



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Wireless Speaker

Test Model: BSSK2017

Environmental Conditions

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





A.1 20dB Emission Bandwidth

Test Result

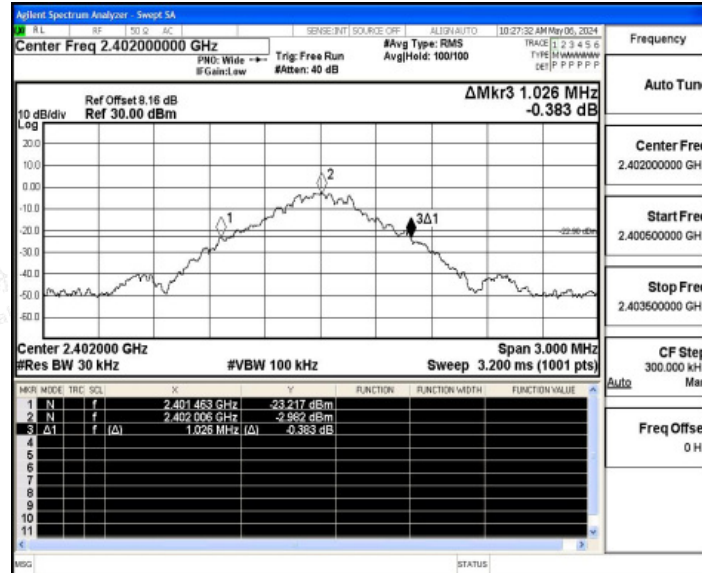
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.026	2401.463	2402.489	---	---
		2441	1.023	2440.466	2441.489	---	---
		2480	1.035	2479.460	2480.495	---	---
2DH5	Ant1	2402	1.284	2401.355	2402.639	---	---
		2441	1.281	2440.367	2441.648	---	---
		2480	1.287	2479.358	2480.645	---	---



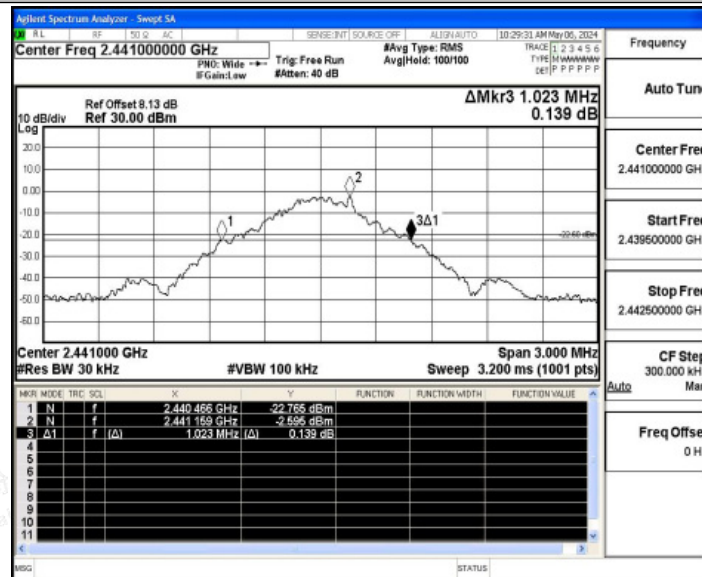


Test Graphs

DH5_Ant1_2402

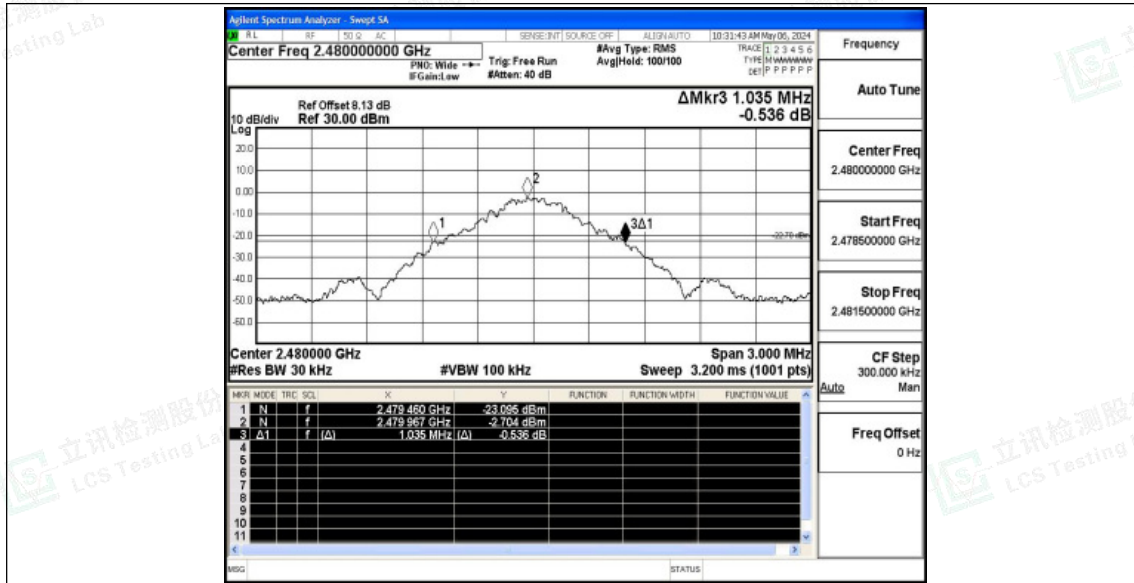


DH5_Ant1_2441

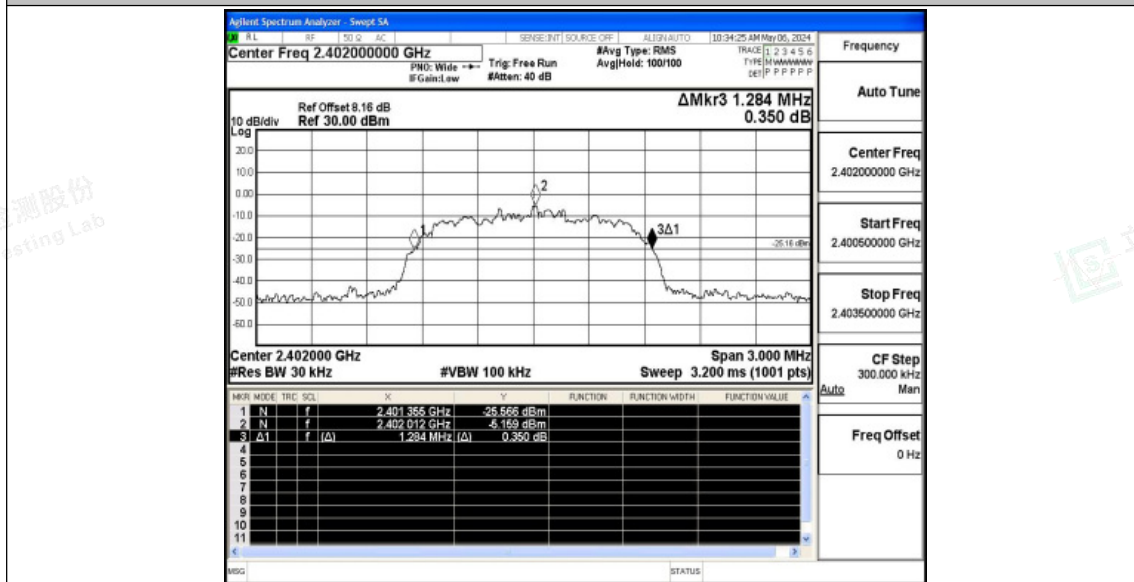


DH5_Ant1_2480





2DH5_Ant1_2402



2DH5_Ant1_2441



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A.2 Maximum conducted output power

Test Result Peak

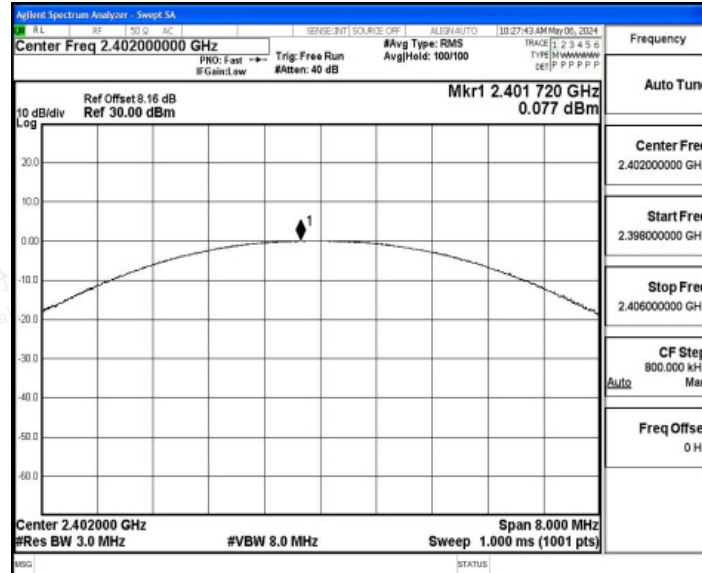
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.08	≤20.97	PASS
		2441	0.28	≤20.97	PASS
		2480	0.43	≤20.97	PASS
2DH5	Ant1	2402	0.04	≤20.97	PASS
		2441	0.12	≤20.97	PASS
		2480	0.18	≤20.97	PASS



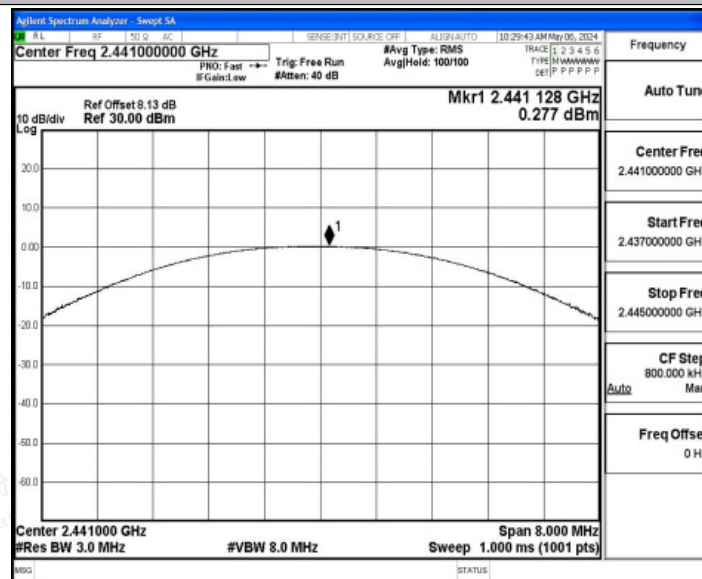


Test Graphs

DH5_Ant1_2402

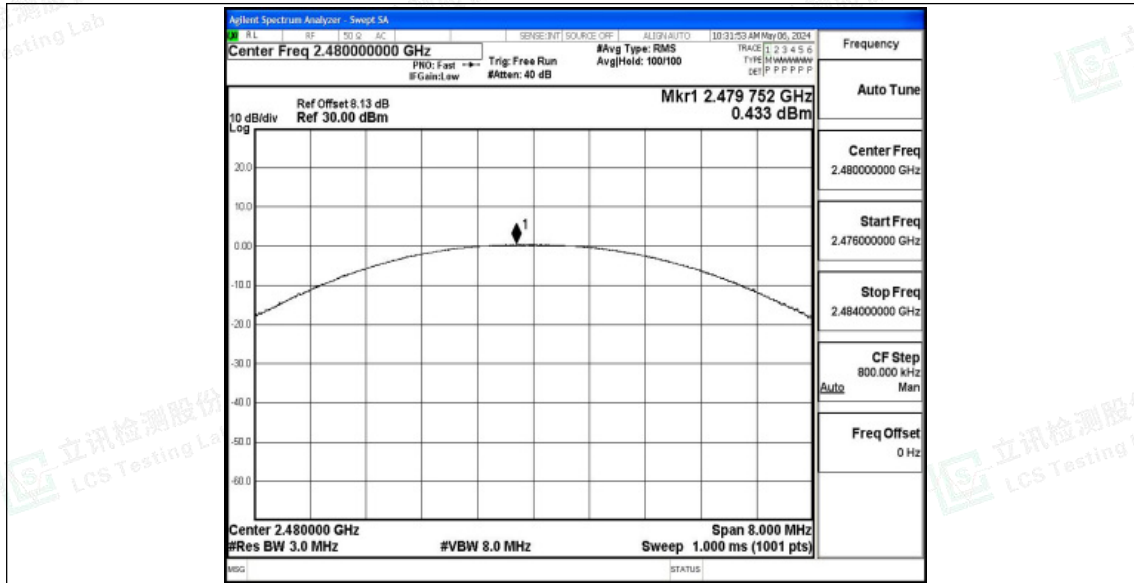


DH5_Ant1_2441

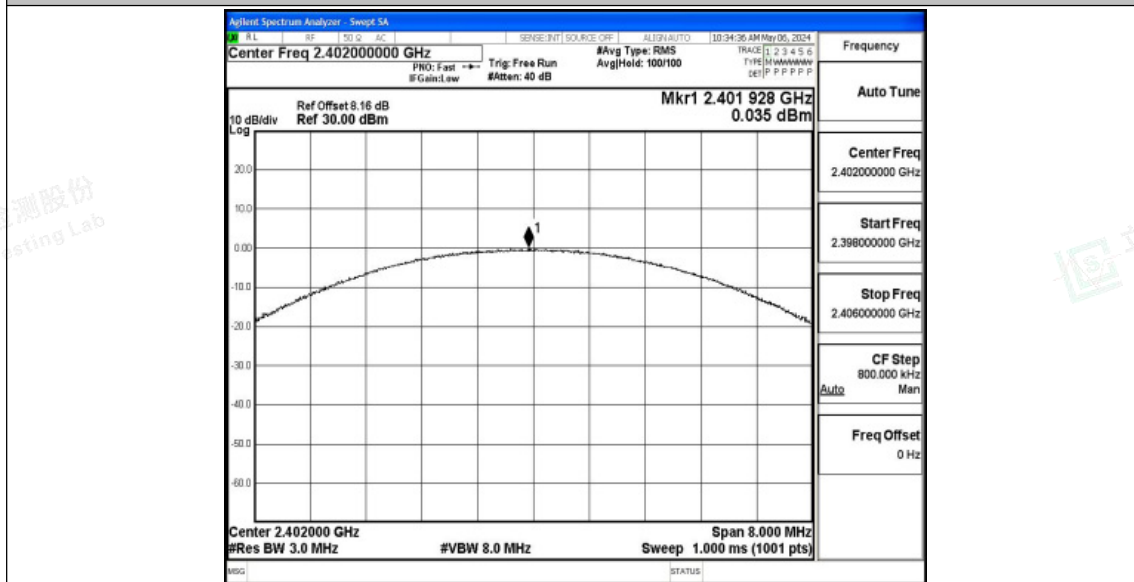


DH5_Ant1_2480



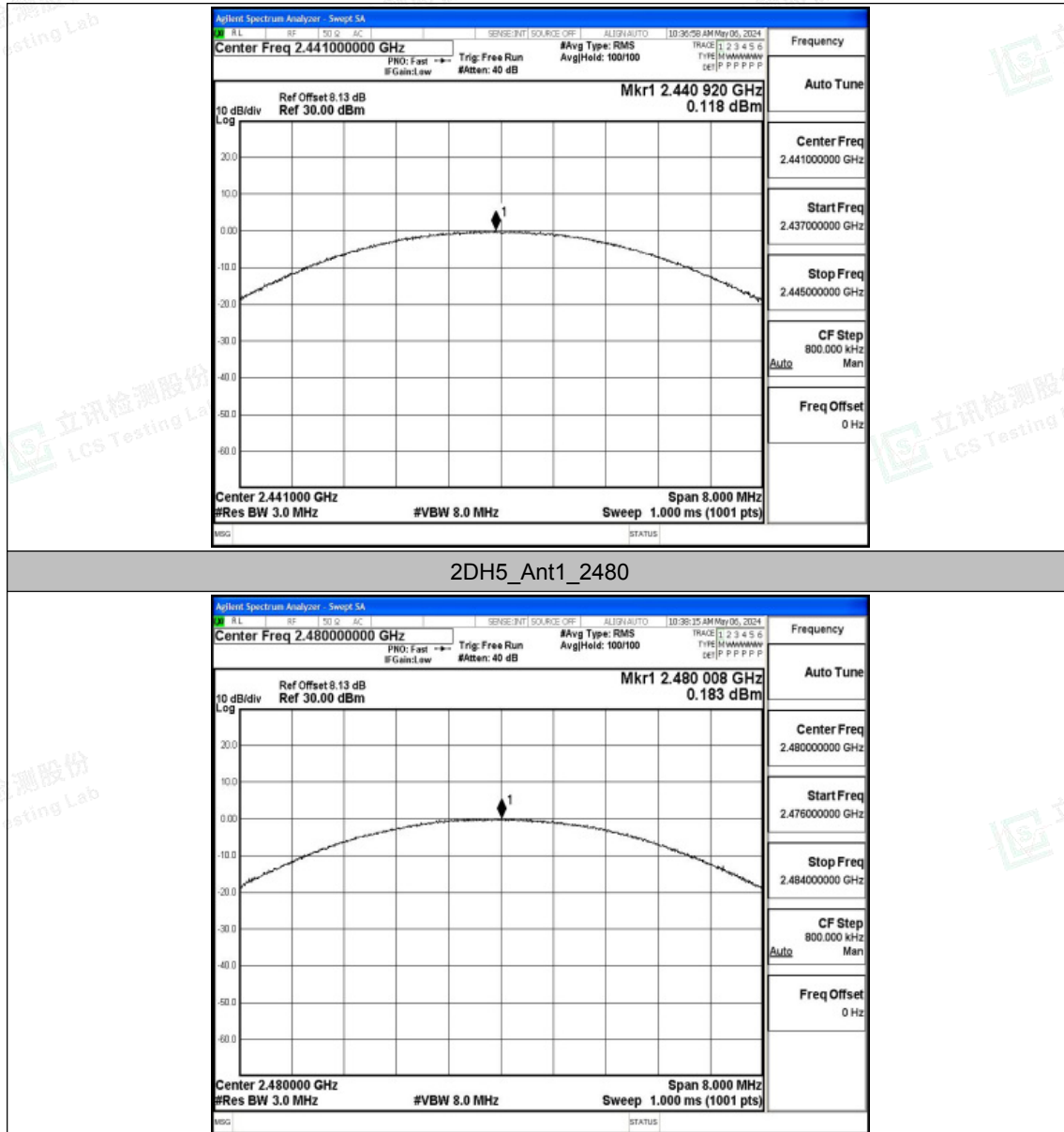


2DH5_Ant1_2402



2DH5_Ant1_2441







A.3 Carrier frequency separation

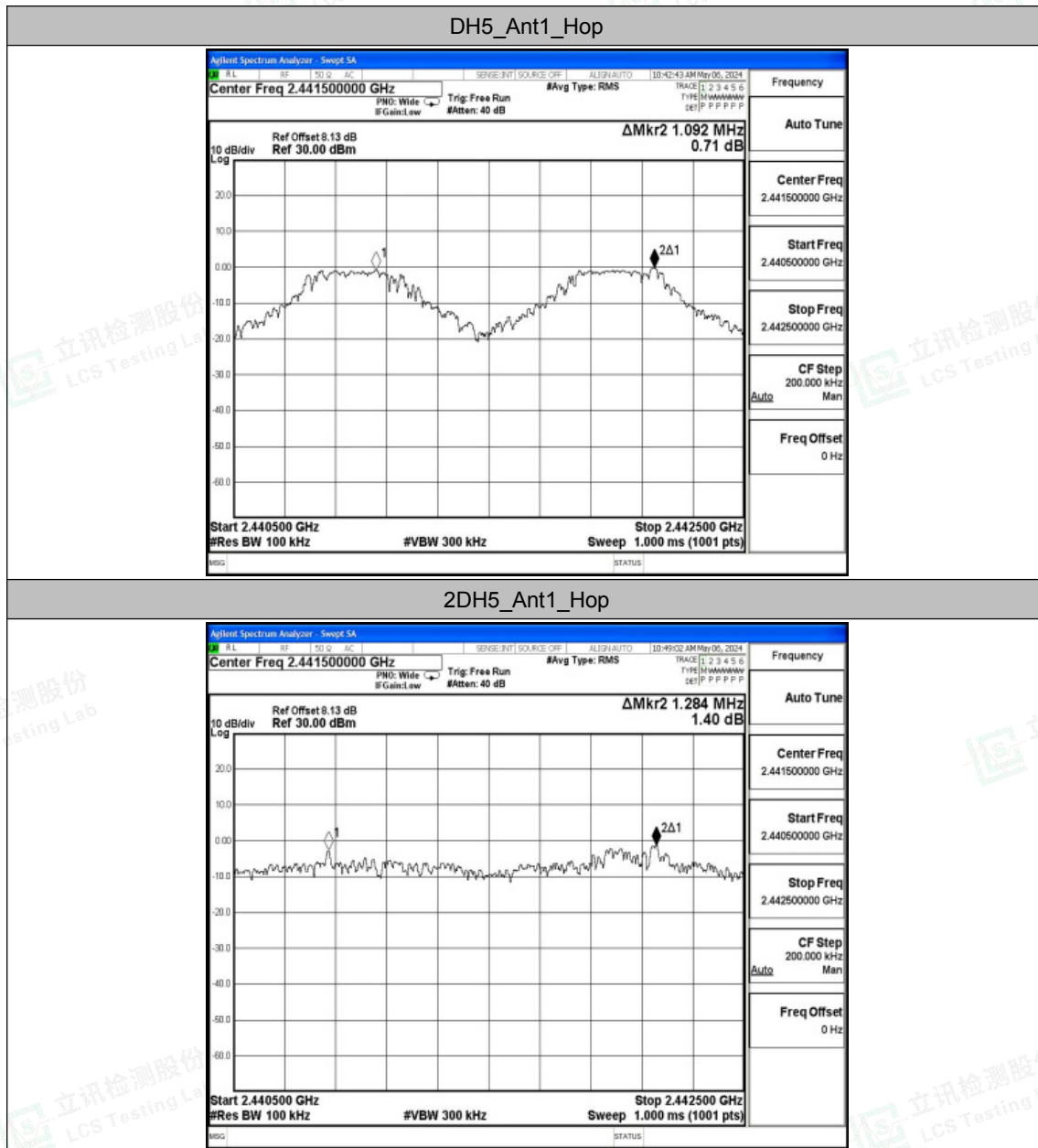
Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.092	≥ 1.035	PASS
2DH5	Ant1	Hop	1.284	≥ 0.858	PASS





Test Graphs



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A.4 Time of occupancy

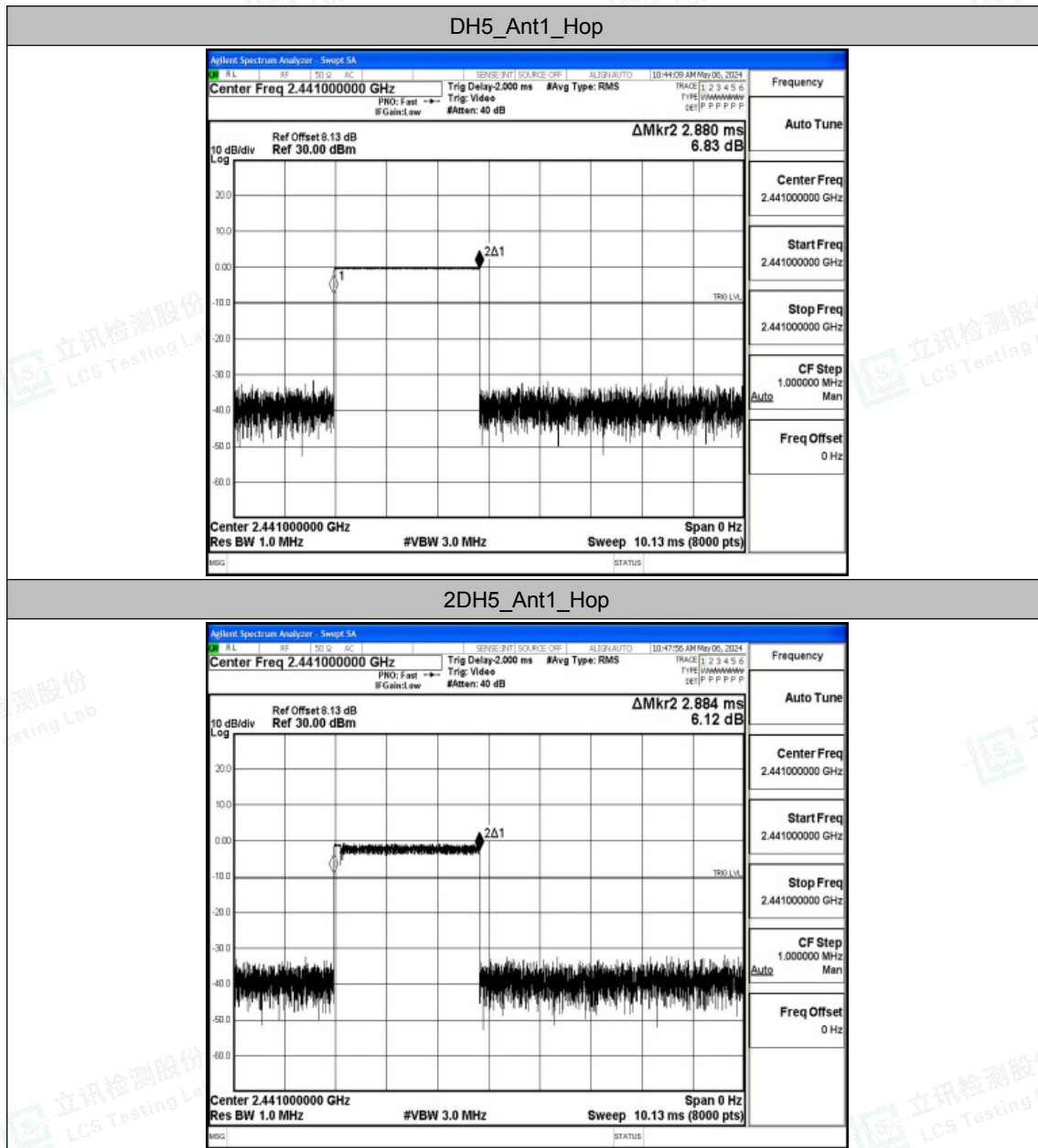
Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.884	106.67	0.308	≤0.4	PASS





Test Graphs



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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

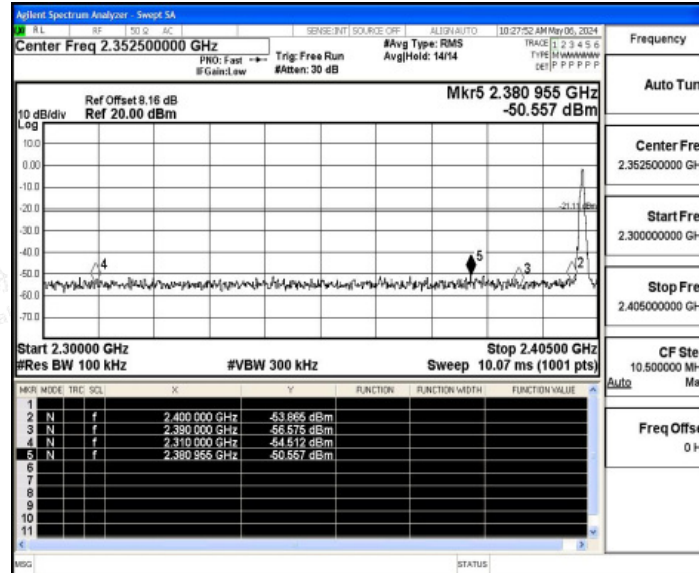
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-1.11	-50.56	≤-21.11	PASS
		High	2480	-0.66	-51.01	≤-20.66	PASS
		Low	Hop_2402	-0.99	-50.2	≤-20.99	PASS
		High	Hop_2480	0.03	-49.35	≤-19.97	PASS
2DH5	Ant1	Low	2402	-2.13	-50.84	≤-22.13	PASS
		High	2480	-4.50	-48.98	≤-24.5	PASS
		Low	Hop_2402	-2.74	-49.28	≤-22.74	PASS
		High	Hop_2480	-1.78	-49.51	≤-21.78	PASS



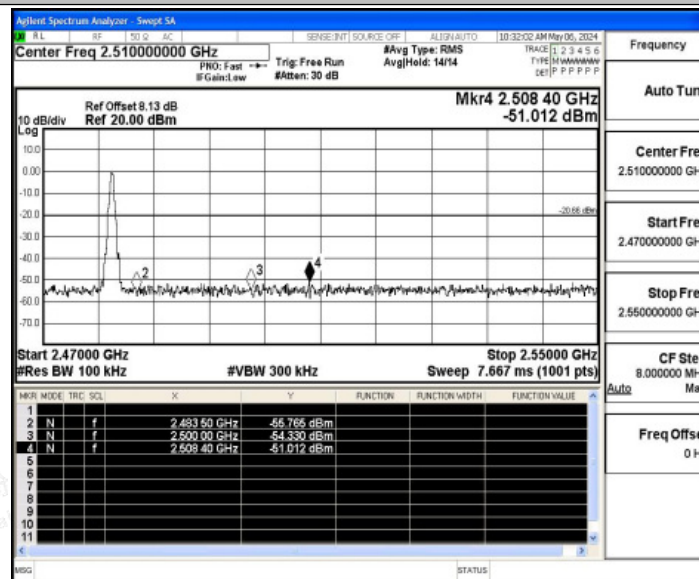


Test Graphs

DH5_Ant1_Low_2402

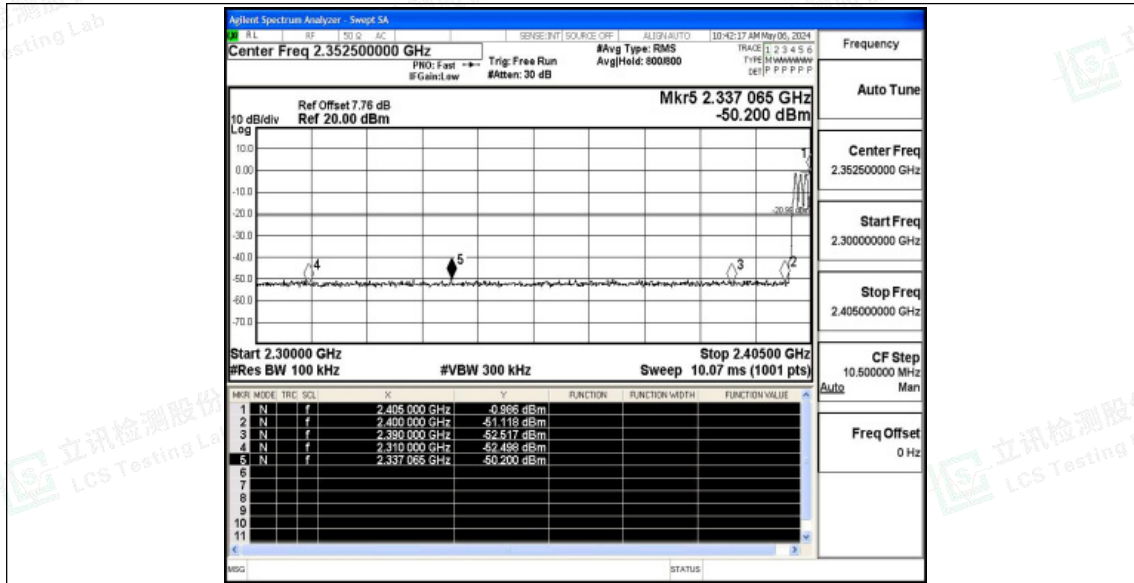


DH5_Ant1_High_2480

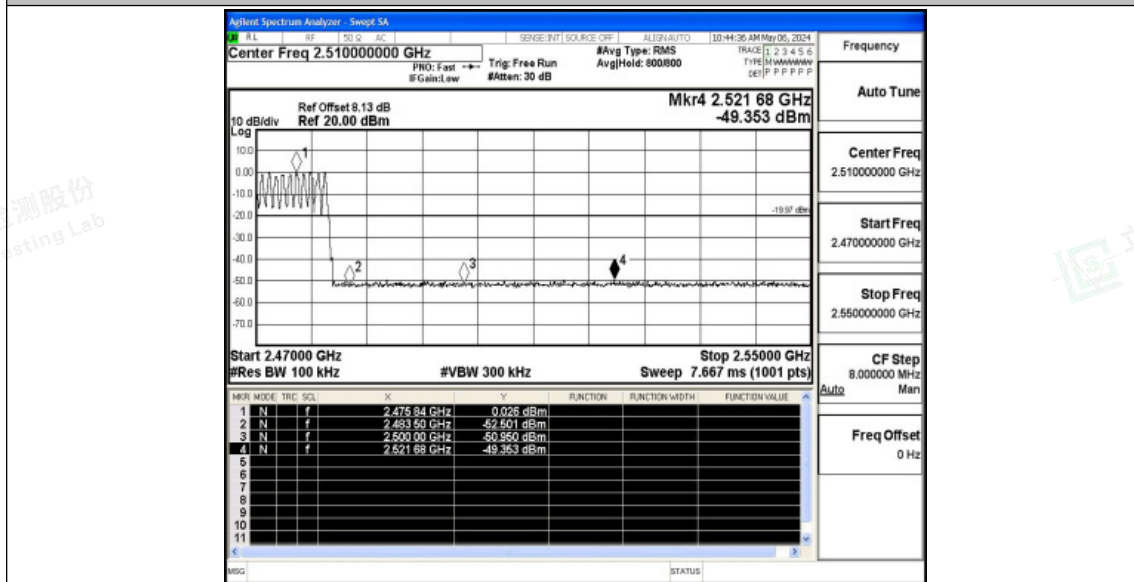


DH5_Ant1_Low_Hop_2402





DH5_Ant1_High_Hop_2480



2DH5_Ant1_Low_2402

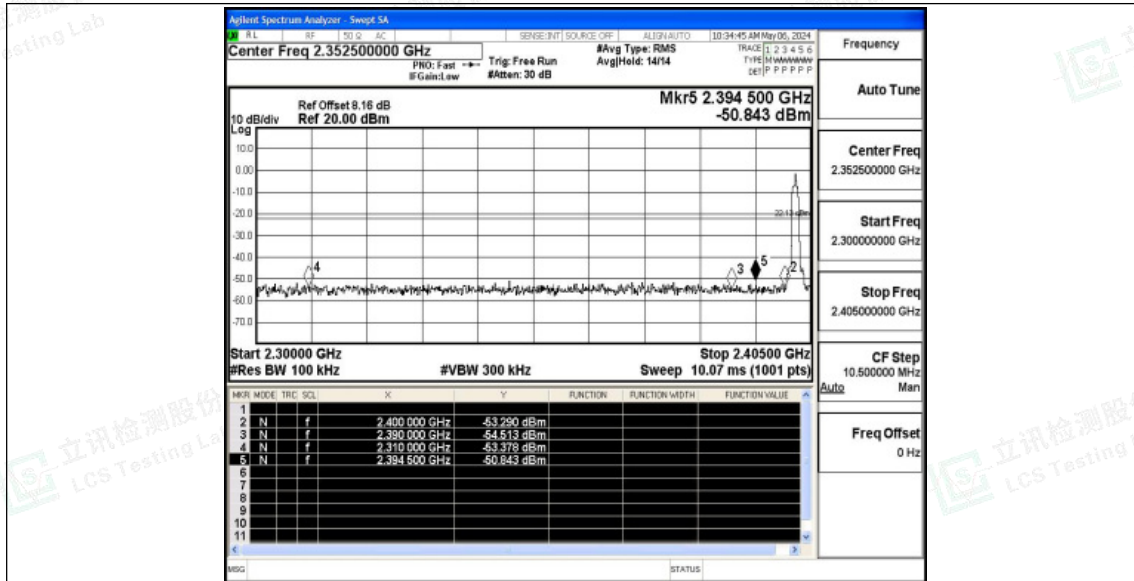


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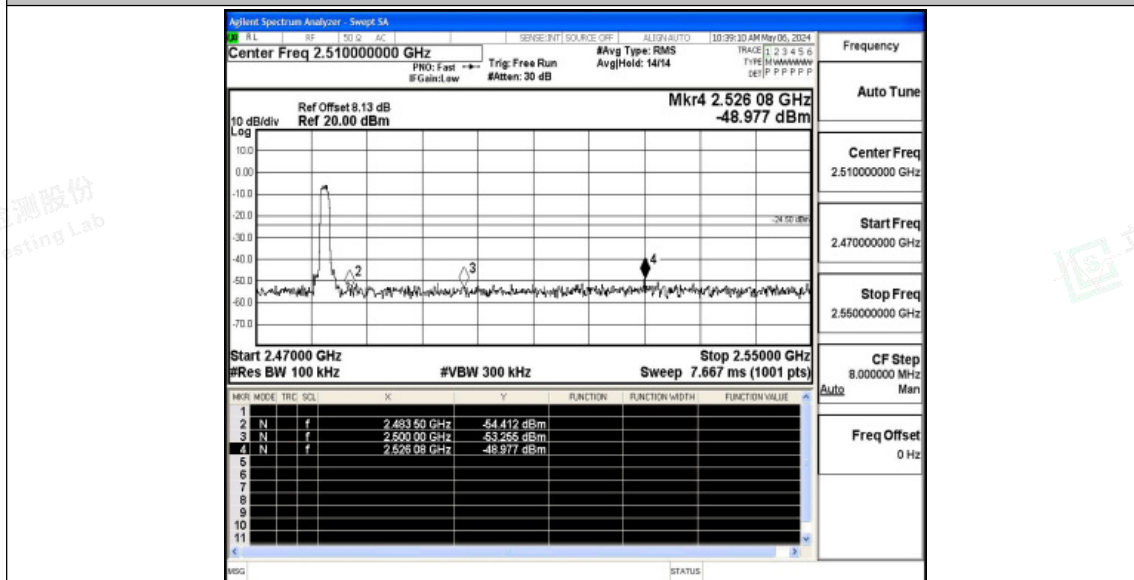
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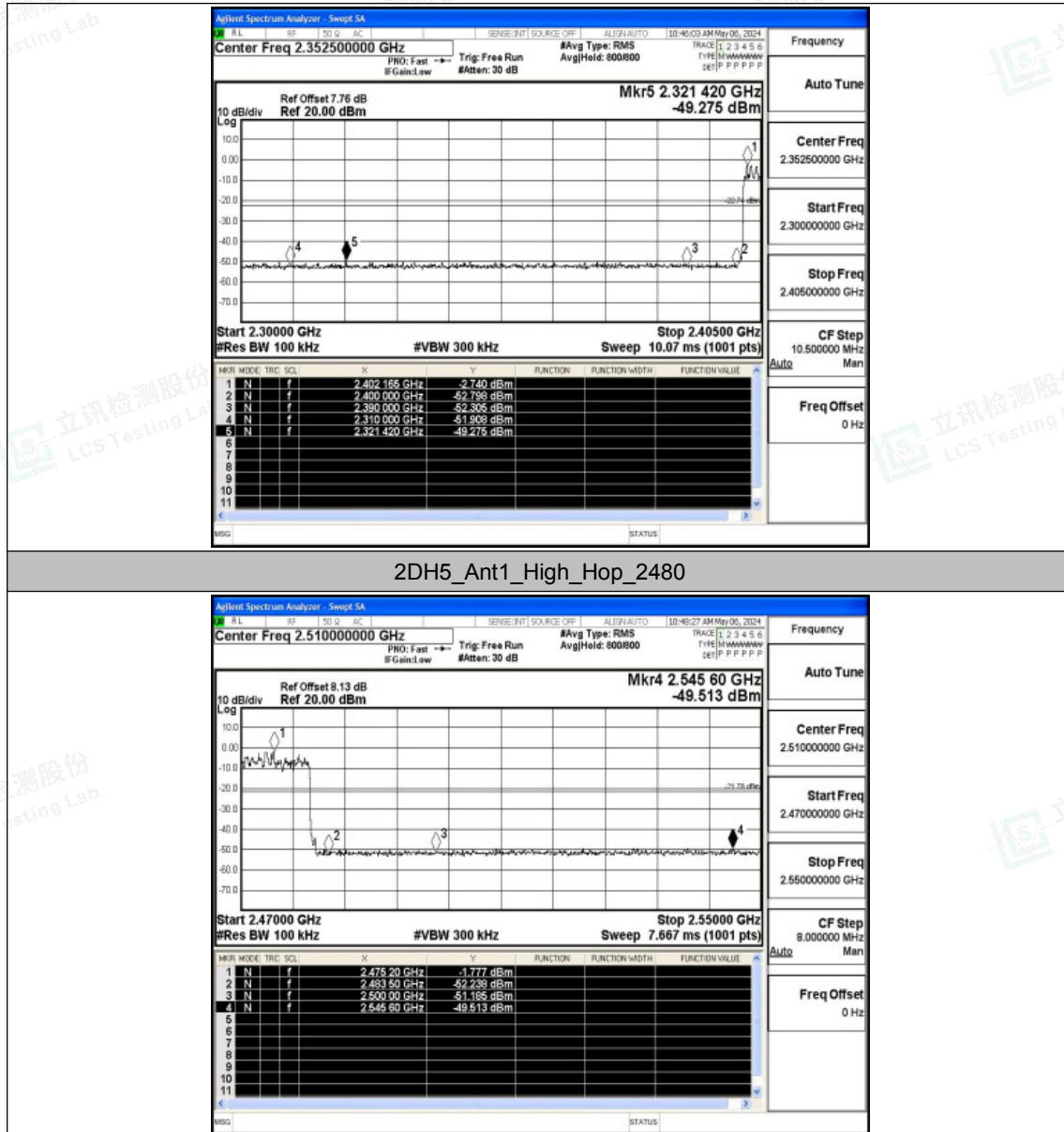


2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402





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A.7 Conducted Spurious Emission

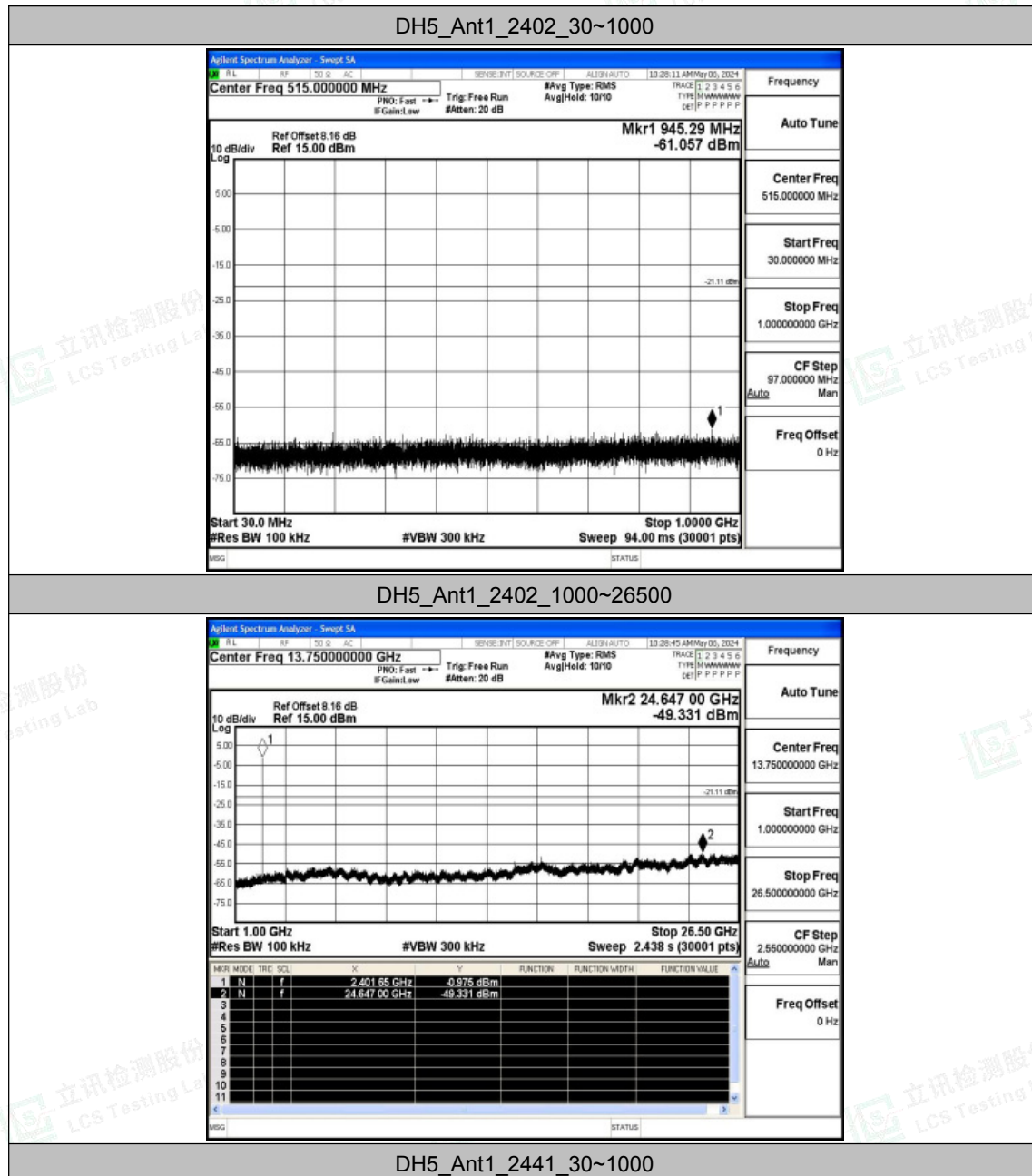
Test Result

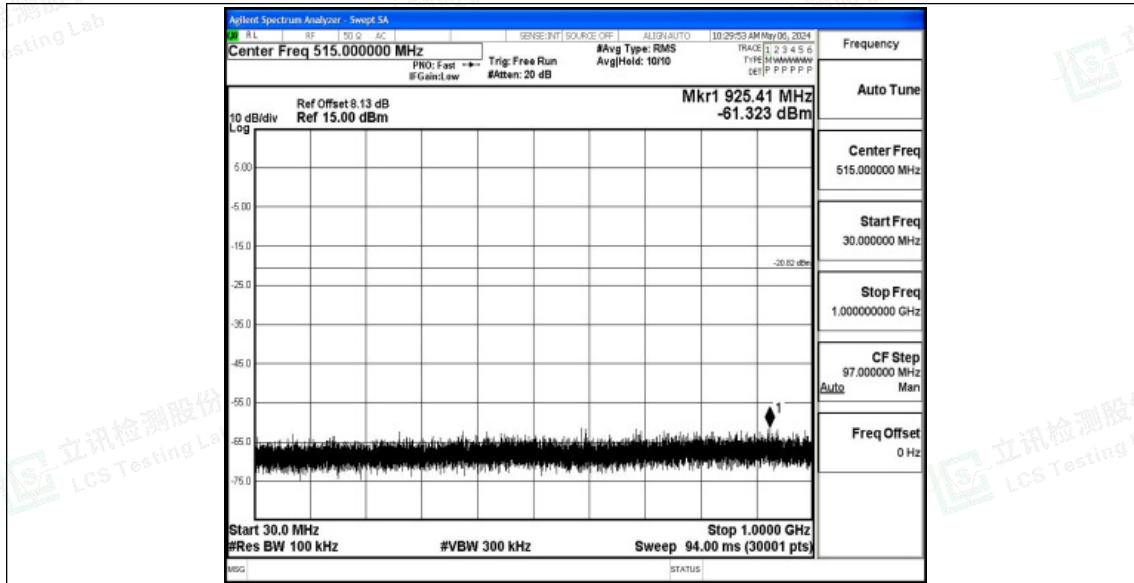
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	30~1000	-1.11	-61.06	≤-21.11	PASS
			1000~26500	-1.11	-49.33	≤-21.11	PASS
		2441	30~1000	-0.82	-61.32	≤-20.82	PASS
			1000~26500	-0.82	-48.97	≤-20.82	PASS
		2480	30~1000	-0.66	-61.49	≤-20.66	PASS
			1000~26500	-0.66	-49.14	≤-20.66	PASS
2DH5	Ant1	2402	30~1000	-2.13	-61.71	≤-22.13	PASS
			1000~26500	-2.13	-48.83	≤-22.13	PASS
		2441	30~1000	-1.31	-61.9	≤-21.31	PASS
			1000~26500	-1.31	-49.02	≤-21.31	PASS
		2480	30~1000	-4.50	-60.55	≤-24.5	PASS
			1000~26500	-4.50	-49.38	≤-24.5	PASS



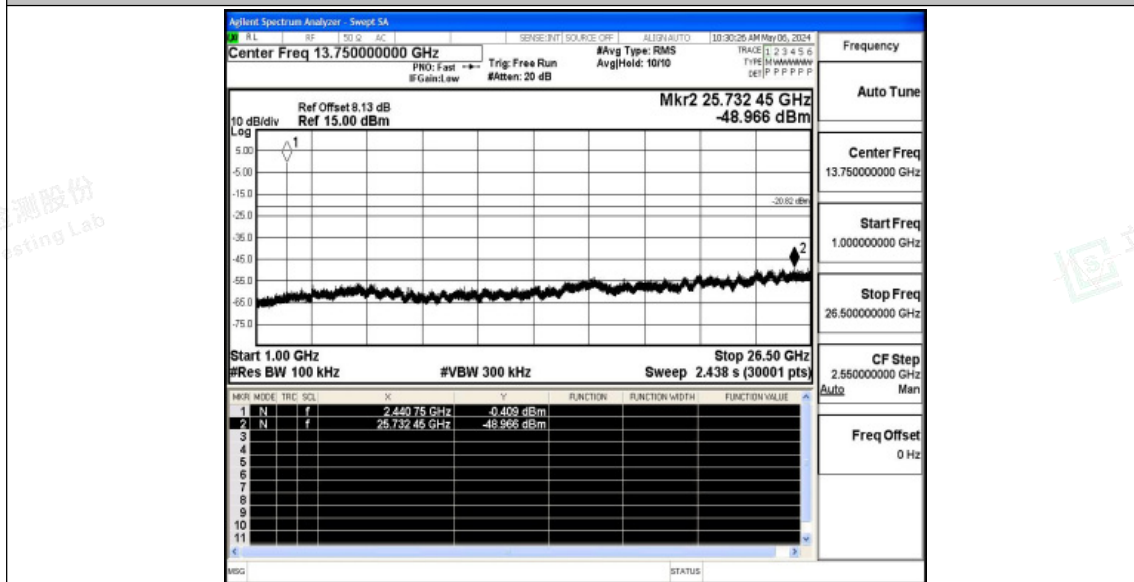


Test Graphs



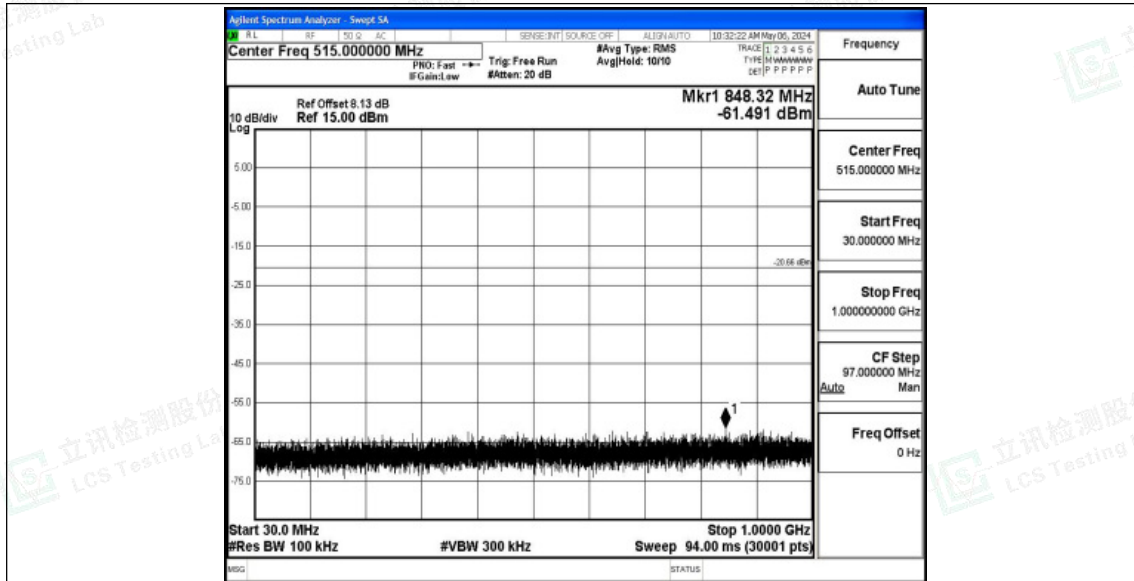


DH5_Ant1_2441_1000~26500

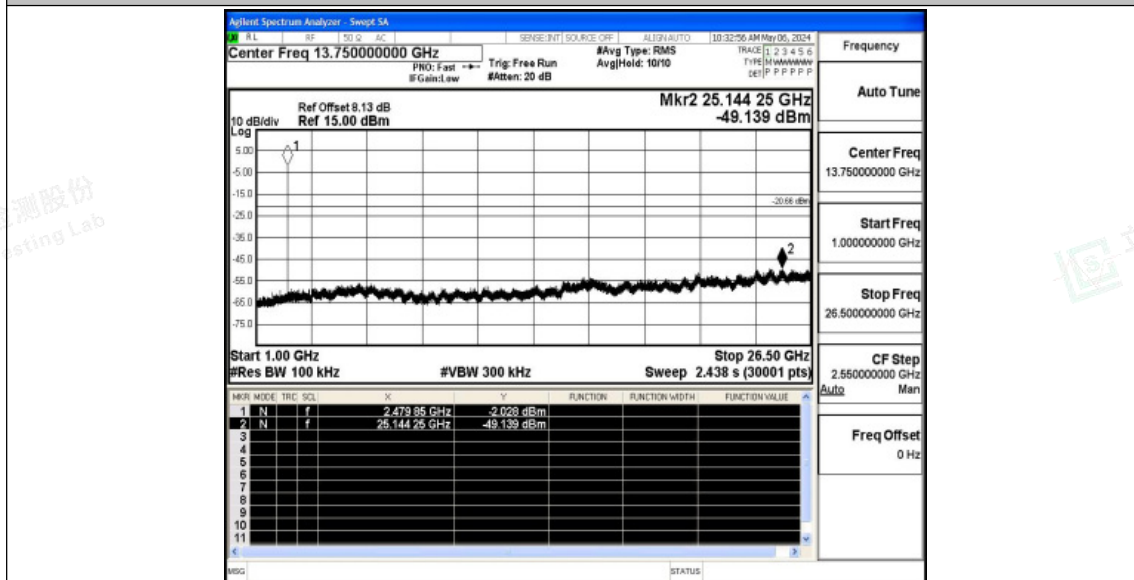


DH5_Ant1_2480_30~1000



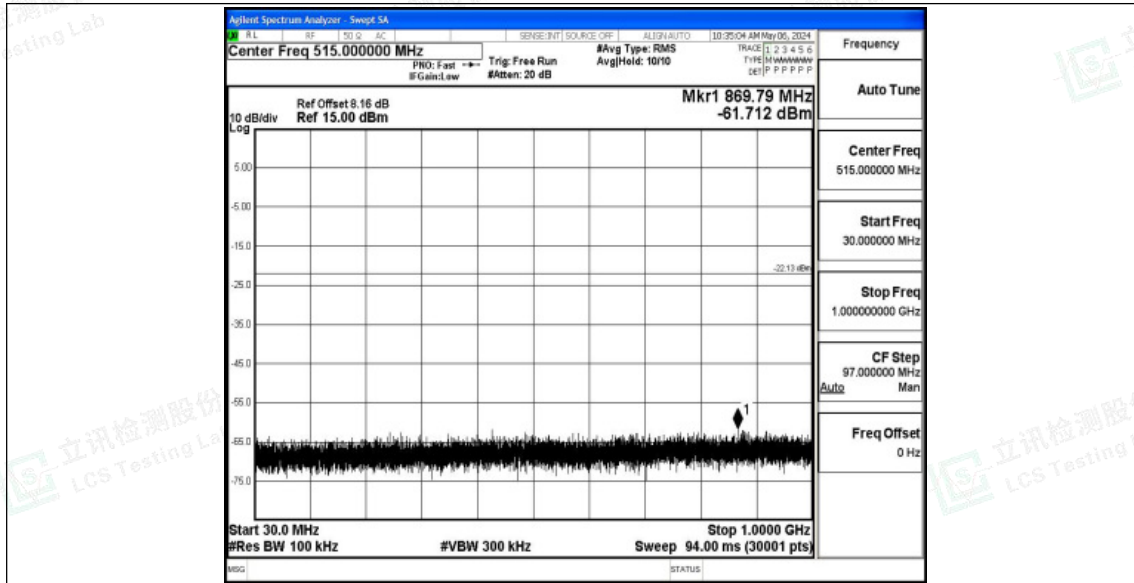


DH5_Ant1_2480_1000~26500

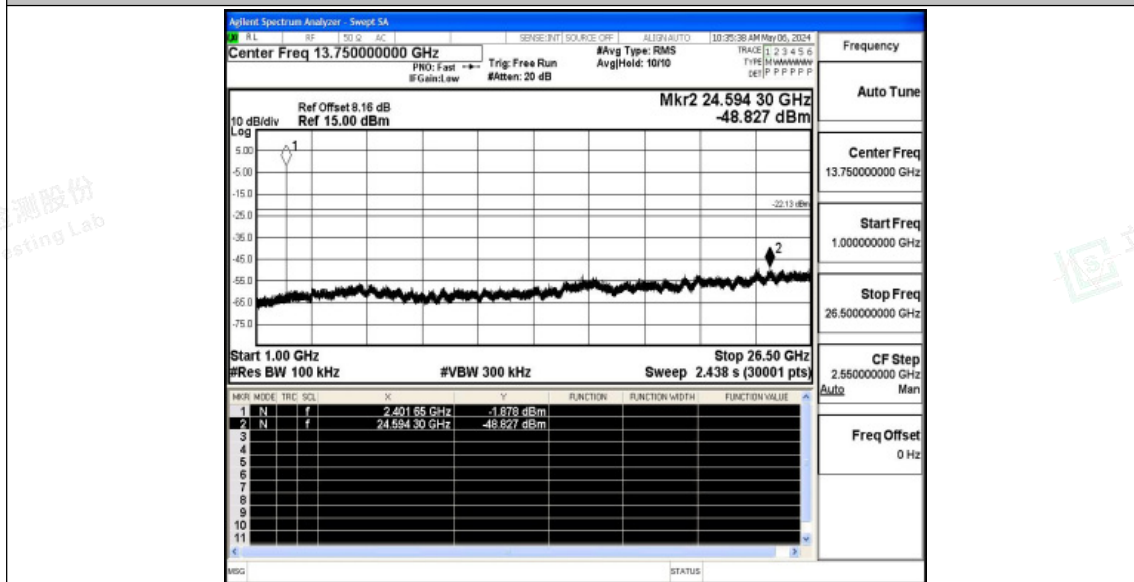


2DH5_Ant1_2402_30~1000



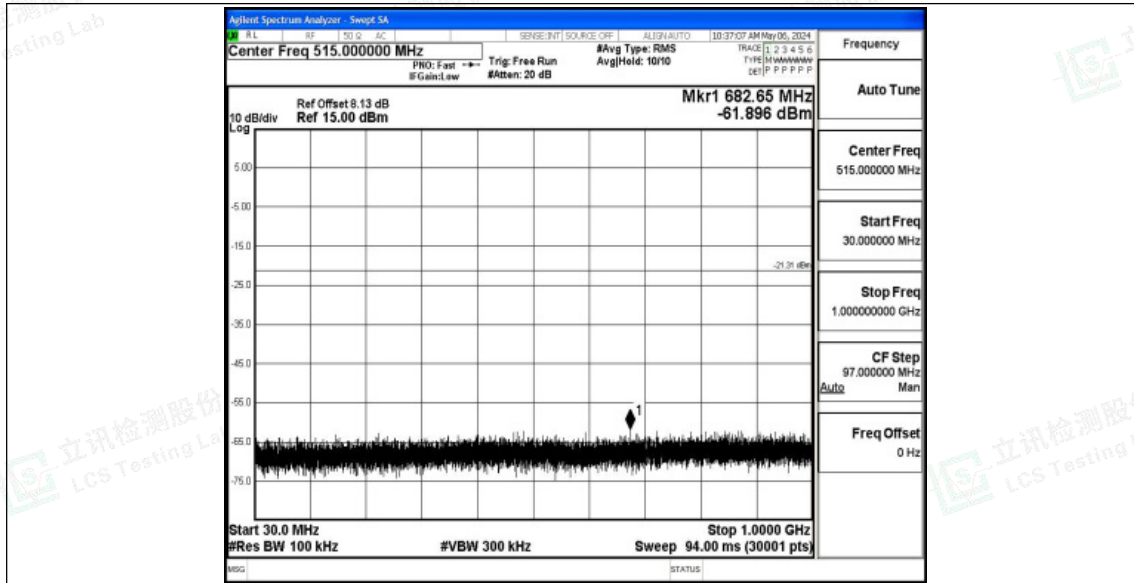


2DH5_Ant1_2402_1000~26500

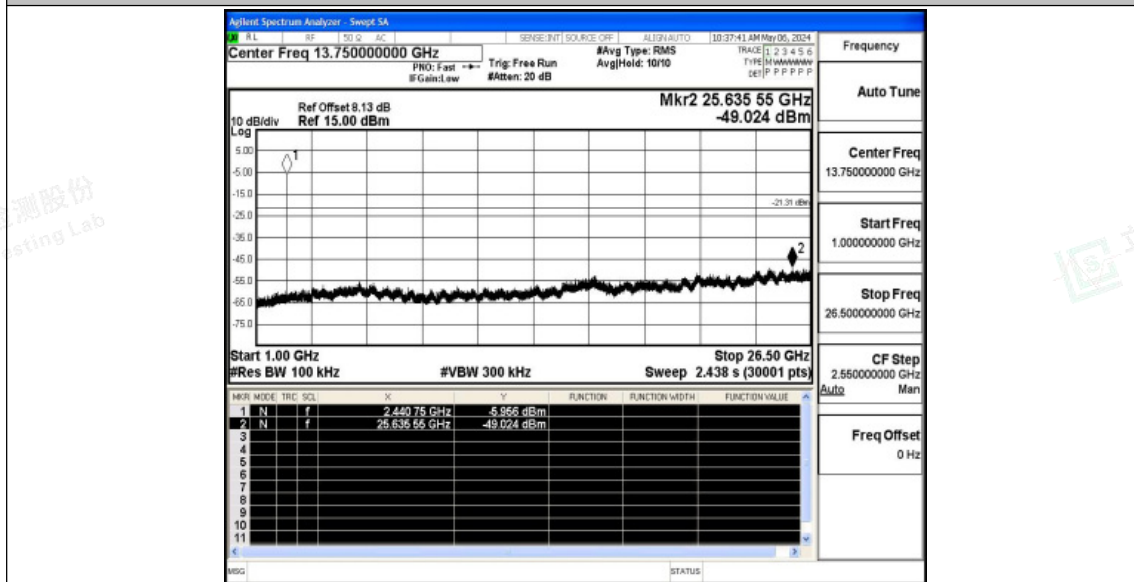


2DH5_Ant1_2441_30~1000





2DH5_Ant1_2441_1000~26500



2DH5_Ant1_2480_30~1000

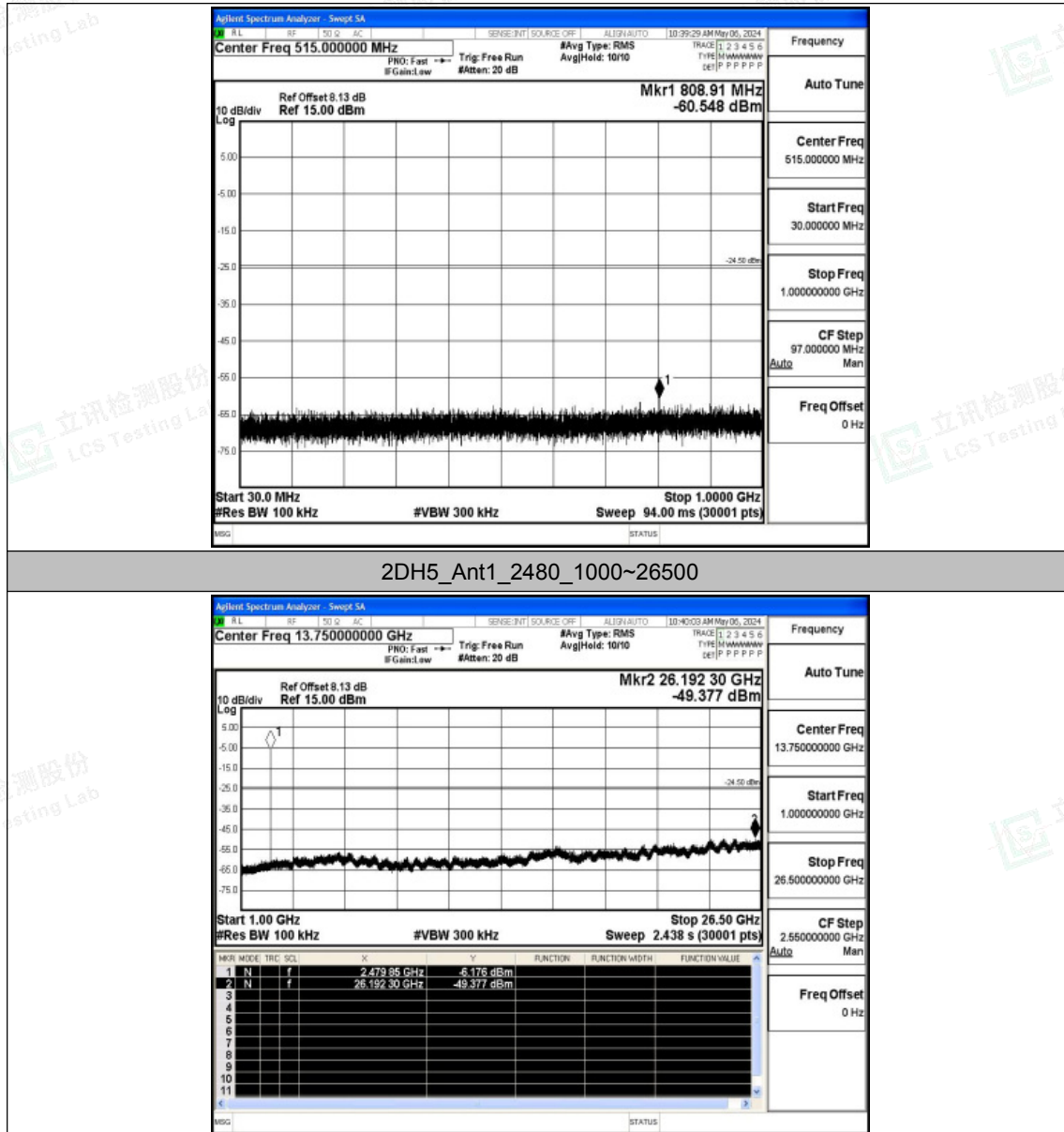


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Reference Level

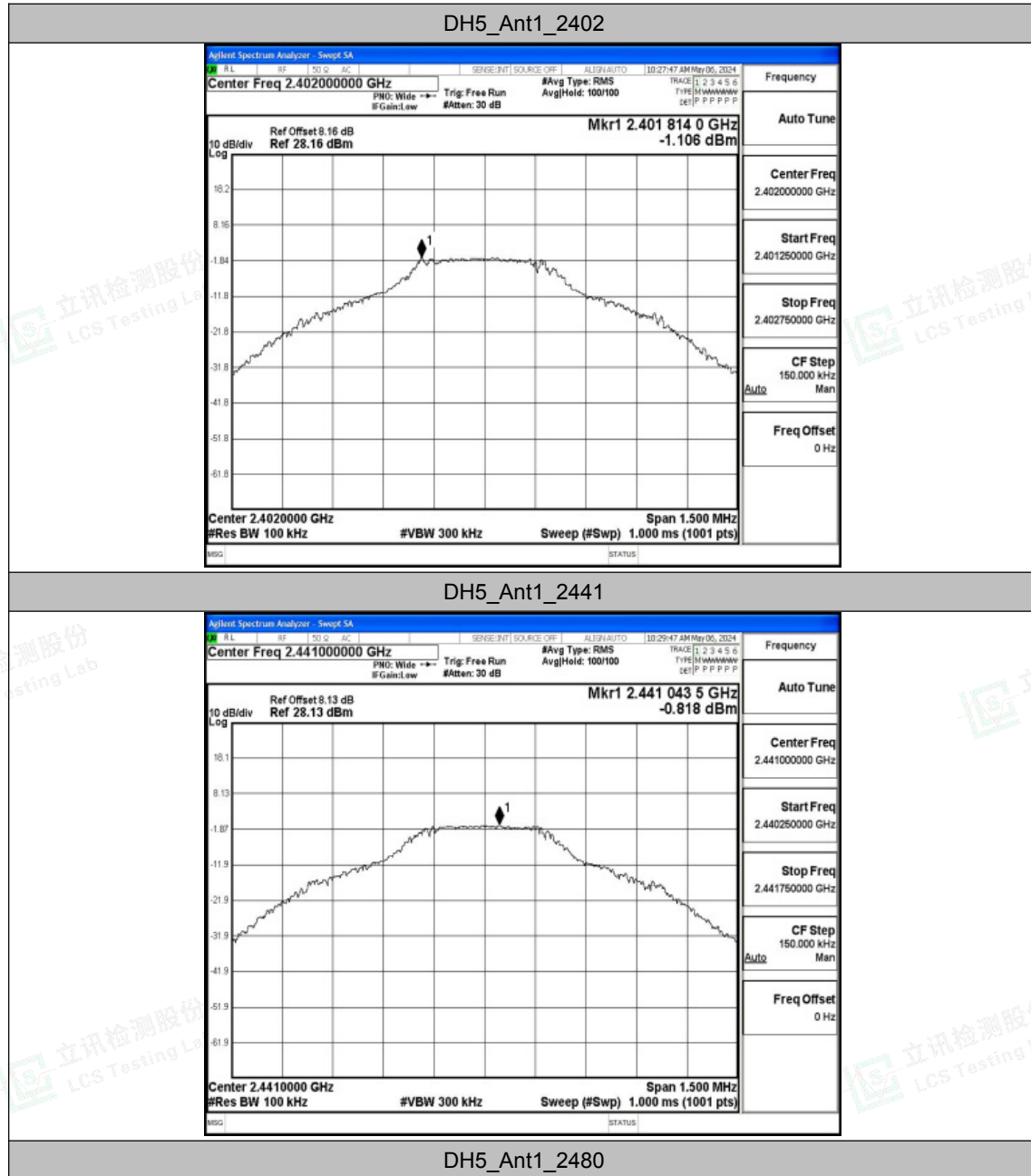
Test Result

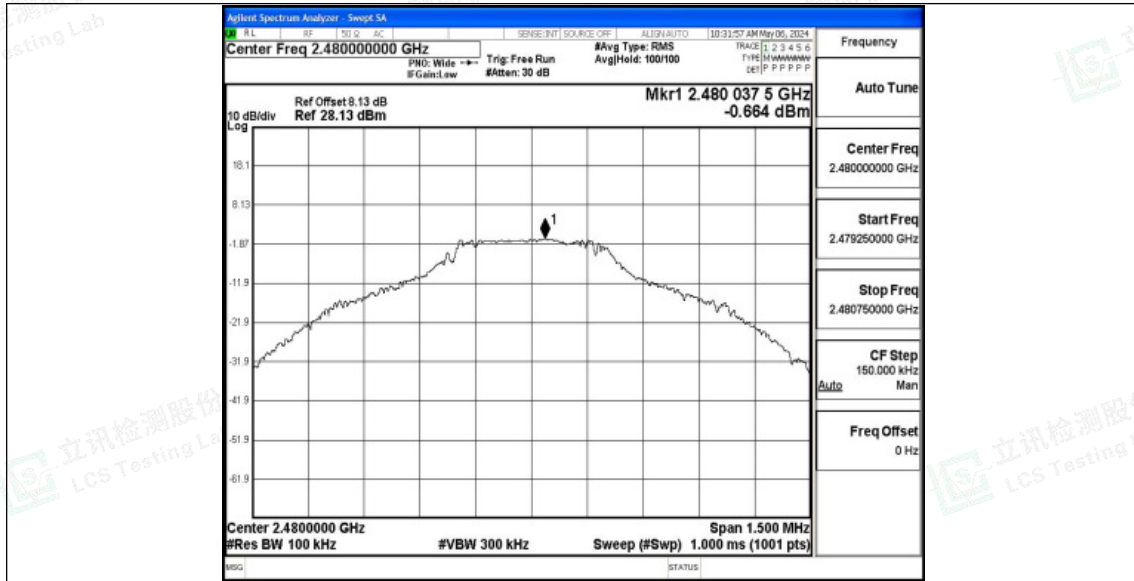
TestMode	Antenna	ChName	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	2401.81	-1.11	---	PASS
		2441	2441.04	-0.82	---	PASS
		2480	2480.04	-0.66	---	PASS
2DH5	Ant1	2402	2401.84	-2.13	---	PASS
		2441	2440.84	-1.31	---	PASS
		2480	2480.03	-4.50	---	PASS



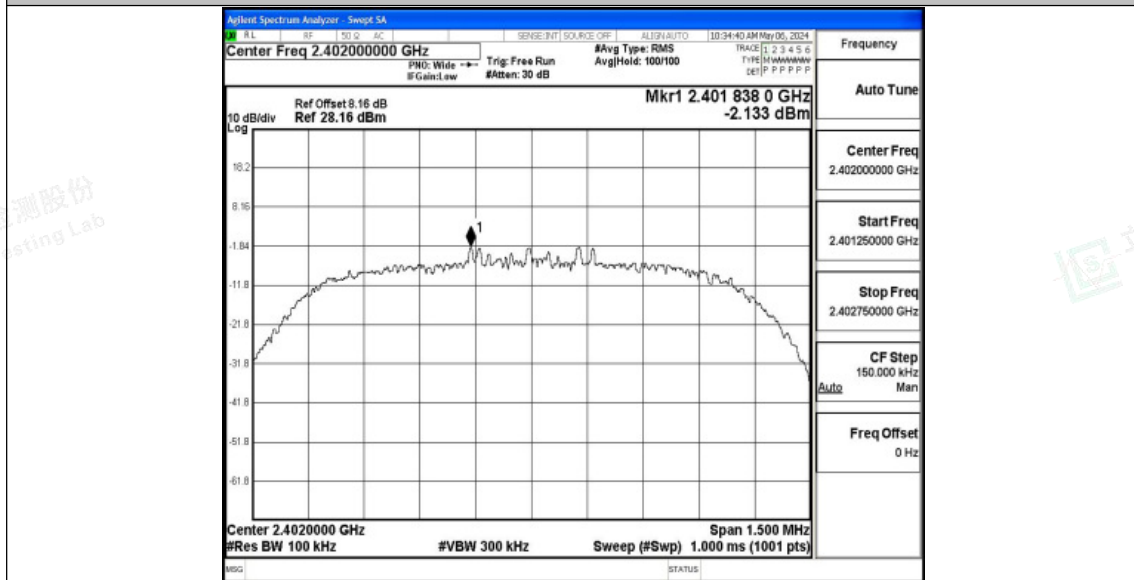


Test Graphs



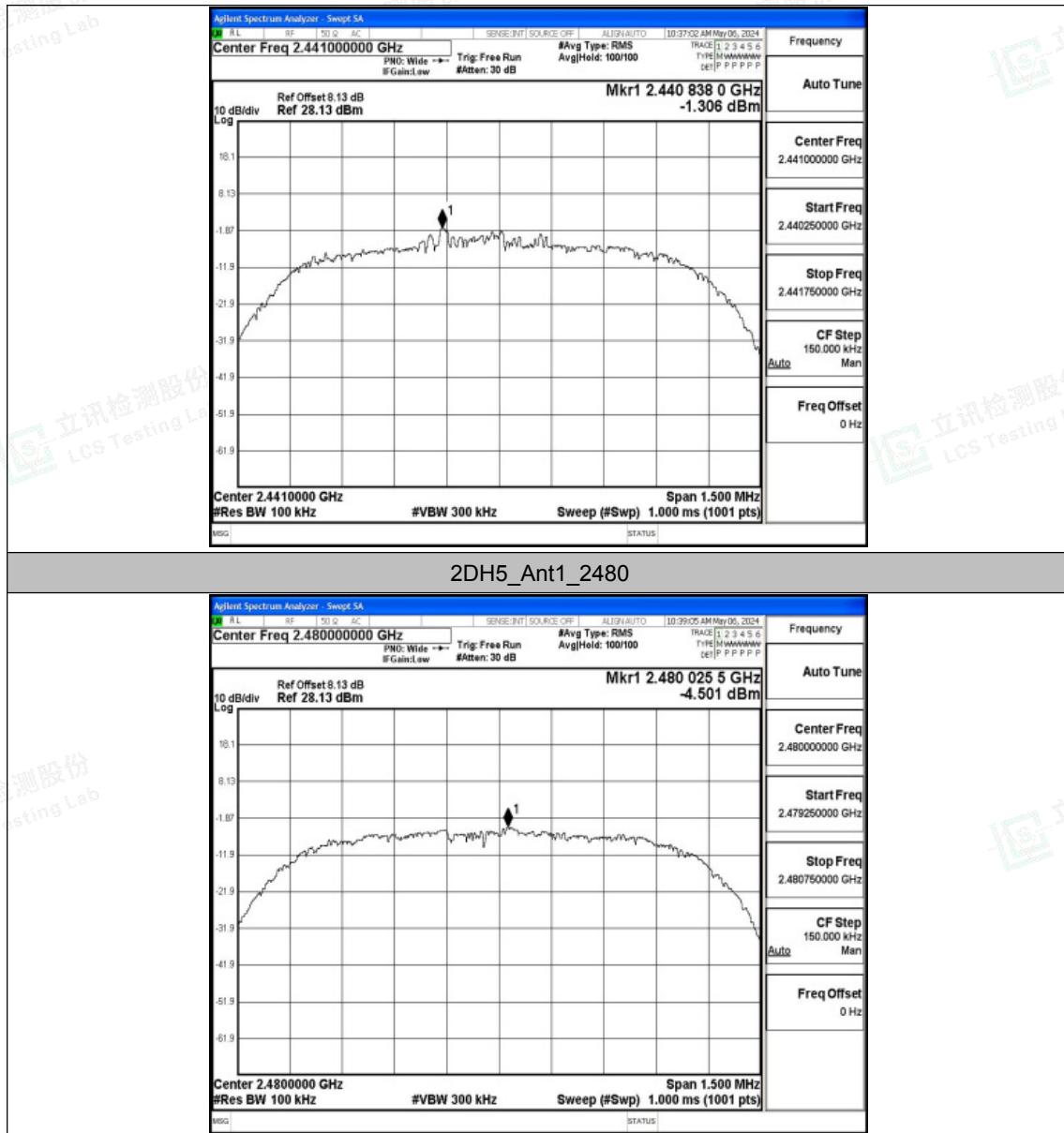


2DH5_Ant1_2402



2DH5_Ant1_2441







A.8 Duty Cycle

Test Result

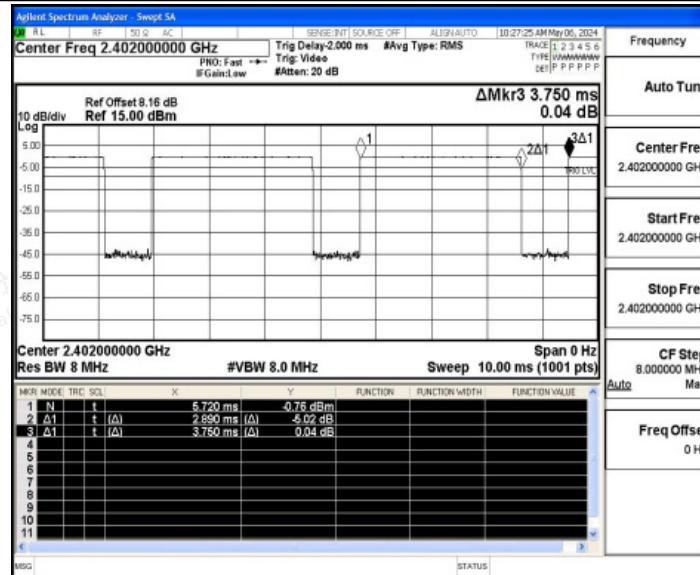
TestMode	Antenna	Frequency[MHz]	ON Time[ms]	Period[ms]	Duty Cycle[%]	Duty Cycle Factor[dB]	1/T Factor[kHz]
DH5	Ant1	2402	2.89	3.75	77.07	1.13	0.35
		2441	2.88	3.75	76.80	1.15	0.35
		2480	2.88	3.75	76.80	1.15	0.35
2DH5	Ant1	2402	2.89	3.75	77.07	1.13	0.35
		2441	2.89	3.75	77.07	1.13	0.35
		2480	2.89	3.75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



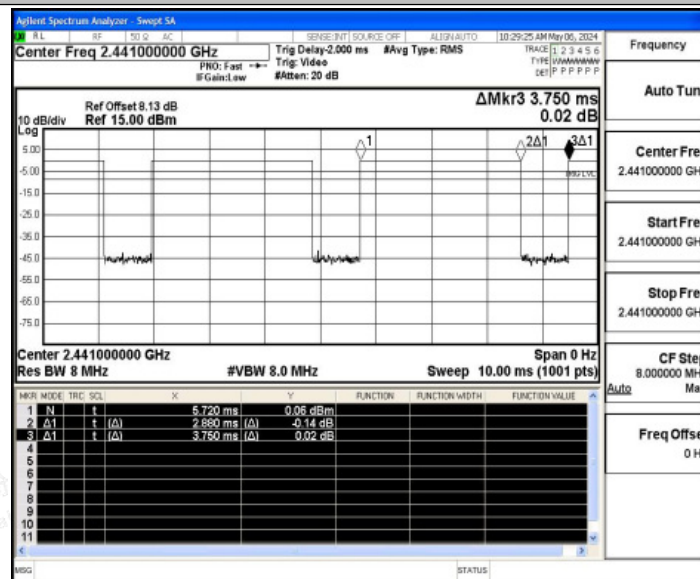


Test Graphs

DH5_Ant1_2402

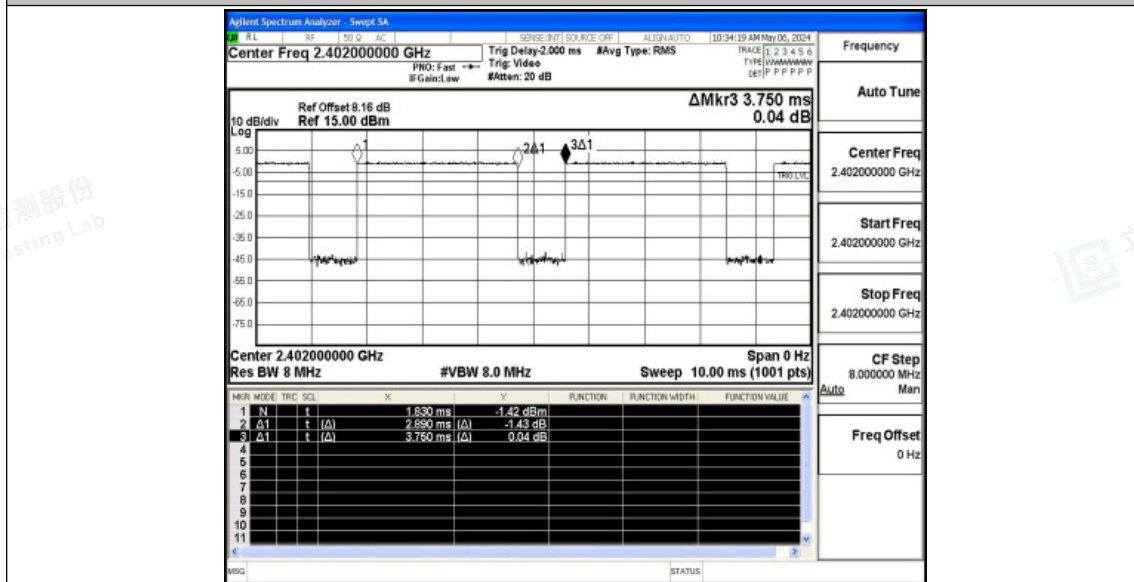
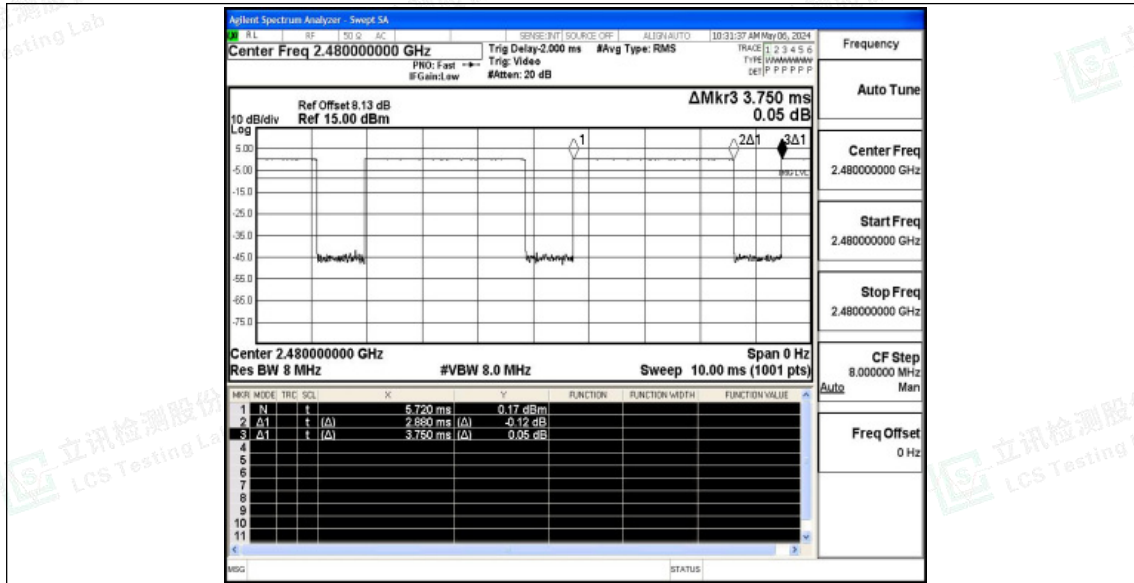


DH5_Ant1_2441



DH5_Ant1_2480



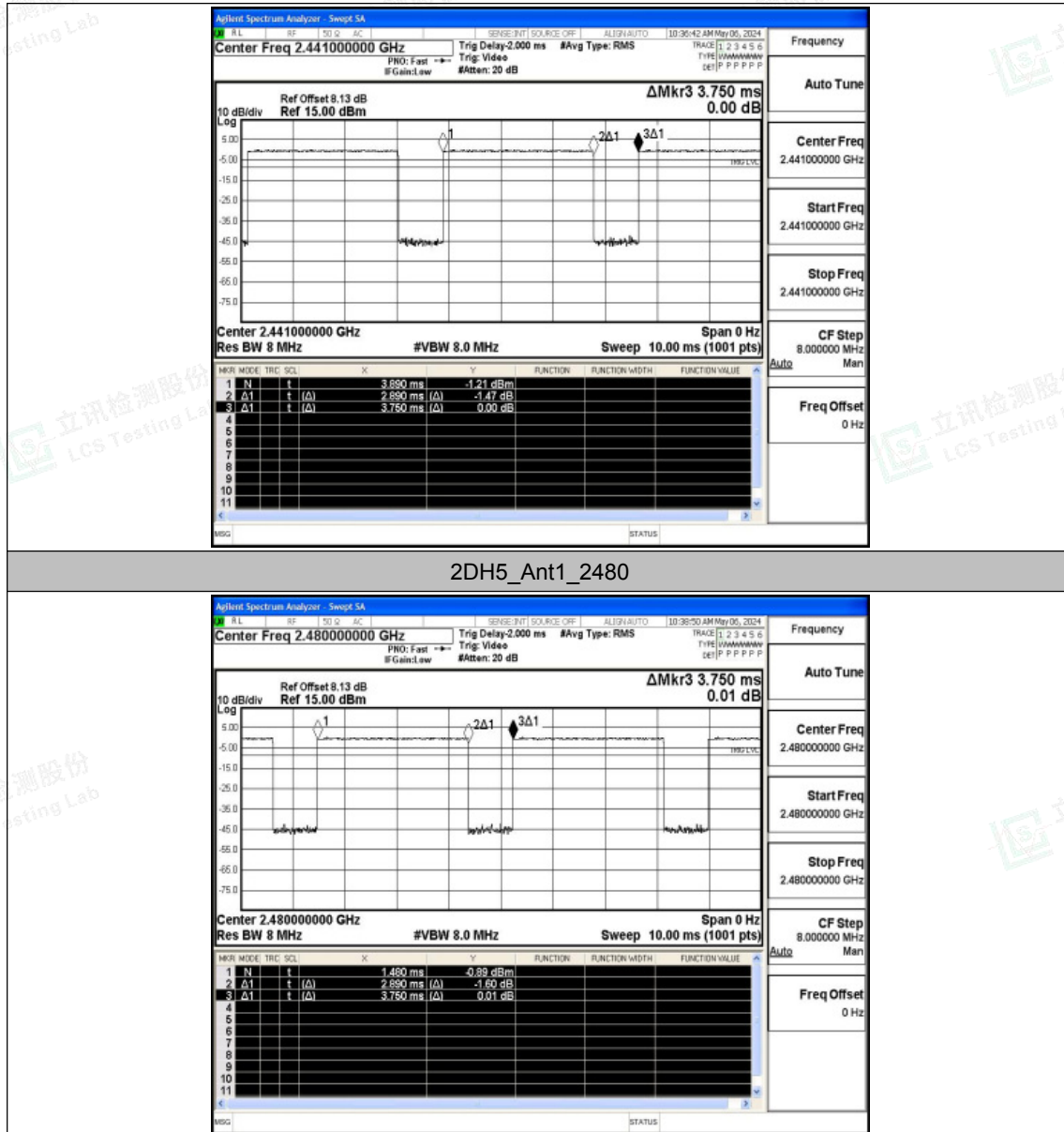


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A.9 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.46	≤-41.20	46.74	≤54	PASS
				AV	2384.945	-47.89	≤-41.20	47.31	≤54	PASS
				AV	2390.000	-48.46	≤-41.20	46.74	≤54	PASS
				Peak	2310.000	-42.12	≤-21.20	53.08	≤74	PASS
				Peak	2378.015	-38.31	≤-21.20	56.89	≤74	PASS
				Peak	2390.000	-41.28	≤-21.20	53.92	≤74	PASS
		High	2480	AV	2483.500	-48.89	≤-41.20	46.31	≤54	PASS
				AV	2492.240	-47.82	≤-41.20	47.38	≤54	PASS
				AV	2500.000	-48.35	≤-41.20	46.85	≤54	PASS
				Peak	2483.500	-41.67	≤-21.20	53.53	≤74	PASS
				Peak	2492.480	-38.55	≤-21.20	56.65	≤74	PASS
				Peak	2500.000	-42.15	≤-21.20	53.05	≤74	PASS
		Low	Hop_240 2	Peak	2310.000	-41.61	≤-21.20	53.59	≤74	PASS
				Peak	2363.315	-38.84	≤-21.20	56.36	≤74	PASS
				Peak	2390.000	-41.32	≤-21.20	53.88	≤74	PASS
		High	Hop_248 0	Peak	2483.500	-41.07	≤-21.20	54.13	≤74	PASS
				Peak	2494.400	-38.09	≤-21.20	57.11	≤74	PASS
				Peak	2500.000	-41	≤-21.20	54.20	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.76	≤-41.20	46.44	≤54	PASS
				AV	2349.245	-47.65	≤-41.20	47.55	≤54	PASS
				AV	2390.000	-48.68	≤-41.20	46.52	≤54	PASS
				Peak	2310.000	-41.85	≤-21.20	53.35	≤74	PASS
				Peak	2378.225	-38.51	≤-21.20	56.69	≤74	PASS
				Peak	2390.000	-40.63	≤-21.20	54.57	≤74	PASS
		High	2480	AV	2483.500	-48.5	≤-41.20	46.70	≤54	PASS
				AV	2495.840	-47.5	≤-41.20	47.70	≤54	PASS
				AV	2500.000	-48.13	≤-41.20	47.07	≤54	PASS
				Peak	2483.500	-42.14	≤-21.20	53.06	≤74	PASS
				Peak	2492.240	-37.99	≤-21.20	57.21	≤74	PASS
				Peak	2500.000	-40.59	≤-21.20	54.61	≤74	PASS
		Low	Hop_240 2	Peak	2310.000	-41.75	≤-21.20	53.45	≤74	PASS
				Peak	2381.480	-38.69	≤-21.20	56.51	≤74	PASS
				Peak	2390.000	-41.9	≤-21.20	53.30	≤74	PASS





	High	Hop_248 0	Peak	2483.500	-39.71	≤ -21.20	55.49	≤ 74	PASS
			Peak	2488.480	-39.22	≤ -21.20	55.98	≤ 74	PASS
			Peak	2500.000	-41.88	≤ -21.20	53.32	≤ 74	PASS

Note:

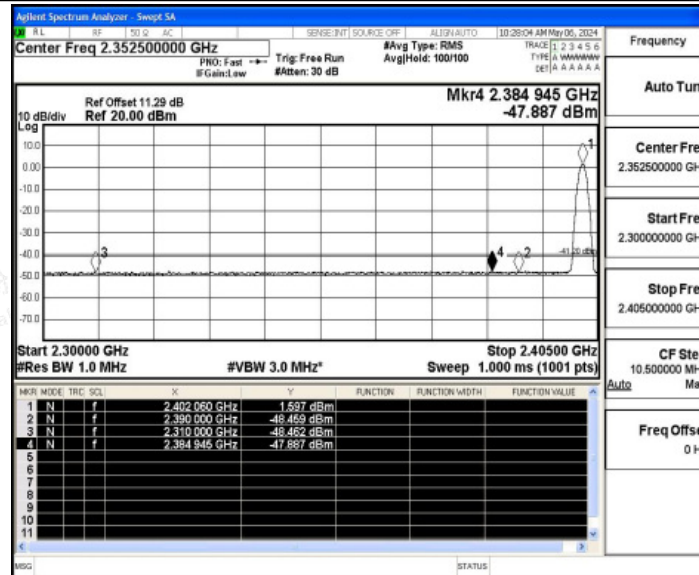
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



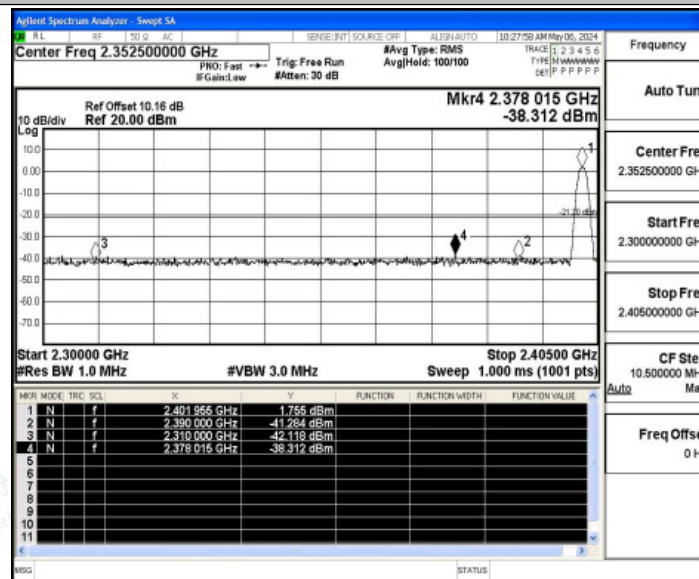


Test Graphs

DH5_Ant1_Low_2402_AV

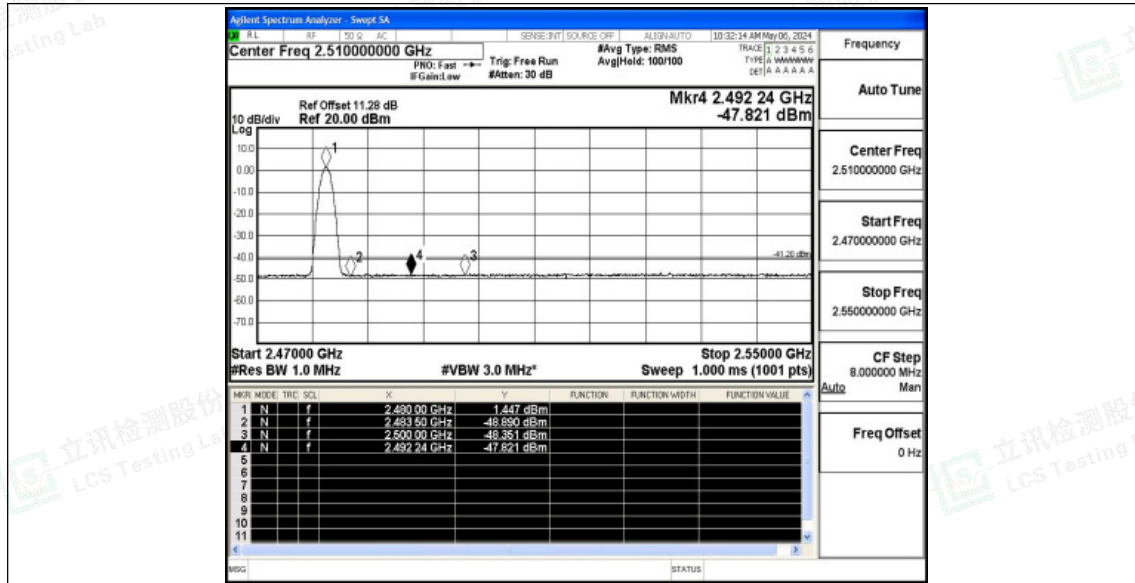


DH5_Ant1_Low_2402_Peak

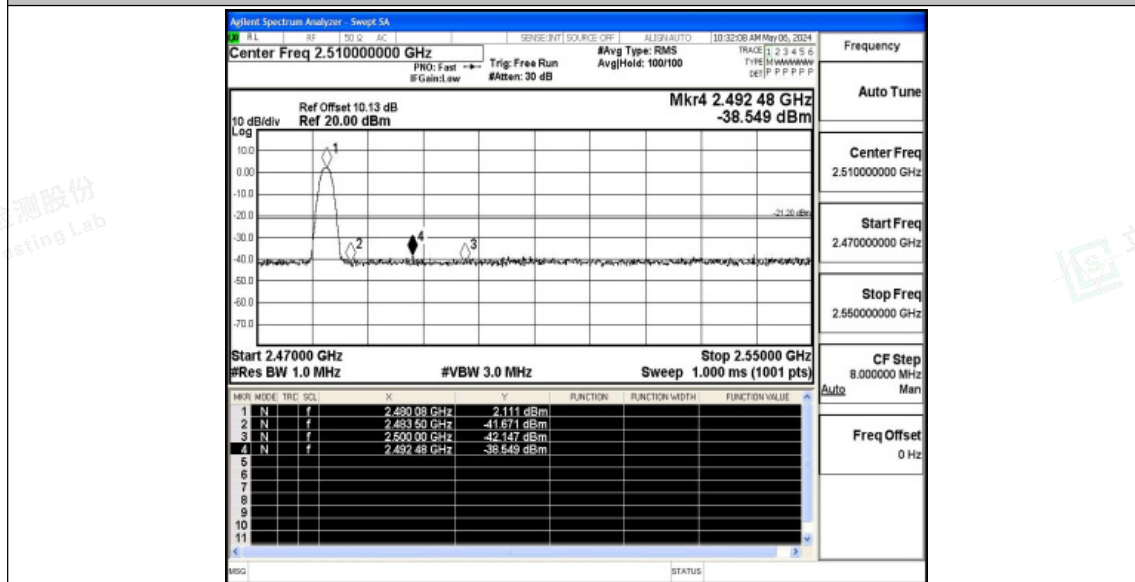


DH5_Ant1_High_2480_AV





DH5_Ant1_High_2480_Peak



DH5_Ant1_Low_Hop_2402_Peak

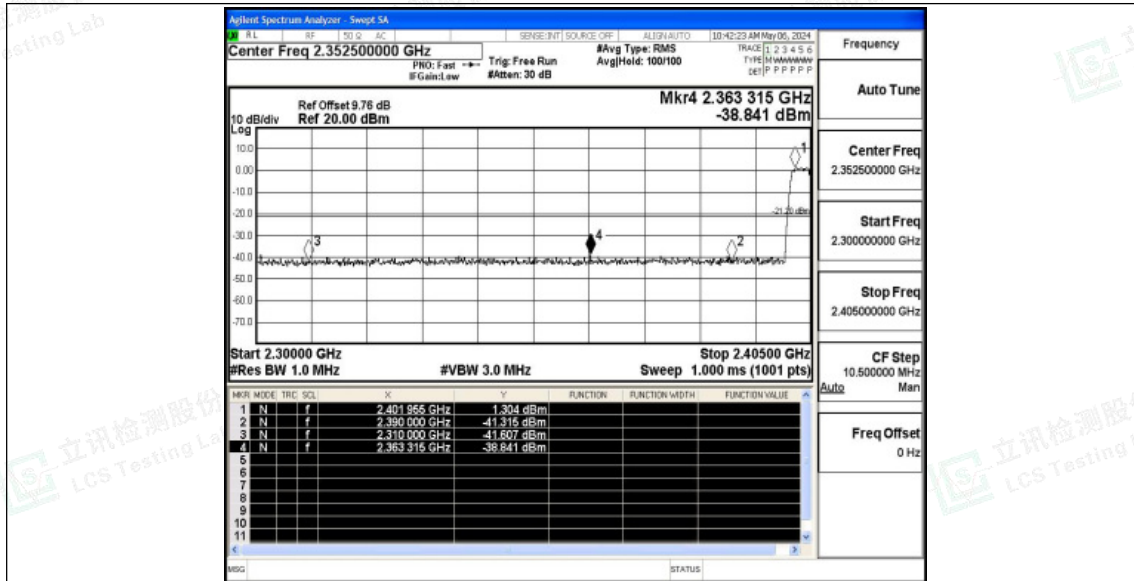


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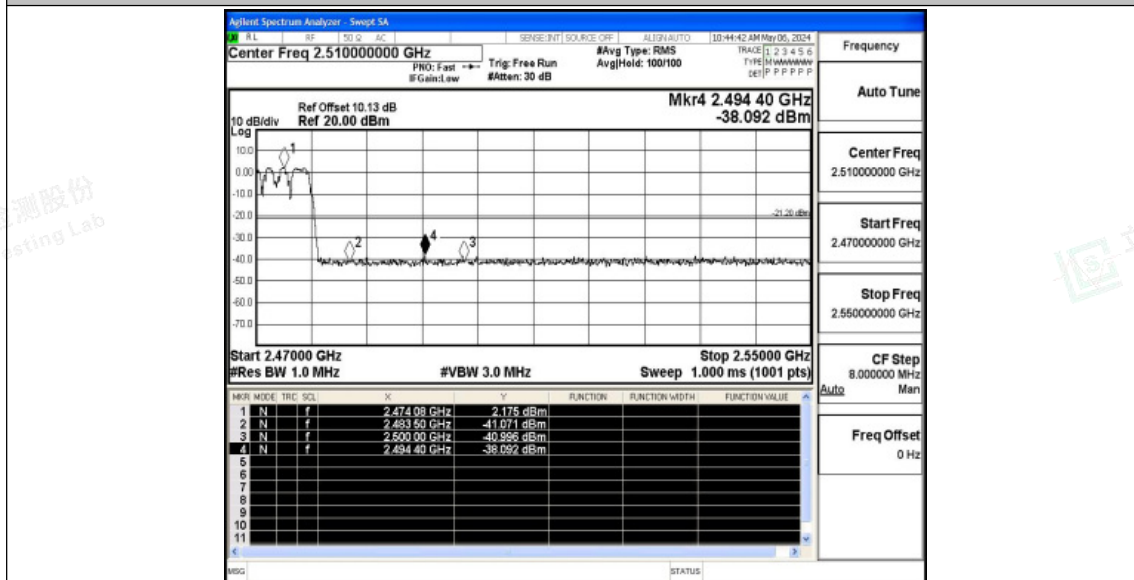
Add: 101, 201 Bldg A & 301 Bldg C., Juji Industrial Park, Yabianxueziwei Shajing Street, Baoan District, Shenzhen, 518000, P.R.C.

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DH5_Ant1_High_Hop_2480_Peak



2DH5_Ant1_Low_2402_AV

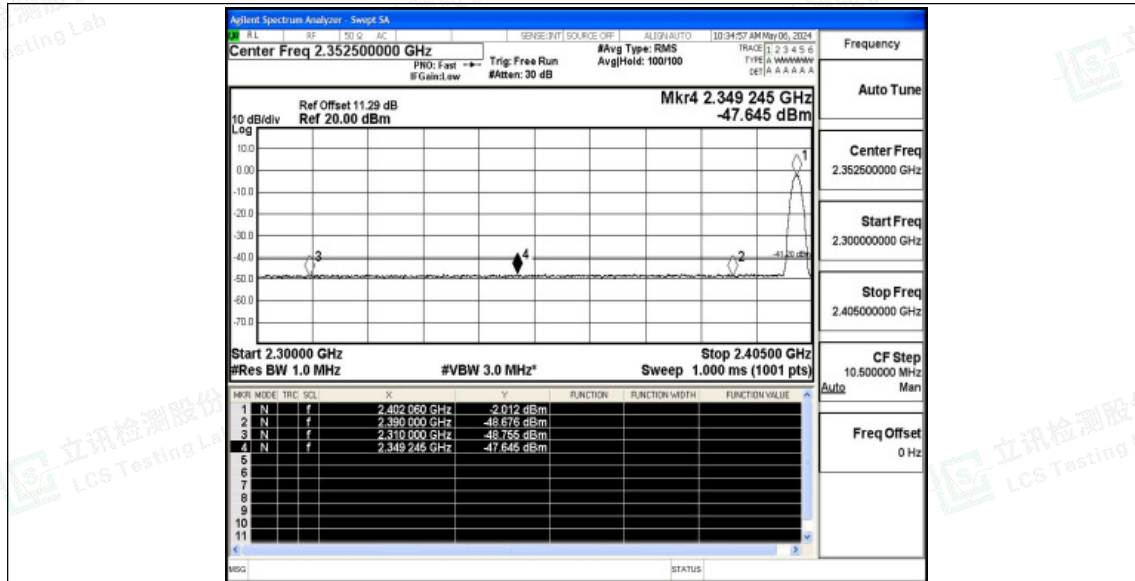


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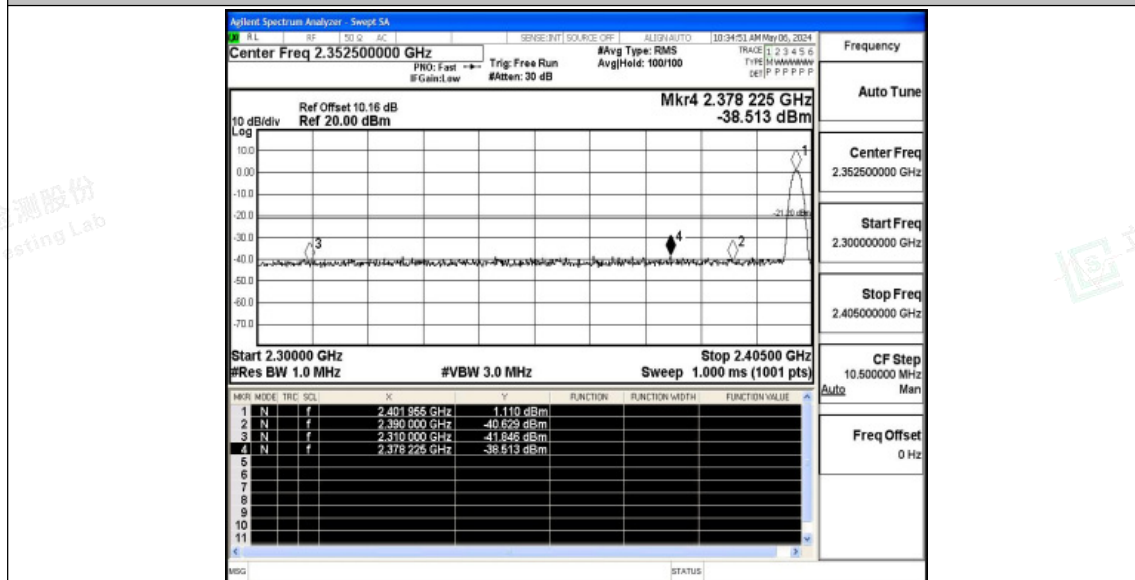
Add: 101, 201 Bldg A & 301 Bldg C., Juji Industrial Park, Yabianxueziwei Shajing Street, Baoan District, Shenzhen, 518000, P.R.C.

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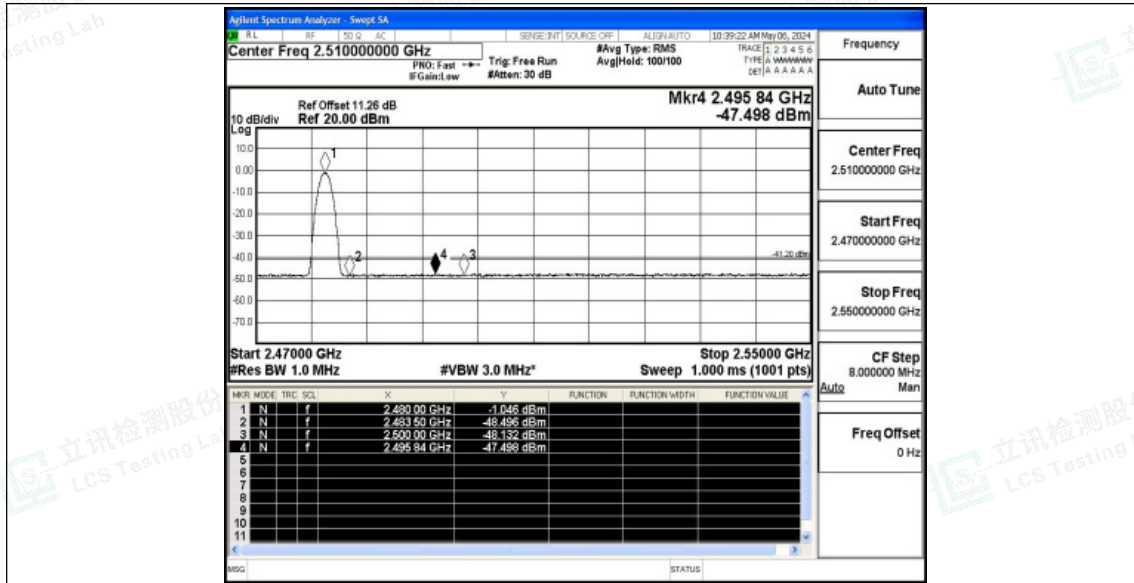


2DH5_Ant1_Low_2402_Peak

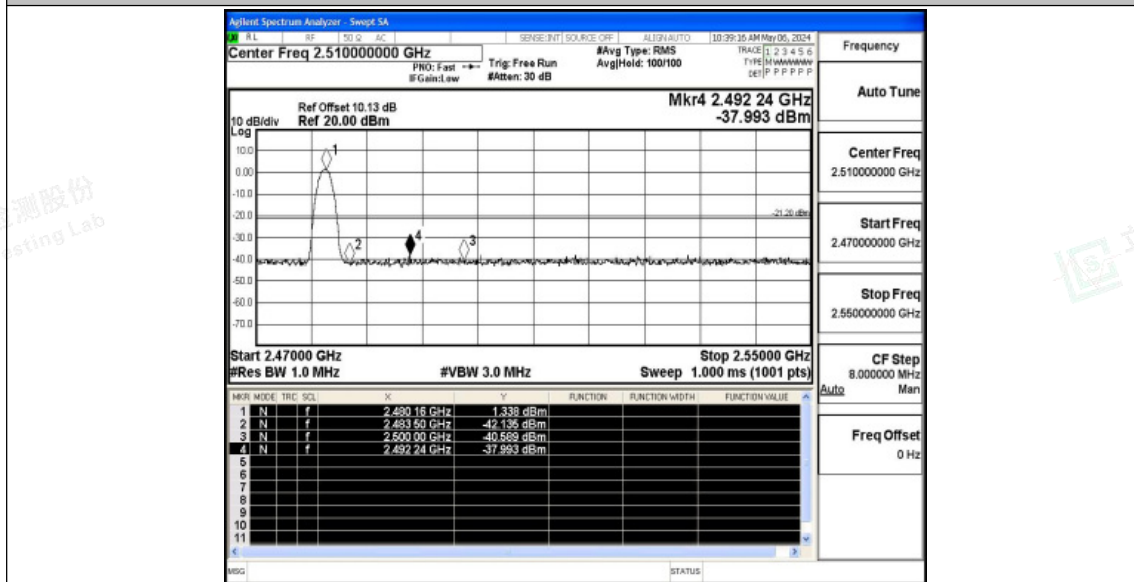


2DH5_Ant1_High_2480_AV





2DH5_Ant1_High_2480_Peak



2DH5_Ant1_Low_Hop_2402_Peak



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