

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

Product Name: Wanbo Projector

Trade Mark: wanbo

Test Model: WPD24

FCC ID: 2A7PIWPD24

Environmental Conditions

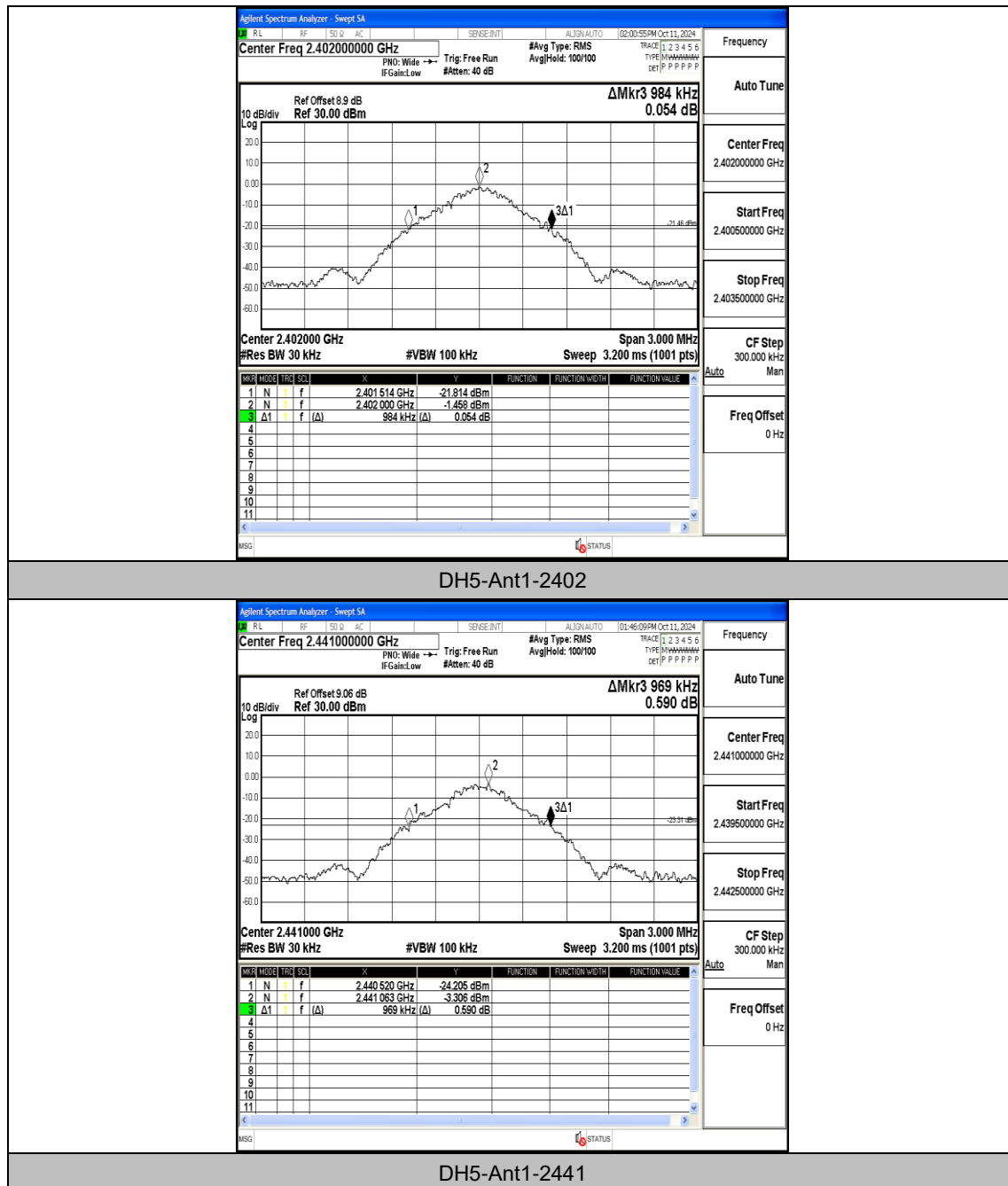
Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

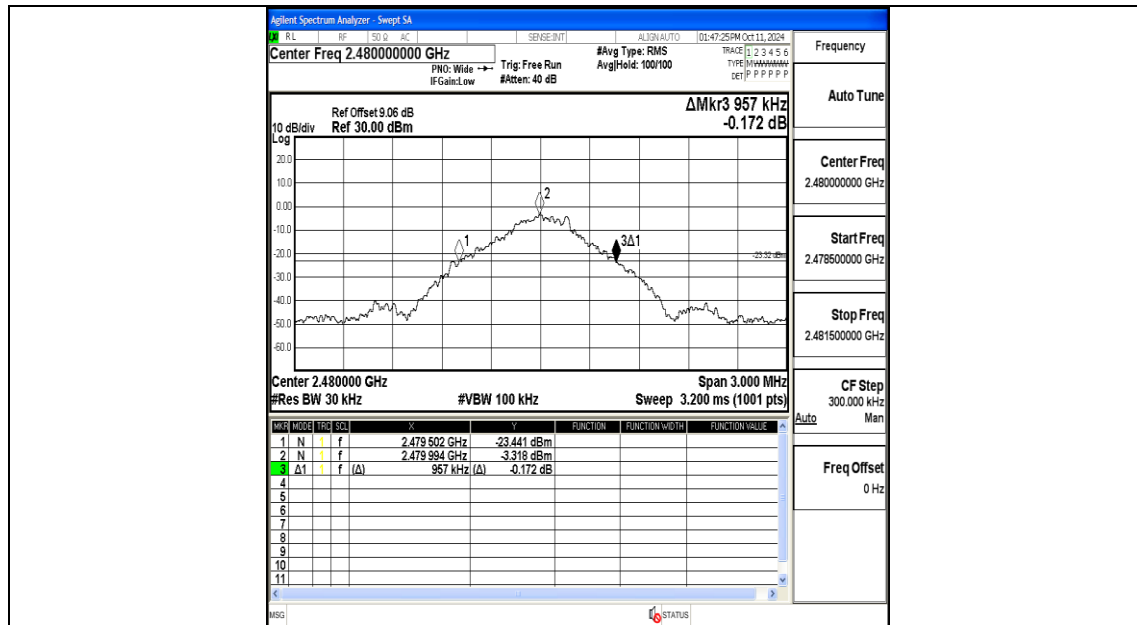
Appendix A: 20dB Emission Bandwidth

Test Result

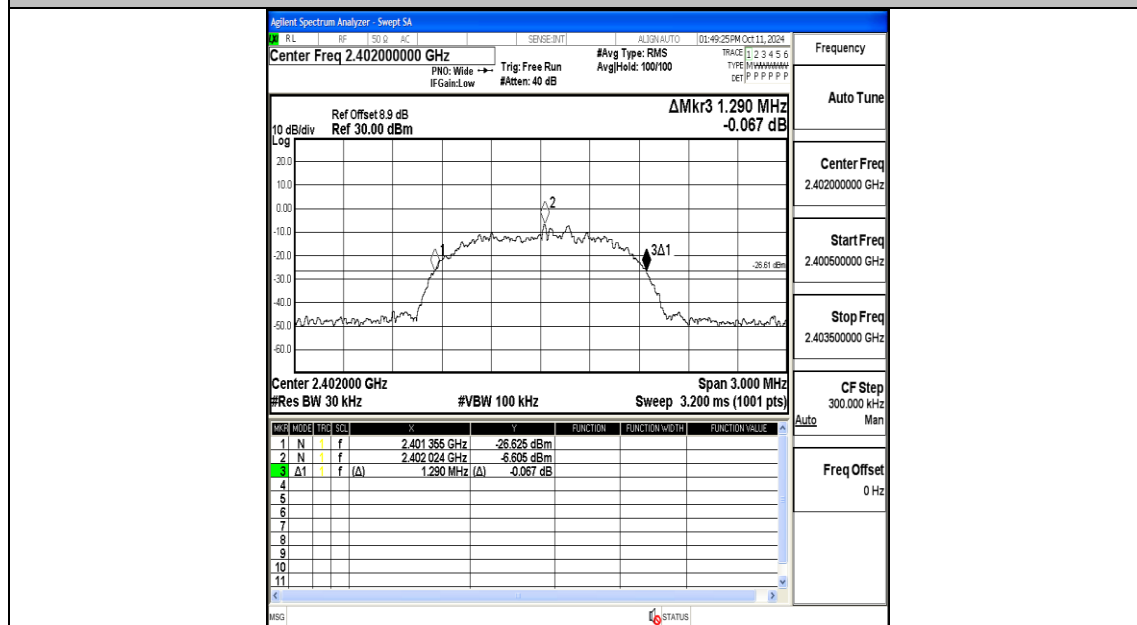
Test Mode	Antenna	Frequency [MHz]	20db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.984	2401.514	2402.498	---	---
DH5	Ant1	2441	0.969	2440.520	2441.489	---	---
DH5	Ant1	2480	0.957	2479.502	2480.459	---	---
2DH5	Ant1	2402	1.290	2401.355	2402.645	---	---
2DH5	Ant1	2441	1.290	2440.346	2441.636	---	---
2DH5	Ant1	2480	1.308	2479.346	2480.654	---	---
3DH5	Ant1	2402	1.281	2401.346	2402.627	---	---
3DH5	Ant1	2441	1.305	2440.346	2441.651	---	---
3DH5	Ant1	2480	1.296	2479.355	2480.651	---	---

Test Graphs

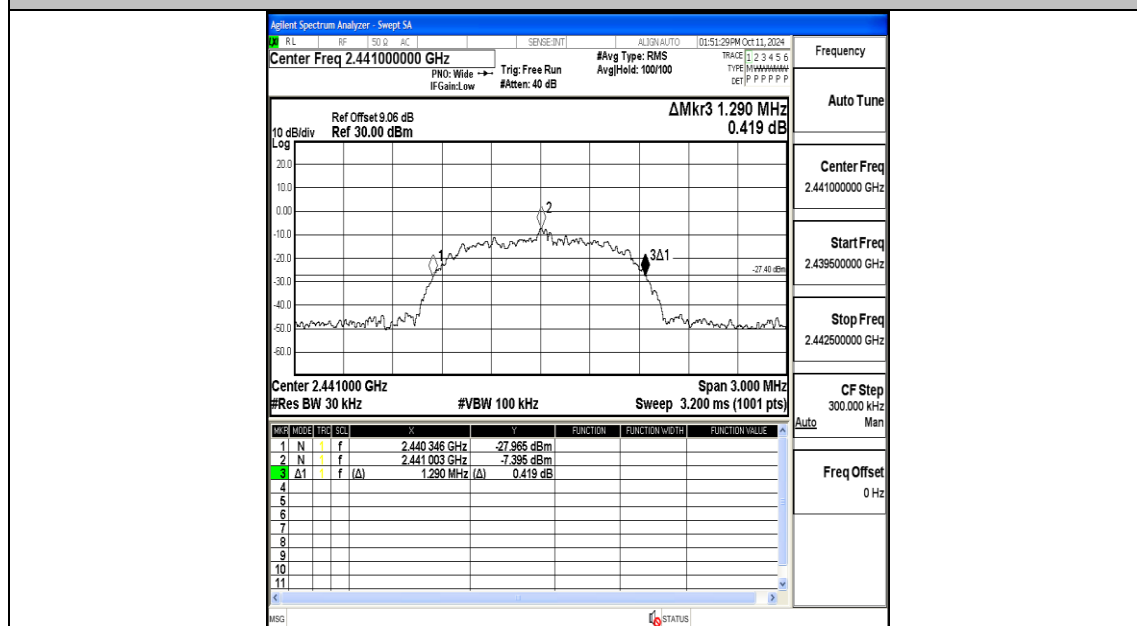




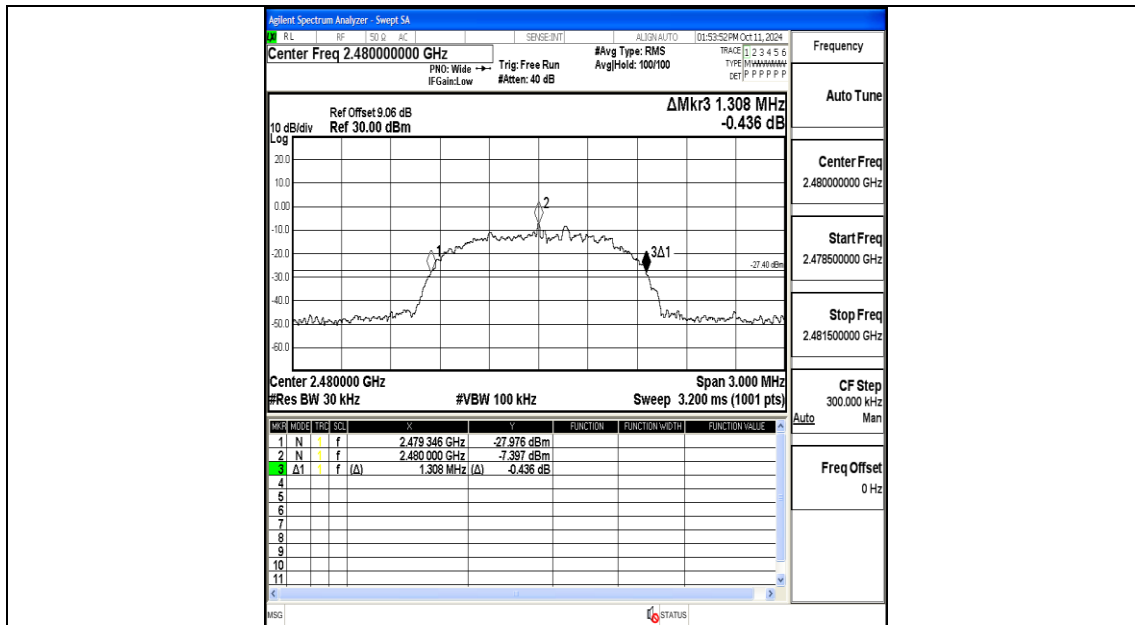
DH5-Ant1-2480



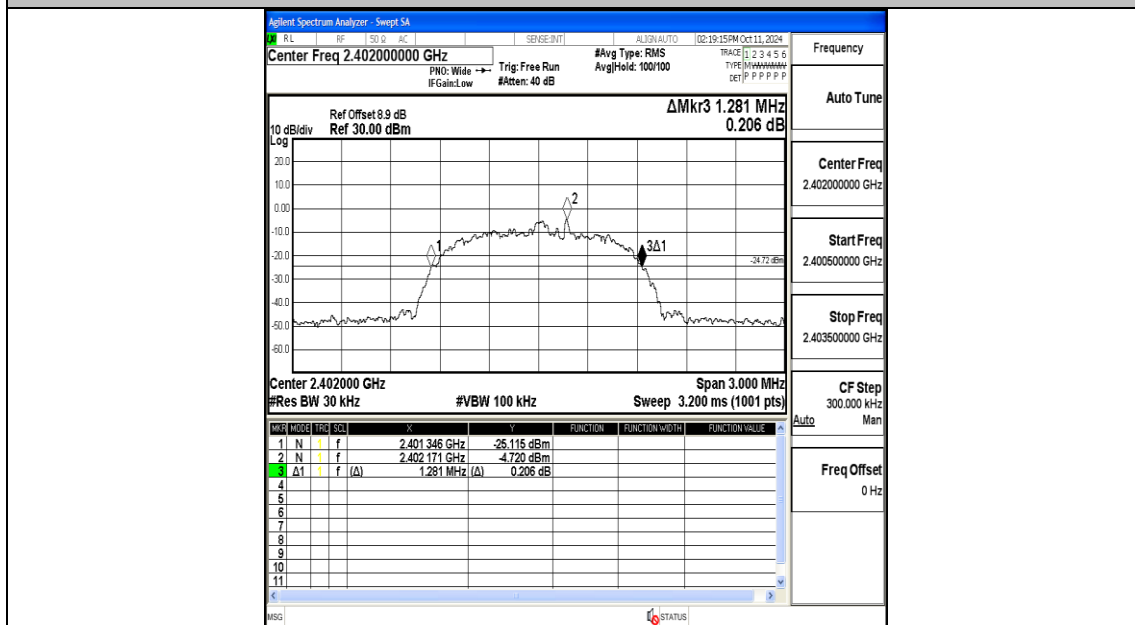
2DH5-Ant1-2402



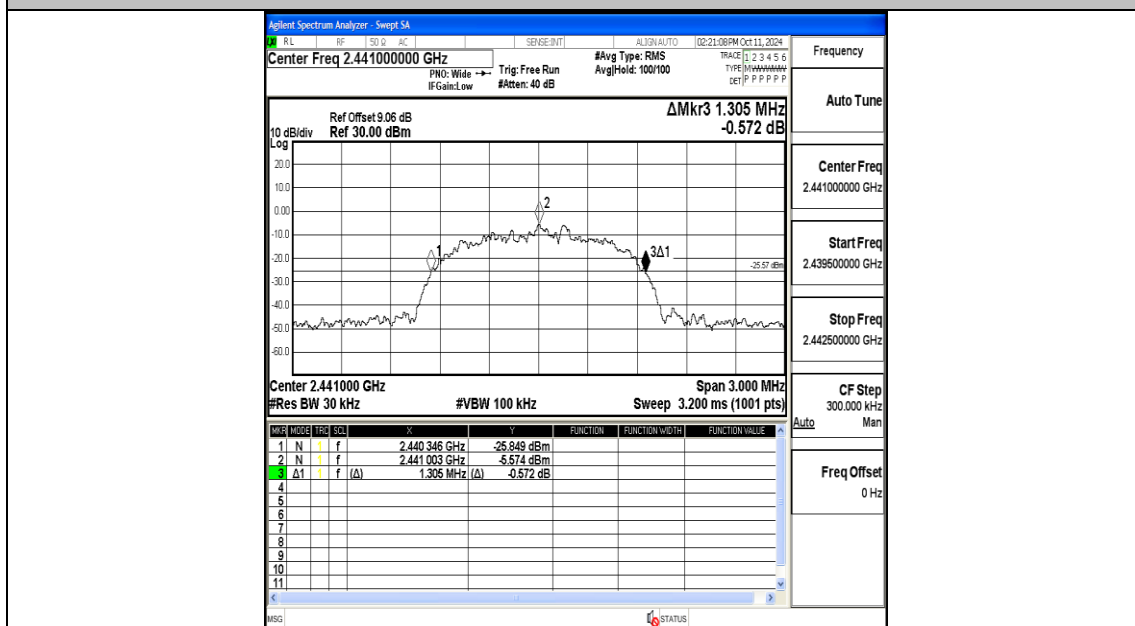
2DH5-Ant1-2441



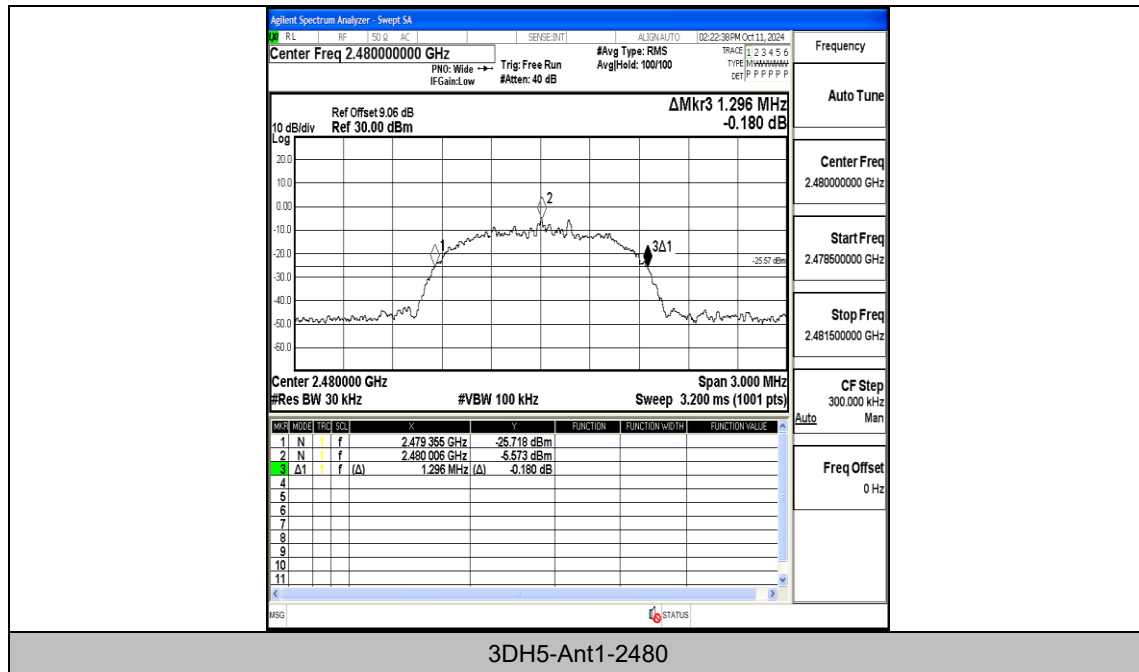
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441

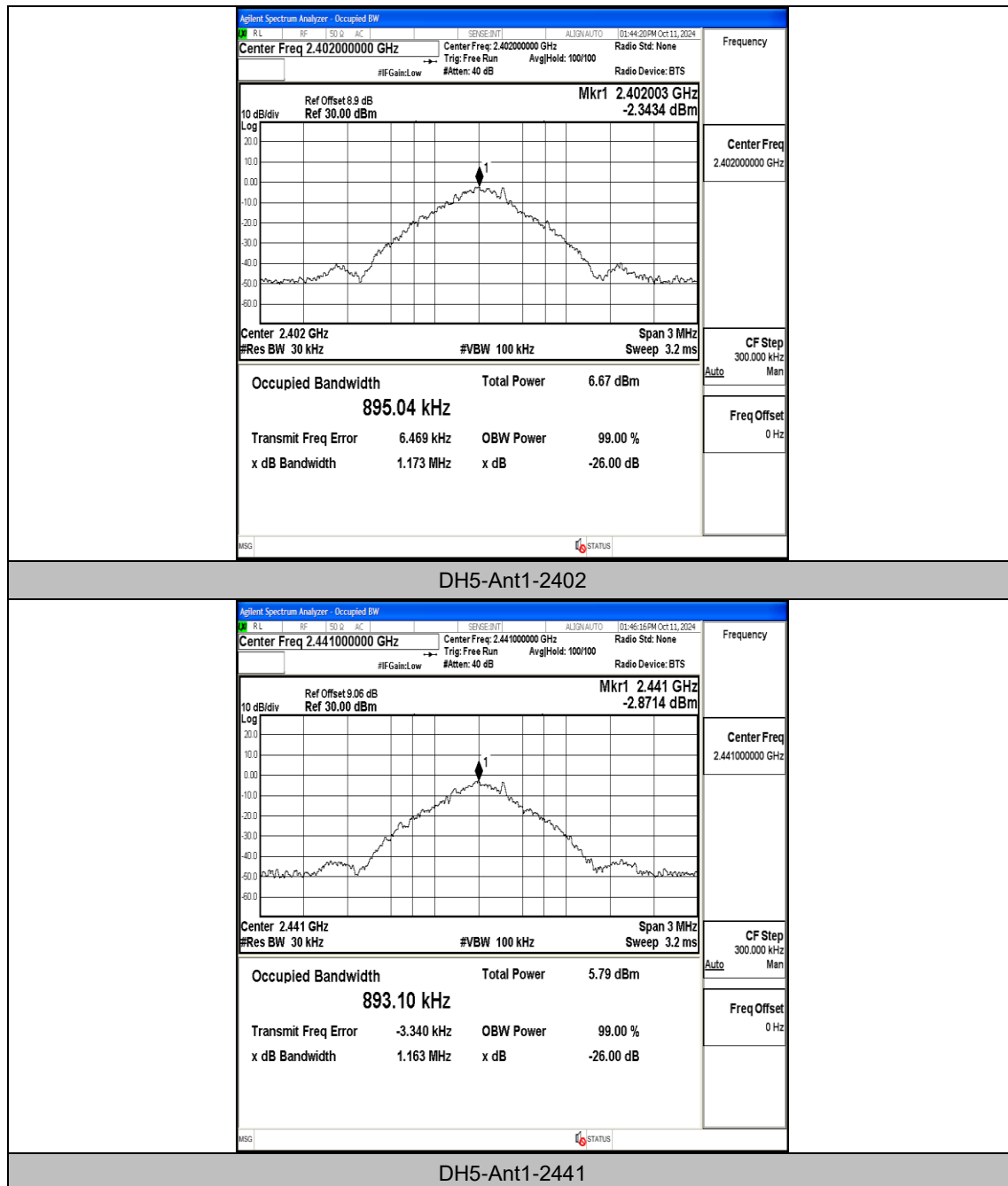


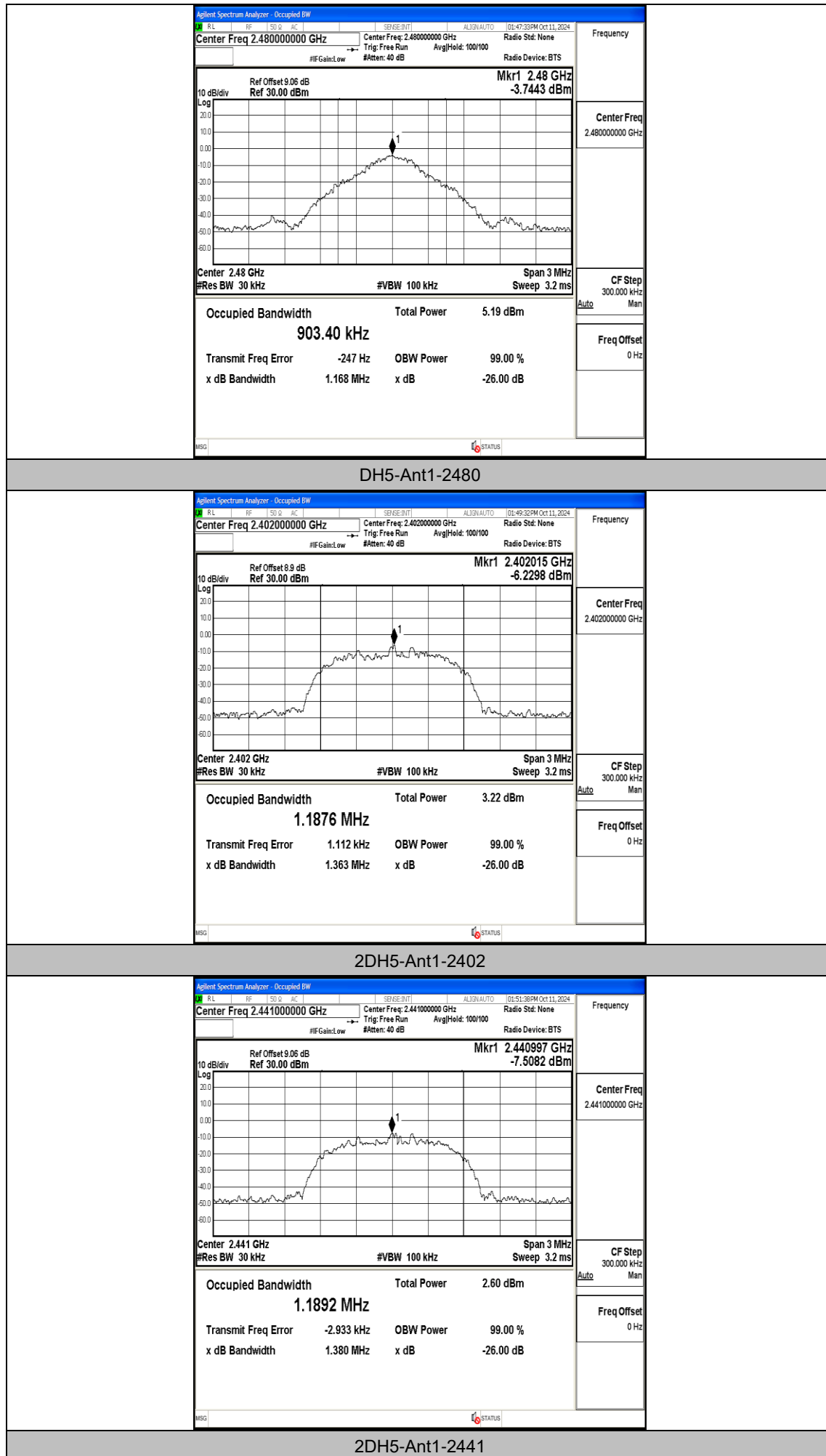
Appendix B: Occupied Channel Bandwidth

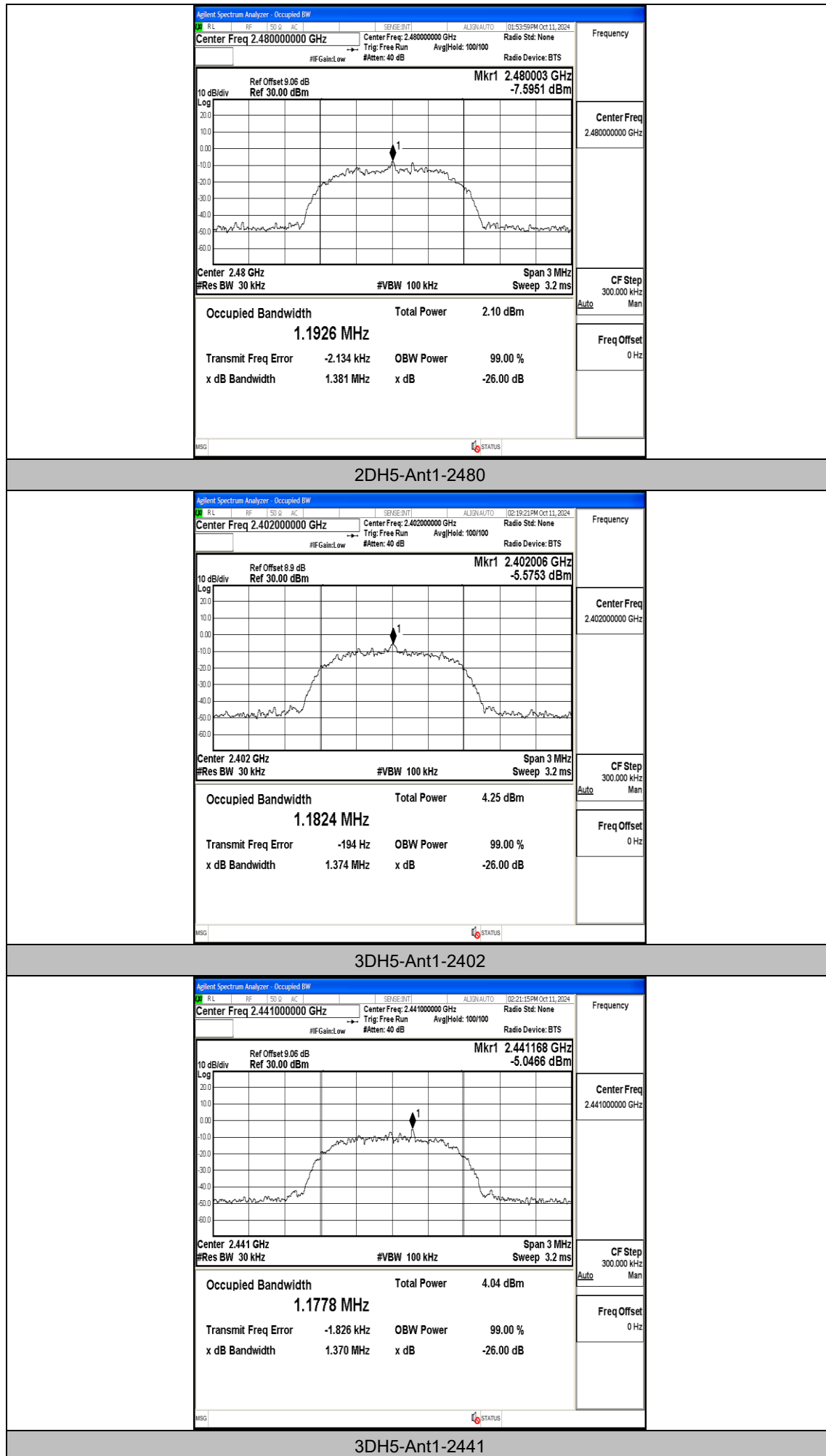
Test Result

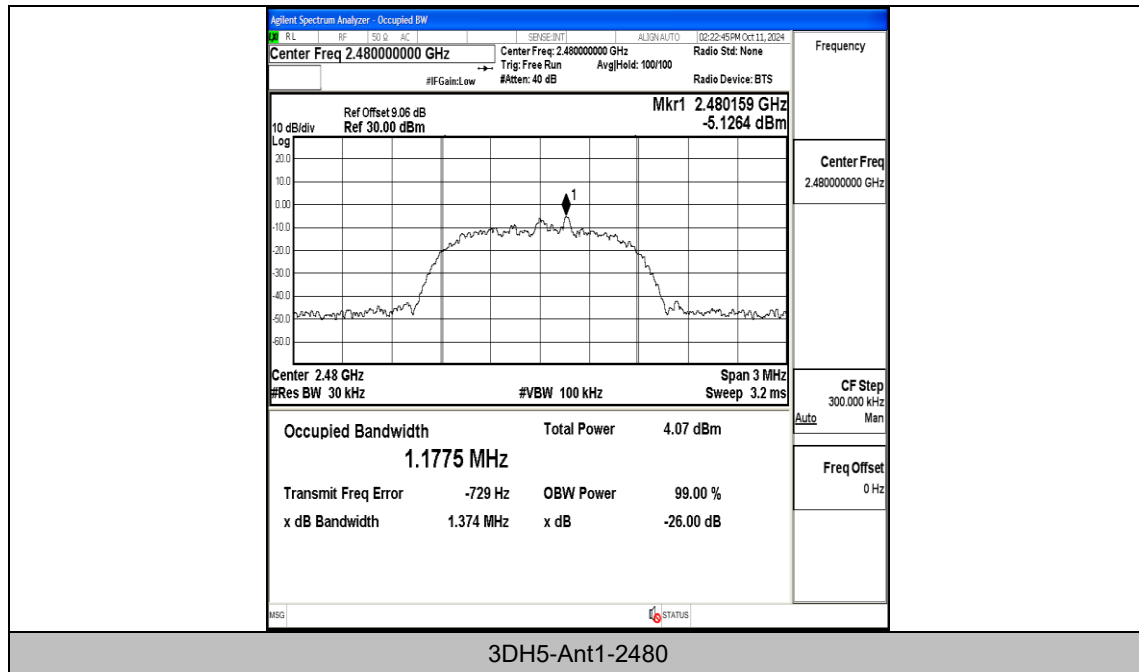
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.89504	2401.5590	2402.4540	---	---
DH5	Ant1	2441	0.89310	2440.5501	2441.4432	---	---
DH5	Ant1	2480	0.90340	2479.5481	2480.4515	---	---
2DH5	Ant1	2402	1.1876	2401.4073	2402.5949	---	---
2DH5	Ant1	2441	1.1892	2440.4025	2441.5917	---	---
2DH5	Ant1	2480	1.1926	2479.4016	2480.5942	---	---
3DH5	Ant1	2402	1.1824	2401.4086	2402.5910	---	---
3DH5	Ant1	2441	1.1778	2440.4093	2441.5871	---	---
3DH5	Ant1	2480	1.1775	2479.4105	2480.5880	---	---

Test Graphs







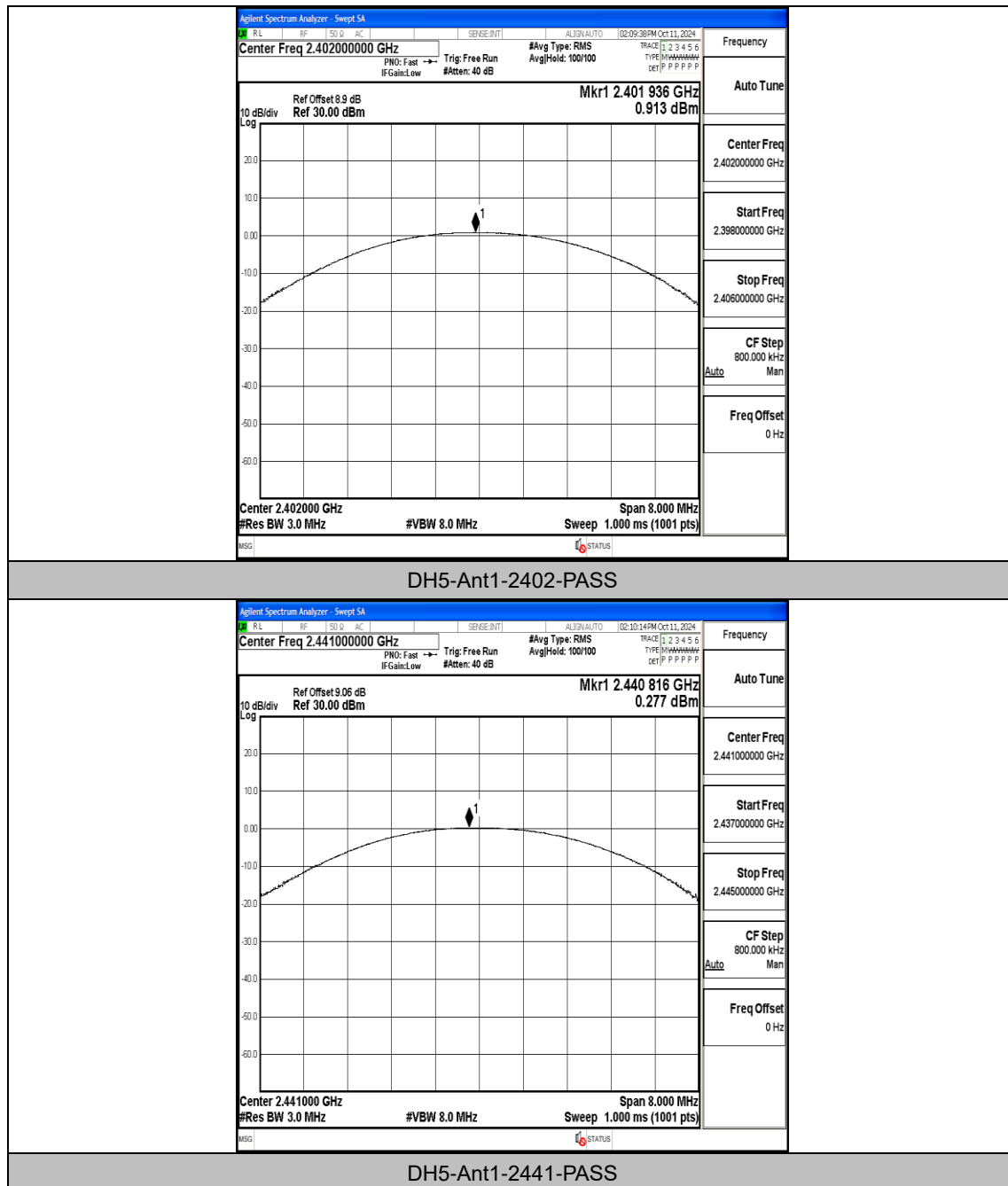


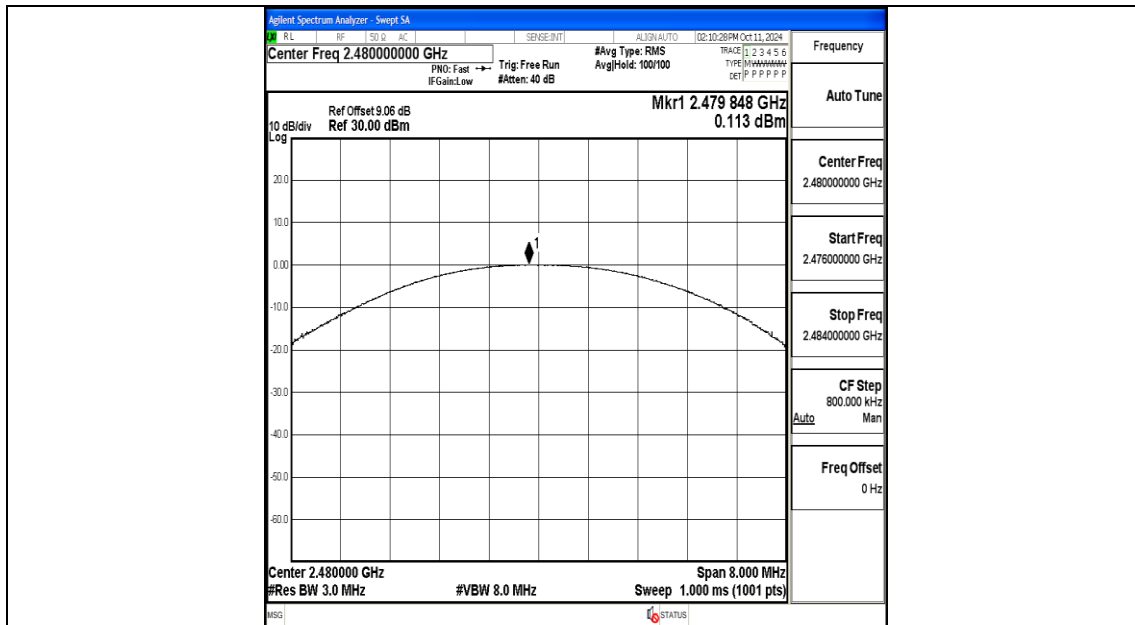
Appendix C: Maximum peak conducted output power

Test Result

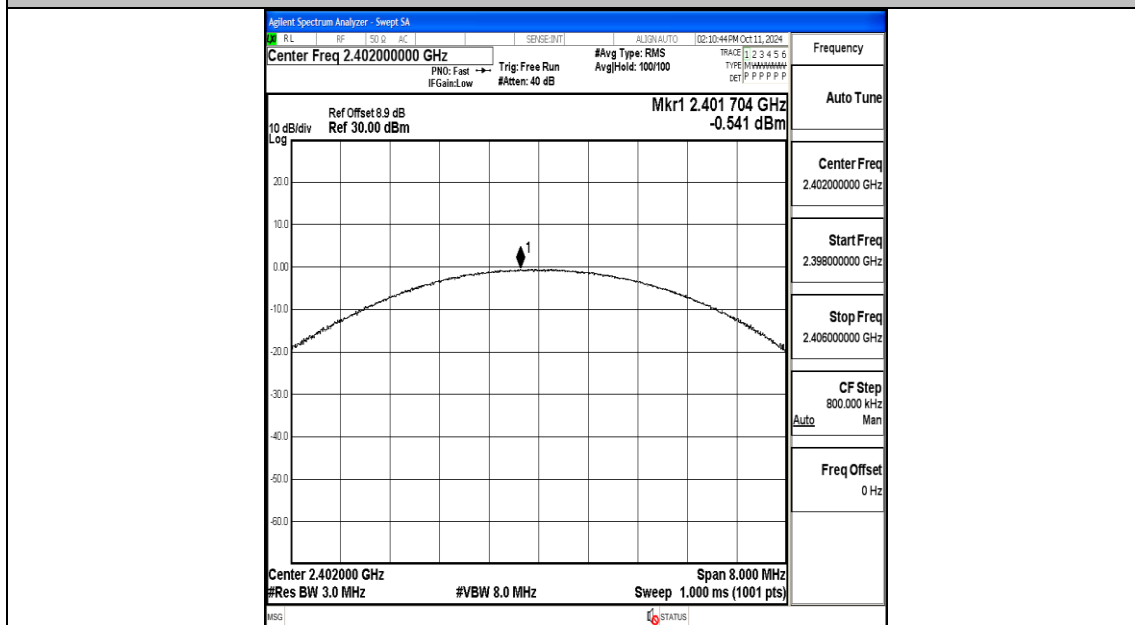
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	0.91	≤30	PASS
DH5	Ant1	2441	0.28	≤30	PASS
DH5	Ant1	2480	0.11	≤30	PASS
2DH5	Ant1	2402	-0.54	≤30	PASS
2DH5	Ant1	2441	-0.98	≤30	PASS
2DH5	Ant1	2480	-1.32	≤30	PASS
3DH5	Ant1	2402	-0.13	≤20.97	PASS
3DH5	Ant1	2441	-0.65	≤20.97	PASS
3DH5	Ant1	2480	-0.95	≤20.97	PASS

Test Graphs

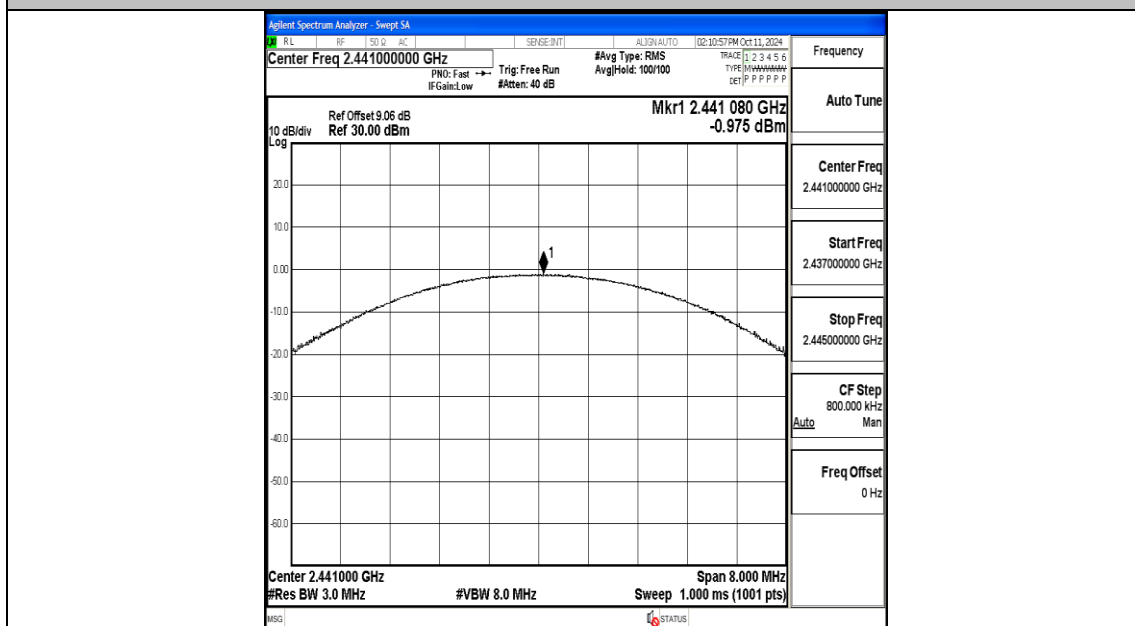




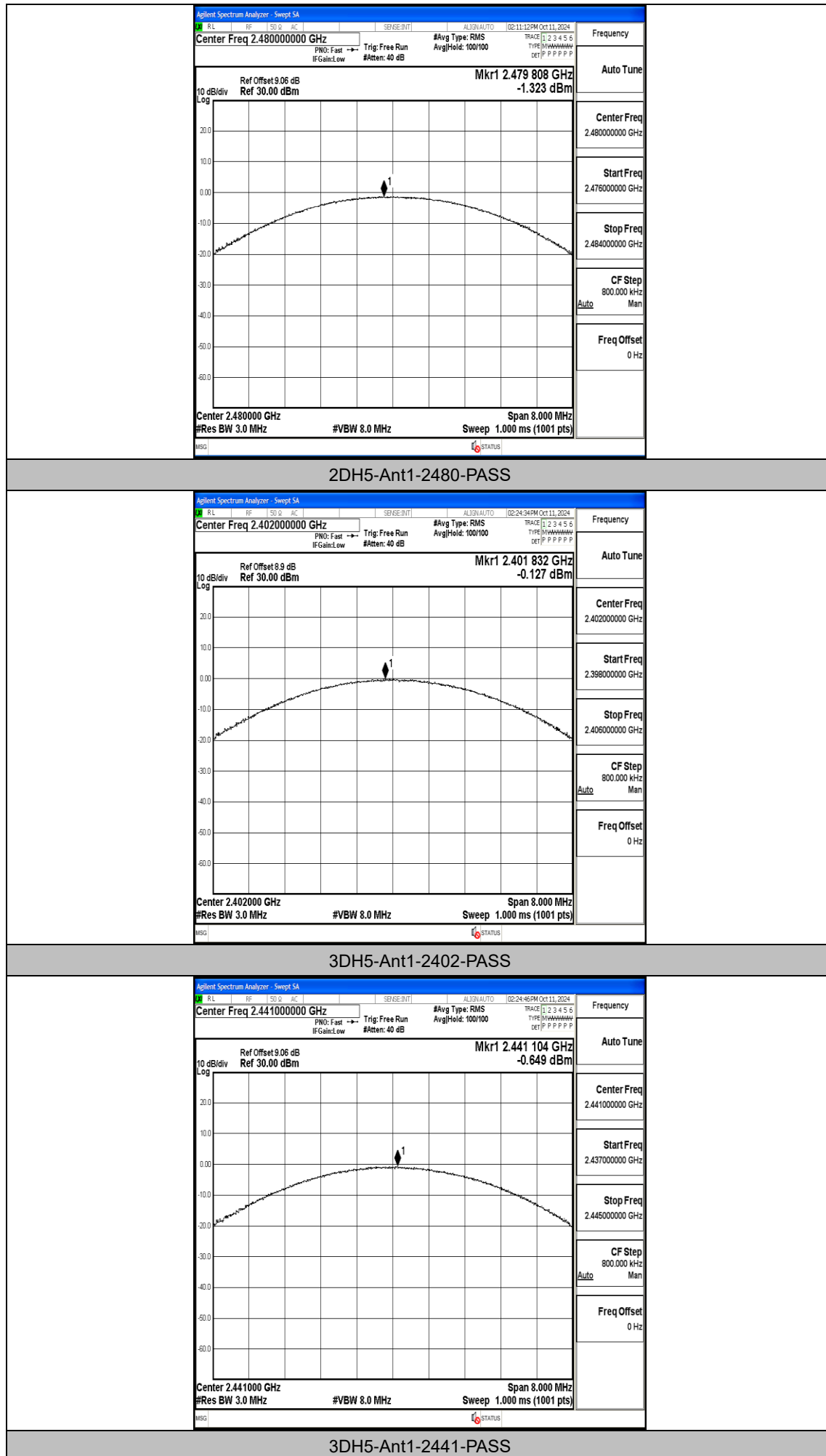
DH5-Ant1-2480-PASS

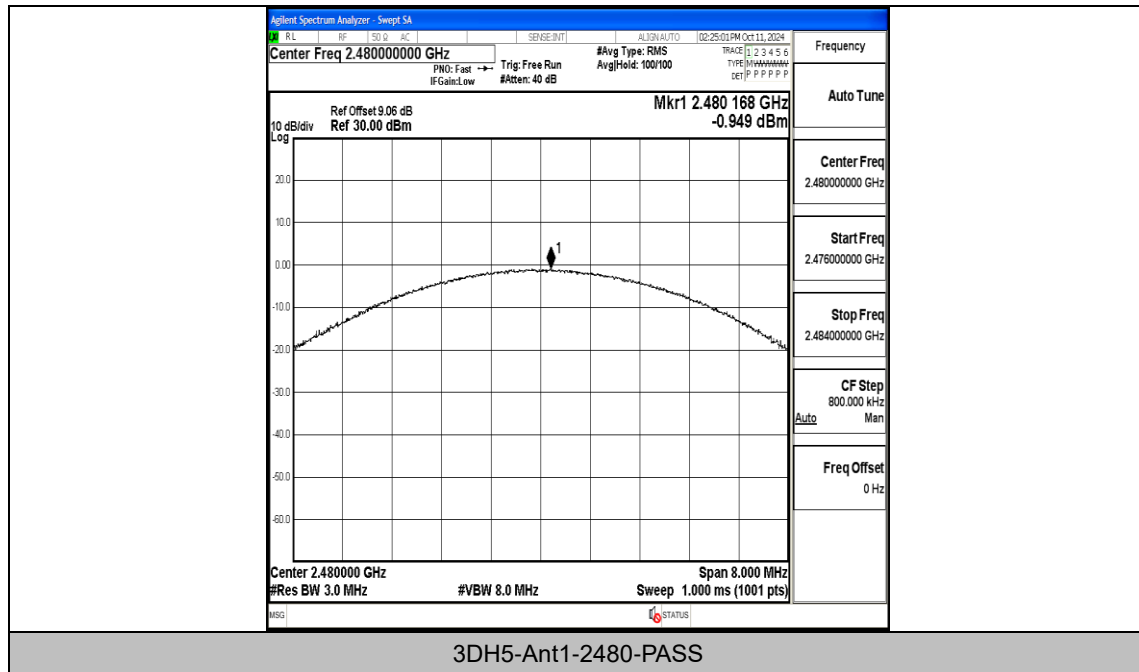


2DH5-Ant1-2402-PASS



2DH5-Ant1-2441-PASS



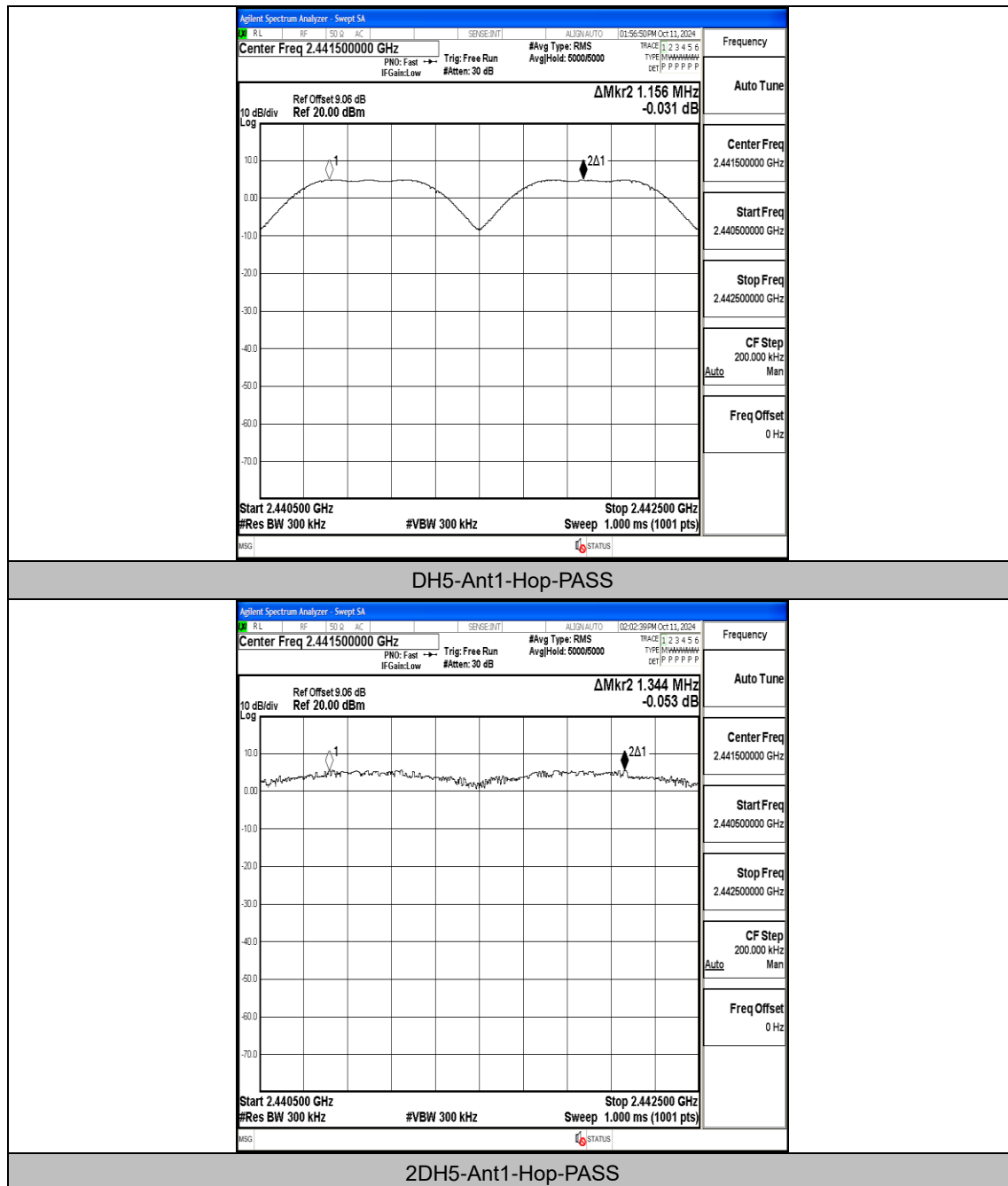


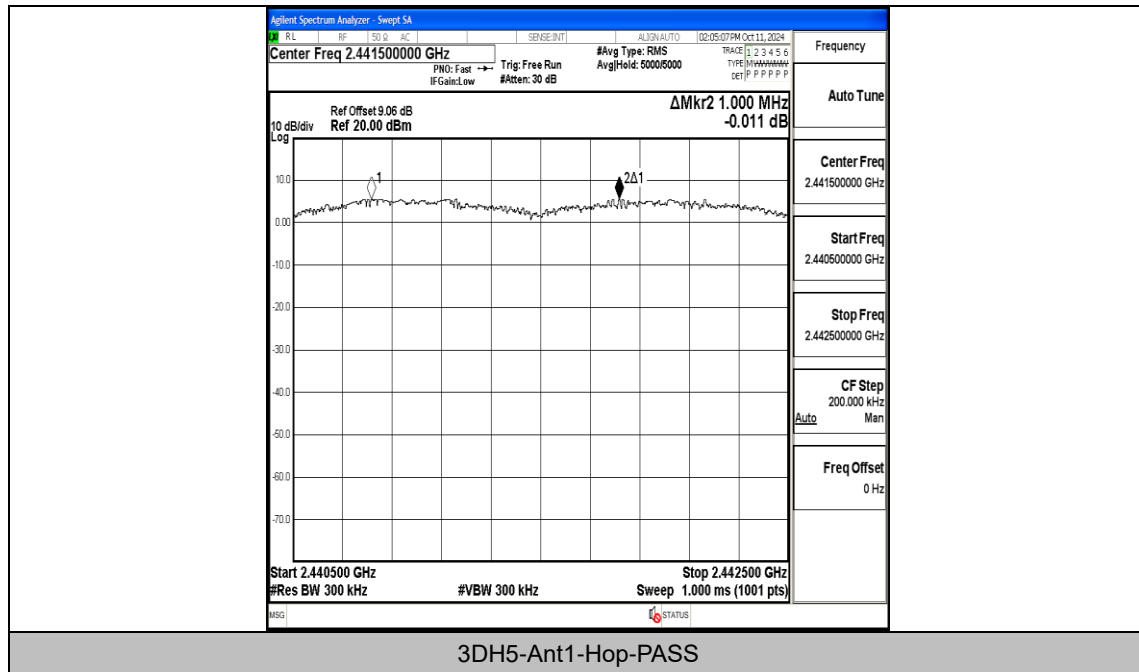
Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	1.156	≥ 1.080	PASS
2DH5	Ant1	Hop	1.344	≥ 1.308	PASS
3DH5	Ant1	Hop	1	≥ 0.025	PASS

Test Graphs



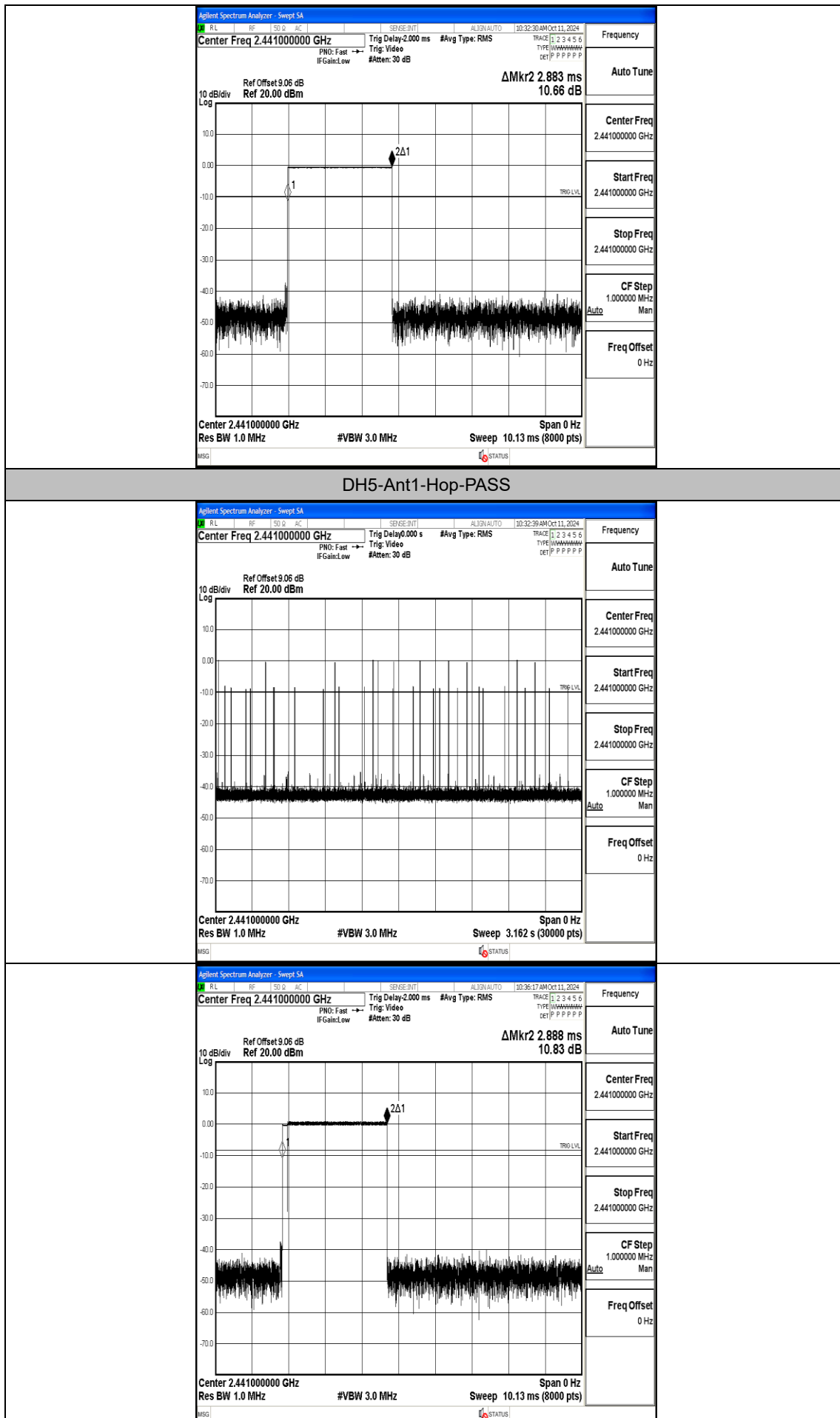


Appendix E: Time of occupancy

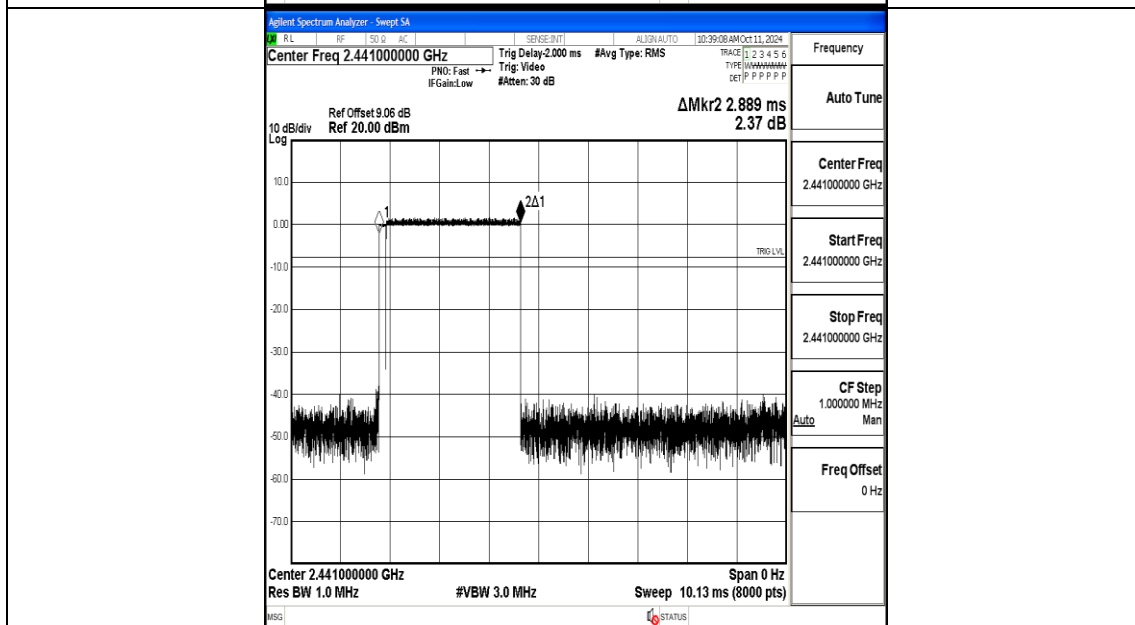
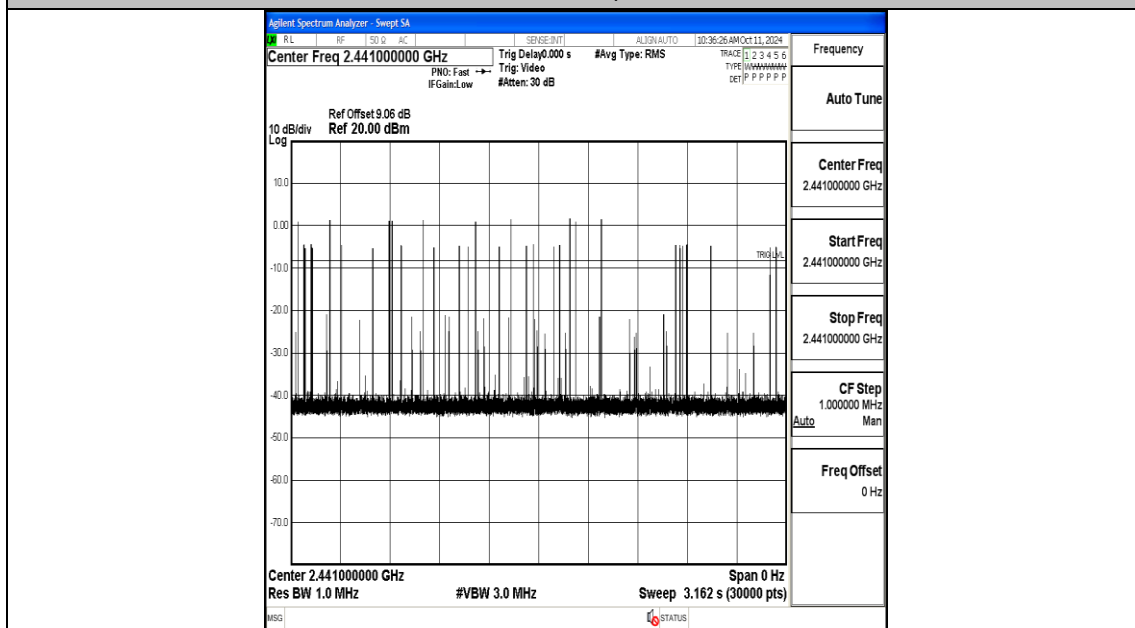
Test Result

Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.883	120	0.346	≤0.4	PASS
2DH5	Ant1	Hop	2.888	110	0.318	≤0.4	PASS
3DH5	Ant1	Hop	2.889	120	0.347	≤0.4	PASS

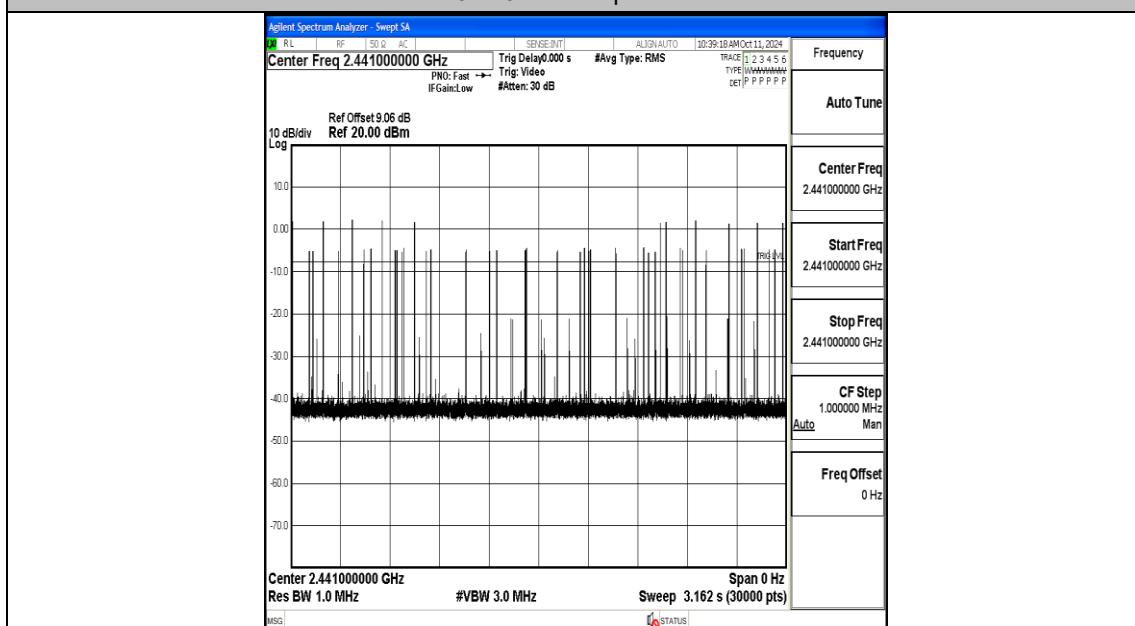
Test Graphs



2DH5-Ant1-Hop-PASS



3DH5-Ant1-Hop-PASS

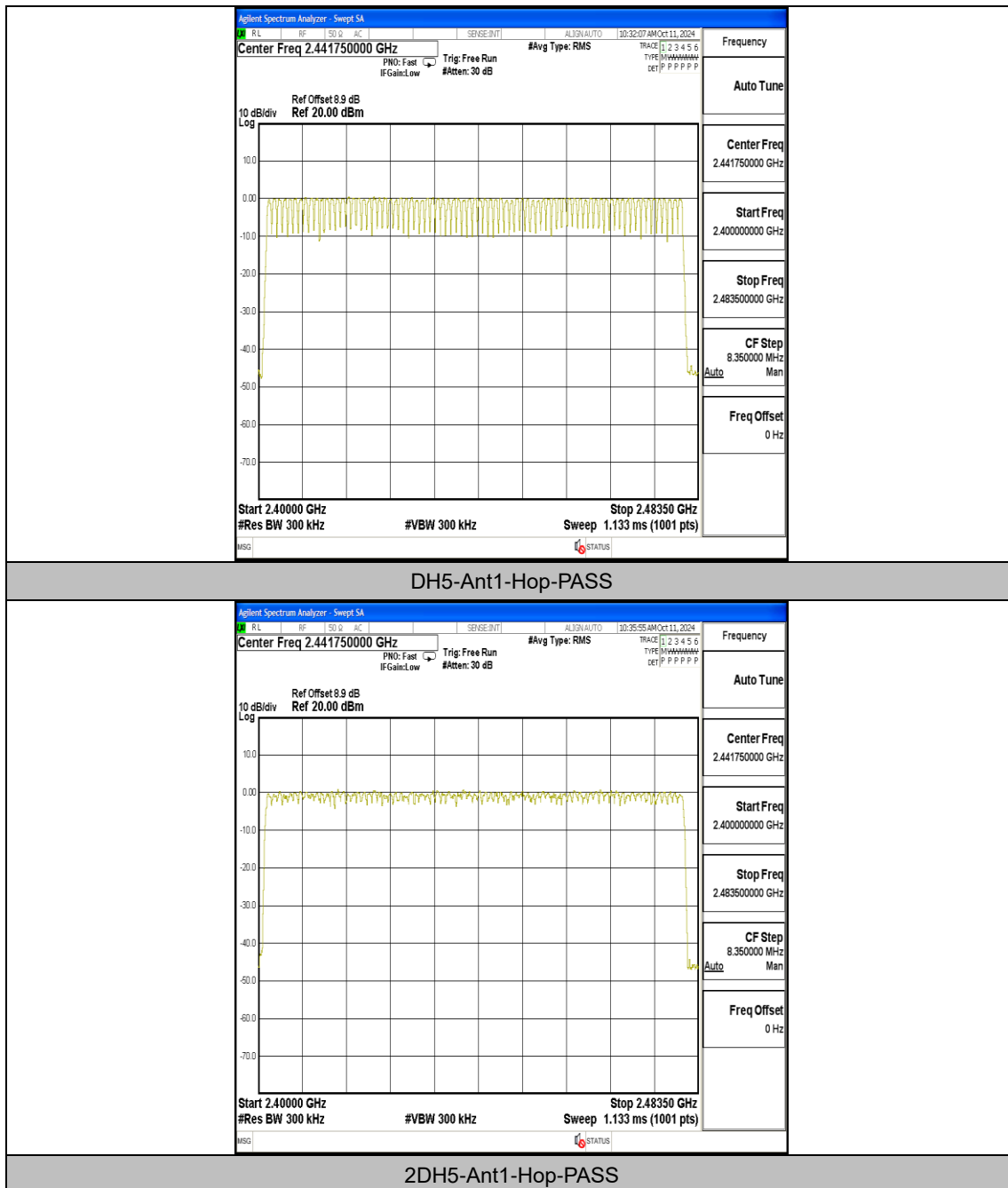


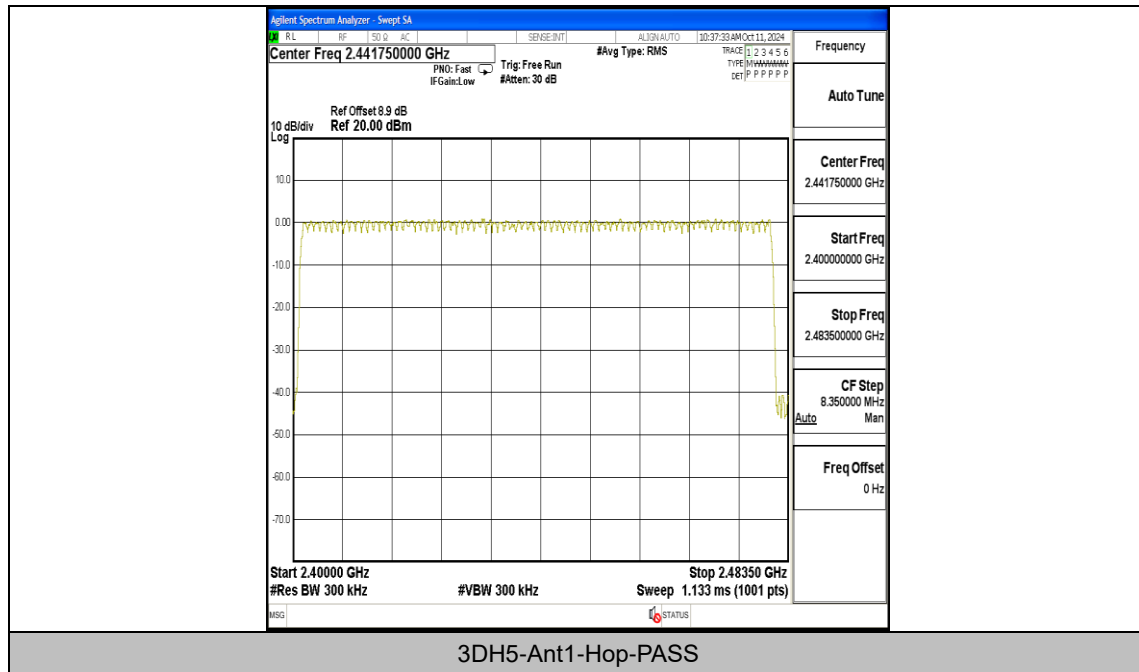
Appendix F: Number of hopping channels

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



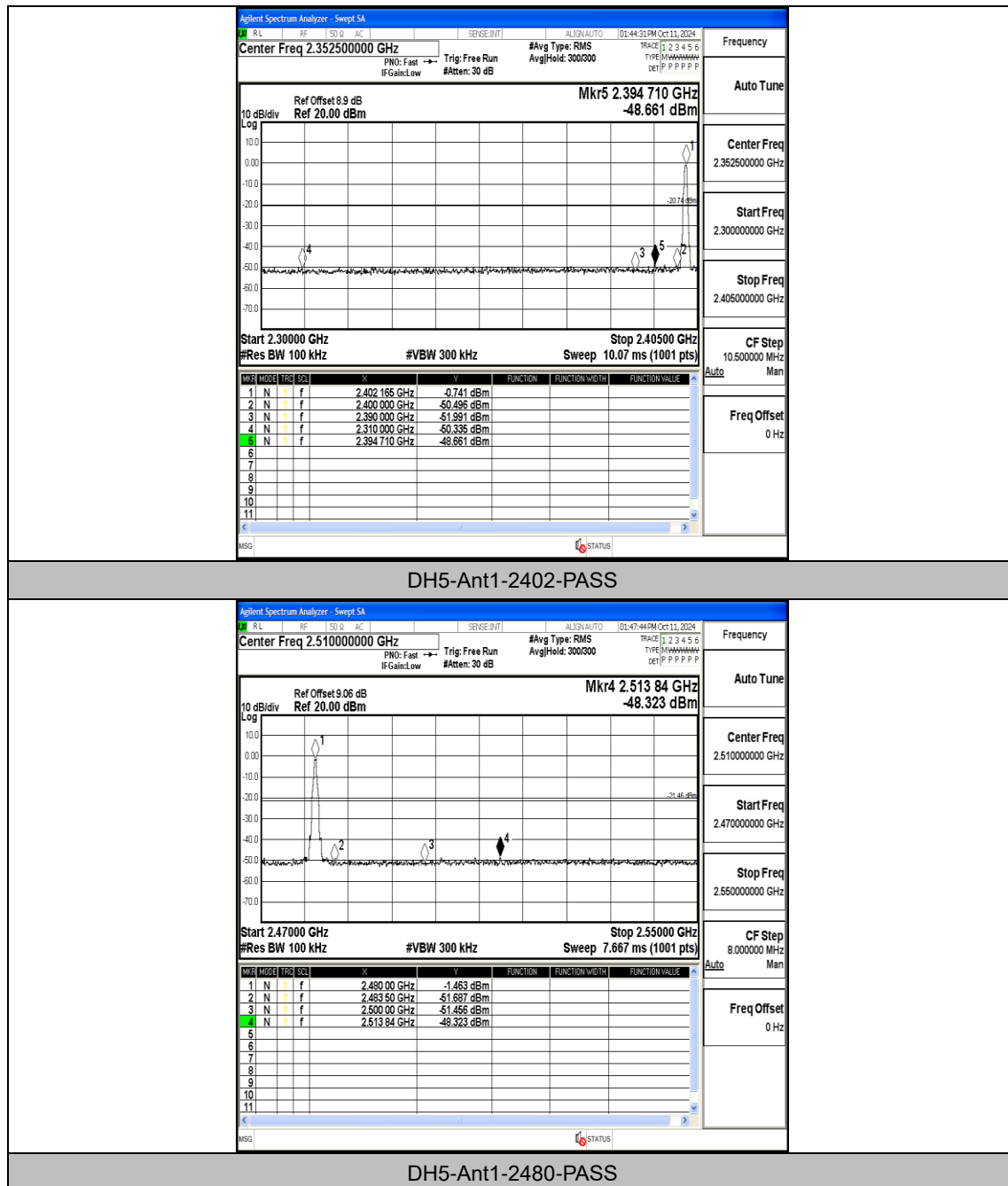


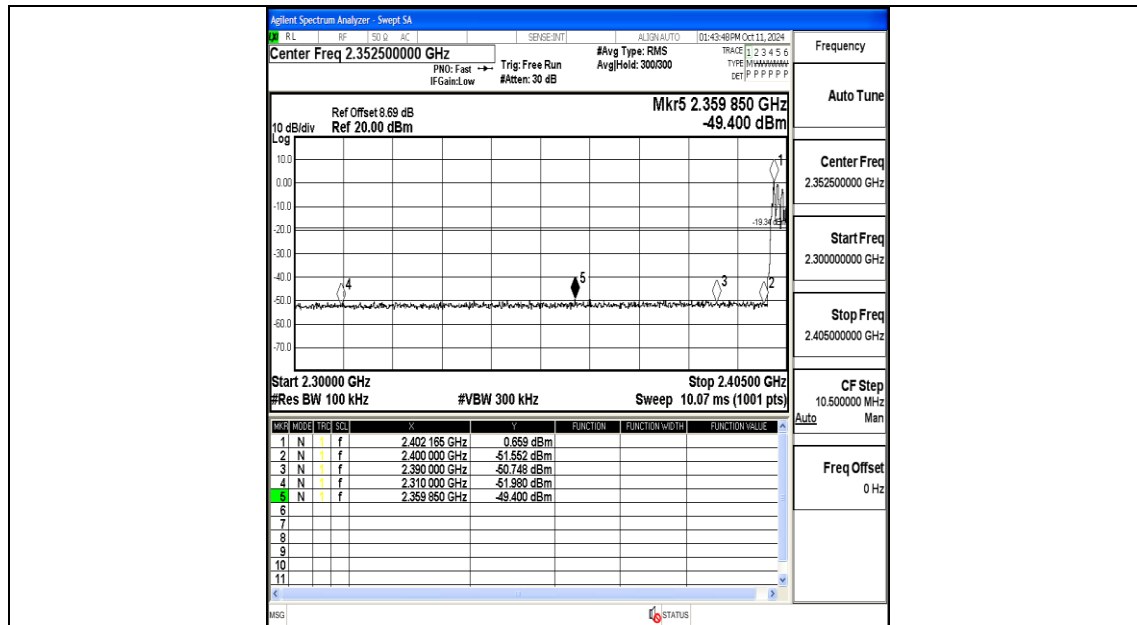
Appendix G: Band edge measurements

Test Result

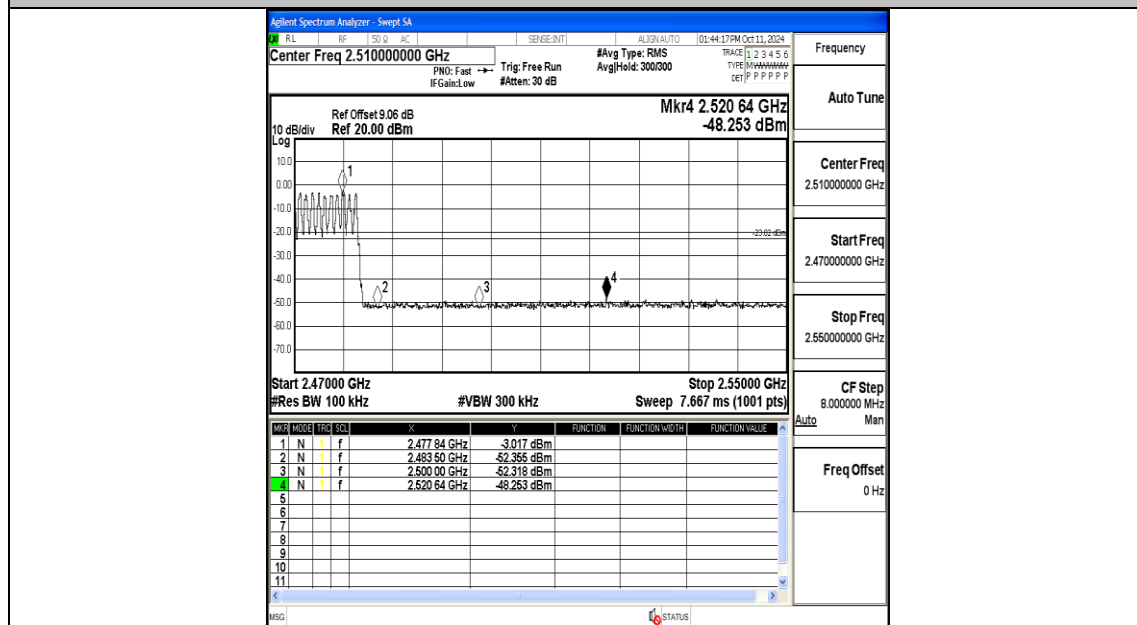
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.74	-48.66	≤ -20.74	PASS
DH5	Ant1	High	2480	-1.46	-48.32	≤ -21.46	PASS
DH5	Ant1	Low	Hop_2402	0.66	-49.4	≤ -19.34	PASS
DH5	Ant1	High	Hop_2480	-3.02	-48.25	≤ -23.02	PASS
2DH5	Ant1	Low	2402	-3.91	-49.08	≤ -23.91	PASS
2DH5	Ant1	High	2480	-4.79	-47.6	≤ -24.79	PASS
2DH5	Ant1	Low	Hop_2402	-2.12	-47.55	≤ -22.12	PASS
2DH5	Ant1	High	Hop_2480	-3.96	-48.25	≤ -23.96	PASS
3DH5	Ant1	Low	2402	-2.30	-49.02	≤ -22.3	PASS
3DH5	Ant1	High	2480	-2.81	-48.67	≤ -22.81	PASS
3DH5	Ant1	Low	Hop_2402	-1.83	-45.81	≤ -21.83	PASS
3DH5	Ant1	High	Hop_2480	-4.60	-47.48	≤ -24.6	PASS

Test Graphs

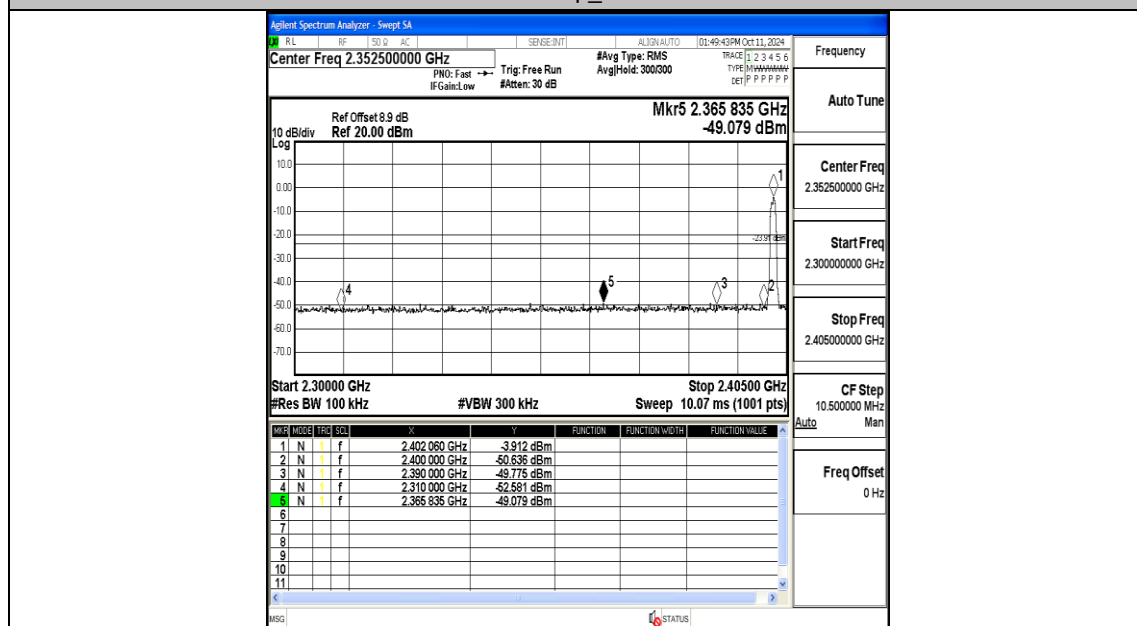




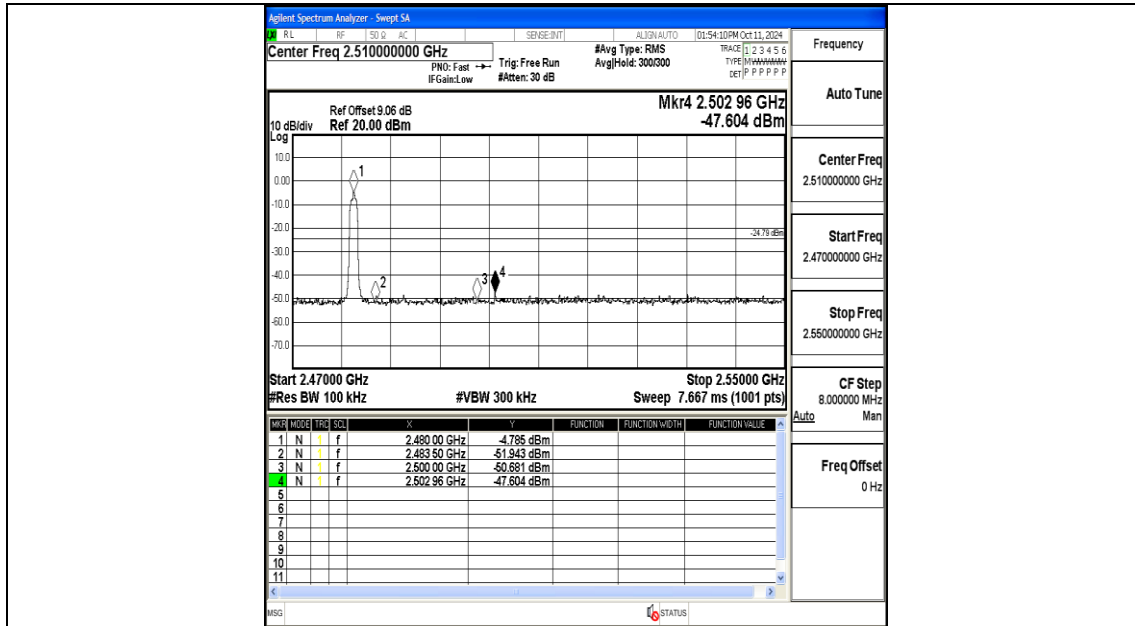
DH5-Ant1-Hop_2402-PASS



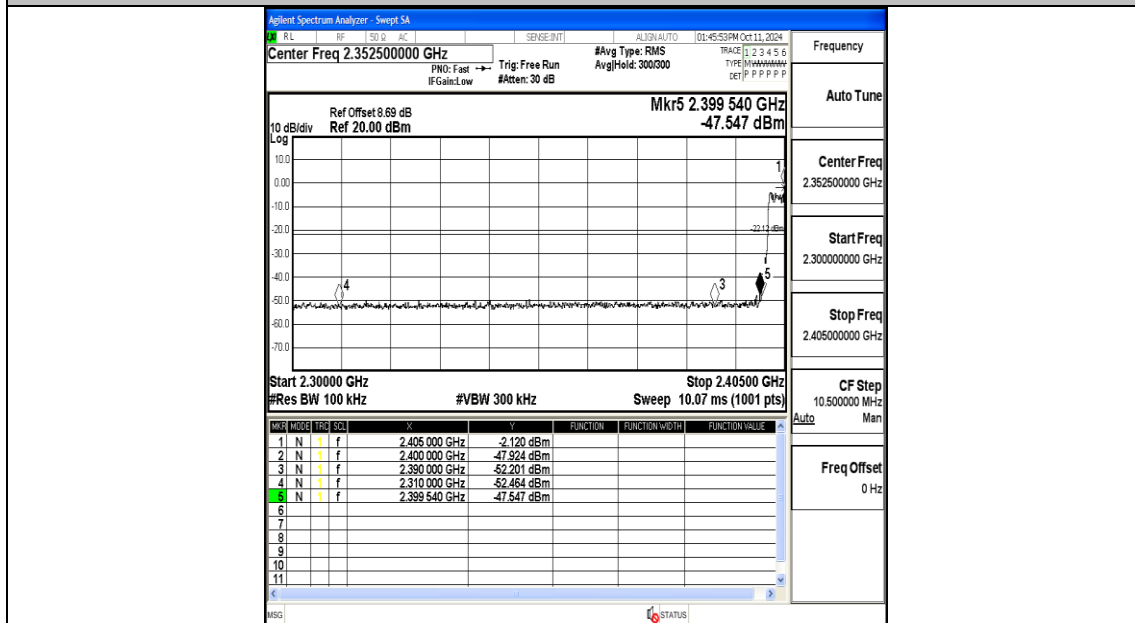
DH5-Ant1-Hop_2480-PASS



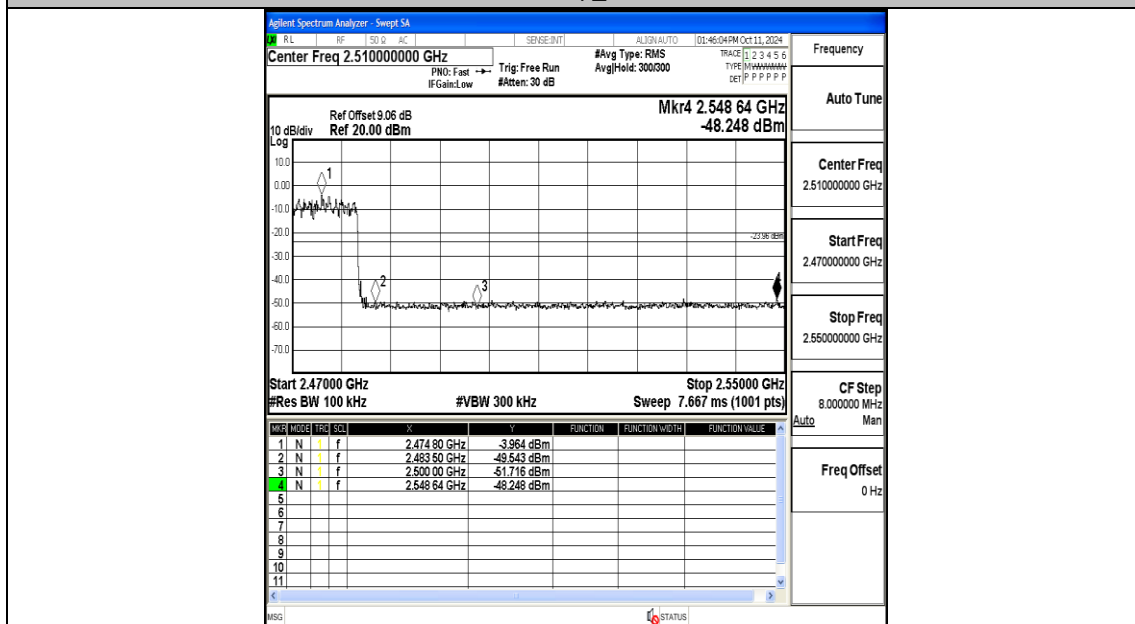
2DH5-Ant1-2402-PASS



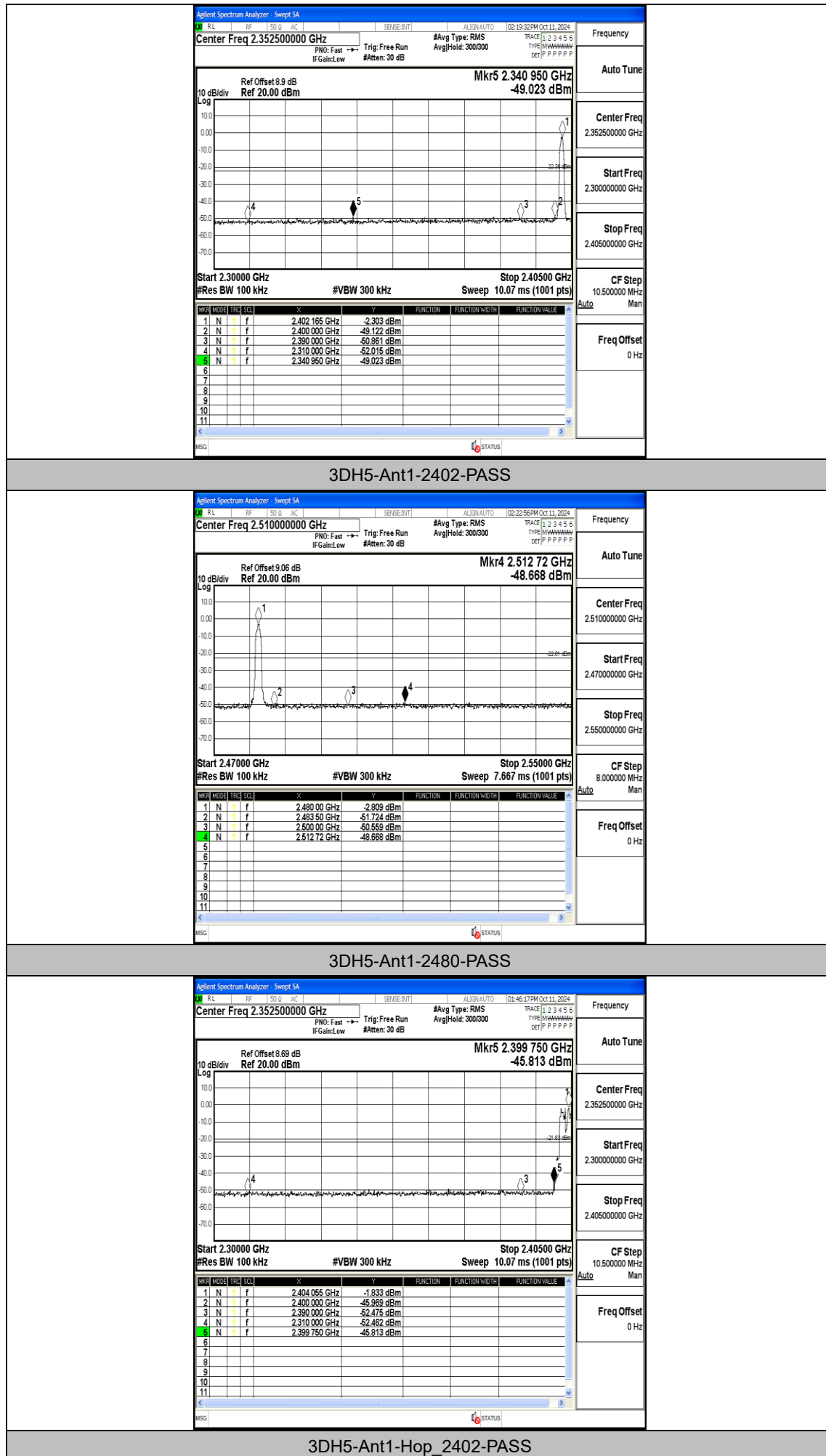
2DH5-Ant1-2480-PASS

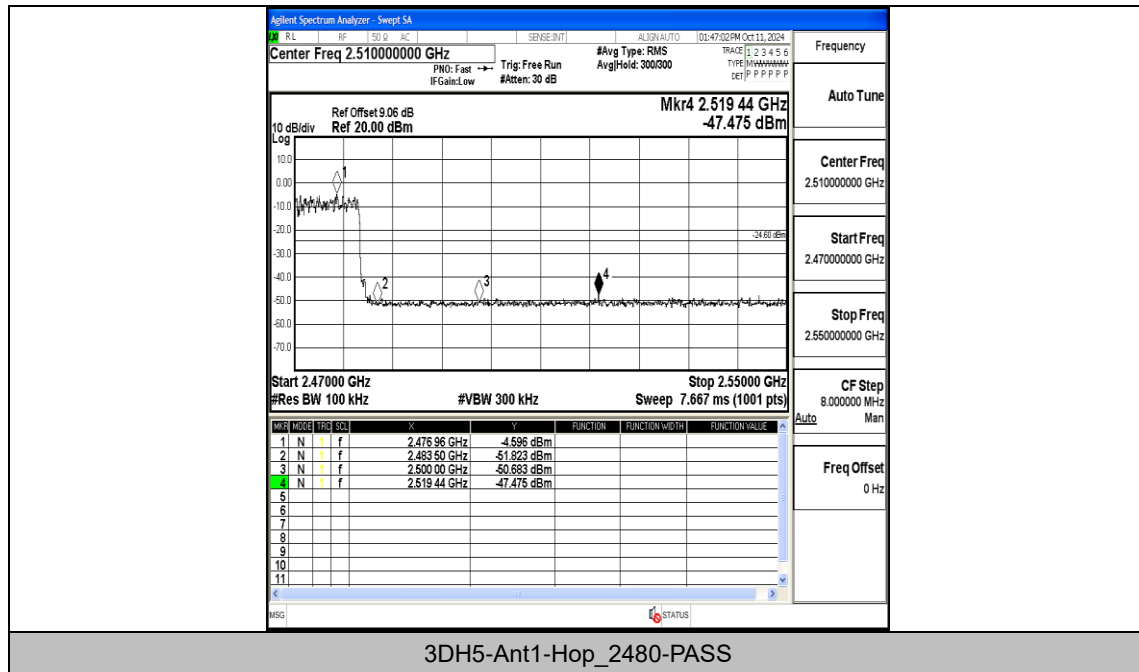


2DH5-Ant1-Hop_2402-PASS



2DH5-Ant1-Hop_2480-PASS



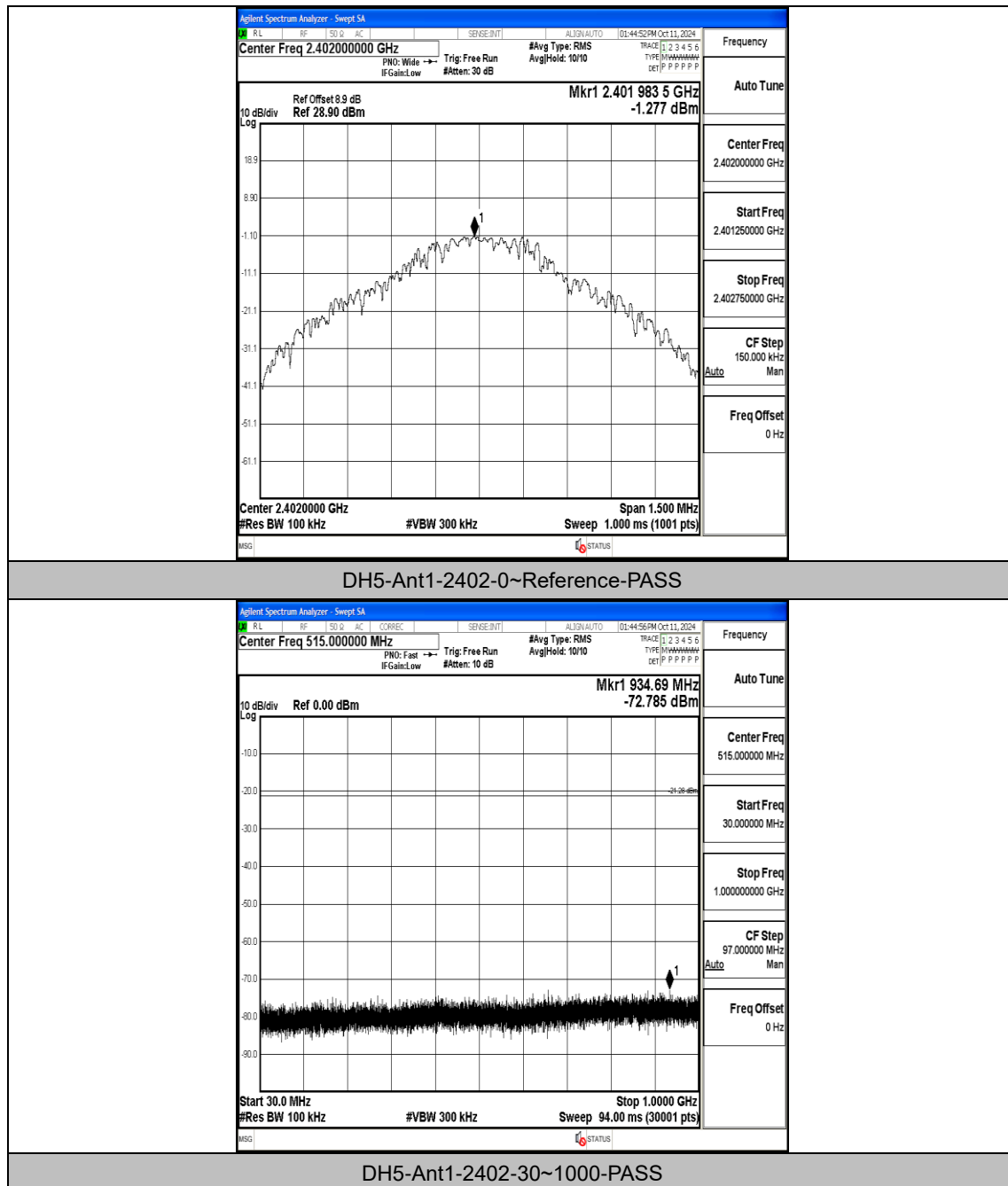


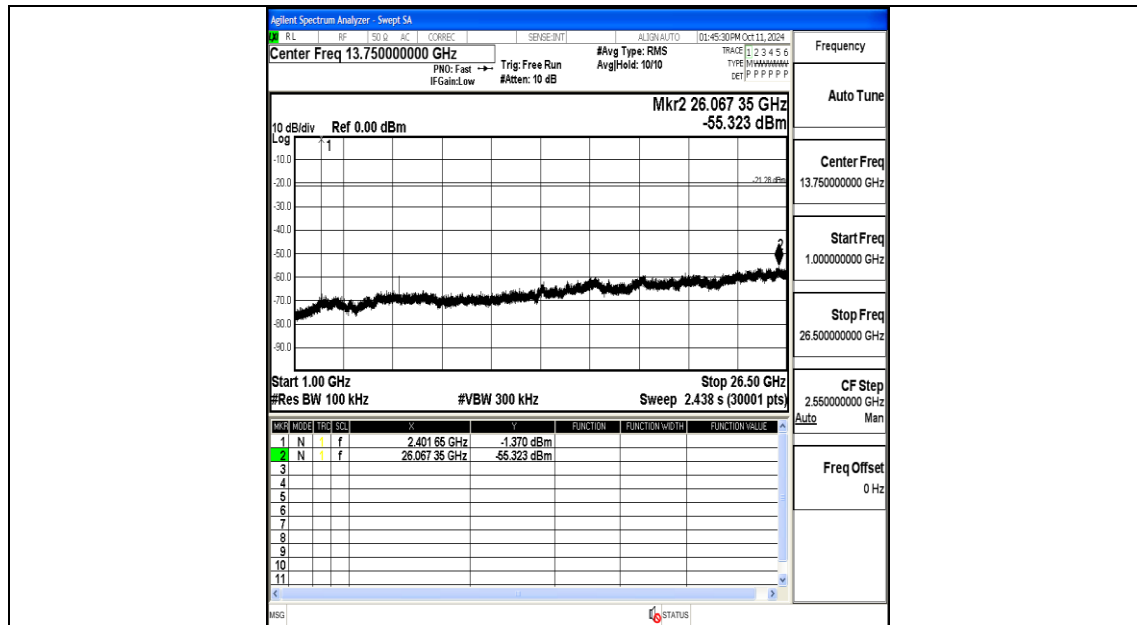
Appendix H: Conducted Spurious Emission

Test Result

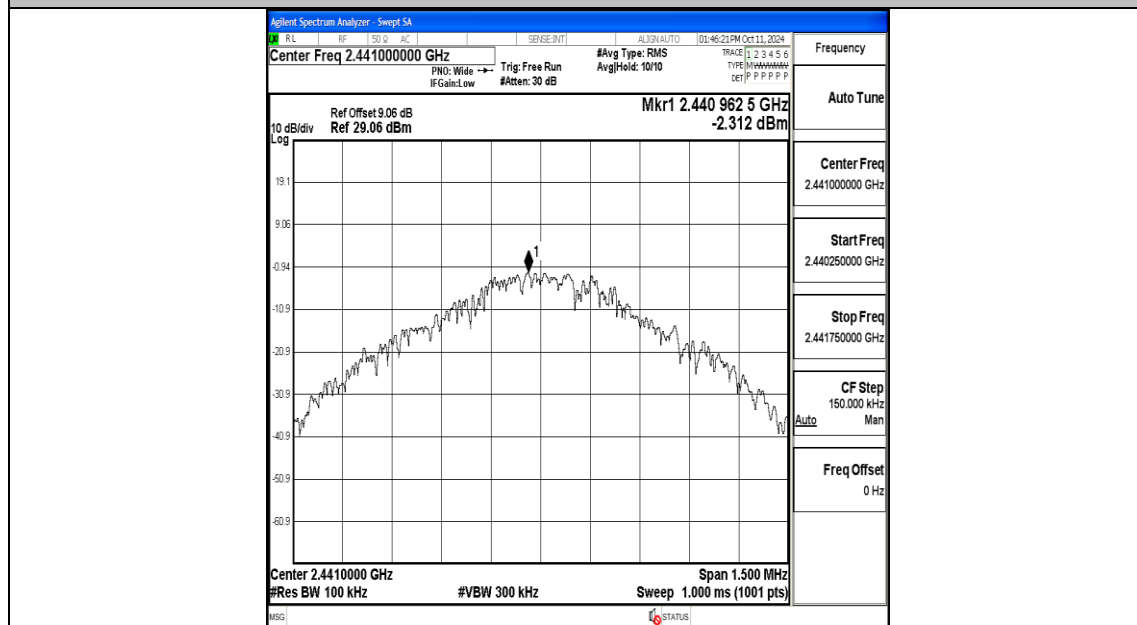
Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-1.28	-1.28	---	PASS
DH5	Ant1	2402	30~1000	-1.28	-72.79	≤ -21.28	PASS
DH5	Ant1	2402	1000~26500	-1.28	-55.32	≤ -21.28	PASS
DH5	Ant1	2441	0~Reference	-2.31	-2.31	---	PASS
DH5	Ant1	2441	30~1000	-2.31	-72.61	≤ -22.31	PASS
DH5	Ant1	2441	1000~26500	-2.31	-55.45	≤ -22.31	PASS
DH5	Ant1	2480	0~Reference	-1.84	-1.84	---	PASS
DH5	Ant1	2480	30~1000	-1.84	-72.75	≤ -21.84	PASS
DH5	Ant1	2480	1000~26500	-1.84	-38.89	≤ -21.84	PASS
2DH5	Ant1	2402	0~Reference	-4.63	-4.63	---	PASS
2DH5	Ant1	2402	30~1000	-4.63	-71.59	≤ -24.63	PASS
2DH5	Ant1	2402	1000~26500	-4.63	-55.12	≤ -24.63	PASS
2DH5	Ant1	2441	0~Reference	-7.28	-7.28	---	PASS
2DH5	Ant1	2441	30~1000	-7.28	-72.31	≤ -27.28	PASS
2DH5	Ant1	2441	1000~26500	-7.28	-55.39	≤ -27.28	PASS
2DH5	Ant1	2480	0~Reference	-7.76	-7.76	---	PASS
2DH5	Ant1	2480	30~1000	-7.76	-72	≤ -27.76	PASS
2DH5	Ant1	2480	1000~26500	-7.76	-54.96	≤ -27.76	PASS
3DH5	Ant1	2402	0~Reference	-4.78	-4.78	---	PASS
3DH5	Ant1	2402	30~1000	-4.78	-72.09	≤ -24.78	PASS
3DH5	Ant1	2402	1000~26500	-4.78	-54.76	≤ -24.78	PASS
3DH5	Ant1	2441	0~Reference	-5.98	-5.98	---	PASS
3DH5	Ant1	2441	30~1000	-5.98	-72.53	≤ -25.98	PASS
3DH5	Ant1	2441	1000~26500	-5.98	-55.17	≤ -25.98	PASS
3DH5	Ant1	2480	0~Reference	-6.11	-6.11	---	PASS
3DH5	Ant1	2480	30~1000	-6.11	-72.05	≤ -26.11	PASS
3DH5	Ant1	2480	1000~26500	-6.11	-54.85	≤ -26.11	PASS

Test Graphs

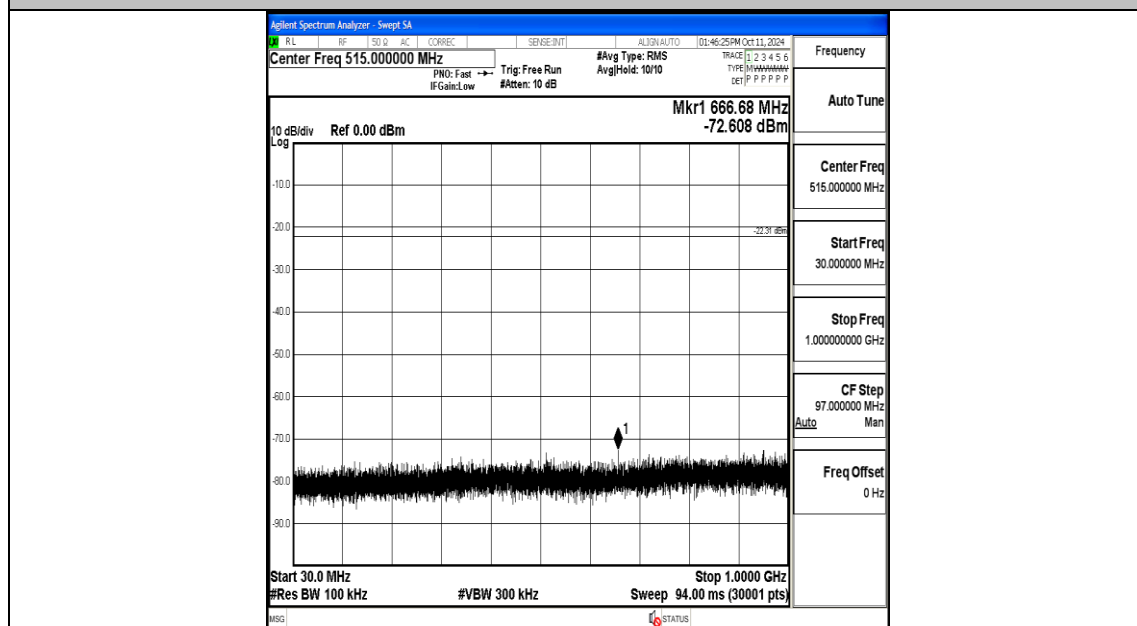




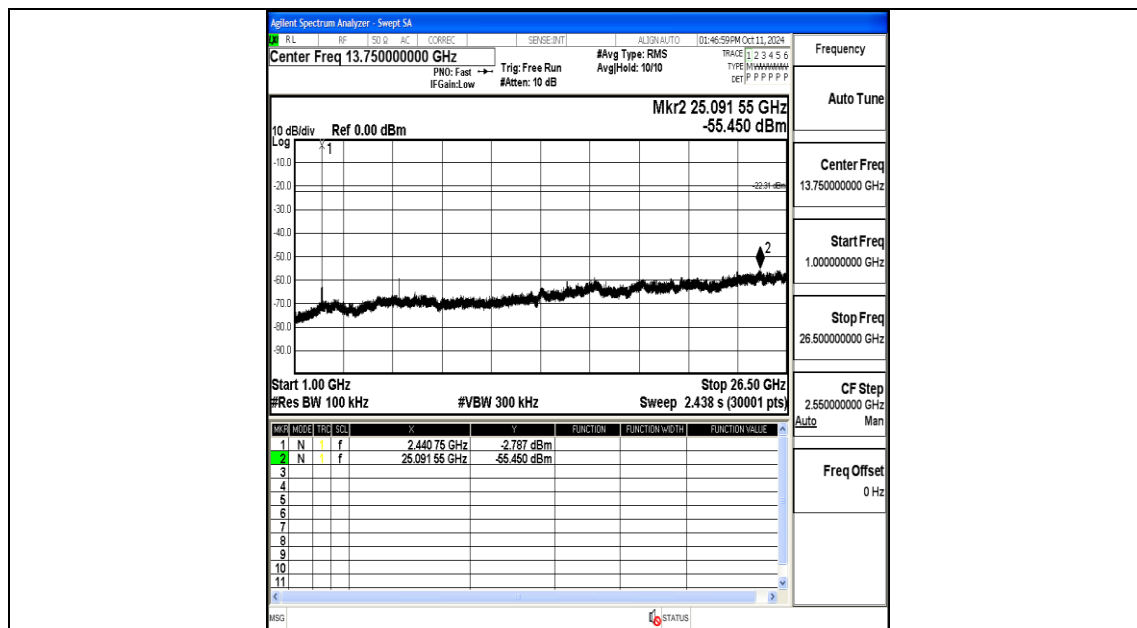
DH5-Ant1-2402-1000~26500-PASS



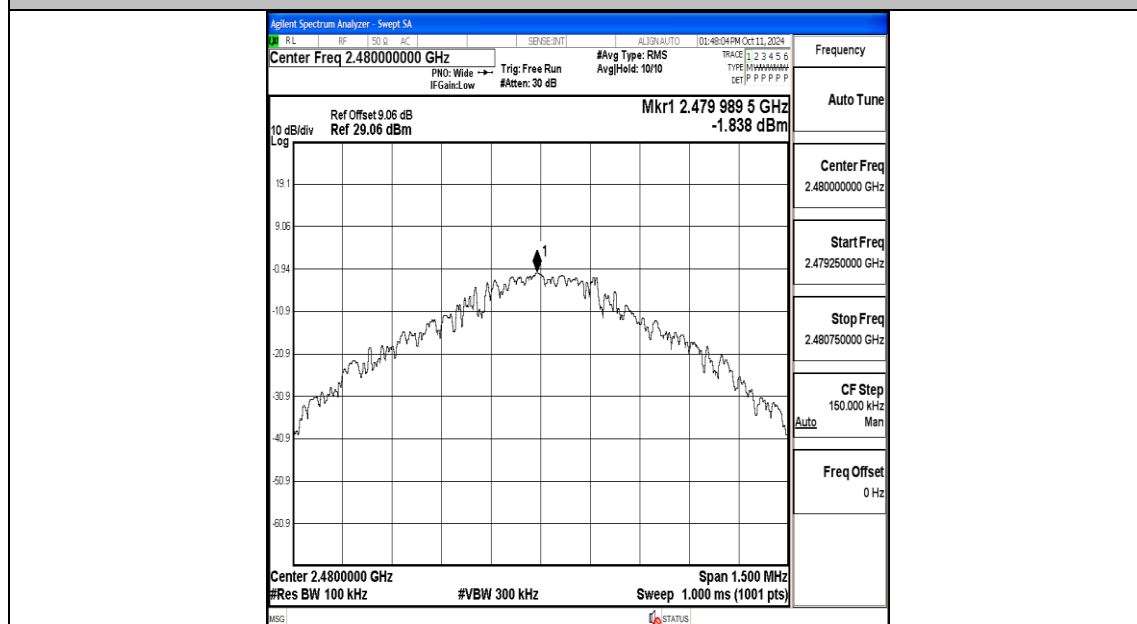
DH5-Ant1-2441-0~Reference-PASS



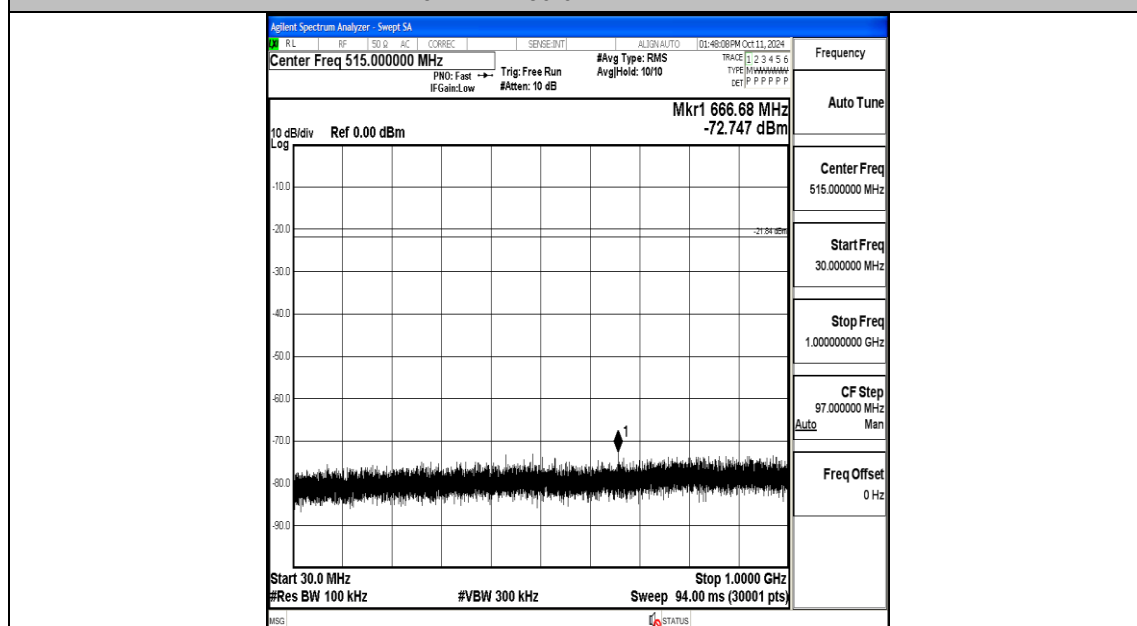
DH5-Ant1-2441-30~1000-PASS



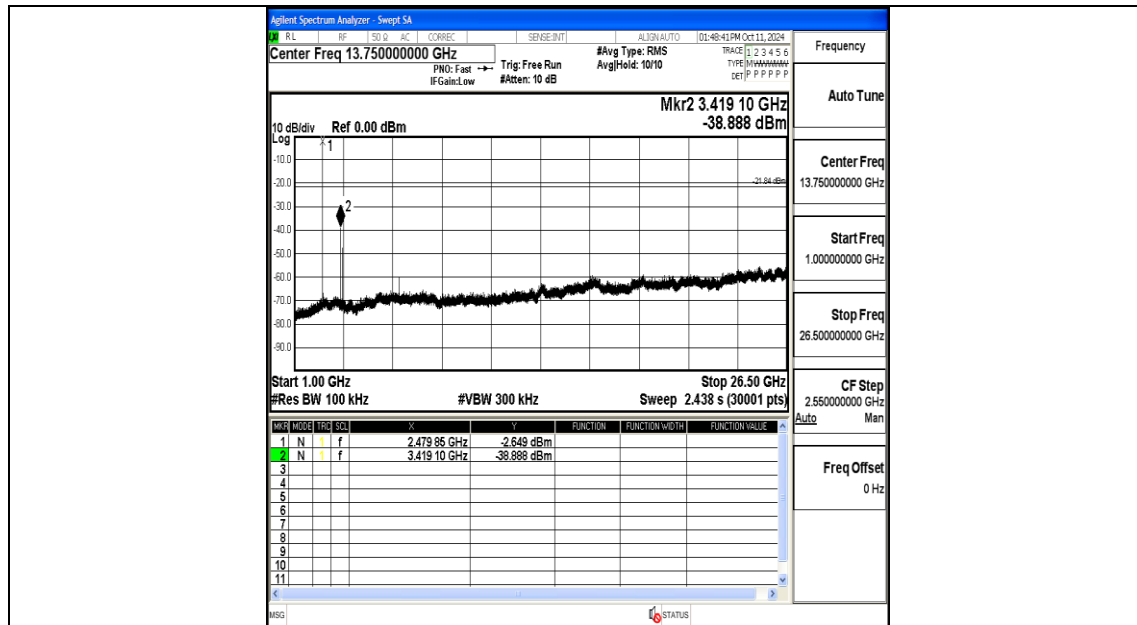
DH5-Ant1-2441-1000~26500-PASS



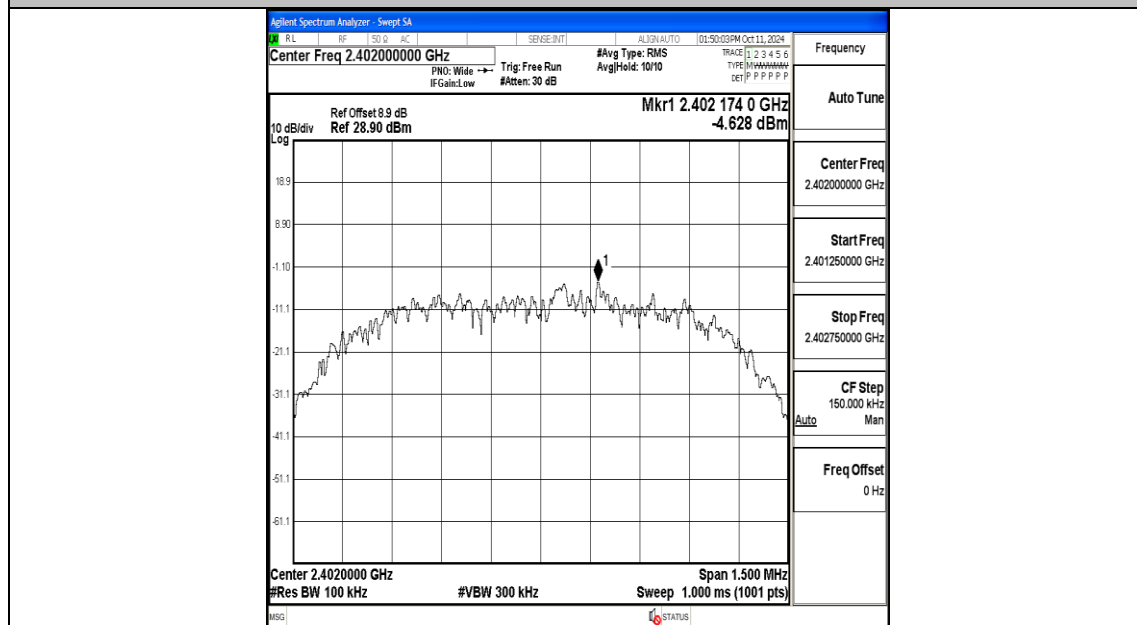
DH5-Ant1-2480-0~Reference-PASS



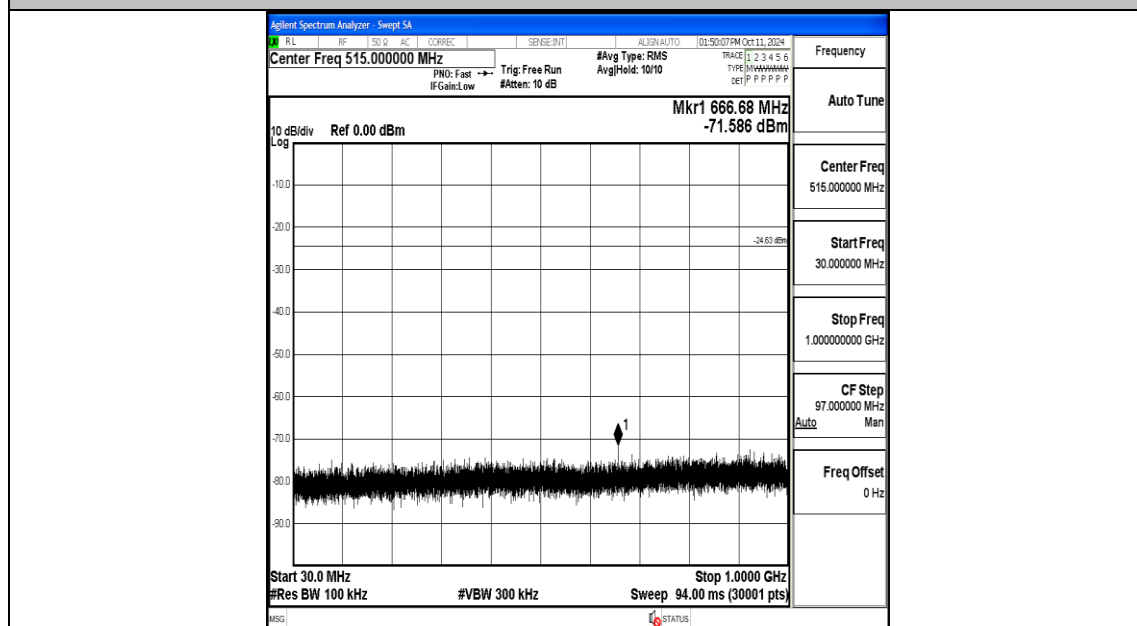
DH5-Ant1-2480-30~1000-PASS



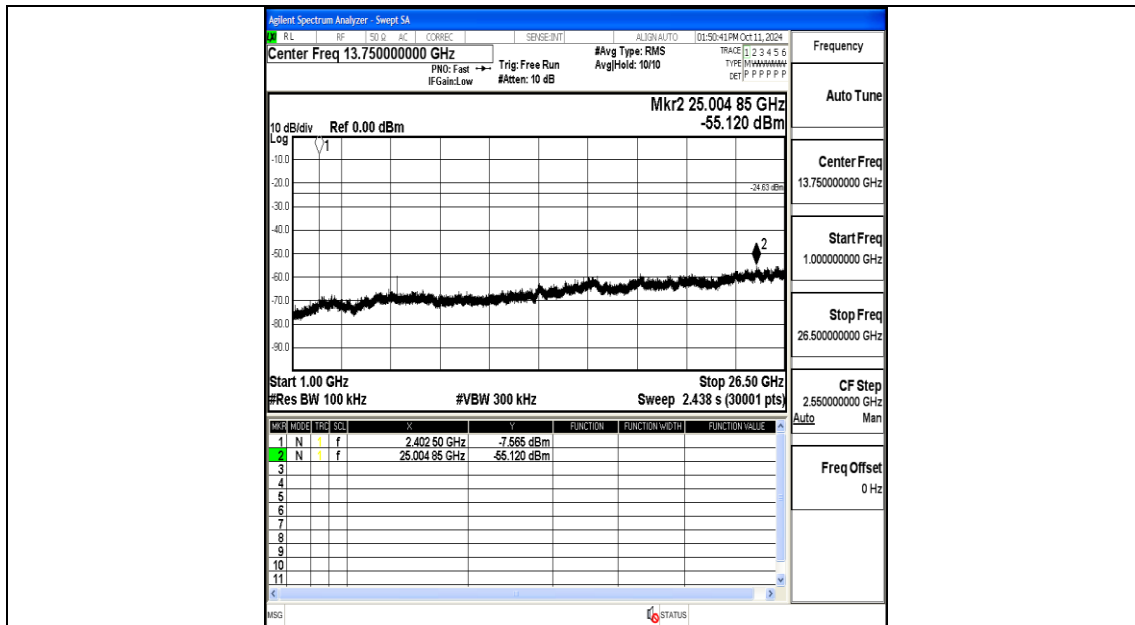
DH5-Ant1-2480-1000~26500-PASS



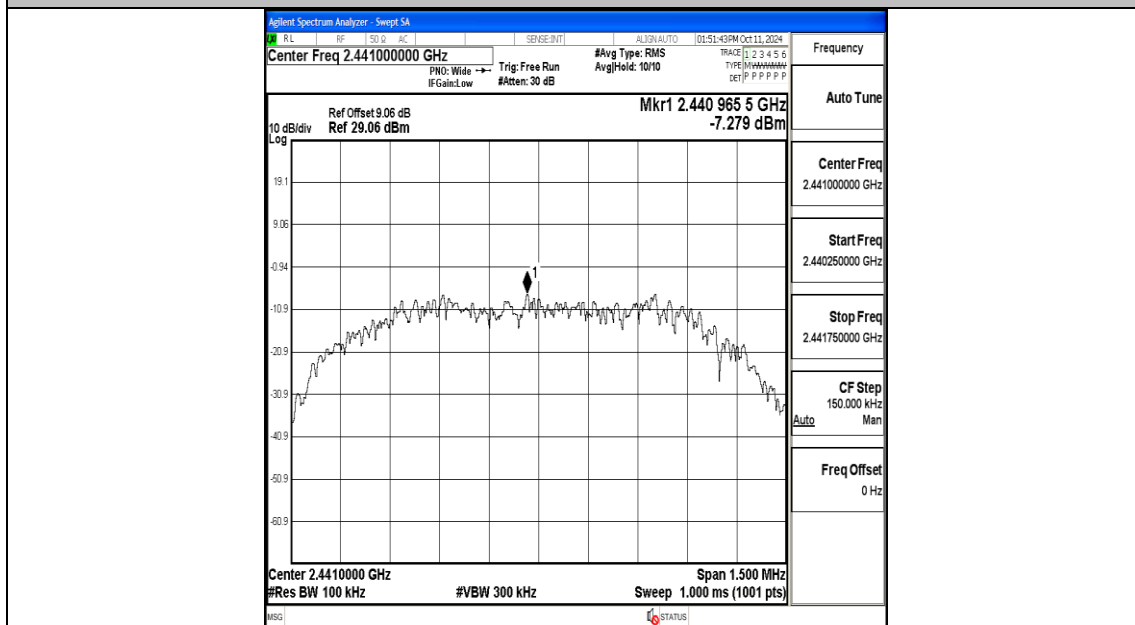
2DH5-Ant1-2402-0~Reference-PASS



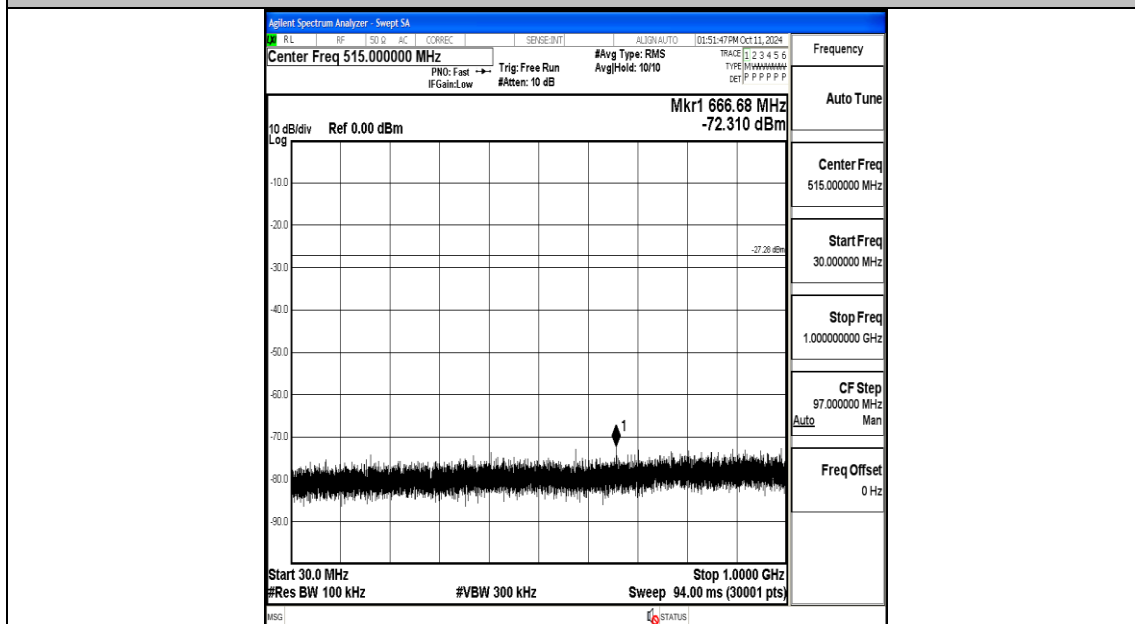
2DH5-Ant1-2402-30~1000-PASS



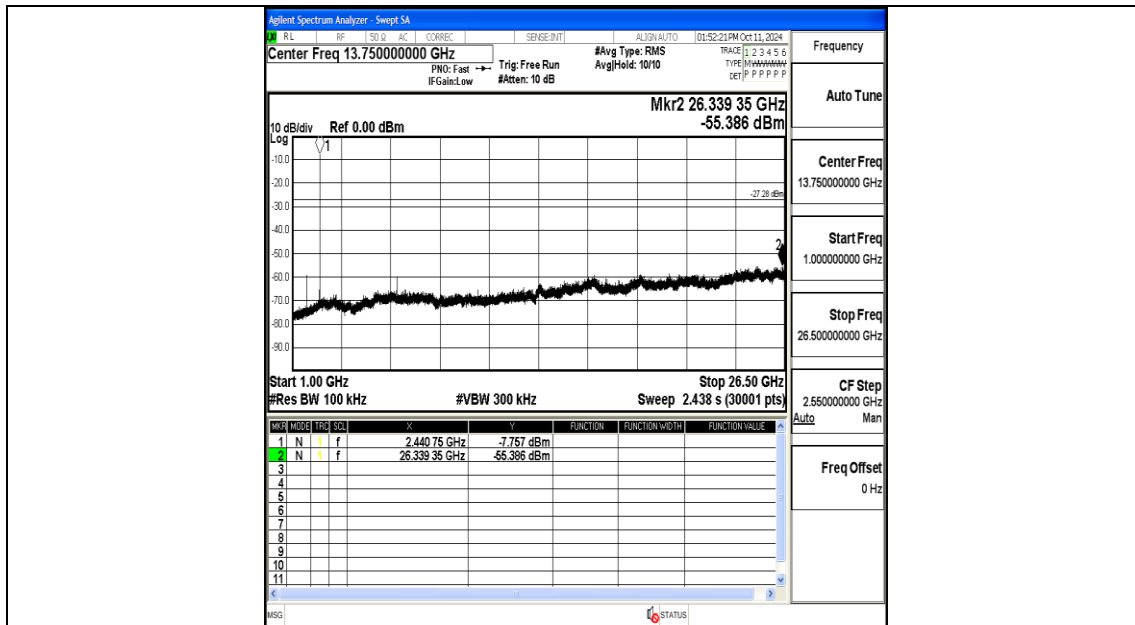
2DH5-Ant1-2402-1000~26500-PASS



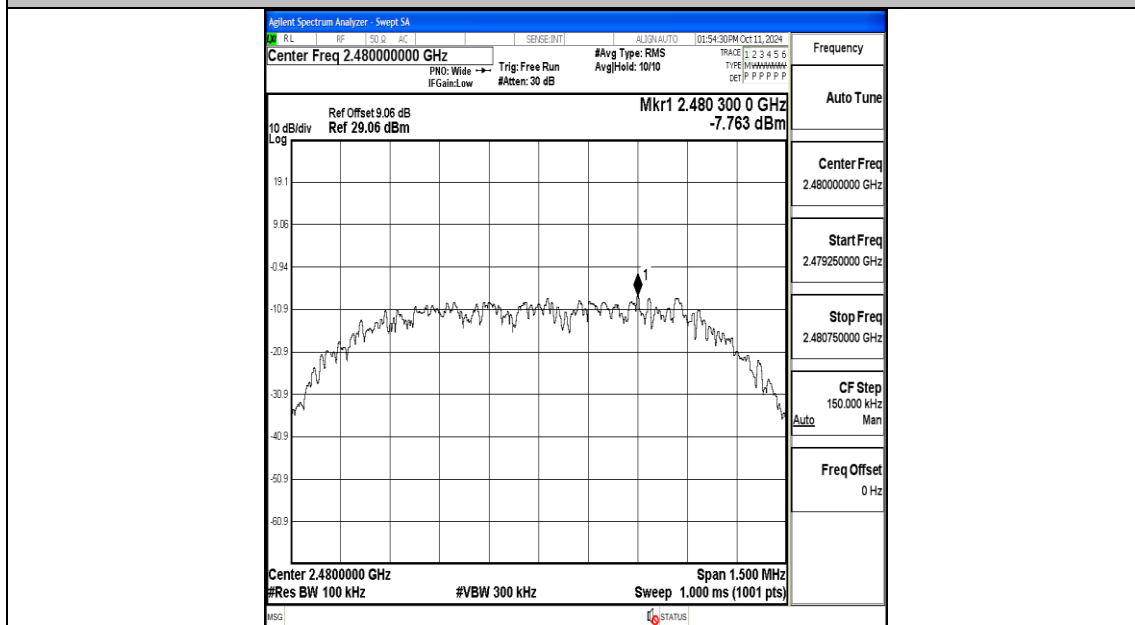
2DH5-Ant1-2441-0~Reference-PASS



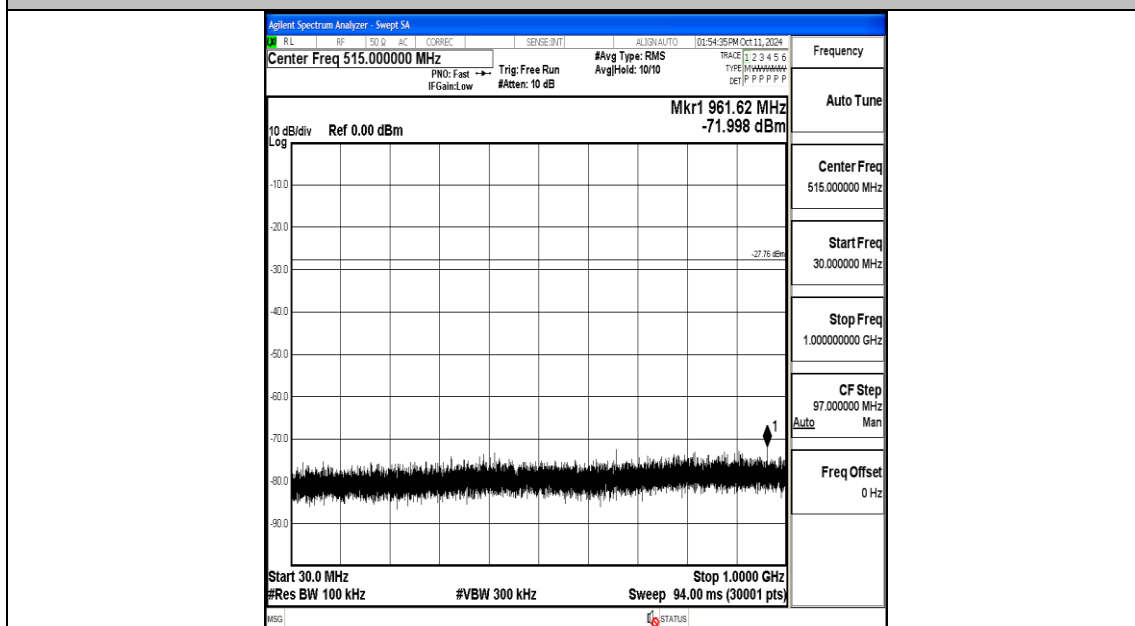
2DH5-Ant1-2441-30~1000-PASS



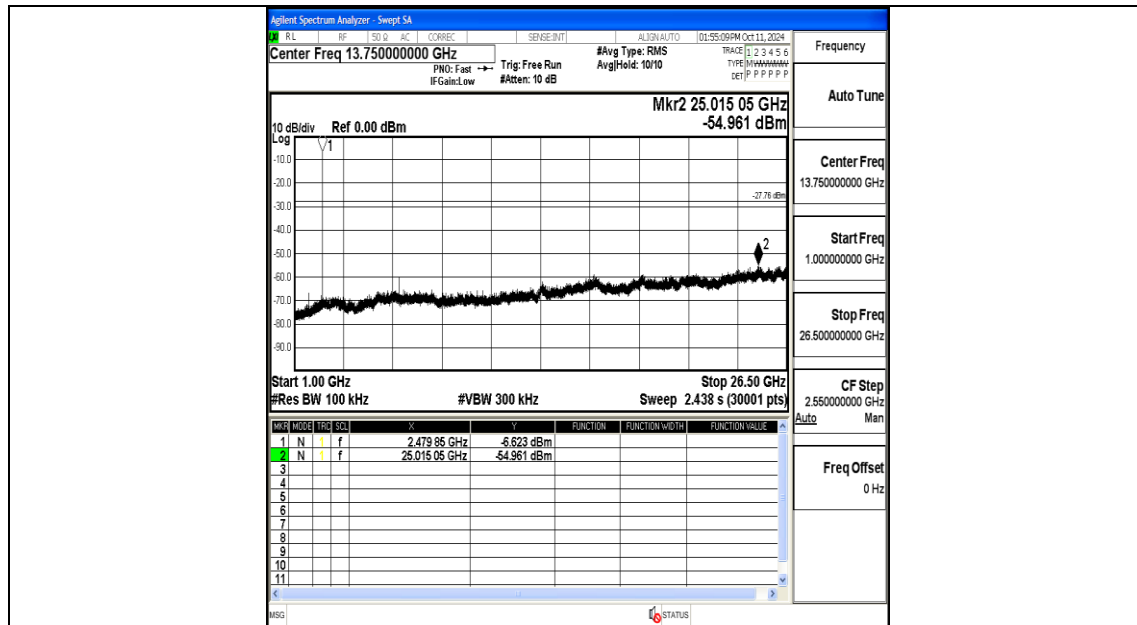
2DH5-Ant1-2441-1000~26500-PASS



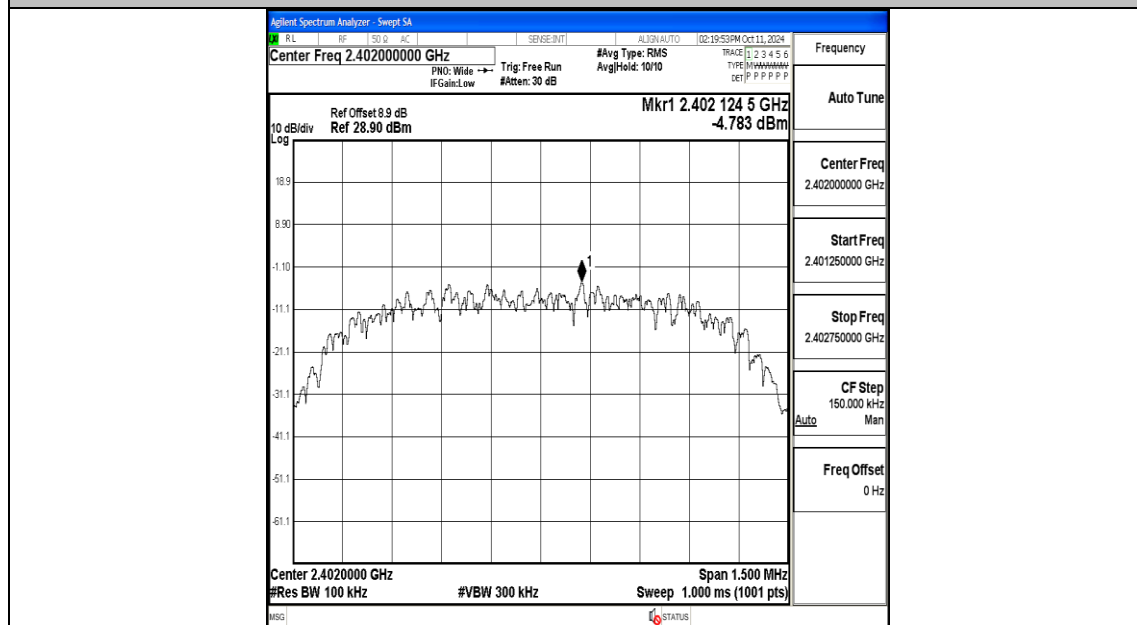
2DH5-Ant1-2480-0~Reference-PASS



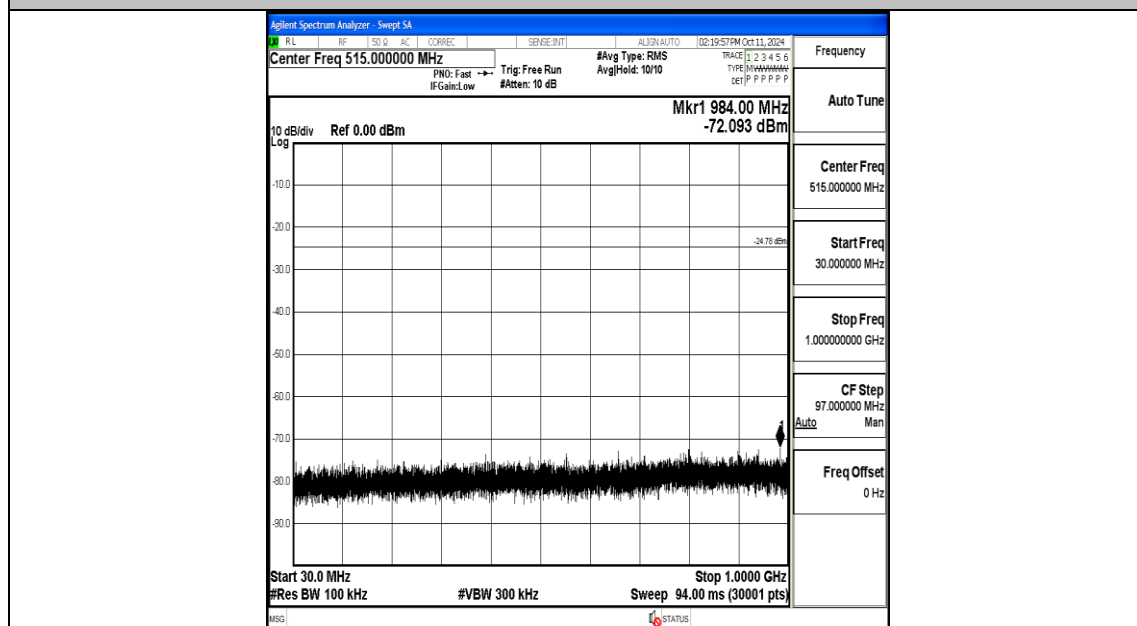
2DH5-Ant1-2480-30~1000-PASS



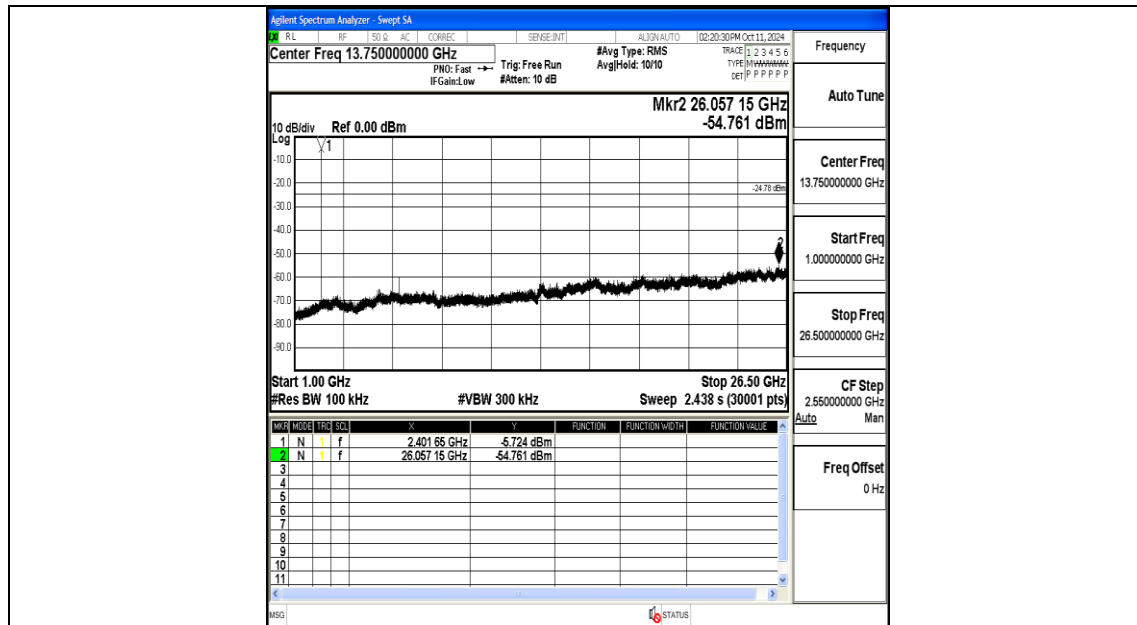
2DH5-Ant1-2480-1000~26500-PASS



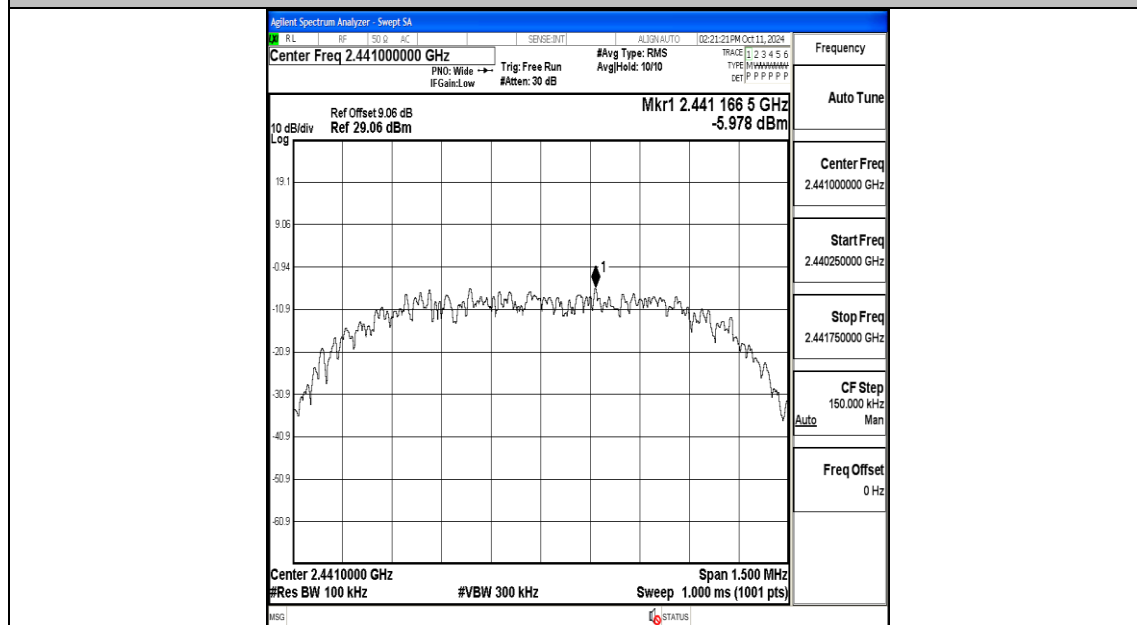
3DH5-Ant1-2402-0~Reference-PASS



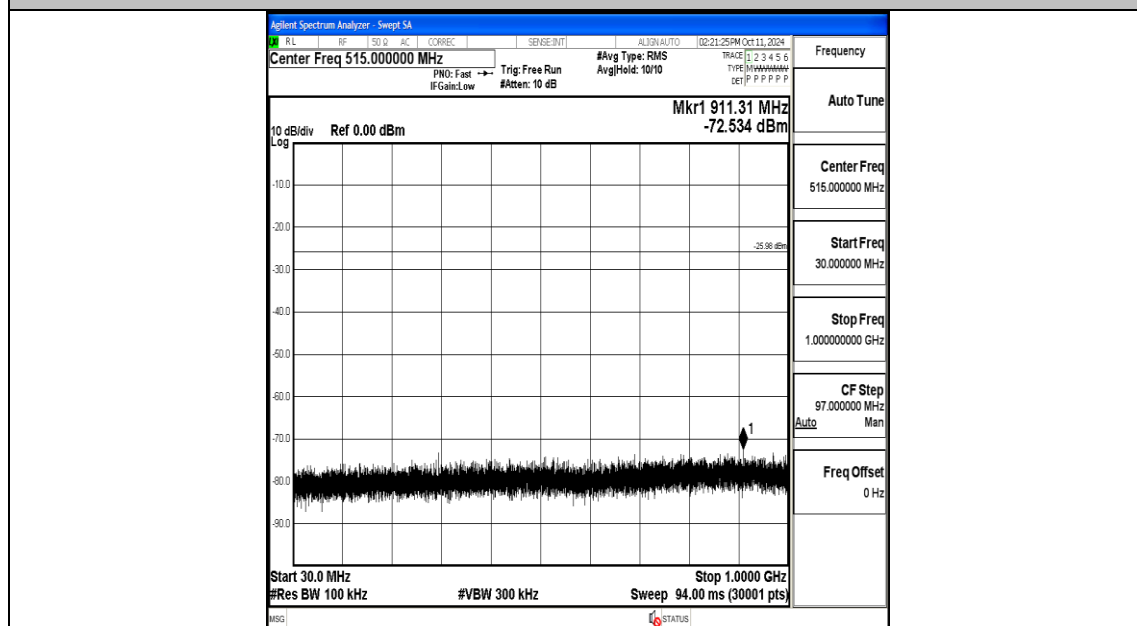
3DH5-Ant1-2402-30~1000-PASS



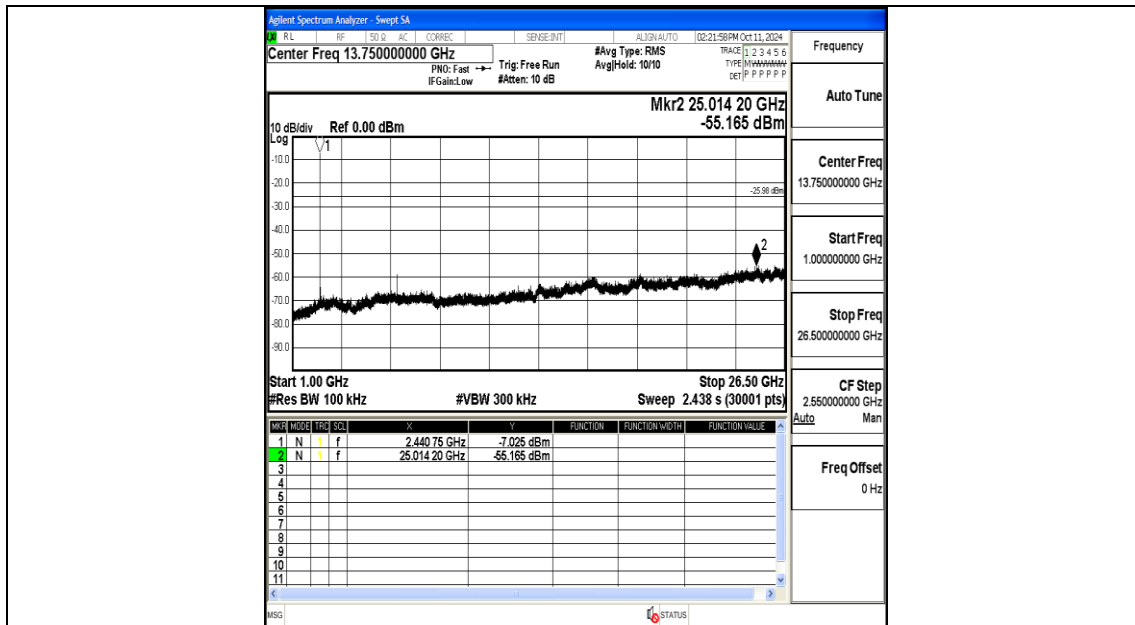
3DH5-Ant1-2402-1000~26500-PASS



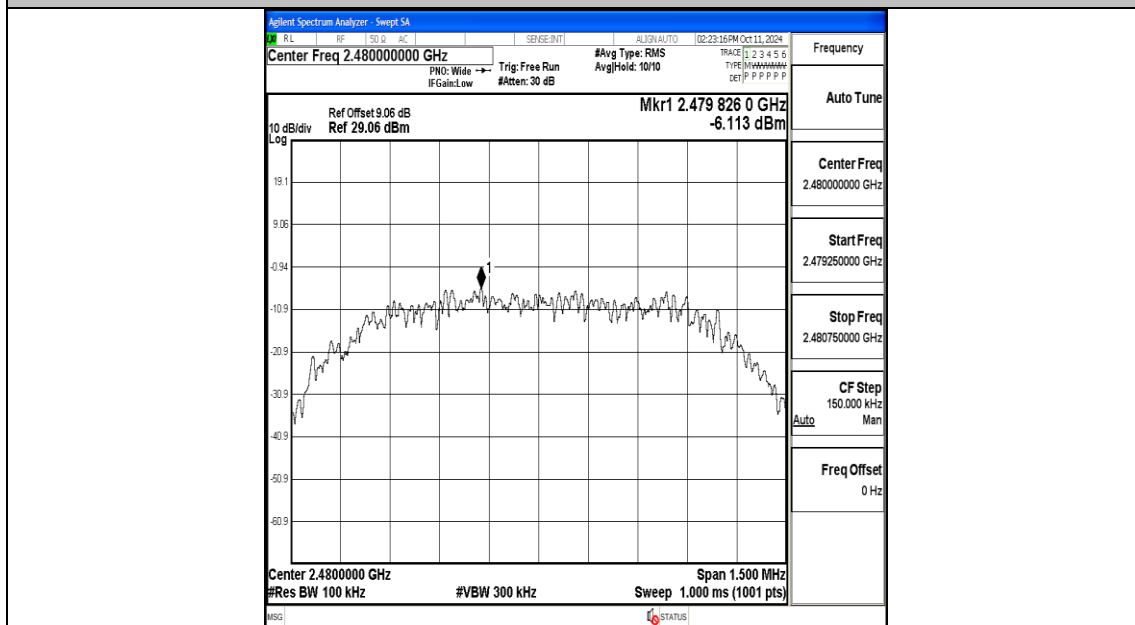
3DH5-Ant1-2441-0~Reference-PASS



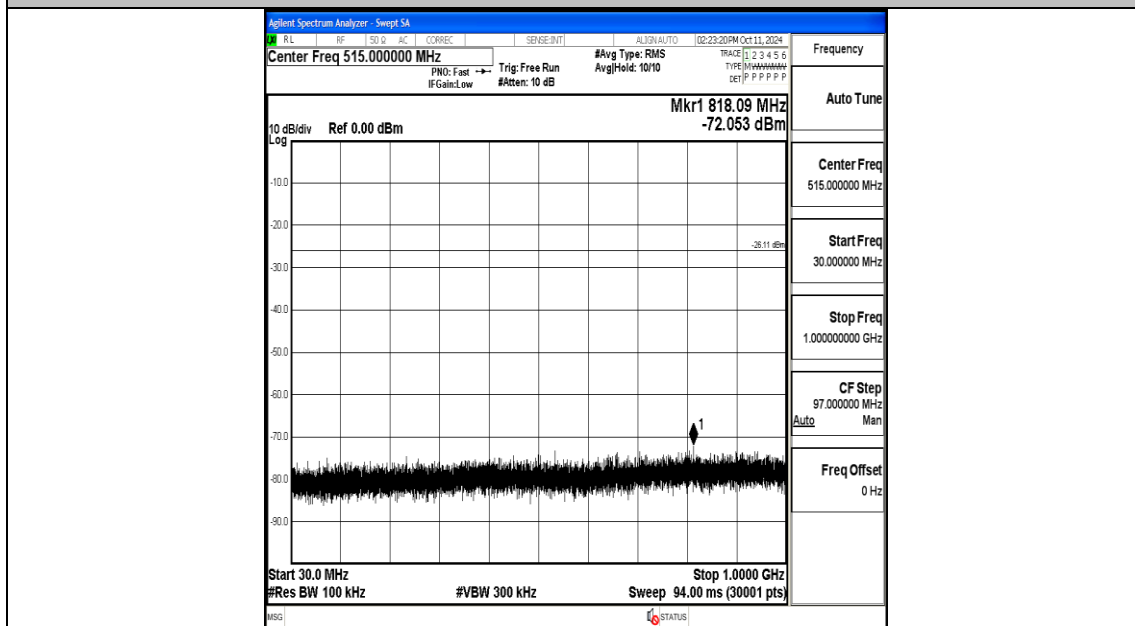
3DH5-Ant1-2441-30~1000-PASS



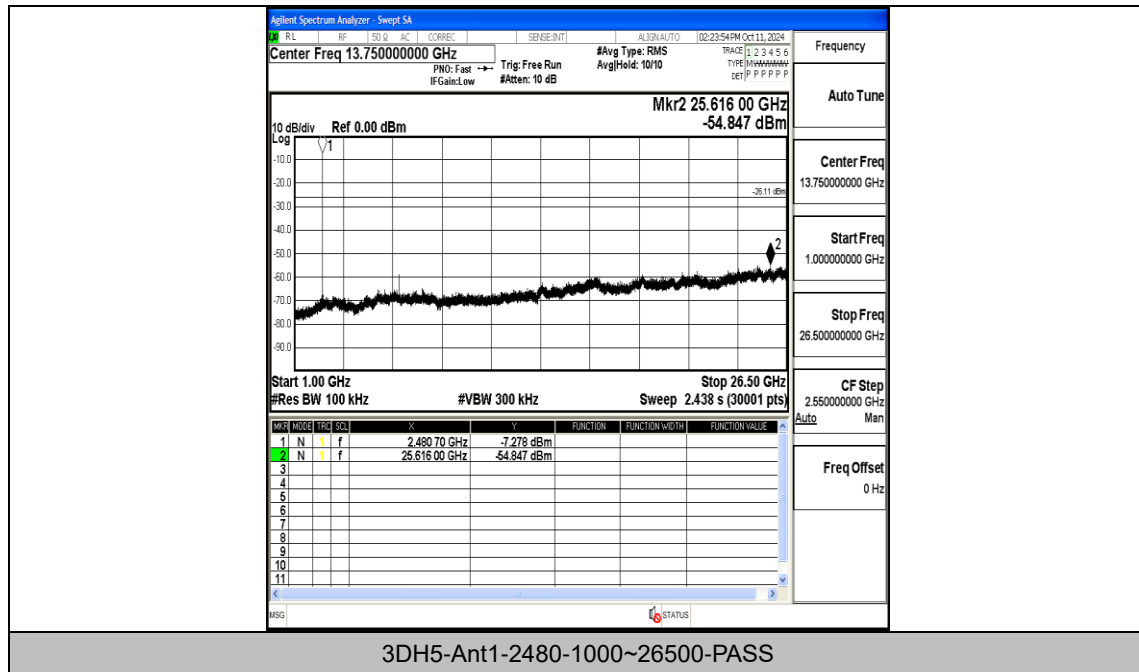
3DH5-Ant1-2441-1000~26500-PASS



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



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

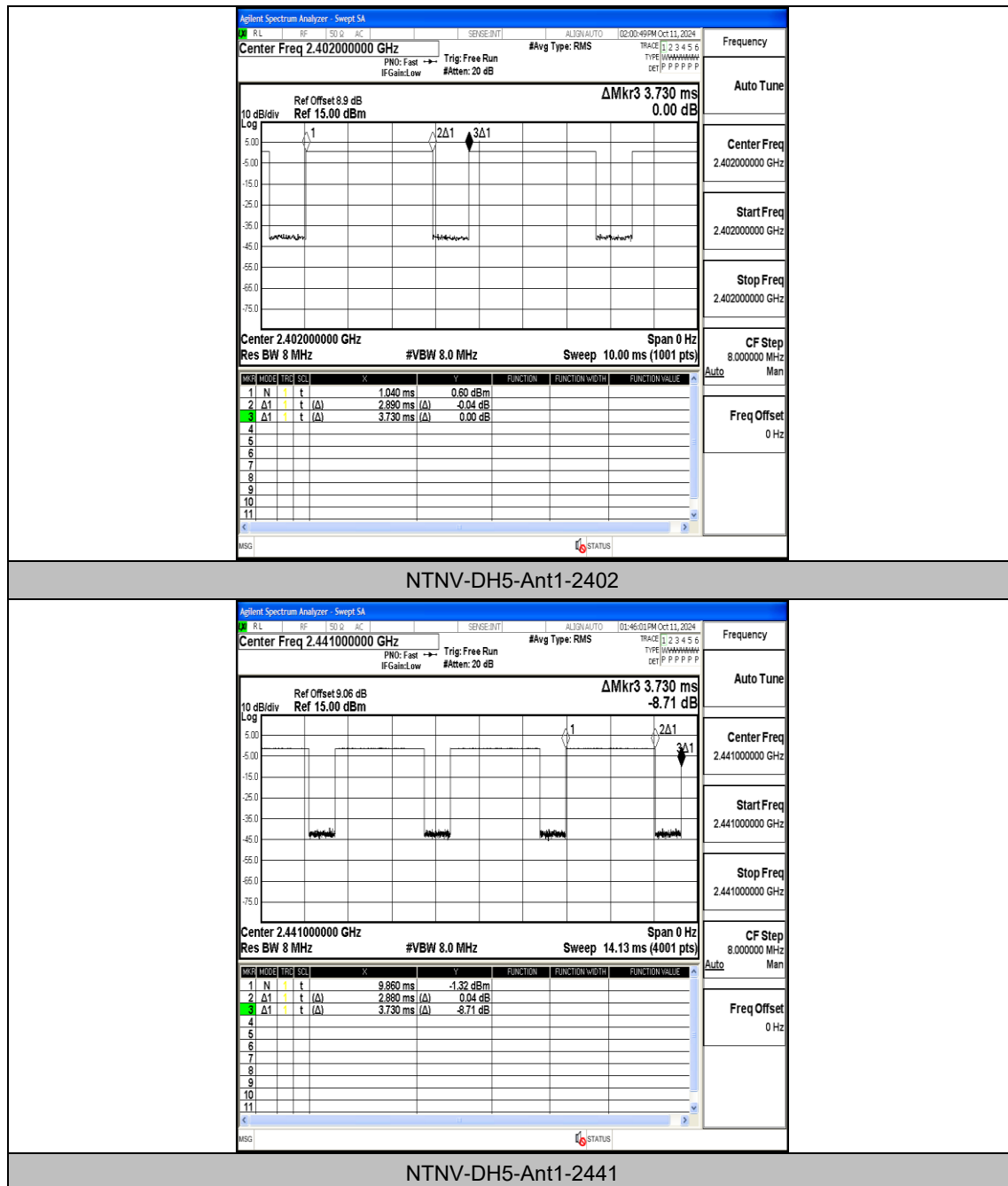


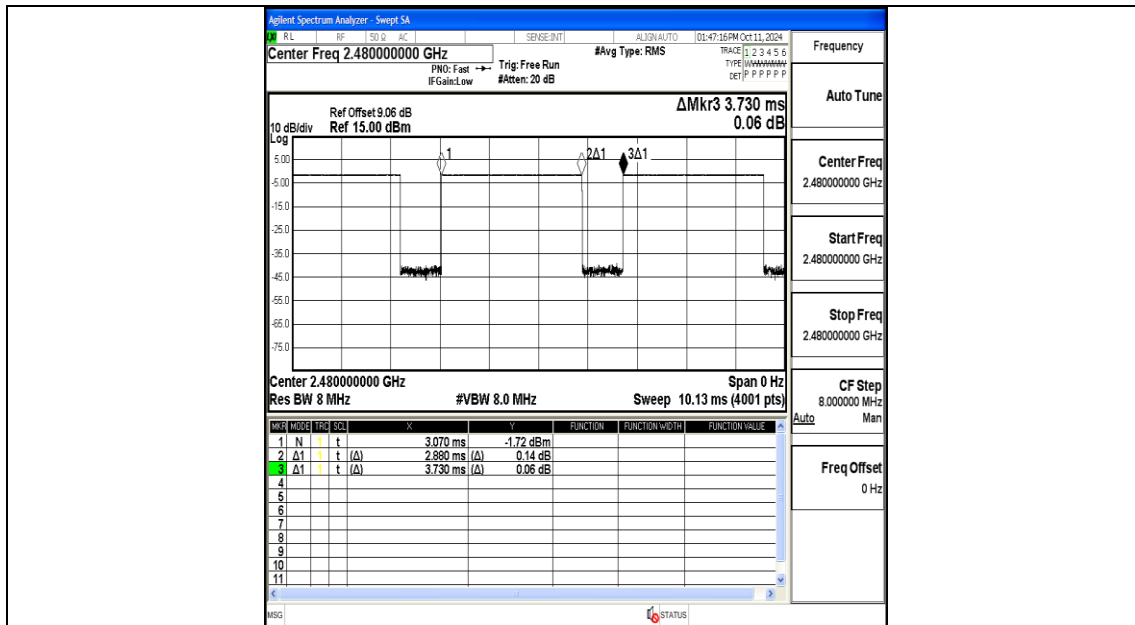
Appendix I: Duty Cycle

Test Result

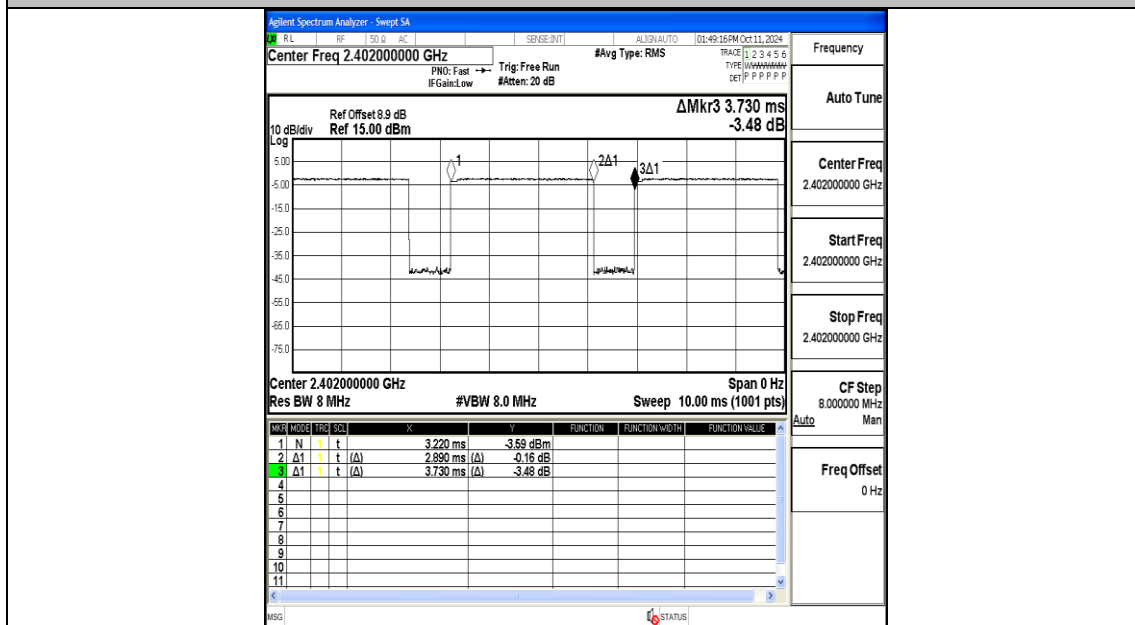
Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.89	3.73	77.48	1.11
DH5	Ant1	2441	2.88	3.73	77.21	1.12
DH5	Ant1	2480	2.88	3.73	77.21	1.12
2DH5	Ant1	2402	2.89	3.73	77.48	1.11
2DH5	Ant1	2441	2.88	3.73	77.21	1.12
2DH5	Ant1	2480	2.88	3.73	77.21	1.12
3DH5	Ant1	2402	2.89	3.74	77.27	1.12
3DH5	Ant1	2441	2.88	3.73	77.21	1.12
3DH5	Ant1	2480	2.89	3.74	77.27	1.12

Test Graphs

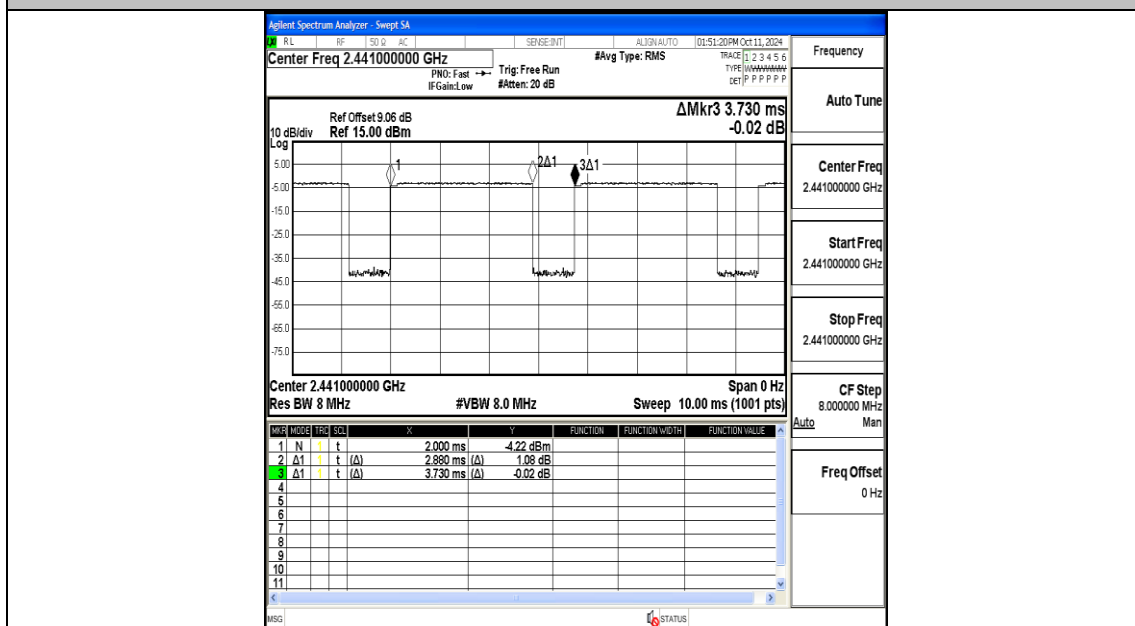




NTNV-DH5-Ant1-2480



NTNV-2DH5-Ant1-2402



NTNV-2DH5-Ant1-2441

