

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Stereo Wireless Speakers
Test Model: TS-04

Environmental Conditions

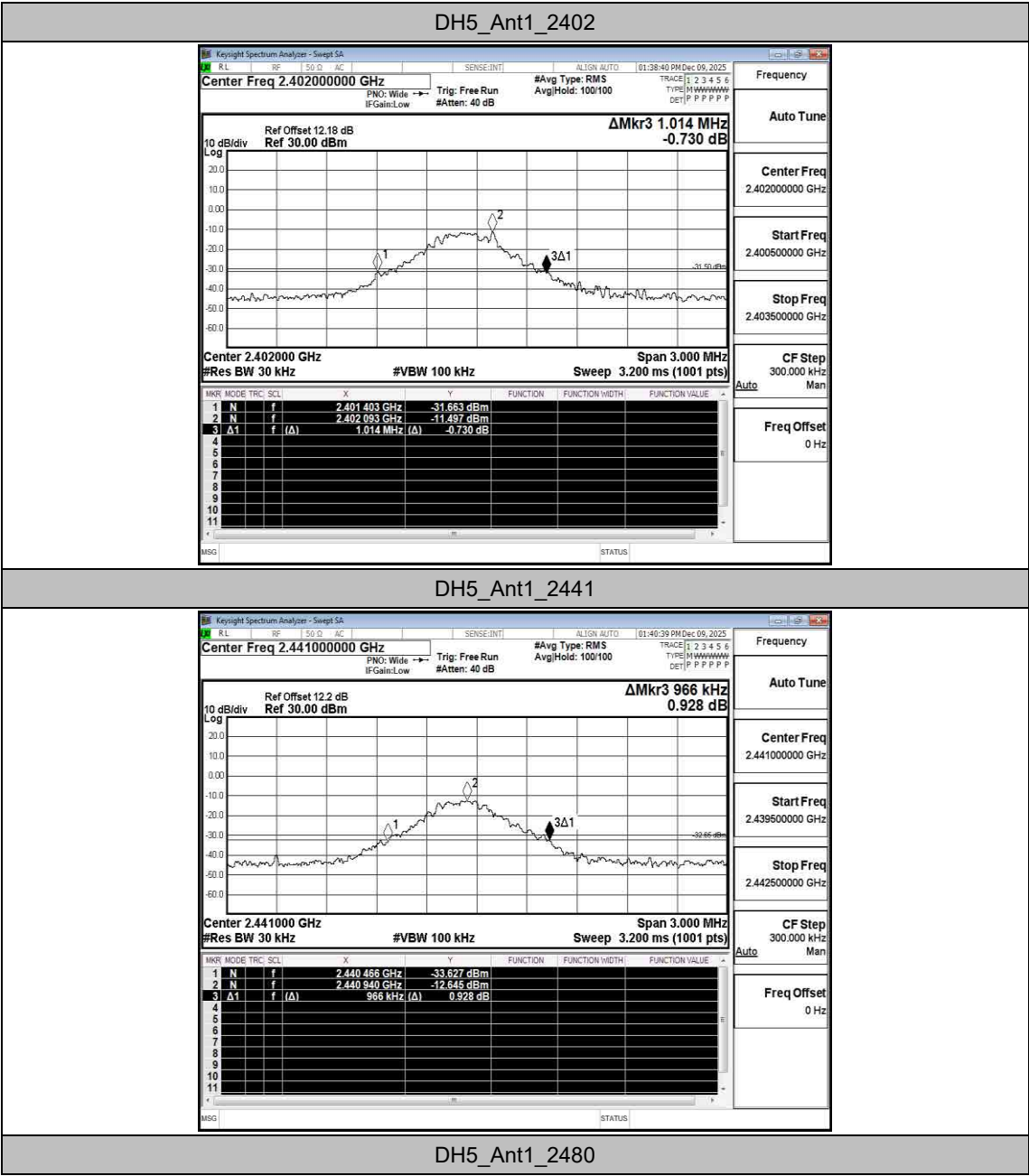
Temperature:	23.8°C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang Hai
Supervised by:	Yan Chen

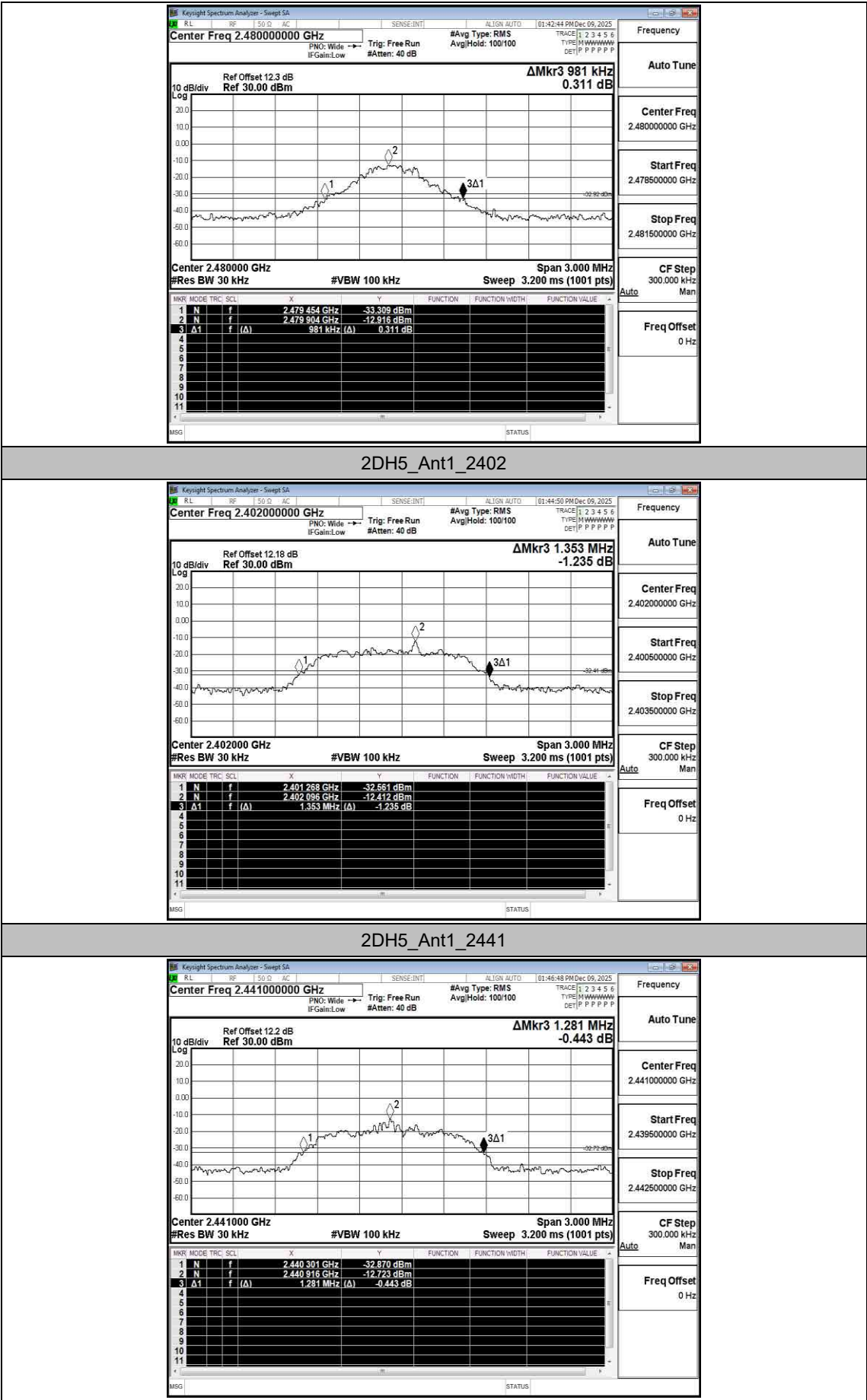
A.1 -20dB Bandwidth

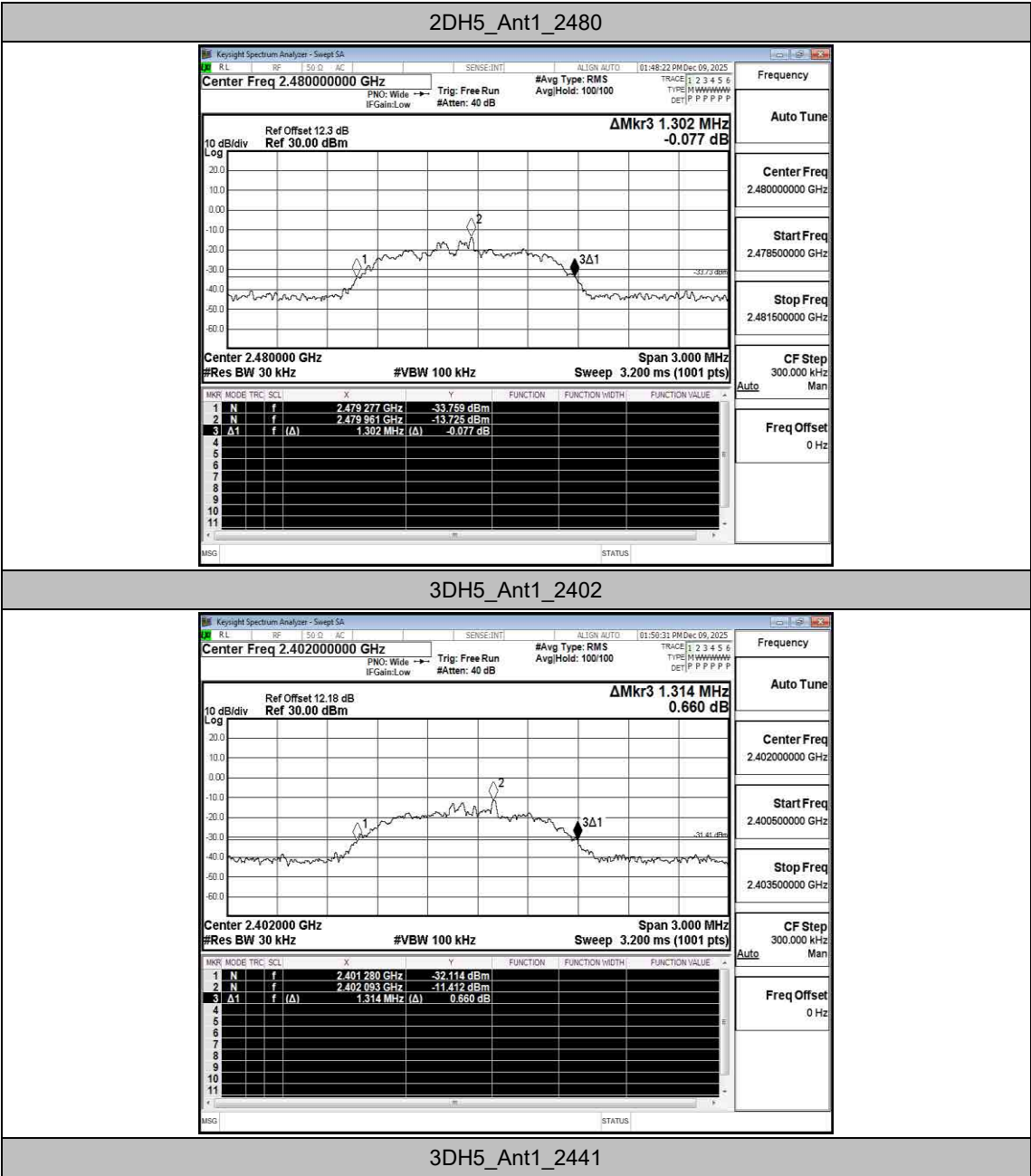
Test Result

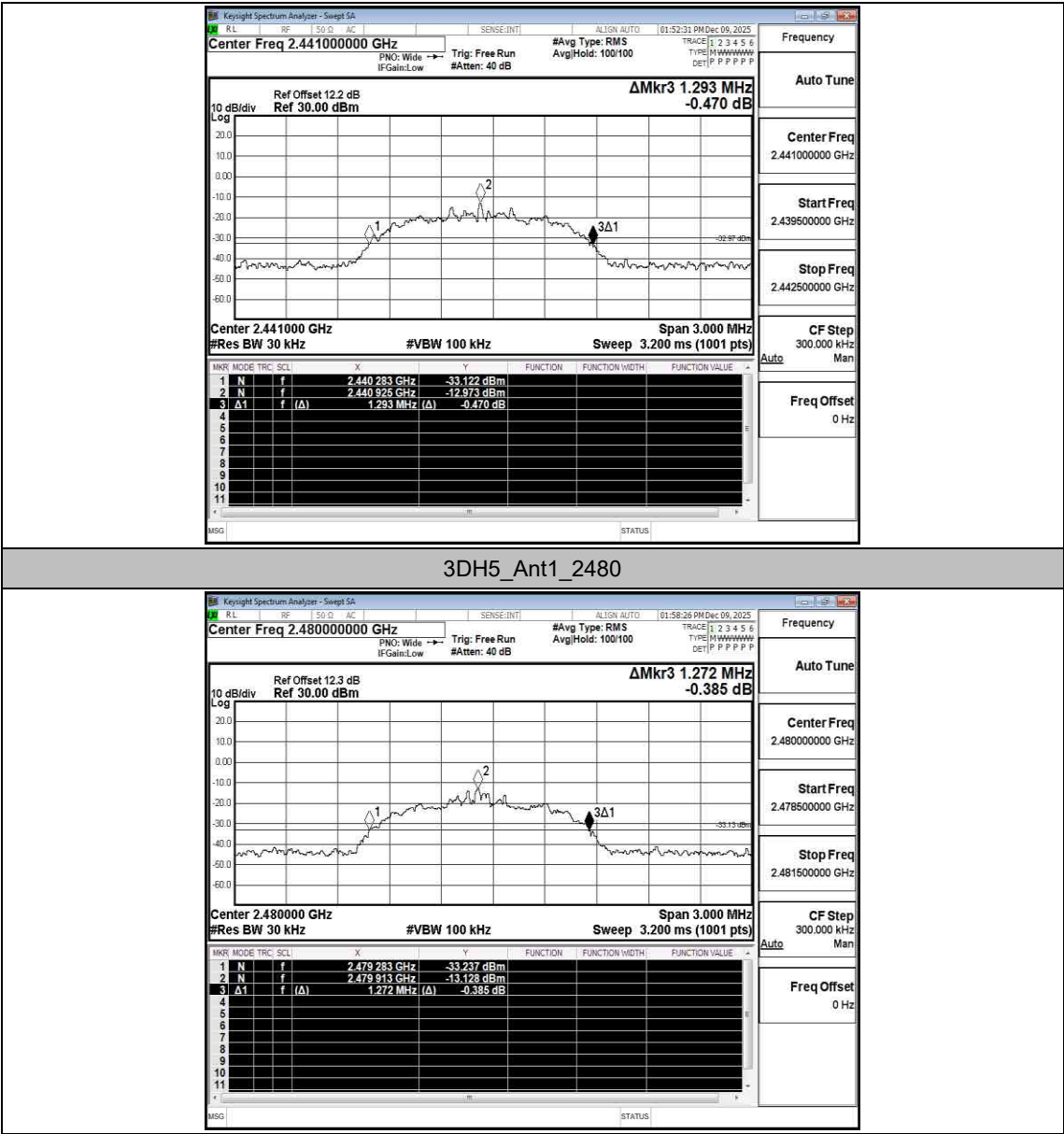
TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.014	2401.403	2402.417	---	---
		2441	0.966	2440.466	2441.432	---	---
		2480	0.981	2479.454	2480.435	---	---
2DH5	Ant1	2402	1.353	2401.268	2402.621	---	---
		2441	1.281	2440.301	2441.582	---	---
		2480	1.302	2479.277	2480.579	---	---
3DH5	Ant1	2402	1.314	2401.280	2402.594	---	---
		2441	1.293	2440.283	2441.576	---	---
		2480	1.272	2479.283	2480.555	---	---

Test Graphs







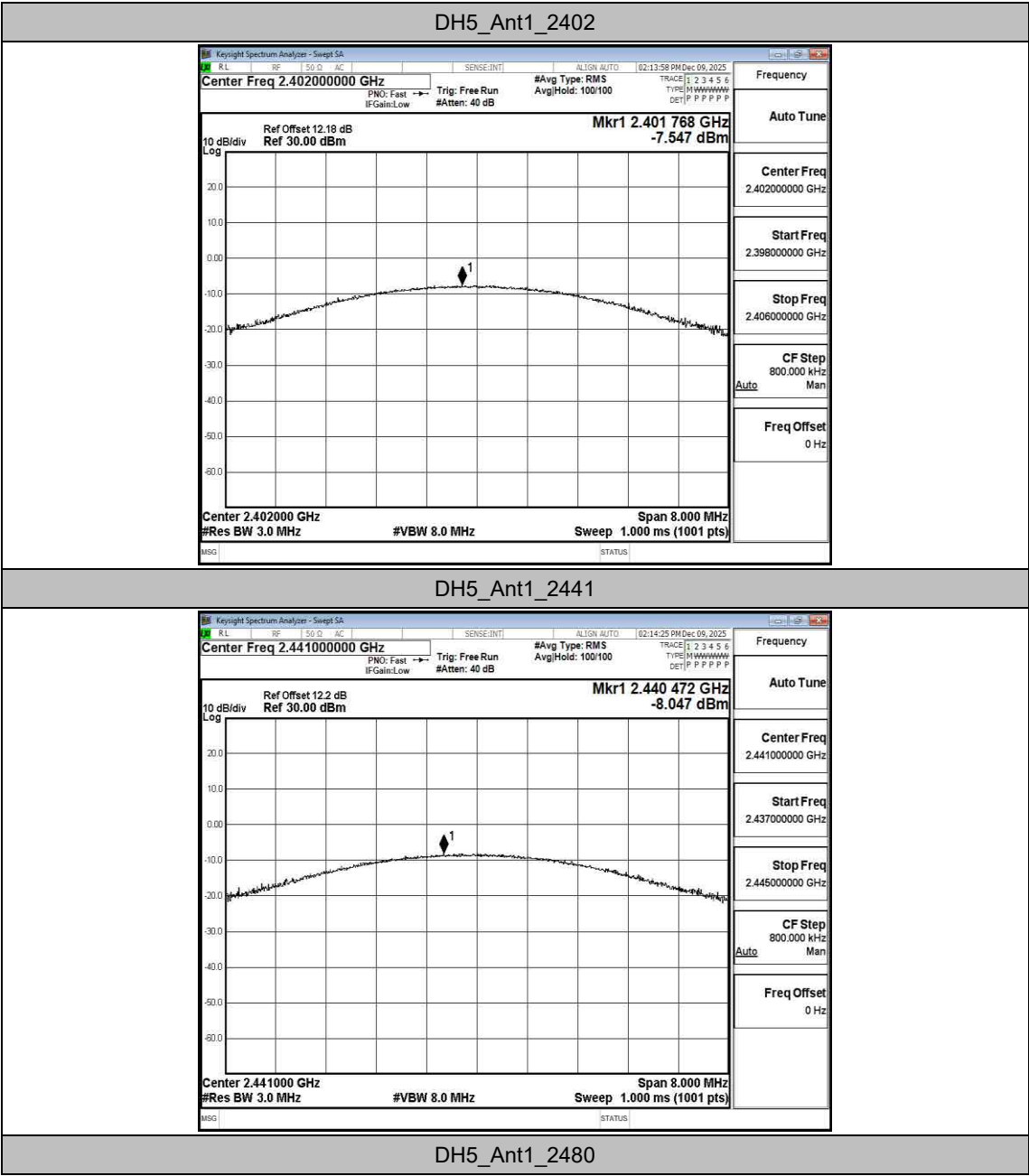


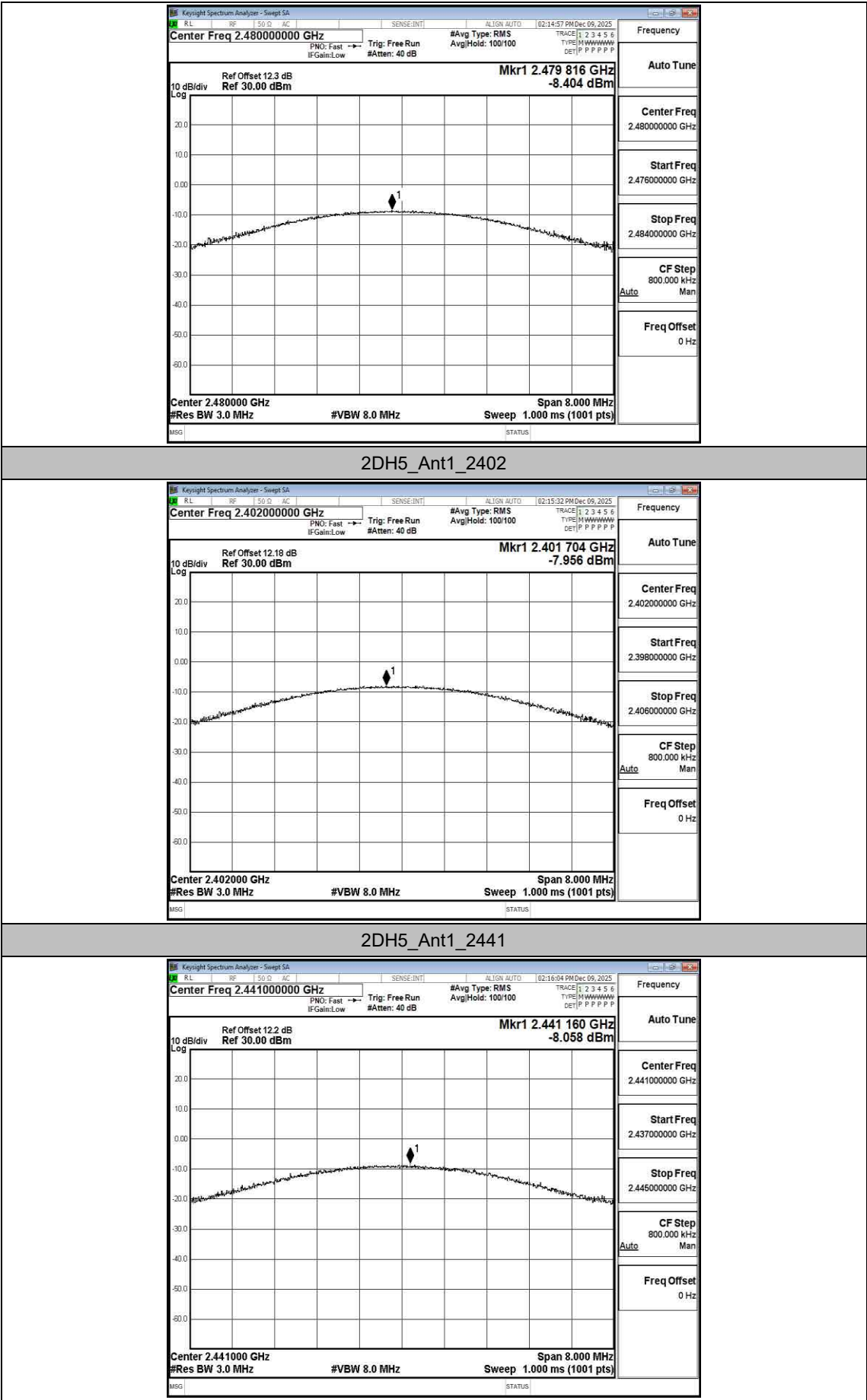
A.2 Maximum Peak Conducted Output Power

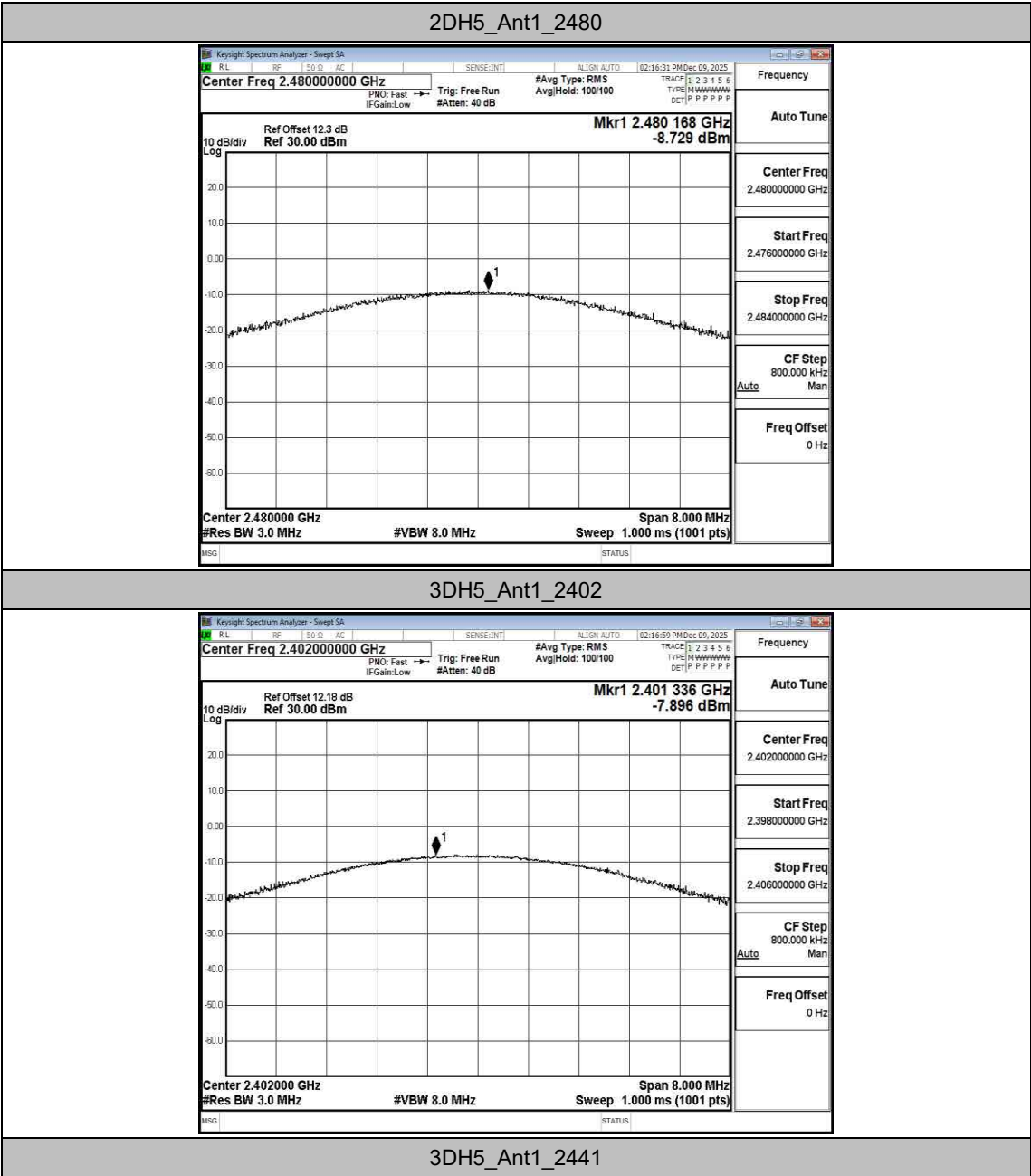
Test Result Peak

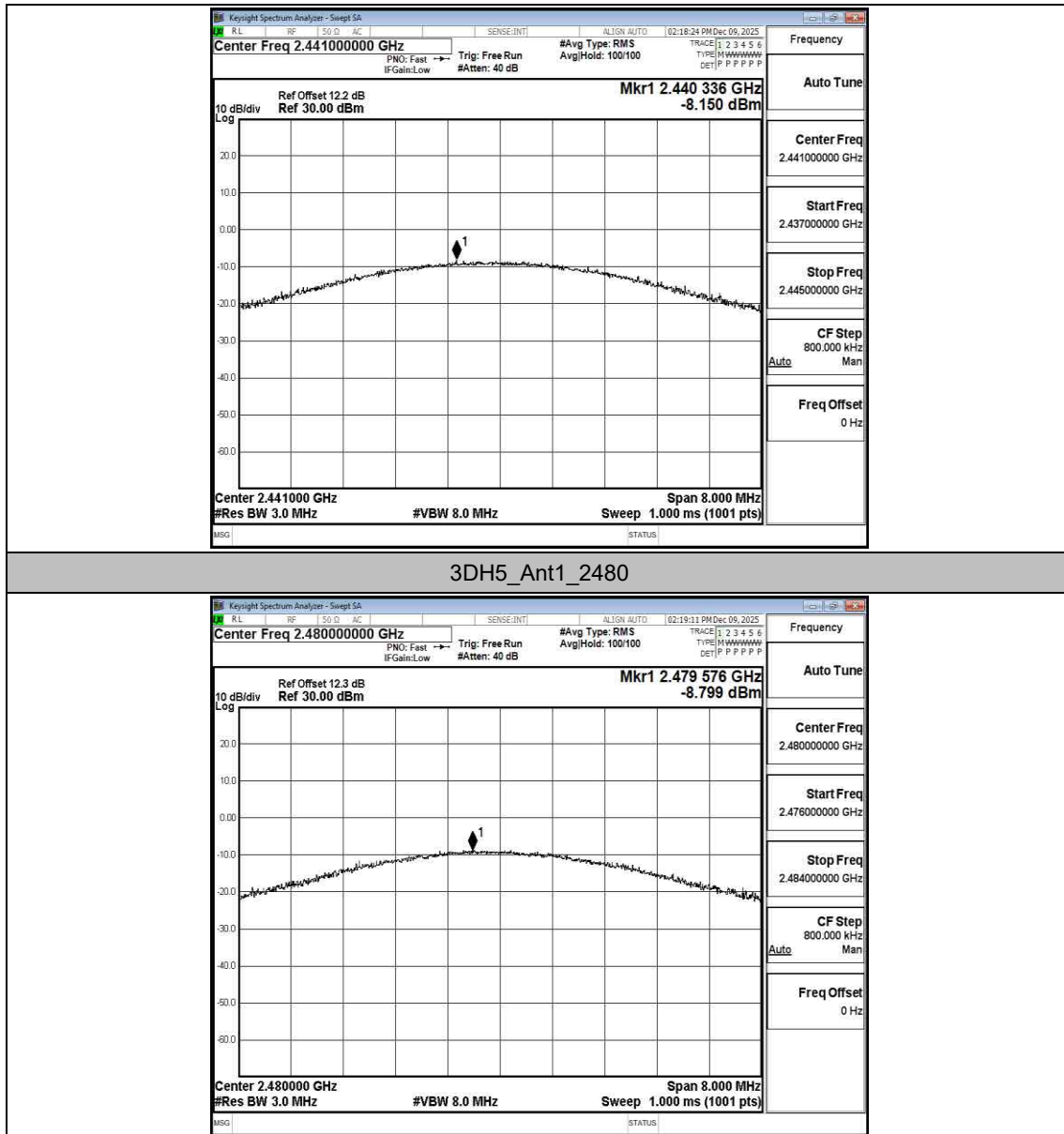
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-7.55	≤20.97	PASS
		2441	-8.05	≤20.97	PASS
		2480	-8.40	≤20.97	PASS
2DH5	Ant1	2402	-7.96	≤20.97	PASS
		2441	-8.06	≤20.97	PASS
		2480	-8.73	≤20.97	PASS
3DH5	Ant1	2402	-7.90	≤20.97	PASS
		2441	-8.15	≤20.97	PASS
		2480	-8.80	≤20.97	PASS

Test Graphs







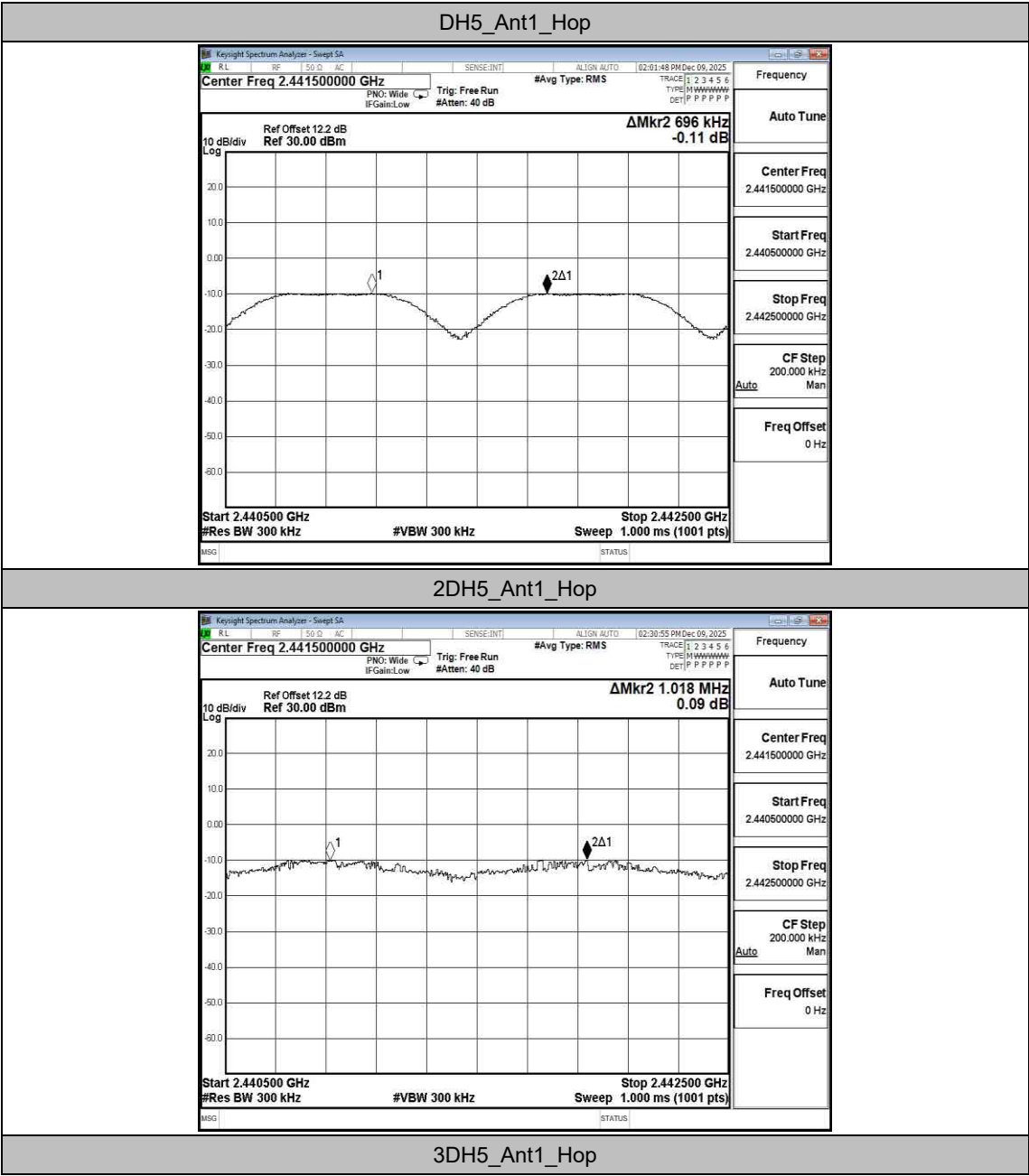


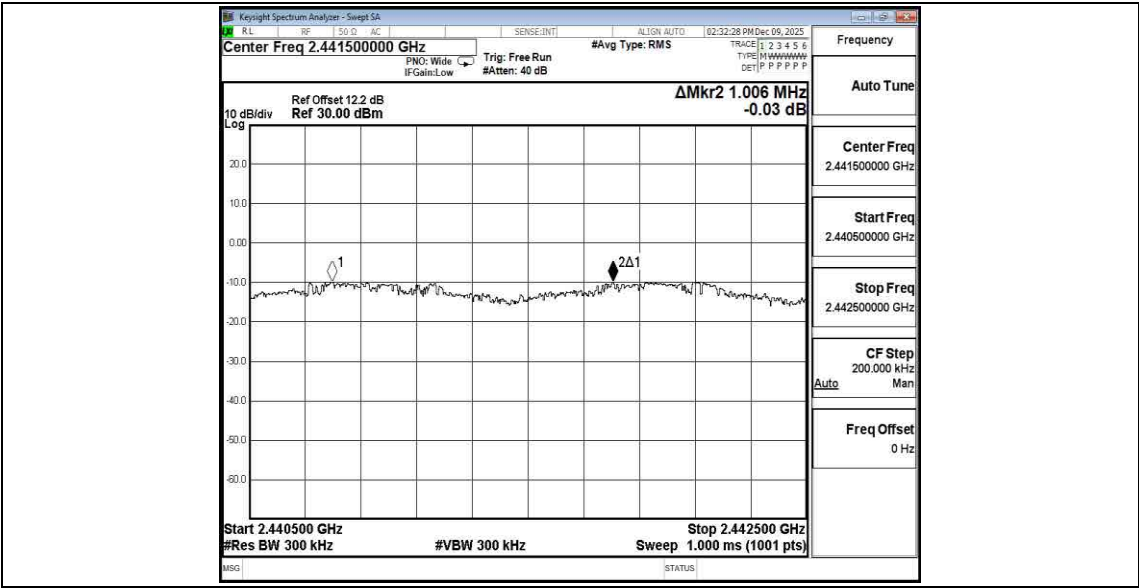
A.3 Carrier Frequencies Separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.696	≥0.676	PASS
2DH5	Ant1	Hop	1.018	≥0.902	PASS
3DH5	Ant1	Hop	1.006	≥0.876	PASS

Test Graphs



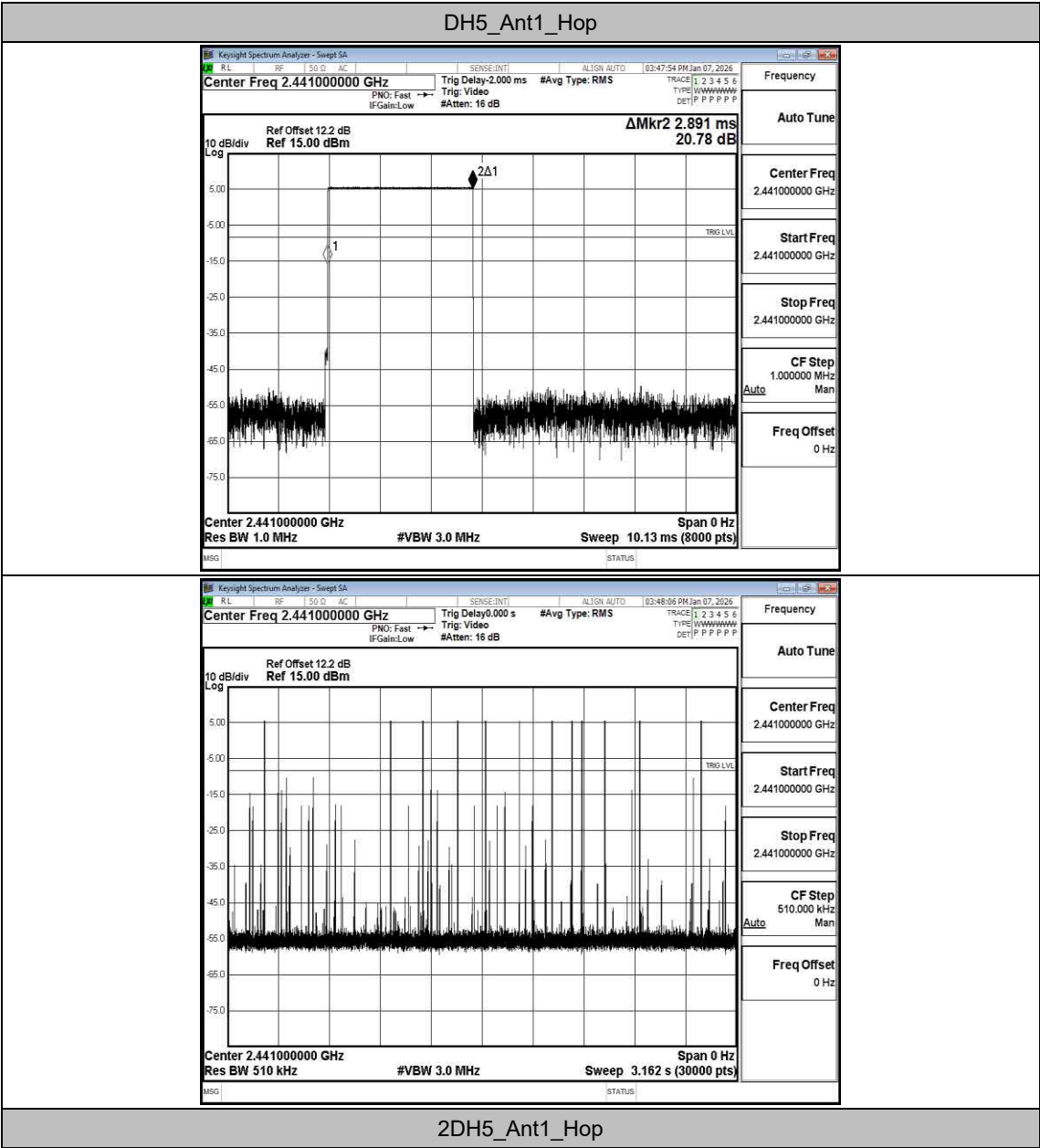


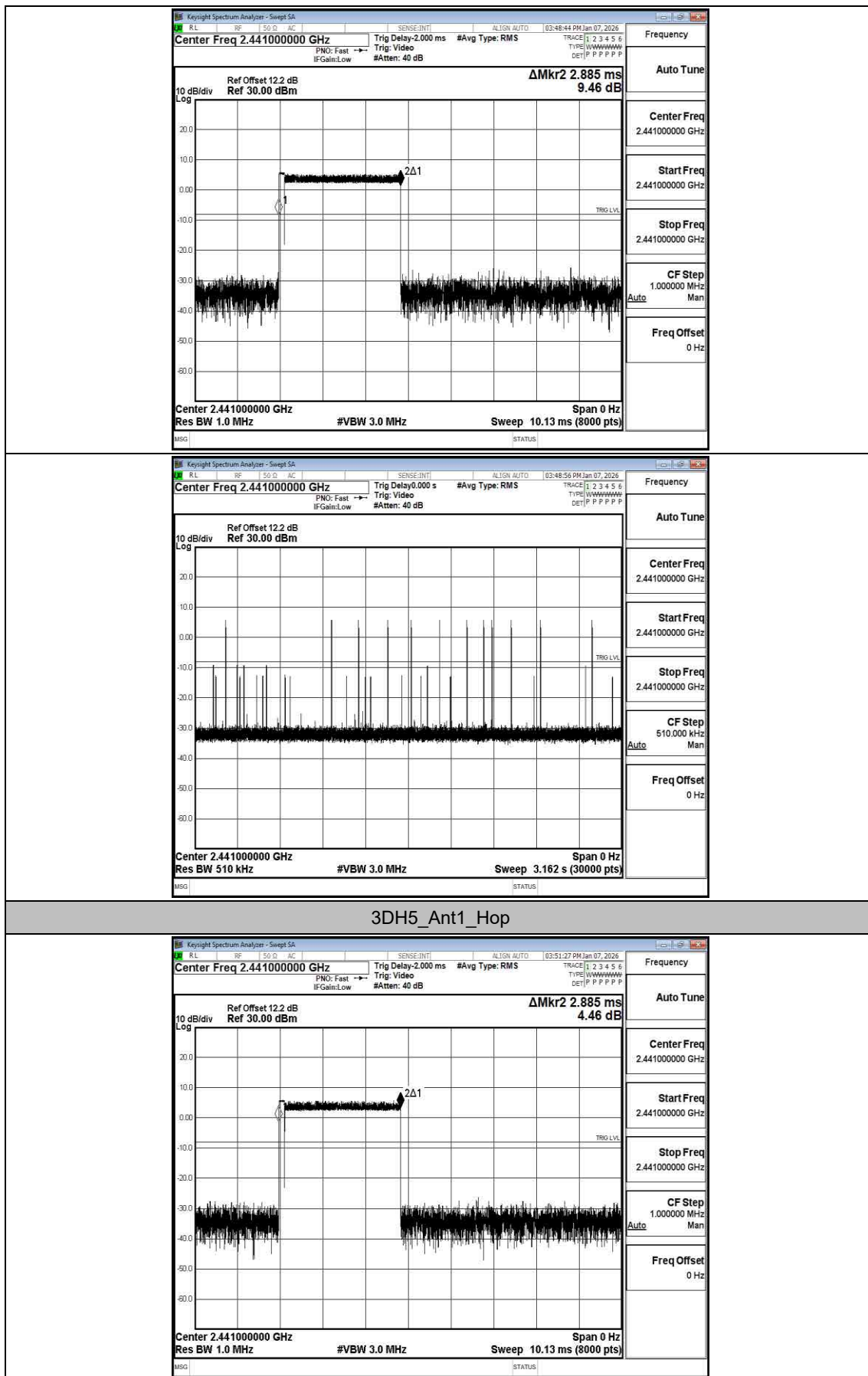
A.4 Dwell Time

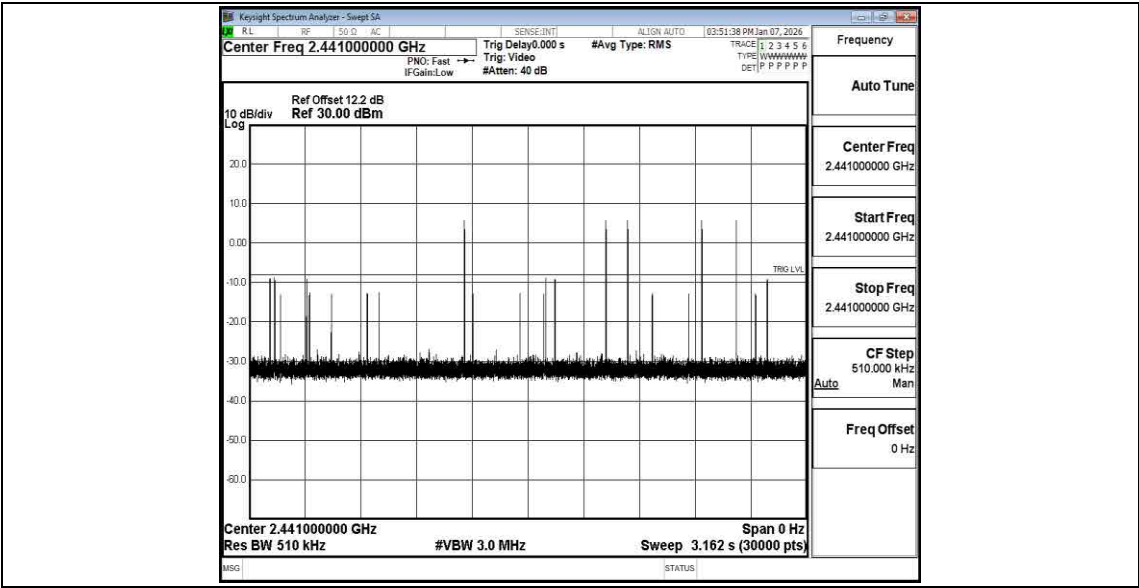
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.891	130	0.376	≤0.4	PASS
2DH5	Ant1	Hop	2.885	130	0.375	≤0.4	PASS
3DH5	Ant1	Hop	2.885	60	0.173	≤0.4	PASS

Test Graphs





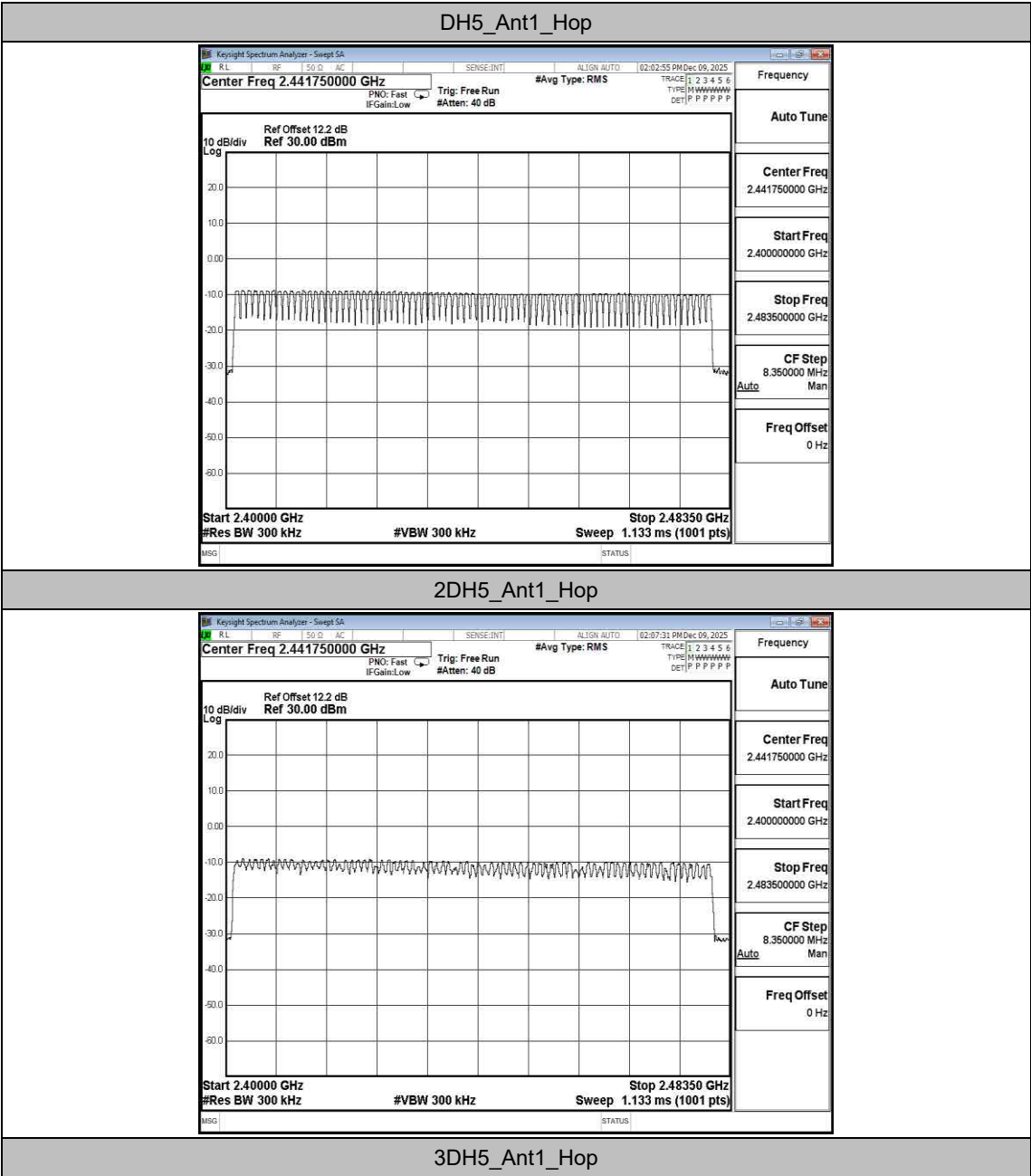


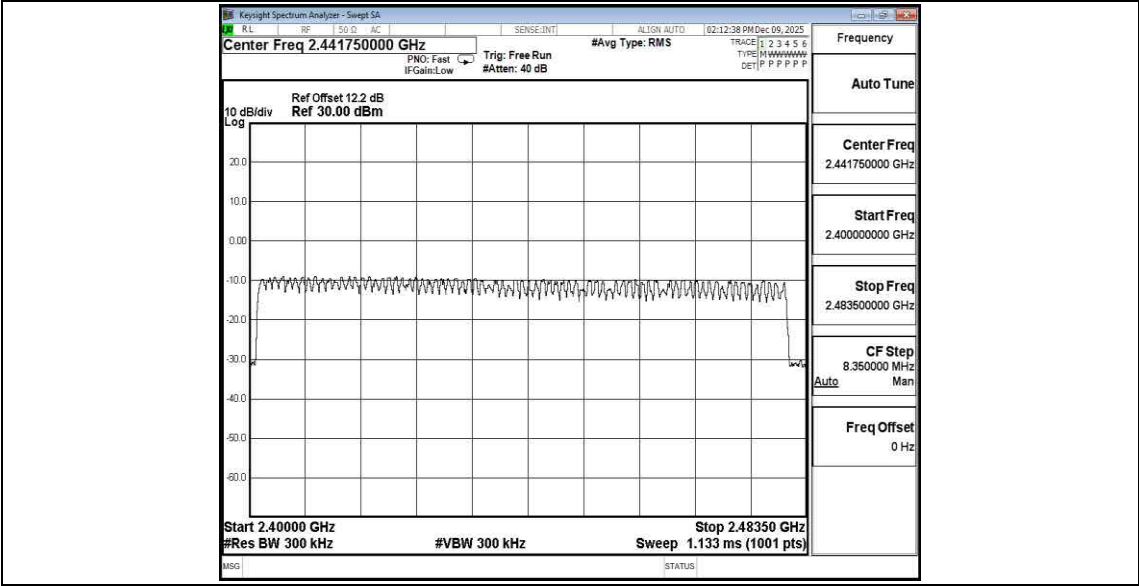
A.5 Number of Hopping Channel

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



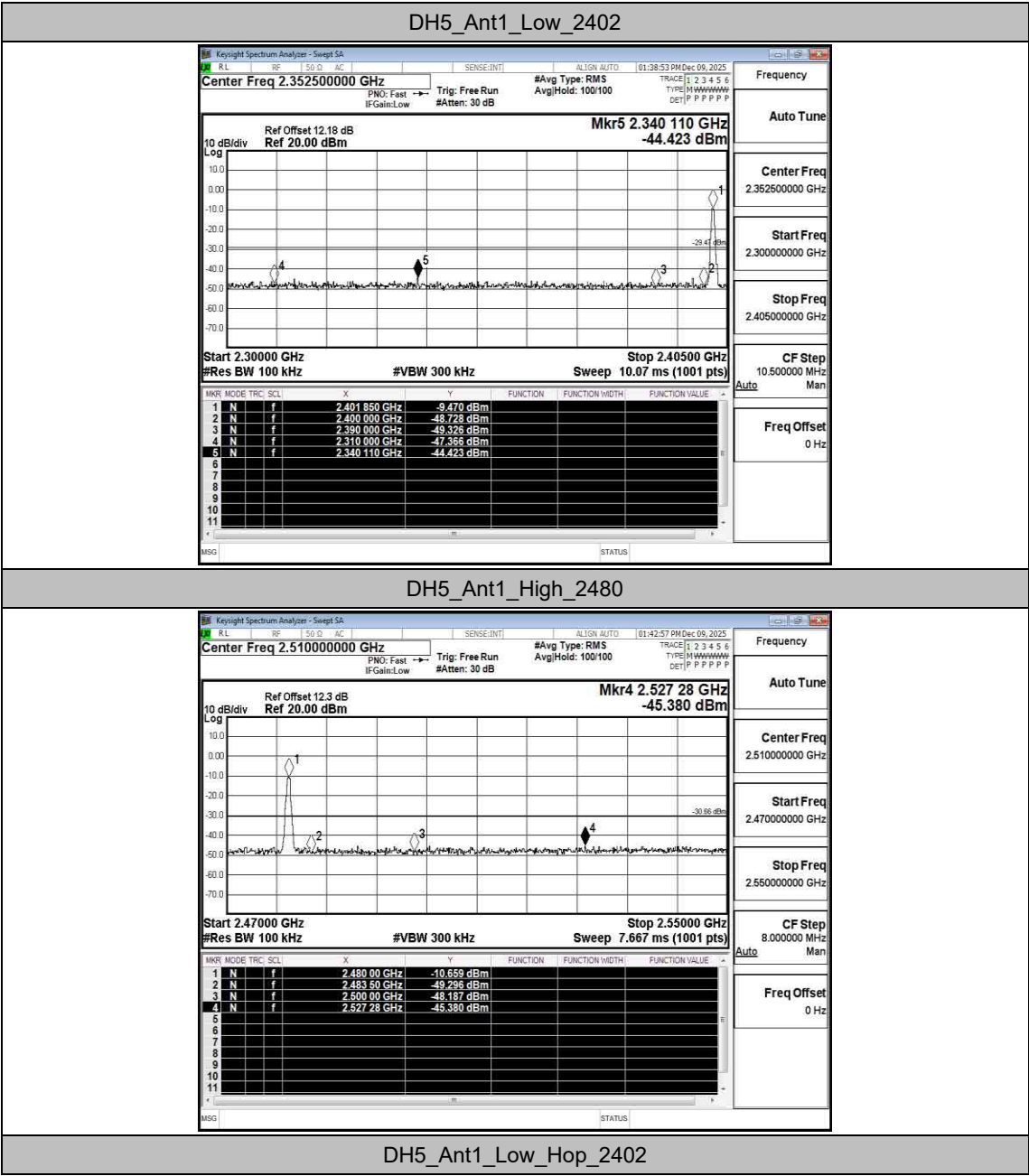


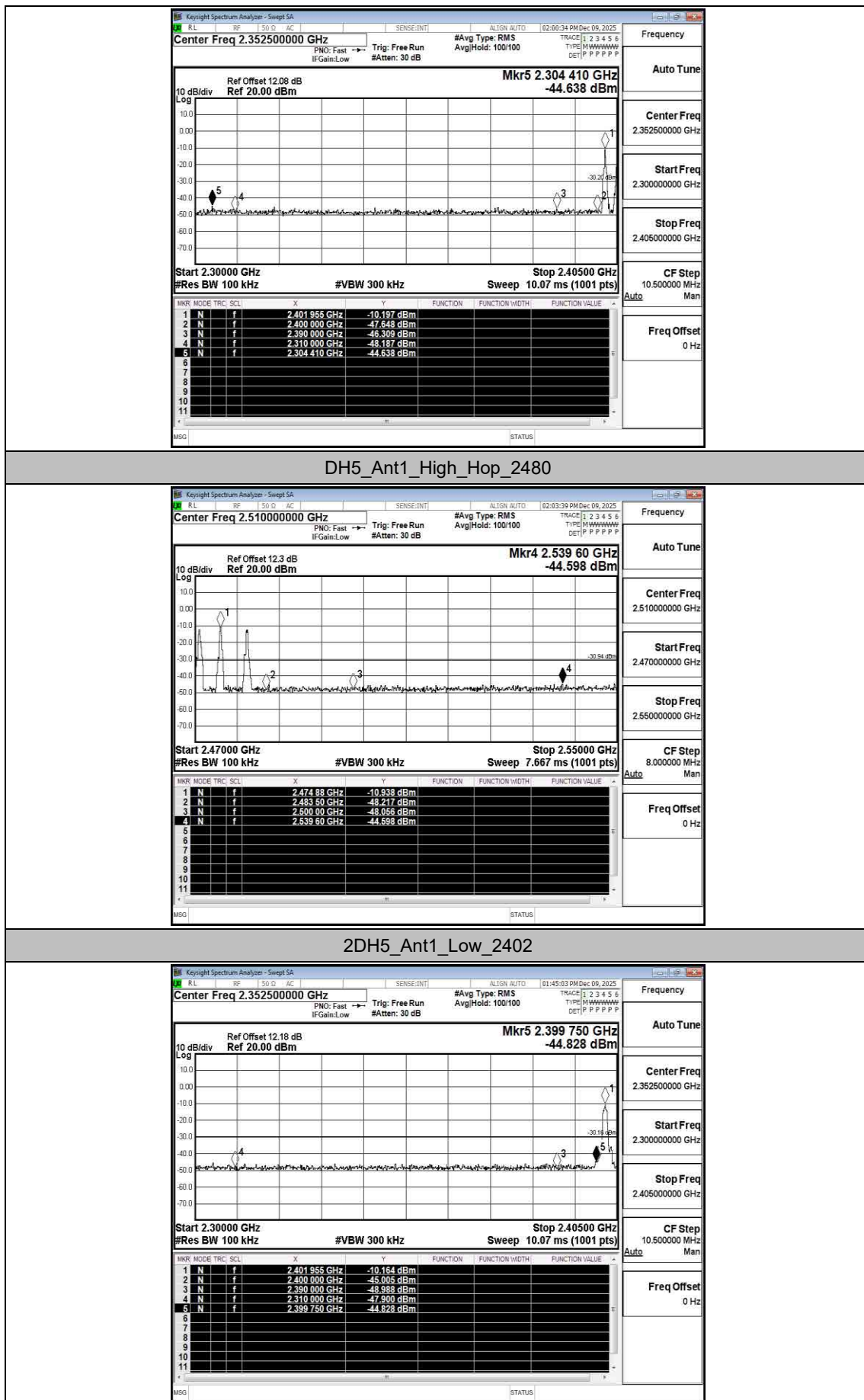
A.6 Band Edge

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-9.47	-44.42	≤-29.47	PASS
		High	2480	-10.66	-45.38	≤-30.66	PASS
		Low	Hop_2402	-10.20	-44.64	≤-30.2	PASS
		High	Hop_2480	-10.94	-44.6	≤-30.94	PASS
2DH5	Ant1	Low	2402	-10.16	-44.83	≤-30.16	PASS
		High	2480	-11.58	-45.07	≤-31.58	PASS
		Low	Hop_2402	-14.70	-45.51	≤-34.7	PASS
		High	Hop_2480	-17.87	-45.06	≤-37.87	PASS
3DH5	Ant1	Low	2402	-10.57	-44.51	≤-30.57	PASS
		High	2480	-10.83	-44.99	≤-30.83	PASS
		Low	Hop_2402	-17.46	-46.23	≤-37.46	PASS
		High	Hop_2480	-17.21	-45	≤-37.21	PASS

Test Graphs

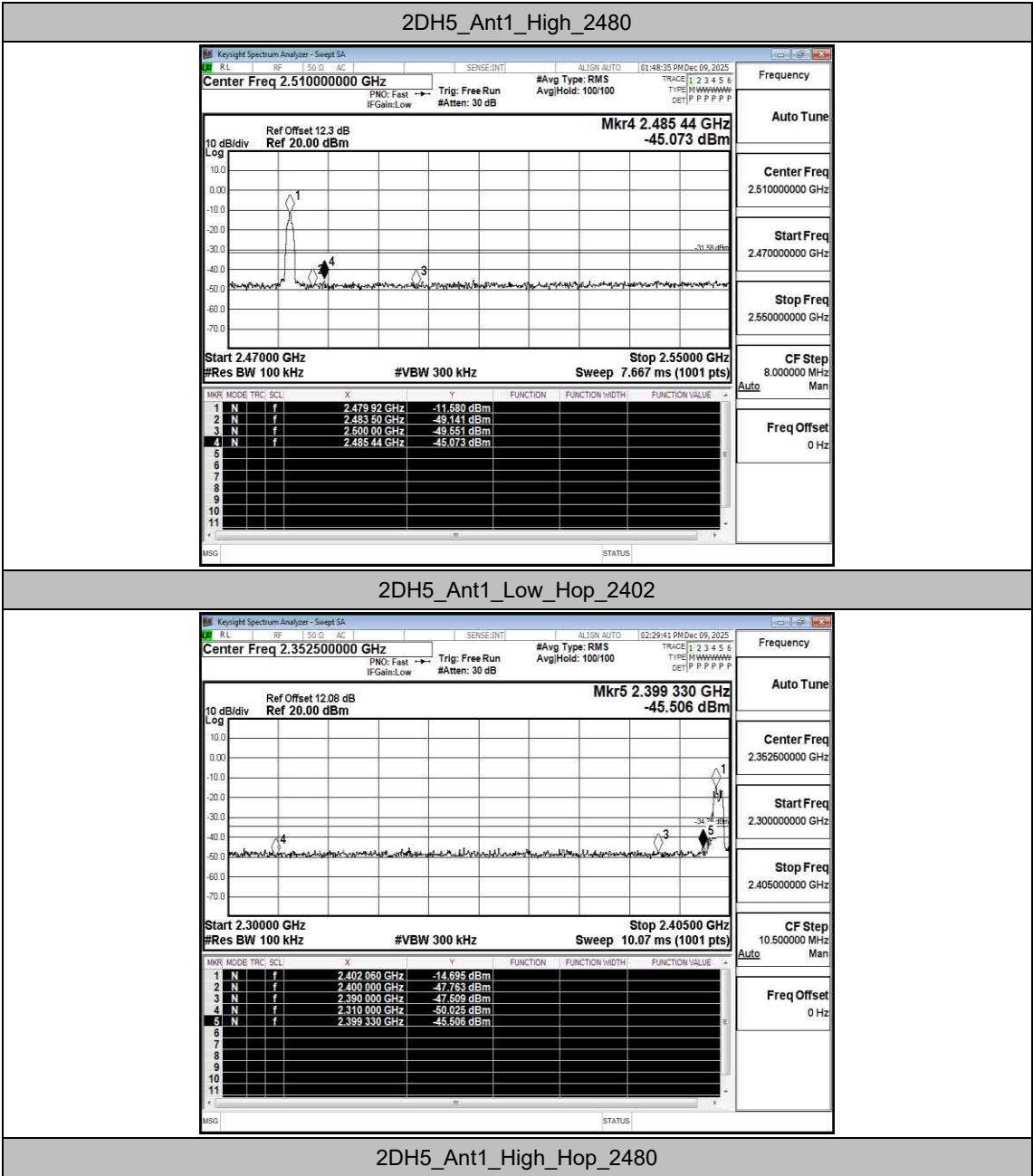


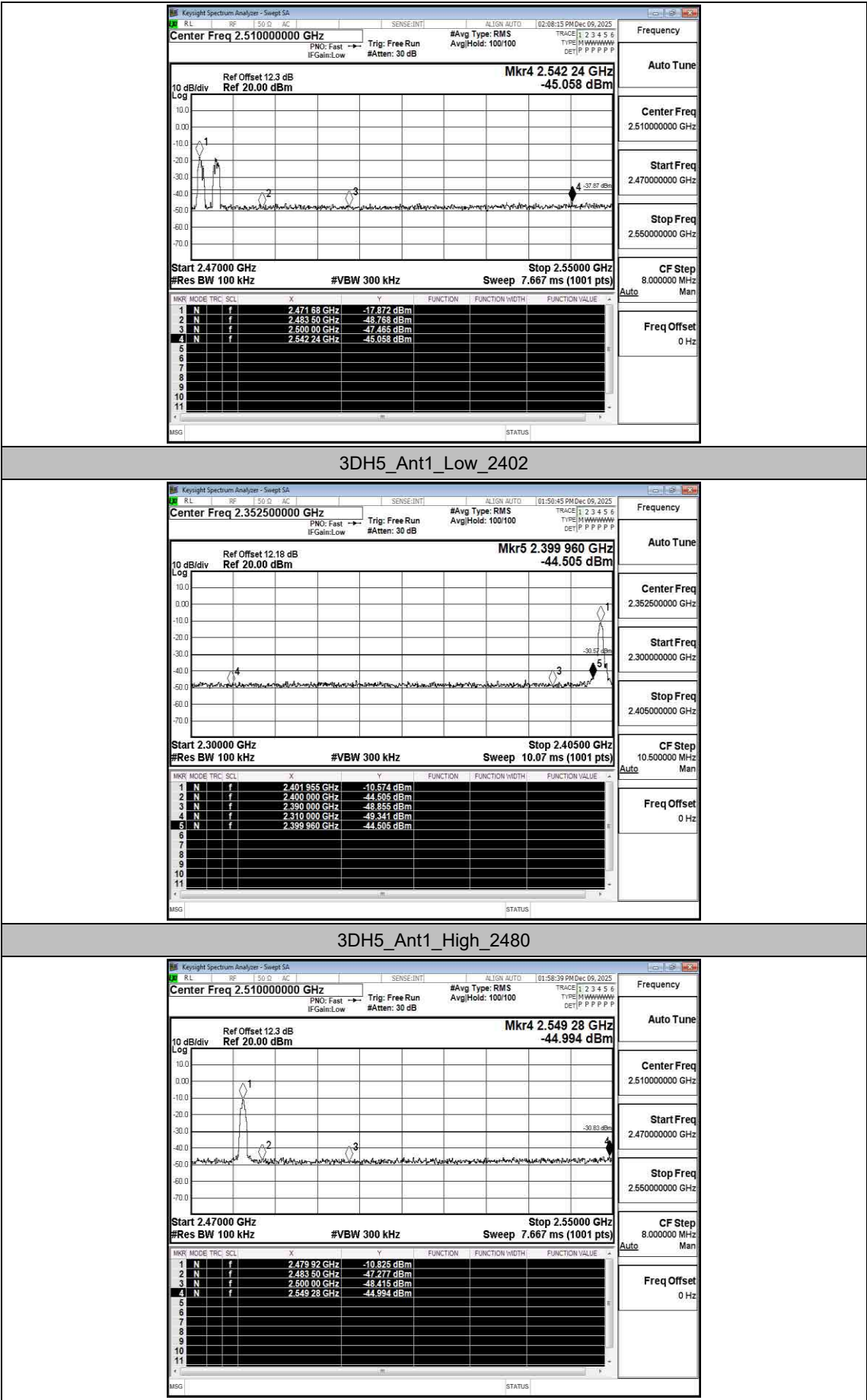


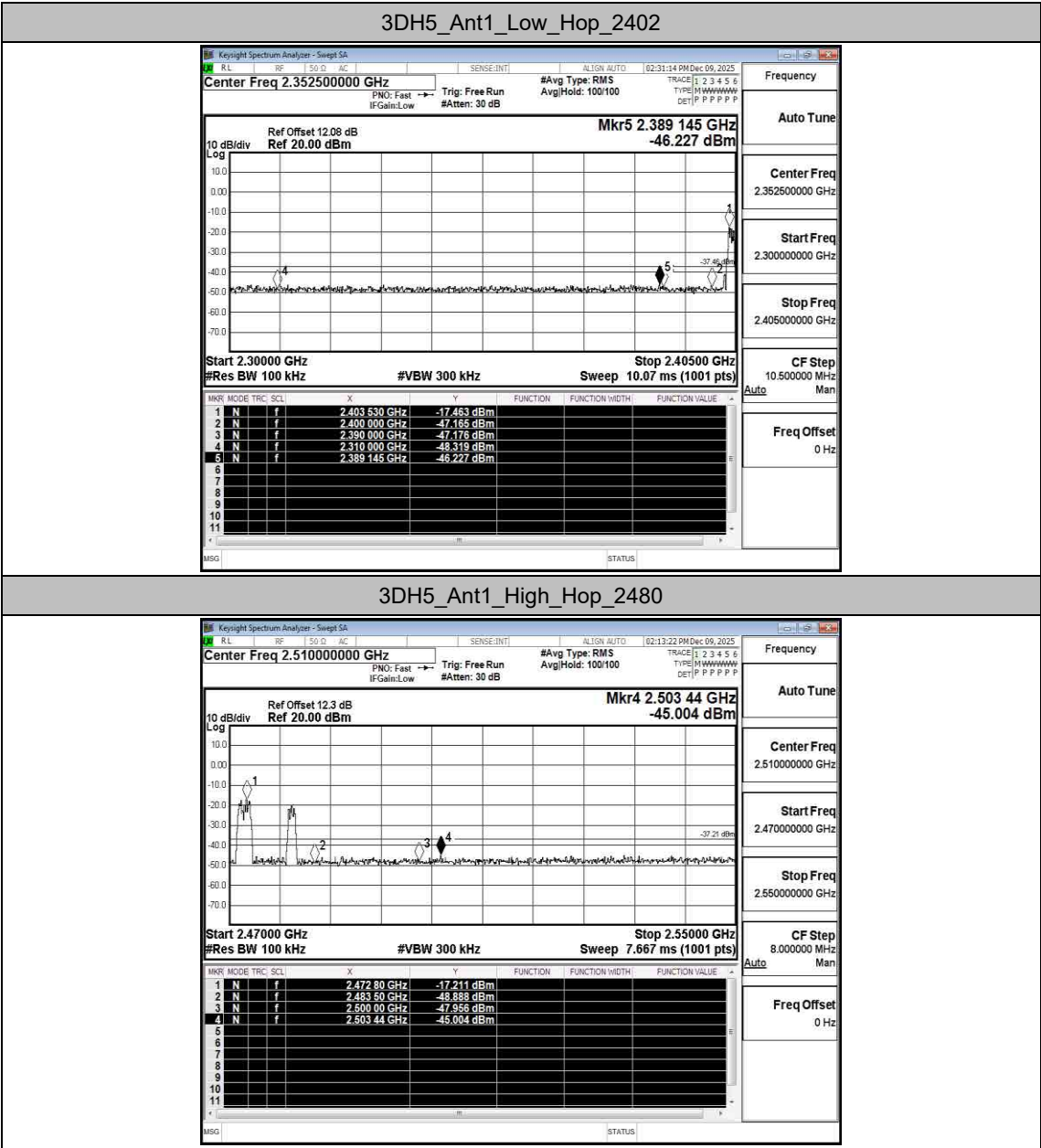
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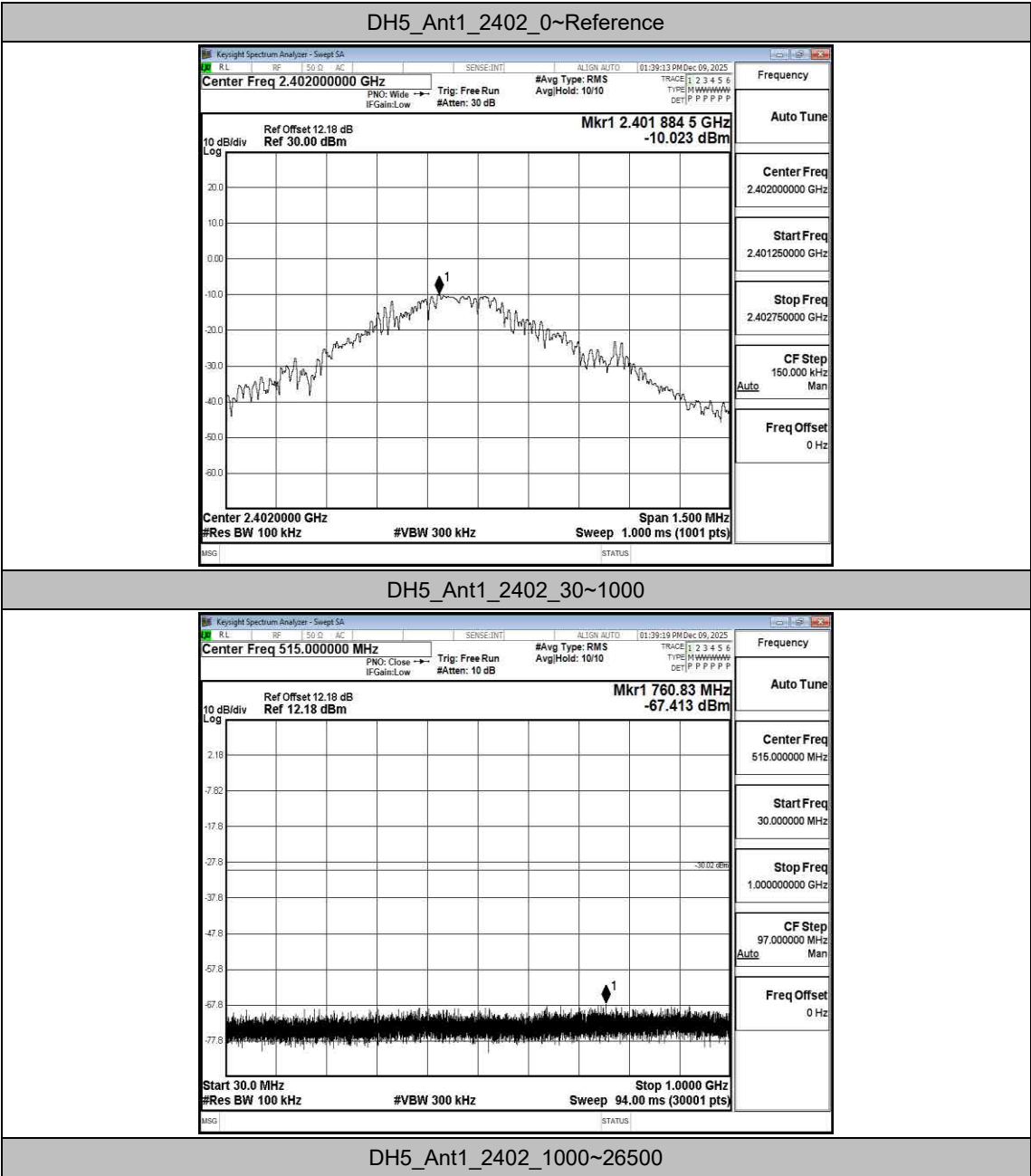


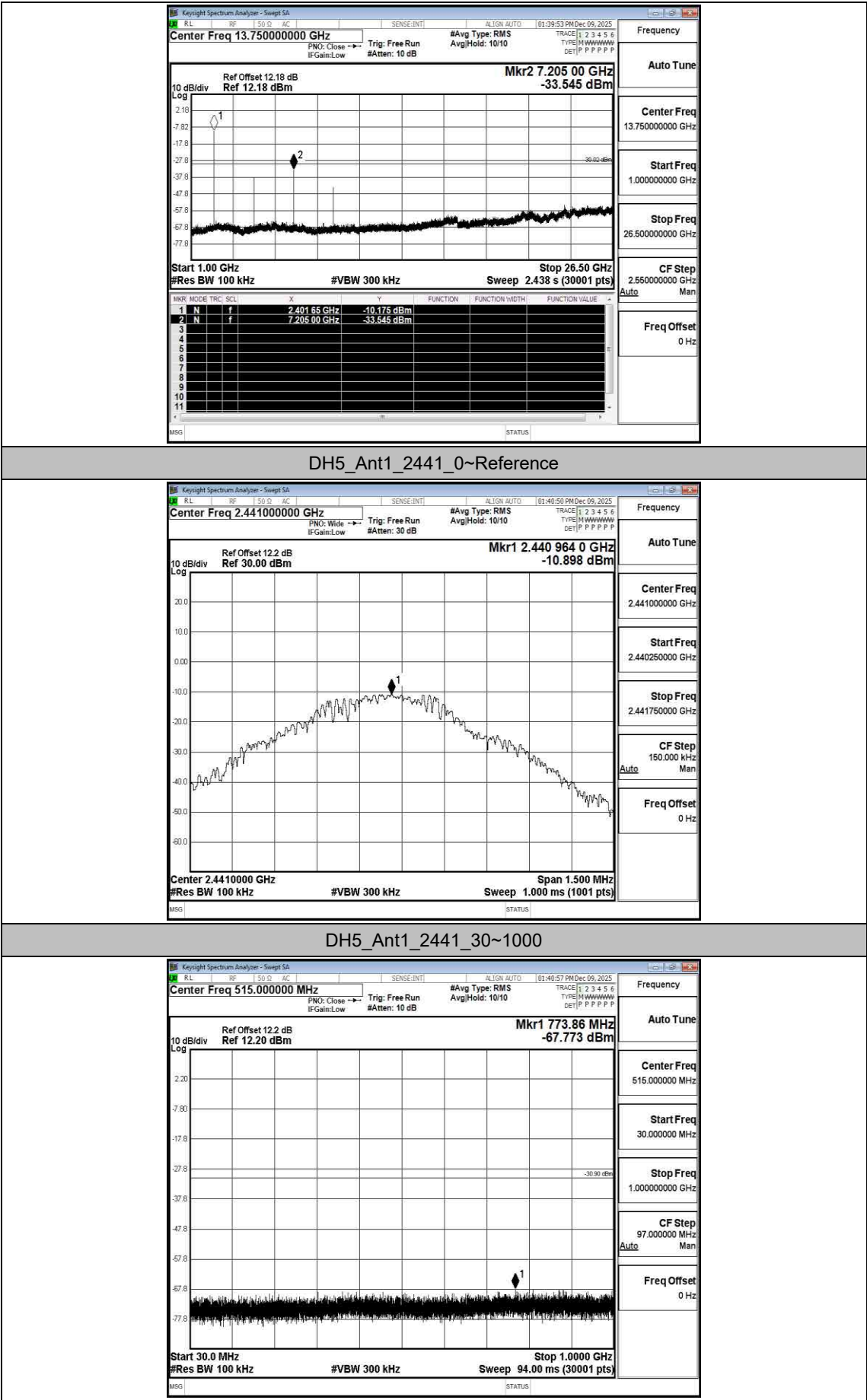
A.7 Conducted RF Spurious Emission

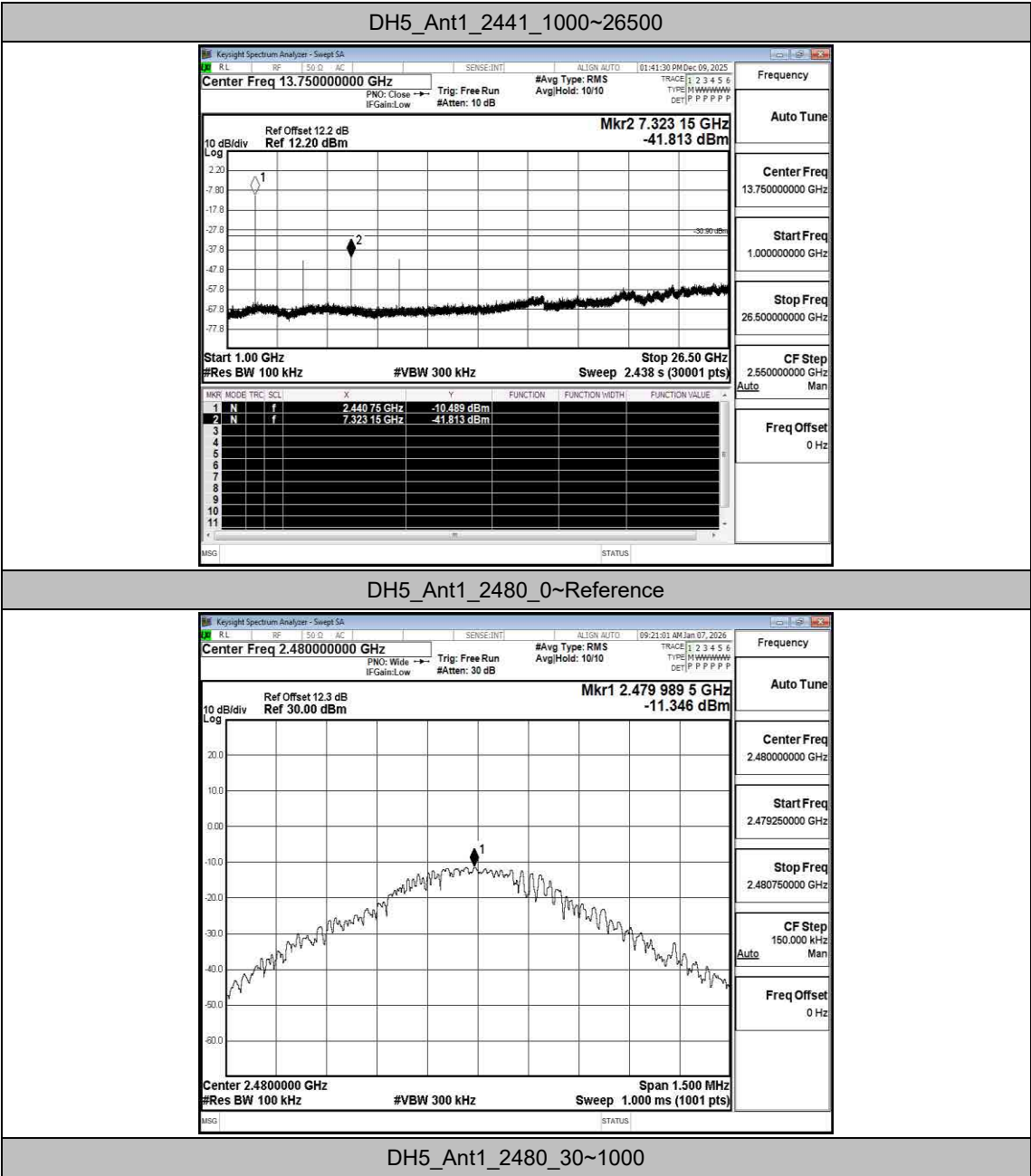
Test Result

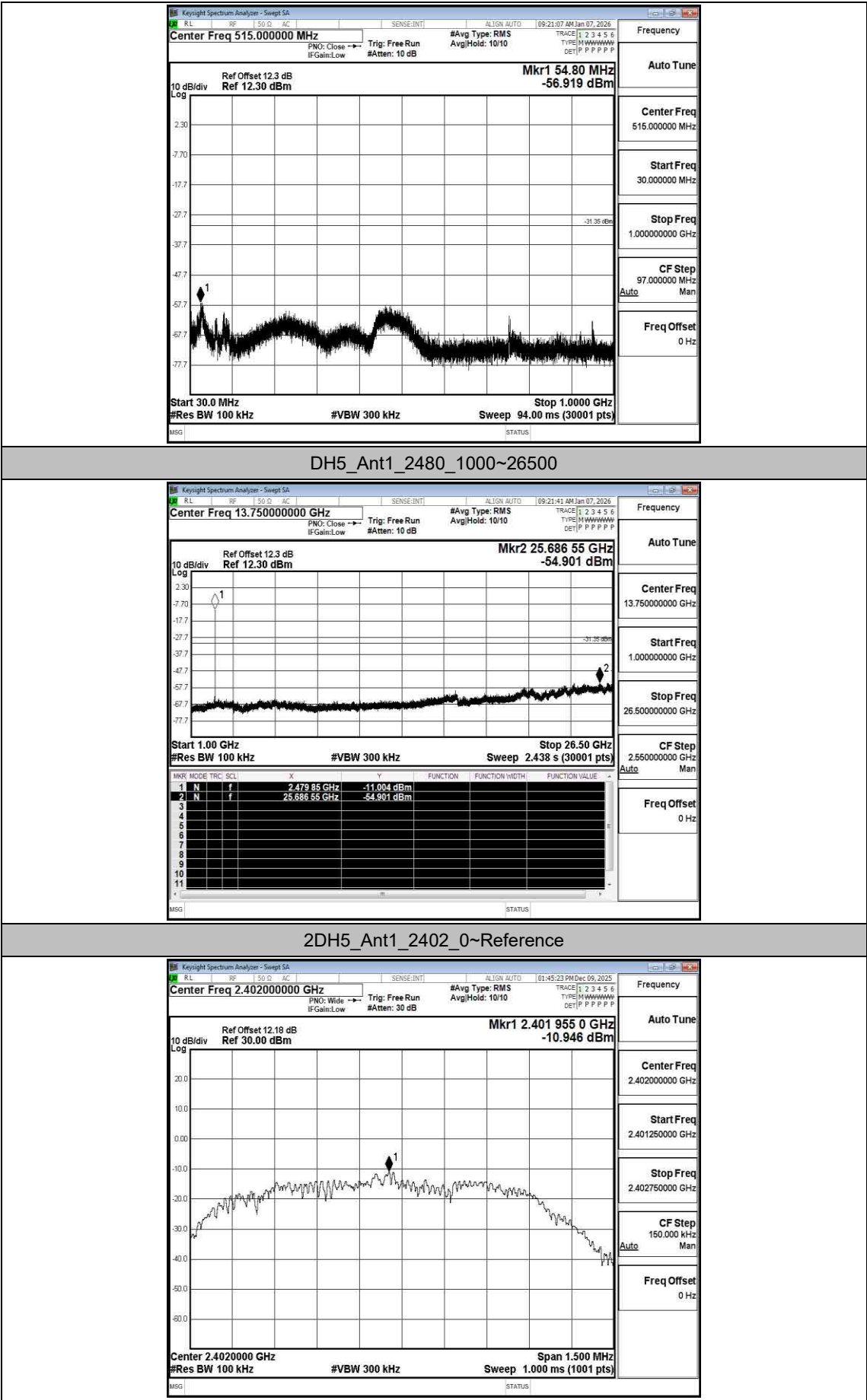
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-10.02	-10.02	---	PASS
			30~1000	-10.02	-67.41	≤-30.02	PASS
			1000~26500	-10.02	-33.55	≤-30.02	PASS
		2441	Reference	-10.90	-10.90	---	PASS
			30~1000	-10.90	-67.77	≤-30.9	PASS
			1000~26500	-10.90	-41.81	≤-30.9	PASS
		2480	Reference	-11.35	-11.35	---	PASS
			30~1000	-11.35	-56.92	≤-31.35	PASS
			1000~26500	-11.35	-54.9	≤-31.35	PASS
2DH5	Ant1	2402	Reference	-10.95	-10.95	---	PASS
			30~1000	-10.95	-66.43	≤-30.95	PASS
			1000~26500	-10.95	-33.47	≤-30.95	PASS
		2441	Reference	-15.19	-15.19	---	PASS
			30~1000	-15.19	-67.4	≤-35.19	PASS
			1000~26500	-15.19	-46.96	≤-35.19	PASS
		2480	Reference	-15.72	-15.72	---	PASS
			30~1000	-15.72	-67.29	≤-35.72	PASS
			1000~26500	-15.72	-49.28	≤-35.72	PASS
3DH5	Ant1	2402	Reference	-12.23	-12.23	---	PASS
			30~1000	-12.23	-68.18	≤-32.23	PASS
			1000~26500	-12.23	-39.4	≤-32.23	PASS
		2441	Reference	-13.99	-13.99	---	PASS
			30~1000	-13.99	-67.23	≤-33.99	PASS
			1000~26500	-13.99	-43.42	≤-33.99	PASS
		2480	Reference	-15.18	-15.18	---	PASS
			30~1000	-15.18	-67.2	≤-35.18	PASS
			1000~26500	-15.18	-47.74	≤-35.18	PASS

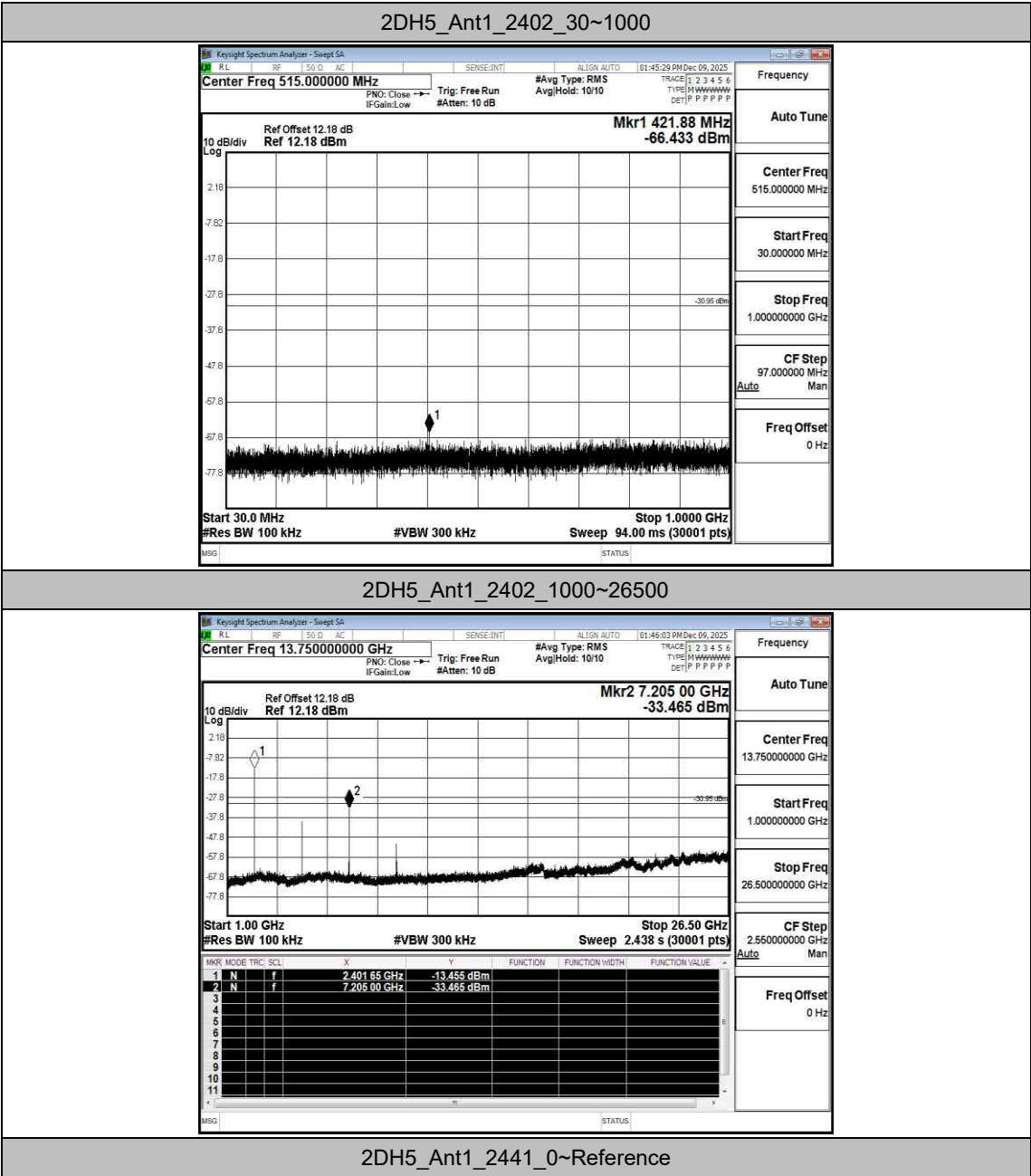
Test Graphs

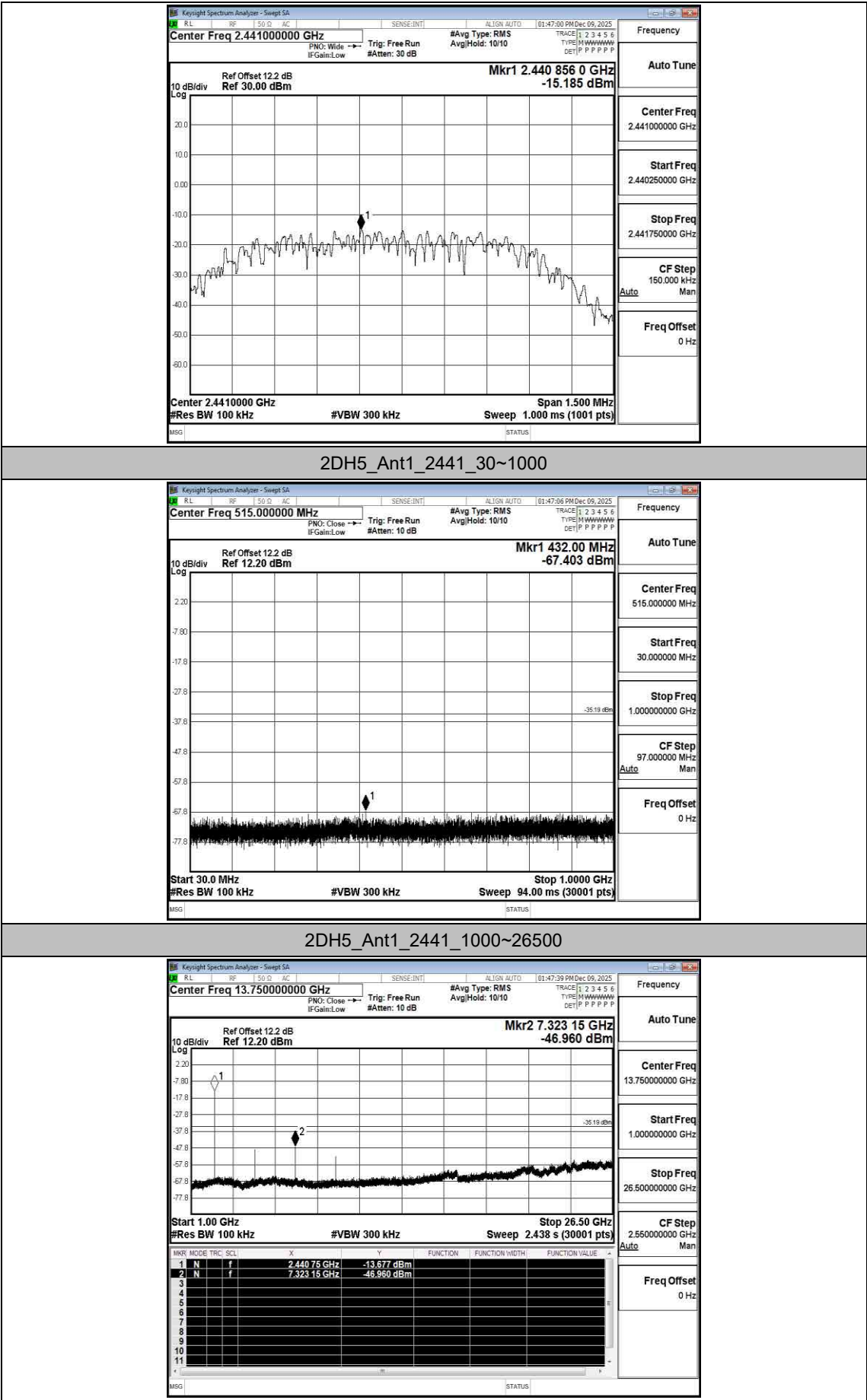


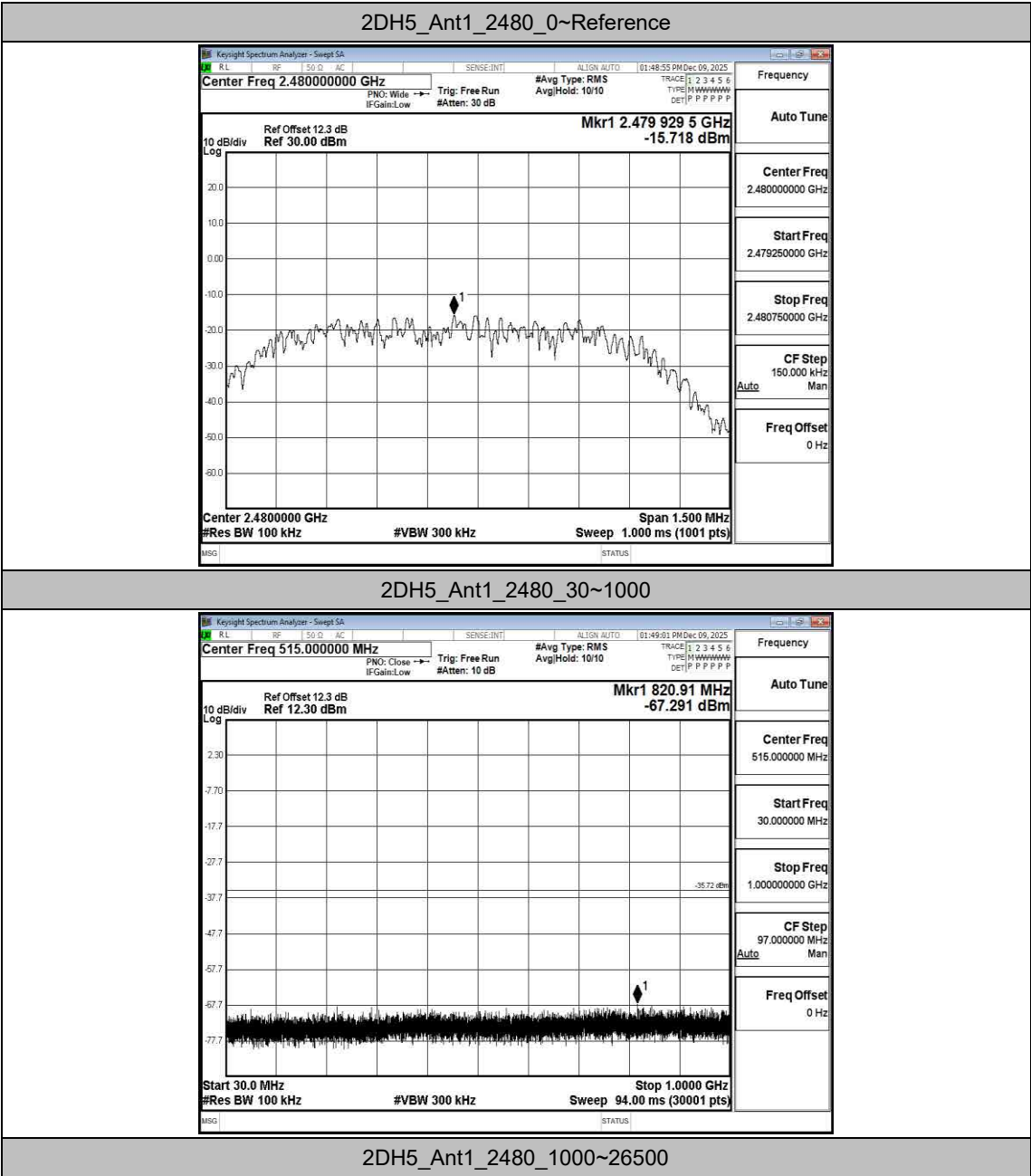


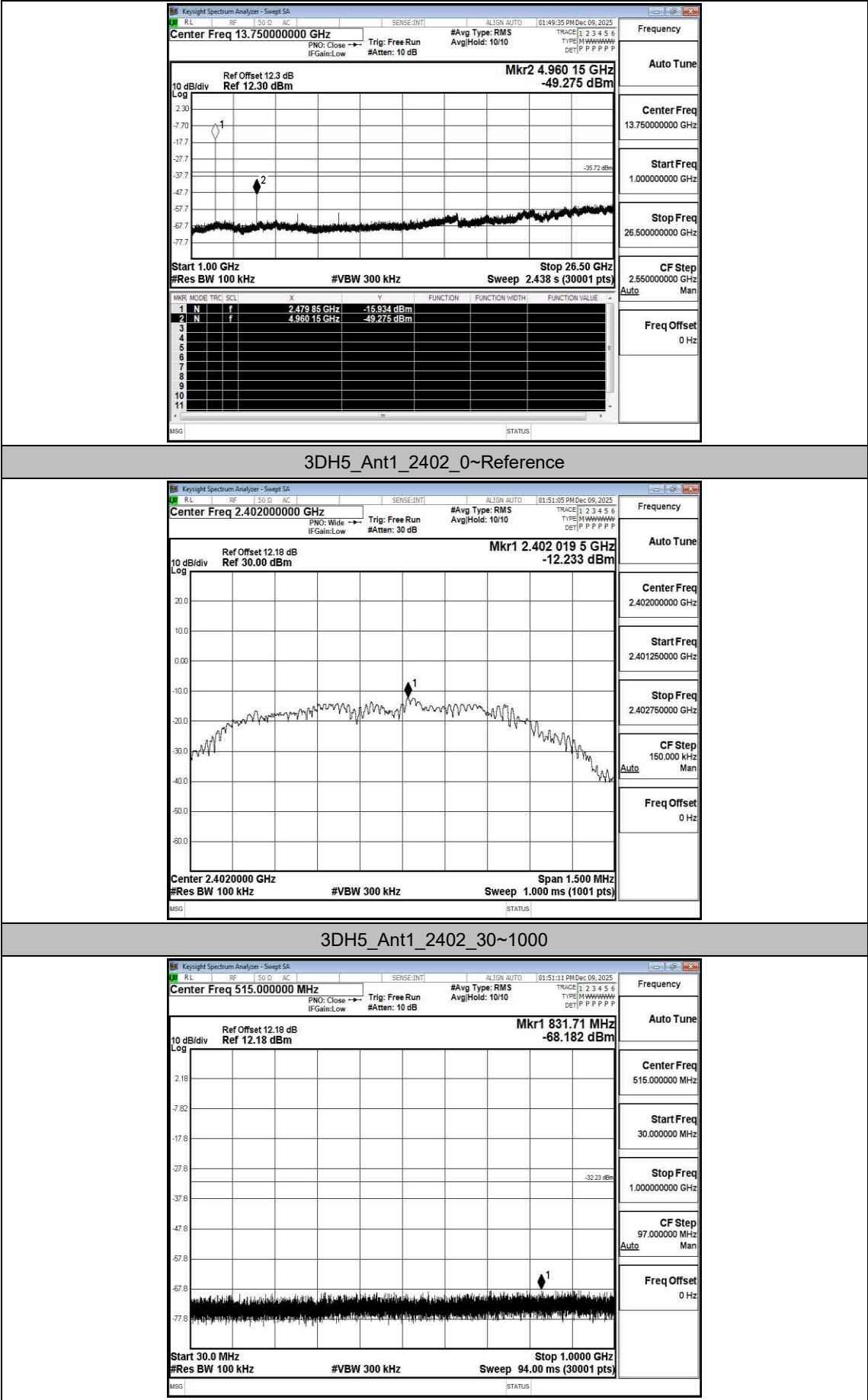


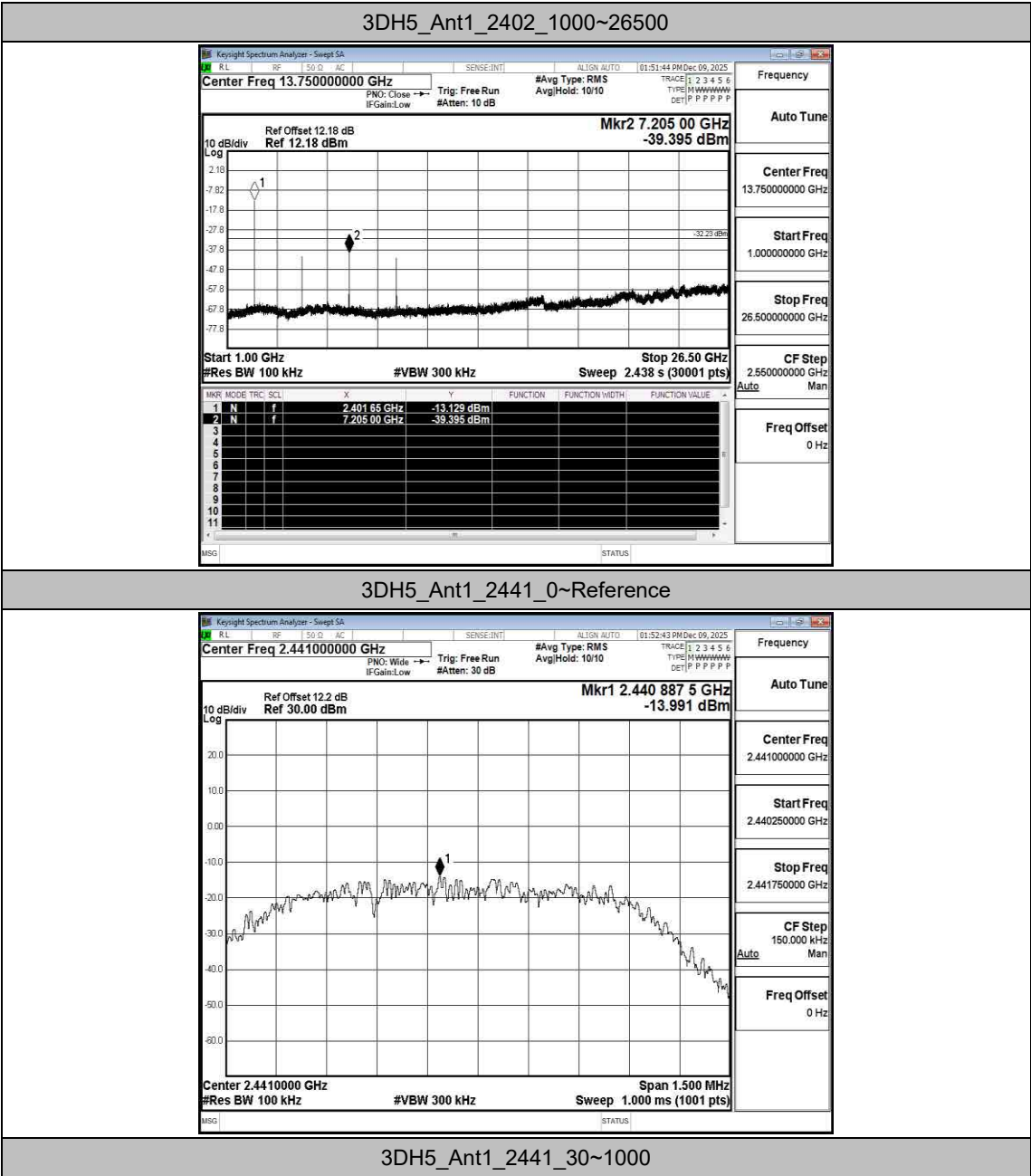


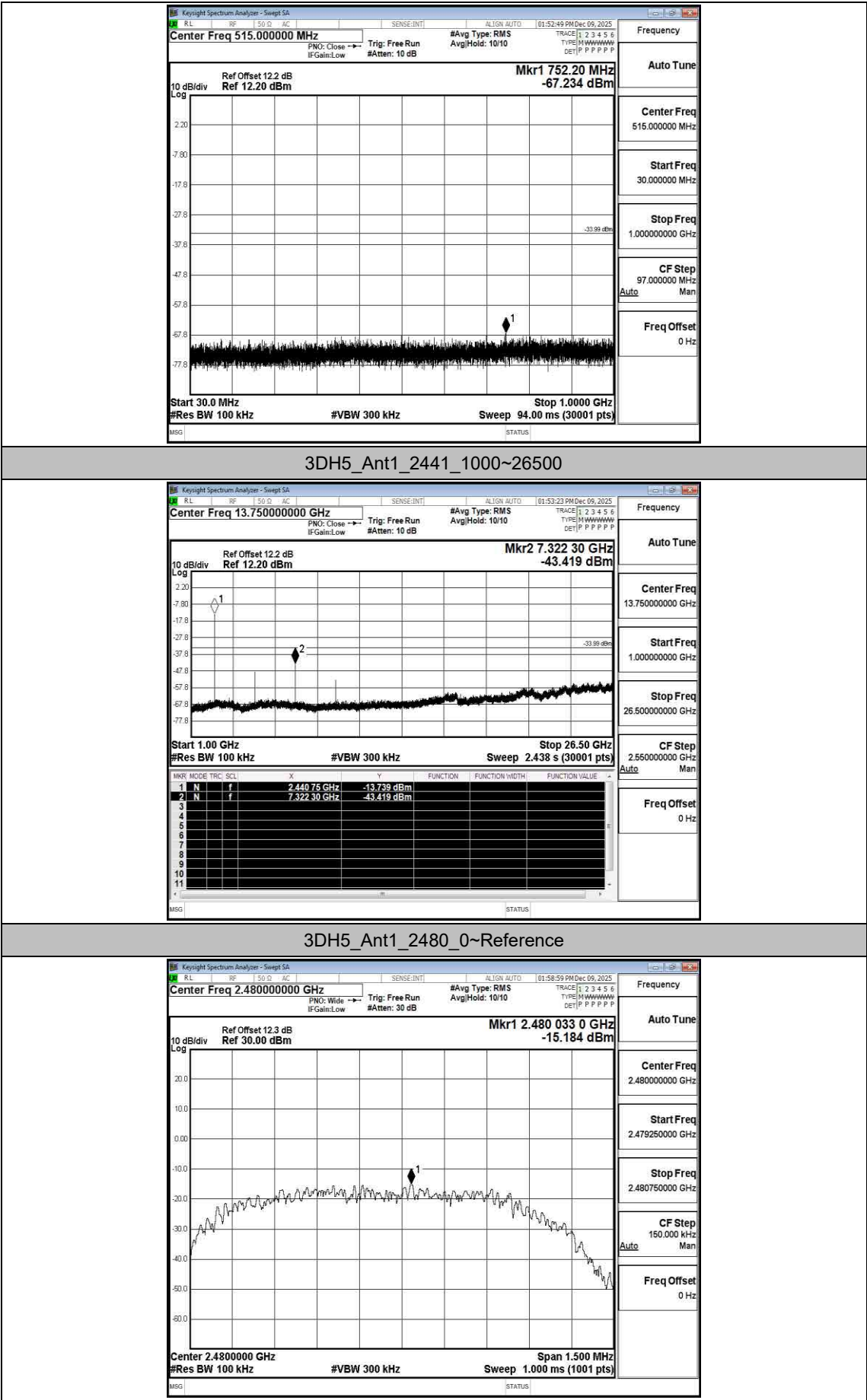


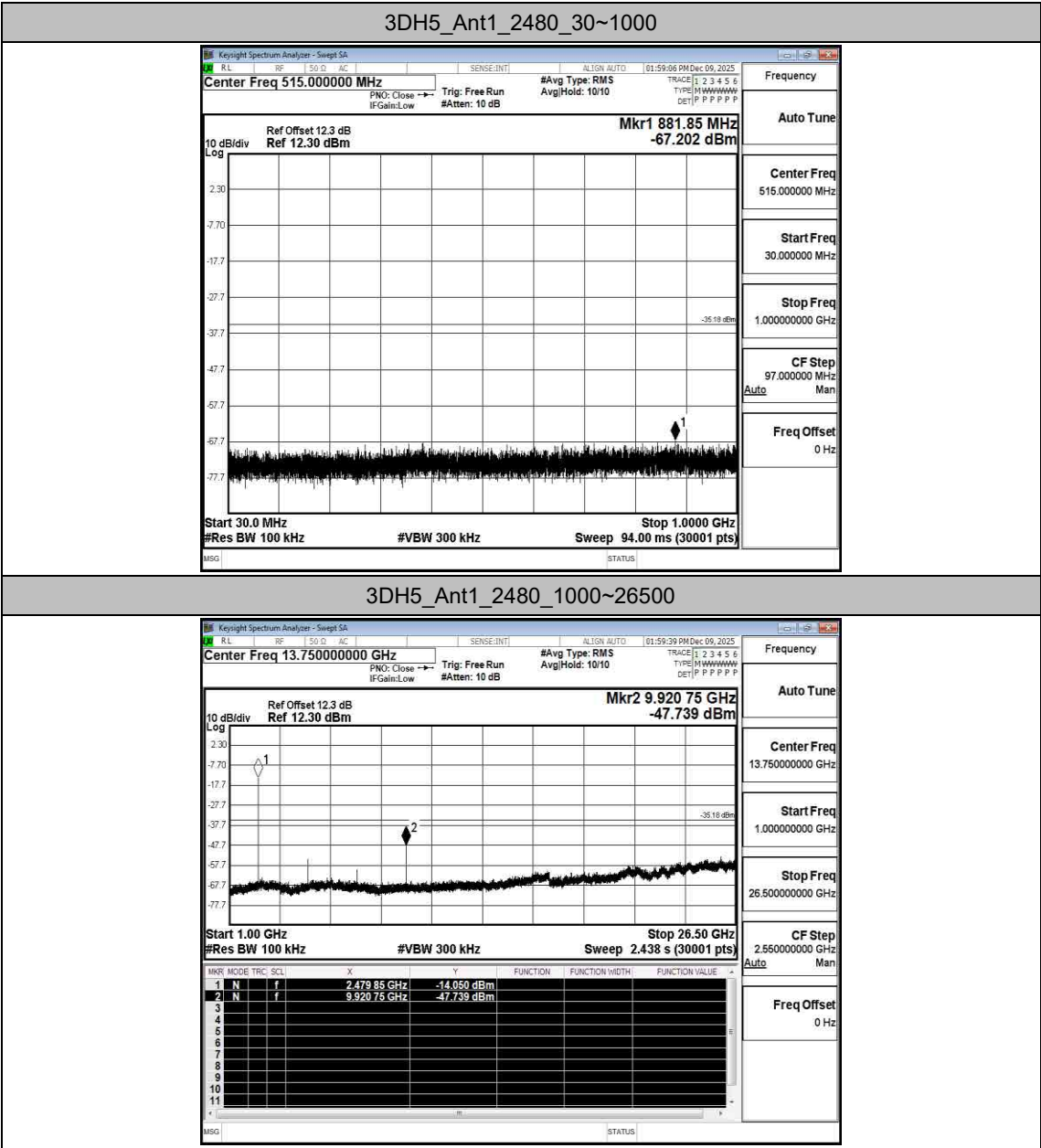










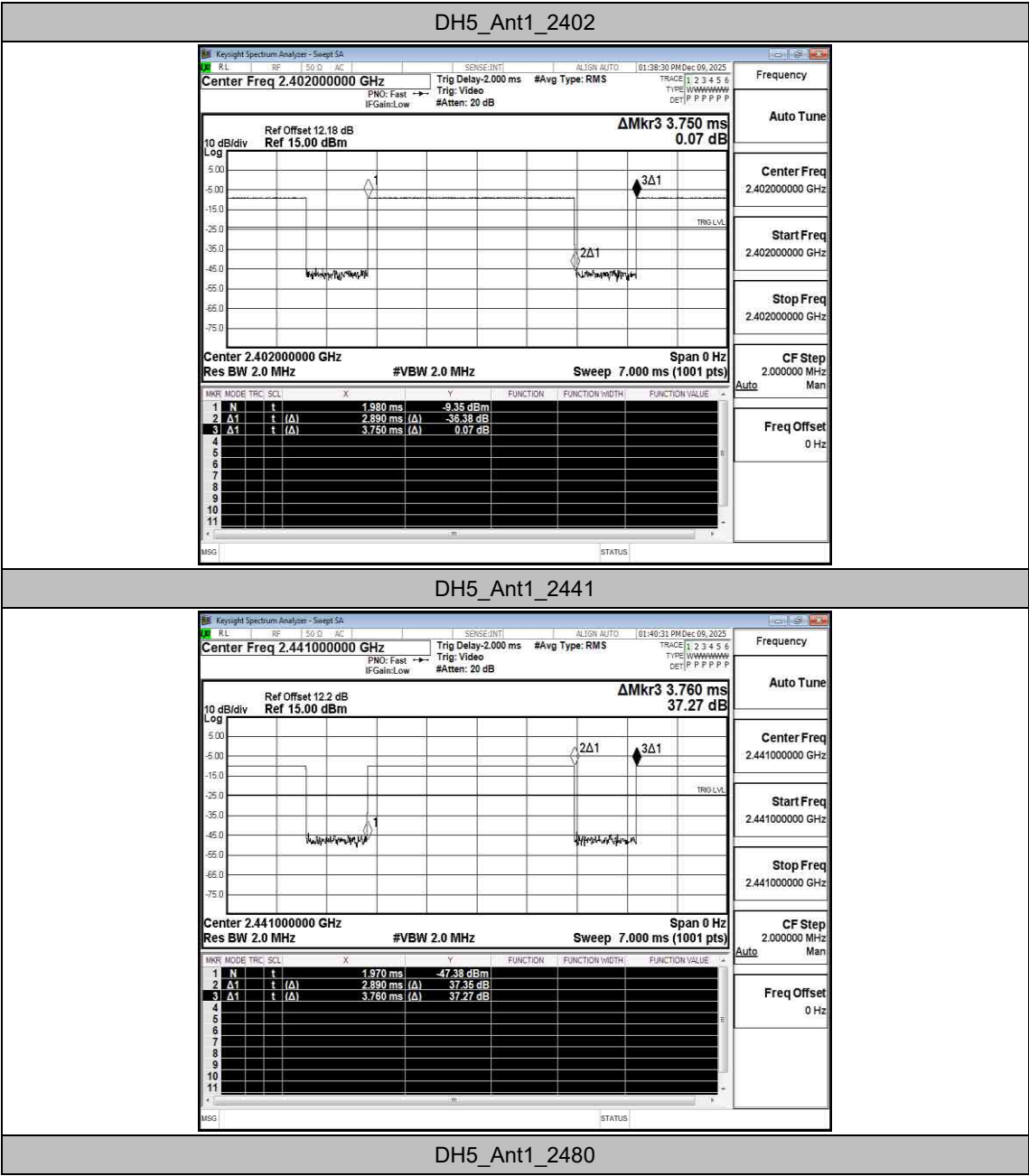


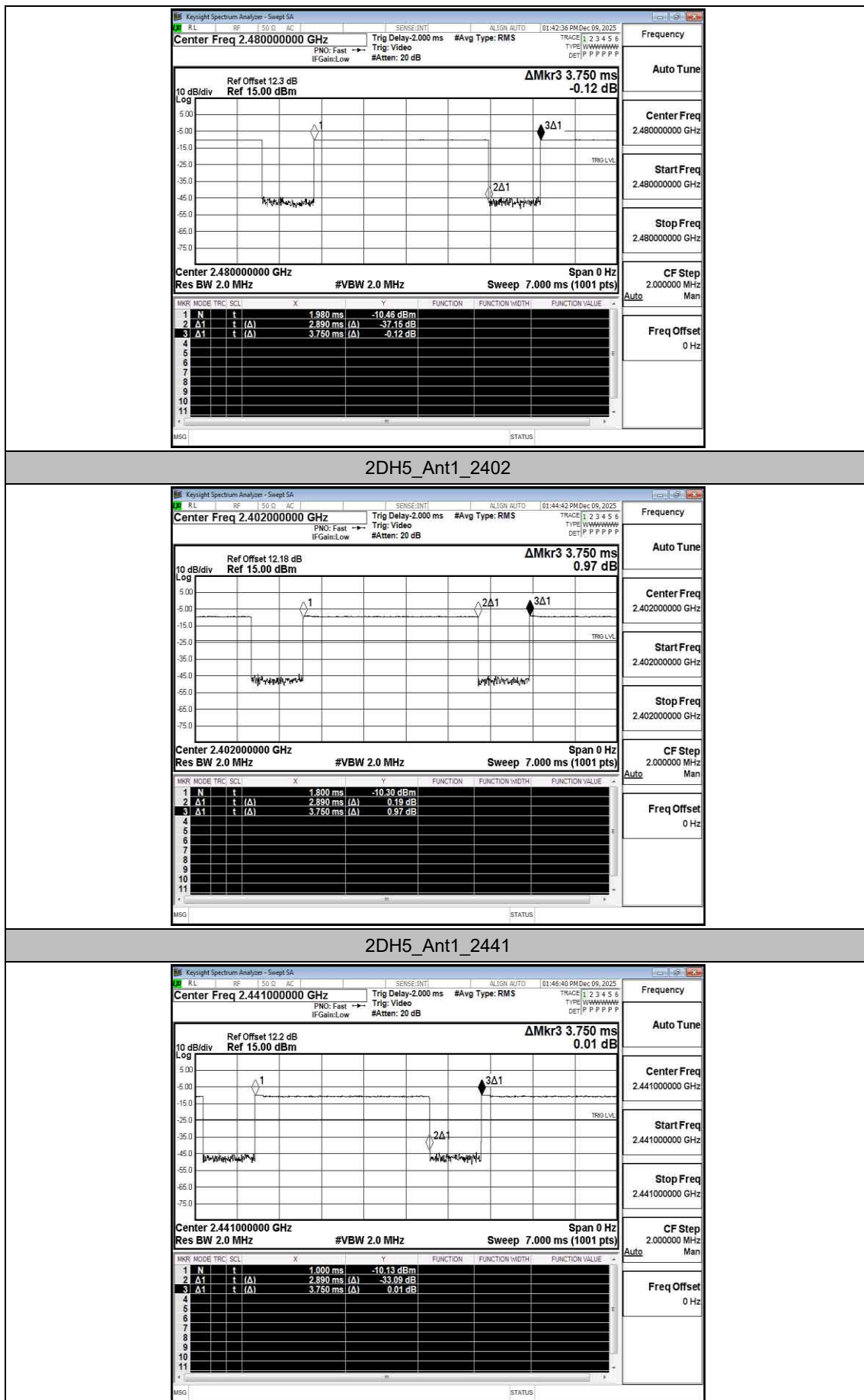
A.8 Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.89	3.75	77.07	1.13	---	---
		2441	2.89	3.76	76.86	1.14	---	---
		2480	2.89	3.75	77.07	1.13	---	---
2DH5	Ant1	2402	2.89	3.75	77.07	1.13	---	---
		2441	2.89	3.75	77.07	1.13	---	---
		2480	2.89	3.76	76.86	1.14	---	---
3DH5	Ant1	2402	2.90	3.76	77.13	1.13	---	---
		2441	2.88	3.74	77.01	1.13	---	---
		2480	2.90	3.76	77.13	1.13	---	---

Test Graphs

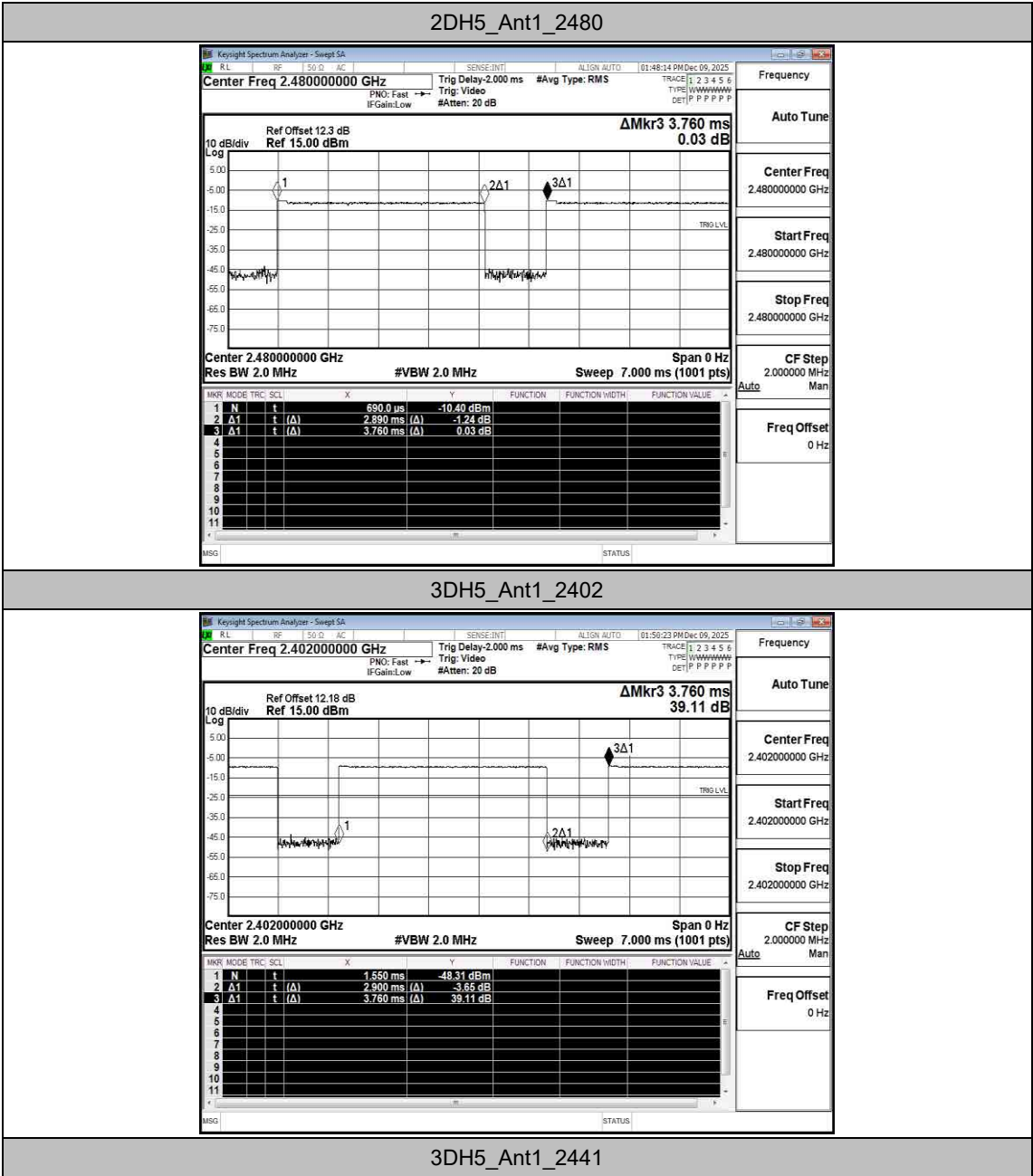


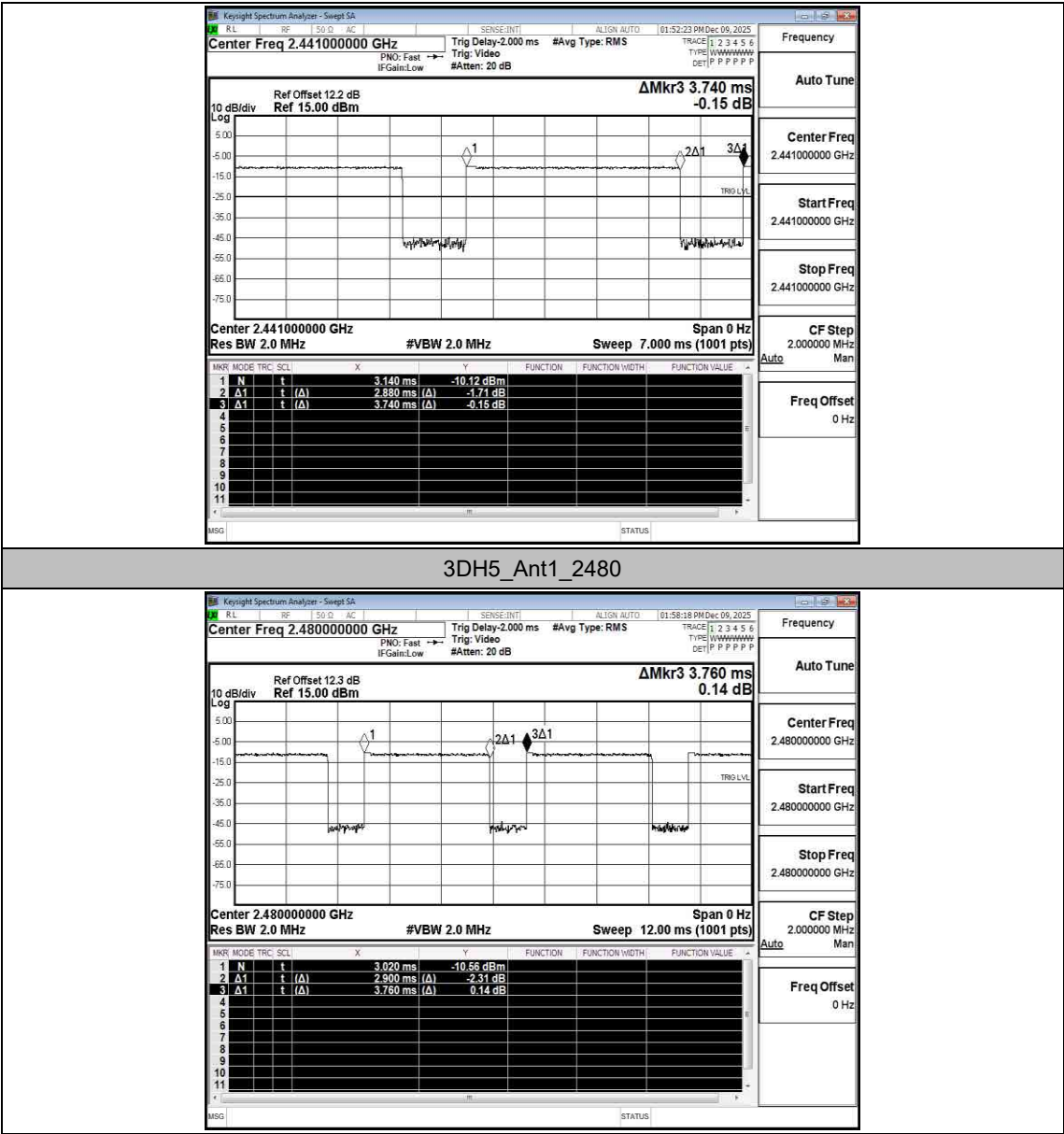


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A.9 Restrict Band

Test Result

Test Mode	Antenna	Channel Name	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-60.93	≤-44.33	2.00	1.13	37.40	≤54	PASS
				AV	2310.395	-60.21	≤-44.33	2.00	1.13	38.12	≤54	PASS
				AV	2390.000	-60.86	≤-44.33	2.00	1.13	37.47	≤54	PASS
				Peak	2310.000	-53.5	≤-23.20	2.00	0.00	43.70	≤74	PASS
				Peak	2340.425	-50.04	≤-23.20	2.00	0.00	47.16	≤74	PASS
				Peak	2390.000	-53.12	≤-23.20	2.00	0.00	44.08	≤74	PASS
		High	2480	AV	2483.500	-60.58	≤-44.33	2.00	1.13	37.75	≤54	PASS
				AV	2484.080	-59.64	≤-44.33	2.00	1.13	38.69	≤54	PASS
				AV	2500.000	-60.55	≤-44.33	2.00	1.13	37.78	≤54	PASS
				Peak	2483.500	-52.03	≤-23.20	2.00	0.00	45.17	≤74	PASS
				Peak	2495.360	-49.87	≤-23.20	2.00	0.00	47.33	≤74	PASS
				Peak	2500.000	-52.97	≤-23.20	2.00	0.00	44.23	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-53.39	≤-23.20	2.00	0.00	43.81	≤74	PASS
				Peak	2372.240	-49.91	≤-23.20	2.00	0.00	47.29	≤74	PASS
				Peak	2390.000	-53.65	≤-23.20	2.00	0.00	43.55	≤74	PASS
		High	Hop_2480	Peak	2483.500	-51.29	≤-23.20	2.00	0.00	45.91	≤74	PASS
				Peak	2493.120	-48.76	≤-23.20	2.00	0.00	48.44	≤74	PASS
				Peak	2500.000	-53.66	≤-23.20	2.00	0.00	43.54	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-60.83	≤-44.33	2.00	1.13	37.50	≤54	PASS
				AV	2389.985	-60.11	≤-44.33	2.00	1.13	38.22	≤54	PASS
				AV	2390.000	-60.12	≤-44.33	2.00	1.13	38.21	≤54	PASS
				Peak	2310.000	-53.16	≤-23.20	2.00	0.00	44.04	≤74	PASS
				Peak	2353.550	-49.98	≤-23.20	2.00	0.00	47.22	≤74	PASS
				Peak	2390.000	-53.87	≤-23.20	2.00	0.00	43.33	≤74	PASS
		High	2480	AV	2483.500	-60.07	≤-44.34	2.00	1.14	38.27	≤54	PASS
				AV	2483.600	-59.45	≤-44.34	2.00	1.14	38.89	≤54	PASS
				AV	2500.000	-60.54	≤-44.34	2.00	1.14	37.80	≤54	PASS
				Peak	2483.500	-51.38	≤-23.20	2.00	0.00	45.82	≤74	PASS
				Peak	2484.000	-49.27	≤-23.20	2.00	0.00	47.93	≤74	PASS
				Peak	2500.000	-51.67	≤-23.20	2.00	0.00	45.53	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-52.14	≤-23.20	2.00	0.00	45.06	≤74	PASS
				Peak	2351.135	-50.03	≤-23.20	2.00	0.00	47.17	≤74	PASS
				Peak	2390.000	-52.68	≤-23.20	2.00	0.00	44.52	≤74	PASS
		High	Hop_2480	Peak	2483.500	-51.91	≤-23.20	2.00	0.00	45.29	≤74	PASS
				Peak	2494.640	-49.89	≤-23.20	2.00	0.00	47.31	≤74	PASS
				Peak	2500.000	-52.32	≤-23.20	2.00	0.00	44.88	≤74	PASS

3DH5	Ant1	Low	2402	AV	2310.000	-61.18	≤-44.33	2.00	1.13	37.15	≤54	PASS
				AV	2388.200	-60.01	≤-44.33	2.00	1.13	38.32	≤54	PASS
				AV	2390.000	-60.48	≤-44.33	2.00	1.13	37.85	≤54	PASS
				Peak	2310.000	-54.01	≤-23.20	2.00	0.00	43.19	≤74	PASS
				Peak	2378.960	-50.09	≤-23.20	2.00	0.00	47.11	≤74	PASS
				Peak	2390.000	-52.49	≤-23.20	2.00	0.00	44.71	≤74	PASS
		High	2480	AV	2483.500	-60.27	≤-44.33	2.00	1.13	38.06	≤54	PASS
				AV	2498.160	-59.65	≤-44.33	2.00	1.13	38.68	≤54	PASS
				AV	2500.000	-60.79	≤-44.33	2.00	1.13	37.54	≤54	PASS
				Peak	2483.500	-51.36	≤-23.20	2.00	0.00	45.84	≤74	PASS
				Peak	2497.520	-50	≤-23.20	2.00	0.00	47.20	≤74	PASS
				Peak	2500.000	-51.04	≤-23.20	2.00	0.00	46.16	≤74	PASS
		Low	Hop_ 2402	Peak	2310.000	-52.49	≤-23.20	2.00	0.00	44.71	≤74	PASS
				Peak	2350.610	-50.26	≤-23.20	2.00	0.00	46.94	≤74	PASS
				Peak	2390.000	-52.63	≤-23.20	2.00	0.00	44.57	≤74	PASS
		High	Hop_ 2480	Peak	2483.500	-53.21	≤-23.20	2.00	0.00	43.99	≤74	PASS
				Peak	2493.040	-50.25	≤-23.20	2.00	0.00	46.95	≤74	PASS
				Peak	2500.000	-53.21	≤-23.20	2.00	0.00	43.99	≤74	PASS

Note:

1. The Antenna Gain 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

