

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Portable Bluetooth Retro Radio with Built-in Rechargeable Battery

Test Model: TF-B139C

Environmental Conditions

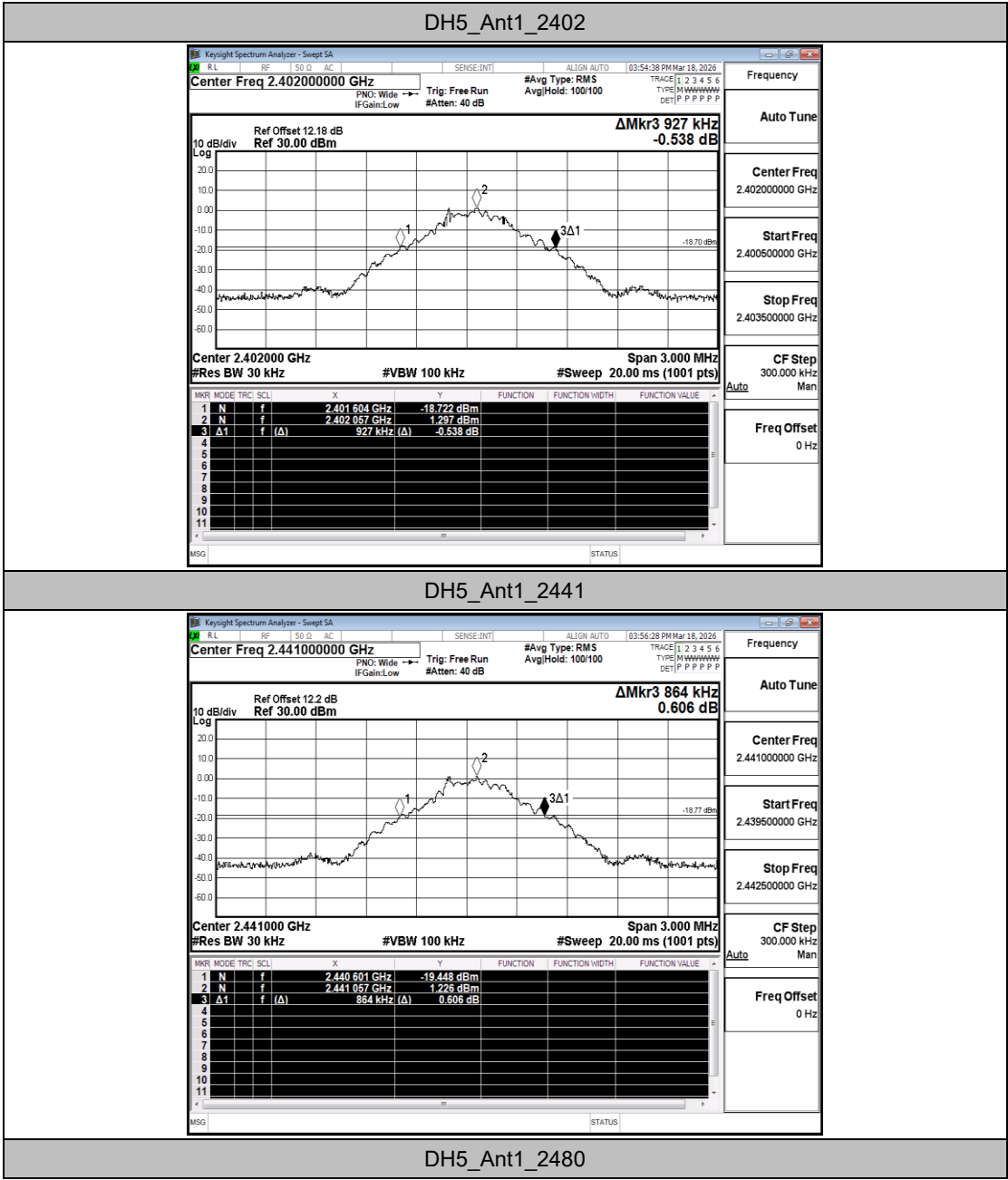
Temperature:	23.9°C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

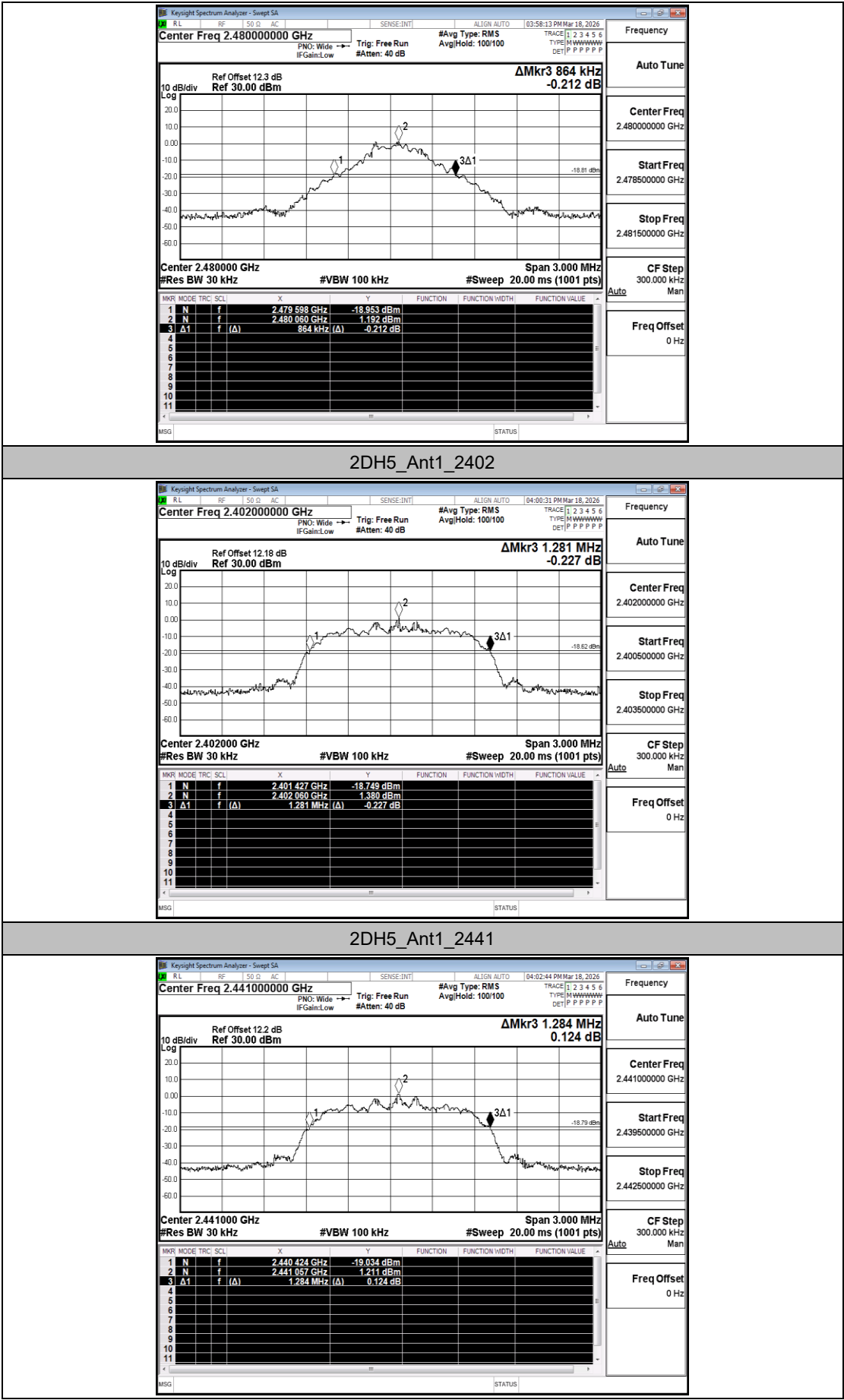
A.1 20dB Emission Bandwidth

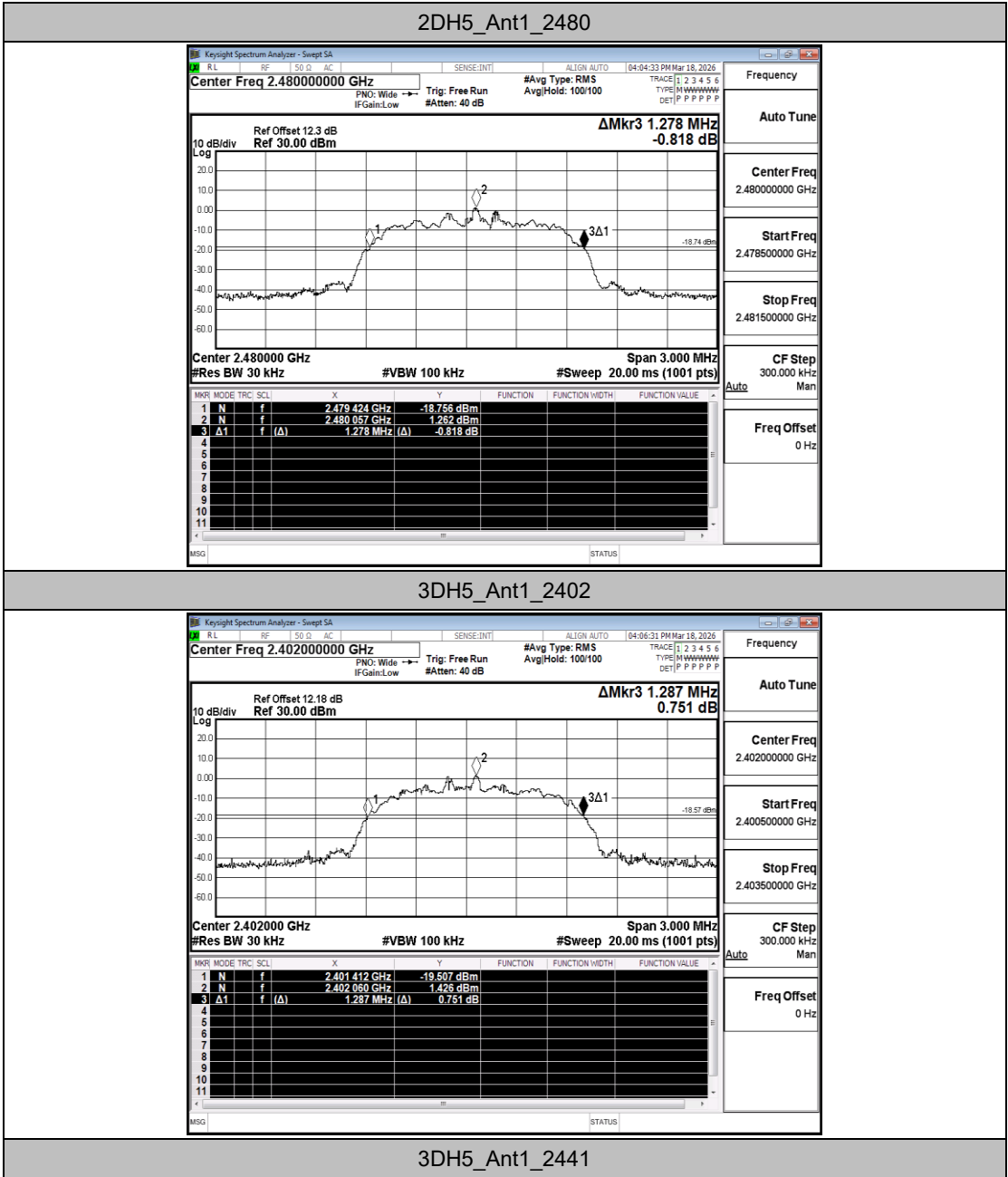
Test Result

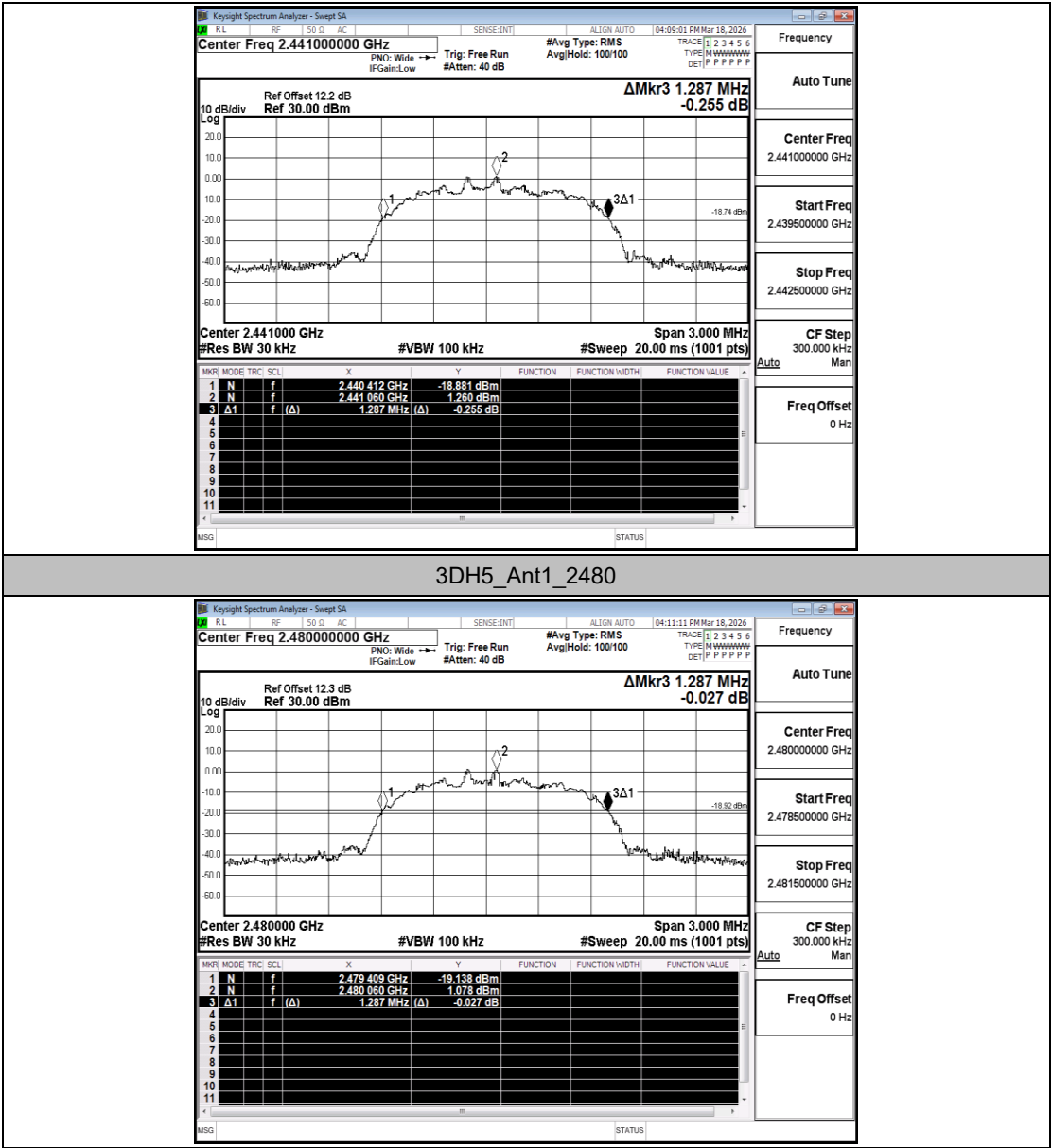
TestMode	Antenna	Freq (MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.927	2401.604	2402.531	---	---
		2441	0.864	2440.601	2441.465	---	---
		2480	0.864	2479.598	2480.462	---	---
2DH5	Ant1	2402	1.281	2401.427	2402.708	---	---
		2441	1.284	2440.424	2441.708	---	---
		2480	1.278	2479.424	2480.702	---	---
3DH5	Ant1	2402	1.287	2401.412	2402.699	---	---
		2441	1.287	2440.412	2441.699	---	---
		2480	1.287	2479.409	2480.696	---	---

Test Graphs







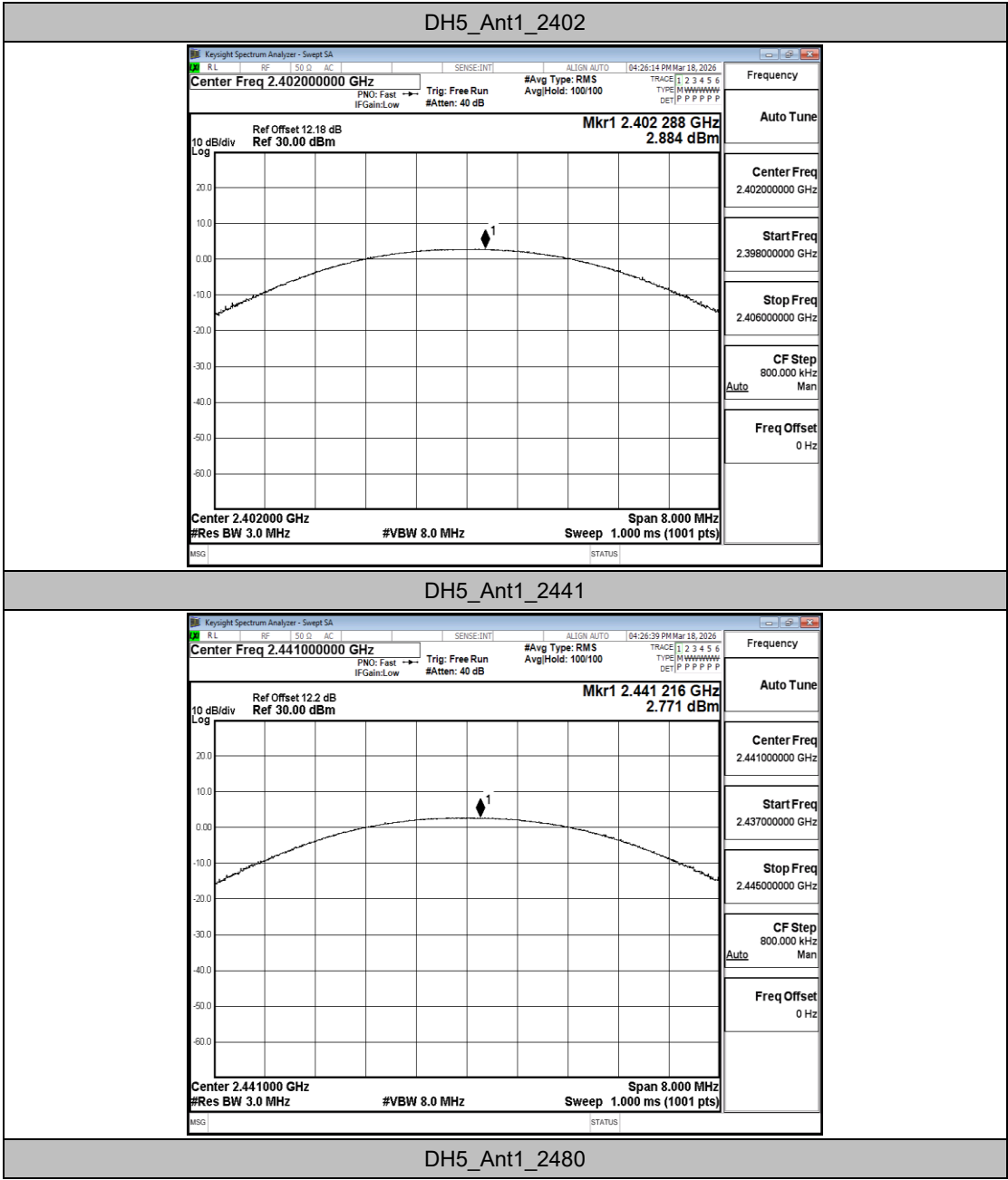


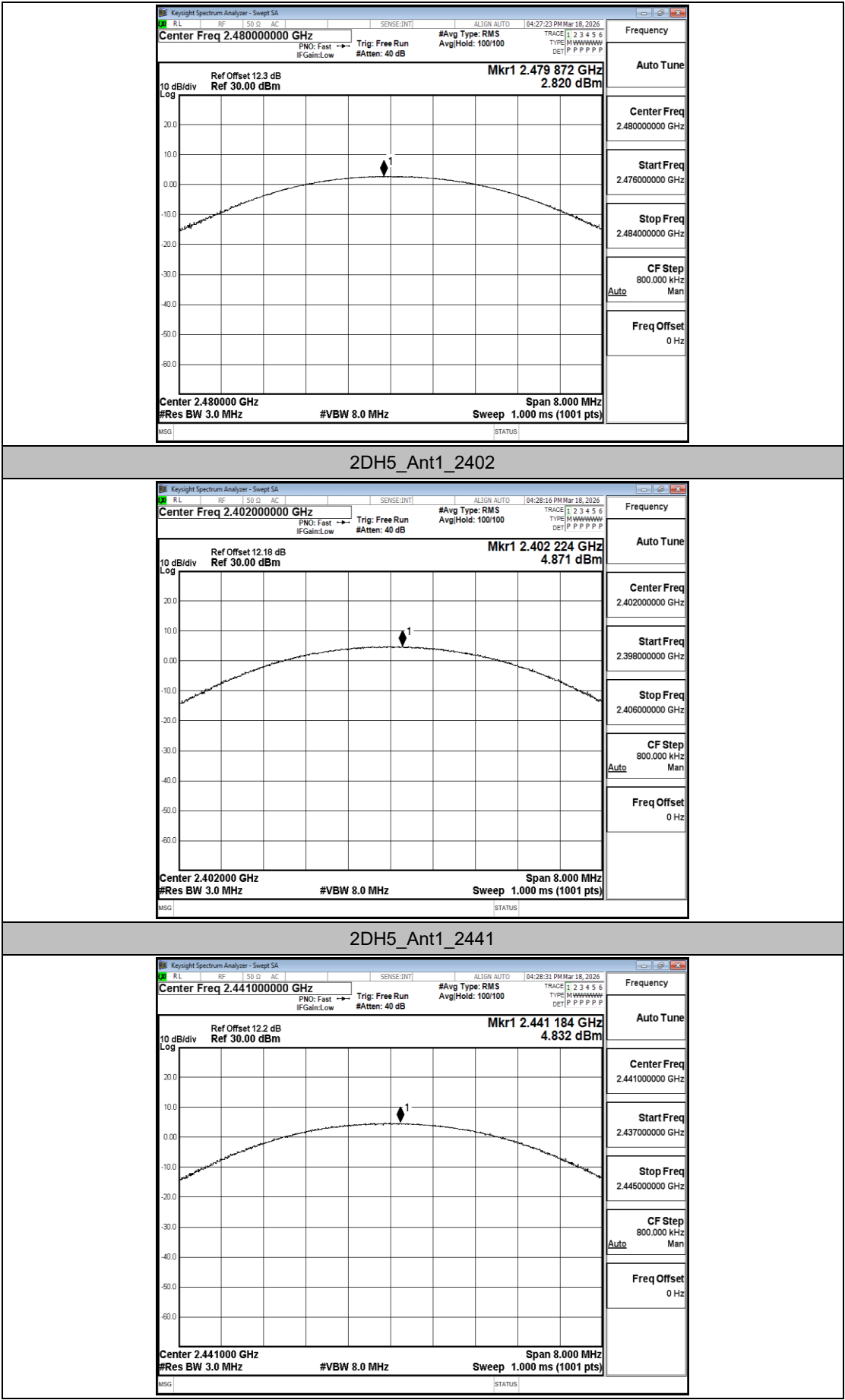
A.2 Maximum conducted output power

Test Result Peak

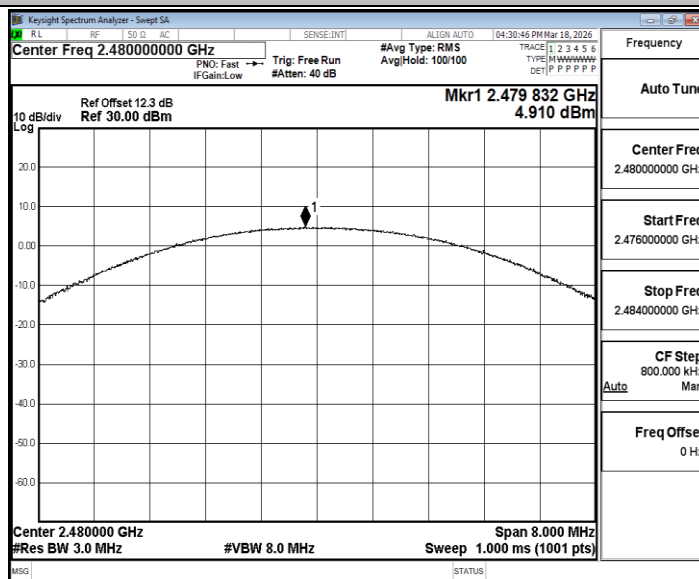
Test Mode	Antenna	Freq (MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	2.88	≤30	PASS
		2441	2.77	≤30	PASS
		2480	2.82	≤30	PASS
2DH5	Ant1	2402	4.87	≤30	PASS
		2441	4.83	≤30	PASS
		2480	4.91	≤30	PASS
3DH5	Ant1	2402	5.28	≤30	PASS
		2441	5.14	≤30	PASS
		2480	5.15	≤30	PASS

Test Graphs

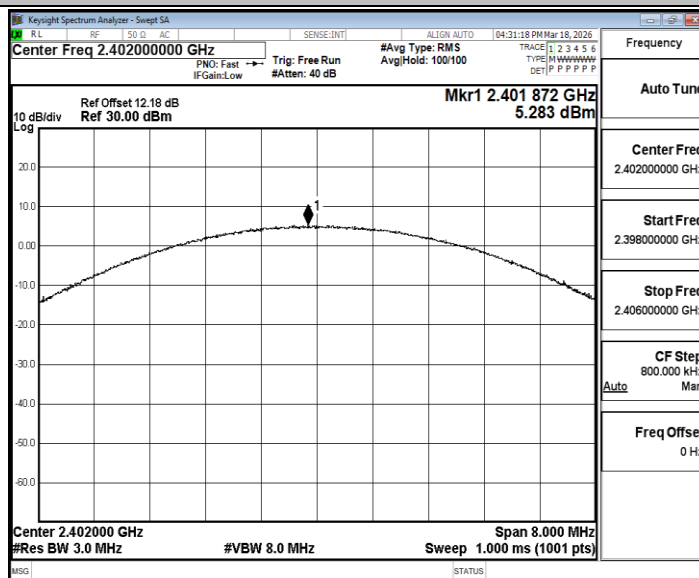




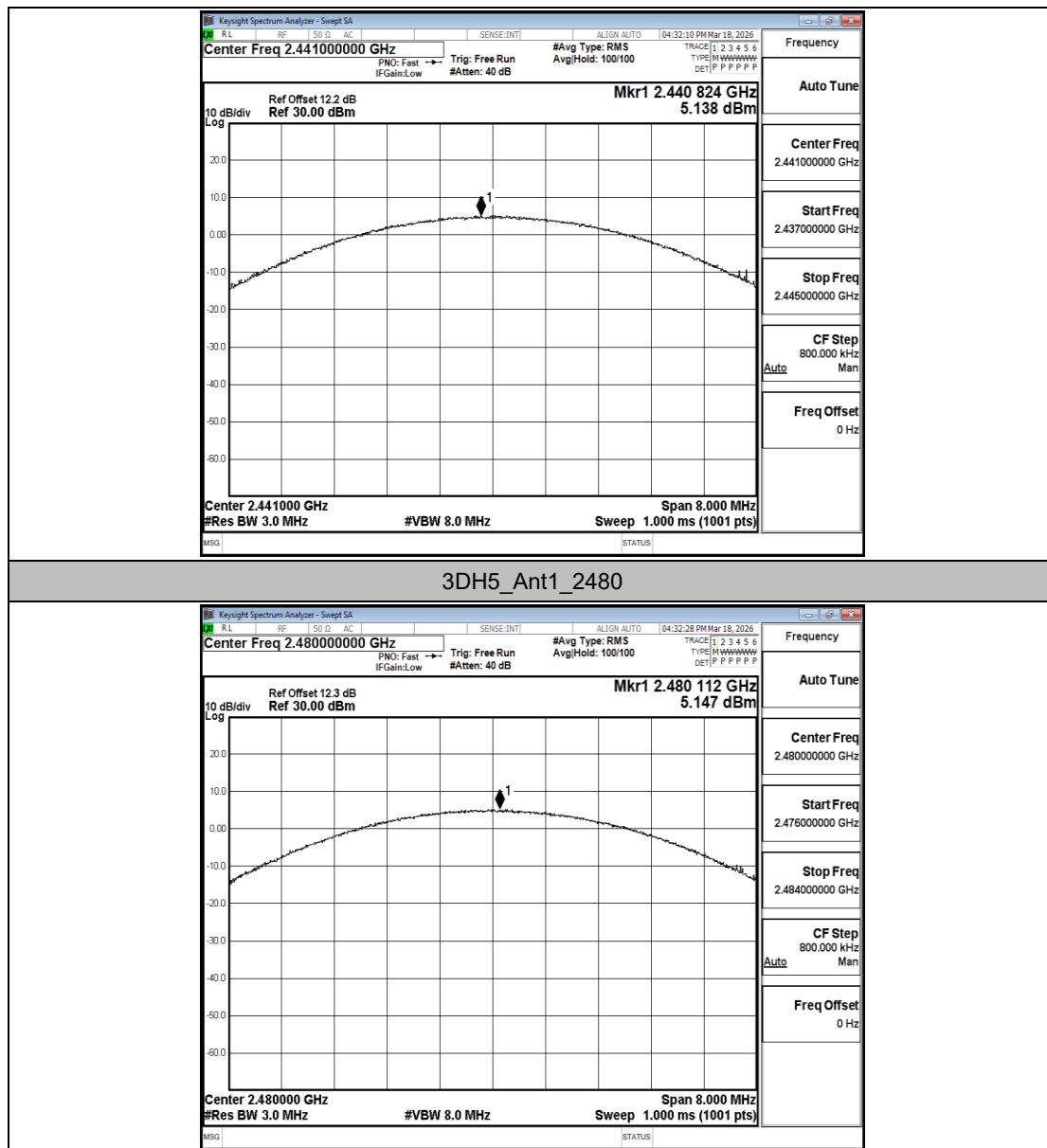
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441

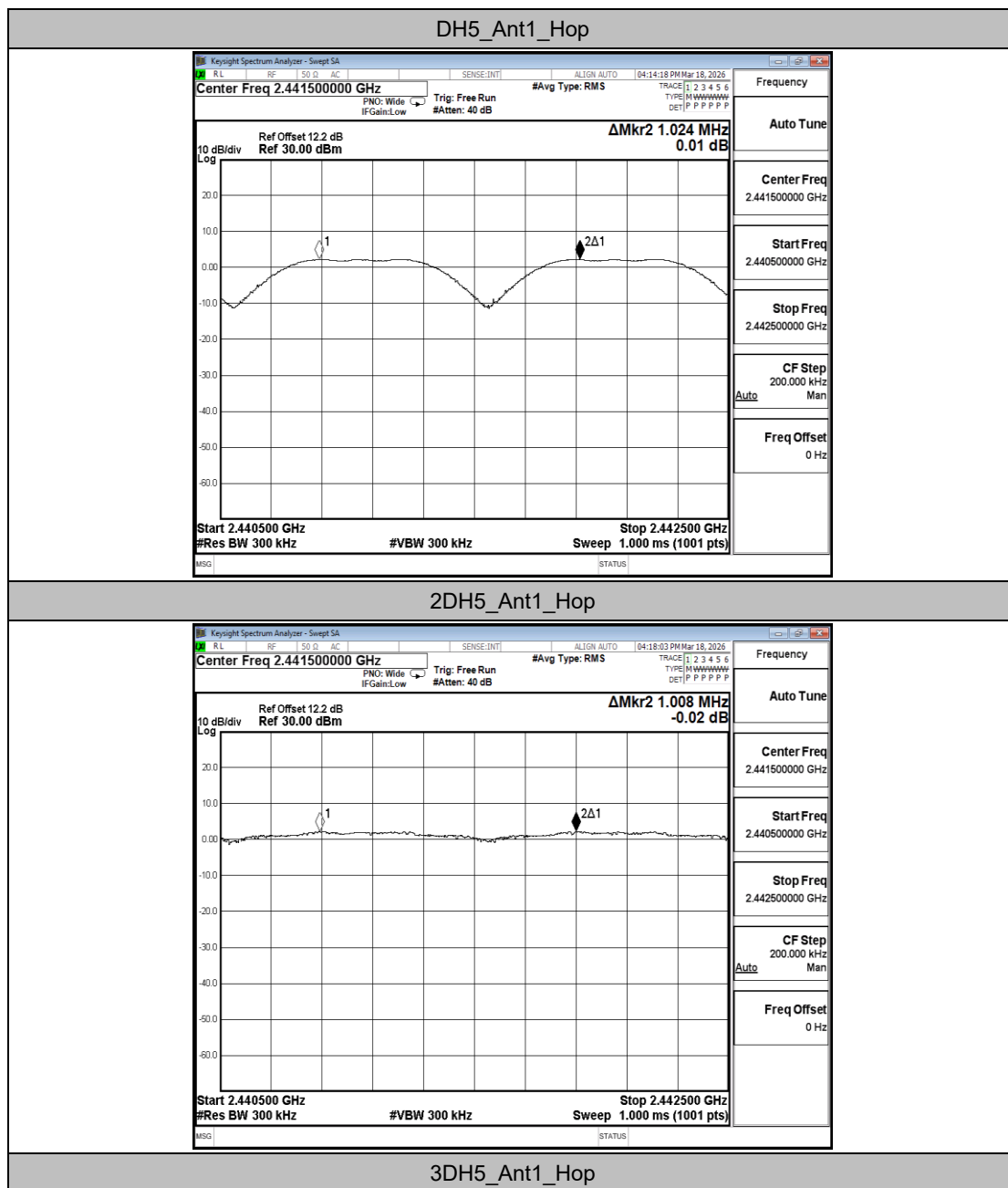


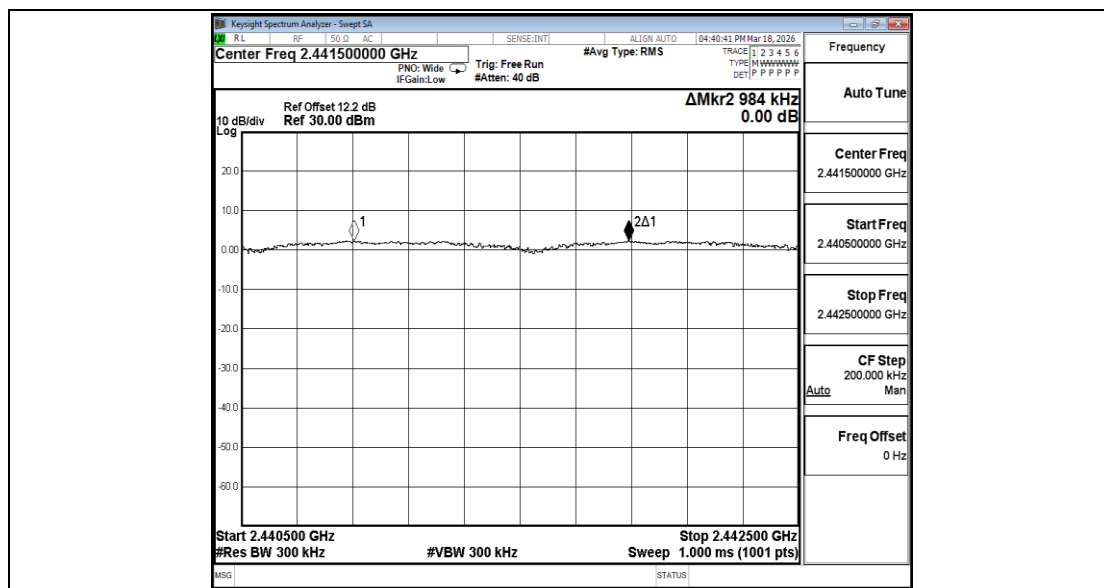
A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.024	≥0.927	PASS
2DH5	Ant1	Hop	1.008	≥0.856	PASS
3DH5	Ant1	Hop	0.984	≥0.858	PASS

Test Graphs



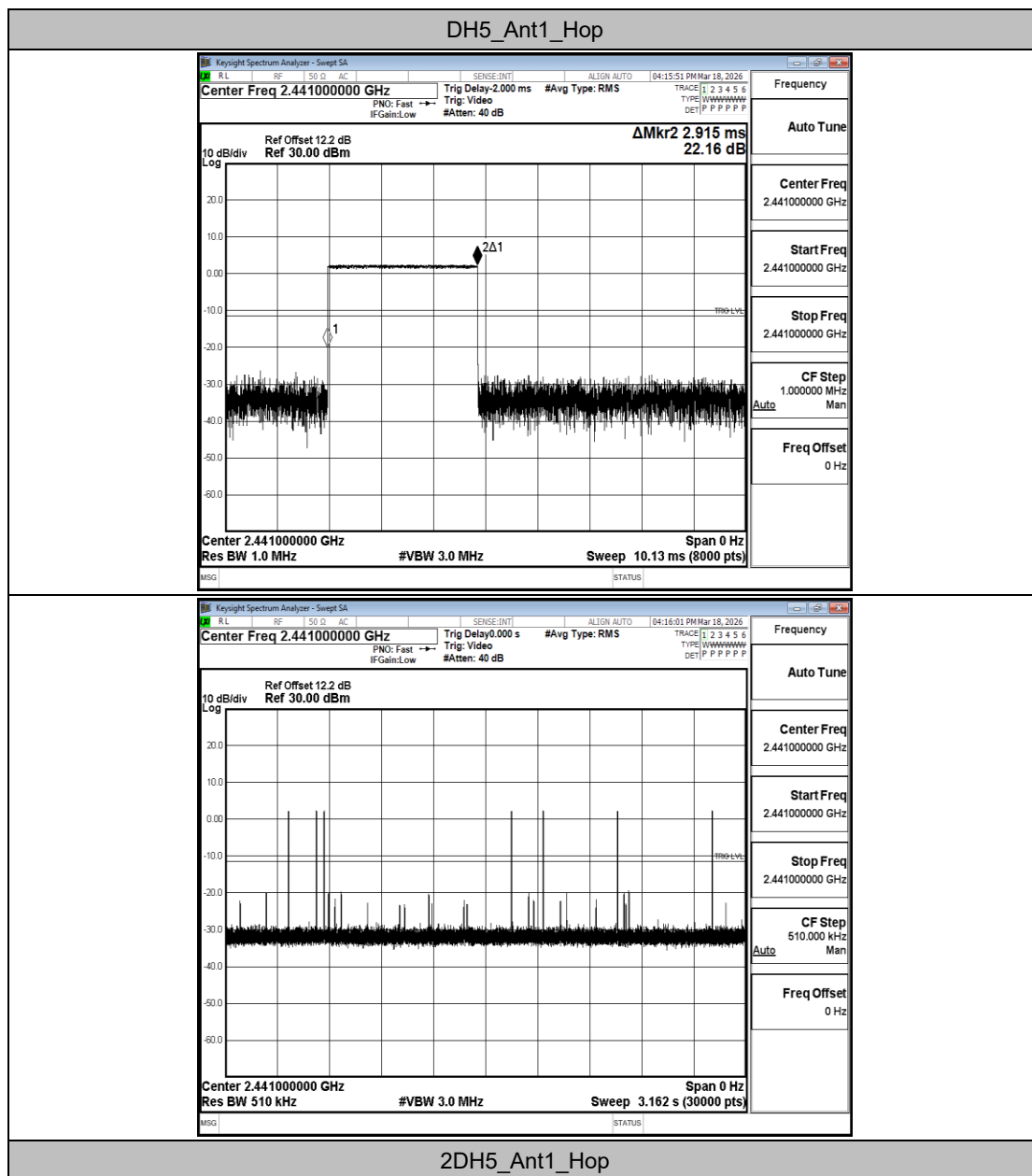


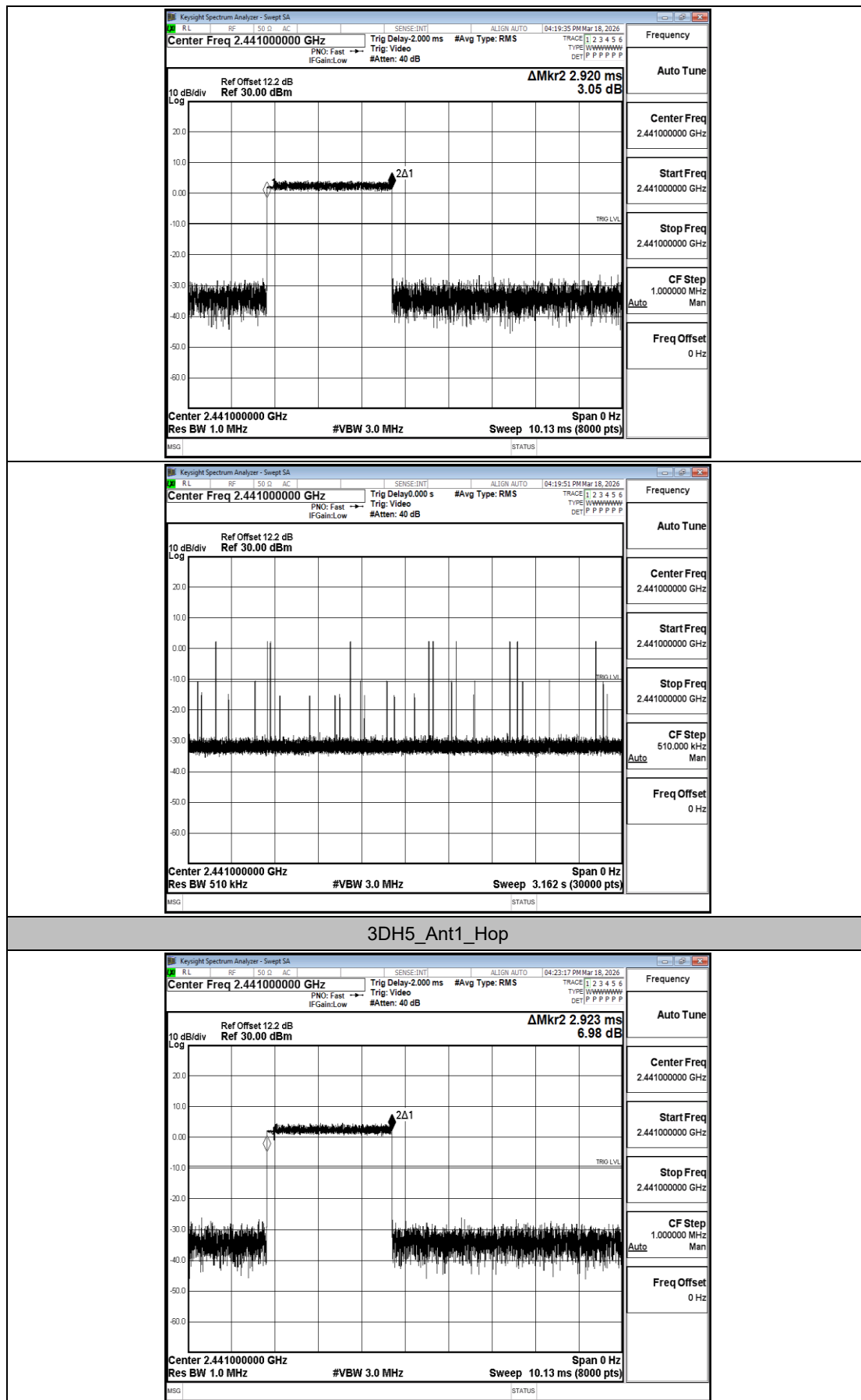
A.4 Time of occupancy

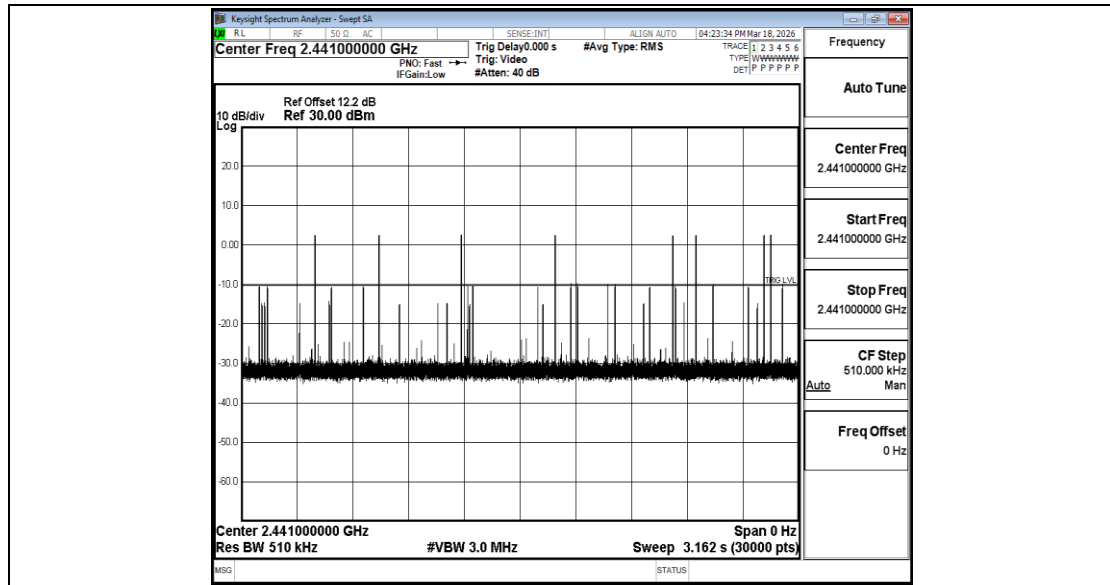
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.915	80	0.233	≤0.4	PASS
2DH5	Ant1	Hop	2.920	120	0.35	≤0.4	PASS
3DH5	Ant1	Hop	2.923	90	0.263	≤0.4	PASS

Test Graphs





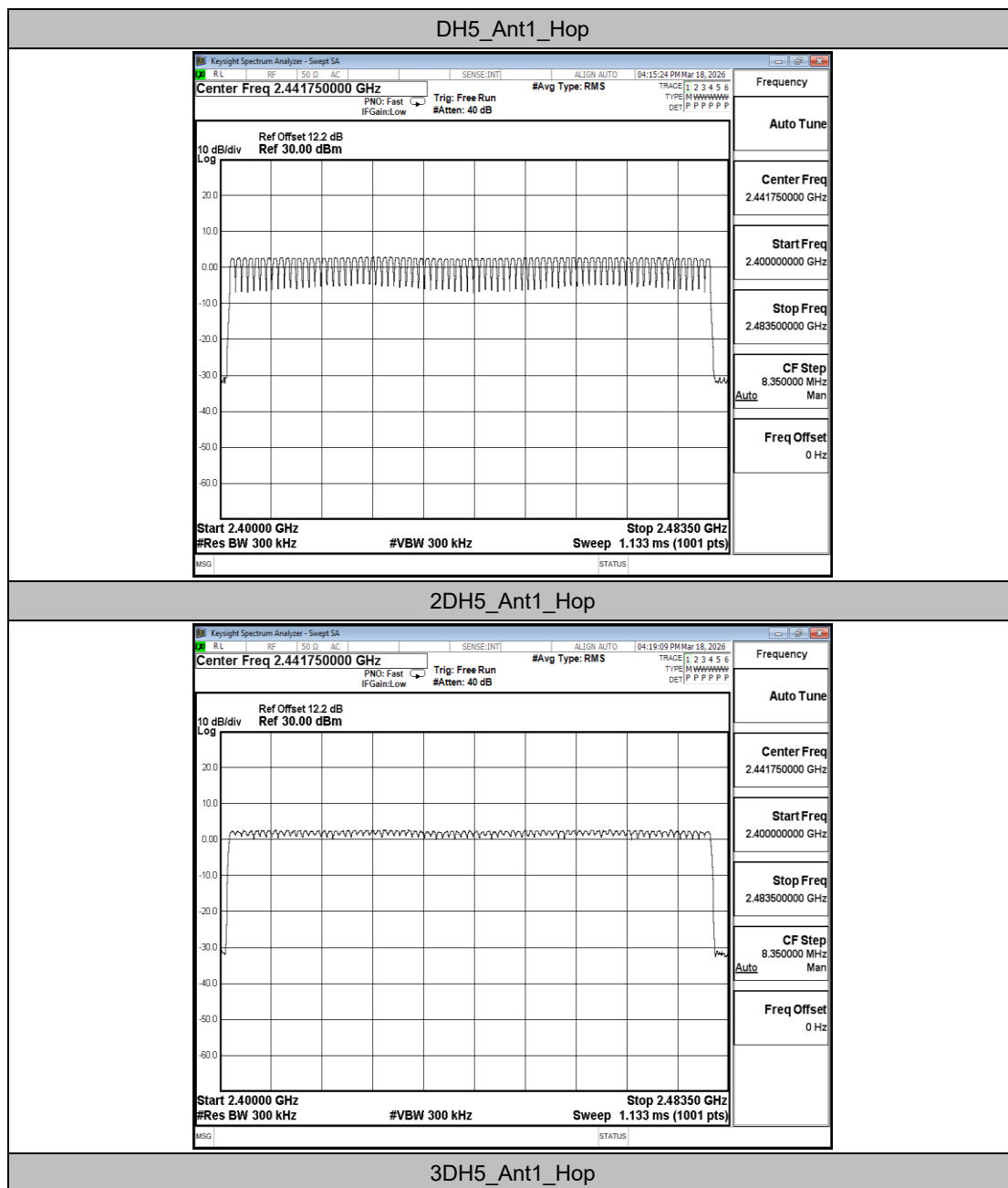


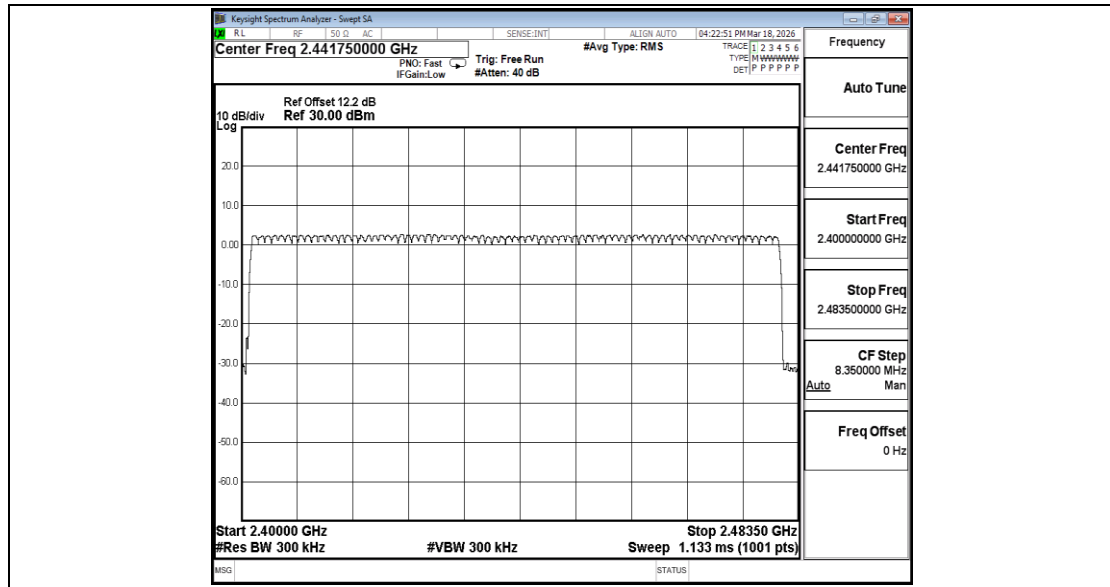
A.5 Number of hopping channels

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



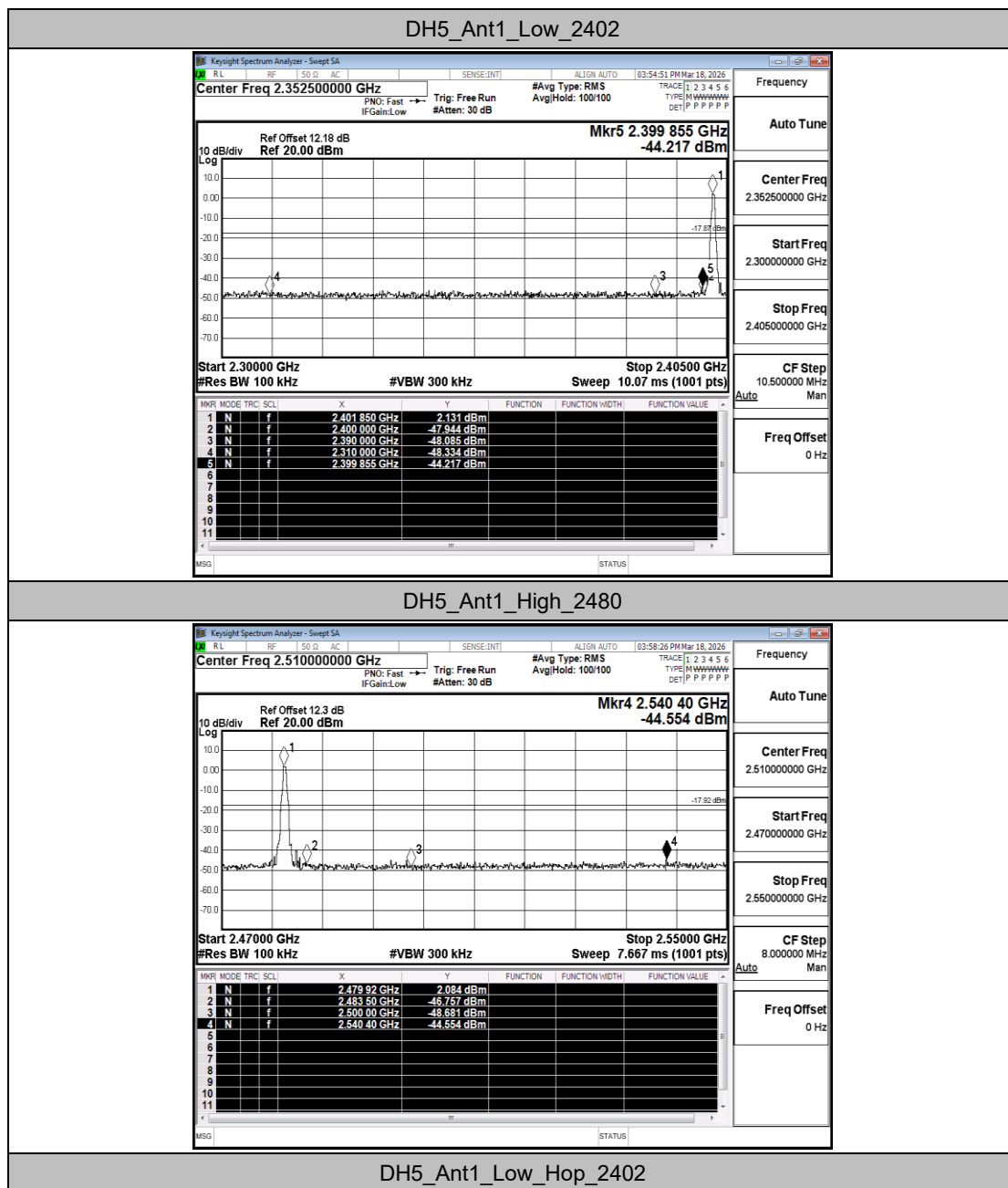


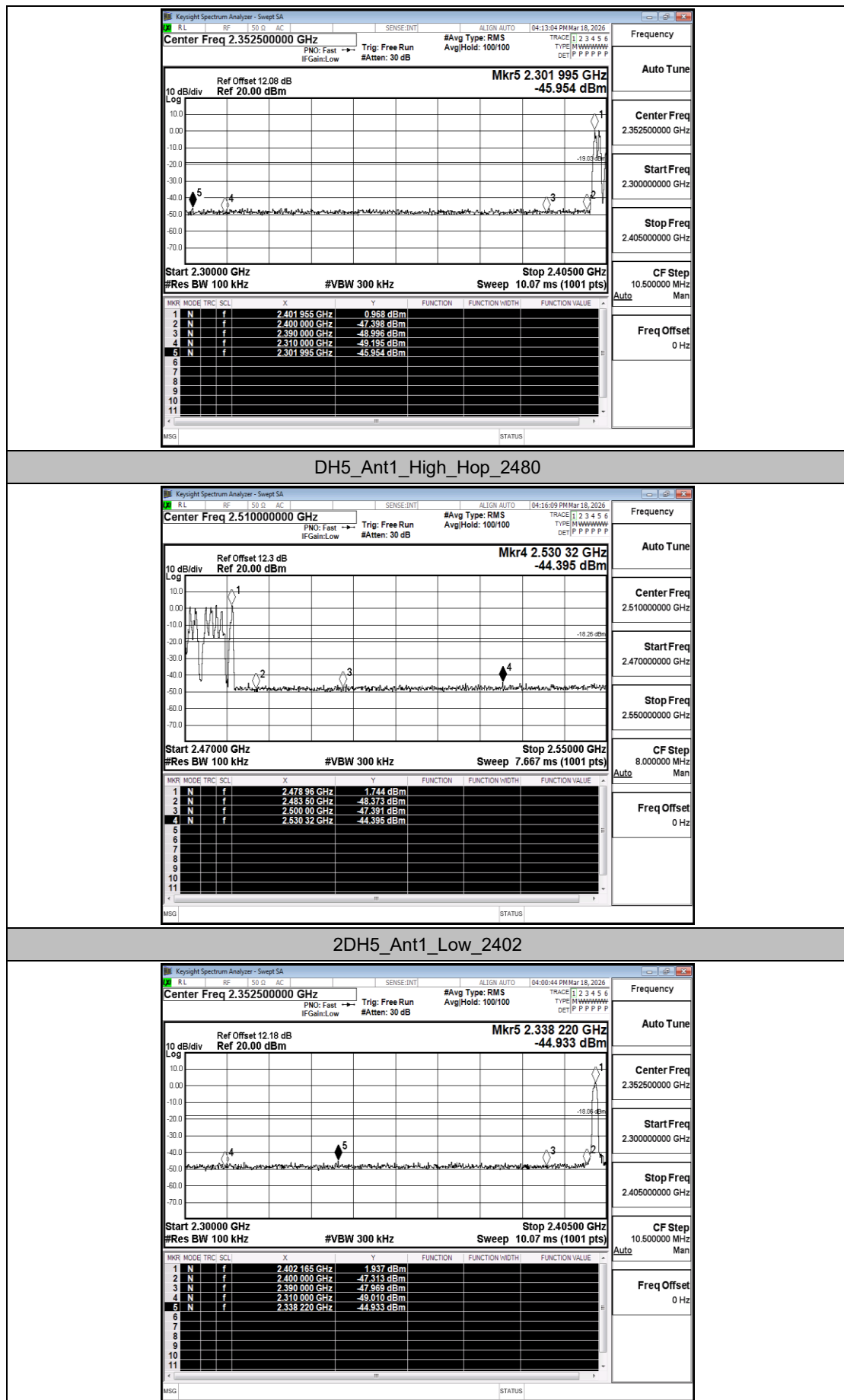
A.6 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq (MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	2.13	-44.22	≤-17.87	PASS
		High	2480	2.08	-44.55	≤-17.92	PASS
		Low	Hop_2402	0.97	-45.95	≤-19.03	PASS
		High	Hop_2480	1.74	-44.4	≤-18.26	PASS
2DH5	Ant1	Low	2402	1.94	-44.93	≤-18.06	PASS
		High	2480	2.02	-44.81	≤-17.98	PASS
		Low	Hop_2402	-1.22	-45.76	≤-21.22	PASS
		High	Hop_2480	0.90	-44.47	≤-19.1	PASS
3DH5	Ant1	Low	2402	2.18	-41.04	≤-17.82	PASS
		High	2480	2.08	-44.79	≤-17.92	PASS
		Low	Hop_2402	-1.35	-46.07	≤-21.35	PASS
		High	Hop_2480	-0.02	-44.14	≤-20.02	PASS

Test Graphs



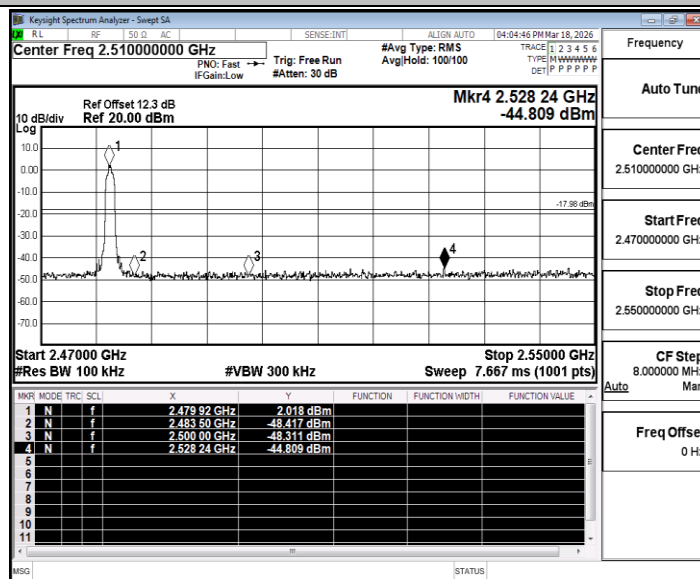


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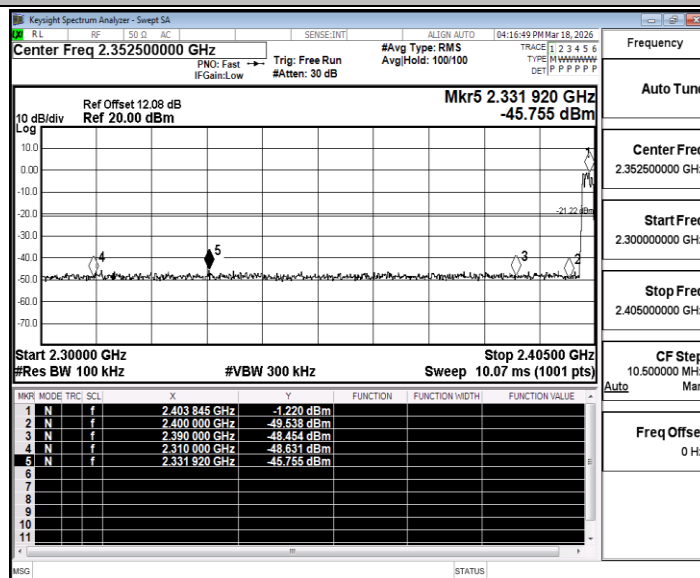
Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

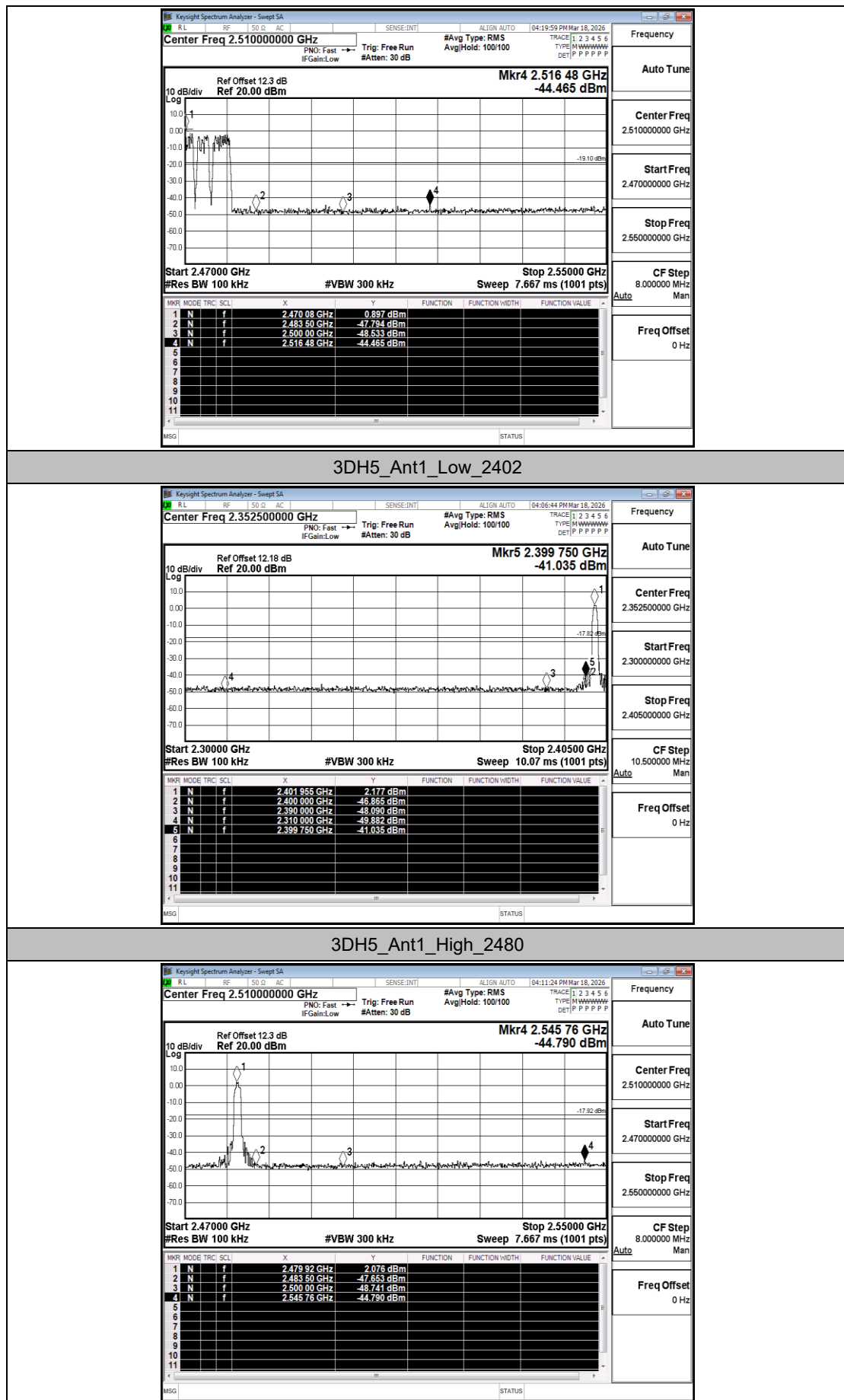
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



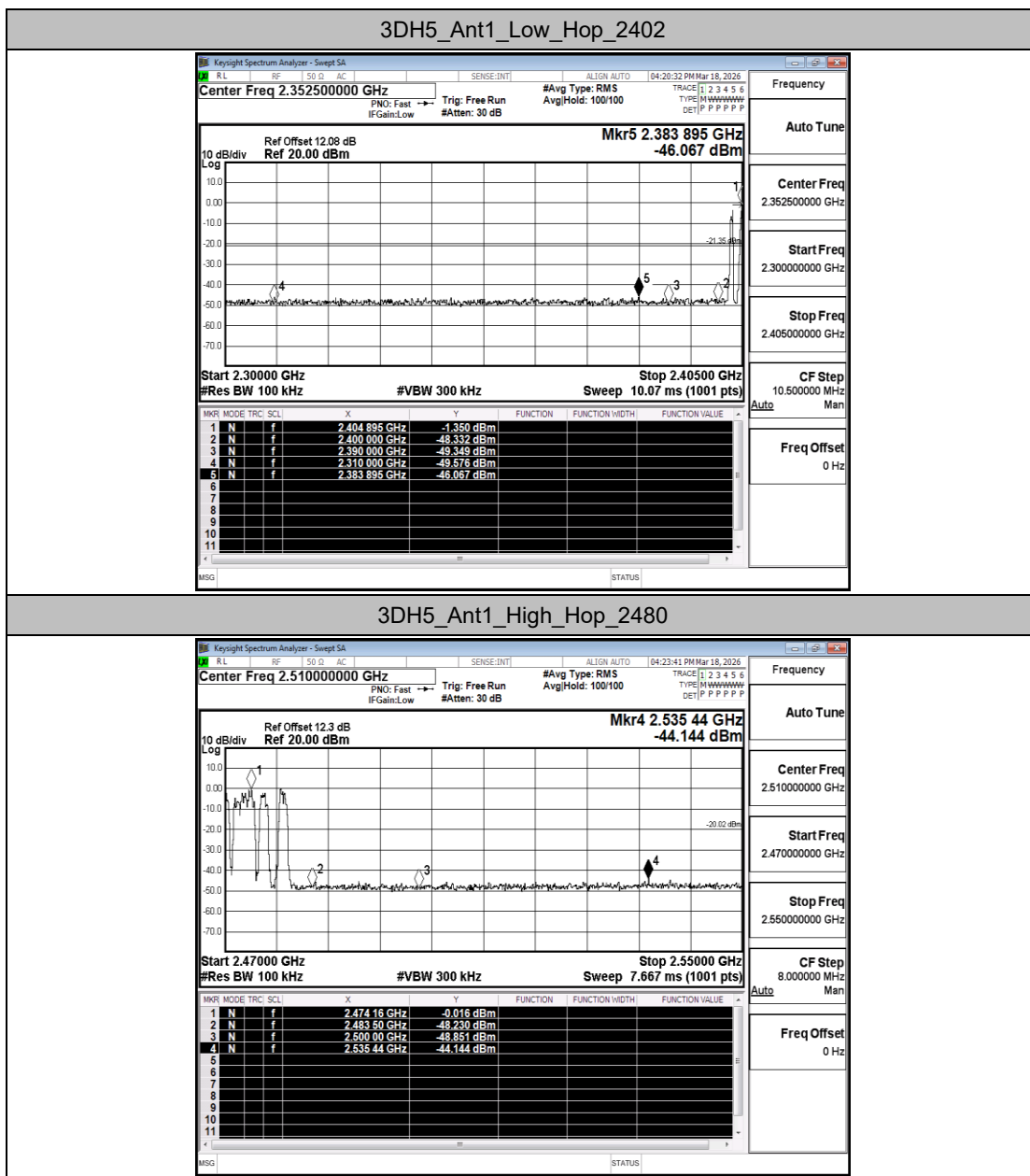
2DH5_Ant1_High_Hop_2480



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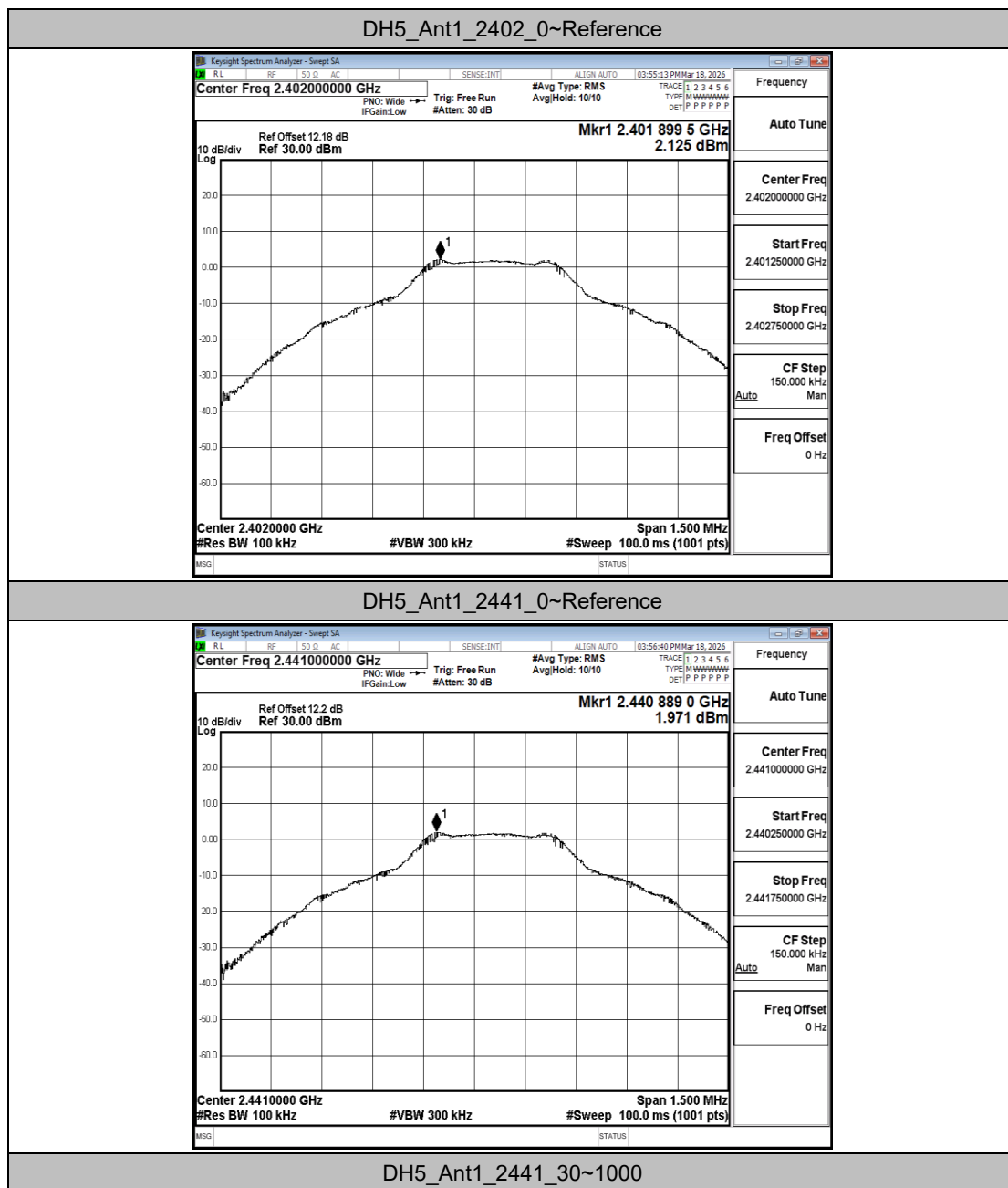


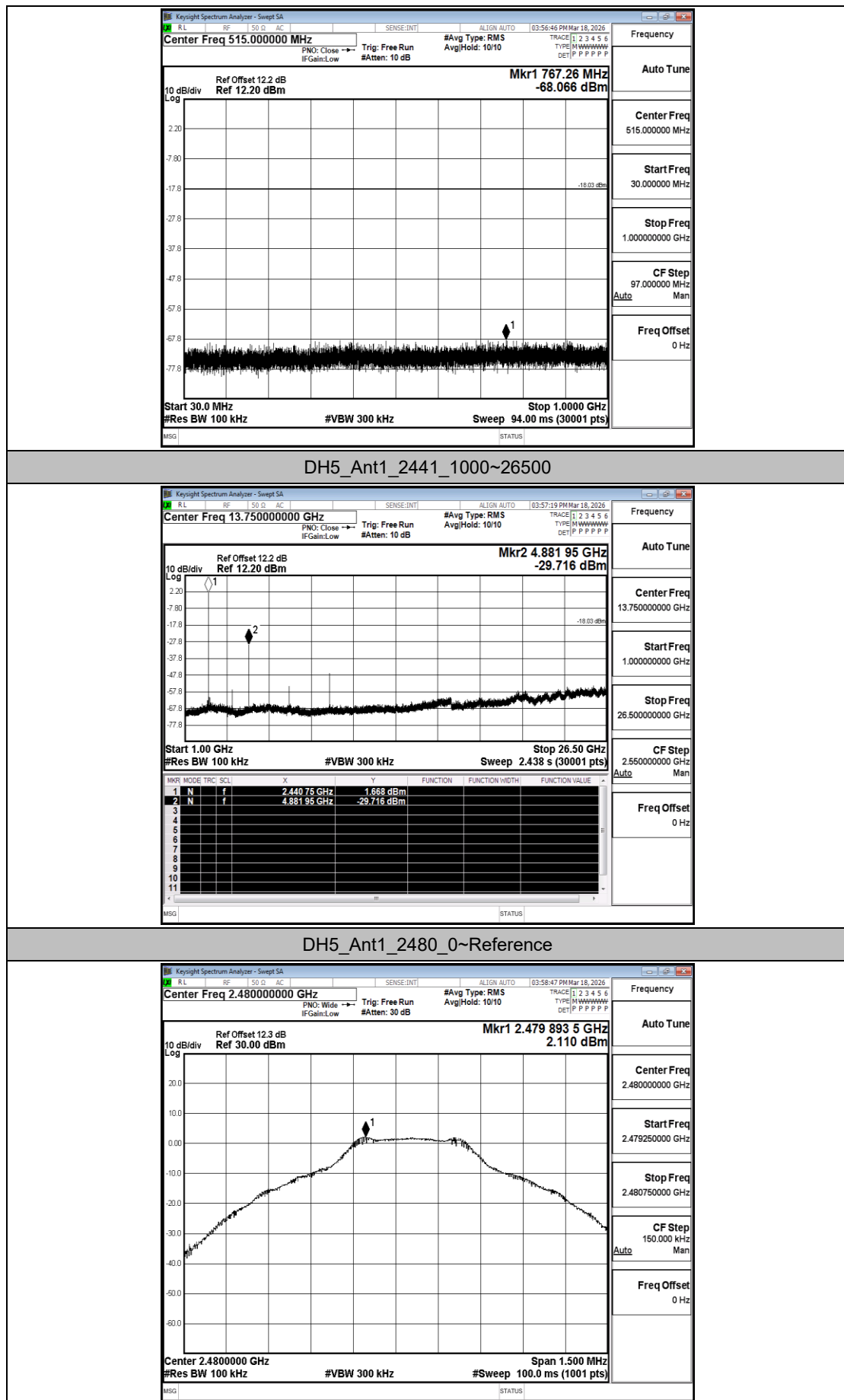
A.7 Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq (MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	2.13	2.13	---	PASS
		2441	Reference	1.97	1.97	---	PASS
			30~1000	1.97	-68.07	≤-18.03	PASS
			1000~26500	1.97	-29.72	≤-18.03	PASS
		2480	Reference	2.11	2.11	---	PASS
			30~1000	2.11	-67.8	≤-17.89	PASS
			1000~26500	2.11	-31.39	≤-17.89	PASS
2DH5	Ant1	2402	Reference	2.14	2.14	---	PASS
			30~1000	2.14	-67.41	≤-17.86	PASS
			1000~26500	2.14	-33.88	≤-17.86	PASS
		2441	Reference	1.94	1.94	---	PASS
			30~1000	1.94	-66.6	≤-18.06	PASS
			1000~26500	1.94	-33.47	≤-18.06	PASS
		2480	Reference	2.06	2.06	---	PASS
			30~1000	2.06	-67.43	≤-17.94	PASS
			1000~26500	2.06	-33.34	≤-17.94	PASS
3DH5	Ant1	2402	Reference	2.27	2.27	---	PASS
			30~1000	2.27	-67.33	≤-17.73	PASS
			1000~26500	2.27	-31.65	≤-17.73	PASS
		2441	Reference	2.14	2.14	---	PASS
			30~1000	2.14	-67.05	≤-17.86	PASS
			1000~26500	2.14	-30.11	≤-17.86	PASS
		2480	Reference	2.22	2.22	---	PASS
			30~1000	2.22	-66.85	≤-17.78	PASS
			1000~26500	2.22	-34.6	≤-17.78	PASS

Test Graphs





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