



## Appendix A

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

Product Name: Karaoke System

Test Model: K6

#### Environmental Conditions

Temperature:	23.9° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan





## A.1 20dB Emission Bandwidth

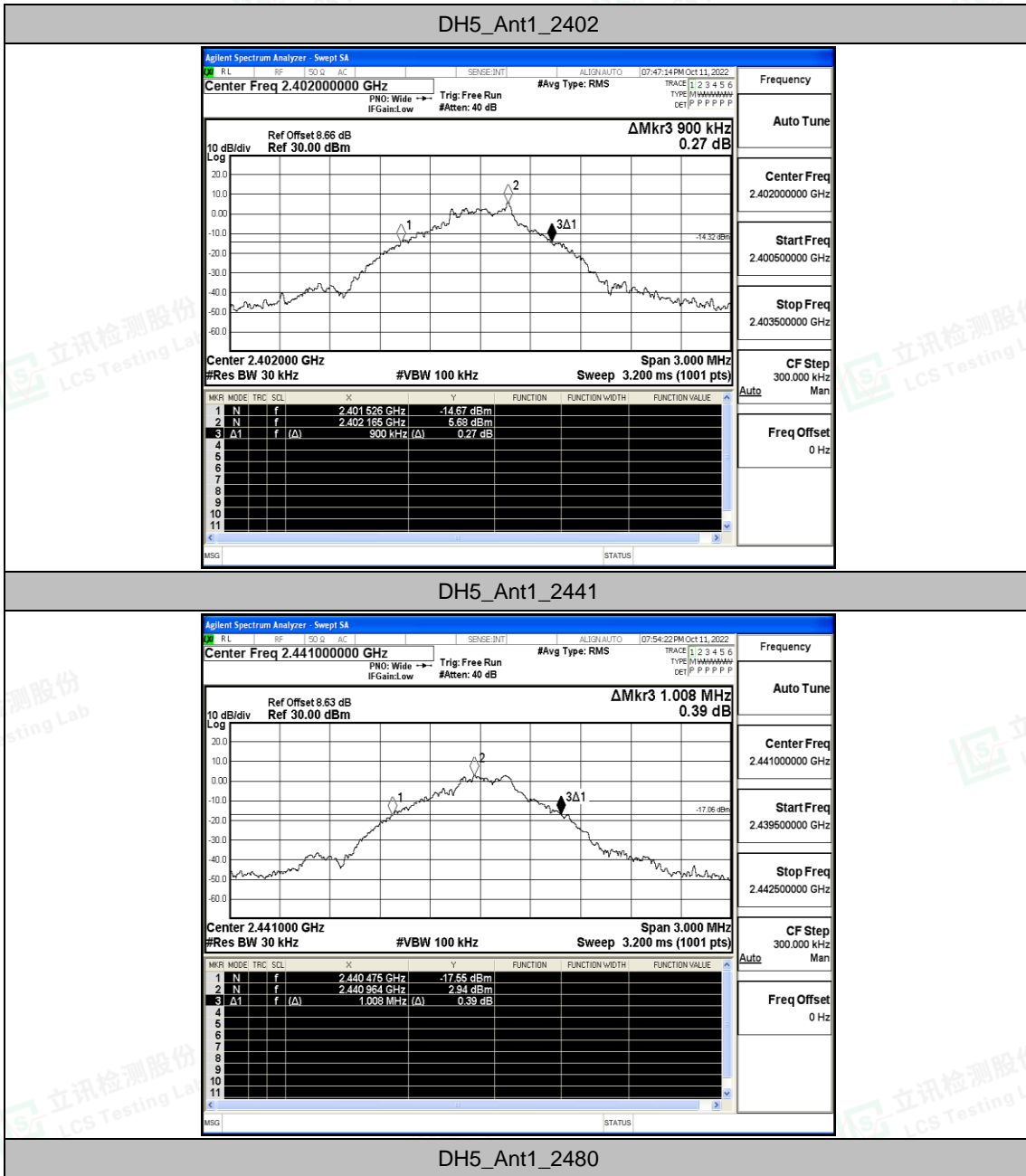
### Test Result

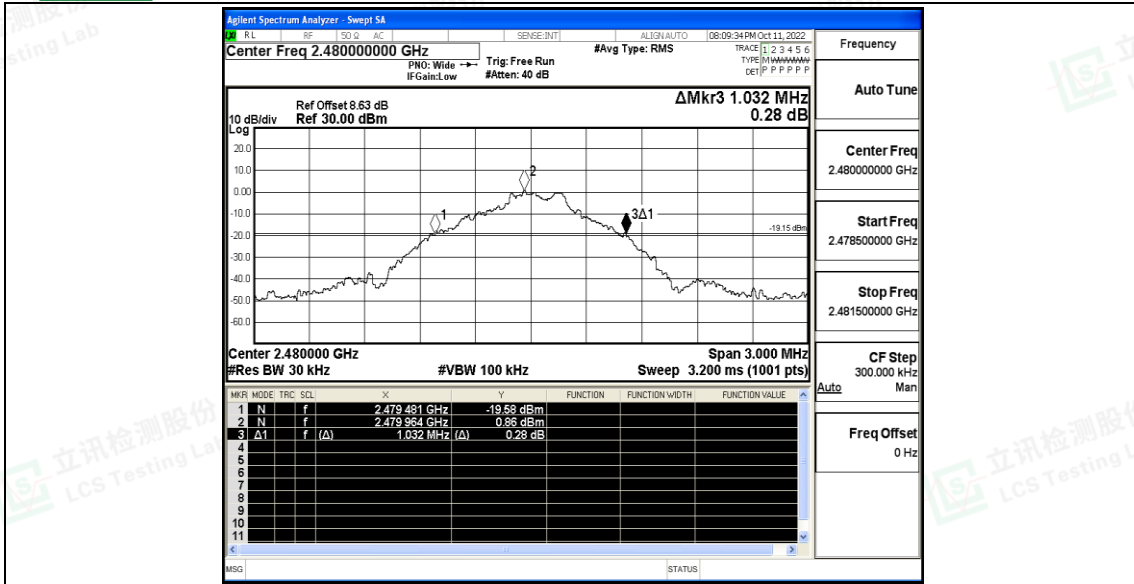
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant1	2402	0.900	2401.526	2402.426	---
		2441	1.008	2440.475	2441.483	---
		2480	1.032	2479.481	2480.513	---
2DH5	Ant1	2402	1.305	2401.358	2402.663	---
		2441	1.314	2440.346	2441.660	---
		2480	1.305	2479.349	2480.654	---
3DH5	Ant1	2402	1.320	2401.343	2402.663	---
		2441	1.290	2440.367	2441.657	---
		2480	1.272	2479.361	2480.633	---



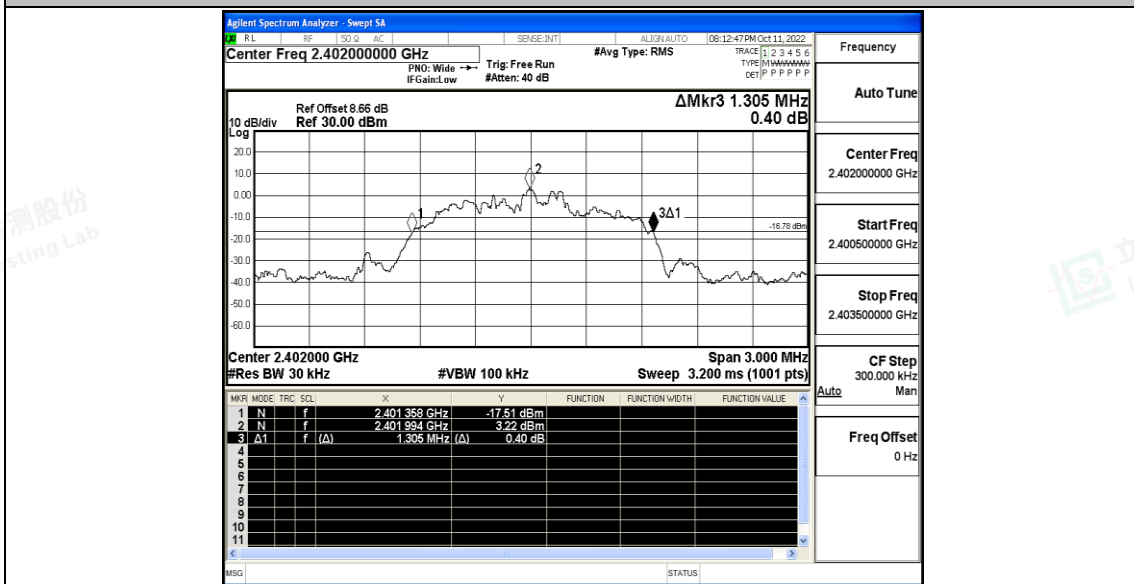


### Test Graphs



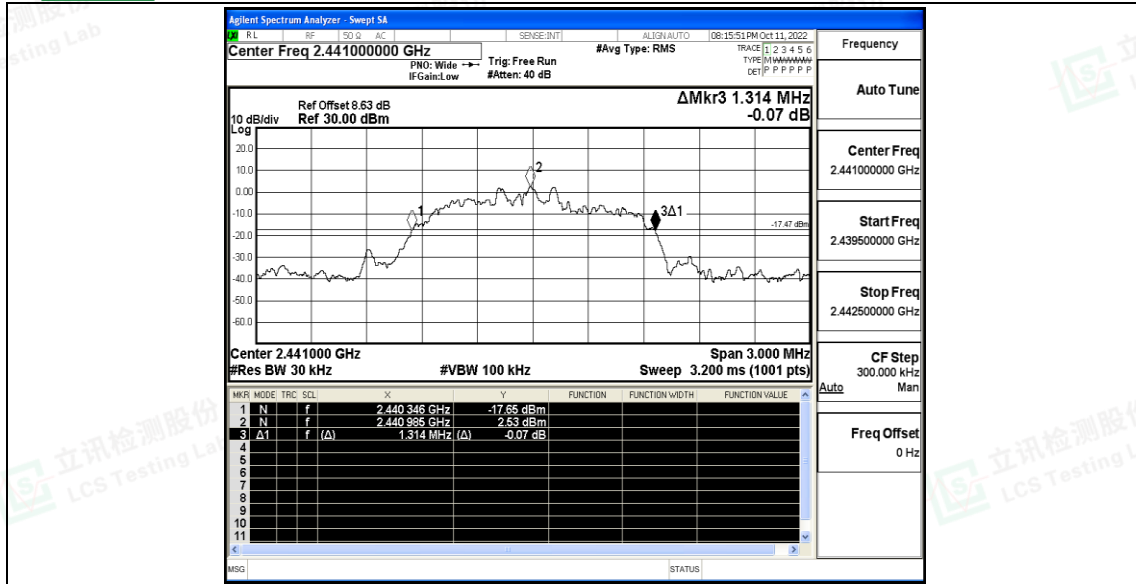


2DH5\_Ant1\_2402

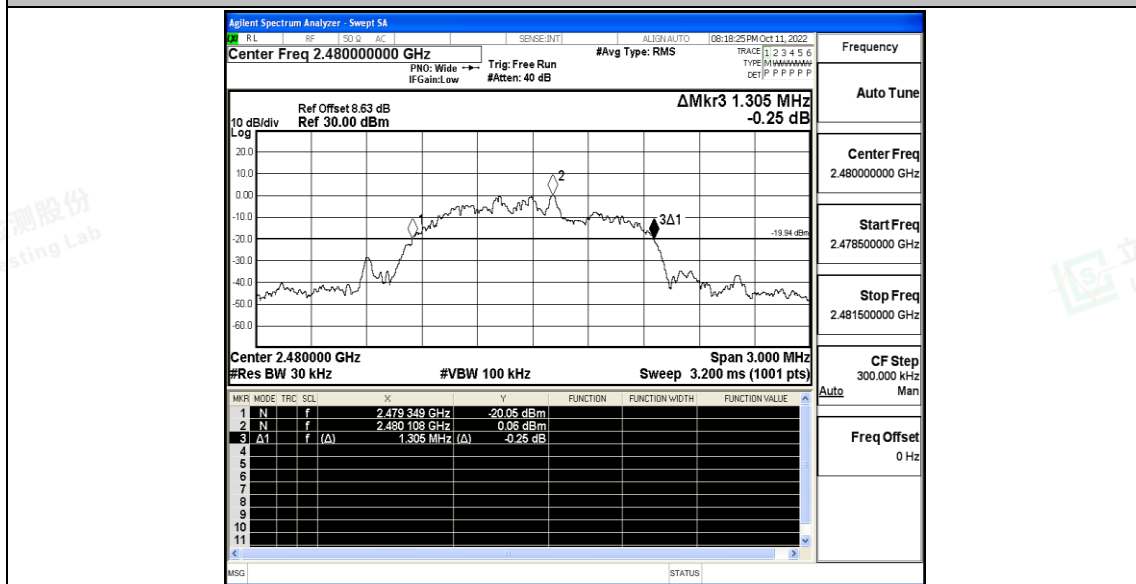


2DH5\_Ant1\_2441



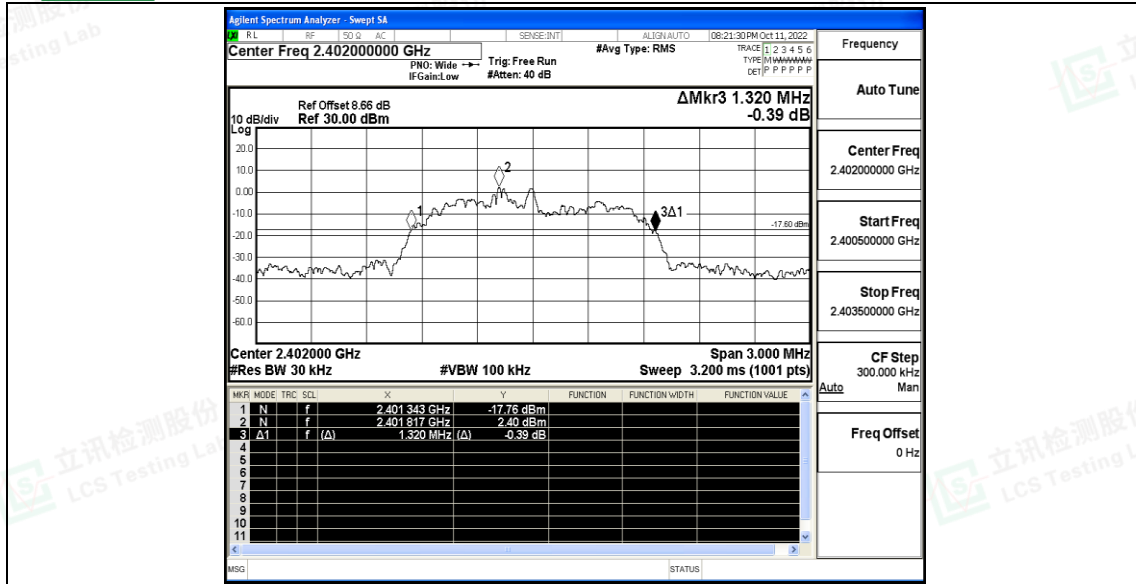


2DH5\_Ant1\_2480

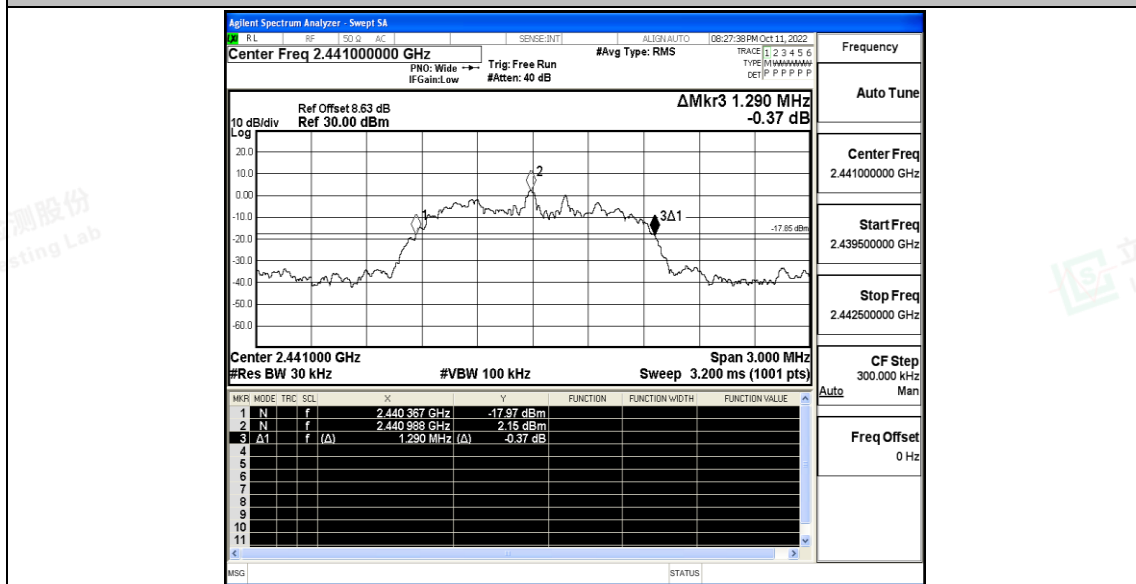


3DH5\_Ant1\_2402



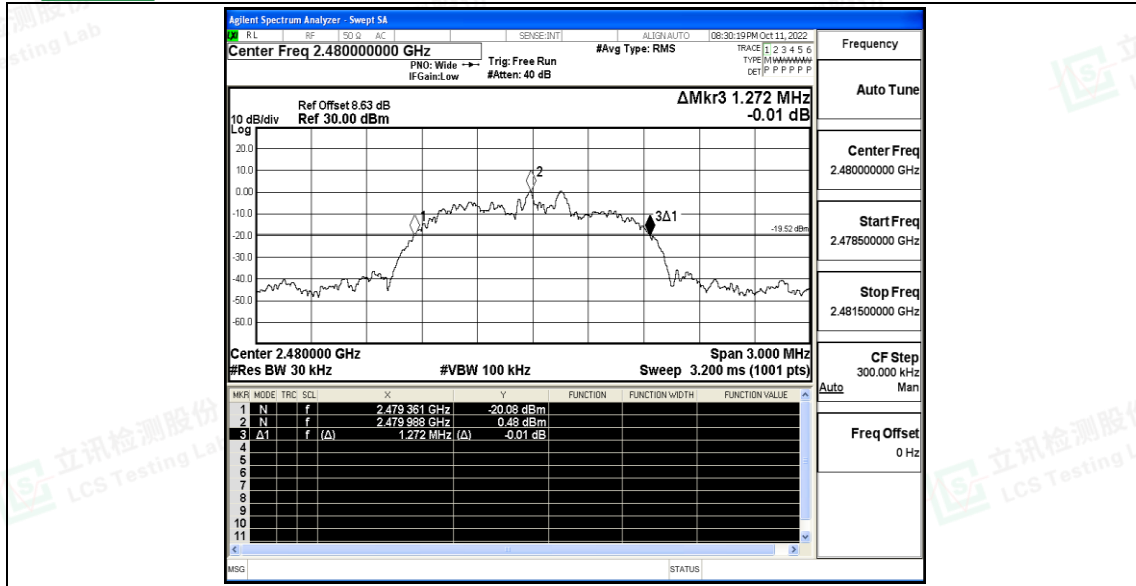


3DH5\_Ant1\_2441



3DH5\_Ant1\_2480







## A.2 Maximum conducted output power

### Test Result

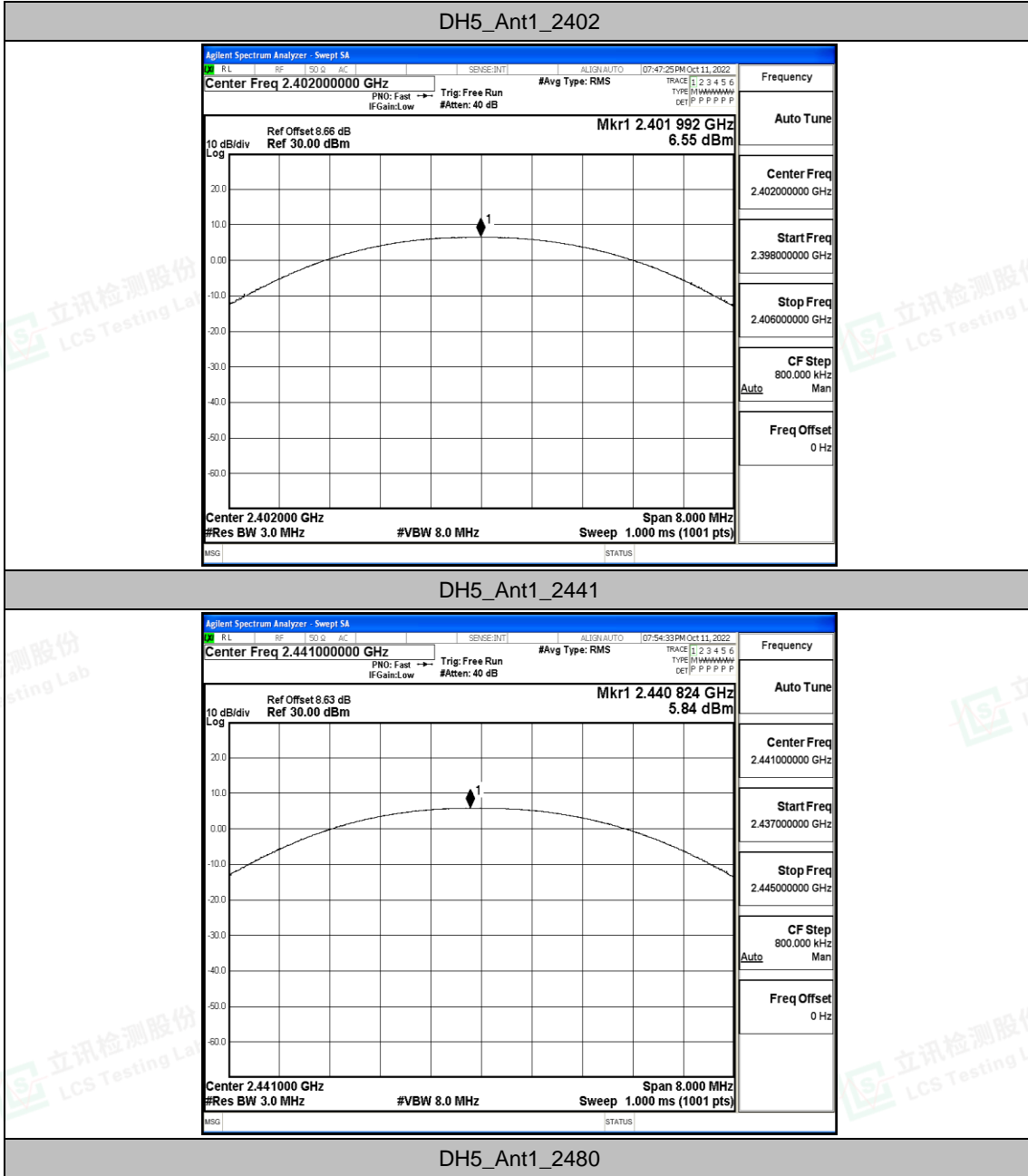
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	6.55	≤21	PASS
		2441	5.84	≤21	PASS
		2480	3.49	≤21	PASS
2DH5	Ant1	2402	6.42	≤21	PASS
		2441	5.70	≤21	PASS
		2480	3.50	≤21	PASS
3DH5	Ant1	2402	6.55	≤21	PASS
		2441	5.82	≤21	PASS
		2480	3.50	≤21	PASS

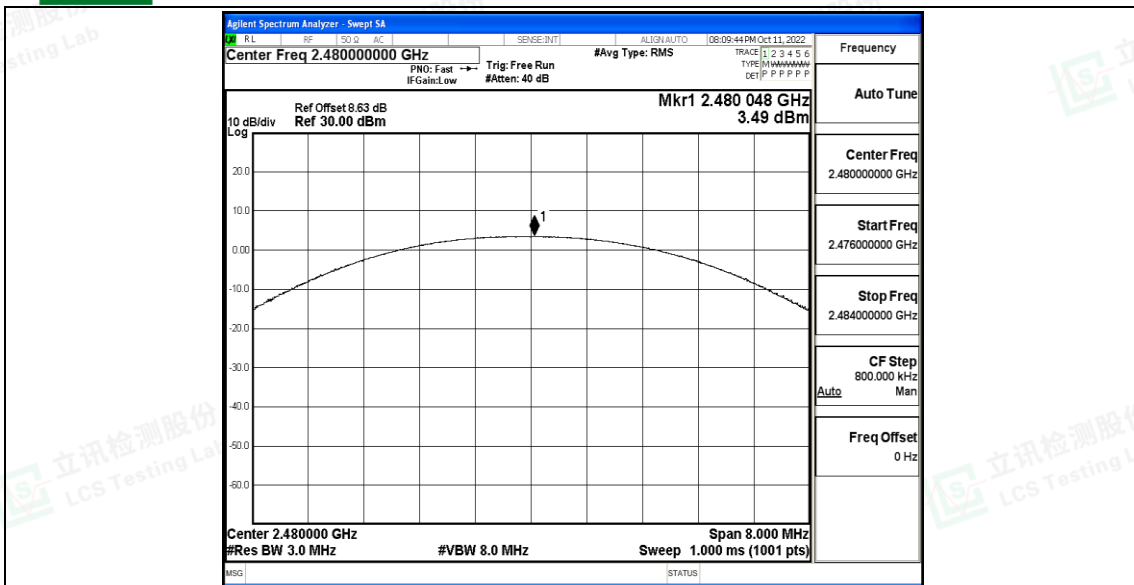




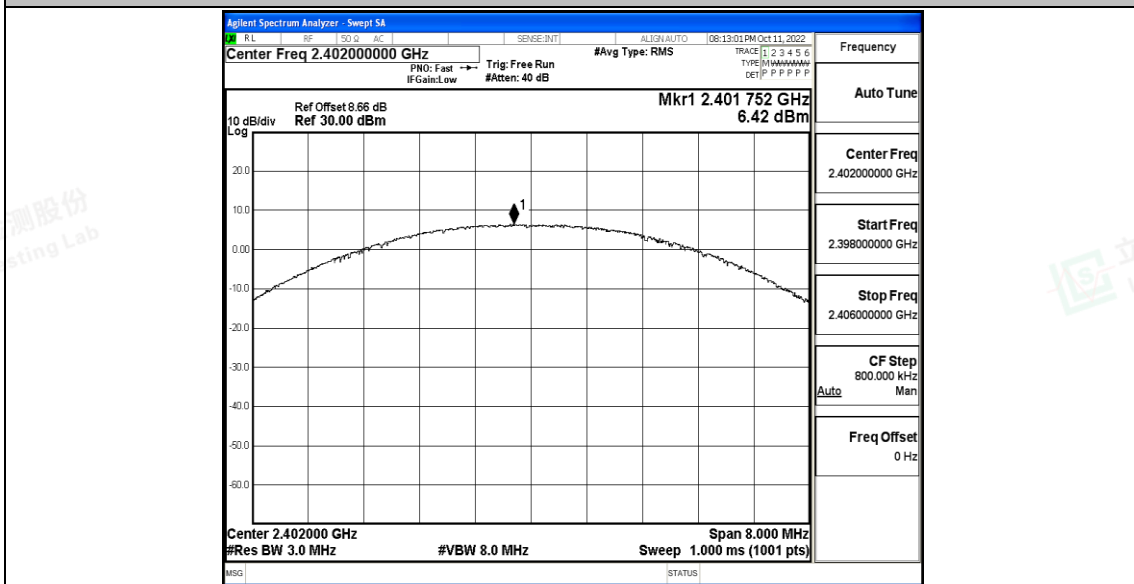


### Test Graphs



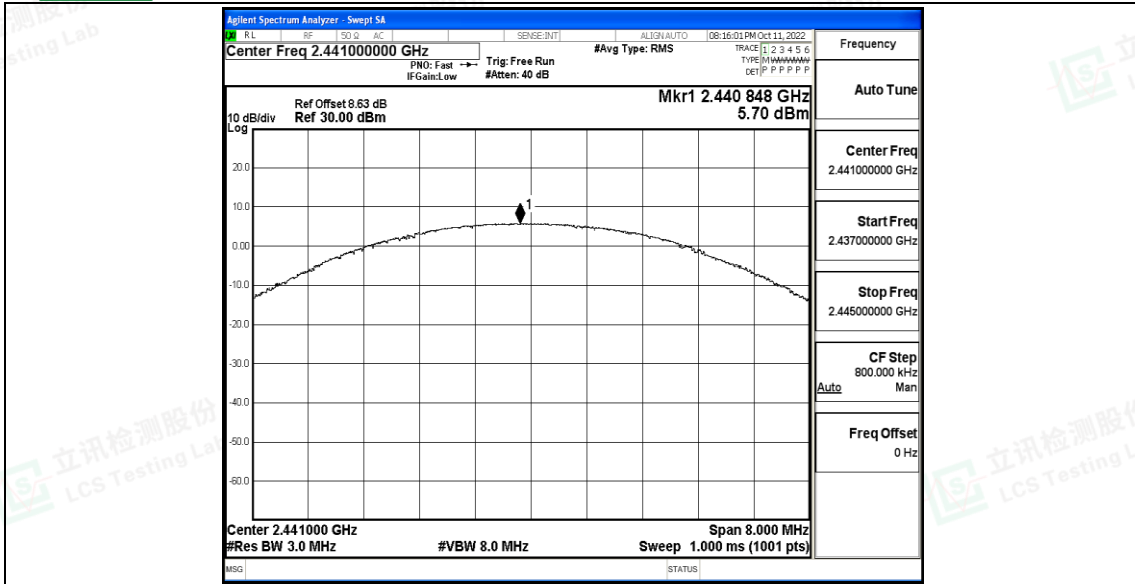


2DH5\_Ant1\_2402

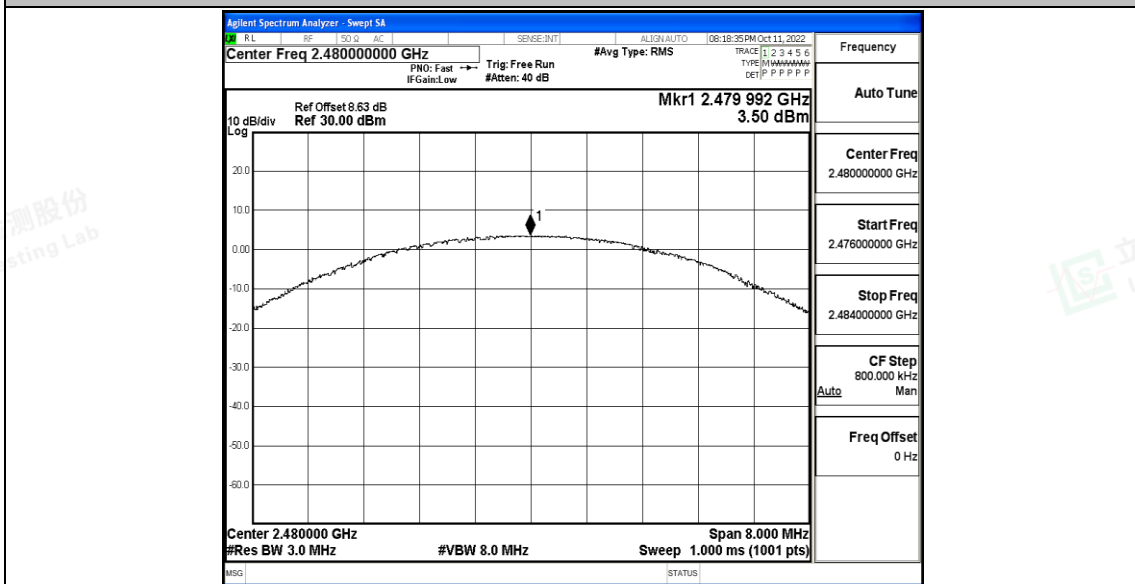


2DH5\_Ant1\_2441



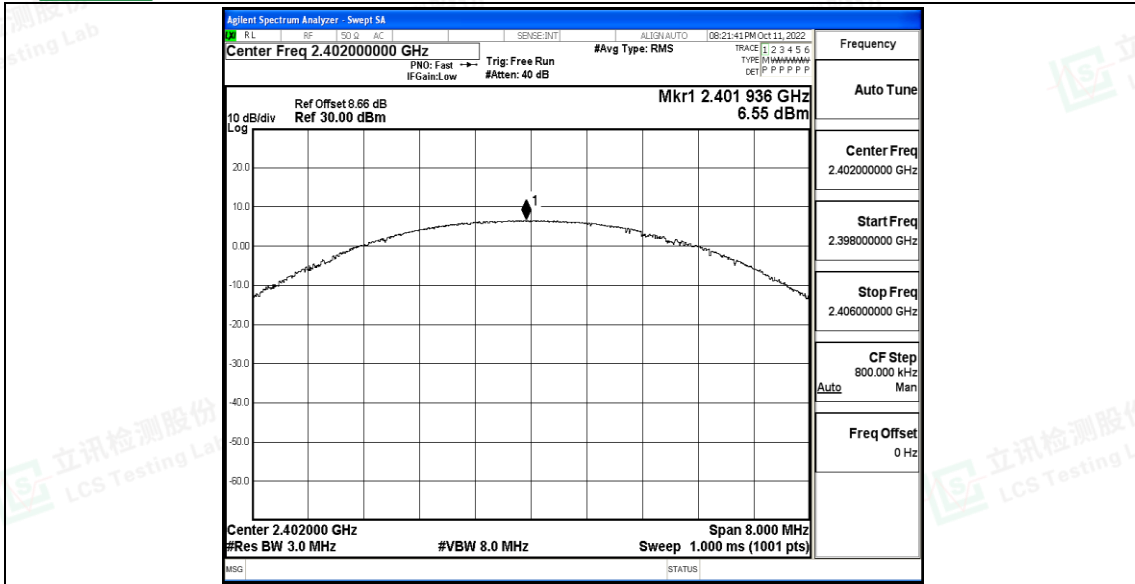


2DH5\_Ant1\_2480

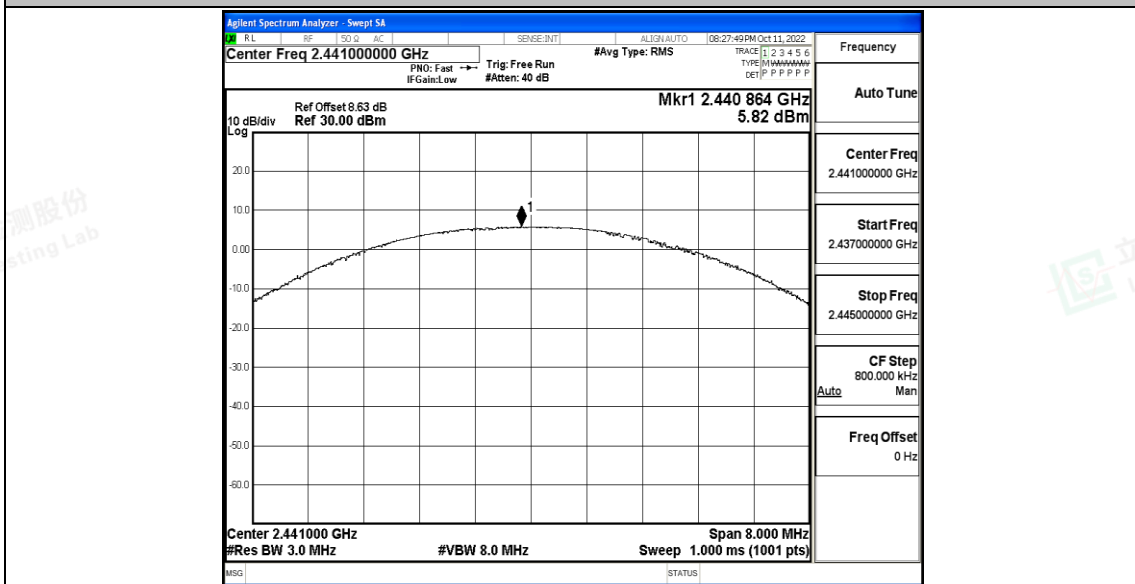


3DH5\_Ant1\_2402



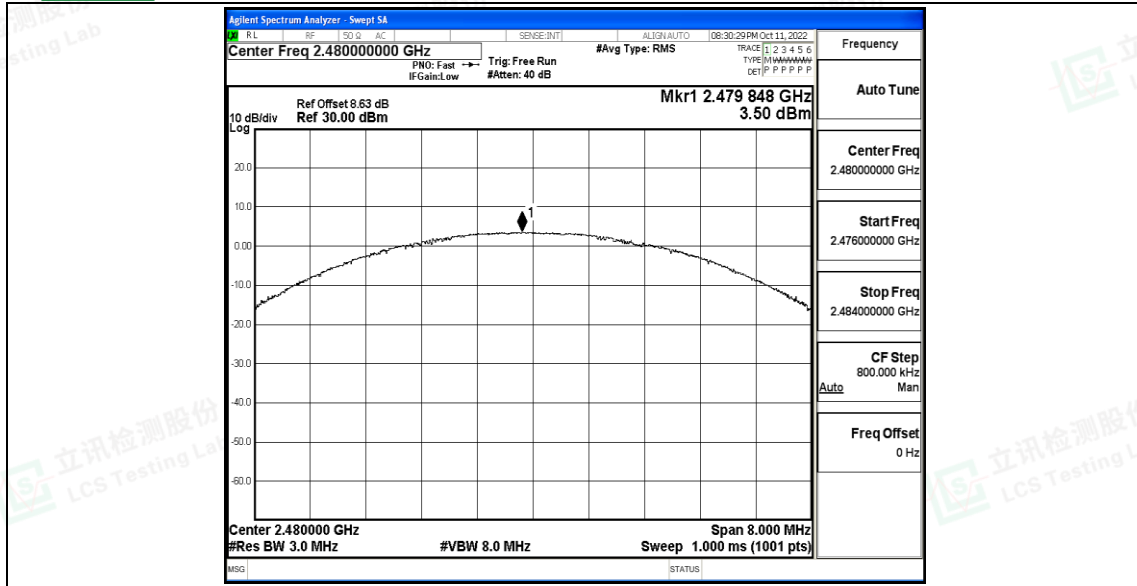


3DH5\_Ant1\_2441



3DH5\_Ant1\_2480







### A.3 Carrier frequency separation

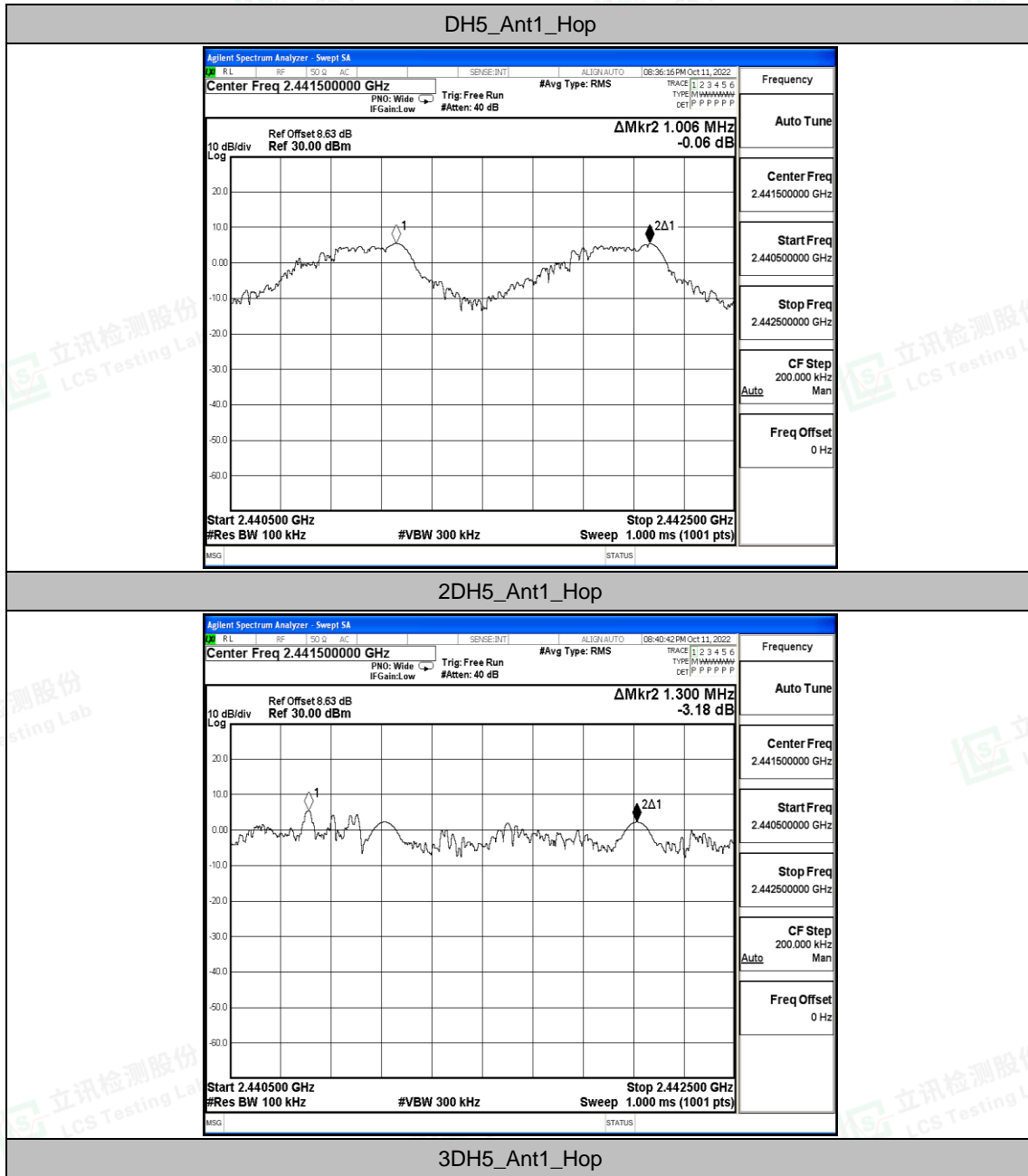
#### Test Result

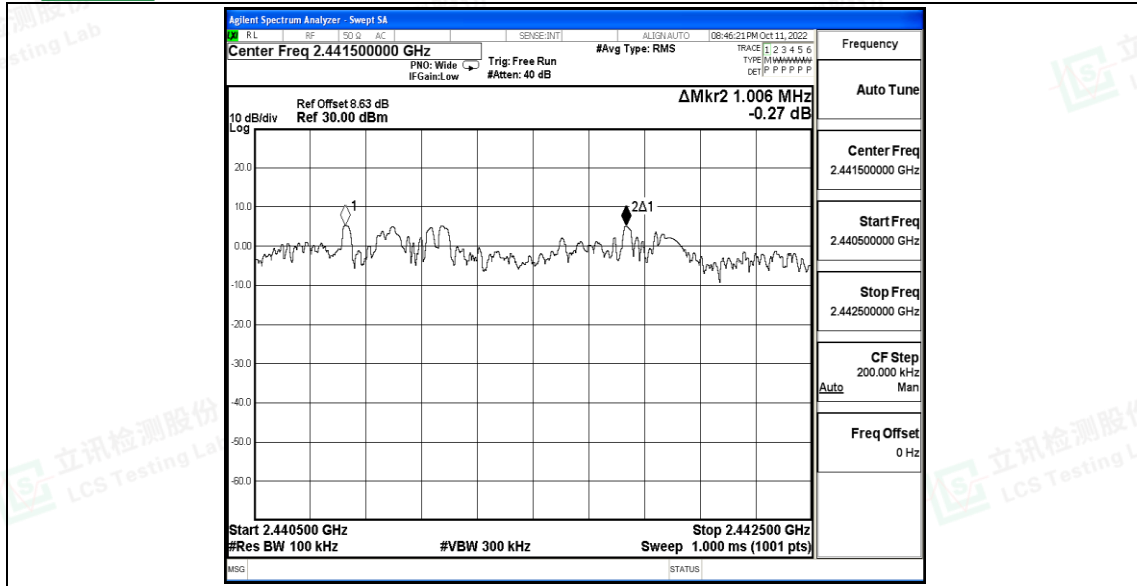
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.006	≥0.688	PASS
2DH5	Ant1	Hop	1.300	≥0.876	PASS
3DH5	Ant1	Hop	1.006	≥0.880	PASS





### Test Graphs









## A.4 Time of occupancy

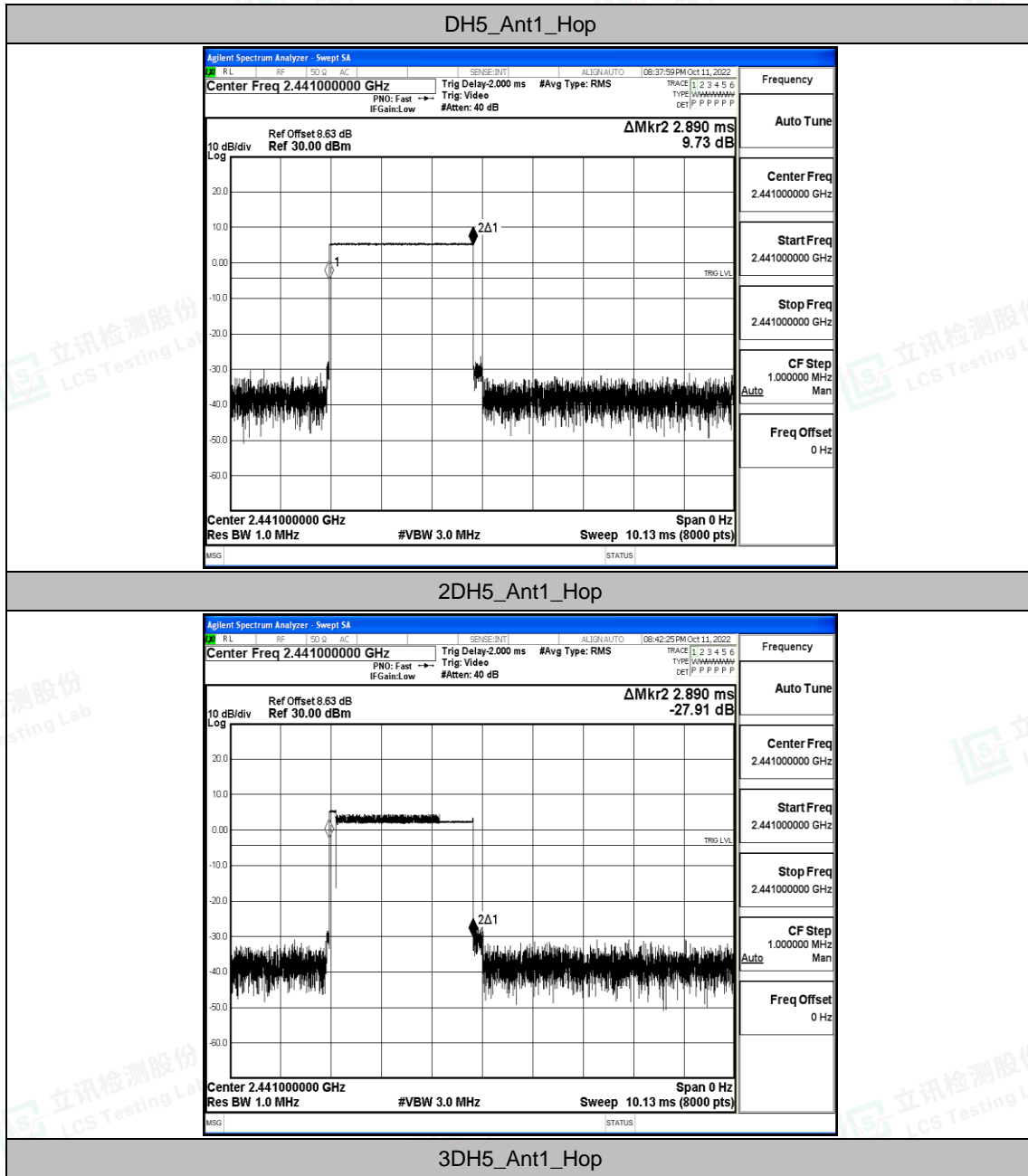
### Test Result

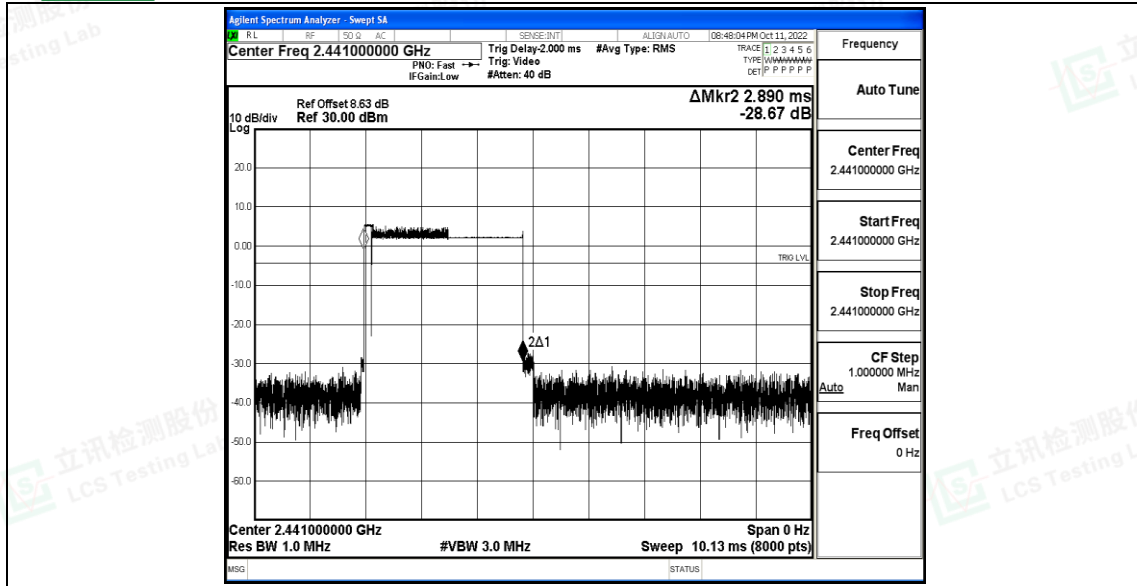
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS
2DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS





### Test Graphs







## A.5 Number of hopping channels

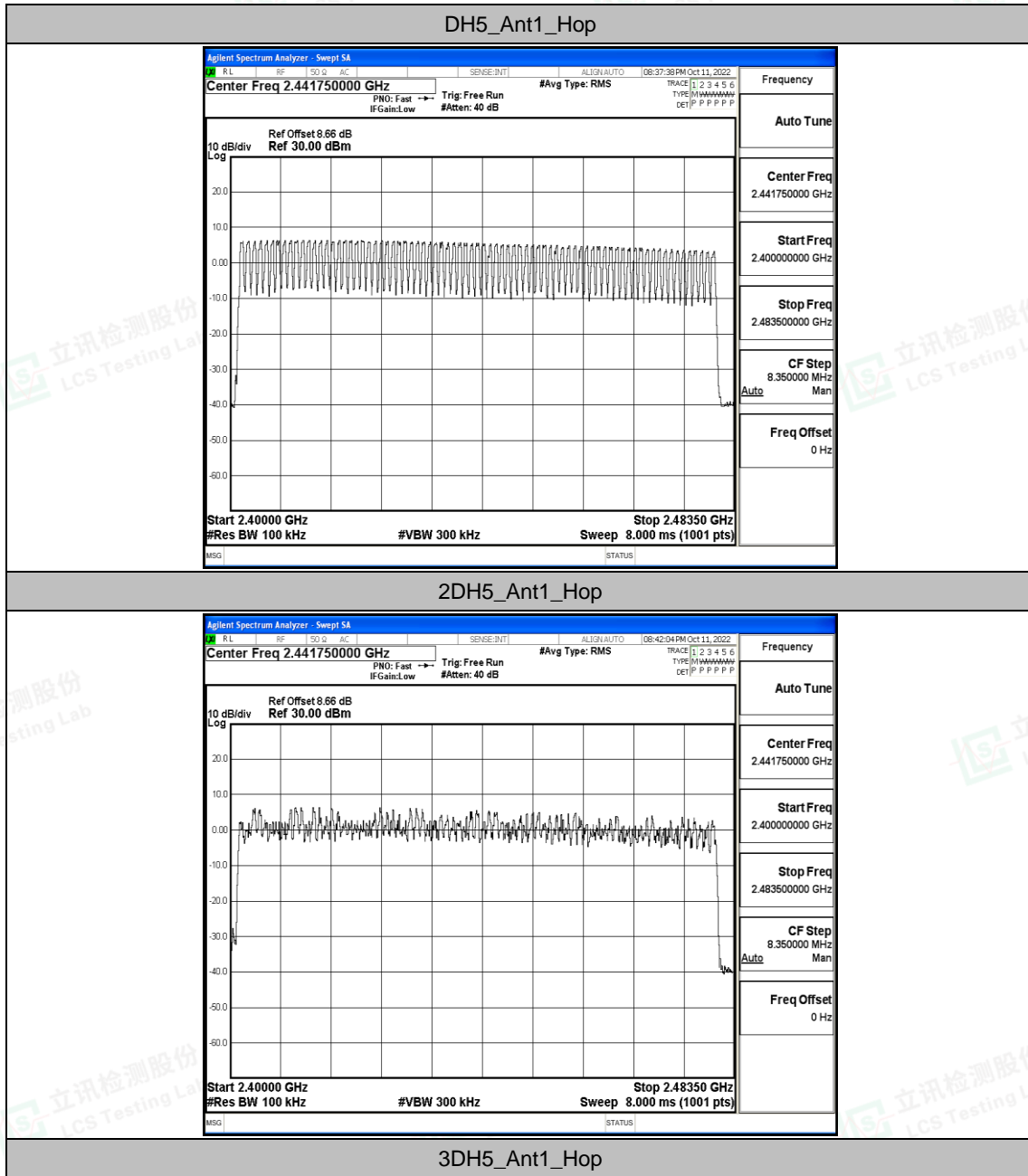
### Test Result

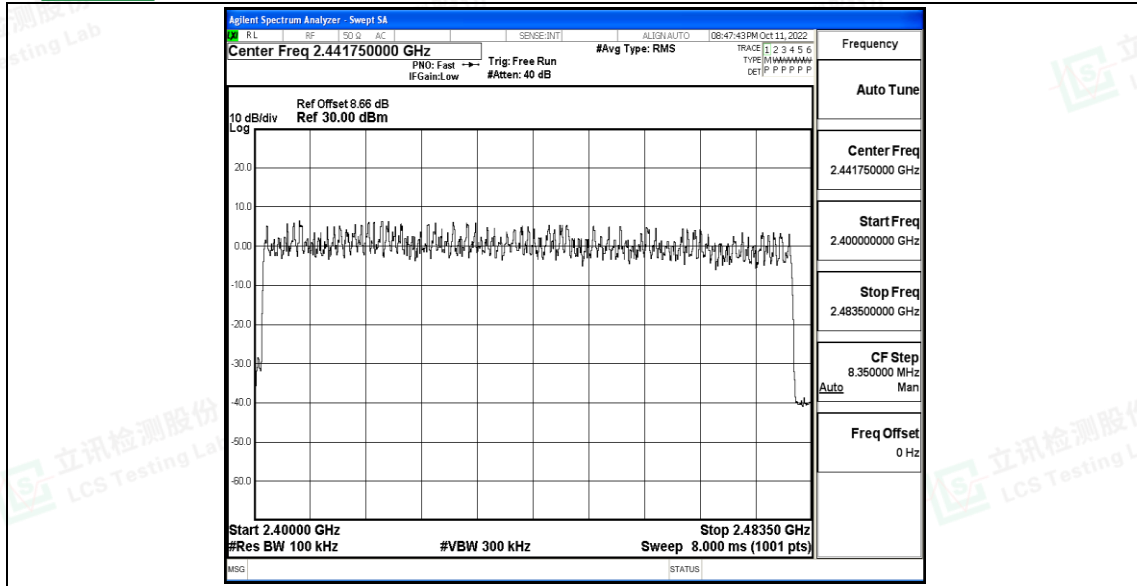
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS





### Test Graphs







## A.6 Band edge measurements

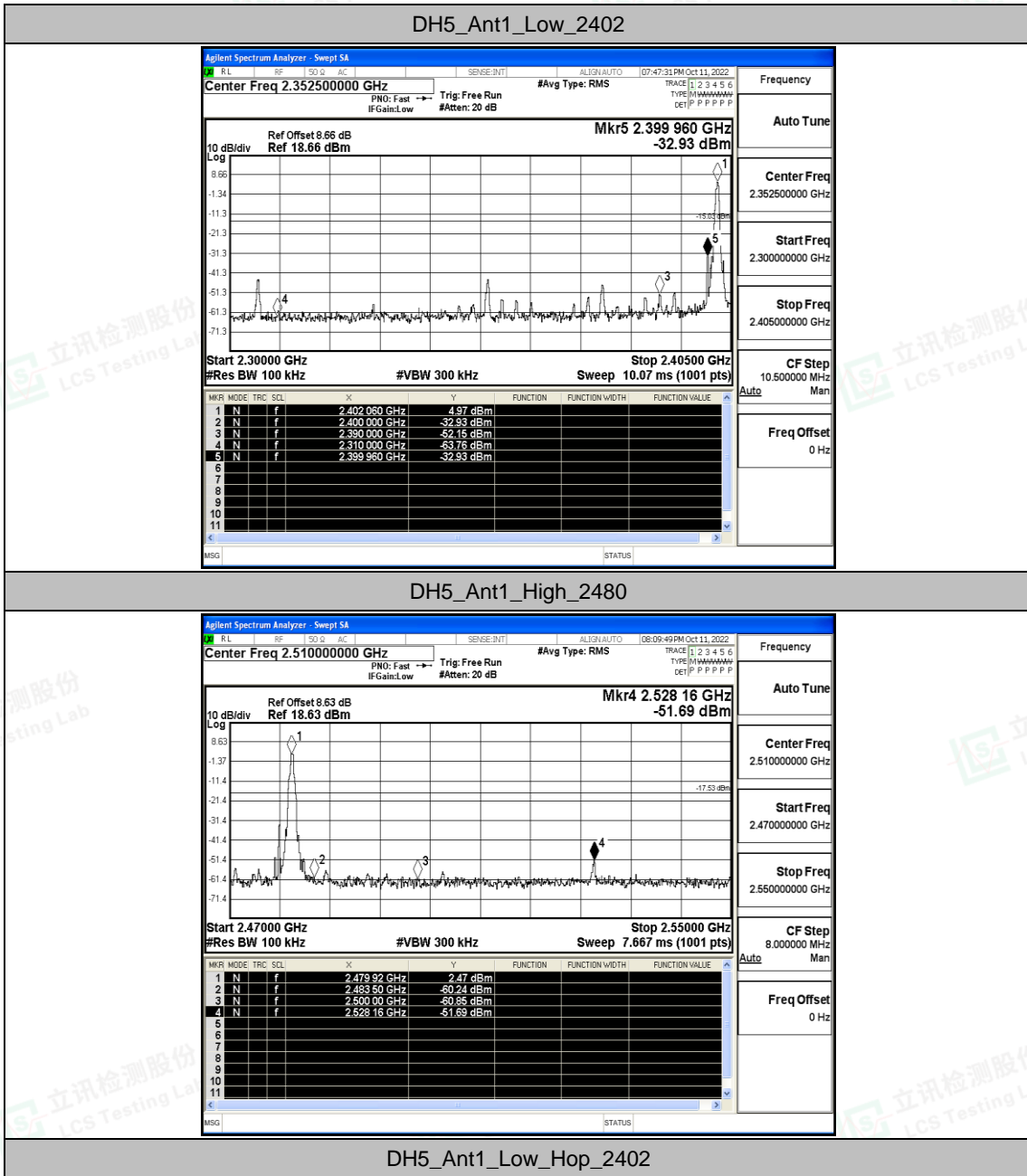
### Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	4.97	-32.93	≤-15.03	PASS
		High	2480	2.47	-51.69	≤-17.53	PASS
		Low	Hop_2402	5.77	-43.48	≤-14.23	PASS
		High	Hop_2480	3.60	-46.59	≤-16.4	PASS
2DH5	Ant1	Low	2402	1.88	-33.61	≤-18.12	PASS
		High	2480	0.92	-54.75	≤-19.08	PASS
		Low	Hop_2402	5.63	-44.98	≤-14.38	PASS
		High	Hop_2480	0.87	-45.7	≤-19.13	PASS
3DH5	Ant1	Low	2402	1.68	-33.25	≤-18.32	PASS
		High	2480	2.25	-54.69	≤-17.76	PASS
		Low	Hop_2402	5.56	-43.38	≤-14.44	PASS
		High	Hop_2480	3.61	-47.09	≤-16.39	PASS

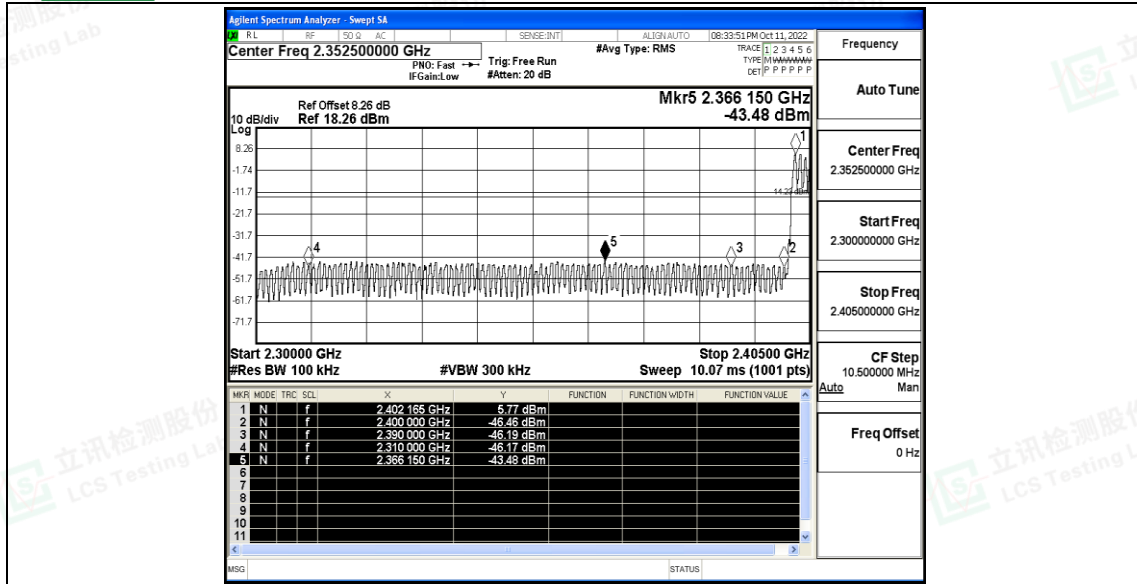




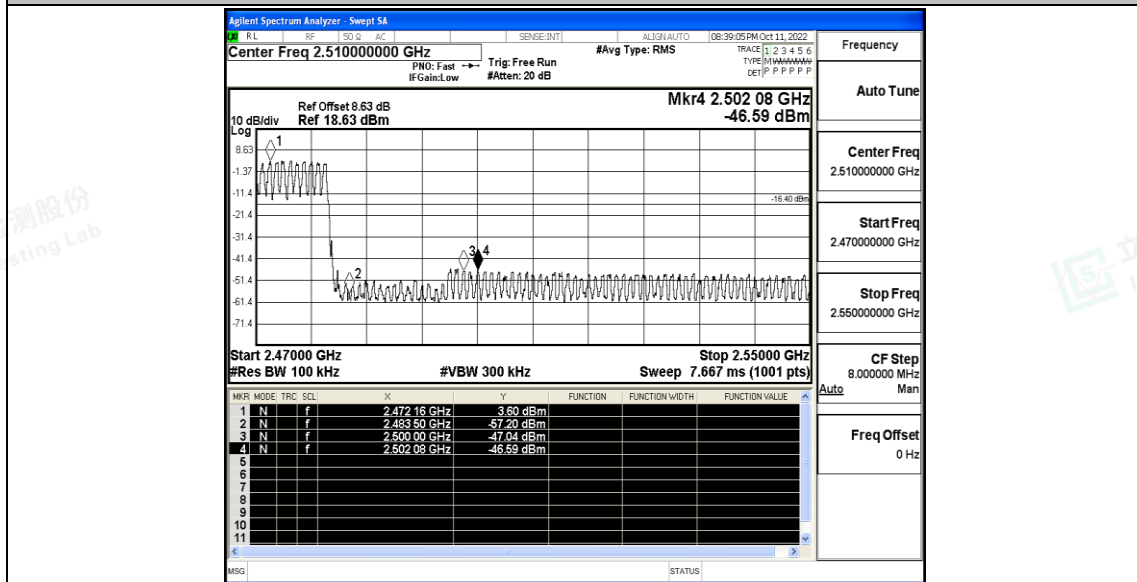
Test Graphs





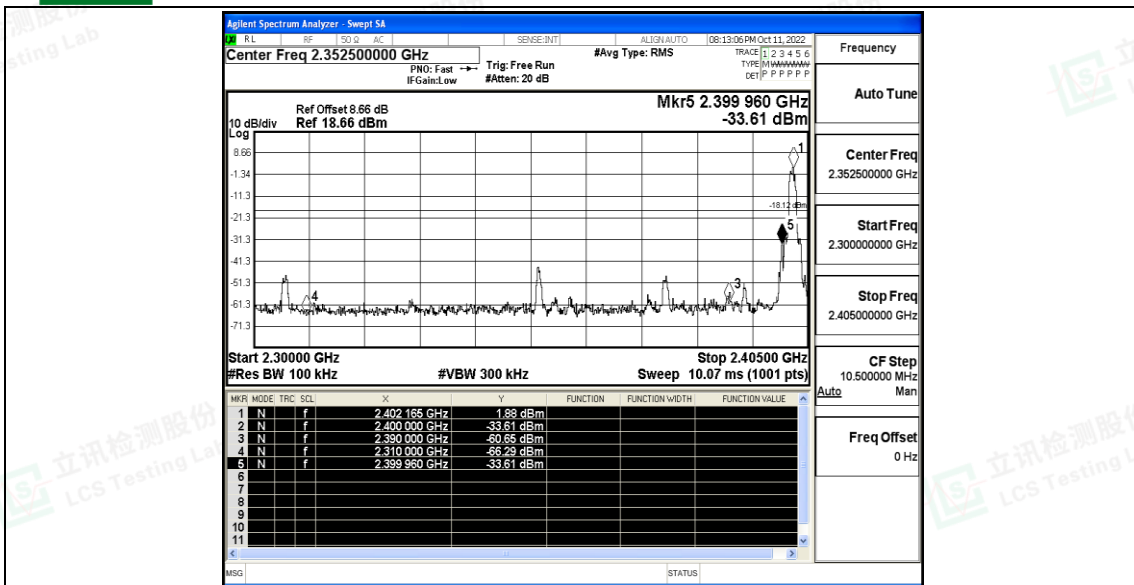


DH5\_Ant1\_High\_Hop\_2480

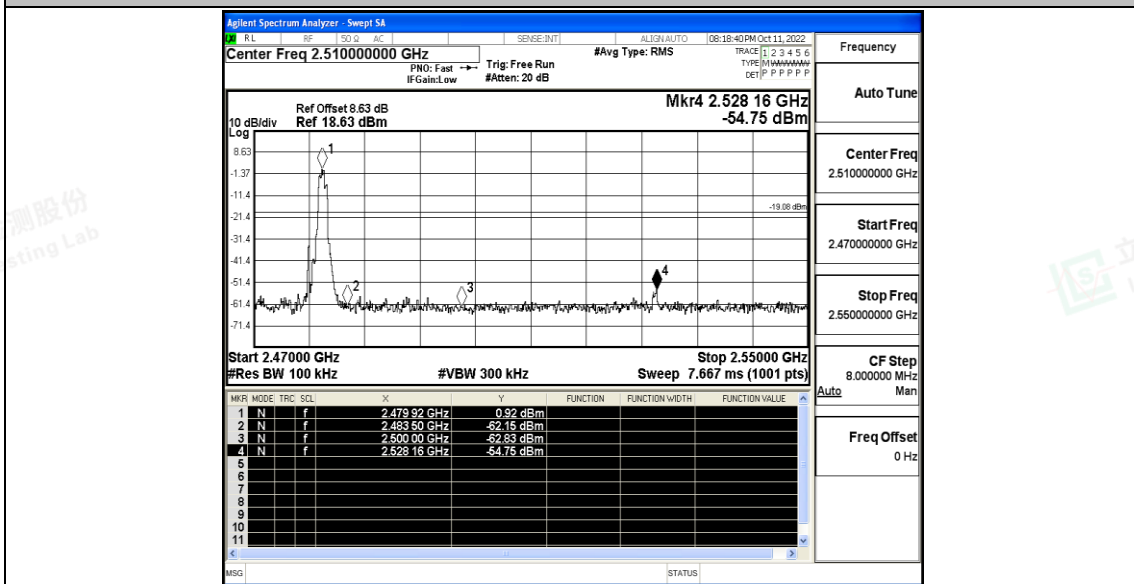


2DH5\_Ant1\_Low\_2402



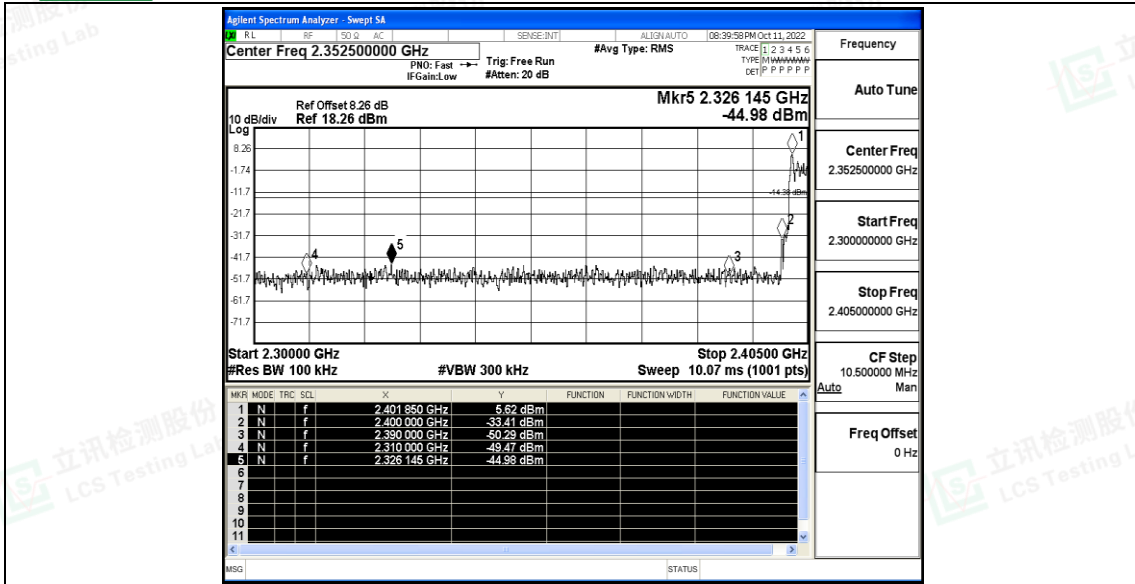


2DH5\_Ant1\_High\_2480

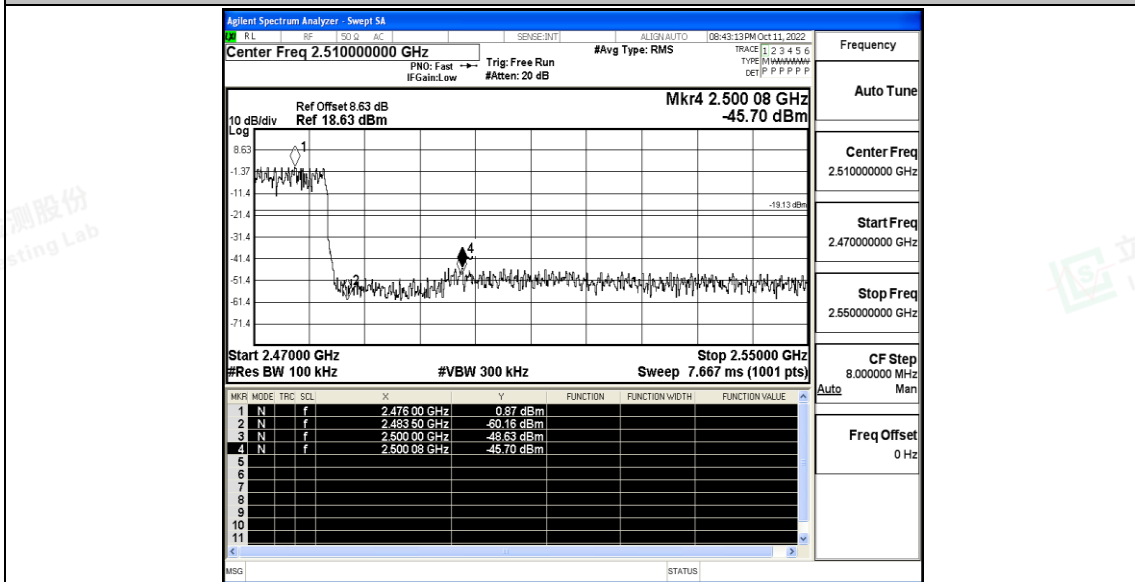


2DH5\_Ant1\_Low\_Hop\_2402



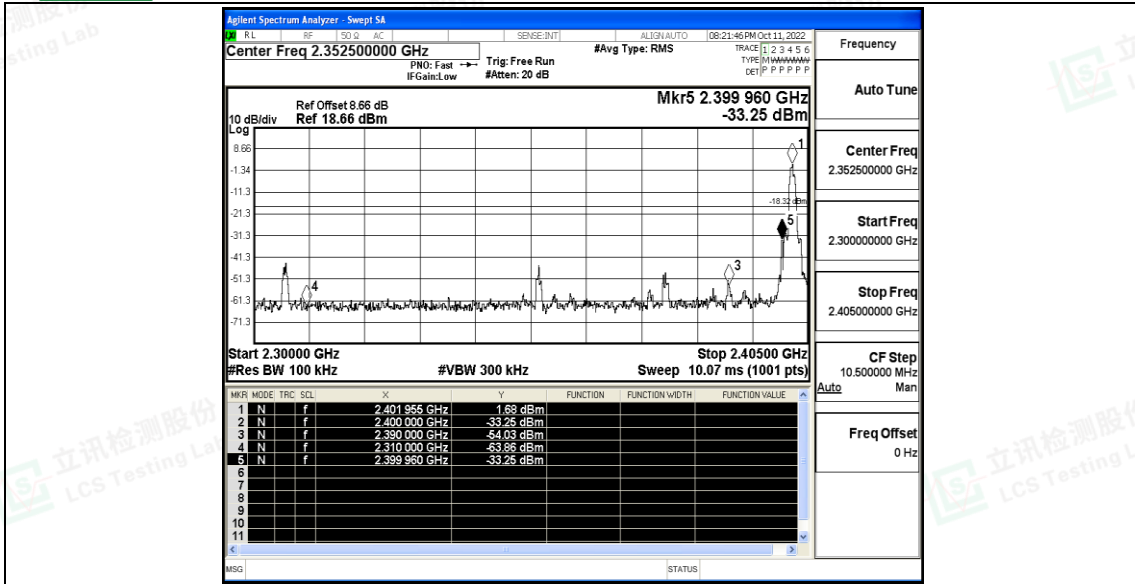


2DH5\_Ant1\_High\_Hop\_2480

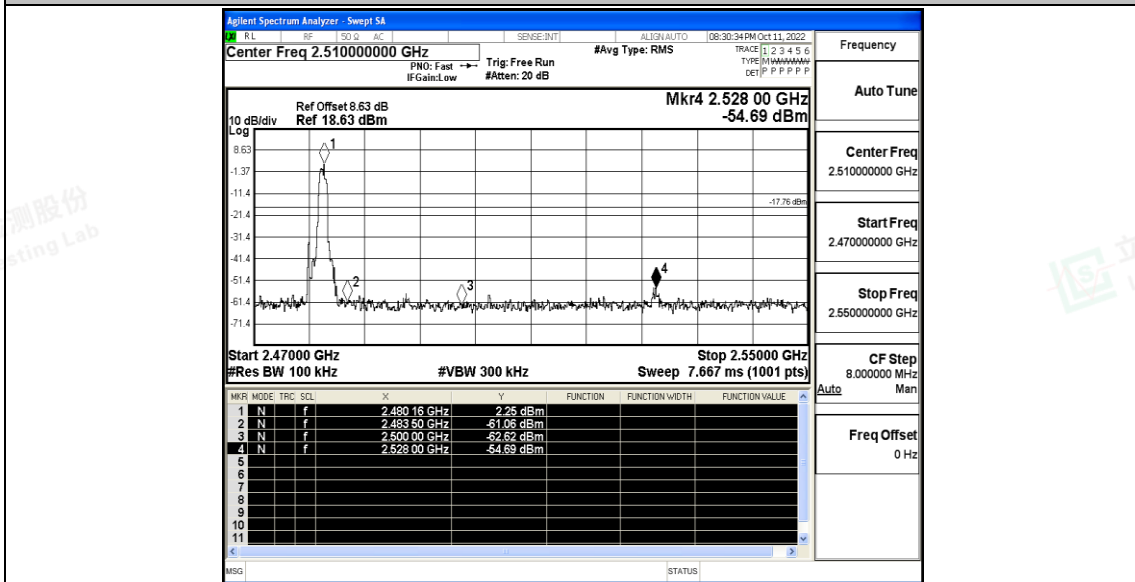


3DH5\_Ant1\_Low\_2402



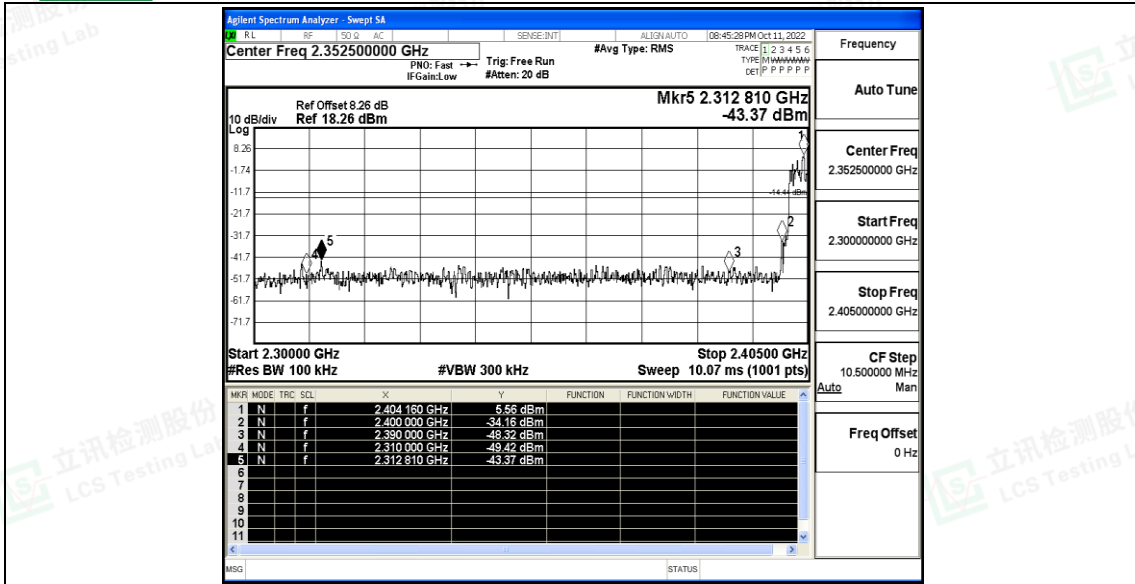


3DH5\_Ant1\_High\_2480

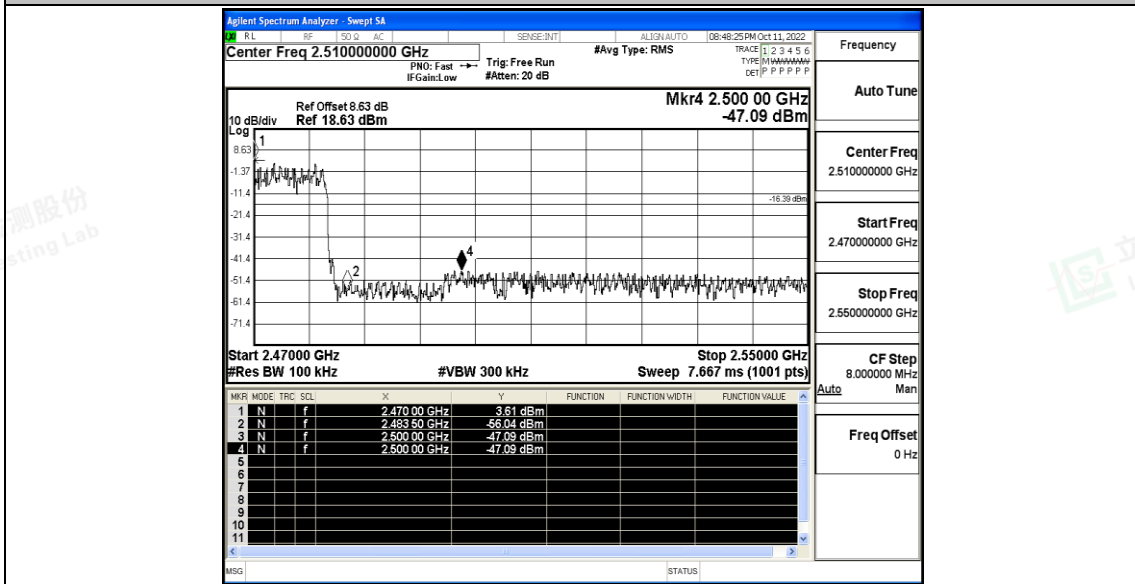


3DH5\_Ant1\_Low\_Hop\_2402





3DH5\_Ant1\_High\_Hop\_2480





## A.7 Conducted Spurious Emission

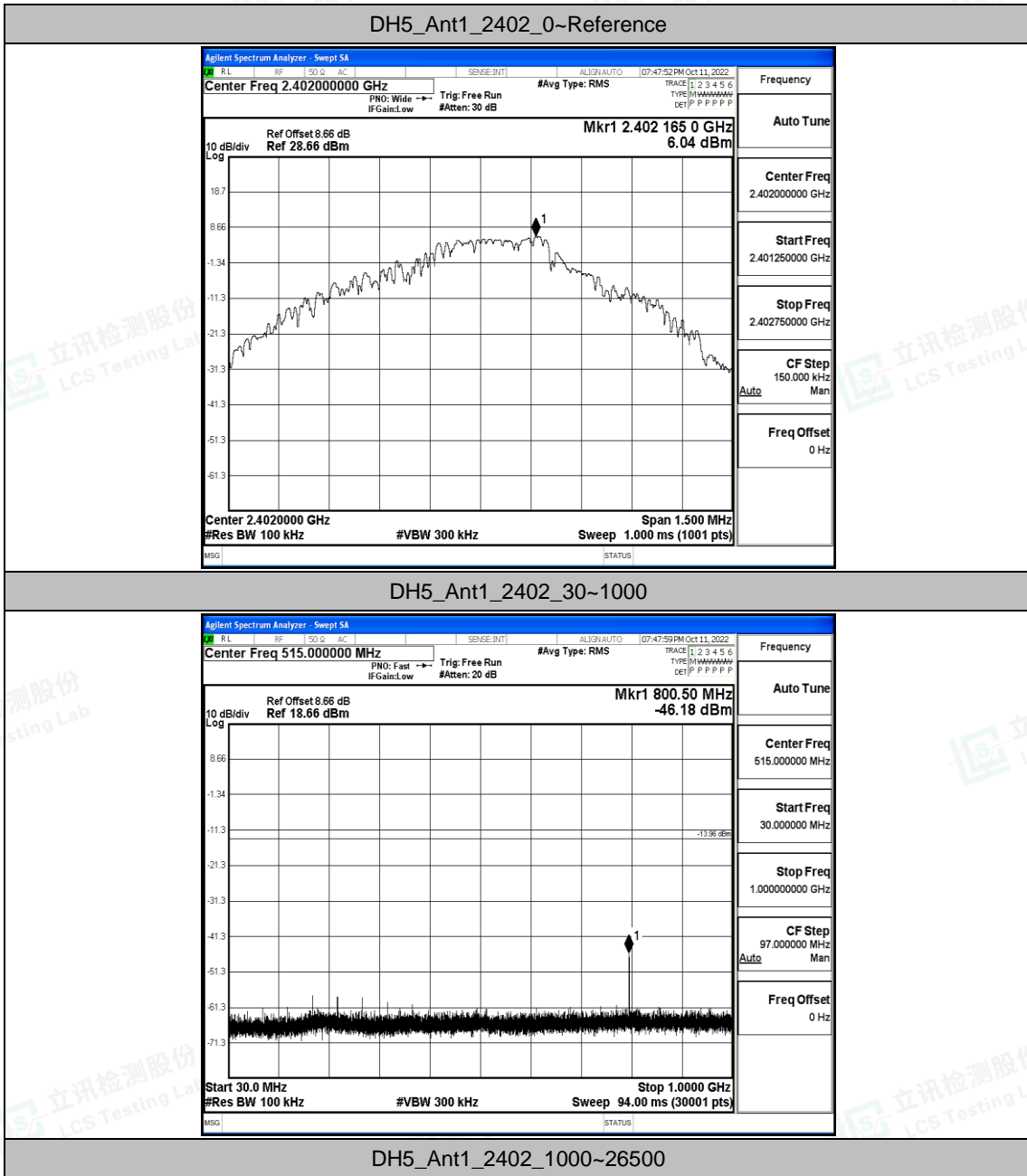
### Test Result

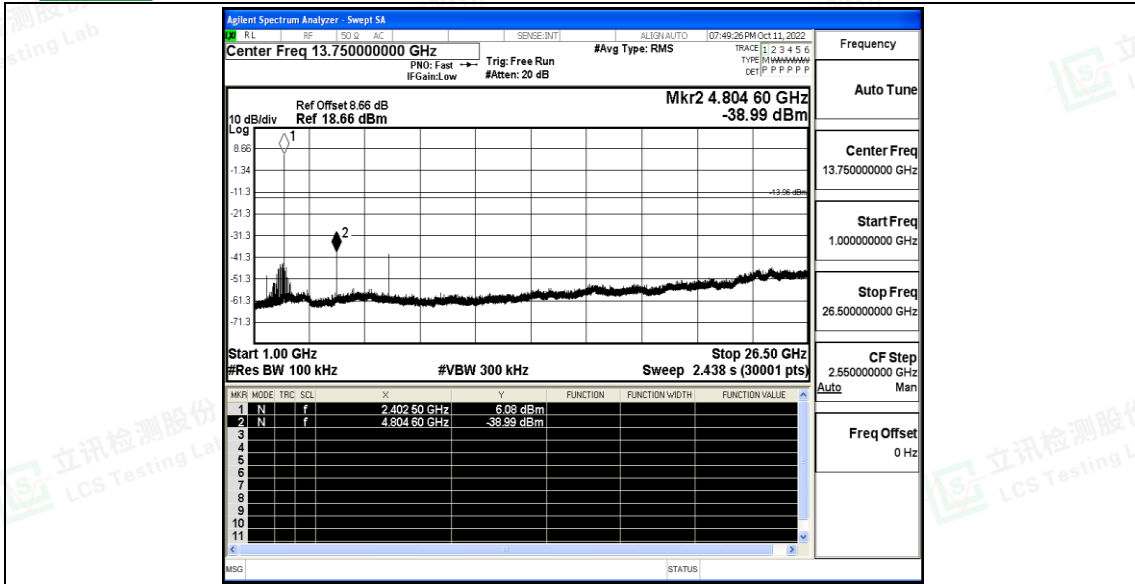
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	6.04	6.04	---	PASS
			30~1000	6.04	-46.18	≤-13.96	PASS
			1000~26500	6.04	-38.99	≤-13.96	PASS
		2441	Reference	5.48	5.48	---	PASS
			30~1000	5.48	-46.18	≤-14.52	PASS
			1000~26500	5.48	-37.63	≤-14.52	PASS
		2480	Reference	2.99	2.99	---	PASS
			30~1000	2.99	-48.2	≤-17.01	PASS
			1000~26500	2.99	-39.92	≤-17.01	PASS
2DH5	Ant1	2402	Reference	1.07	1.07	---	PASS
			30~1000	1.07	-60.06	≤-18.93	PASS
			1000~26500	1.07	-46.45	≤-18.93	PASS
		2441	Reference	4.36	4.36	---	PASS
			30~1000	4.36	-48.53	≤-15.64	PASS
			1000~26500	4.36	-37.66	≤-15.64	PASS
		2480	Reference	2.79	2.79	---	PASS
			30~1000	2.79	-51.17	≤-17.21	PASS
			1000~26500	2.79	-37.85	≤-17.21	PASS
3DH5	Ant1	2402	Reference	-1.56	-1.56	---	PASS
			30~1000	-1.56	-60.1	≤-21.56	PASS
			1000~26500	-1.56	-46.57	≤-21.56	PASS
		2441	Reference	1.89	1.89	---	PASS
			30~1000	1.89	-60.04	≤-18.11	PASS
			1000~26500	1.89	-45.95	≤-18.11	PASS
		2480	Reference	-1.13	-1.13	---	PASS
			30~1000	-1.13	-60.18	≤-21.13	PASS
			1000~26500	-1.13	-45.97	≤-21.13	PASS



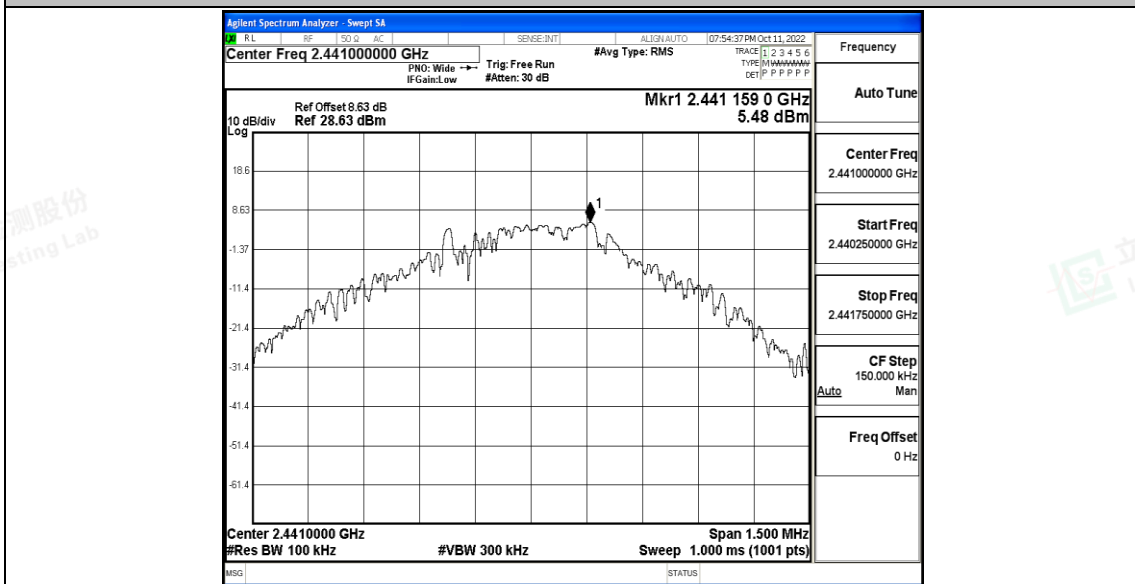


### Test Graphs





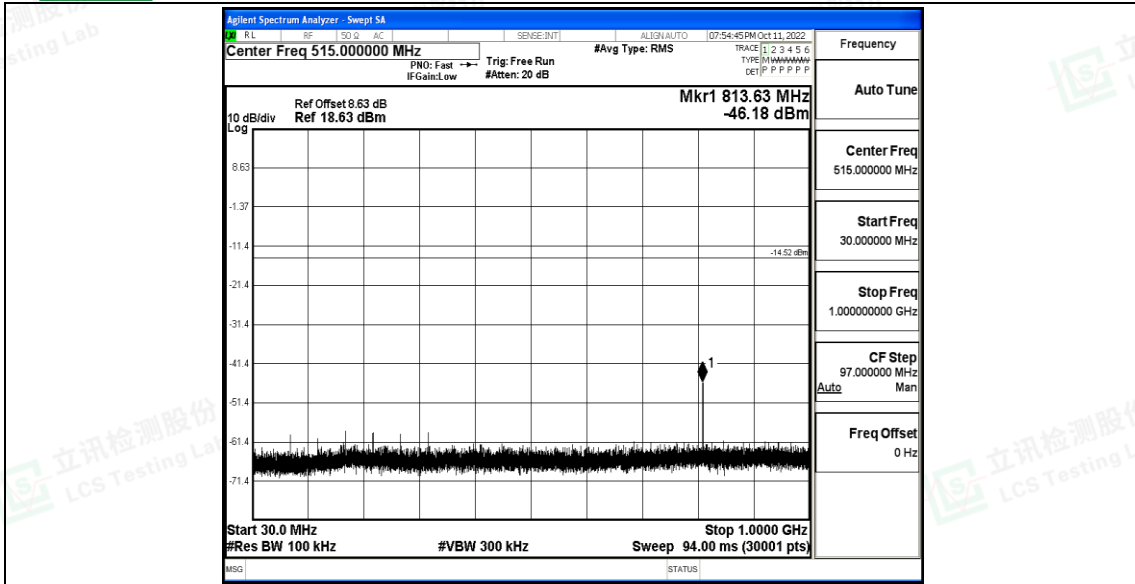
DH5\_Ant1\_2441\_0-Reference



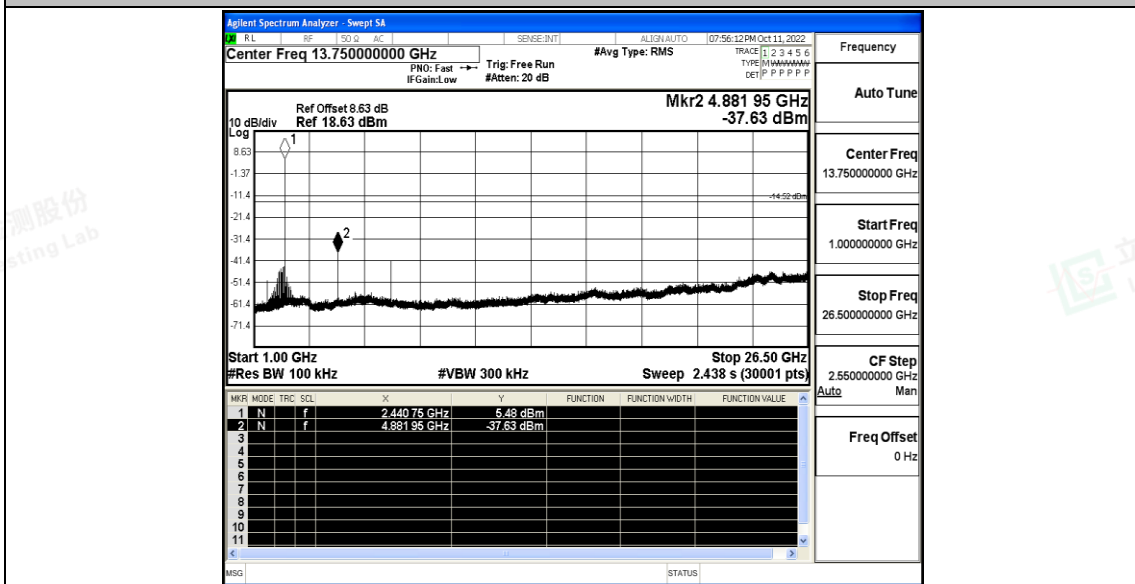
DH5\_Ant1\_2441\_30~1000





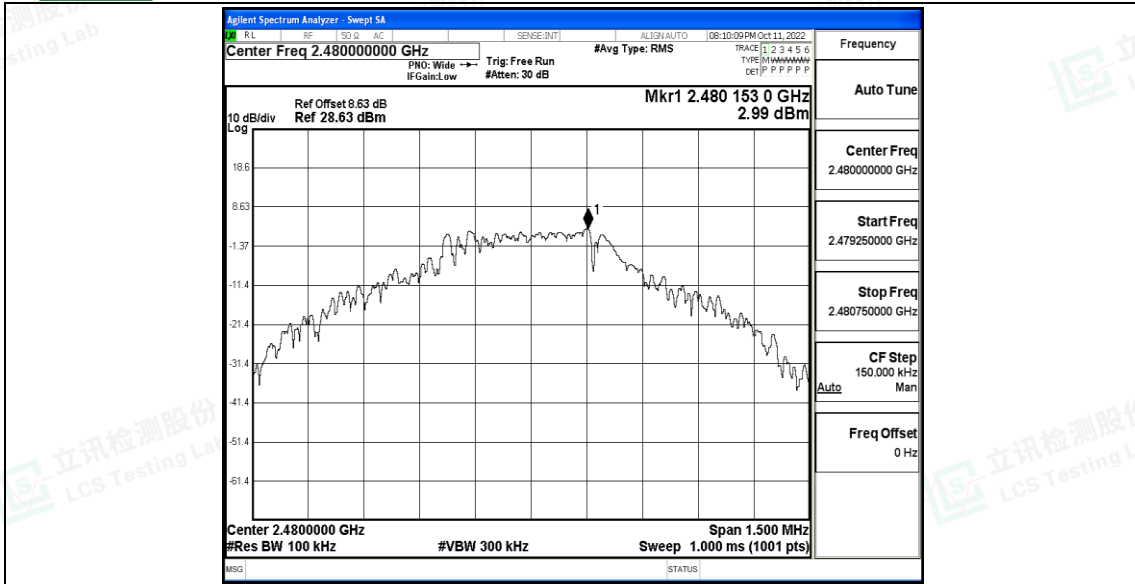


DH5\_Ant1\_2441\_1000~26500

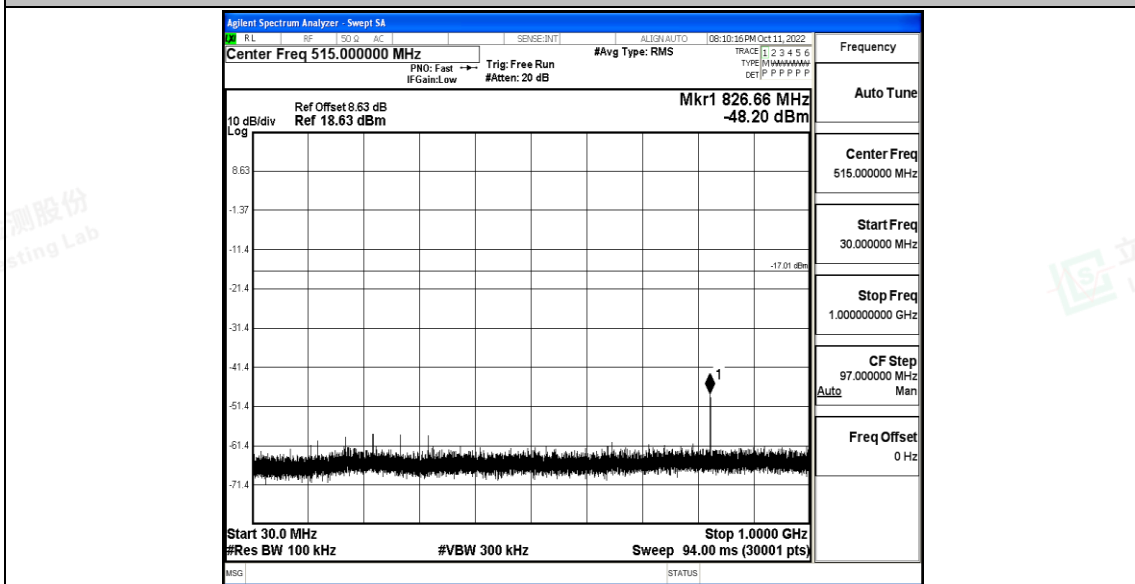


DH5\_Ant1\_2480\_0-Reference



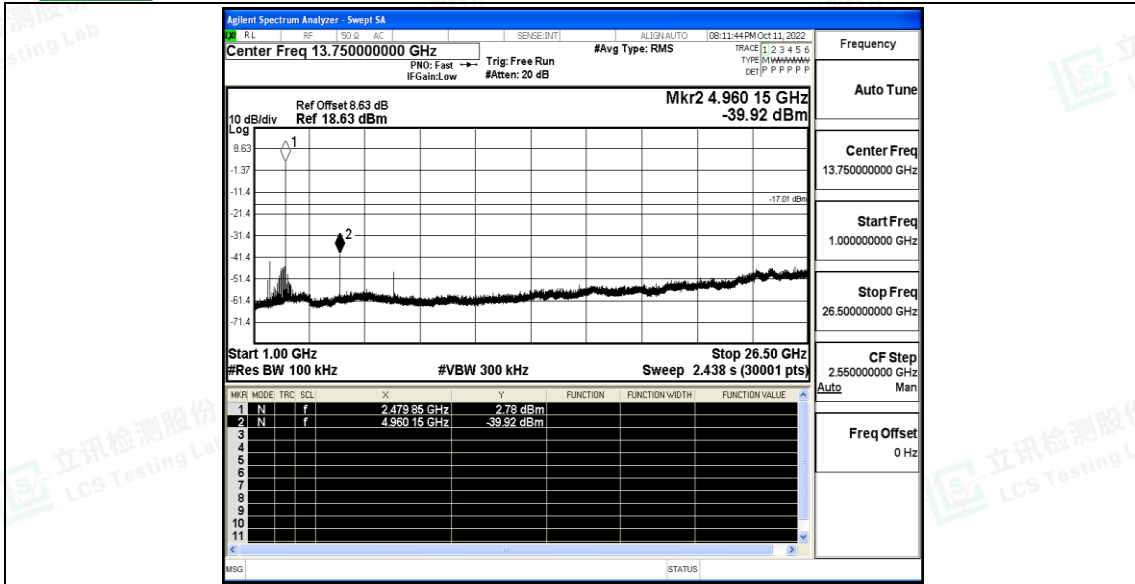


DH5\_Ant1\_2480\_30~1000

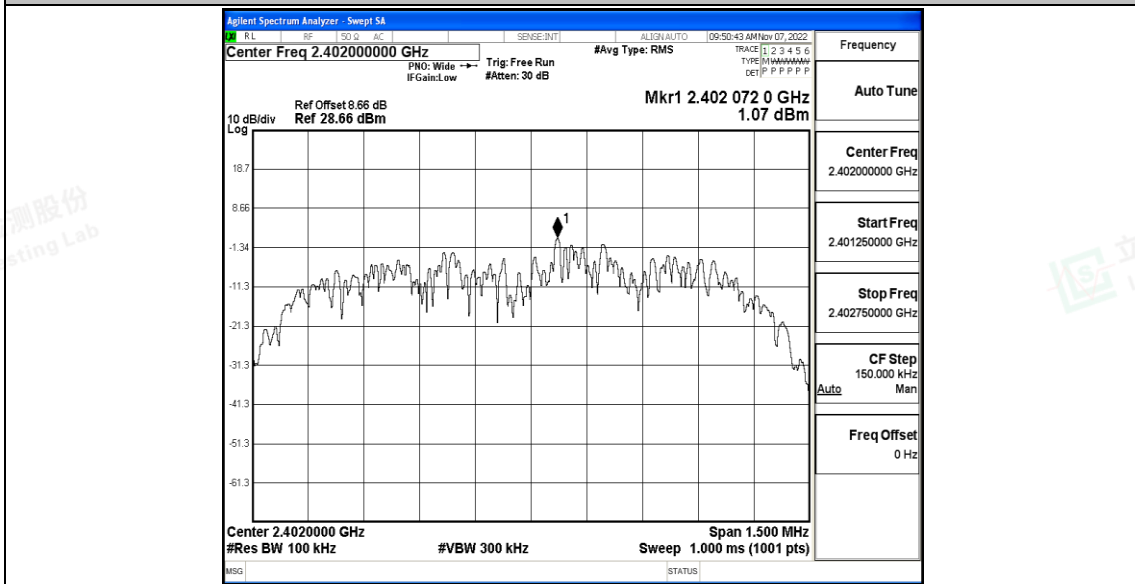


DH5\_Ant1\_2480\_1000~26500



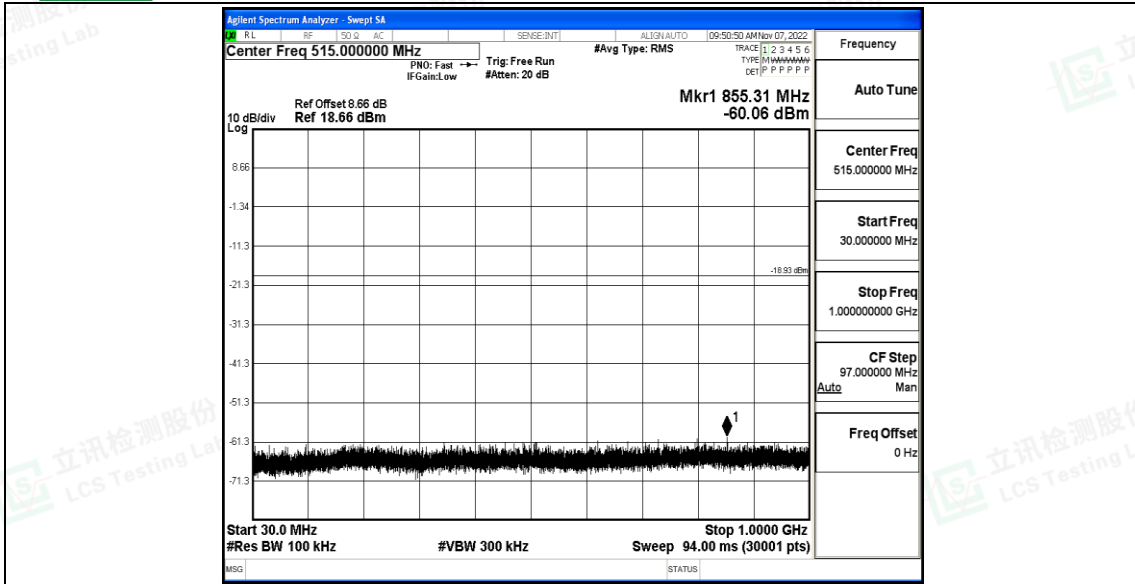


2DH5\_Ant1\_2402\_0~Reference

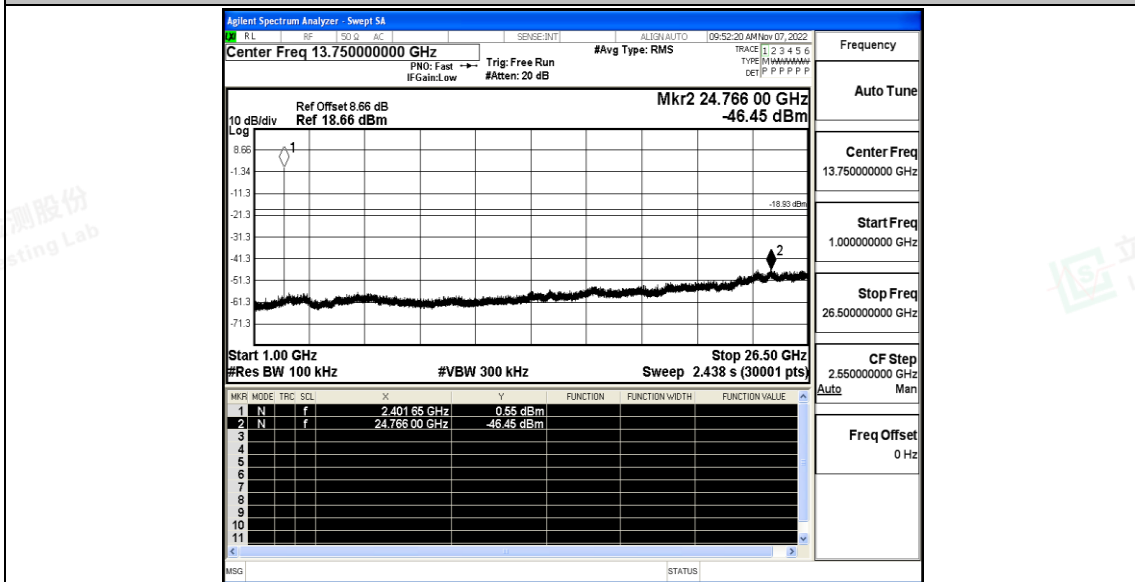


2DH5\_Ant1\_2402\_30~1000



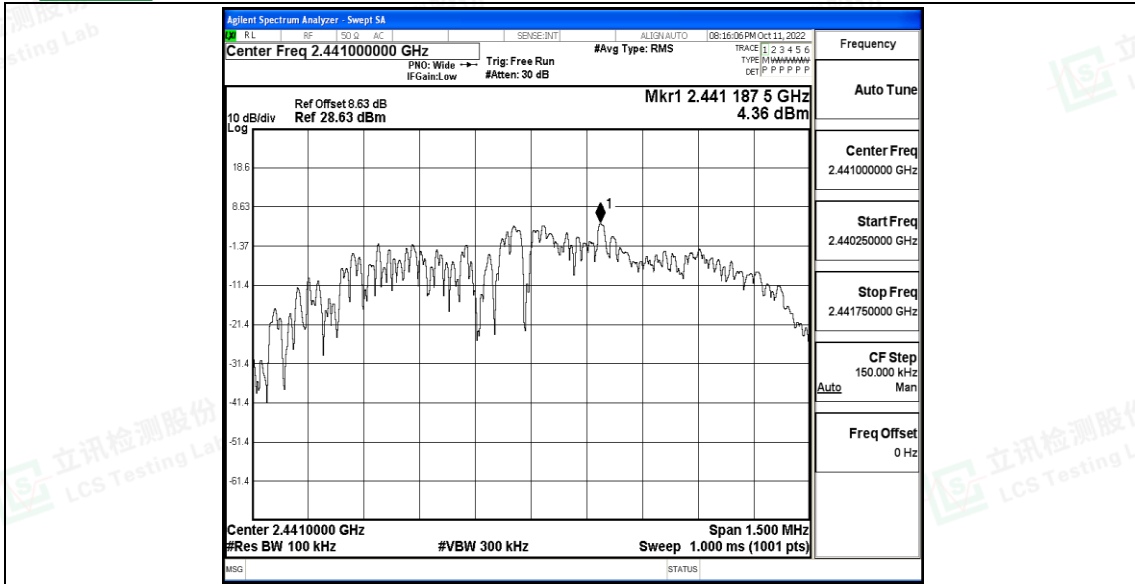


2DH5\_Ant1\_2402\_1000~26500

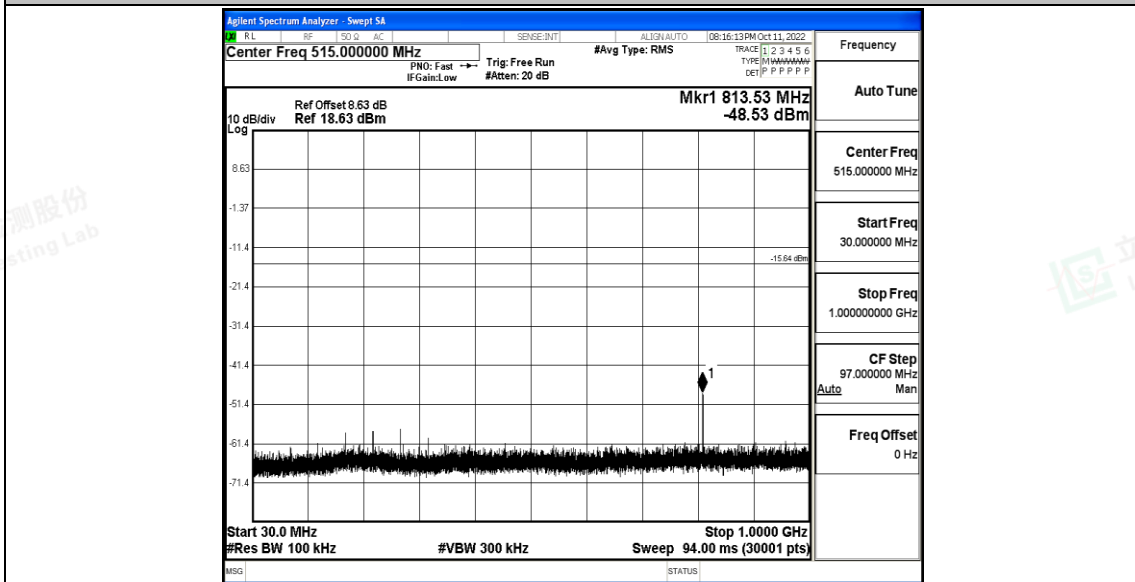


2DH5\_Ant1\_2441\_0~Reference



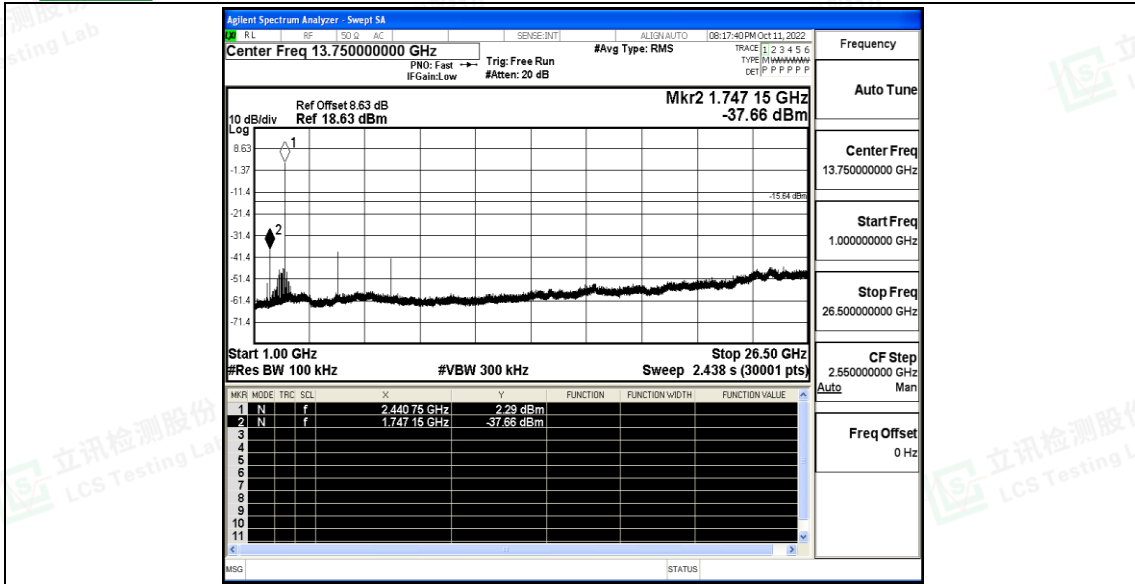


2DH5\_Ant1\_2441\_30~1000

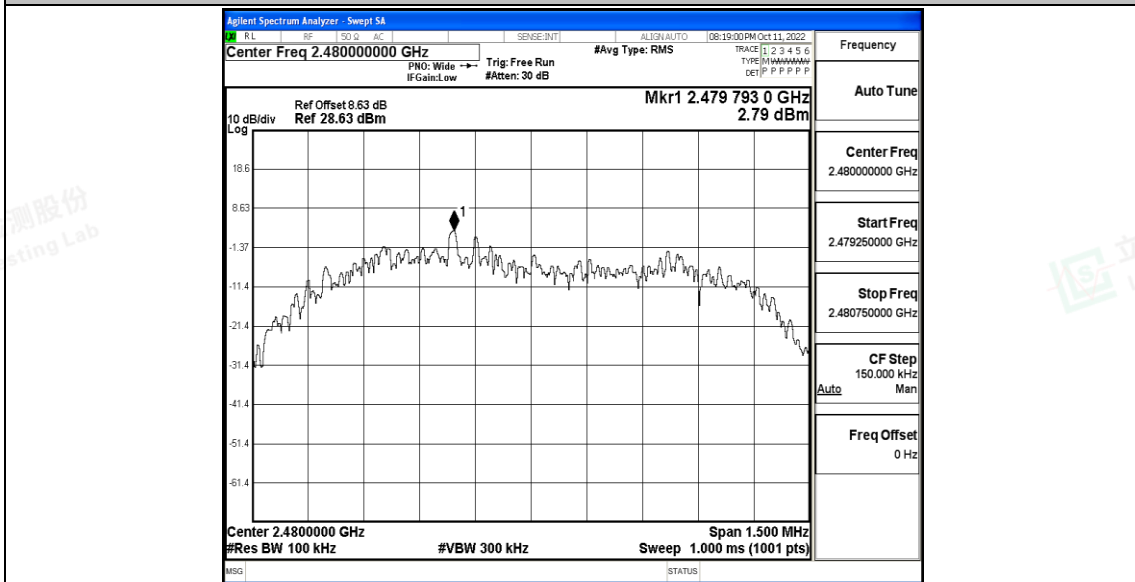


2DH5\_Ant1\_2441\_1000~26500



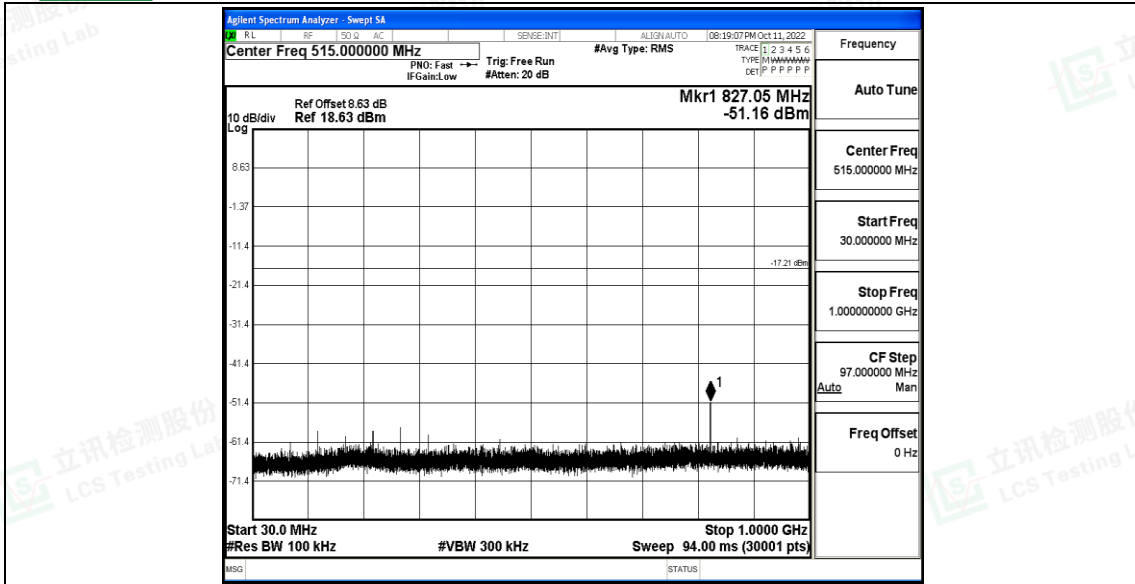


2DH5\_Ant1\_2480\_0~Reference

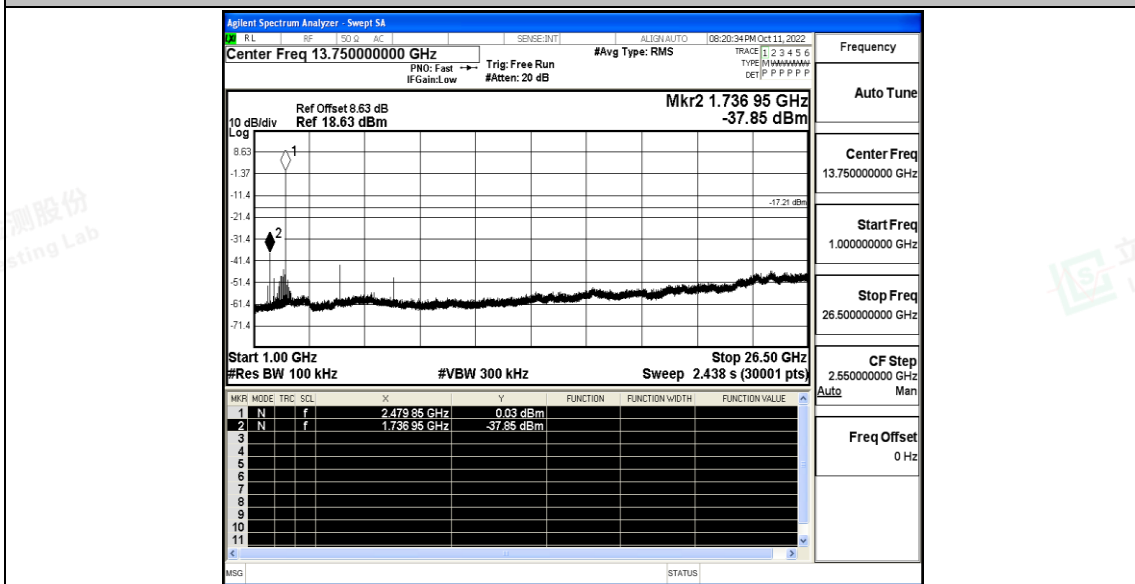


2DH5\_Ant1\_2480\_30~1000



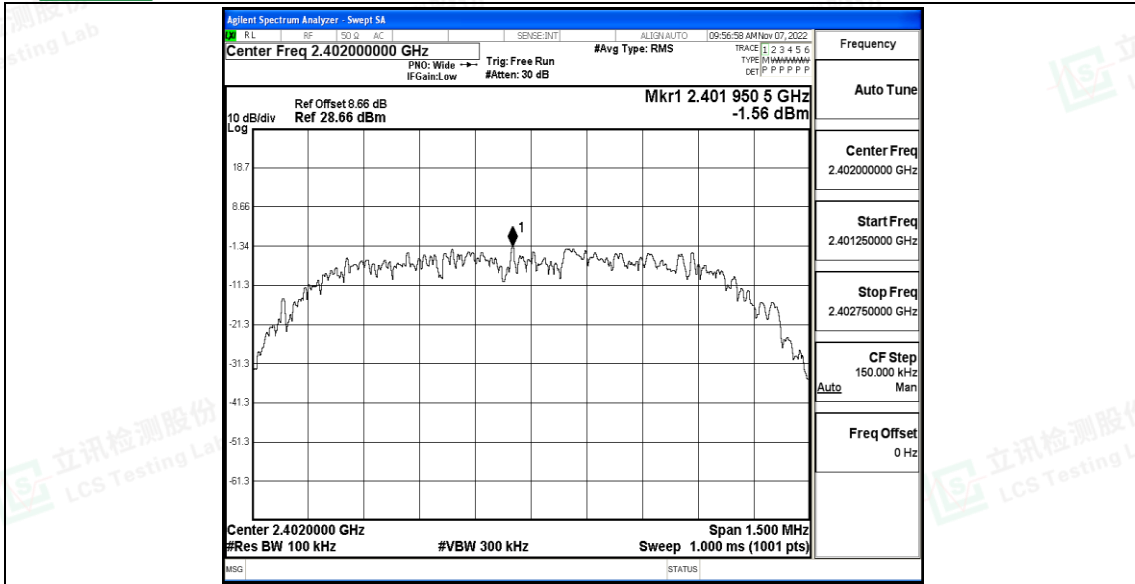


2DH5\_Ant1\_2480\_1000~26500

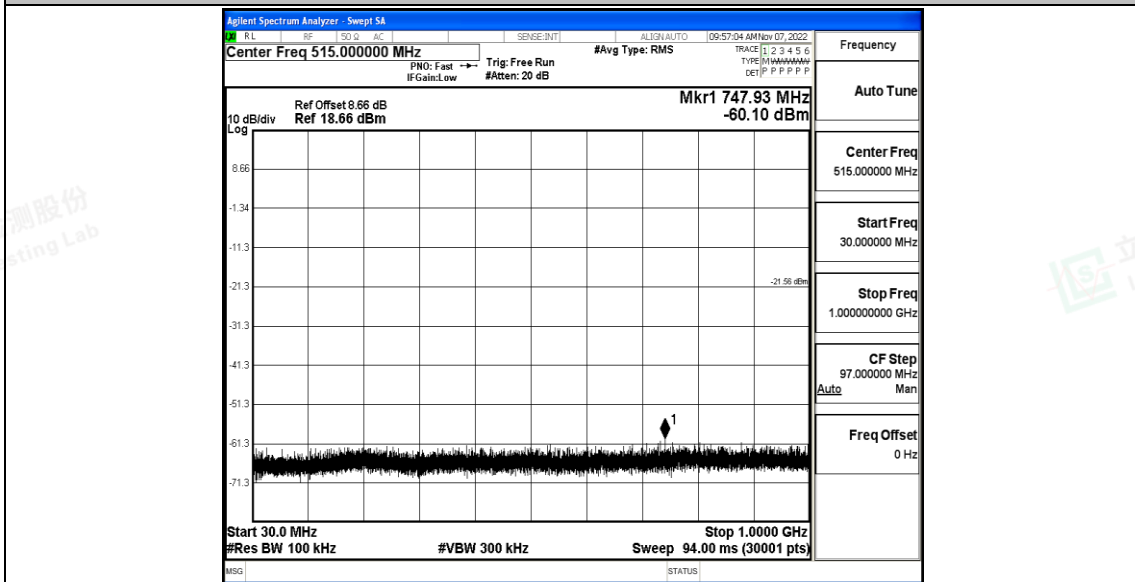


3DH5\_Ant1\_2402\_0~Reference





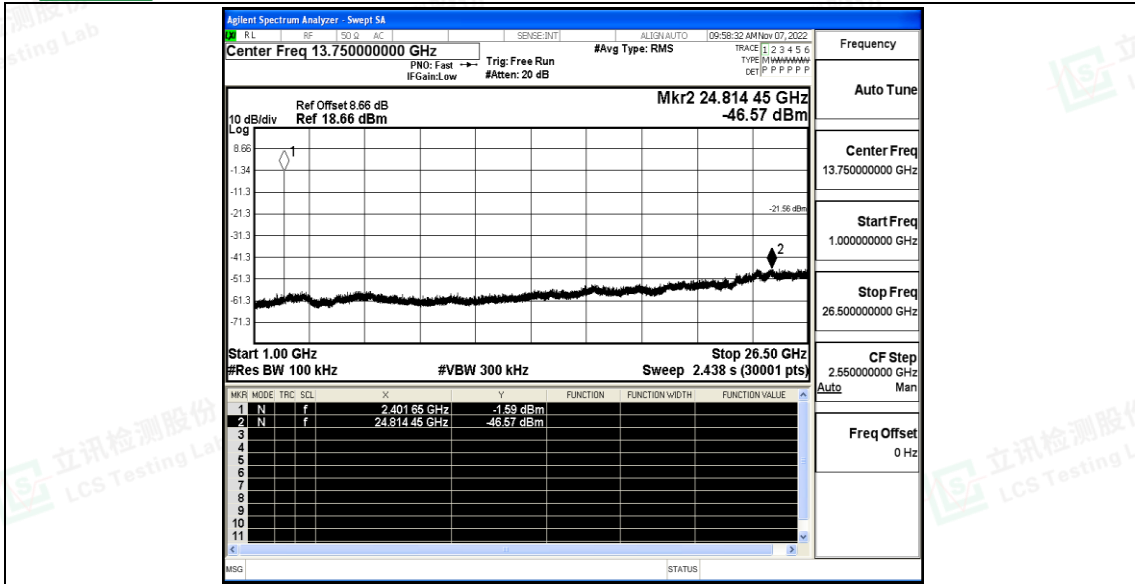
3DH5\_Ant1\_2402\_30~1000



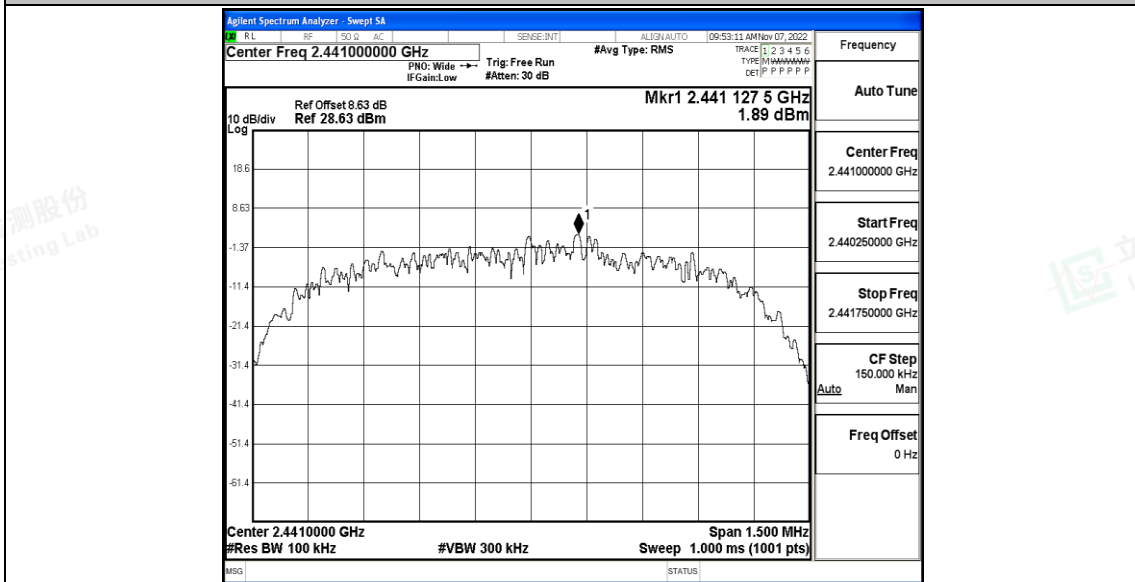
3DH5\_Ant1\_2402\_1000~26500





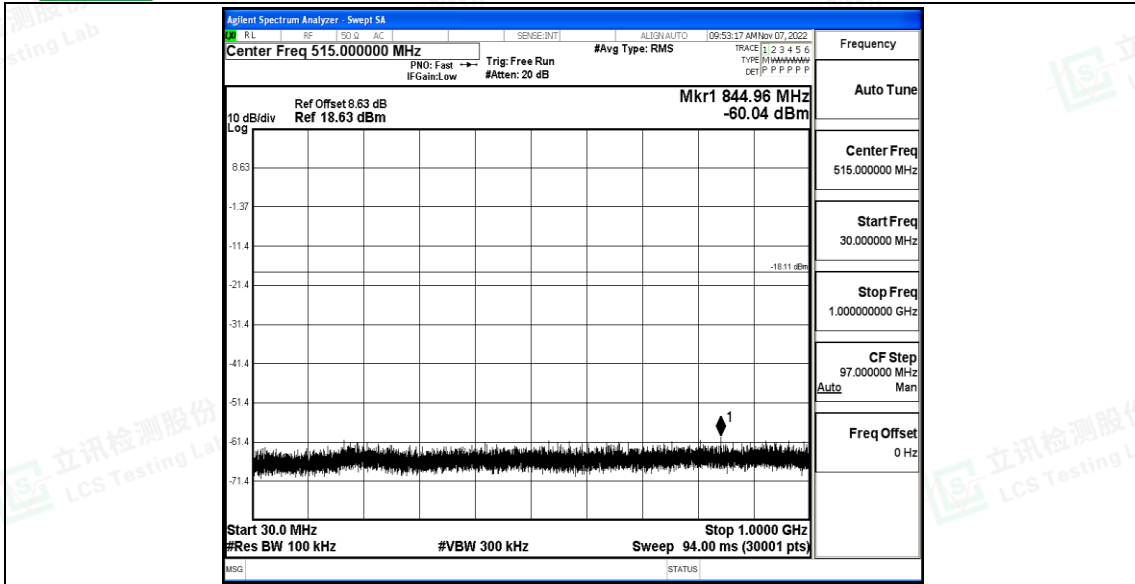


3DH5\_Ant1\_2441\_0~Reference

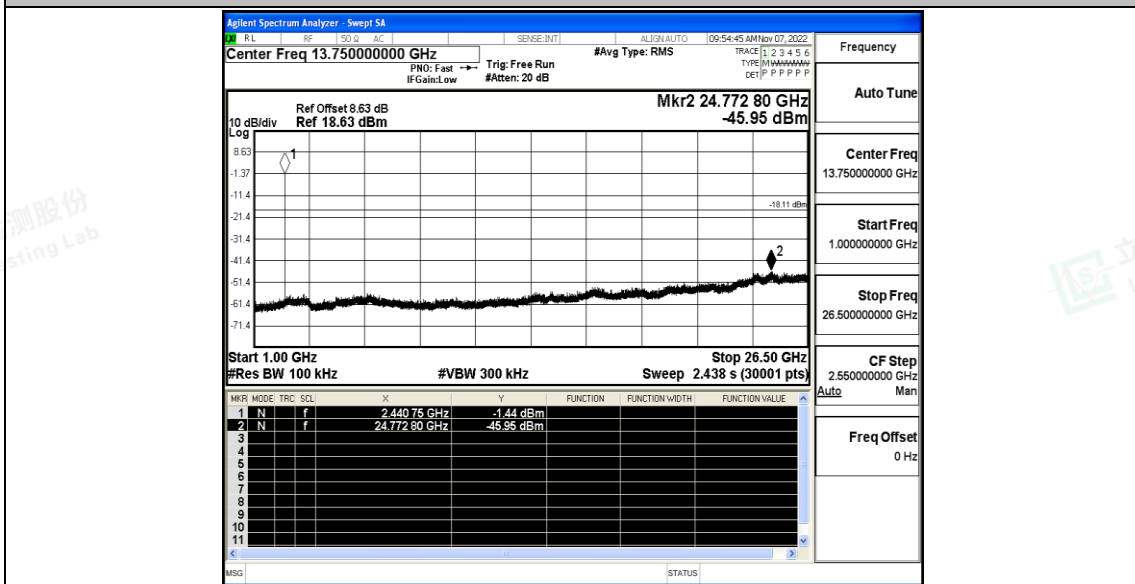


3DH5\_Ant1\_2441\_30~1000



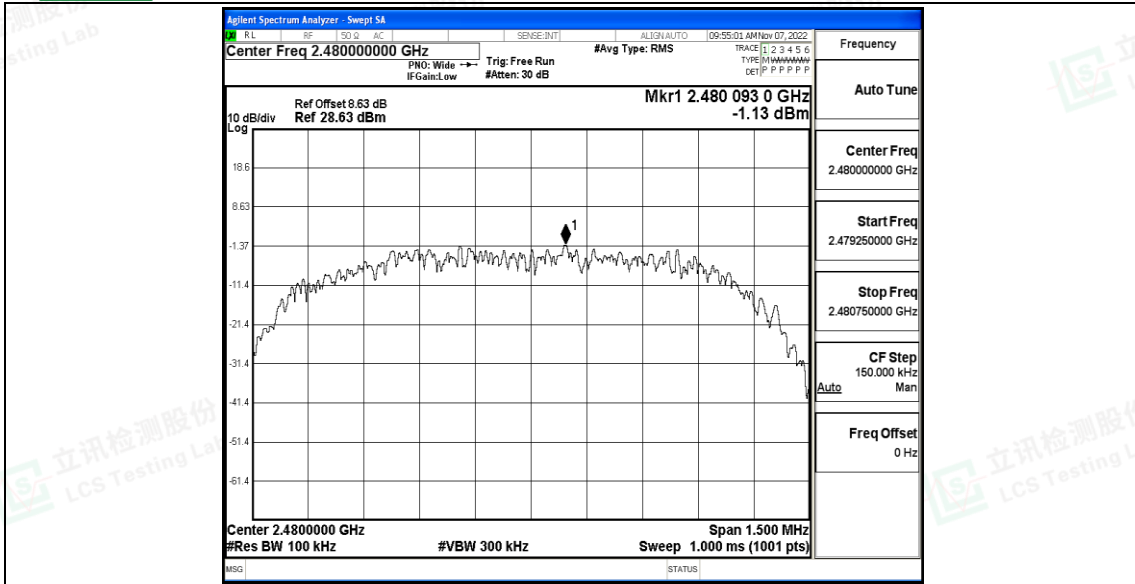


3DH5\_Ant1\_2441\_1000~26500

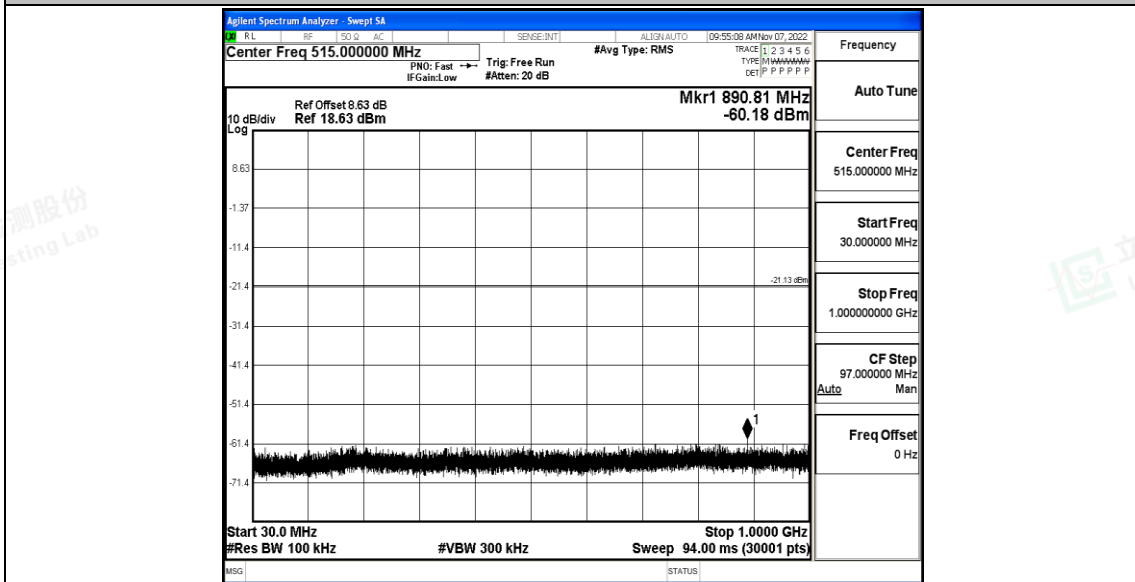


3DH5\_Ant1\_2480\_0~Reference



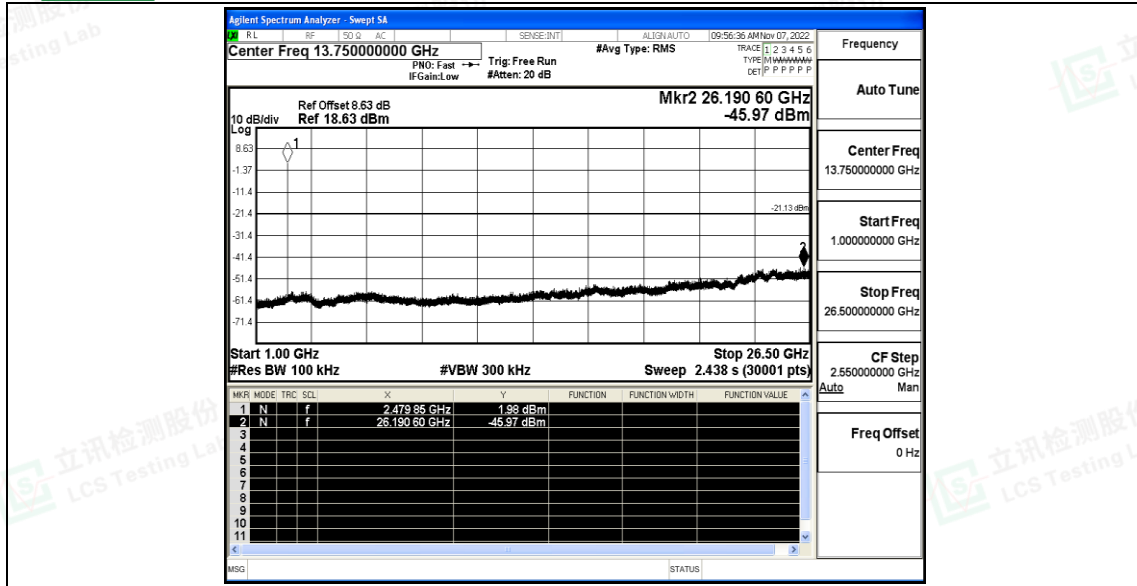


3DH5\_Ant1\_2480\_30~1000



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	-57.74	≤-41.20	37.46	≤54	PASS
				AV	2354.075	-41.95	≤-41.20	53.25	≤54	PASS
				AV	2390.000	-49.31	≤-41.20	45.89	≤54	PASS
				Peak	2310.000	-53.23	≤-21.20	41.97	≤74	PASS
				Peak	2354.285	-39.34	≤-21.20	55.86	≤74	PASS
				Peak	2390.000	-46.56	≤-21.20	48.64	≤74	PASS
		High	2480	AV	2483.500	-53.11	≤-41.20	42.09	≤54	PASS
				AV	2483.520	-53.11	≤-41.20	42.09	≤54	PASS
				AV	2500.000	-56.86	≤-41.20	38.34	≤54	PASS
				Peak	2483.500	-52.75	≤-21.20	42.45	≤74	PASS
				Peak	2491.840	-46.94	≤-21.20	48.26	≤74	PASS
				Peak	2500.000	-51.84	≤-21.20	43.36	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-40.72	≤-21.20	54.48	≤74	PASS
				Peak	2373.290	-39.47	≤-21.20	55.73	≤74	PASS
				Peak	2390.000	-41.83	≤-21.20	53.37	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-47.99	≤-21.20	47.21	≤74	PASS
				Peak	2498.880	-41	≤-21.20	54.20	≤74	PASS
				Peak	2500.000	-41.87	≤-21.20	53.33	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-58.11	≤-41.20	37.09	≤54	PASS
				AV	2353.970	-45.85	≤-41.20	49.35	≤54	PASS
				AV	2390.000	-53.01	≤-41.20	42.19	≤54	PASS
				Peak	2310.000	-55.67	≤-21.20	39.53	≤74	PASS
				Peak	2354.390	-41.96	≤-21.20	53.24	≤74	PASS
				Peak	2390.000	-46.94	≤-21.20	48.26	≤74	PASS
		High	2480	AV	2483.500	-53.86	≤-41.20	41.34	≤54	PASS
				AV	2483.520	-53.86	≤-41.20	41.34	≤54	PASS
				AV	2500.000	-57.02	≤-41.20	38.18	≤54	PASS
				Peak	2483.500	-52.83	≤-21.20	42.37	≤74	PASS
				Peak	2485.760	-47.41	≤-21.20	47.79	≤74	PASS
				Peak	2500.000	-53.74	≤-21.20	41.46	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-43.06	≤-21.20	52.14	≤74	PASS
				Peak	2324.780	-40.03	≤-21.20	55.17	≤74	PASS
				Peak	2390.000	-43.13	≤-21.20	52.07	≤74	PASS
		High	Hop_24	Peak	2483.500	-47.81	≤-21.20	47.39	≤74	PASS





3DH5	Ant1		80	Peak	2498.800	-41.43	≤-21.20	53.77	≤74	PASS
				Peak	2500.000	-42.5	≤-21.20	52.70	≤74	PASS
		Low	2402	AV	2310.000	-58.03	≤-41.20	37.17	≤54	PASS
				AV	2353.970	-46.19	≤-41.20	49.01	≤54	PASS
				AV	2390.000	-52.87	≤-41.20	42.33	≤54	PASS
				Peak	2310.000	-52.73	≤-21.20	42.47	≤74	PASS
				Peak	2353.865	-43.25	≤-21.20	51.95	≤74	PASS
				Peak	2390.000	-47	≤-21.20	48.20	≤74	PASS
		High	2480	AV	2483.500	-53.8	≤-41.20	41.40	≤54	PASS
				AV	2483.520	-53.8	≤-41.20	41.40	≤54	PASS
				AV	2500.000	-57.03	≤-41.20	38.17	≤54	PASS
				Peak	2483.500	-51.13	≤-21.20	44.07	≤74	PASS
				Peak	2492.240	-45.94	≤-21.20	49.26	≤74	PASS
				Peak	2500.000	-50.67	≤-21.20	44.53	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-43.25	≤-21.20	51.95	≤74	PASS
				Peak	2359.850	-40.44	≤-21.20	54.76	≤74	PASS
				Peak	2390.000	-44.21	≤-21.20	50.99	≤74	PASS
		High	Hop_2480	Peak	2483.500	-46.17	≤-21.20	49.03	≤74	PASS
				Peak	2498.960	-41.14	≤-21.20	54.06	≤74	PASS
				Peak	2500.000	-41.7	≤-21.20	53.50	≤74	PASS

Note:

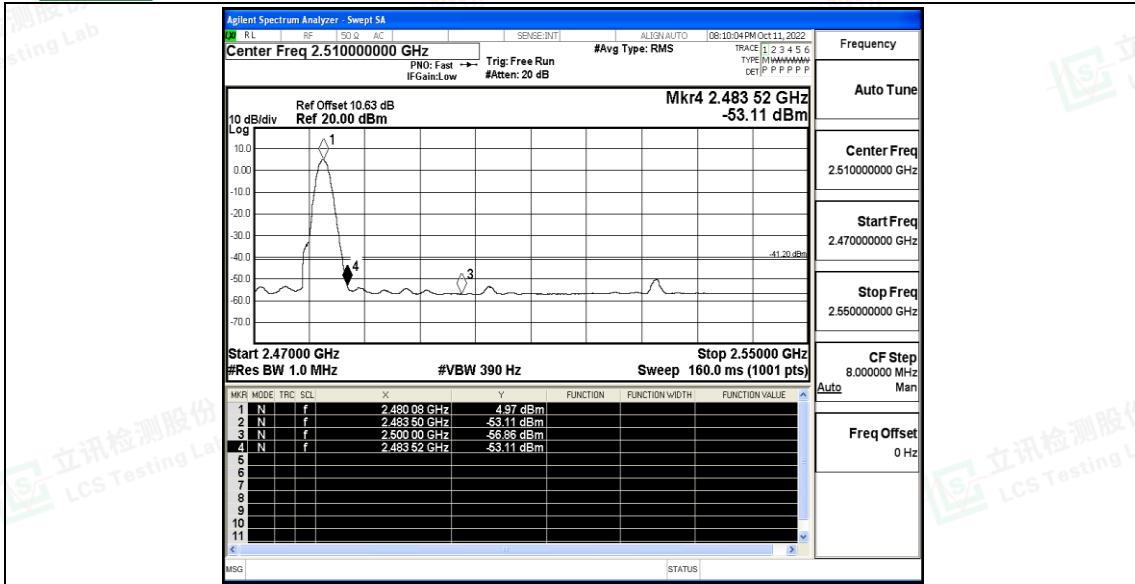
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



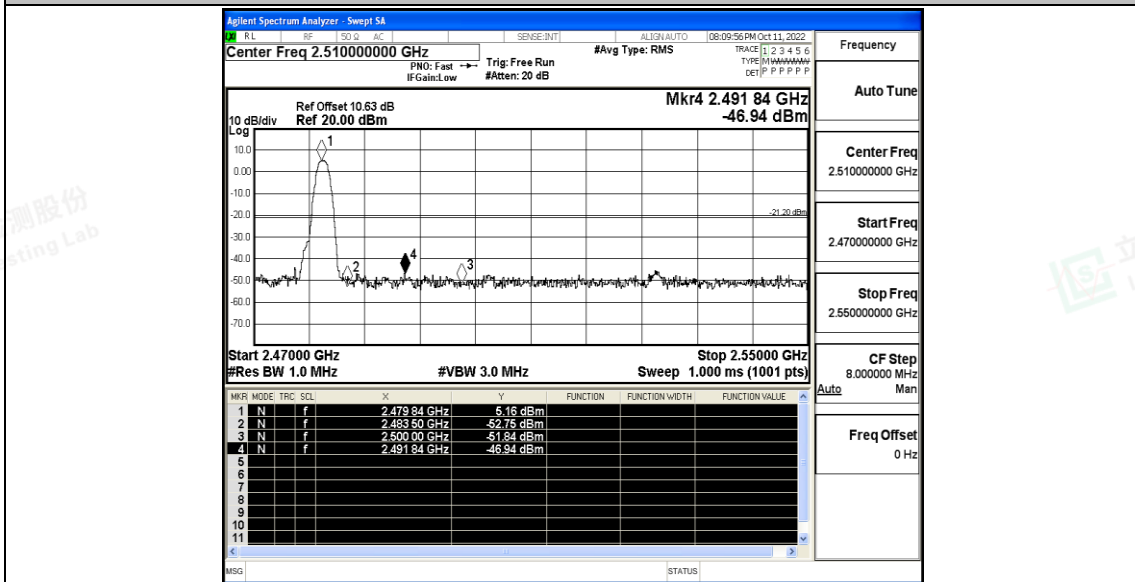


Test Graphs





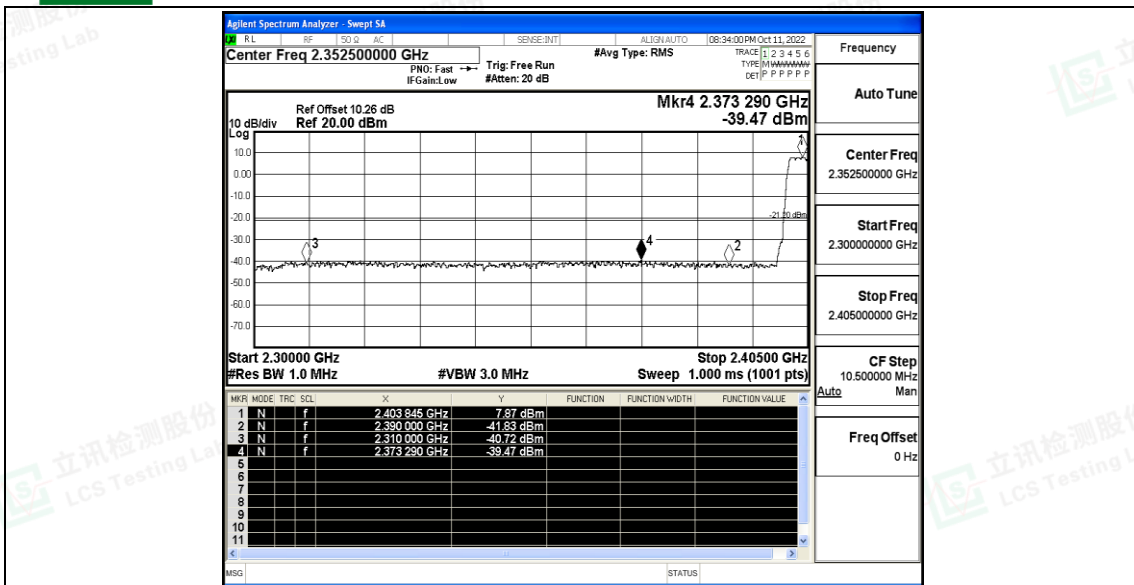
DH5\_Ant1\_High\_2480\_Peak



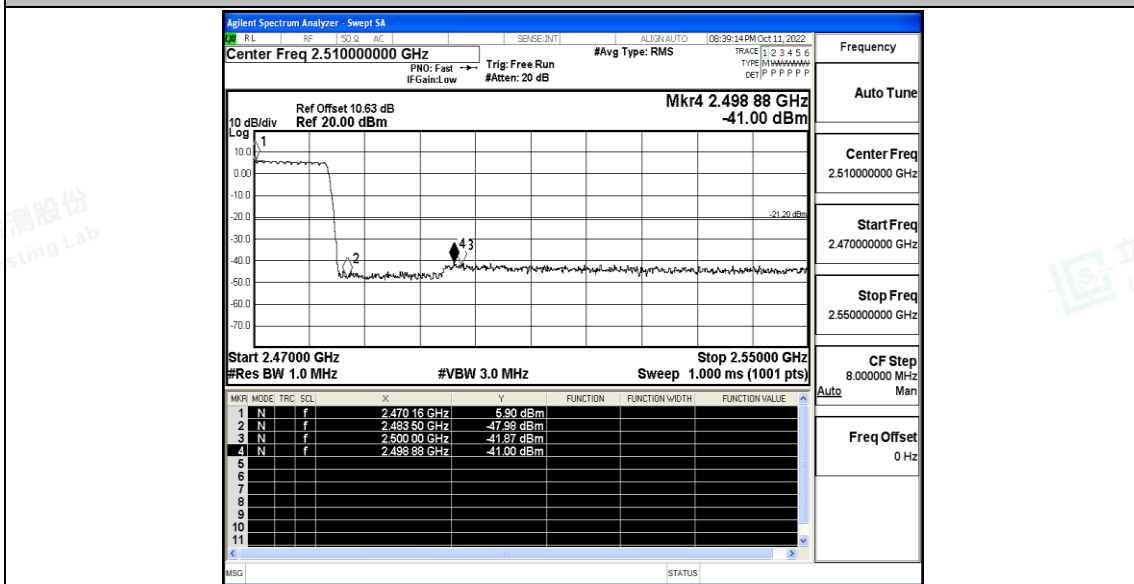
DH5\_Ant1\_Low\_Hop\_2402\_Peak





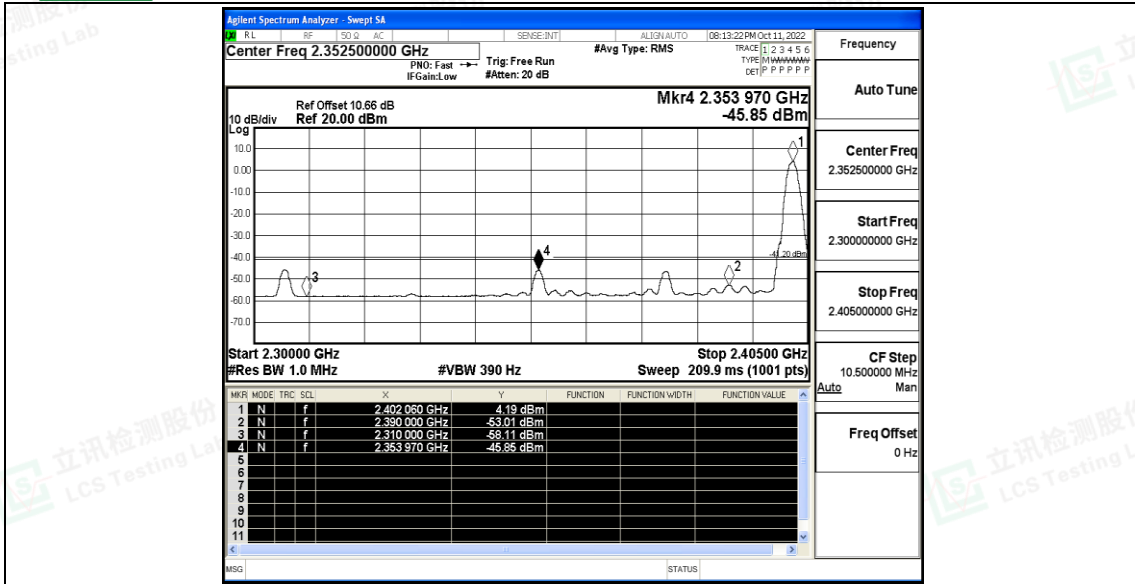


DH5\_Ant1\_High\_Hop\_2480\_Peak

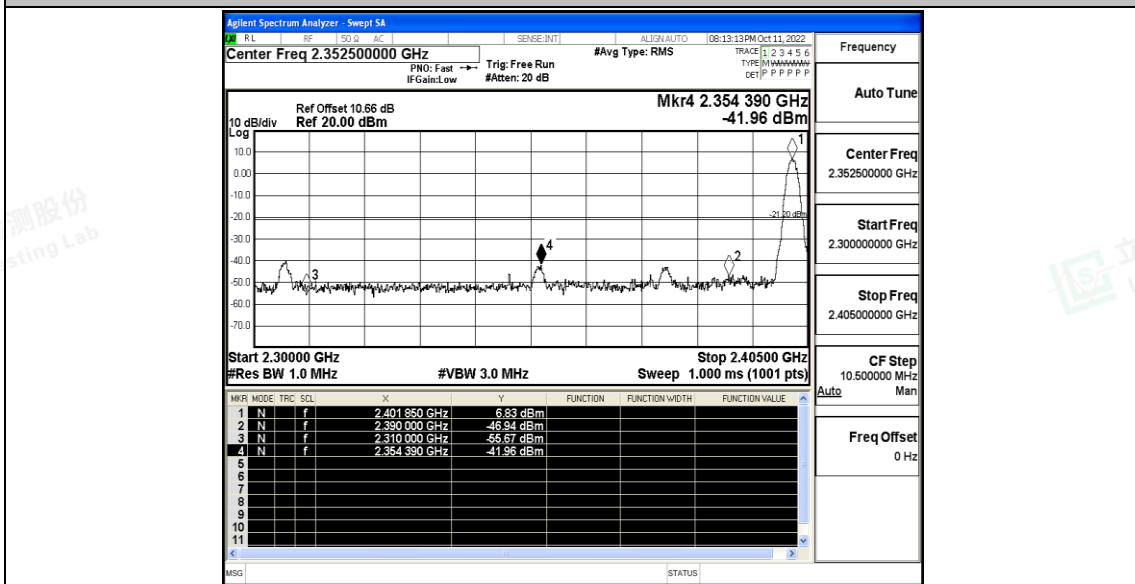


2DH5\_Ant1\_Low\_2402\_AV



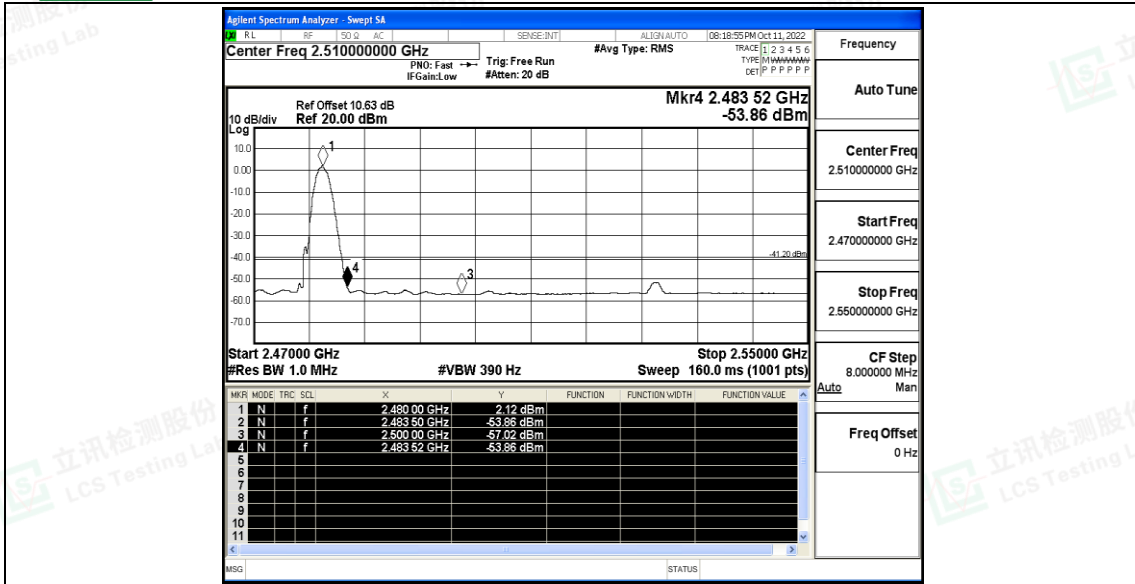


2DH5\_Ant1\_Low\_2402\_Peak

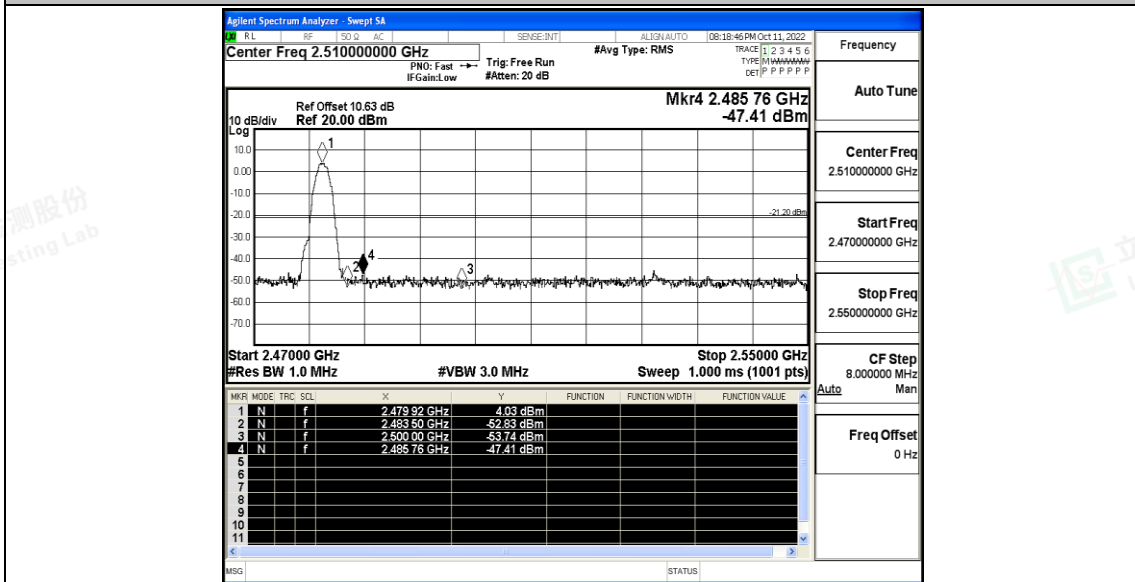


2DH5\_Ant1\_High\_2480\_AV



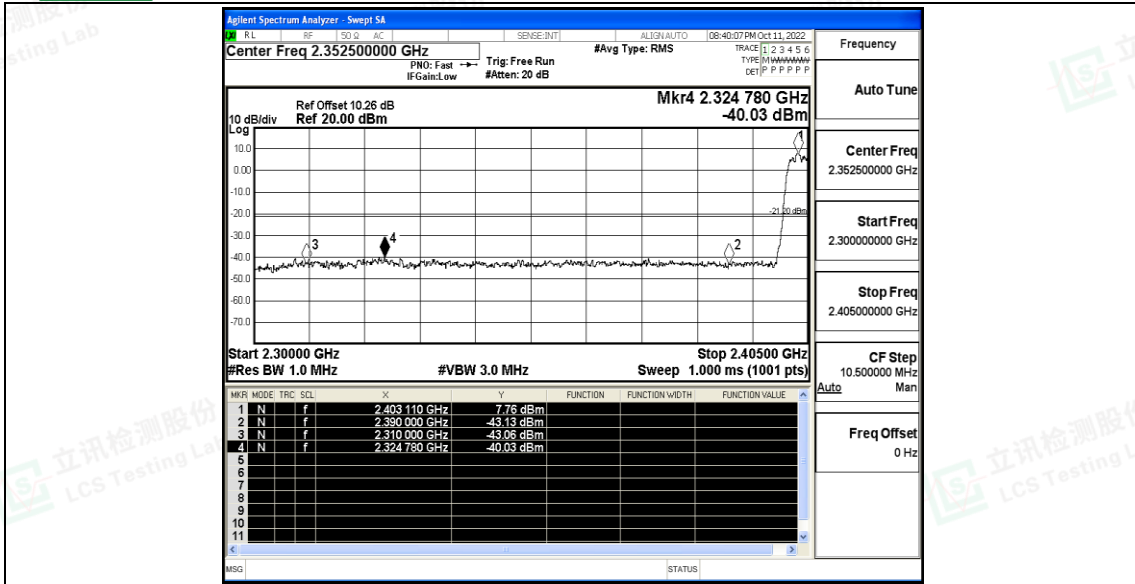


2DH5\_Ant1\_High\_2480\_Peak

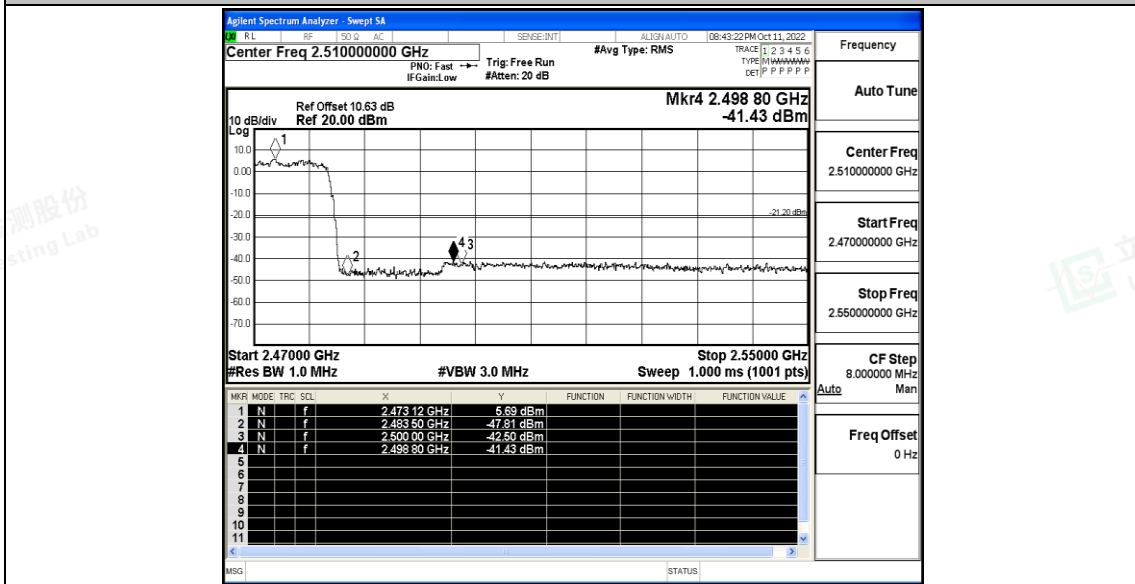


2DH5\_Ant1\_Low\_Hop\_2402\_Peak



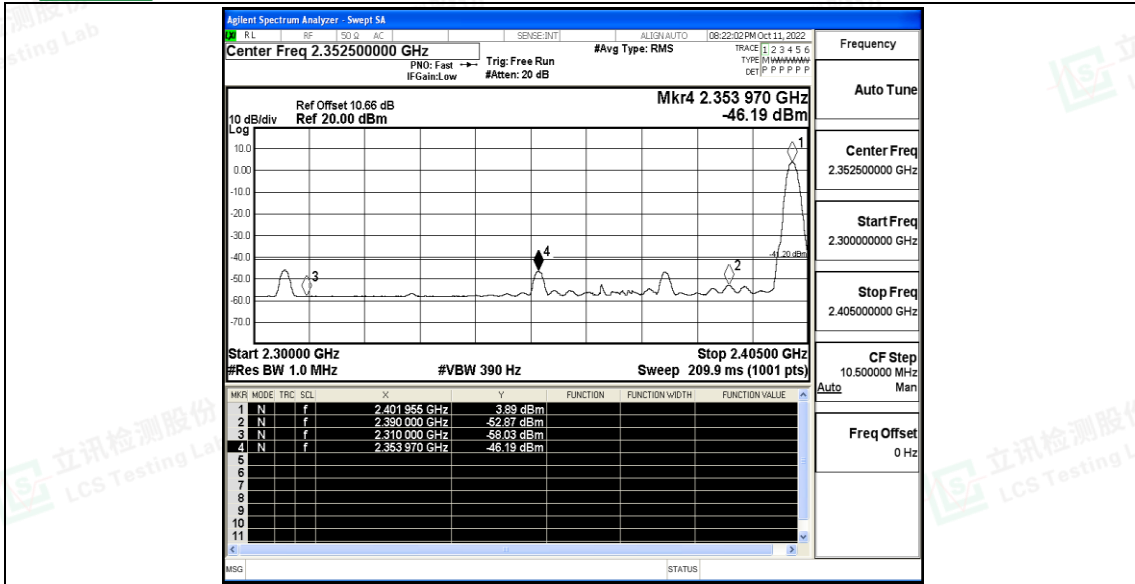


2DH5\_Ant1\_High\_Hop\_2480\_Peak

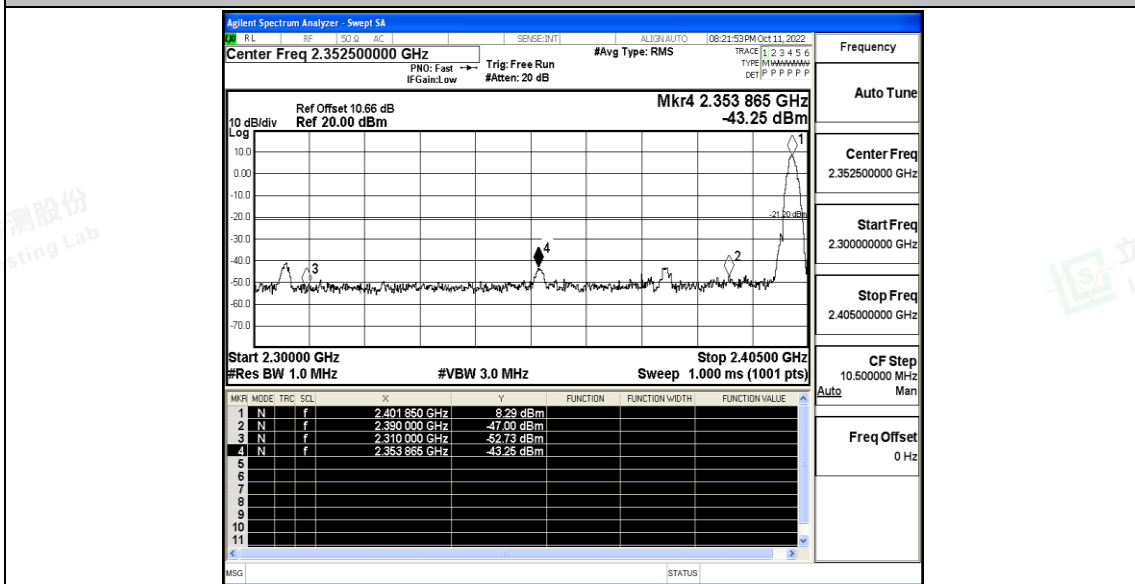


3DH5\_Ant1\_Low\_2402\_AV



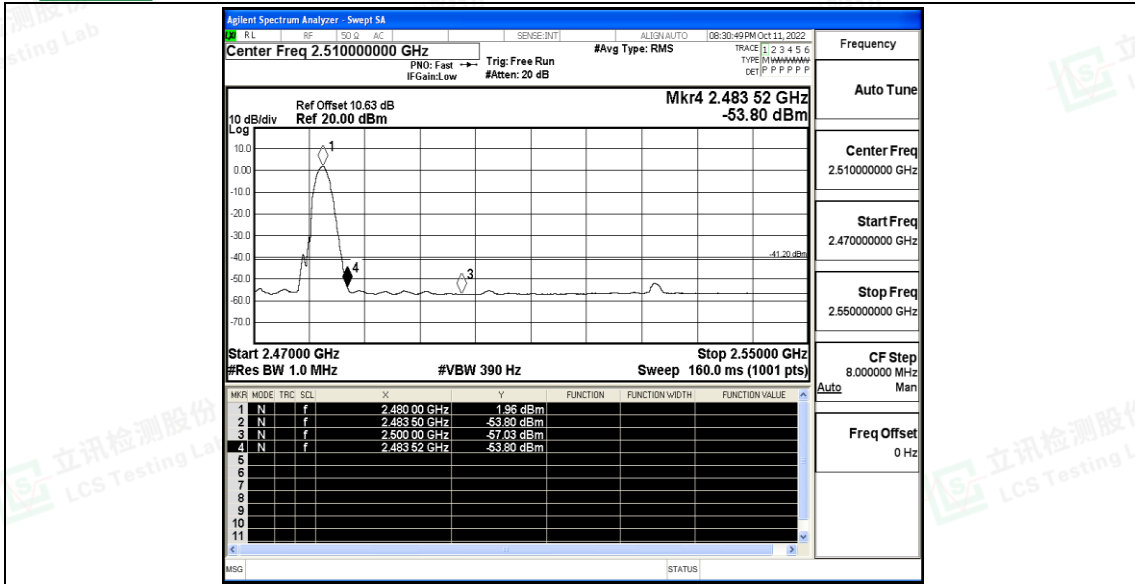


3DH5\_Ant1\_Low\_2402\_Peak

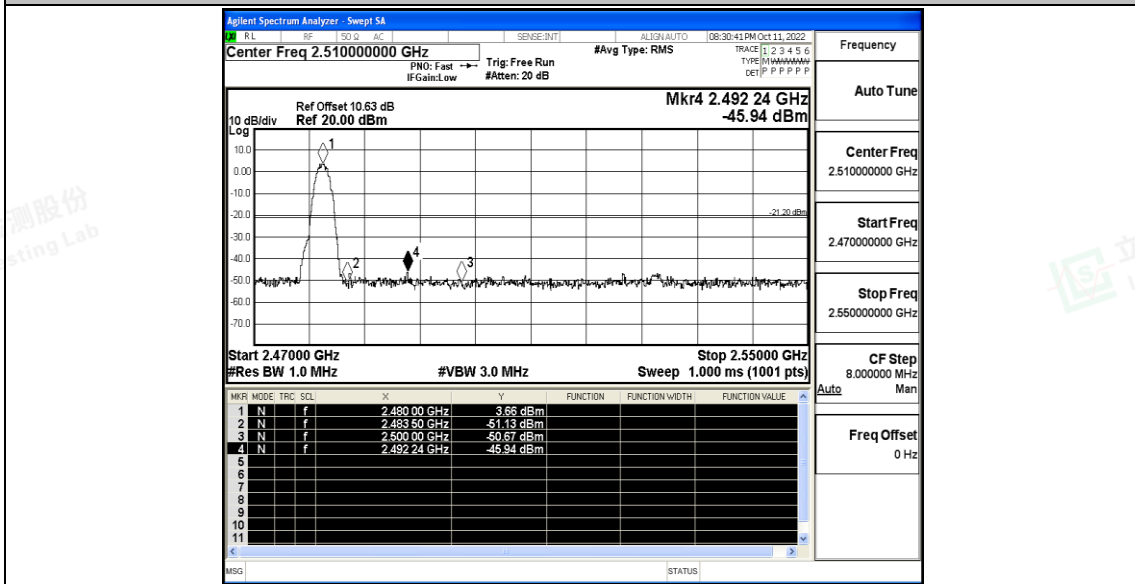


3DH5\_Ant1\_High\_2480\_AV



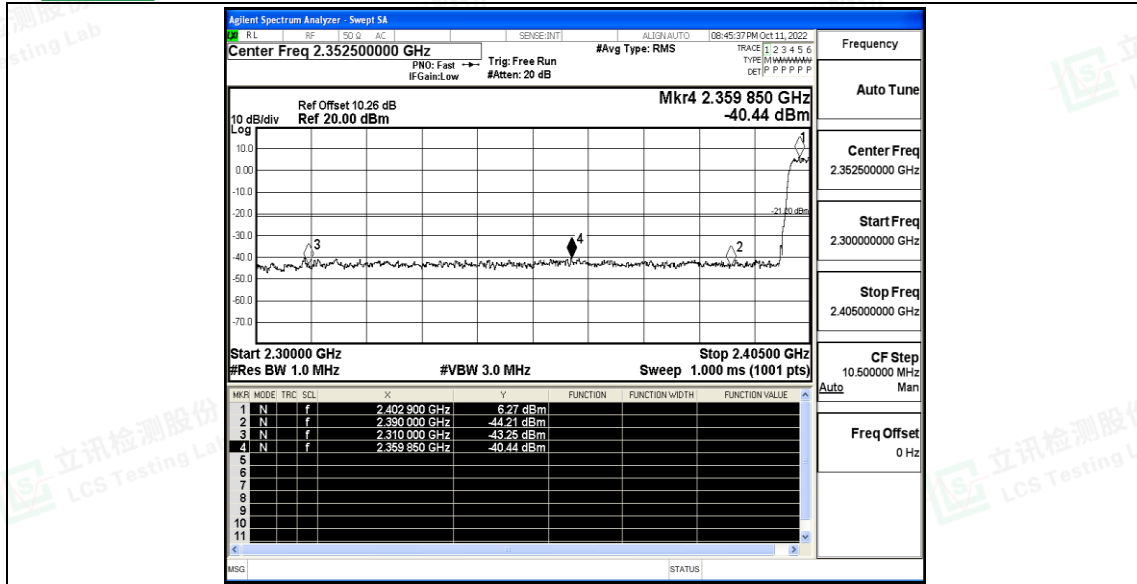


3DH5\_Ant1\_High\_2480\_Peak



3DH5\_Ant1\_Low\_Hop\_2402\_Peak





3DH5\_Ant1\_High\_Hop\_2480\_Peak

