

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Portable Speaker

Test Model: X-BOOM-X

Environmental Conditions

Temperature:	24.1°C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Yan Chen
Supervised by:	Fengliu Tang

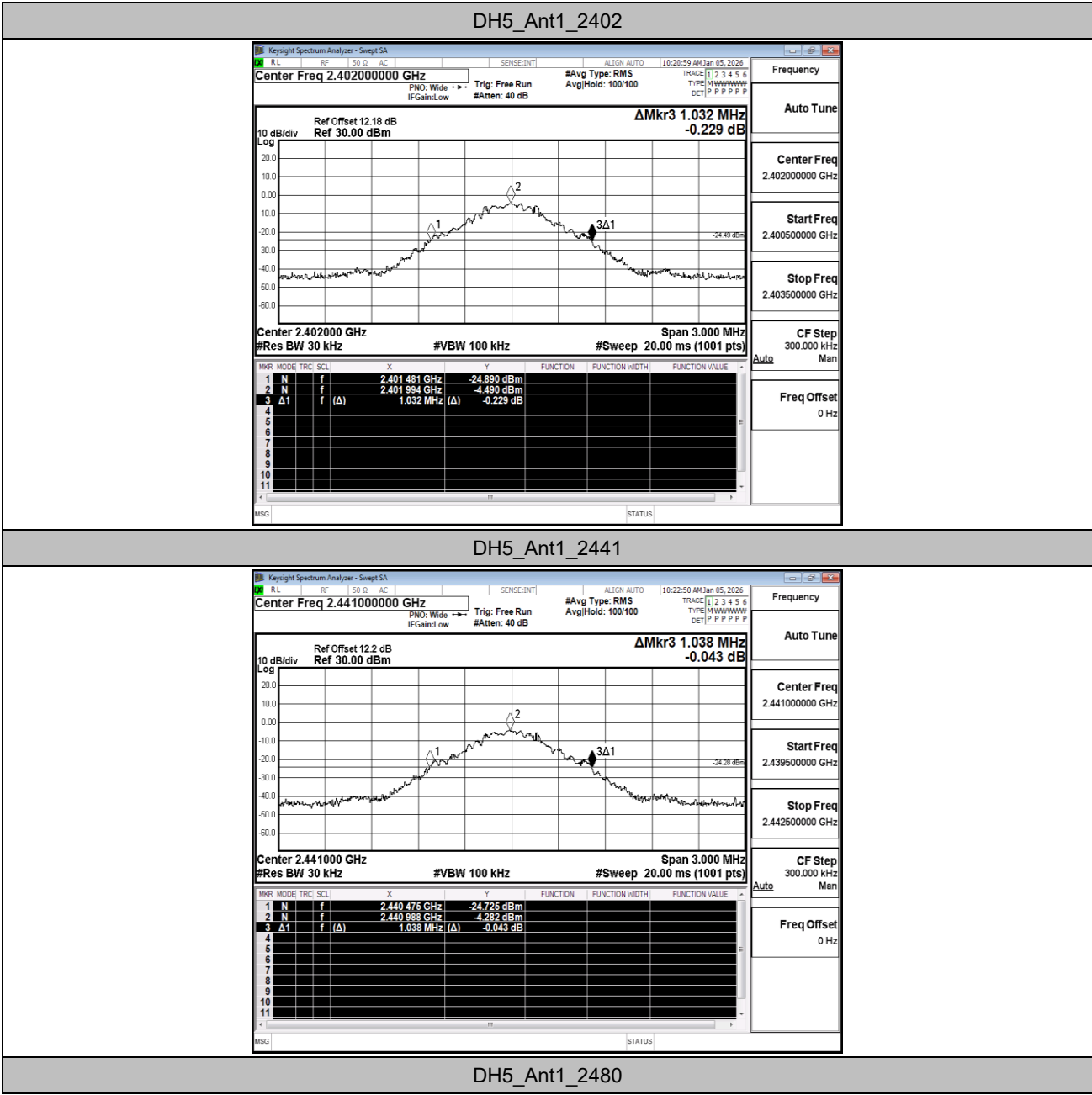
A.1 20dB Emission Bandwidth

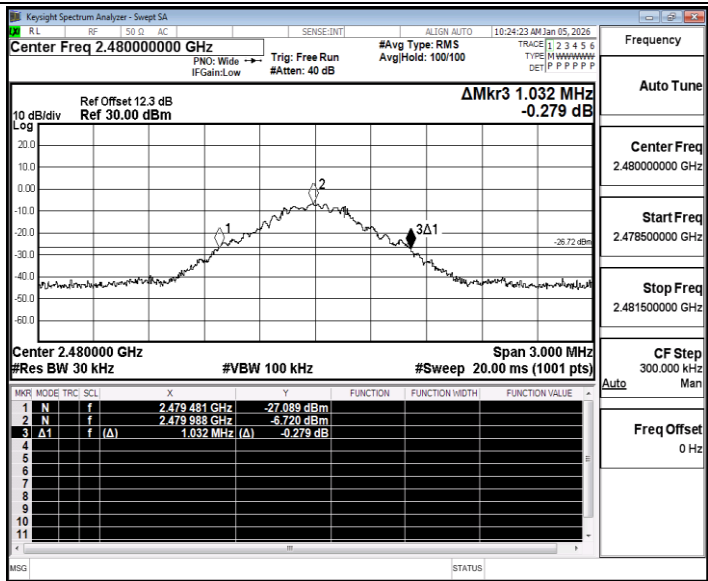
Test Result

TestMode	Antenna	Freq (MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	1.032	2401.481	2402.513	---	---
		2441	1.038	2440.475	2441.513	---	---
		2480	1.032	2479.481	2480.513	---	---
2DH5	Ant1	2402	1.323	2401.337	2402.660	---	---
		2441	1.326	2440.334	2441.660	---	---
		2480	1.323	2479.343	2480.666	---	---
3DH5	Ant1	2402	1.290	2401.340	2402.630	---	---
		2441	1.329	2440.337	2441.666	---	---
		2480	1.323	2479.346	2480.669	---	---

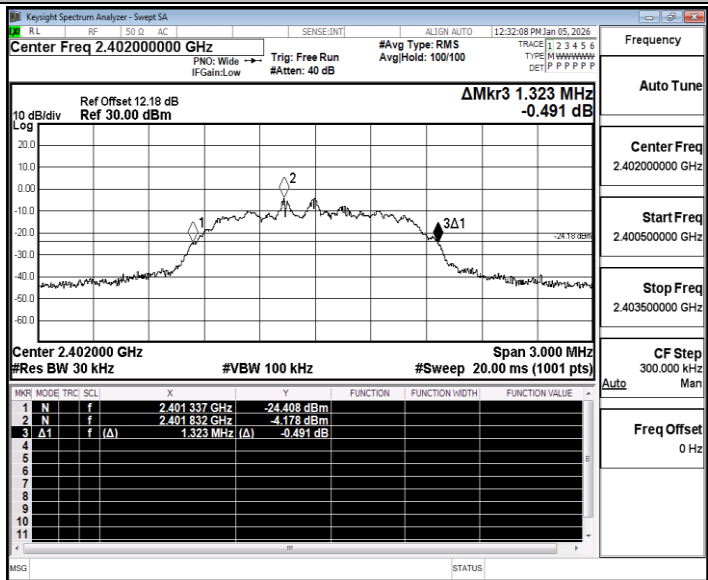
Note: offset=System attenuation +cable loss

Test Graphs

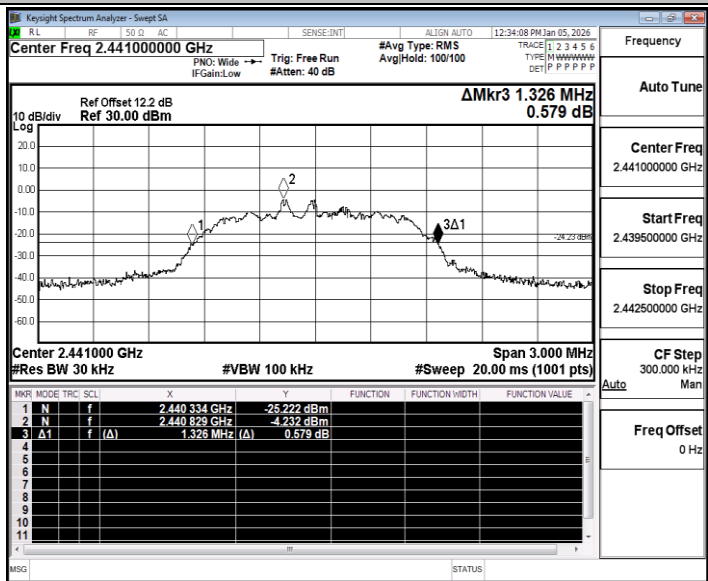




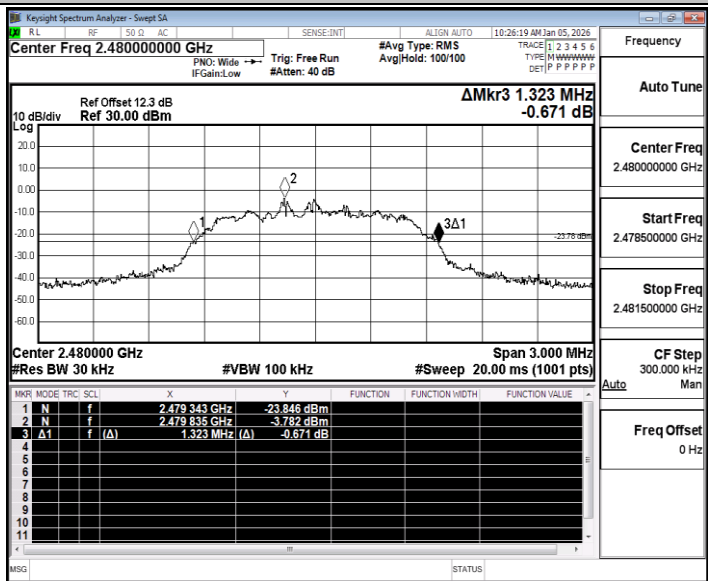
2DH5_Ant1_2402



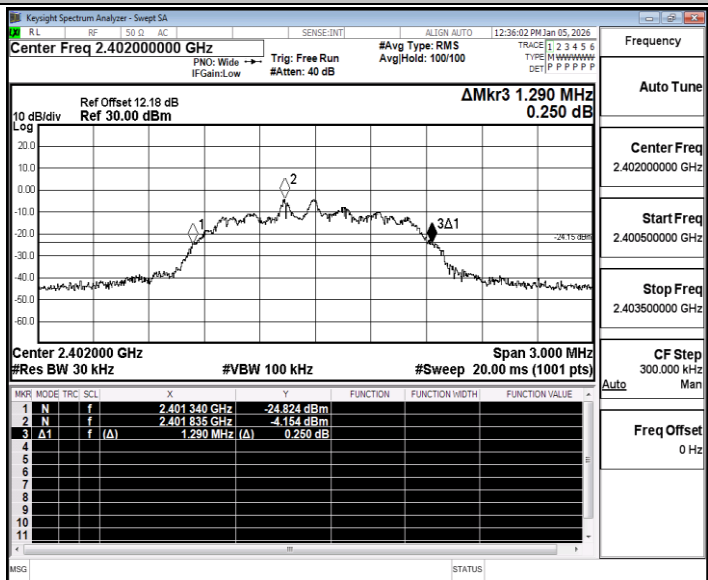
2DH5_Ant1_2441



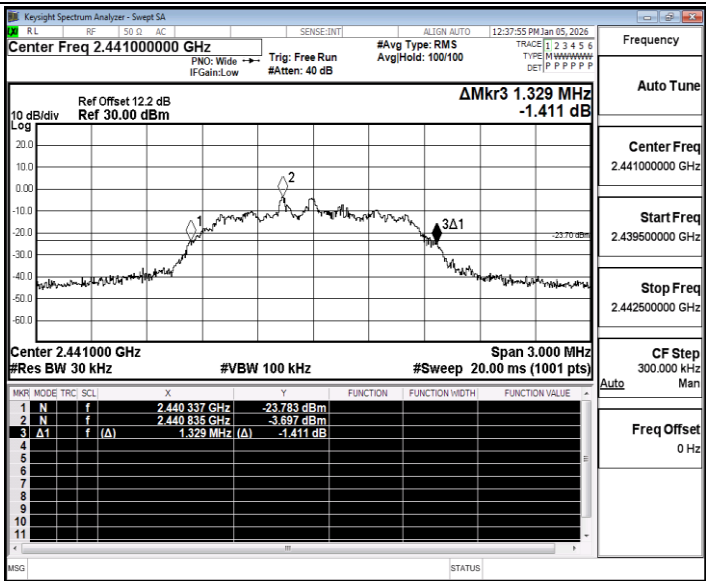
2DH5_Ant1_2480



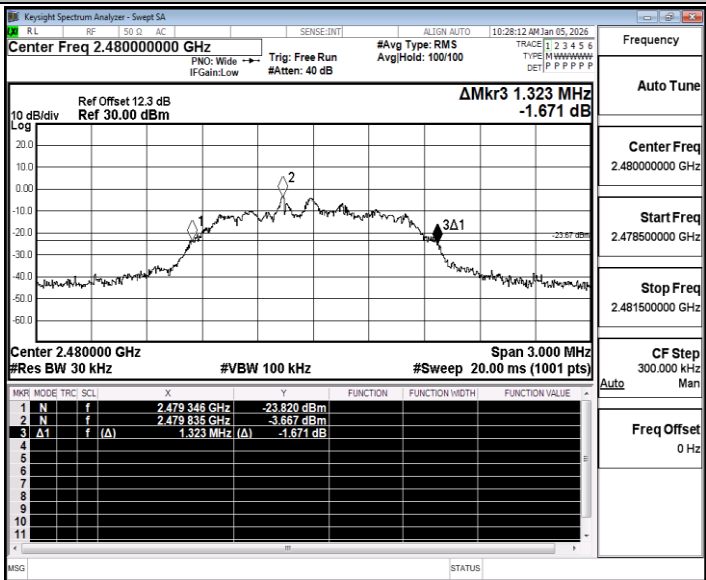
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



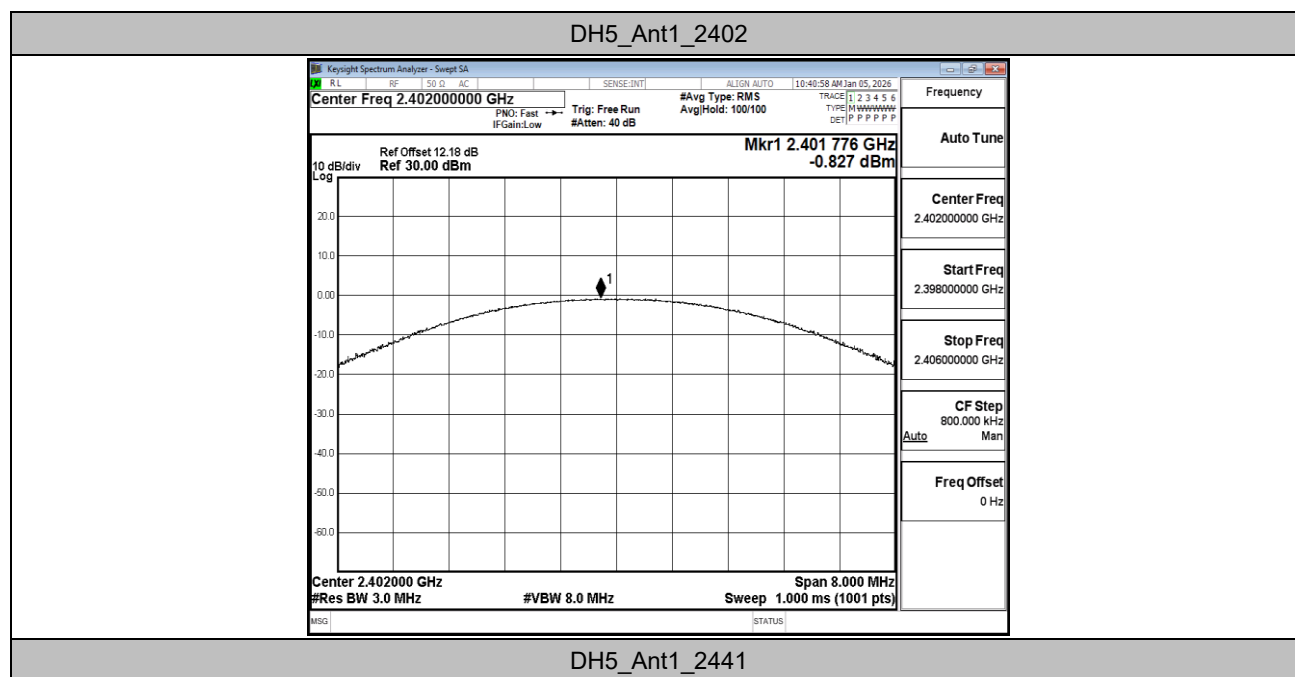
A.2 Maximum Peak conducted output power

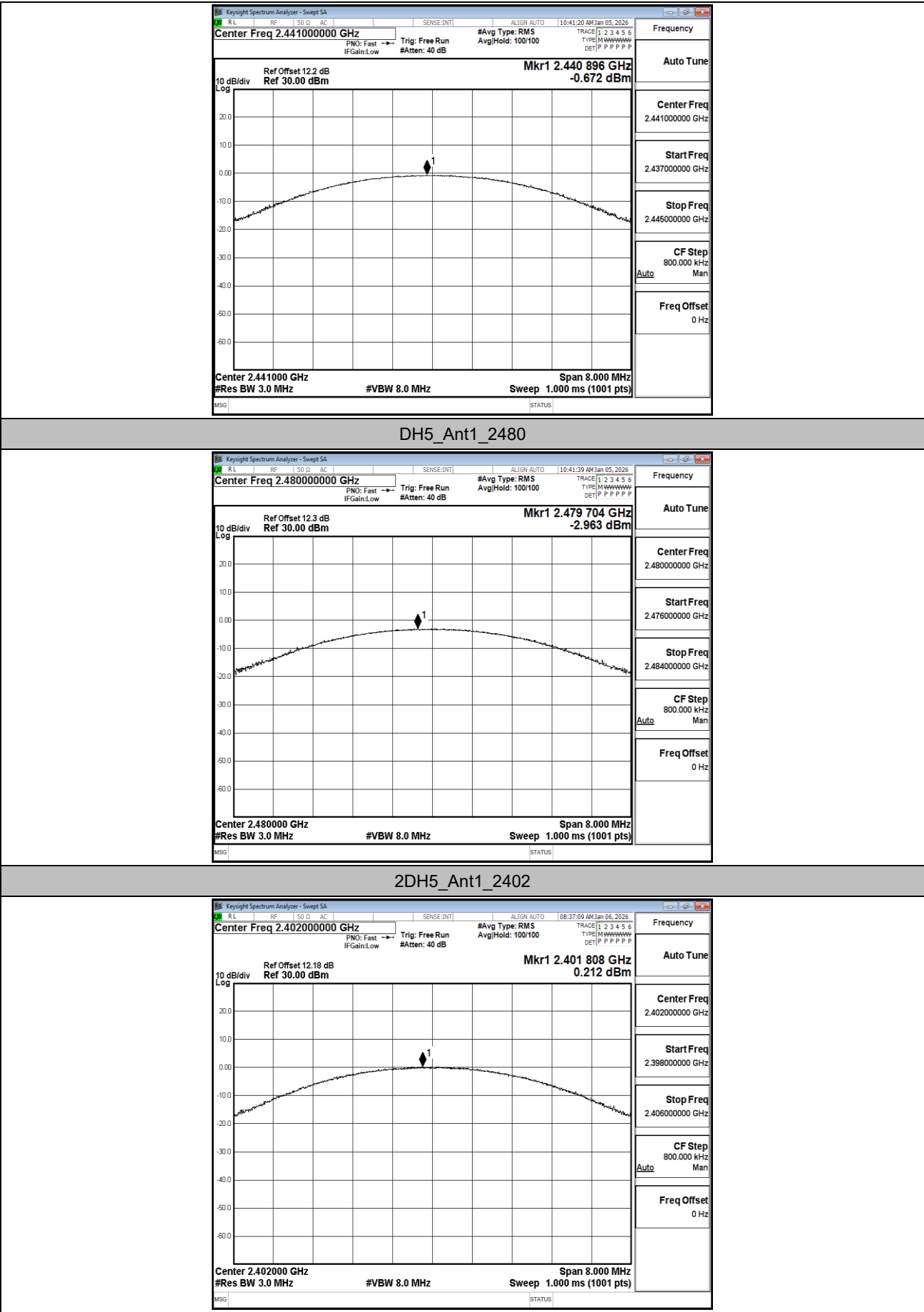
Test Result Peak

Test Mode	Antenna	Freq (MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-0.83	≤20.97	PASS
		2441	-0.67	≤20.97	PASS
		2480	-2.96	≤20.97	PASS
2DH5	Ant1	2402	0.21	≤20.97	PASS
		2441	-0.25	≤20.97	PASS
		2480	0.03	≤20.97	PASS
3DH5	Ant1	2402	0.71	≤20.97	PASS
		2441	0.11	≤20.97	PASS
		2480	0.15	≤20.97	PASS

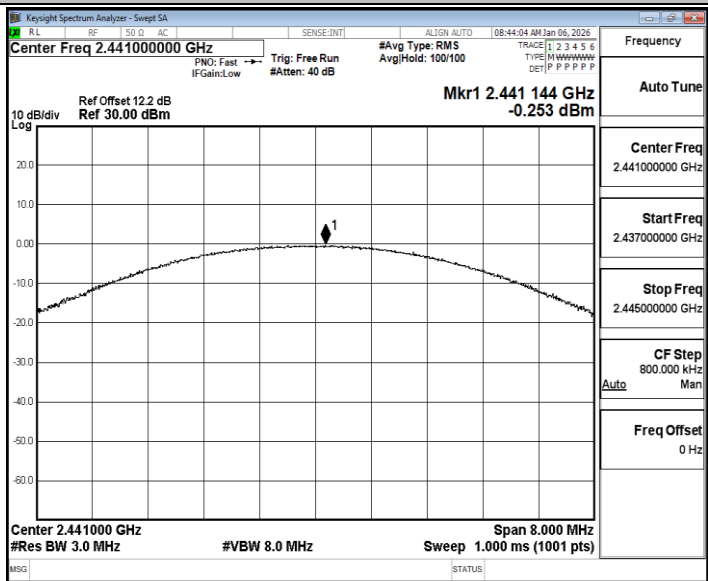
Note: offset=System attenuation +cabal loss

Test Graphs

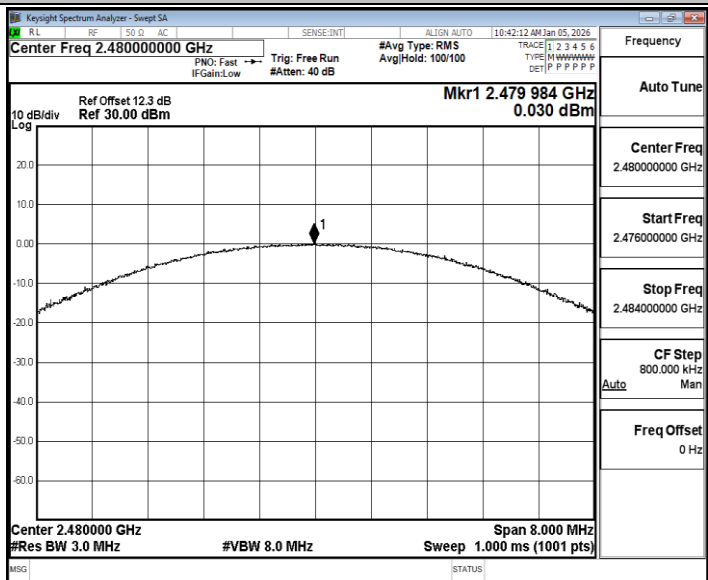




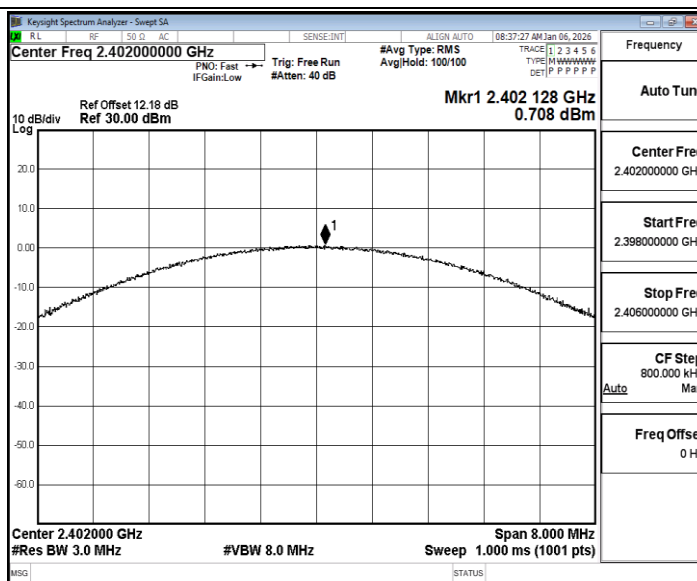
2DH5_Ant1_2441



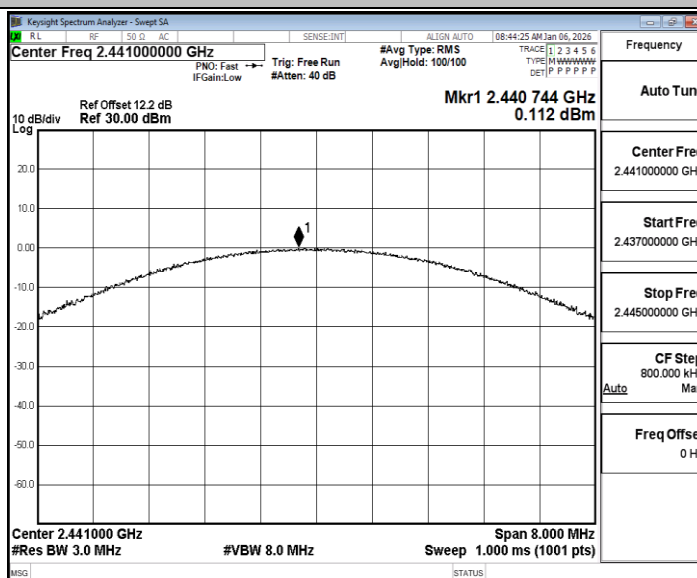
2DH5_Ant1_2480



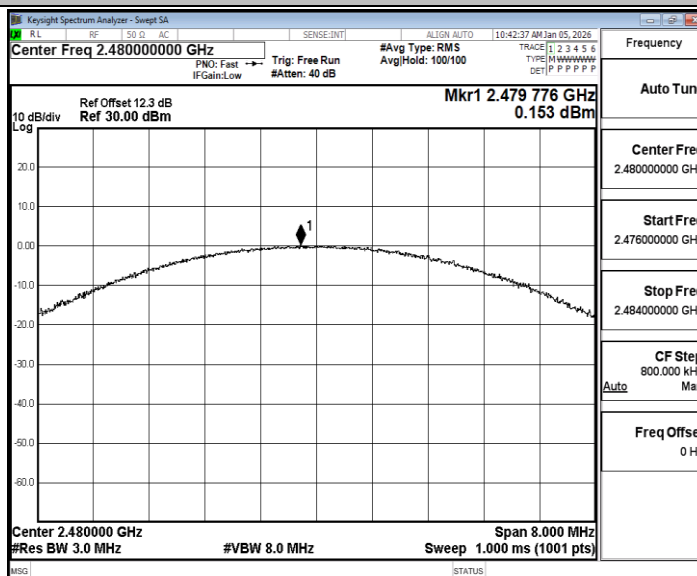
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



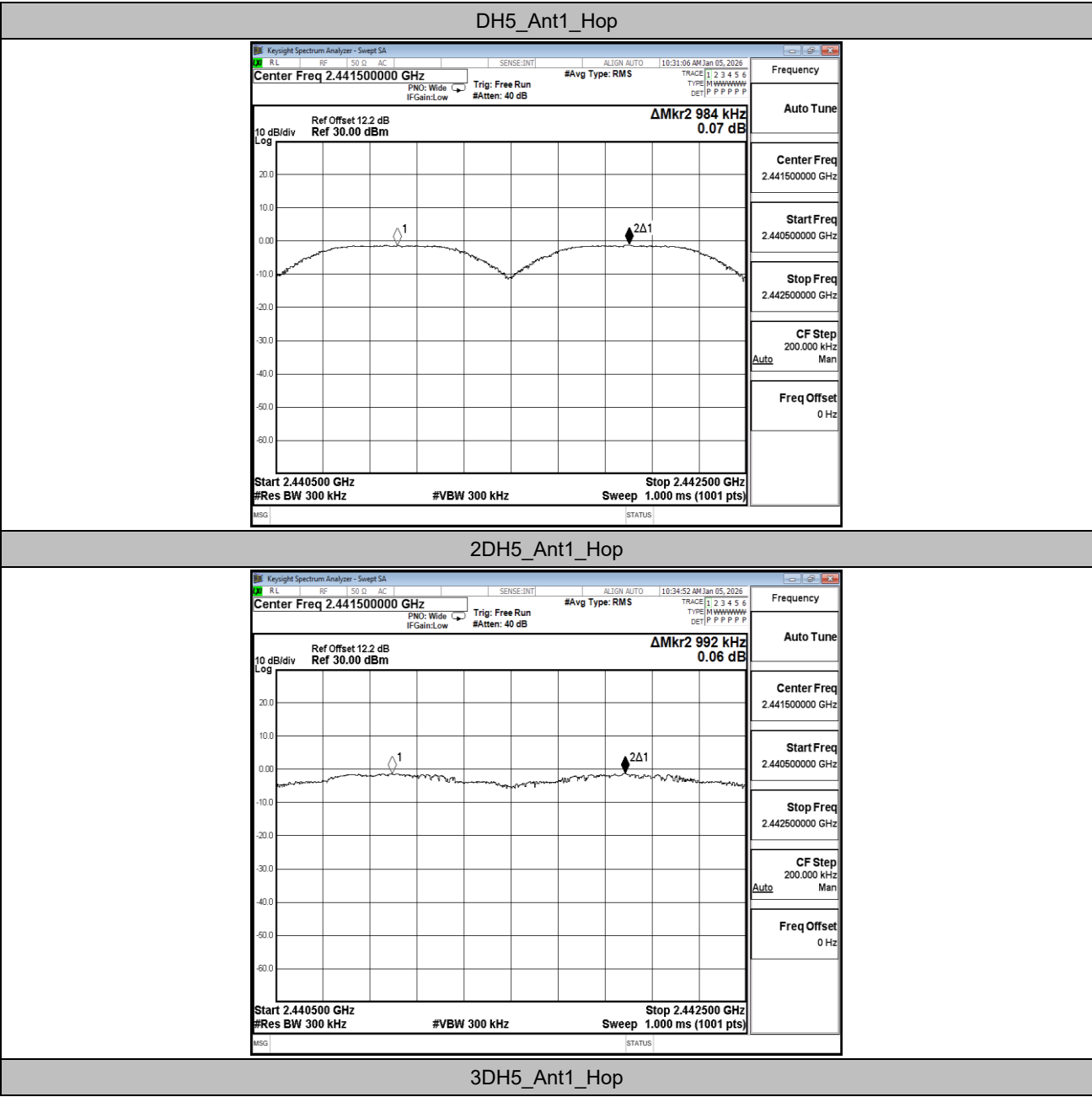
A.3 Carrier frequency separation

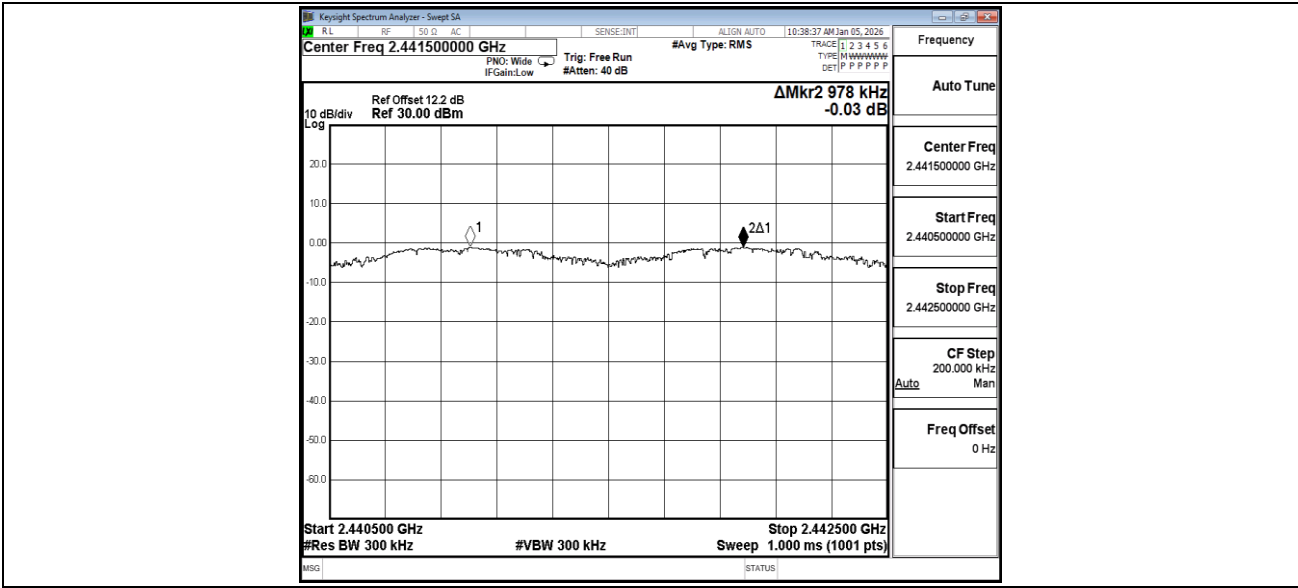
Test Result

TestMode	Antenna	Freq (MHz)	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	0.984	≥ 0.692	PASS
2DH5	Ant1	Hop	0.992	≥ 0.884	PASS
3DH5	Ant1	Hop	0.978	≥ 0.882	PASS

Note: offset=System attenuation +cabel loss

Test Graphs





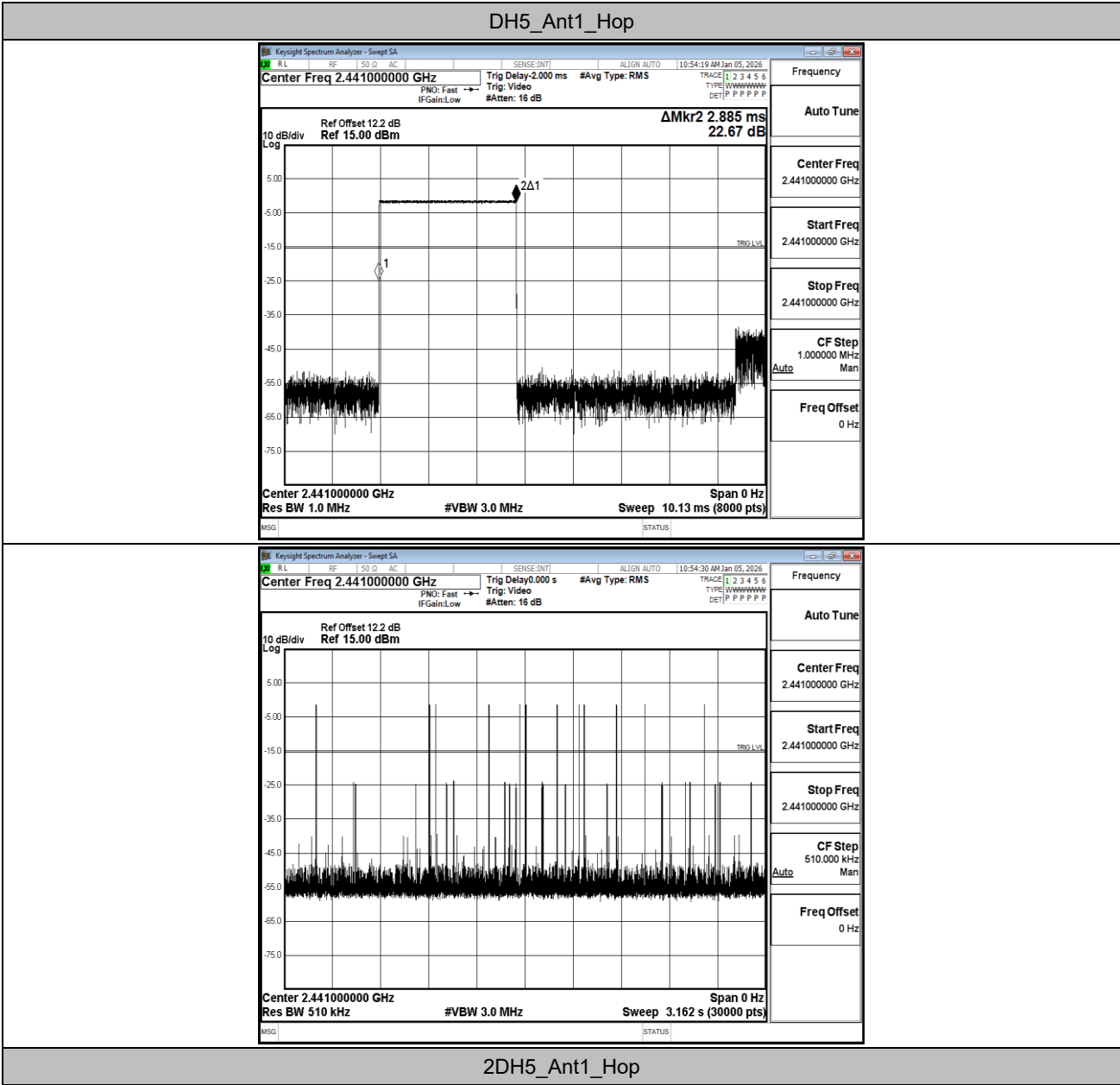
A.4 Time of occupancy

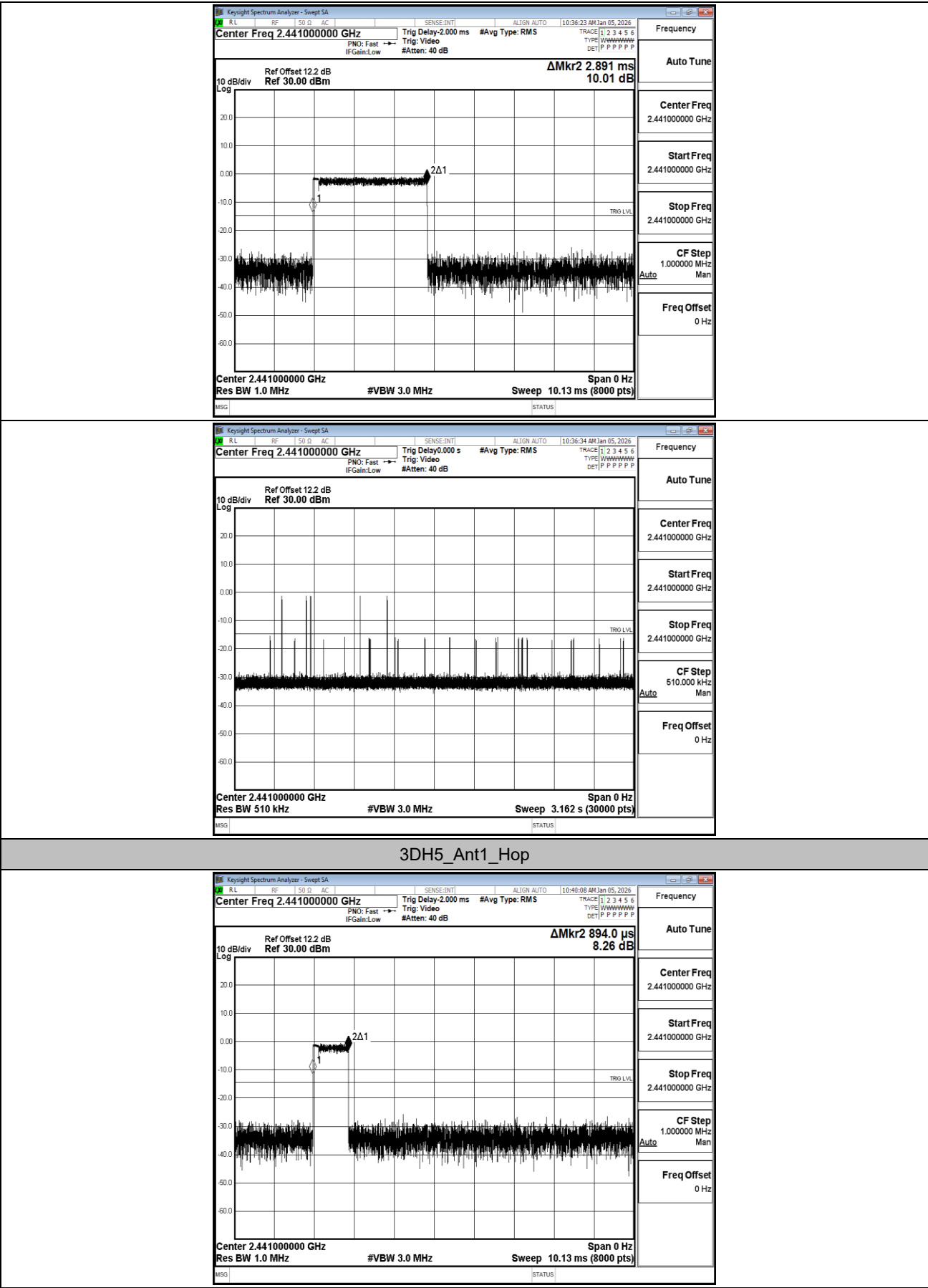
Test Result

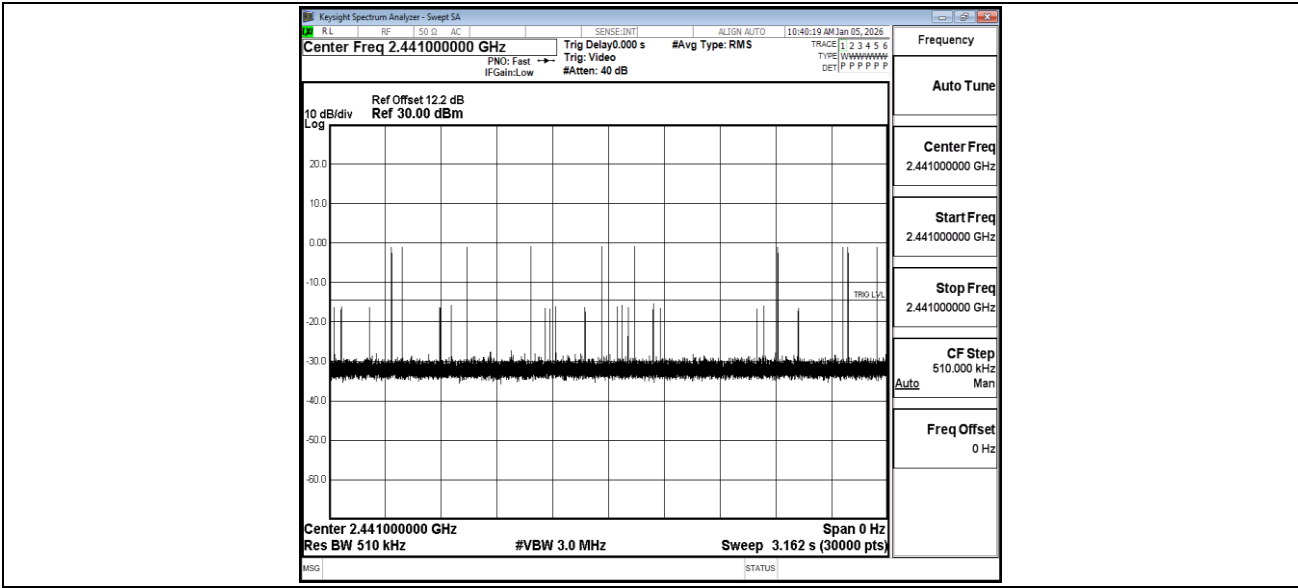
TestMode	Antenna	Freq (MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.885	130	0.375	≤0.4	PASS
2DH5	Ant1	Hop	2.891	60	0.173	≤0.4	PASS
3DH5	Ant1	Hop	0.894	110	0.098	≤0.4	PASS

Note: offset=System attenuation +cabal loss

Test Graphs







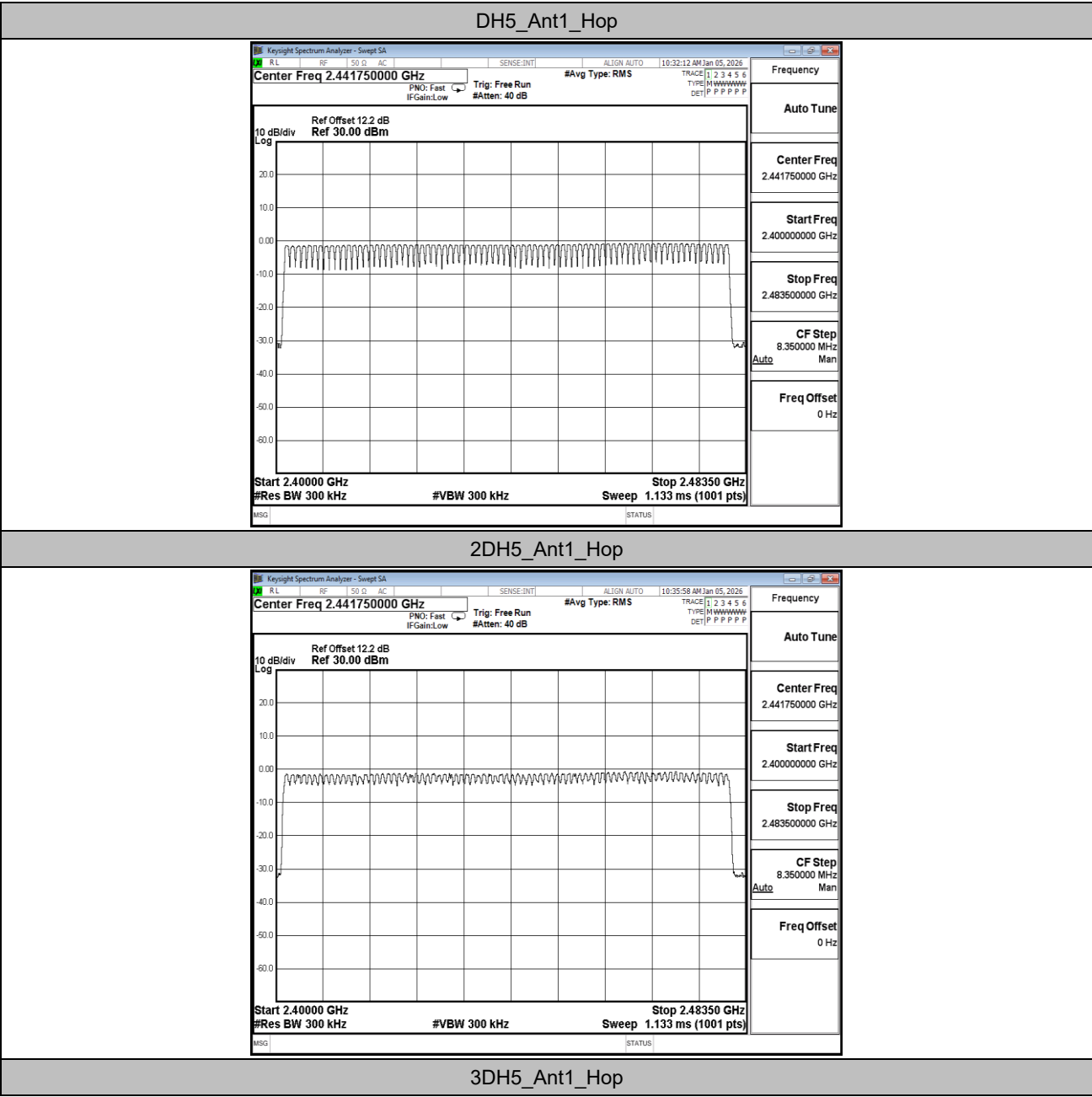
A.5 Number of hopping channels

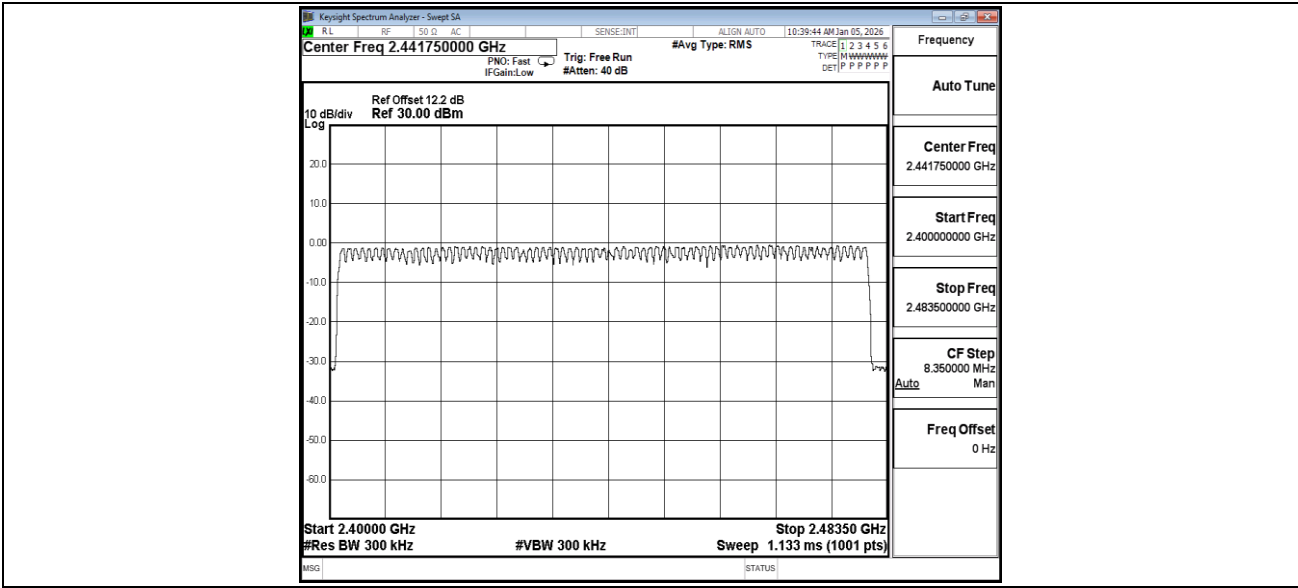
Test Result

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

Note: offset=System attenuation +cabal loss

Test Graphs





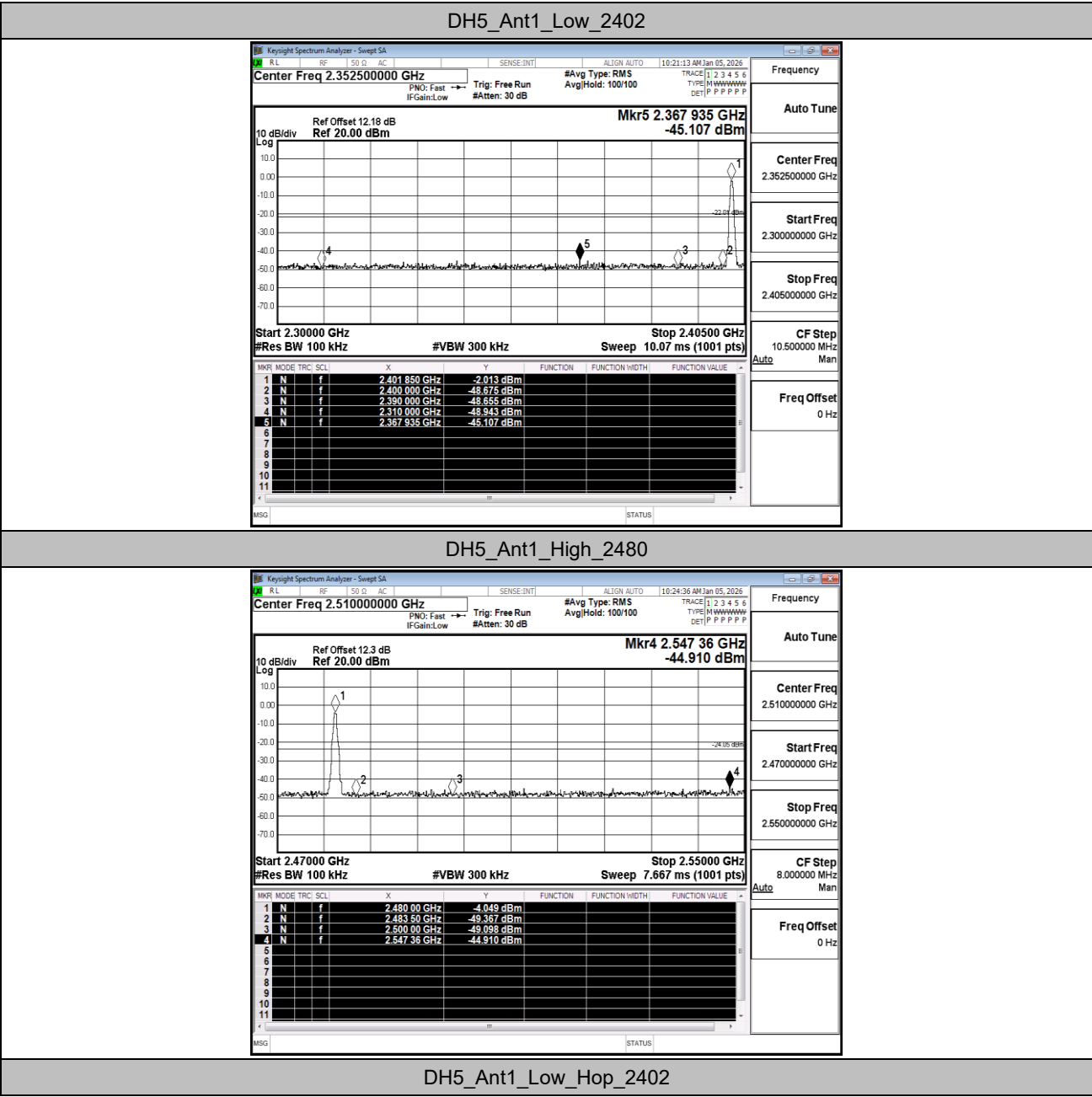
A.6 Band edge measurements

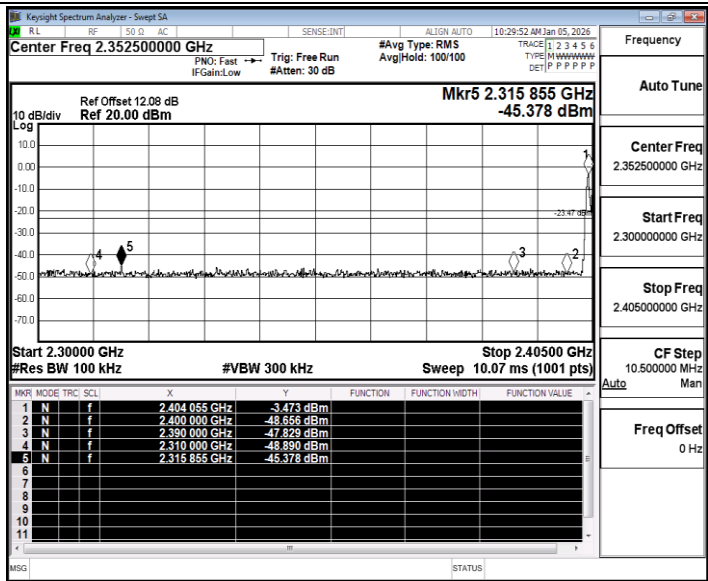
Test Result

TestMode	Antenna	ChName	Freq (MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-2.01	-45.11	≤ -22.01	PASS
		High	2480	-4.05	-44.91	≤ -24.05	PASS
		Low	Hop_2402	-3.47	-45.38	≤ -23.47	PASS
		High	Hop_2480	-1.60	-44.49	≤ -21.6	PASS
2DH5	Ant1	Low	2402	-1.90	-45.29	≤ -21.9	PASS
		High	2480	-1.52	-44.49	≤ -21.52	PASS
		Low	Hop_2402	-7.87	-46.19	≤ -27.87	PASS
		High	Hop_2480	-2.54	-44.7	≤ -22.54	PASS
3DH5	Ant1	Low	2402	-2.05	-45.19	≤ -22.05	PASS
		High	2480	-1.62	-44.98	≤ -21.62	PASS
		Low	Hop_2402	-6.84	-46.09	≤ -26.84	PASS
		High	Hop_2480	-1.52	-45.26	≤ -21.52	PASS

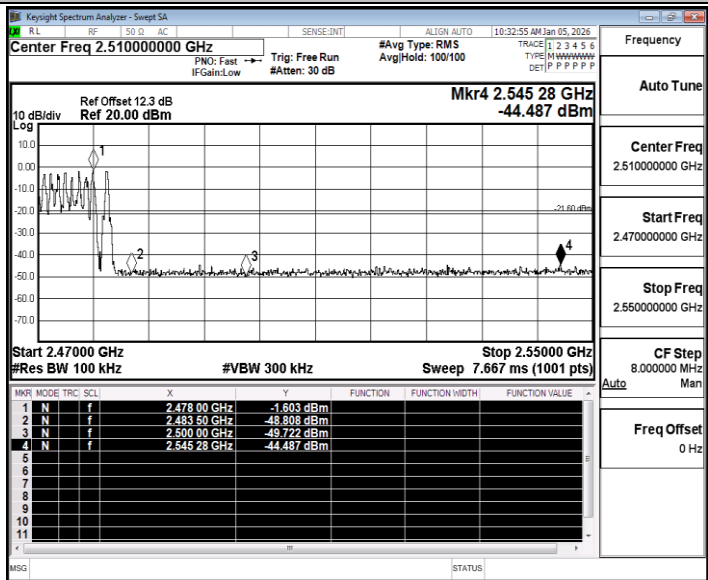
Note: offset=System attenuation +cabal loss

Test Graphs

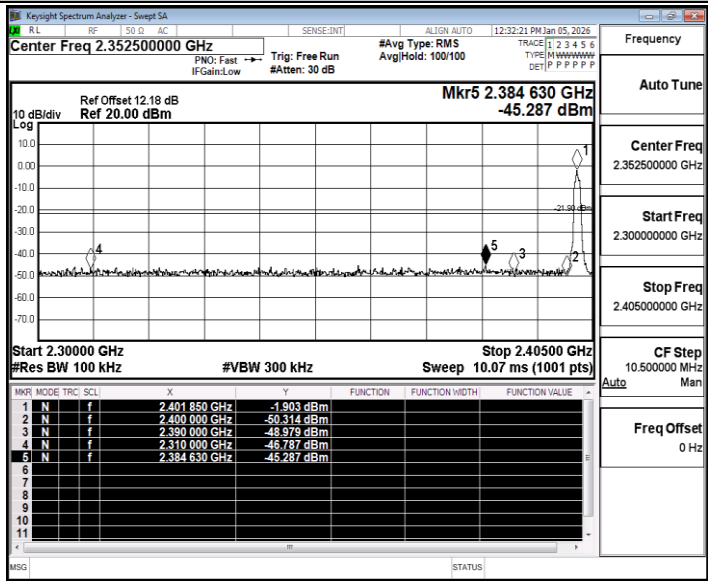


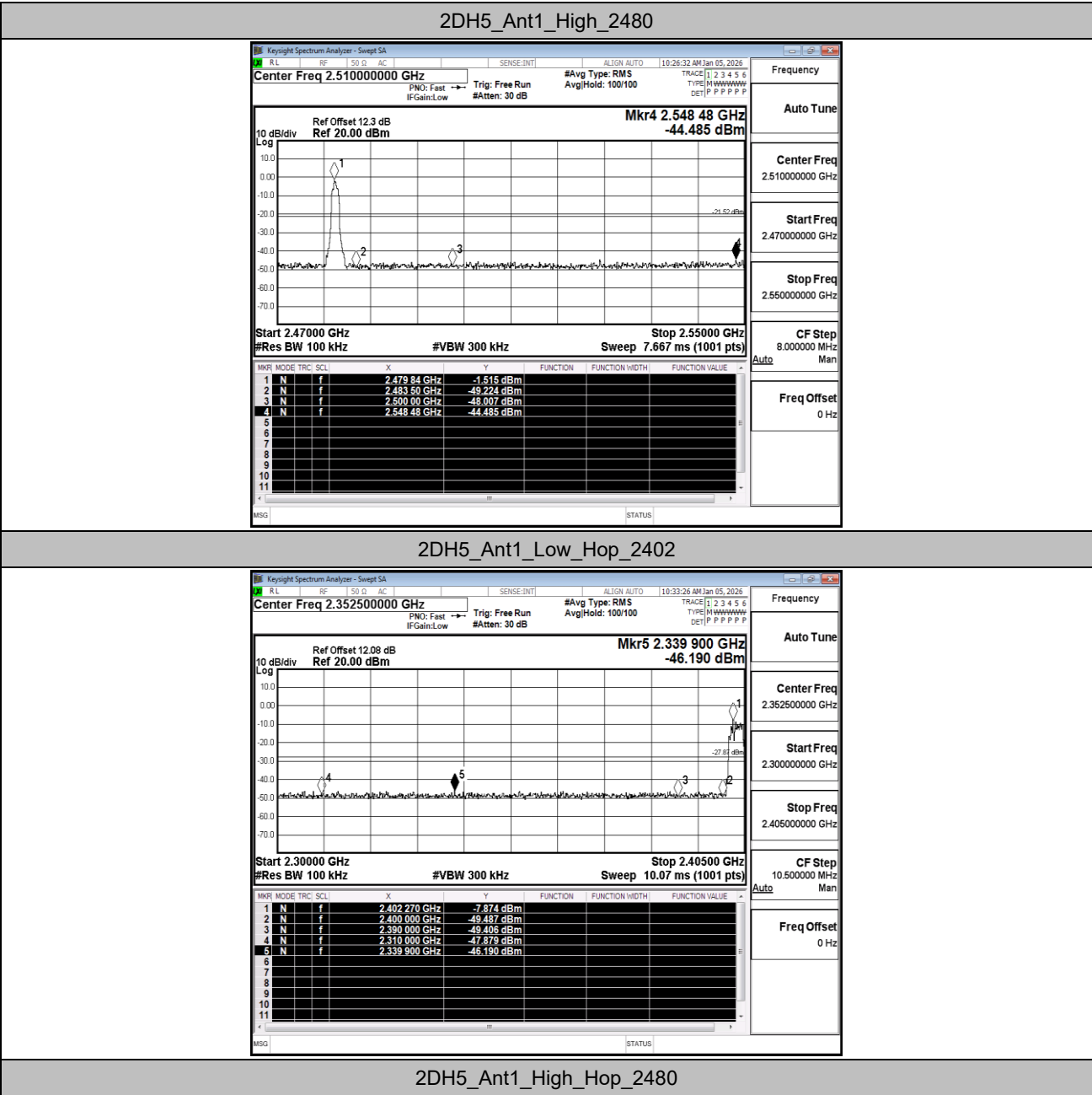


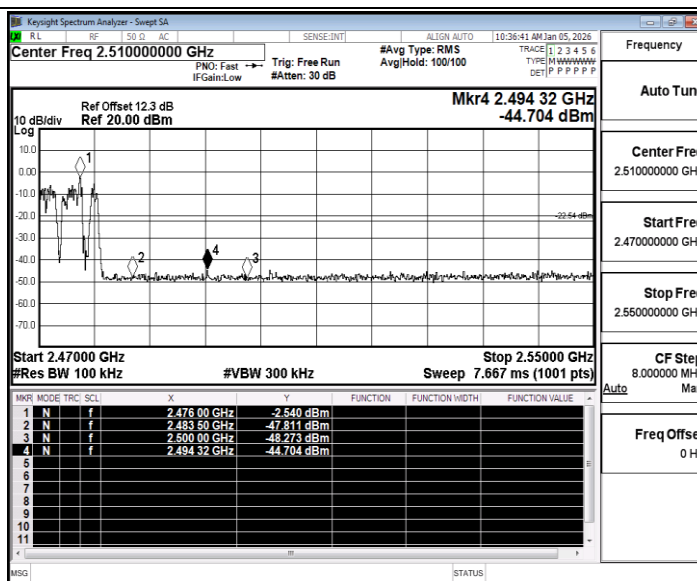
DH5_Ant1_High_Hop_2480



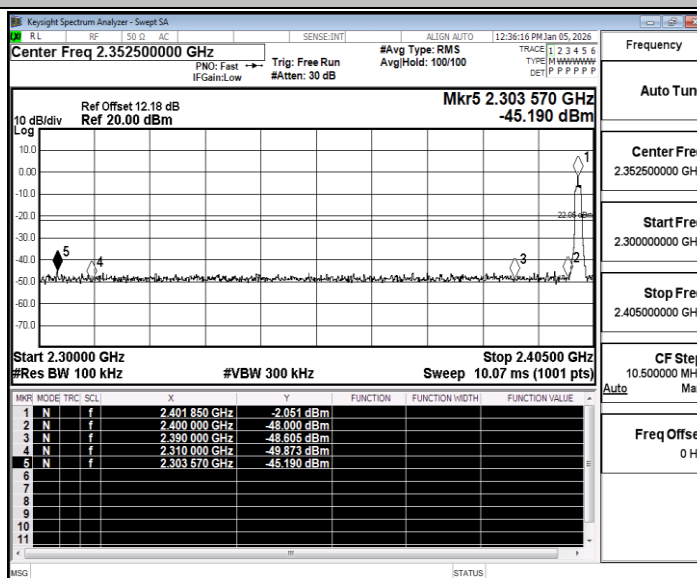
2DH5_Ant1_Low_2402



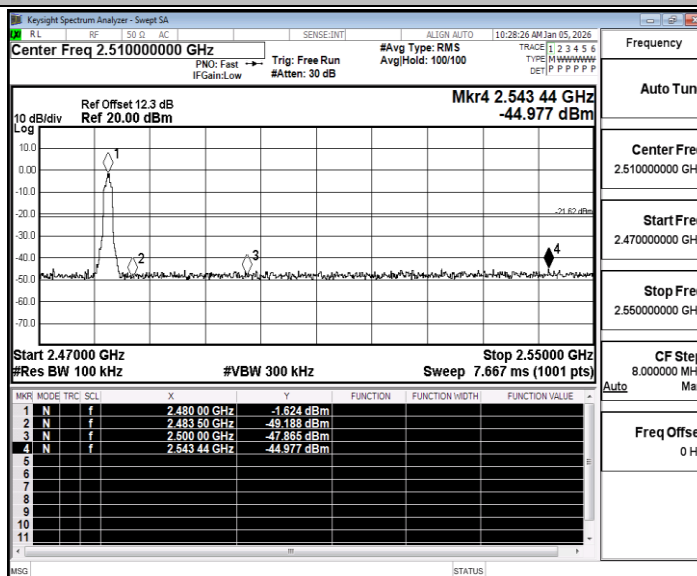




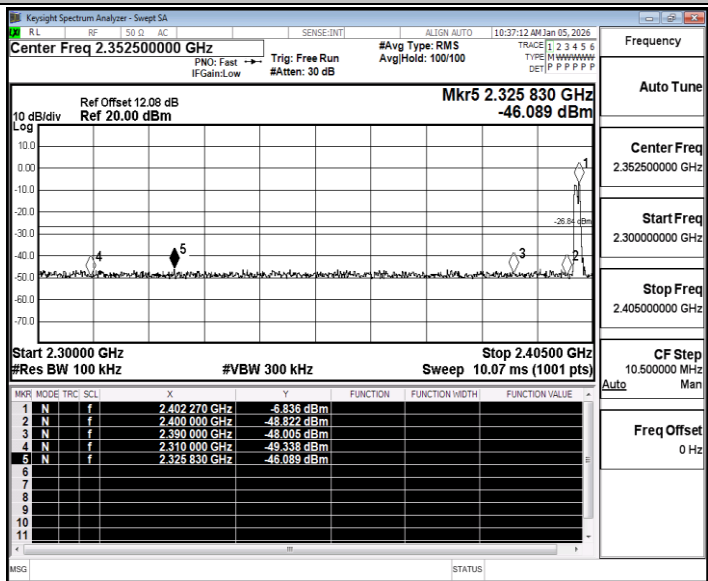
3DH5_Ant1_Low_2402



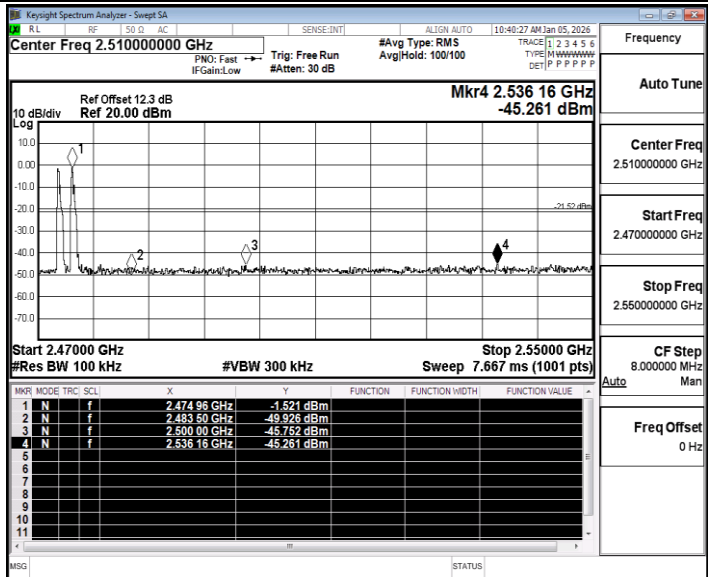
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



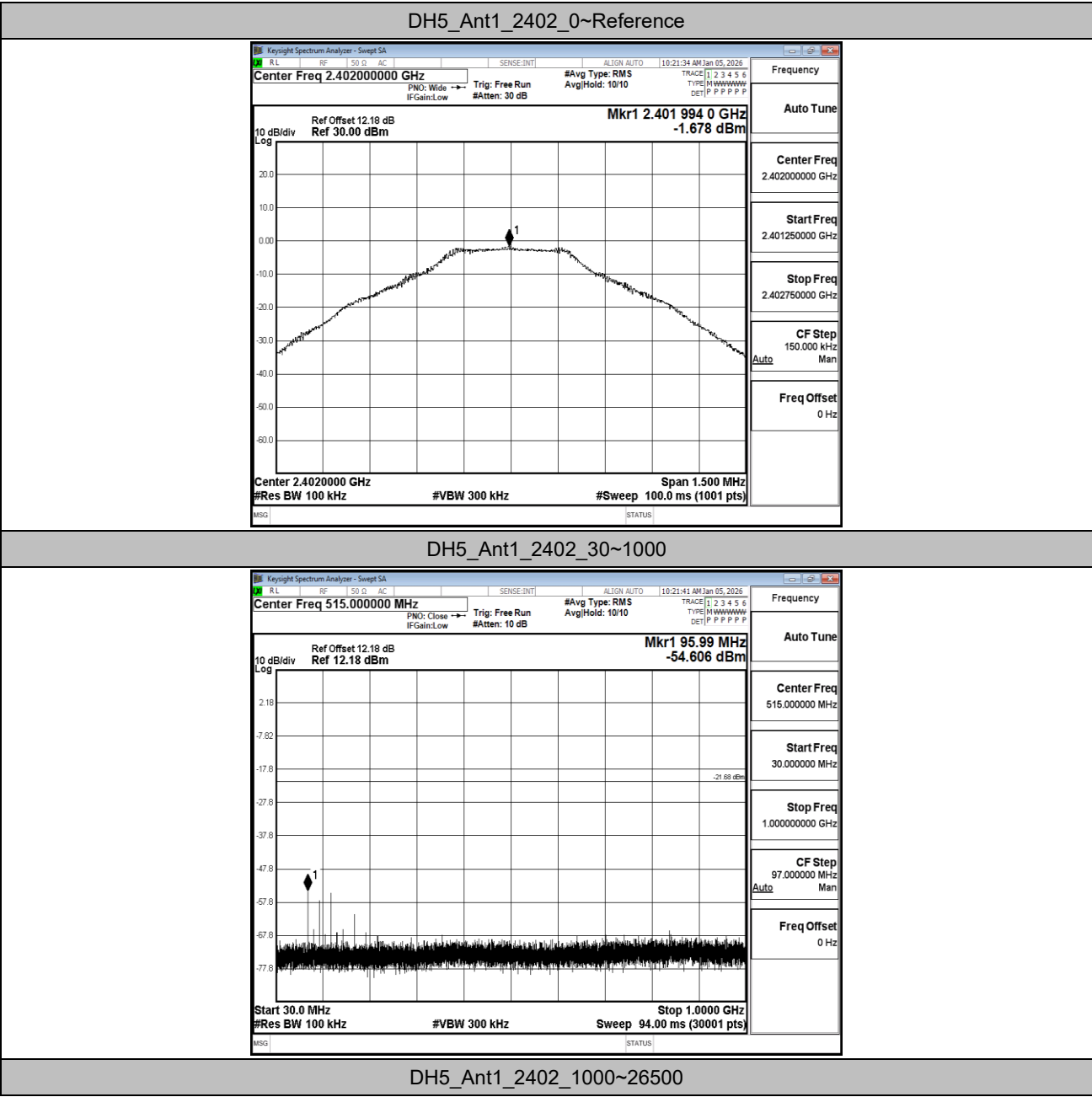
A.7 Conducted Spurious Emission

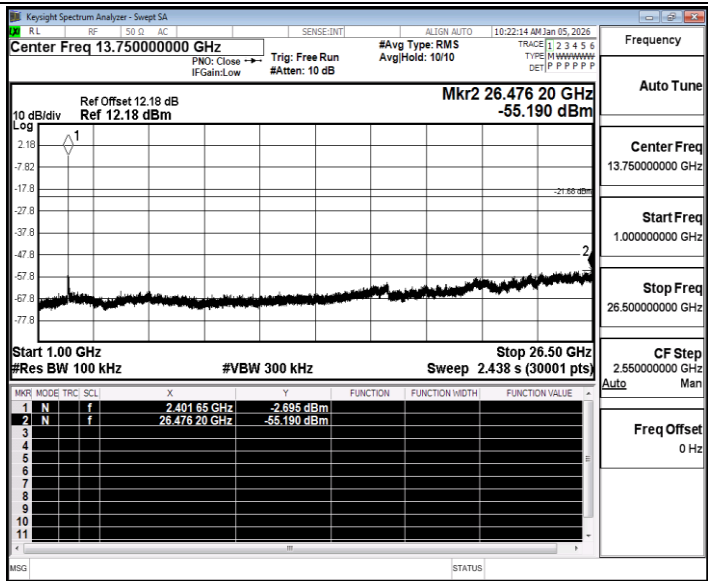
Test Result

TestMode	Antenna	Freq (MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.68	-1.68	---	PASS
			30~1000	-1.68	-54.61	≤ -21.68	PASS
			1000~26500	-1.68	-55.19	≤ -21.68	PASS
		2441	Reference	-1.47	-1.47	---	PASS
			30~1000	-1.47	-54.11	≤ -21.47	PASS
			1000~26500	-1.47	-54.22	≤ -21.47	PASS
		2480	Reference	-3.91	-3.91	---	PASS
			30~1000	-3.91	-53.9	≤ -23.91	PASS
			1000~26500	-3.91	-54.5	≤ -23.91	PASS
2DH5	Ant1	2402	Reference	-1.74	-1.74	---	PASS
			30~1000	-1.74	-54.05	≤ -21.74	PASS
			1000~26500	-1.74	-53.5	≤ -21.74	PASS
		2441	Reference	-1.54	-1.54	---	PASS
			30~1000	-1.54	-54.11	≤ -21.54	PASS
			1000~26500	-1.54	-54.62	≤ -21.54	PASS
		2480	Reference	-1.20	-1.20	---	PASS
			30~1000	-1.20	-54.09	≤ -21.2	PASS
			1000~26500	-1.20	-54.43	≤ -21.2	PASS
3DH5	Ant1	2402	Reference	-1.58	-1.58	---	PASS
			30~1000	-1.58	-54.43	≤ -21.58	PASS
			1000~26500	-1.58	-55.33	≤ -21.58	PASS
		2441	Reference	-1.21	-1.21	---	PASS
			30~1000	-1.21	-54.08	≤ -21.21	PASS
			1000~26500	-1.21	-54.91	≤ -21.21	PASS
		2480	Reference	-0.97	-0.97	---	PASS
			30~1000	-0.97	-54.39	≤ -20.97	PASS
			1000~26500	-0.97	-54.6	≤ -20.97	PASS

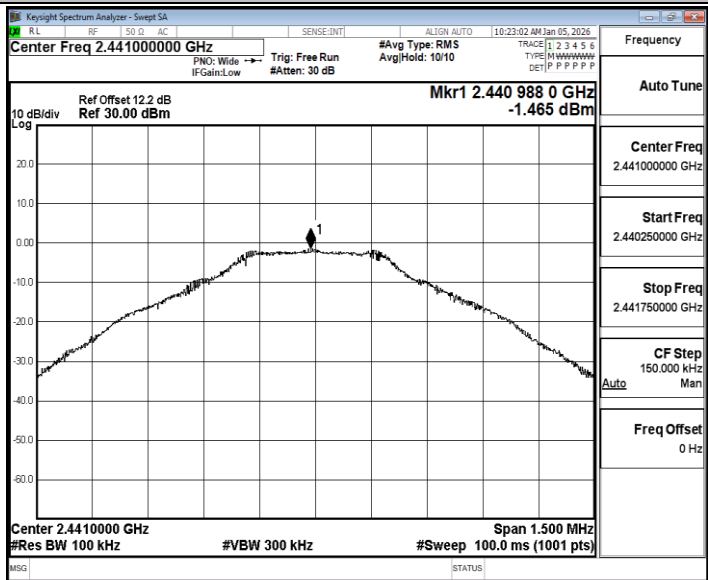
Note: offset=System attenuation +cabel loss

Test Graphs

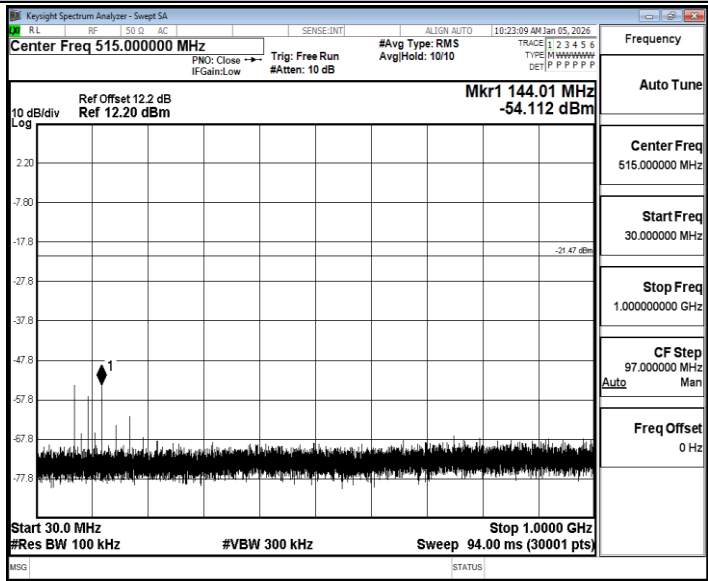




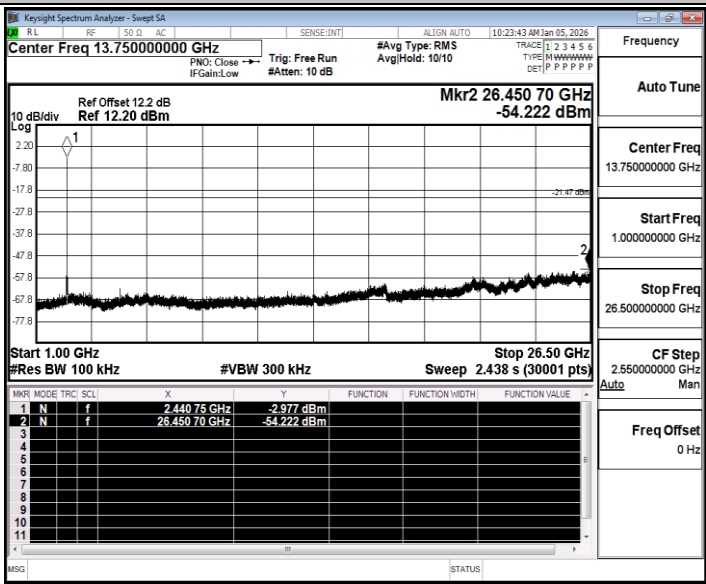
DH5_Ant1_2441_0~Reference



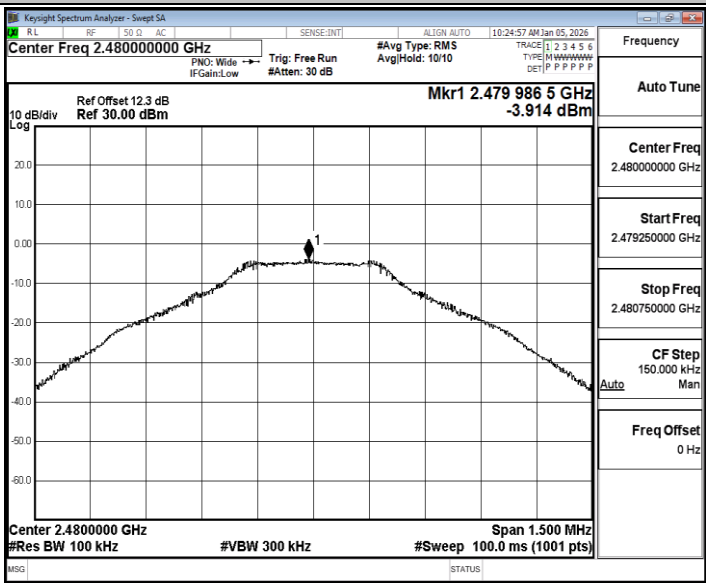
DH5_Ant1_2441_30~1000



DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000