

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

Product Name: Wireless Speaker

Trade Mark: /

Test Model: ZEALOT-S127

FCC ID: 2AFKR-S127

Environmental Conditions

Temperature:	23.5℃
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	0.945	2401.544	2402.489	---	---
DH5	Ant1	2441	0.957	2440.547	2441.504	---	---
DH5	Ant1	2480	0.951	2479.547	2480.498	---	---
2DH5	Ant1	2402	1.323	2401.346	2402.669	---	---
2DH5	Ant1	2441	1.287	2440.376	2441.663	---	---
2DH5	Ant1	2480	1.323	2479.346	2480.669	---	---
3DH5	Ant1	2402	1.272	2401.373	2402.645	---	---
3DH5	Ant1	2441	1.251	2440.376	2441.627	---	---
3DH5	Ant1	2480	1.254	2479.373	2480.627	---	---

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

Test Graphs



DH5-Ant1-2402



DH5-Ant1-2441





2DH5-Ant1-2441



2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



Appendix B: Occupied Channel Bandwidth

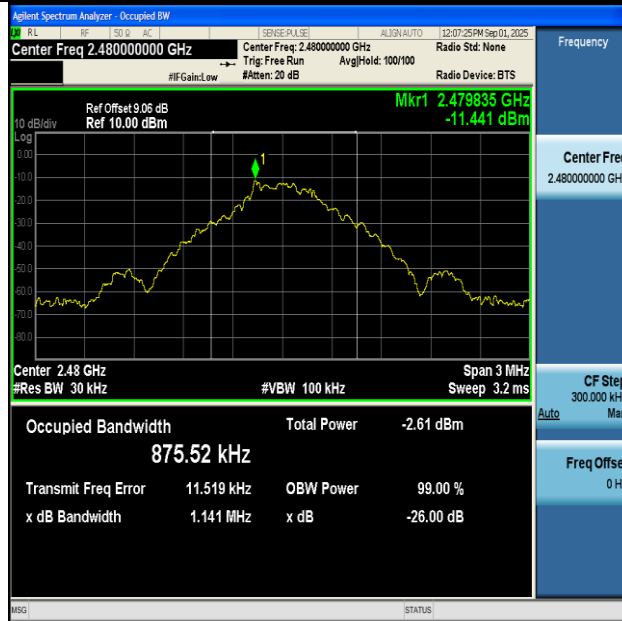
Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.87865	2401.5721	2402.4507	---	---
DH5	Ant1	2441	0.88746	2440.5680	2441.4555	---	---
DH5	Ant1	2480	0.87552	2479.5738	2480.4493	---	---
2DH5	Ant1	2402	1.1808	2401.4176	2402.5984	---	---
2DH5	Ant1	2441	1.1785	2440.4195	2441.5980	---	---
2DH5	Ant1	2480	1.1692	2479.4240	2480.5932	---	---
3DH5	Ant1	2402	1.1600	2401.4305	2402.5905	---	---
3DH5	Ant1	2441	1.1575	2440.4321	2441.5896	---	---
3DH5	Ant1	2480	1.1610	2479.4263	2480.5873	---	---

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

Test Graphs

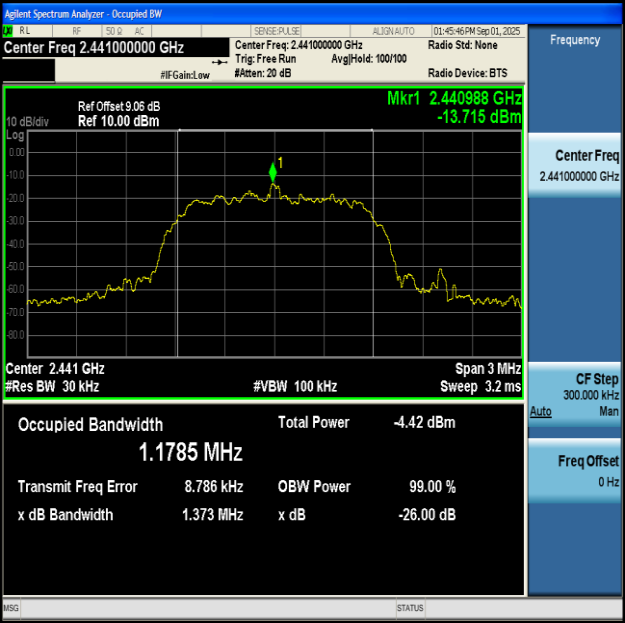




DH5-Ant1-2480



2DH5-Ant1-2402



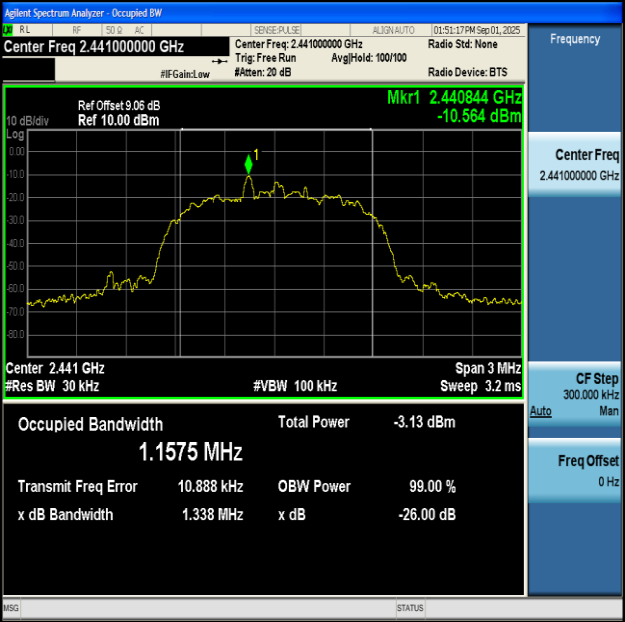
2DH5-Ant1-2441



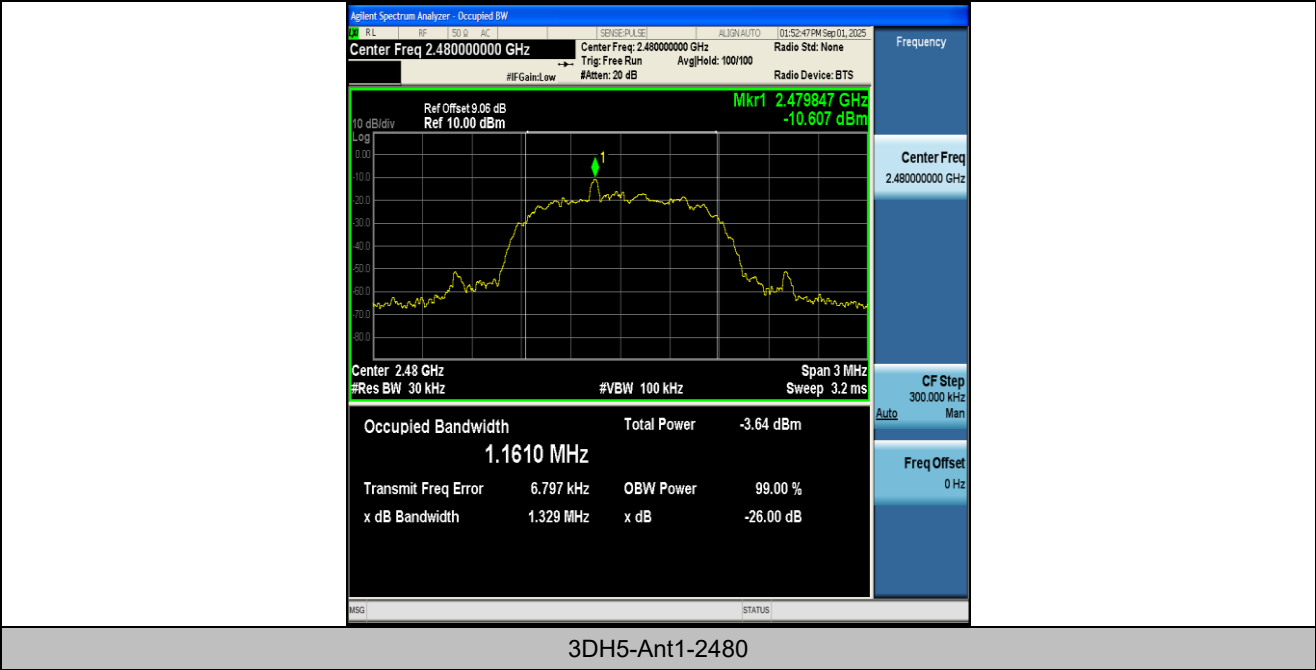
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



Appendix C: Maximum peak conducted output power

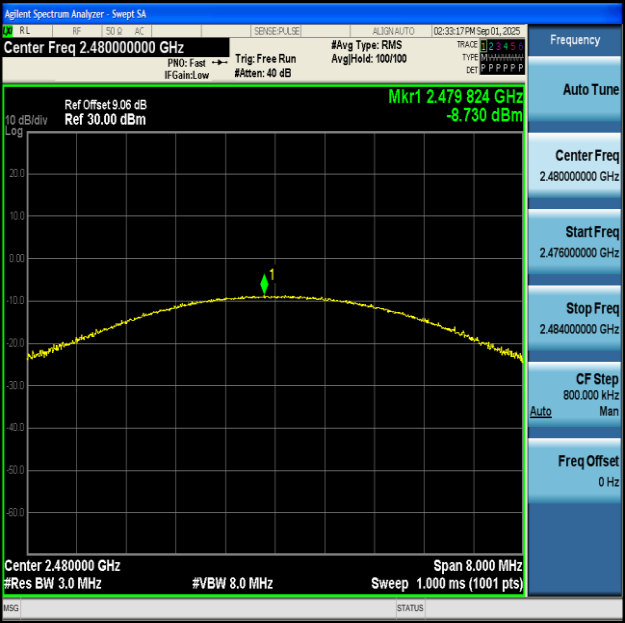
Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	-9.15	≤30	PASS
DH5	Ant1	2441	-8.50	≤30	PASS
DH5	Ant1	2480	-8.73	≤30	PASS
2DH5	Ant1	2402	-8.70	≤20.97	PASS
2DH5	Ant1	2441	-8.08	≤20.97	PASS
2DH5	Ant1	2480	-8.21	≤20.97	PASS
3DH5	Ant1	2402	-8.26	≤20.97	PASS
3DH5	Ant1	2441	-7.76	≤20.97	PASS
3DH5	Ant1	2480	-7.56	≤20.97	PASS

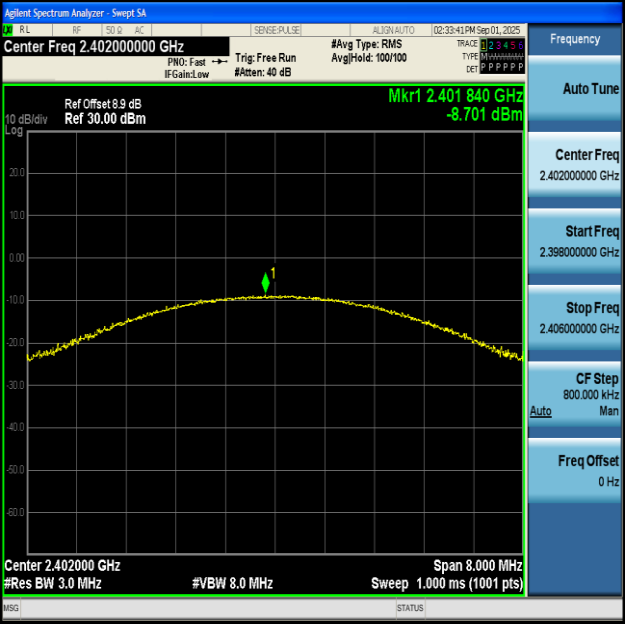
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs

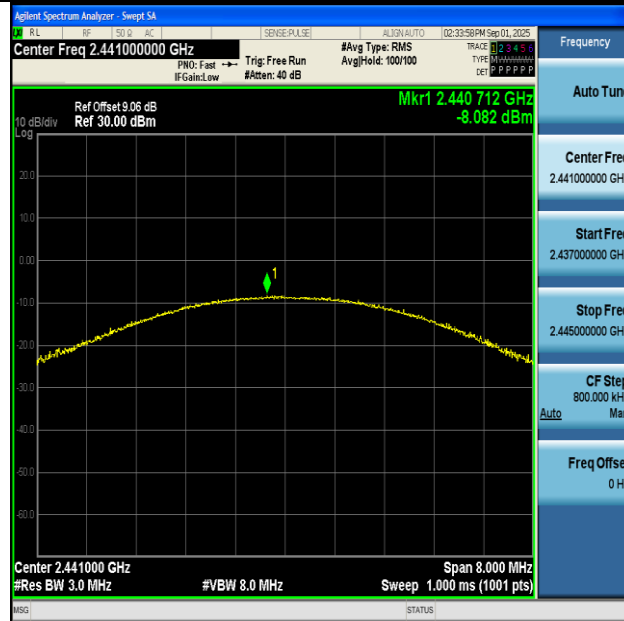




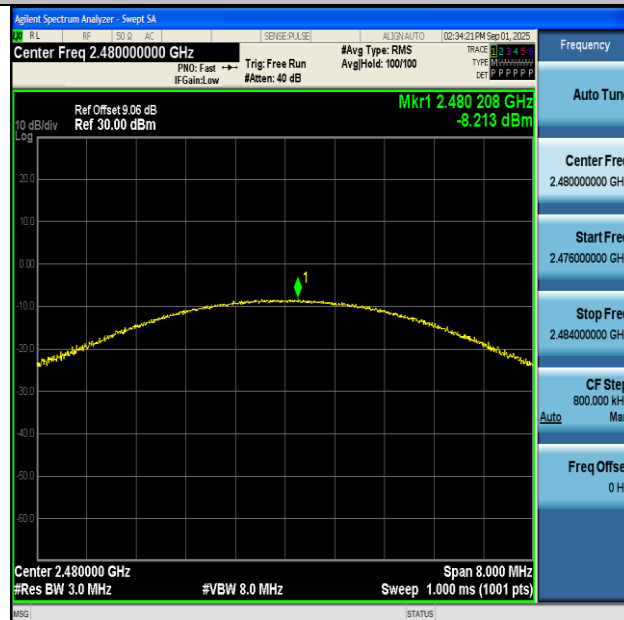
DH5-Ant1-2480-PASS



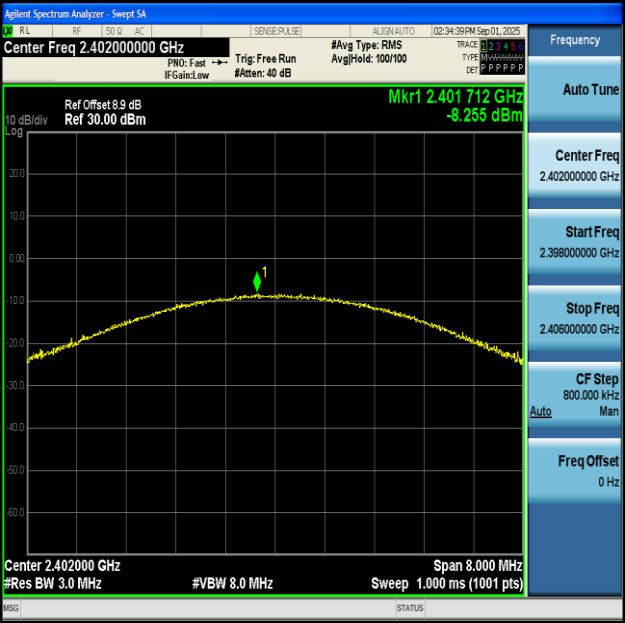
2DH5-Ant1-2402-PASS



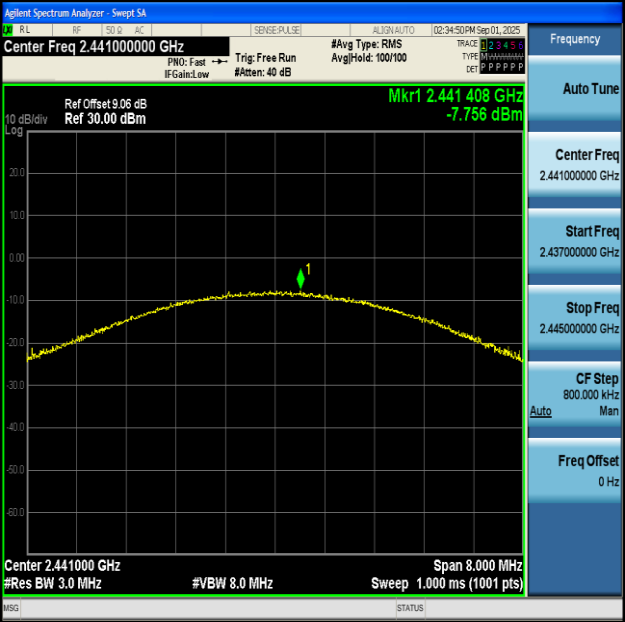
2DH5-Ant1-2441-PASS



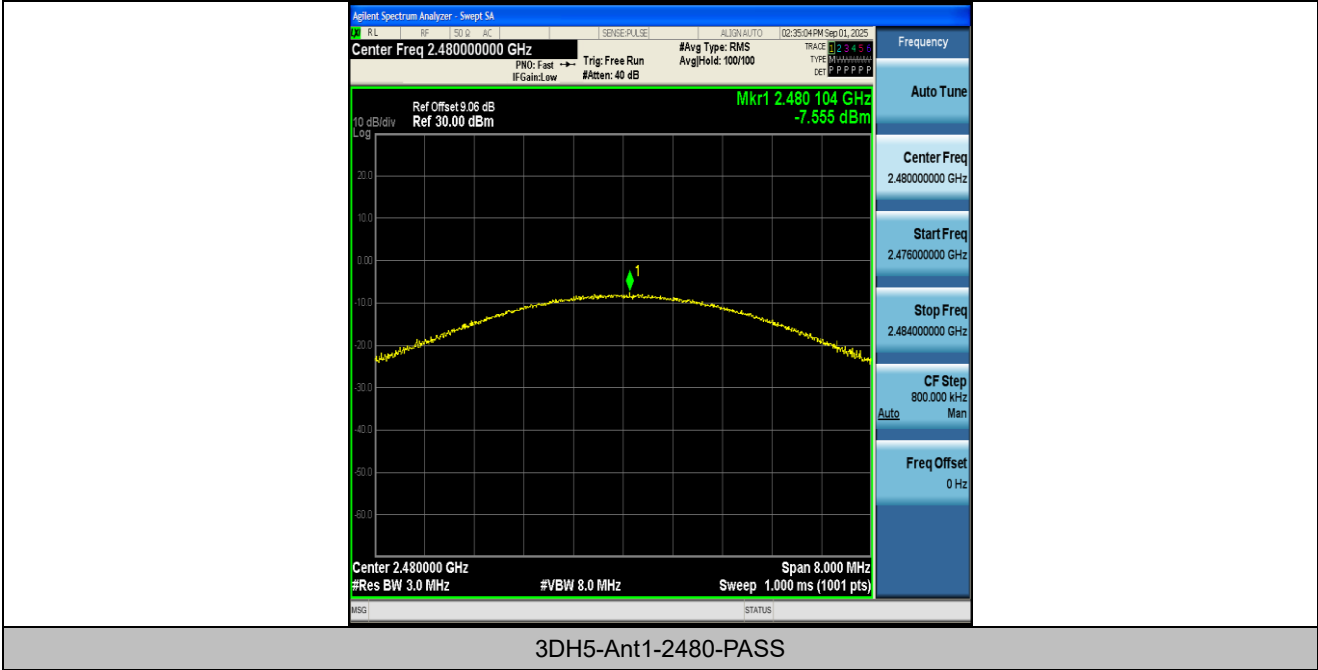
2DH5-Ant1-2480-PASS



3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS



Appendix D: Carrier frequency separation

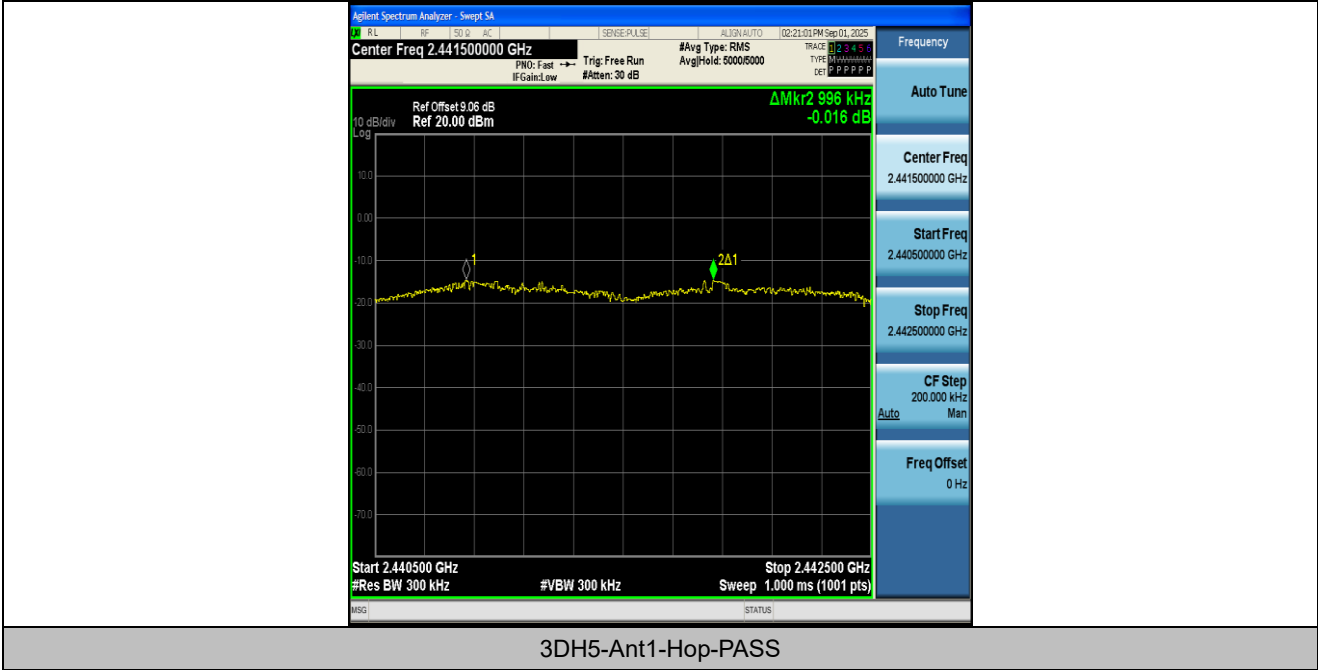
Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	1.006	≥ 0.957	PASS
2DH5	Ant1	Hop	1.004	≥ 0.882	PASS
3DH5	Ant1	Hop	0.996	≥ 0.848	PASS

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

Test Graphs





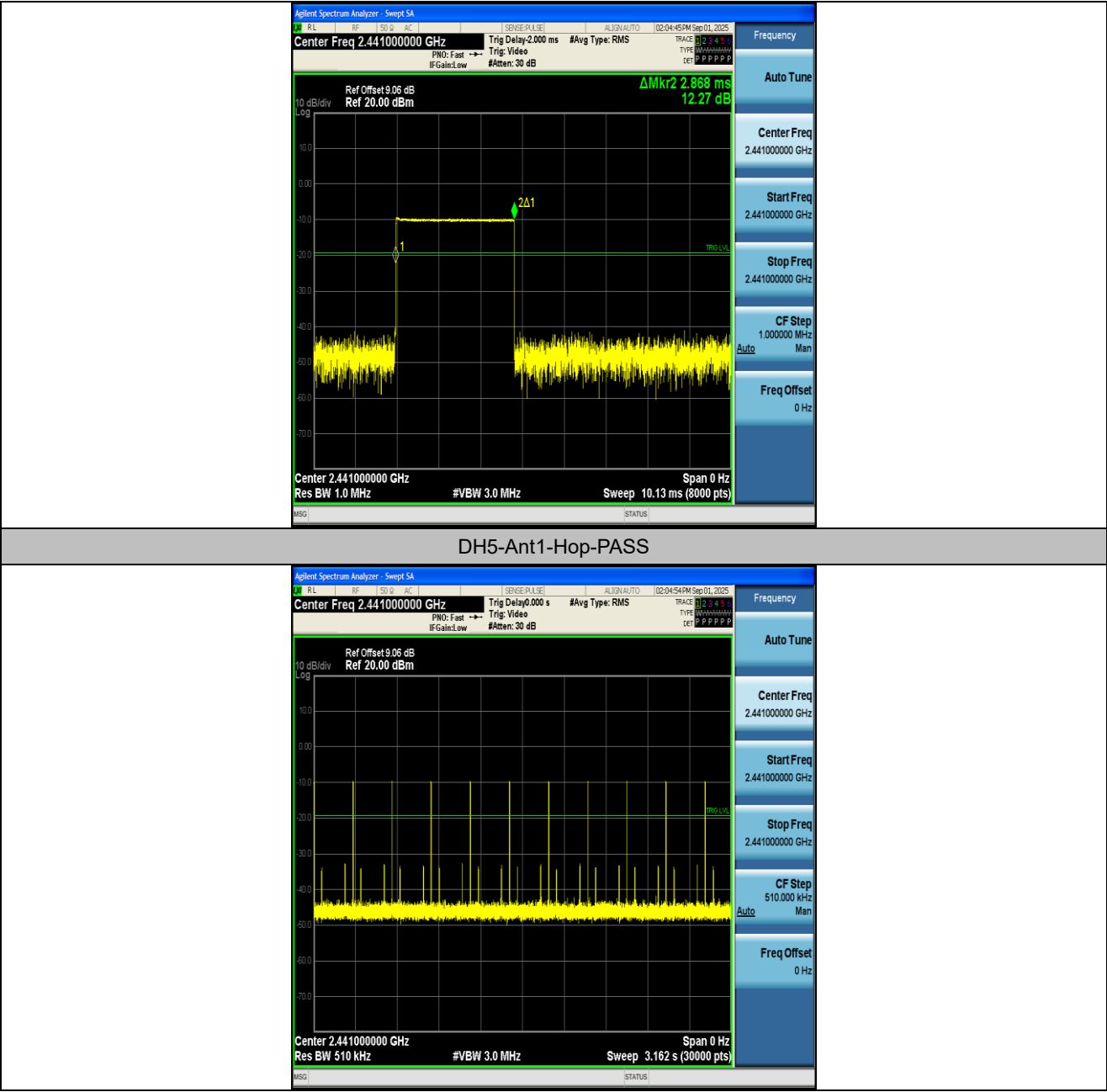
Appendix E: Time of occupancy

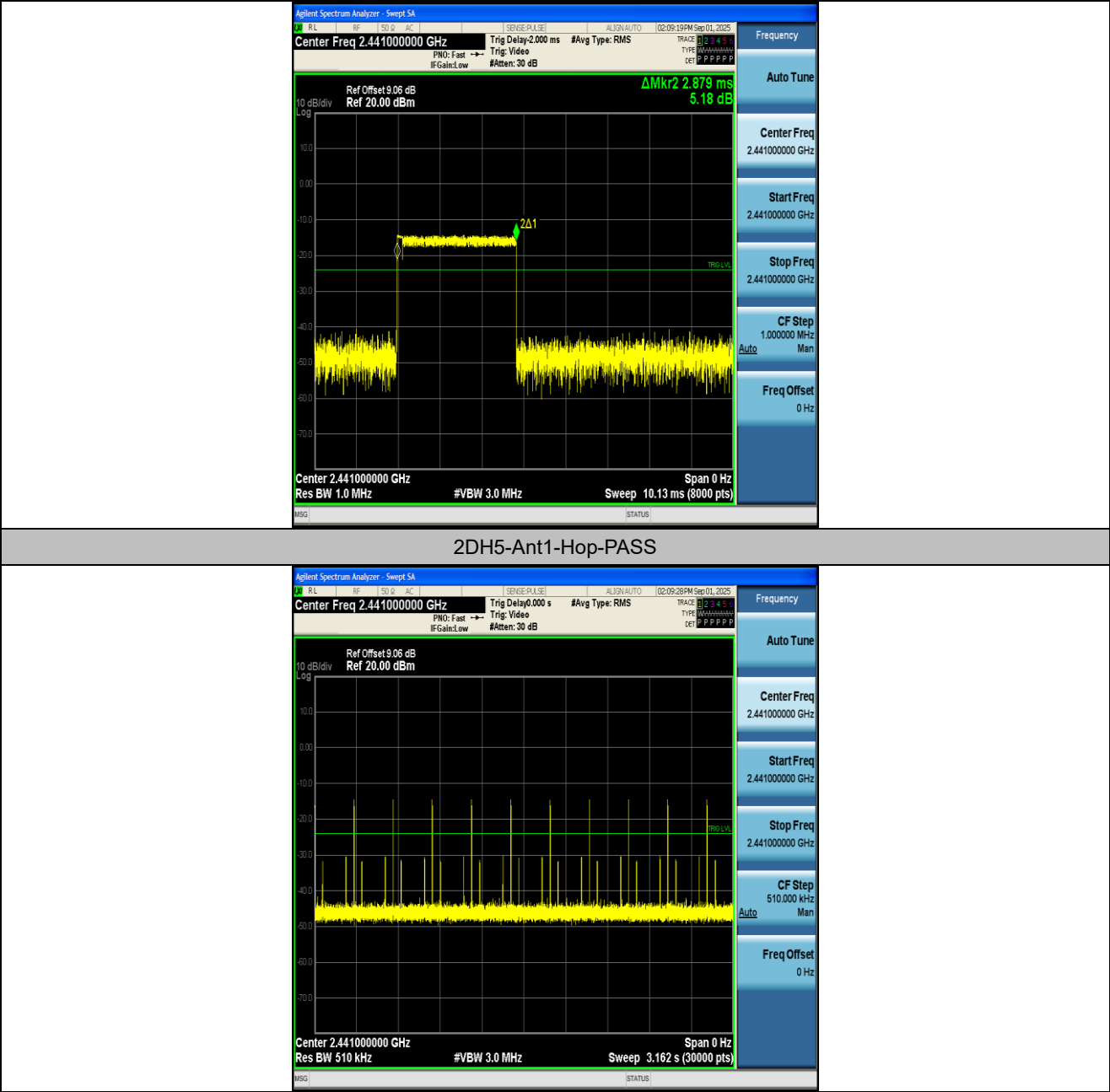
Test Result

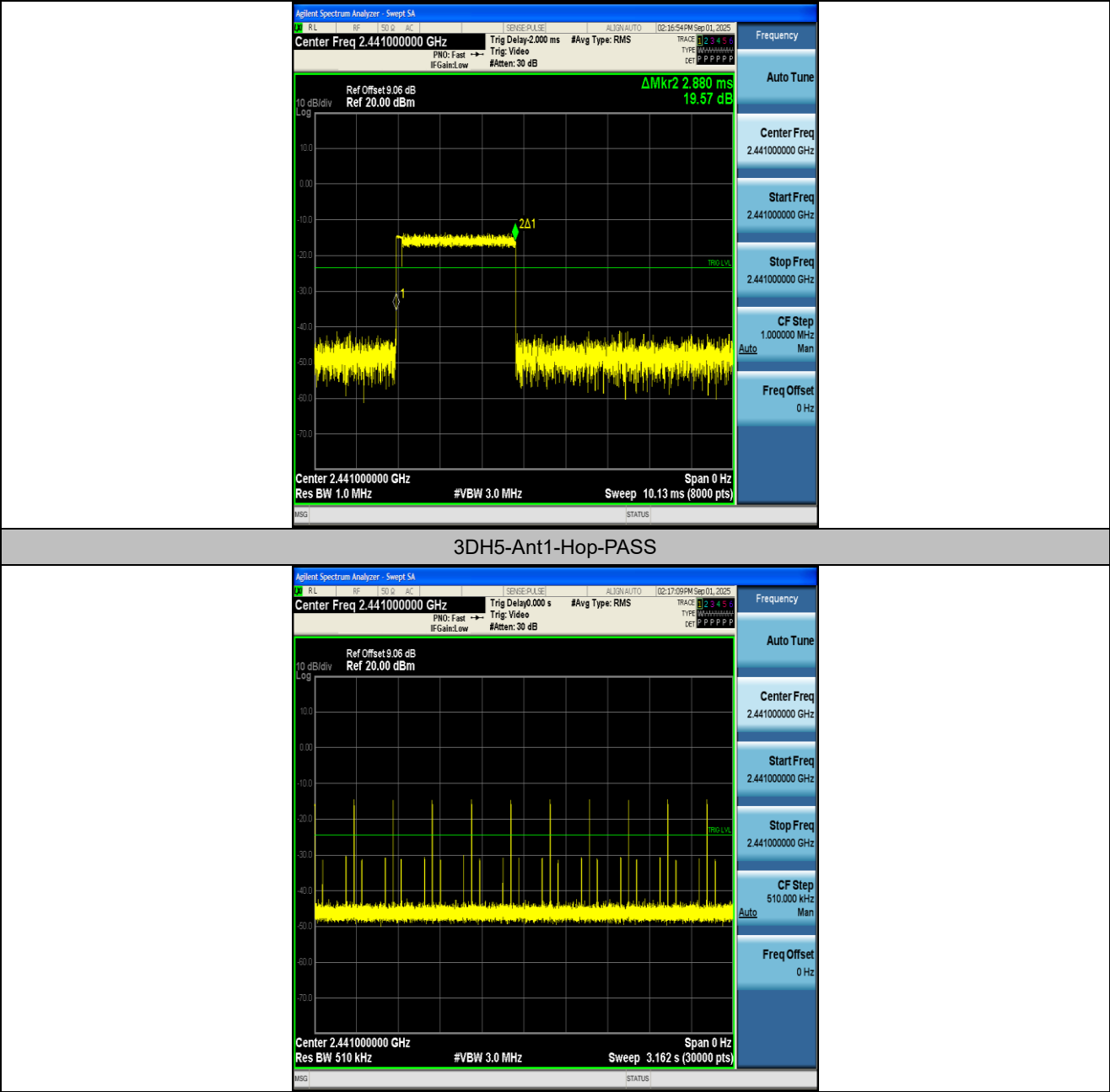
Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.868	110	0.315	≤0.4	PASS
2DH5	Ant1	Hop	2.879	110	0.317	≤0.4	PASS
3DH5	Ant1	Hop	2.880	110	0.317	≤0.4	PASS

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

Test Graphs







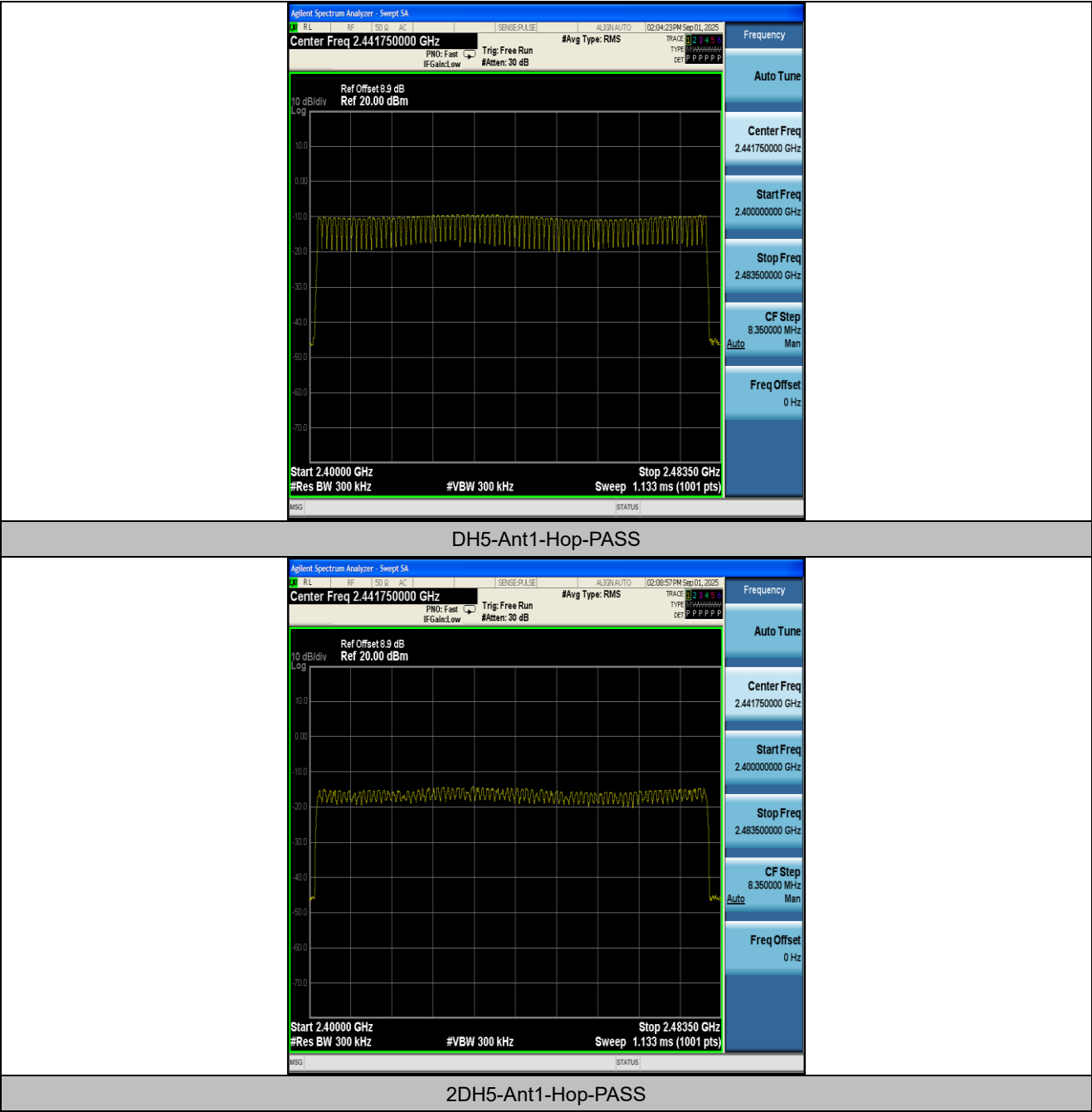
Appendix F: Number of hopping channels

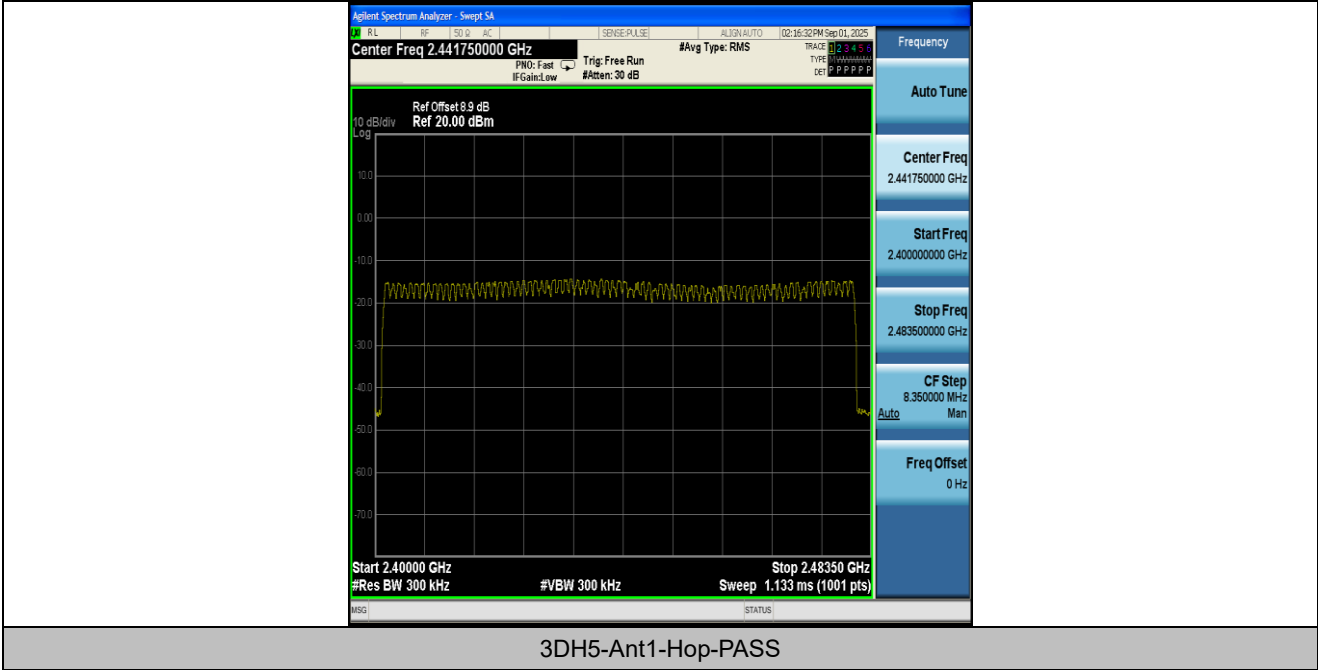
Test Result

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





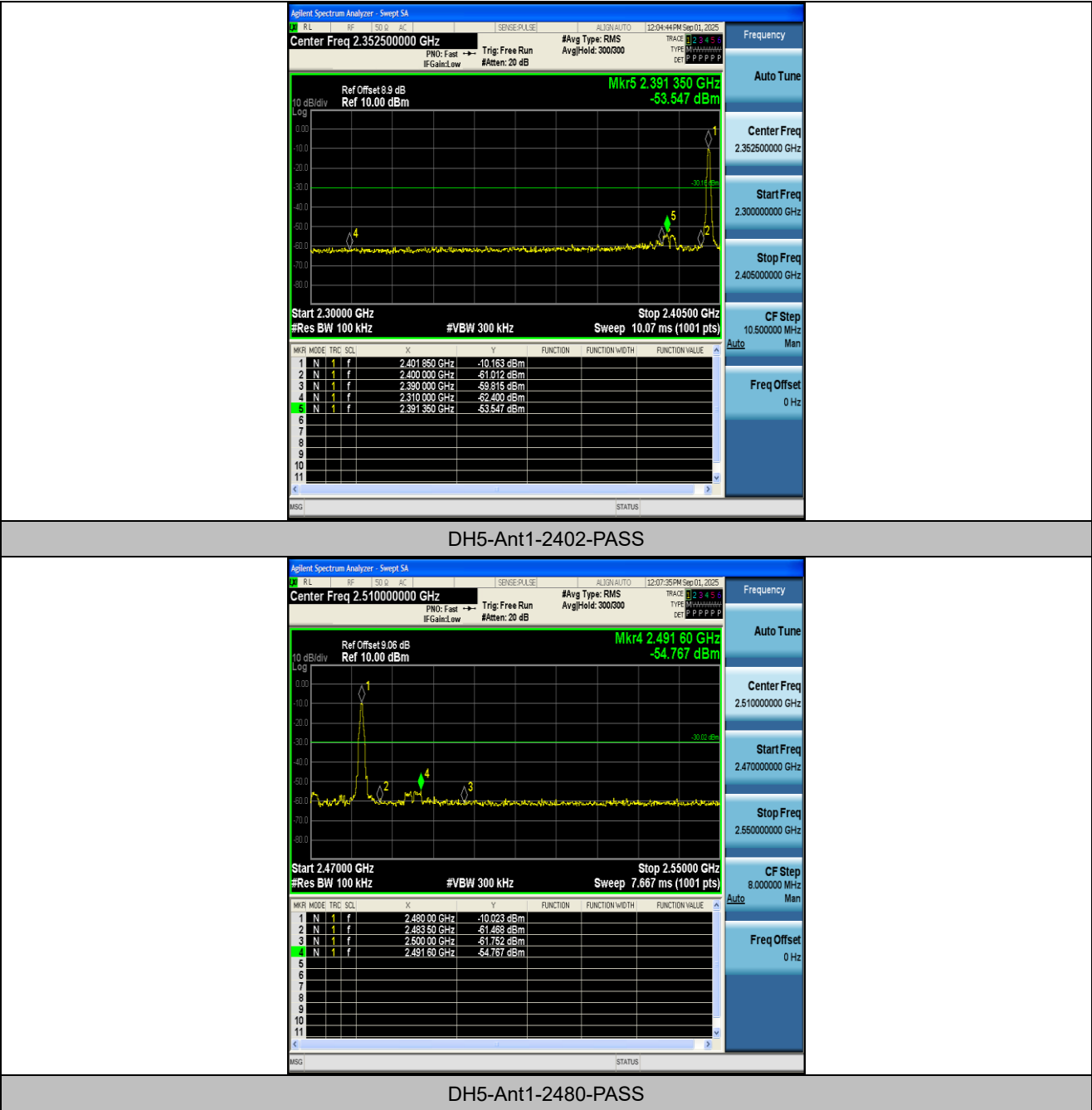
Appendix G: Band edge measurements

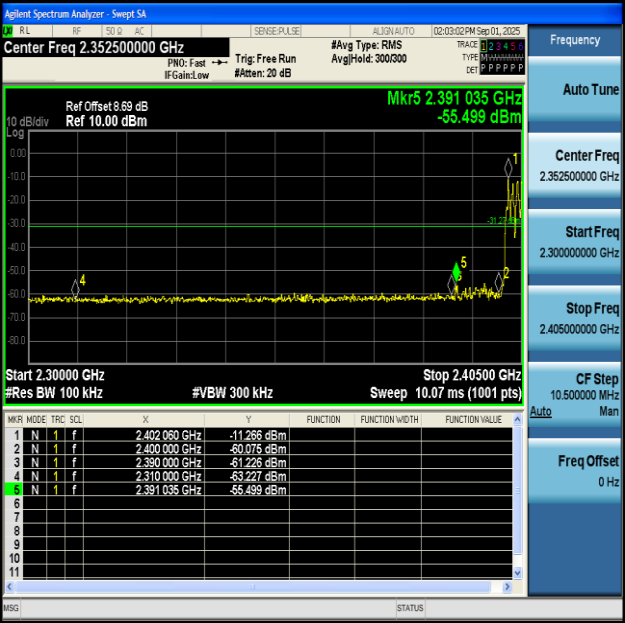
Test Result

Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-10.16	-53.55	≤-30.16	PASS
DH5	Ant1	High	2480	-10.02	-54.77	≤-30.02	PASS
DH5	Ant1	Low	Hop_2402	-11.27	-55.5	≤-31.27	PASS
DH5	Ant1	High	Hop_2480	-12.15	-56.87	≤-32.15	PASS
2DH5	Ant1	Low	2402	-10.53	-55.5	≤-30.53	PASS
2DH5	Ant1	High	2480	-10.30	-56.06	≤-30.3	PASS
2DH5	Ant1	Low	Hop_2402	-14.93	-57.63	≤-34.93	PASS
2DH5	Ant1	High	Hop_2480	-12.05	-57.44	≤-32.05	PASS
3DH5	Ant1	Low	2402	-10.39	-55.39	≤-30.39	PASS
3DH5	Ant1	High	2480	-9.83	-56.88	≤-29.83	PASS
3DH5	Ant1	Low	Hop_2402	-15.10	-57.28	≤-35.1	PASS
3DH5	Ant1	High	Hop_2480	-13.34	-57.3	≤-33.34	PASS

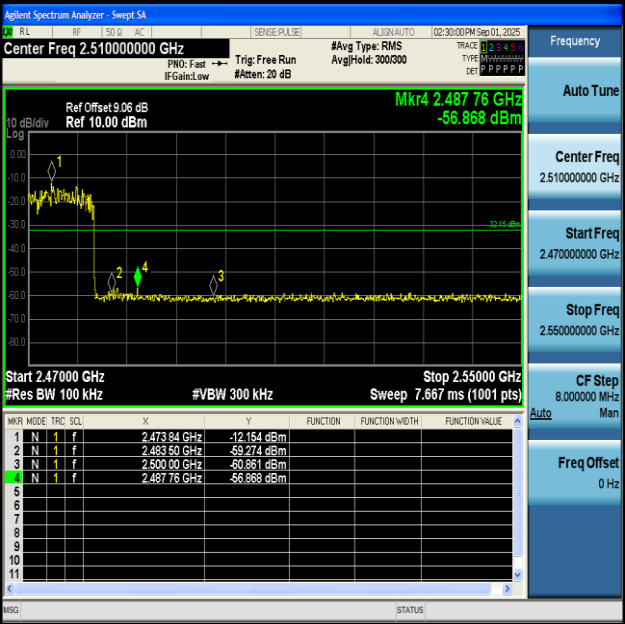
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs

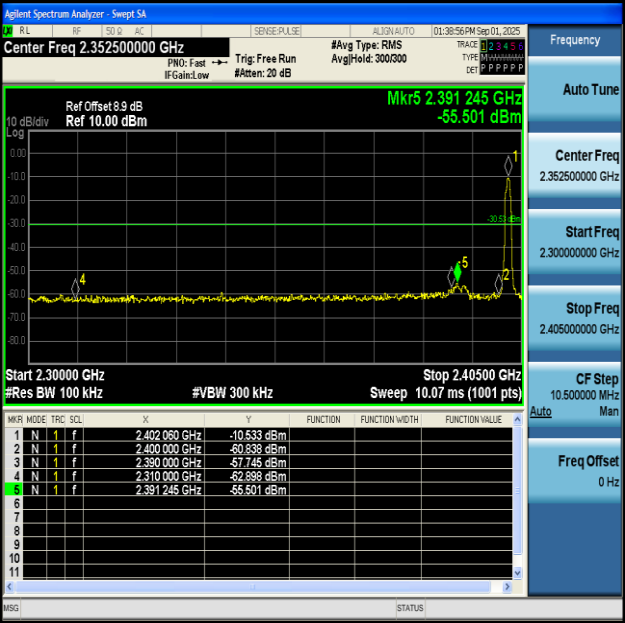




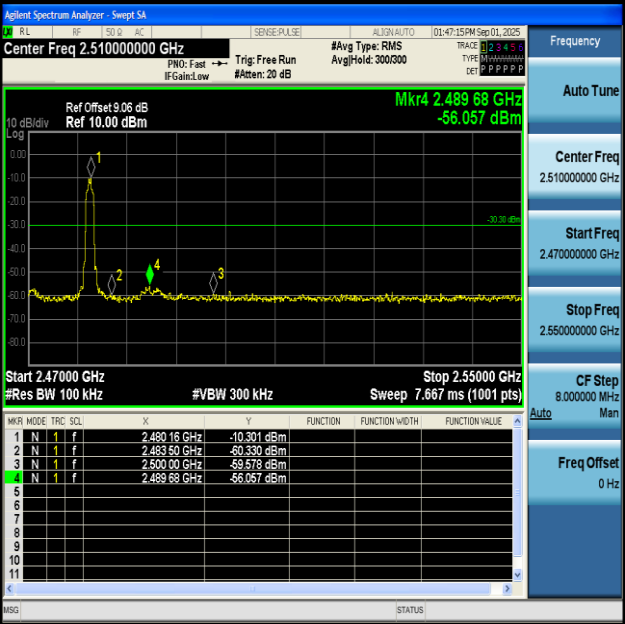
DH5-Ant1-Hop_2402-PASS



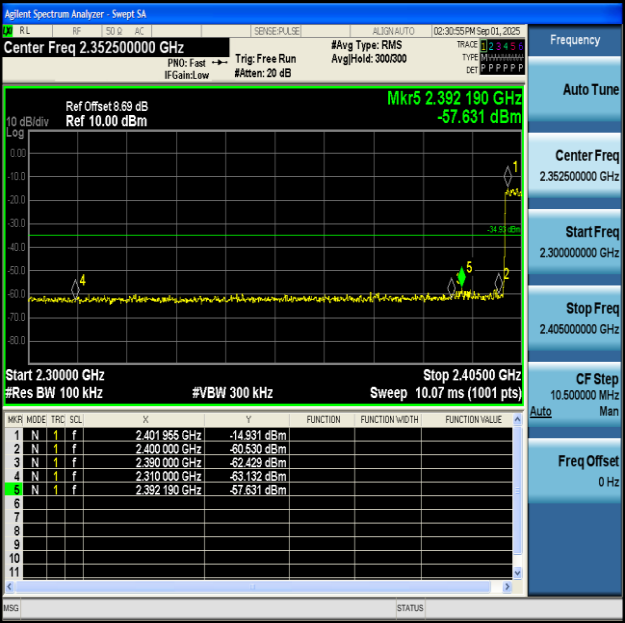
DH5-Ant1-Hop_2480-PASS



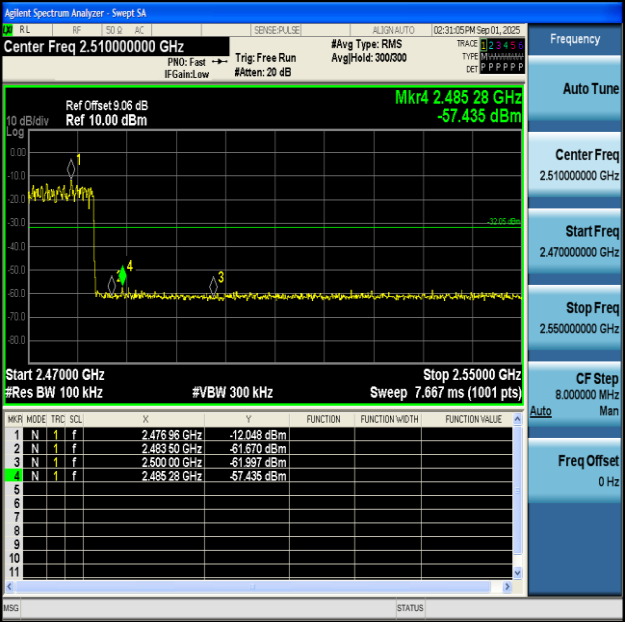
2DH5-Ant1-2402-PASS



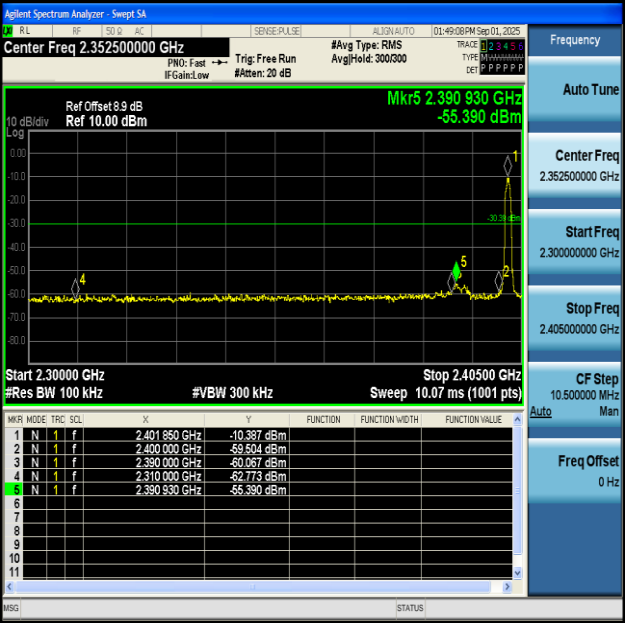
2DH5-Ant1-2480-PASS



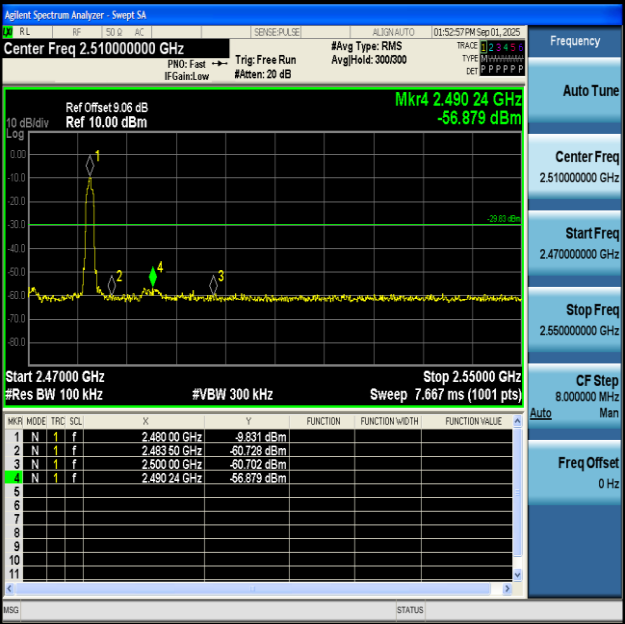
2DH5-Ant1-Hop_2402-PASS



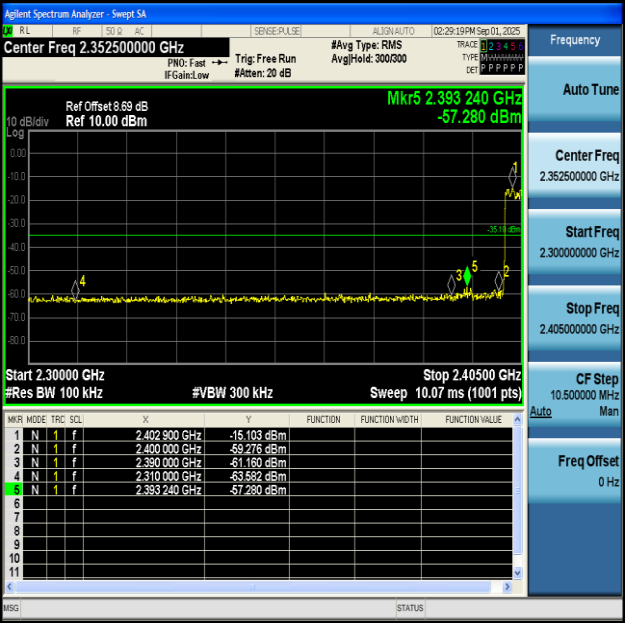
2DH5-Ant1-Hop_2480-PASS



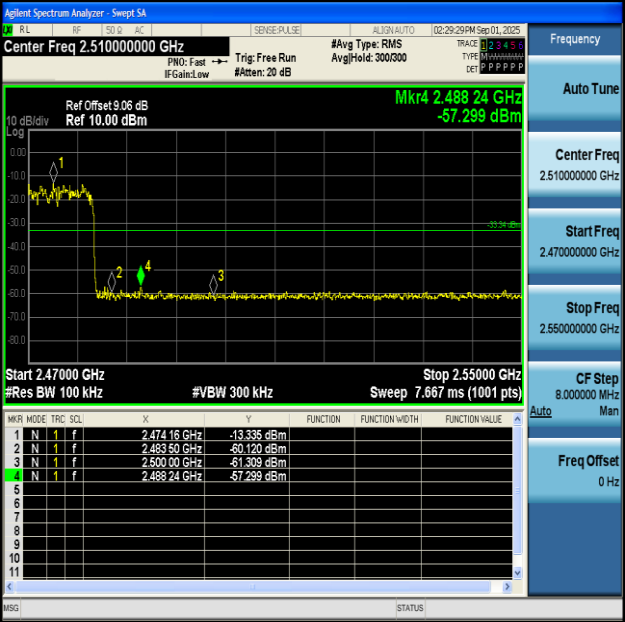
3DH5-Ant1-2402-PASS



3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS



3DH5-Ant1-Hop_2480-PASS

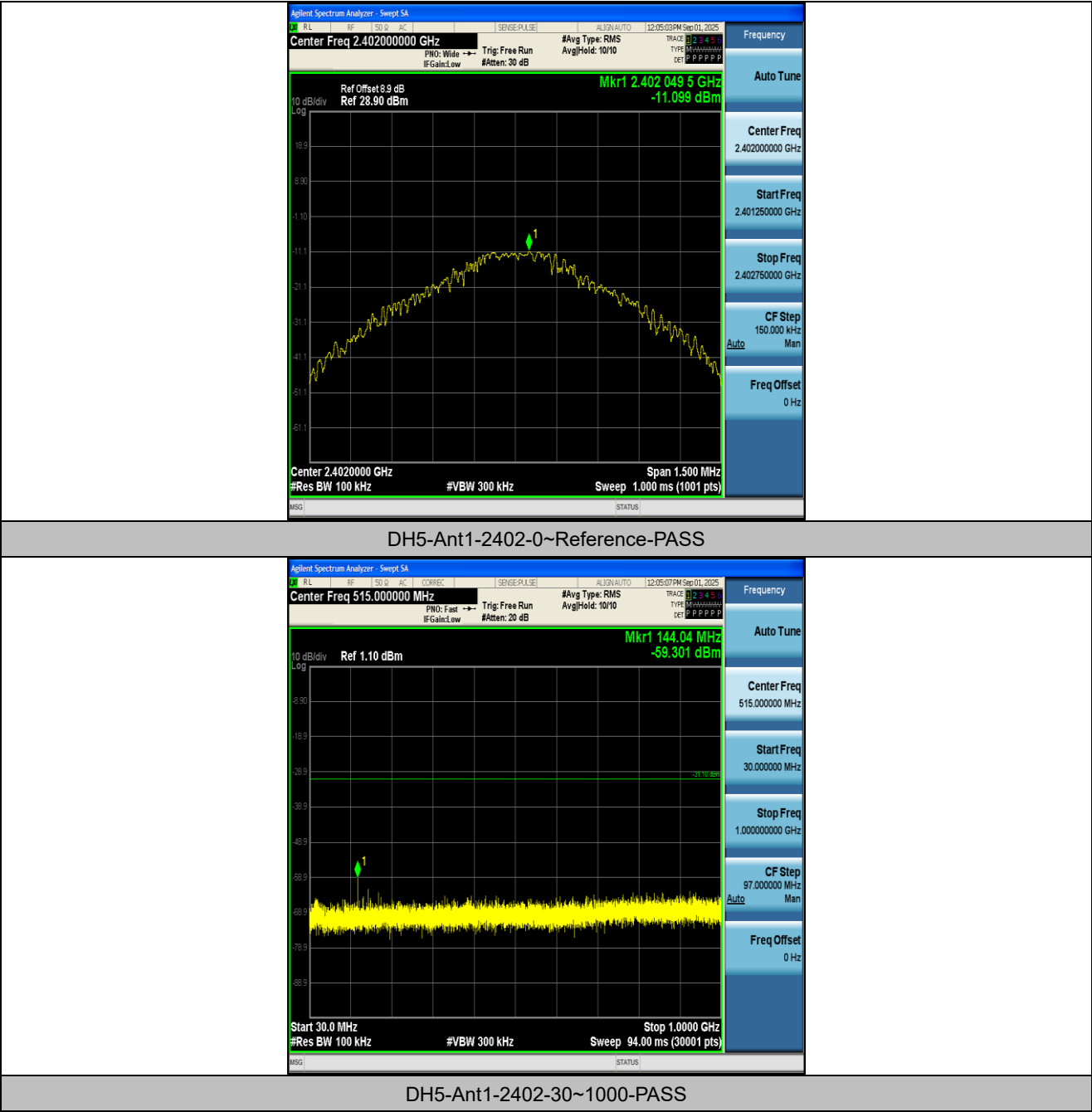
Appendix H: Conducted Spurious Emission

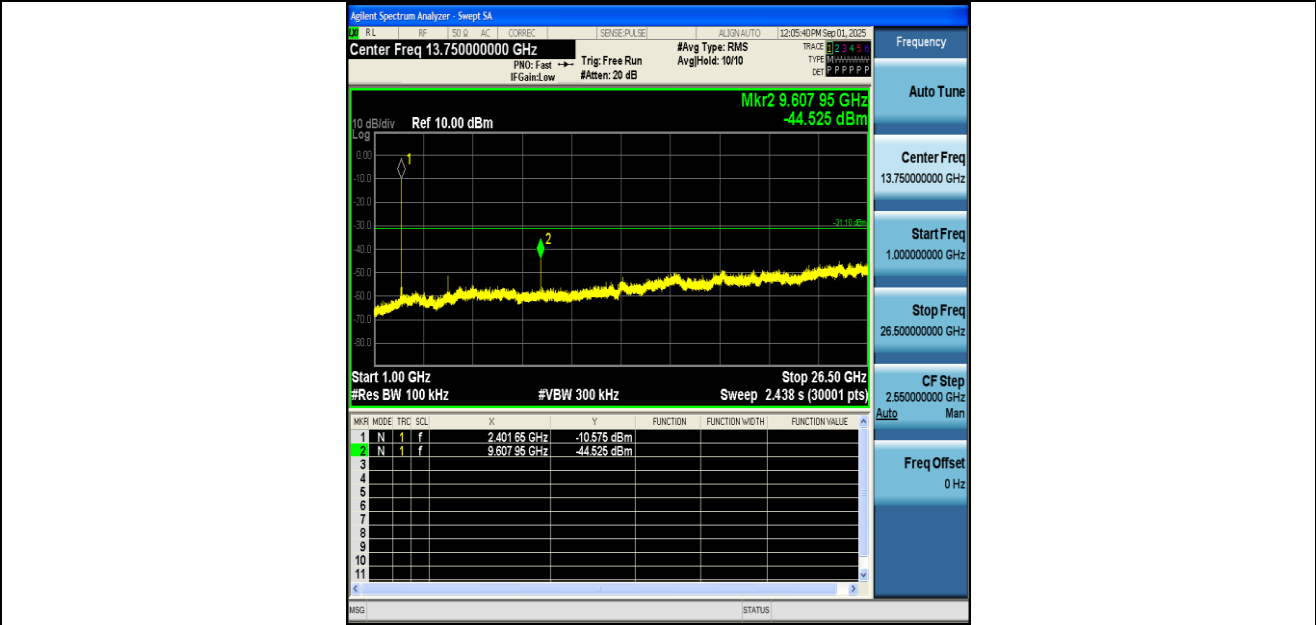
Test Result

Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-11.10	-11.10	---	PASS
DH5	Ant1	2402	30~1000	-11.10	-59.3	≤-31.1	PASS
DH5	Ant1	2402	1000~26500	-11.10	-44.53	≤-31.1	PASS
DH5	Ant1	2441	0~Reference	-10.59	-10.59	---	PASS
DH5	Ant1	2441	30~1000	-10.59	-59.19	≤-30.59	PASS
DH5	Ant1	2441	1000~26500	-10.59	-39.4	≤-30.59	PASS
DH5	Ant1	2480	0~Reference	-9.89	-9.89	---	PASS
DH5	Ant1	2480	30~1000	-9.89	-59.1	≤-29.89	PASS
DH5	Ant1	2480	1000~26500	-9.89	-44.74	≤-29.89	PASS
2DH5	Ant1	2402	0~Reference	-15.19	-15.19	---	PASS
2DH5	Ant1	2402	30~1000	-15.19	-61.62	≤-35.19	PASS
2DH5	Ant1	2402	1000~26500	-15.19	-45.05	≤-35.19	PASS
2DH5	Ant1	2441	0~Reference	-13.78	-13.78	---	PASS
2DH5	Ant1	2441	30~1000	-13.78	-60.24	≤-33.78	PASS
2DH5	Ant1	2441	1000~26500	-13.78	-40.33	≤-33.78	PASS
2DH5	Ant1	2480	0~Reference	-11.12	-11.12	---	PASS
2DH5	Ant1	2480	30~1000	-11.12	-59.03	≤-31.12	PASS
2DH5	Ant1	2480	1000~26500	-11.12	-44.8	≤-31.12	PASS
3DH5	Ant1	2402	0~Reference	-12.30	-12.30	---	PASS
3DH5	Ant1	2402	30~1000	-12.30	-59.82	≤-32.3	PASS
3DH5	Ant1	2402	1000~26500	-12.30	-45.39	≤-32.3	PASS
3DH5	Ant1	2441	0~Reference	-9.89	-9.89	---	PASS
3DH5	Ant1	2441	30~1000	-9.89	-60.1	≤-29.89	PASS
3DH5	Ant1	2441	1000~26500	-9.89	-40	≤-29.89	PASS
3DH5	Ant1	2480	0~Reference	-10.08	-10.08	---	PASS
3DH5	Ant1	2480	30~1000	-10.08	-60.33	≤-30.08	PASS
3DH5	Ant1	2480	1000~26500	-10.08	-44.87	≤-30.08	PASS

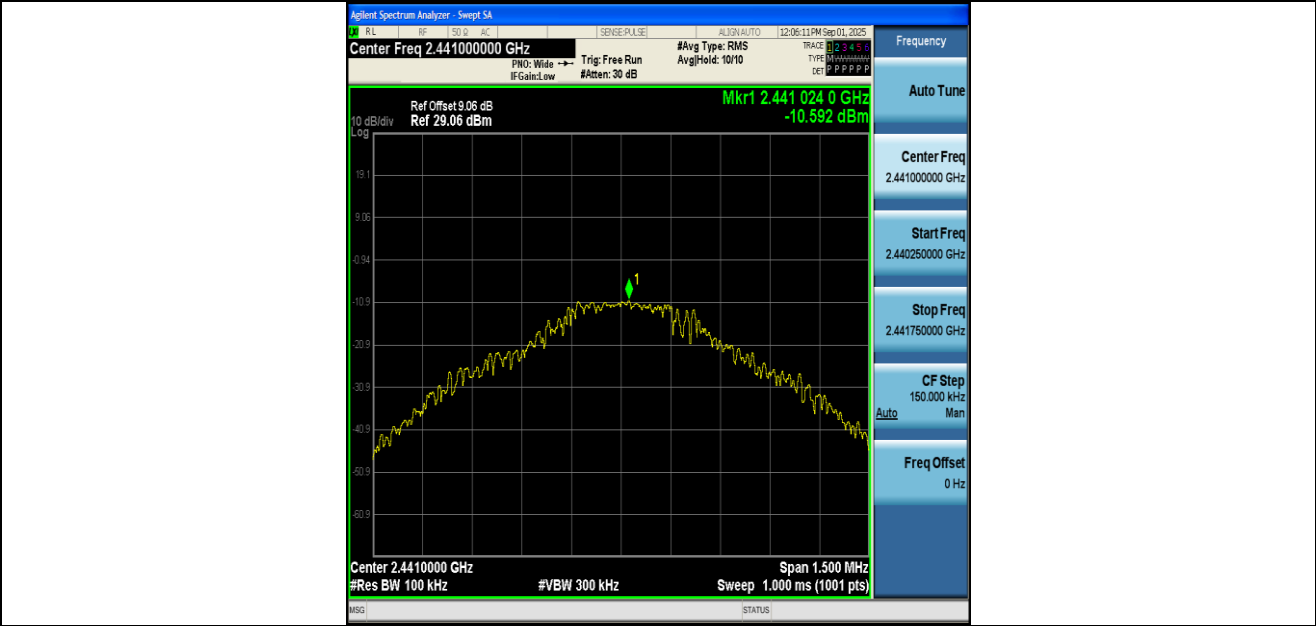
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.

Test Graphs

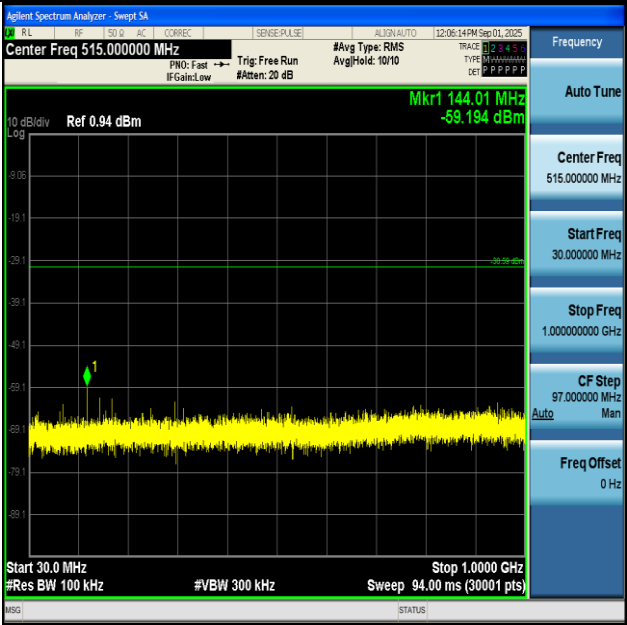




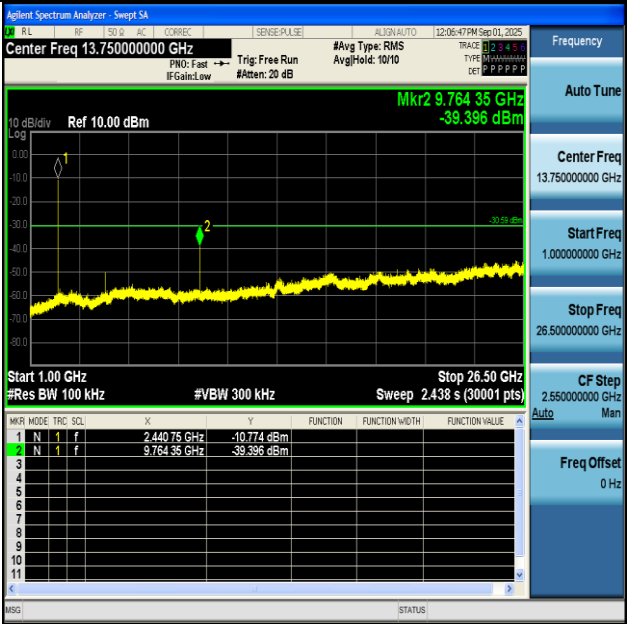
DH5-Ant1-2402-1000~26500-PASS



DH5-Ant1-2441-0~Reference-PASS



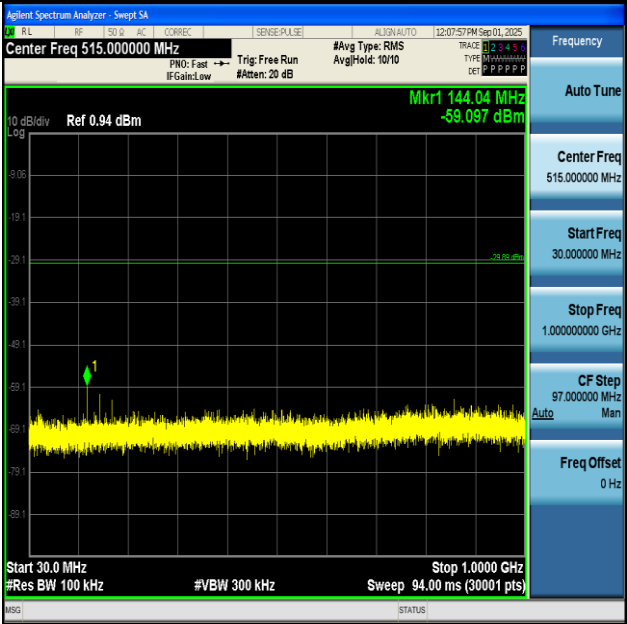
DH5-Ant1-2441-30~1000-PASS



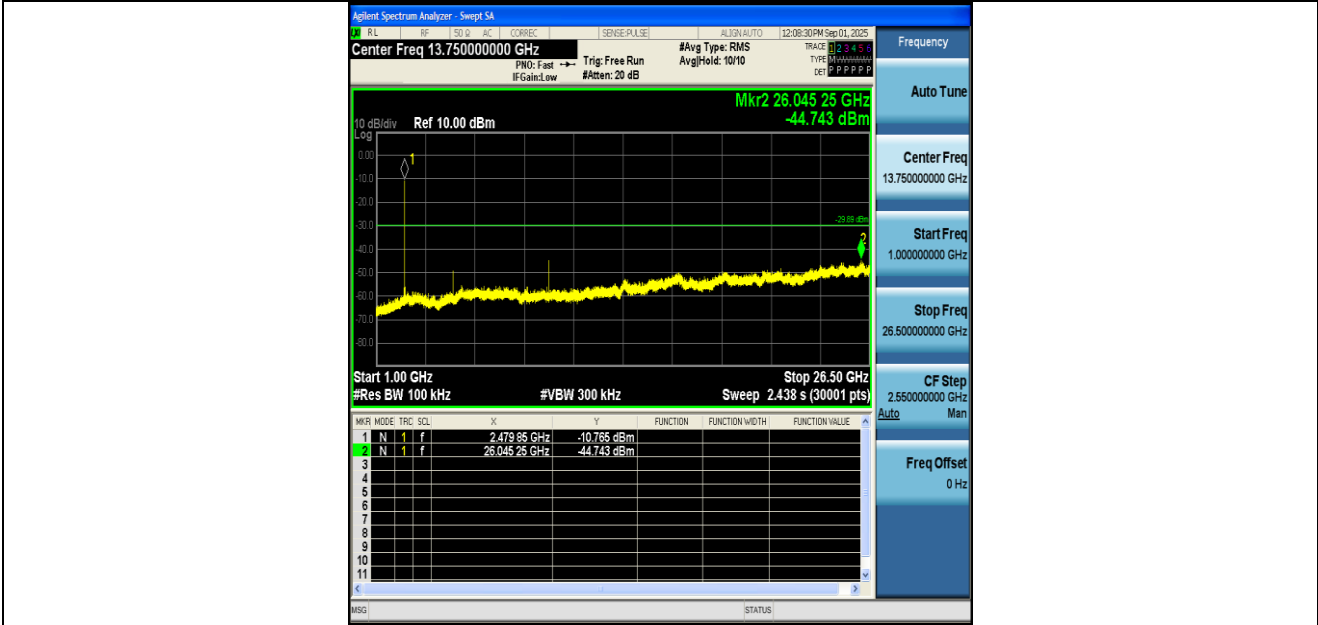
DH5-Ant1-2441-1000~26500-PASS



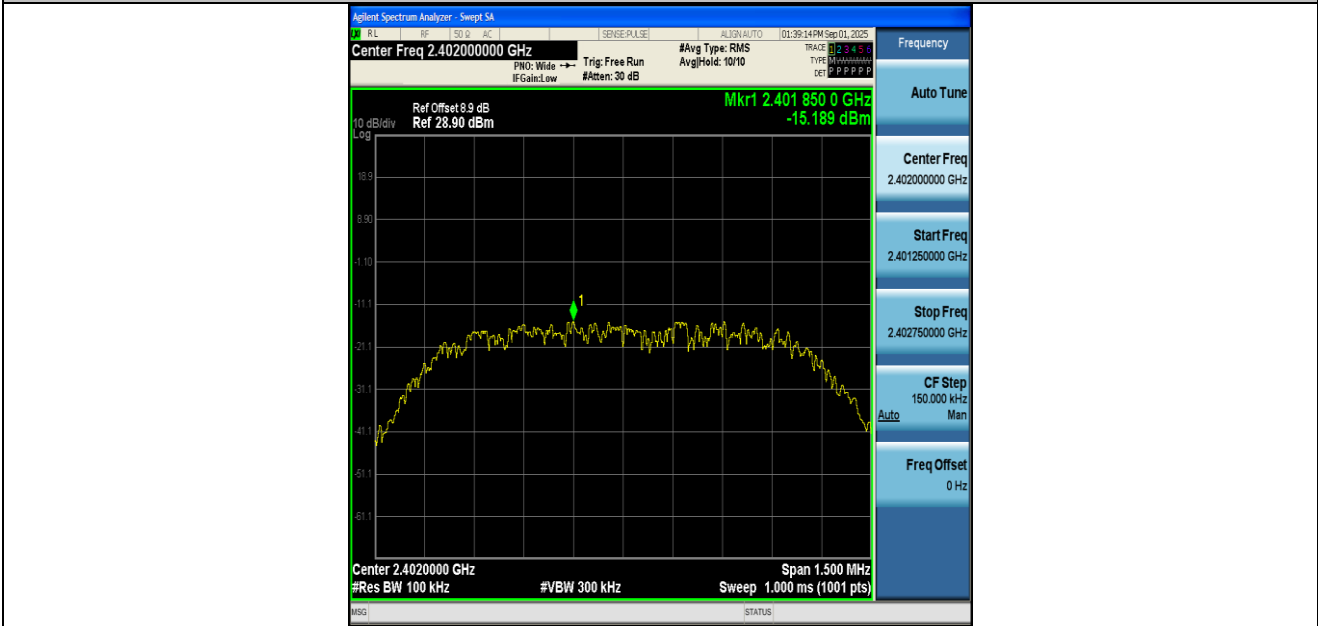
DH5-Ant1-2480-0~Reference-PASS



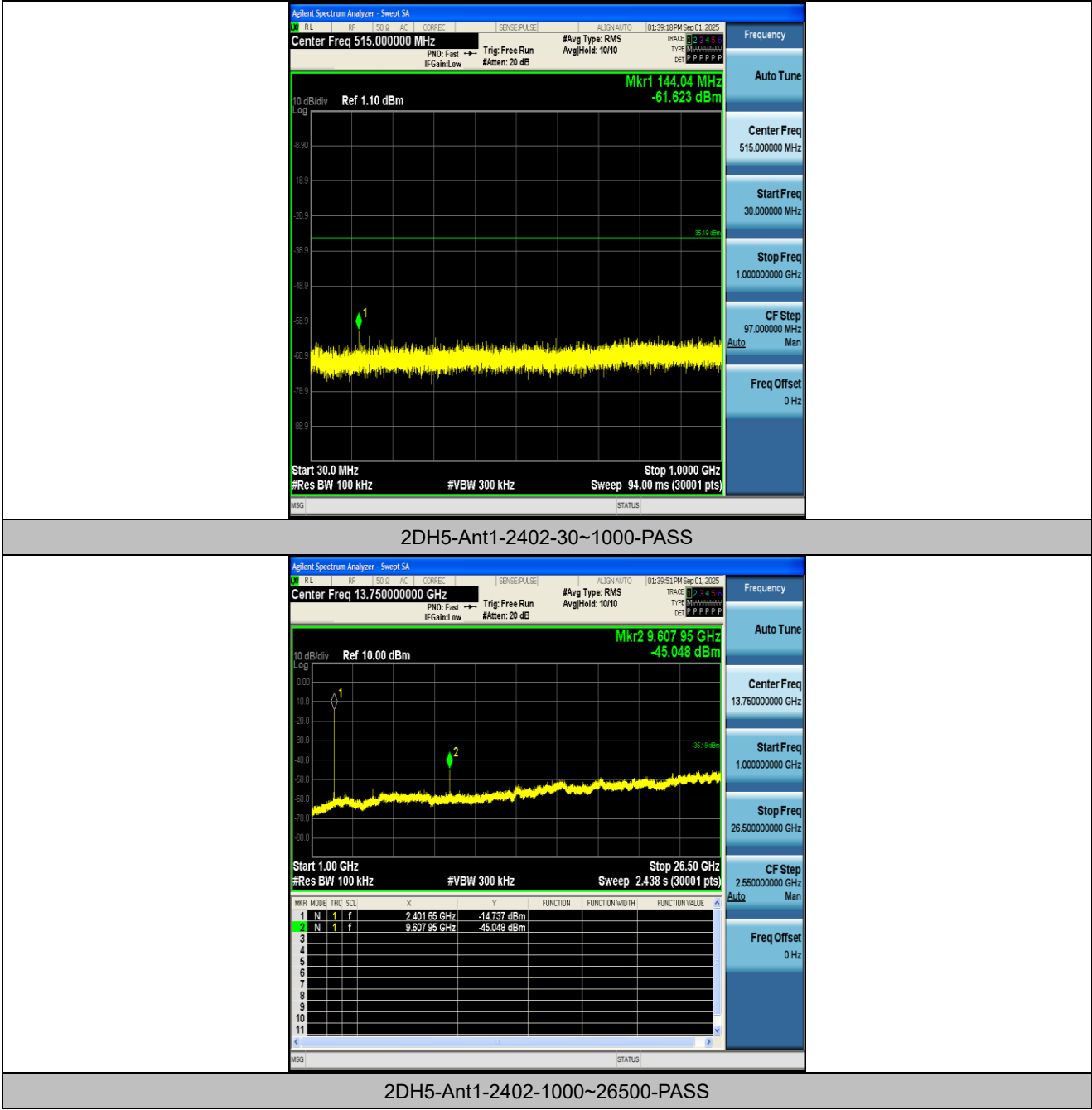
DH5-Ant1-2480-30~1000-PASS

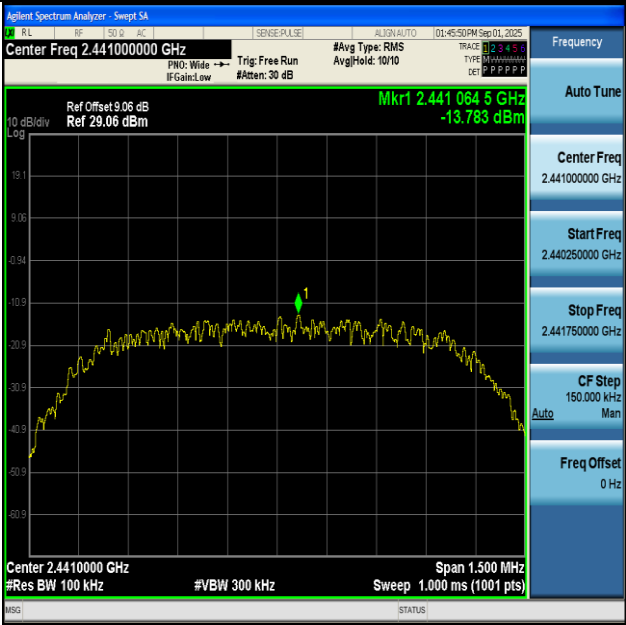


DH5-Ant1-2480-1000~26500-PASS

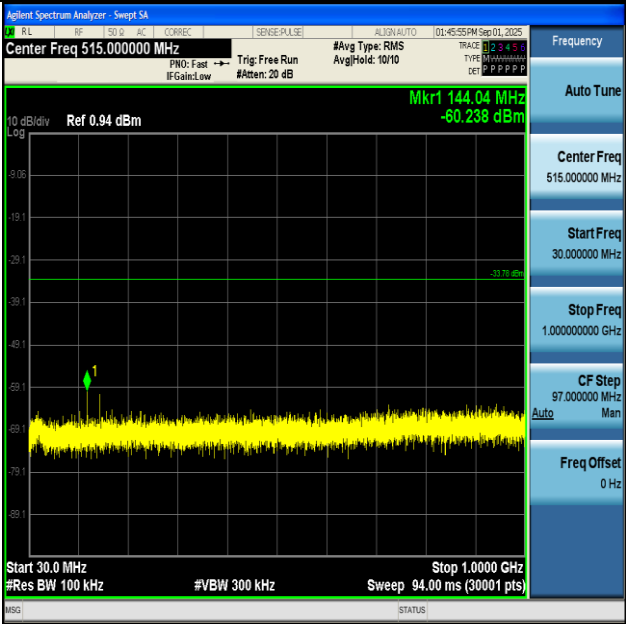


2DH5-Ant1-2402-0~Reference-PASS

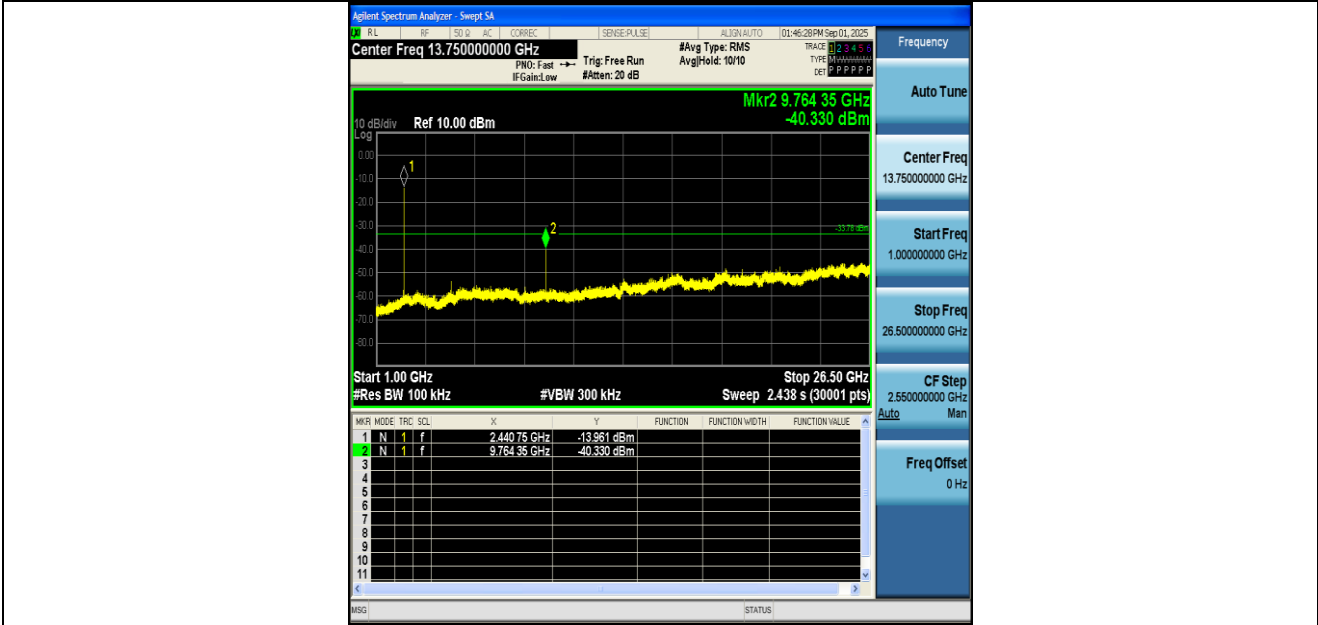




2DH5-Ant1-2441-0~Reference-PASS



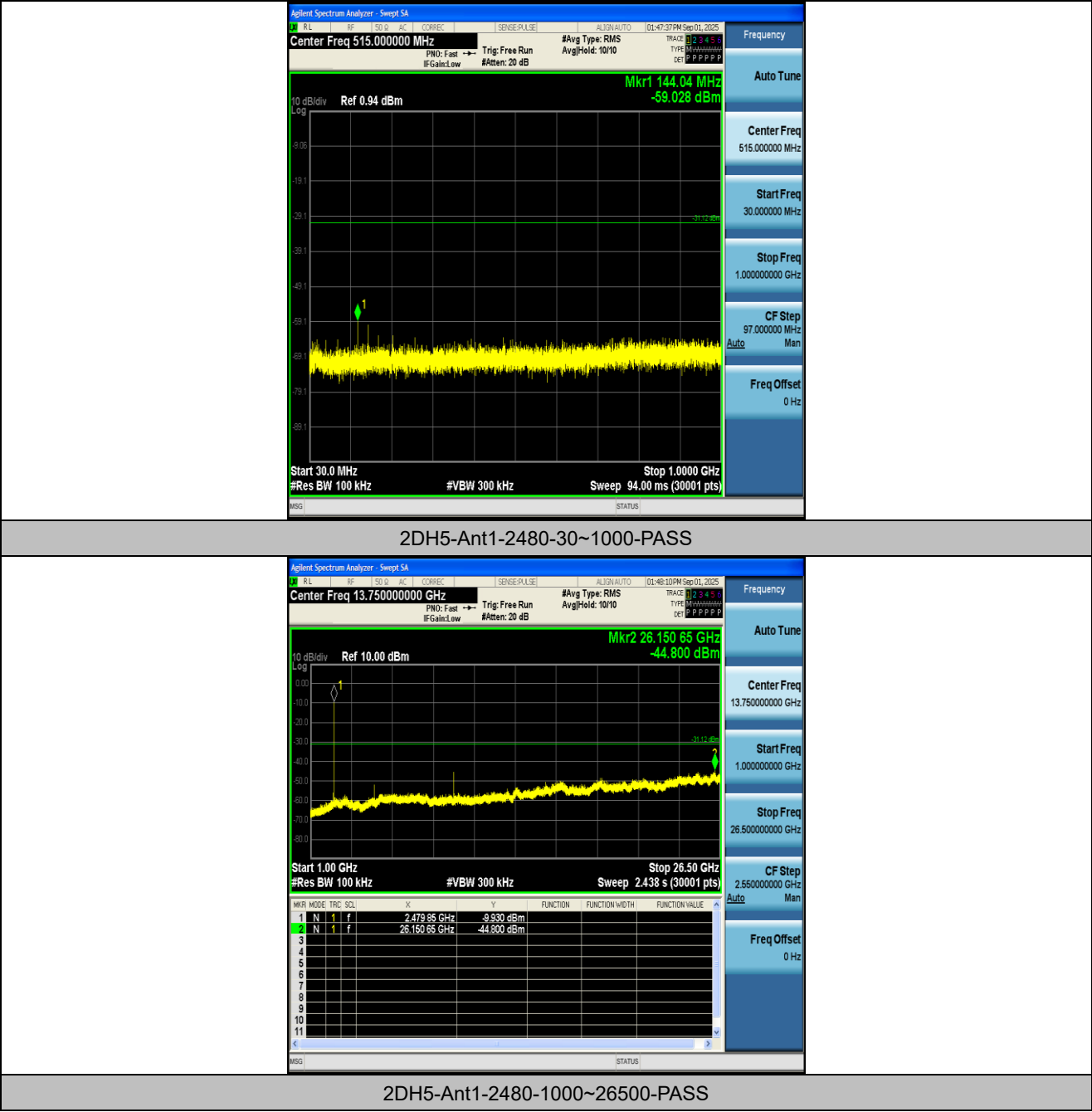
2DH5-Ant1-2441-30~1000-PASS



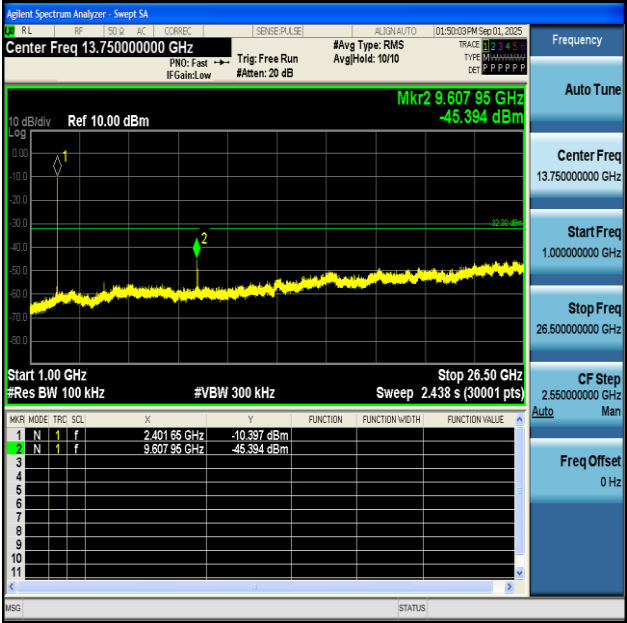
2DH5-Ant1-2441-1000~26500-PASS



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



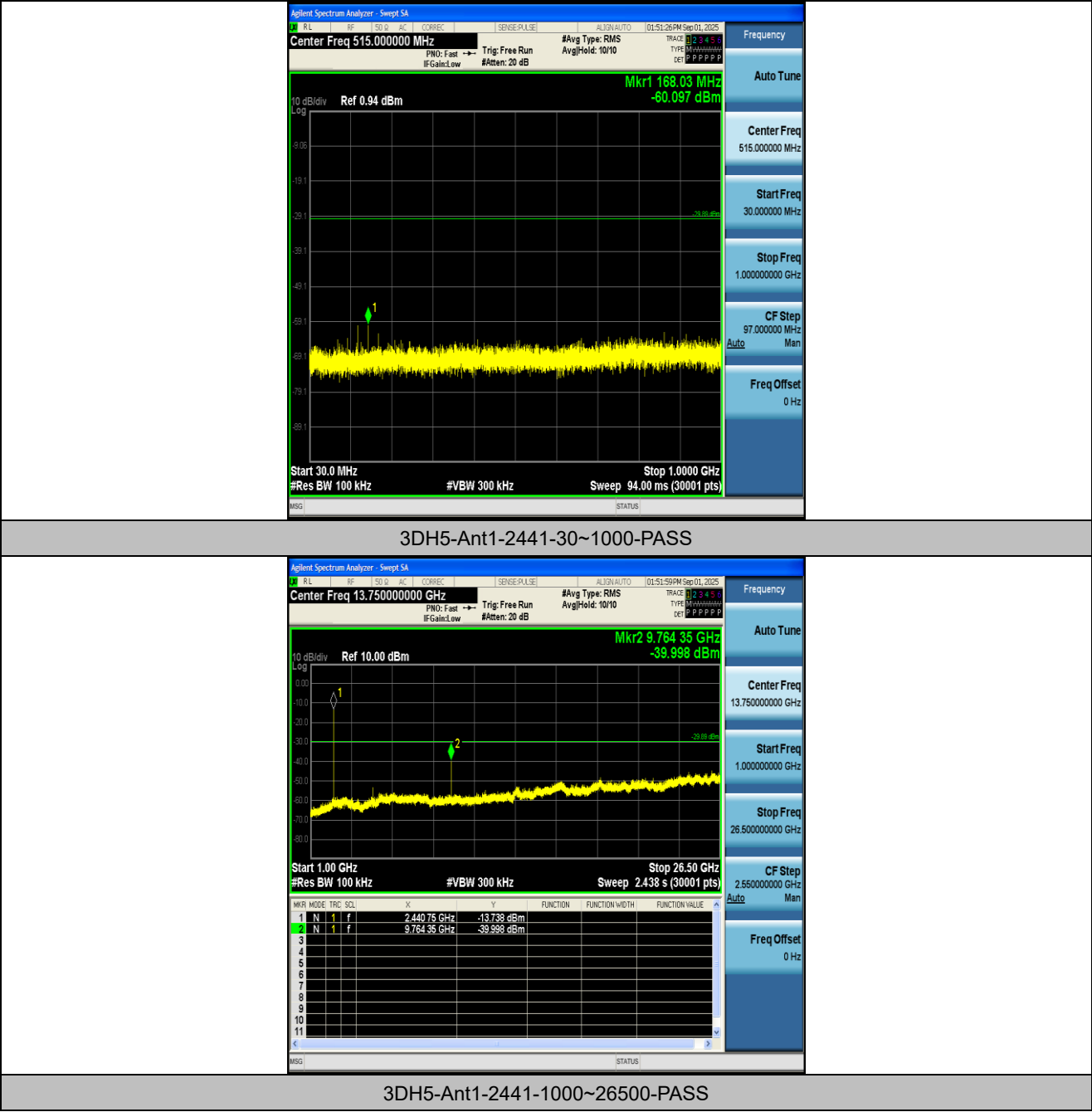


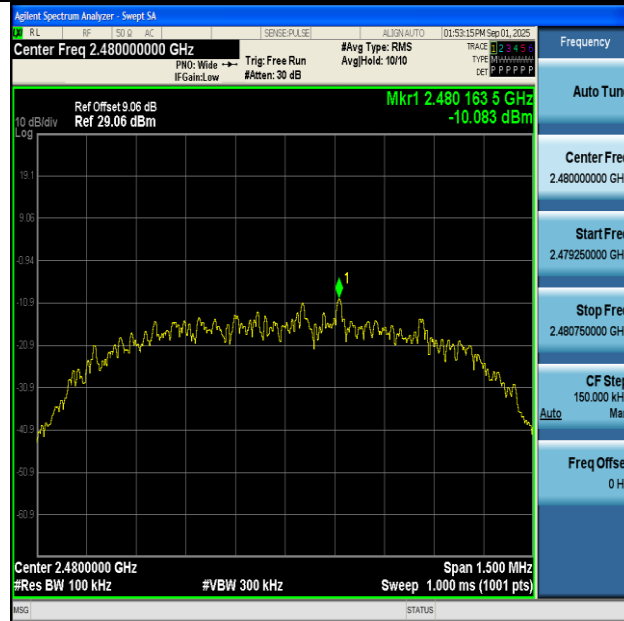


3DH5-Ant1-2402-1000~26500-PASS

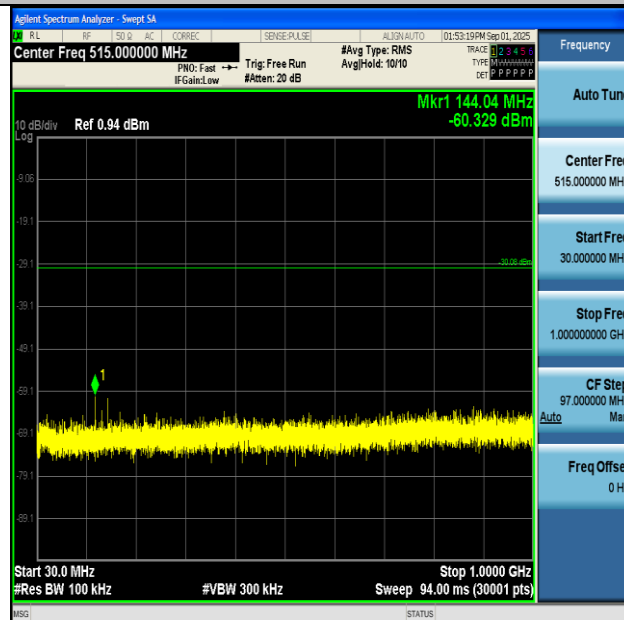


3DH5-Ant1-2441-0~Reference-PASS

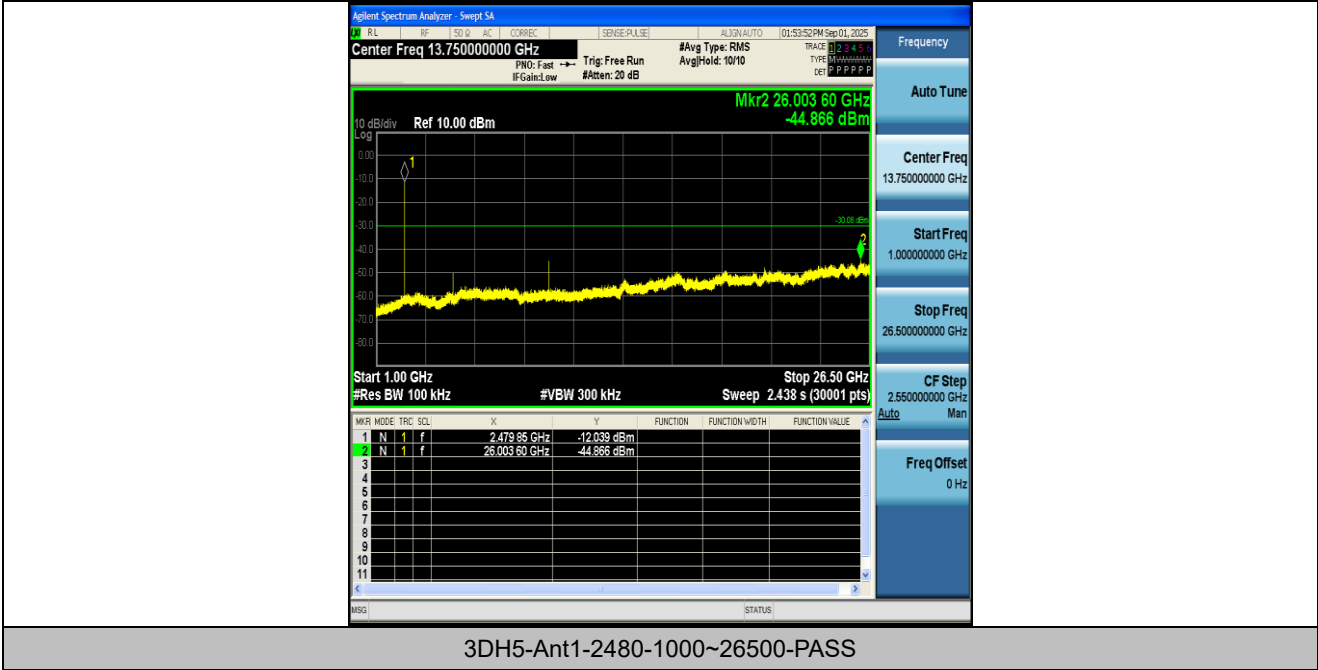




3DH5-Ant1-2480-0~Reference-PASS



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



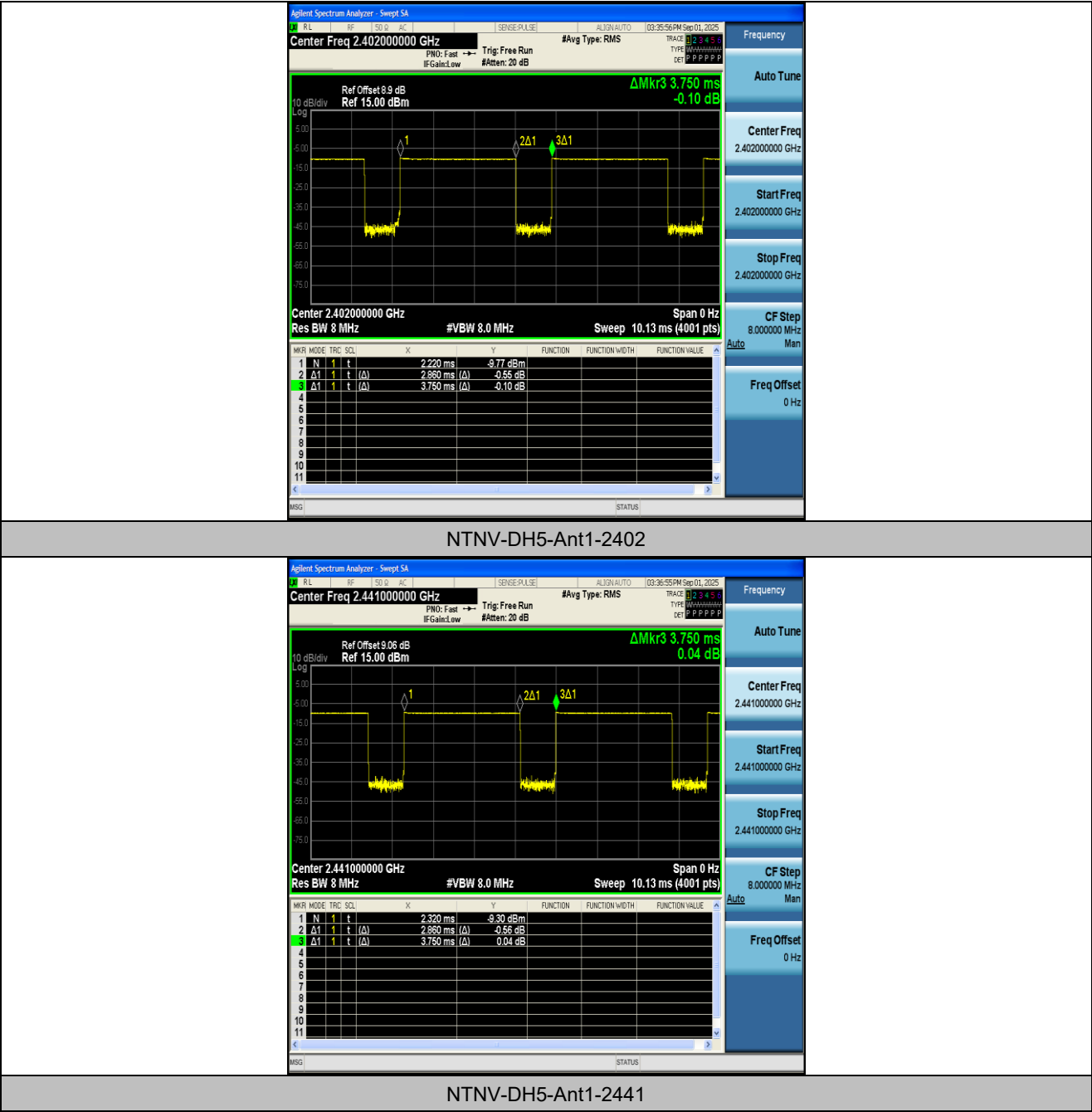
Appendix I: Duty Cycle

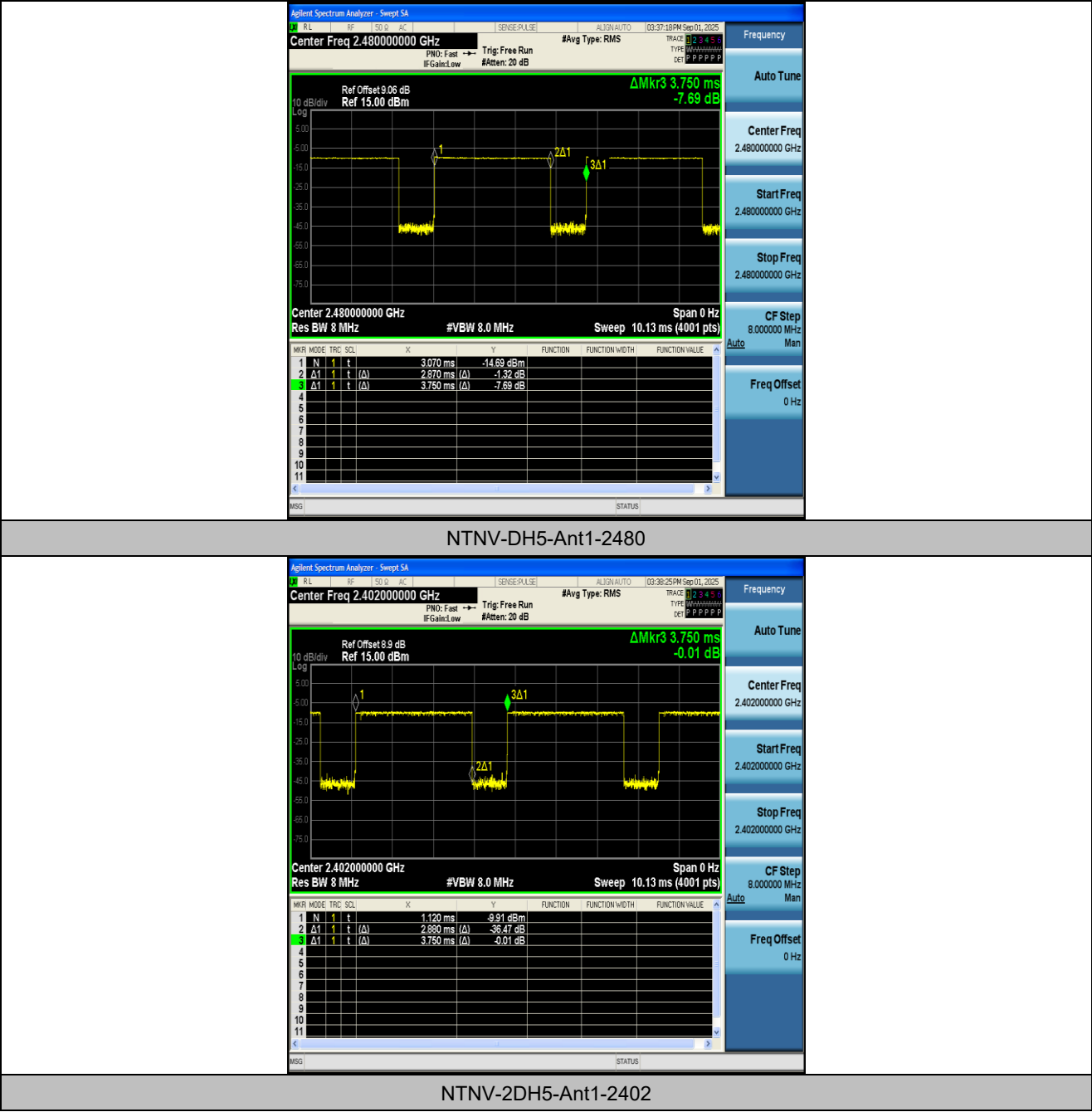
Test Result

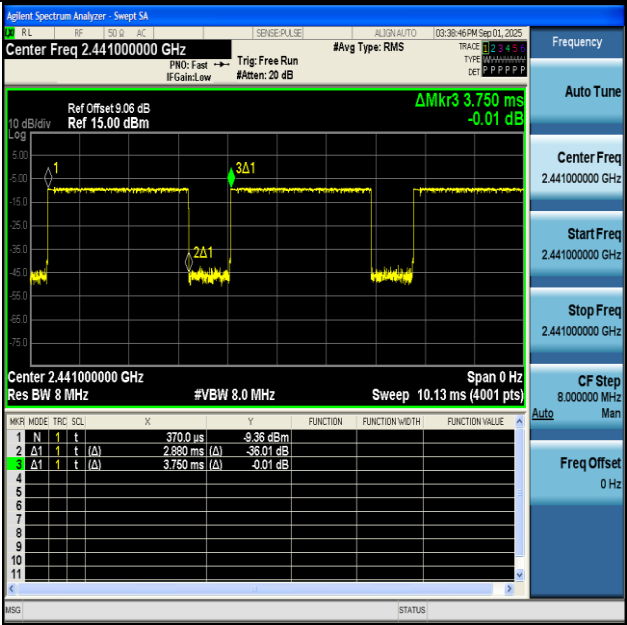
Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.86	3.75	76.27	1.18
DH5	Ant1	2441	2.86	3.75	76.27	1.18
DH5	Ant1	2480	2.87	3.75	76.53	1.16
2DH5	Ant1	2402	2.88	3.75	76.80	1.15
2DH5	Ant1	2441	2.88	3.75	76.80	1.15
2DH5	Ant1	2480	2.88	3.75	76.80	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	2.88	3.75	76.80	1.15

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

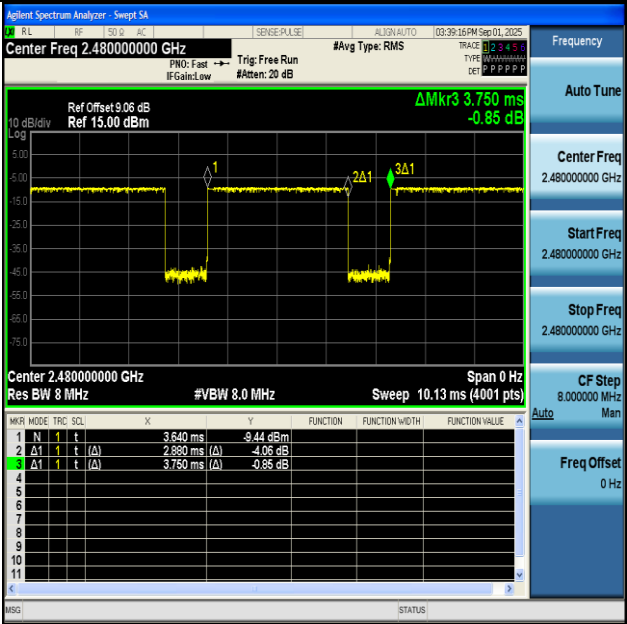
Test Graphs







NTNV-2DH5-Ant1-2441



NTNV-2DH5-Ant1-2480

