

Appendix Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Wanbo Projector

Trade Mark: Wanbo

Test Model: WPC14

FCC ID: 2A7PI-WPC14

Environmental Conditions

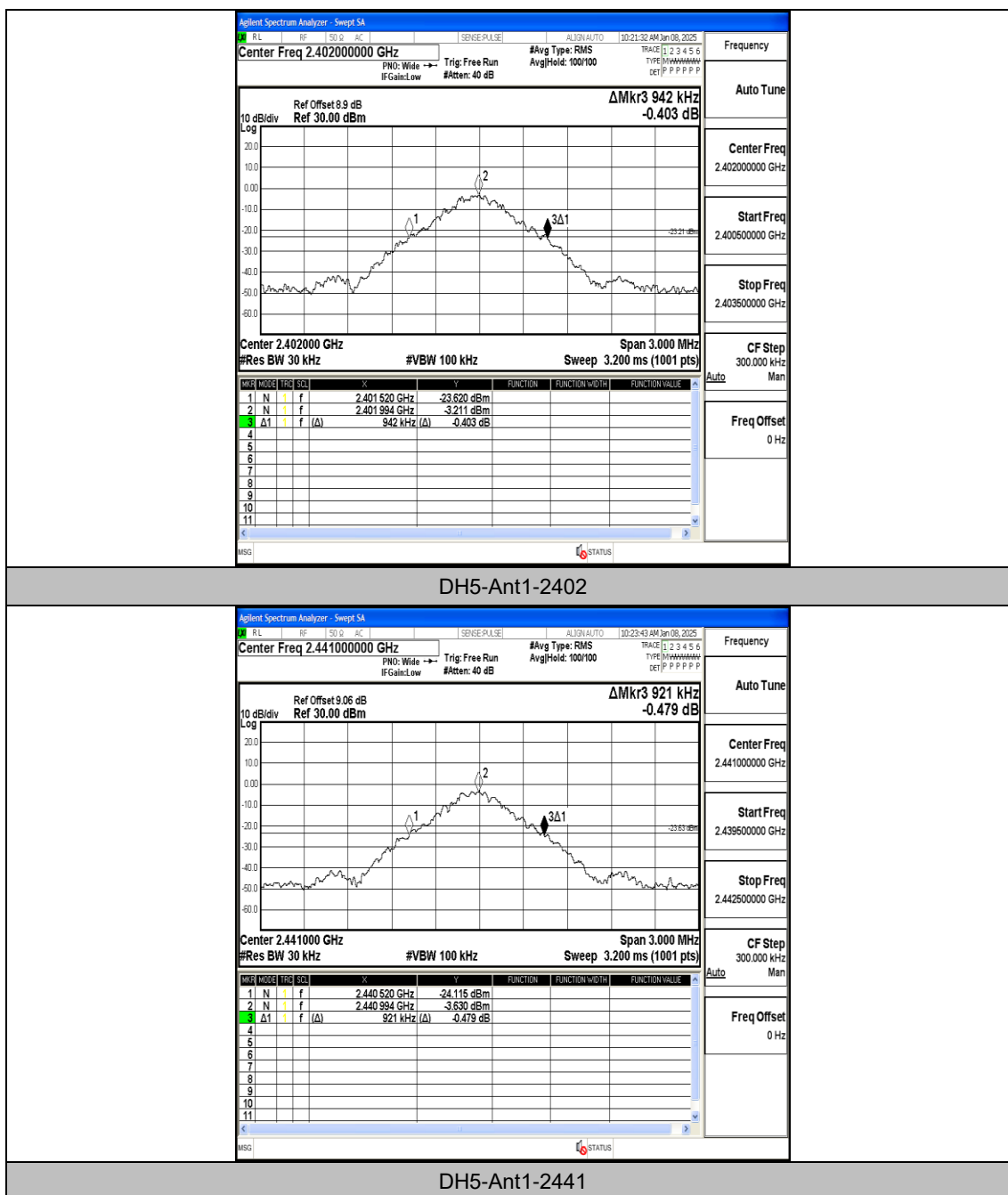
Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

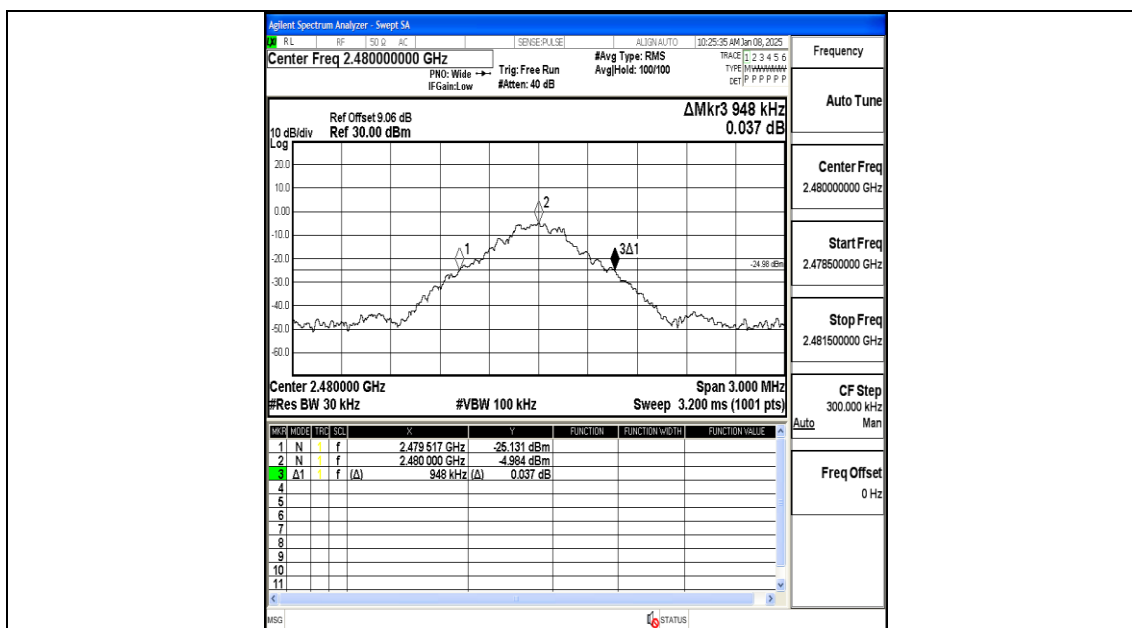
Appendix A: 20dB Emission Bandwidth

Test Result

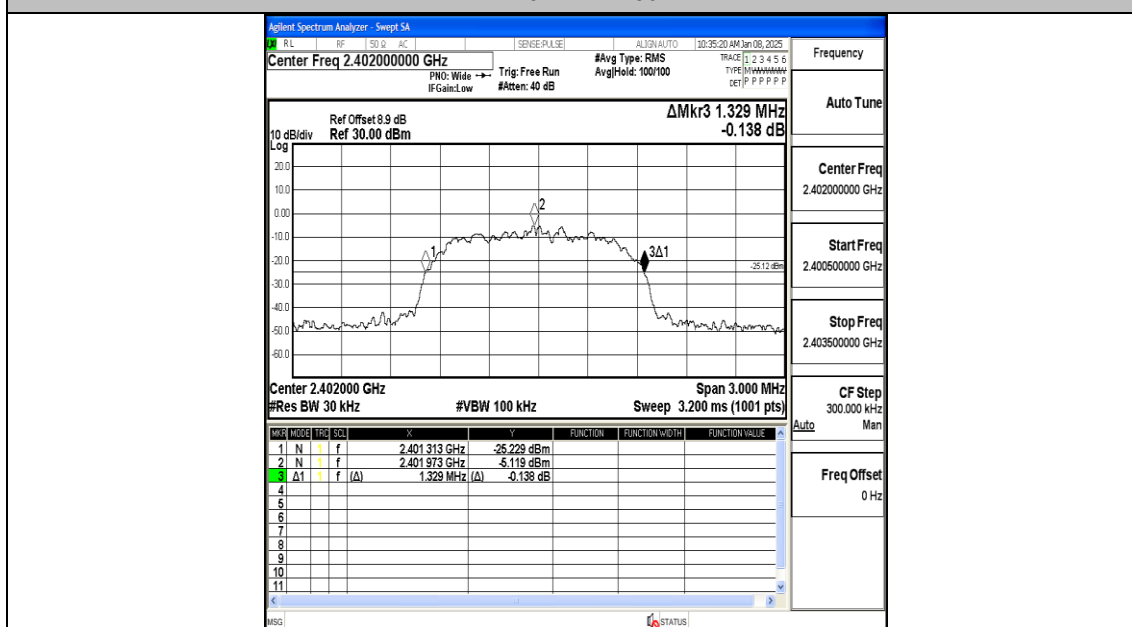
Test Mode	Antenna	Frequency [MHz]	20db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.942	2401.520	2402.462	---	---
DH5	Ant1	2441	0.921	2440.520	2441.441	---	---
DH5	Ant1	2480	0.948	2479.517	2480.465	---	---
2DH5	Ant1	2402	1.329	2401.313	2402.642	---	---
2DH5	Ant1	2441	1.326	2440.313	2441.639	---	---
2DH5	Ant1	2480	1.323	2479.316	2480.639	---	---
3DH5	Ant1	2402	1.311	2401.325	2402.636	---	---
3DH5	Ant1	2441	1.299	2440.328	2441.627	---	---
3DH5	Ant1	2480	1.308	2479.328	2480.636	---	---

Test Graphs

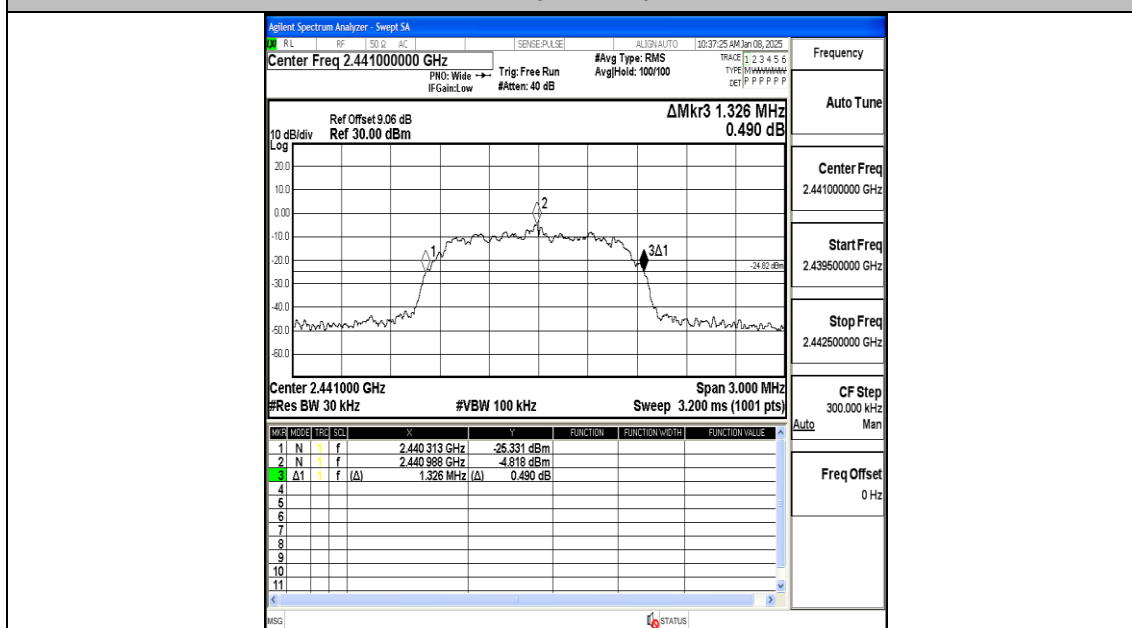




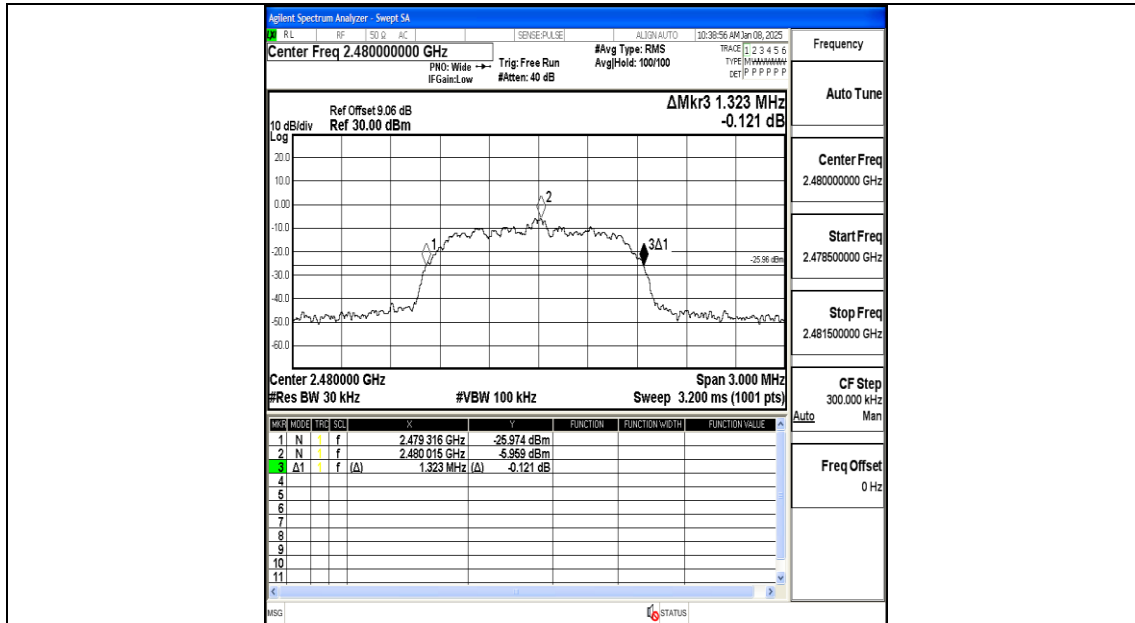
DH5-Ant1-2480



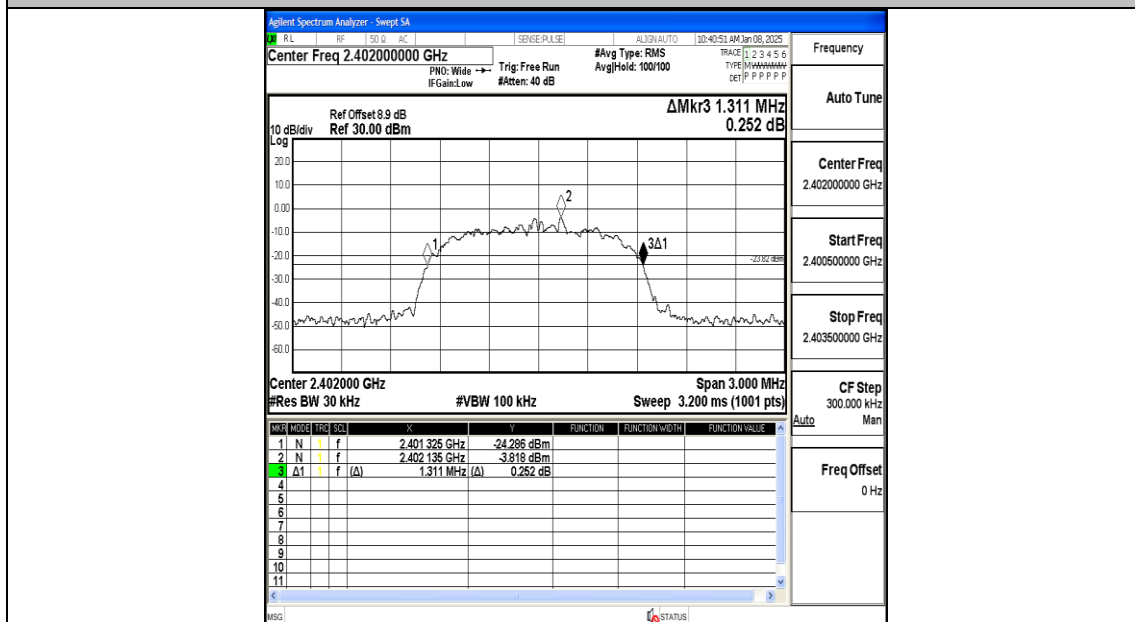
2DH5-Ant1-2402



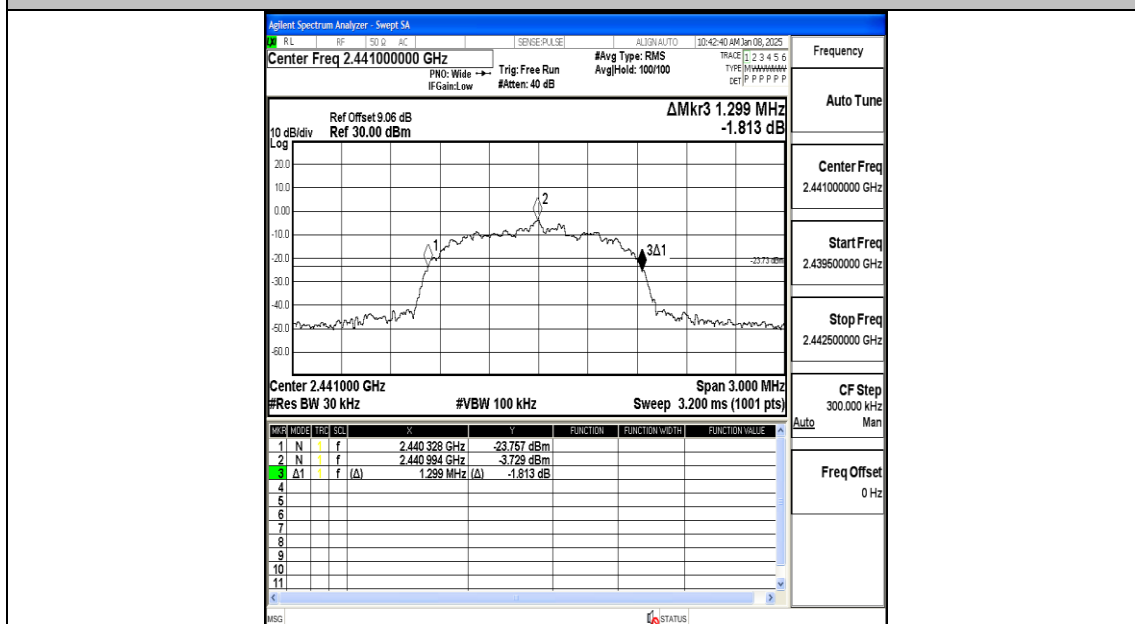
2DH5-Ant1-2441



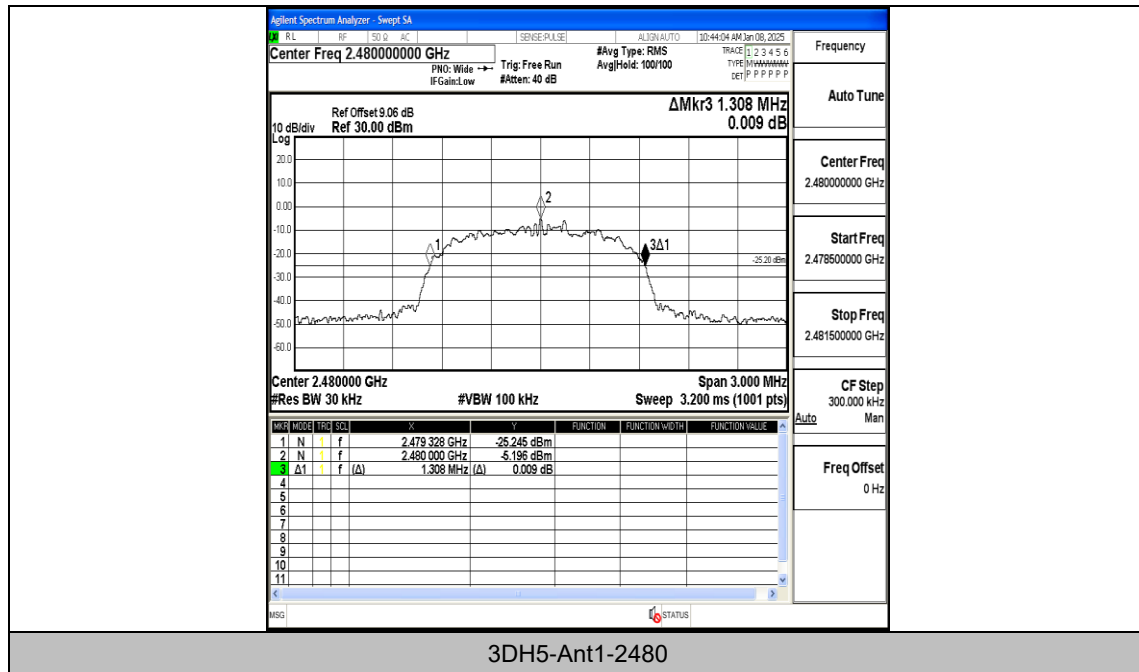
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441

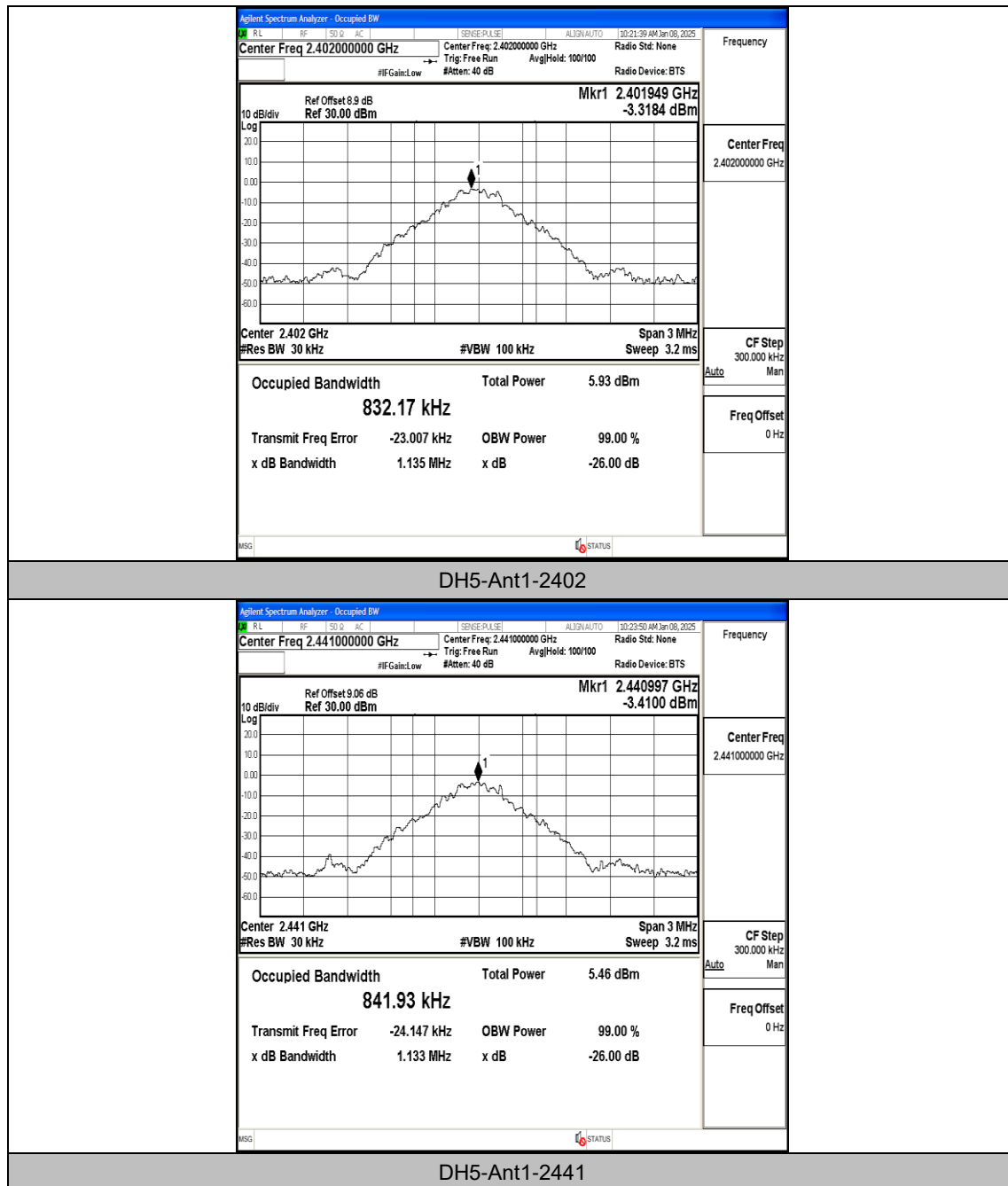


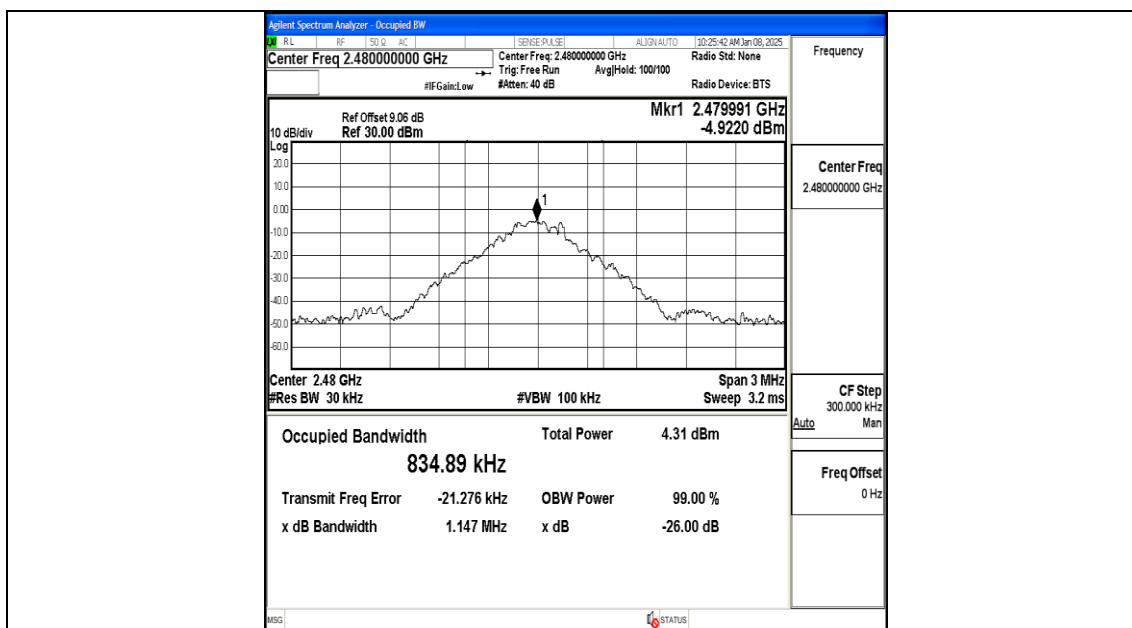
Appendix B: Occupied Channel Bandwidth

Test Result

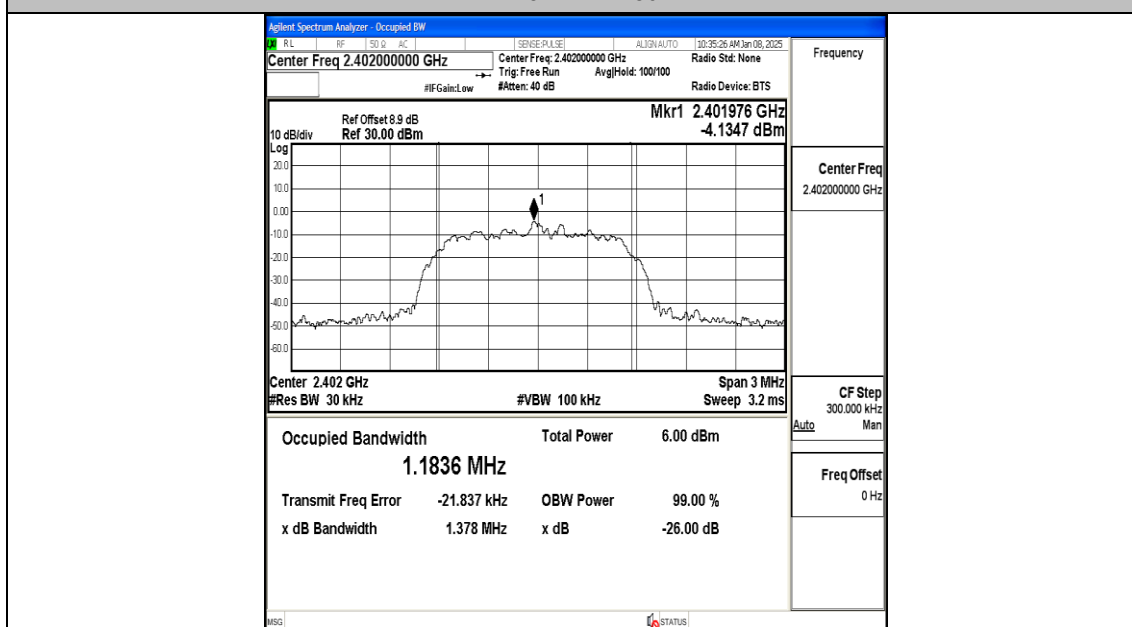
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.83217	2401.5609	2402.3931	---	---
DH5	Ant1	2441	0.84193	2440.5549	2441.3968	---	---
DH5	Ant1	2480	0.83489	2479.5613	2480.3962	---	---
2DH5	Ant1	2402	1.1836	2401.3864	2402.5700	---	---
2DH5	Ant1	2441	1.1924	2440.3811	2441.5735	---	---
2DH5	Ant1	2480	1.1902	2479.3845	2480.5747	---	---
3DH5	Ant1	2402	1.1914	2401.3833	2402.5747	---	---
3DH5	Ant1	2441	1.1884	2440.3830	2441.5714	---	---
3DH5	Ant1	2480	1.1913	2479.3843	2480.5756	---	---

Test Graphs

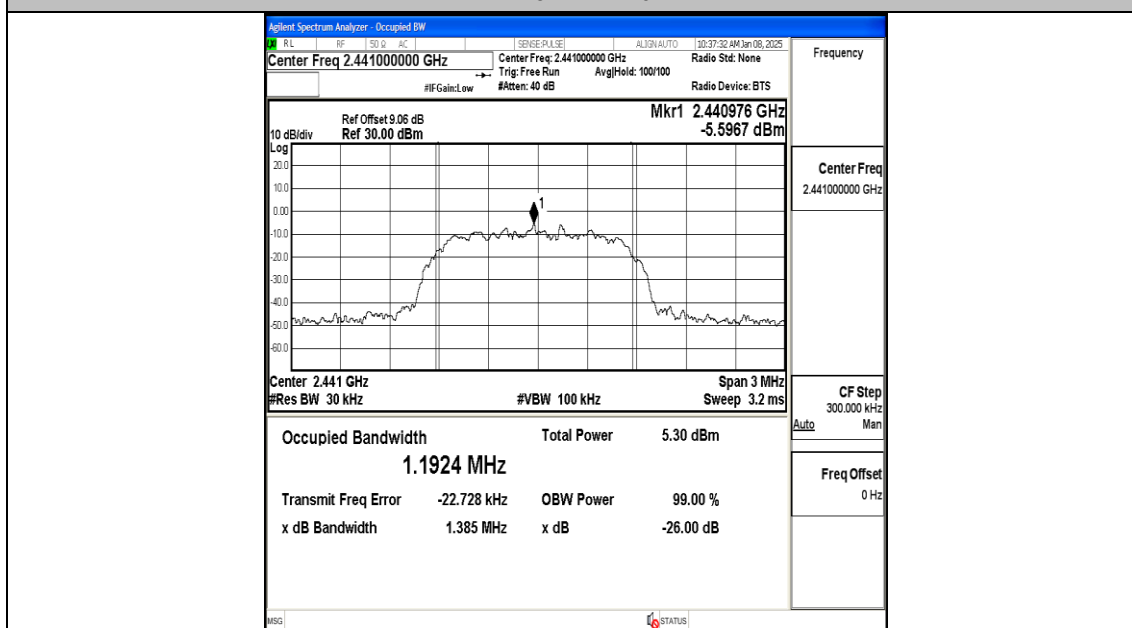




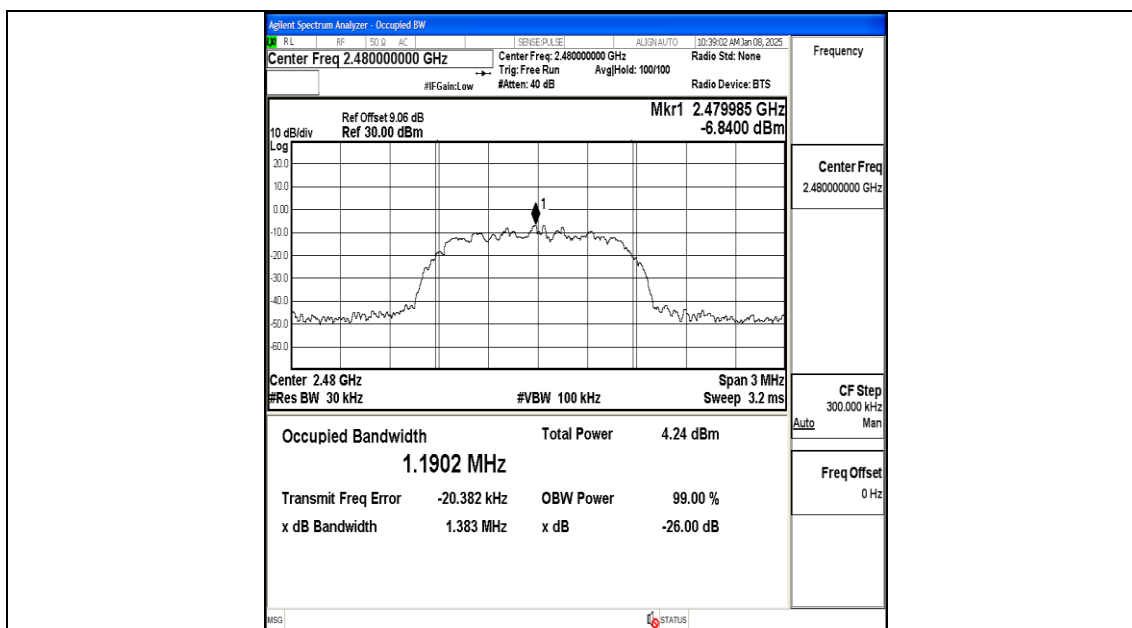
DH5-Ant1-2480



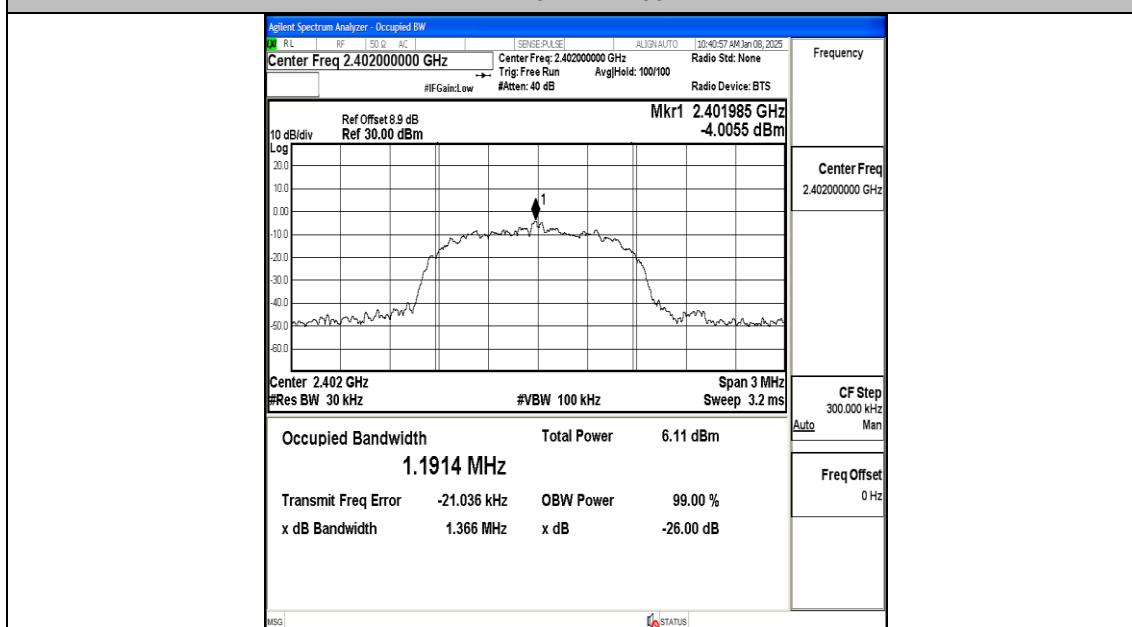
2DH5-Ant1-2402



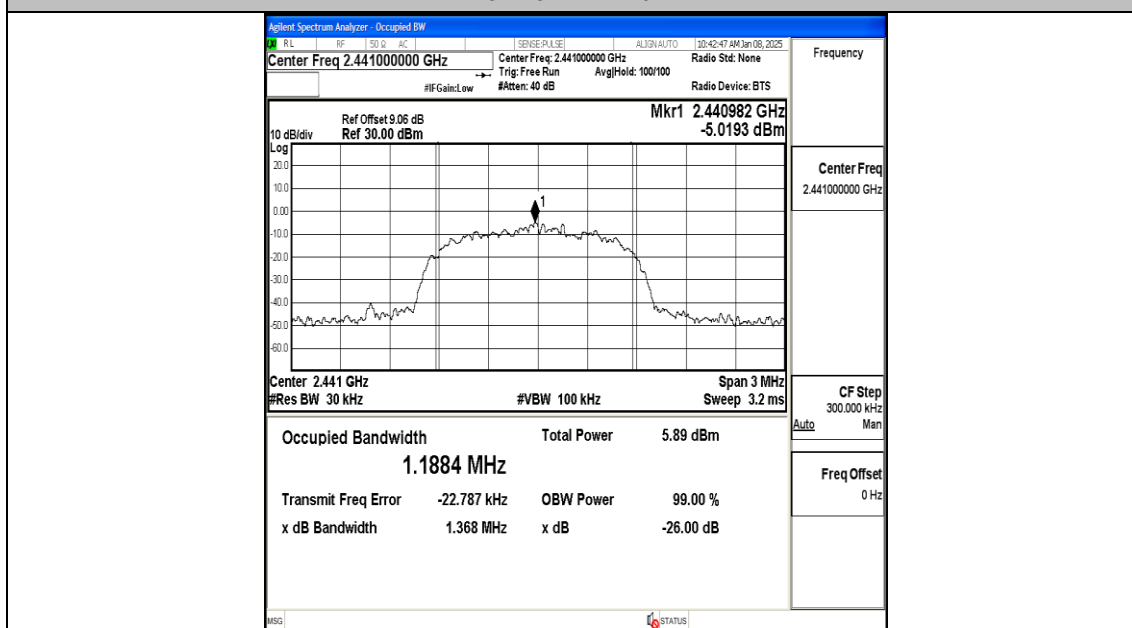
2DH5-Ant1-2441



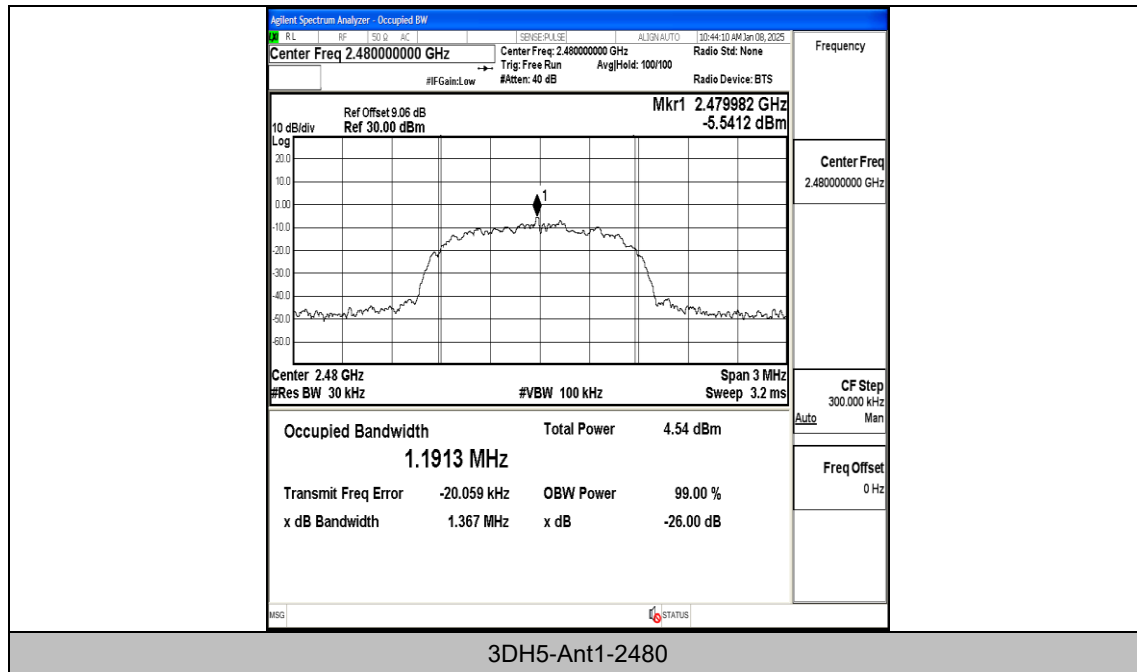
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441

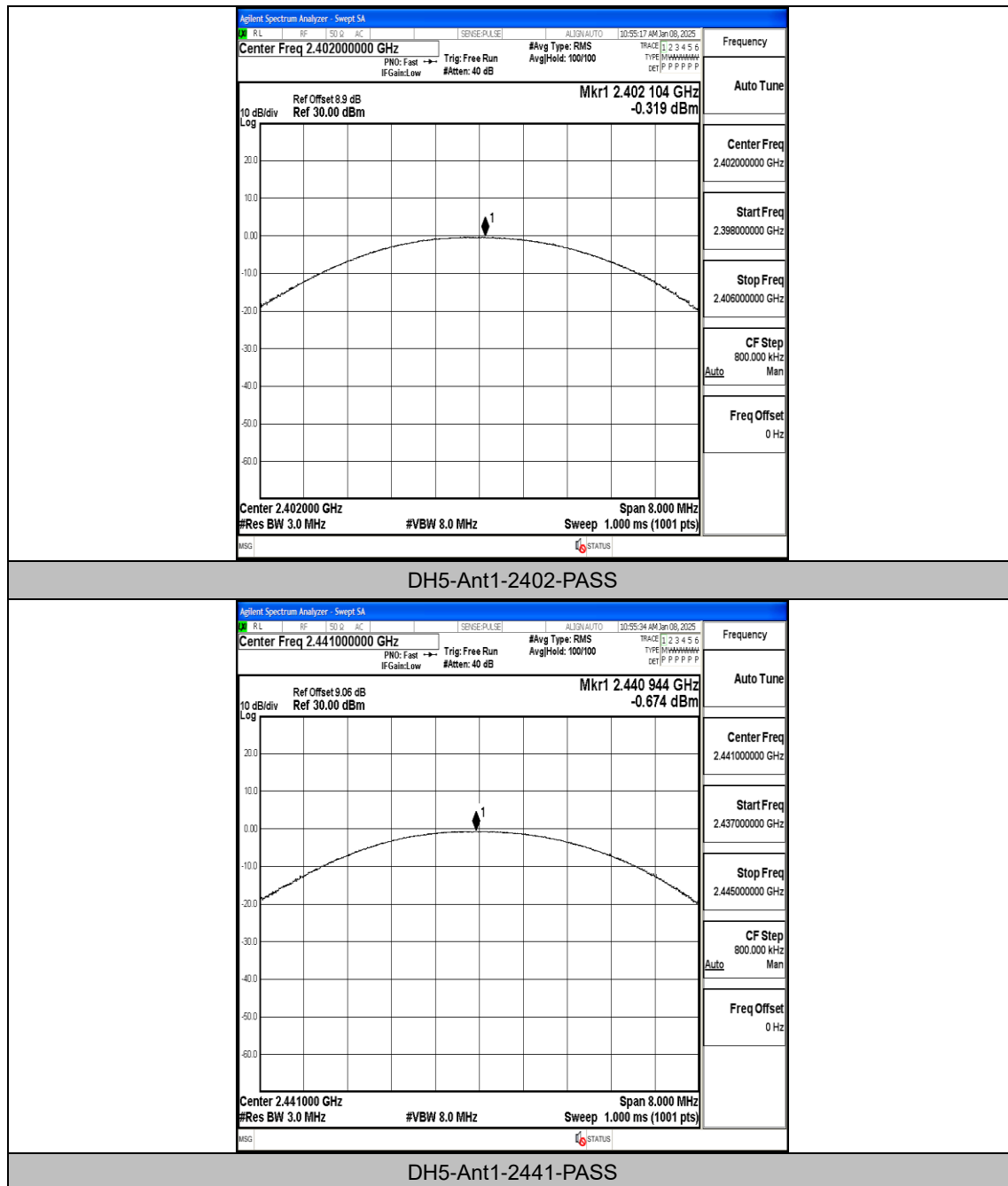


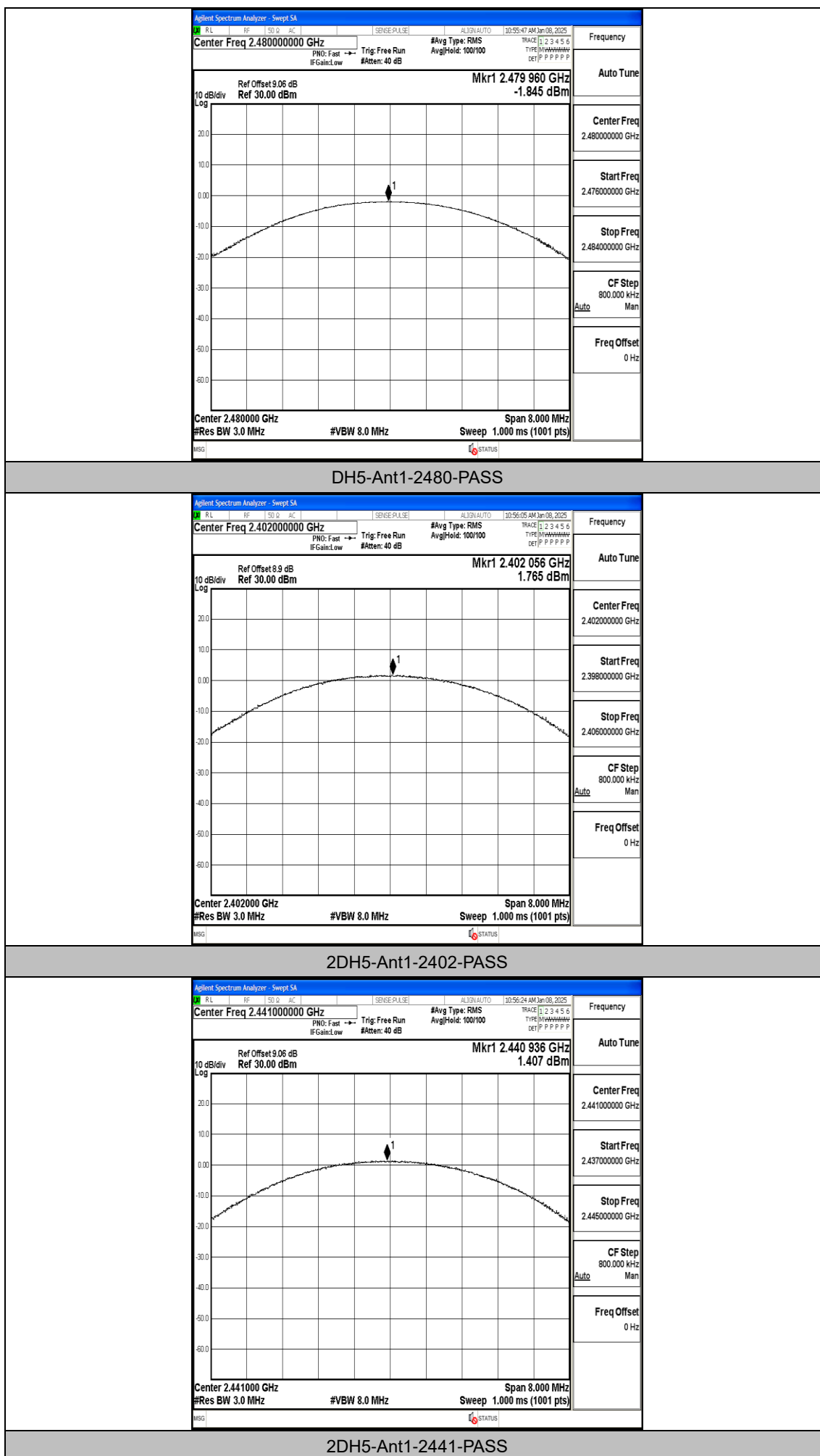
Appendix C: Maximum peak conducted output power

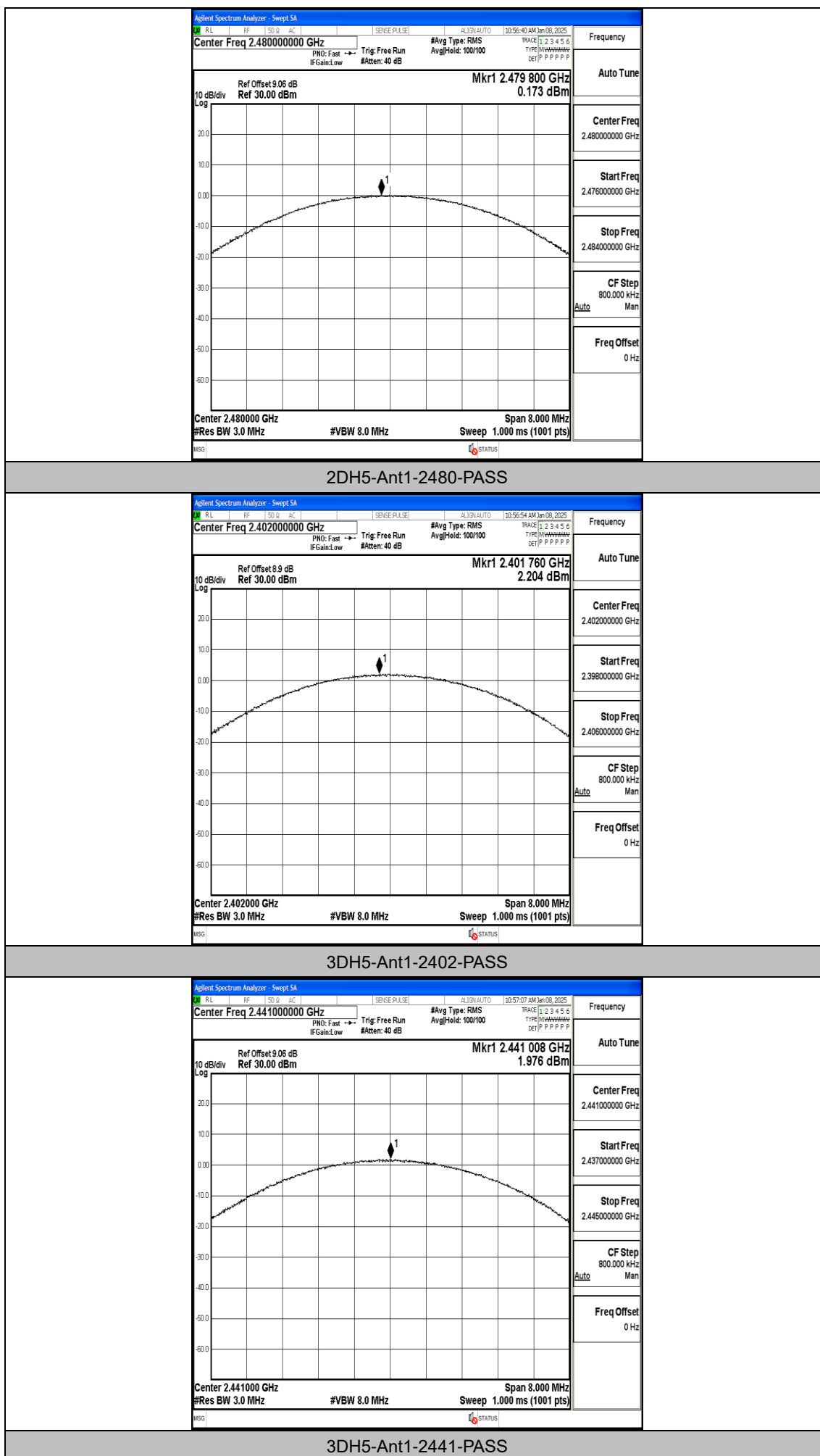
Test Result

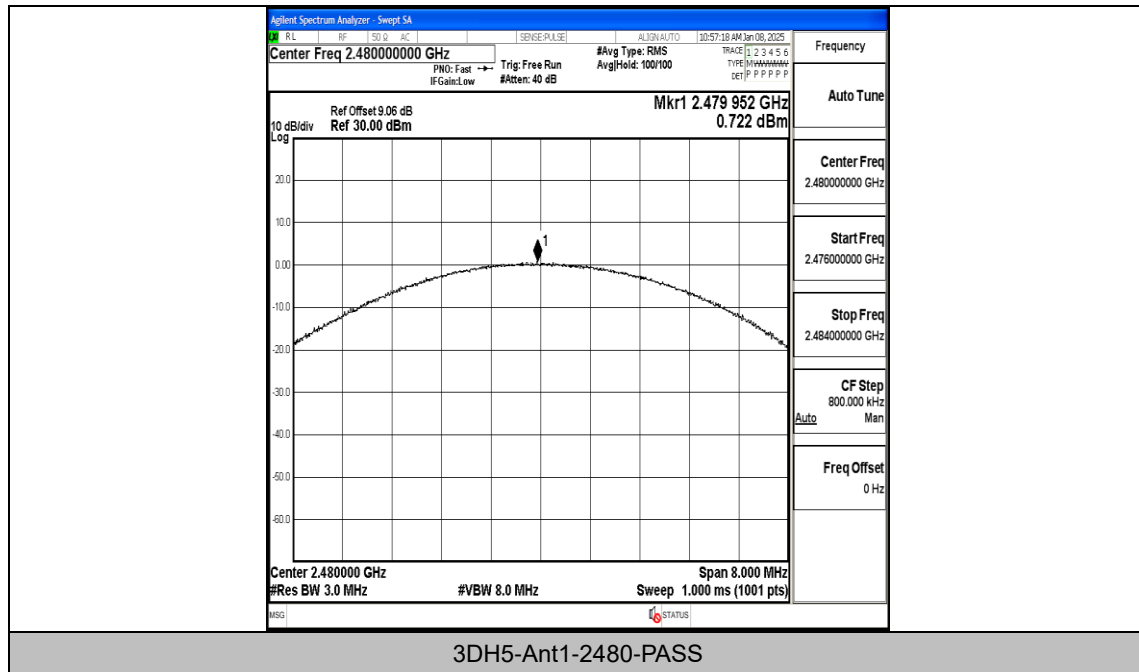
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	-0.32	≤30	PASS
DH5	Ant1	2441	-0.67	≤30	PASS
DH5	Ant1	2480	-1.85	≤30	PASS
2DH5	Ant1	2402	1.77	≤20.97	PASS
2DH5	Ant1	2441	1.41	≤20.97	PASS
2DH5	Ant1	2480	0.17	≤20.97	PASS
3DH5	Ant1	2402	2.20	≤20.97	PASS
3DH5	Ant1	2441	1.98	≤20.97	PASS
3DH5	Ant1	2480	0.72	≤20.97	PASS

Test Graphs







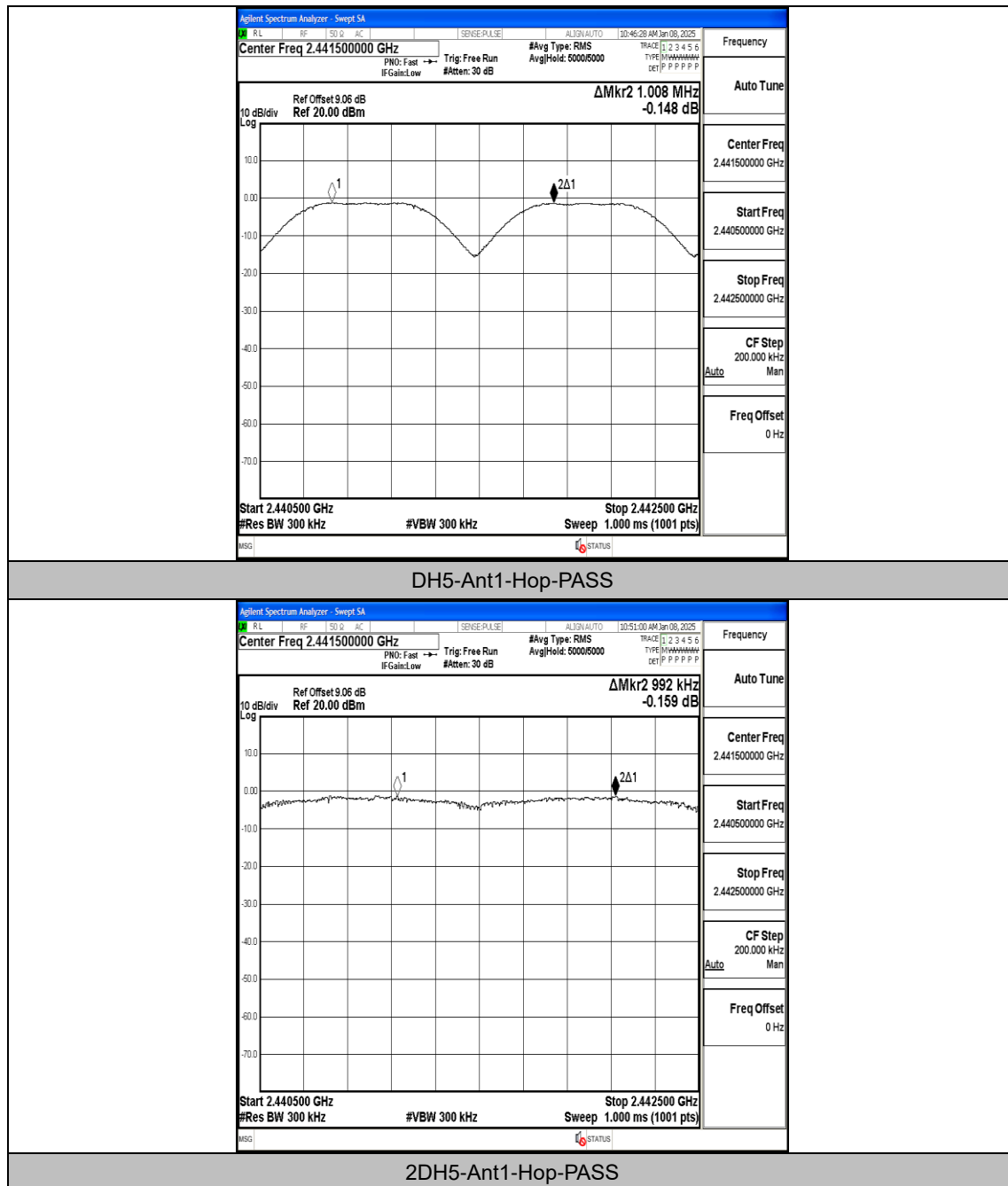


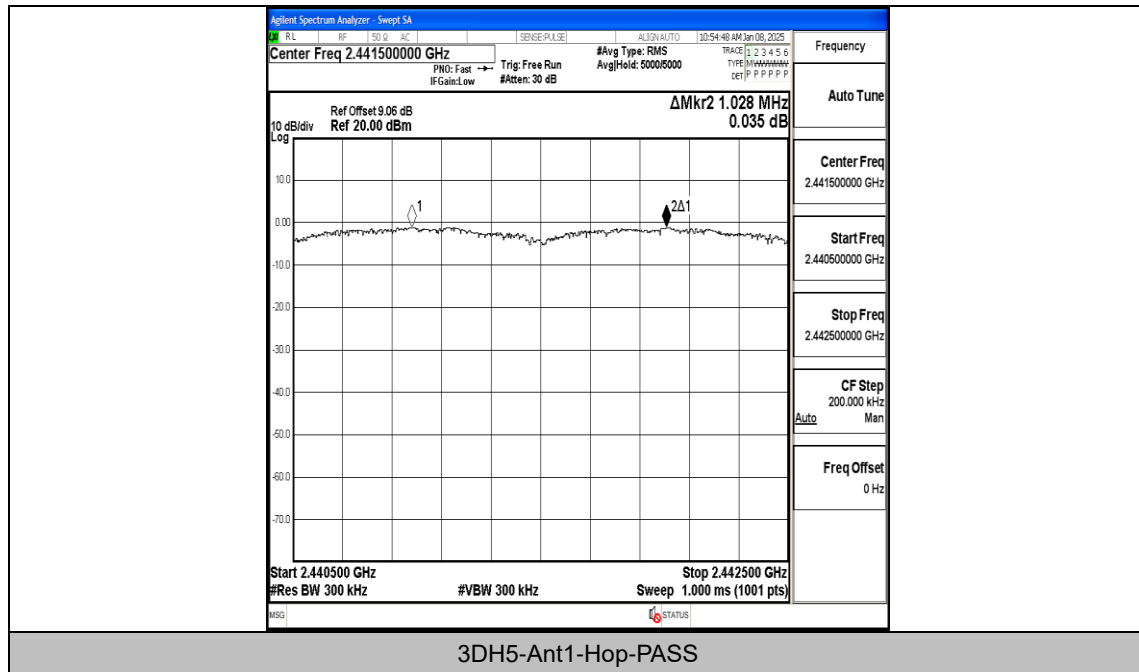
Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	1.008	≥ 0.948	PASS
2DH5	Ant1	Hop	0.992	≥ 0.886	PASS
3DH5	Ant1	Hop	1.028	≥ 0.874	PASS

Test Graphs



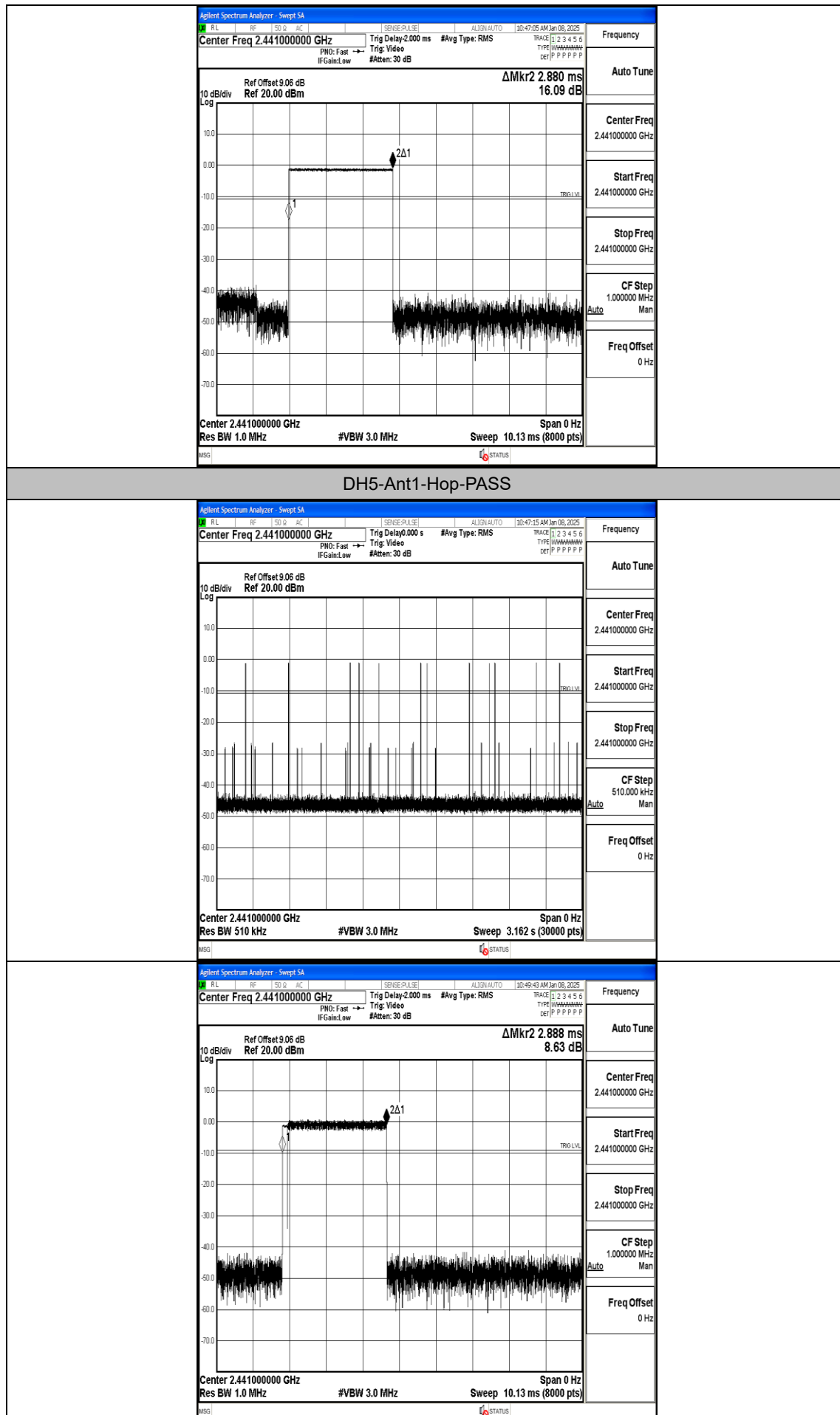


Appendix E: Time of occupancy

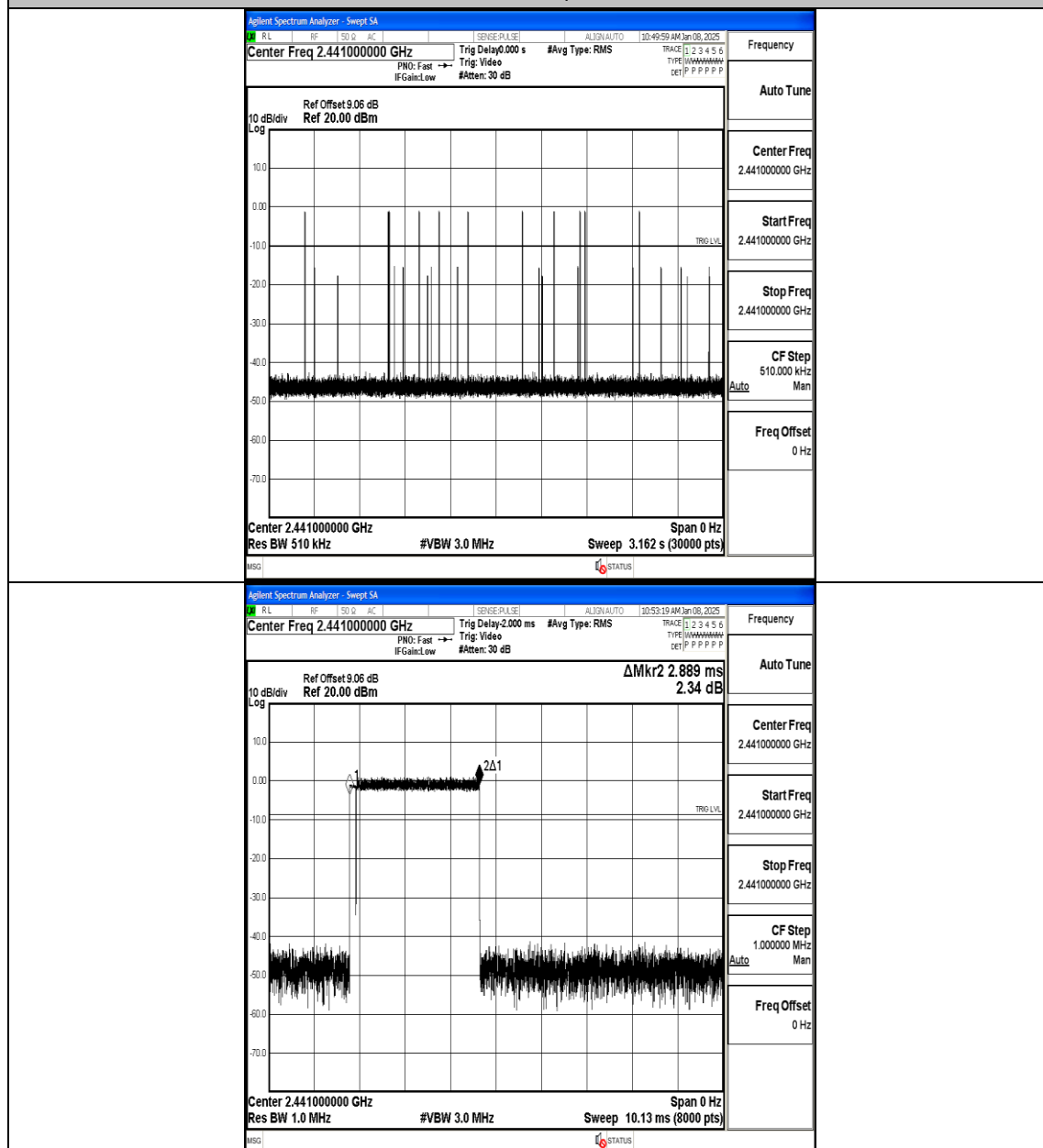
Test Result

Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.880	130	0.374	≤0.4	PASS
2DH5	Ant1	Hop	2.888	120	0.347	≤0.4	PASS
3DH5	Ant1	Hop	2.889	100	0.289	≤0.4	PASS

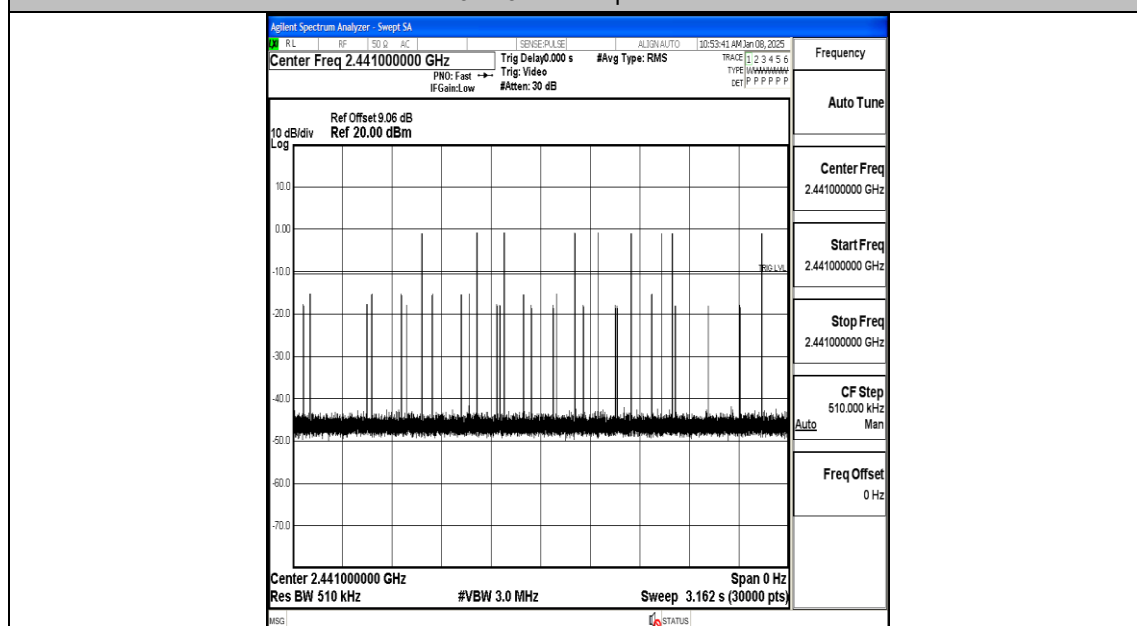
Test Graphs



2DH5-Ant1-Hop-PASS



3DH5-Ant1-Hop-PASS

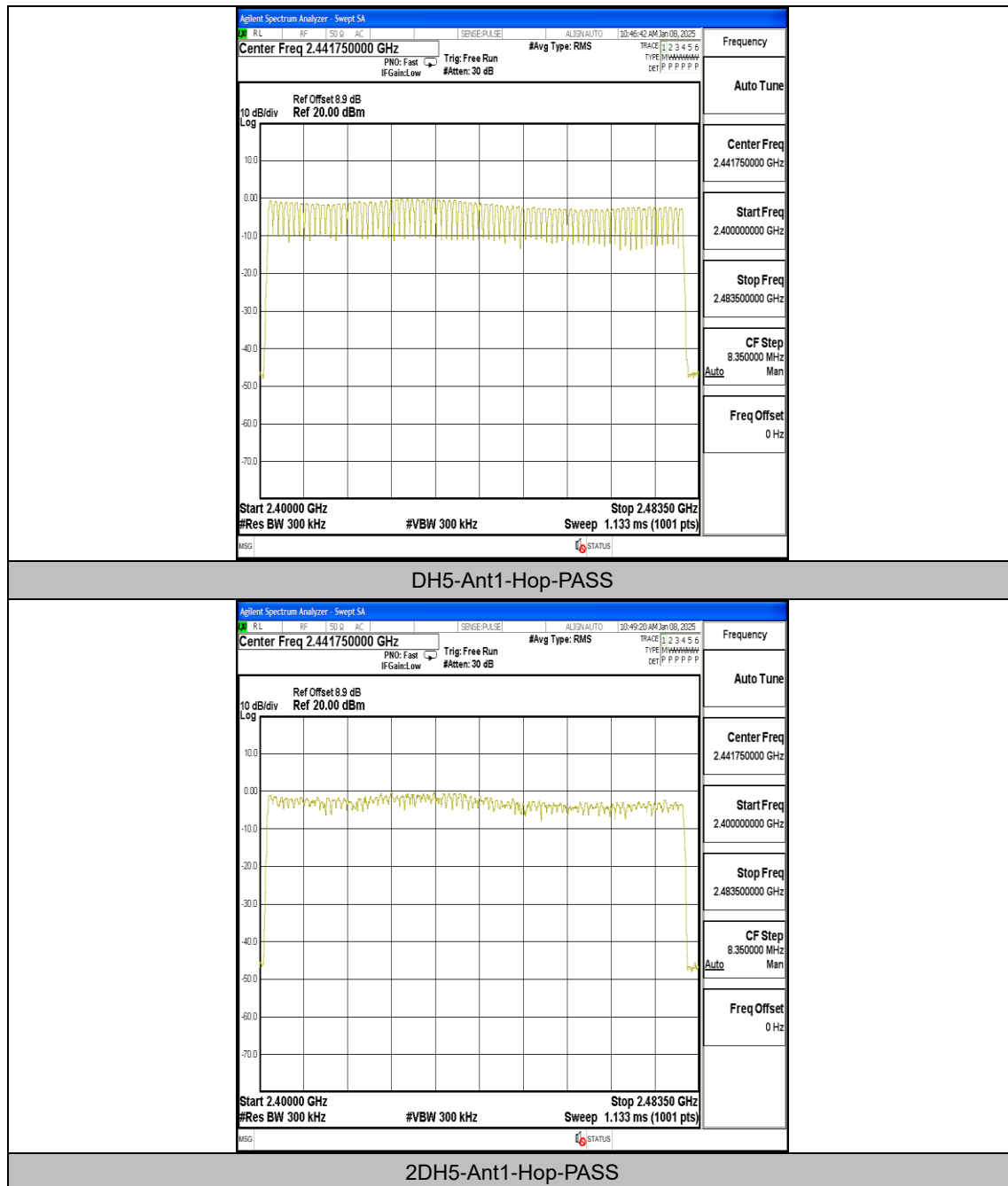


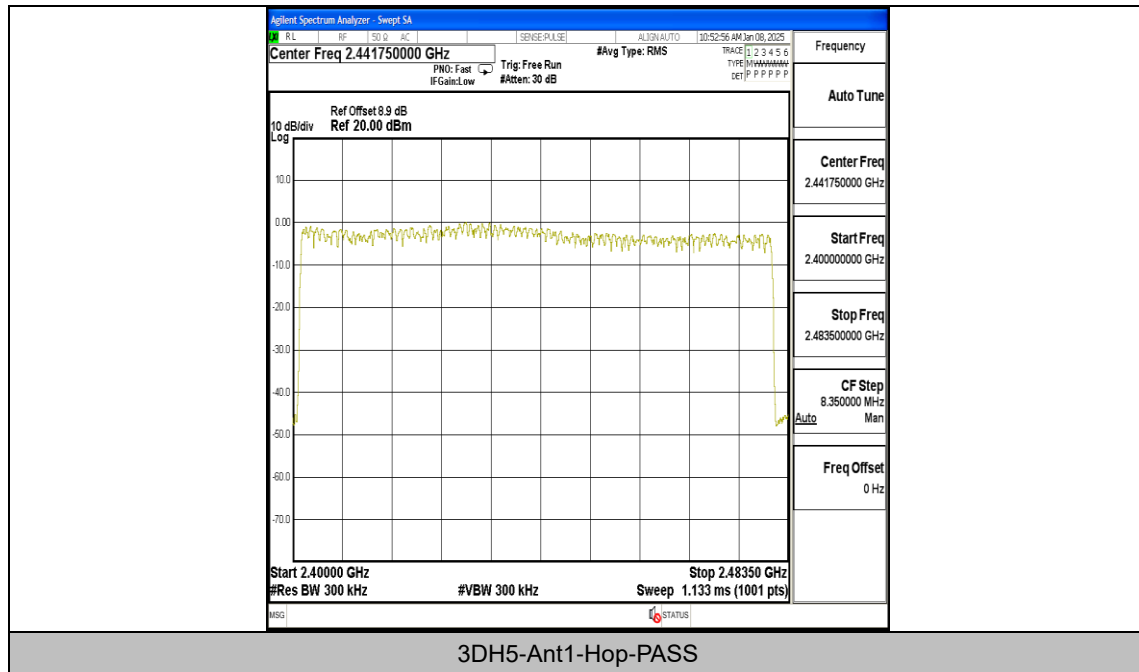
Appendix F: Number of hopping channels

Test Result

Test Mode	Antenna	Frequency [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



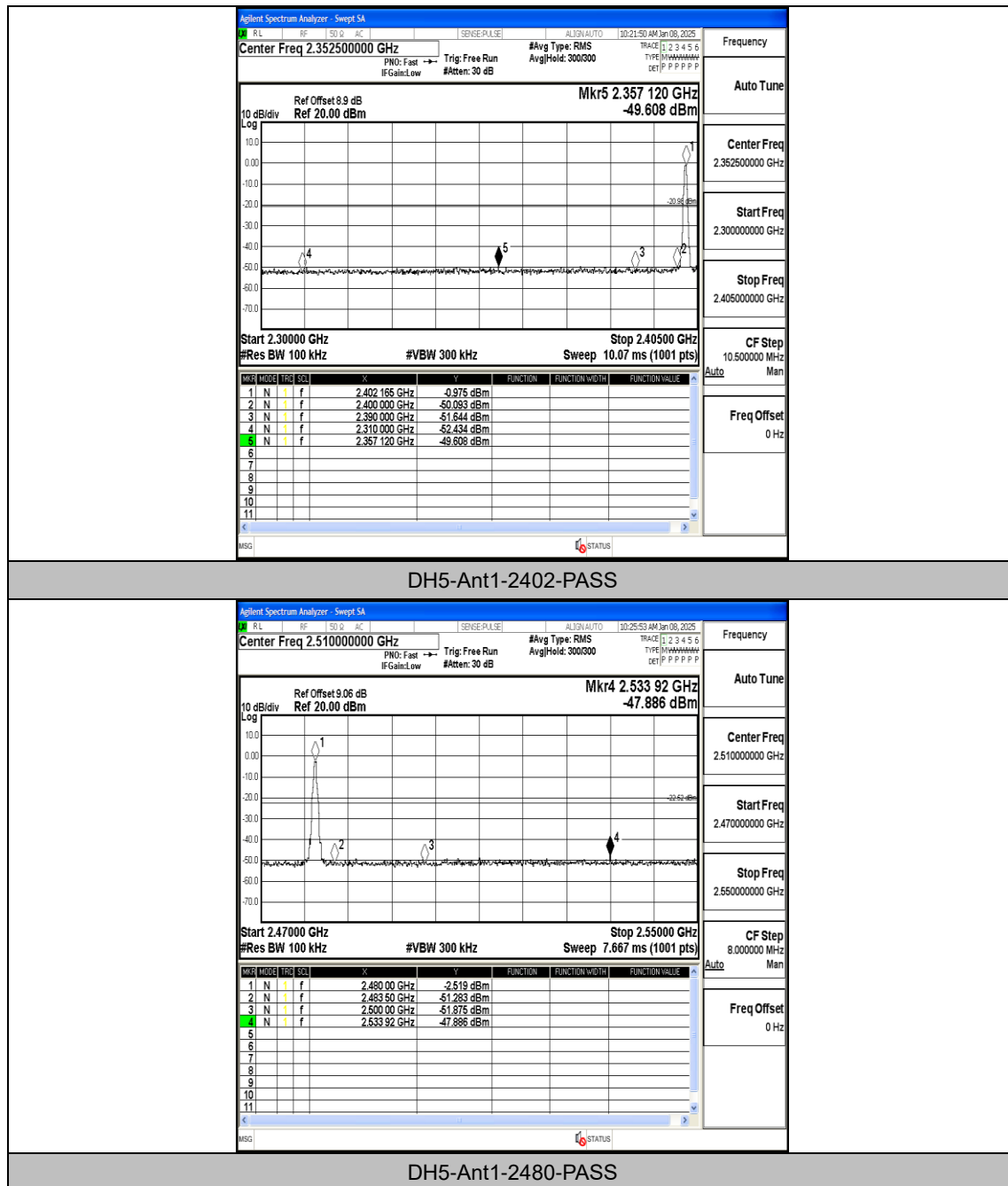


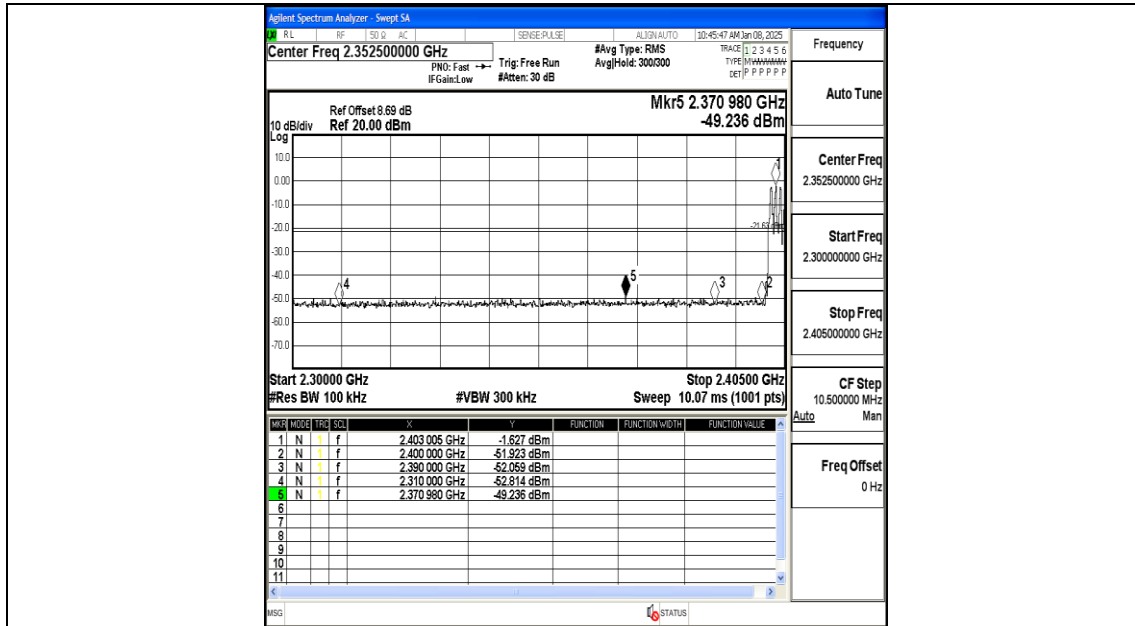
Appendix G: Band edge measurements

Test Result

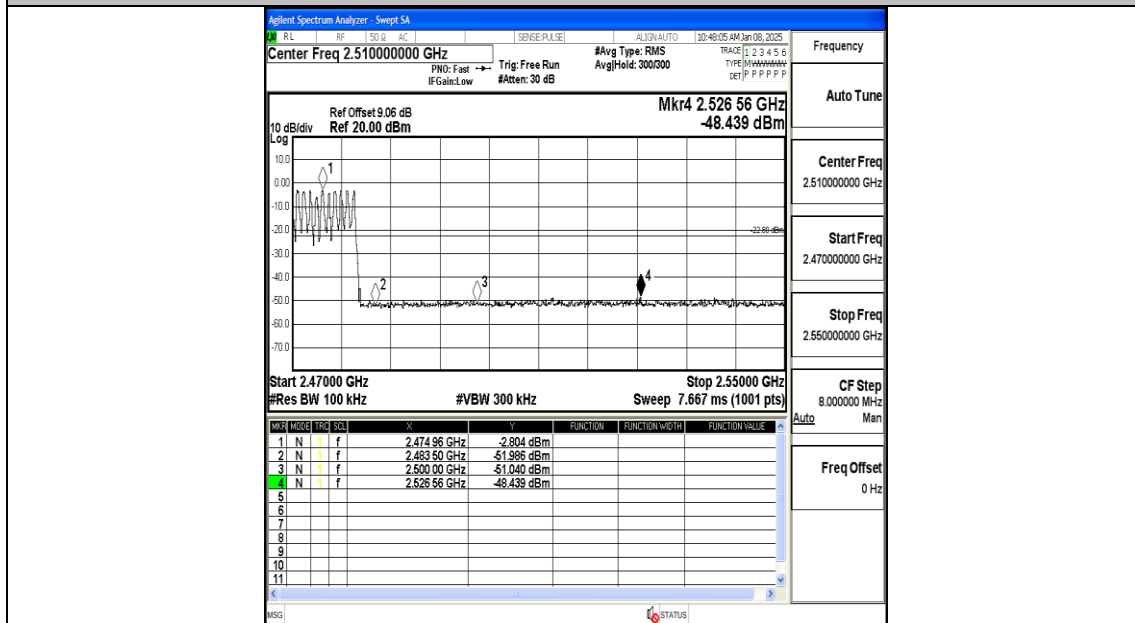
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.98	-49.61	≤ -20.98	PASS
DH5	Ant1	High	2480	-2.52	-47.89	≤ -22.52	PASS
DH5	Ant1	Low	Hop_2402	-1.63	-49.24	≤ -21.63	PASS
DH5	Ant1	High	Hop_2480	-2.80	-48.44	≤ -22.8	PASS
2DH5	Ant1	Low	2402	-2.64	-49.14	≤ -22.64	PASS
2DH5	Ant1	High	2480	-4.01	-48.14	≤ -24.01	PASS
2DH5	Ant1	Low	Hop_2402	-2.05	-49.29	≤ -22.05	PASS
2DH5	Ant1	High	Hop_2480	-3.72	-48.68	≤ -23.72	PASS
3DH5	Ant1	Low	2402	-0.97	-49.16	≤ -20.97	PASS
3DH5	Ant1	High	2480	-2.61	-48.84	≤ -22.61	PASS
3DH5	Ant1	Low	Hop_2402	-3.83	-49.22	≤ -23.83	PASS
3DH5	Ant1	High	Hop_2480	-4.55	-48.22	≤ -24.55	PASS

Test Graphs

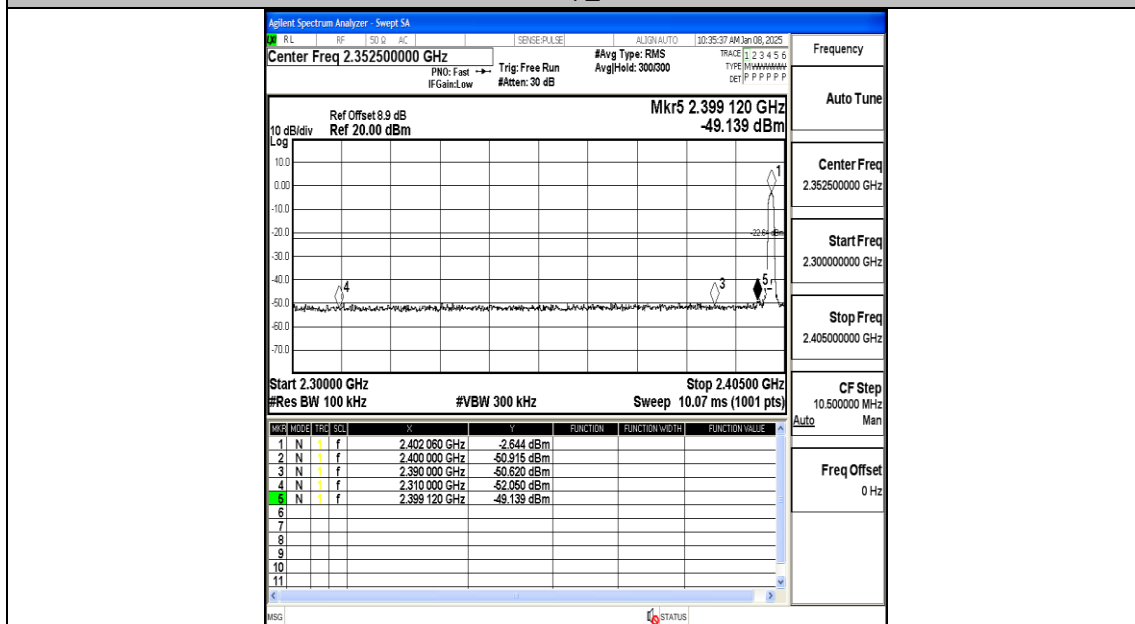




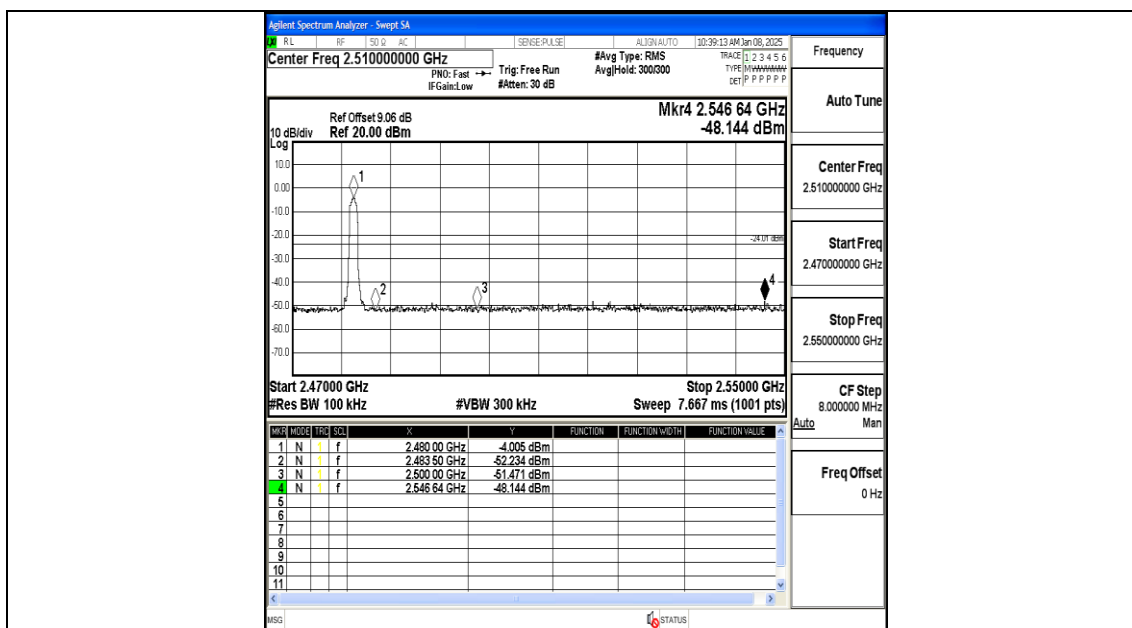
DH5-Ant1-Hop_2402-PASS



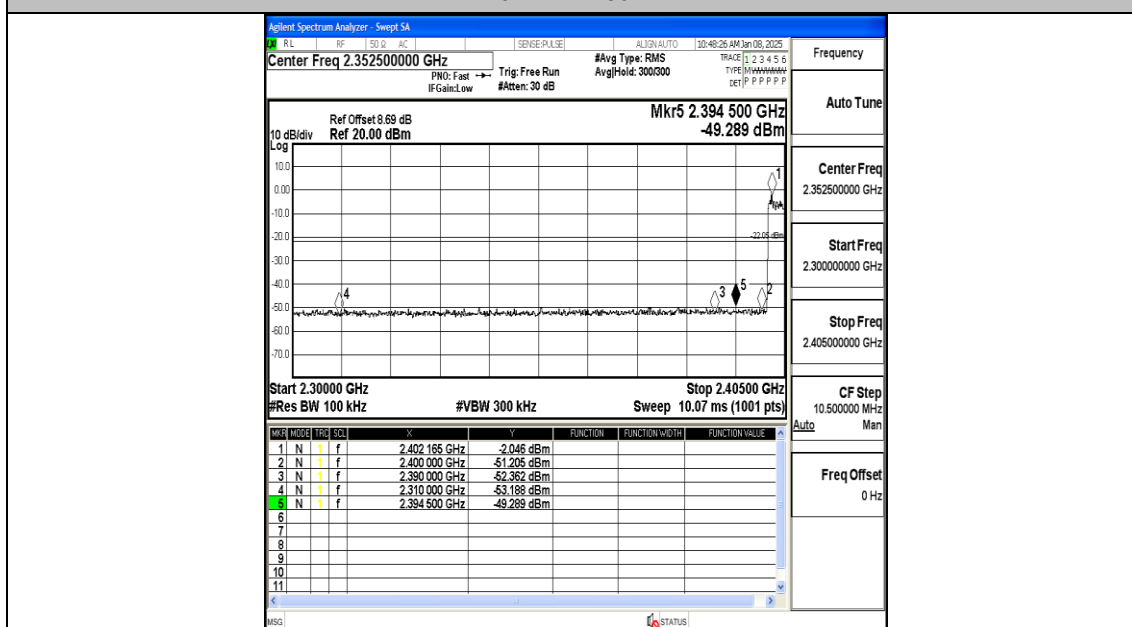
DH5-Ant1-Hop_2480-PASS



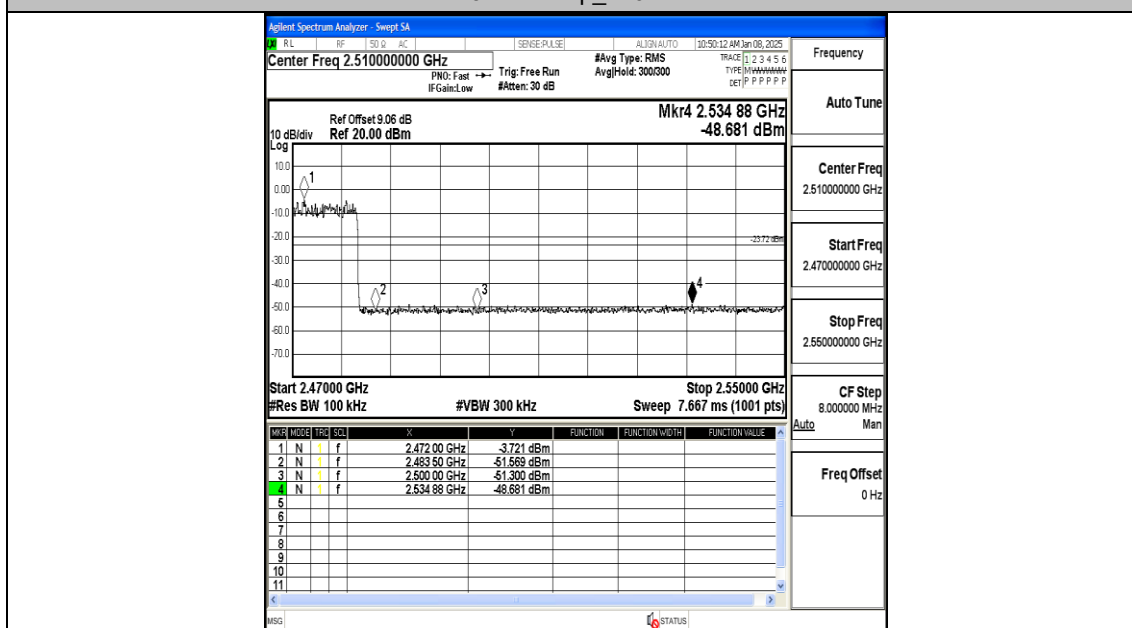
2DH5-Ant1-2402-PASS



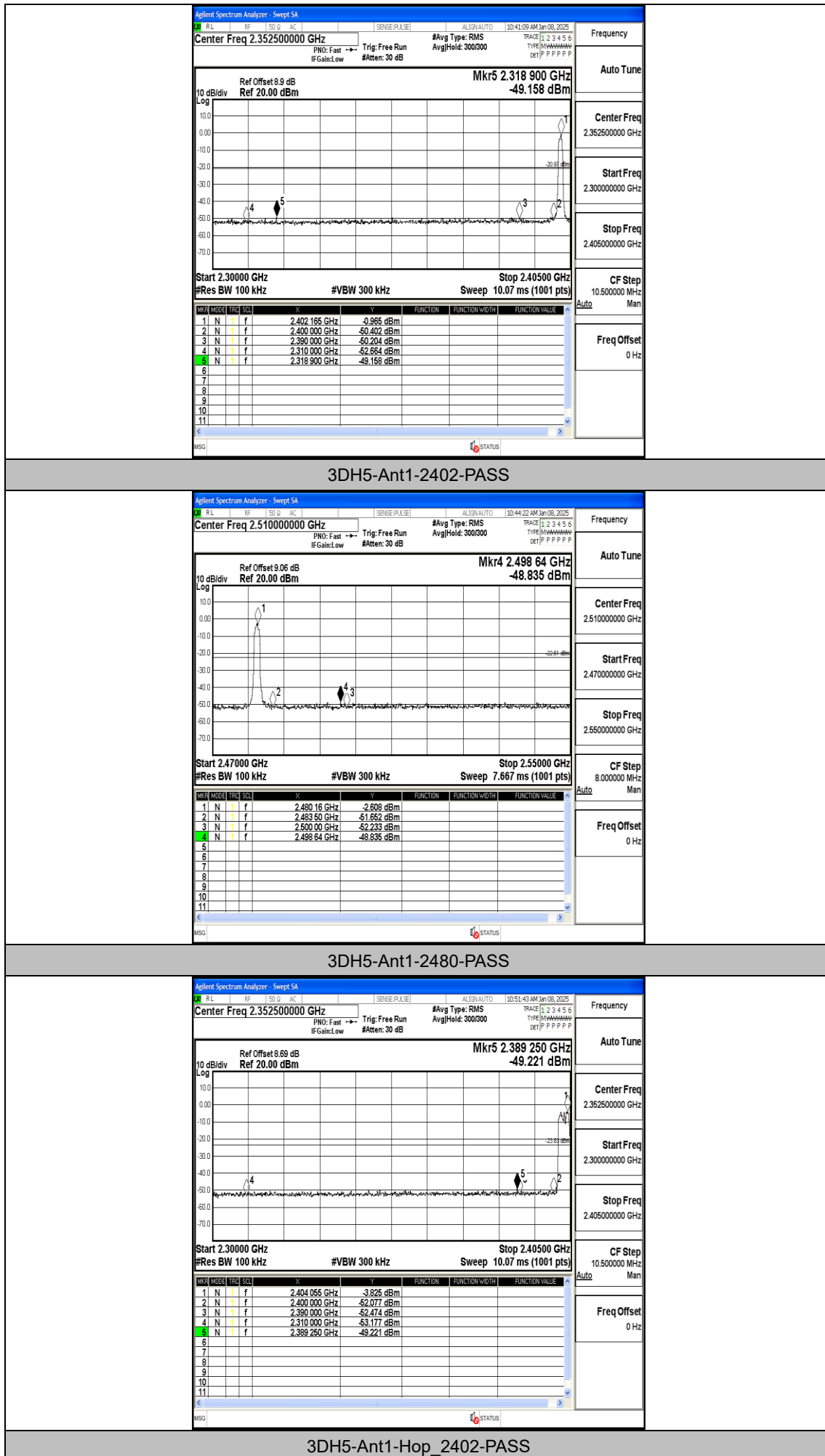
2DH5-Ant1-2480-PASS

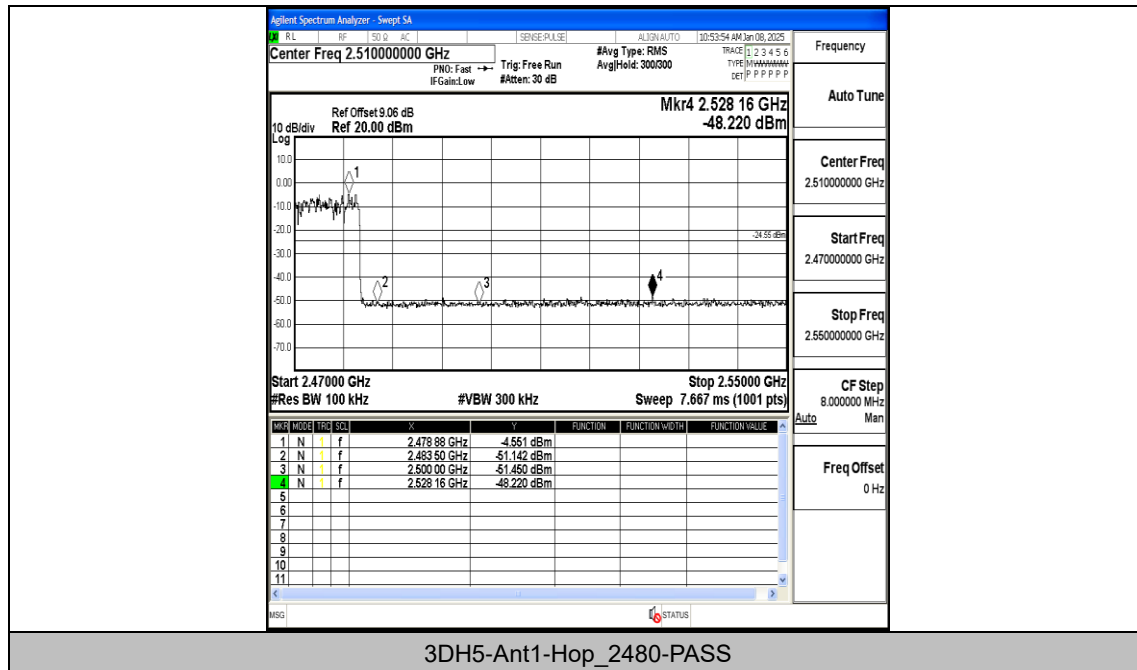


2DH5-Ant1-Hop_2402-PASS



2DH5-Ant1-Hop_2480-PASS



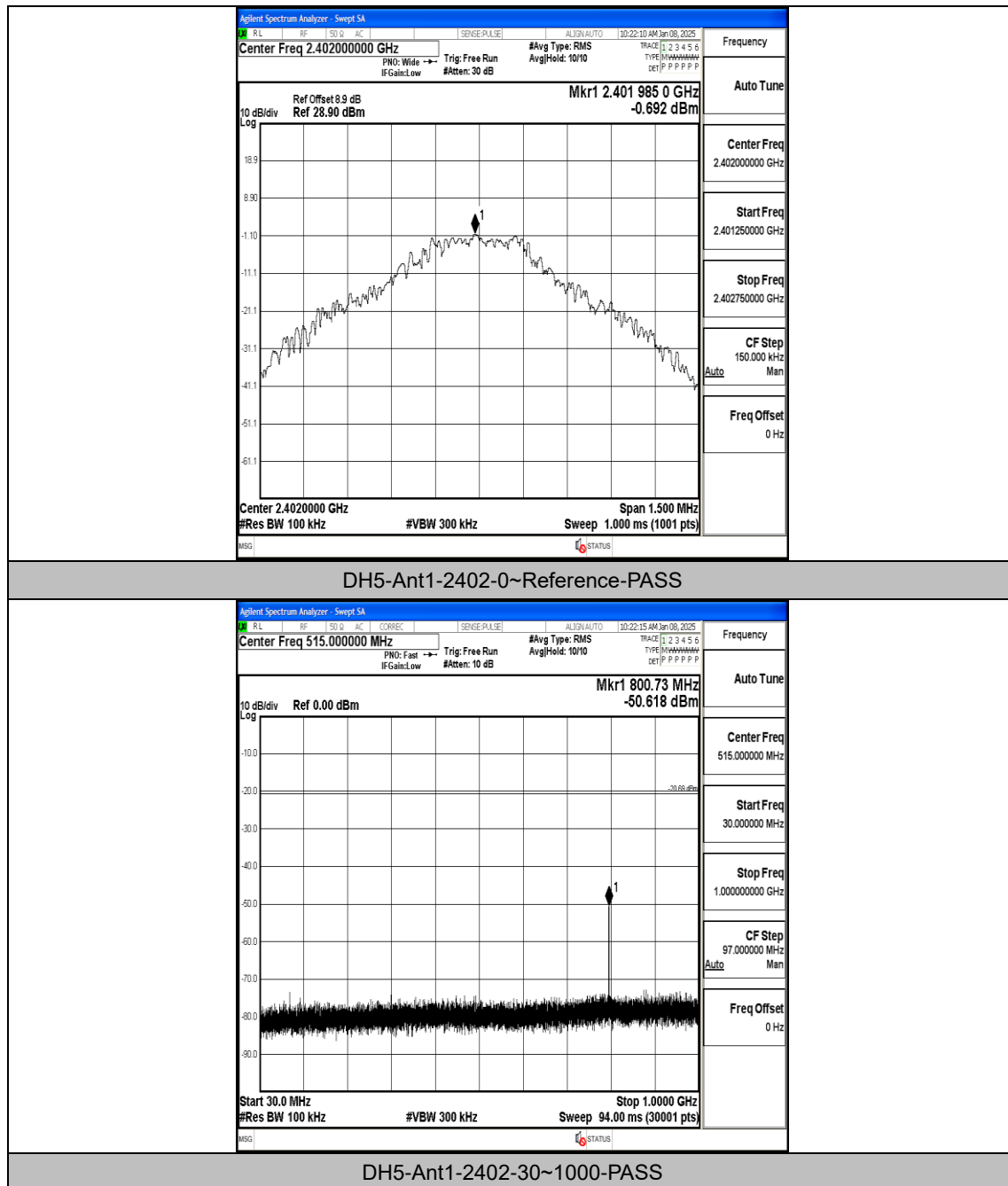


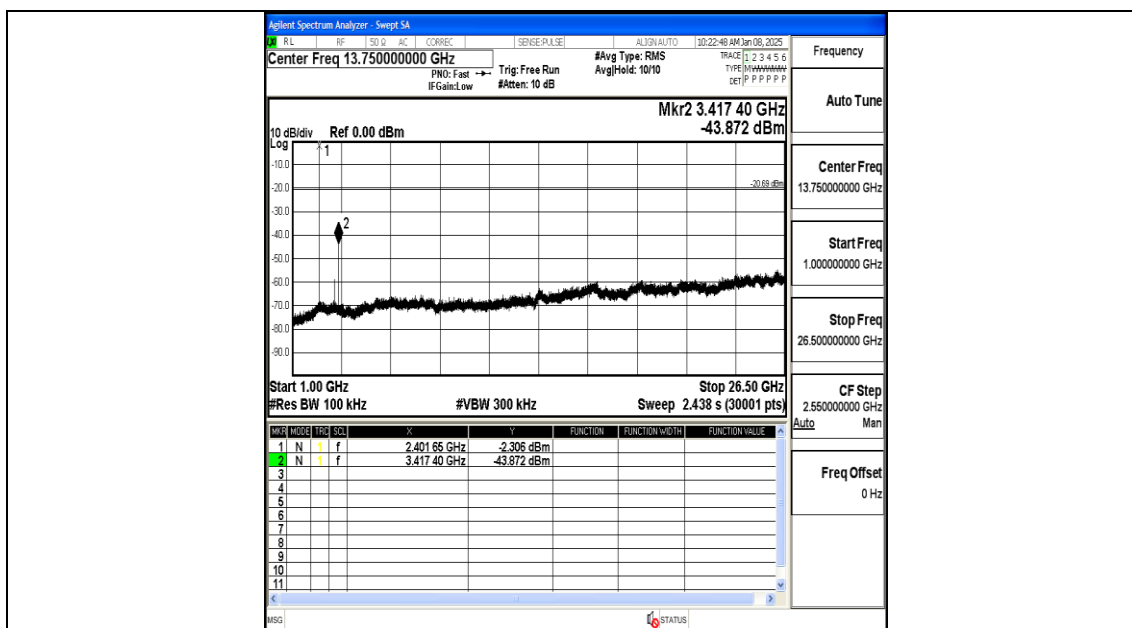
Appendix H: Conducted Spurious Emission

Test Result

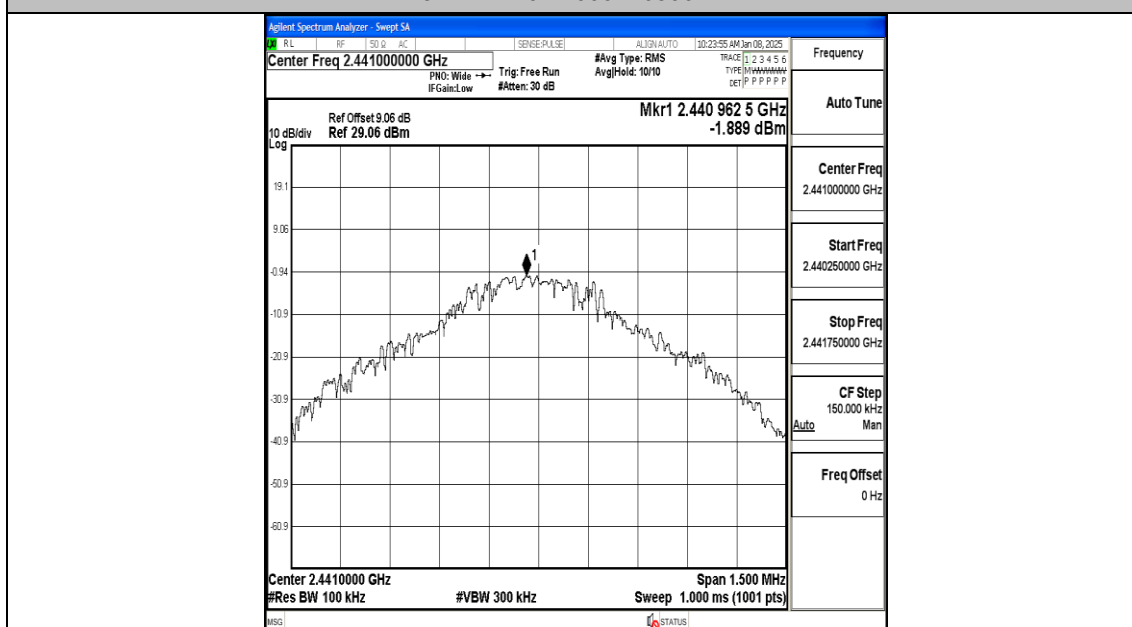
Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-0.69	-0.69	---	PASS
DH5	Ant1	2402	30~1000	-0.69	-50.62	≤-20.69	PASS
DH5	Ant1	2402	1000~26500	-0.69	-43.87	≤-20.69	PASS
DH5	Ant1	2441	0~Reference	-1.89	-1.89	---	PASS
DH5	Ant1	2441	30~1000	-1.89	-50.32	≤-21.89	PASS
DH5	Ant1	2441	1000~26500	-1.89	-55.83	≤-21.89	PASS
DH5	Ant1	2480	0~Reference	-2.93	-2.93	---	PASS
DH5	Ant1	2480	30~1000	-2.93	-52.23	≤-22.93	PASS
DH5	Ant1	2480	1000~26500	-2.93	-54.35	≤-22.93	PASS
2DH5	Ant1	2402	0~Reference	-3.64	-3.64	---	PASS
2DH5	Ant1	2402	30~1000	-3.64	-53.37	≤-23.64	PASS
2DH5	Ant1	2402	1000~26500	-3.64	-55.16	≤-23.64	PASS
2DH5	Ant1	2441	0~Reference	-3.48	-3.48	---	PASS
2DH5	Ant1	2441	30~1000	-3.48	-52.96	≤-23.48	PASS
2DH5	Ant1	2441	1000~26500	-3.48	-54.9	≤-23.48	PASS
2DH5	Ant1	2480	0~Reference	-3.27	-3.27	---	PASS
2DH5	Ant1	2480	30~1000	-3.27	-52.98	≤-23.27	PASS
2DH5	Ant1	2480	1000~26500	-3.27	-54.84	≤-23.27	PASS
3DH5	Ant1	2402	0~Reference	-3.63	-3.63	---	PASS
3DH5	Ant1	2402	30~1000	-3.63	-52.92	≤-23.63	PASS
3DH5	Ant1	2402	1000~26500	-3.63	-55.45	≤-23.63	PASS
3DH5	Ant1	2441	0~Reference	-3.22	-3.22	---	PASS
3DH5	Ant1	2441	30~1000	-3.22	-52.39	≤-23.22	PASS
3DH5	Ant1	2441	1000~26500	-3.22	-55.52	≤-23.22	PASS
3DH5	Ant1	2480	0~Reference	-4.59	-4.59	---	PASS
3DH5	Ant1	2480	30~1000	-4.59	-50.62	≤-24.59	PASS
3DH5	Ant1	2480	1000~26500	-4.59	-55.48	≤-24.59	PASS

Test Graphs

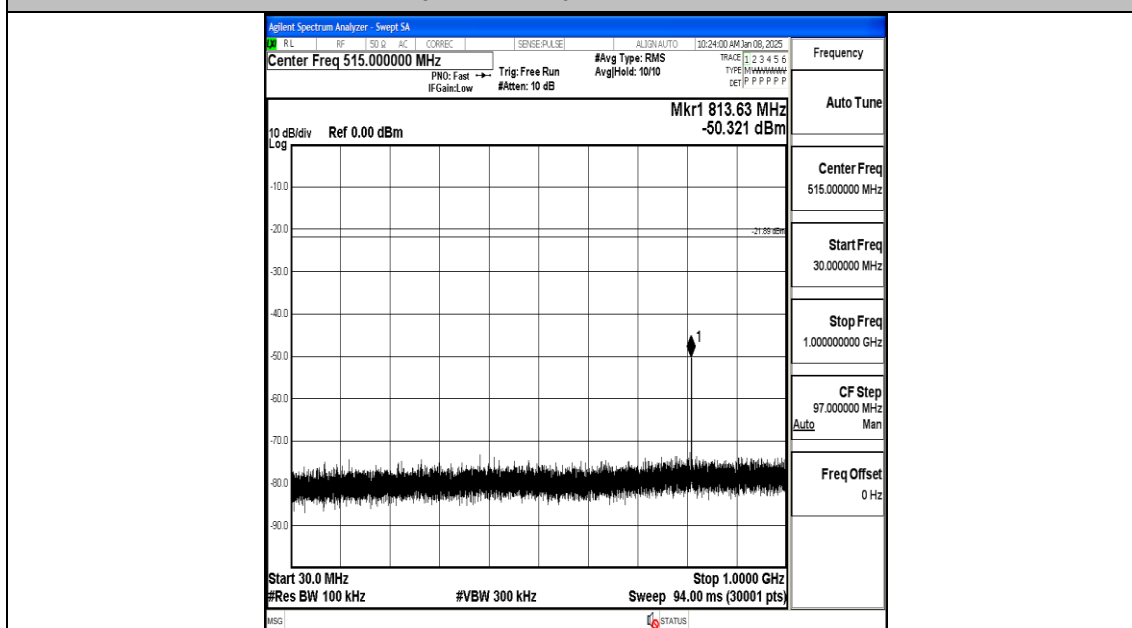




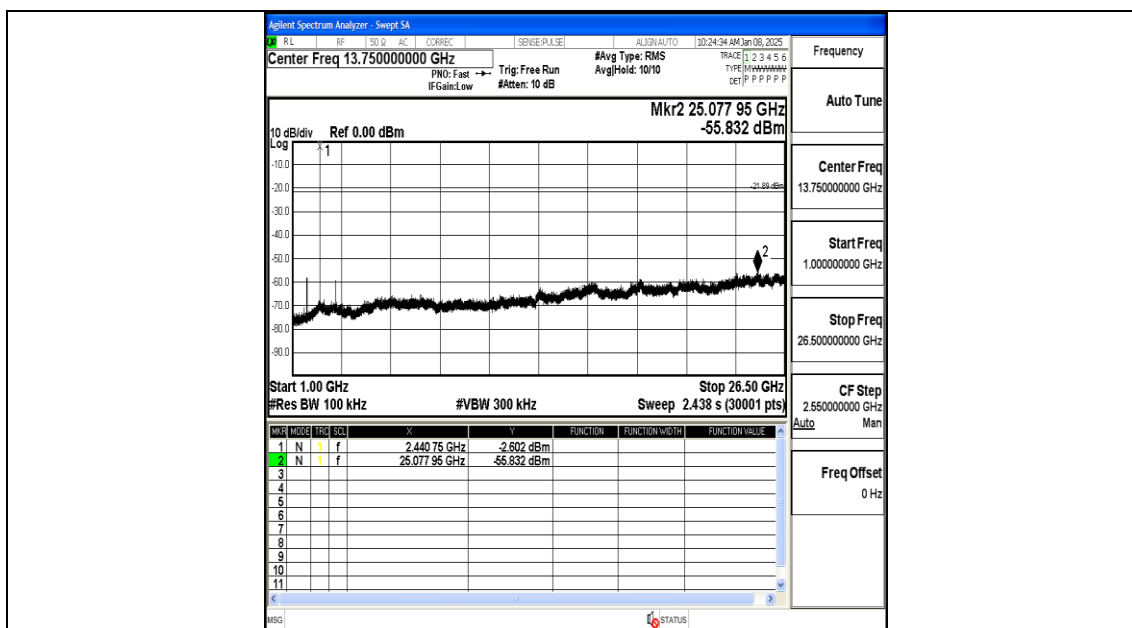
DH5-Ant1-2402-1000~26500-PASS



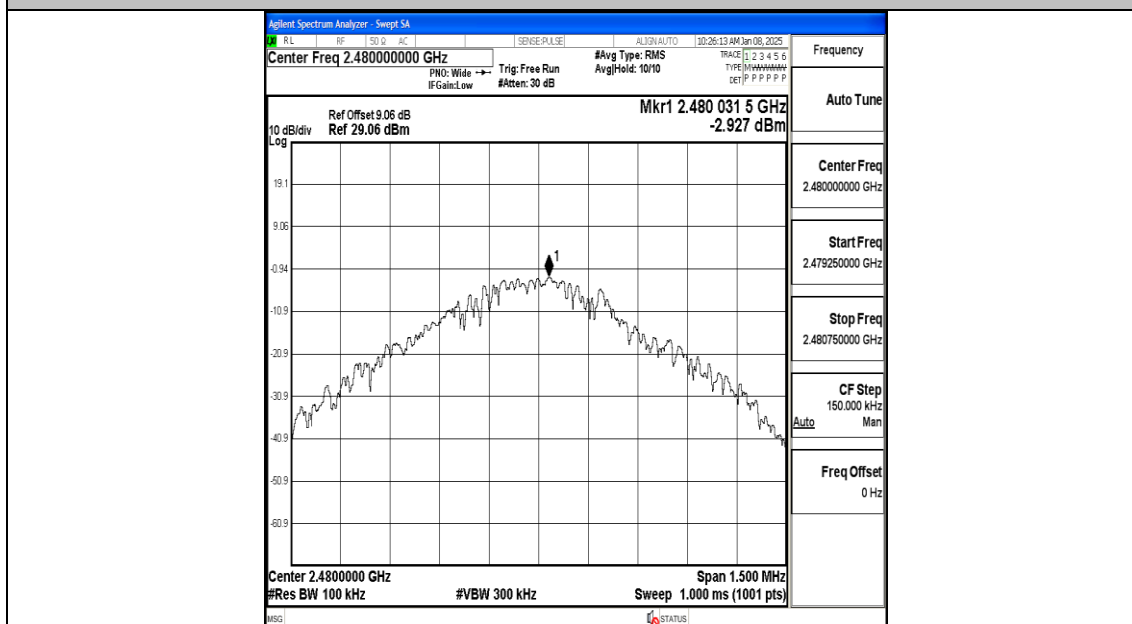
DH5-Ant1-2441-0~Reference-PASS



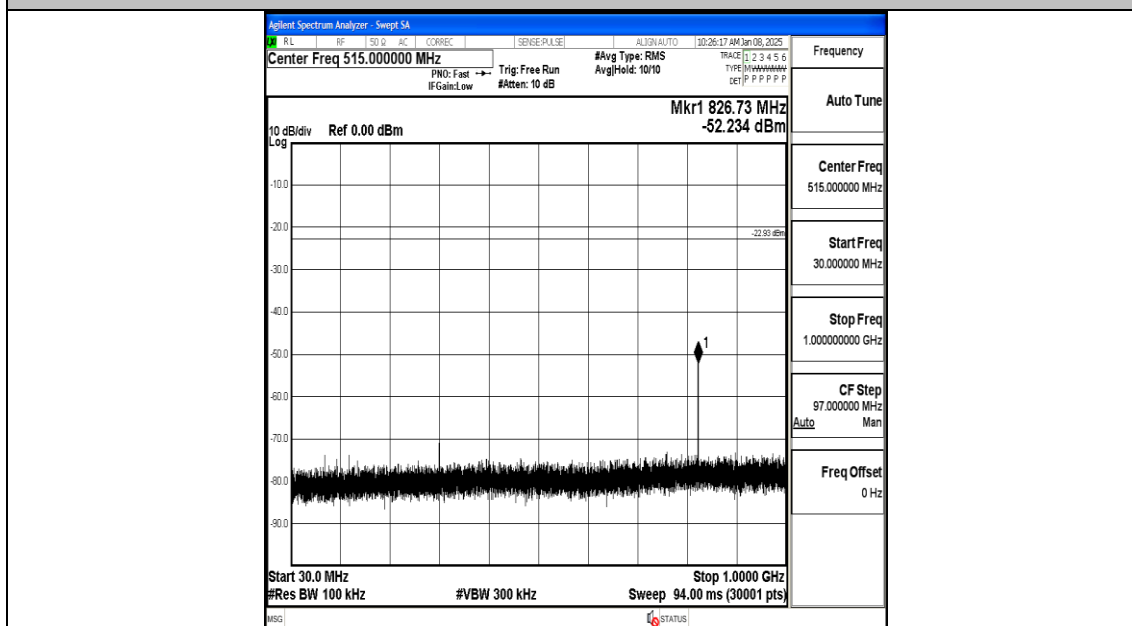
DH5-Ant1-2441-30~1000-PASS



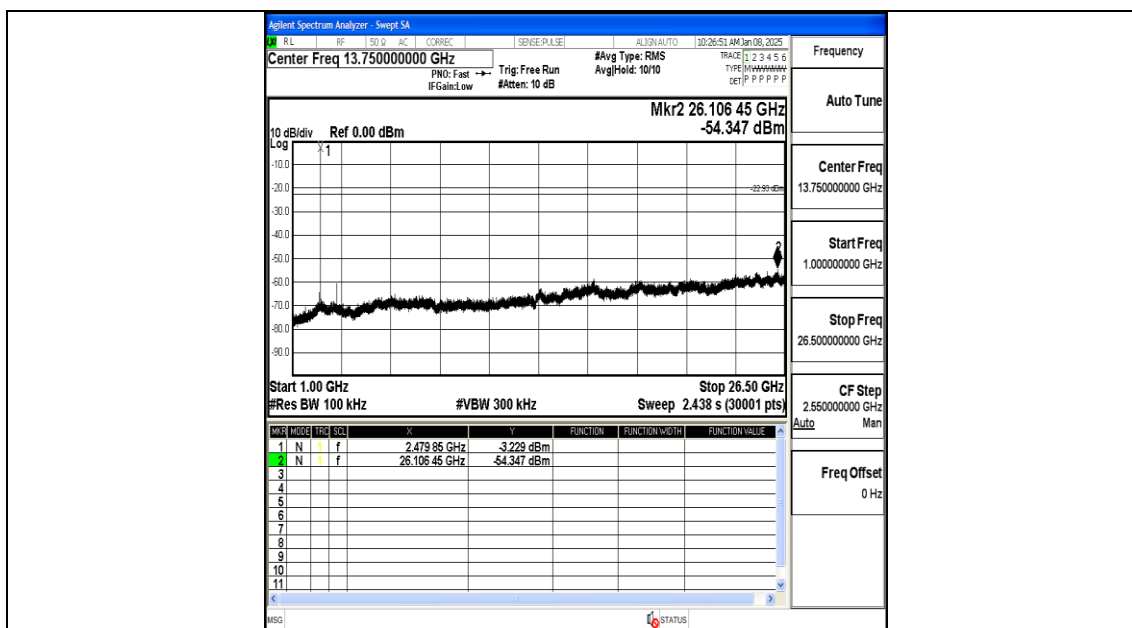
DH5-Ant1-2441-1000~26500-PASS



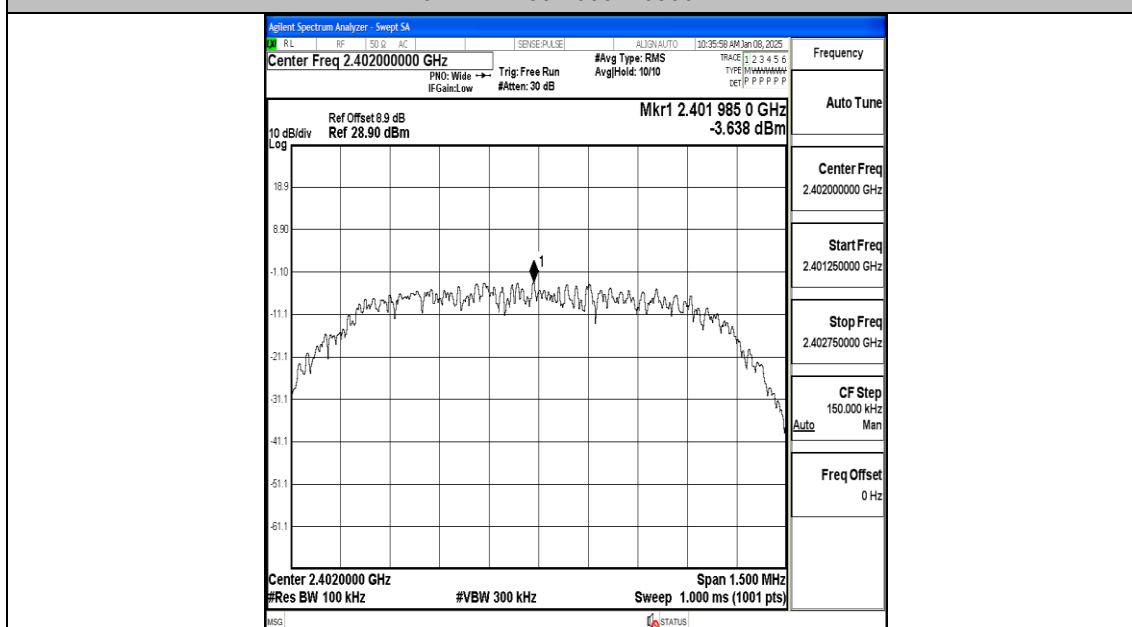
DH5-Ant1-2480-0~Reference-PASS



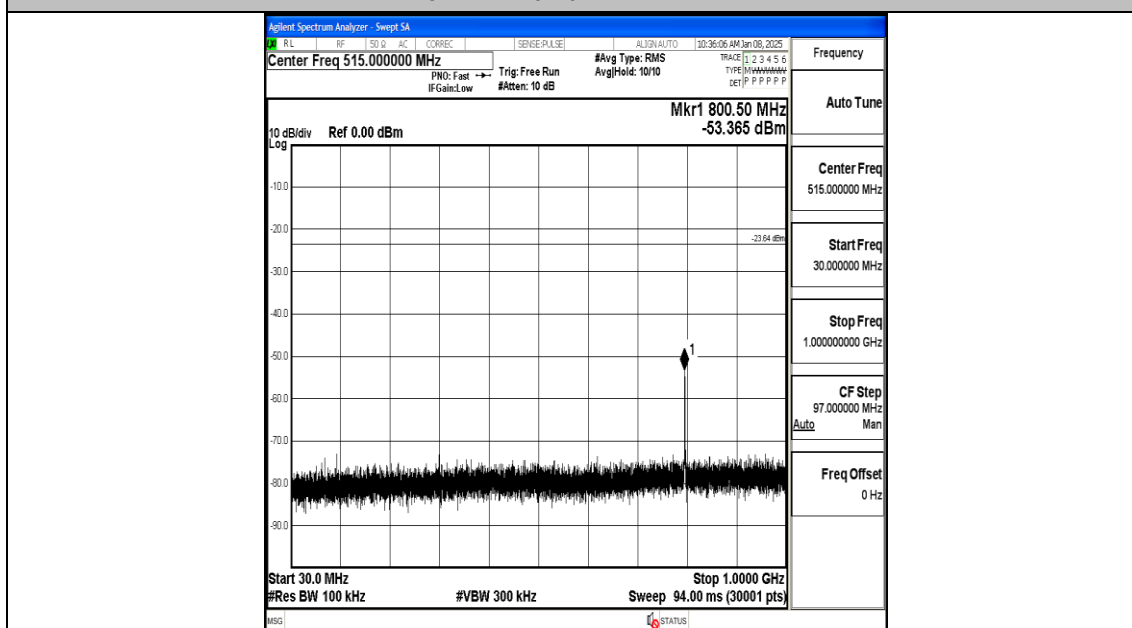
DH5-Ant1-2480-30~1000-PASS



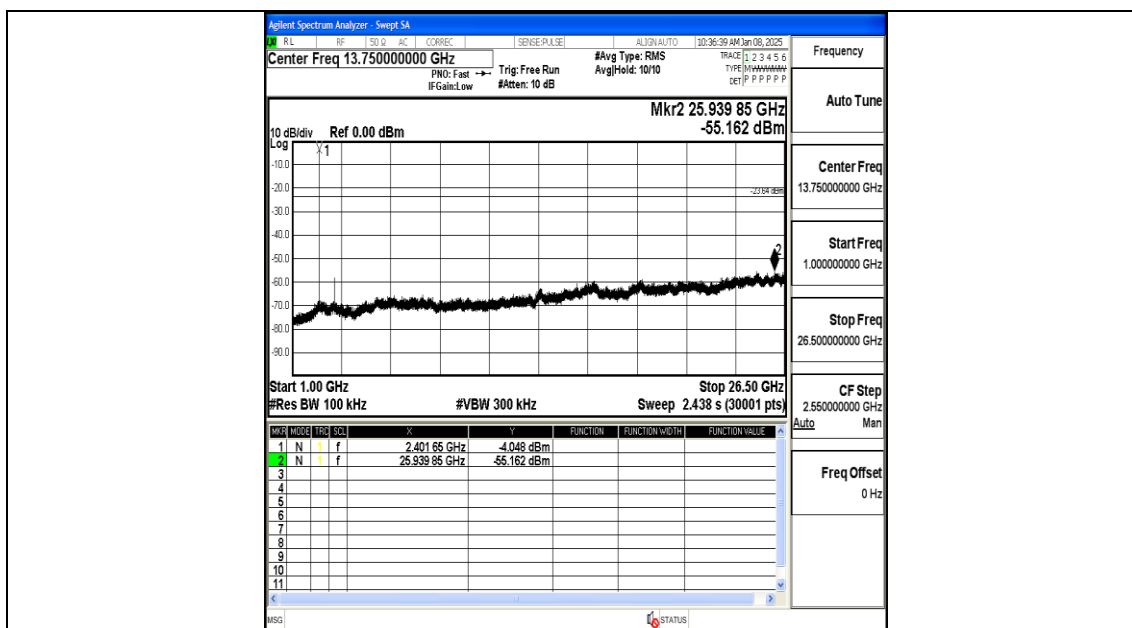
DH5-Ant1-2480-1000~26500-PASS



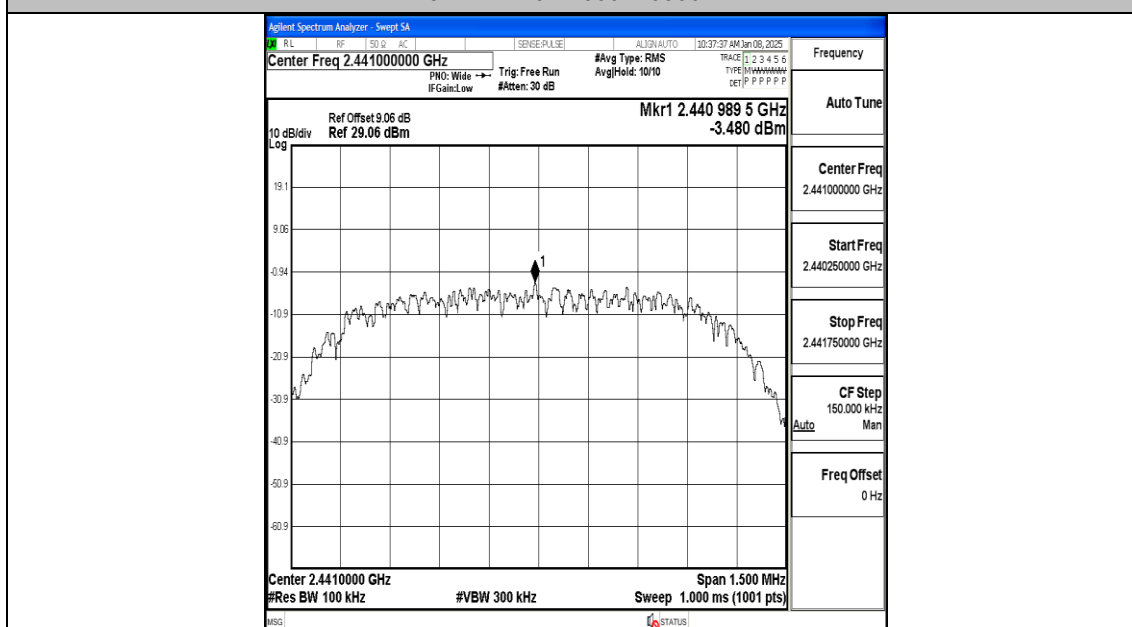
2DH5-Ant1-2402-0~Reference-PASS



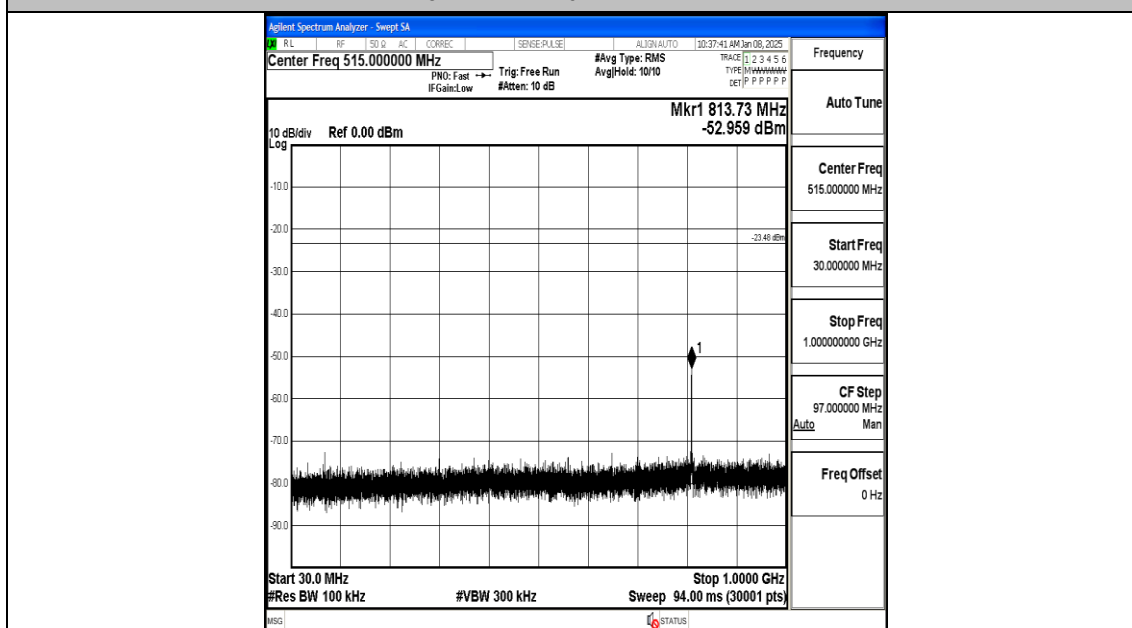
2DH5-Ant1-2402-30~1000-PASS



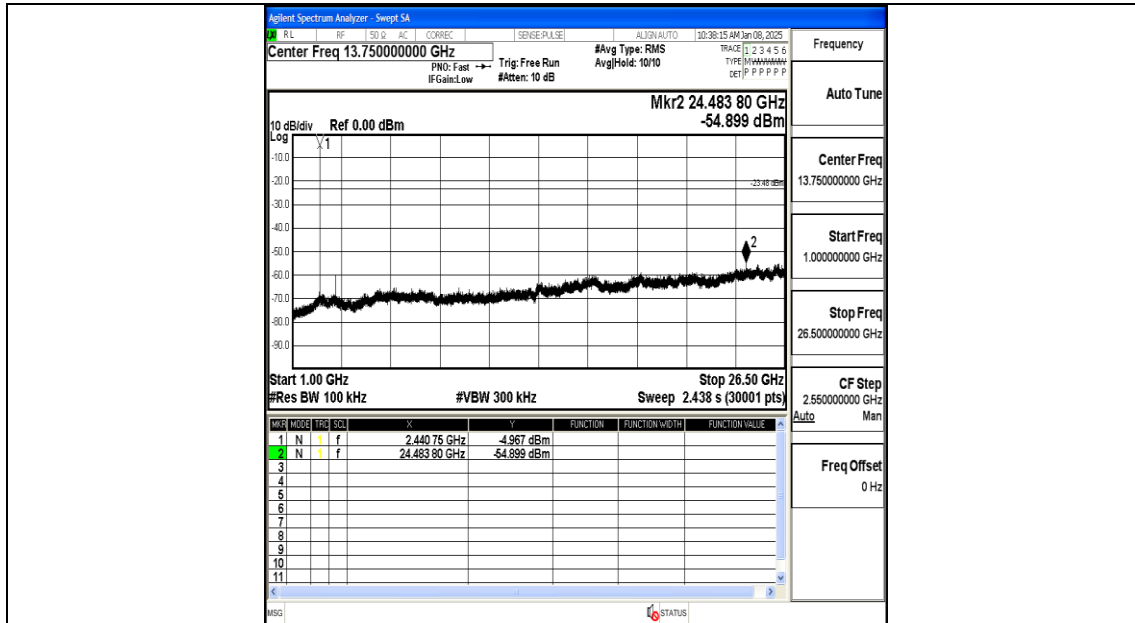
2DH5-Ant1-2402-1000~26500-PASS



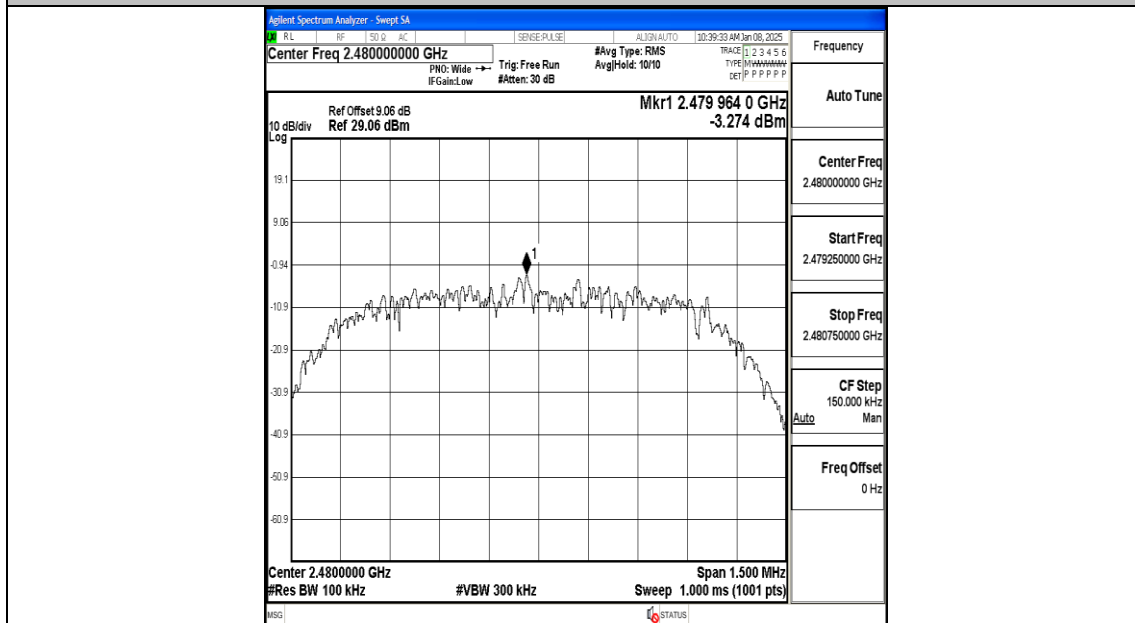
2DH5-Ant1-2441-0~Reference-PASS



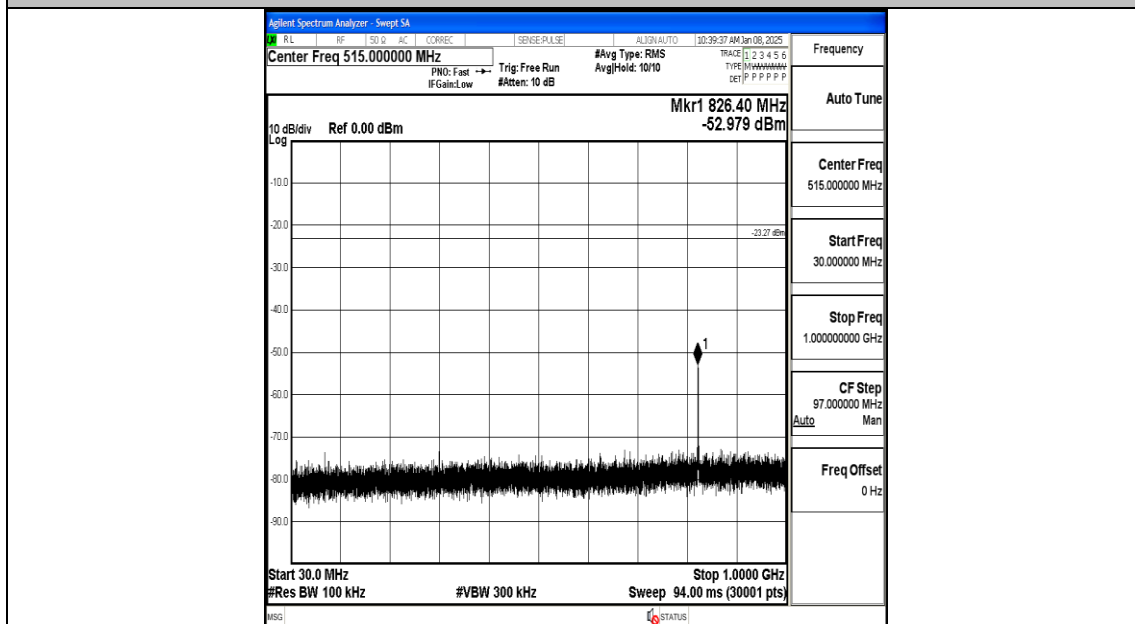
2DH5-Ant1-2441-30~1000-PASS



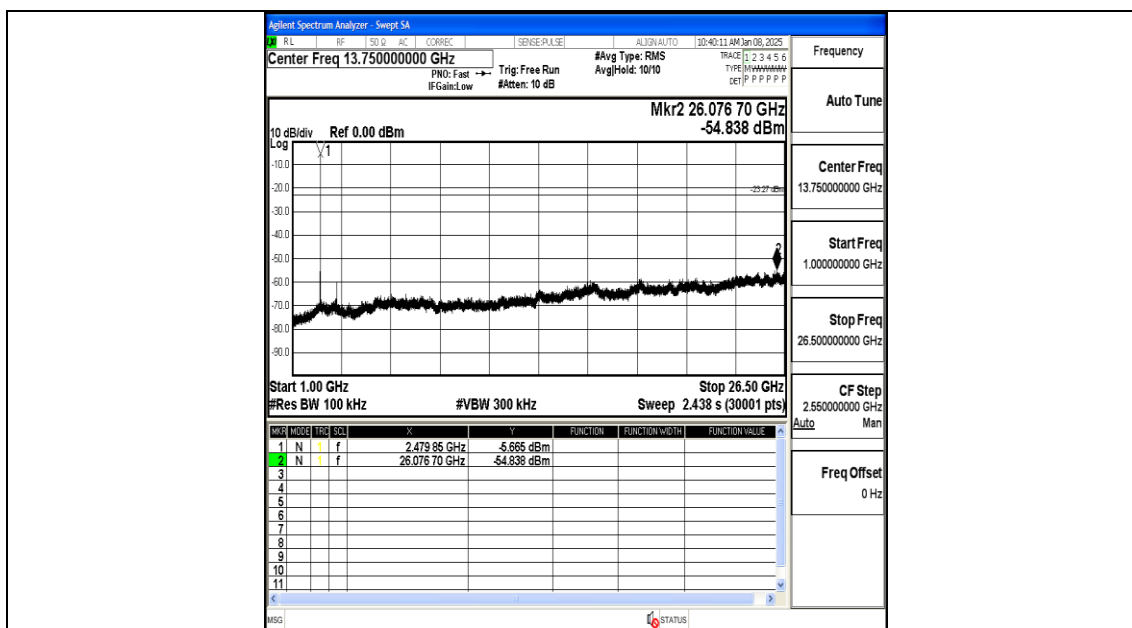
2DH5-Ant1-2441-1000~26500-PASS



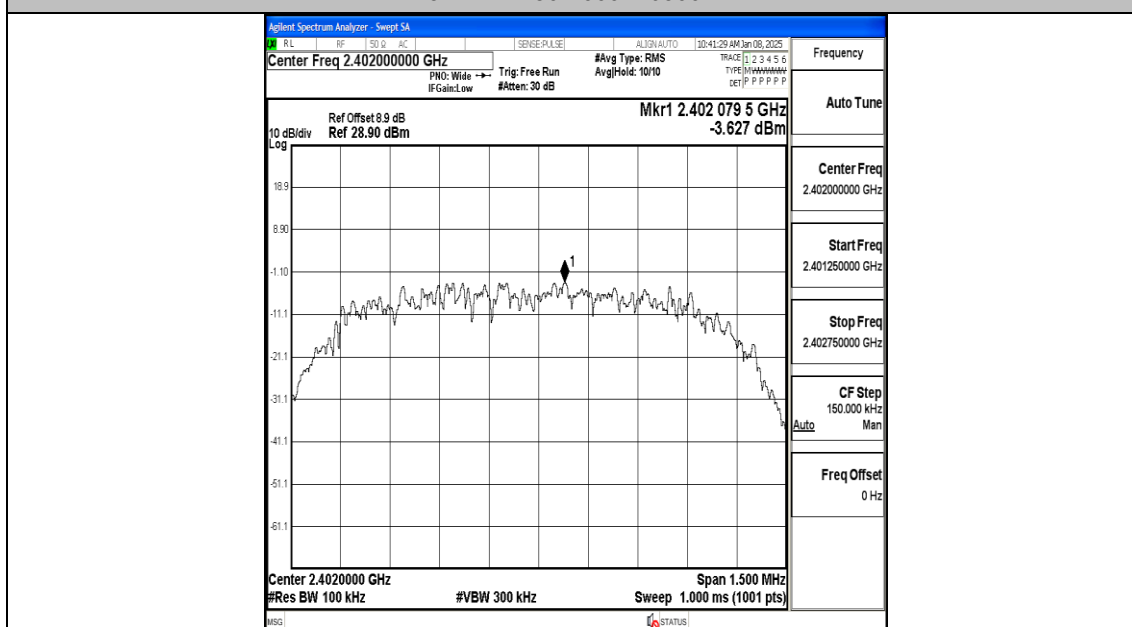
2DH5-Ant1-2480-0~Reference-PASS



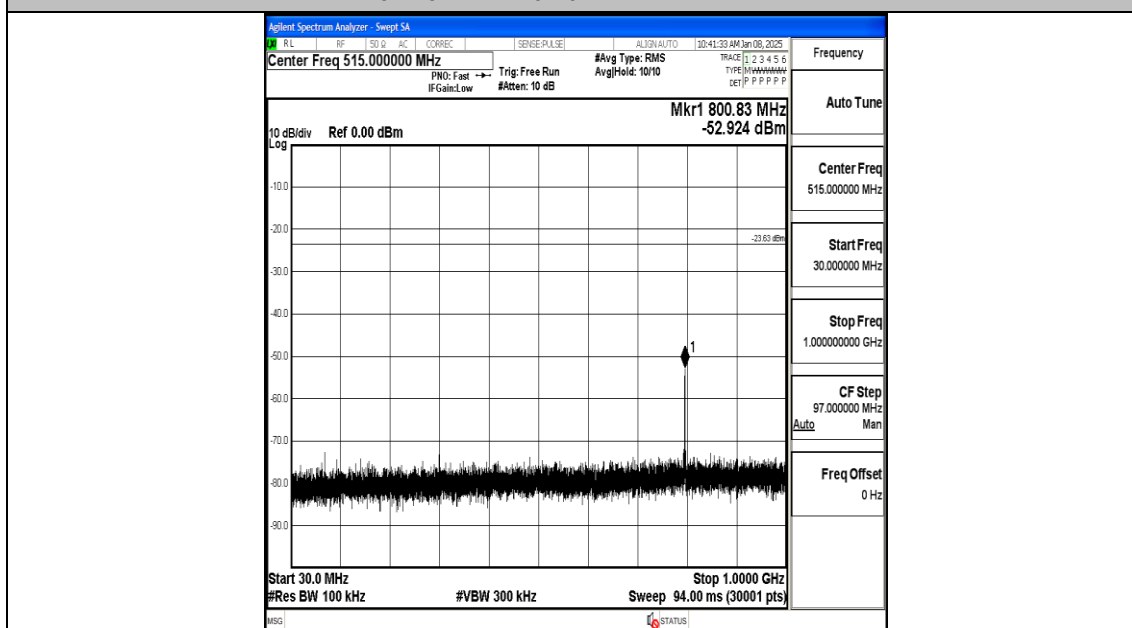
2DH5-Ant1-2480-30~1000-PASS



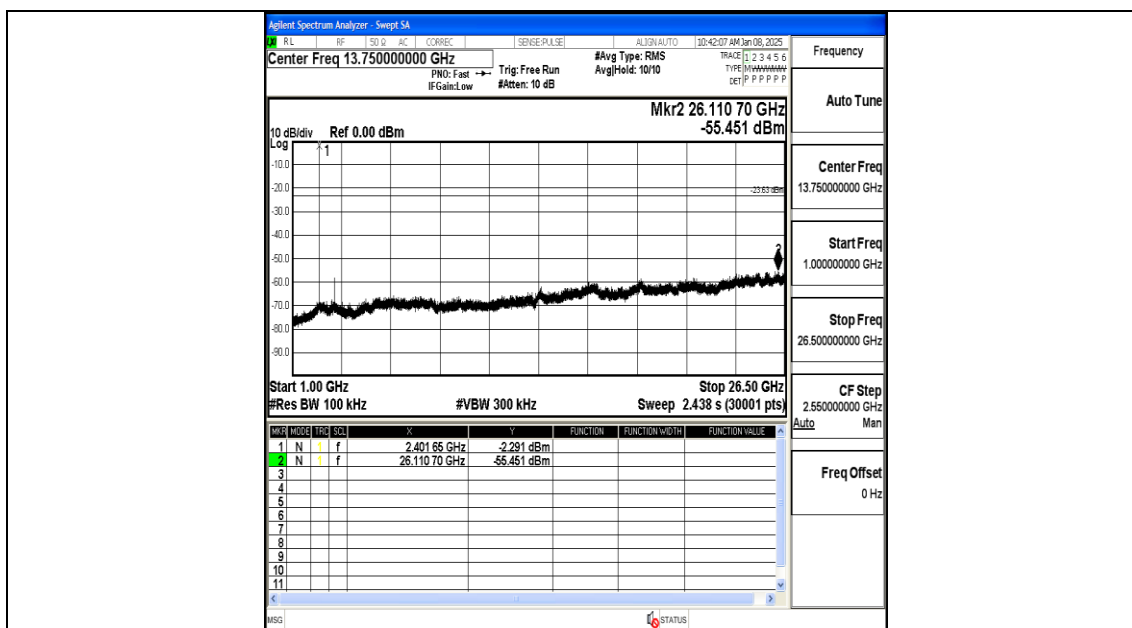
2DH5-Ant1-2480-1000~26500-PASS



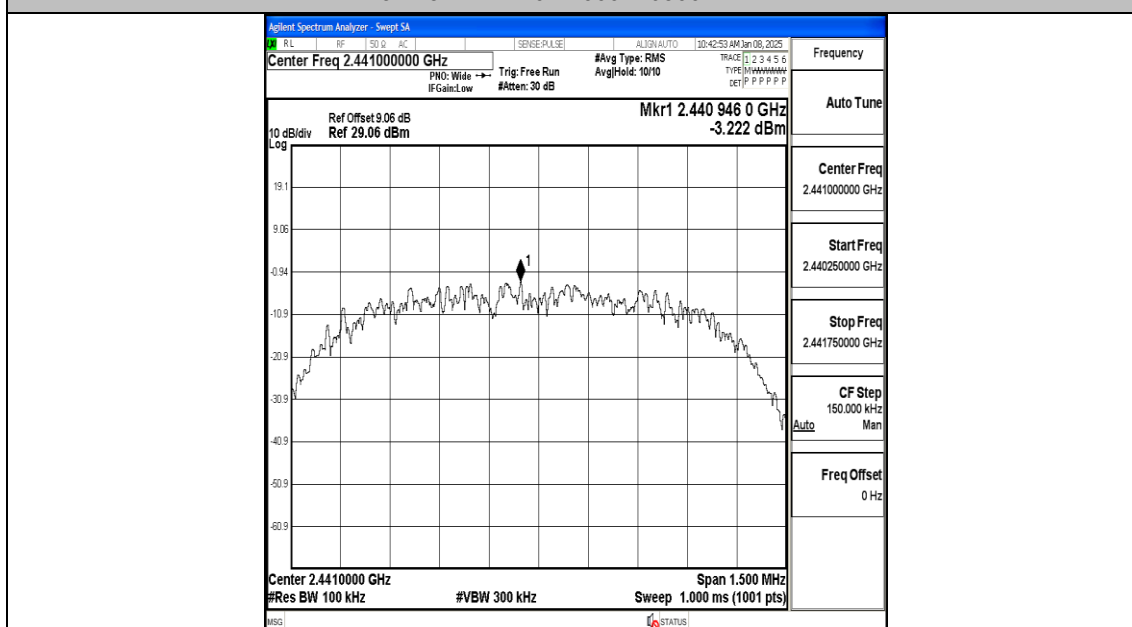
3DH5-Ant1-2402-0~Reference-PASS



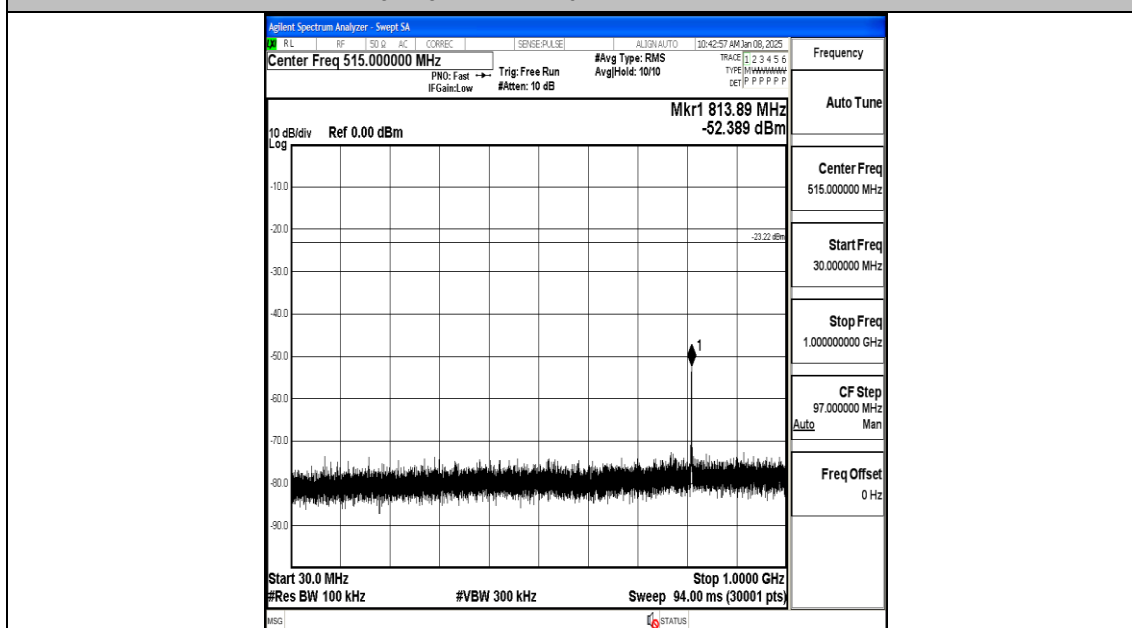
3DH5-Ant1-2402-30~1000-PASS



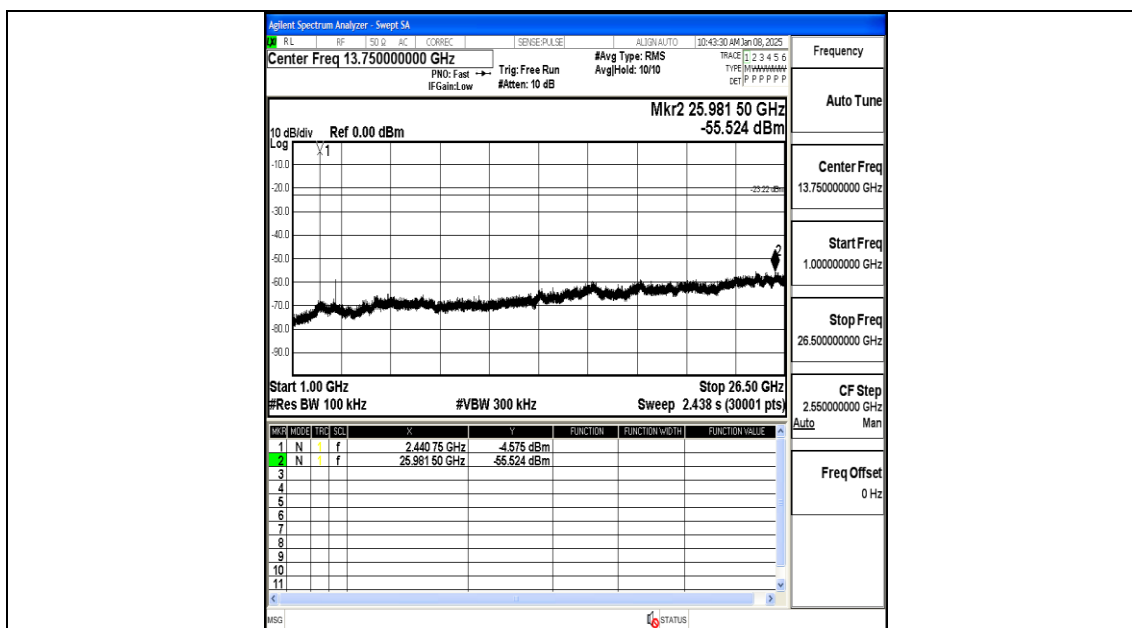
3DH5-Ant1-2402-1000~26500-PASS



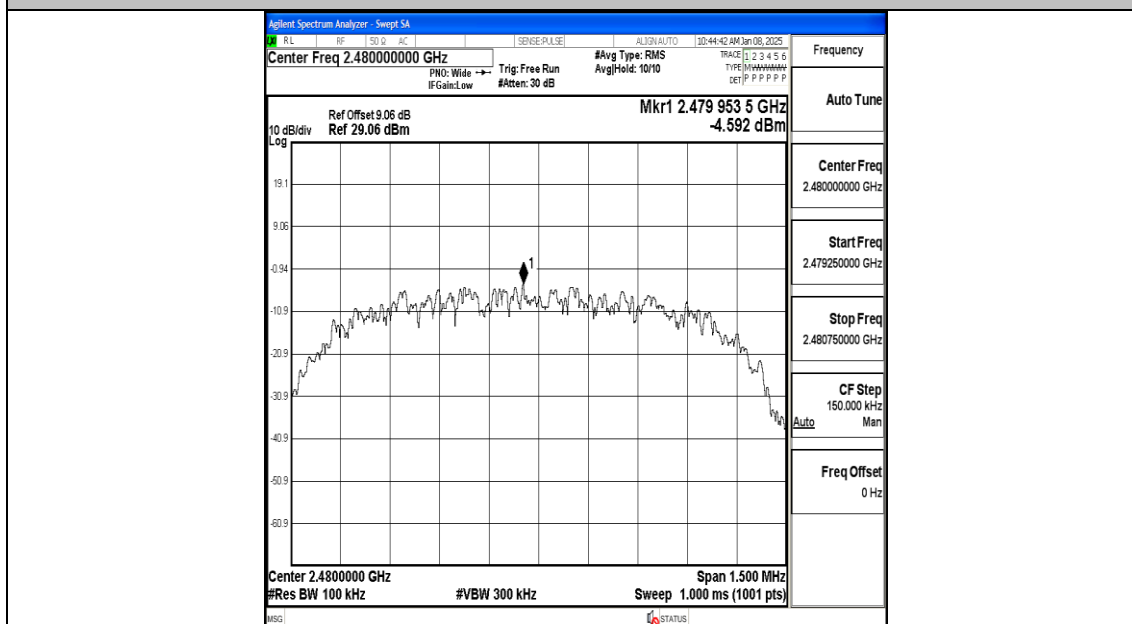
3DH5-Ant1-2441-0~Reference-PASS



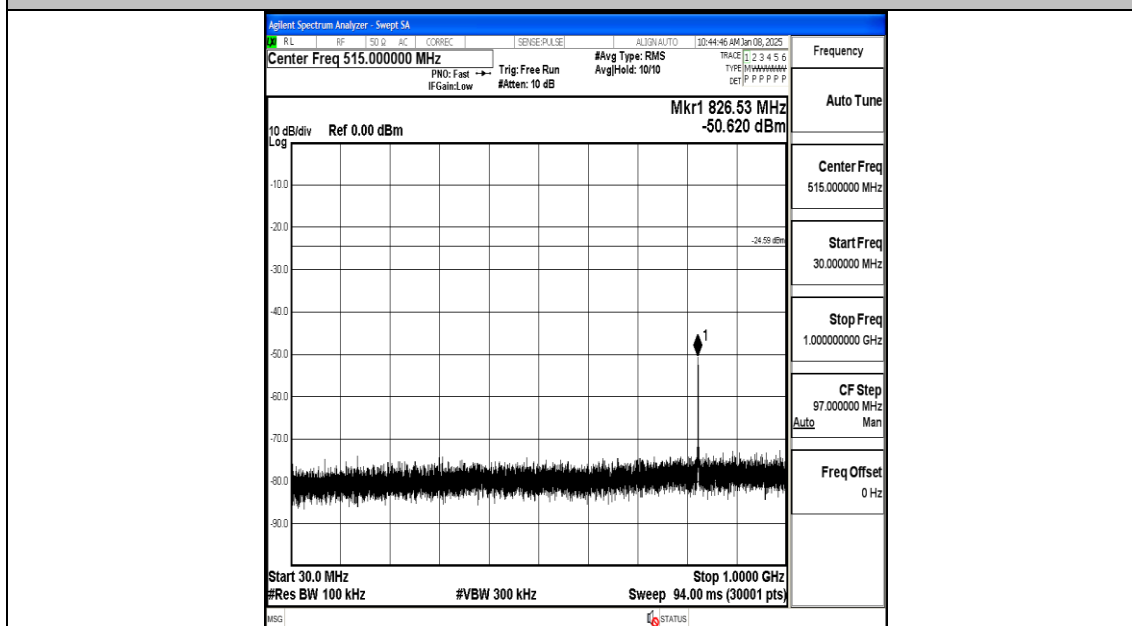
3DH5-Ant1-2441-30~1000-PASS



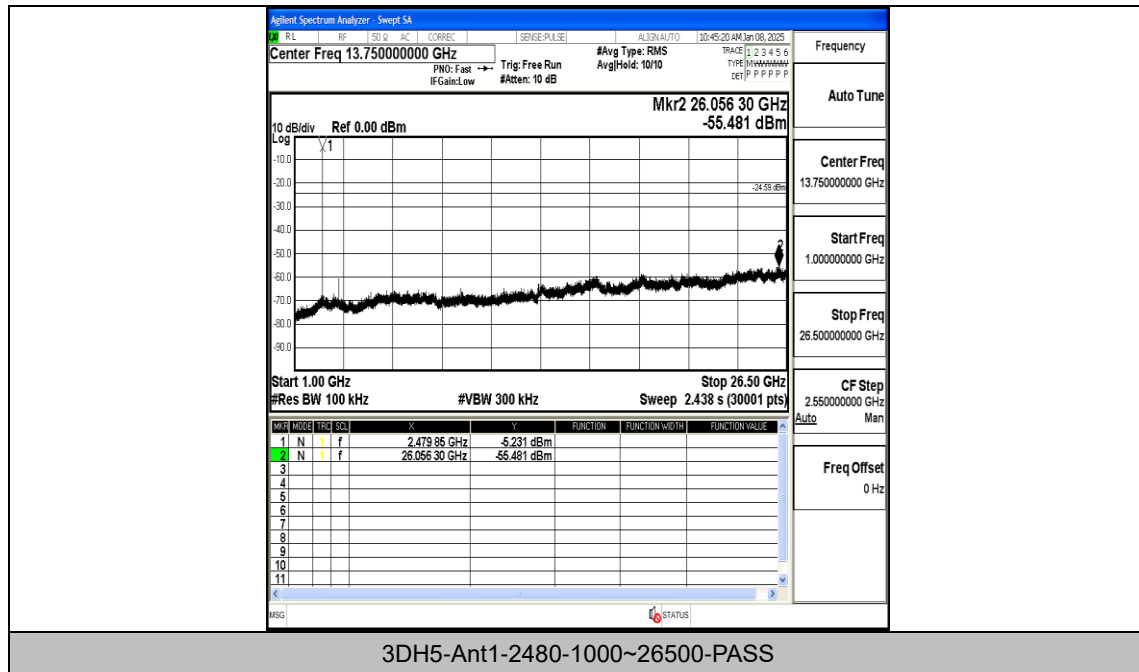
3DH5-Ant1-2441-1000~26500-PASS



3DH5-Ant1-2480-0~Reference-PASS



3DH5-Ant1-2480-30~1000-PASS

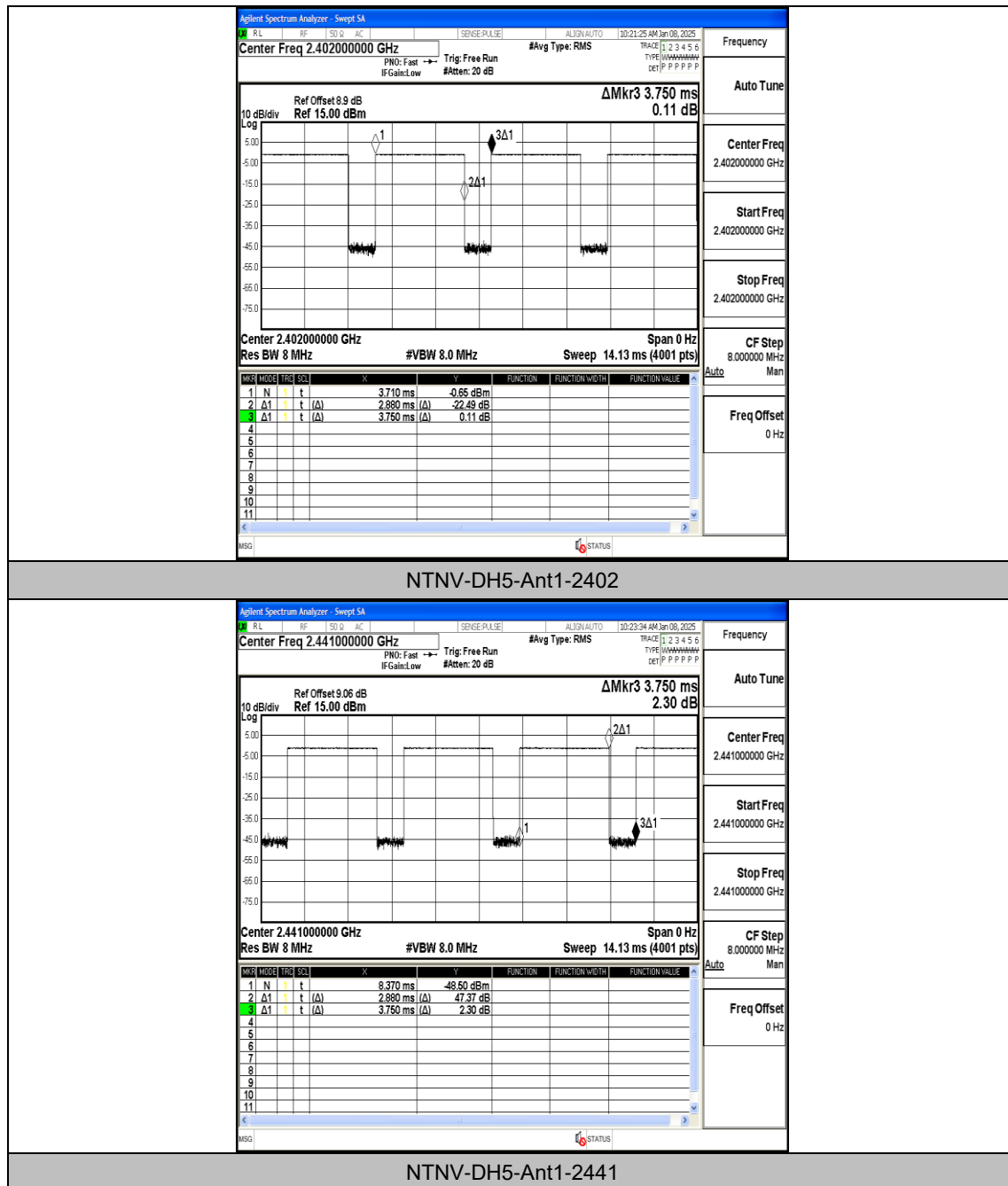


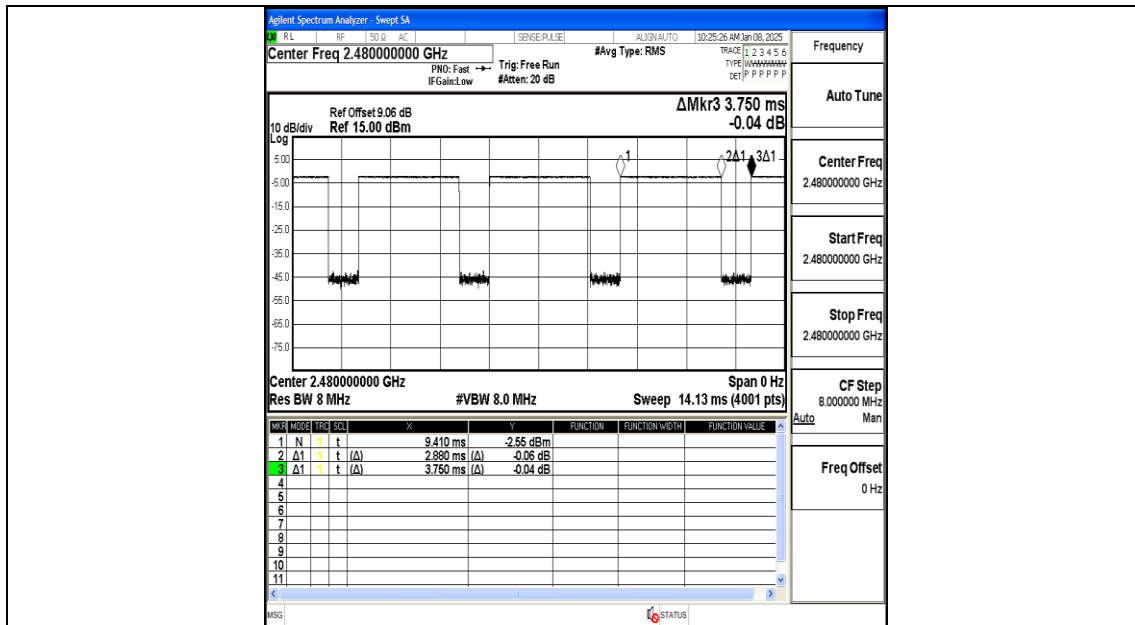
Appendix I: Duty Cycle

Test Result

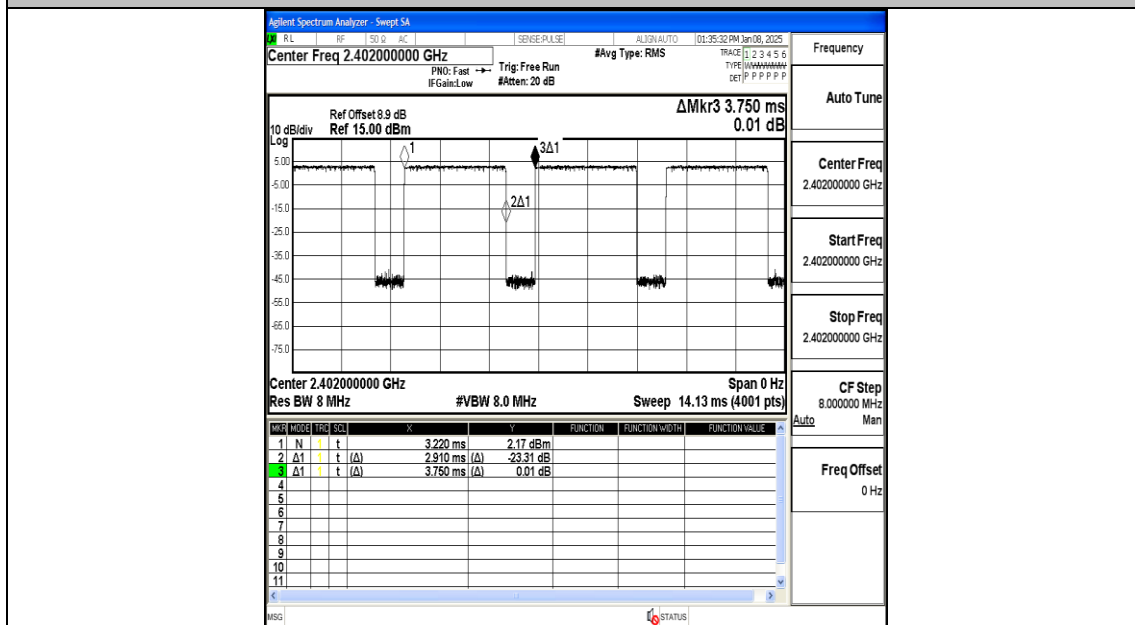
Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.88	3.75	76.80	1.15
DH5	Ant1	2441	2.88	3.75	76.80	1.15
DH5	Ant1	2480	2.88	3.75	76.80	1.15
2DH5	Ant1	2402	2.91	3.75	77.60	1.10
2DH5	Ant1	2441	2.90	3.75	77.33	1.12
2DH5	Ant1	2480	2.91	3.75	77.60	1.10
3DH5	Ant1	2402	2.91	3.75	77.60	1.10
3DH5	Ant1	2441	2.91	3.75	77.60	1.10
3DH5	Ant1	2480	2.91	3.75	77.60	1.10

Test Graphs

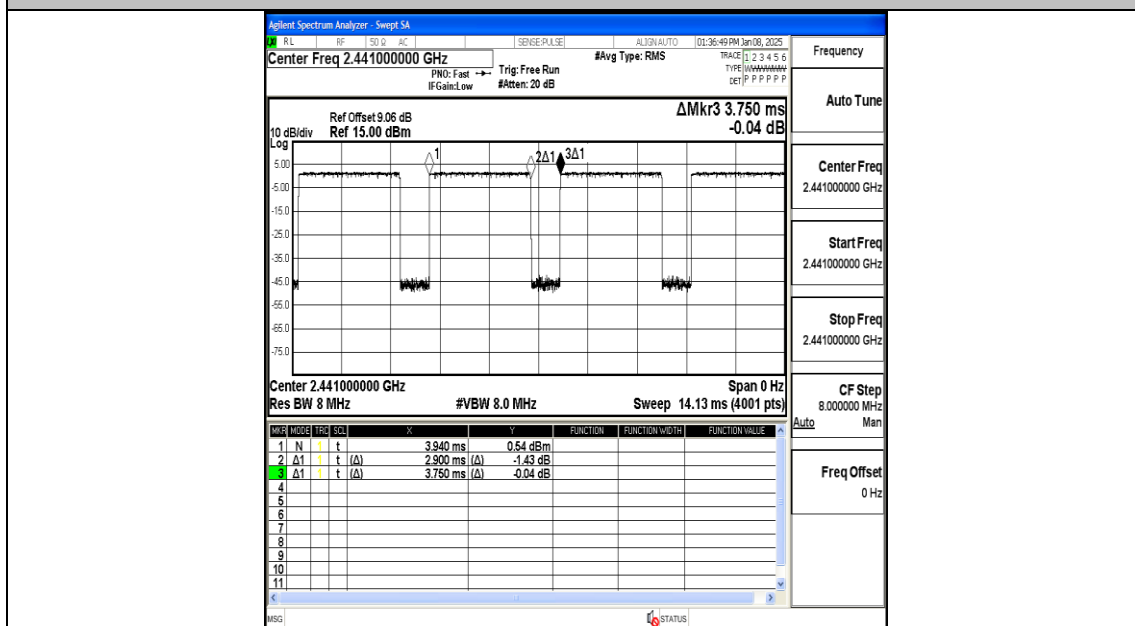




NTNV-DH5-Ant1-2480



NTNV-2DH5-Ant1-2402



NTNV-2DH5-Ant1-2441

