



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

Product Name: WIRELESS KARAOKE MICROPHONE

Trade Mark: /

Test Model: MIC290KP

FCC ID: UU8-MIC290

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	0.984	2401.487	2402.471	---	---
DH5	Ant1	2441	0.939	2440.550	2441.489	---	---
DH5	Ant1	2480	0.939	2479.541	2480.480	---	---
2DH5	Ant1	2402	1.323	2401.328	2402.651	---	---
2DH5	Ant1	2441	1.230	2440.376	2441.606	---	---
2DH5	Ant1	2480	1.275	2479.364	2480.639	---	---
3DH5	Ant1	2402	1.224	2401.379	2402.603	---	---
3DH5	Ant1	2441	1.311	2440.328	2441.639	---	---
3DH5	Ant1	2480	1.308	2479.331	2480.639	---	---

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 B: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.87851	2401.5558	2402.4343	---	---
DH5	Ant1	2441	0.92080	2440.5130	2441.4338	---	---
DH5	Ant1	2480	0.89016	2479.5415	2480.4317	---	---
2DH5	Ant1	2402	1.1784	2401.3964	2402.5748	---	---
2DH5	Ant1	2441	1.1889	2440.3951	2441.5840	---	---
2DH5	Ant1	2480	1.1735	2479.4010	2480.5745	---	---
3DH5	Ant1	2402	1.2026	2401.3859	2402.5885	---	---
3DH5	Ant1	2441	1.1775	2440.3925	2441.5700	---	---
3DH5	Ant1	2480	1.1826	2479.4039	2480.5865	---	---

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



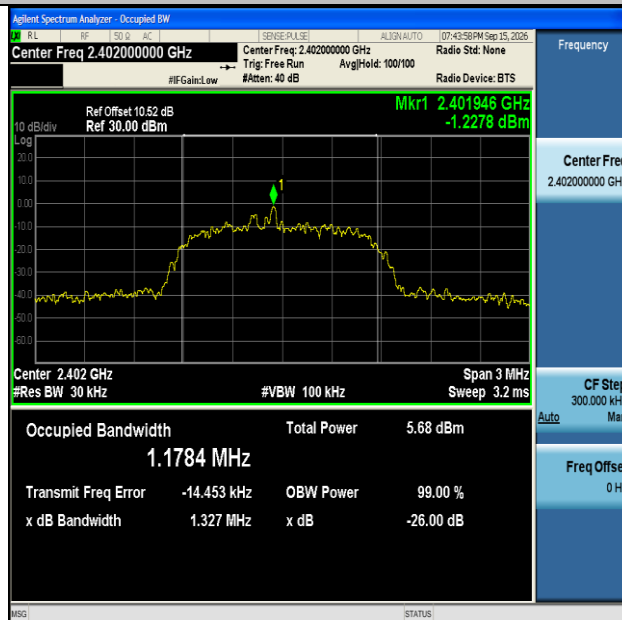


Test Graphs



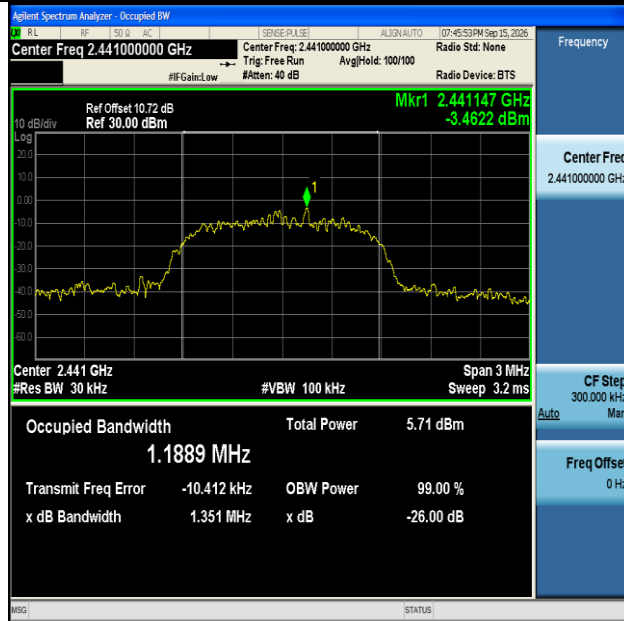


DH5-Ant1-2480



2DH5-Ant1-2402



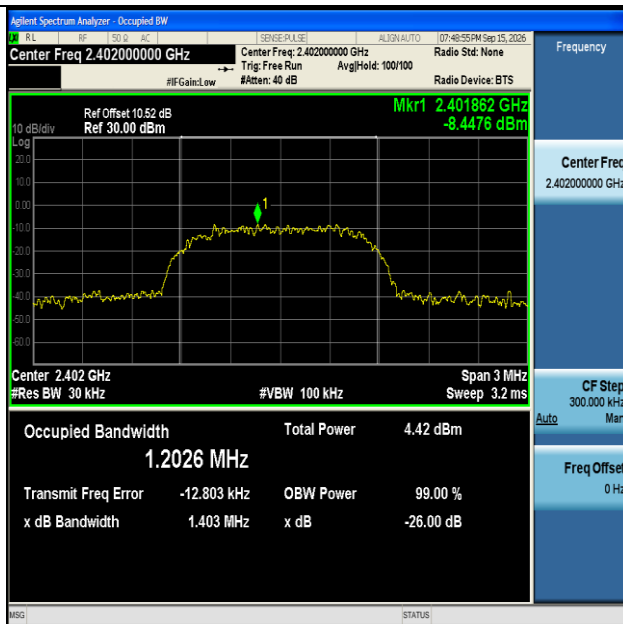


2DH5-Ant1-2441

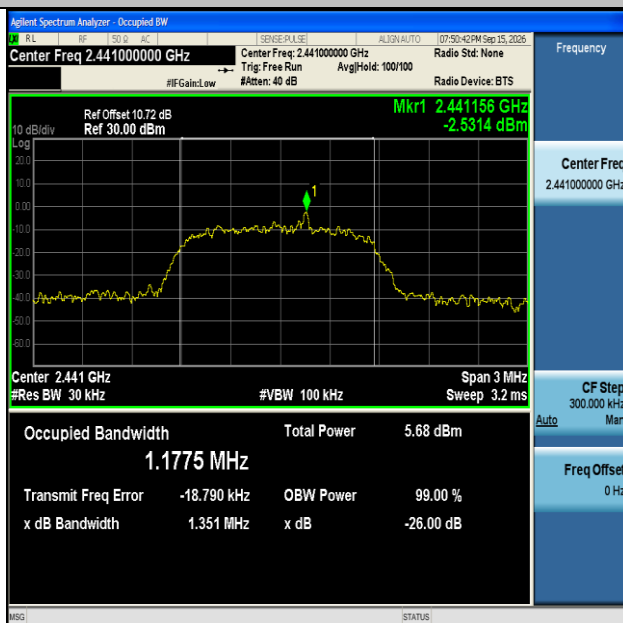


2DH5-Ant1-2480



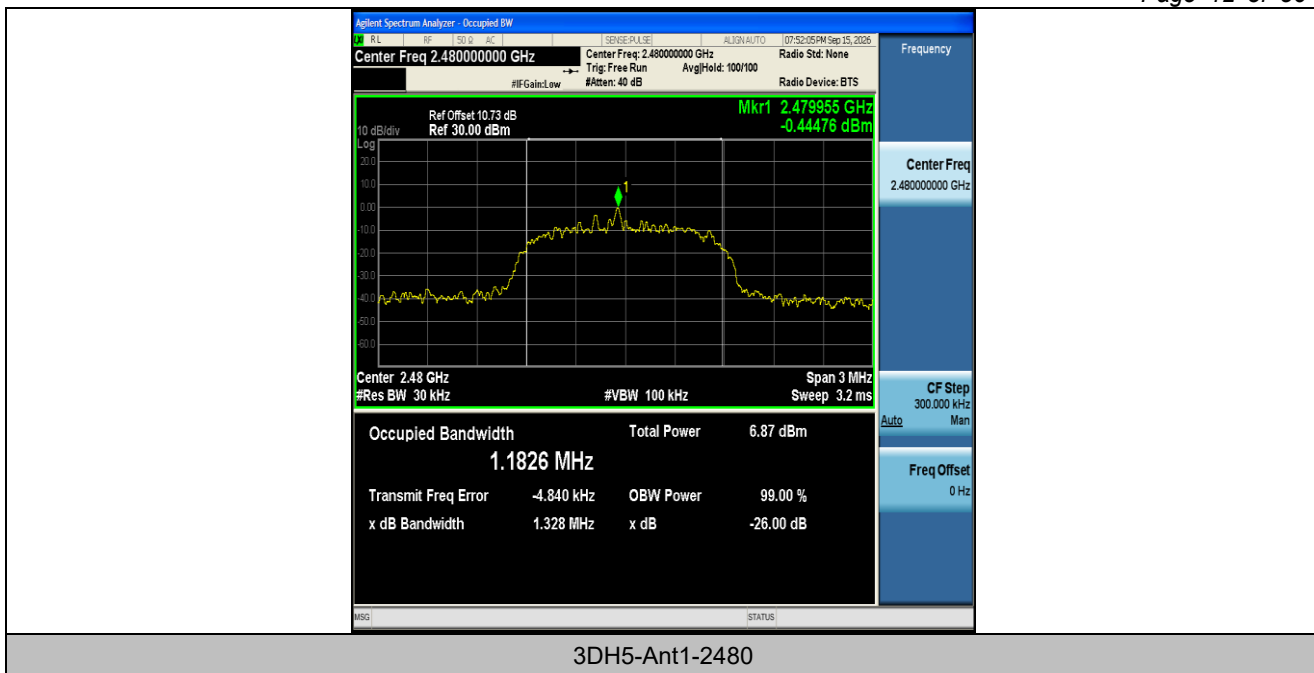


3DH5-Ant1-2402



3DH5-Ant1-2441







Appendix C: Maximum peak conducted output power

Test Result

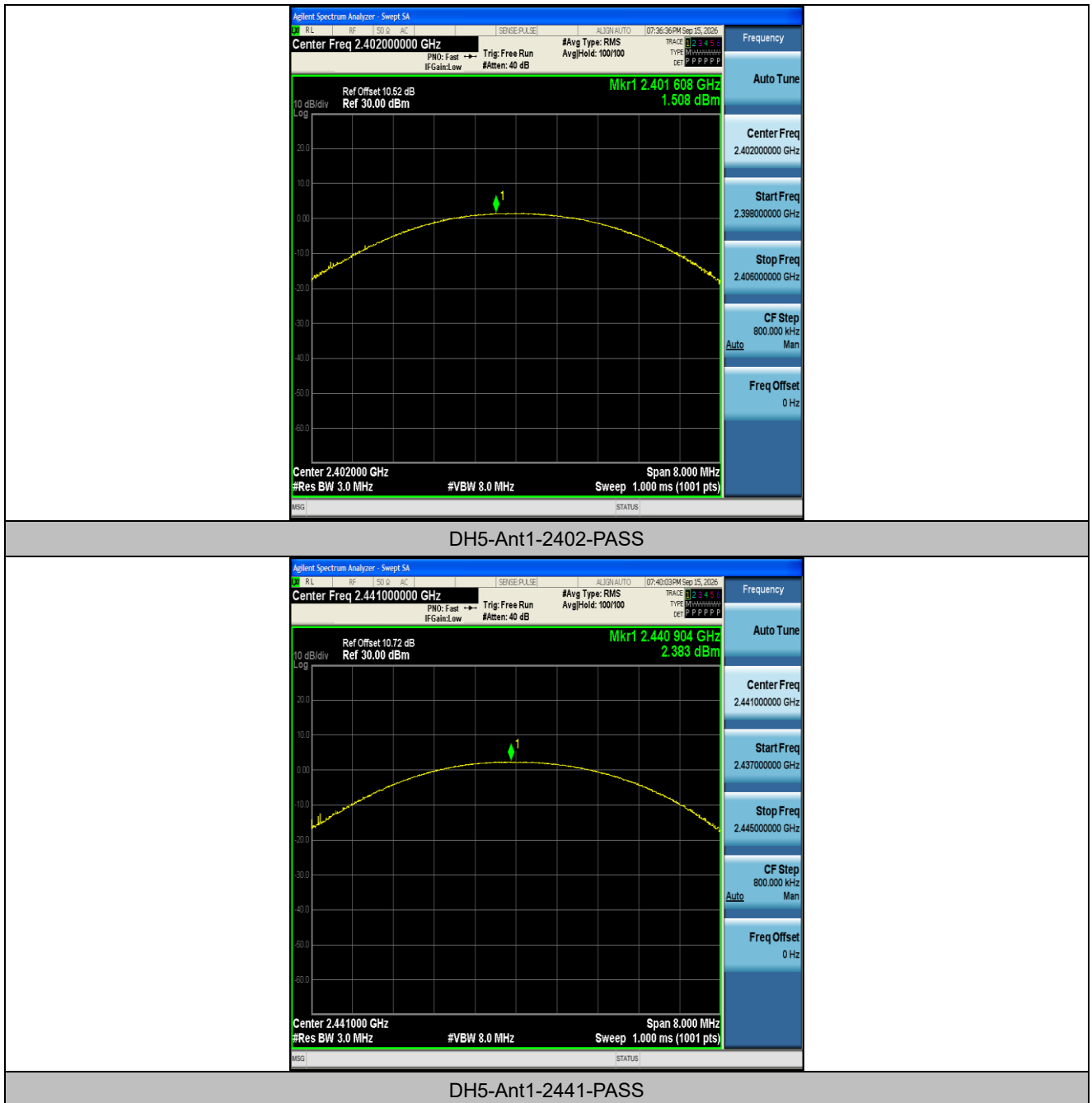
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	1.51	≤30	PASS
DH5	Ant1	2441	2.38	≤30	PASS
DH5	Ant1	2480	2.51	≤30	PASS
2DH5	Ant1	2402	1.30	≤20.97	PASS
2DH5	Ant1	2441	2.27	≤20.97	PASS
2DH5	Ant1	2480	2.32	≤20.97	PASS
3DH5	Ant1	2402	1.48	≤20.97	PASS
3DH5	Ant1	2441	2.26	≤20.97	PASS
3DH5	Ant1	2480	2.43	≤20.97	PASS

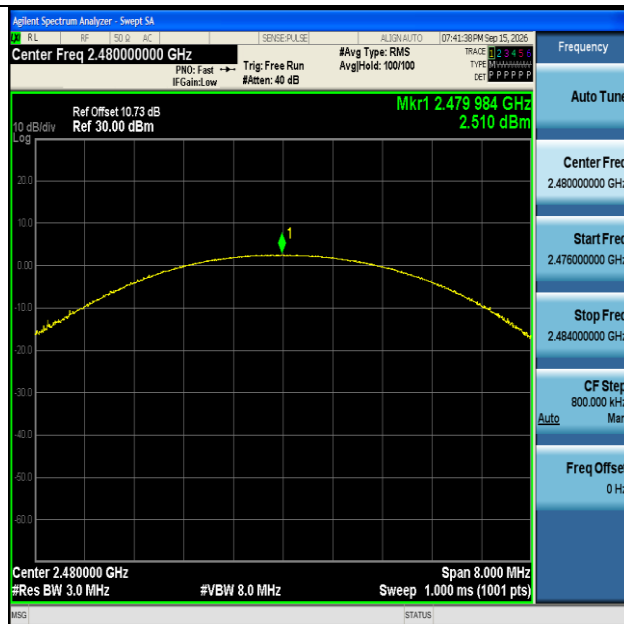
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



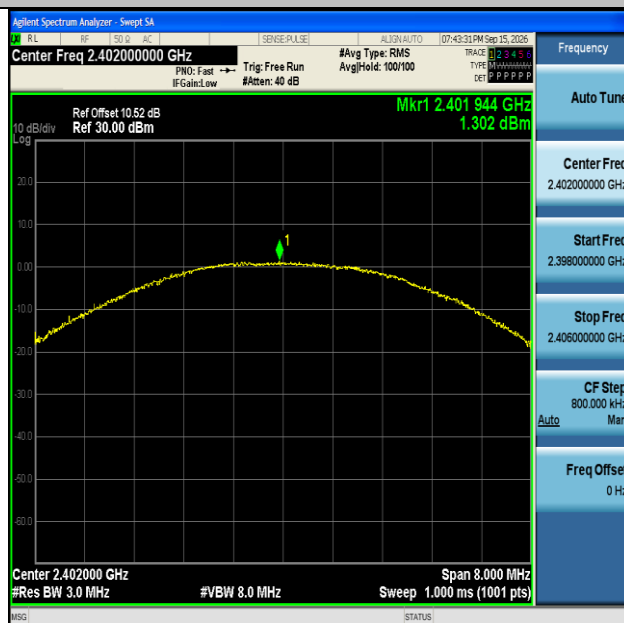


Test Graphs



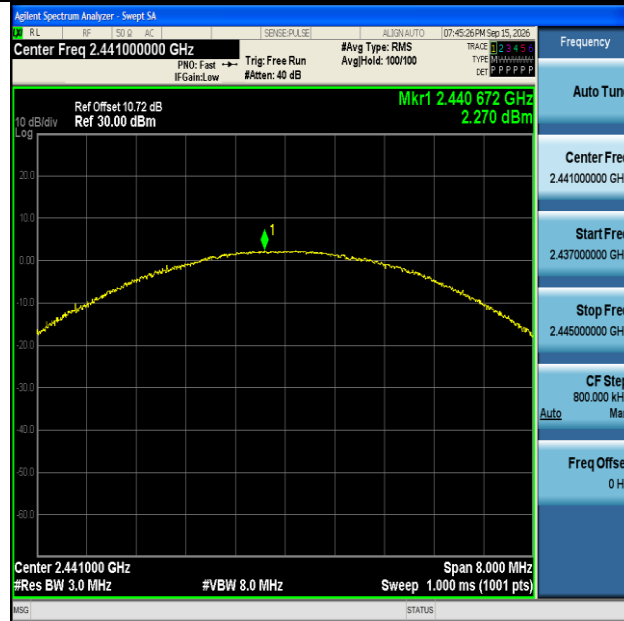


DH5-Ant1-2480-PASS

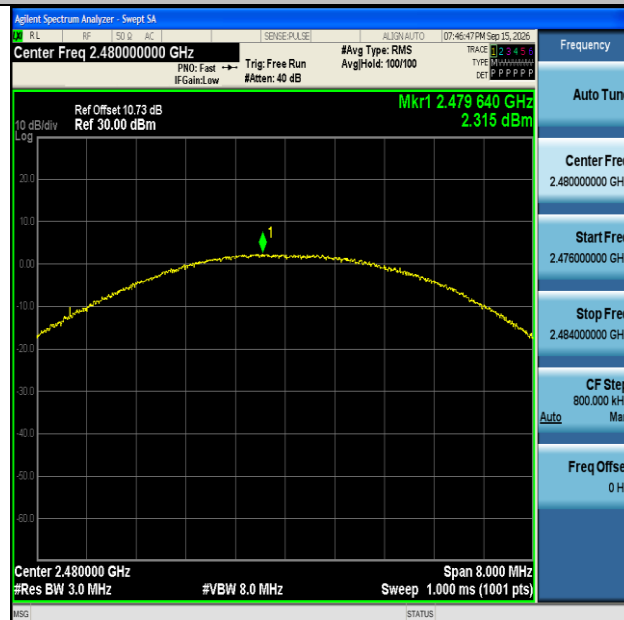


2DH5-Ant1-2402-PASS



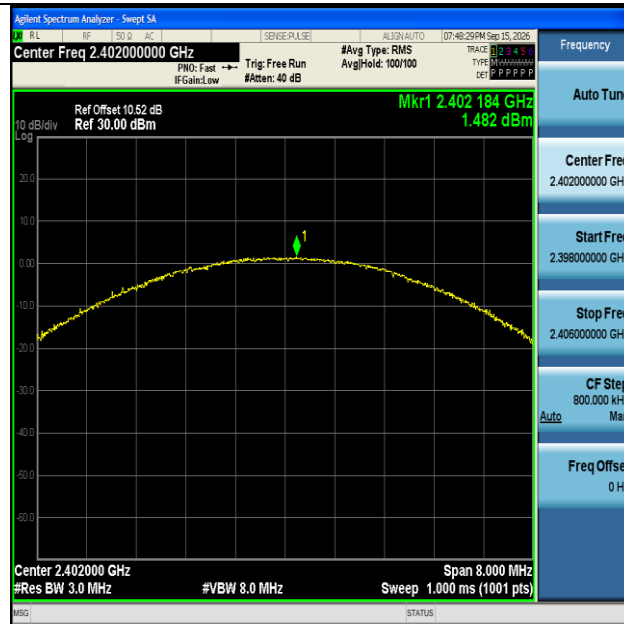


2DH5-Ant1-2441-PASS

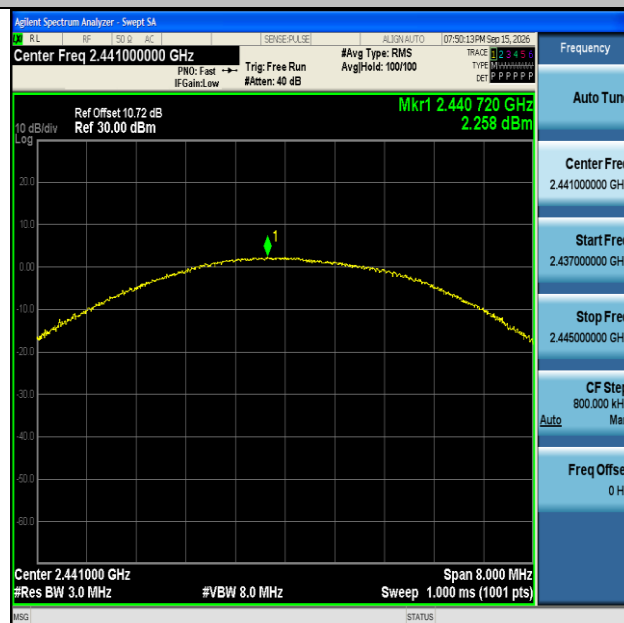


2DH5-Ant1-2480-PASS



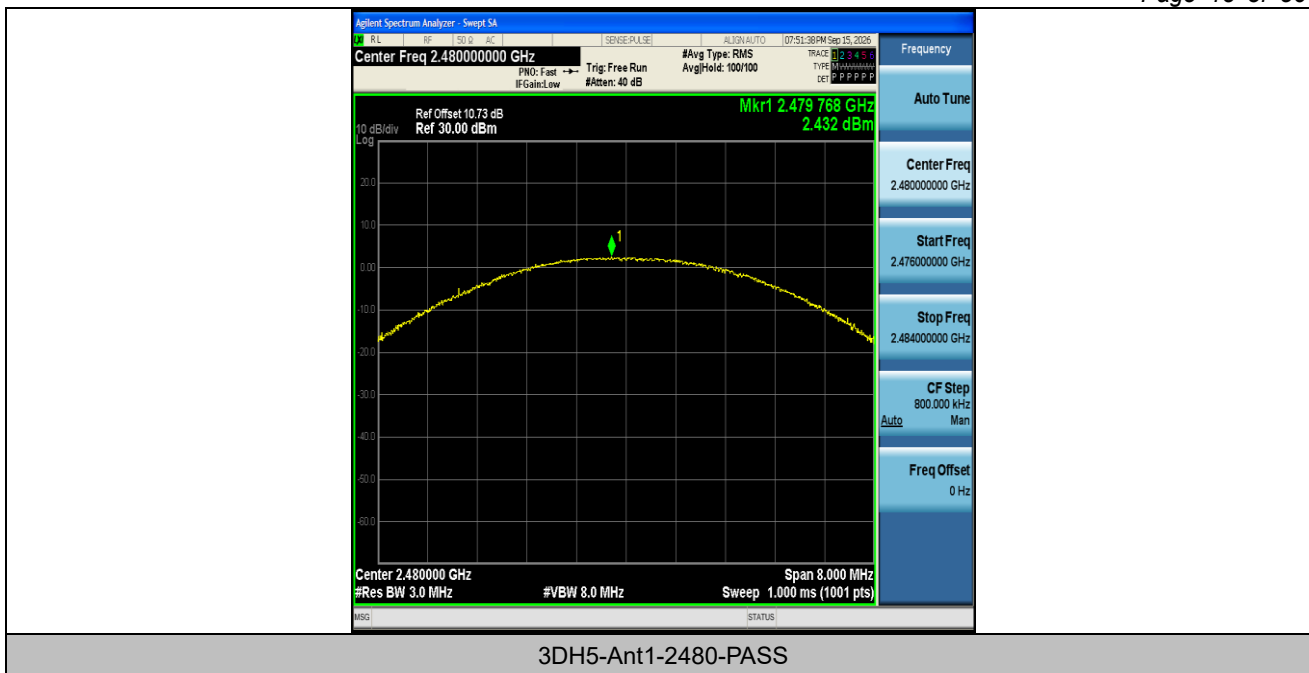


3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS







Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	1.008	≥ 0.984	PASS
2DH5	Ant1	Hop	0.966	≥ 0.882	PASS
3DH5	Ant1	Hop	1.006	≥ 0.874	PASS

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





Test Graphs







Appendix E: Time of occupancy

Test Result

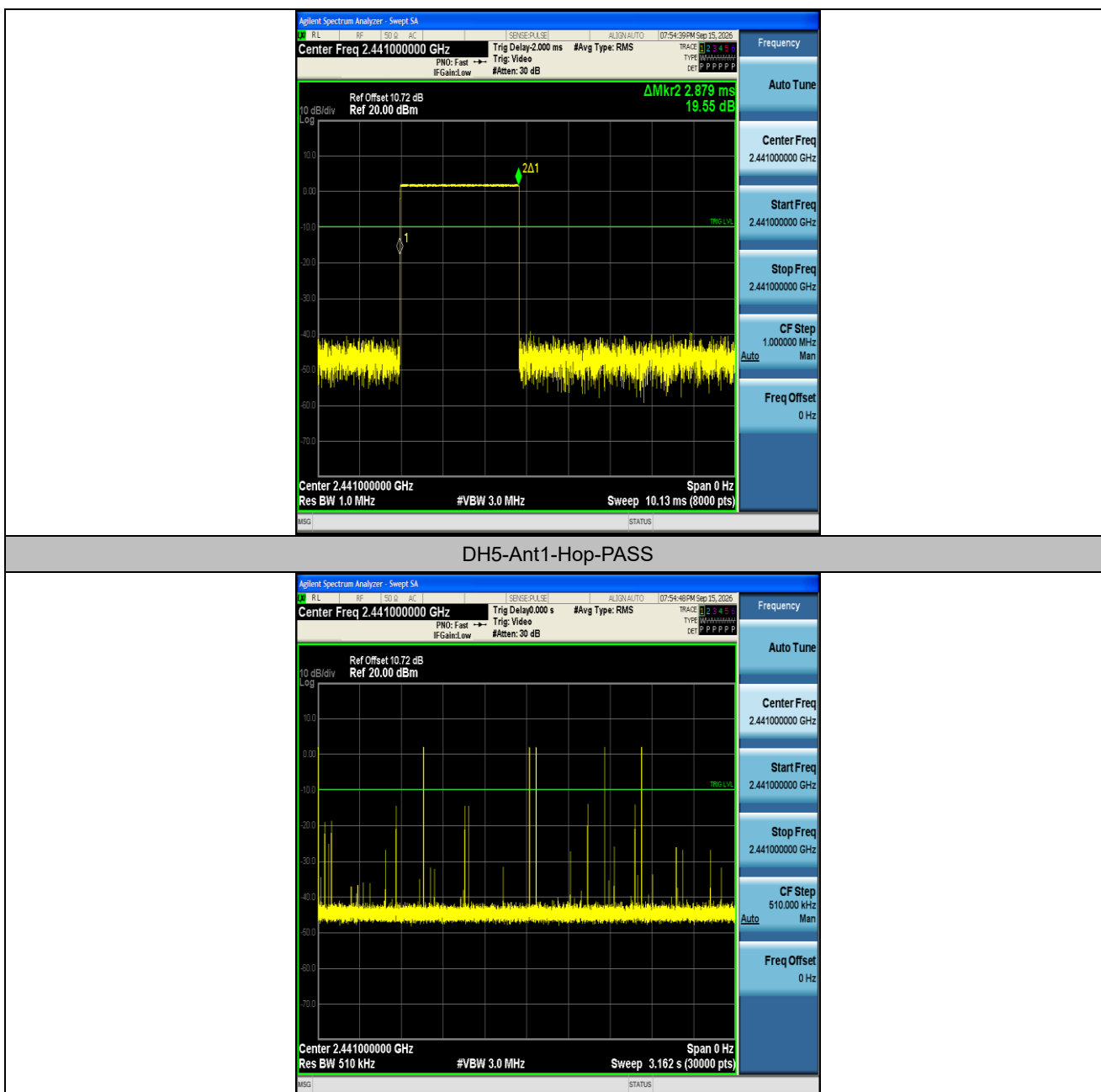
Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.879	60	0.173	≤0.4	PASS
2DH5	Ant1	Hop	2.888	50	0.144	≤0.4	PASS
3DH5	Ant1	Hop	2.887	40	0.115	≤0.4	PASS

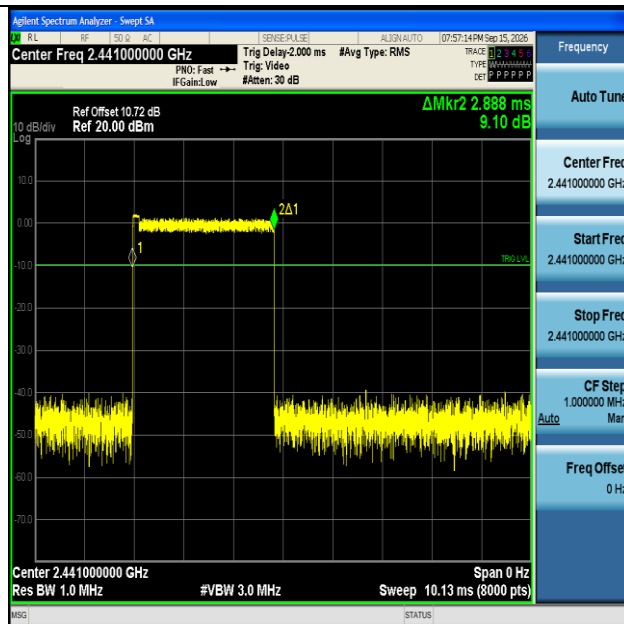
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



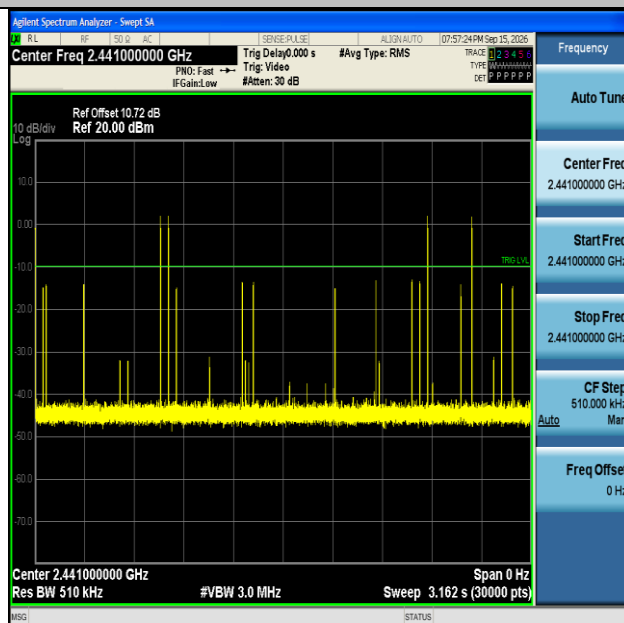


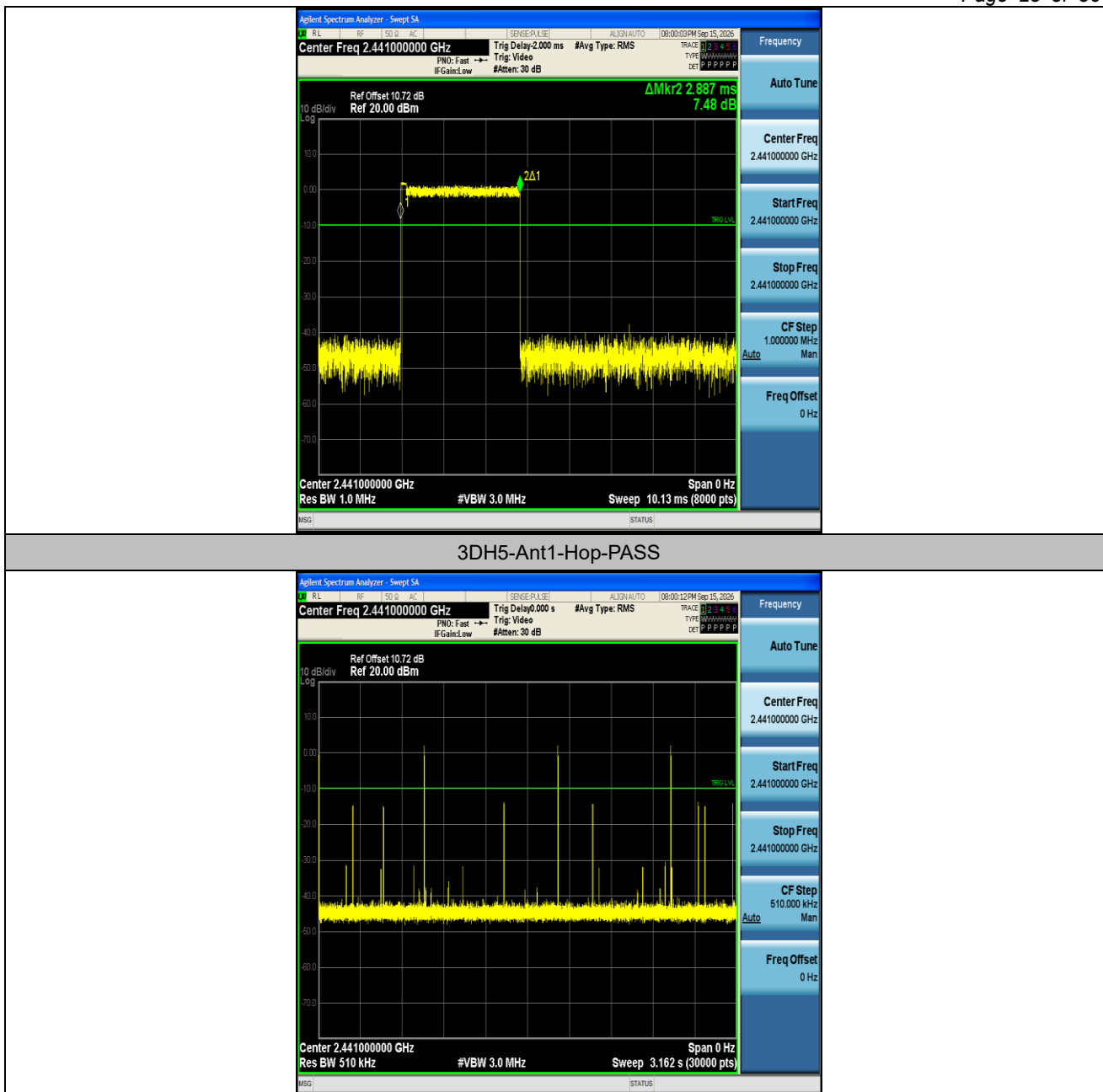
Test Graphs





2DH5-Ant1-Hop-PASS







Appendix F: Number of hopping channels

Test Result

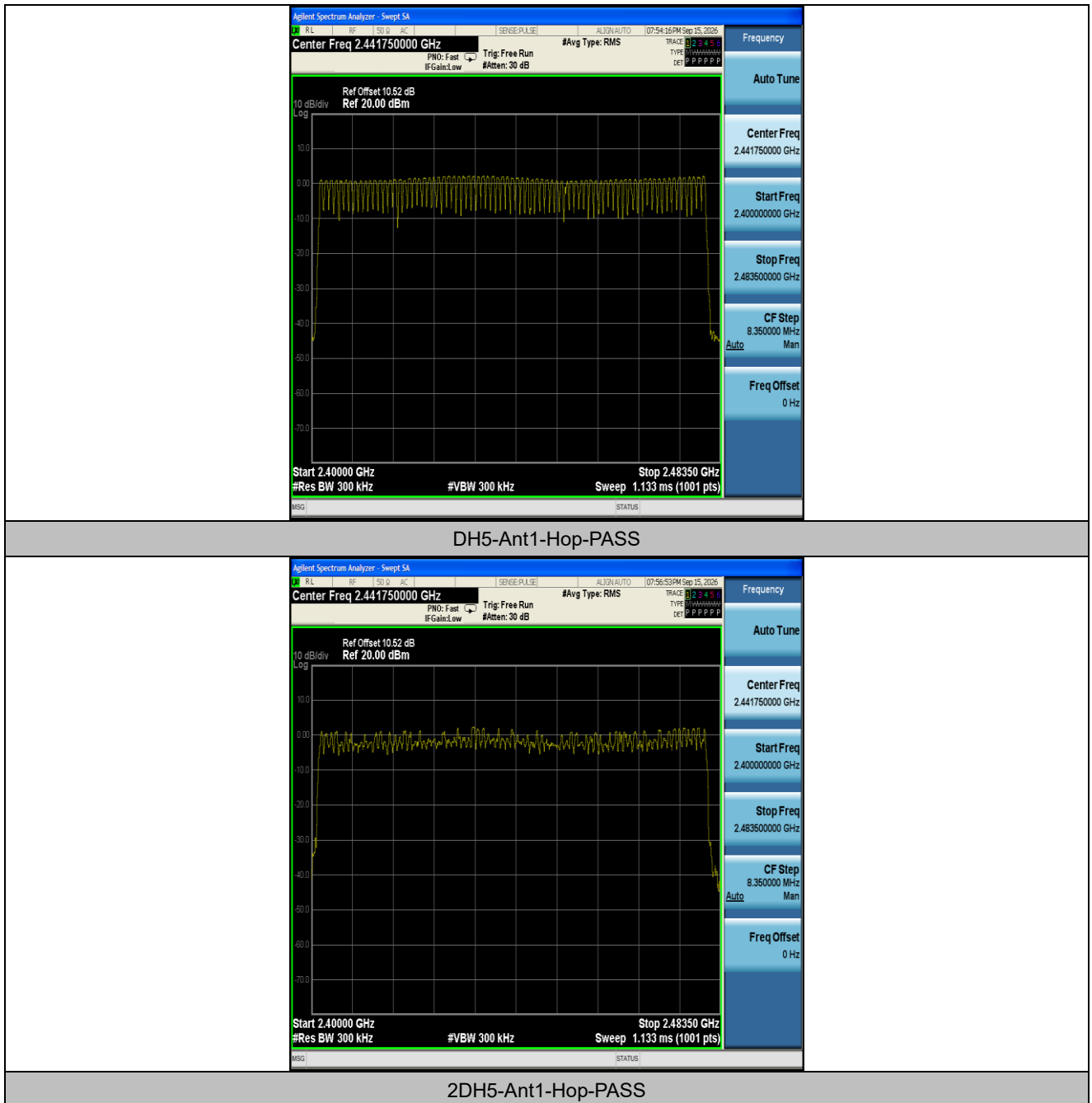
Test Mode	Antenna	Frequency [MHz]	Result [Num]	Limit [Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

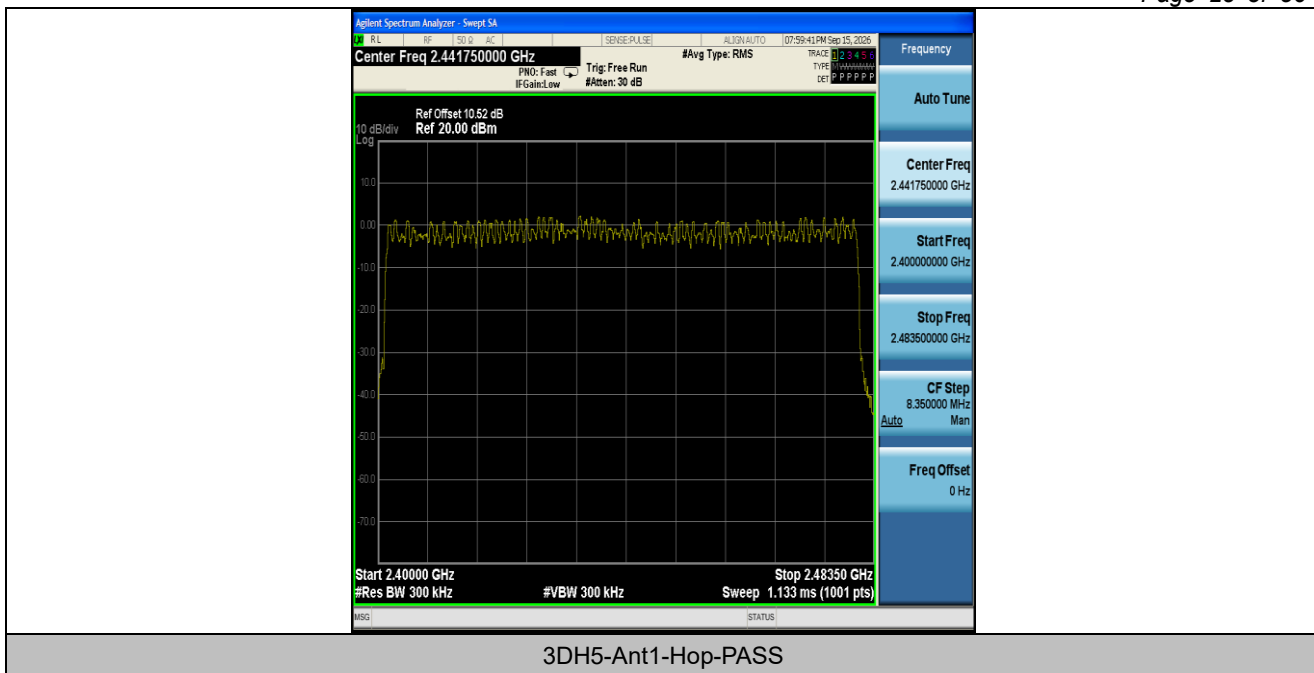
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs







Appendix G: Band edge measurements

Test Result

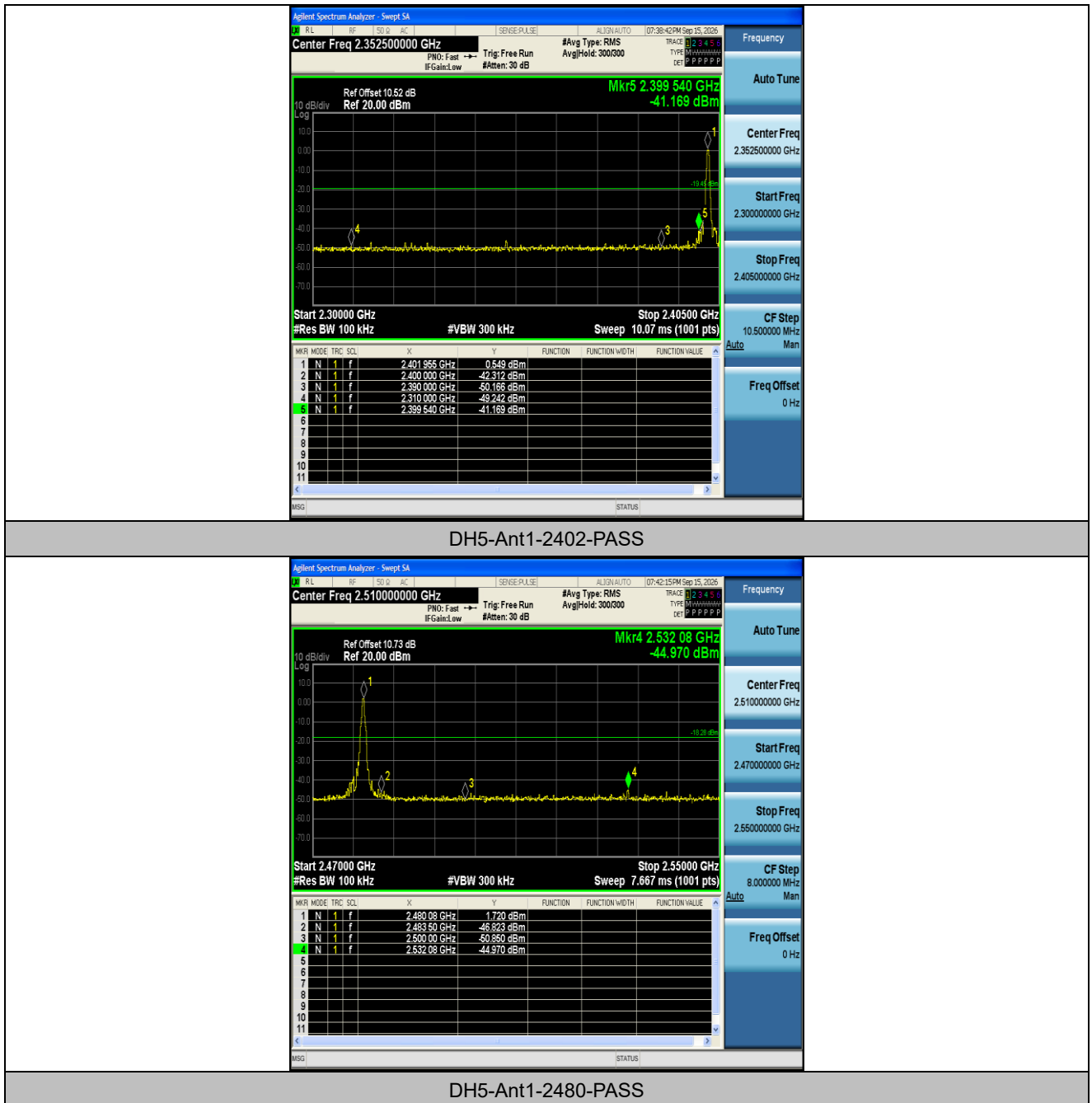
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.55	-41.17	≤-19.45	PASS
DH5	Ant1	High	2480	1.72	-44.97	≤-18.28	PASS
DH5	Ant1	Low	Hop_2402	0.01	-45.07	≤-19.99	PASS
DH5	Ant1	High	Hop_2480	1.56	-45.48	≤-18.44	PASS
2DH5	Ant1	Low	2402	-2.04	-40.4	≤-22.04	PASS
2DH5	Ant1	High	2480	-1.20	-46.19	≤-21.2	PASS
2DH5	Ant1	Low	Hop_2402	-3.81	-45.47	≤-23.81	PASS
2DH5	Ant1	High	Hop_2480	0.01	-45.64	≤-19.99	PASS
3DH5	Ant1	Low	2402	0.17	-41.47	≤-19.83	PASS
3DH5	Ant1	High	2480	1.37	-45.88	≤-18.63	PASS
3DH5	Ant1	Low	Hop_2402	-4.15	-43.84	≤-24.15	PASS
3DH5	Ant1	High	Hop_2480	1.64	-46.25	≤-18.36	PASS

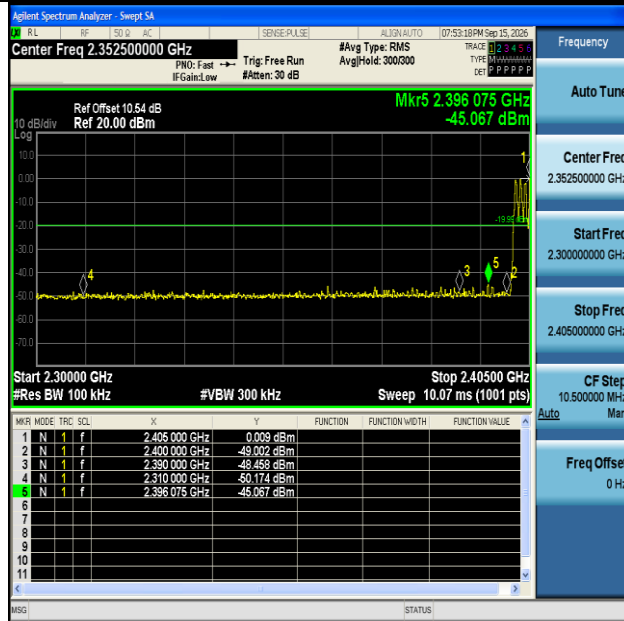
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



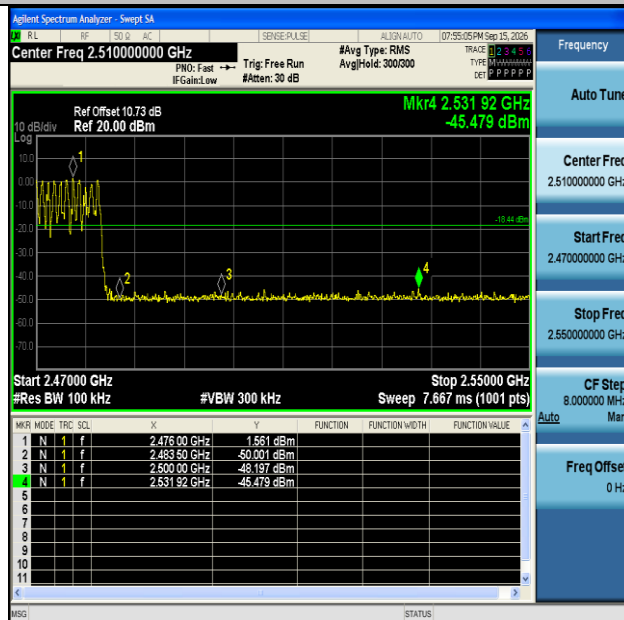


Test Graphs



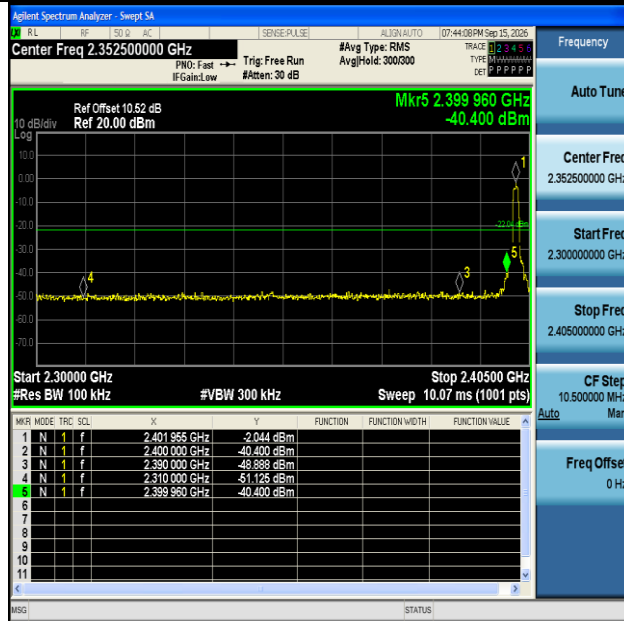


DH5-Ant1-Hop_2402-PASS

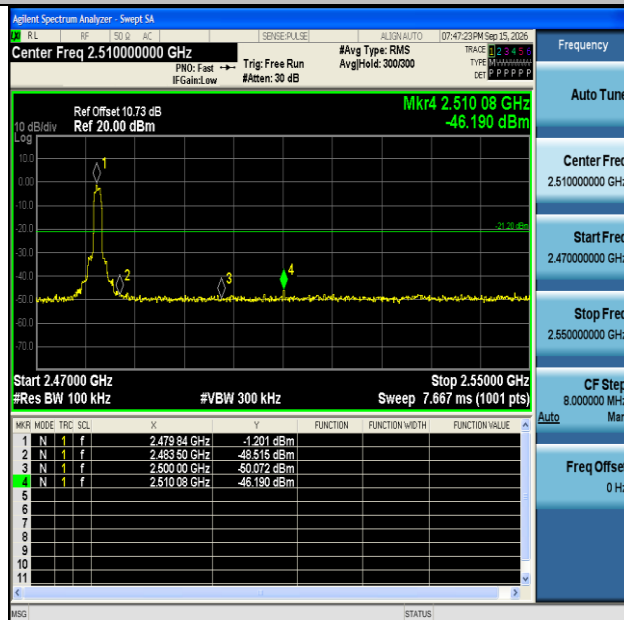


DH5-Ant1-Hop_2480-PASS



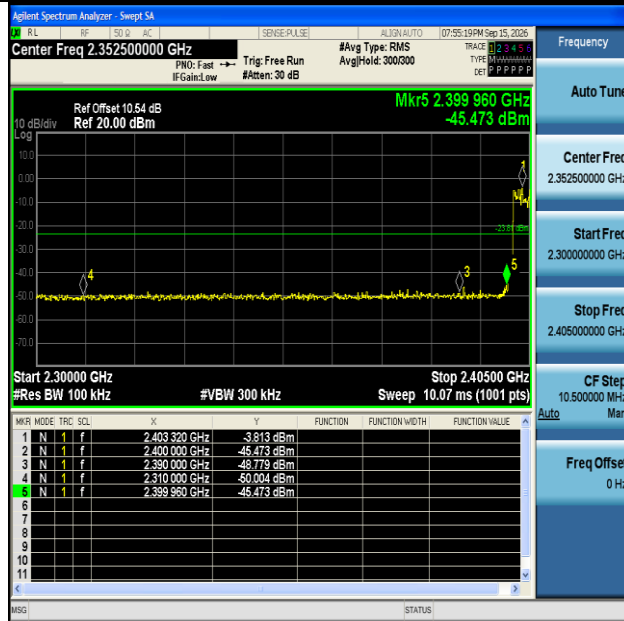


2DH5-Ant1-2402-PASS



2DH5-Ant1-2480-PASS



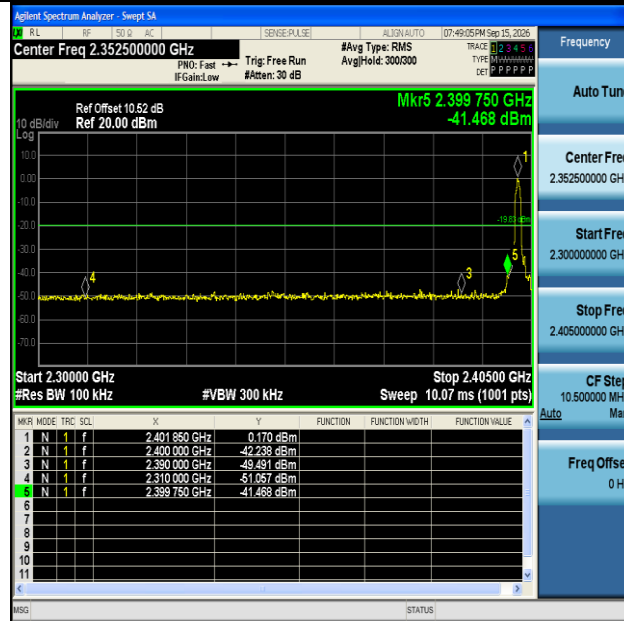


2DH5-Ant1-Hop_2402-PASS

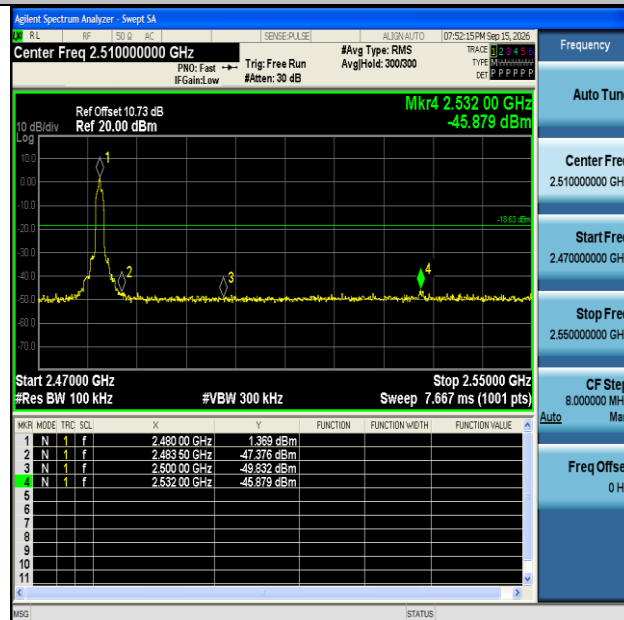


2DH5-Ant1-Hop_2480-PASS



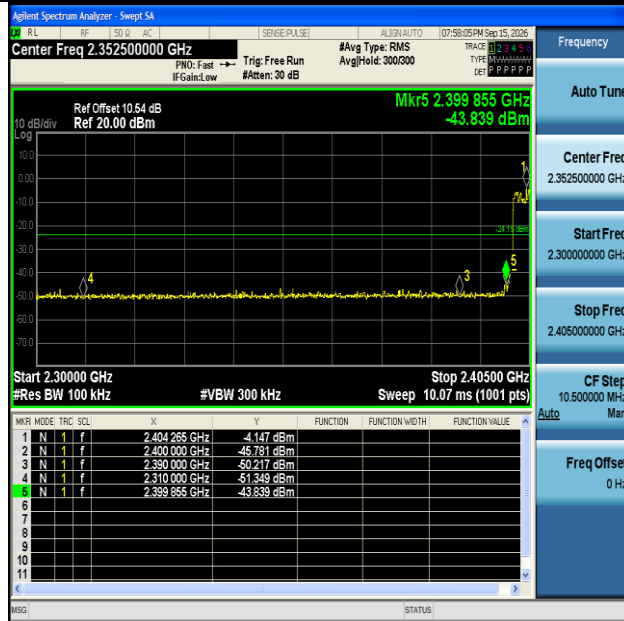


3DH5-Ant1-2402-PASS

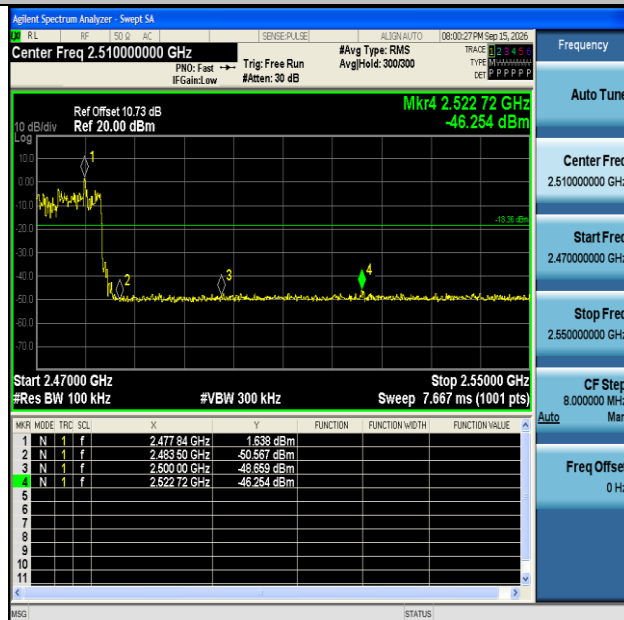


3DH5-Ant1-2480-PASS





3DH5-Ant1-Hop_2402-PASS



3DH5-Ant1-Hop_2480-PASS





Appendix H: Conducted Spurious Emission

Test Result

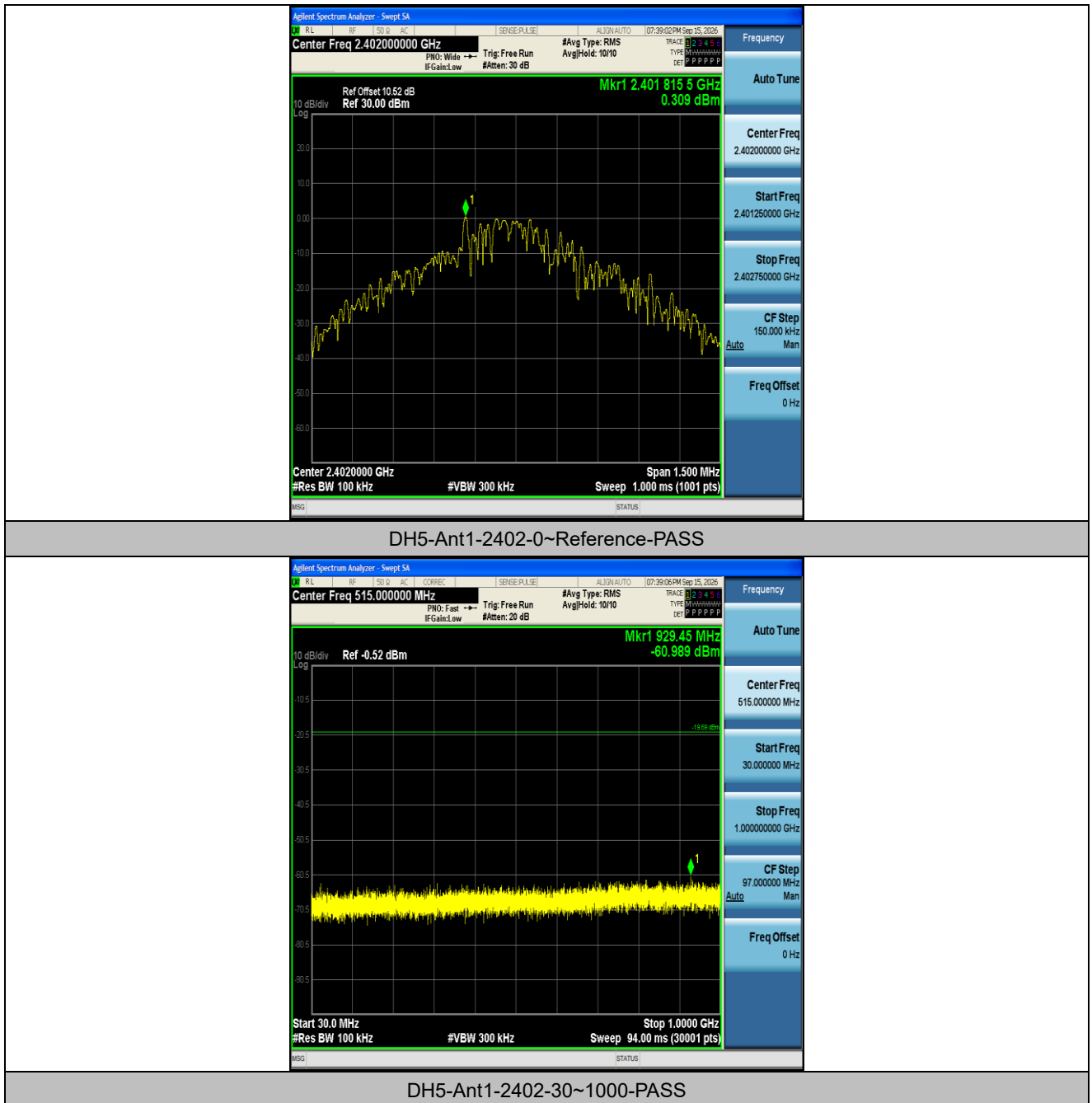
Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	0.31	0.31	---	PASS
DH5	Ant1	2402	30~1000	0.31	-60.99	≤-19.69	PASS
DH5	Ant1	2402	1000~26500	0.31	-36.31	≤-19.69	PASS
DH5	Ant1	2441	0~Reference	1.10	1.10	---	PASS
DH5	Ant1	2441	30~1000	1.10	-61.14	≤-18.9	PASS
DH5	Ant1	2441	1000~26500	1.10	-35.78	≤-18.9	PASS
DH5	Ant1	2480	0~Reference	1.41	1.41	---	PASS
DH5	Ant1	2480	30~1000	1.41	-57.08	≤-18.59	PASS
DH5	Ant1	2480	1000~26500	1.41	-35.86	≤-18.59	PASS
2DH5	Ant1	2402	0~Reference	-3.25	-3.25	---	PASS
2DH5	Ant1	2402	30~1000	-3.25	-60.69	≤-23.25	PASS
2DH5	Ant1	2402	1000~26500	-3.25	-36.4	≤-23.25	PASS
2DH5	Ant1	2441	0~Reference	-3.74	-3.74	---	PASS
2DH5	Ant1	2441	30~1000	-3.74	-58.59	≤-23.74	PASS
2DH5	Ant1	2441	1000~26500	-3.74	-36.04	≤-23.74	PASS
2DH5	Ant1	2480	0~Reference	-3.07	-3.07	---	PASS
2DH5	Ant1	2480	30~1000	-3.07	-61.11	≤-23.07	PASS
2DH5	Ant1	2480	1000~26500	-3.07	-36.35	≤-23.07	PASS
3DH5	Ant1	2402	0~Reference	-3.74	-3.74	---	PASS
3DH5	Ant1	2402	30~1000	-3.74	-57.38	≤-23.74	PASS
3DH5	Ant1	2402	1000~26500	-3.74	-35.93	≤-23.74	PASS
3DH5	Ant1	2441	0~Reference	-3.61	-3.61	---	PASS
3DH5	Ant1	2441	30~1000	-3.61	-60.46	≤-23.61	PASS
3DH5	Ant1	2441	1000~26500	-3.61	-36.44	≤-23.61	PASS
3DH5	Ant1	2480	0~Reference	1.07	1.07	---	PASS
3DH5	Ant1	2480	30~1000	1.07	-61.43	≤-18.93	PASS
3DH5	Ant1	2480	1000~26500	1.07	-35.34	≤-18.93	PASS

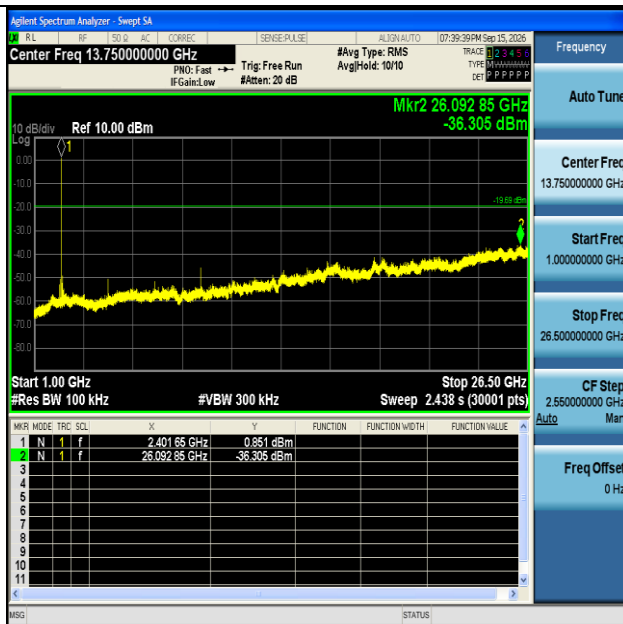
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.



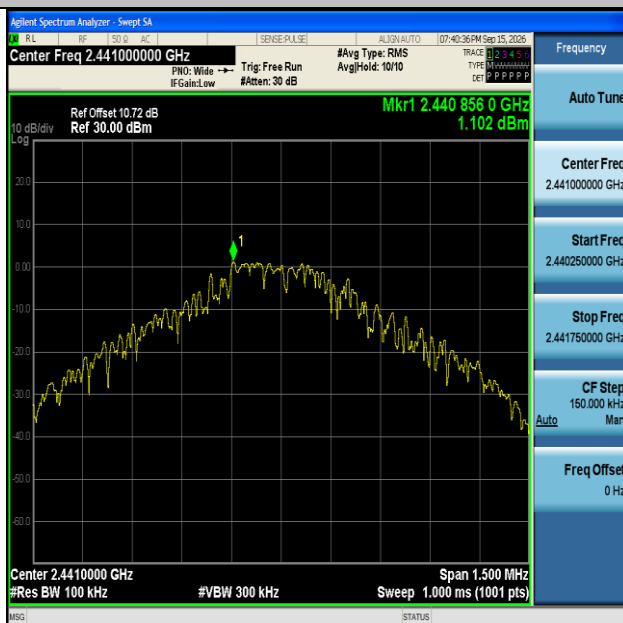


Test Graphs



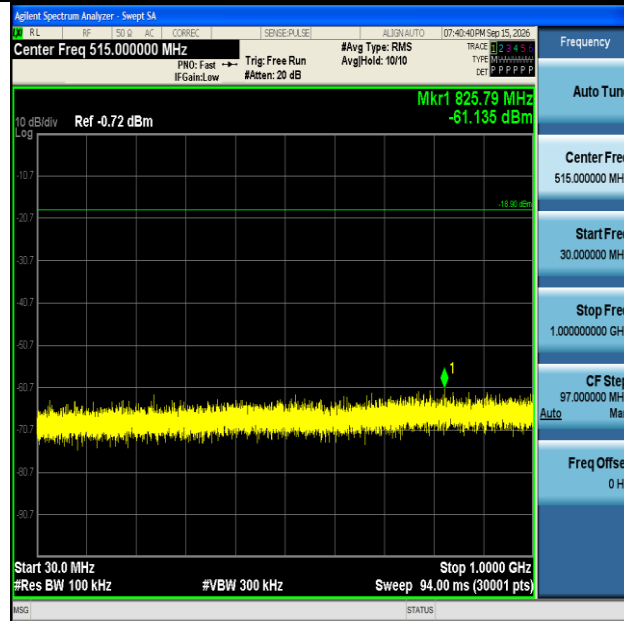


DH5-Ant1-2402-1000~26500-PASS



DH5-Ant1-2441-0~Reference-PASS





DH5-Ant1-2441-30~1000-PASS

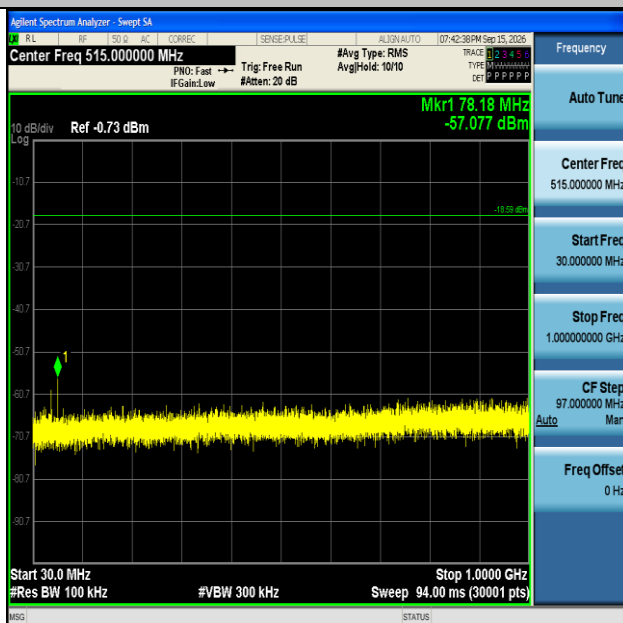


DH5-Ant1-2441-1000~26500-PASS



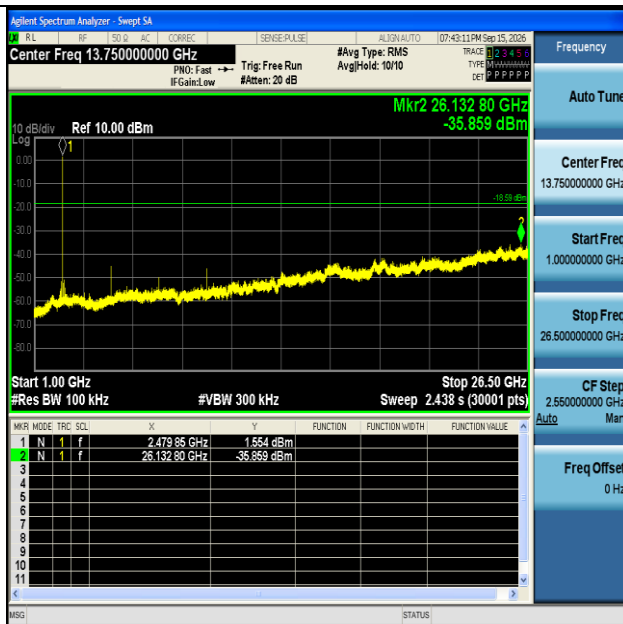


DH5-Ant1-2480-0~Reference-PASS

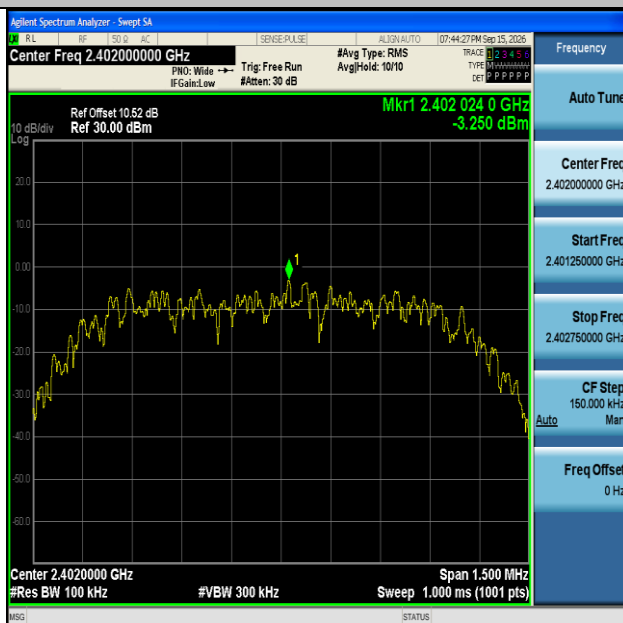


DH5-Ant1-2480-30~1000-PASS



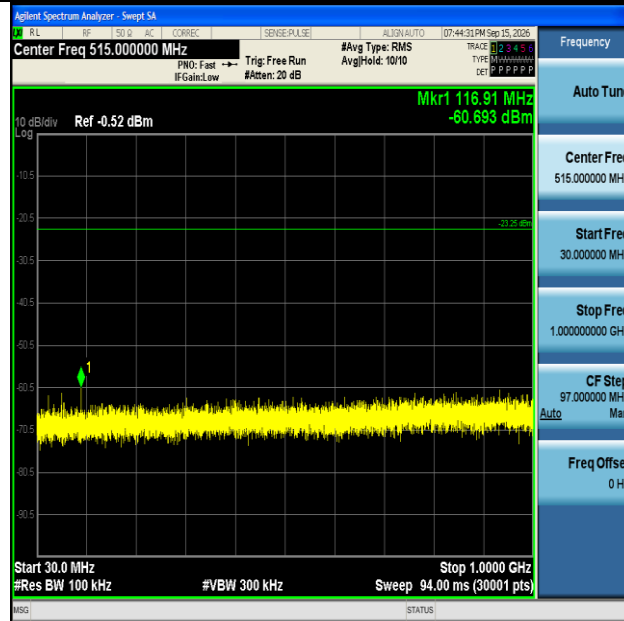


DH5-Ant1-2480-1000~26500-PASS

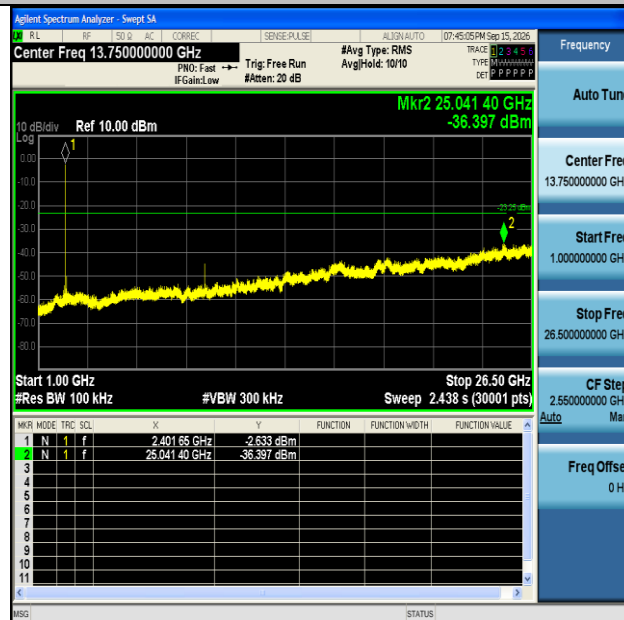


2DH5-Ant1-2402-0~Reference-PASS



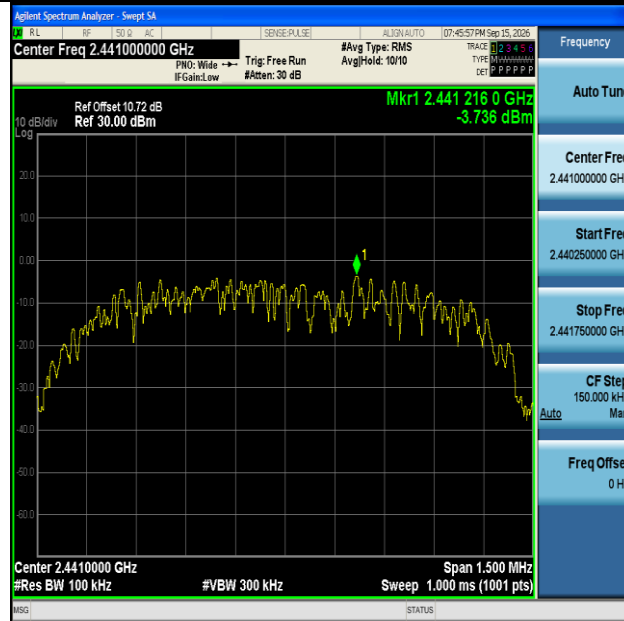


2DH5-Ant1-2402-30~1000-PASS

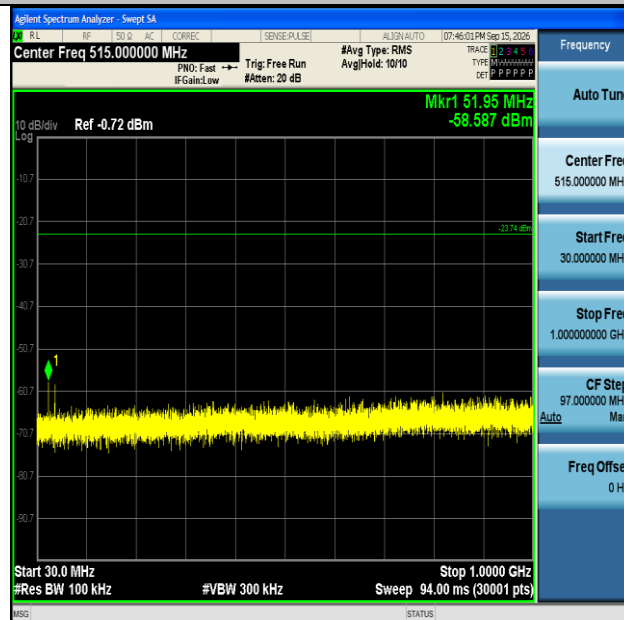


2DH5-Ant1-2402-1000~26500-PASS



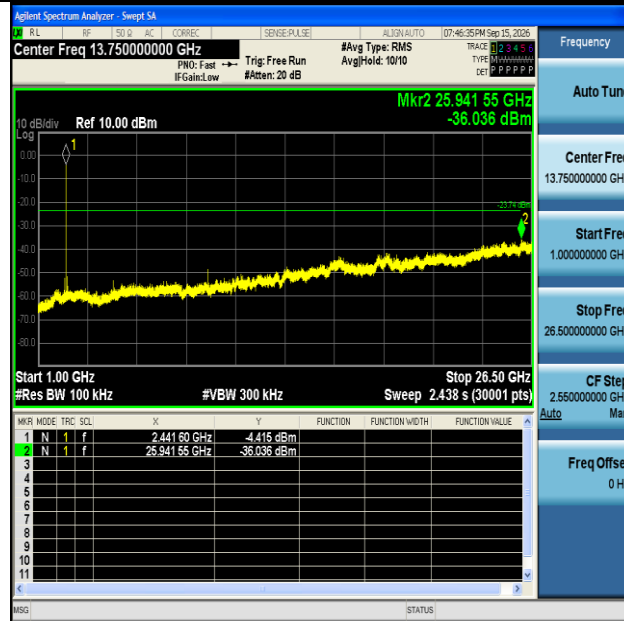


2DH5-Ant1-2441-0~Reference-PASS

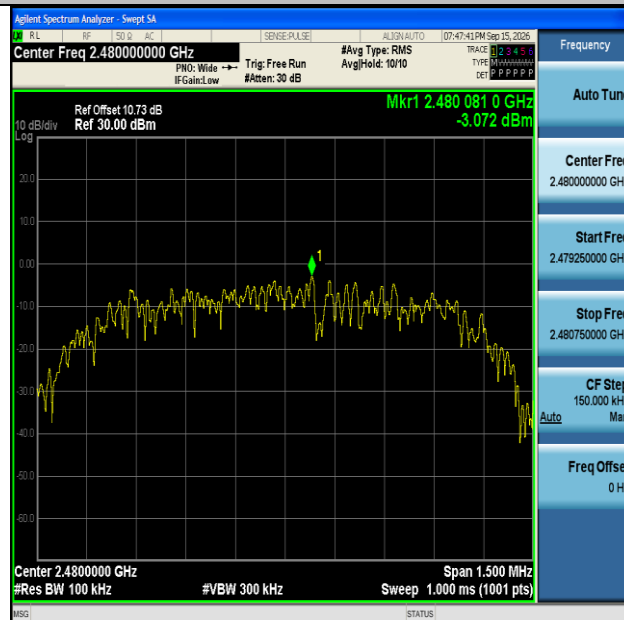


2DH5-Ant1-2441-30~1000-PASS



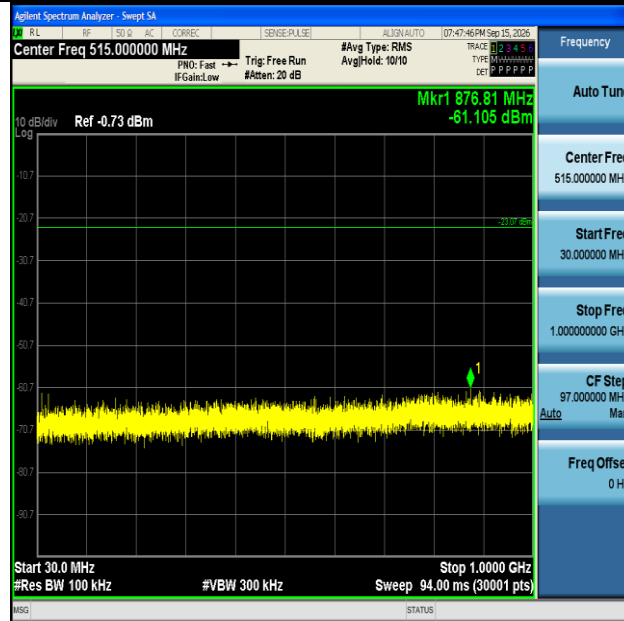


2DH5-Ant1-2441-1000~26500-PASS

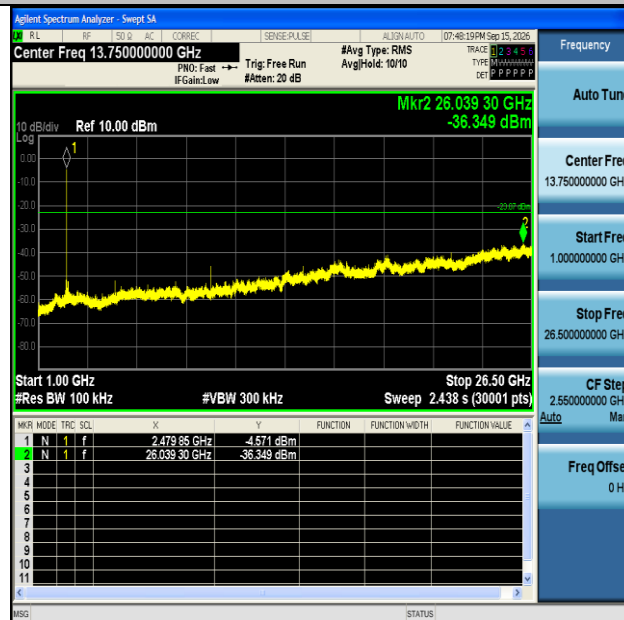


2DH5-Ant1-2480-0~Reference-PASS





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

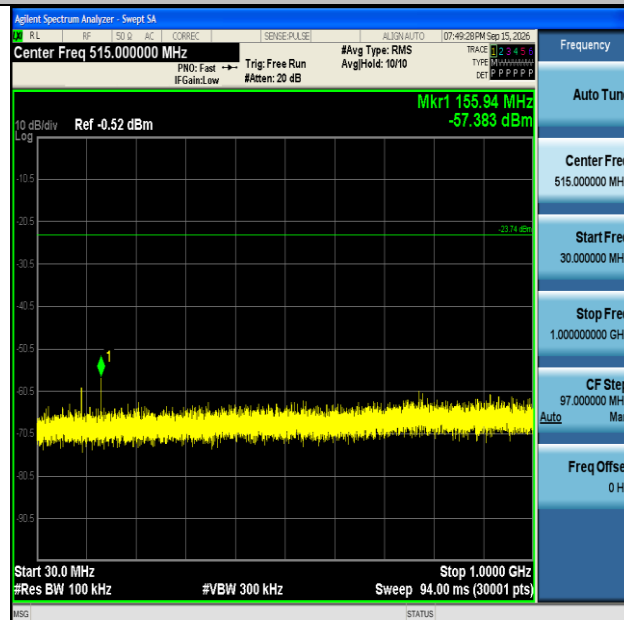


2DH5-Ant1-2480-1000~26500-PASS



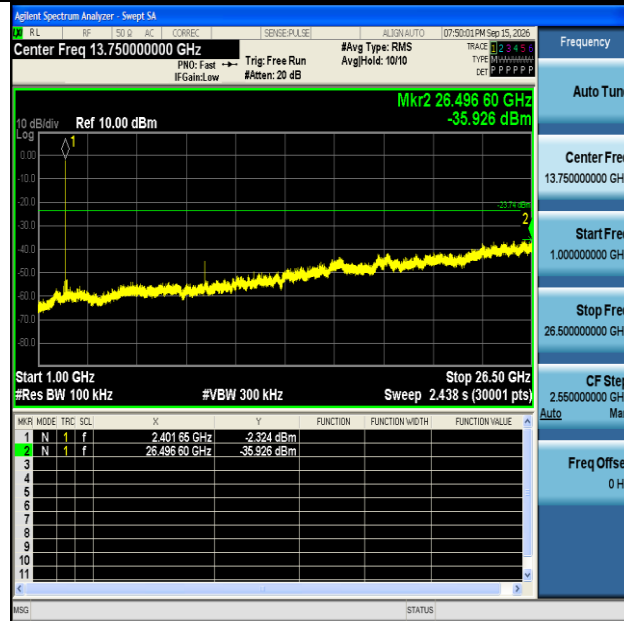


3DH5-Ant1-2402-0~Reference-PASS

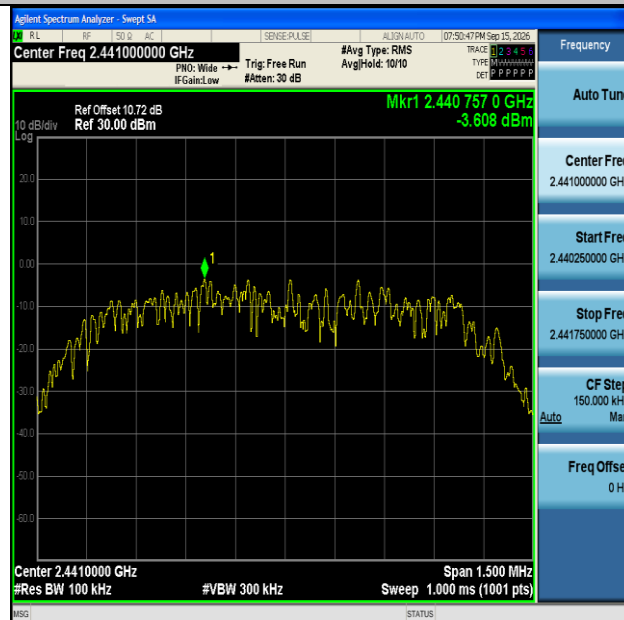


3DH5-Ant1-2402-30~1000-PASS



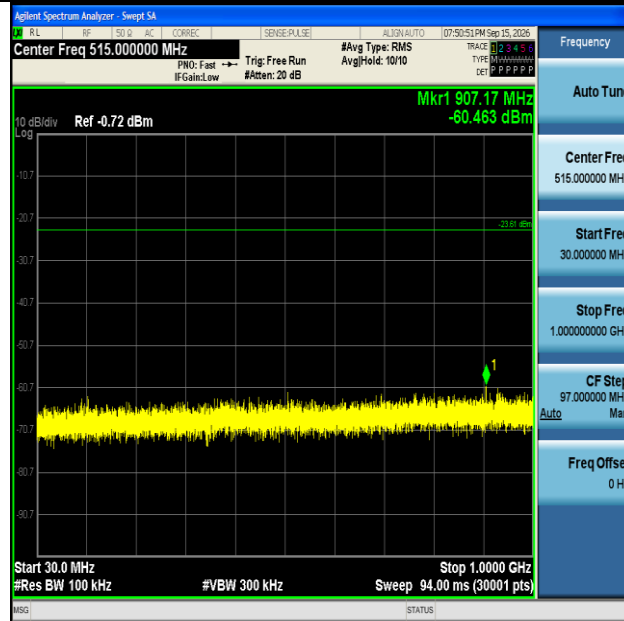


3DH5-Ant1-2402-1000~26500-PASS



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



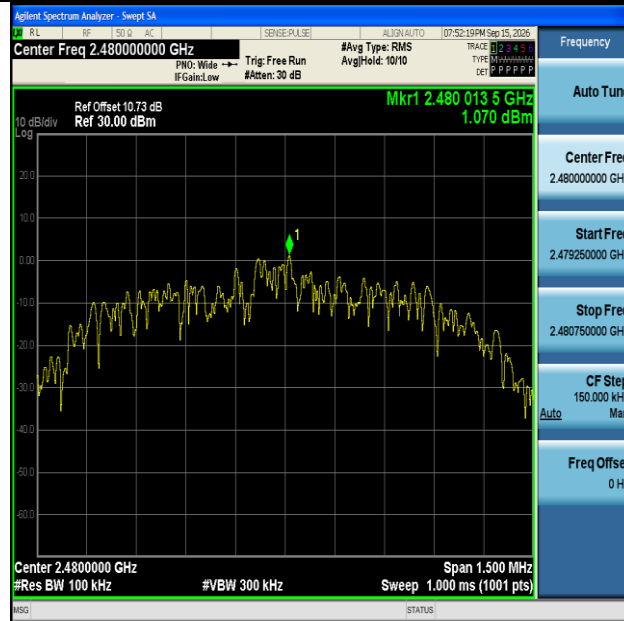


3DH5-Ant1-2441-30~1000-PASS

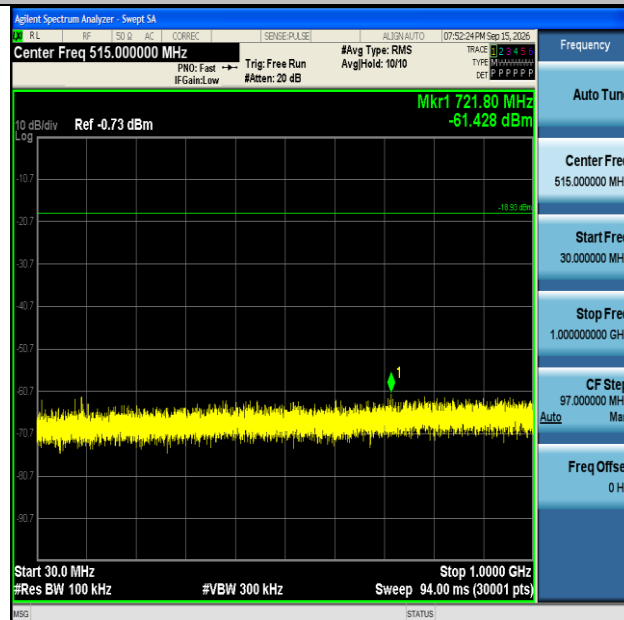


3DH5-Ant1-2441-1000~26500-PASS



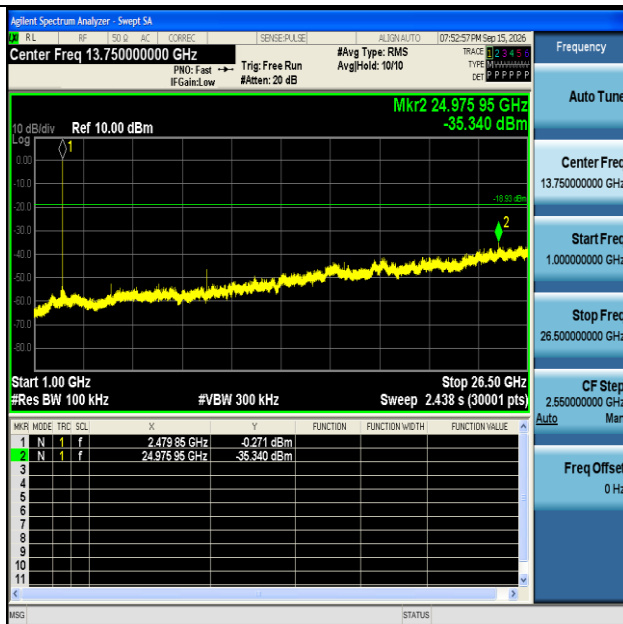


3DH5-Ant1-2480-0~Reference-PASS



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





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





Appendix I: Duty Cycle

Test Result

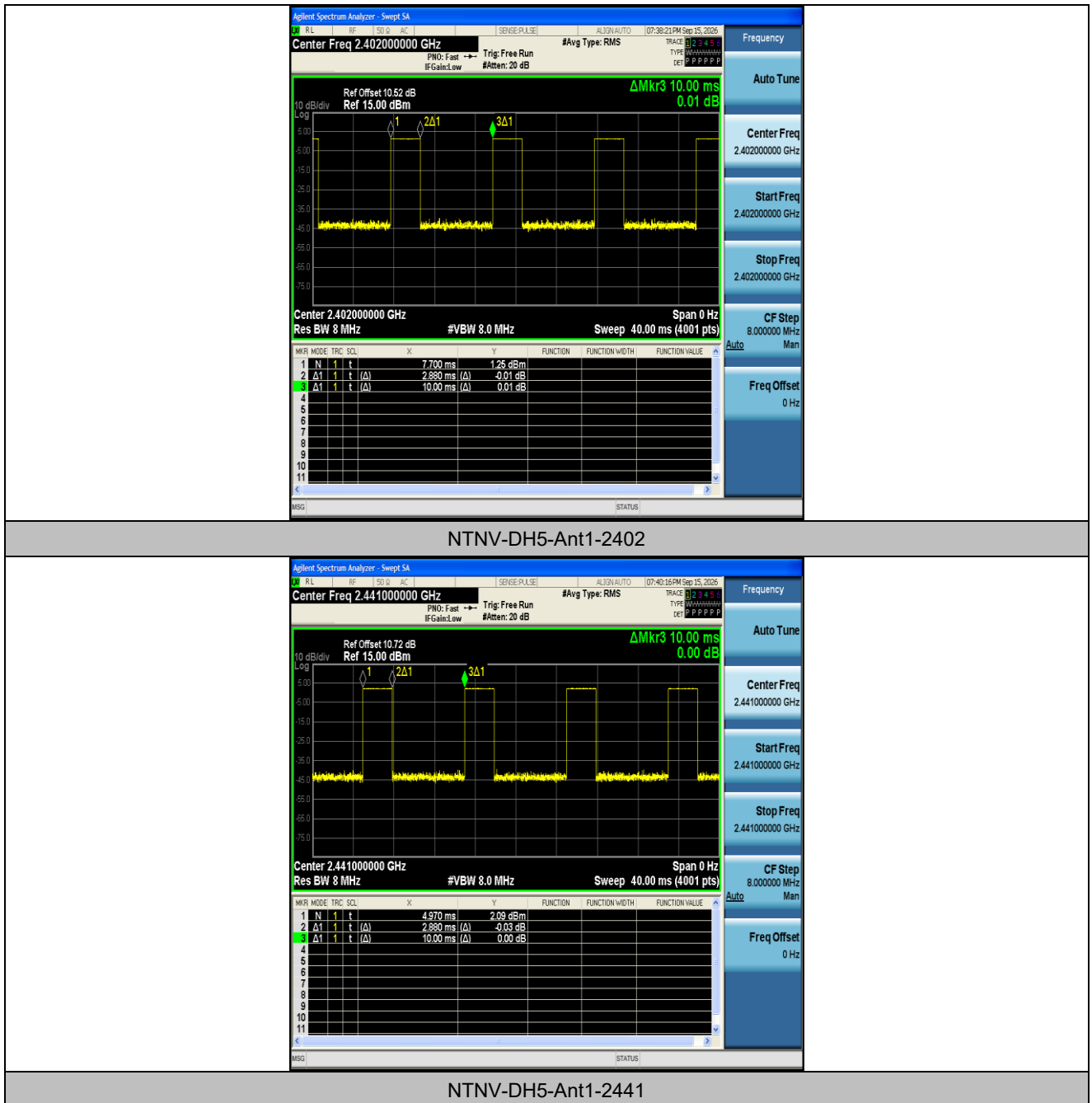
Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.88	10.00	28.80	5.41
DH5	Ant1	2441	2.88	10.00	28.80	5.41
DH5	Ant1	2480	2.88	10.00	28.80	5.41
2DH5	Ant1	2402	2.89	10.00	28.90	5.39
2DH5	Ant1	2441	2.89	10.00	28.90	5.39
2DH5	Ant1	2480	2.89	10.00	28.90	5.39
3DH5	Ant1	2402	2.88	10.00	28.80	5.41
3DH5	Ant1	2441	2.88	10.00	28.80	5.41
3DH5	Ant1	2480	2.89	10.00	28.90	5.39

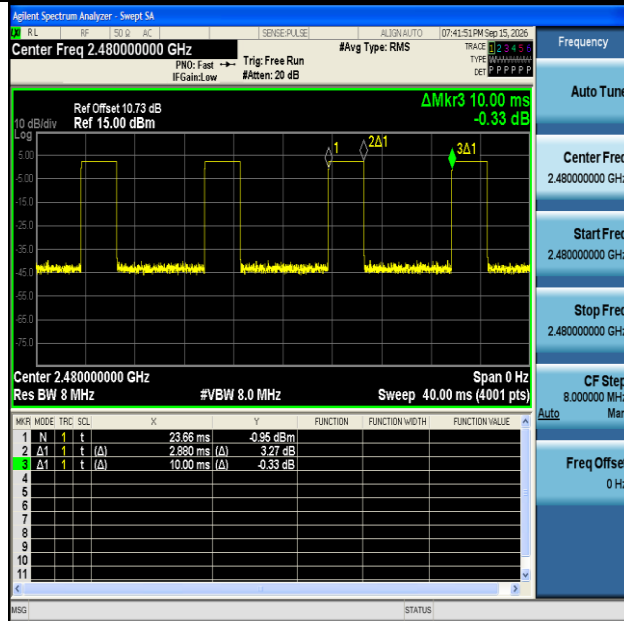
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



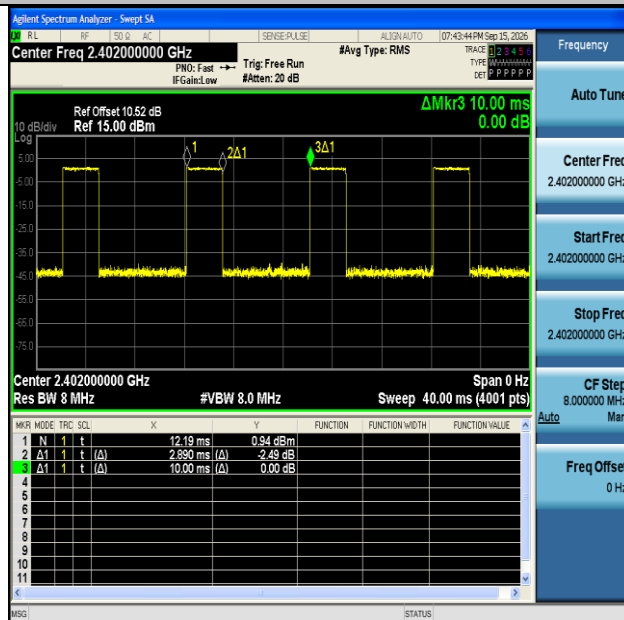


Test Graphs



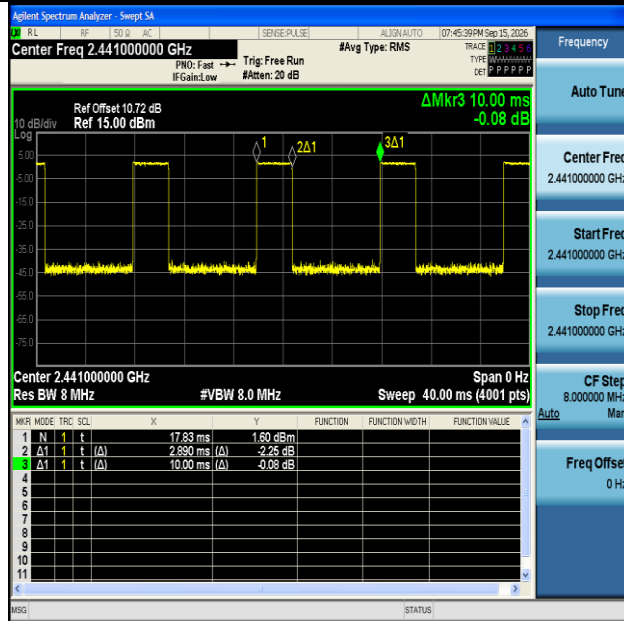


NTNV-DH5-Ant1-2480

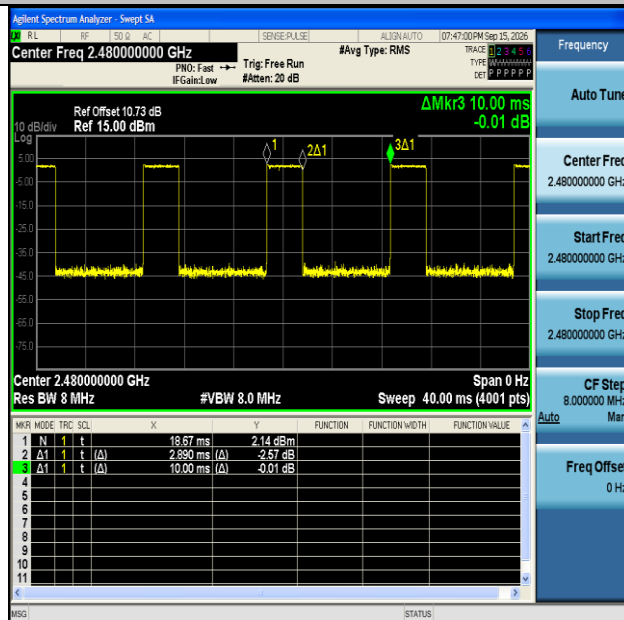


NTNV-2DH5-Ant1-2402



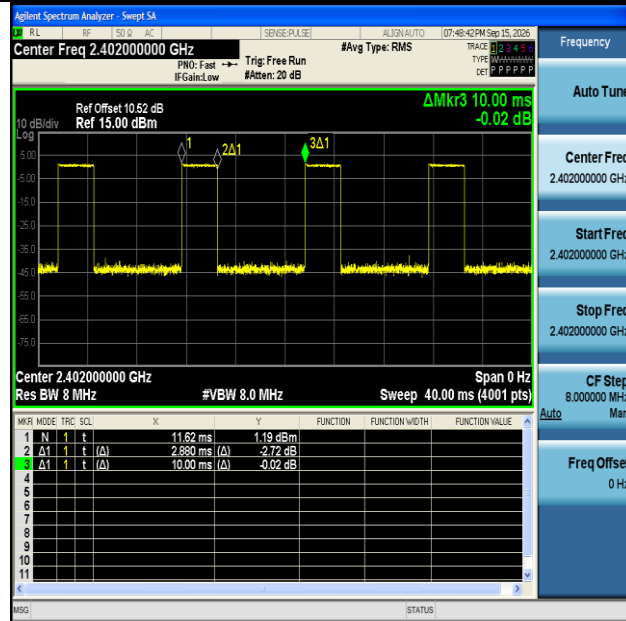


NTNV-2DH5-Ant1-2441

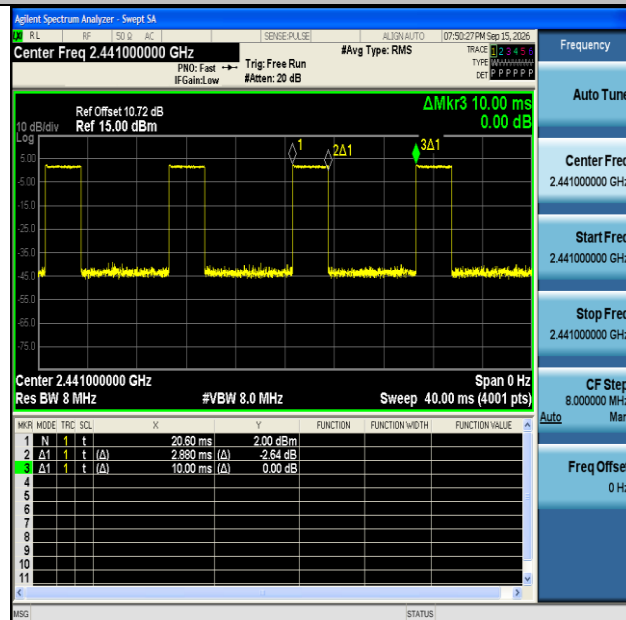


NTNV-2DH5-Ant1-2480





NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441



