

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

Product Name: Wireless Speaker

Trade Mark: /

Test Model: ZEALOT-S167

FCC ID: 2AFKR-S167

Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
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	0.936	2401.568	2402.504	---	---
DH5	Ant1	2441	0.951	2440.571	2441.522	---	---
DH5	Ant1	2480	0.954	2479.571	2480.525	---	---
2DH5	Ant1	2402	1.287	2401.397	2402.684	---	---
2DH5	Ant1	2441	1.320	2440.370	2441.690	---	---
2DH5	Ant1	2480	1.320	2479.370	2480.690	---	---
3DH5	Ant1	2402	1.305	2401.385	2402.690	---	---
3DH5	Ant1	2441	1.305	2440.388	2441.693	---	---
3DH5	Ant1	2480	1.251	2479.406	2480.657	---	---

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs



DH5-Ant1-2441



DH5-Ant1-2480



2DH5-Ant1-2402



2DH5-Ant1-2441



2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



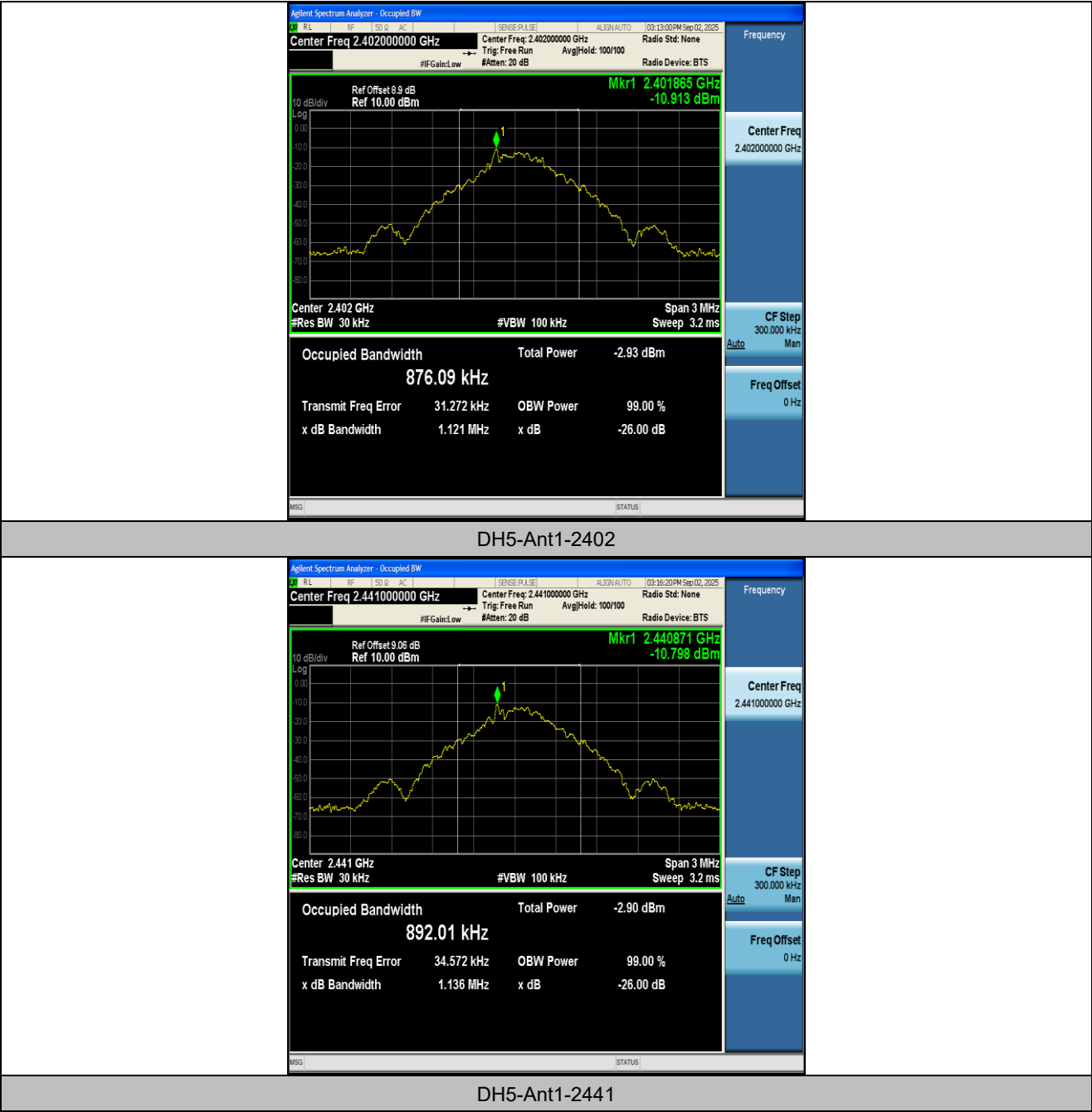
Appendix B: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.87609	2401.5932	2402.4693	---	---
DH5	Ant1	2441	0.89201	2440.5886	2441.4806	---	---
DH5	Ant1	2480	0.89701	2479.5870	2480.4840	---	---
2DH5	Ant1	2402	1.1735	2401.4416	2402.6151	---	---
2DH5	Ant1	2441	1.1604	2440.4498	2441.6102	---	---
2DH5	Ant1	2480	1.1766	2479.4417	2480.6183	---	---
3DH5	Ant1	2402	1.1630	2401.4524	2402.6154	---	---
3DH5	Ant1	2441	1.1664	2440.4496	2441.6160	---	---
3DH5	Ant1	2480	1.1767	2479.4465	2480.6232	---	---

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs







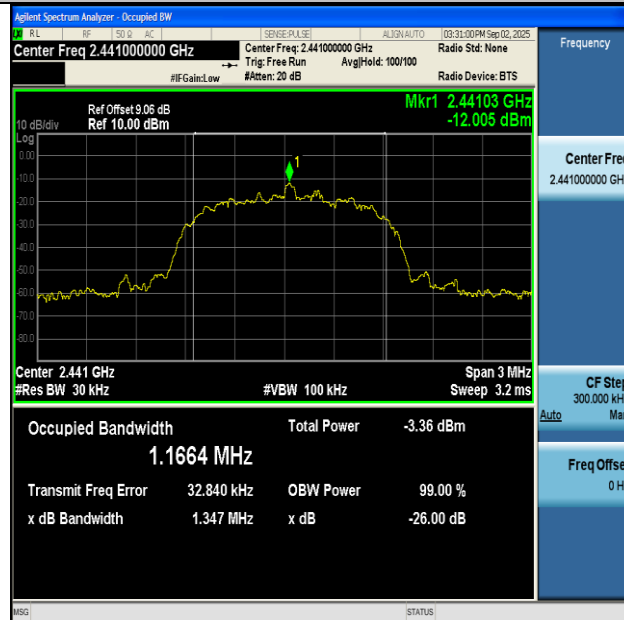
2DH5-Ant1-2441



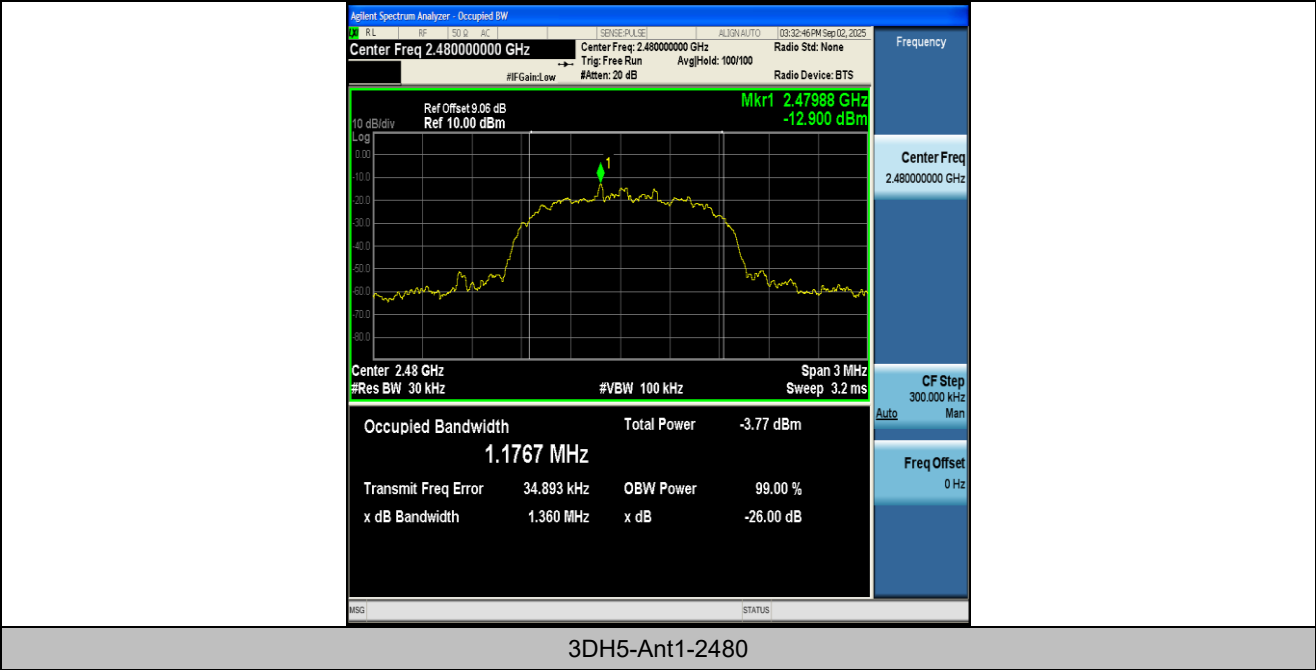
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



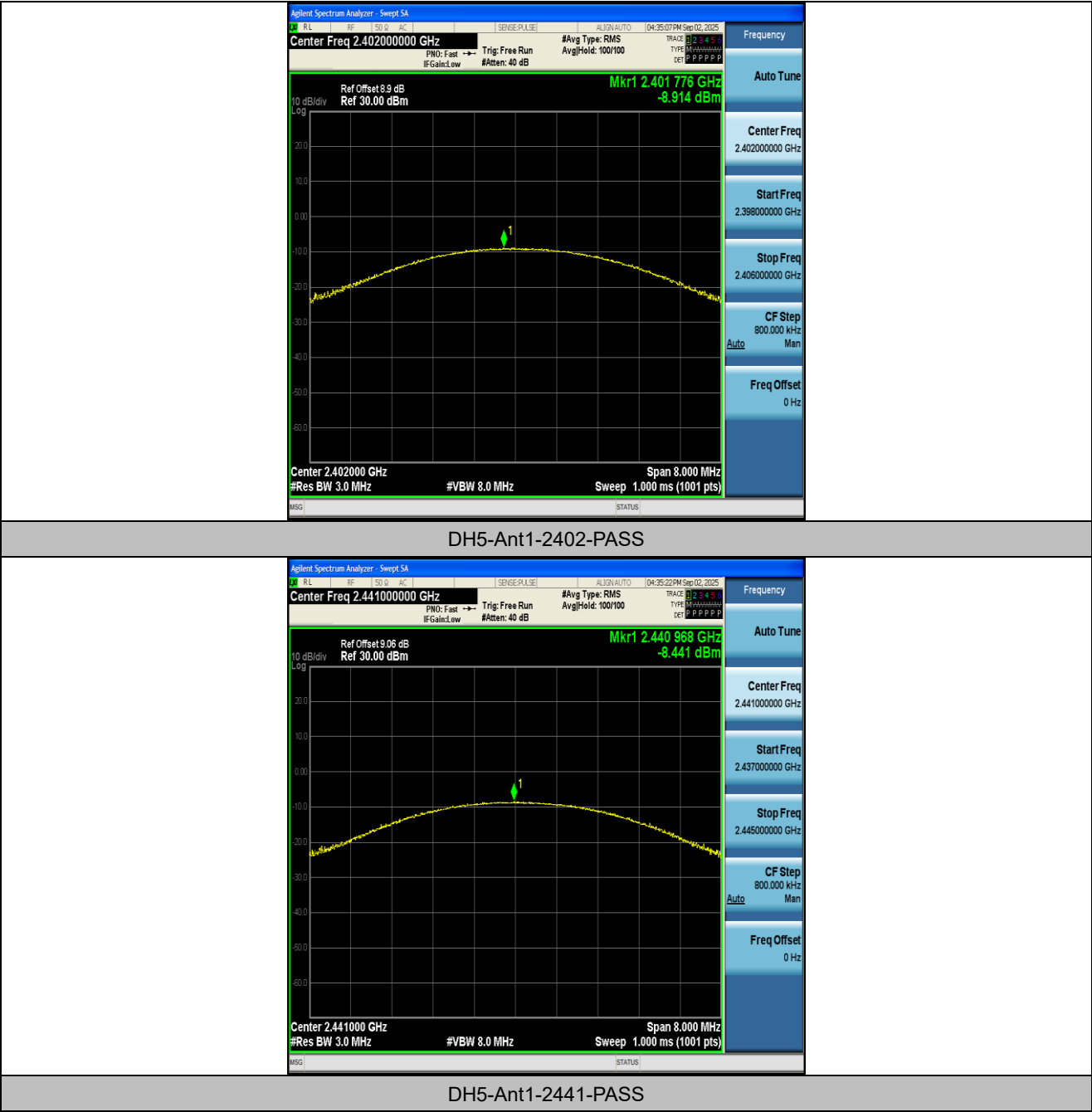
Appendix C: Maximum peak conducted output power

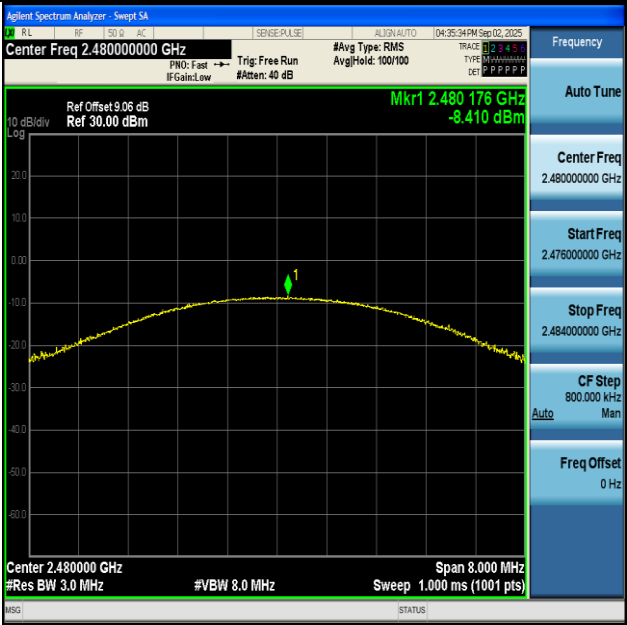
Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	-8.91	≤30	PASS
DH5	Ant1	2441	-8.44	≤30	PASS
DH5	Ant1	2480	-8.41	≤30	PASS
2DH5	Ant1	2402	-8.45	≤20.97	PASS
2DH5	Ant1	2441	-7.89	≤20.97	PASS
2DH5	Ant1	2480	-8.16	≤20.97	PASS
3DH5	Ant1	2402	-7.92	≤20.97	PASS
3DH5	Ant1	2441	-7.17	≤20.97	PASS
3DH5	Ant1	2480	-7.65	≤20.97	PASS

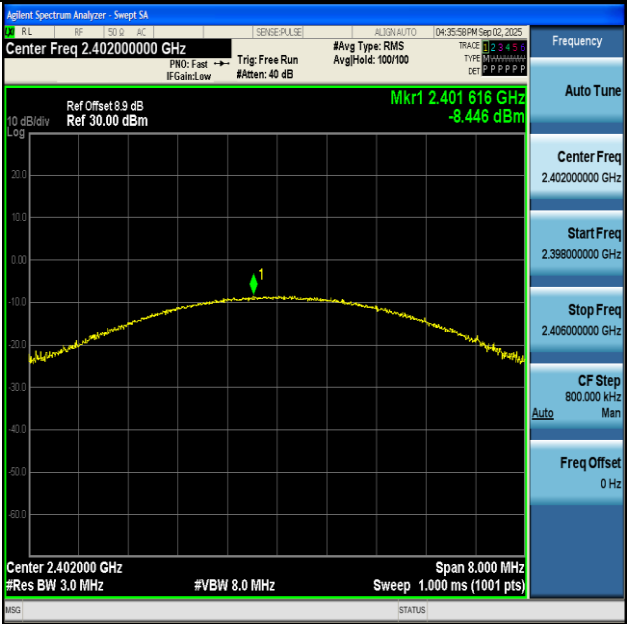
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs

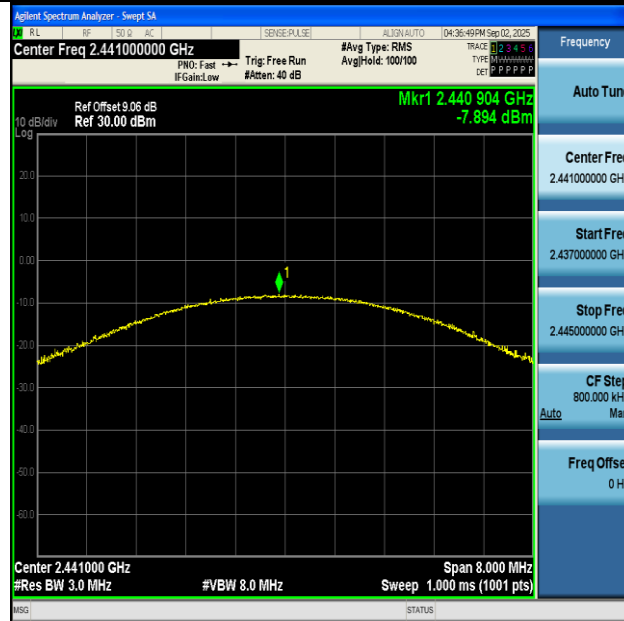




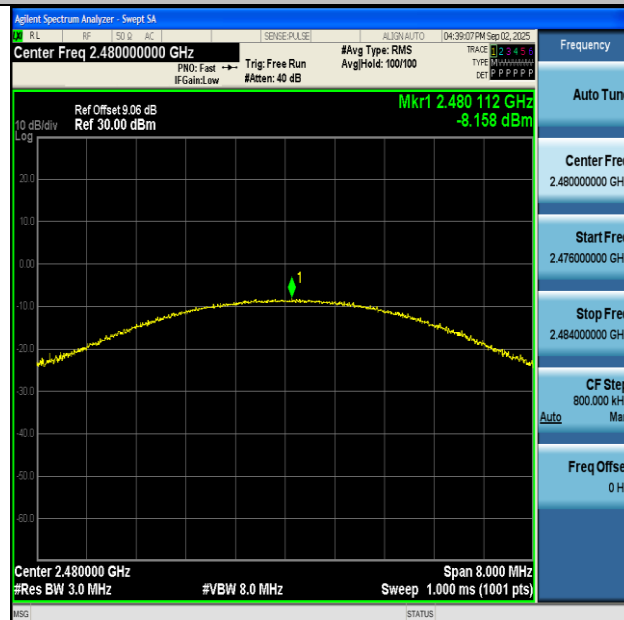
DH5-Ant1-2480-PASS



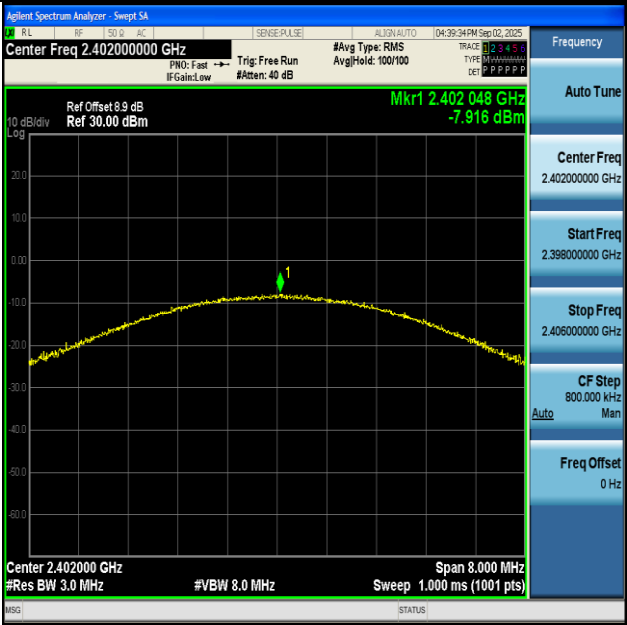
2DH5-Ant1-2402-PASS



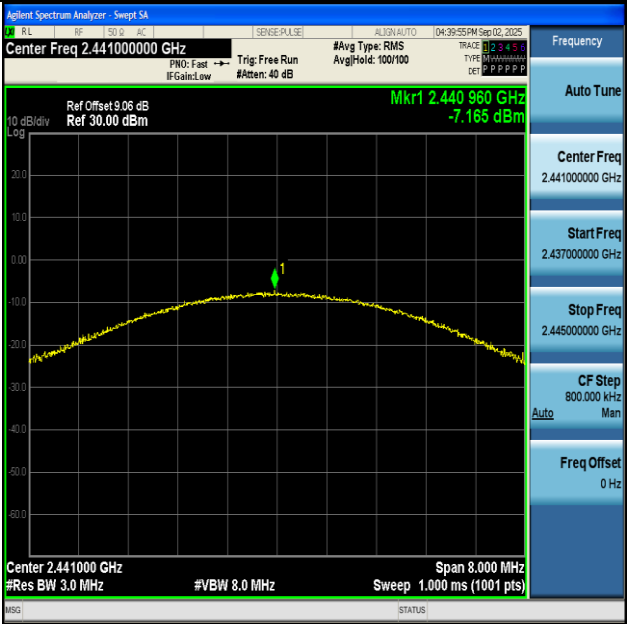
2DH5-Ant1-2441-PASS



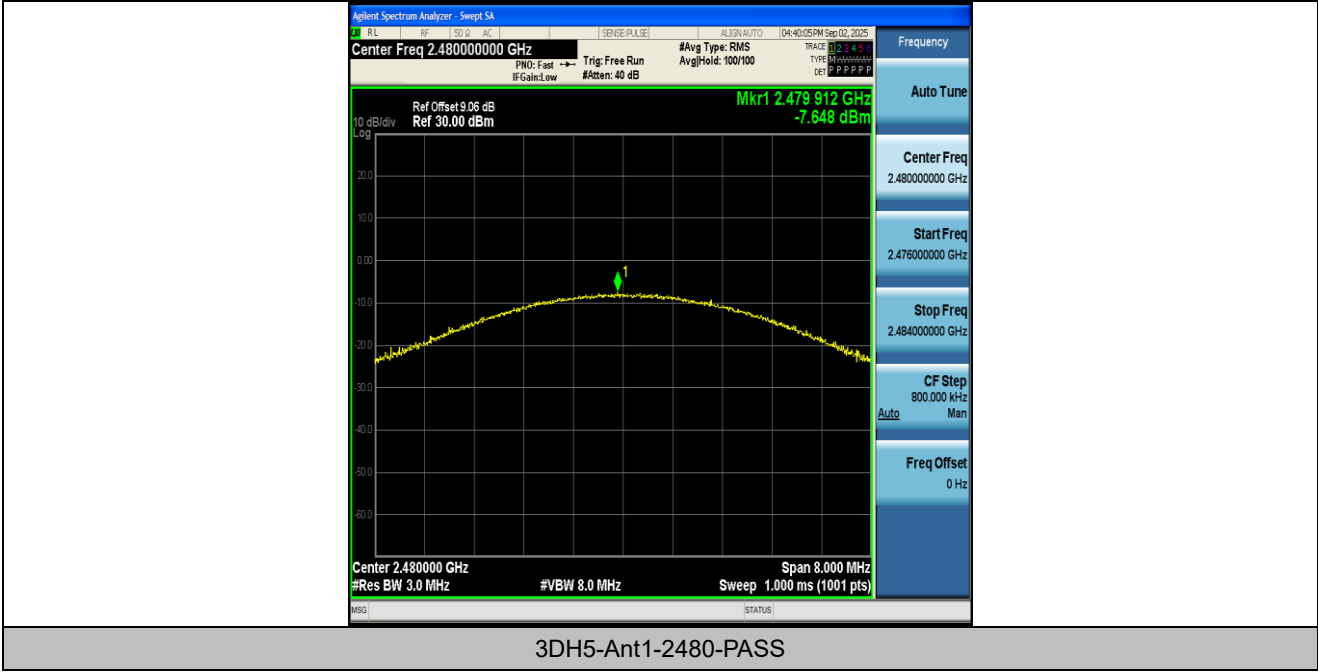
2DH5-Ant1-2480-PASS



3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS



Appendix D: Carrier frequency separation

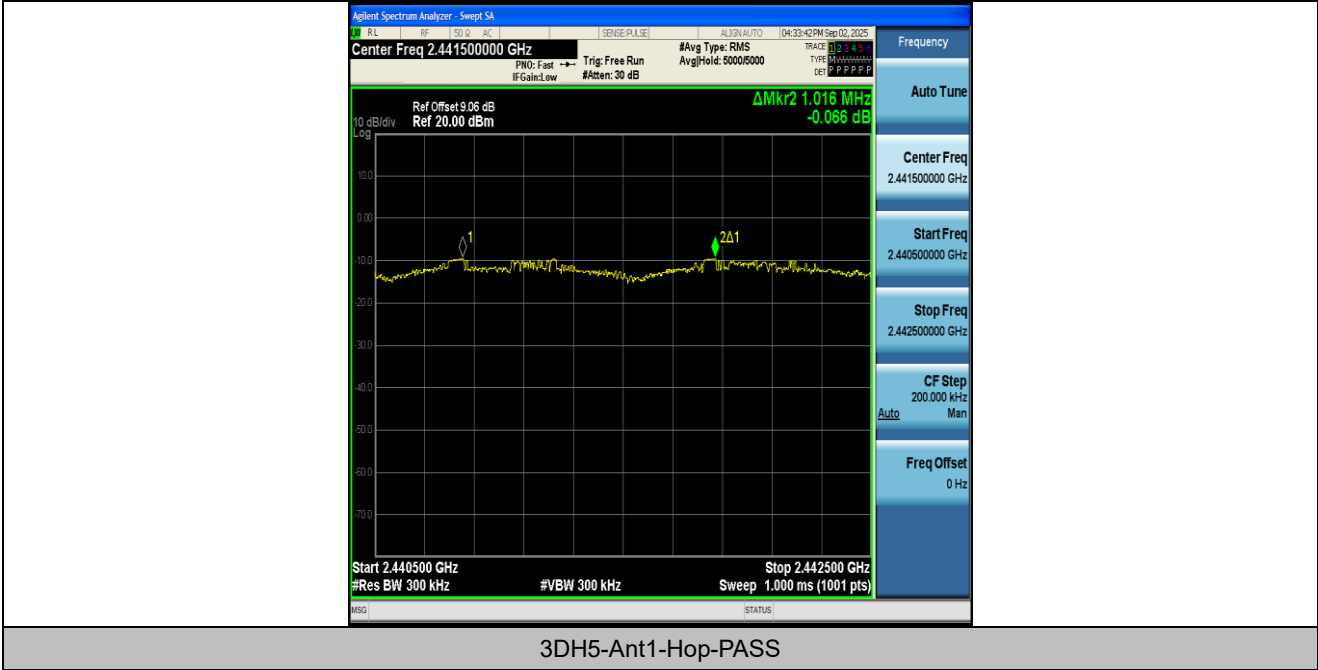
Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	0.974	≥0.954	PASS
2DH5	Ant1	Hop	1.002	≥0.880	PASS
3DH5	Ant1	Hop	1.016	≥0.870	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





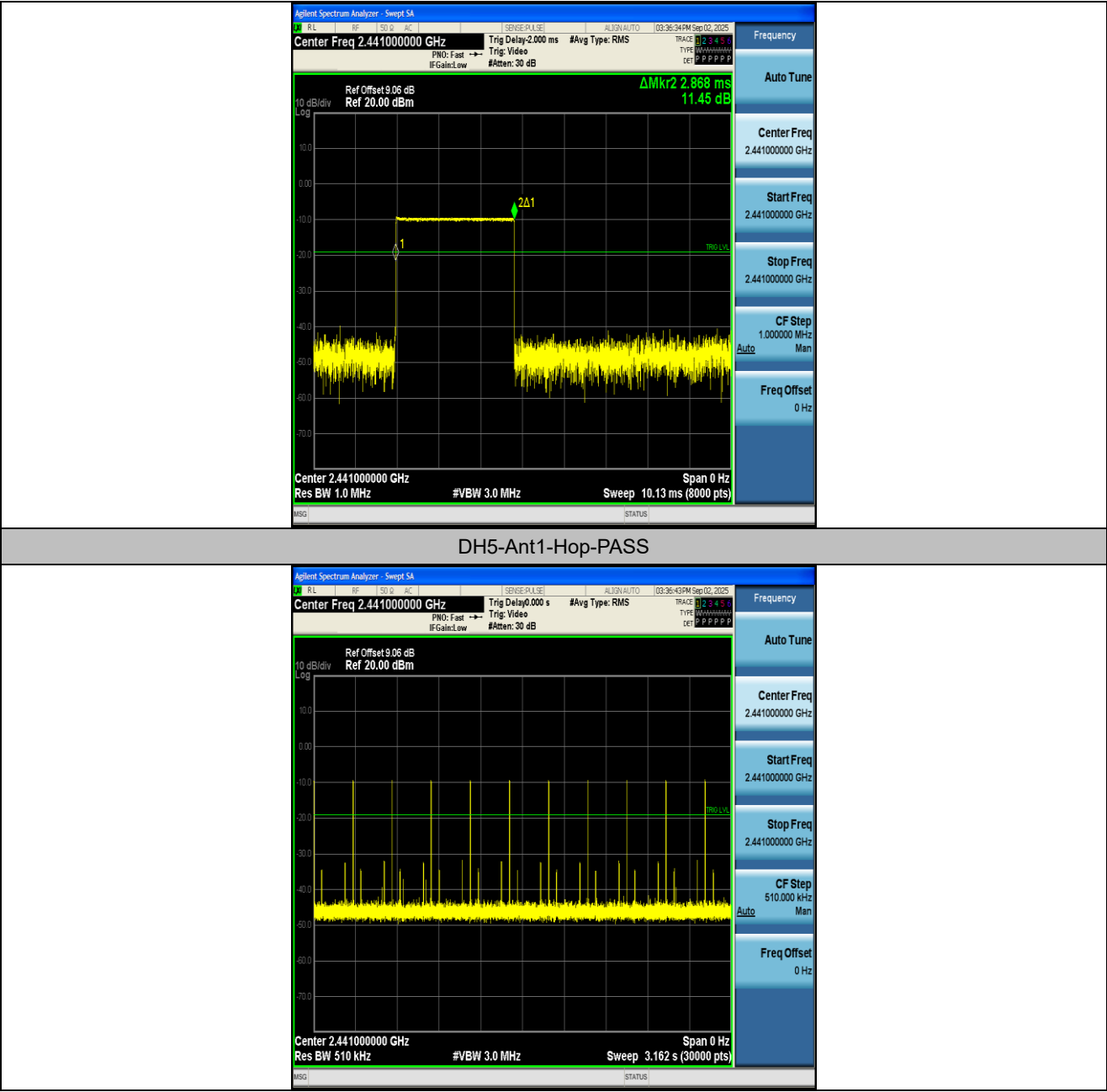
Appendix E: Time of occupancy

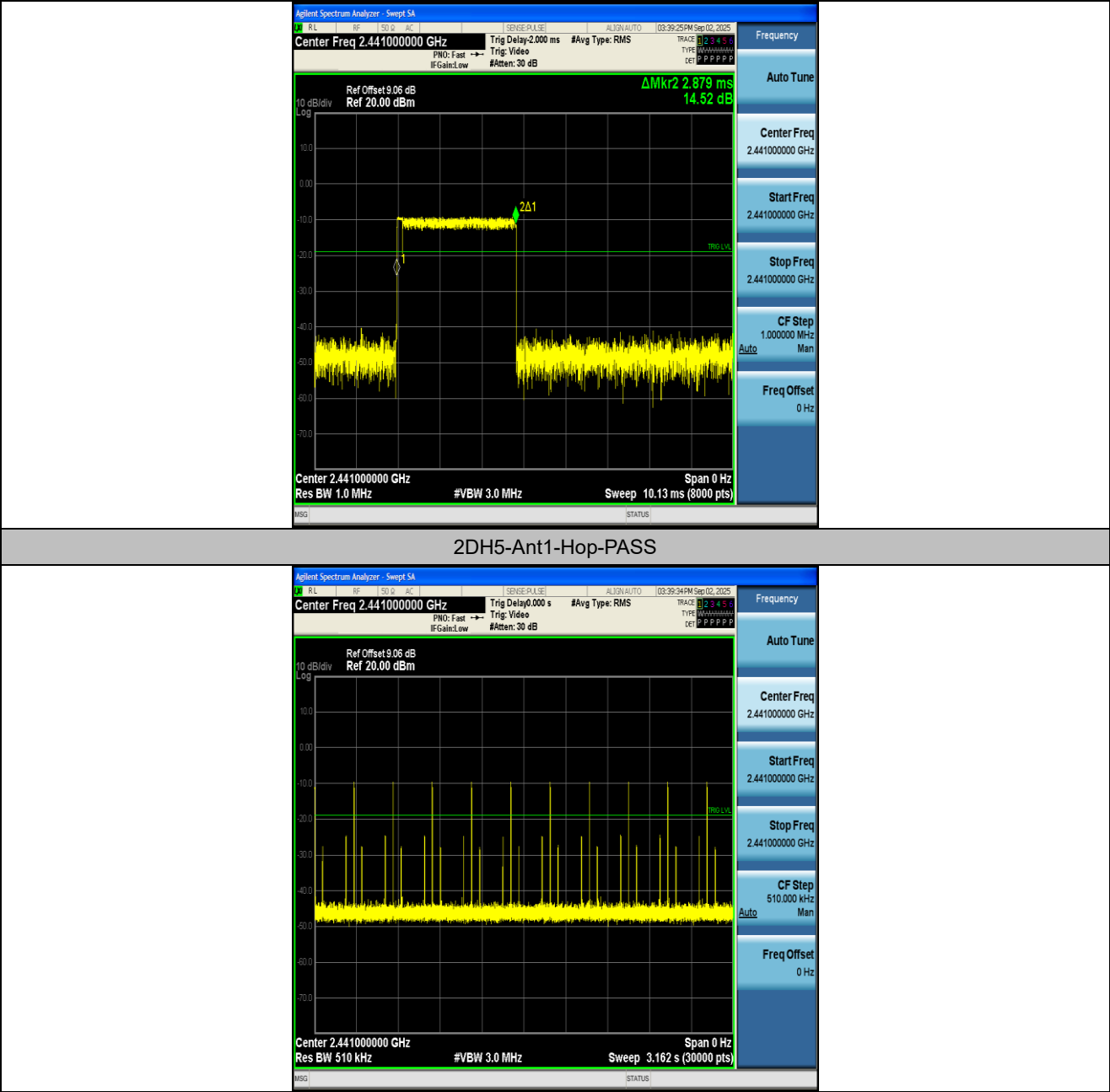
Test Result

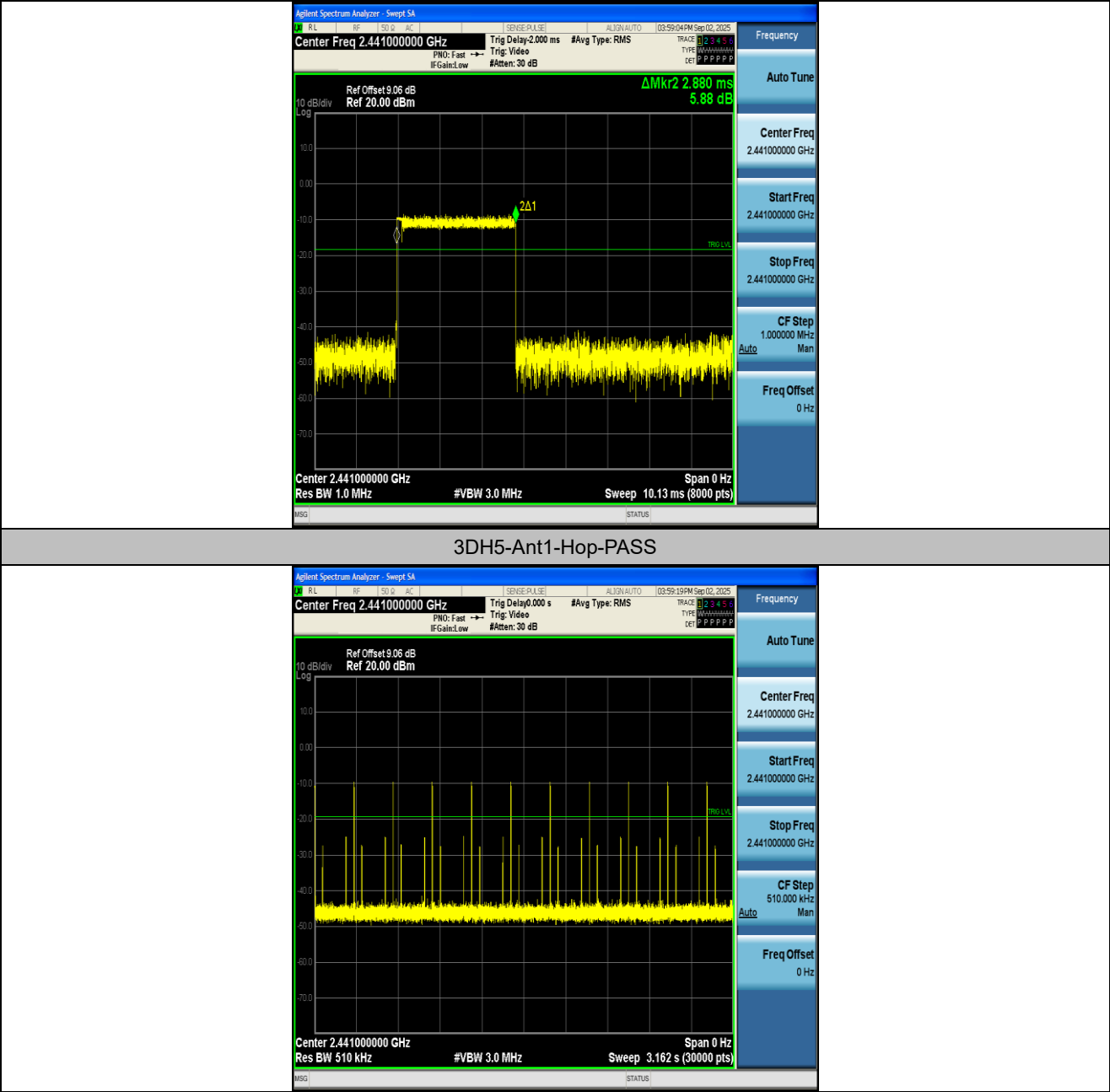
Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.868	110	0.315	≤0.4	PASS
2DH5	Ant1	Hop	2.879	110	0.317	≤0.4	PASS
3DH5	Ant1	Hop	2.880	110	0.317	≤0.4	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs







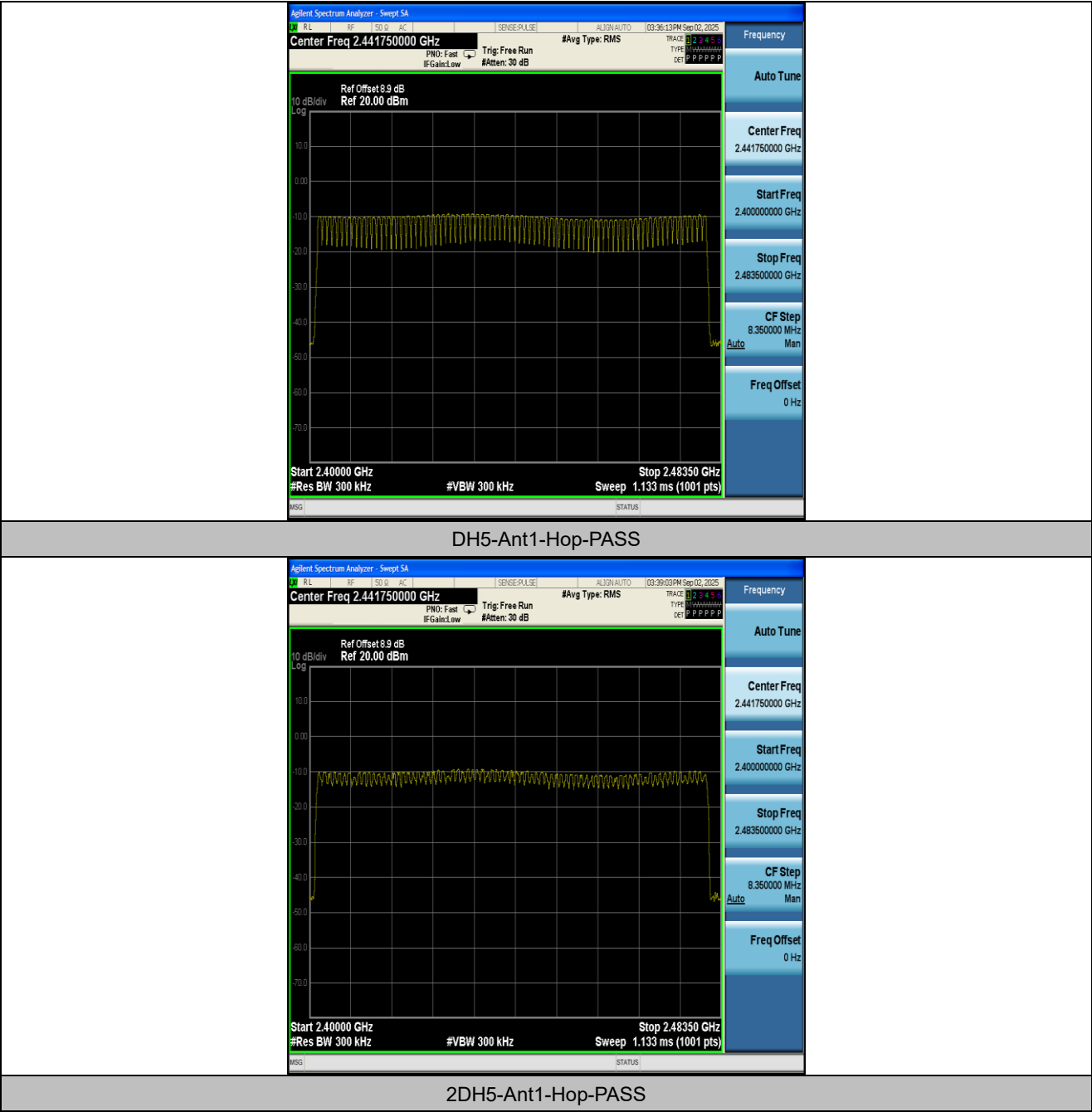
Appendix F: Number of hopping channels

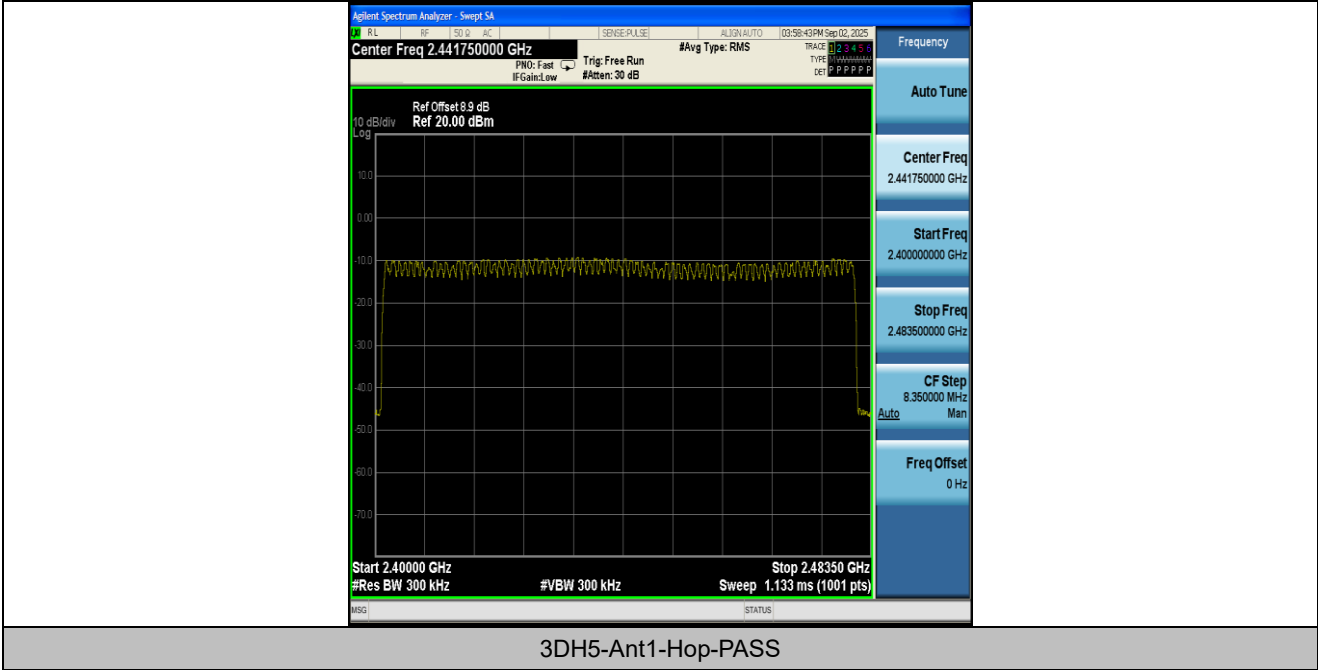
Test Result

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

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





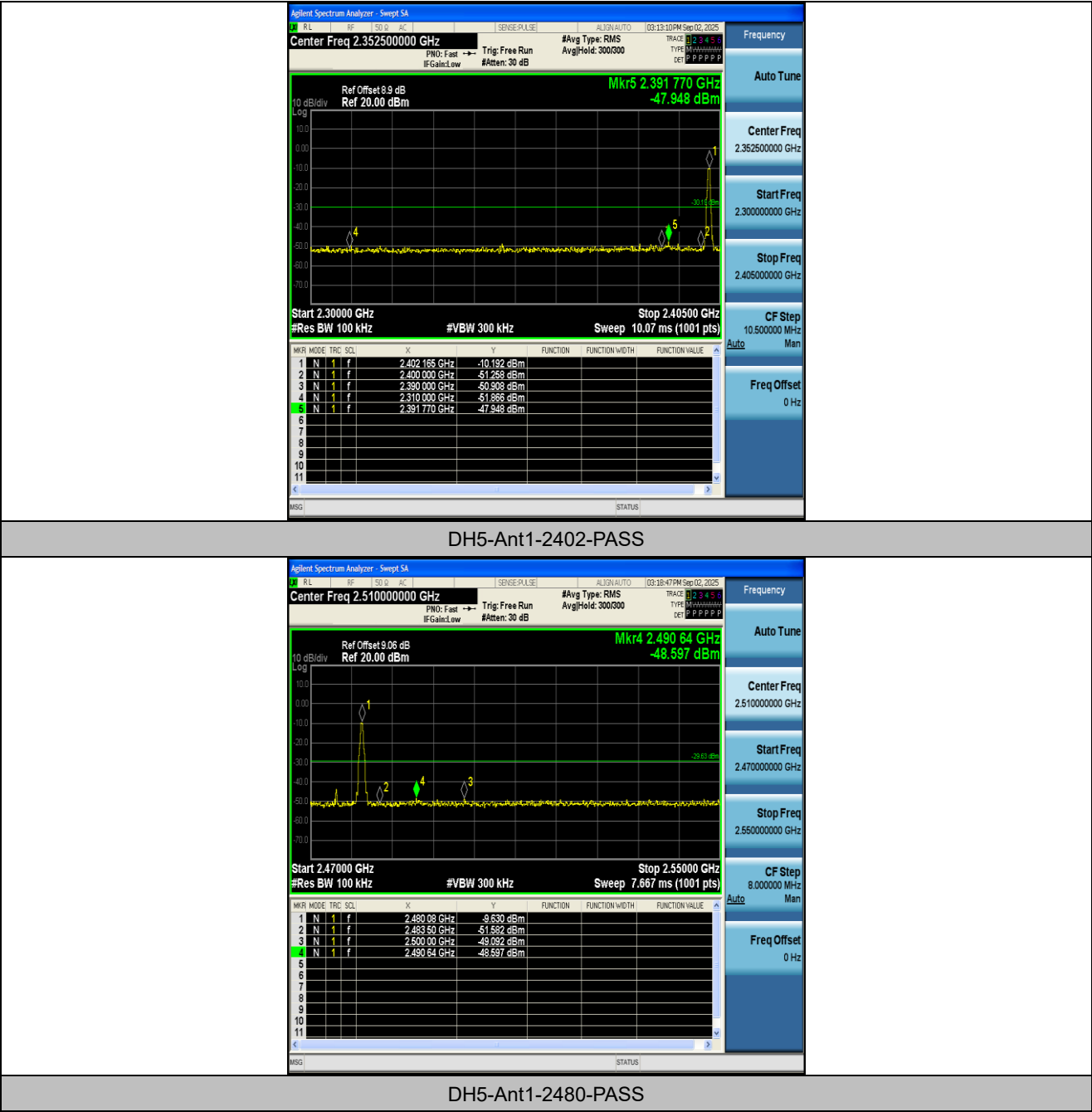
Appendix G: Band edge measurements

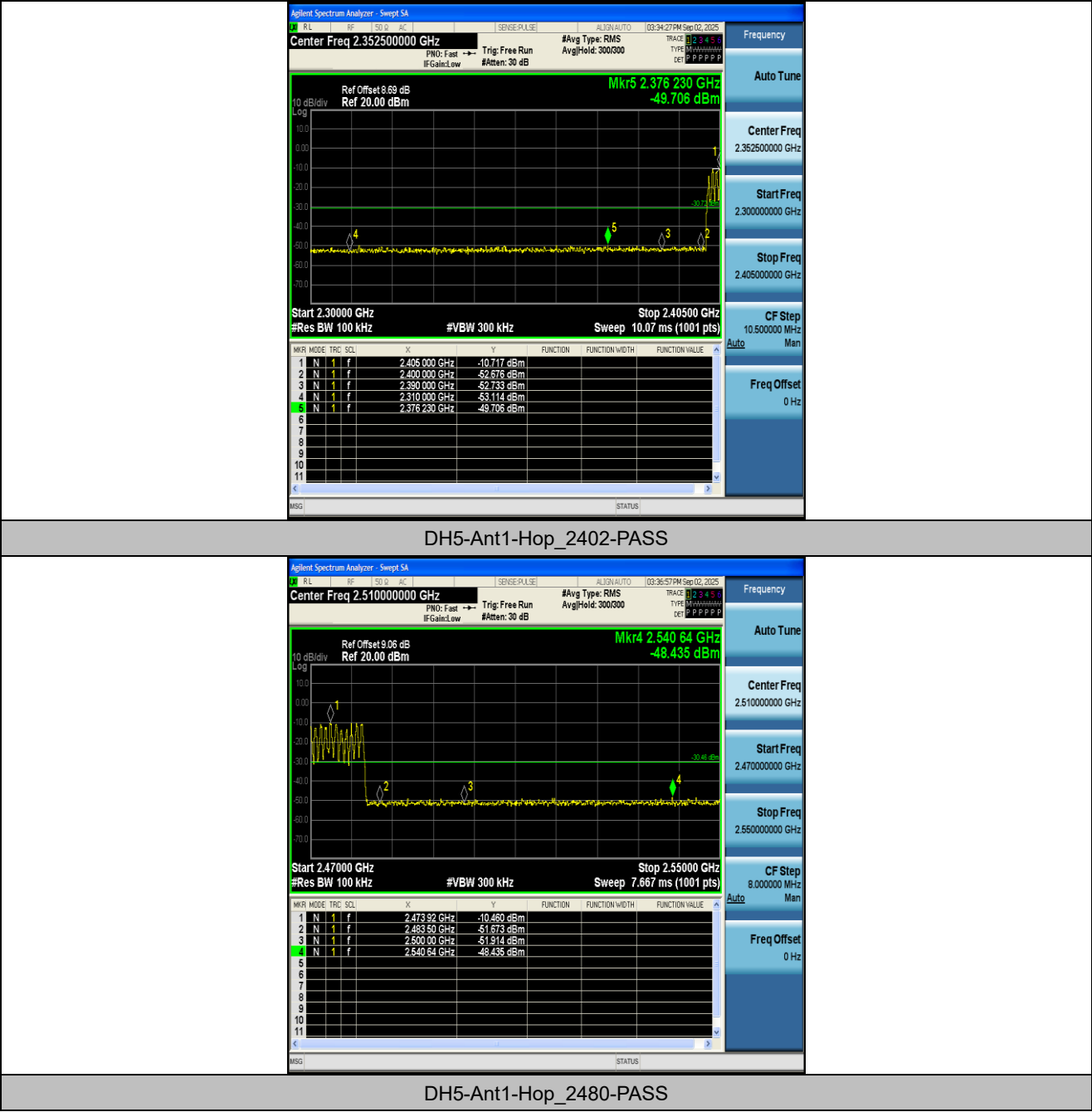
Test Result

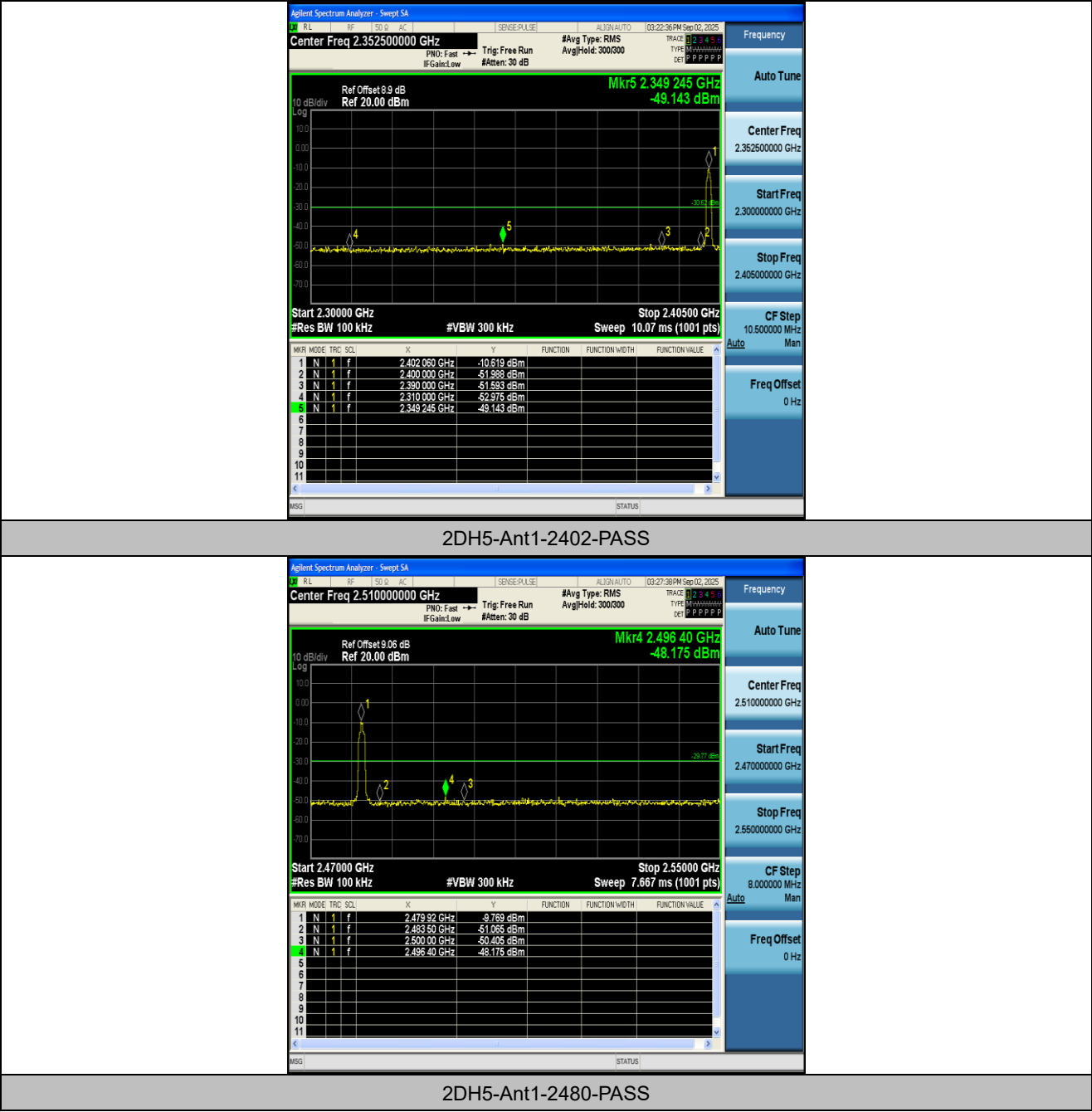
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-10.19	-47.95	≤-30.19	PASS
DH5	Ant1	High	2480	-9.63	-48.6	≤-29.63	PASS
DH5	Ant1	Low	Hop_2402	-10.72	-49.71	≤-30.72	PASS
DH5	Ant1	High	Hop_2480	-10.46	-48.44	≤-30.46	PASS
2DH5	Ant1	Low	2402	-10.62	-49.14	≤-30.62	PASS
2DH5	Ant1	High	2480	-9.77	-48.18	≤-29.77	PASS
2DH5	Ant1	Low	Hop_2402	-12.48	-49.86	≤-32.48	PASS
2DH5	Ant1	High	Hop_2480	-12.15	-48.79	≤-32.15	PASS
3DH5	Ant1	Low	2402	-10.30	-48.47	≤-30.3	PASS
3DH5	Ant1	High	2480	-11.40	-47.89	≤-31.4	PASS
3DH5	Ant1	Low	Hop_2402	-14.31	-49.48	≤-34.31	PASS
3DH5	Ant1	High	Hop_2480	-9.76	-49	≤-29.76	PASS

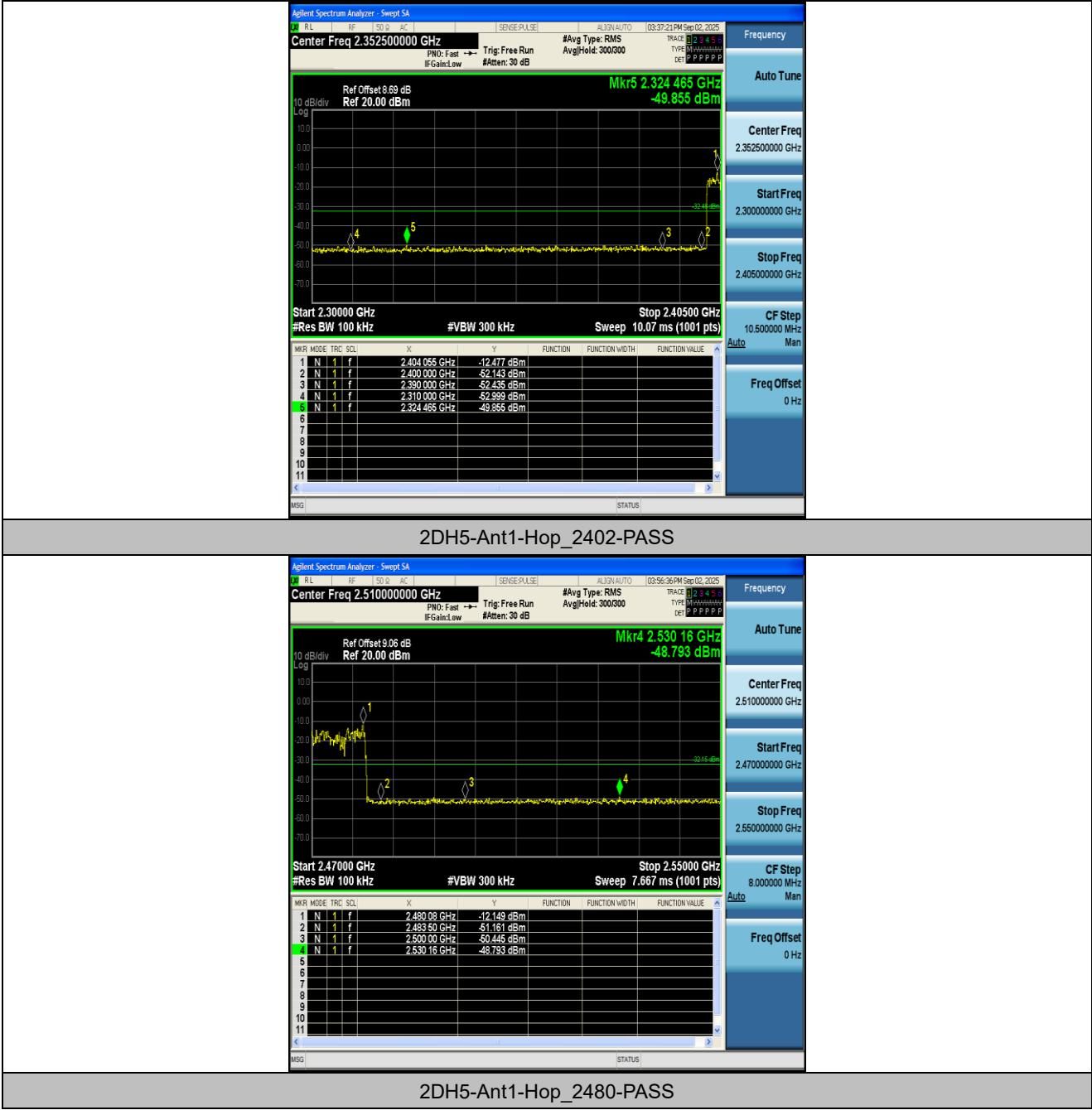
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

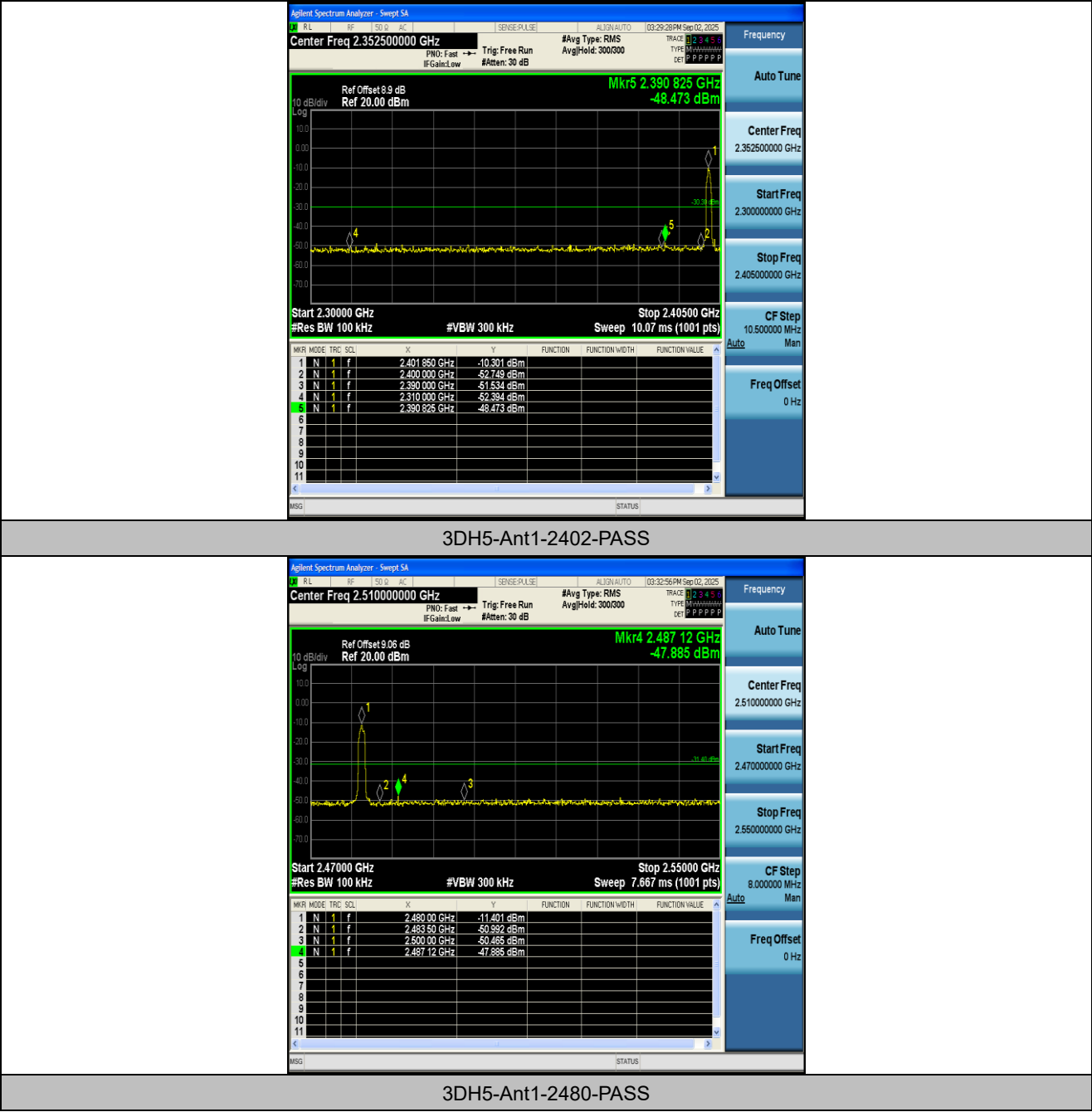
Test Graphs

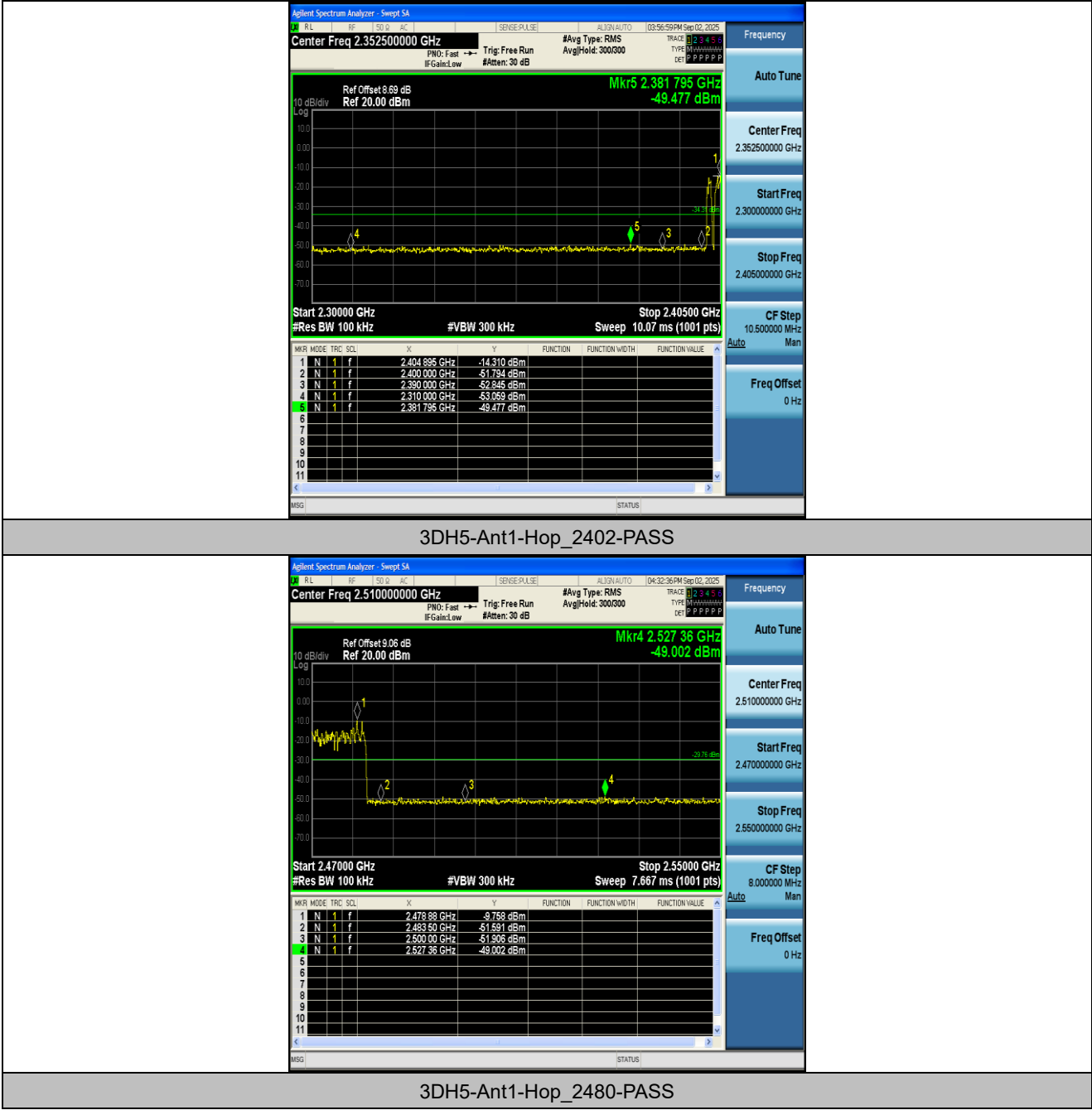












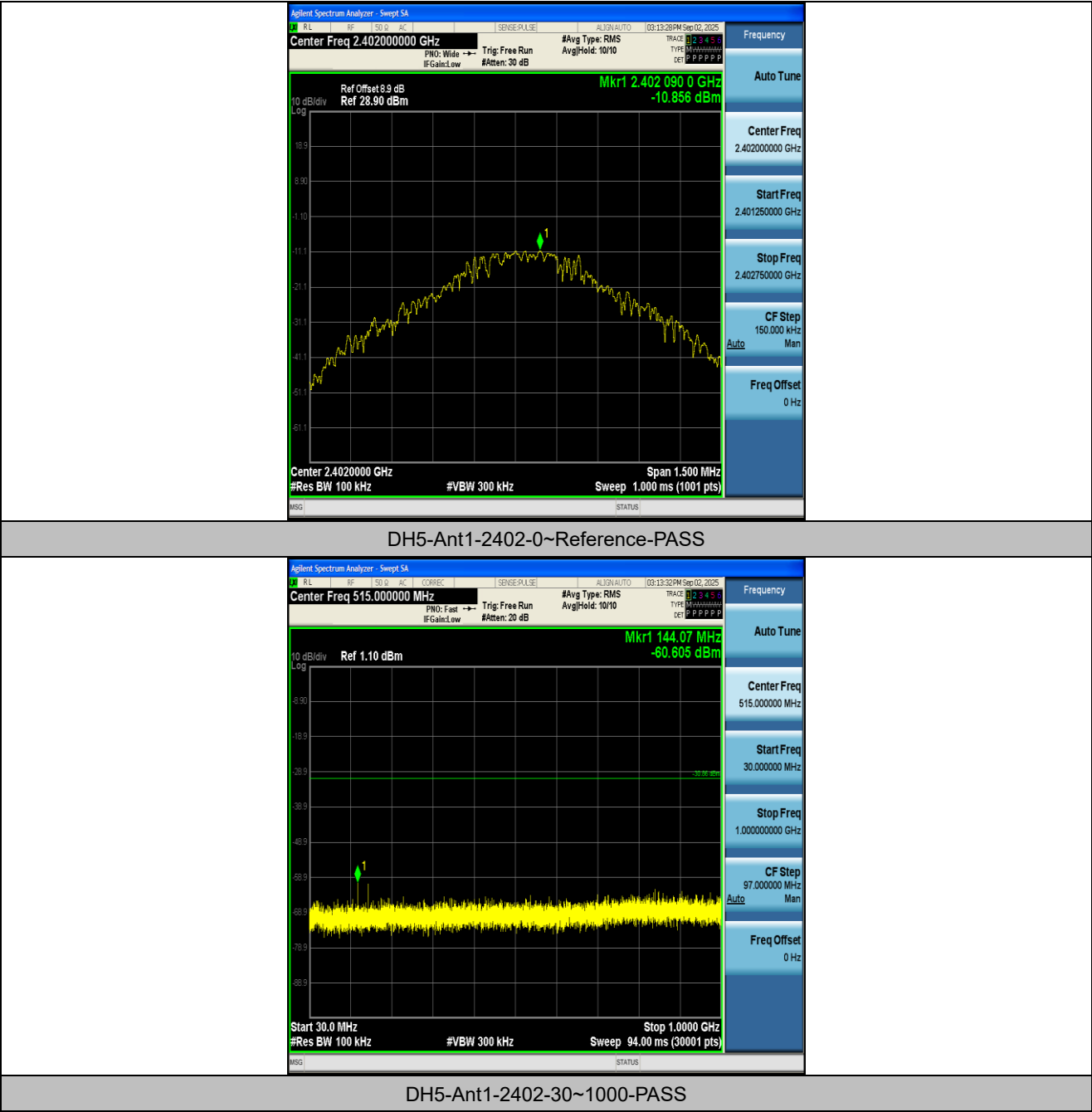
Appendix H: Conducted Spurious Emission

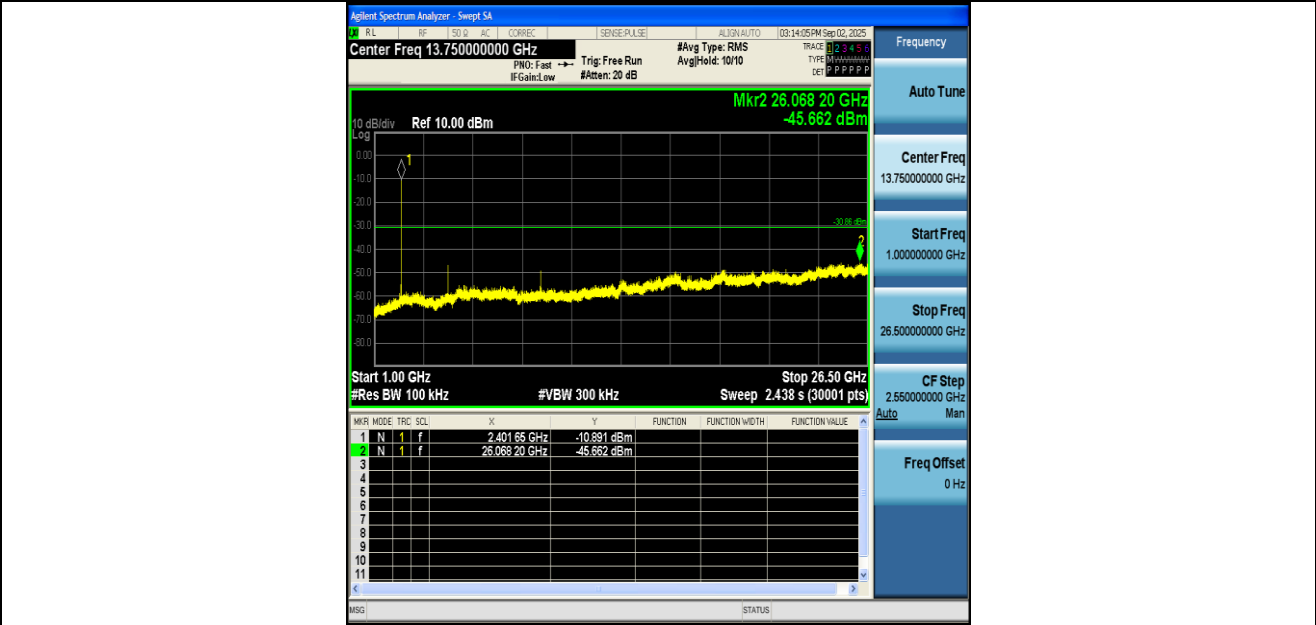
Test Result

Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-10.86	-10.86	---	PASS
DH5	Ant1	2402	30~1000	-10.86	-60.61	≤-30.86	PASS
DH5	Ant1	2402	1000~26500	-10.86	-45.66	≤-30.86	PASS
DH5	Ant1	2441	0~Reference	-10.69	-10.69	---	PASS
DH5	Ant1	2441	30~1000	-10.69	-59.38	≤-30.69	PASS
DH5	Ant1	2441	1000~26500	-10.69	-42.84	≤-30.69	PASS
DH5	Ant1	2480	0~Reference	-10.59	-10.59	---	PASS
DH5	Ant1	2480	30~1000	-10.59	-60.27	≤-30.59	PASS
DH5	Ant1	2480	1000~26500	-10.59	-45.74	≤-30.59	PASS
2DH5	Ant1	2402	0~Reference	-11.13	-11.13	---	PASS
2DH5	Ant1	2402	30~1000	-11.13	-60.52	≤-31.13	PASS
2DH5	Ant1	2402	1000~26500	-11.13	-45.67	≤-31.13	PASS
2DH5	Ant1	2441	0~Reference	-12.93	-12.93	---	PASS
2DH5	Ant1	2441	30~1000	-12.93	-58.98	≤-32.93	PASS
2DH5	Ant1	2441	1000~26500	-12.93	-42.91	≤-32.93	PASS
2DH5	Ant1	2480	0~Reference	-14.15	-14.15	---	PASS
2DH5	Ant1	2480	30~1000	-14.15	-60.28	≤-34.15	PASS
2DH5	Ant1	2480	1000~26500	-14.15	-45.07	≤-34.15	PASS
3DH5	Ant1	2402	0~Reference	-11.72	-11.72	---	PASS
3DH5	Ant1	2402	30~1000	-11.72	-58.56	≤-31.72	PASS
3DH5	Ant1	2402	1000~26500	-11.72	-45.22	≤-31.72	PASS
3DH5	Ant1	2441	0~Reference	-13.50	-13.50	---	PASS
3DH5	Ant1	2441	30~1000	-13.50	-59.97	≤-33.5	PASS
3DH5	Ant1	2441	1000~26500	-13.50	-43.14	≤-33.5	PASS
3DH5	Ant1	2480	0~Reference	-12.02	-12.02	---	PASS
3DH5	Ant1	2480	30~1000	-12.02	-60.21	≤-32.02	PASS
3DH5	Ant1	2480	1000~26500	-12.02	-45.39	≤-32.02	PASS

Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.

Test Graphs

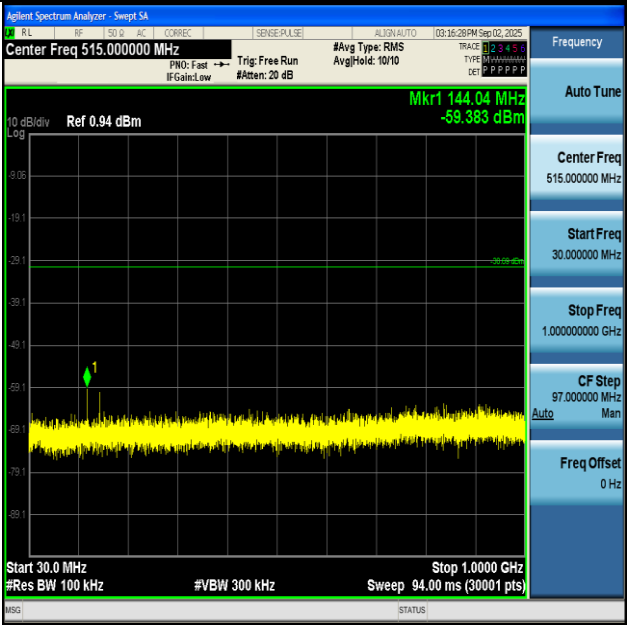




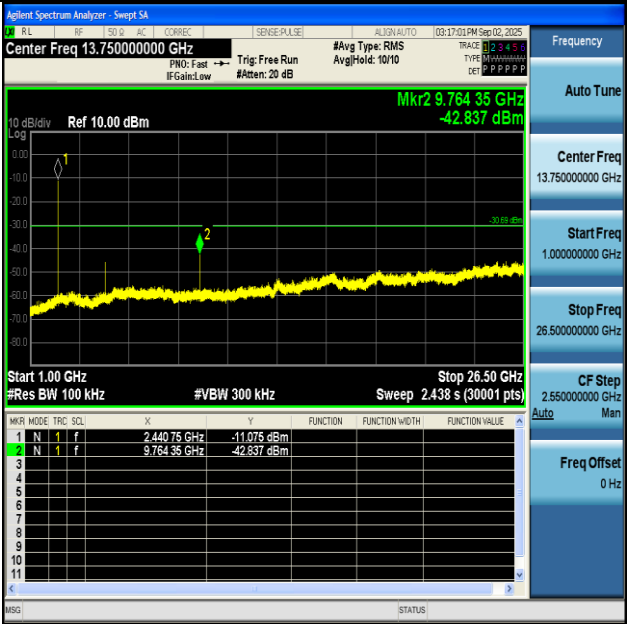
DH5-Ant1-2402-1000~26500-PASS



DH5-Ant1-2441-0~Reference-PASS



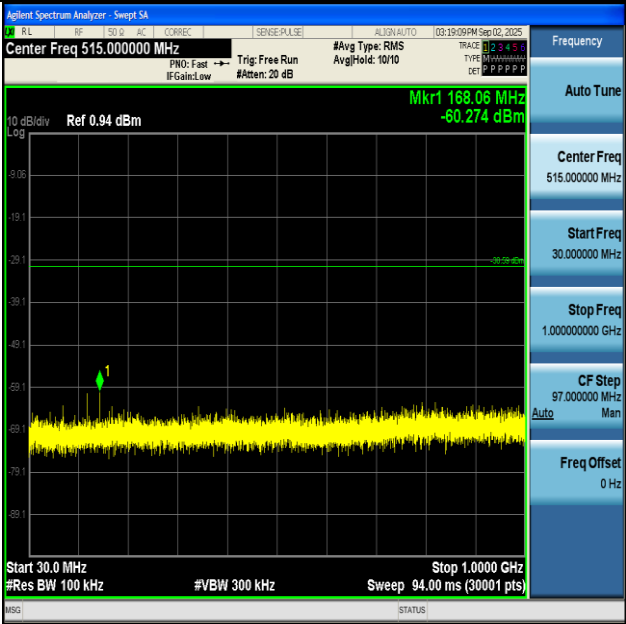
DH5-Ant1-2441-30~1000-PASS



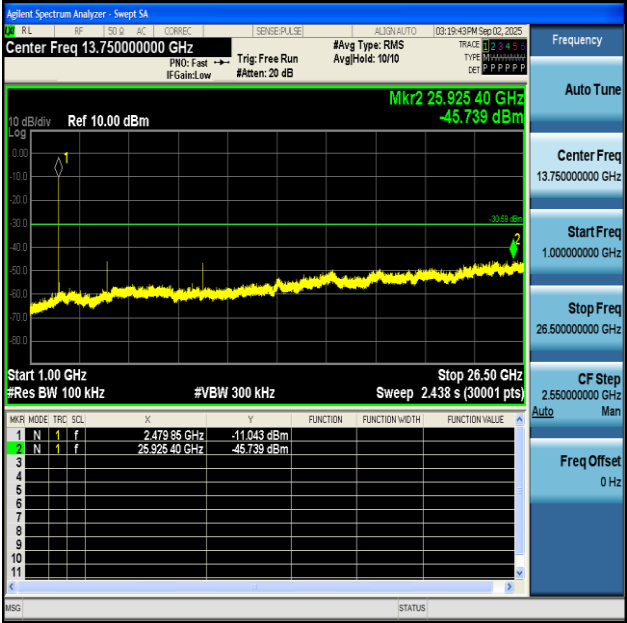
DH5-Ant1-2441-1000~26500-PASS



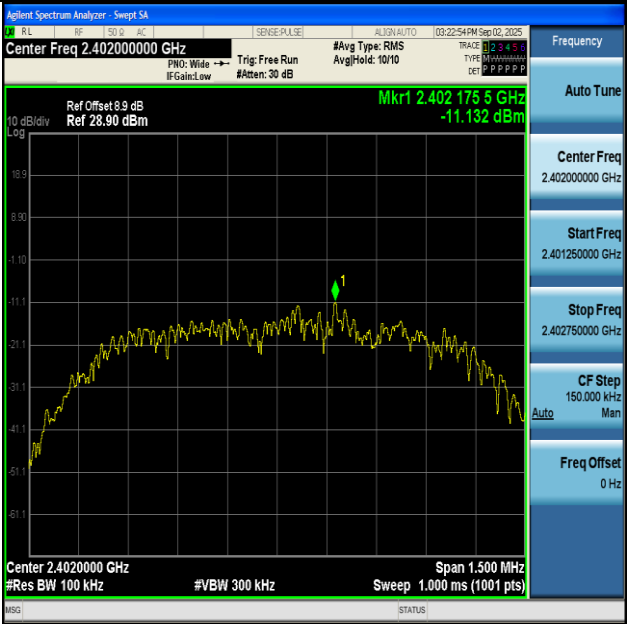
DH5-Ant1-2480-0~Reference-PASS



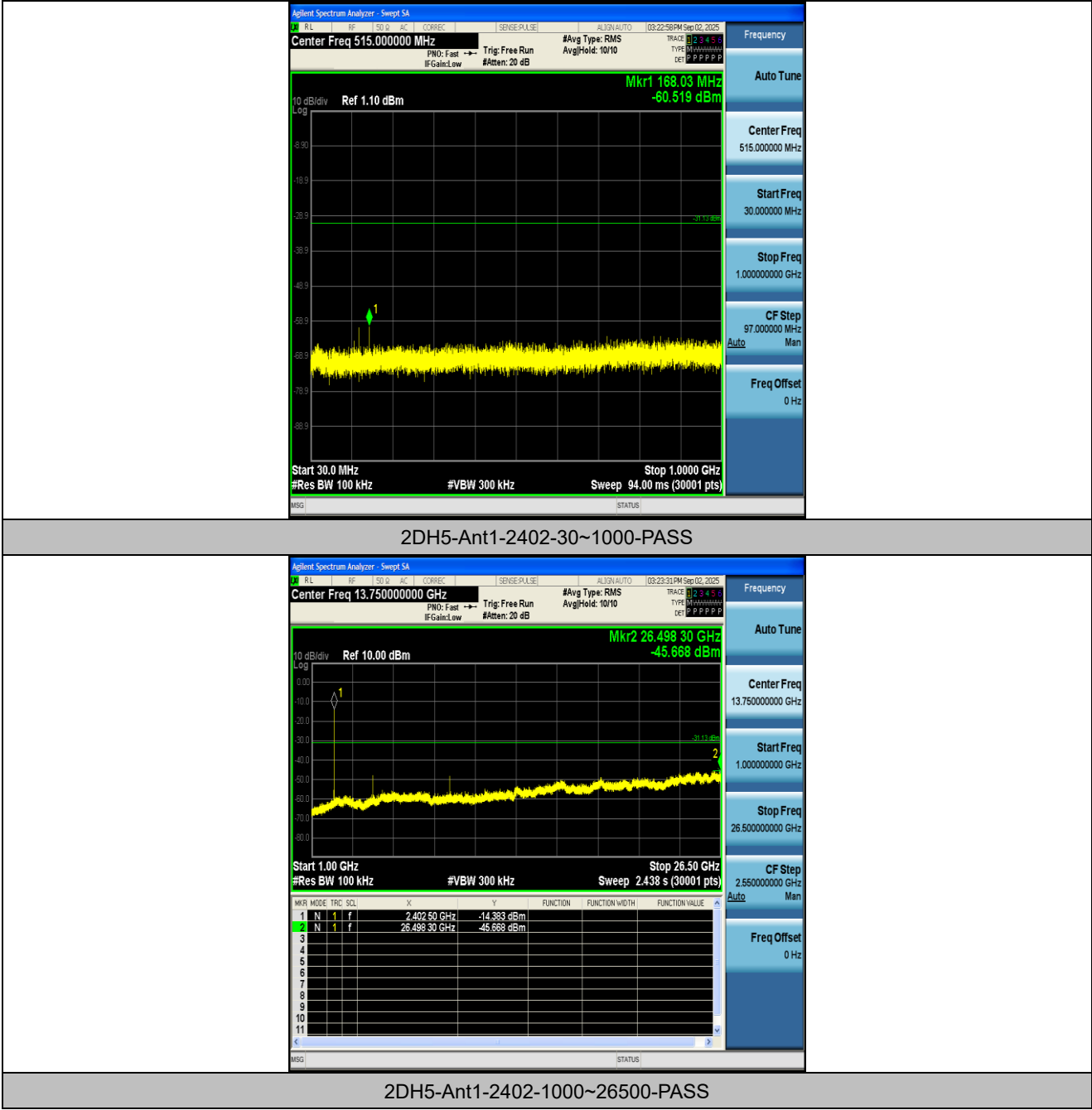
DH5-Ant1-2480-30~1000-PASS



DH5-Ant1-2480-1000~26500-PASS

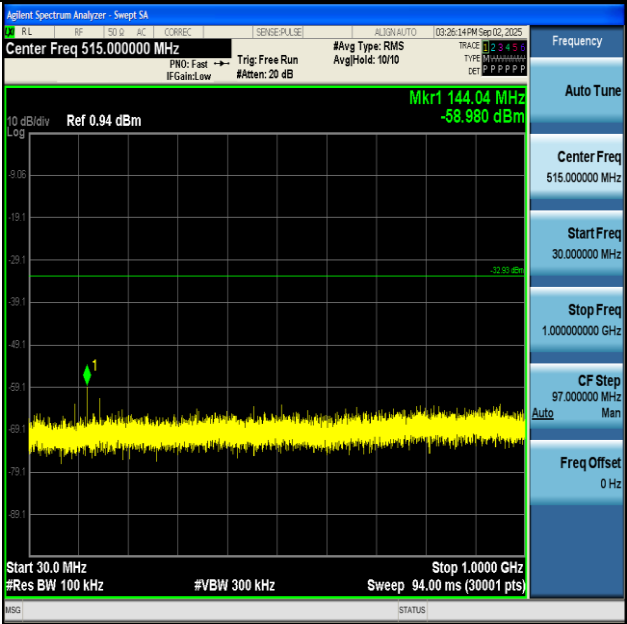


2DH5-Ant1-2402-0~Reference-PASS

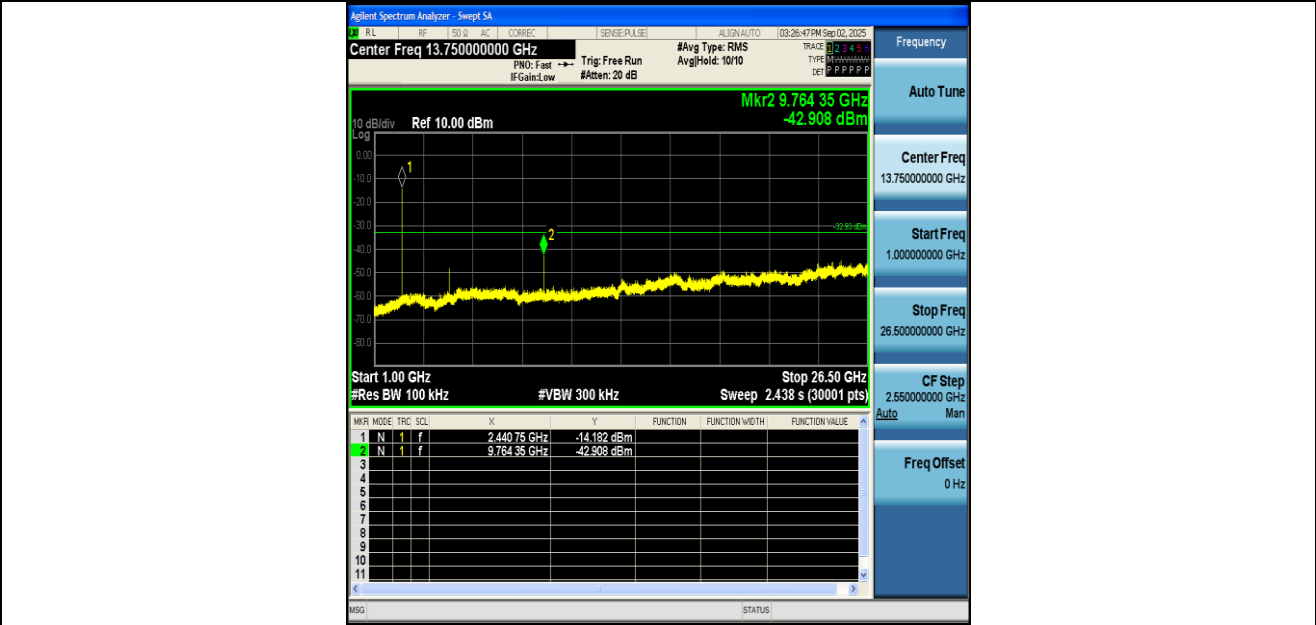




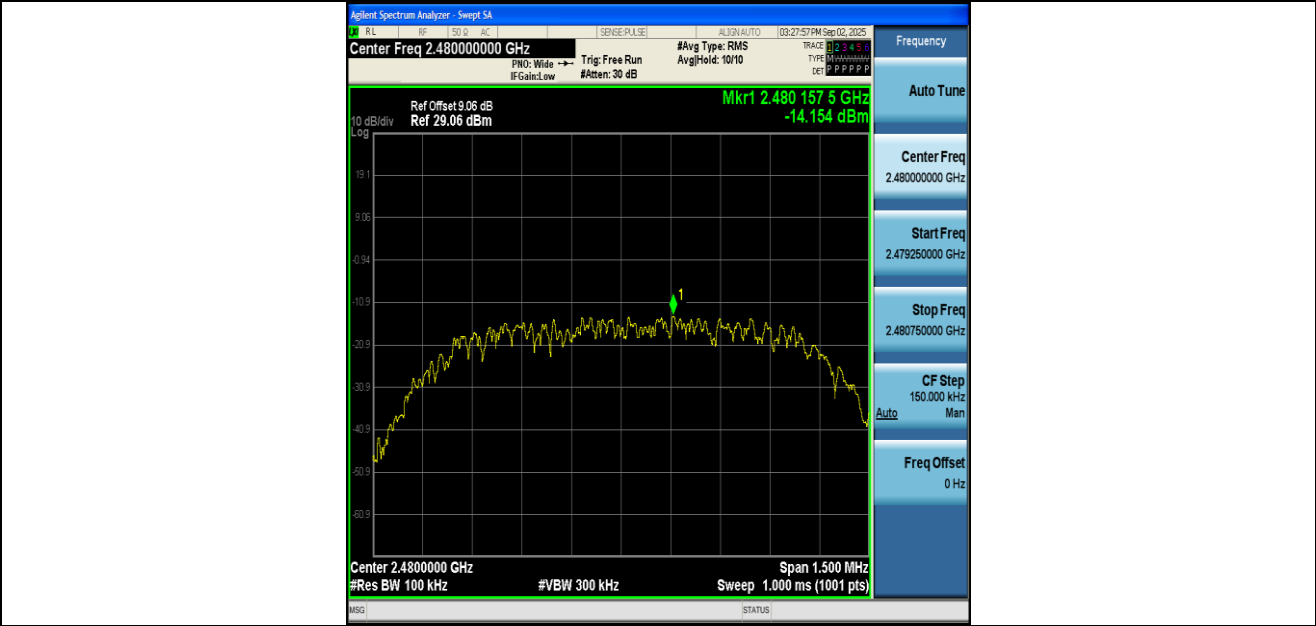
2DH5-Ant1-2441-0~Reference-PASS



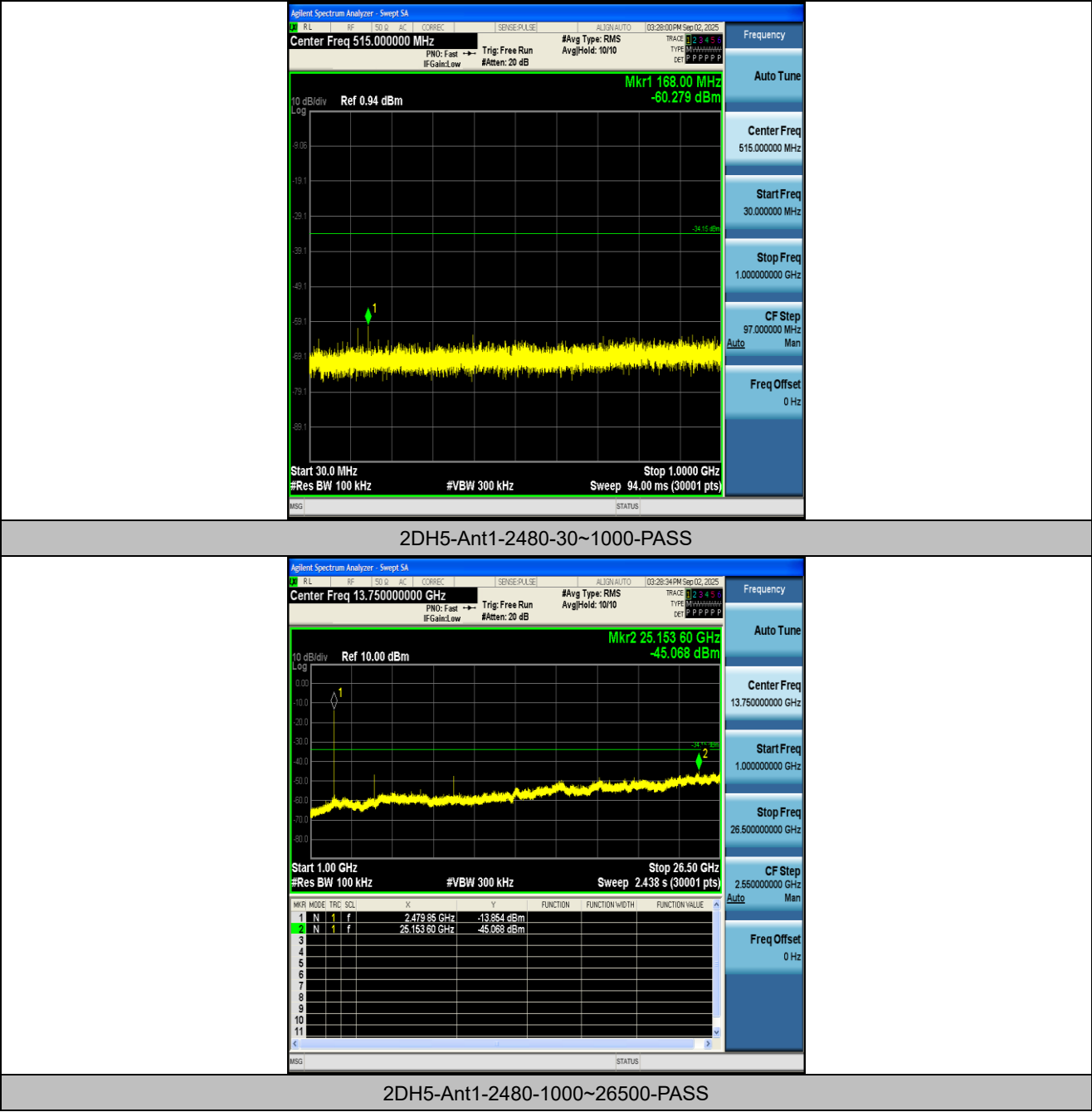
2DH5-Ant1-2441-30~1000-PASS



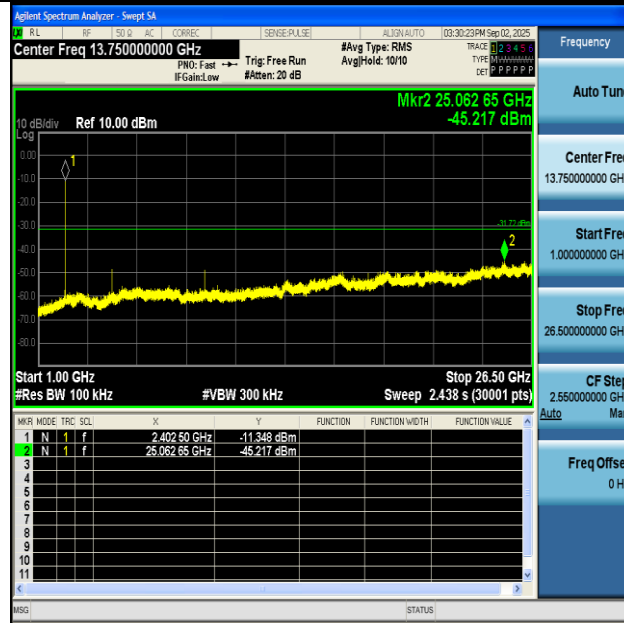
2DH5-Ant1-2441-1000~26500-PASS



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



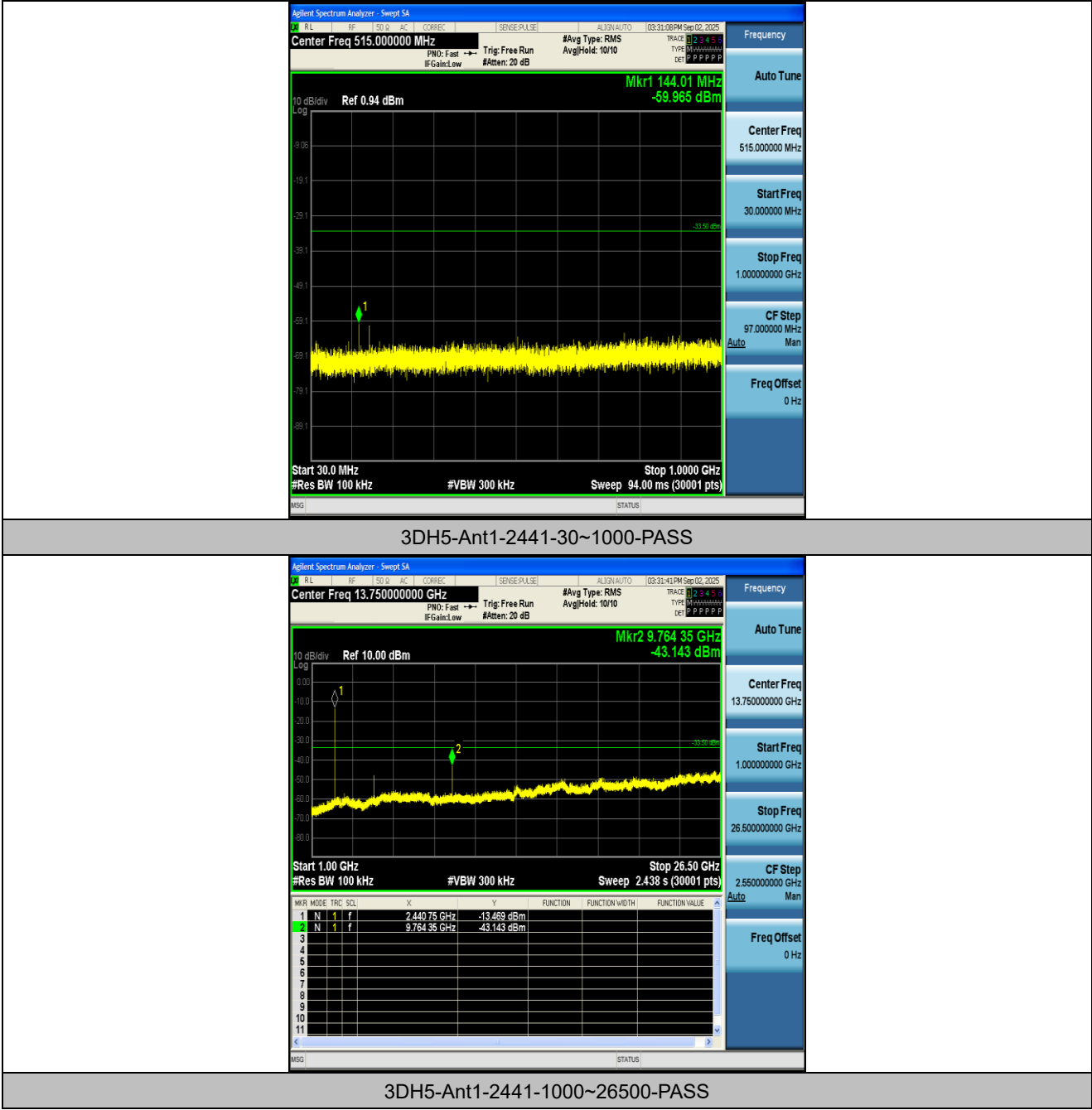




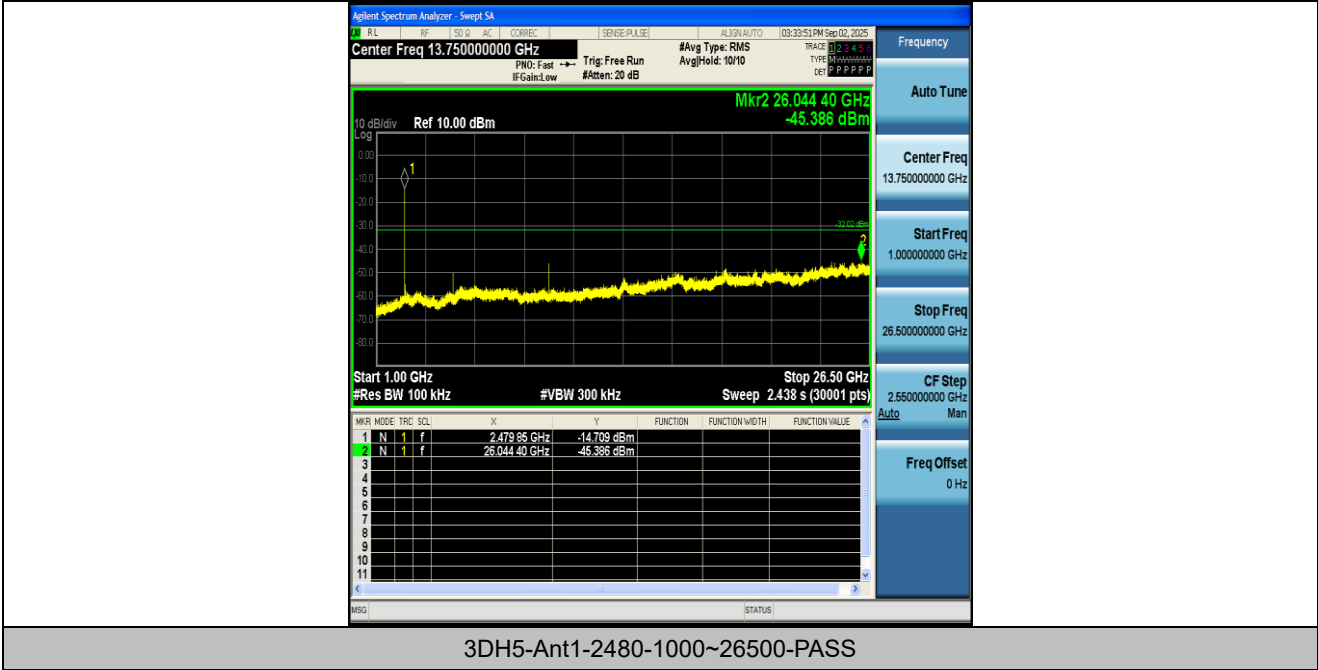
3DH5-Ant1-2402-1000~26500-PASS



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







3DH5-Ant1-2480-1000~26500-PASS

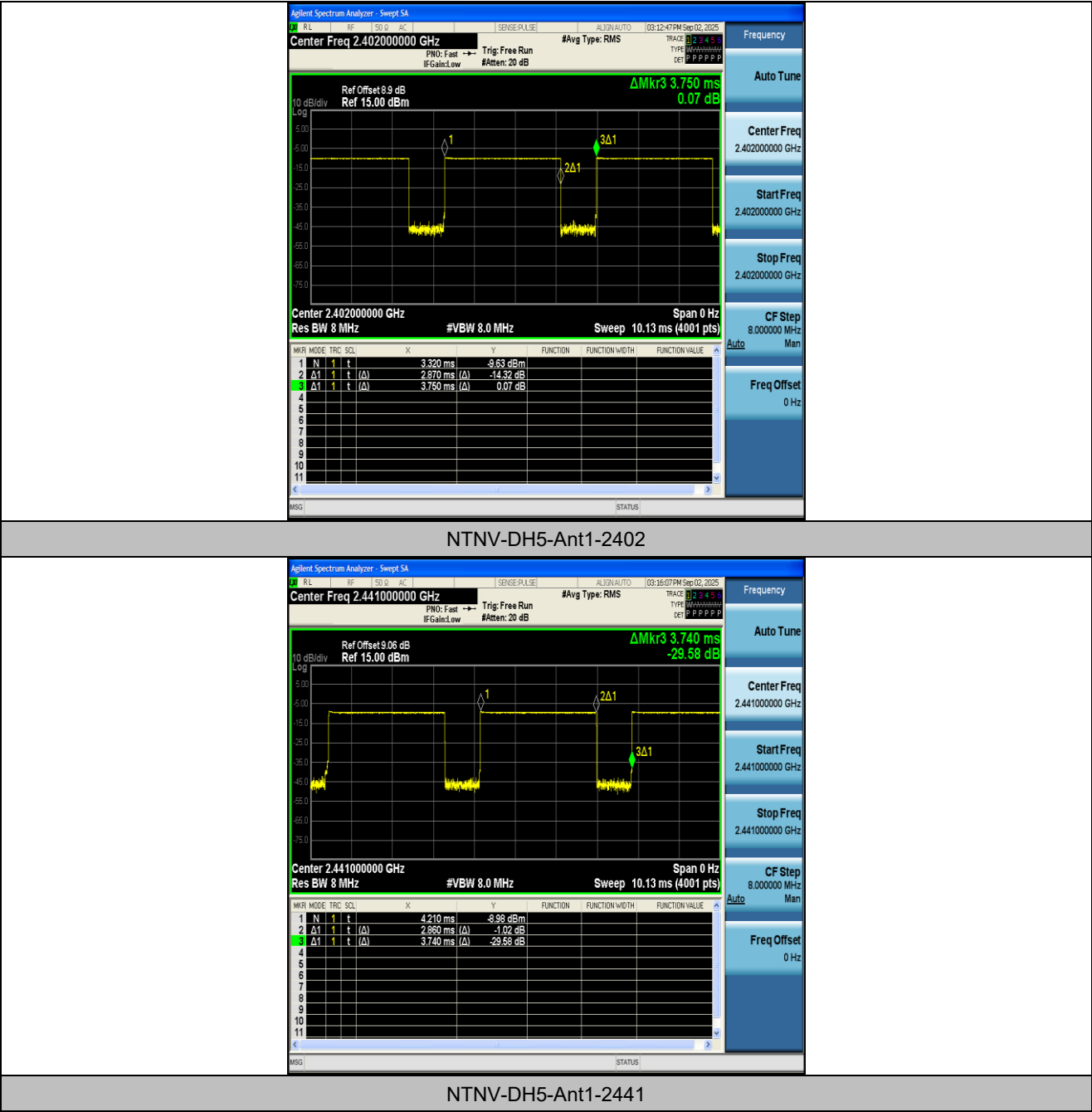
Appendix I: Duty Cycle

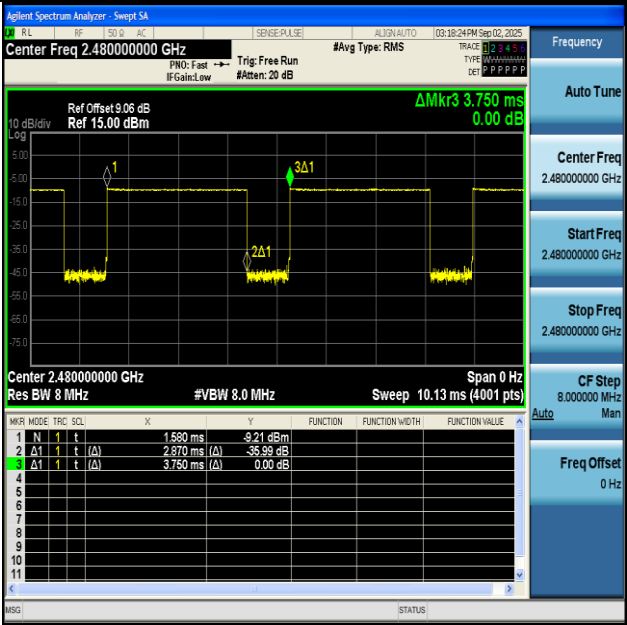
Test Result

Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.87	3.75	76.53	1.16
DH5	Ant1	2441	2.86	3.74	76.47	1.17
DH5	Ant1	2480	2.87	3.75	76.53	1.16
2DH5	Ant1	2402	2.88	3.75	76.80	1.15
2DH5	Ant1	2441	2.74	3.62	75.69	1.21
2DH5	Ant1	2480	2.88	3.75	76.80	1.15
3DH5	Ant1	2402	2.88	3.75	76.80	1.15
3DH5	Ant1	2441	2.88	3.75	76.80	1.15
3DH5	Ant1	2480	2.75	3.62	75.97	1.19

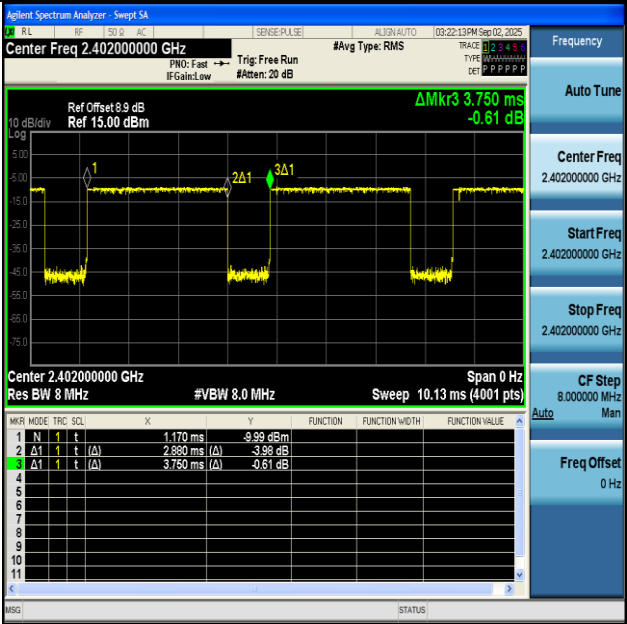
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs





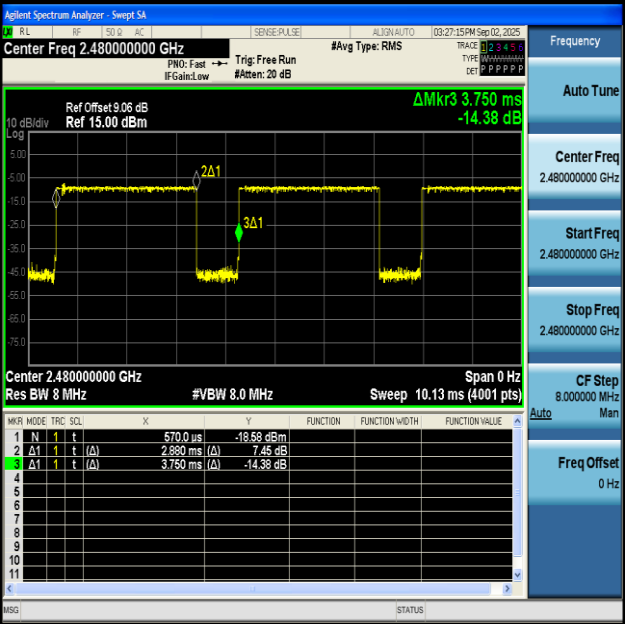
NTNV-DH5-Ant1-2480



NTNV-2DH5-Ant1-2402



NTNV-2DH5-Ant1-2441



NTNV-2DH5-Ant1-2480

