



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Magic 4K plus

Test Model: TV-175R

Environmental Conditions

Temperature:	23.8℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Monkey Li
Supervised by:	Li Huan





A.1 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant	2402	0.975	2401.529	2402.504	---
		2441	1.044	2440.463	2441.507	---
		2480	1.041	2479.463	2480.504	---
2DH5	Ant	2402	1.329	2401.334	2402.663	---
		2441	1.290	2440.364	2441.654	---
		2480	1.314	2479.340	2480.654	---
3DH5	Ant	2402	1.308	2401.349	2402.657	---
		2441	1.314	2440.346	2441.660	---
		2480	1.296	2479.352	2480.648	---

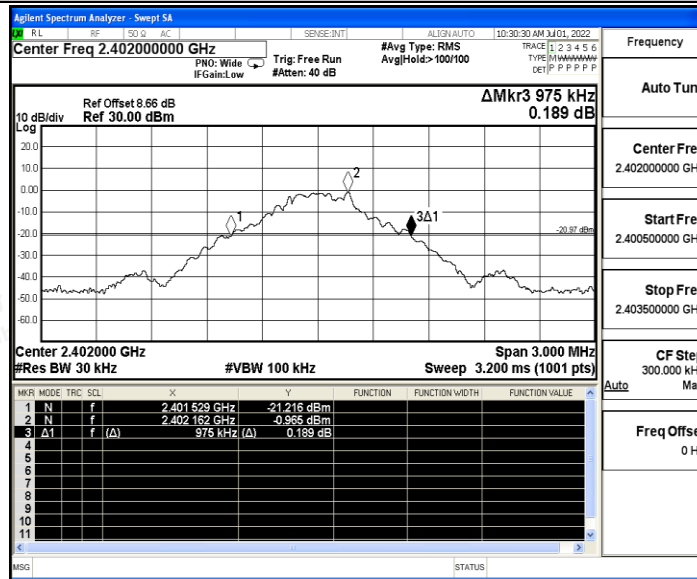


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Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

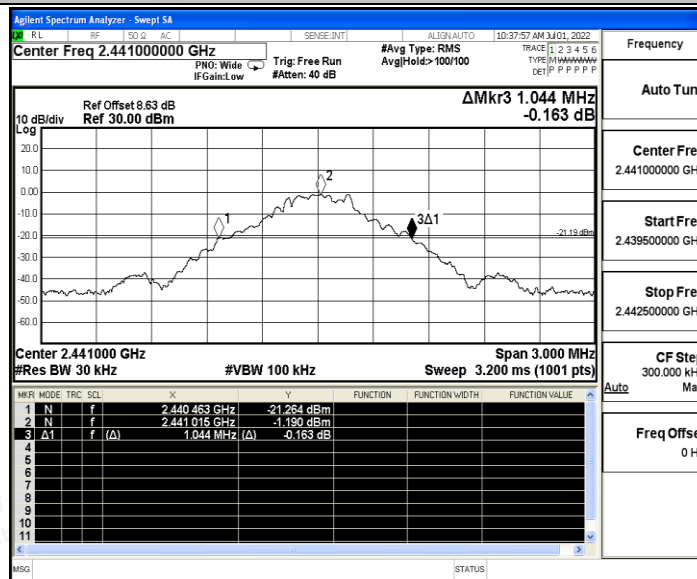


Test Graphs

DH5_Ant_2402

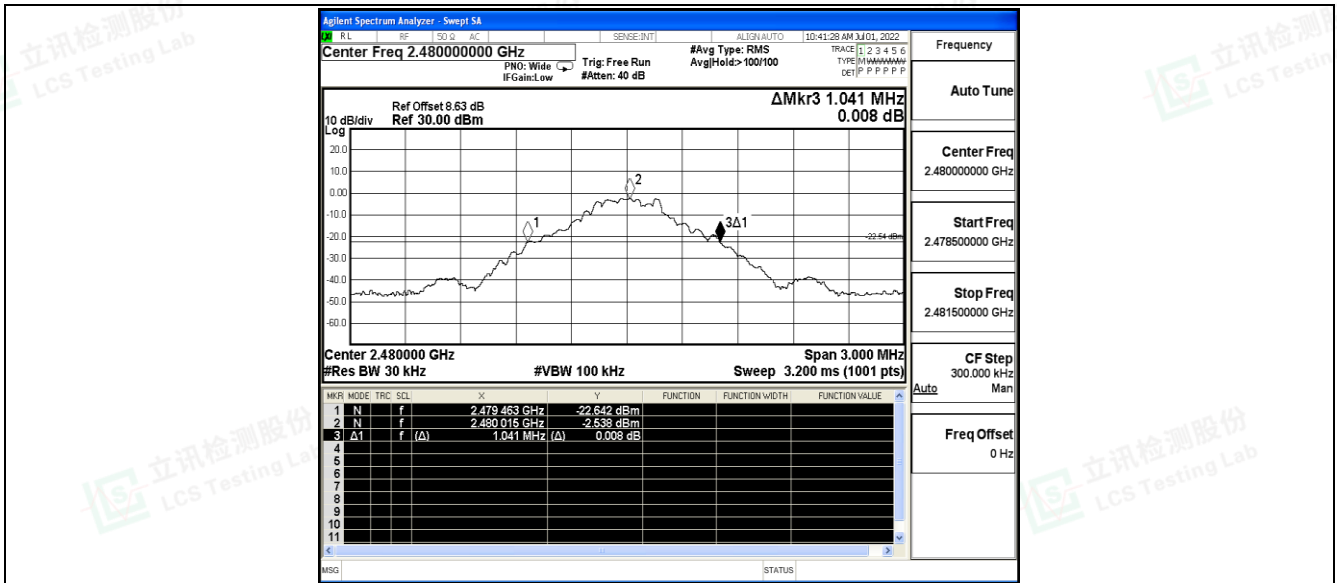


DH5_Ant_2441

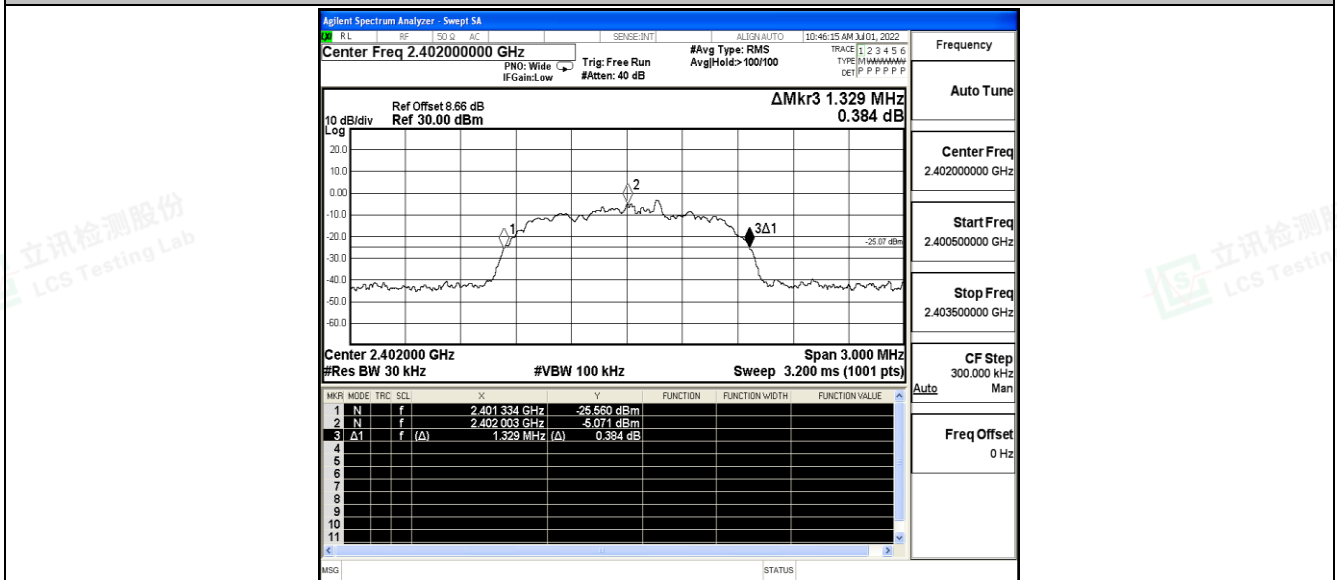


DH5_Ant_2480



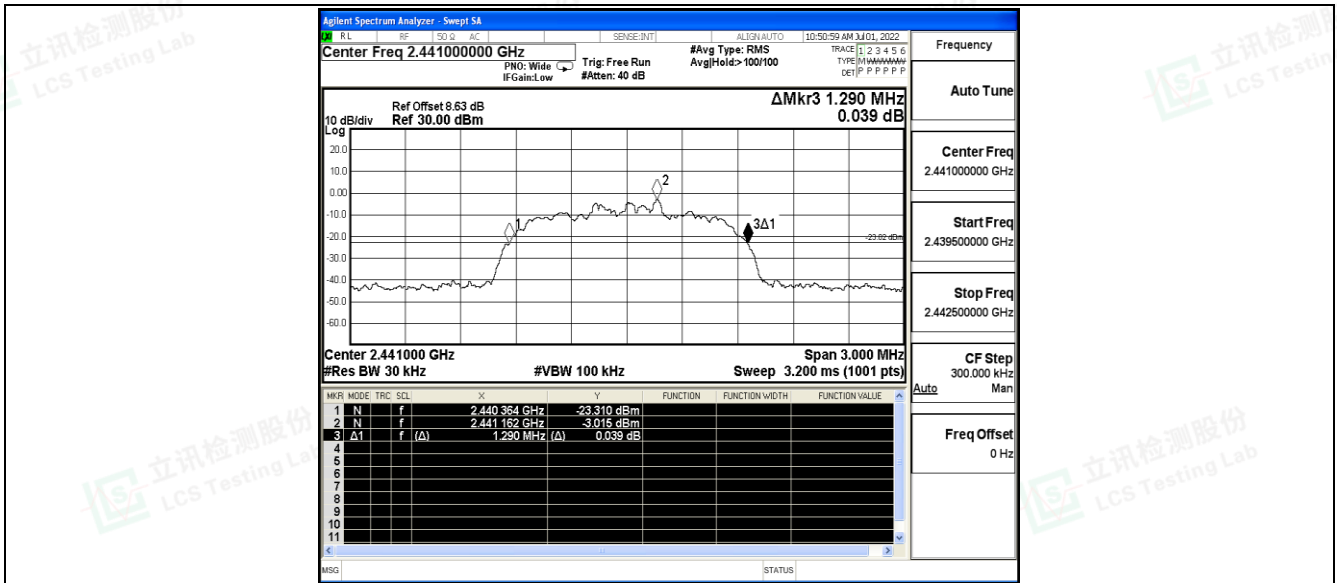


2DH5_Ant_2402

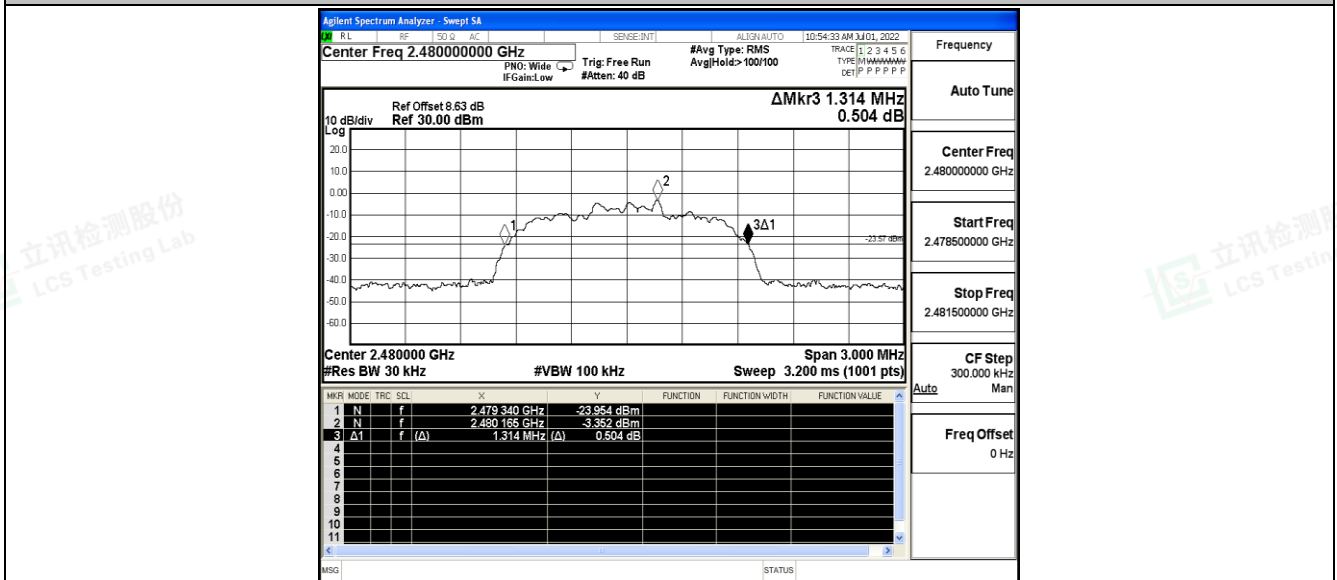


2DH5_Ant_2441



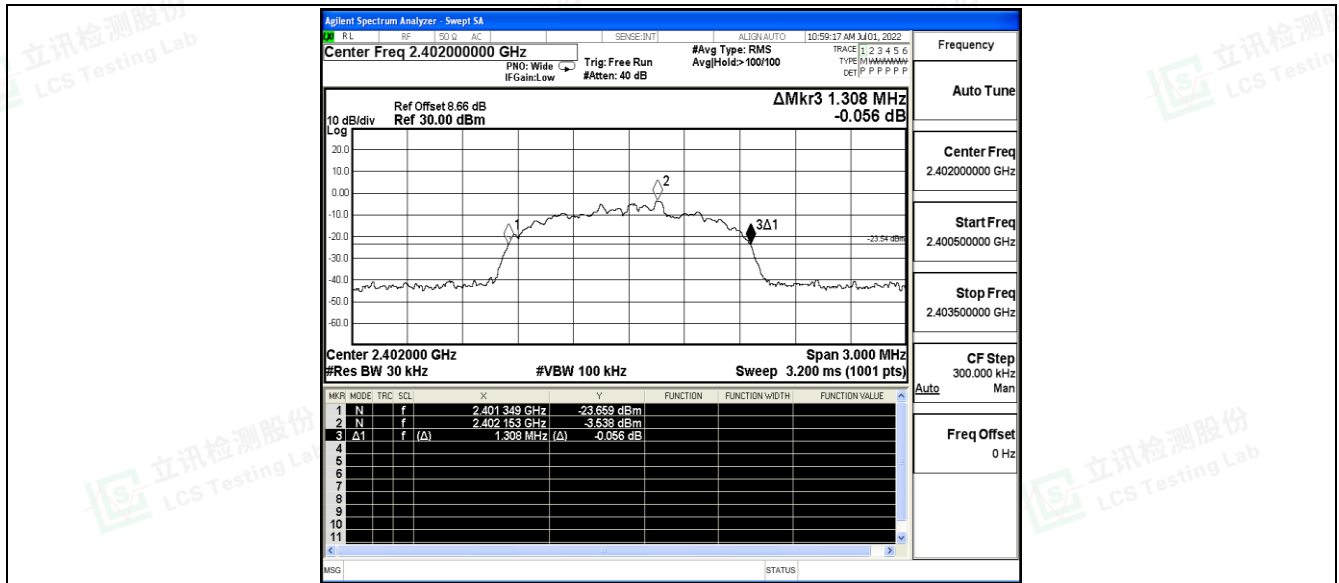


2DH5_Ant_2480

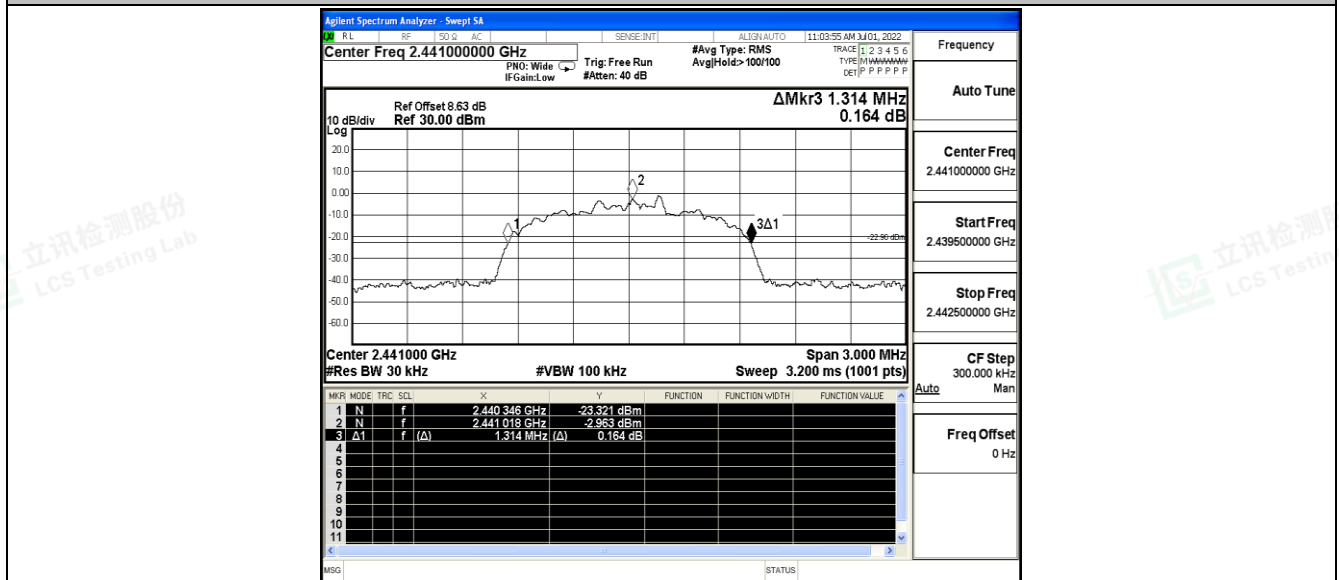


3DH5_Ant_2402



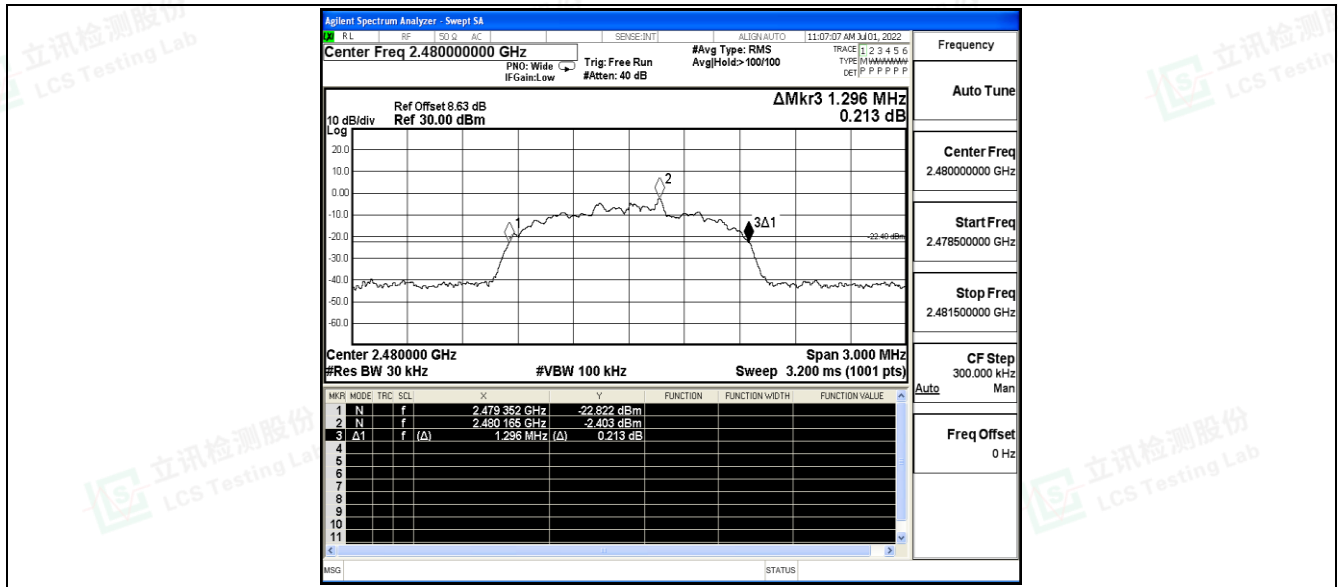


3DH5_Ant_2441



3DH5_Ant_2480







A.2 Maximum peak conducted output power

Test Result

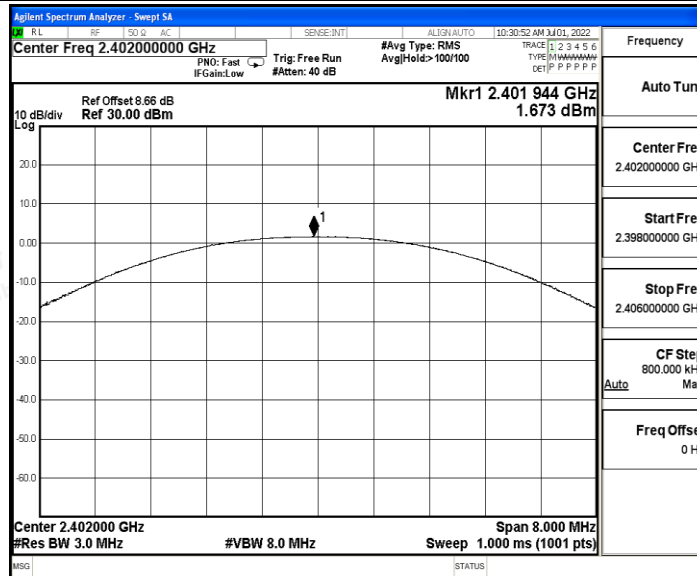
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant	2402	1.67	≤20.97	PASS
		2441	1.81	≤20.97	PASS
		2480	0.56	≤20.97	PASS
2DH5	Ant	2402	0.58	≤20.97	PASS
		2441	0.92	≤20.97	PASS
		2480	0.54	≤20.97	PASS
3DH5	Ant	2402	0.96	≤20.97	PASS
		2441	2.16	≤20.97	PASS
		2480	1.02	≤20.97	PASS



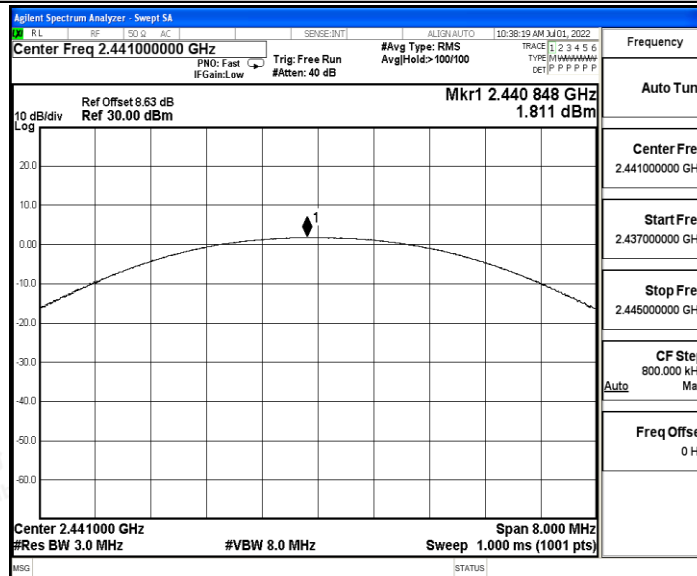


Test Graphs

DH5_Ant_2402

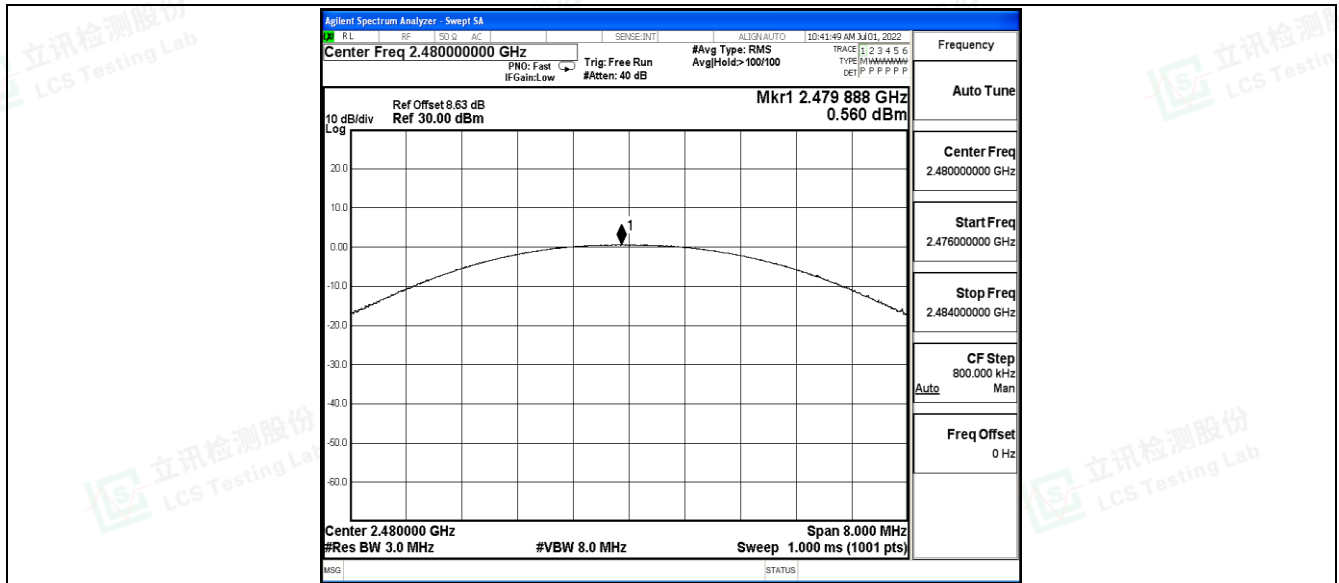


DH5_Ant_2441

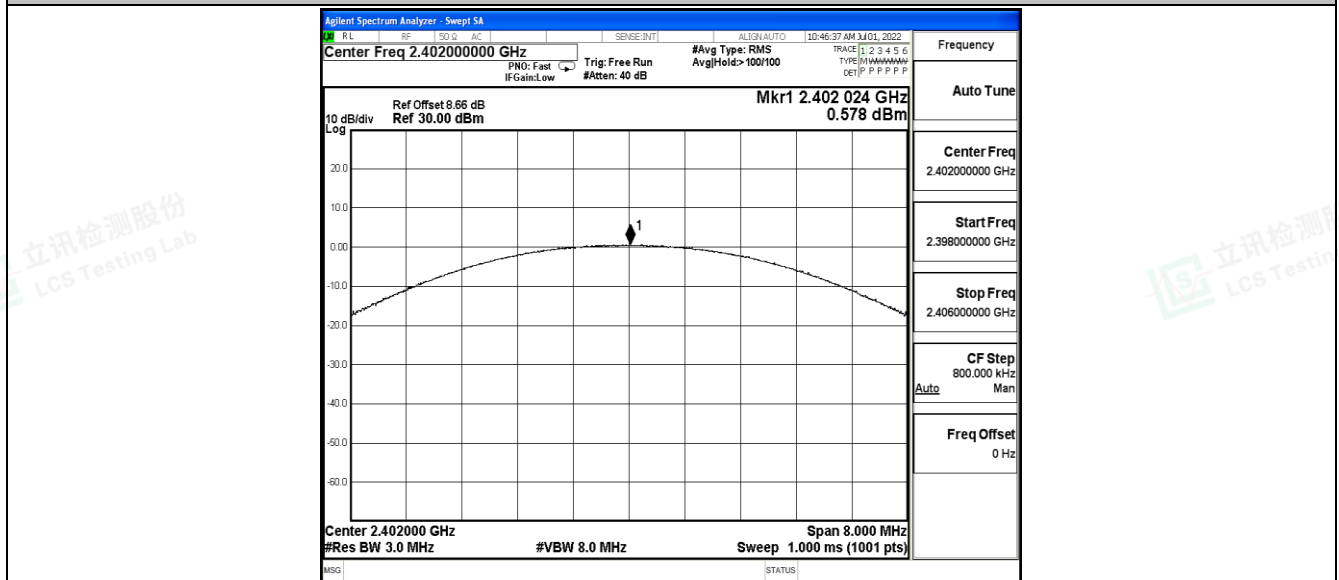


DH5_Ant_2480



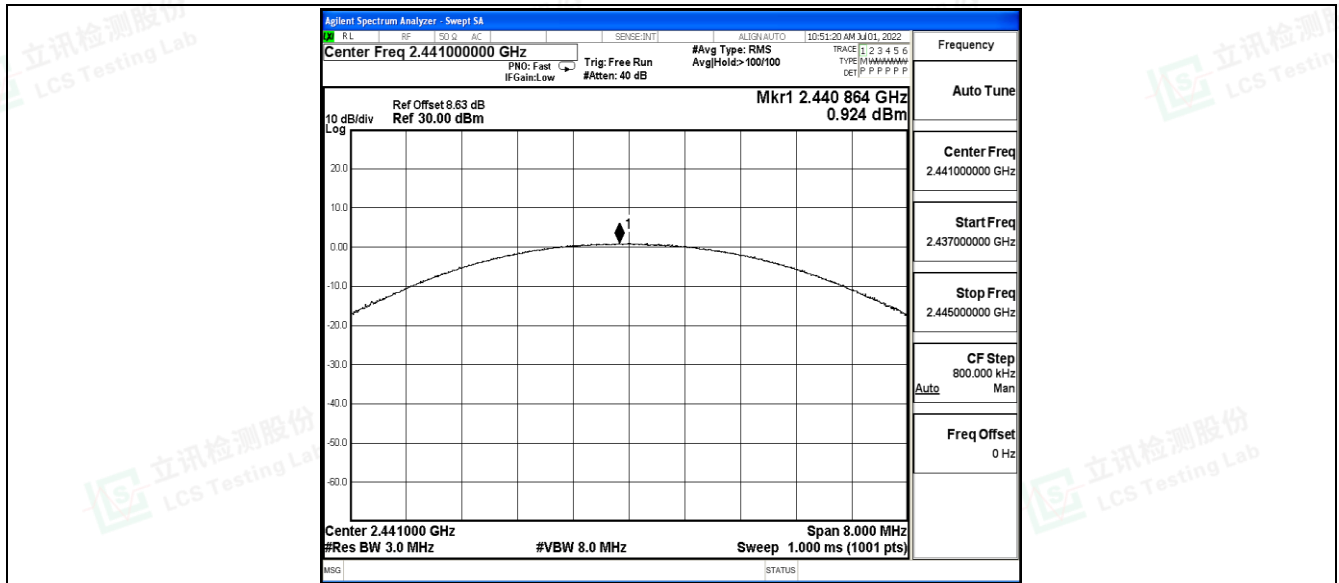


2DH5_Ant_2402

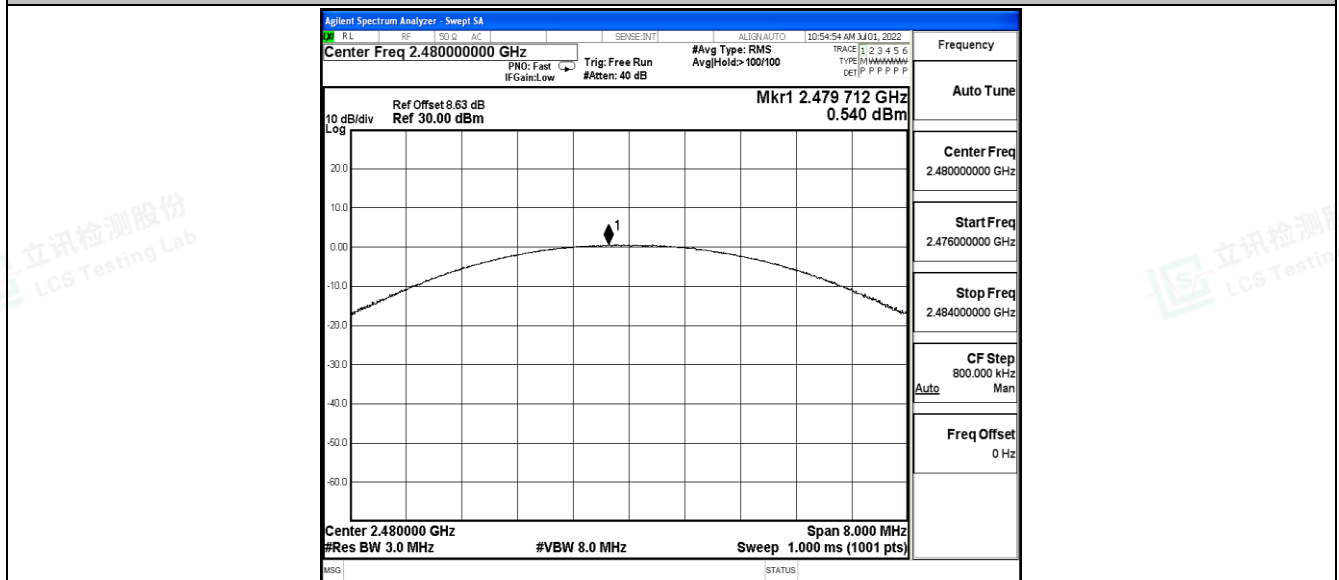


2DH5_Ant_2441



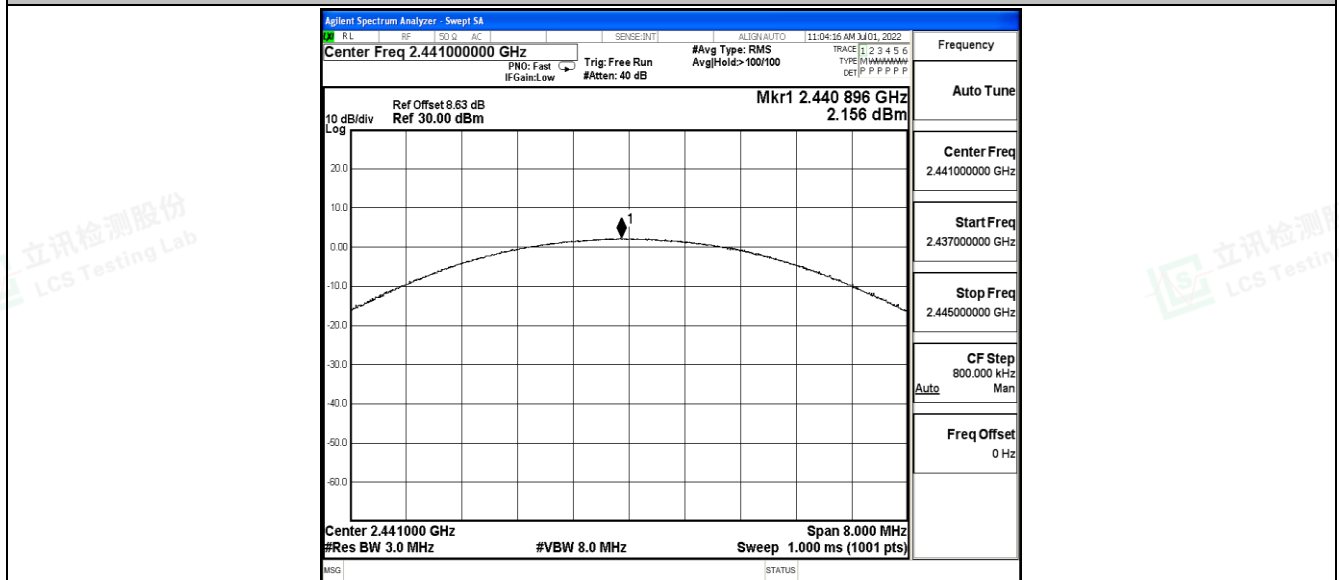
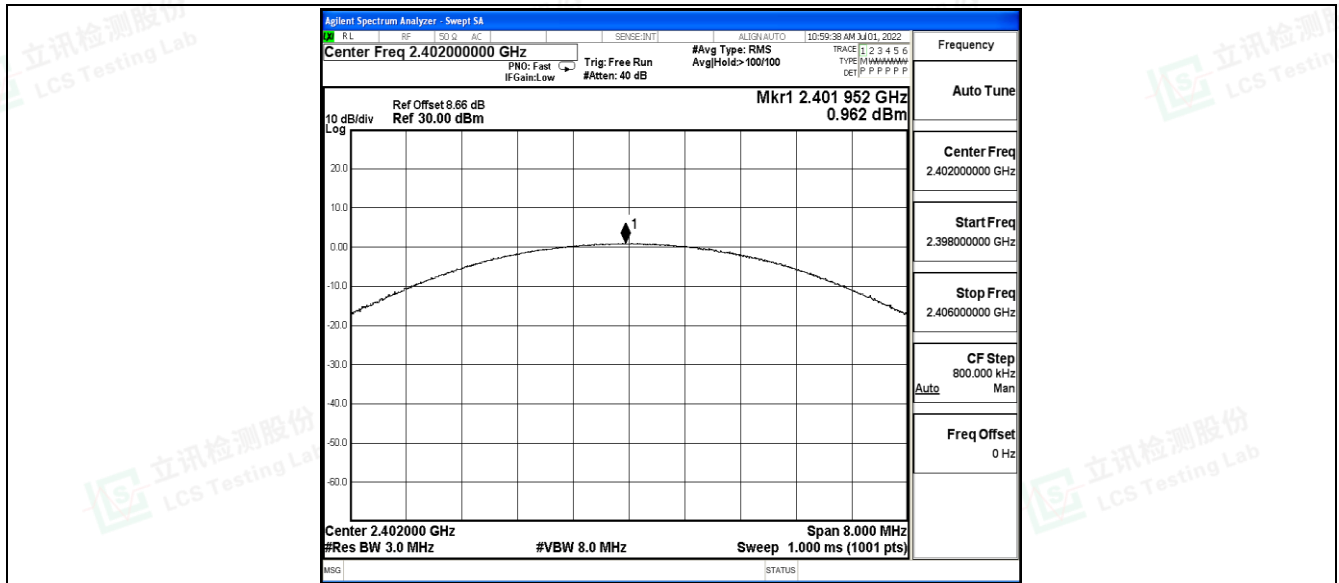


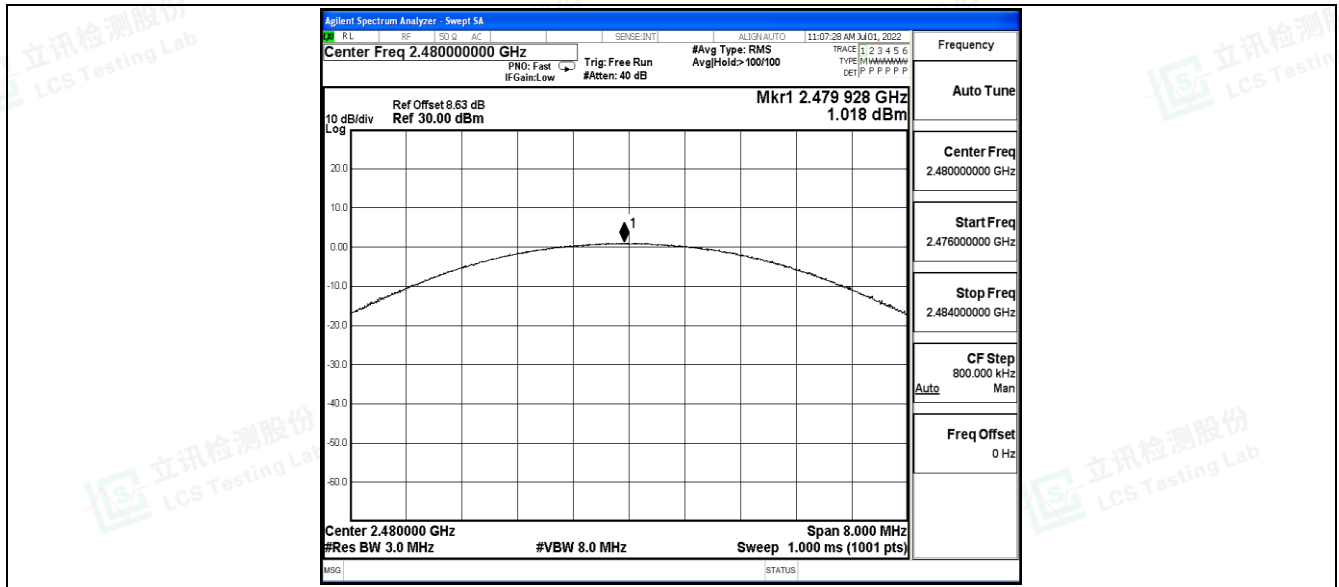
2DH5_Ant_2480



3DH5_Ant_2402









A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant	Hop	1.220	≥0.696	PASS
2DH5	Ant	Hop	1.014	≥0.886	PASS
3DH5	Ant	Hop	0.996	≥0.876	PASS

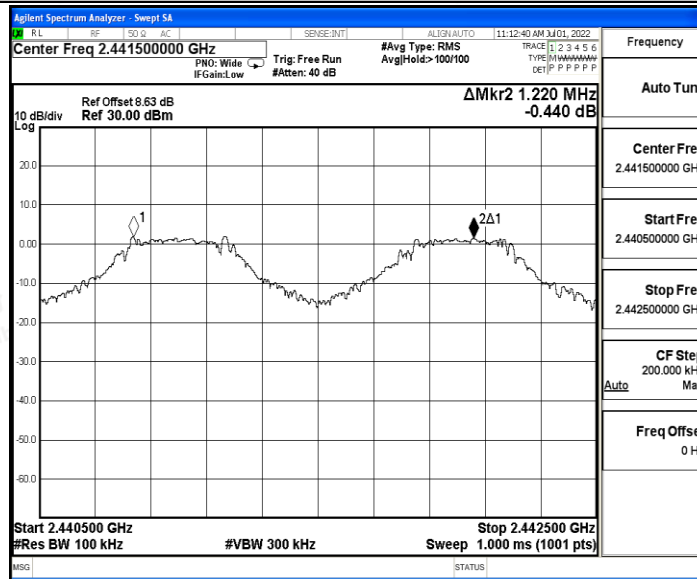


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Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
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Scan code to check authenticity

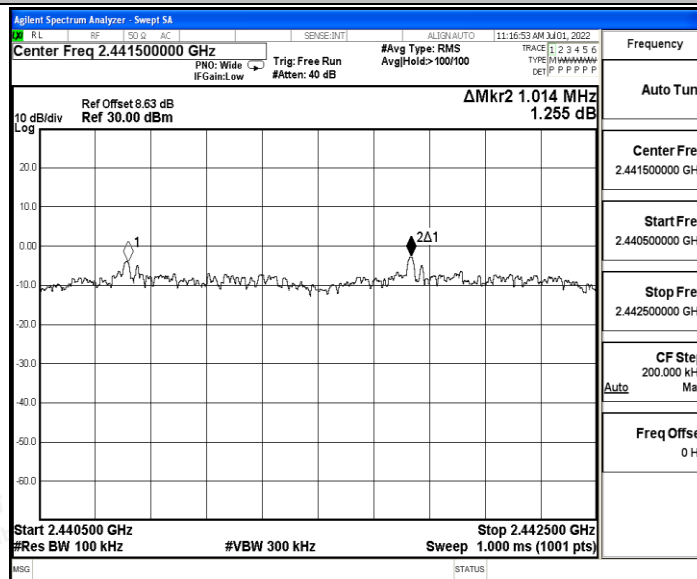


Test Graphs

DH5_Ant_Hop

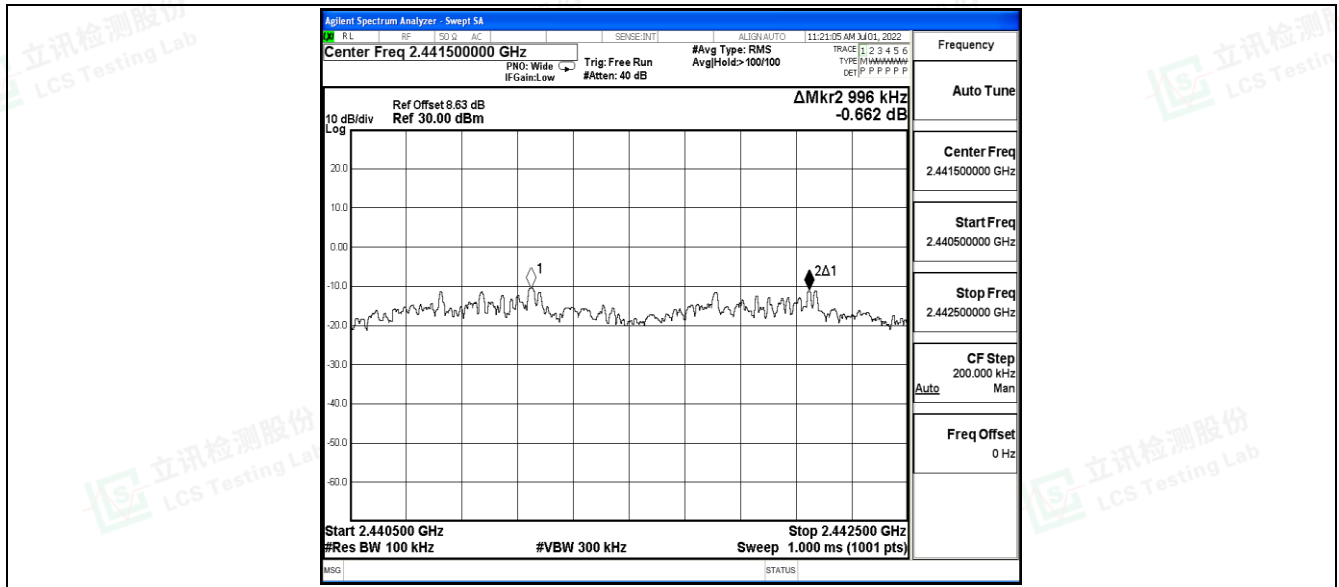


2DH5_Ant_Hop



3DH5_Ant_Hop







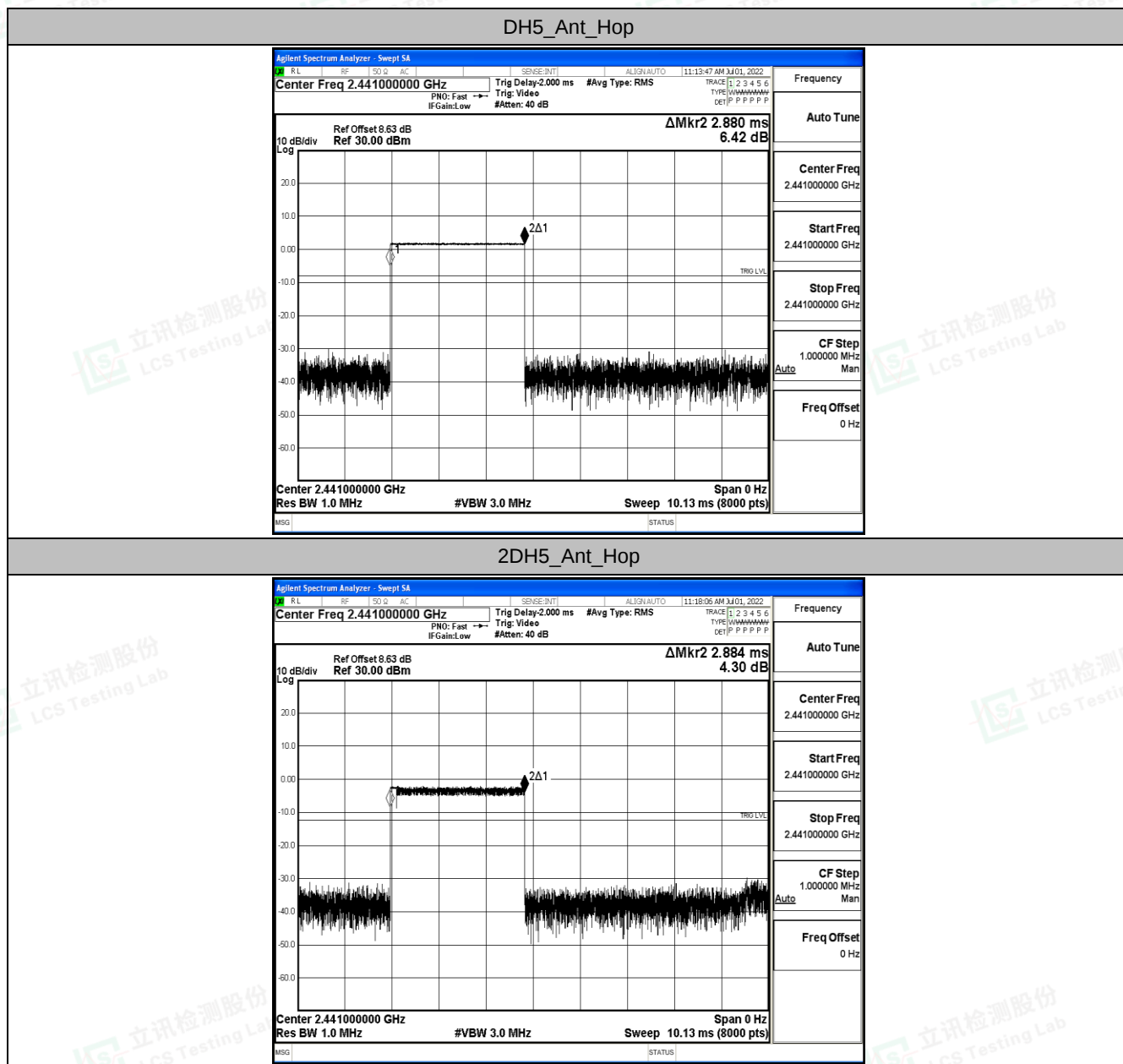
A.4 Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant	Hop	2.88	106.67	0.307	≤0.4	PASS
2DH5	Ant	Hop	2.88	106.67	0.307	≤0.4	PASS
3DH5	Ant	Hop	2.88	106.67	0.307	≤0.4	PASS



Test Graphs



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A.5 Number of hopping channels

Test Result

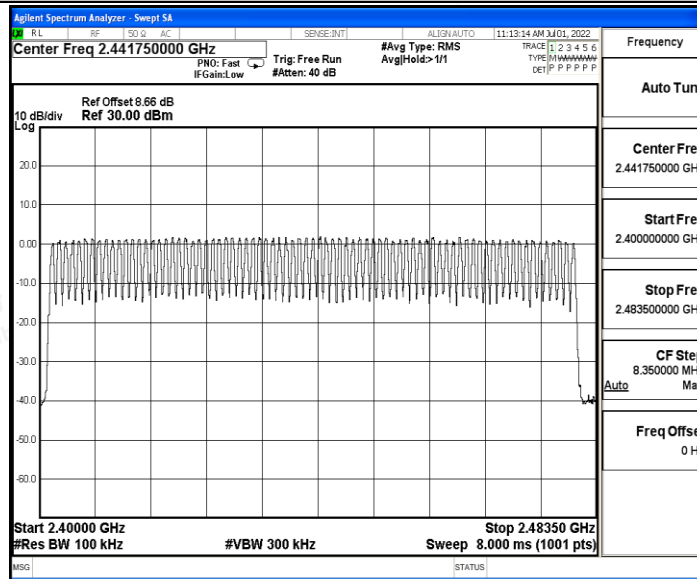
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant	Hop	79	≥15	PASS
2DH5	Ant	Hop	79	≥15	PASS
3DH5	Ant	Hop	79	≥15	PASS



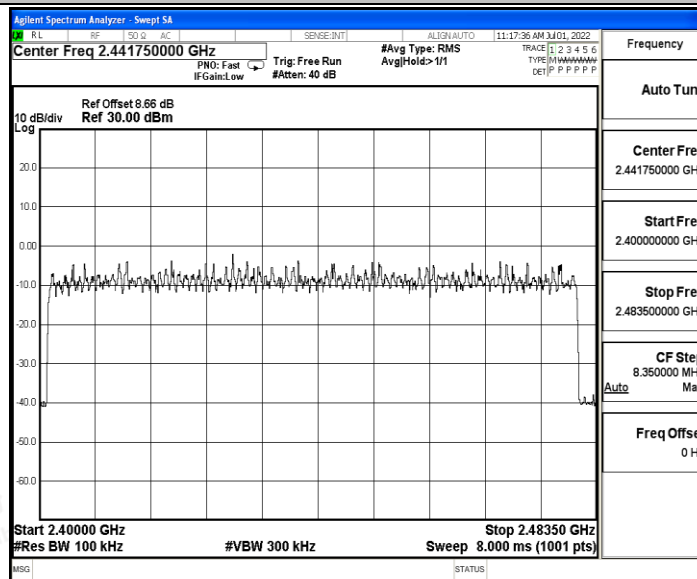


Test Graphs

DH5_Ant_Hop

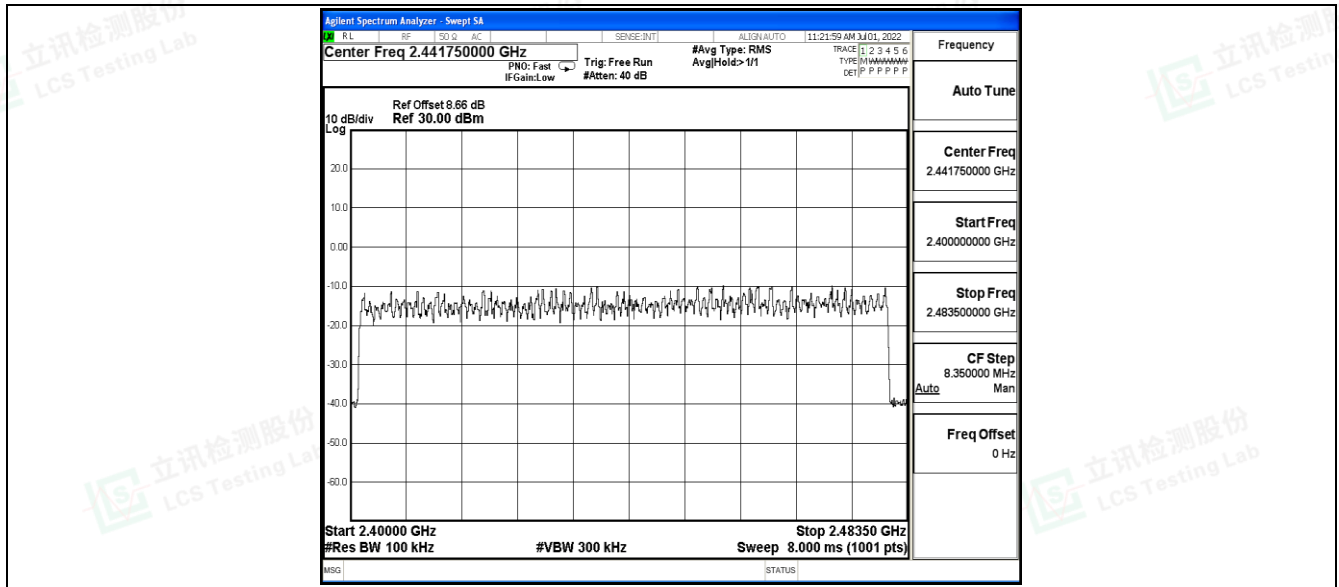


2DH5_Ant_Hop



3DH5_Ant_Hop







A.6 Band edge measurements

Test Result

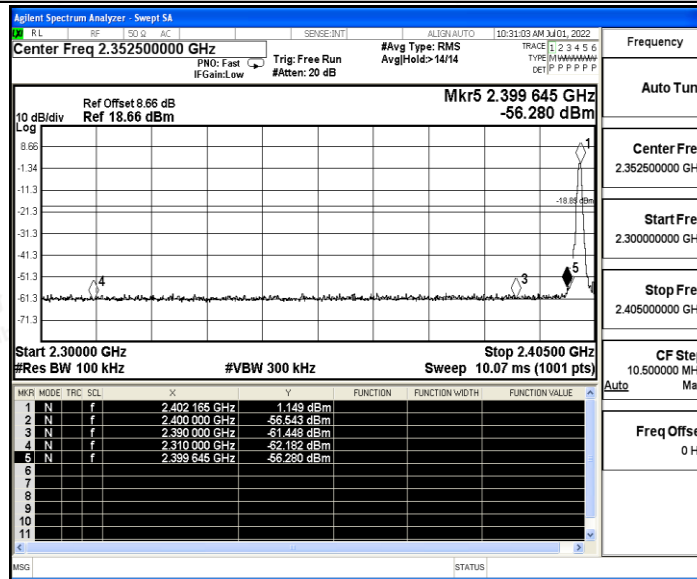
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant	Low	2402	1.15	-56.28	≤ -18.85	PASS
		High	2480	-0.02	-57.88	≤ -20.02	PASS
		Low	Hop_2402	0.36	-58.17	≤ -19.64	PASS
		High	Hop_2480	0.42	-57.46	≤ -19.58	PASS
2DH5	Ant	Low	2402	-0.53	-56.86	≤ -20.53	PASS
		High	2480	-0.48	-57.69	≤ -20.48	PASS
		Low	Hop_2402	-15.54	-58.46	≤ -35.54	PASS
		High	Hop_2480	-2.38	-57.47	≤ -22.38	PASS
3DH5	Ant	Low	2402	-0.31	-56.3	≤ -20.31	PASS
		High	2480	-0.73	-57.91	≤ -20.73	PASS
		Low	Hop_2402	-15.43	-57.88	≤ -35.43	PASS
		High	Hop_2480	-10.20	-57.47	≤ -30.2	PASS



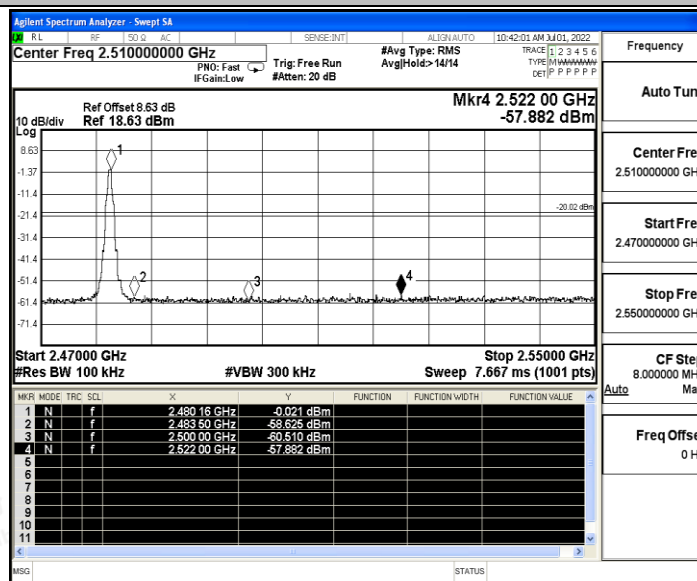


Test Graphs

DH5_Ant_Low_2402

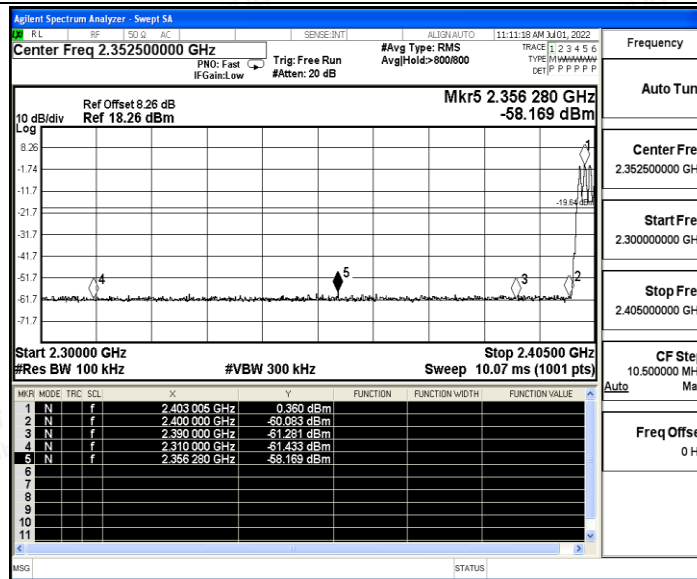


DH5_Ant_High_2480

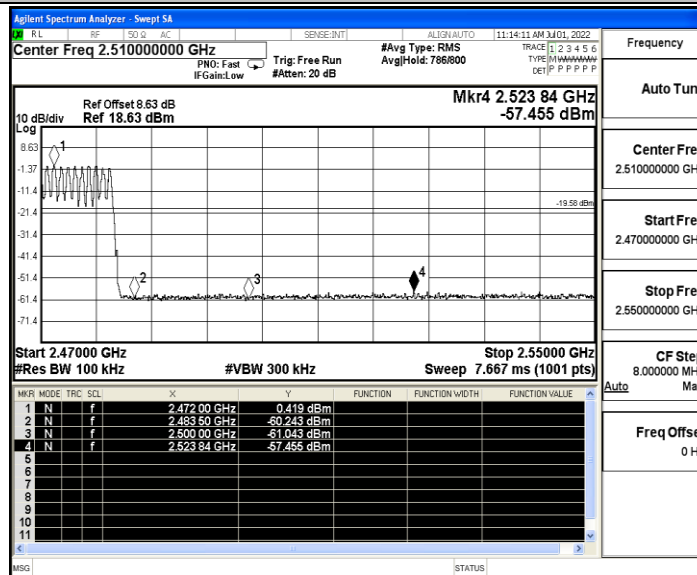


DH5_Ant_Low_Hop_2402



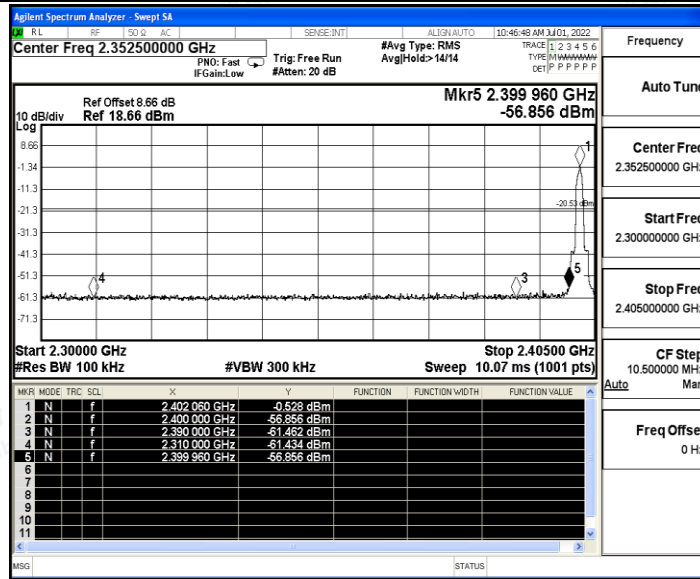


DH5_Ant_High_Hop_2480

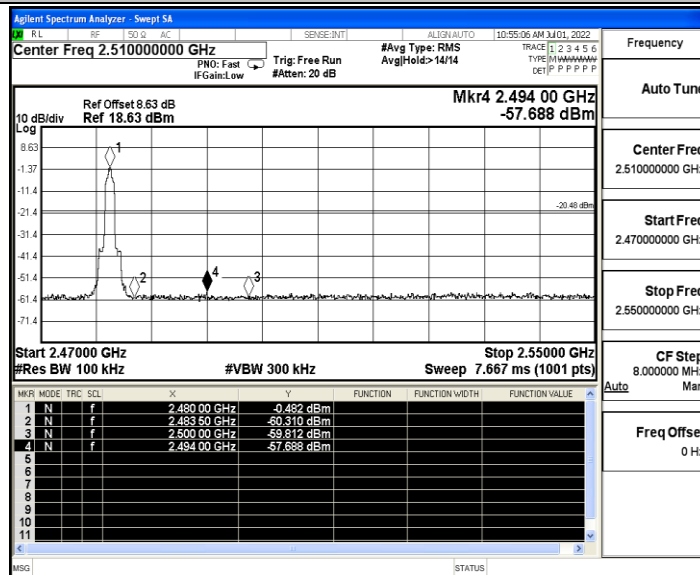


2DH5_Ant_Low_2402



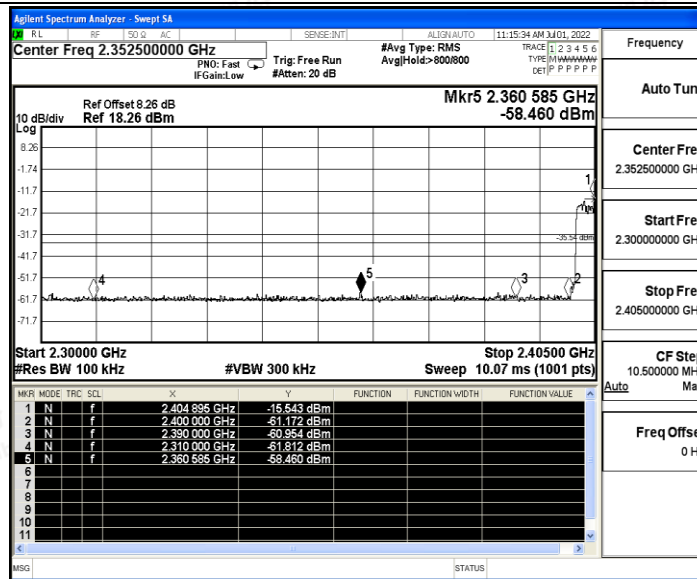


2DH5_Ant_High_2480

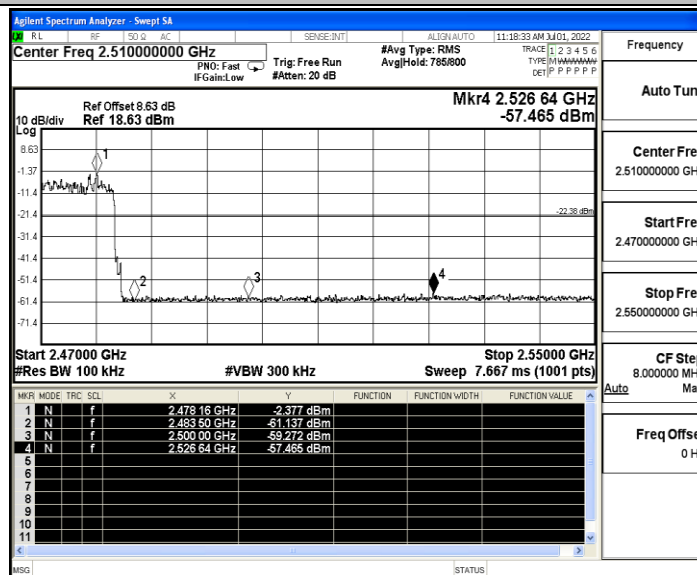


2DH5_Ant_Low_Hop_2402



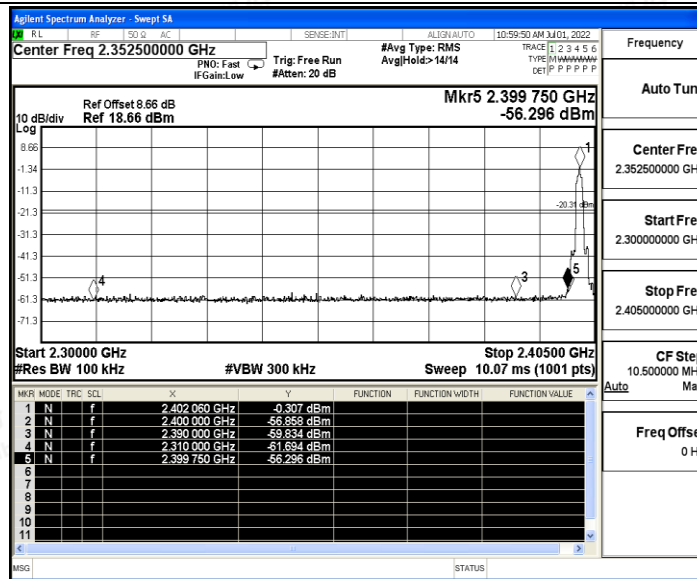


2DH5_Ant_High_Hop_2480

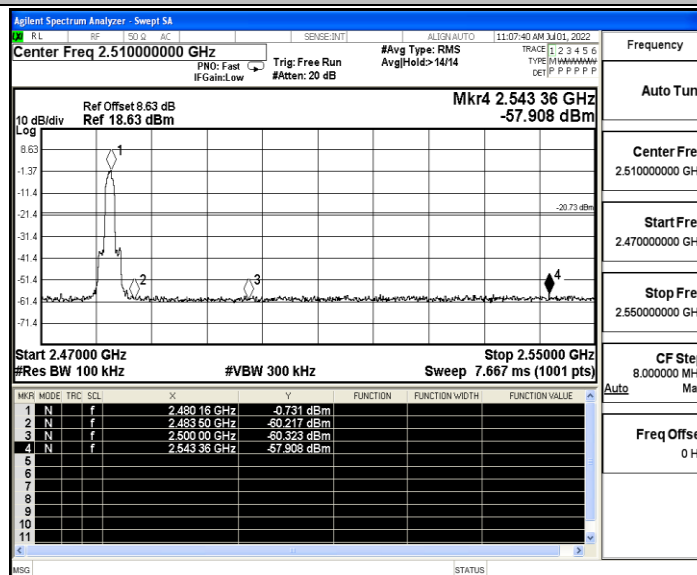


3DH5_Ant_Low_2402



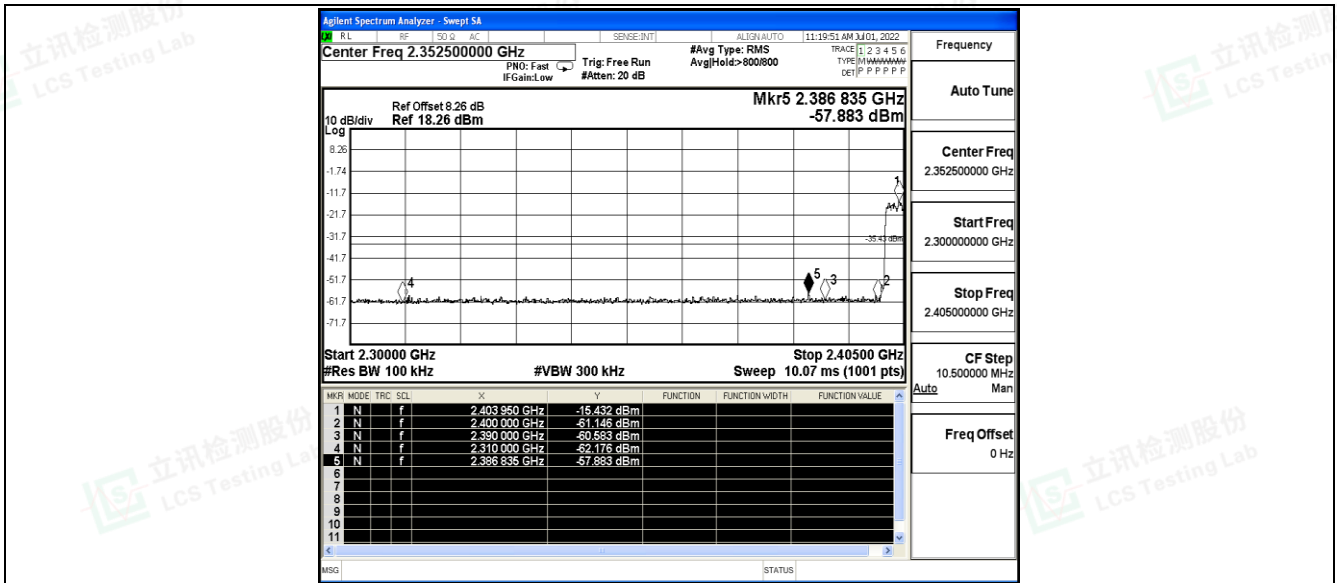


3DH5_Ant_High_2480

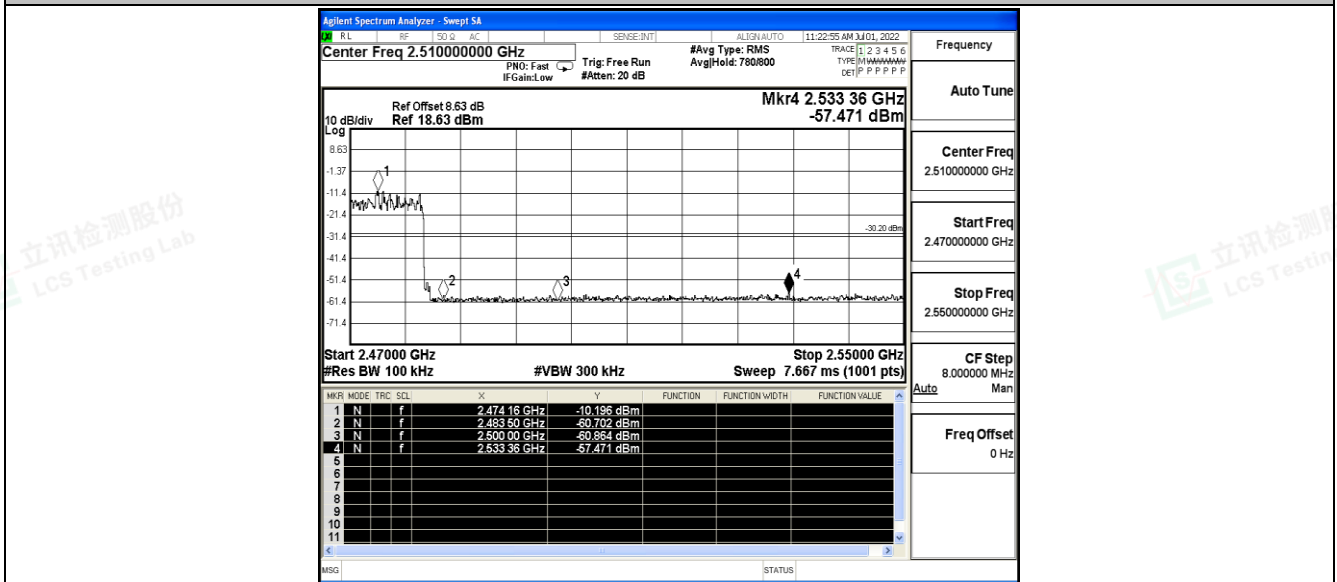


3DH5_Ant_Low_Hop_2402





3DH5_Ant_High_Hop_2480





A.7 Conducted Spurious Emission

Test Result

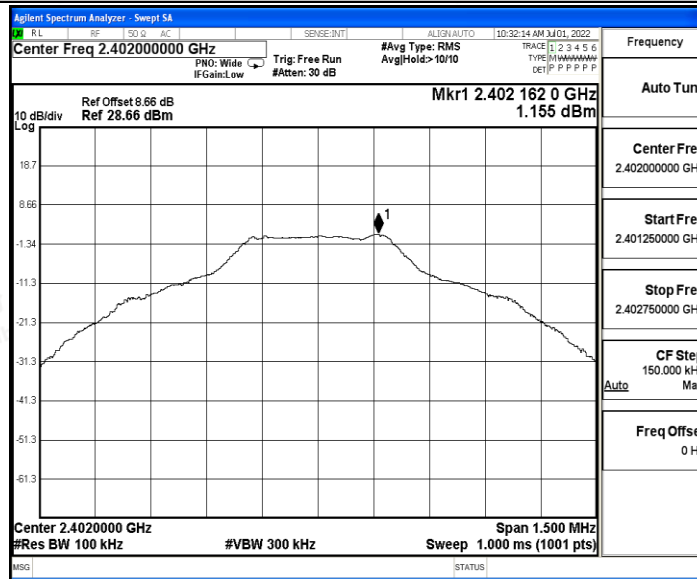
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant	2402	Reference	1.15	1.15	---	PASS
			30~1000	1.15	-60.5	≤-18.85	PASS
			1000~26500	1.15	-45.94	≤-18.85	PASS
		2441	Reference	1.21	1.21	---	PASS
			30~1000	1.21	-60.54	≤-18.79	PASS
			1000~26500	1.21	-45.34	≤-18.79	PASS
		2480	Reference	0.32	0.32	---	PASS
			30~1000	0.32	-60.16	≤-19.68	PASS
			1000~26500	0.32	-45.77	≤-19.68	PASS
2DH5	Ant	2402	Reference	-0.67	-0.67	---	PASS
			30~1000	-0.67	-59.95	≤-20.67	PASS
			1000~26500	-0.67	-46.1	≤-20.67	PASS
		2441	Reference	-0.44	-0.44	---	PASS
			30~1000	-0.44	-60.47	≤-20.44	PASS
			1000~26500	-0.44	-45.43	≤-20.44	PASS
		2480	Reference	-0.45	-0.45	---	PASS
			30~1000	-0.45	-43.94	≤-20.45	PASS
			1000~26500	-0.45	-46.22	≤-20.45	PASS
3DH5	Ant	2402	Reference	-0.28	-0.28	---	PASS
			30~1000	-0.28	-59.89	≤-20.28	PASS
			1000~26500	-0.28	-45.34	≤-20.28	PASS
		2441	Reference	0.76	0.76	---	PASS
			30~1000	0.76	-60.3	≤-19.24	PASS
			1000~26500	0.76	-46.1	≤-19.24	PASS
		2480	Reference	-0.36	-0.36	---	PASS
			30~1000	-0.36	-60.42	≤-20.36	PASS
			1000~26500	-0.36	-45.2	≤-20.36	PASS



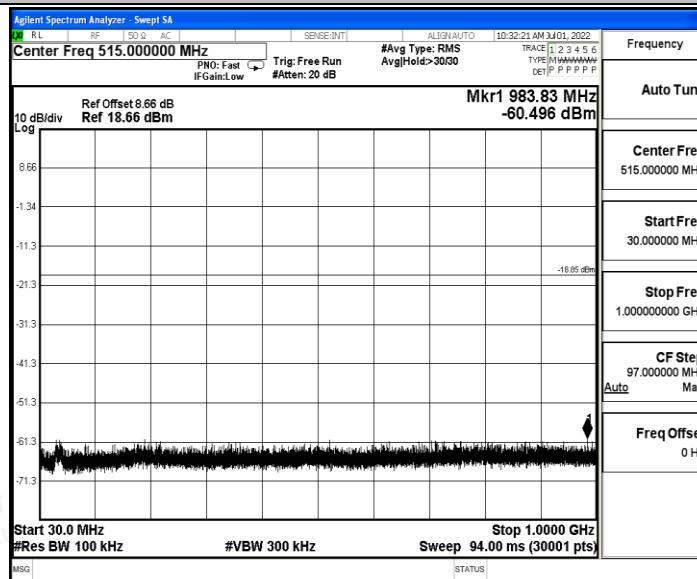


Test Graphs

DH5_Ant_2402_0~Reference

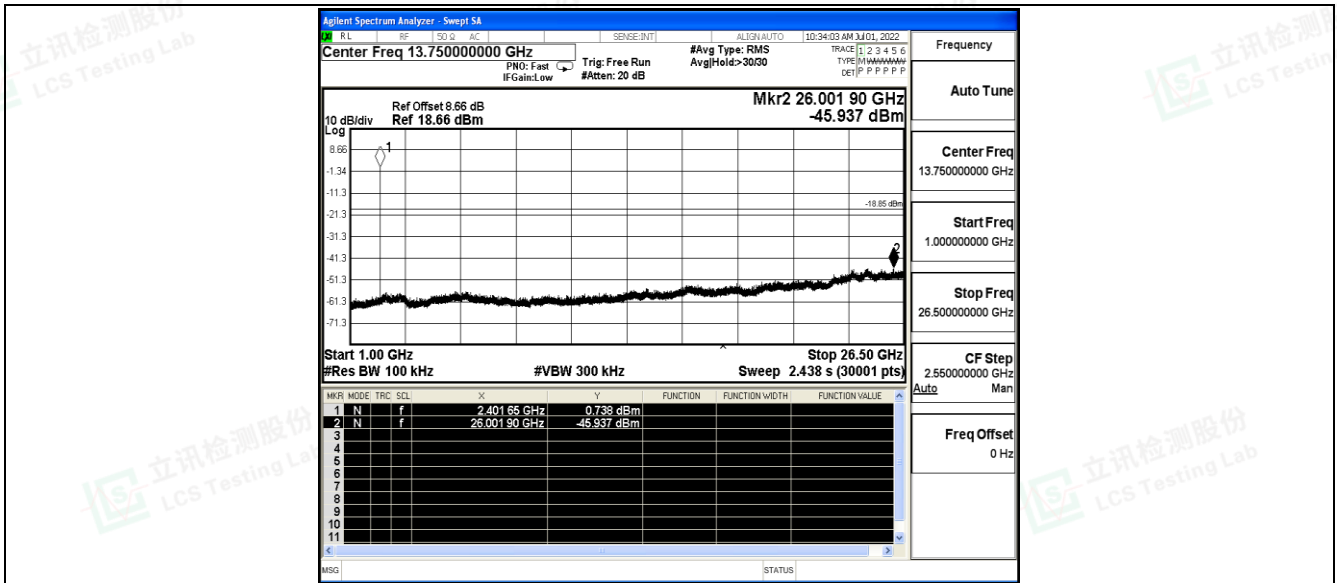


DH5_Ant_2402_30~1000

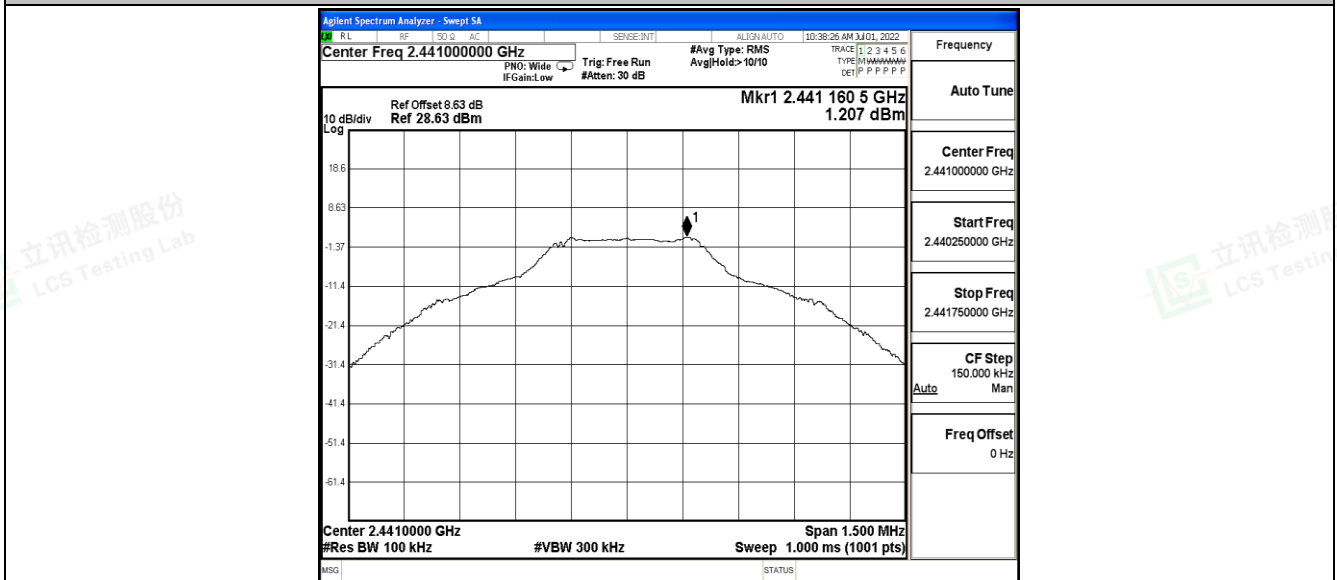


DH5_Ant_2402_1000~26500



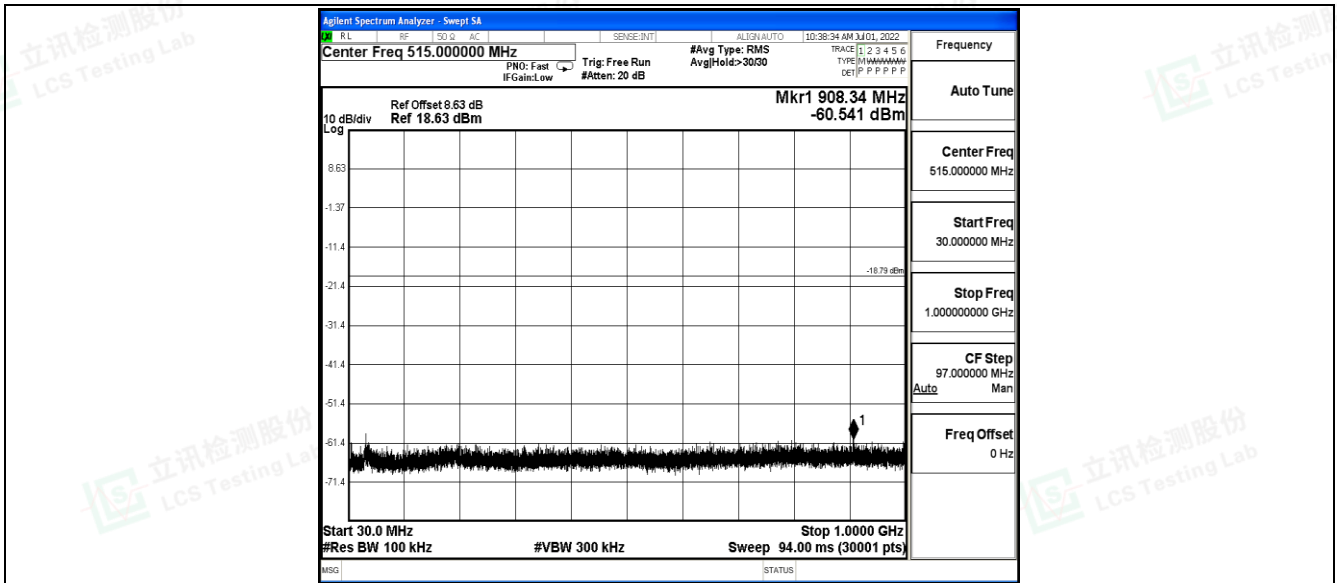


DH5_Ant_2441_0~Reference

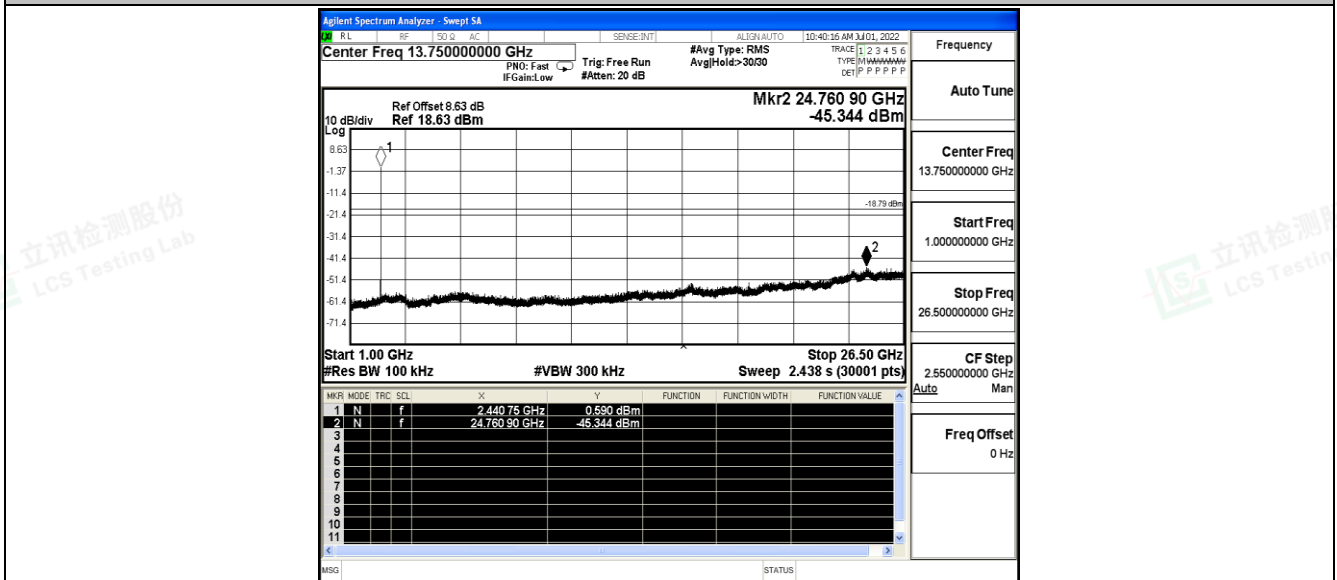


DH5_Ant_2441_30~1000



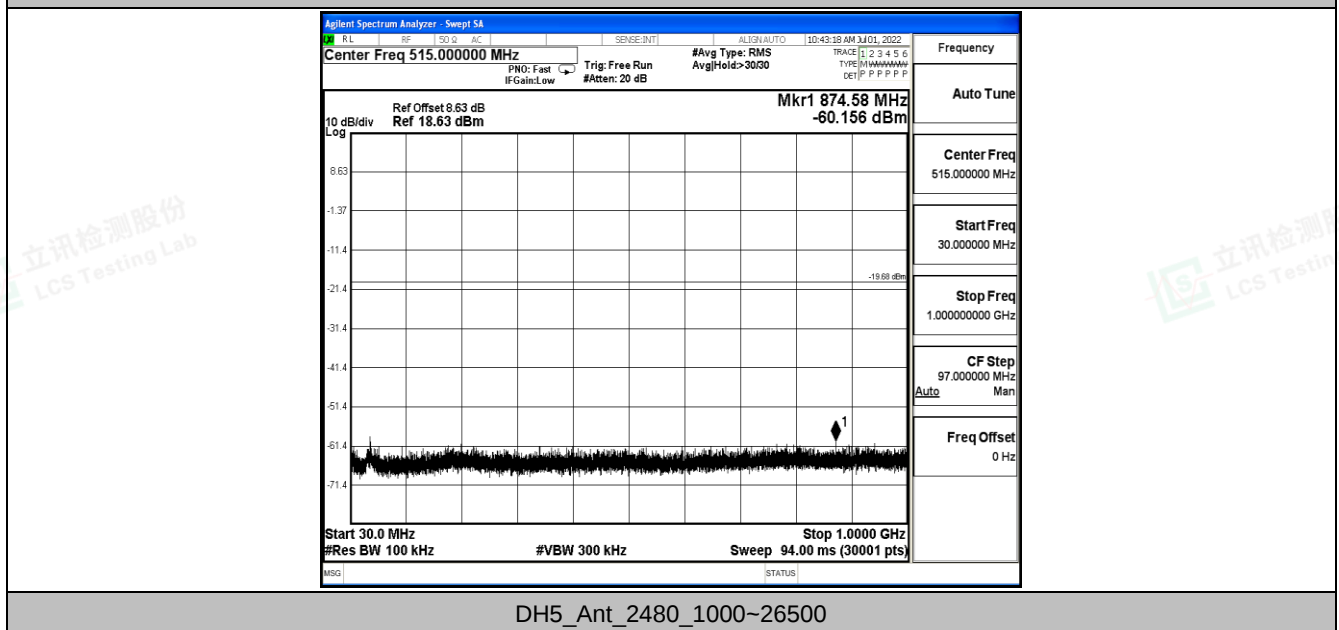
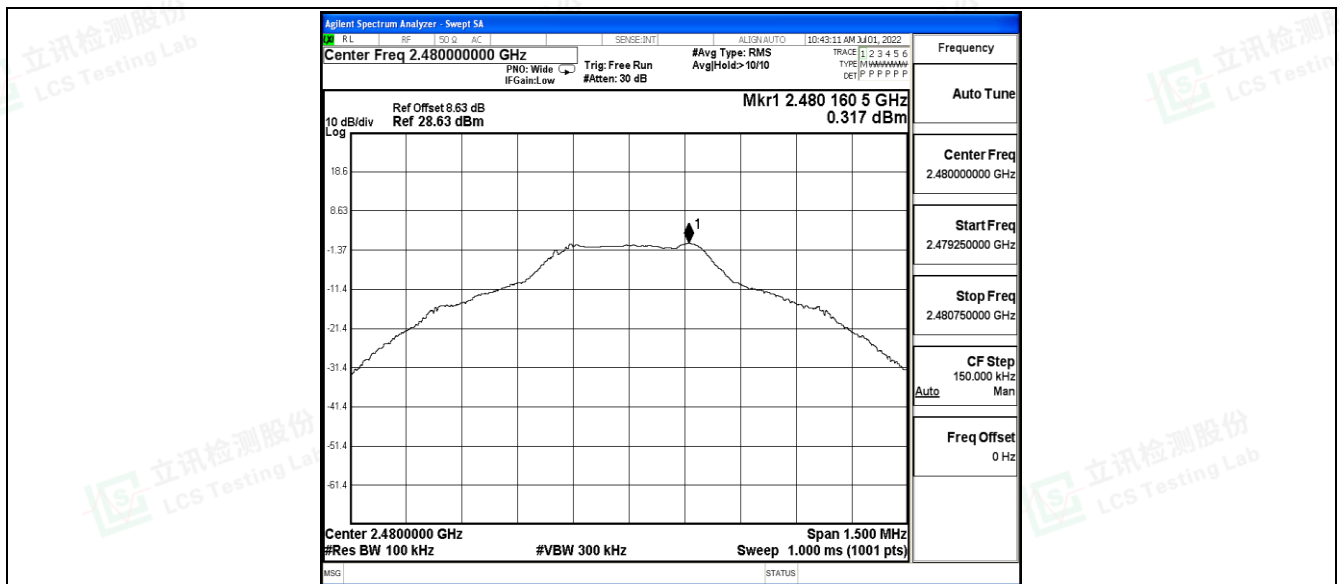


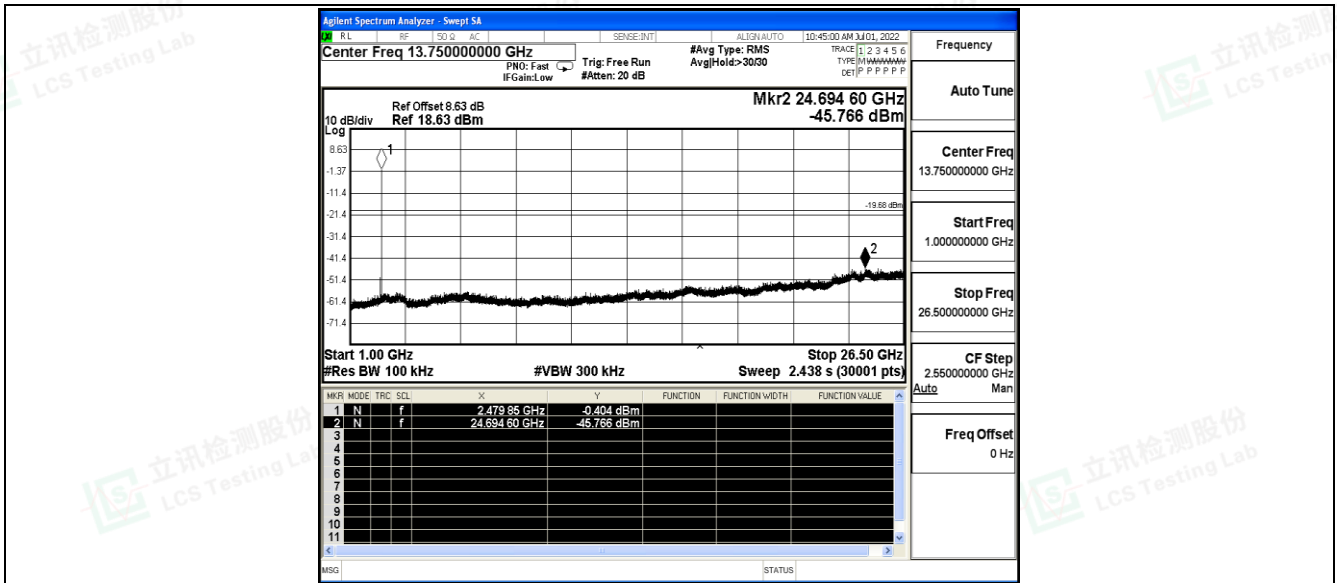
DH5_Ant_2441_1000~26500



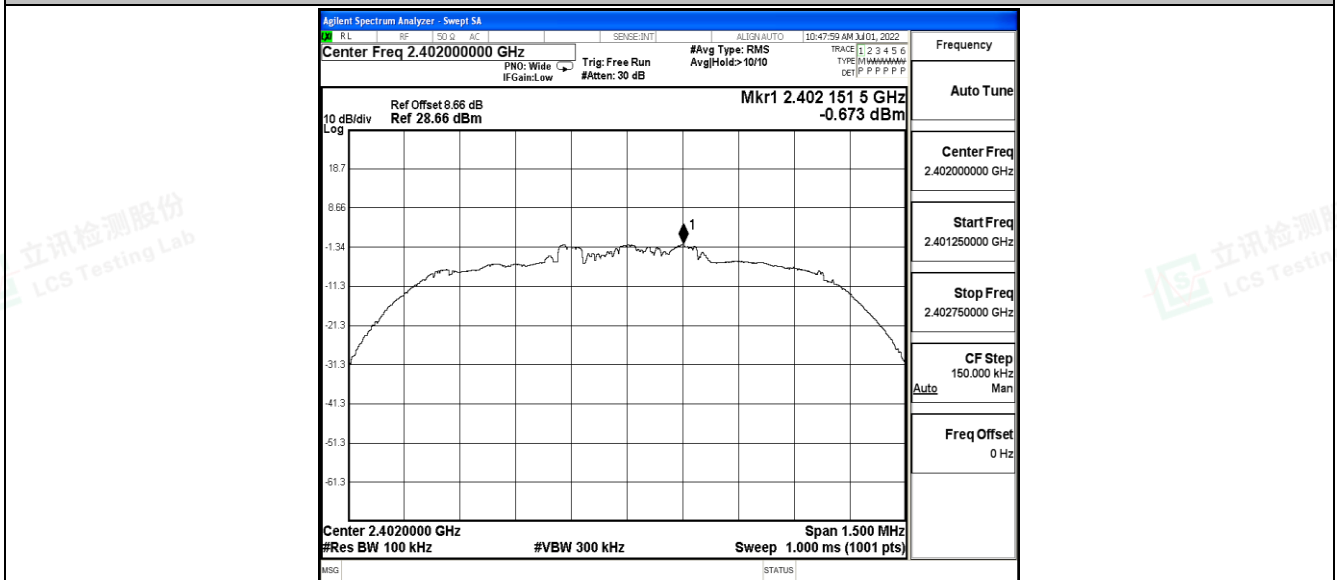
DH5_Ant_2480_0~Reference





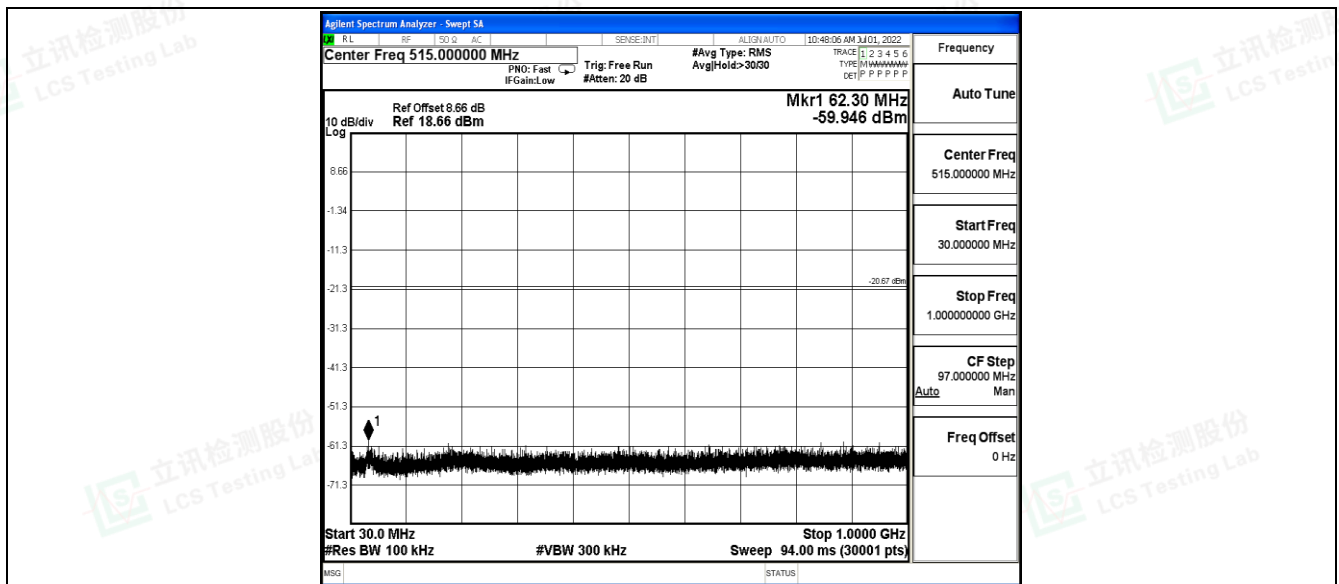


2DH5_Ant_2402_0-Reference

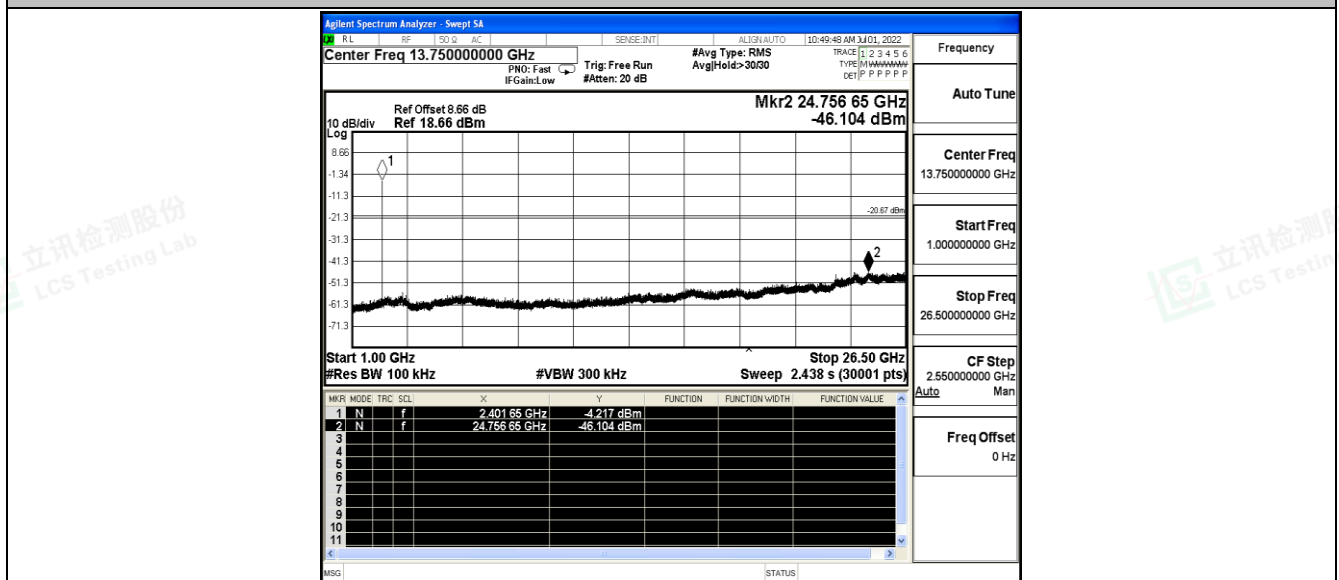


2DH5_Ant_2402_30~1000



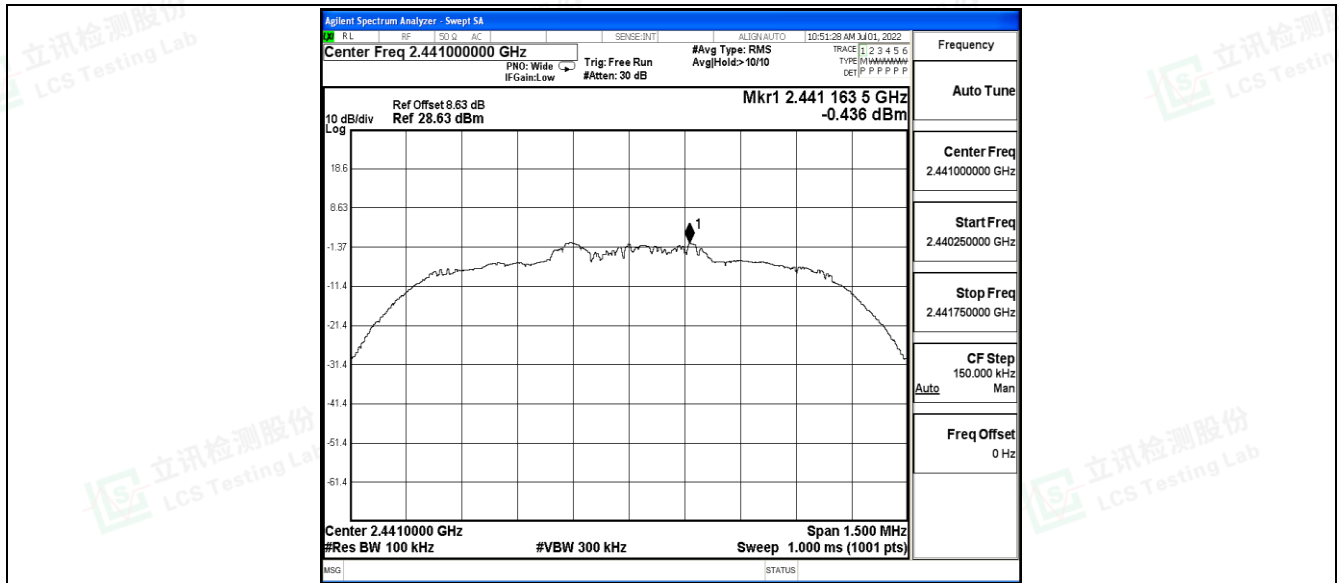


2DH5_Ant_2402_1000~26500

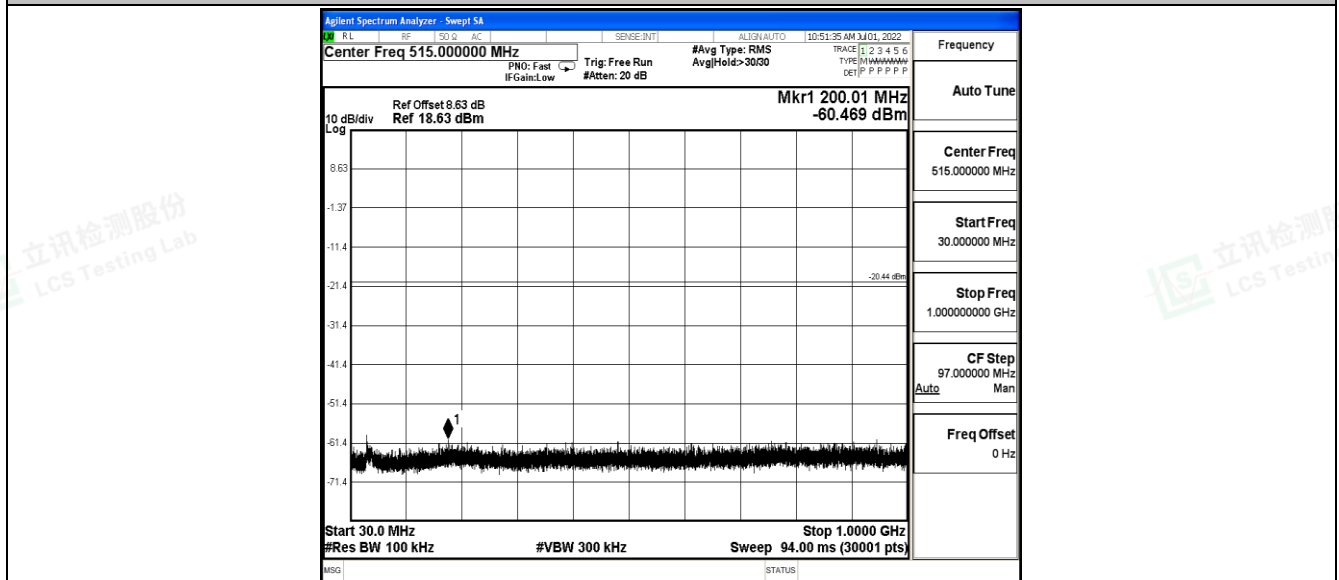


2DH5_Ant_2441_0~Reference



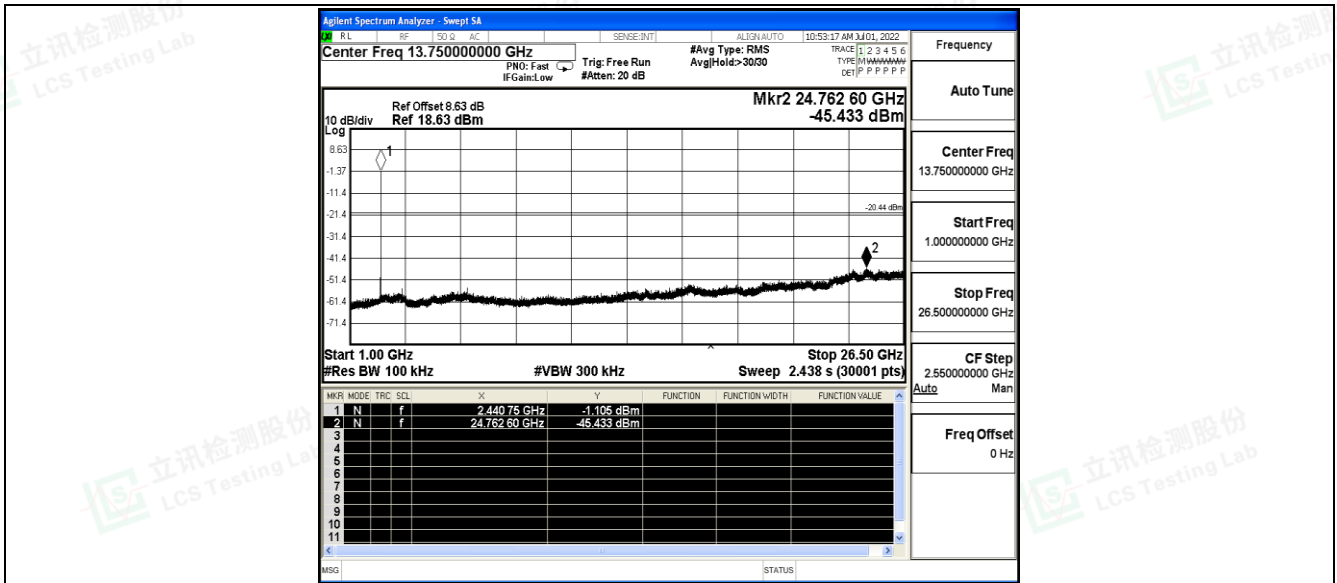


2DH5_Ant_2441_30~1000

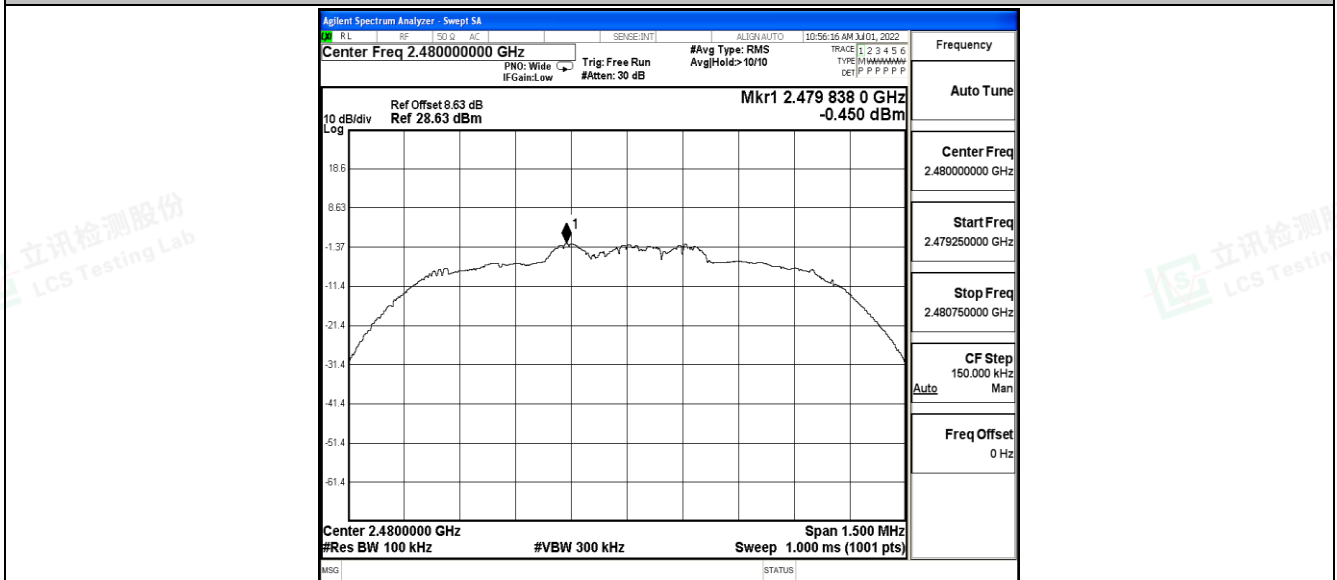


2DH5_Ant_2441_1000~26500



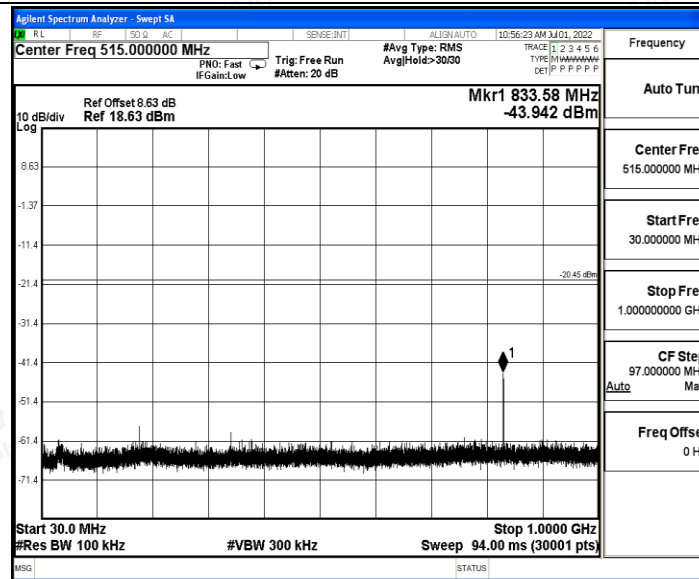


2DH5_Ant_2480_0-Reference

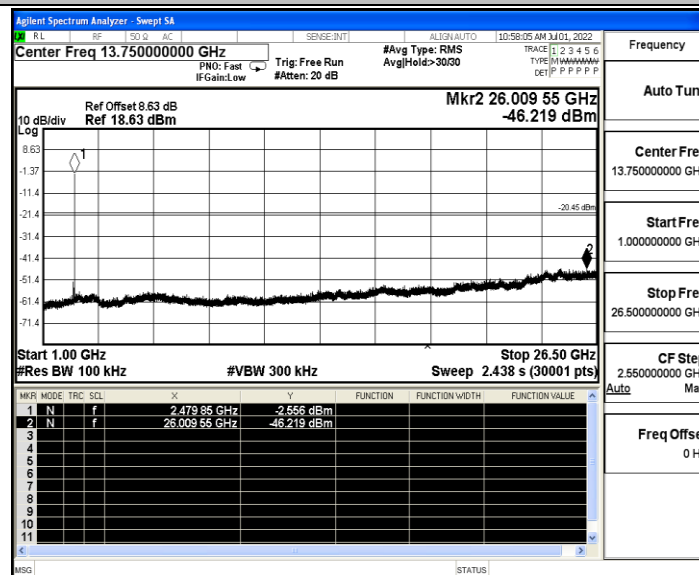


2DH5_Ant_2480_30~1000



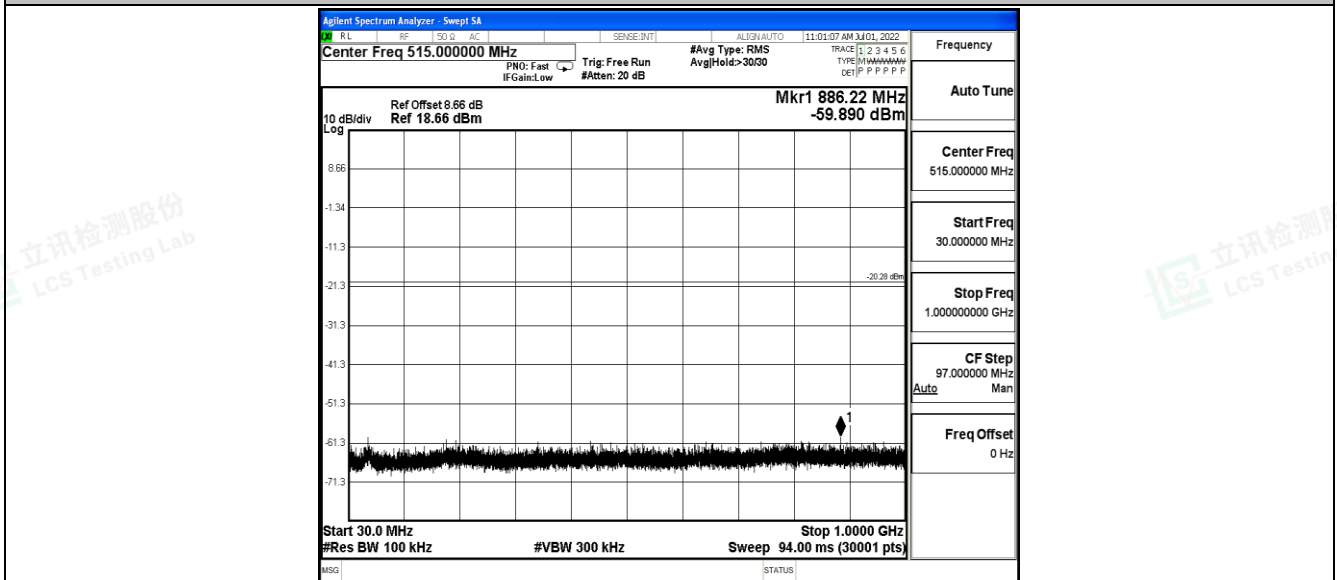
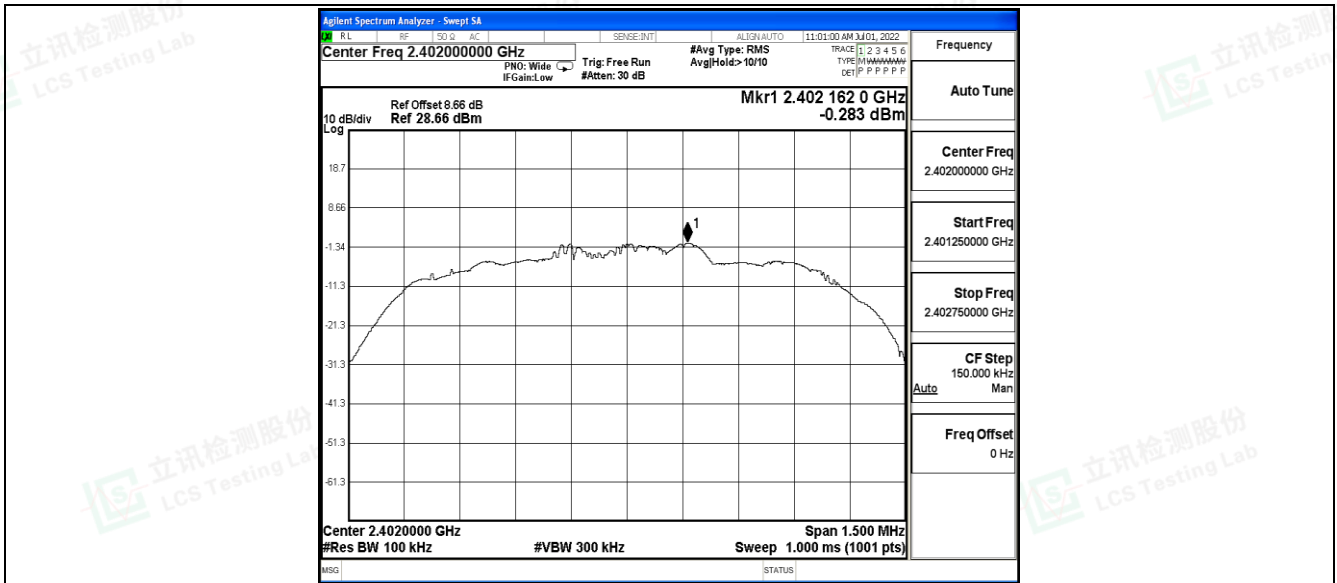


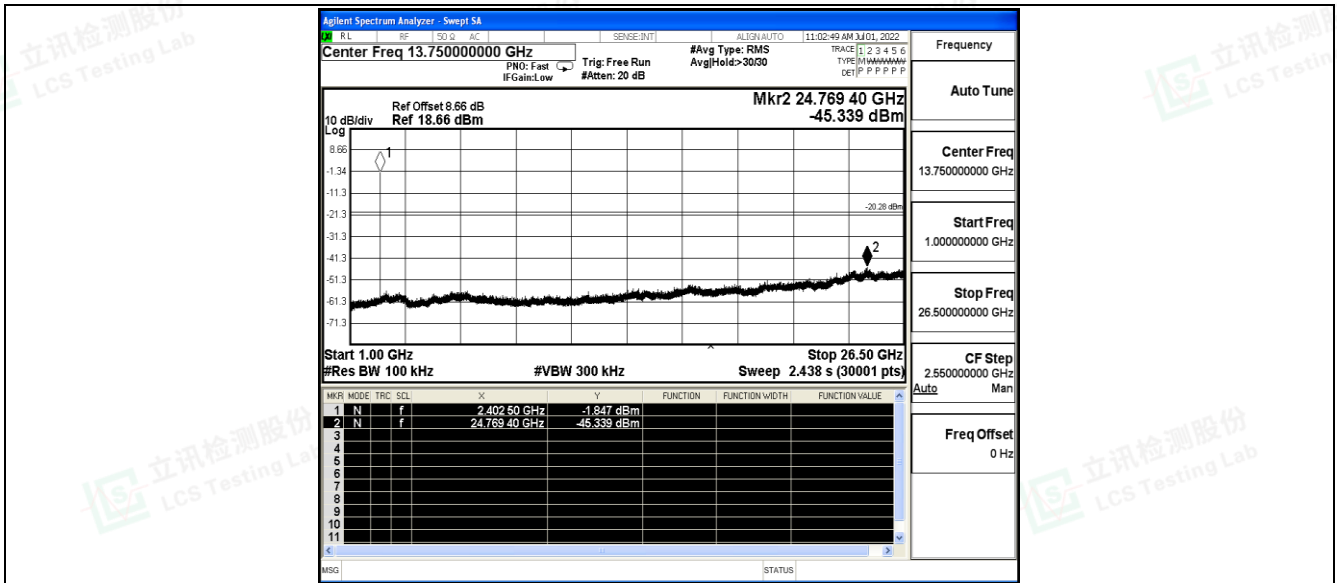
2DH5_Ant_2480_1000~26500



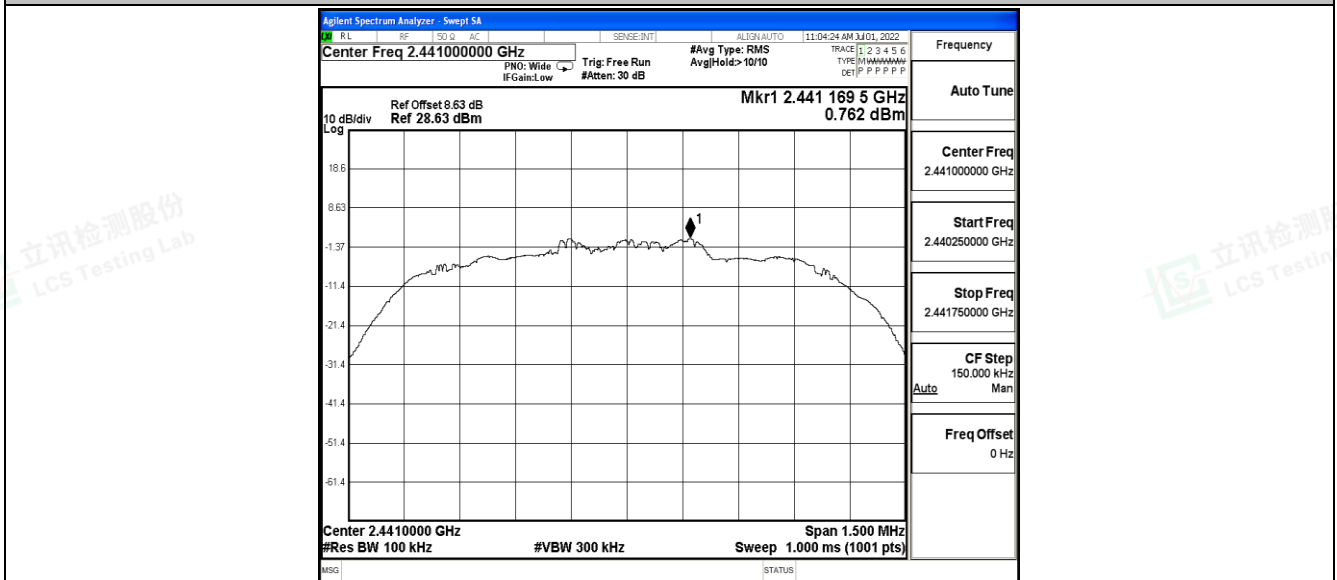
3DH5_Ant_2402_0-Reference





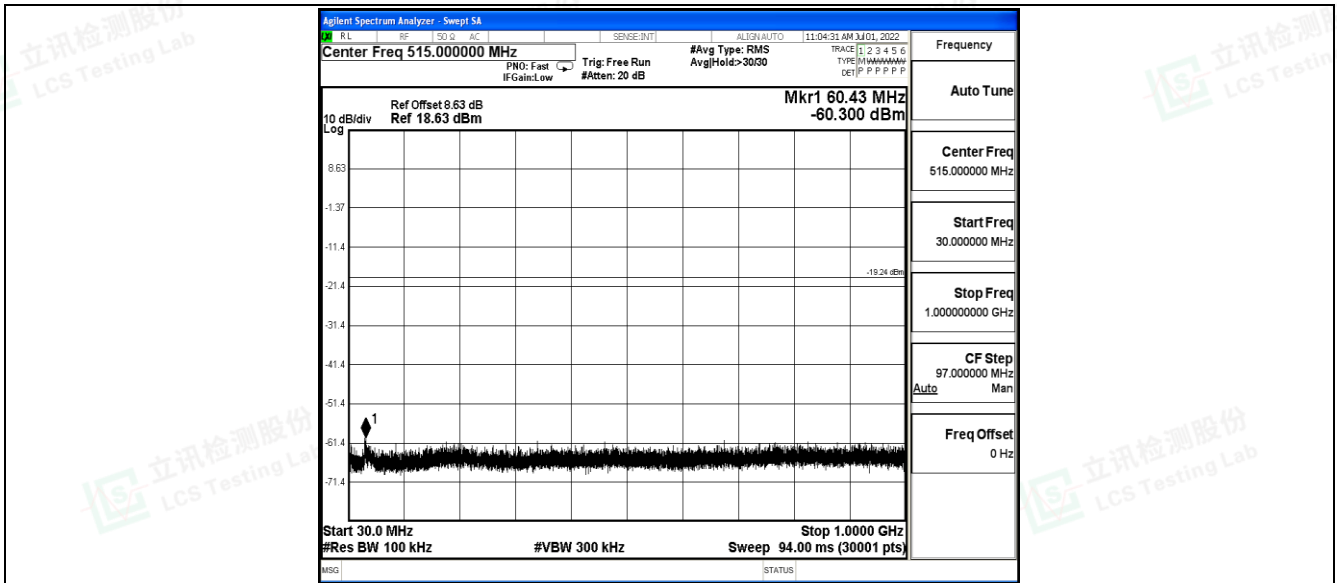


3DH5_Ant_2441_0-Reference

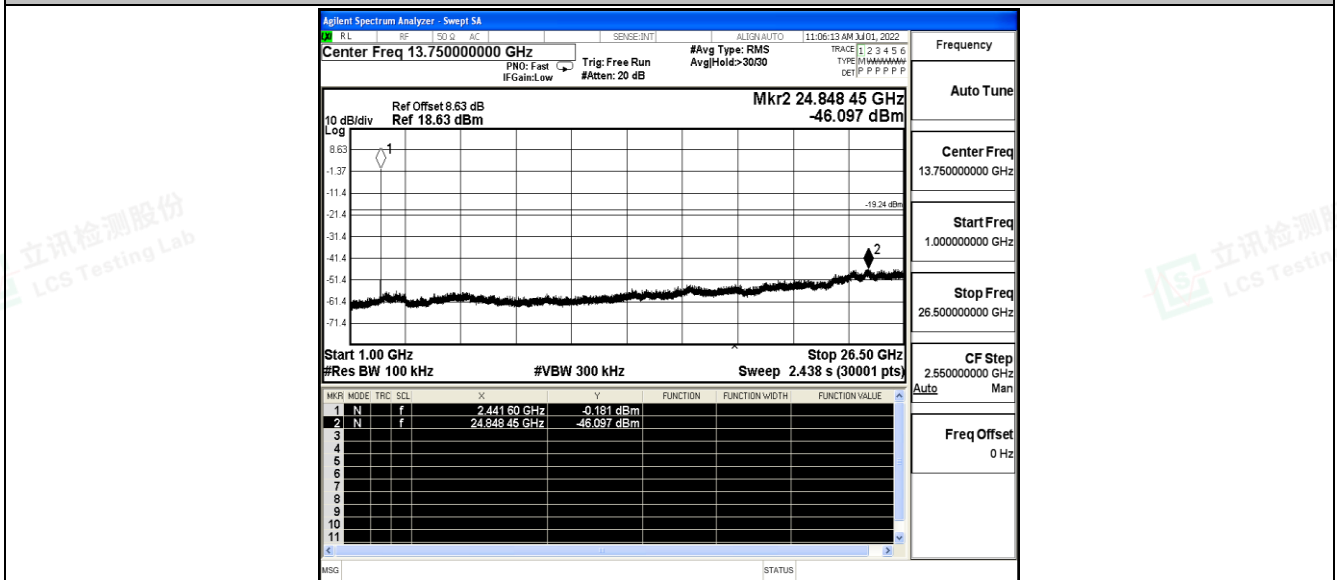


3DH5_Ant_2441_30~1000



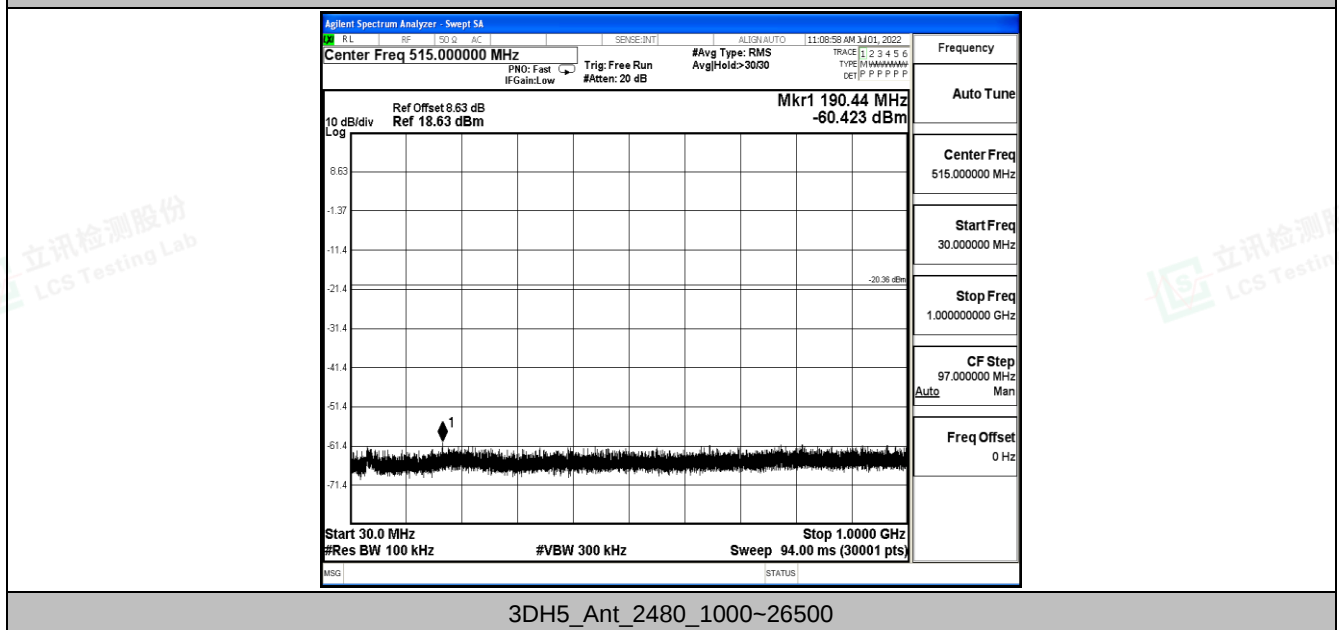
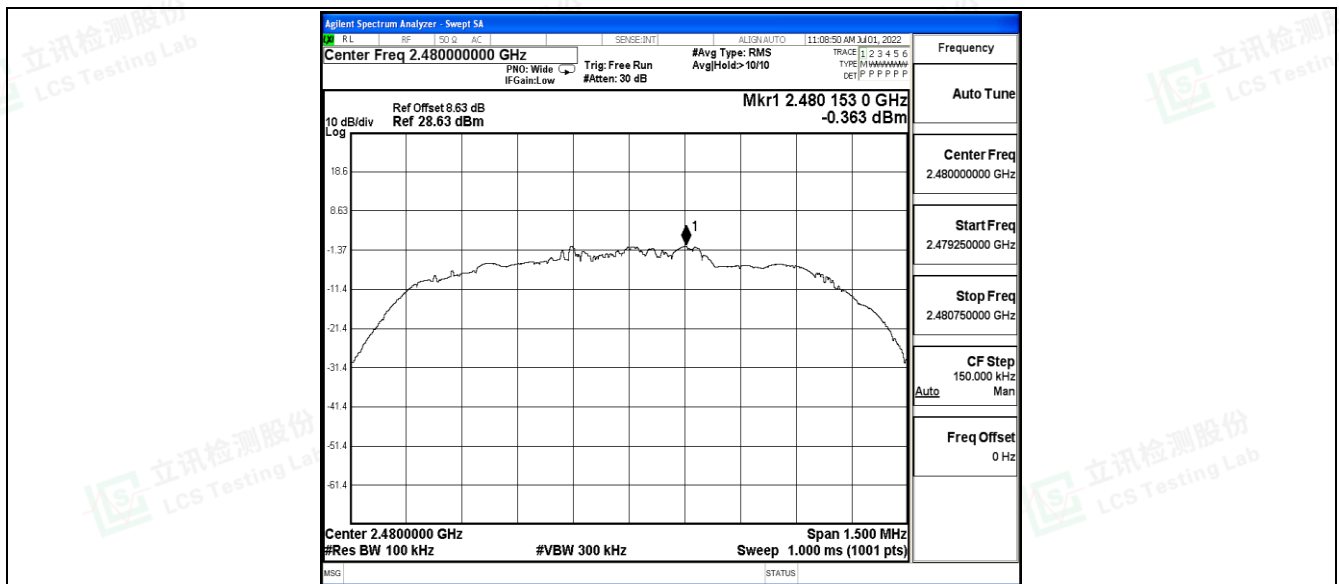


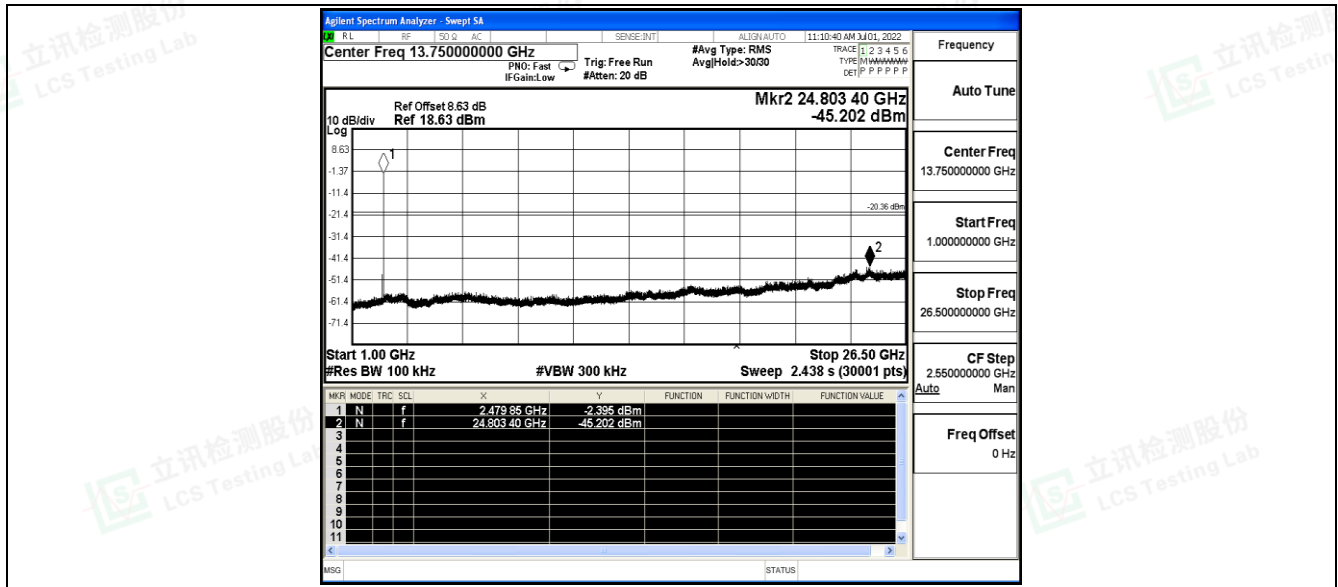
3DH5_Ant_2441_1000~26500



3DH5_Ant_2480_0~Reference









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	Ant	Low	2402	AV	2310.000	-58.04	≤-41.20	37.16	≤54	PASS
				AV	2388.725	-57.49	≤-41.20	37.71	≤54	PASS
				AV	2390.000	-57.58	≤-41.20	37.62	≤54	PASS
				Peak	2310.000	-48.14	≤-21.20	47.06	≤74	PASS
				Peak	2359.430	-46.19	≤-21.20	49.01	≤74	PASS
				Peak	2390.000	-47.52	≤-21.20	47.68	≤74	PASS
		High	2480	AV	2483.500	-55.05	≤-41.20	40.15	≤54	PASS
				AV	2483.520	-55.05	≤-41.20	40.15	≤54	PASS
				AV	2500.000	-57.06	≤-41.20	38.14	≤54	PASS
				Peak	2483.500	-47.6	≤-21.20	47.60	≤74	PASS
				Peak	2492.720	-45.82	≤-21.20	49.38	≤74	PASS
				Peak	2500.000	-46.99	≤-21.20	48.21	≤74	PASS
2DH5	Ant	Low	2402	AV	2310.000	-58.01	≤-41.20	37.19	≤54	PASS
				AV	2383.685	-57.45	≤-41.20	37.75	≤54	PASS
				AV	2390.000	-57.59	≤-41.20	37.61	≤54	PASS
				Peak	2310.000	-48.59	≤-21.20	46.61	≤74	PASS
				Peak	2379.800	-46.02	≤-21.20	49.18	≤74	PASS
				Peak	2390.000	-48.01	≤-21.20	47.19	≤74	PASS
		High	2480	AV	2483.500	-54.6	≤-41.20	40.60	≤54	PASS
				AV	2483.520	-54.61	≤-41.20	40.59	≤54	PASS
				AV	2500.000	-57.07	≤-41.20	38.13	≤54	PASS
				Peak	2483.500	-46.39	≤-21.20	48.81	≤74	PASS
				Peak	2484.640	-45.84	≤-21.20	49.36	≤74	PASS
				Peak	2500.000	-46.37	≤-21.20	48.83	≤74	PASS
3DH5	Ant	Low	2402	AV	2310.000	-57.91	≤-41.20	37.29	≤54	PASS
				AV	2389.880	-57.35	≤-41.20	37.85	≤54	PASS
				AV	2390.000	-57.61	≤-41.20	37.59	≤54	PASS
				Peak	2310.000	-48.56	≤-21.20	46.64	≤74	PASS
				Peak	2364.680	-46.48	≤-21.20	48.72	≤74	PASS
				Peak	2390.000	-47.98	≤-21.20	47.22	≤74	PASS
		High	2480	AV	2483.500	-54.63	≤-41.20	40.57	≤54	PASS
				AV	2483.520	-54.72	≤-41.20	40.48	≤54	PASS
				AV	2500.000	-57.1	≤-41.20	38.10	≤54	PASS
				Peak	2483.500	-46.75	≤-21.20	48.45	≤74	PASS
				Peak	2483.600	-45.7	≤-21.20	49.50	≤74	PASS



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

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				Peak	2500.000	-47.31	≤-21.20	47.89	≤74	PASS
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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.

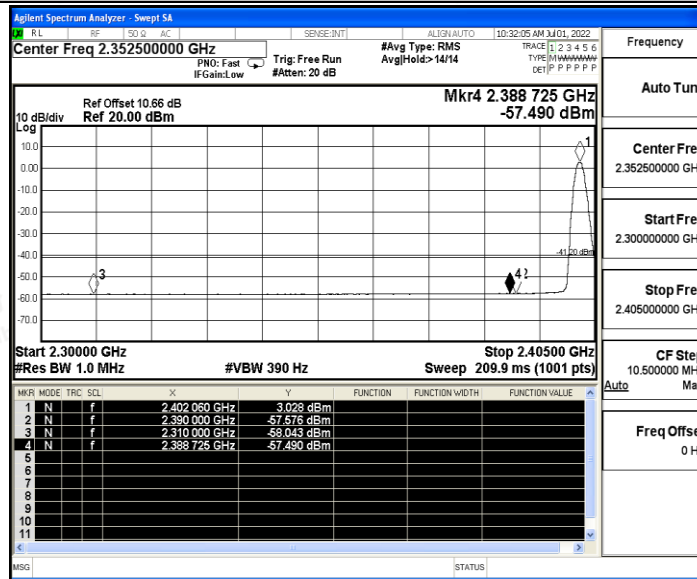


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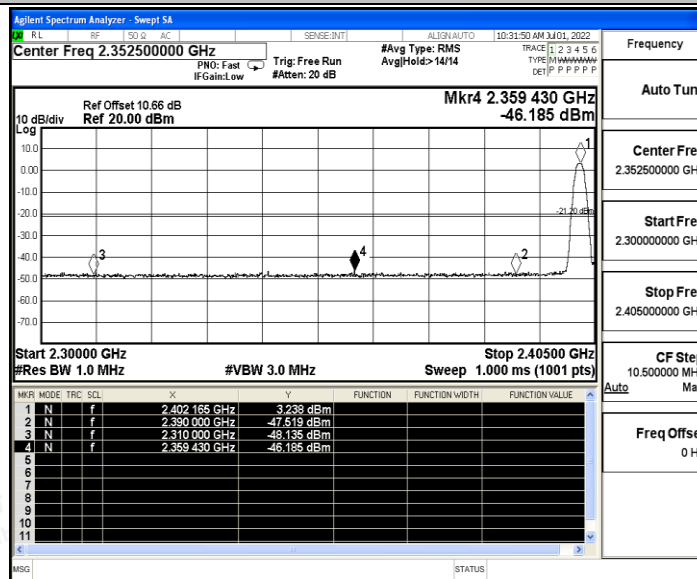


Test Graphs

DH5_Ant_Low_2402_AV

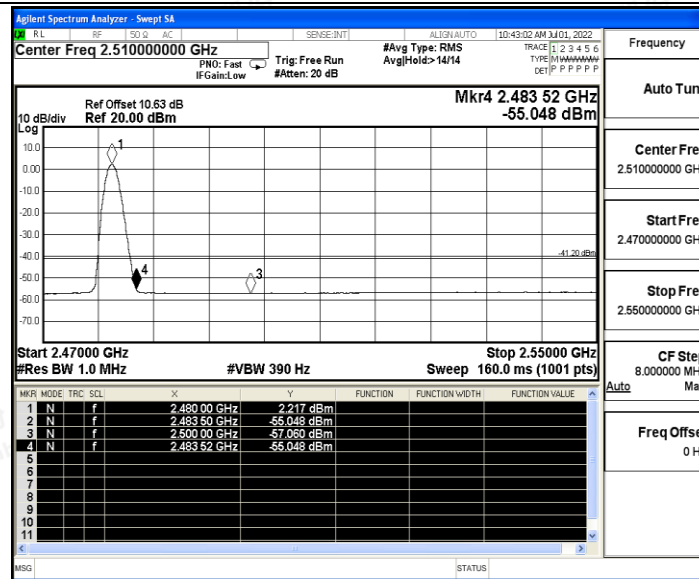


DH5_Ant_Low_2402_Peak

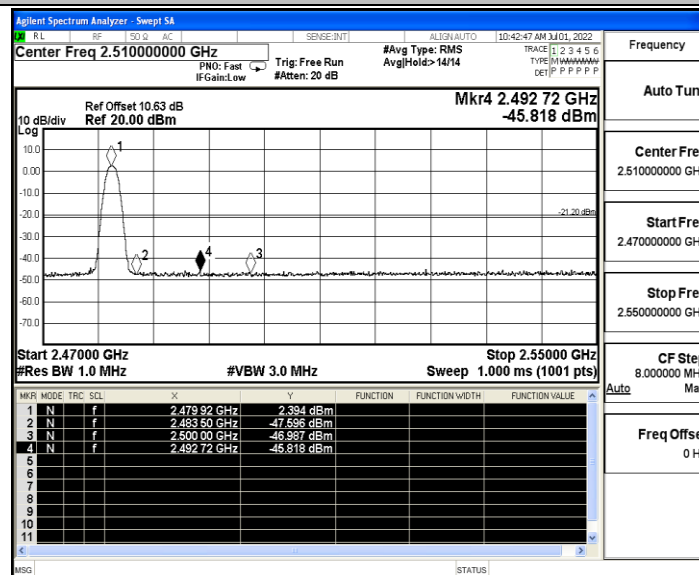


DH5_Ant_High_2480_AV



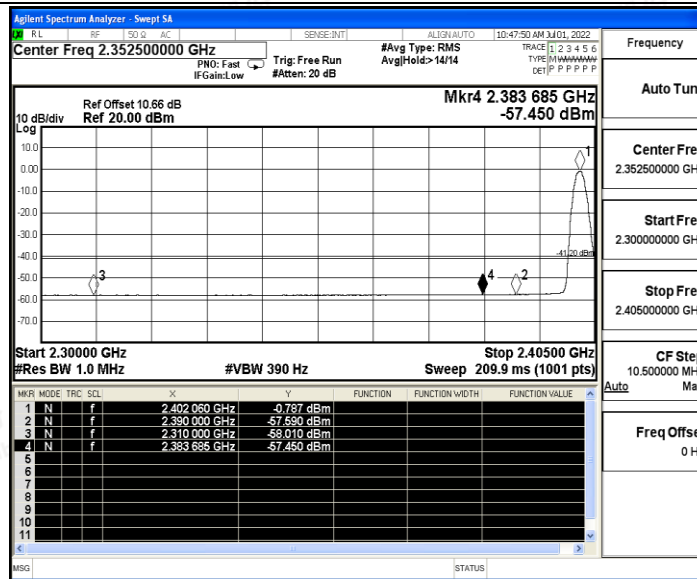


DH5_Ant_High_2480_Peak

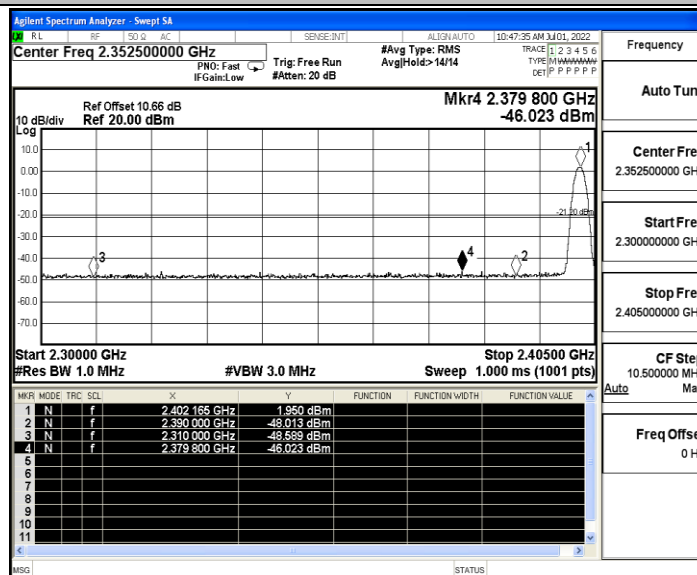


2DH5_Ant_Low_2402_AV



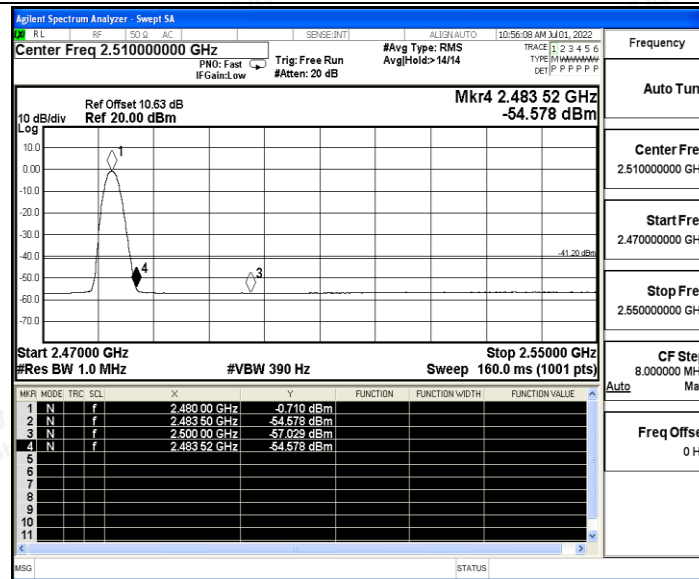


2DH5_Ant_Low_2402_Peak

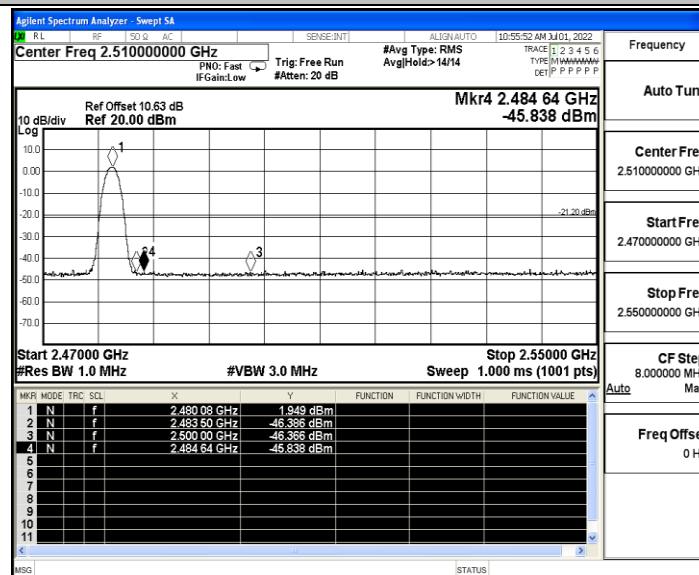


2DH5_Ant_High_2480_AV





2DH5_Ant_High_2480_Peak



3DH5_Ant_Low_2402_AV

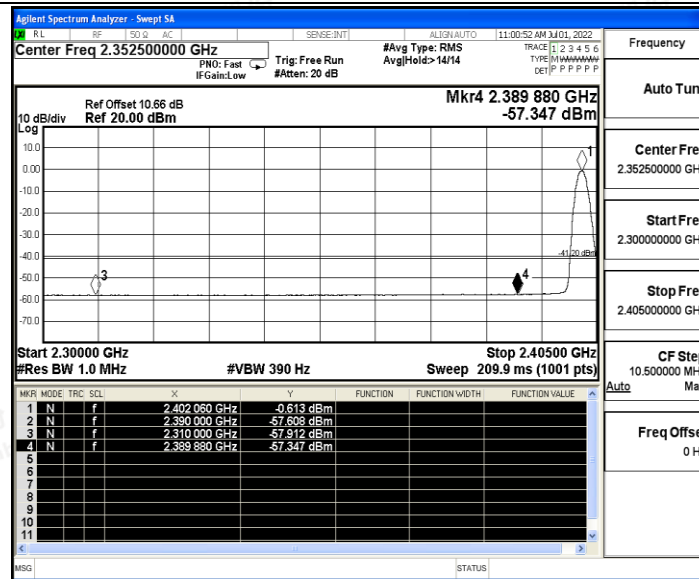


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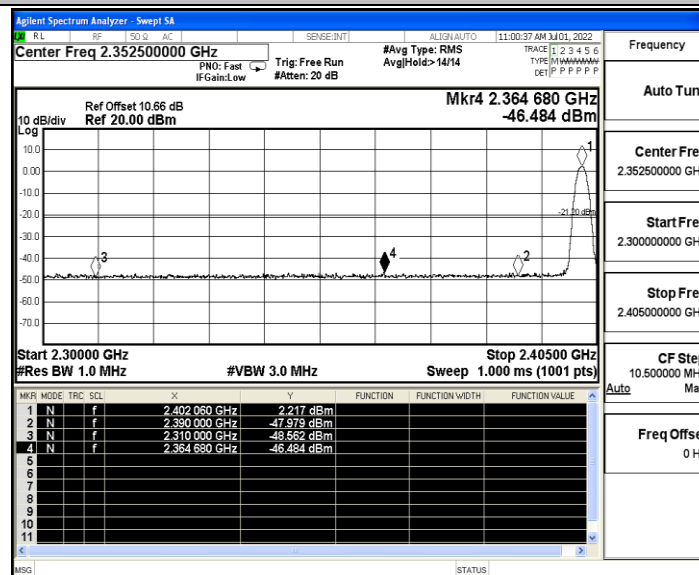
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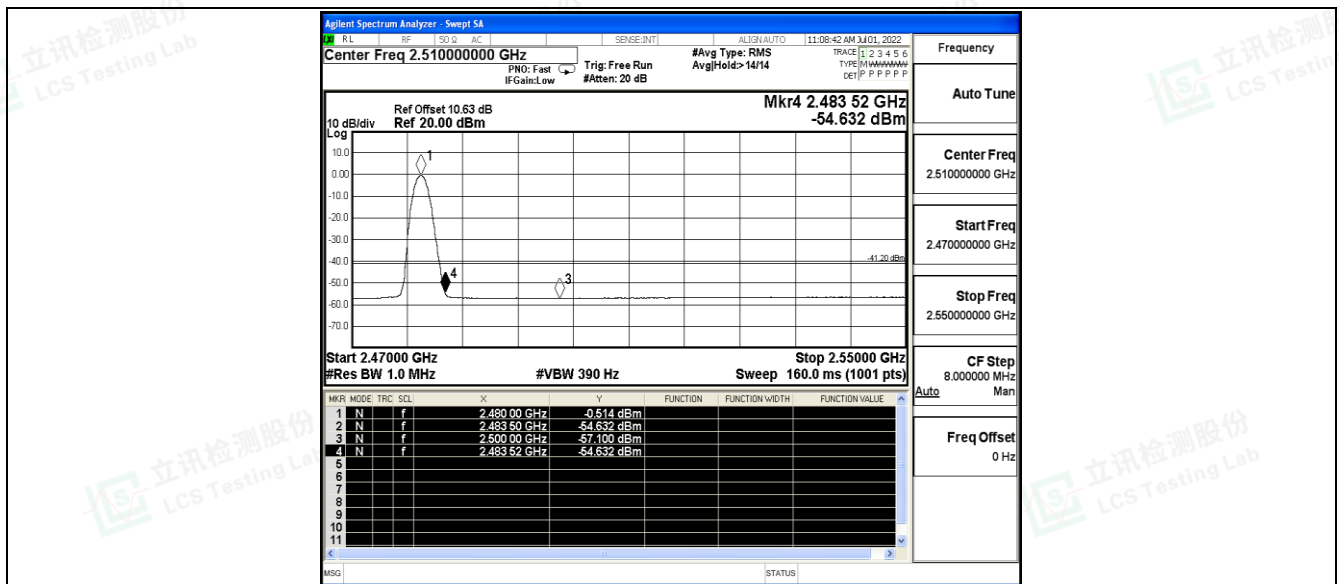


3DH5_Ant_Low_2402_Peak



3DH5_Ant_High_2480_AV





3DH5_Ant_High_2480_Peak

