

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: WIRELESS EARPHONE

Test Model: KC-640

Environmental Conditions

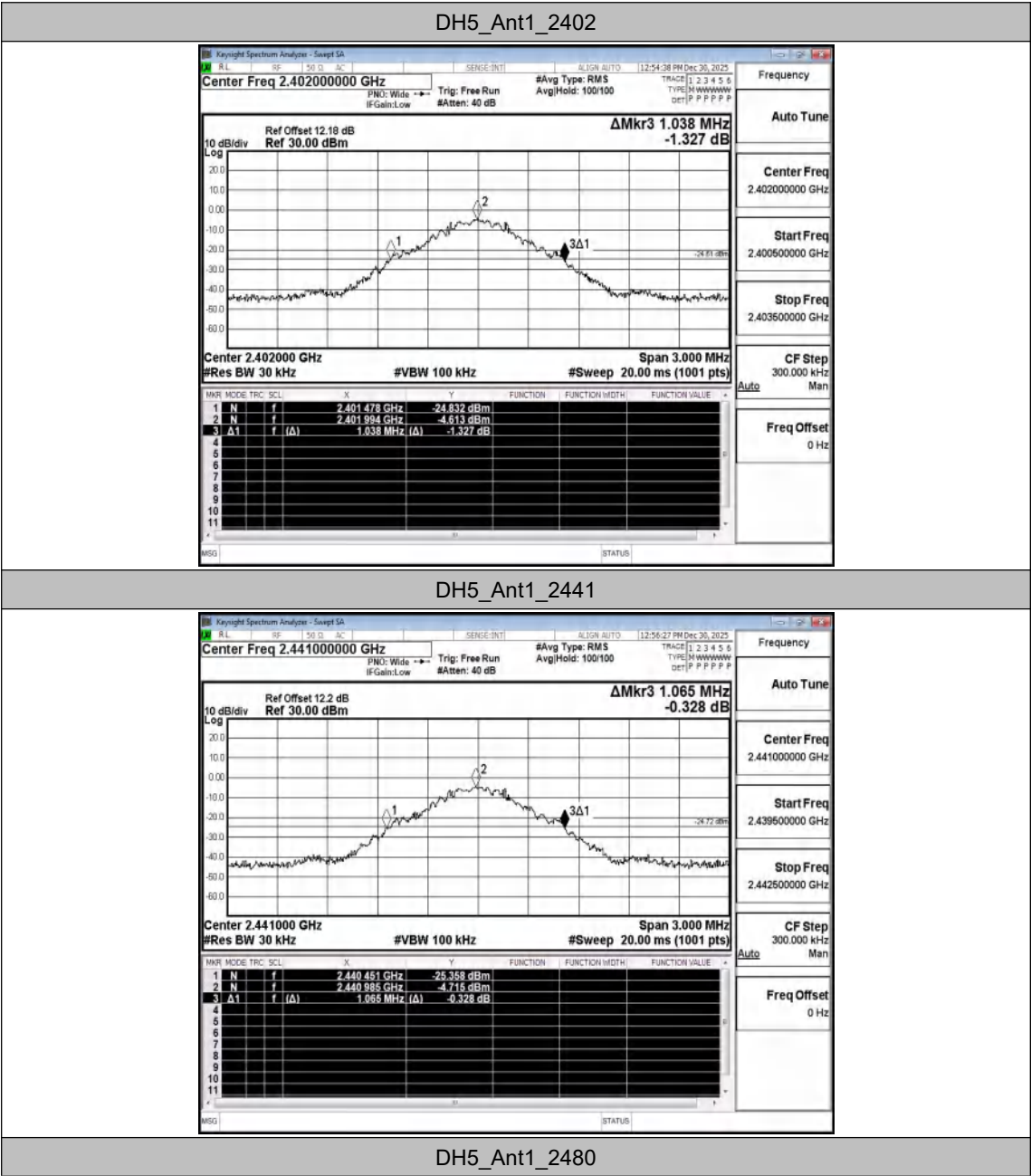
Temperature:	24.6°C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

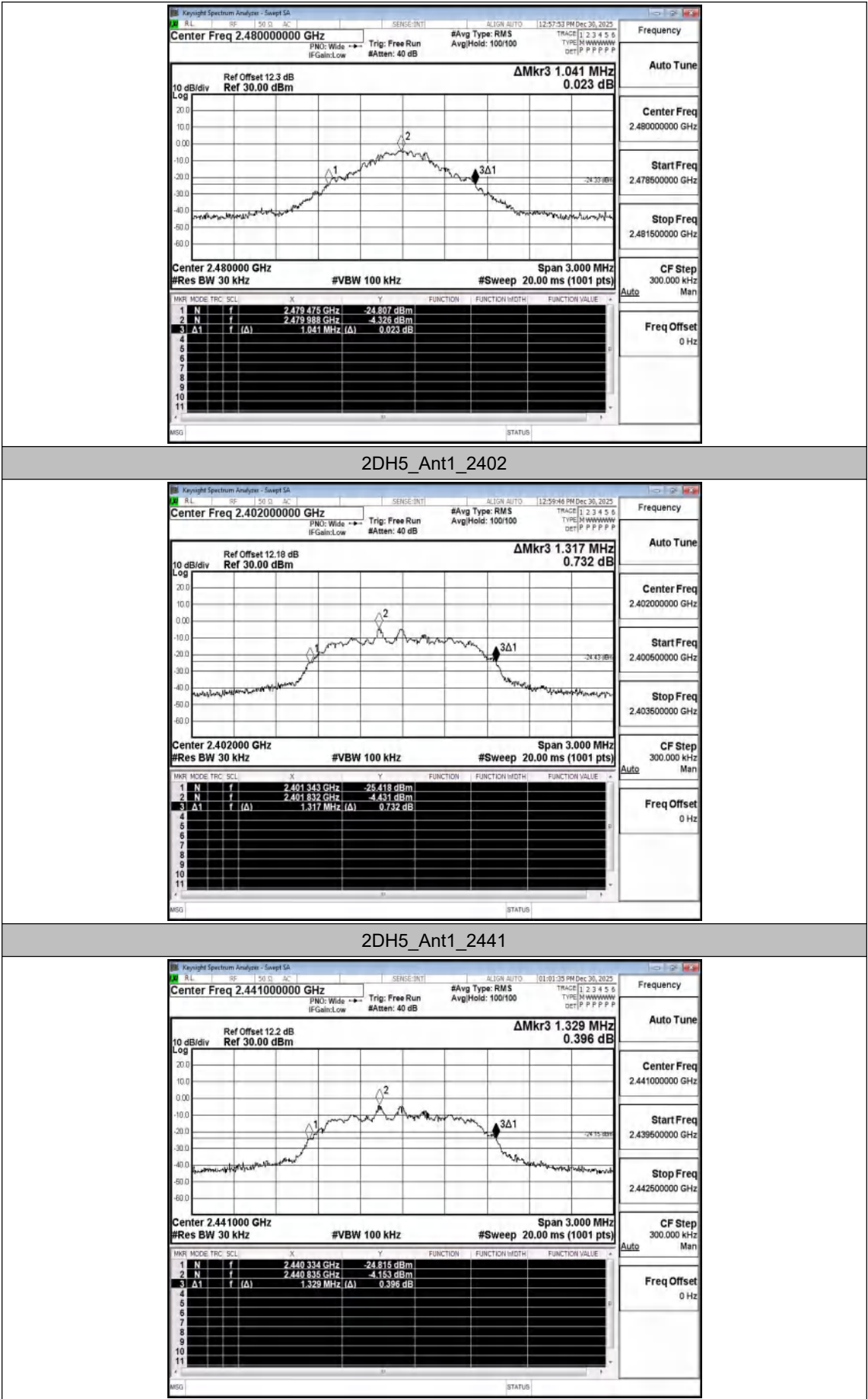
A.1 20dB Emission Bandwidth

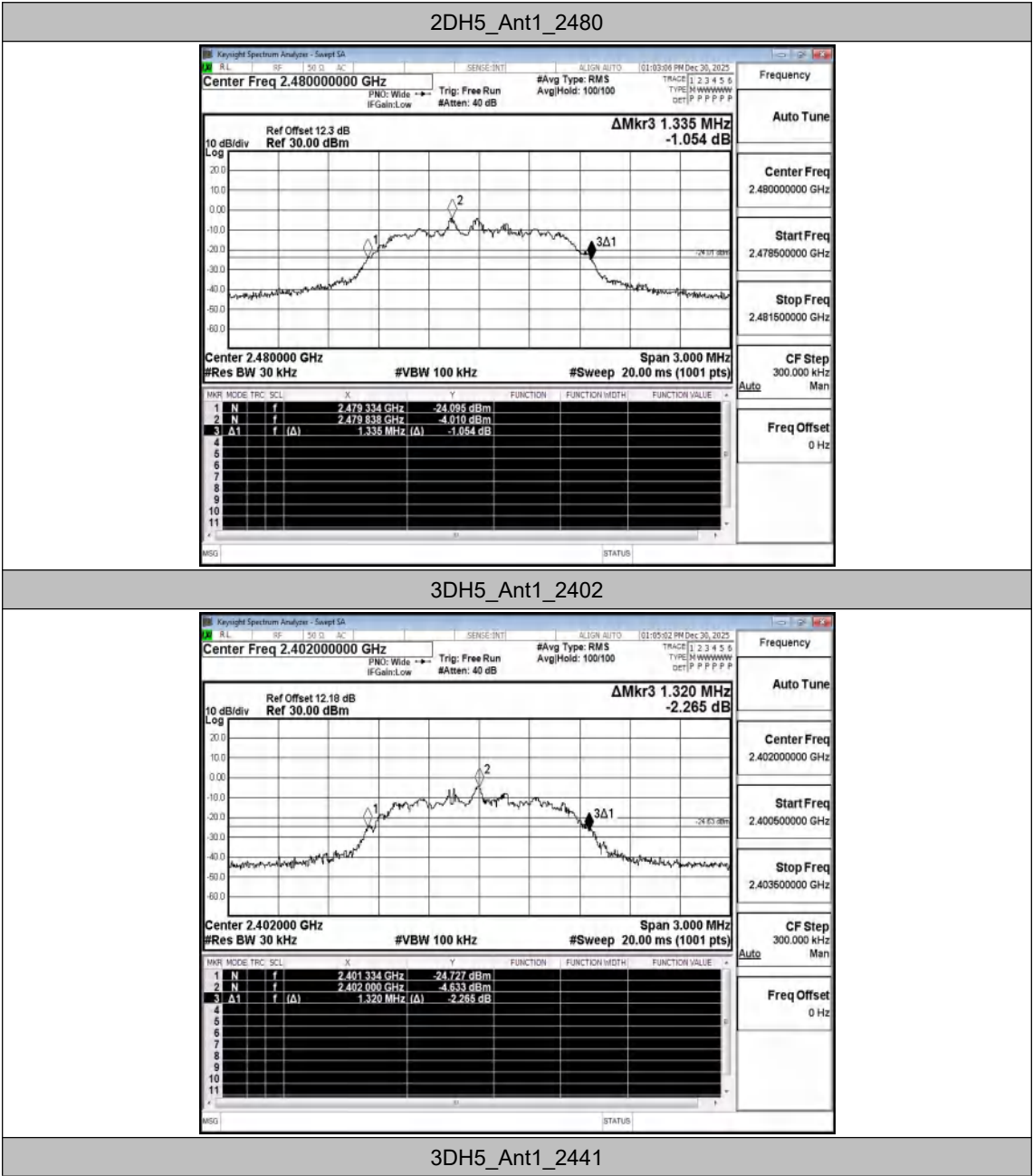
Test Result

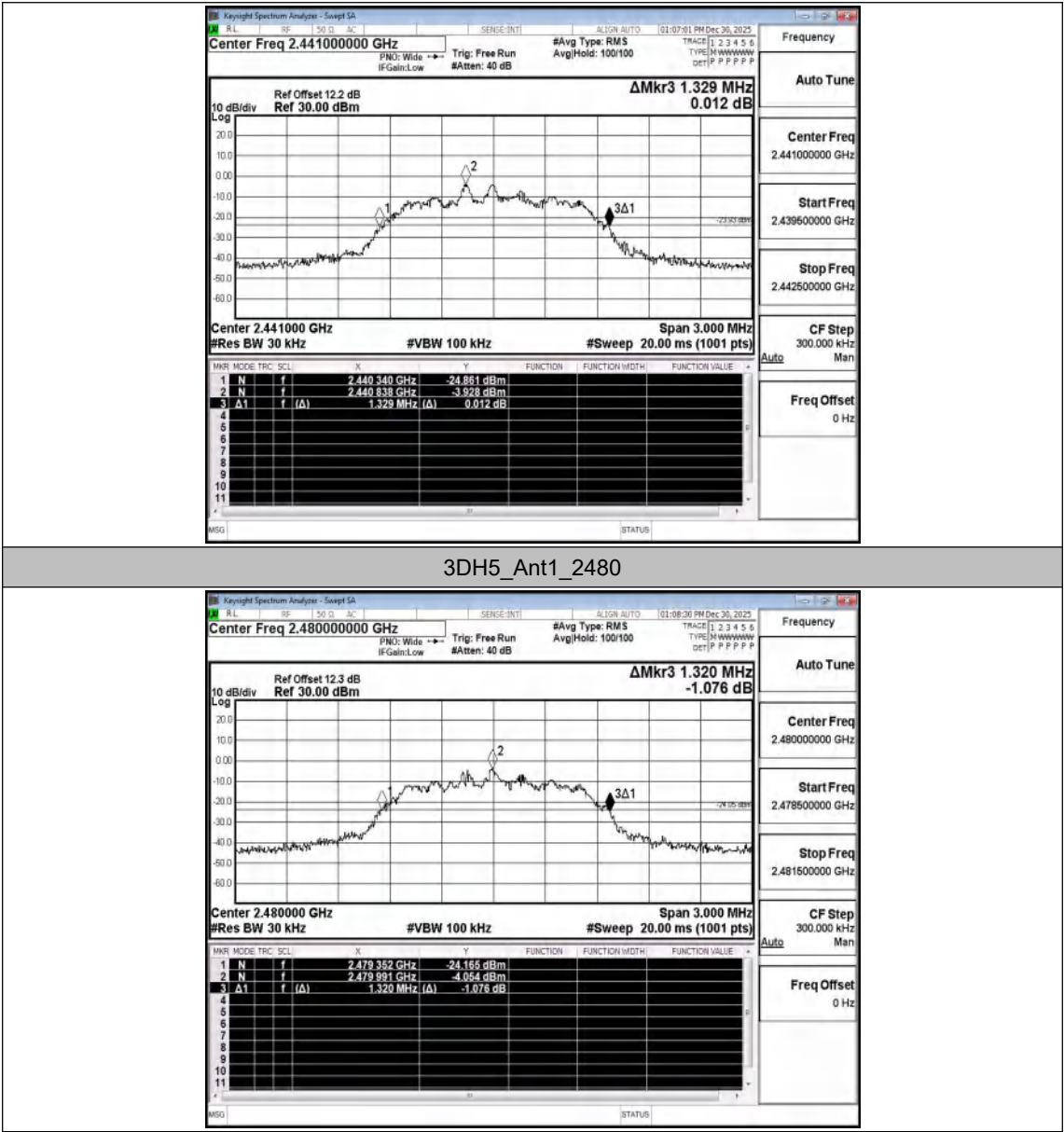
TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.038	2401.478	2402.516	---	---
		2441	1.065	2440.451	2441.516	---	---
		2480	1.041	2479.475	2480.516	---	---
2DH5	Ant1	2402	1.317	2401.343	2402.660	---	---
		2441	1.329	2440.334	2441.663	---	---
		2480	1.335	2479.334	2480.669	---	---
3DH5	Ant1	2402	1.320	2401.334	2402.654	---	---
		2441	1.329	2440.340	2441.669	---	---
		2480	1.320	2479.352	2480.672	---	---

Test Graphs







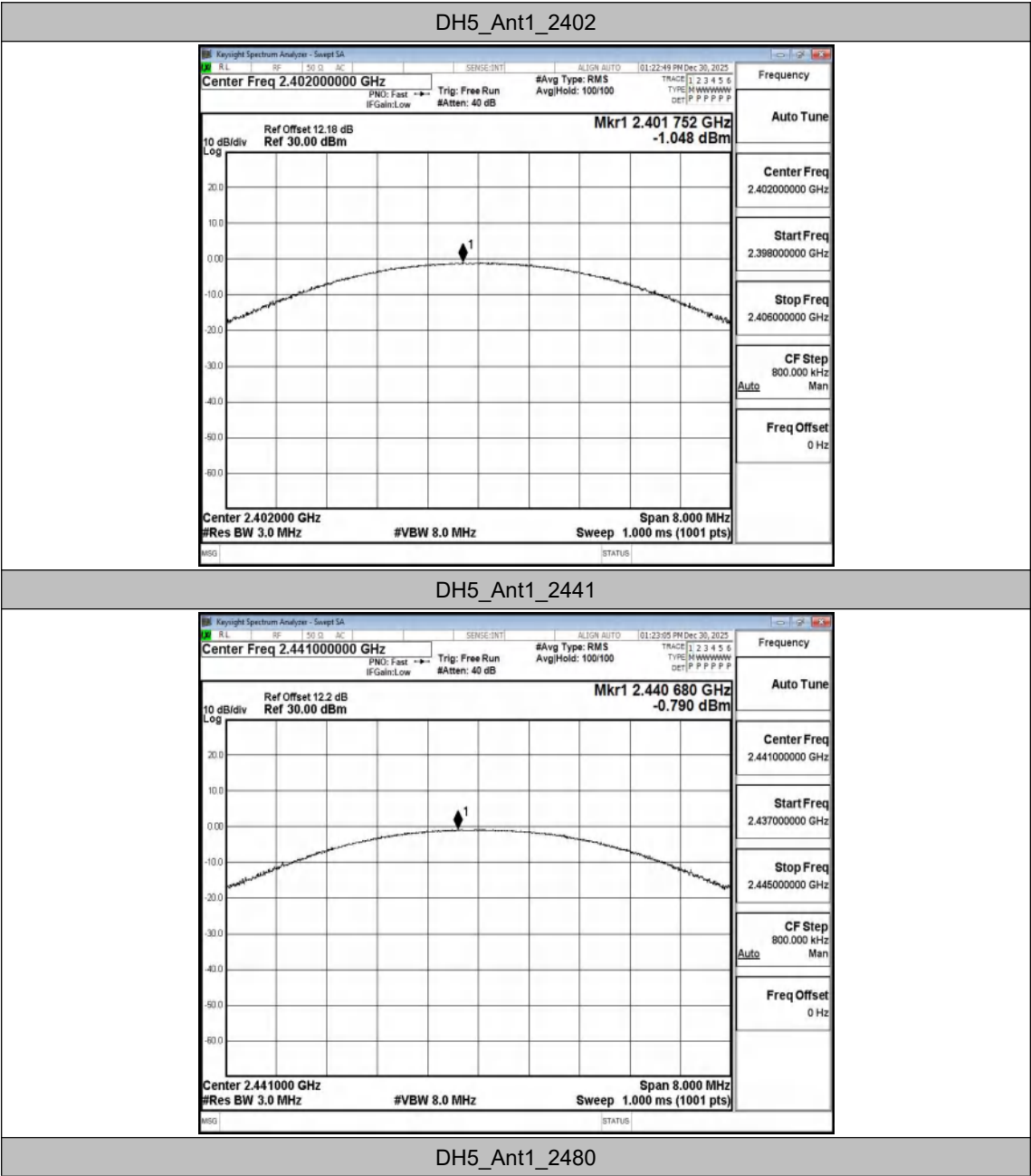


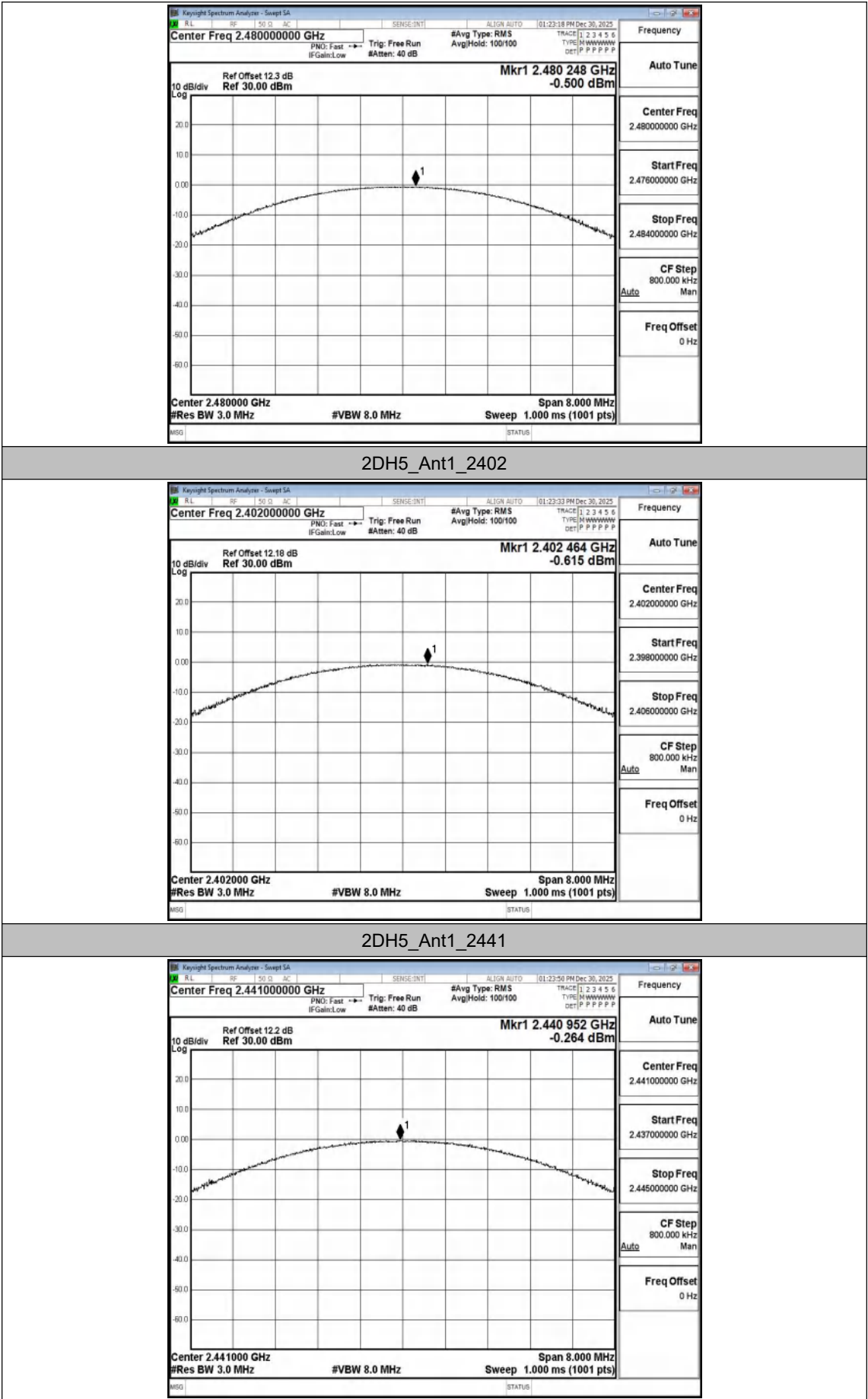
A.2 Maximum peak conducted output power

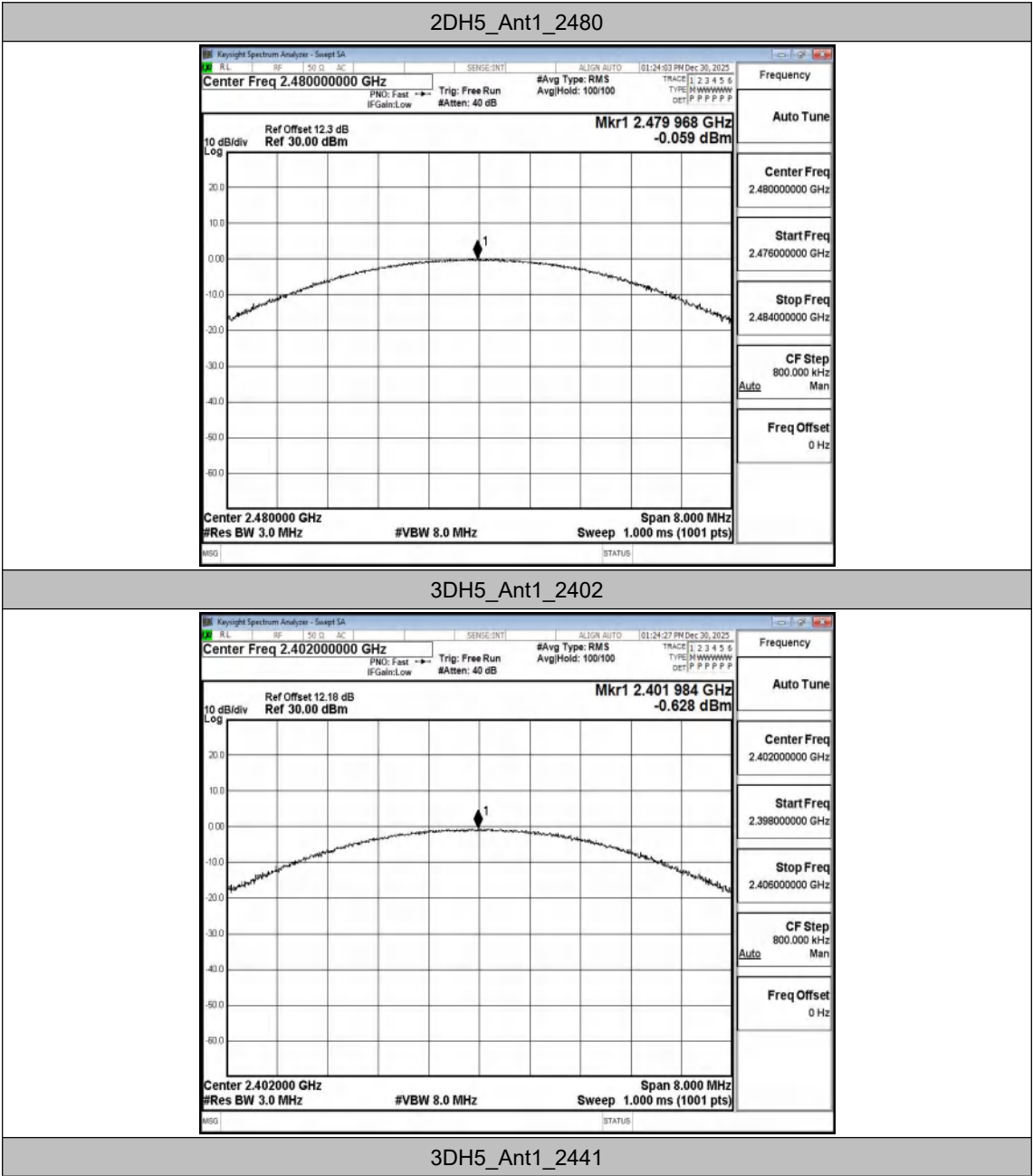
Test Result Peak

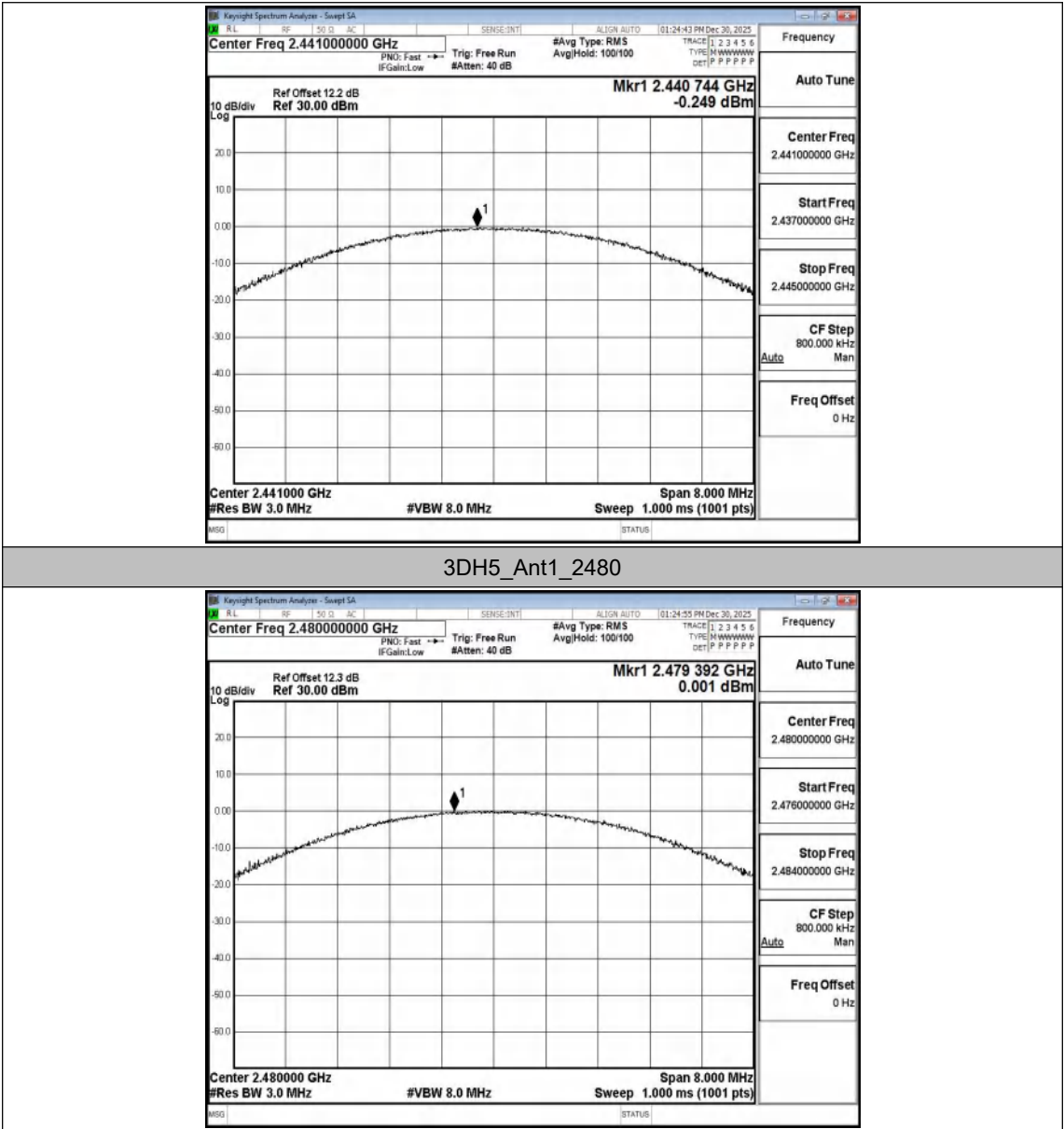
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-1.05	≤ 20.97	PASS
		2441	-0.79	≤ 20.97	PASS
		2480	-0.50	≤ 20.97	PASS
2DH5	Ant1	2402	-0.62	≤ 20.97	PASS
		2441	-0.26	≤ 20.97	PASS
		2480	-0.06	≤ 20.97	PASS
3DH5	Ant1	2402	-0.63	≤ 20.97	PASS
		2441	-0.25	≤ 20.97	PASS
		2480	0.00	≤ 20.97	PASS

Test Graphs







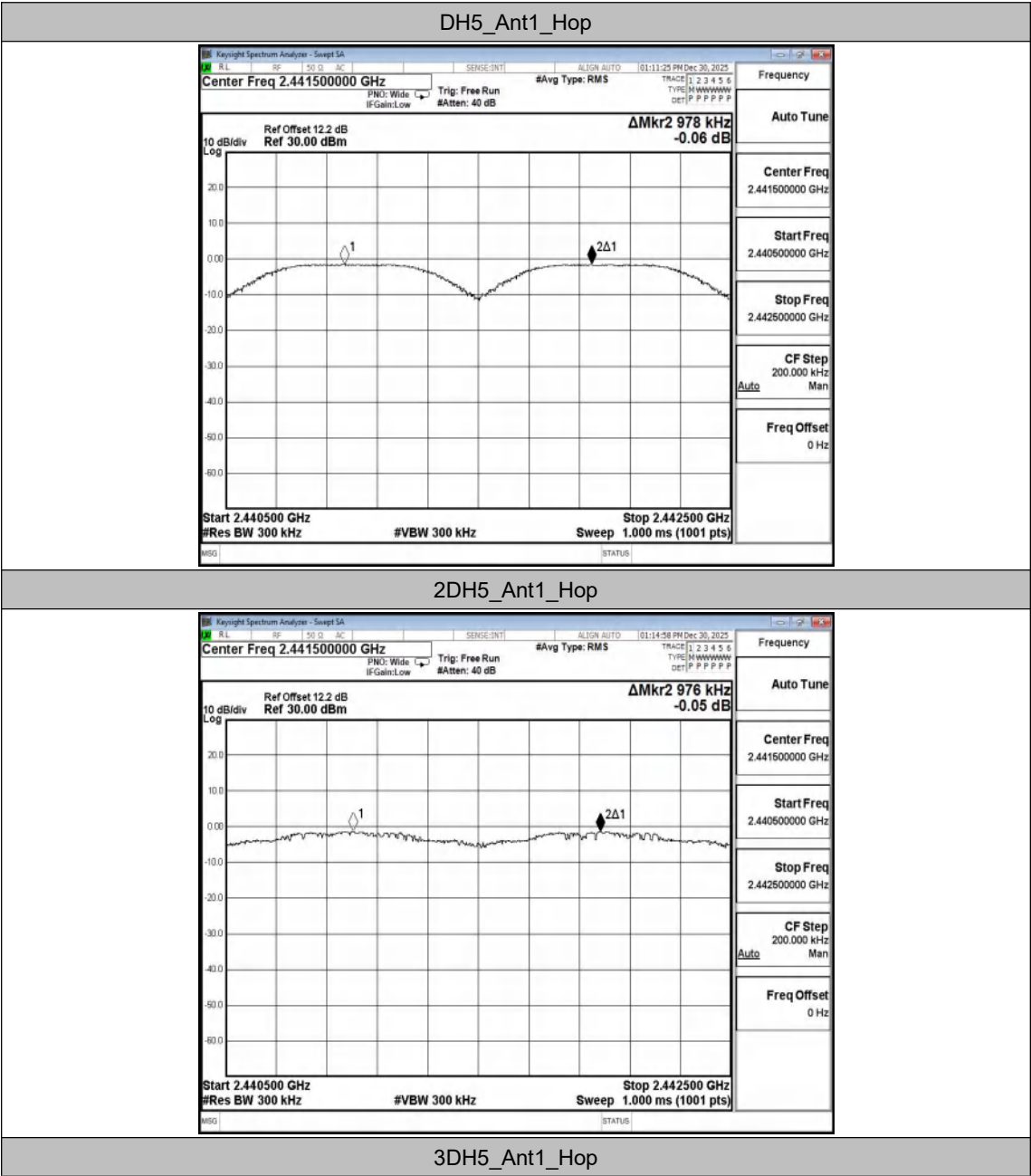


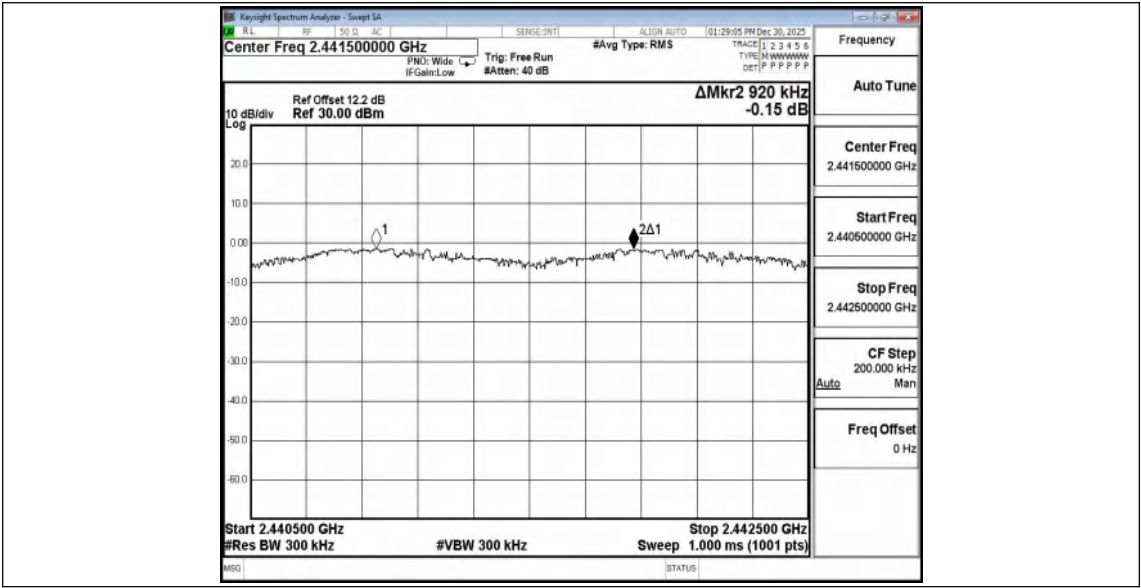
A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.978	≥0.710	PASS
2DH5	Ant1	Hop	0.976	≥0.890	PASS
3DH5	Ant1	Hop	0.92	≥0.886	PASS

Test Graphs



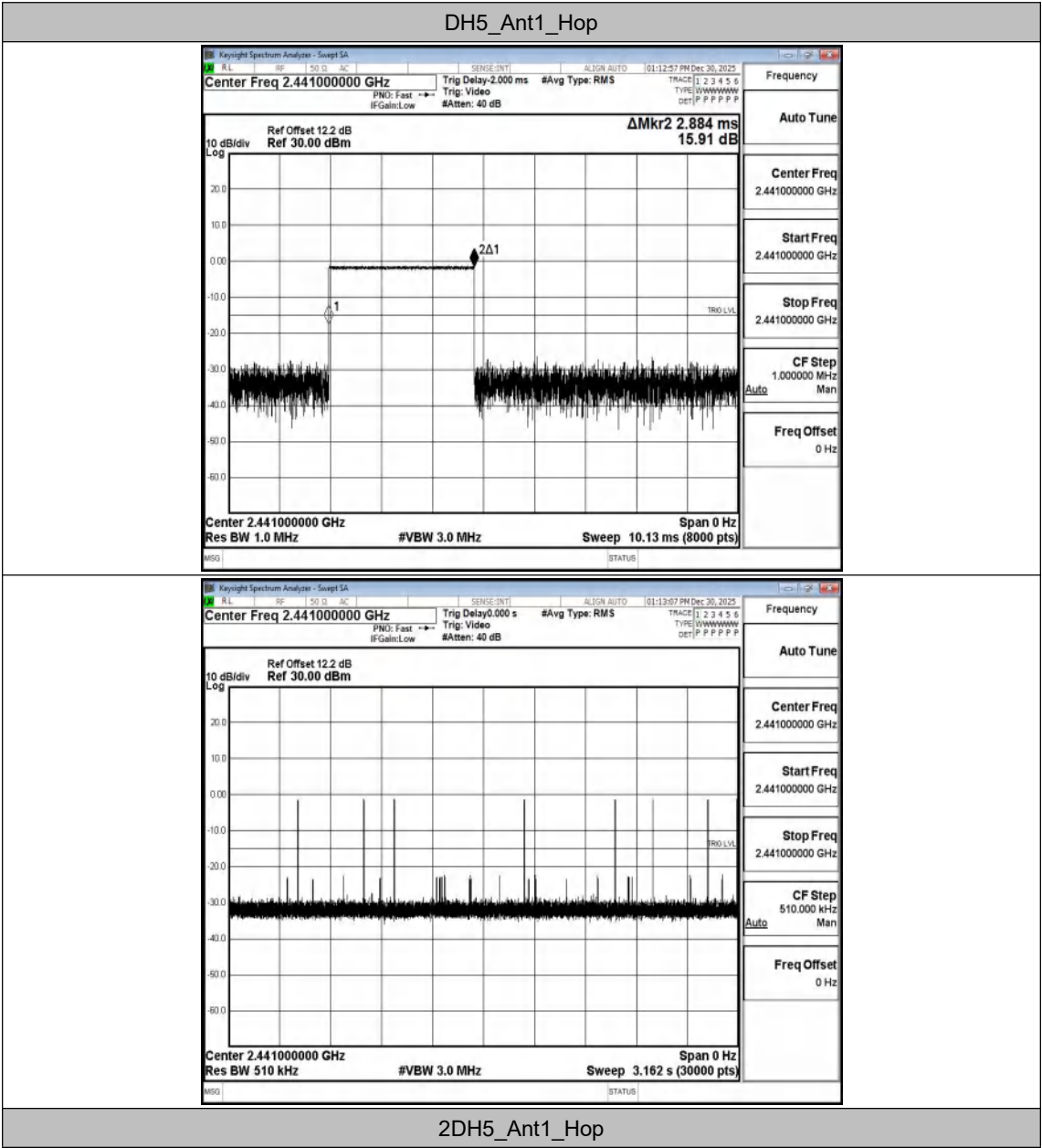


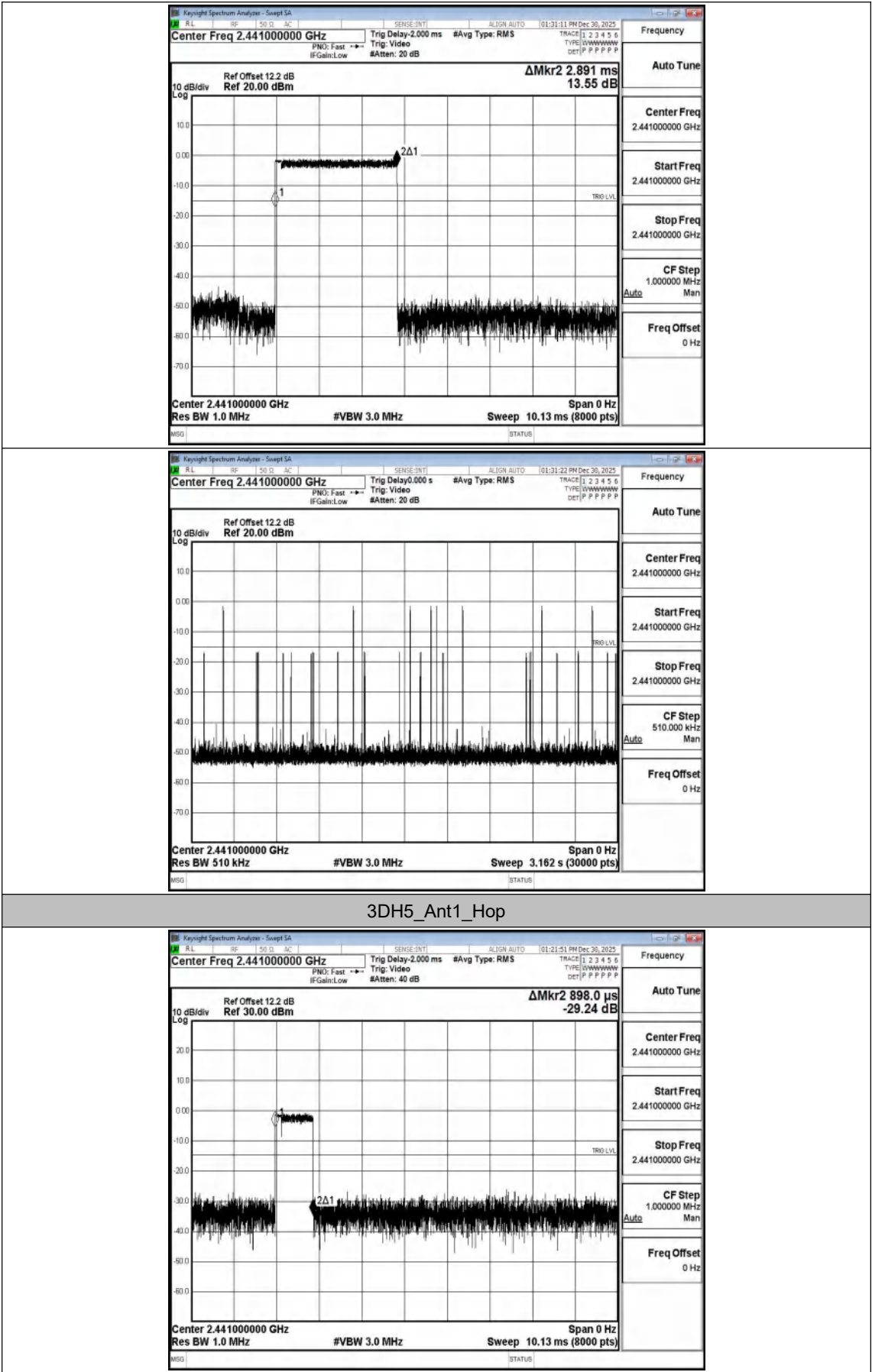
A.4 Time of occupancy

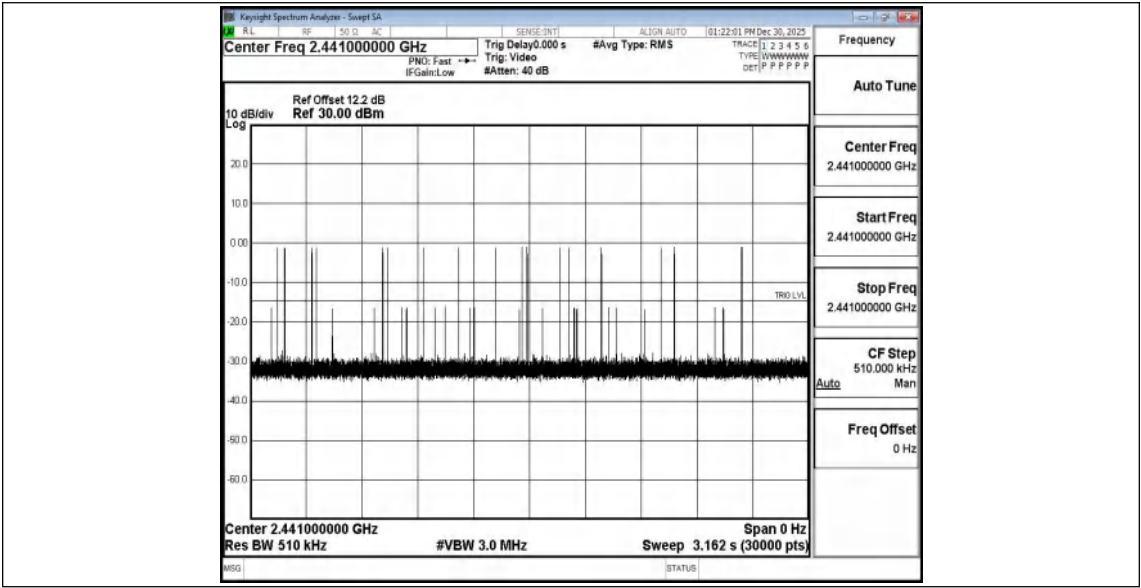
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.884	90	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.891	90	0.26	≤0.4	PASS
3DH5	Ant1	Hop	0.898	180	0.162	≤0.4	PASS

Test Graphs





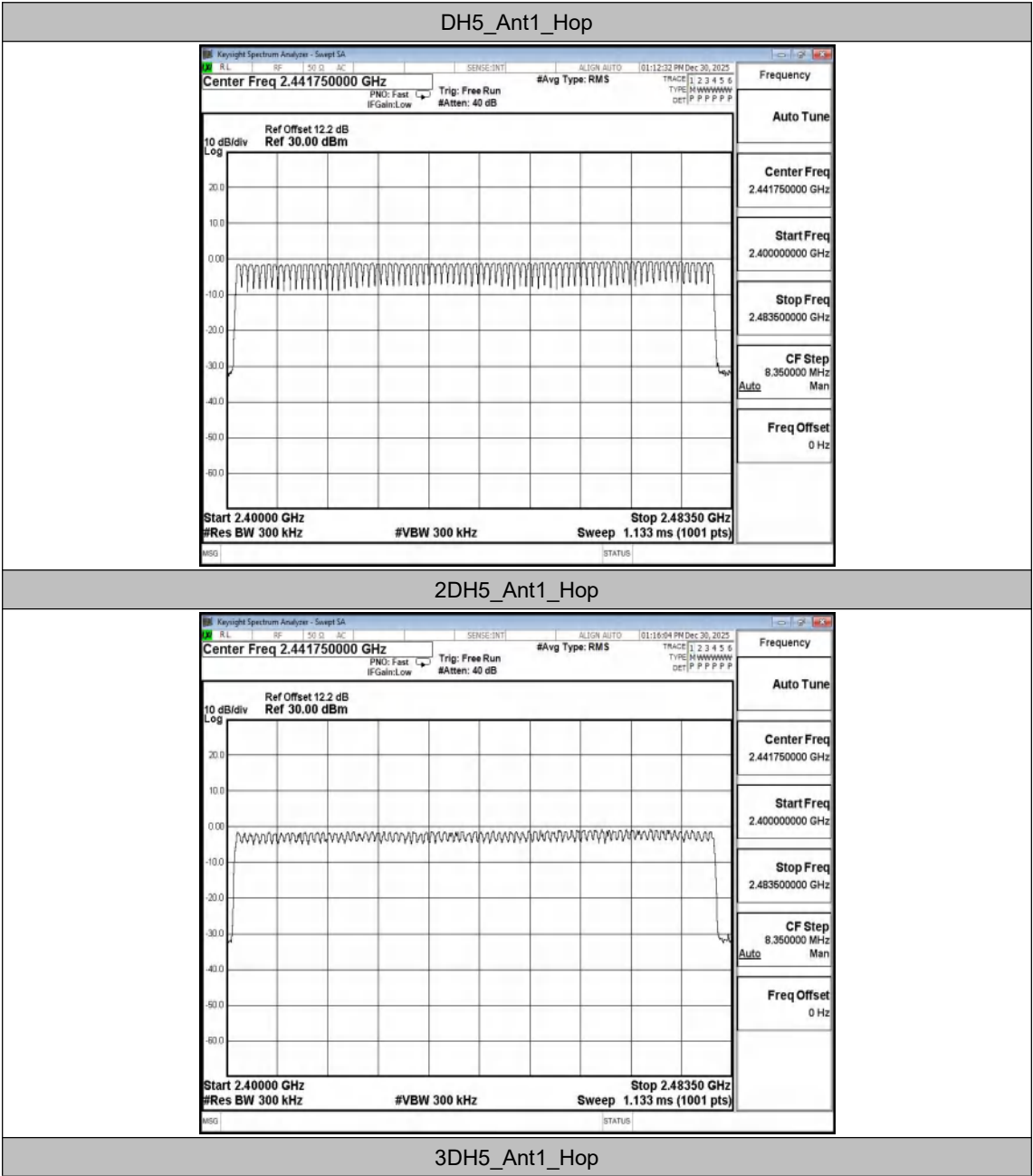


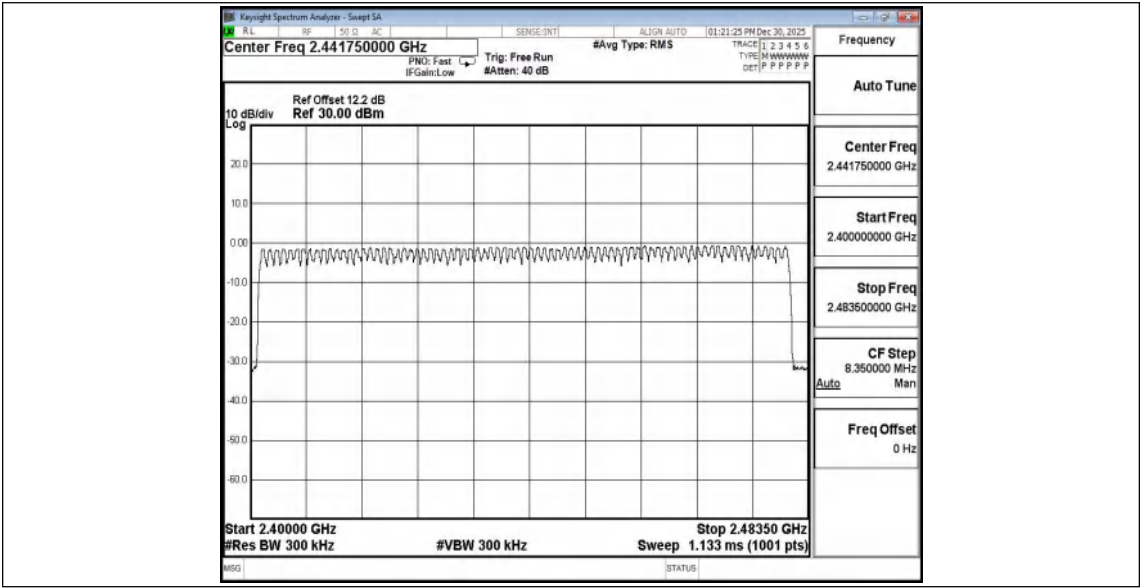
A.5 Number of hopping channels

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



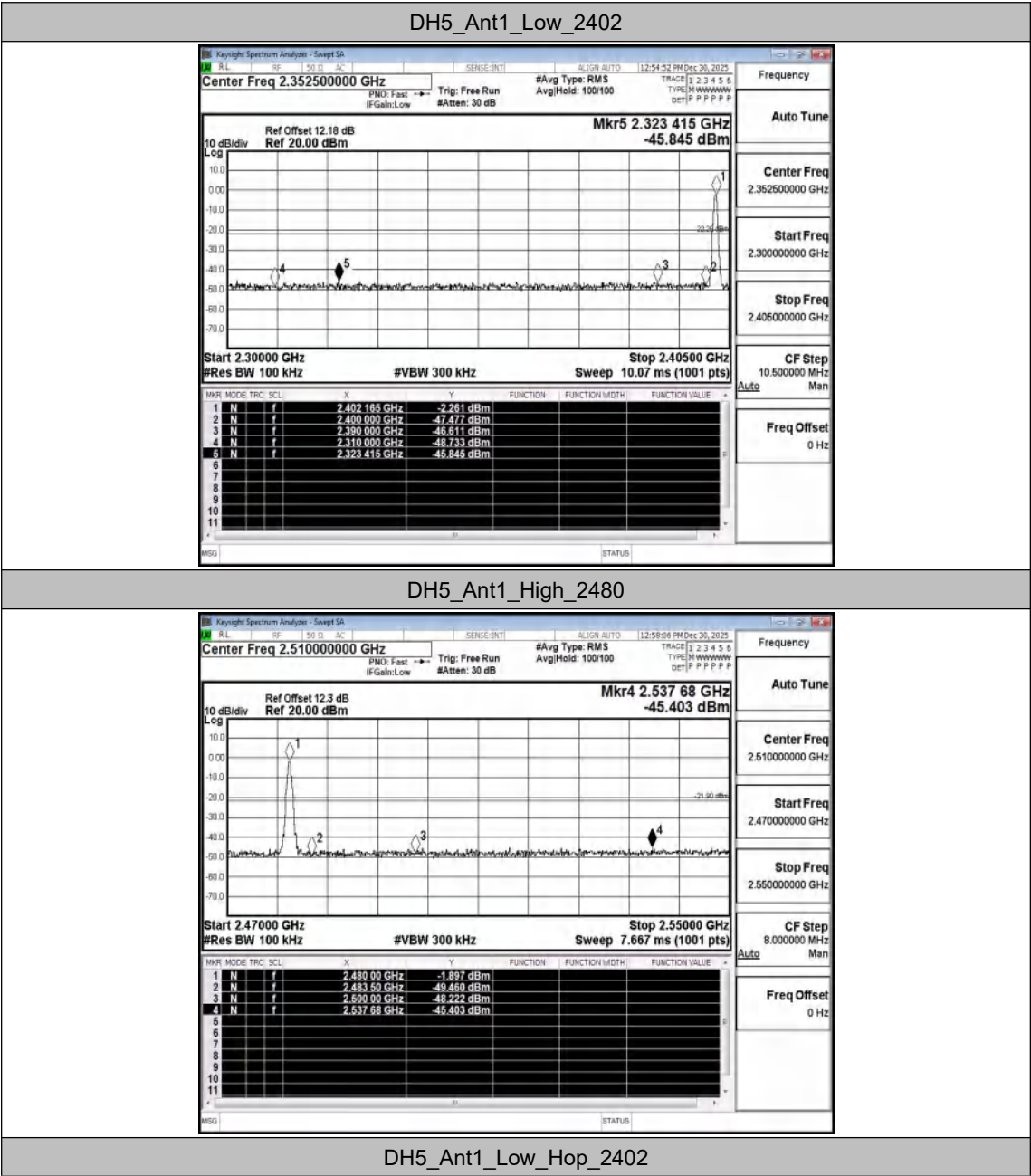


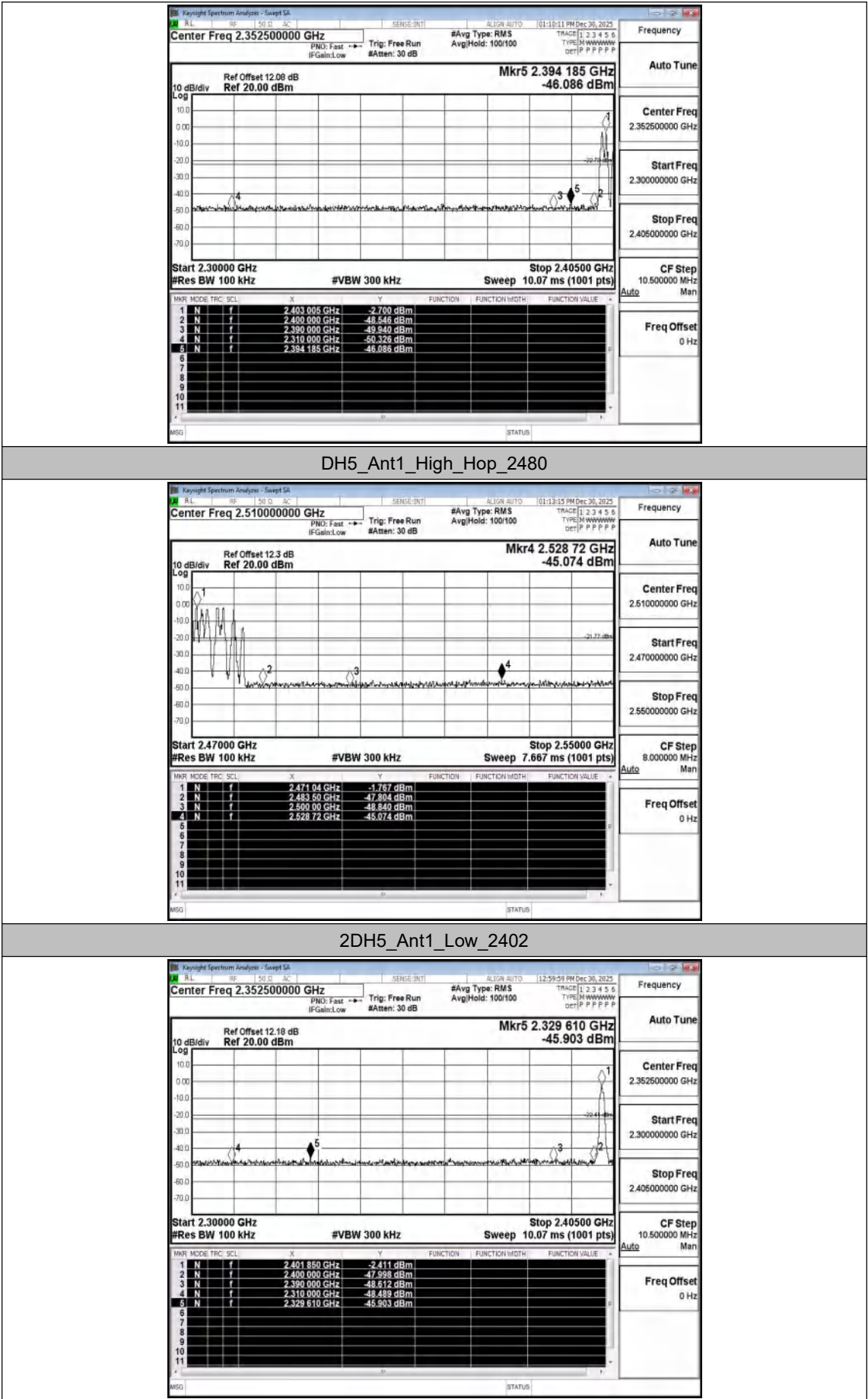
A.6 Band edge measurements

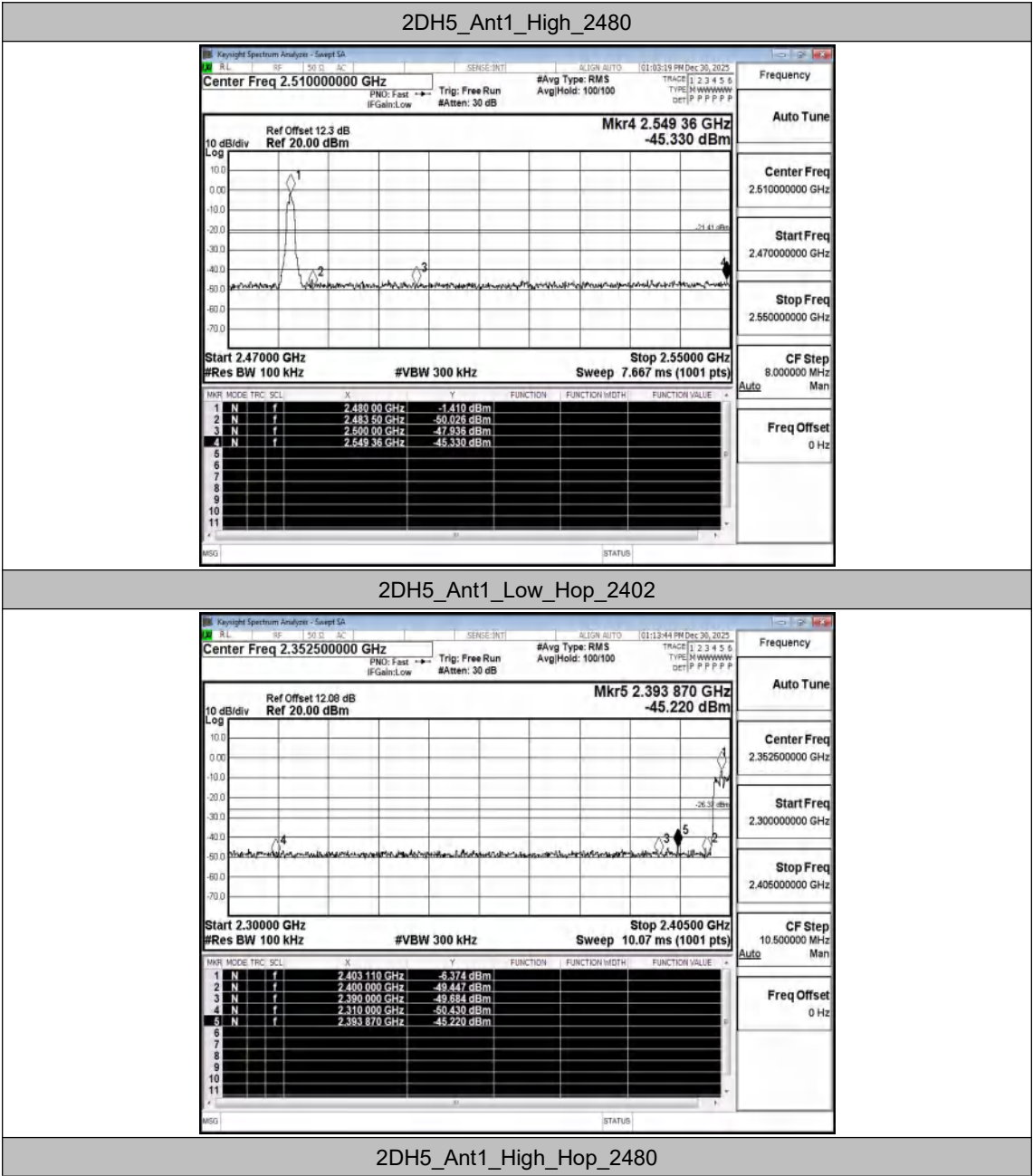
Test Result

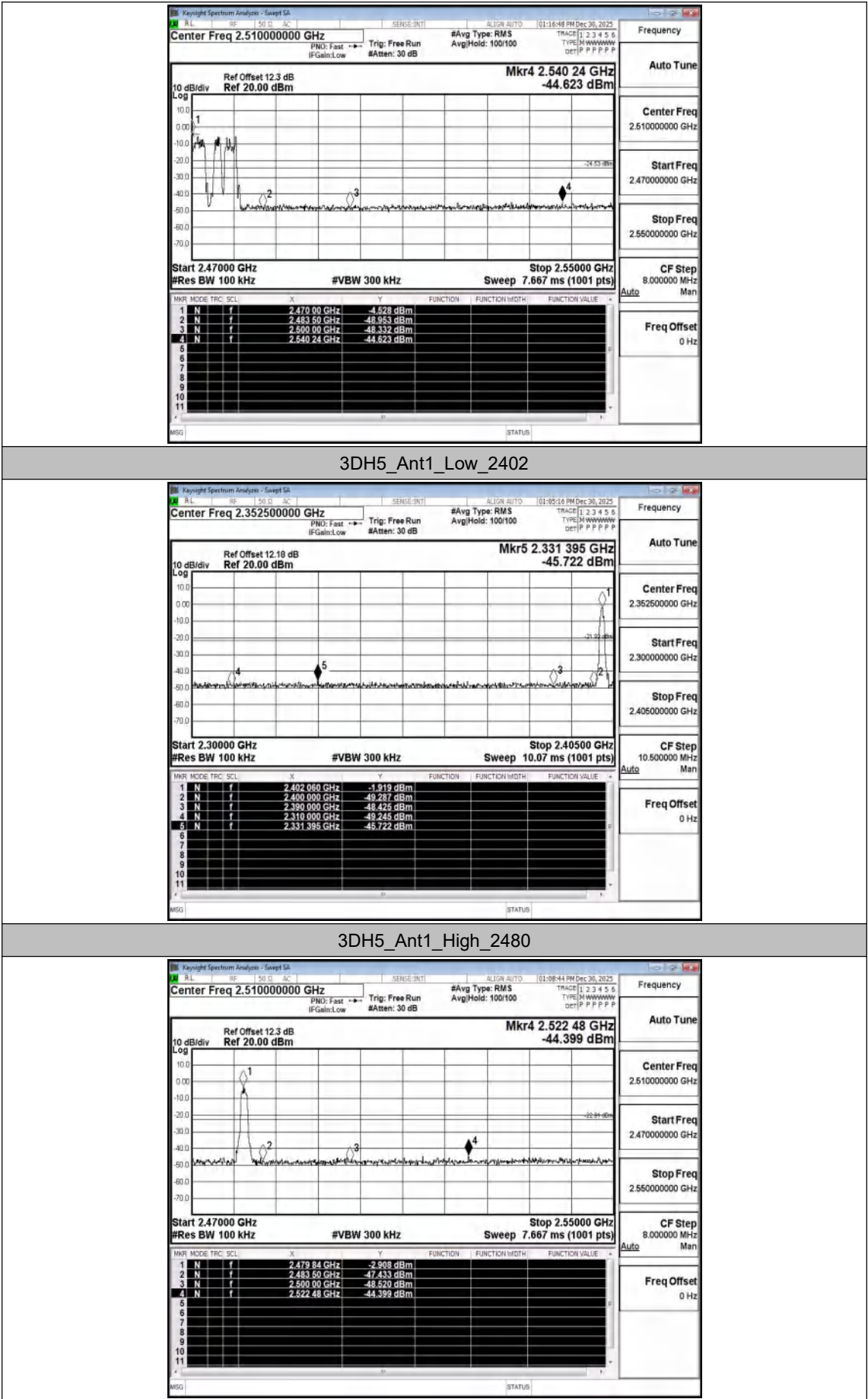
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-2.26	-45.85	≤ -22.26	PASS
		High	2480	-1.90	-45.4	≤ -21.9	PASS
		Low	Hop_2402	-2.70	-46.09	≤ -22.7	PASS
		High	Hop_2480	-1.77	-45.07	≤ -21.77	PASS
2DH5	Ant1	Low	2402	-2.41	-45.9	≤ -22.41	PASS
		High	2480	-1.41	-45.33	≤ -21.41	PASS
		Low	Hop_2402	-6.37	-45.22	≤ -26.37	PASS
		High	Hop_2480	-4.53	-44.62	≤ -24.53	PASS
3DH5	Ant1	Low	2402	-1.92	-45.72	≤ -21.92	PASS
		High	2480	-2.91	-44.4	≤ -22.91	PASS
		Low	Hop_2402	-4.26	-45.4	≤ -24.26	PASS
		High	Hop_2480	-8.65	-44.87	≤ -28.65	PASS

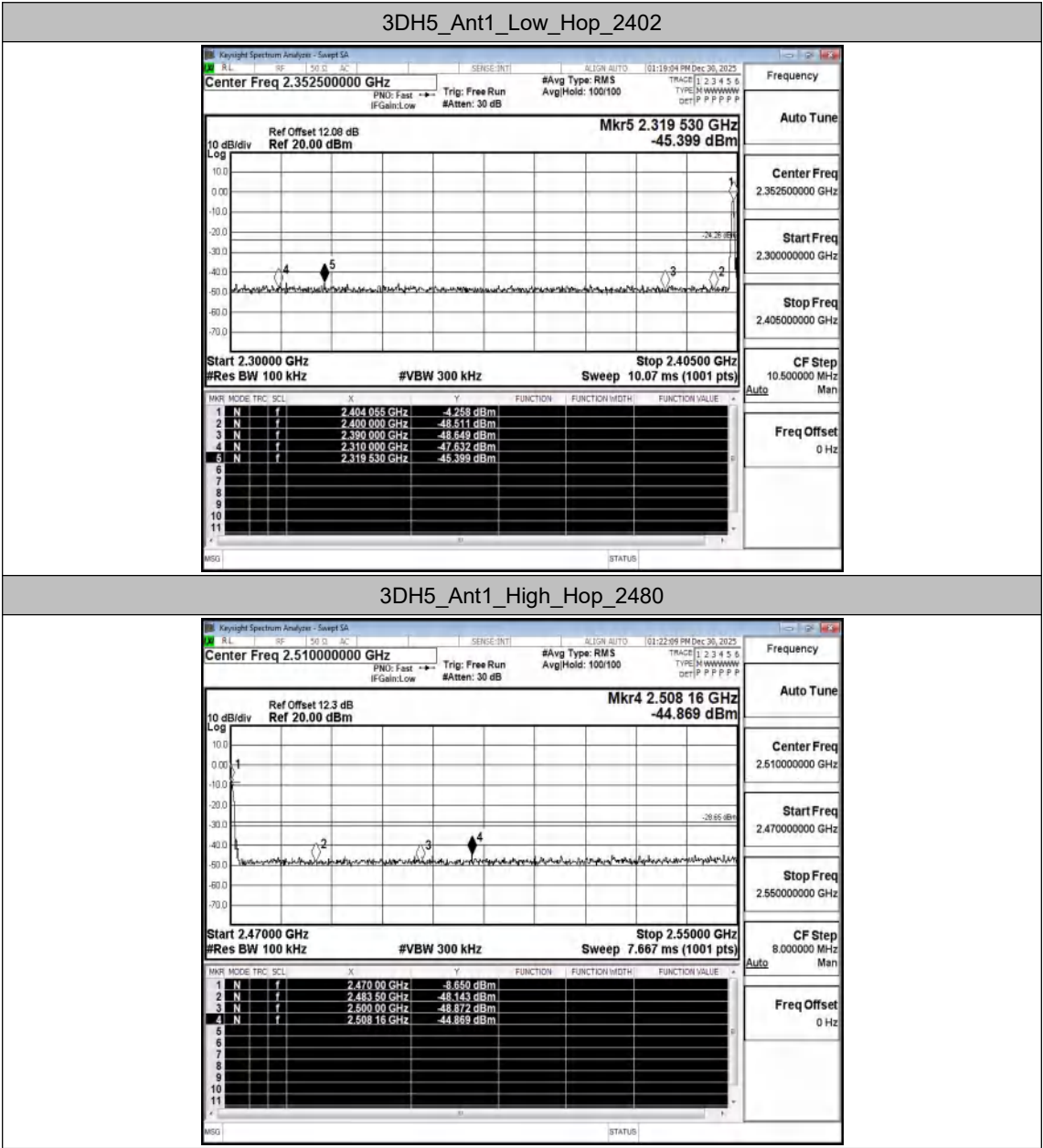
Test Graphs









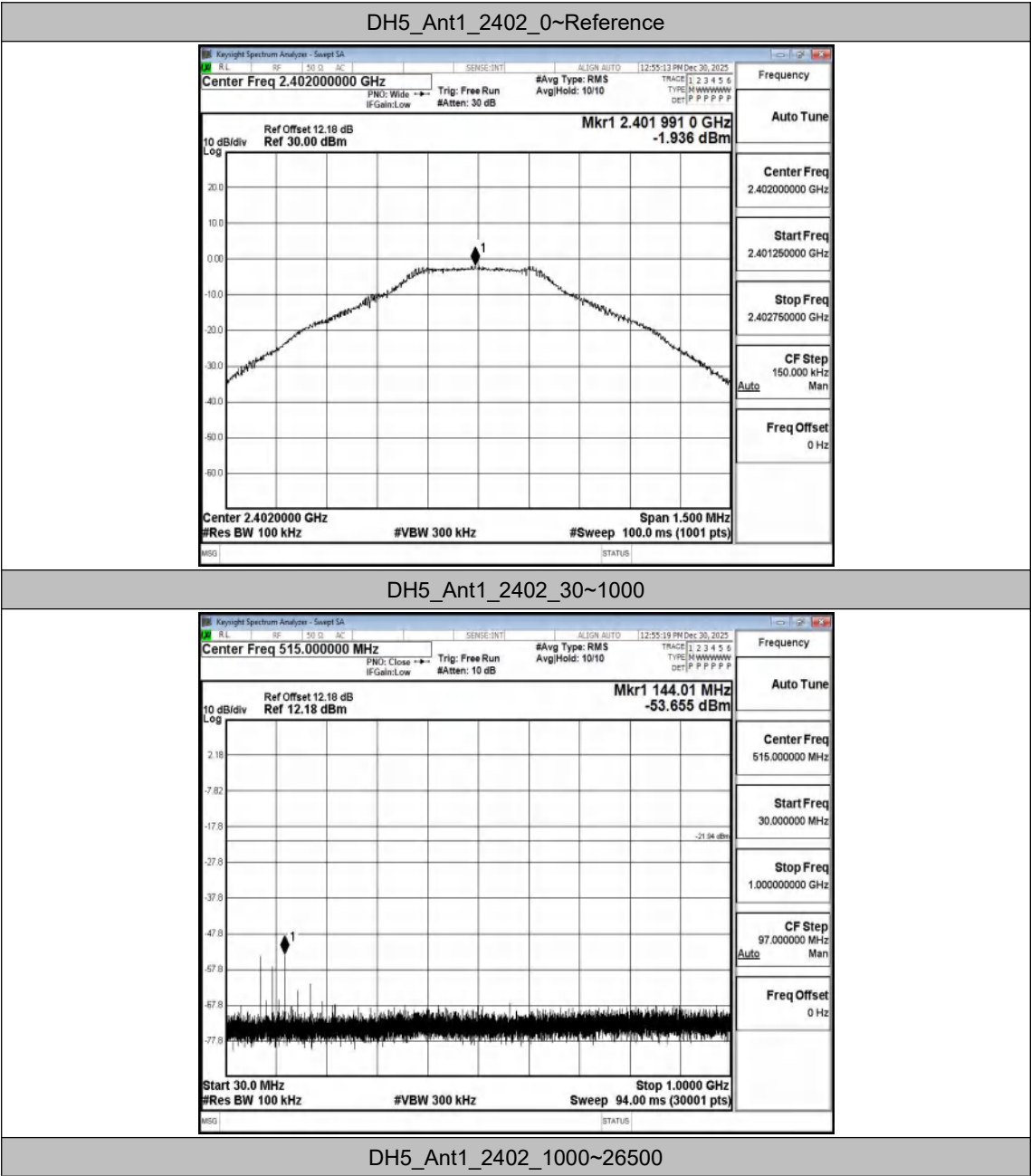


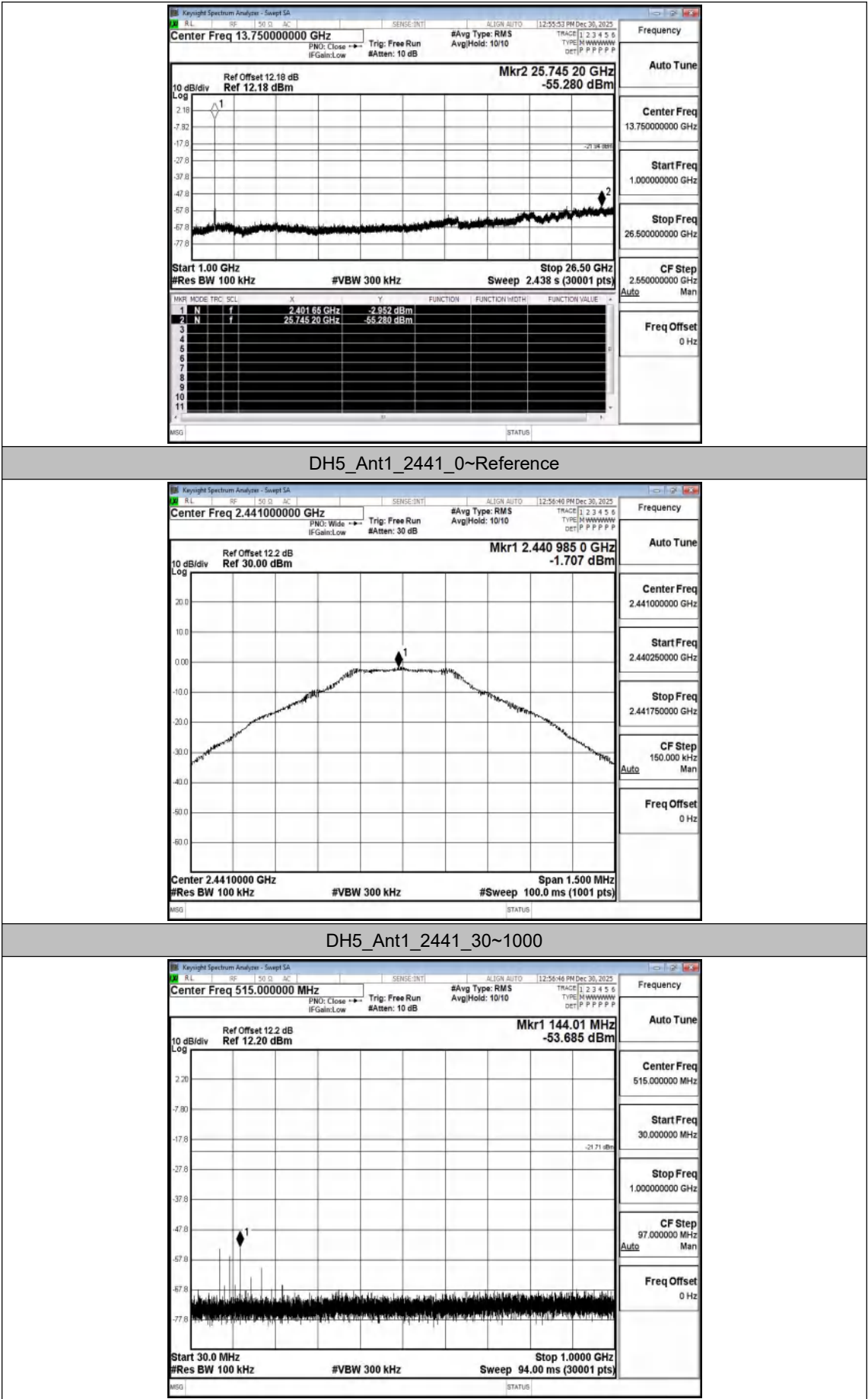
A.7 Conducted Spurious Emission

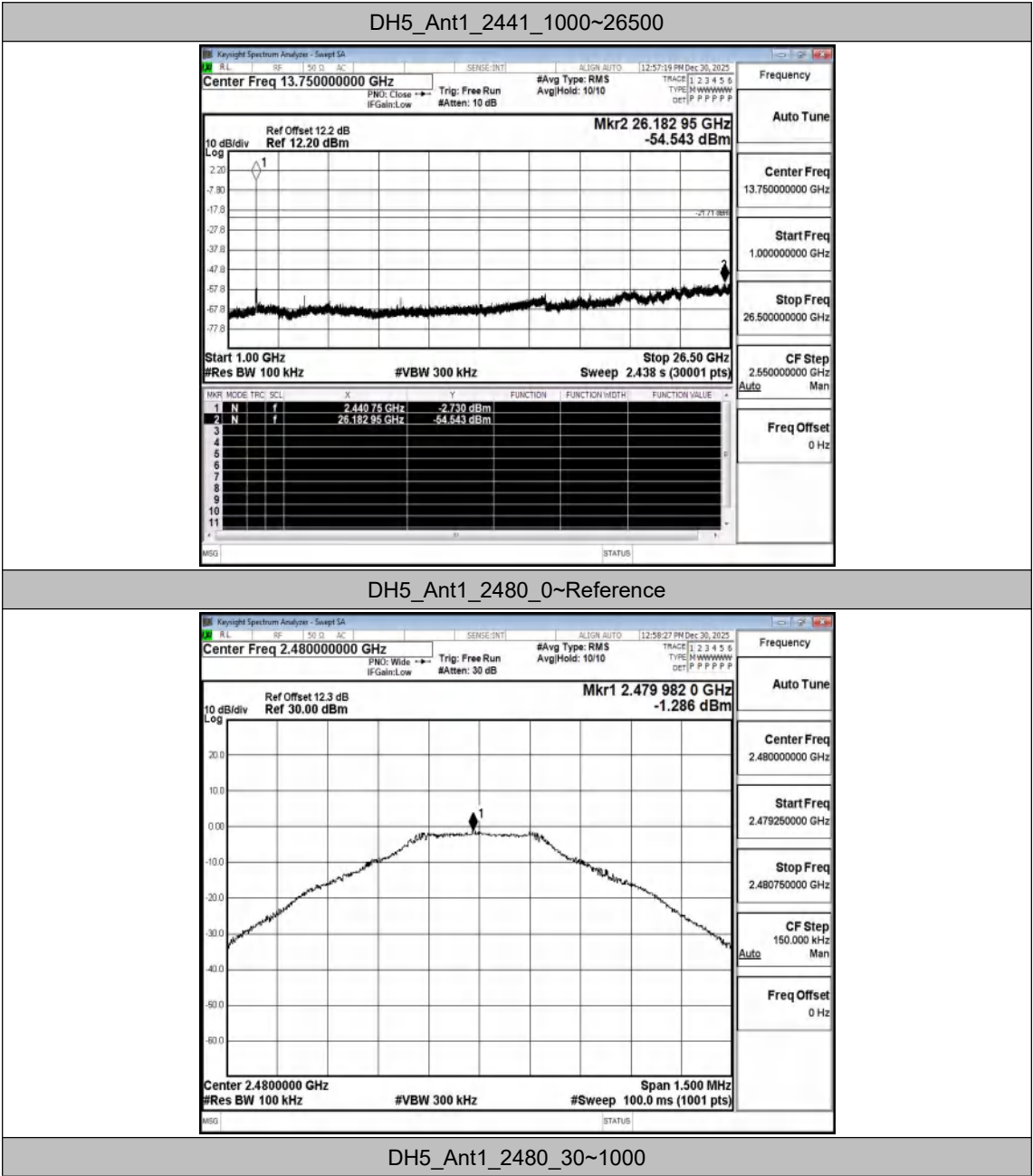
Test Result

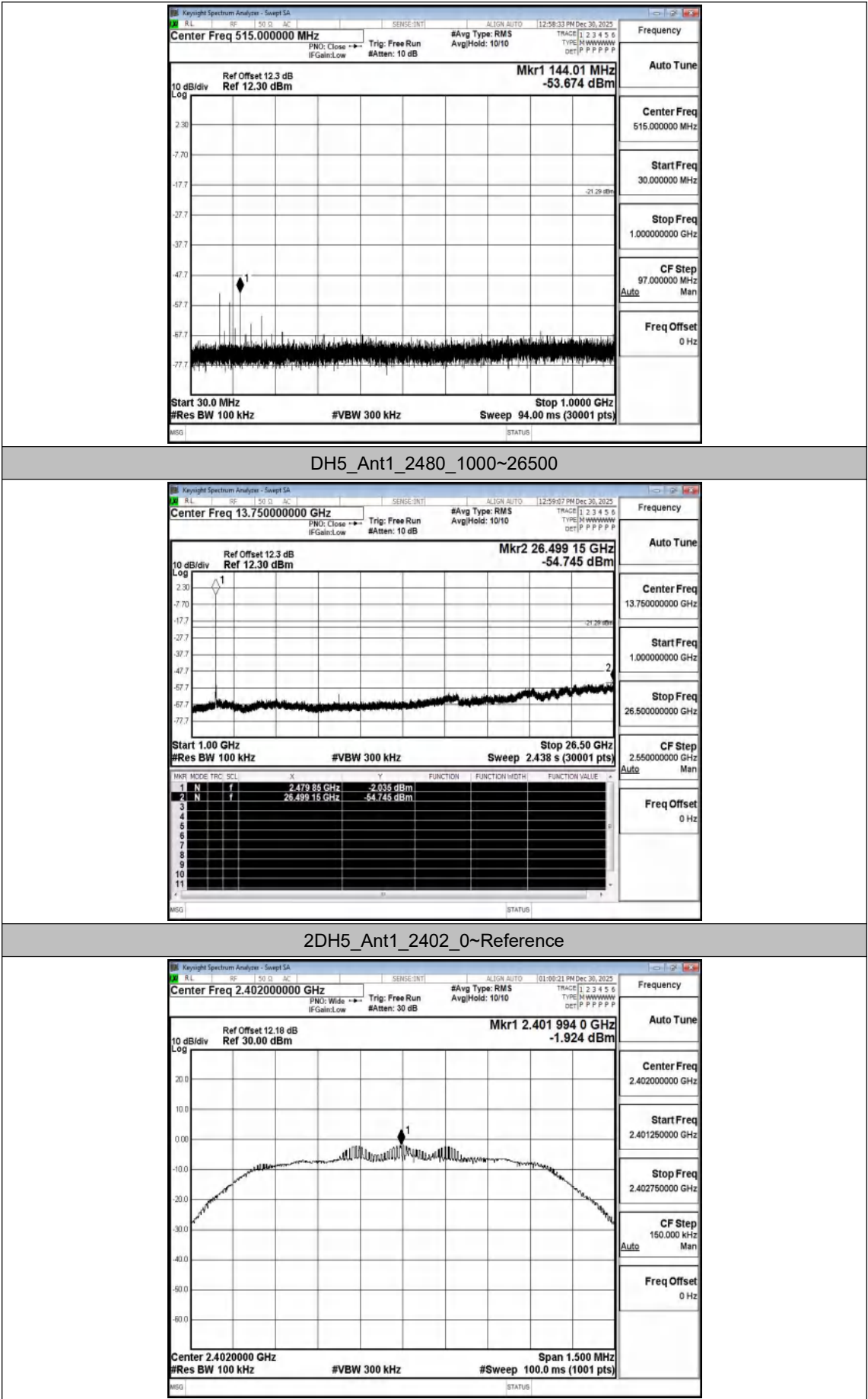
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.94	-1.94	---	PASS
			30~1000	-1.94	-53.66	≤-21.94	PASS
			1000~26500	-1.94	-55.28	≤-21.94	PASS
		2441	Reference	-1.71	-1.71	---	PASS
			30~1000	-1.71	-53.69	≤-21.71	PASS
			1000~26500	-1.71	-54.54	≤-21.71	PASS
		2480	Reference	-1.29	-1.29	---	PASS
			30~1000	-1.29	-53.67	≤-21.29	PASS
			1000~26500	-1.29	-54.75	≤-21.29	PASS
2DH5	Ant1	2402	Reference	-1.92	-1.92	---	PASS
			30~1000	-1.92	-53.78	≤-21.92	PASS
			1000~26500	-1.92	-53.81	≤-21.92	PASS
		2441	Reference	-1.65	-1.65	---	PASS
			30~1000	-1.65	-53.75	≤-21.65	PASS
			1000~26500	-1.65	-54.21	≤-21.65	PASS
		2480	Reference	-1.27	-1.27	---	PASS
			30~1000	-1.27	-53.5	≤-21.27	PASS
			1000~26500	-1.27	-54.75	≤-21.27	PASS
3DH5	Ant1	2402	Reference	-1.73	-1.73	---	PASS
			30~1000	-1.73	-53.58	≤-21.73	PASS
			1000~26500	-1.73	-55.18	≤-21.73	PASS
		2441	Reference	-1.43	-1.43	---	PASS
			30~1000	-1.43	-53.82	≤-21.43	PASS
			1000~26500	-1.43	-54.4	≤-21.43	PASS
		2480	Reference	-1.03	-1.03	---	PASS
			30~1000	-1.03	-53.72	≤-21.03	PASS
			1000~26500	-1.03	-54.64	≤-21.03	PASS

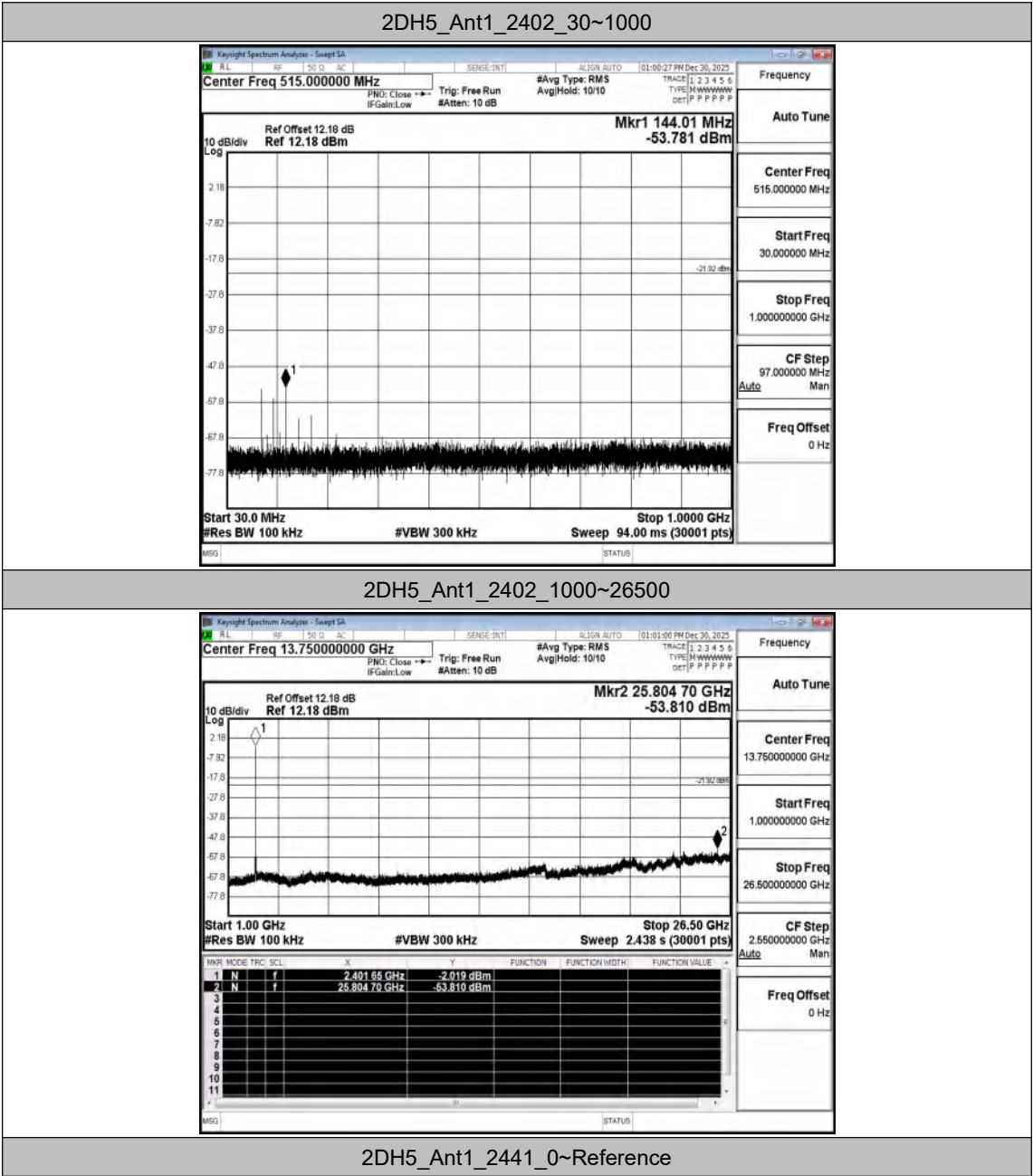
Test Graphs

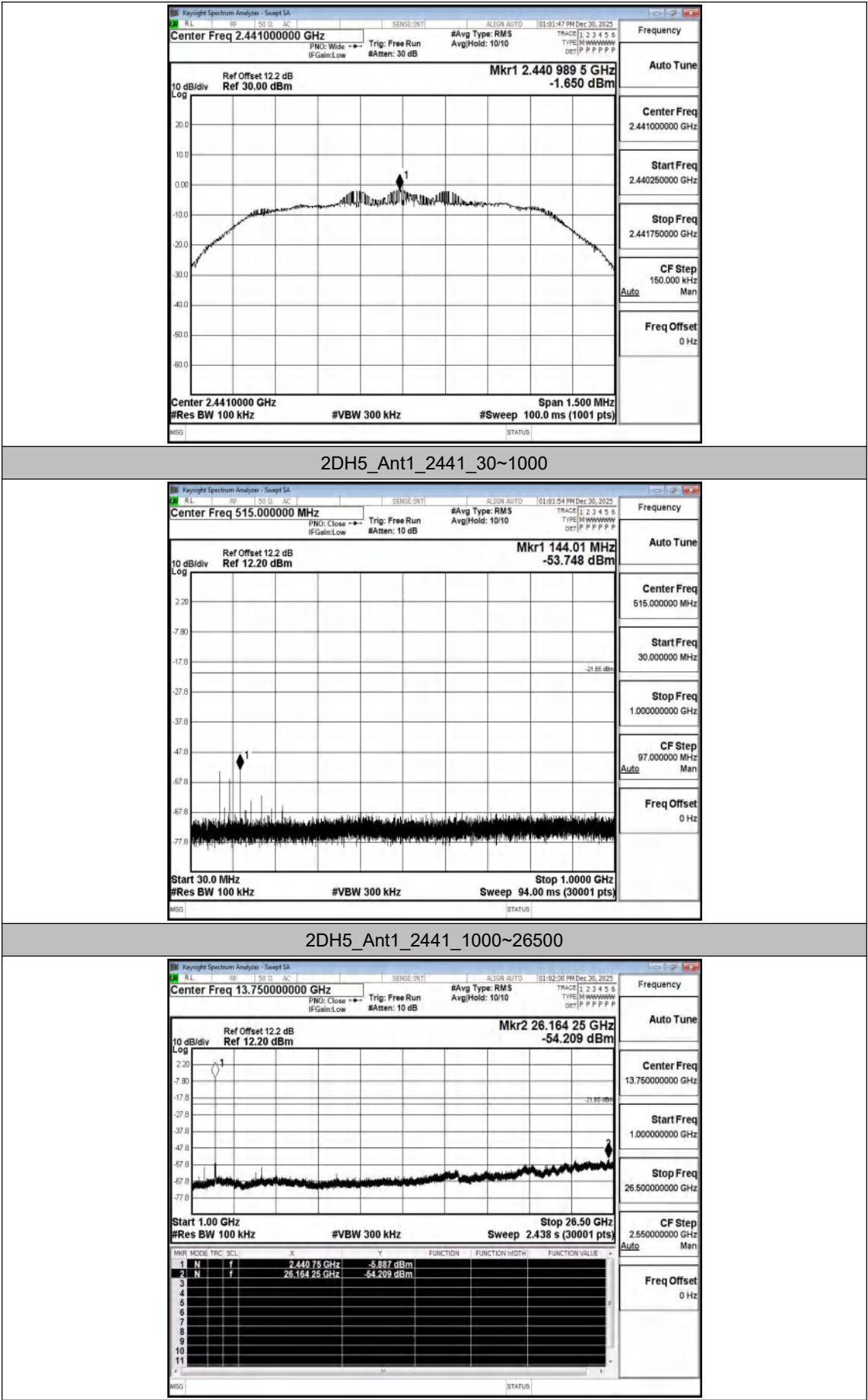


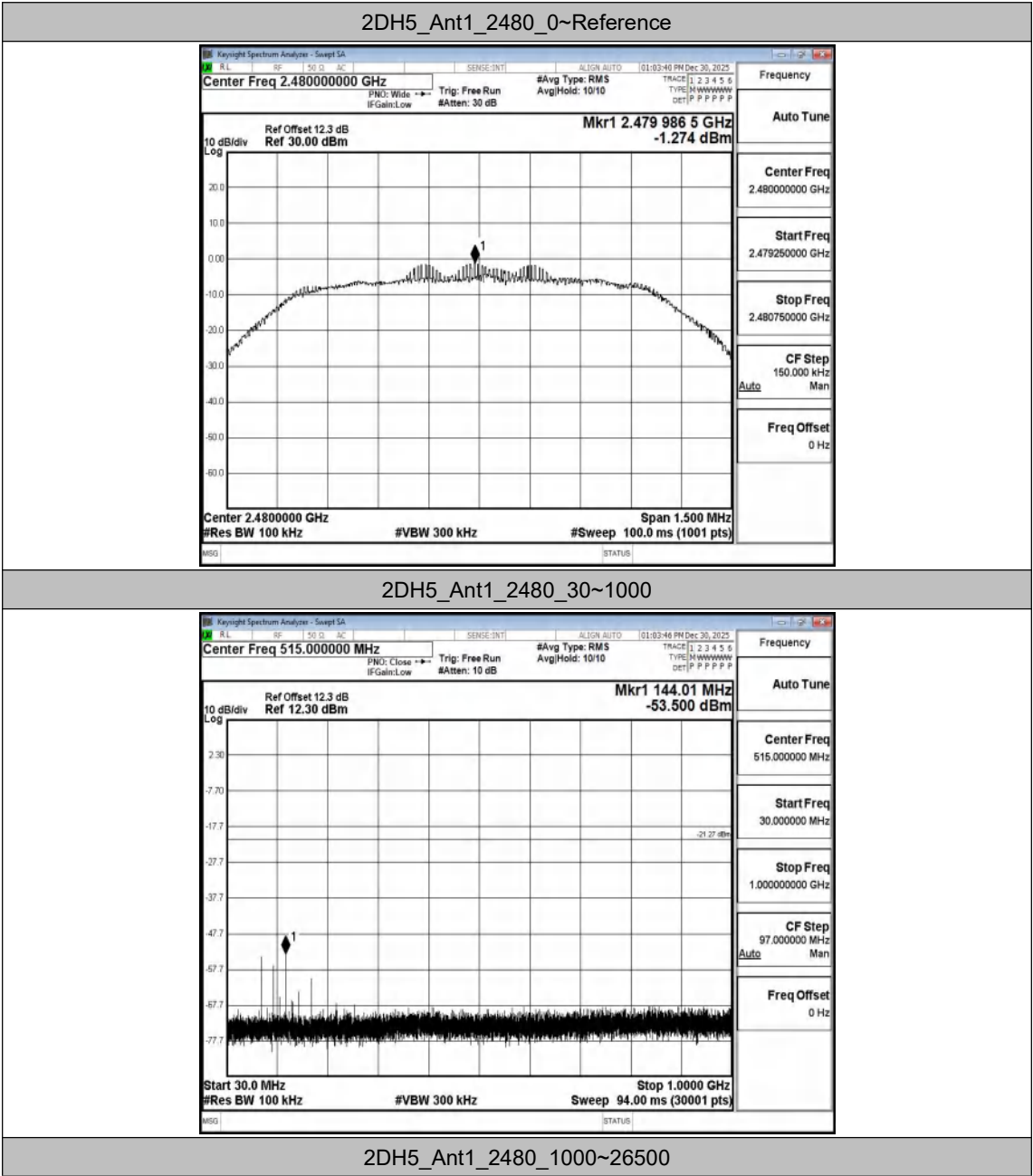


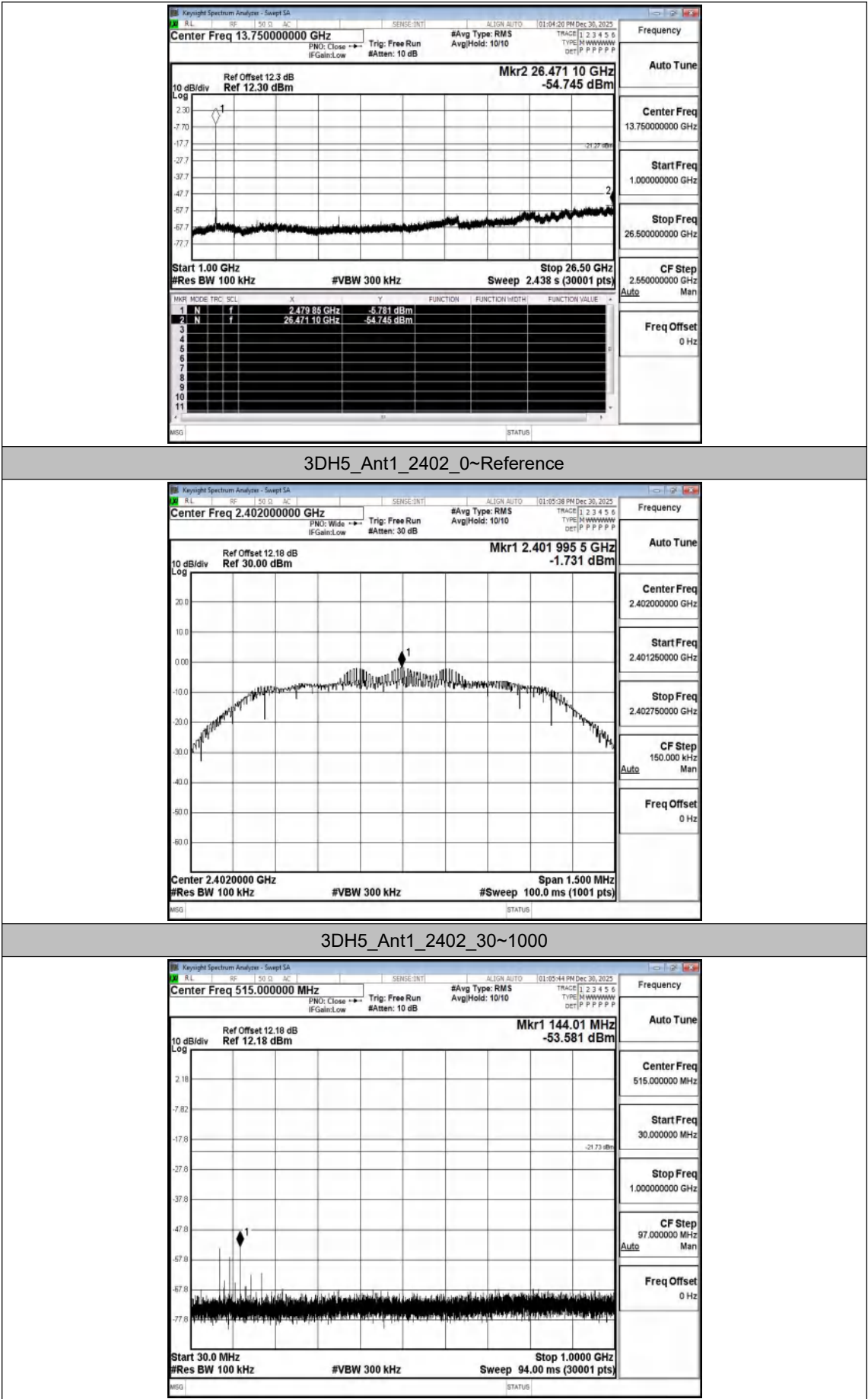


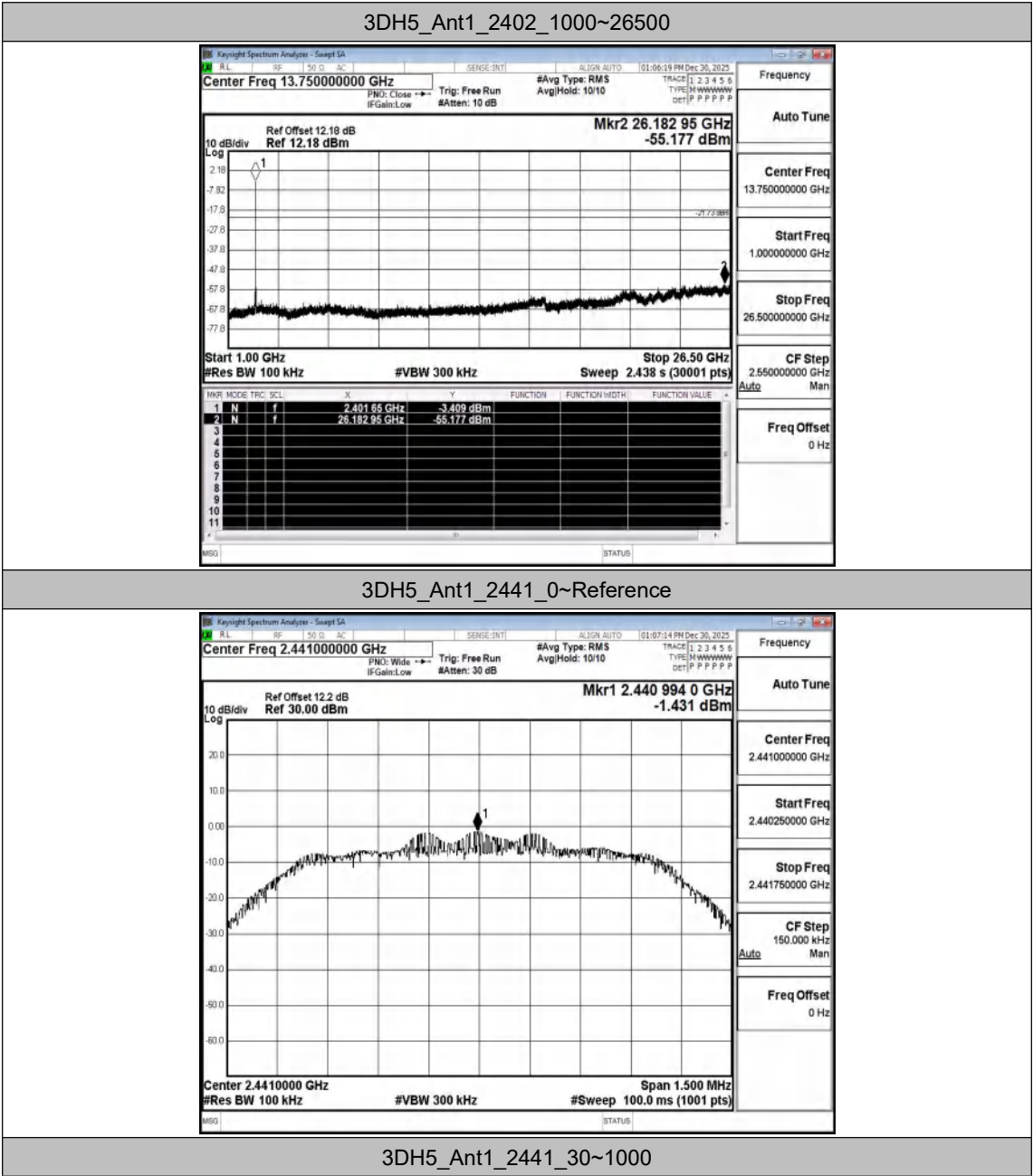


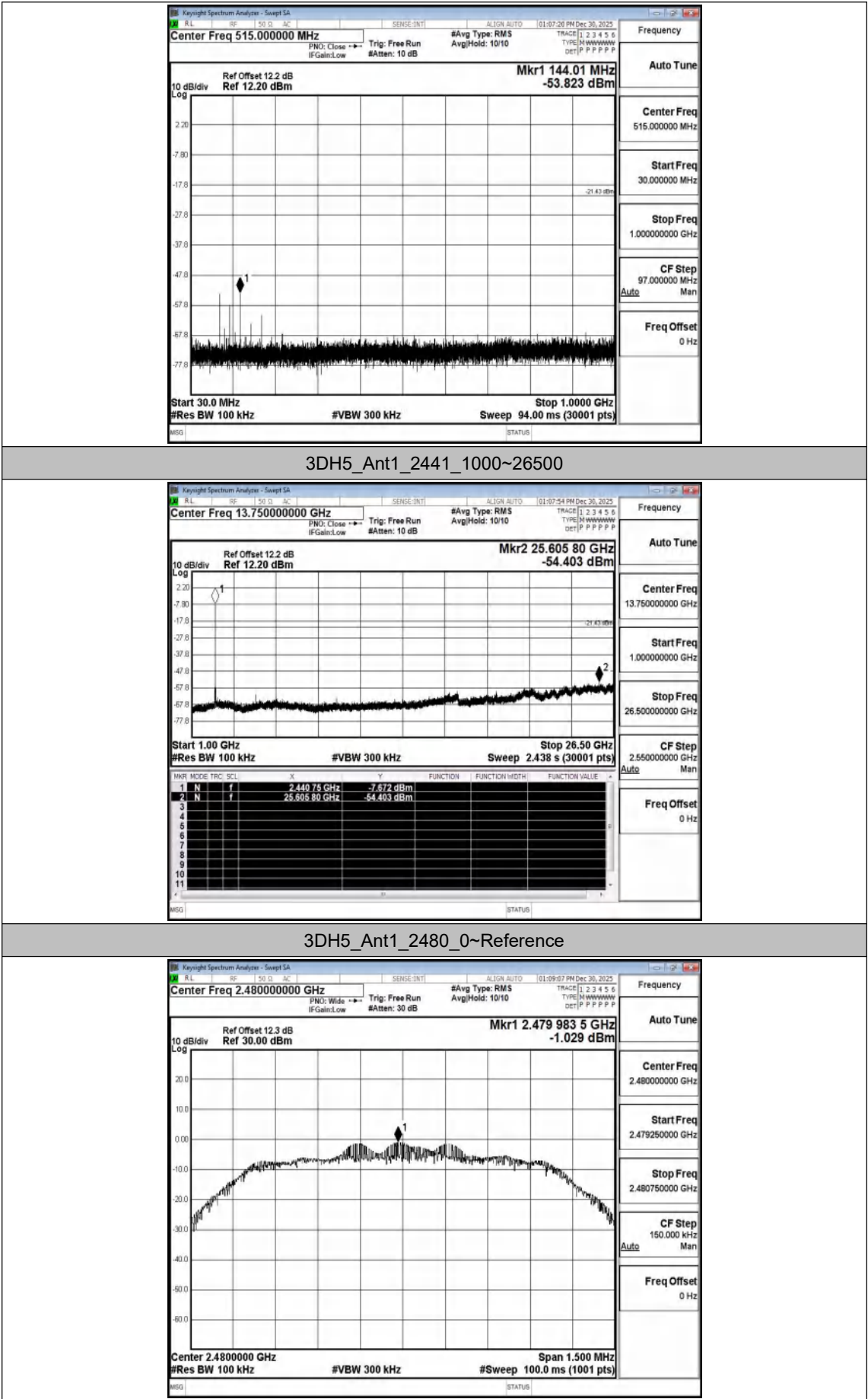


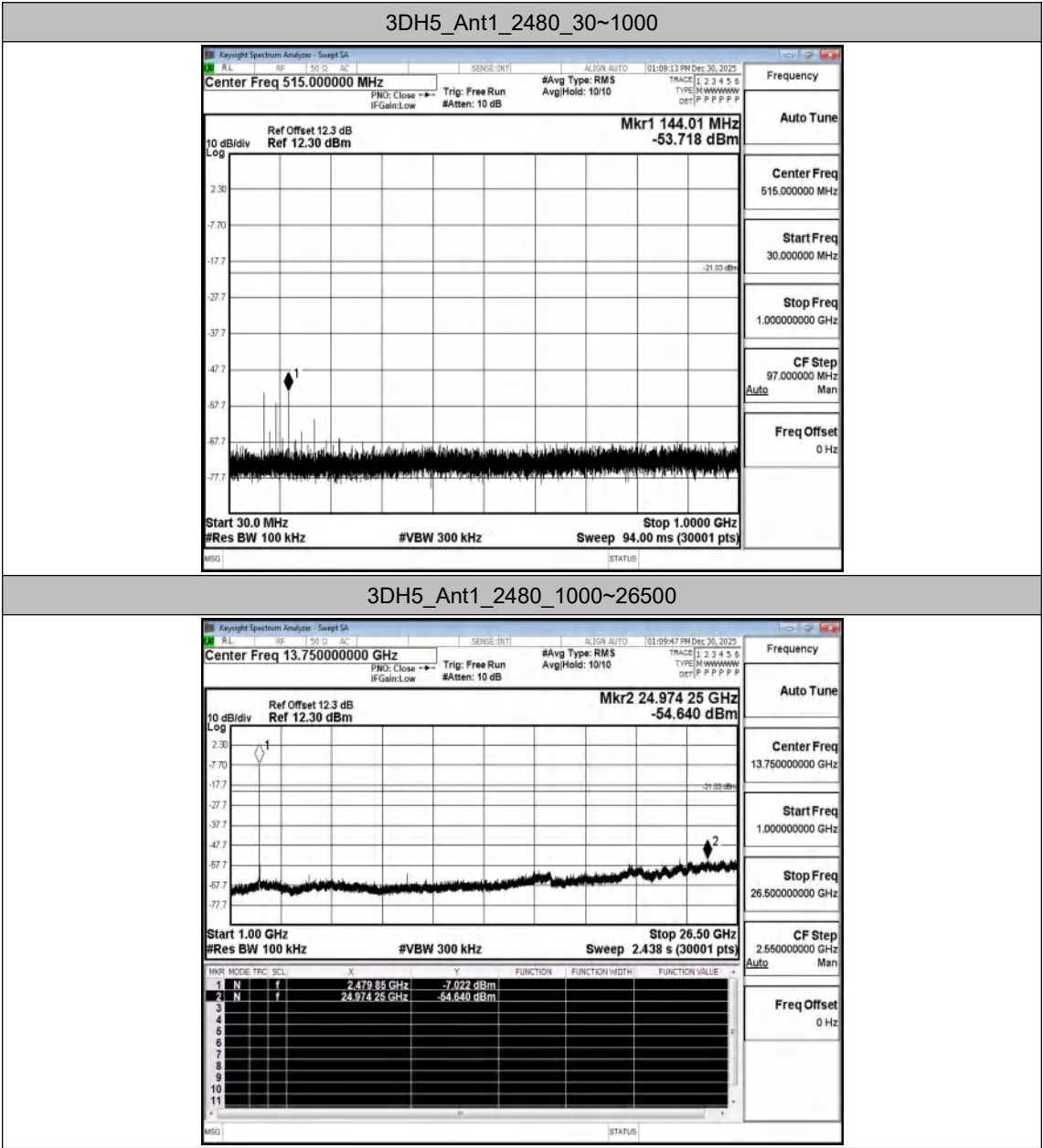










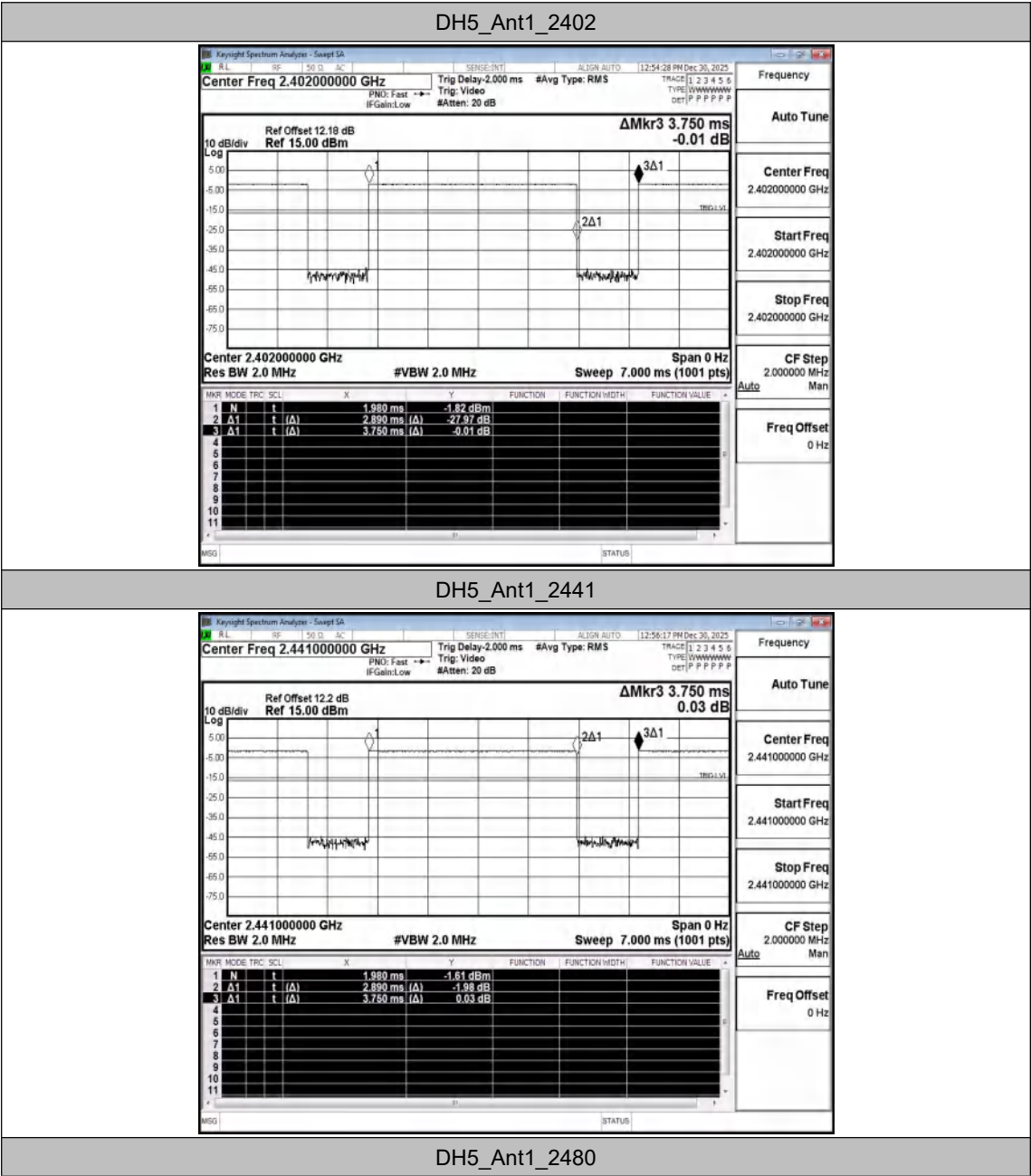


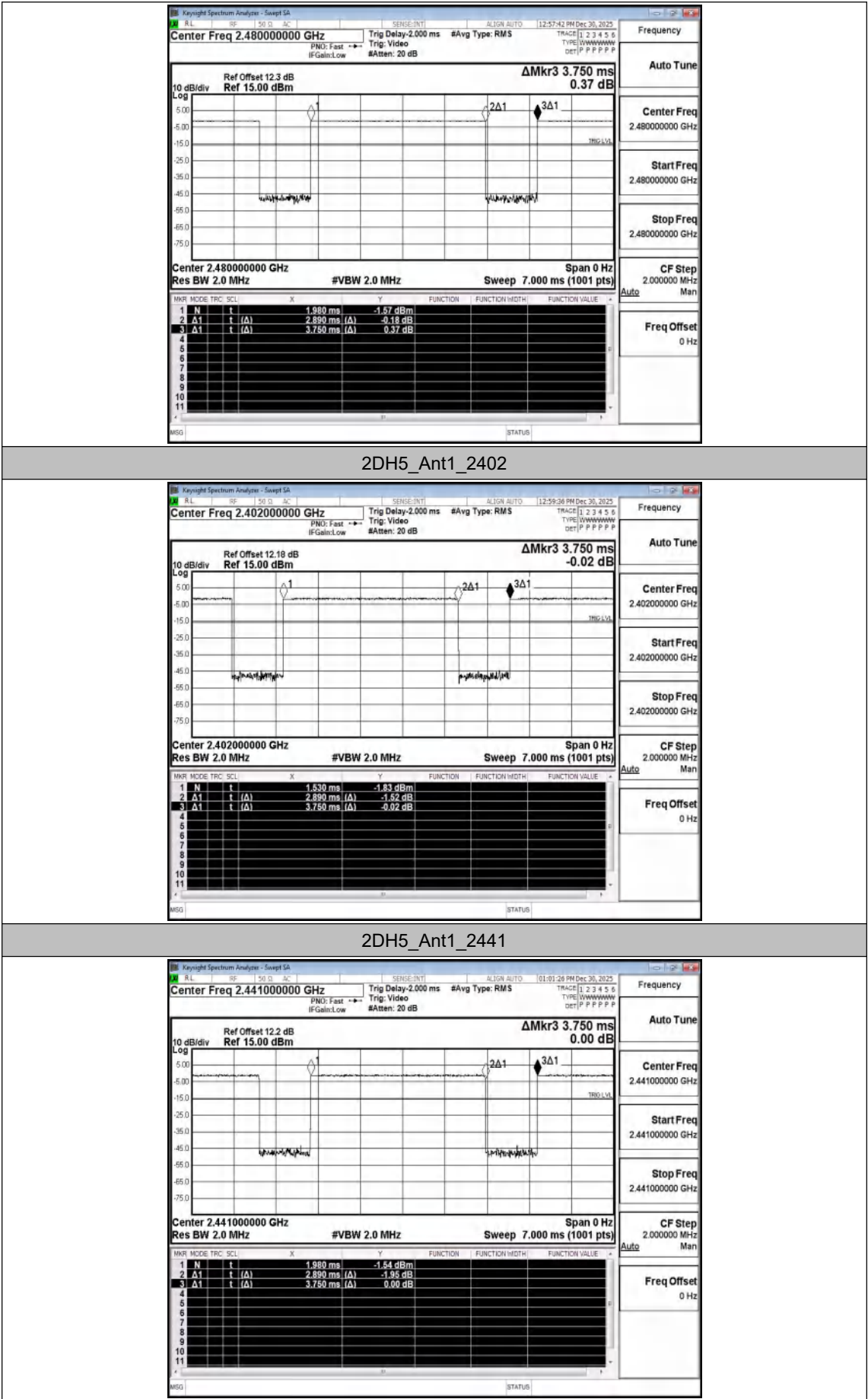
A.8 Duty Cycle

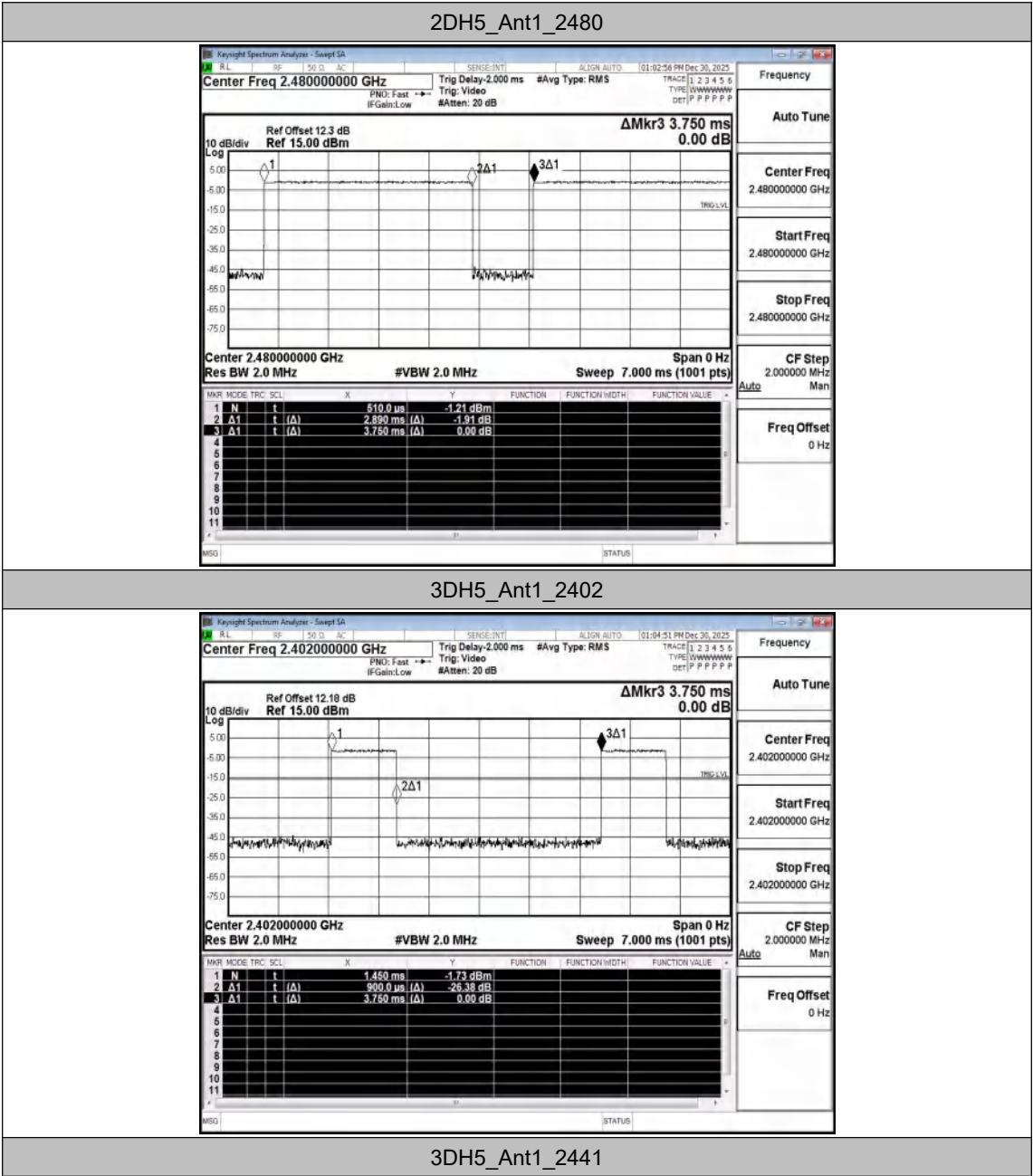
Test Result

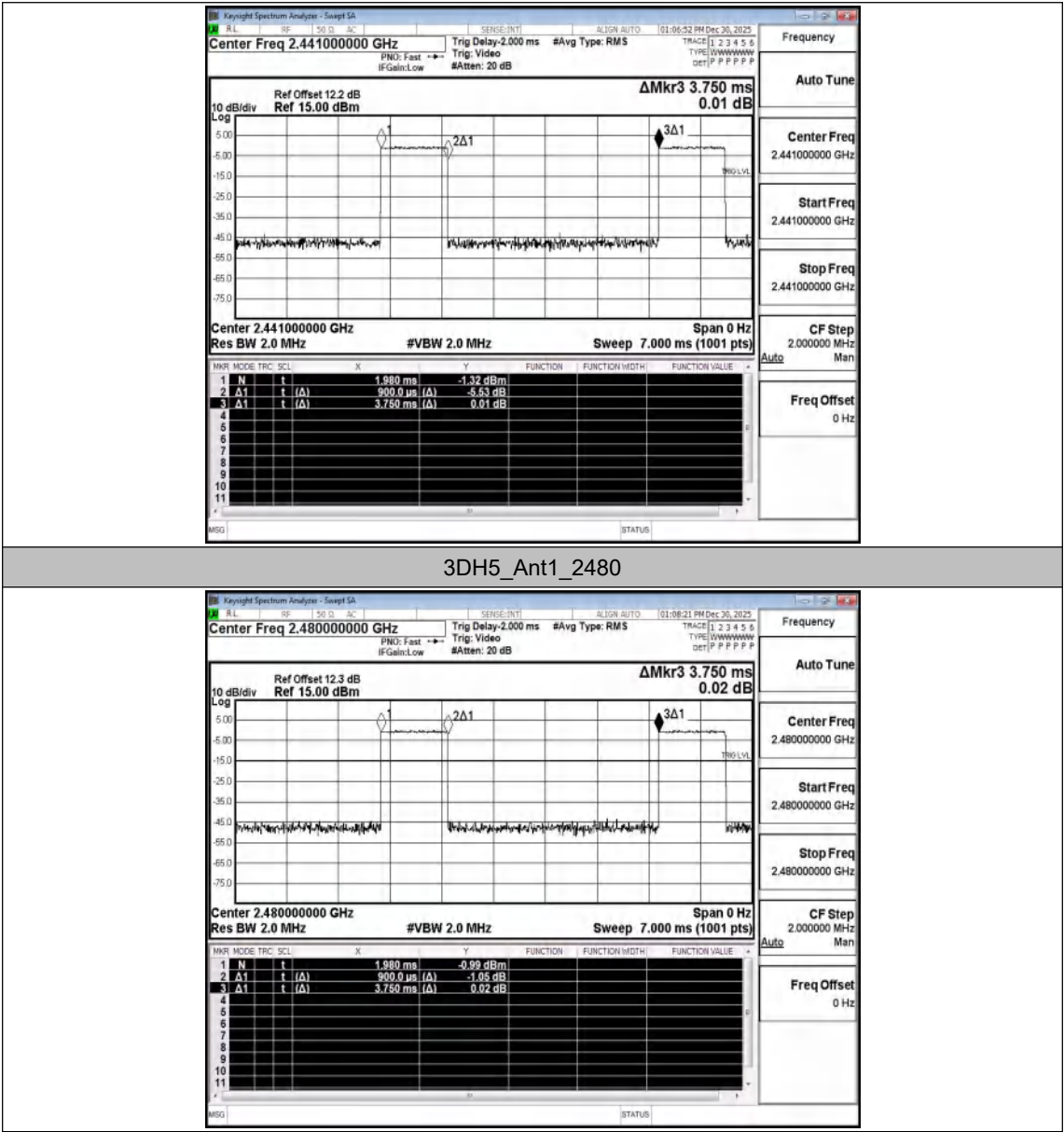
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.89	3.75	77.07	1.13	---	---
		2441	2.89	3.75	77.07	1.13	---	---
		2480	2.89	3.75	77.07	1.13	---	---
2DH5	Ant1	2402	2.89	3.75	77.07	1.13	---	---
		2441	2.89	3.75	77.07	1.13	---	---
		2480	2.89	3.75	77.07	1.13	---	---
3DH5	Ant1	2402	0.90	3.75	24.00	6.20	---	---
		2441	0.90	3.75	24.00	6.20	---	---
		2480	0.90	3.75	24.00	6.20	---	---

Test Graphs









A.9 Emissions in Restricted Bands

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	-61.09	≤-45.43	2.00	1.13	37.30	≤54	PASS
				AV	2384.210	-56.07	≤-45.43	2.00	1.13	42.32	≤54	PASS
				AV	2390.000	-57.54	≤-45.43	2.00	1.13	40.85	≤54	PASS
				Peak	2310.000	-53.65	≤-24.30	2.00	0	43.61	≤74	PASS
				Peak	2382.845	-45.82	≤-24.30	2.00	0	51.44	≤74	PASS
				Peak	2390.000	-49.7	≤-24.30	2.00	0	47.56	≤74	PASS
		High	2480	AV	2483.500	-59.28	≤-45.43	2.00	1.13	39.11	≤54	PASS
				AV	2499.120	-55.38	≤-45.43	2.00	1.13	43.01	≤54	PASS
				AV	2500.000	-56.08	≤-45.43	2.00	1.13	42.31	≤54	PASS
				Peak	2483.500	-49.22	≤-24.30	2.00	0	48.04	≤74	PASS
				Peak	2496.080	-44.97	≤-24.30	2.00	0	52.29	≤74	PASS
				Peak	2500.000	-47.37	≤-24.30	2.00	0	49.89	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-53.91	≤-24.30	2.00	0	43.35	≤74	PASS
				Peak	2382.425	-46.75	≤-24.30	2.00	0	50.51	≤74	PASS
				Peak	2390.000	-49.15	≤-24.30	2.00	0	48.11	≤74	PASS
		High	Hop_2480	Peak	2483.500	-50.39	≤-24.30	2.00	0	46.87	≤74	PASS
				Peak	2485.200	-45.8	≤-24.30	2.00	0	51.46	≤74	PASS
				Peak	2500.000	-48.29	≤-24.30	2.00	0	48.97	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-61.41	≤-45.43	2.00	1.13	36.98	≤54	PASS
				AV	2379.695	-56.25	≤-45.43	2.00	1.13	42.14	≤54	PASS
				AV	2390.000	-58.07	≤-45.43	2.00	1.13	40.32	≤54	PASS
				Peak	2310.000	-52.67	≤-24.30	2.00	0	44.59	≤74	PASS
				Peak	2382.635	-46.44	≤-24.30	2.00	0	50.82	≤74	PASS
				Peak	2390.000	-49.55	≤-24.30	2.00	0	47.71	≤74	PASS
		High	2480	AV	2483.500	-59.15	≤-45.43	2.00	1.13	39.24	≤54	PASS
				AV	2497.280	-55.05	≤-45.43	2.00	1.13	43.34	≤54	PASS
				AV	2500.000	-55.32	≤-45.43	2.00	1.13	43.07	≤54	PASS
				Peak	2483.500	-49.9	≤-24.30	2.00	0	47.36	≤74	PASS
				Peak	2496.320	-45.08	≤-24.30	2.00	0	52.18	≤74	PASS
				Peak	2500.000	-47.99	≤-24.30	2.00	0	49.27	≤74	PASS

3DH5	Ant1	Low	Hop_ 2402	Peak	2310.000	-52.39	≤-24.30	2.00	0	44.87	≤74	PASS
				Peak	2389.775	-47.2	≤-24.30	2.00	0	50.06	≤74	PASS
				Peak	2390.000	-49.3	≤-24.30	2.00	0	47.96	≤74	PASS
		High	Hop_ 2480	Peak	2483.500	-50.86	≤-24.30	2.00	0	46.40	≤74	PASS
				Peak	2489.200	-46.18	≤-24.30	2.00	0	51.08	≤74	PASS
				Peak	2500.000	-50.56	≤-24.30	2.00	0	46.70	≤74	PASS
		Low	2402	AV	2310.000	-61.05	≤-50.50	2.00	6.2	42.41	≤54	PASS
				AV	2381.900	-58.82	≤-50.50	2.00	6.2	44.64	≤54	PASS
				AV	2390.000	-60.28	≤-50.50	2.00	6.2	43.18	≤54	PASS
				Peak	2310.000	-52.4	≤-24.30	2.00	0	44.86	≤74	PASS
				Peak	2378.855	-46.17	≤-24.30	2.00	0	51.09	≤74	PASS
				Peak	2390.000	-48.96	≤-24.30	2.00	0	48.30	≤74	PASS
3DH5	Ant1	High	2480	AV	2483.500	-59.78	≤-50.50	2.00	6.2	43.68	≤54	PASS
				AV	2499.600	-57.93	≤-50.50	2.00	6.2	45.53	≤54	PASS
				AV	2500.000	-58.08	≤-50.50	2.00	6.2	45.38	≤54	PASS
				Peak	2483.500	-49.52	≤-24.30	2.00	0	47.74	≤74	PASS
				Peak	2499.440	-44.72	≤-24.30	2.00	0	52.54	≤74	PASS
				Peak	2500.000	-46.54	≤-24.30	2.00	0	50.72	≤74	PASS
		Low	Hop_ 2402	Peak	2310.000	-52.63	≤-24.30	2.00	0	44.63	≤74	PASS
				Peak	2387.465	-46.88	≤-24.30	2.00	0	50.38	≤74	PASS
				Peak	2390.000	-49.27	≤-24.30	2.00	0	47.99	≤74	PASS
		High	Hop_ 2480	Peak	2483.500	-47.57	≤-24.30	2.00	0	49.69	≤74	PASS
				Peak	2485.040	-45.59	≤-24.30	2.00	0	51.67	≤74	PASS
				Peak	2500.000	-48.76	≤-24.30	2.00	0	48.50	≤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

