



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

Product Name: Smart Watch

Trade Mark: Haylou

Test Model: HSS02

FCC ID: 2AMQ6-HSS02

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	0.963	2401.535	2402.498	---	---
DH5	Ant1	2441	0.954	2440.541	2441.495	---	---
DH5	Ant1	2480	0.951	2479.541	2480.492	---	---
2DH5	Ant1	2402	1.347	2401.331	2402.678	---	---
2DH5	Ant1	2441	1.275	2440.385	2441.660	---	---
2DH5	Ant1	2480	1.263	2479.376	2480.639	---	---
3DH5	Ant1	2402	1.293	2401.355	2402.648	---	---
3DH5	Ant1	2441	1.203	2440.412	2441.615	---	---
3DH5	Ant1	2480	1.275	2479.361	2480.636	---	---

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	0.84618	2401.5810	2402.4272	---	---
DH5	Ant1	2441	0.85564	2440.5738	2441.4294	---	---
DH5	Ant1	2480	0.82830	2479.5880	2480.4163	---	---
2DH5	Ant1	2402	1.1756	2401.4152	2402.5908	---	---
2DH5	Ant1	2441	1.1696	2440.4166	2441.5862	---	---
2DH5	Ant1	2480	1.1514	2479.4281	2480.5795	---	---
3DH5	Ant1	2402	1.1751	2401.4215	2402.5966	---	---
3DH5	Ant1	2441	1.1539	2440.4287	2441.5826	---	---
3DH5	Ant1	2480	1.1366	2479.4399	2480.5765	---	---

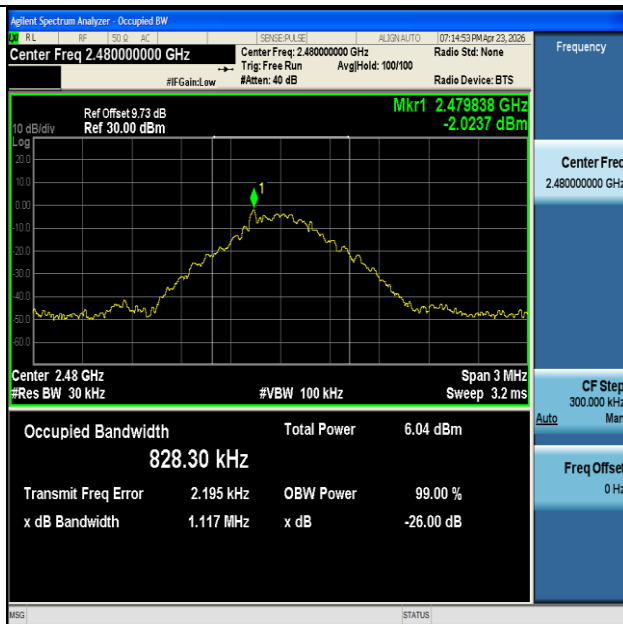
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



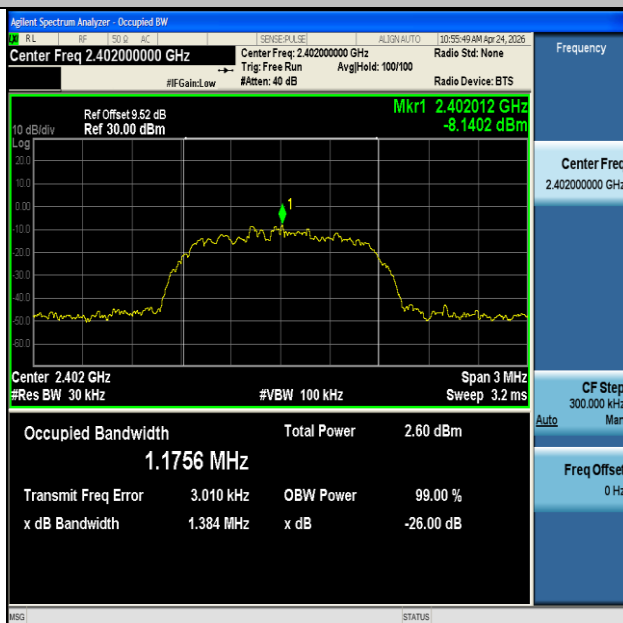


Test Graphs





DH5-Ant1-2480

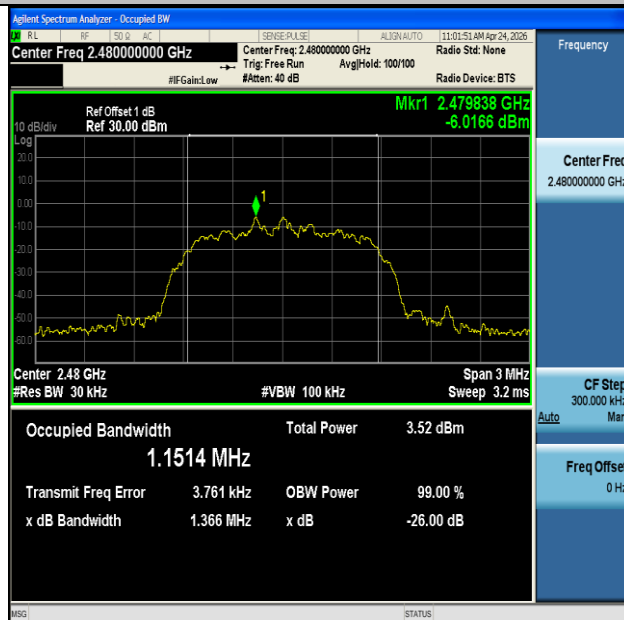


2DH5-Ant1-2402





2DH5-Ant1-2441



2DH5-Ant1-2480



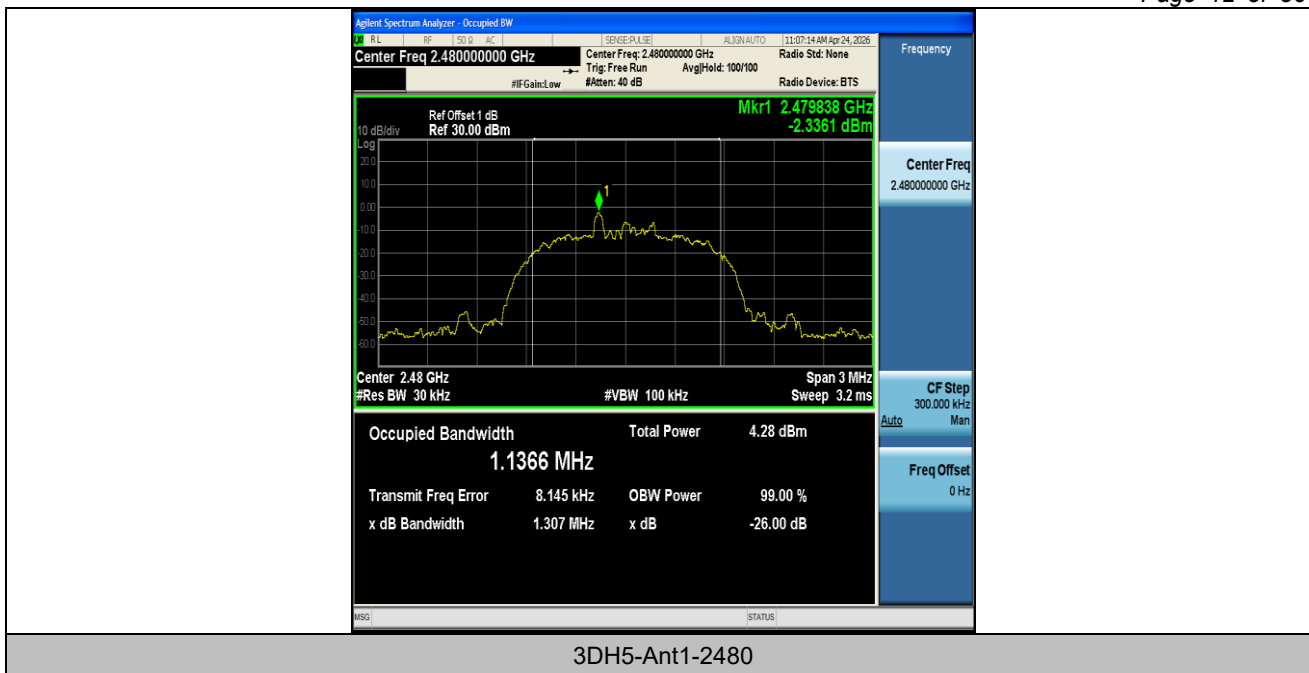


3DH5-Ant1-2402



3DH5-Ant1-2441







Appendix C: Maximum peak conducted output power

Test Result

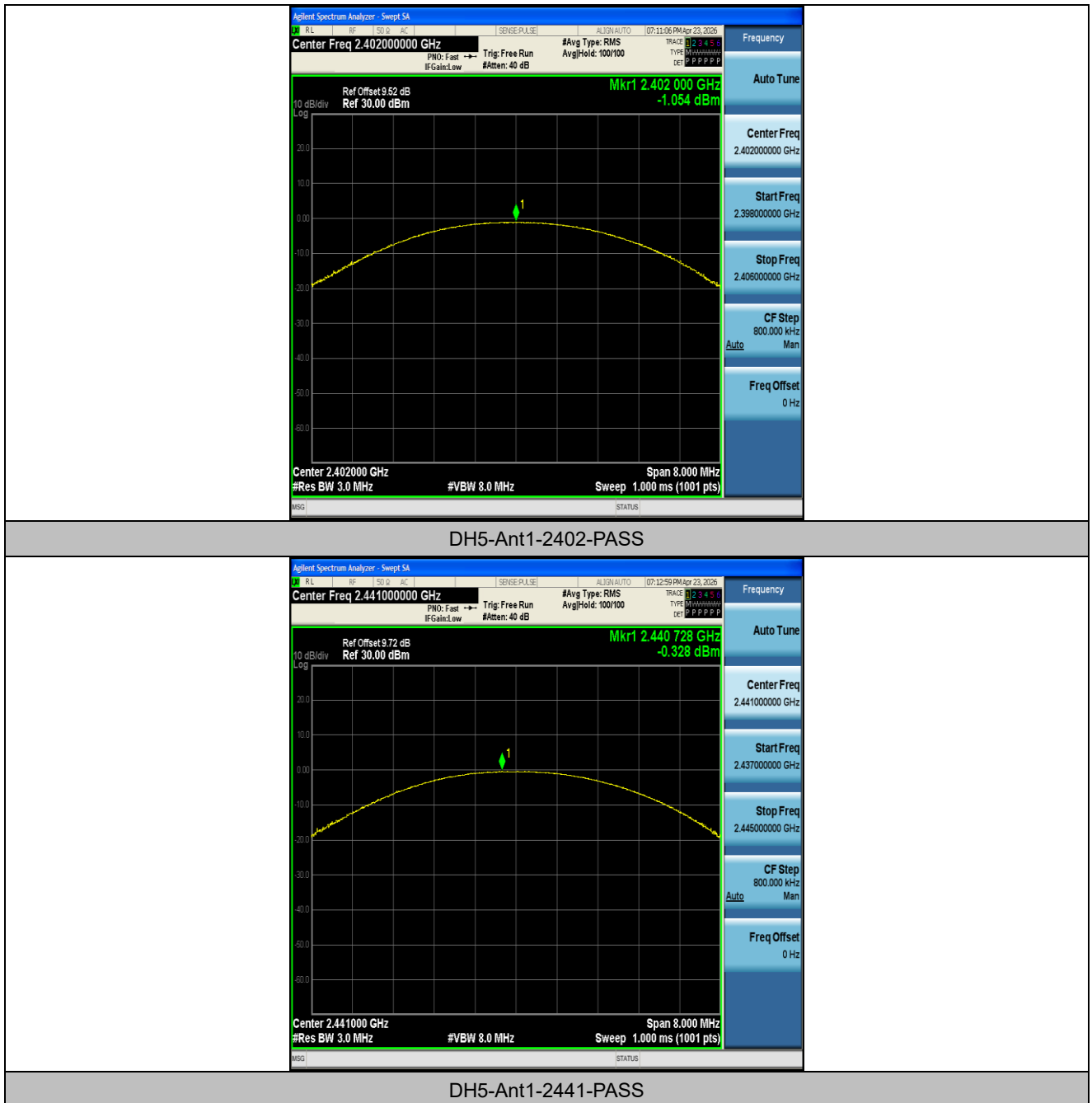
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	-1.05	≤30	PASS
DH5	Ant1	2441	-0.33	≤30	PASS
DH5	Ant1	2480	-0.62	≤30	PASS
2DH5	Ant1	2402	-1.84	≤20.97	PASS
2DH5	Ant1	2441	-0.94	≤20.97	PASS
2DH5	Ant1	2480	-1.25	≤20.97	PASS
3DH5	Ant1	2402	-1.39	≤20.97	PASS
3DH5	Ant1	2441	-0.61	≤20.97	PASS
3DH5	Ant1	2480	-1.09	≤20.97	PASS

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



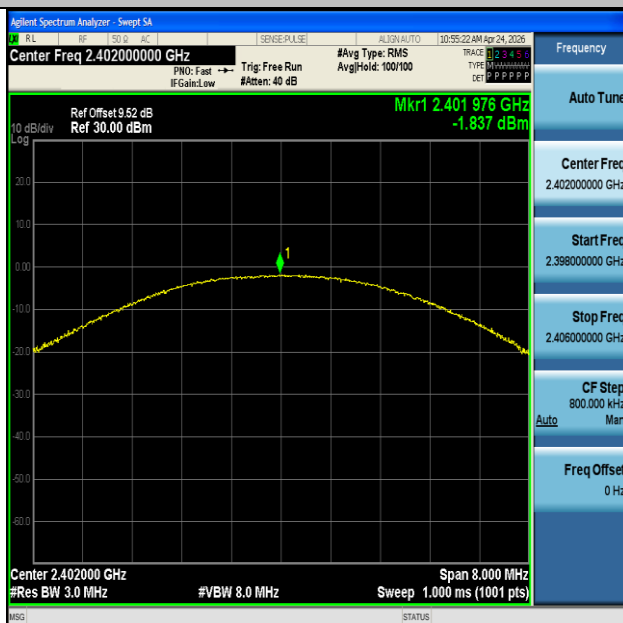


Test Graphs



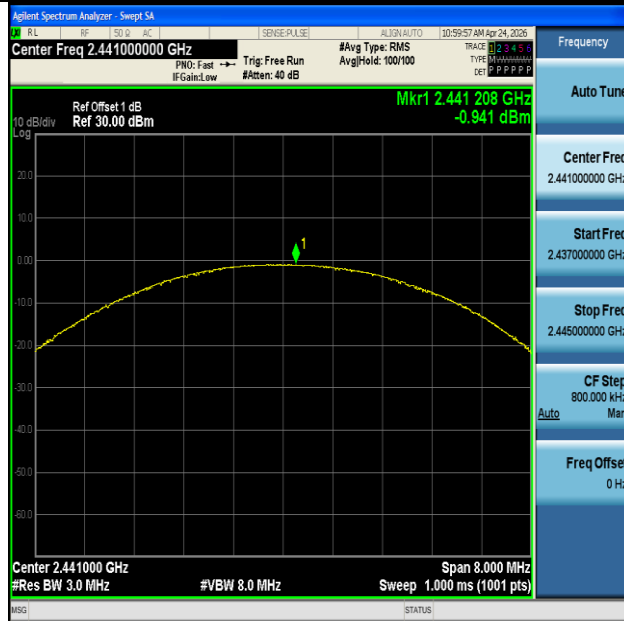


DH5-Ant1-2480-PASS

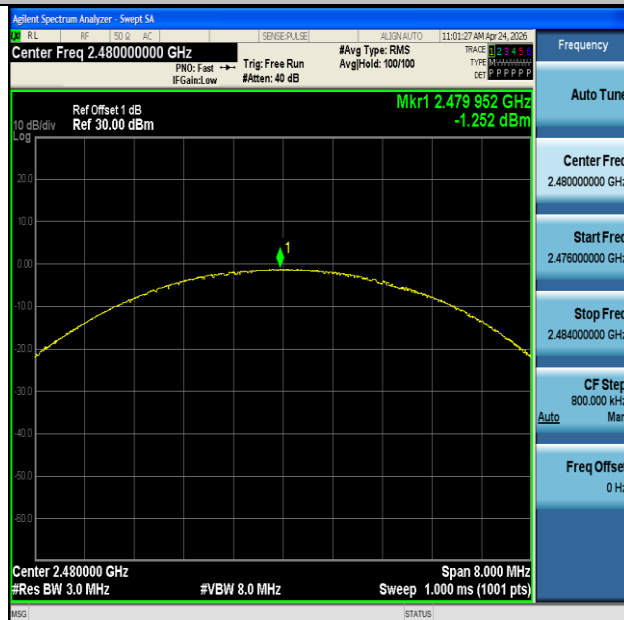


2DH5-Ant1-2402-PASS



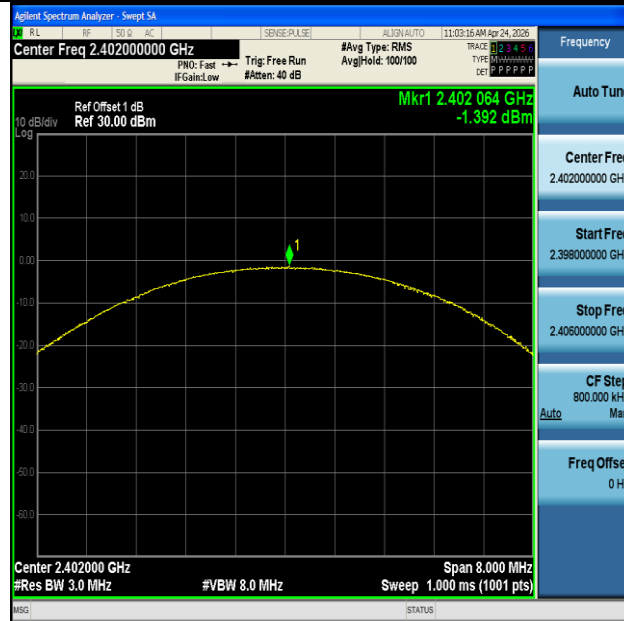


2DH5-Ant1-2441-PASS

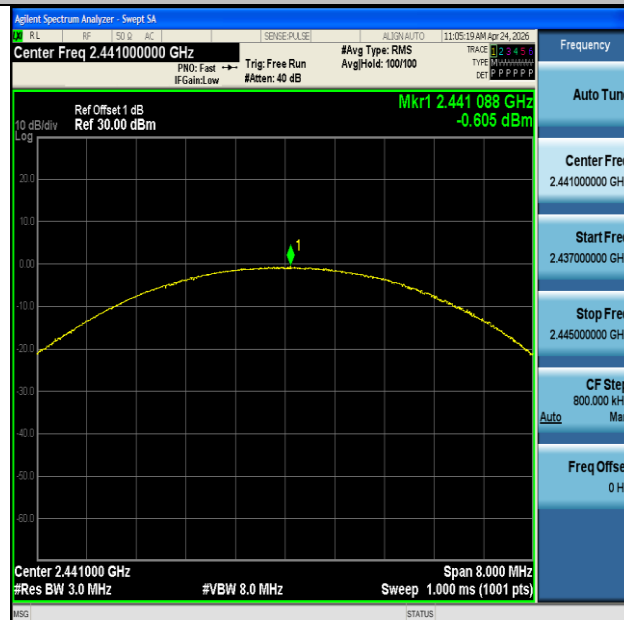


2DH5-Ant1-2480-PASS



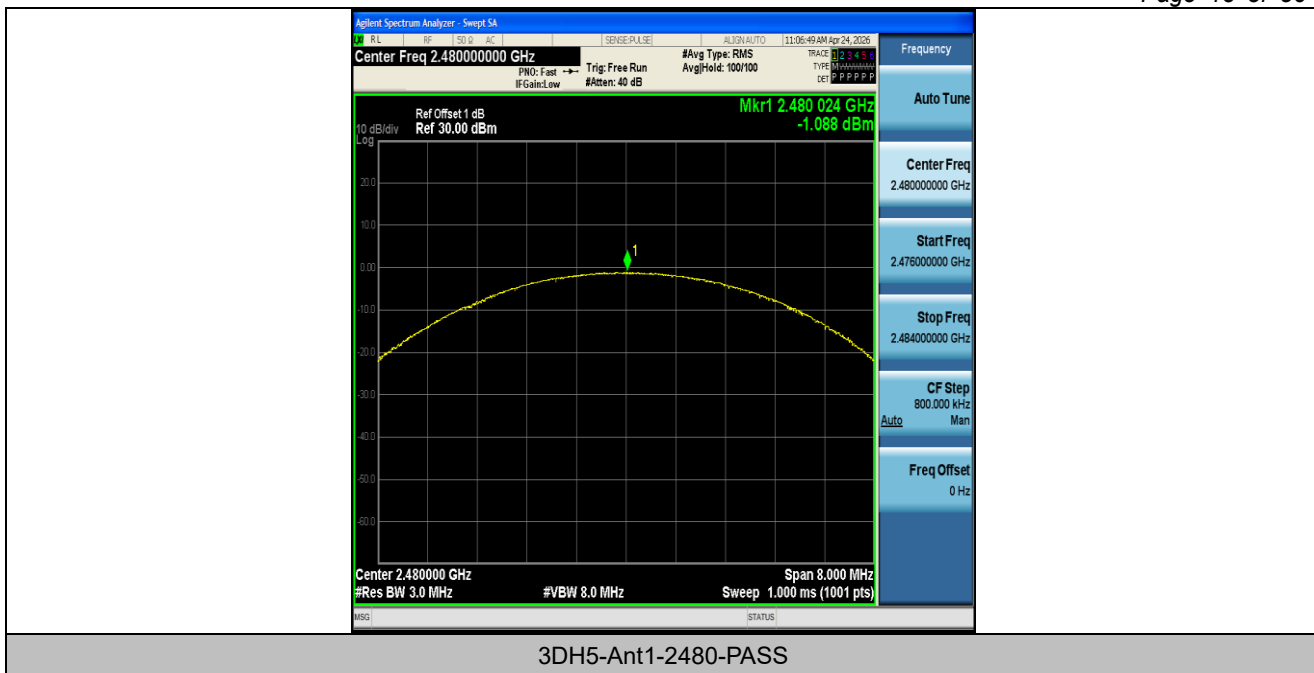


3DH5-Ant1-2402-PASS



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	≥0.963	PASS
2DH5	Ant1	Hop	1.042	≥0.898	PASS
3DH5	Ant1	Hop	1	≥0.862	PASS

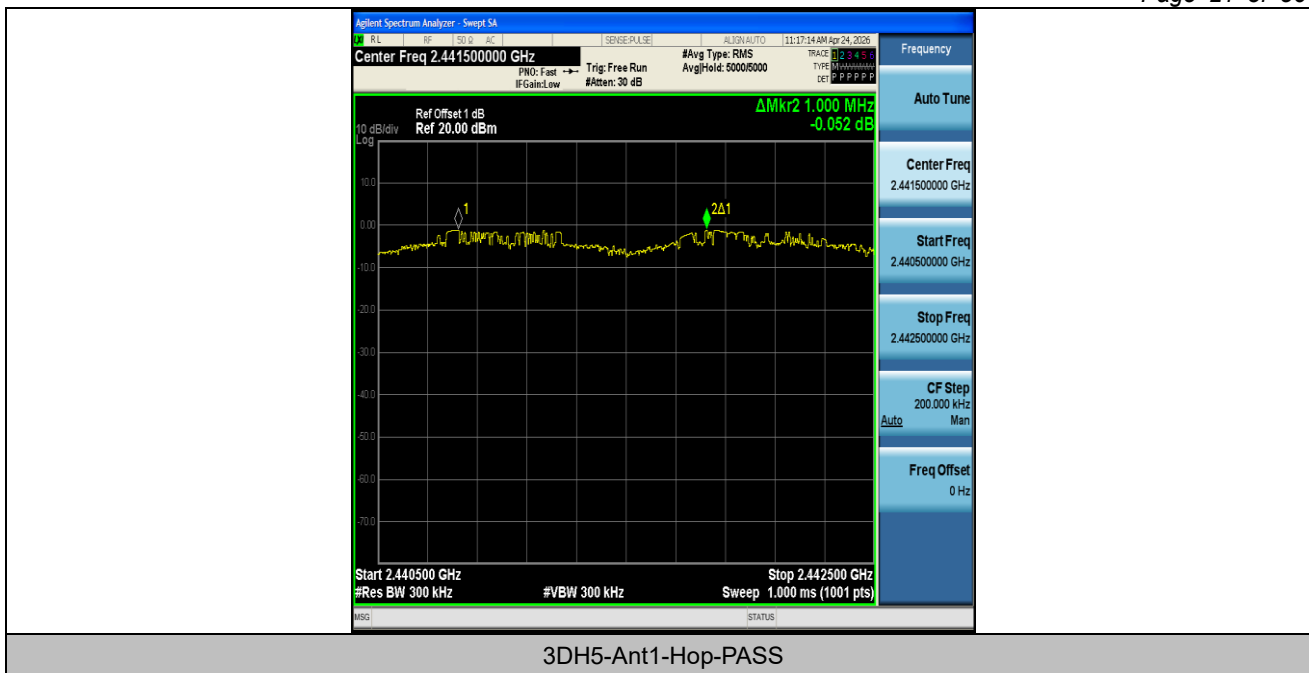
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs







Appendix E: Time of occupancy

Test Result

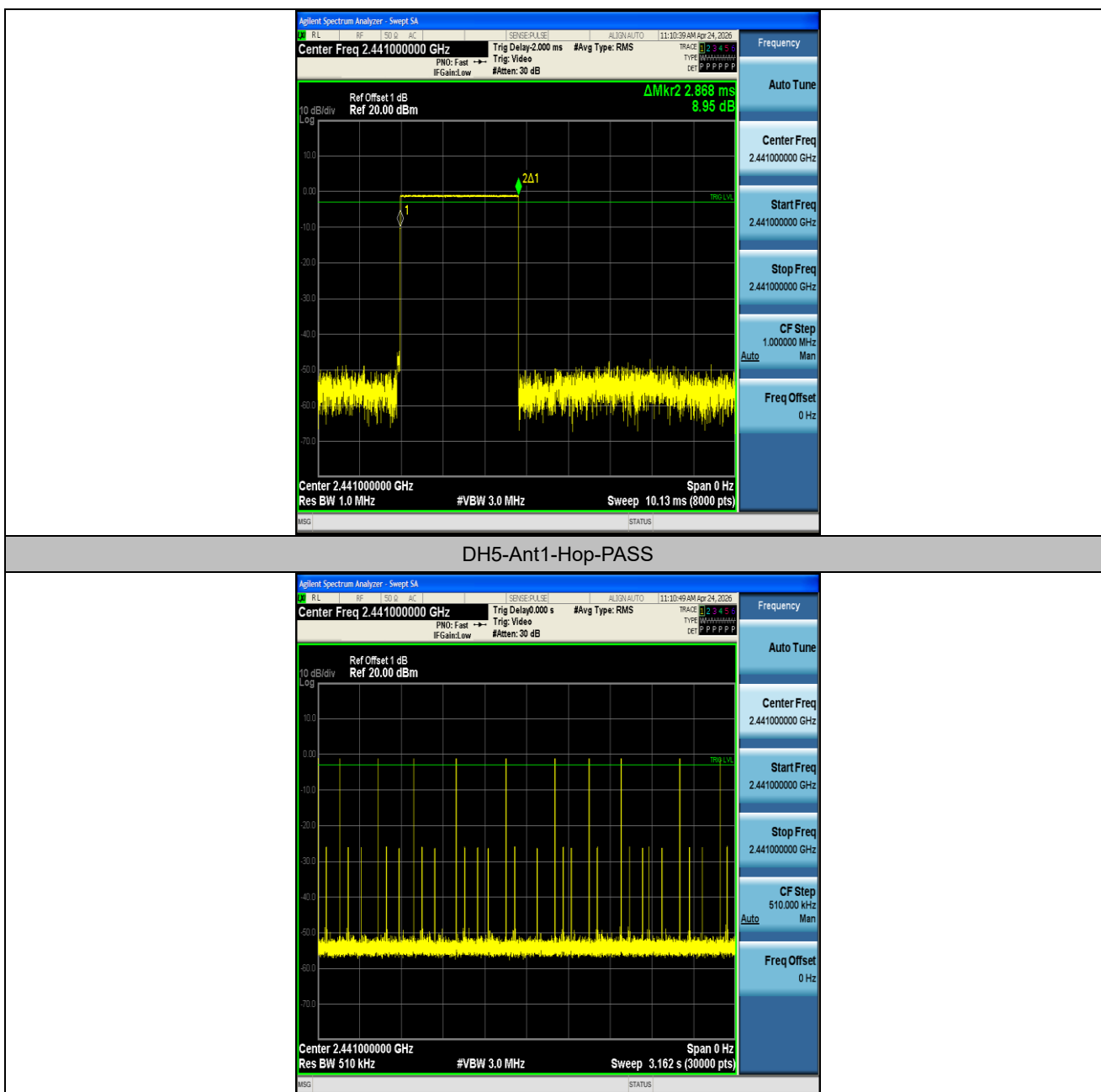
Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.868	110	0.315	≤0.4	PASS
2DH5	Ant1	Hop	2.879	110	0.317	≤0.4	PASS
3DH5	Ant1	Hop	2.880	110	0.317	≤0.4	PASS

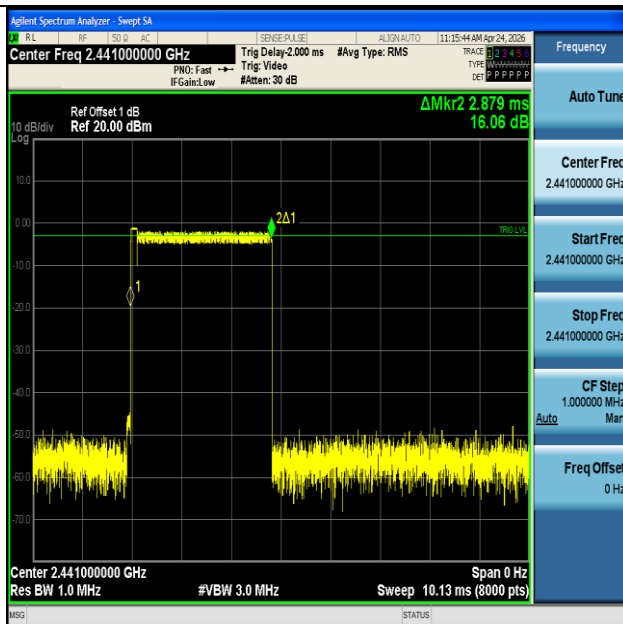
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



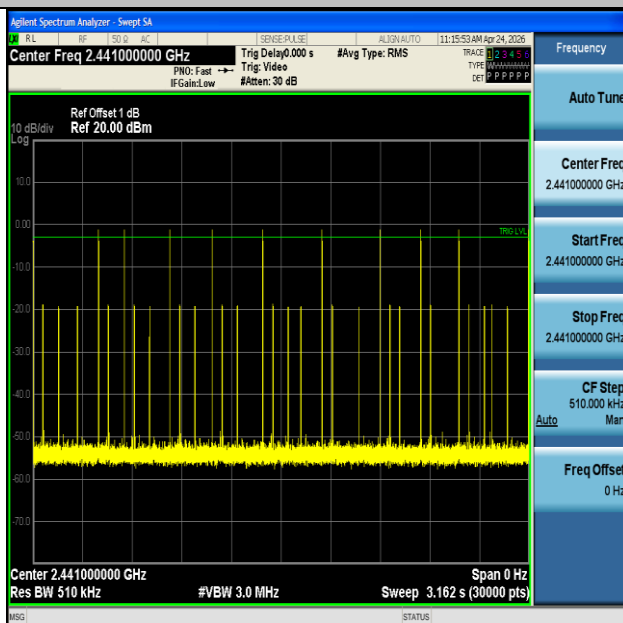


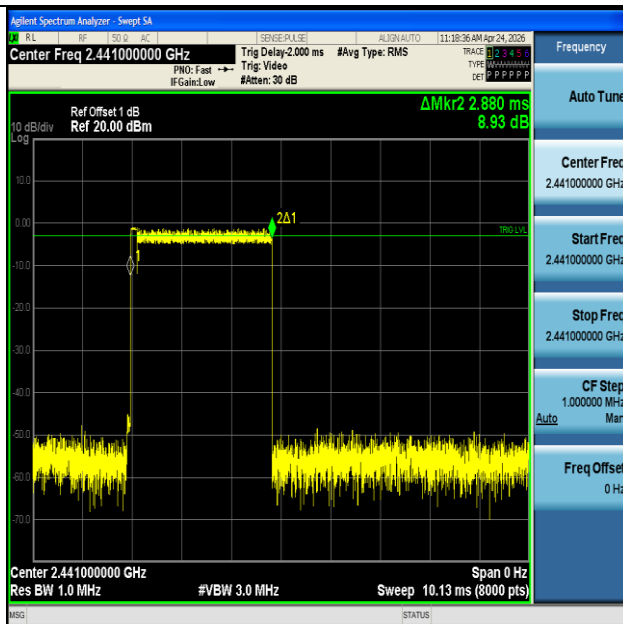
Test Graphs



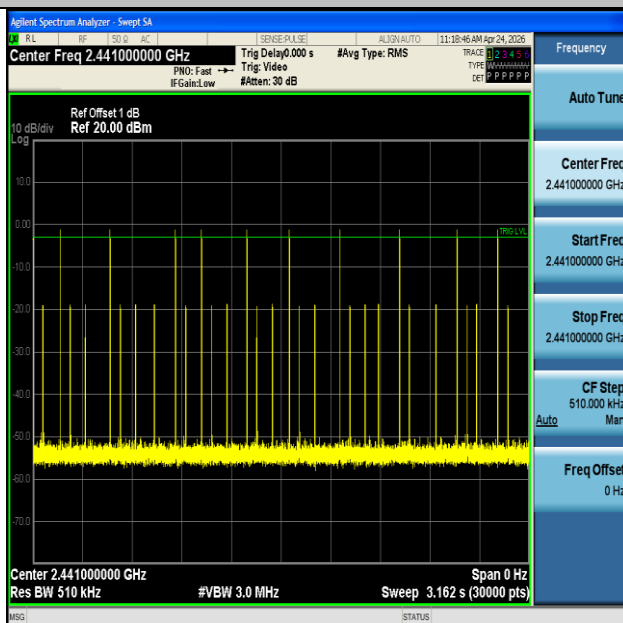


2DH5-Ant1-Hop-PASS





3DH5-Ant1-Hop-PASS





Appendix F: Number of hopping channels

Test Result

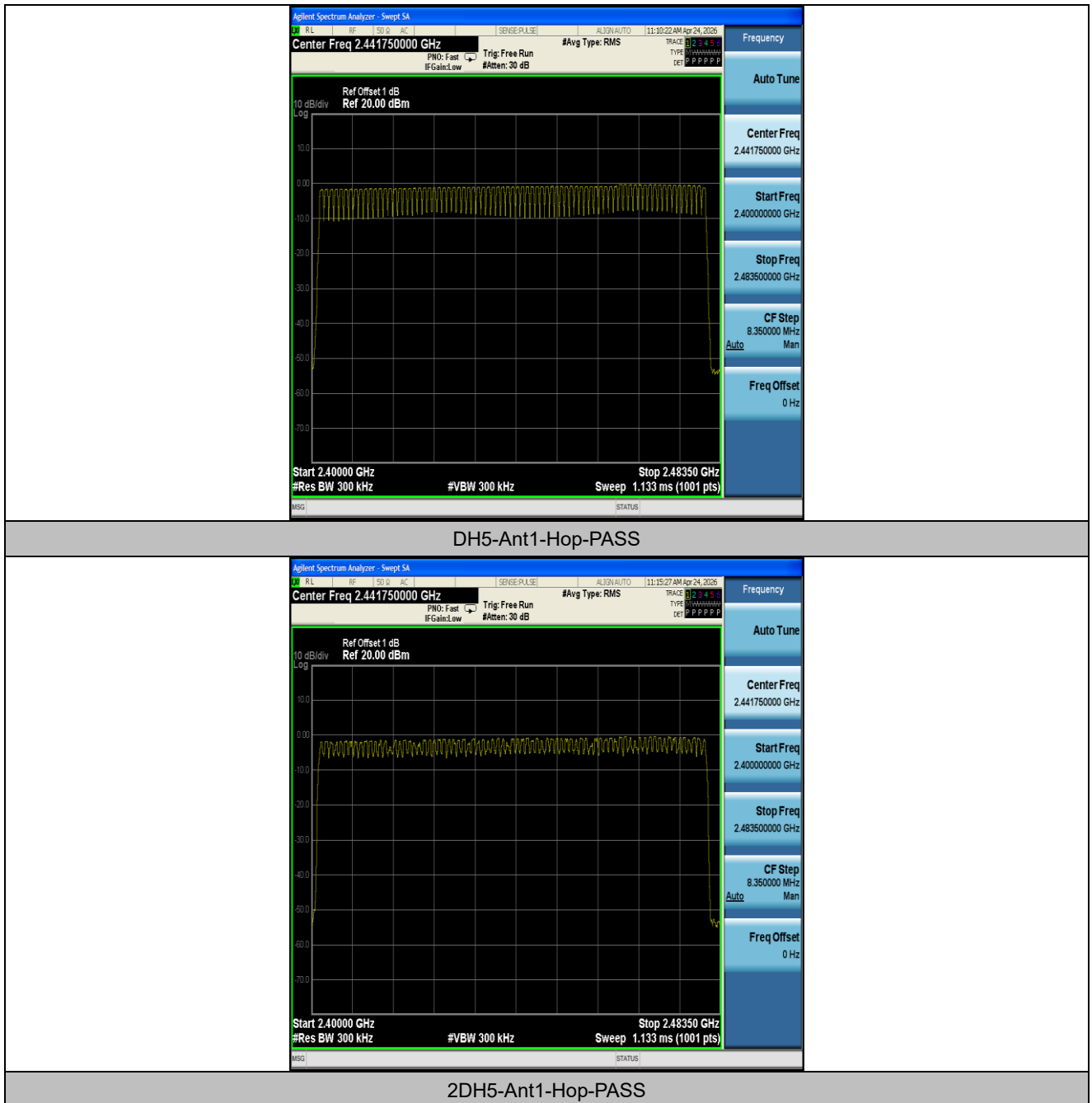
Test Mode	Antenna	Frequency [MHz]	Result [Num]	Limit [Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

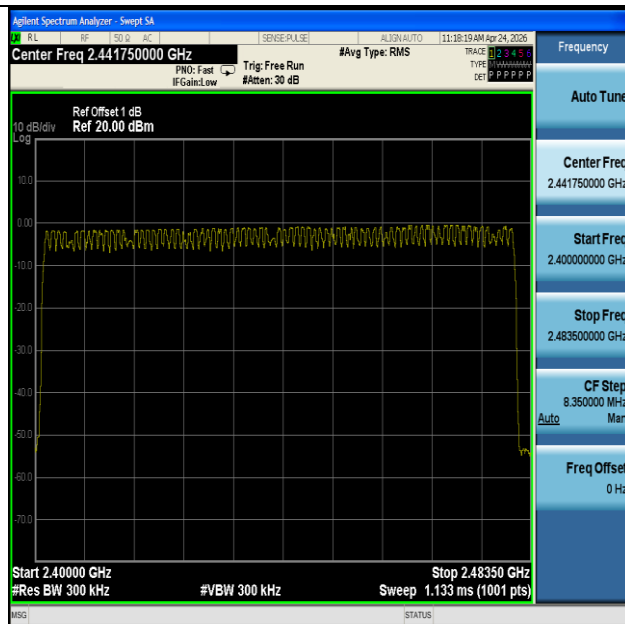
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs





3DH5-Ant1-Hop-PASS



Appendix G: Band edge measurements

Test Result

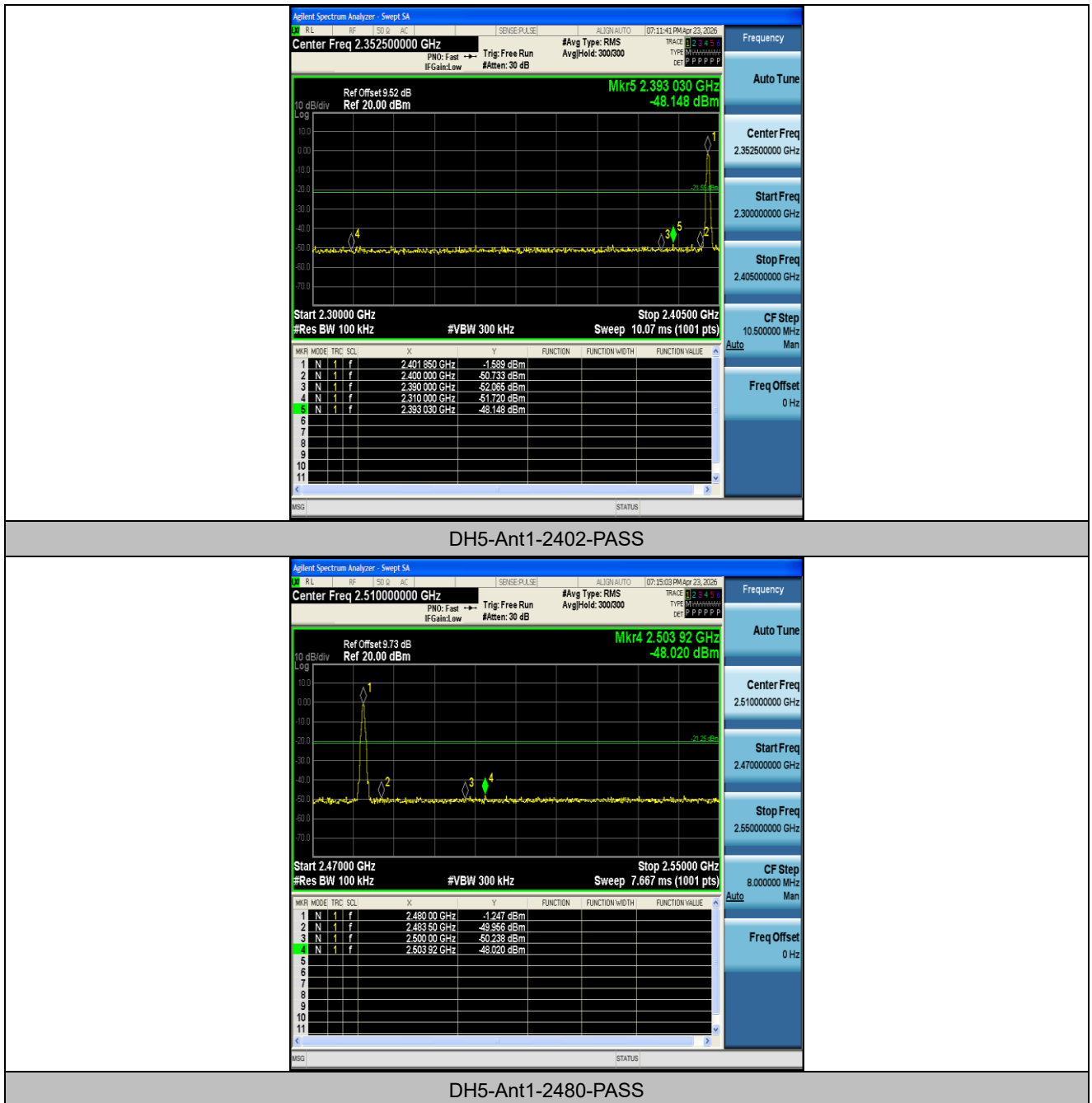
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-1.59	-48.15	≤ -21.59	PASS
DH5	Ant1	High	2480	-1.25	-48.02	≤ -21.25	PASS
DH5	Ant1	Low	Hop_2402	-2.58	-57.11	≤ -22.58	PASS
DH5	Ant1	High	Hop_2480	-0.66	-56.18	≤ -20.66	PASS
2DH5	Ant1	Low	2402	-2.99	-48	≤ -22.99	PASS
2DH5	Ant1	High	2480	-2.50	-56.44	≤ -22.5	PASS
2DH5	Ant1	Low	Hop_2402	-1.95	-57.06	≤ -21.95	PASS
2DH5	Ant1	High	Hop_2480	-3.15	-55.95	≤ -23.15	PASS
3DH5	Ant1	Low	2402	-3.43	-56.98	≤ -23.43	PASS
3DH5	Ant1	High	2480	-3.80	-56.33	≤ -23.8	PASS
3DH5	Ant1	Low	Hop_2402	-7.04	-57.44	≤ -27.04	PASS
3DH5	Ant1	High	Hop_2480	-3.27	-56.78	≤ -23.27	PASS

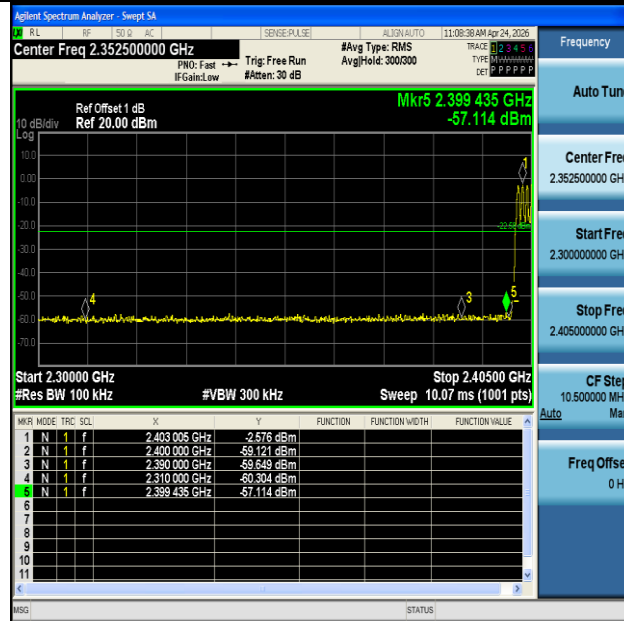
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



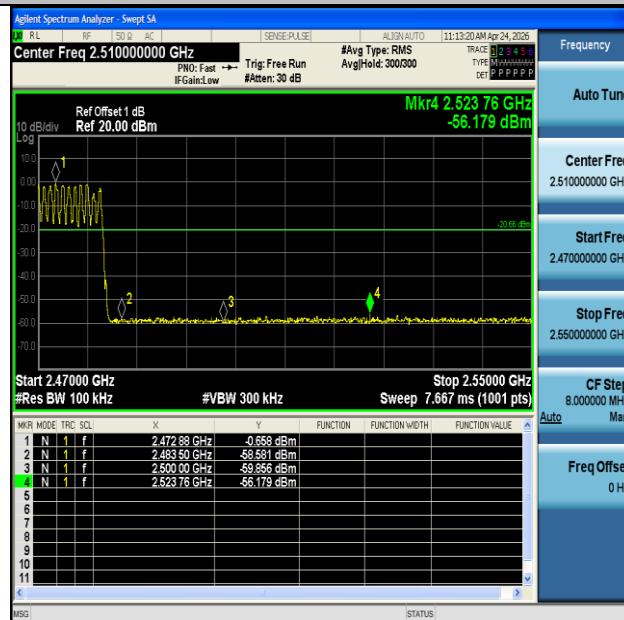


Test Graphs



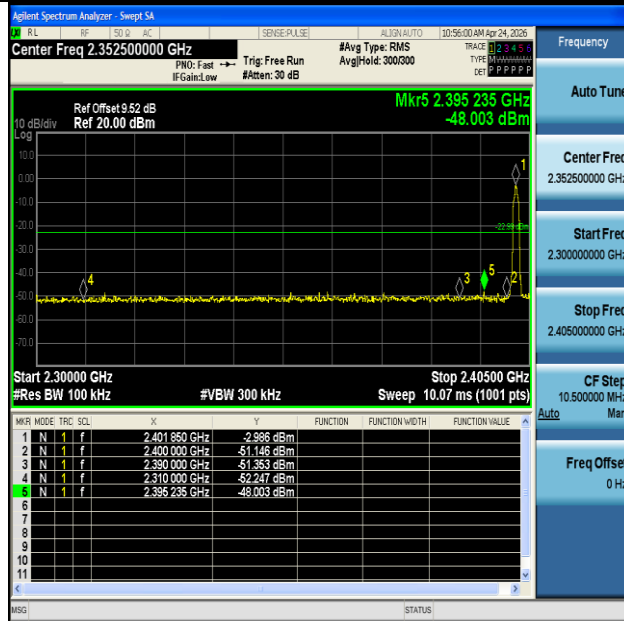


DH5-Ant1-Hop_2402-PASS

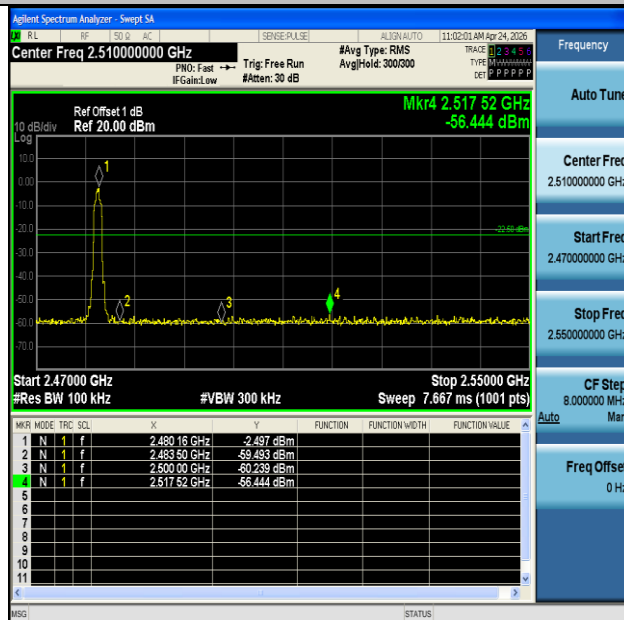


DH5-Ant1-Hop_2480-PASS



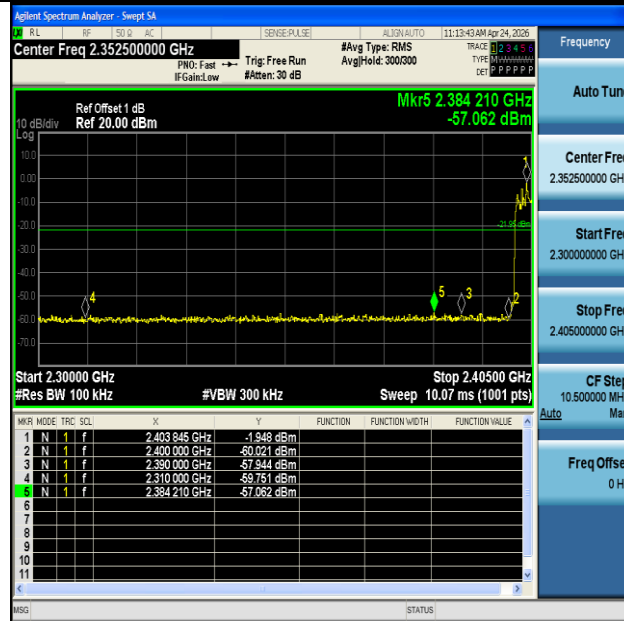


2DH5-Ant1-2402-PASS

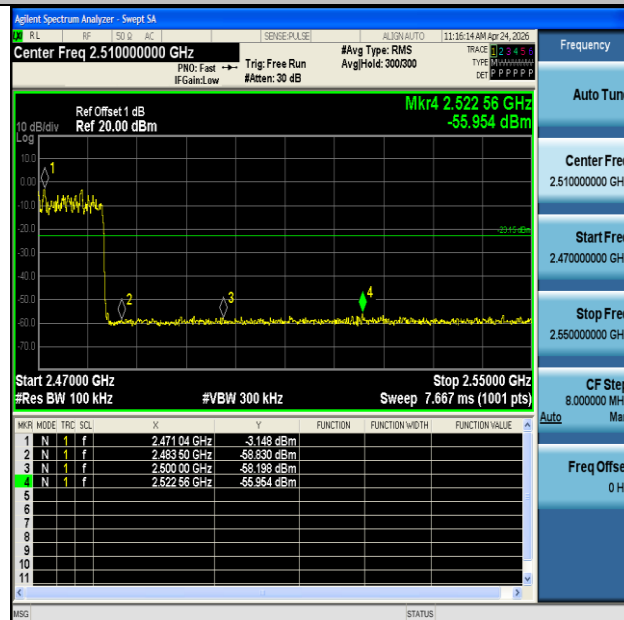


2DH5-Ant1-2480-PASS





2DH5-Ant1-Hop_2402-PASS

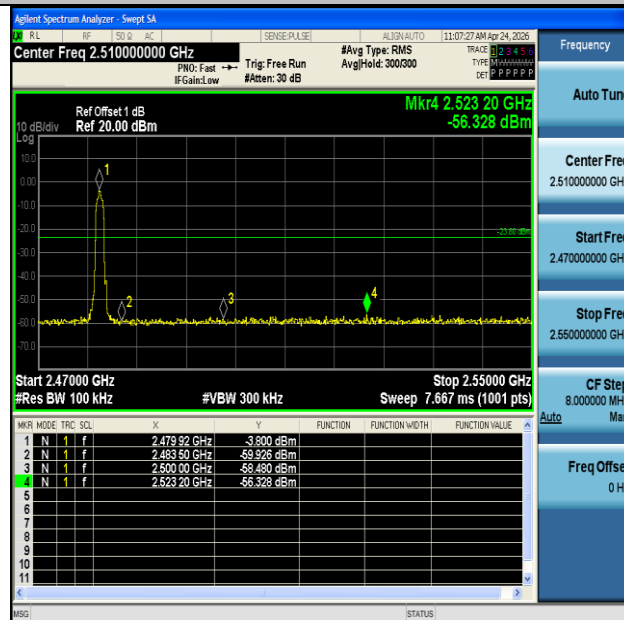


2DH5-Ant1-Hop_2480-PASS



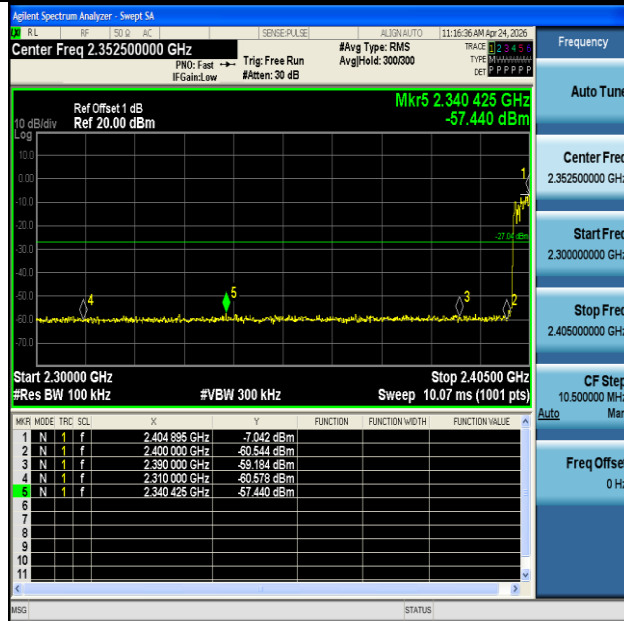


3DH5-Ant1-2402-PASS

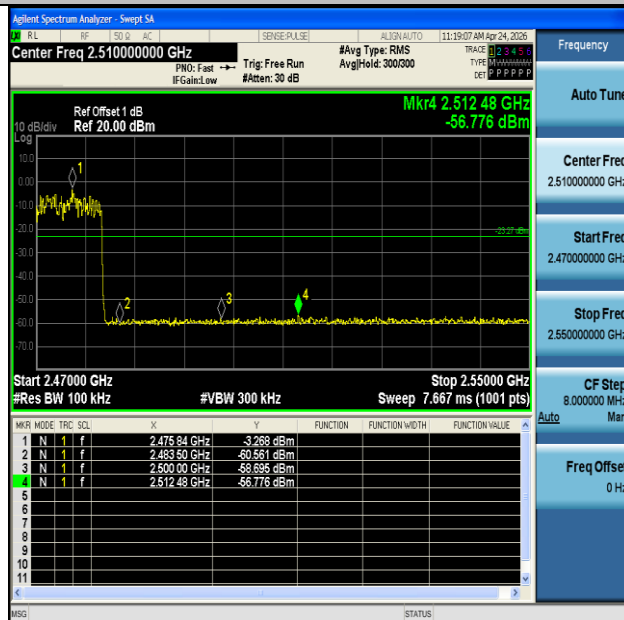


3DH5-Ant1-2480-PASS





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	-2.78	-2.78	---	PASS
DH5	Ant1	2402	30~1000	-2.78	-58.94	≤-22.78	PASS
DH5	Ant1	2402	1000~26500	-2.78	-45.24	≤-22.78	PASS
DH5	Ant1	2441	0~Reference	-2.16	-2.16	---	PASS
DH5	Ant1	2441	30~1000	-2.16	-59.39	≤-22.16	PASS
DH5	Ant1	2441	1000~26500	-2.16	-45.37	≤-22.16	PASS
DH5	Ant1	2480	0~Reference	-2.41	-2.41	---	PASS
DH5	Ant1	2480	30~1000	-2.41	-59.52	≤-22.41	PASS
DH5	Ant1	2480	1000~26500	-2.41	-45.17	≤-22.41	PASS
2DH5	Ant1	2402	0~Reference	-6.59	-6.59	---	PASS
2DH5	Ant1	2402	30~1000	-6.59	-59.72	≤-26.59	PASS
2DH5	Ant1	2402	1000~26500	-6.59	-45.27	≤-26.59	PASS
2DH5	Ant1	2441	0~Reference	-2.12	-2.12	---	PASS
2DH5	Ant1	2441	30~1000	-2.12	-59.52	≤-22.12	PASS
2DH5	Ant1	2441	1000~26500	-2.12	-45.41	≤-22.12	PASS
2DH5	Ant1	2480	0~Reference	-6.12	-6.12	---	PASS
2DH5	Ant1	2480	30~1000	-6.12	-58.75	≤-26.12	PASS
2DH5	Ant1	2480	1000~26500	-6.12	-45.26	≤-26.12	PASS
3DH5	Ant1	2402	0~Reference	-3.31	-3.31	---	PASS
3DH5	Ant1	2402	30~1000	-3.31	-59.59	≤-23.31	PASS
3DH5	Ant1	2402	1000~26500	-3.31	-44.92	≤-23.31	PASS
3DH5	Ant1	2441	0~Reference	-4.62	-4.62	---	PASS
3DH5	Ant1	2441	30~1000	-4.62	-59.86	≤-24.62	PASS
3DH5	Ant1	2441	1000~26500	-4.62	-45.02	≤-24.62	PASS
3DH5	Ant1	2480	0~Reference	-5.68	-5.68	---	PASS
3DH5	Ant1	2480	30~1000	-5.68	-59.34	≤-25.68	PASS
3DH5	Ant1	2480	1000~26500	-5.68	-44.84	≤-25.68	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.

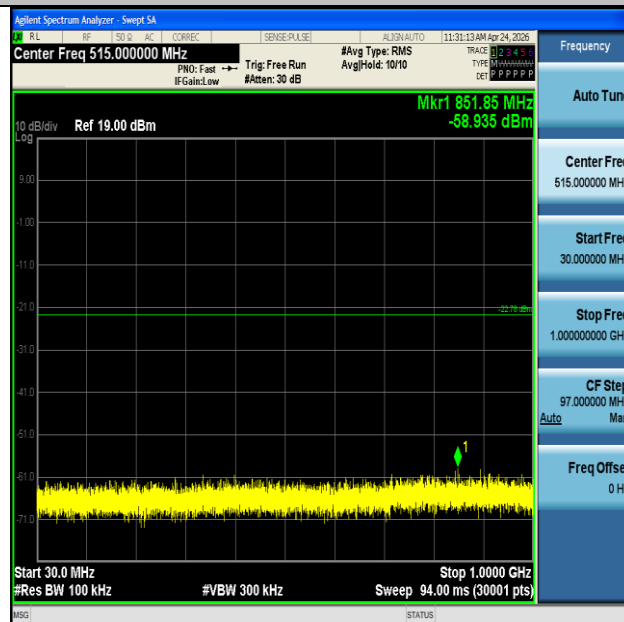




Test Graphs

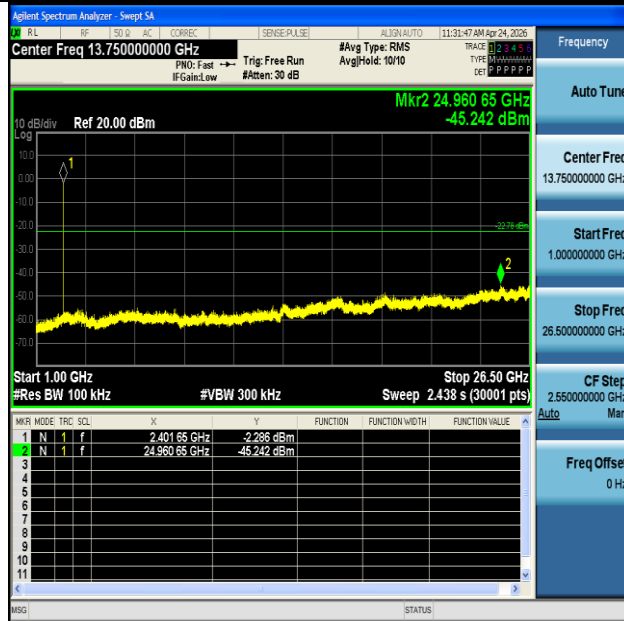


DH5-Ant1-2402-0~Reference-PASS

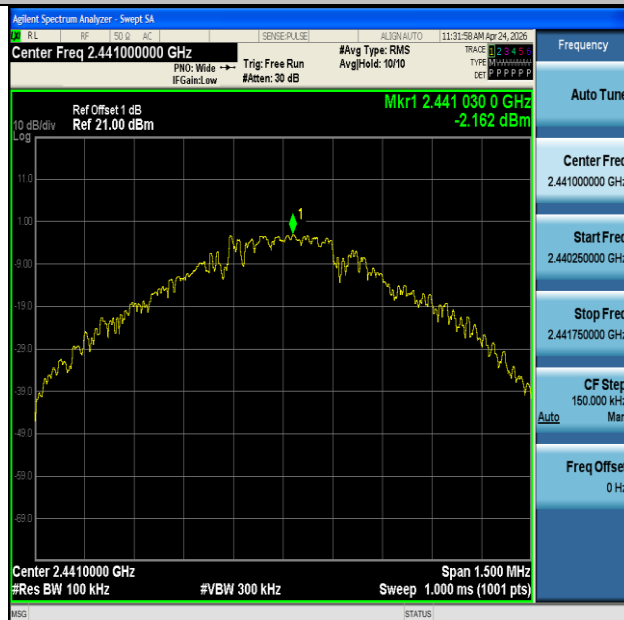


DH5-Ant1-2402-30~1000-PASS



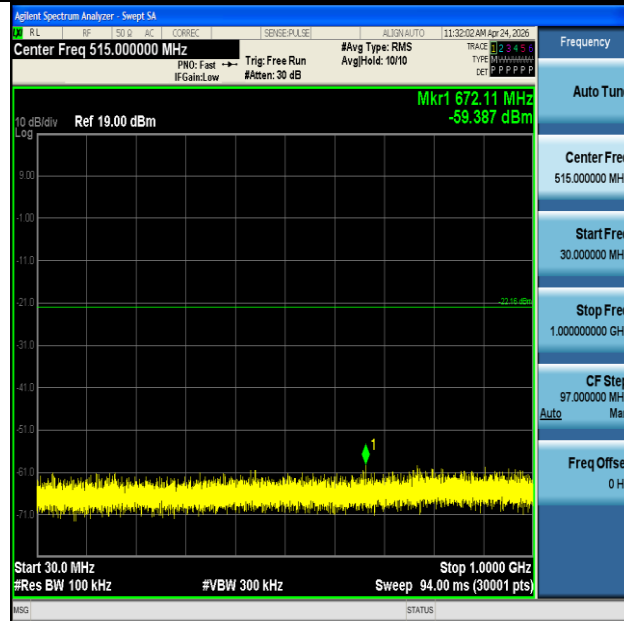


DH5-Ant1-2402-1000~26500-PASS

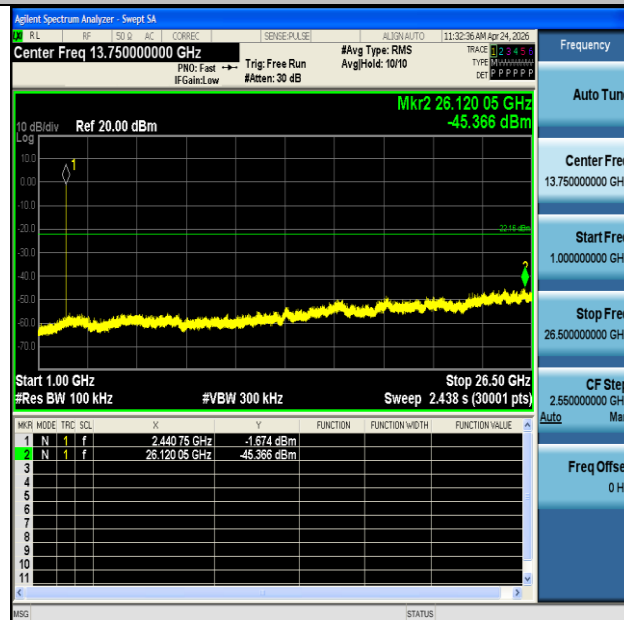


DH5-Ant1-2441-0~Reference-PASS





DH5-Ant1-2441-30~1000-PASS

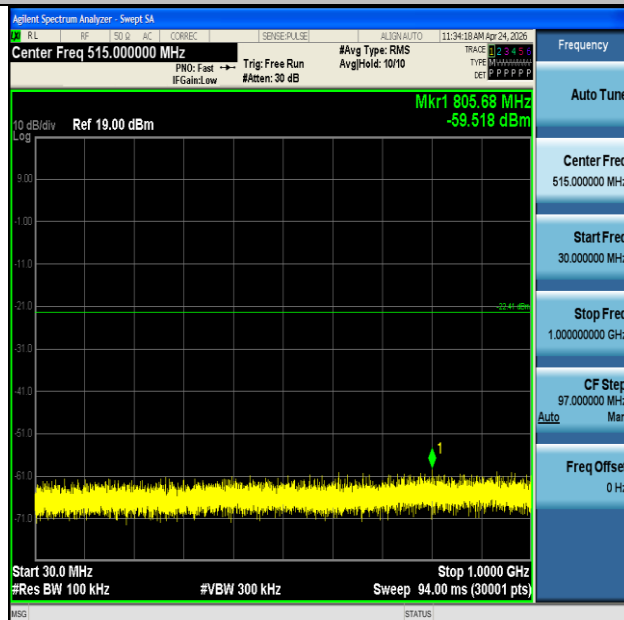


DH5-Ant1-2441-1000~26500-PASS



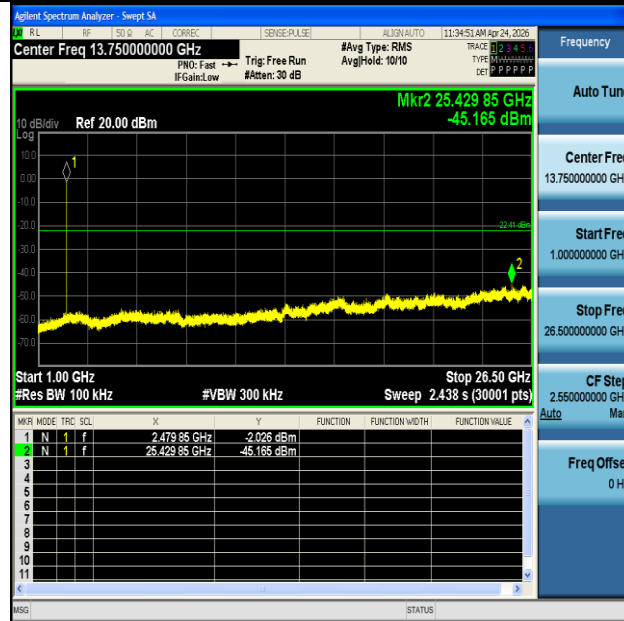


DH5-Ant1-2480-0~Reference-PASS

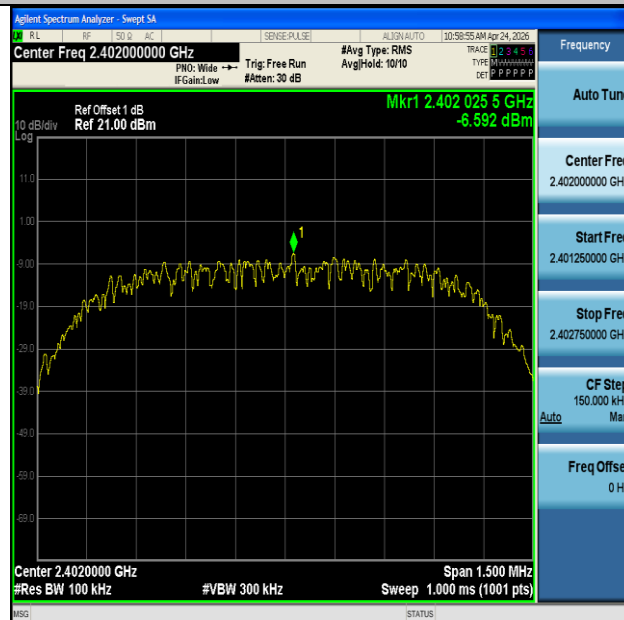


DH5-Ant1-2480-30~1000-PASS



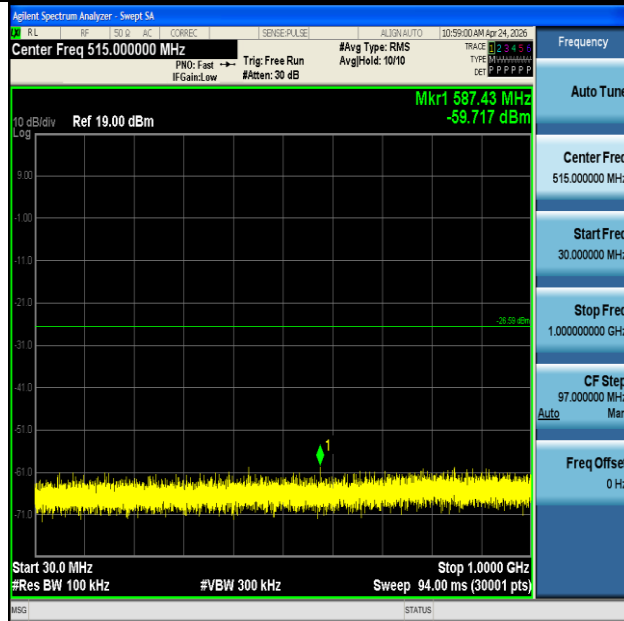


DH5-Ant1-2480-1000~26500-PASS

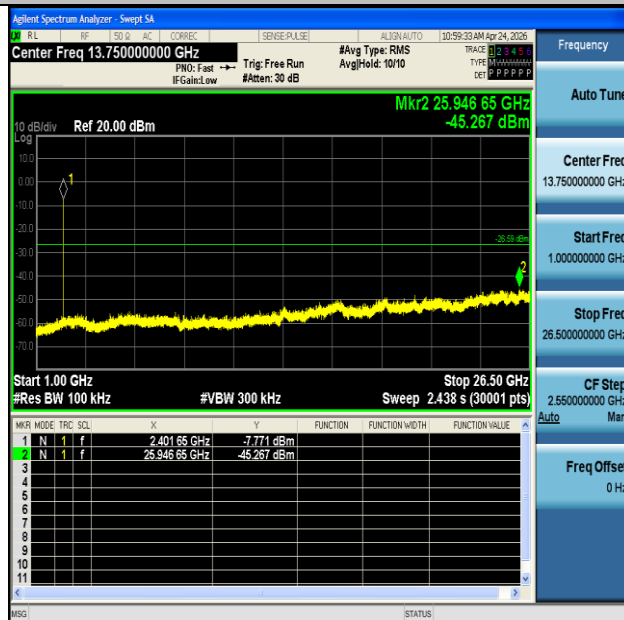


2DH5-Ant1-2402-0~Reference-PASS



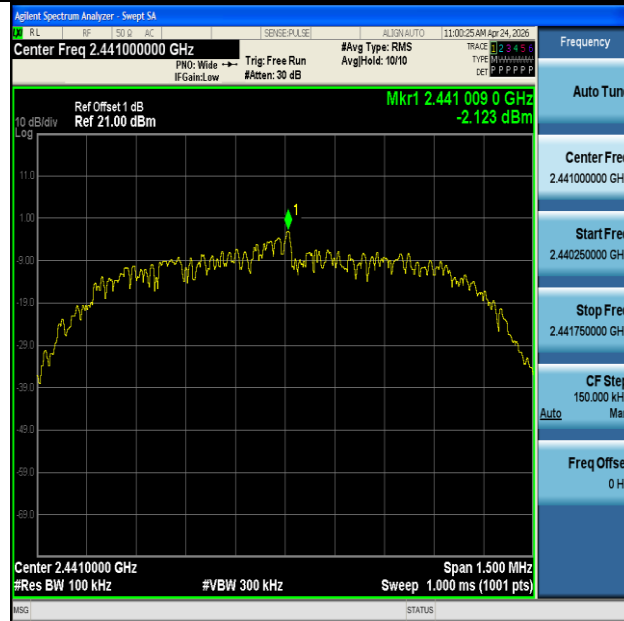


2DH5-Ant1-2402-30~1000-PASS

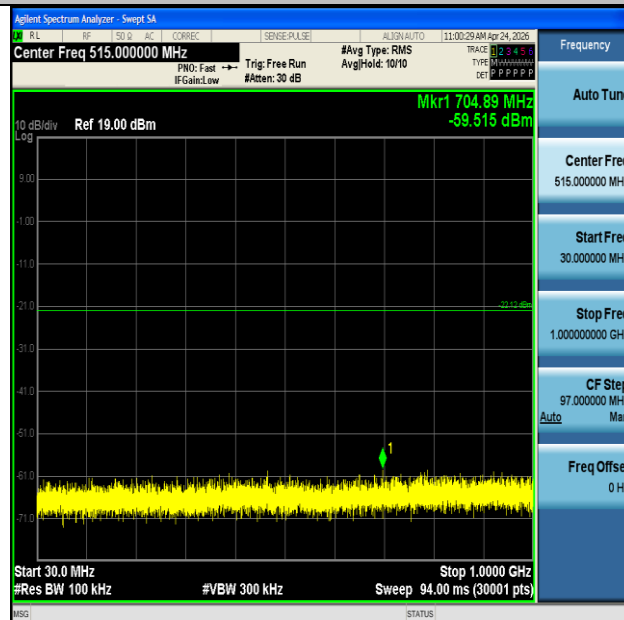


2DH5-Ant1-2402-1000~26500-PASS



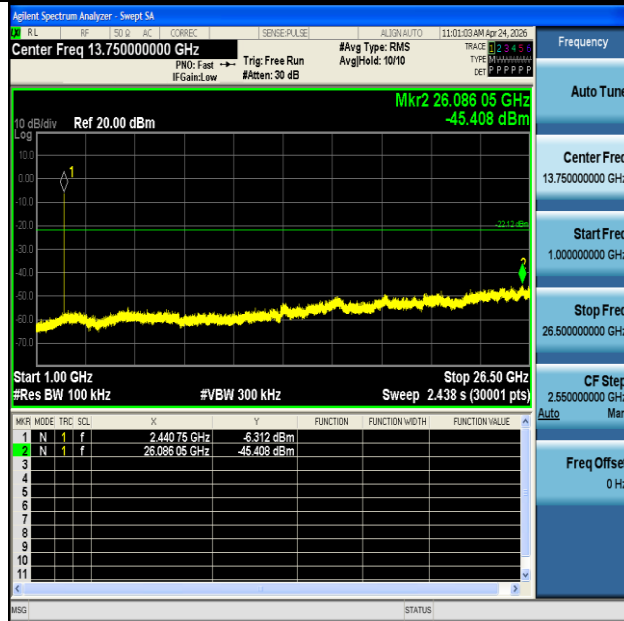


2DH5-Ant1-2441-0~Reference-PASS



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



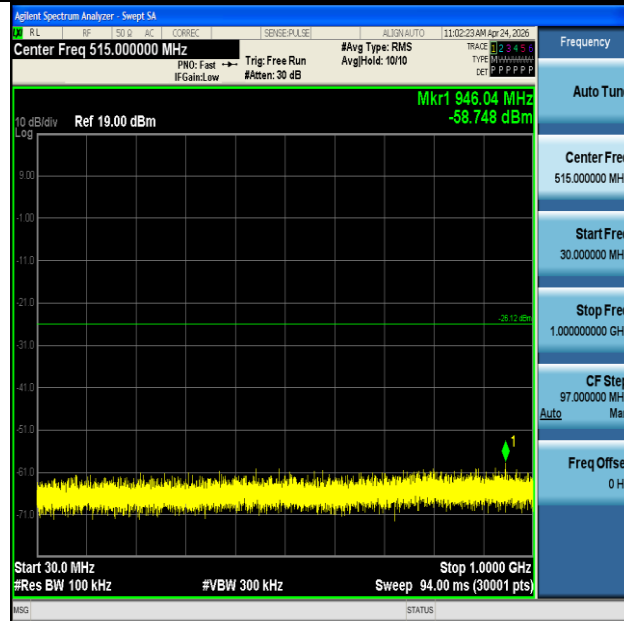


2DH5-Ant1-2441-1000~26500-PASS

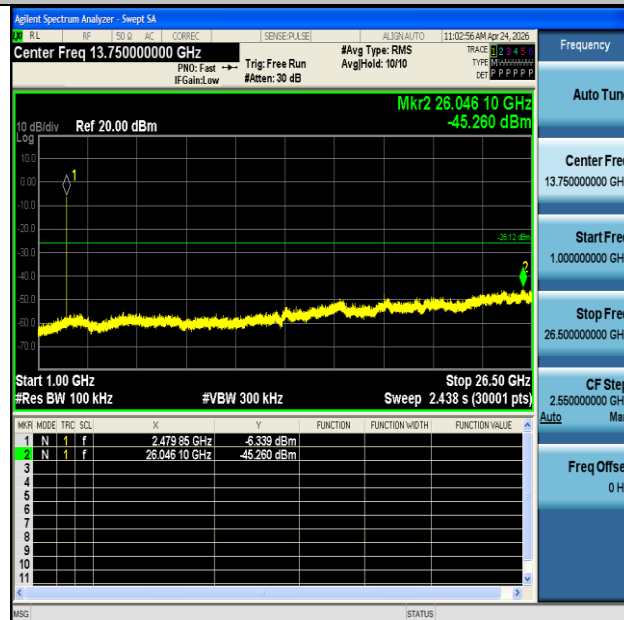


2DH5-Ant1-2480-0~Reference-PASS





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

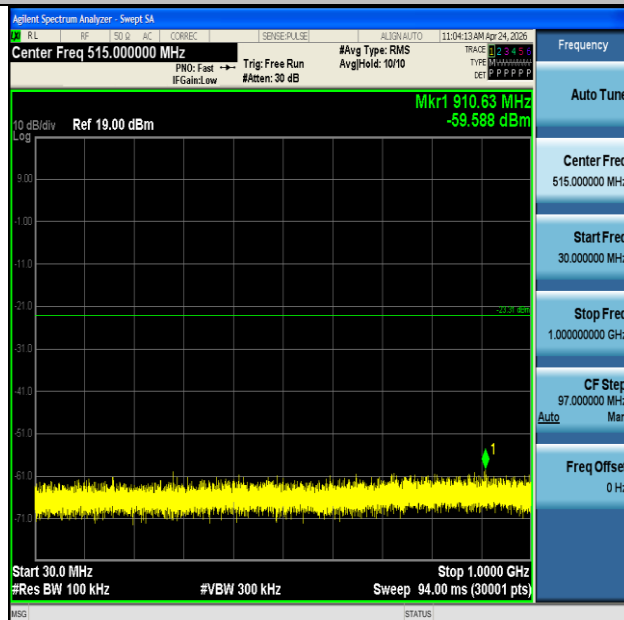


2DH5-Ant1-2480-1000~26500-PASS



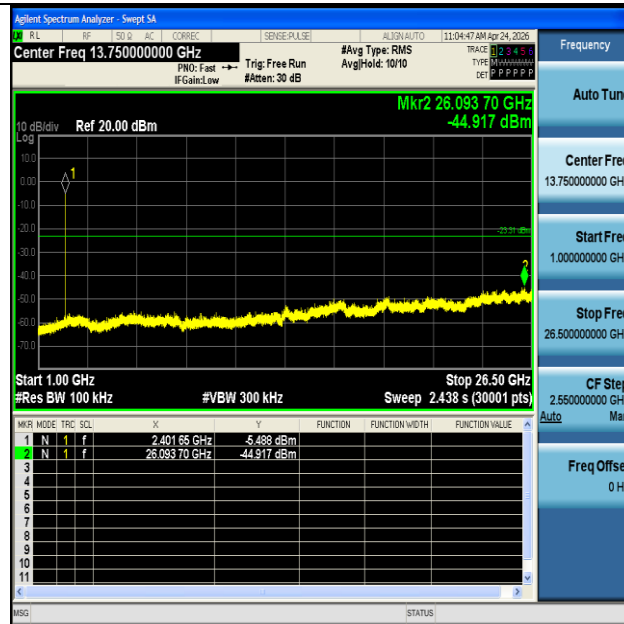


3DH5-Ant1-2402-0~Reference-PASS

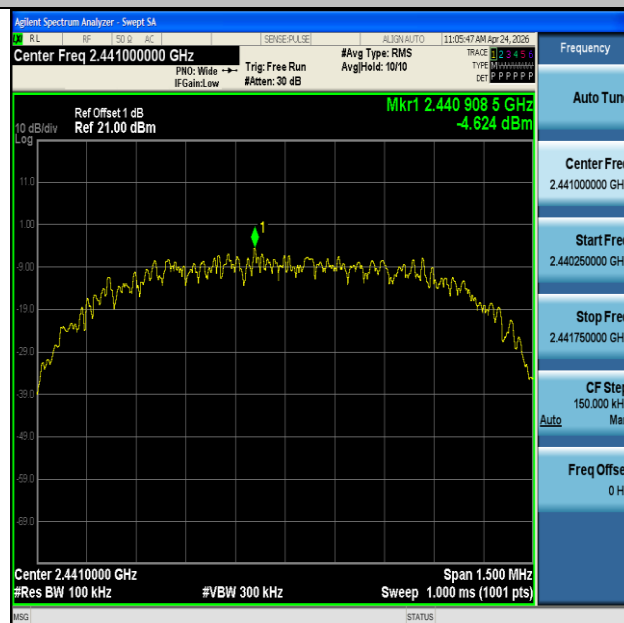


3DH5-Ant1-2402-30~1000-PASS



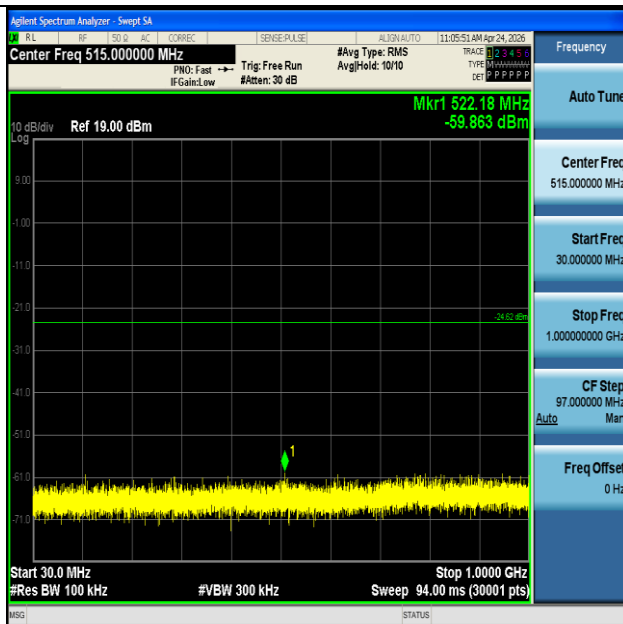


3DH5-Ant1-2402-1000~26500-PASS

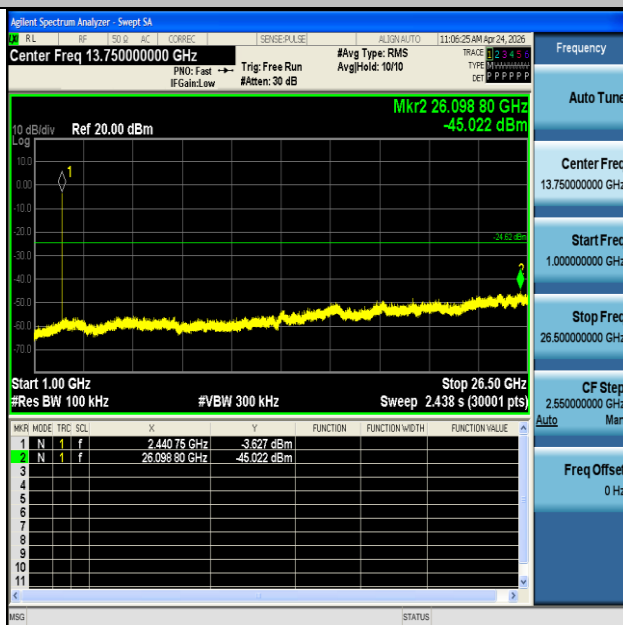


3DH5-Ant1-2441-0~Reference-PASS



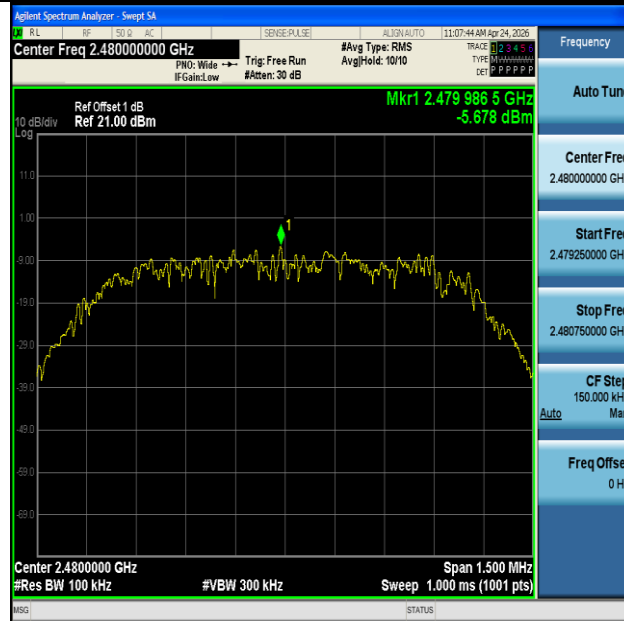


3DH5-Ant1-2441-30~1000-PASS

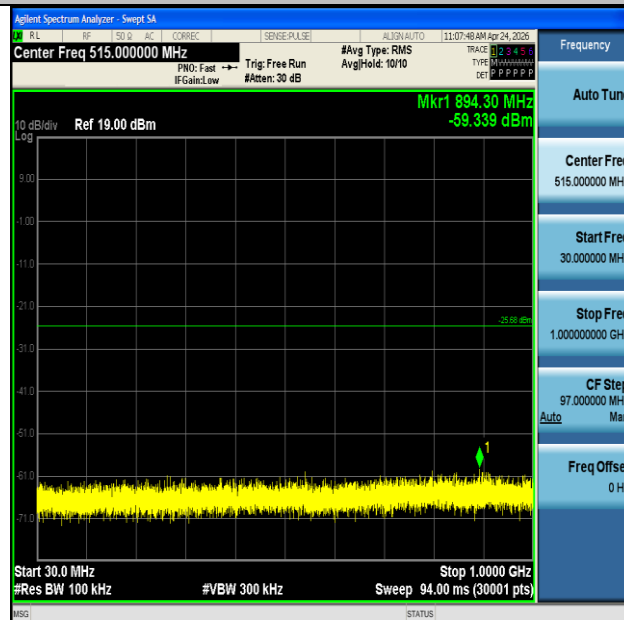


3DH5-Ant1-2441-1000~26500-PASS



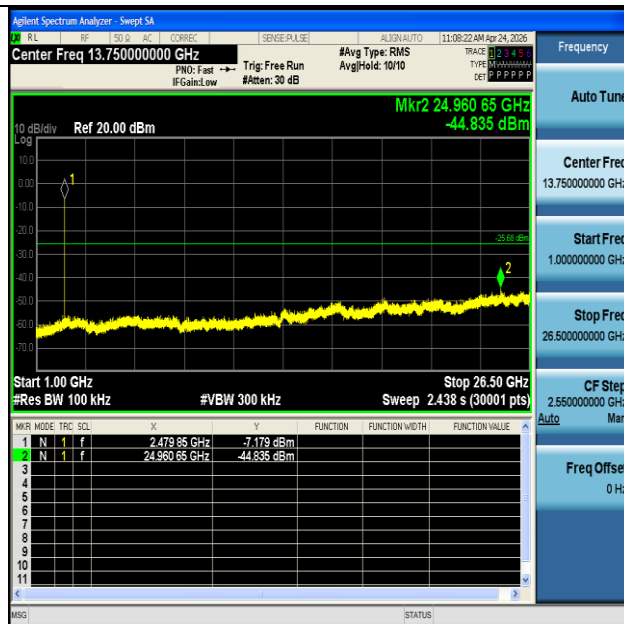


3DH5-Ant1-2480-0~Reference-PASS



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





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





Appendix I: Duty Cycle

Test Result

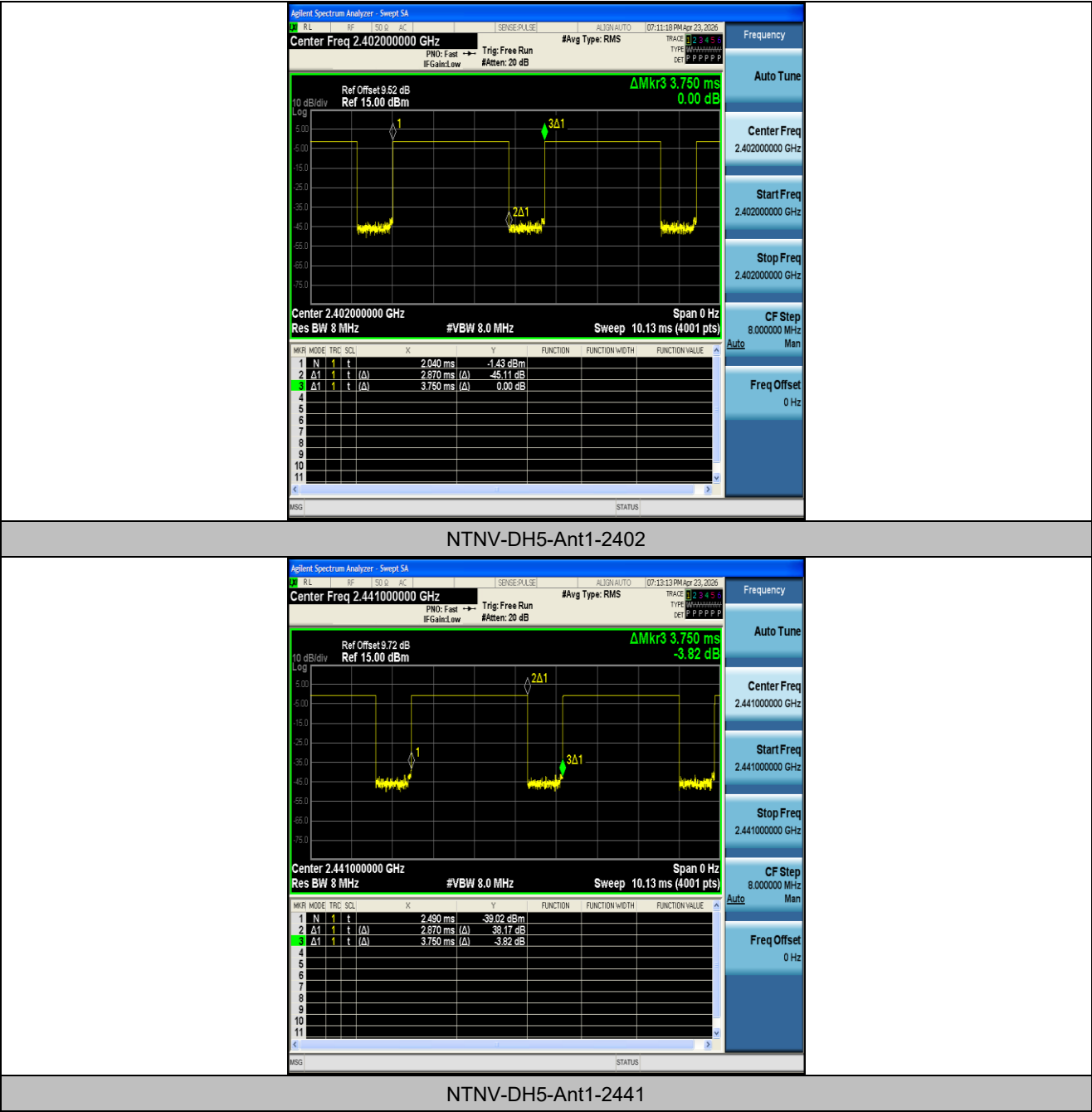
Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.87	3.75	76.53	1.16
DH5	Ant1	2441	2.87	3.75	76.53	1.16
DH5	Ant1	2480	2.87	3.75	76.53	1.16
2DH5	Ant1	2402	2.88	3.75	76.80	1.15
2DH5	Ant1	2441	2.87	3.75	76.53	1.16
2DH5	Ant1	2480	2.88	3.75	76.80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

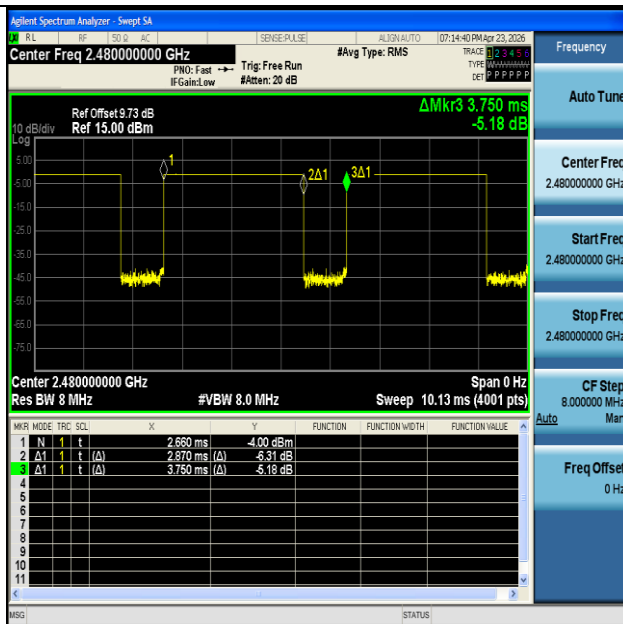
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



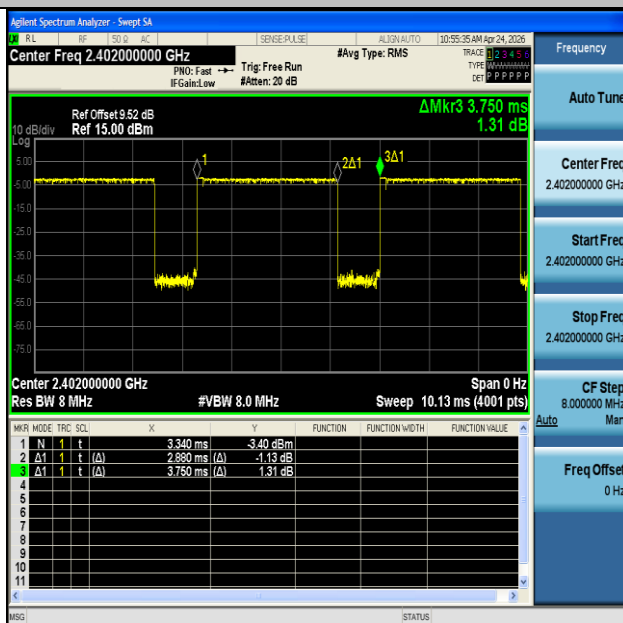


Test Graphs



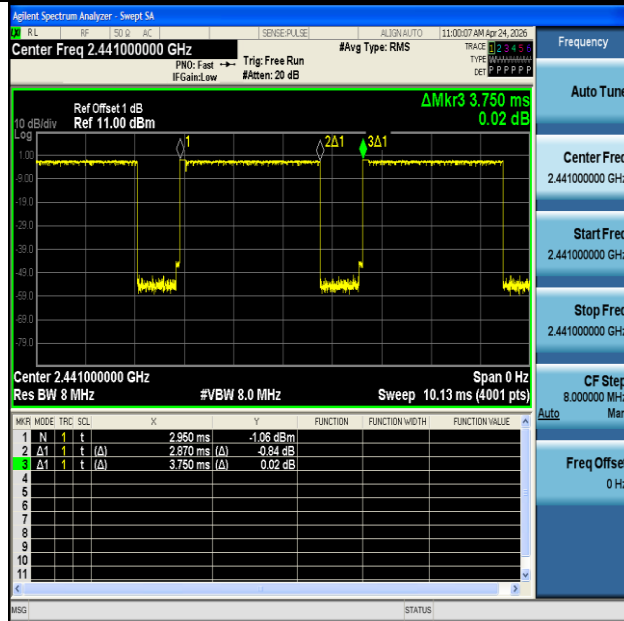


NTNV-DH5-Ant1-2480

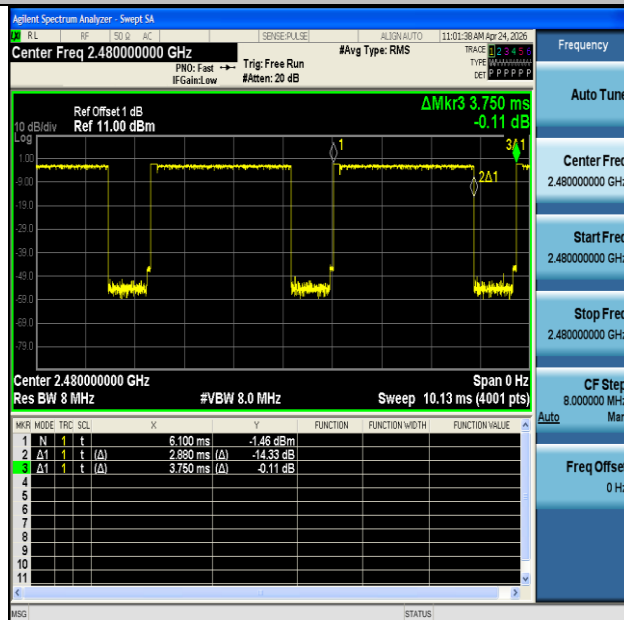


NTNV-2DH5-Ant1-2402



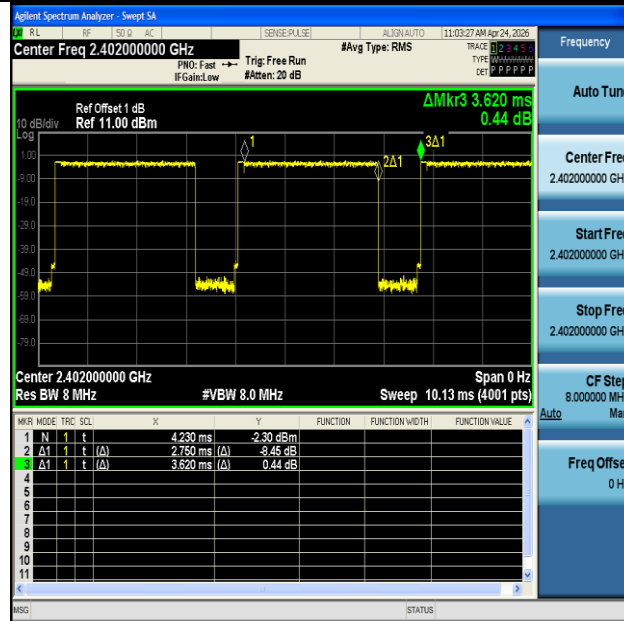


NTNV-2DH5-Ant1-2441

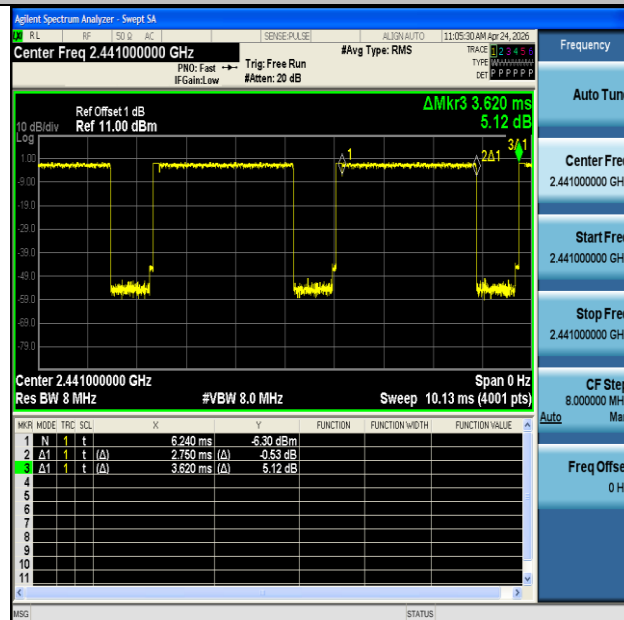


NTNV-2DH5-Ant1-2480



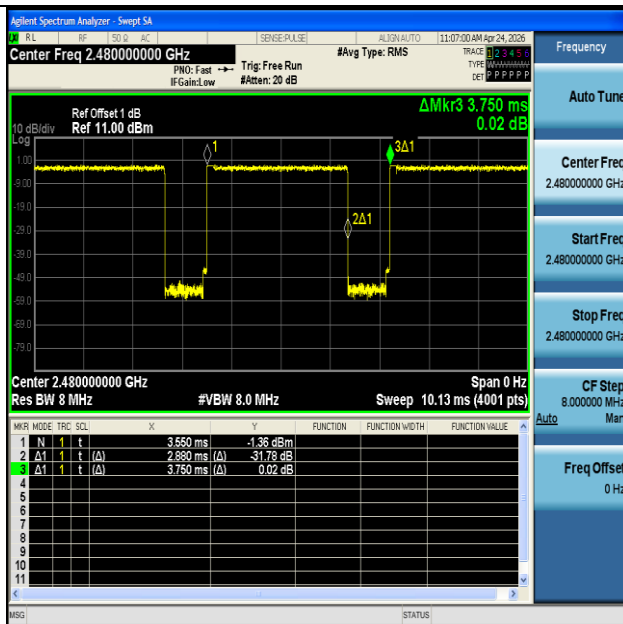


NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441





NTNV-3DH5-Ant1-2480

