



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: AUDEN BAMBOO BLUETOOTH SPEAKER

Test Model: 101520-231B

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Jack cheng</i> Jack Cheng
Supervised by:	<i>Libu</i> Li Huan





A.1 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant	2402	1.044	2401.454	2402.498	---	---
		2441	1.032	2440.463	2441.495	---	---
		2480	1.032	2479.454	2480.486	---	---
2DH5	Ant	2402	1.314	2401.331	2402.645	---	---
		2441	1.290	2440.352	2441.642	---	---
		2480	1.290	2479.352	2480.642	---	---
3DH5	Ant	2402	1.290	2401.340	2402.630	---	---
		2441	1.296	2440.340	2441.636	---	---
		2480	1.290	2479.340	2480.630	---	---

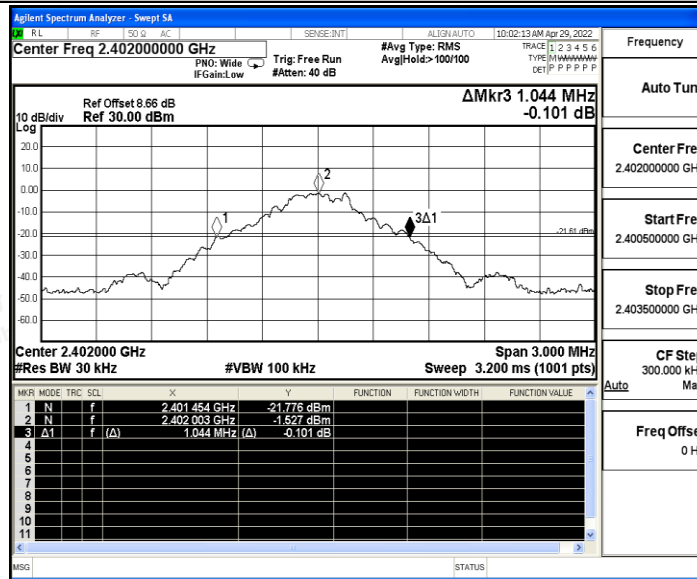


Shenzhen LCS Compliance Testing Laboratory Ltd.
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

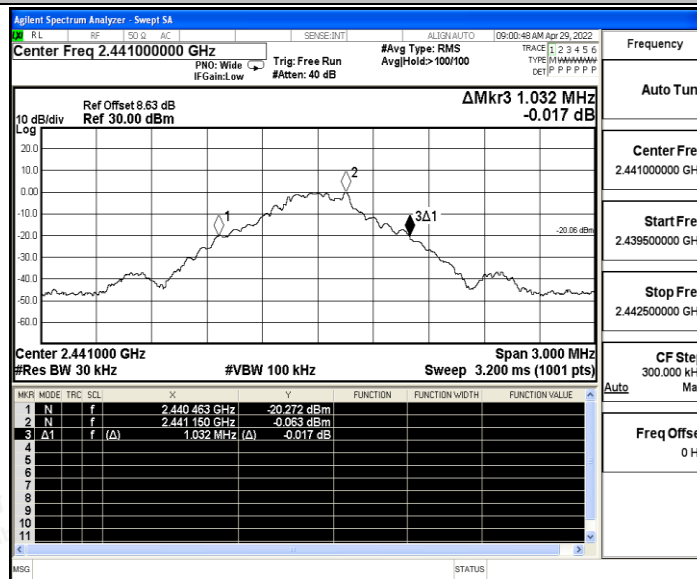


Test Graphs

DH5_Ant_2402

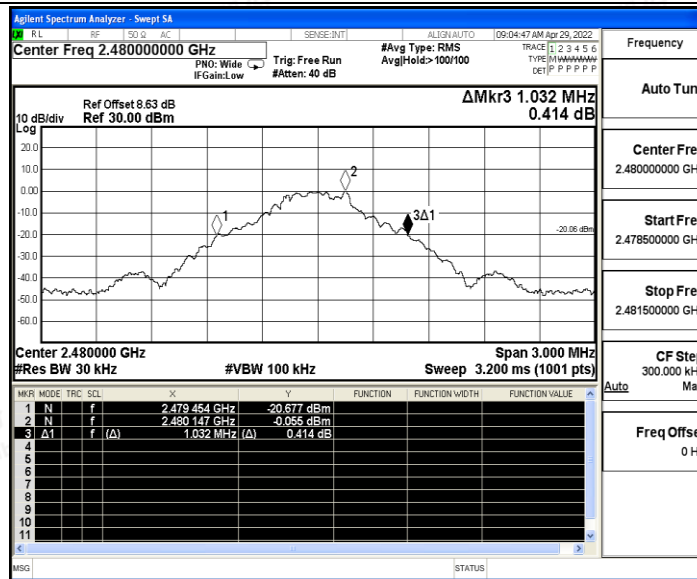


DH5_Ant_2441

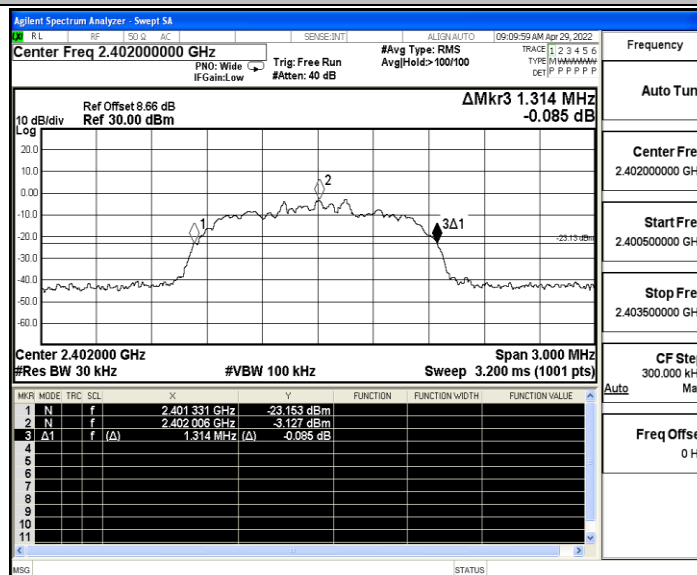


DH5_Ant_2480



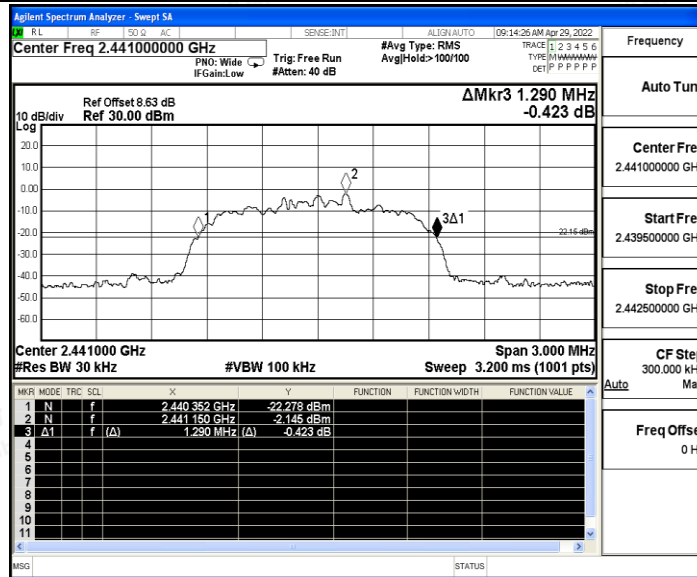


2DH5_Ant_2402

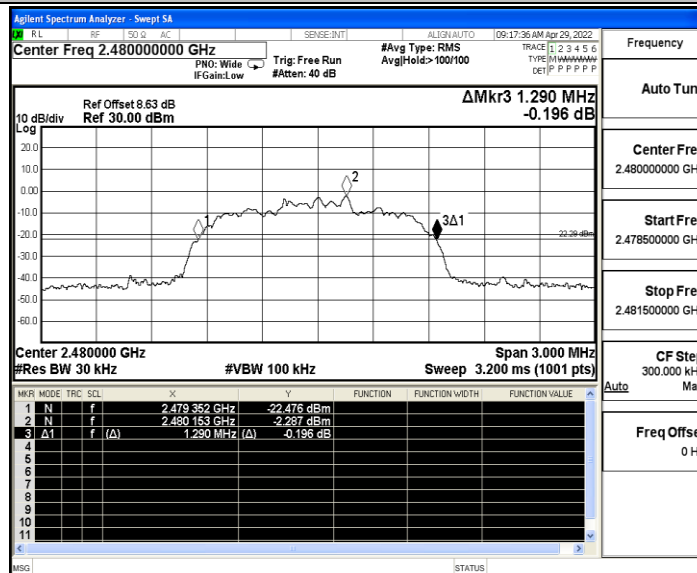


2DH5_Ant_2441



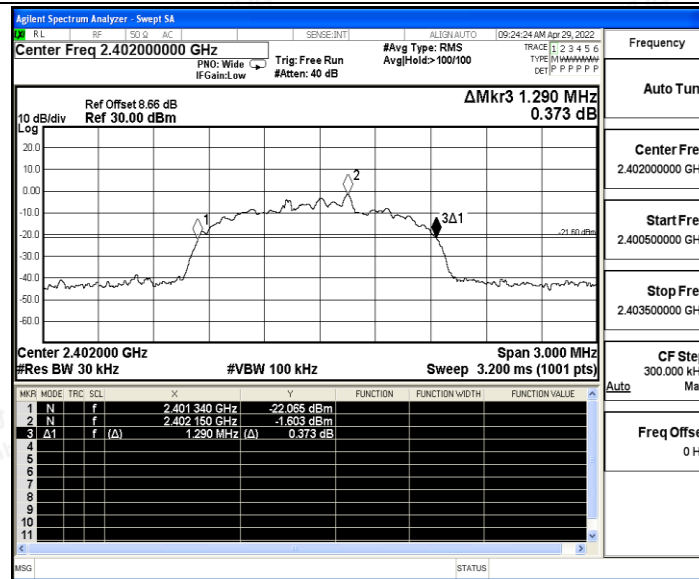


2DH5_Ant_2480

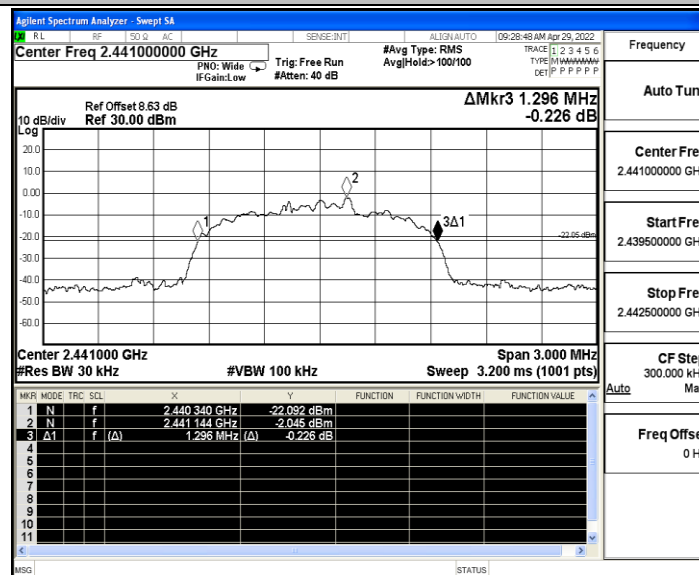


3DH5_Ant_2402



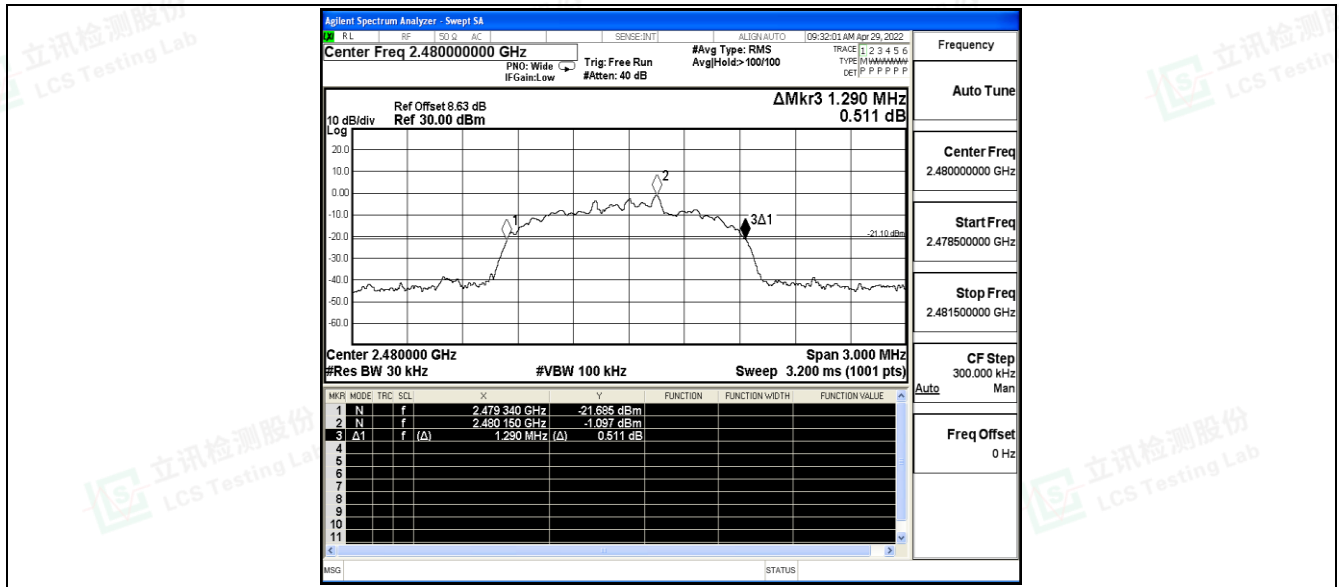


3DH5_Ant_2441



3DH5_Ant_2480







A.2 Maximum peak conducted output power

Test Result

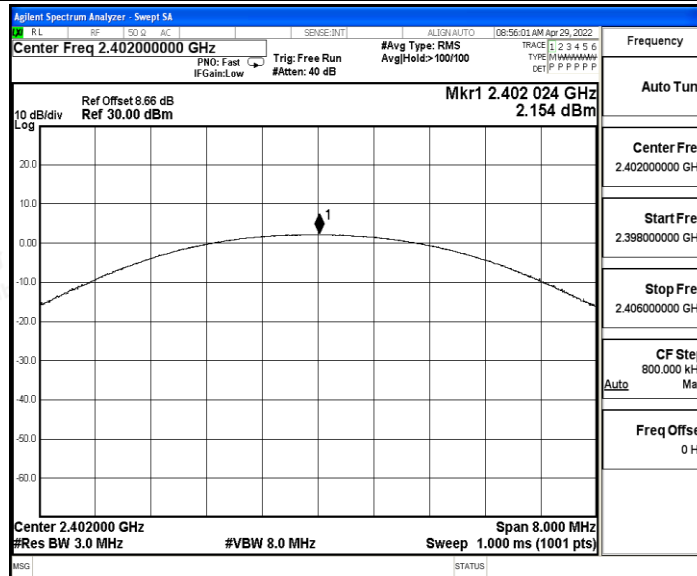
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant	2402	2.15	≤20.97	PASS
		2441	2.51	≤20.97	PASS
		2480	2.63	≤20.97	PASS
2DH5	Ant	2402	1.92	≤20.97	PASS
		2441	2.06	≤20.97	PASS
		2480	1.94	≤20.97	PASS
3DH5	Ant	2402	1.63	≤20.97	PASS
		2441	2.14	≤20.97	PASS
		2480	2.42	≤20.97	PASS



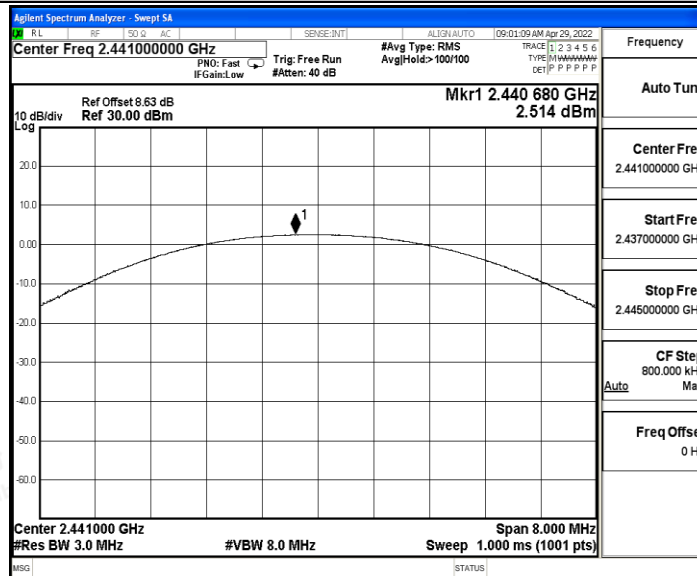


Test Graphs

DH5_Ant_2402

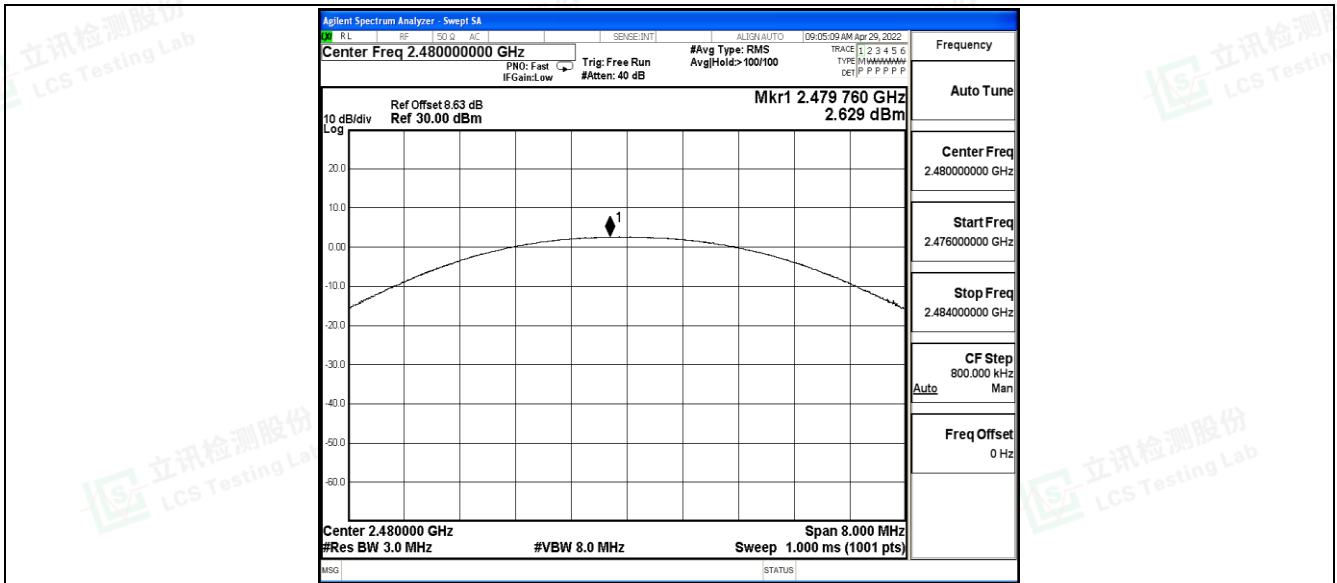


DH5_Ant_2441

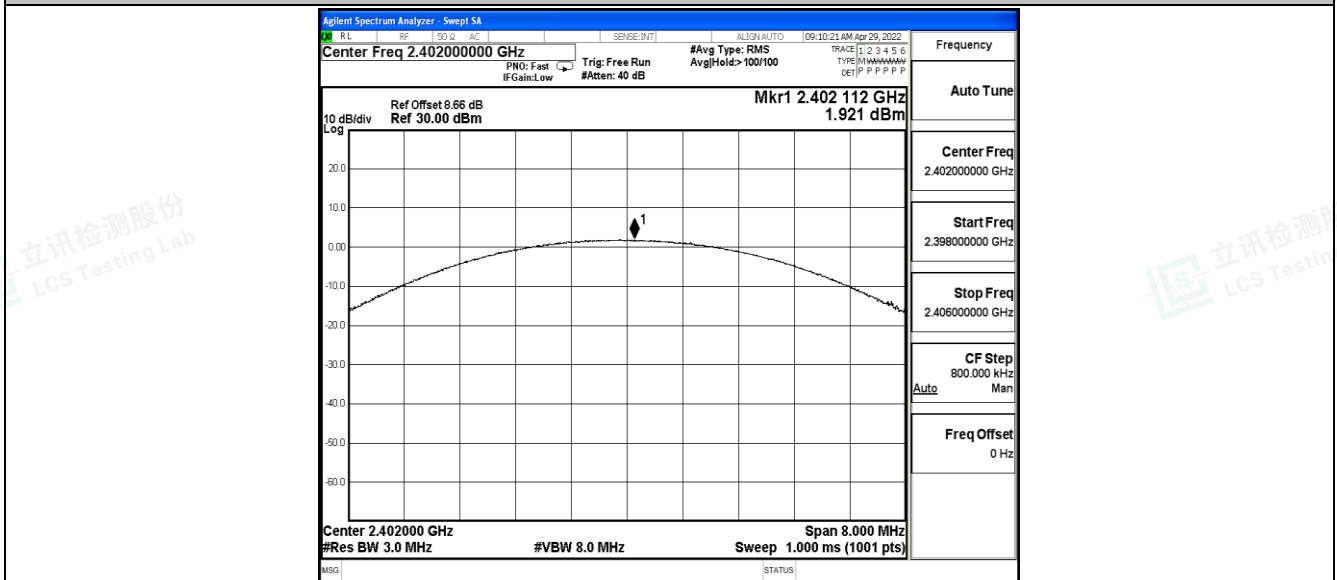


DH5_Ant_2480



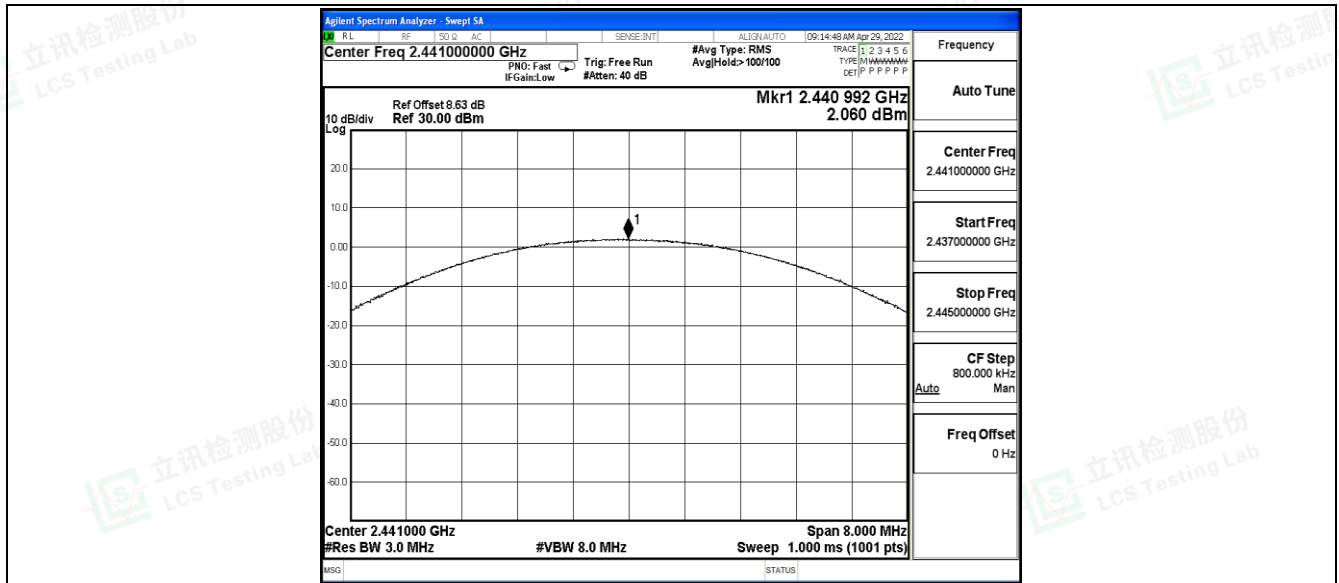


2DH5_Ant_2402

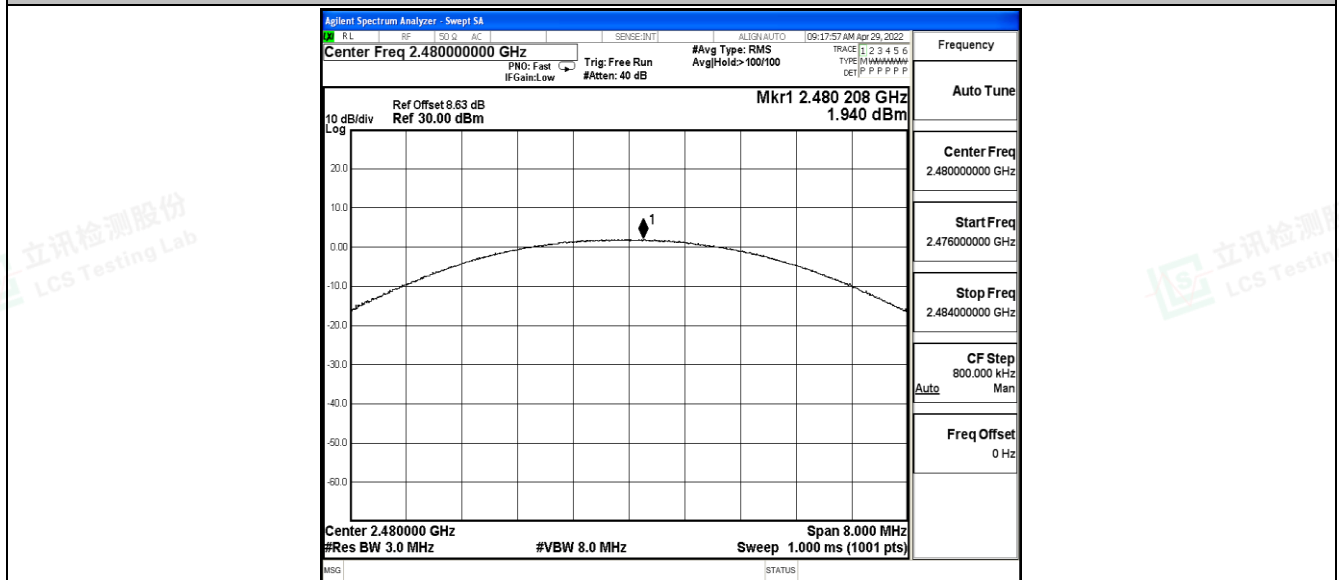


2DH5_Ant_2441



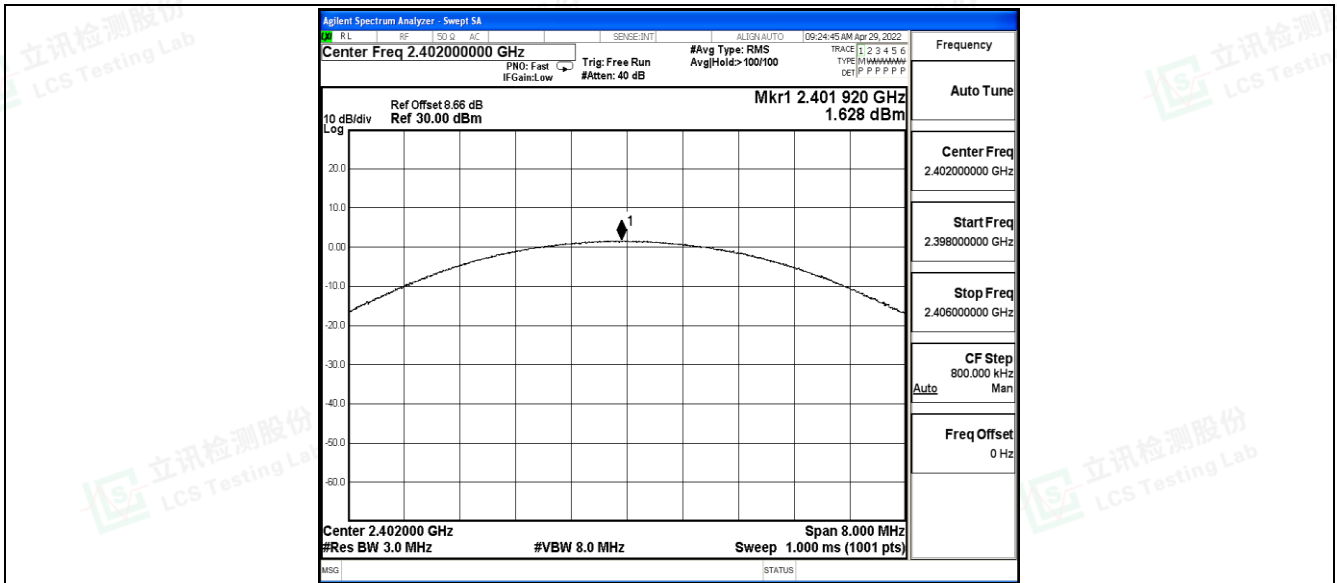


2DH5_Ant_2480

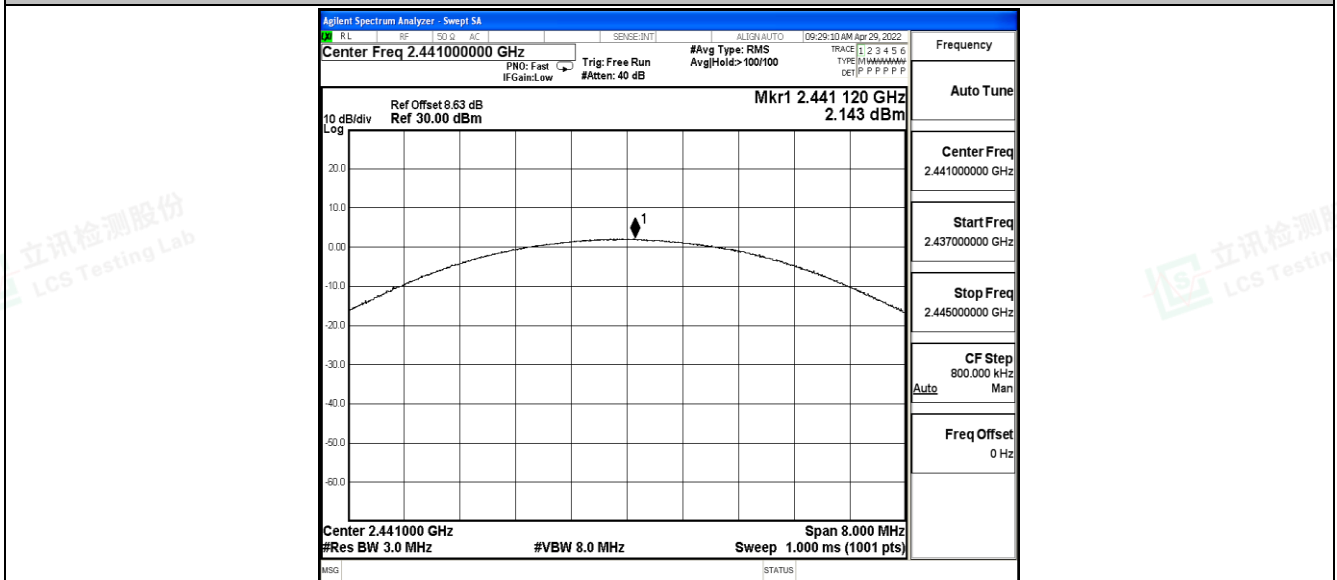


3DH5_Ant_2402



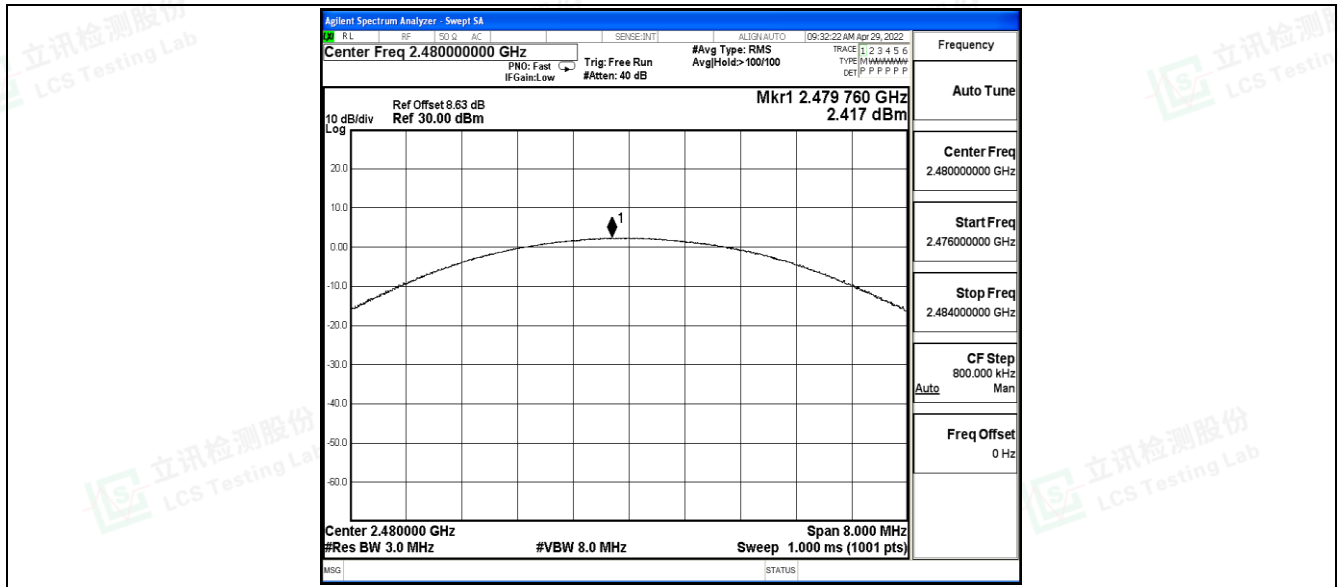


3DH5_Ant_2441



3DH5_Ant_2480







A.3 Carrier frequency separation

Test Result

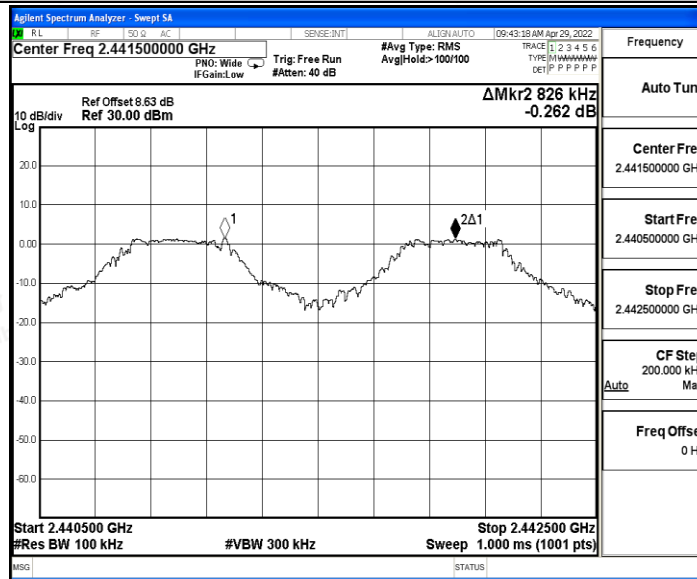
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant	Hop	0.826	≥0.696	PASS
2DH5	Ant	Hop	1.01	≥0.876	PASS
3DH5	Ant	Hop	1.184	≥0.864	PASS



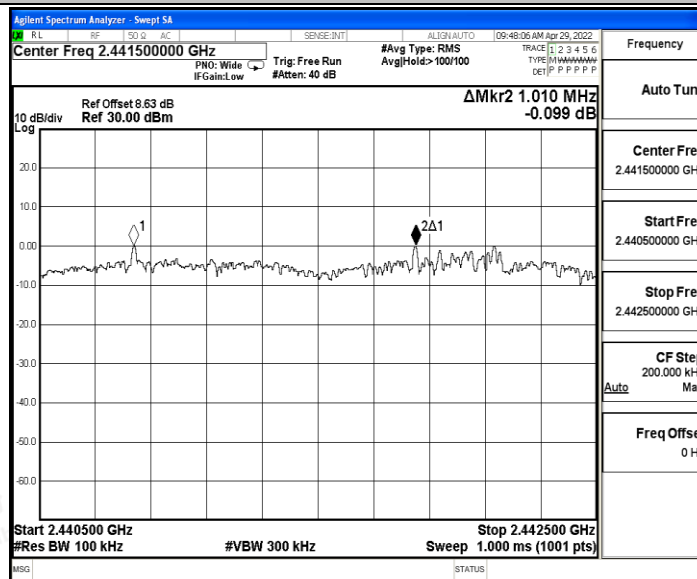


Test Graphs

DH5_Ant_Hop

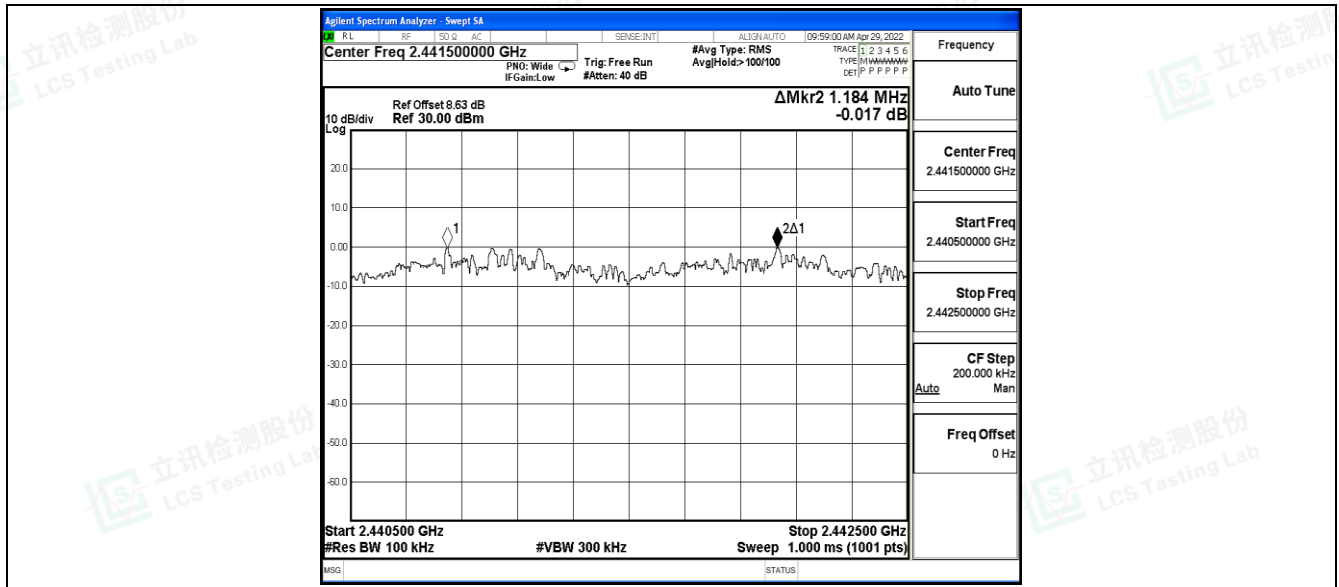


2DH5_Ant_Hop



3DH5_Ant_Hop







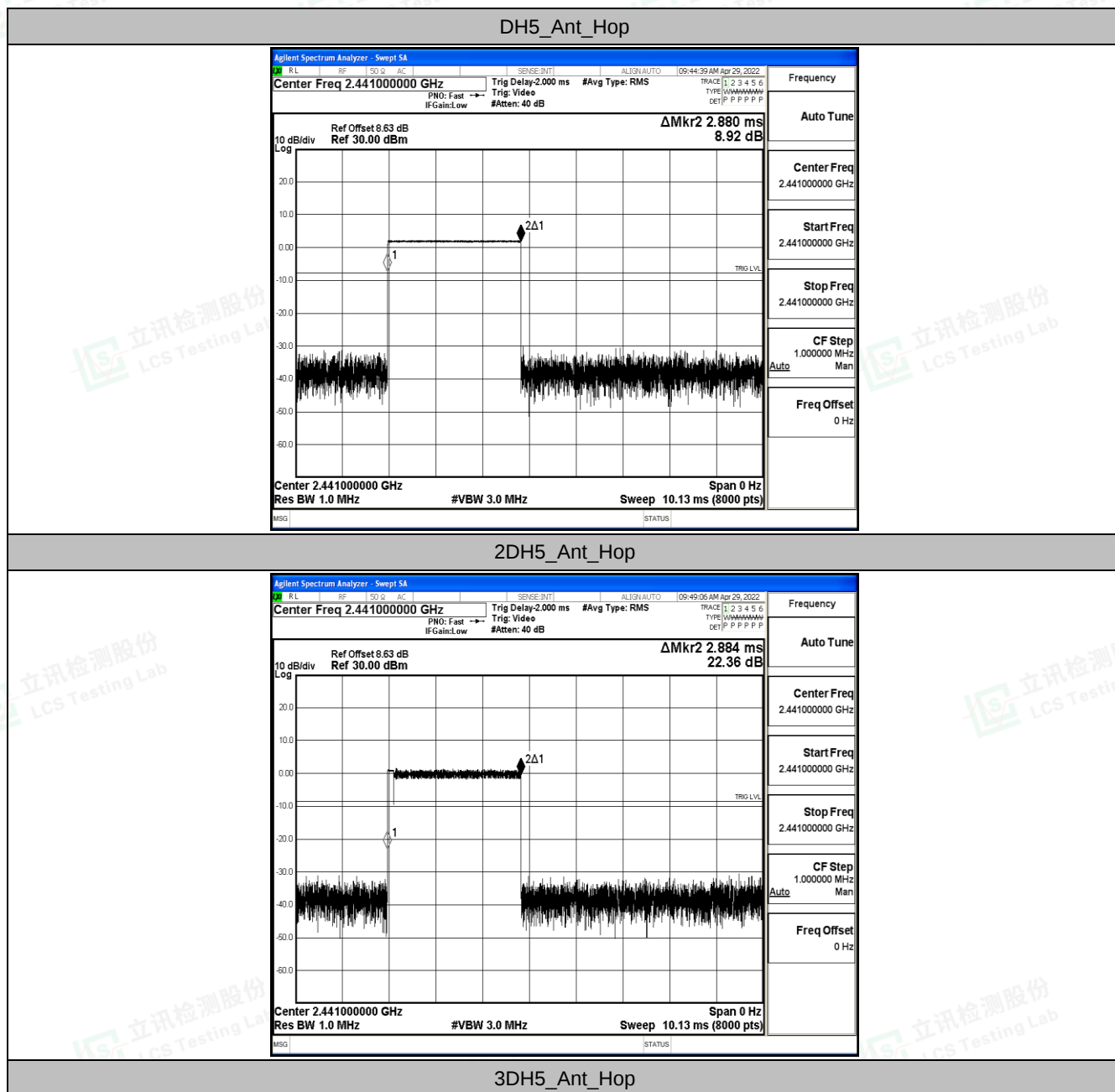
A.4 Time of occupancy

Test Result

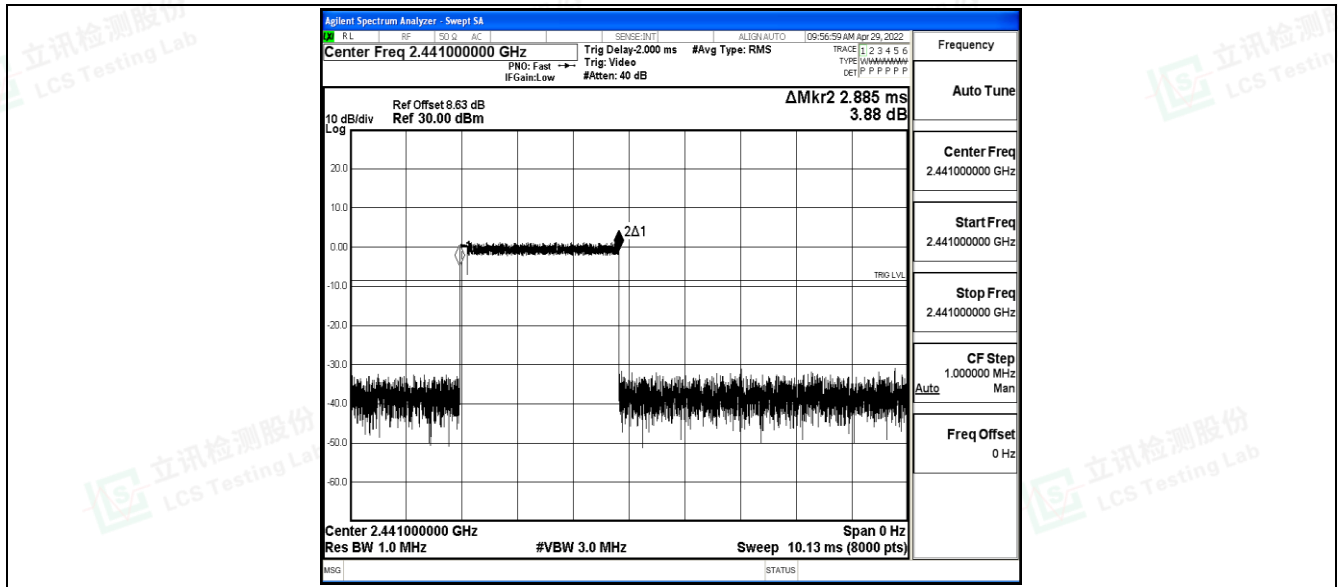
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant	Hop	2.88	106.67	0.307	≤0.4	PASS
2DH5	Ant	Hop	2.88	106.67	0.307	≤0.4	PASS
3DH5	Ant	Hop	2.89	106.67	0.308	≤0.4	PASS



Test Graphs



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A.5 Number of hopping channels

Test Result

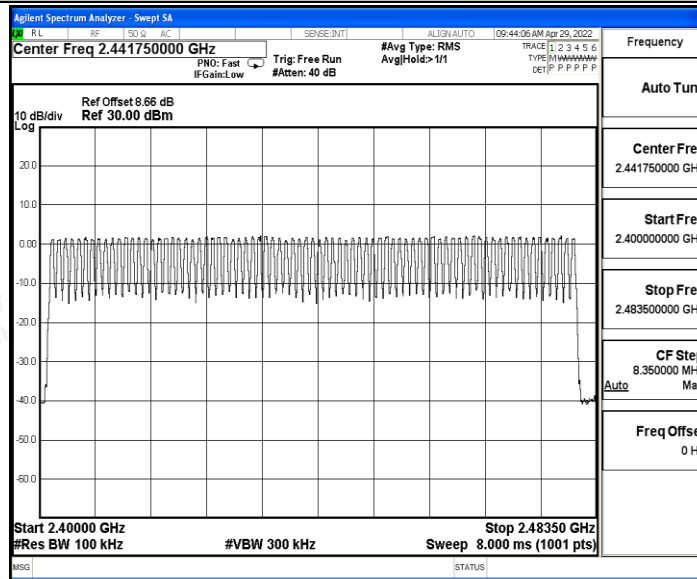
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant	Hop	79	≥15	PASS
2DH5	Ant	Hop	79	≥15	PASS
3DH5	Ant	Hop	79	≥15	PASS



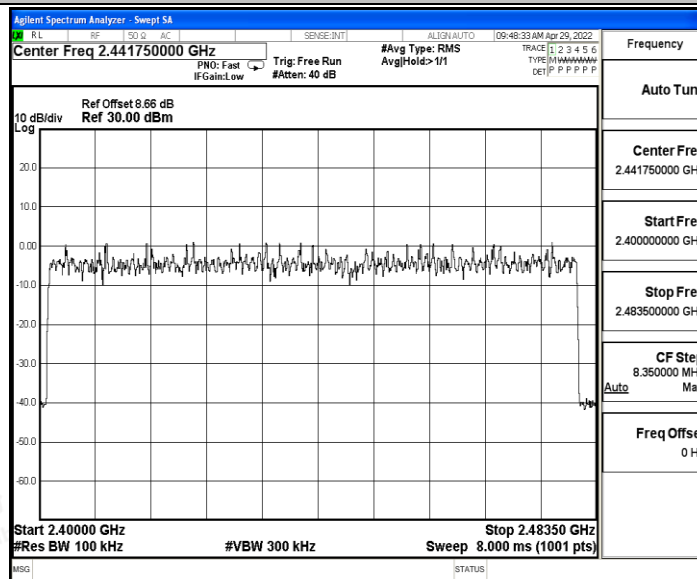


Test Graphs

DH5_Ant_Hop

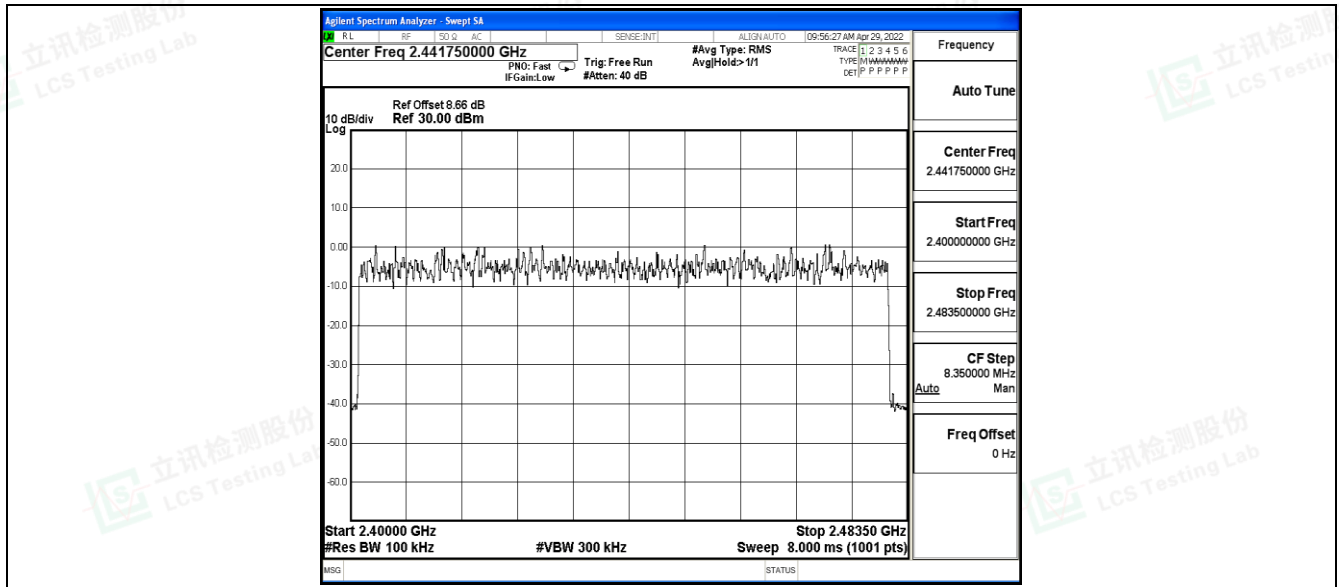


2DH5_Ant_Hop



3DH5_Ant_Hop







A.6 Band edge measurements

Test Result

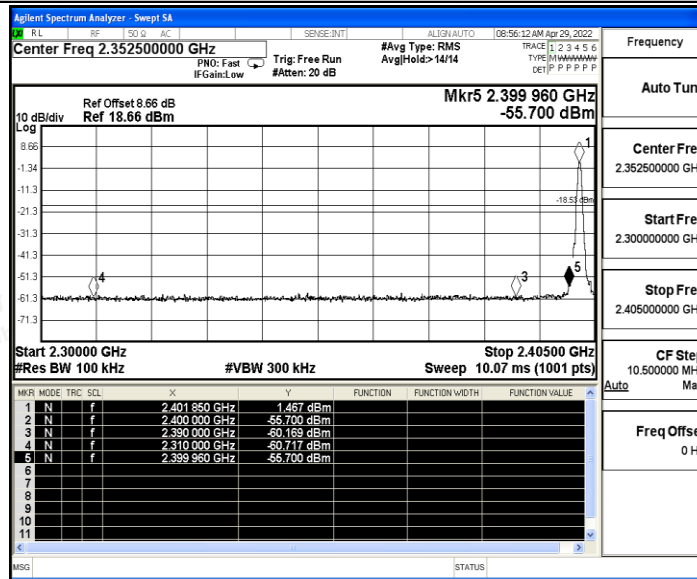
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant	Low	2402	1.47	-55.7	≤ -18.53	PASS
		High	2480	2.00	-57.48	≤ -18	PASS
		Low	Hop_2402	0.49	-59.28	≤ -19.51	PASS
		High	Hop_2480	1.52	-57.64	≤ -18.48	PASS
2DH5	Ant	Low	2402	0.67	-55.39	≤ -19.33	PASS
		High	2480	0.58	-58	≤ -19.42	PASS
		Low	Hop_2402	-4.28	-58.82	≤ -24.28	PASS
		High	Hop_2480	0.02	-57.56	≤ -19.99	PASS
3DH5	Ant	Low	2402	0.25	-55.72	≤ -19.75	PASS
		High	2480	0.94	-57.58	≤ -19.07	PASS
		Low	Hop_2402	-2.44	-58.76	≤ -22.44	PASS
		High	Hop_2480	0.16	-57.63	≤ -19.84	PASS



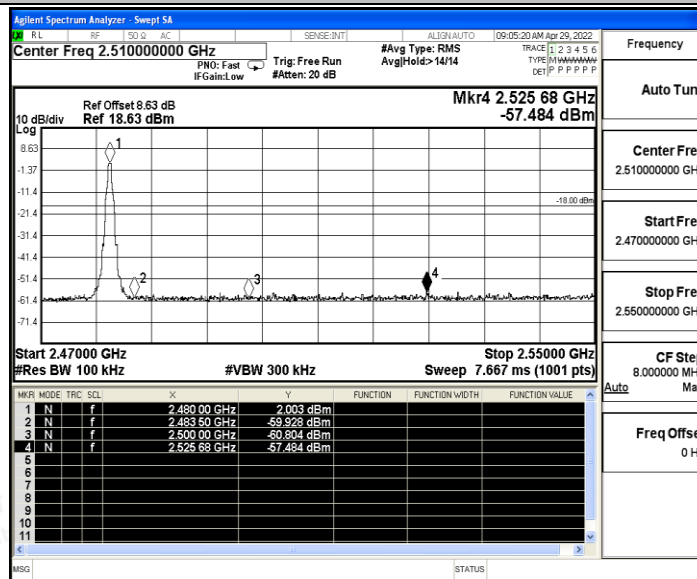


Test Graphs

DH5_Ant_Low_2402

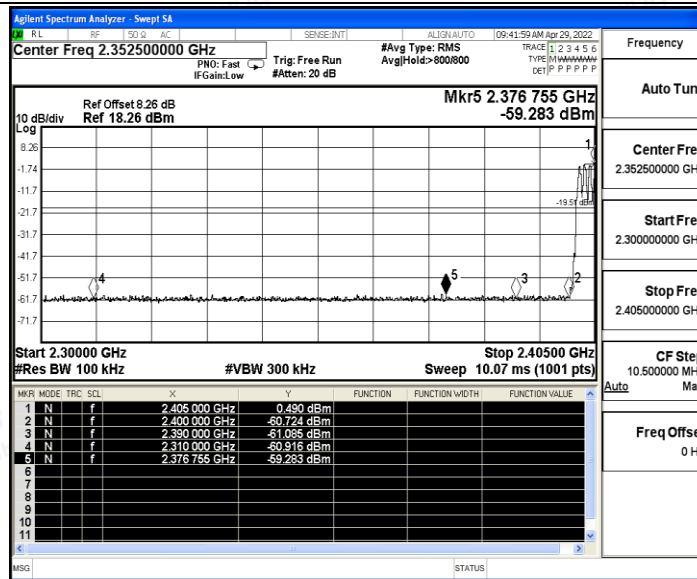


DH5_Ant_High_2480

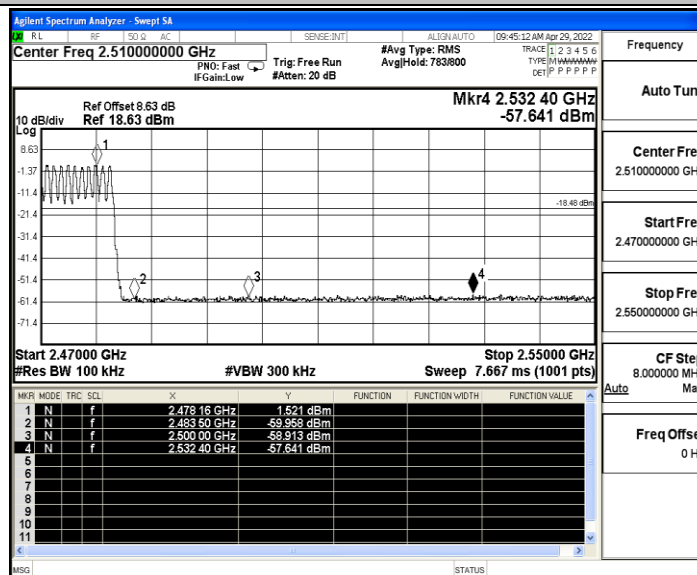


DH5_Ant_Low_Hop_2402



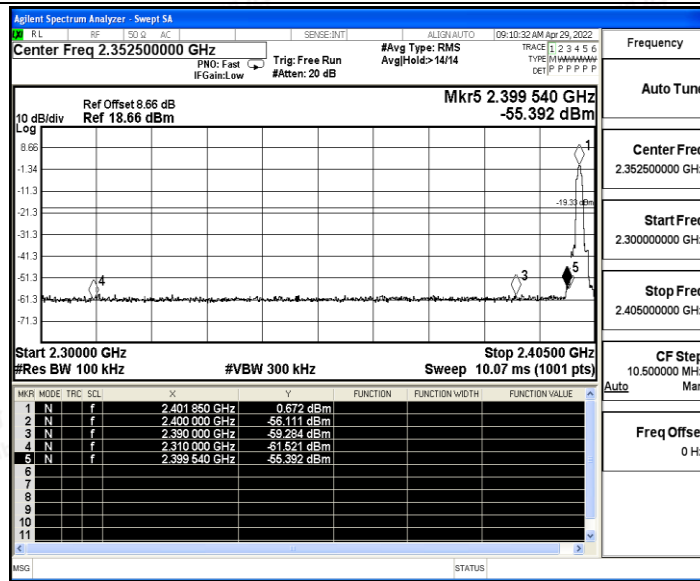


DH5_Ant_High_Hop_2480

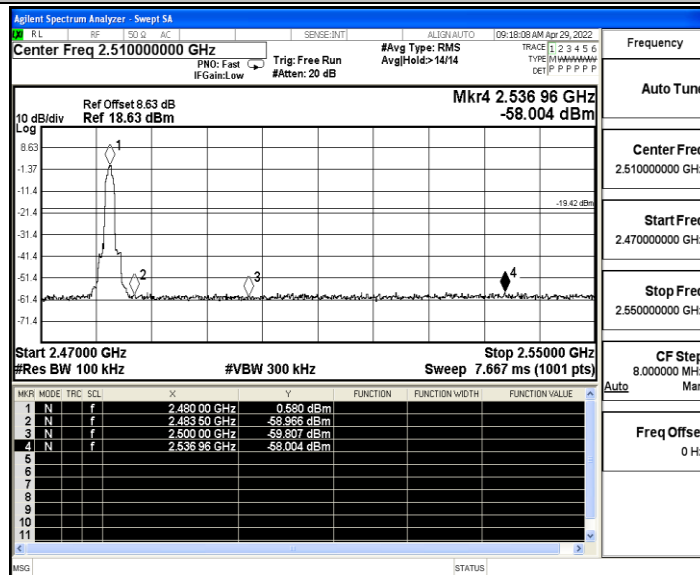


2DH5_Ant_Low_2402



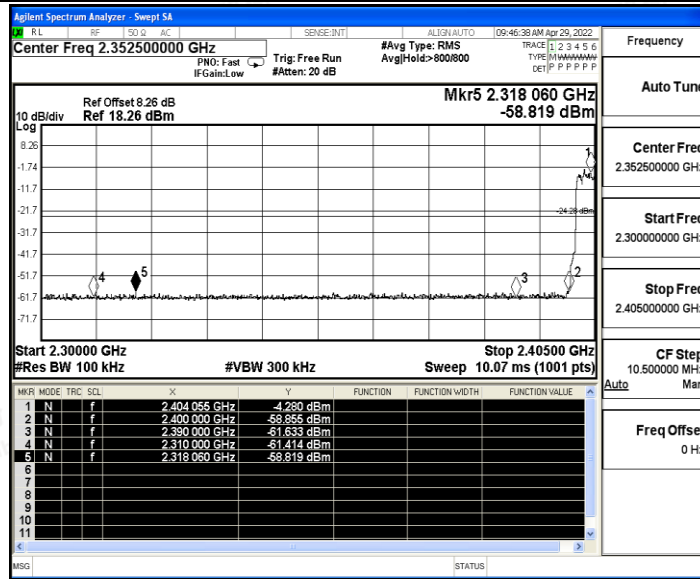


2DH5_Ant_High_2480

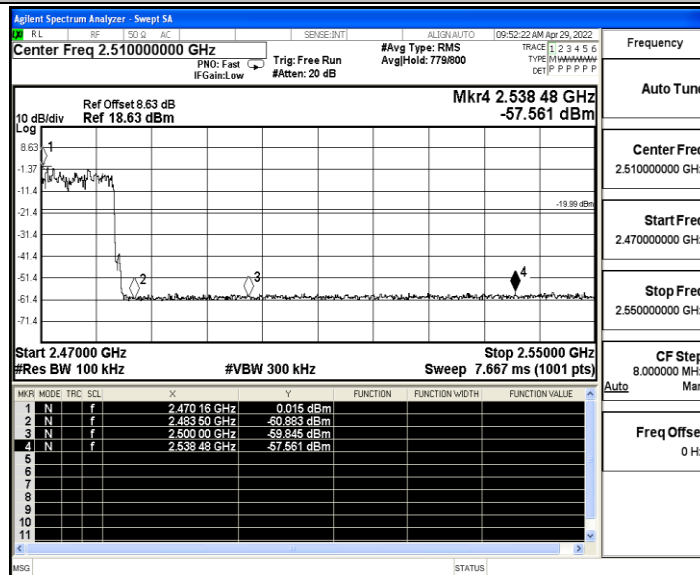


2DH5_Ant_Low_Hop_2402



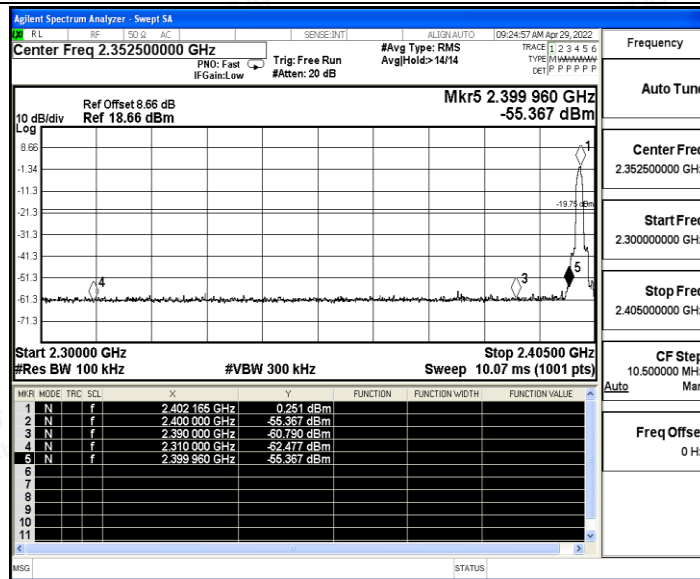


2DH5_Ant_High_Hop_2480

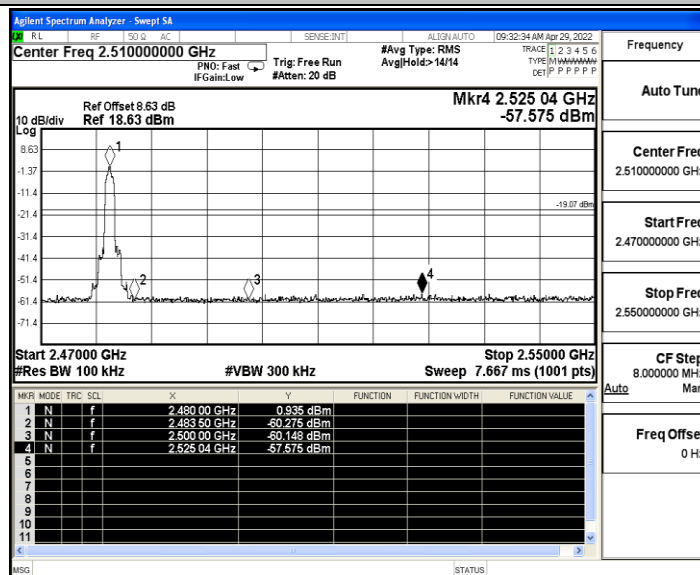


3DH5_Ant_Low_2402



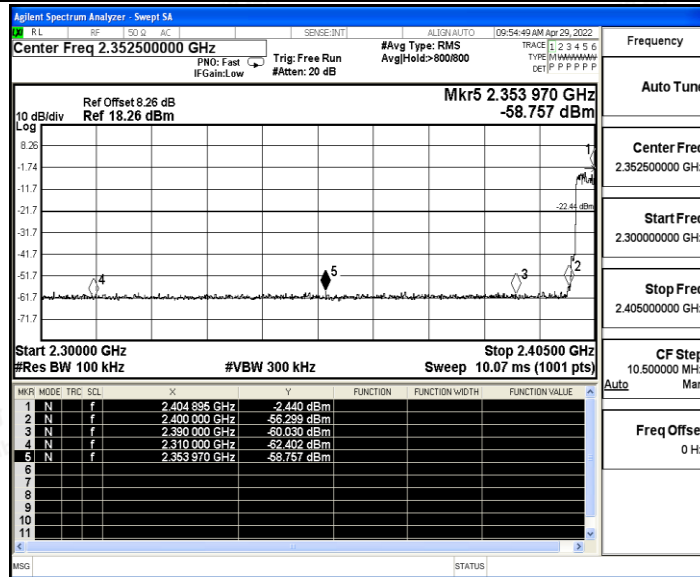


3DH5_Ant_High_2480

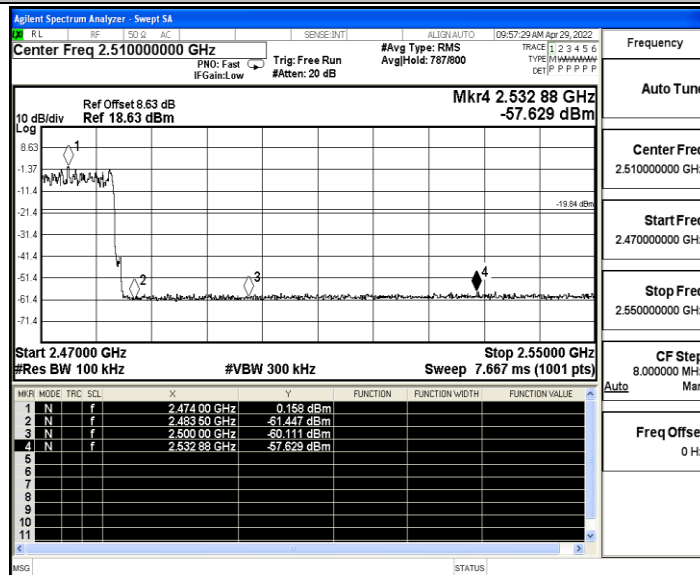


3DH5_Ant_Low_Hop_2402





3DH5_Ant_High_Hop_2480





A.7 Conducted Spurious Emission

Test Result

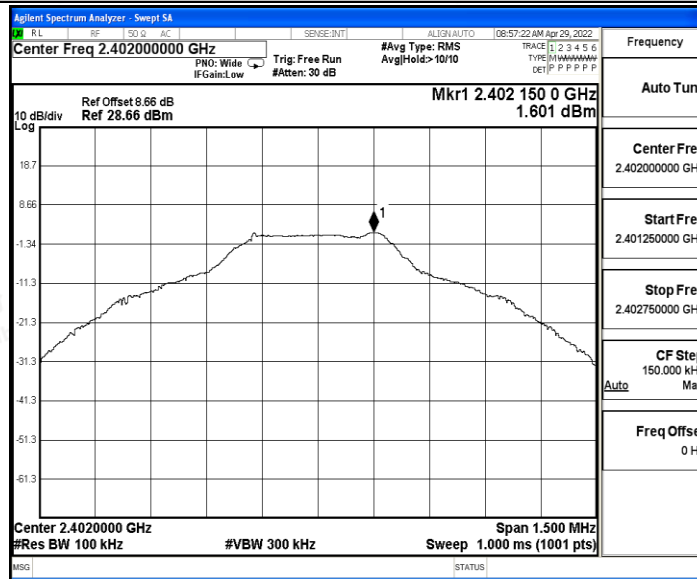
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant	2402	Reference	1.60	1.60	---	PASS
			30~1000	1.60	-60.52	≤-18.4	PASS
			1000~26500	1.60	-45.91	≤-18.4	PASS
		2441	Reference	1.93	1.93	---	PASS
			30~1000	1.93	-60.59	≤-18.07	PASS
			1000~26500	1.93	-46.02	≤-18.07	PASS
		2480	Reference	2.01	2.01	---	PASS
			30~1000	2.01	-60.49	≤-17.99	PASS
			1000~26500	2.01	-46.07	≤-17.99	PASS
2DH5	Ant	2402	Reference	0.63	0.63	---	PASS
			30~1000	0.63	-60.54	≤-19.37	PASS
			1000~26500	0.63	-46.14	≤-19.37	PASS
		2441	Reference	0.56	0.56	---	PASS
			30~1000	0.56	-60.41	≤-19.44	PASS
			1000~26500	0.56	-46.4	≤-19.44	PASS
		2480	Reference	0.41	0.41	---	PASS
			30~1000	0.41	-60.46	≤-19.59	PASS
			1000~26500	0.41	-46.44	≤-19.59	PASS
3DH5	Ant	2402	Reference	0.27	0.27	---	PASS
			30~1000	0.27	-60.96	≤-19.73	PASS
			1000~26500	0.27	-46.36	≤-19.73	PASS
		2441	Reference	0.62	0.62	---	PASS
			30~1000	0.62	-60.21	≤-19.38	PASS
			1000~26500	0.62	-46.13	≤-19.38	PASS
		2480	Reference	1.02	1.02	---	PASS
			30~1000	1.02	-60.97	≤-18.98	PASS
			1000~26500	1.02	-46.46	≤-18.98	PASS



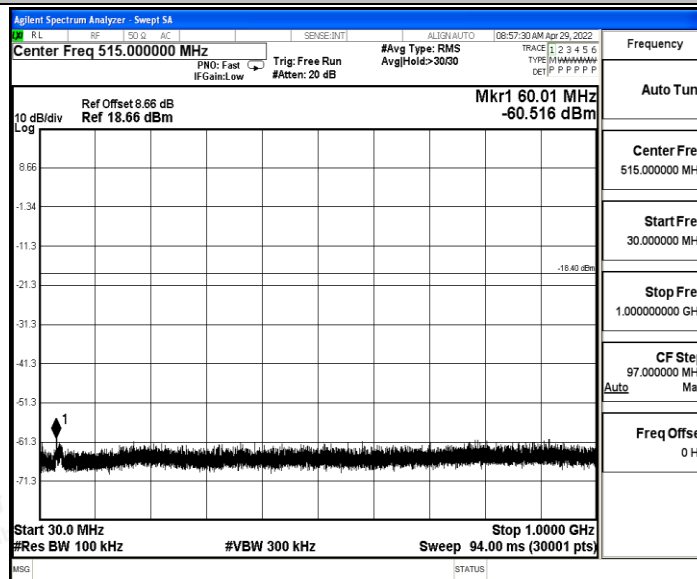


Test Graphs

DH5_Ant_2402_0~Reference

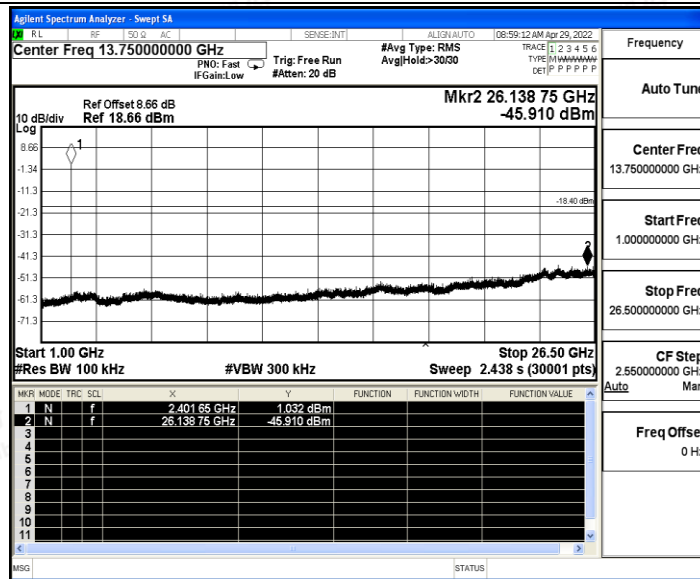


DH5_Ant_2402_30~1000

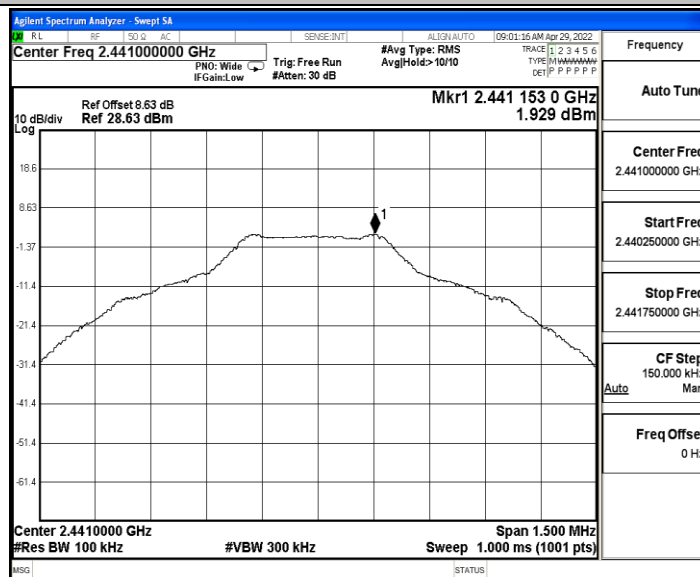


DH5_Ant_2402_1000~26500



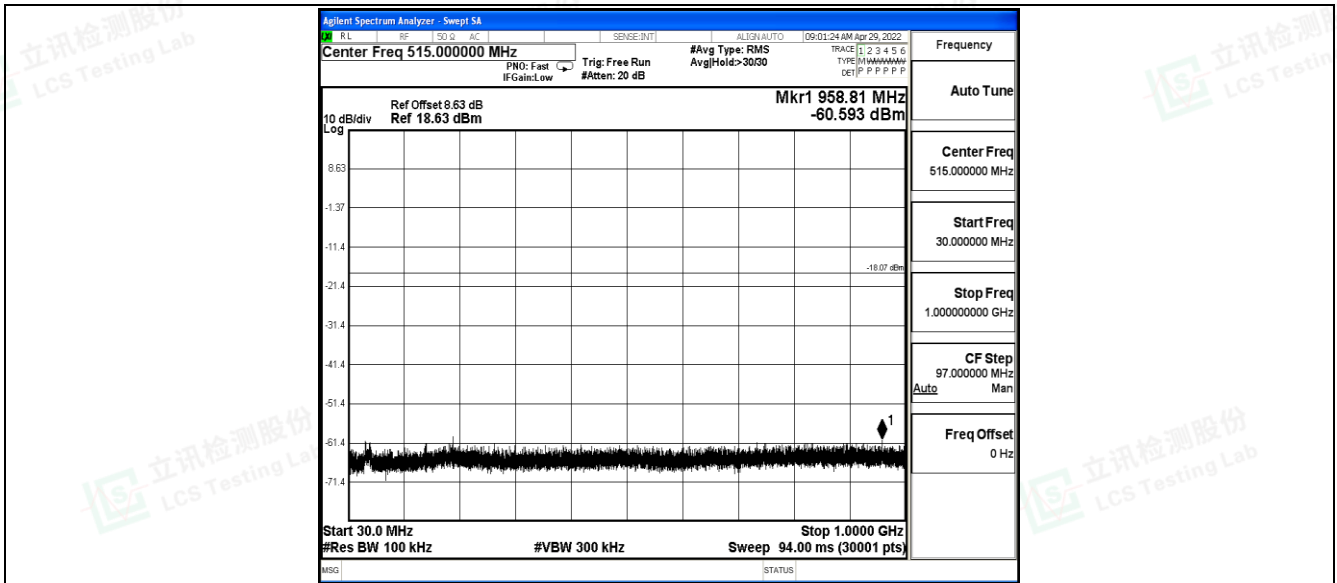


DH5_Ant_2441_0~Reference

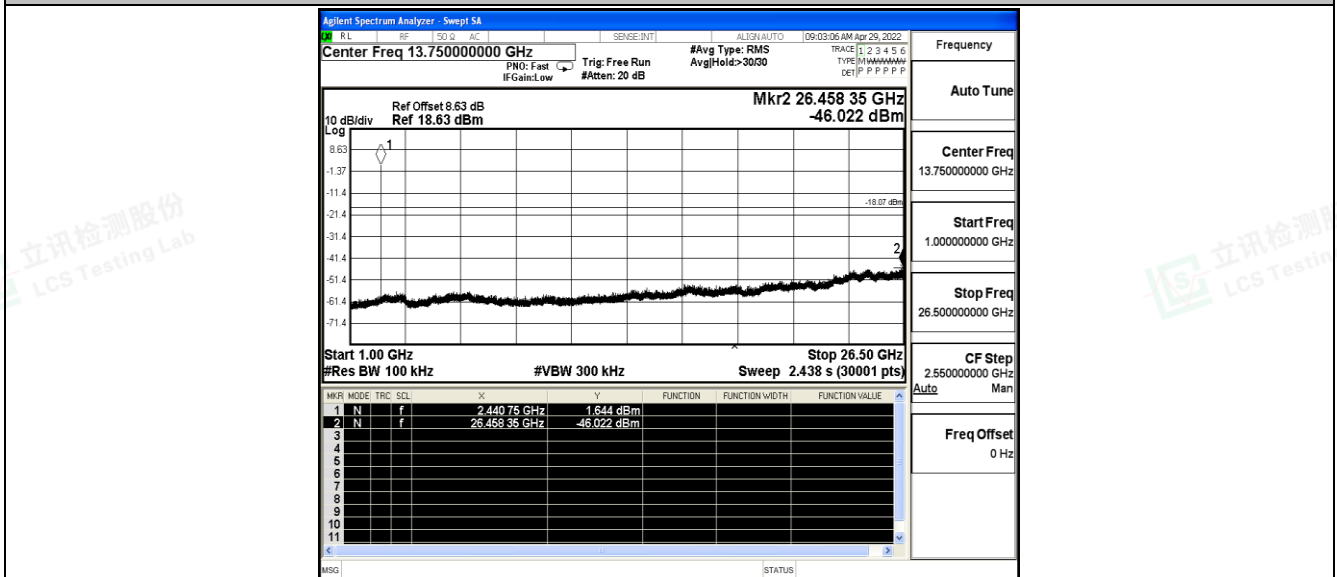


DH5_Ant_2441_30~1000



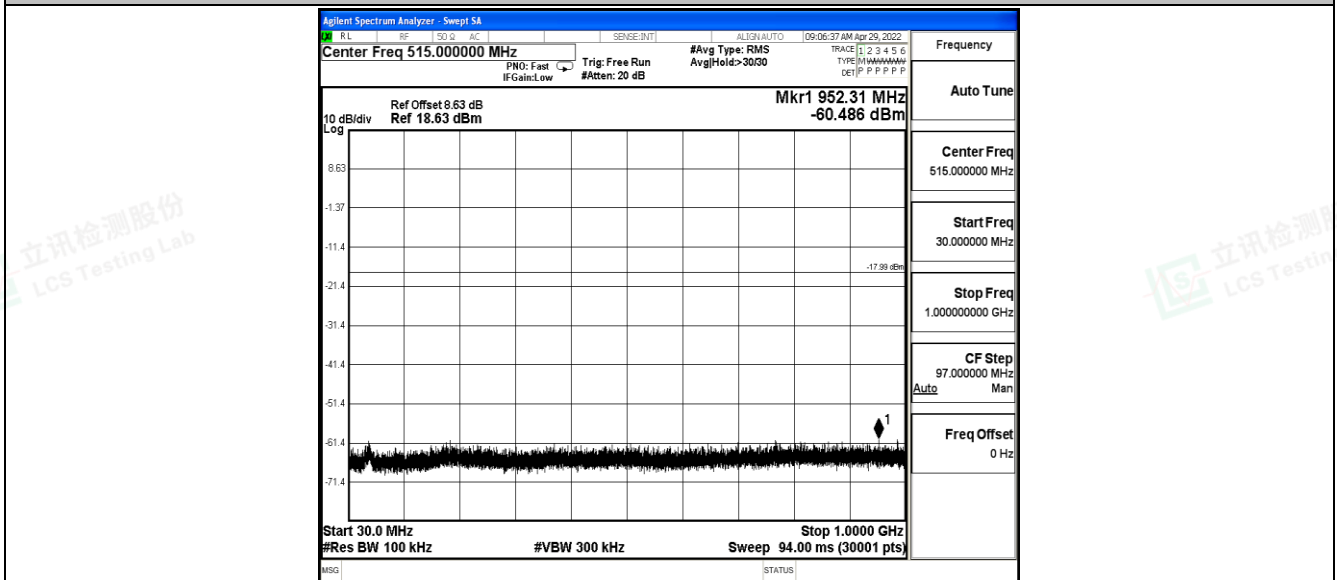
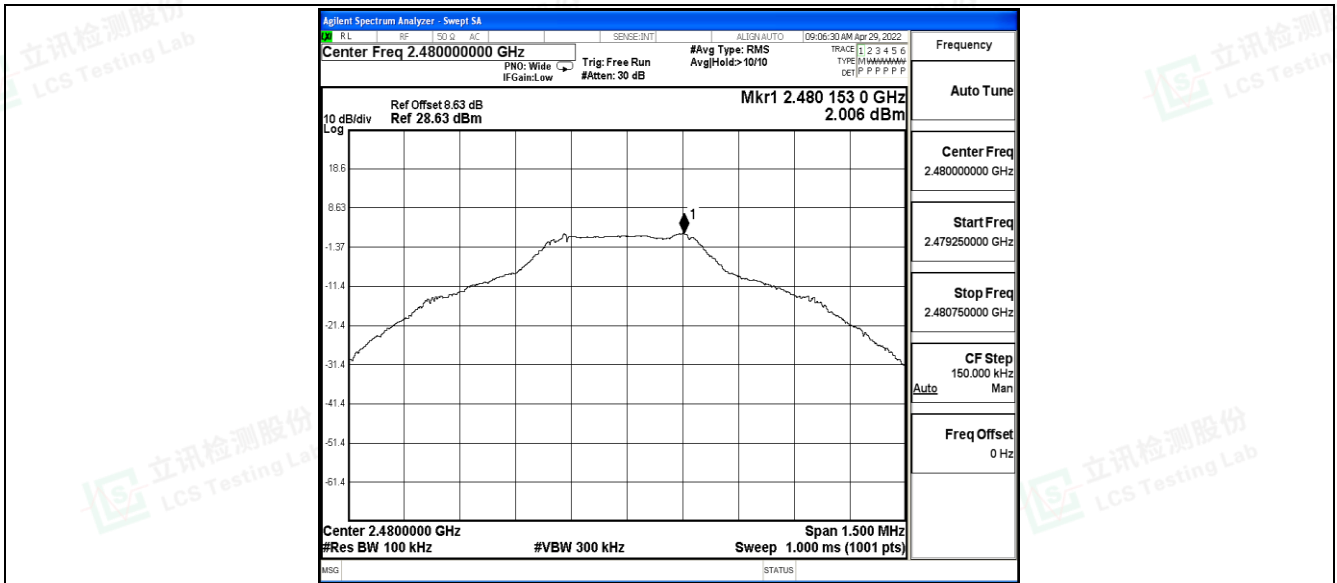


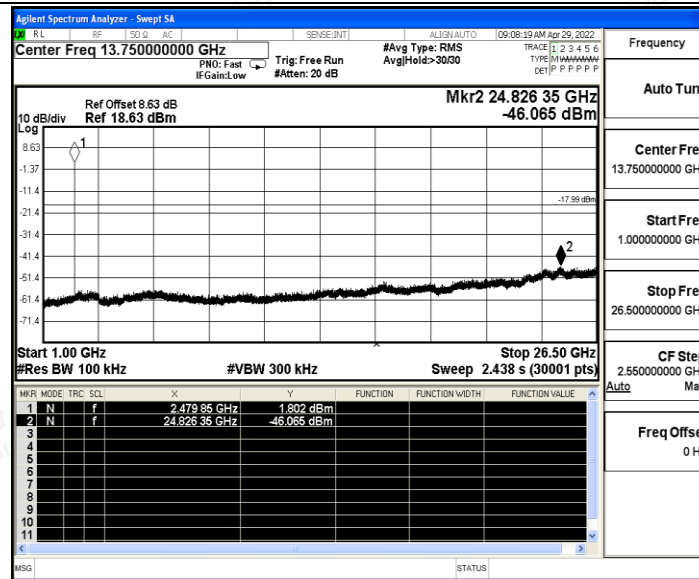
DH5_Ant_2441_1000~26500



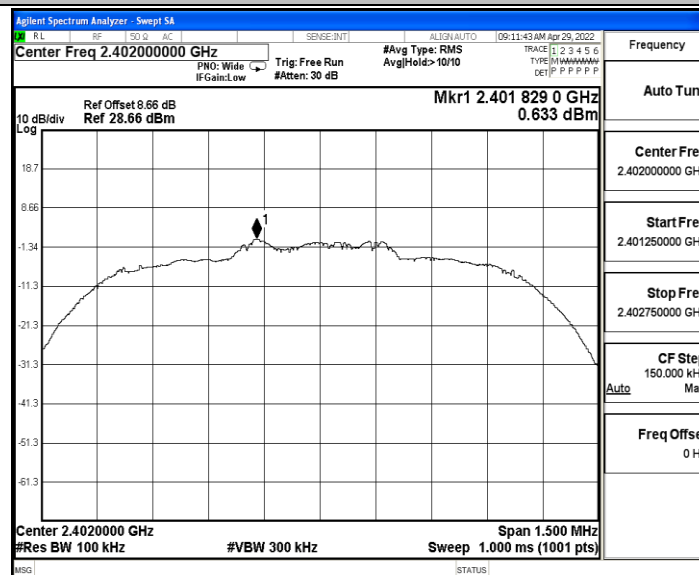
DH5_Ant_2480_0~Reference





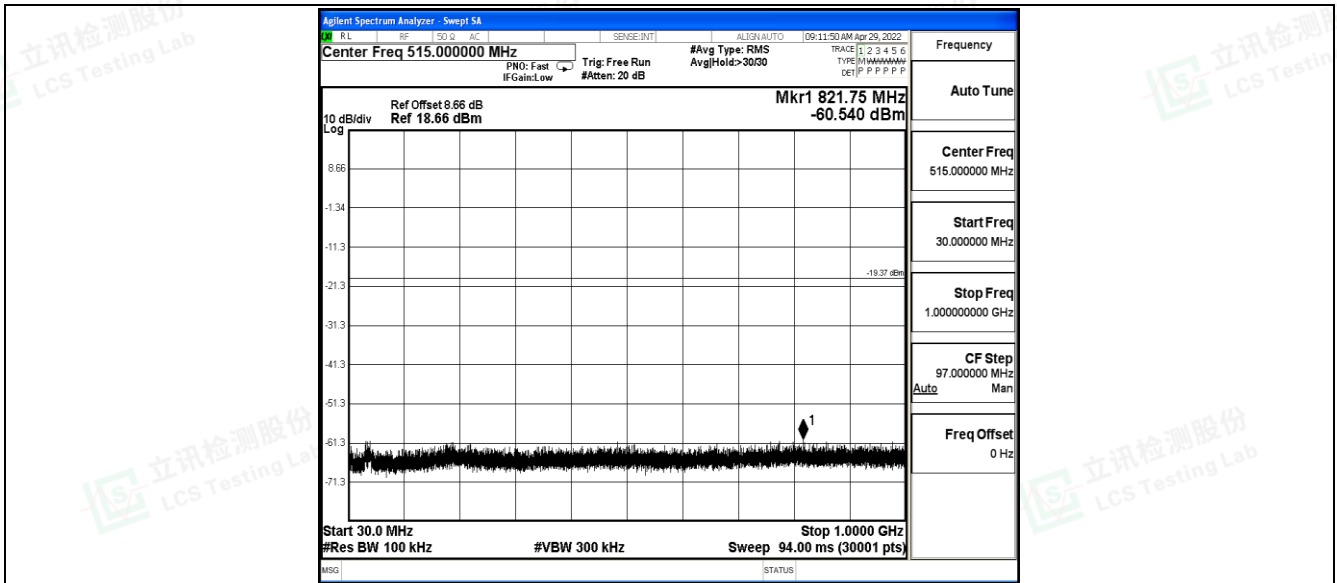


2DH5_Ant_2402_0-Reference

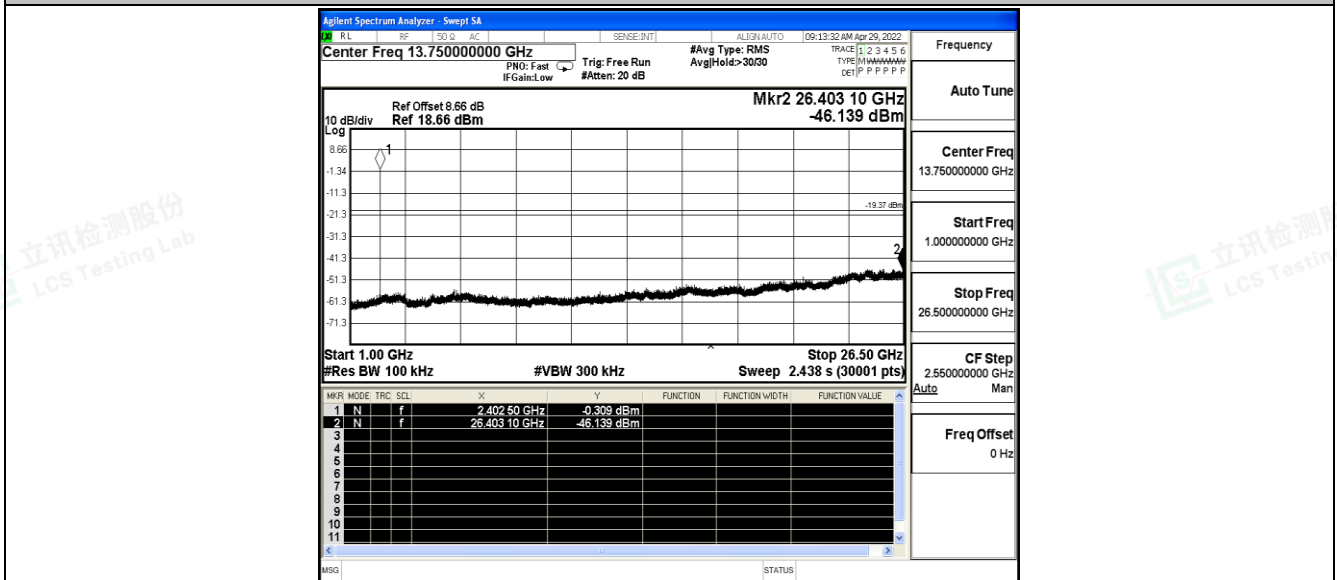


2DH5_Ant_2402_30~1000



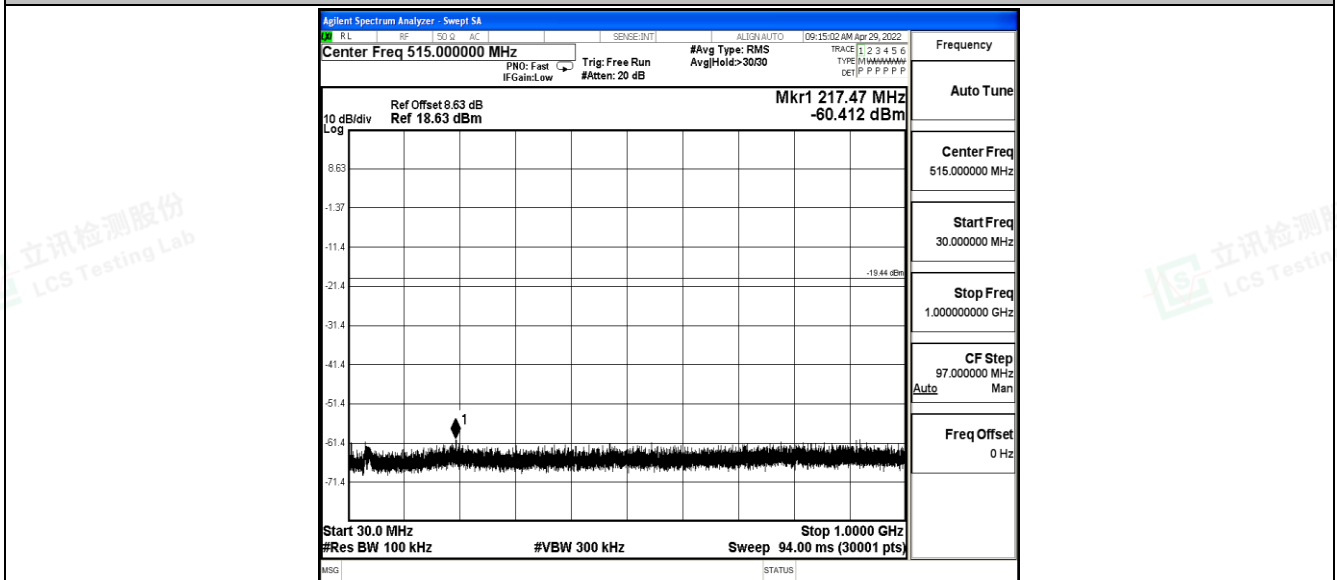
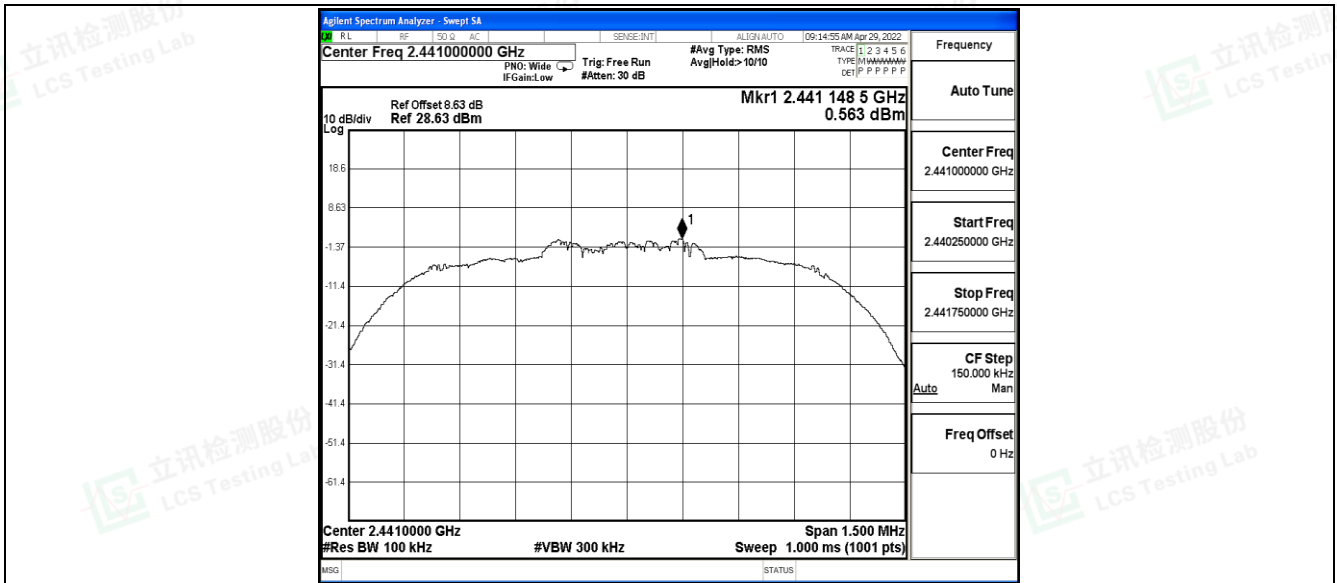


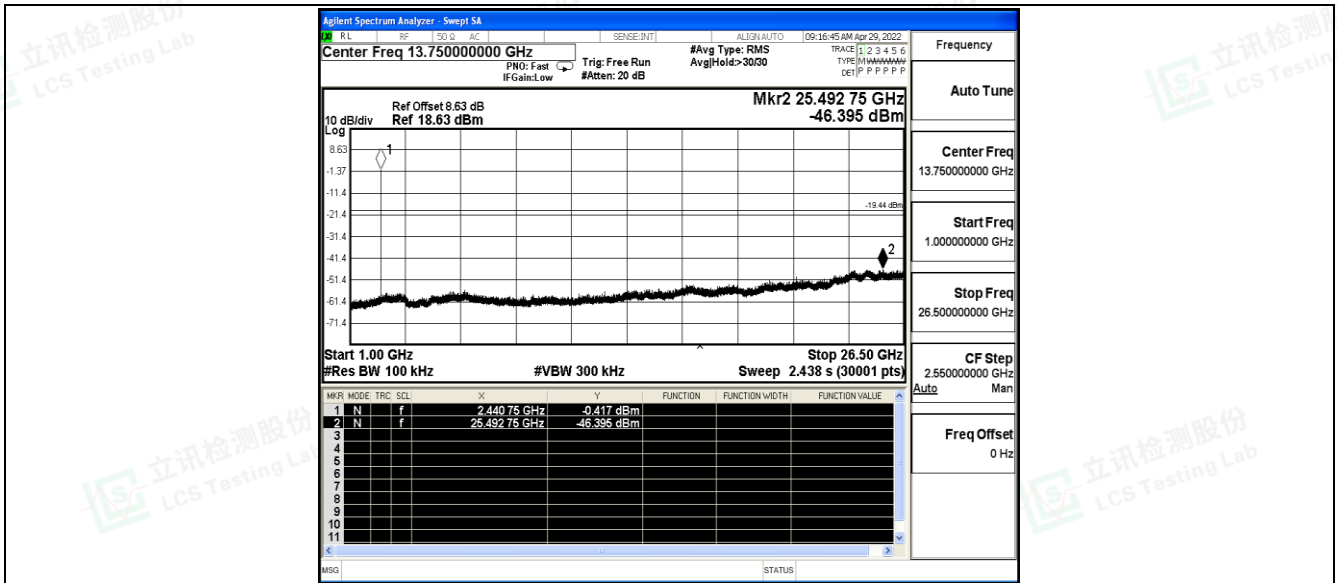
2DH5_Ant_2402_1000~26500



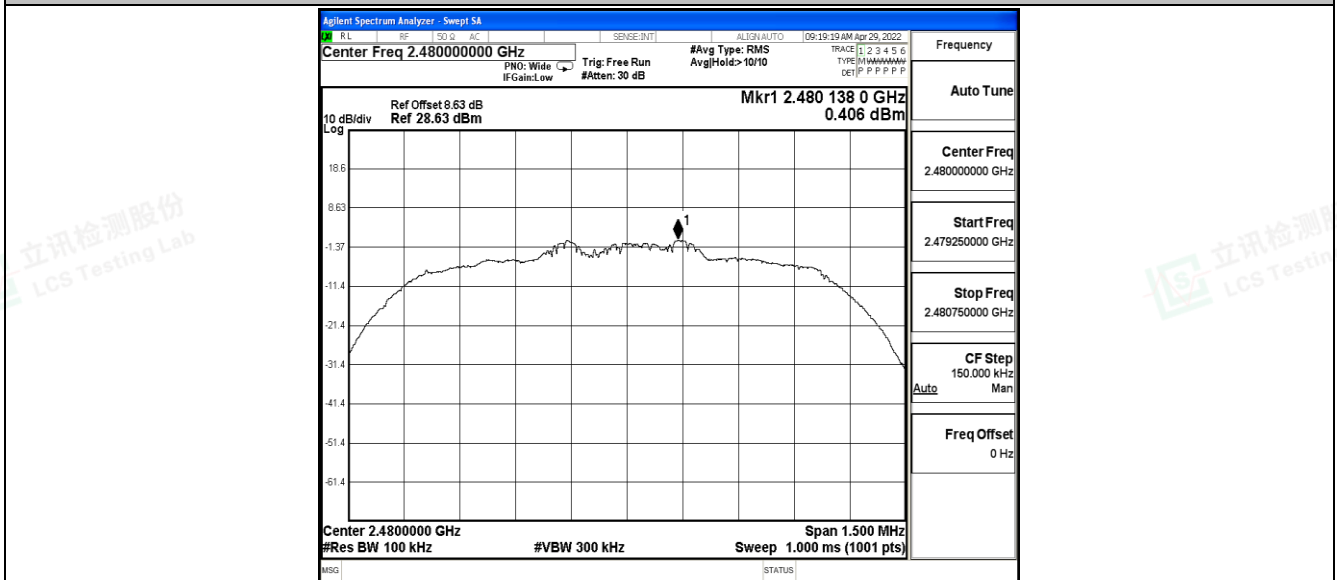
2DH5_Ant_2441_0~Reference





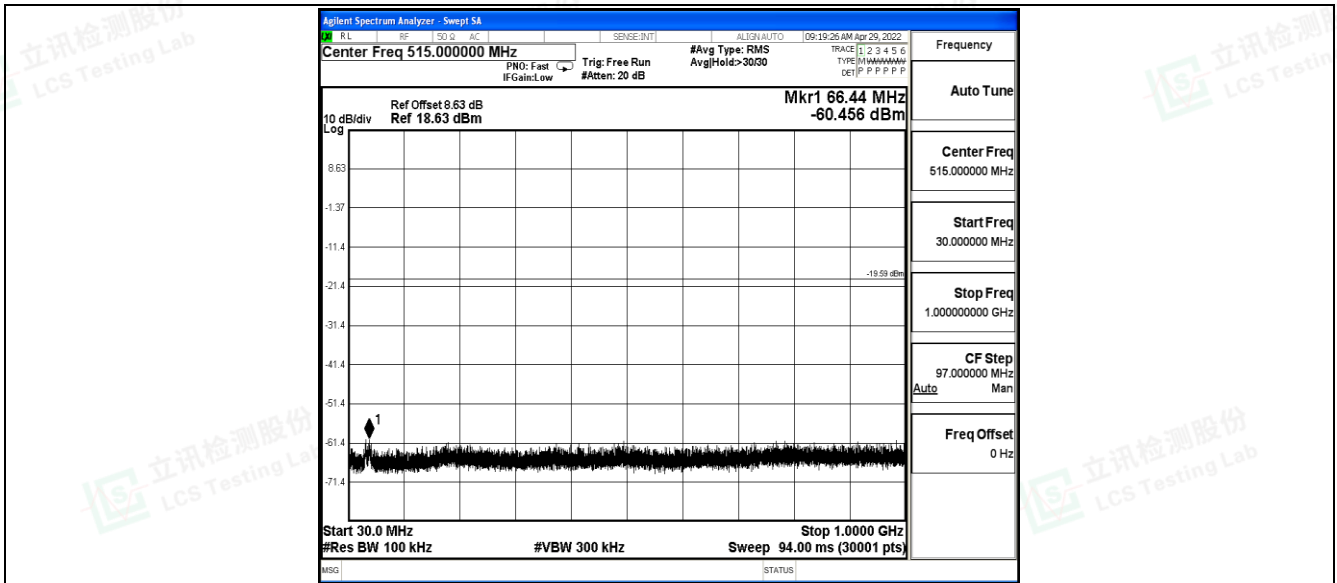


2DH5_Ant_2480_0-Reference

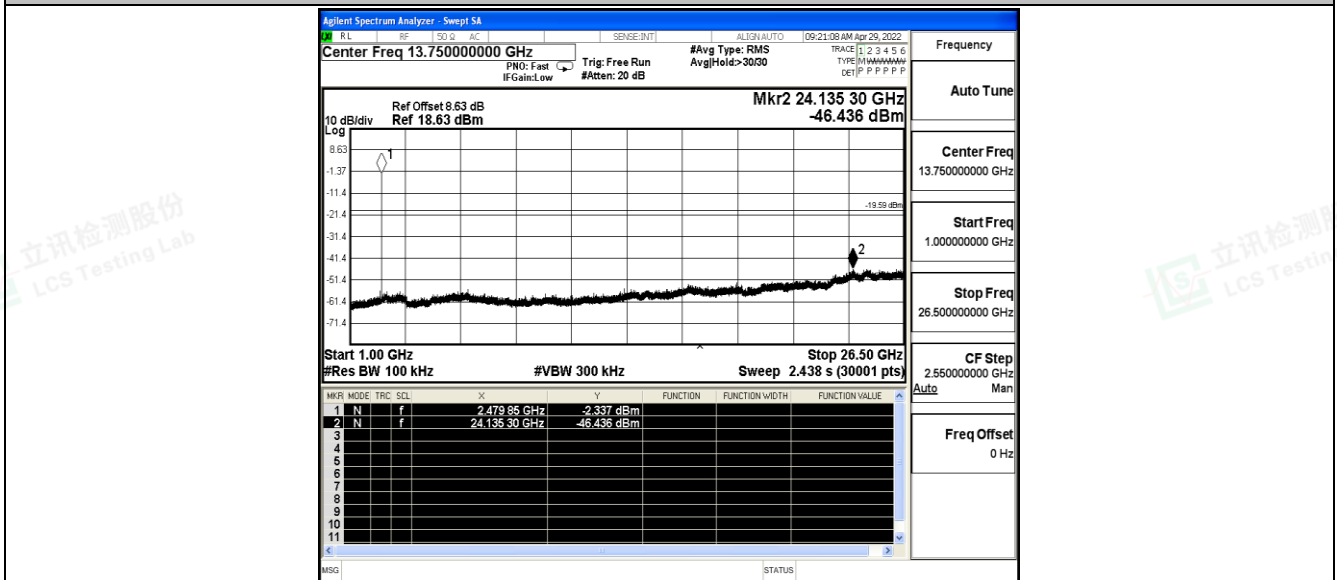


2DH5_Ant_2480_30~1000



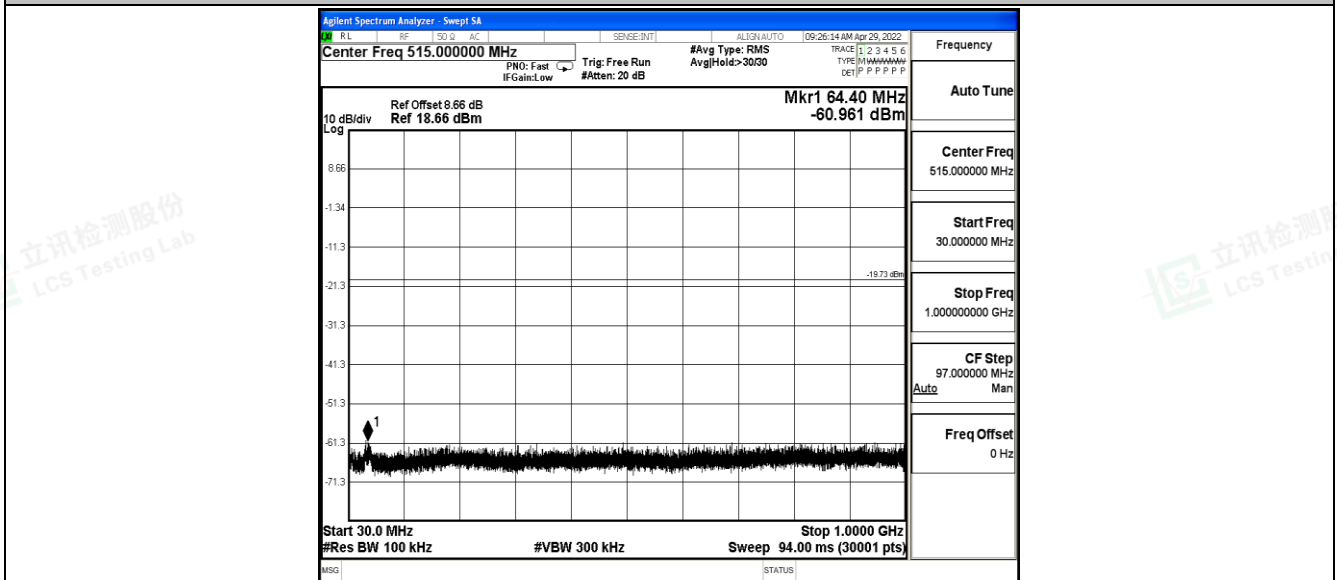
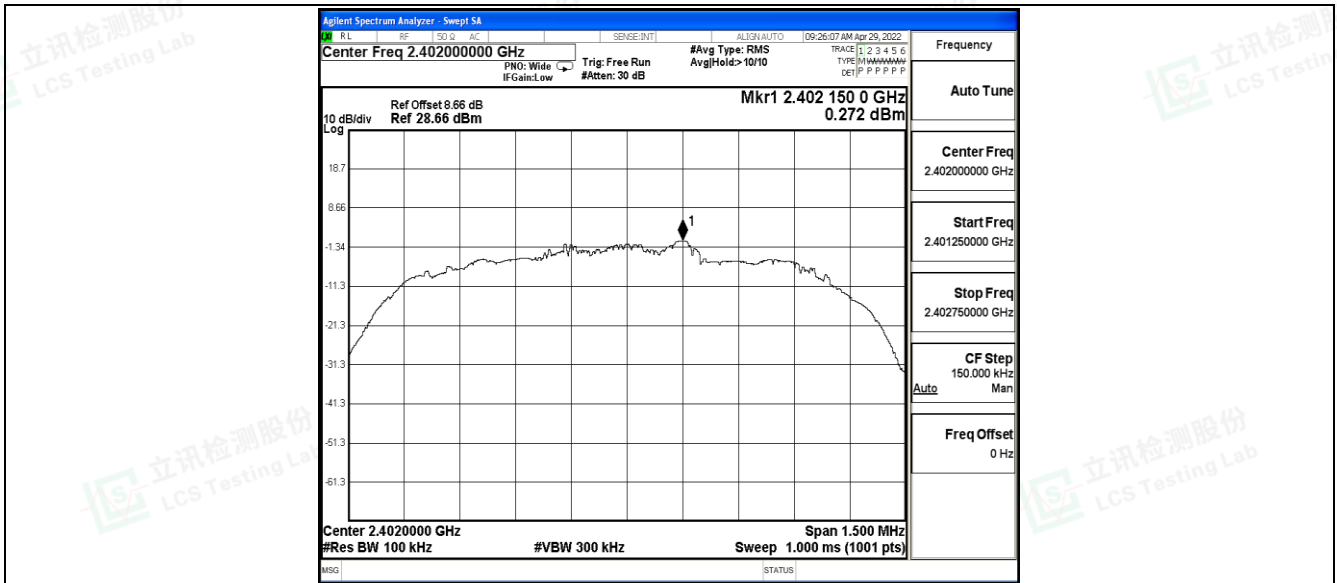


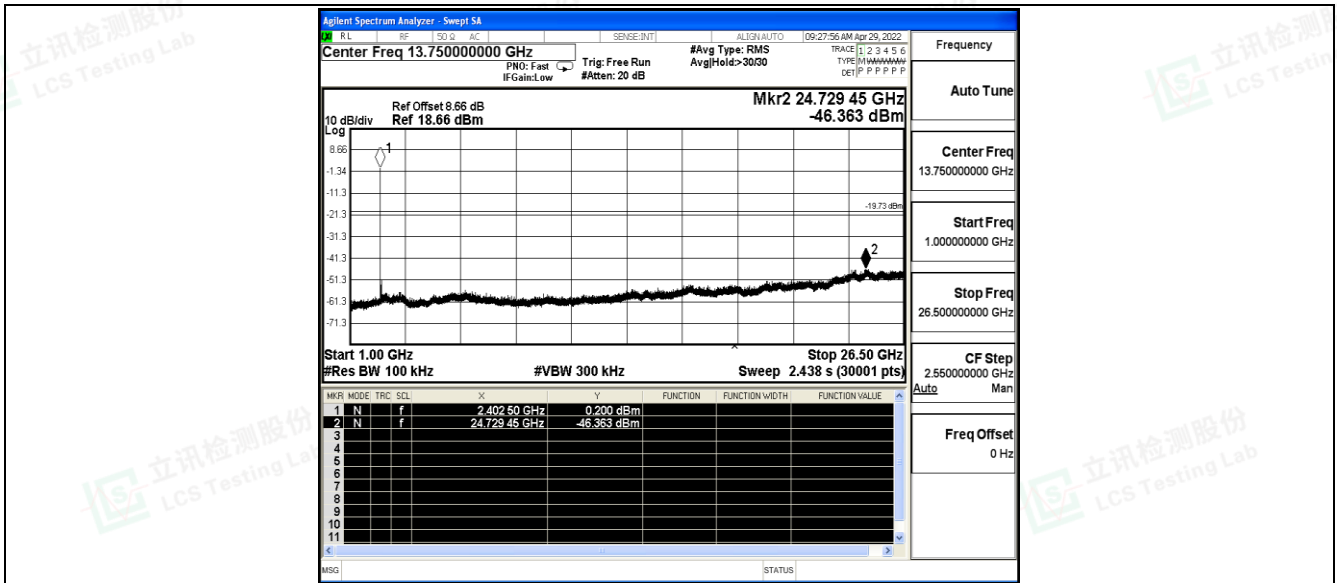
2DH5_Ant_2480_1000~26500



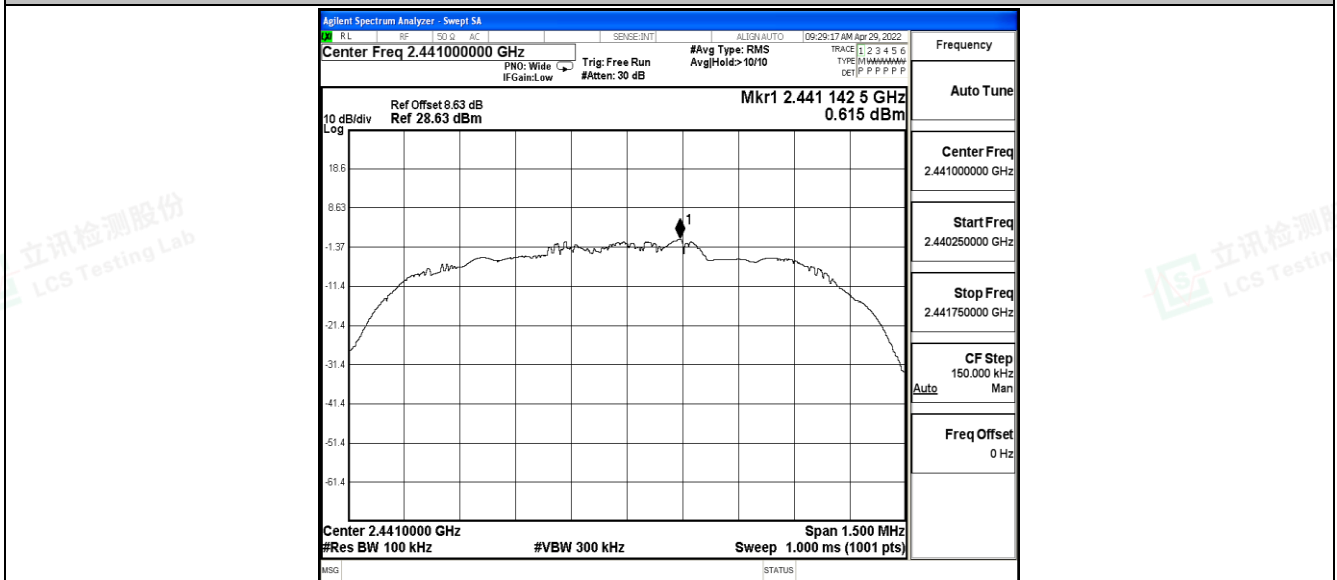
3DH5_Ant_2402_0~Reference





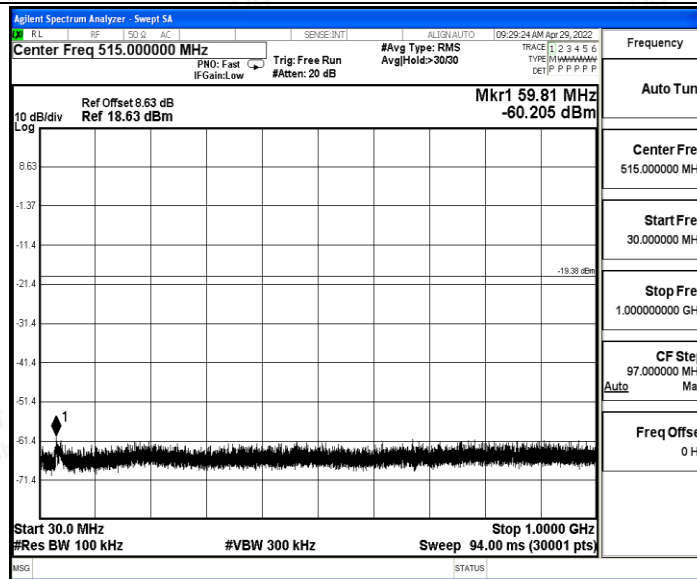


3DH5_Ant_2441_0-Reference

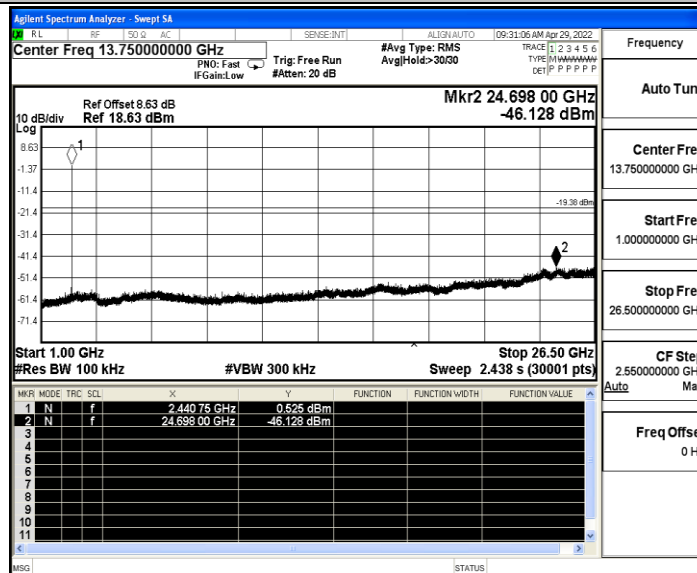


3DH5_Ant_2441_30~1000



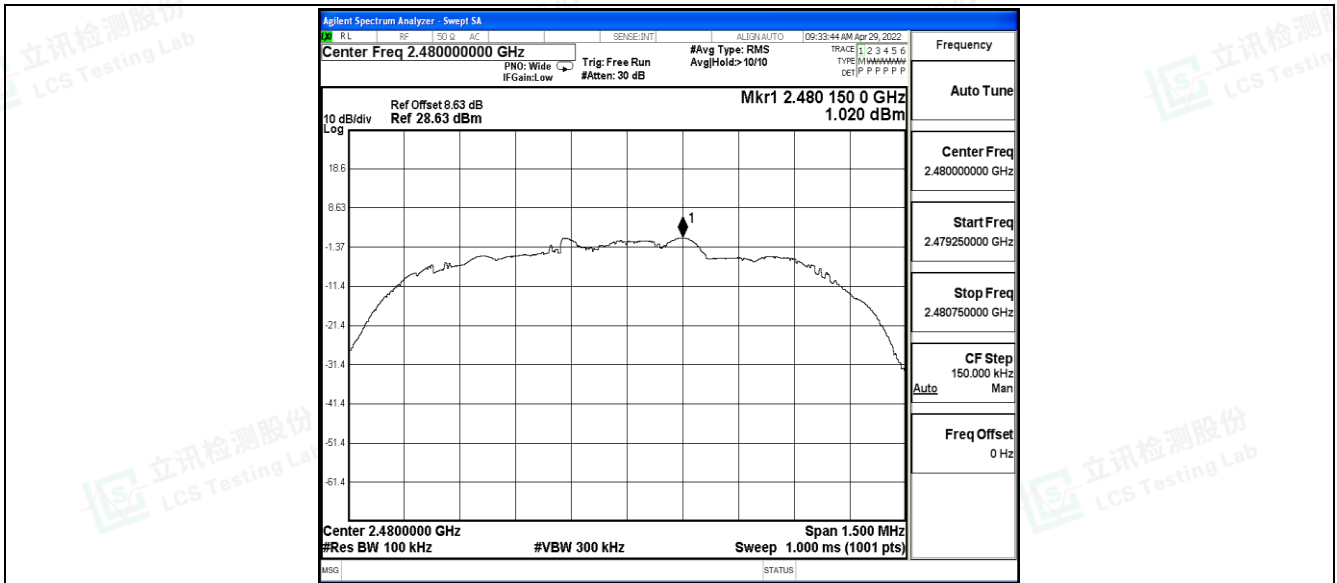


3DH5_Ant_2441_1000~26500

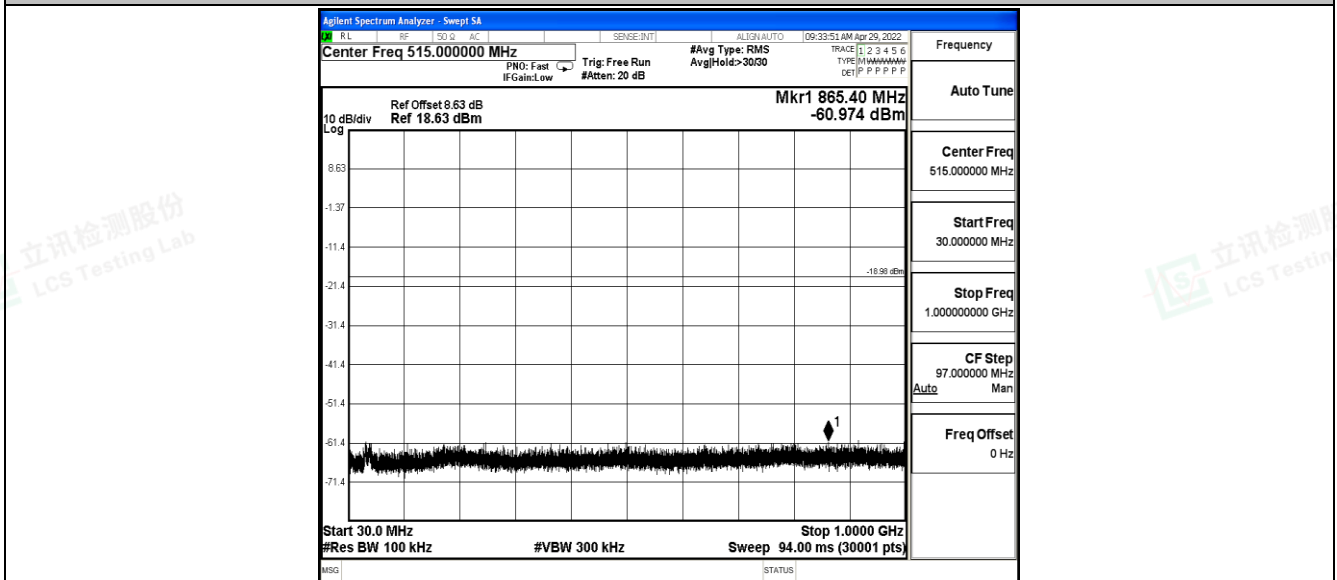


3DH5_Ant_2480_0~Reference



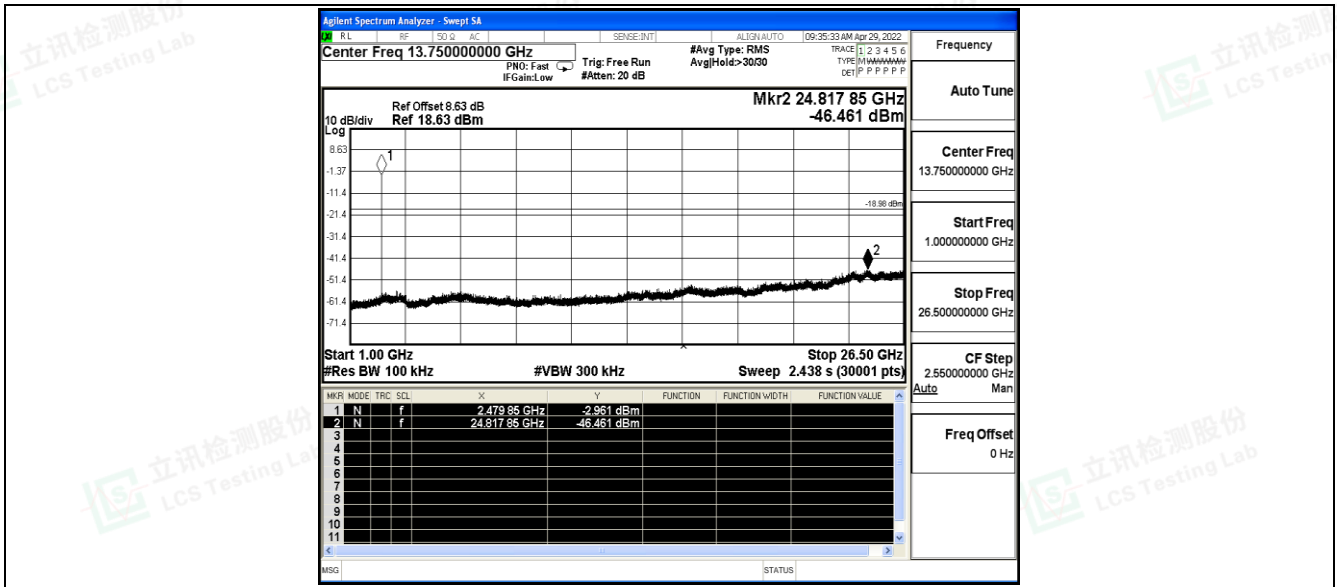


3DH5_Ant_2480_30~1000



3DH5_Ant_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	Ant	Low	2402	AV	2310.000	-58.06	≤-41.20	37.14	≤54	PASS
				AV	2389.880	-57.48	≤-41.20	37.72	≤54	PASS
				AV	2390.000	-57.58	≤-41.20	37.62	≤54	PASS
				Peak	2310.000	-49	≤-21.20	46.20	≤74	PASS
				Peak	2318.480	-46.23	≤-21.20	48.97	≤74	PASS
				Peak	2390.000	-48.54	≤-21.20	46.66	≤74	PASS
		High	2480	AV	2483.500	-54.49	≤-41.20	40.71	≤54	PASS
				AV	2483.520	-54.49	≤-41.20	40.71	≤54	PASS
				AV	2500.000	-57.08	≤-41.20	38.12	≤54	PASS
				Peak	2483.500	-47.06	≤-21.20	48.14	≤74	PASS
				Peak	2496.400	-45.9	≤-21.20	49.30	≤74	PASS
				Peak	2500.000	-48.44	≤-21.20	46.76	≤74	PASS
2DH5	Ant	Low	2402	AV	2310.000	-58.03	≤-41.20	37.17	≤54	PASS
				AV	2389.565	-57.51	≤-41.20	37.69	≤54	PASS
				AV	2390.000	-57.55	≤-41.20	37.65	≤54	PASS
				Peak	2310.000	-48.41	≤-21.20	46.79	≤74	PASS
				Peak	2382.320	-46.55	≤-21.20	48.65	≤74	PASS
				Peak	2390.000	-48.53	≤-21.20	46.67	≤74	PASS
		High	2480	AV	2483.500	-54.45	≤-41.20	40.75	≤54	PASS
				AV	2483.520	-54.45	≤-41.20	40.75	≤54	PASS
				AV	2500.000	-57.03	≤-41.20	38.17	≤54	PASS
				Peak	2483.500	-47.44	≤-21.20	47.76	≤74	PASS
				Peak	2495.600	-45.73	≤-21.20	49.47	≤74	PASS
				Peak	2500.000	-47.23	≤-21.20	47.97	≤74	PASS
3DH5	Ant	Low	2402	AV	2310.000	-58.14	≤-41.20	37.06	≤54	PASS
				AV	2382.215	-57.61	≤-41.20	37.59	≤54	PASS
				AV	2390.000	-57.64	≤-41.20	37.56	≤54	PASS
				Peak	2310.000	-49.03	≤-21.20	46.17	≤74	PASS
				Peak	2363.630	-46.48	≤-21.20	48.72	≤74	PASS
				Peak	2390.000	-47.68	≤-21.20	47.52	≤74	PASS
		High	2480	AV	2483.500	-54.01	≤-41.20	41.19	≤54	PASS
				AV	2483.520	-54	≤-41.20	41.20	≤54	PASS
				AV	2500.000	-57.19	≤-41.20	38.01	≤54	PASS
				Peak	2483.500	-46.76	≤-21.20	48.44	≤74	PASS
				Peak	2498.480	-45.7	≤-21.20	49.50	≤74	PASS



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Scan code to check authenticity



				Peak	2500.000	-47.54	≤-21.20	47.66	≤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.

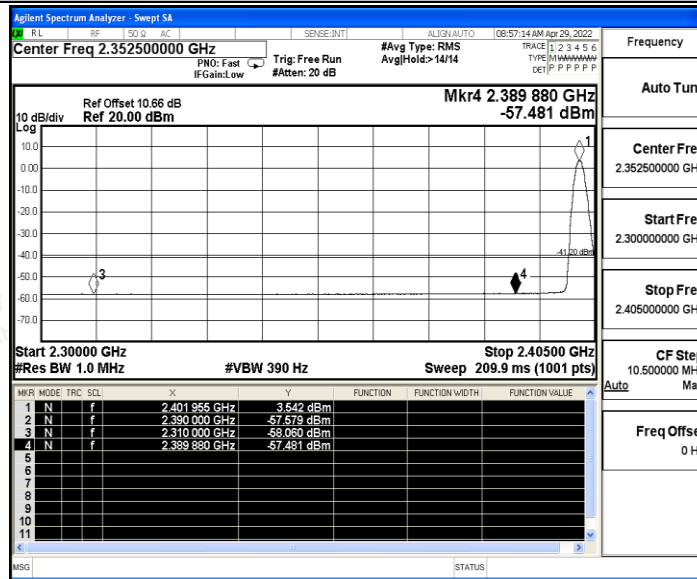


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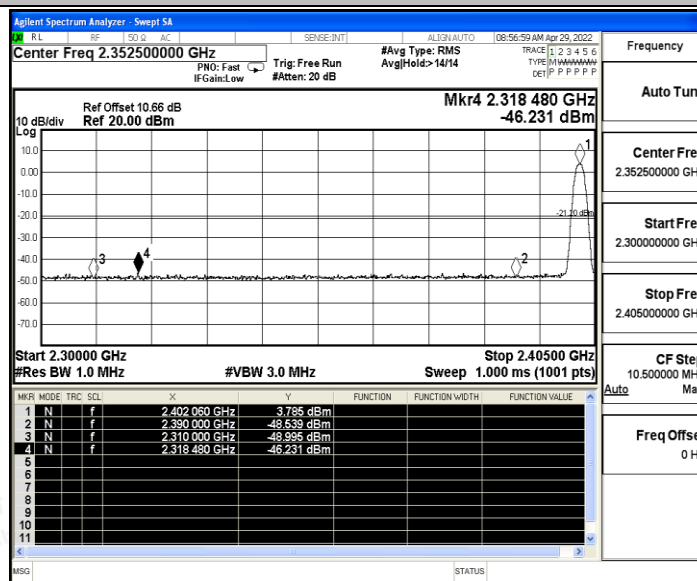


Test Graphs

DH5_Ant_Low_2402_AV

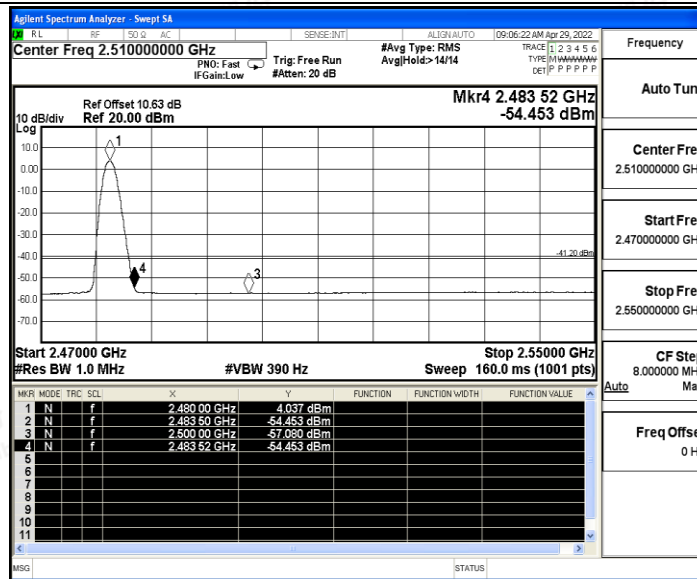


DH5_Ant_Low_2402_Peak

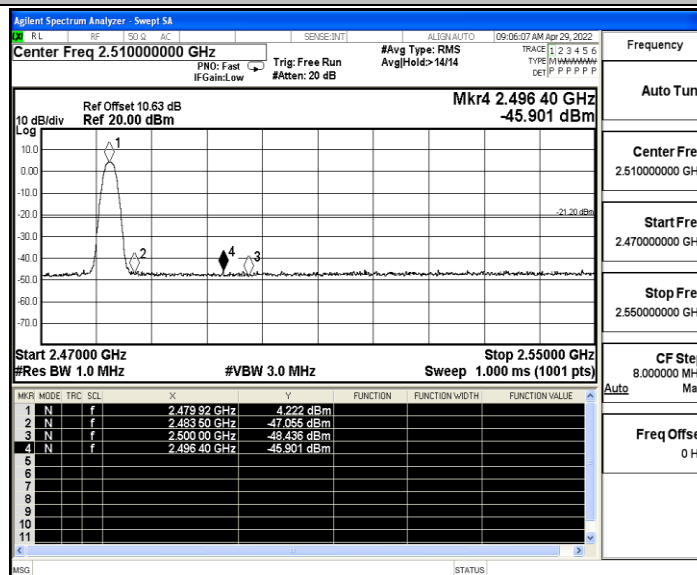


DH5_Ant_High_2480_AV



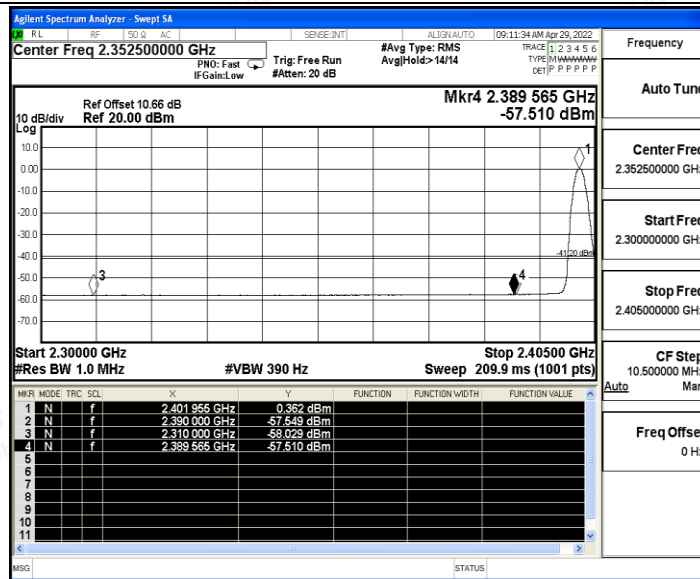


DH5_Ant_High_2480_Peak

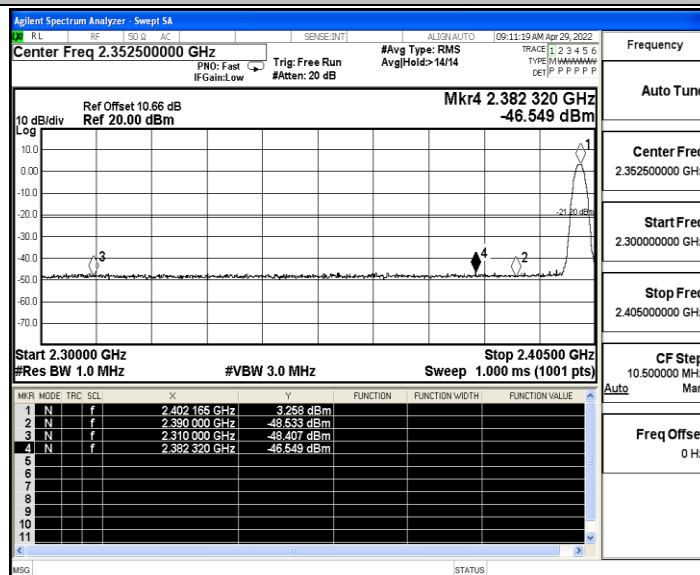


2DH5_Ant_Low_2402_AV



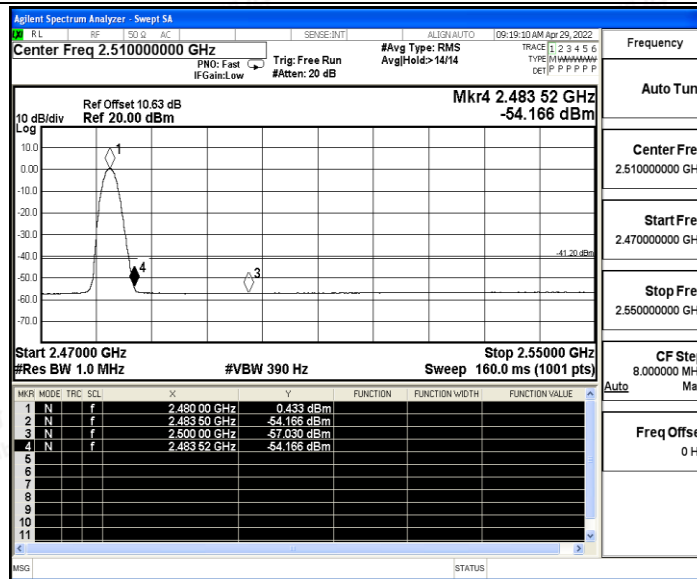


2DH5_Ant_Low_2402_Peak

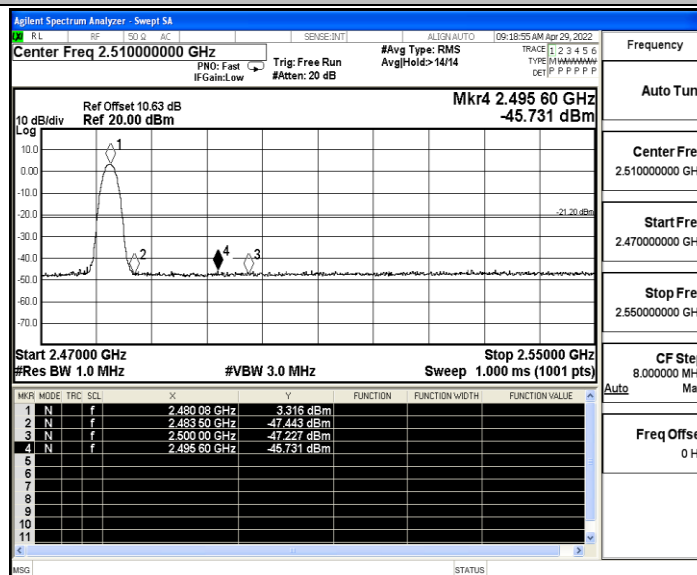


2DH5_Ant_High_2480_AV



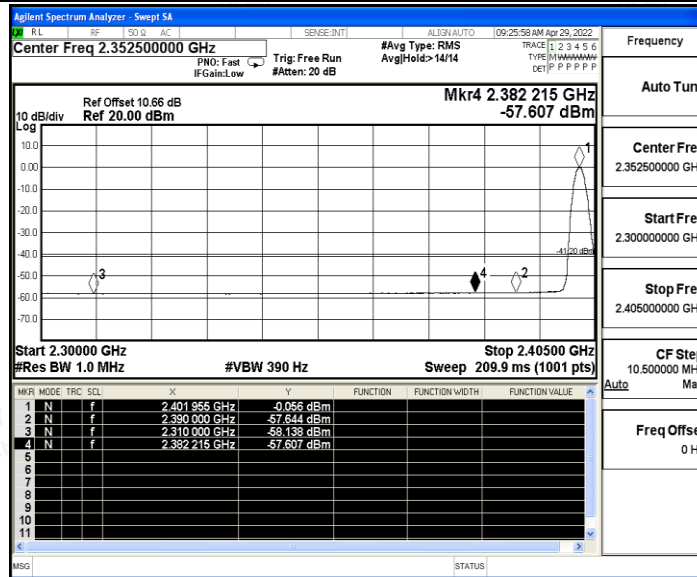


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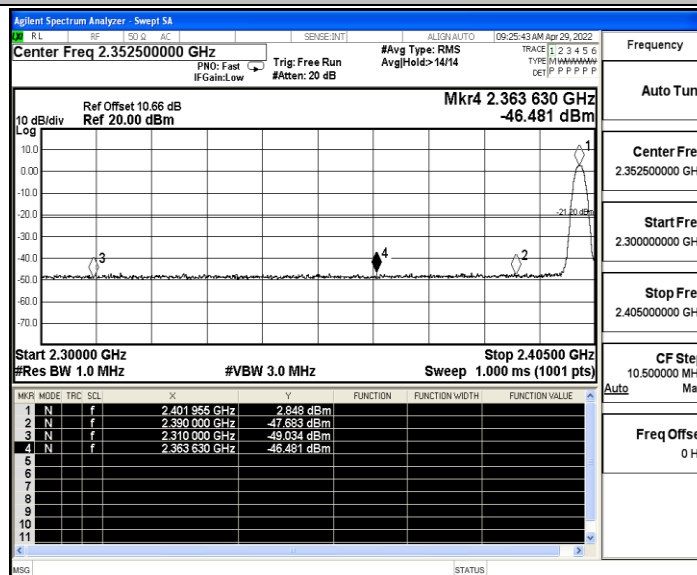


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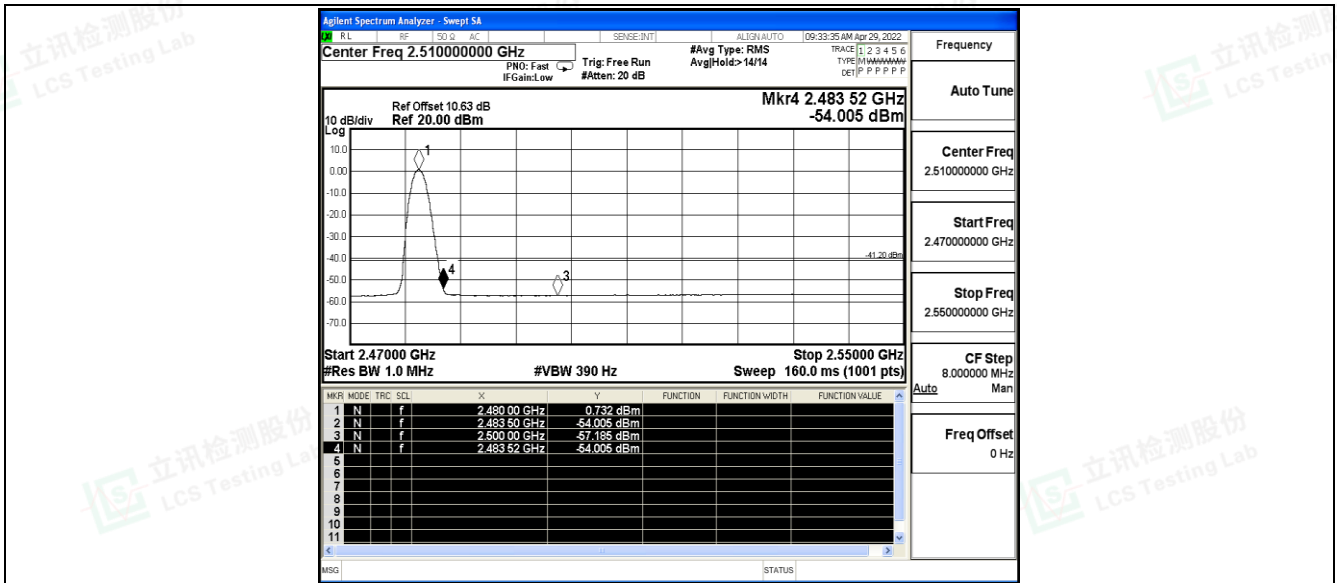


3DH5_Ant_Low_2402_Peak



3DH5_Ant_High_2480_AV





3DH5_Ant_High_2480_Peak

