



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Wireless Power Amplifier

Test Model: V3-QASF-V1

Environmental Conditions

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



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A.1 20dB Emission Bandwidth

Test Result

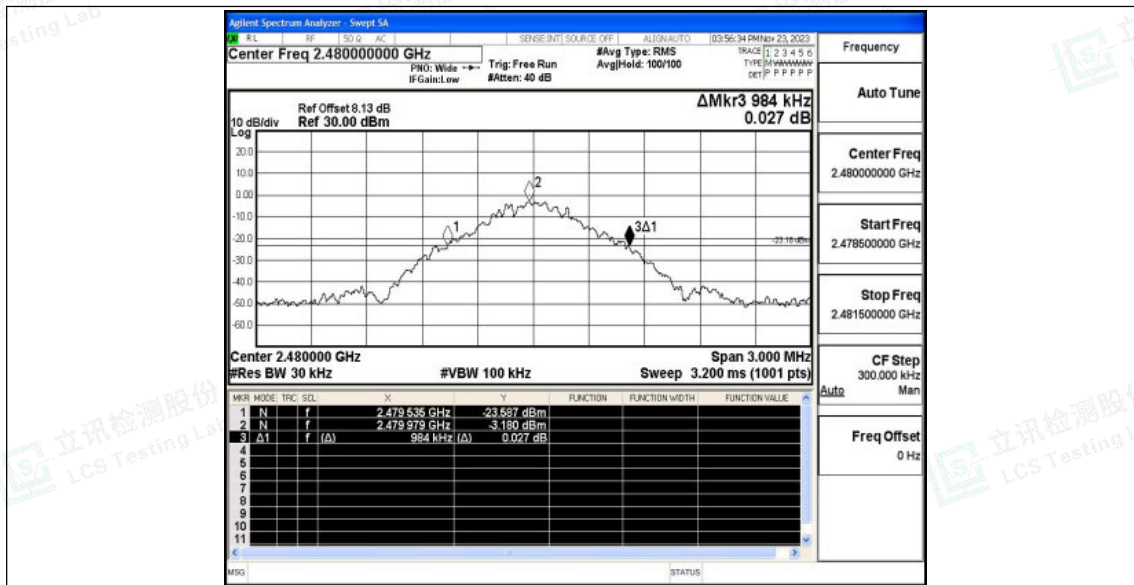
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant1	2402	0.966	2401.541	2402.507	---
		2441	1.008	2440.484	2441.492	---
		2480	0.984	2479.535	2480.519	---
2DH5	Ant1	2402	1.293	2401.364	2402.657	---
		2441	1.317	2440.340	2441.657	---
		2480	1.323	2479.340	2480.663	---



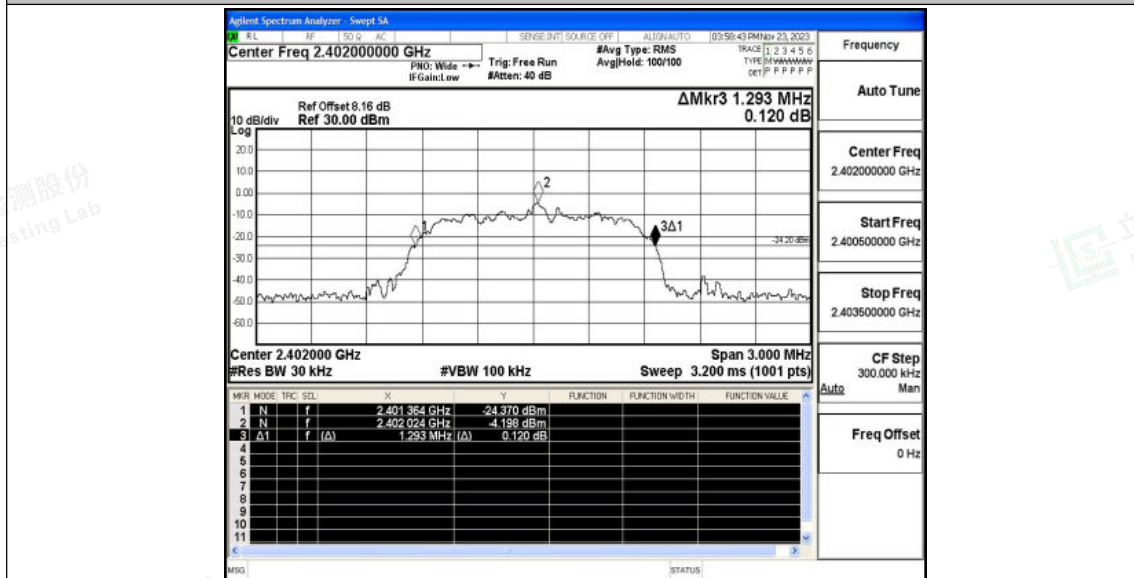


Test Graphs



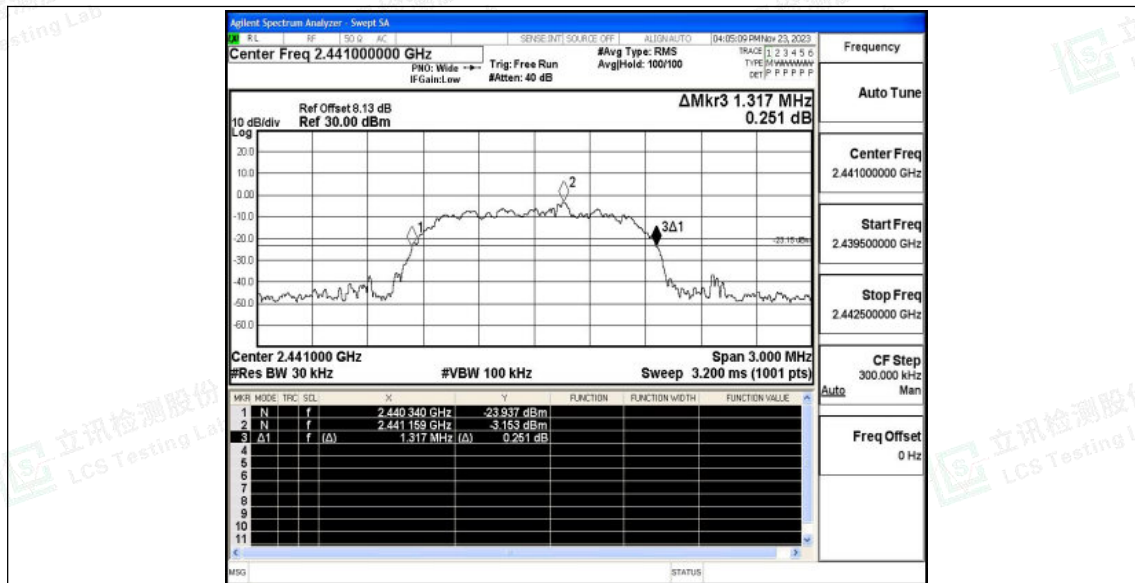


2DH5_Ant1_2402

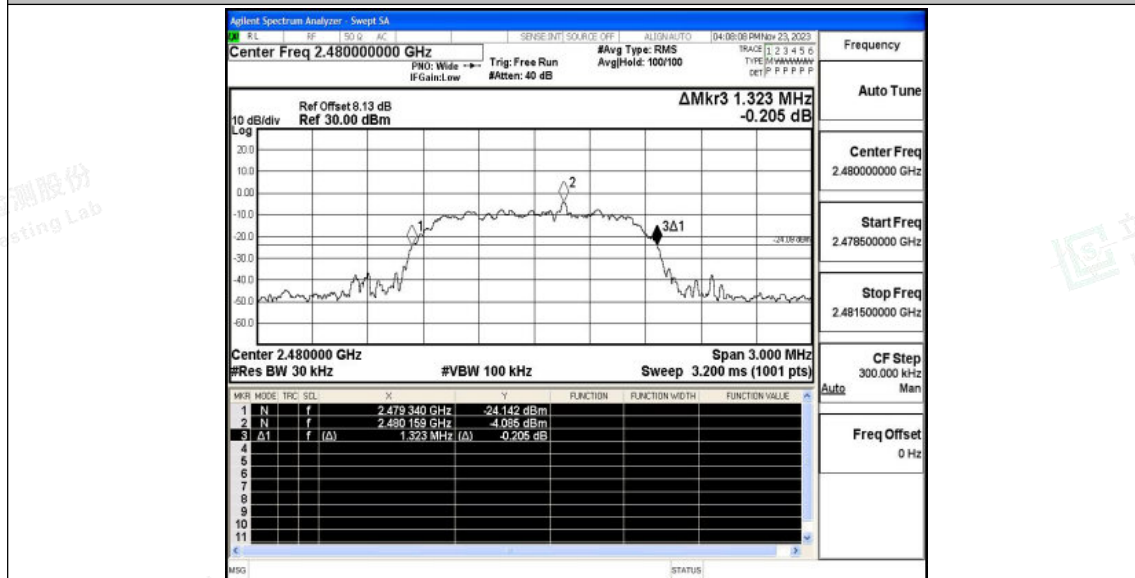


2DH5_Ant1_2441





2DH5_Ant1_2480





A.2 Maximum peak conducted output power

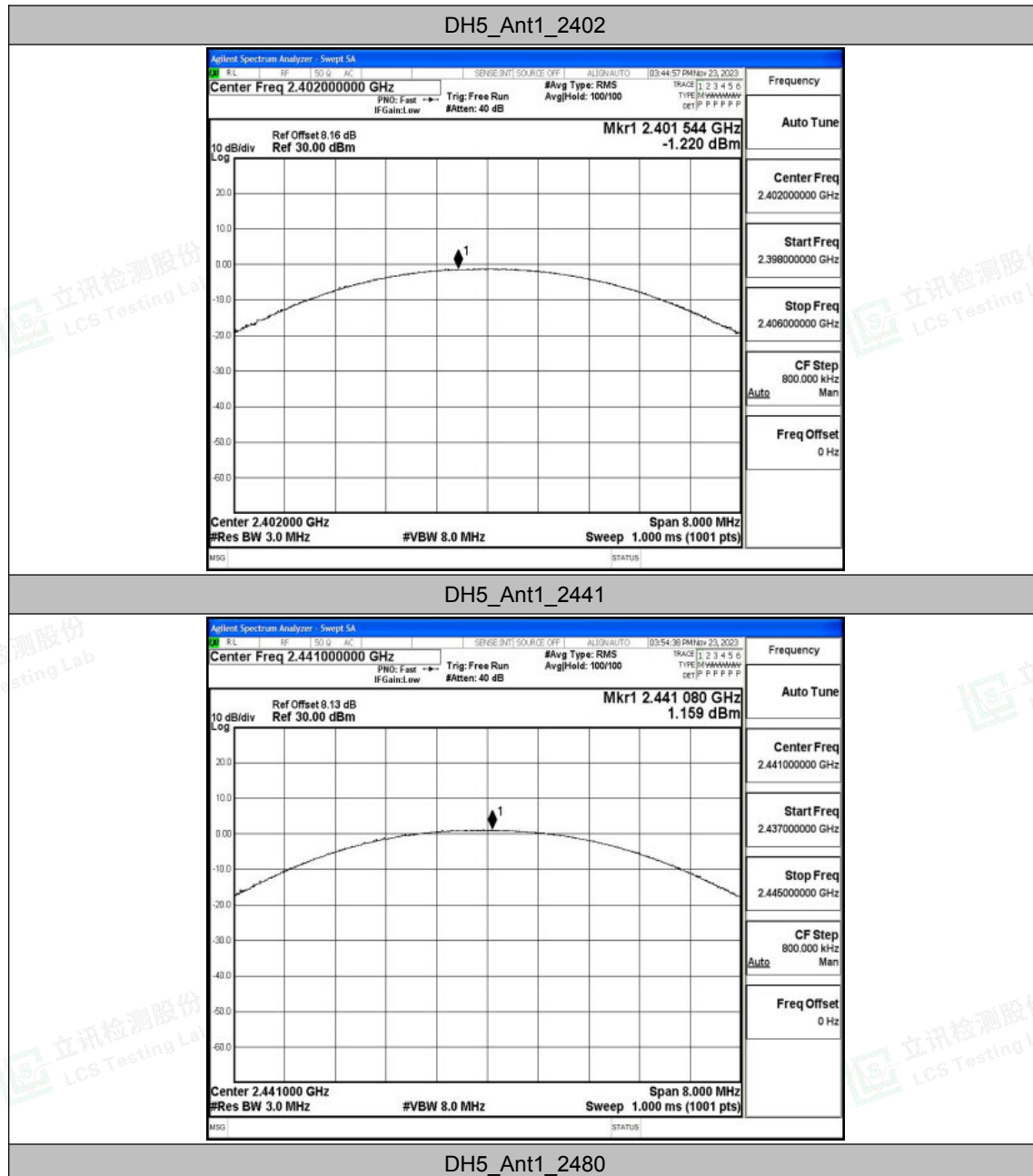
Test Result

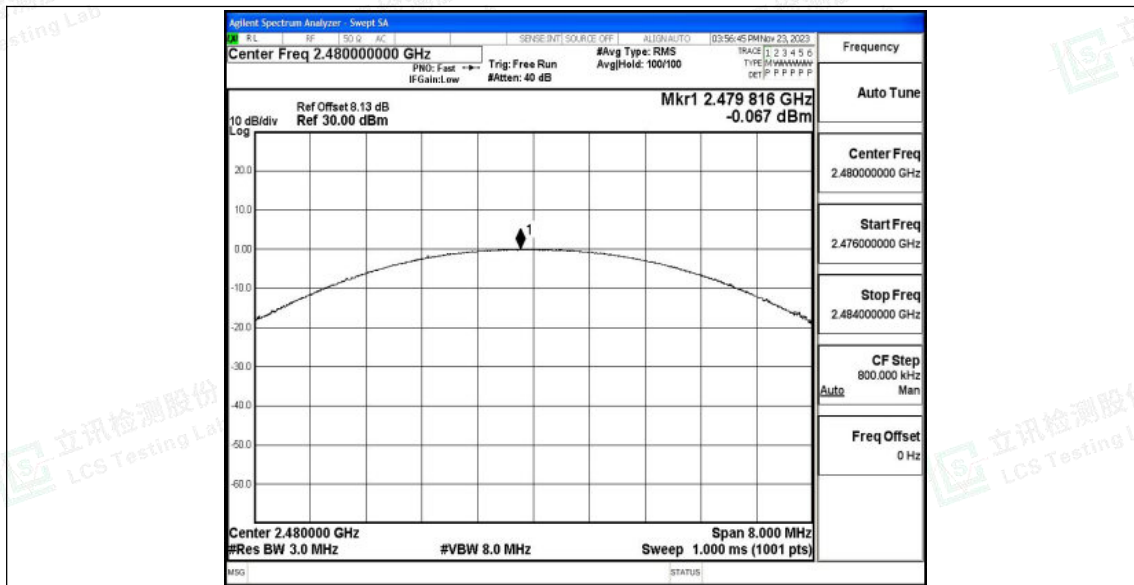
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-1.22	≤20.97	PASS
		2441	1.16	≤20.97	PASS
		2480	-0.07	≤20.97	PASS
2DH5	Ant1	2402	0.7	≤20.97	PASS
		2441	2.92	≤20.97	PASS
		2480	1.6	≤20.97	PASS



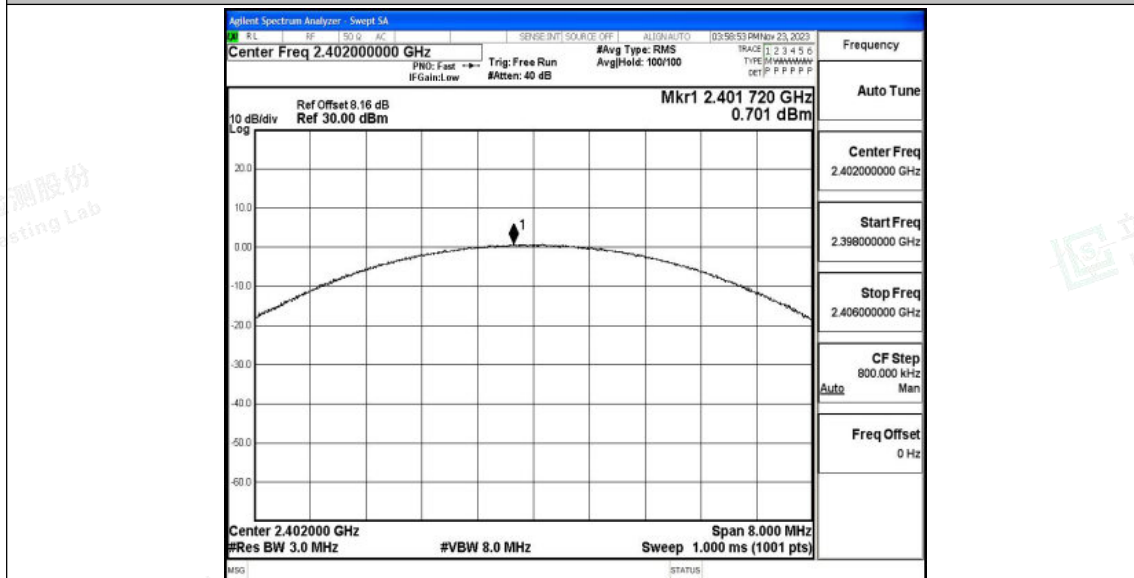


Test Graphs



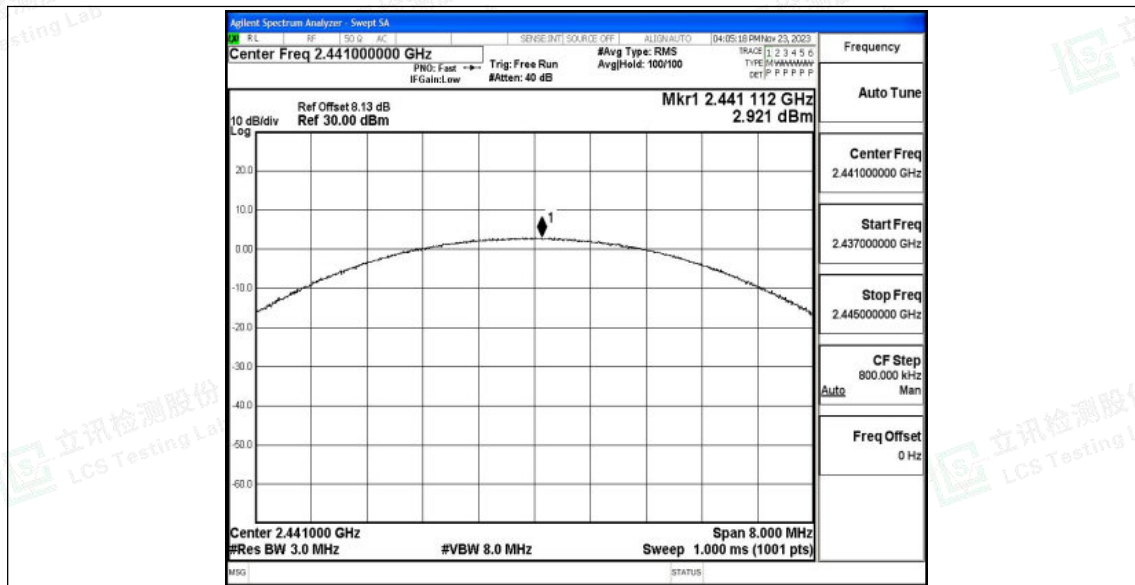


2DH5_Ant1_2402

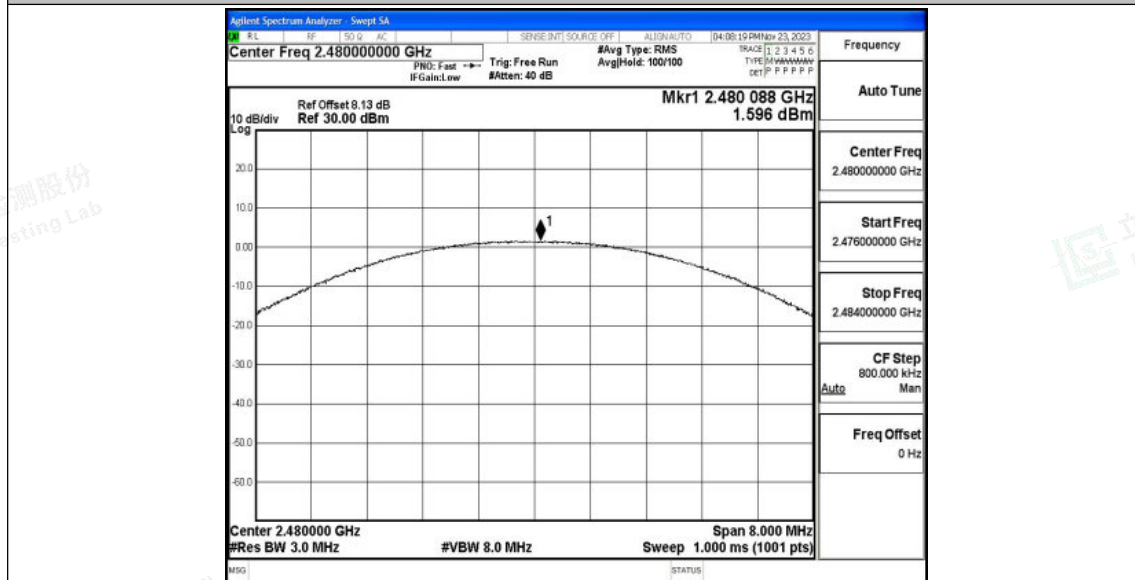


2DH5_Ant1_2441





2DH5_Ant1_2480





A.3 Carrier frequency separation

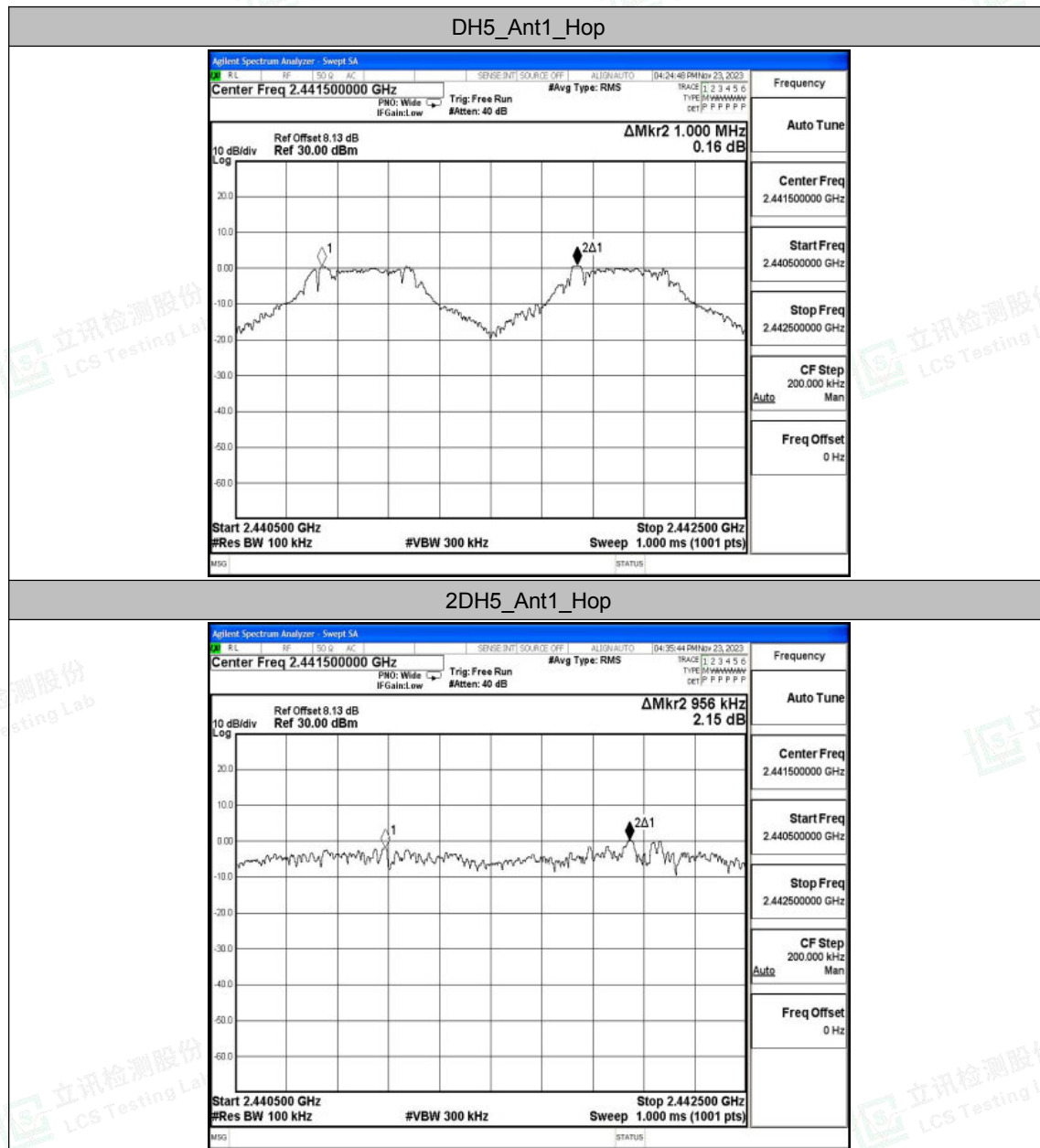
Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1	≥ 0.672	PASS
2DH5	Ant1	Hop	0.956	≥ 0.882	PASS





Test Graphs





A.4 Time of occupancy

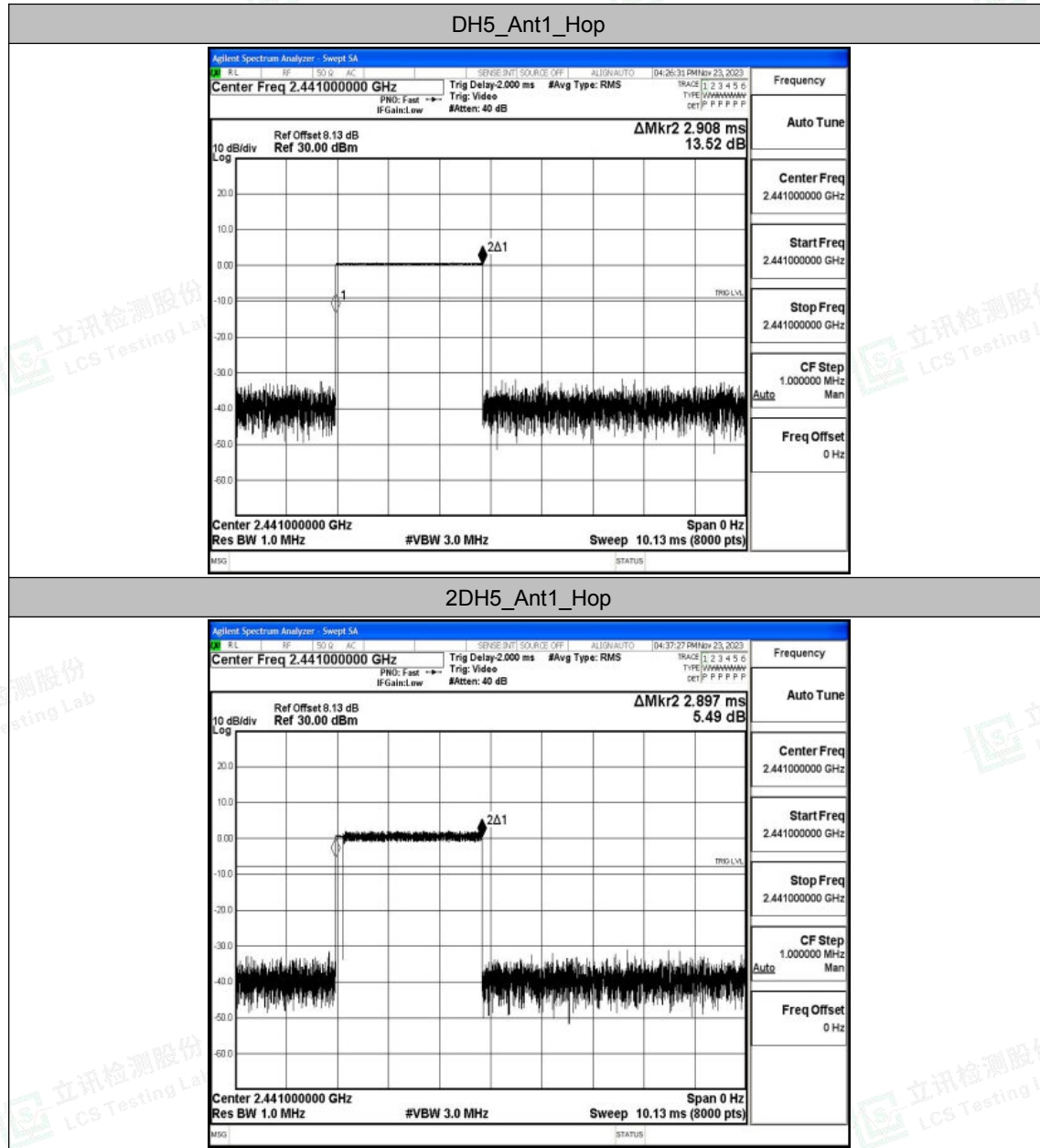
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.908	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	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS





Test Graphs





A.6 Band edge measurements

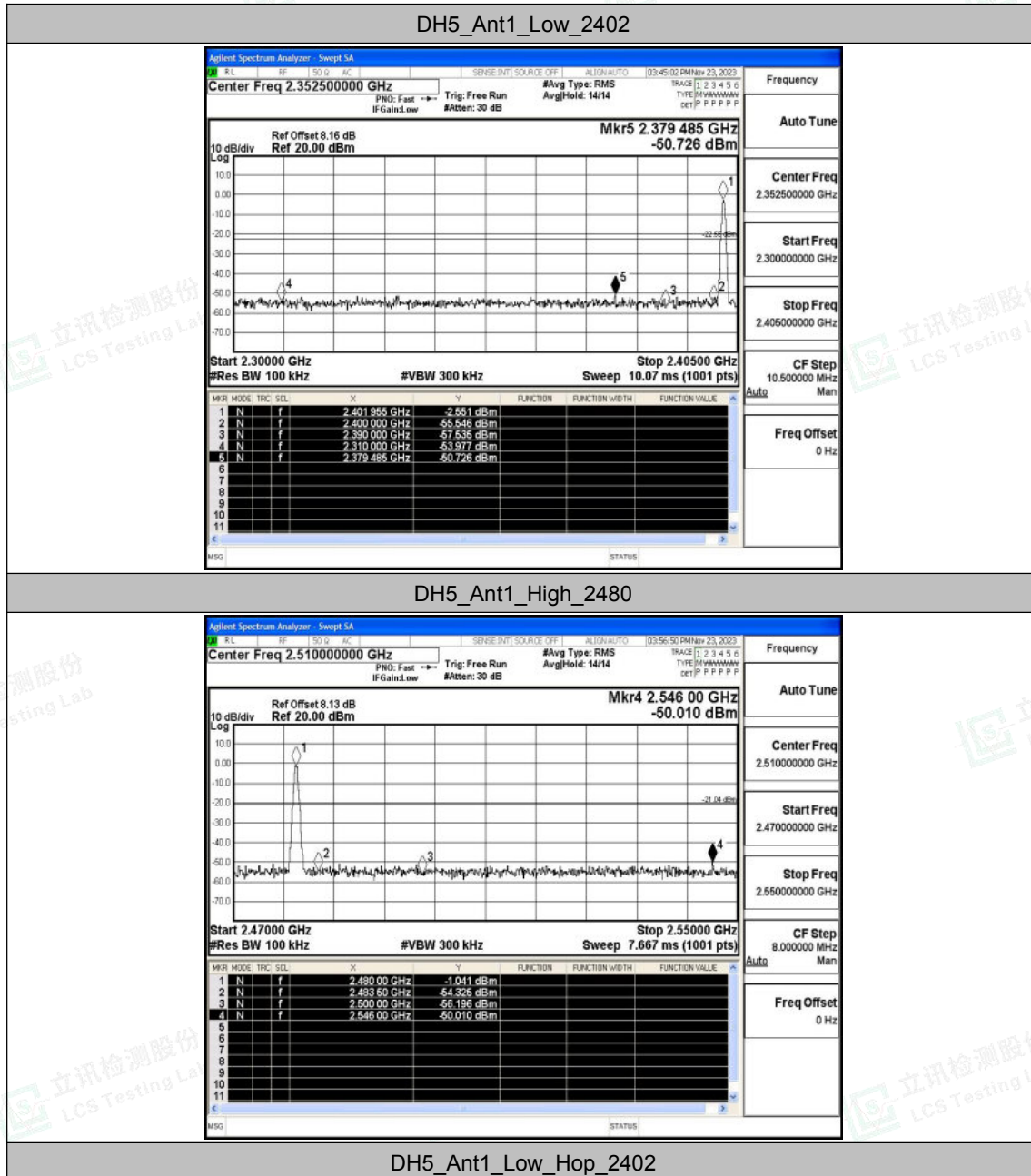
Test Result

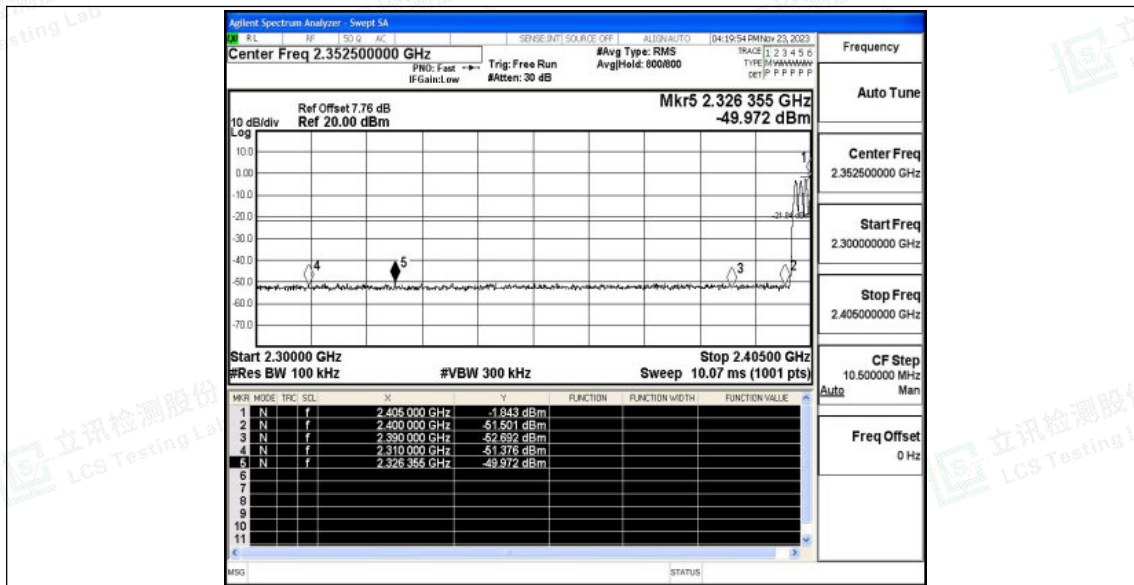
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-2.55	-50.73	≤ -22.55	PASS
		High	2480	-1.04	-50.01	≤ -21.04	PASS
		Low	Hop_2402	-1.84	-49.97	≤ -21.84	PASS
		High	Hop_2480	-0.32	-49.13	≤ -20.32	PASS
2DH5	Ant1	Low	2402	-3.66	-50.98	≤ -23.66	PASS
		High	2480	-0.88	-49.85	≤ -20.88	PASS
		Low	Hop_2402	-3.27	-49.93	≤ -23.27	PASS
		High	Hop_2480	-0.25	-49.88	≤ -20.25	PASS



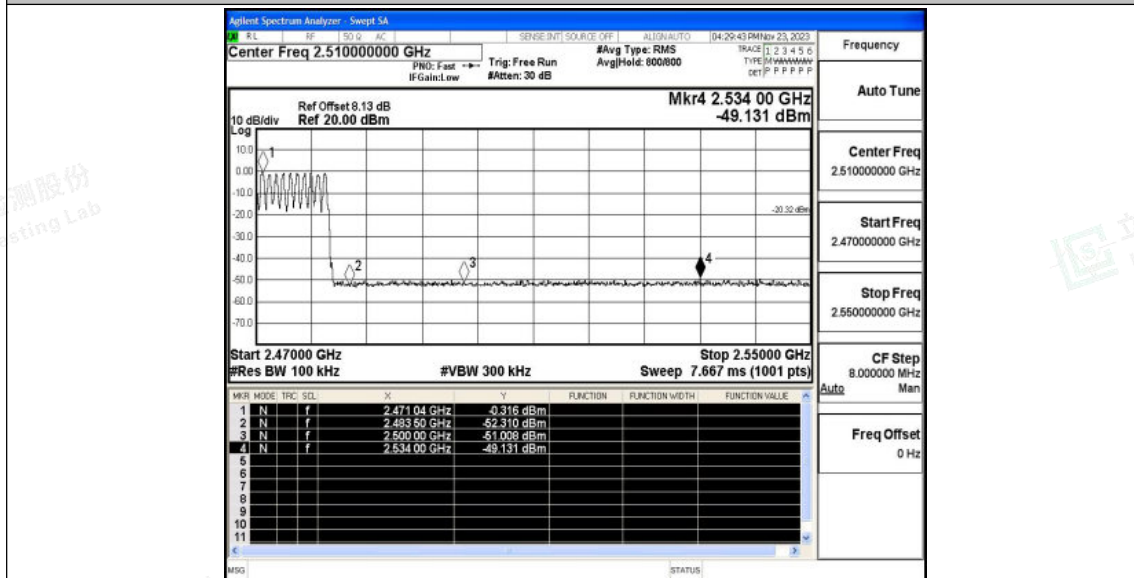


Test Graphs



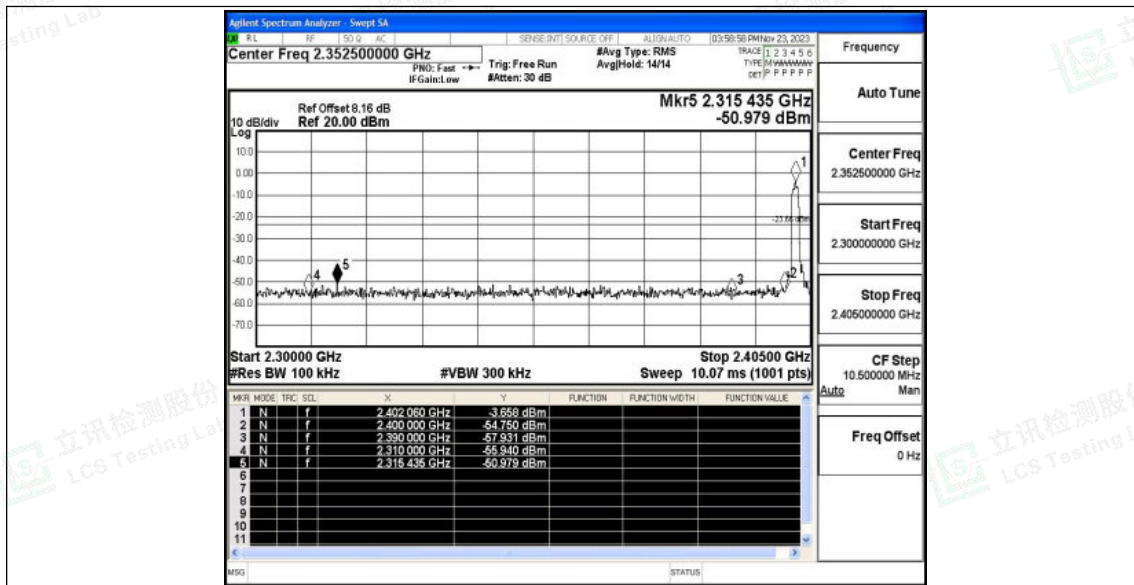


DH5_Ant1_High_Hop_2480

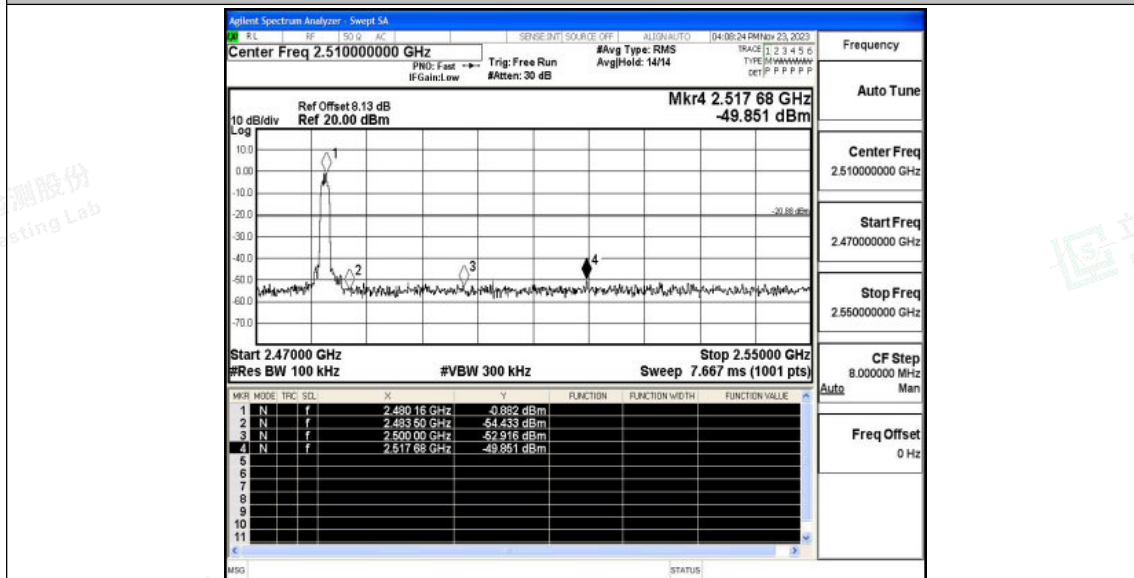


2DH5_Ant1_Low_2402



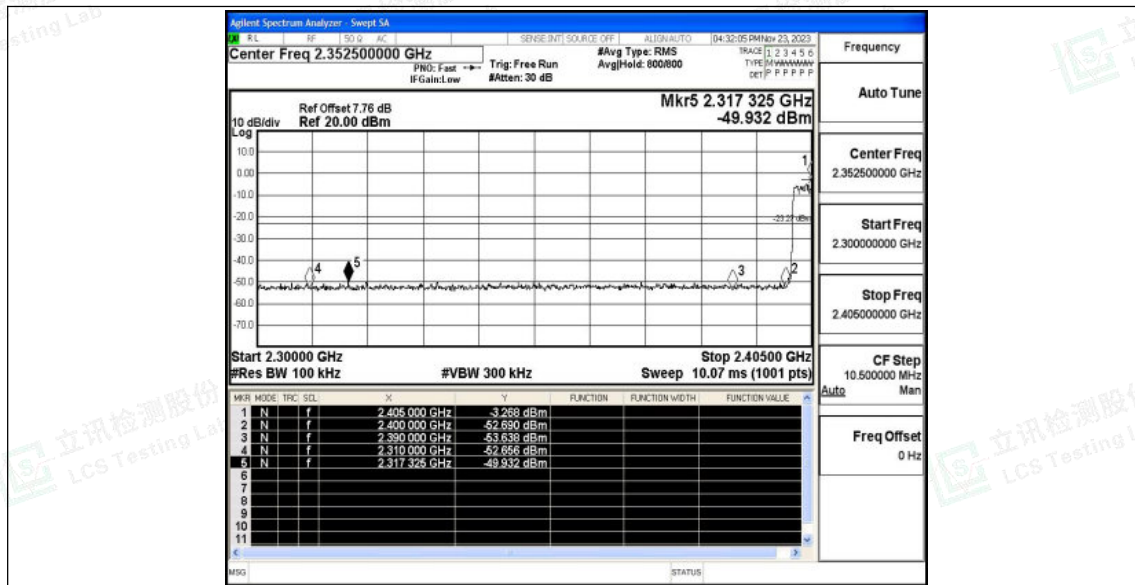


2DH5_Ant1_High_2480

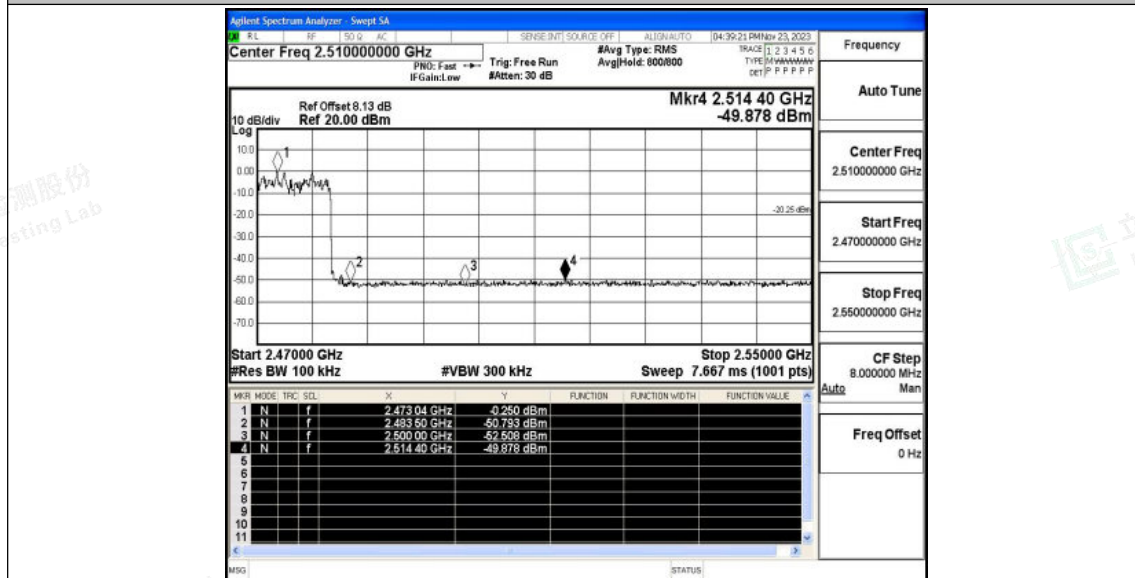


2DH5_Ant1_Low_Hop_2402





2DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

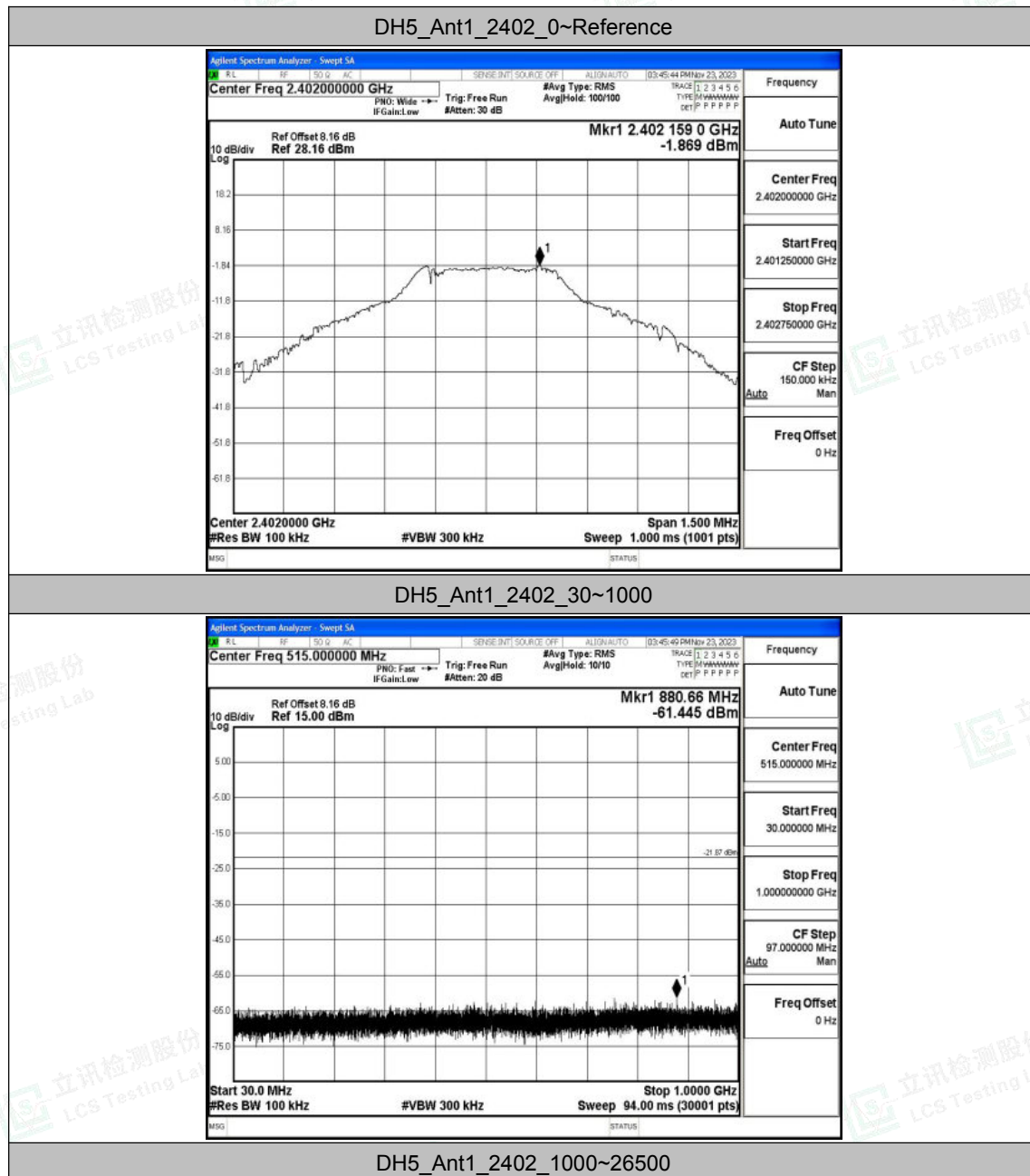
Test Result

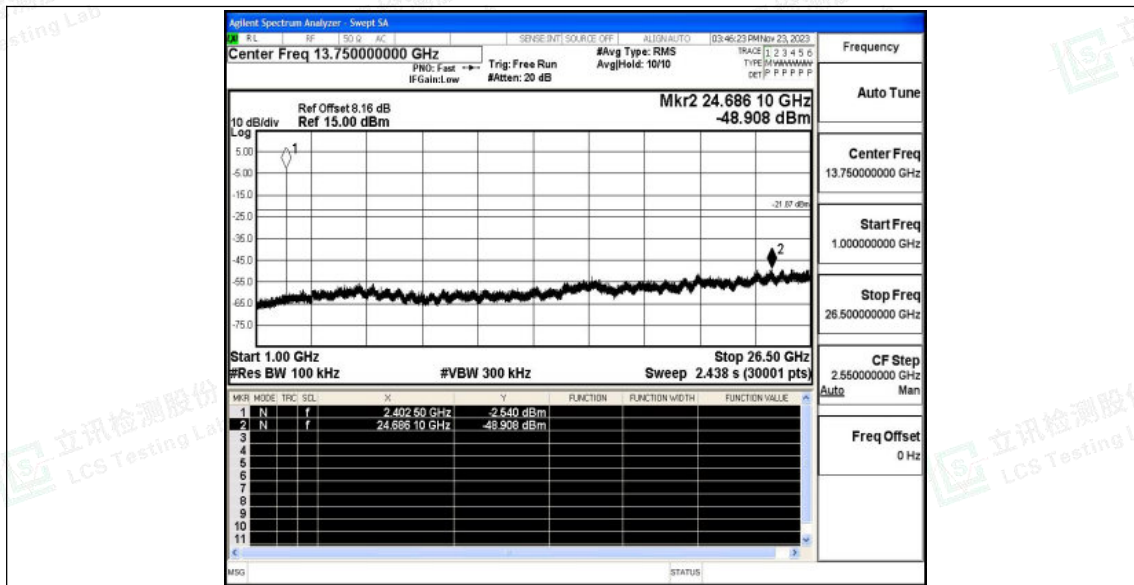
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.87	-1.87	---	PASS
			30~1000	-1.87	-61.45	≤-21.87	PASS
			1000~26500	-1.87	-48.91	≤-21.87	PASS
		2441	Reference	0.53	0.53	---	PASS
			30~1000	0.53	-62.29	≤-19.47	PASS
			1000~26500	0.53	-48.66	≤-19.47	PASS
		2480	Reference	-1.16	-1.16	---	PASS
			30~1000	-1.16	-62.06	≤-21.16	PASS
			1000~26500	-1.16	-49.27	≤-21.16	PASS
2DH5	Ant1	2402	Reference	-2.44	-2.44	---	PASS
			30~1000	-2.44	-61.94	≤-22.44	PASS
			1000~26500	-2.44	-48.61	≤-22.44	PASS
		2441	Reference	-0.14	-0.14	---	PASS
			30~1000	-0.14	-61.66	≤-20.14	PASS
			1000~26500	-0.14	-48.48	≤-20.14	PASS
		2480	Reference	-3.07	-3.07	---	PASS
			30~1000	-3.07	-62.38	≤-23.07	PASS
			1000~26500	-3.07	-48.33	≤-23.07	PASS



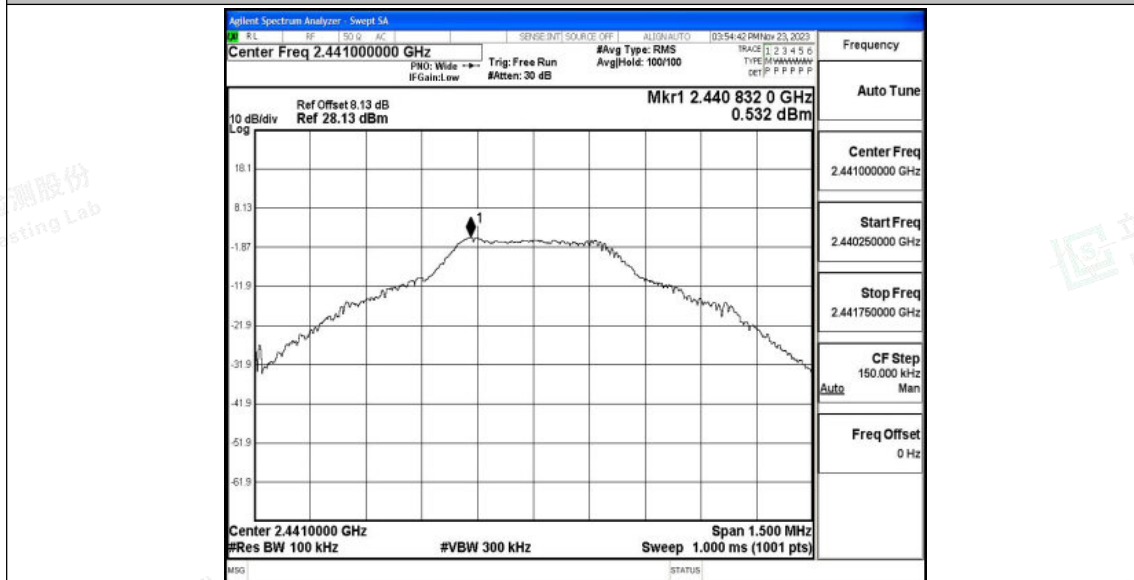


Test Graphs



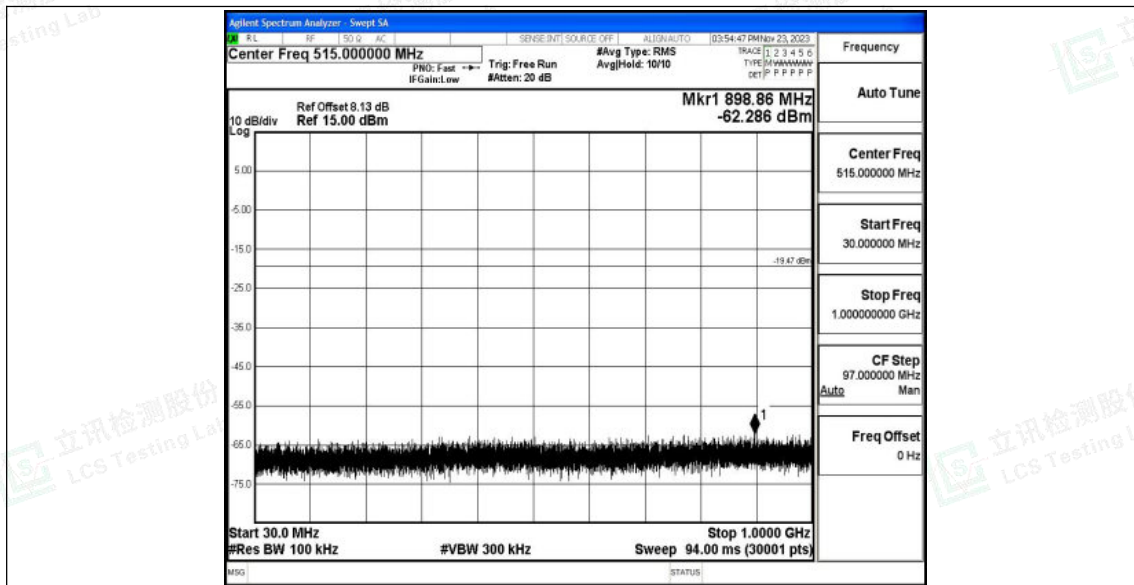


DH5_Ant1_2441_0~Reference

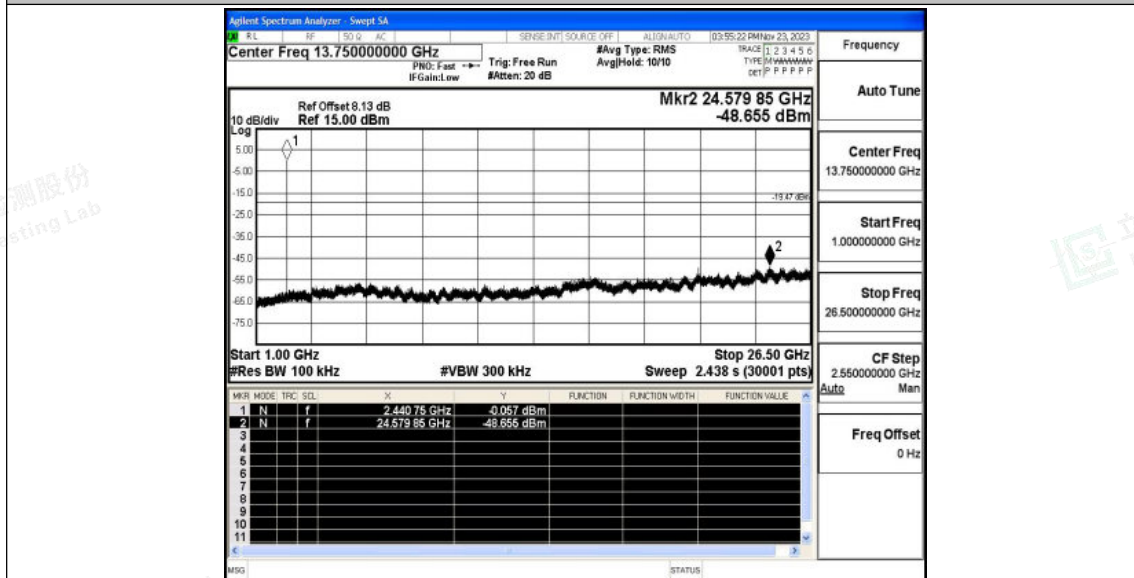


DH5_Ant1_2441_30~1000



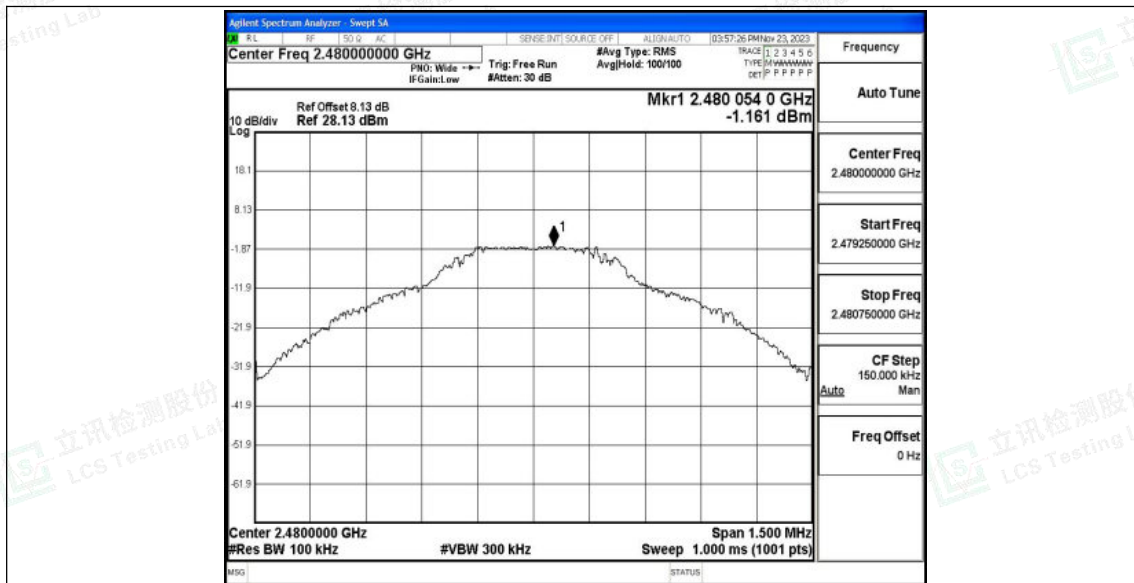


DH5_Ant1_2441_1000~26500

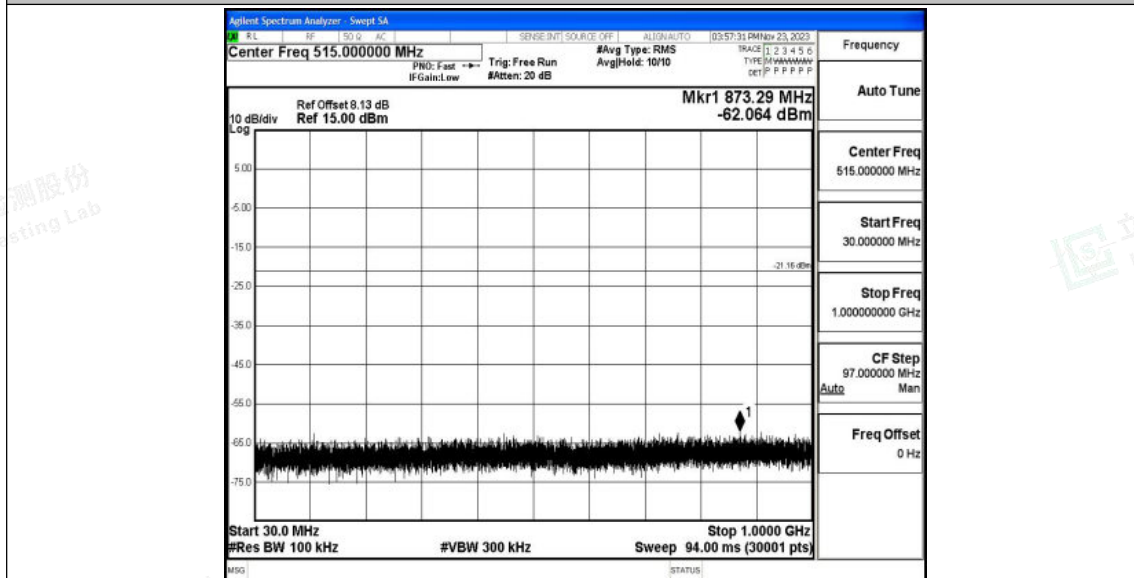


DH5_Ant1_2480_0~Reference



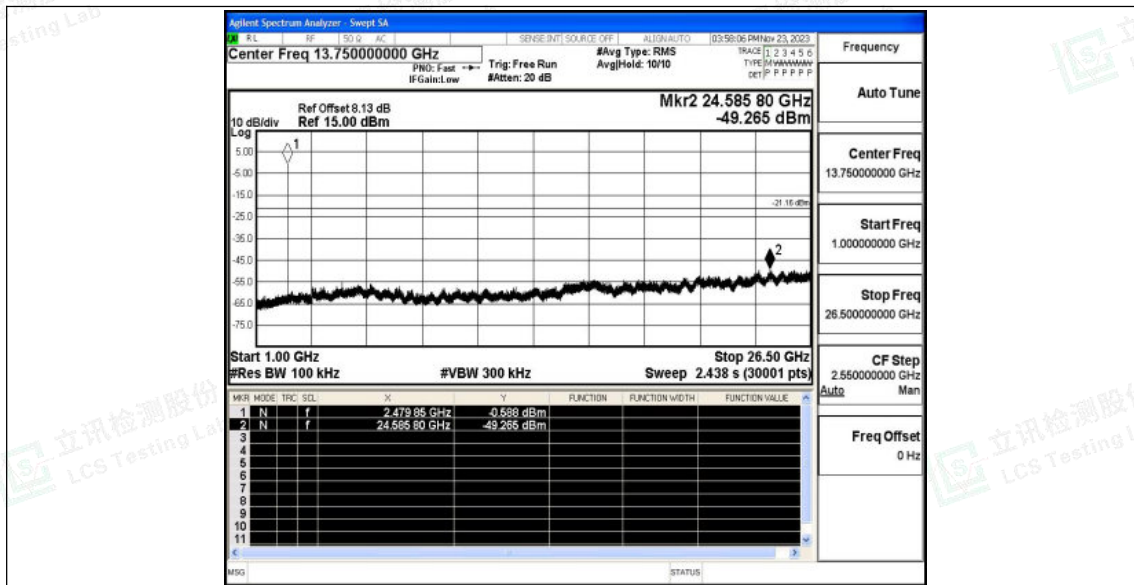


DH5_Ant1_2480_30~1000

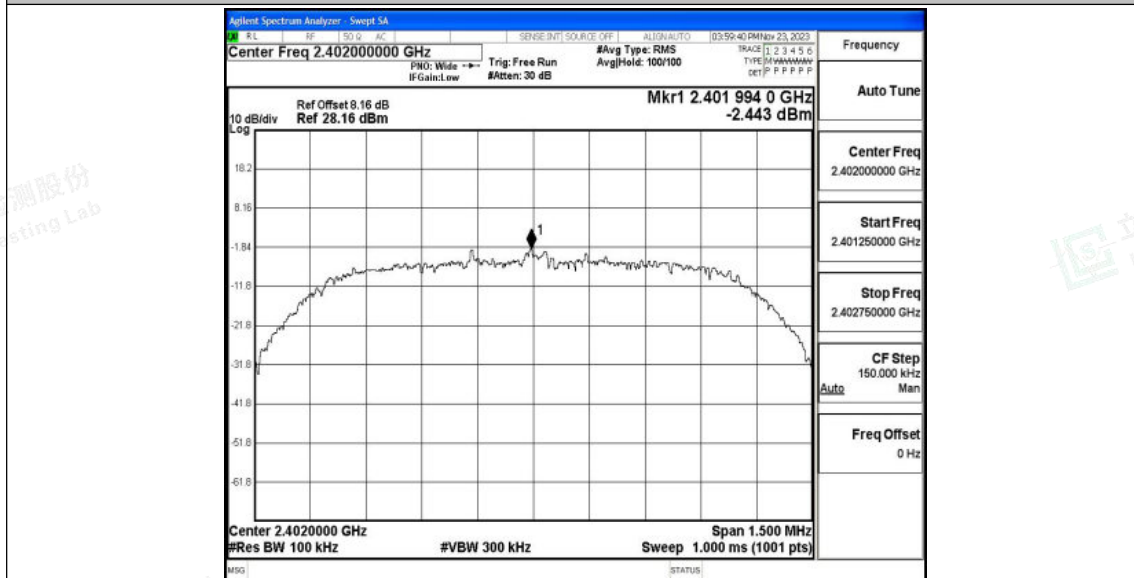


DH5_Ant1_2480_1000~26500



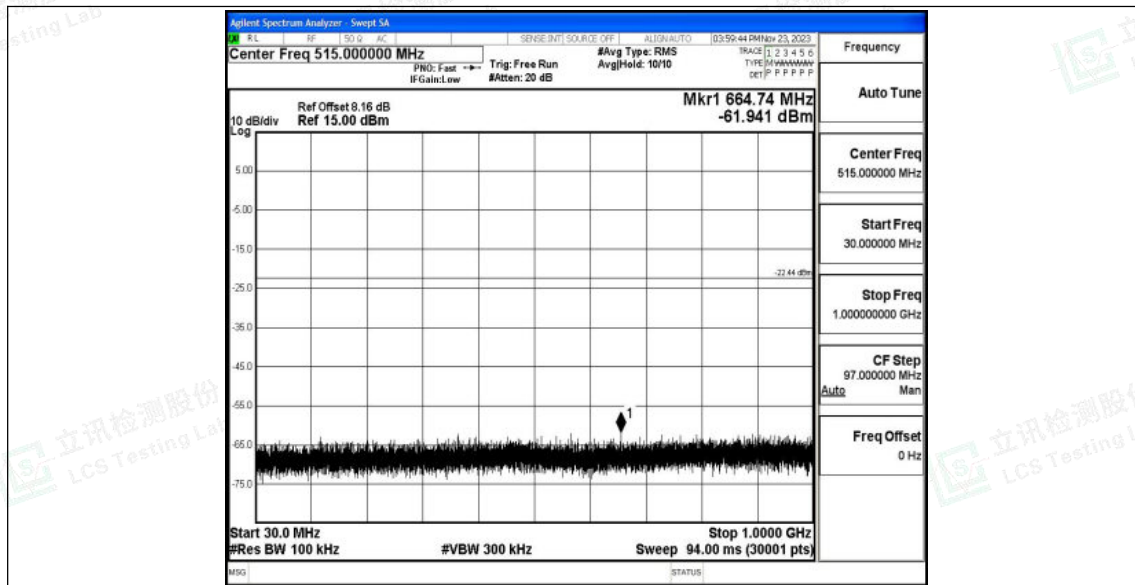


2DH5_Ant1_2402_0~Reference

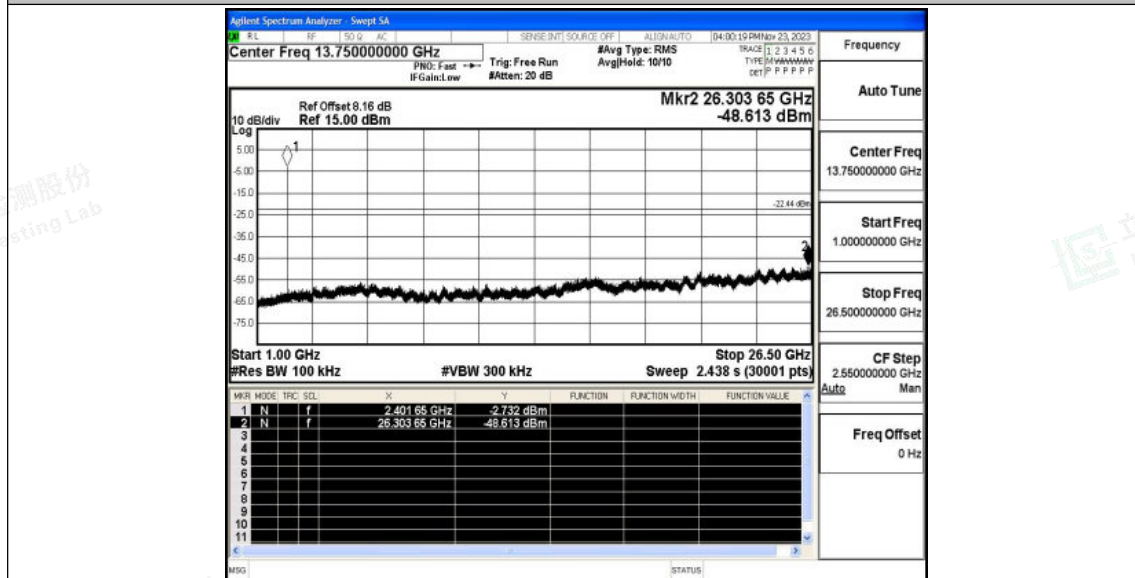


2DH5_Ant1_2402_30~1000



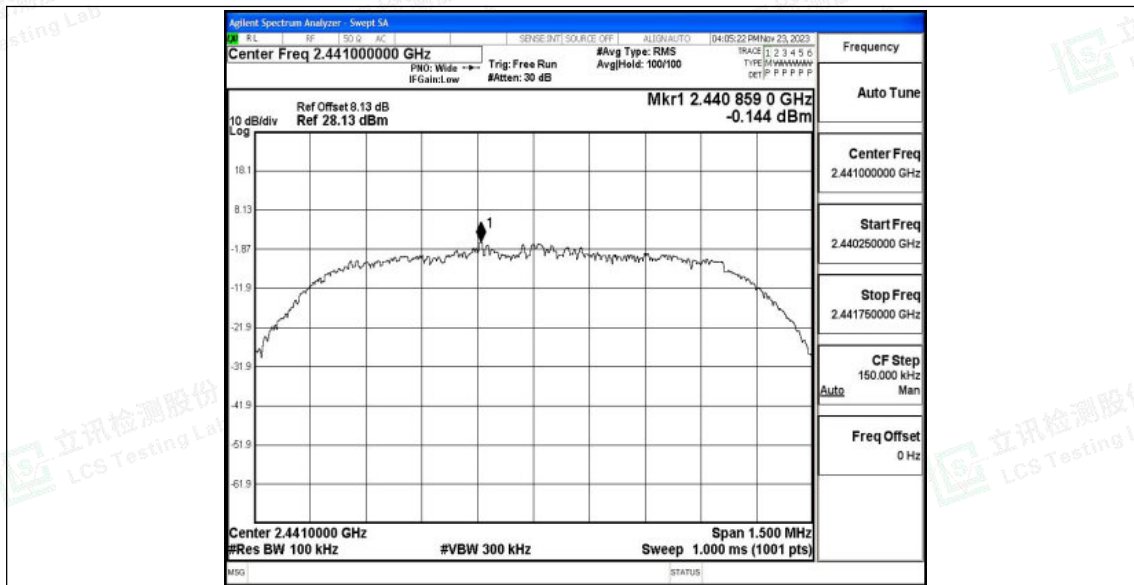


2DH5_Ant1_2402_1000~26500

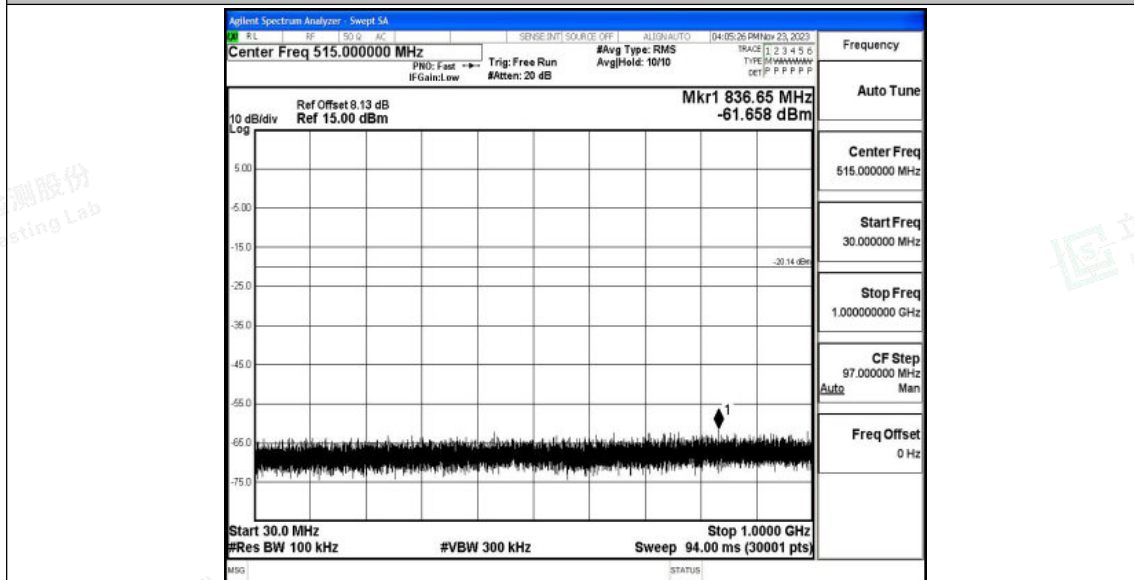


2DH5_Ant1_2441_0~Reference



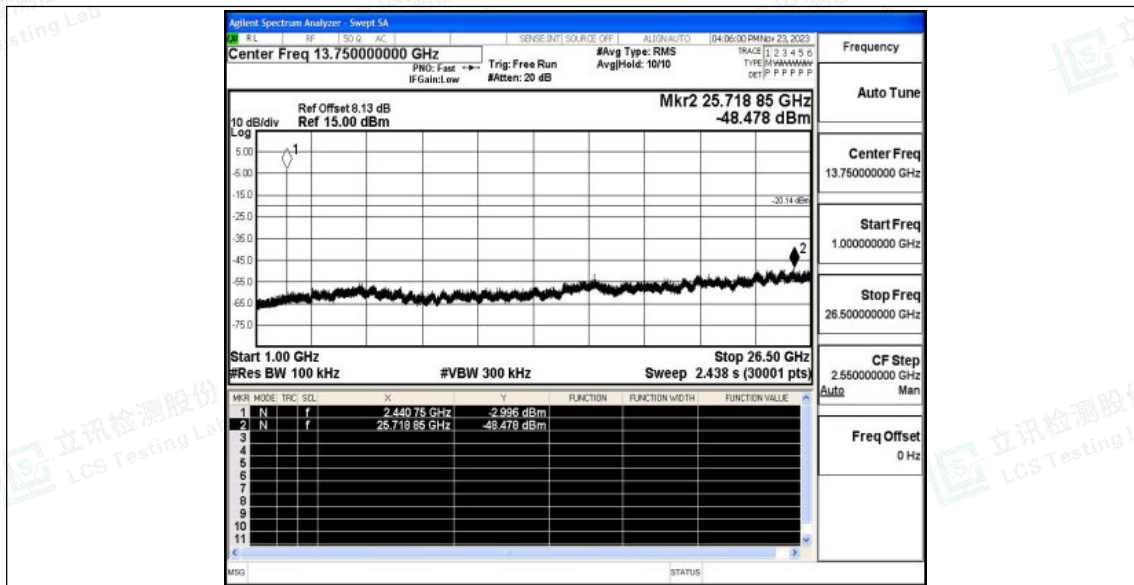


2DH5_Ant1_2441_30~1000

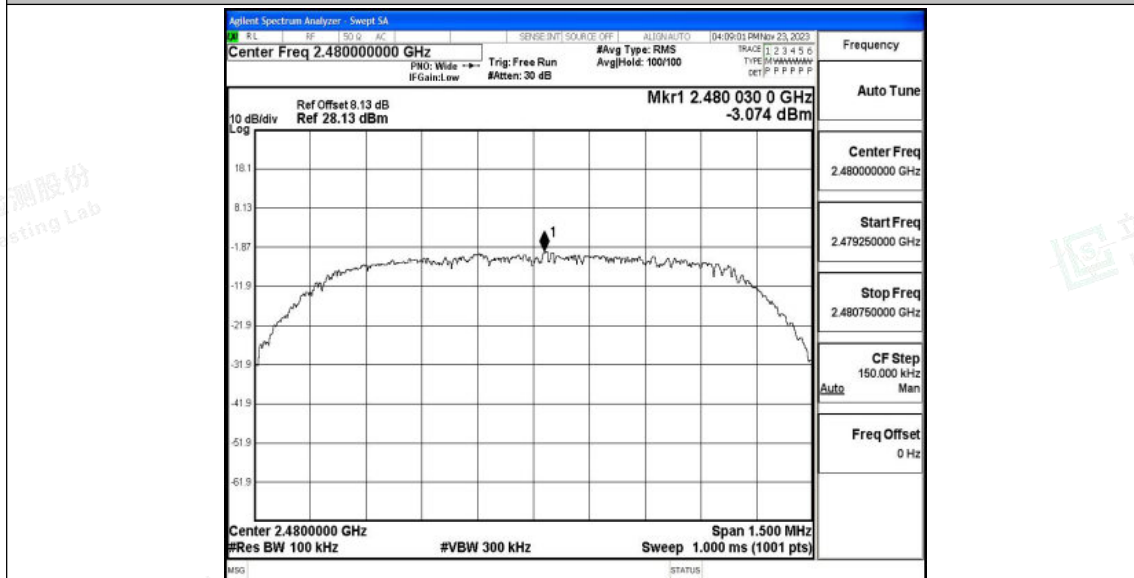


2DH5_Ant1_2441_1000~26500



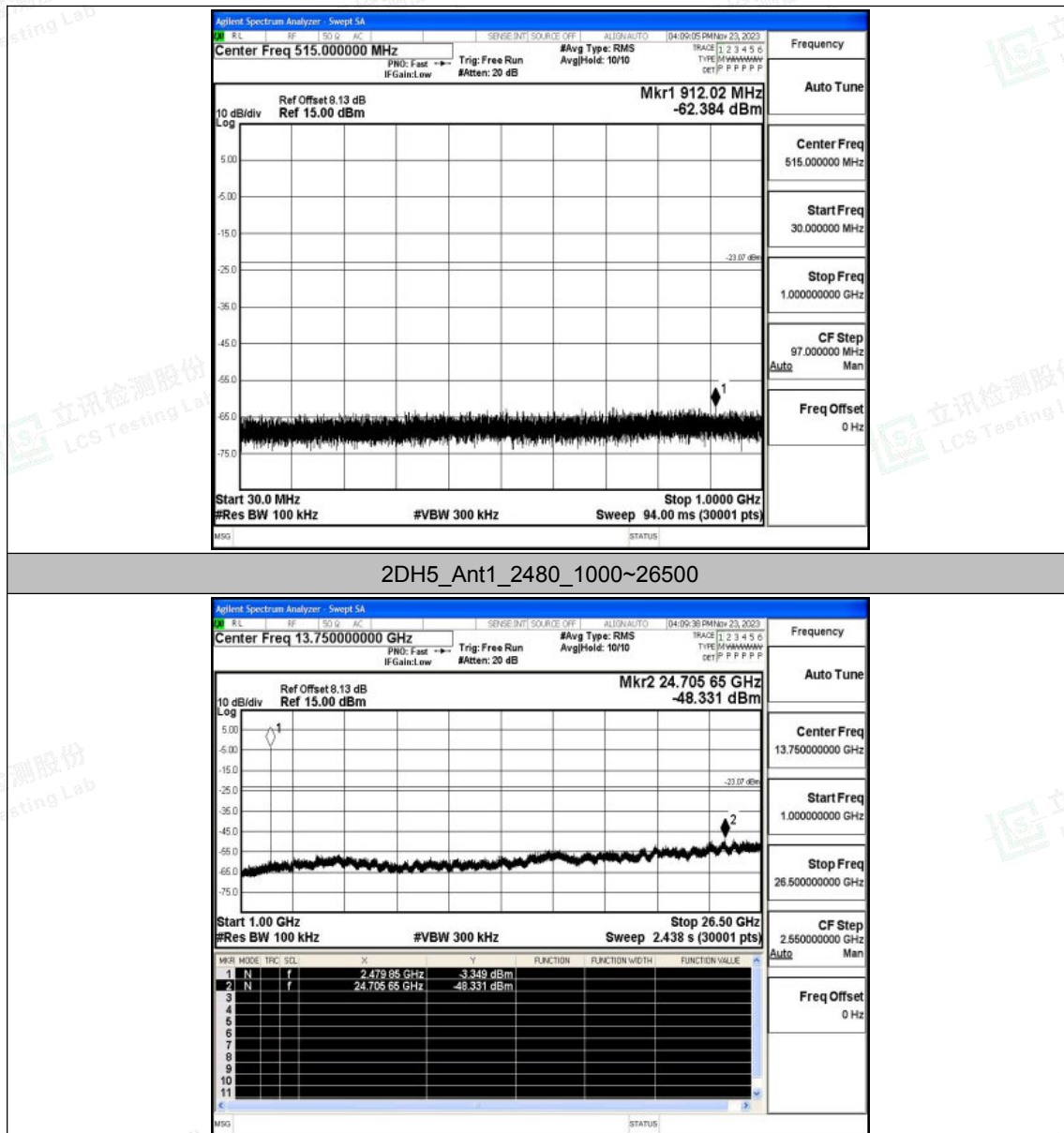


2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000







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	-49.23	≤-41.20	45.97	≤54	PASS
				AV	2388.935	-48.72	≤-41.20	46.48	≤54	PASS
				AV	2390.000	-48.88	≤-41.20	46.32	≤54	PASS
				Peak	2310.000	-43.86	≤-21.20	51.34	≤74	PASS
				Peak	2315.645	-39.44	≤-21.20	55.76	≤74	PASS
				Peak	2390.000	-44.07	≤-21.20	51.13	≤74	PASS
		High	2480	AV	2483.500	-48.51	≤-41.20	46.69	≤54	PASS
				AV	2483.520	-48.51	≤-41.20	46.69	≤54	PASS
				AV	2500.000	-48.79	≤-41.20	46.41	≤54	PASS
				Peak	2483.500	-43.83	≤-21.20	51.37	≤74	PASS
				Peak	2496.240	-39.66	≤-21.20	55.54	≤74	PASS
				Peak	2500.000	-45	≤-21.20	50.20	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-41.96	≤-21.20	53.24	≤74	PASS
				Peak	2388.725	-38.74	≤-21.20	56.46	≤74	PASS
				Peak	2390.000	-41.01	≤-21.20	54.19	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-40.74	≤-21.20	54.46	≤74	PASS
				Peak	2494.720	-38.18	≤-21.20	57.02	≤74	PASS
				Peak	2500.000	-40.53	≤-21.20	54.67	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.16	≤-41.20	46.04	≤54	PASS
				AV	2377.175	-48.66	≤-41.20	46.54	≤54	PASS
				AV	2390.000	-48.92	≤-41.20	46.28	≤54	PASS
				Peak	2310.000	-44.95	≤-21.20	50.25	≤74	PASS
				Peak	2381.690	-38.23	≤-21.20	56.97	≤74	PASS
				Peak	2390.000	-44.38	≤-21.20	50.82	≤74	PASS
		High	2480	AV	2483.500	-48.01	≤-41.20	47.19	≤54	PASS
				AV	2483.520	-48.01	≤-41.20	47.19	≤54	PASS
				AV	2500.000	-48.65	≤-41.20	46.55	≤54	PASS
				Peak	2483.500	-45.7	≤-21.20	49.50	≤74	PASS
				Peak	2488.480	-39.54	≤-21.20	55.66	≤74	PASS
				Peak	2500.000	-43.29	≤-21.20	51.91	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-42.15	≤-21.20	53.05	≤74	PASS
				Peak	2329.715	-38.23	≤-21.20	56.97	≤74	PASS
				Peak	2390.000	-41.15	≤-21.20	54.05	≤74	PASS



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		High	Hop_24 80	Peak	2483.500	-40.36	≤ -21.20	54.84	≤ 74	PASS
				Peak	2496.960	-37.82	≤ -21.20	57.38	≤ 74	PASS
				Peak	2500.000	-40.87	≤ -21.20	54.33	≤ 74	PASS

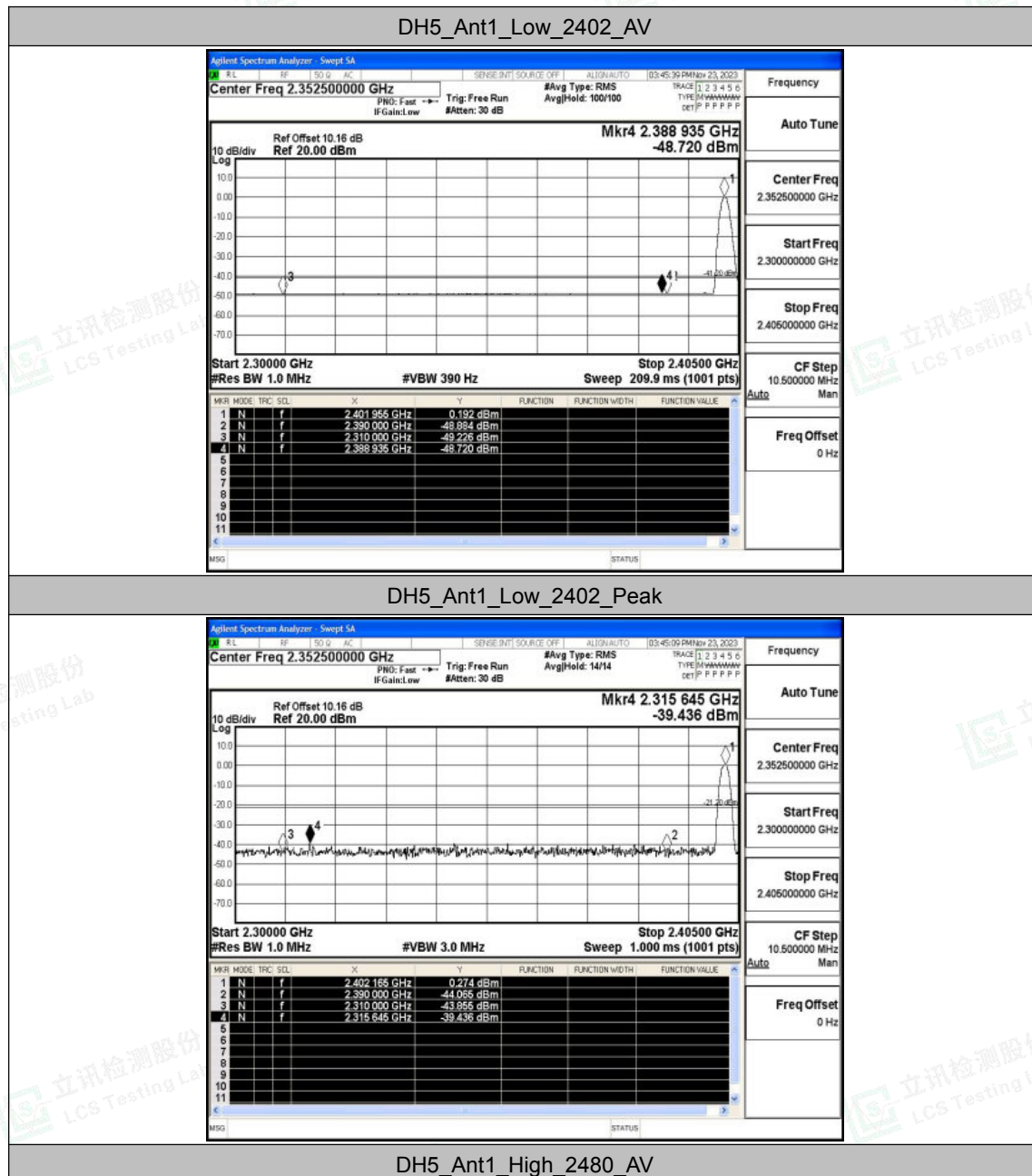
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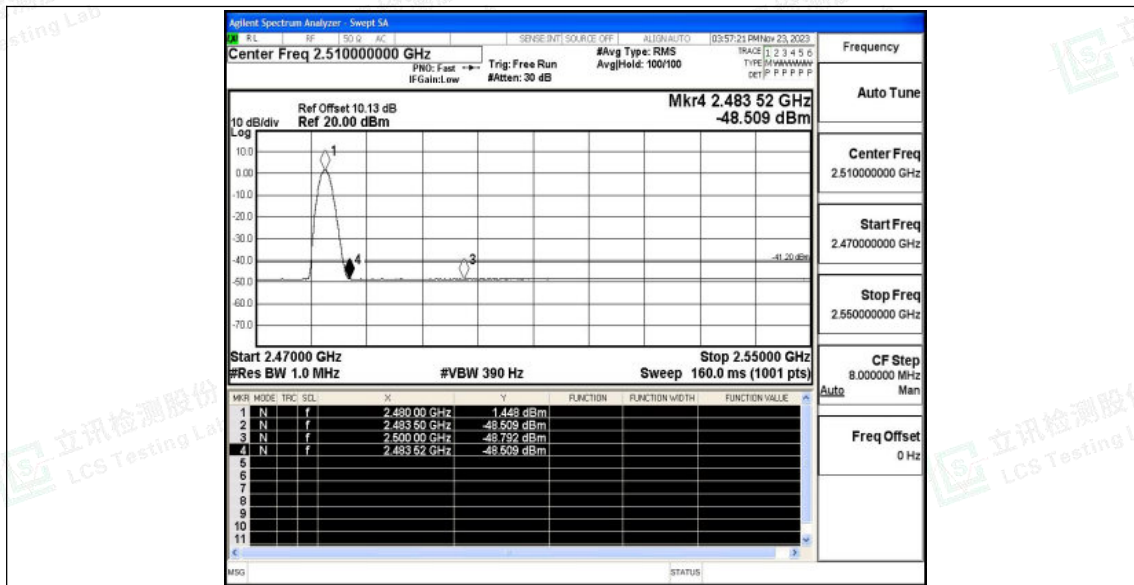
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



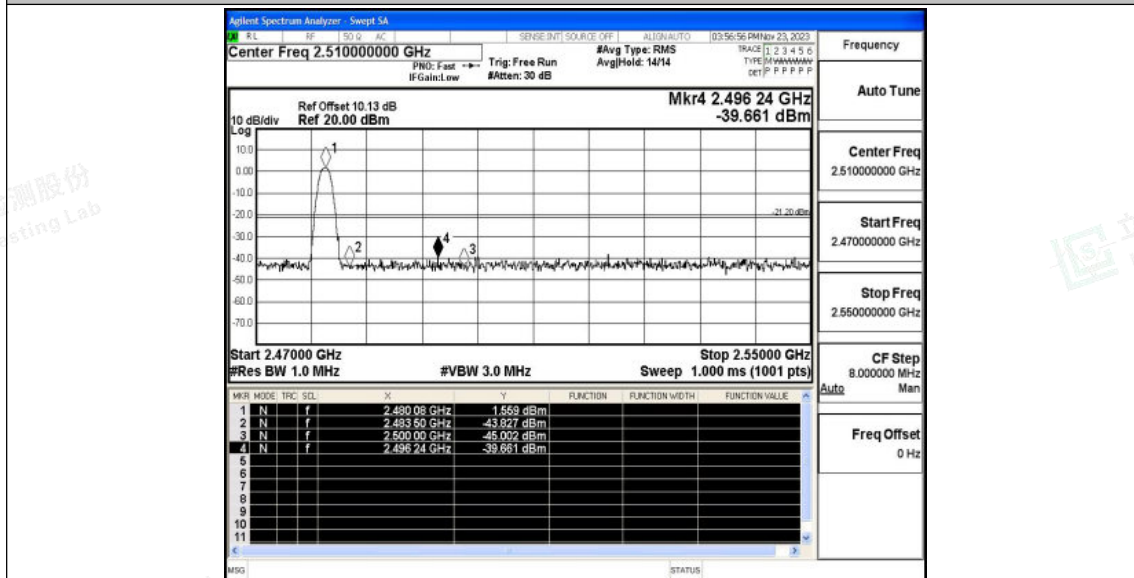


Test Graphs



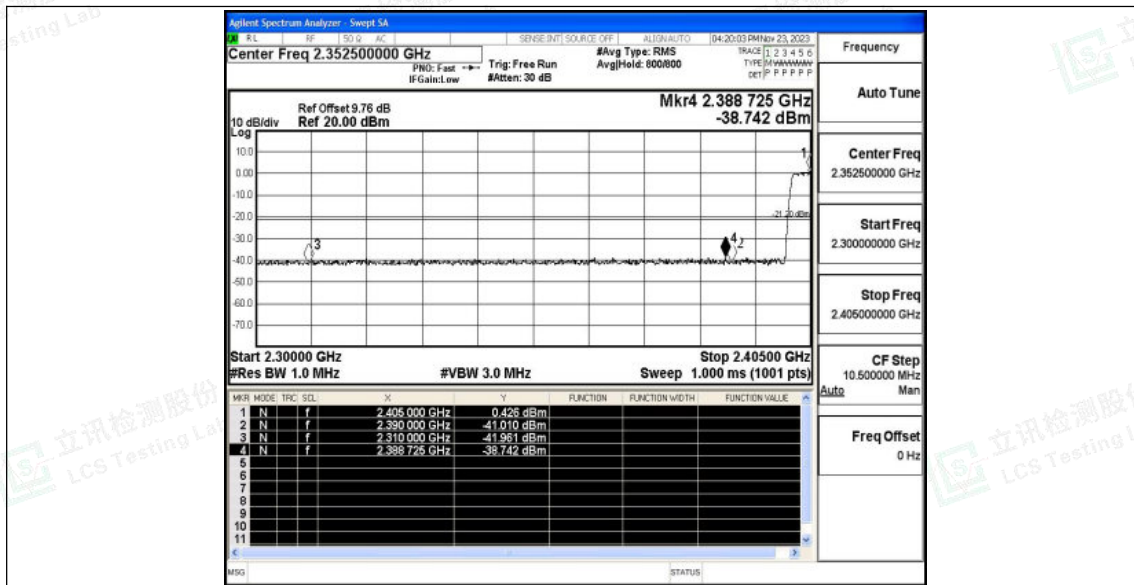


DH5_Ant1_High_2480_Peak

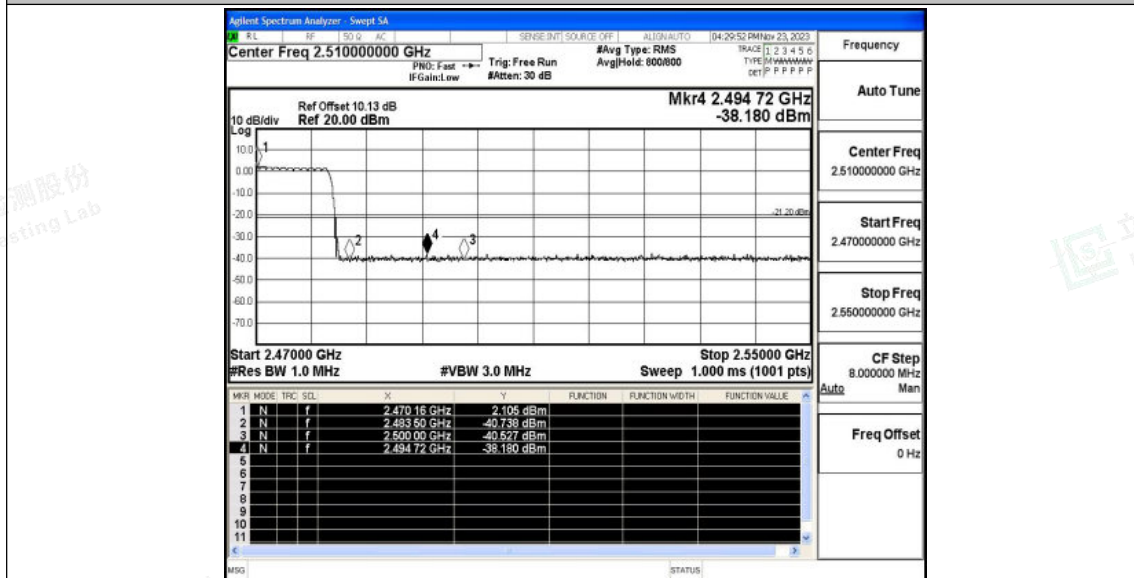


DH5_Ant1_Low_Hop_2402_Peak



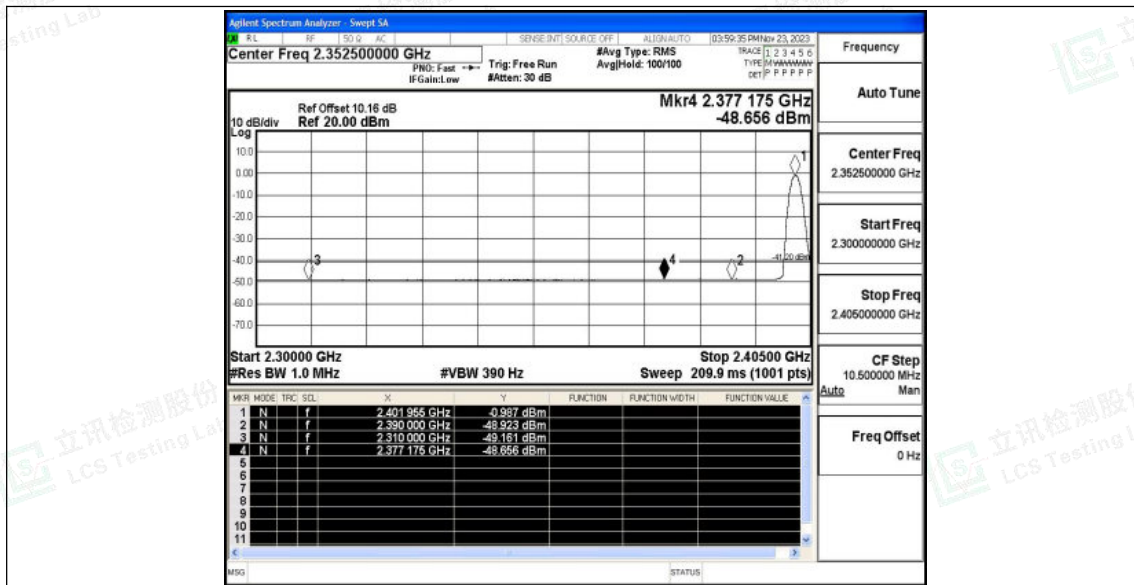


DH5_Ant1_High_Hop_2480_Peak

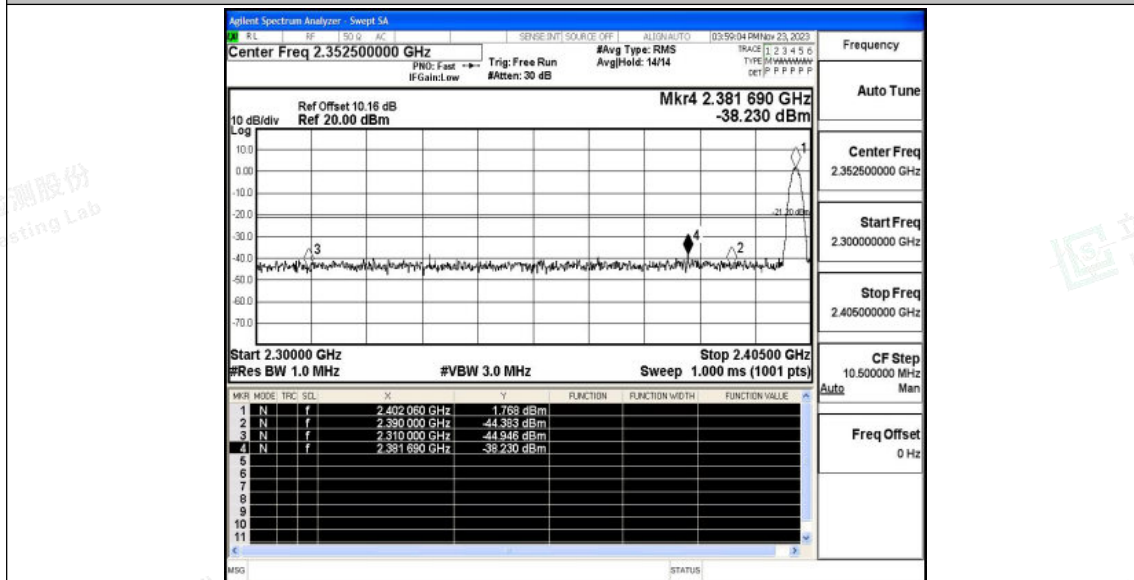


2DH5_Ant1_Low_2402_AV



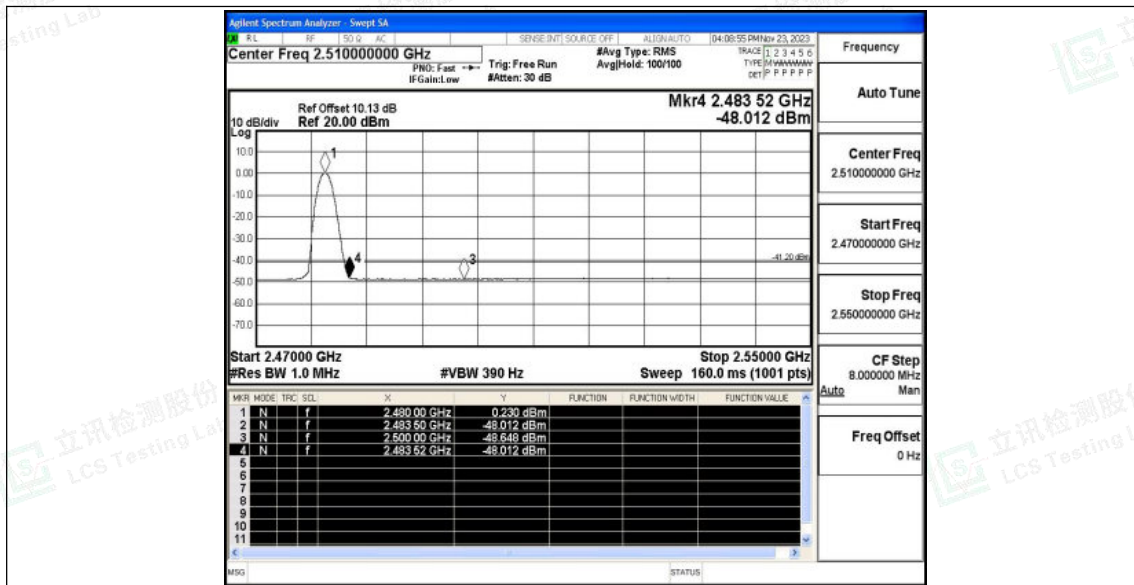


2DH5_Ant1_Low_2402_Peak

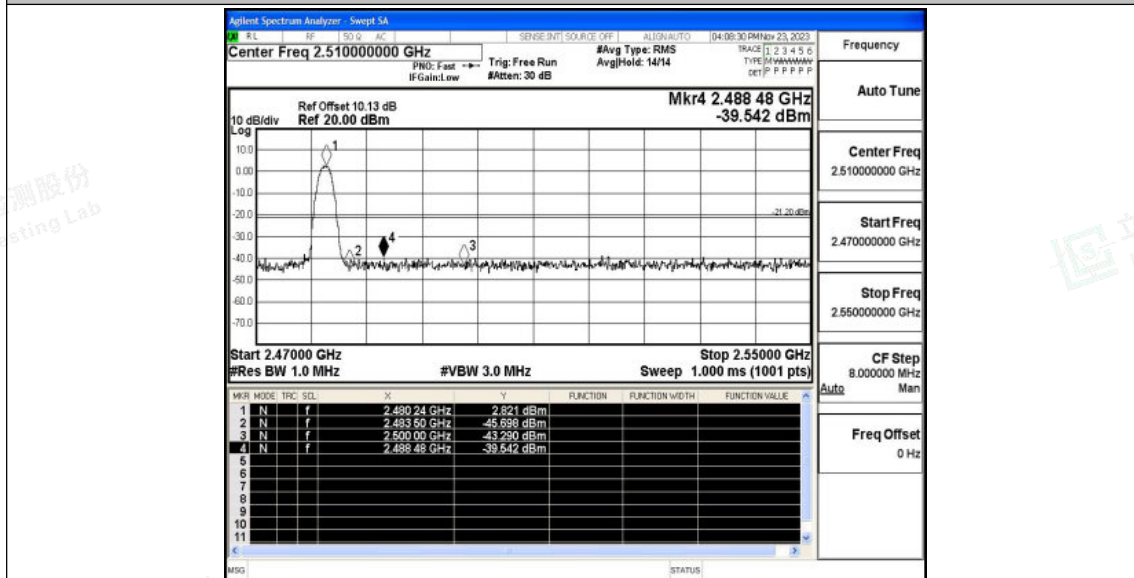


2DH5_Ant1_High_2480_AV



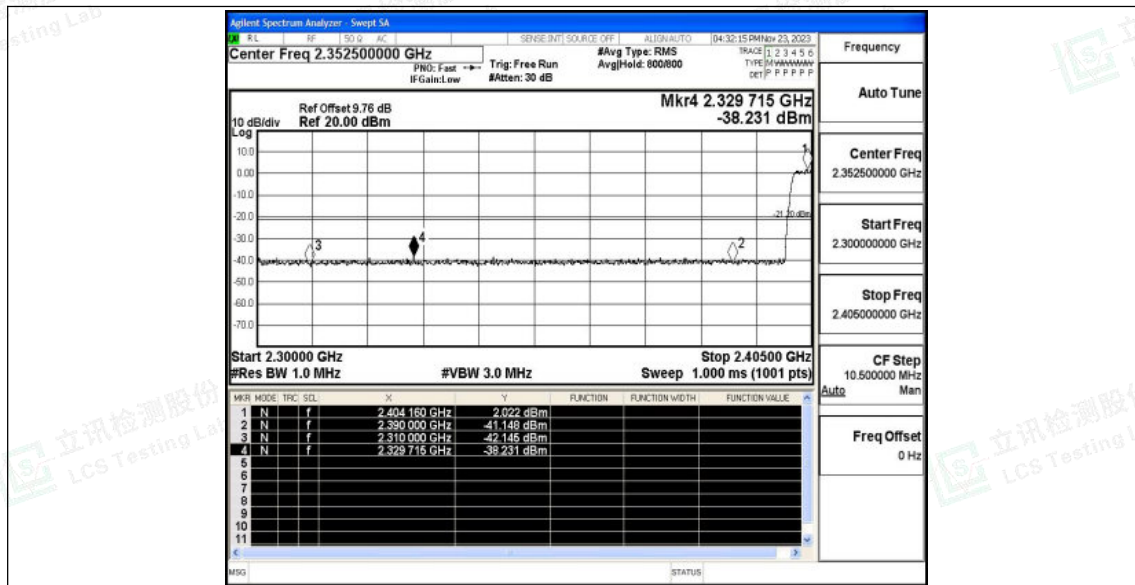


2DH5_Ant1_High_2480_Peak



2DH5_Ant1_Low_Hop_2402_Peak





2DH5_Ant1_High_Hop_2480_Peak

