



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

Product Name: WIRELESS SPEAKER & LED LAMP

Trade Mark: SARINA

Test Model: SA-RBSP-BLK

FCC ID: 2AANZRBSP

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	1.047	2401.472	2402.519	---	---
DH5	Ant1	2441	1.047	2440.472	2441.519	---	---
DH5	Ant1	2480	1.047	2479.475	2480.522	---	---
2DH5	Ant1	2402	1.326	2401.343	2402.669	---	---
2DH5	Ant1	2441	1.347	2440.328	2441.675	---	---
2DH5	Ant1	2480	1.329	2479.346	2480.675	---	---

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





Test Graphs





DH5-Ant1-2480



2DH5-Ant1-2402





2DH5-Ant1-2441



2DH5-Ant1-2480





Appendix B: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.95849	2401.5156	2402.4741	---	---
DH5	Ant1	2441	0.97315	2440.5055	2441.4786	---	---
DH5	Ant1	2480	0.97586	2479.5099	2480.4858	---	---
2DH5	Ant1	2402	1.2326	2401.3919	2402.6245	---	---
2DH5	Ant1	2441	1.2561	2440.3763	2441.6324	---	---
2DH5	Ant1	2480	1.2505	2479.3816	2480.6321	---	---

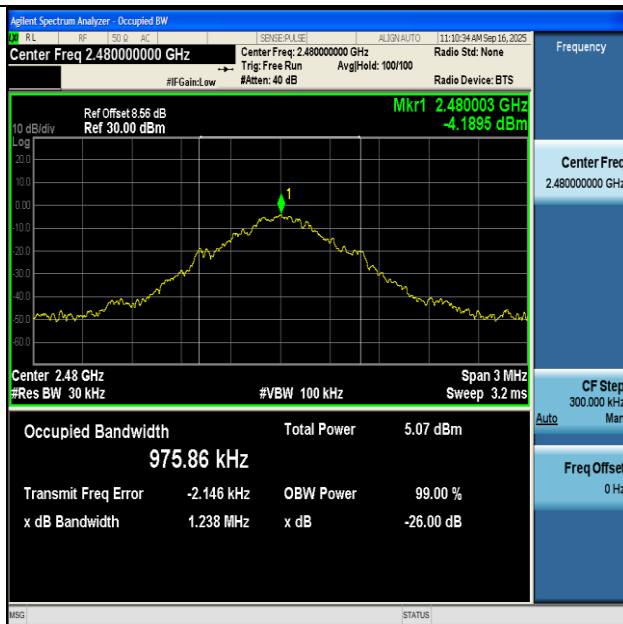
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



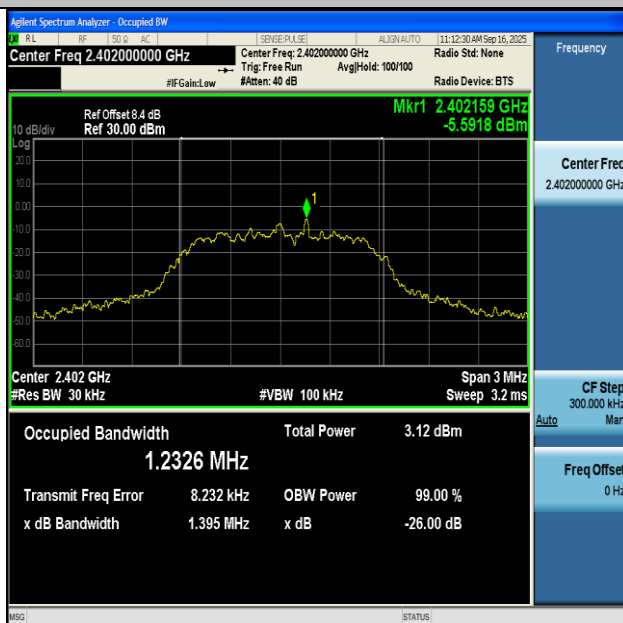


Test Graphs



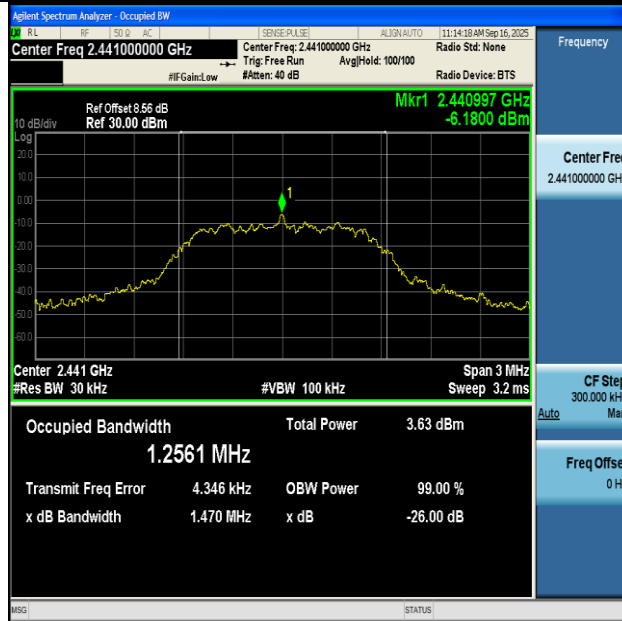


DH5-Ant1-2480



2DH5-Ant1-2402





2DH5-Ant1-2441



2DH5-Ant1-2480





Appendix C: Maximum peak conducted output power

Test Result

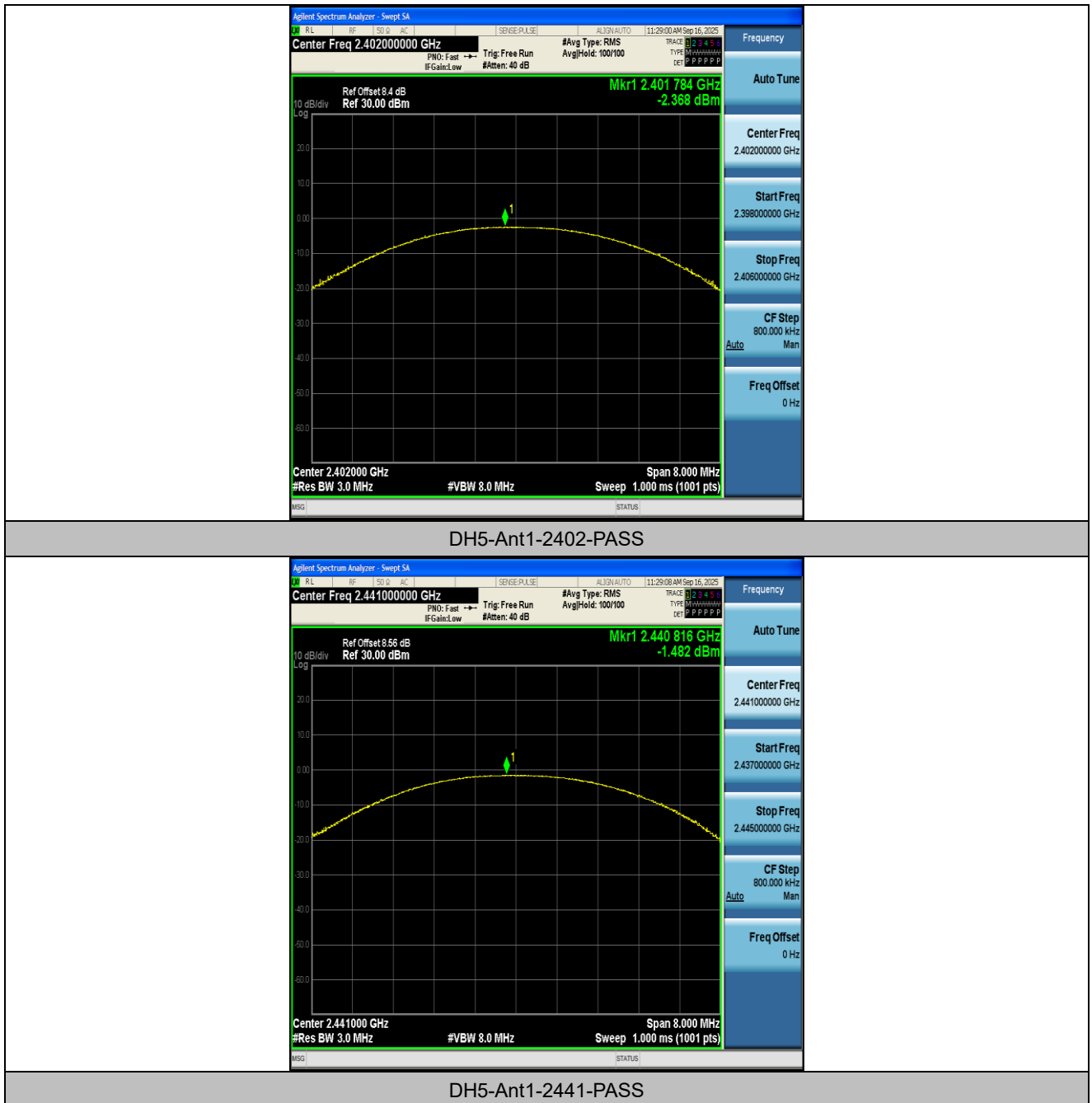
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	-2.37	≤20.97	PASS
DH5	Ant1	2441	-1.48	≤20.97	PASS
DH5	Ant1	2480	-1.21	≤20.97	PASS
2DH5	Ant1	2402	-1.69	≤20.97	PASS
2DH5	Ant1	2441	-0.78	≤20.97	PASS
2DH5	Ant1	2480	-0.30	≤20.97	PASS

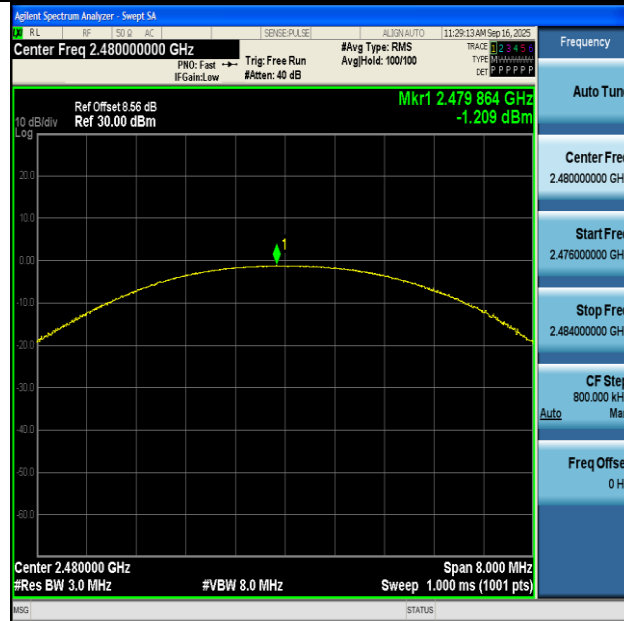
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



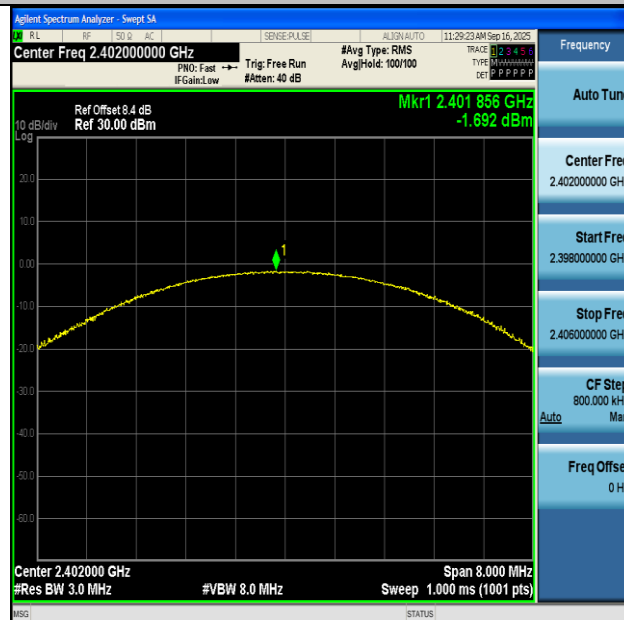


Test Graphs



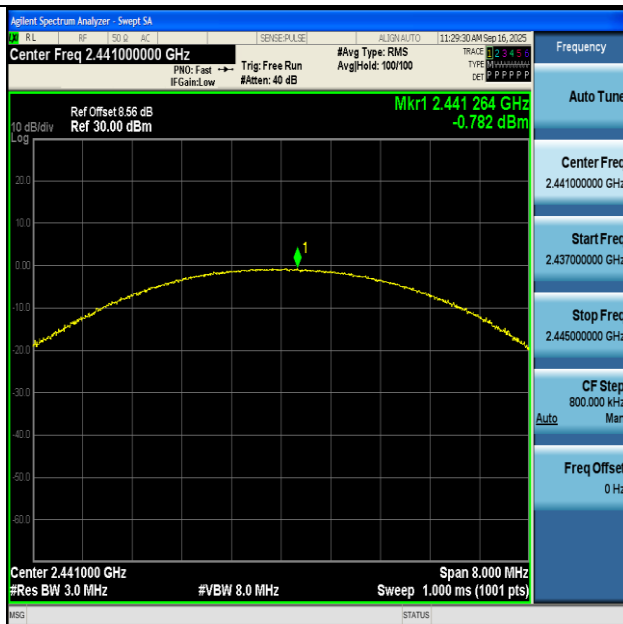


DH5-Ant1-2480-PASS

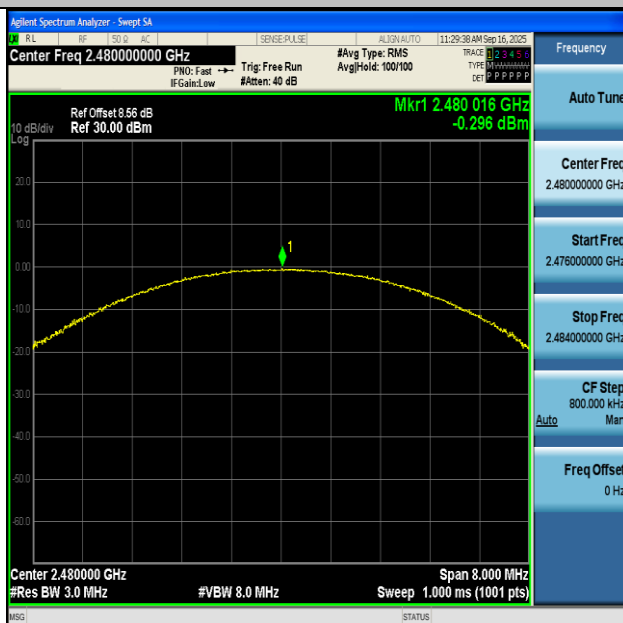


2DH5-Ant1-2402-PASS





2DH5-Ant1-2441-PASS



2DH5-Ant1-2480-PASS





Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	0.994	≥ 0.698	PASS
2DH5	Ant1	Hop	1.028	≥ 0.898	PASS

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





Test Graphs





Appendix E: Time of occupancy

Test Result

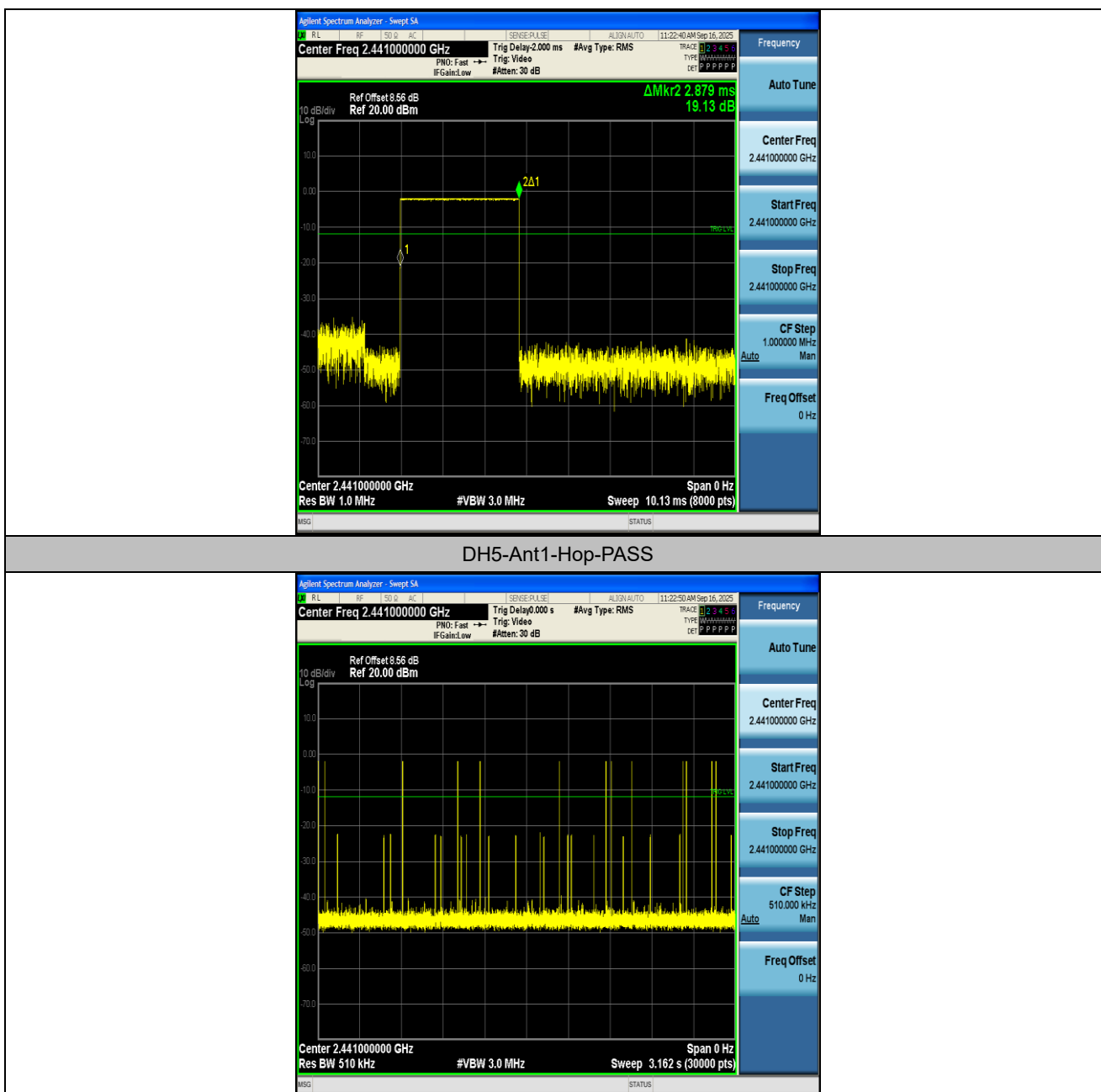
Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.879	130	0.374	≤0.4	PASS
2DH5	Ant1	Hop	2.884	120	0.346	≤0.4	PASS

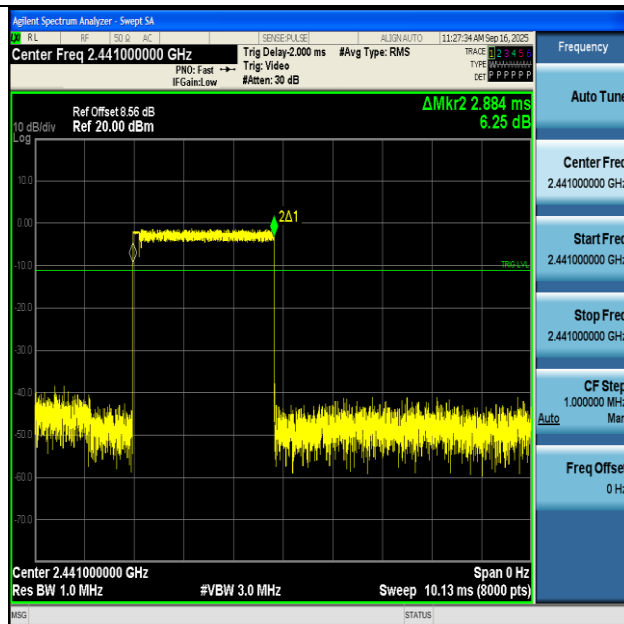
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



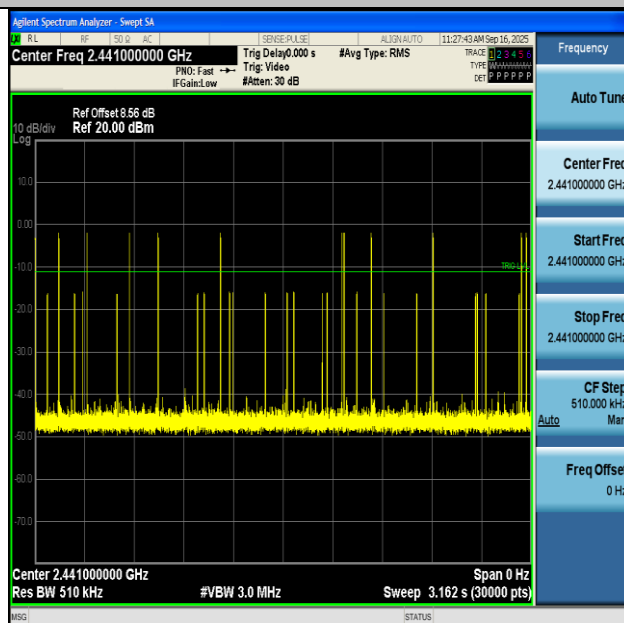


Test Graphs





2DH5-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

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





Test Graphs





Appendix G: Band edge measurements

Test Result

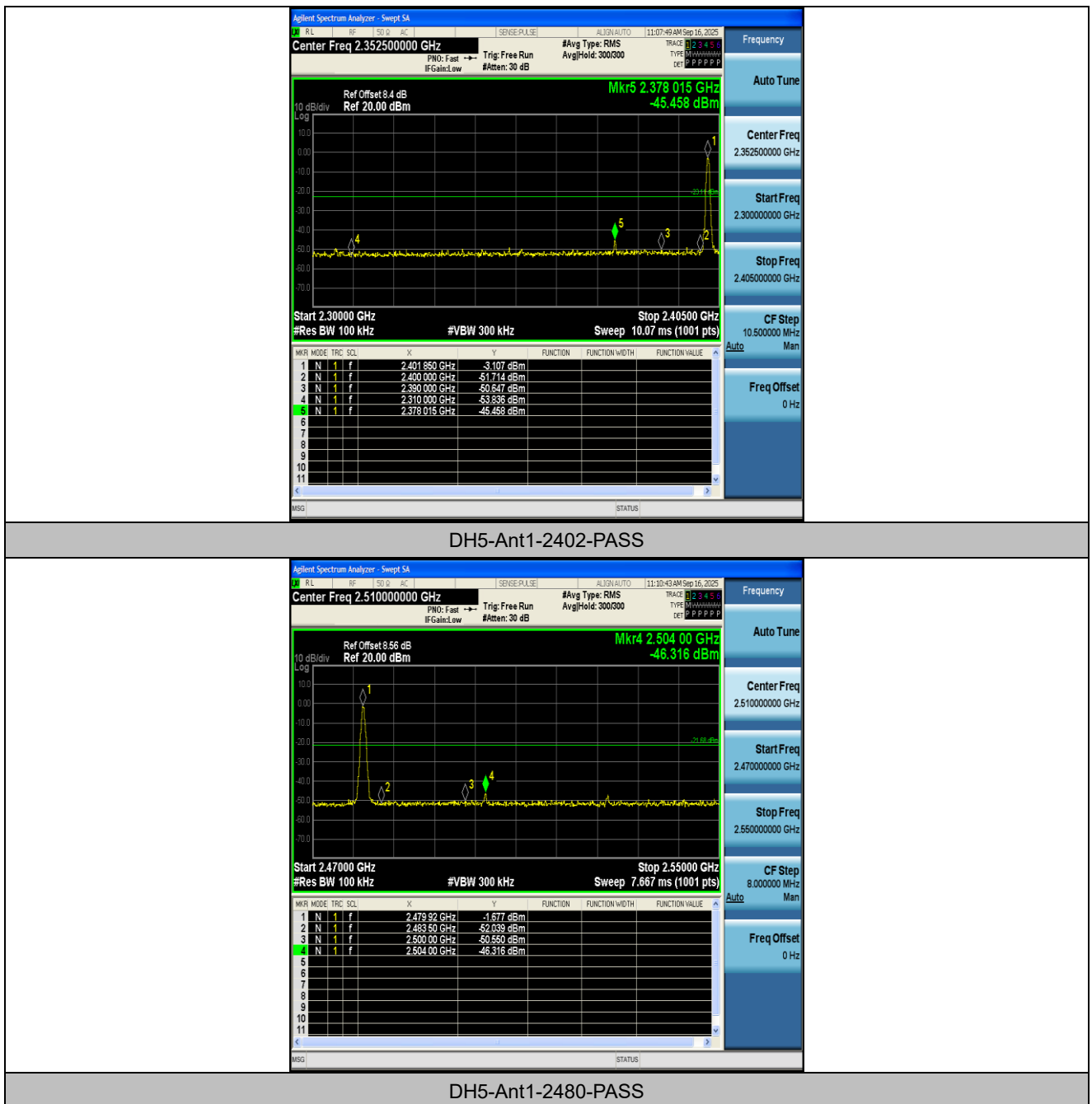
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.11	-45.46	≤ -23.11	PASS
DH5	Ant1	High	2480	-1.68	-46.32	≤ -21.68	PASS
DH5	Ant1	Low	Hop_2402	-3.41	-46.37	≤ -23.41	PASS
DH5	Ant1	High	Hop_2480	-2.43	-46.18	≤ -22.43	PASS
2DH5	Ant1	Low	2402	-3.17	-47.45	≤ -23.17	PASS
2DH5	Ant1	High	2480	-2.47	-48.4	≤ -22.47	PASS
2DH5	Ant1	Low	Hop_2402	-6.48	-46.65	≤ -26.48	PASS
2DH5	Ant1	High	Hop_2480	-3.00	-48.13	≤ -23	PASS

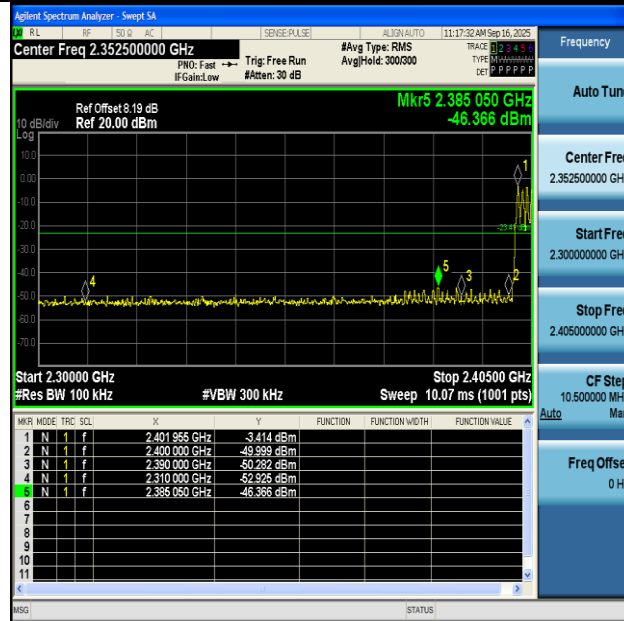
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



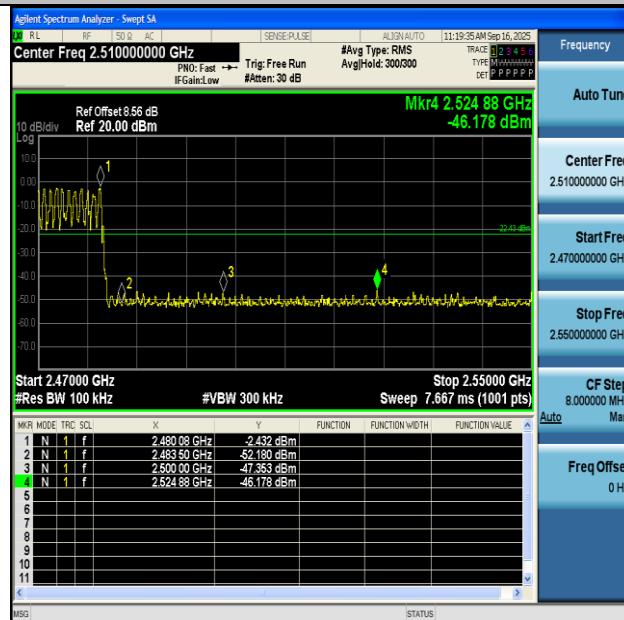


Test Graphs



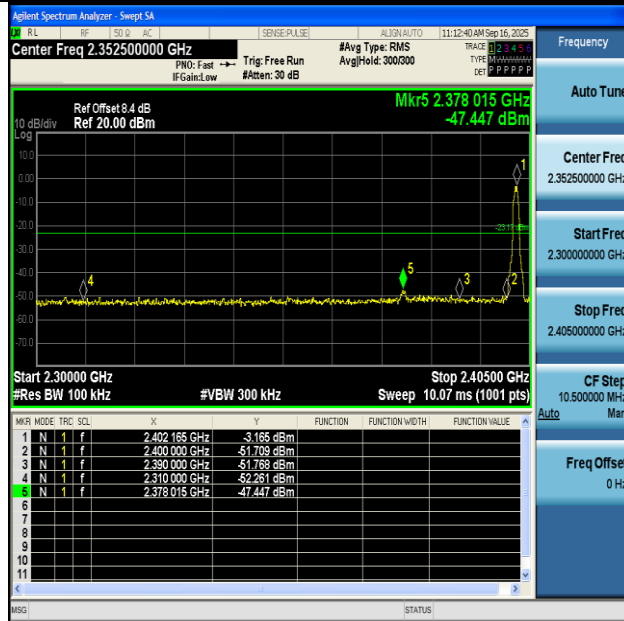


DH5-Ant1-Hop_2402-PASS

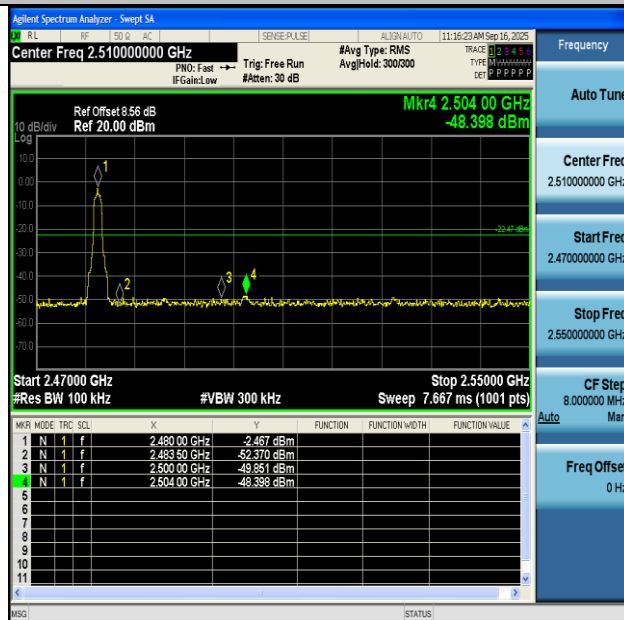


DH5-Ant1-Hop_2480-PASS



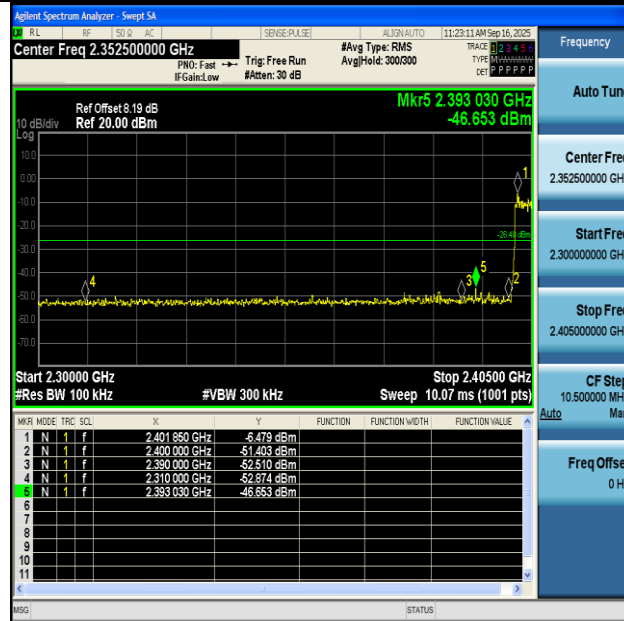


2DH5-Ant1-2402-PASS

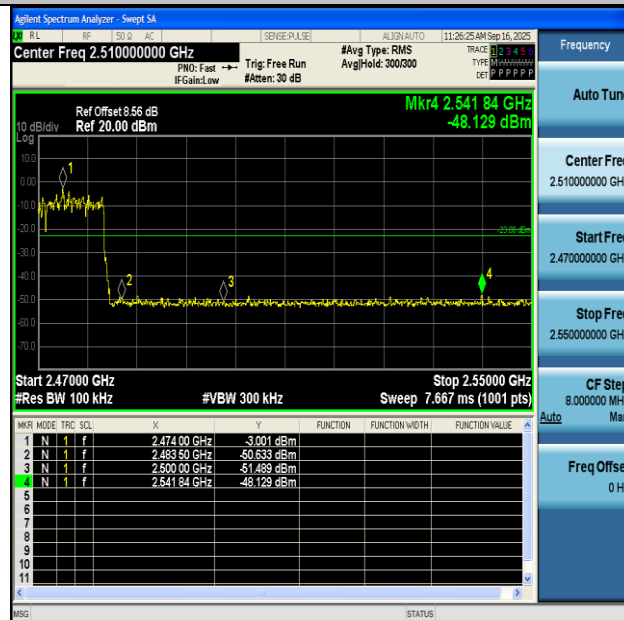


2DH5-Ant1-2480-PASS





2DH5-Ant1-Hop_2402-PASS



2DH5-Ant1-Hop_2480-PASS





Appendix H: Conducted Spurious Emission

Test Result

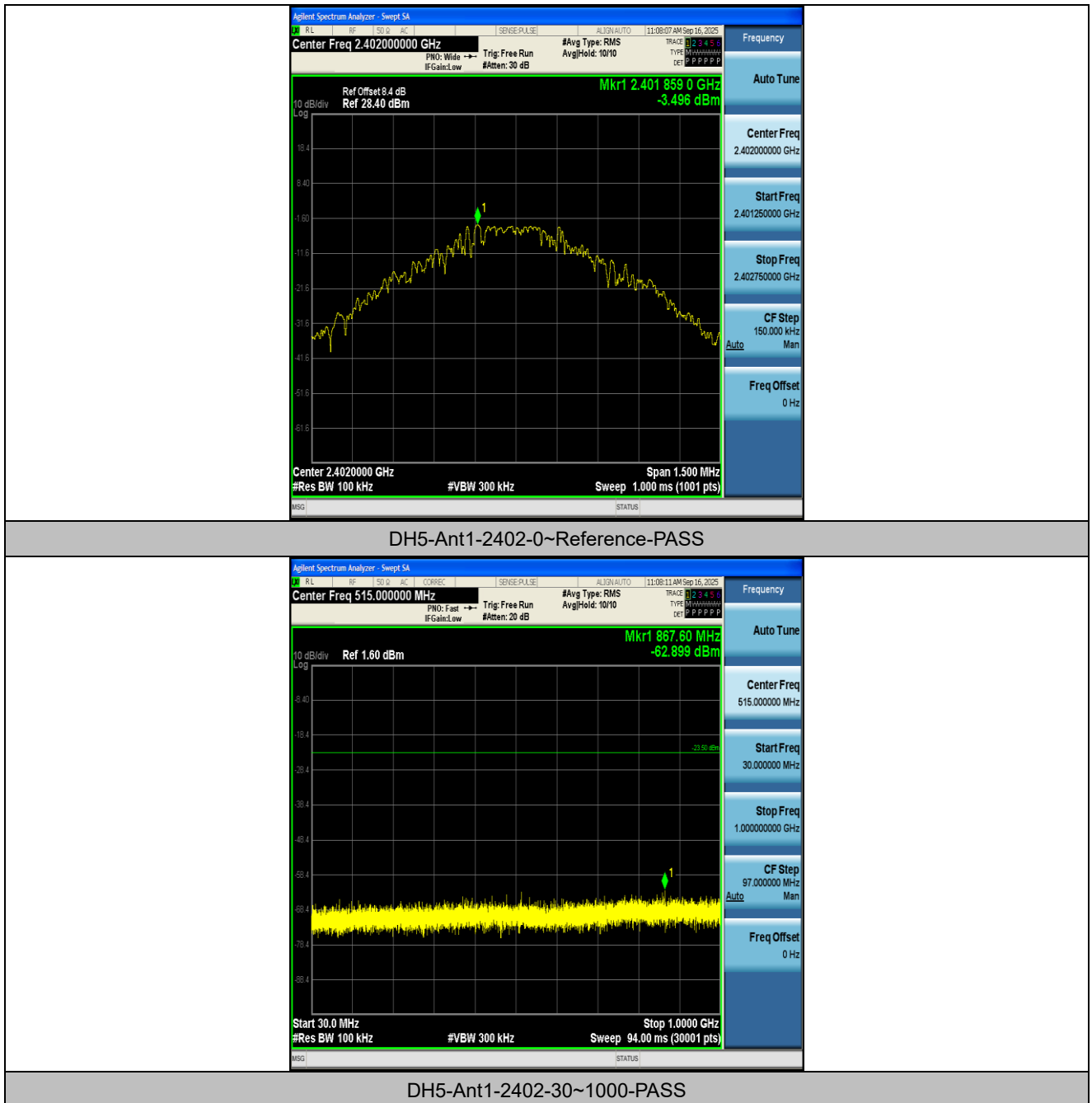
Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-3.50	-3.50	---	PASS
DH5	Ant1	2402	30~1000	-3.50	-62.9	≤-23.5	PASS
DH5	Ant1	2402	1000~26500	-3.50	-44.15	≤-23.5	PASS
DH5	Ant1	2441	0~Reference	-2.81	-2.81	---	PASS
DH5	Ant1	2441	30~1000	-2.81	-63.52	≤-22.81	PASS
DH5	Ant1	2441	1000~26500	-2.81	-43.81	≤-22.81	PASS
DH5	Ant1	2480	0~Reference	-2.35	-2.35	---	PASS
DH5	Ant1	2480	30~1000	-2.35	-62.77	≤-22.35	PASS
DH5	Ant1	2480	1000~26500	-2.35	-44.43	≤-22.35	PASS
2DH5	Ant1	2402	0~Reference	-4.18	-4.18	---	PASS
2DH5	Ant1	2402	30~1000	-4.18	-63.06	≤-24.18	PASS
2DH5	Ant1	2402	1000~26500	-4.18	-45.39	≤-24.18	PASS
2DH5	Ant1	2441	0~Reference	-5.50	-5.50	---	PASS
2DH5	Ant1	2441	30~1000	-5.50	-63.68	≤-25.5	PASS
2DH5	Ant1	2441	1000~26500	-5.50	-45.43	≤-25.5	PASS
2DH5	Ant1	2480	0~Reference	-5.35	-5.35	---	PASS
2DH5	Ant1	2480	30~1000	-5.35	-63.66	≤-25.35	PASS
2DH5	Ant1	2480	1000~26500	-5.35	-44.93	≤-25.35	PASS

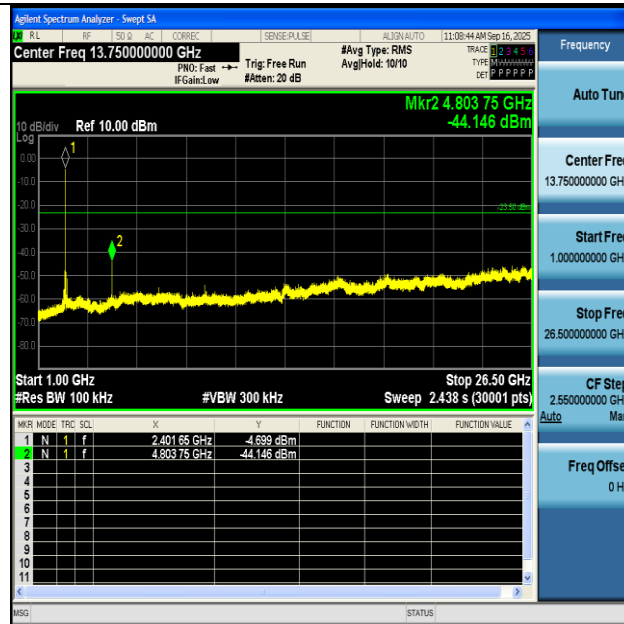
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.



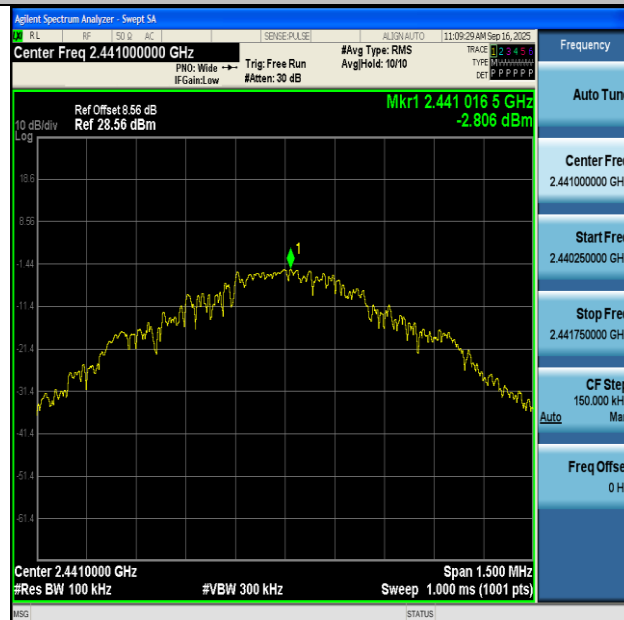


Test Graphs



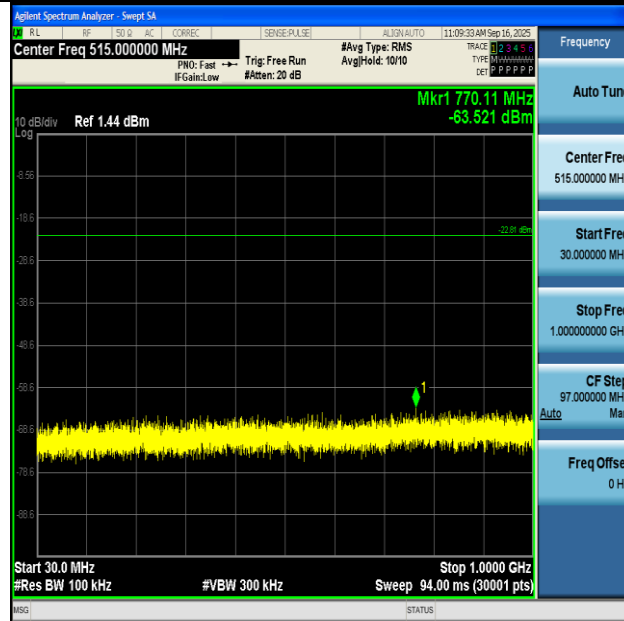


DH5-Ant1-2402-1000~26500-PASS

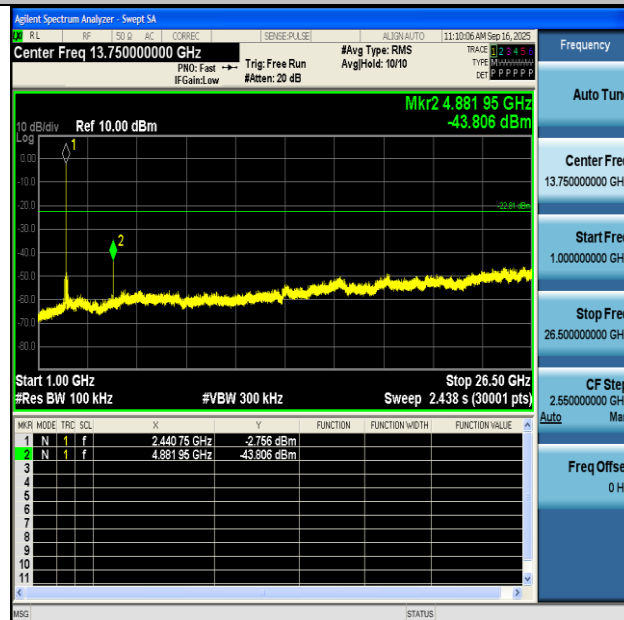


DH5-Ant1-2441-0~Reference-PASS





DH5-Ant1-2441-30~1000-PASS

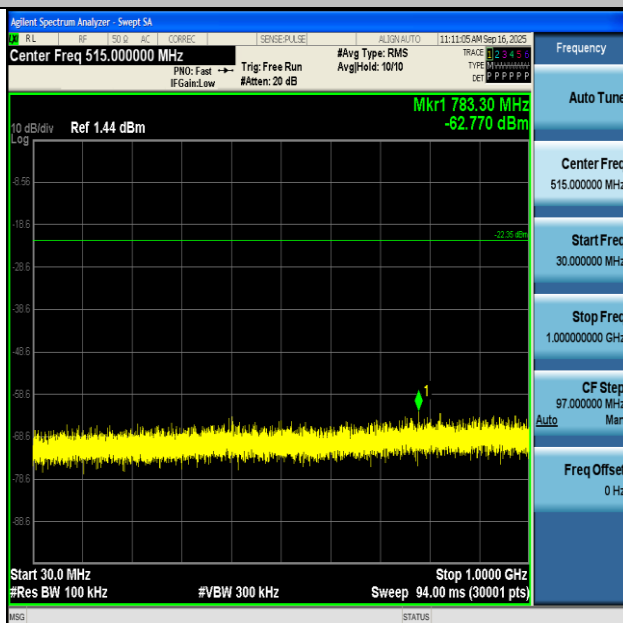


DH5-Ant1-2441-1000~26500-PASS



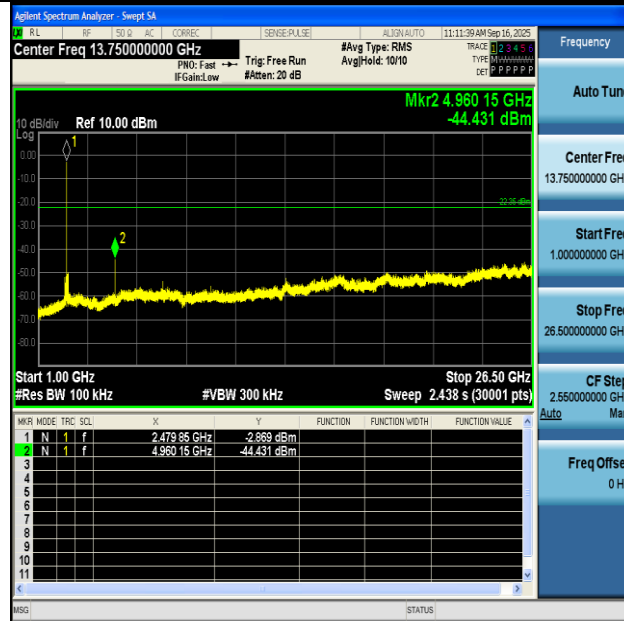


DH5-Ant1-2480-0~Reference-PASS



DH5-Ant1-2480-30~1000-PASS





DH5-Ant1-2480-1000~26500-PASS

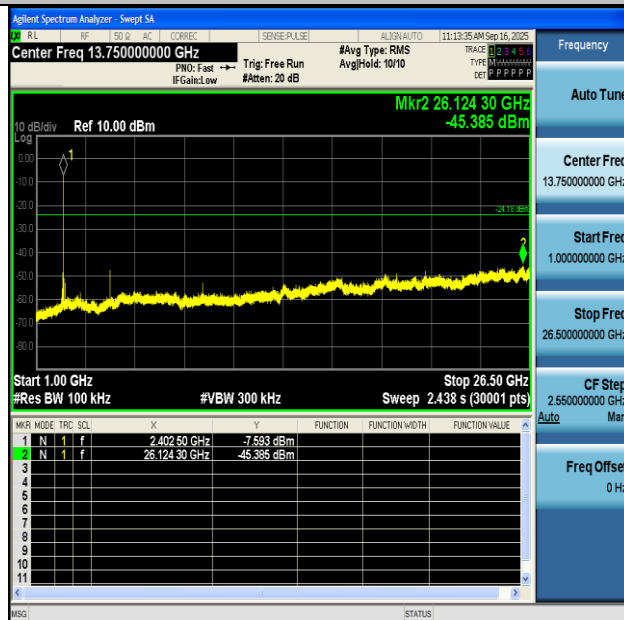


2DH5-Ant1-2402-0~Reference-PASS



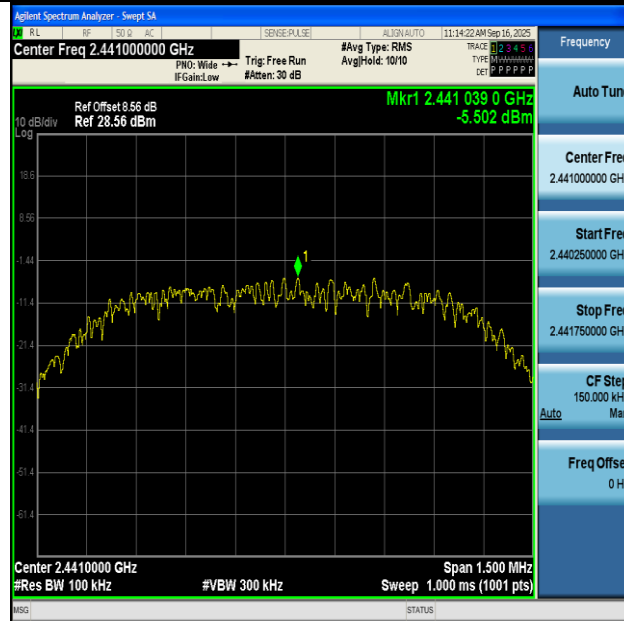


2DH5-Ant1-2402-30~1000-PASS

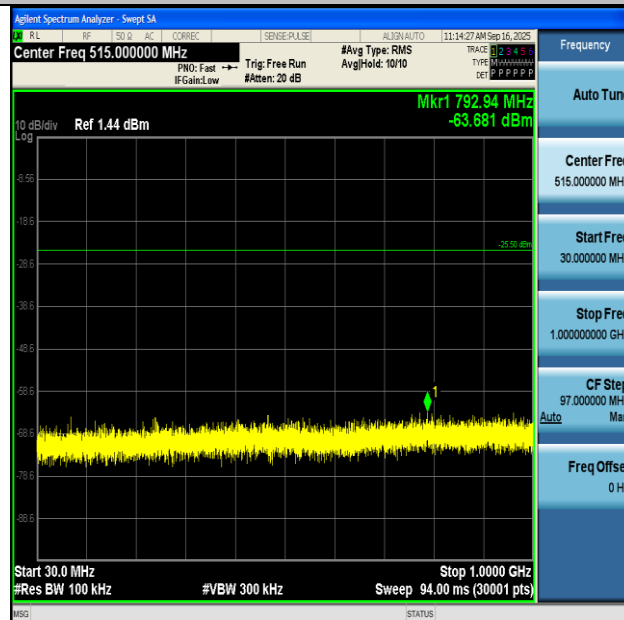


2DH5-Ant1-2402-1000~26500-PASS



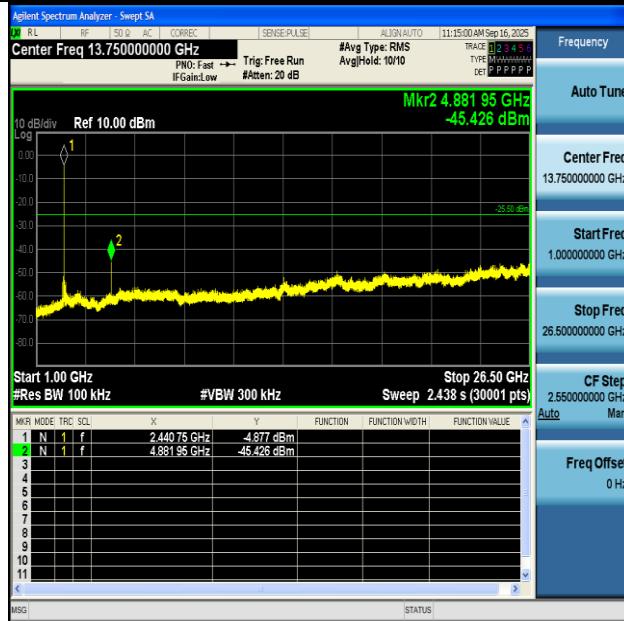


2DH5-Ant1-2441-0~Reference-PASS



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



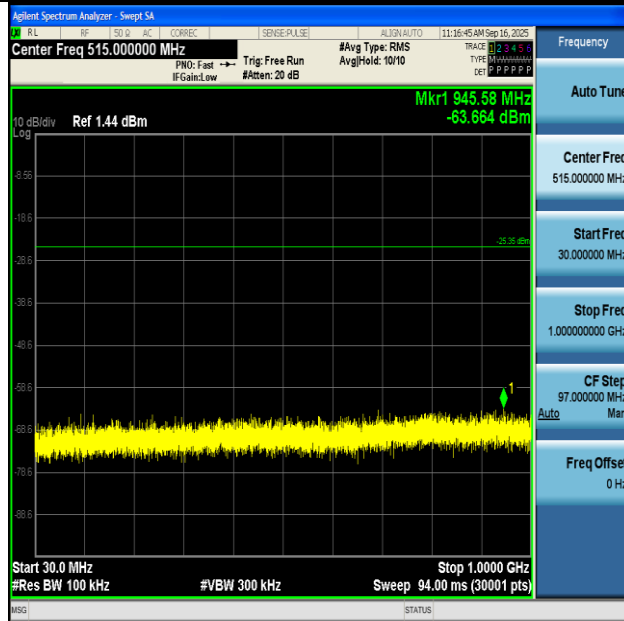


2DH5-Ant1-2441-1000~26500-PASS

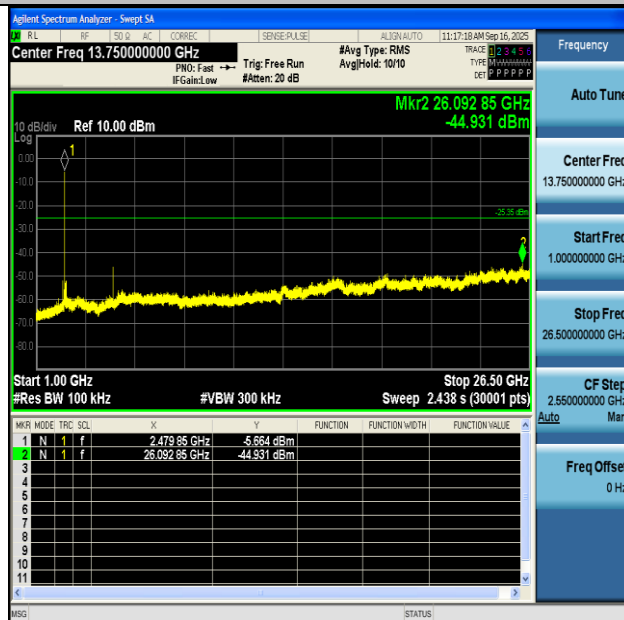


2DH5-Ant1-2480-0~Reference-PASS





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



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





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	2.89	3.76	76.86	1.14
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

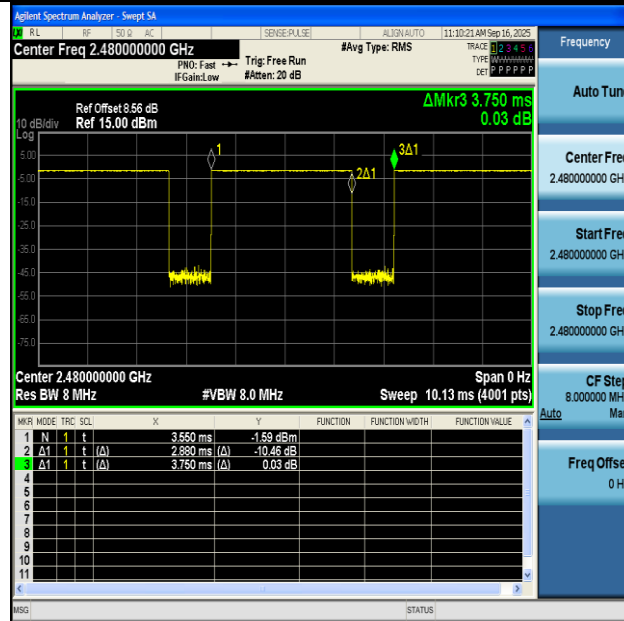
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



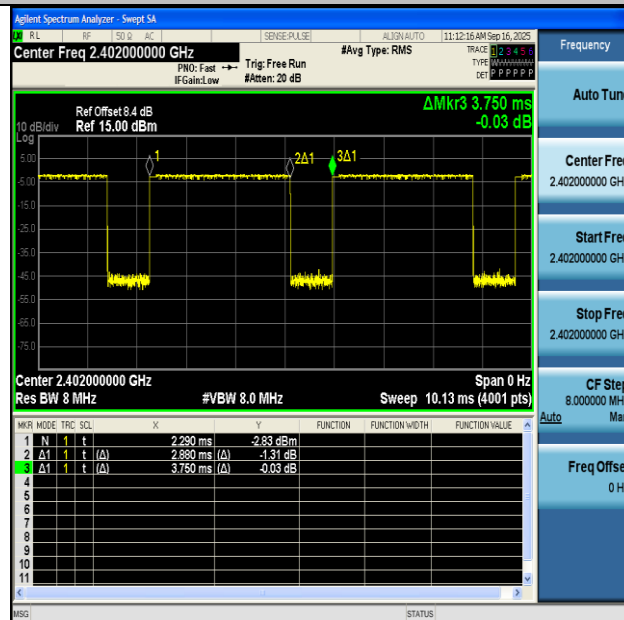


Test Graphs



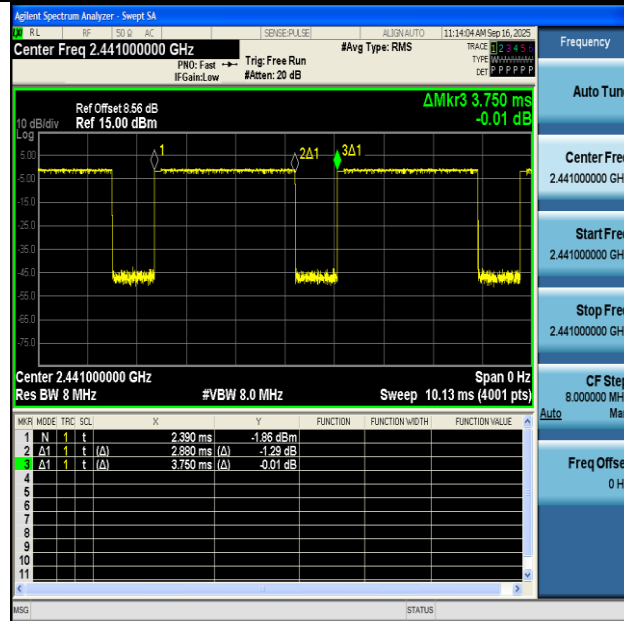


NTNV-DH5-Ant1-2480

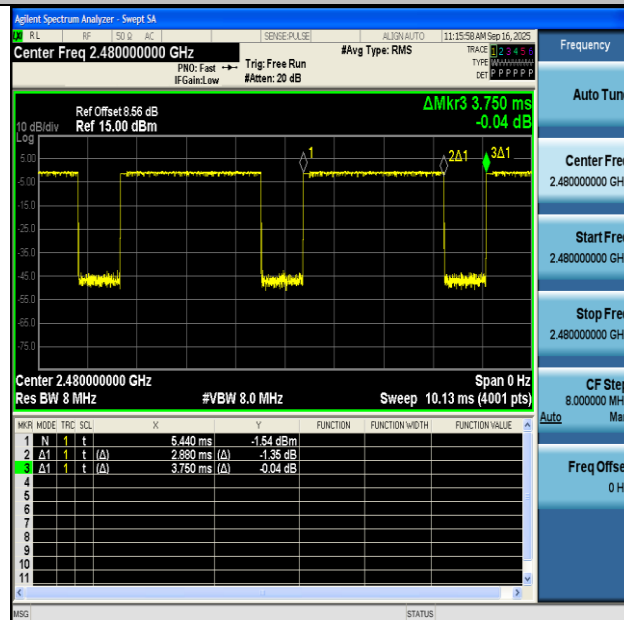


NTNV-2DH5-Ant1-2402





NTNV-2DH5-Ant1-2441



NTNV-2DH5-Ant1-2480

