



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: TWS Earphones

Test Model: S300

Environmental Conditions

Temperature:	23.1° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Nick Peng





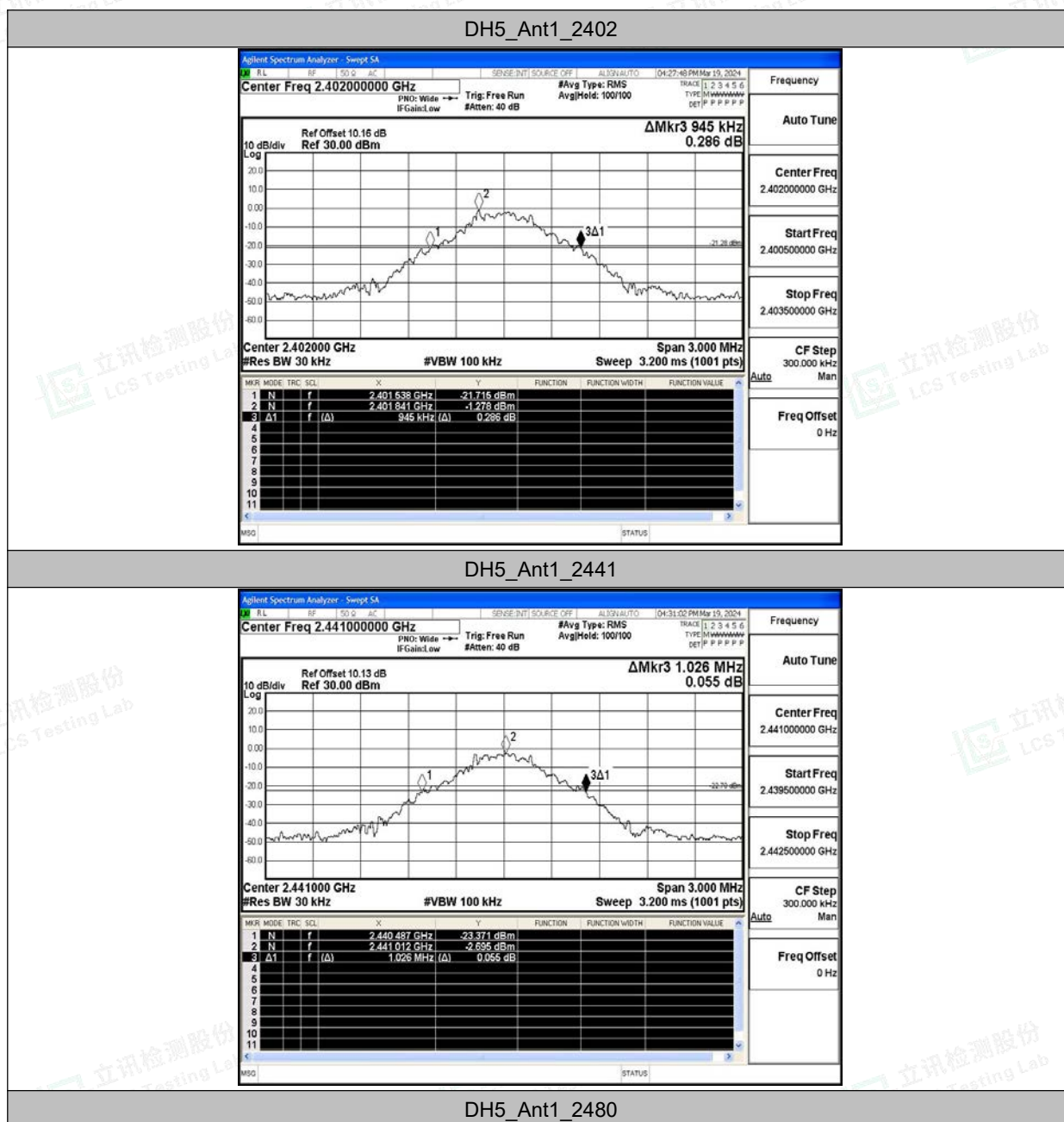
A.1 20dB Emission Bandwidth

Test Result

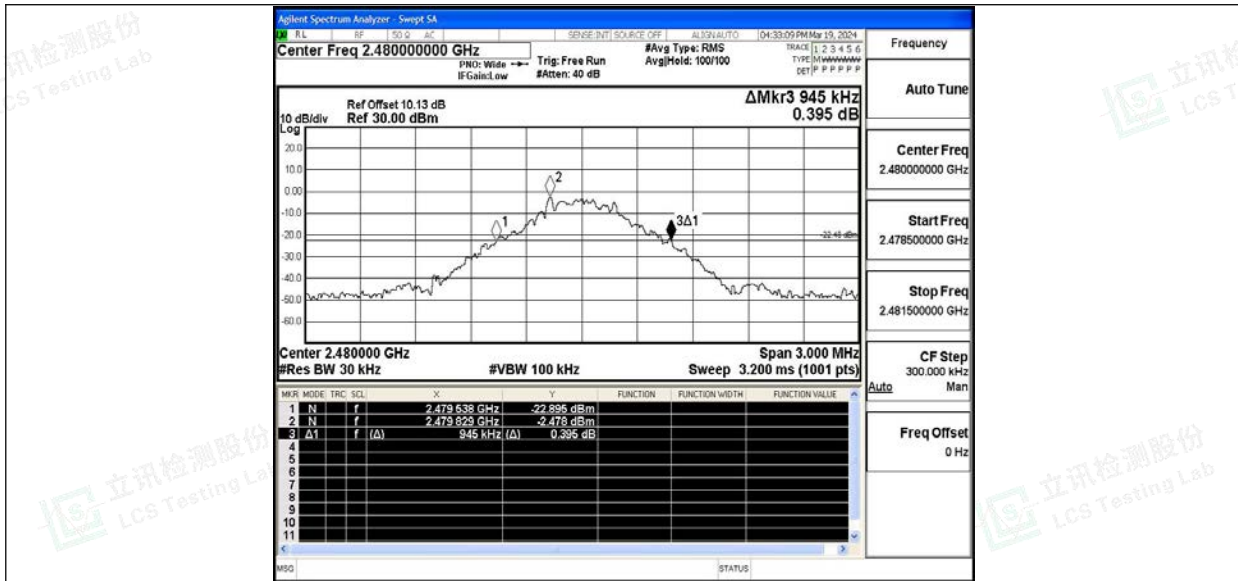
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.945	2401.538	2402.483	---	---
		2441	1.026	2440.487	2441.513	---	---
		2480	0.945	2479.538	2480.483	---	---
2DH5	Ant1	2402	1.314	2401.343	2402.657	---	---
		2441	1.287	2440.364	2441.651	---	---
		2480	1.290	2479.361	2480.651	---	---



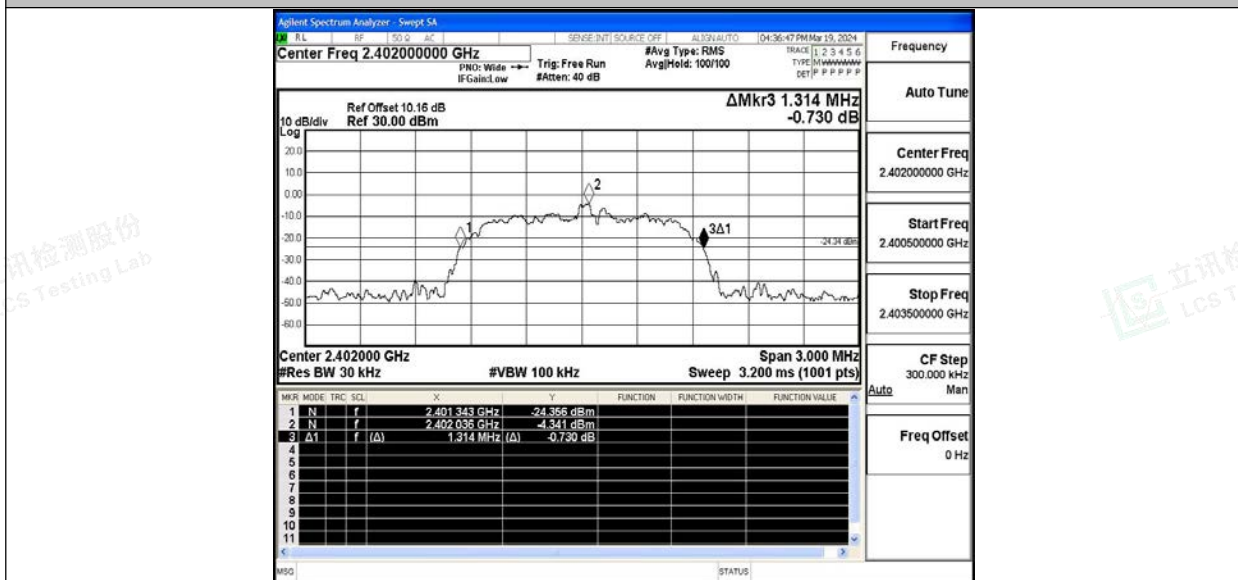
Test Graphs



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Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

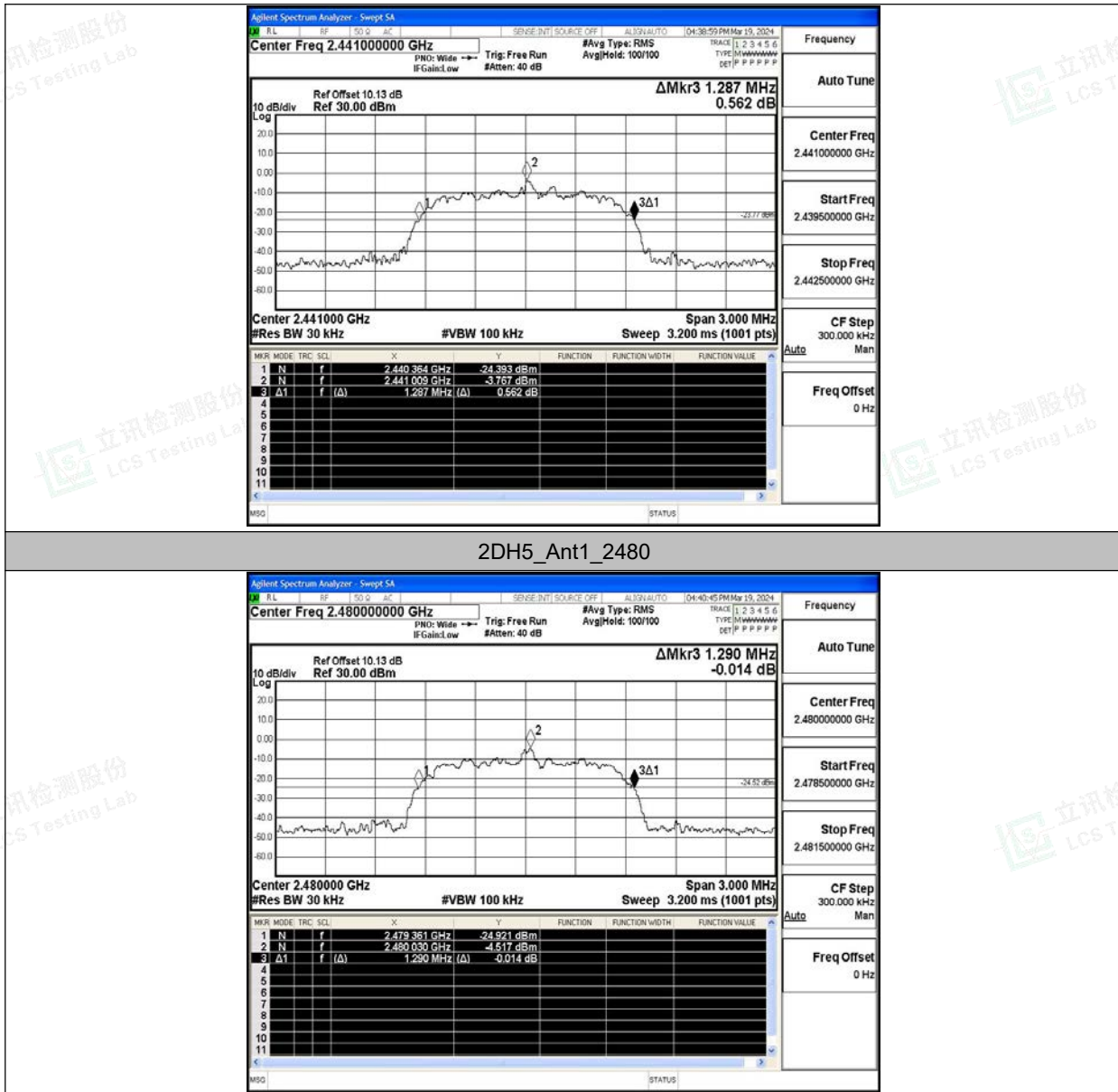


2DH5_Ant1_2402



2DH5_Ant1_2441







A.2 Maximum Peak Conducted Output Power

Test Result

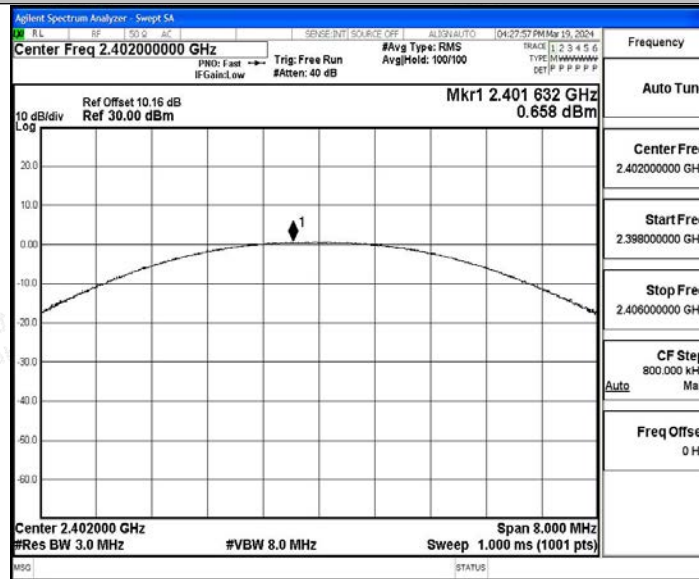
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.66	≤20.97	PASS
		2441	0.49	≤20.97	PASS
		2480	-0.52	≤20.97	PASS
2DH5	Ant1	2402	0.63	≤20.97	PASS
		2441	0.29	≤20.97	PASS
		2480	-0.07	≤20.97	PASS



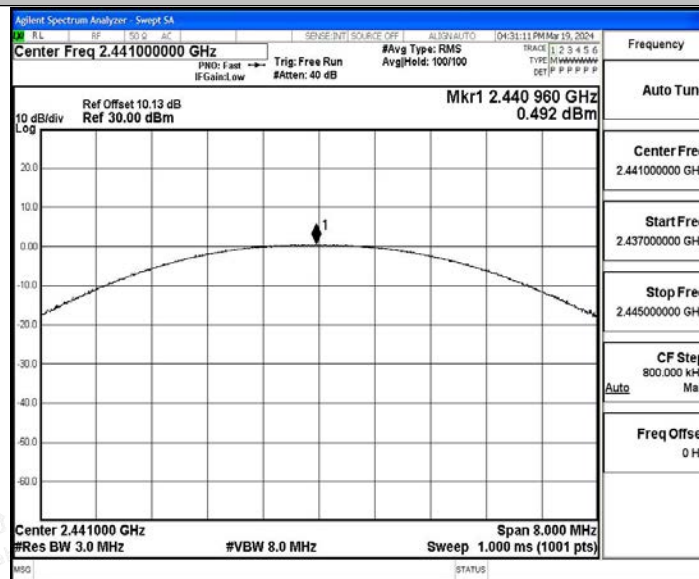


Test Graphs

DH5_Ant1_2402

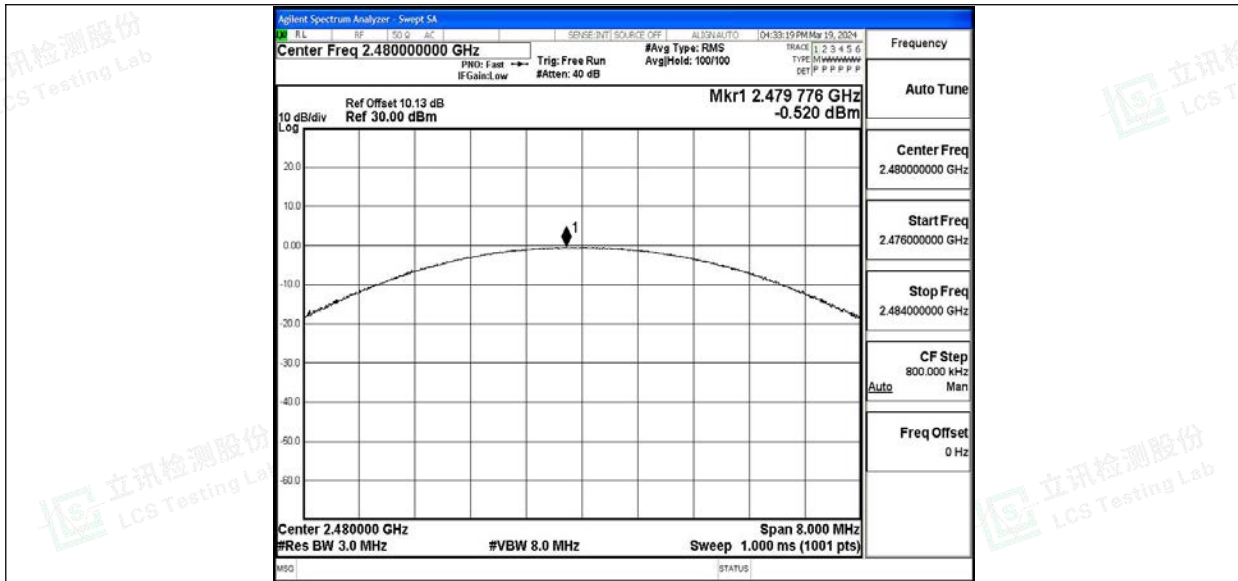


DH5_Ant1_2441

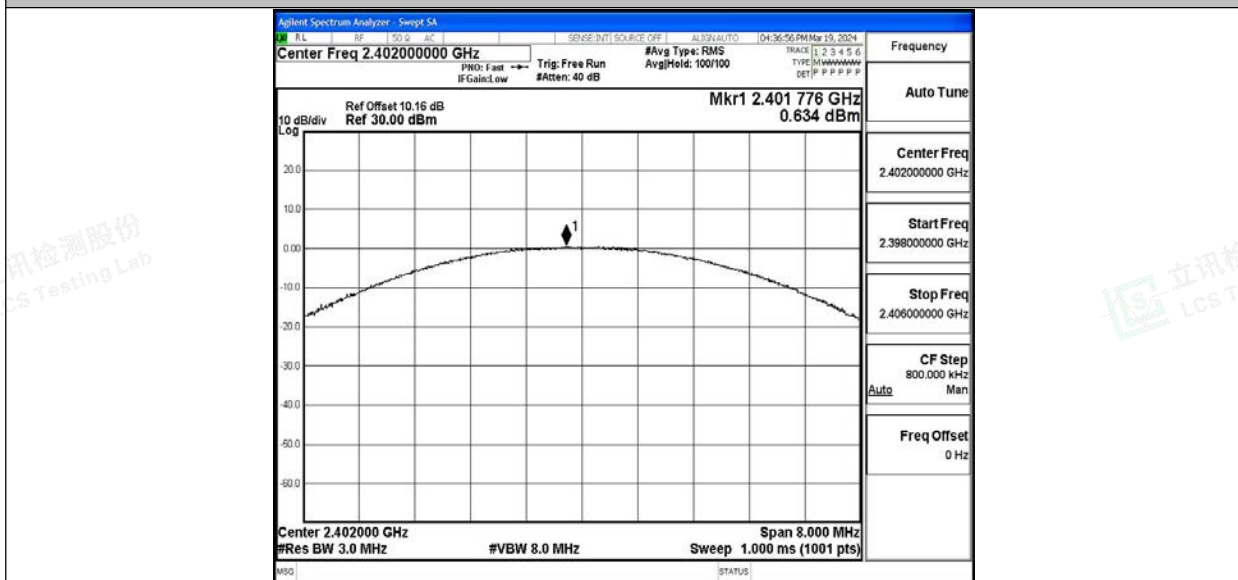


DH5_Ant1_2480



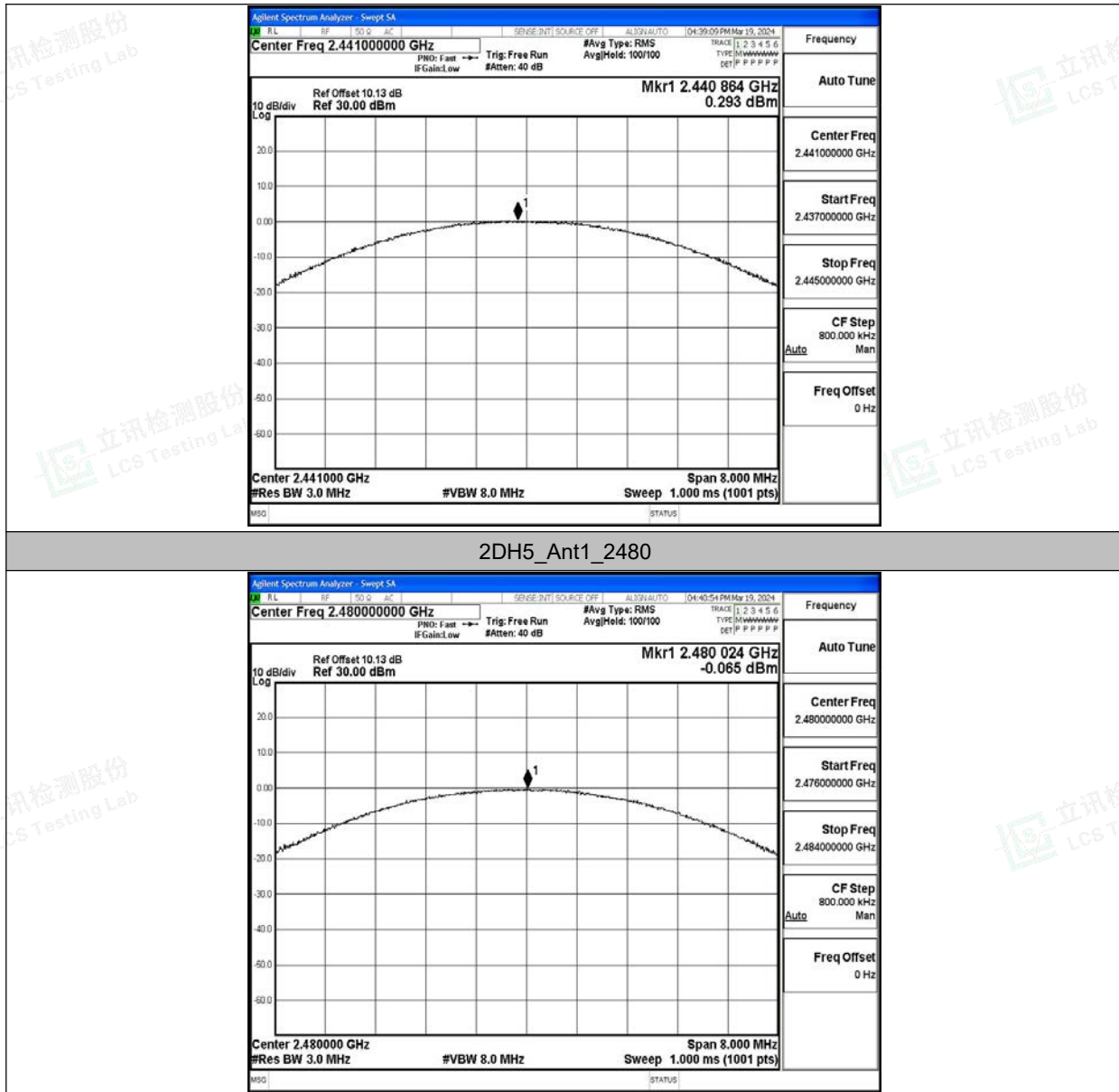


2DH5_Ant1_2402



2DH5_Ant1_2441







A.3 Carrier frequency separation

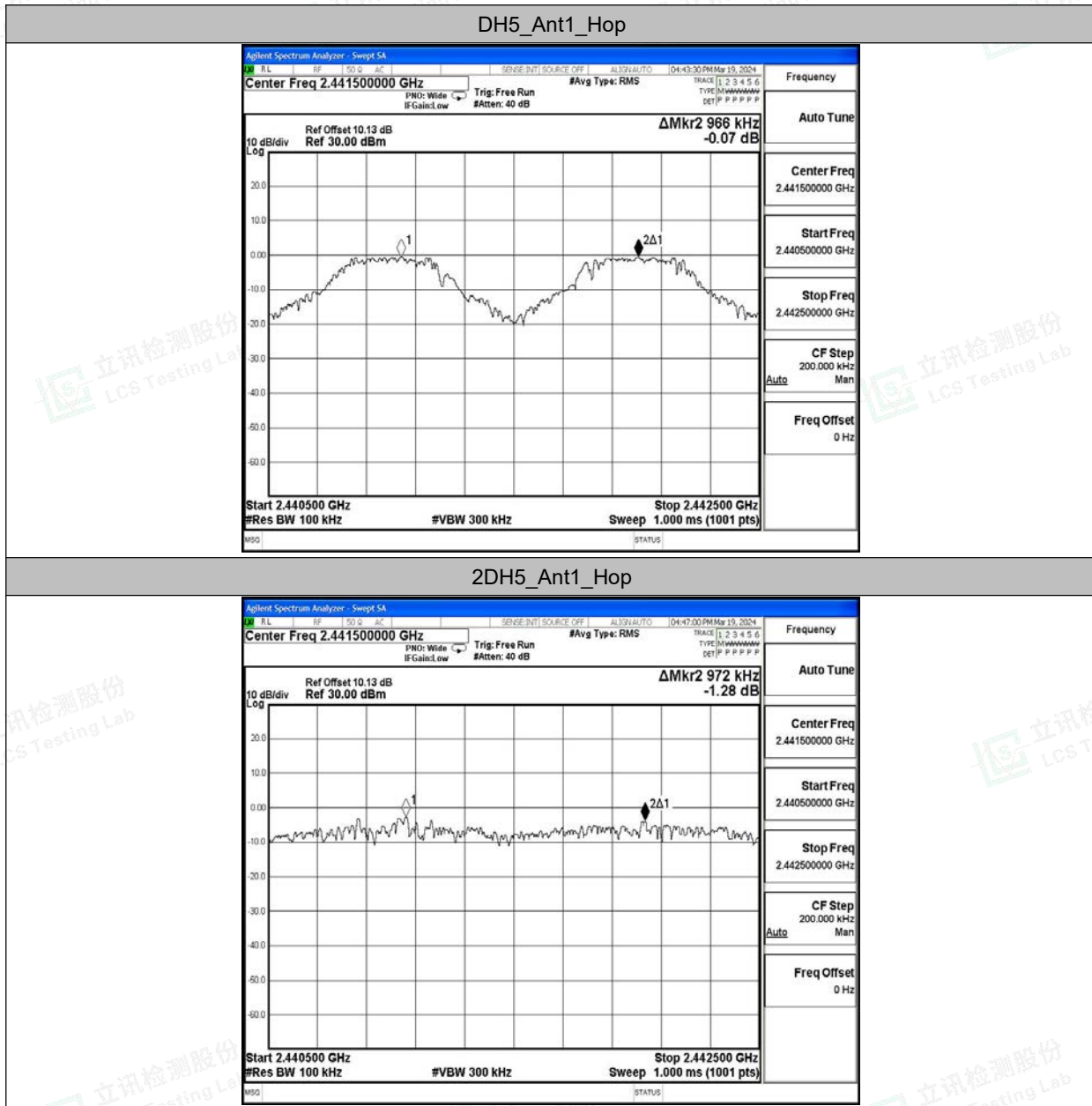
Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.966	≥ 0.684	PASS
2DH5	Ant1	Hop	0.972	≥ 0.876	PASS





Test Graphs



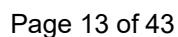


A.4 Time of occupancy

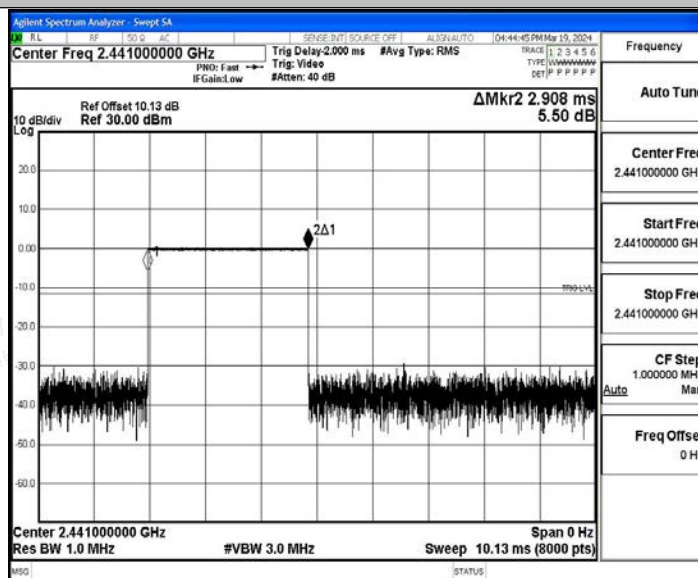
Test Result

TestMode	Antenna	Frequency[MHz]	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

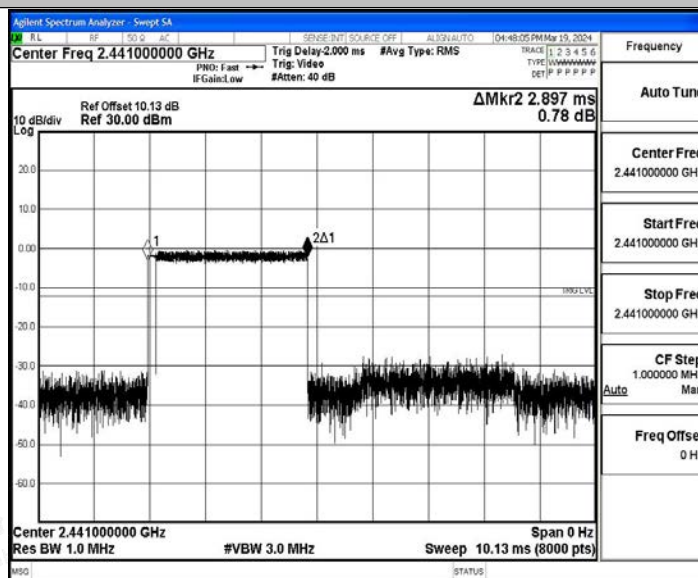




DH5 Ant1 Hop



2DH5 Ant1 Hop



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A.5 Number of hopping channels

Test Result

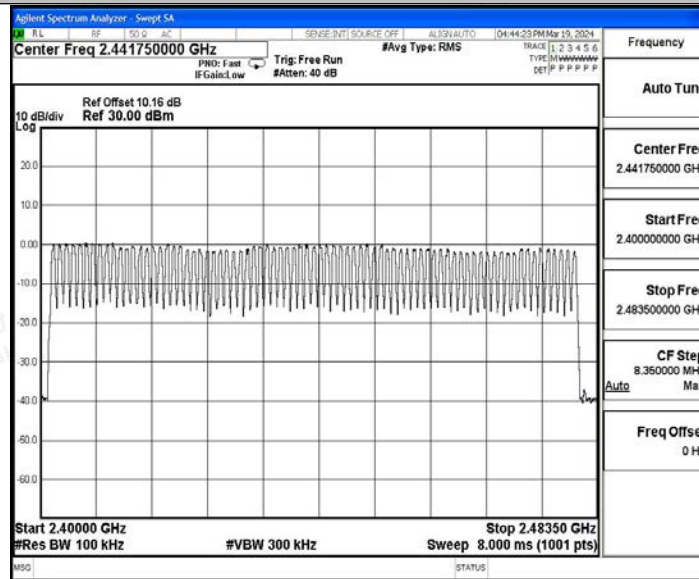
TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS



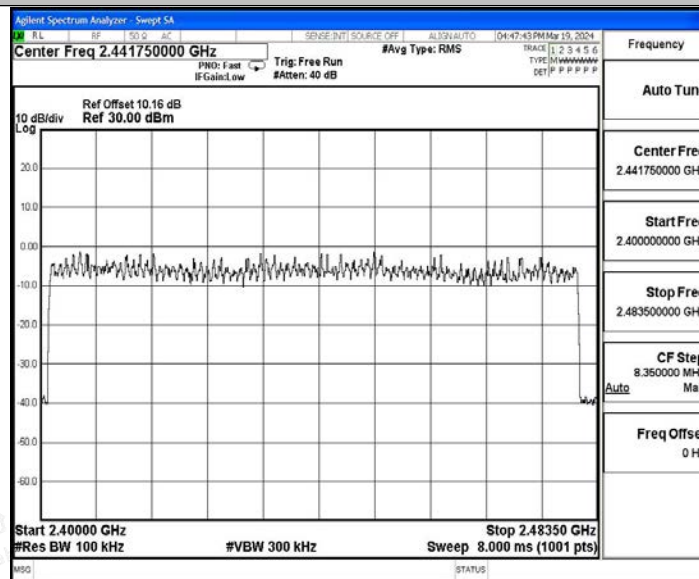


Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop





A.6 Band edge measurements

Test Result

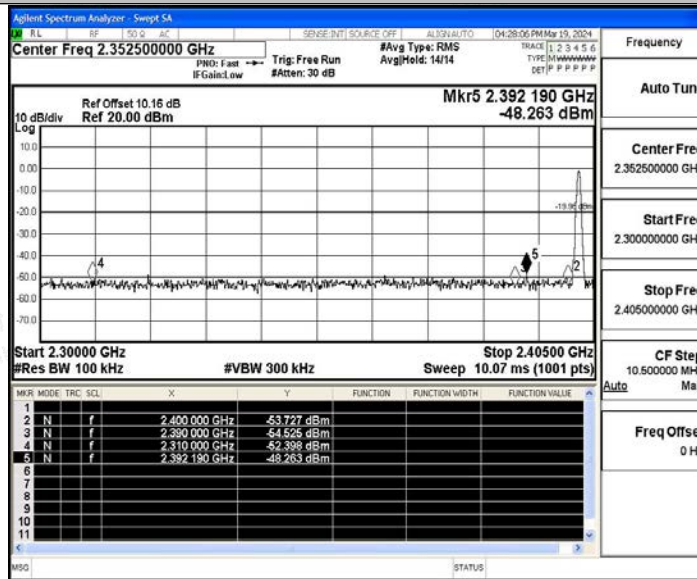
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.04	-48.26	≤ -19.96	PASS
		High	2480	-1.54	-48.41	≤ -21.54	PASS
		Low	Hop_2402	-0.37	-47.8	≤ -20.37	PASS
		High	Hop_2480	-1.18	-47.29	≤ -21.18	PASS
2DH5	Ant1	Low	2402	-1.80	-49.24	≤ -21.8	PASS
		High	2480	-2.61	-48.85	≤ -22.61	PASS
		Low	Hop_2402	-4.79	-47.5	≤ -24.79	PASS
		High	Hop_2480	-3.45	-46.75	≤ -23.45	PASS



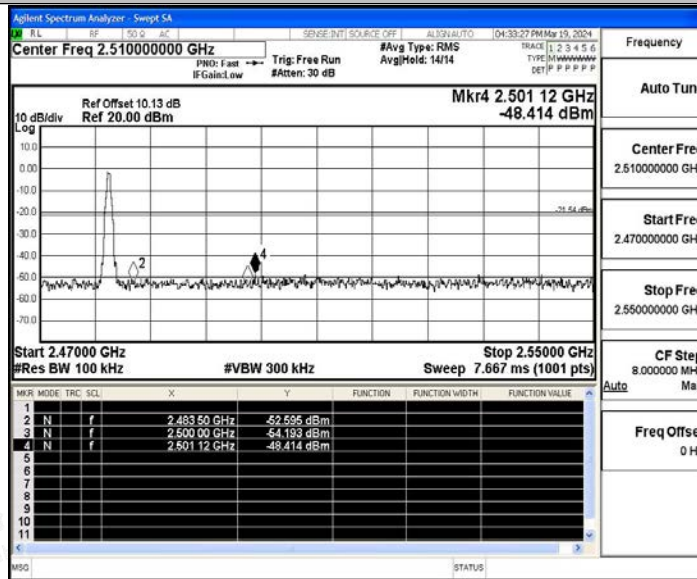


Test Graphs

DH5_Ant1_Low_2402

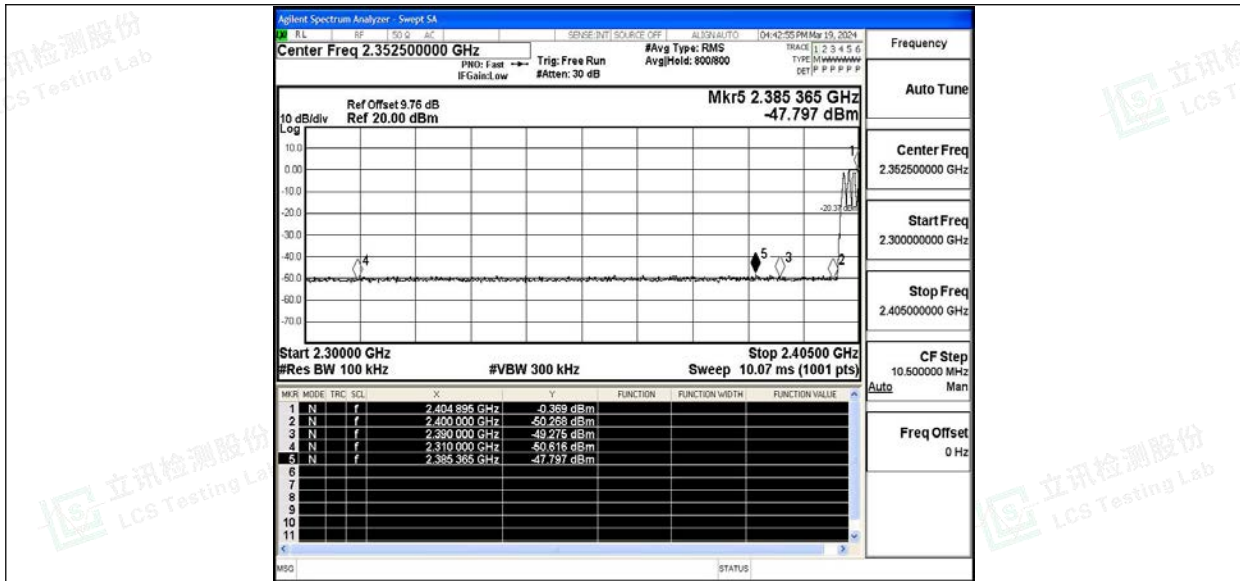


DH5_Ant1_High_2480

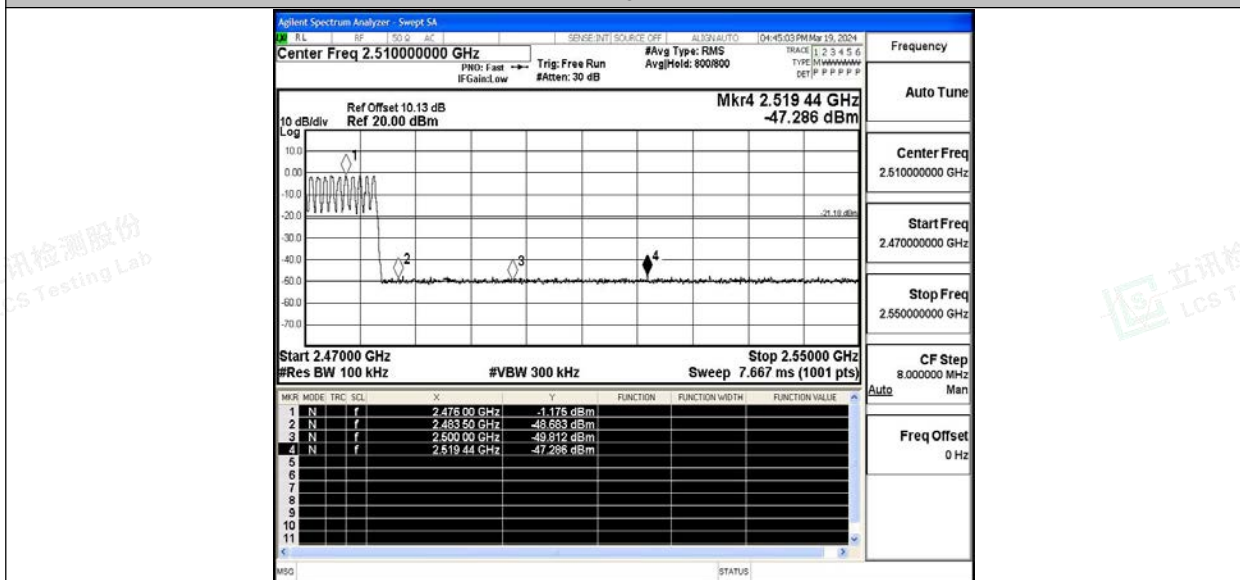


DH5_Ant1_Low_Hop_2402



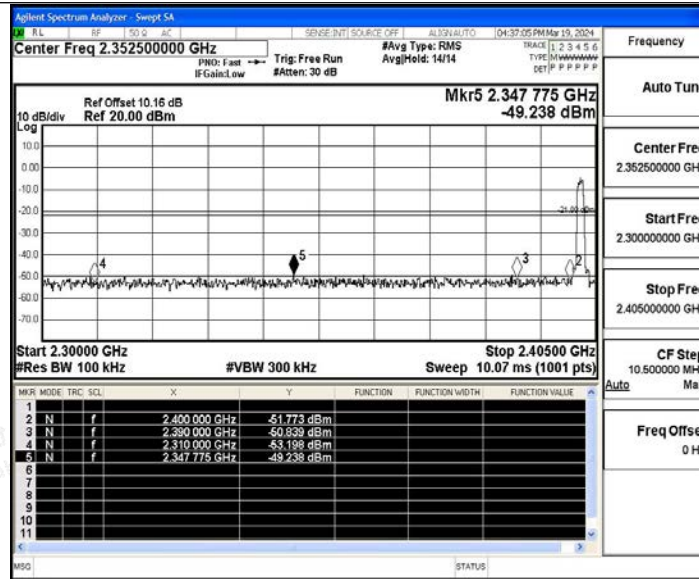


DH5_Ant1_High_Hop_2480

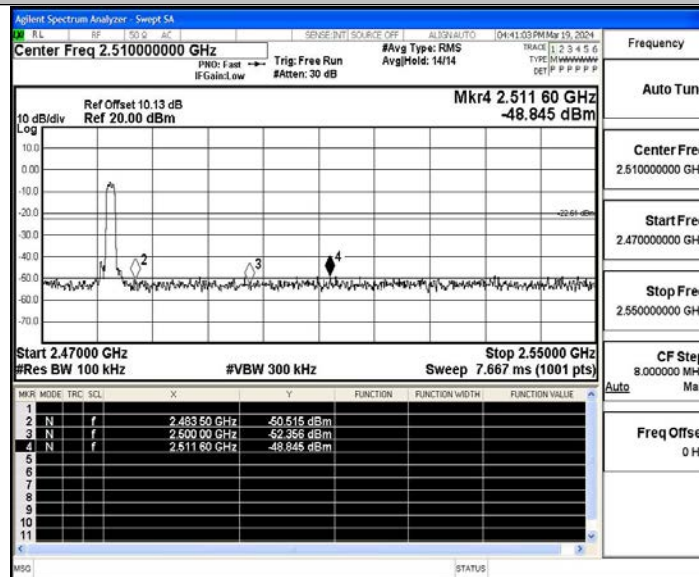


2DH5_Ant1_Low_2402



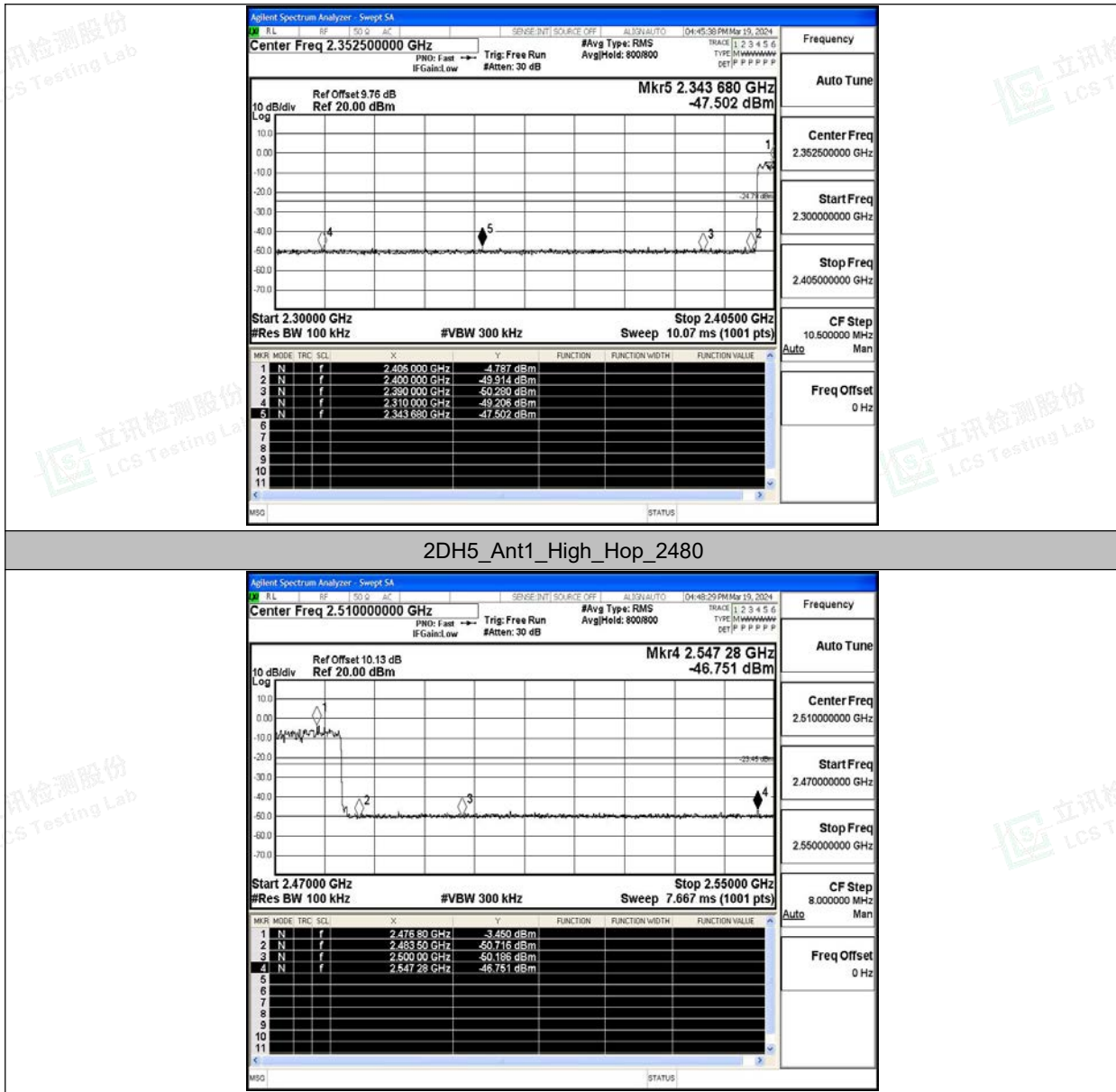


2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402







A.7 Conducted Spurious Emission

Test Result

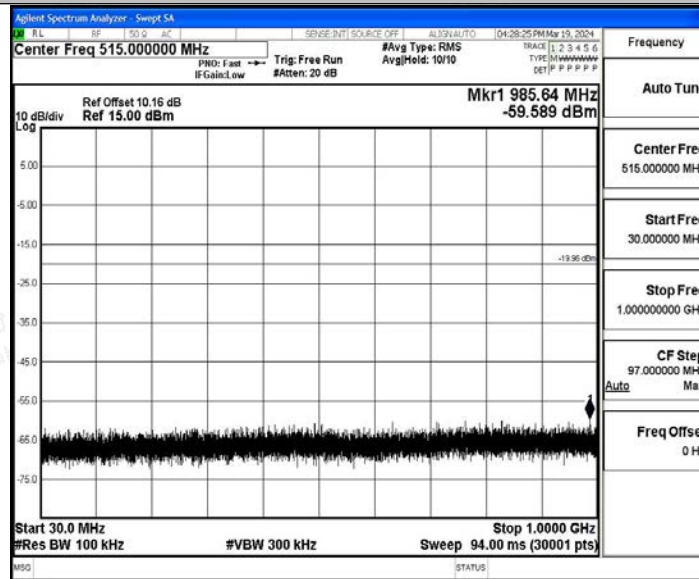
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	30~1000	0.04	-59.59	≤-19.96	PASS
			1000~26500	0.04	-47.04	≤-19.96	PASS
		2441	30~1000	-0.12	-59.91	≤-20.12	PASS
			1000~26500	-0.12	-47.44	≤-20.12	PASS
		2480	30~1000	-1.54	-59.72	≤-21.54	PASS
			1000~26500	-1.54	-46.66	≤-21.54	PASS
2DH5	Ant1	2402	30~1000	-1.80	-59.97	≤-21.8	PASS
			1000~26500	-1.80	-46.84	≤-21.8	PASS
		2441	30~1000	-2.02	-60.19	≤-22.02	PASS
			1000~26500	-2.02	-47.05	≤-22.02	PASS
		2480	30~1000	-2.61	-59.82	≤-22.61	PASS
			1000~26500	-2.61	-47.05	≤-22.61	PASS



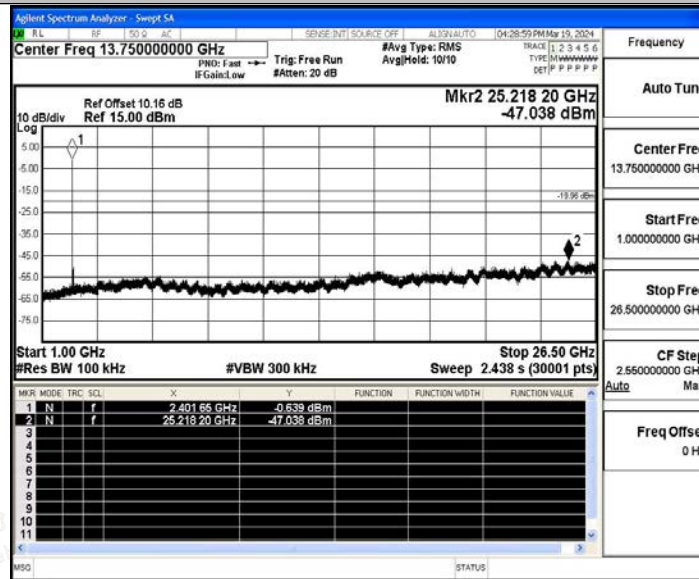


Test Graphs

DH5_Ant1_2402_30~1000

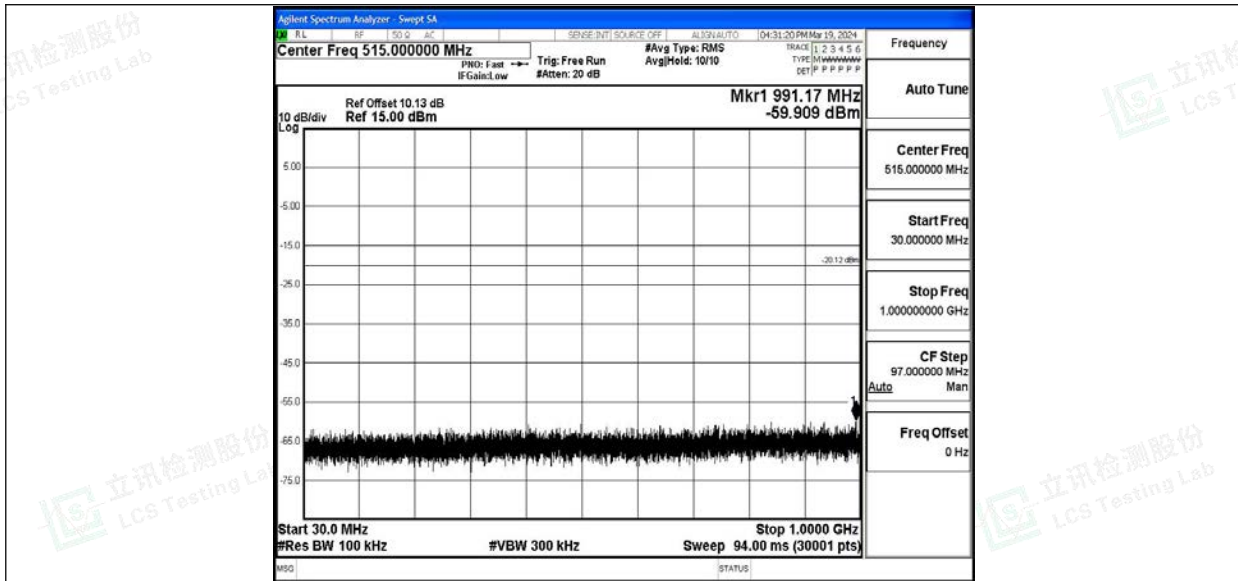


DH5_Ant1_2402_1000~26500

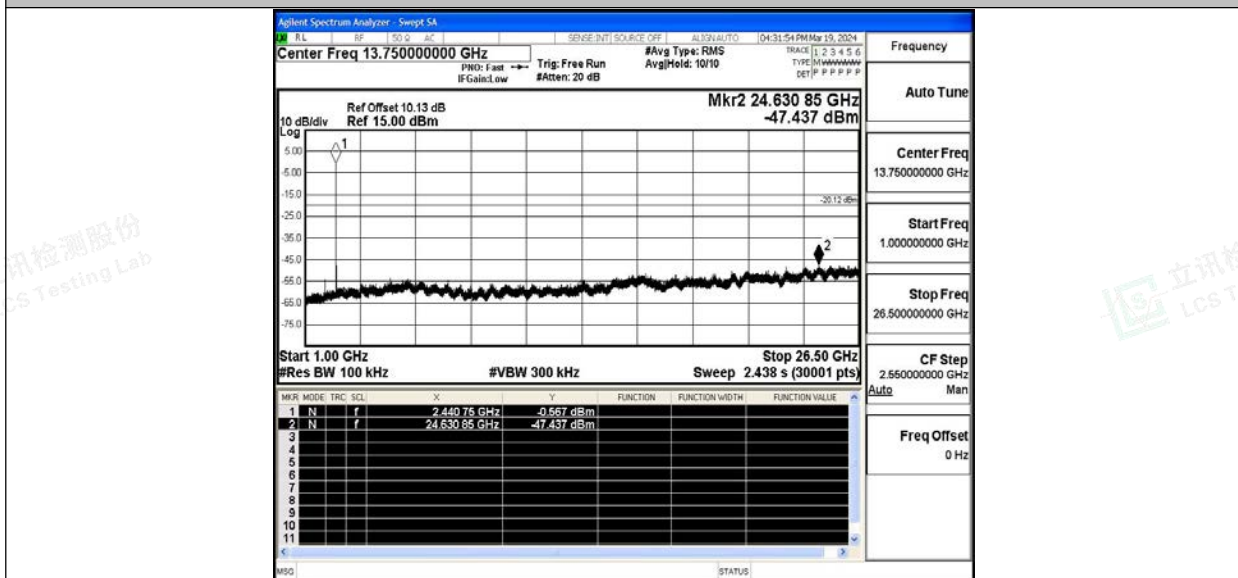


DH5_Ant1_2441_30~1000



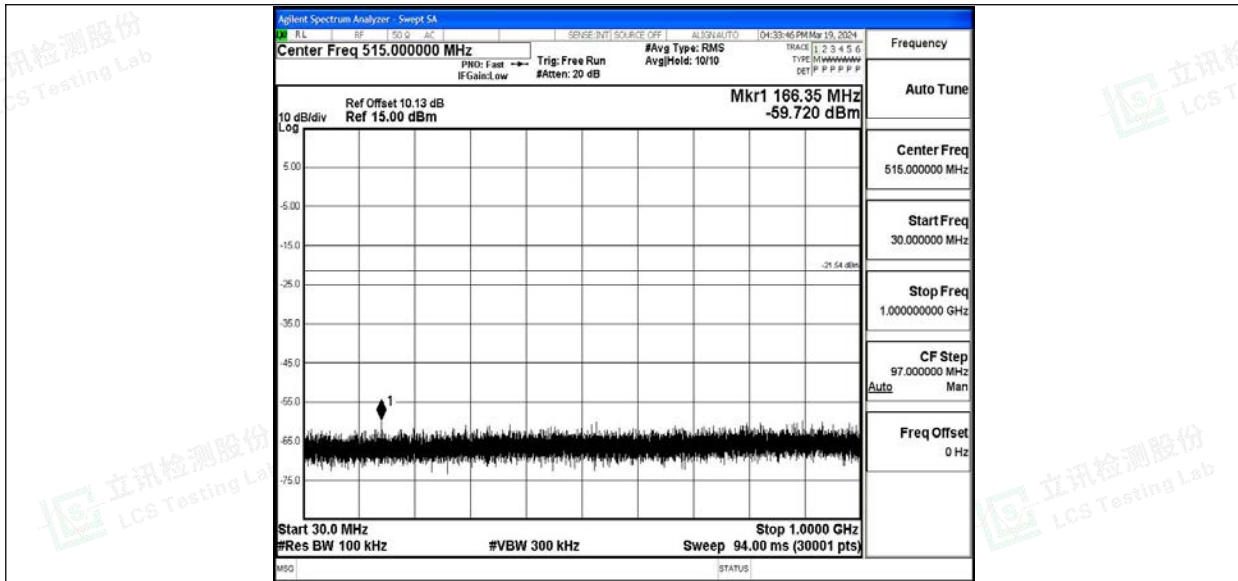


DH5_Ant1_2441_1000~26500

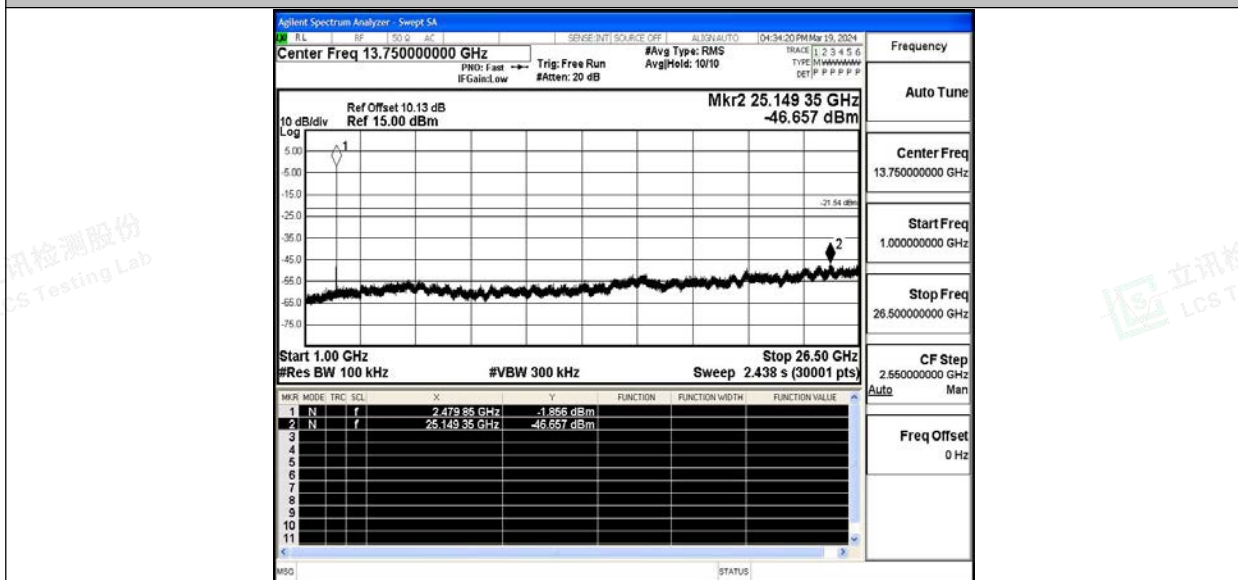


DH5_Ant1_2480_30~1000



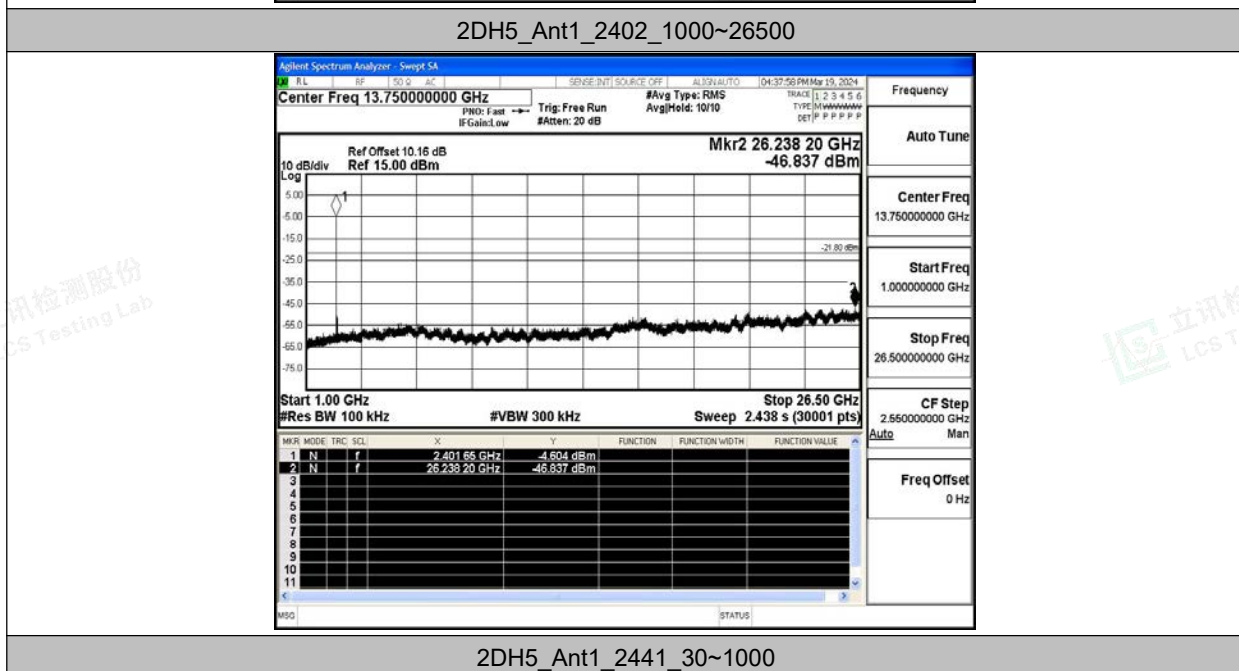
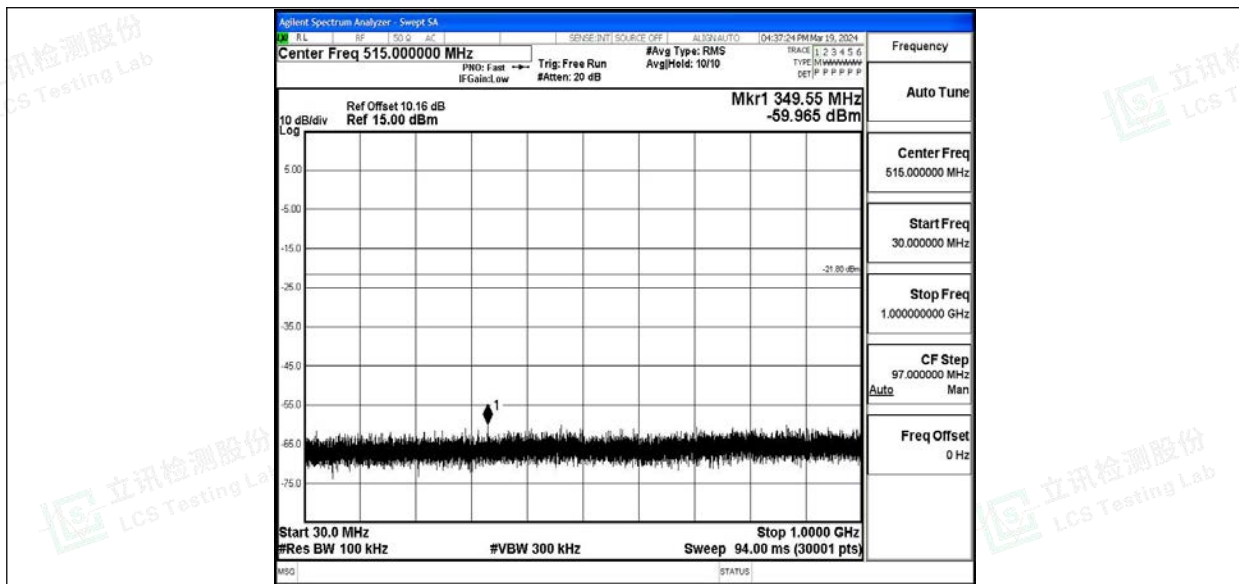


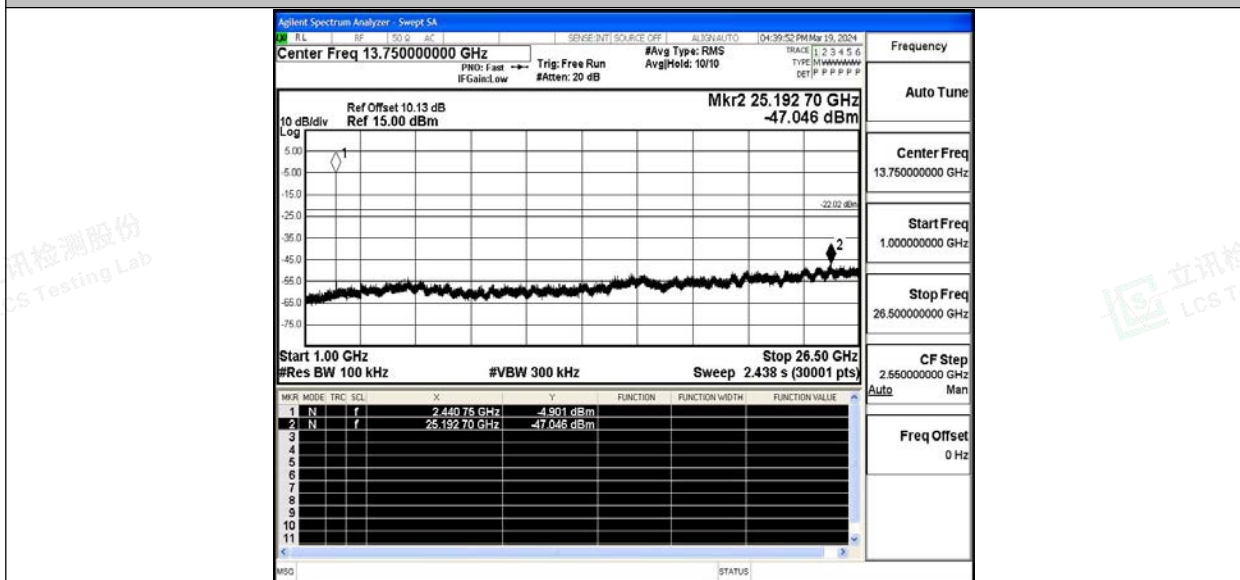
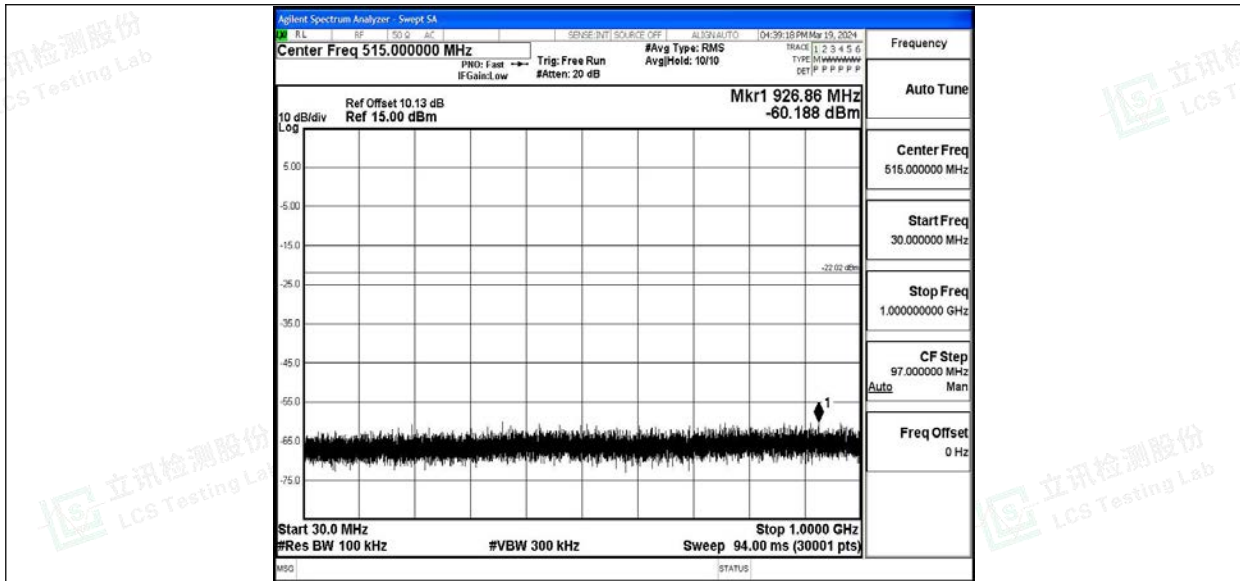
DH5_Ant1_2480_1000~26500

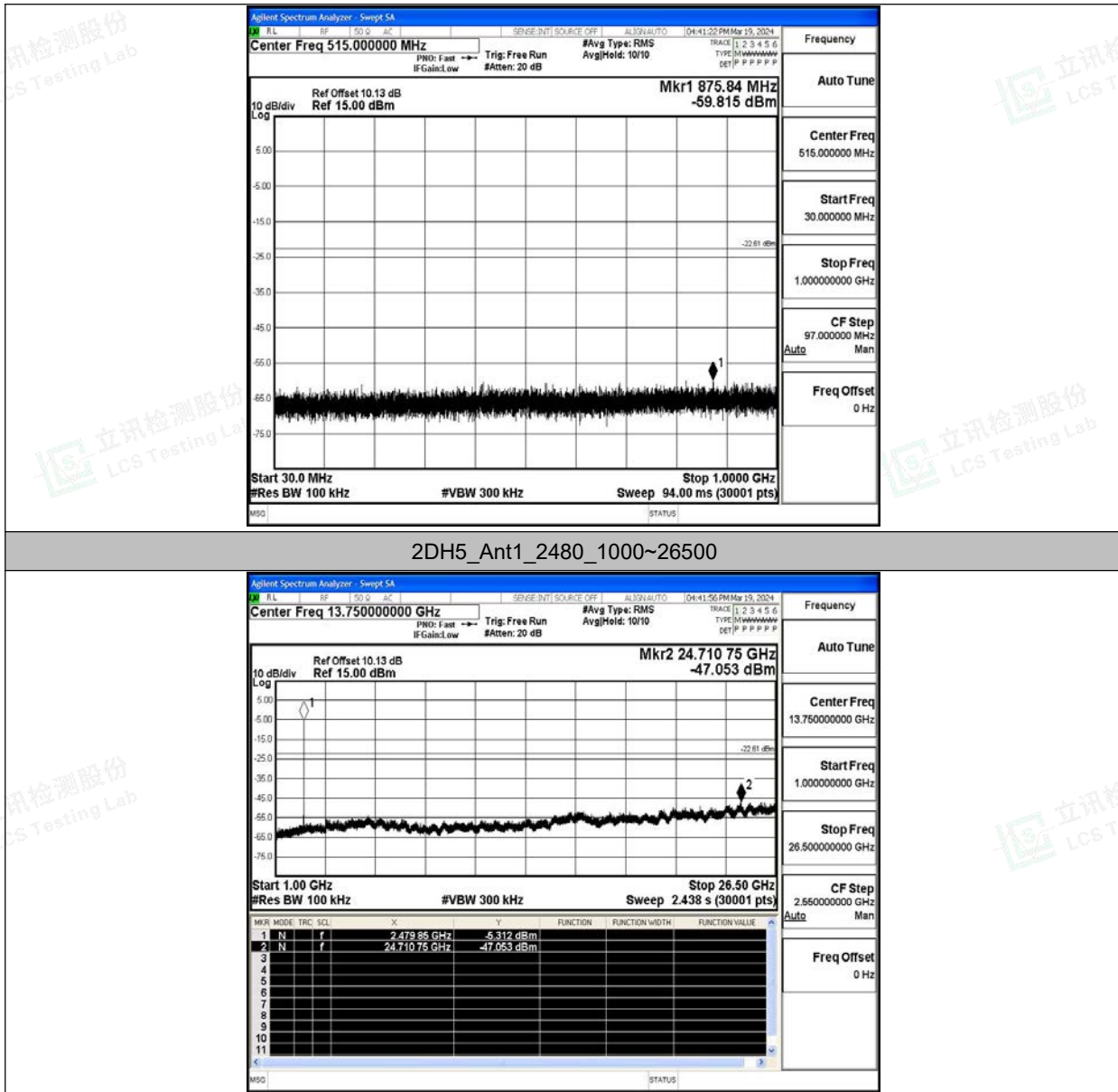


2DH5_Ant1_2402_30~1000











Reference Level

Test Result

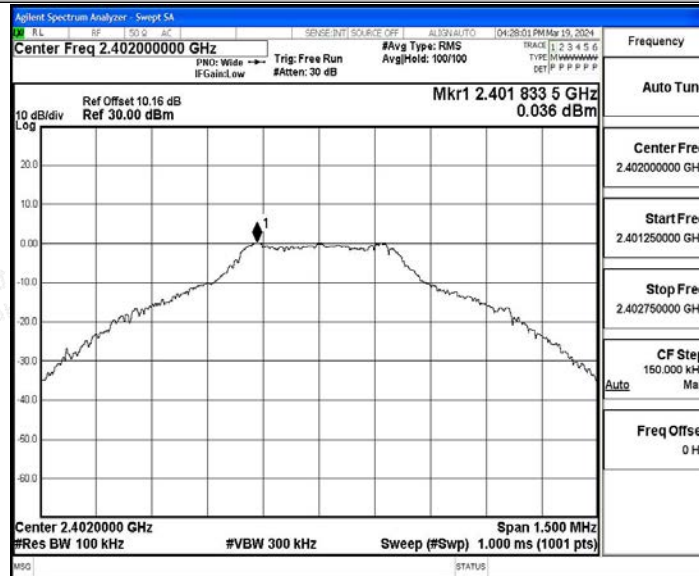
TestMode	Antenna	ChName	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	2401.83	0.04	---	PASS
		2441	2440.83	-0.12	---	PASS
		2480	2479.82	-1.54	---	PASS
2DH5	Ant1	2402	2401.99	-1.80	---	PASS
		2441	2441.00	-2.02	---	PASS
		2480	2480.00	-2.61	---	PASS



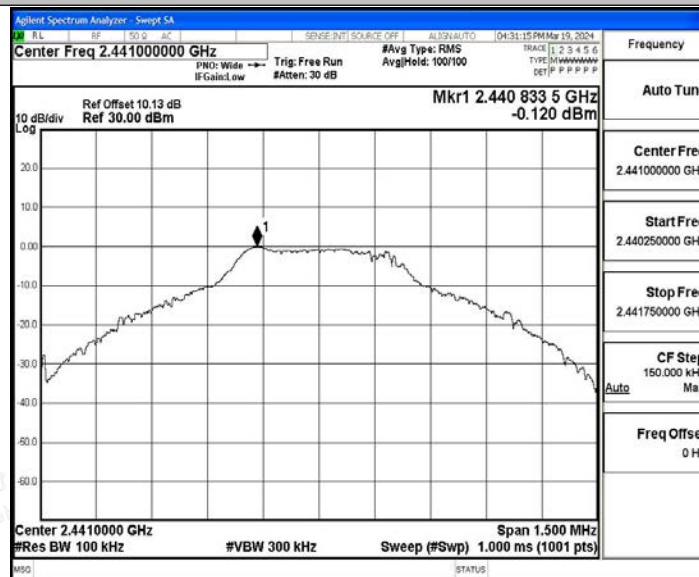


Test Graphs

DH5_Ant1_2402

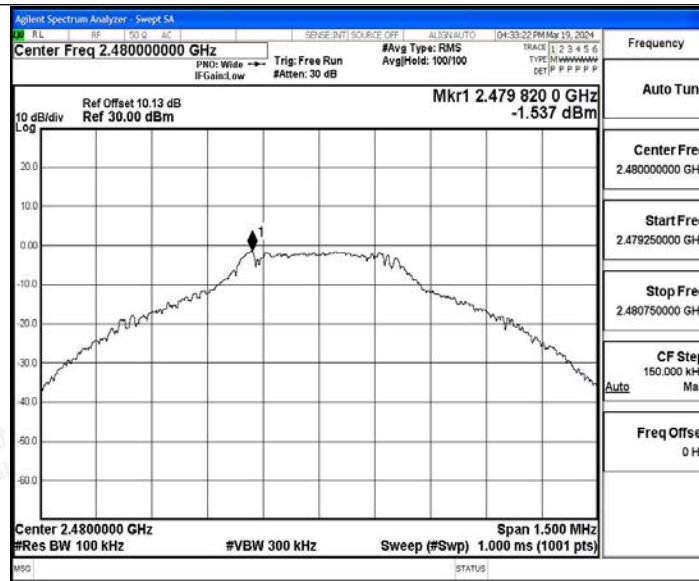


DH5_Ant1_2441

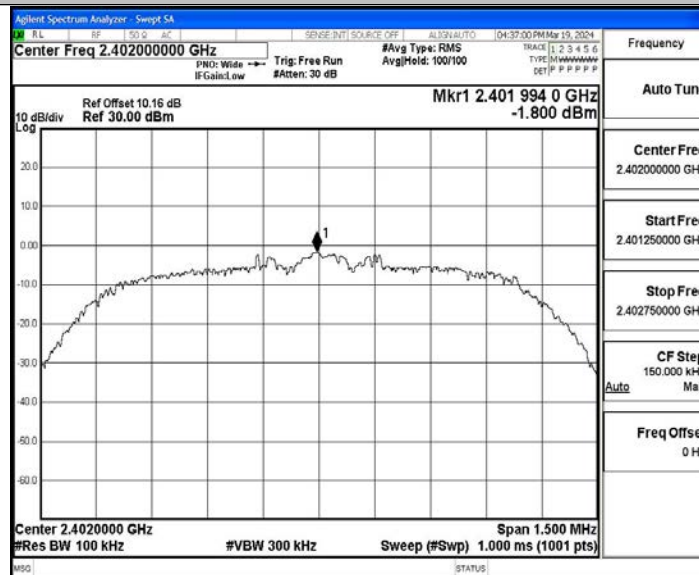


DH5_Ant1_2480



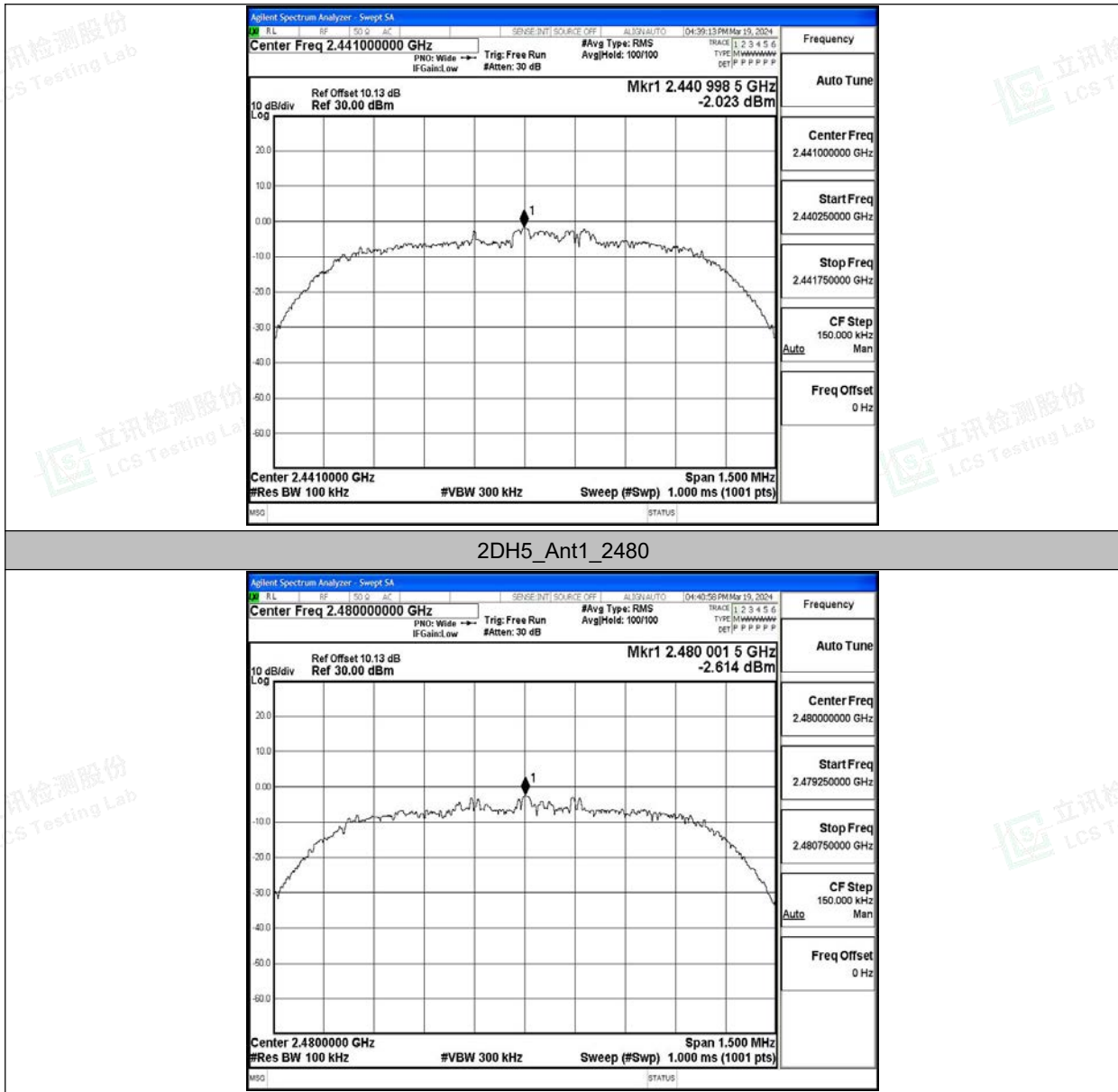


2DH5_Ant1_2402



2DH5_Ant1_2441







A.8 Duty Cycle

Test Result

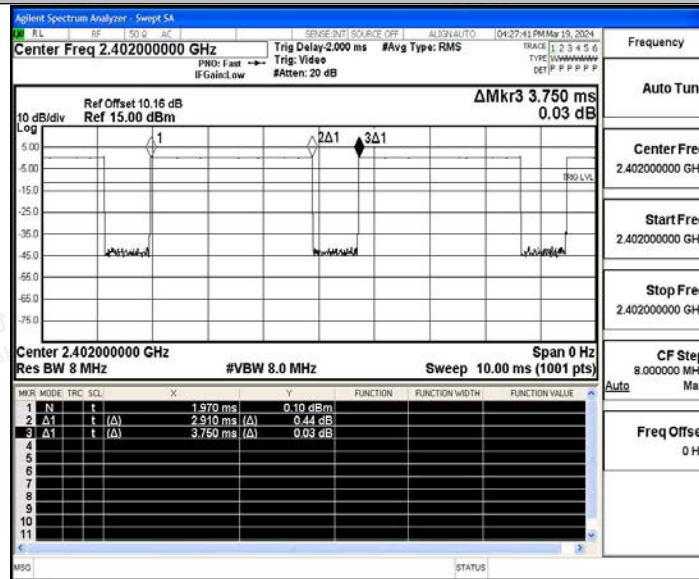
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[kHz]
DH5	Ant1	2402	2.91	3.75	77.60	1.10	0.34
		2441	2.91	3.75	77.60	1.10	0.34
		2480	2.91	3.75	77.60	1.10	0.34
2DH5	Ant1	2402	2.90	3.75	77.33	1.12	0.34
		2441	2.90	3.75	77.33	1.12	0.34
		2480	2.90	3.75	77.33	1.12	0.34



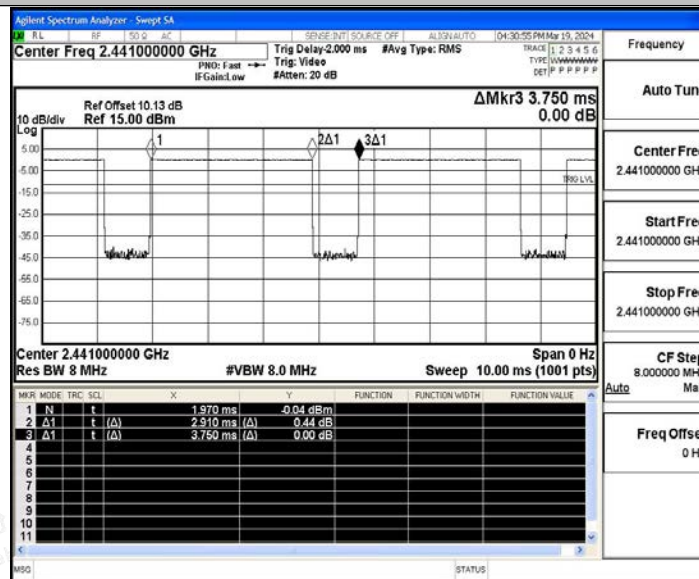


Test Graphs

DH5_Ant1_2402

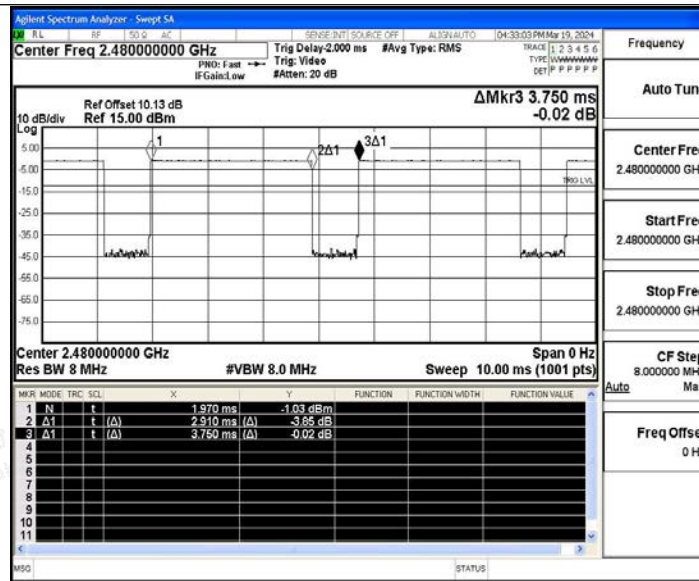


DH5_Ant1_2441

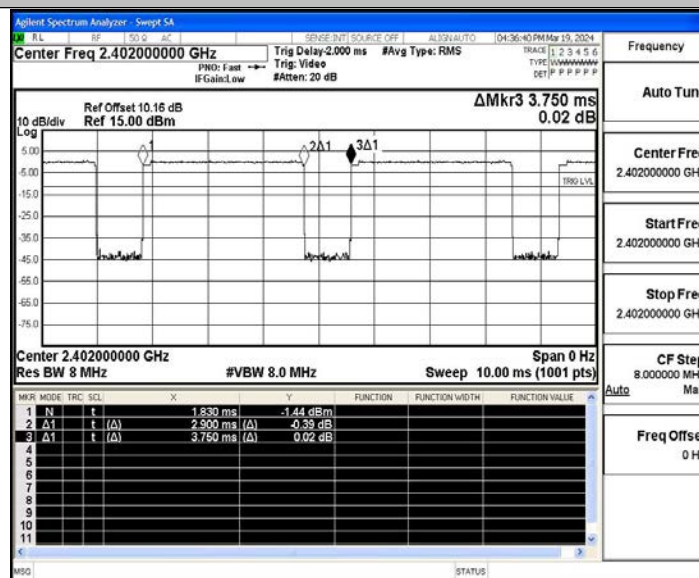


DH5_Ant1_2480



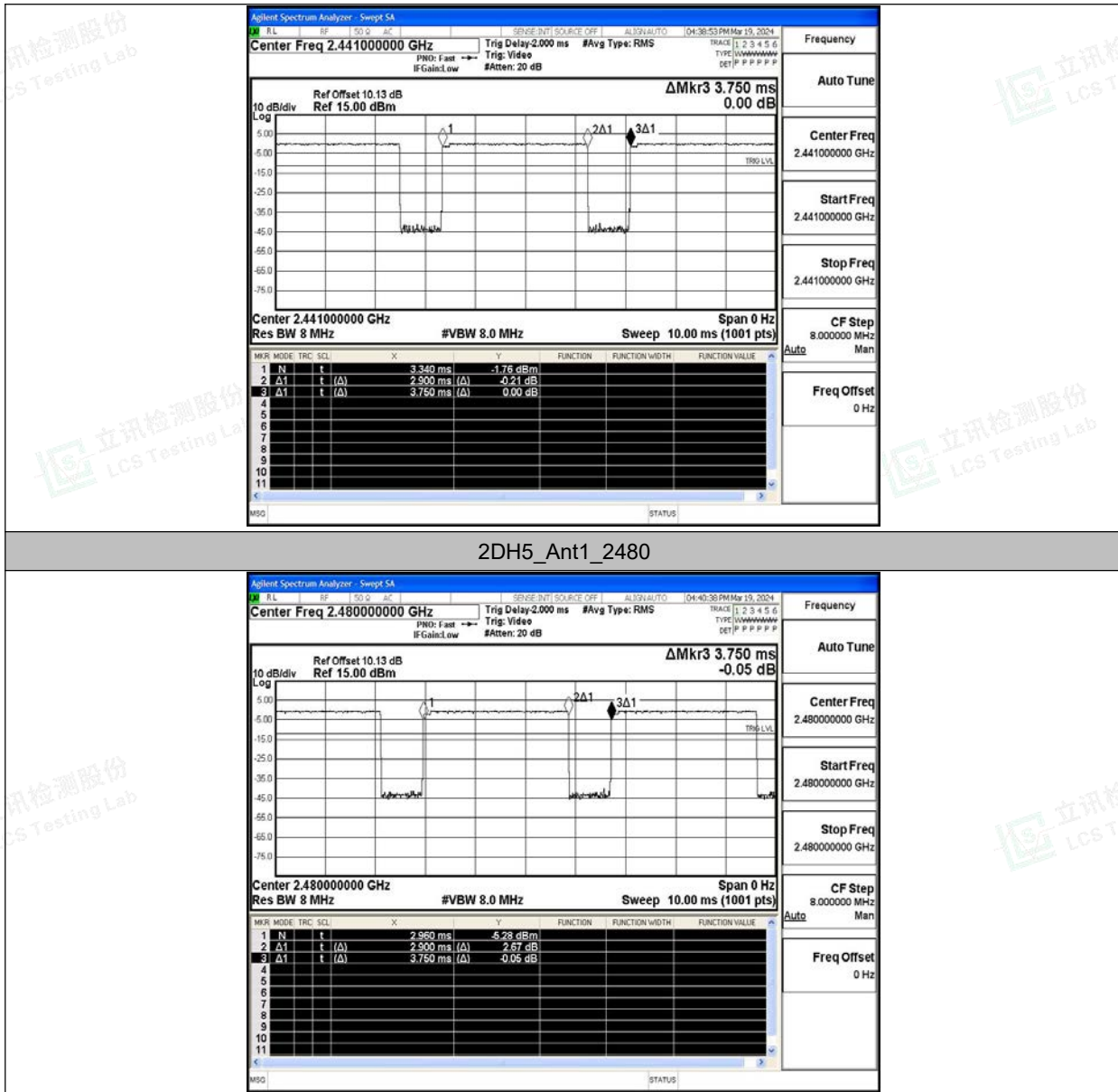


2DH5_Ant1_2402



2DH5_Ant1_2441







A.9 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.04	≤-41.20	47.16	≤54	PASS
				AV	2371.400	-45.82	≤-41.20	49.38	≤54	PASS
				AV	2390.000	-46.96	≤-41.20	48.24	≤54	PASS
				Peak	2310.000	-40.03	≤-21.20	55.17	≤74	PASS
				Peak	2377.805	-36.6	≤-21.20	58.60	≤74	PASS
				Peak	2390.000	-39.79	≤-21.20	55.41	≤74	PASS
		High	2480	AV	2483.500	-47.01	≤-41.20	48.19	≤54	PASS
				AV	2491.920	-46.05	≤-41.20	49.15	≤54	PASS
				AV	2500.000	-46.33	≤-41.20	48.87	≤54	PASS
				Peak	2483.500	-40.44	≤-21.20	54.76	≤74	PASS
				Peak	2496.080	-36.03	≤-21.20	59.17	≤74	PASS
				Peak	2500.000	-39.65	≤-21.20	55.55	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-39.67	≤-21.20	55.53	≤74	PASS
				Peak	2337.065	-36.55	≤-21.20	58.65	≤74	PASS
				Peak	2390.000	-41.02	≤-21.20	54.18	≤74	PASS
		High	Hop_2480	Peak	2483.500	-40.22	≤-21.20	54.98	≤74	PASS
				Peak	2490.960	-37.22	≤-21.20	57.98	≤74	PASS
				Peak	2500.000	-40.21	≤-21.20	54.99	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-47.44	≤-41.20	47.76	≤54	PASS
				AV	2382.215	-46.09	≤-41.20	49.11	≤54	PASS
				AV	2390.000	-46.17	≤-41.20	49.03	≤54	PASS
				Peak	2310.000	-40.04	≤-21.20	55.16	≤74	PASS
				Peak	2387.675	-36.67	≤-21.20	58.53	≤74	PASS
				Peak	2390.000	-37.66	≤-21.20	57.54	≤74	PASS
		High	2480	AV	2483.500	-46.61	≤-41.20	48.59	≤54	PASS
				AV	2492.800	-45.65	≤-41.20	49.55	≤54	PASS
				AV	2500.000	-46.55	≤-41.20	48.65	≤54	PASS
				Peak	2483.500	-38.05	≤-21.20	57.15	≤74	PASS
				Peak	2493.360	-37.23	≤-21.20	57.97	≤74	PASS
				Peak	2500.000	-39.28	≤-21.20	55.92	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.05	≤-21.20	55.15	≤74	PASS
				Peak	2373.500	-37.67	≤-21.20	57.53	≤74	PASS
				Peak	2390.000	-40.16	≤-21.20	55.04	≤74	PASS
		High	Hop_2480	Peak	2483.500	-40.3	≤-21.20	54.90	≤74	PASS
				Peak	2491.280	-37.15	≤-21.20	58.05	≤74	PASS
				Peak	2500.000	-38.16	≤-21.20	57.04	≤74	PASS



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Scan code to check authenticity



Note:

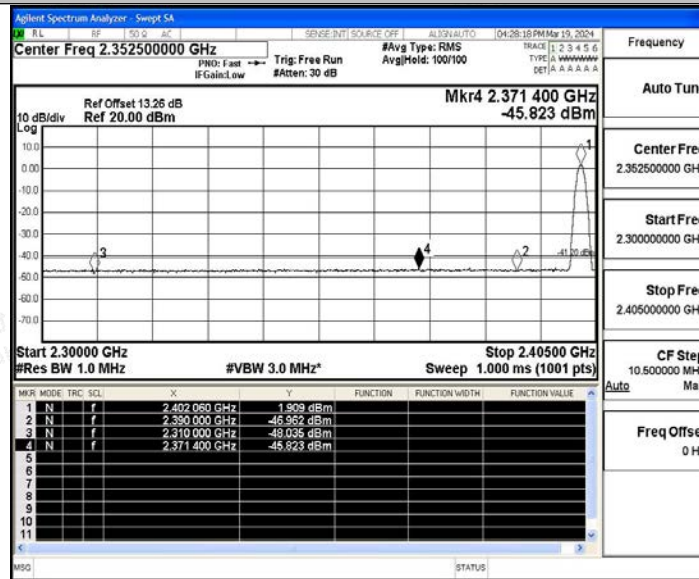
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



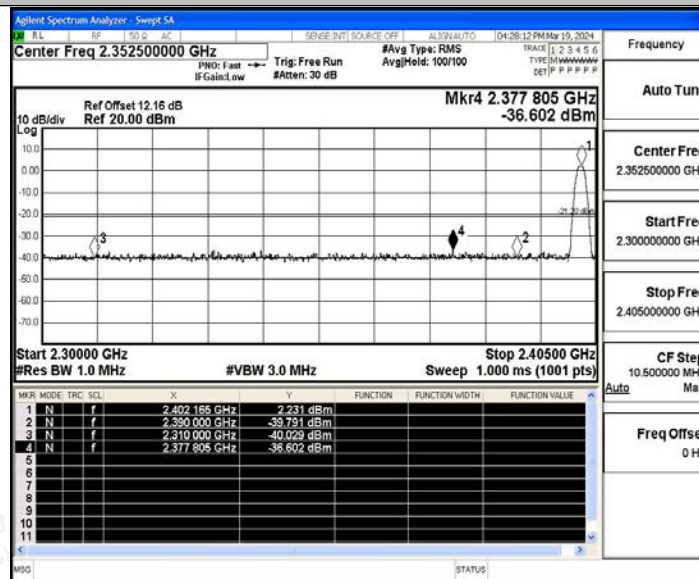


Test Graphs

DH5_Ant1_Low_2402_AV

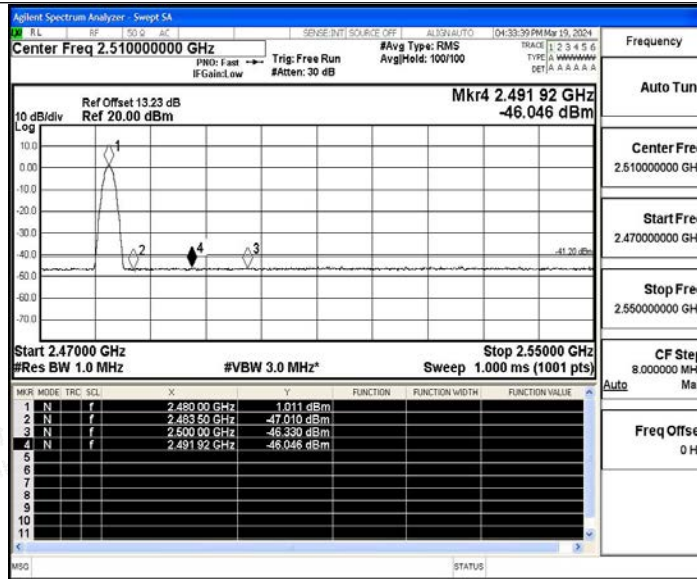


DH5_Ant1_Low_2402_Peak

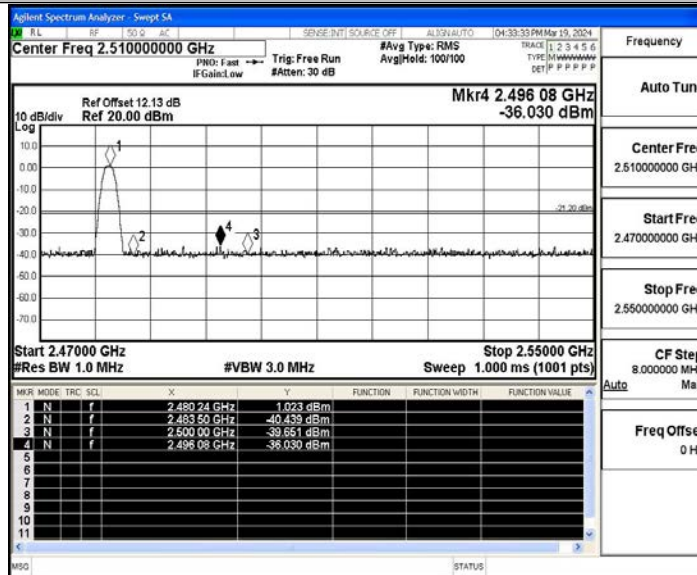


DH5_Ant1_High_2480_AV



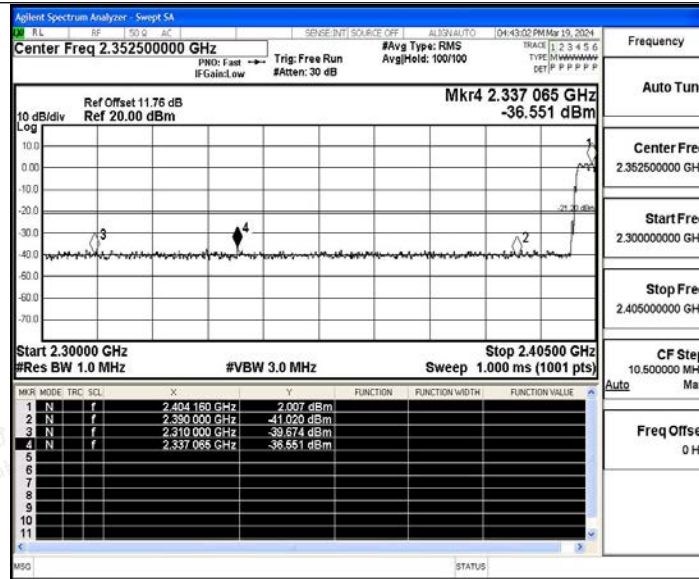


DH5_Ant1_High_2480_Peak

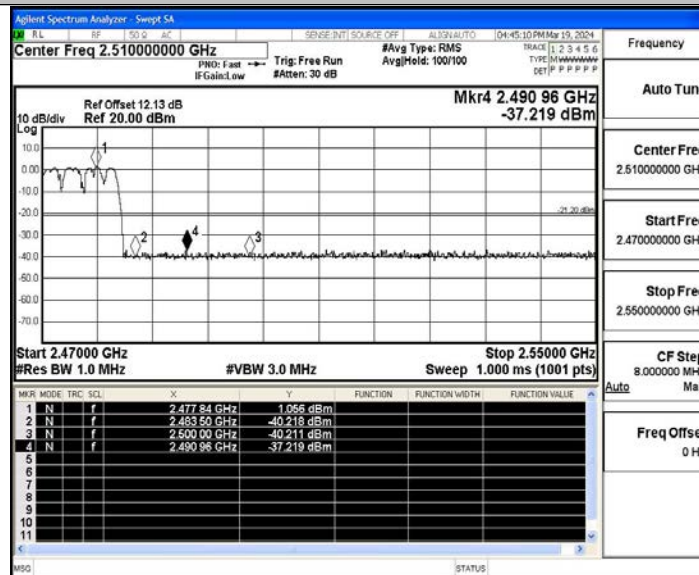


DH5_Ant1_Low_Hop_2402_Peak



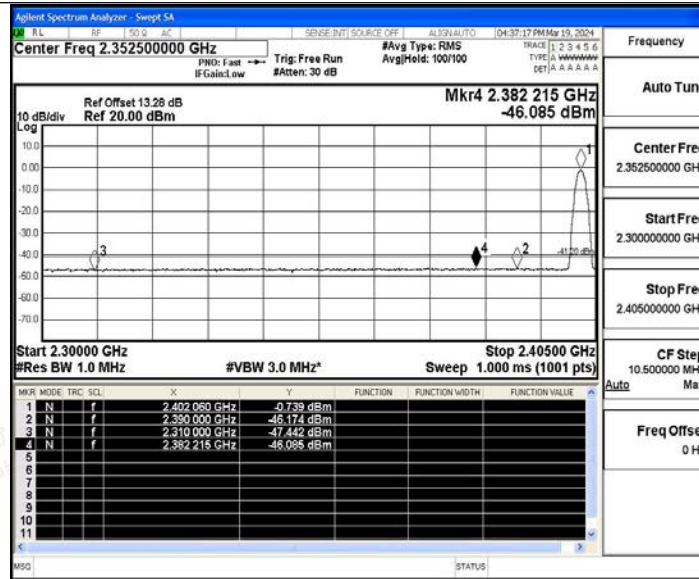


DH5_Ant1_High_Hop_2480_Peak

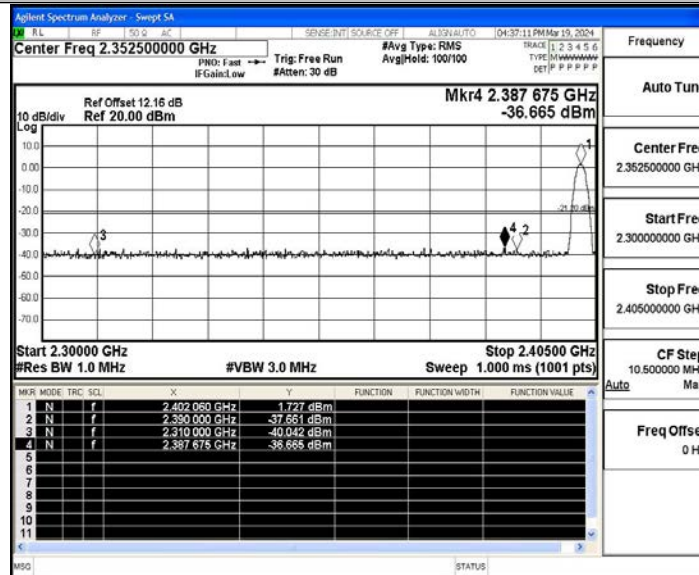


2DH5_Ant1_Low_2402_AV



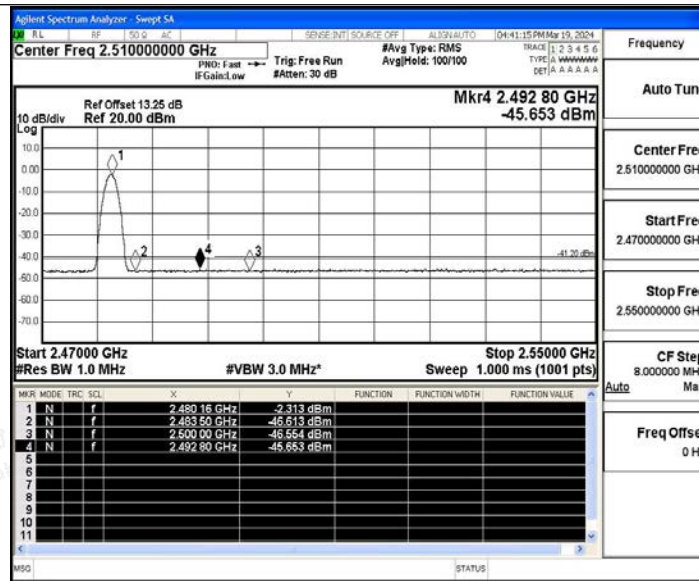


2DH5_Ant1_Low_2402_Peak

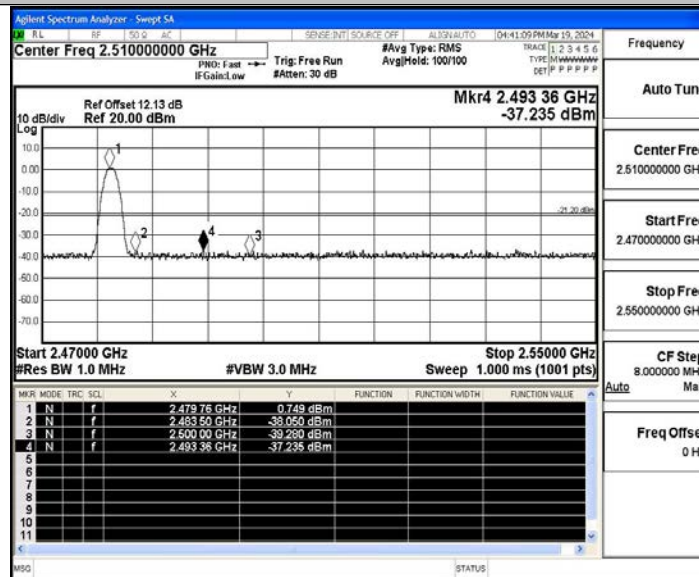


2DH5_Ant1_High_2480_AV



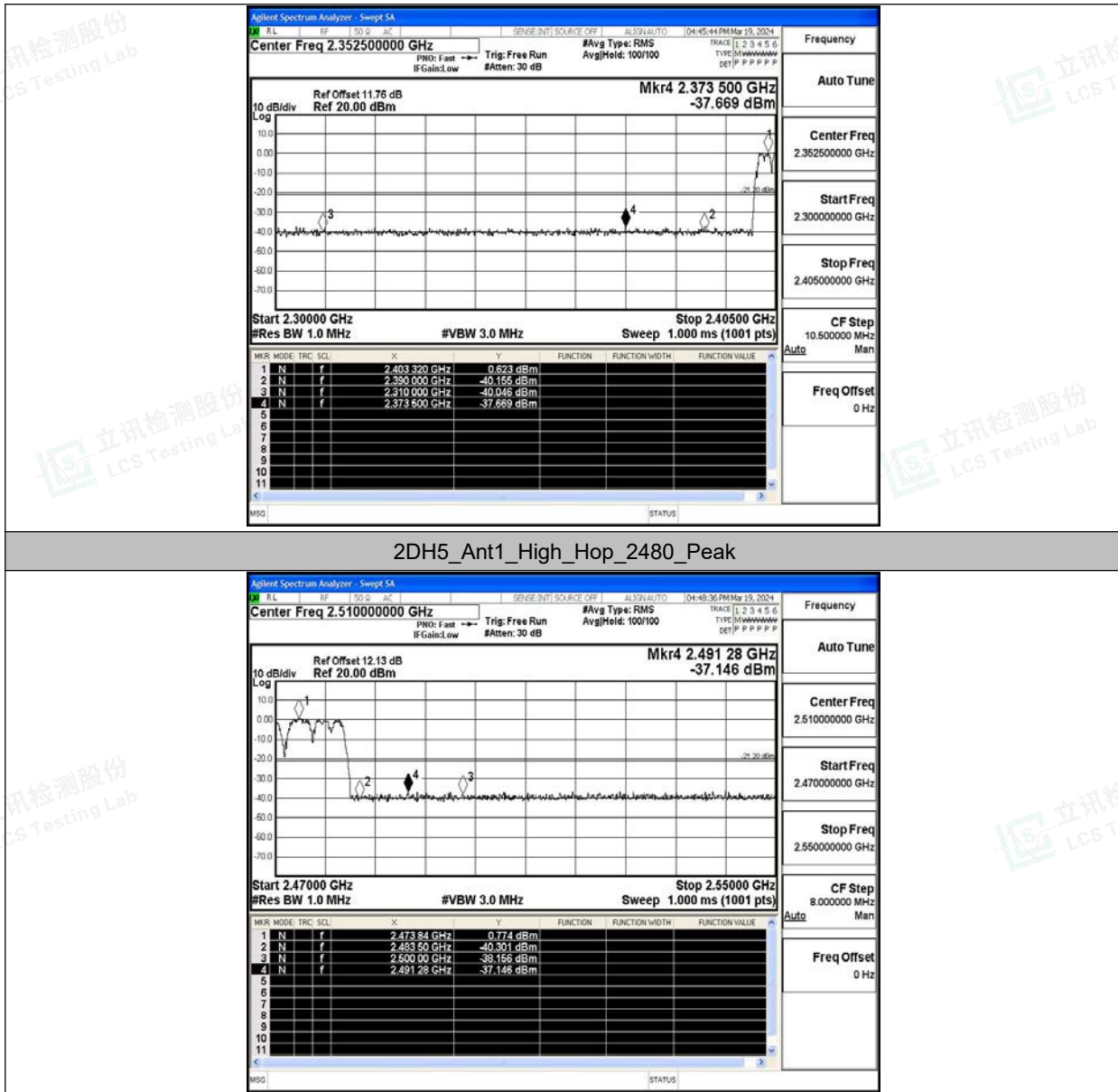


2DH5_Ant1_High_2480_Peak



2DH5_Ant1_Low_Hop_2402_Peak





-----THE END OF TEST REPORT-----

