

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

Product Name: Voter Identification Unit

Trade Mark: SMARTMATIC

Test Model: VIU-500 Model 700

FCC ID: 2AGVK-VIU-500A70-R2

Environmental Conditions

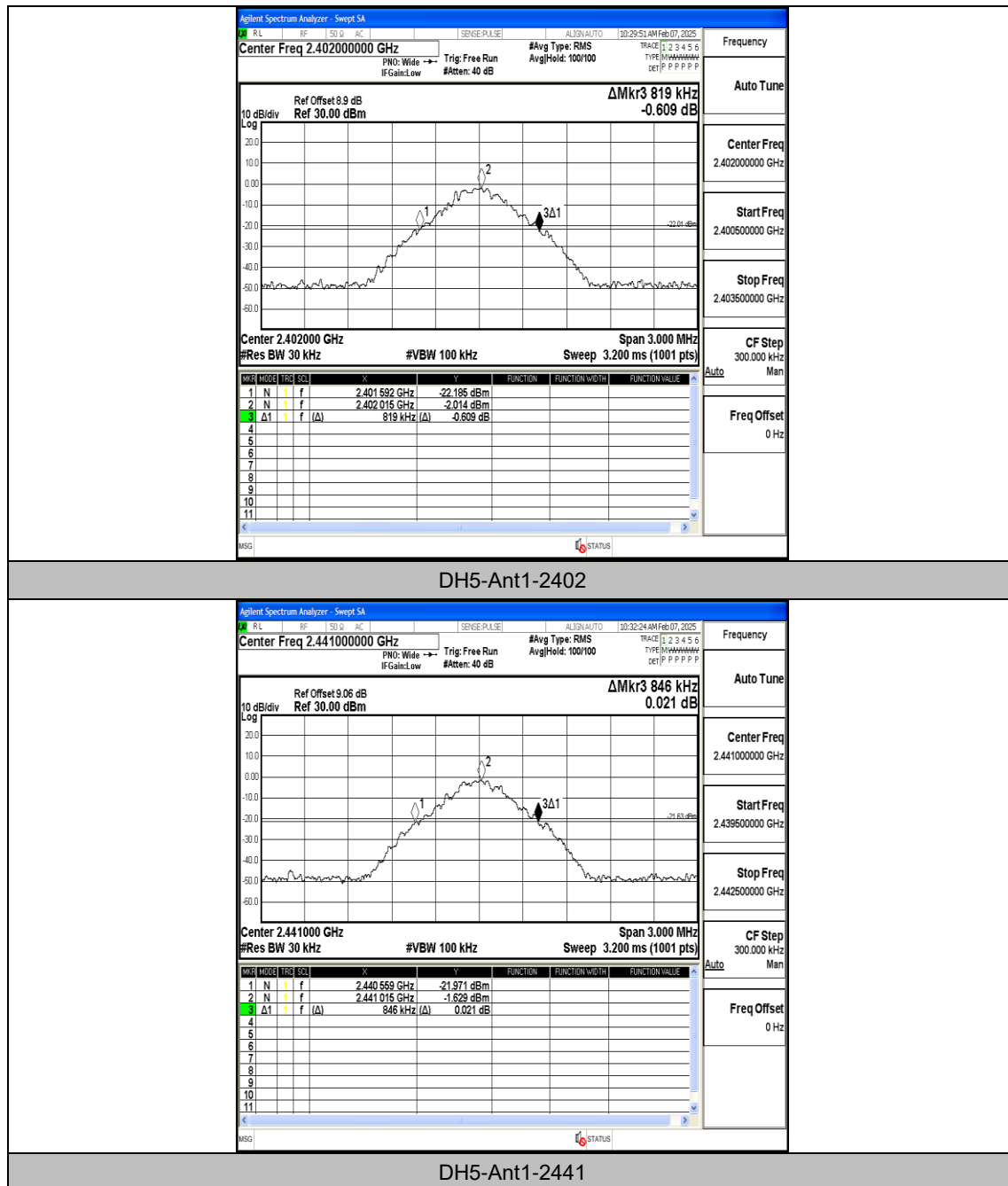
Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

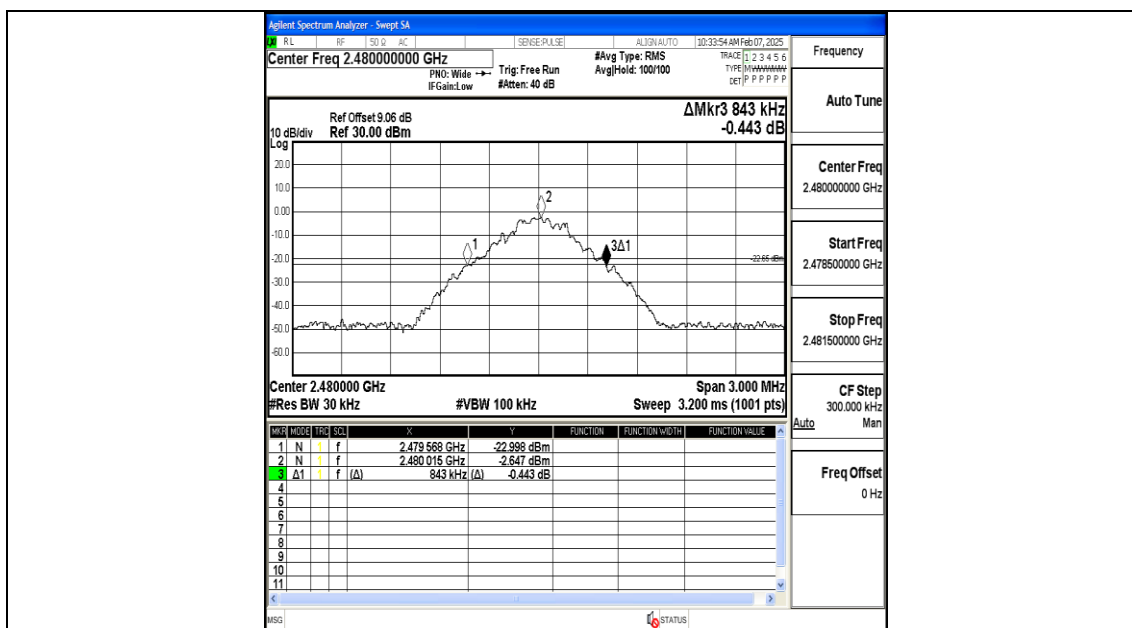
Appendix A: 20dB Emission Bandwidth

Test Result

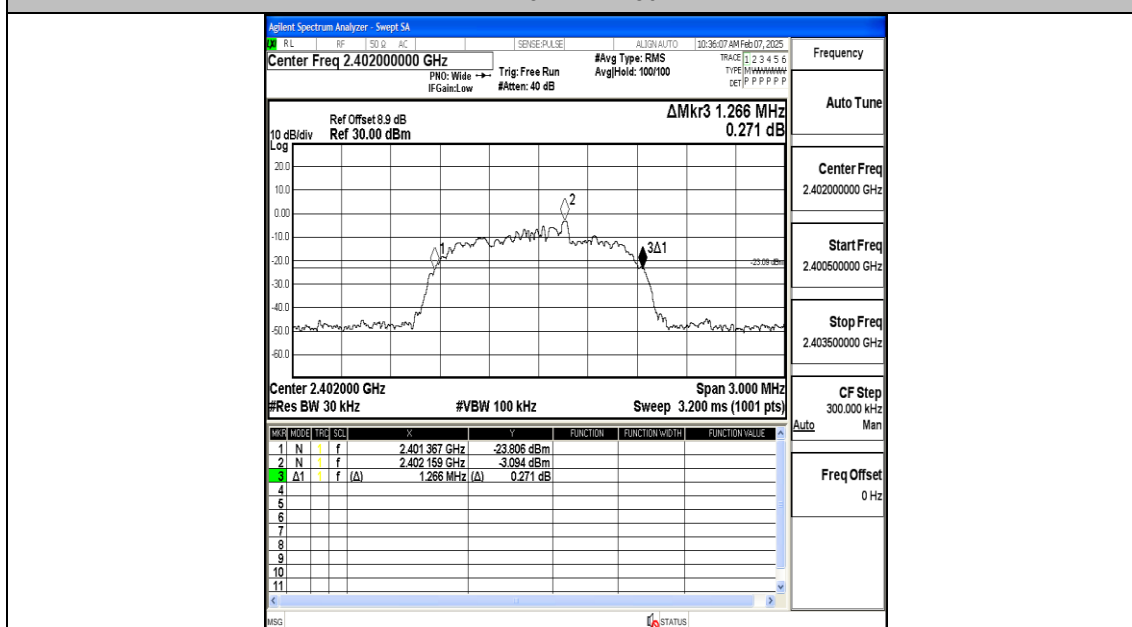
Test Mode	Antenna	Frequency [MHz]	20db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.819	2401.592	2402.411	---	---
DH5	Ant1	2441	0.846	2440.559	2441.405	---	---
DH5	Ant1	2480	0.843	2479.568	2480.411	---	---
2DH5	Ant1	2402	1.266	2401.367	2402.633	---	---
2DH5	Ant1	2441	1.281	2440.364	2441.645	---	---
2DH5	Ant1	2480	1.284	2479.361	2480.645	---	---
3DH5	Ant1	2402	1.287	2401.358	2402.645	---	---
3DH5	Ant1	2441	1.296	2440.352	2441.648	---	---
3DH5	Ant1	2480	1.269	2479.355	2480.624	---	---

Test Graphs

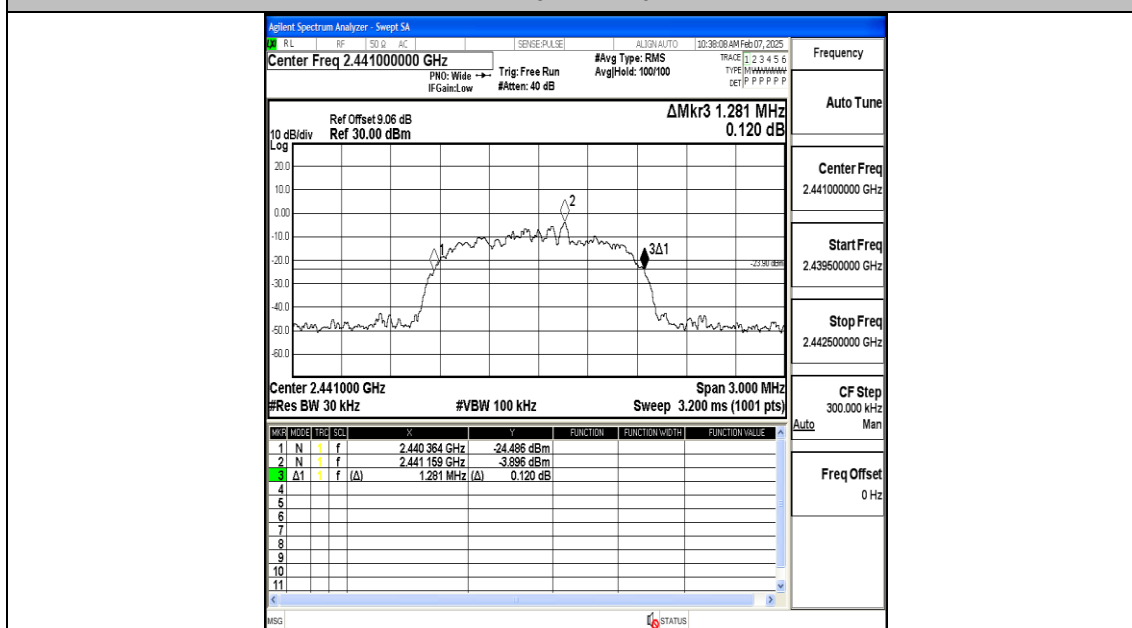




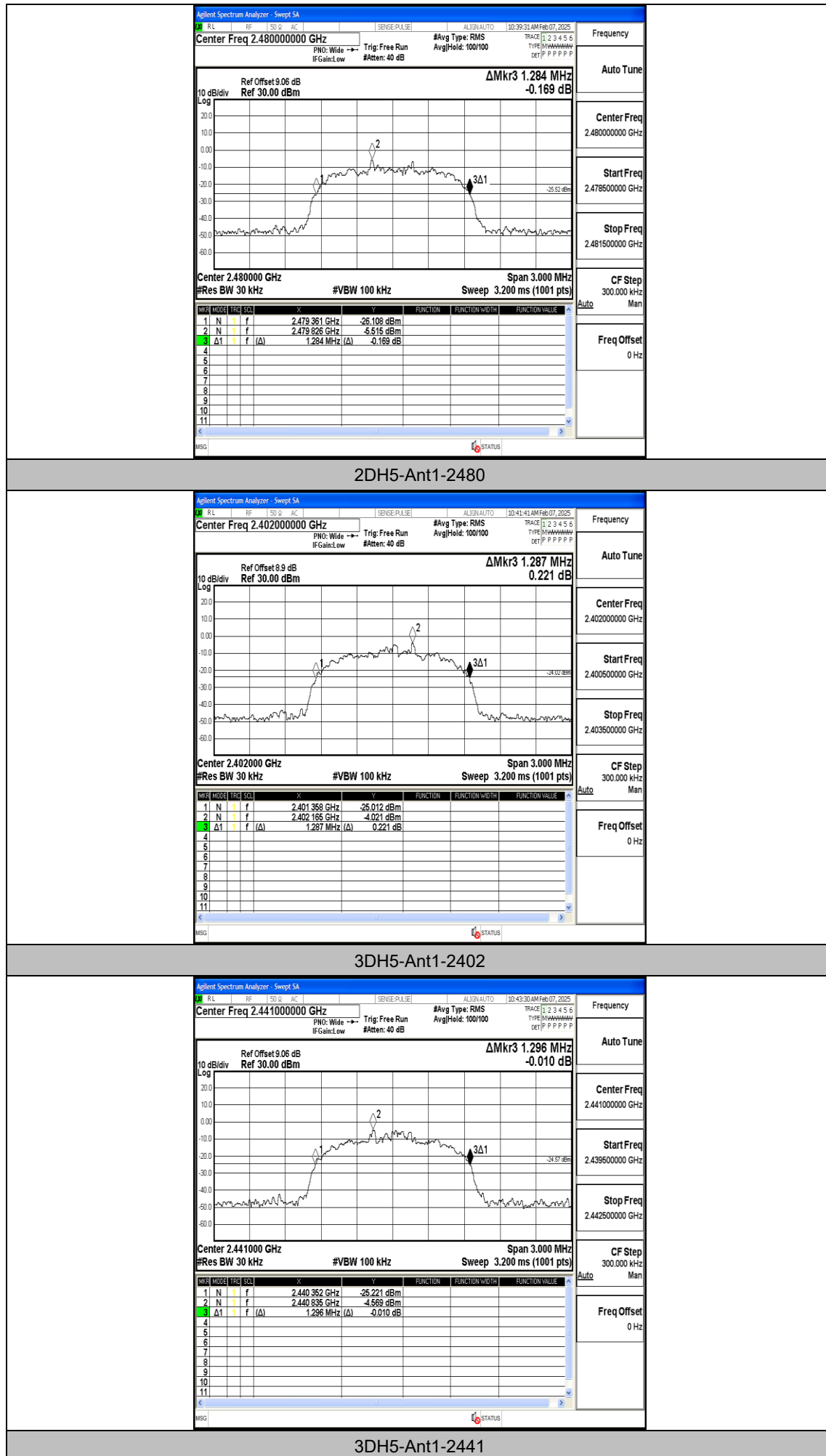
DH5-Ant1-2480

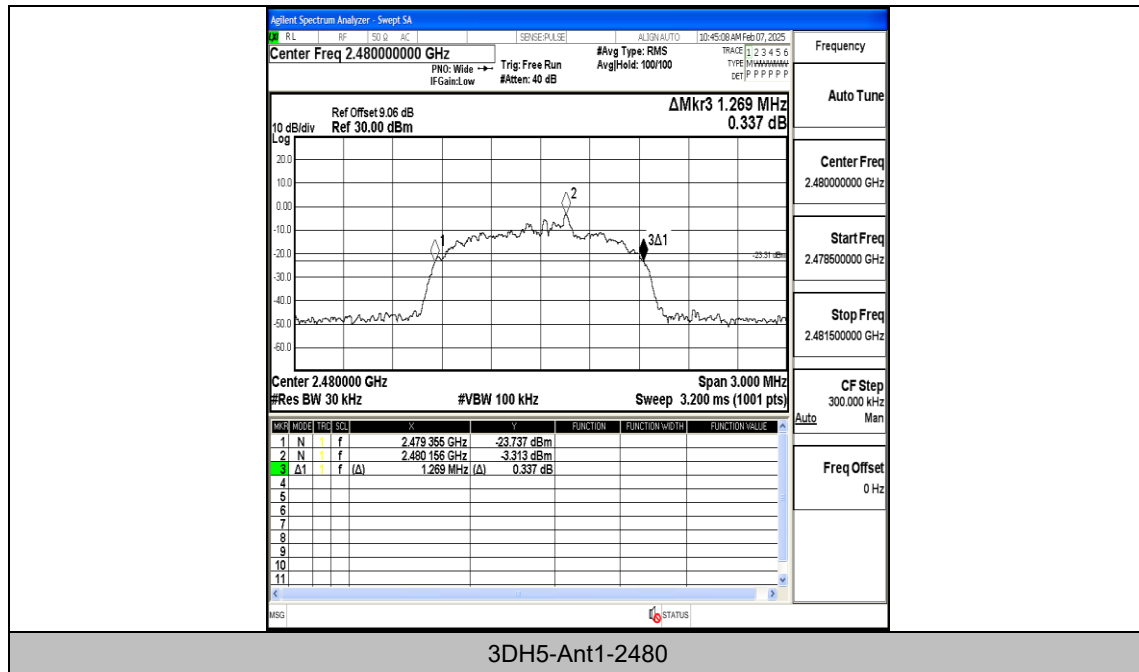


2DH5-Ant1-2402



2DH5-Ant1-2441



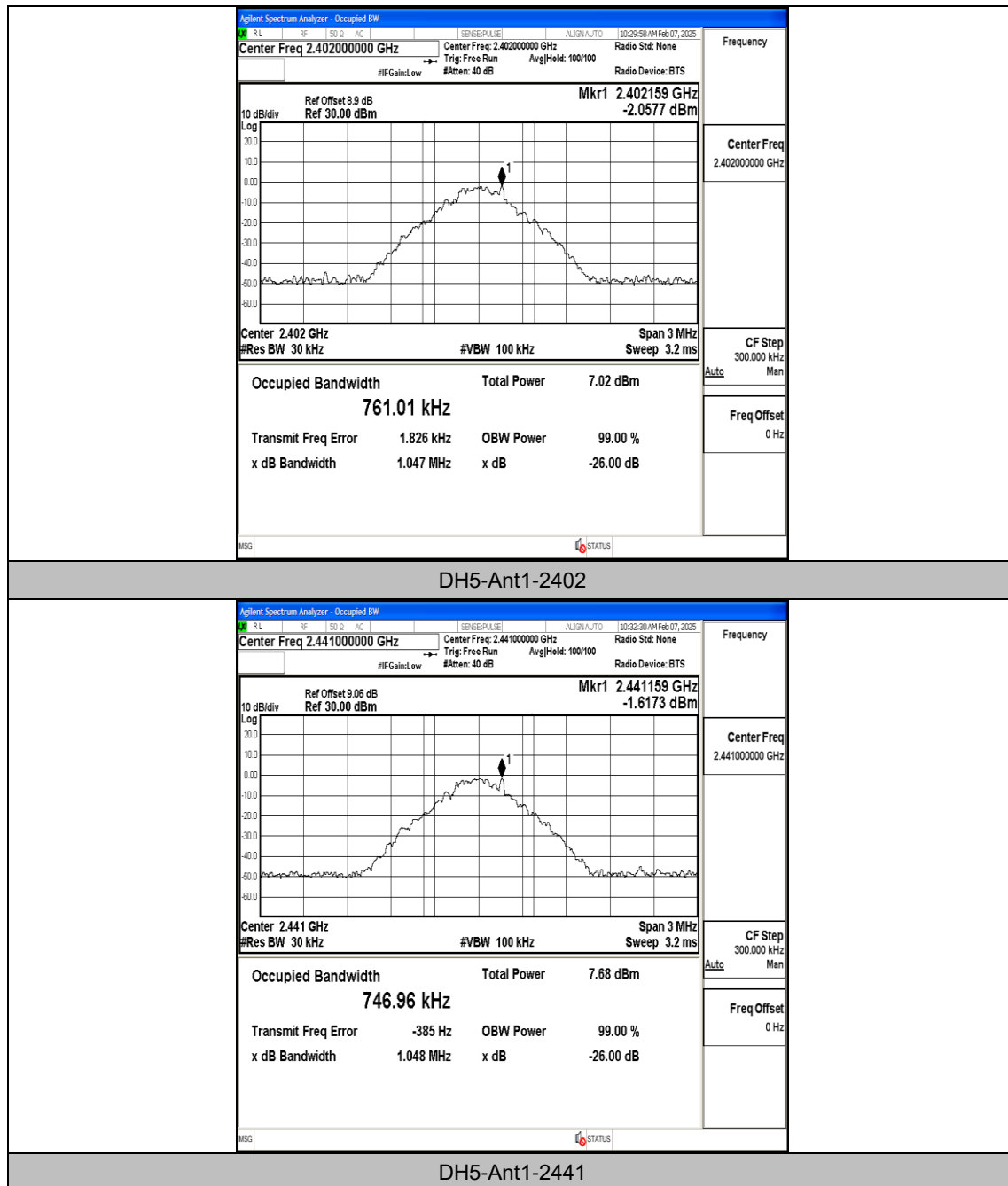


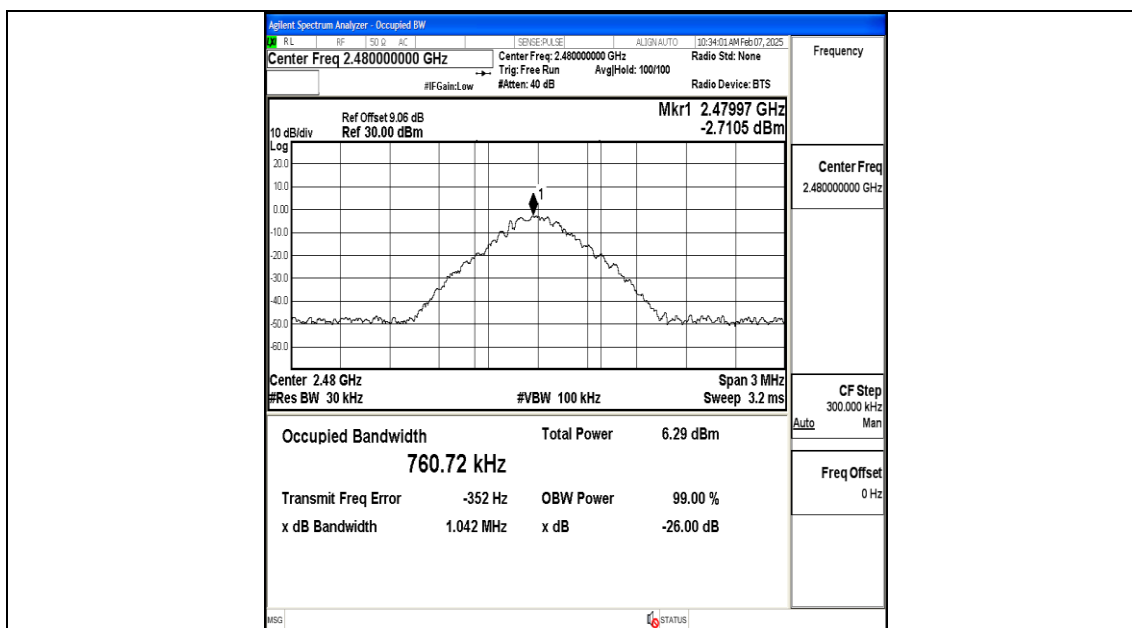
Appendix B: Occupied Channel Bandwidth

Test Result

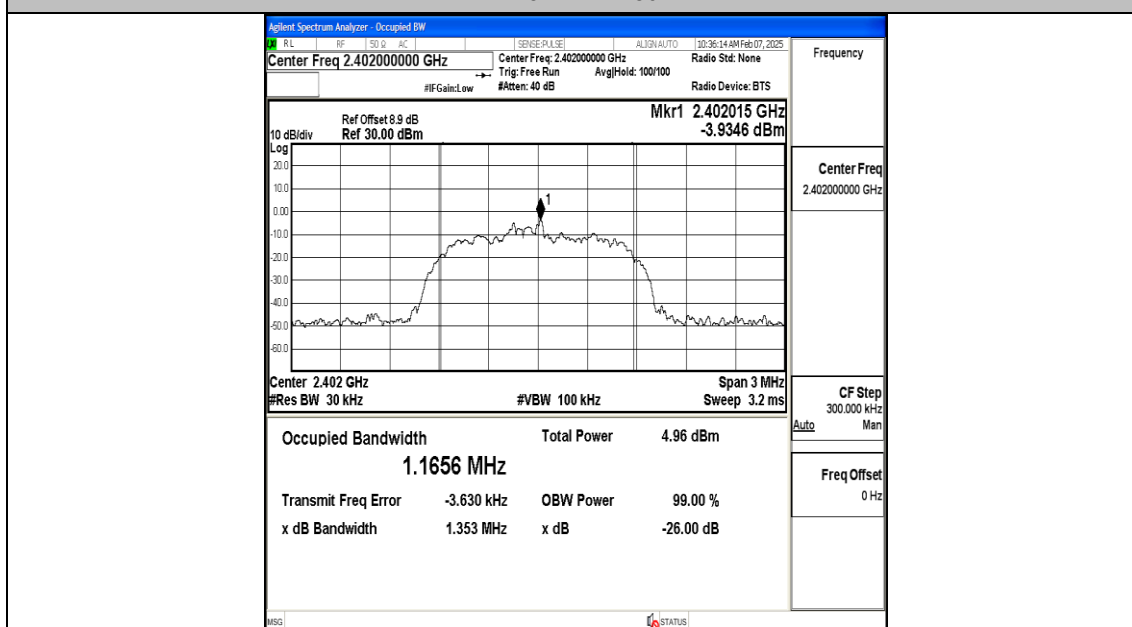
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.76101	2401.6213	2402.3823	---	---
DH5	Ant1	2441	0.74696	2440.6261	2441.3731	---	---
DH5	Ant1	2480	0.76072	2479.6193	2480.3800	---	---
2DH5	Ant1	2402	1.1656	2401.4136	2402.5792	---	---
2DH5	Ant1	2441	1.1544	2440.4175	2441.5719	---	---
2DH5	Ant1	2480	1.1764	2479.4071	2480.5835	---	---
3DH5	Ant1	2402	1.1776	2401.4131	2402.5907	---	---
3DH5	Ant1	2441	1.1900	2440.4012	2441.5912	---	---
3DH5	Ant1	2480	1.1754	2479.4112	2480.5866	---	---

Test Graphs





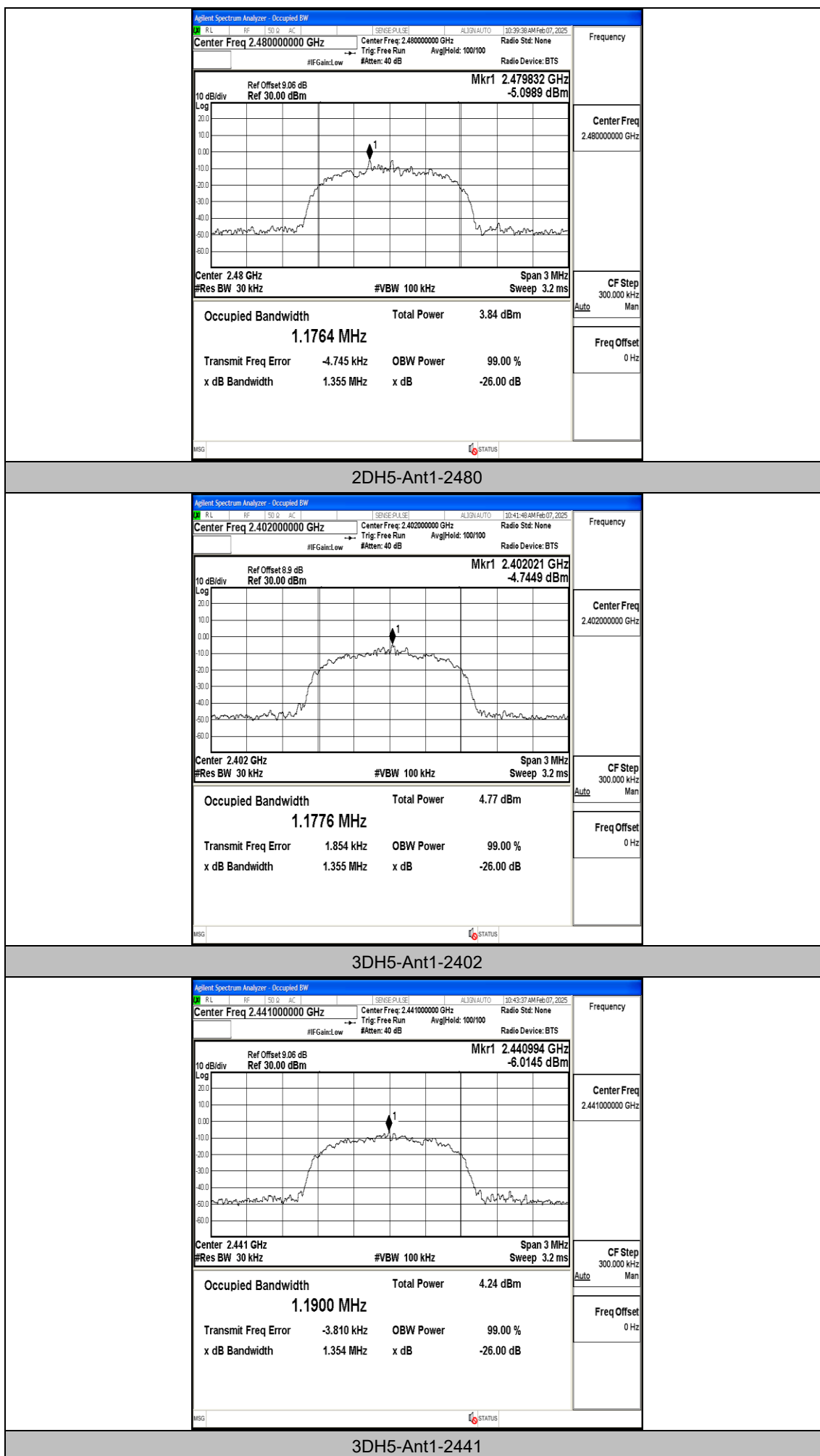
DH5-Ant1-2480

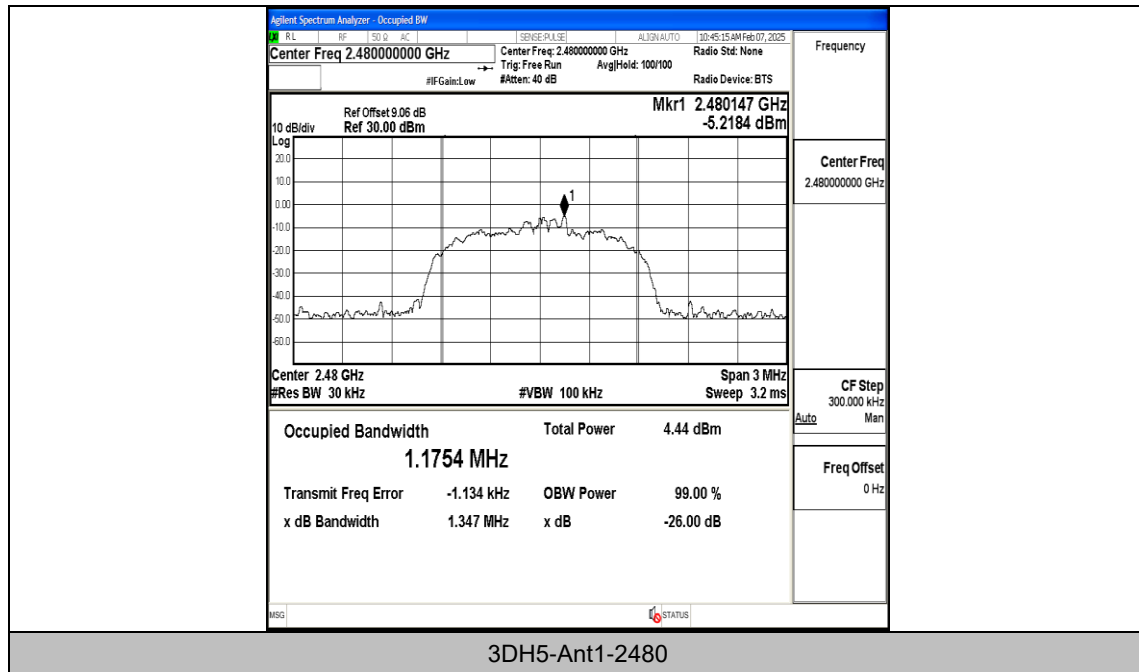


2DH5-Ant1-2402



2DH5-Ant1-2441



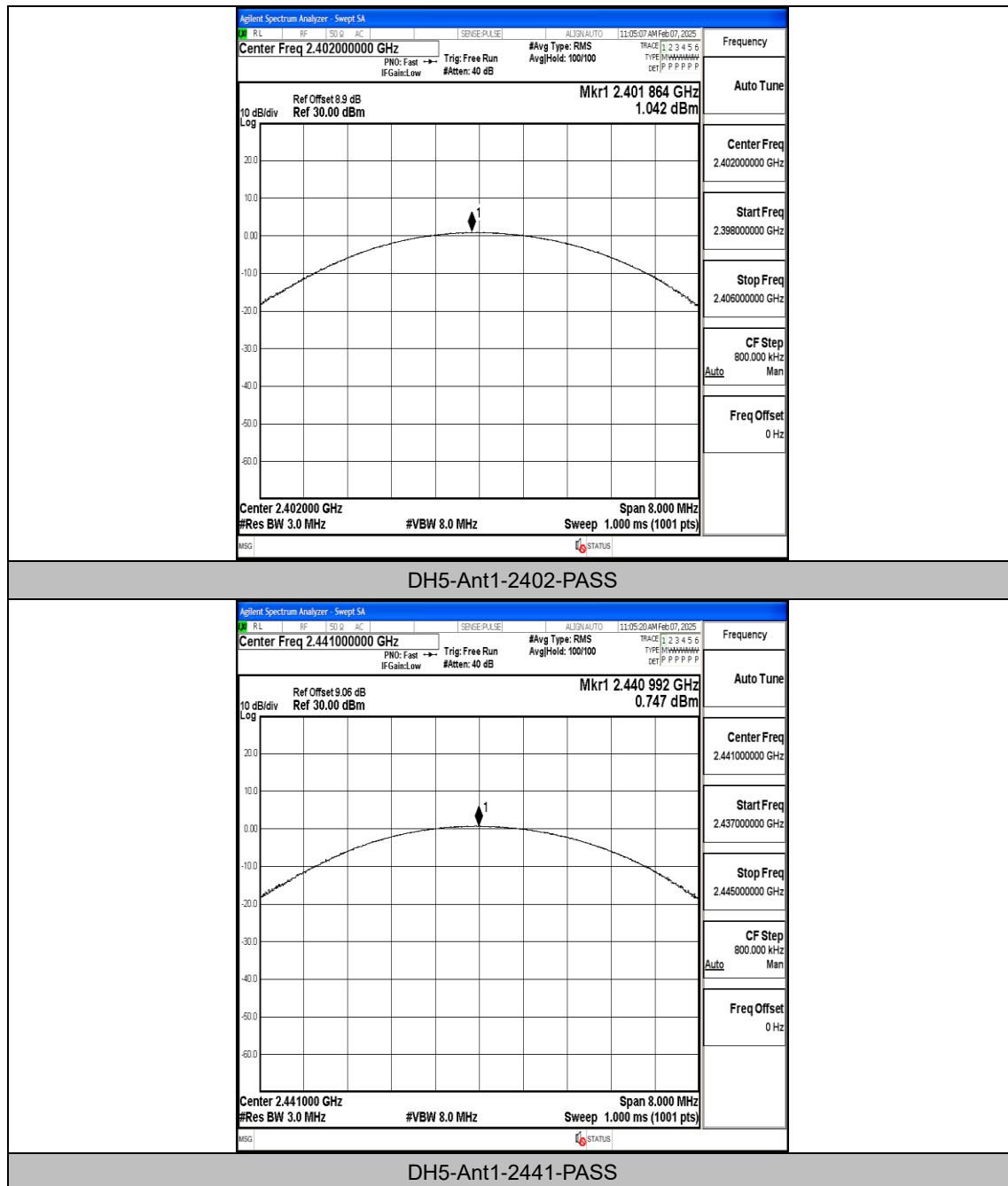


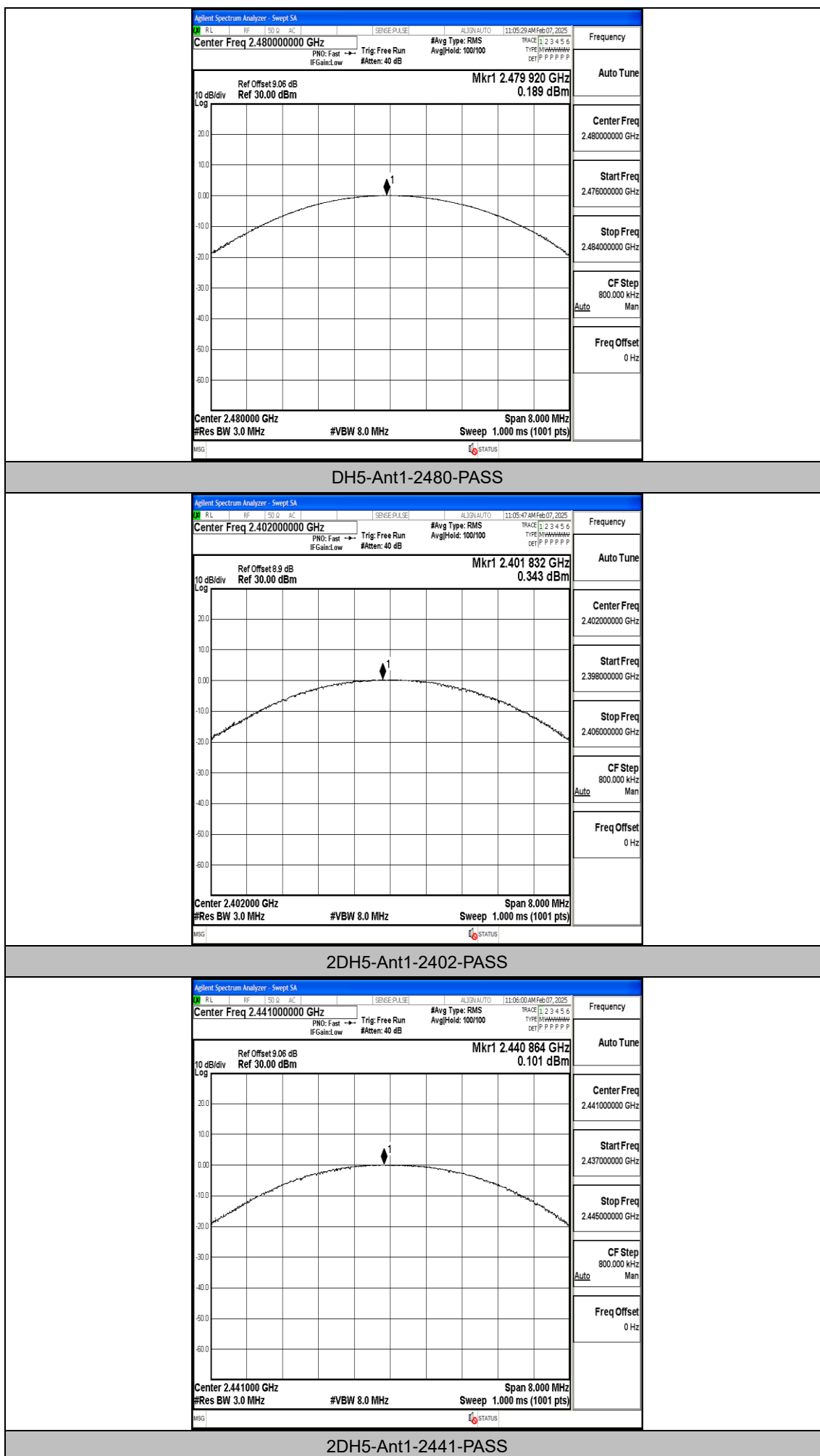
Appendix C: Maximum peak conducted output power

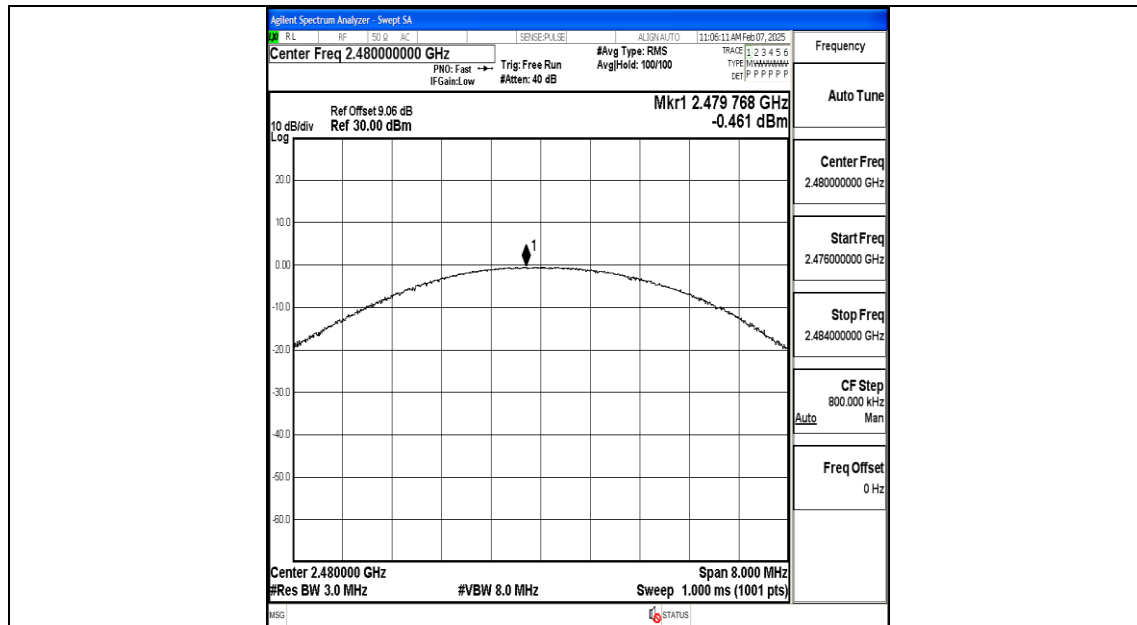
Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	1.04	≤30	PASS
DH5	Ant1	2441	0.75	≤30	PASS
DH5	Ant1	2480	0.19	≤30	PASS
2DH5	Ant1	2402	0.34	≤20.97	PASS
2DH5	Ant1	2441	0.10	≤20.97	PASS
2DH5	Ant1	2480	-0.46	≤20.97	PASS
3DH5	Ant1	2402	0.30	≤20.97	PASS
3DH5	Ant1	2441	0.19	≤20.97	PASS
3DH5	Ant1	2480	-0.41	≤20.97	PASS

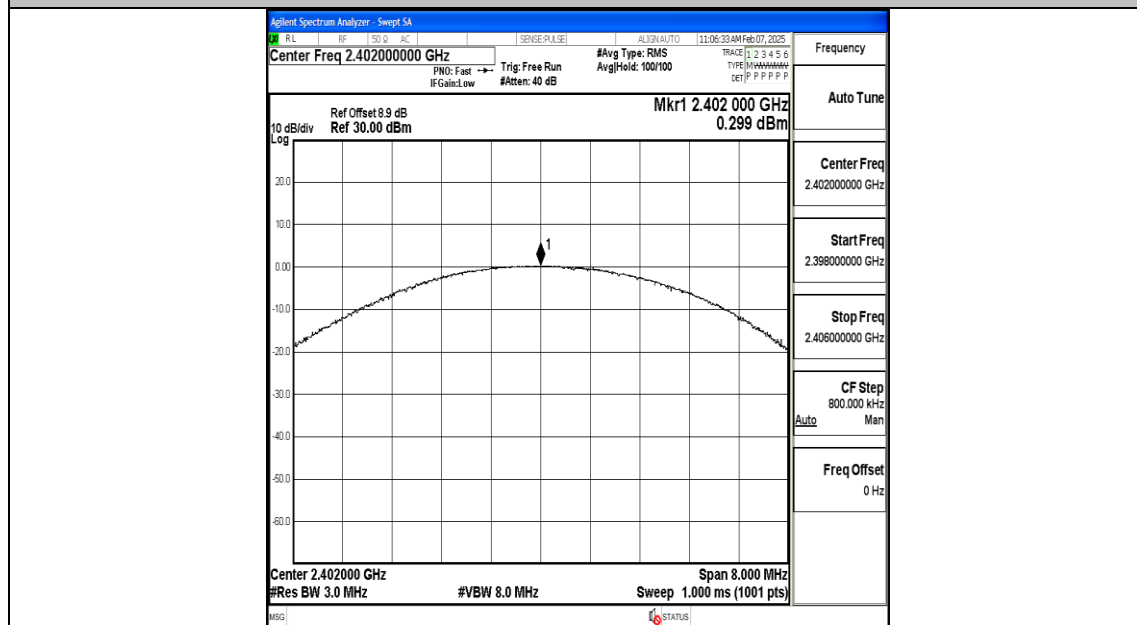
Test Graphs



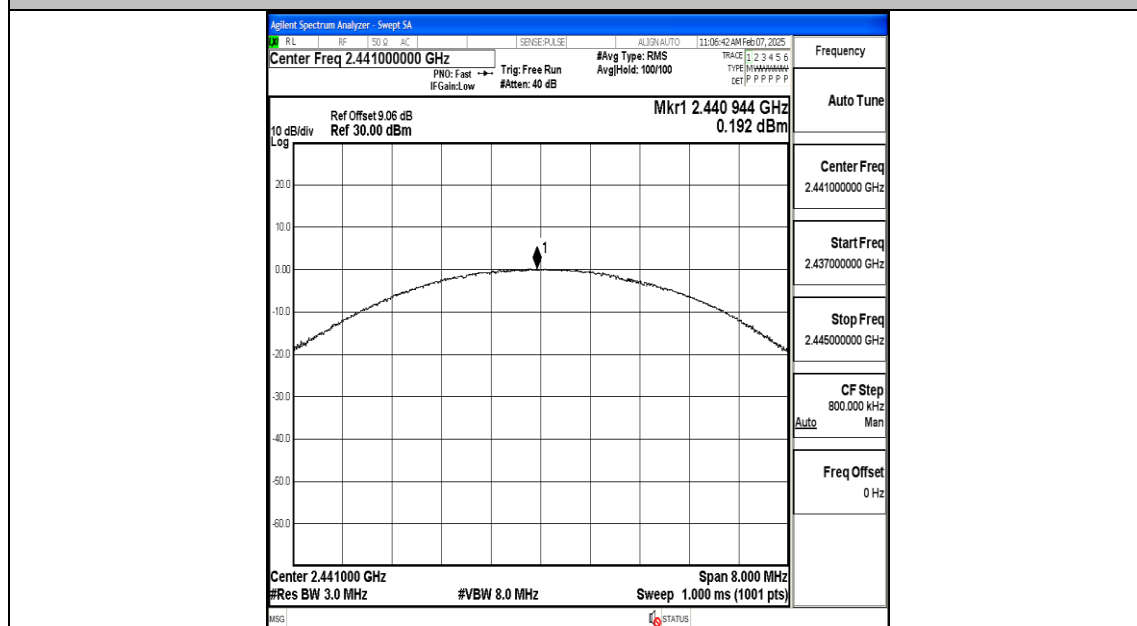




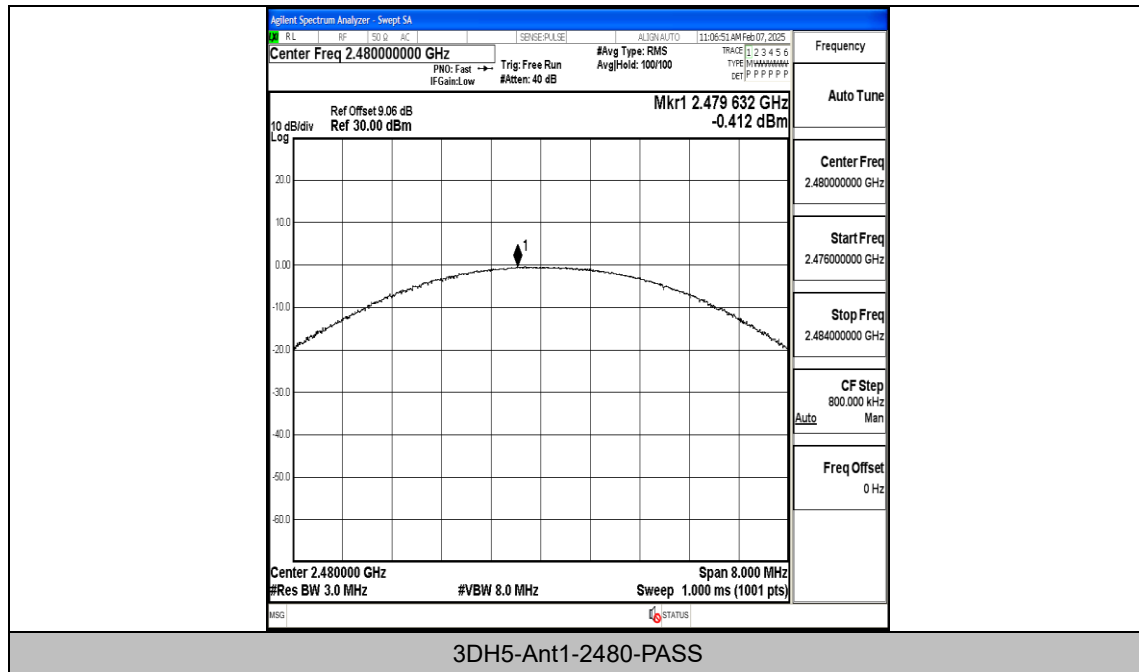
2DH5-Ant1-2480-PASS



3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS

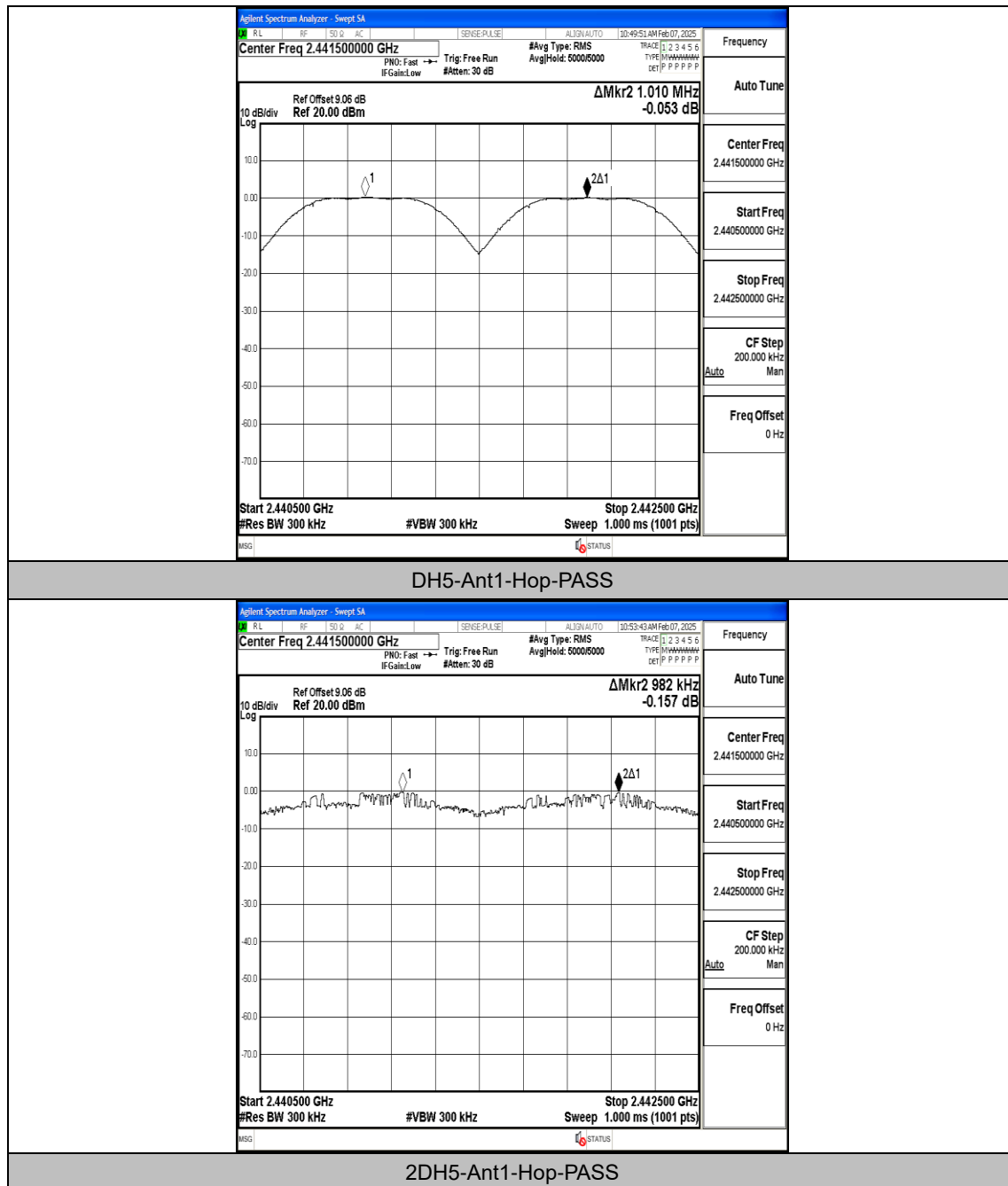


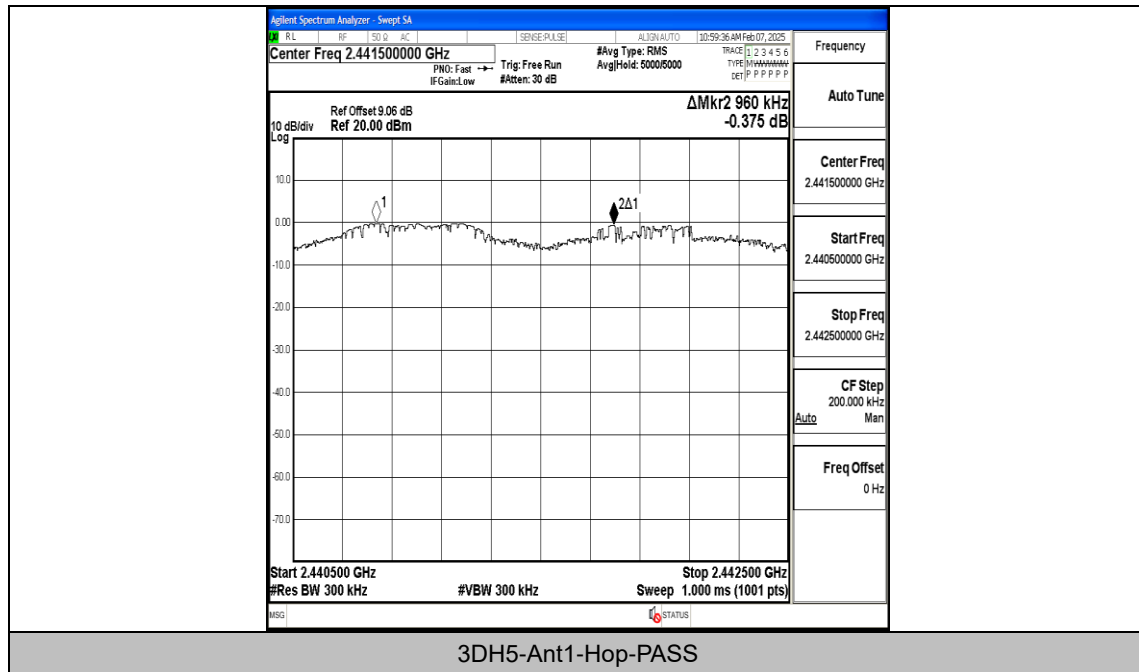
Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	1.01	≥ 0.846	PASS
2DH5	Ant1	Hop	0.982	≥ 0.856	PASS
3DH5	Ant1	Hop	0.96	≥ 0.864	PASS

Test Graphs



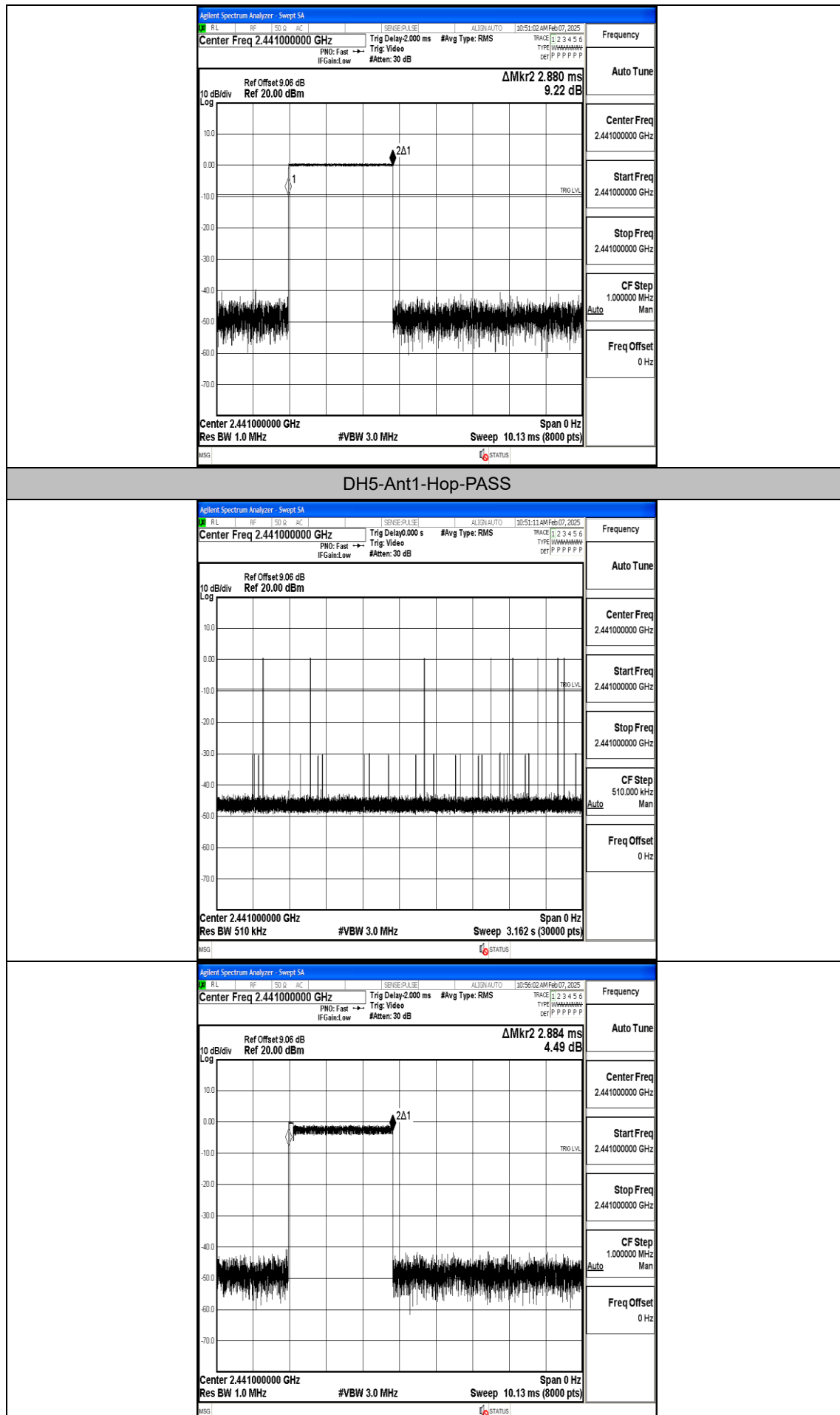


Appendix E: Time of occupancy

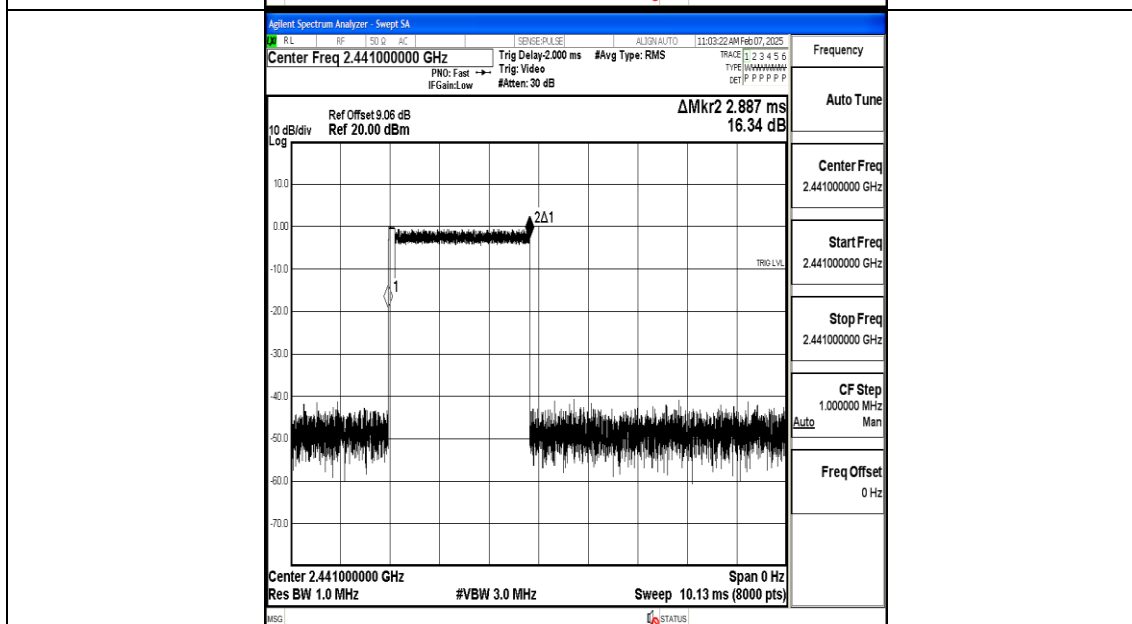
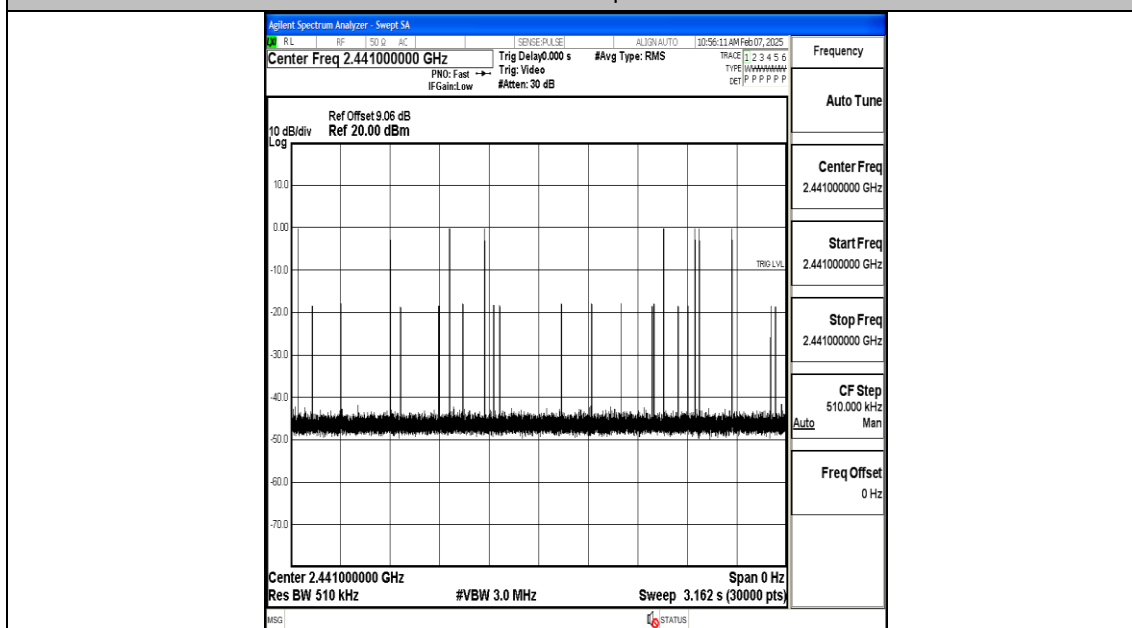
Test Result

Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.880	90	0.259	≤0.4	PASS
2DH5	Ant1	Hop	2.884	90	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.887	120	0.346	≤0.4	PASS

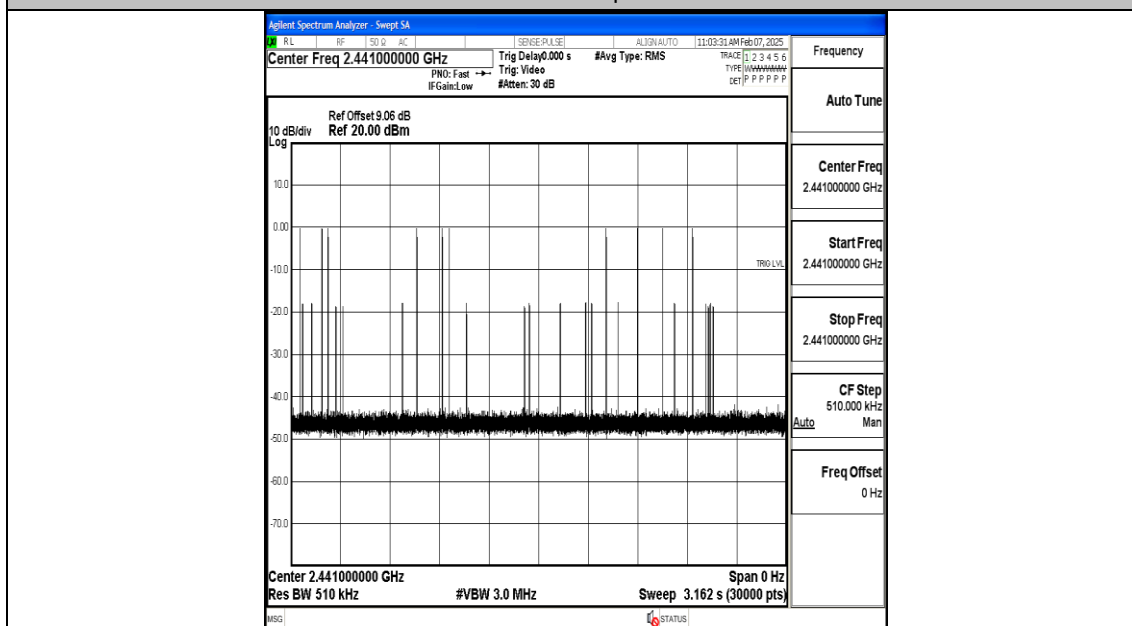
Test Graphs



2DH5-Ant1-Hop-PASS



3DH5-Ant1-Hop-PASS

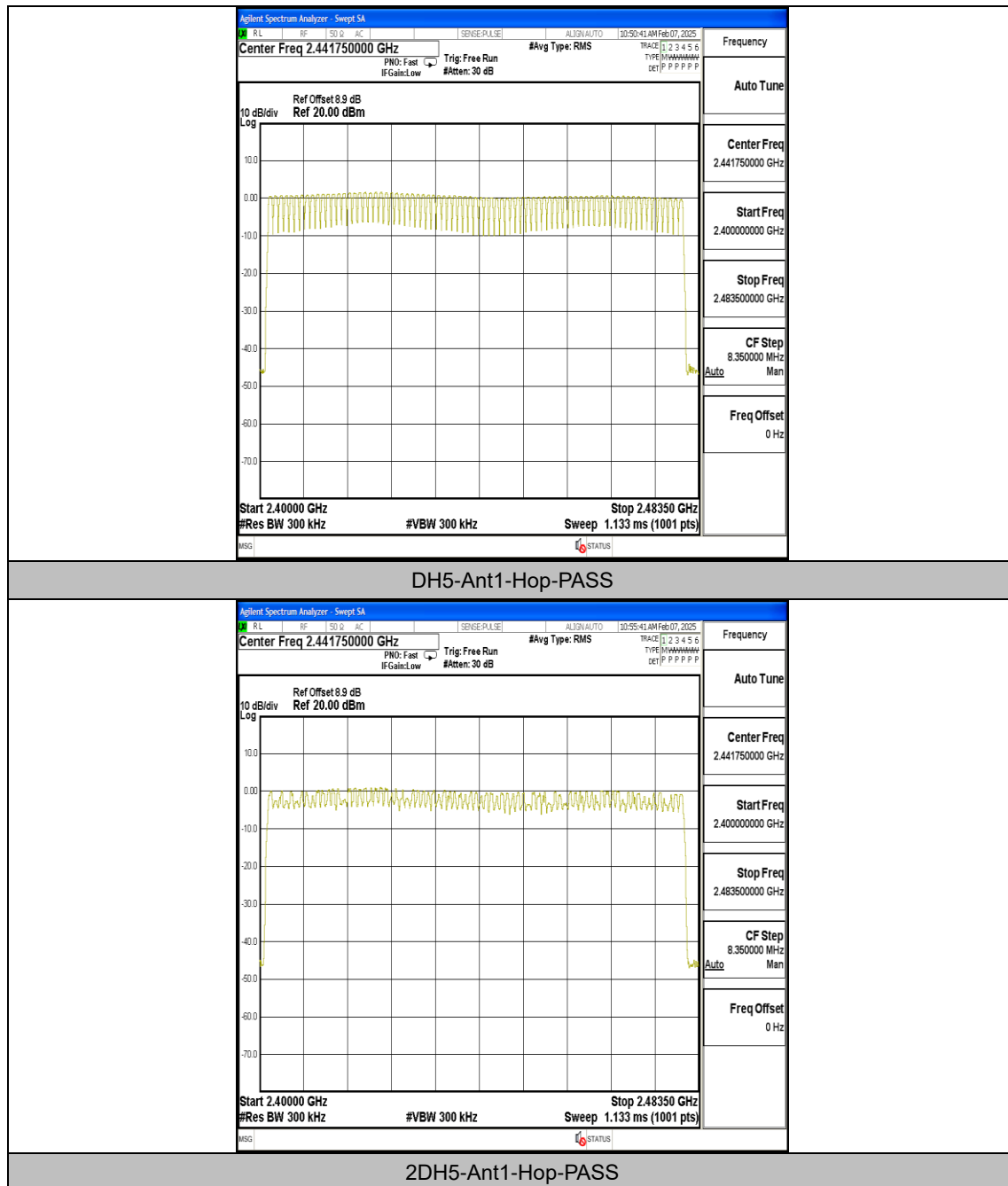


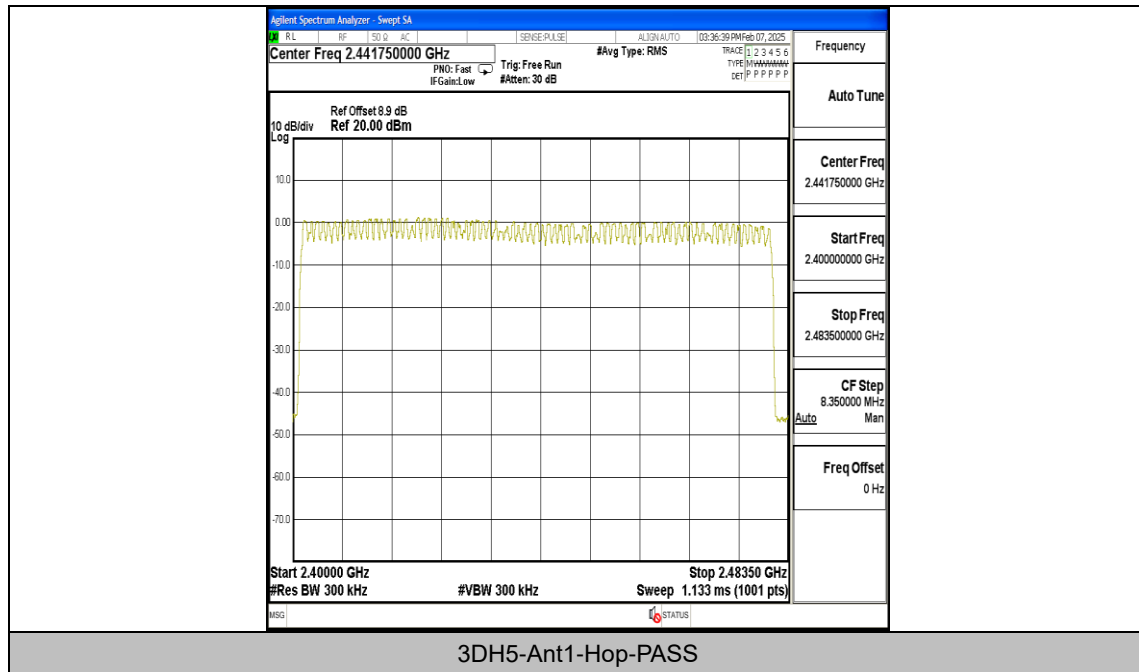
Appendix F: Number of hopping channels

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



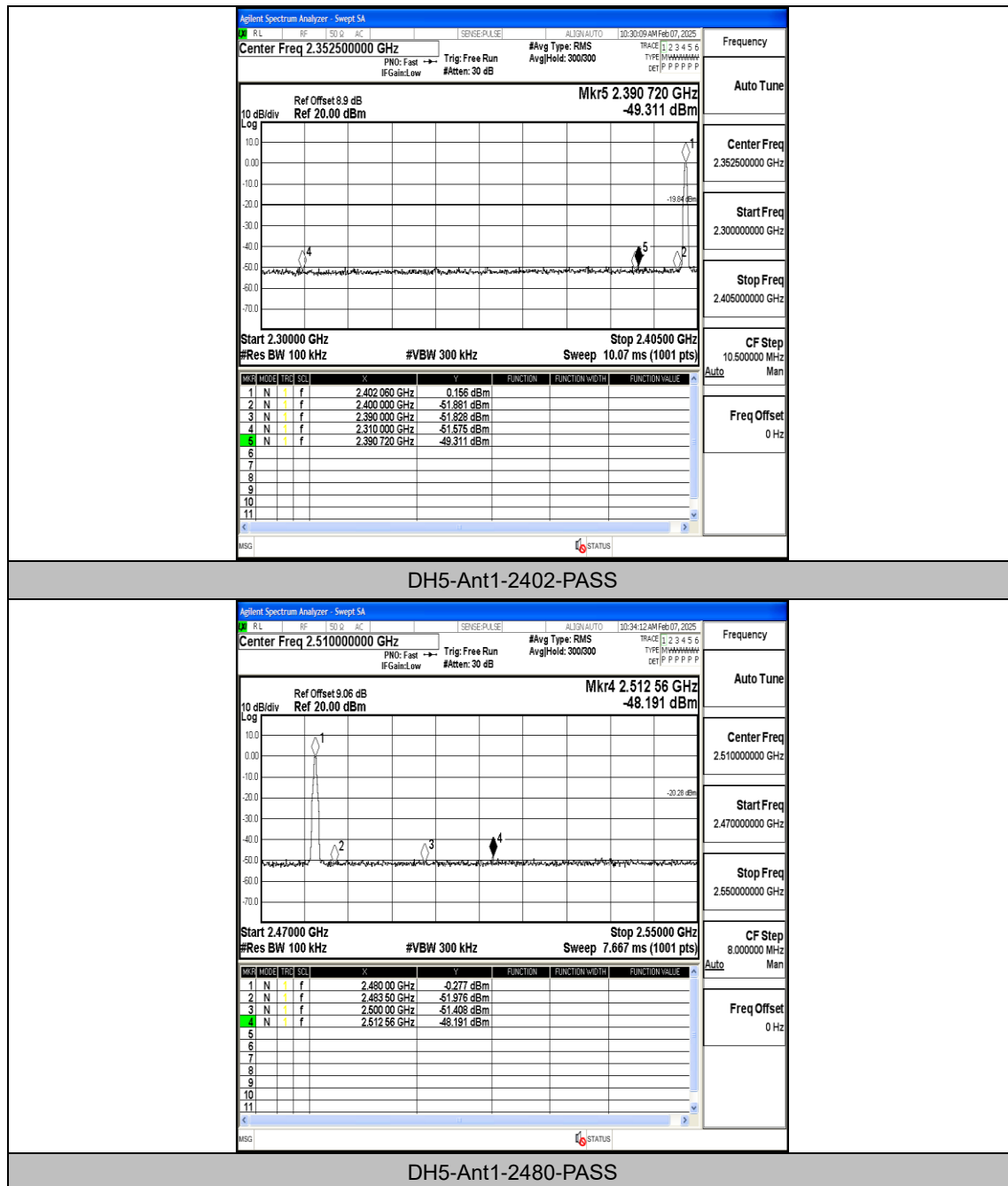


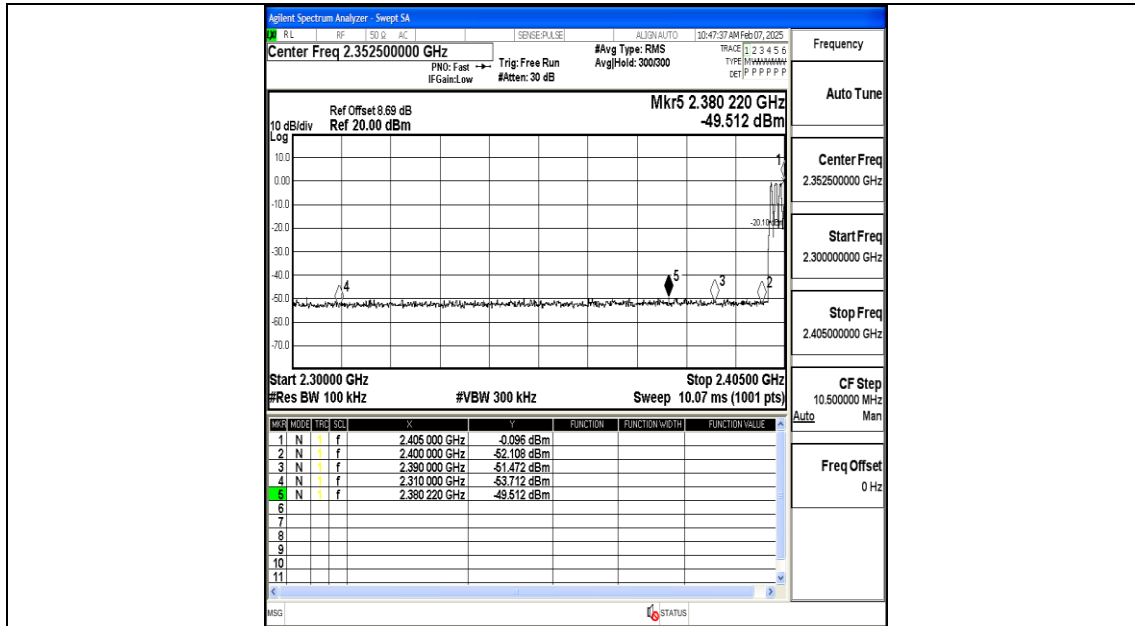
Appendix G: Band edge measurements

Test Result

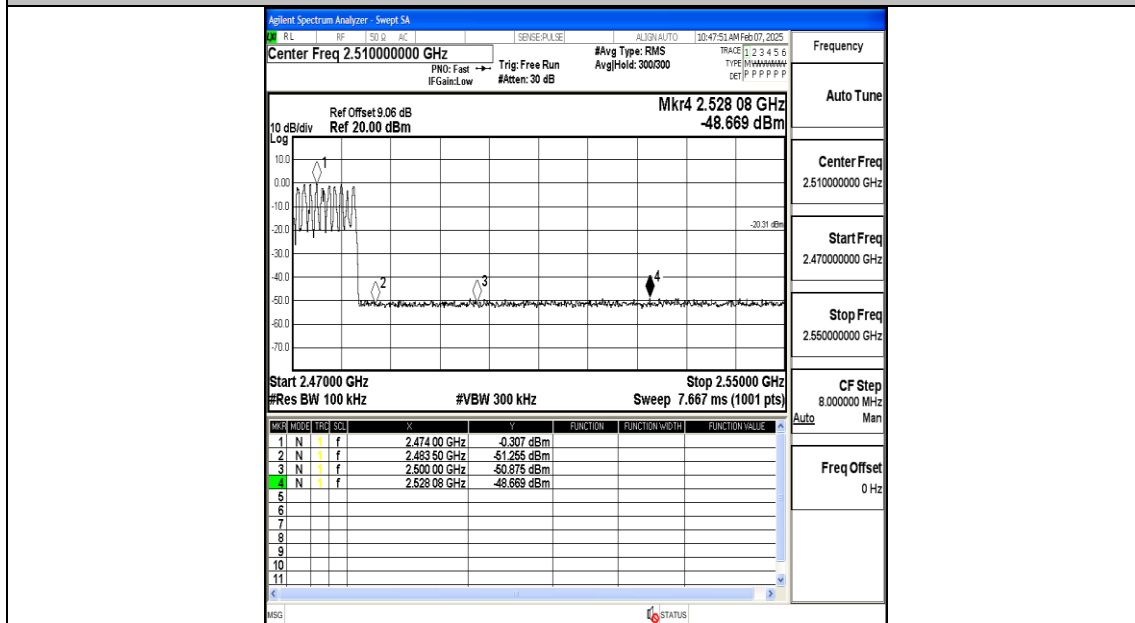
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.16	-49.31	≤-19.84	PASS
DH5	Ant1	High	2480	-0.28	-48.19	≤-20.28	PASS
DH5	Ant1	Low	Hop_2402	-0.10	-49.51	≤-20.1	PASS
DH5	Ant1	High	Hop_2480	-0.31	-48.67	≤-20.31	PASS
2DH5	Ant1	Low	2402	-0.04	-49.57	≤-20.04	PASS
2DH5	Ant1	High	2480	-3.02	-49.31	≤-23.02	PASS
2DH5	Ant1	Low	Hop_2402	-5.40	-49.74	≤-25.4	PASS
2DH5	Ant1	High	Hop_2480	-2.71	-47.93	≤-22.71	PASS
3DH5	Ant1	Low	2402	-0.06	-49.29	≤-20.06	PASS
3DH5	Ant1	High	2480	-0.83	-48.57	≤-20.83	PASS
3DH5	Ant1	Low	Hop_2402	-4.91	-49.02	≤-24.91	PASS
3DH5	Ant1	High	Hop_2480	-0.31	-48.94	≤-20.31	PASS

Test Graphs

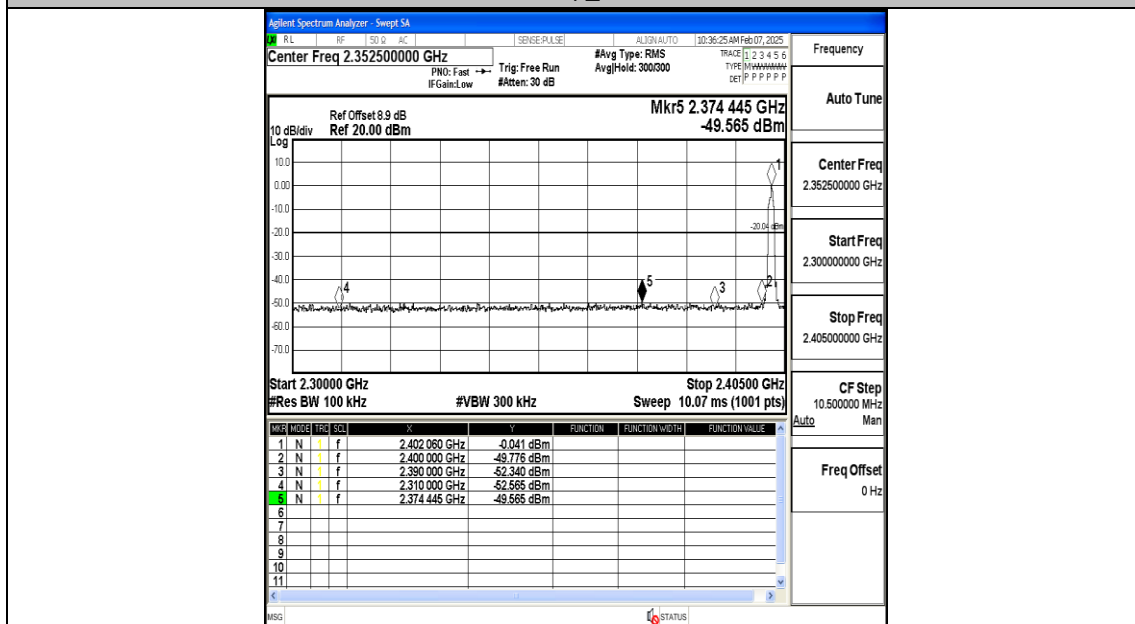




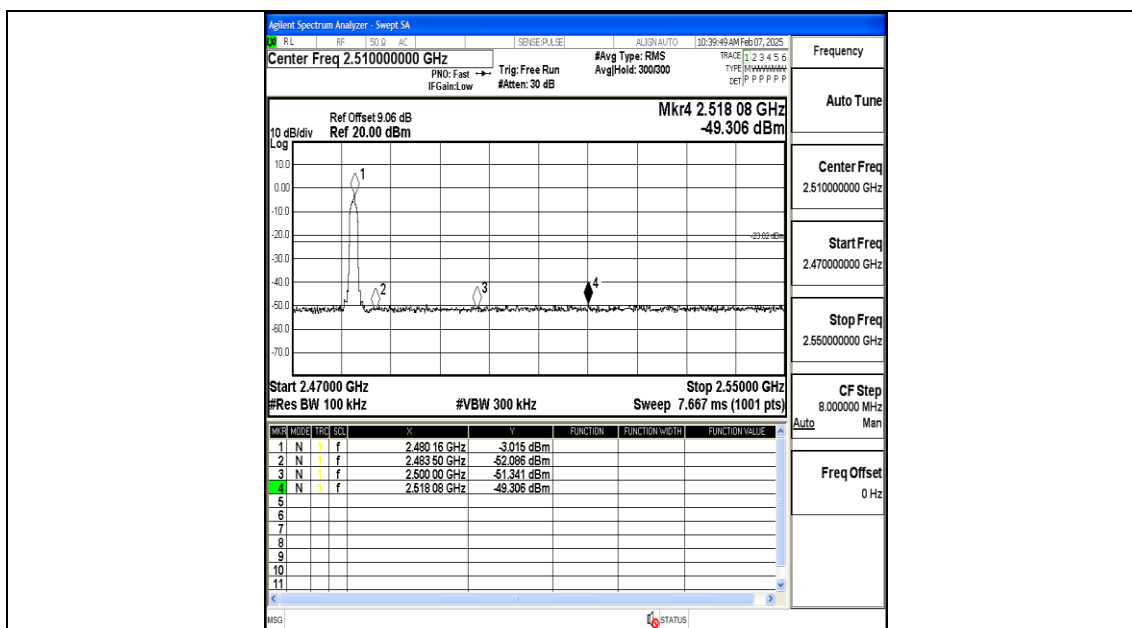
DH5-Ant1-Hop_2402-PASS



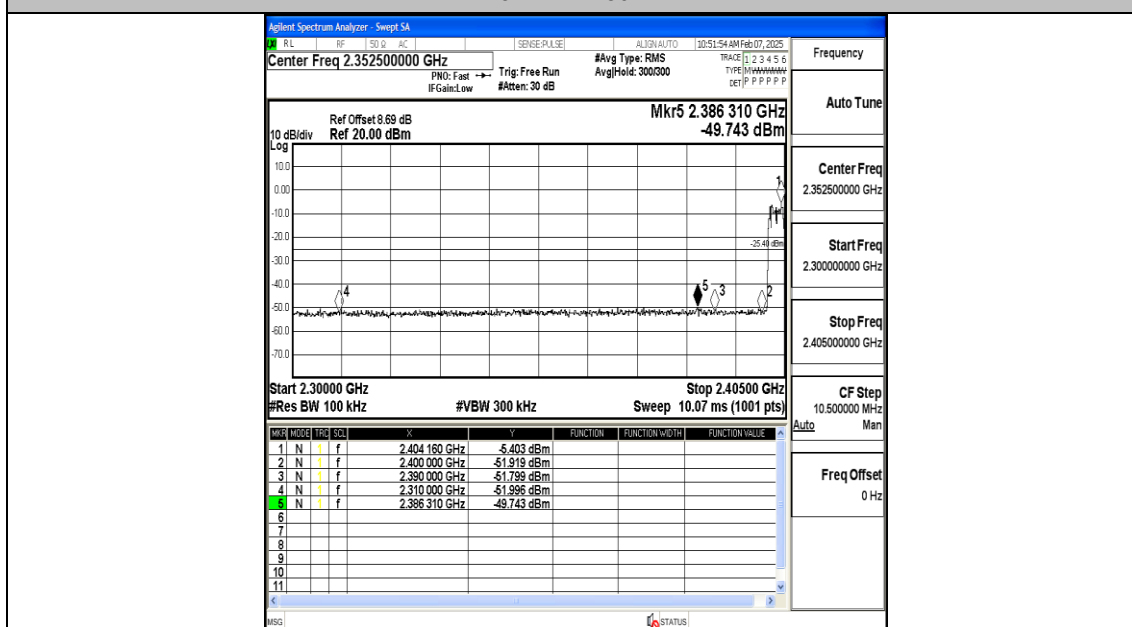
DH5-Ant1-Hop_2480-PASS



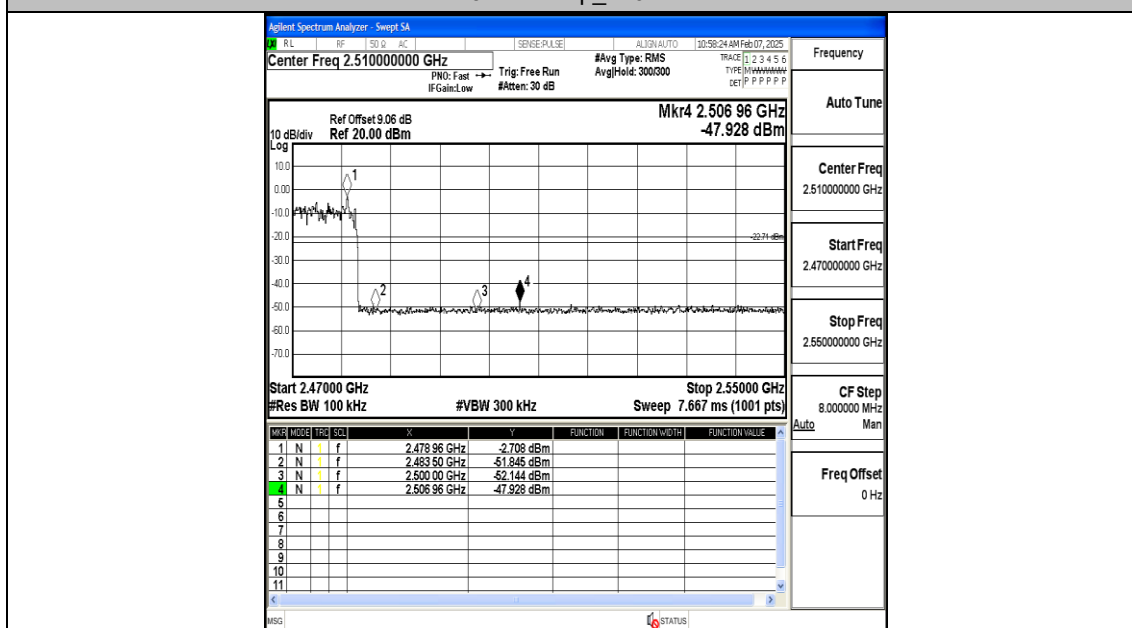
2DH5-Ant1-2402-PASS



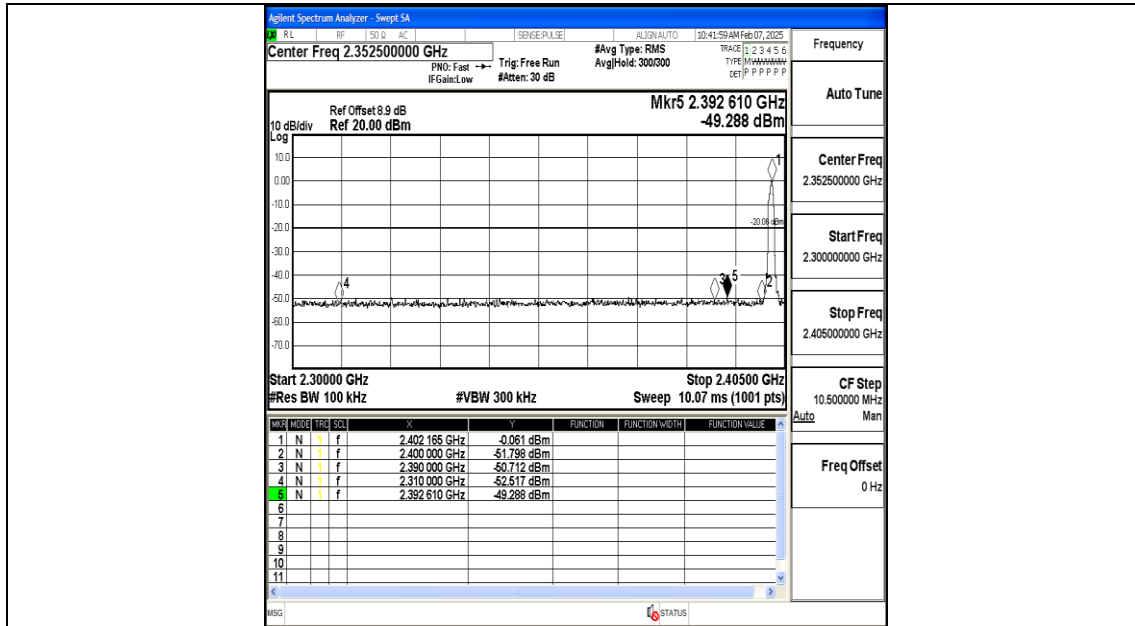
2DH5-Ant1-2480-PASS



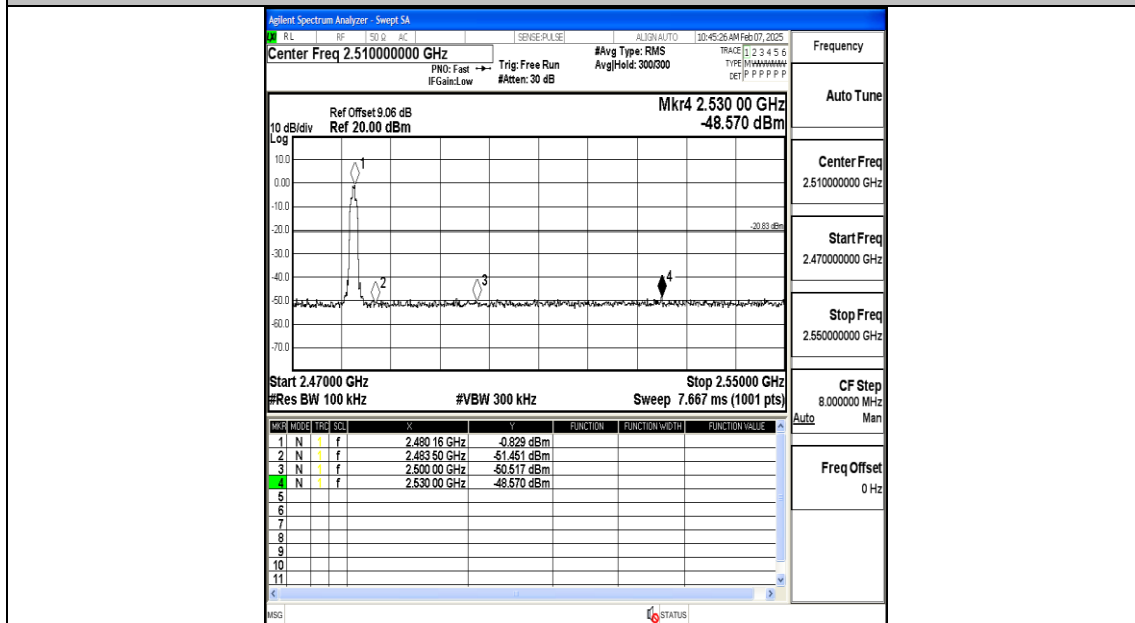
2DH5-Ant1-Hop_2402-PASS



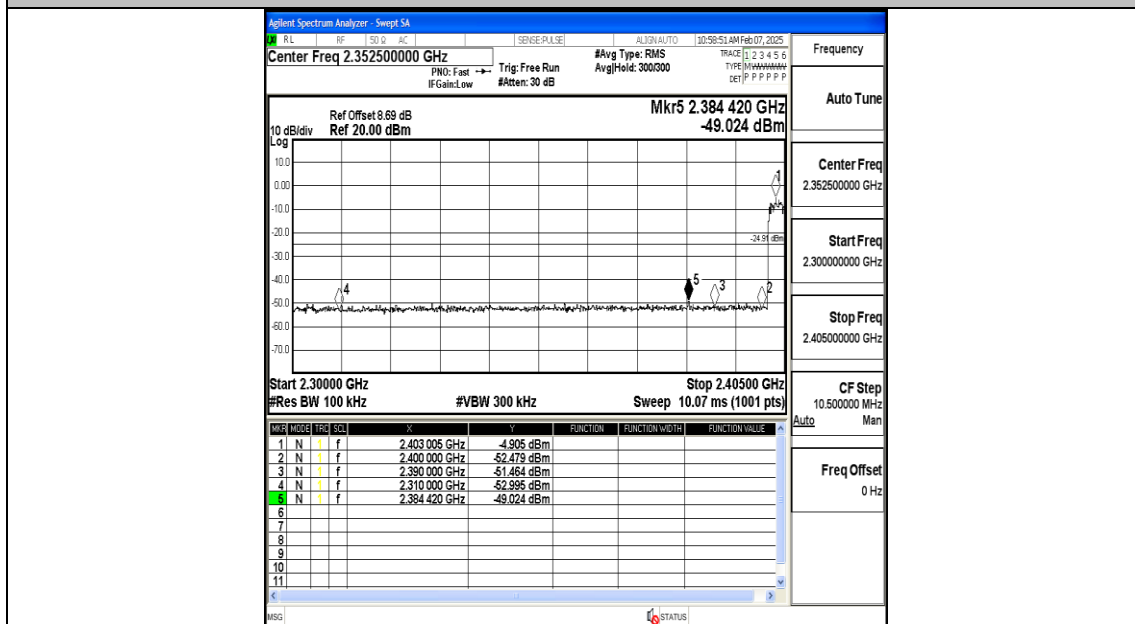
2DH5-Ant1-Hop_2480-PASS



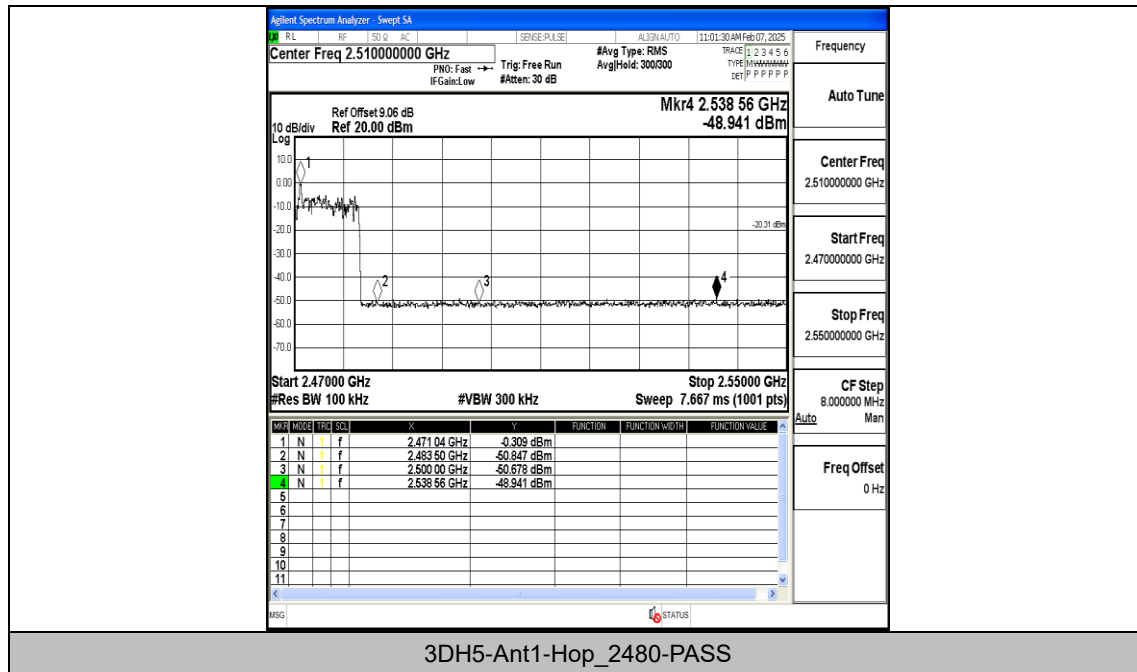
3DH5-Ant1-2402-PASS



3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS

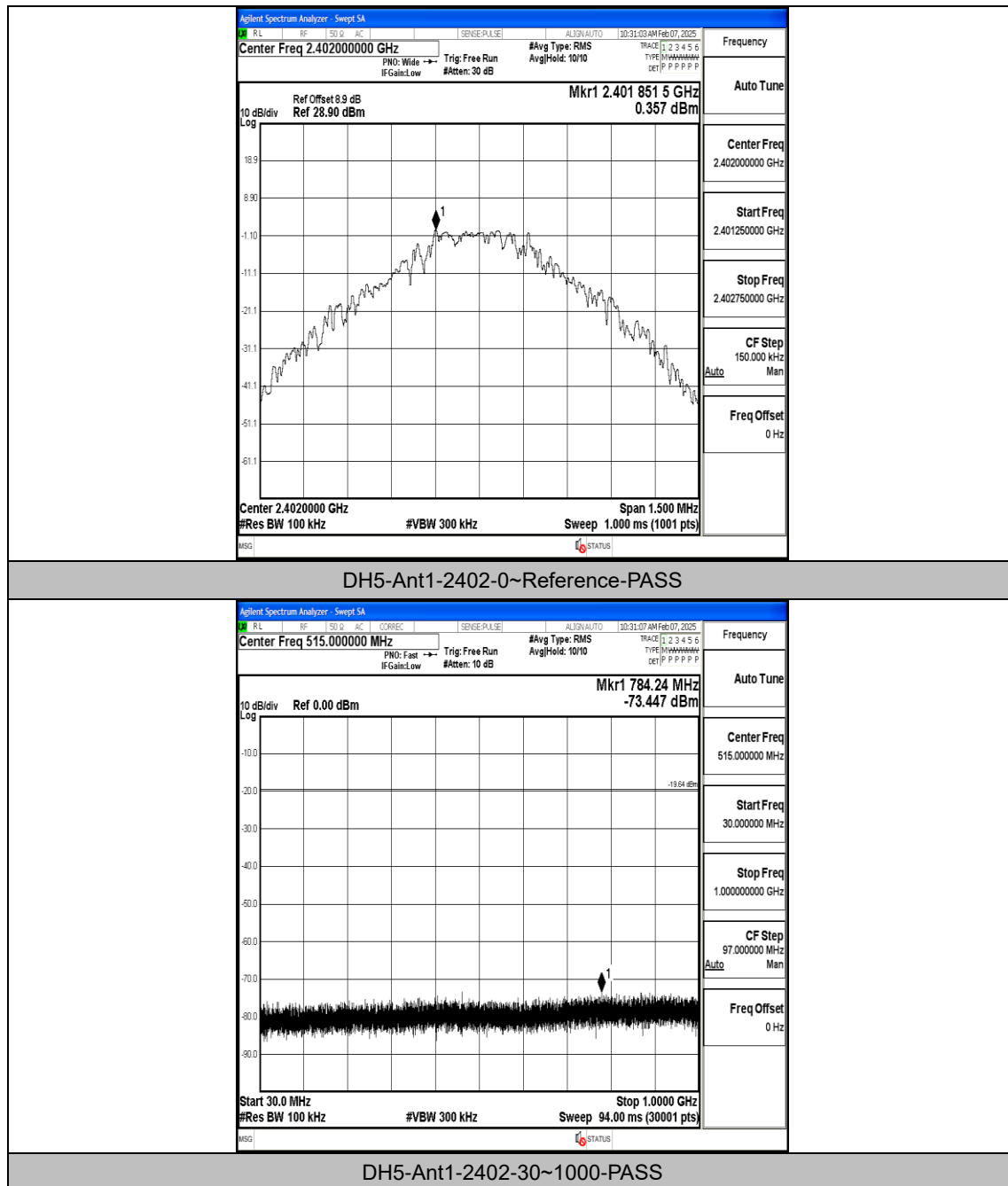


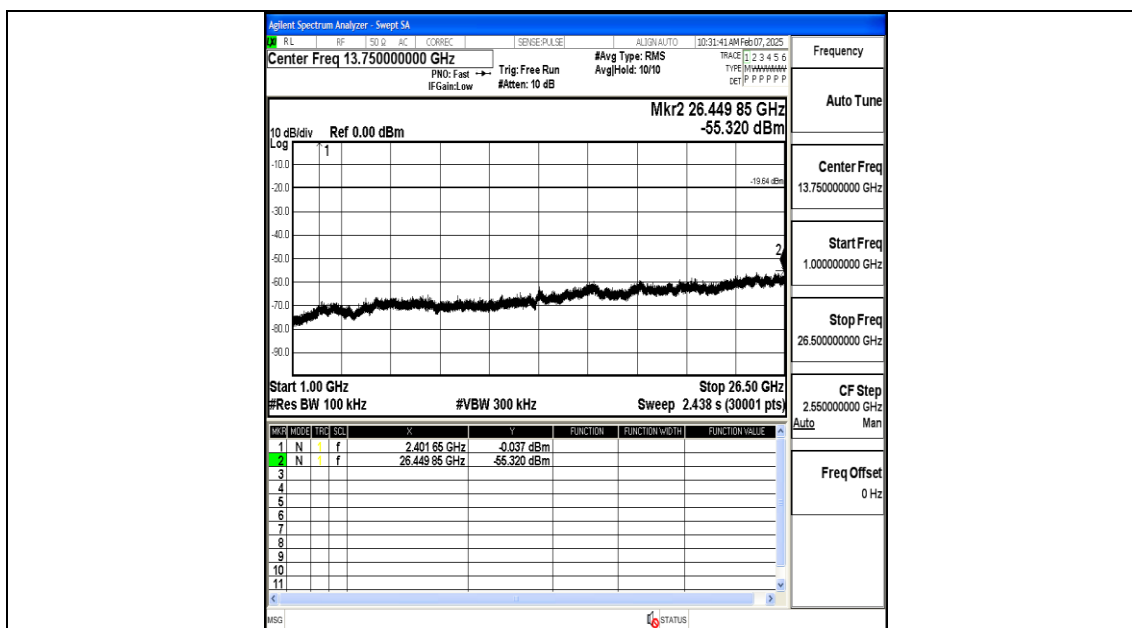
Appendix H: Conducted Spurious Emission

Test Result

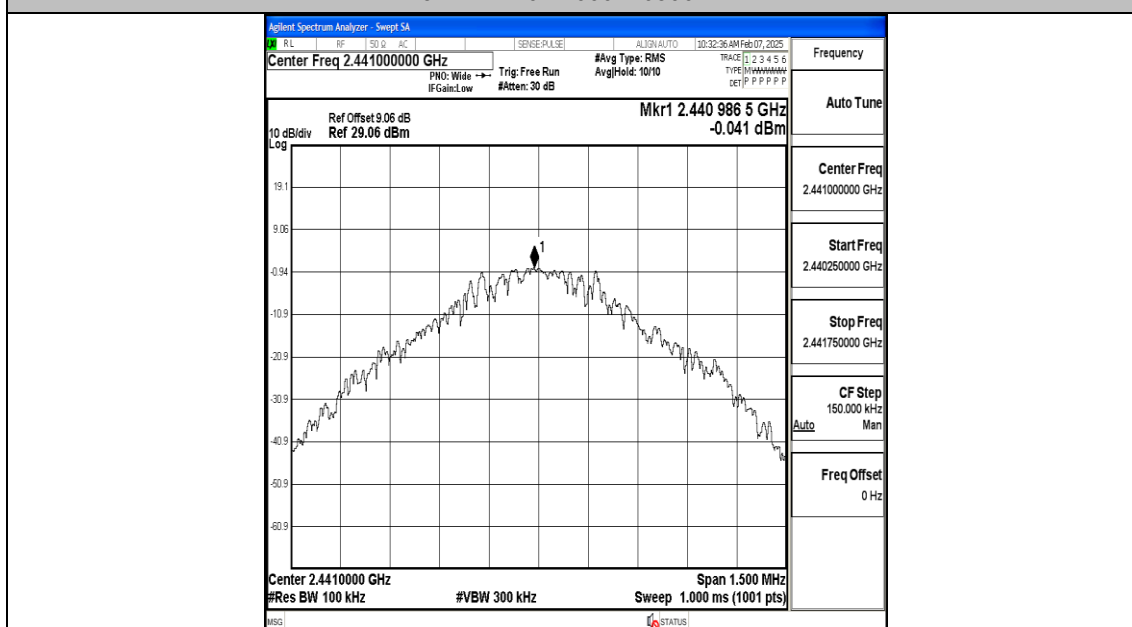
Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	0.36	0.36	---	PASS
DH5	Ant1	2402	30~1000	0.36	-73.45	≤-19.64	PASS
DH5	Ant1	2402	1000~26500	0.36	-55.32	≤-19.64	PASS
DH5	Ant1	2441	0~Reference	-0.04	-0.04	---	PASS
DH5	Ant1	2441	30~1000	-0.04	-71.78	≤-20.04	PASS
DH5	Ant1	2441	1000~26500	-0.04	-55.53	≤-20.04	PASS
DH5	Ant1	2480	0~Reference	-0.74	-0.74	---	PASS
DH5	Ant1	2480	30~1000	-0.74	-73.18	≤-20.74	PASS
DH5	Ant1	2480	1000~26500	-0.74	-55.39	≤-20.74	PASS
2DH5	Ant1	2402	0~Reference	-5.31	-5.31	---	PASS
2DH5	Ant1	2402	30~1000	-5.31	-73.09	≤-25.31	PASS
2DH5	Ant1	2402	1000~26500	-5.31	-55.56	≤-25.31	PASS
2DH5	Ant1	2441	0~Reference	-1.09	-1.09	---	PASS
2DH5	Ant1	2441	30~1000	-1.09	-72.25	≤-21.09	PASS
2DH5	Ant1	2441	1000~26500	-1.09	-55.6	≤-21.09	PASS
2DH5	Ant1	2480	0~Reference	-3.48	-3.48	---	PASS
2DH5	Ant1	2480	30~1000	-3.48	-73.39	≤-23.48	PASS
2DH5	Ant1	2480	1000~26500	-3.48	-55.38	≤-23.48	PASS
3DH5	Ant1	2402	0~Reference	-4.35	-4.35	---	PASS
3DH5	Ant1	2402	30~1000	-4.35	-72.25	≤-24.35	PASS
3DH5	Ant1	2402	1000~26500	-4.35	-55.75	≤-24.35	PASS
3DH5	Ant1	2441	0~Reference	-1.00	-1.00	---	PASS
3DH5	Ant1	2441	30~1000	-1.00	-72.61	≤-21	PASS
3DH5	Ant1	2441	1000~26500	-1.00	-55.8	≤-21	PASS
3DH5	Ant1	2480	0~Reference	-1.03	-1.03	---	PASS
3DH5	Ant1	2480	30~1000	-1.03	-73.17	≤-21.03	PASS
3DH5	Ant1	2480	1000~26500	-1.03	-55.79	≤-21.03	PASS

Test Graphs

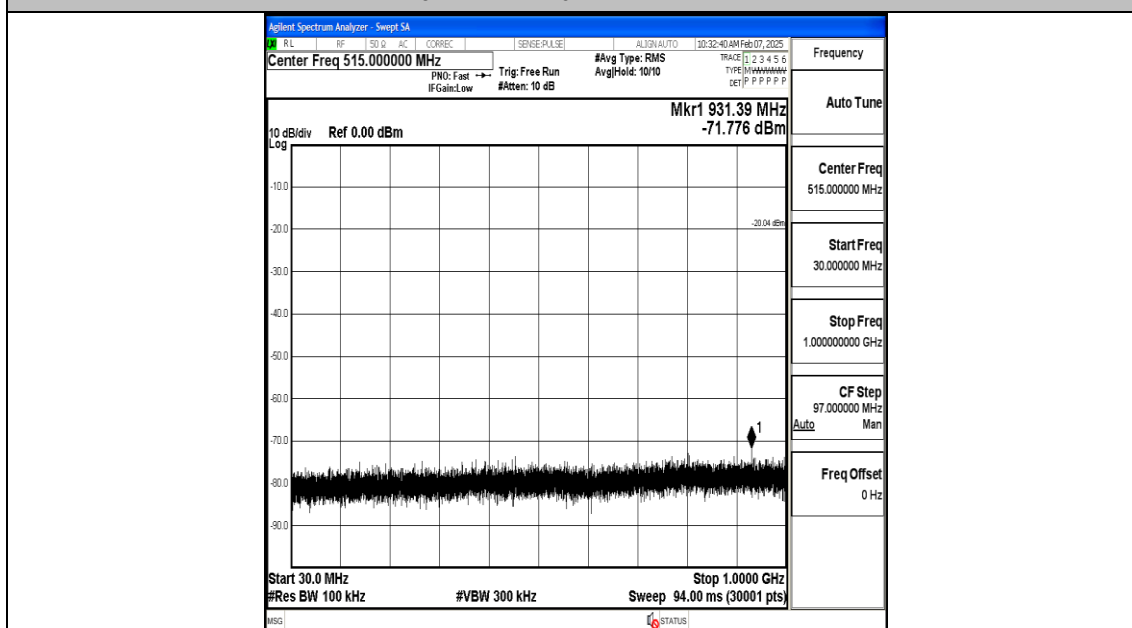




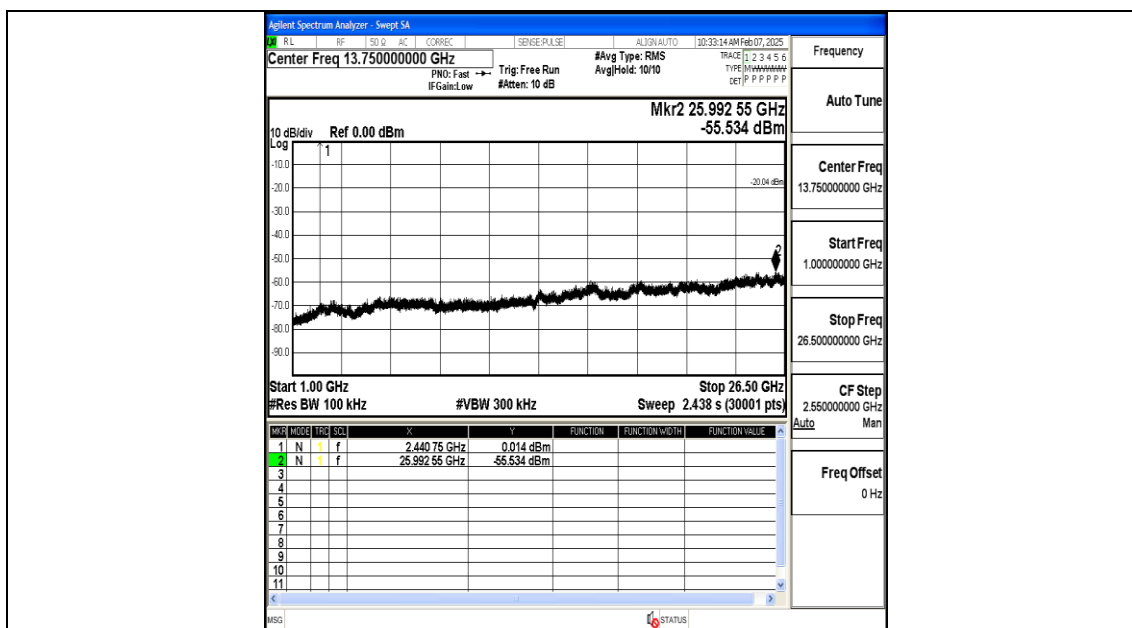
DH5-Ant1-2402-1000~26500-PASS



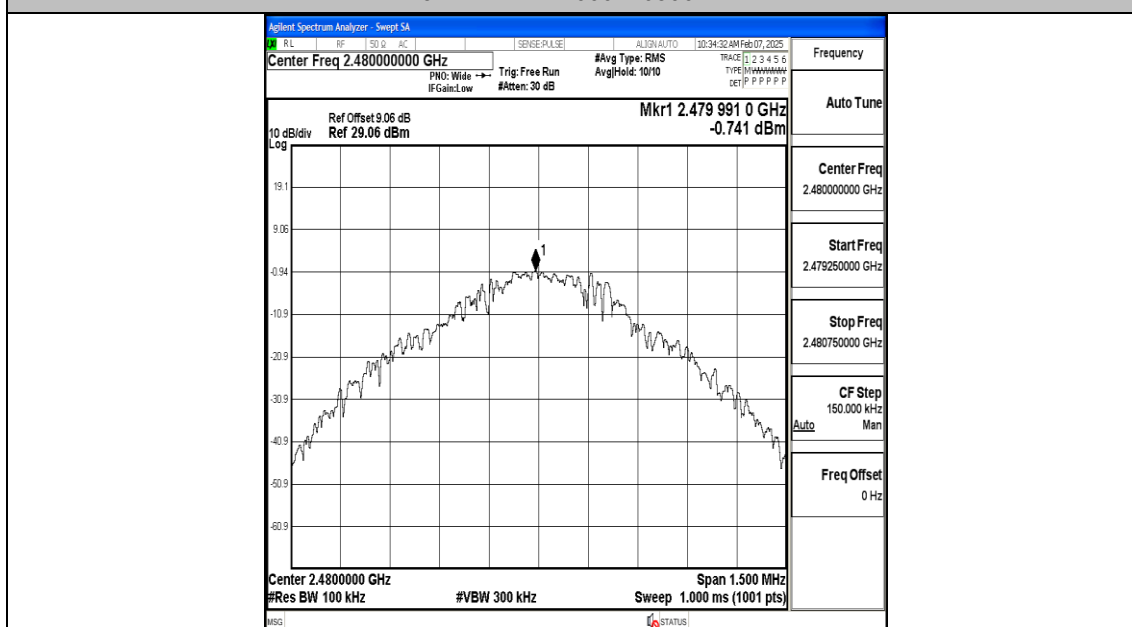
DH5-Ant1-2441-0~Reference-PASS



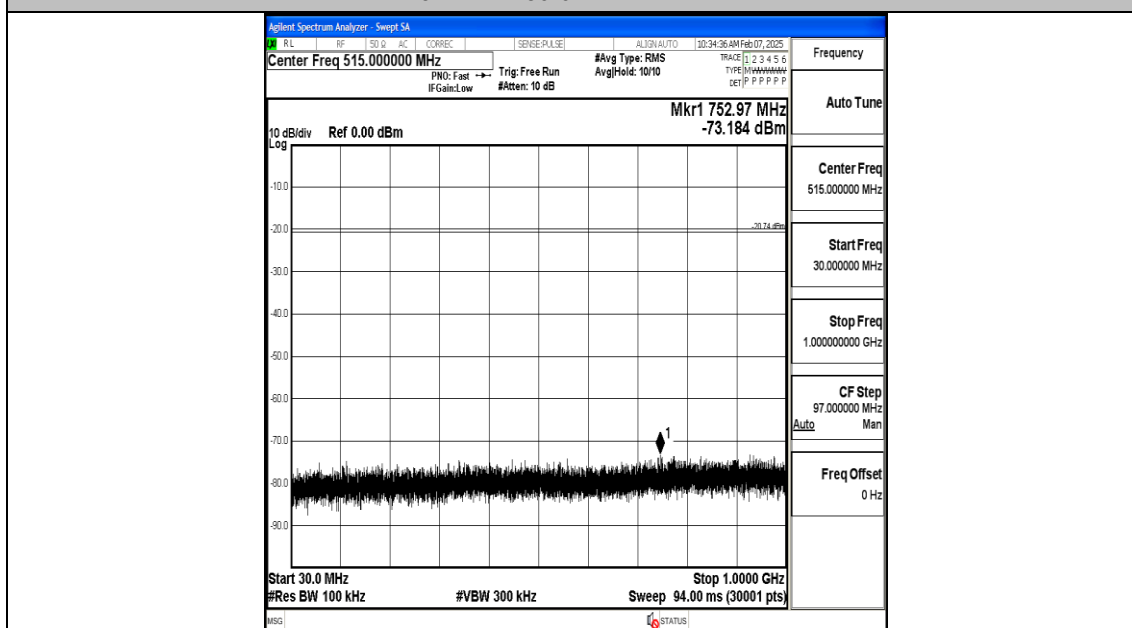
DH5-Ant1-2441-30~1000-PASS



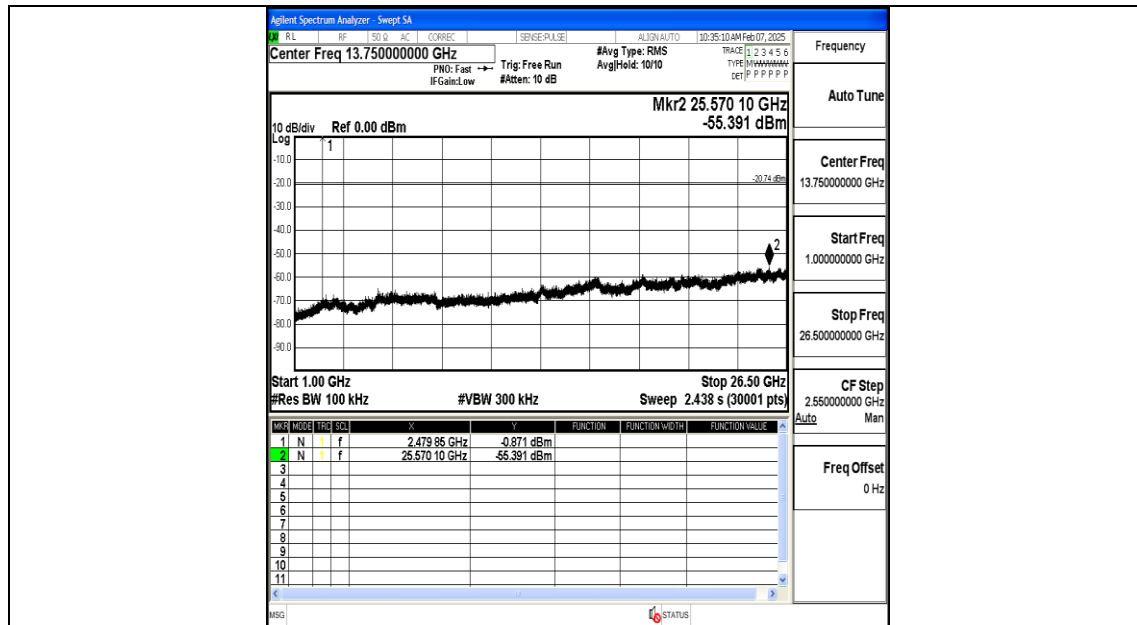
DH5-Ant1-2441-1000~26500-PASS



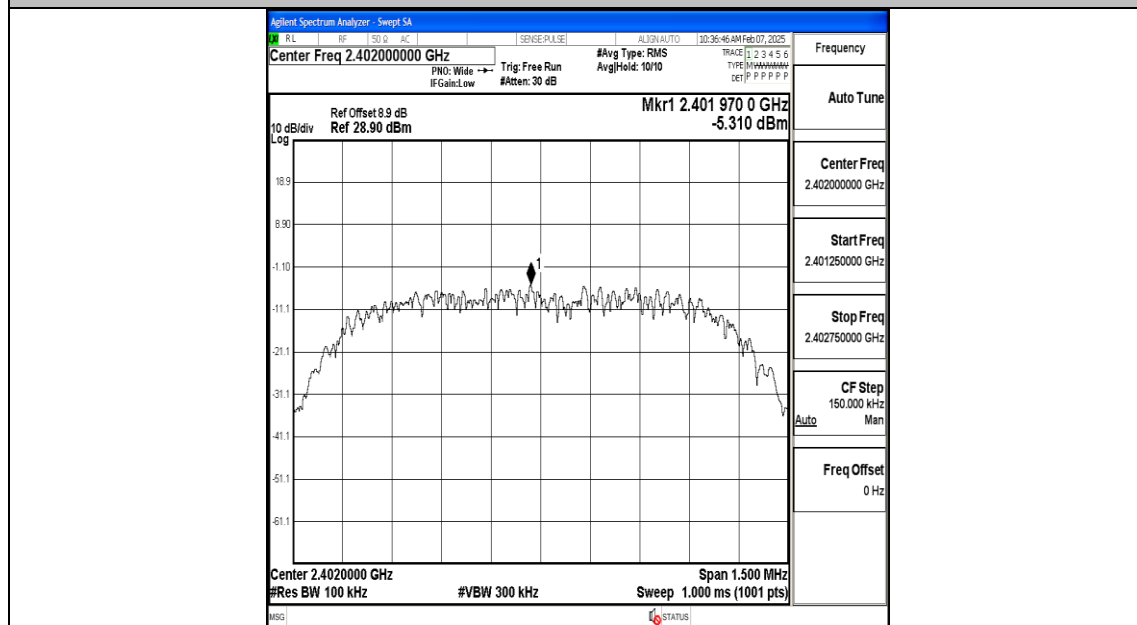
DH5-Ant1-2480-0~Reference-PASS



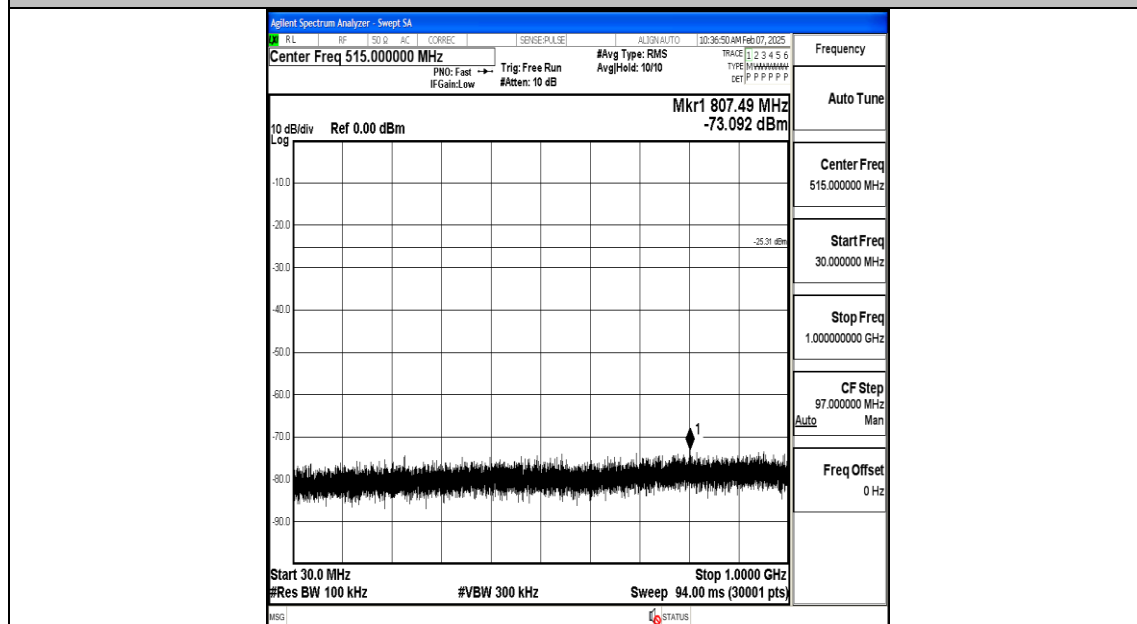
DH5-Ant1-2480-30~1000-PASS



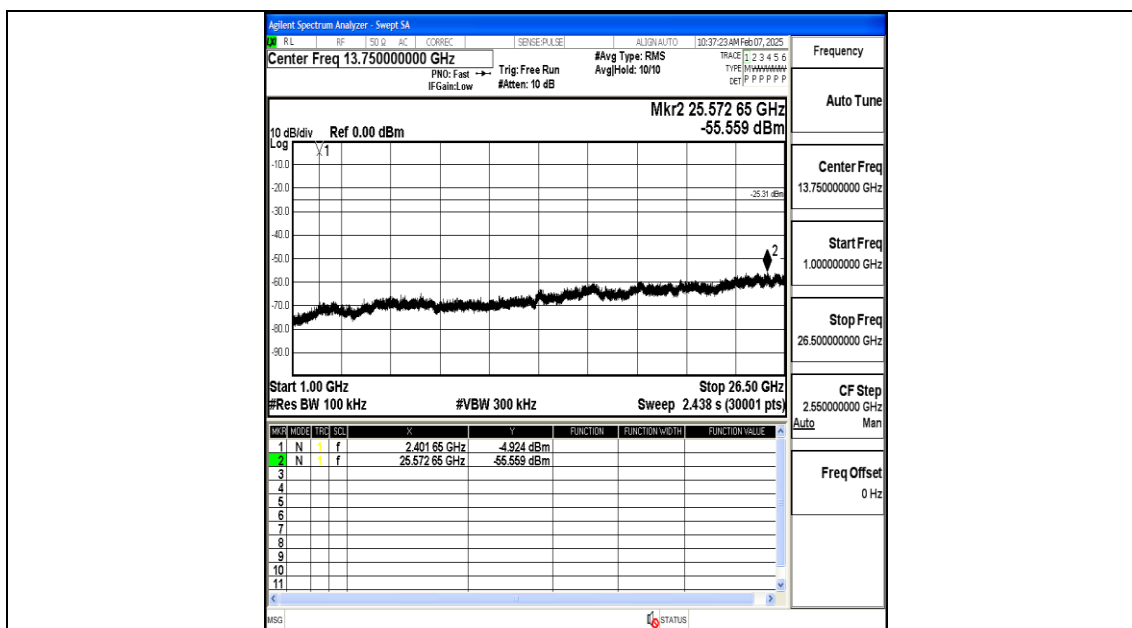
DH5-Ant1-2480-1000~26500-PASS



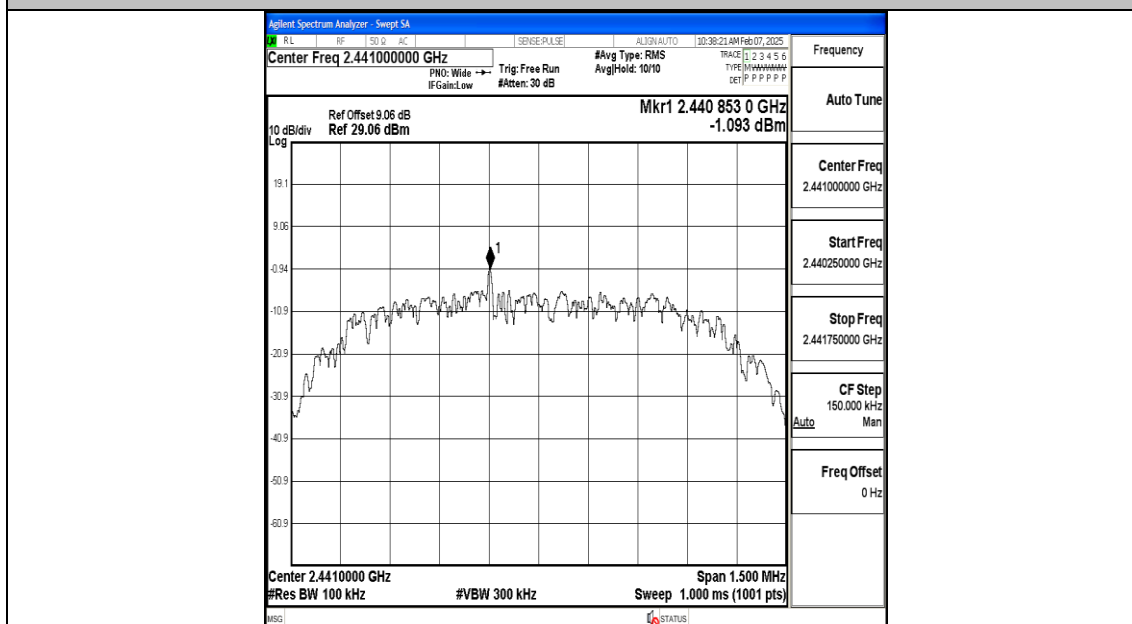
2DH5-Ant1-2402-0~Reference-PASS



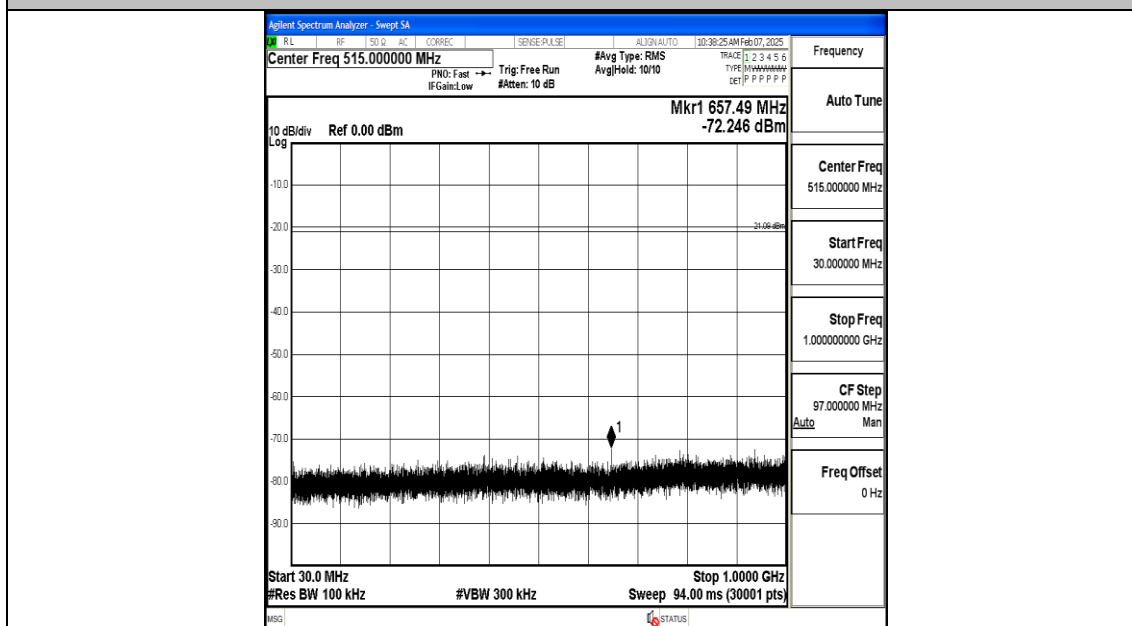
2DH5-Ant1-2402-30~1000-PASS



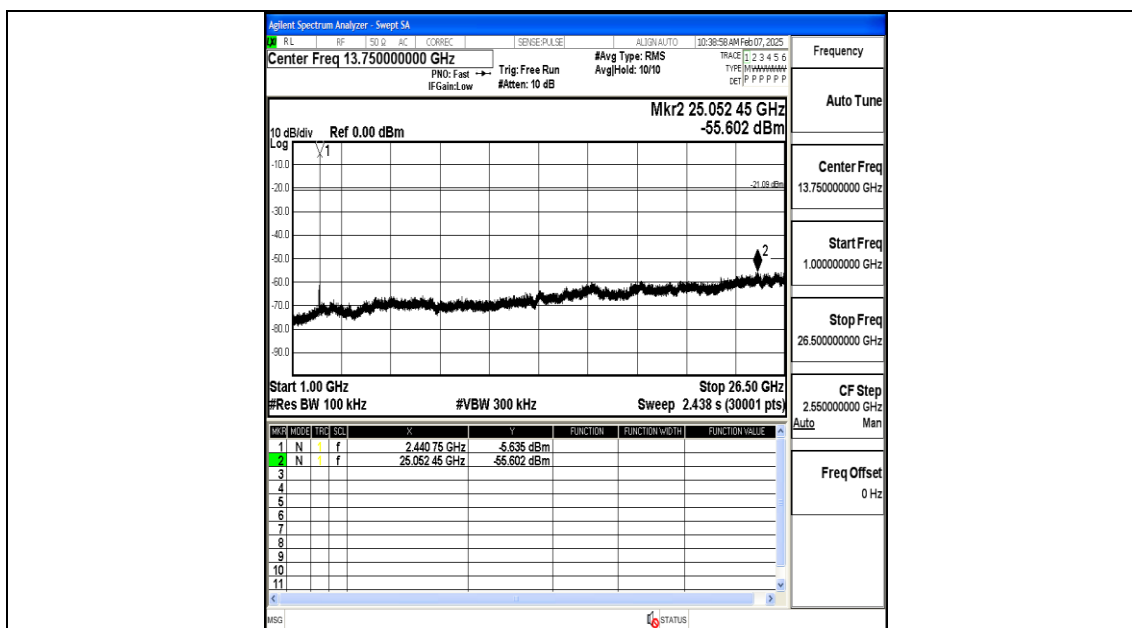
2DH5-Ant1-2402-1000~26500-PASS



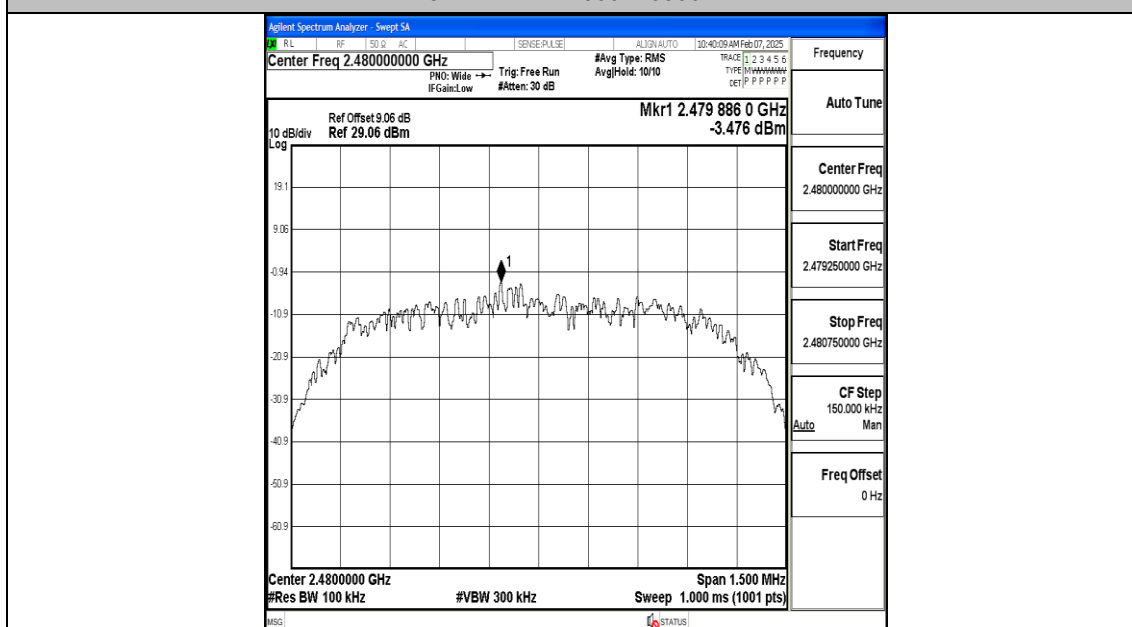
2DH5-Ant1-2441-0~Reference-PASS



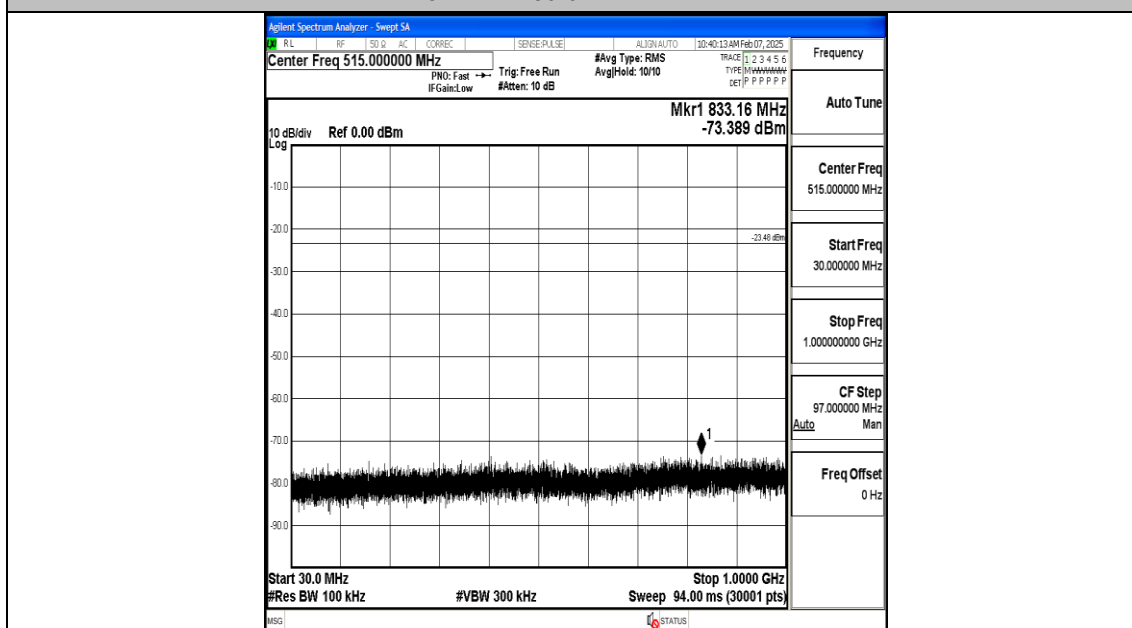
2DH5-Ant1-2441-30~1000-PASS



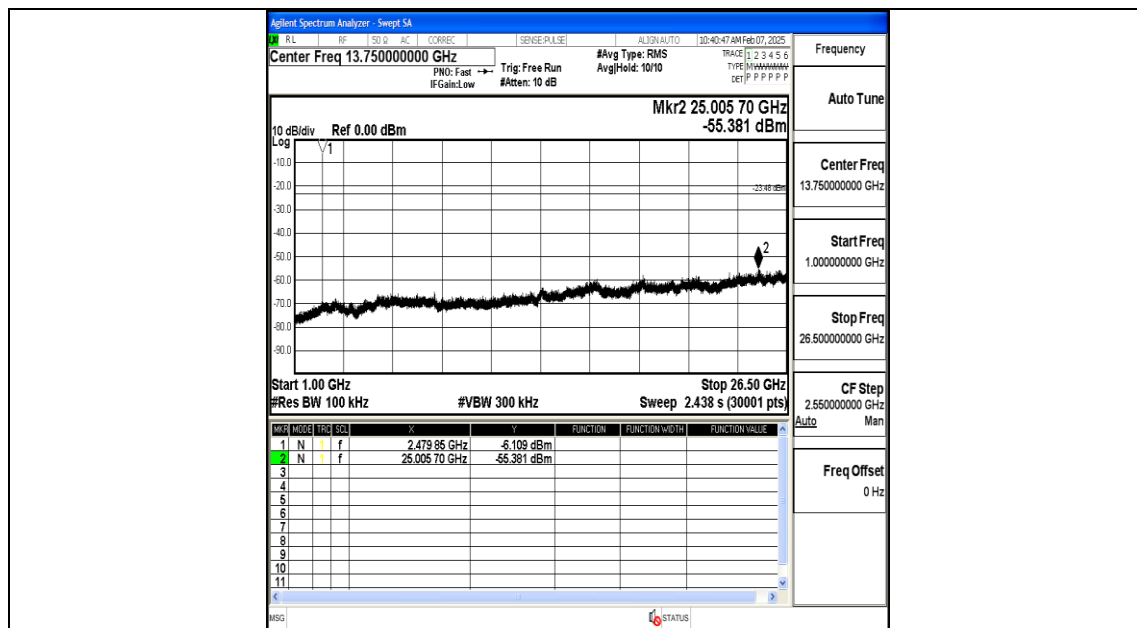
2DH5-Ant1-2441-1000~26500-PASS



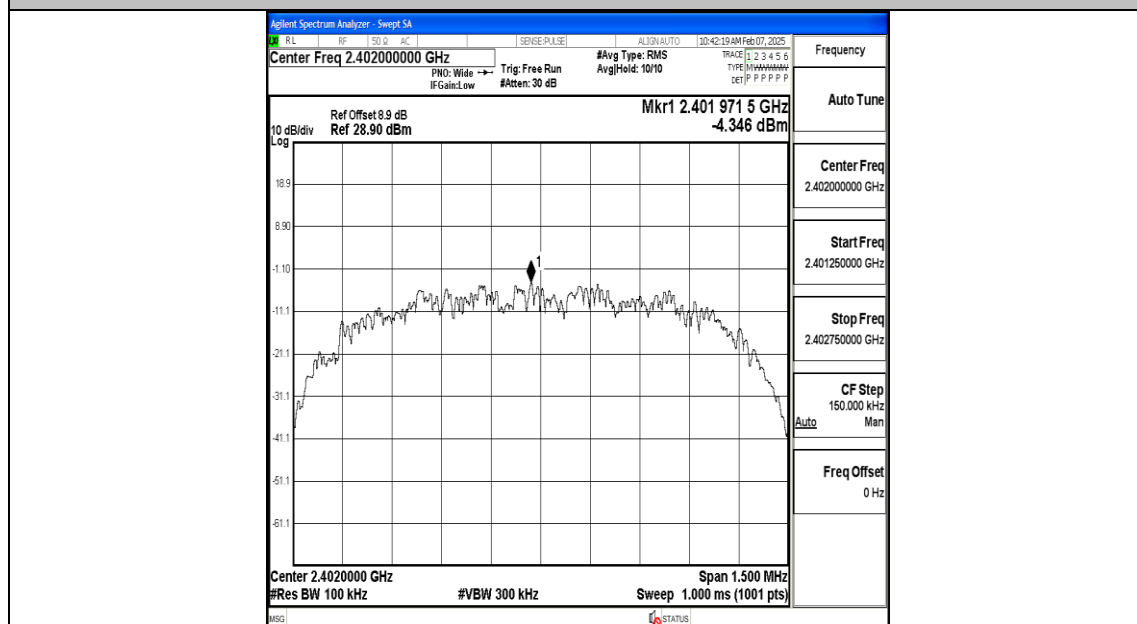
2DH5-Ant1-2480-0~Reference-PASS



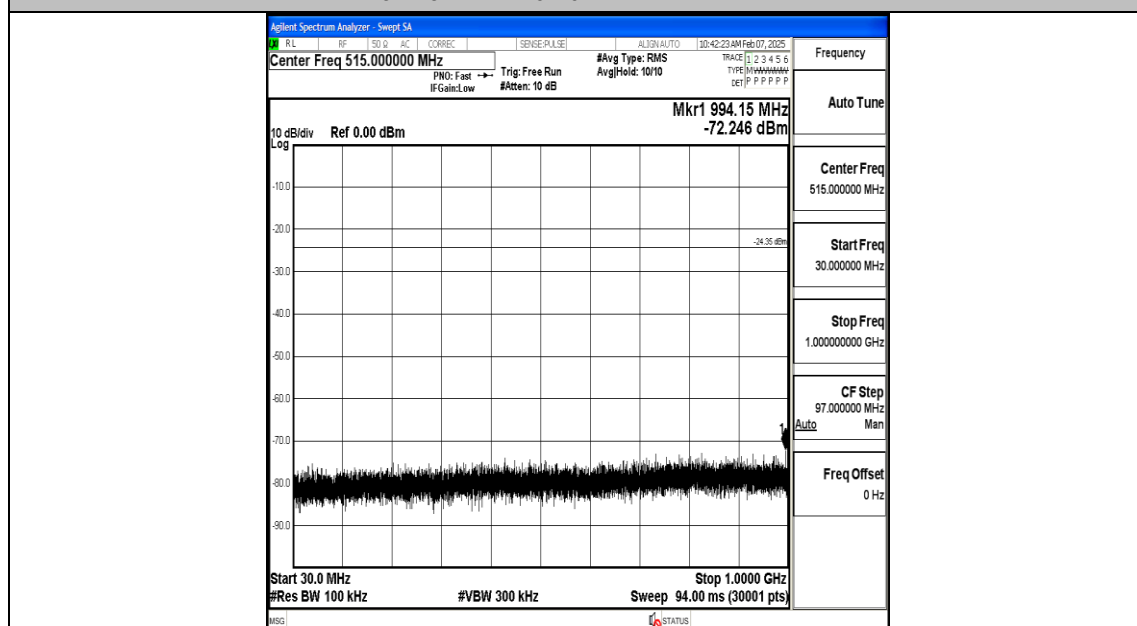
2DH5-Ant1-2480-30~1000-PASS



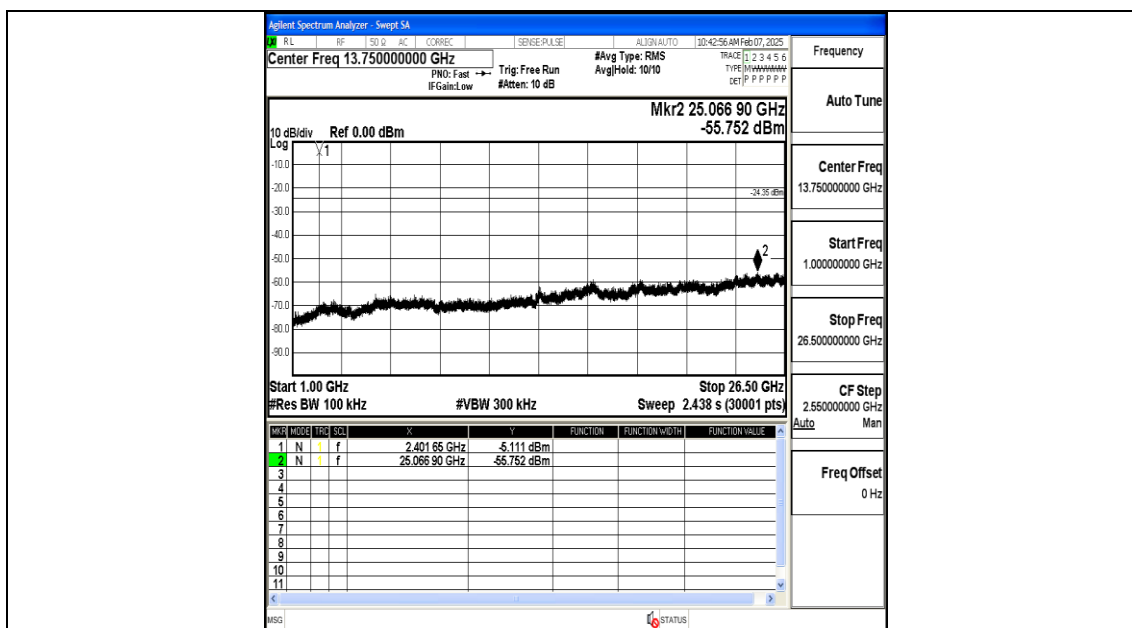
2DH5-Ant1-2480-1000~26500-PASS



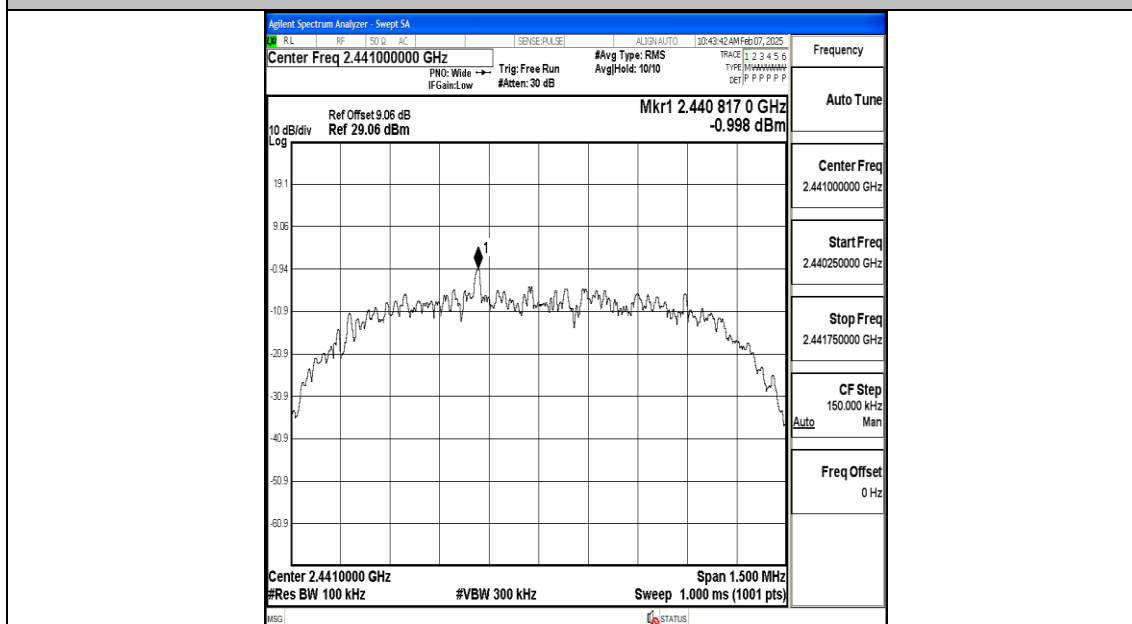
3DH5-Ant1-2402-0~Reference-PASS



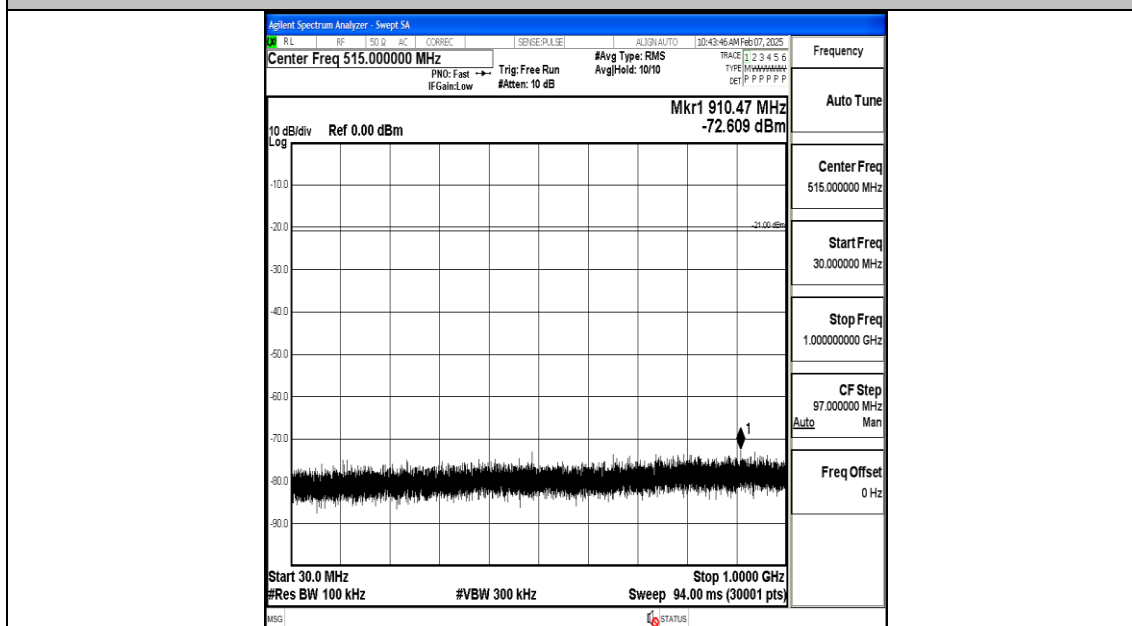
3DH5-Ant1-2402-30~1000-PASS



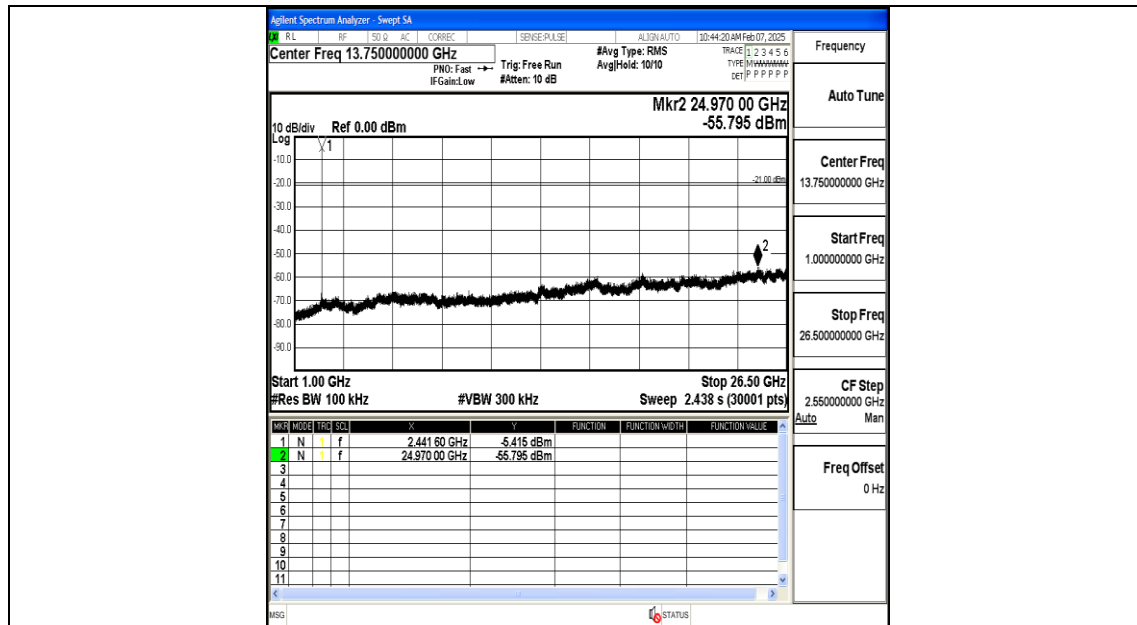
3DH5-Ant1-2402-1000~26500-PASS



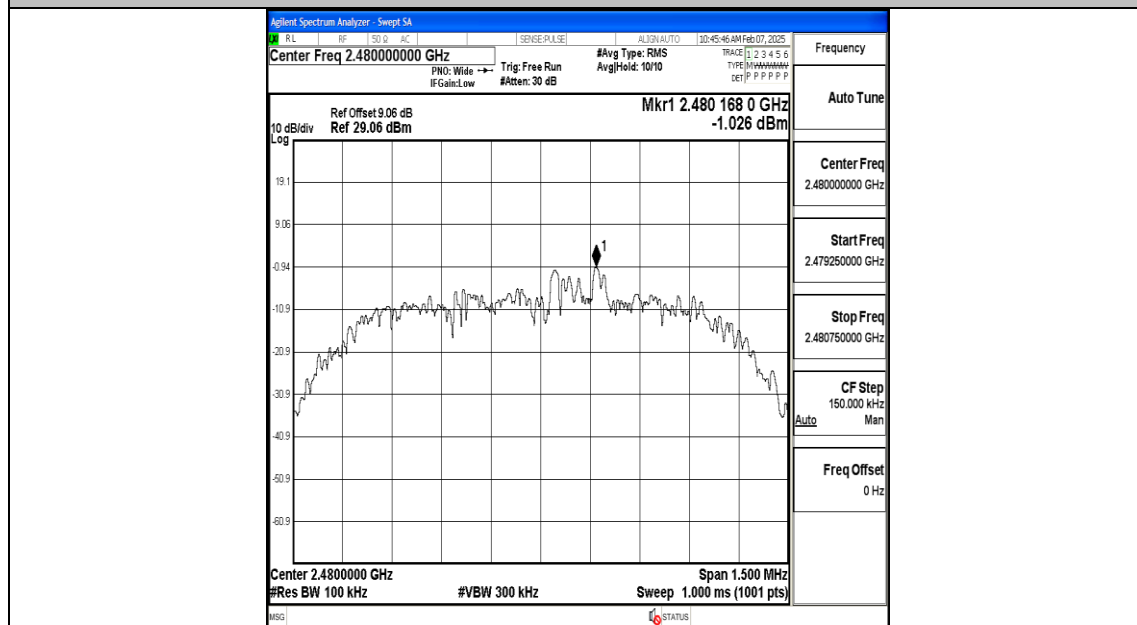
3DH5-Ant1-2441-0~Reference-PASS



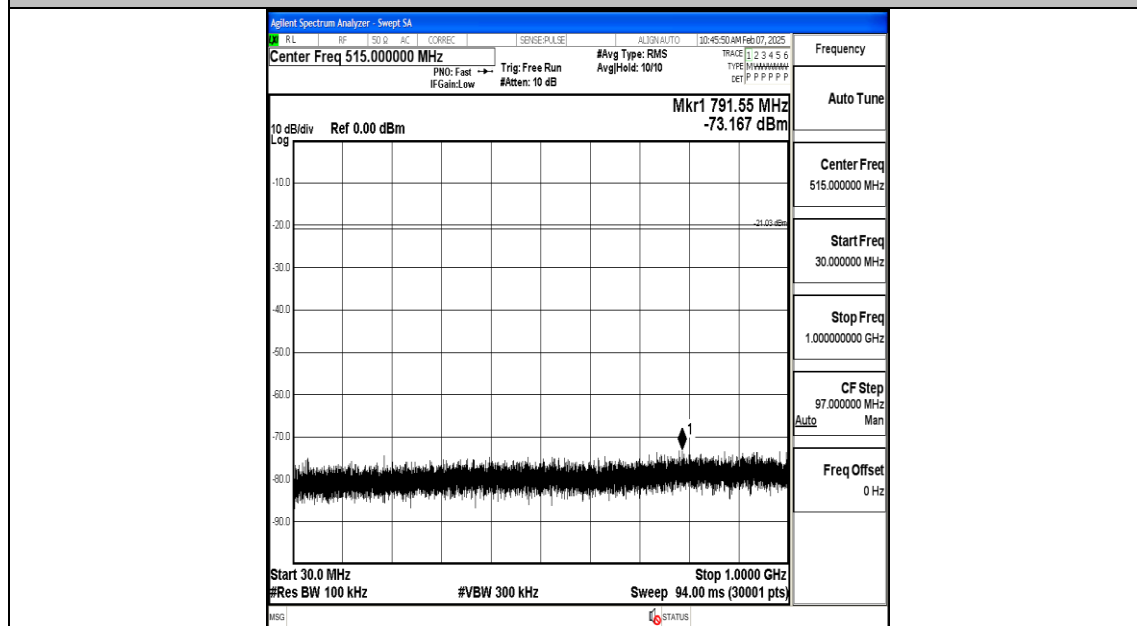
3DH5-Ant1-2441-30~1000-PASS



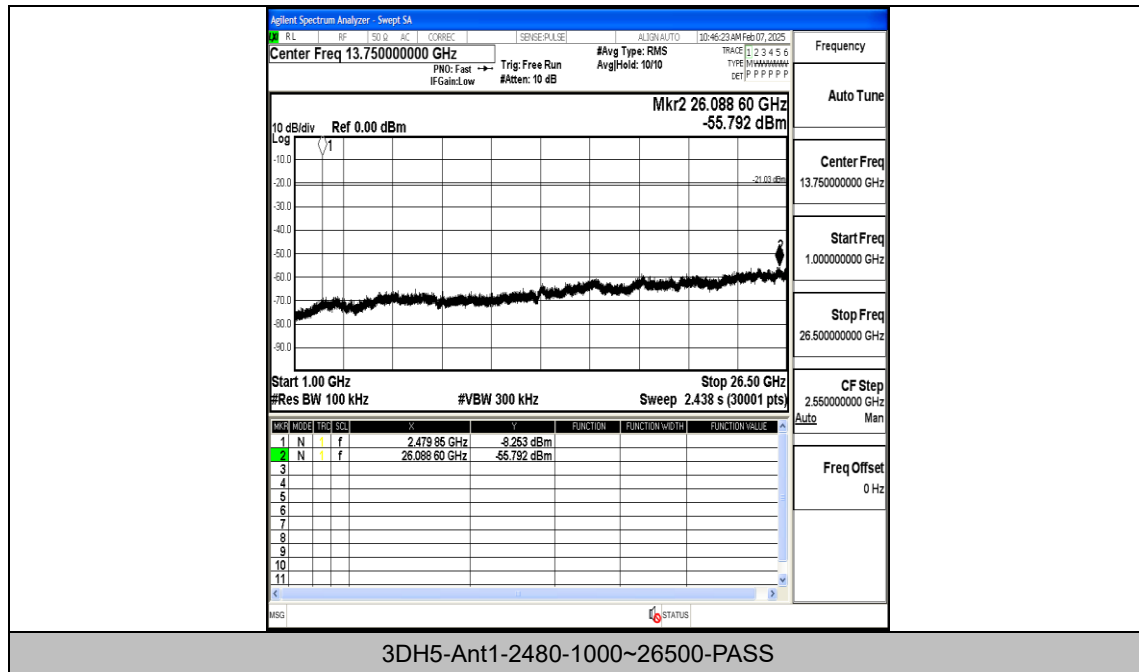
3DH5-Ant1-2441-1000~26500-PASS



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



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

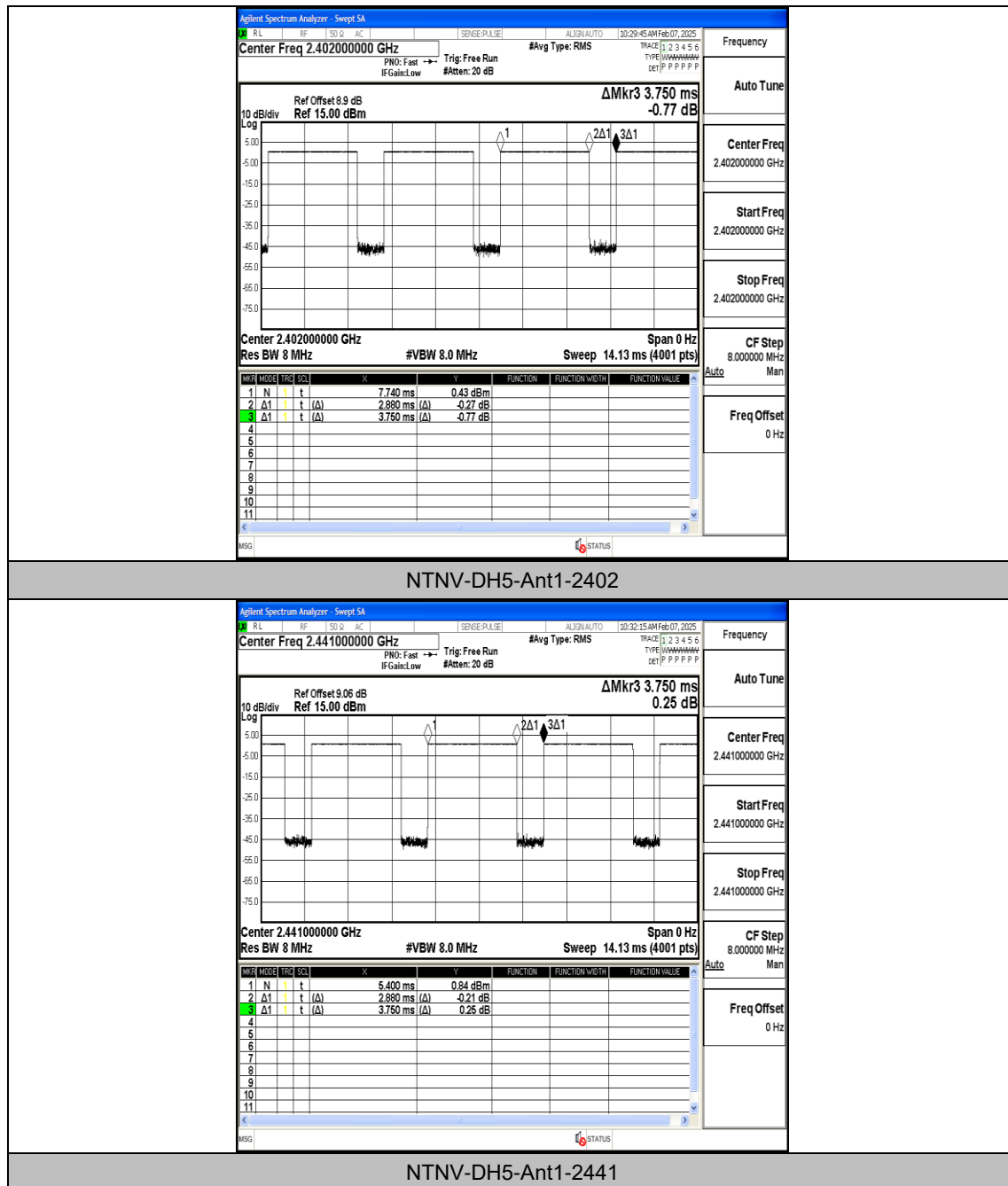


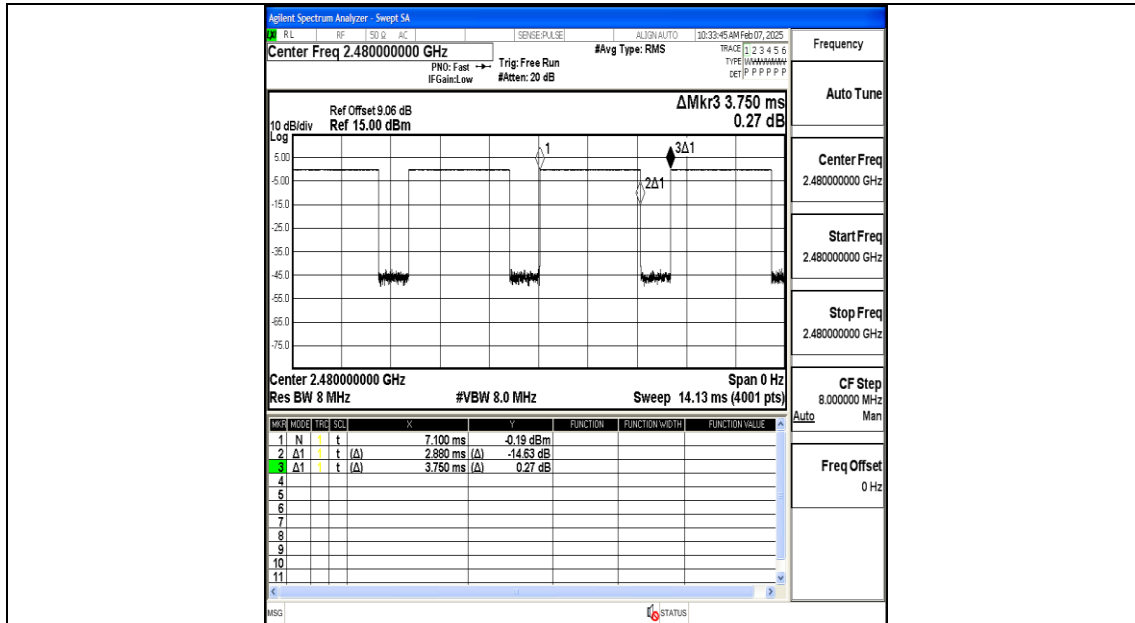
Appendix I: Duty Cycle

Test Result

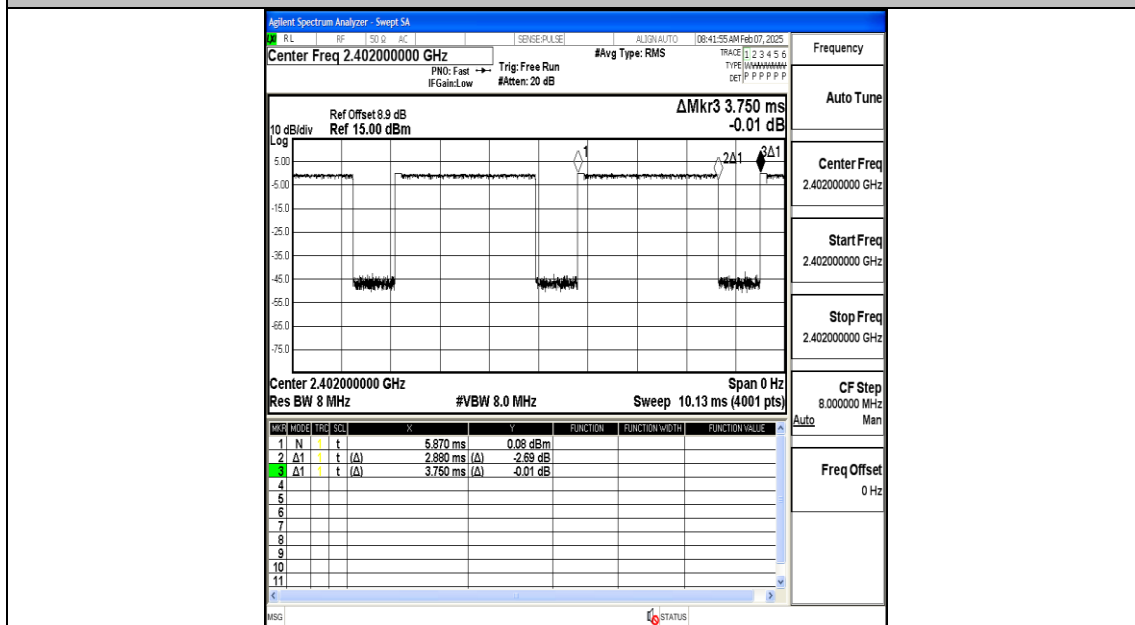
Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.88	3.75	76.80	1.15
DH5	Ant1	2441	2.88	3.75	76.80	1.15
DH5	Ant1	2480	2.88	3.75	76.80	1.15
2DH5	Ant1	2402	2.88	3.75	76.80	1.15
2DH5	Ant1	2441	2.88	3.75	76.80	1.15
2DH5	Ant1	2480	2.88	3.75	76.80	1.15
3DH5	Ant1	2402	2.89	3.75	77.07	1.13
3DH5	Ant1	2441	2.89	3.75	77.07	1.13
3DH5	Ant1	2480	2.89	3.75	77.07	1.13

Test Graphs

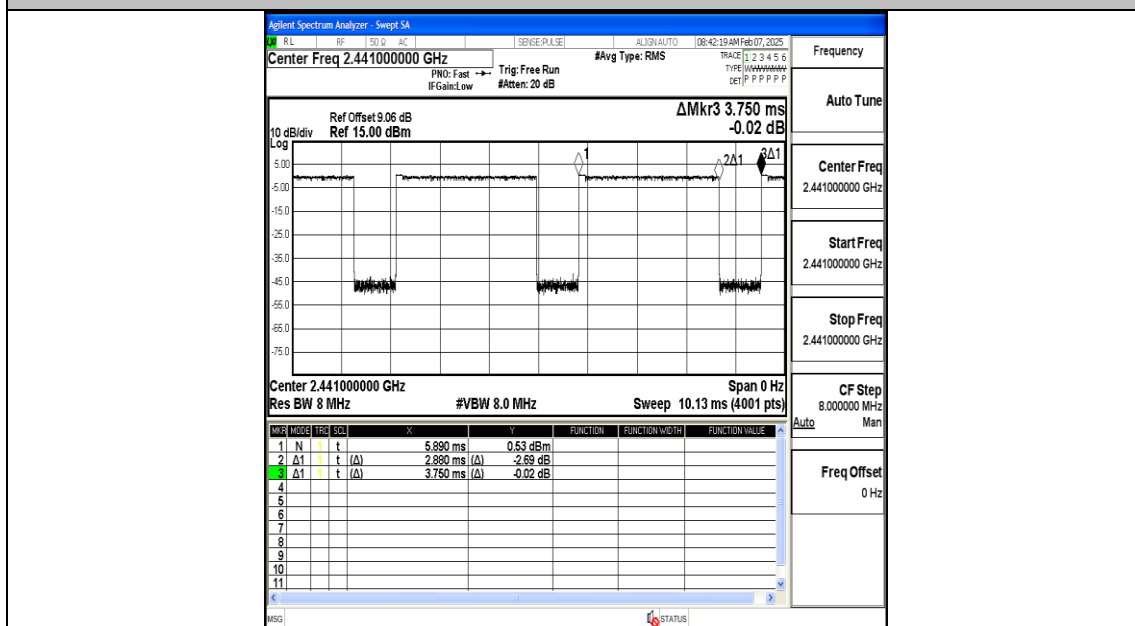




NTNV-DH5-Ant1-2480



NTNV-2DH5-Ant1-2402



NTNV-2DH5-Ant1-2441

