

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth Speaker

Test Model: OS-2220

Environmental Conditions

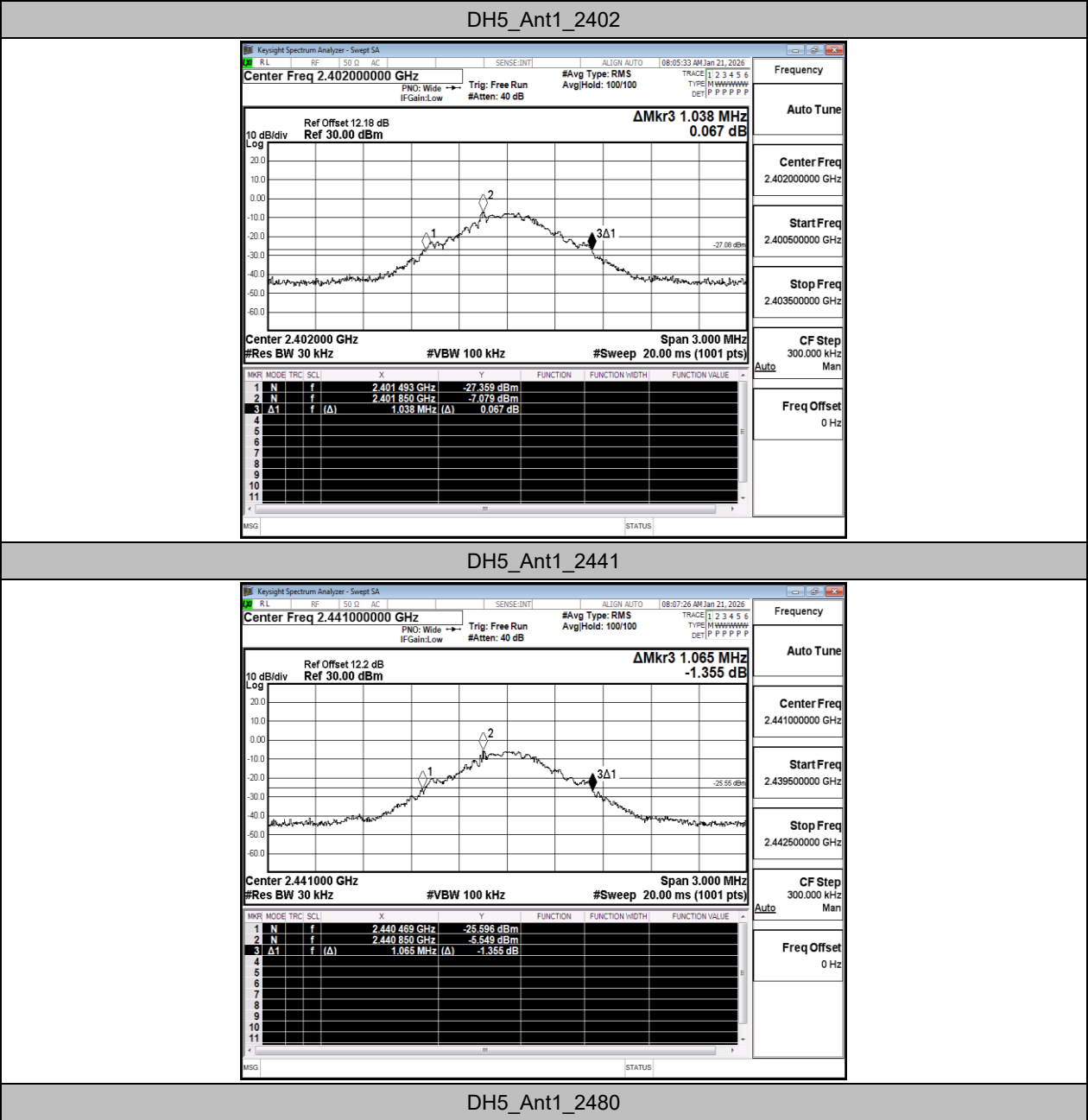
Temperature:	23.8°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

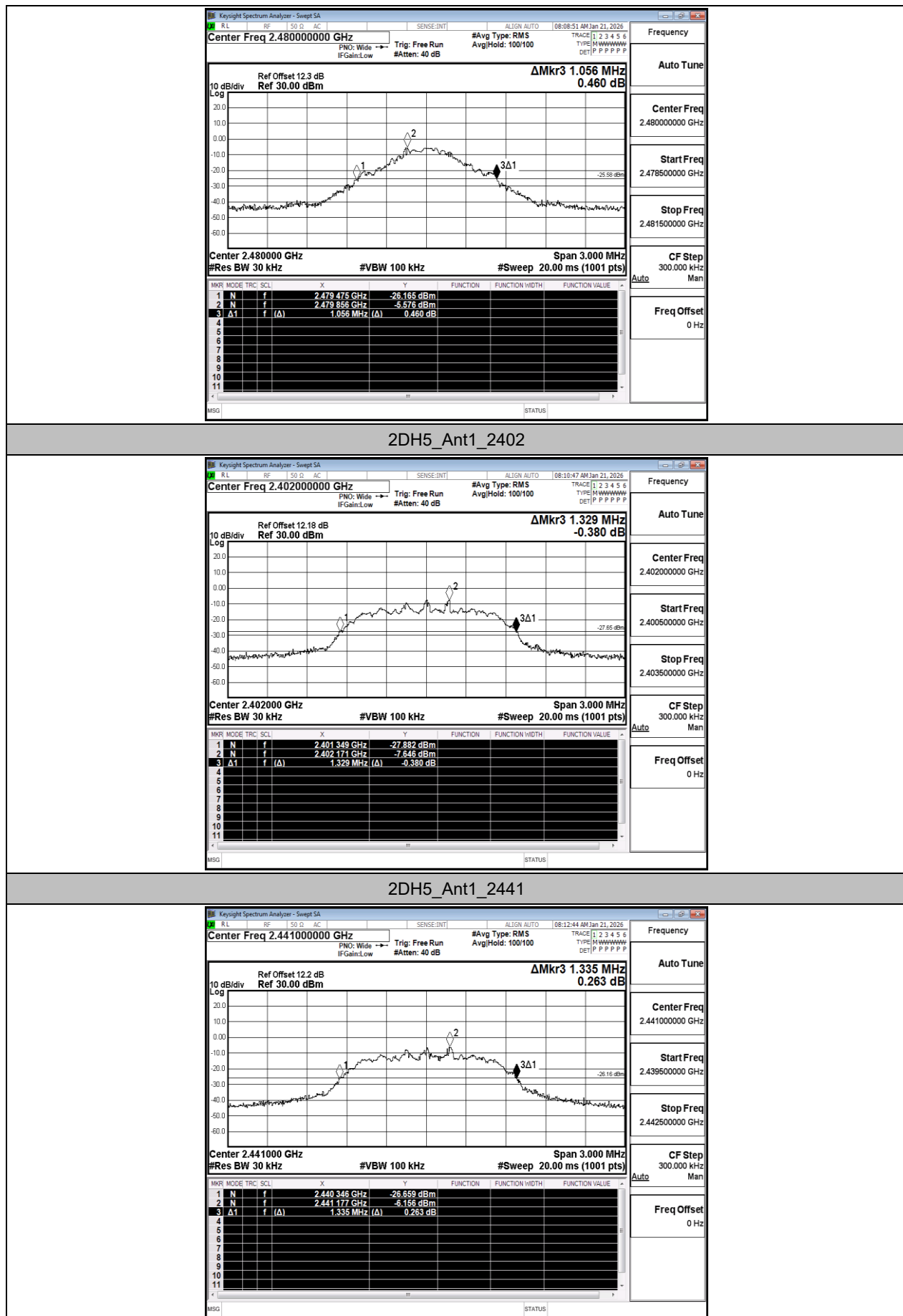
A.1 20dB Emission Bandwidth

Test Result

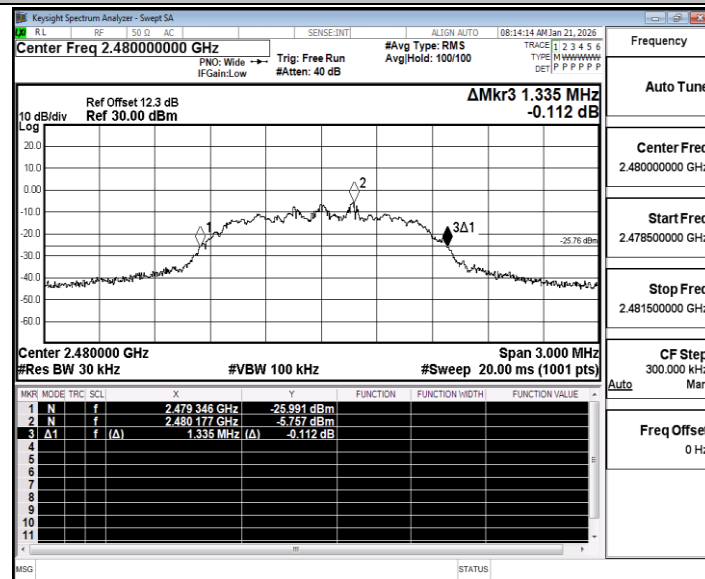
TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.038	2401.493	2402.531	---	---
		2441	1.065	2440.469	2441.534	---	---
		2480	1.056	2479.475	2480.531	---	---
2DH5	Ant1	2402	1.329	2401.349	2402.678	---	---
		2441	1.335	2440.346	2441.681	---	---
		2480	1.335	2479.346	2480.681	---	---
3DH5	Ant1	2402	1.290	2401.370	2402.660	---	---
		2441	1.287	2440.367	2441.654	---	---
		2480	1.290	2479.358	2480.648	---	---

Test Graphs

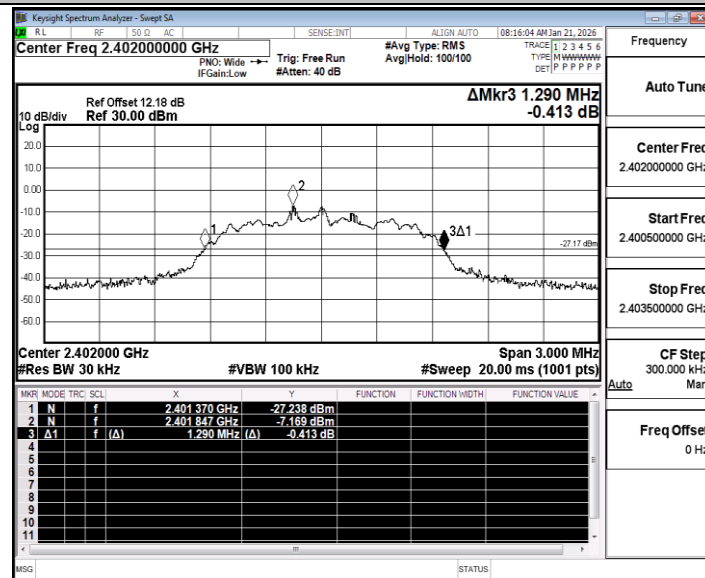




2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441

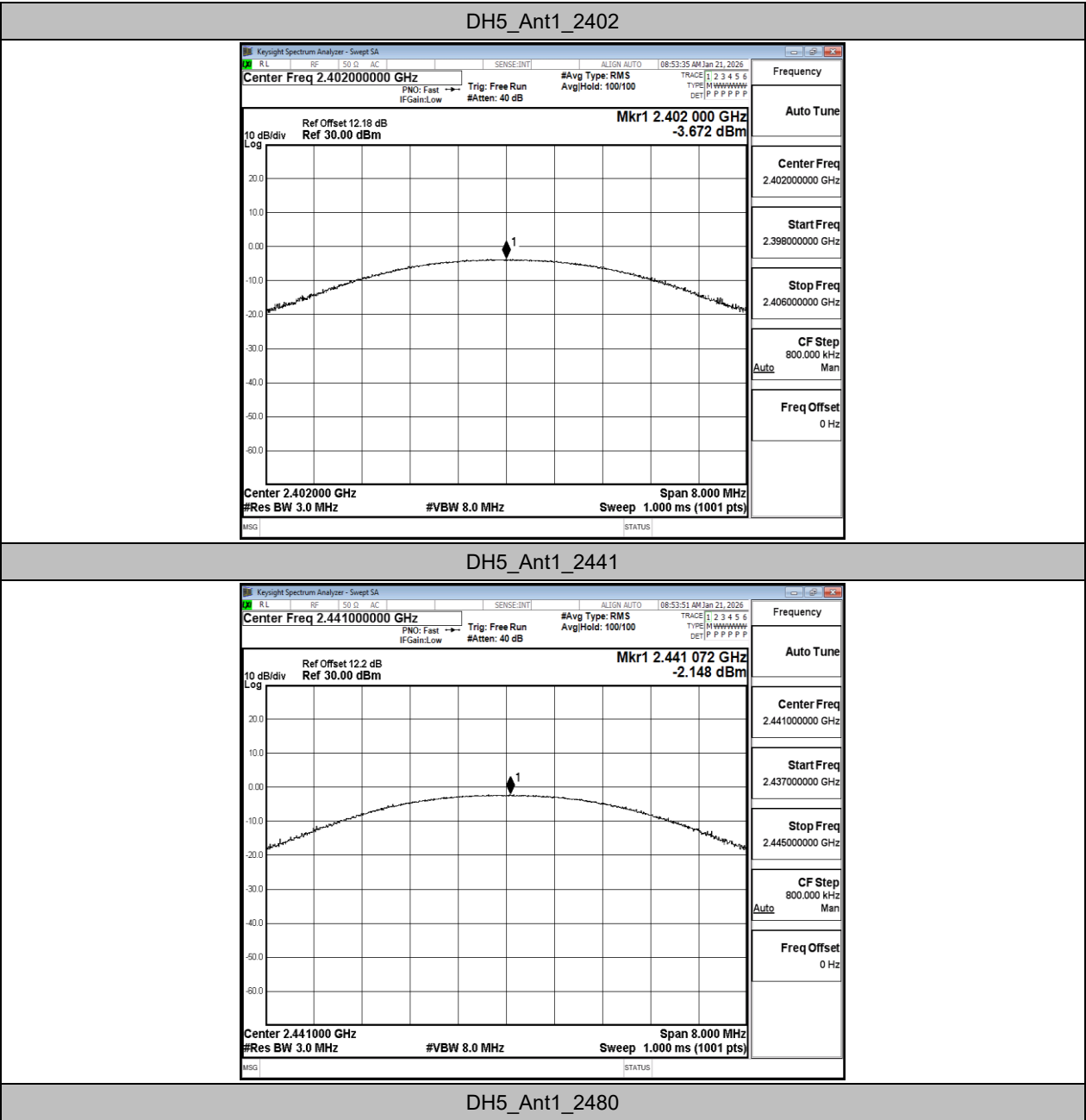


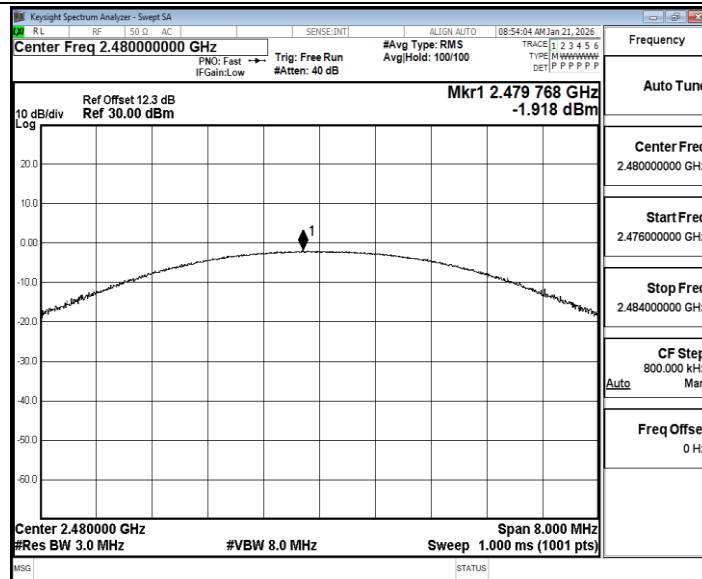
A.2 Maximum Peak conducted output power

Test Result Peak

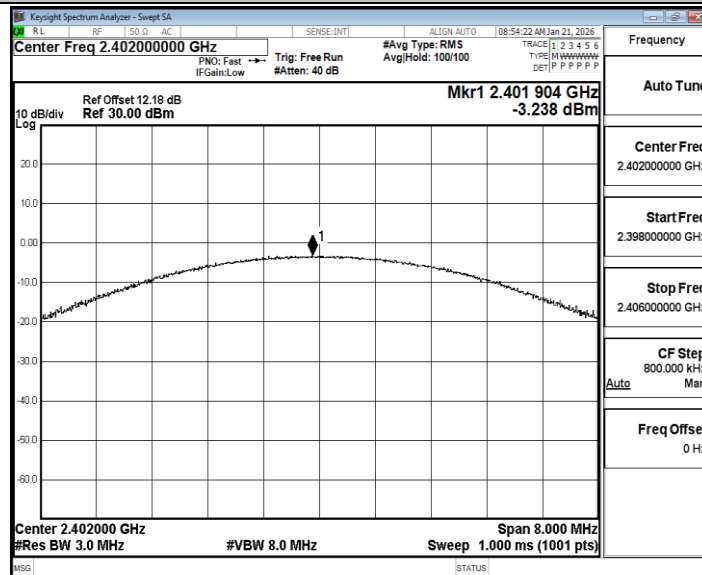
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-3.67	≤30	PASS
		2441	-2.15	≤30	PASS
		2480	-1.92	≤30	PASS
2DH5	Ant1	2402	-3.24	≤30	PASS
		2441	-1.68	≤30	PASS
		2480	-1.51	≤30	PASS
3DH5	Ant1	2402	-2.83	≤30	PASS
		2441	-1.08	≤30	PASS
		2480	-1.20	≤30	PASS

Test Graphs

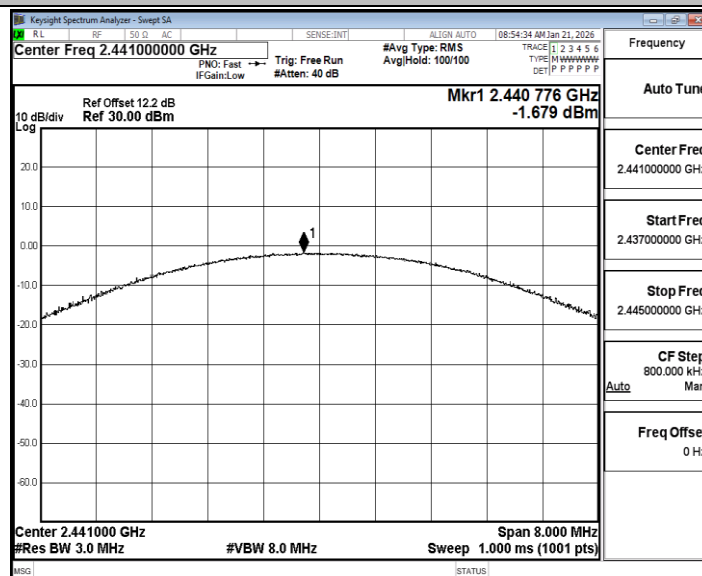




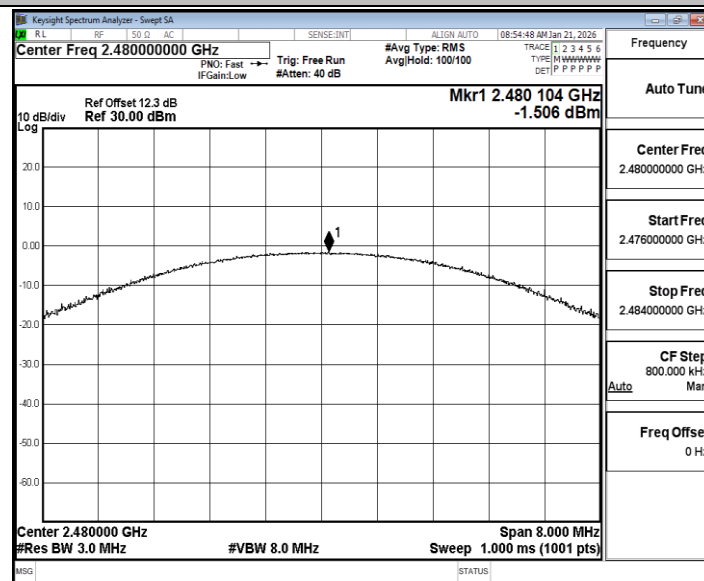
2DH5_Ant1_2402



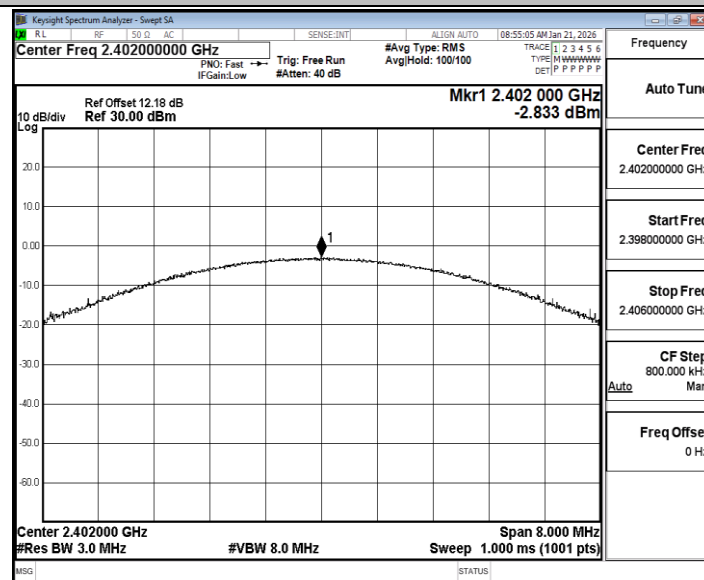
2DH5_Ant1_2441



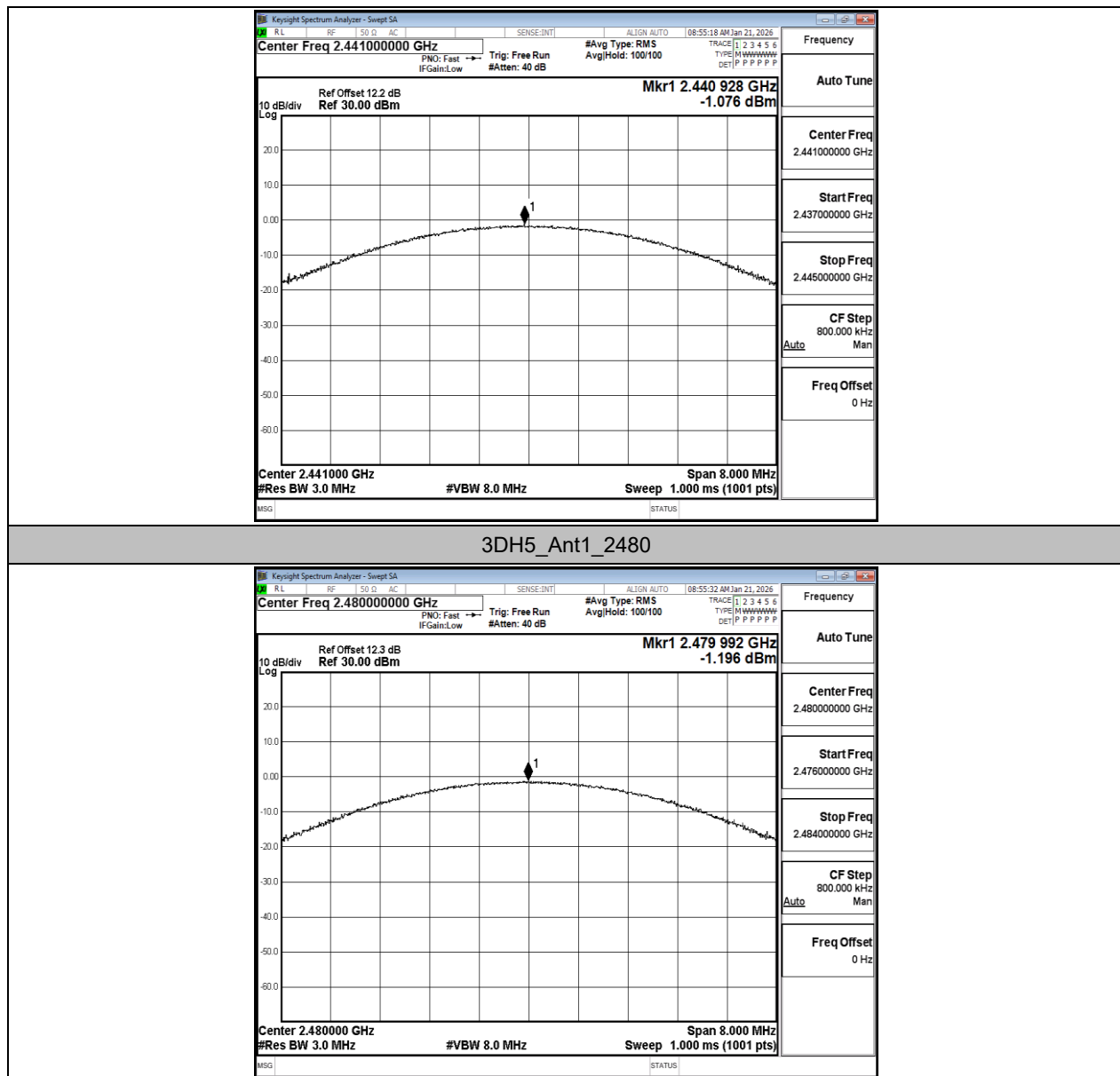
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441

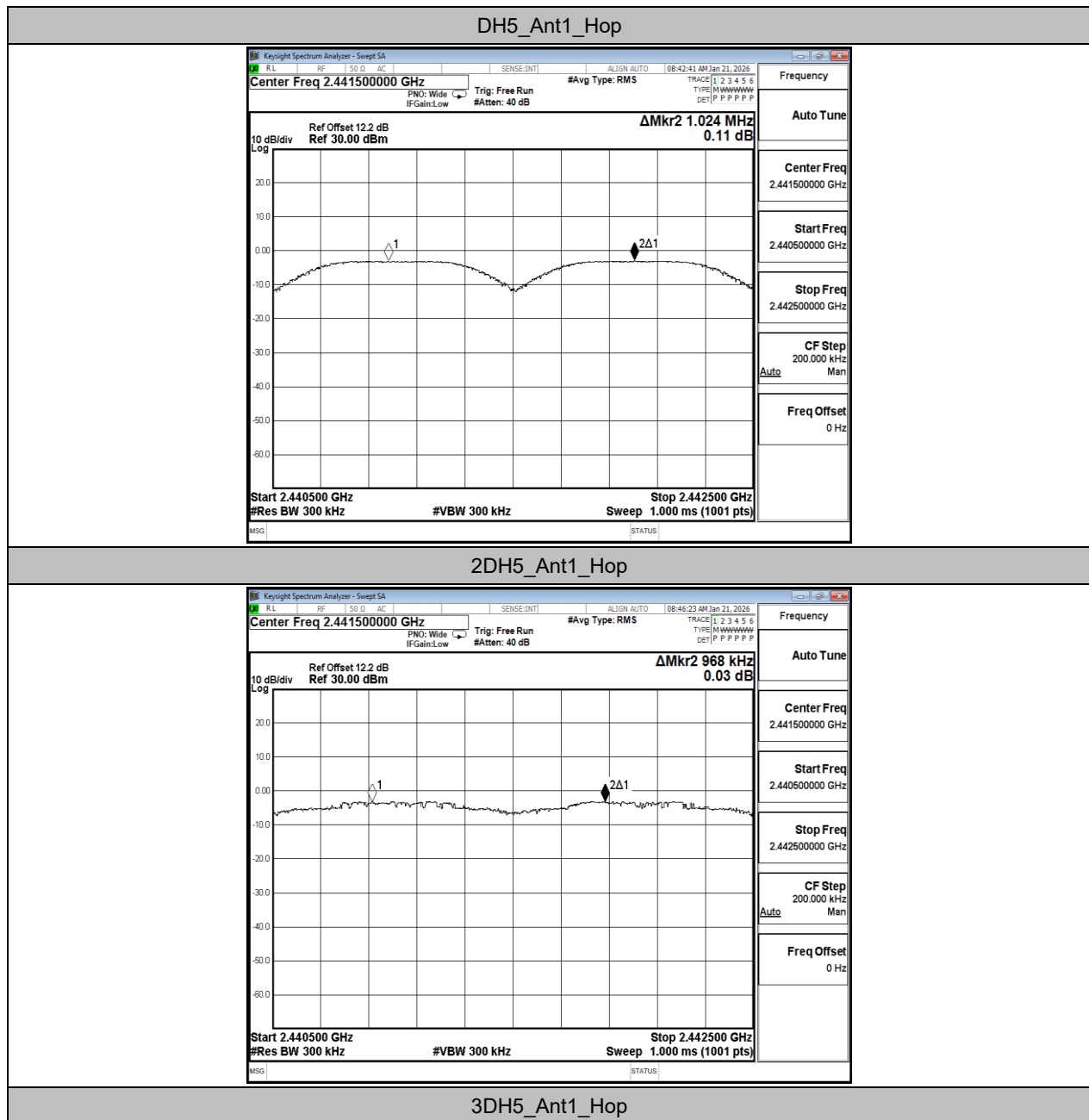


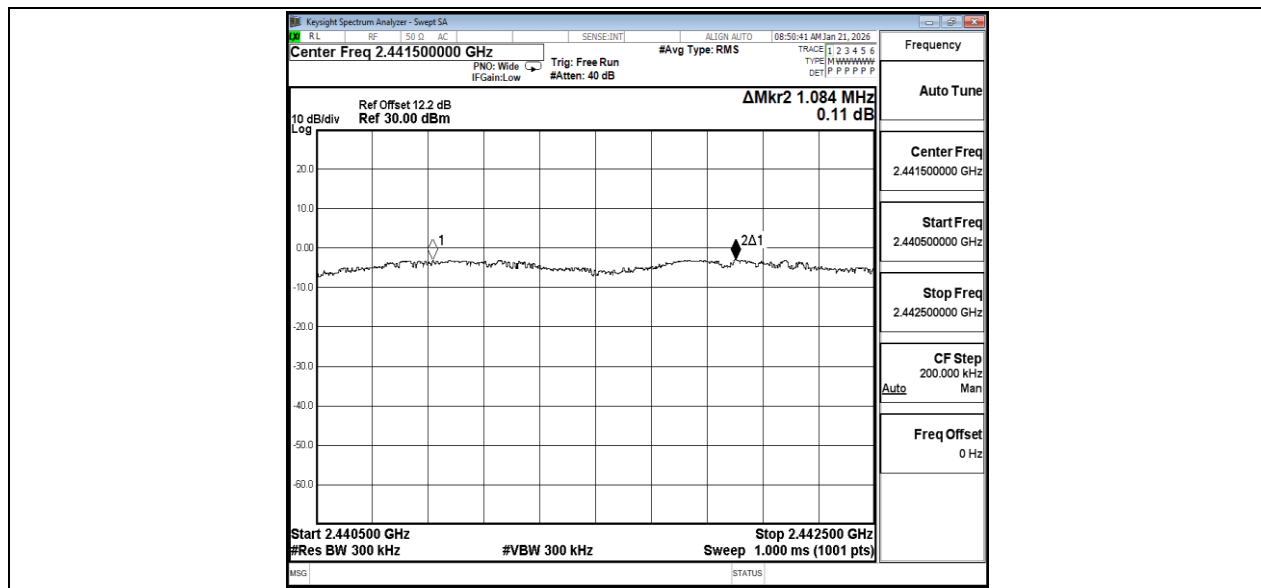
A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.024	≥ 0.710	PASS
2DH5	Ant1	Hop	0.968	≥ 0.890	PASS
3DH5	Ant1	Hop	1.084	≥ 0.860	PASS

Test Graphs



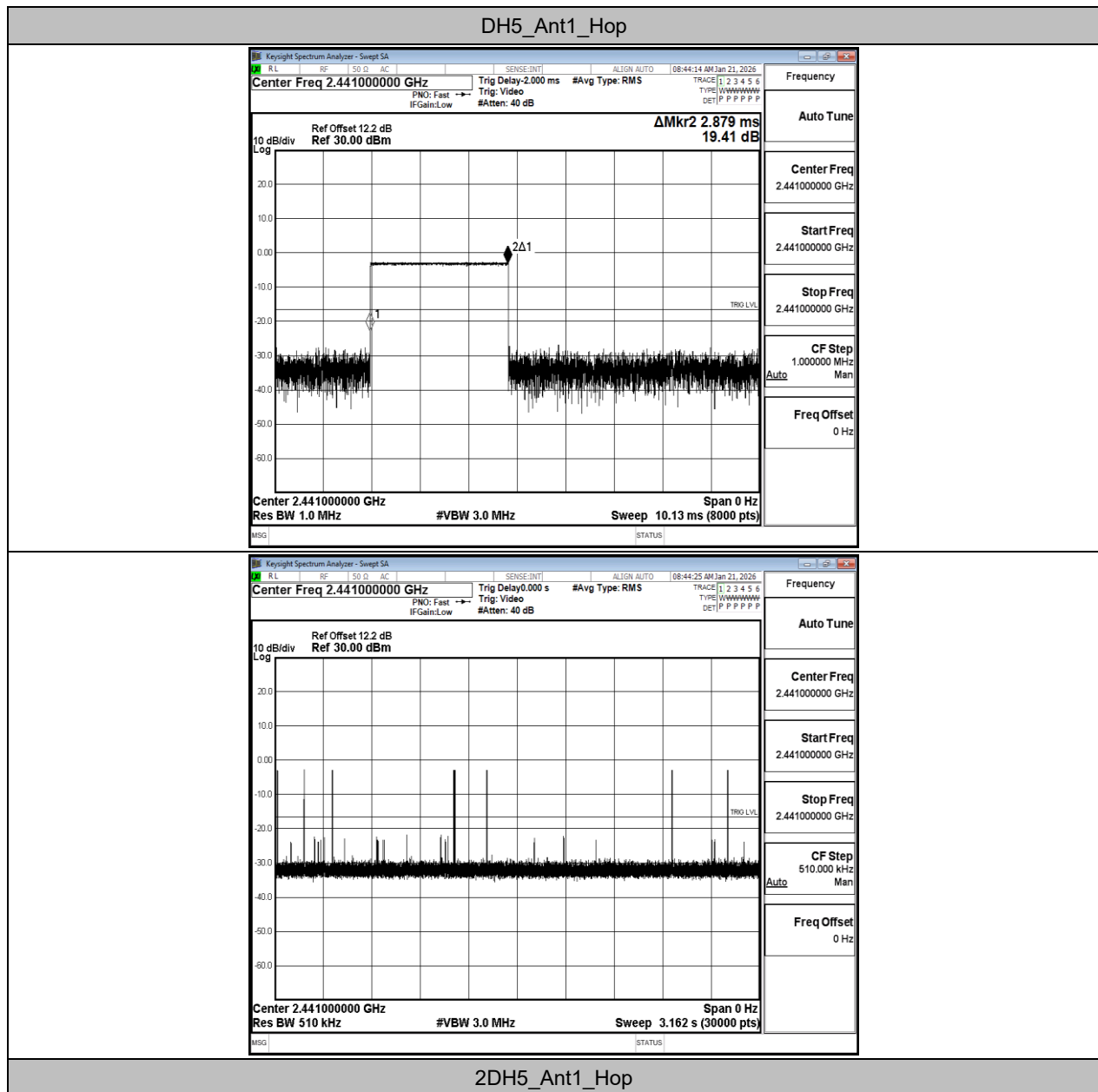


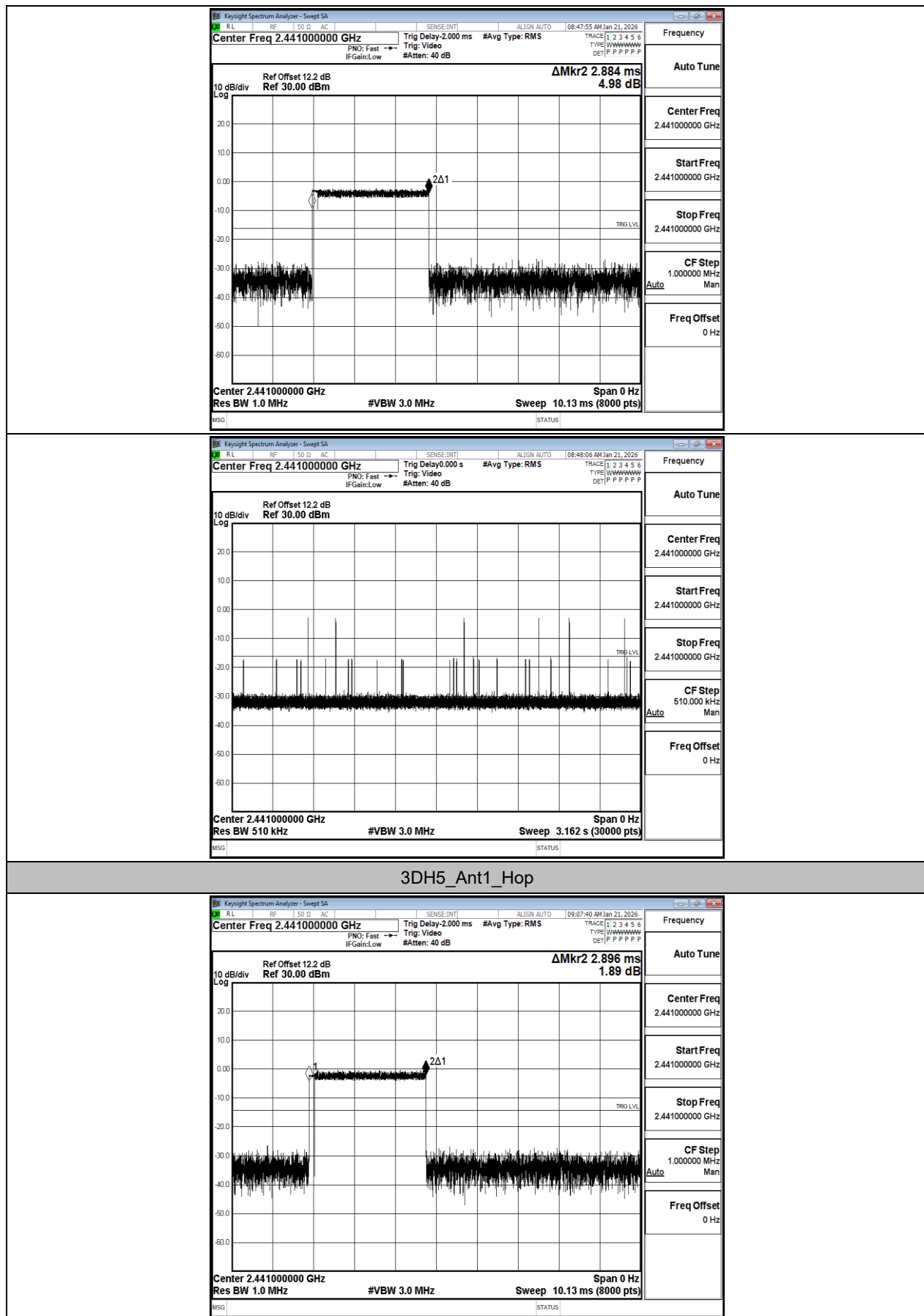
A.4 Time of occupancy

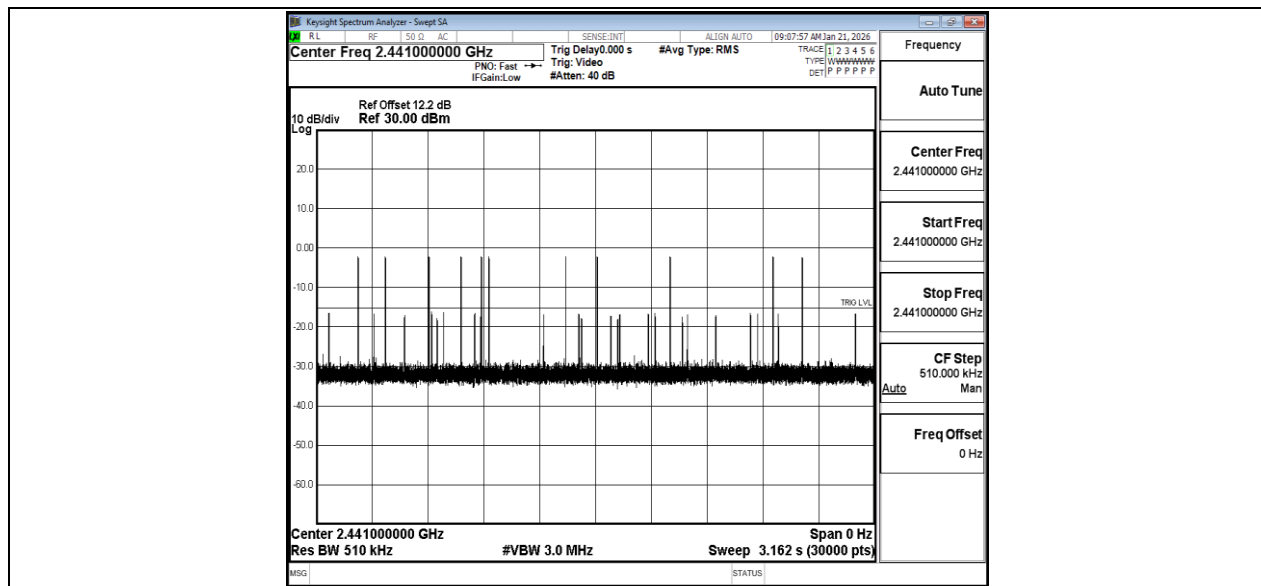
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.879	90	0.259	≤0.4	PASS
2DH5	Ant1	Hop	2.884	70	0.202	≤0.4	PASS
3DH5	Ant1	Hop	2.896	120	0.348	≤0.4	PASS

Test Graphs





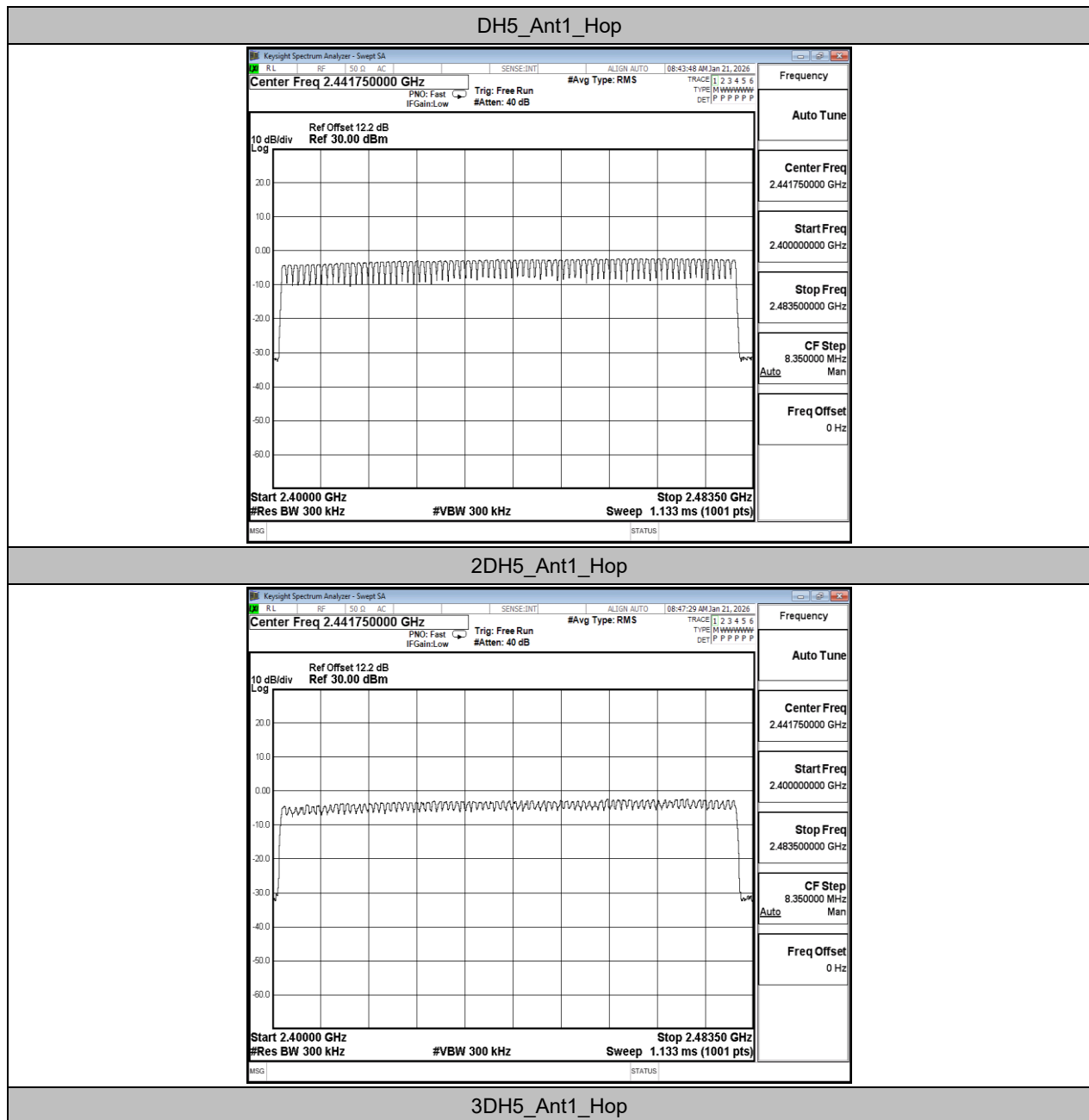


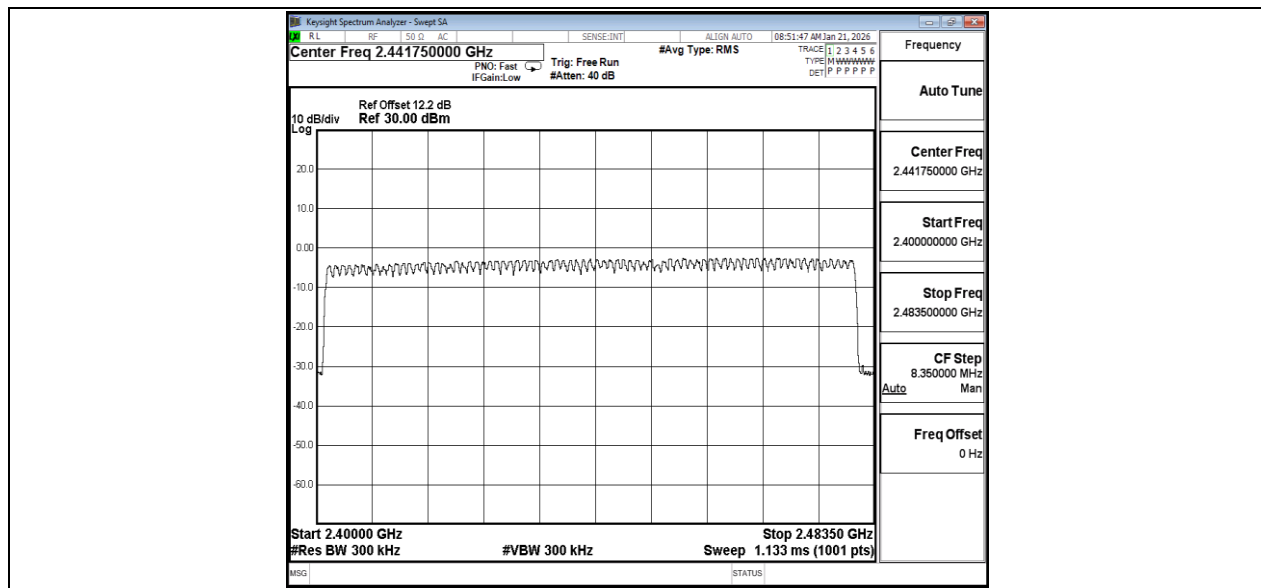
A.5 Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	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



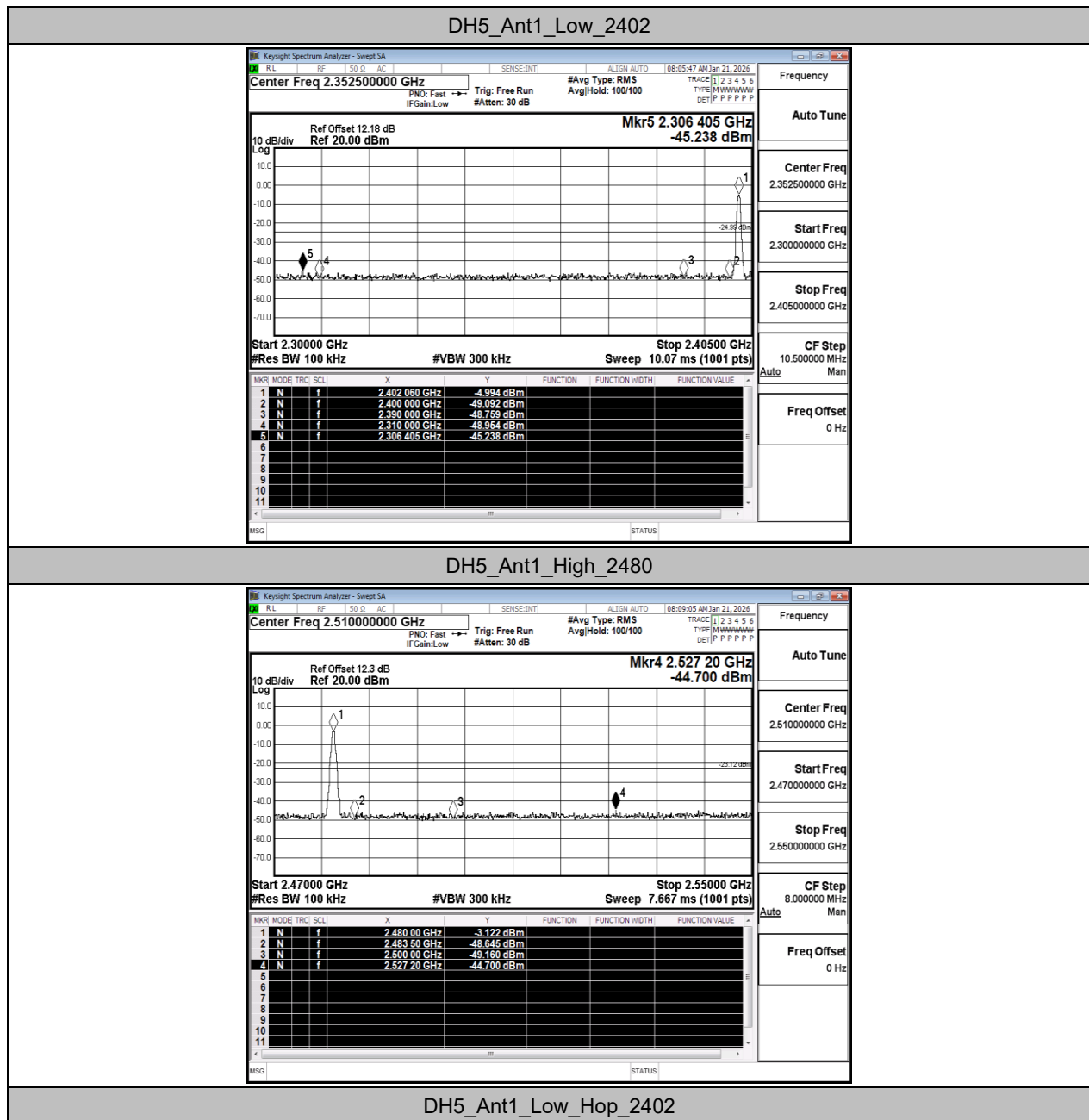


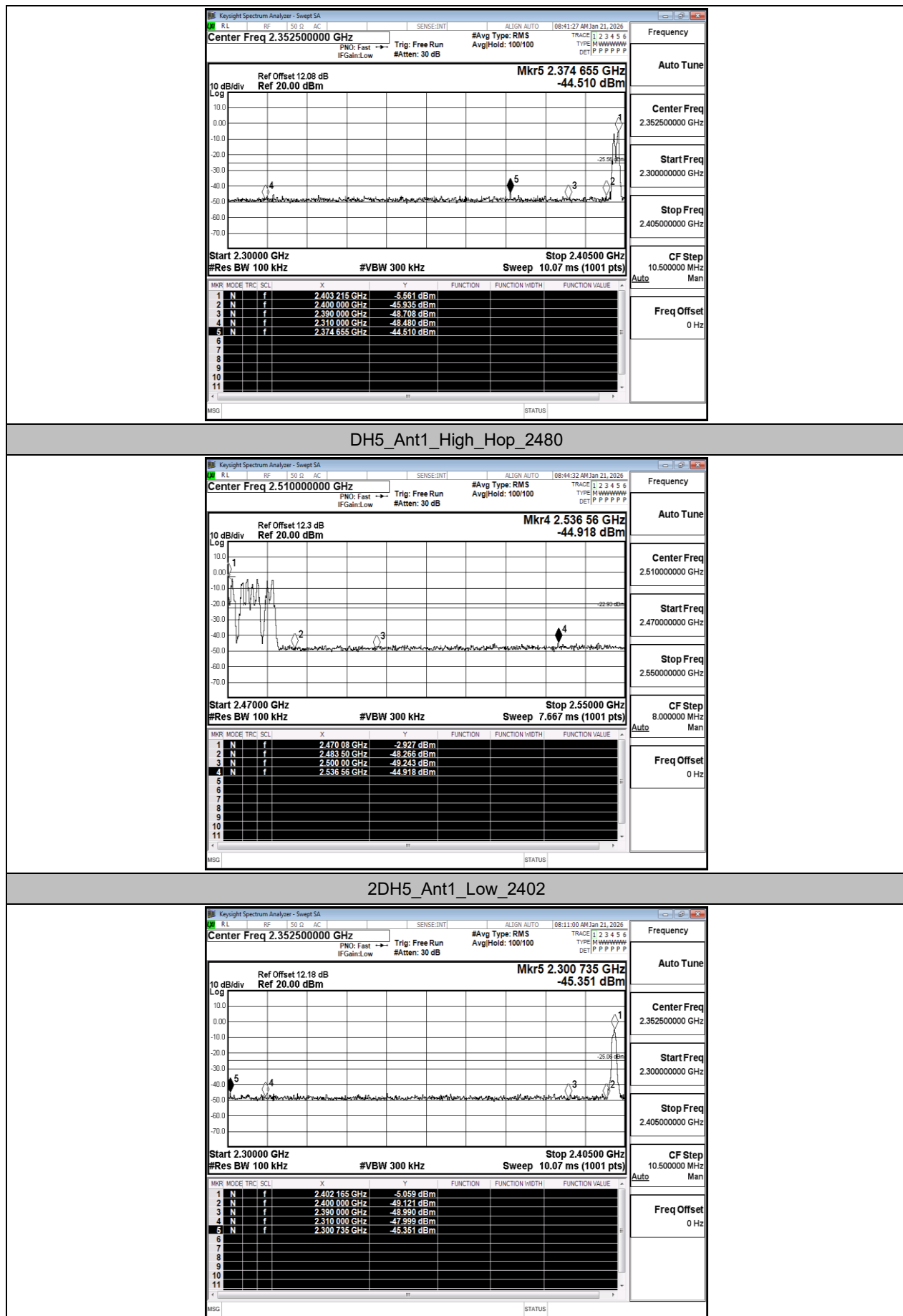
A.6 Band edge measurements

Test Result

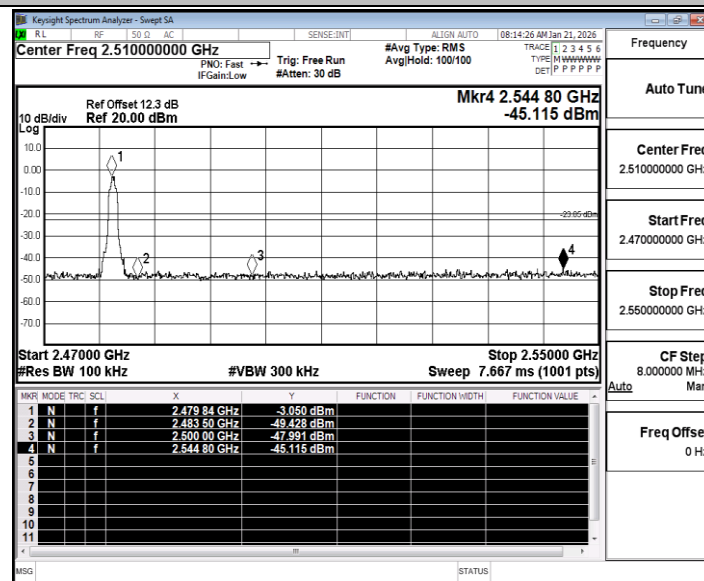
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.99	-45.24	≤-24.99	PASS
		High	2480	-3.12	-44.7	≤-23.12	PASS
		Low	Hop_2402	-5.56	-44.51	≤-25.56	PASS
		High	Hop_2480	-2.93	-44.92	≤-22.93	PASS
2DH5	Ant1	Low	2402	-5.06	-45.35	≤-25.06	PASS
		High	2480	-3.05	-45.12	≤-23.05	PASS
		Low	Hop_2402	-9.39	-44.84	≤-29.39	PASS
		High	Hop_2480	-7.23	-44.89	≤-27.23	PASS
3DH5	Ant1	Low	2402	-5.73	-45.45	≤-25.73	PASS
		High	2480	-3.66	-45.55	≤-23.66	PASS
		Low	Hop_2402	-9.02	-45.96	≤-29.02	PASS
		High	Hop_2480	-7.02	-45.03	≤-27.02	PASS

Test Graphs

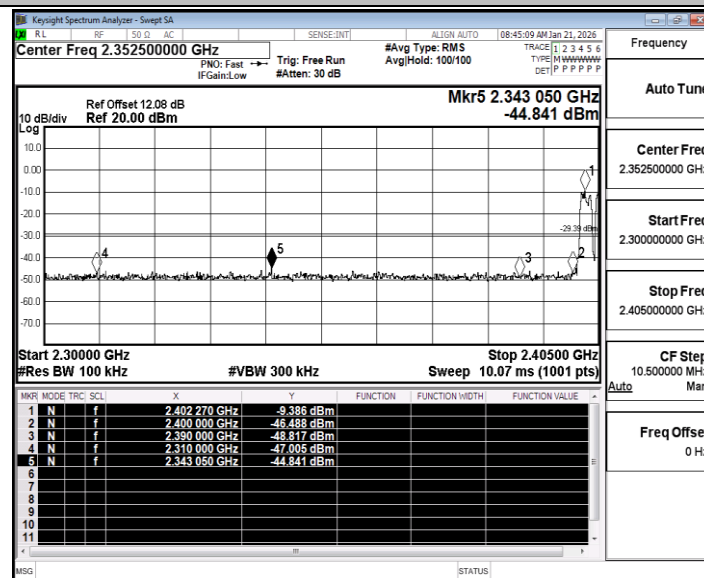




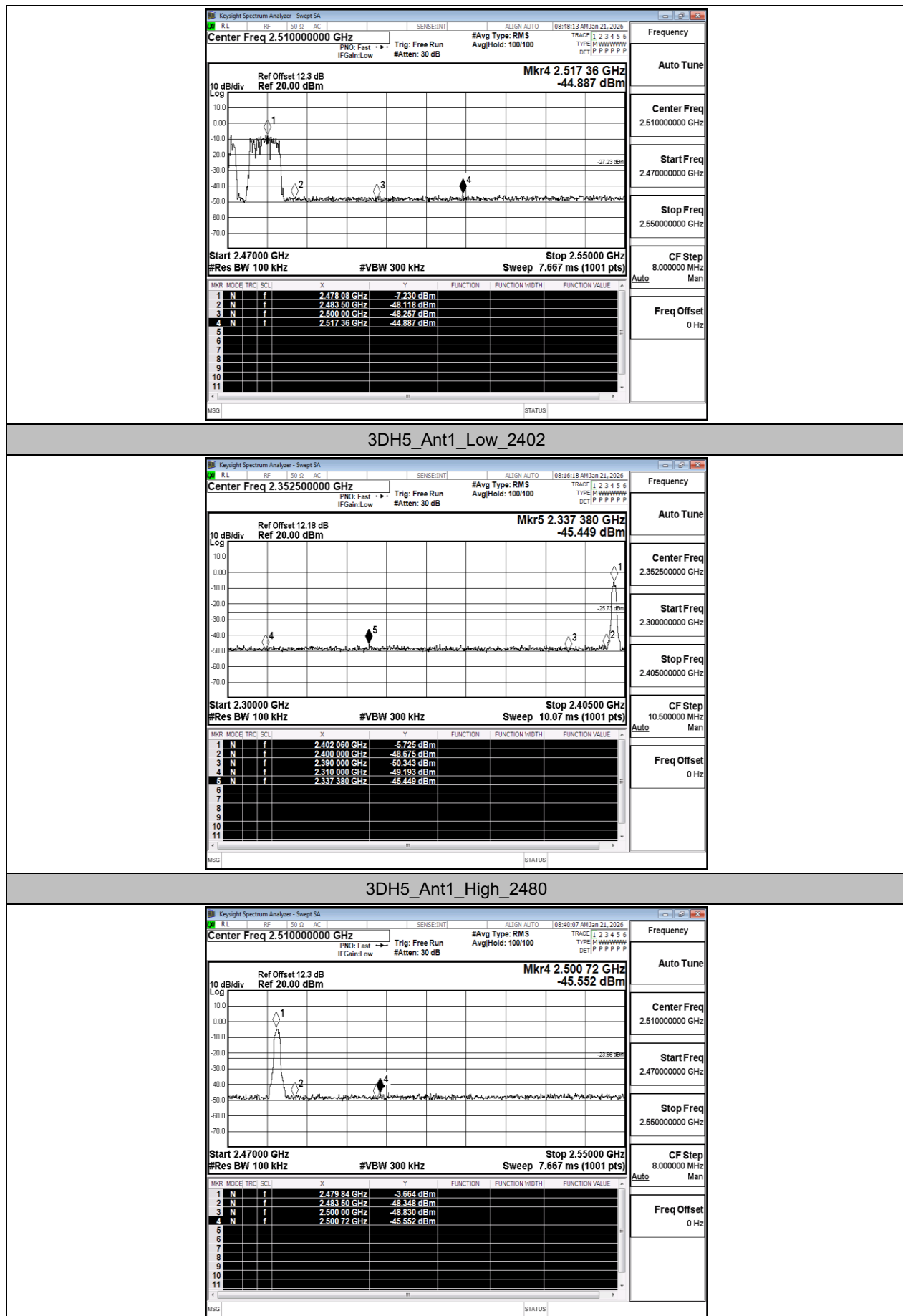
2DH5_Ant1_High_2480



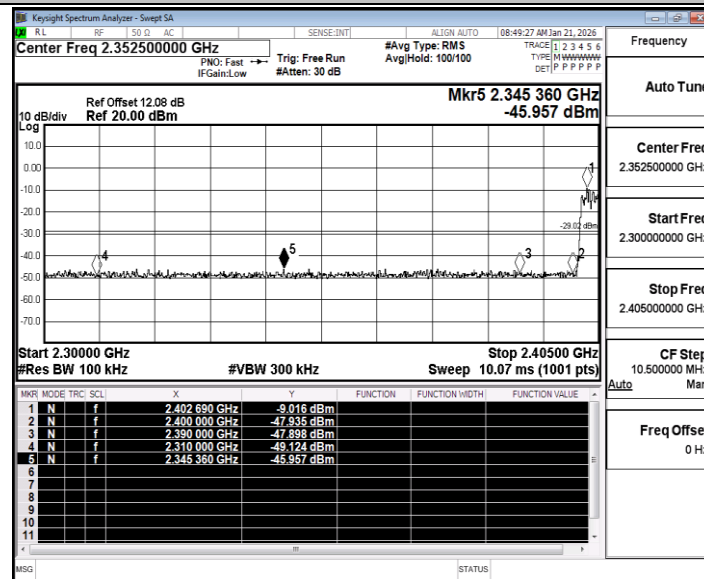
2DH5_Ant1_Low_Hop_2402



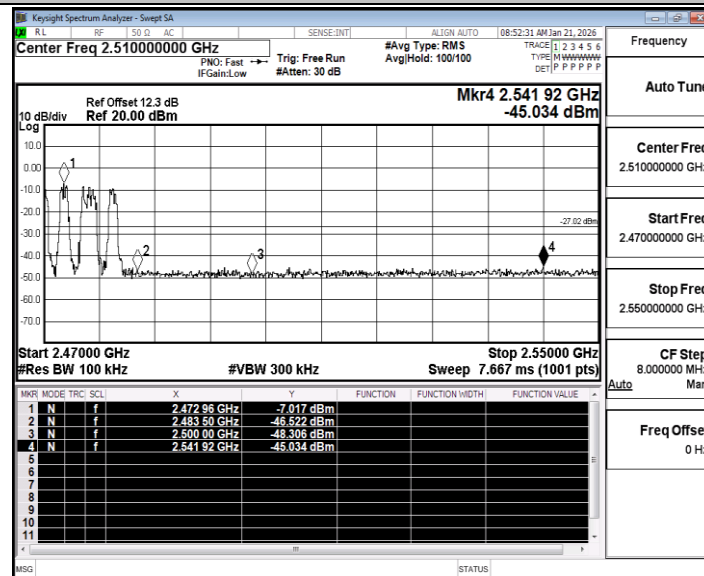
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

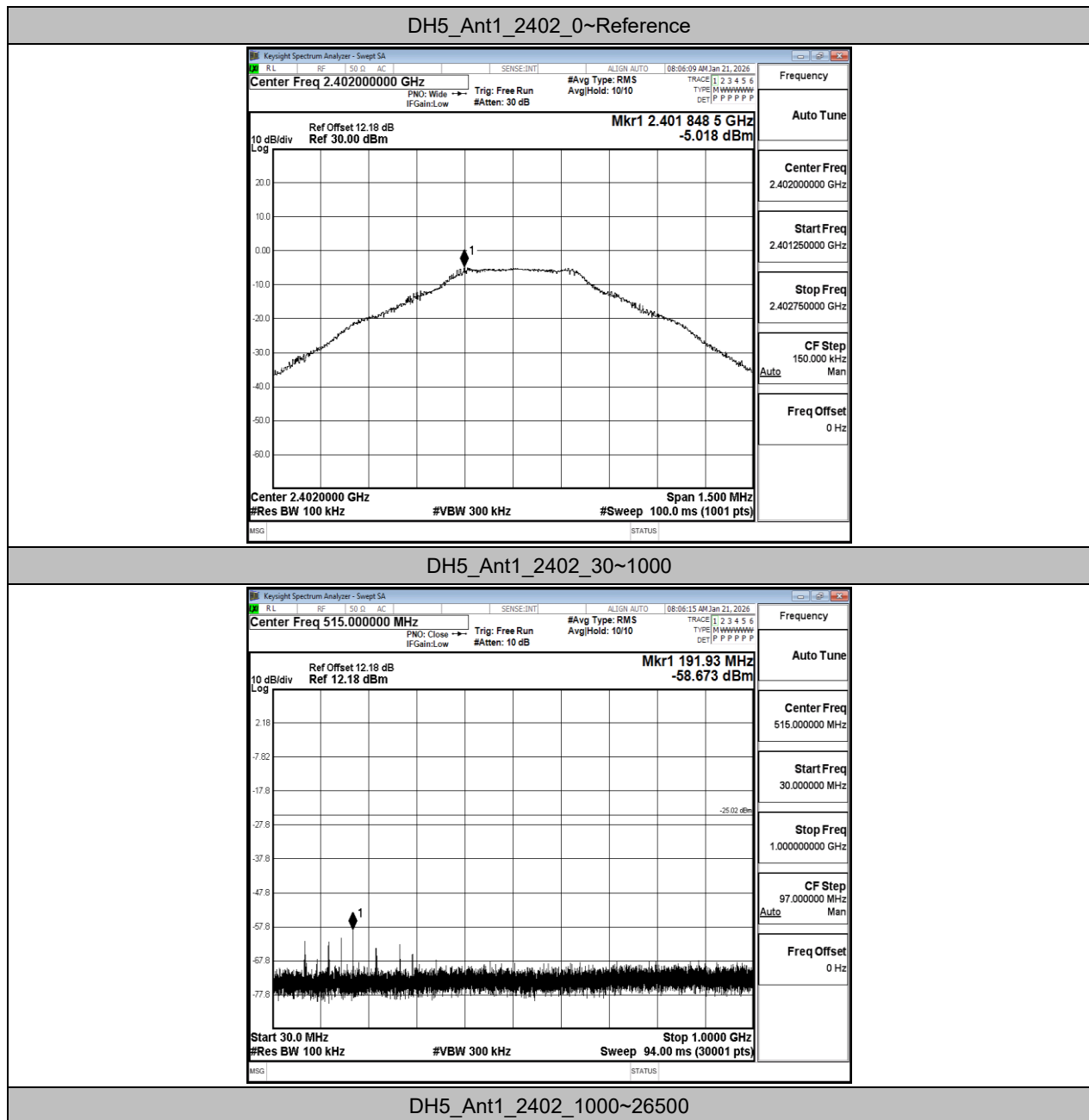


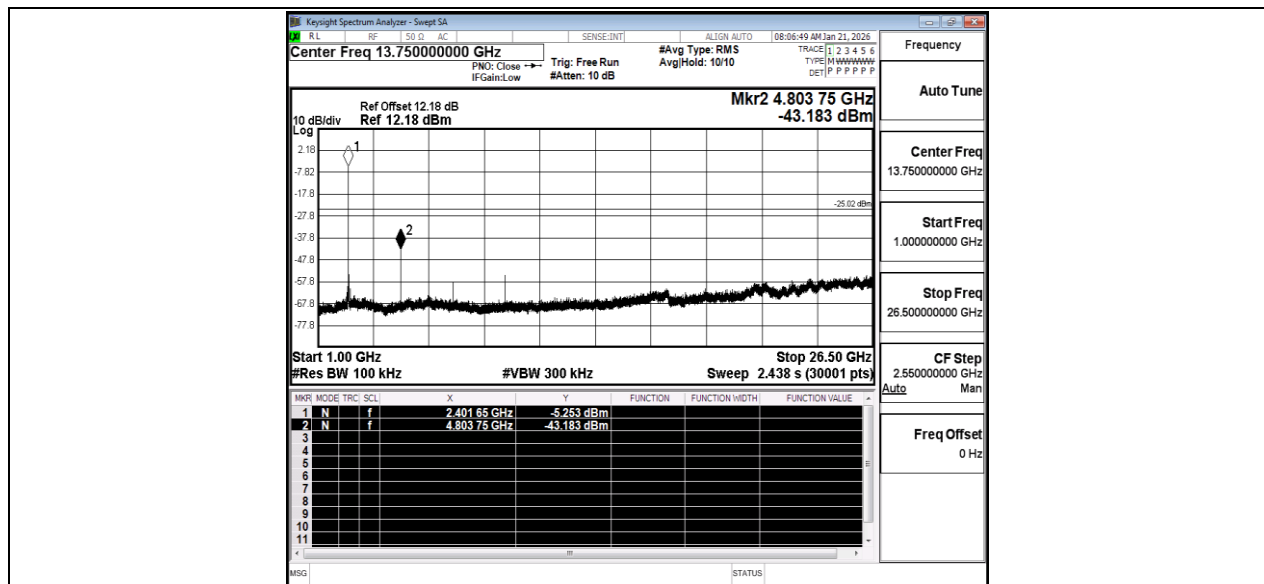
A.7 Conducted Spurious Emission

Test Result

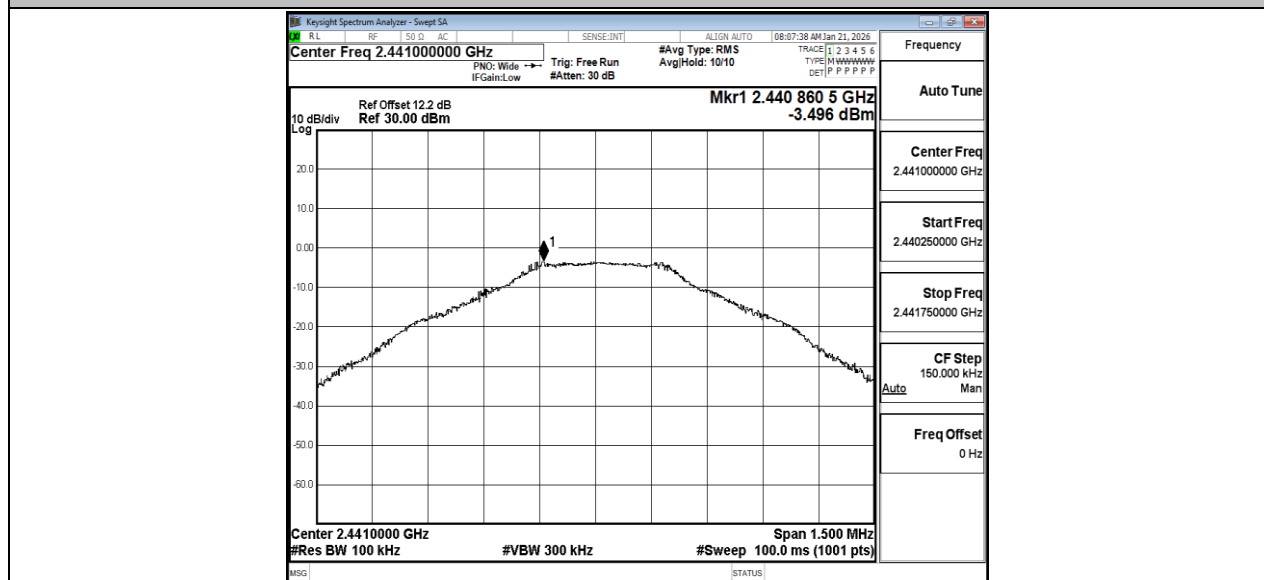
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-5.02	-5.02	---	PASS
			30~1000	-5.02	-58.67	≤-25.02	PASS
			1000~26500	-5.02	-43.18	≤-25.02	PASS
		2441	Reference	-3.50	-3.50	---	PASS
			30~1000	-3.50	-62.46	≤-23.5	PASS
			1000~26500	-3.50	-39.9	≤-23.5	PASS
		2480	Reference	-3.12	-3.12	---	PASS
			30~1000	-3.12	-57.92	≤-23.12	PASS
			1000~26500	-3.12	-41.14	≤-23.12	PASS
2DH5	Ant1	2402	Reference	-4.97	-4.97	---	PASS
			30~1000	-4.97	-60.96	≤-24.97	PASS
			1000~26500	-4.97	-43.47	≤-24.97	PASS
		2441	Reference	-3.49	-3.49	---	PASS
			30~1000	-3.49	-59.96	≤-23.49	PASS
			1000~26500	-3.49	-42.83	≤-23.49	PASS
		2480	Reference	-3.11	-3.11	---	PASS
			30~1000	-3.11	-58.37	≤-23.11	PASS
			1000~26500	-3.11	-42.21	≤-23.11	PASS
3DH5	Ant1	2402	Reference	-4.93	-4.93	---	PASS
			30~1000	-4.93	-59.45	≤-24.93	PASS
			1000~26500	-4.93	-43.16	≤-24.93	PASS
		2441	Reference	-3.42	-3.42	---	PASS
			30~1000	-3.42	-59.24	≤-23.42	PASS
			1000~26500	-3.42	-42.57	≤-23.42	PASS
		2480	Reference	-3.11	-3.11	---	PASS
			30~1000	-3.11	-59.76	≤-23.11	PASS
			1000~26500	-3.11	-42.83	≤-23.11	PASS

Test Graphs

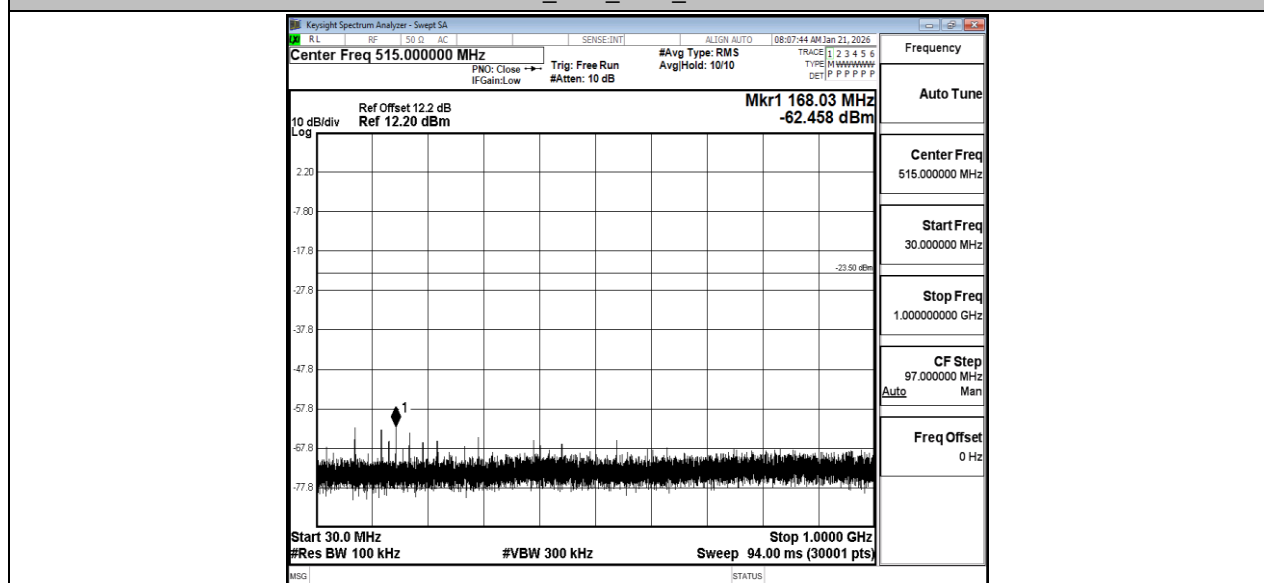




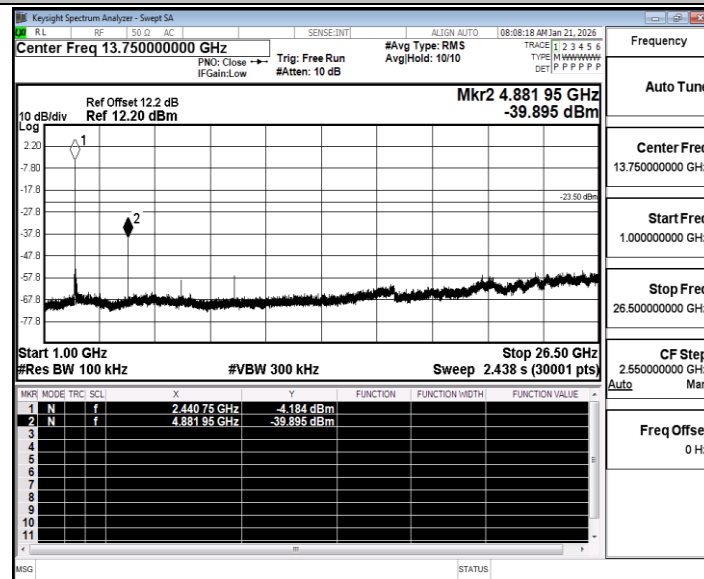
DH5_Ant1_2441_0~Reference



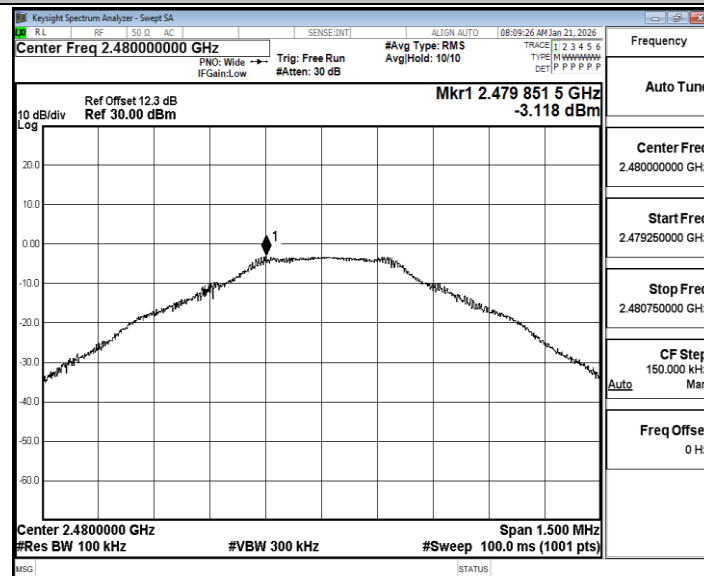
DH5_Ant1_2441_30~1000



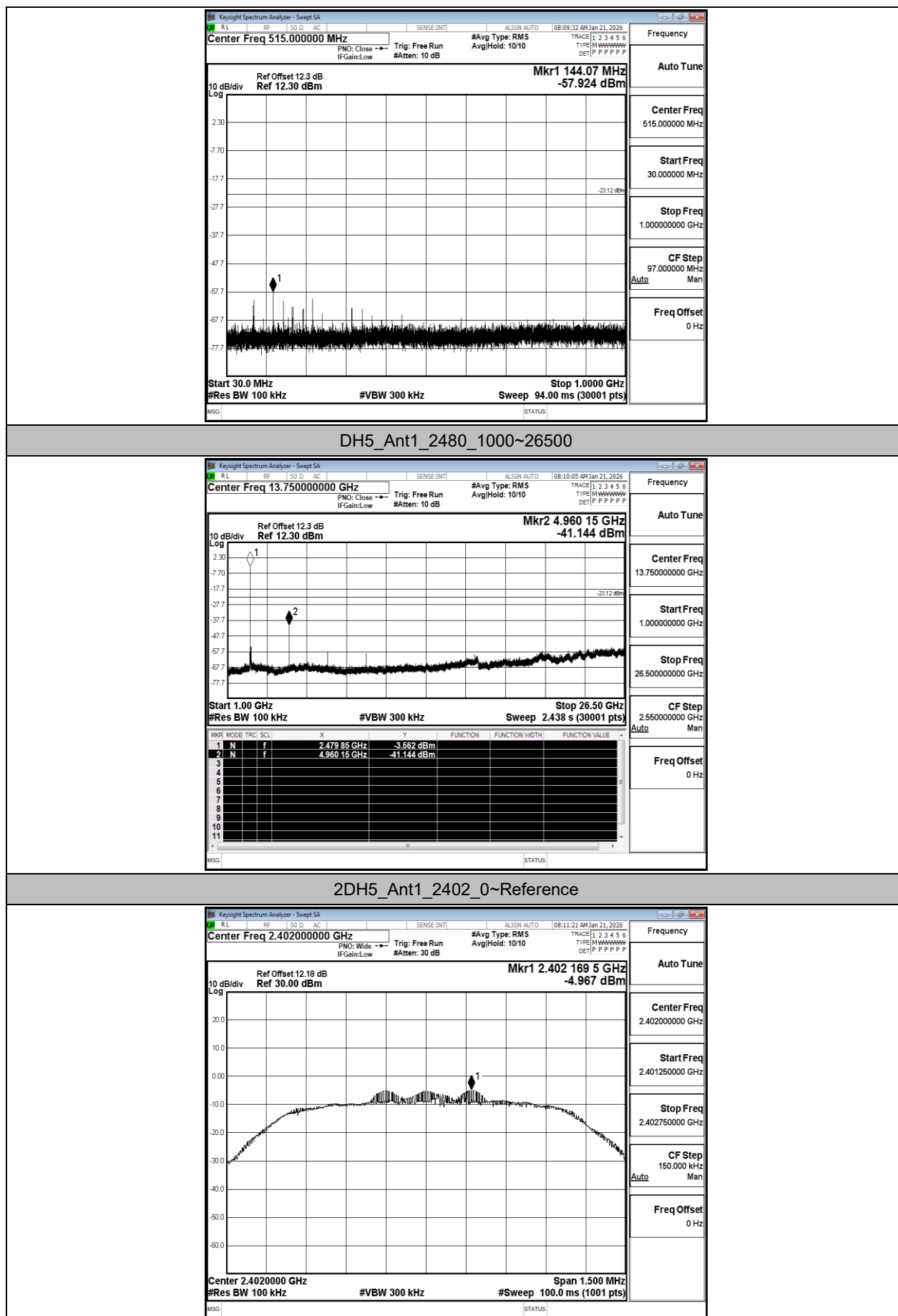
DH5_Ant1_2441_1000~26500



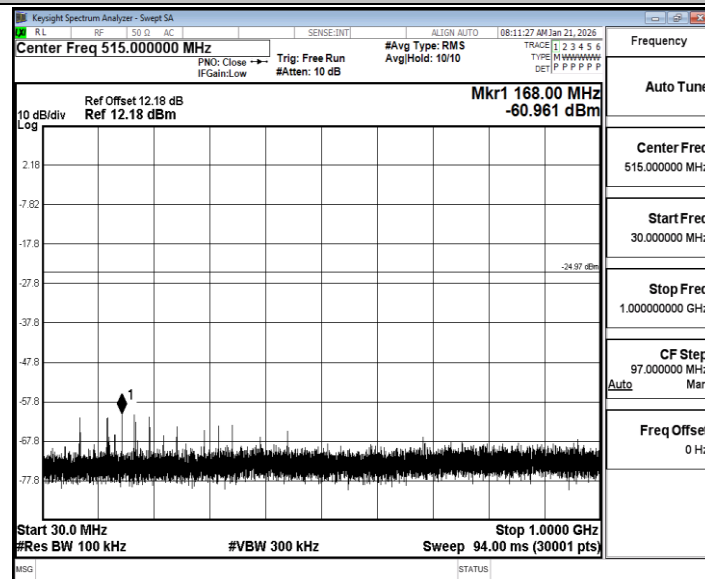
DH5_Ant1_2480_0~Reference



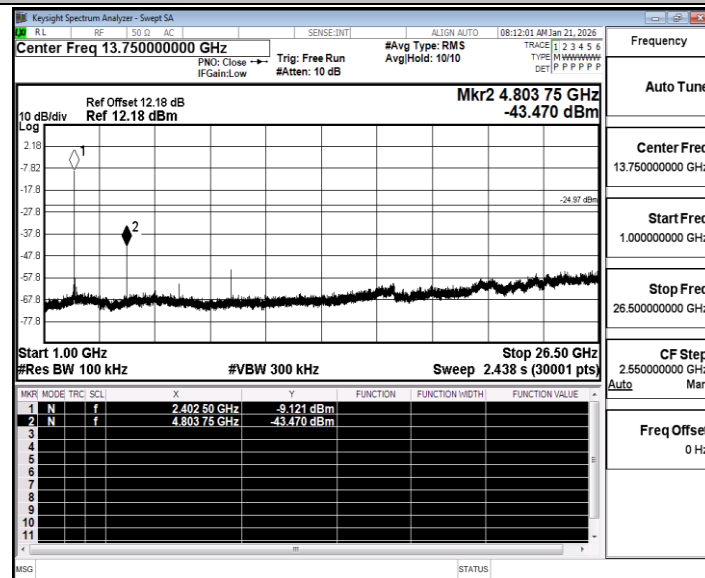
DH5_Ant1_2480_30~1000



2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference

