



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Smart Watch

Test Model: 38083

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Ling Zhu



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Scan code to check authenticity



A.1 20dB Emission Bandwidth

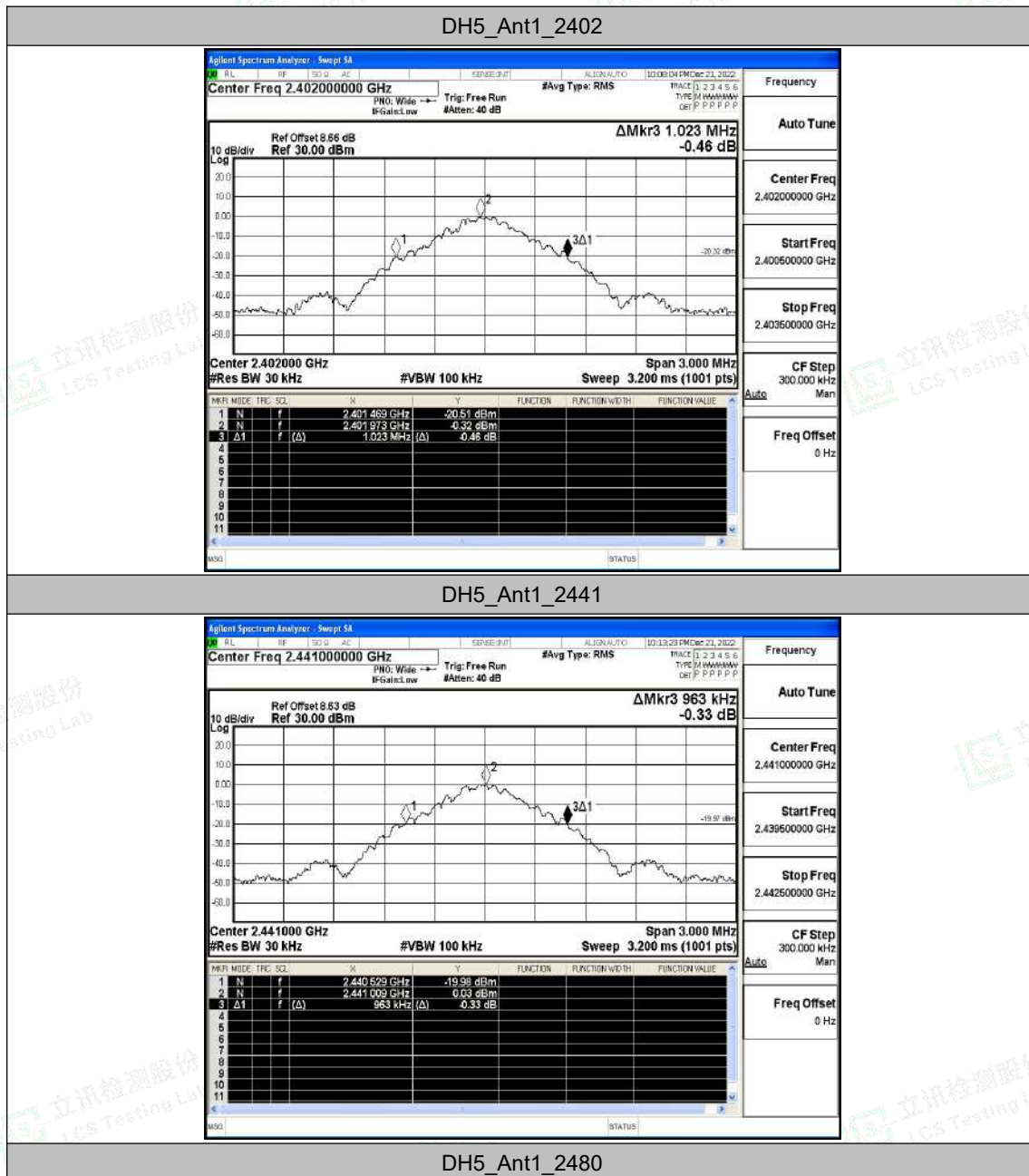
Test Result

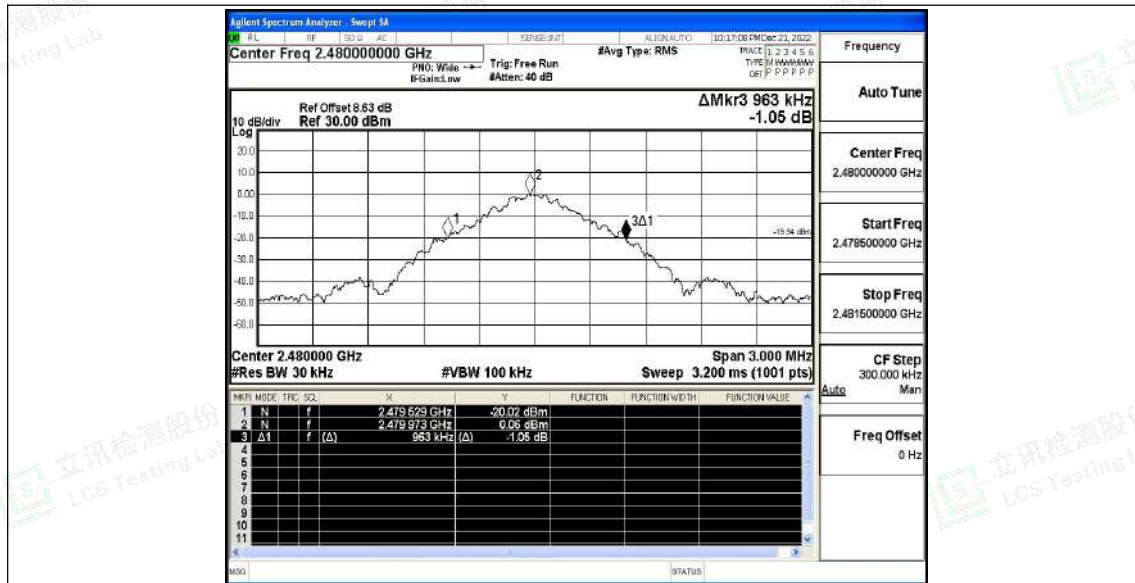
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant1	2402	1.023	2401.469	2402.492	PASS
		2441	0.963	2440.529	2441.492	PASS
		2480	0.963	2479.529	2480.492	PASS
2DH5	Ant1	2402	1.368	2401.313	2402.681	PASS
		2441	1.371	2440.313	2441.684	PASS
		2480	1.374	2479.310	2480.684	PASS
3DH5	Ant1	2402	1.359	2401.316	2402.675	PASS
		2441	1.353	2440.316	2441.669	PASS
		2480	1.356	2479.316	2480.672	PASS



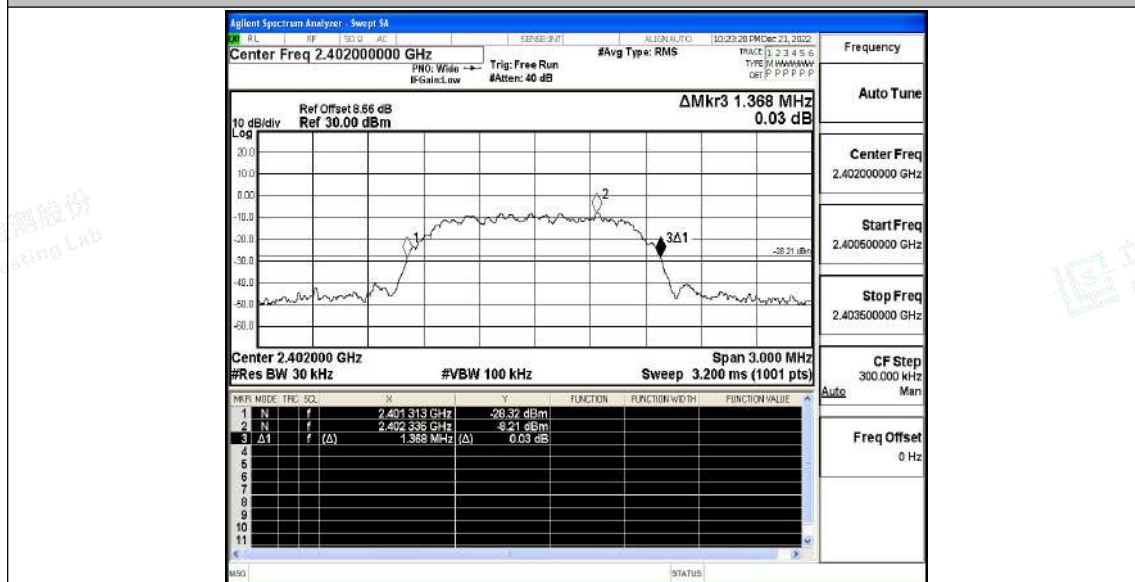


Test Graphs



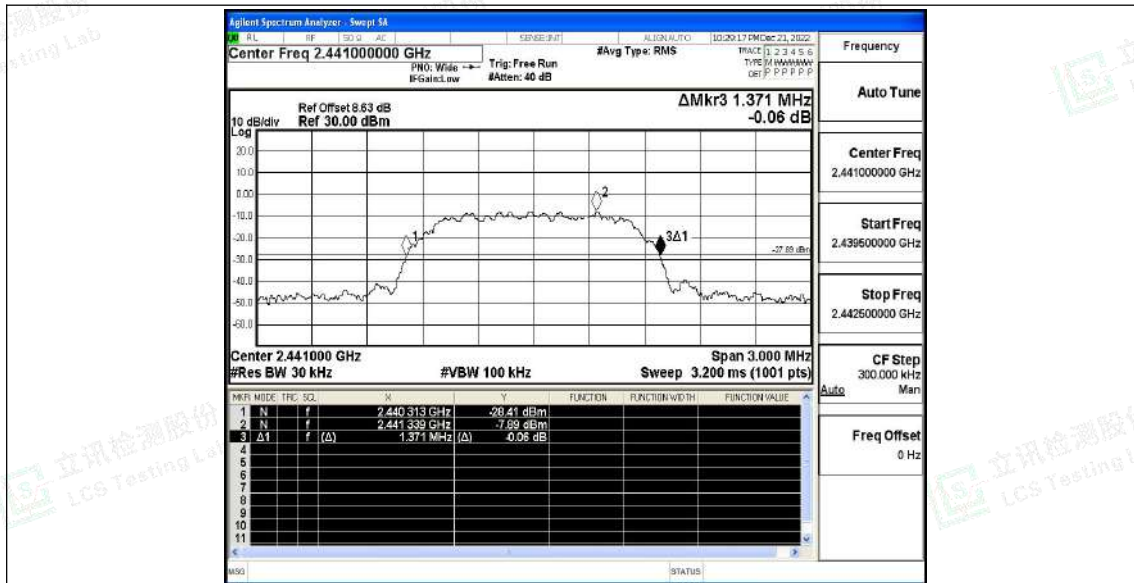


2DH5_Ant1_2402

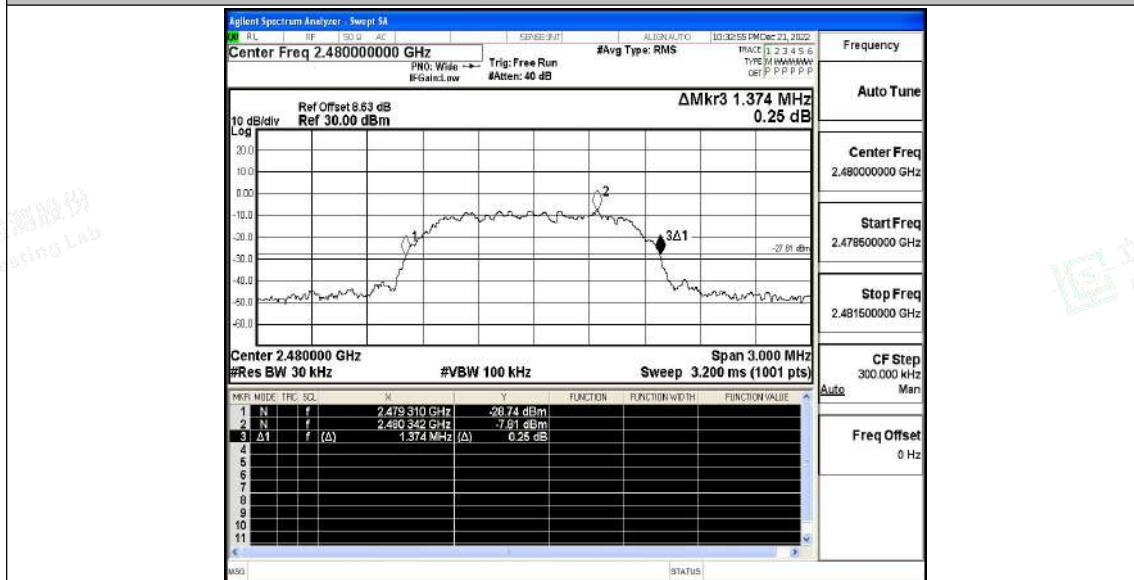


2DH5_Ant1_2441



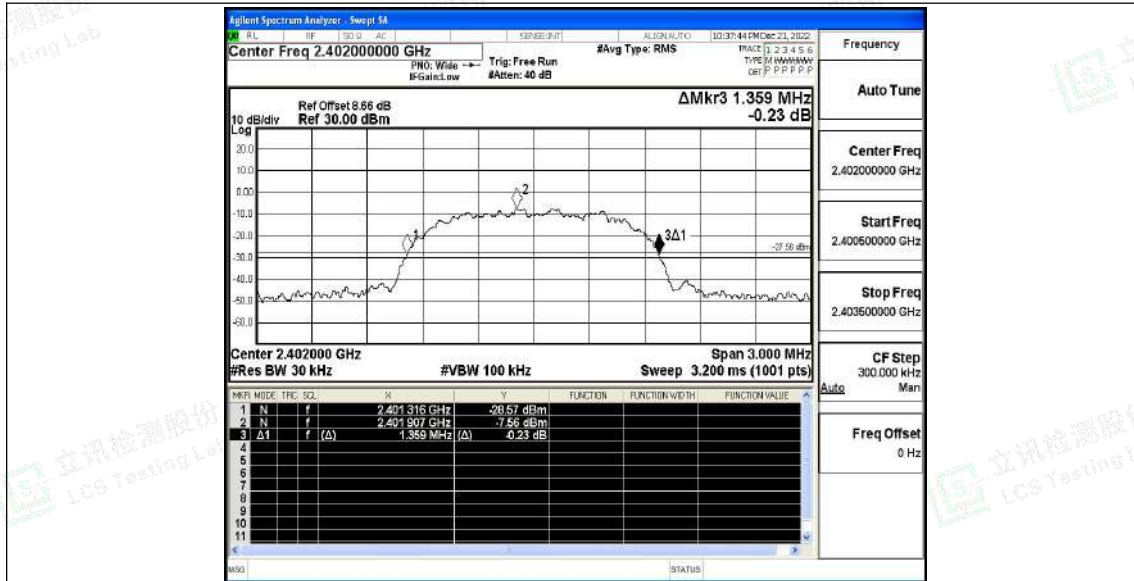


2DH5_Ant1_2480

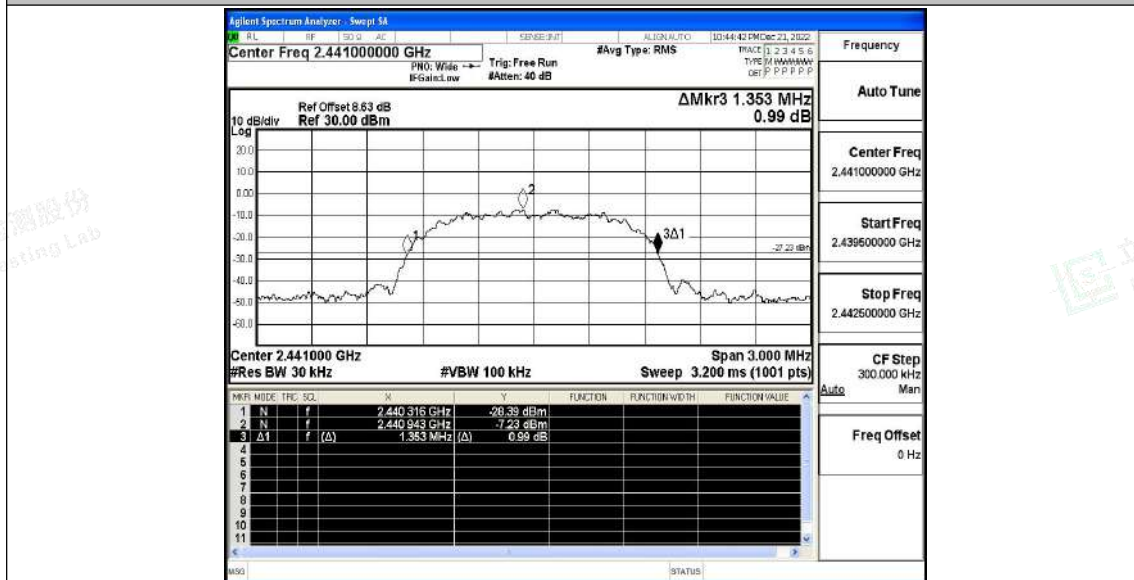


3DH5_Ant1_2402



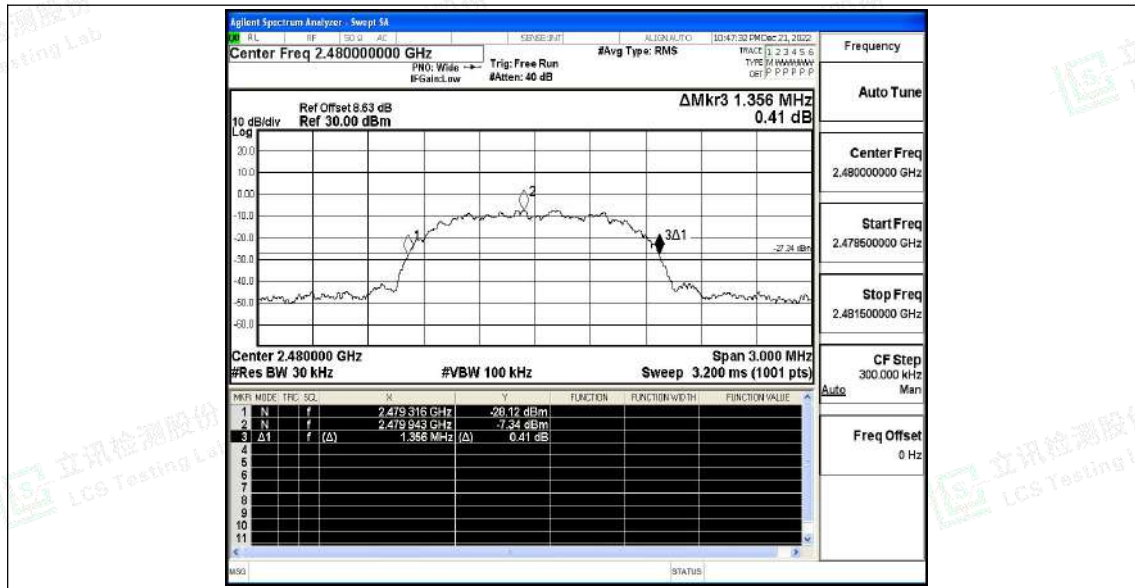


3DH5_Ant1_2441



3DH5_Ant1_2480







A.2 Maximum conducted output power

Test Result

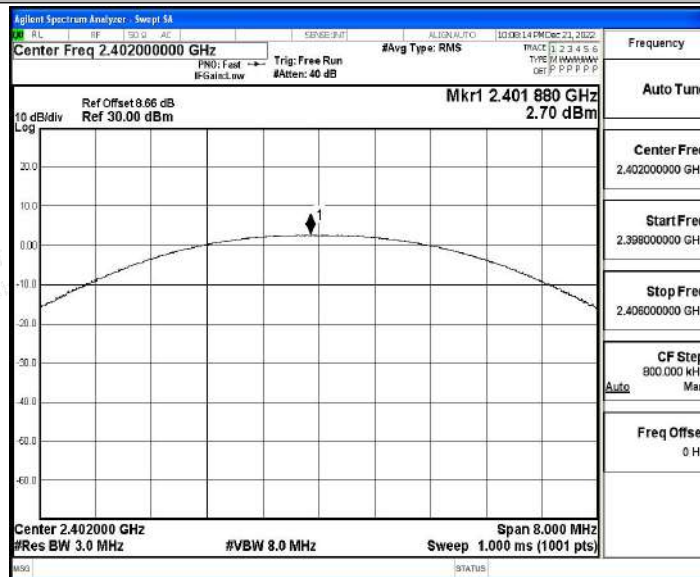
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	2.70	≤20.97	PASS
		2441	2.97	≤20.97	PASS
		2480	2.99	≤20.97	PASS
2DH5	Ant1	2402	0.92	≤20.97	PASS
		2441	1.23	≤20.97	PASS
		2480	1.22	≤20.97	PASS
3DH5	Ant1	2402	1.48	≤20.97	PASS
		2441	1.72	≤20.97	PASS
		2480	1.74	≤20.97	PASS



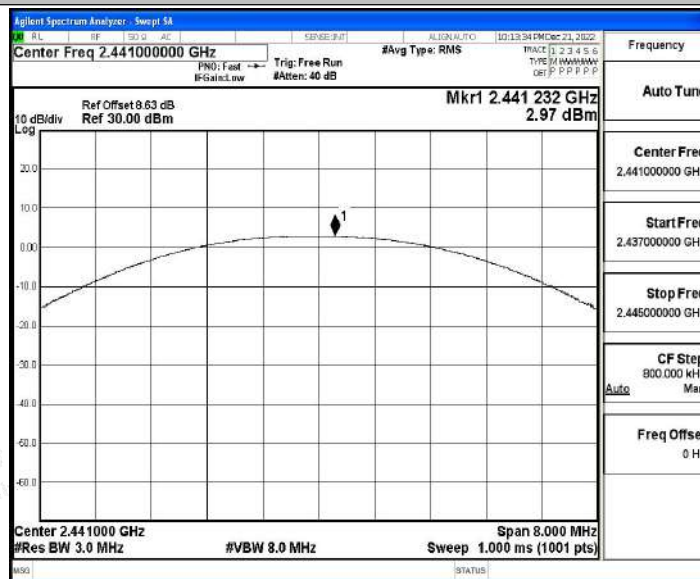


Test Graphs

DH5_Ant1_2402

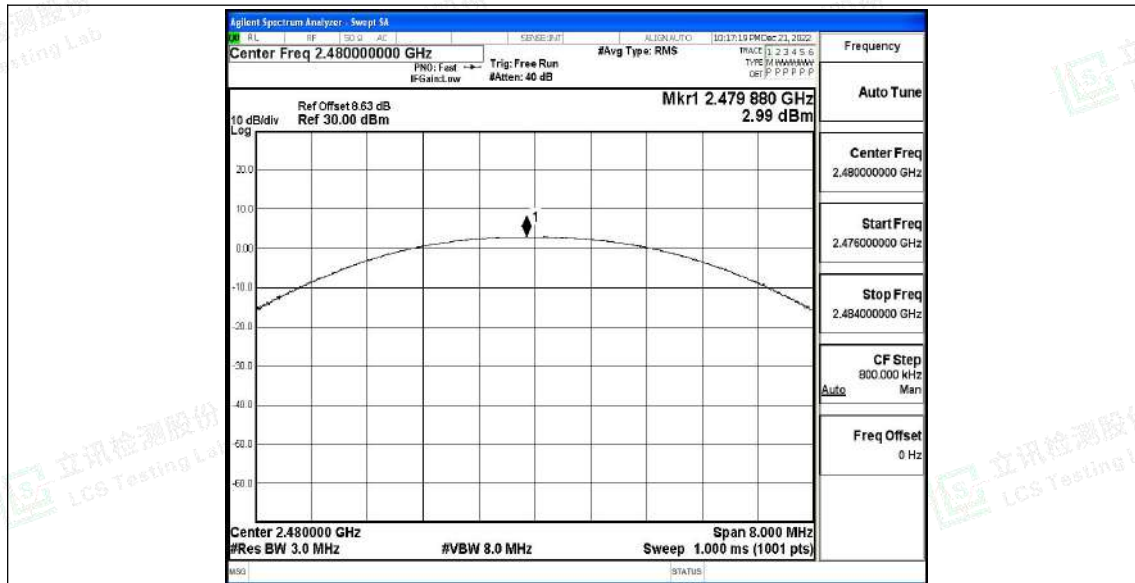


DH5_Ant1_2441

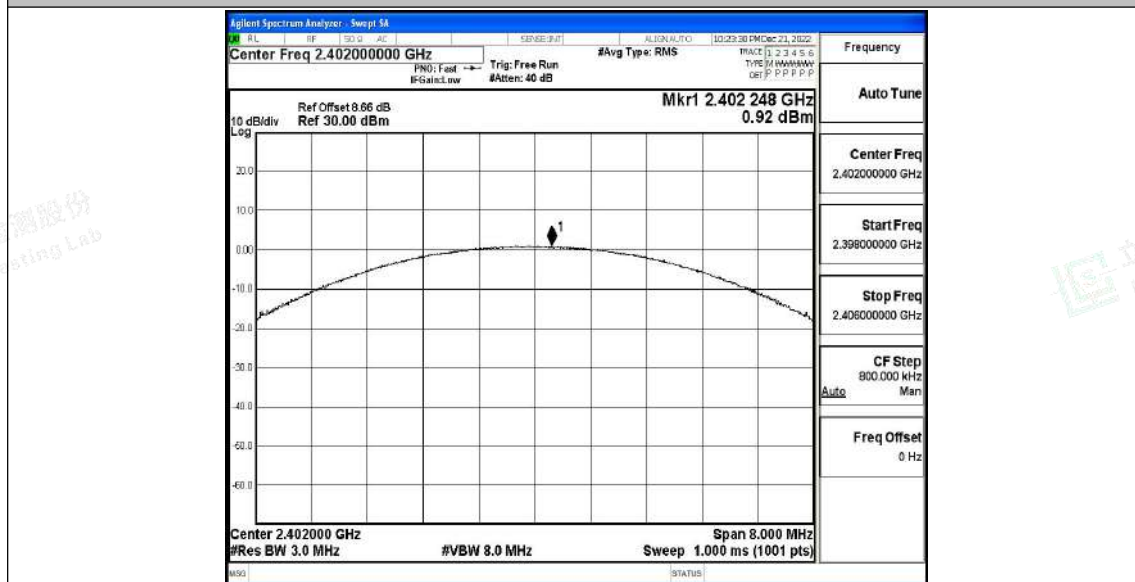


DH5_Ant1_2480



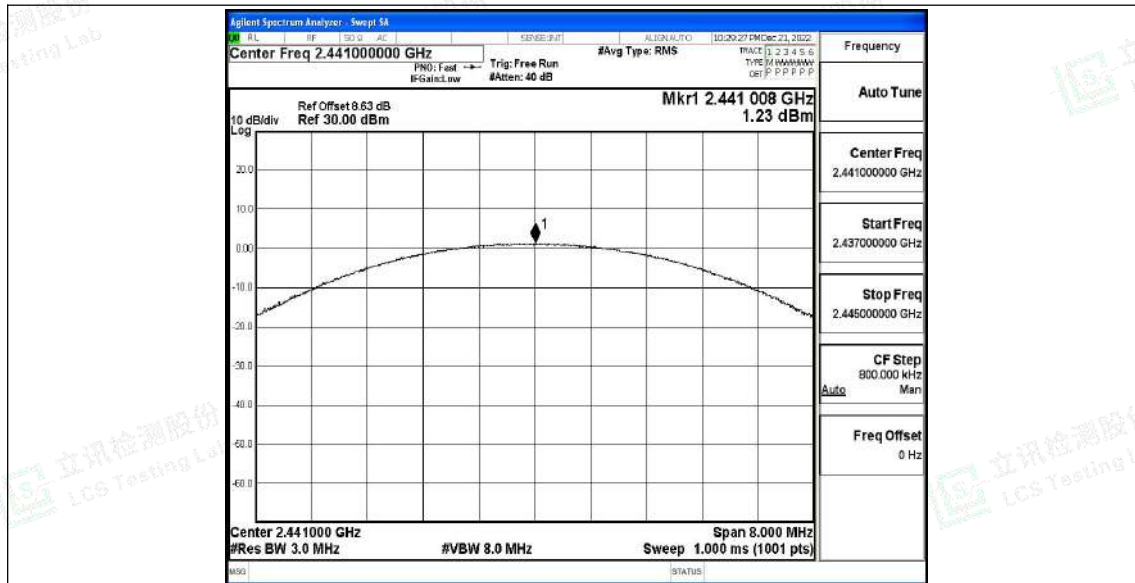


2DH5_Ant1_2402

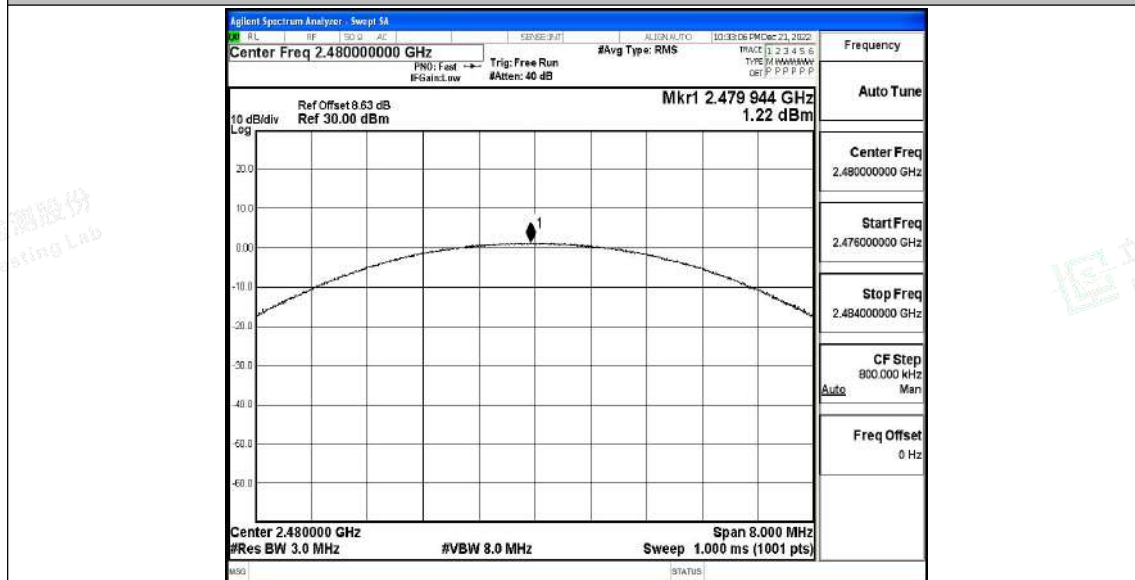


2DH5_Ant1_2441



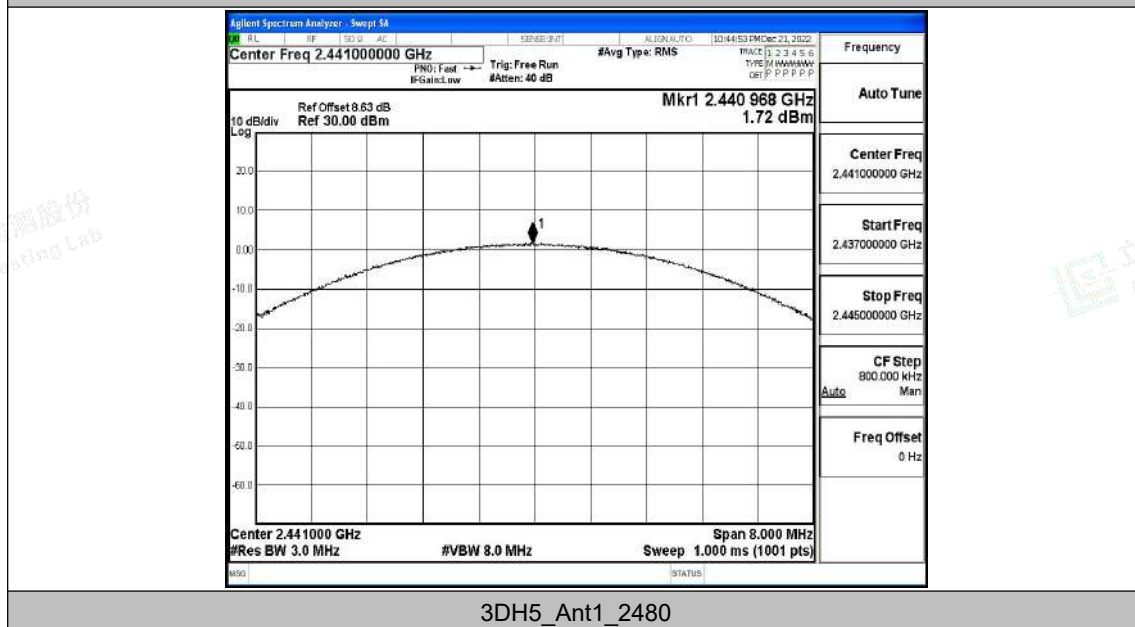
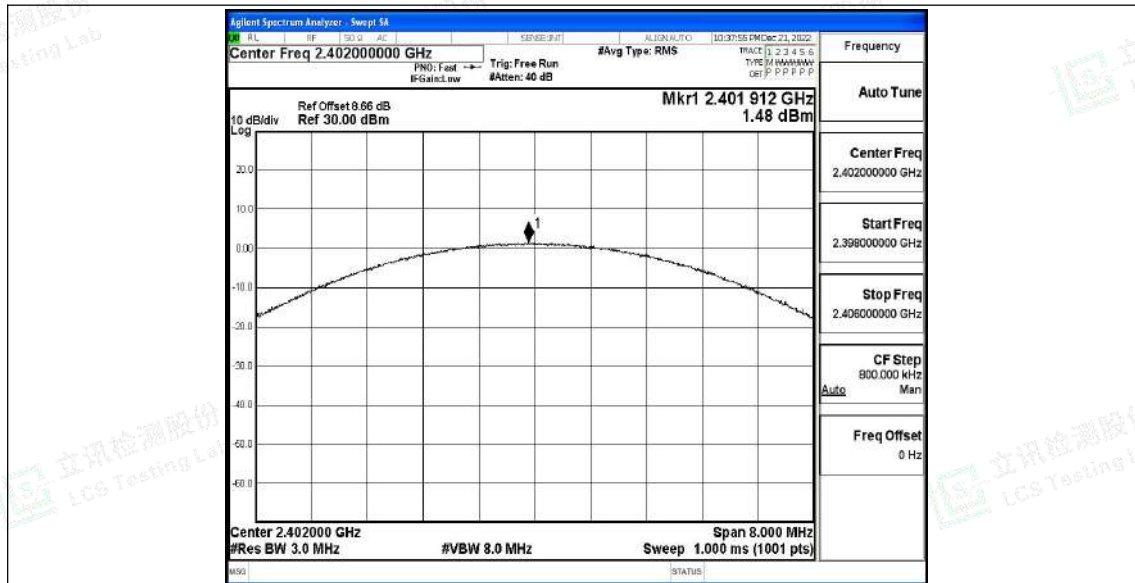


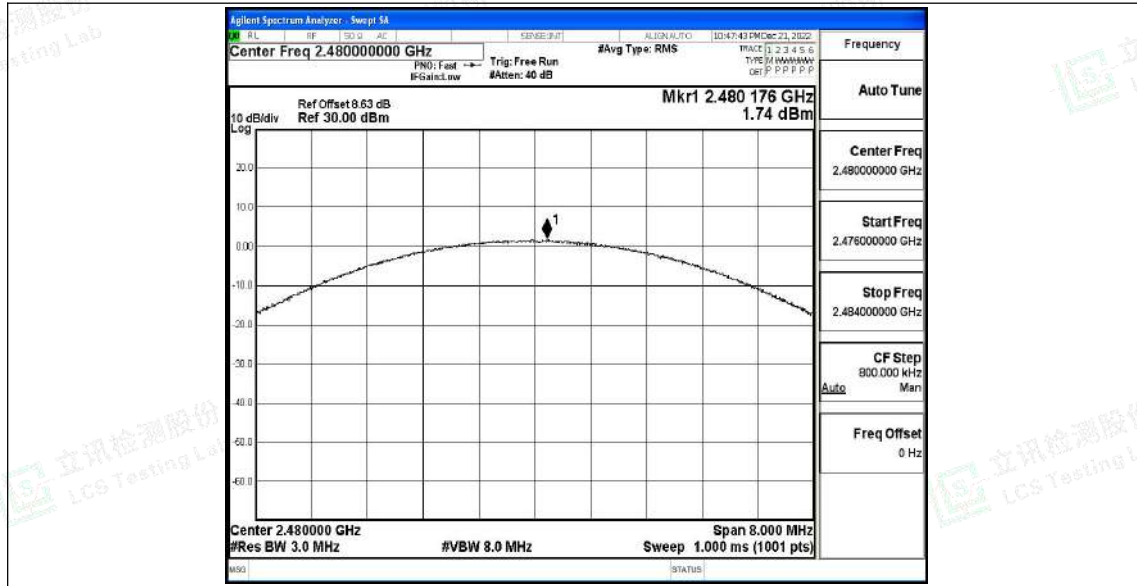
2DH5_Ant1_2480



3DH5_Ant1_2402









A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.052	≥ 1.023	PASS
2DH5	Ant1	Hop	1.038	≥ 0.916	PASS
3DH5	Ant1	Hop	1.038	≥ 0.906	PASS





Test Graphs





A.4 Time of occupancy

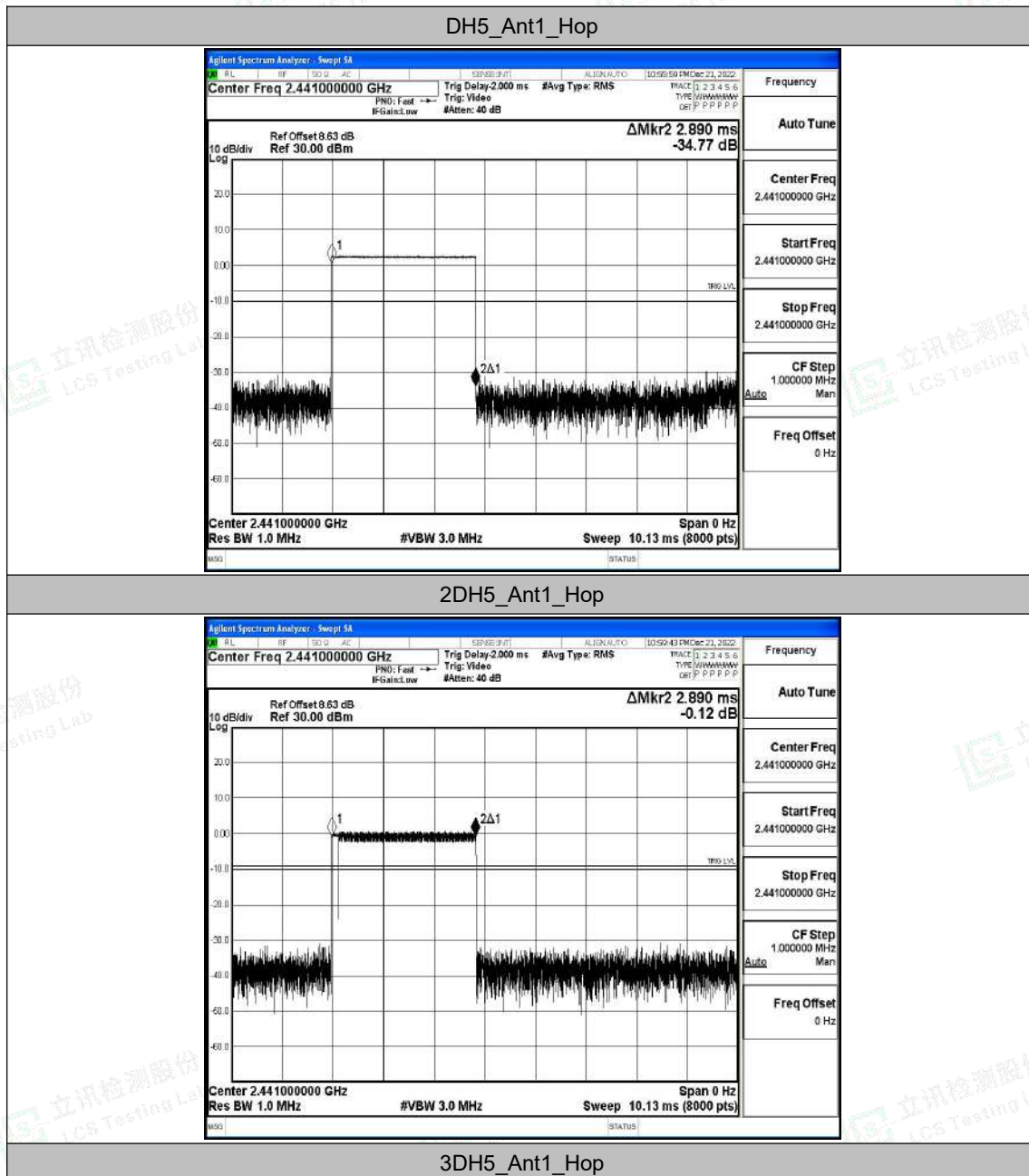
Test Result

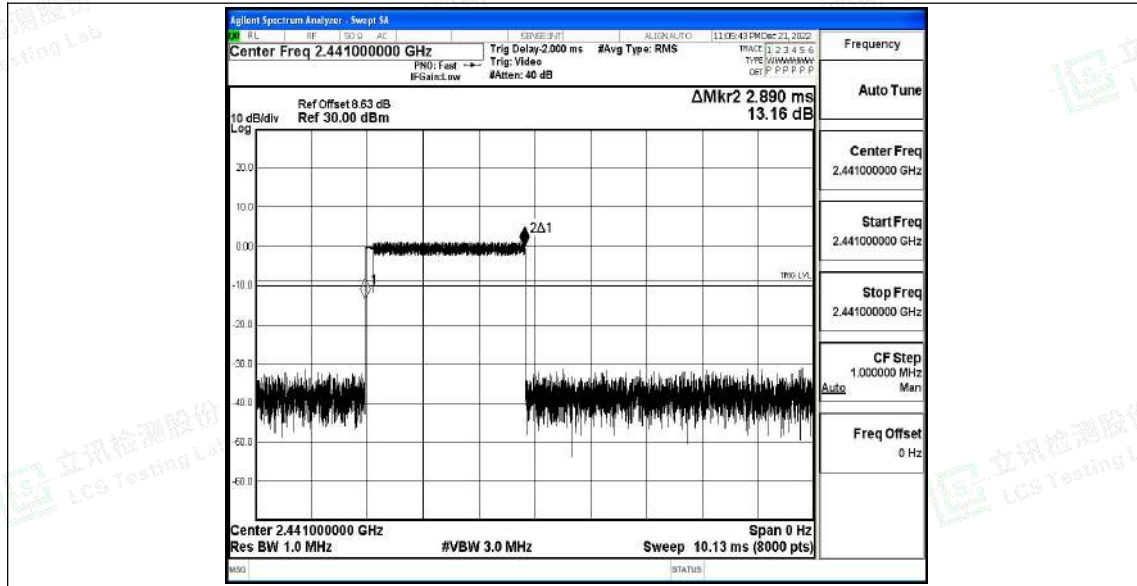
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS
2DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS





Test Graphs







A.5 Number of hopping channels

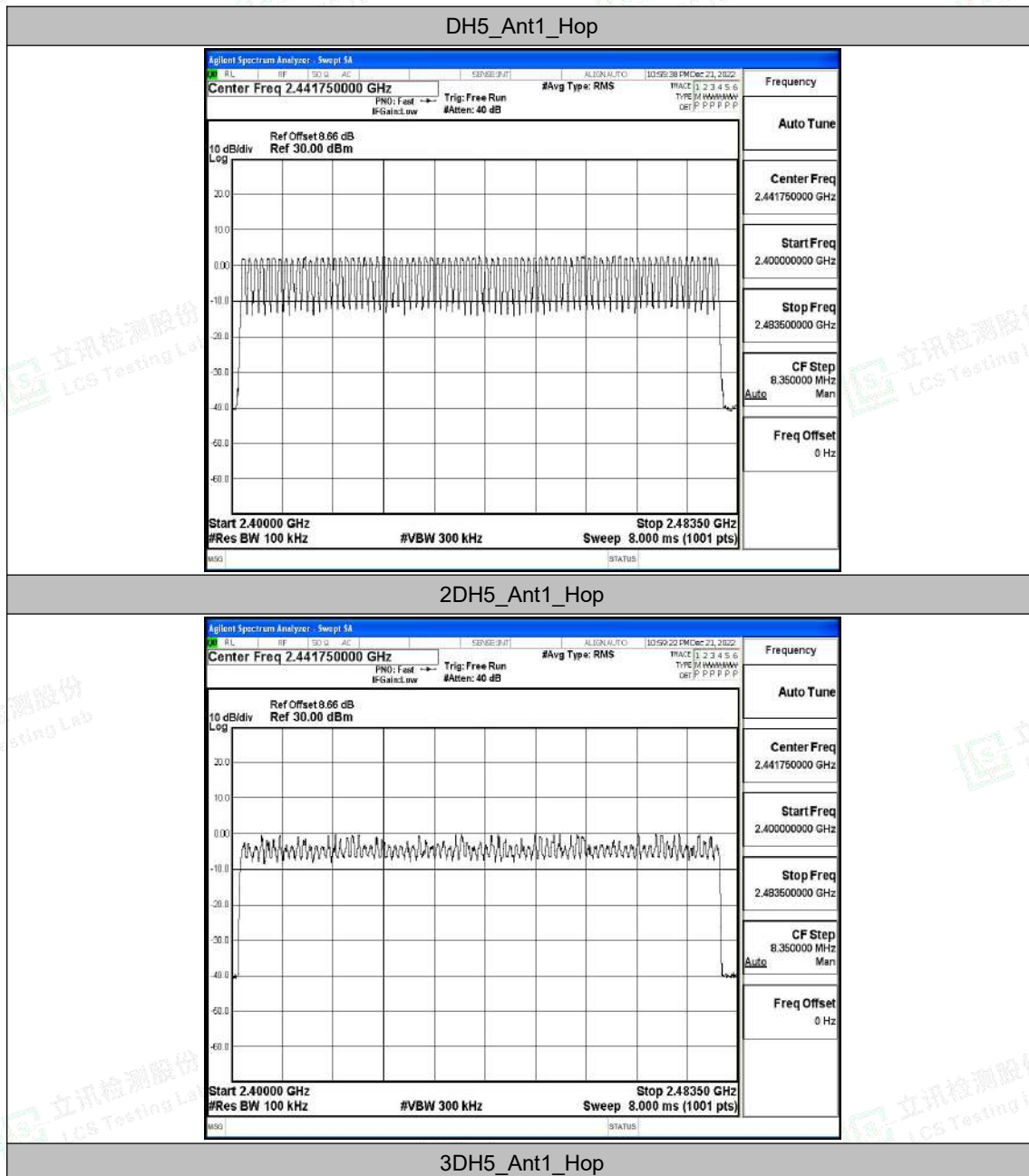
Test Result

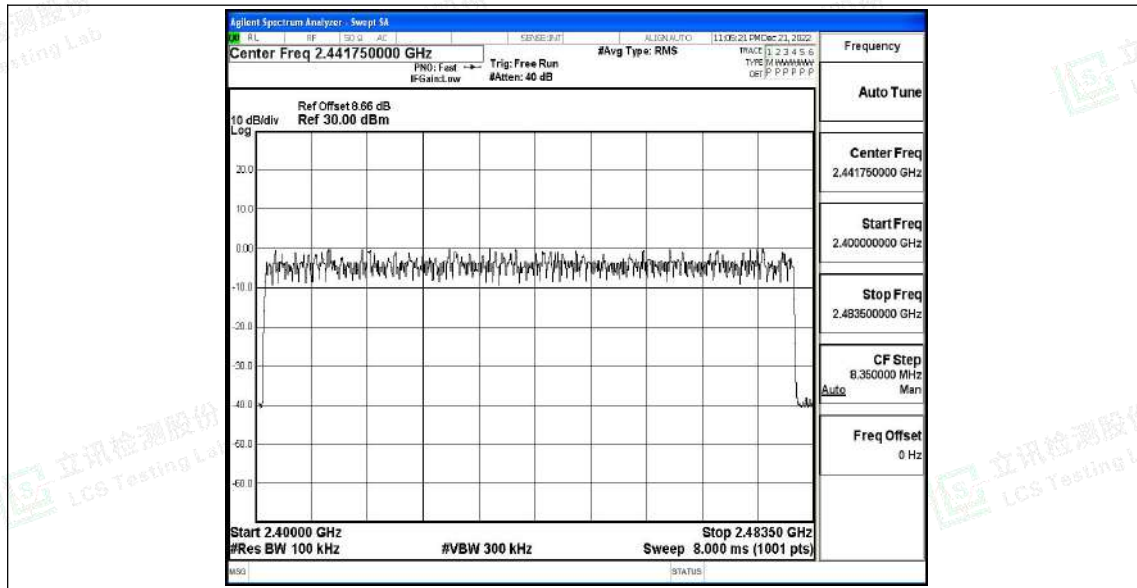
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS





Test Graphs







A.6 Band edge measurements

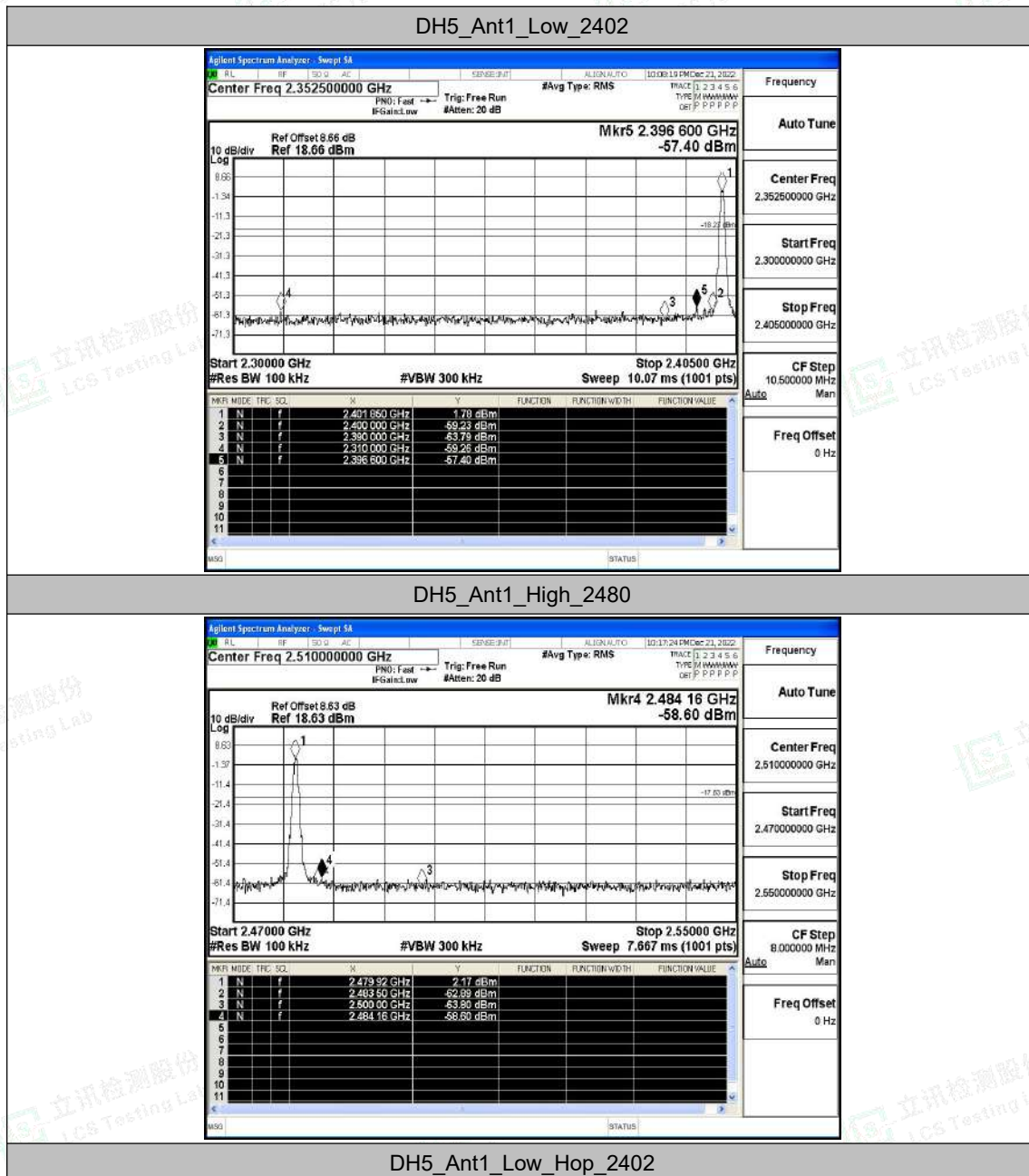
Test Result

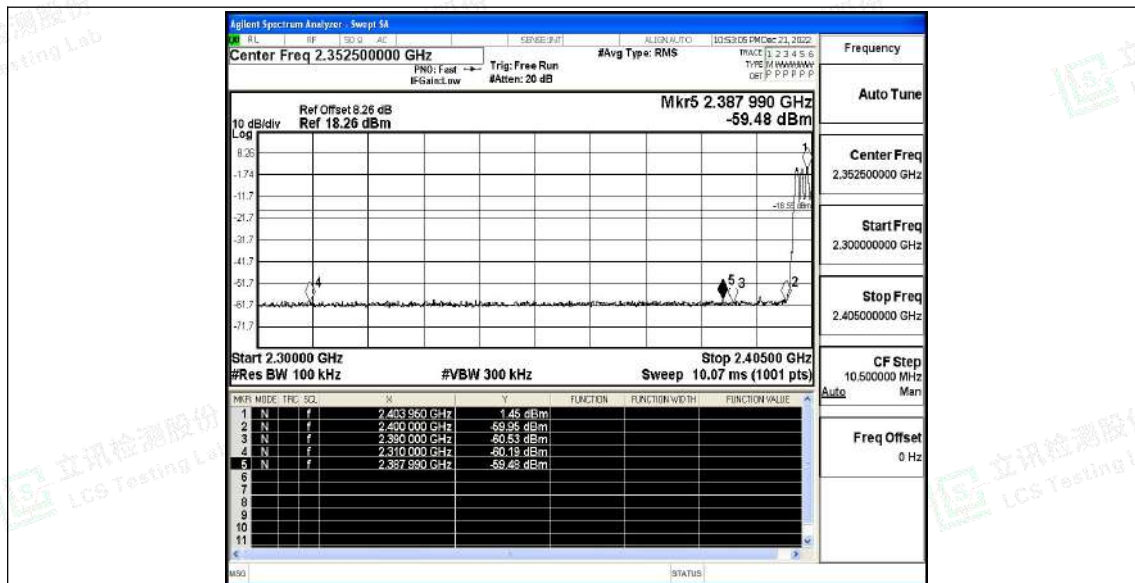
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	1.78	-57.4	≤-18.23	PASS
		High	2480	2.17	-58.6	≤-17.83	PASS
		Low	Hop_2402	1.45	-59.48	≤-18.55	PASS
		High	Hop_2480	2.16	-56.8	≤-17.85	PASS
2DH5	Ant1	Low	2402	-3.94	-58.69	≤-23.94	PASS
		High	2480	-3.81	-59.26	≤-23.81	PASS
		Low	Hop_2402	-4.20	-59.12	≤-24.2	PASS
		High	Hop_2480	-1.93	-56.67	≤-21.93	PASS
3DH5	Ant1	Low	2402	-4.33	-59.32	≤-24.33	PASS
		High	2480	-4.03	-58.78	≤-24.03	PASS
		Low	Hop_2402	-2.41	-59.27	≤-22.41	PASS
		High	Hop_2480	-3.17	-57.71	≤-23.17	PASS



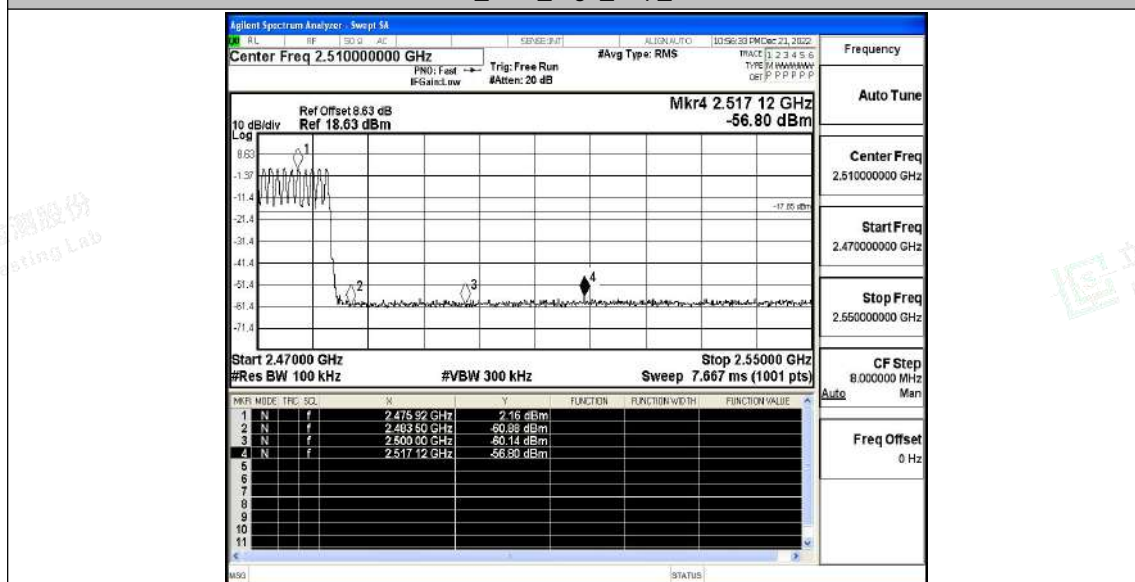


Test Graphs



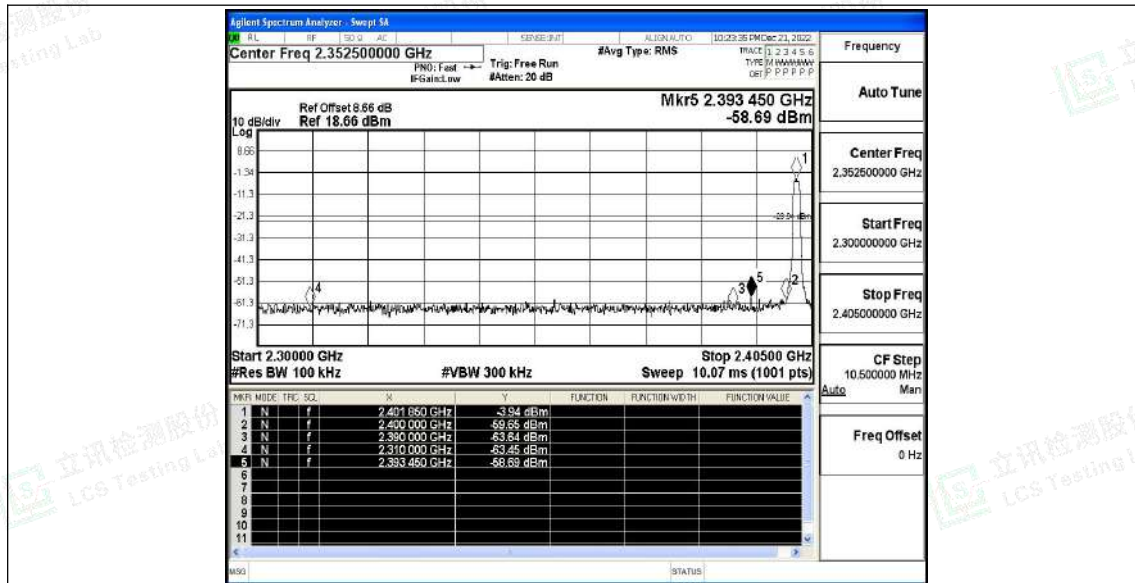


DH5_Ant1_High_Hop_2480

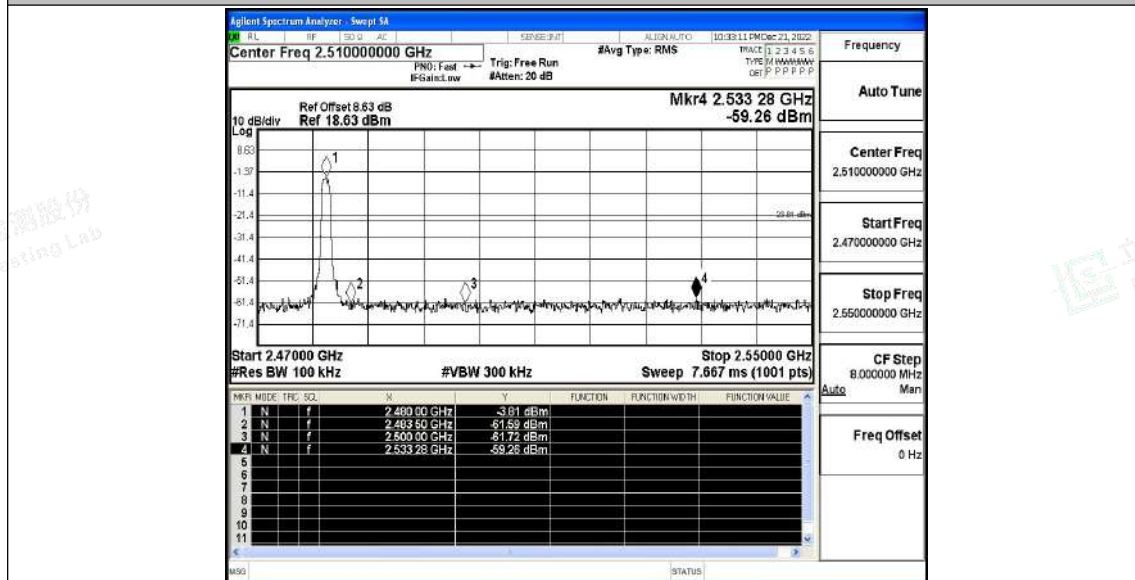


2DH5_Ant1_Low_2402



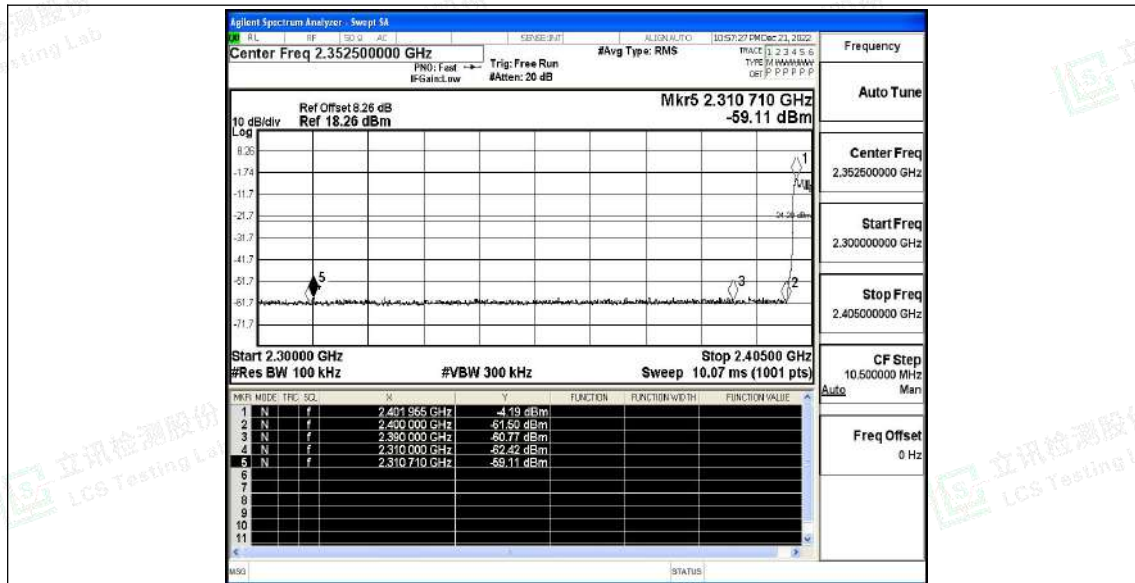


2DH5_Ant1_High_2480

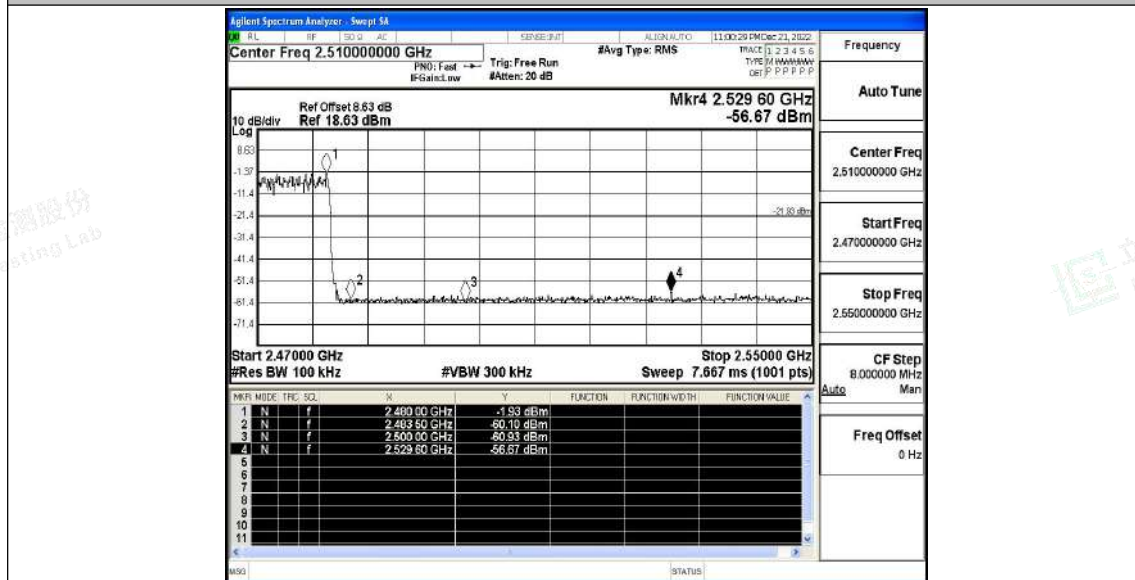


2DH5_Ant1_Low_Hop_2402



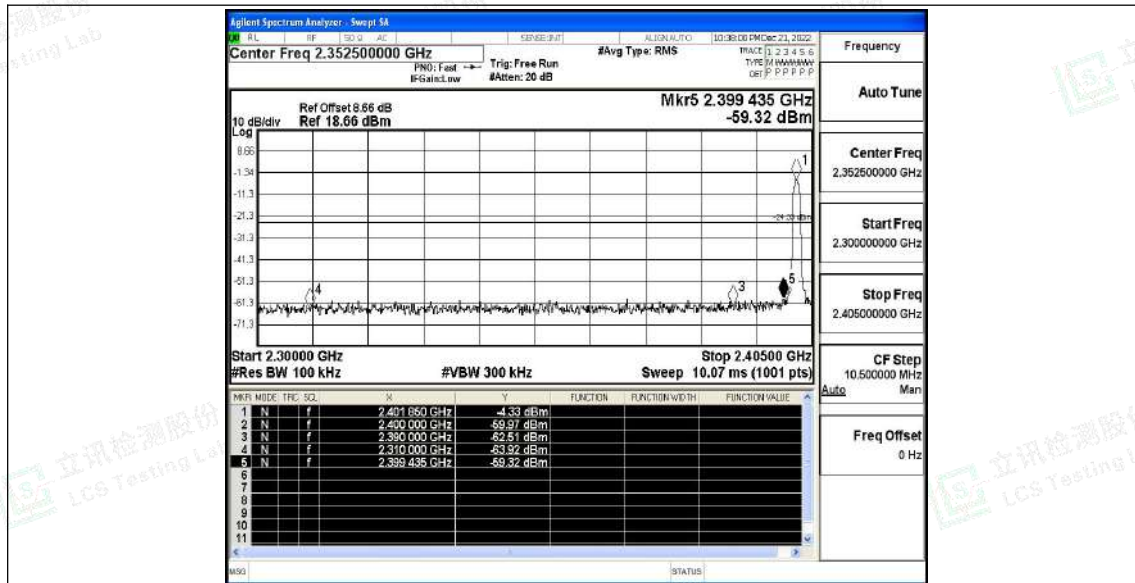


2DH5_Ant1_High_Hop_2480

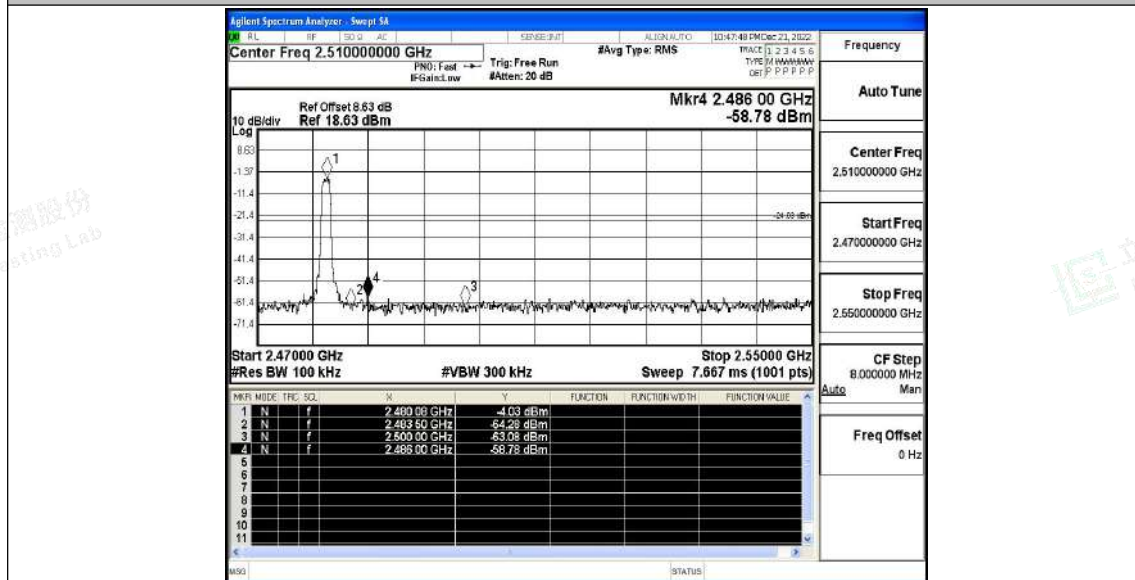


3DH5_Ant1_Low_2402



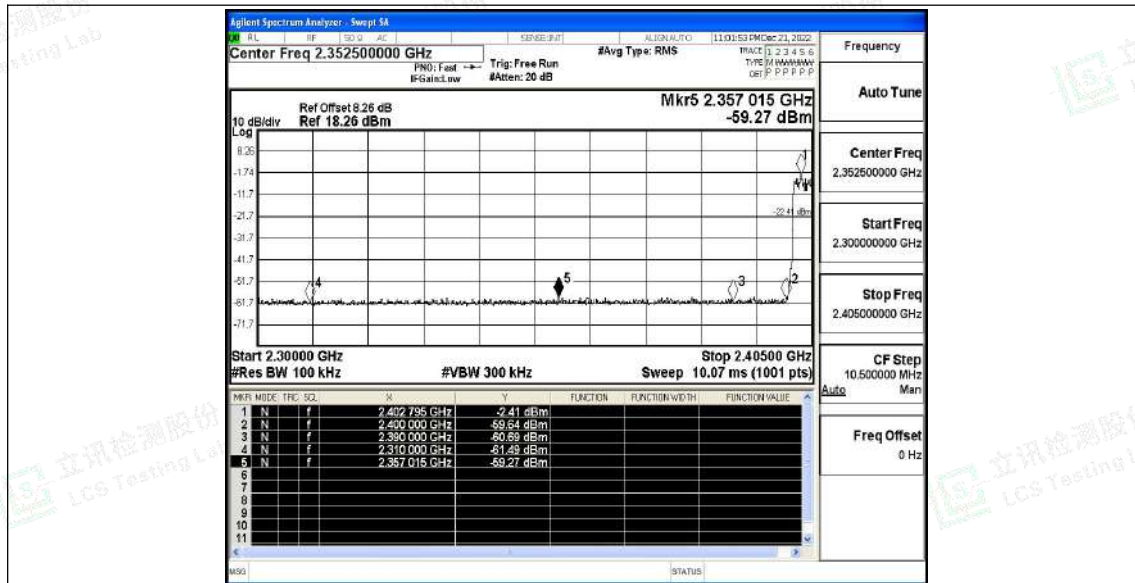


3DH5_Ant1_High_2480

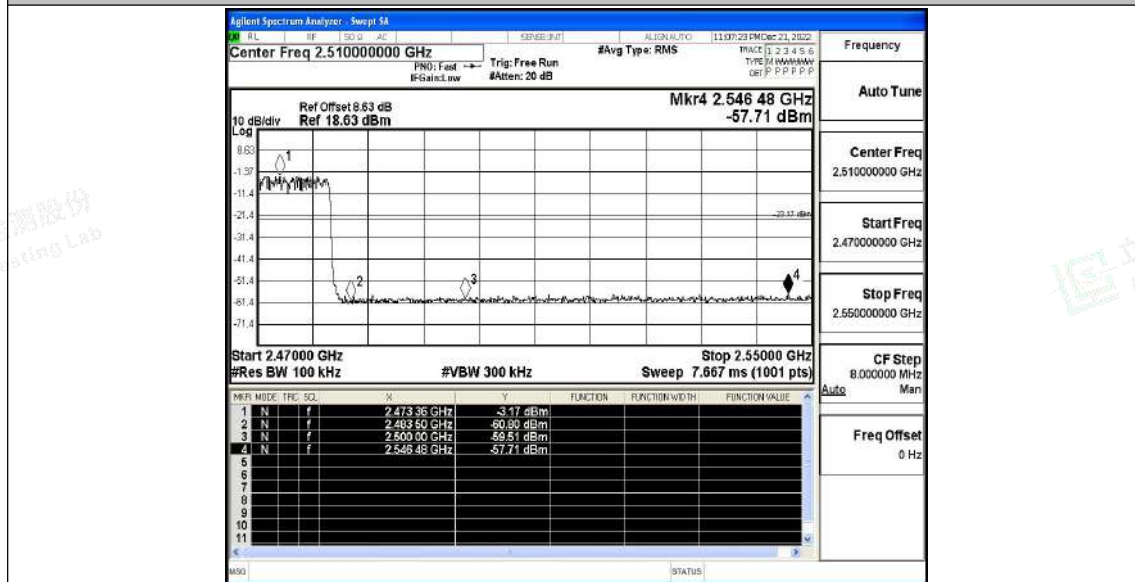


3DH5_Ant1_Low_Hop_2402





3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

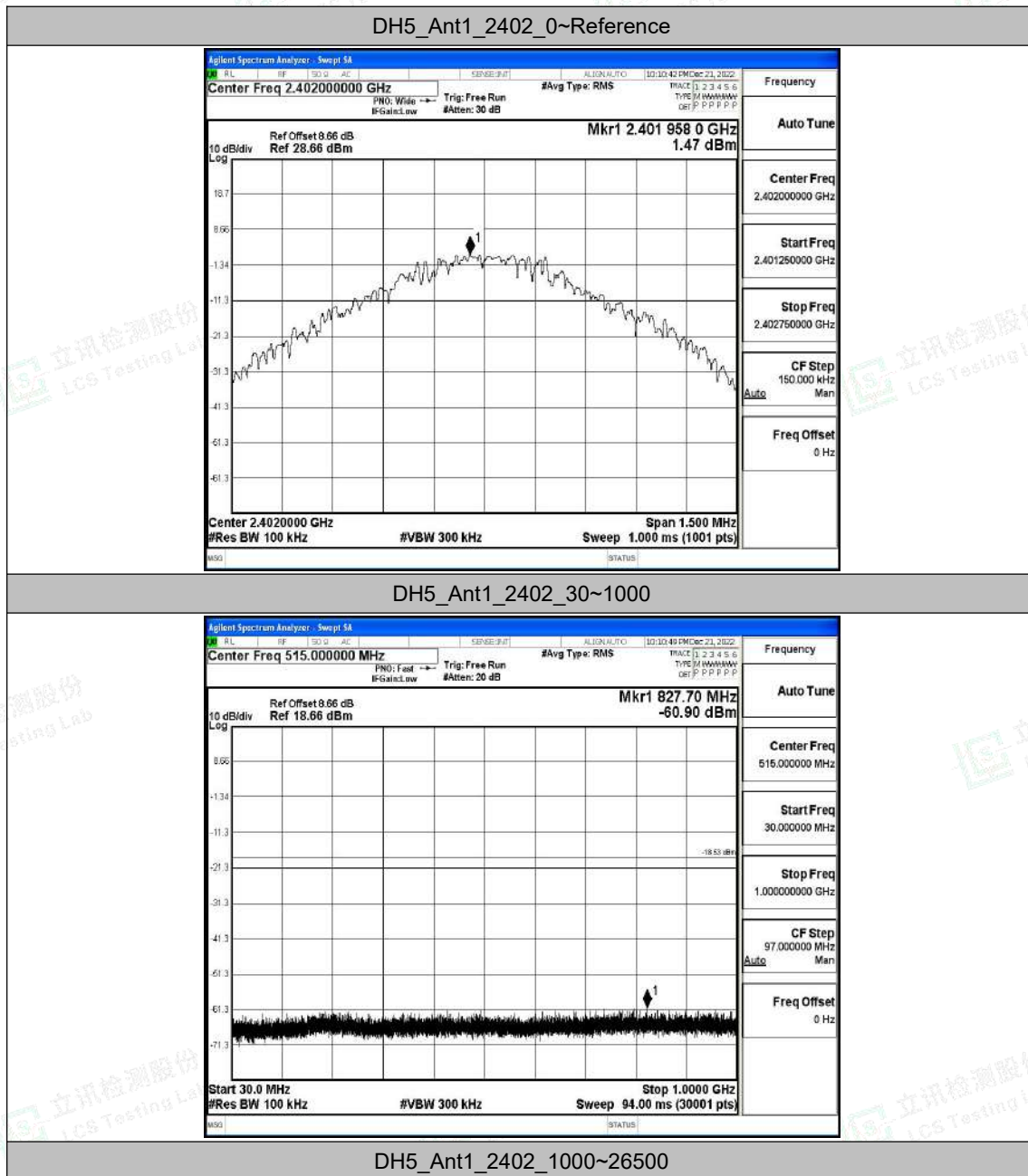
Test Result

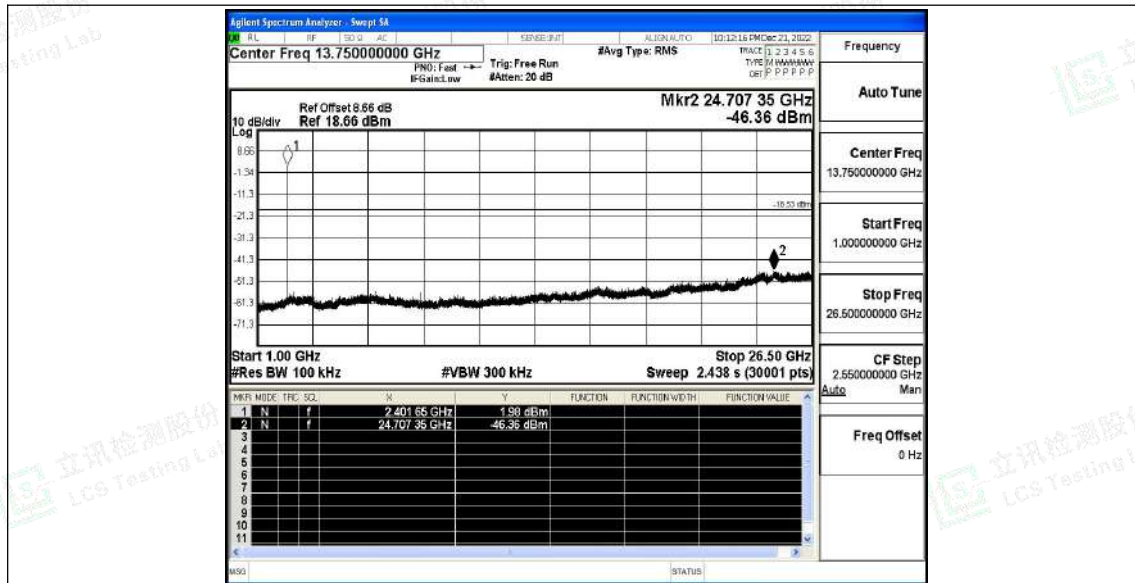
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	1.47	1.47	---	PASS
			30~1000	1.47	-60.9	≤-18.53	PASS
			1000~26500	1.47	-46.37	≤-18.53	PASS
		2441	Reference	1.83	1.83	---	PASS
			30~1000	1.83	-60.77	≤-18.17	PASS
			1000~26500	1.83	-46.04	≤-18.17	PASS
		2480	Reference	1.84	1.84	---	PASS
			30~1000	1.84	-59.66	≤-18.16	PASS
			1000~26500	1.84	-46.26	≤-18.16	PASS
2DH5	Ant1	2402	Reference	-3.99	-3.99	---	PASS
			30~1000	-3.99	-61.24	≤-23.99	PASS
			1000~26500	-3.99	-45.99	≤-23.99	PASS
		2441	Reference	-4.04	-4.04	---	PASS
			30~1000	-4.04	-60.17	≤-24.04	PASS
			1000~26500	-4.04	-45.96	≤-24.04	PASS
		2480	Reference	-4.42	-4.42	---	PASS
			30~1000	-4.42	-54.33	≤-24.42	PASS
			1000~26500	-4.42	-46.5	≤-24.42	PASS
3DH5	Ant1	2402	Reference	-3.76	-3.76	---	PASS
			30~1000	-3.76	-58.74	≤-23.76	PASS
			1000~26500	-3.76	-45.49	≤-23.76	PASS
		2441	Reference	-3.74	-3.74	---	PASS
			30~1000	-3.74	-60.76	≤-23.74	PASS
			1000~26500	-3.74	-46.59	≤-23.74	PASS
		2480	Reference	-3.48	-3.48	---	PASS
			30~1000	-3.48	-60.27	≤-23.48	PASS
			1000~26500	-3.48	-45.69	≤-23.48	PASS



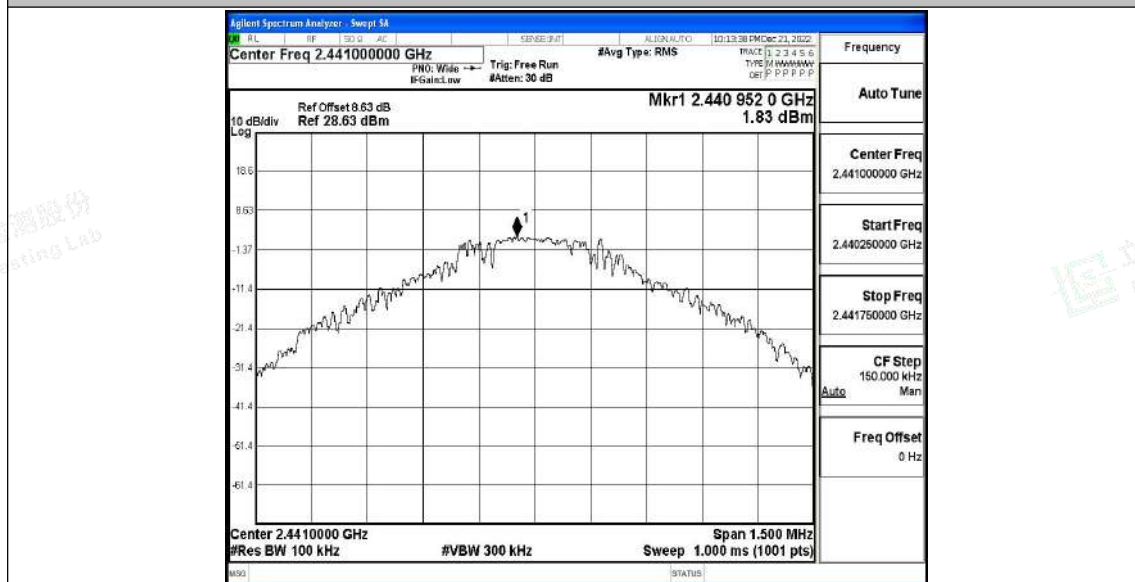


Test Graphs



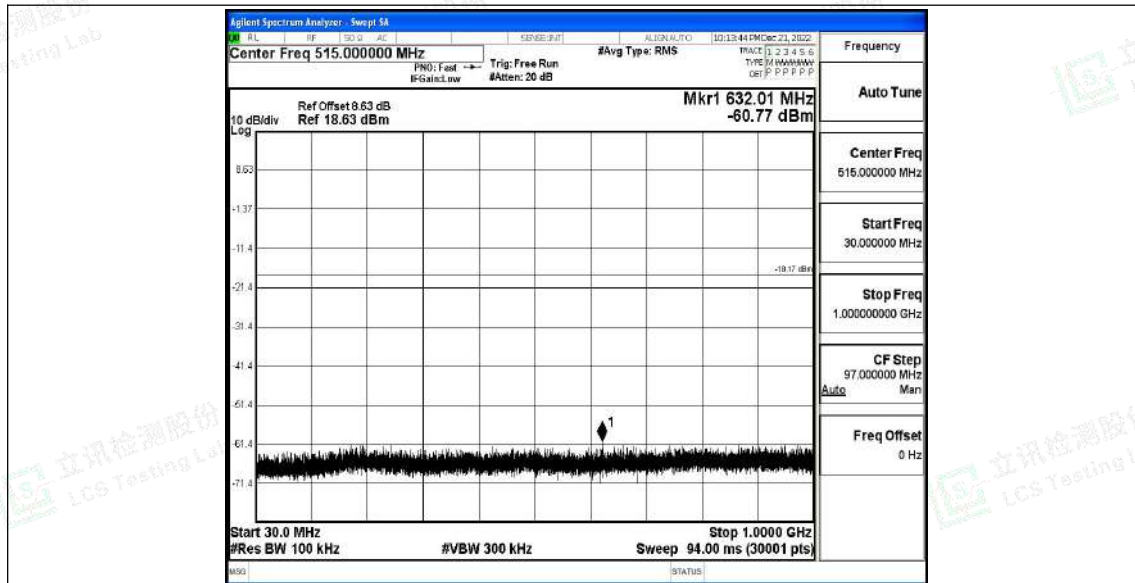


DH5_Ant1_2441_0~Reference

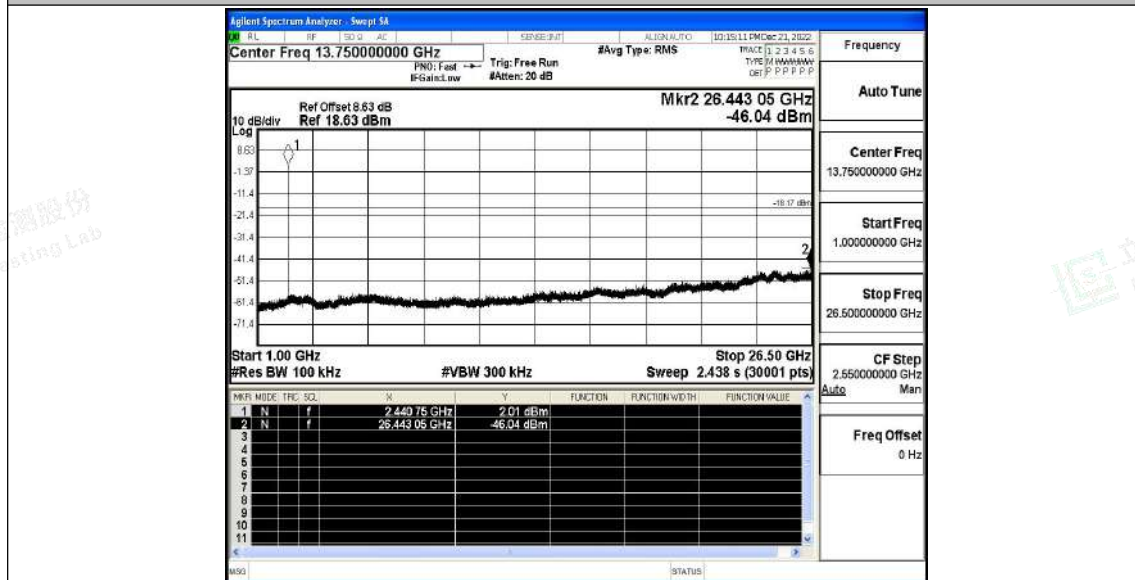


DH5_Ant1_2441_30~1000



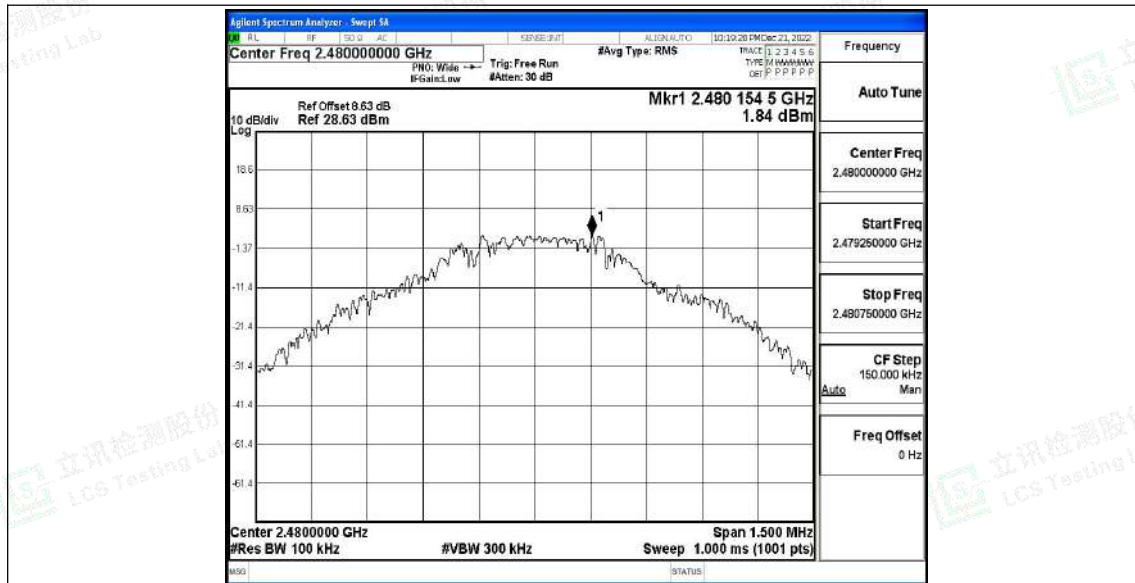


DH5_Ant1_2441_1000~26500

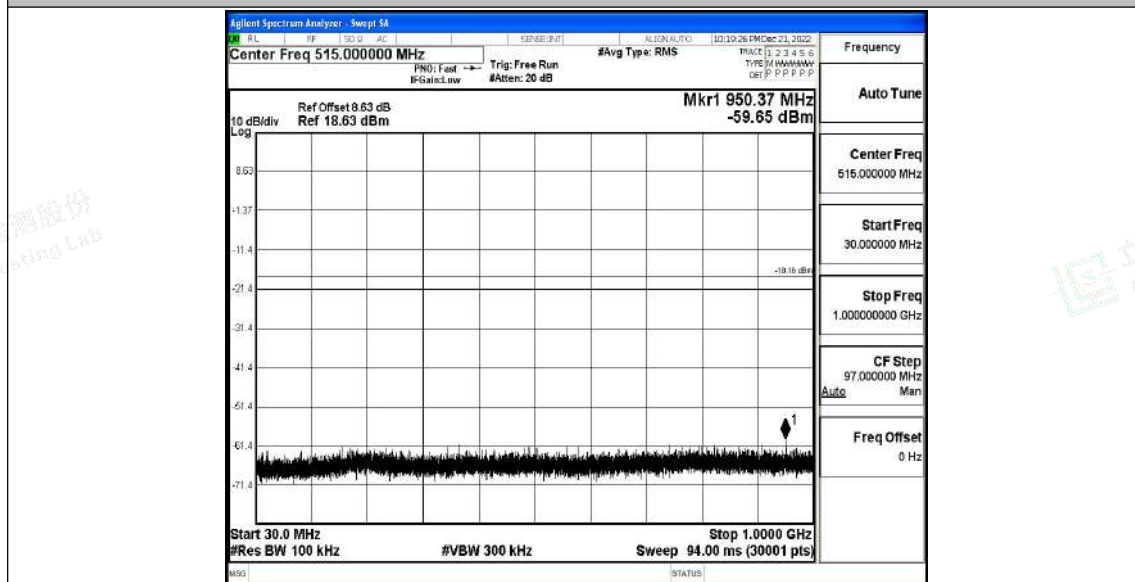


DH5_Ant1_2480_0~Reference



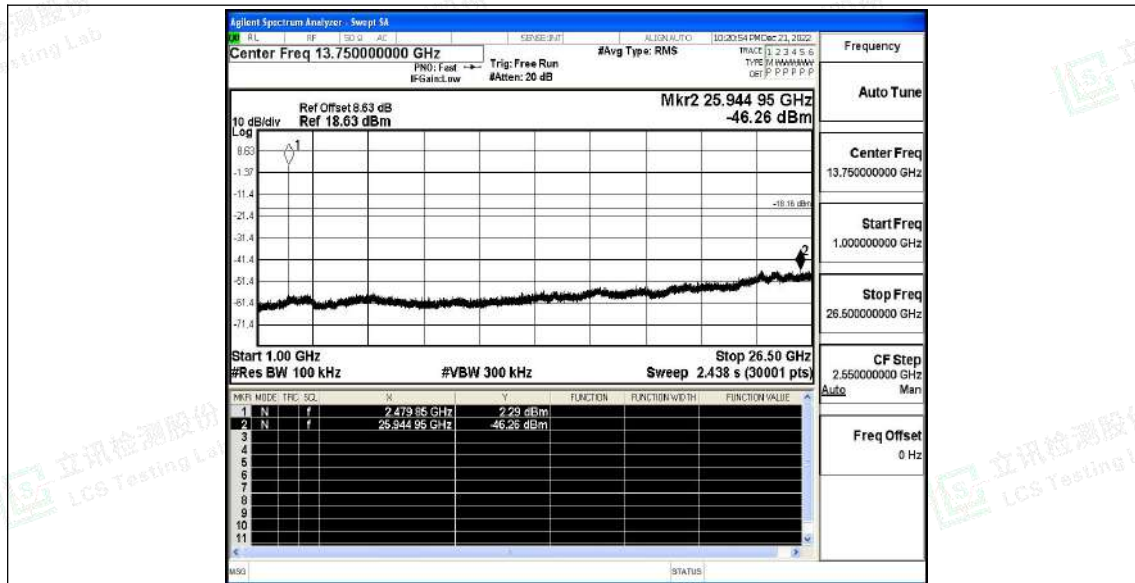


DH5_Ant1_2480_30~1000

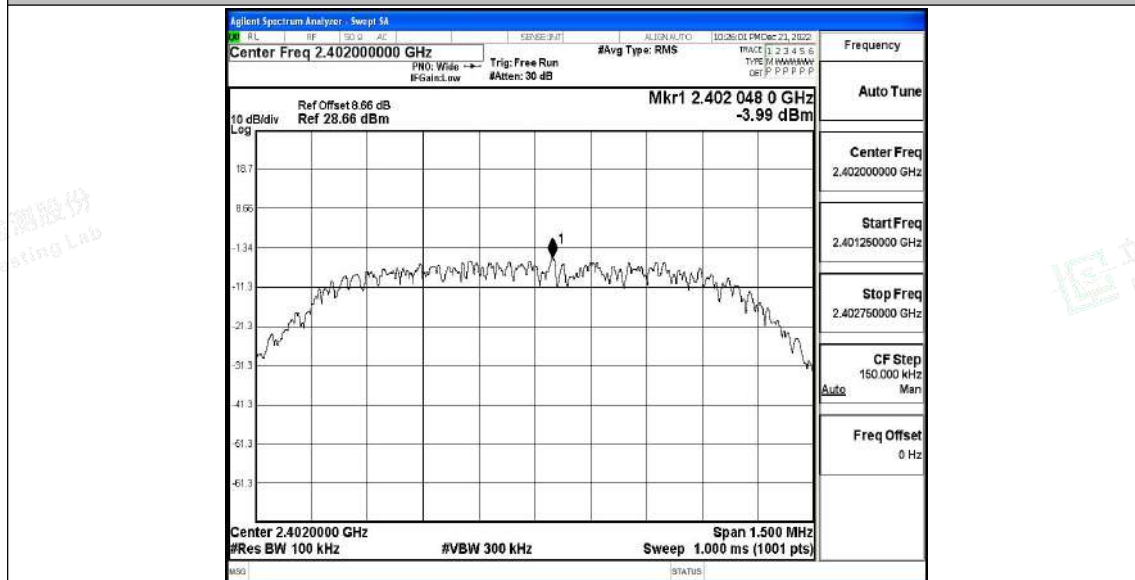


DH5_Ant1_2480_1000~26500



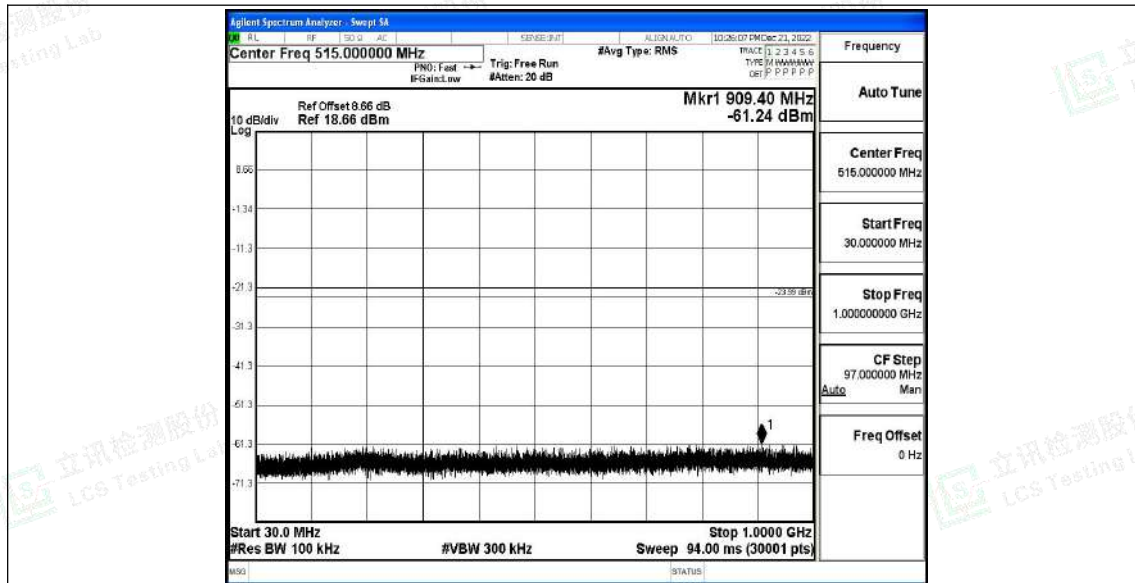


2DH5_Ant1_2402_0~Reference

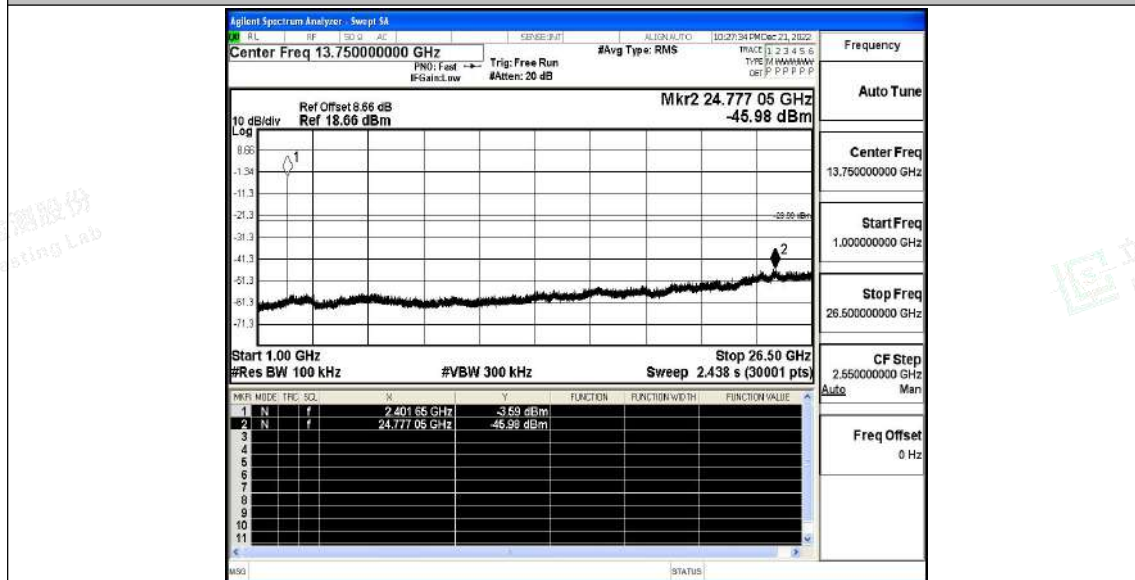


2DH5_Ant1_2402_30~1000



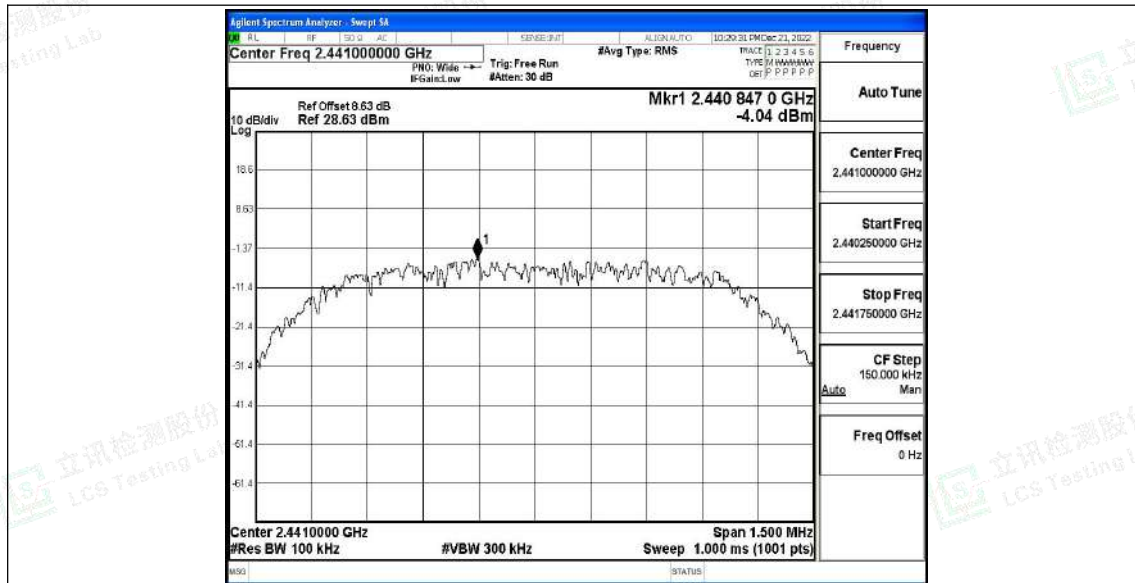


2DH5_Ant1_2402_1000~26500

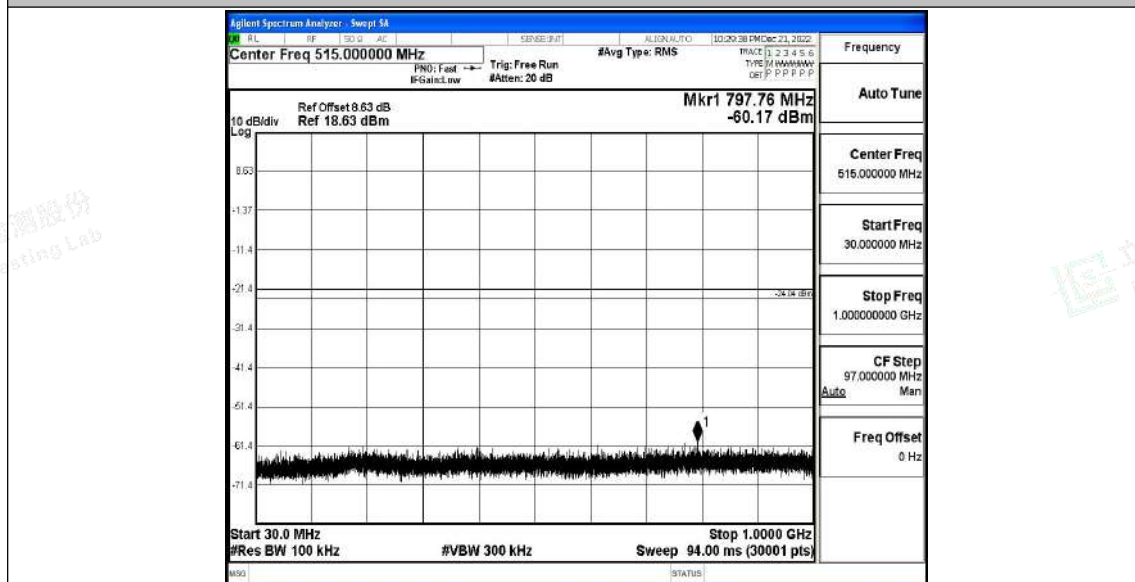


2DH5_Ant1_2441_0~Reference



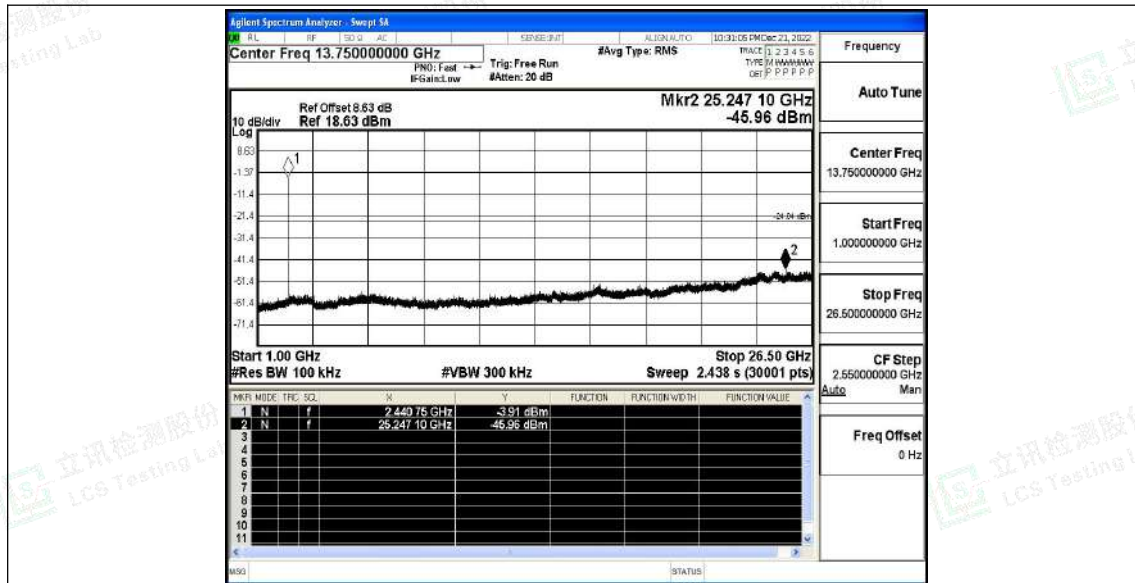


2DH5_Ant1_2441_30~1000

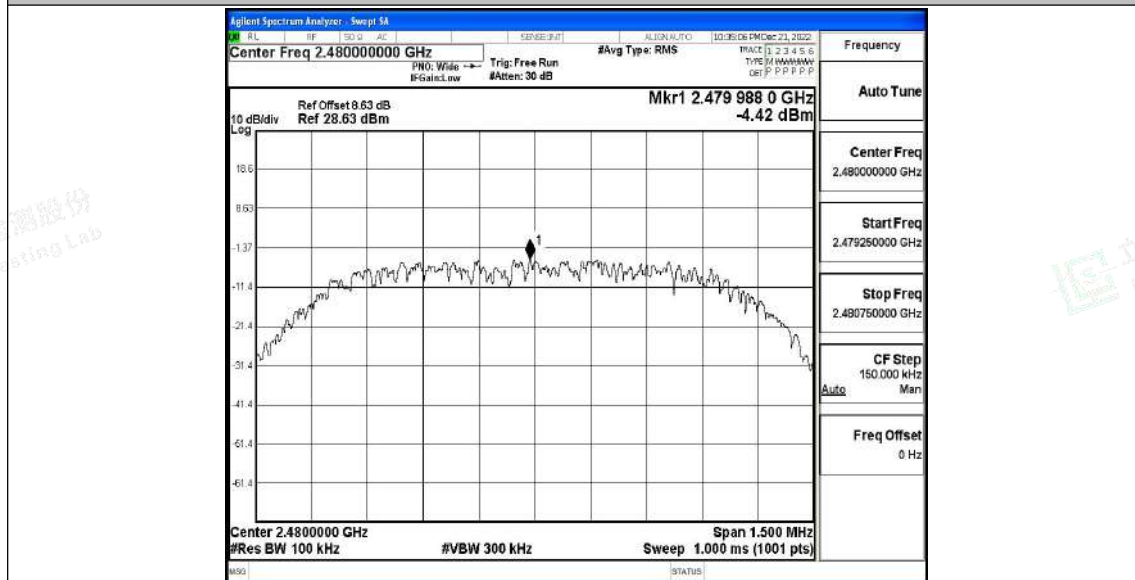


2DH5_Ant1_2441_1000~26500



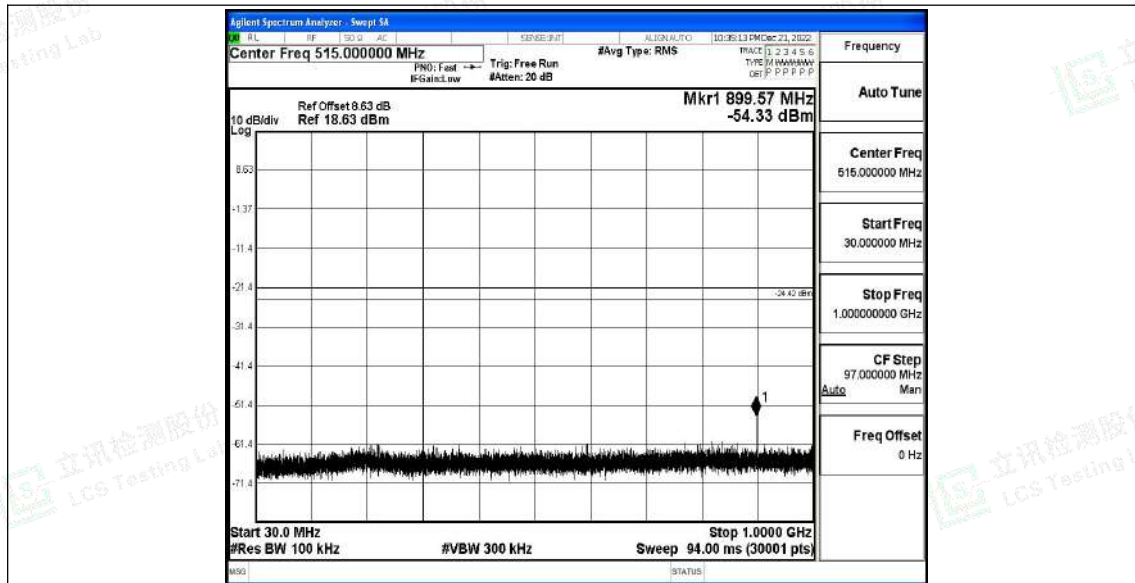


2DH5_Ant1_2480_0~Reference

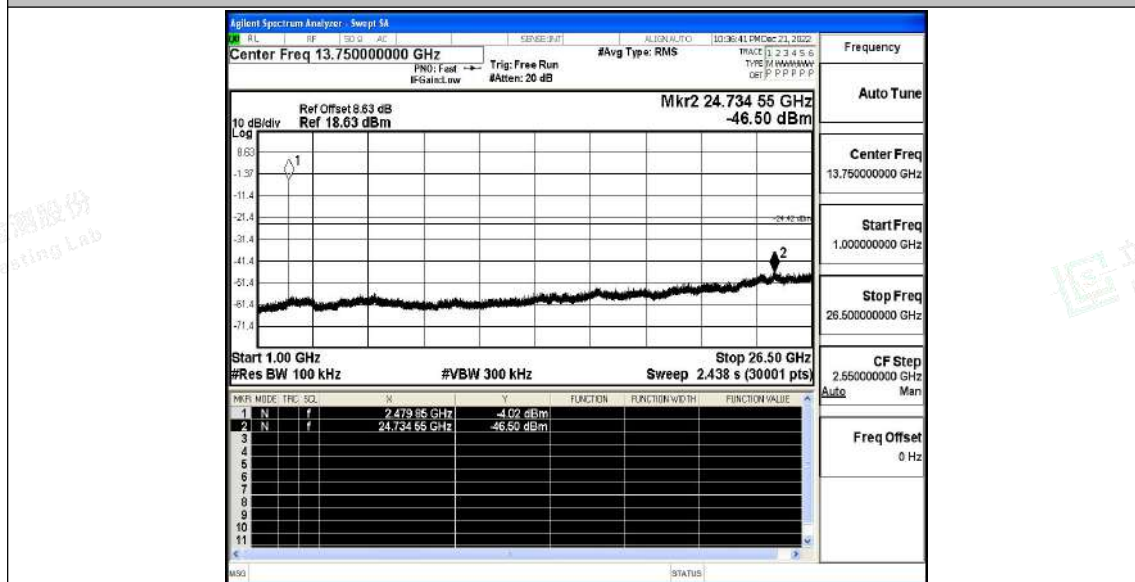


2DH5_Ant1_2480_30~1000



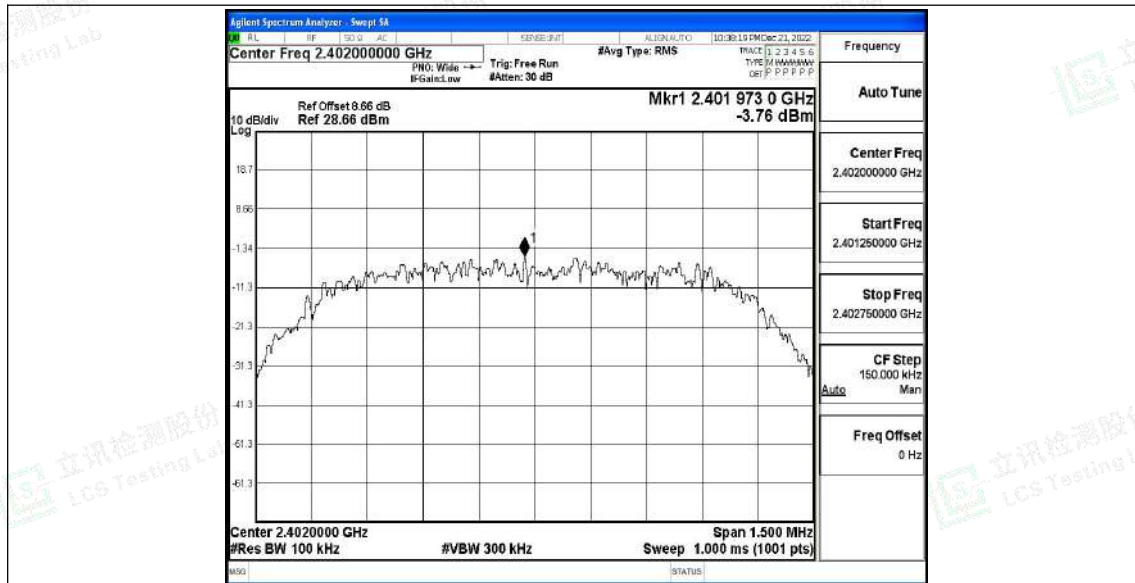


2DH5_Ant1_2480_1000~26500

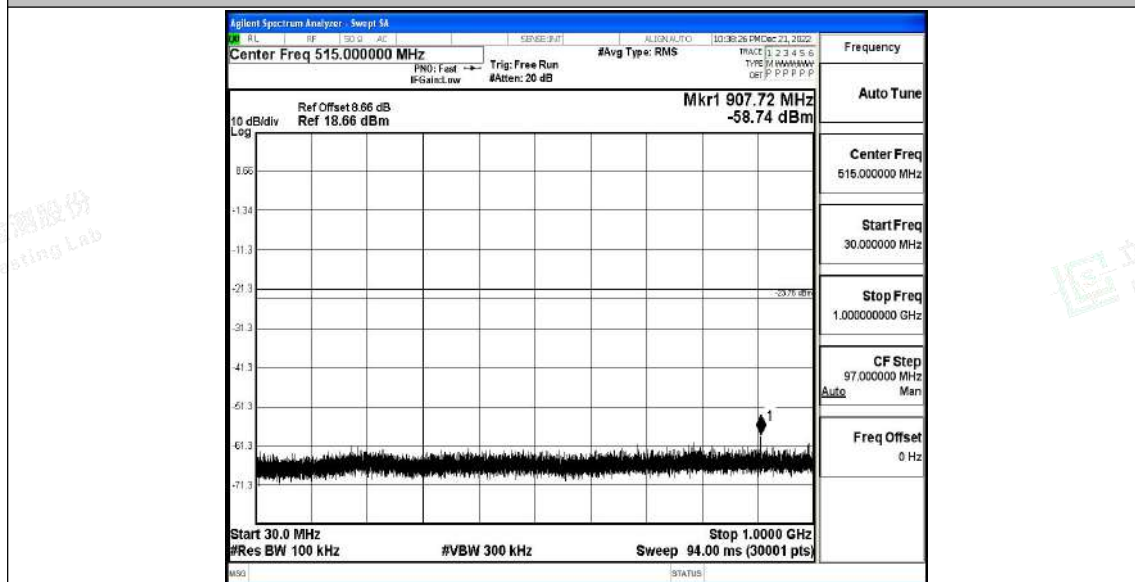


3DH5_Ant1_2402_0~Reference



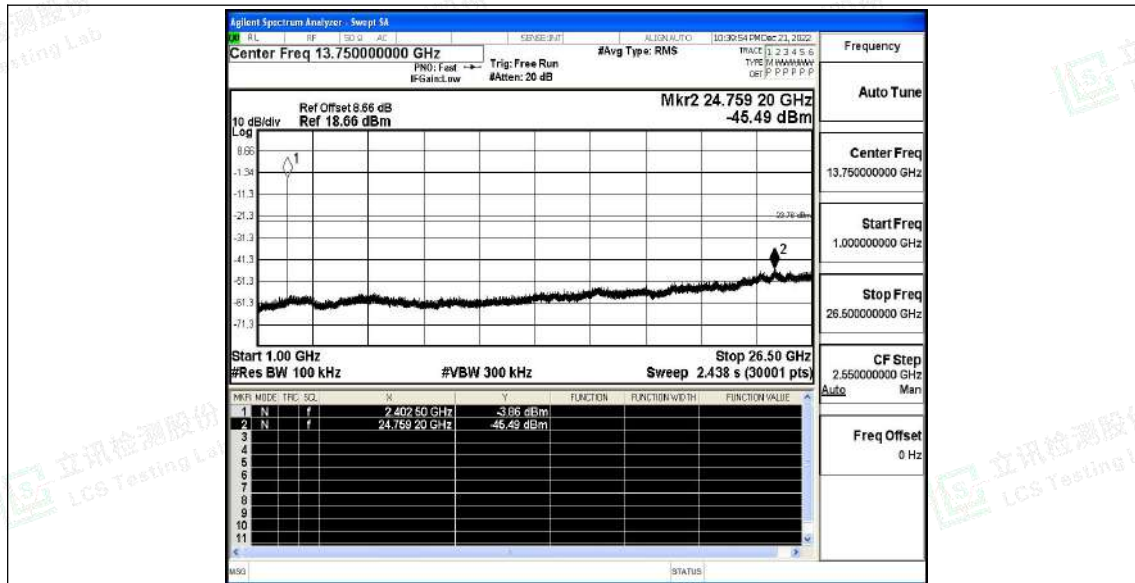


3DH5_Ant1_2402_30~1000

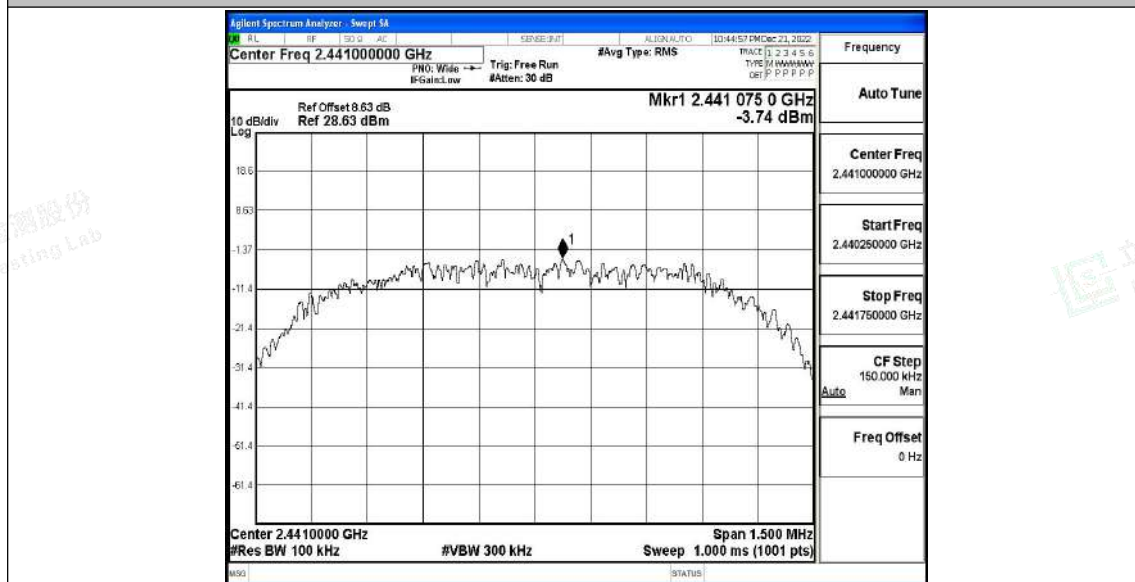


3DH5_Ant1_2402_1000~26500



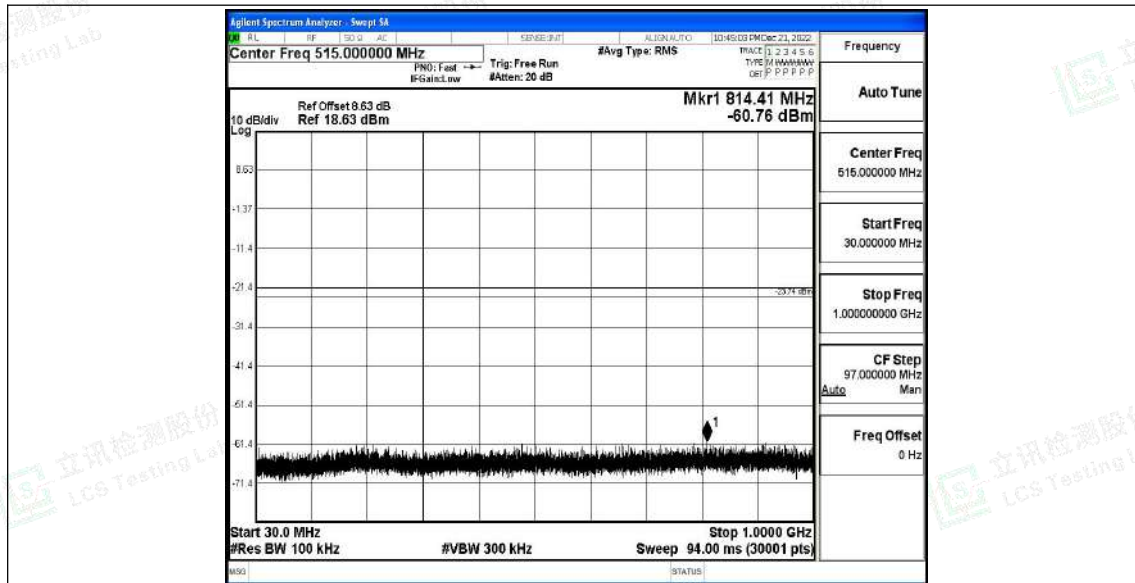


3DH5_Ant1_2441_0~Reference

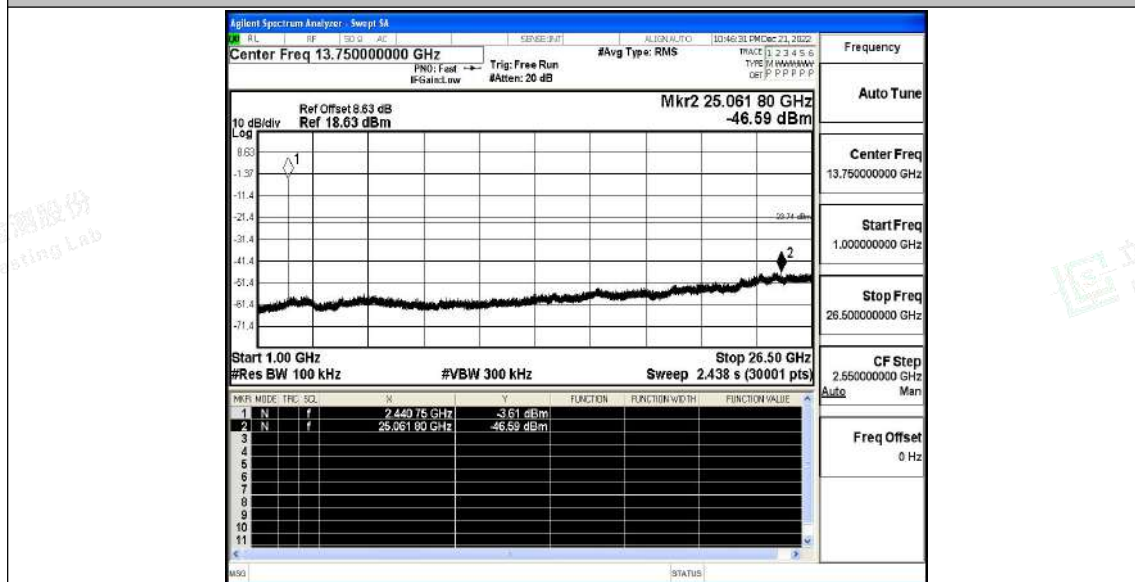


3DH5_Ant1_2441_30~1000



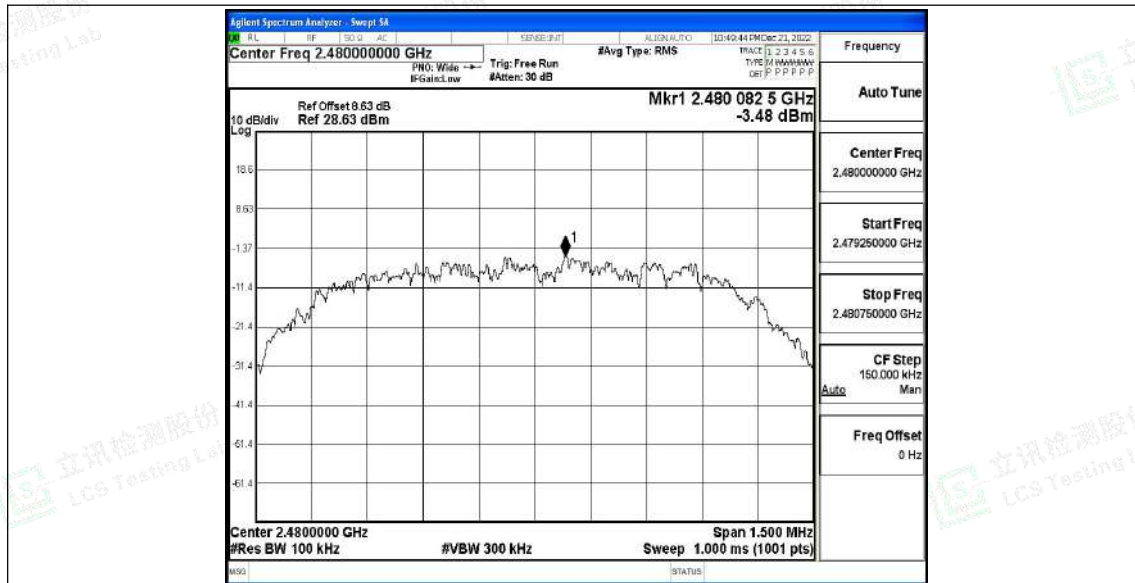


3DH5_Ant1_2441_1000~26500

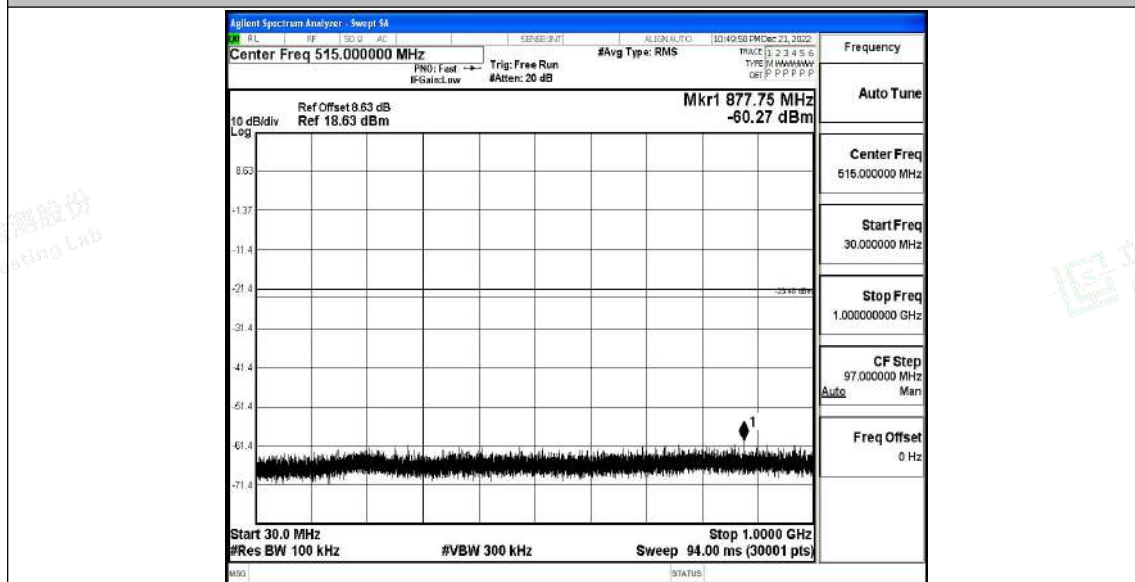


3DH5_Ant1_2480_0~Reference



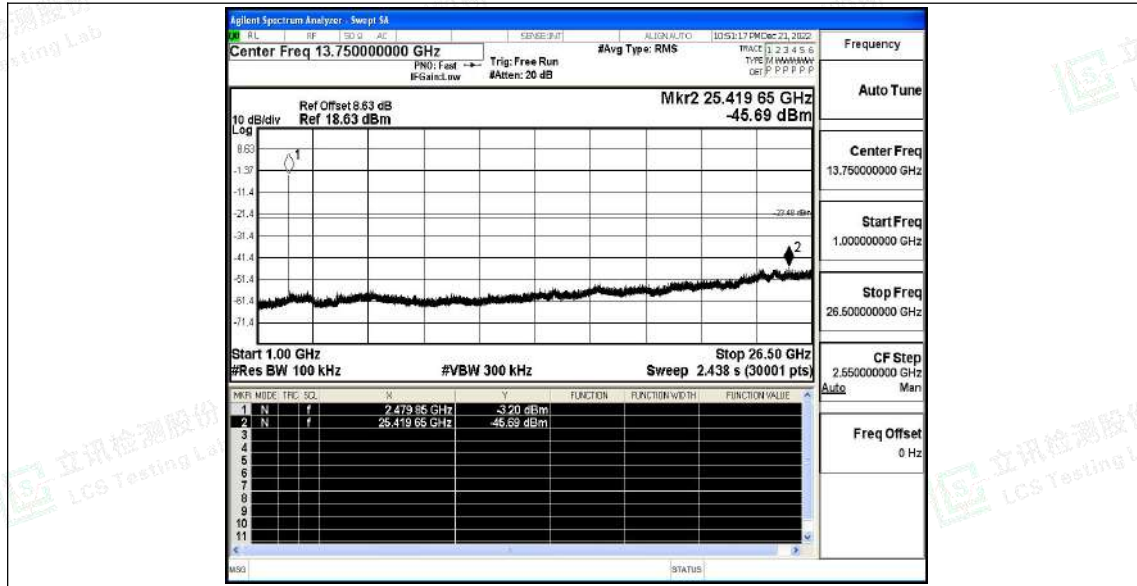


3DH5_Ant1_2480_30~1000



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	-58.25	≤-41.20	36.95	≤54	PASS
				AV	2389.985	-57.39	≤-41.20	37.81	≤54	PASS
				AV	2390.000	-57.39	≤-41.20	37.81	≤54	PASS
				Peak	2310.000	-53.03	≤-21.20	42.17	≤74	PASS
				Peak	2325.200	-48.36	≤-21.20	46.84	≤74	PASS
				Peak	2390.000	-53.21	≤-21.20	41.99	≤74	PASS
		High	2480	AV	2483.500	-52.94	≤-41.20	42.26	≤54	PASS
				AV	2483.520	-52.94	≤-41.20	42.26	≤54	PASS
				AV	2500.000	-57.32	≤-41.20	37.88	≤54	PASS
				Peak	2483.500	-48.56	≤-21.20	46.64	≤74	PASS
				Peak	2488.880	-47.37	≤-21.20	47.83	≤74	PASS
				Peak	2500.000	-53.74	≤-21.20	41.46	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-49.92	≤-21.20	45.28	≤74	PASS
				Peak	2335.070	-47.19	≤-21.20	48.01	≤74	PASS
				Peak	2390.000	-50.07	≤-21.20	45.13	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-49.37	≤-21.20	45.83	≤74	PASS
				Peak	2491.120	-45.96	≤-21.20	49.24	≤74	PASS
				Peak	2500.000	-47.77	≤-21.20	47.43	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-58.34	≤-41.20	36.86	≤54	PASS
				AV	2389.985	-57.71	≤-41.20	37.49	≤54	PASS
				AV	2390.000	-57.71	≤-41.20	37.49	≤54	PASS
				Peak	2310.000	-53.62	≤-21.20	41.58	≤74	PASS
				Peak	2339.375	-46.74	≤-21.20	48.46	≤74	PASS
				Peak	2390.000	-49.38	≤-21.20	45.82	≤74	PASS
		High	2480	AV	2483.500	-54.05	≤-41.20	41.15	≤54	PASS
				AV	2483.520	-54.05	≤-41.20	41.15	≤54	PASS
				AV	2500.000	-57.42	≤-41.20	37.78	≤54	PASS
				Peak	2483.500	-50.34	≤-21.20	44.86	≤74	PASS
				Peak	2496.480	-48.04	≤-21.20	47.16	≤74	PASS
				Peak	2500.000	-49.93	≤-21.20	45.27	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-50.46	≤-21.20	44.74	≤74	PASS
				Peak	2374.970	-47.4	≤-21.20	47.80	≤74	PASS
				Peak	2390.000	-49.42	≤-21.20	45.78	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-48.02	≤-21.20	47.18	≤74	PASS
				Peak	2497.680	-45.93	≤-21.20	49.27	≤74	PASS



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Scan code to check authenticity



3DH5	Ant1	Low	2402	Peak	2500.000	-48.66	≤ -21.20	46.54	≤ 74	PASS
				AV	2310.000	-58.42	≤ -41.20	36.78	≤ 54	PASS
				AV	2389.985	-57.76	≤ -41.20	37.44	≤ 54	PASS
				AV	2390.000	-57.77	≤ -41.20	37.43	≤ 54	PASS
				Peak	2310.000	-53.7	≤ -21.20	41.50	≤ 74	PASS
				Peak	2385.995	-47.65	≤ -21.20	47.55	≤ 74	PASS
				Peak	2390.000	-53.16	≤ -21.20	42.04	≤ 74	PASS
		High	2480	AV	2483.500	-54.06	≤ -41.20	41.14	≤ 54	PASS
				AV	2483.520	-54.06	≤ -41.20	41.14	≤ 54	PASS
				AV	2500.000	-57.42	≤ -41.20	37.78	≤ 54	PASS
				Peak	2483.500	-48.31	≤ -21.20	46.89	≤ 74	PASS
				Peak	2484.880	-47.95	≤ -21.20	47.25	≤ 74	PASS
				Peak	2500.000	-50.74	≤ -21.20	44.46	≤ 74	PASS
		Low	Hop_24 02	Peak	2310.000	-49.53	≤ -21.20	45.67	≤ 74	PASS
				Peak	2380.640	-47.02	≤ -21.20	48.18	≤ 74	PASS
				Peak	2390.000	-48.38	≤ -21.20	46.82	≤ 74	PASS
		High	Hop_24 80	Peak	2483.500	-48.24	≤ -21.20	46.96	≤ 74	PASS
				Peak	2488.720	-46.9	≤ -21.20	48.30	≤ 74	PASS
				Peak	2500.000	-48.75	≤ -21.20	46.45	≤ 74	PASS

Note:

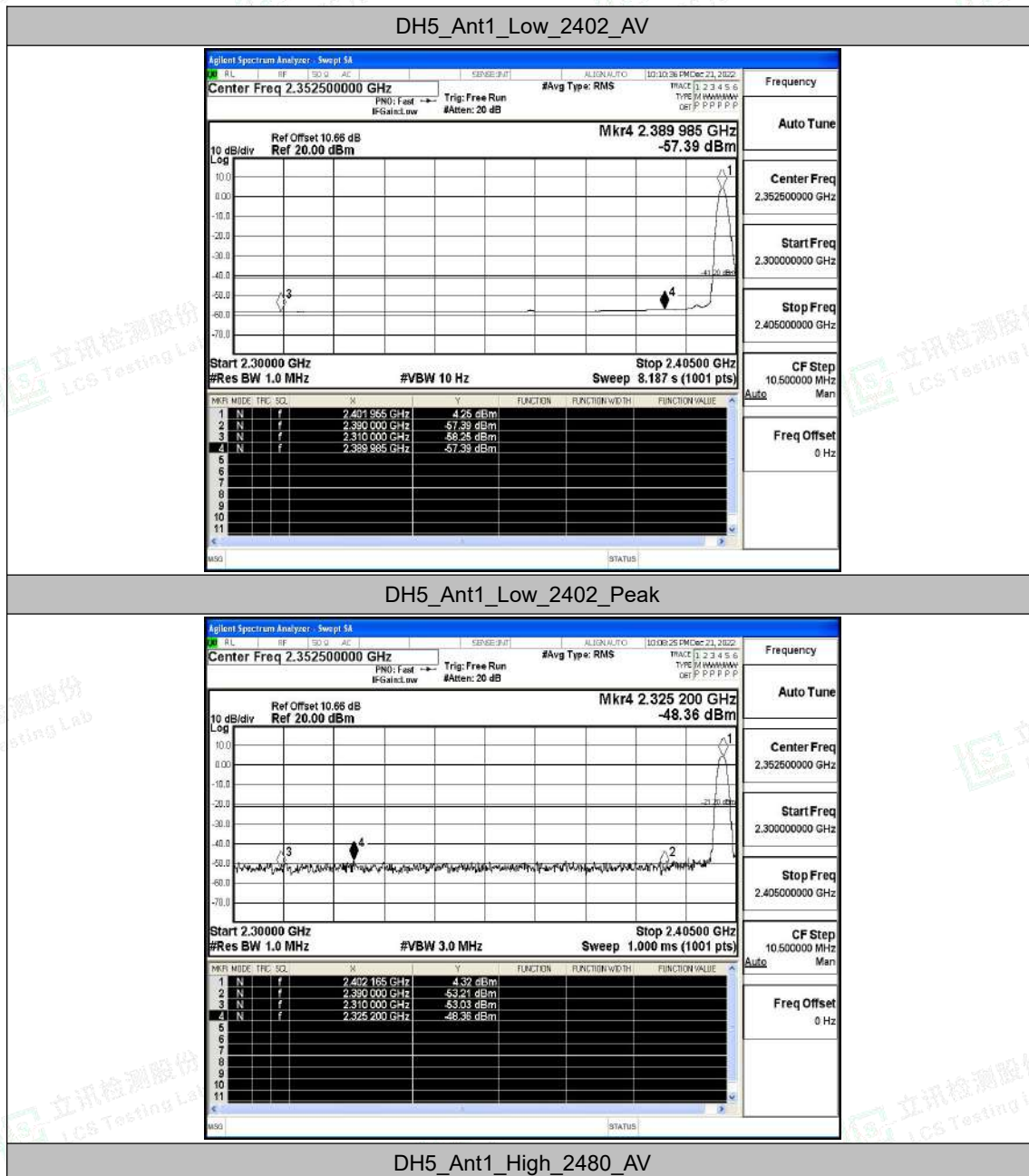
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

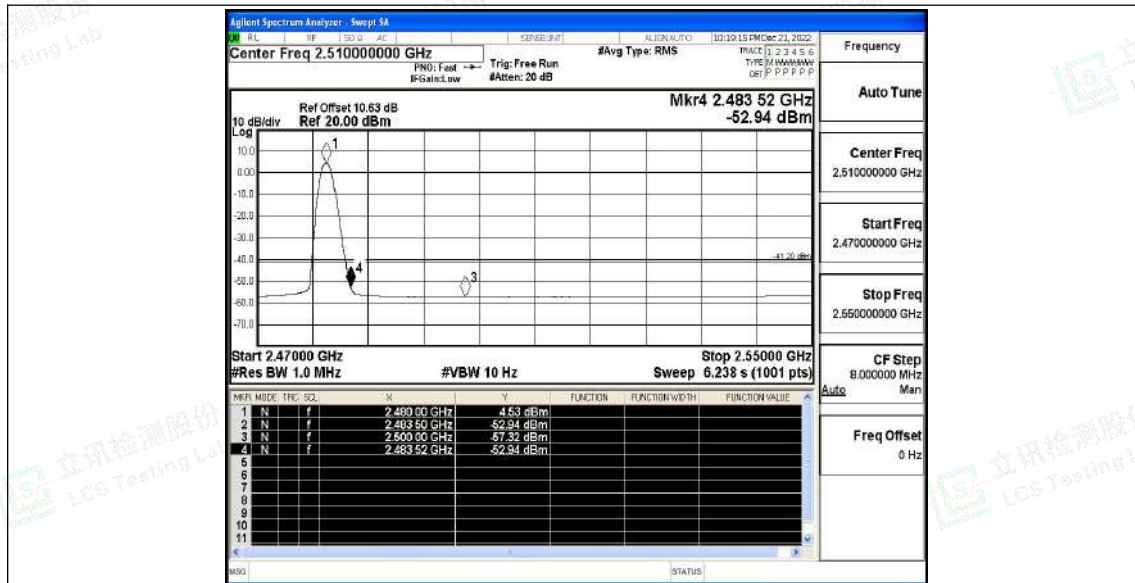


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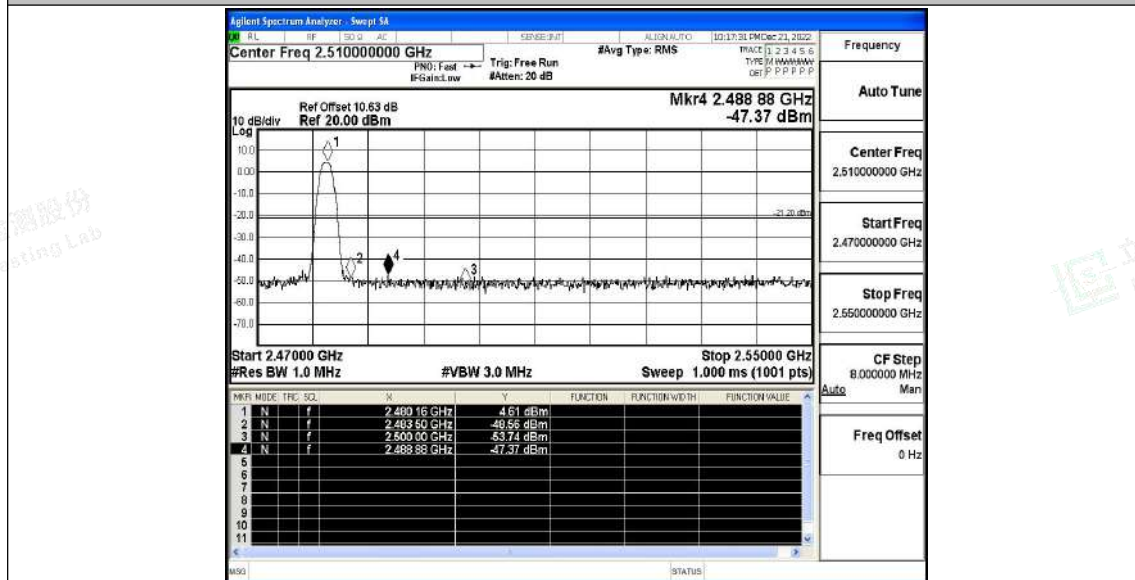


Test Graphs



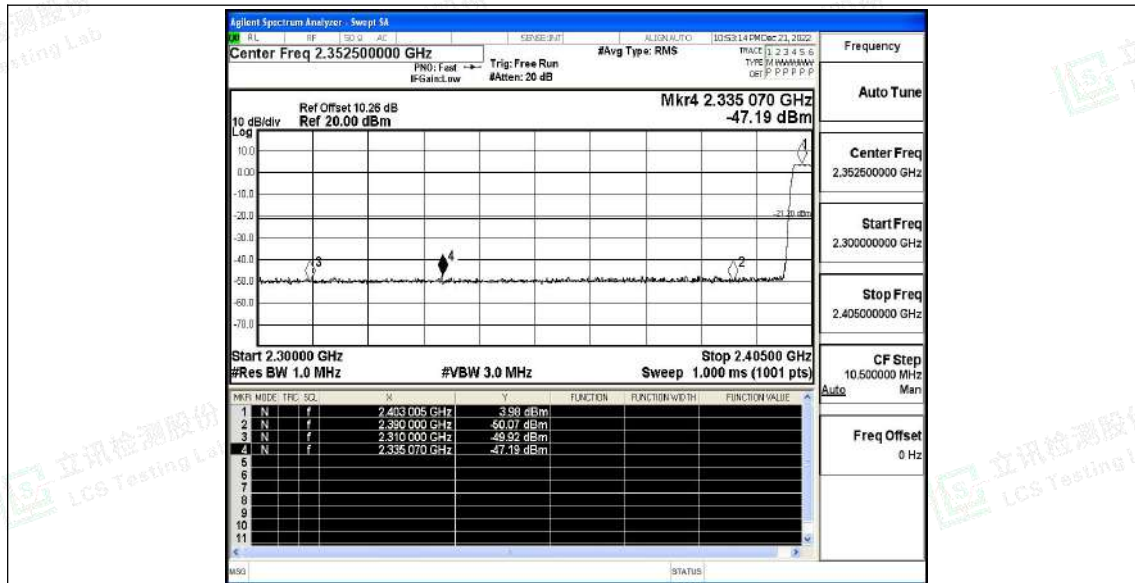


DH5_Ant1_High_2480_Peak

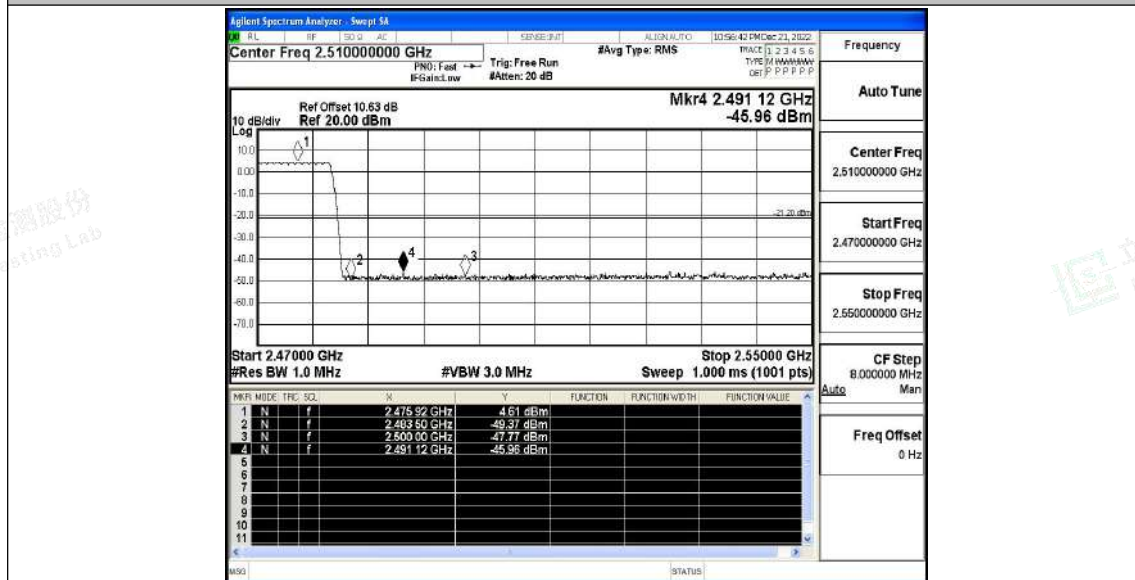


DH5_Ant1_Low_Hop_2402_Peak



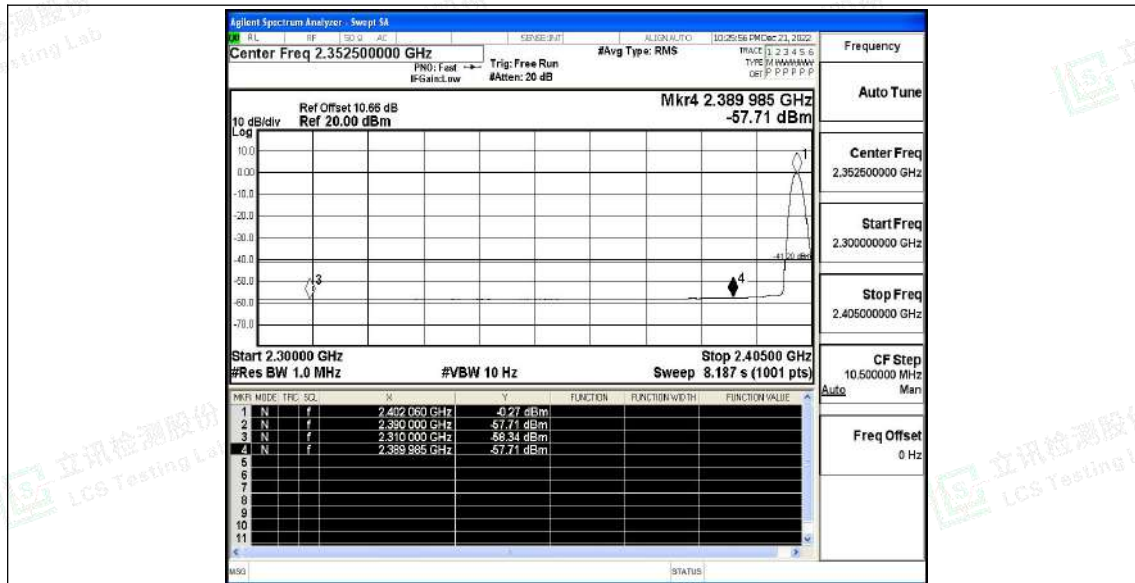


DH5_Ant1_High_Hop_2480_Peak

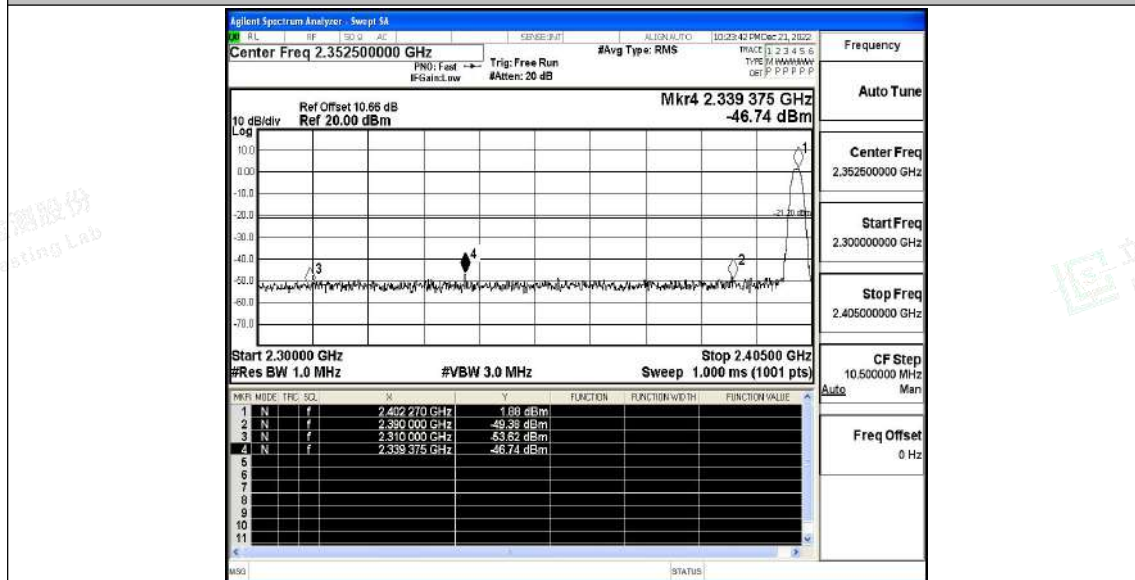


2DH5_Ant1_Low_2402_AV



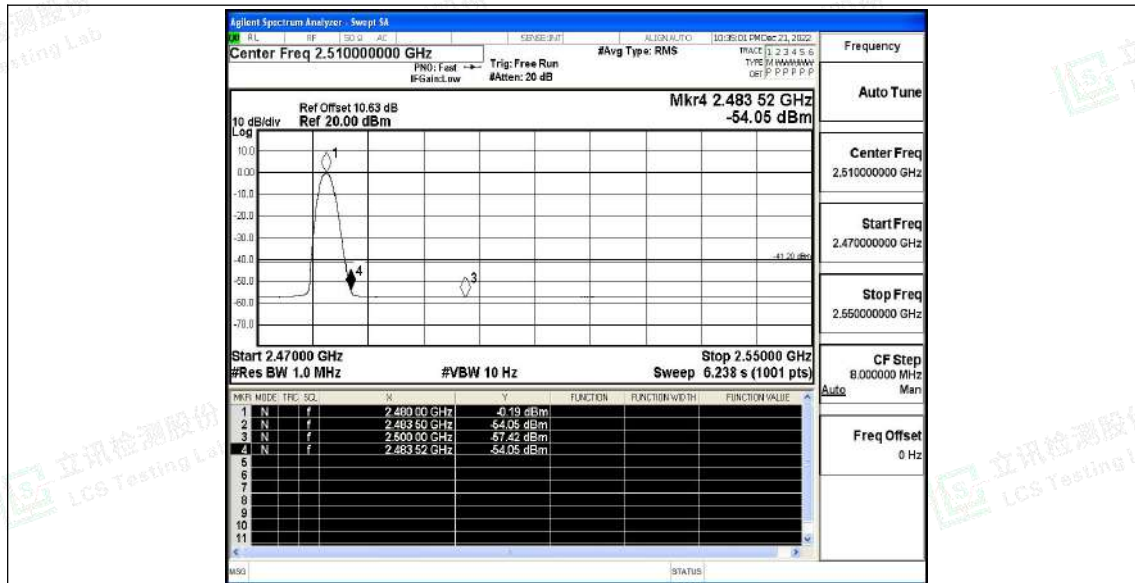


2DH5_Ant1_Low_2402_Peak

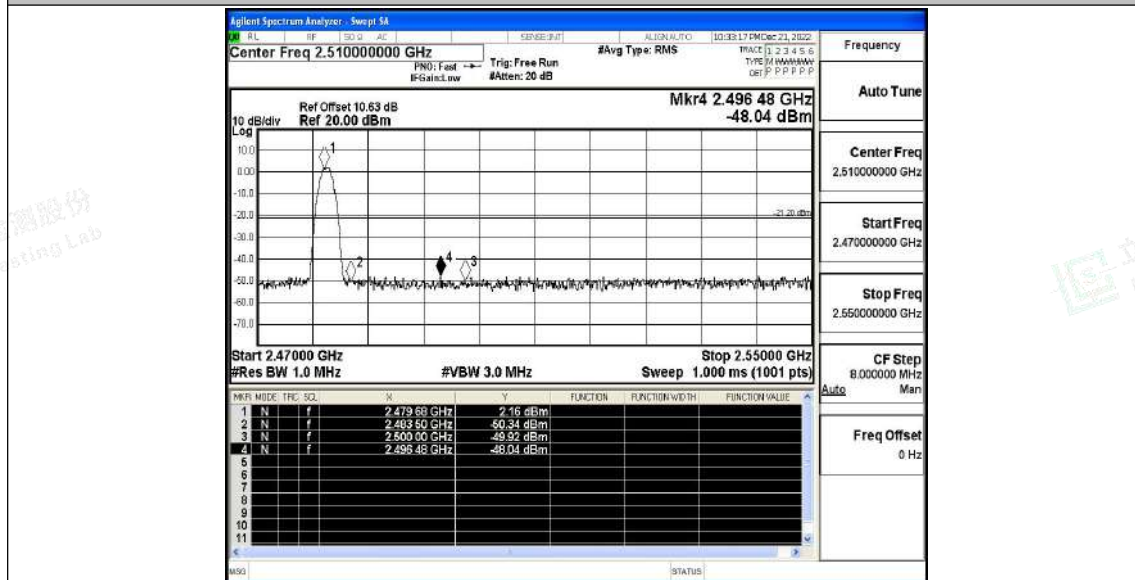


2DH5_Ant1_High_2480_AV



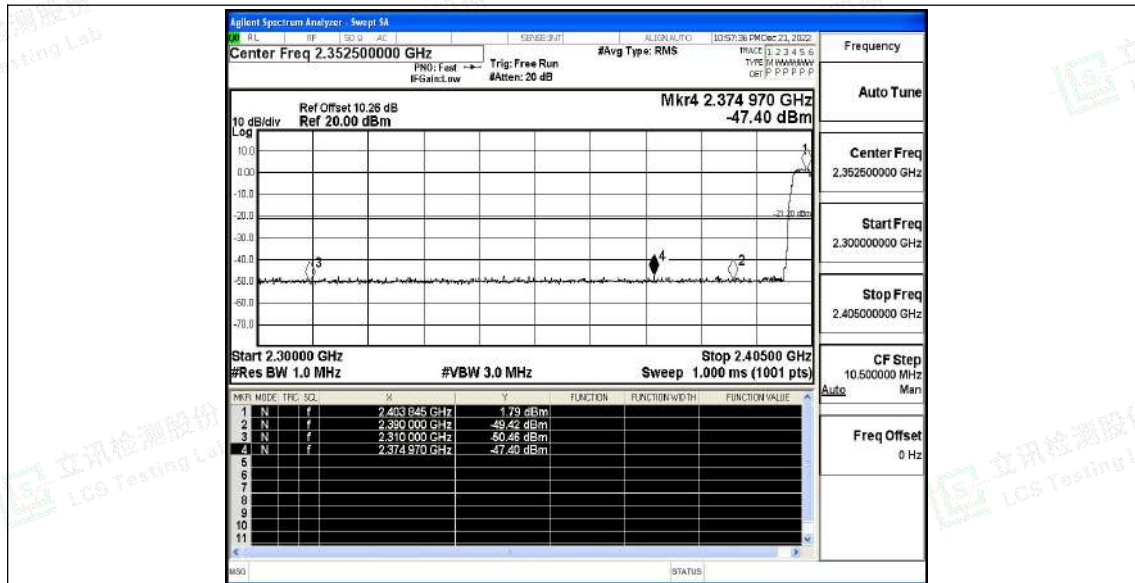


2DH5_Ant1_High_2480_Peak

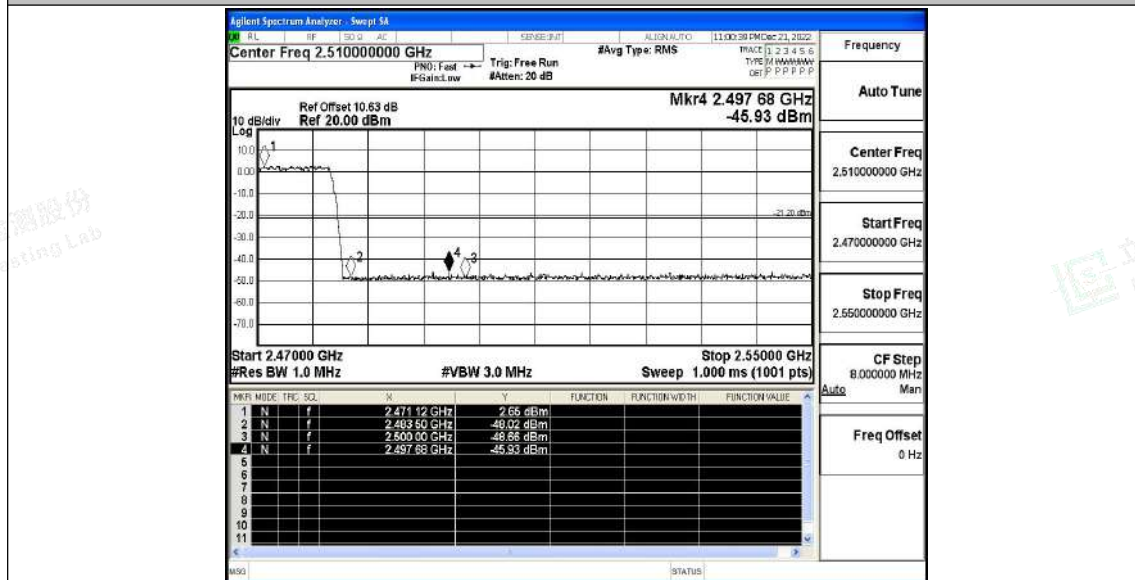


2DH5_Ant1_Low_Hop_2402_Peak



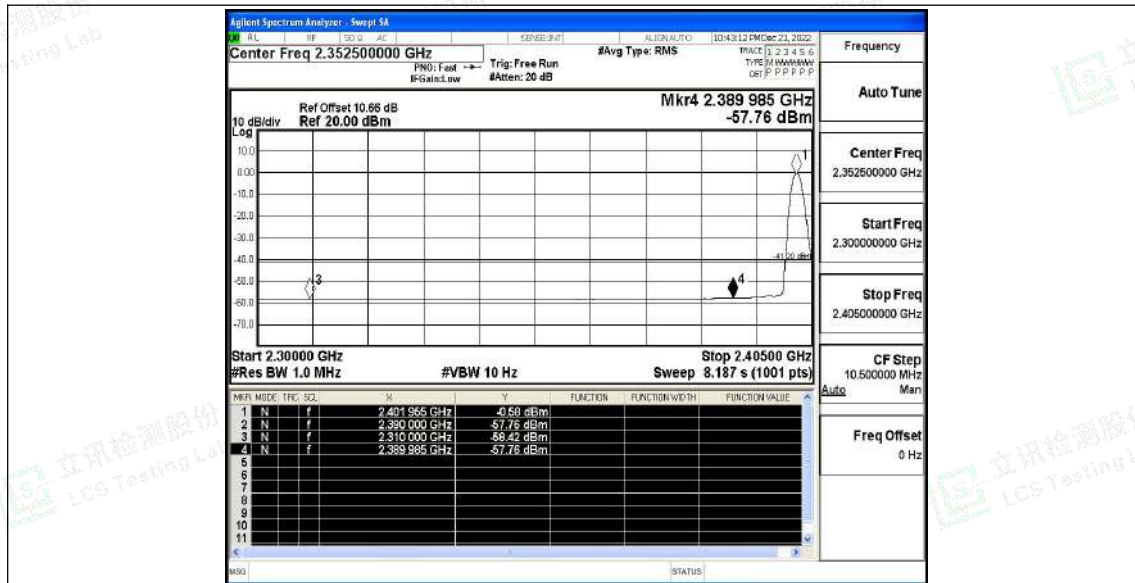


2DH5_Ant1_High_Hop_2480_Peak

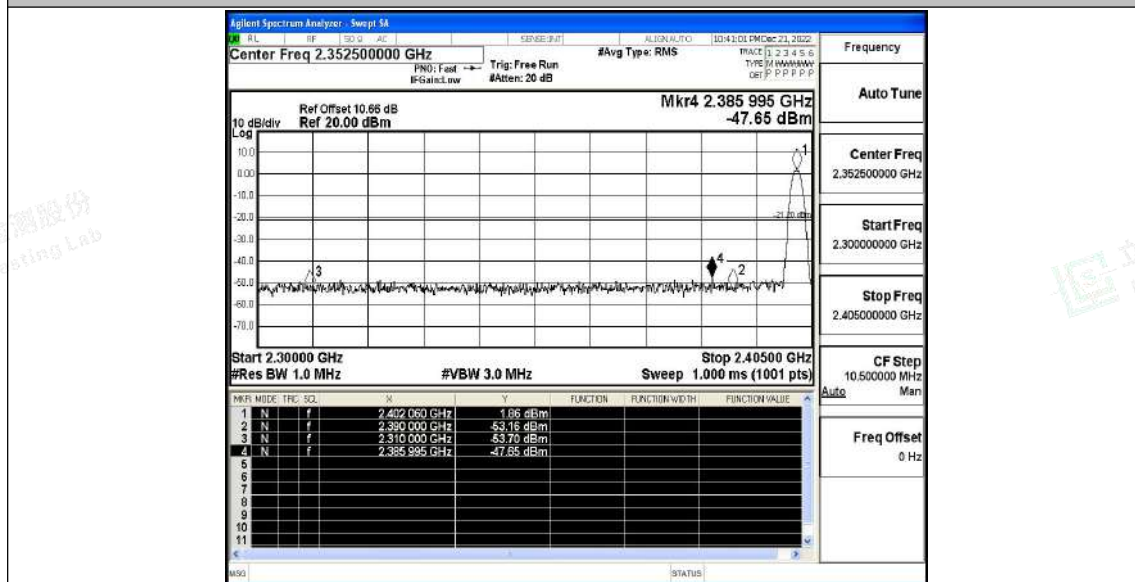


3DH5_Ant1_Low_2402_AV



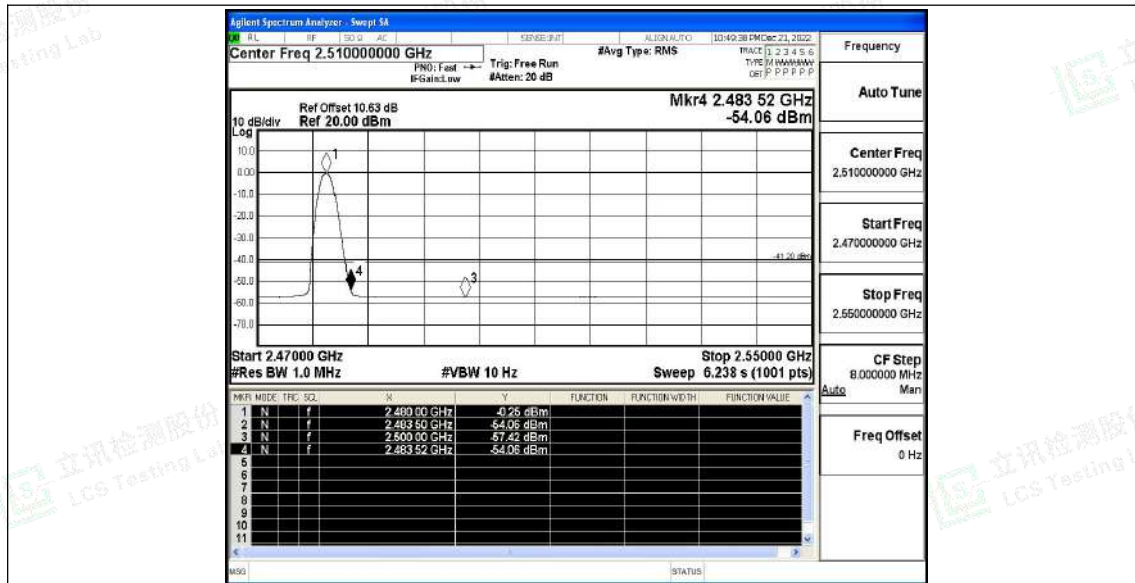


3DH5_Ant1_Low_2402_Peak

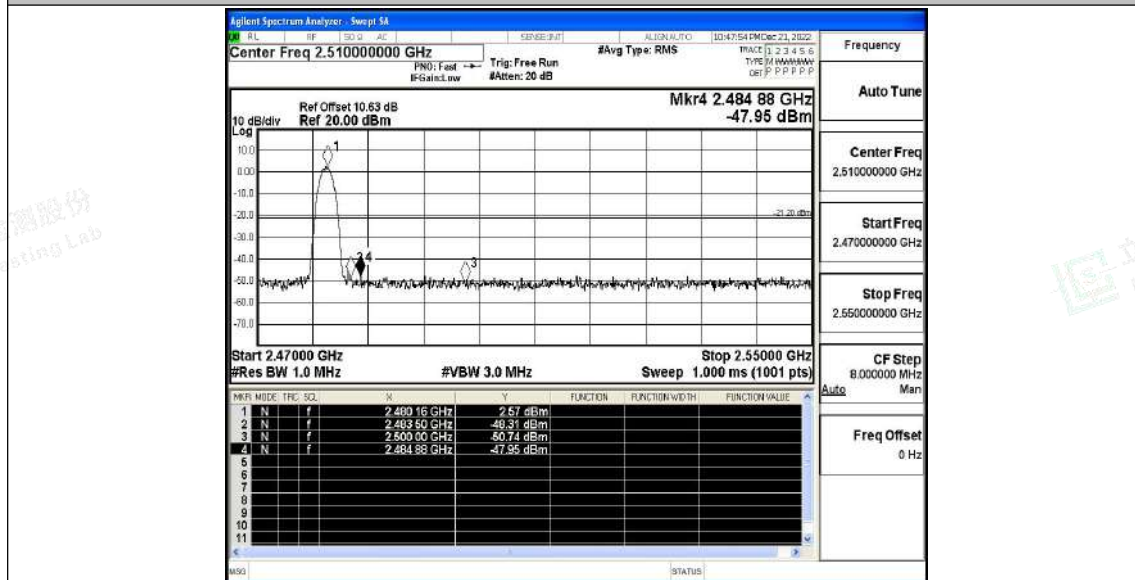


3DH5_Ant1_High_2480_AV





3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



