



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Kids Karaoke Machine

Test Model: KA218

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Li Huan





A.1 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Verdict
DH5	Ant1	2402	1.050	2401.457	2402.507	---
		2441	0.975	2440.511	2441.486	---
		2480	0.945	2479.526	2480.471	---
2DH5	Ant1	2402	1.314	2401.340	2402.654	---
		2441	1.290	2440.355	2441.645	---
		2480	1.287	2479.358	2480.645	---



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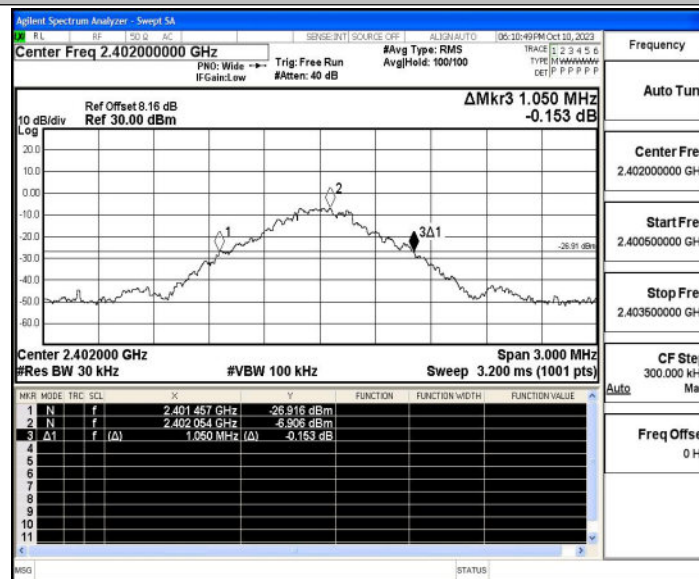
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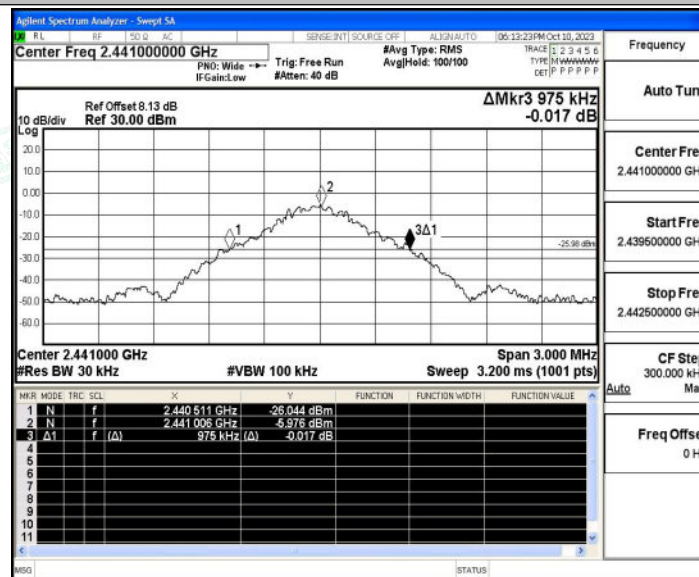


Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480

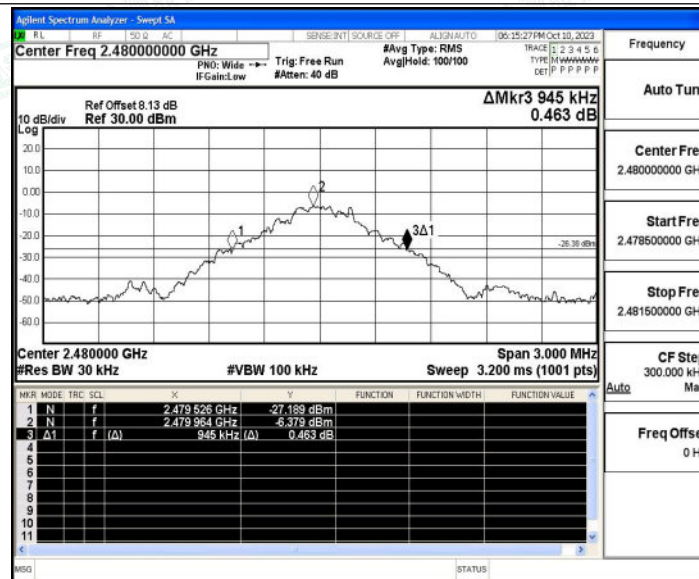


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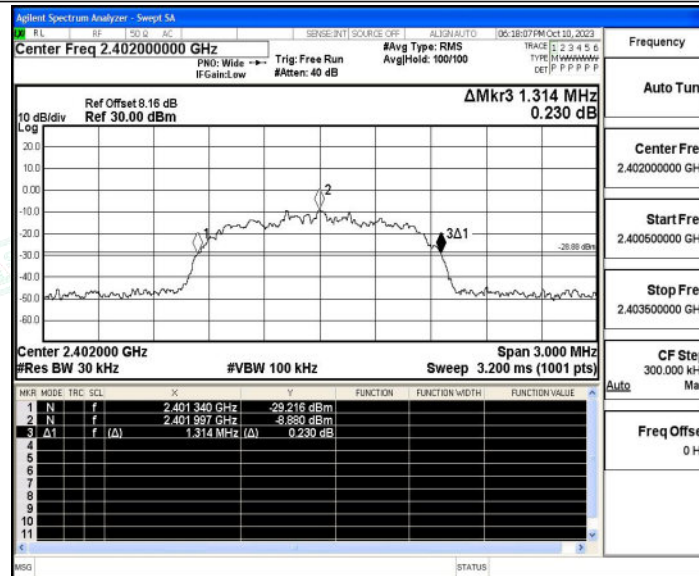
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2DH5_Ant1_2402



2DH5_Ant1_2441

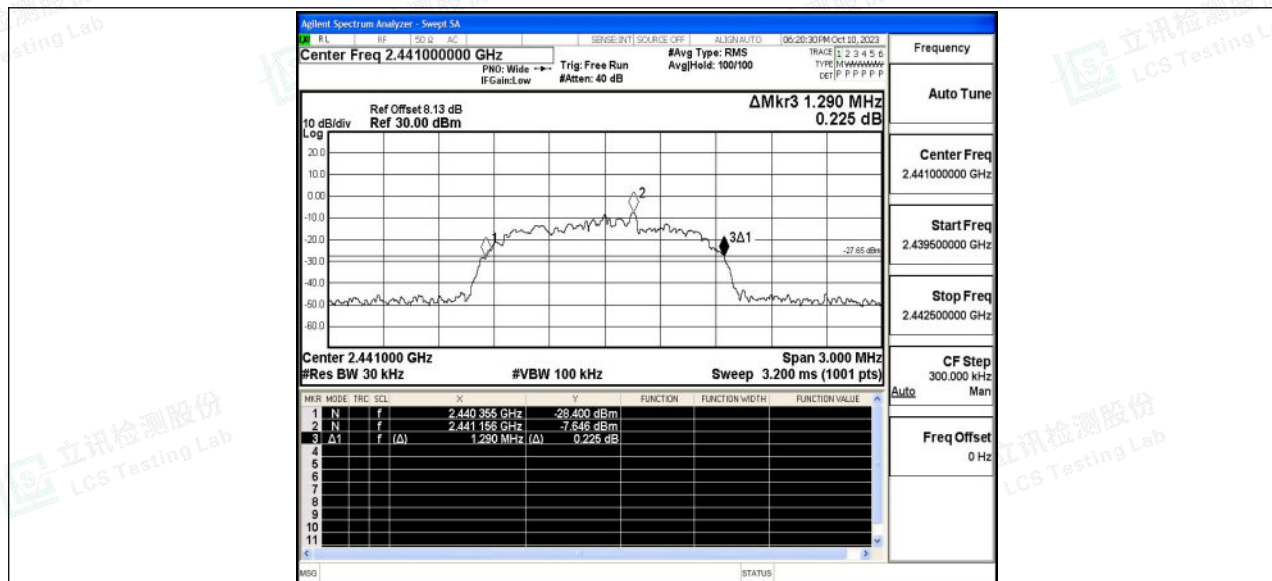


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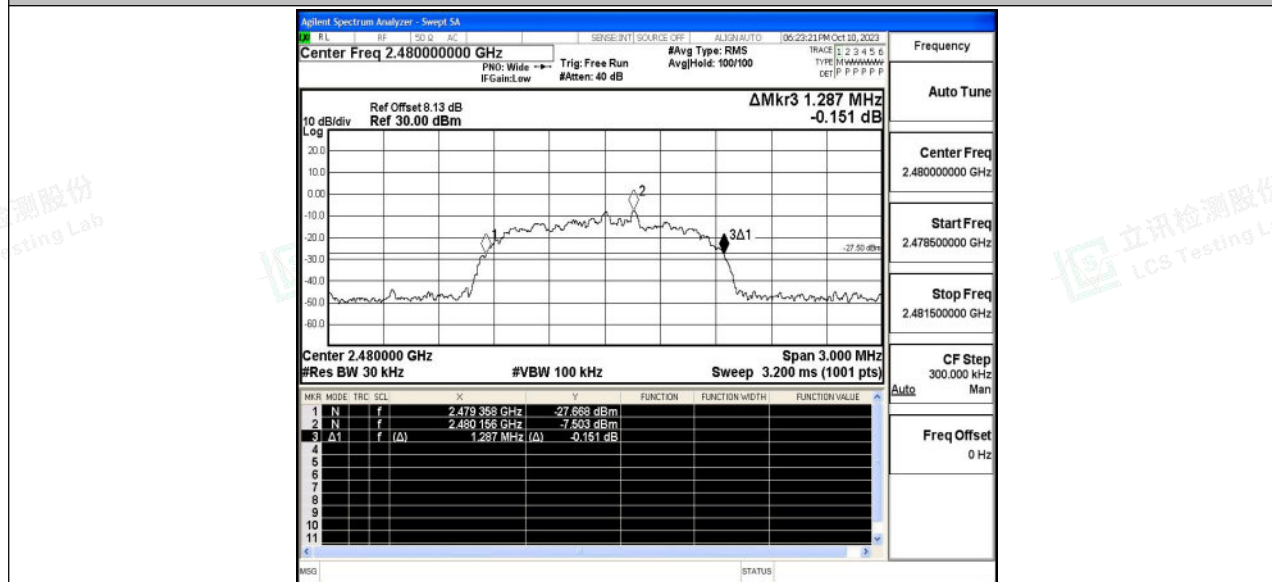
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2DH5_Ant1_2480



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A.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-3.26	≤20.97	PASS
		2441	-2.74	≤20.97	PASS
		2480	-3.22	≤20.97	PASS
2DH5	Ant1	2402	-3.53	≤20.97	PASS
		2441	-3.08	≤20.97	PASS
		2480	-3.26	≤20.97	PASS



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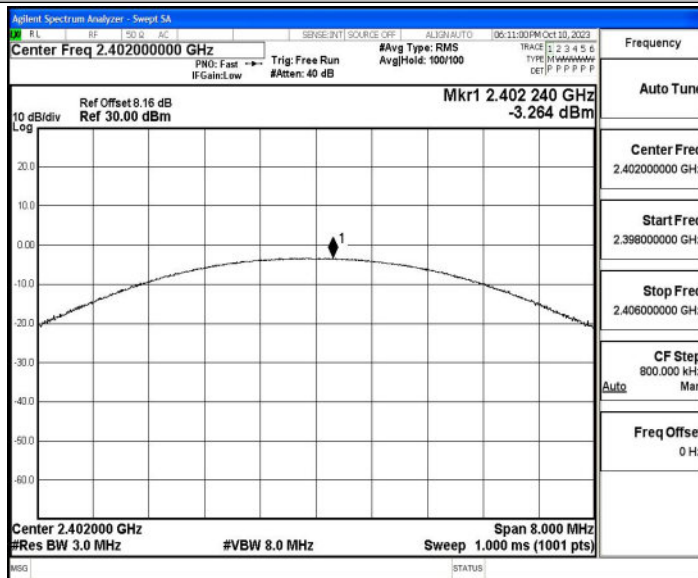
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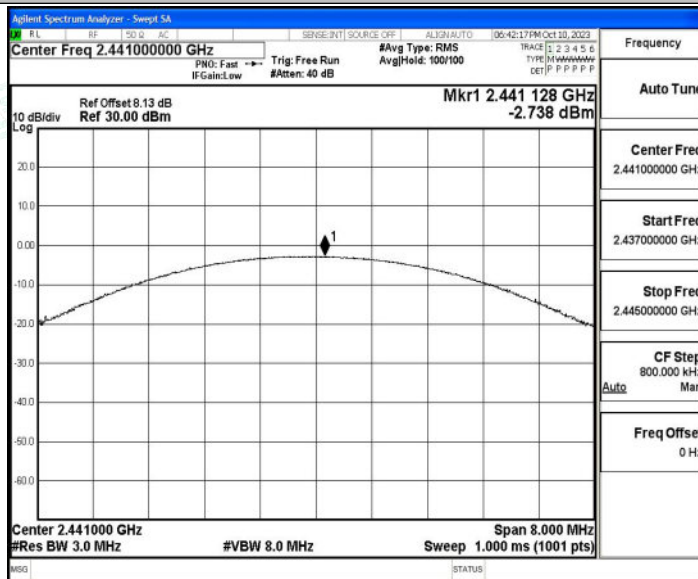


Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480

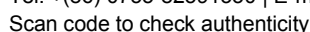


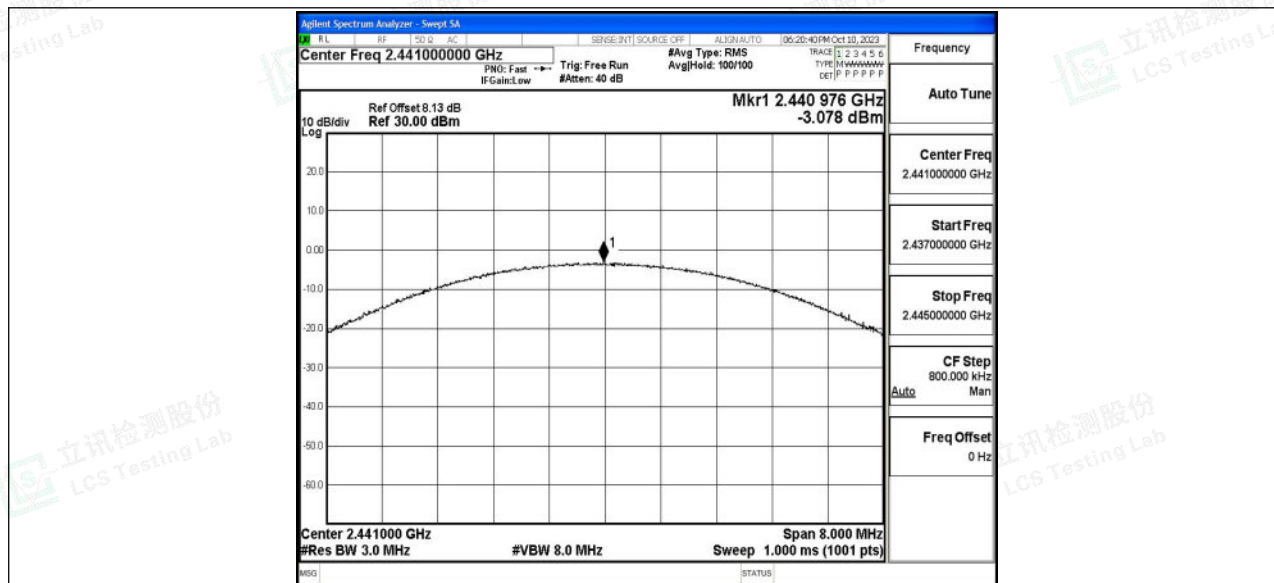
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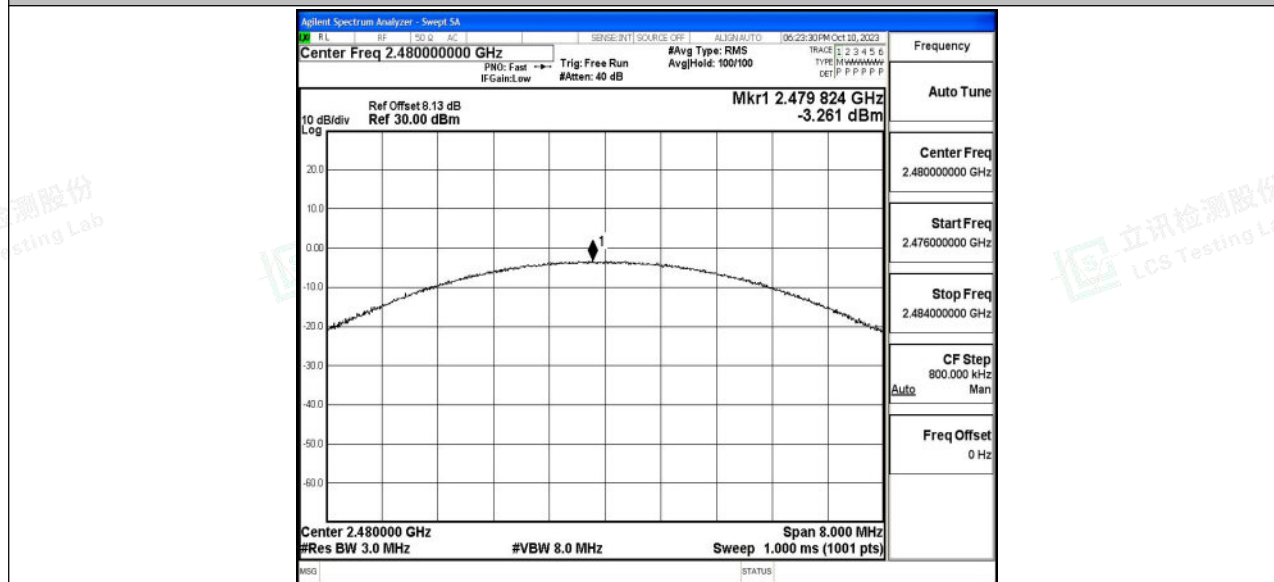
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2DH5_Ant1_2480



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A.3 Carrier frequency separation

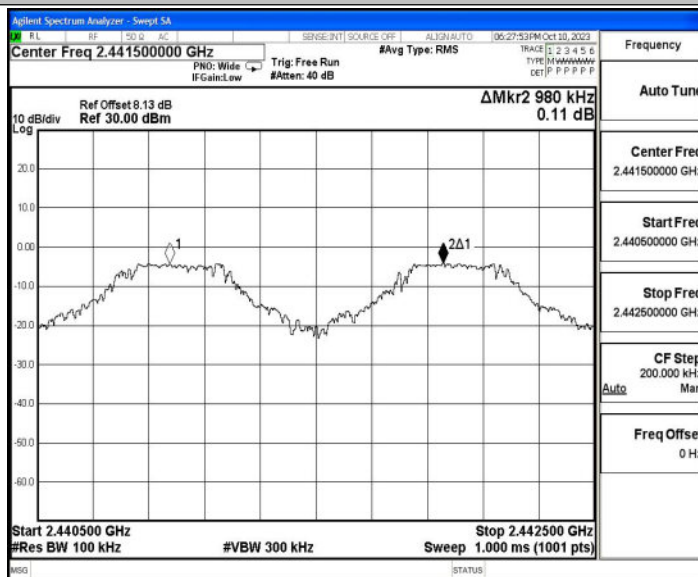
Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.98	≥ 0.700	PASS
2DH5	Ant1	Hop	1.014	≥ 0.876	PASS

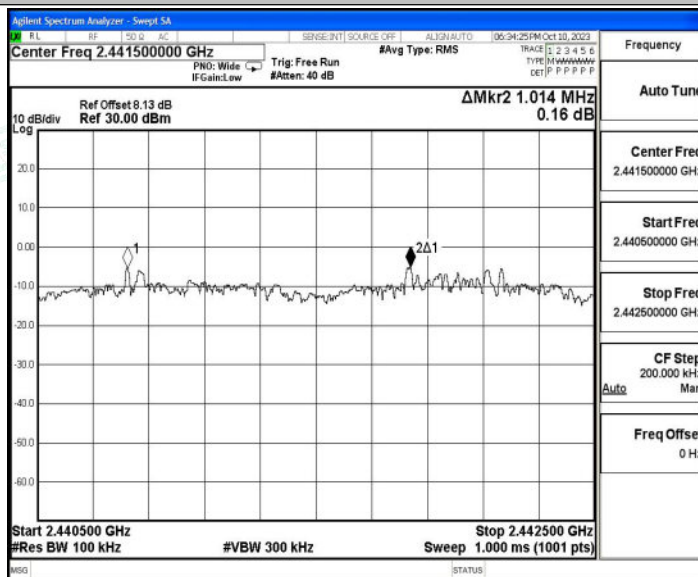


Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop



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A.4 Time of occupancy

Test Result

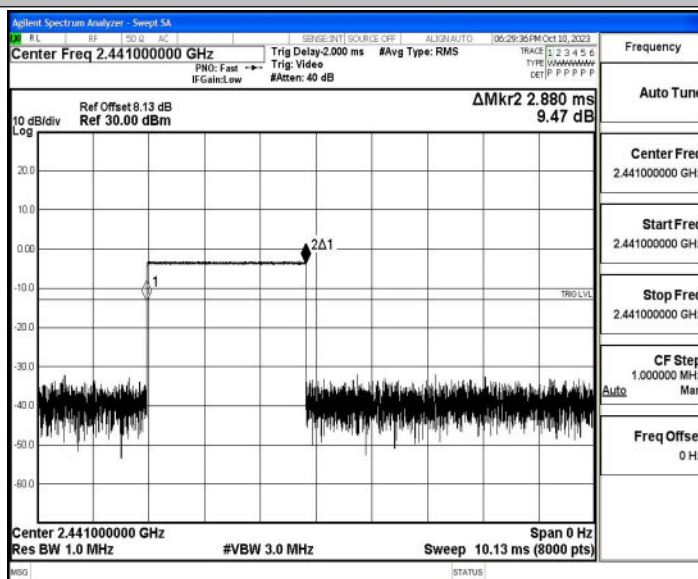
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.884	106.67	0.308	≤0.4	PASS



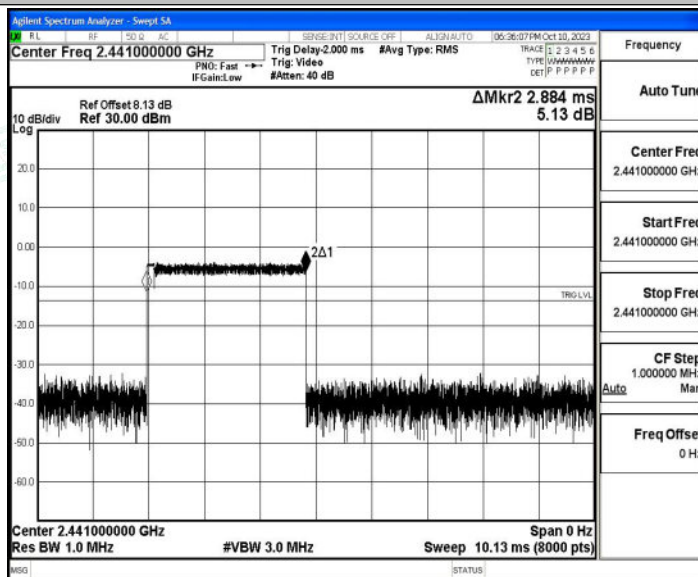


Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop



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A.5 Number of hopping channels

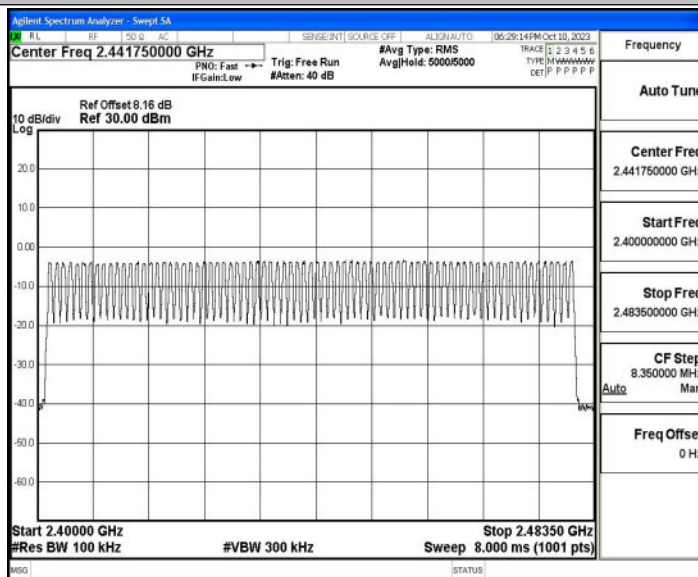
Test Result

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

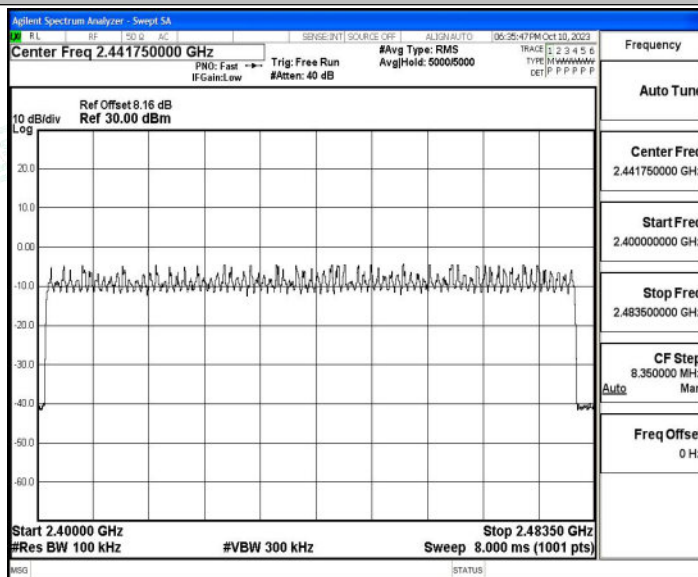


Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop



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A.6 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.29	-50.77	≤ -24.29	PASS
		High	2480	-4.52	-50.3	≤ -24.52	PASS
		Low	Hop_2402	-4.48	-49.9	≤ -24.48	PASS
		High	Hop_2480	-3.79	-48.11	≤ -23.79	PASS
2DH5	Ant1	Low	2402	-5.91	-49.14	≤ -25.91	PASS
		High	2480	-8.83	-49.57	≤ -28.83	PASS
		Low	Hop_2402	-5.80	-49.4	≤ -25.8	PASS
		High	Hop_2480	-4.57	-49.4	≤ -24.57	PASS



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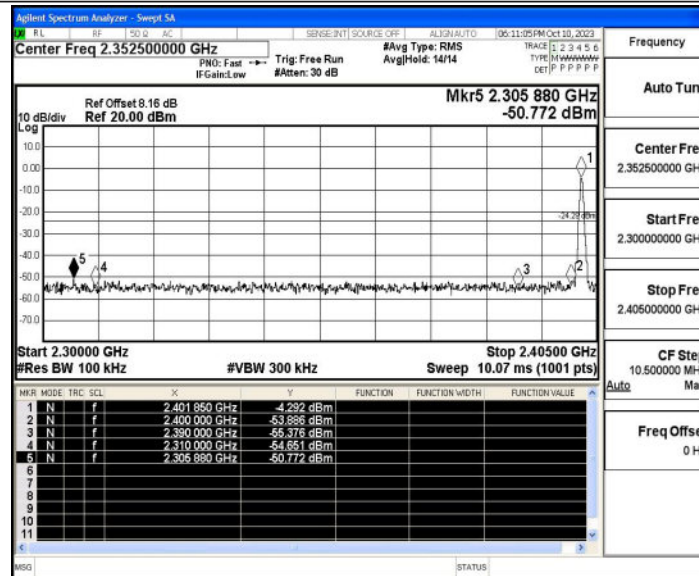
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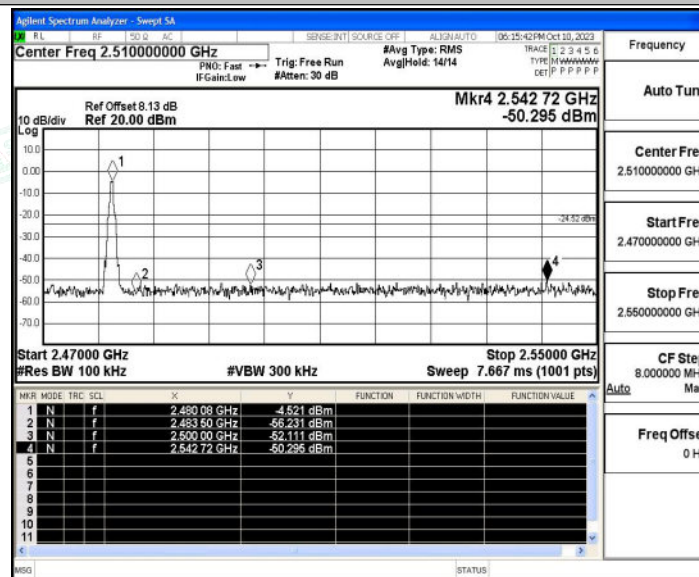


Test Graphs

DH5_Ant1_Low_2402



DH5_Ant1_High_2480



DH5_Ant1_Low_Hop_2402

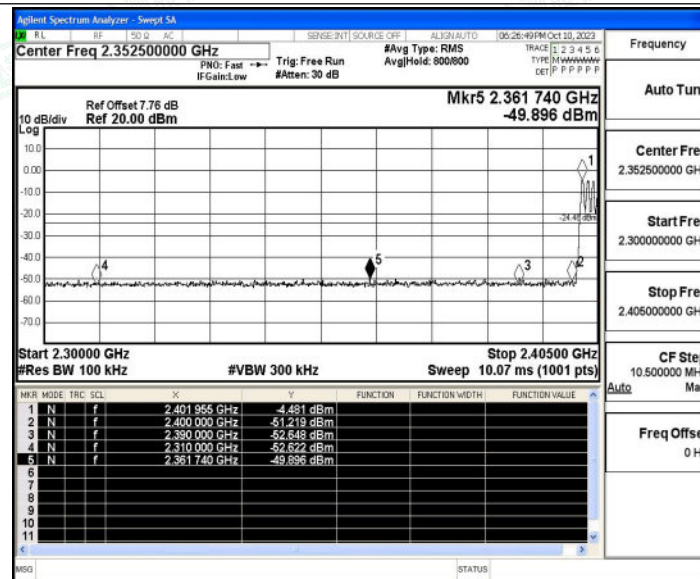


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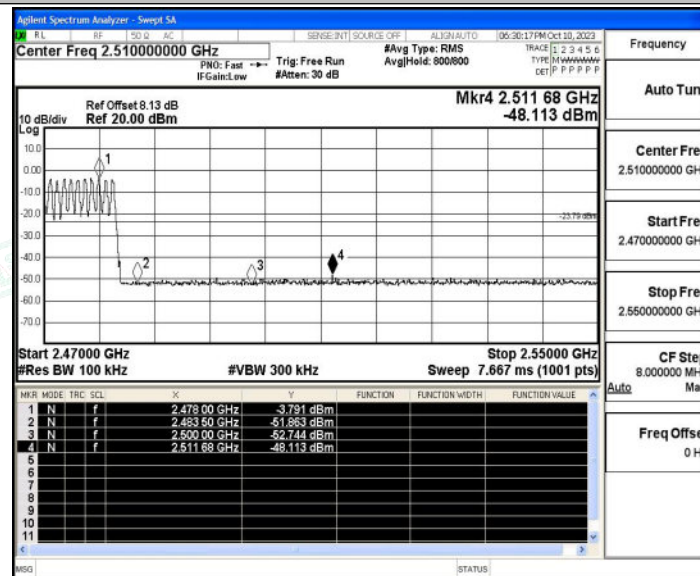
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DH5_Ant1_High_Hop_2480



2DH5_Ant1_Low_2402

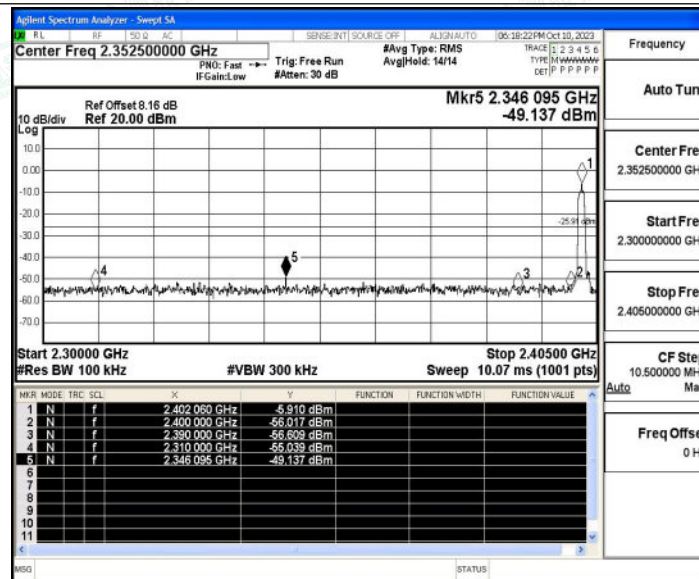


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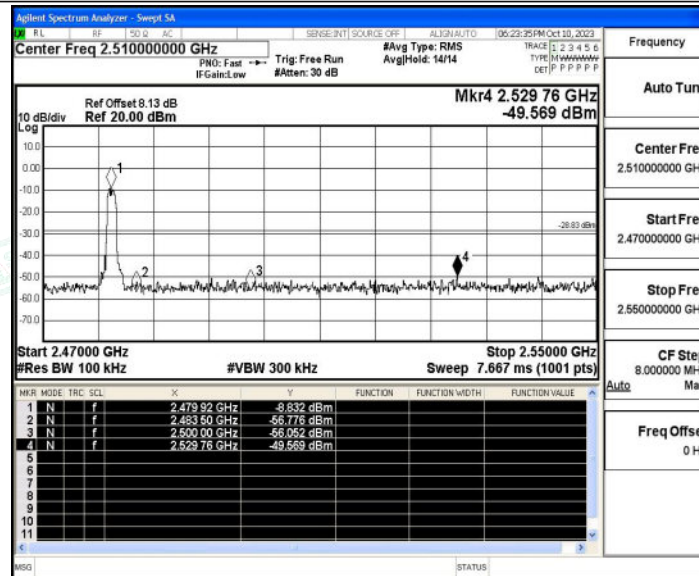
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2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402

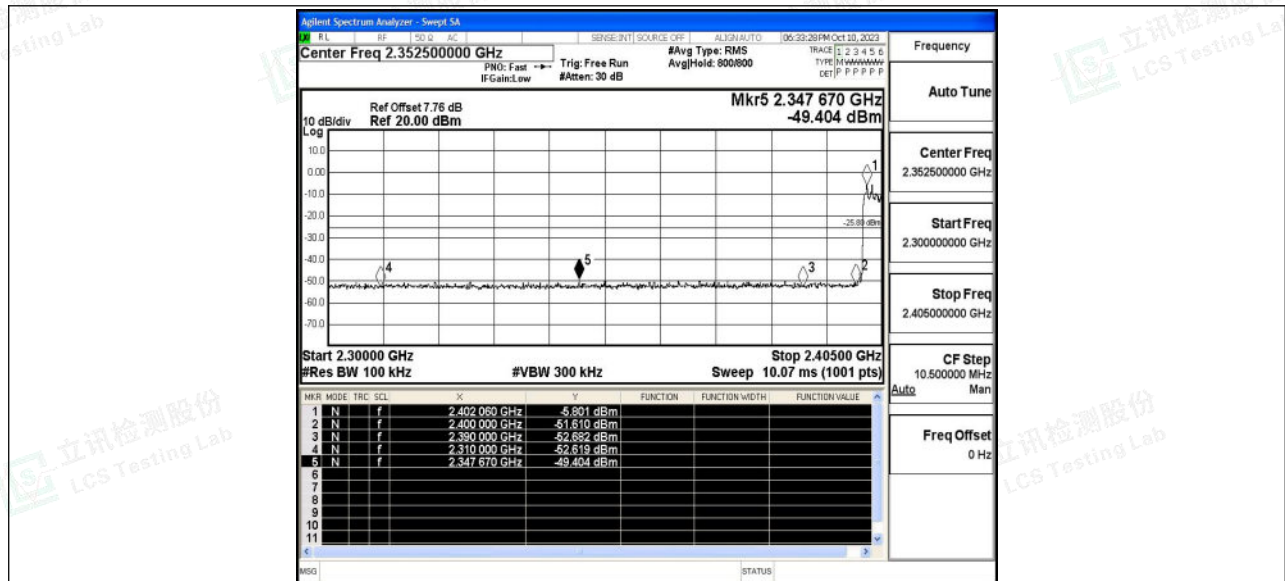


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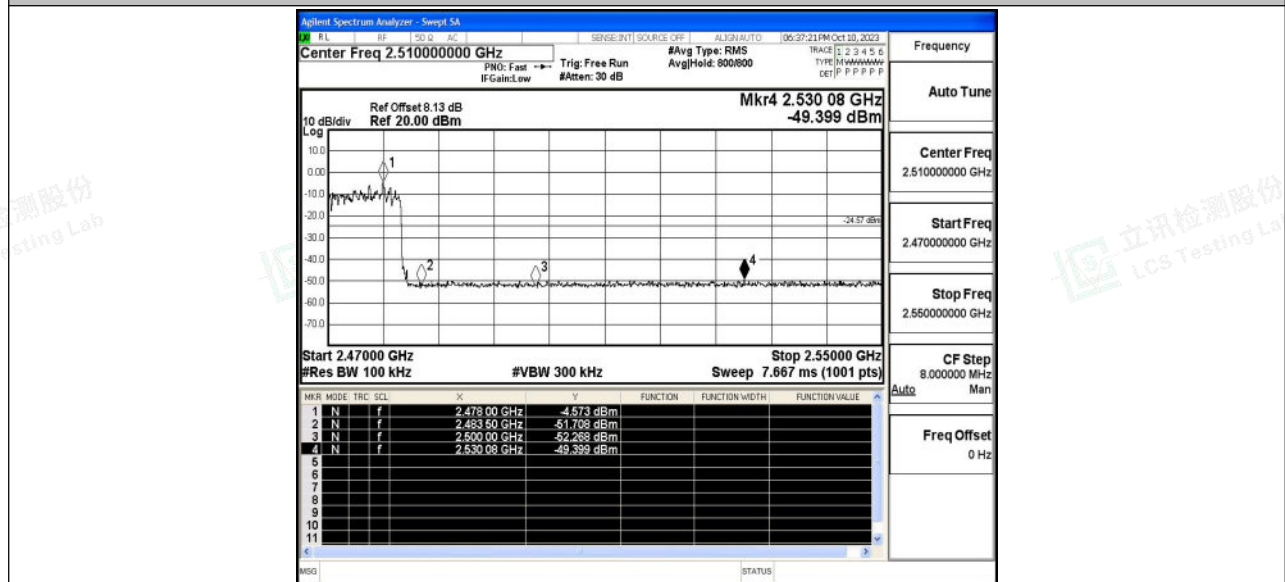
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2DH5_Ant1_High_Hop_2480



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A.7 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-4.24	-4.24	---	PASS
			30~1000	-4.24	-60.42	≤ -24.24	PASS
			1000~26500	-4.24	-49.46	≤ -24.24	PASS
		2441	Reference	-4.33	-4.33	---	PASS
			30~1000	-4.33	-62.1	≤ -24.33	PASS
			1000~26500	-4.33	-49.5	≤ -24.33	PASS
		2480	Reference	-4.09	-4.09	---	PASS
			30~1000	-4.09	-61.65	≤ -24.09	PASS
			1000~26500	-4.09	-49.08	≤ -24.09	PASS
2DH5	Ant1	2402	Reference	-5.34	-5.34	---	PASS
			30~1000	-5.34	-61.27	≤ -25.34	PASS
			1000~26500	-5.34	-47.89	≤ -25.34	PASS
		2441	Reference	-6.60	-6.60	---	PASS
			30~1000	-6.60	-61.72	≤ -26.6	PASS
			1000~26500	-6.60	-49.18	≤ -26.6	PASS
		2480	Reference	-4.57	-4.57	---	PASS
			30~1000	-4.57	-61.39	≤ -24.57	PASS
			1000~26500	-4.57	-48.92	≤ -24.57	PASS



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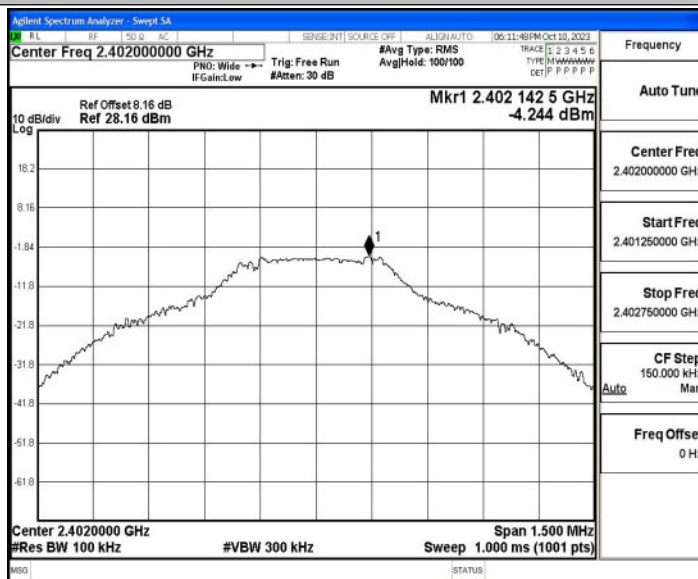
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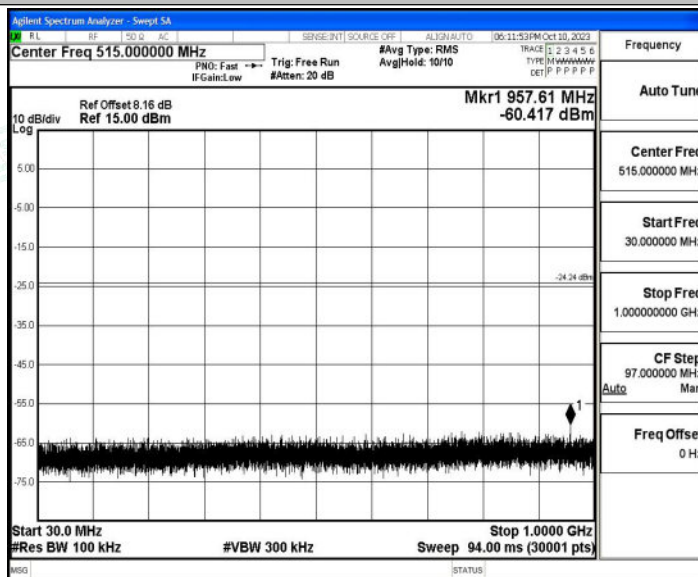


Test Graphs

DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



DH5_Ant1_2402_1000~26500

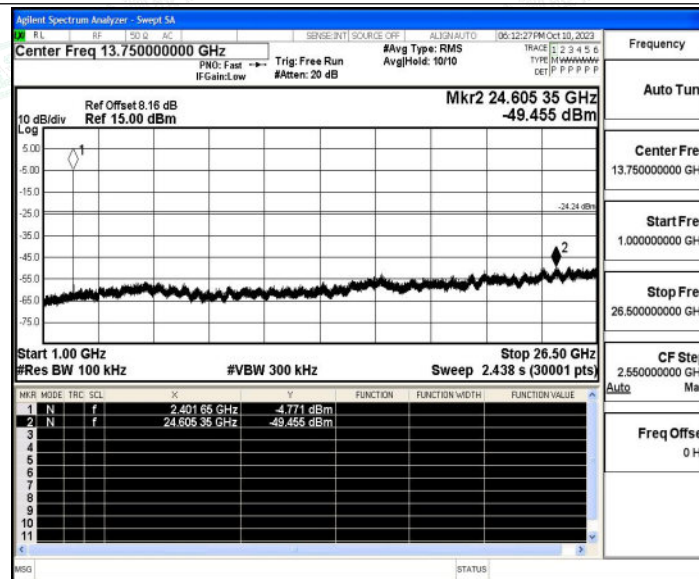


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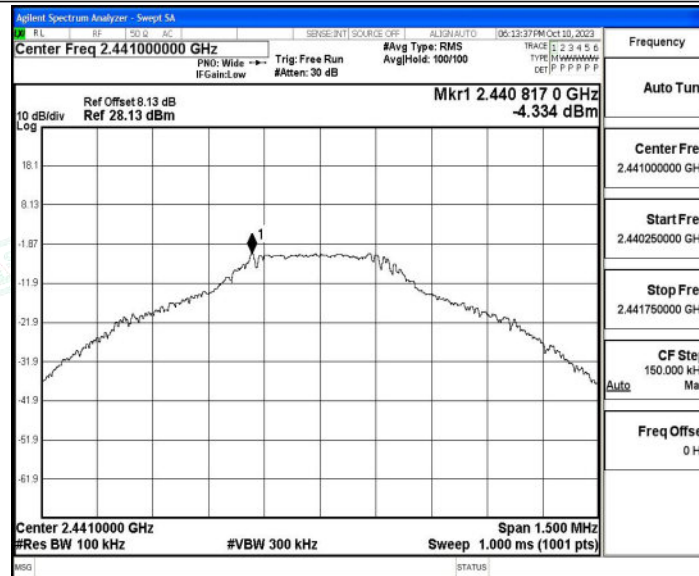
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DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000

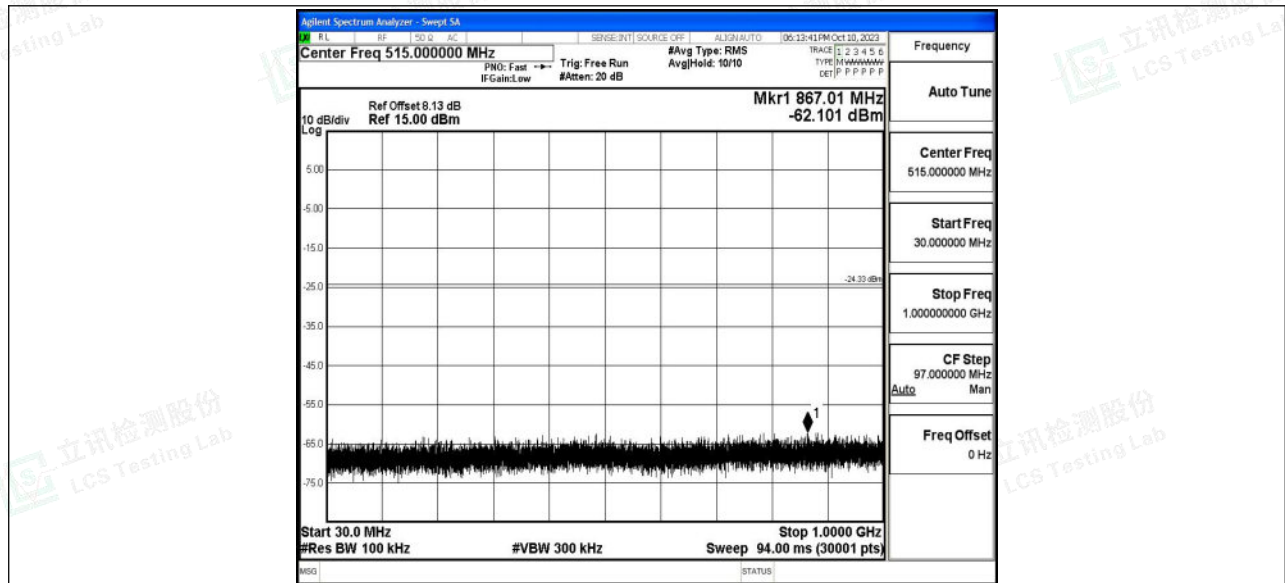


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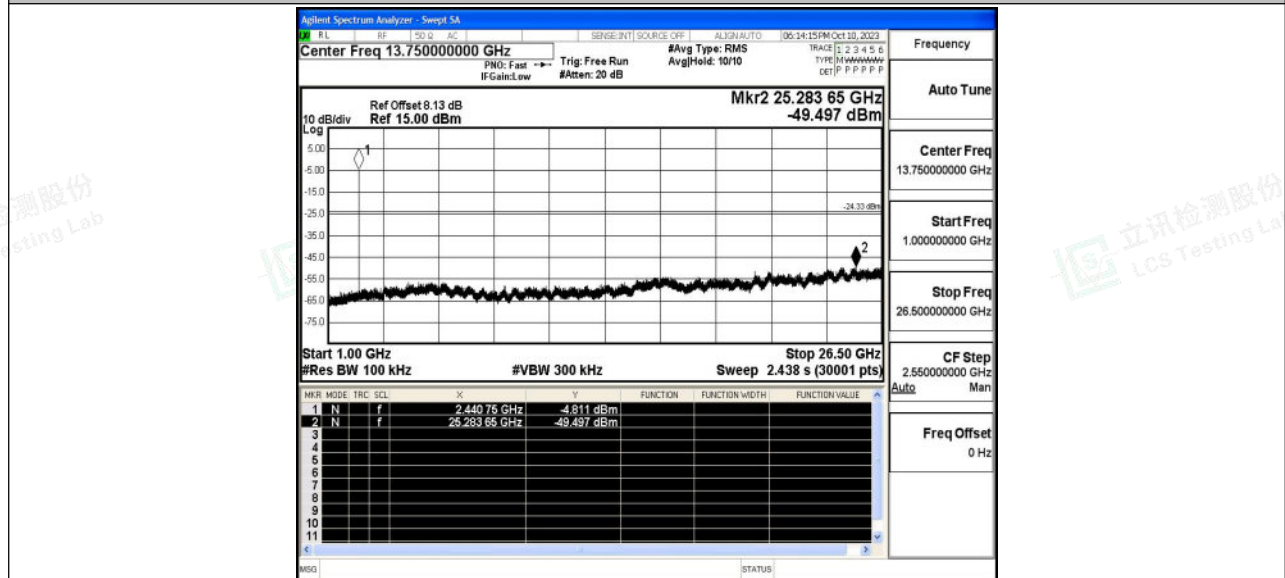
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DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0~Reference

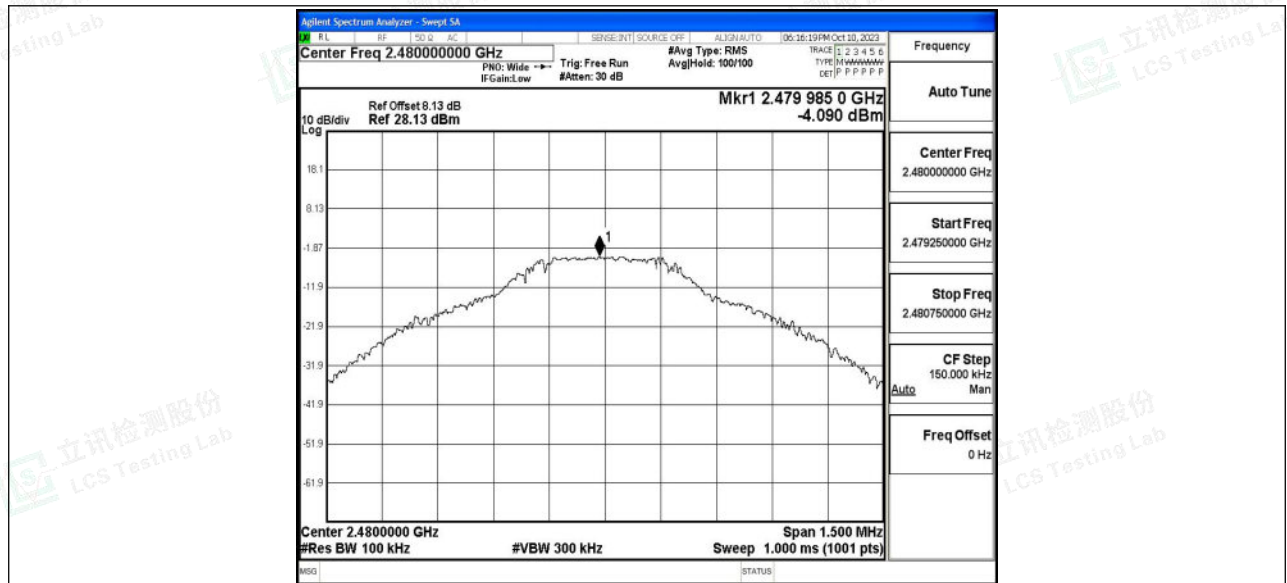


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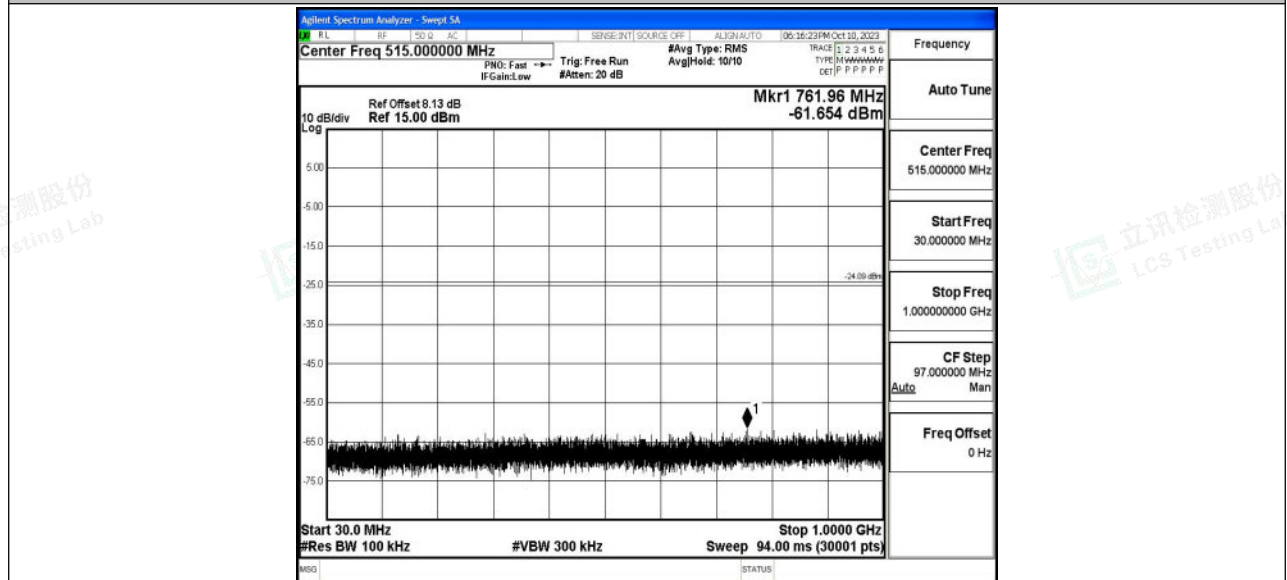
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DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

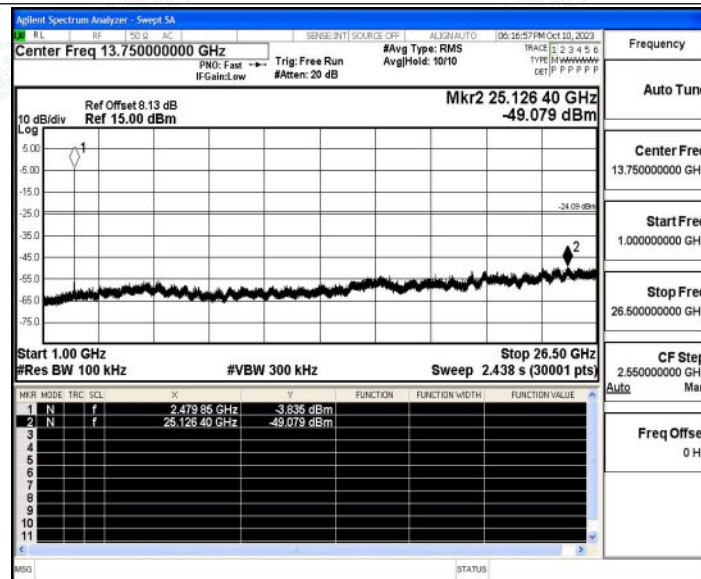


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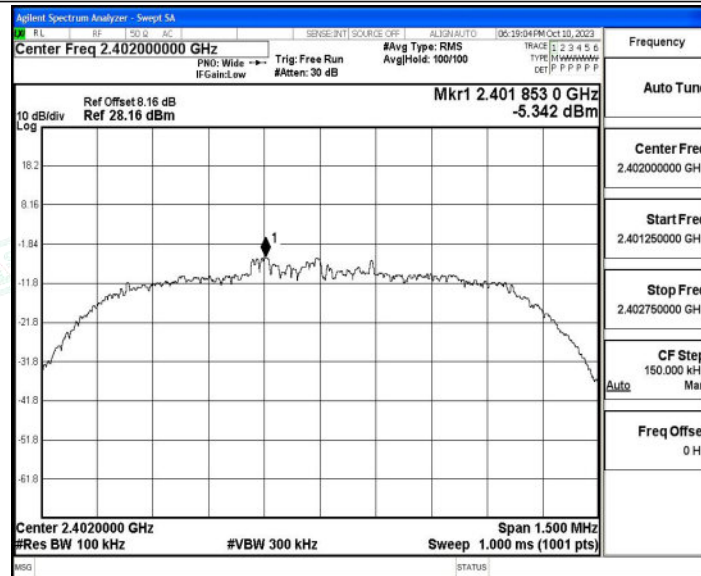
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2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000

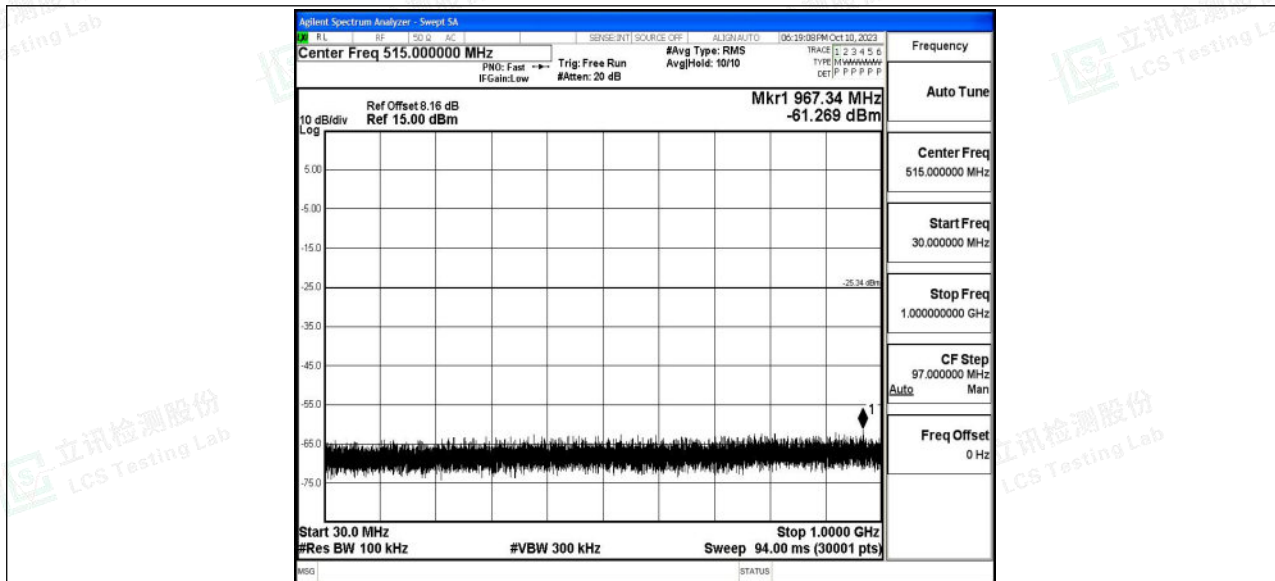


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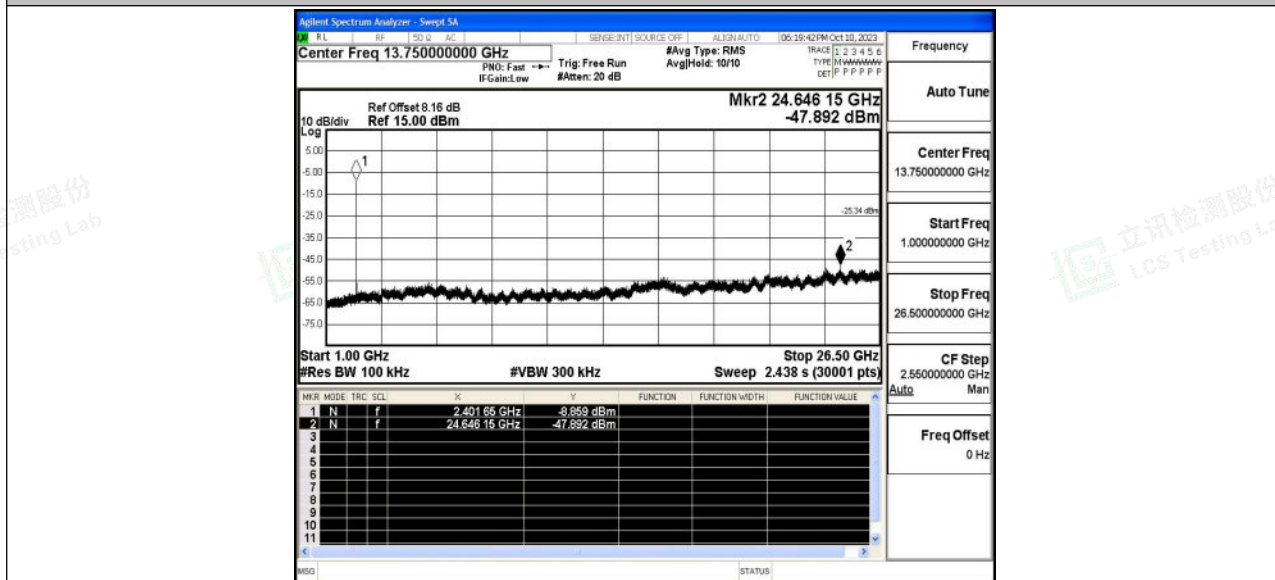
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2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference

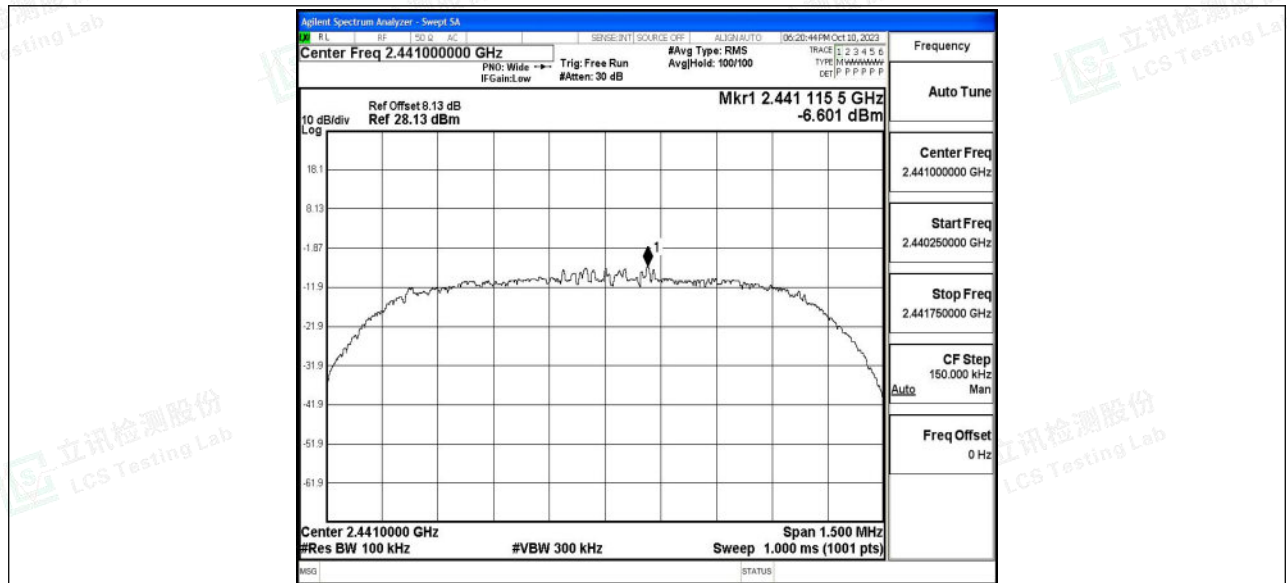


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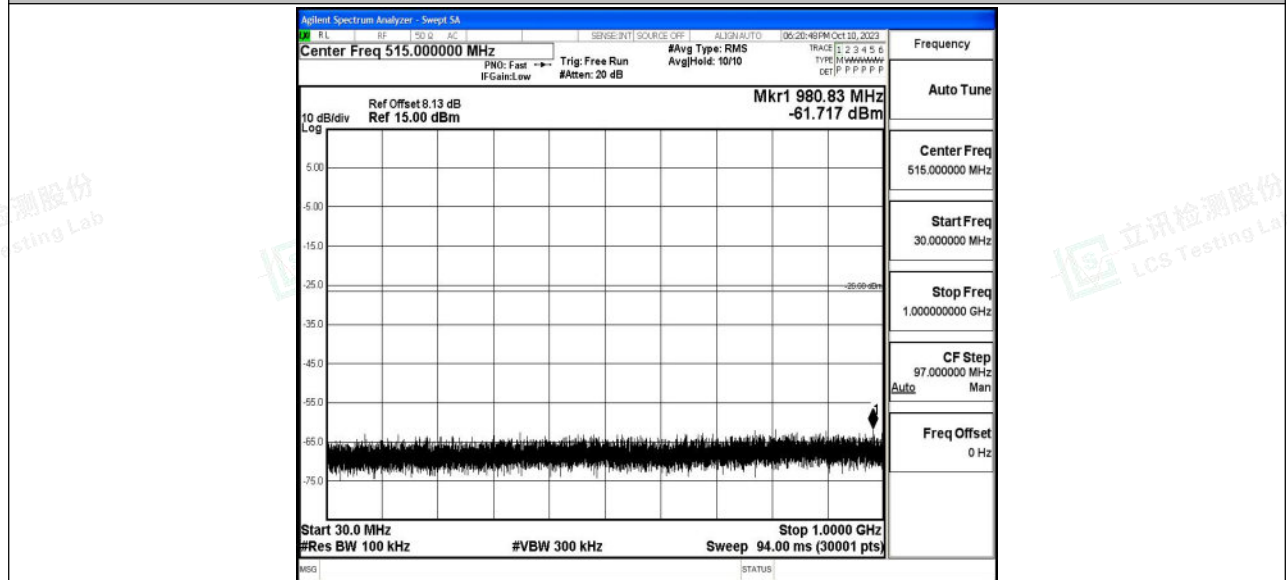
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2DH5_Ant1_2441_30~1000



2DH5_Ant1_2441_1000~26500

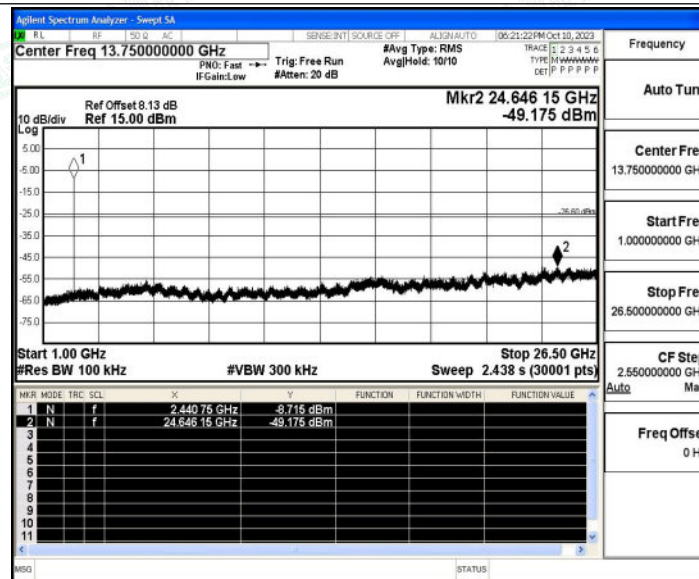


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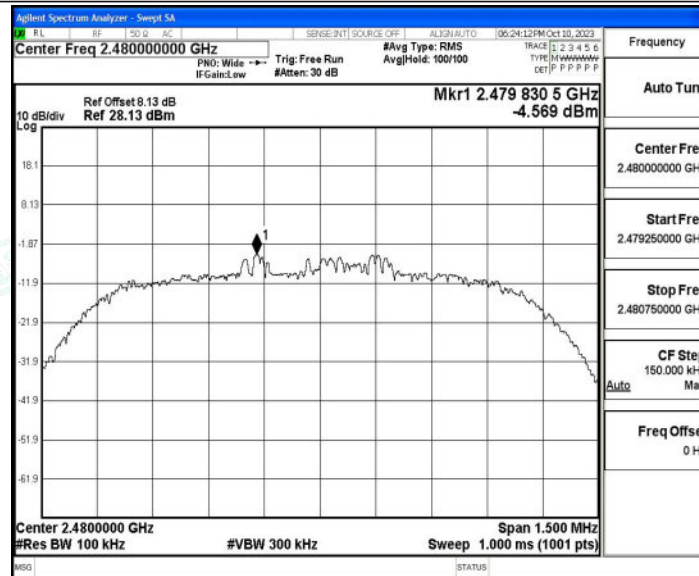
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2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000

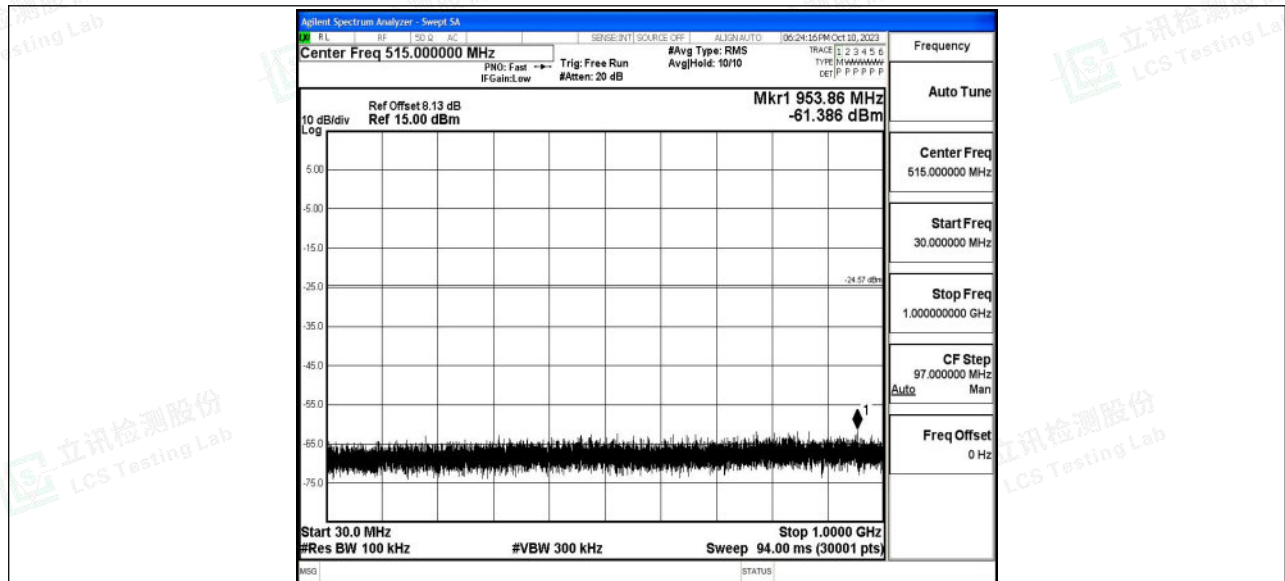


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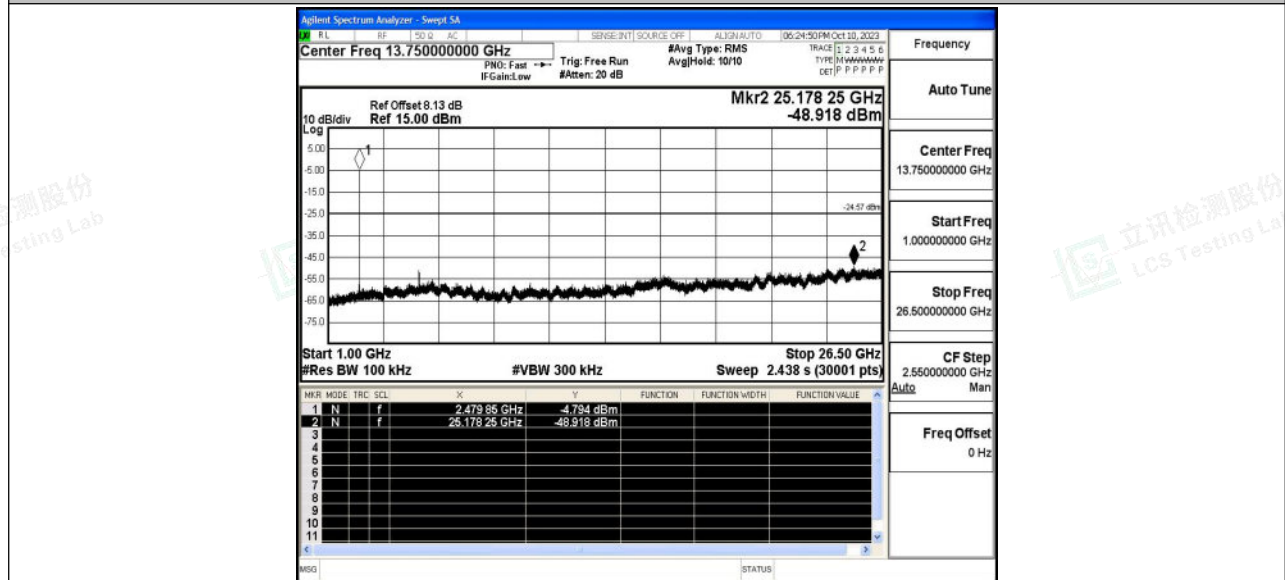
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2DH5_Ant1_2480_1000~26500



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A.8 Emissions in Restricted Bands

Test Result

TestM ode	Antenna	ChNam e	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-49.03	≤-41.20	46.17	≤54	PASS
				AV	2384.315	-48.66	≤-41.20	46.54	≤54	PASS
				AV	2390.000	-48.69	≤-41.20	46.51	≤54	PASS
				Peak	2310.000	-40.84	≤-21.20	54.36	≤74	PASS
				Peak	2371.085	-39.42	≤-21.20	55.78	≤74	PASS
				Peak	2390.000	-43.5	≤-21.20	51.70	≤74	PASS
		High	2480	AV	2483.500	-48.67	≤-41.20	46.53	≤54	PASS
				AV	2498.880	-48.49	≤-41.20	46.71	≤54	PASS
				AV	2500.000	-48.64	≤-41.20	46.56	≤54	PASS
				Peak	2483.500	-43.62	≤-21.20	51.58	≤74	PASS
				Peak	2499.280	-39.6	≤-21.20	55.60	≤74	PASS
				Peak	2500.000	-42.92	≤-21.20	52.28	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-40.88	≤-21.20	54.32	≤74	PASS
				Peak	2324.360	-38.55	≤-21.20	56.65	≤74	PASS
				Peak	2390.000	-40.18	≤-21.20	55.02	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-40.65	≤-21.20	54.55	≤74	PASS
				Peak	2496.320	-38.43	≤-21.20	56.77	≤74	PASS
				Peak	2500.000	-40.43	≤-21.20	54.77	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.21	≤-41.20	45.99	≤54	PASS
				AV	2388.620	-48.47	≤-41.20	46.73	≤54	PASS
				AV	2390.000	-48.76	≤-41.20	46.44	≤54	PASS
				Peak	2310.000	-43.8	≤-21.20	51.40	≤74	PASS
				Peak	2373.500	-39.52	≤-21.20	55.68	≤74	PASS
				Peak	2390.000	-42.21	≤-21.20	52.99	≤74	PASS
		High	2480	AV	2483.500	-48.6	≤-41.20	46.60	≤54	PASS
				AV	2496.560	-48.39	≤-41.20	46.81	≤54	PASS
				AV	2500.000	-48.63	≤-41.20	46.57	≤54	PASS
				Peak	2483.500	-42.51	≤-21.20	52.69	≤74	PASS
				Peak	2494.720	-40.08	≤-21.20	55.12	≤74	PASS
				Peak	2500.000	-43.96	≤-21.20	51.24	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-40.78	≤-21.20	54.42	≤74	PASS
				Peak	2380.115	-37.76	≤-21.20	57.44	≤74	PASS
				Peak	2390.000	-40.12	≤-21.20	55.08	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-39.87	≤-21.20	55.33	≤74	PASS
				Peak	2488.000	-38.28	≤-21.20	56.92	≤74	PASS



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			Peak	2500.000	-40.55	≤-21.20	54.65	≤74	PASS
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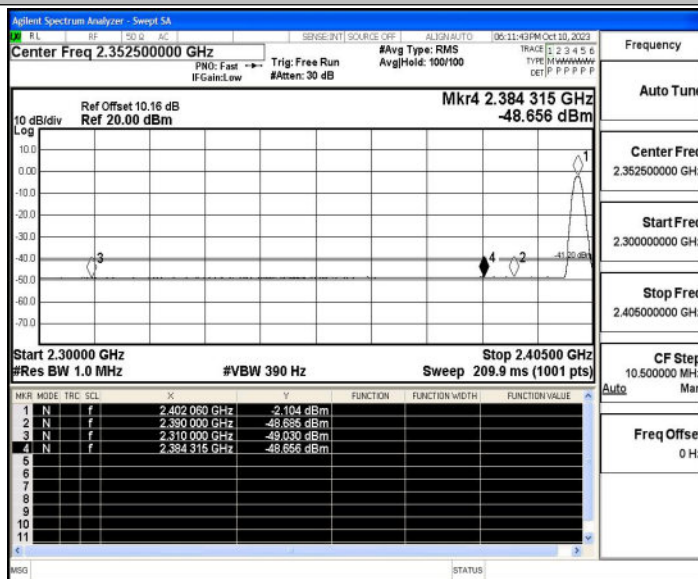
- Note:
1. The Antenna Gain is compensated in the graph.
 2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



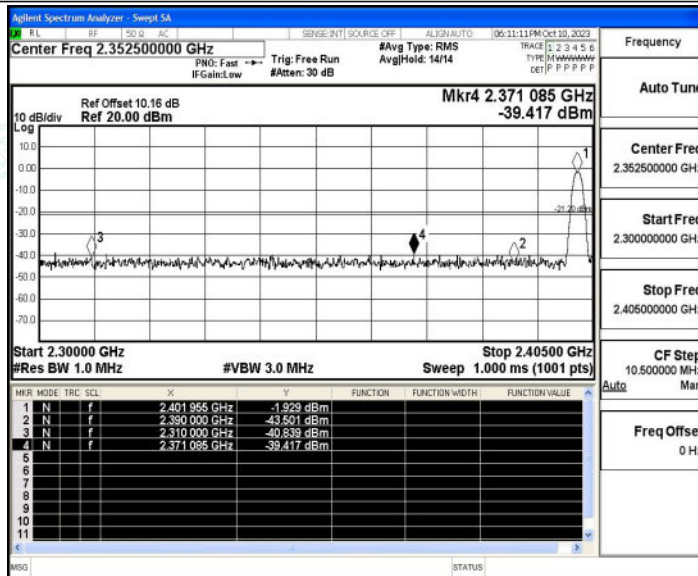


Test Graphs

DH5_Ant1_Low_2402_AV



DH5_Ant1_Low_2402_Peak



DH5_Ant1_High_2480_AV

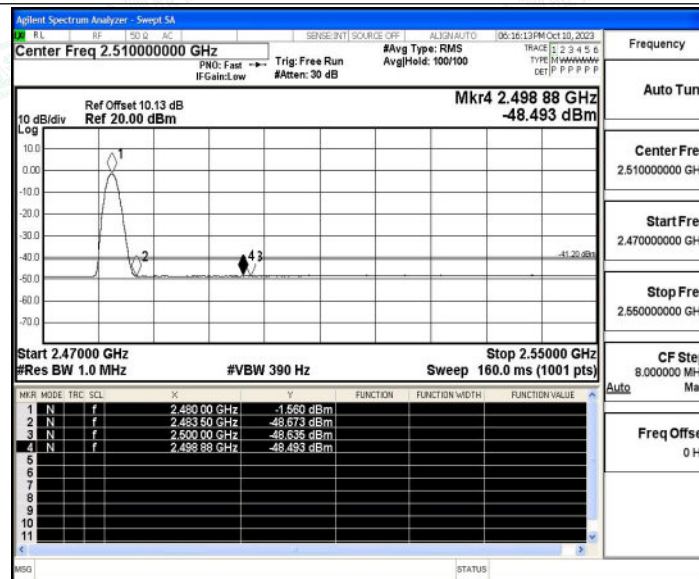


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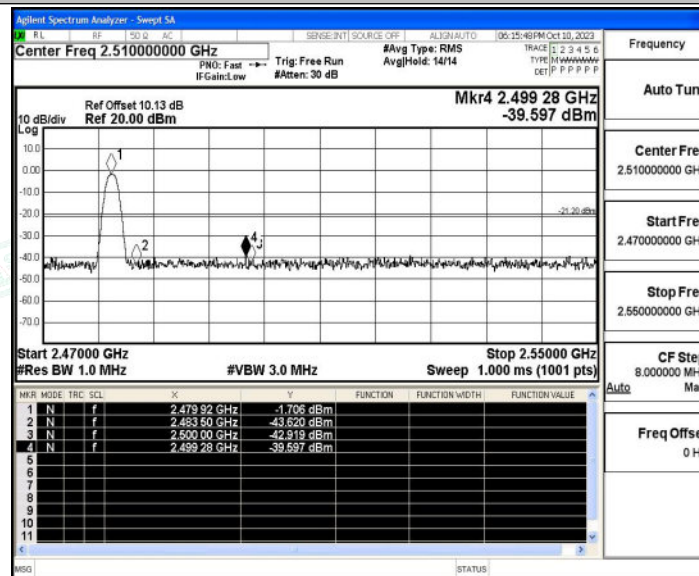
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DH5_Ant1_High_2480_Peak



DH5_Ant1_Low_Hop_2402_Peak

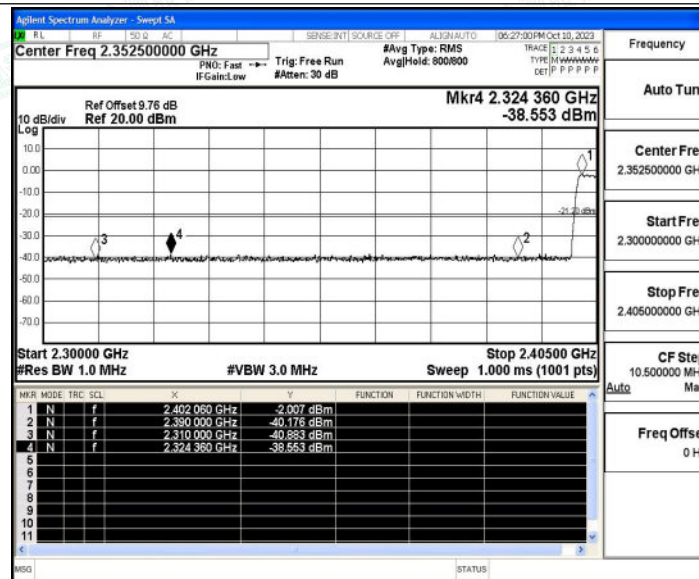


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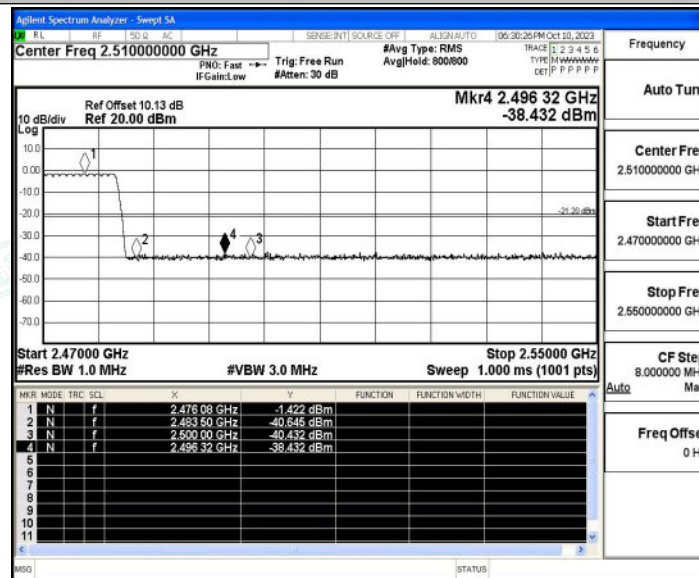
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DH5_Ant1_High_Hop_2480_Peak



2DH5_Ant1_Low_2402_AV

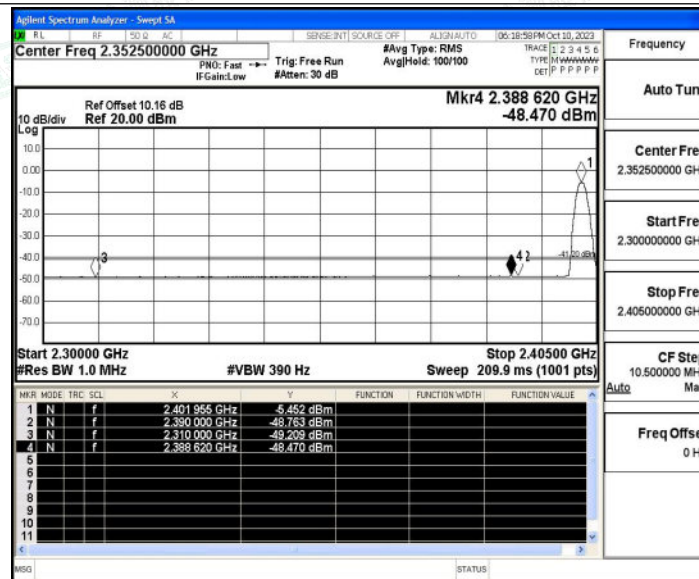


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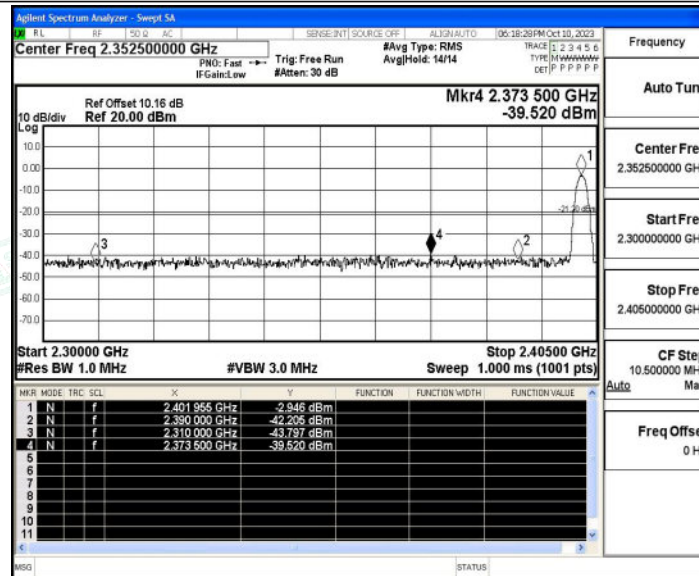
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2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV

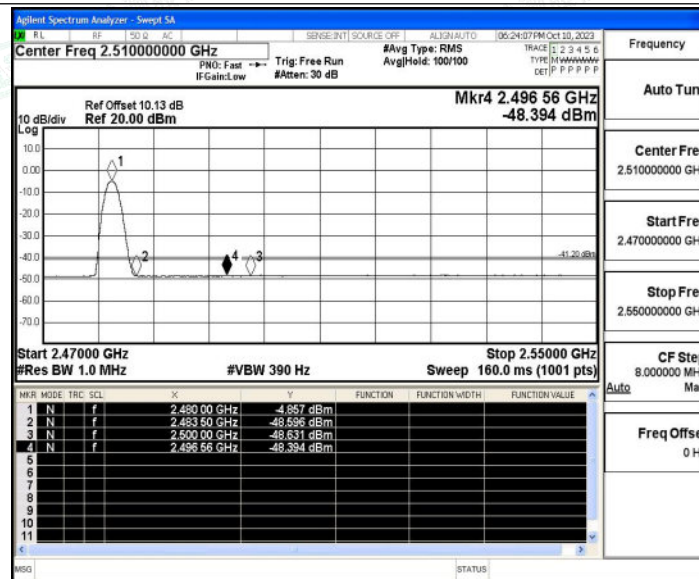


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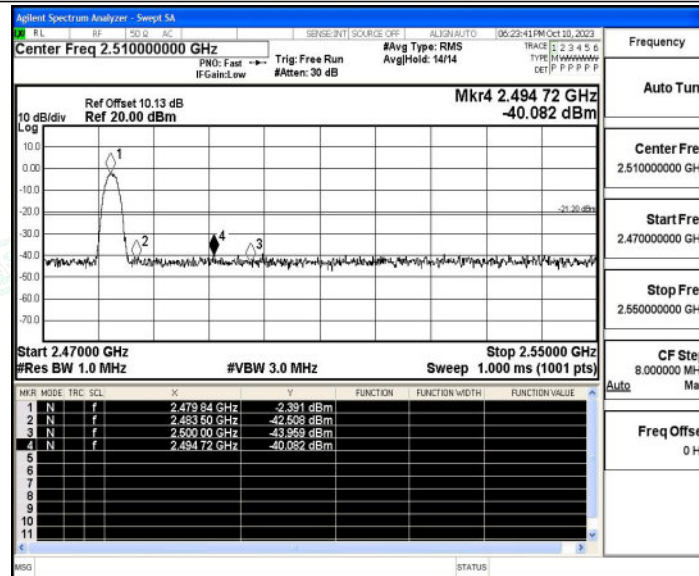
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2DH5_Ant1_High_2480_Peak



2DH5_Ant1_Low_Hop_2402_Peak

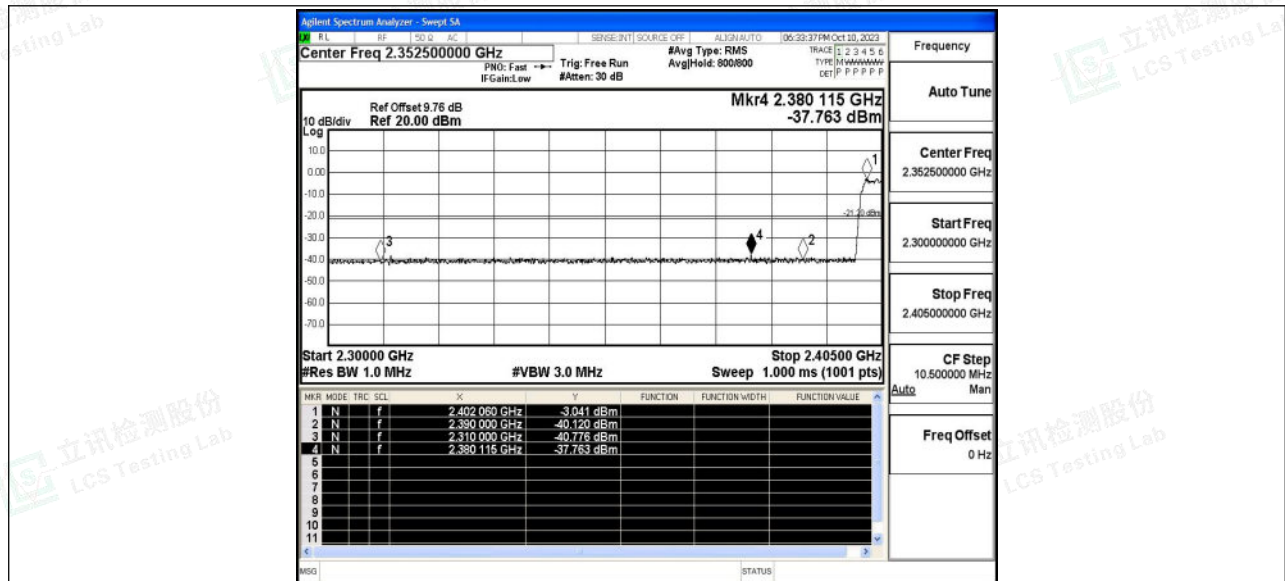


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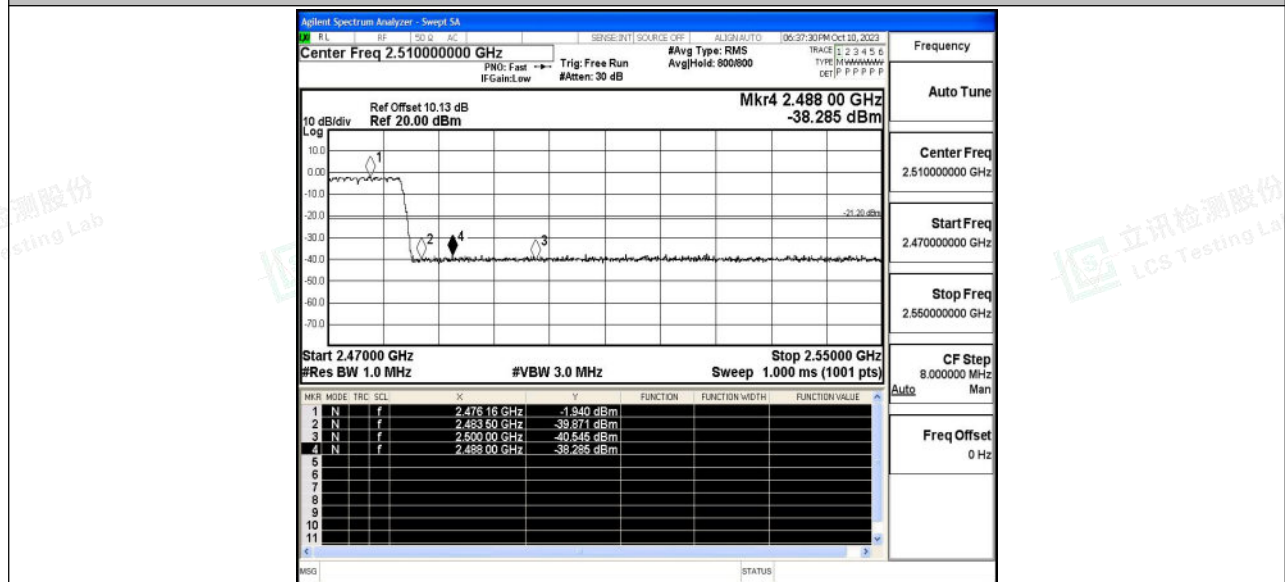
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2DH5_Ant1_High_Hop_2480_Peak



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