



## Appendix A

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

Product Name: Vehicle navigation

Test Model: AV-N64

#### Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Jack Cheng





# A.1 20dB Emission Bandwidth

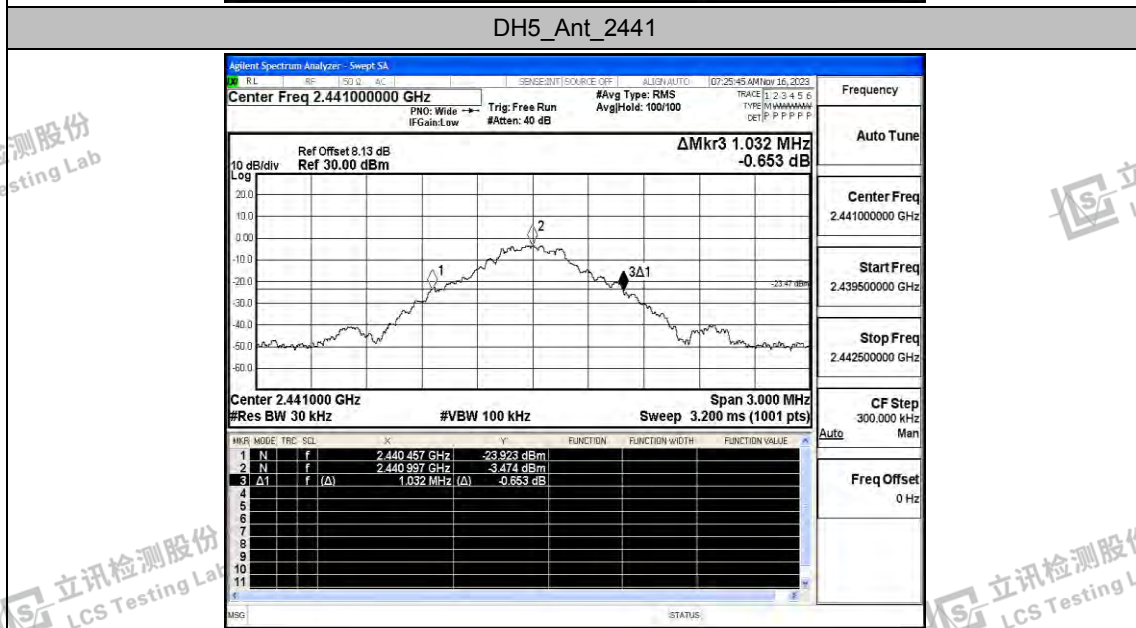
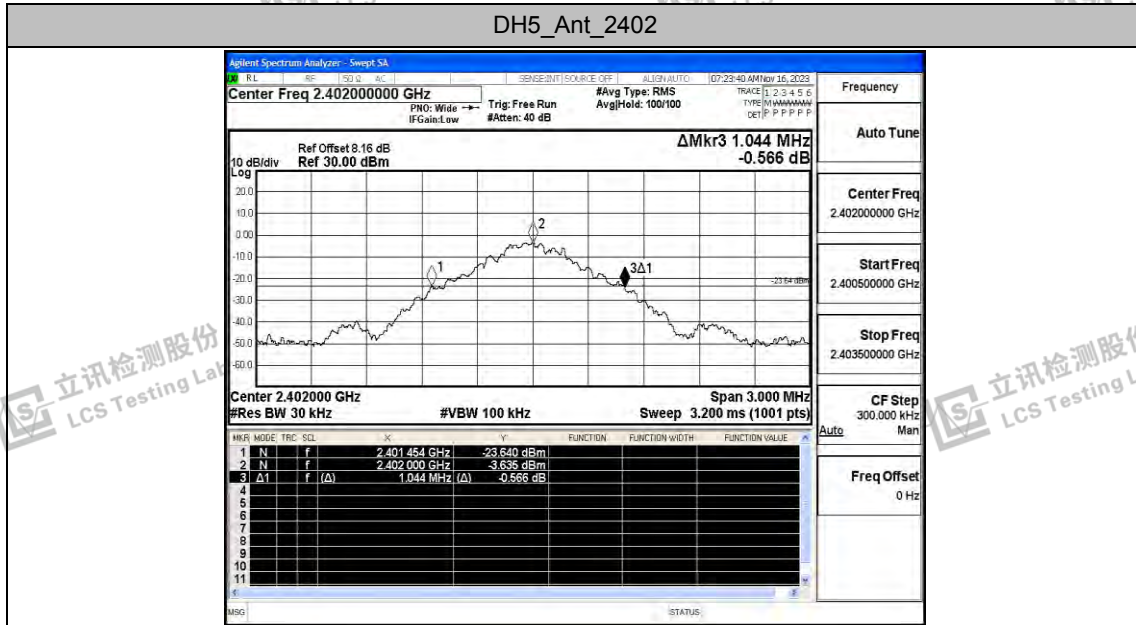
## Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant	2402	1.044	2401.454	2402.498	---
		2441	1.032	2440.457	2441.489	---
		2480	1.035	2479.460	2480.495	---
2DH5	Ant	2402	1.314	2401.331	2402.645	---
		2441	1.332	2440.316	2441.648	---
		2480	1.290	2479.349	2480.639	---
3DH5	Ant	2402	1.299	2401.346	2402.645	---
		2441	1.302	2440.343	2441.645	---
		2480	1.302	2479.334	2480.636	---



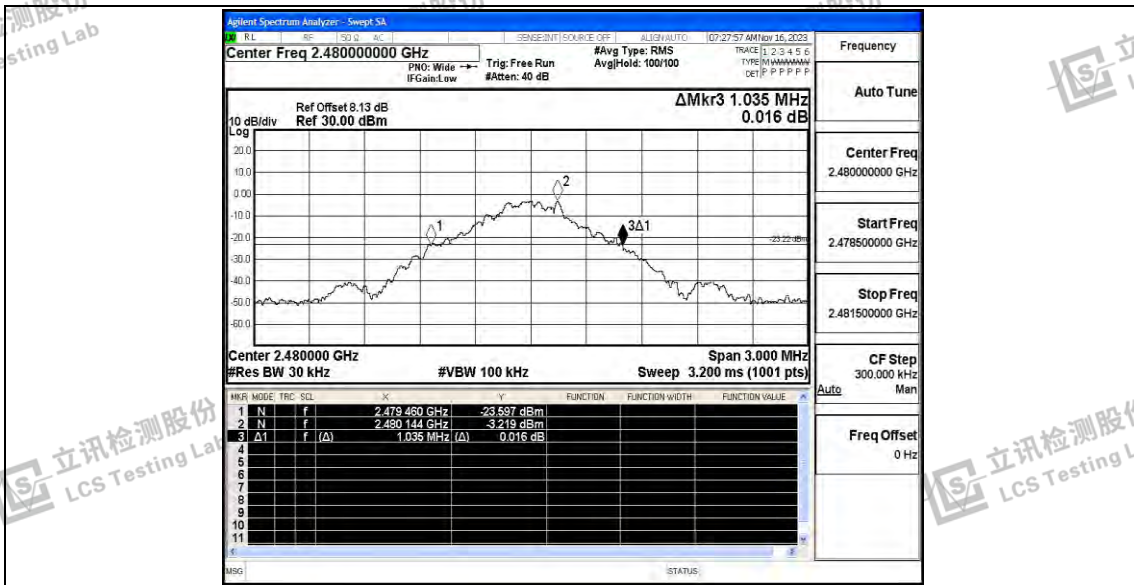


### Test Graphs

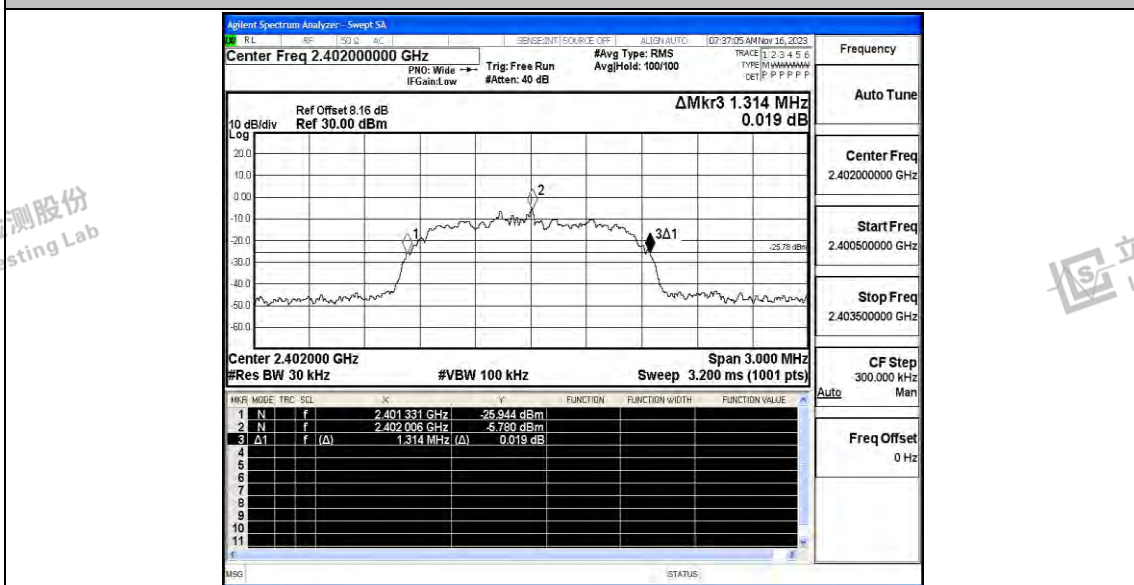


#### DH5\_Ant\_2480



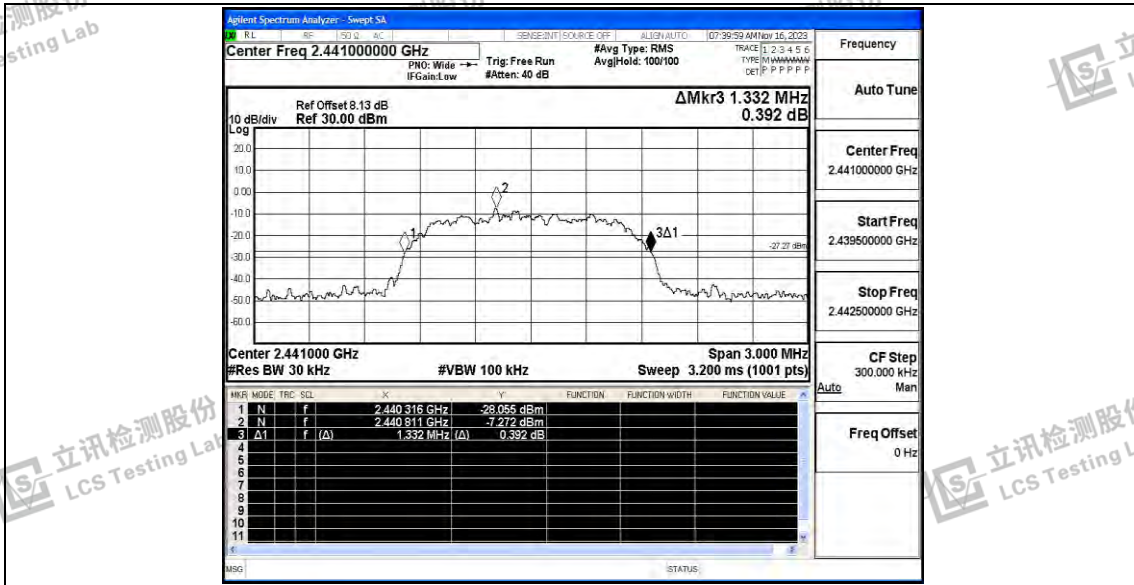


2DH5\_Ant\_2402

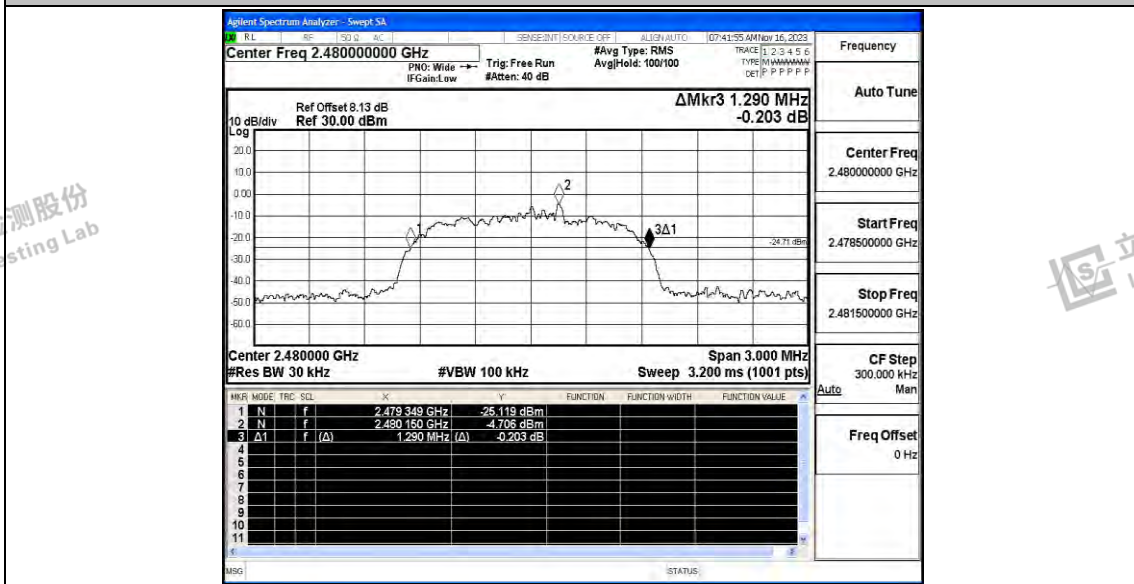


2DH5\_Ant\_2441



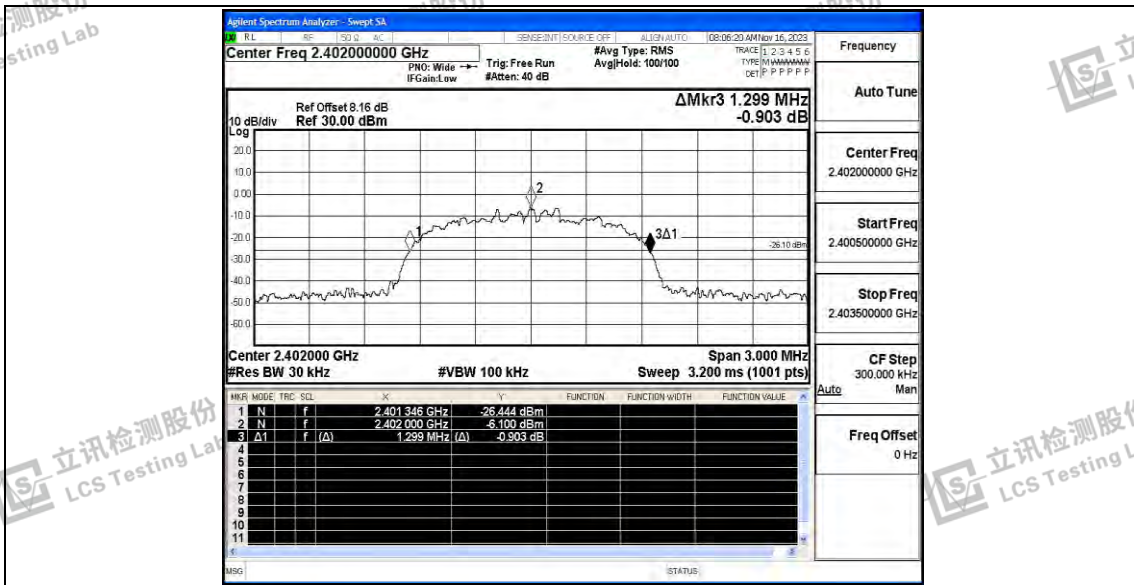


2DH5\_Ant\_2480

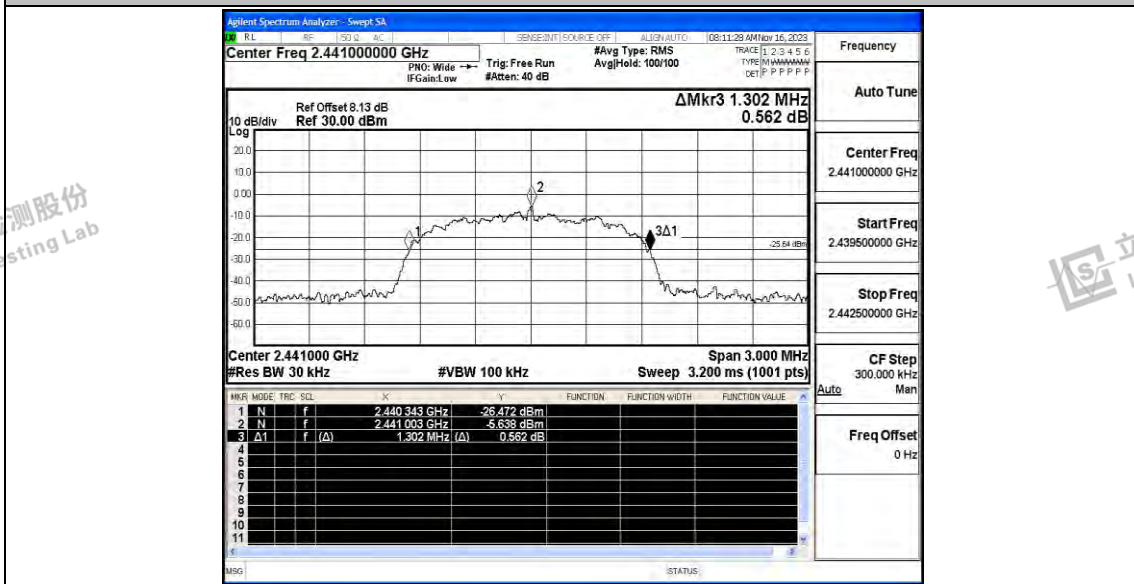


3DH5\_Ant\_2402



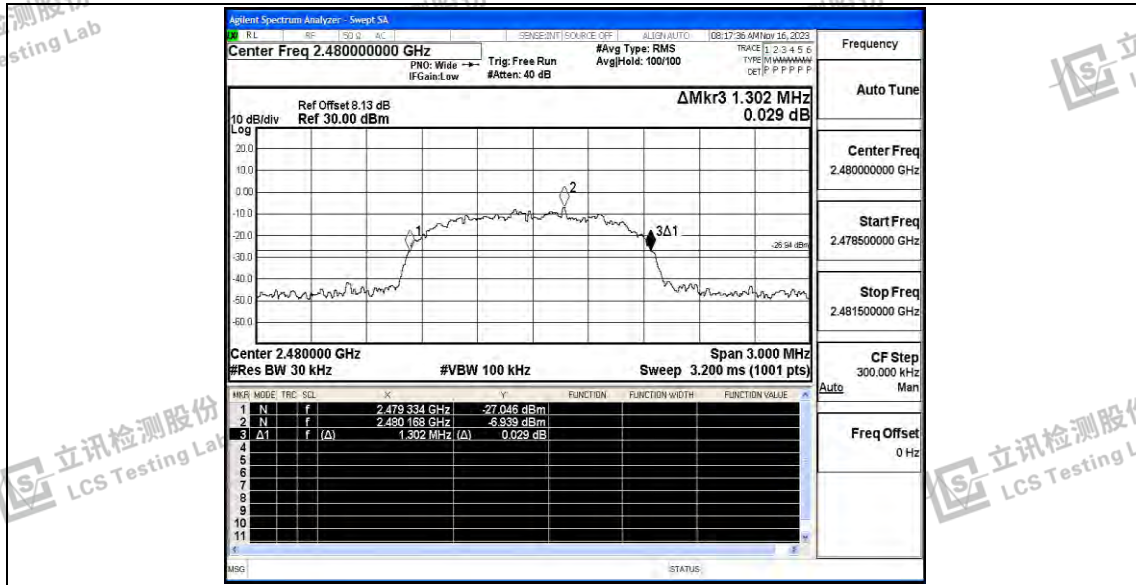


3DH5\_Ant\_2441



3DH5\_Ant\_2480







## A.2 Maximum peak conducted output power

### Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant	2402	-0.57	≤20.97	PASS
		2441	-0.4	≤20.97	PASS
		2480	-0.22	≤20.97	PASS
2DH5	Ant	2402	-0.72	≤20.97	PASS
		2441	-0.67	≤20.97	PASS
		2480	-0.71	≤20.97	PASS
3DH5	Ant	2402	-0.46	≤20.97	PASS
		2441	-0.32	≤20.97	PASS
		2480	-0.29	≤20.97	PASS







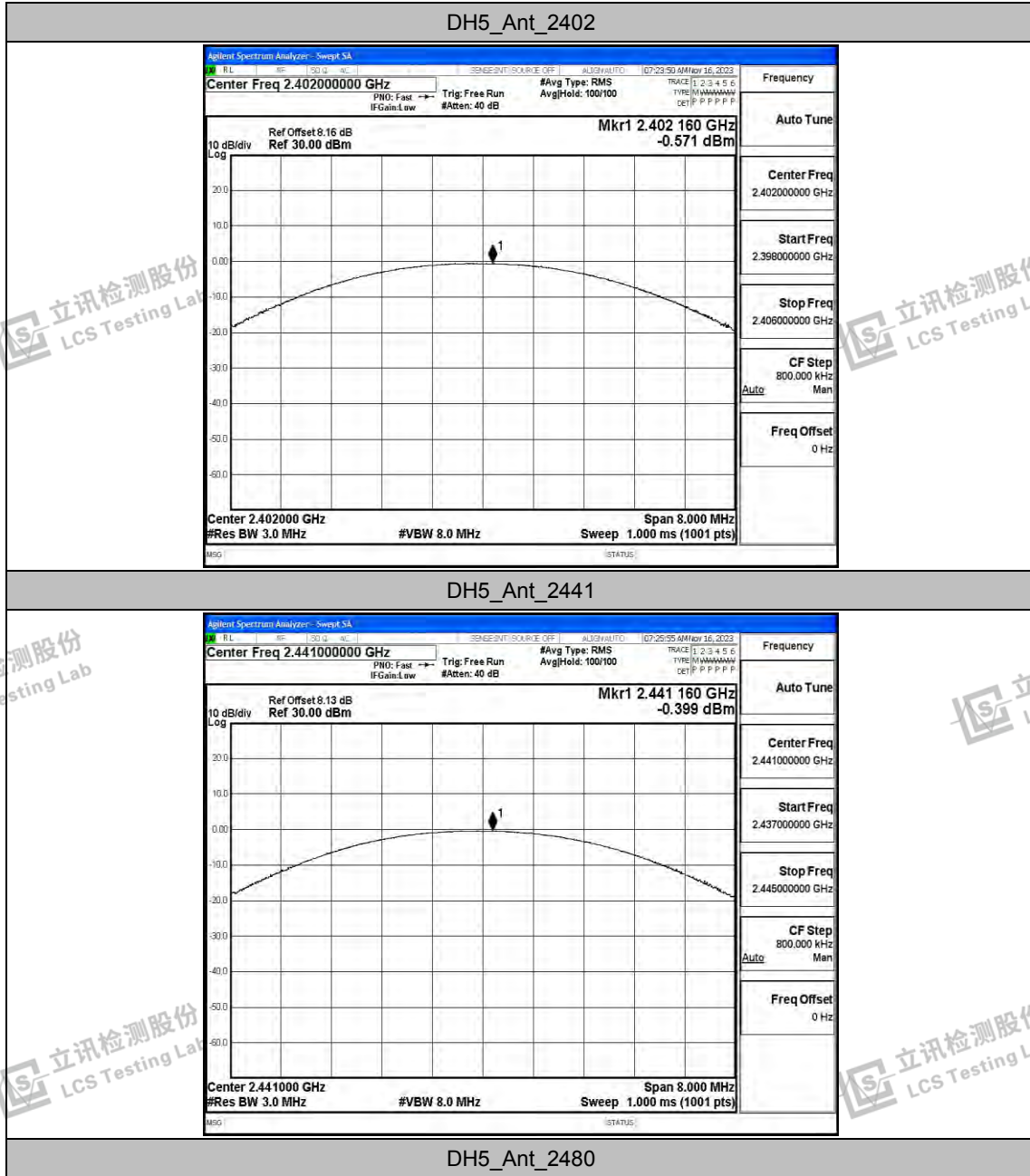
立讯检测股份  
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### Test Graphs



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LCS Testing Lab

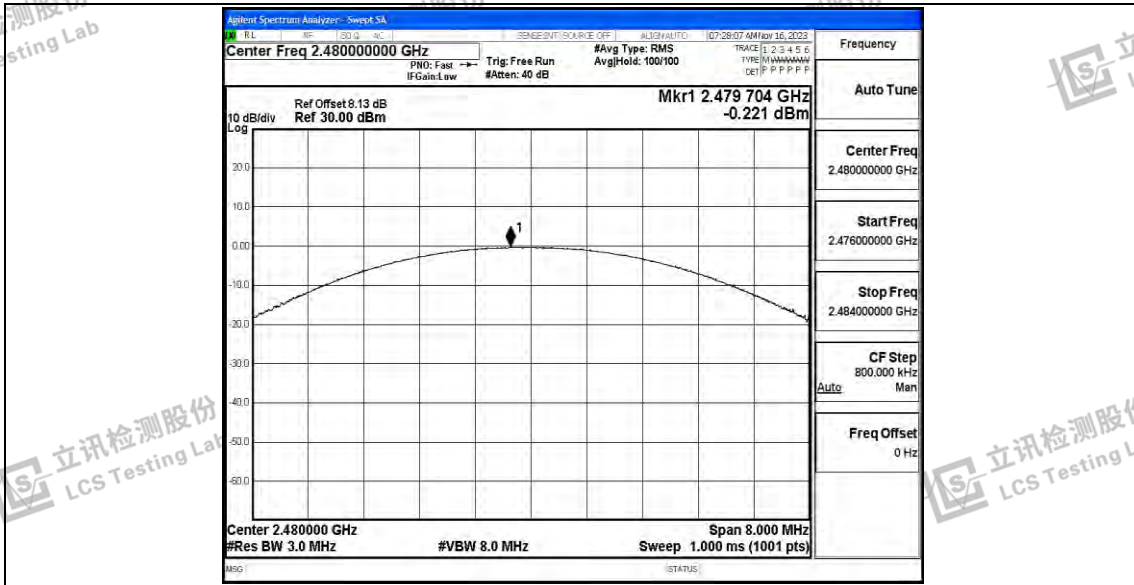
立讯检测股份  
LCS Testing Lab

立讯检测股份  
LCS Testing Lab

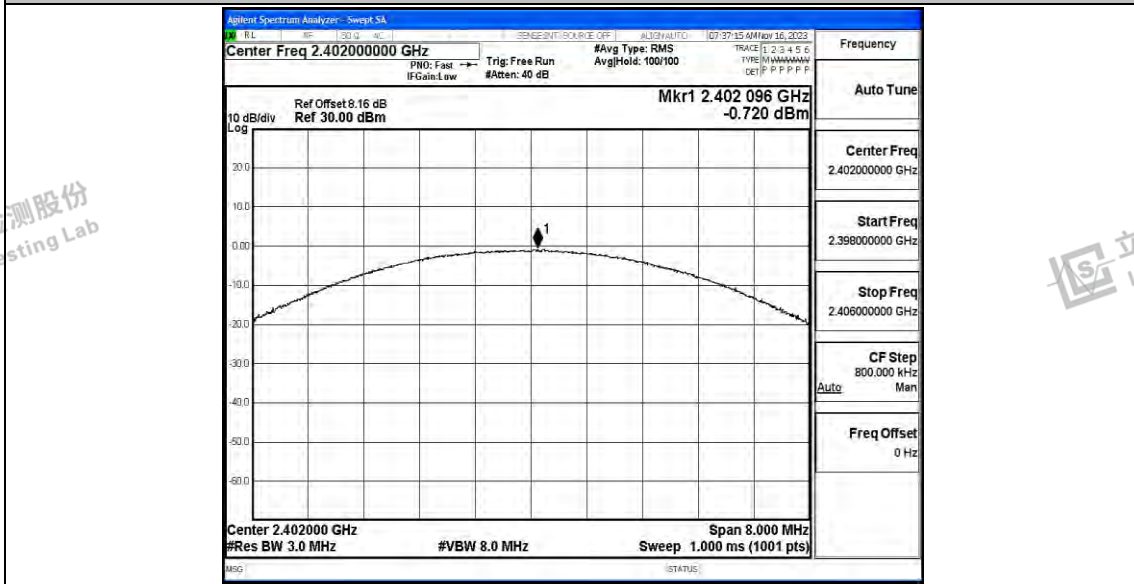
立讯检测股份  
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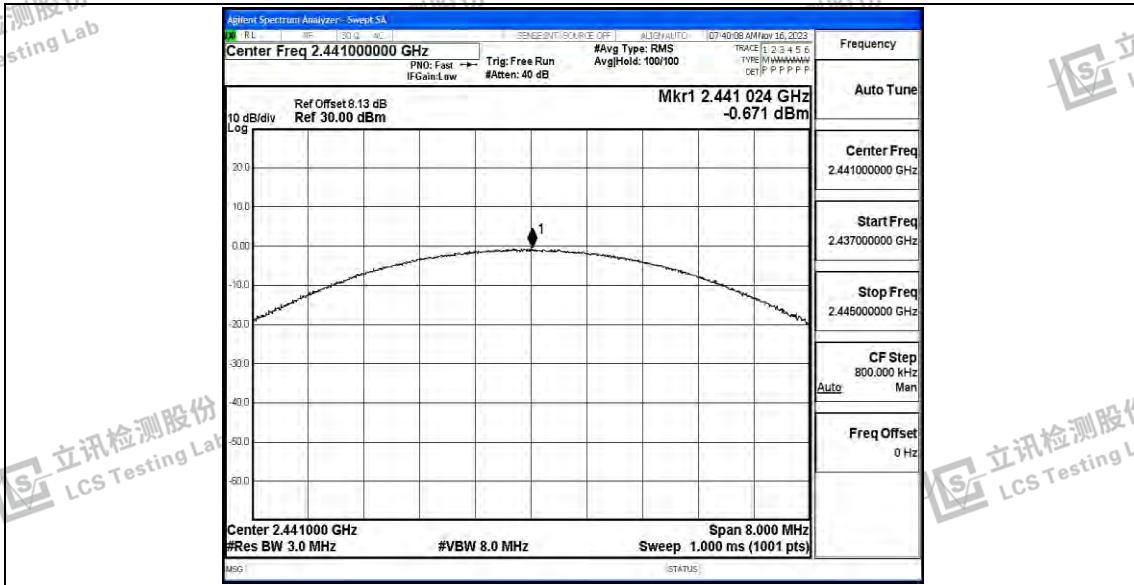


2DH5\_Ant\_2402

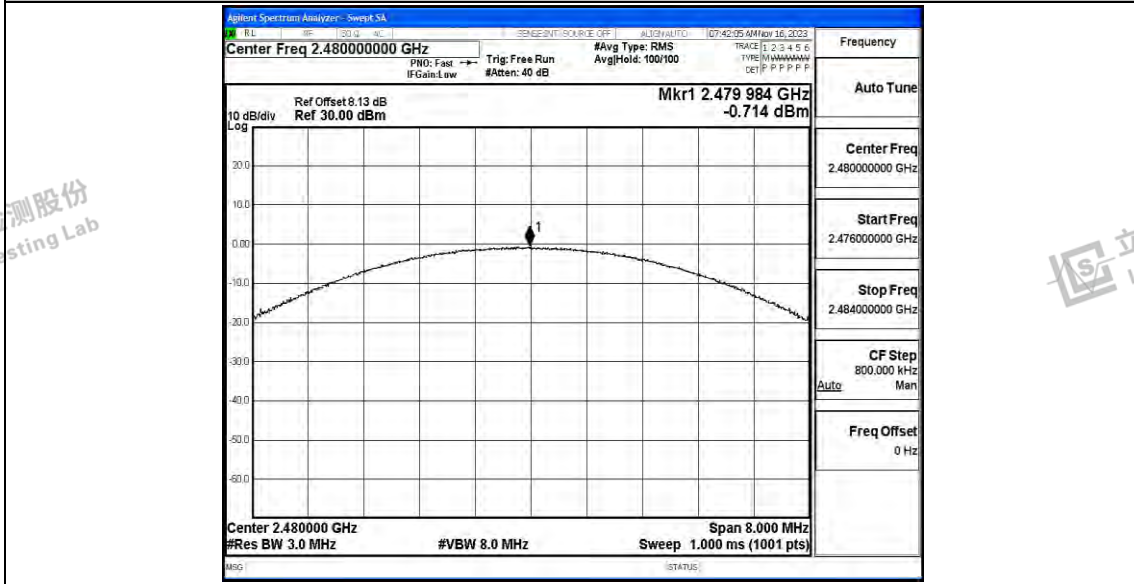


2DH5\_Ant\_2441



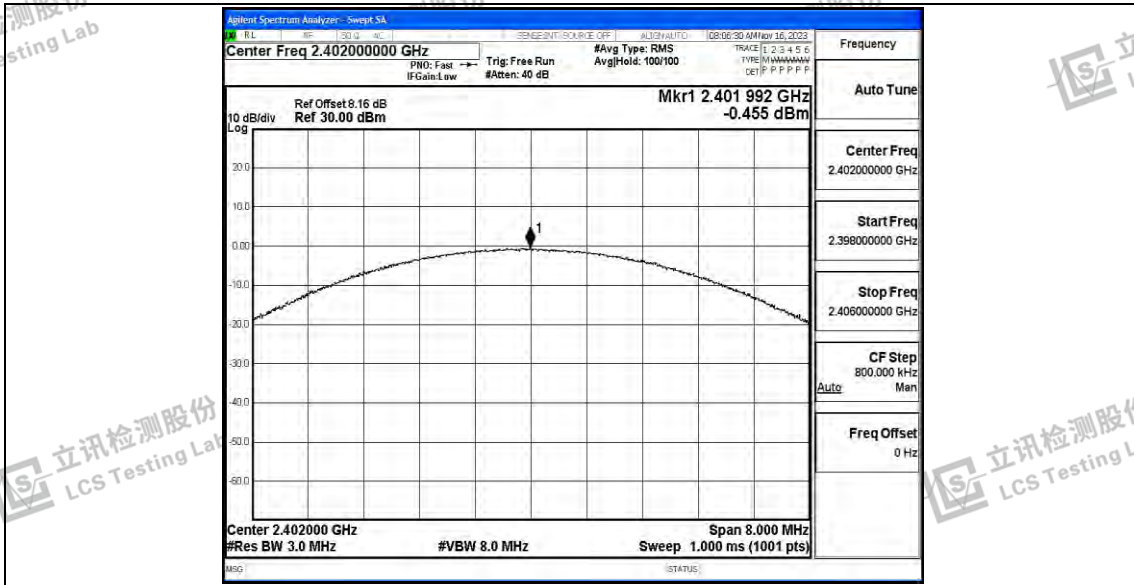


2DH5\_Ant\_2480

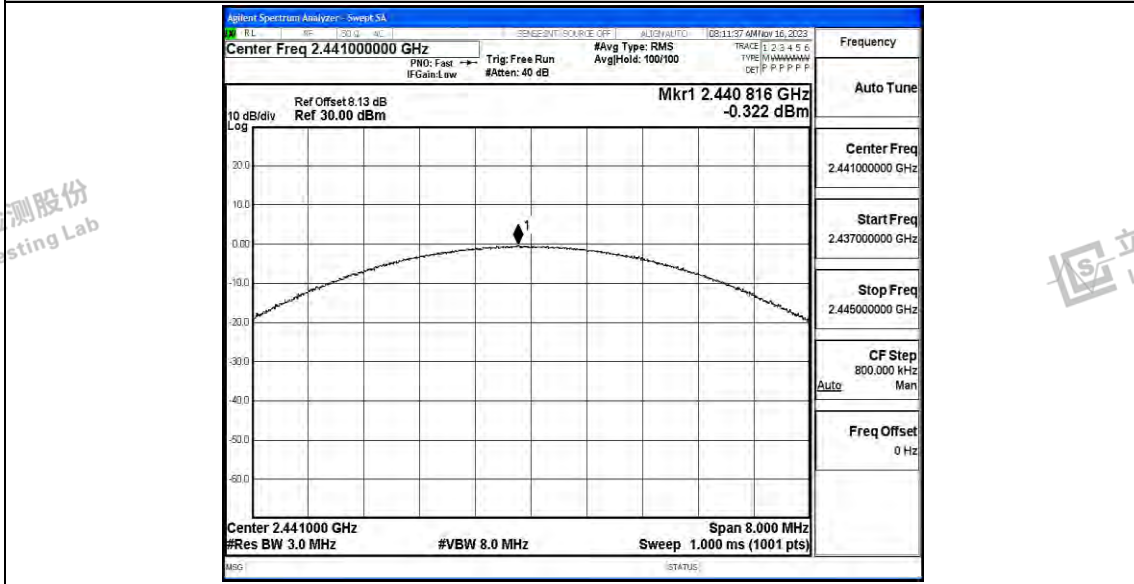


3DH5\_Ant\_2402



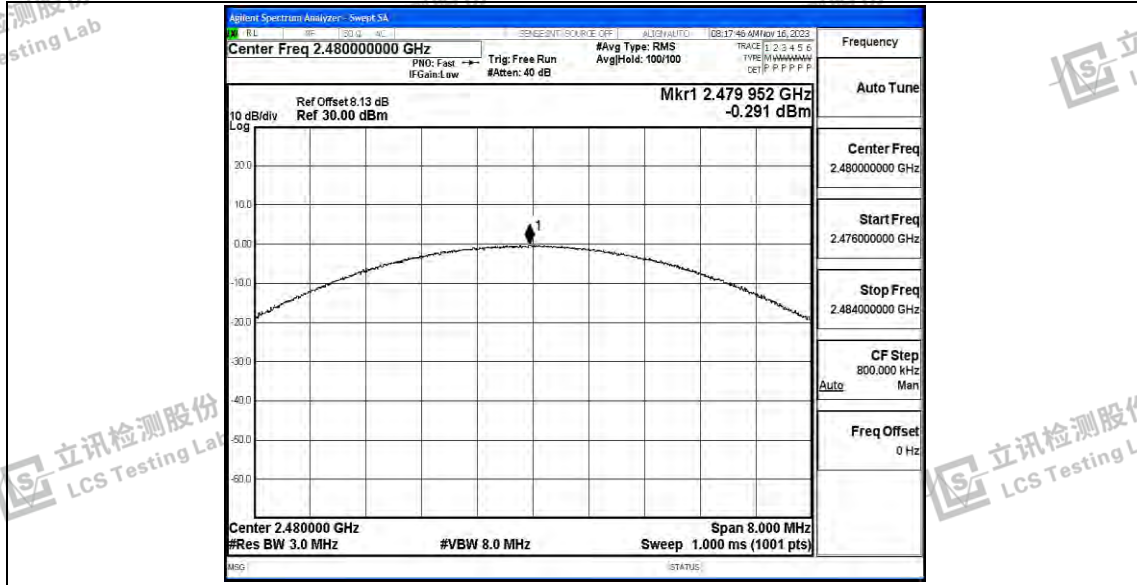


3DH5\_Ant\_2441



3DH5\_Ant\_2480





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 Scan code to check authenticity



### A.3 Carrier frequency separation

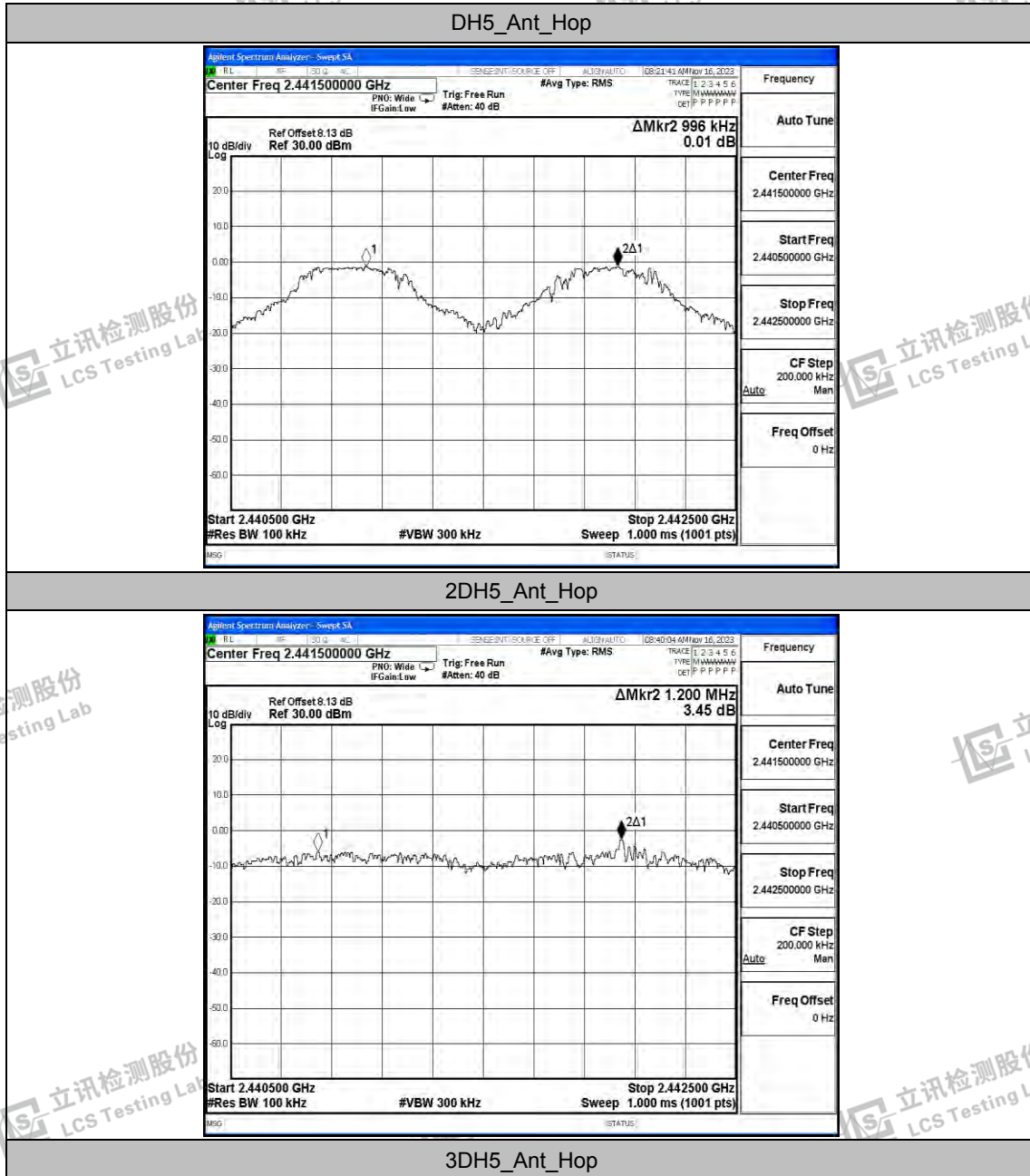
#### Test Result

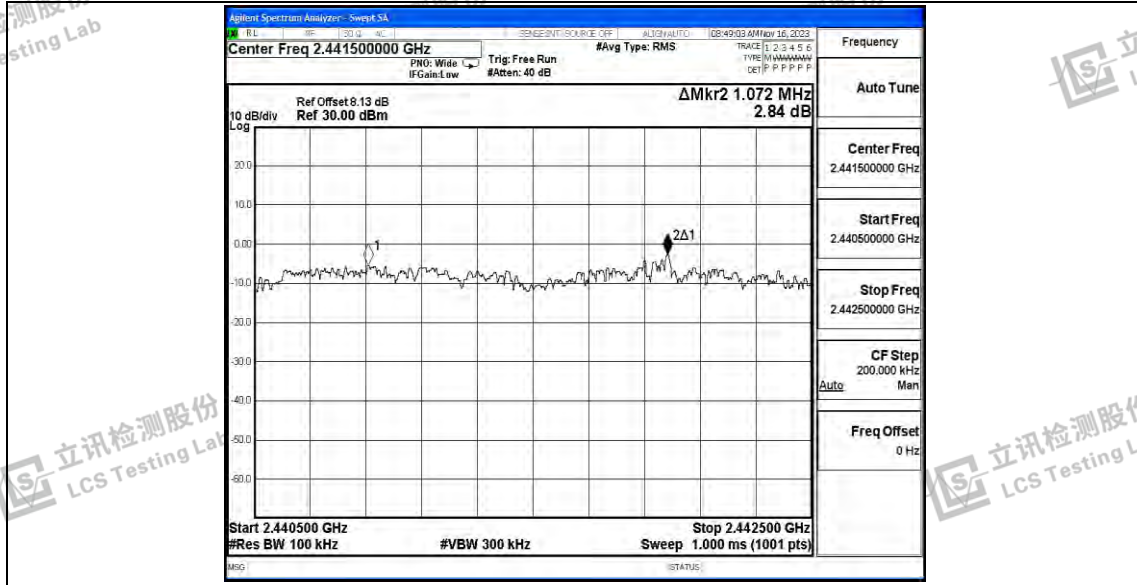
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant	Hop	0.996	≥0.696	PASS
2DH5	Ant	Hop	1.2	≥0.888	PASS
3DH5	Ant	Hop	1.072	≥0.868	PASS





### Test Graphs









## A.4 Time of occupancy

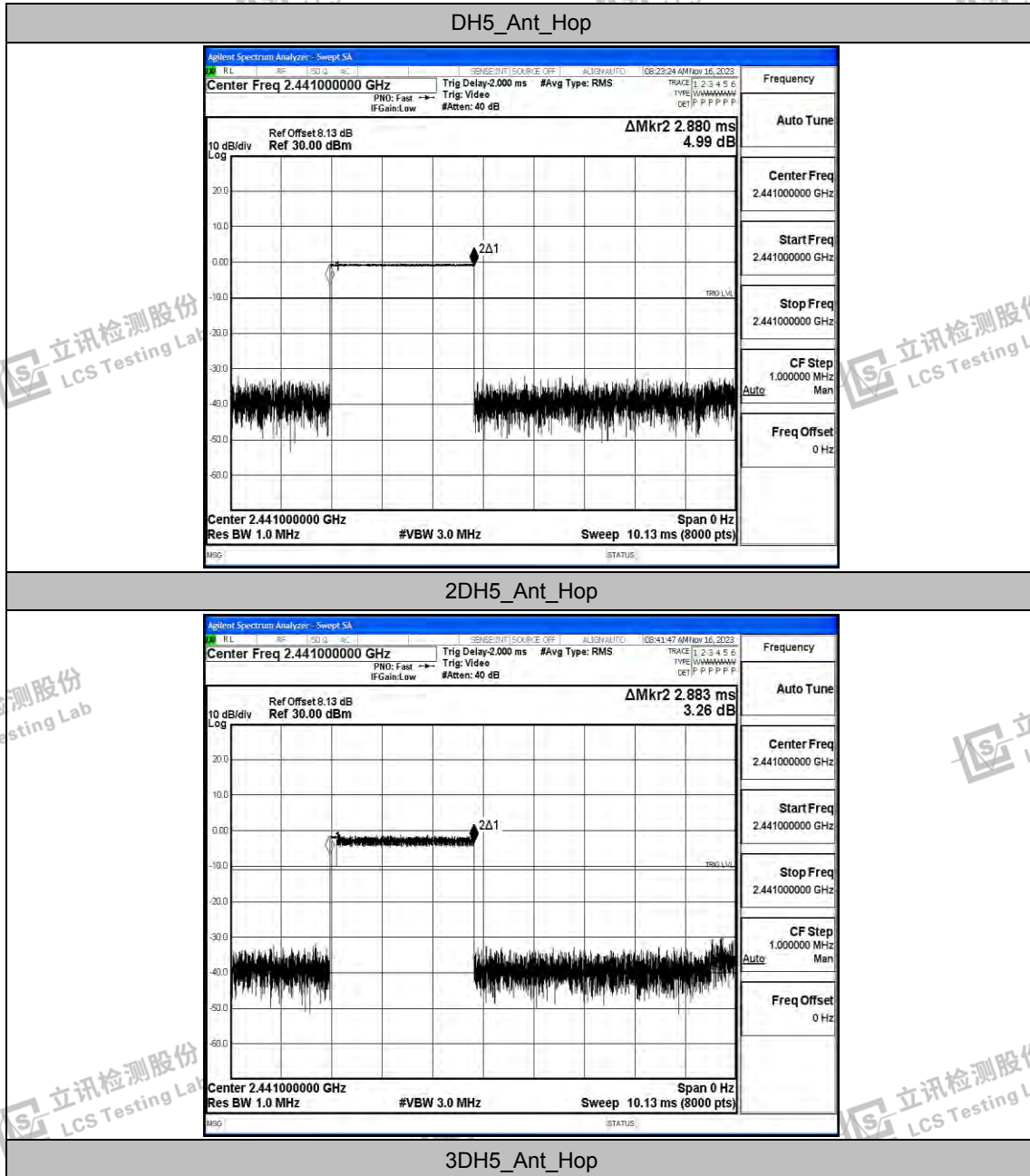
### Test Result

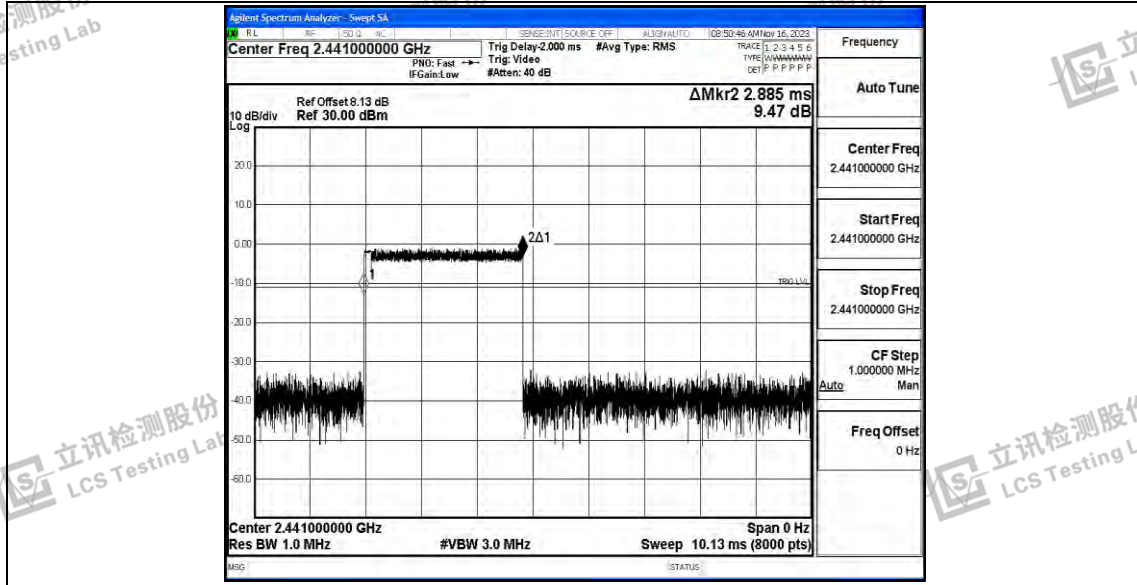
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant	Hop	2.883	106.67	0.308	≤0.4	PASS
3DH5	Ant	Hop	2.885	106.67	0.308	≤0.4	PASS





### Test Graphs





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## A.5 Number of hopping channels

### Test Result

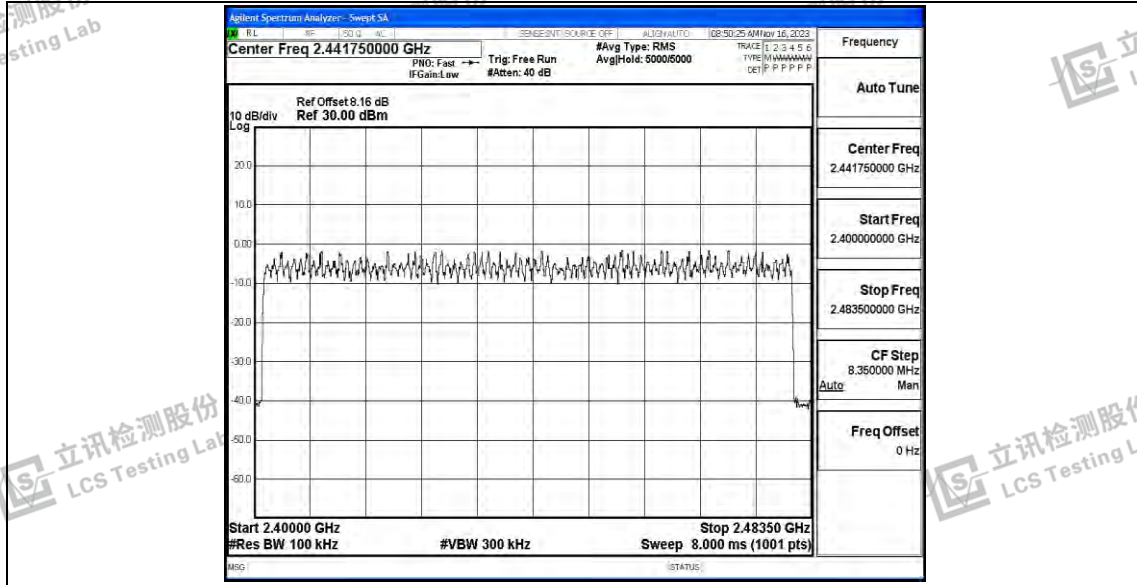
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant	Hop	79	≥15	PASS
2DH5	Ant	Hop	79	≥15	PASS
3DH5	Ant	Hop	79	≥15	PASS





### Test Graphs







### A.6 Band edge measurements

#### Test Result

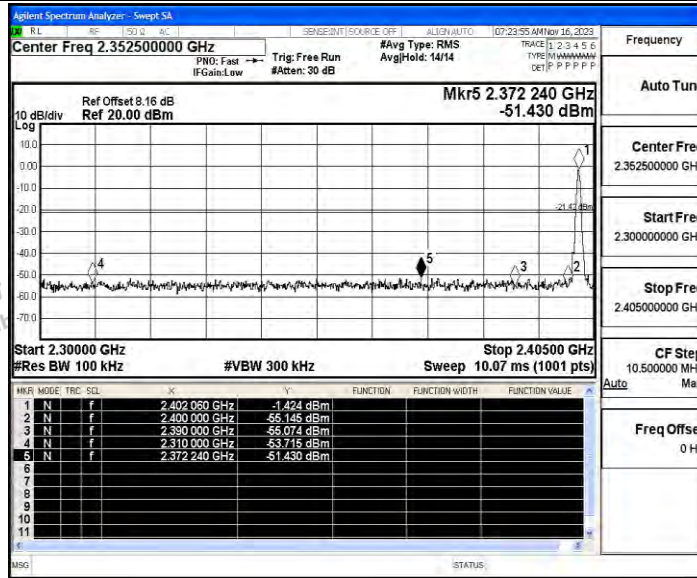
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant	Low	2402	-1.42	-51.43	≤-21.42	PASS
		High	2480	-1.33	-50.15	≤-21.33	PASS
		Low	Hop_2402	-2.11	-49.88	≤-22.11	PASS
		High	Hop_2480	-0.77	-48.96	≤-20.77	PASS
2DH5	Ant	Low	2402	-3.69	-50.9	≤-23.69	PASS
		High	2480	-3.49	-50.6	≤-23.49	PASS
		Low	Hop_2402	-2.63	-50.07	≤-22.63	PASS
		High	Hop_2480	-1.74	-49.24	≤-21.74	PASS
3DH5	Ant	Low	2402	-5.55	-51.14	≤-25.55	PASS
		High	2480	-5.79	-50.82	≤-25.79	PASS
		Low	Hop_2402	-4.27	-49.53	≤-24.27	PASS
		High	Hop_2480	-2.36	-48.93	≤-22.36	PASS



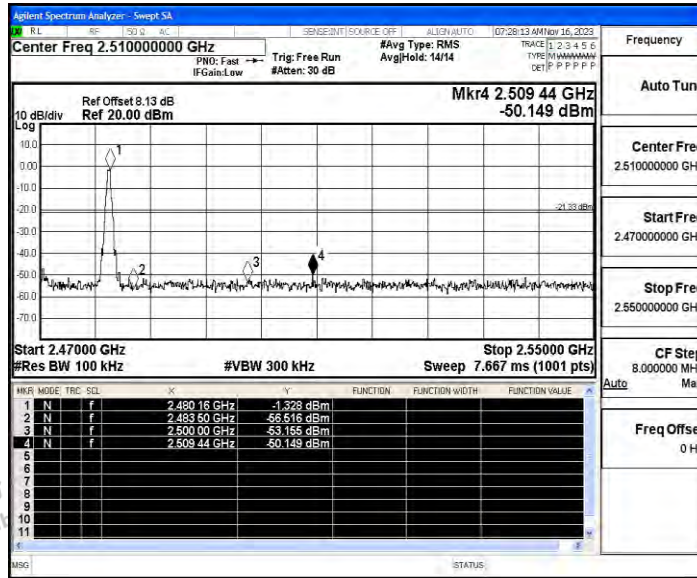


Test Graphs

DH5\_Ant\_Low\_2402



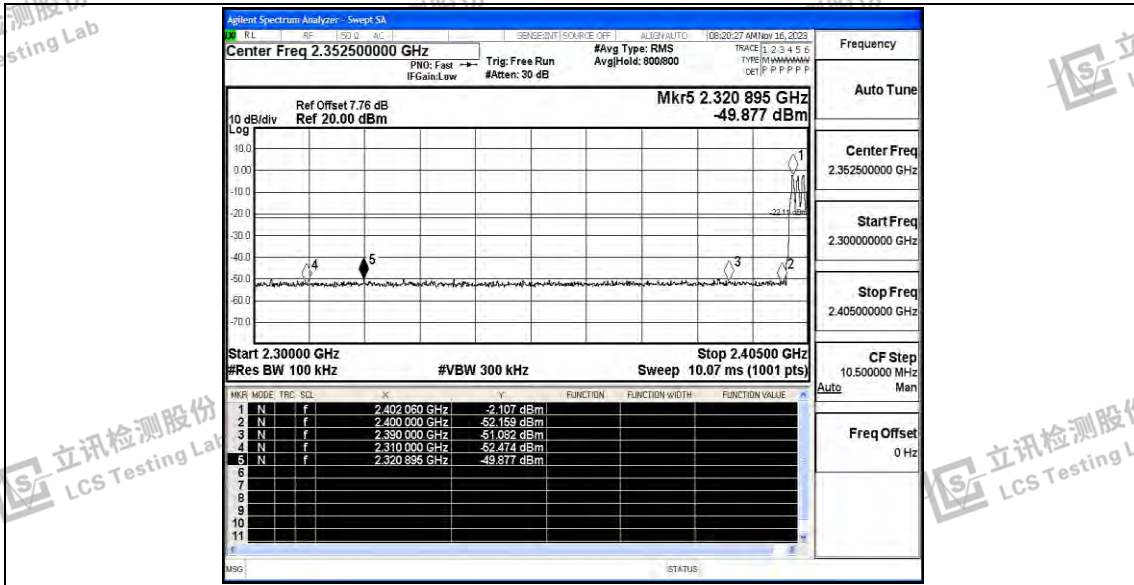
DH5\_Ant\_High\_2480



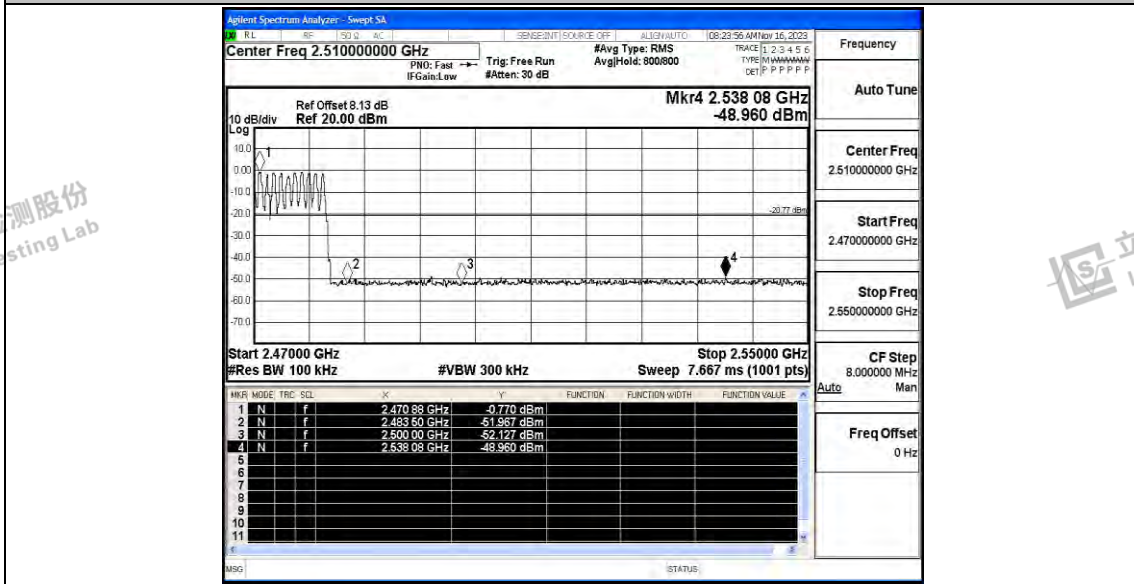
DH5\_Ant\_Low\_Hop\_2402





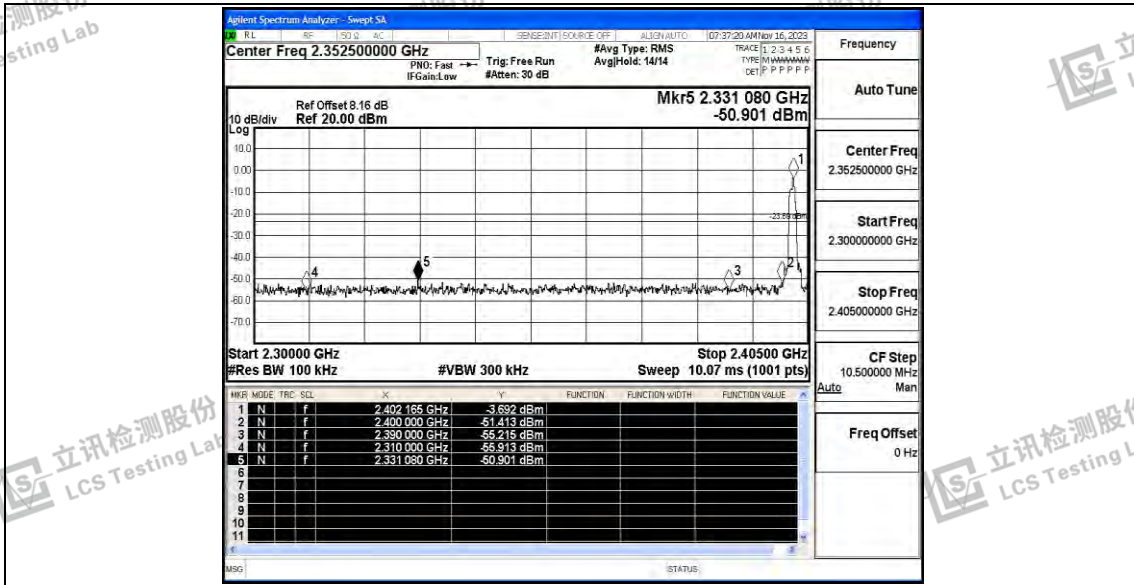


DH5\_Ant\_High\_Hop\_2480

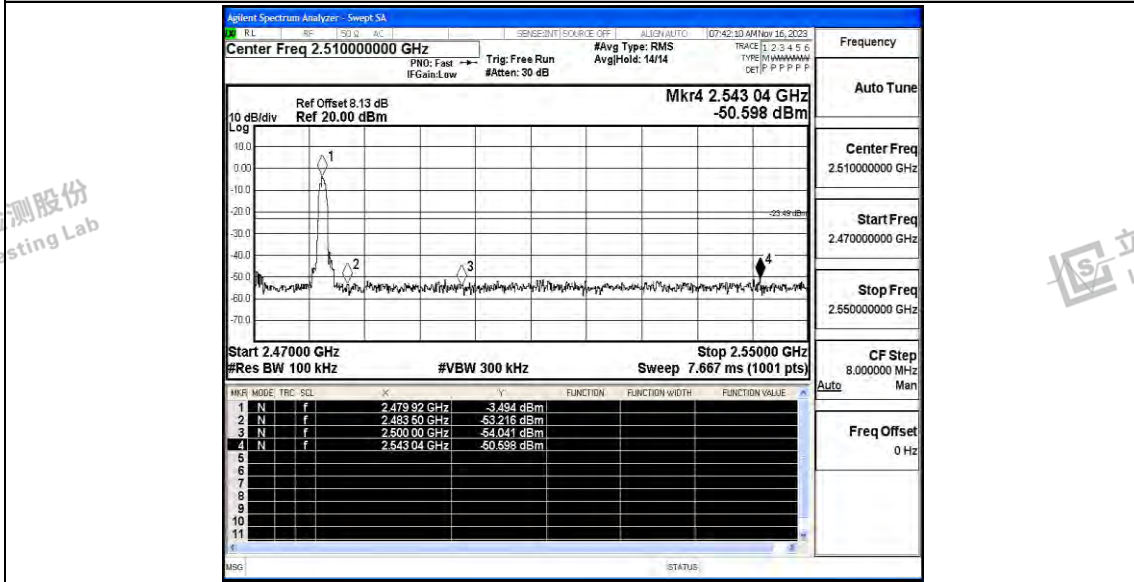


2DH5\_Ant\_Low\_2402



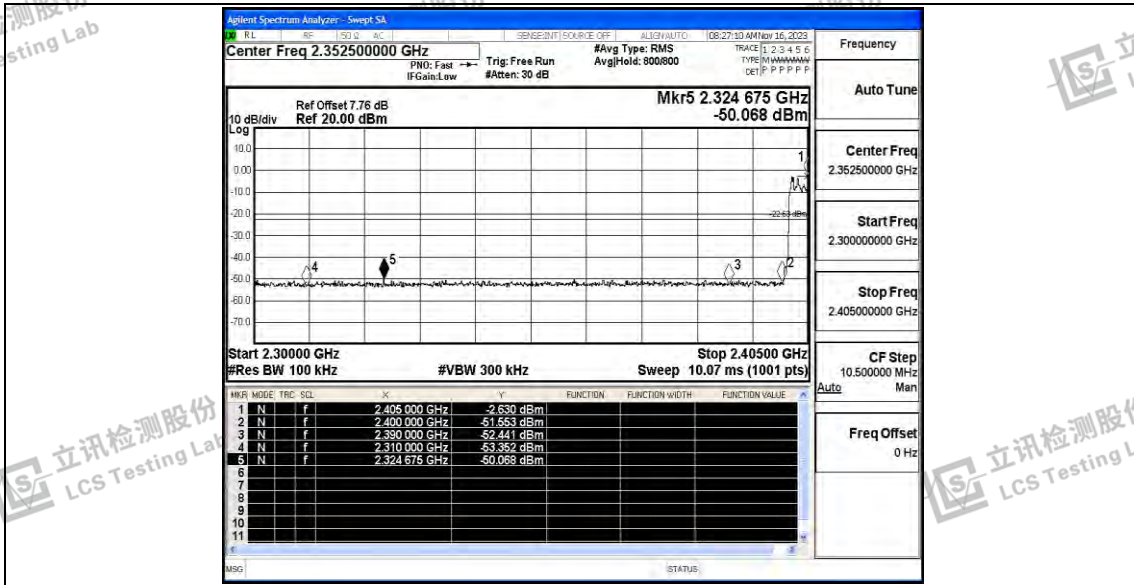


2DH5\_Ant\_High\_2480

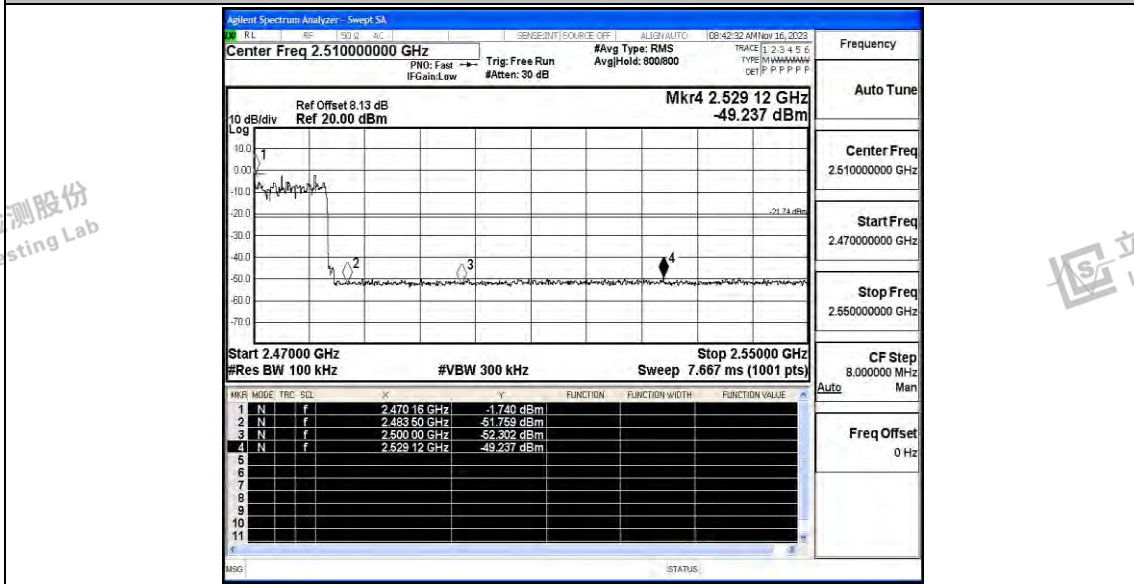


2DH5\_Ant\_Low\_Hop\_2402



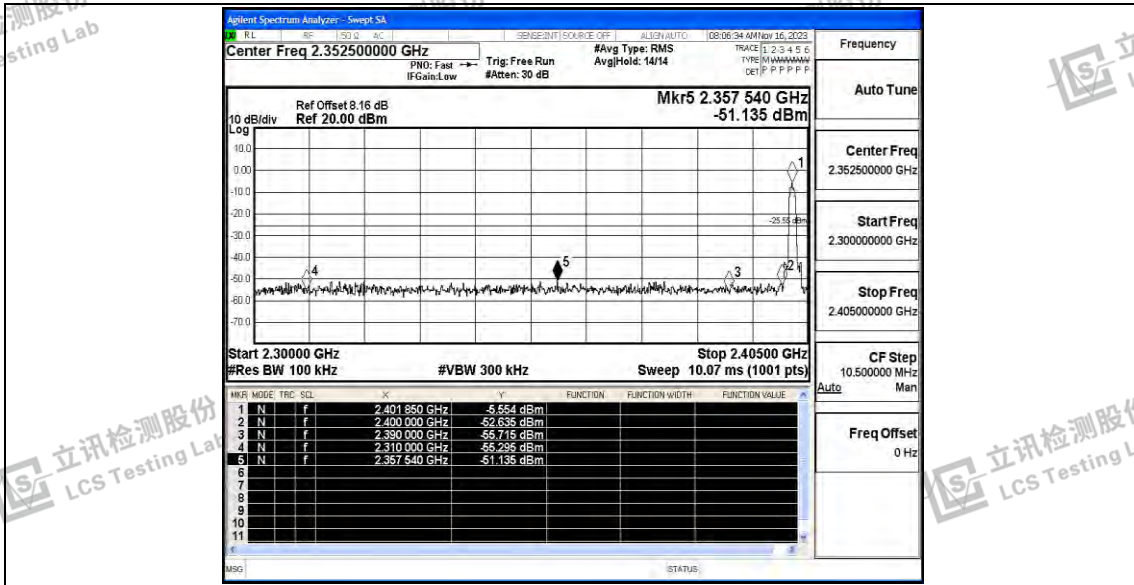


2DH5\_Ant\_High\_Hop\_2480

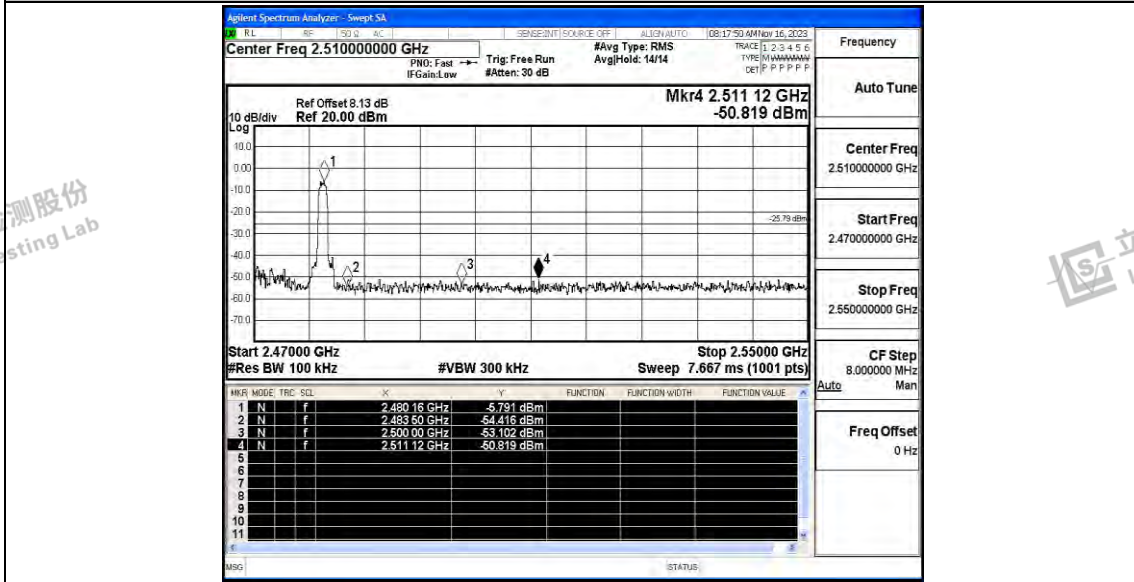


3DH5\_Ant\_Low\_2402



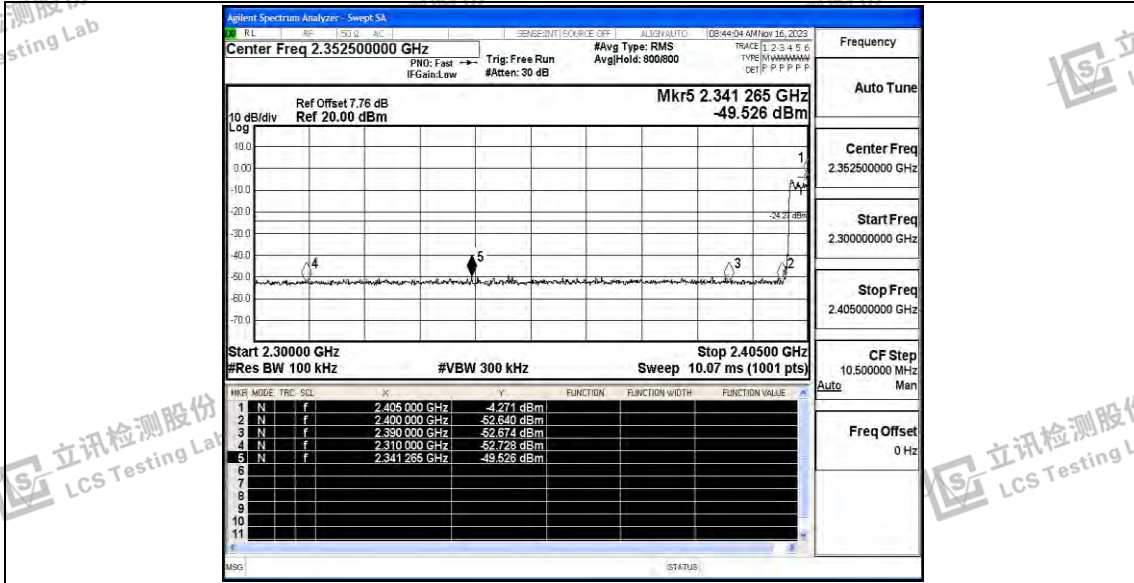


3DH5\_Ant\_High\_2480

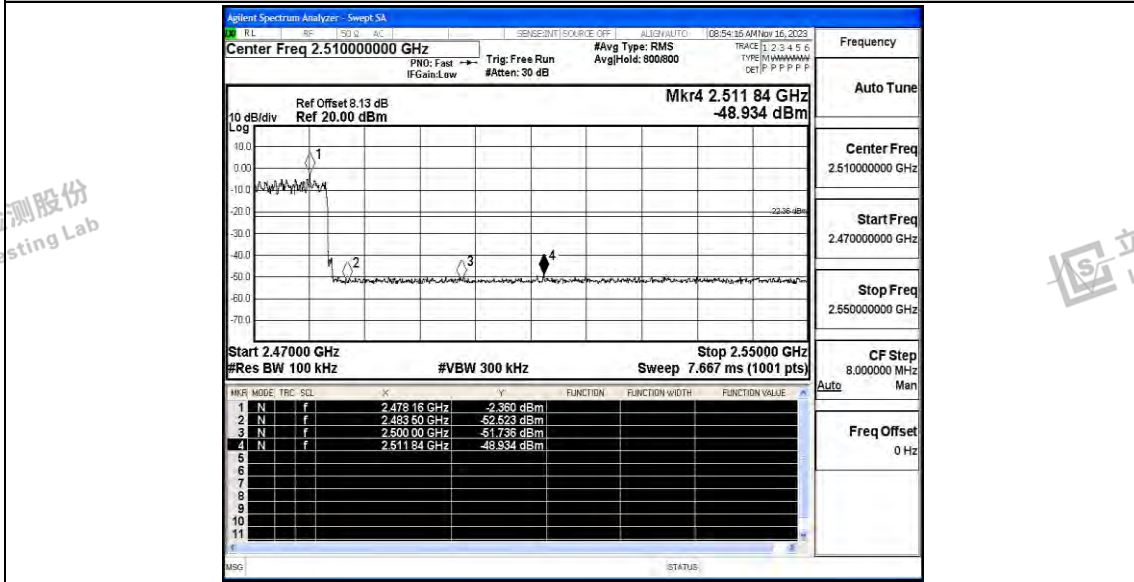


3DH5\_Ant\_Low\_Hop\_2402





3DH5\_Ant\_High\_Hop\_2480





## A.7 Conducted Spurious Emission

### Test Result

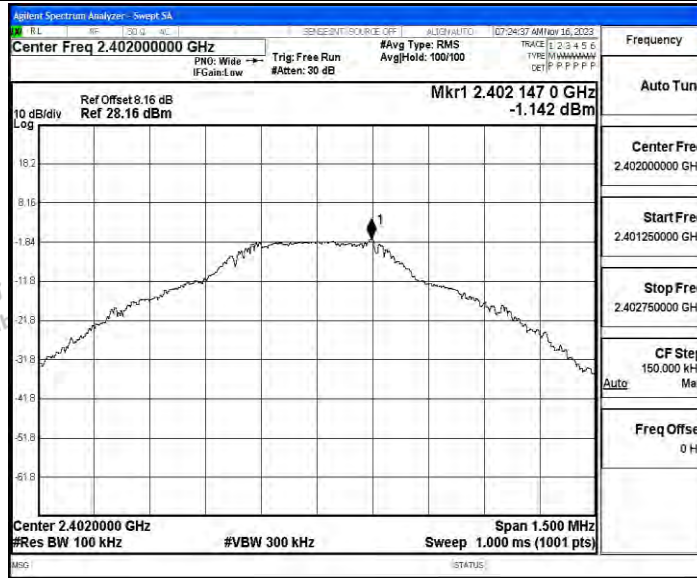
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant	2402	Reference	-1.14	-1.14	---	PASS
			30~1000	-1.14	-61.36	≤-21.14	PASS
			1000~26500	-1.14	-48.26	≤-21.14	PASS
		2441	Reference	-1.09	-1.09	---	PASS
			30~1000	-1.09	-61.82	≤-21.09	PASS
			1000~26500	-1.09	-49.75	≤-21.09	PASS
		2480	Reference	-1.03	-1.03	---	PASS
			30~1000	-1.03	-61.56	≤-21.03	PASS
			1000~26500	-1.03	-49.02	≤-21.03	PASS
2DH5	Ant	2402	Reference	-2.21	-2.21	---	PASS
			30~1000	-2.21	-61.59	≤-22.21	PASS
			1000~26500	-2.21	-48.88	≤-22.21	PASS
		2441	Reference	-2.20	-2.20	---	PASS
			30~1000	-2.20	-61.36	≤-22.2	PASS
			1000~26500	-2.20	-49.11	≤-22.2	PASS
		2480	Reference	-2.26	-2.26	---	PASS
			30~1000	-2.26	-61.92	≤-22.26	PASS
			1000~26500	-2.26	-48.66	≤-22.26	PASS
3DH5	Ant	2402	Reference	-1.97	-1.97	---	PASS
			30~1000	-1.97	-62.05	≤-21.97	PASS
			1000~26500	-1.97	-49.01	≤-21.97	PASS
		2441	Reference	-2.50	-2.50	---	PASS
			30~1000	-2.50	-59.95	≤-22.5	PASS
			1000~26500	-2.50	-49.03	≤-22.5	PASS
		2480	Reference	-4.13	-4.13	---	PASS
			30~1000	-4.13	-60.75	≤-24.13	PASS
			1000~26500	-4.13	-49.79	≤-24.13	PASS



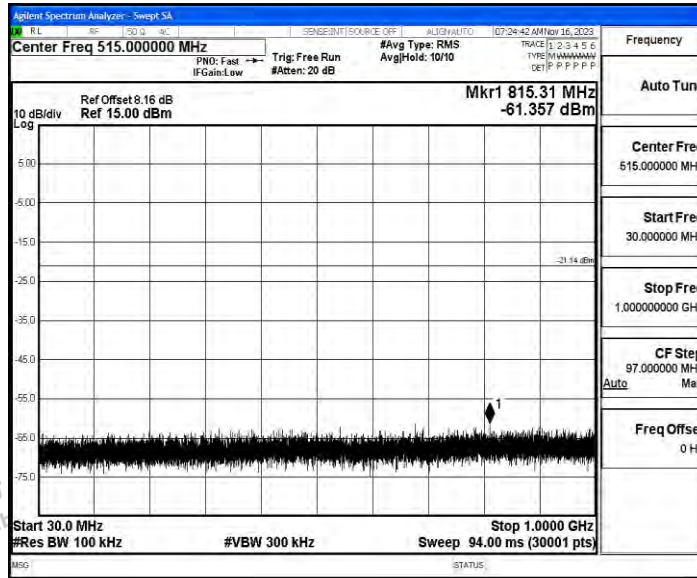


### Test Graphs

#### DH5\_Ant\_2402\_0~Reference

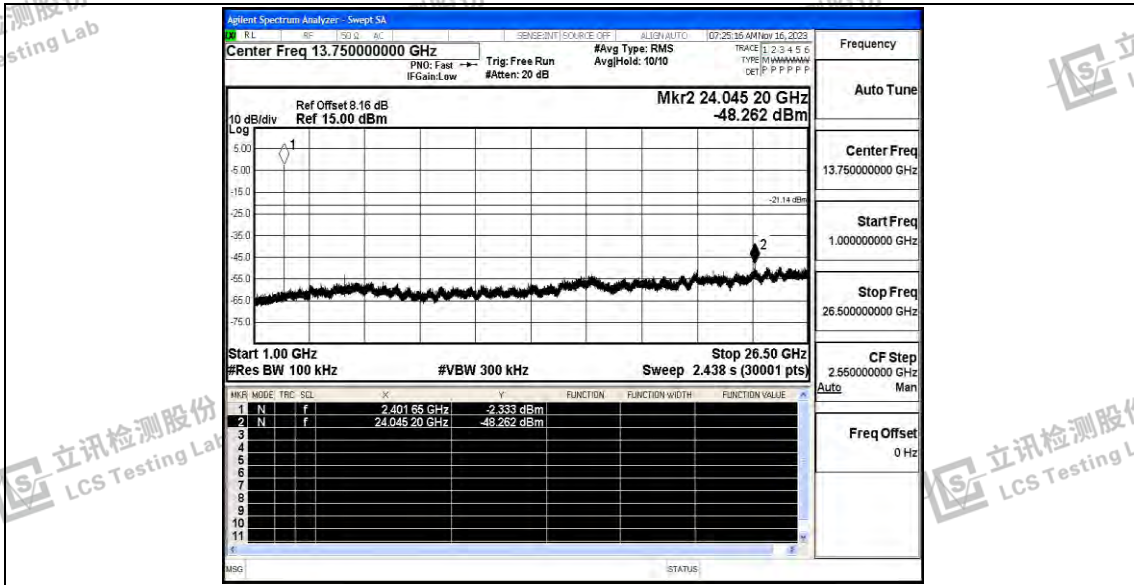


#### DH5\_Ant\_2402\_30~1000

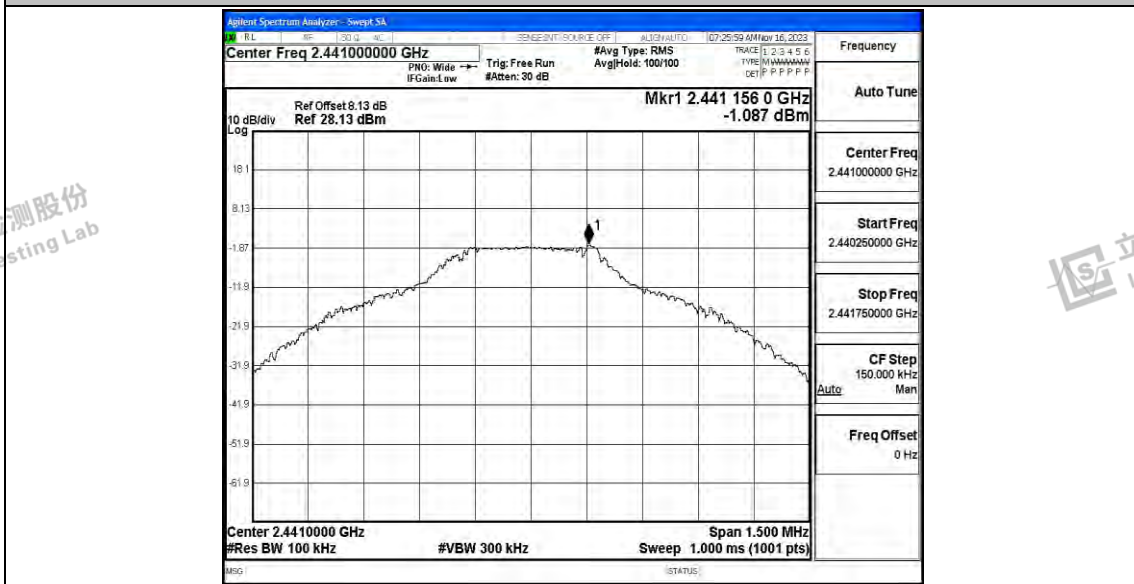


#### DH5\_Ant\_2402\_1000~26500





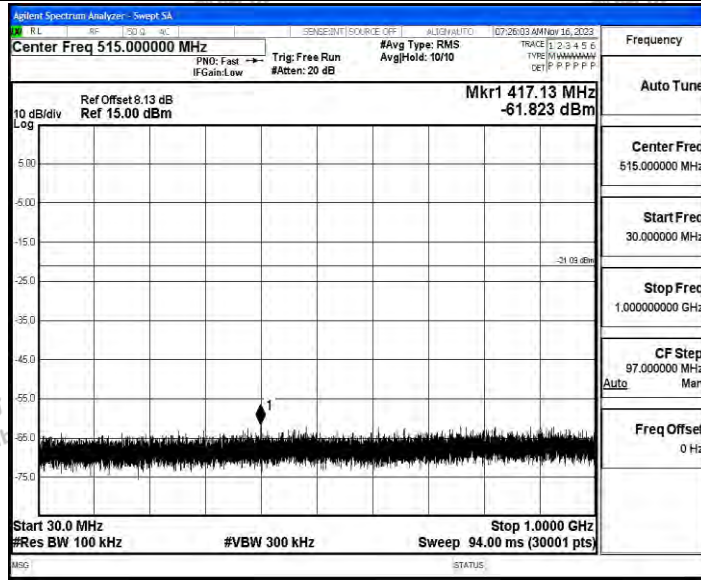
DH5\_Ant\_2441\_0~Reference



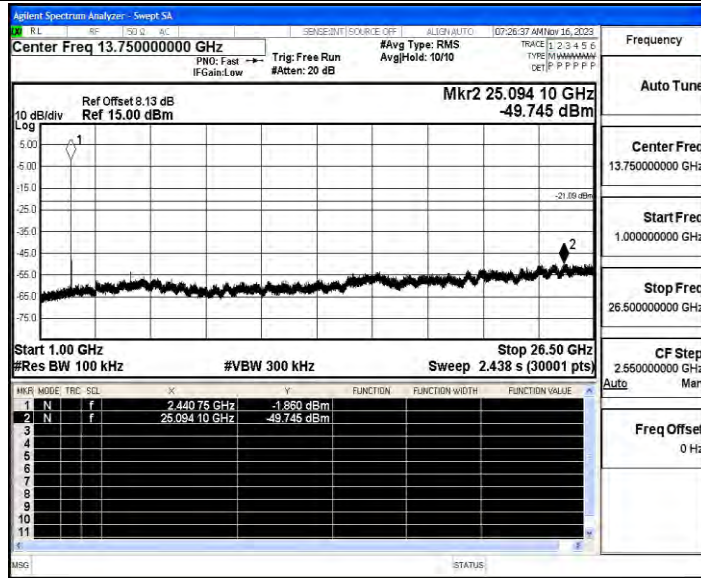
DH5\_Ant\_2441\_30~1000





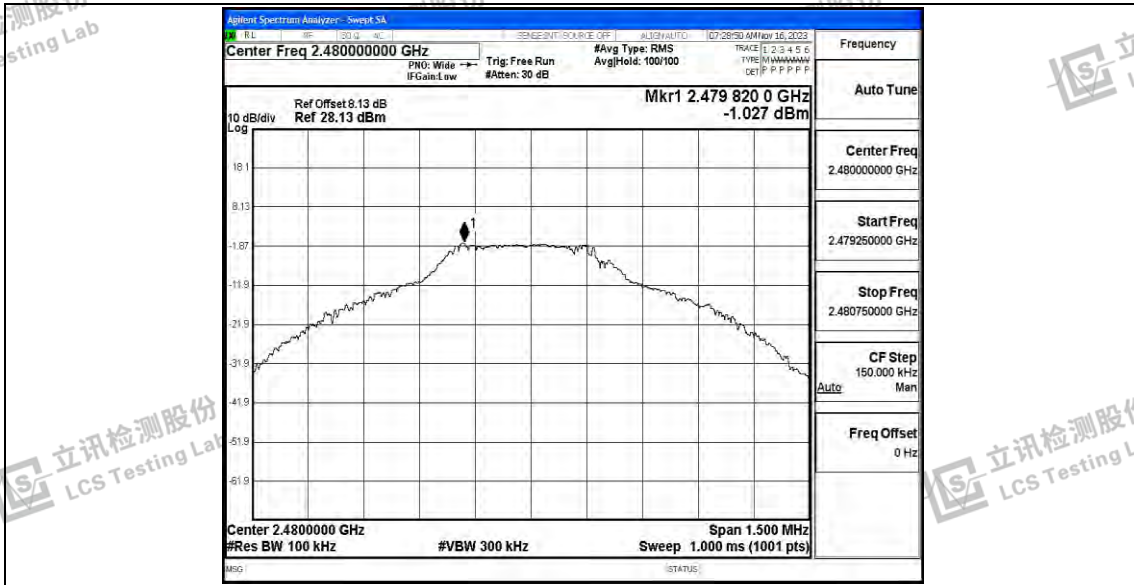


DH5\_Ant\_2441\_1000~26500

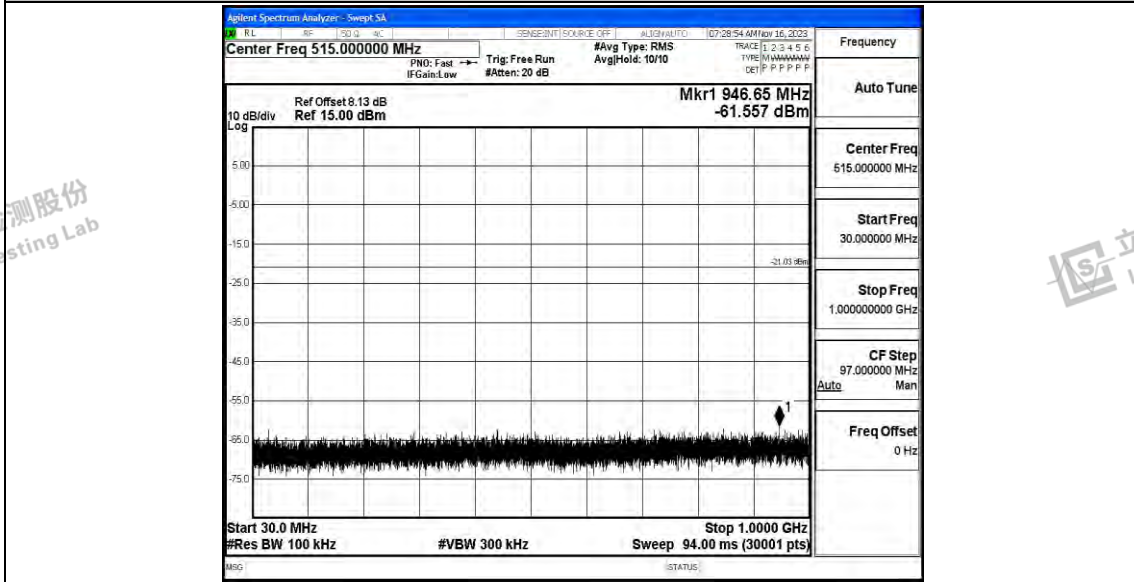


DH5\_Ant\_2480\_0~Reference



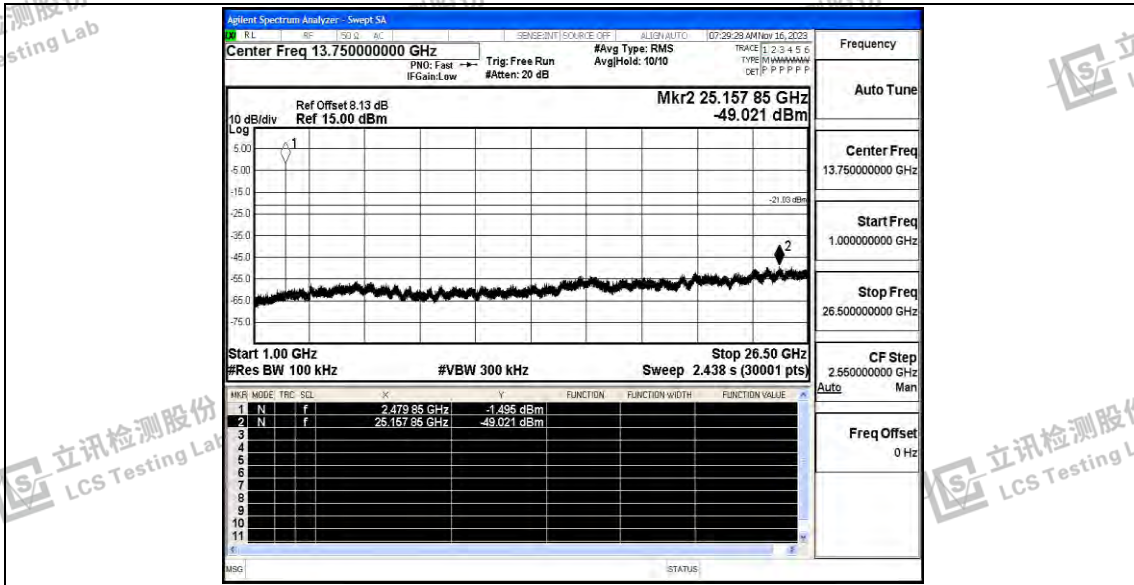


DH5\_Ant\_2480\_30~1000

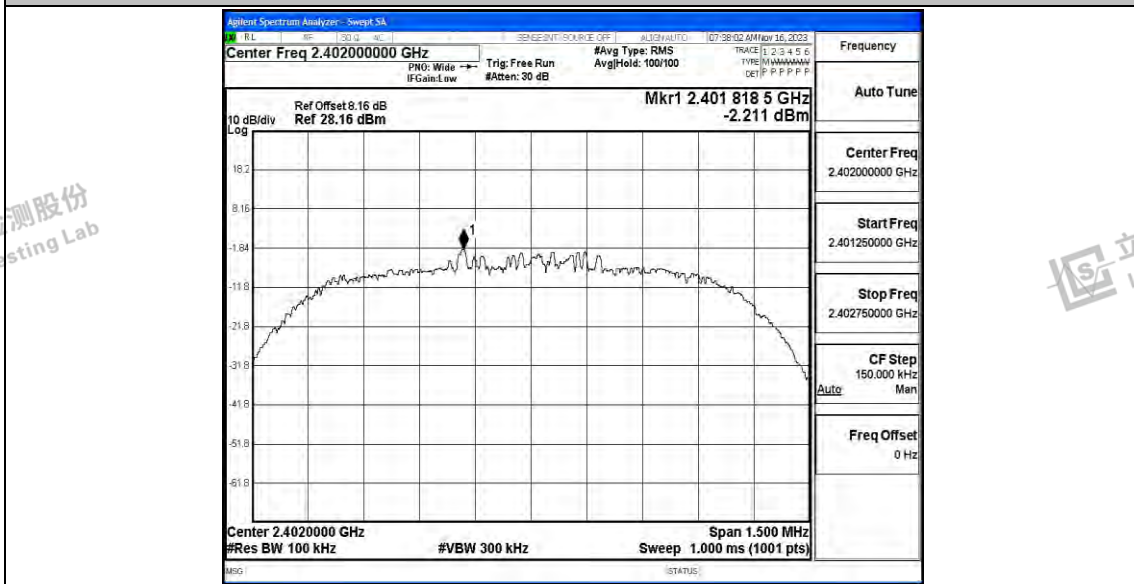


DH5\_Ant\_2480\_1000~26500



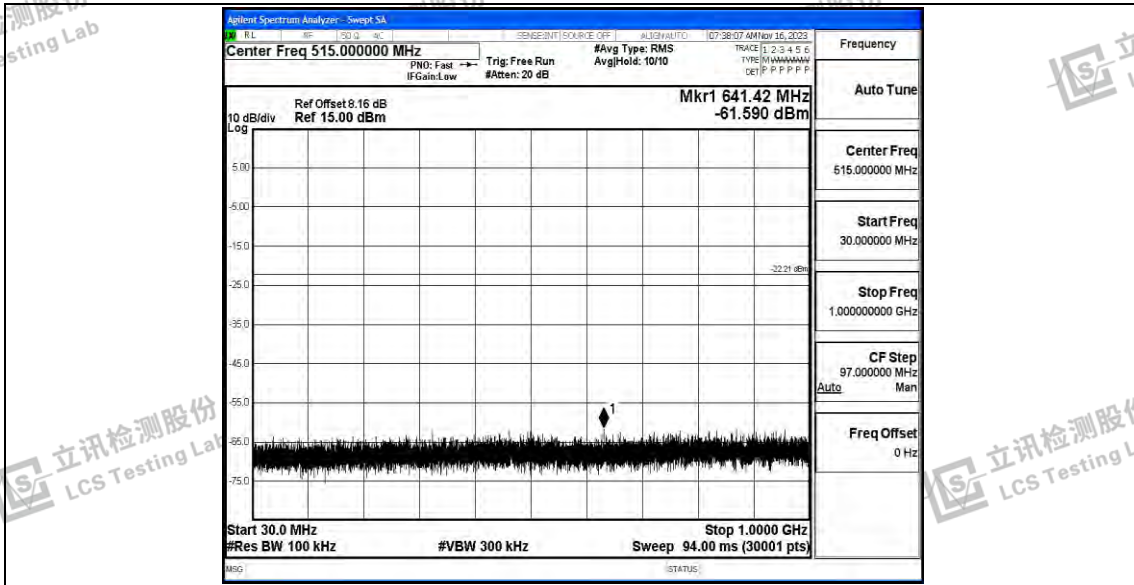


2DH5\_Ant\_2402\_0~Reference

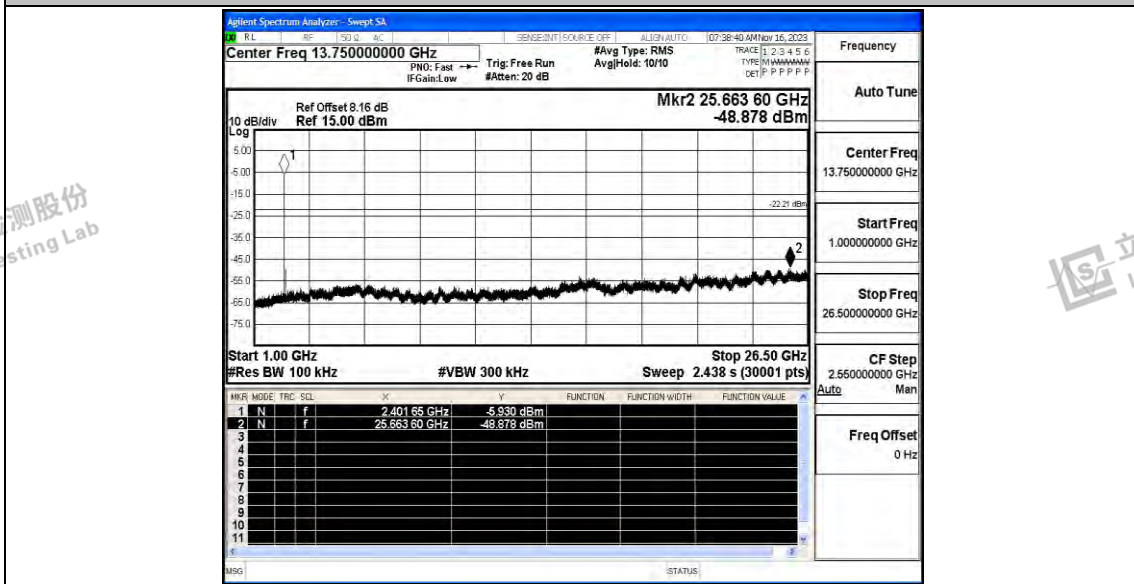


2DH5\_Ant\_2402\_30~1000



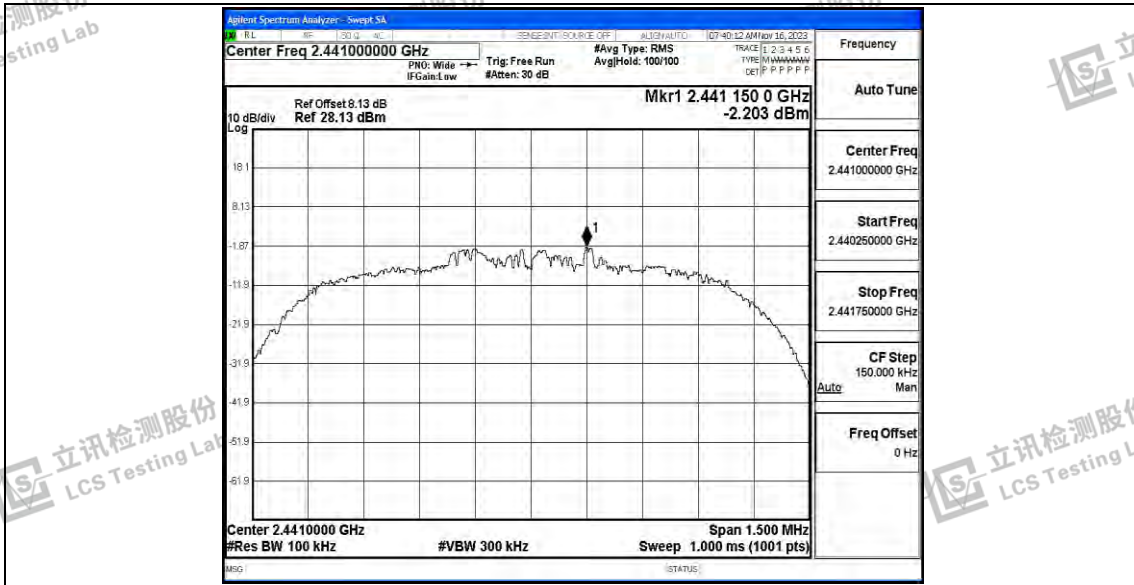


2DH5\_Ant\_2402\_1000~26500

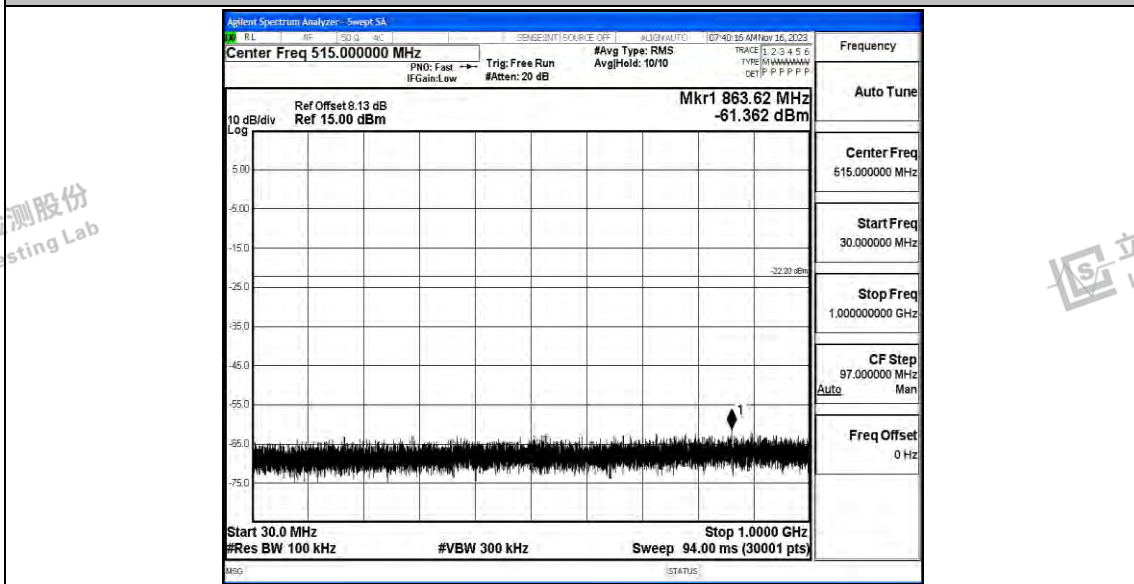


2DH5\_Ant\_2441\_0~Reference



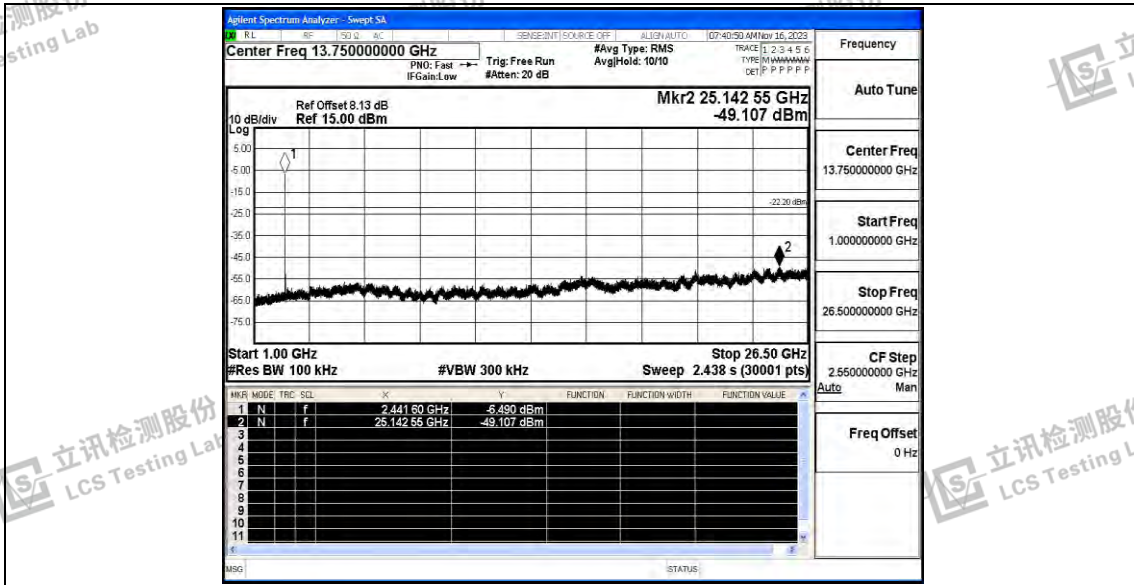


2DH5\_Ant\_2441\_30~1000

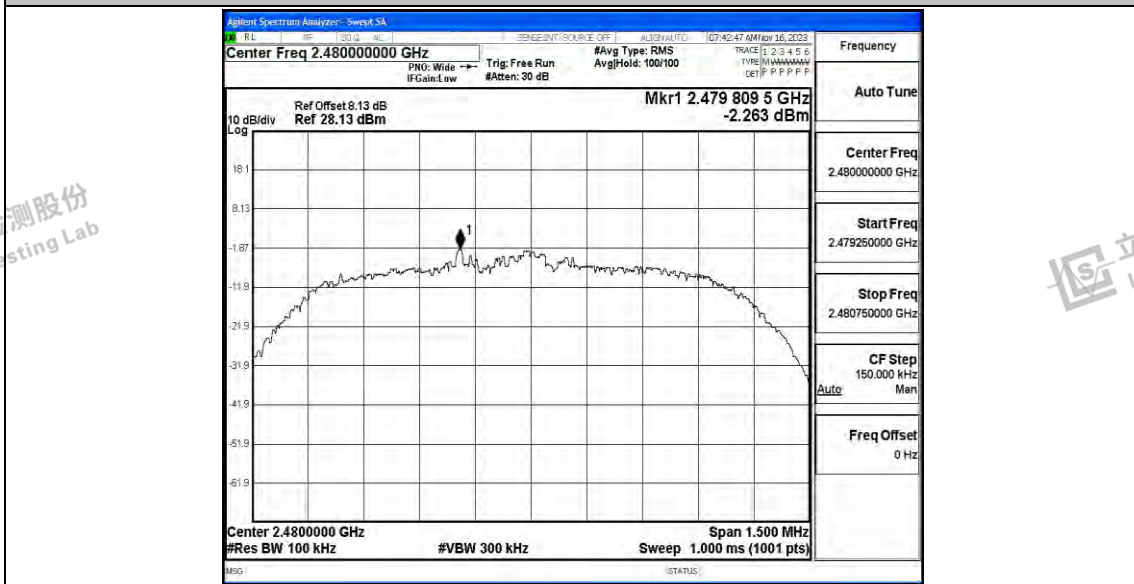


2DH5\_Ant\_2441\_1000~26500



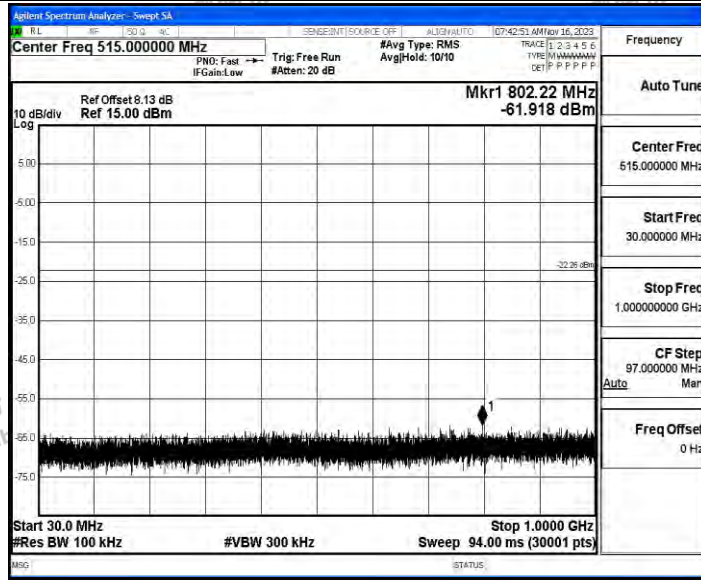


2DH5\_Ant\_2480\_0~Reference

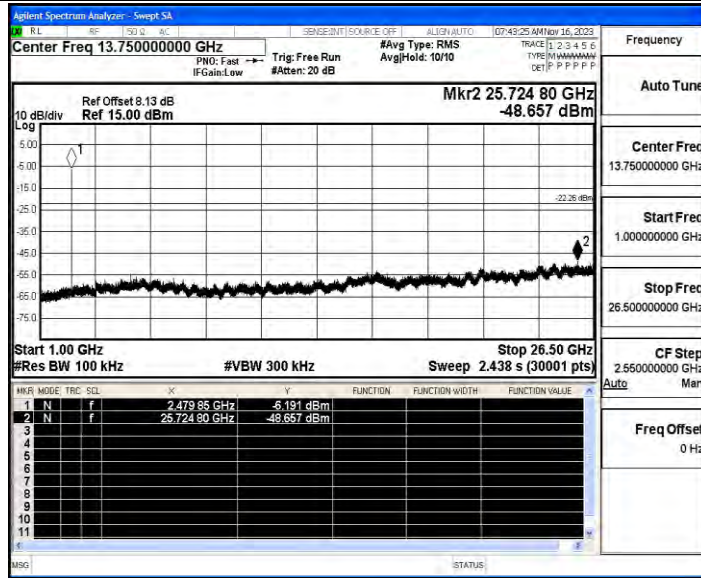


2DH5\_Ant\_2480\_30~1000



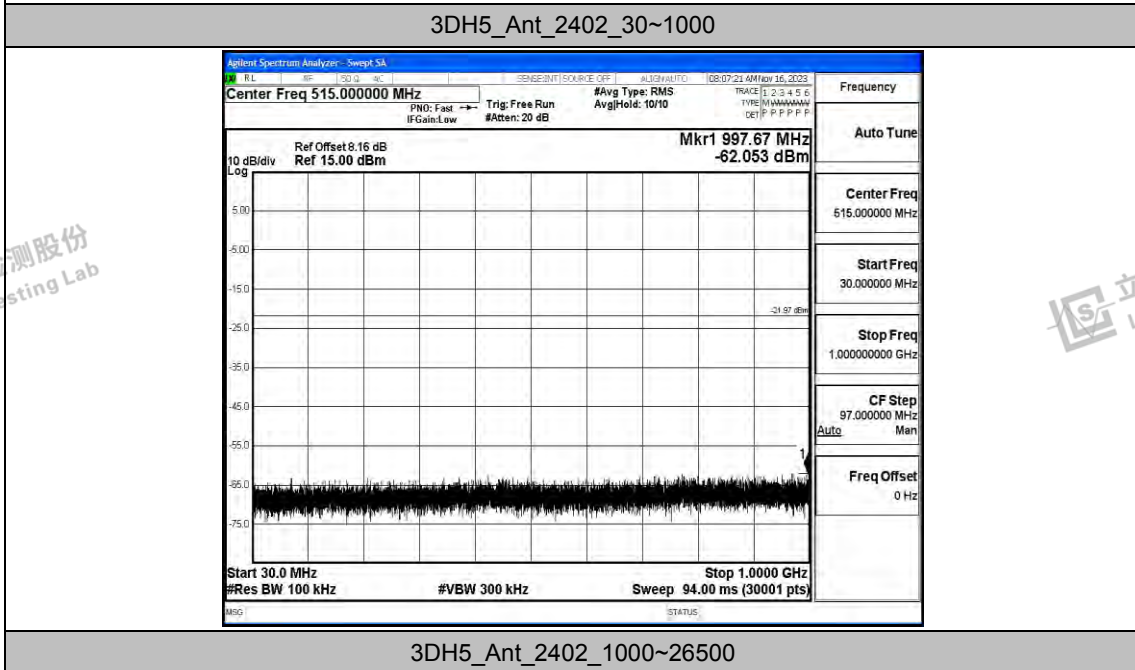
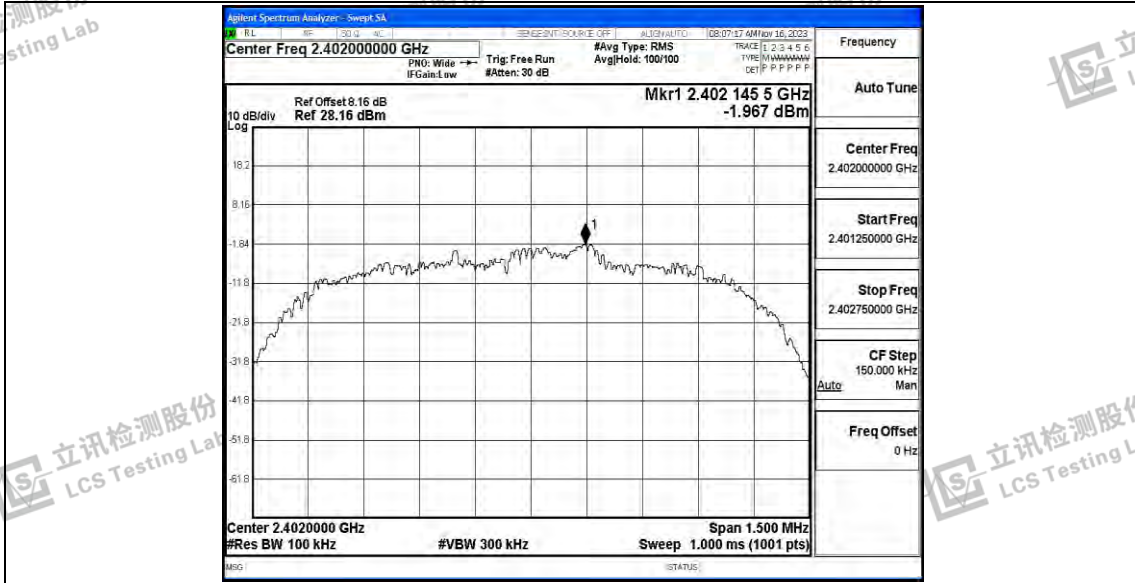


2DH5\_Ant\_2480\_1000~26500

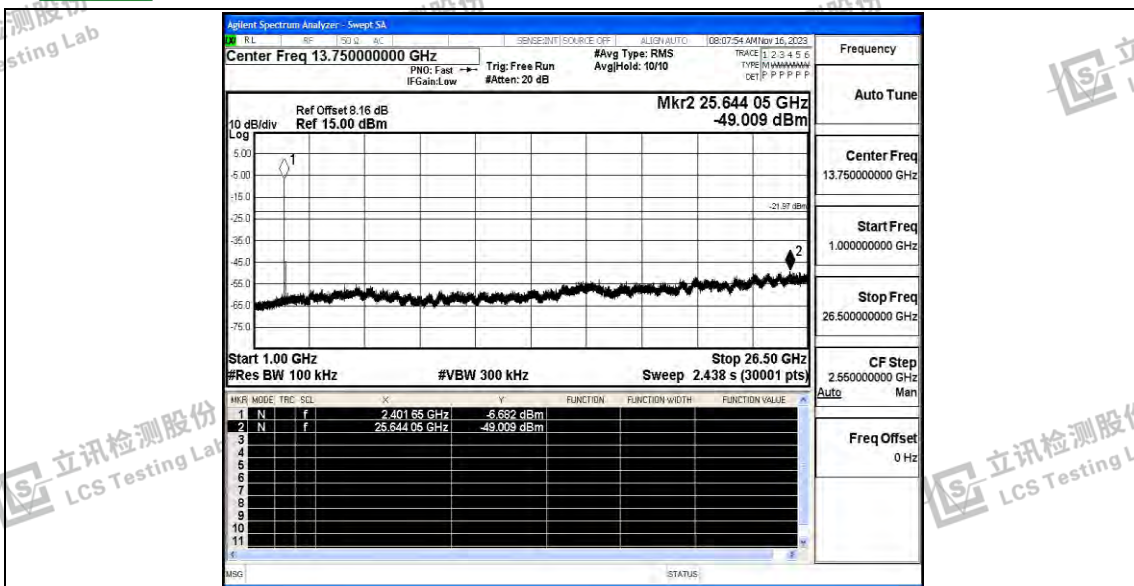


3DH5\_Ant\_2402\_0-Reference

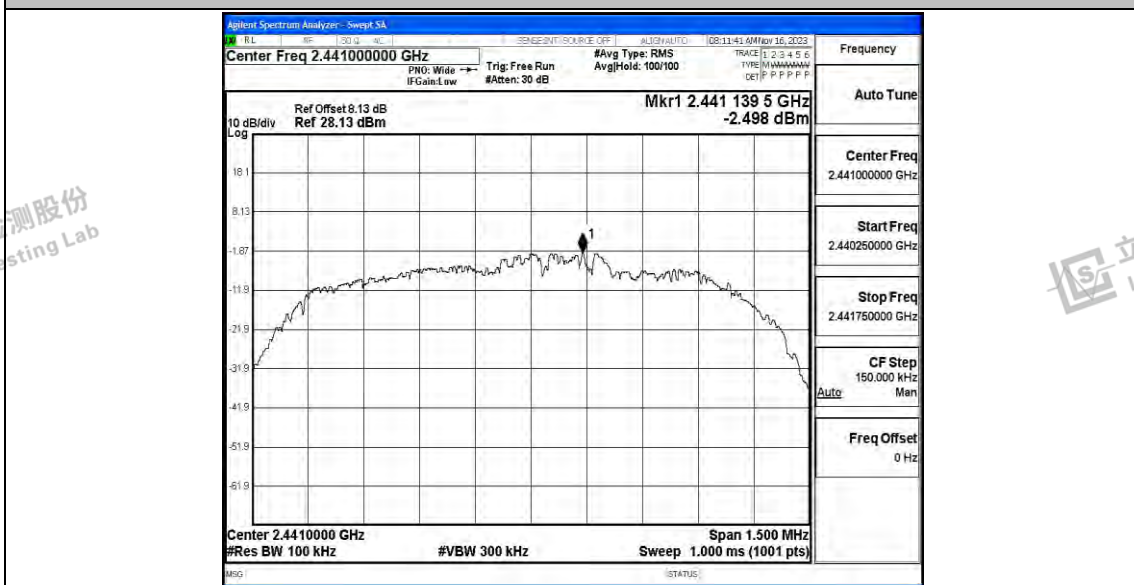






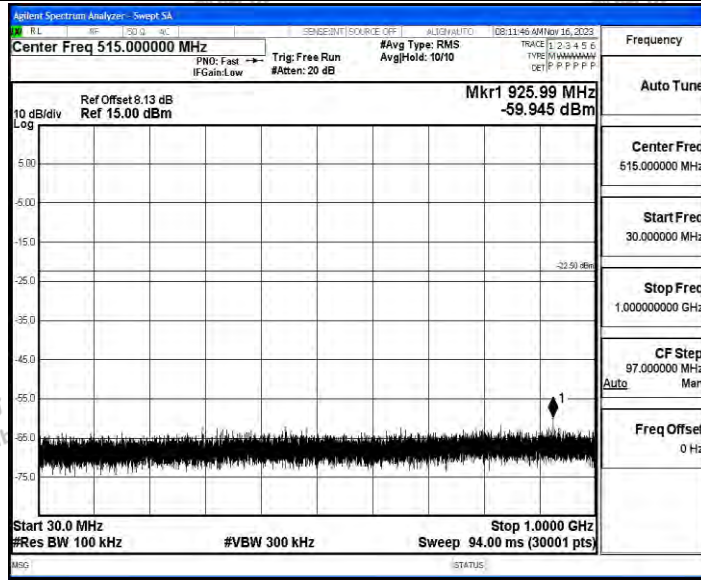


3DH5\_Ant\_2441\_0~Reference

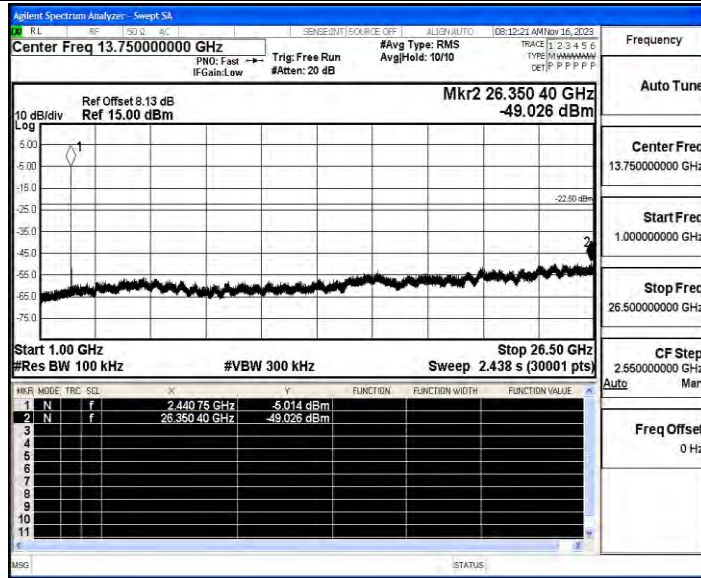


3DH5\_Ant\_2441\_30~1000



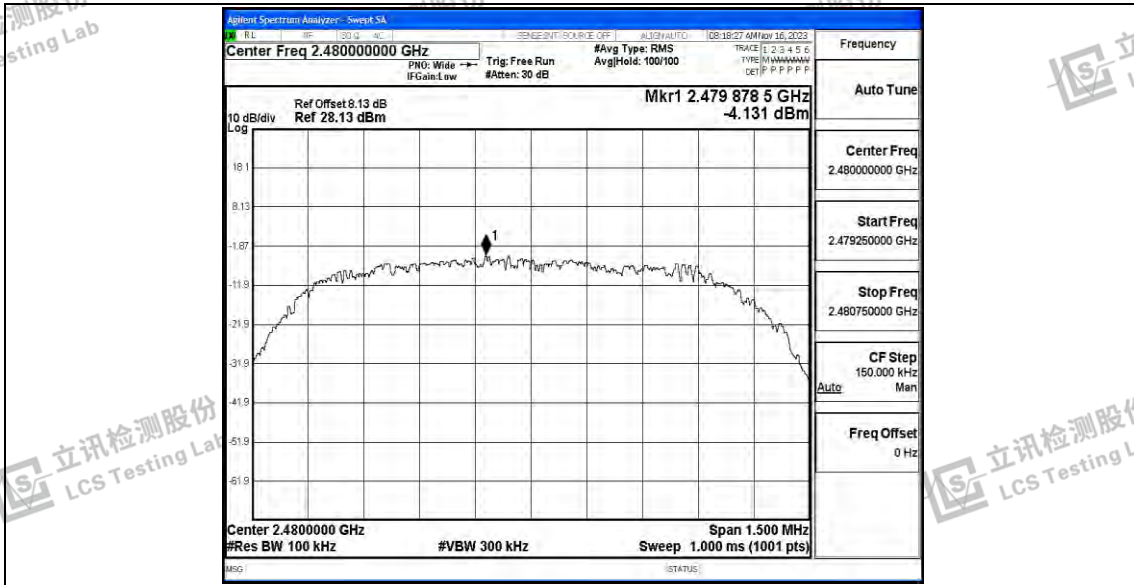


3DH5\_Ant\_2441\_1000~26500

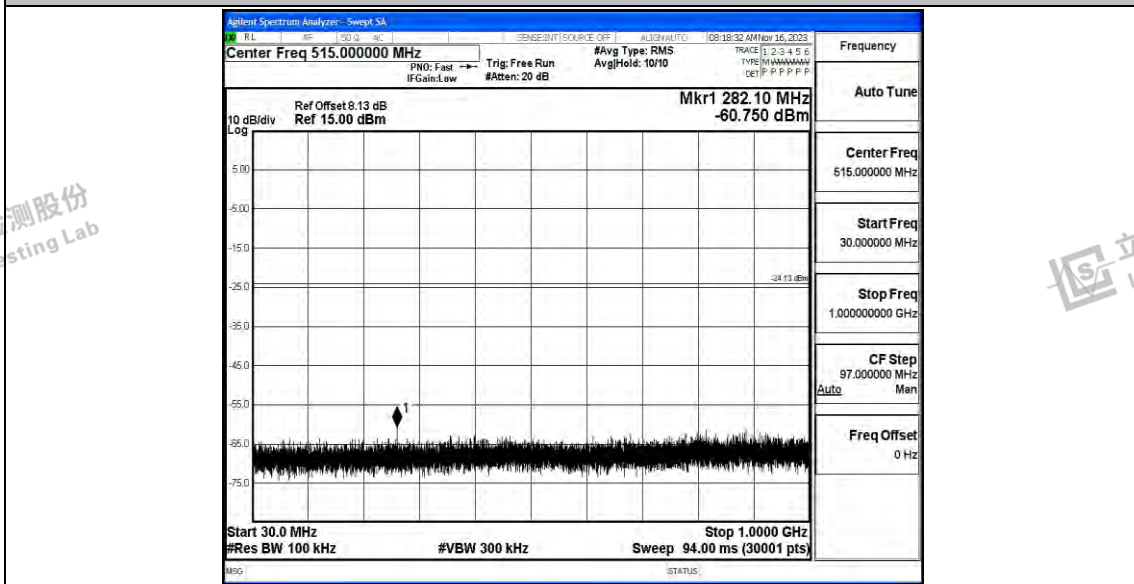


3DH5\_Ant\_2480\_0~Reference



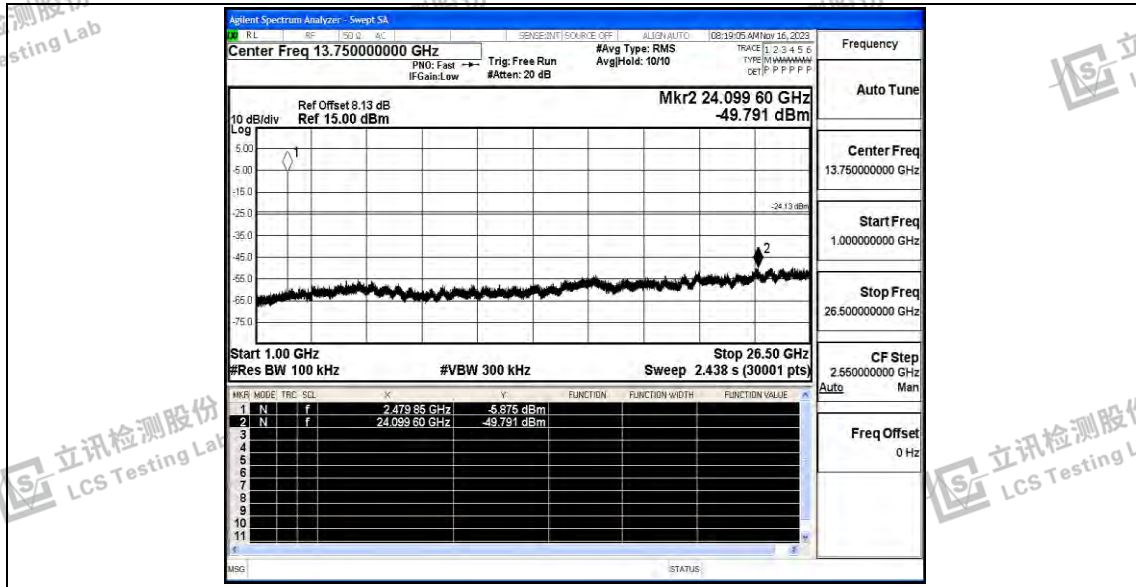


3DH5\_Ant\_2480\_30~1000



3DH5\_Ant\_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	Ant	Low	2402	AV	2310.000	-49.1	≤-41.20	46.10	≤54	PASS
				AV	2377.070	-48.59	≤-41.20	46.61	≤54	PASS
				AV	2390.000	-48.66	≤-41.20	46.54	≤54	PASS
				Peak	2310.000	-42.91	≤-21.20	52.29	≤74	PASS
				Peak	2382.215	-38.91	≤-21.20	56.29	≤74	PASS
				Peak	2390.000	-43.71	≤-21.20	51.49	≤74	PASS
		High	2480	AV	2483.500	-48.57	≤-41.20	46.63	≤54	PASS
				AV	2494.560	-48.5	≤-41.20	46.70	≤54	PASS
				AV	2500.000	-48.66	≤-41.20	46.54	≤54	PASS
				Peak	2483.500	-42.62	≤-21.20	52.58	≤74	PASS
				Peak	2488.880	-40.39	≤-21.20	54.81	≤74	PASS
				Peak	2500.000	-40.66	≤-21.20	54.54	≤74	PASS
	Low	Hop_24 02	Peak	2310.000	-41.11	≤-21.20	54.09	≤74	PASS	
			Peak	2325.410	-38.27	≤-21.20	56.93	≤74	PASS	
			Peak	2390.000	-40.59	≤-21.20	54.61	≤74	PASS	
		High	Hop_24 80	Peak	2483.500	-40.11	≤-21.20	55.09	≤74	PASS
				Peak	2486.480	-37.72	≤-21.20	57.48	≤74	PASS
				Peak	2500.000	-41.21	≤-21.20	53.99	≤74	PASS
2DH5	Ant	Low	2402	AV	2310.000	-49.06	≤-41.20	46.14	≤54	PASS
				AV	2386.310	-48.52	≤-41.20	46.68	≤54	PASS
				AV	2390.000	-48.75	≤-41.20	46.45	≤54	PASS
				Peak	2310.000	-43.56	≤-21.20	51.64	≤74	PASS
				Peak	2377.070	-39.82	≤-21.20	55.38	≤74	PASS
				Peak	2390.000	-44.06	≤-21.20	51.14	≤74	PASS
		High	2480	AV	2483.500	-48.49	≤-41.20	46.71	≤54	PASS
				AV	2483.520	-48.49	≤-41.20	46.71	≤54	PASS
				AV	2500.000	-48.64	≤-41.20	46.56	≤54	PASS
				Peak	2483.500	-43.54	≤-21.20	51.66	≤74	PASS
				Peak	2497.280	-39.85	≤-21.20	55.35	≤74	PASS
				Peak	2500.000	-43.36	≤-21.20	51.84	≤74	PASS
	Low	Hop_24 02	Peak	2310.000	-41.01	≤-21.20	54.19	≤74	PASS	
			Peak	2330.975	-38.8	≤-21.20	56.40	≤74	PASS	
			Peak	2390.000	-39.12	≤-21.20	56.08	≤74	PASS	
		High	Hop_24	Peak	2483.500	-38.76	≤-21.20	56.44	≤74	PASS





3DH5	Ant	Low	80	Peak	2494.800	-38.47	≤-21.20	56.73	≤74	PASS
				Peak	2500.000	-40.15	≤-21.20	55.05	≤74	PASS
			2402	AV	2310.000	-49.12	≤-41.20	46.08	≤54	PASS
				AV	2388.515	-48.56	≤-41.20	46.64	≤54	PASS
				AV	2390.000	-48.81	≤-41.20	46.39	≤54	PASS
				Peak	2310.000	-44.08	≤-21.20	51.12	≤74	PASS
				Peak	2382.740	-39.41	≤-21.20	55.79	≤74	PASS
				Peak	2390.000	-42.7	≤-21.20	52.50	≤74	PASS
		2480	AV	2483.500	-48.48	≤-41.20	46.72	≤54	PASS	
			AV	2492.240	-48.4	≤-41.20	46.80	≤54	PASS	
			AV	2500.000	-48.51	≤-41.20	46.69	≤54	PASS	
			Peak	2483.500	-44.64	≤-21.20	50.56	≤74	PASS	
			Peak	2491.920	-39.98	≤-21.20	55.22	≤74	PASS	
			Peak	2500.000	-43.85	≤-21.20	51.35	≤74	PASS	
		Low	Hop_24 02	Peak	2310.000	-40.99	≤-21.20	54.21	≤74	PASS
				Peak	2373.815	-38.61	≤-21.20	56.59	≤74	PASS
				Peak	2390.000	-40.51	≤-21.20	54.69	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-39.86	≤-21.20	55.34	≤74	PASS
				Peak	2494.320	-37.17	≤-21.20	58.03	≤74	PASS
				Peak	2500.000	-39.79	≤-21.20	55.41	≤74	PASS

## Note:

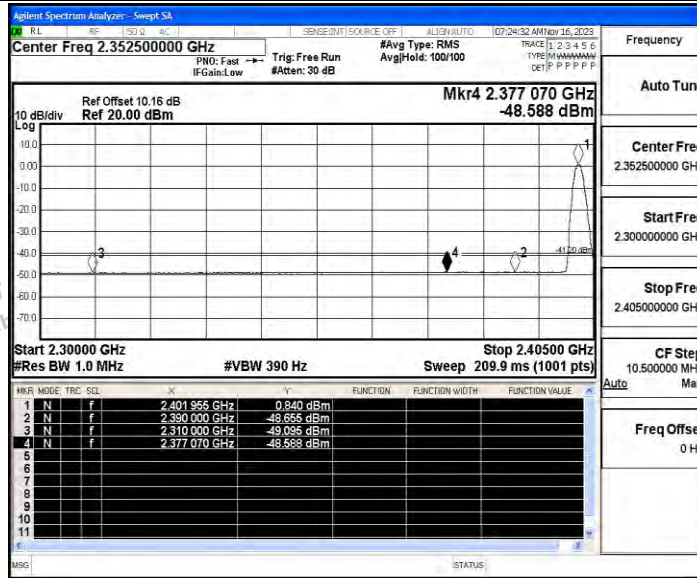
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



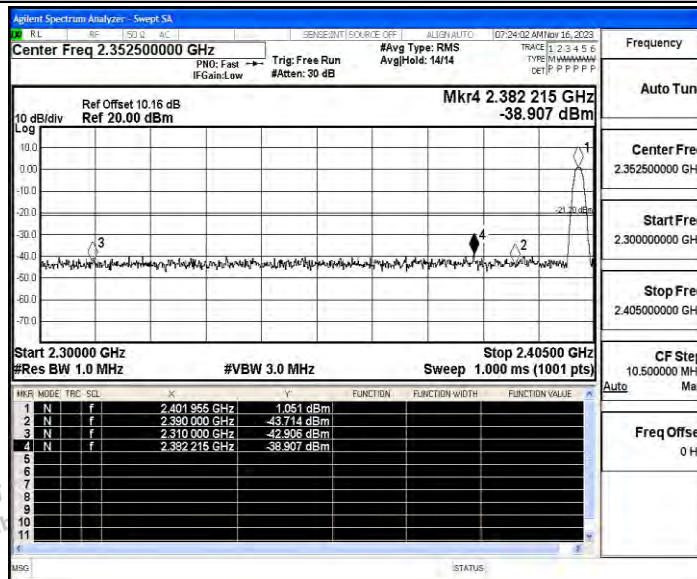


### Test Graphs

#### DH5\_Ant\_Low\_2402\_AV

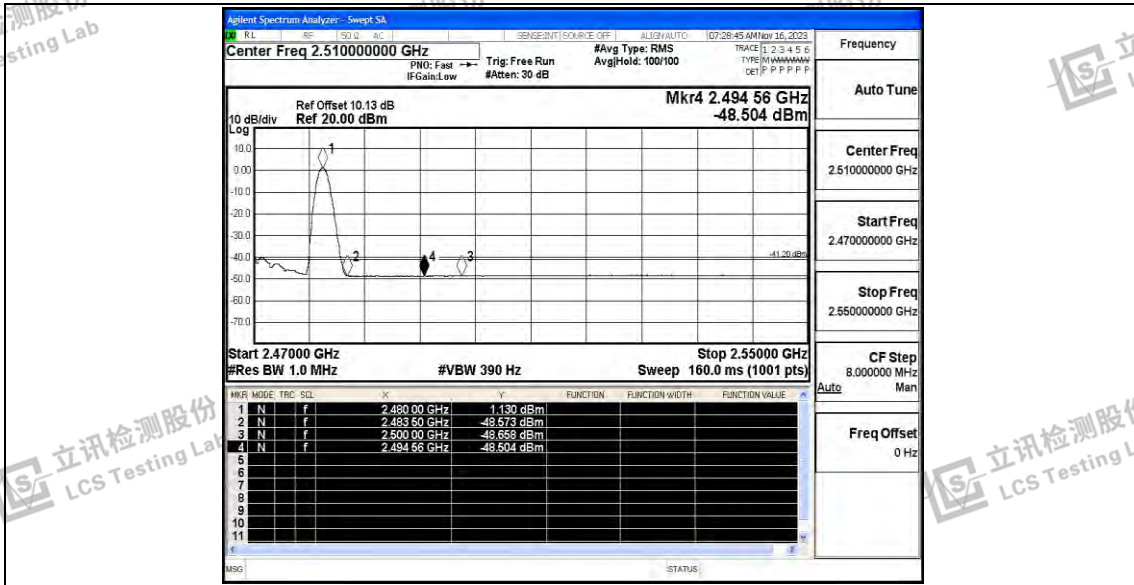


#### DH5\_Ant\_Low\_2402\_Peak

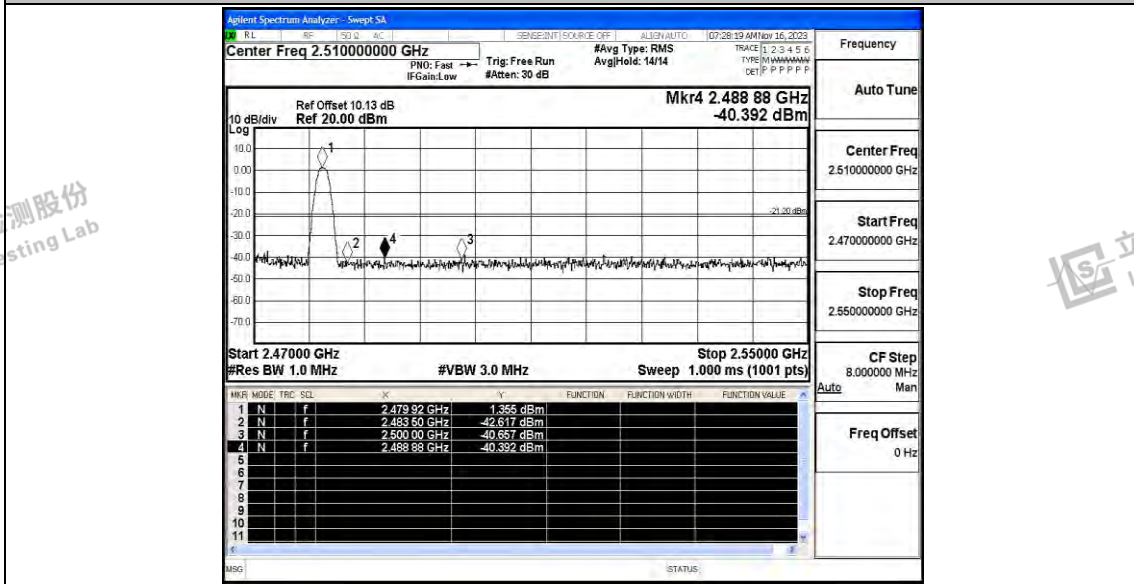


#### DH5\_Ant\_High\_2480\_AV





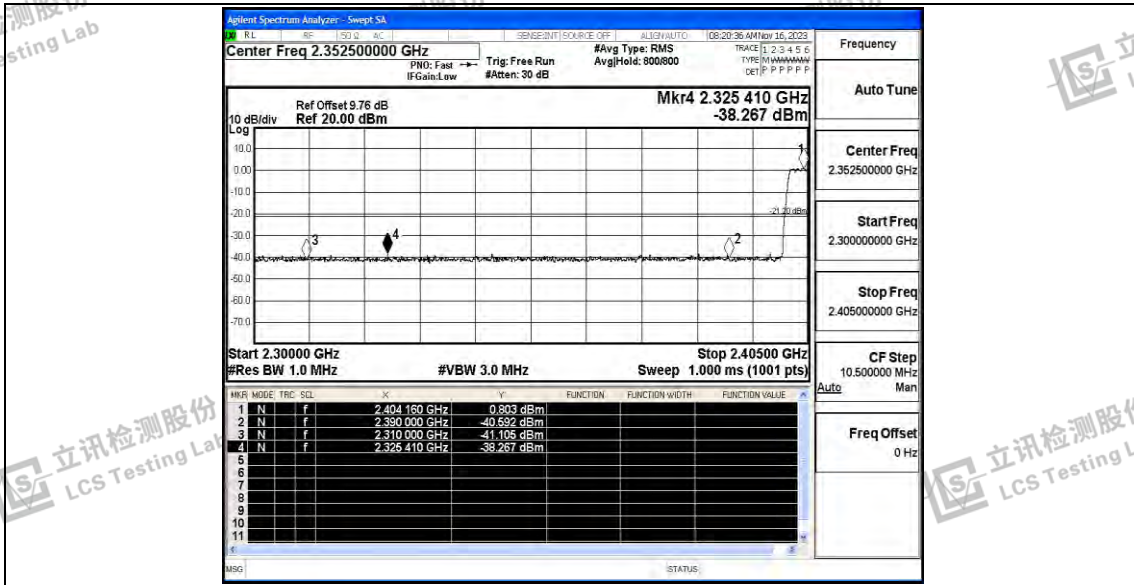
DH5\_Ant\_High\_2480\_Peak



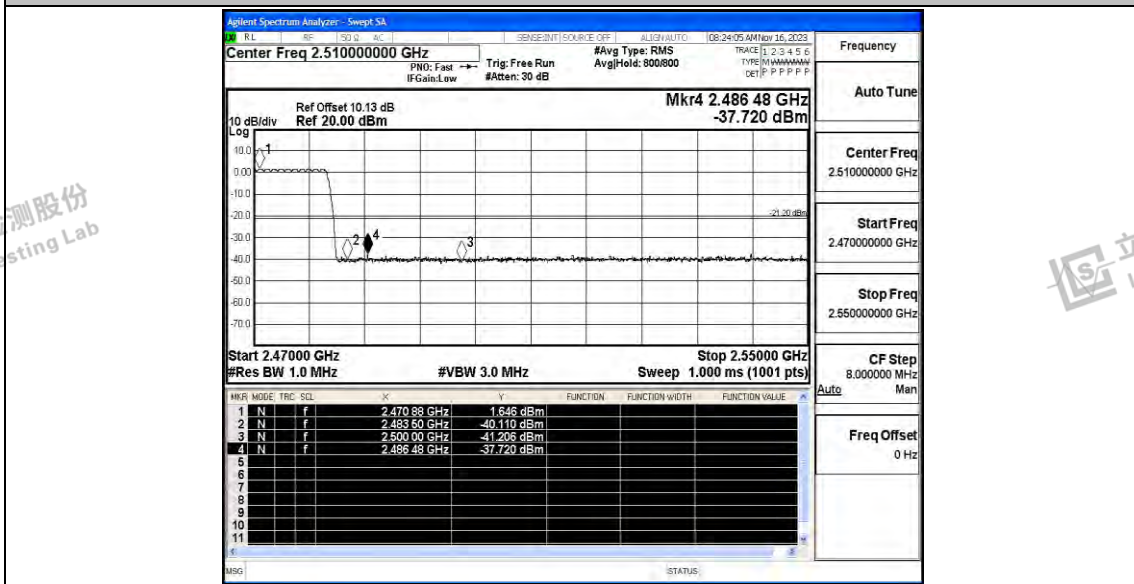
DH5\_Ant\_Low\_Hop\_2402\_Peak





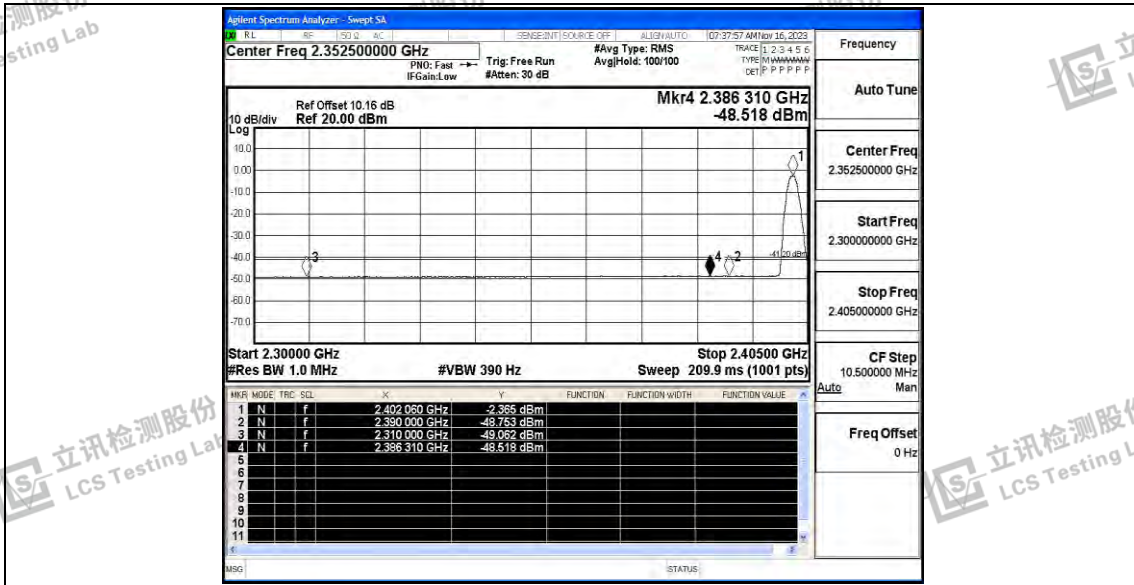


DH5\_Ant\_High\_Hop\_2480\_Peak

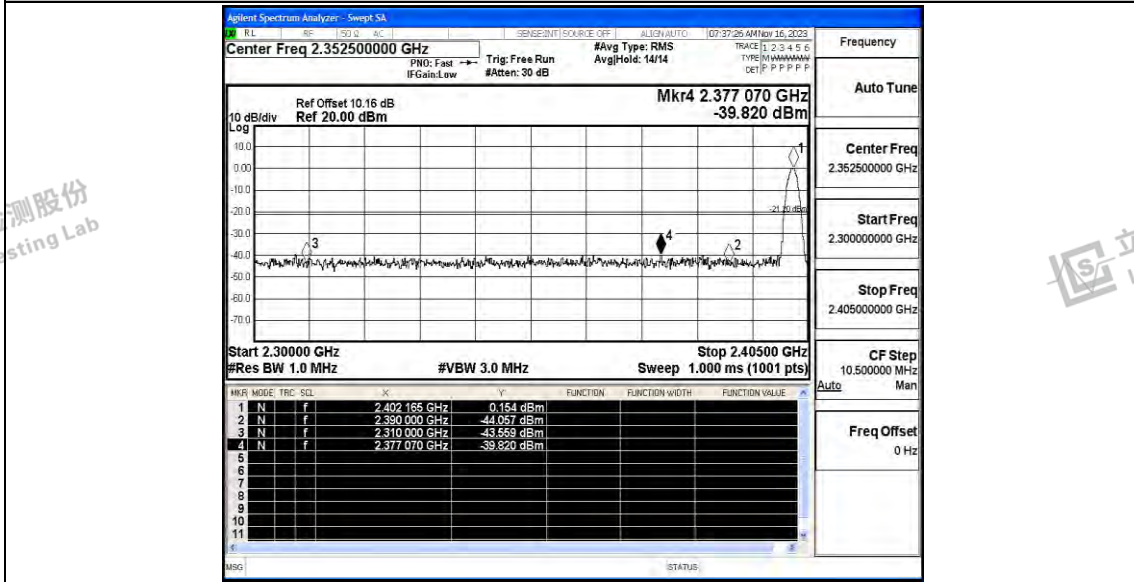


2DH5\_Ant\_Low\_2402\_AV



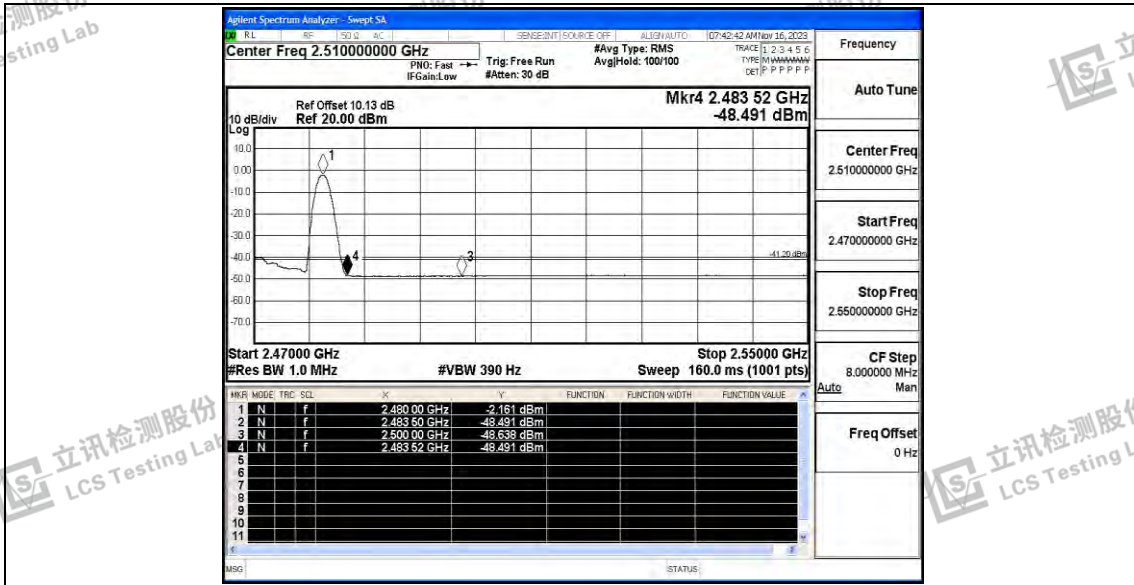


2DH5\_Ant\_Low\_2402\_Peak

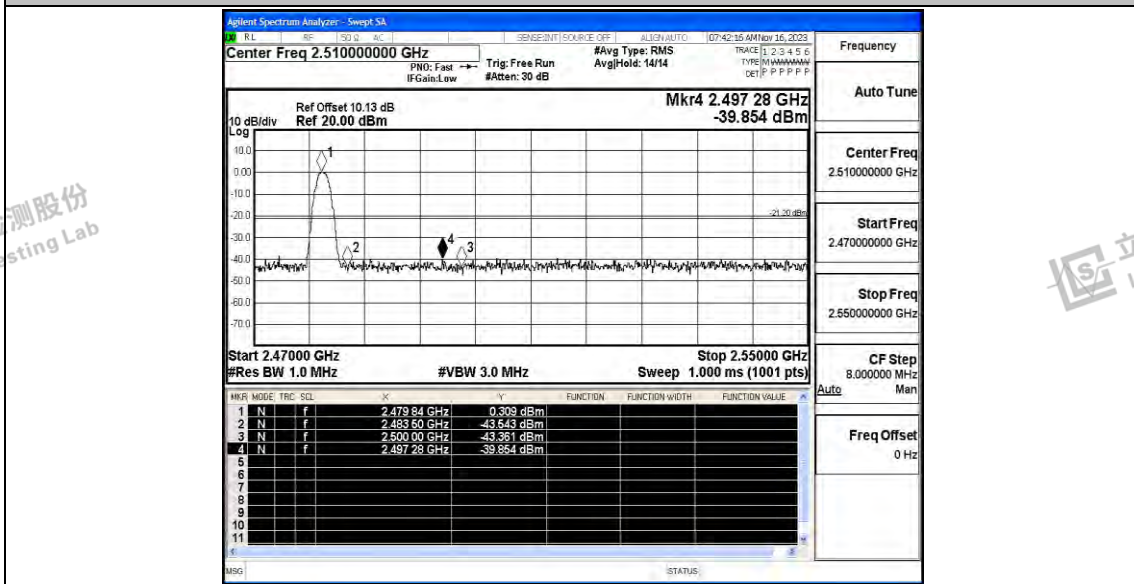


2DH5\_Ant\_High\_2480\_AV



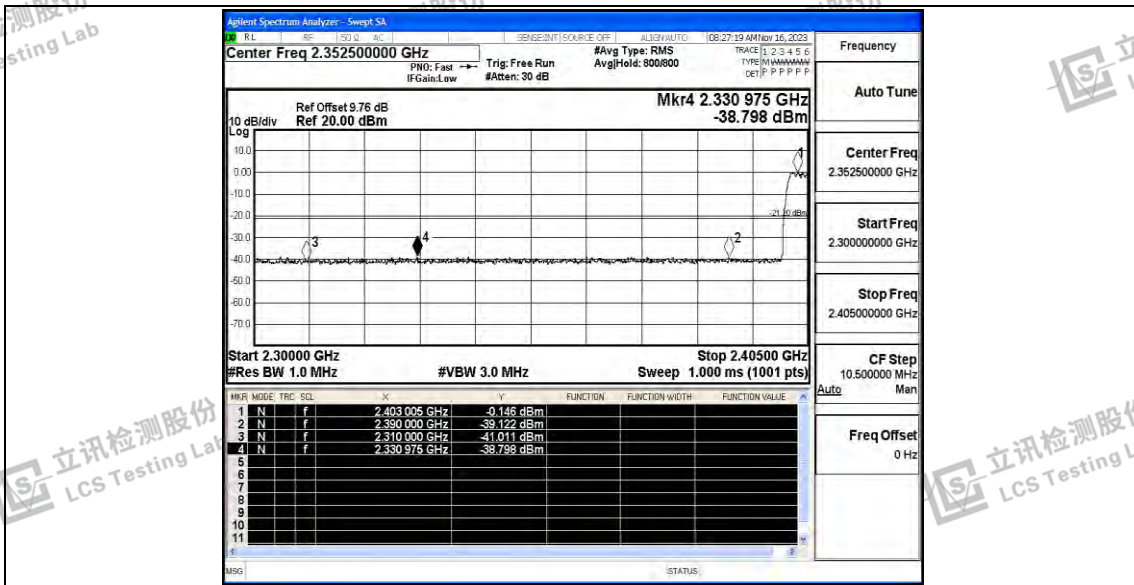


2DH5\_Ant\_High\_2480\_Peak

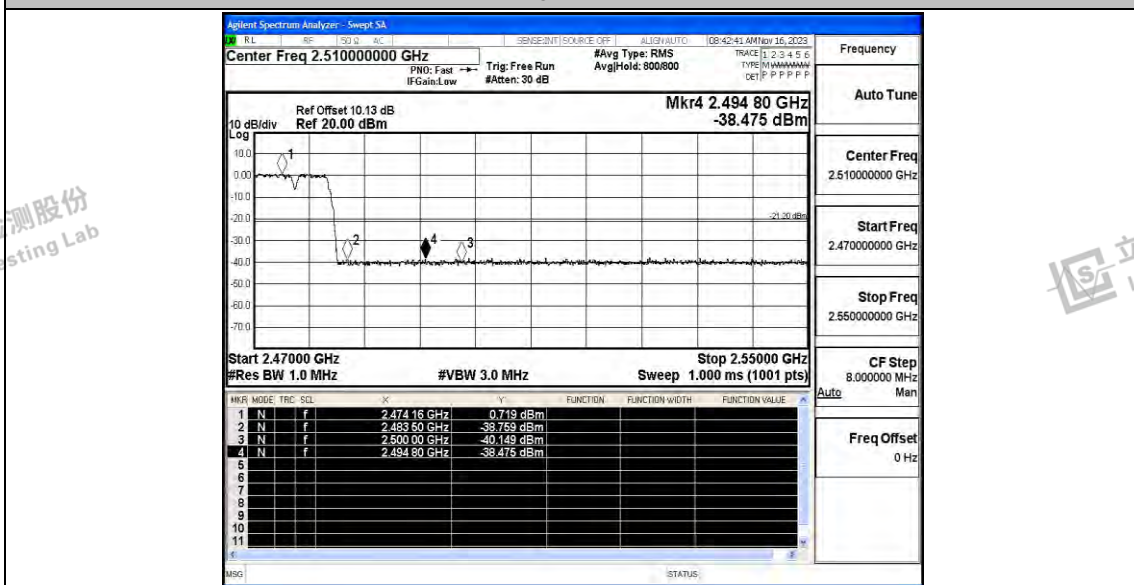


2DH5\_Ant\_Low\_Hop\_2402\_Peak



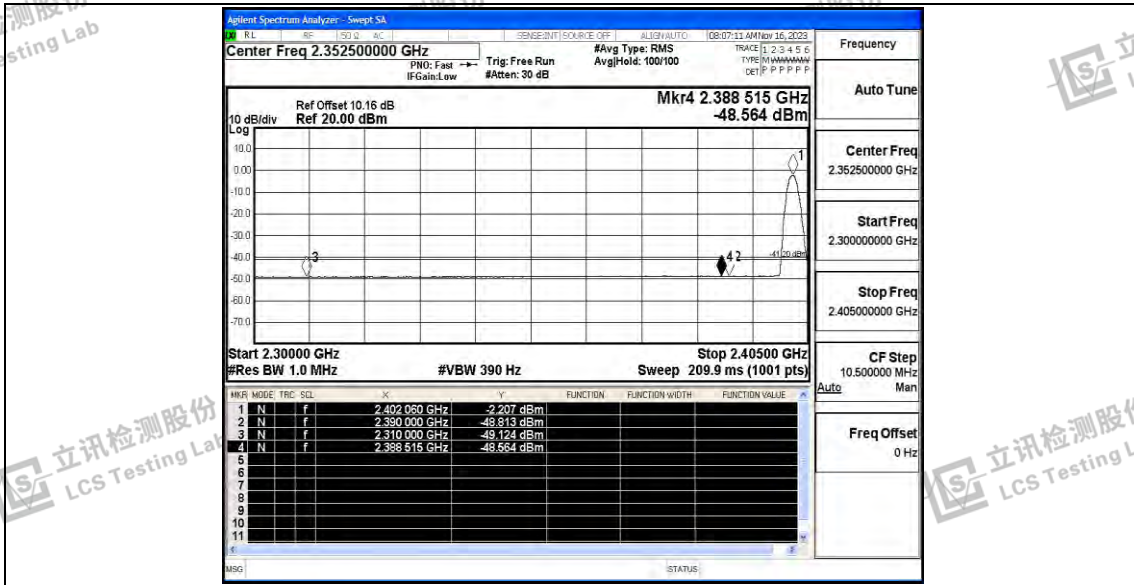


2DH5\_Ant\_High\_Hop\_2480\_Peak

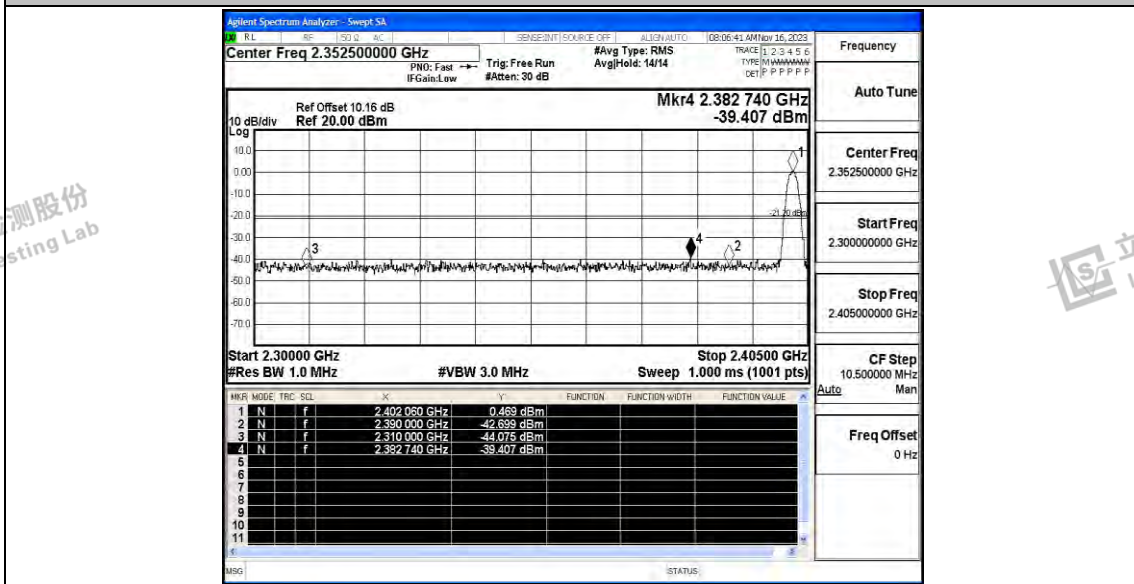


3DH5\_Ant\_Low\_2402\_AV



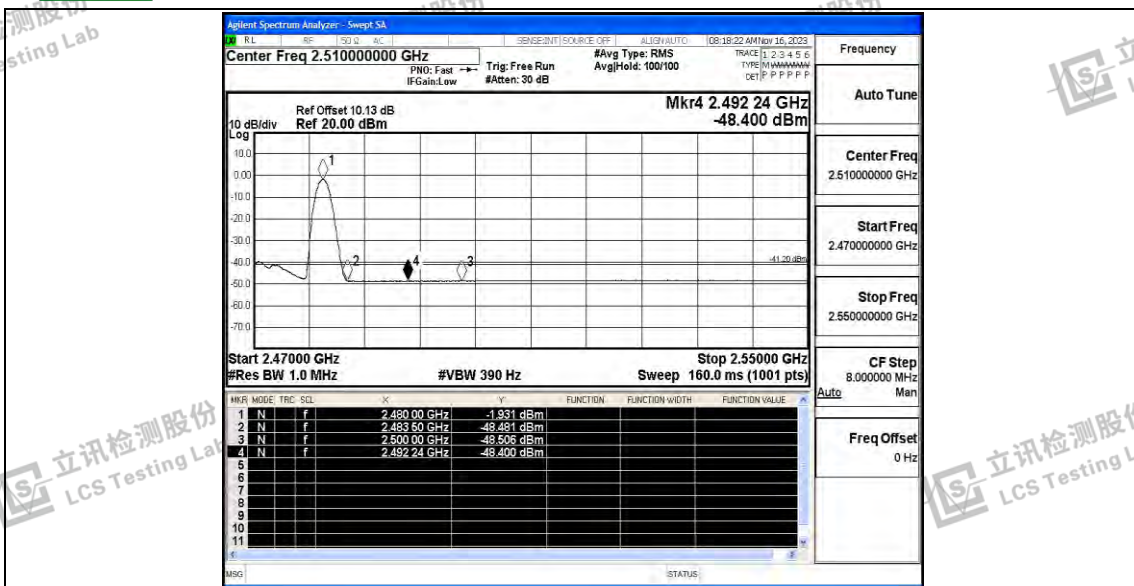


3DH5\_Ant\_Low\_2402\_Peak

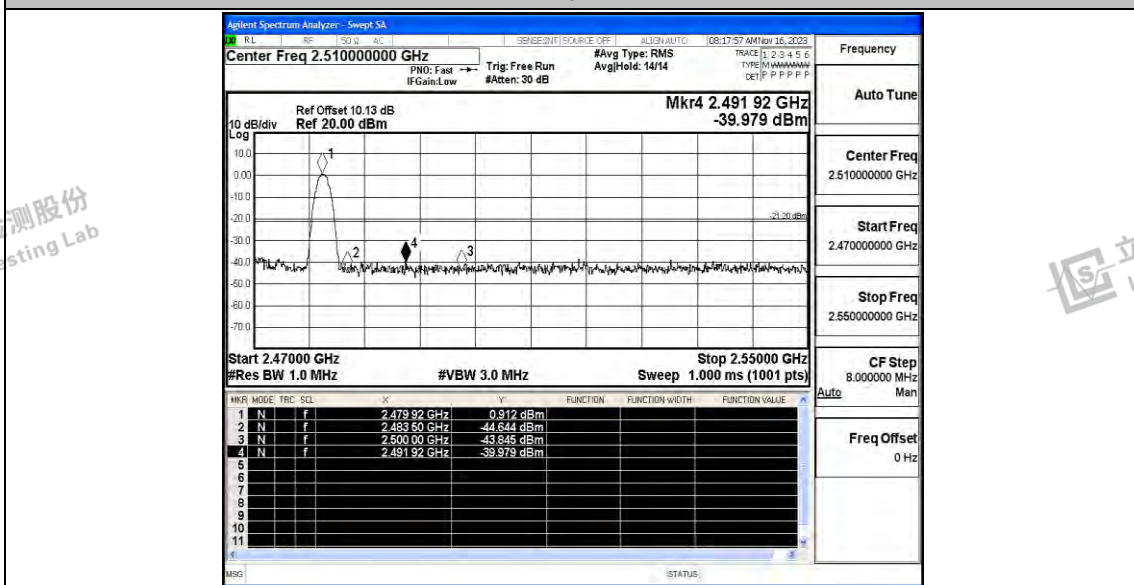


3DH5\_Ant\_High\_2480\_AV



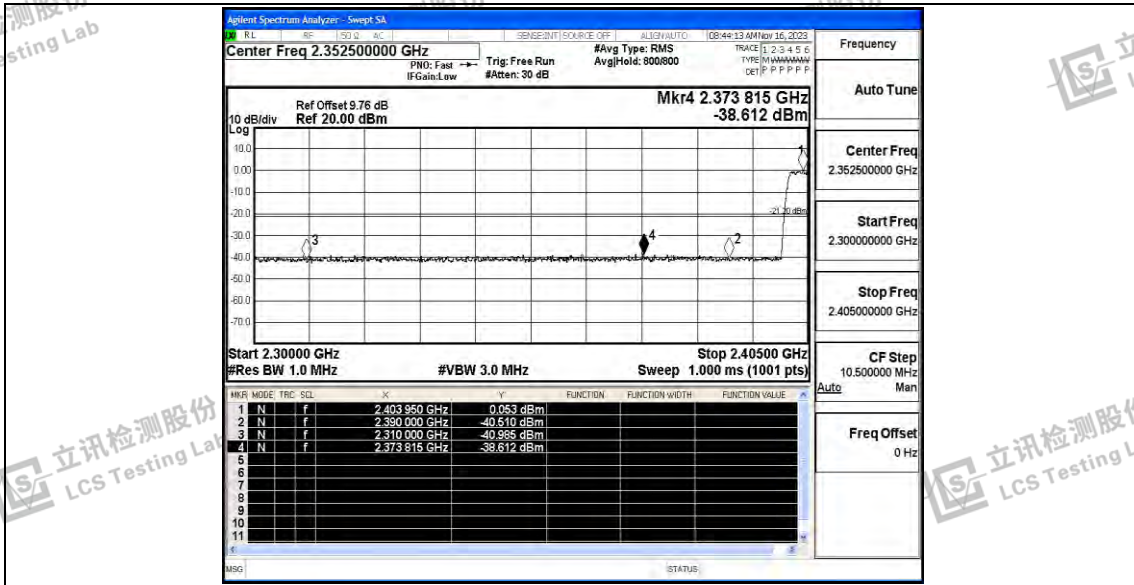


3DH5\_Ant\_High\_2480\_Peak



3DH5\_Ant\_Low\_Hop\_2402\_Peak





3DH5\_Ant\_High\_Hop\_2480\_Peak

