

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth speaker

Test Model: OS-2461

Environmental Conditions

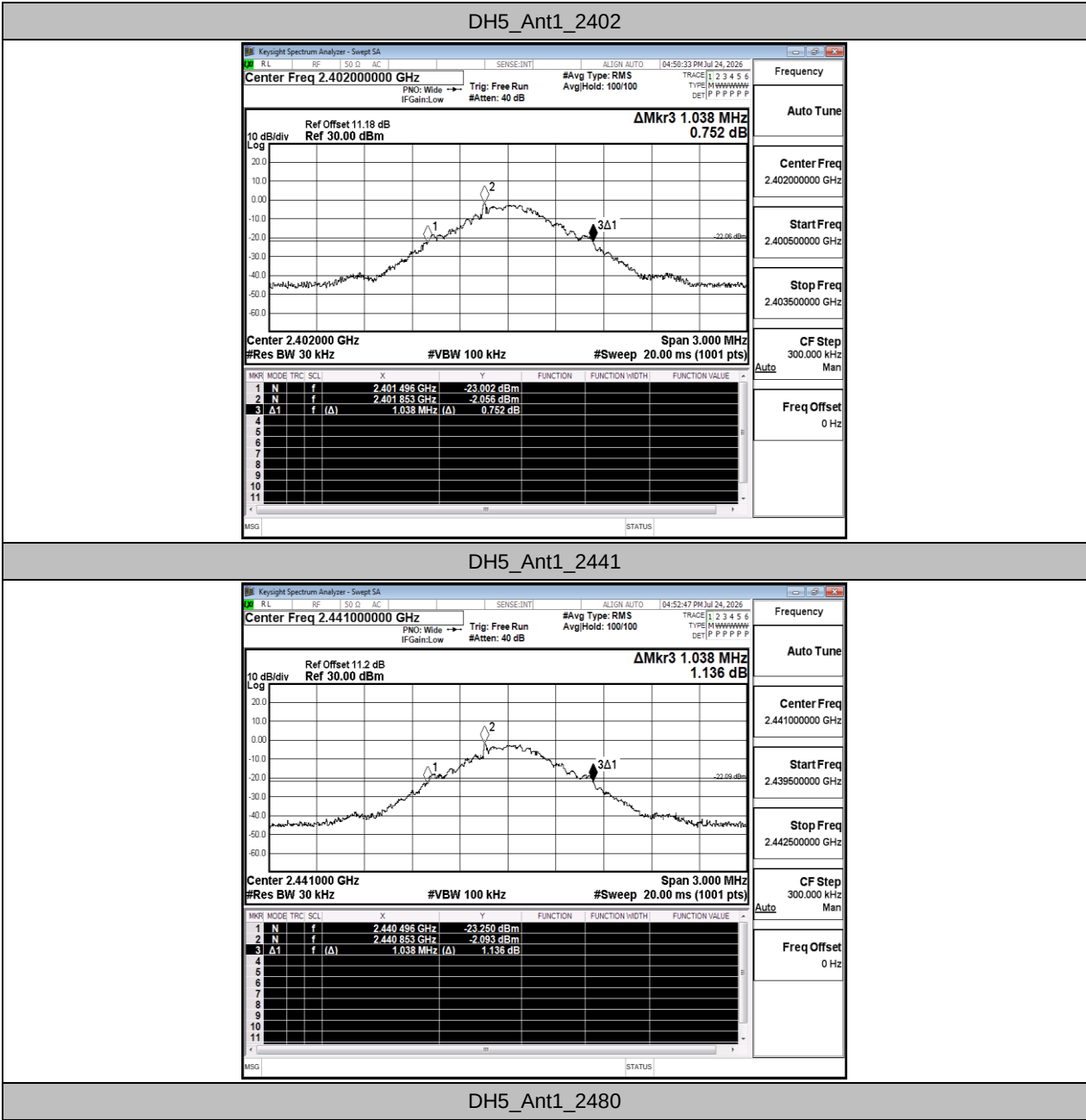
Temperature:	24.5°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

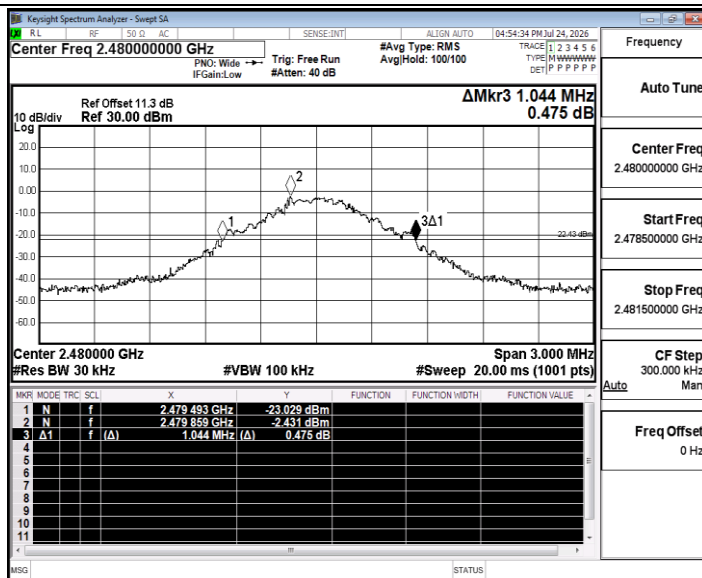
A.1 20dB Emission Bandwidth

Test Result

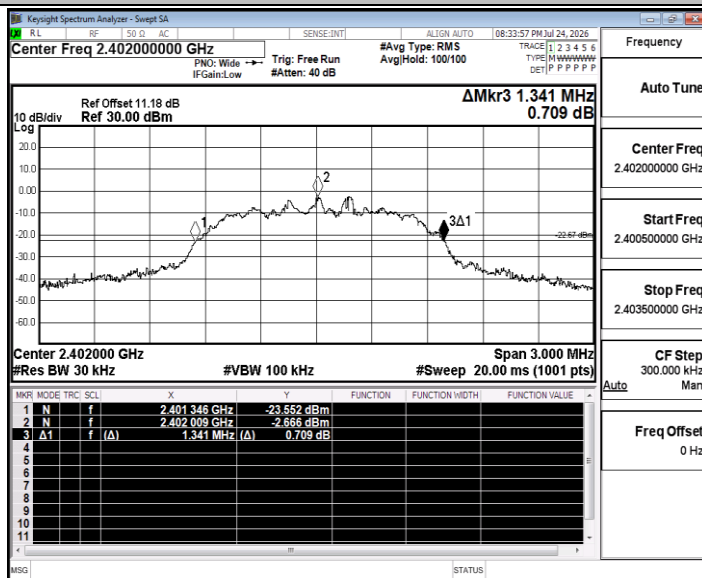
TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.038	2401.496	2402.534	---	---
		2441	1.038	2440.496	2441.534	---	---
		2480	1.044	2479.493	2480.537	---	---
2DH5	Ant1	2402	1.341	2401.346	2402.687	---	---
		2441	1.332	2440.355	2441.687	---	---
		2480	1.338	2479.349	2480.687	---	---
3DH5	Ant1	2402	1.311	2401.364	2402.675	---	---
		2441	1.293	2440.370	2441.663	---	---
		2480	1.293	2479.370	2480.663	---	---

Test Graphs

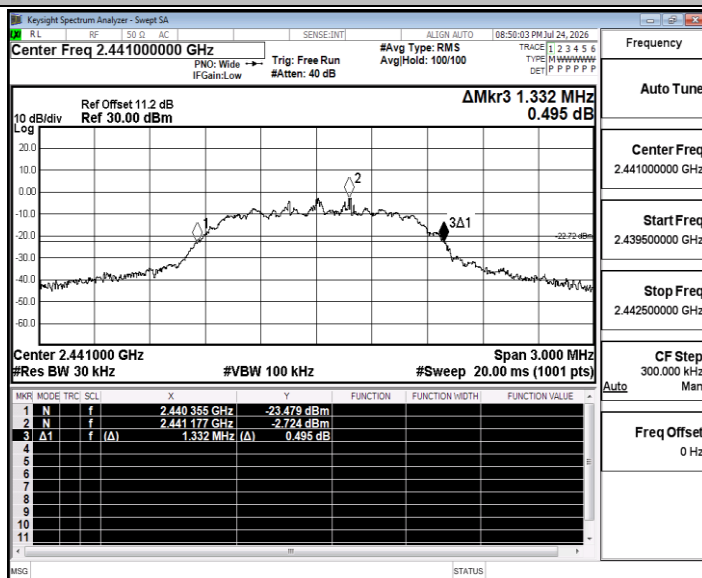




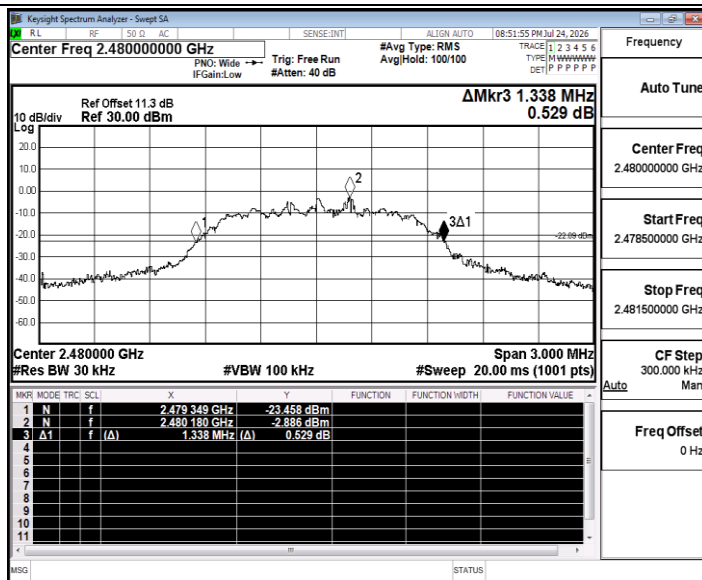
2DH5_Ant1_2402



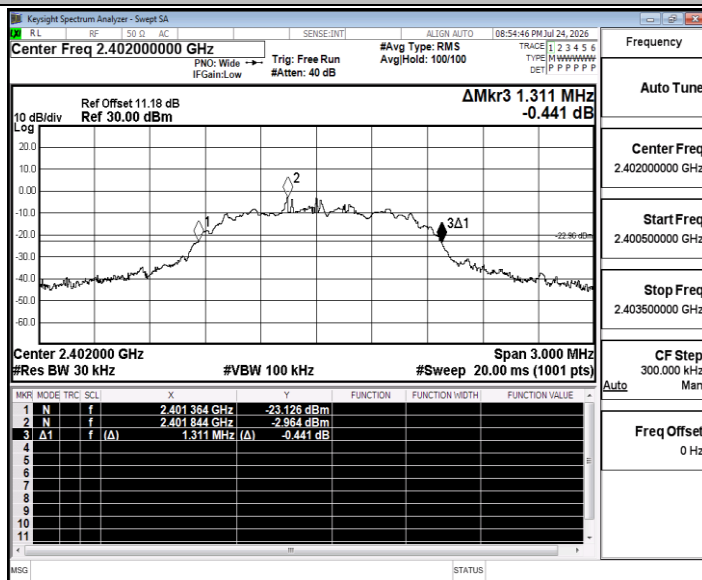
2DH5_Ant1_2441



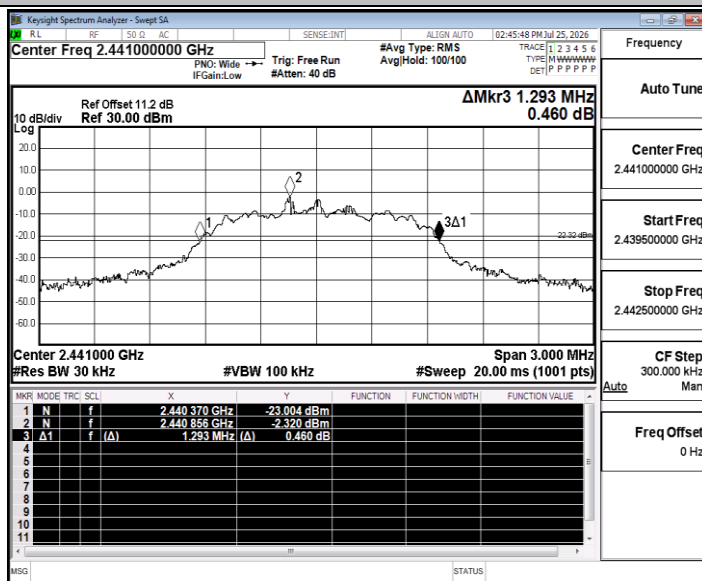
2DH5_Ant1_2480



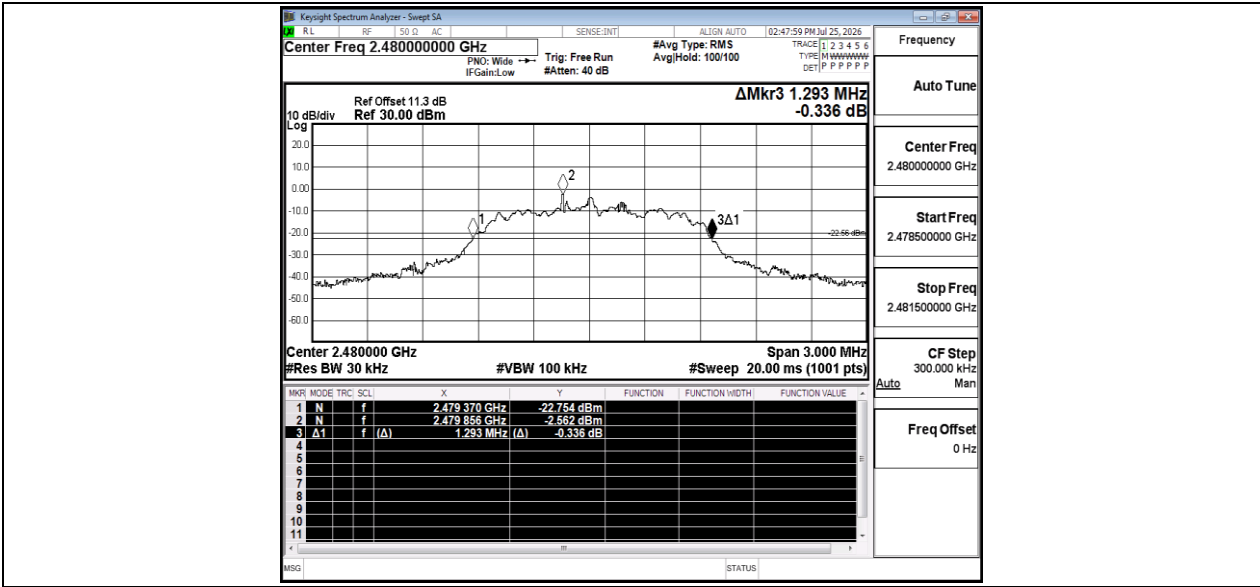
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

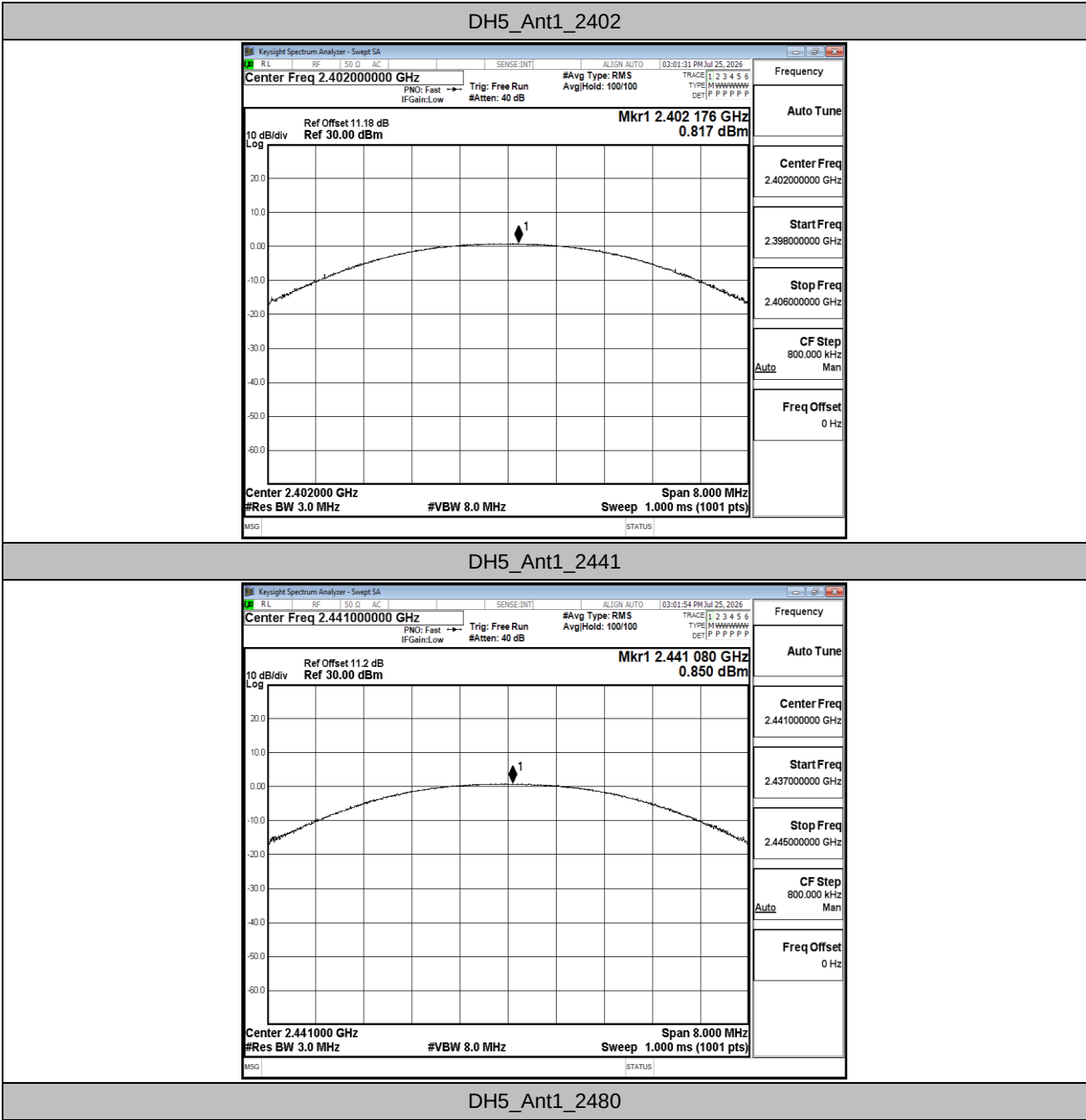


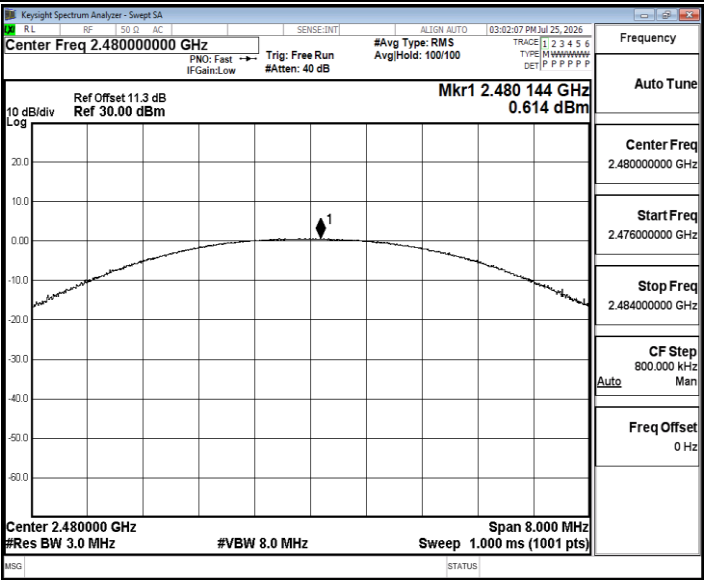
A.2 Maximum Peak conducted output power

Test Result Peak

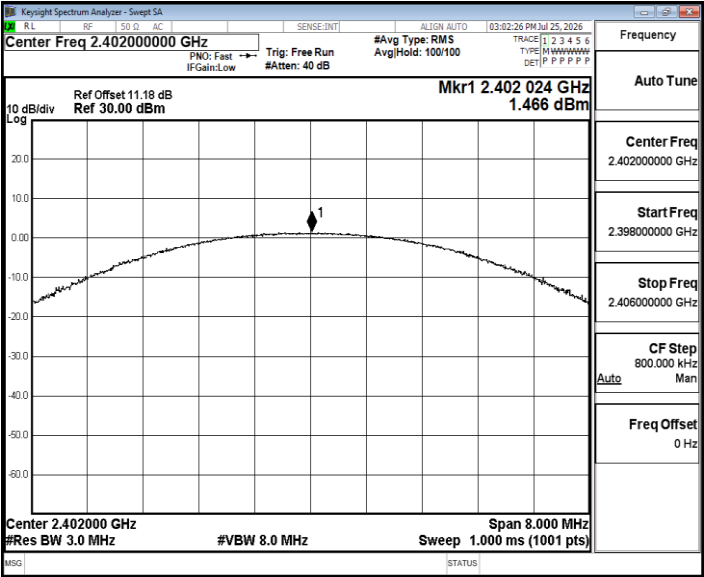
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.82	≤20.97	PASS
		2441	0.85	≤20.97	PASS
		2480	0.61	≤20.97	PASS
2DH5	Ant1	2402	1.47	≤20.97	PASS
		2441	1.47	≤20.97	PASS
		2480	1.15	≤20.97	PASS
3DH5	Ant1	2402	1.71	≤20.97	PASS
		2441	1.78	≤20.97	PASS
		2480	1.53	≤20.97	PASS

Test Graphs

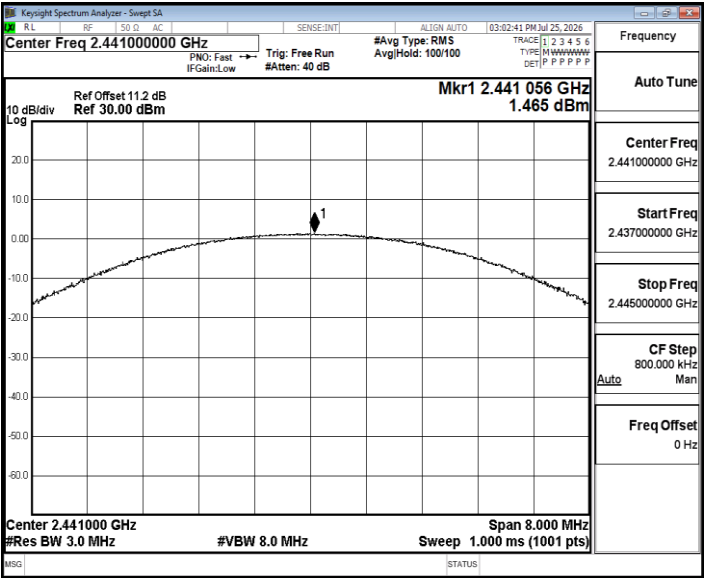




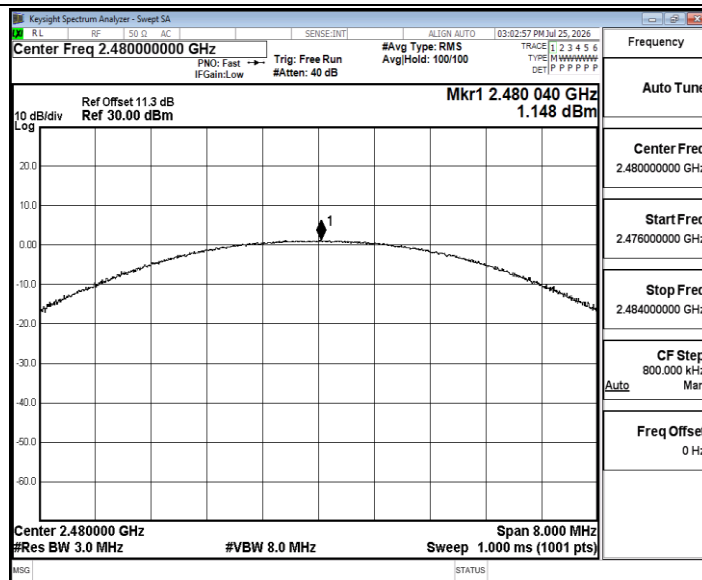
2DH5_Ant1_2402



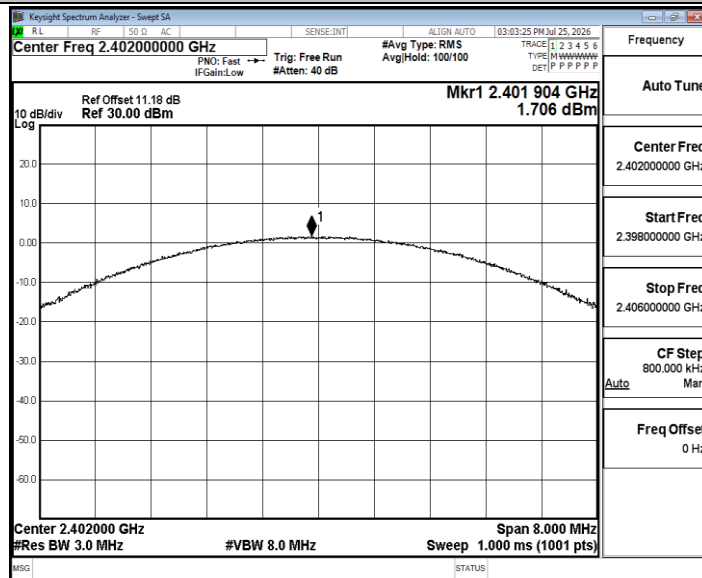
2DH5_Ant1_2441



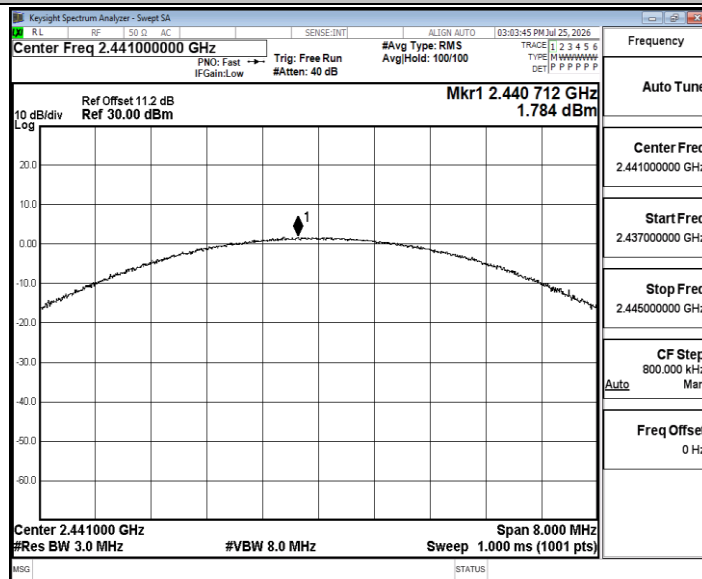
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



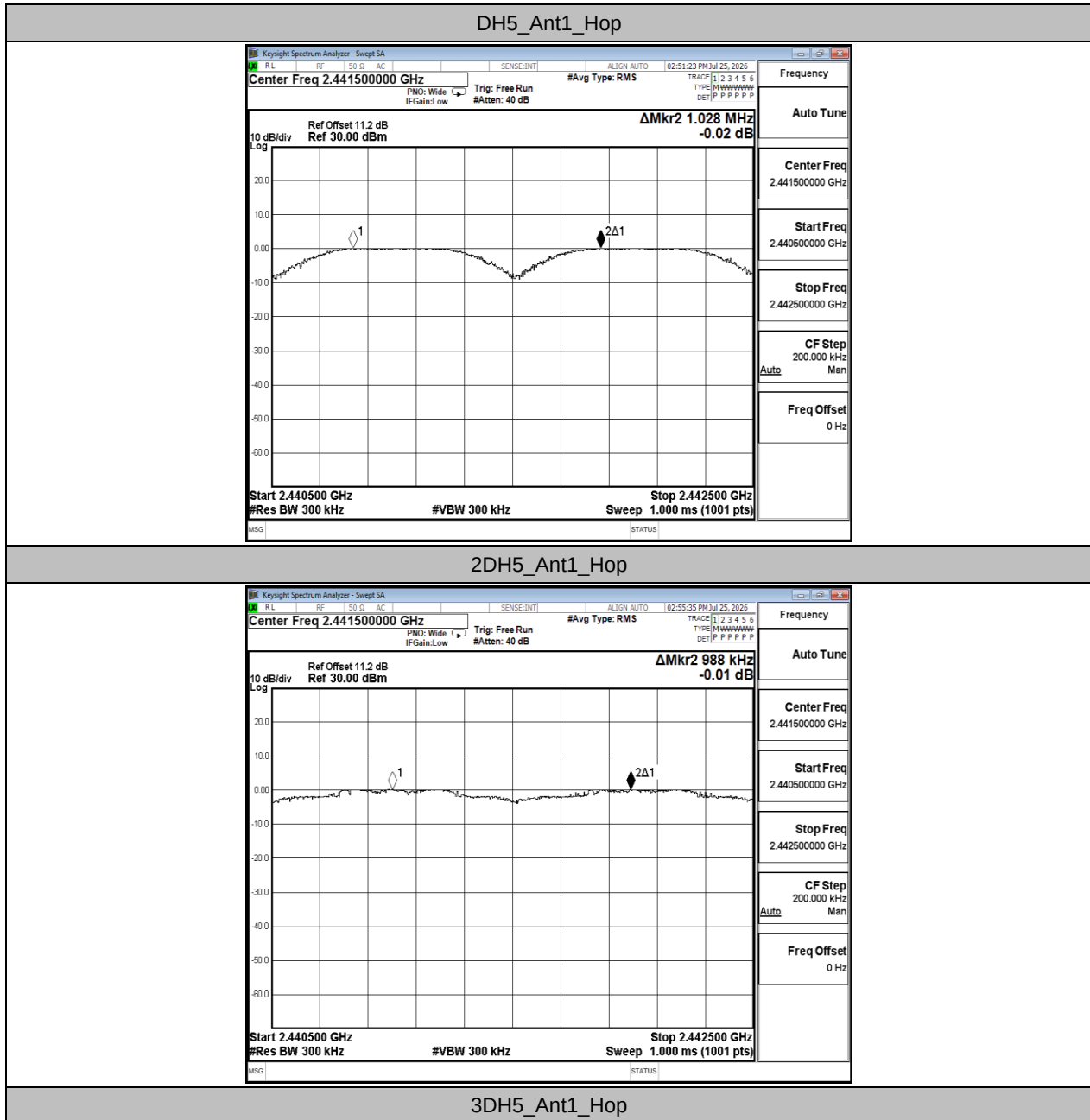
3DH5_Ant1_2480

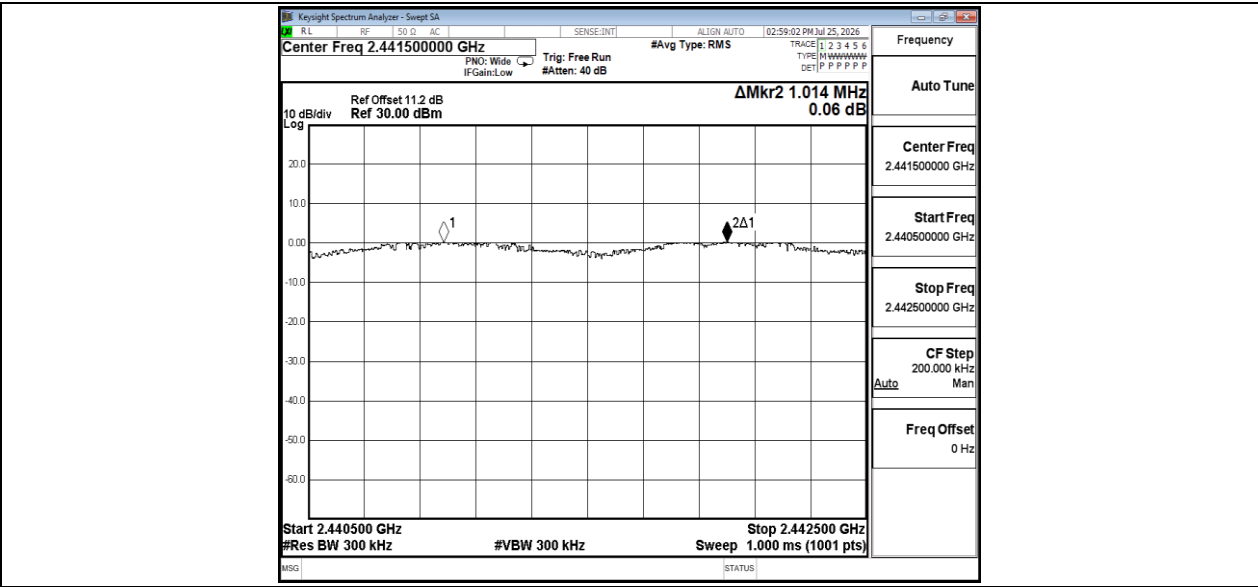
A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.028	≥ 0.696	PASS
2DH5	Ant1	Hop	0.988	≥ 0.894	PASS
3DH5	Ant1	Hop	1.014	≥ 0.874	PASS

Test Graphs



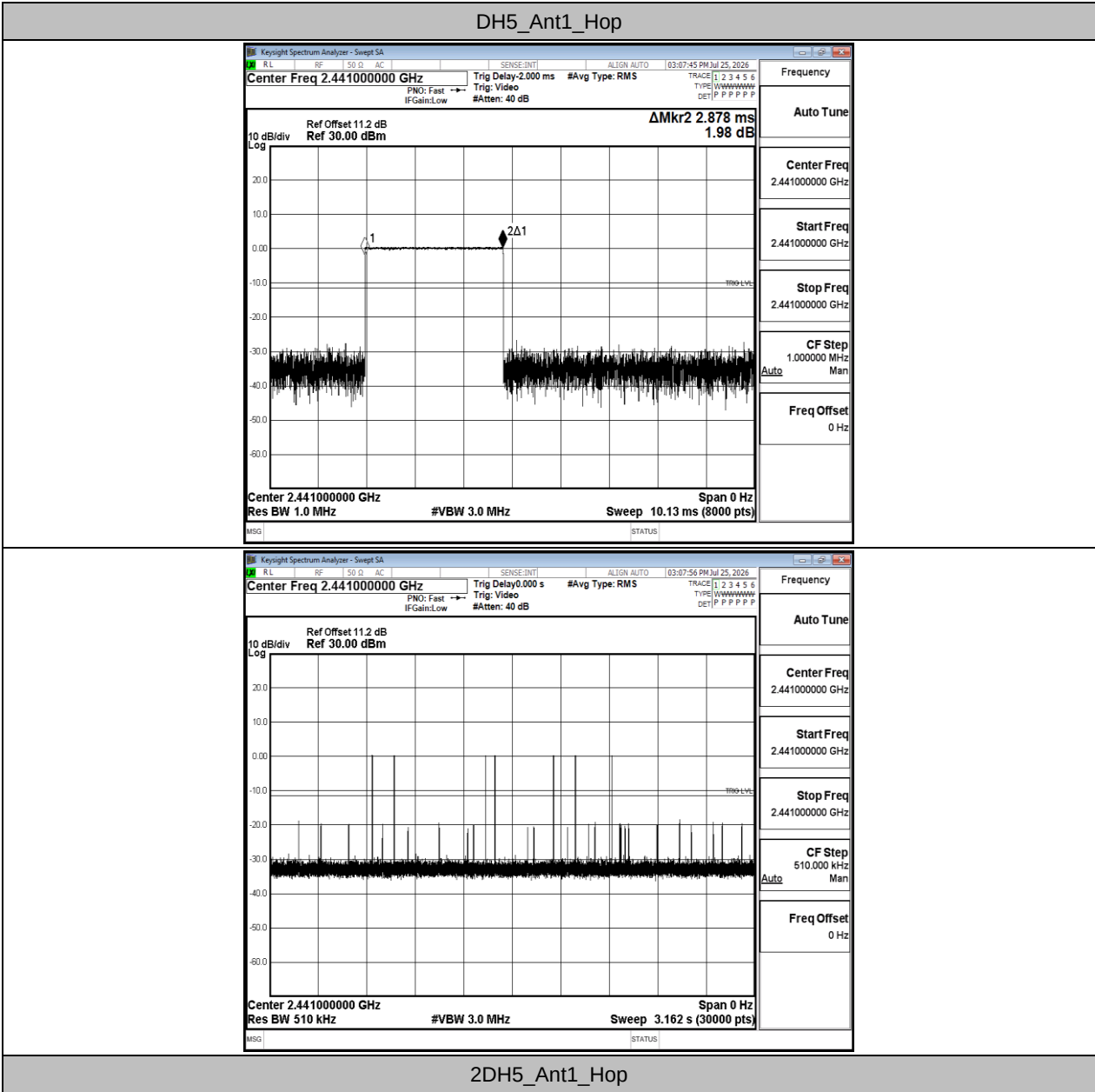


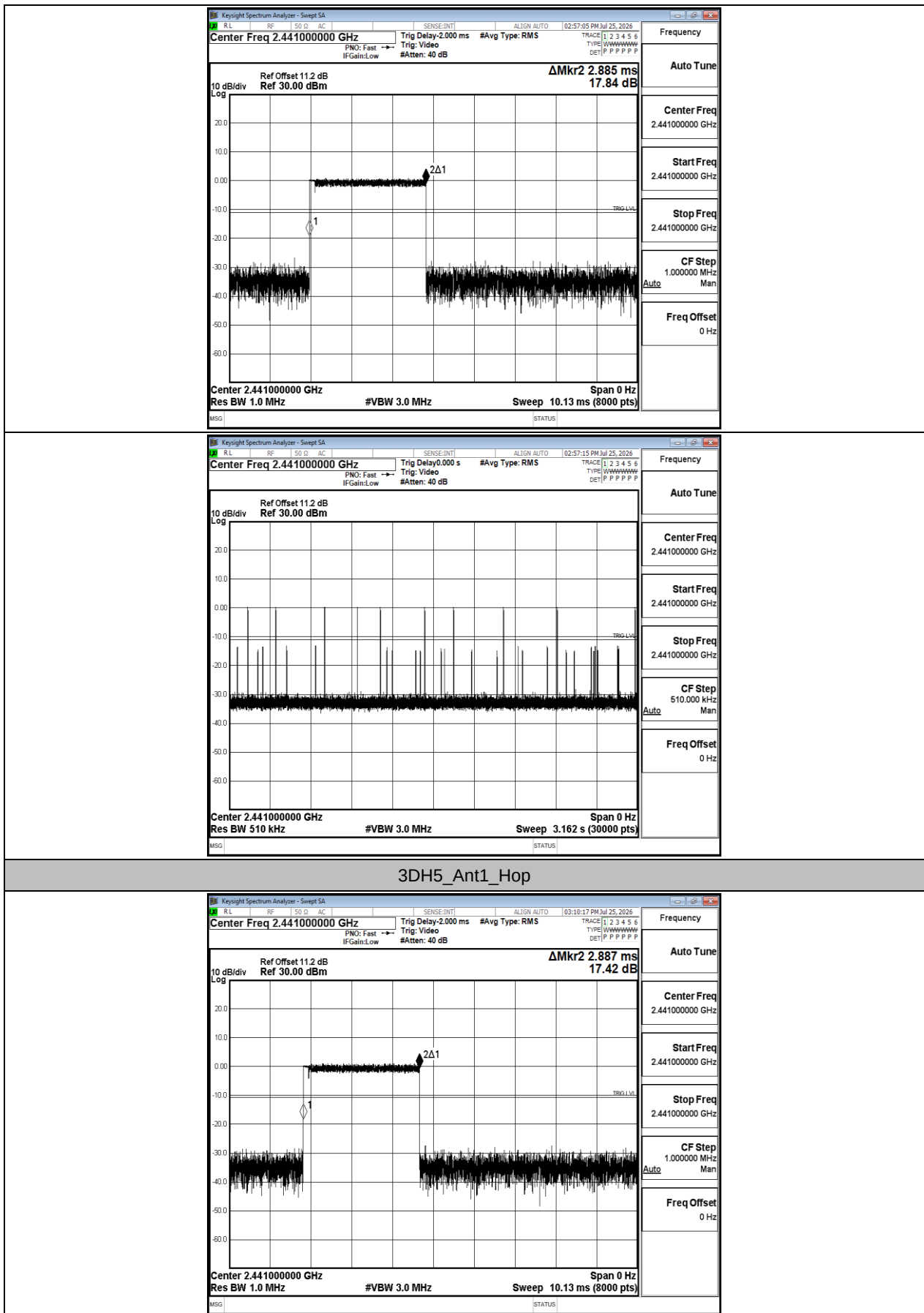
A4 Time of occupancy

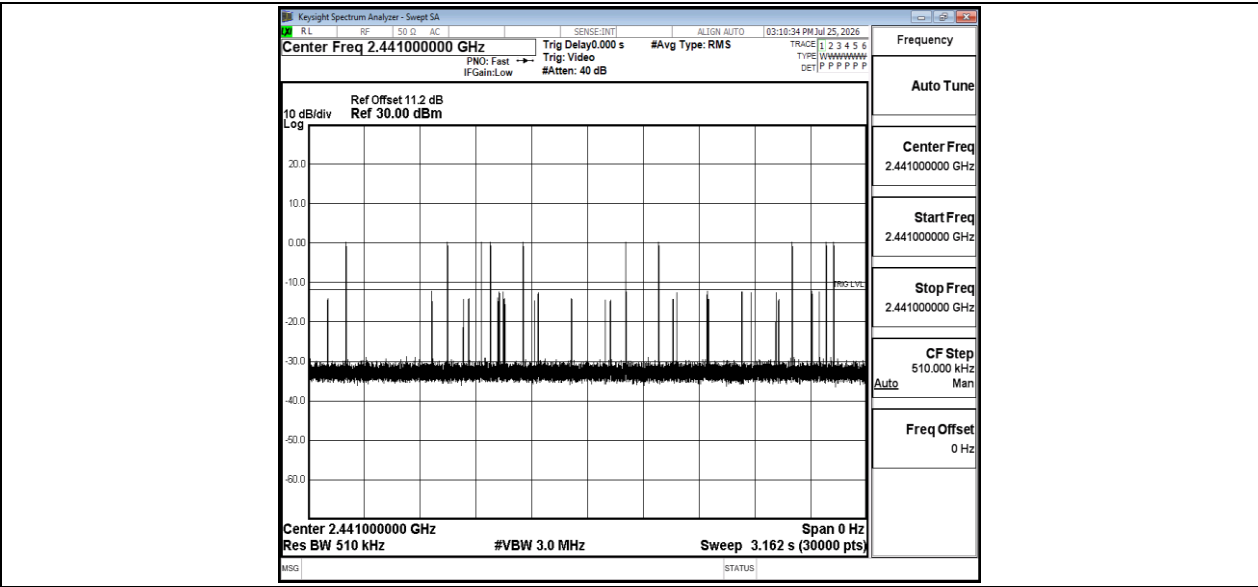
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.878	80	0.23	≤0.4	PASS
2DH5	Ant1	Hop	2.885	110	0.317	≤0.4	PASS
3DH5	Ant1	Hop	2.887	110	0.318	≤0.4	PASS

Test Graphs





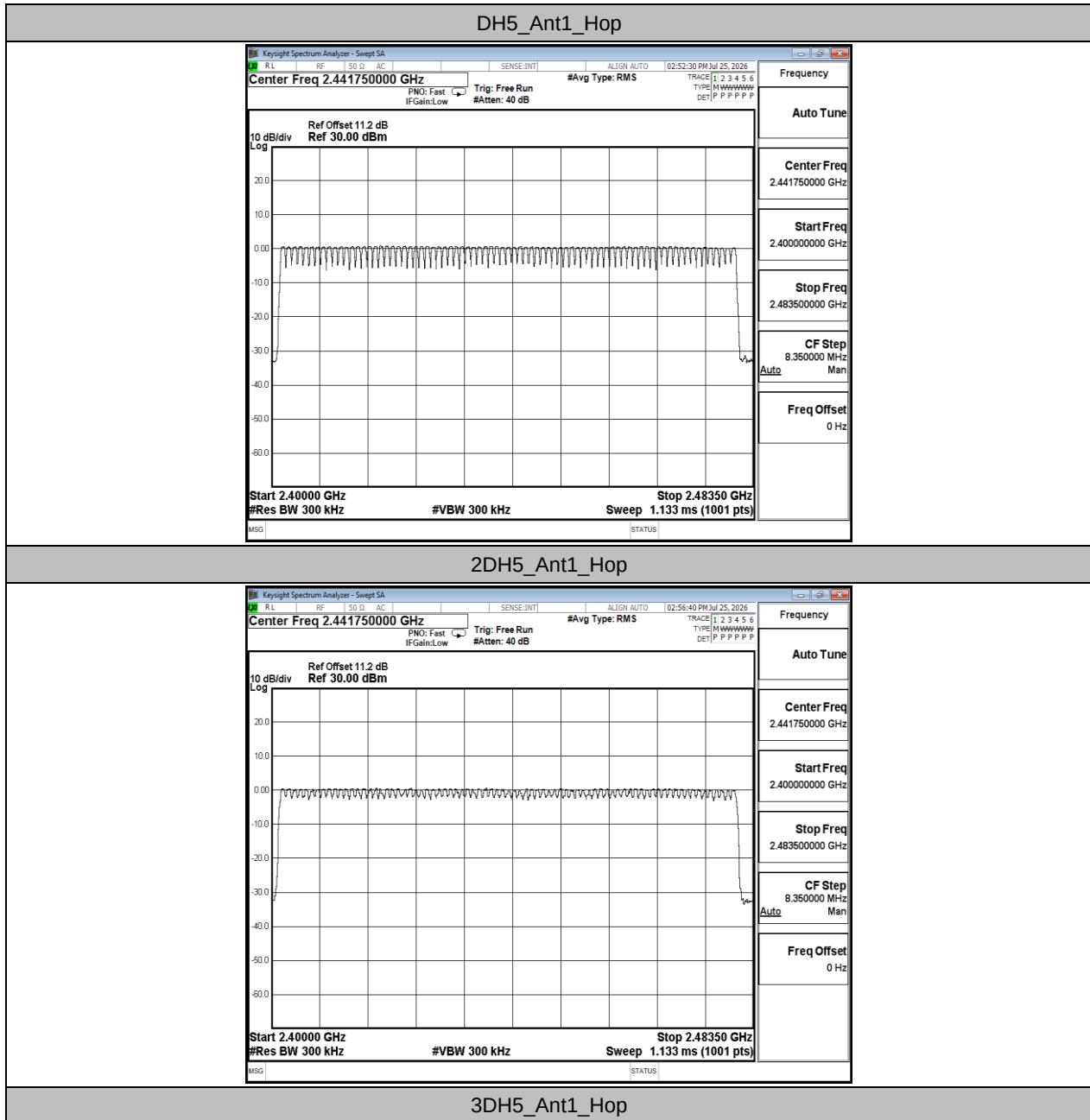


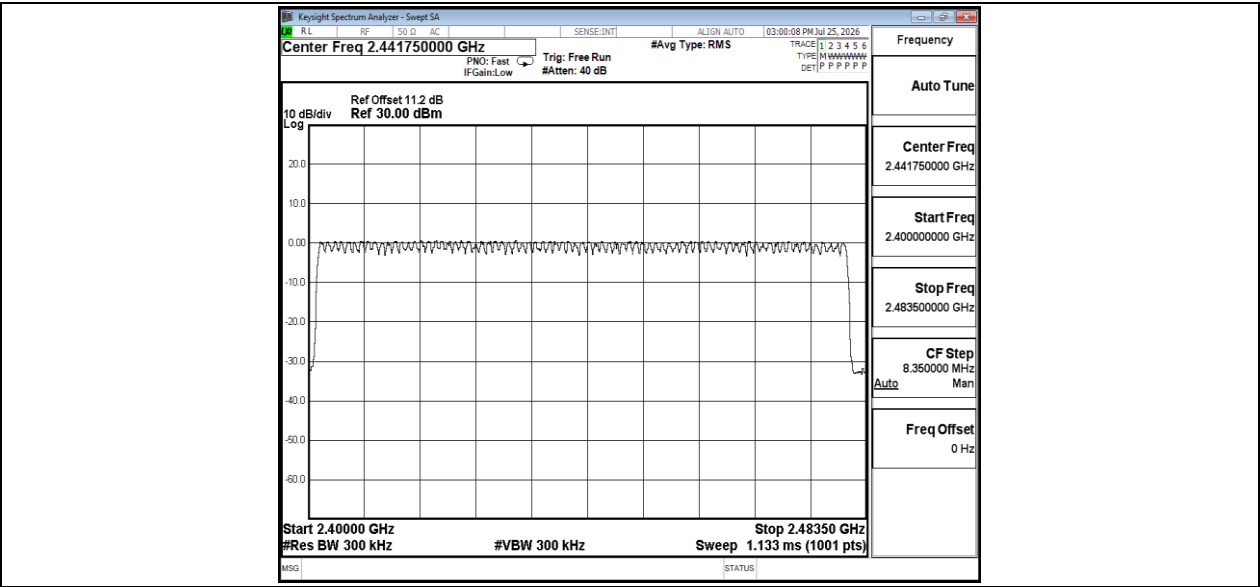
A.5 Number of hopping channels

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



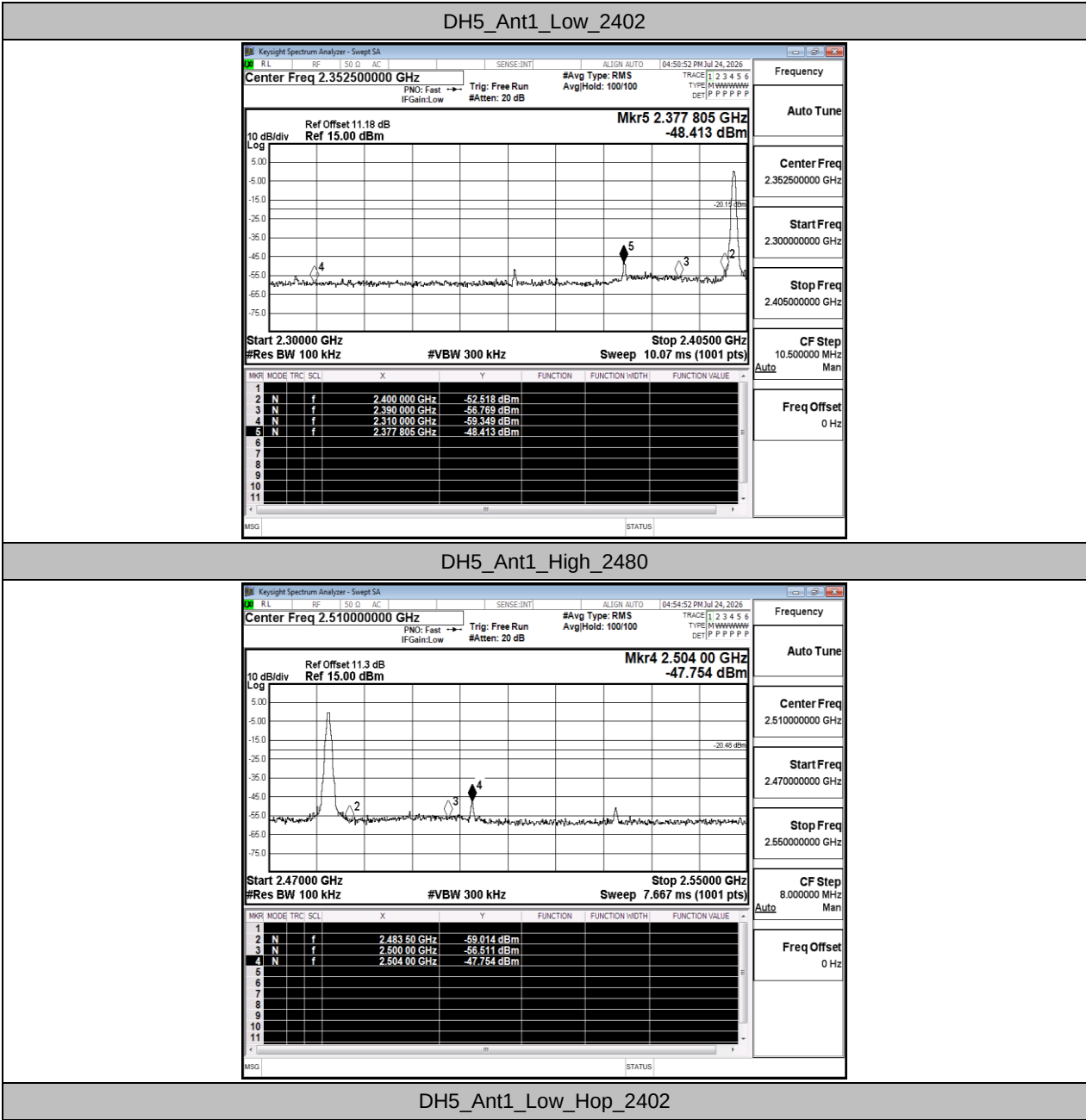


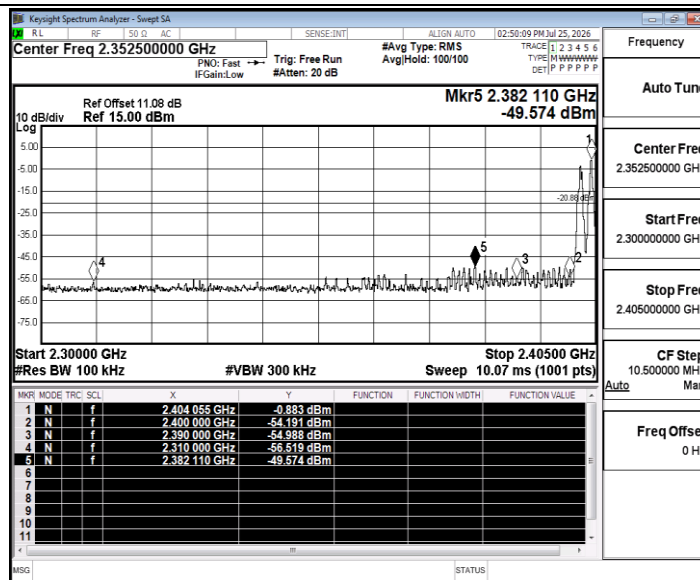
A.6 Band edge measurements

Test Result

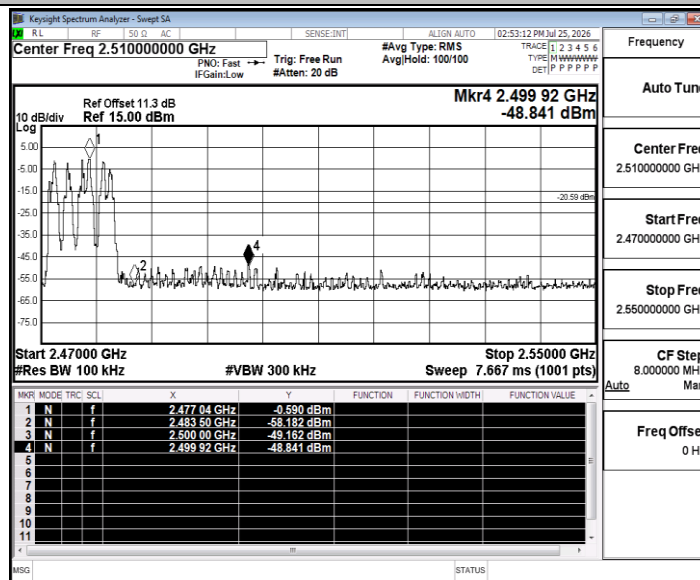
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.15	-48.41	≤ -20.15	PASS
		High	2480	-0.48	-47.75	≤ -20.48	PASS
		Low	Hop_2402	-0.88	-49.57	≤ -20.88	PASS
		High	Hop_2480	-0.59	-48.84	≤ -20.59	PASS
2DH5	Ant1	Low	2402	-0.85	-48.47	≤ -20.85	PASS
		High	2480	-0.16	-49.74	≤ -20.16	PASS
		Low	Hop_2402	-6.48	-50.92	≤ -26.48	PASS
		High	Hop_2480	-4.62	-50.06	≤ -24.62	PASS
3DH5	Ant1	Low	2402	-1.70	-49.71	≤ -21.7	PASS
		High	2480	-0.50	-50.08	≤ -20.5	PASS
		Low	Hop_2402	-2.89	-50.47	≤ -22.89	PASS
		High	Hop_2480	-3.82	-50.39	≤ -23.82	PASS

Test Graphs

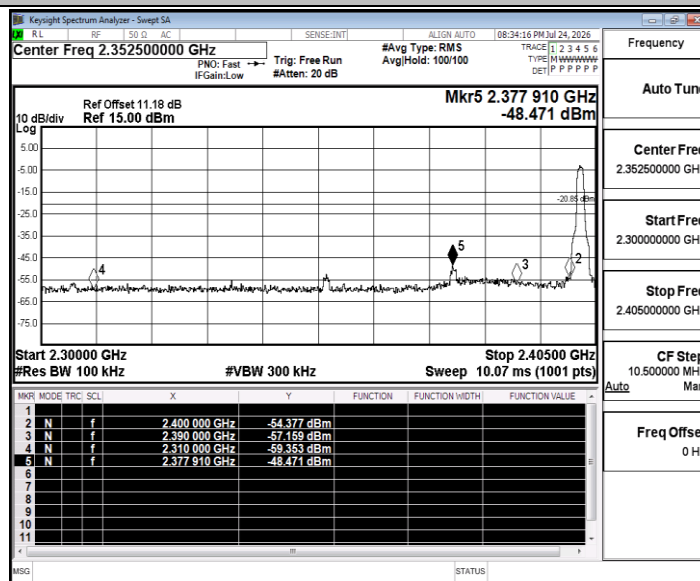




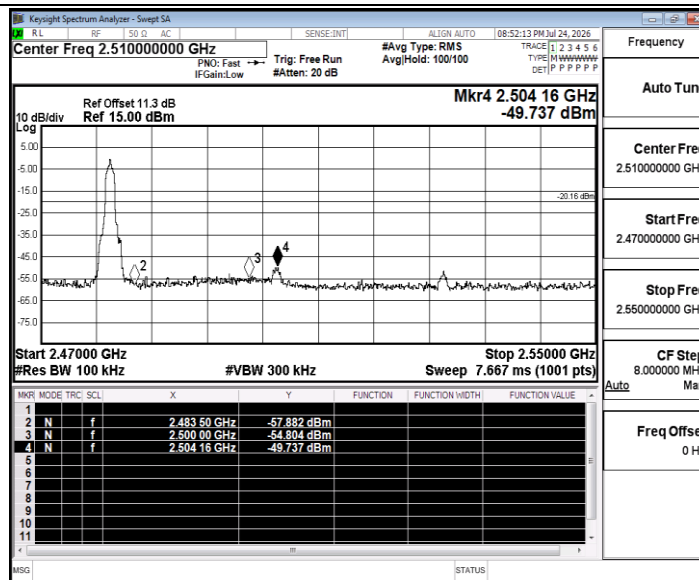
DH5_Ant1_High_Hop_2480



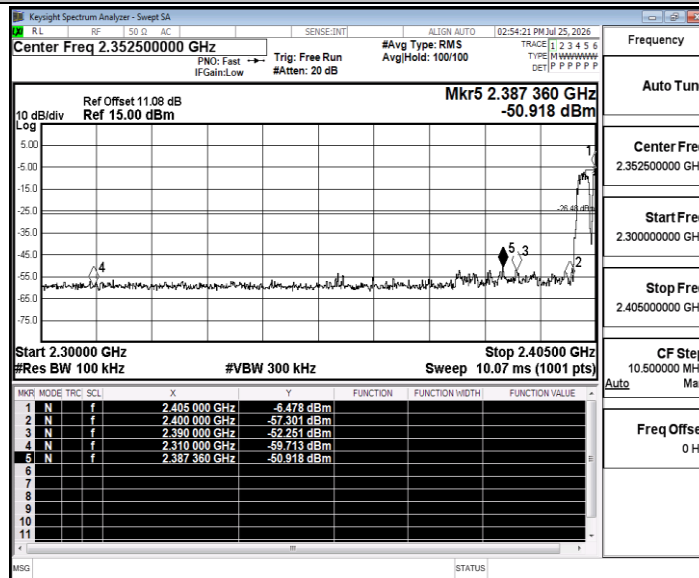
2DH5_Ant1_Low_2402



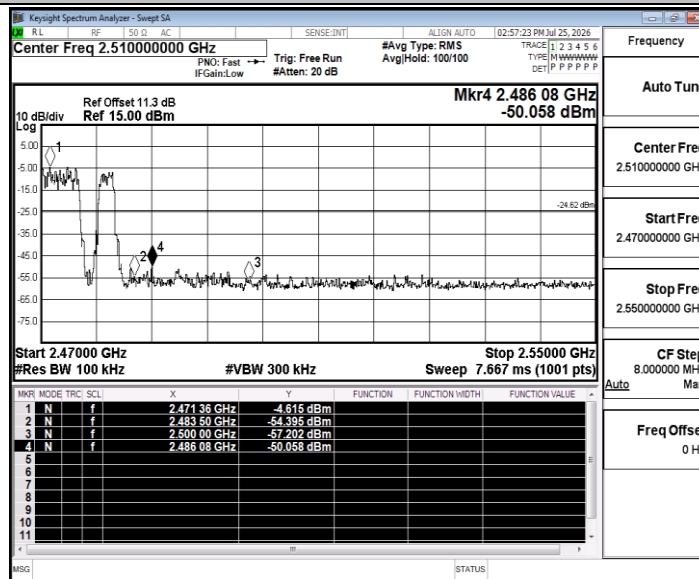
2DH5_Ant1_High_2480



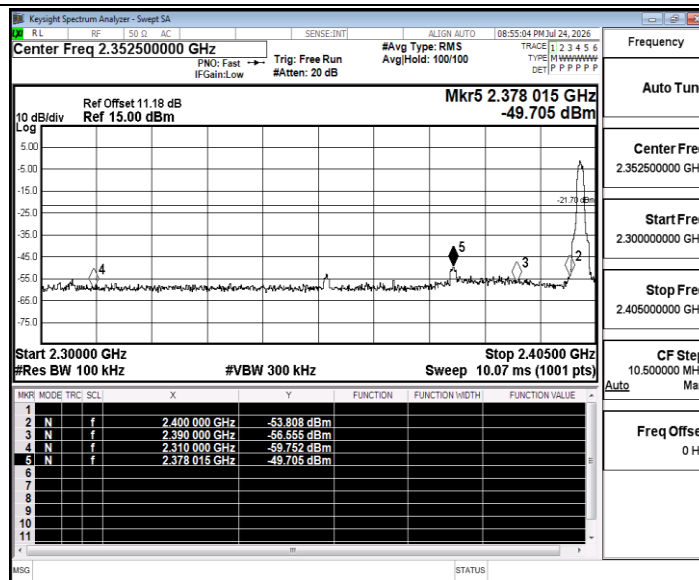
2DH5_Ant1_Low_Hop_2402



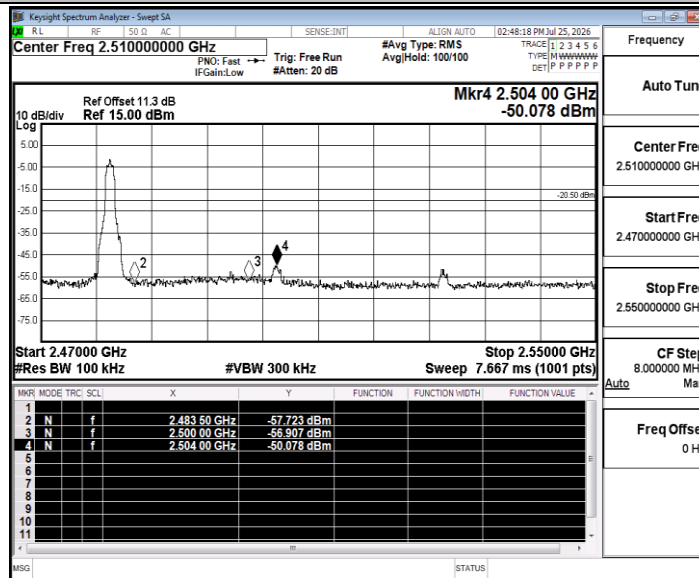
2DH5_Ant1_High_Hop_2480



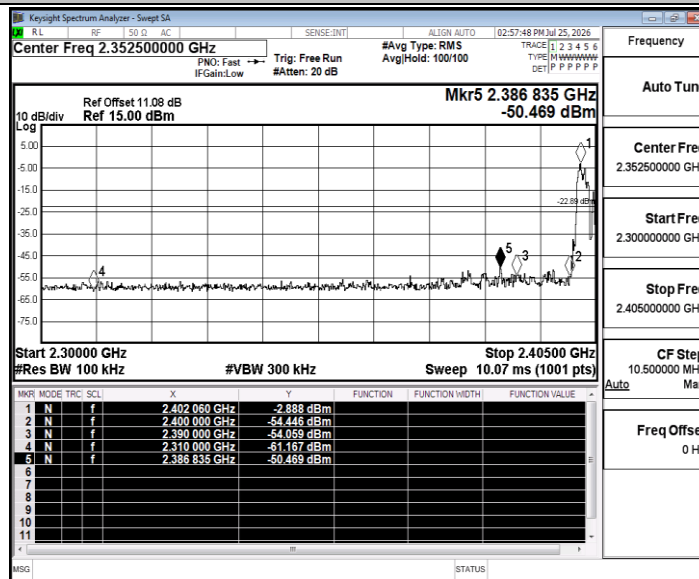
3DH5_Ant1_Low_2402



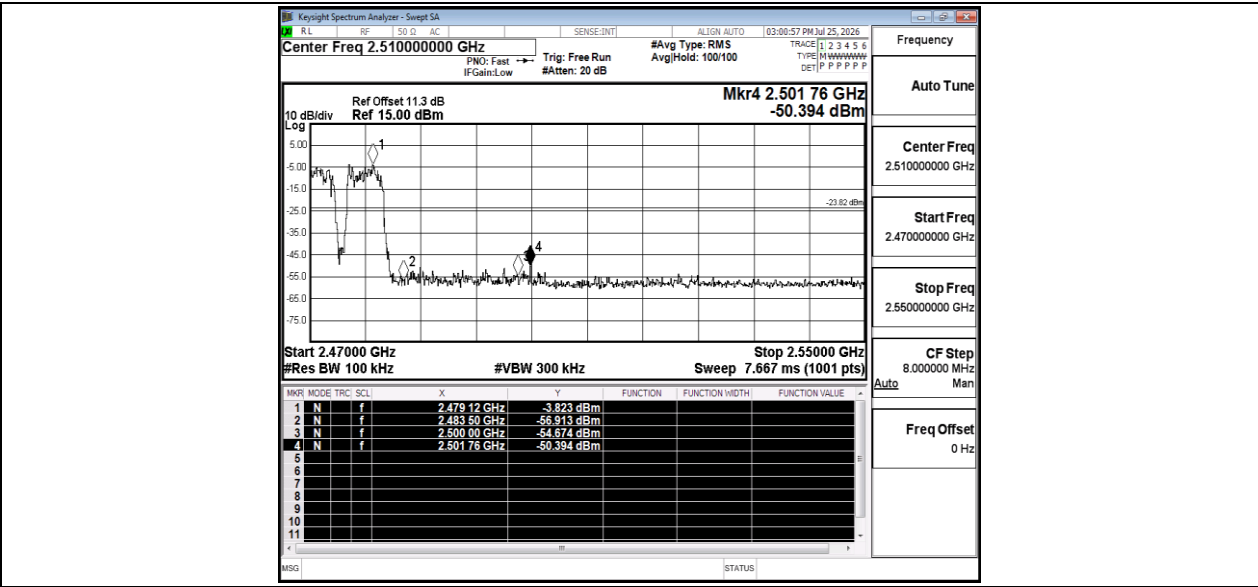
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

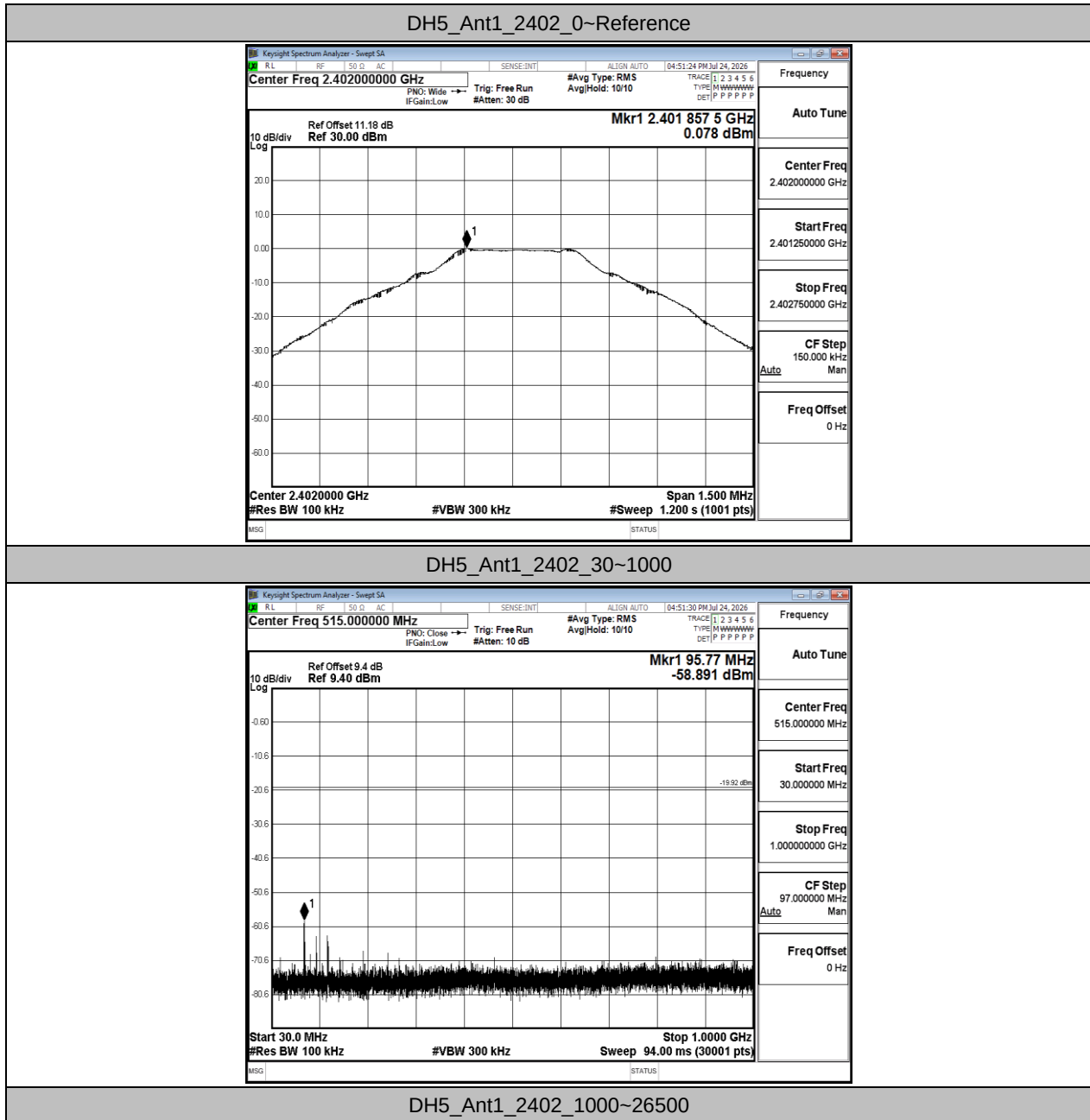


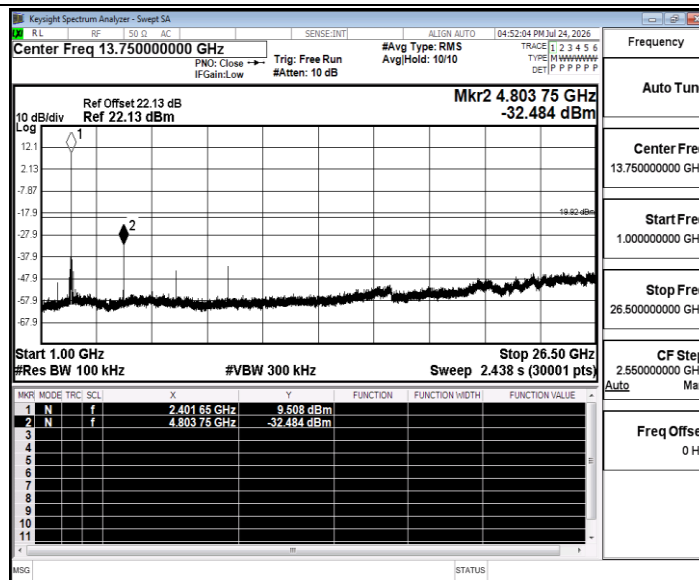
A.7 Conducted Spurious Emission

Test Result

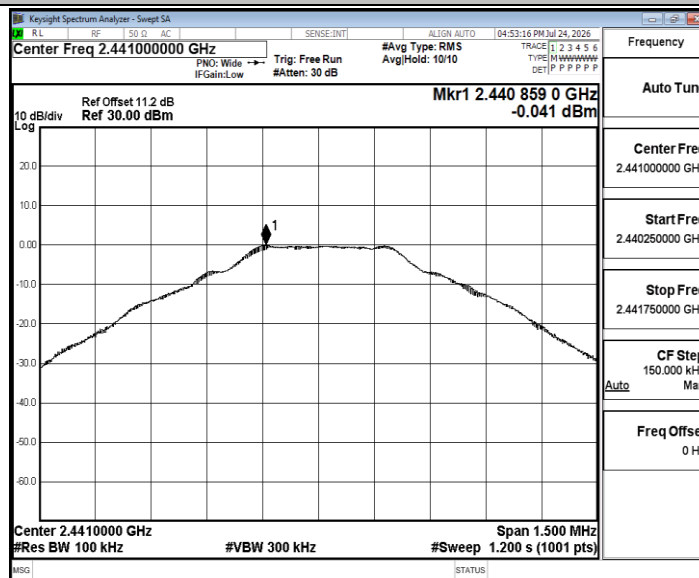
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.08	0.08	---	PASS
			30~1000	0.08	-58.89	≤-19.92	PASS
			1000~26500	0.08	-32.48	≤-19.92	PASS
		2441	Reference	-0.04	-0.04	---	PASS
			30~1000	-0.04	-58.89	≤-20.04	PASS
			1000~26500	-0.04	-30.05	≤-20.04	PASS
		2480	Reference	-0.28	-0.28	---	PASS
			30~1000	-0.28	-58.57	≤-20.28	PASS
			1000~26500	-0.28	-27.9	≤-20.28	PASS
2DH5	Ant1	2402	Reference	0.17	0.17	---	PASS
			30~1000	0.17	-59.23	≤-19.83	PASS
			1000~26500	0.17	-33.51	≤-19.83	PASS
		2441	Reference	0.06	0.06	---	PASS
			30~1000	0.06	-58.51	≤-19.94	PASS
			1000~26500	0.06	-33.24	≤-19.94	PASS
		2480	Reference	-0.15	-0.15	---	PASS
			30~1000	-0.15	-58.92	≤-20.15	PASS
			1000~26500	-0.15	-33.9	≤-20.15	PASS
3DH5	Ant1	2402	Reference	0.20	0.20	---	PASS
			30~1000	0.20	-59.1	≤-19.8	PASS
			1000~26500	0.20	-34.11	≤-19.8	PASS
		2441	Reference	-0.27	-0.27	---	PASS
			30~1000	-0.27	-58.73	≤-20.27	PASS
			1000~26500	-0.27	-32.21	≤-20.27	PASS
		2480	Reference	-0.50	-0.50	---	PASS
			30~1000	-0.50	-59.38	≤-20.5	PASS
			1000~26500	-0.50	-33.25	≤-20.5	PASS

Test Graphs

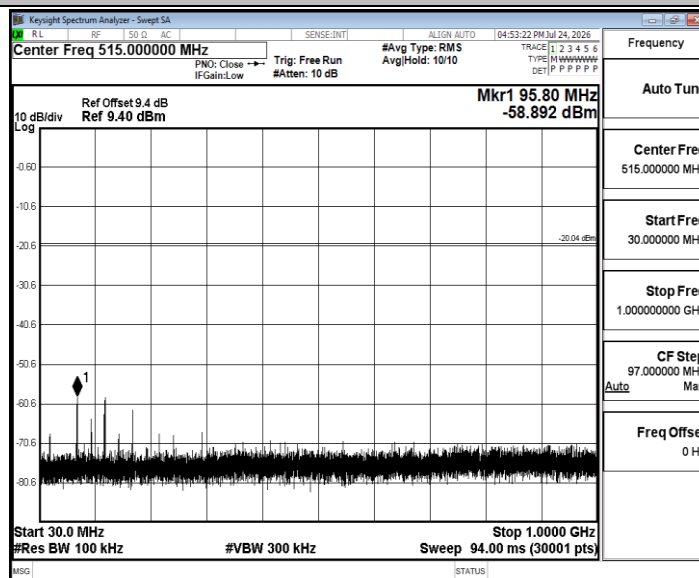




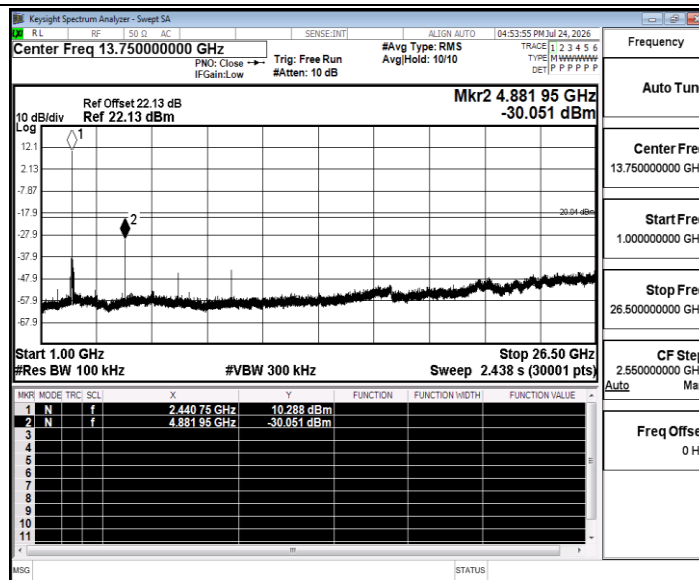
DH5_Ant1_2441_0~Reference



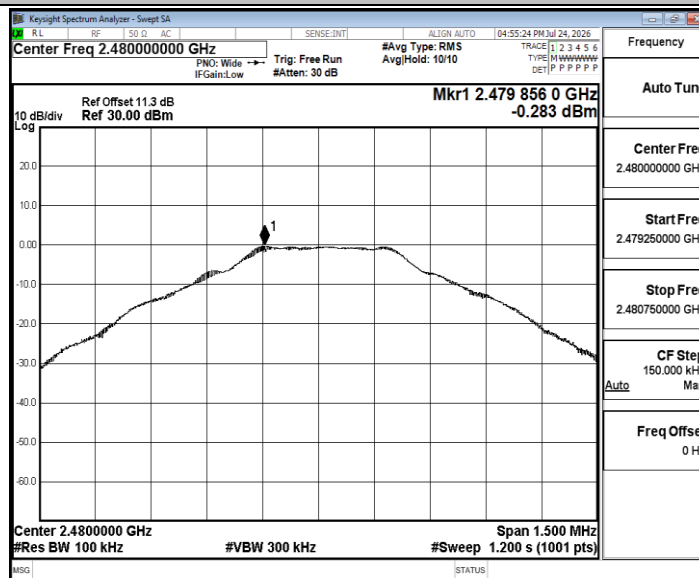
DH5_Ant1_2441_30~1000



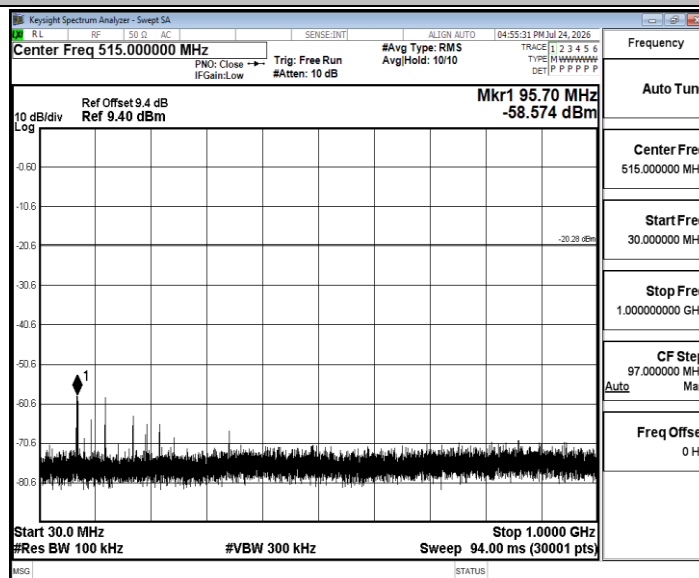
DH5_Ant1_2441_1000~26500



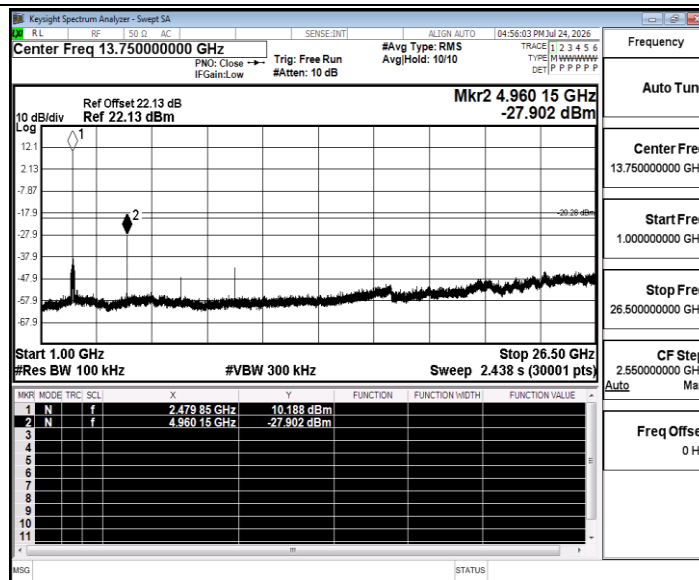
DH5_Ant1_2480_0~Reference



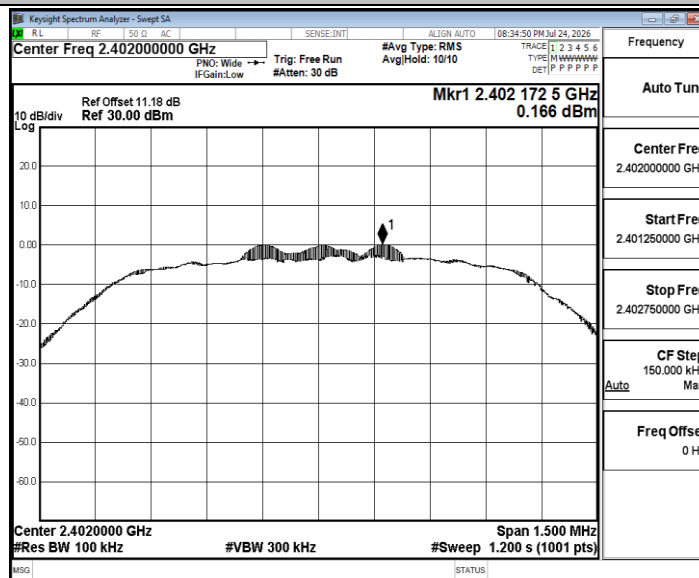
DH5_Ant1_2480_30~1000



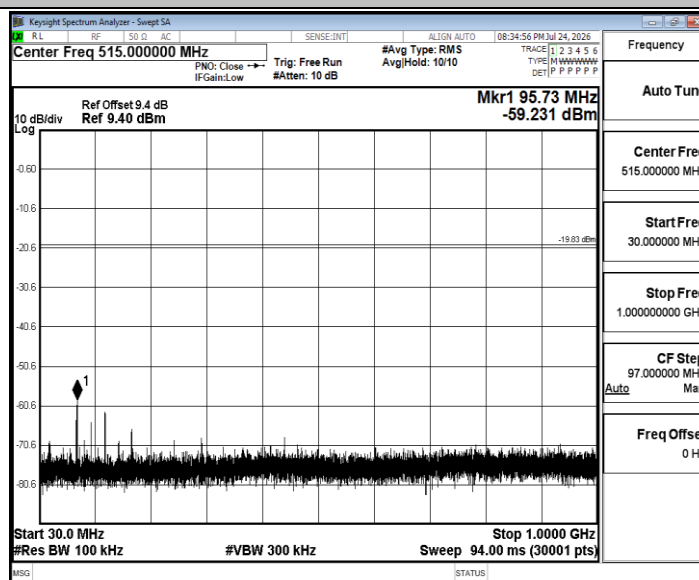
DH5_Ant1_2480_1000~26500



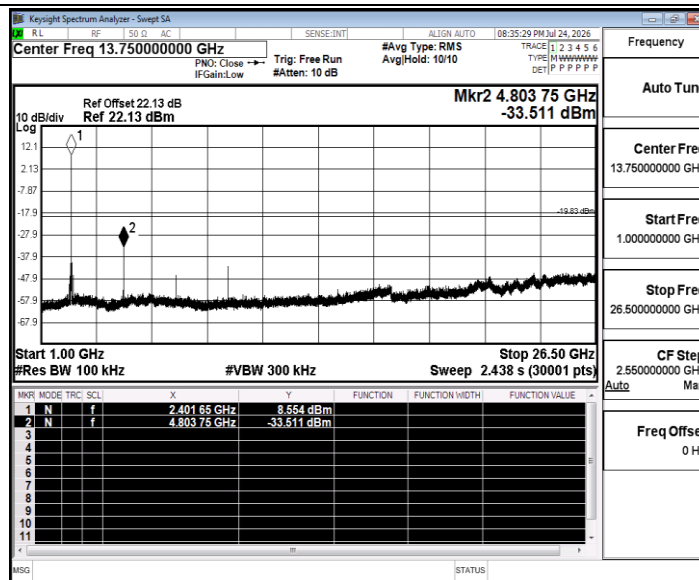
2DH5_Ant1_2402_0~Reference



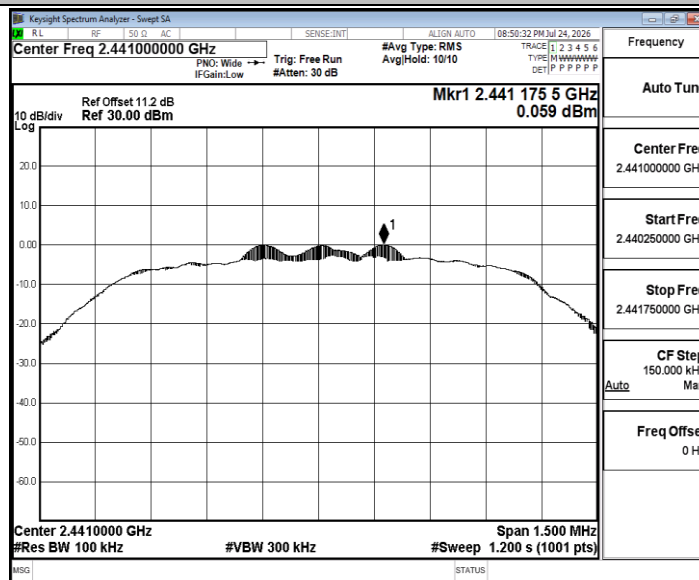
2DH5_Ant1_2402_30~1000



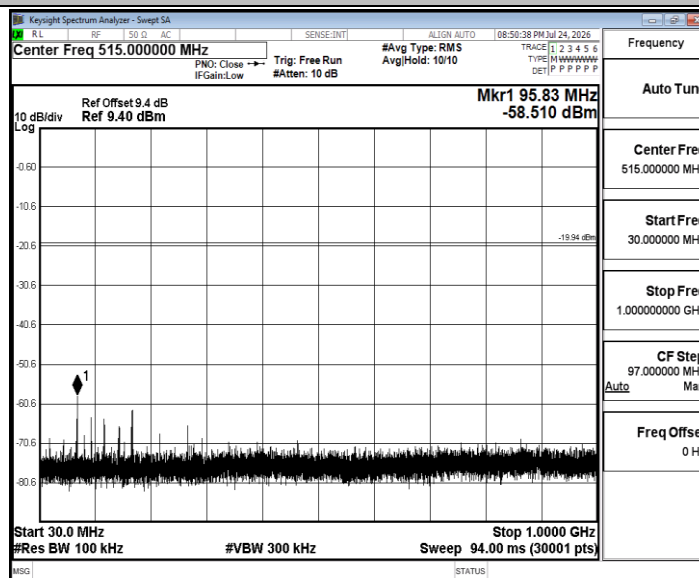
2DH5_Ant1_2402_1000~26500



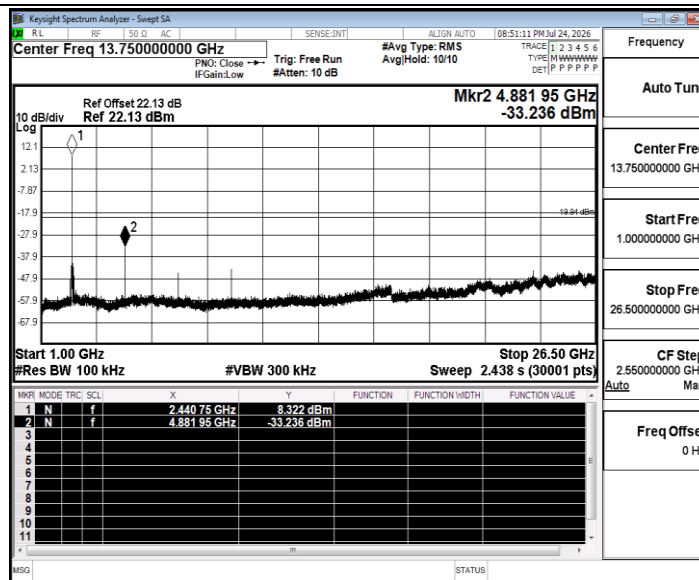
2DH5_Ant1_2441_0~Reference



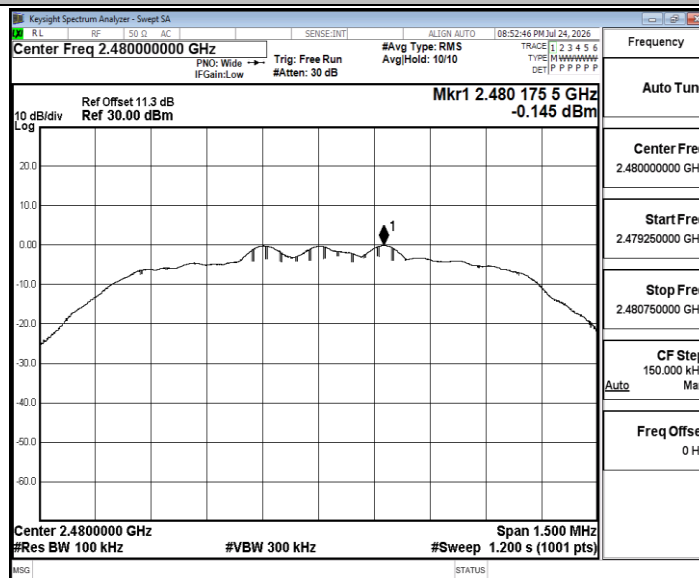
2DH5_Ant1_2441_30~1000



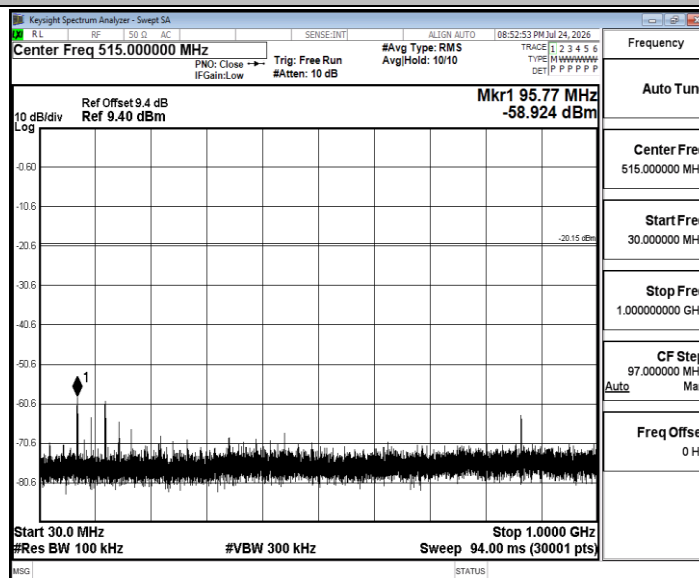
2DH5_Ant1_2441_1000~26500



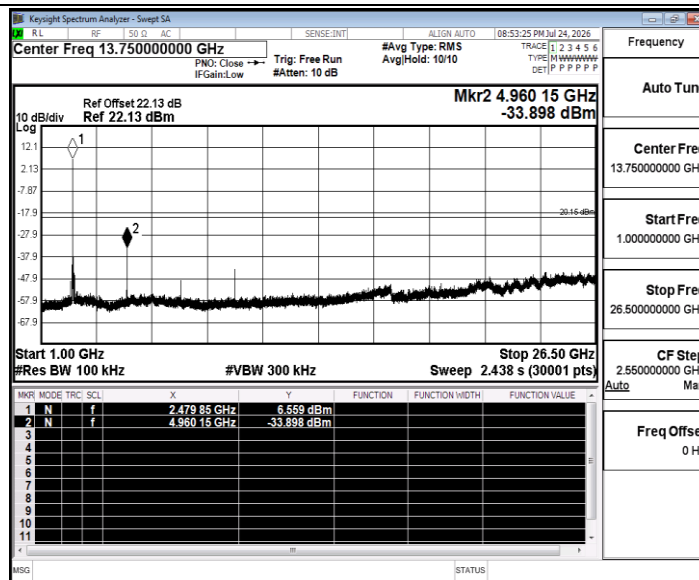
2DH5_Ant1_2480_0~Reference



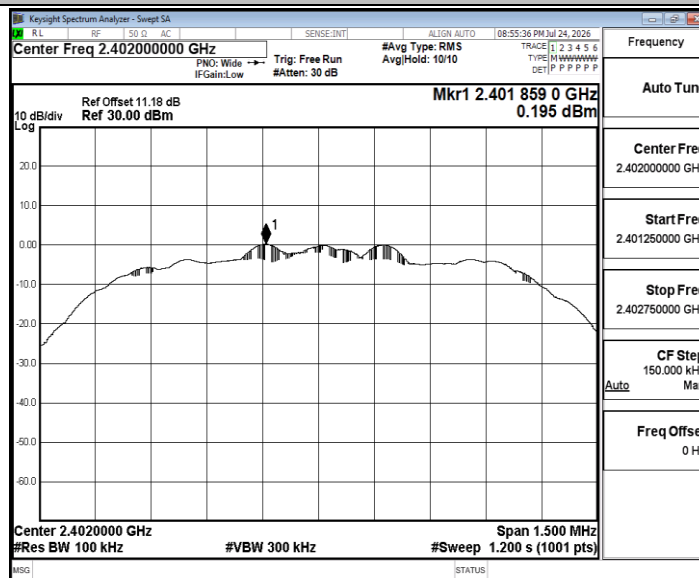
2DH5_Ant1_2480_30~1000



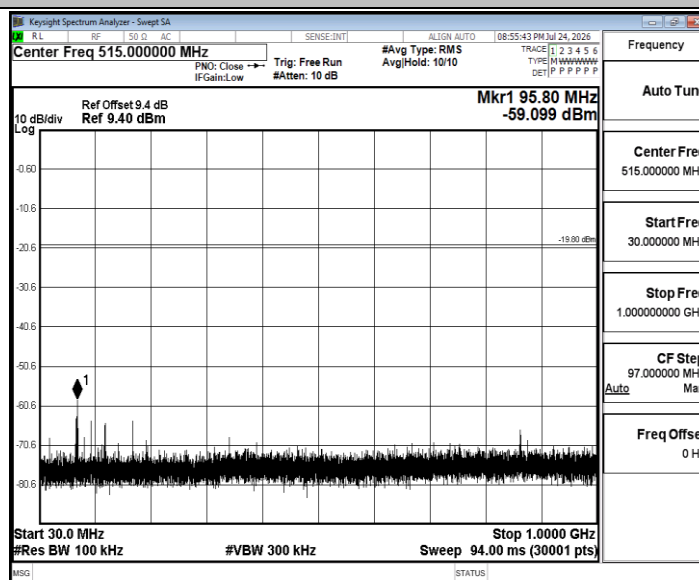
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



3DH5_Ant1_2402_1000~26500