



## Appendix A

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

Product Name: TWS Earphones

Test Model: S300

#### Environmental Conditions

Temperature:	23.1° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Nick Peng





## A.1 20dB Emission Bandwidth

### Test Result

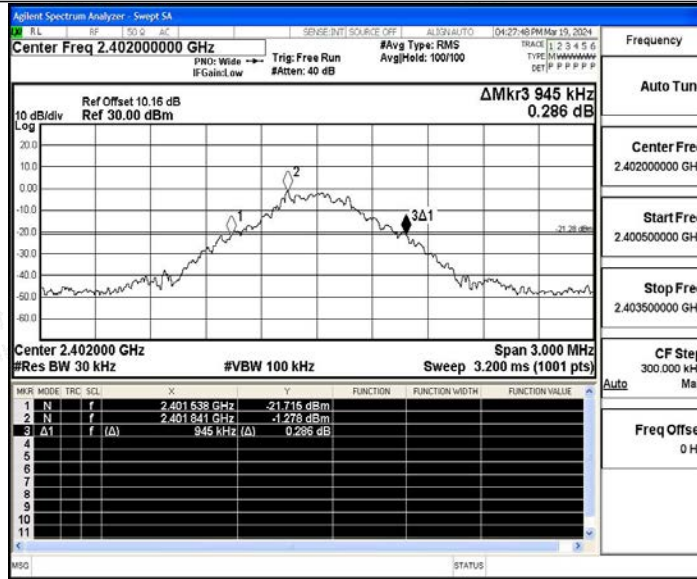
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.945	2401.538	2402.483	---	---
		2441	1.026	2440.487	2441.513	---	---
		2480	0.945	2479.538	2480.483	---	---
2DH5	Ant1	2402	1.314	2401.343	2402.657	---	---
		2441	1.287	2440.364	2441.651	---	---
		2480	1.290	2479.361	2480.651	---	---



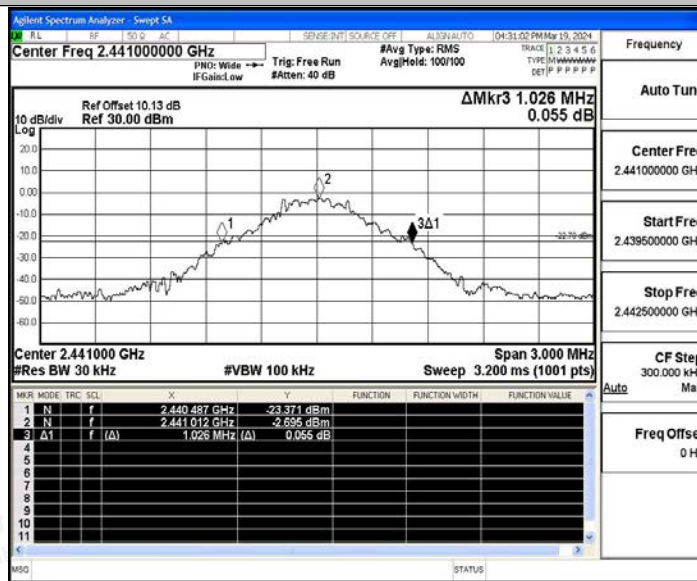


### Test Graphs

DH5\_Ant1\_2402

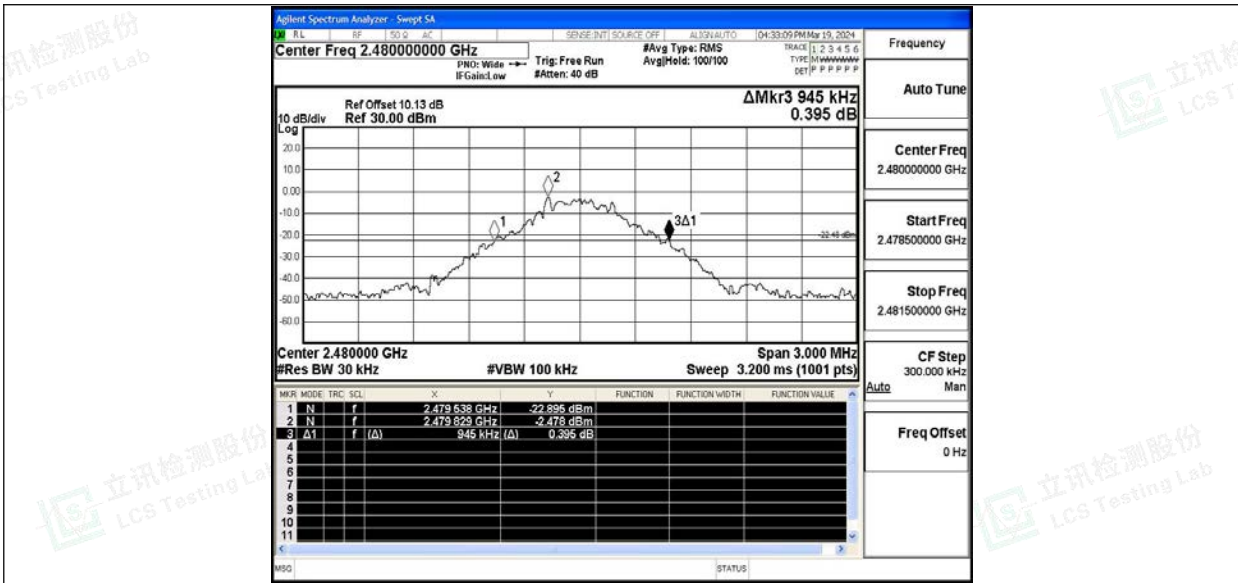


DH5\_Ant1\_2441

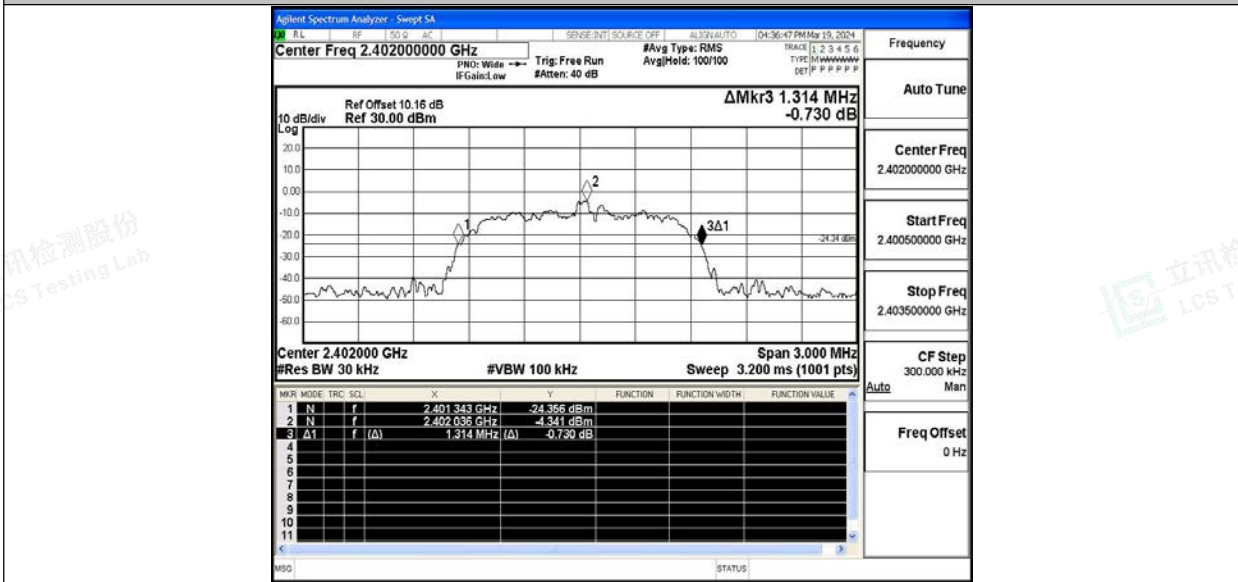


DH5\_Ant1\_2480



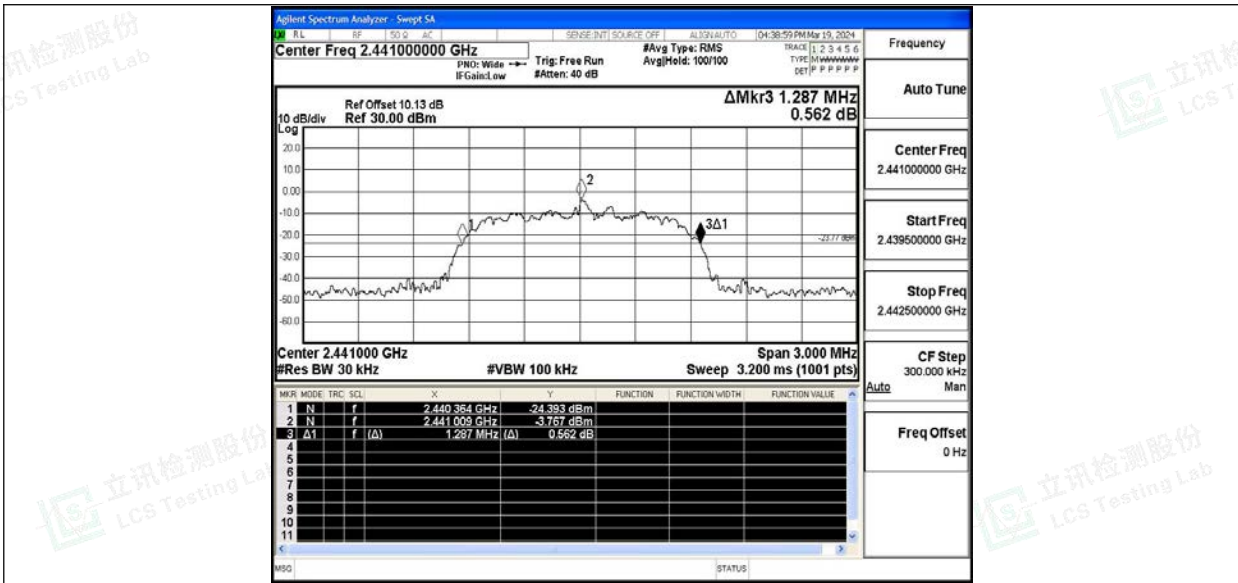


2DH5\_Ant1\_2402

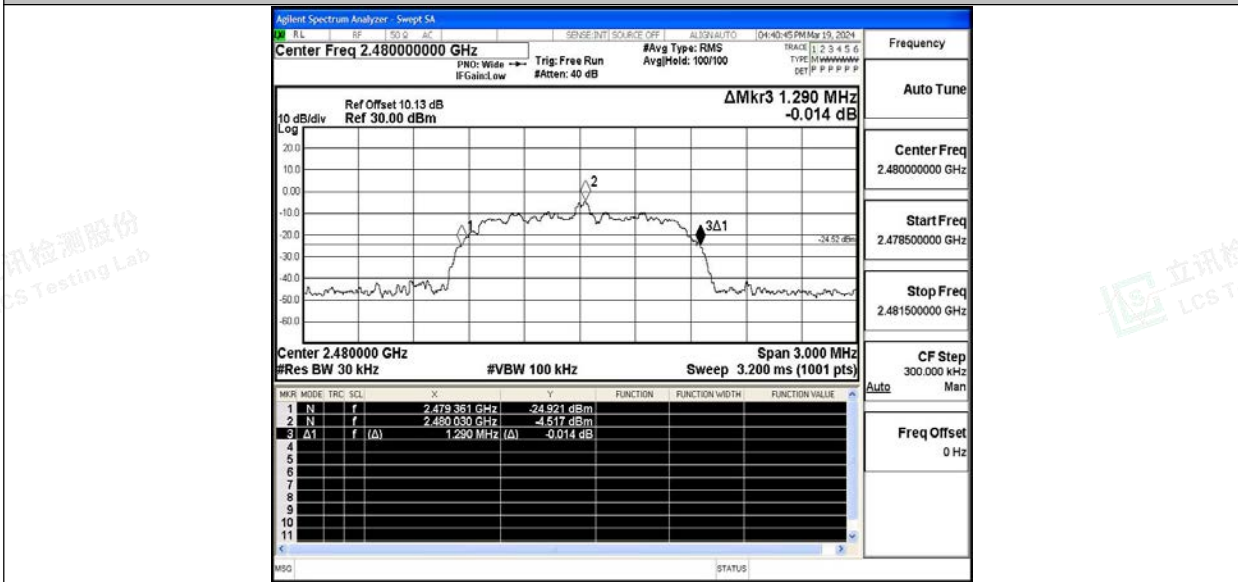


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





## A.2 Maximum Peak Conducted Output Power

### Test Result

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.66	≤20.97	PASS
		2441	0.49	≤20.97	PASS
		2480	-0.52	≤20.97	PASS
2DH5	Ant1	2402	0.63	≤20.97	PASS
		2441	0.29	≤20.97	PASS
		2480	-0.07	≤20.97	PASS

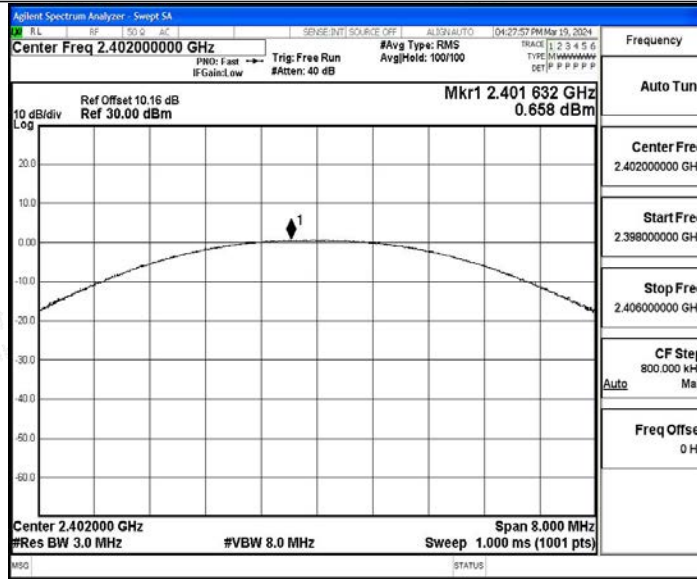




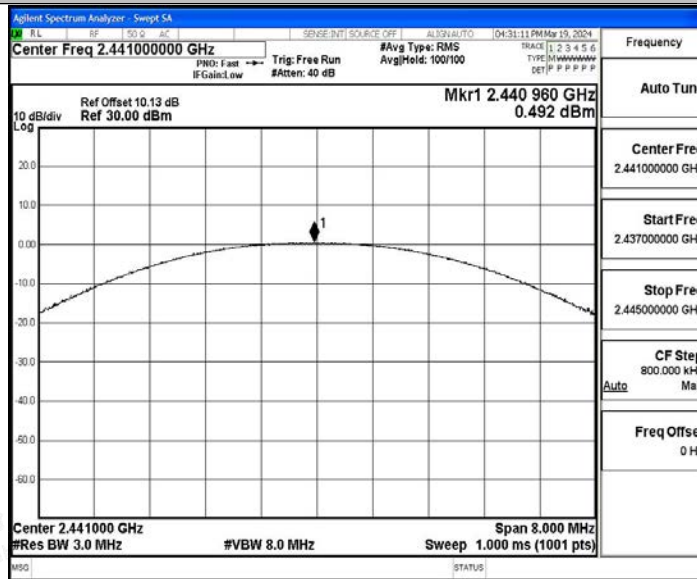


### Test Graphs

DH5\_Ant1\_2402

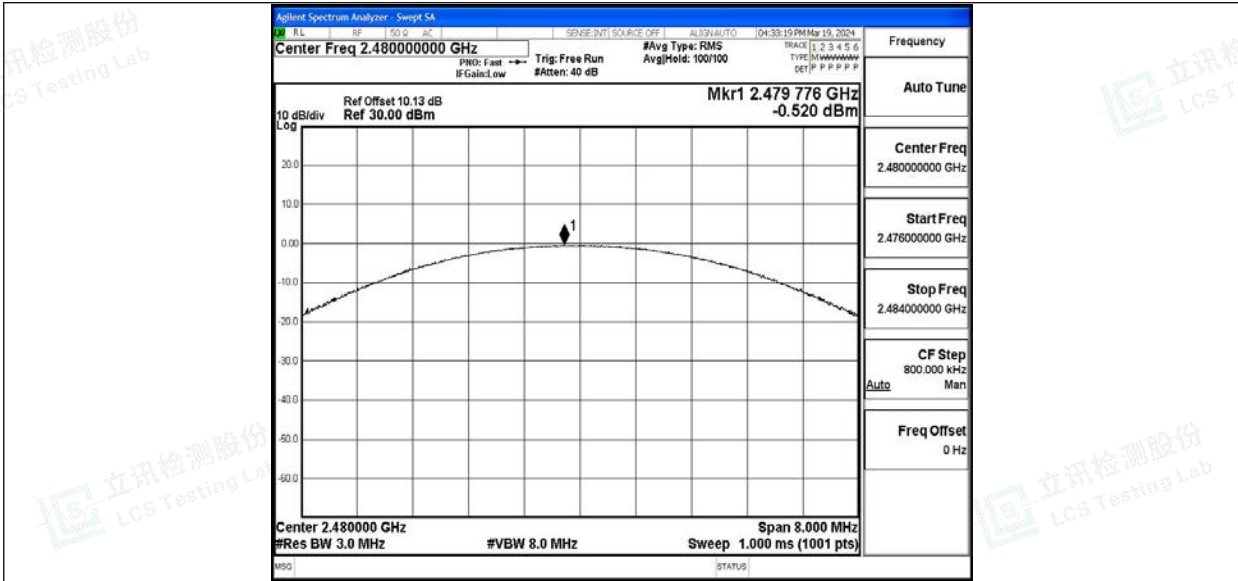


DH5\_Ant1\_2441

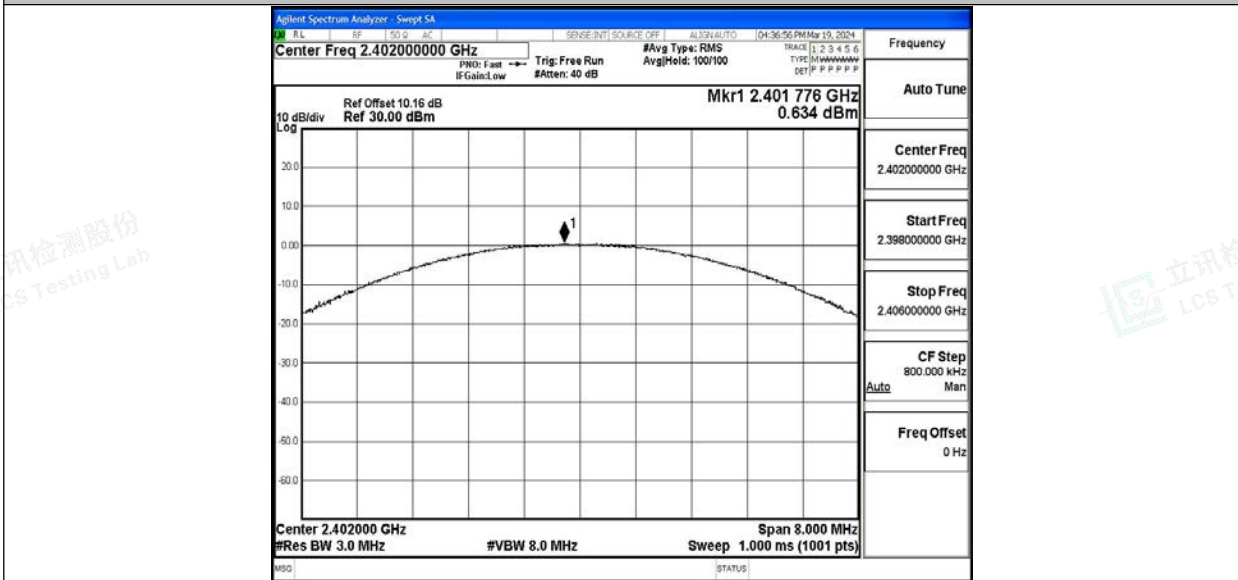


DH5\_Ant1\_2480





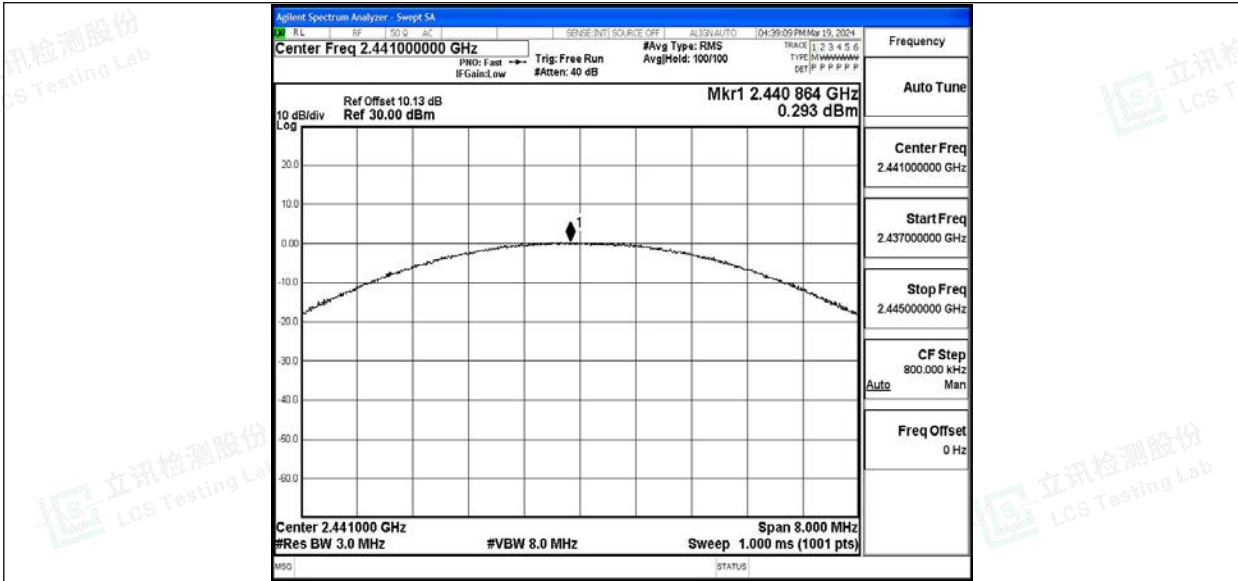
2DH5\_Ant1\_2402



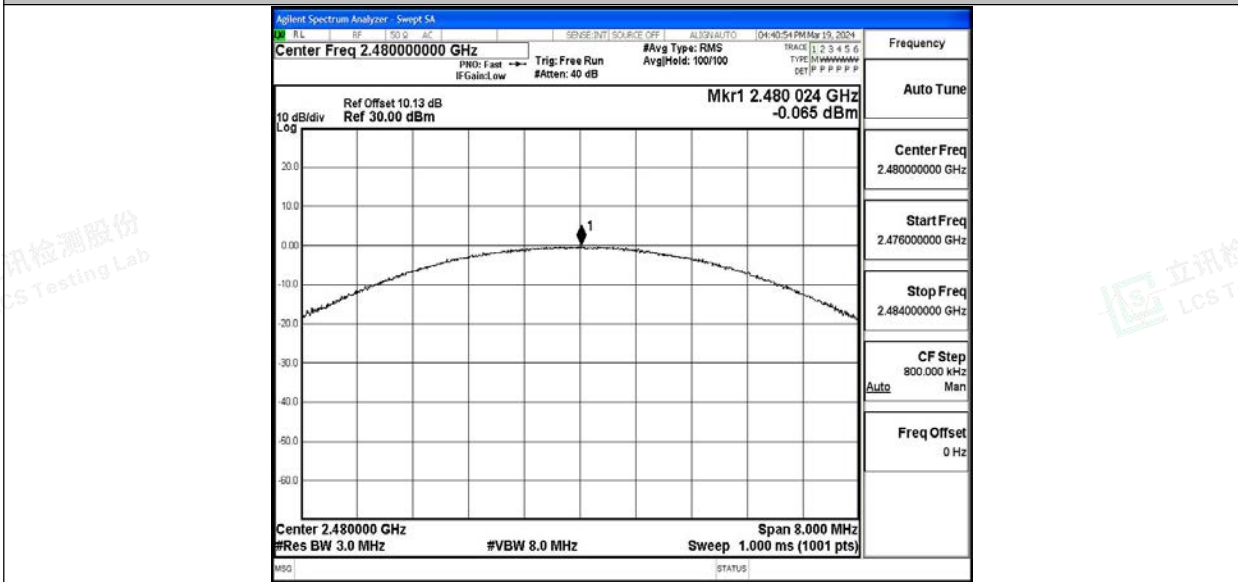
2DH5\_Ant1\_2441







2DH5\_Ant1\_2480





### A.3 Carrier frequency separation

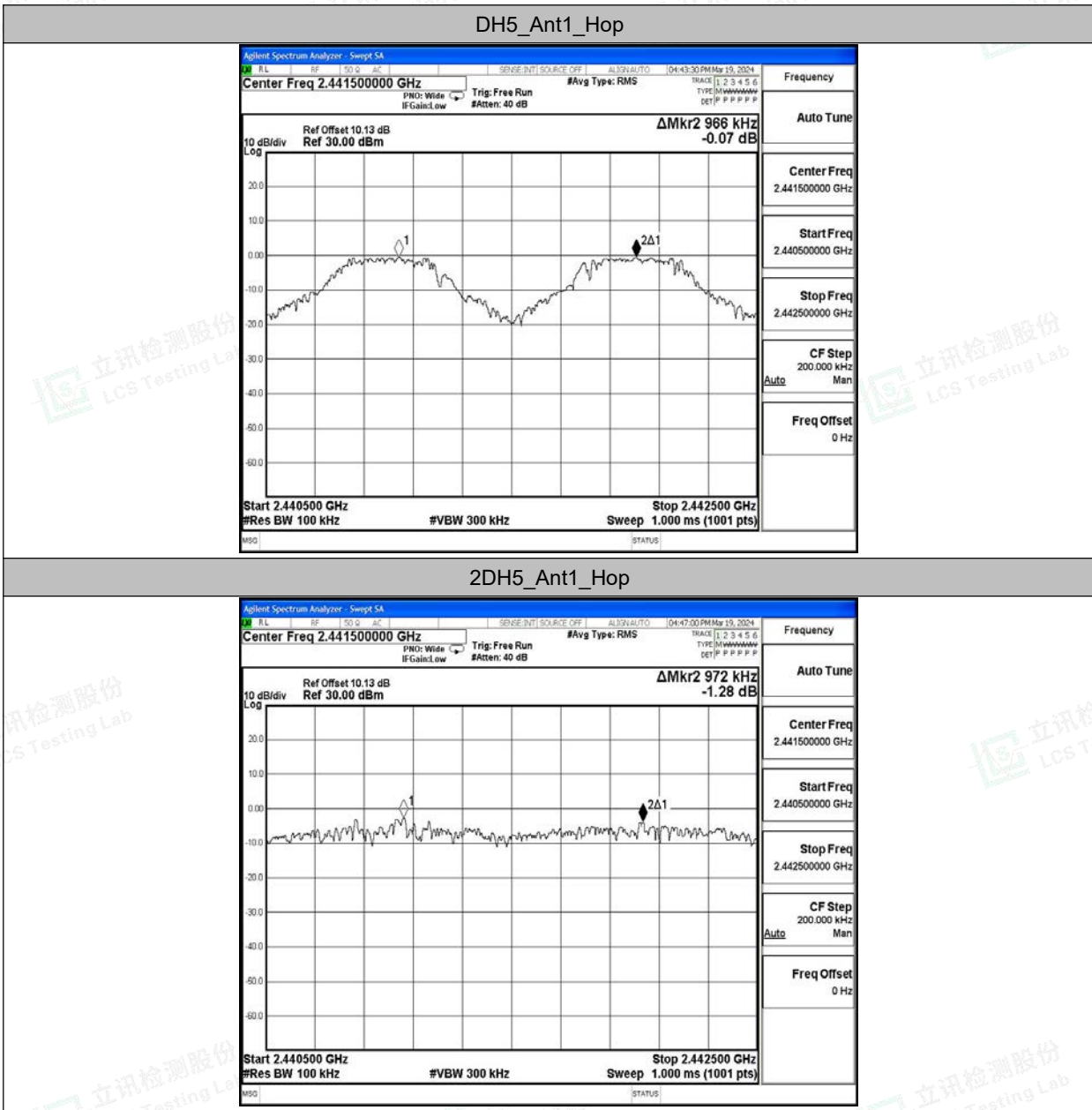
#### Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.966	≥0.684	PASS
2DH5	Ant1	Hop	0.972	≥0.876	PASS





### Test Graphs





### A.4 Time of occupancy

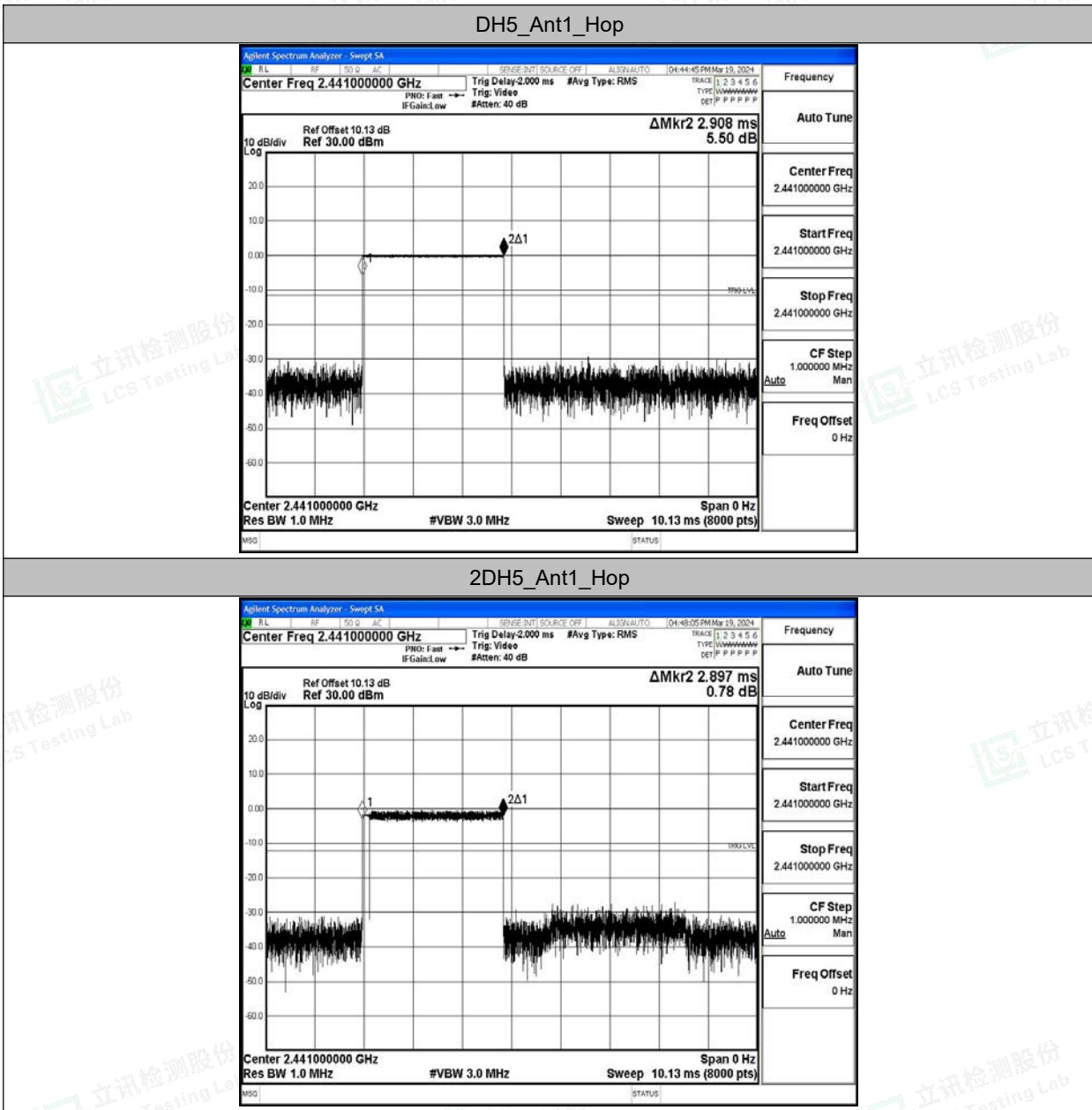
#### Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.908	106.67	0.31	≤0.4	PASS
2DH5	Ant1	Hop	2.897	106.67	0.309	≤0.4	PASS





### Test Graphs





## A.5 Number of hopping channels

### Test Result

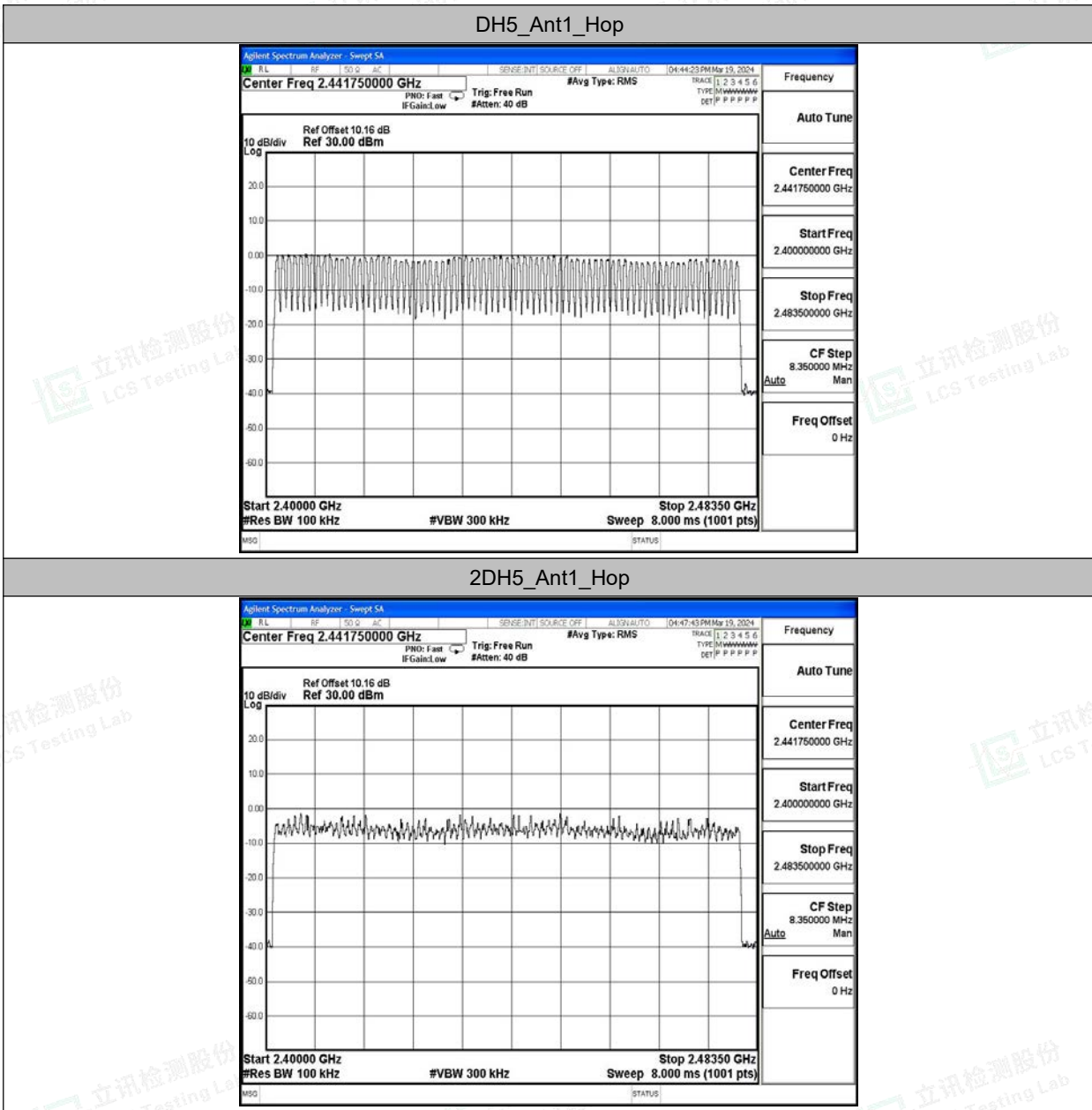
TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS







### 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	0.04	-48.26	≤-19.96	PASS
		High	2480	-1.54	-48.41	≤-21.54	PASS
		Low	Hop_2402	-0.37	-47.8	≤-20.37	PASS
		High	Hop_2480	-1.18	-47.29	≤-21.18	PASS
2DH5	Ant1	Low	2402	-1.80	-49.24	≤-21.8	PASS
		High	2480	-2.61	-48.85	≤-22.61	PASS
		Low	Hop_2402	-4.79	-47.5	≤-24.79	PASS
		High	Hop_2480	-3.45	-46.75	≤-23.45	PASS

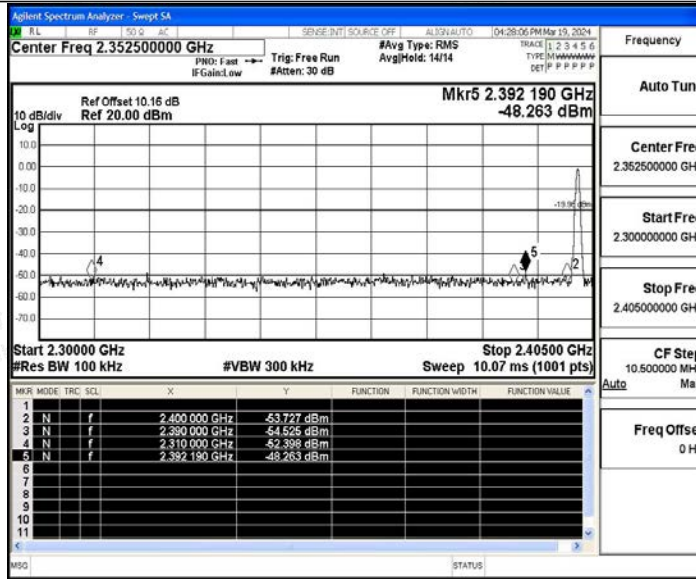


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 Scan code to check authenticity

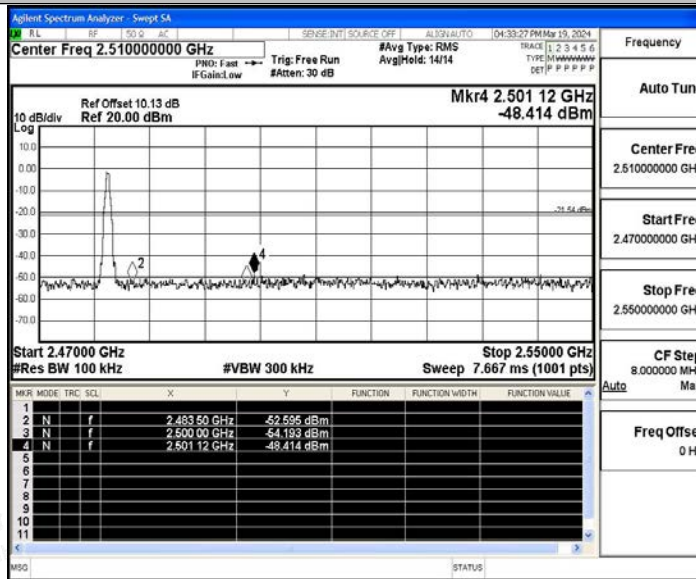


### Test Graphs

#### DH5\_Ant1\_Low\_2402

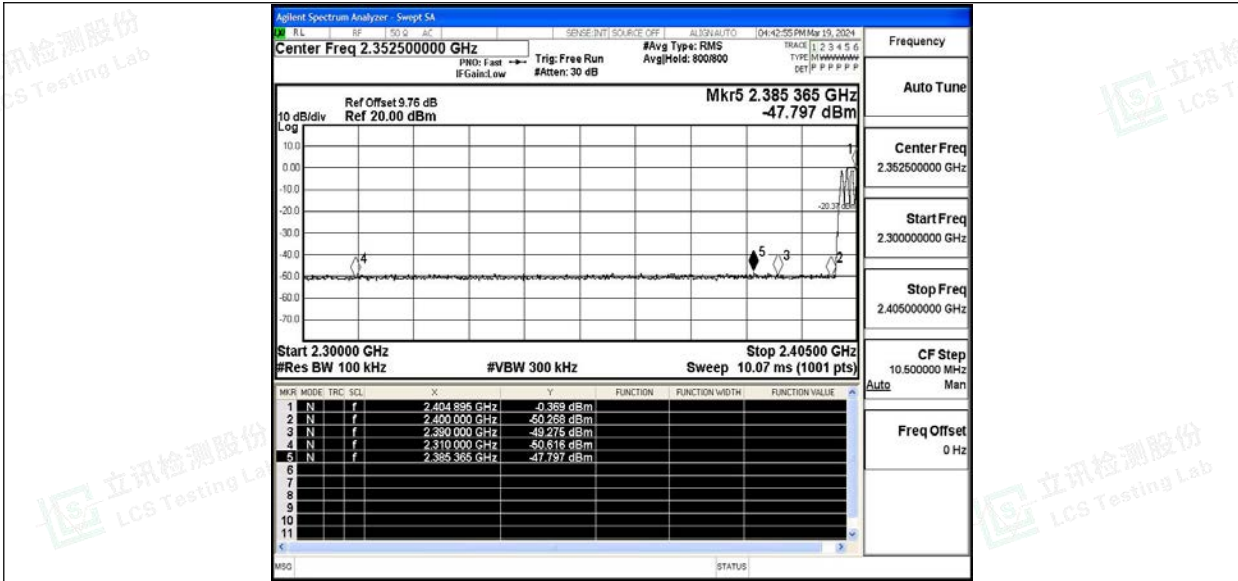


#### DH5\_Ant1\_High\_2480

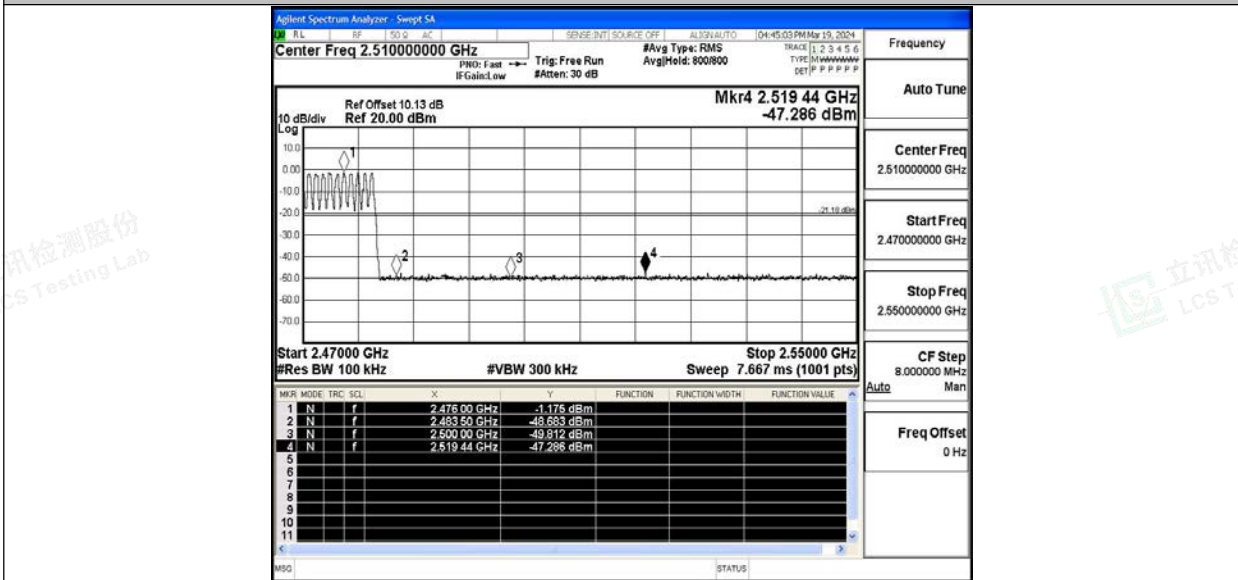


#### DH5\_Ant1\_Low\_Hop\_2402



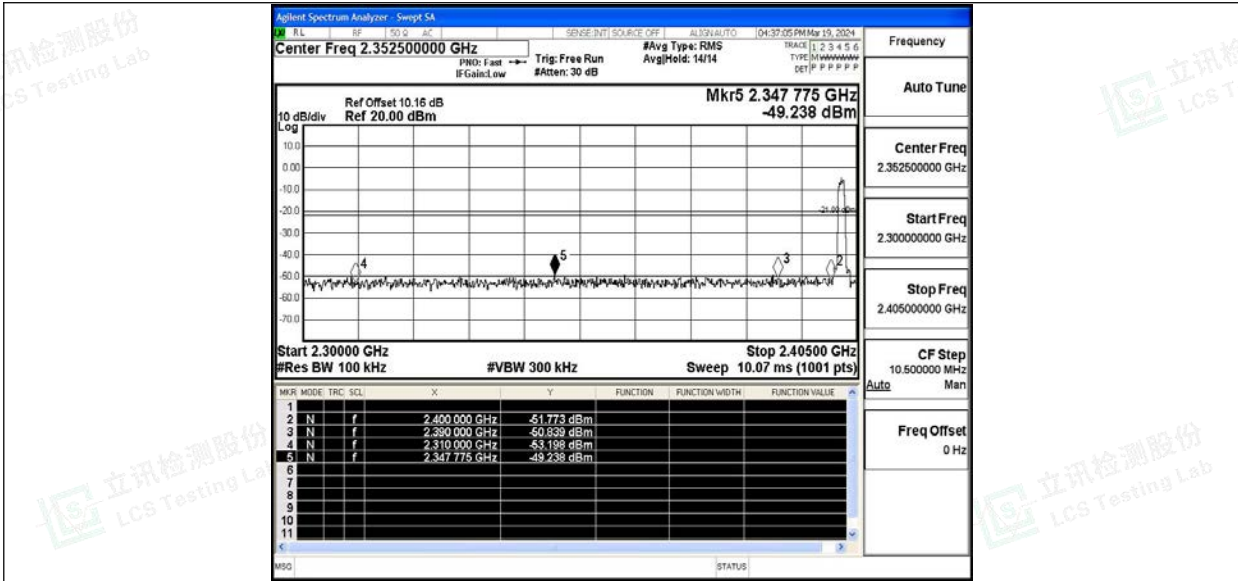


DH5\_Ant1\_High\_Hop\_2480

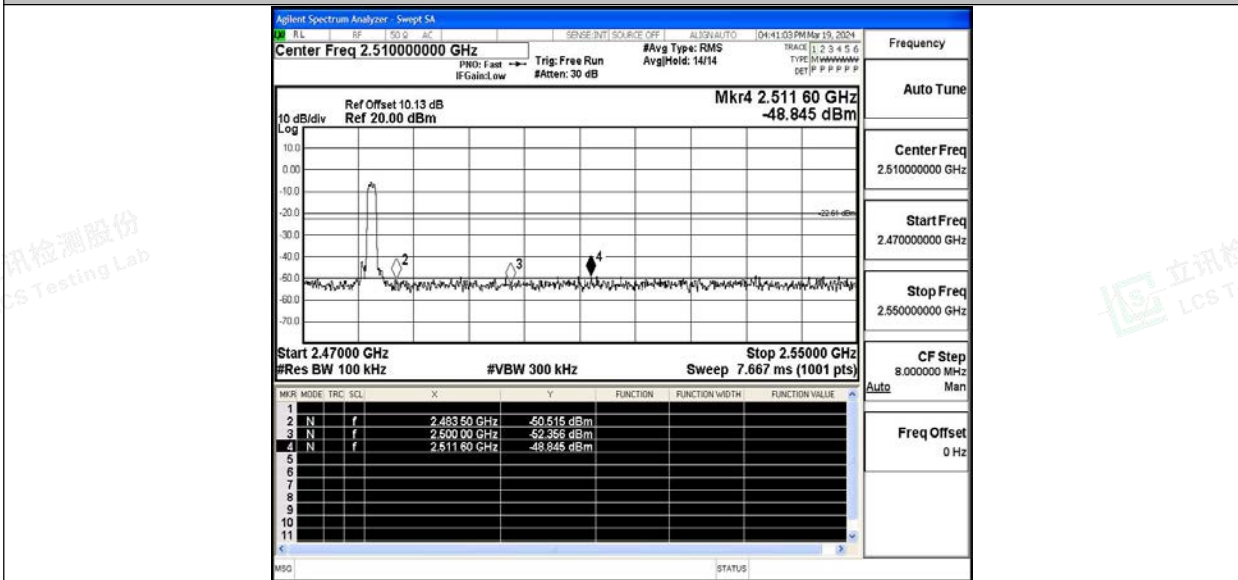


2DH5\_Ant1\_Low\_2402





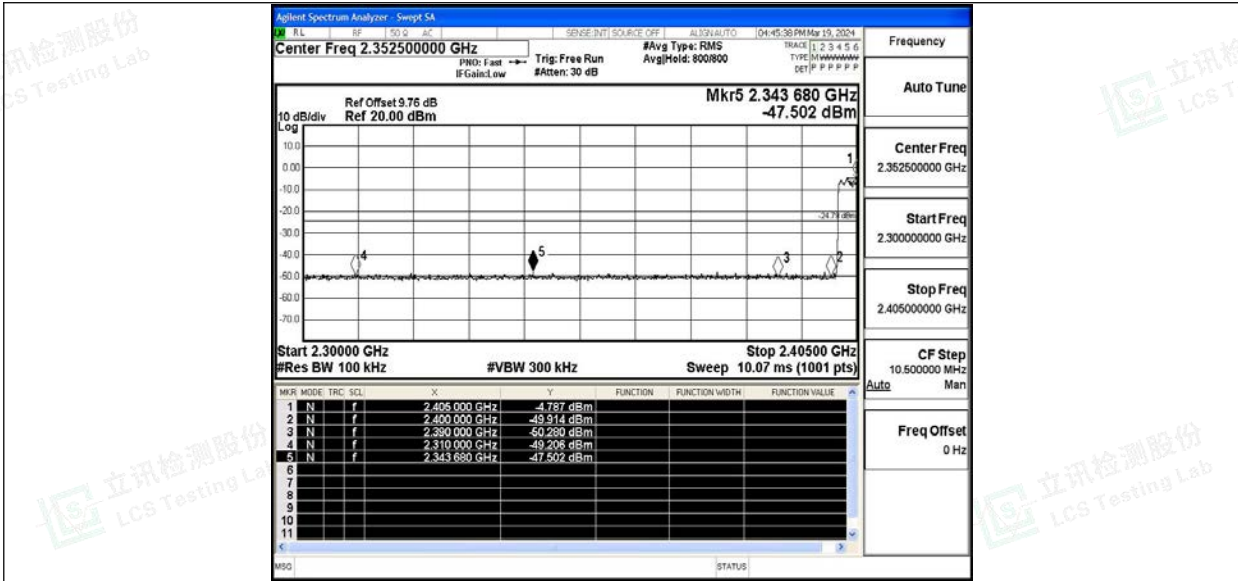
2DH5\_Ant1\_High\_2480



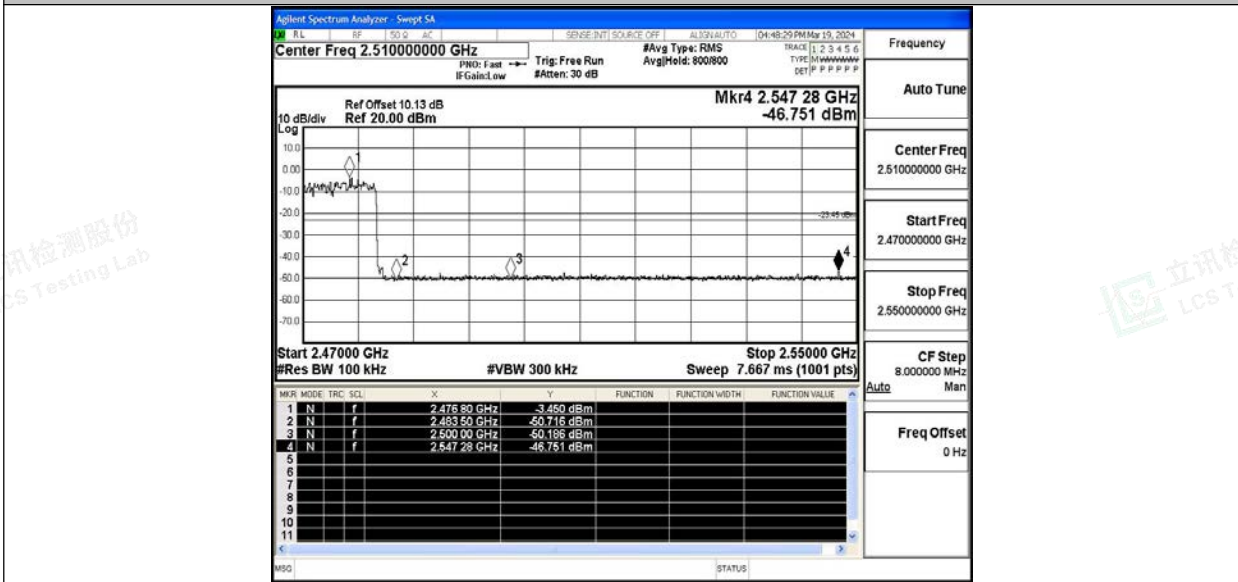
2DH5\_Ant1\_Low\_Hop\_2402







2DH5\_Ant1\_High\_Hop\_2480







### A.7 Conducted Spurious Emission

#### Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	30~1000	0.04	-59.59	≤-19.96	PASS
			1000~26500	0.04	-47.04	≤-19.96	PASS
		2441	30~1000	-0.12	-59.91	≤-20.12	PASS
			1000~26500	-0.12	-47.44	≤-20.12	PASS
		2480	30~1000	-1.54	-59.72	≤-21.54	PASS
			1000~26500	-1.54	-46.66	≤-21.54	PASS
2DH5	Ant1	2402	30~1000	-1.80	-59.97	≤-21.8	PASS
			1000~26500	-1.80	-46.84	≤-21.8	PASS
		2441	30~1000	-2.02	-60.19	≤-22.02	PASS
			1000~26500	-2.02	-47.05	≤-22.02	PASS
		2480	30~1000	-2.61	-59.82	≤-22.61	PASS
			1000~26500	-2.61	-47.05	≤-22.61	PASS

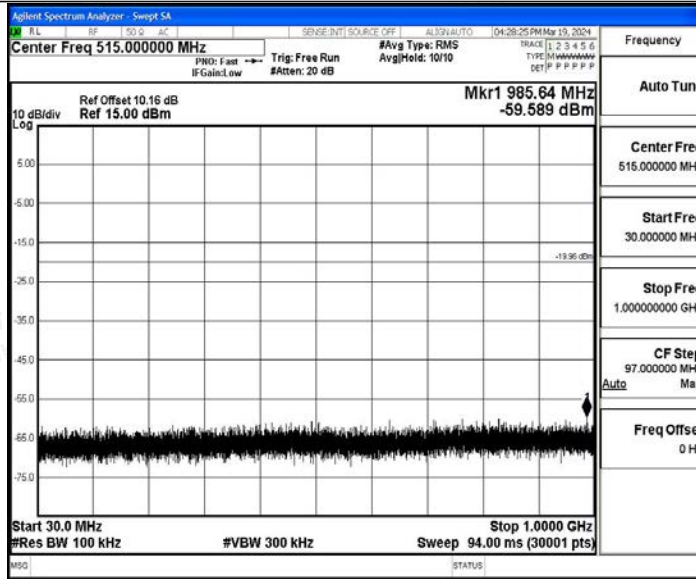


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 Scan code to check authenticity

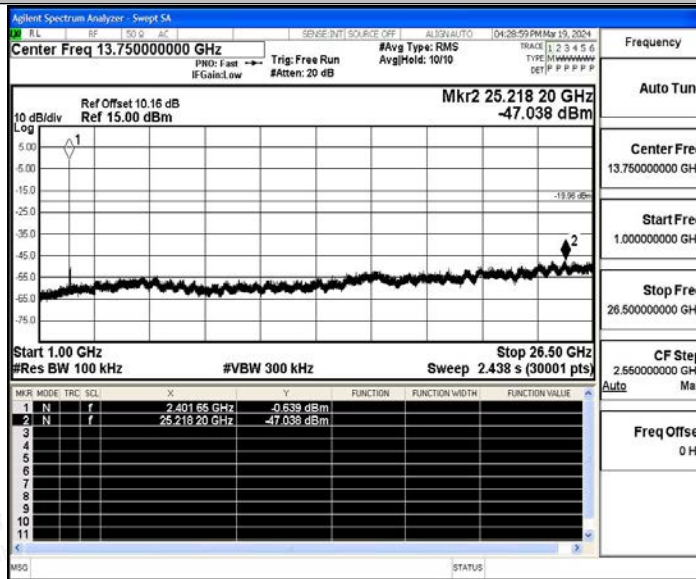


### Test Graphs

DH5\_Ant1\_2402\_30~1000

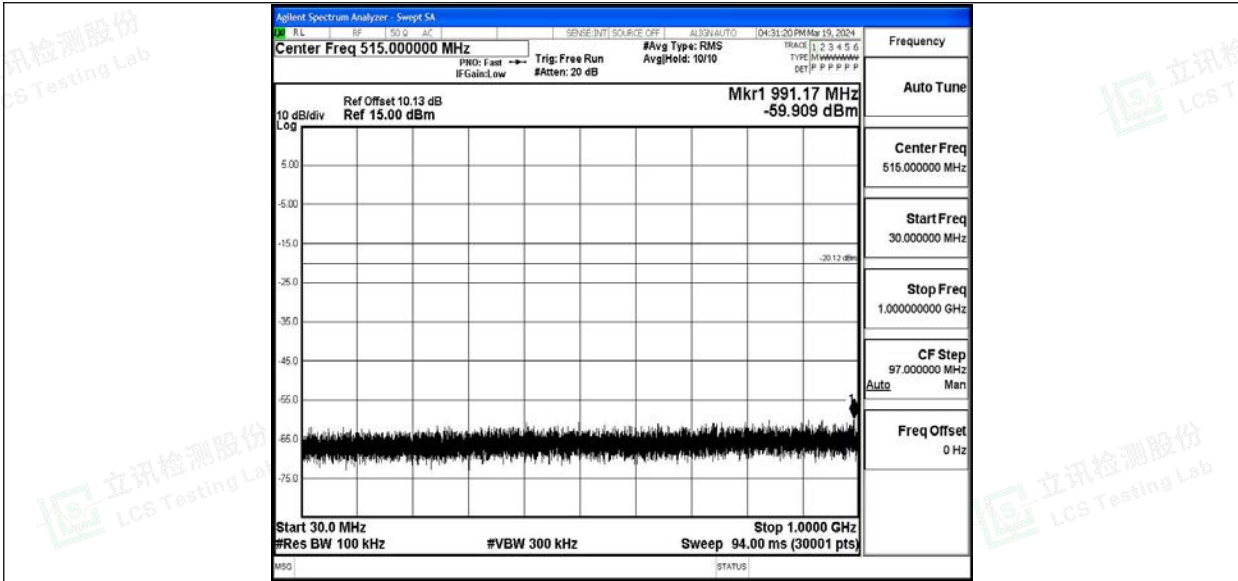


DH5\_Ant1\_2402\_1000~26500

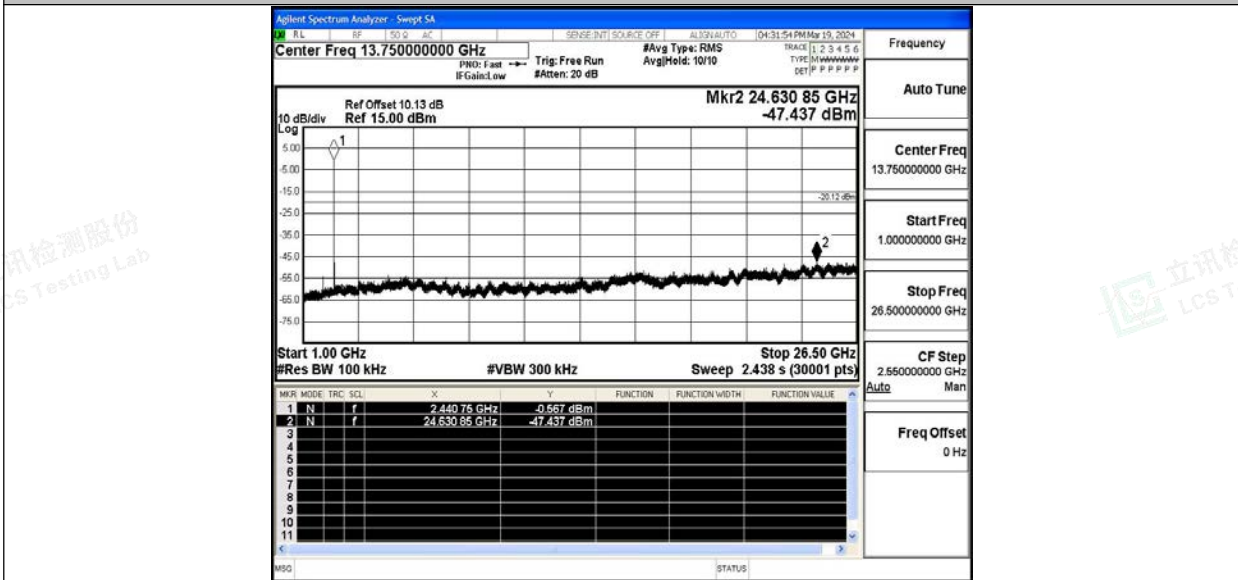


DH5\_Ant1\_2441\_30~1000



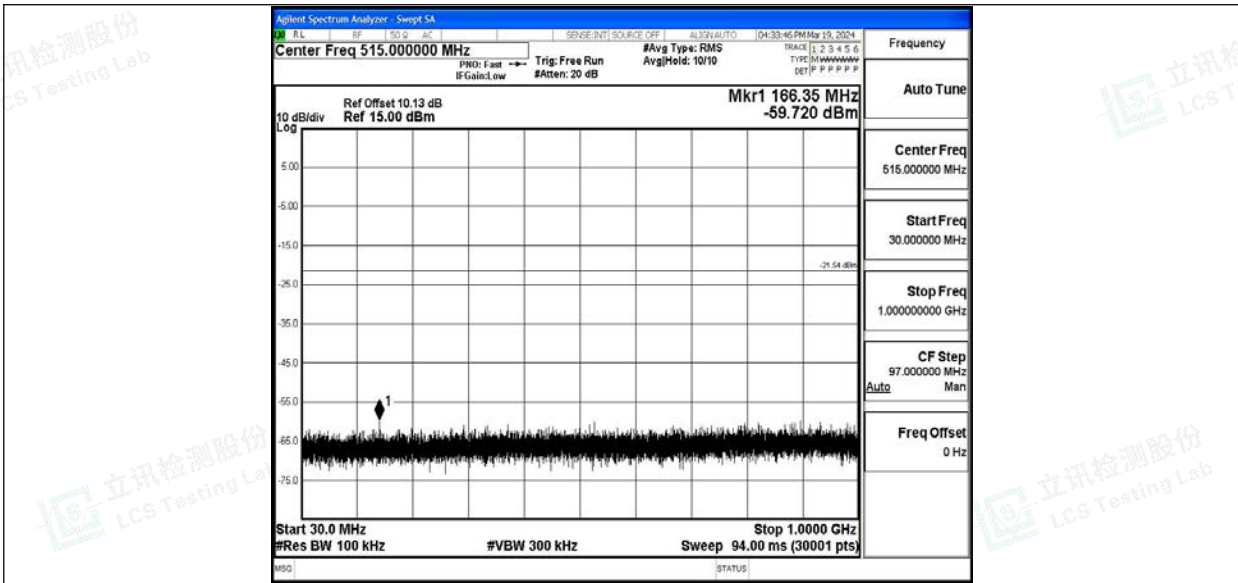


DH5\_Ant1\_2441\_1000~26500

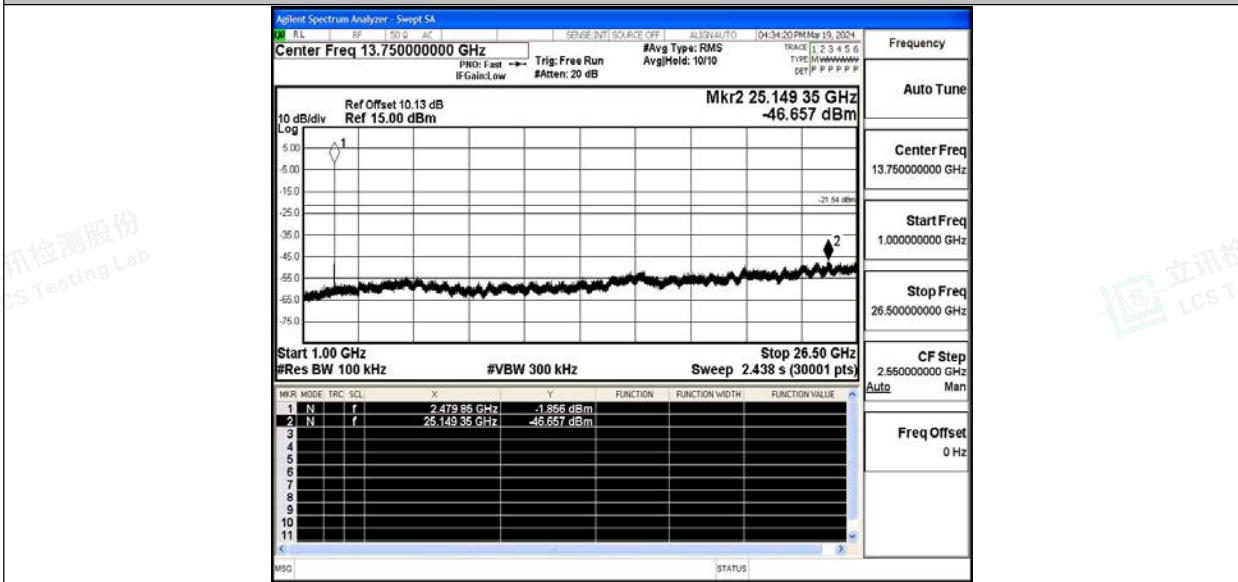


DH5\_Ant1\_2480\_30~1000



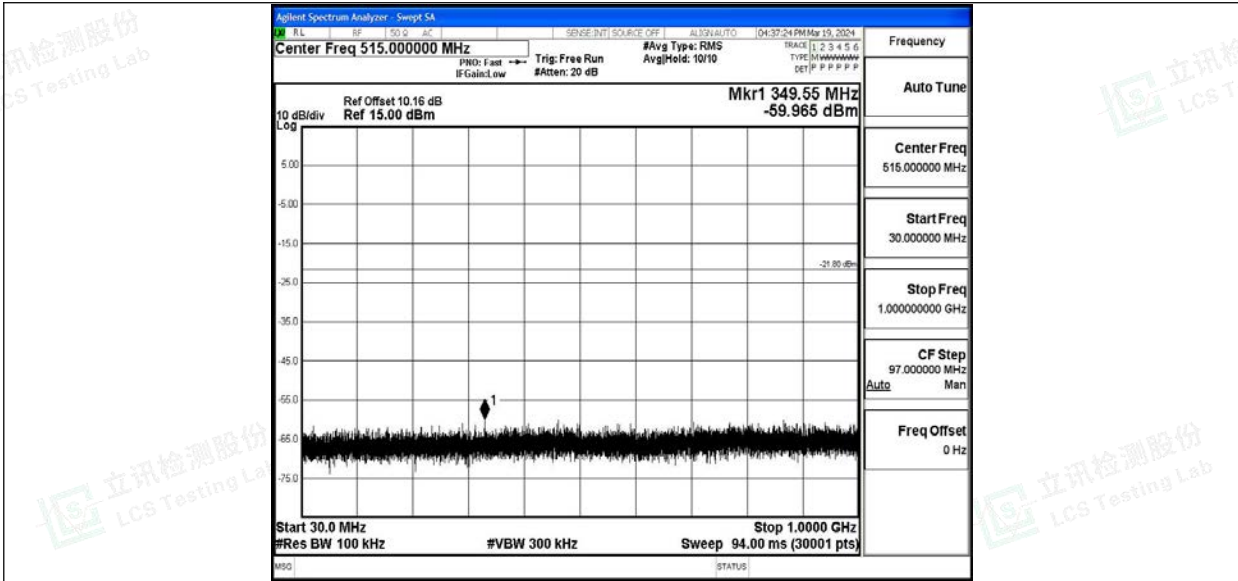


DH5\_Ant1\_2480\_1000~26500

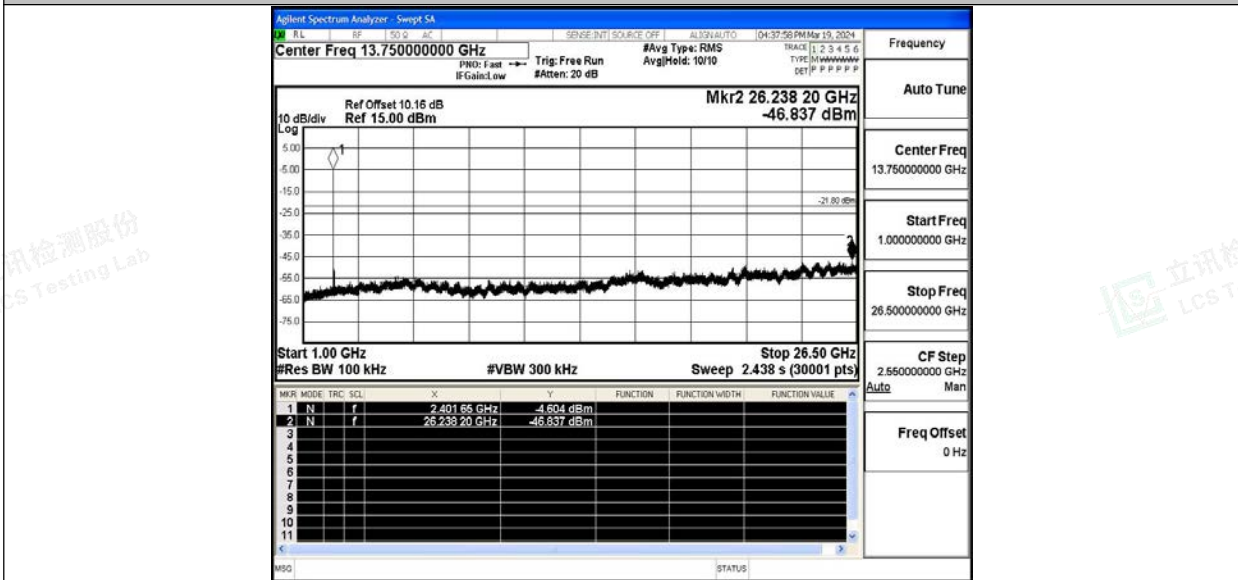


2DH5\_Ant1\_2402\_30~1000





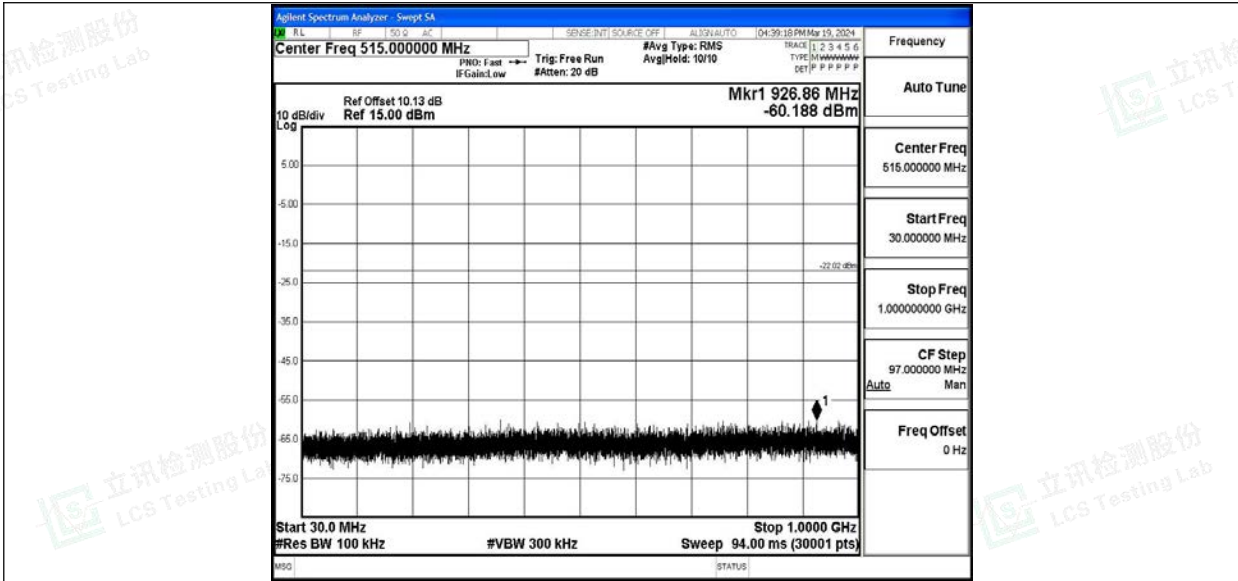
2DH5\_Ant1\_2402\_1000~26500



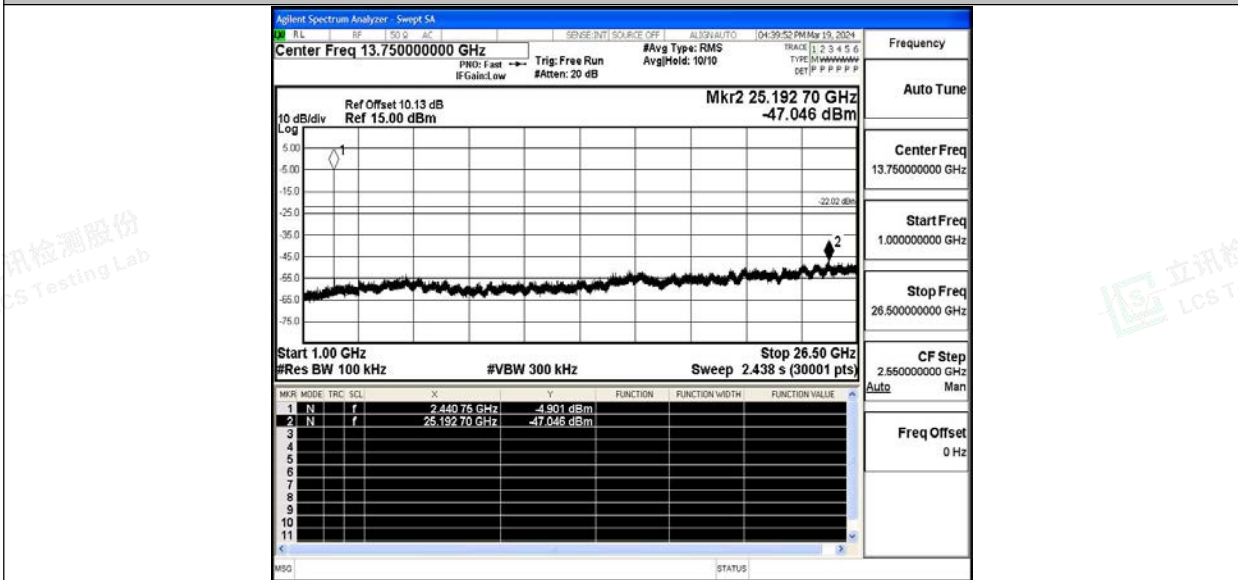
2DH5\_Ant1\_2441\_30~1000







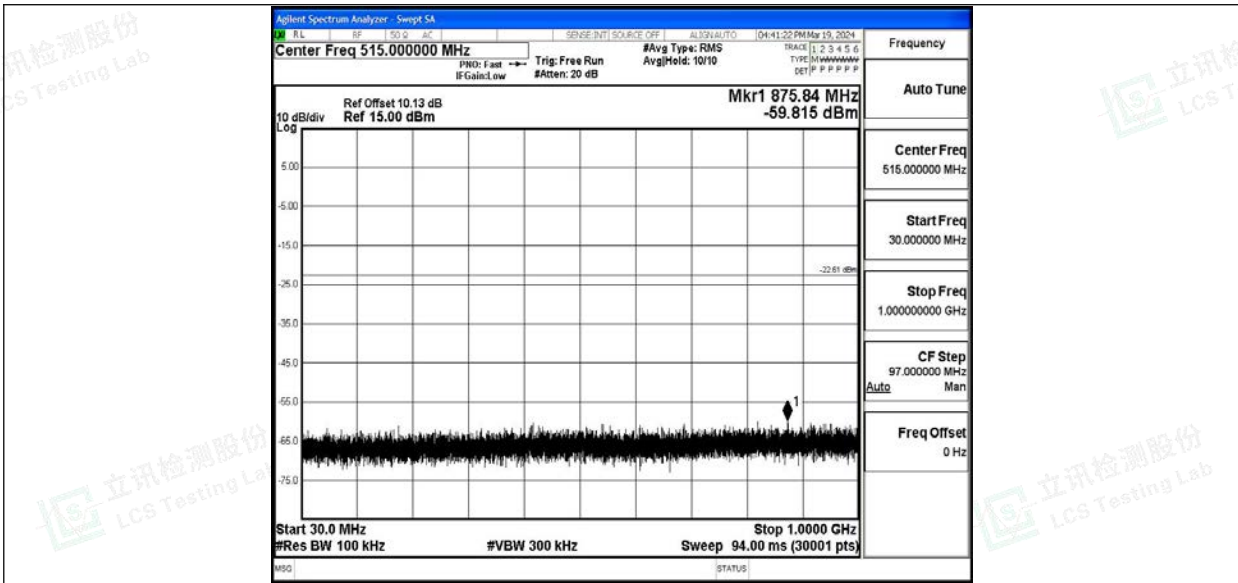
2DH5\_Ant1\_2441\_1000~26500



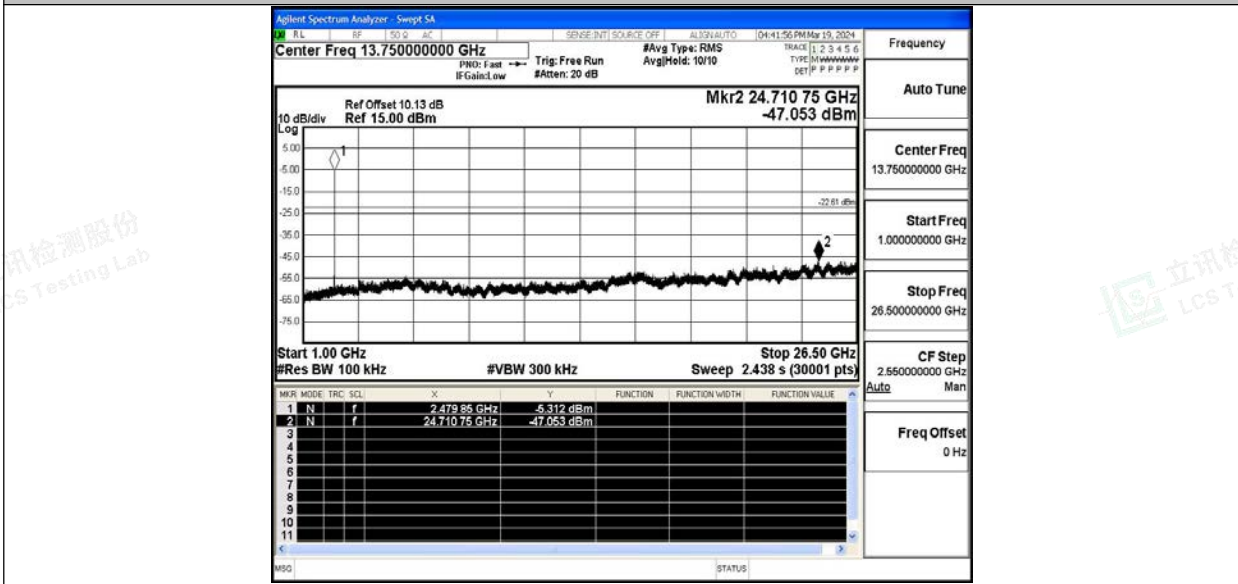
2DH5\_Ant1\_2480\_30~1000







2DH5\_Ant1\_2480\_1000~26500





## Reference Level

### Test Result

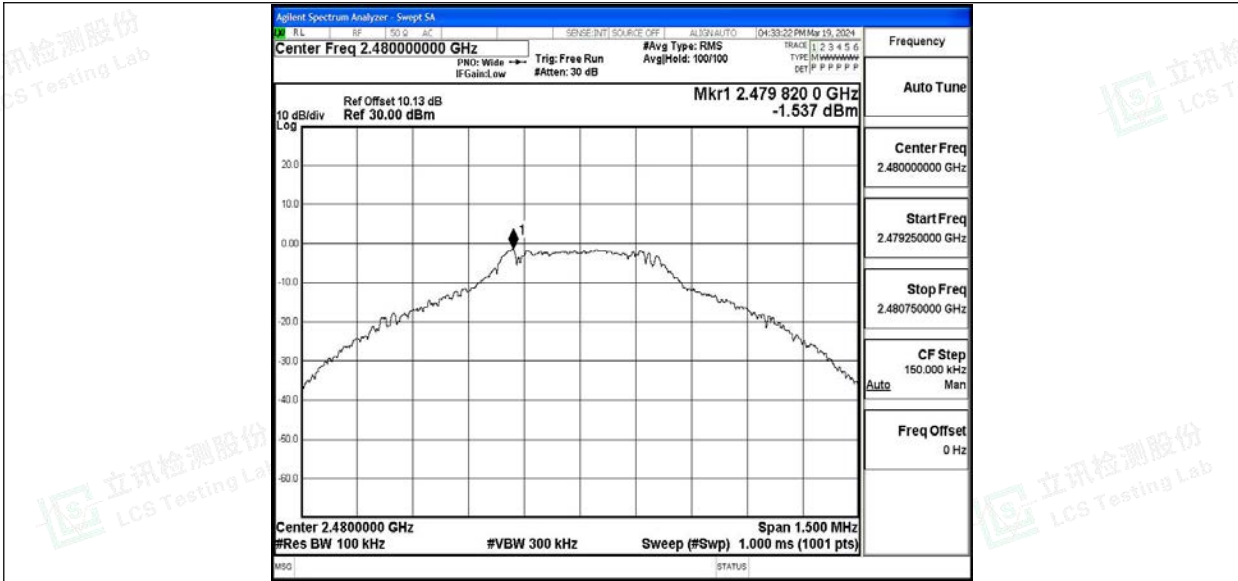
TestMode	Antenna	ChName	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	2401.83	0.04	---	PASS
		2441	2440.83	-0.12	---	PASS
		2480	2479.82	-1.54	---	PASS
2DH5	Ant1	2402	2401.99	-1.80	---	PASS
		2441	2441.00	-2.02	---	PASS
		2480	2480.00	-2.61	---	PASS



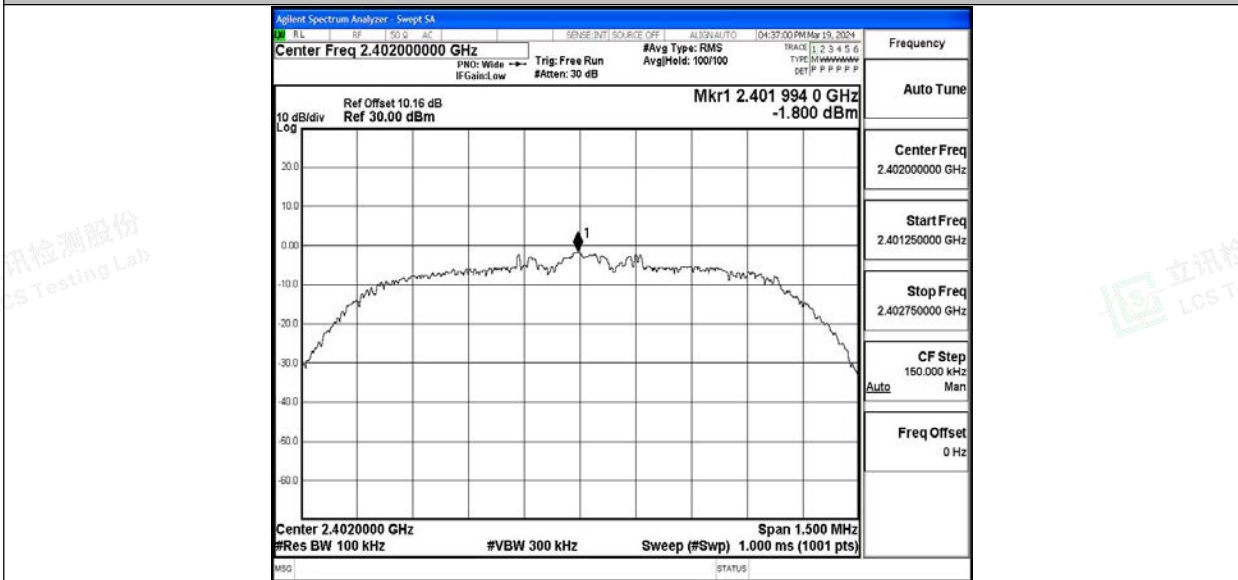


### Test Graphs



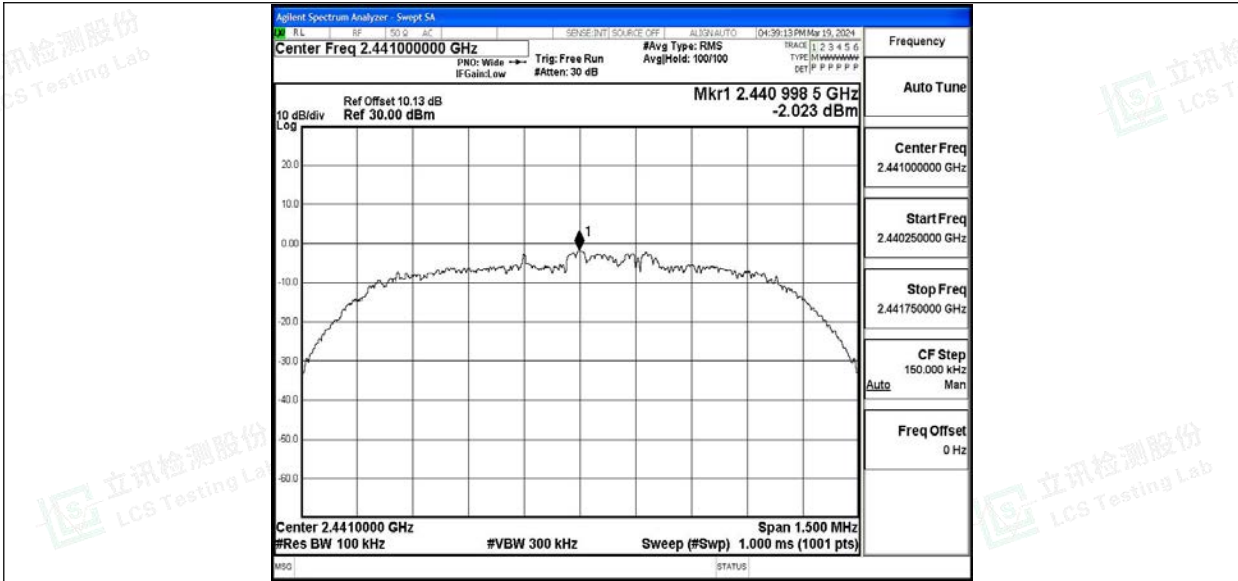


2DH5\_Ant1\_2402

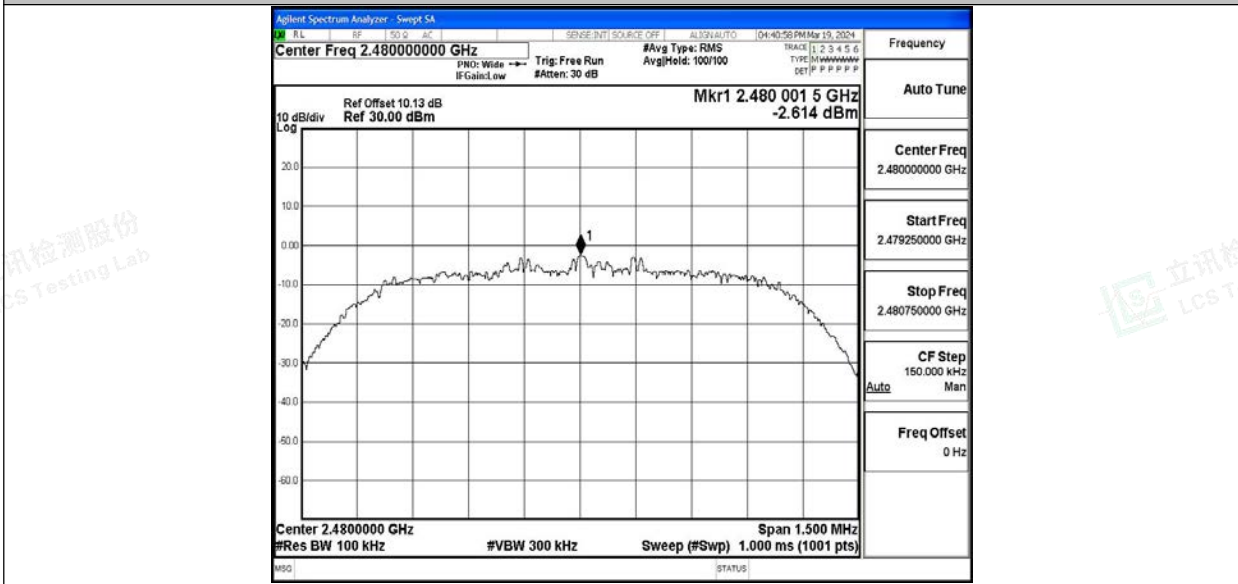


2DH5\_Ant1\_2441





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	2.91	3.75	77.60	1.10	0.34
		2441	2.91	3.75	77.60	1.10	0.34
		2480	2.91	3.75	77.60	1.10	0.34
2DH5	Ant1	2402	2.90	3.75	77.33	1.12	0.34
		2441	2.90	3.75	77.33	1.12	0.34
		2480	2.90	3.75	77.33	1.12	0.34



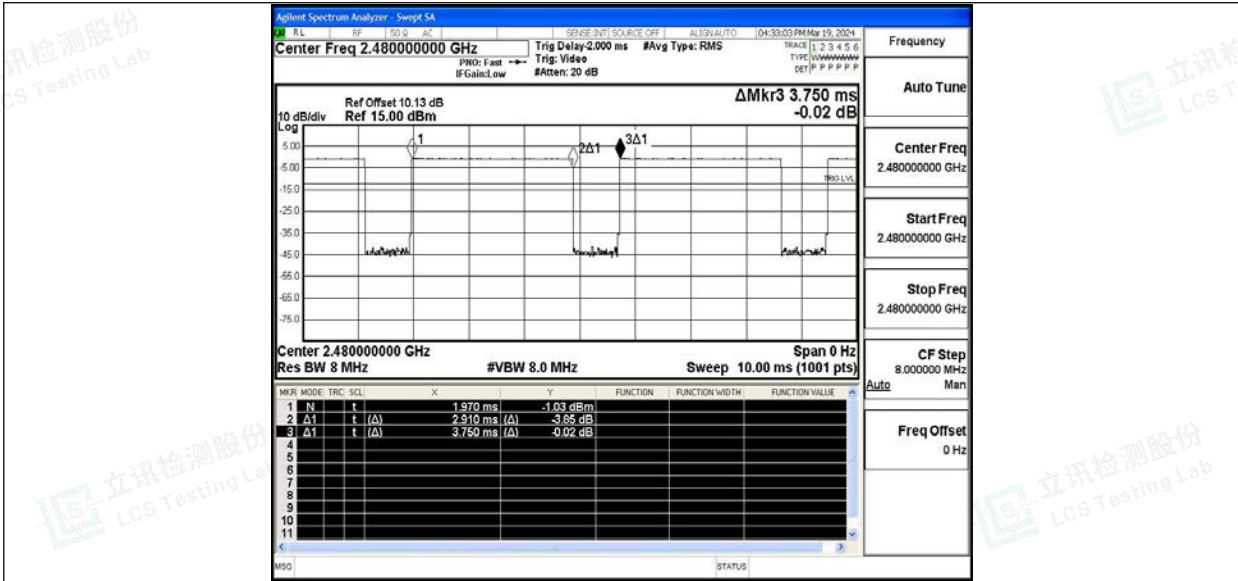
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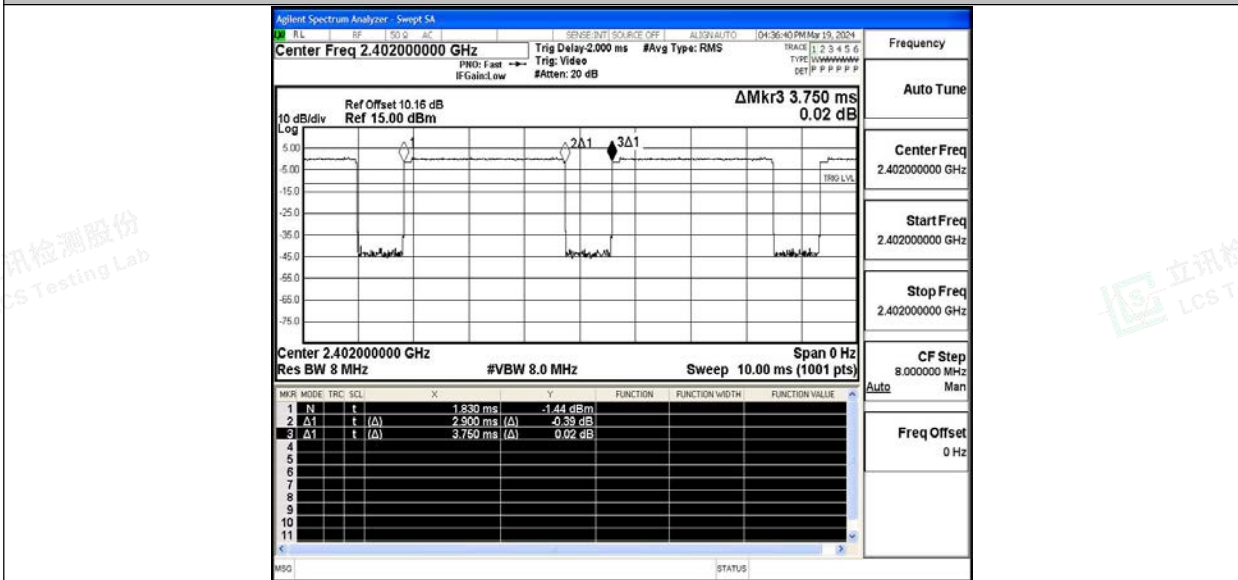


### Test Graphs



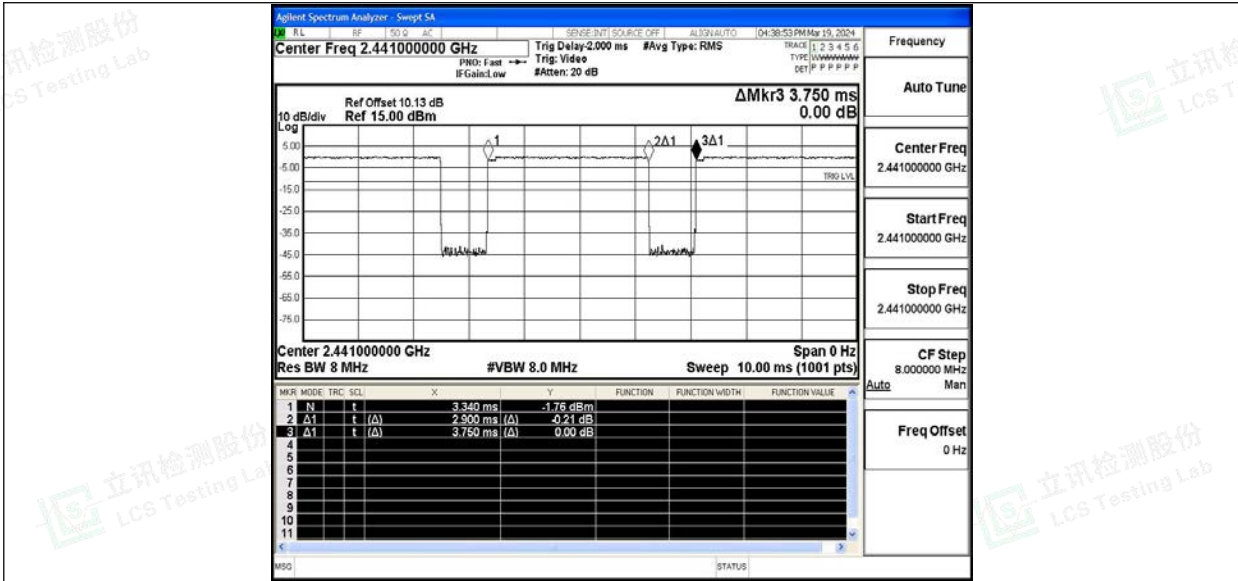


2DH5\_Ant1\_2402

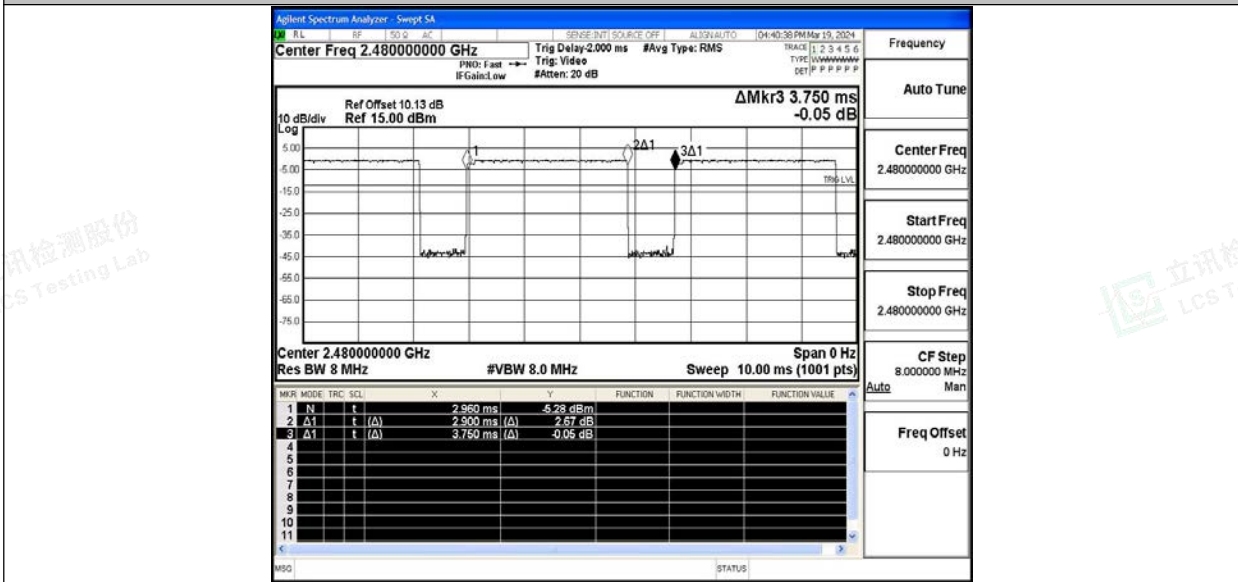


2DH5\_Ant1\_2441





2DH5\_Ant1\_2480





### A.9 Emissions in Restricted Bands

#### Test Result

TestMode	Antenna	ChName	Frequency[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.04	≤-41.20	47.16	≤54	PASS
				AV	2371.400	-45.82	≤-41.20	49.38	≤54	PASS
				AV	2390.000	-46.96	≤-41.20	48.24	≤54	PASS
				Peak	2310.000	-40.03	≤-21.20	55.17	≤74	PASS
				Peak	2377.805	-36.6	≤-21.20	58.60	≤74	PASS
				Peak	2390.000	-39.79	≤-21.20	55.41	≤74	PASS
		High	2480	AV	2483.500	-47.01	≤-41.20	48.19	≤54	PASS
				AV	2491.920	-46.05	≤-41.20	49.15	≤54	PASS
				AV	2500.000	-46.33	≤-41.20	48.87	≤54	PASS
				Peak	2483.500	-40.44	≤-21.20	54.76	≤74	PASS
				Peak	2496.080	-36.03	≤-21.20	59.17	≤74	PASS
				Peak	2500.000	-39.65	≤-21.20	55.55	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-39.67	≤-21.20	55.53	≤74	PASS
				Peak	2337.065	-36.55	≤-21.20	58.65	≤74	PASS
				Peak	2390.000	-41.02	≤-21.20	54.18	≤74	PASS
		High	Hop_2480	Peak	2483.500	-40.22	≤-21.20	54.98	≤74	PASS
				Peak	2490.960	-37.22	≤-21.20	57.98	≤74	PASS
				Peak	2500.000	-40.21	≤-21.20	54.99	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-47.44	≤-41.20	47.76	≤54	PASS
				AV	2382.215	-46.09	≤-41.20	49.11	≤54	PASS
				AV	2390.000	-46.17	≤-41.20	49.03	≤54	PASS
				Peak	2310.000	-40.04	≤-21.20	55.16	≤74	PASS
				Peak	2387.675	-36.67	≤-21.20	58.53	≤74	PASS
				Peak	2390.000	-37.66	≤-21.20	57.54	≤74	PASS
		High	2480	AV	2483.500	-46.61	≤-41.20	48.59	≤54	PASS
				AV	2492.800	-45.65	≤-41.20	49.55	≤54	PASS
				AV	2500.000	-46.55	≤-41.20	48.65	≤54	PASS
				Peak	2483.500	-38.05	≤-21.20	57.15	≤74	PASS
				Peak	2493.360	-37.23	≤-21.20	57.97	≤74	PASS
				Peak	2500.000	-39.28	≤-21.20	55.92	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.05	≤-21.20	55.15	≤74	PASS
				Peak	2373.500	-37.67	≤-21.20	57.53	≤74	PASS
				Peak	2390.000	-40.16	≤-21.20	55.04	≤74	PASS
		High	Hop_2480	Peak	2483.500	-40.3	≤-21.20	54.90	≤74	PASS
				Peak	2491.280	-37.15	≤-21.20	58.05	≤74	PASS
				Peak	2500.000	-38.16	≤-21.20	57.04	≤74	PASS



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 Scan code to check authenticity



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.

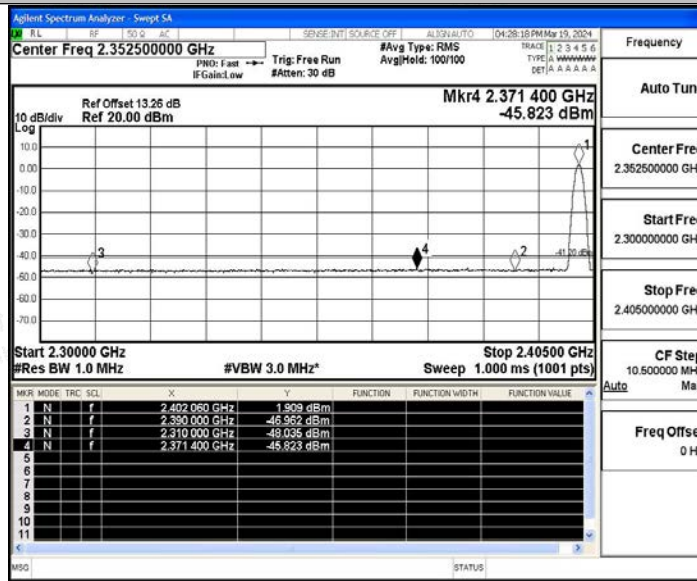




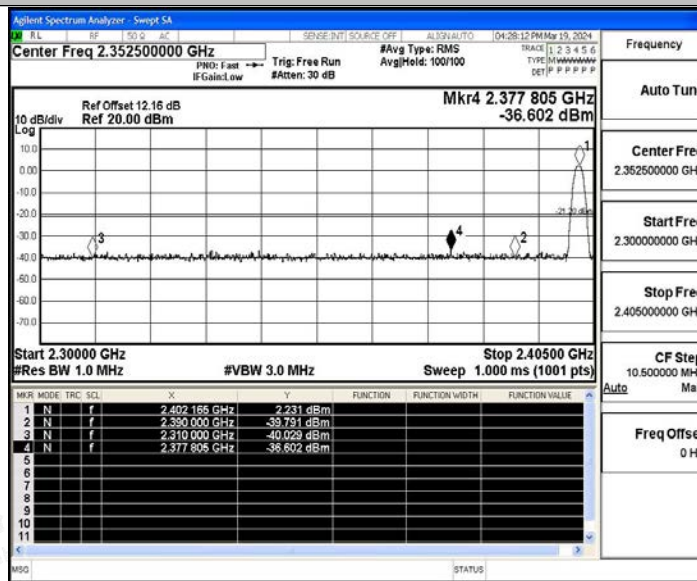


### Test Graphs

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



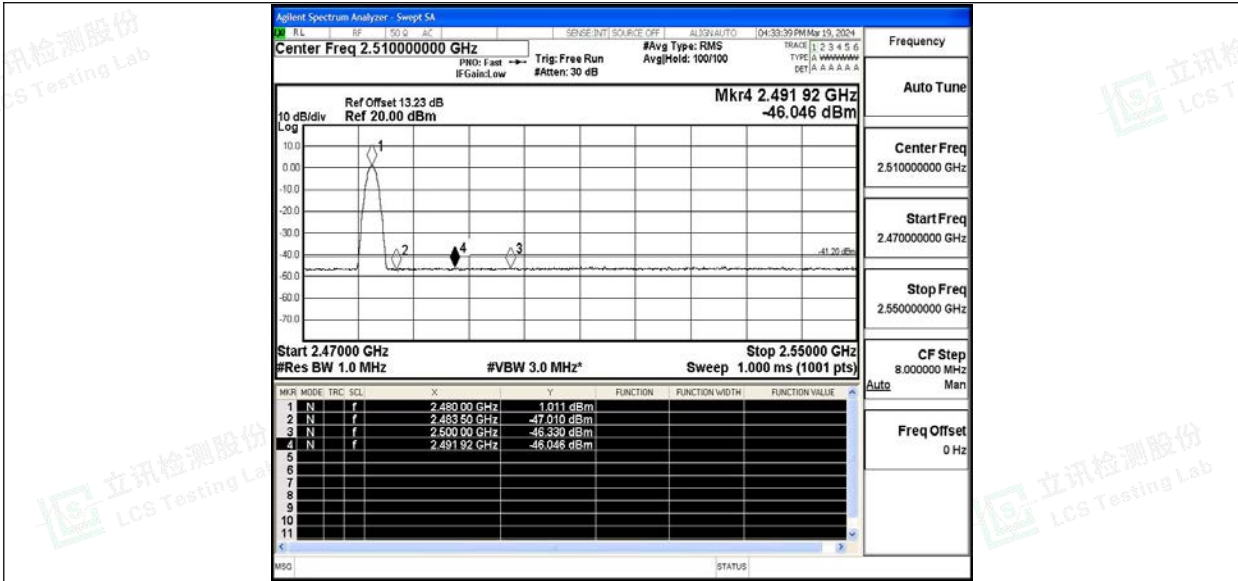
#### DH5\_Ant1\_Low\_2402\_Peak



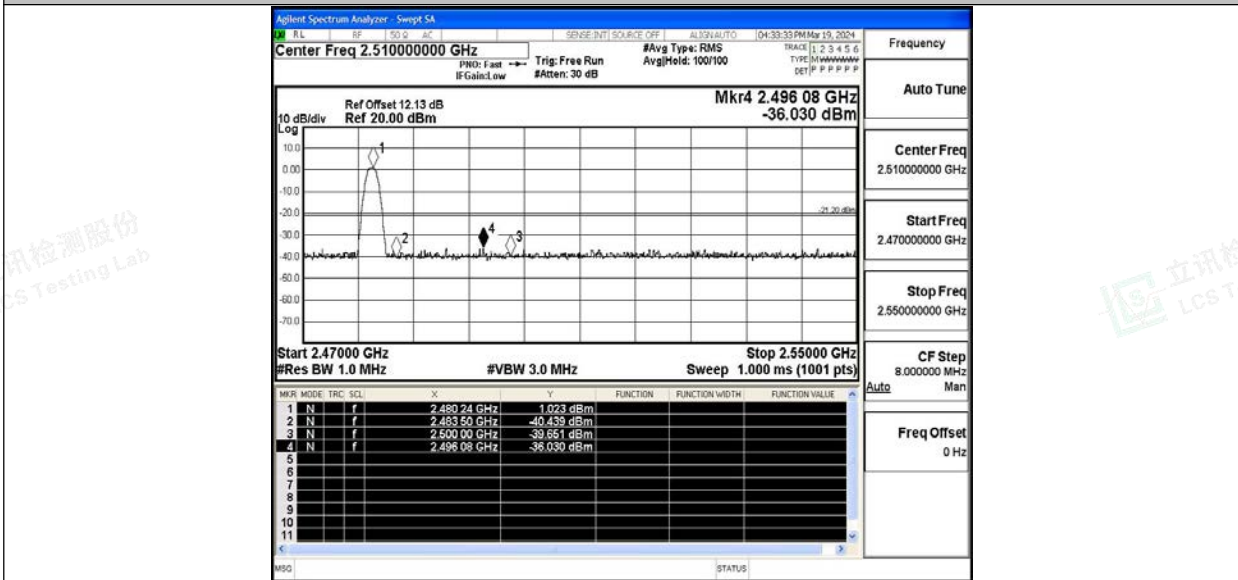
#### DH5\_Ant1\_High\_2480\_AV





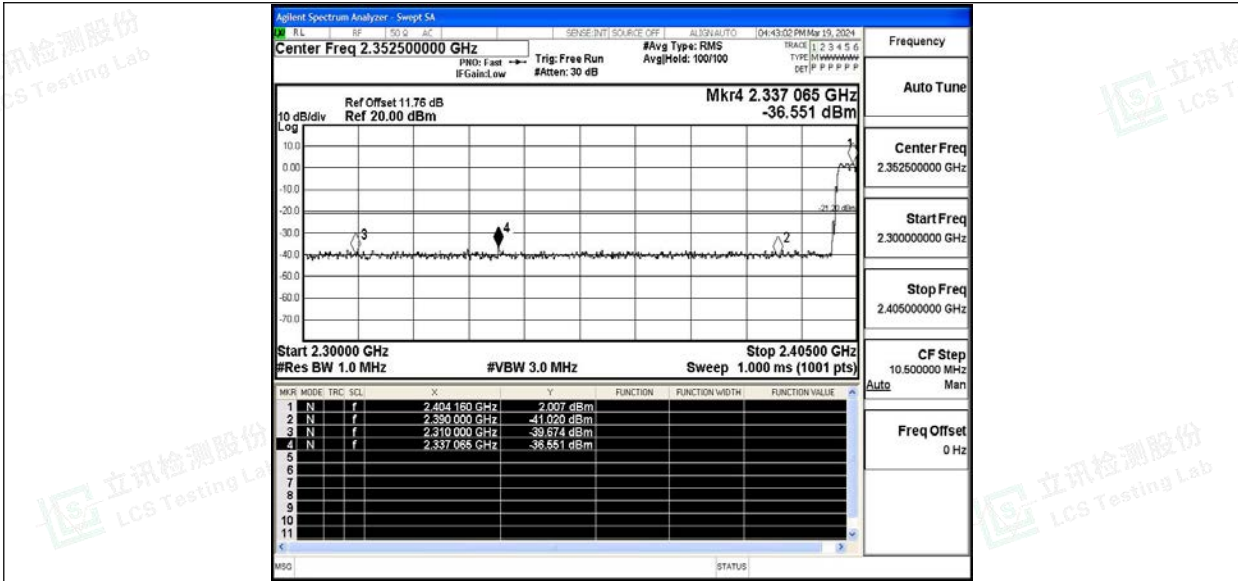


DH5\_Ant1\_High\_2480\_Peak

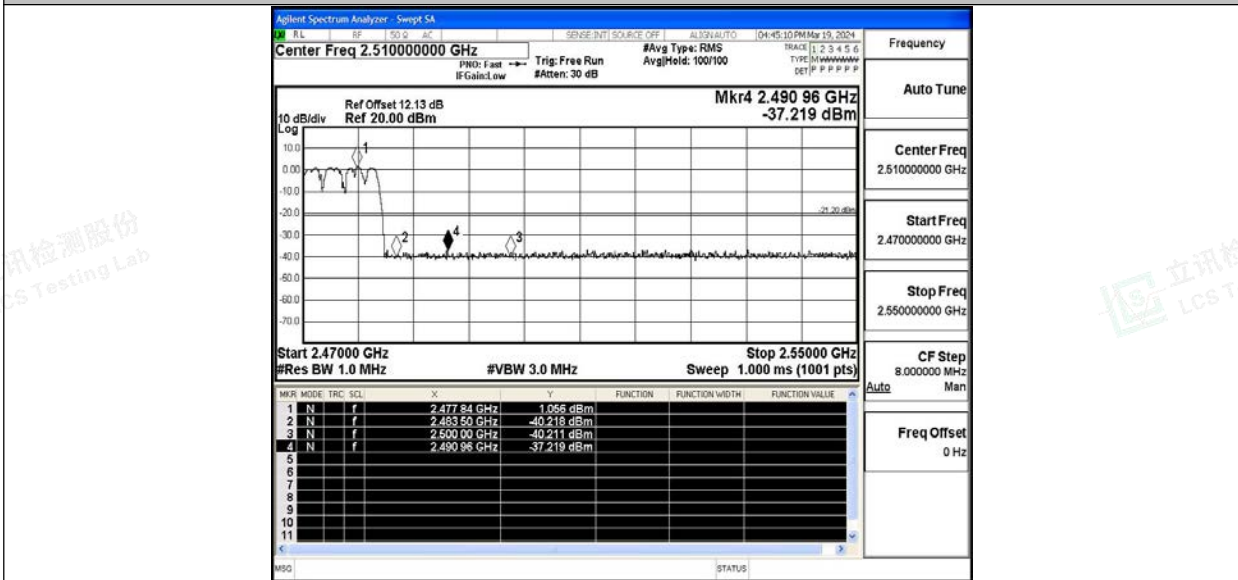


DH5\_Ant1\_Low\_Hop\_2402\_Peak



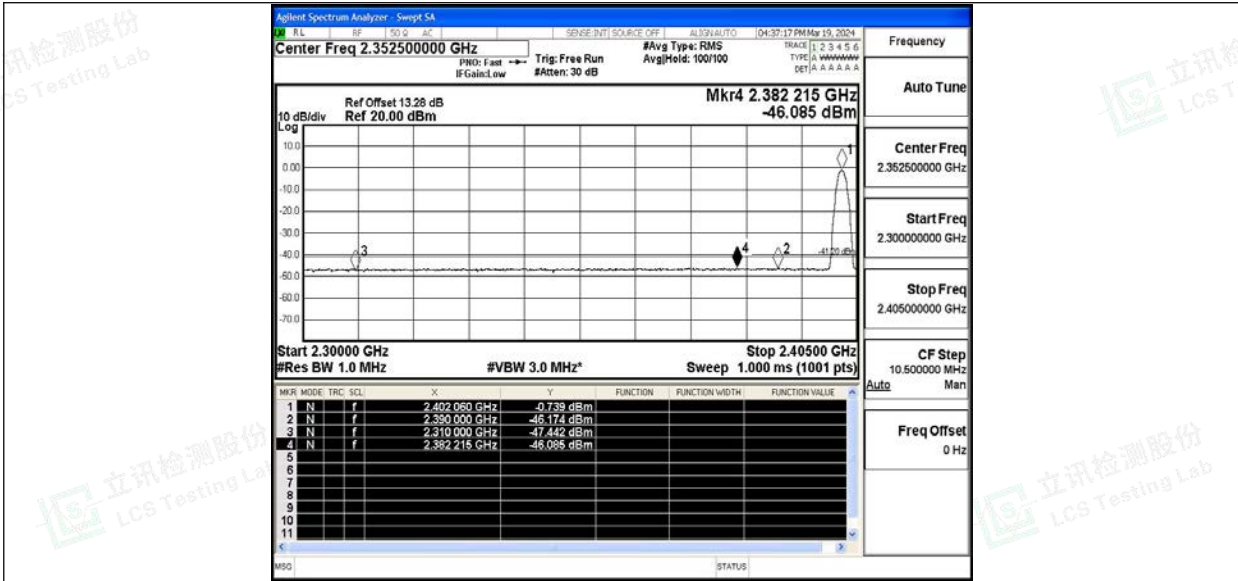


DH5\_Ant1\_High\_Hop\_2480\_Peak

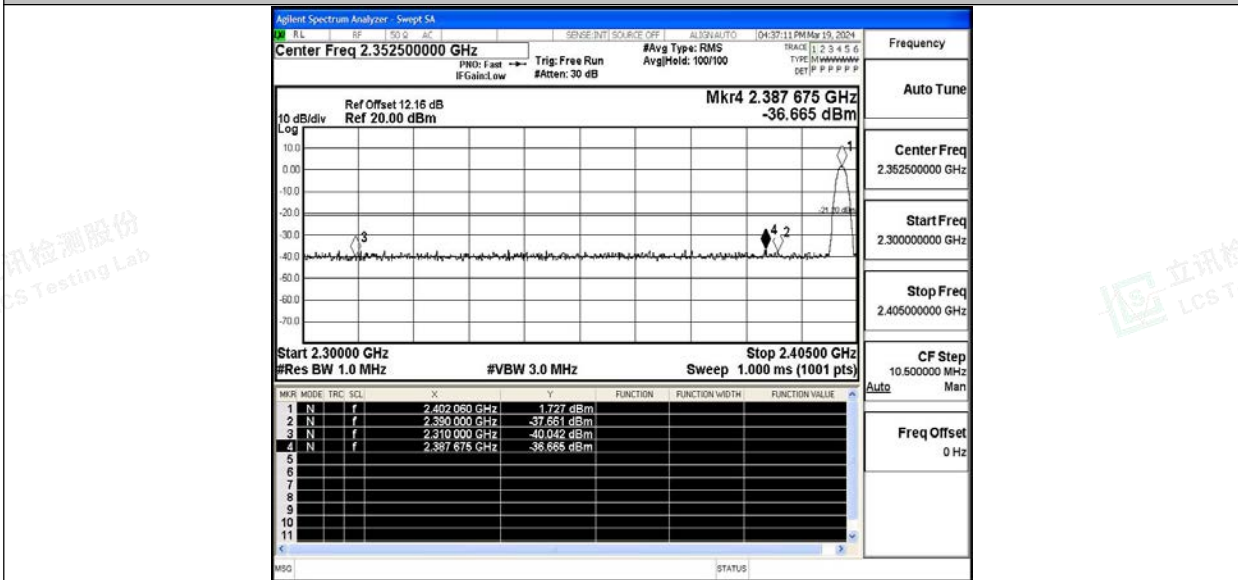


2DH5\_Ant1\_Low\_2402\_AV



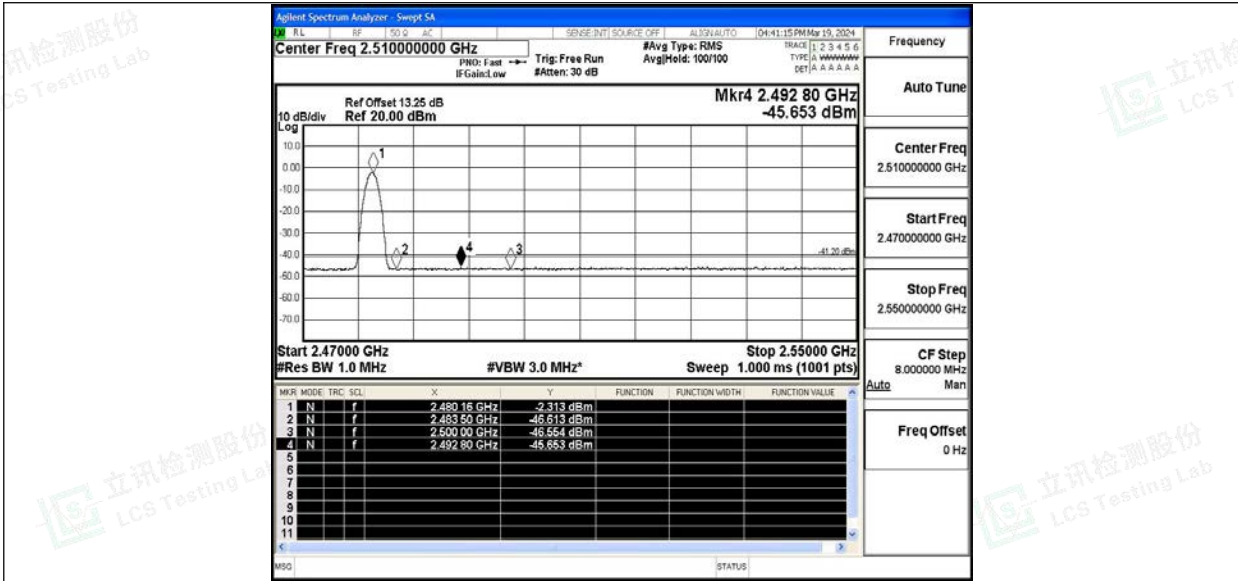


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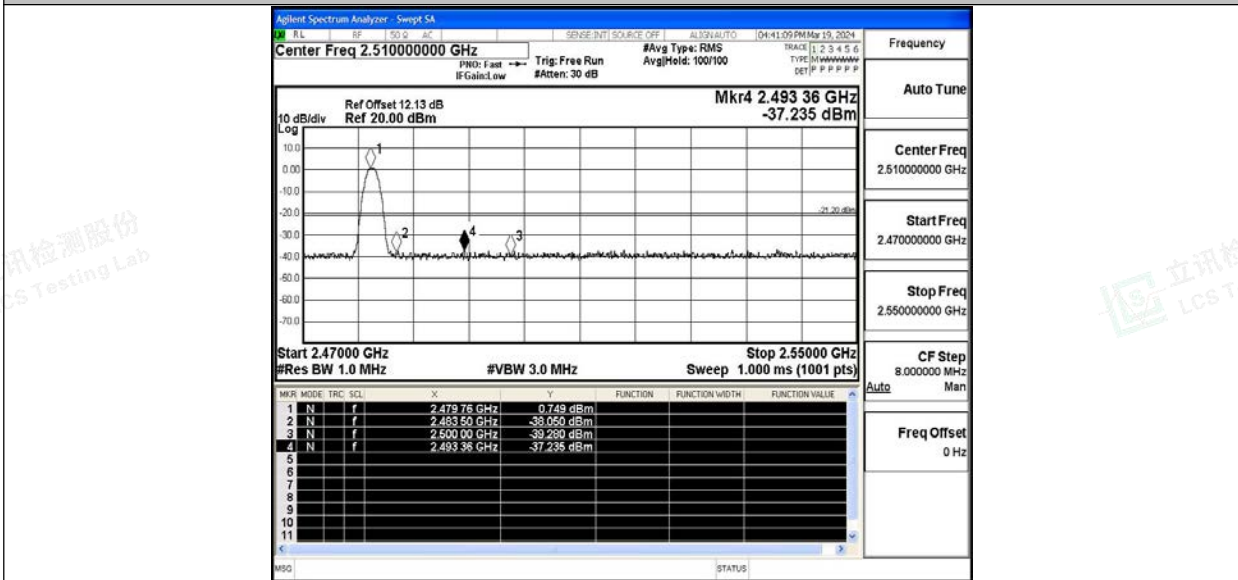


2DH5\_Ant1\_High\_2480\_AV





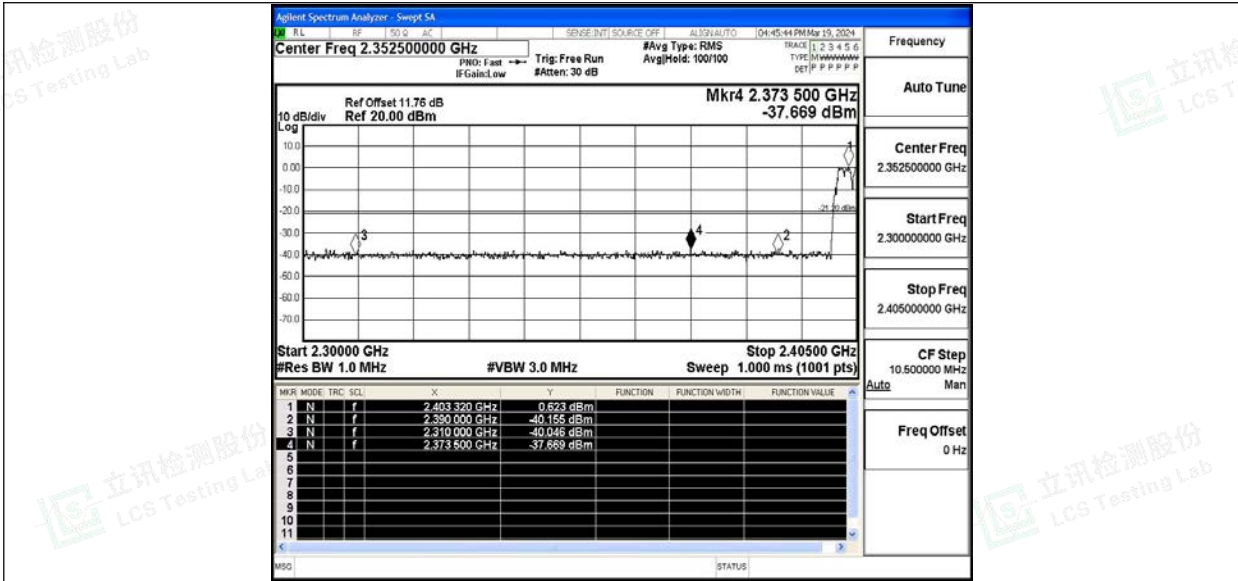
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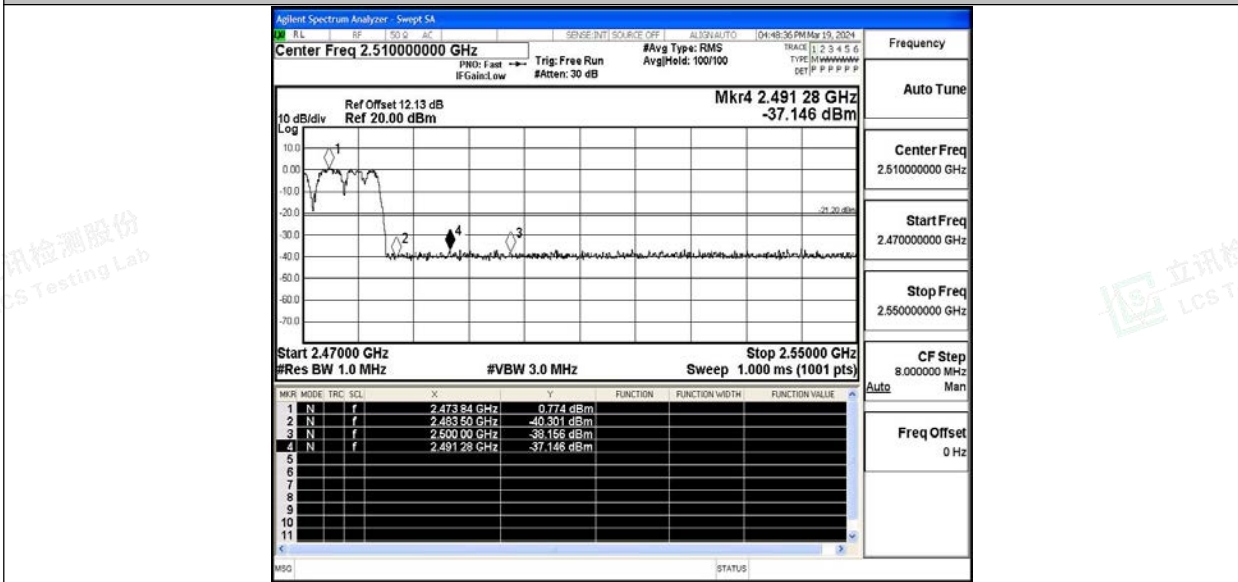
2DH5\_Ant1\_Low\_Hop\_2402\_Peak







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



-----THE END OF TEST REPORT-----

