



## Appendix A

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

Product Name: Smart Watch

Test Model: H13s

#### Environmental Conditions

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





## A.1 20dB Emission Bandwidth

### Test Result

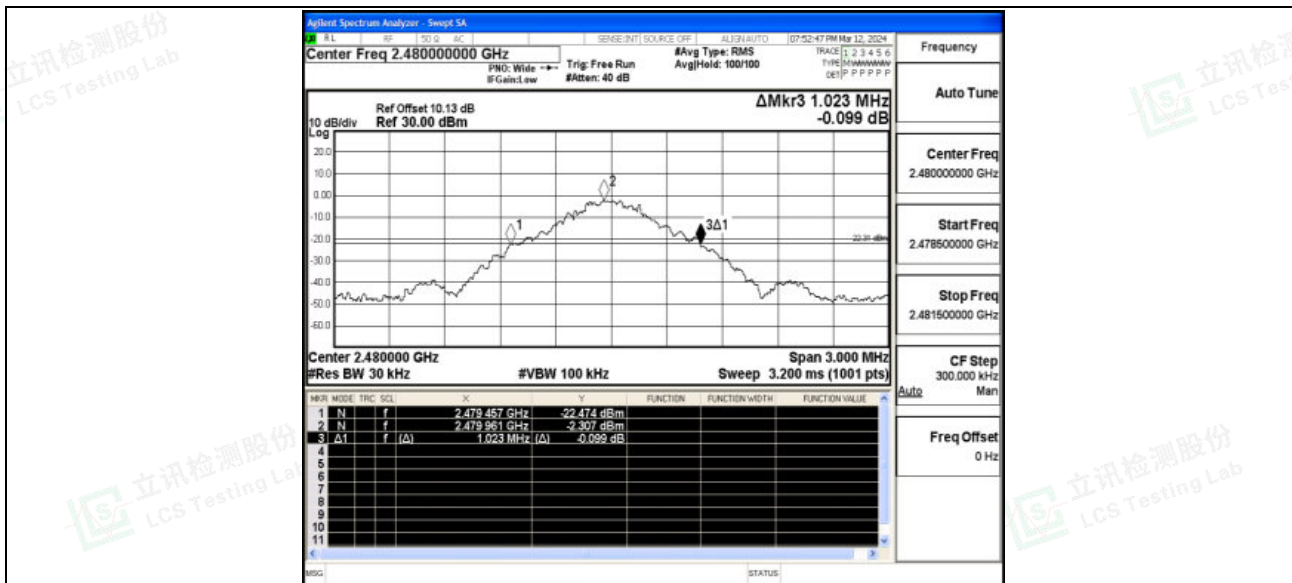
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.035	2401.457	2402.492	---	---
		2441	1.032	2440.457	2441.489	---	---
		2480	1.023	2479.457	2480.480	---	---
2DH5	Ant1	2402	1.332	2401.319	2402.651	---	---
		2441	1.293	2440.349	2441.642	---	---
		2480	1.281	2479.355	2480.636	---	---



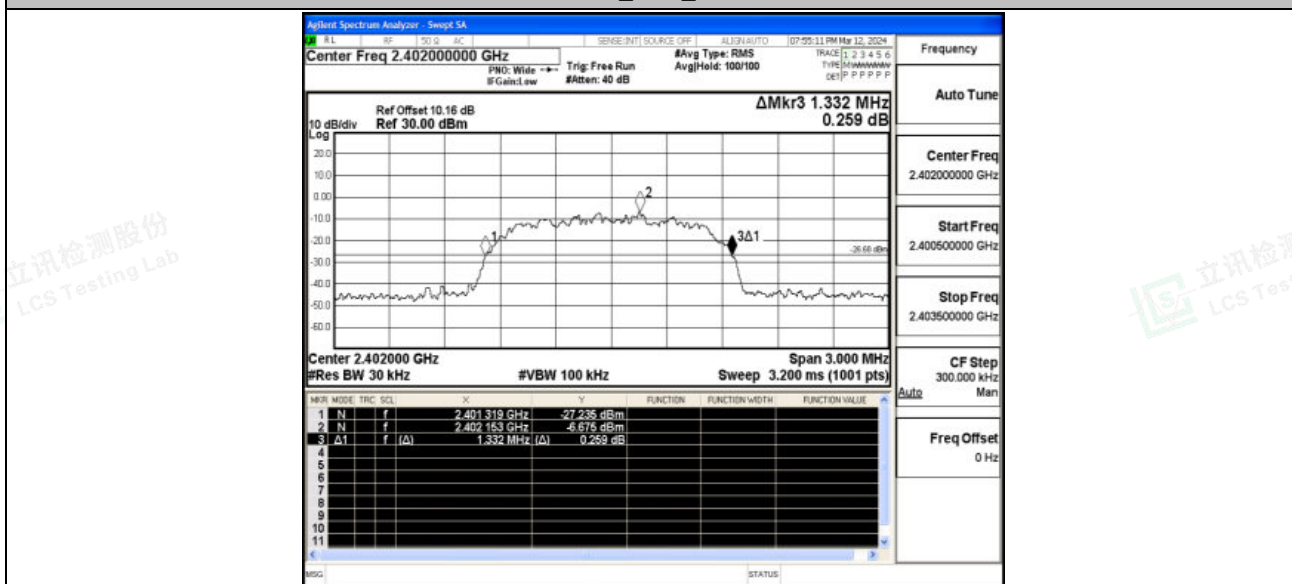


### Test Graphs



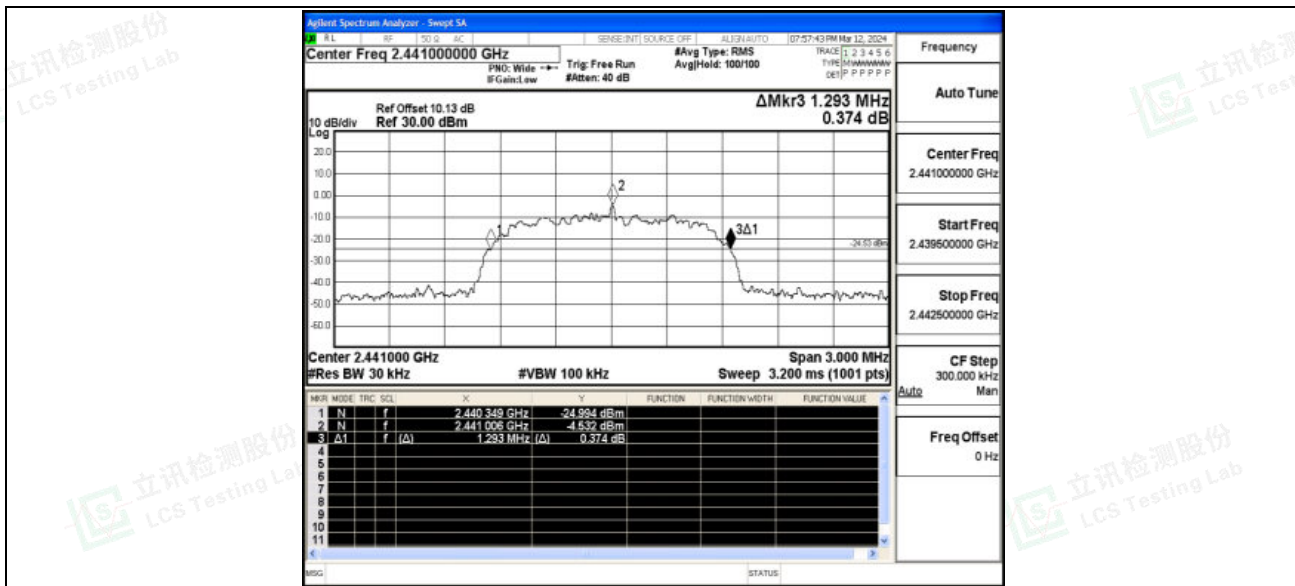


2DH5\_Ant1\_2402

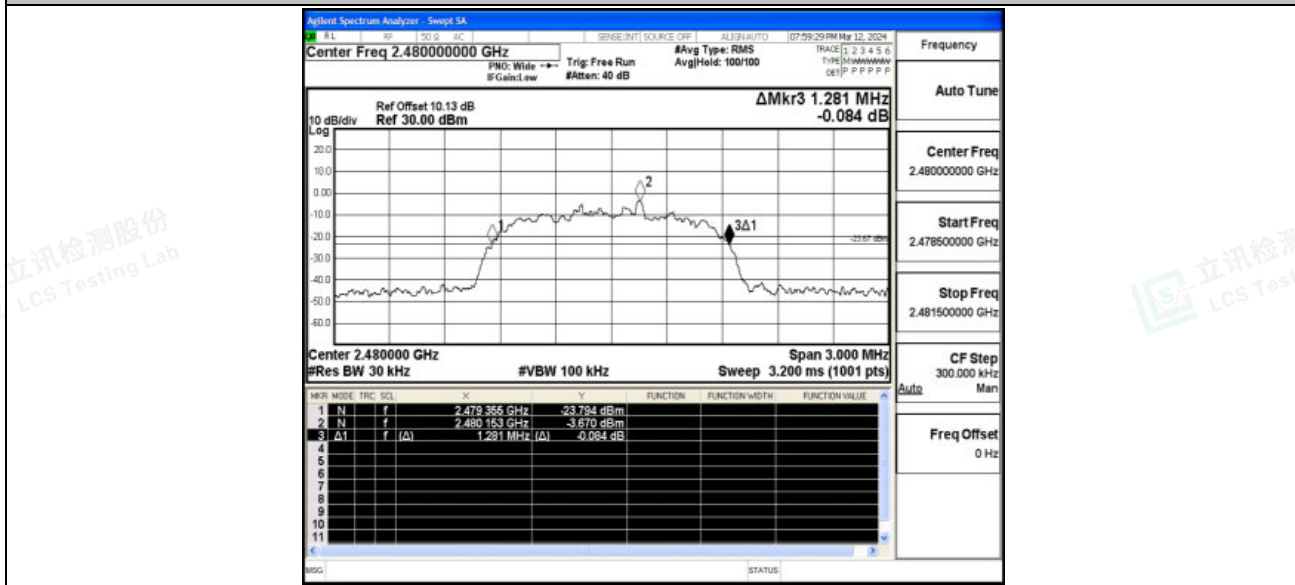


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





## A.2 Maximum Peak conducted output power

### Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.59	≤20.97	PASS
		2441	0.75	≤20.97	PASS
		2480	0.78	≤20.97	PASS
2DH5	Ant1	2402	0.22	≤20.97	PASS
		2441	0.50	≤20.97	PASS
		2480	0.42	≤20.97	PASS



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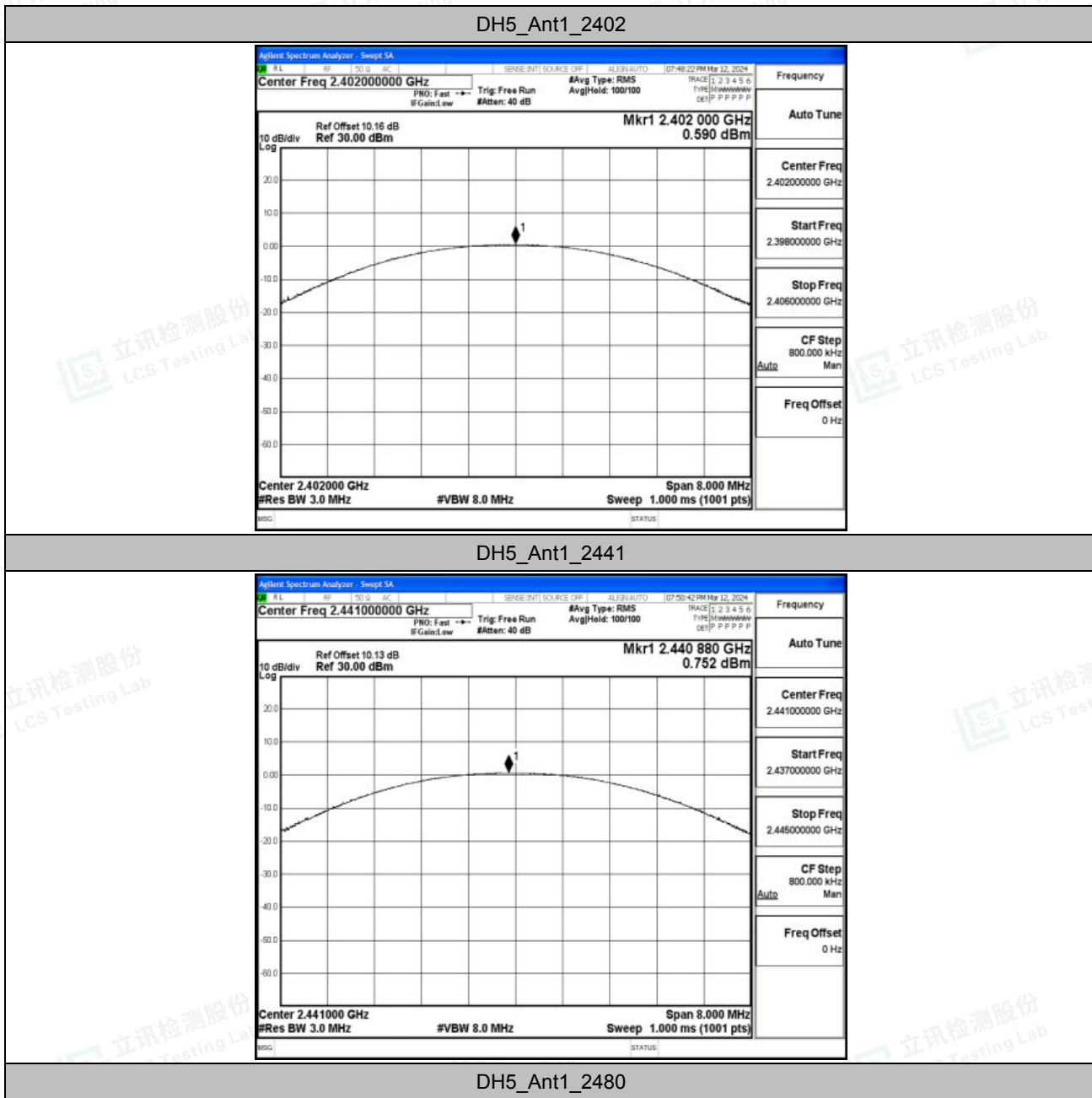
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

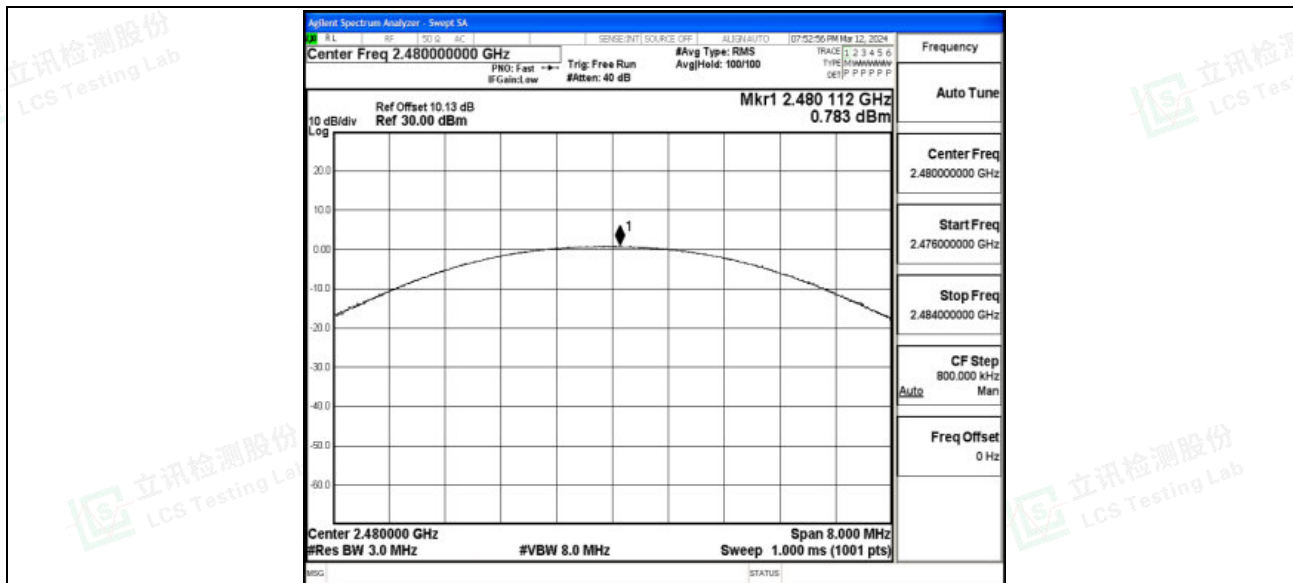
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

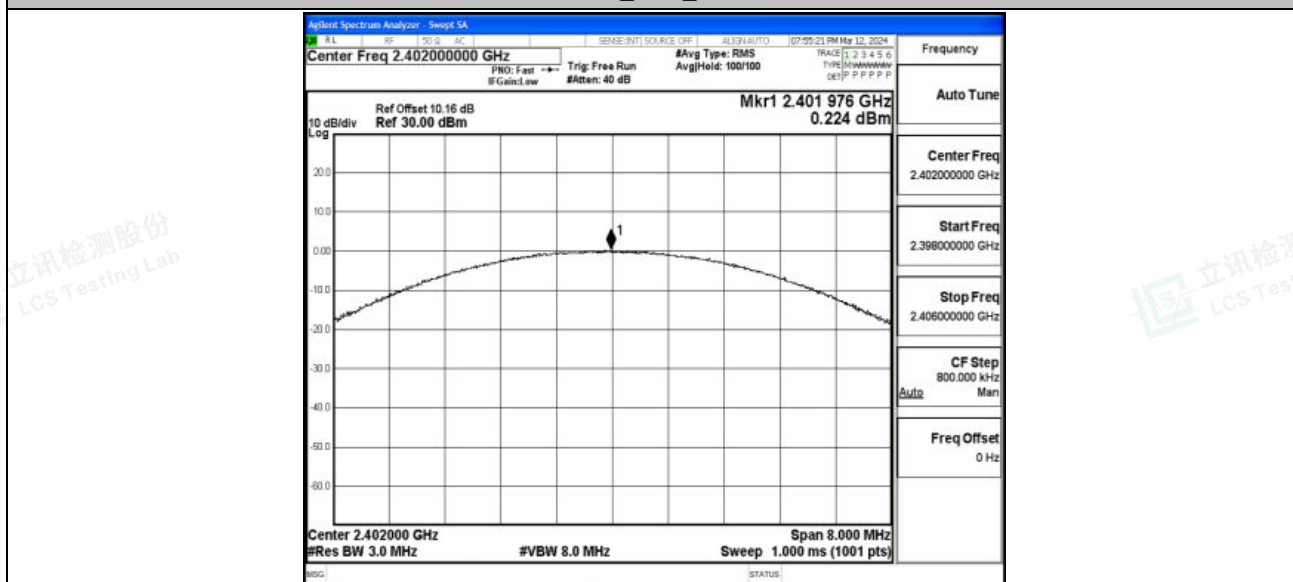


### Test Graphs





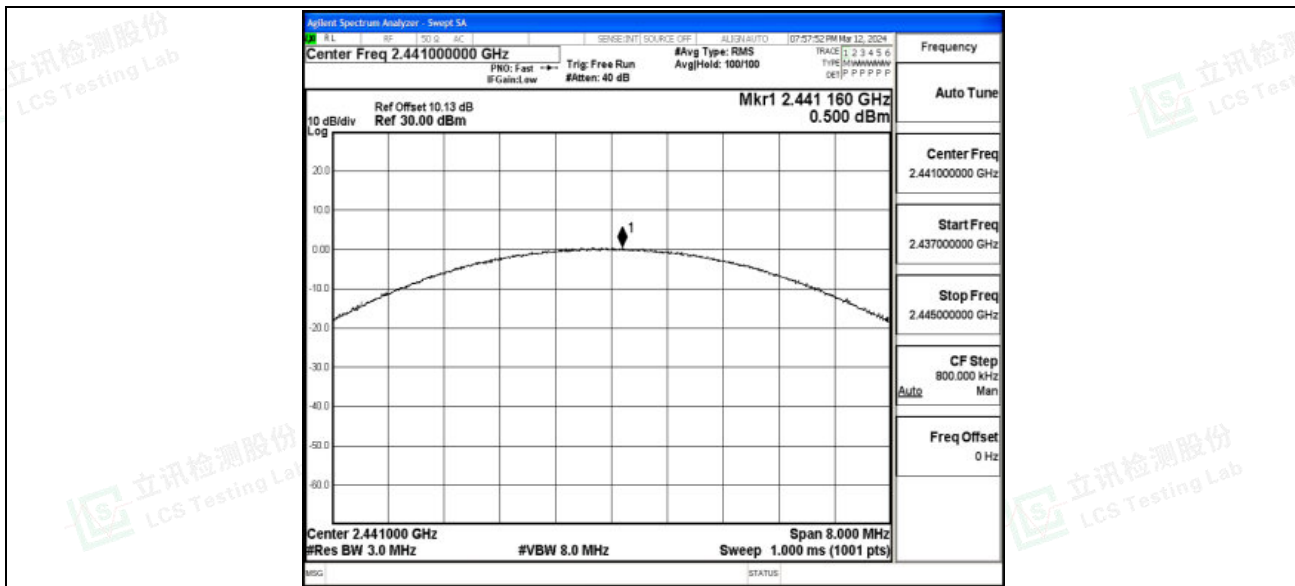
2DH5\_Ant1\_2402



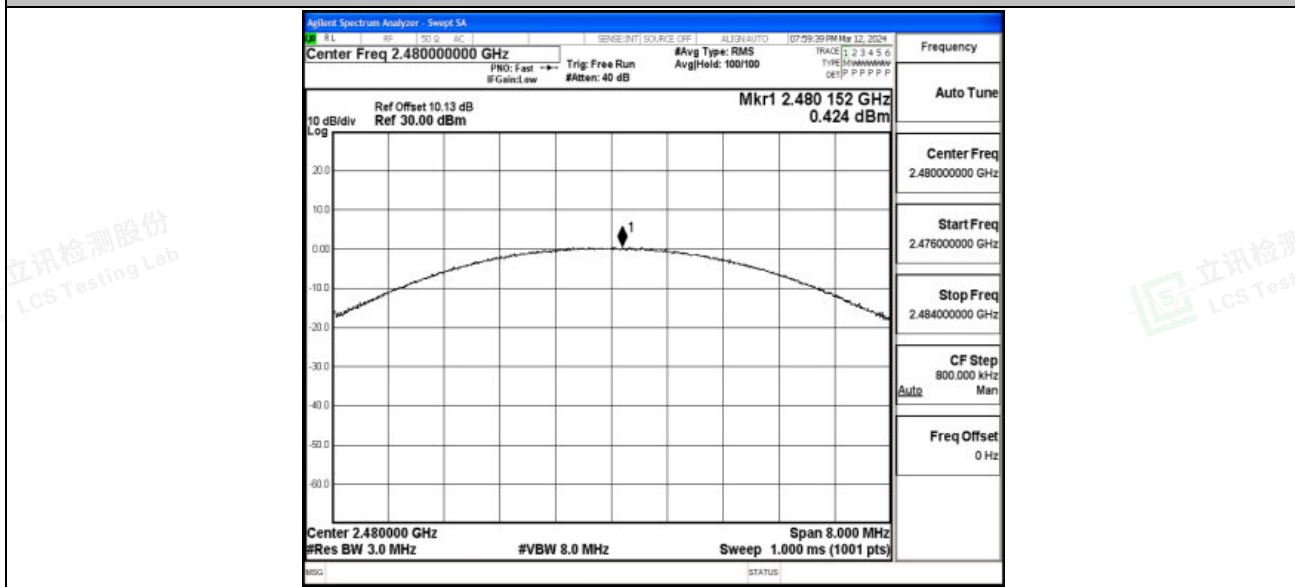
2DH5\_Ant1\_2441







2DH5\_Ant1\_2480





### A.3 Carrier frequency separation

#### Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.81	≥0.690	PASS
2DH5	Ant1	Hop	1.154	≥0.888	PASS





### Test Graphs





### A.4 Time of occupancy

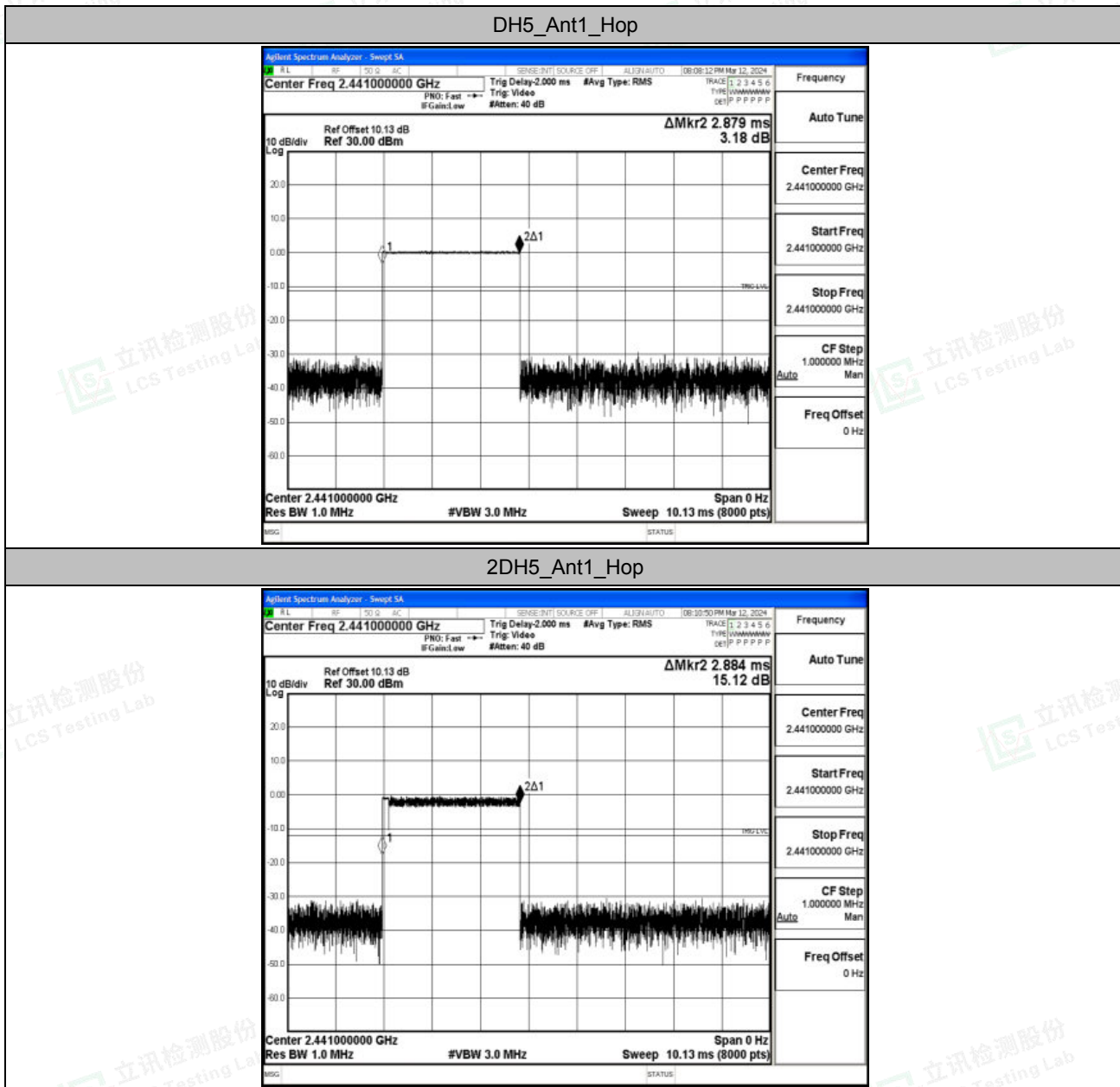
#### Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.879	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.884	106.67	0.308	≤0.4	PASS





### Test Graphs





## A.5 Number of hopping channels

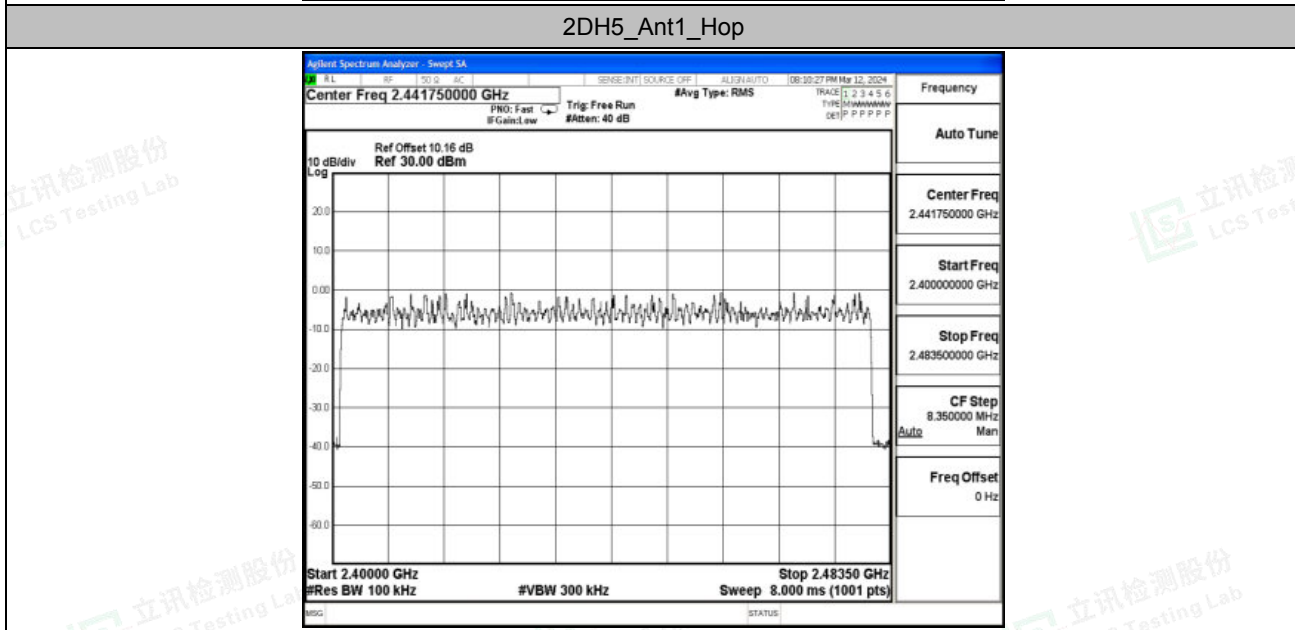
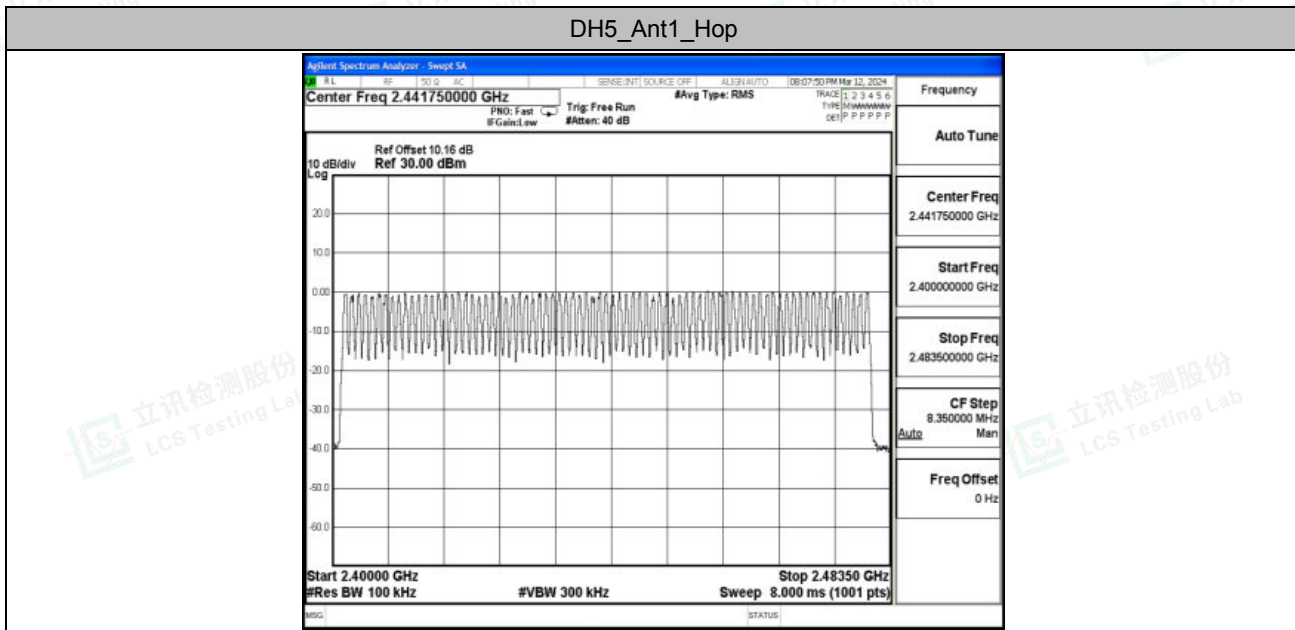
### Test Result

TestMode	Antenna	Frequency[MHz]	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	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.69	-48.75	≤-20.69	PASS
		High	2480	-0.34	-48.97	≤-20.34	PASS
		Low	Hop_2402	-0.98	-47.3	≤-20.98	PASS
		High	Hop_2480	0.06	-47.41	≤-19.94	PASS
2DH5	Ant1	Low	2402	-1.75	-49.19	≤-21.75	PASS
		High	2480	-1.50	-48.58	≤-21.5	PASS
		Low	Hop_2402	-4.71	-47.55	≤-24.71	PASS
		High	Hop_2480	-1.38	-47.74	≤-21.38	PASS



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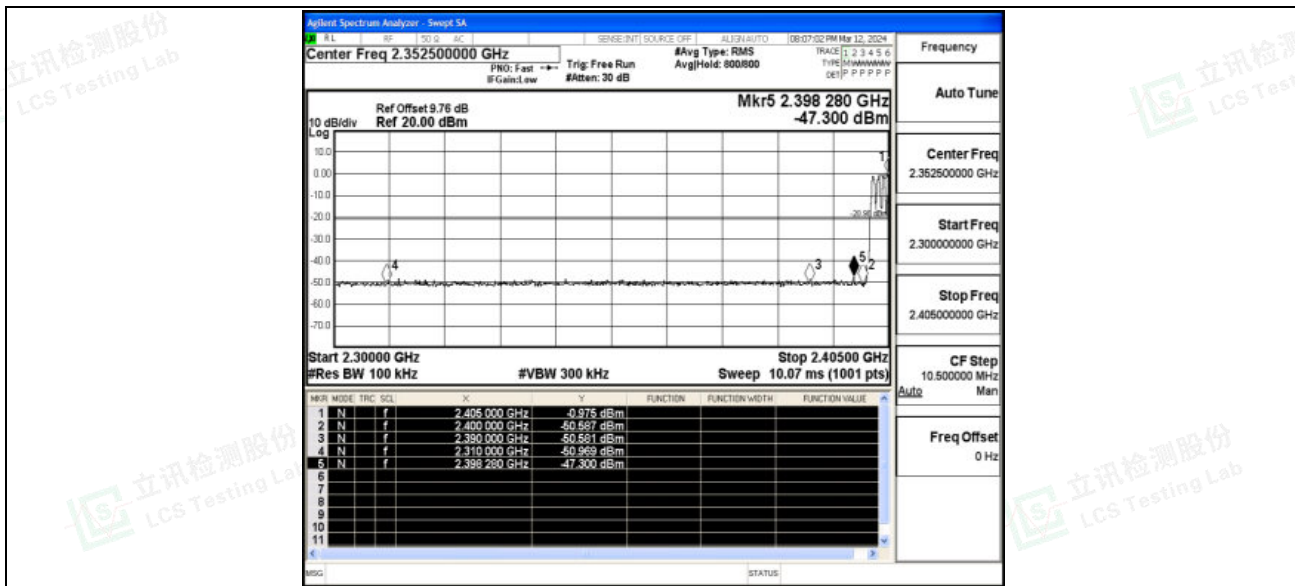
Scan code to check authenticity



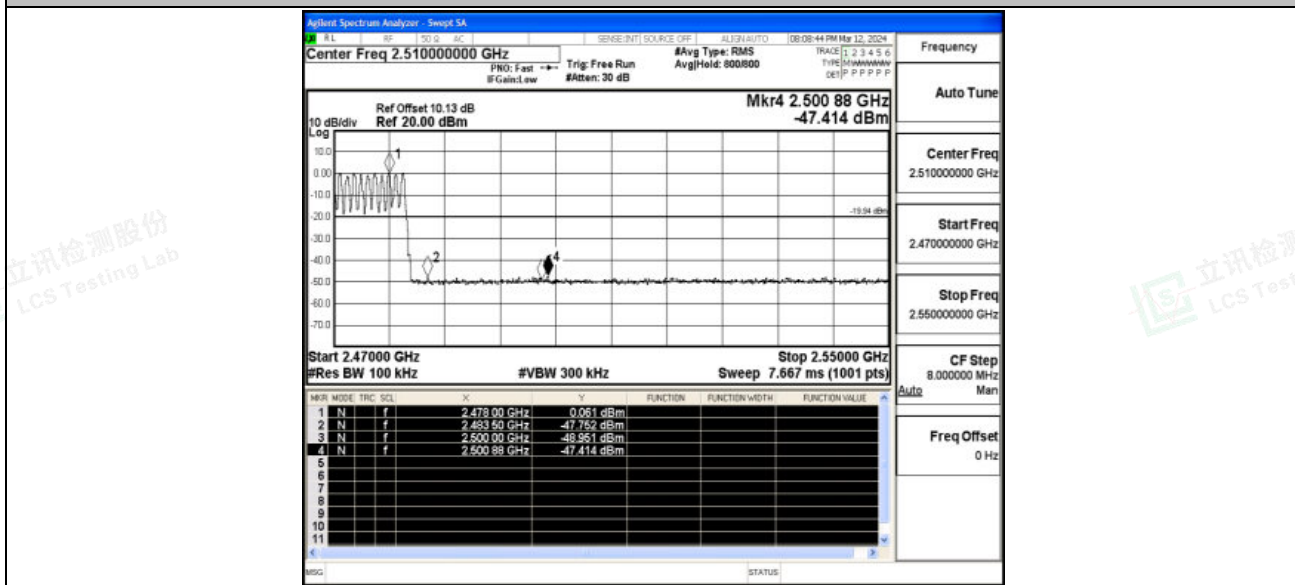


### Test Graphs



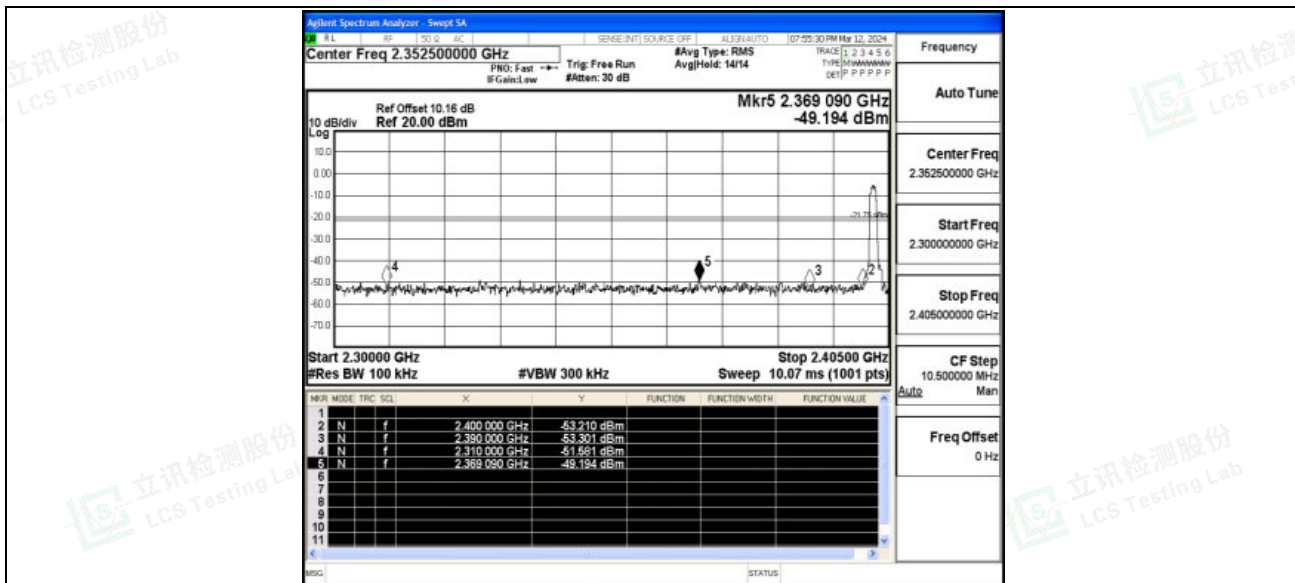


DH5\_Ant1\_High\_Hop\_2480

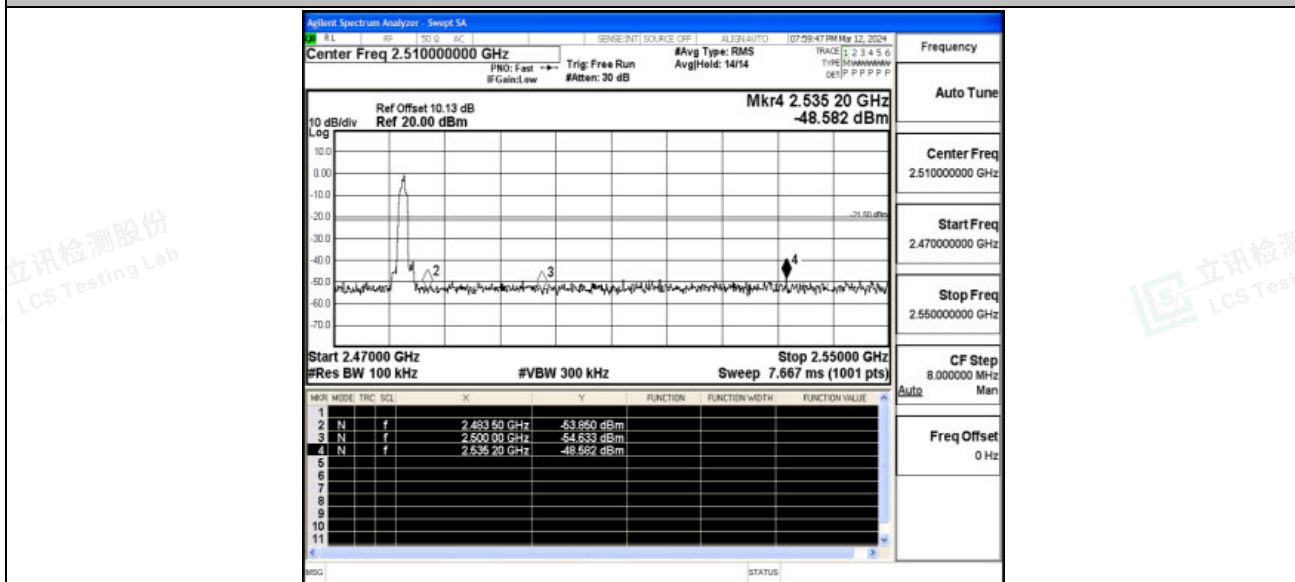


2DH5\_Ant1\_Low\_2402



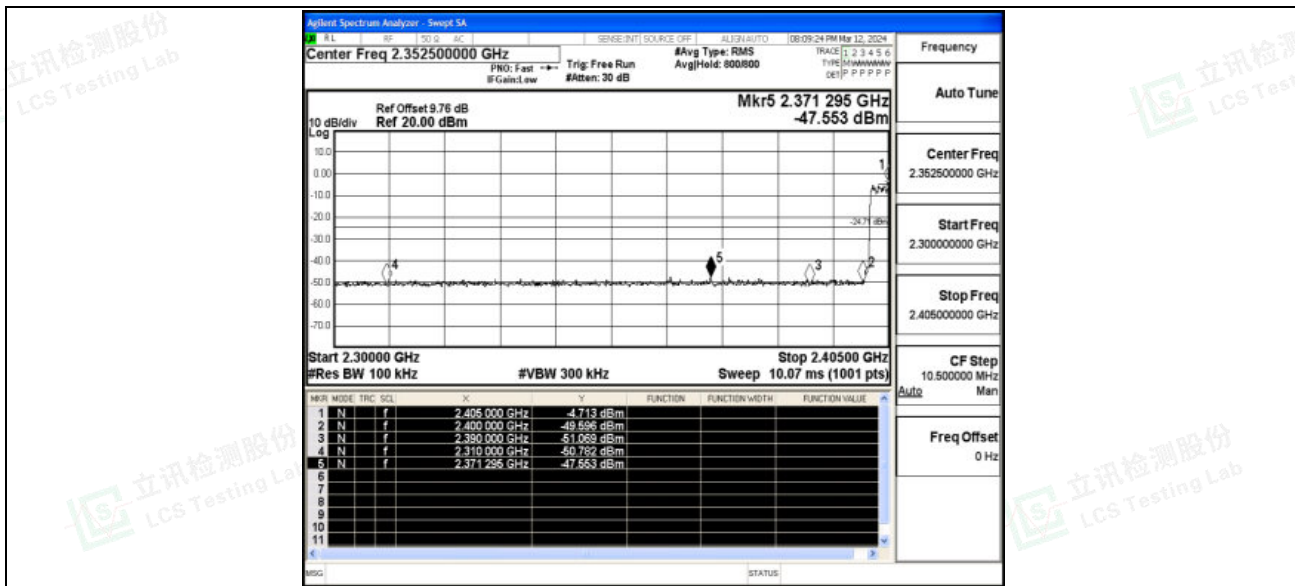


2DH5\_Ant1\_High\_2480

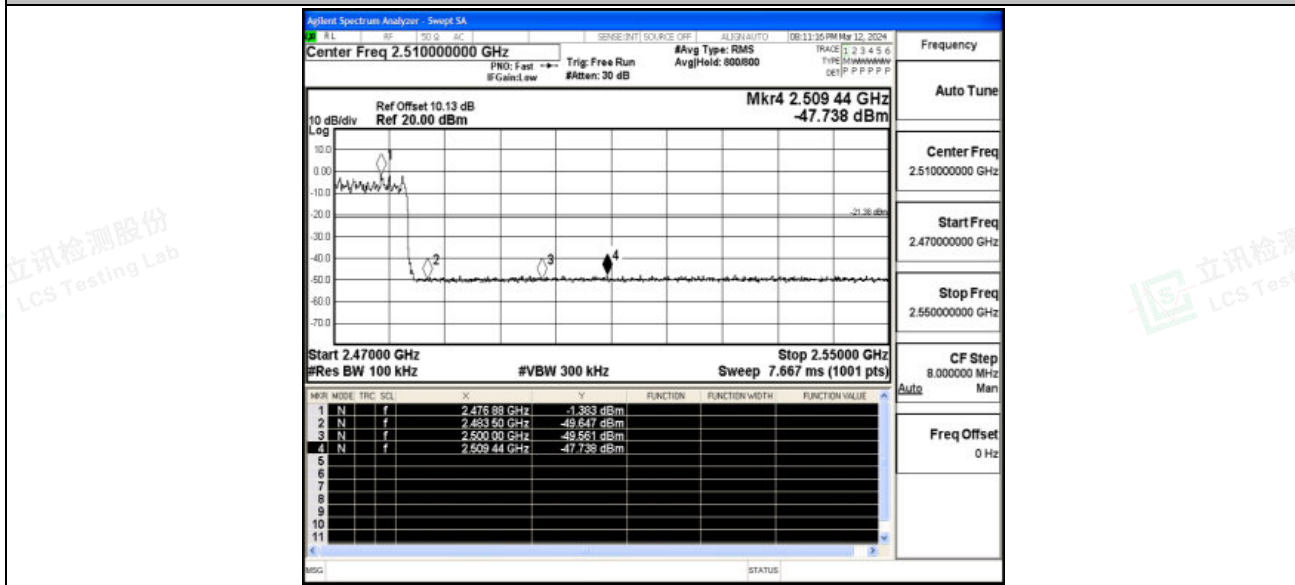


2DH5\_Ant1\_Low\_Hop\_2402





2DH5\_Ant1\_High\_Hop\_2480





### A.7 Conducted Spurious Emission

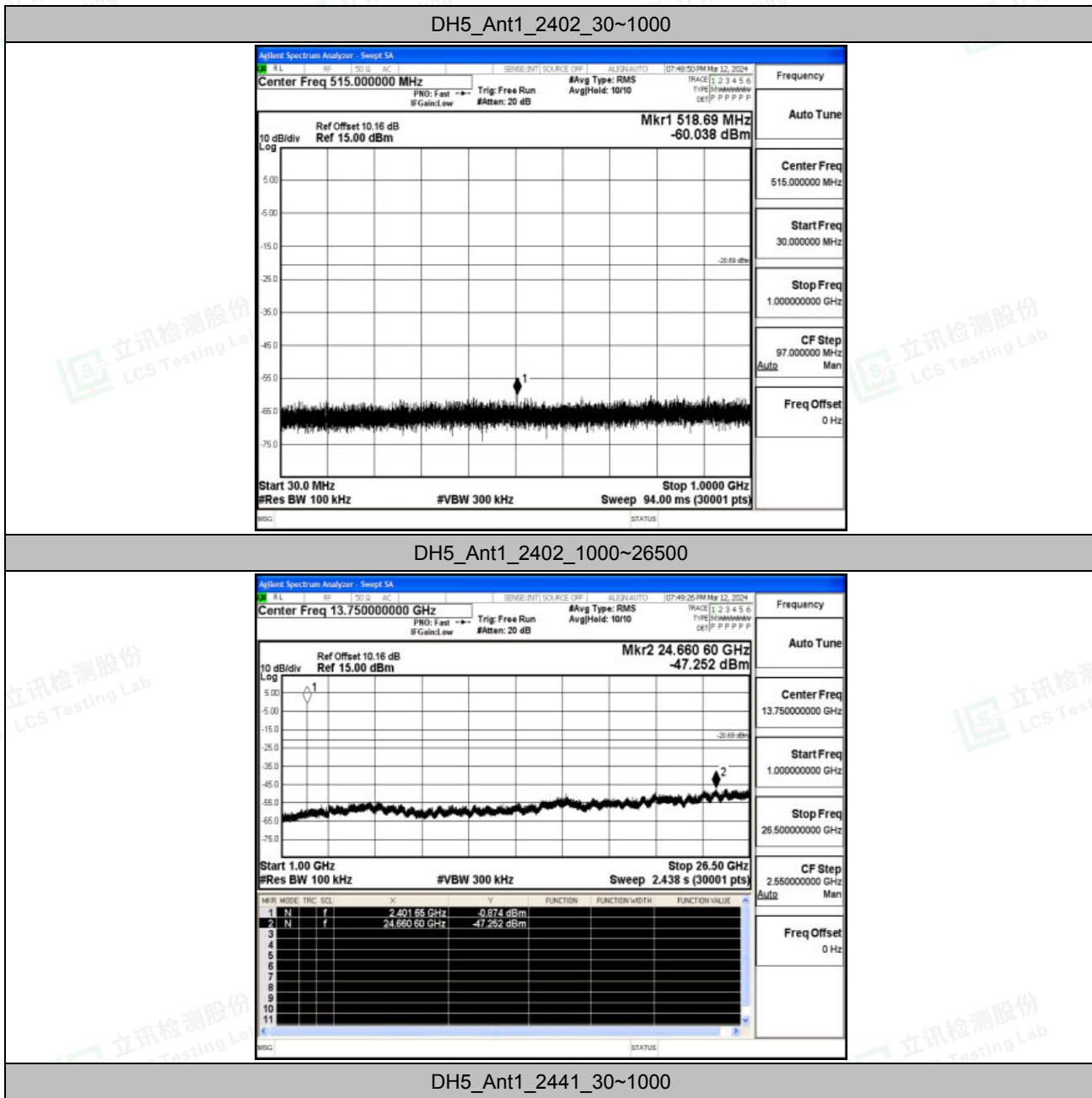
#### Test Result

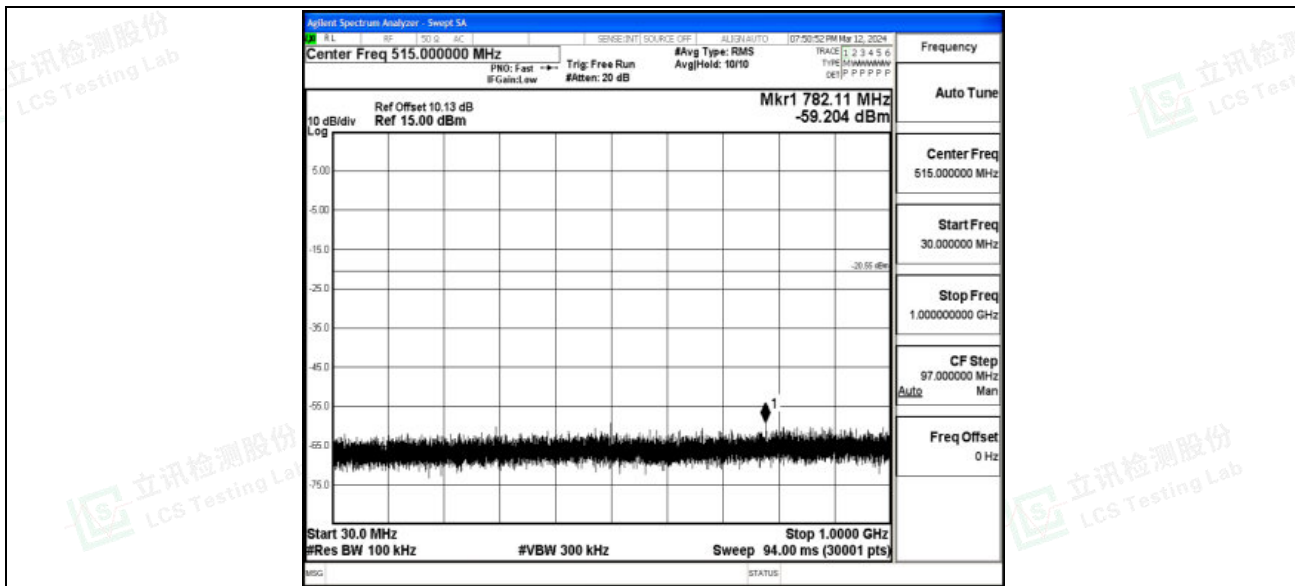
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	30~1000	-0.69	-60.04	≤-20.69	PASS
			1000~26500	-0.69	-47.25	≤-20.69	PASS
		2441	30~1000	-0.55	-59.2	≤-20.55	PASS
			1000~26500	-0.55	-47.03	≤-20.55	PASS
		2480	30~1000	-0.34	-59.65	≤-20.34	PASS
			1000~26500	-0.34	-47.23	≤-20.34	PASS
2DH5	Ant1	2402	30~1000	-1.75	-59.88	≤-21.75	PASS
			1000~26500	-1.75	-47.33	≤-21.75	PASS
		2441	30~1000	-0.94	-59.44	≤-20.94	PASS
			1000~26500	-0.94	-46.57	≤-20.94	PASS
		2480	30~1000	-1.50	-59.43	≤-21.5	PASS
			1000~26500	-1.50	-46.99	≤-21.5	PASS



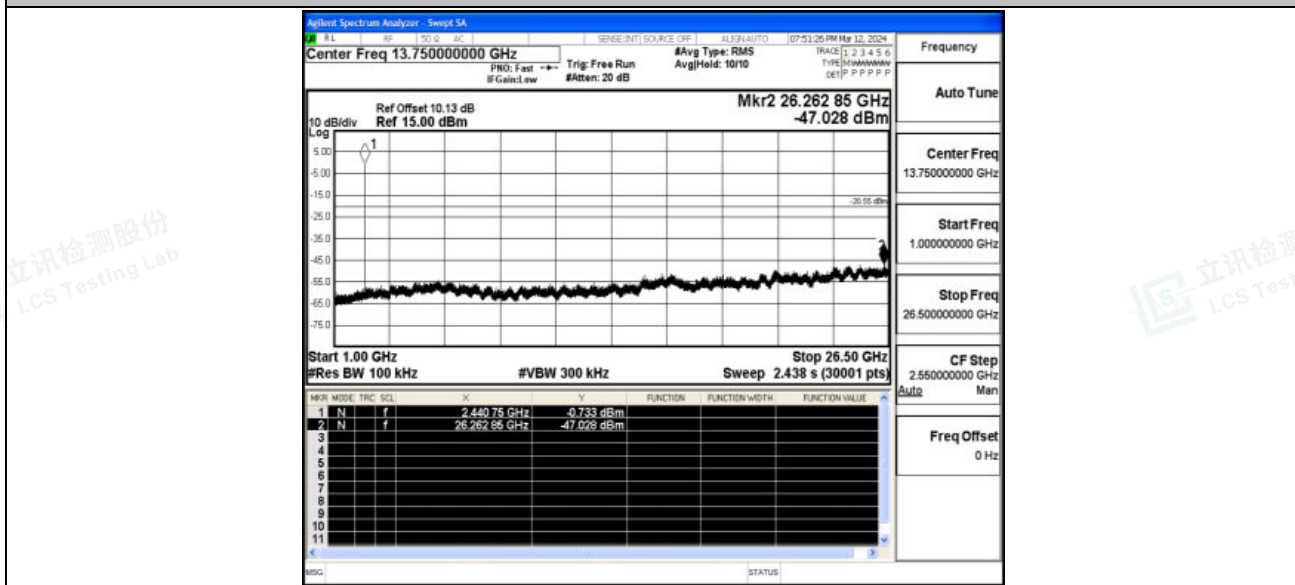


### Test Graphs



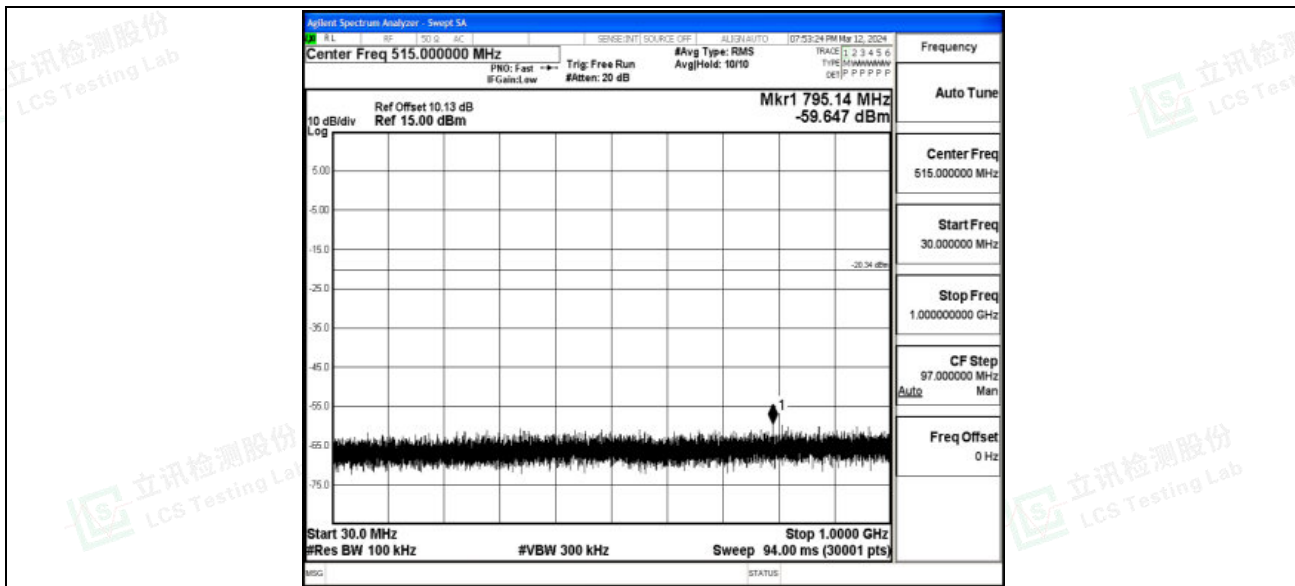


DH5\_Ant1\_2441\_1000~26500

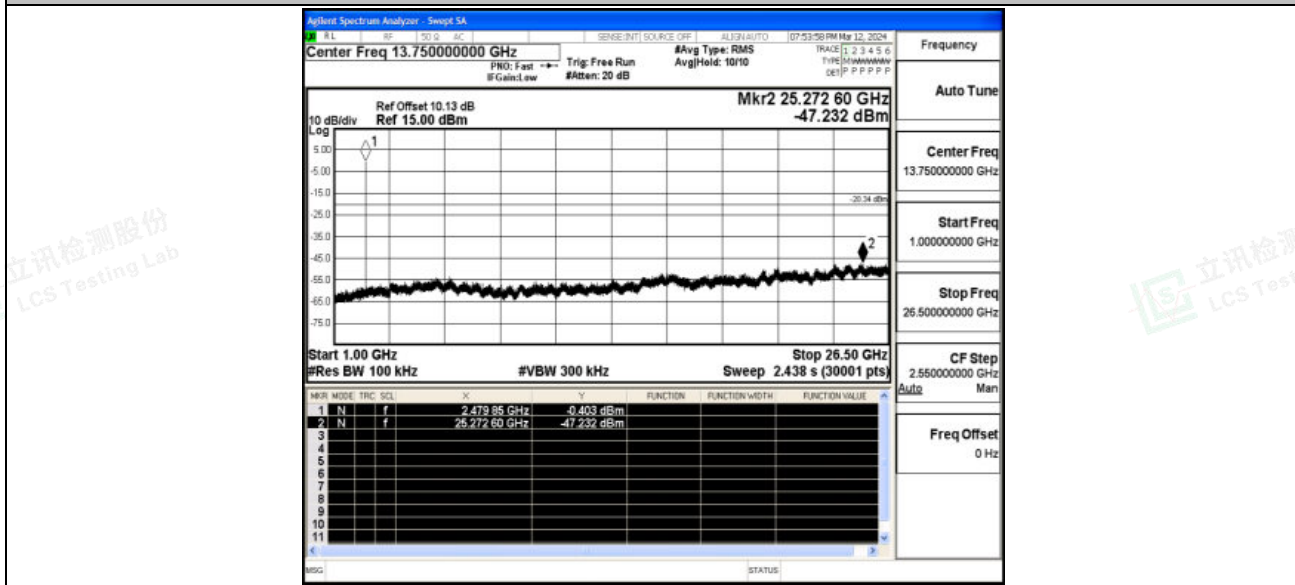


DH5\_Ant1\_2480\_30~1000





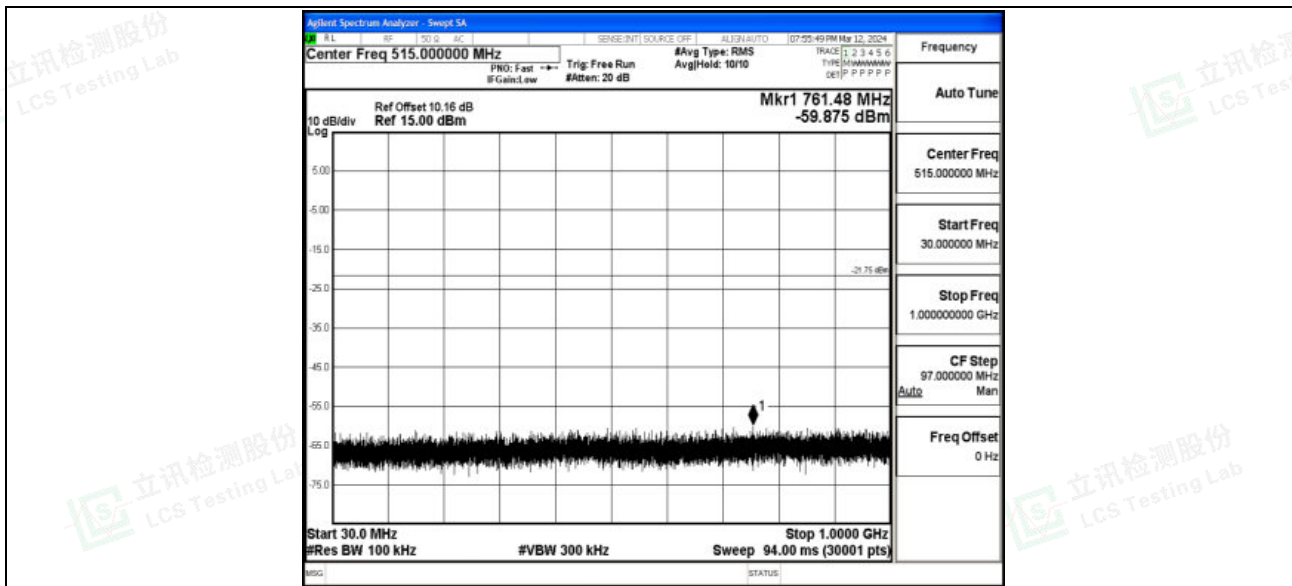
DH5\_Ant1\_2480\_1000~26500



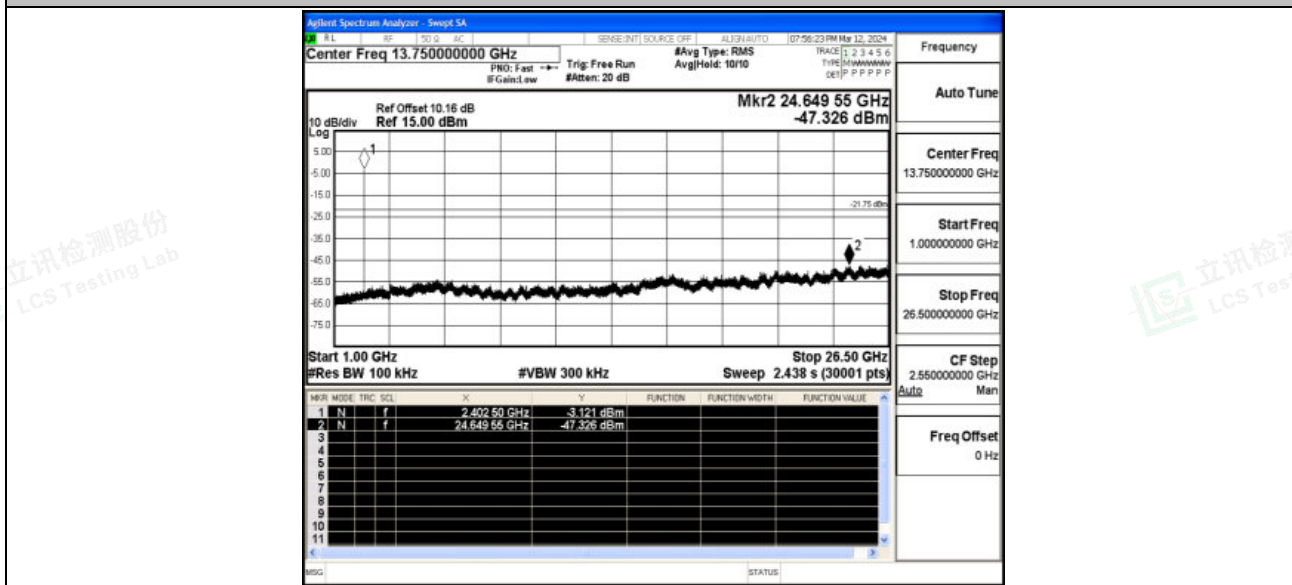
2DH5\_Ant1\_2402\_30~1000





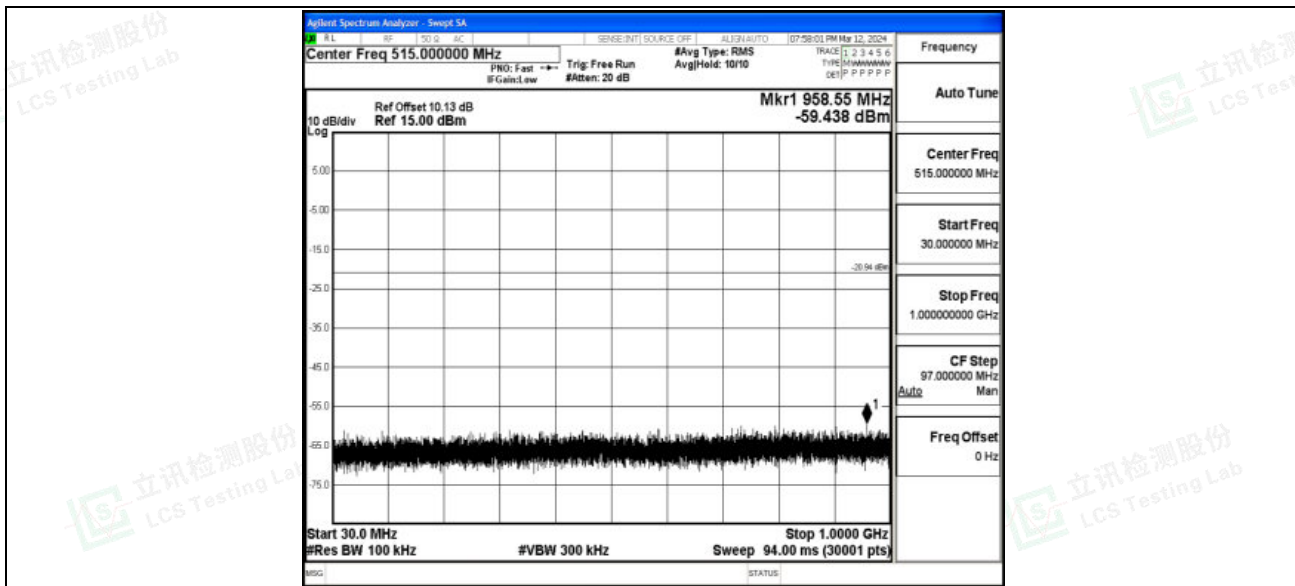


2DH5\_Ant1\_2402\_1000~26500

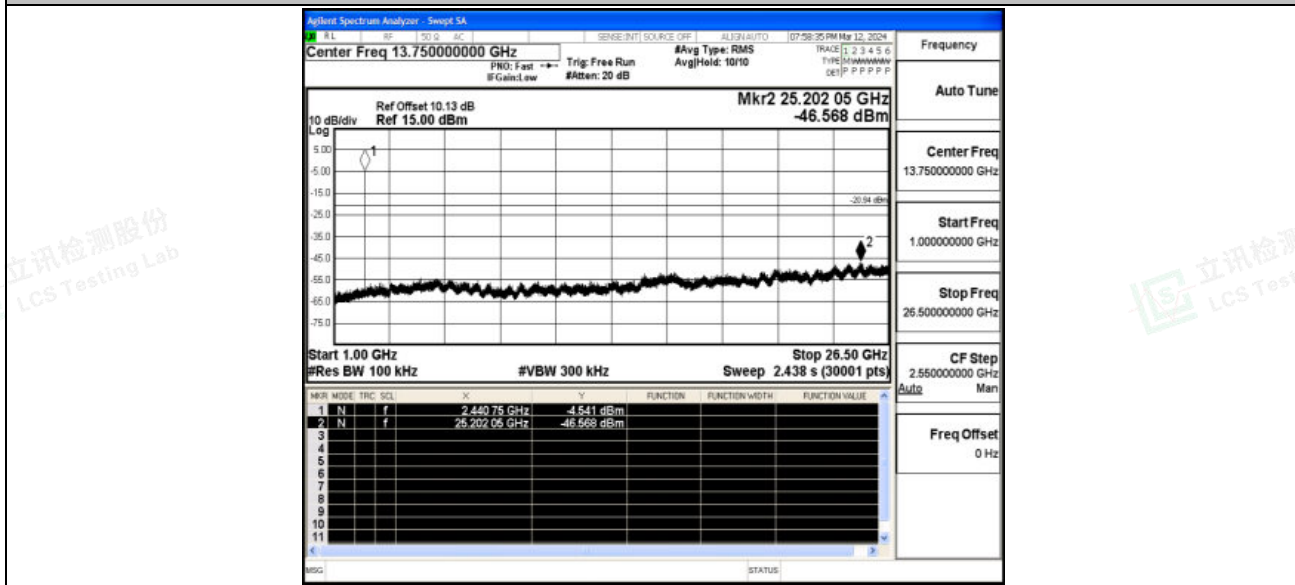


2DH5\_Ant1\_2441\_30~1000



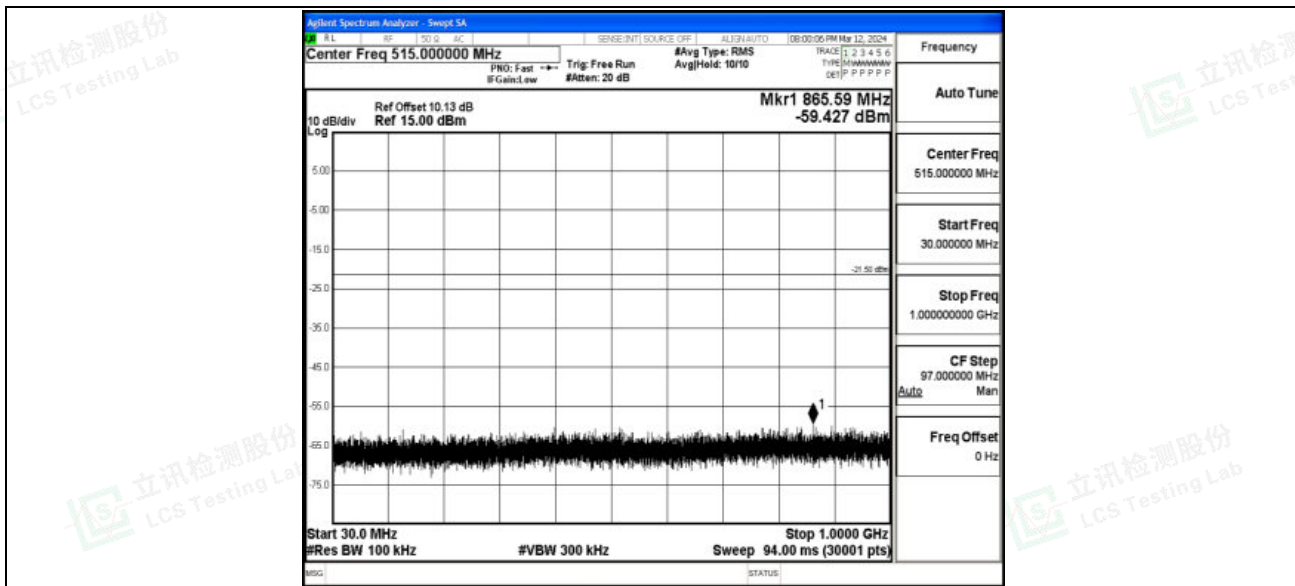


2DH5\_Ant1\_2441\_1000~26500

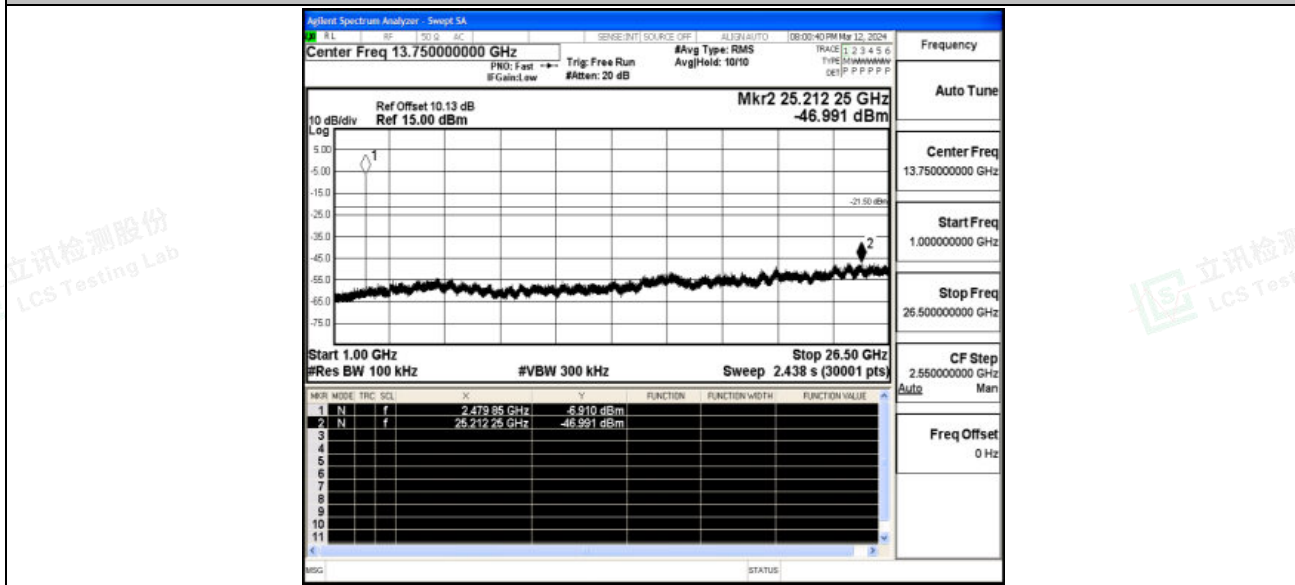


2DH5\_Ant1\_2480\_30~1000





2DH5\_Ant1\_2480\_1000~26500





### Reference Level

### Test Result

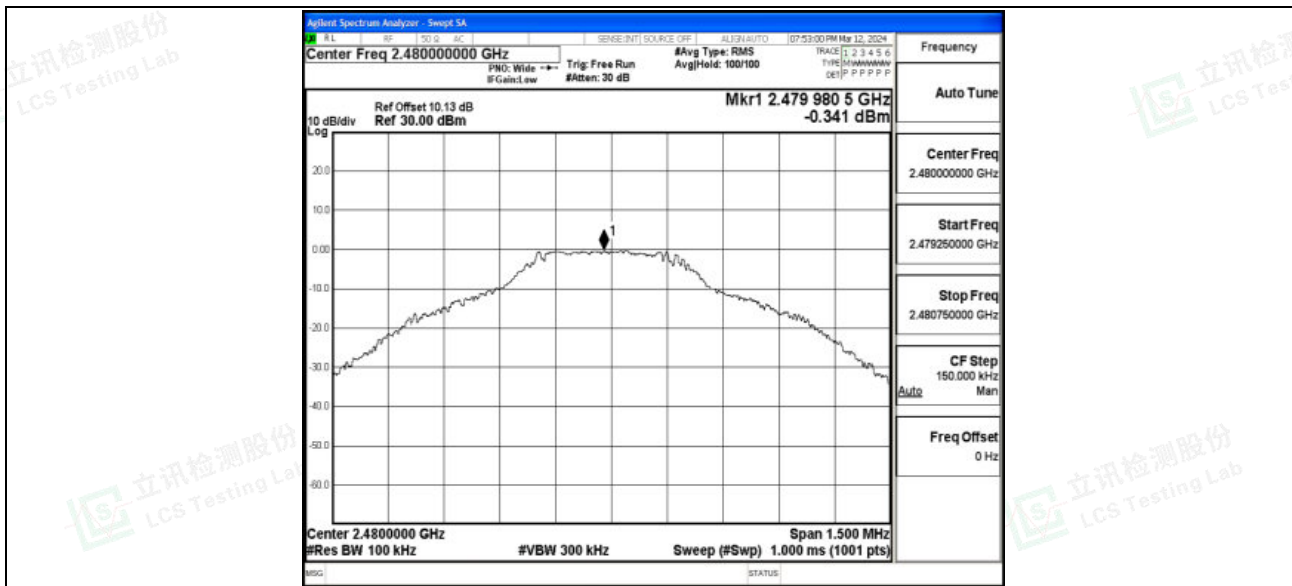
TestMode	Antenna	ChName	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	2401.99	-0.69	---	PASS
		2441	2441.00	-0.55	---	PASS
		2480	2479.98	-0.34	---	PASS
2DH5	Ant1	2402	2401.85	-1.75	---	PASS
		2441	2440.83	-0.94	---	PASS
		2480	2480.15	-1.50	---	PASS



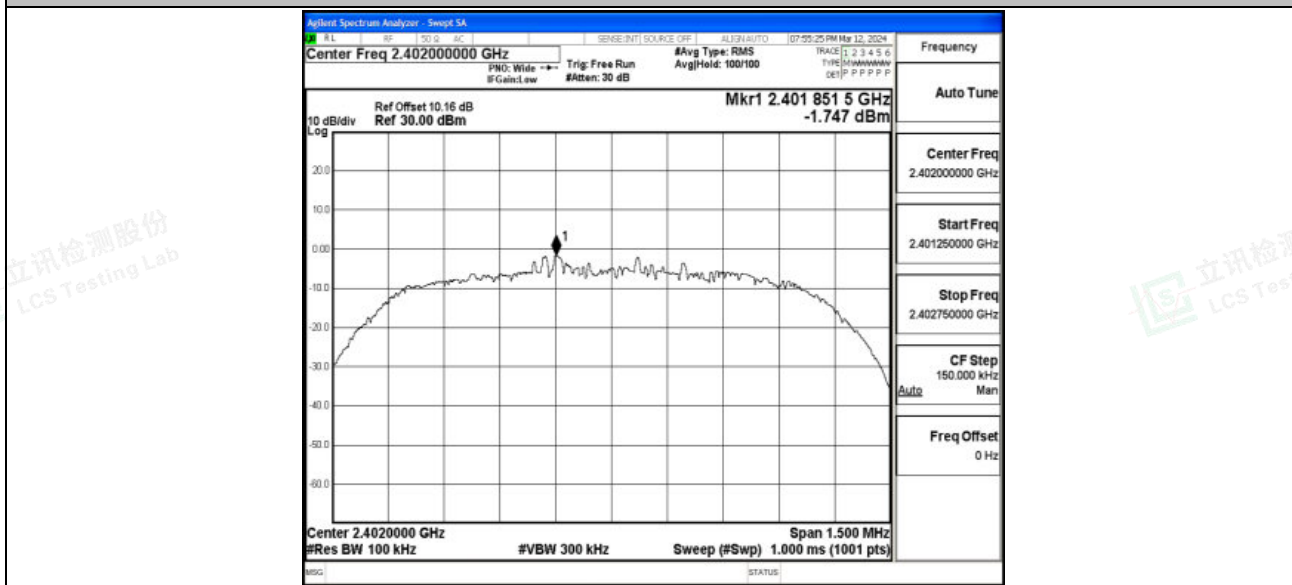


### Test Graphs



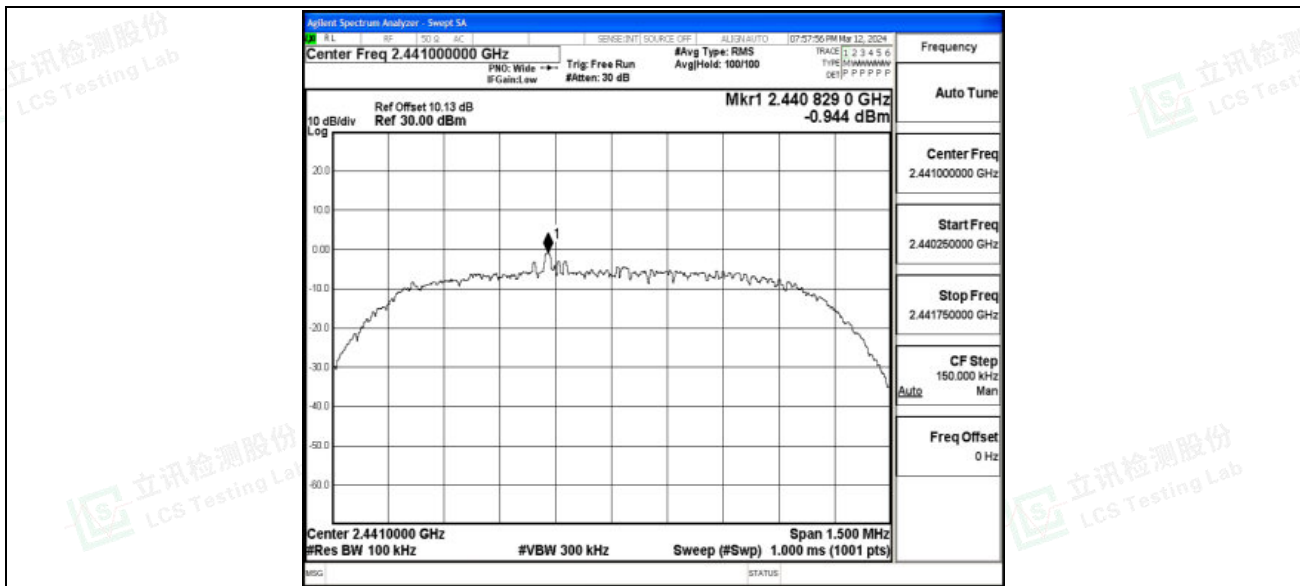


2DH5\_Ant1\_2402

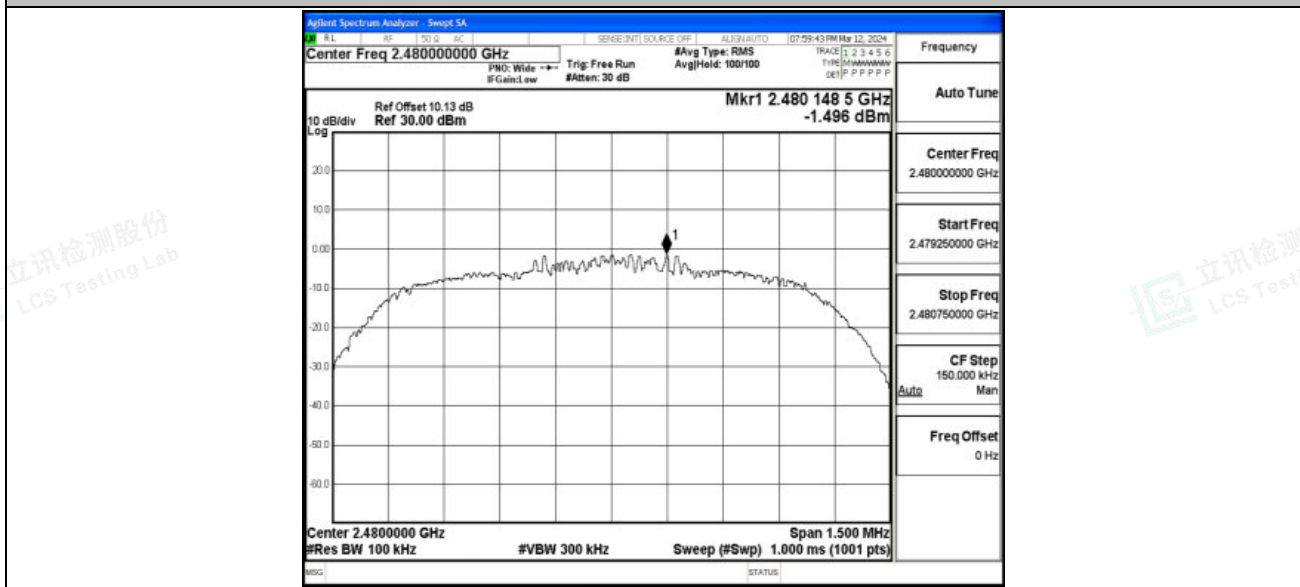


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





### A.8 Duty Cycle

#### Test Result

TestMode	Antenna	Frequency[M Hz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[kHz]
DH5	Ant1	2402	2.88	3.75	76.80	1.15	0.35
		2441	2.88	3.75	76.80	1.15	0.35
		2480	2.88	3.75	76.80	1.15	0.35
2DH5	Ant1	2402	2.88	3.75	76.80	1.15	0.35
		2441	2.89	3.75	77.07	1.13	0.35
		2480	2.89	3.75	77.07	1.13	0.35

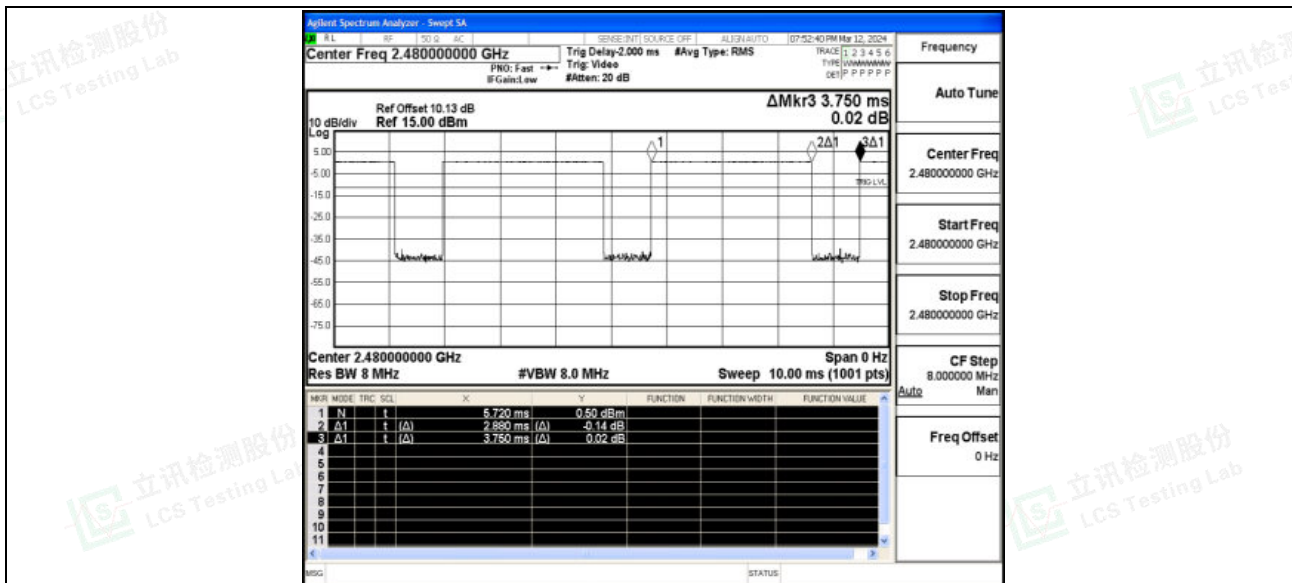




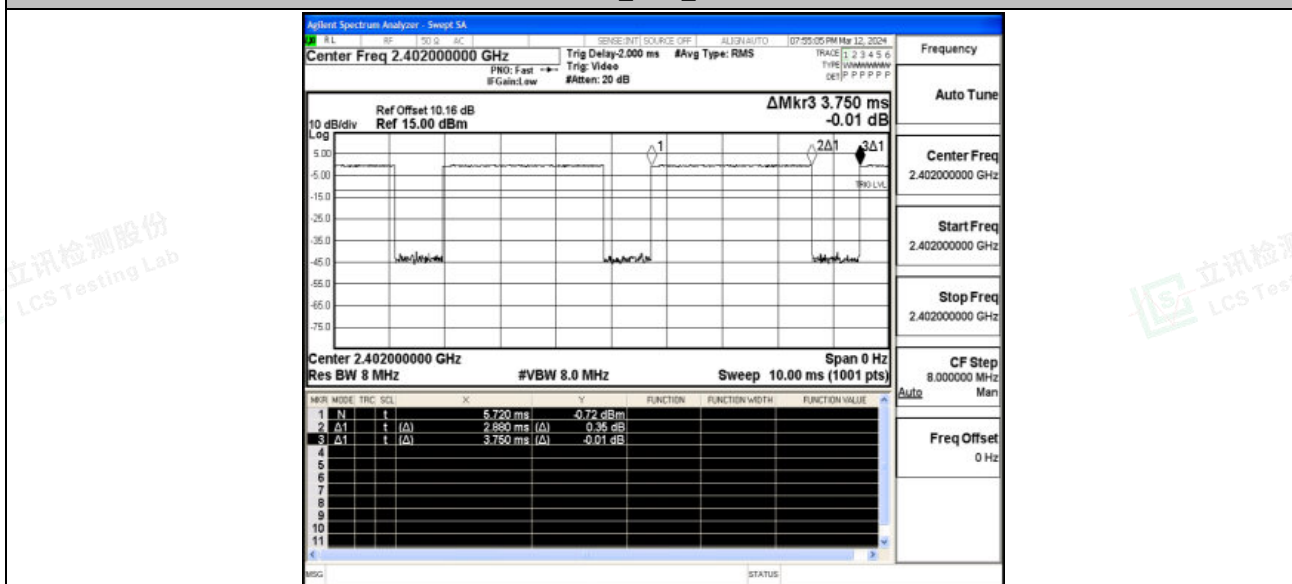


### Test Graphs



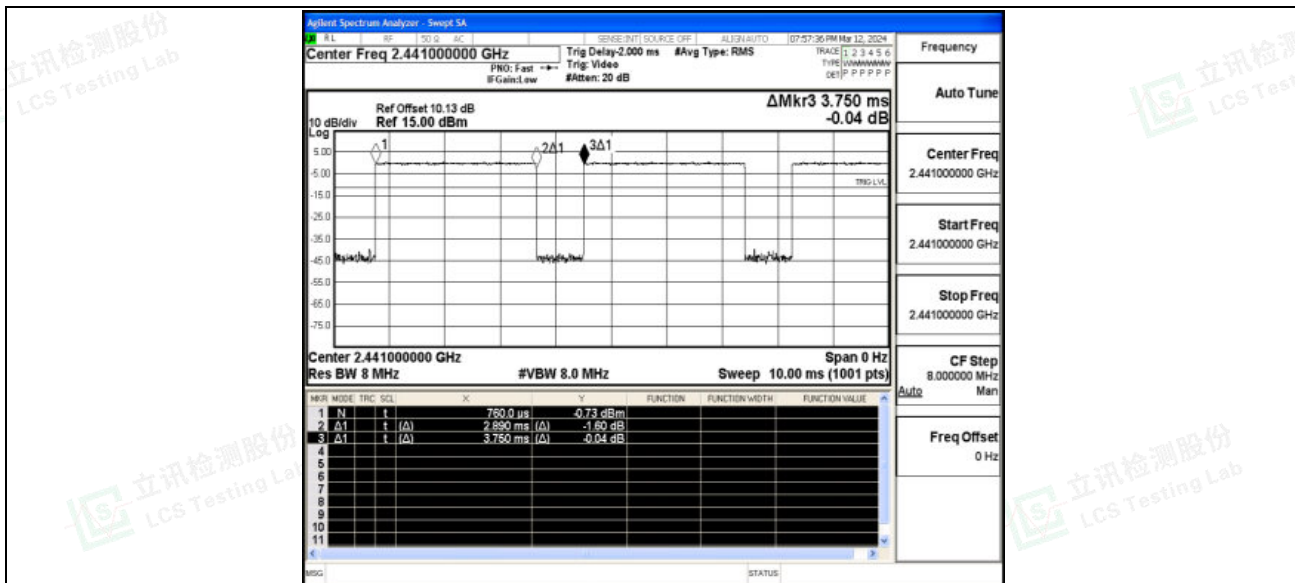


2DH5\_Ant1\_2402

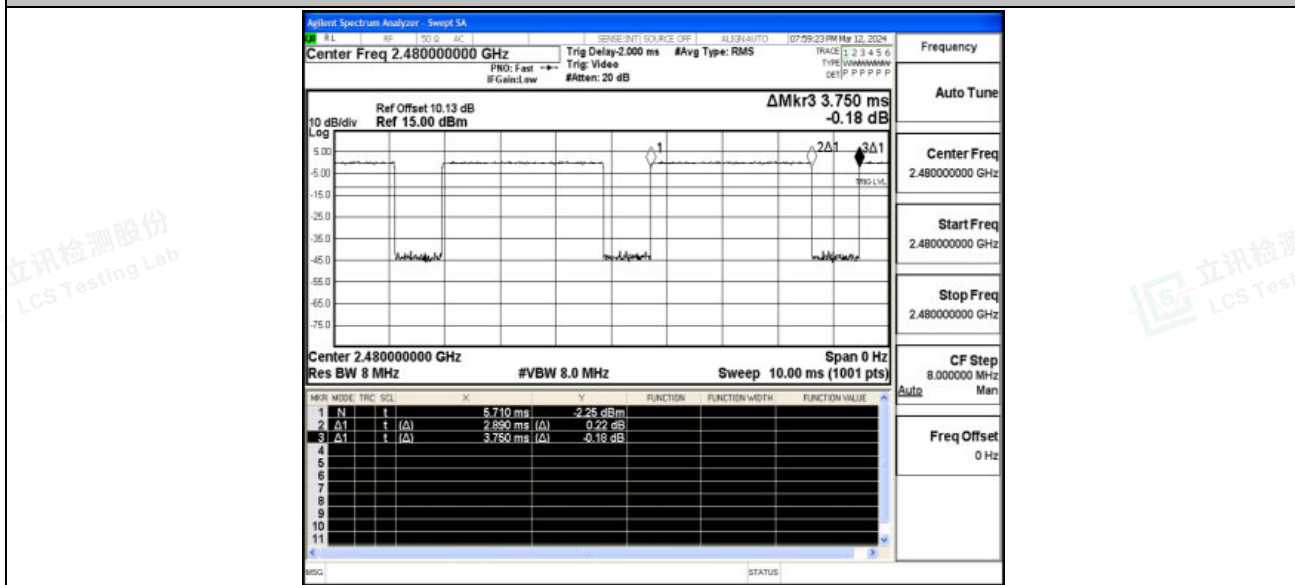


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





## A.9 Emissions in Restricted Bands

### Test Result

Test Mode	Antenna	Channel Name	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict		
DH5	Ant1	Low	2402	AV	2310.000	-47.08	≤-41.20	48.12	≤54	PASS		
				AV	2386.625	-45.54	≤-41.20	49.66	≤54	PASS		
				AV	2390.000	-46.41	≤-41.20	48.79	≤54	PASS		
				Peak	2310.000	-40.08	≤-21.20	55.12	≤74	PASS		
				Peak	2361.320	-37.03	≤-21.20	58.17	≤74	PASS		
				Peak	2390.000	-39.39	≤-21.20	55.81	≤74	PASS		
		High	2480	AV	2483.500	-46.85	≤-41.20	48.35	≤54	PASS		
				AV	2488.960	-45.64	≤-41.20	49.56	≤54	PASS		
				AV	2500.000	-46.72	≤-41.20	48.48	≤54	PASS		
				Peak	2483.500	-41.12	≤-21.20	54.08	≤74	PASS		
				Peak	2486.480	-37.14	≤-21.20	58.06	≤74	PASS		
				Peak	2500.000	-39.14	≤-21.20	56.06	≤74	PASS		
		Low	Hop_2402	Peak	2310.000	-40.7	≤-21.20	54.50	≤74	PASS		
				Peak	2372.345	-37.4	≤-21.20	57.80	≤74	PASS		
				Peak	2390.000	-39.52	≤-21.20	55.68	≤74	PASS		
		High	Hop_2480	Peak	2483.500	-39.93	≤-21.20	55.27	≤74	PASS		
				Peak	2499.040	-37.02	≤-21.20	58.18	≤74	PASS		
				Peak	2500.000	-38.21	≤-21.20	56.99	≤74	PASS		
		2DH5	Ant1	Low	2402	AV	2310.000	-47.24	≤-41.20	47.96	≤54	PASS
						AV	2342.420	-45.72	≤-41.20	49.48	≤54	PASS
						AV	2390.000	-46.83	≤-41.20	48.37	≤54	PASS
Peak	2310.000					-40.01	≤-21.20	55.19	≤74	PASS		
Peak	2385.155					-36.86	≤-21.20	58.34	≤74	PASS		
Peak	2390.000					-40.35	≤-21.20	54.85	≤74	PASS		
High	2480			AV	2483.500	-47.04	≤-41.20	48.16	≤54	PASS		
				AV	2498.800	-45.5	≤-41.20	49.70	≤54	PASS		
				AV	2500.000	-46.37	≤-41.20	48.83	≤54	PASS		
				Peak	2483.500	-39.39	≤-21.20	55.81	≤74	PASS		
				Peak	2496.080	-36.9	≤-21.20	58.30	≤74	PASS		
				Peak	2500.000	-39.47	≤-21.20	55.73	≤74	PASS		
Low	Hop_2402			Peak	2310.000	-40.14	≤-21.20	55.06	≤74	PASS		
				Peak	2385.890	-37.25	≤-21.20	57.95	≤74	PASS		
				Peak	2390.000	-40.28	≤-21.20	54.92	≤74	PASS		
High	Hop_2480			Peak	2483.500	-38.98	≤-21.20	56.22	≤74	PASS		
				Peak	2492.080	-37.01	≤-21.20	58.19	≤74	PASS		



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				Peak	2500.000	-41.85	≤-21.20	53.35	≤74	PASS
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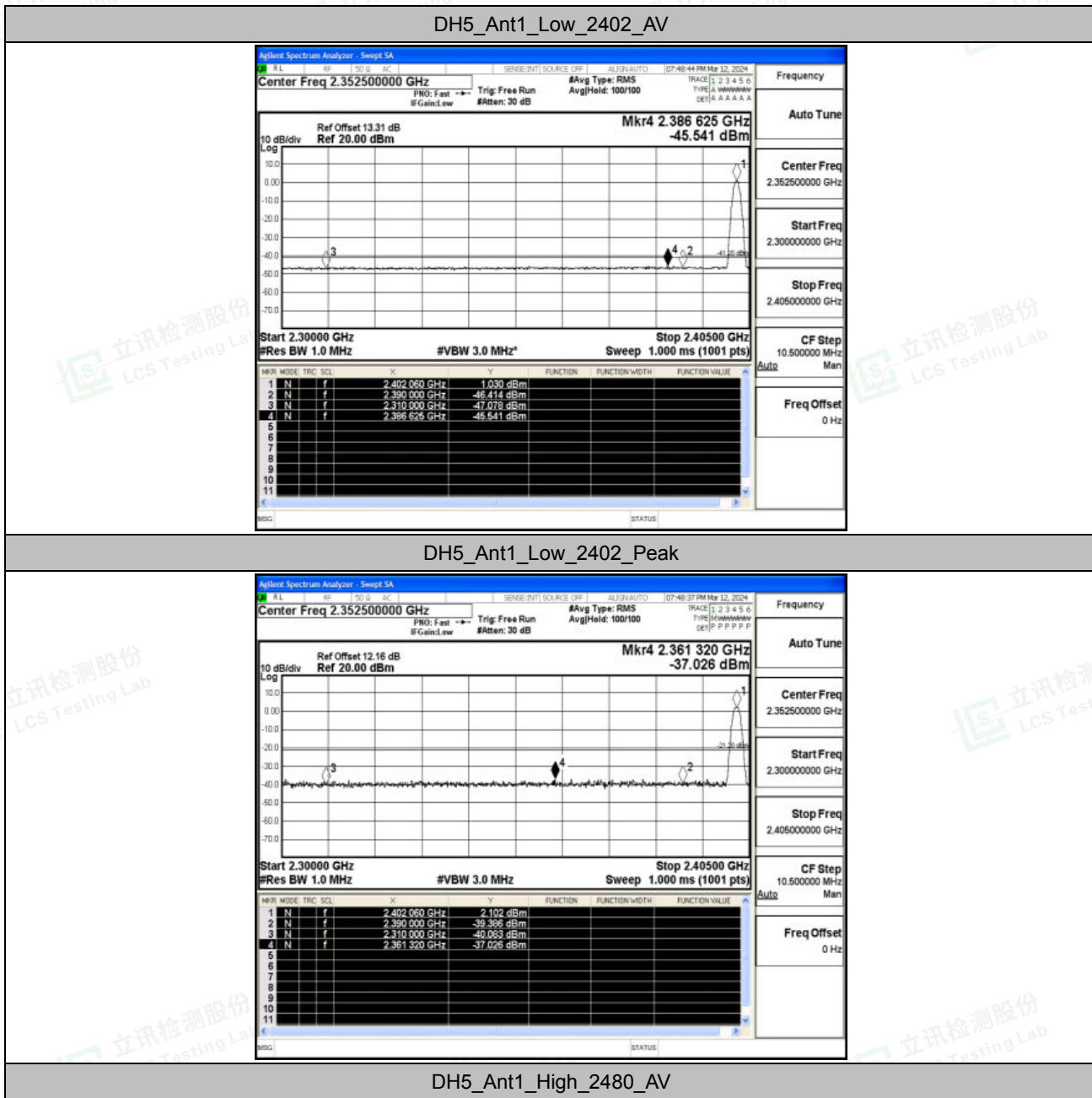
Note:

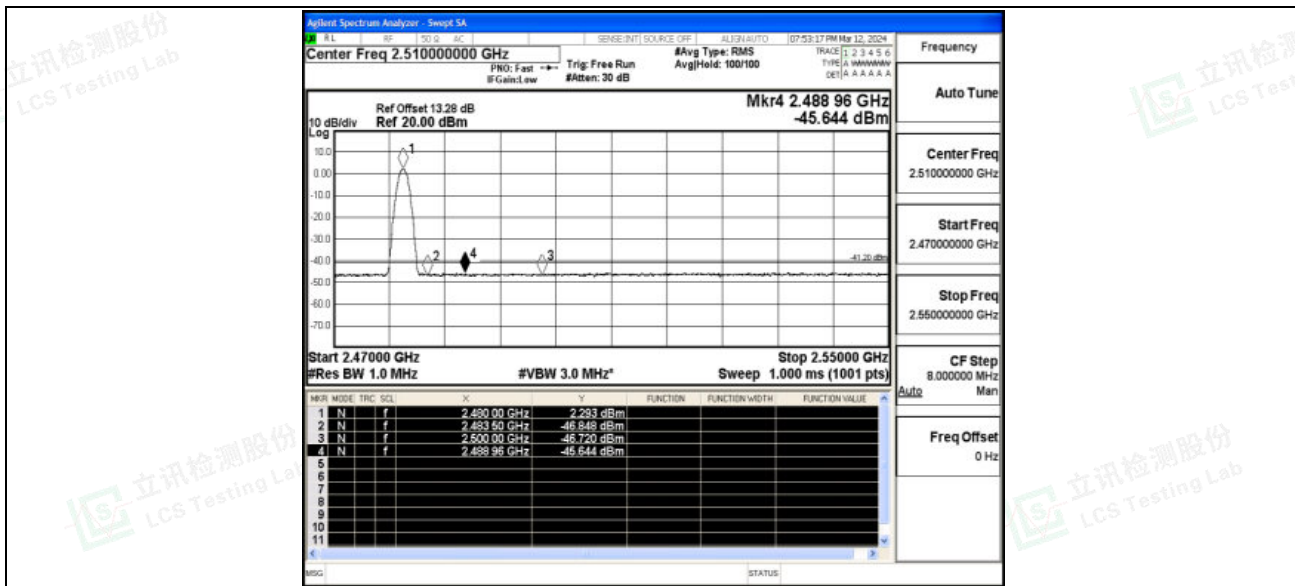
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



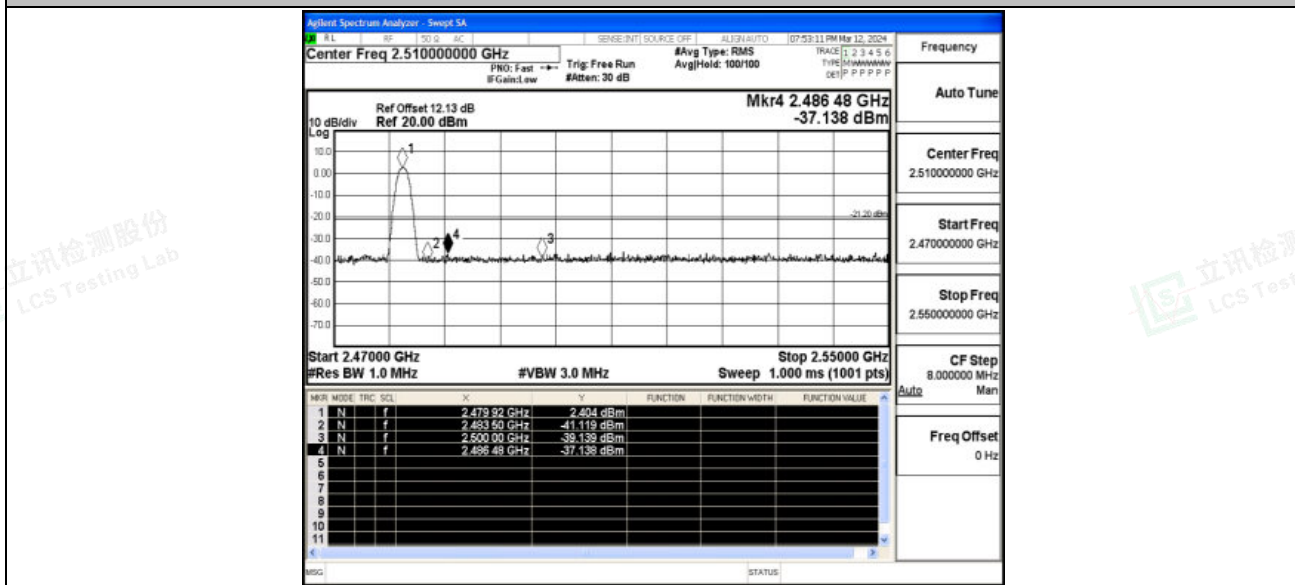


### Test Graphs



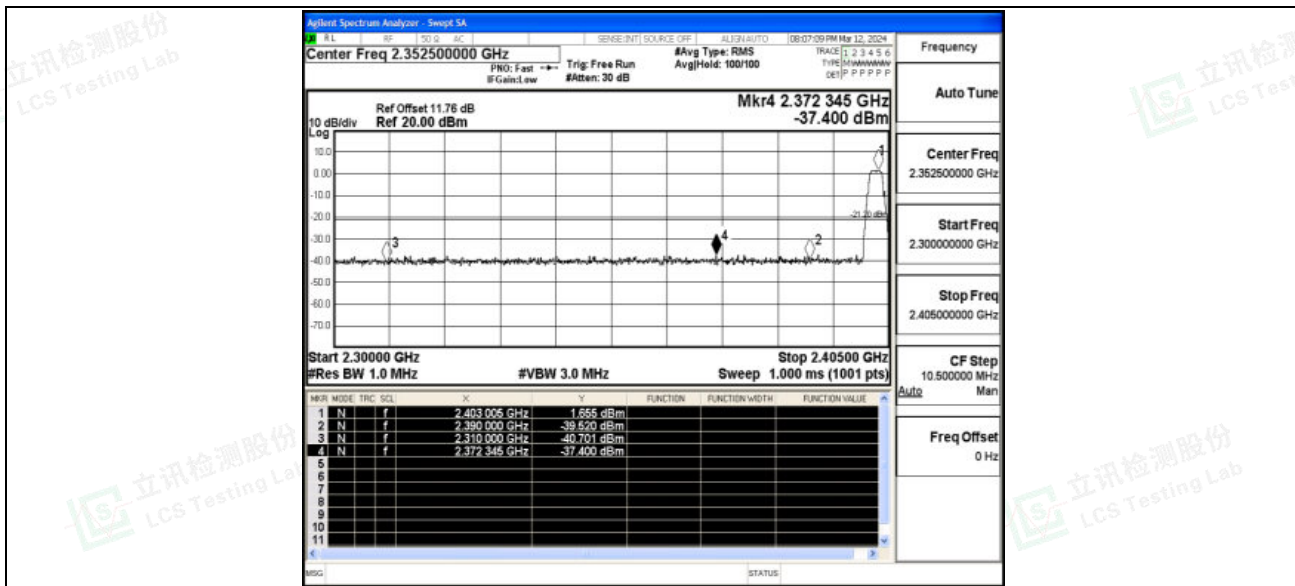


DH5\_Ant1\_High\_2480\_Peak

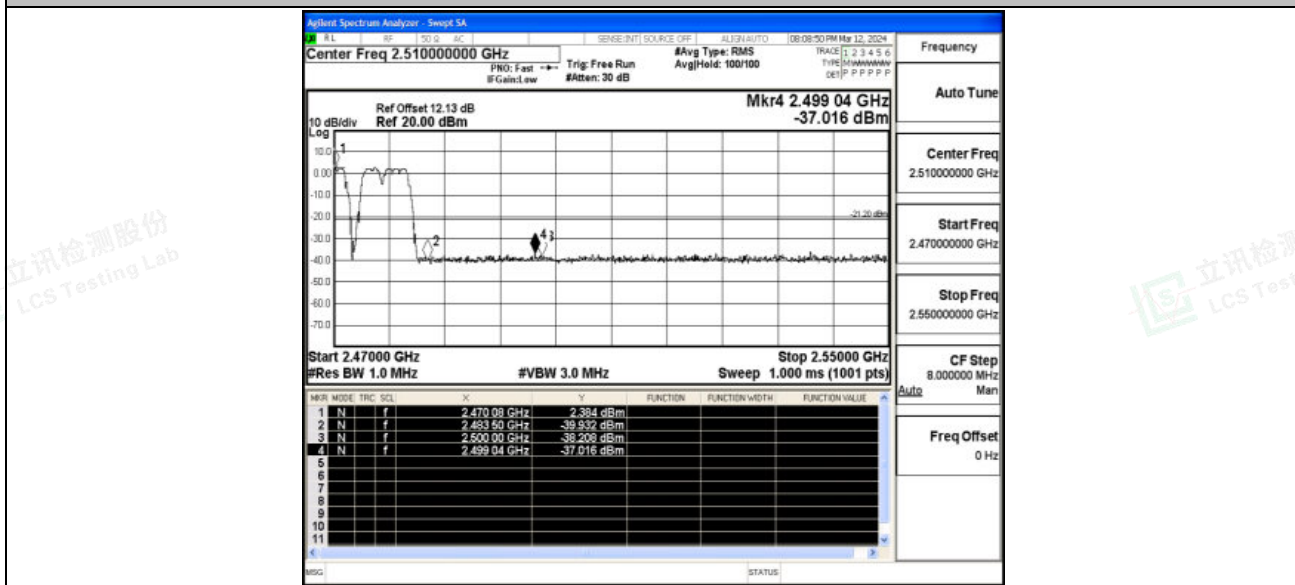


DH5\_Ant1\_Low\_Hop\_2402\_Peak





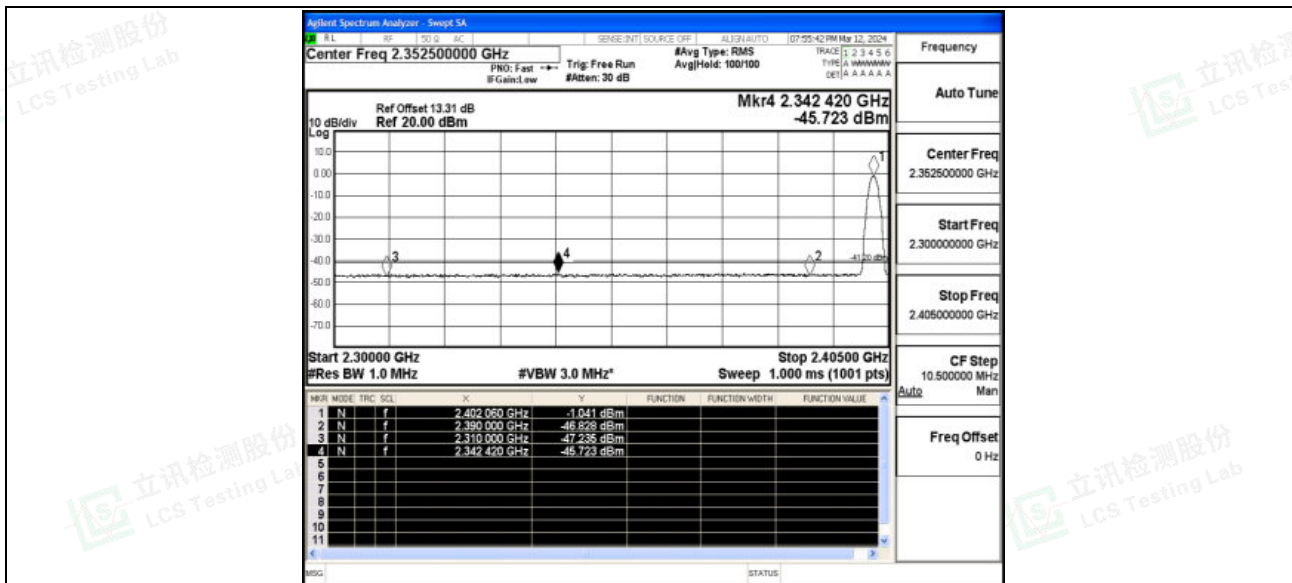
DH5\_Ant1\_High\_Hop\_2480\_Peak



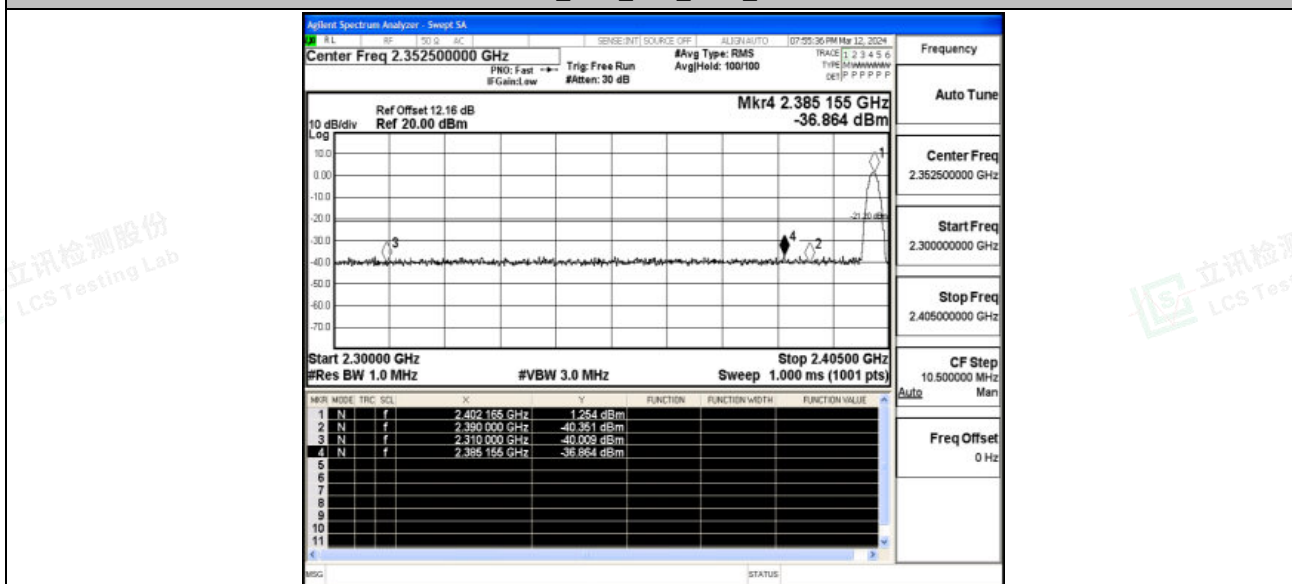
2DH5\_Ant1\_Low\_2402\_AV





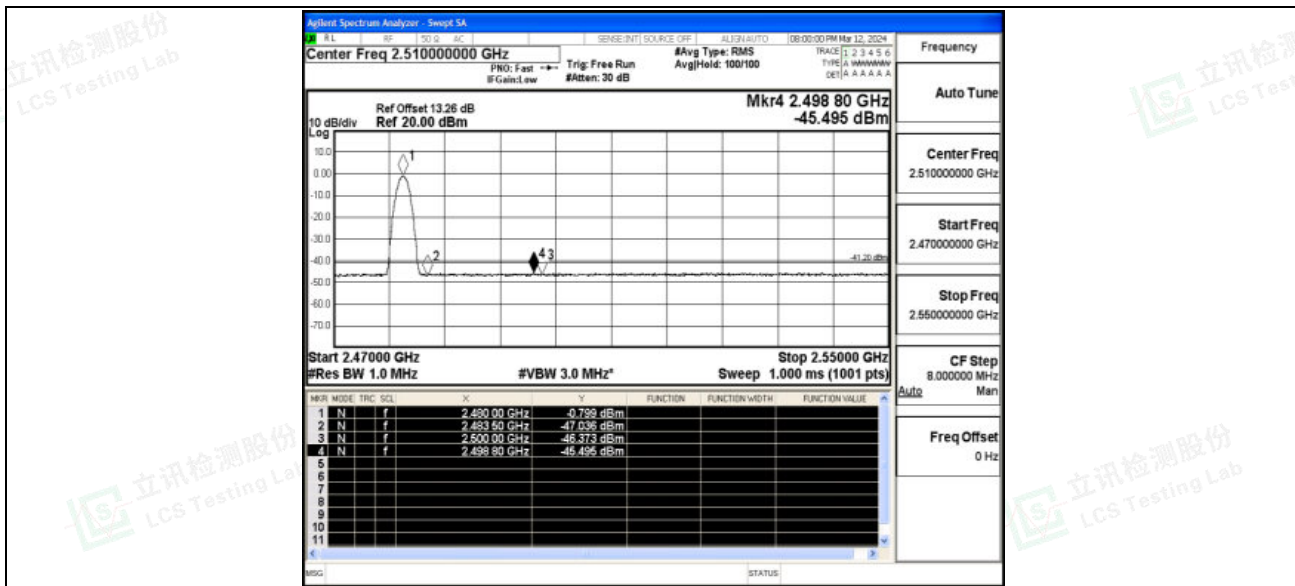


2DH5\_Ant1\_Low\_2402\_Peak

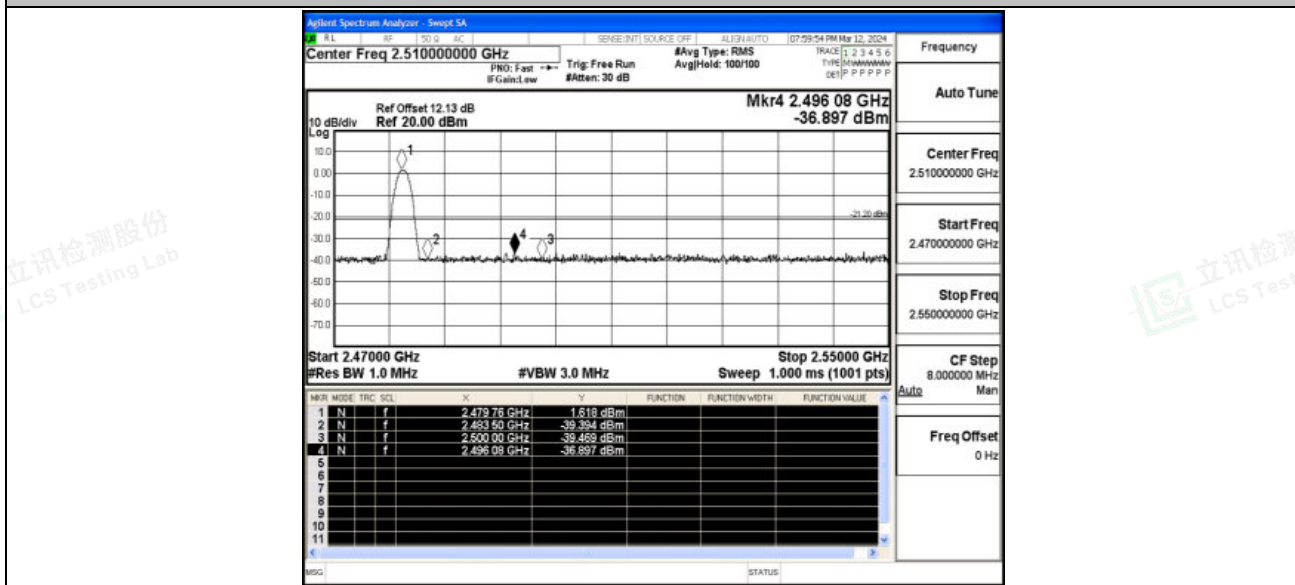


2DH5\_Ant1\_High\_2480\_AV





2DH5\_Ant1\_High\_2480\_Peak



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

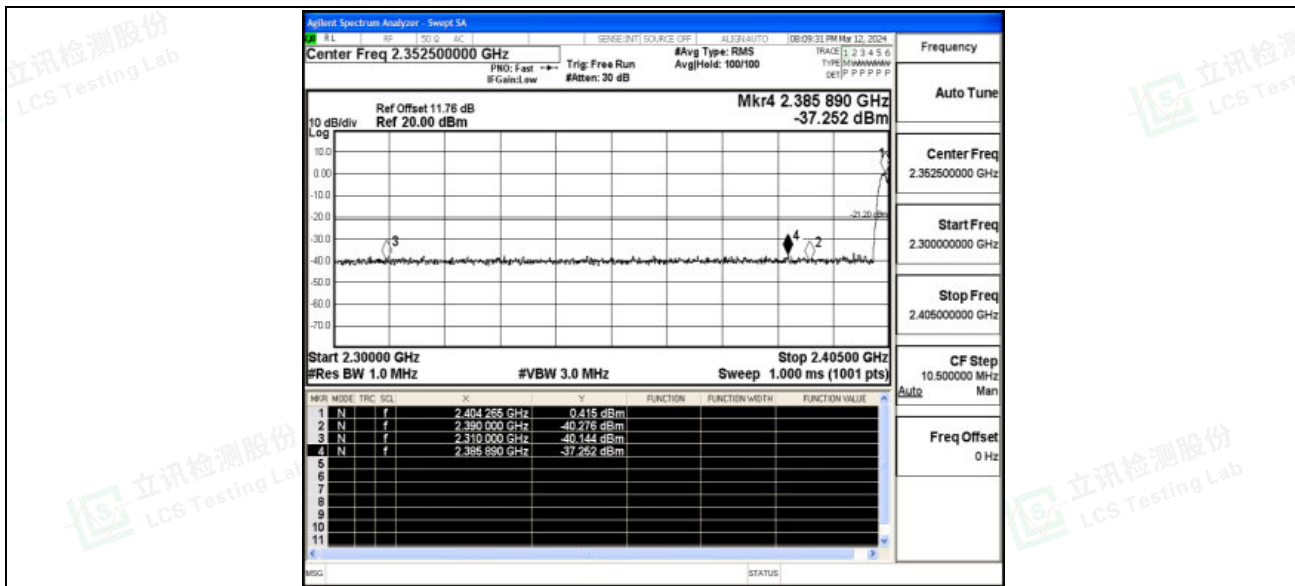


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2DH5\_Ant1\_High\_Hop\_2480\_Peak

