



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

Product Name: 6.0 Bluetooth Adapter

Trade Mark: /

Test Model: BTA-60

FCC ID: 2A3F2-BTA-60

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	0.954	2401.520	2402.474	---	---
DH5	Ant1	2441	0.966	2440.517	2441.483	---	---
DH5	Ant1	2480	0.957	2479.523	2480.480	---	---
2DH5	Ant1	2402	1.281	2401.358	2402.639	---	---
2DH5	Ant1	2441	1.290	2440.352	2441.642	---	---
2DH5	Ant1	2480	1.311	2479.331	2480.642	---	---
3DH5	Ant1	2402	1.341	2401.313	2402.654	---	---
3DH5	Ant1	2441	1.308	2440.334	2441.642	---	---
3DH5	Ant1	2480	1.290	2479.355	2480.645	---	---

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





3DH5-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	0.87443	2401.5534	2402.4279	---	---
DH5	Ant1	2441	0.88316	2440.5506	2441.4338	---	---
DH5	Ant1	2480	0.88174	2479.5470	2480.4288	---	---
2DH5	Ant1	2402	1.1675	2401.4009	2402.5684	---	---
2DH5	Ant1	2441	1.1774	2440.4002	2441.5776	---	---
2DH5	Ant1	2480	1.1845	2479.3931	2480.5776	---	---
3DH5	Ant1	2402	1.1837	2401.3985	2402.5822	---	---
3DH5	Ant1	2441	1.1753	2440.4042	2441.5795	---	---
3DH5	Ant1	2480	1.1877	2479.3949	2480.5826	---	---

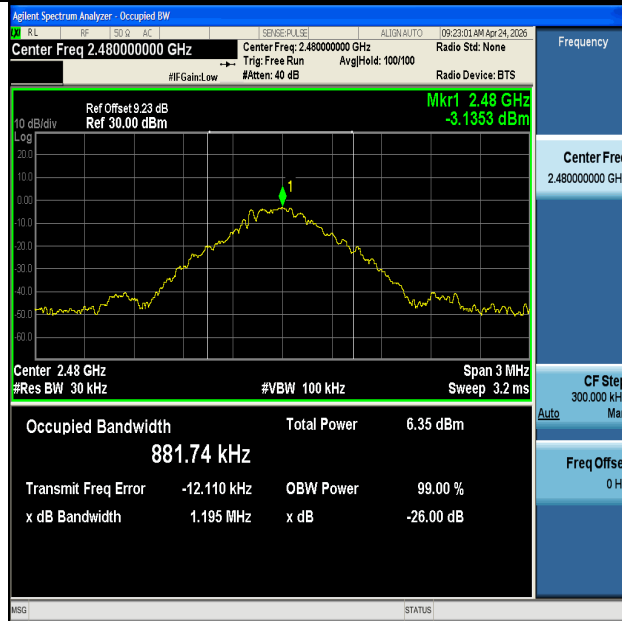
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs



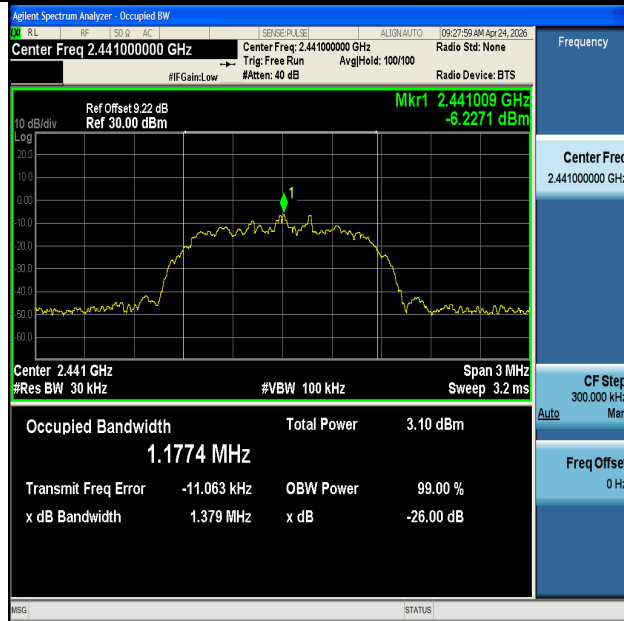


DH5-Ant1-2480



2DH5-Ant1-2402





2DH5-Ant1-2441

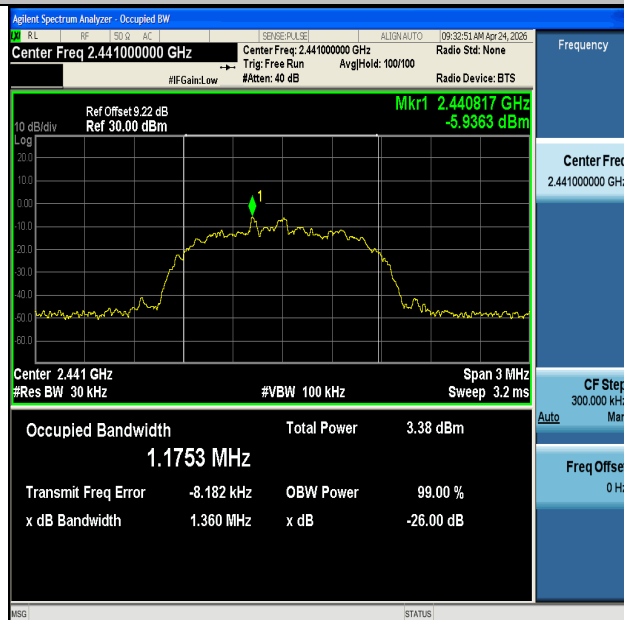


2DH5-Ant1-2480



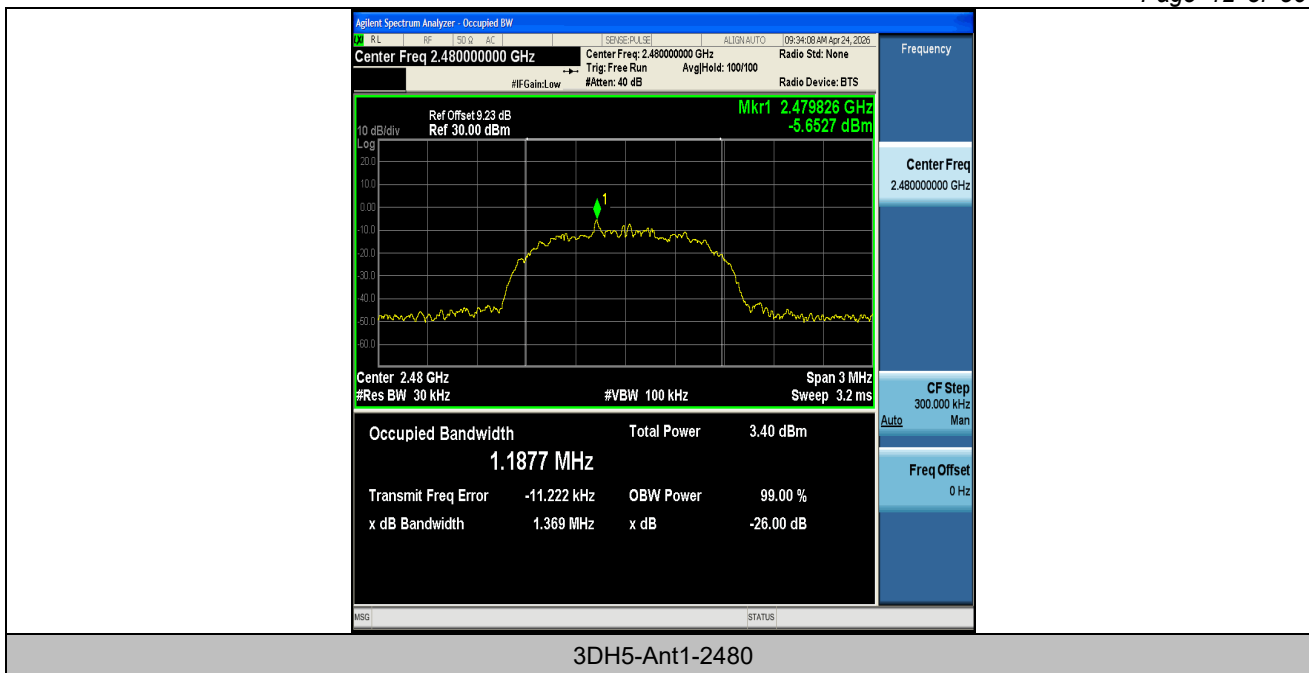


3DH5-Ant1-2402



3DH5-Ant1-2441







Appendix C: Maximum peak conducted output power

Test Result

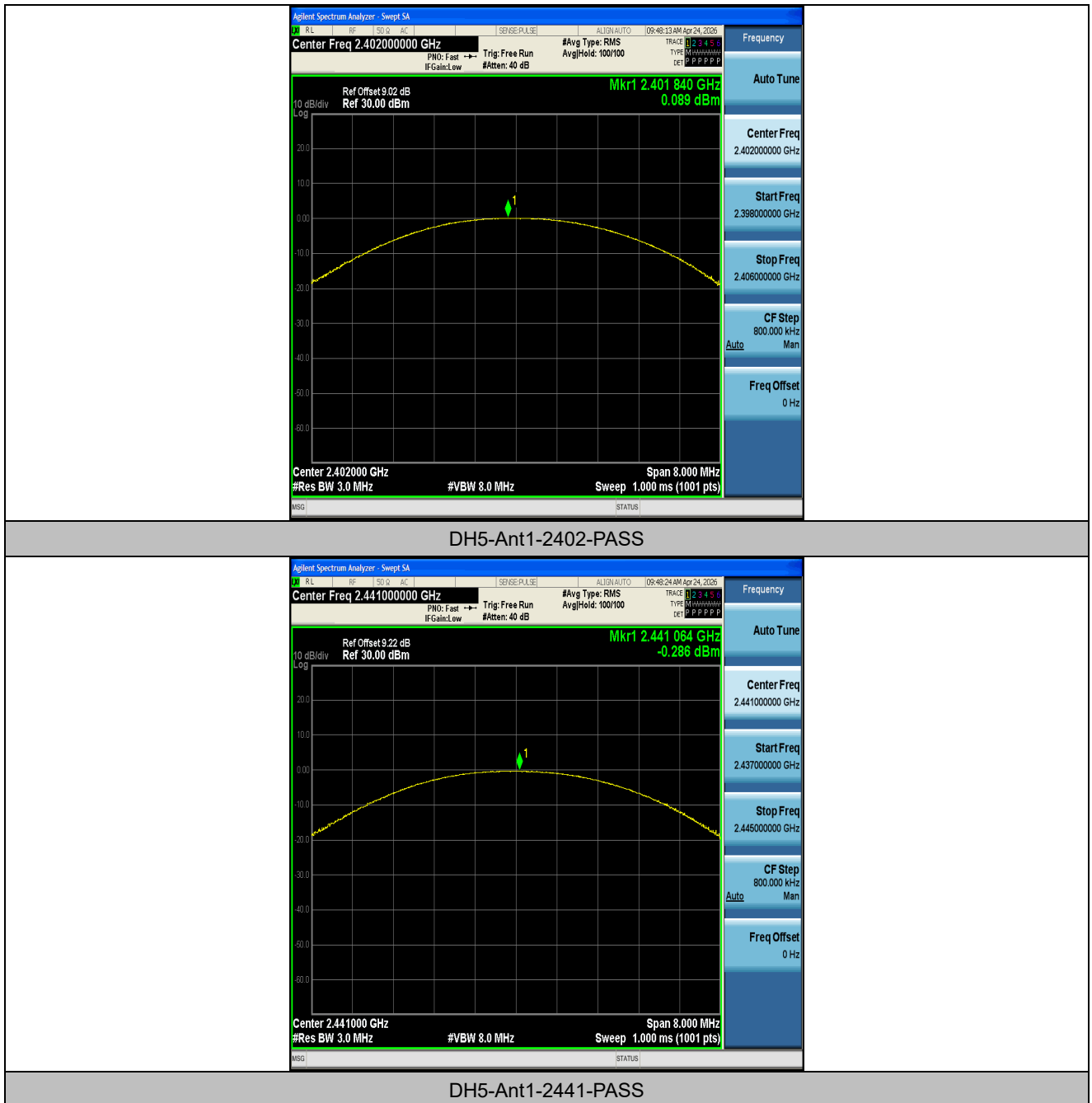
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	0.09	≤30	PASS
DH5	Ant1	2441	-0.29	≤30	PASS
DH5	Ant1	2480	0.08	≤30	PASS
2DH5	Ant1	2402	-0.10	≤20.97	PASS
2DH5	Ant1	2441	-1.92	≤20.97	PASS
2DH5	Ant1	2480	-1.93	≤20.97	PASS
3DH5	Ant1	2402	0.57	≤20.97	PASS
3DH5	Ant1	2441	-0.91	≤20.97	PASS
3DH5	Ant1	2480	-1.35	≤20.97	PASS

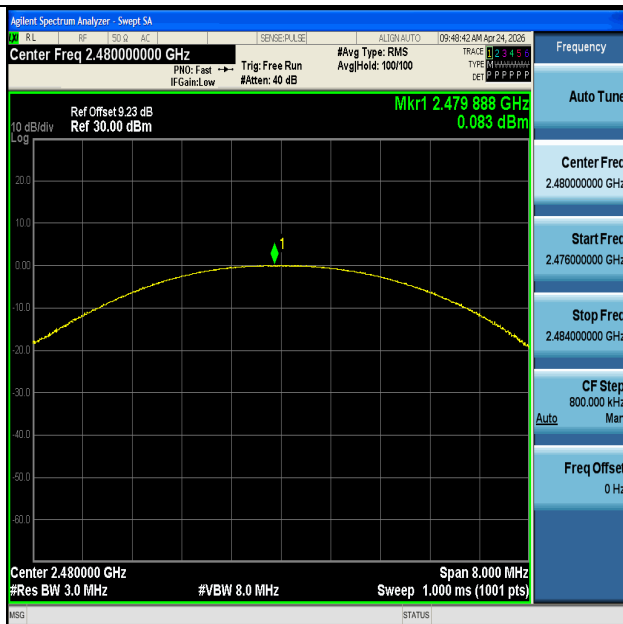
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



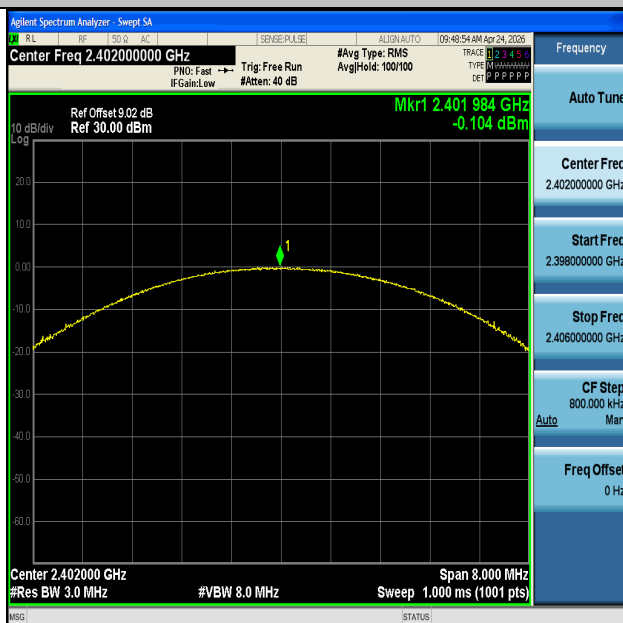


Test Graphs



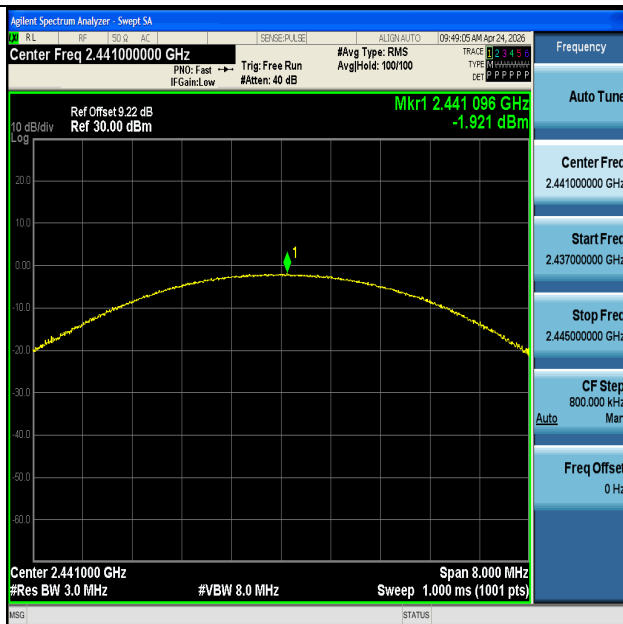


DH5-Ant1-2480-PASS

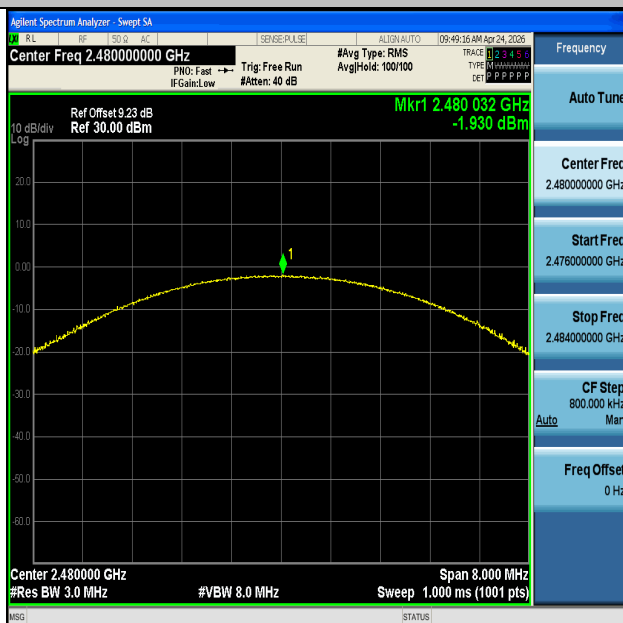


2DH5-Ant1-2402-PASS



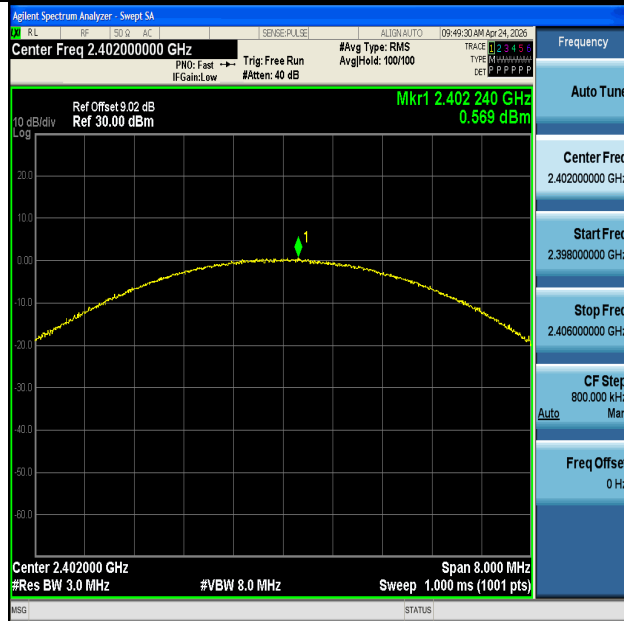


2DH5-Ant1-2441-PASS

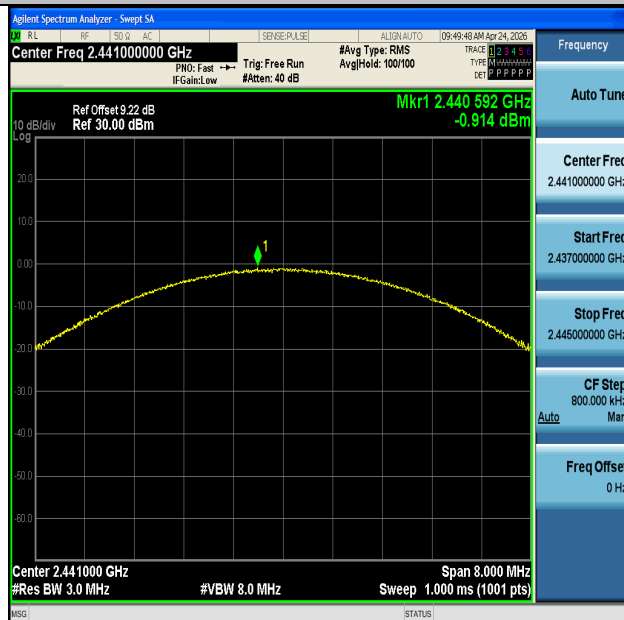


2DH5-Ant1-2480-PASS



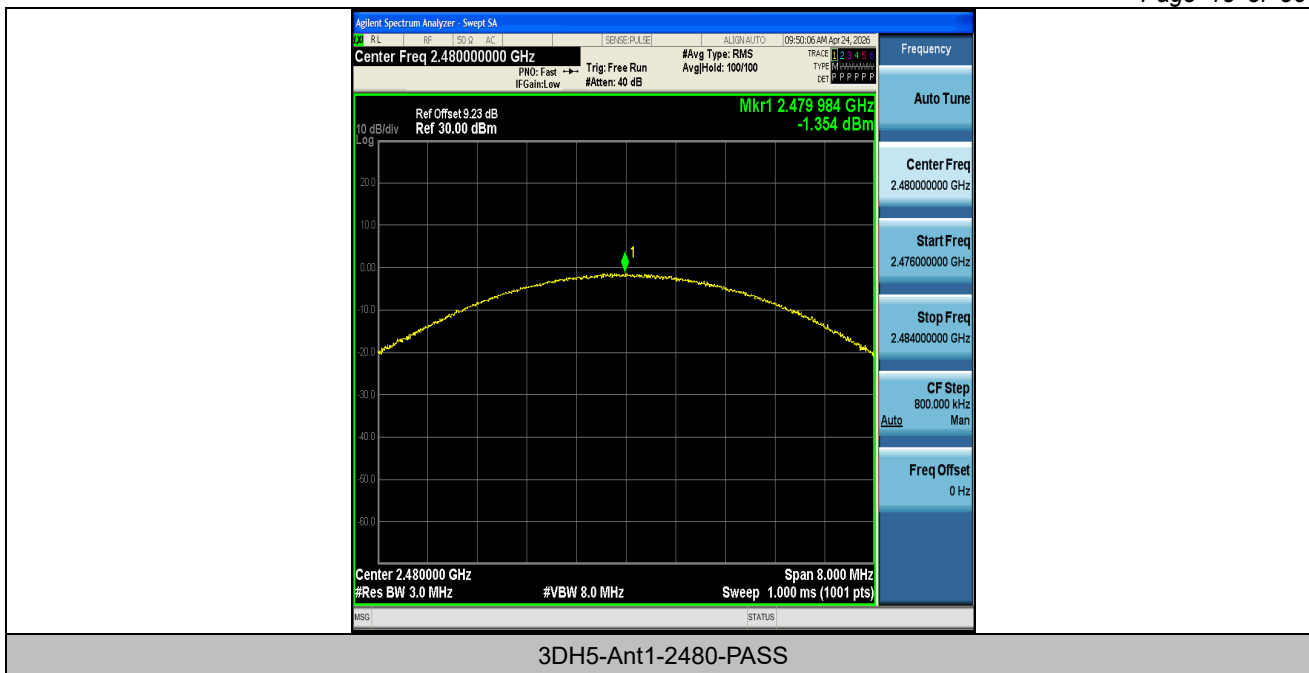


3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS







Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	0.996	≥ 0.966	PASS
2DH5	Ant1	Hop	0.994	≥ 0.874	PASS
3DH5	Ant1	Hop	1.062	≥ 0.894	PASS

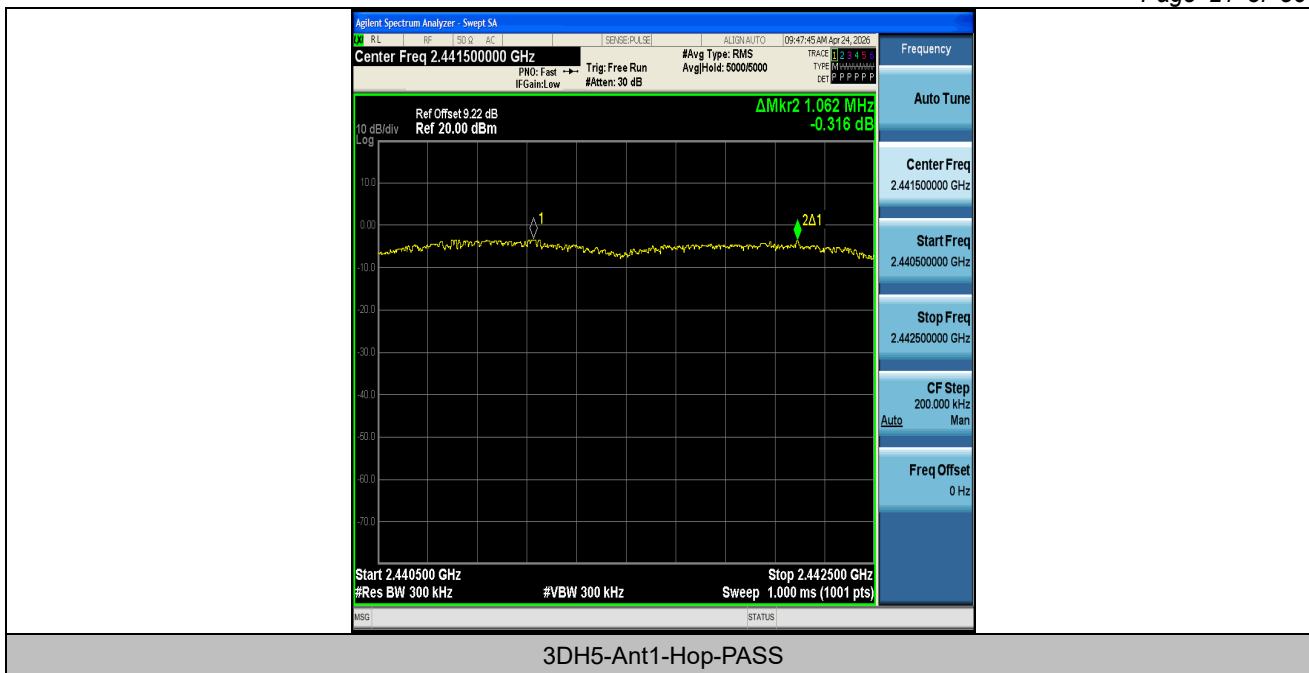
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs







Appendix E: Time of occupancy

Test Result

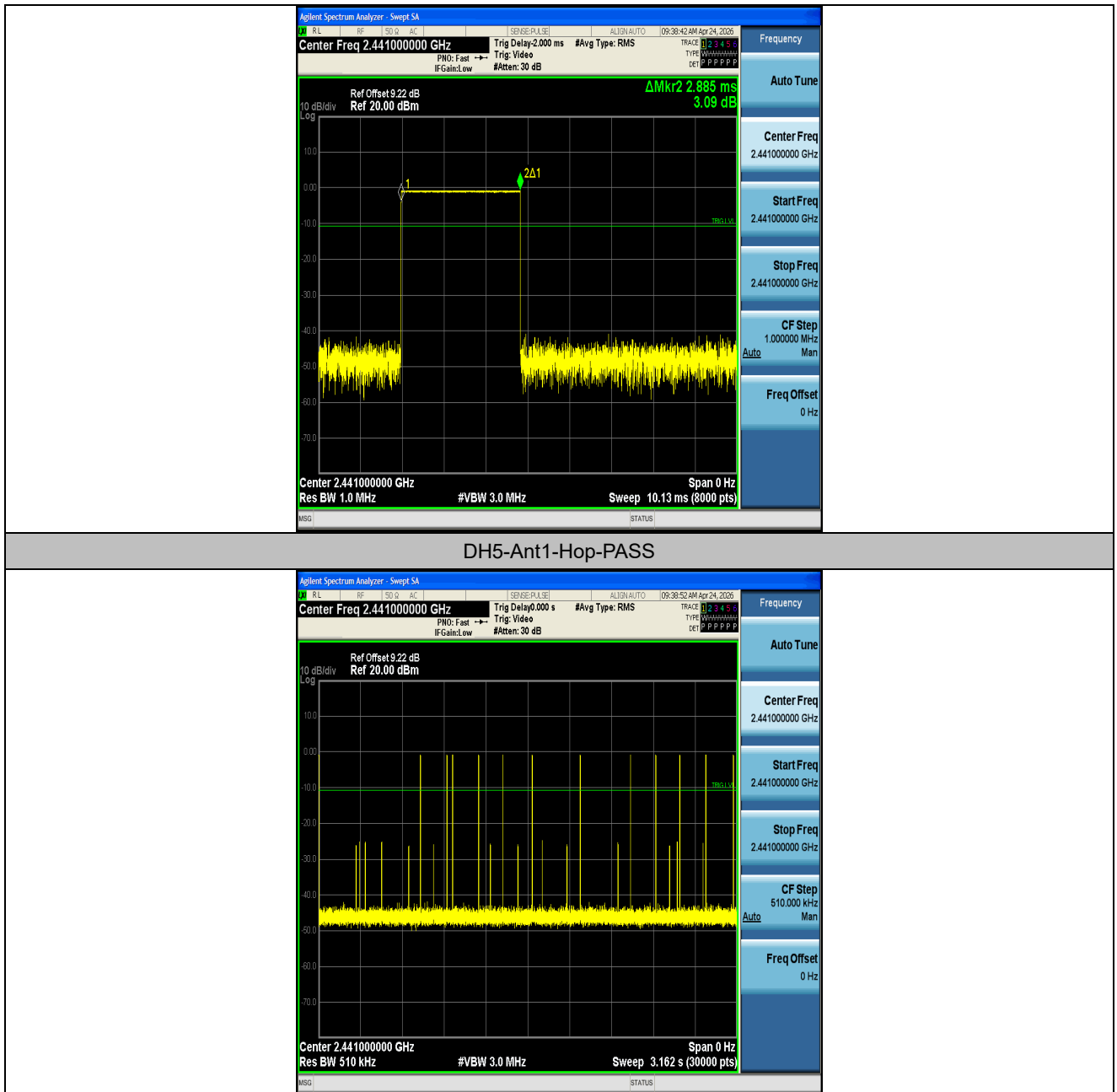
Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.885	130	0.375	≤0.4	PASS
2DH5	Ant1	Hop	2.891	90	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.892	130	0.376	≤0.4	PASS

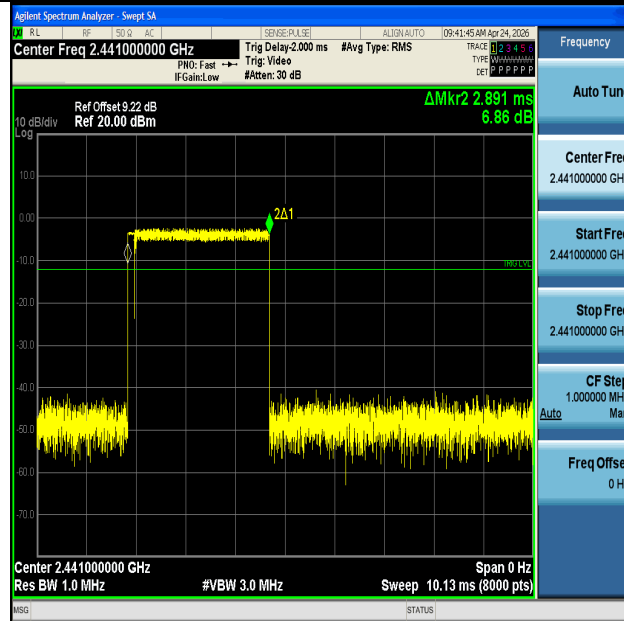
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



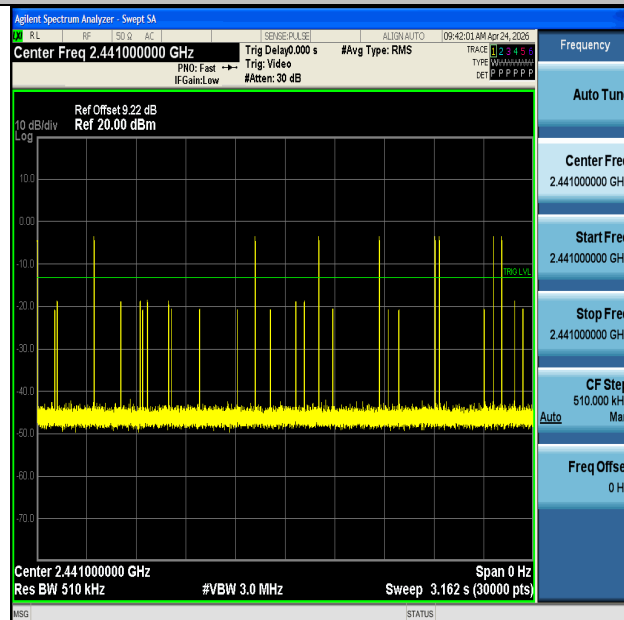


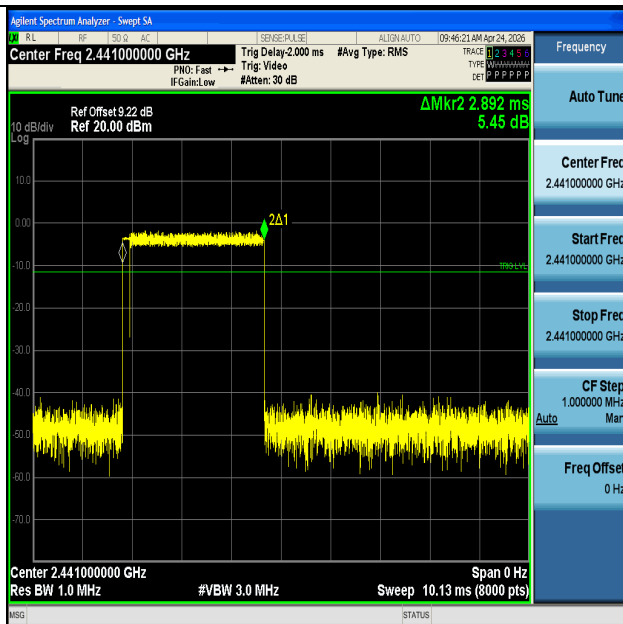
Test Graphs



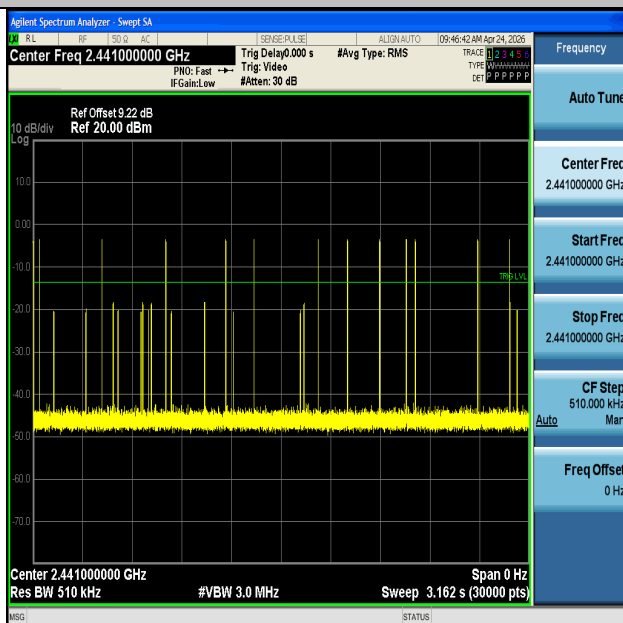


2DH5-Ant1-Hop-PASS





3DH5-Ant1-Hop-PASS





Appendix F: Number of hopping channels

Test Result

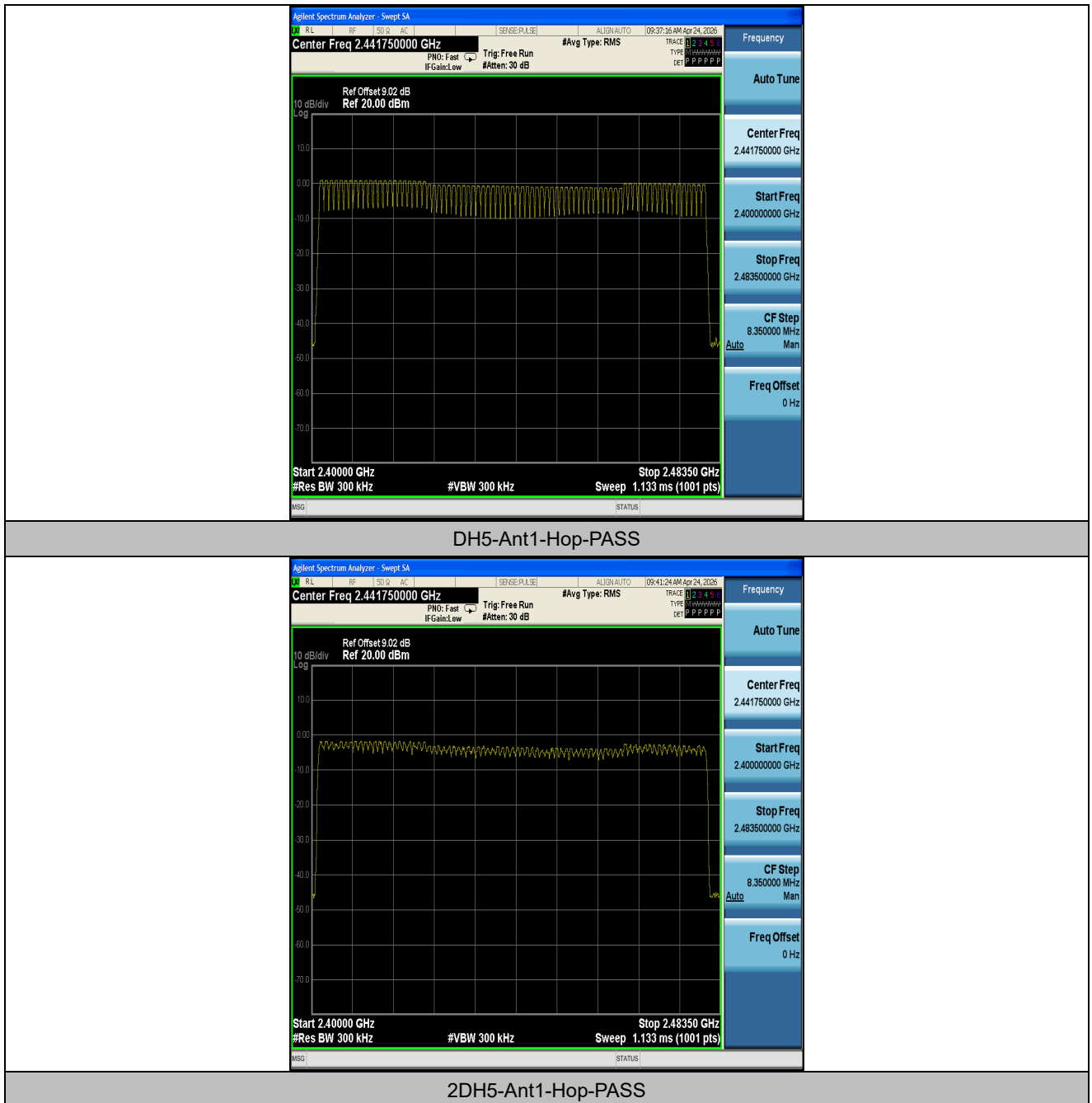
Test Mode	Antenna	Frequency [MHz]	Result [Num]	Limit [Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

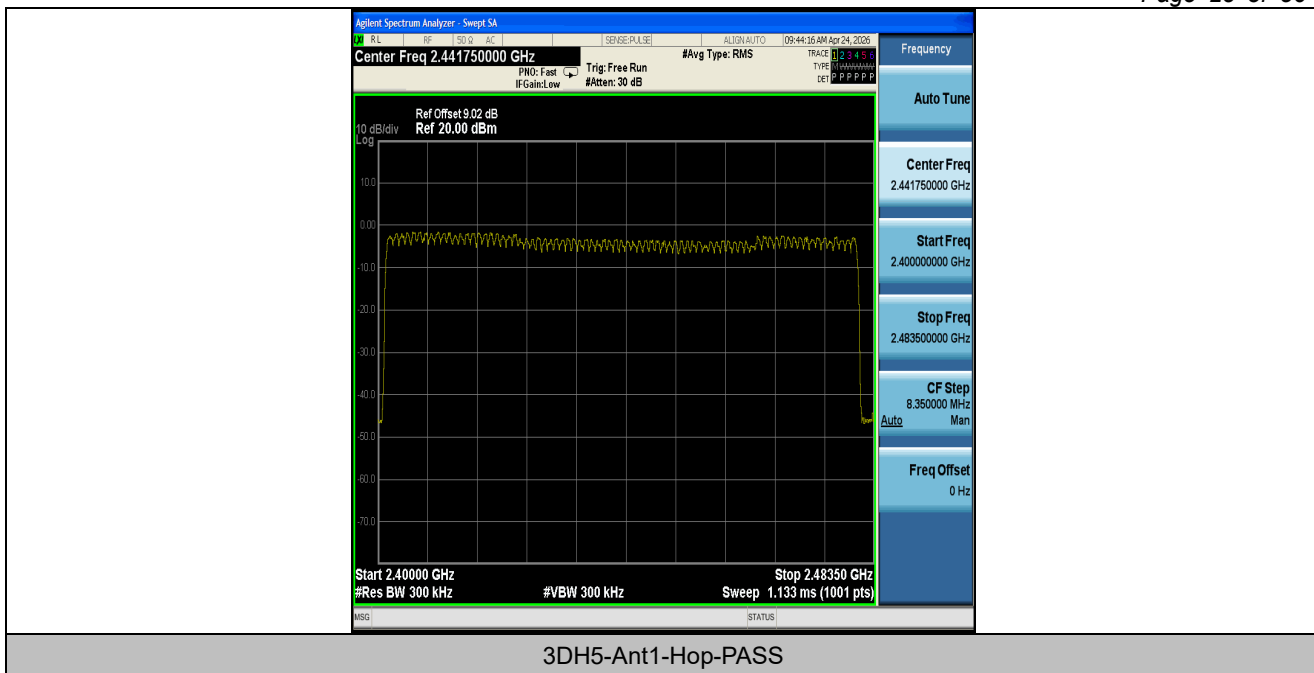
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs







Appendix G: Band edge measurements

Test Result

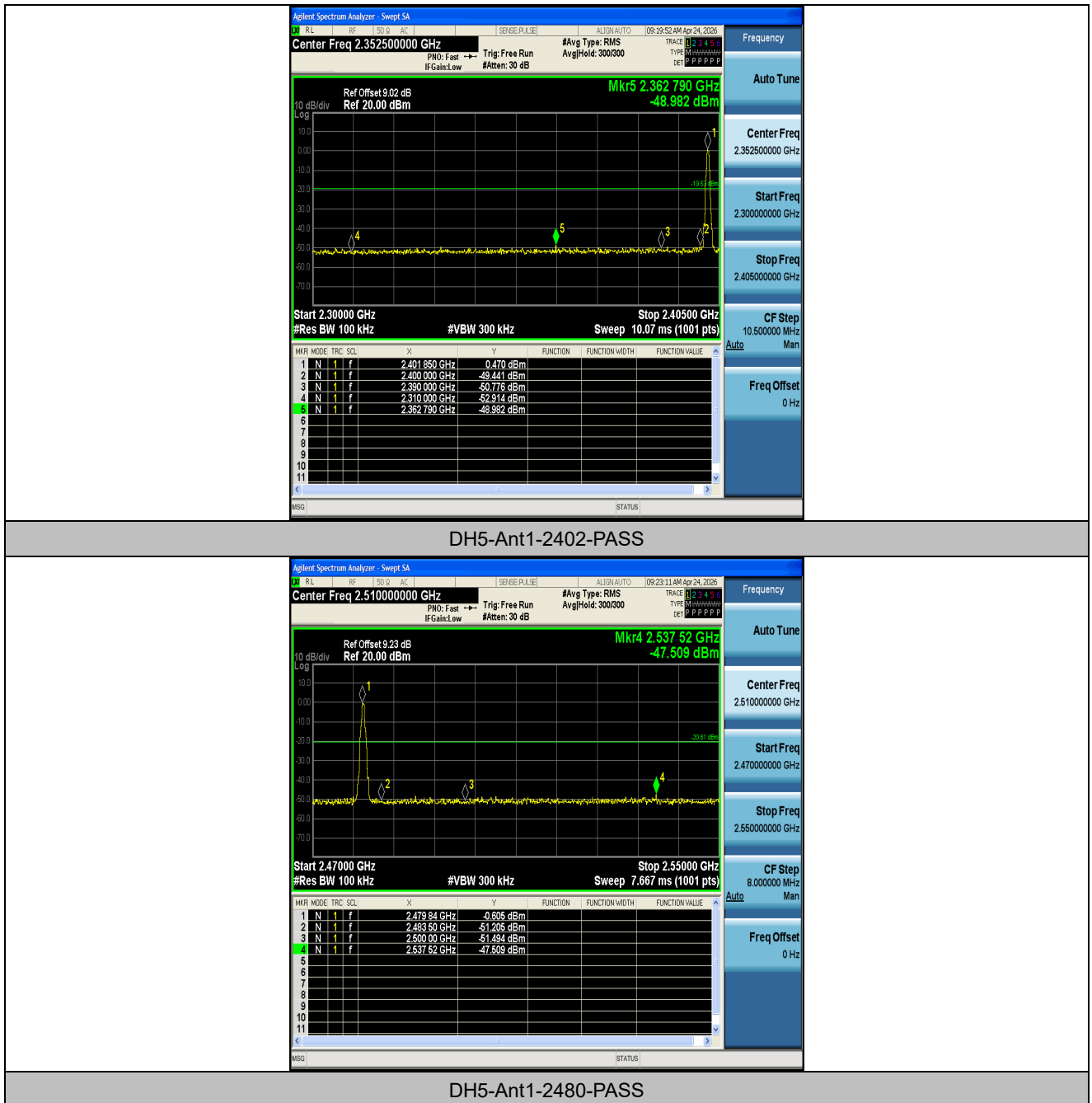
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.47	-48.98	≤-19.53	PASS
DH5	Ant1	High	2480	-0.61	-47.51	≤-20.61	PASS
DH5	Ant1	Low	Hop_2402	0.35	-49.49	≤-19.65	PASS
DH5	Ant1	High	Hop_2480	-0.52	-48.69	≤-20.52	PASS
2DH5	Ant1	Low	2402	-2.16	-49.52	≤-22.16	PASS
2DH5	Ant1	High	2480	-3.10	-48.37	≤-23.1	PASS
2DH5	Ant1	Low	Hop_2402	-6.19	-49.41	≤-26.19	PASS
2DH5	Ant1	High	Hop_2480	-4.73	-48.89	≤-24.73	PASS
3DH5	Ant1	Low	2402	-2.22	-49.02	≤-22.22	PASS
3DH5	Ant1	High	2480	-3.13	-47.89	≤-23.13	PASS
3DH5	Ant1	Low	Hop_2402	-6.14	-48.9	≤-26.14	PASS
3DH5	Ant1	High	Hop_2480	-5.18	-48.38	≤-25.18	PASS

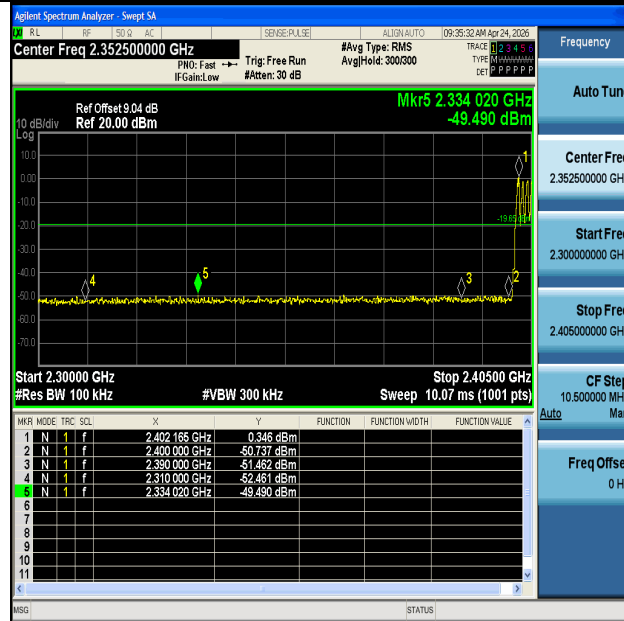
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



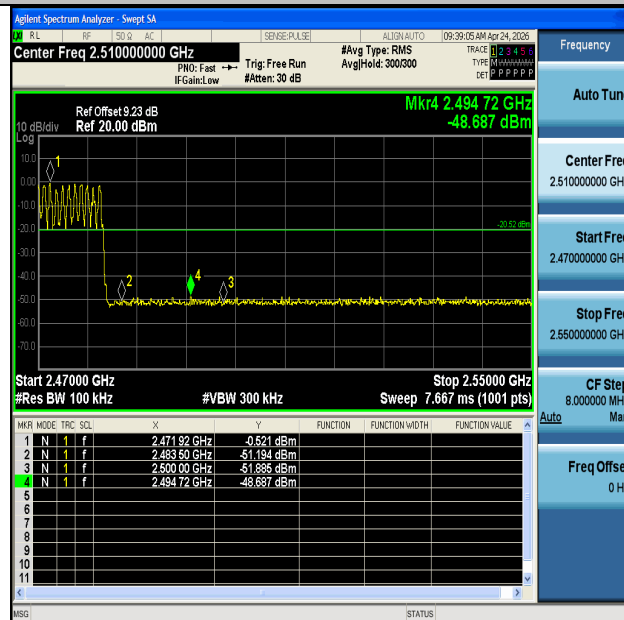


Test Graphs



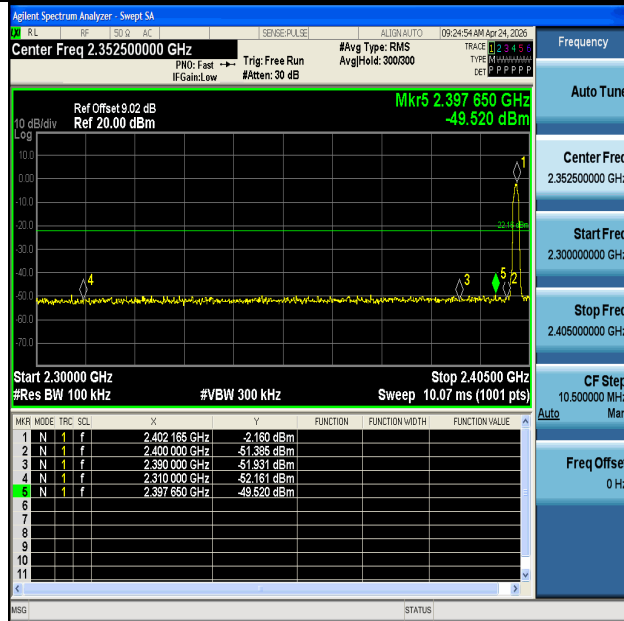


DH5-Ant1-Hop_2402-PASS

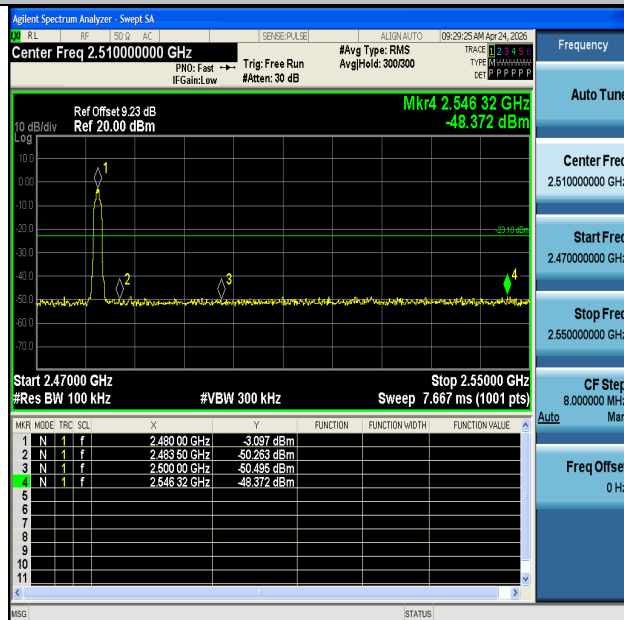


DH5-Ant1-Hop_2480-PASS



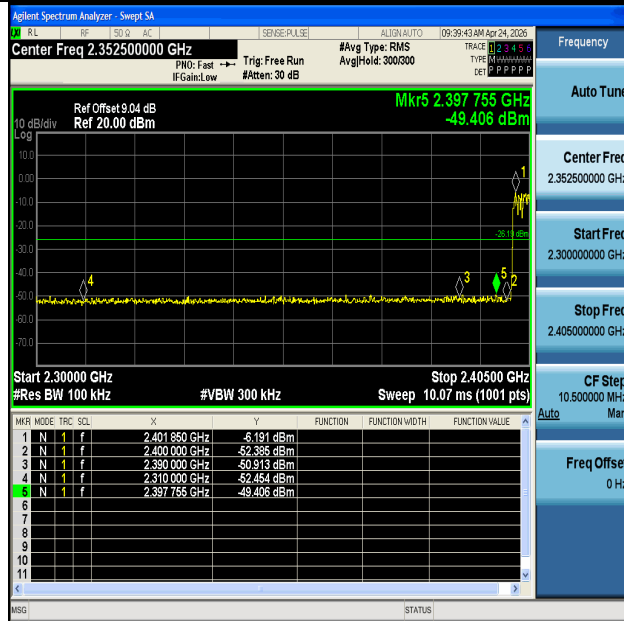


2DH5-Ant1-2402-PASS

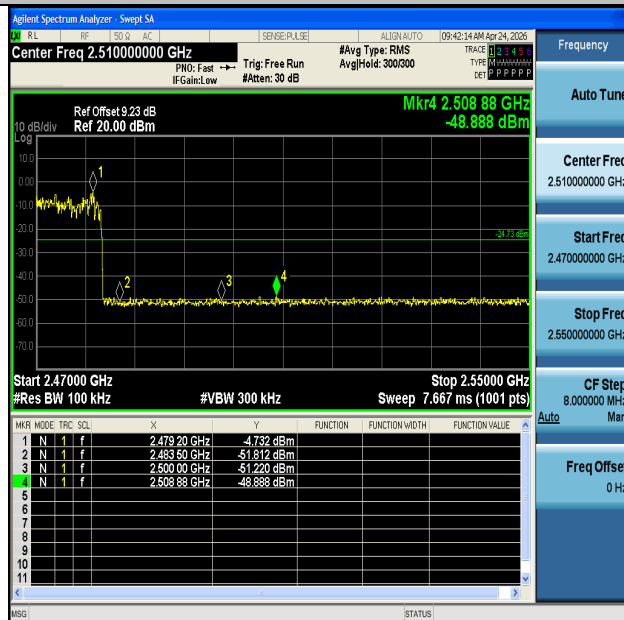


2DH5-Ant1-2480-PASS



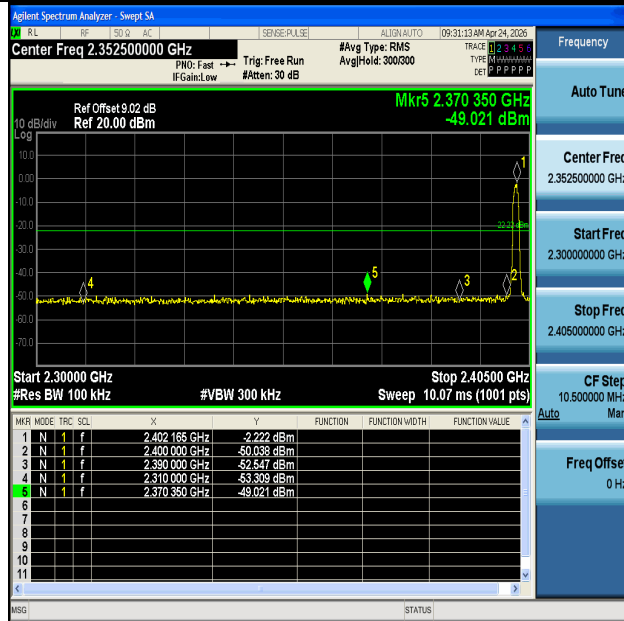


2DH5-Ant1-Hop_2402-PASS

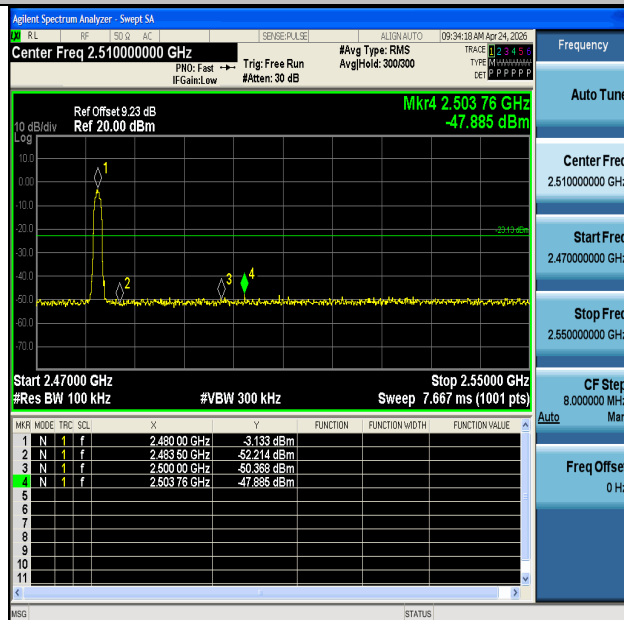


2DH5-Ant1-Hop_2480-PASS



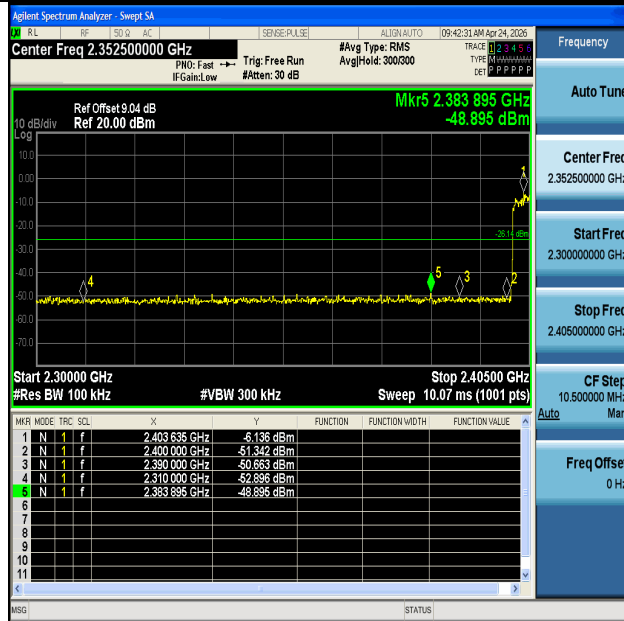


3DH5-Ant1-2402-PASS

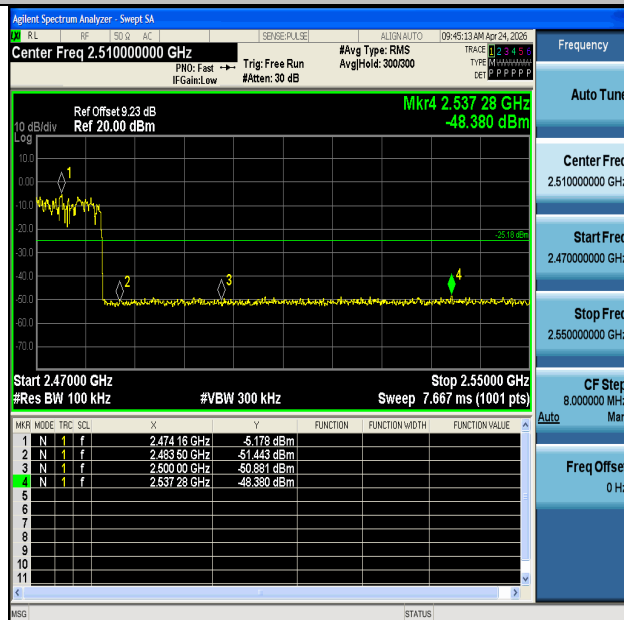


3DH5-Ant1-2480-PASS





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	-0.21	-0.21	---	PASS
DH5	Ant1	2402	30~1000	-0.21	-62.77	≤-20.21	PASS
DH5	Ant1	2402	1000~26500	-0.21	-38.16	≤-20.21	PASS
DH5	Ant1	2441	0~Reference	-1.60	-1.60	---	PASS
DH5	Ant1	2441	30~1000	-1.60	-62.81	≤-21.6	PASS
DH5	Ant1	2441	1000~26500	-1.60	-37.5	≤-21.6	PASS
DH5	Ant1	2480	0~Reference	-1.34	-1.34	---	PASS
DH5	Ant1	2480	30~1000	-1.34	-61.96	≤-21.34	PASS
DH5	Ant1	2480	1000~26500	-1.34	-37.77	≤-21.34	PASS
2DH5	Ant1	2402	0~Reference	-4.42	-4.42	---	PASS
2DH5	Ant1	2402	30~1000	-4.42	-62.65	≤-24.42	PASS
2DH5	Ant1	2402	1000~26500	-4.42	-37.31	≤-24.42	PASS
2DH5	Ant1	2441	0~Reference	-5.56	-5.56	---	PASS
2DH5	Ant1	2441	30~1000	-5.56	-62.71	≤-25.56	PASS
2DH5	Ant1	2441	1000~26500	-5.56	-37.65	≤-25.56	PASS
2DH5	Ant1	2480	0~Reference	-4.52	-4.52	---	PASS
2DH5	Ant1	2480	30~1000	-4.52	-62.96	≤-24.52	PASS
2DH5	Ant1	2480	1000~26500	-4.52	-38.13	≤-24.52	PASS
3DH5	Ant1	2402	0~Reference	-2.69	-2.69	---	PASS
3DH5	Ant1	2402	30~1000	-2.69	-62.33	≤-22.69	PASS
3DH5	Ant1	2402	1000~26500	-2.69	-37.8	≤-22.69	PASS
3DH5	Ant1	2441	0~Reference	-6.43	-6.43	---	PASS
3DH5	Ant1	2441	30~1000	-6.43	-63.02	≤-26.43	PASS
3DH5	Ant1	2441	1000~26500	-6.43	-37.49	≤-26.43	PASS
3DH5	Ant1	2480	0~Reference	-6.18	-6.18	---	PASS
3DH5	Ant1	2480	30~1000	-6.18	-62.63	≤-26.18	PASS
3DH5	Ant1	2480	1000~26500	-6.18	-37.68	≤-26.18	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.

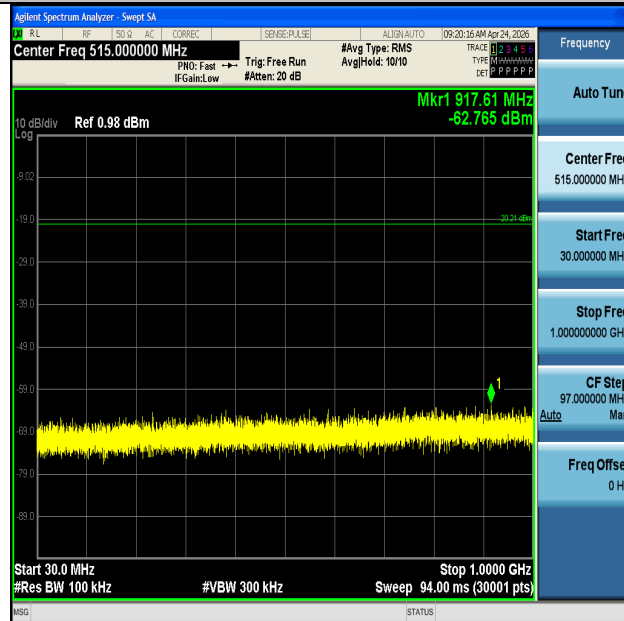




Test Graphs

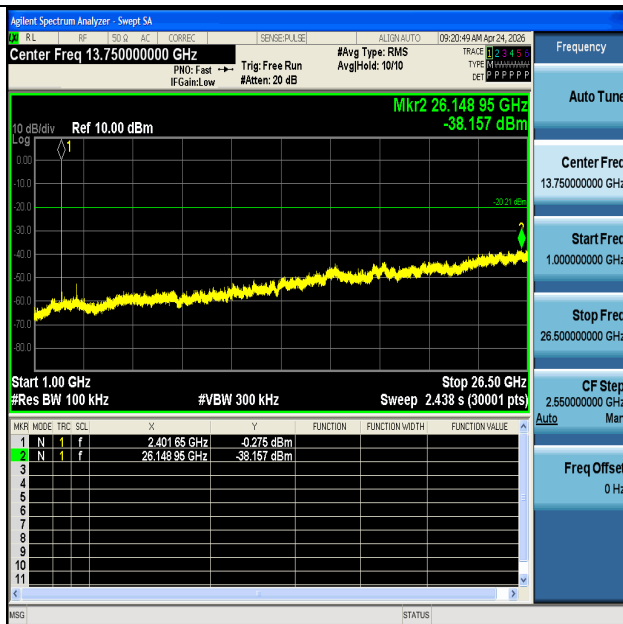


DH5-Ant1-2402-0~Reference-PASS

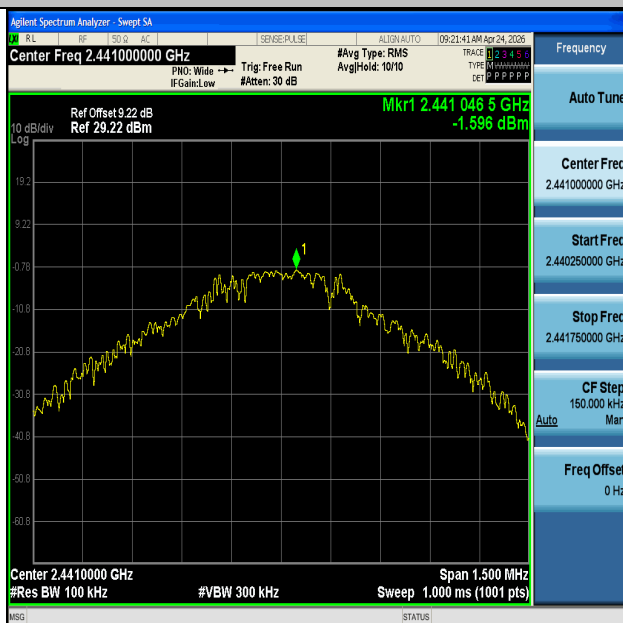


DH5-Ant1-2402-30~1000-PASS



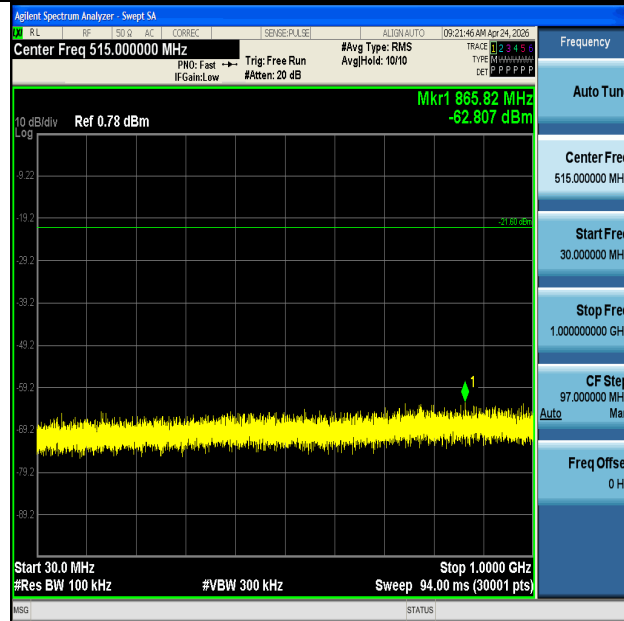


DH5-Ant1-2402-1000~26500-PASS

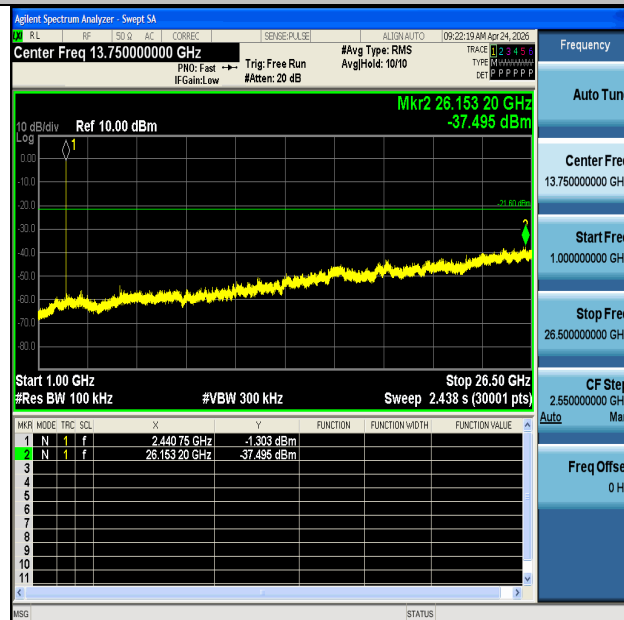


DH5-Ant1-2441-0~Reference-PASS





DH5-Ant1-2441-30~1000-PASS

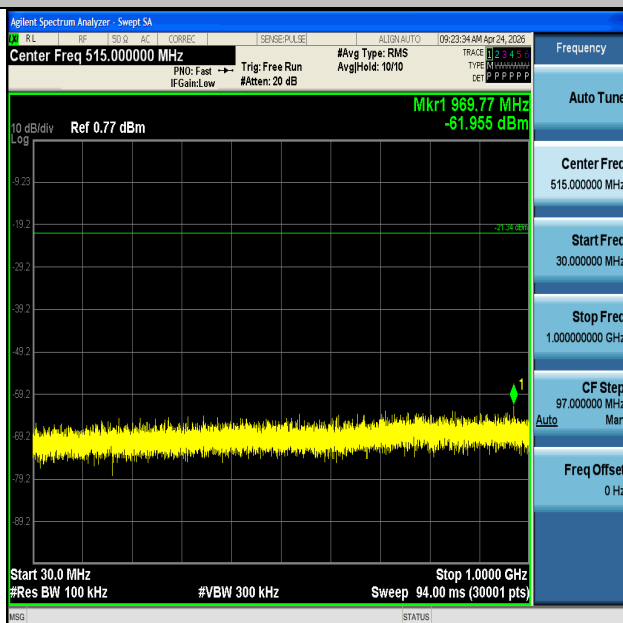


DH5-Ant1-2441-1000~26500-PASS



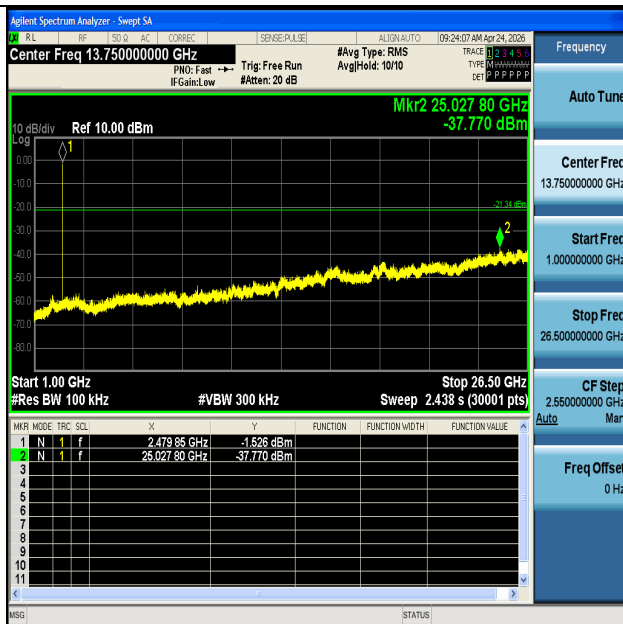


DH5-Ant1-2480-0~Reference-PASS

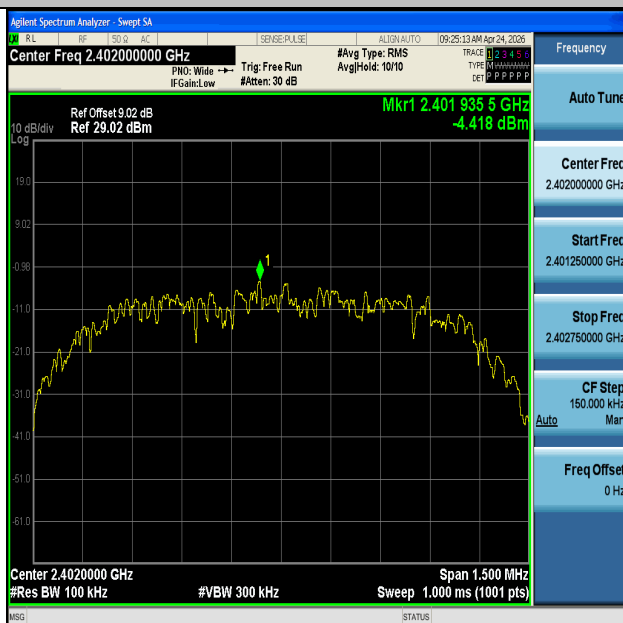


DH5-Ant1-2480-30~1000-PASS



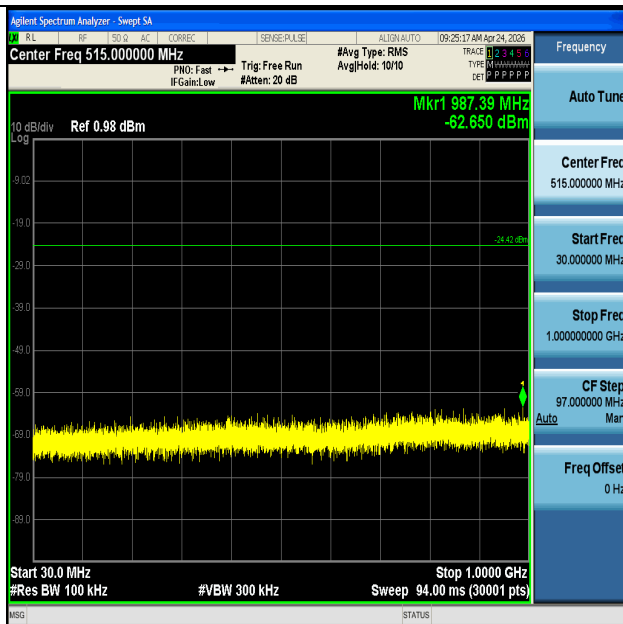


DH5-Ant1-2480-1000~26500-PASS

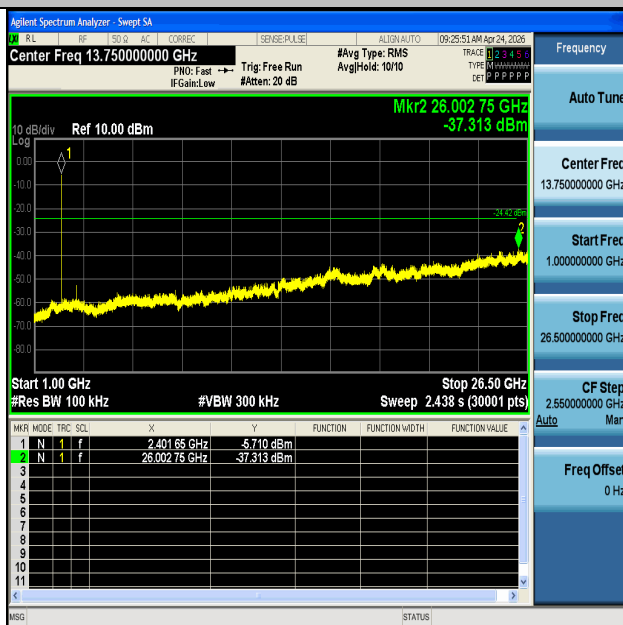


2DH5-Ant1-2402-0~Reference-PASS



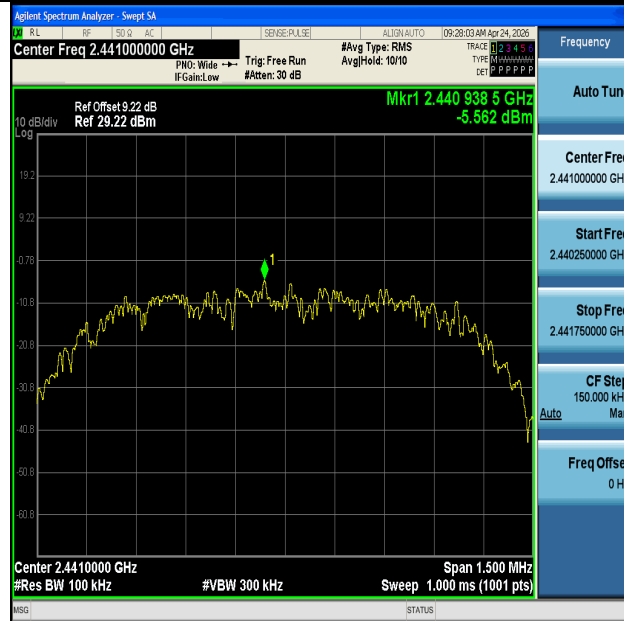


2DH5-Ant1-2402-30~1000-PASS

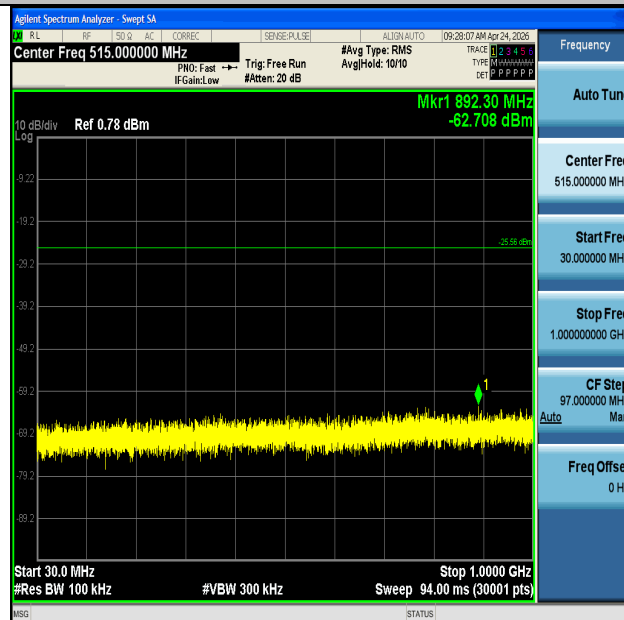


2DH5-Ant1-2402-1000~26500-PASS





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

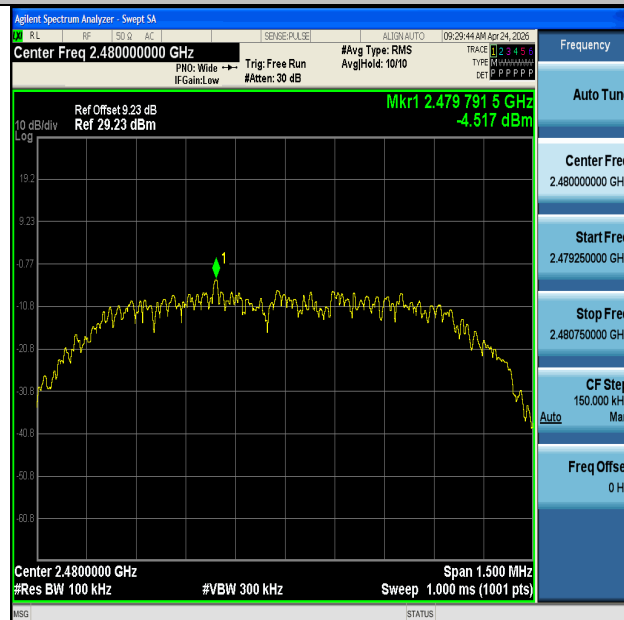


2DH5-Ant1-2441-30~1000-PASS



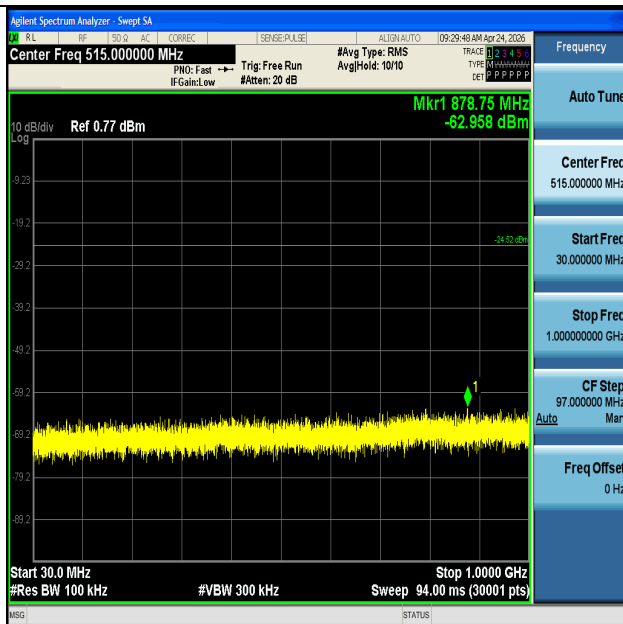


2DH5-Ant1-2441-1000~26500-PASS

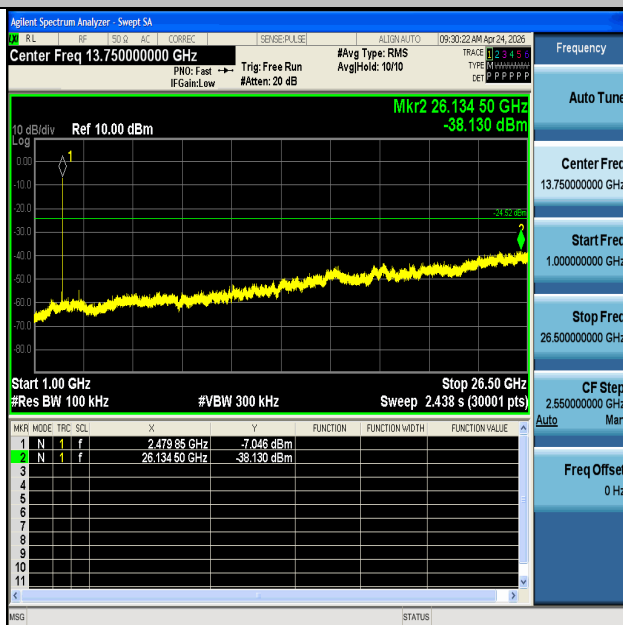


2DH5-Ant1-2480-0~Reference-PASS





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

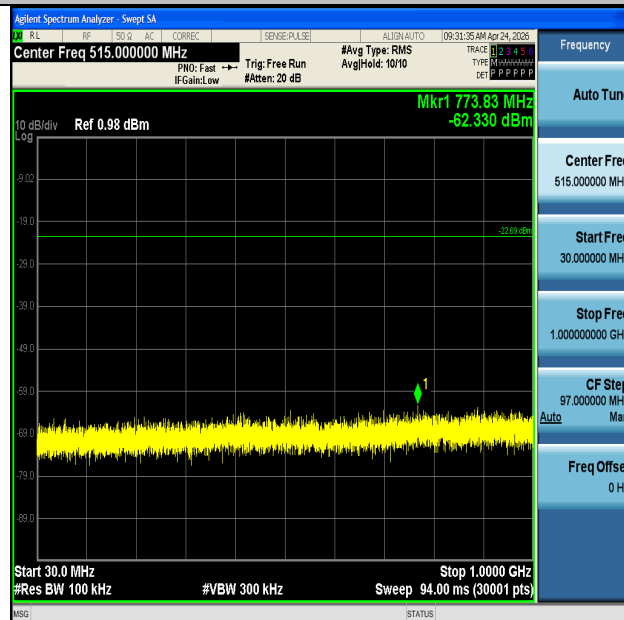


2DH5-Ant1-2480-1000~26500-PASS



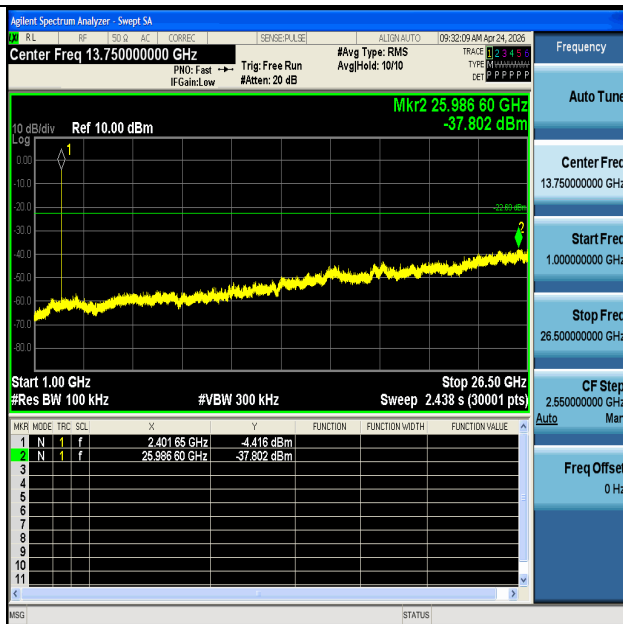


3DH5-Ant1-2402-0~Reference-PASS

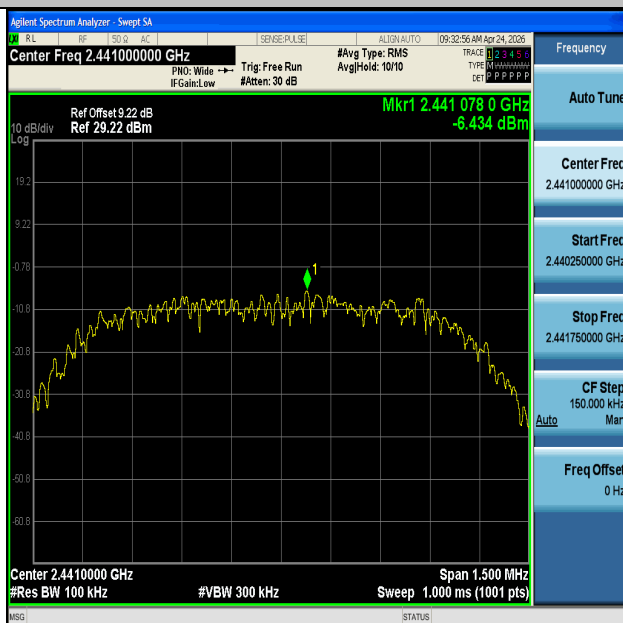


3DH5-Ant1-2402-30~1000-PASS



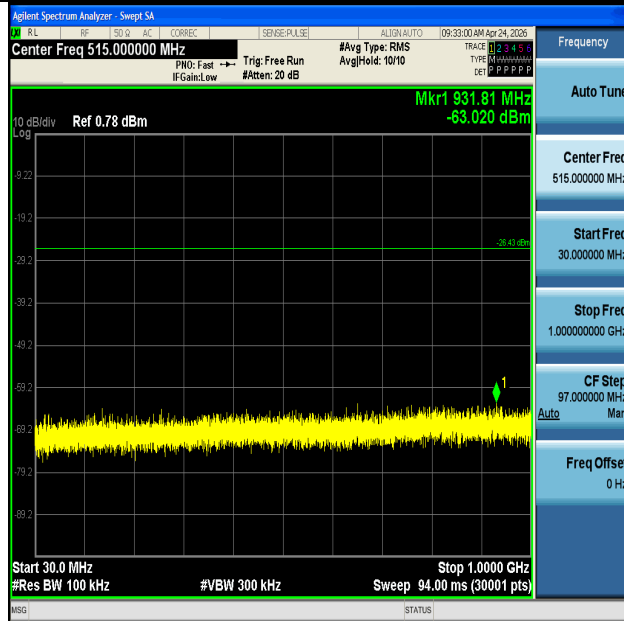


3DH5-Ant1-2402-1000~26500-PASS

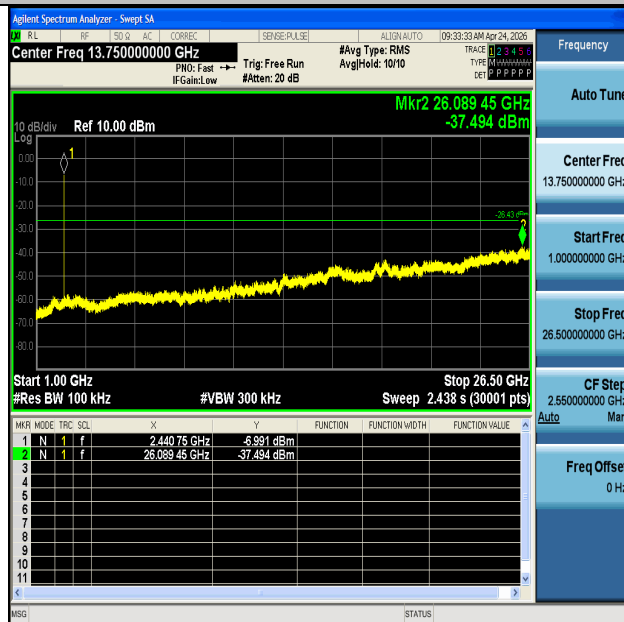


3DH5-Ant1-2441-0~Reference-PASS



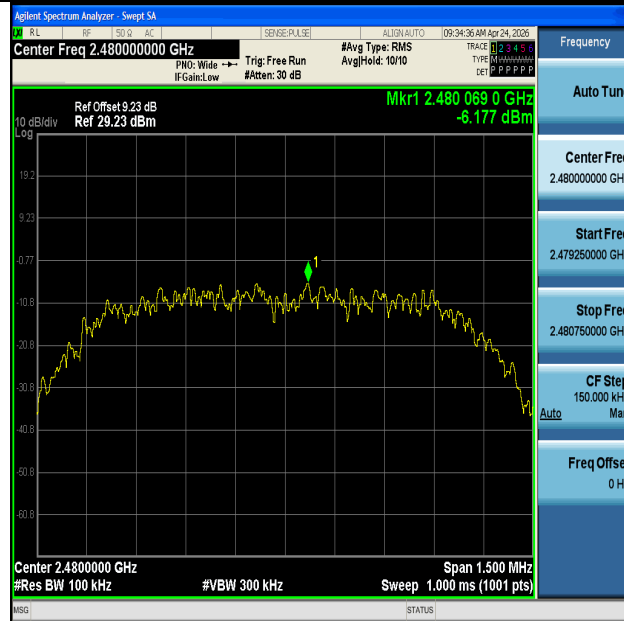


3DH5-Ant1-2441-30~1000-PASS

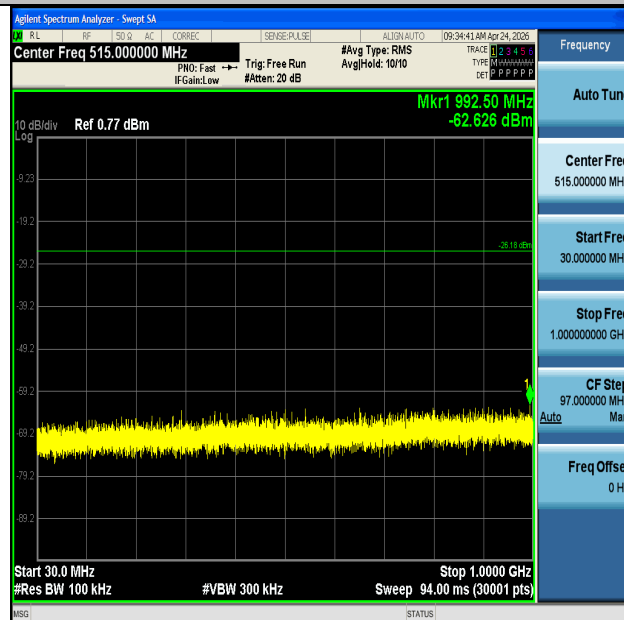


3DH5-Ant1-2441-1000~26500-PASS



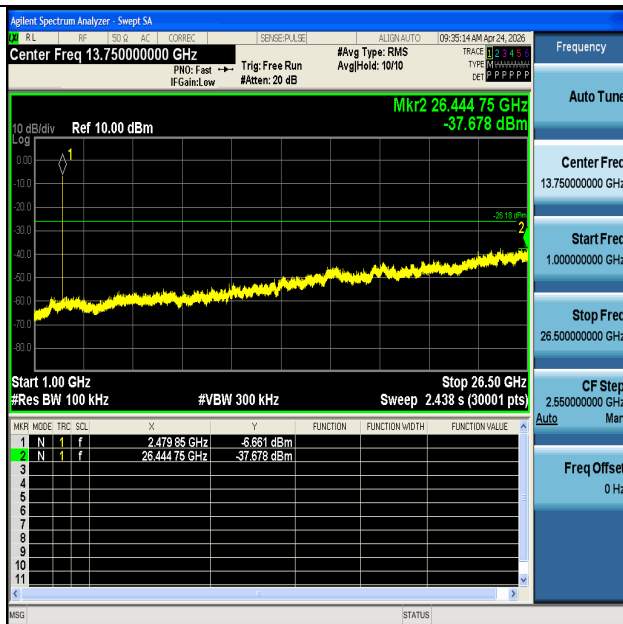


3DH5-Ant1-2480-0~Reference-PASS



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	2.89	3.73	77.48	1.11
DH5	Ant1	2441	2.88	3.73	77.21	1.12
DH5	Ant1	2480	2.89	3.73	77.48	1.11
2DH5	Ant1	2402	2.89	3.74	77.27	1.12
2DH5	Ant1	2441	2.89	3.74	77.27	1.12
2DH5	Ant1	2480	2.89	3.73	77.48	1.11
3DH5	Ant1	2402	2.88	3.73	77.21	1.12
3DH5	Ant1	2441	2.89	3.73	77.48	1.11
3DH5	Ant1	2480	2.89	3.74	77.27	1.12

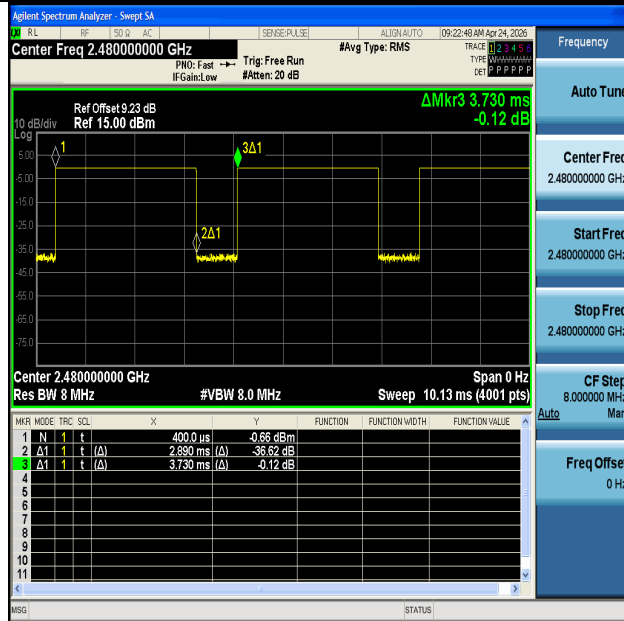
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



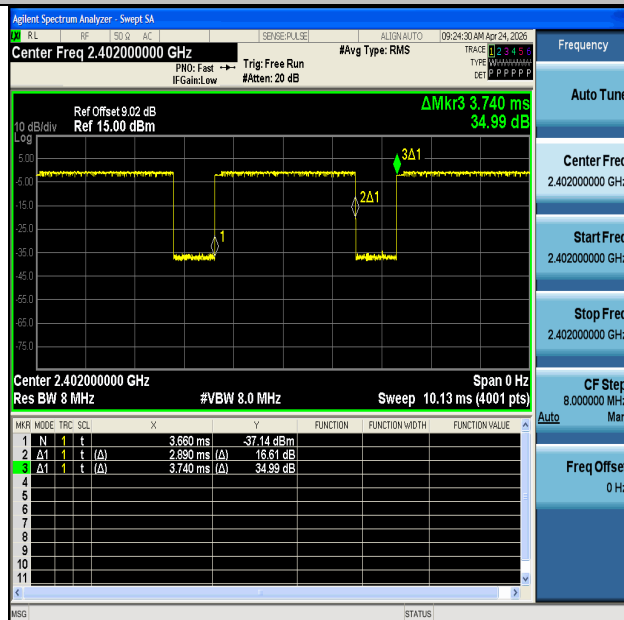


Test Graphs



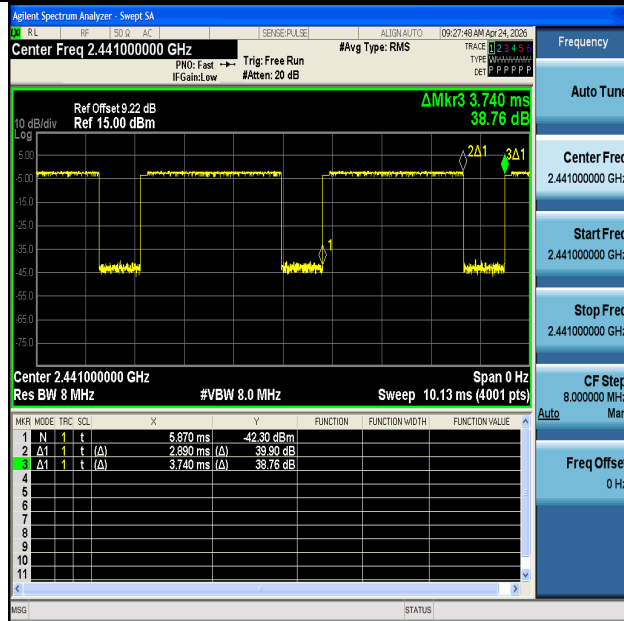


NTNV-DH5-Ant1-2480

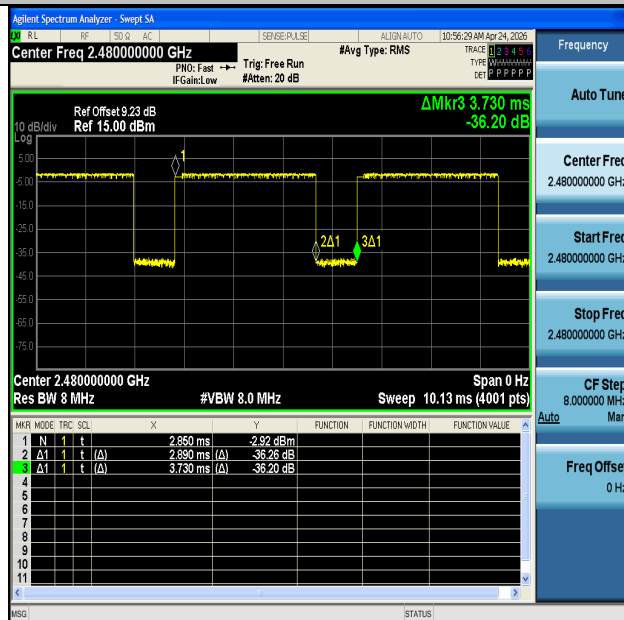


NTNV-2DH5-Ant1-2402



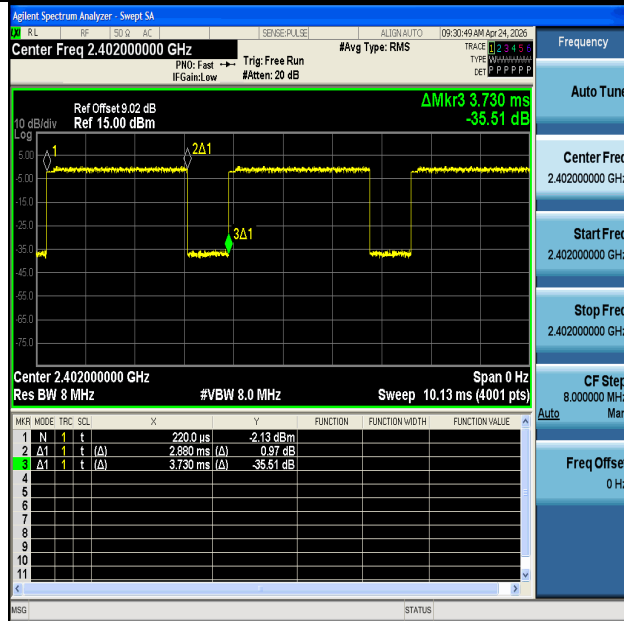


NTNV-2DH5-Ant1-2441

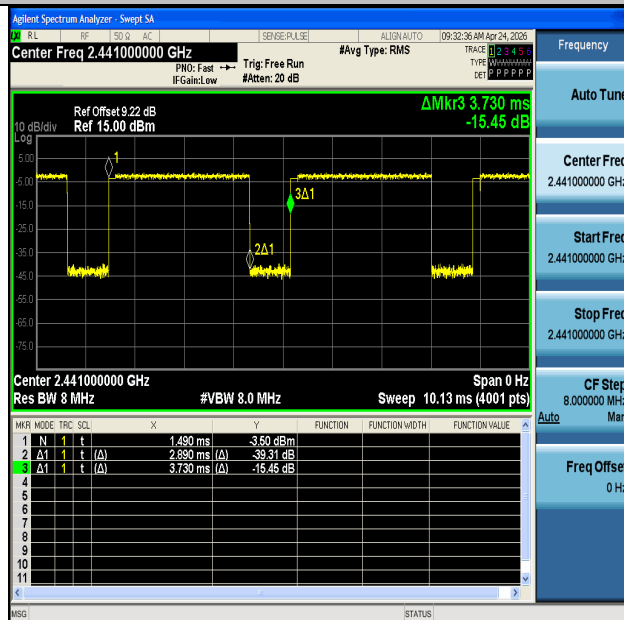


NTNV-2DH5-Ant1-2480



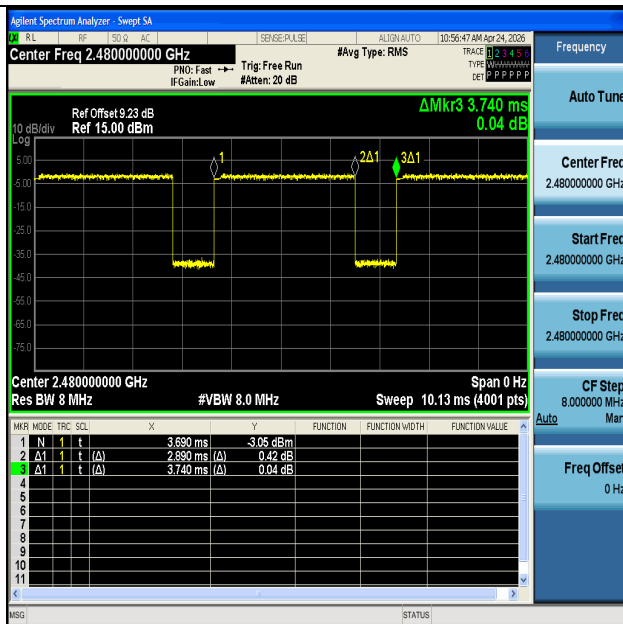


NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441





NTNV-3DH5-Ant1-2480

