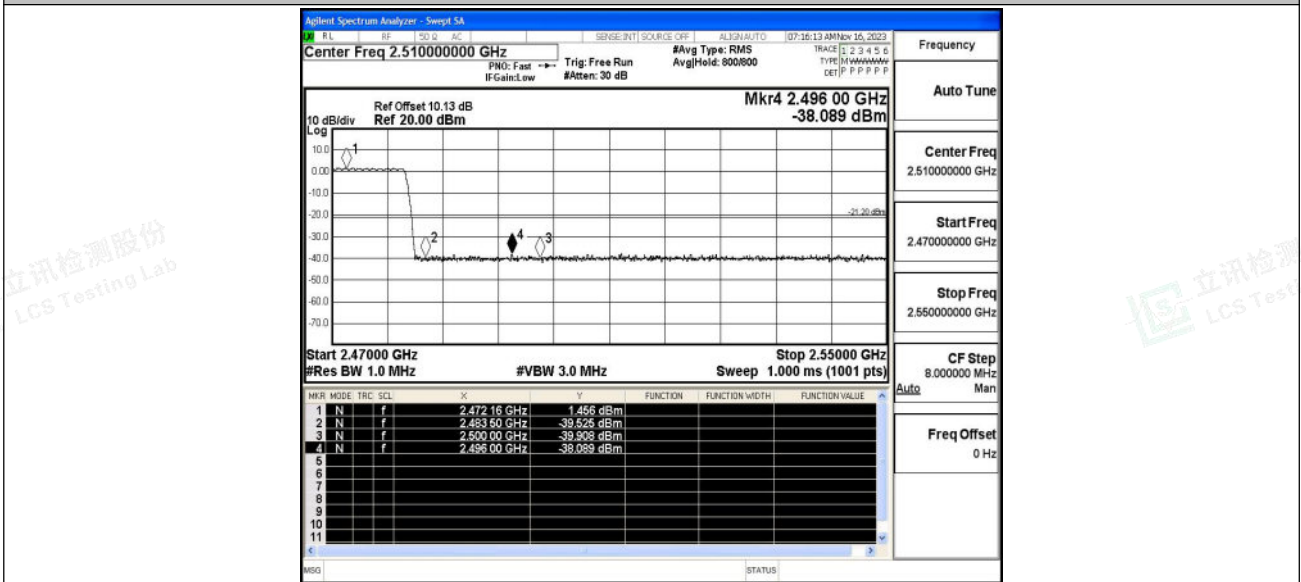


DH5\_Ant1\_Low\_Hop\_2402\_Peak



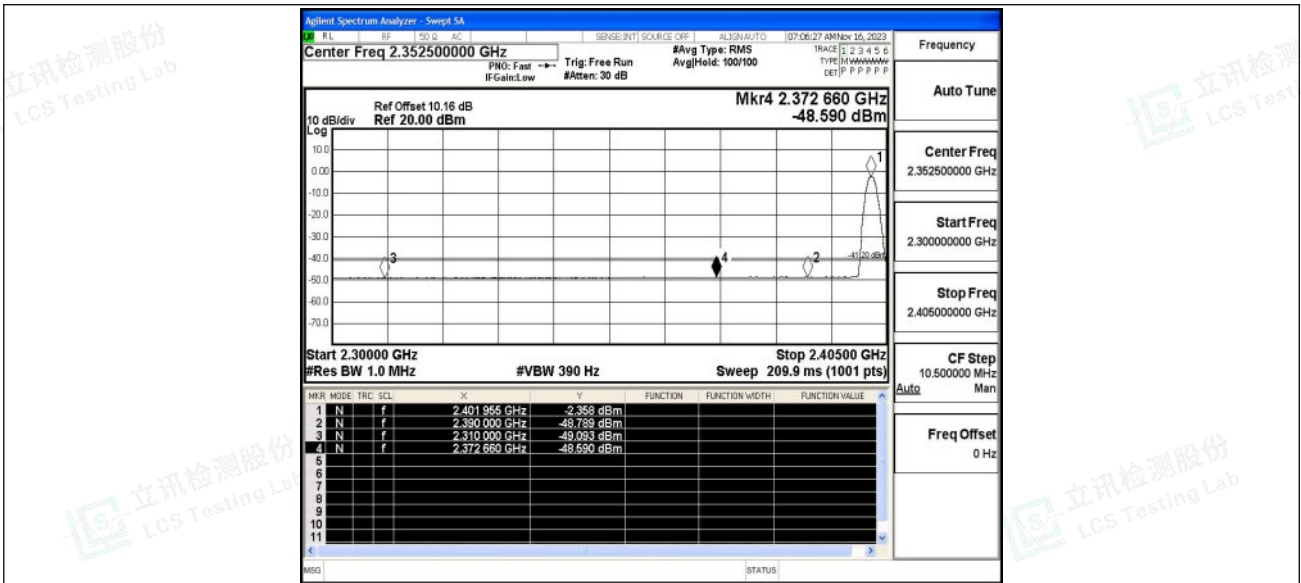


DH5\_Ant1\_High\_Hop\_2480\_Peak

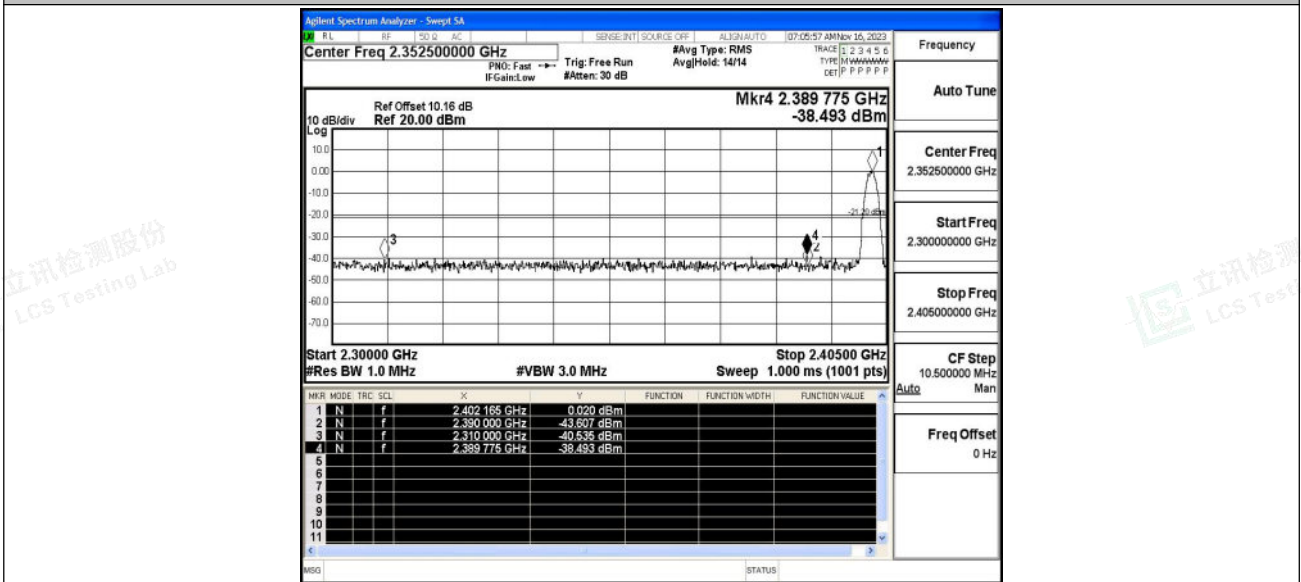


2DH5\_Ant1\_Low\_2402\_AV



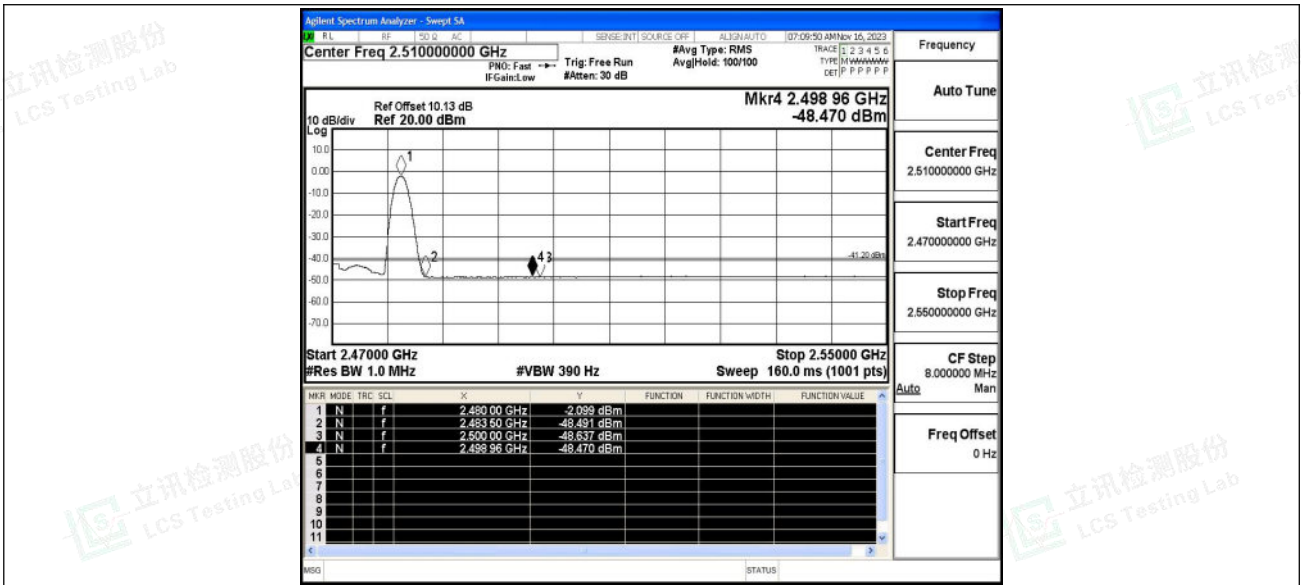


2DH5\_Ant1\_Low\_2402\_Peak

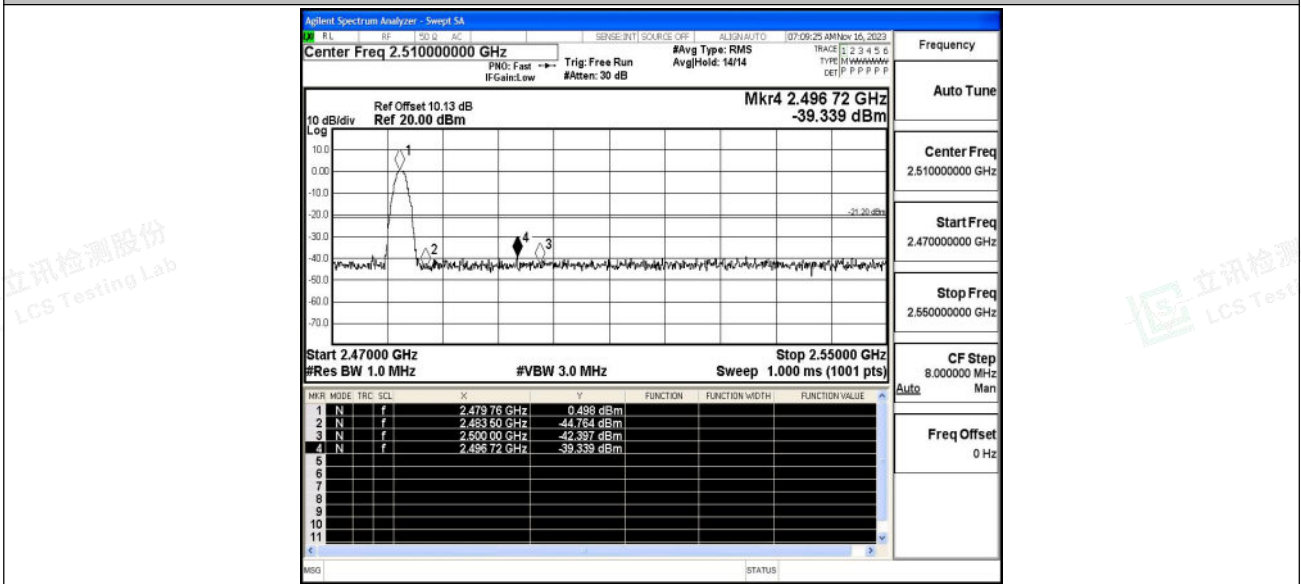


2DH5\_Ant1\_High\_2480\_AV



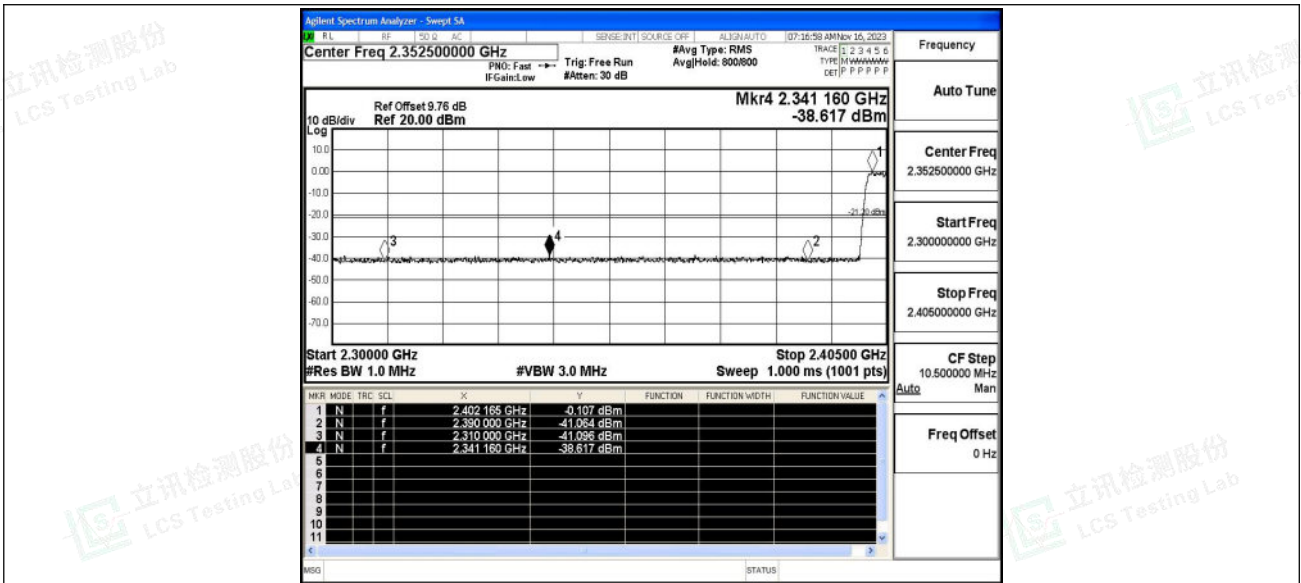


2DH5\_Ant1\_High\_2480\_Peak



2DH5\_Ant1\_Low\_Hop\_2402\_Peak





2DH5\_Ant1\_High\_Hop\_2480\_Peak

