

Case No. : <u>GTS20251206005-5-08</u>
Ambient Condition: <u>22</u> °C, <u>49</u> %RH
According Standard: ■Part15C
Test Date: <u>2025.12.15-2026.1.12</u> Test Engineer: <u>Evan ouyang</u>

AppendixA.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.933	2401.499	2402.432	---	---
		2441	0.924	2440.493	2441.417	---	---
		2480	0.927	2479.505	2480.432	---	---
2DH1	Ant1	2402	1.314	2401.295	2402.609	---	---
		2441	1.305	2440.298	2441.603	---	---
		2480	1.314	2479.298	2480.612	---	---
3DH1	Ant1	2402	1.263	2401.334	2402.597	---	---
		2441	1.296	2440.319	2441.615	---	---
		2480	1.266	2479.328	2480.594	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2DH1_Ant1_2402



2DH1_Ant1_2441



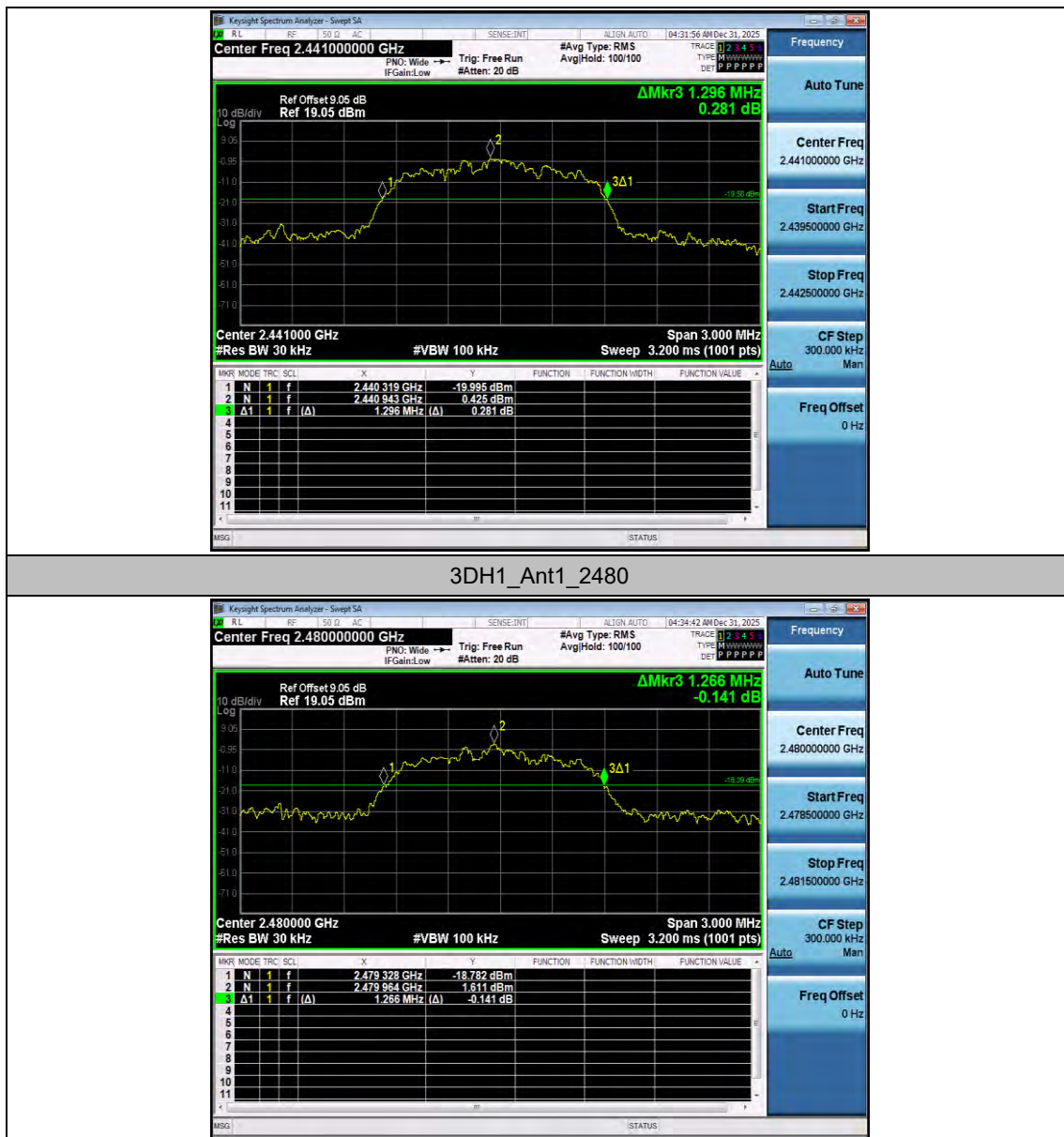
2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



AppendixA.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.82864	2401.5485	2402.3771	---	---
		2441	0.83650	2440.5426	2441.3791	---	---
		2480	0.84404	2479.5380	2480.3820	---	---
2DH1	Ant1	2402	1.1812	2401.3602	2402.5414	---	---
		2441	1.1804	2440.3671	2441.5475	---	---
		2480	1.1970	2479.3614	2480.5584	---	---
3DH1	Ant1	2402	1.1662	2401.3885	2402.5547	---	---
		2441	1.1665	2440.3890	2441.5555	---	---
		2480	1.1793	2479.3846	2480.5639	---	---

Test Graphs

DH1_Ant1_2402



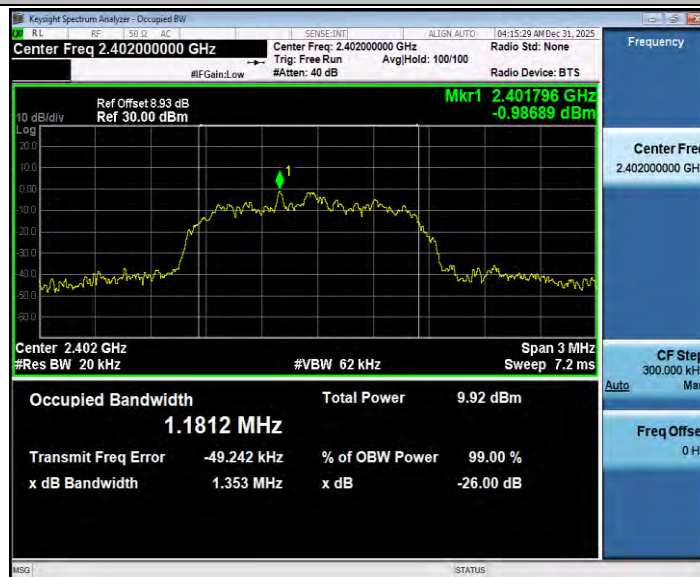
DH1_Ant1_2441



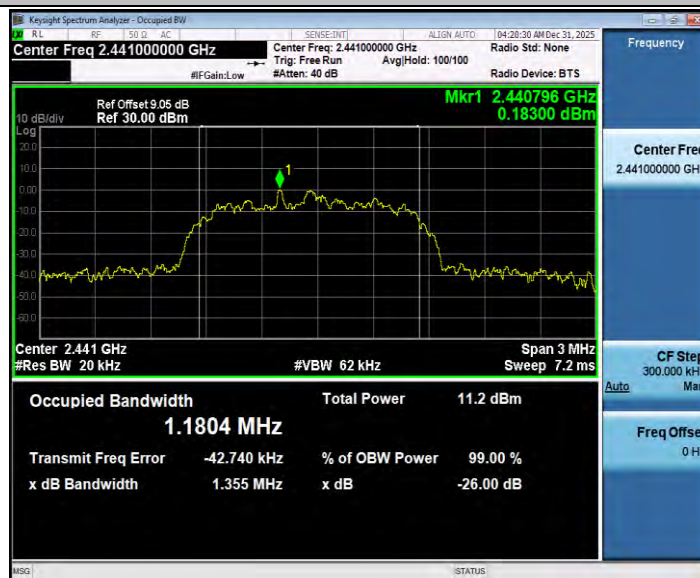
DH1_Ant1_2480



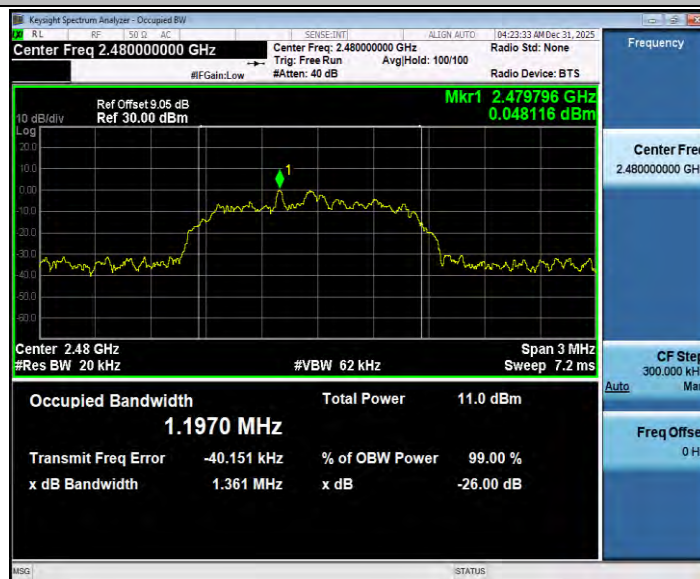
2DH1_Ant1_2402



2DH1_Ant1_2441



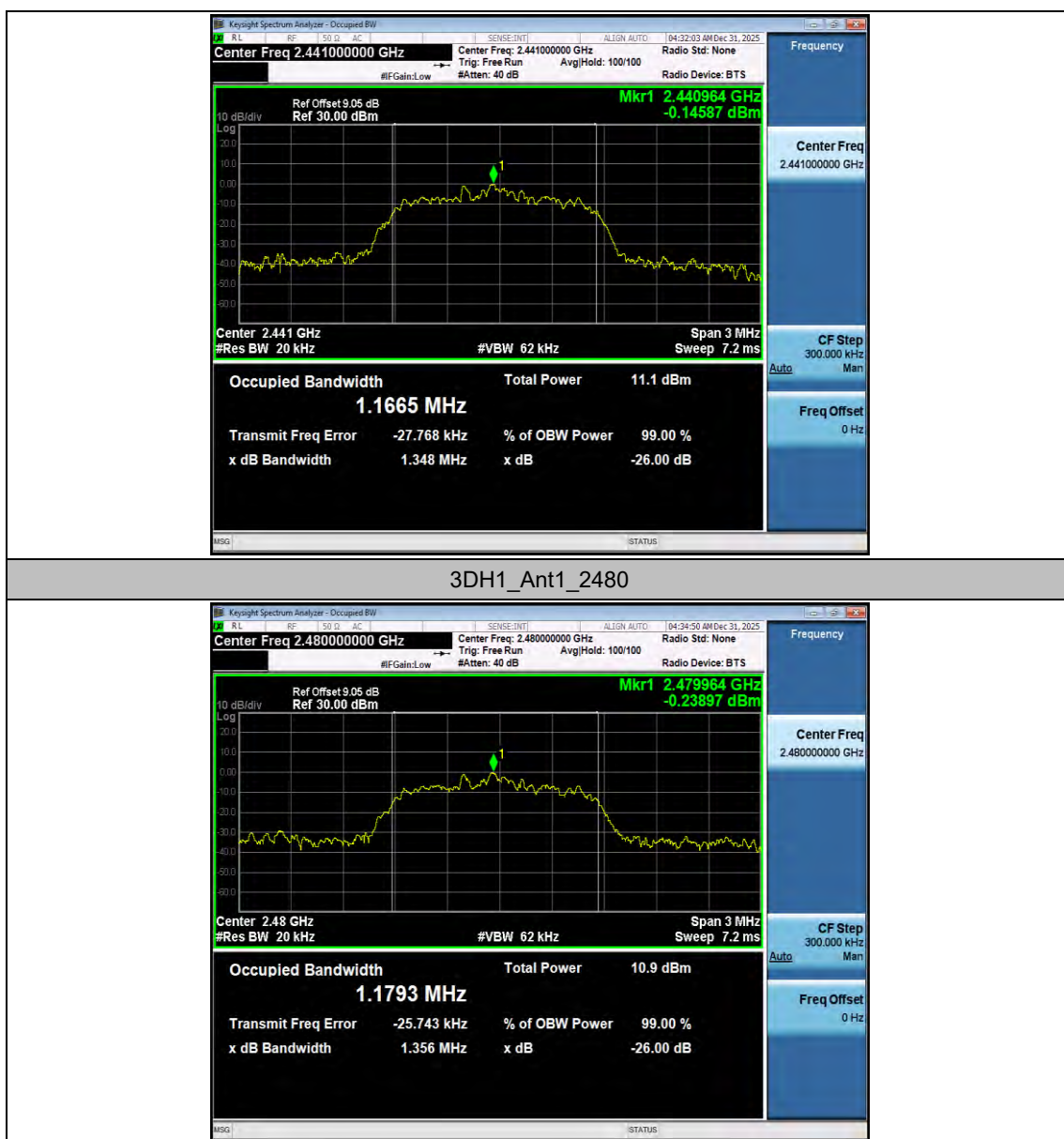
2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



AppendixA.3: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	7.81	≤20.97	PASS
		2441	8.85	≤20.97	PASS
		2480	8.69	≤20.97	PASS
2DH1	Ant1	2402	7.18	≤20.97	PASS
		2441	8.35	≤20.97	PASS
		2480	8.12	≤20.97	PASS
3DH1	Ant1	2402	7.51	≤20.97	PASS
		2441	8.67	≤20.97	PASS
		2480	8.43	≤20.97	PASS

AppendixA.4: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1	≥ 0.622	PASS
		Hop_2441	0.988	≥ 0.622	PASS
		Hop_2480	0.68	≥ 0.622	PASS
2DH1	Ant1	Hop_2402	1.004	≥ 0.876	PASS
		Hop_2441	0.996	≥ 0.876	PASS
		Hop_2480	0.992	≥ 0.876	PASS
3DH1	Ant1	Hop_2402	0.992	≥ 0.864	PASS
		Hop_2441	0.998	≥ 0.864	PASS
		Hop_2480	1.018	≥ 0.864	PASS

Test Graphs

DH1_Ant1_Hop_2402



DH1_Ant1_Hop_2441



DH1_Ant1_Hop_2480



2DH1_Ant1_Hop_2402



2DH1_Ant1_Hop_2441



2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441

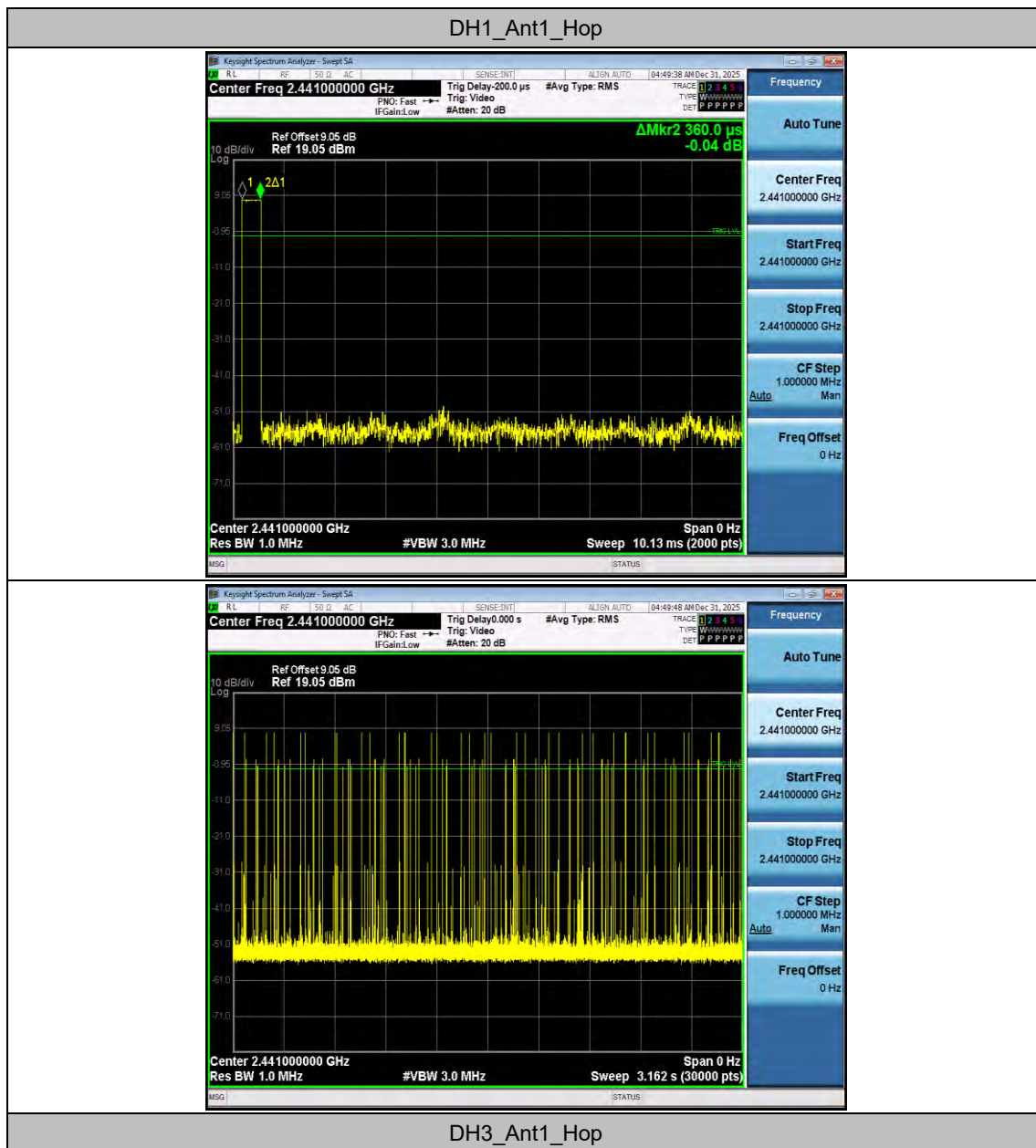


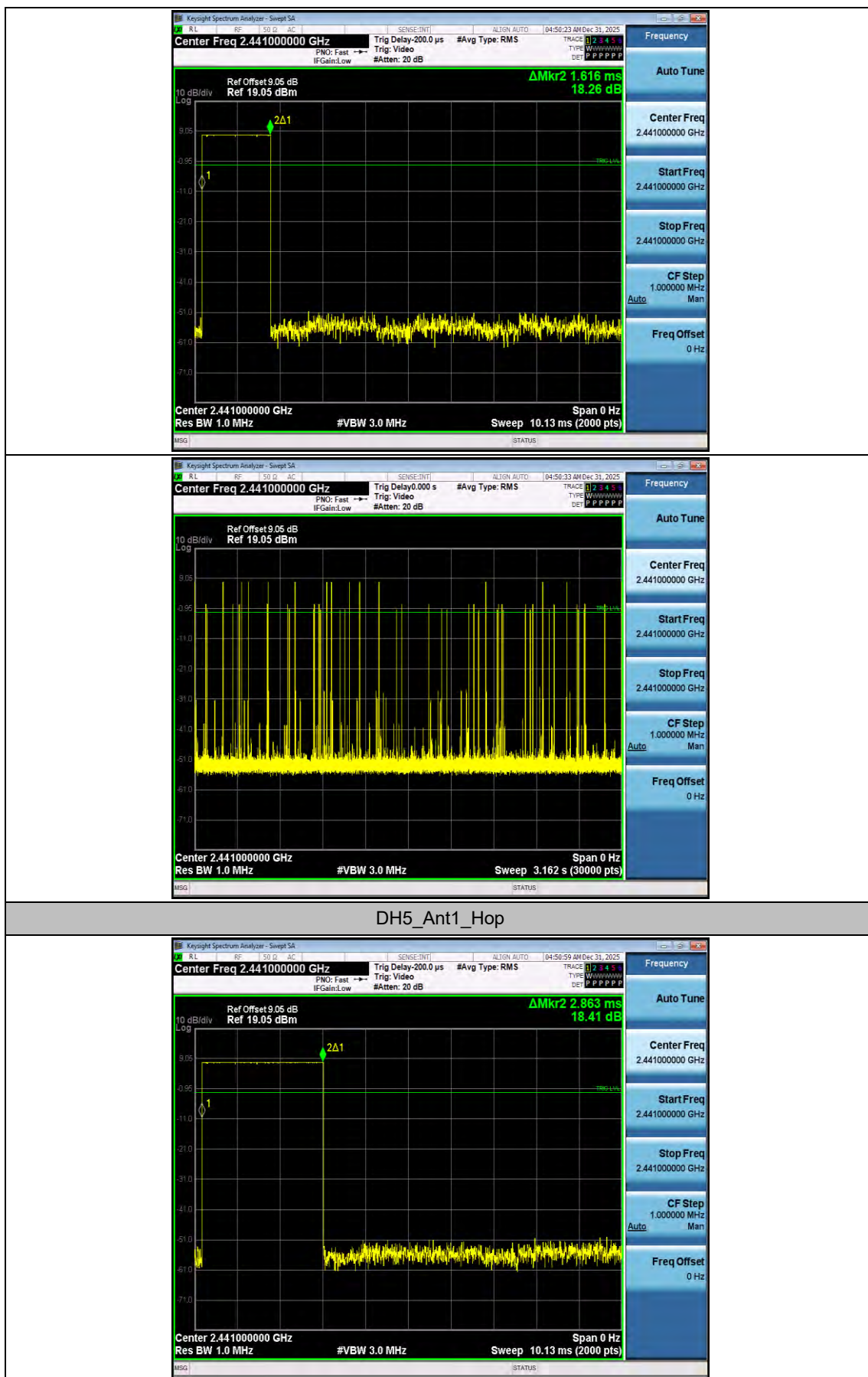
AppendixA.5: Time of occupancy

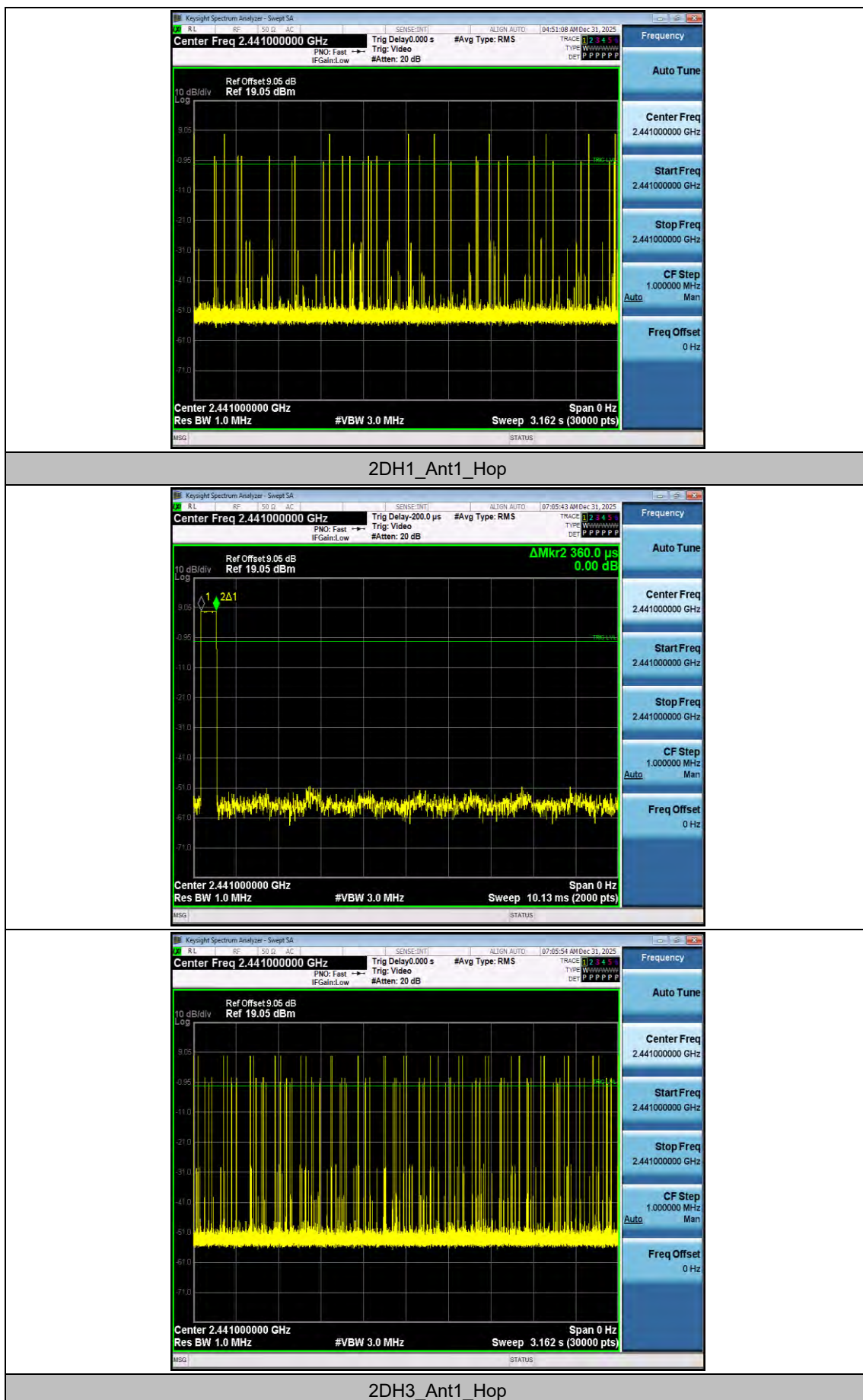
Test Result

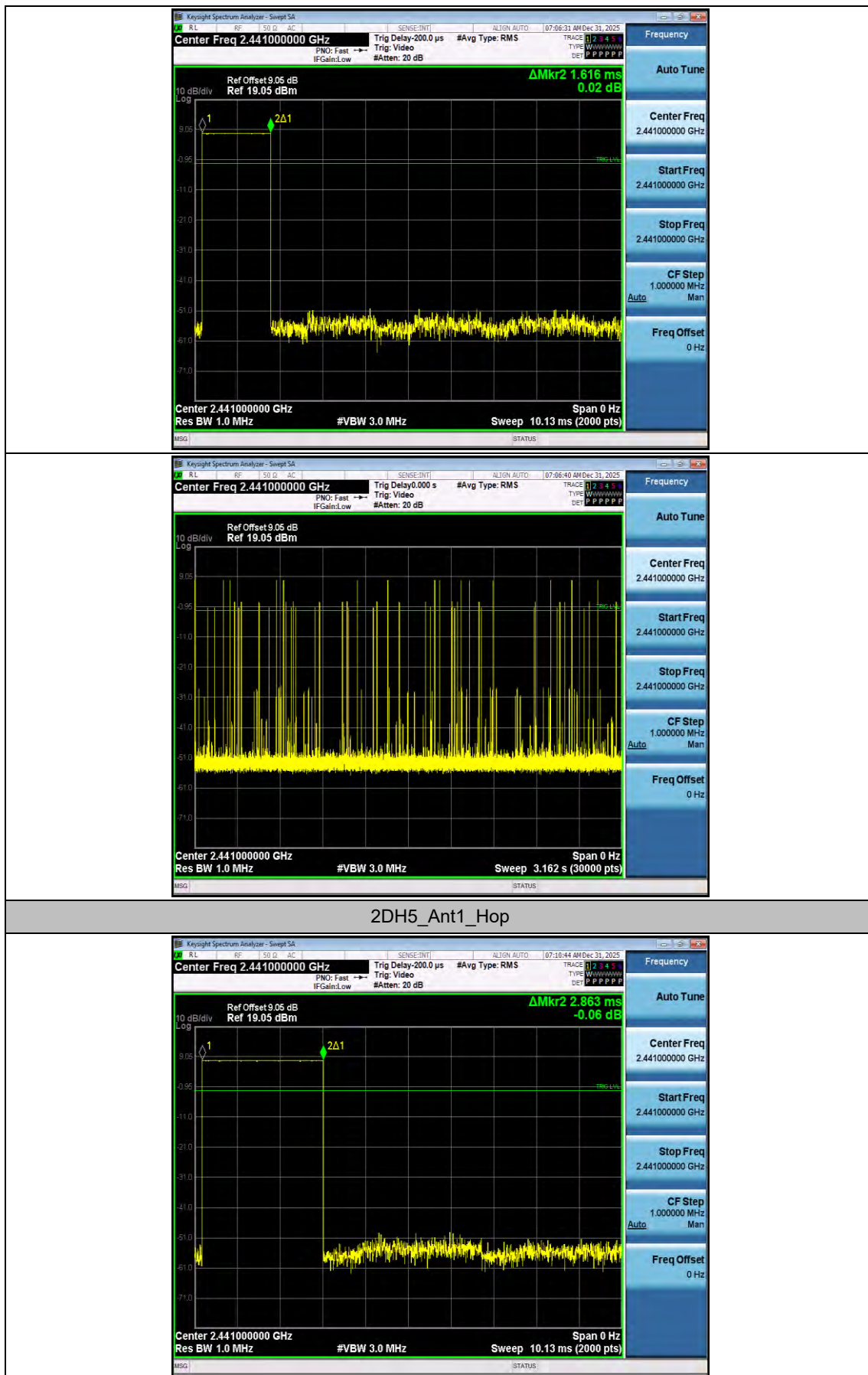
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.360	320	0.115	≤0.4	PASS
DH3	Ant1	Hop	1.616	150	0.242	≤0.4	PASS
DH5	Ant1	Hop	2.863	90	0.258	≤0.4	PASS
2DH1	Ant1	Hop	0.360	330	0.119	≤0.4	PASS
2DH3	Ant1	Hop	1.616	150	0.242	≤0.4	PASS
2DH5	Ant1	Hop	2.863	120	0.344	≤0.4	PASS
3DH1	Ant1	Hop	0.360	330	0.119	≤0.4	PASS
3DH3	Ant1	Hop	1.611	170	0.274	≤0.4	PASS
3DH5	Ant1	Hop	2.863	100	0.286	≤0.4	PASS

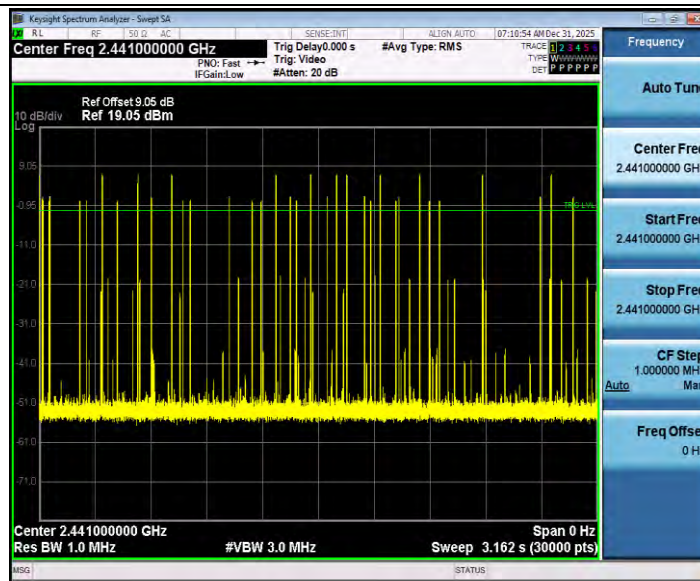
Test Graphs



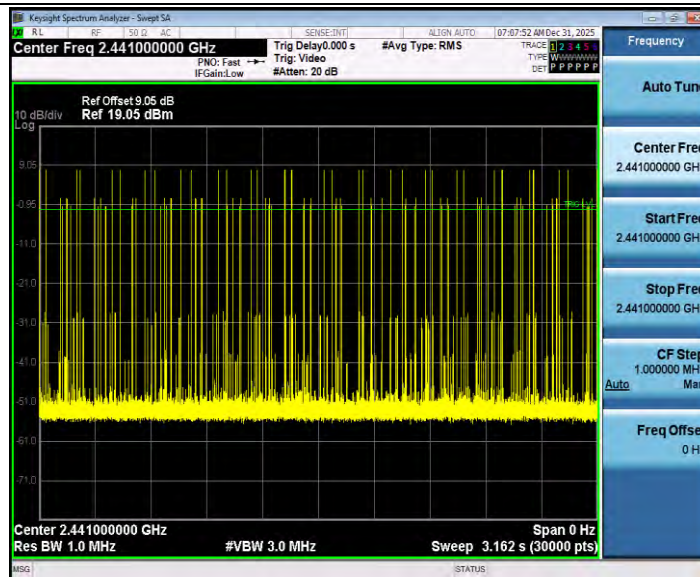
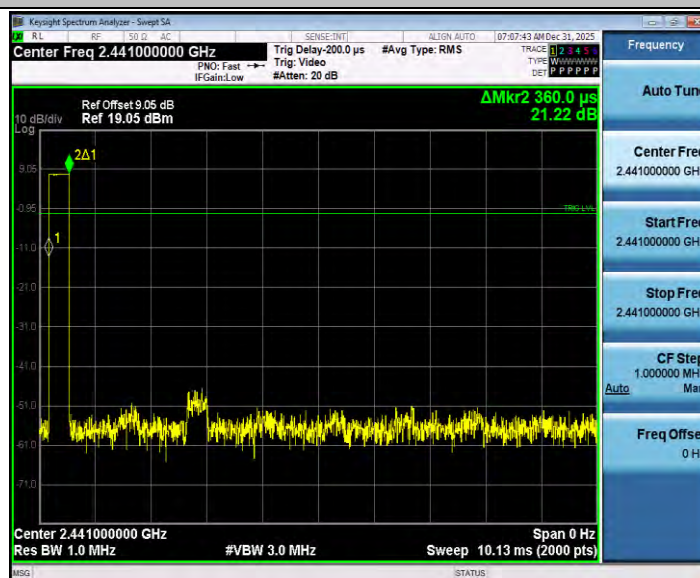




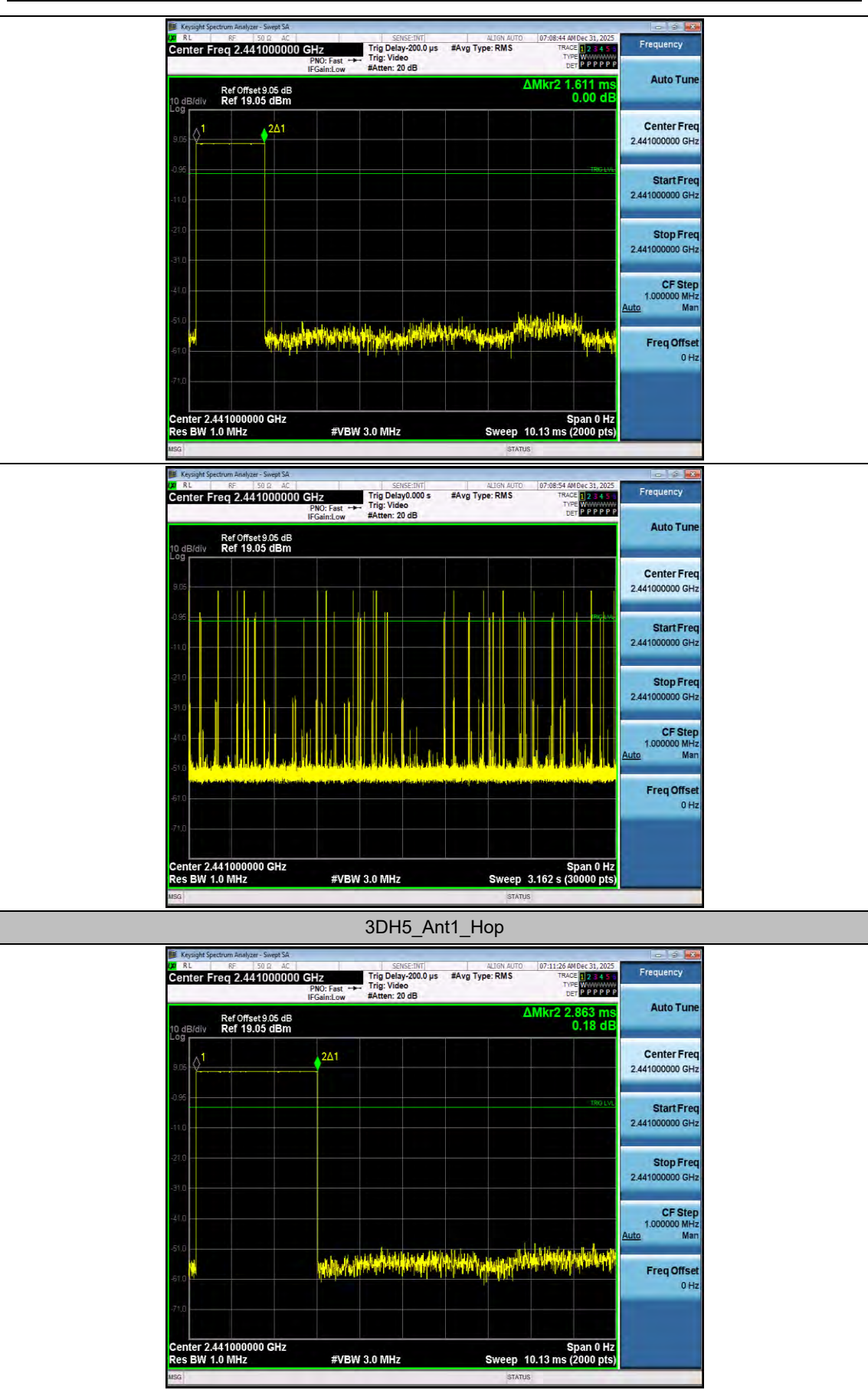




3DH1_Ant1_Hop



3DH3_Ant1_Hop



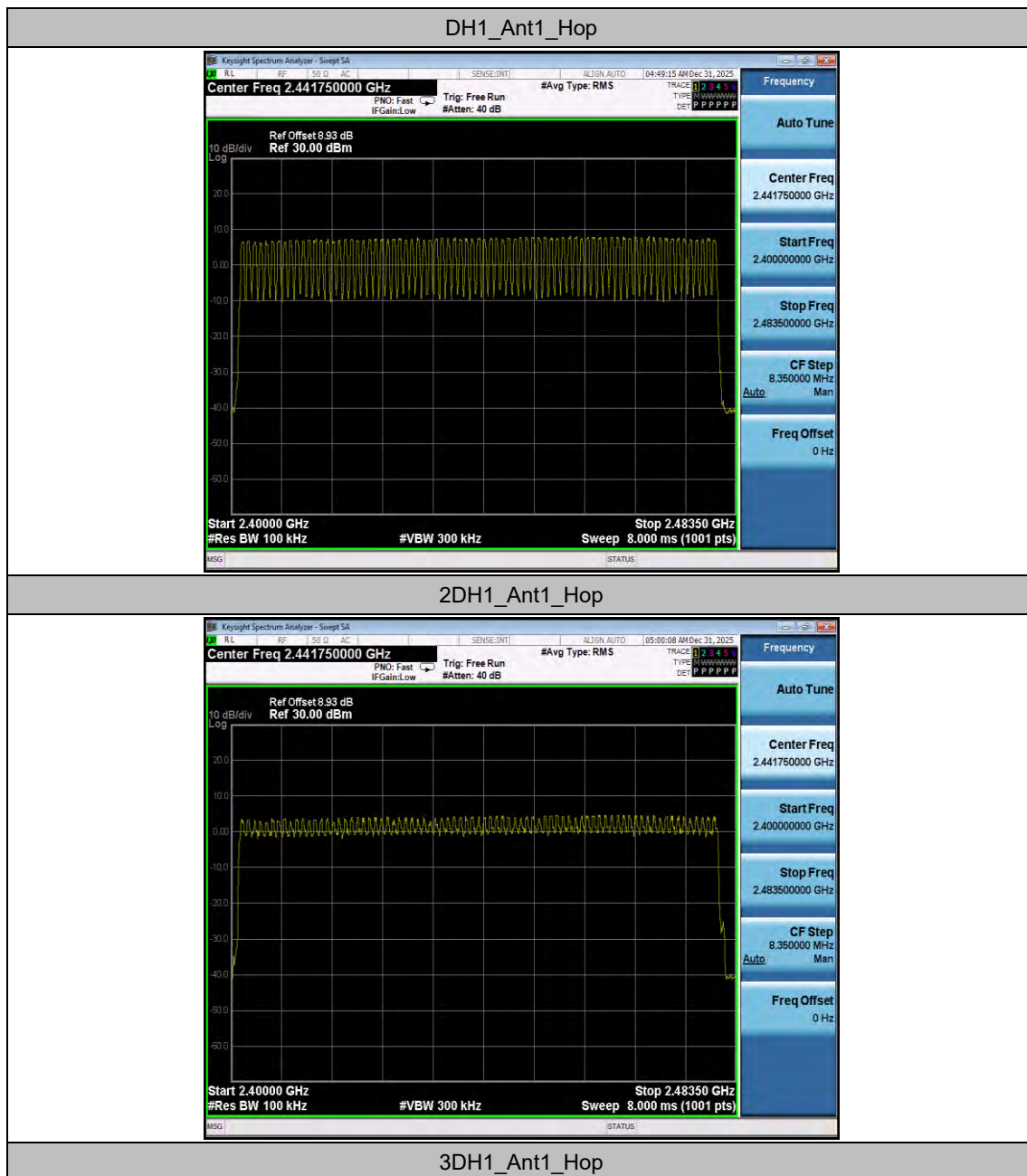


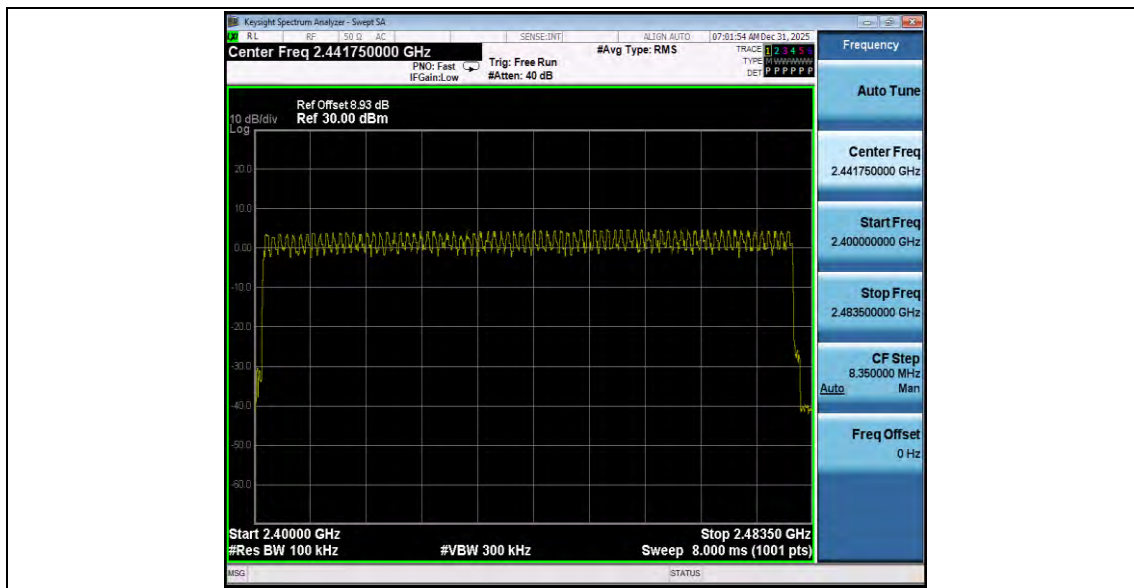
AppendixA.6: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS
3DH1	Ant1	Hop	79	≥15	PASS

Test Graphs





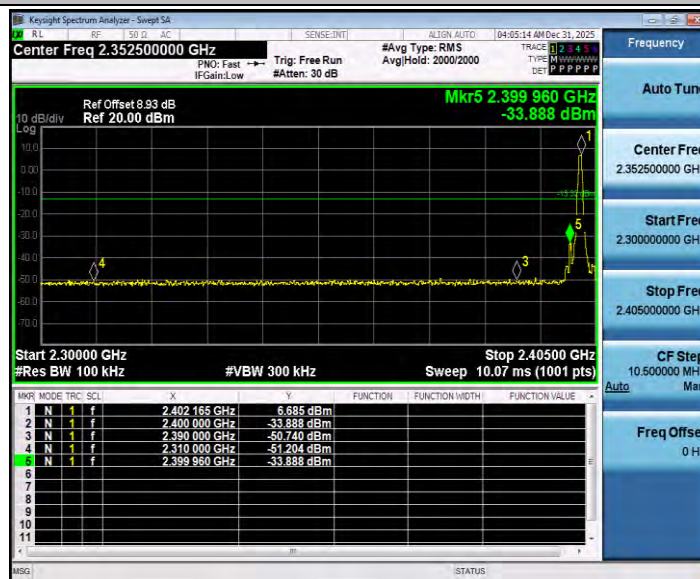
Appendix A.7: Band edge measurements

Test Result

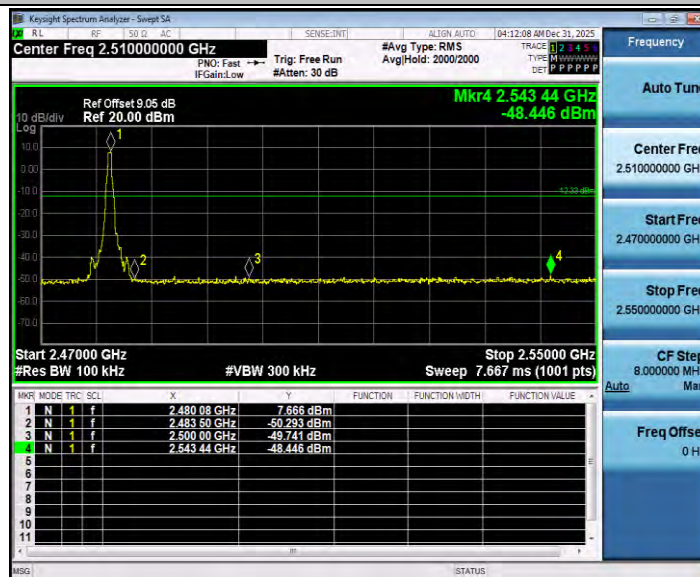
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	6.69	-33.89	≤ -13.32	PASS
		High	2480	7.67	-48.45	≤ -12.33	PASS
		Low	Hop_2402	6.66	-45.74	≤ -13.34	PASS
		High	Hop_2480	7.82	-48.24	≤ -12.18	PASS
2DH1	Ant1	Low	2402	3.35	-46.15	≤ -16.65	PASS
		High	2480	4.25	-48.74	≤ -15.75	PASS
		Low	Hop_2402	3.03	-48.22	≤ -16.97	PASS
		High	Hop_2480	4.39	-48.3	≤ -15.61	PASS
3DH1	Ant1	Low	2402	3.37	-46.11	≤ -16.63	PASS
		High	2480	4.37	-48.77	≤ -15.63	PASS
		Low	Hop_2402	2.34	-48.29	≤ -17.66	PASS
		High	Hop_2480	3.91	-47.92	≤ -16.09	PASS

Test Graphs

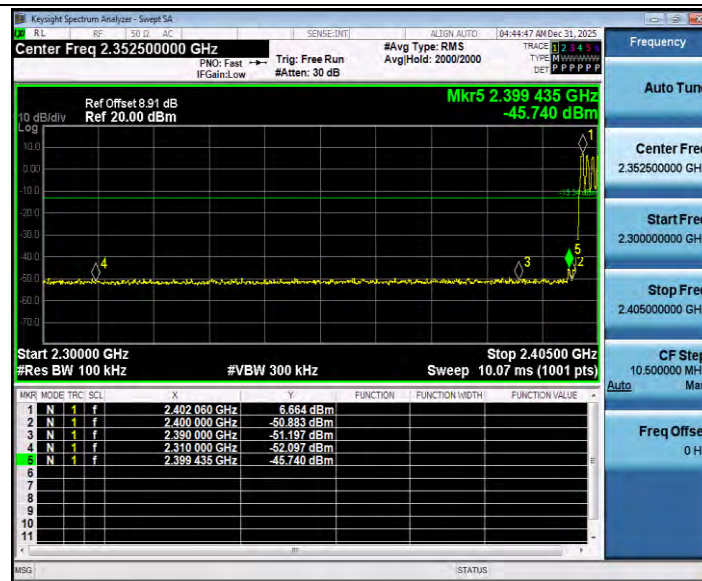
DH1_Ant1_Low_2402



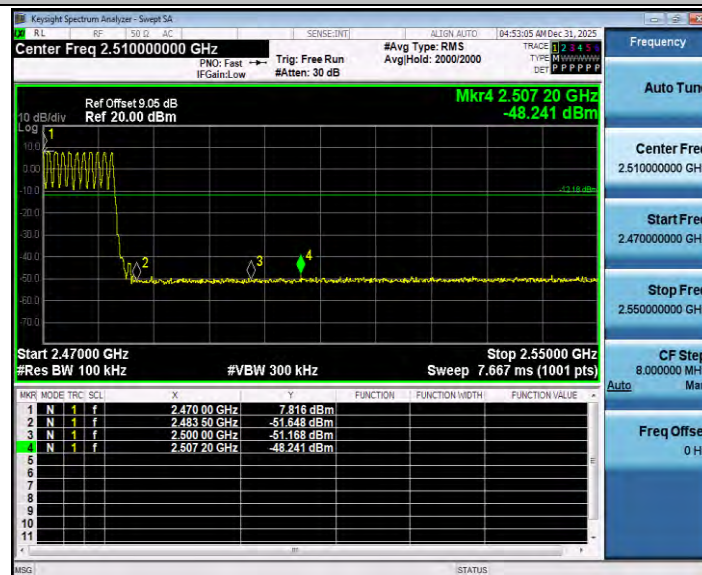
DH1_Ant1_High_2480



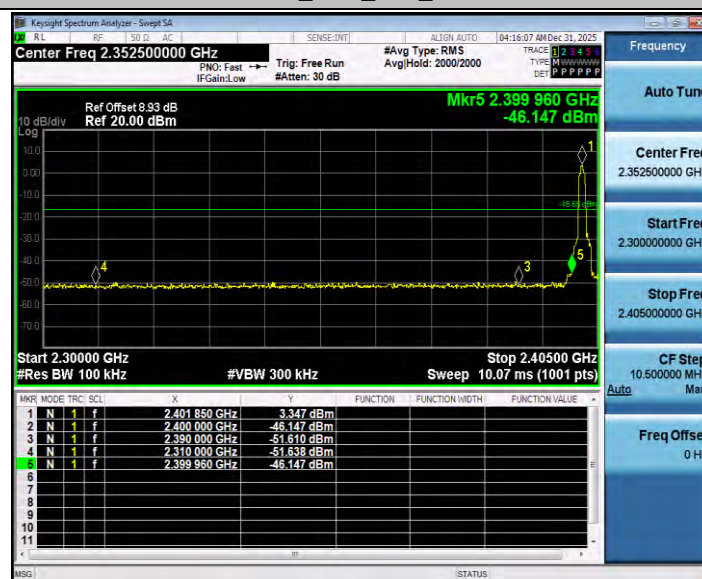
DH1_Ant1_Low_Hop_2402



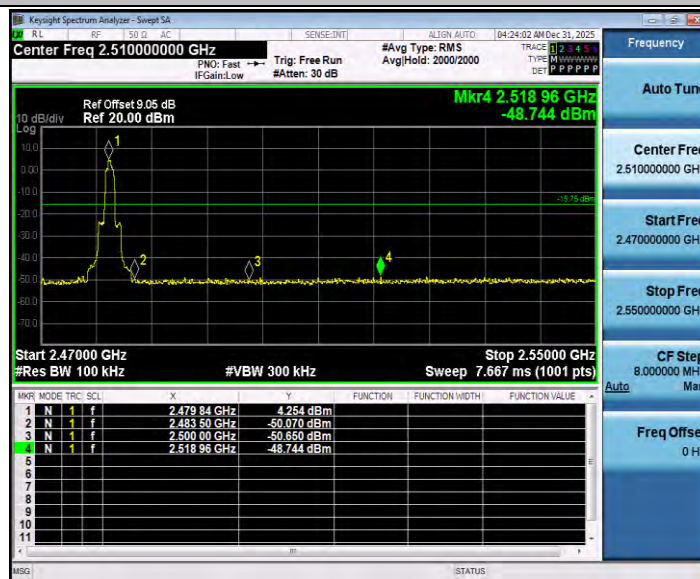
DH1_Ant1_High_Hop_2480



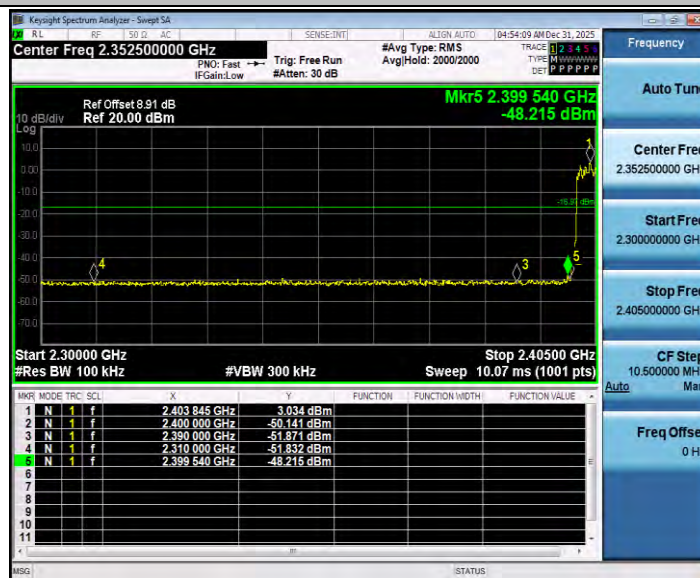
2DH1_Ant1_Low_2402



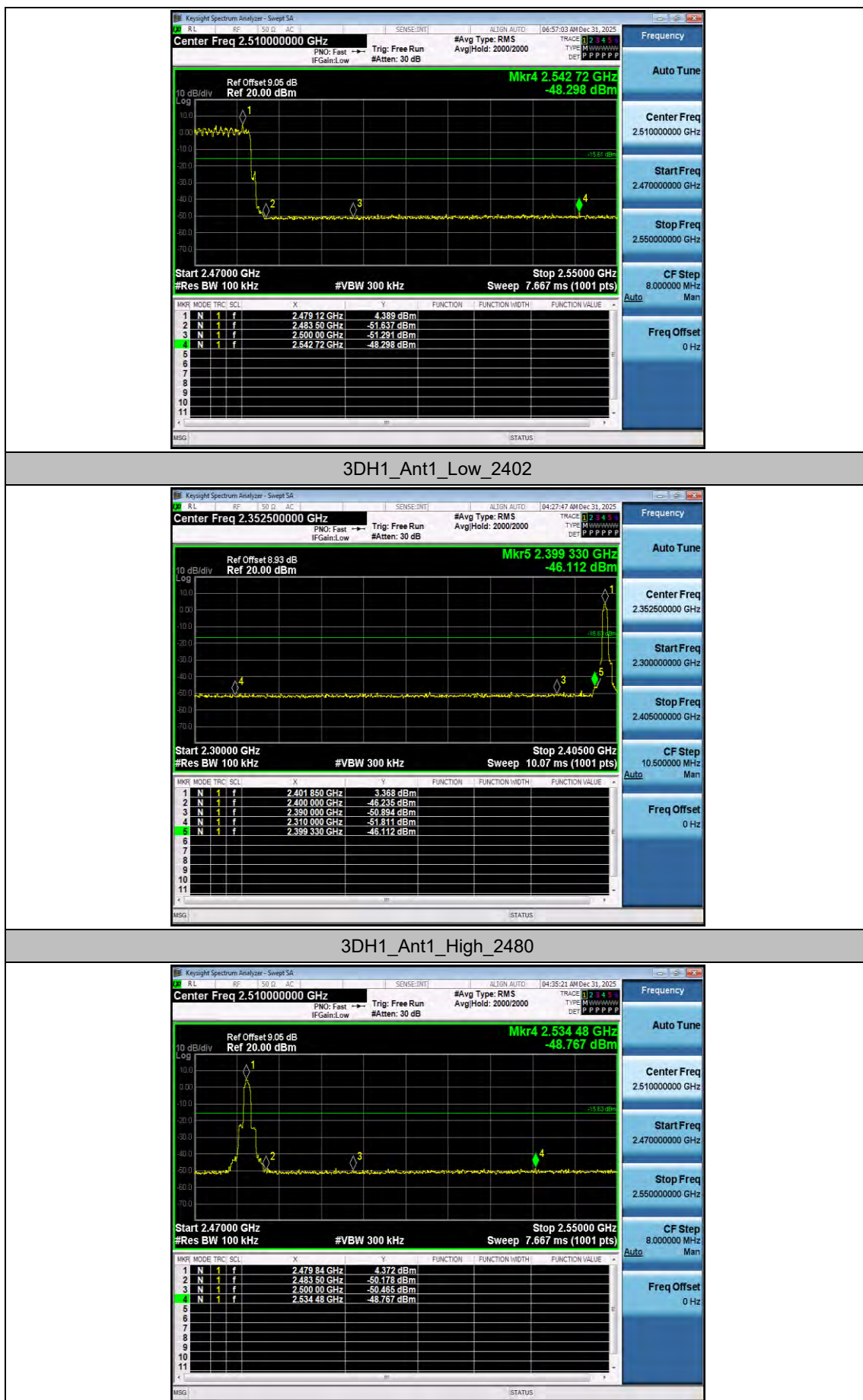
2DH1_Ant1_High_2480



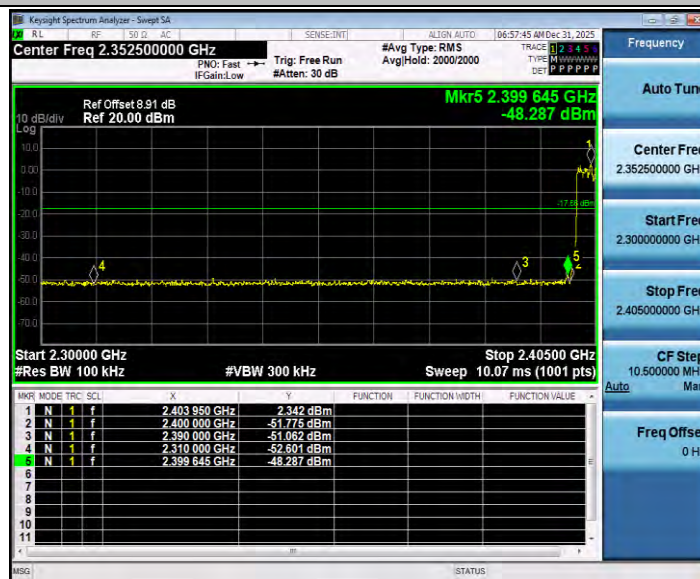
2DH1_Ant1_Low_Hop_2402



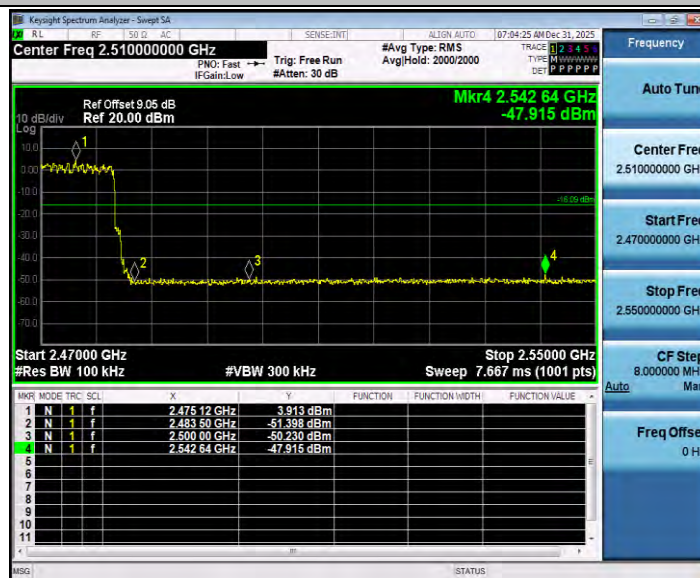
2DH1_Ant1_High_Hop_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480

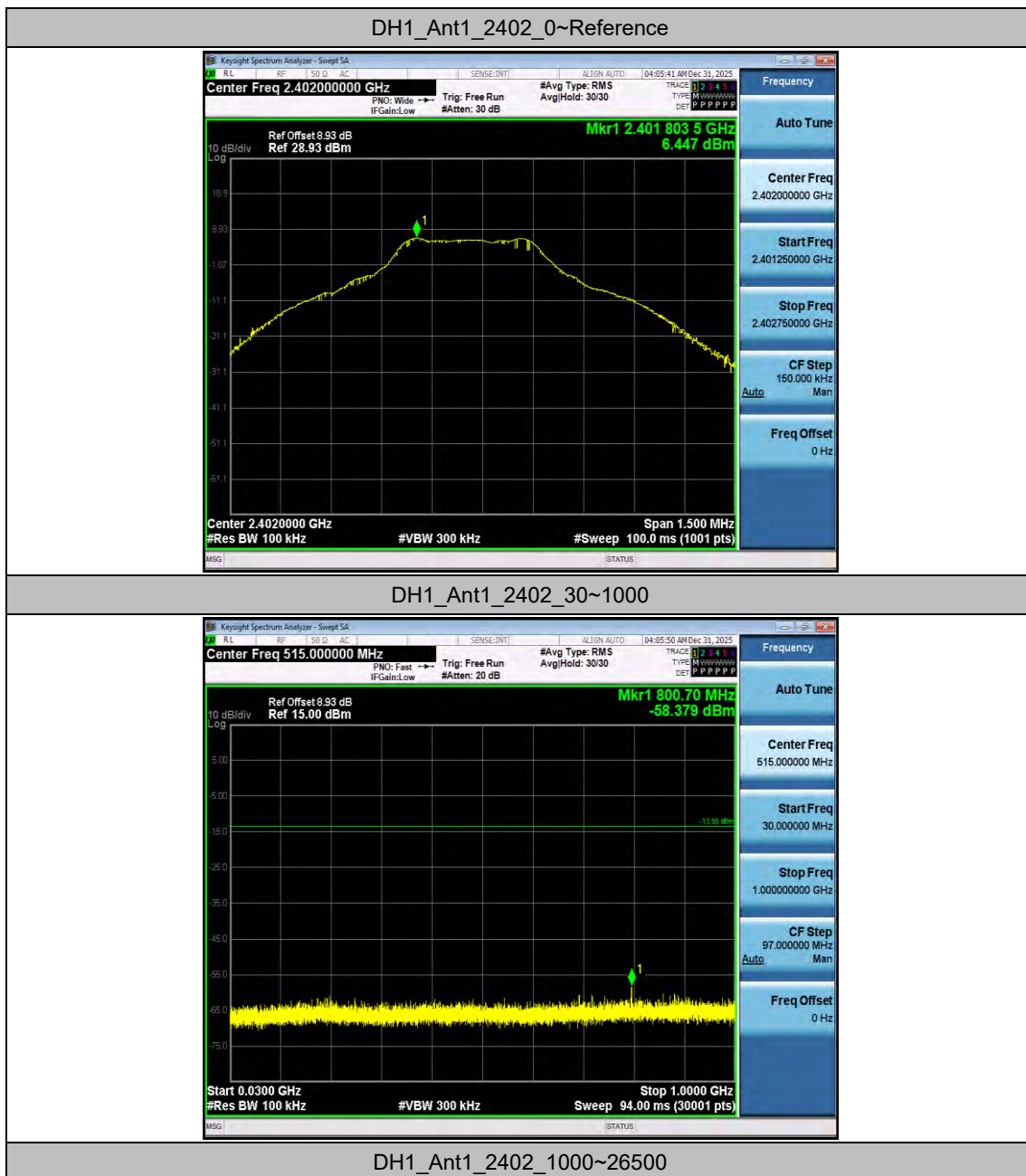


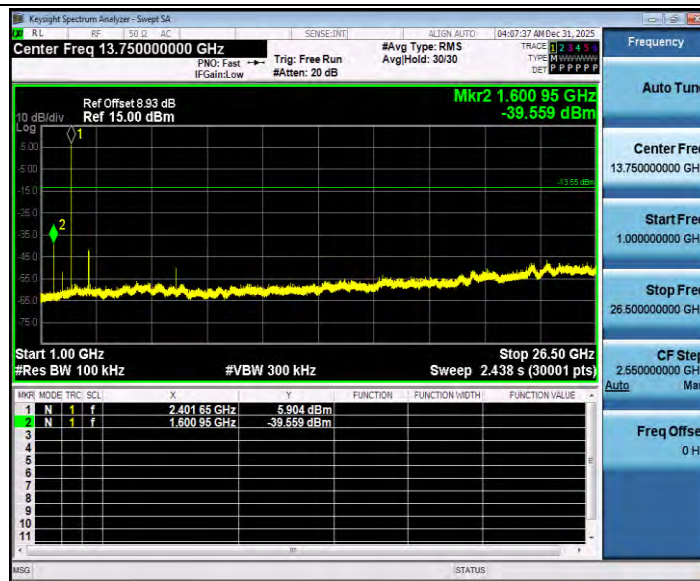
Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	6.45	6.45	---	PASS
			30~1000	6.45	-58.38	≤-13.55	PASS
			1000~26500	6.45	-39.56	≤-13.55	PASS
		2441	Reference	7.53	7.53	---	PASS
			30~1000	7.53	-58.21	≤-12.47	PASS
			1000~26500	7.53	-39.4	≤-12.47	PASS
		2480	Reference	7.42	7.42	---	PASS
			30~1000	7.42	-57.71	≤-12.58	PASS
			1000~26500	7.42	-39.3	≤-12.58	PASS
2DH1	Ant1	2402	Reference	3.17	3.17	---	PASS
			30~1000	3.17	-60.13	≤-16.83	PASS
			1000~26500	3.17	-43.02	≤-16.83	PASS
		2441	Reference	4.23	4.23	---	PASS
			30~1000	4.23	-60.14	≤-15.77	PASS
			1000~26500	4.23	-43.57	≤-15.77	PASS
		2480	Reference	4.12	4.12	---	PASS
			30~1000	4.12	-60.42	≤-15.88	PASS
			1000~26500	4.12	-42.8	≤-15.88	PASS
3DH1	Ant1	2402	Reference	3.31	3.31	---	PASS
			30~1000	3.31	-58.07	≤-16.69	PASS
			1000~26500	3.31	-43.37	≤-16.69	PASS
		2441	Reference	4.38	4.38	---	PASS
			30~1000	4.38	-59.67	≤-15.62	PASS
			1000~26500	4.38	-43.2	≤-15.62	PASS
		2480	Reference	4.28	4.28	---	PASS
			30~1000	4.28	-60.1	≤-15.72	PASS
			1000~26500	4.28	-42.13	≤-15.72	PASS

Test Graphs

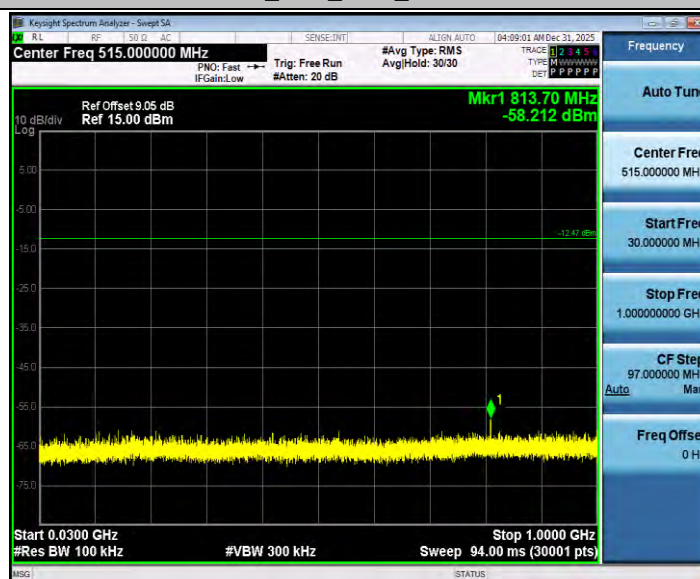




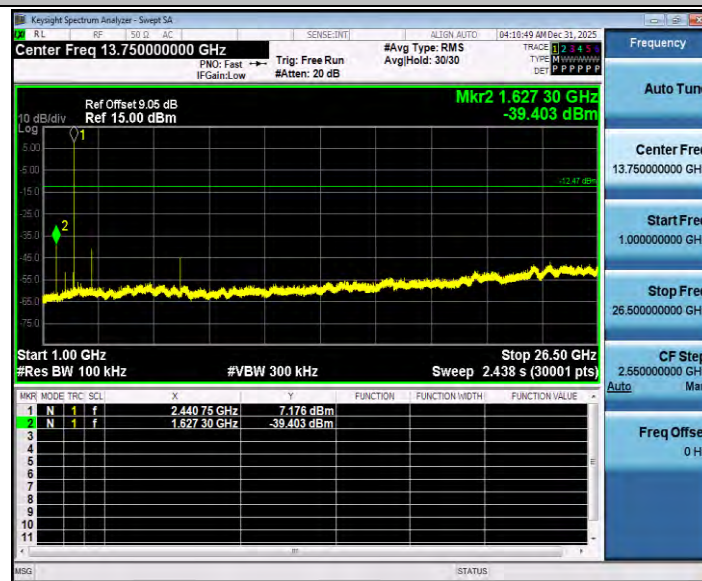
DH1_Ant1_2441_0~Reference



DH1_Ant1_2441_30~1000



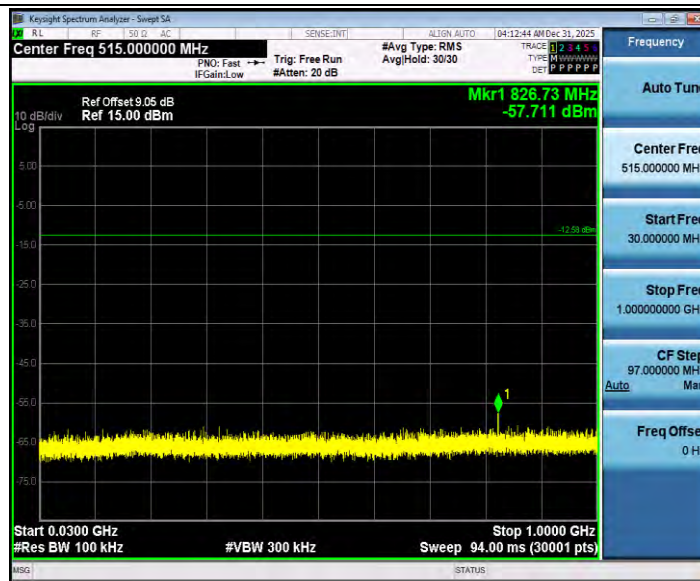
DH1_Ant1_2441_1000~26500



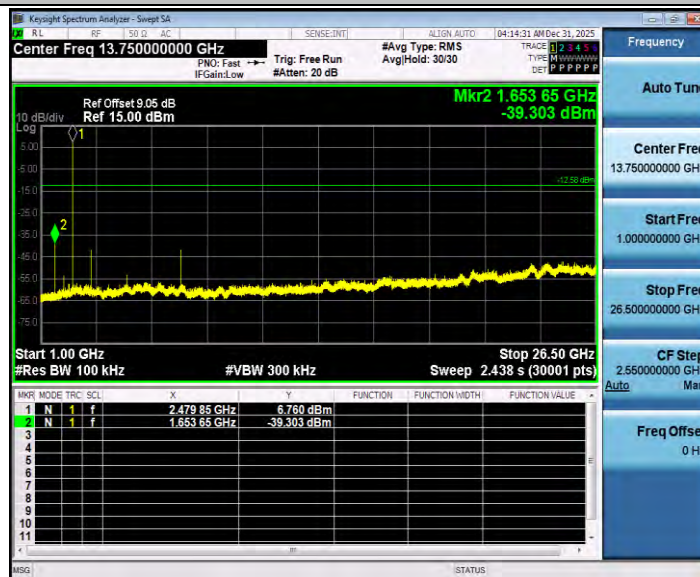
DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000

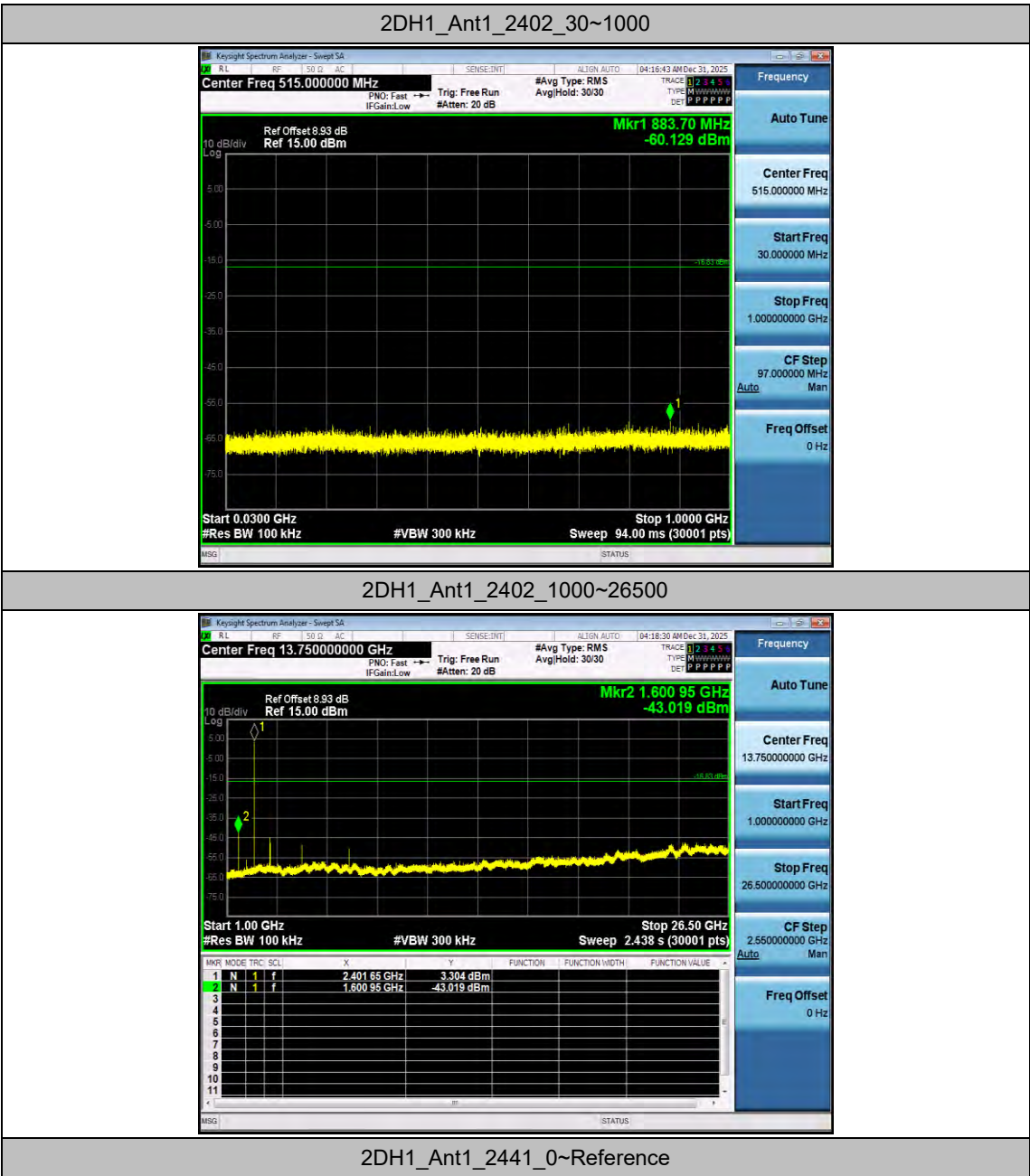


DH1_Ant1_2480_1000~26500



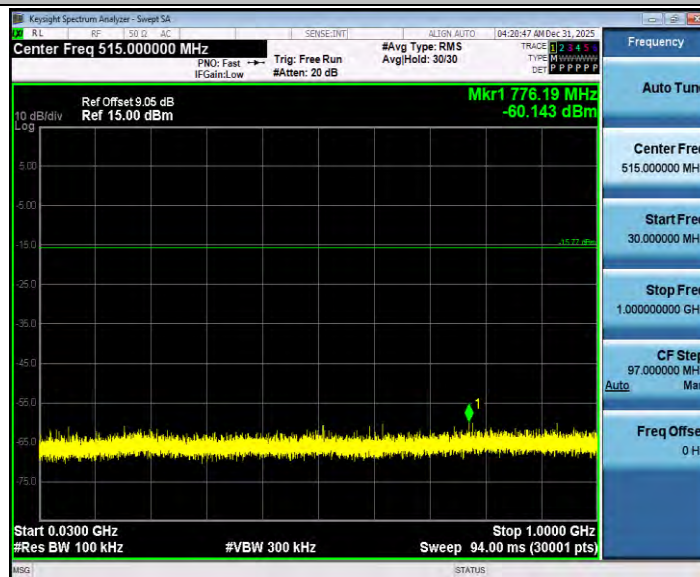
2DH1_Ant1_2402_0~Reference







2DH1_Ant1_2441_30~1000



2DH1_Ant1_2441_1000~26500



2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



2DH1_Ant1_2480_1000~26500

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 8.93 dB
Ref 28.93 dBm

Mkr1 2.4018020 GHz
3.309 dBm

Center Freq 2.40200000 GHz

Start Freq 2.401250000 GHz

Stop Freq 2.402750000 GHz

CF Step 150.000 kHz

Auto Man

Freq Offset 0 Hz

Center 2.4020000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 1.500 MHz

#Sweep 100.0 ms (1001 pts)

The screenshot displays a Keysight Spectrum Analyzer interface. The main plot area shows a spectrum with a noise floor around -65 dBm and a small signal peak at 725.30 MHz. The interface includes several control panels and a status bar.

Top Panel:

- Keysight Spectrum Analyzer - Swept SA
- SENSE: INT
- ALIGN: AUTO
- 04:28:23 AM Dec 31, 2025

Control Panels:

- Center Freq:** 515.000000 MHz
- Ref Offset:** 8.93 dB
- Ref:** 15.00 dBm
- Trig:** Free Run
- #Atten:** 20 dB
- #Avg Type:** RMS
- AvgHld:** 30/30
- Trace:** 1 2 3 4 5
- Type:** M W W W W W W
- Det:** P P P P P

Frequency Panel (Right):

- Auto Tune**
- Center Freq:** 515.000000 MHz
- Start Freq:** 30.000000 MHz
- Stop Freq:** 1.000000000 GHz
- CF Step:** 97.000000 MHz
- Auto** (selected)
- Man**
- Freq Offset:** 0 Hz

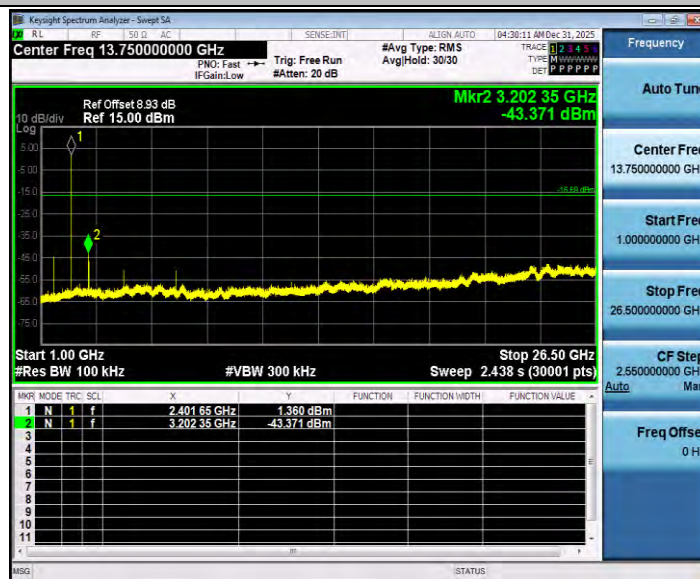
Plot Area:

- Y-axis: 10 dB/dlv, Log
- X-axis: Start 0.0300 GHz, Stop 1.0000 GHz
- Resolution Bandwidth (#Res BW): 100 kHz
- Video Bandwidth (#VBW): 300 kHz
- Sweep: 94.00 ms (30001 pts)
- Marker 1: 725.30 MHz, -58.074 dBm

Status Bar:

- MSG
- STATUS

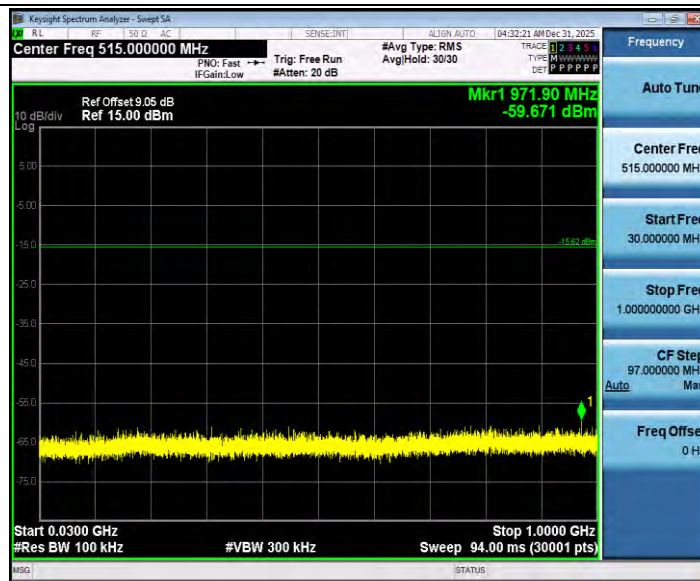
3DH1_Ant1_2402_1000~26500



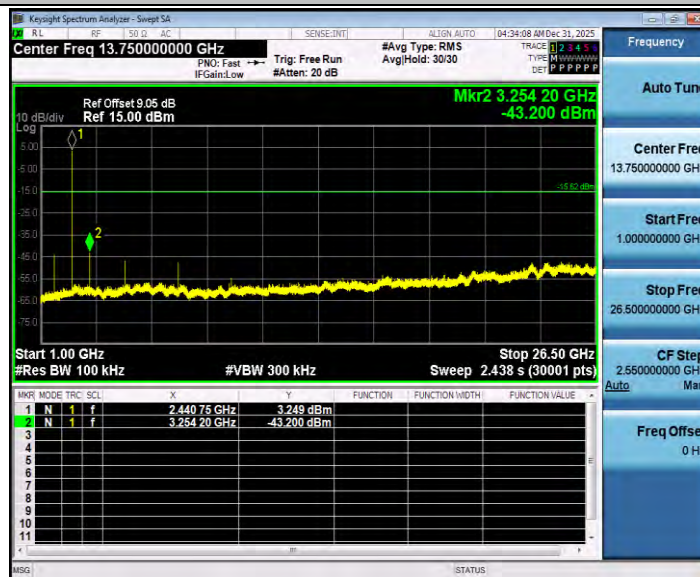
3DH1_Ant1_2441_0~Reference



3DH1_Ant1_2441_30~1000

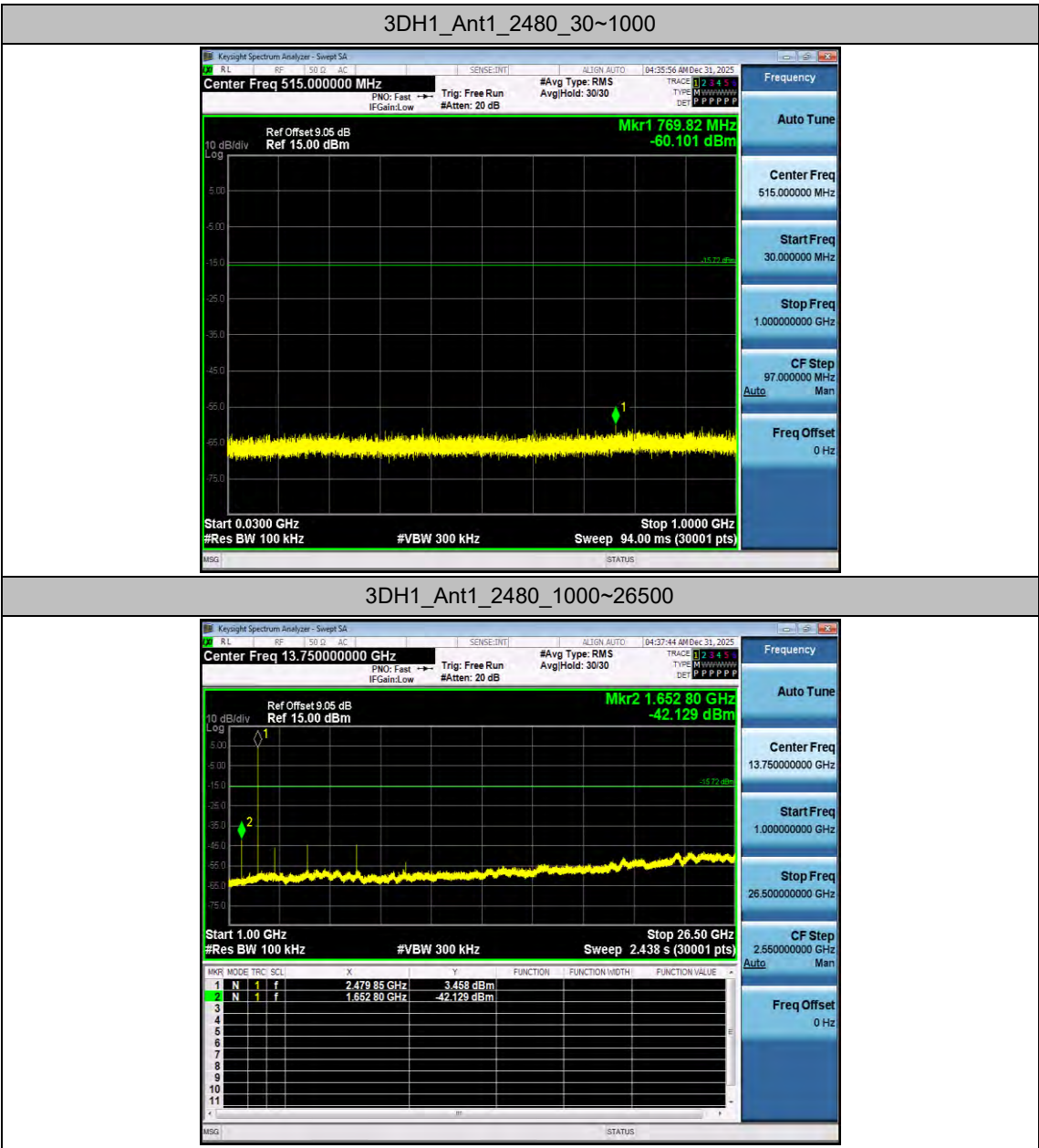


3DH1_Ant1_2441_1000~26500



3DH1_Ant1_2480_0~Reference





Appendix A.9: Emissions in Restricted Bands

Test Result

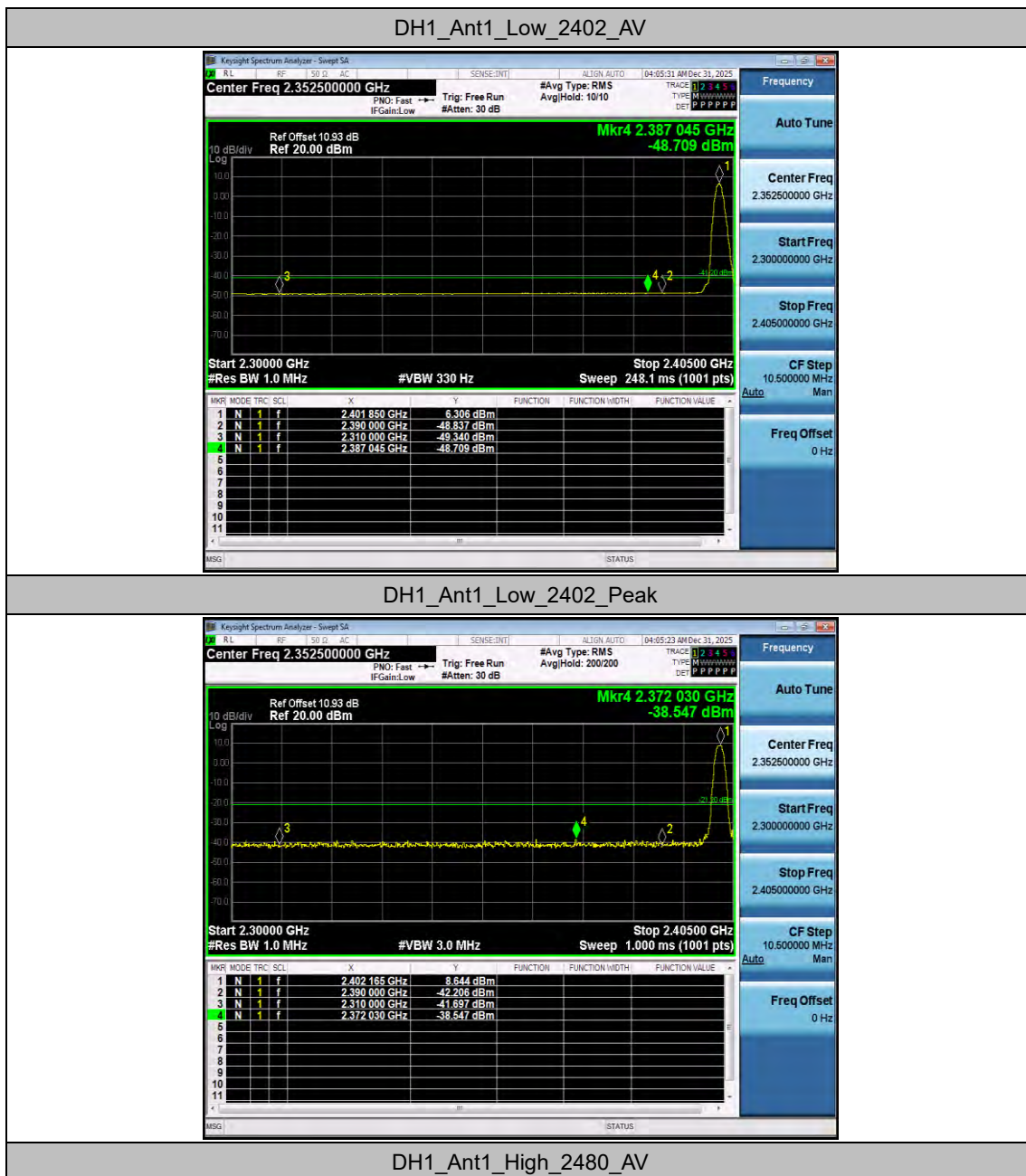
TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-49.34	≤-41.20	45.86	≤54	PASS
				AV	2387.045	-48.71	≤-41.20	46.49	≤54	PASS
				AV	2390.000	-48.84	≤-41.20	46.36	≤54	PASS
				Peak	2310.000	-41.7	≤-21.20	53.50	≤74	PASS
				Peak	2372.030	-38.55	≤-21.20	56.65	≤74	PASS
				Peak	2390.000	-42.21	≤-21.20	52.99	≤74	PASS
		High	2480	AV	2483.500	-46.8	≤-41.20	48.40	≤54	PASS
				AV	2483.520	-46.8	≤-41.20	48.40	≤54	PASS
				AV	2500.000	-48.61	≤-41.20	46.59	≤54	PASS
				Peak	2483.500	-39.87	≤-21.20	55.33	≤74	PASS
				Peak	2483.840	-37.2	≤-21.20	58.00	≤74	PASS
				Peak	2500.000	-40.47	≤-21.20	54.73	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.28	≤-41.20	45.92	≤54	PASS
				AV	2389.040	-48.78	≤-41.20	46.42	≤54	PASS
				AV	2390.000	-49.01	≤-41.20	46.19	≤54	PASS
				Peak	2310.000	-41.8	≤-21.20	53.40	≤74	PASS
				Peak	2376.755	-37.48	≤-21.20	57.72	≤74	PASS
				Peak	2390.000	-41.32	≤-21.20	53.88	≤74	PASS
		High	2480	AV	2483.500	-46.73	≤-41.20	48.47	≤54	PASS
				AV	2483.520	-46.73	≤-41.20	48.47	≤54	PASS
				AV	2500.000	-48.7	≤-41.20	46.50	≤54	PASS
				Peak	2483.500	-37.81	≤-21.20	57.39	≤74	PASS
				Peak	2483.520	-37.81	≤-21.20	57.39	≤74	PASS
				Peak	2500.000	-40.34	≤-21.20	54.86	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.25	≤-41.20	45.95	≤54	PASS
				AV	2385.470	-48.76	≤-41.20	46.44	≤54	PASS
				AV	2390.000	-49.03	≤-41.20	46.17	≤54	PASS
				Peak	2310.000	-40.46	≤-21.20	54.74	≤74	PASS
				Peak	2355.020	-38.43	≤-21.20	56.77	≤74	PASS
				Peak	2390.000	-41.59	≤-21.20	53.61	≤74	PASS
		High	2480	AV	2483.500	-47.19	≤-41.20	48.01	≤54	PASS
				AV	2483.520	-47.19	≤-41.20	48.01	≤54	PASS
				AV	2500.000	-48.59	≤-41.20	46.61	≤54	PASS
				Peak	2483.500	-40.19	≤-21.20	55.01	≤74	PASS
				Peak	2499.360	-38.85	≤-21.20	56.35	≤74	PASS

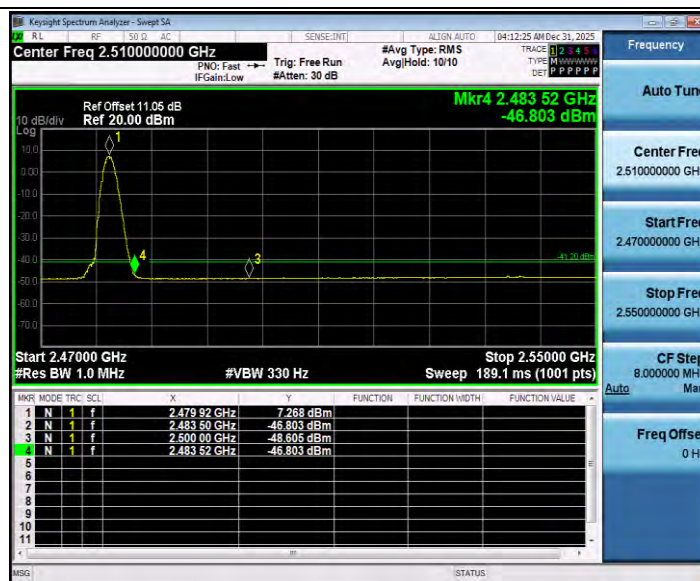
				Peak	2500.000	-42.28	≤-21.20	52.92	≤74	PASS
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Note:

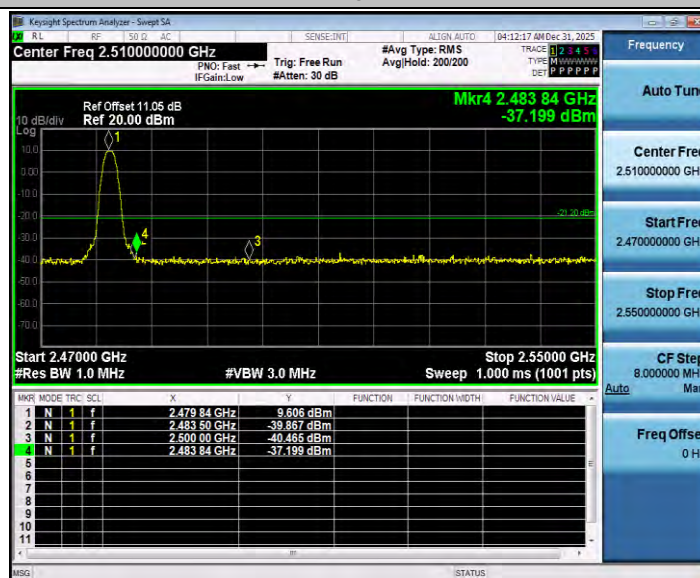
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

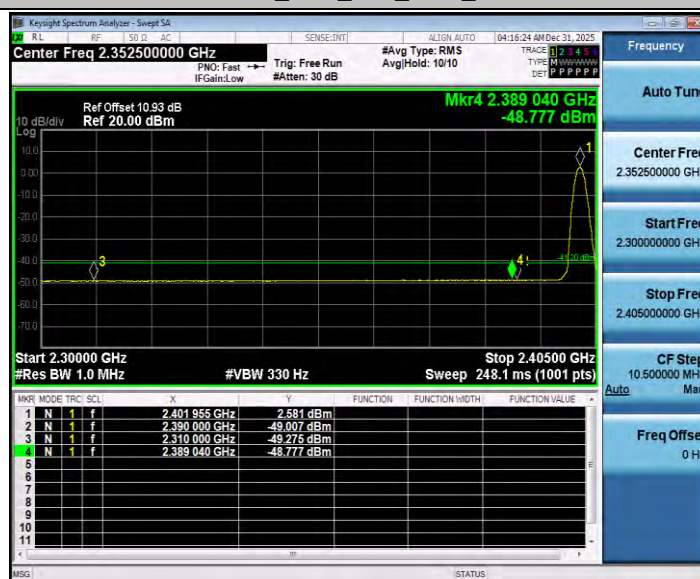


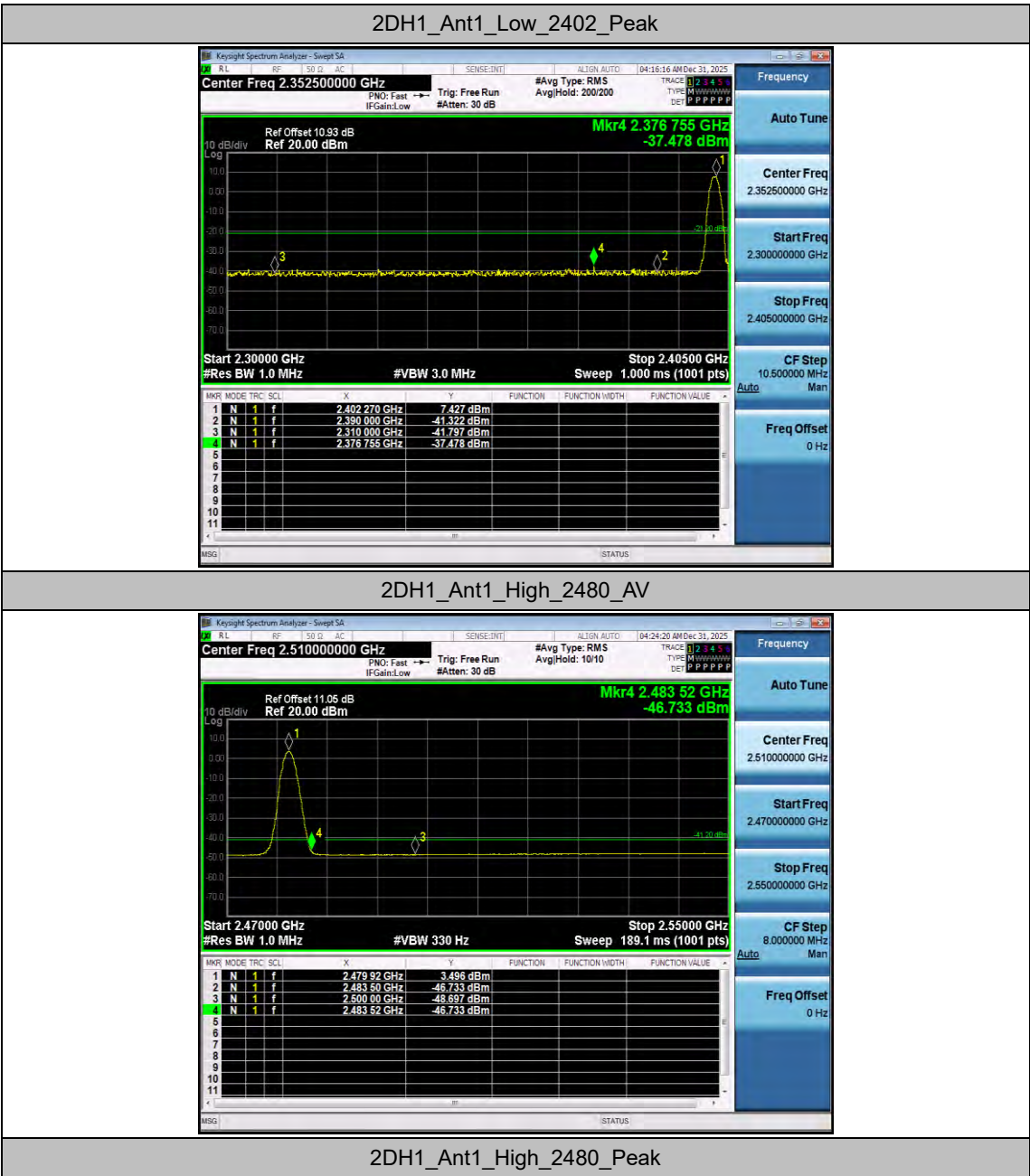


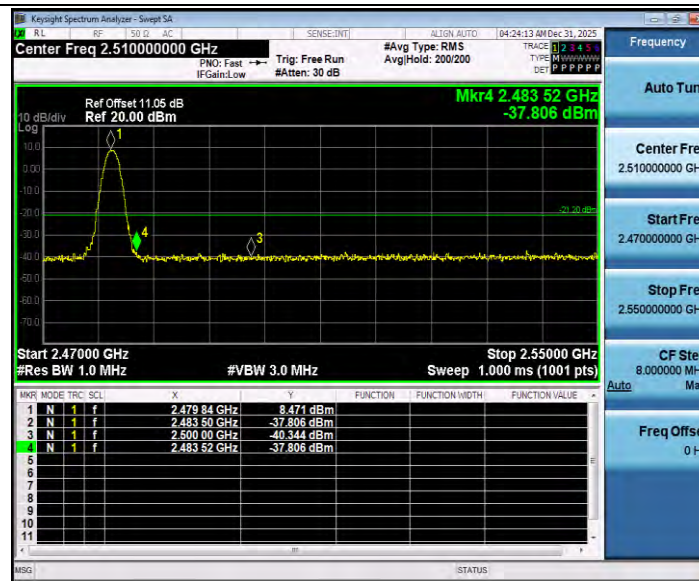
DH1_Ant1_High_2480_Peak



2DH1_Ant1_Low_2402_AV







3DH1_Ant1_Low_2402_AV



3DH1_Ant1_Low_2402_Peak

