

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

Product Name: WIFI TOUCH SCREEN KARAOKE SYSTEM

Trade Mark: Singing Machine

Test Model: ISM9011

FCC ID: 2AAXO-ISM9011

Environmental Conditions

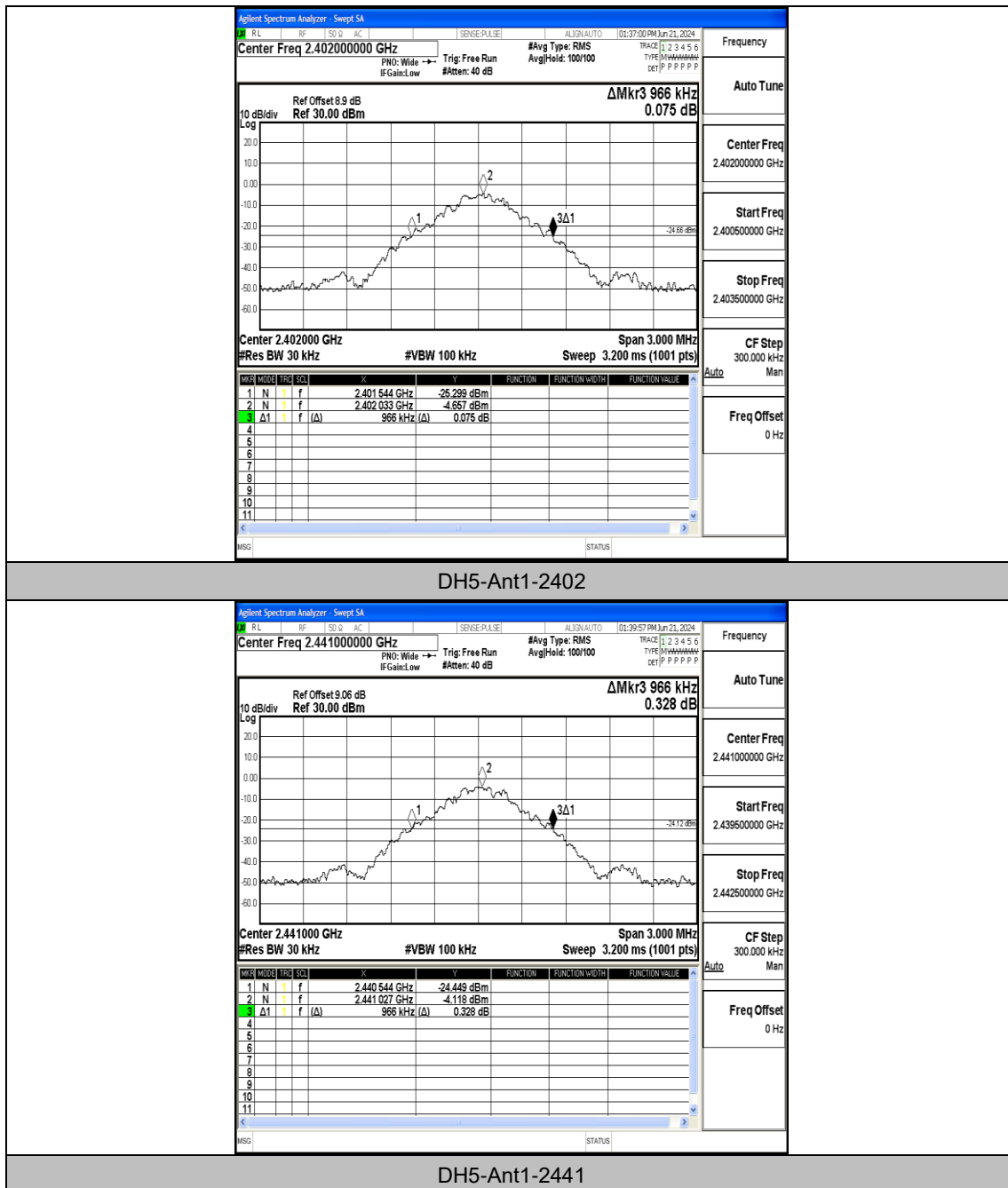
Temperature:	23.8℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

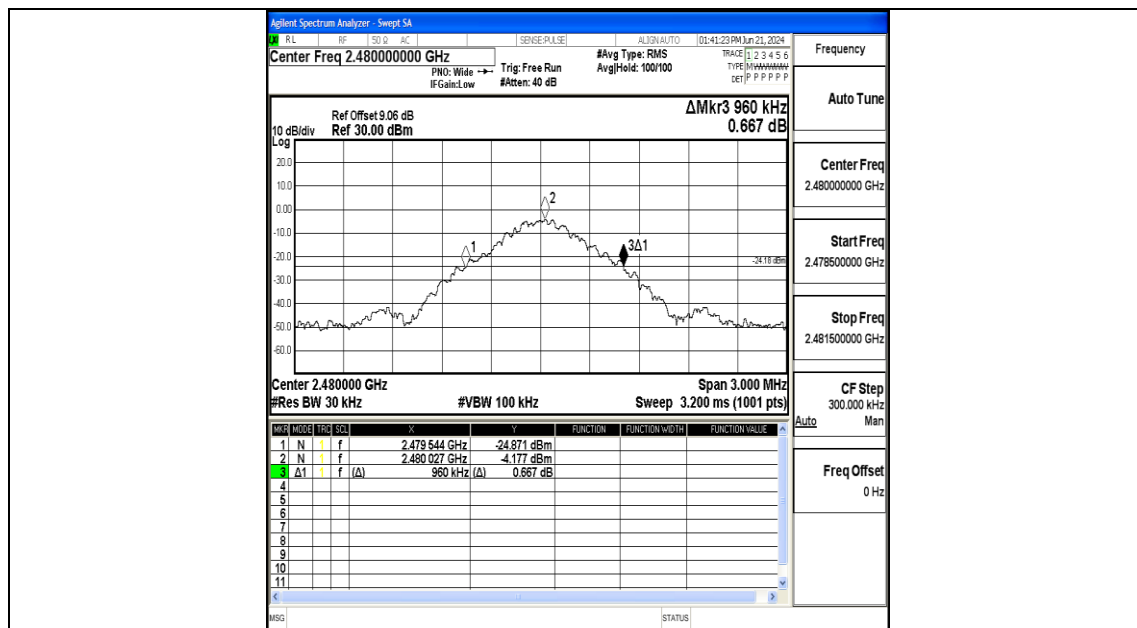
Appendix A: 20dB Emission Bandwidth

Test Result

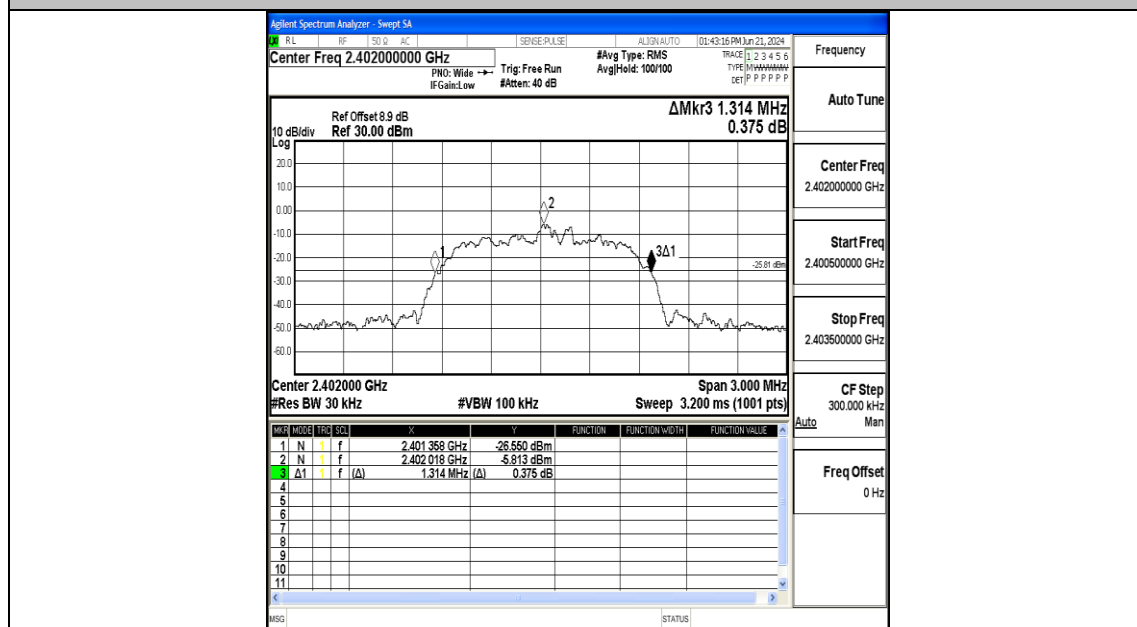
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.966	2401.544	2402.510	---	---
DH5	Ant1	2441	0.966	2440.544	2441.510	---	---
DH5	Ant1	2480	0.960	2479.544	2480.504	---	---
2DH5	Ant1	2402	1.314	2401.358	2402.672	---	---
2DH5	Ant1	2441	1.287	2440.382	2441.669	---	---
2DH5	Ant1	2480	1.284	2479.382	2480.666	---	---
3DH5	Ant1	2402	1.308	2401.364	2402.672	---	---
3DH5	Ant1	2441	1.317	2440.361	2441.678	---	---
3DH5	Ant1	2480	1.302	2479.370	2480.672	---	---

Test Graphs

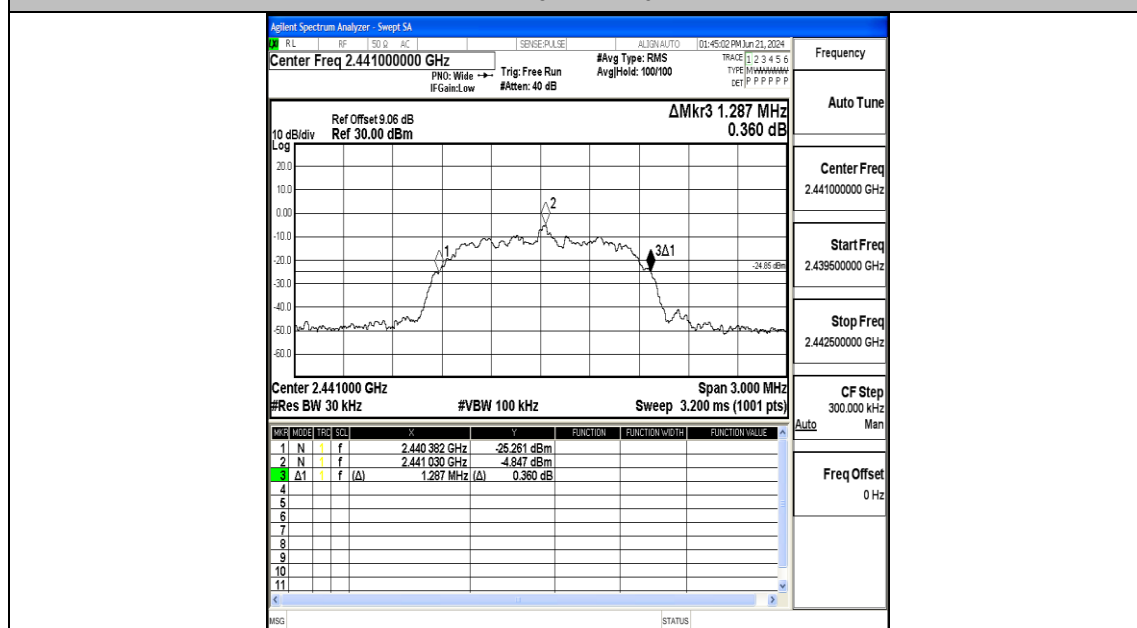




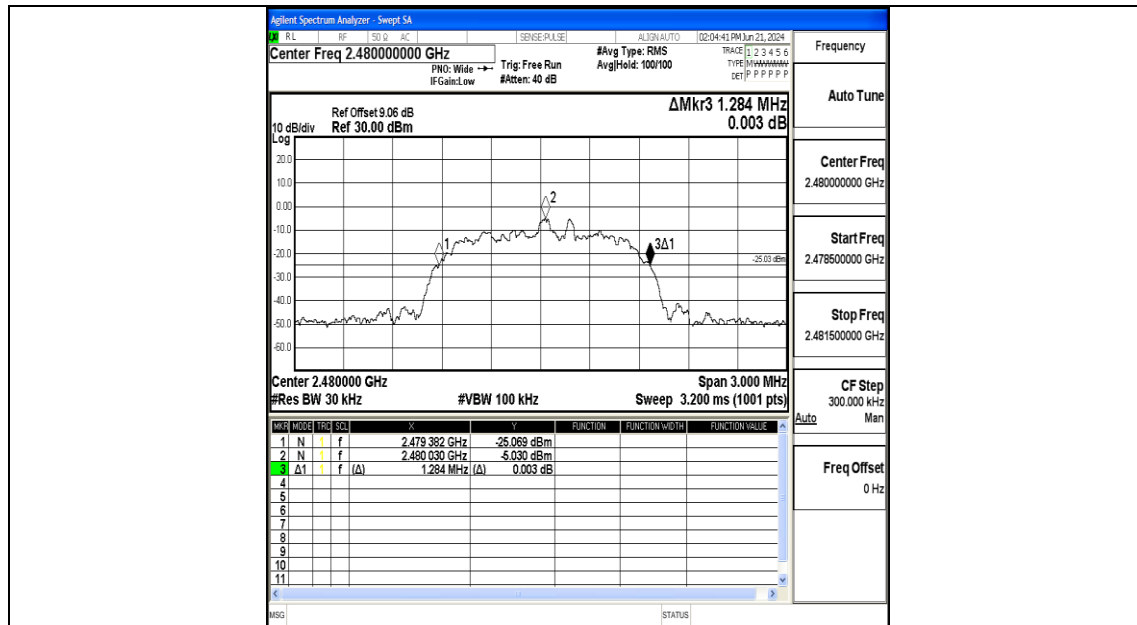
DH5-Ant1-2480



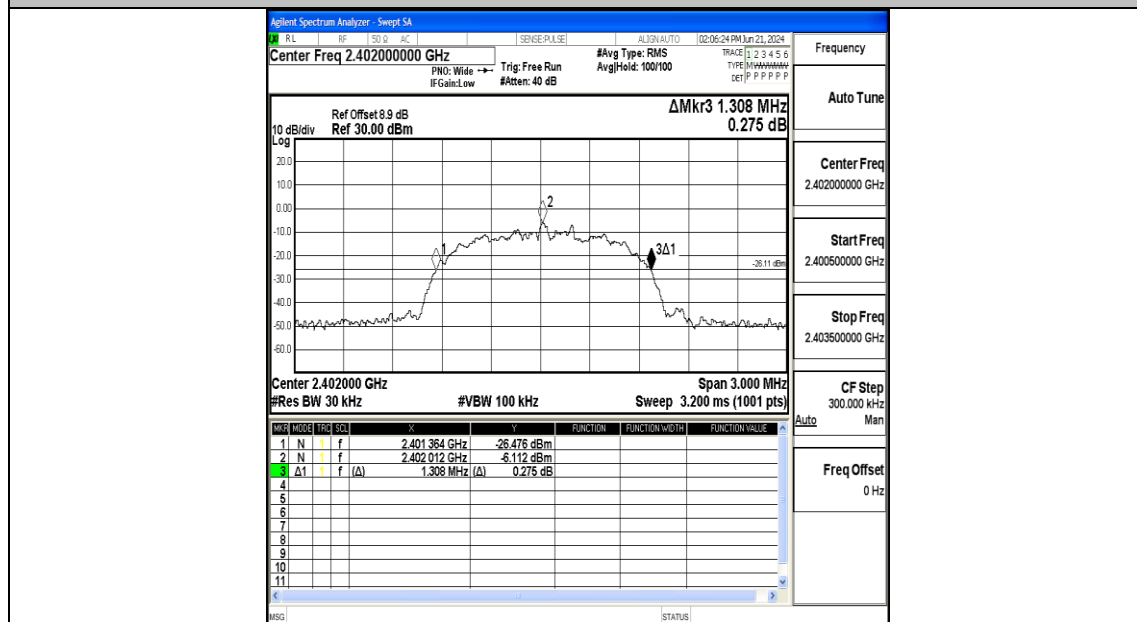
2DH5-Ant1-2402



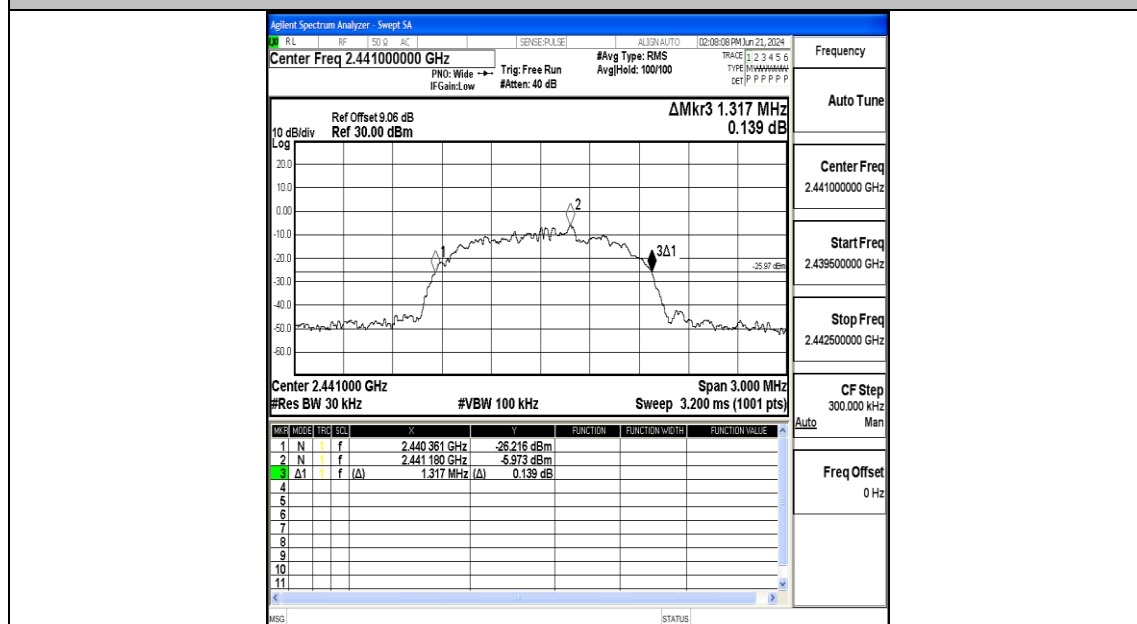
2DH5-Ant1-2441



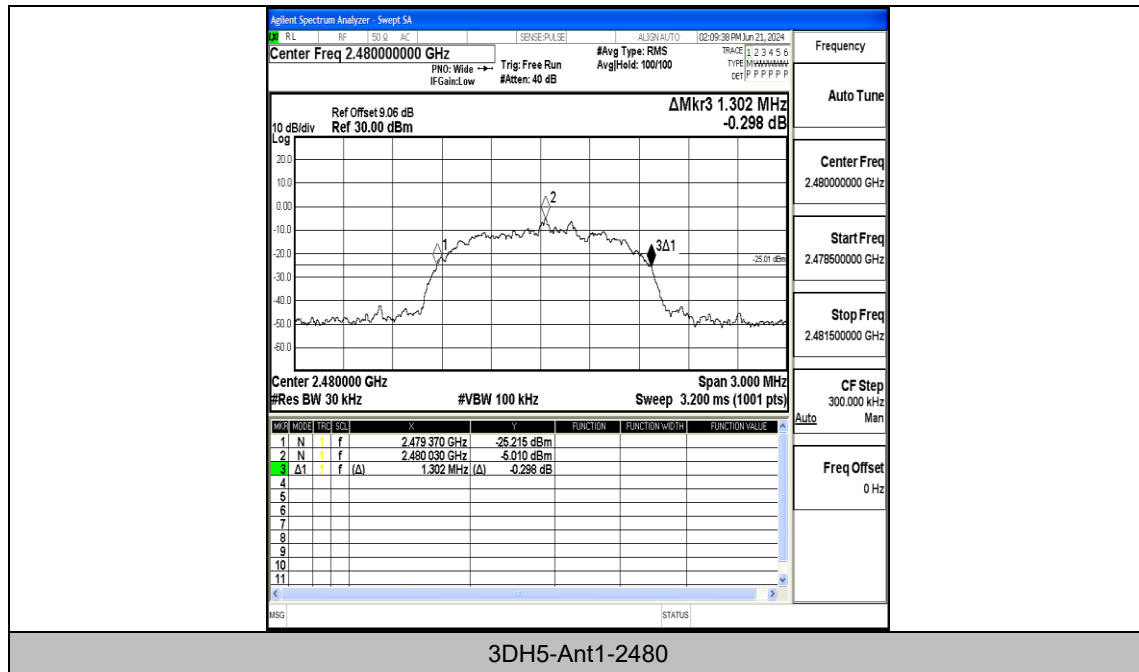
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441

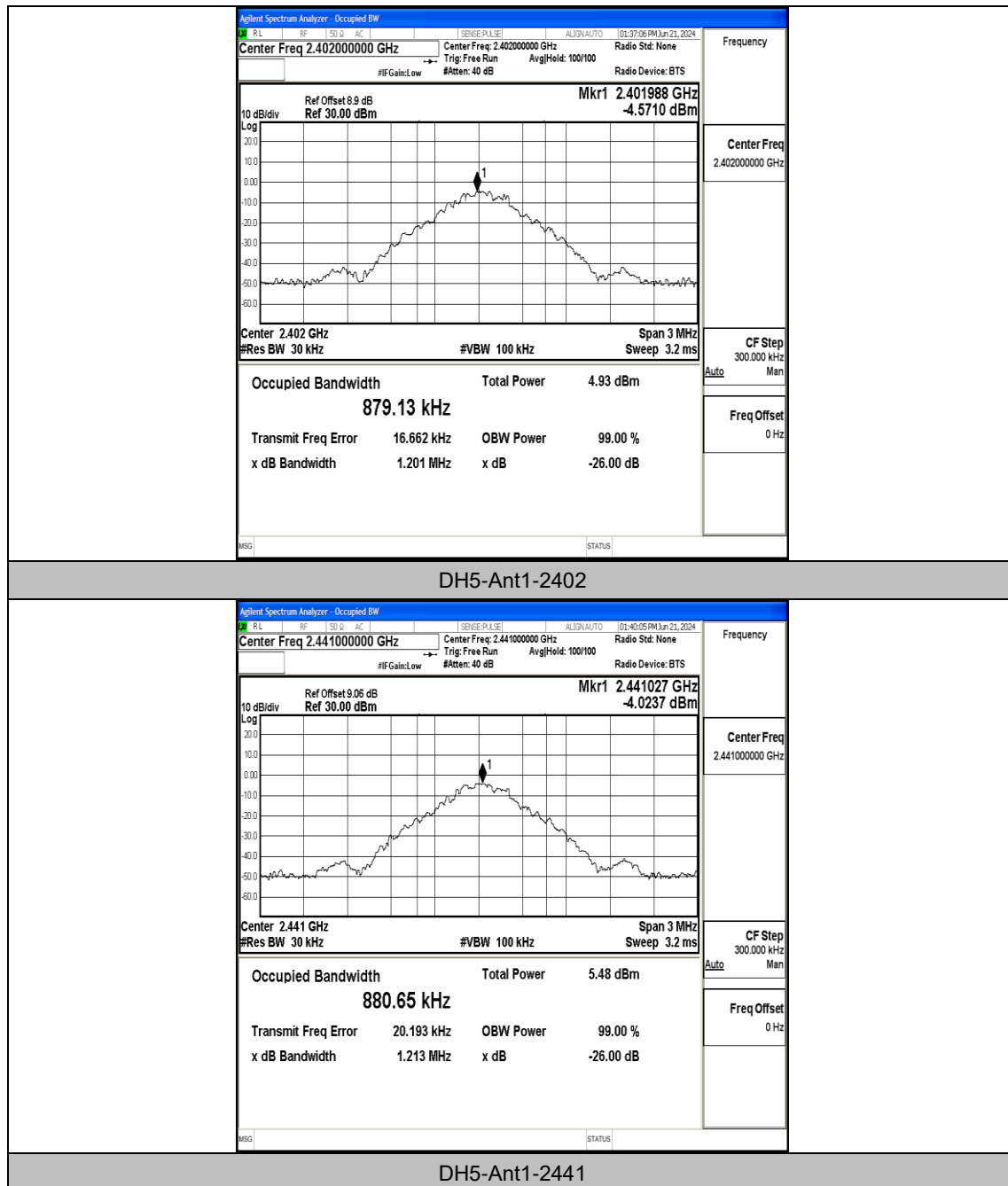


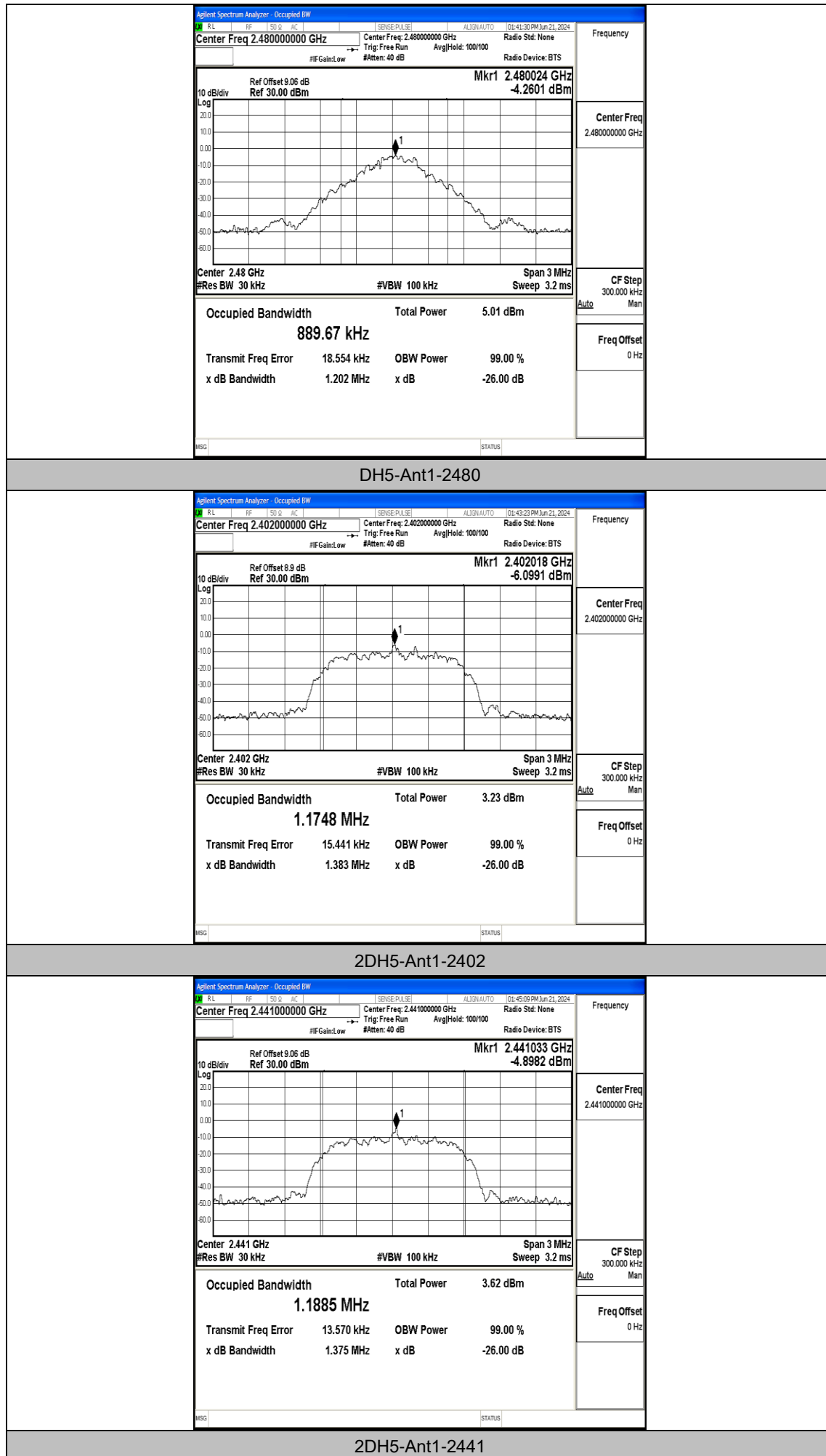
Appendix B: Occupied Channel Bandwidth

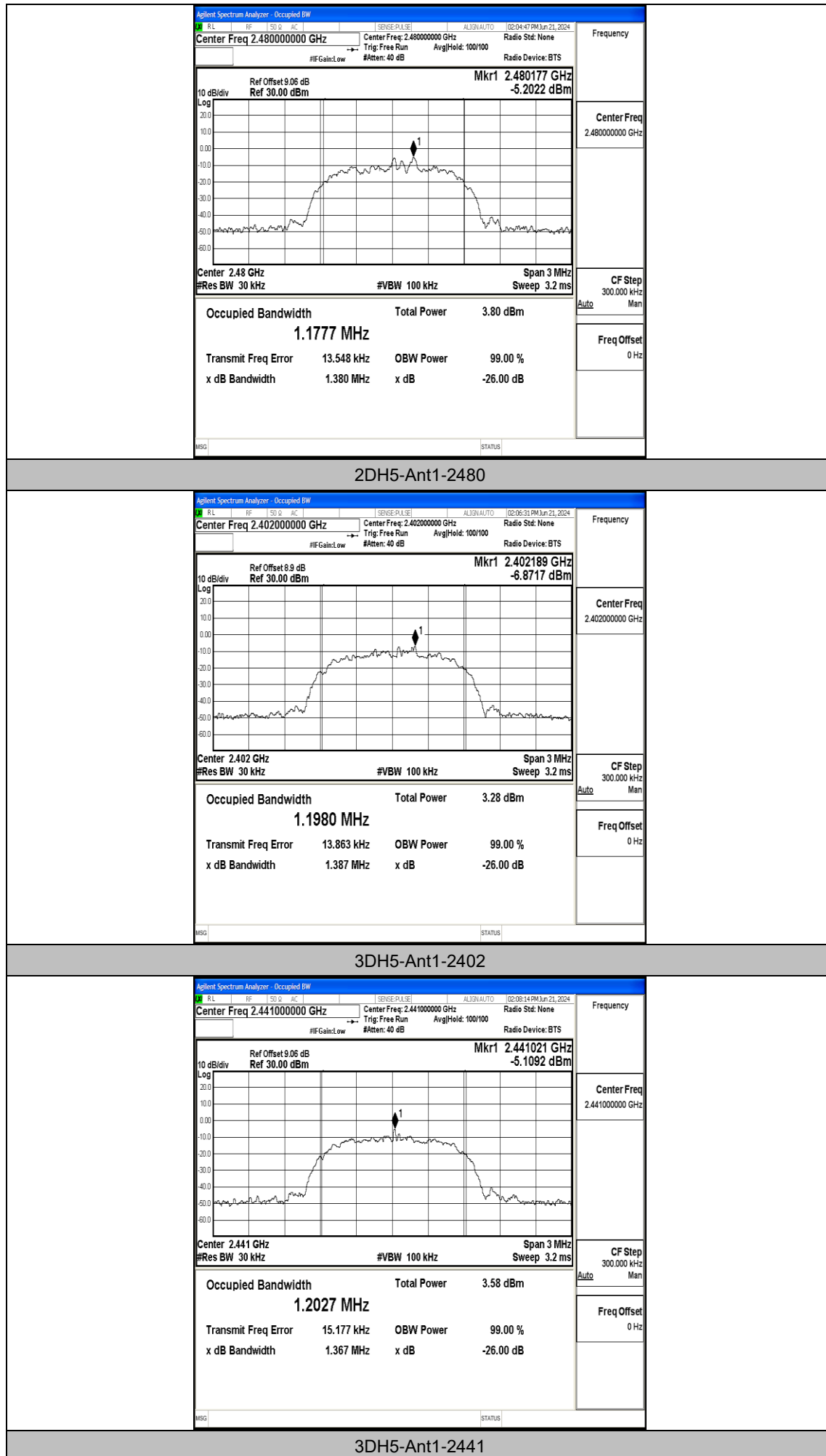
Test Result

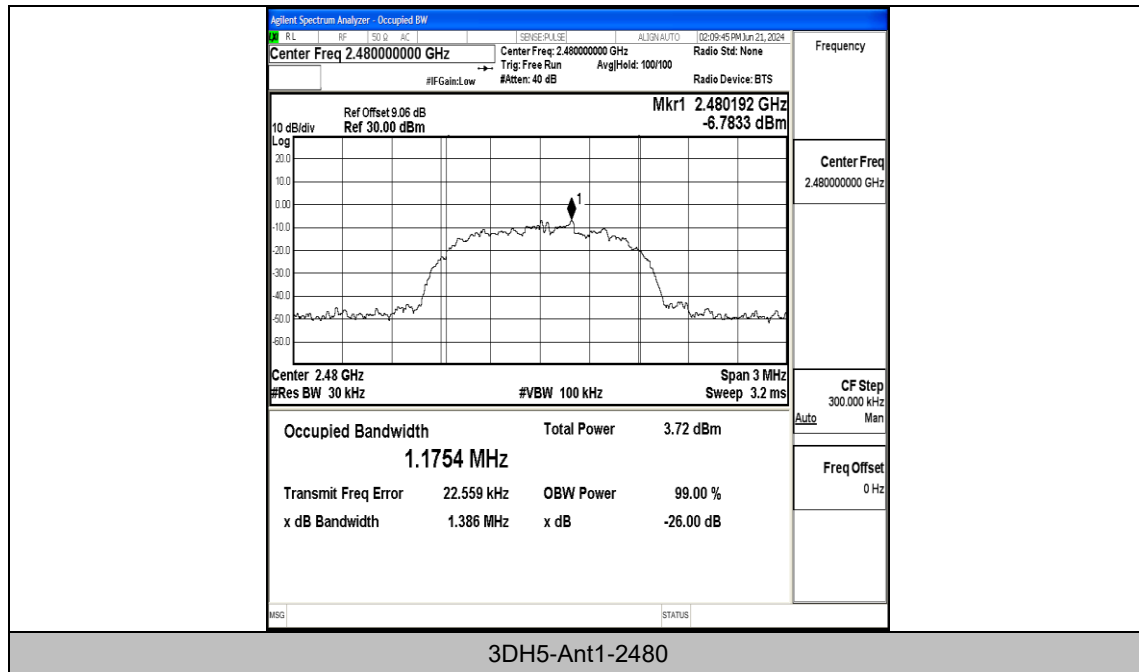
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87913	2401.5771	2402.4562	---	---
DH5	Ant1	2441	0.88065	2440.5799	2441.4605	---	---
DH5	Ant1	2480	0.88967	2479.5737	2480.4634	---	---
2DH5	Ant1	2402	1.1748	2401.4280	2402.6028	---	---
2DH5	Ant1	2441	1.1885	2440.4193	2441.6078	---	---
2DH5	Ant1	2480	1.1777	2479.4247	2480.6024	---	---
3DH5	Ant1	2402	1.1980	2401.4149	2402.6129	---	---
3DH5	Ant1	2441	1.2027	2440.4138	2441.6165	---	---
3DH5	Ant1	2480	1.1754	2479.4349	2480.6103	---	---

Test Graphs







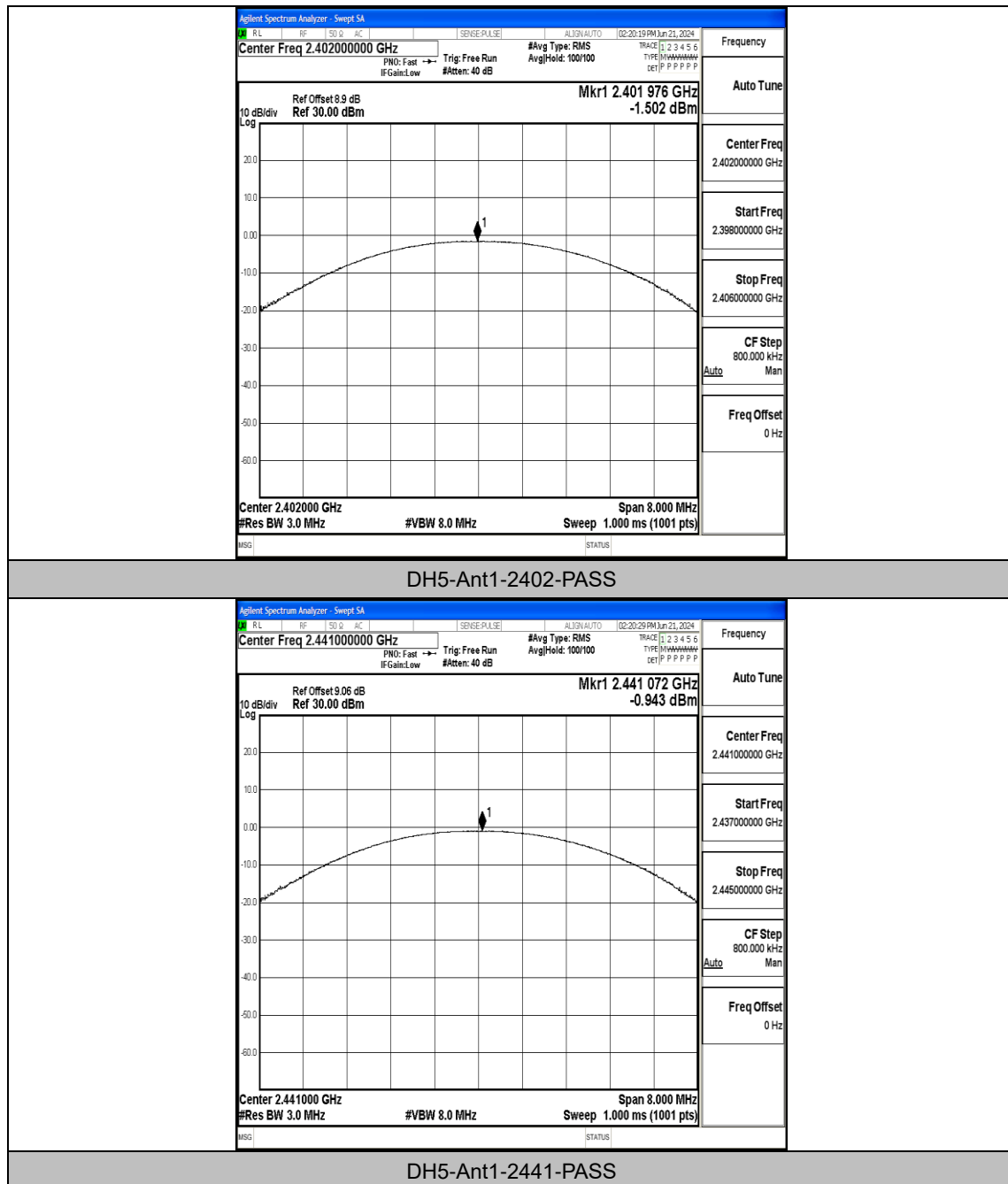


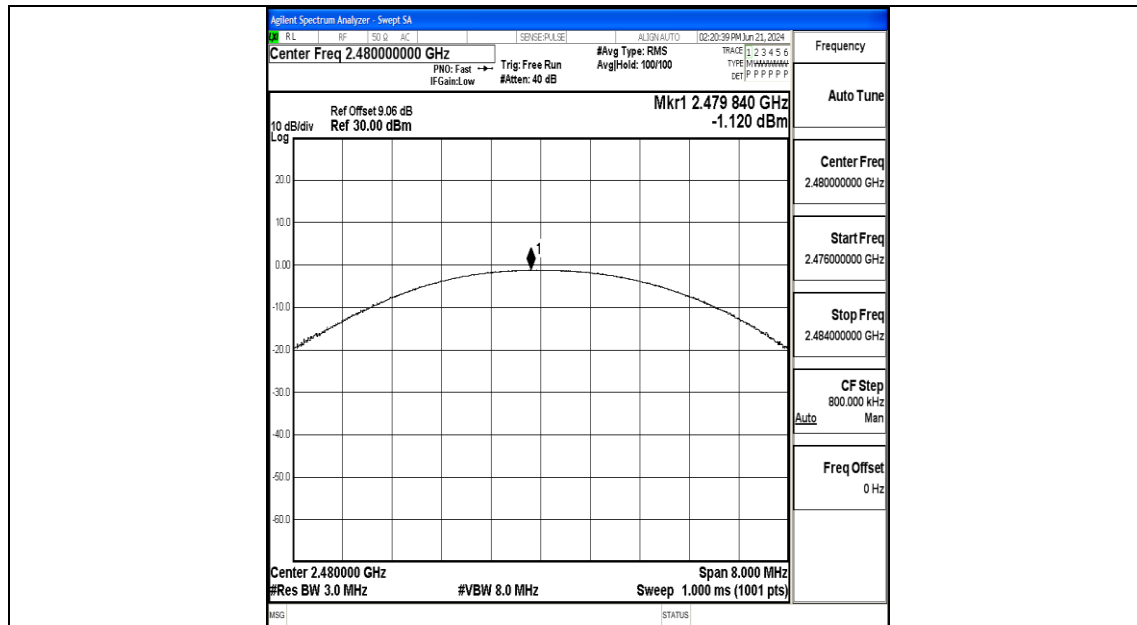
Appendix C: Maximum peak conducted output power

Test Result

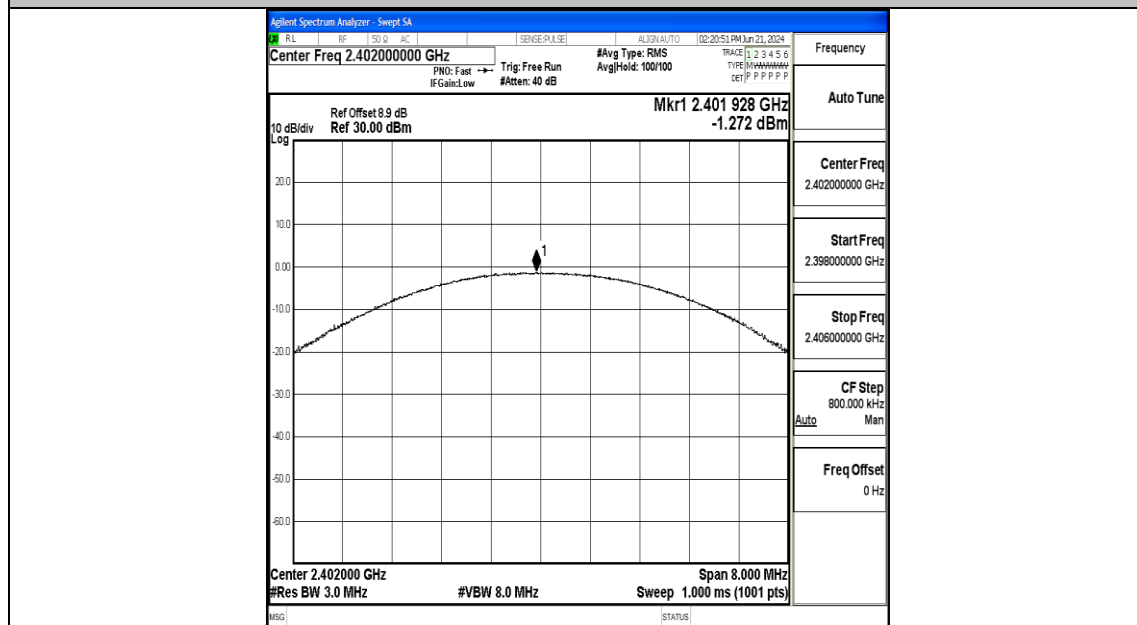
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-1.50	≤30	PASS
DH5	Ant1	2441	-0.94	≤30	PASS
DH5	Ant1	2480	-1.12	≤30	PASS
2DH5	Ant1	2402	-1.27	≤20.97	PASS
2DH5	Ant1	2441	-0.61	≤20.97	PASS
2DH5	Ant1	2480	-0.95	≤20.97	PASS
3DH5	Ant1	2402	-0.65	≤20.97	PASS
3DH5	Ant1	2441	-0.17	≤20.97	PASS
3DH5	Ant1	2480	-0.32	≤20.97	PASS

Test Graphs

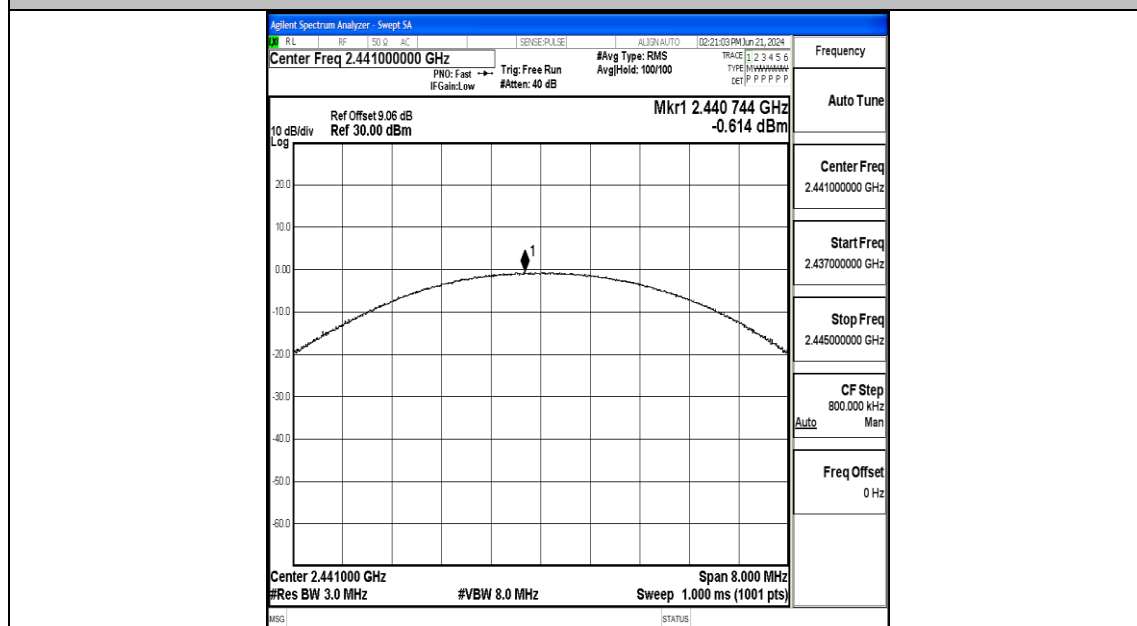




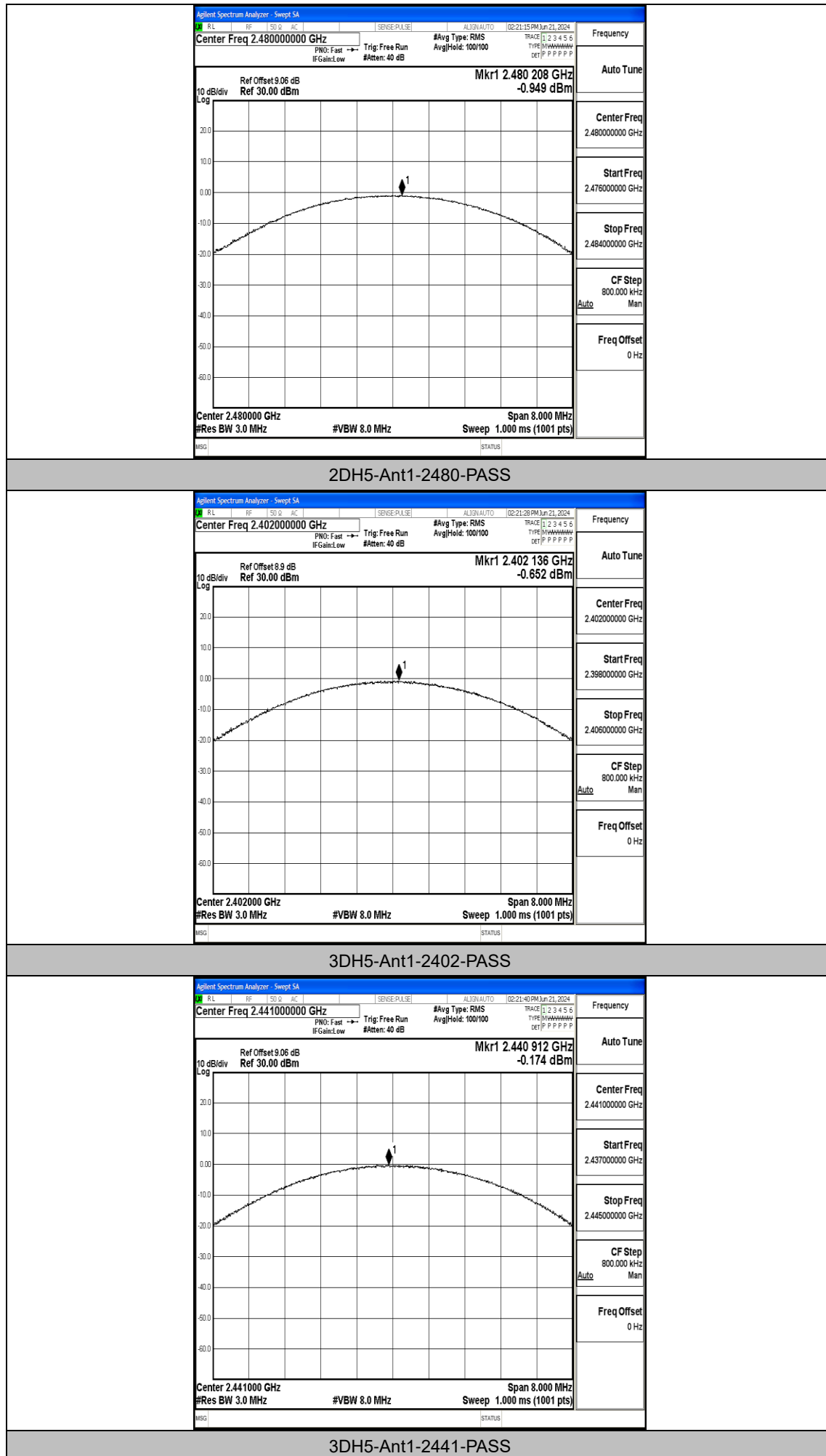
DH5-Ant1-2480-PASS

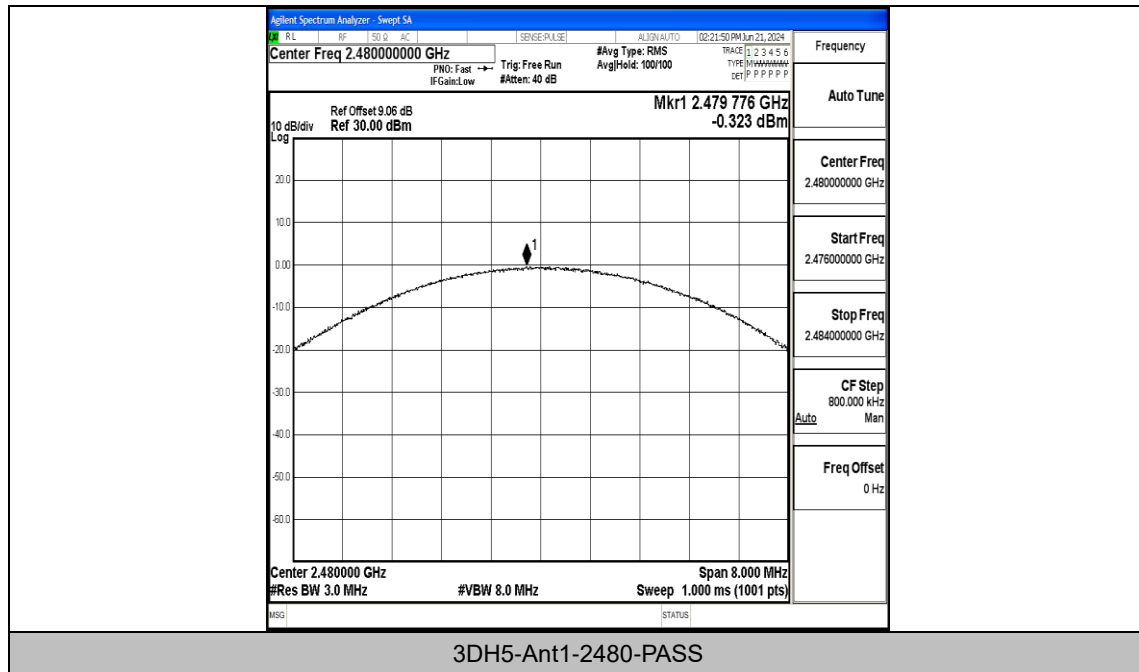


2DH5-Ant1-2402-PASS



2DH5-Ant1-2441-PASS



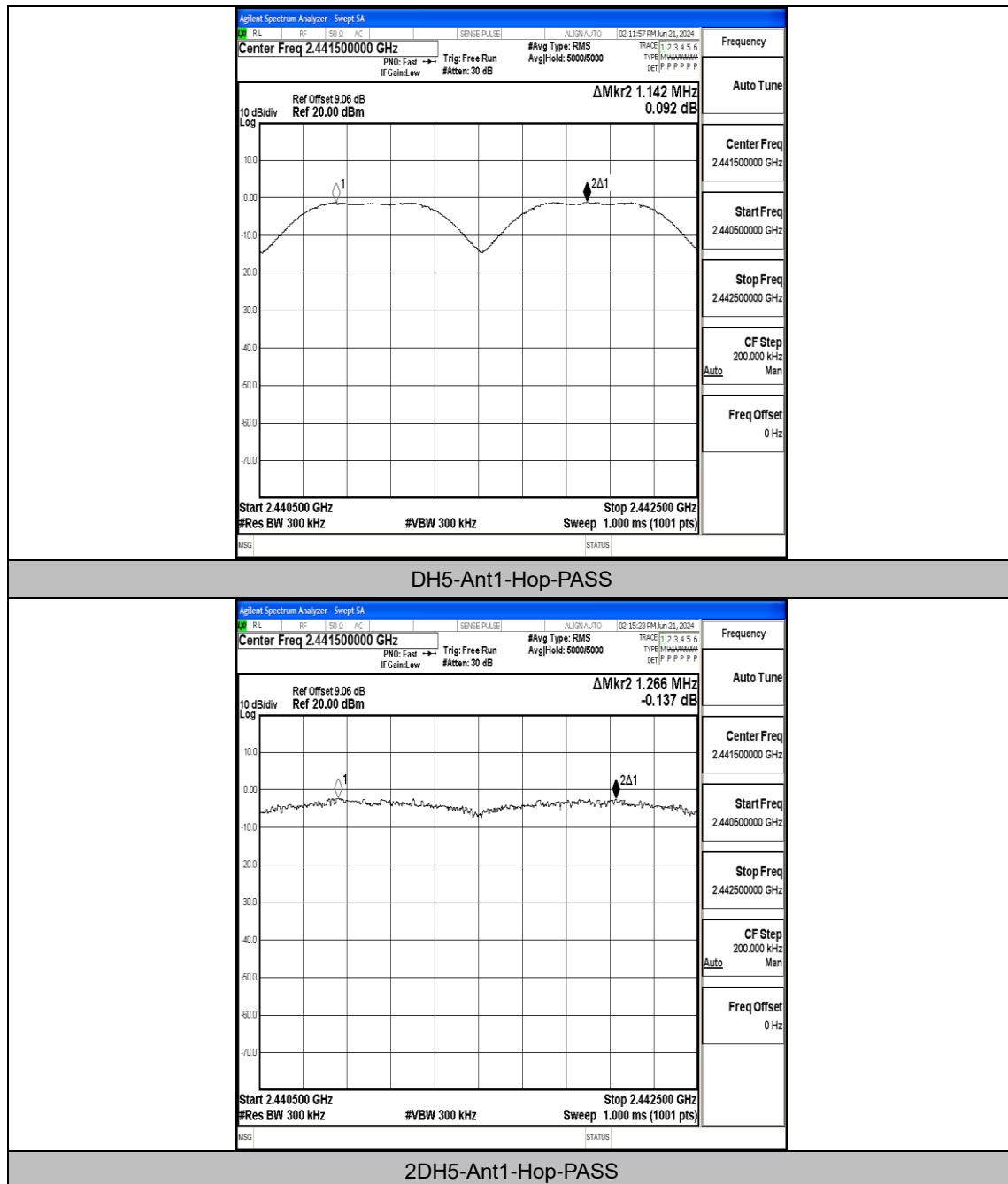


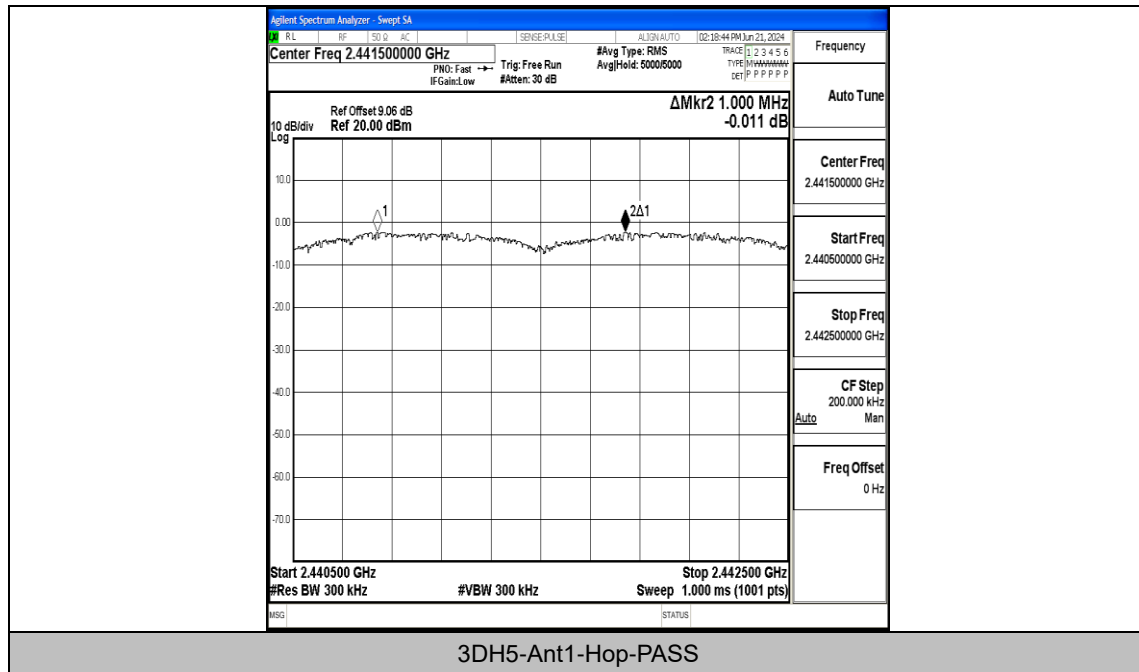
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.142	≥ 0.966	PASS
2DH5	Ant1	Hop	1.266	≥ 0.876	PASS
3DH5	Ant1	Hop	1	≥ 0.878	PASS

Test Graphs



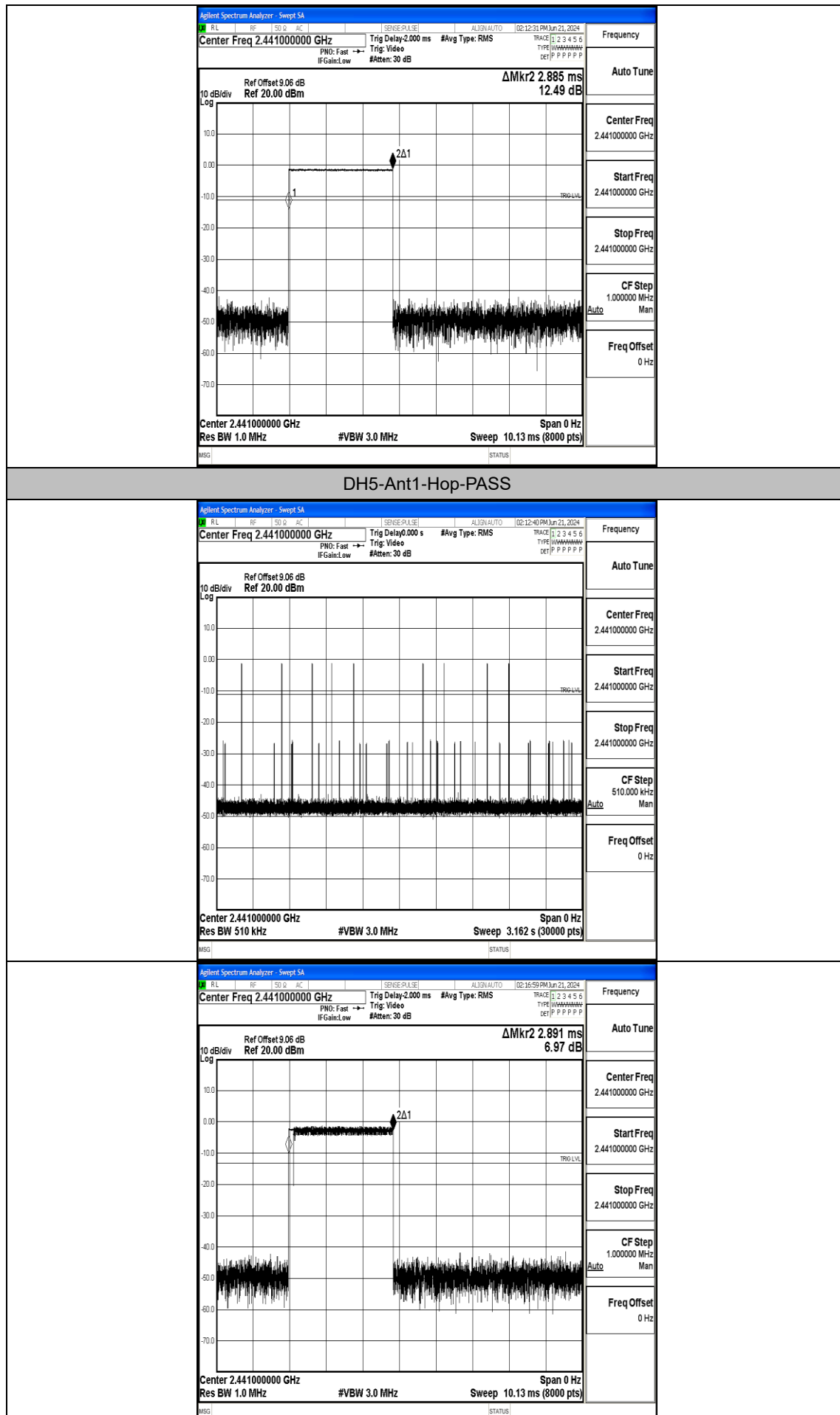


Appendix E: Time of occupancy

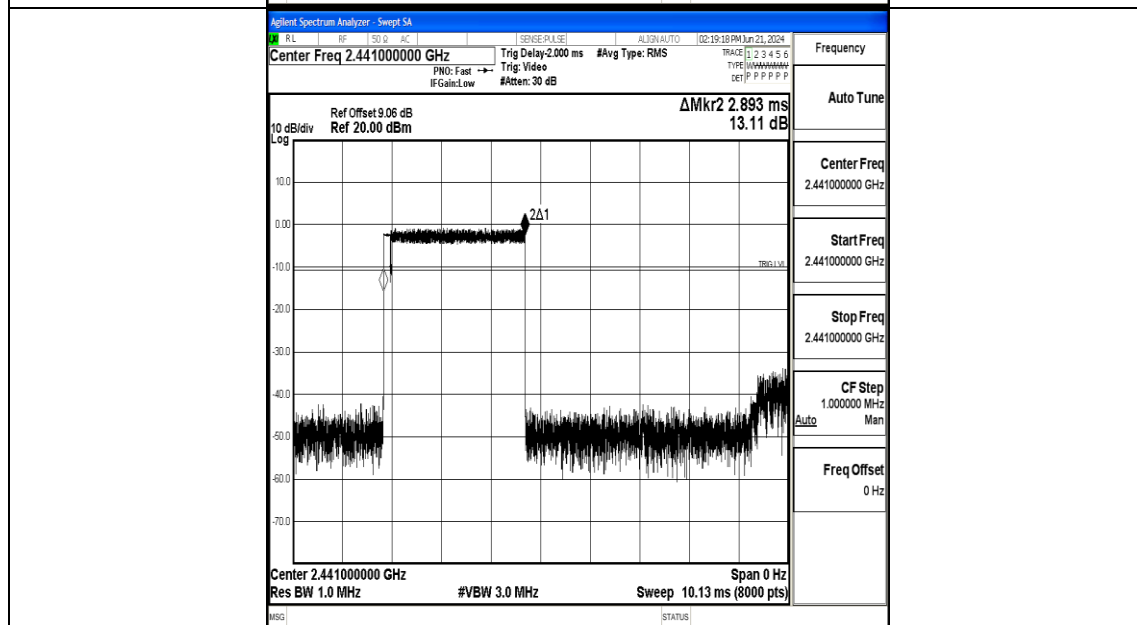
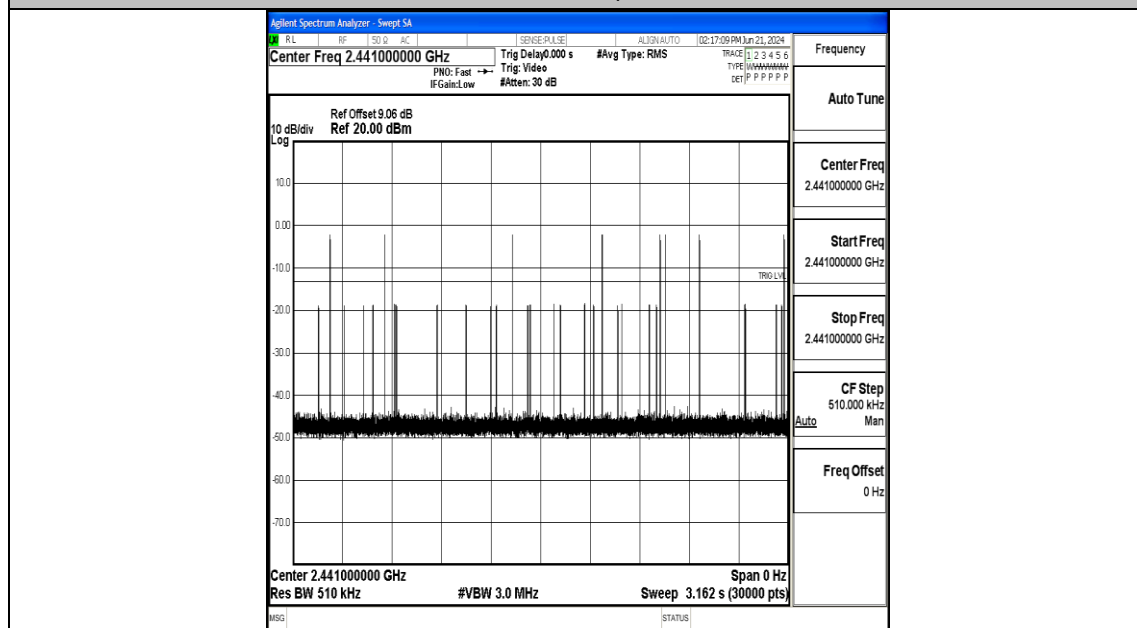
Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.885	100	0.289	≤0.4	PASS
2DH5	Ant1	Hop	2.891	90	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.893	100	0.289	≤0.4	PASS

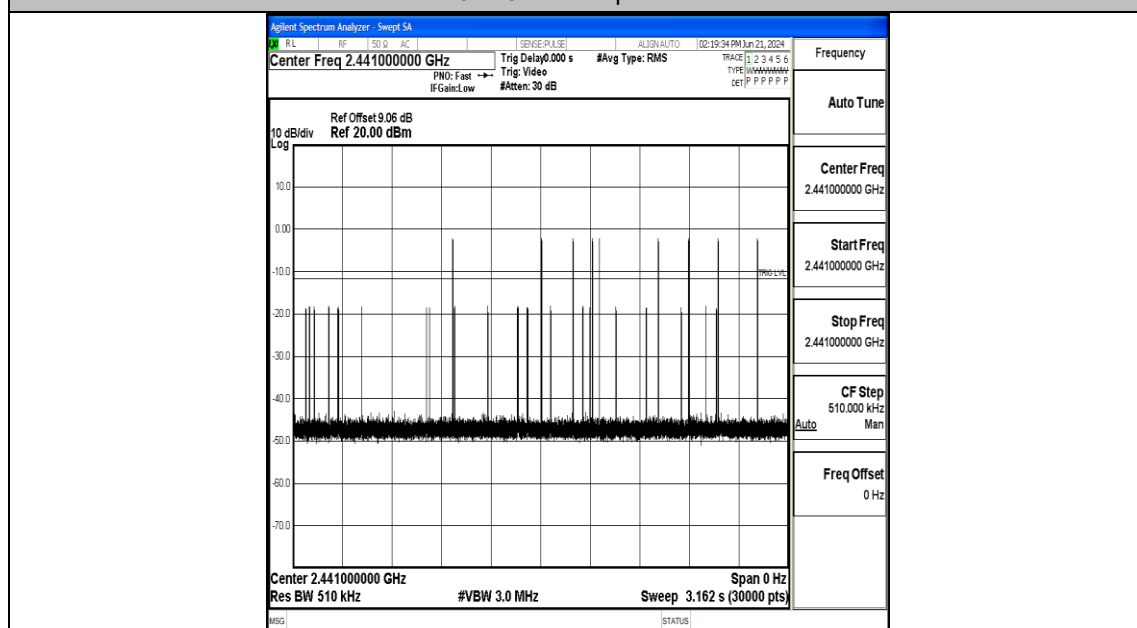
Test Graphs



2DH5-Ant1-Hop-PASS



3DH5-Ant1-Hop-PASS

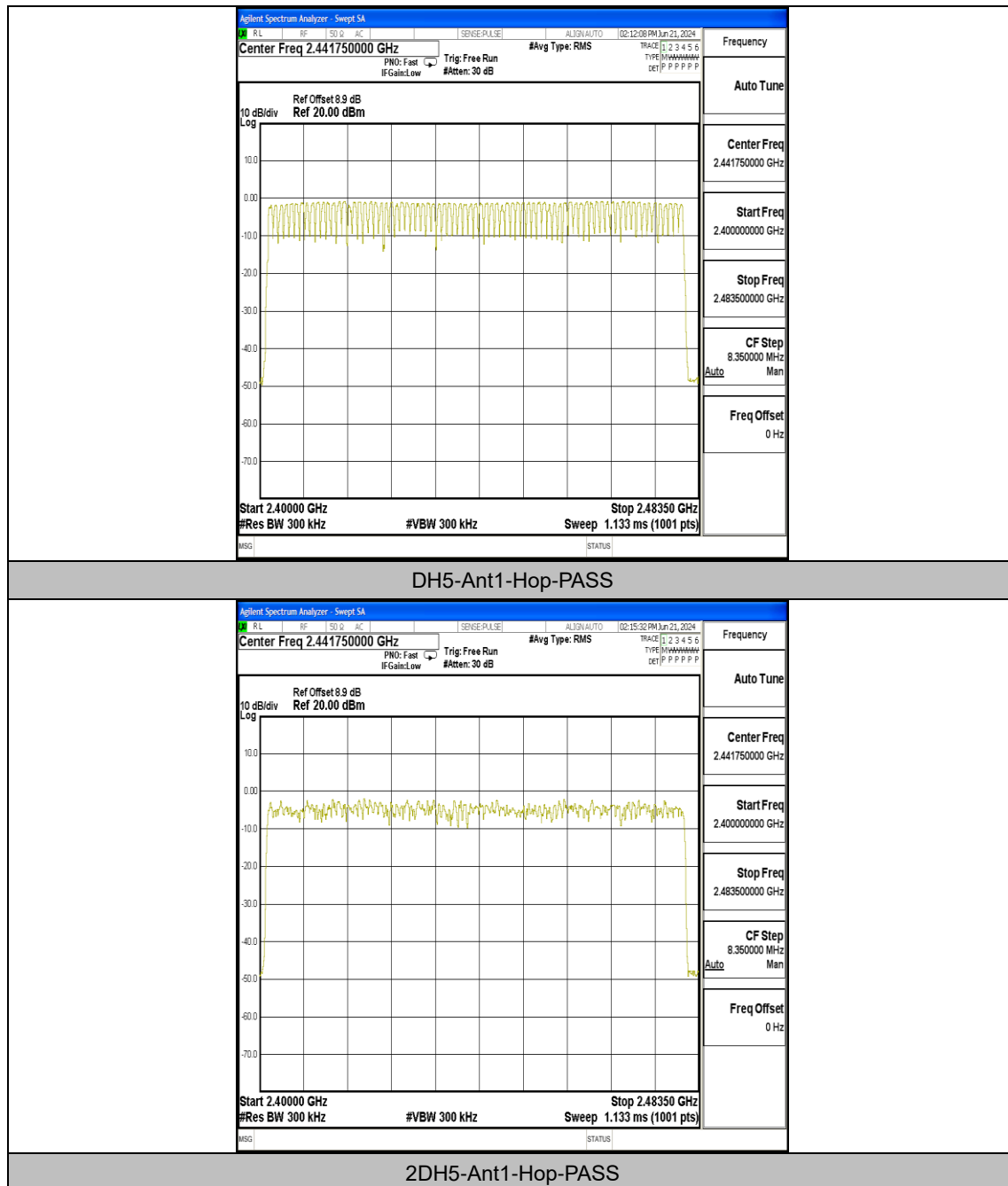


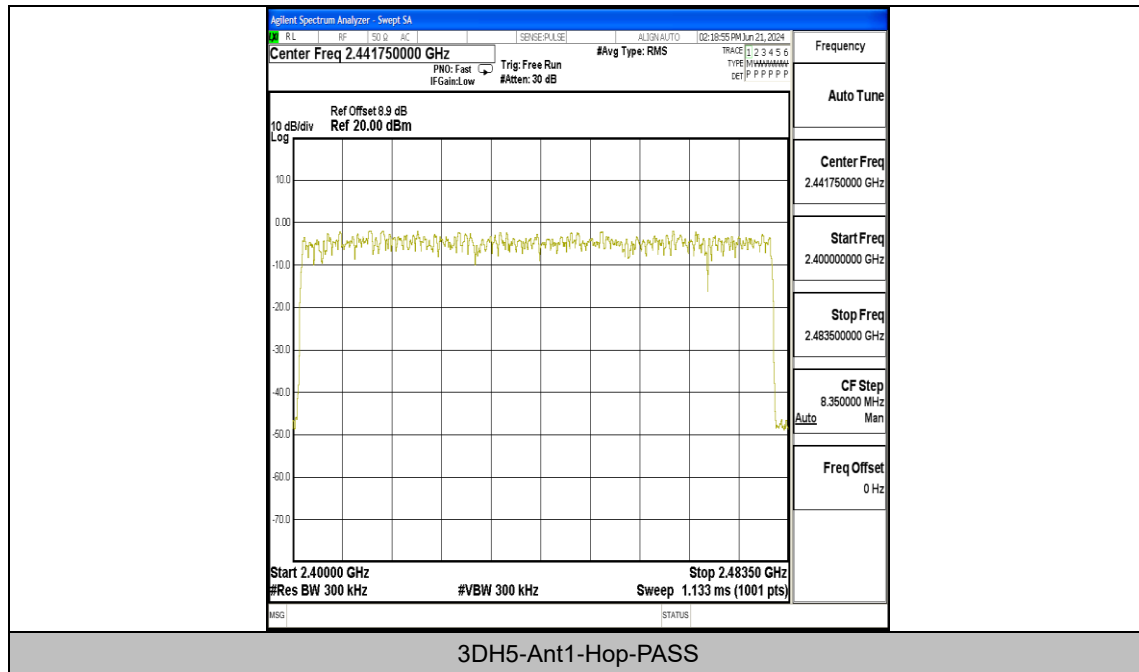
Appendix F: Number of hopping channels

Test Result

TestMode	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

Test Graphs



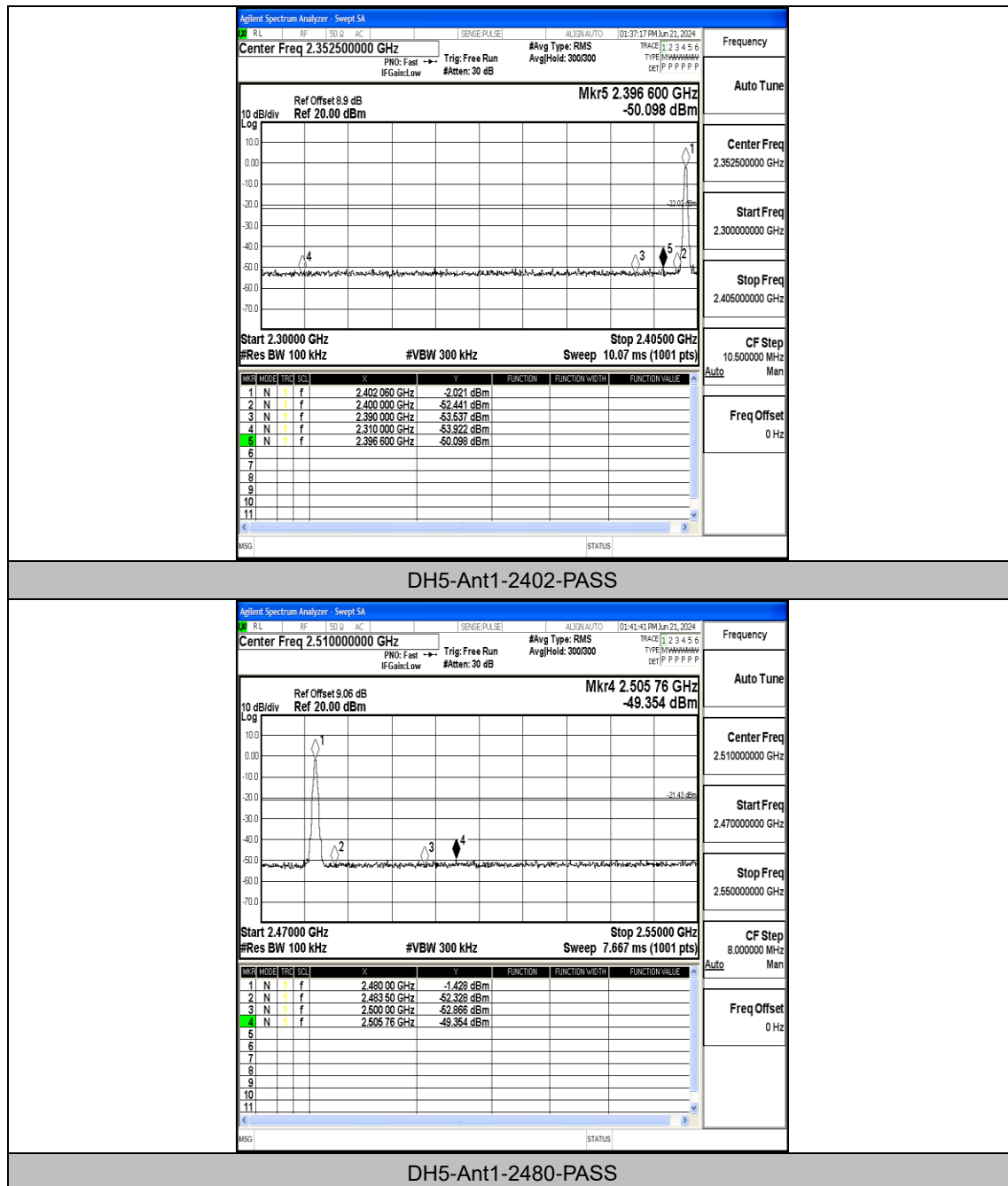


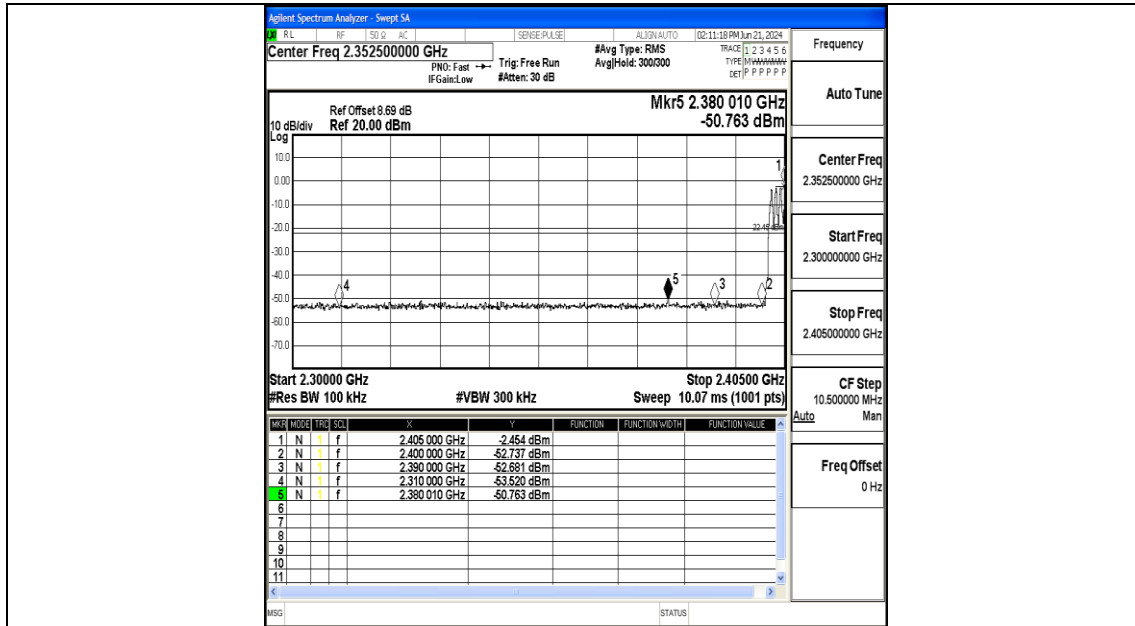
Appendix G: Band edge measurements

Test Result

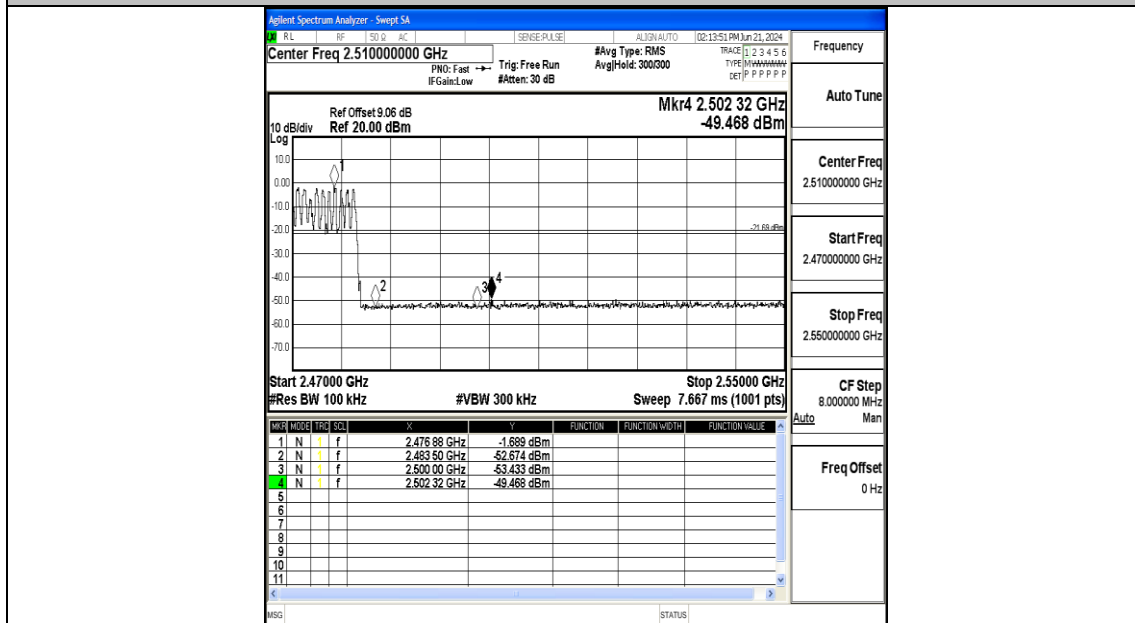
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-2.02	-50.1	≤-22.02	PASS
DH5	Ant1	High	2480	-1.43	-49.35	≤-21.43	PASS
DH5	Ant1	Low	Hop_2402	-2.45	-50.76	≤-22.45	PASS
DH5	Ant1	High	Hop_2480	-1.69	-49.47	≤-21.69	PASS
2DH5	Ant1	Low	2402	-3.04	-50.52	≤-23.04	PASS
2DH5	Ant1	High	2480	-2.76	-49.21	≤-22.76	PASS
2DH5	Ant1	Low	Hop_2402	-6.16	-50.29	≤-26.16	PASS
2DH5	Ant1	High	Hop_2480	-5.14	-49.47	≤-25.14	PASS
3DH5	Ant1	Low	2402	-3.43	-49.52	≤-23.43	PASS
3DH5	Ant1	High	2480	-2.75	-48.19	≤-22.75	PASS
3DH5	Ant1	Low	Hop_2402	-3.13	-50.86	≤-23.13	PASS
3DH5	Ant1	High	Hop_2480	-5.70	-49.62	≤-25.7	PASS

Test Graphs

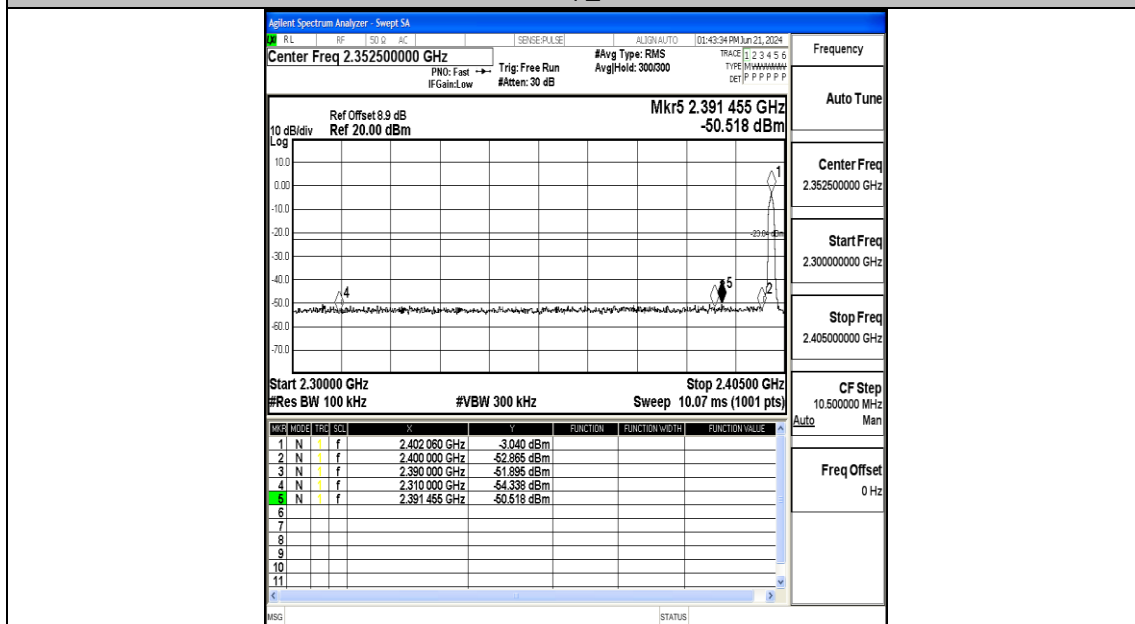




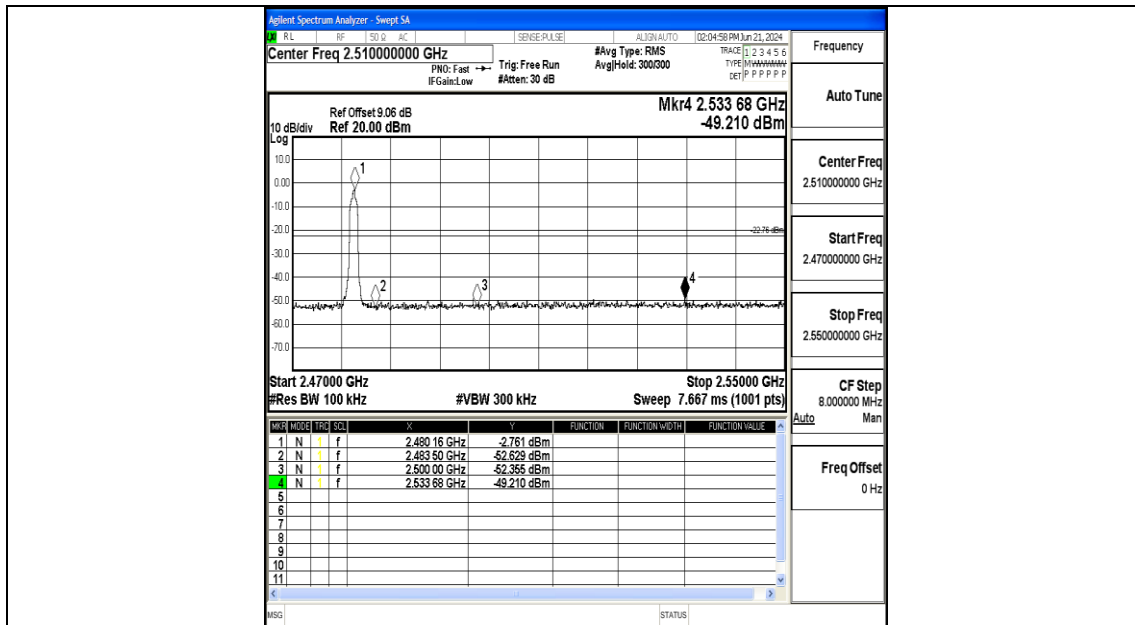
DH5-Ant1-Hop_2402-PASS



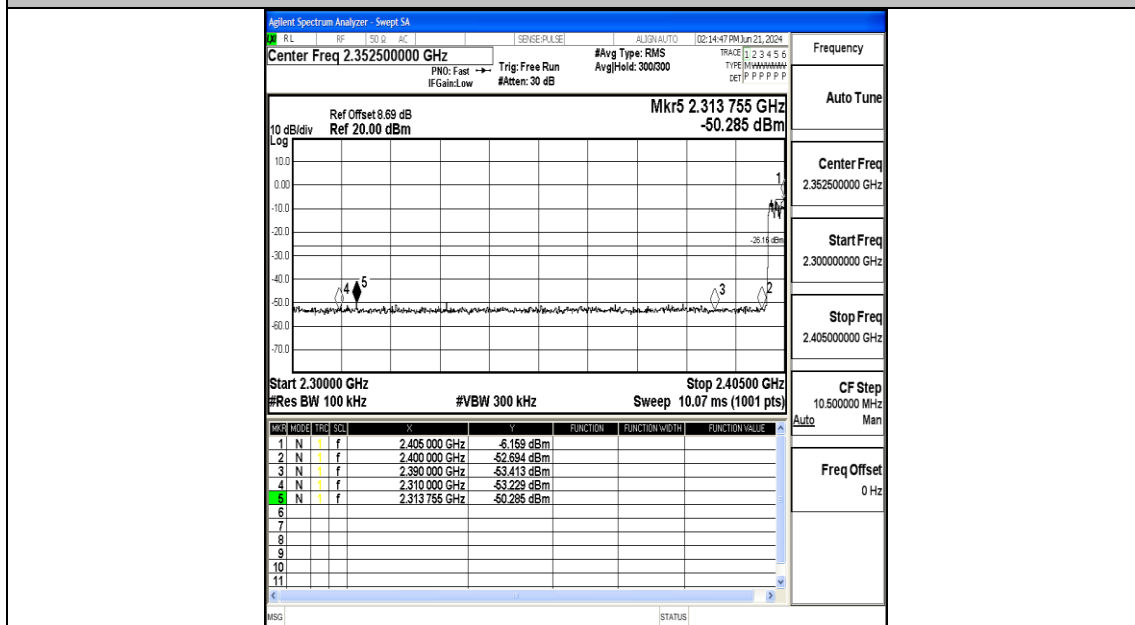
DH5-Ant1-Hop_2480-PASS



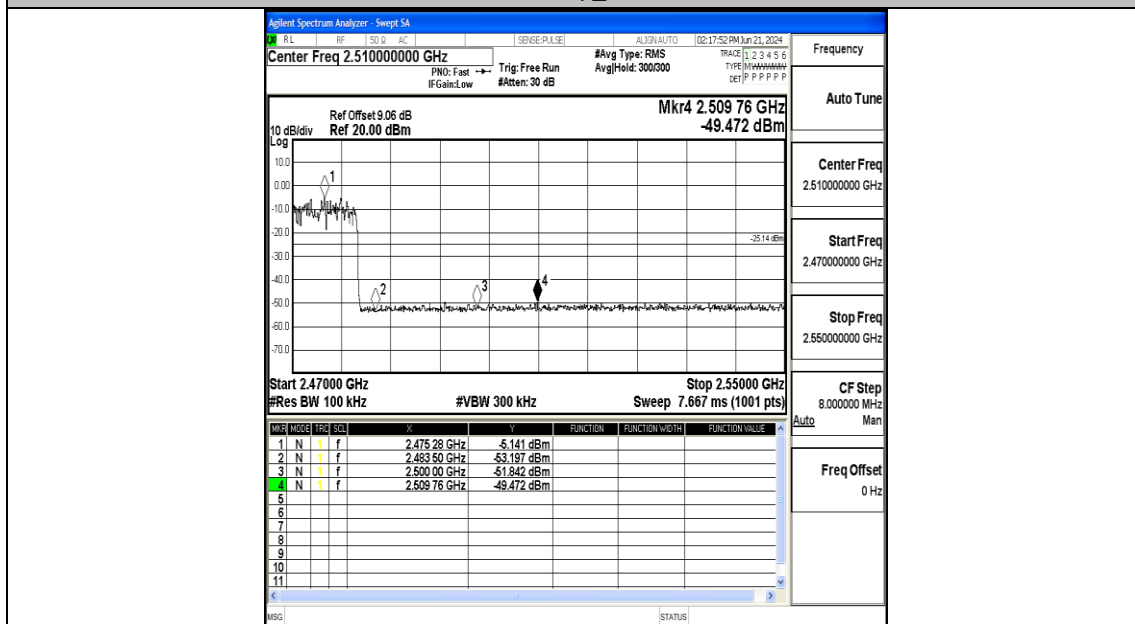
2DH5-Ant1-2402-PASS



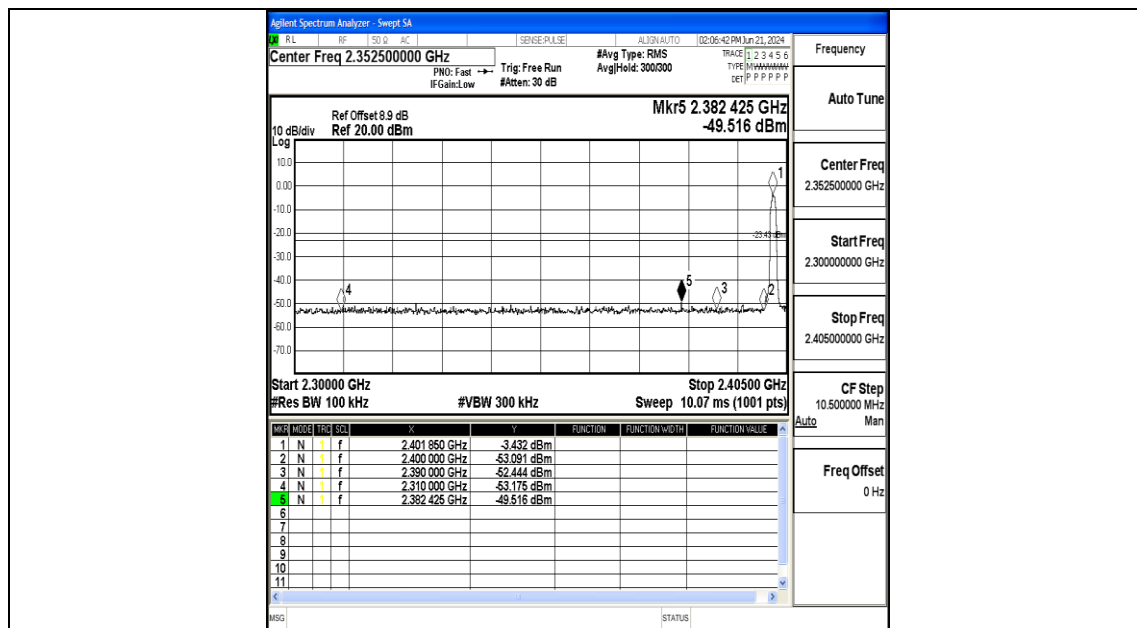
2DH5-Ant1-2480-PASS



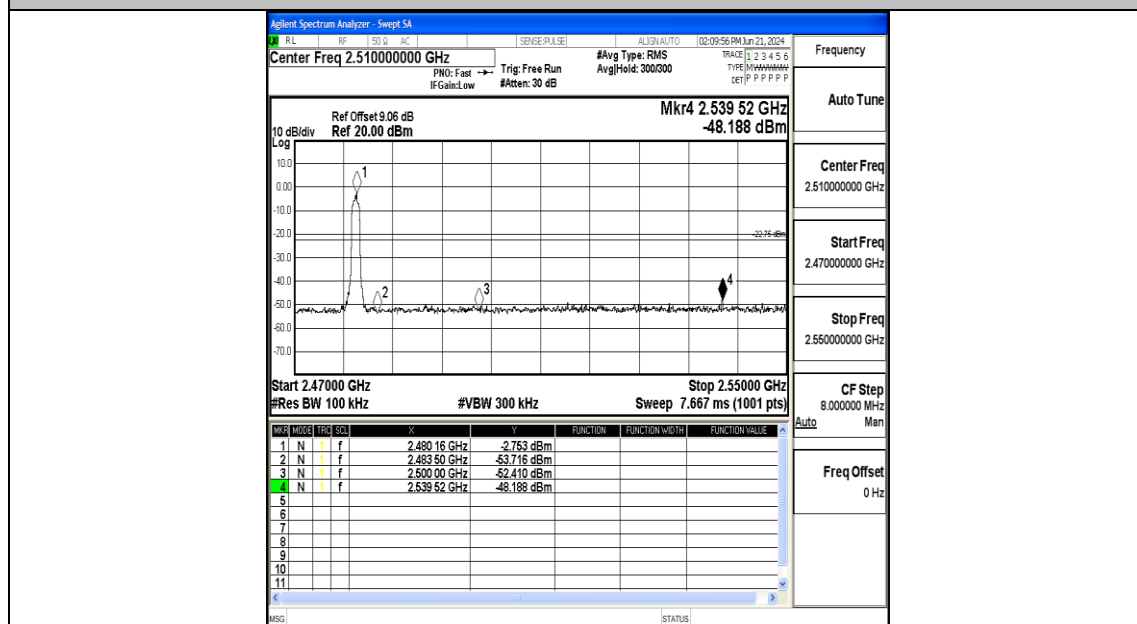
2DH5-Ant1-Hop_2402-PASS



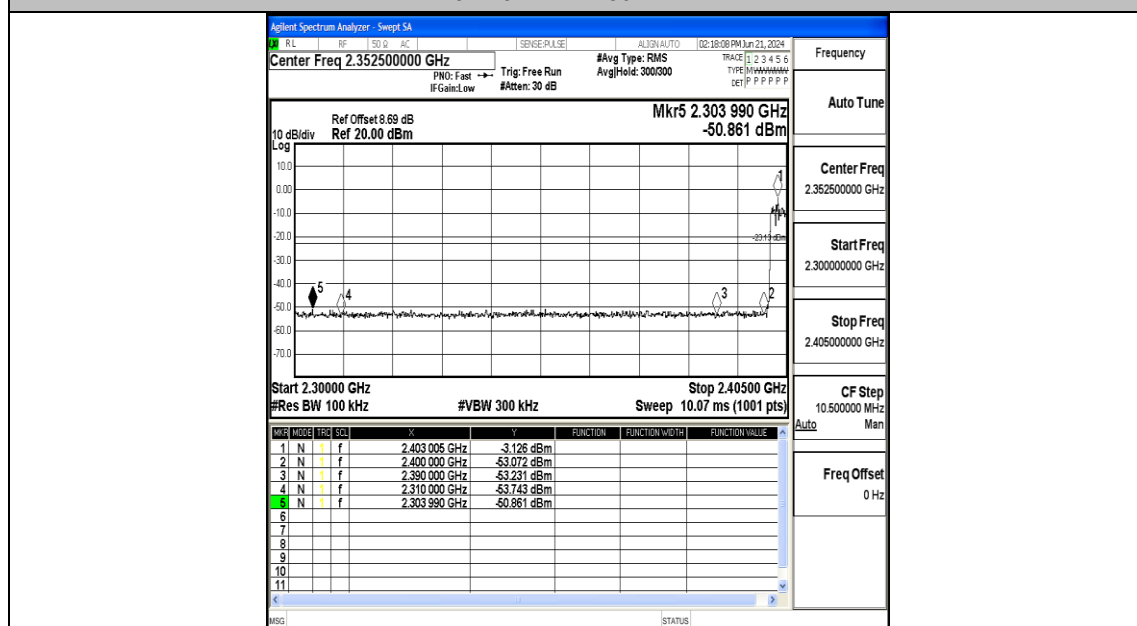
2DH5-Ant1-Hop_2480-PASS



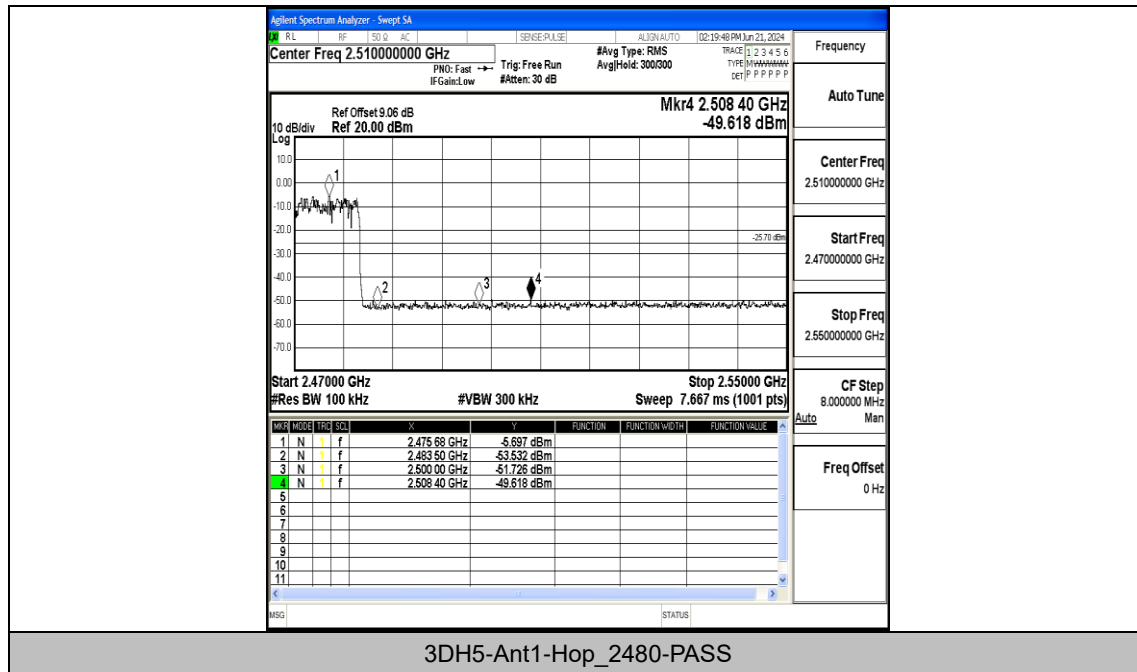
3DH5-Ant1-2402-PASS



3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS

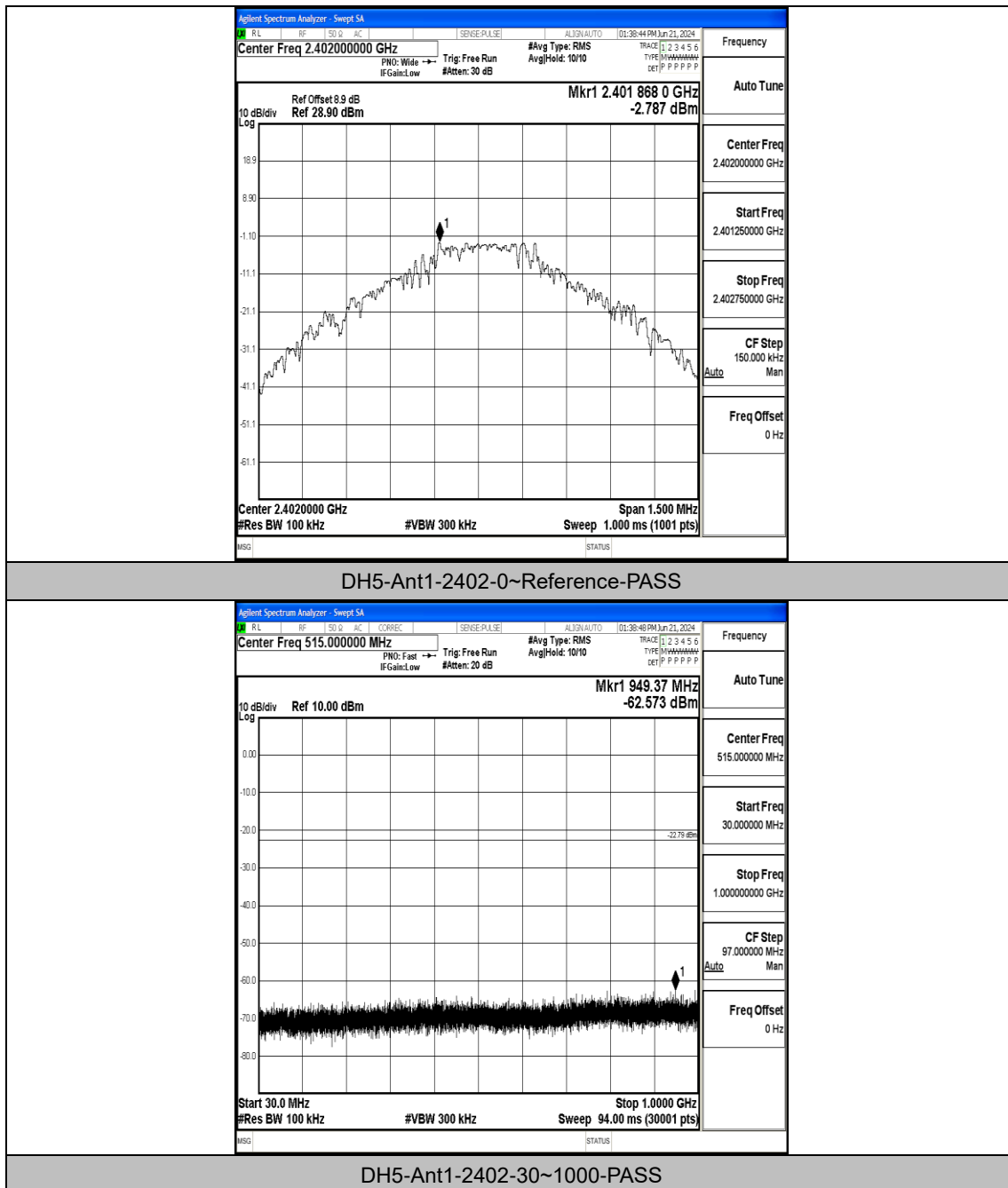


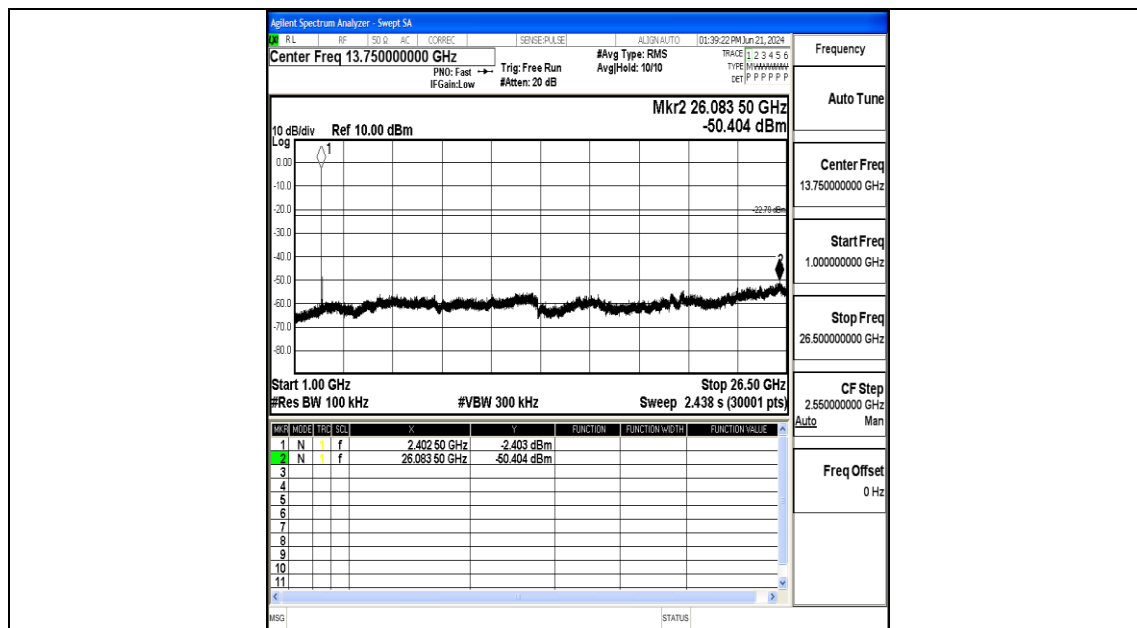
Appendix H: Conducted Spurious Emission

Test Result

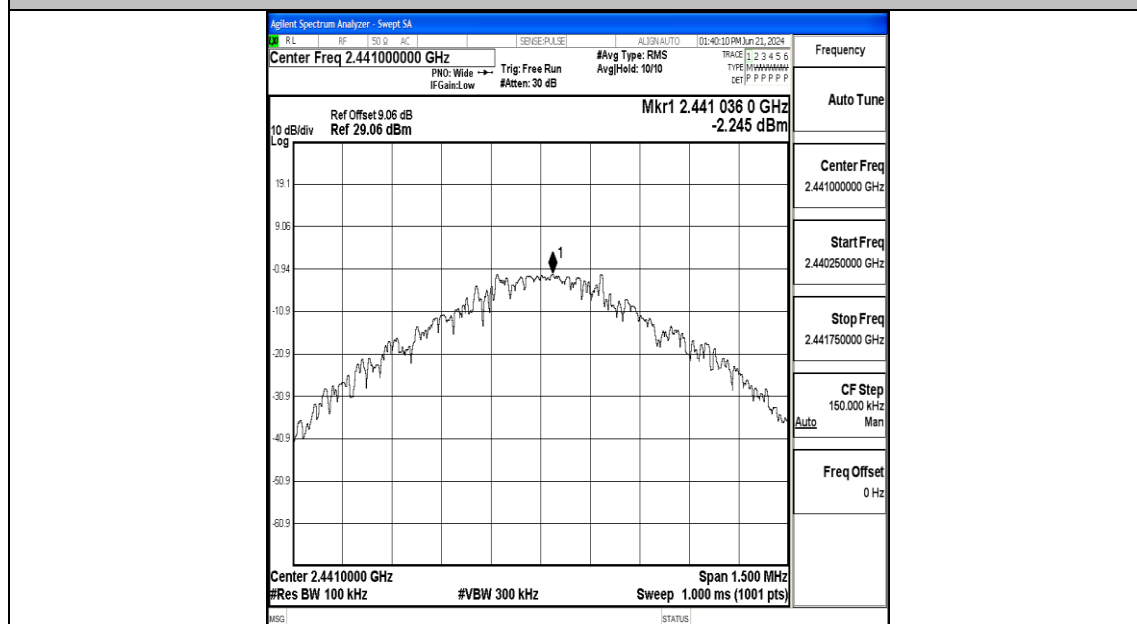
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-2.79	-2.79	---	PASS
DH5	Ant1	2402	30~1000	-2.79	-62.57	≤-22.79	PASS
DH5	Ant1	2402	1000~26500	-2.79	-50.4	≤-22.79	PASS
DH5	Ant1	2441	0~Reference	-2.25	-2.25	---	PASS
DH5	Ant1	2441	30~1000	-2.25	-63.08	≤-22.25	PASS
DH5	Ant1	2441	1000~26500	-2.25	-49.91	≤-22.25	PASS
DH5	Ant1	2480	0~Reference	-2.38	-2.38	---	PASS
DH5	Ant1	2480	30~1000	-2.38	-62.3	≤-22.38	PASS
DH5	Ant1	2480	1000~26500	-2.38	-50	≤-22.38	PASS
2DH5	Ant1	2402	0~Reference	-4.77	-4.77	---	PASS
2DH5	Ant1	2402	30~1000	-4.77	-62.88	≤-24.77	PASS
2DH5	Ant1	2402	1000~26500	-4.77	-50.39	≤-24.77	PASS
2DH5	Ant1	2441	0~Reference	-2.77	-2.77	---	PASS
2DH5	Ant1	2441	30~1000	-2.77	-63	≤-22.77	PASS
2DH5	Ant1	2441	1000~26500	-2.77	-49.89	≤-22.77	PASS
2DH5	Ant1	2480	0~Reference	-3.89	-3.89	---	PASS
2DH5	Ant1	2480	30~1000	-3.89	-62.65	≤-23.89	PASS
2DH5	Ant1	2480	1000~26500	-3.89	-49.77	≤-23.89	PASS
3DH5	Ant1	2402	0~Reference	-3.78	-3.78	---	PASS
3DH5	Ant1	2402	30~1000	-3.78	-62.92	≤-23.78	PASS
3DH5	Ant1	2402	1000~26500	-3.78	-48.9	≤-23.78	PASS
3DH5	Ant1	2441	0~Reference	-5.21	-5.21	---	PASS
3DH5	Ant1	2441	30~1000	-5.21	-62.59	≤-25.21	PASS
3DH5	Ant1	2441	1000~26500	-5.21	-50.34	≤-25.21	PASS
3DH5	Ant1	2480	0~Reference	-3.06	-3.06	---	PASS
3DH5	Ant1	2480	30~1000	-3.06	-63.18	≤-23.06	PASS
3DH5	Ant1	2480	1000~26500	-3.06	-51.1	≤-23.06	PASS

Test Graphs

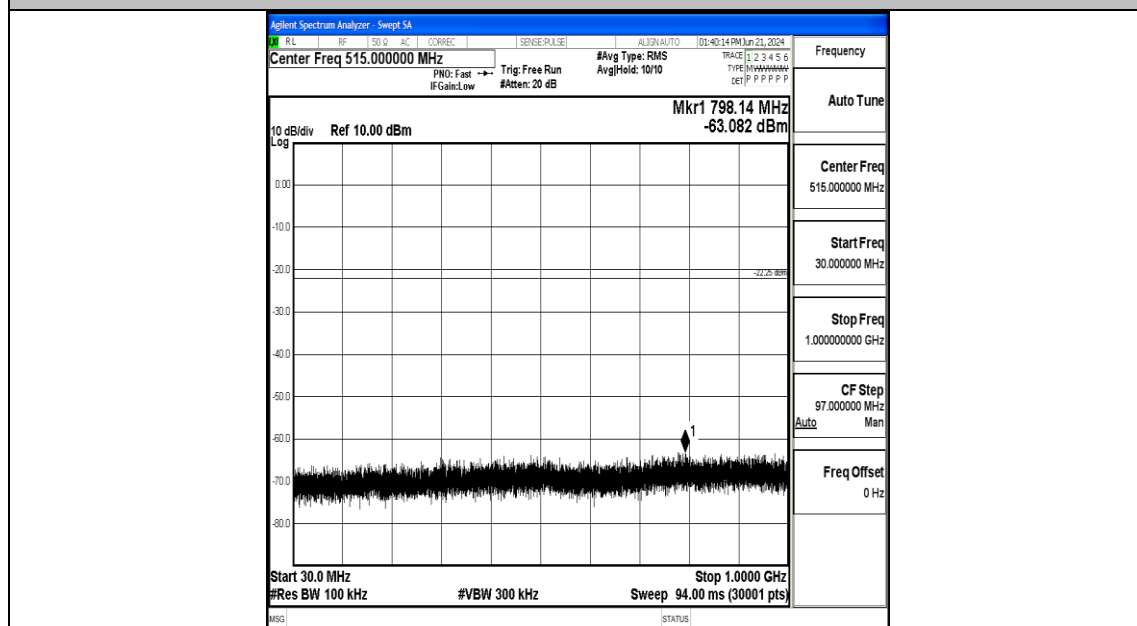




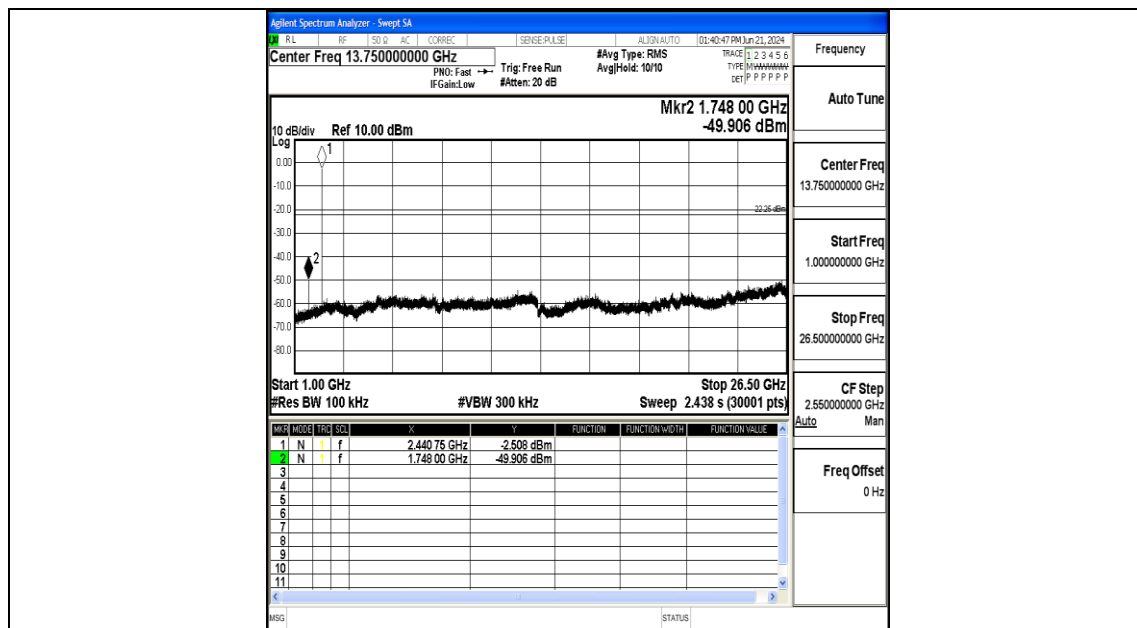
DH5-Ant1-2402-1000~26500-PASS



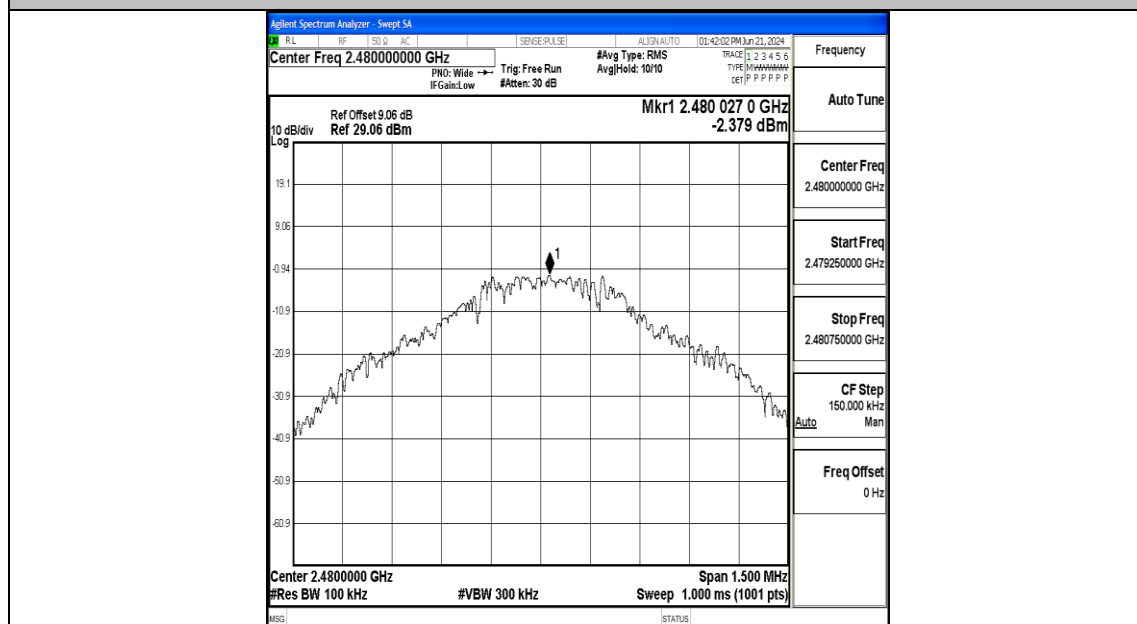
DH5-Ant1-2441-0~Reference-PASS



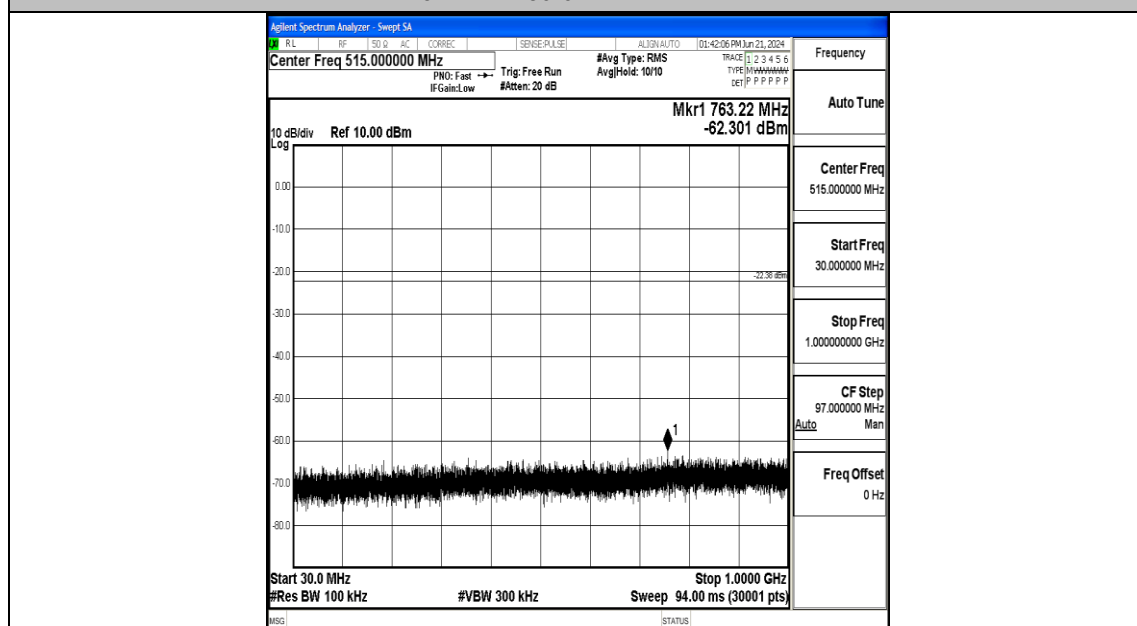
DH5-Ant1-2441-30~1000-PASS



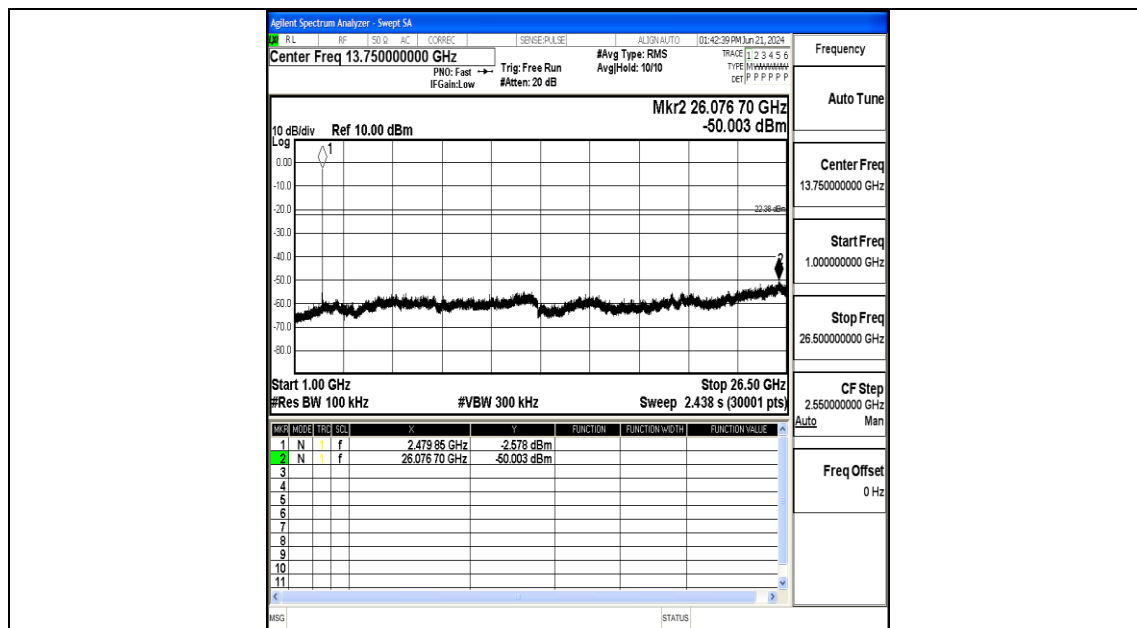
DH5-Ant1-2441-1000~26500-PASS



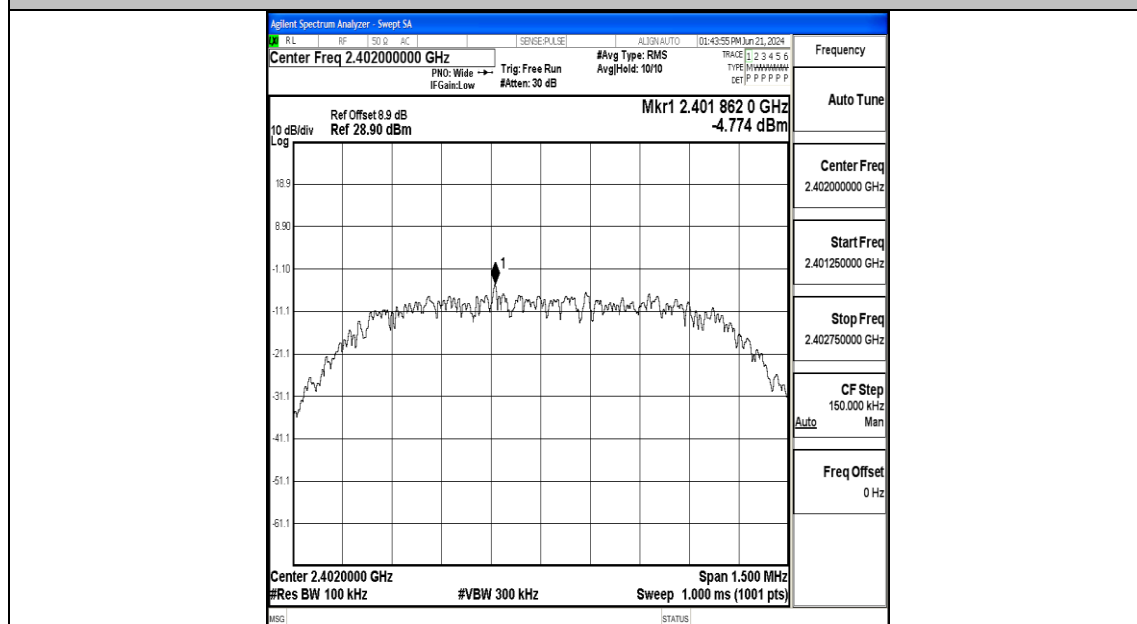
DH5-Ant1-2480-0~Reference-PASS



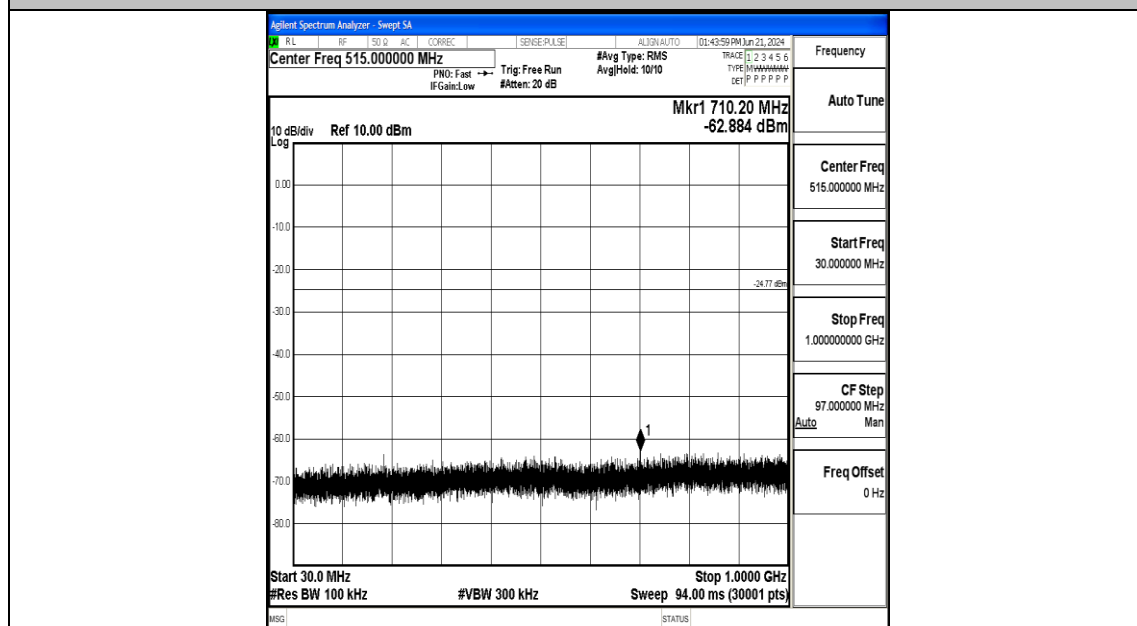
DH5-Ant1-2480-30~1000-PASS



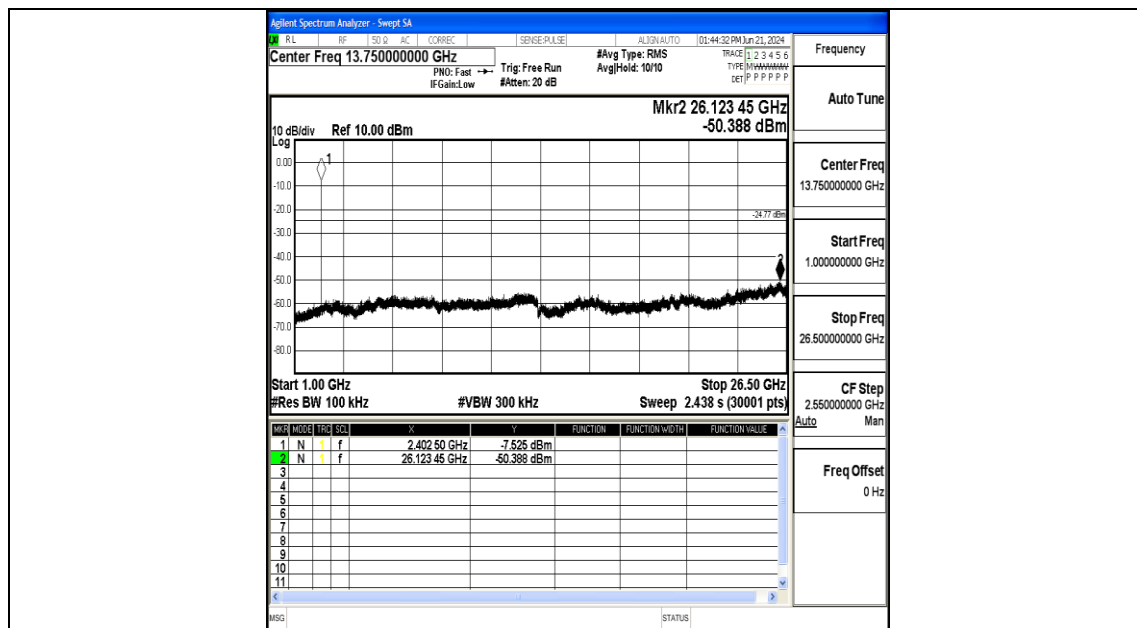
DH5-Ant1-2480-1000~26500-PASS



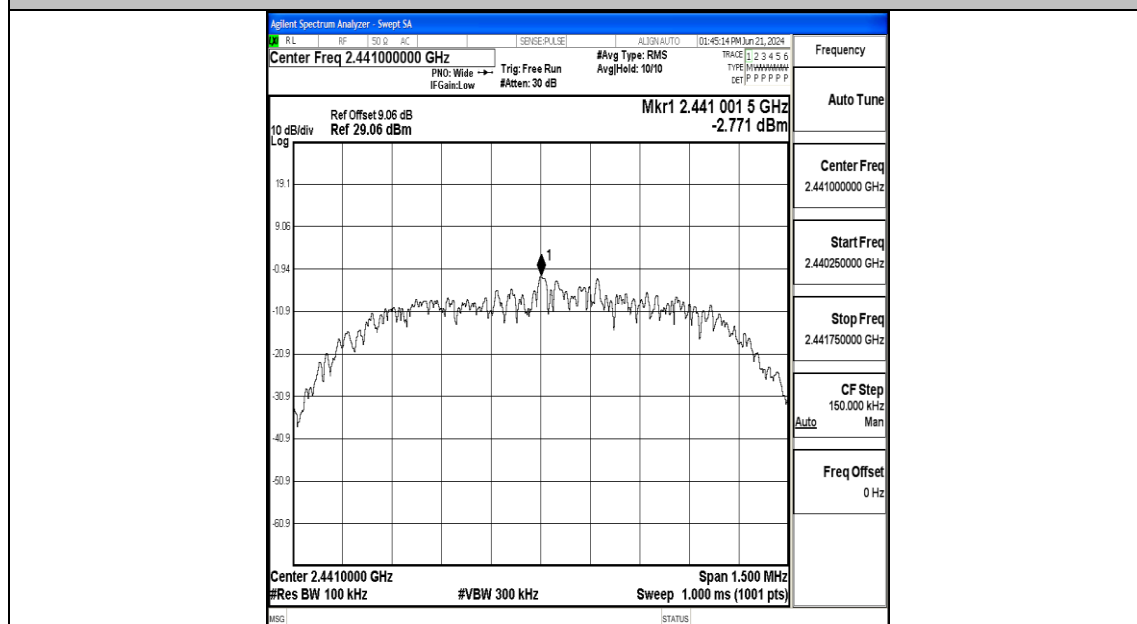
2DH5-Ant1-2402-0~Reference-PASS



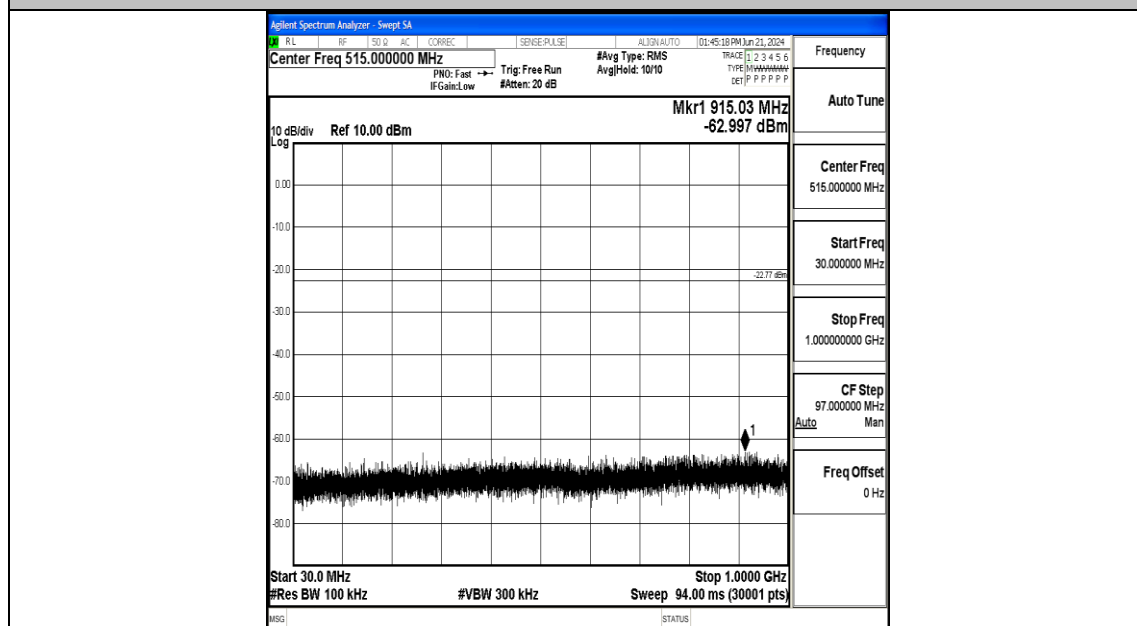
2DH5-Ant1-2402-30~1000-PASS



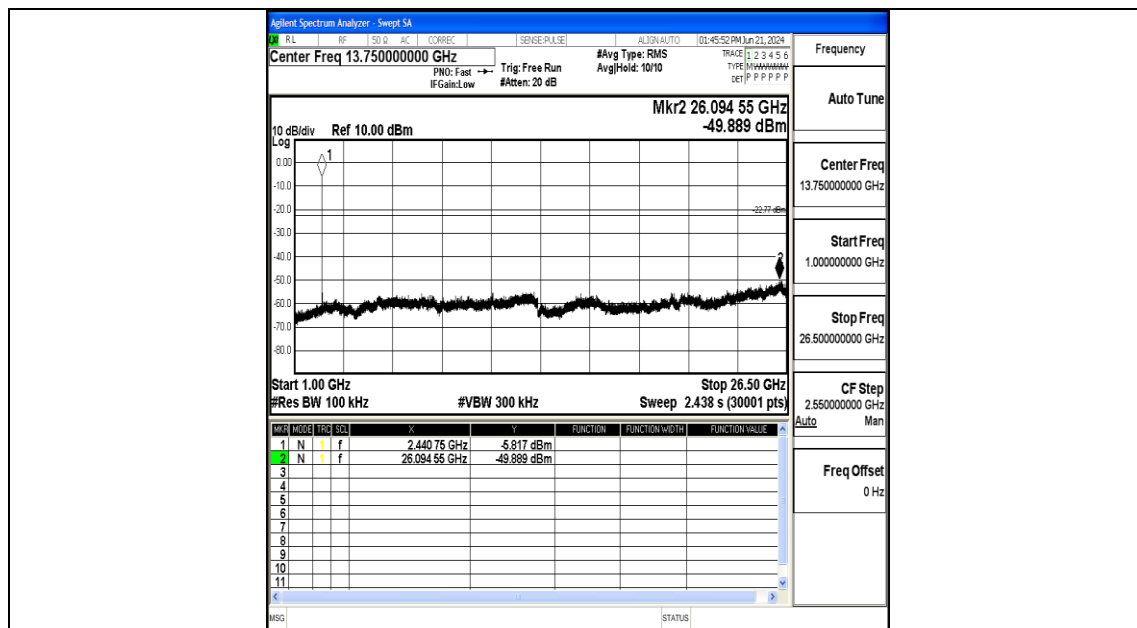
2DH5-Ant1-2402-1000~26500-PASS



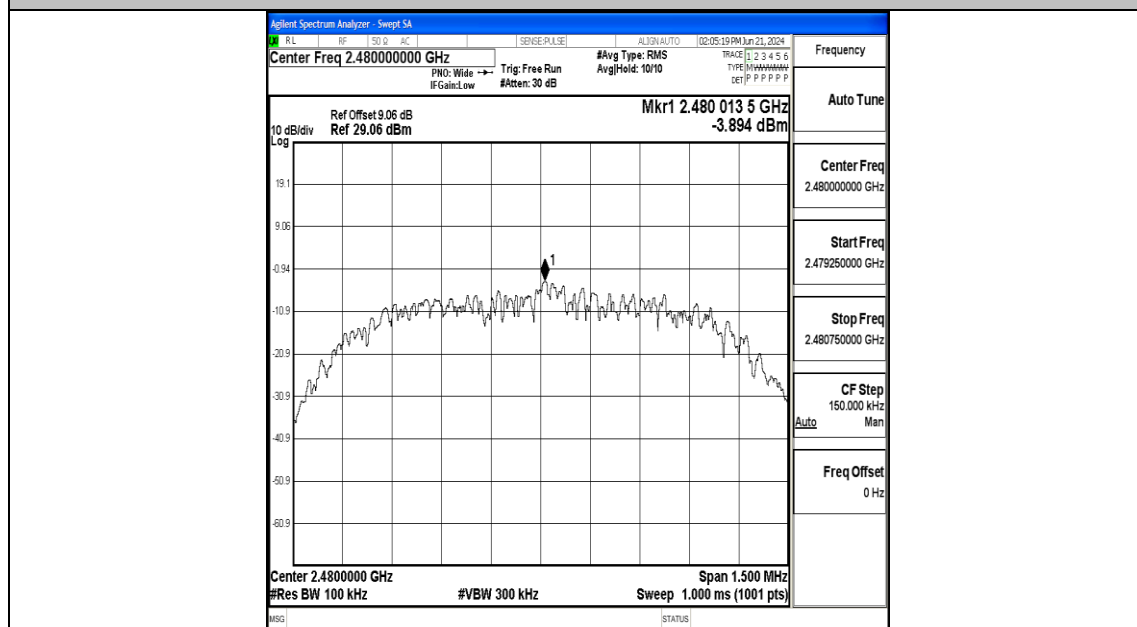
2DH5-Ant1-2441-0~Reference-PASS



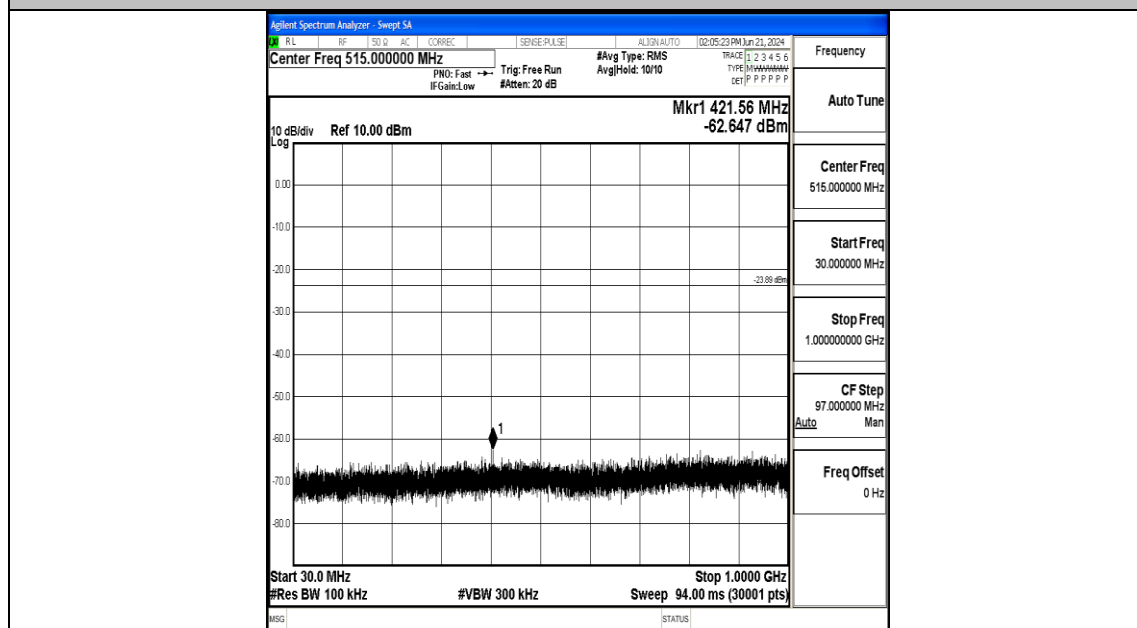
2DH5-Ant1-2441-30~1000-PASS



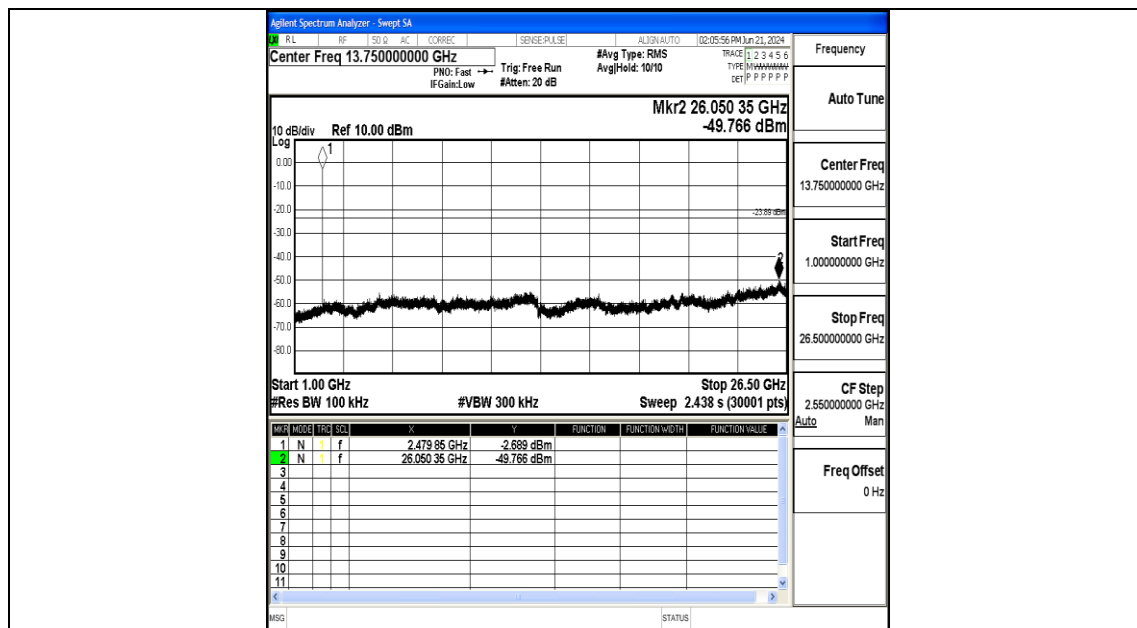
2DH5-Ant1-2441-1000~26500-PASS



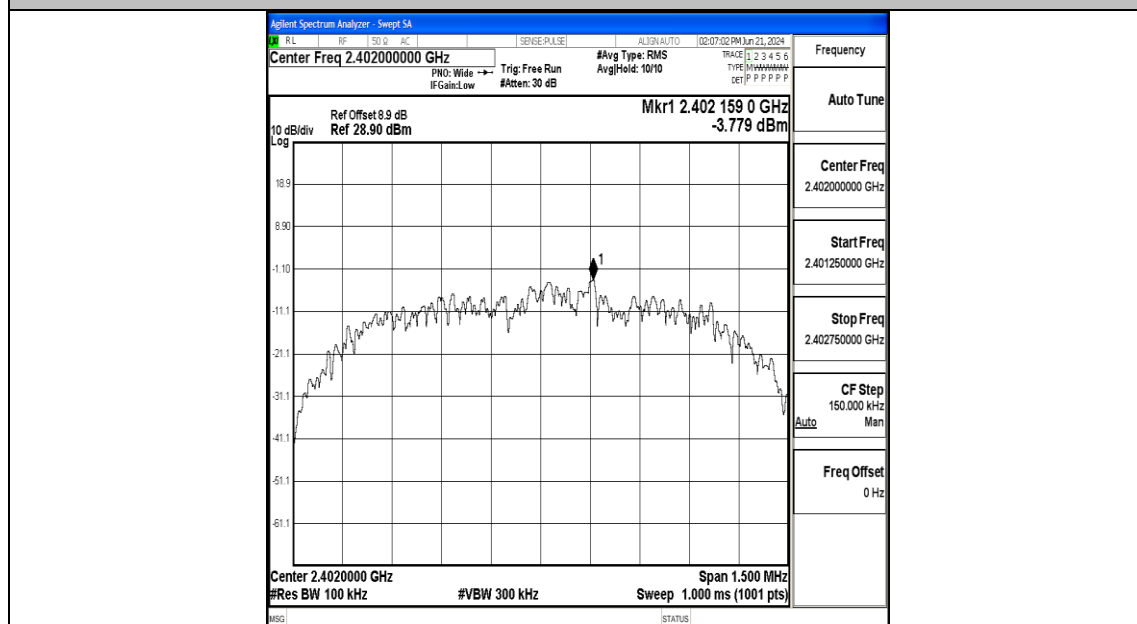
2DH5-Ant1-2480-0~Reference-PASS



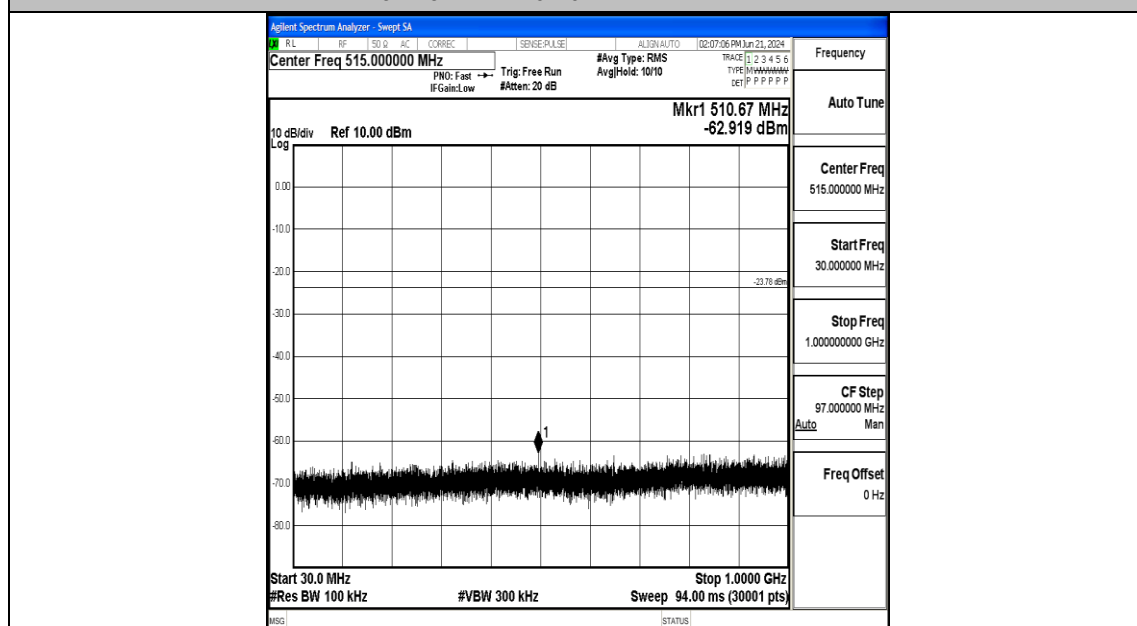
2DH5-Ant1-2480-30~1000-PASS



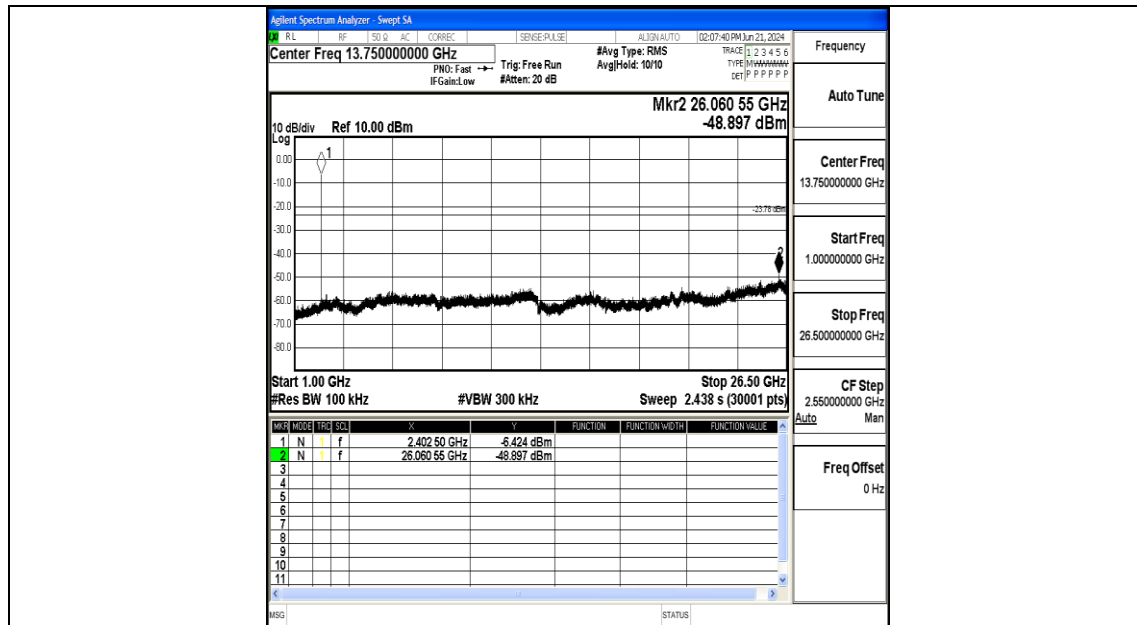
2DH5-Ant1-2480-1000~26500-PASS



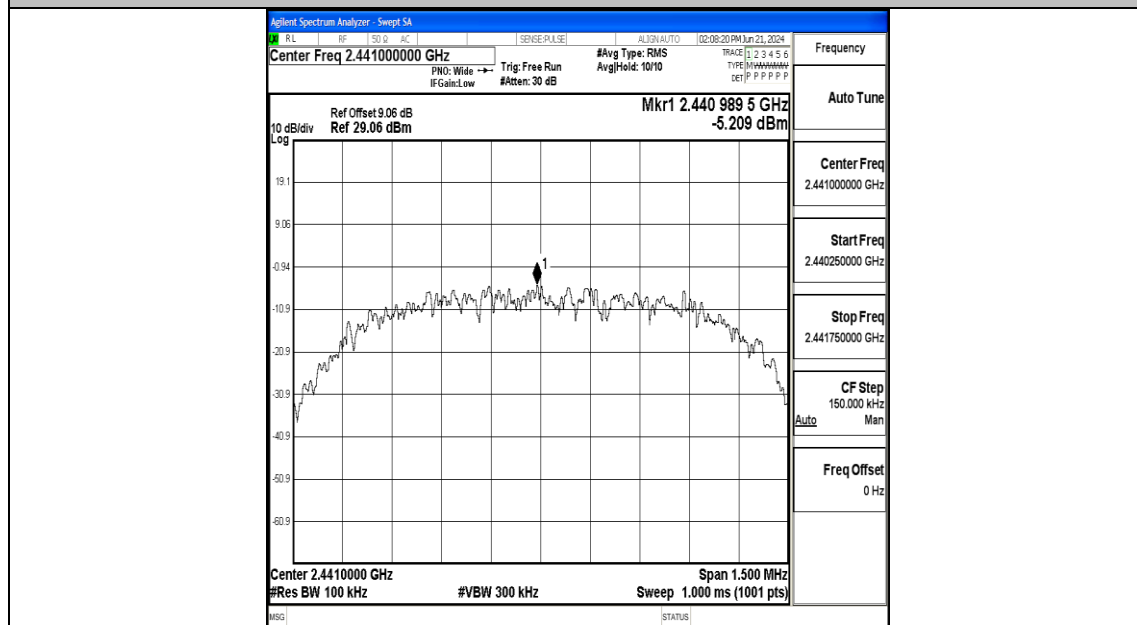
3DH5-Ant1-2402-0~Reference-PASS



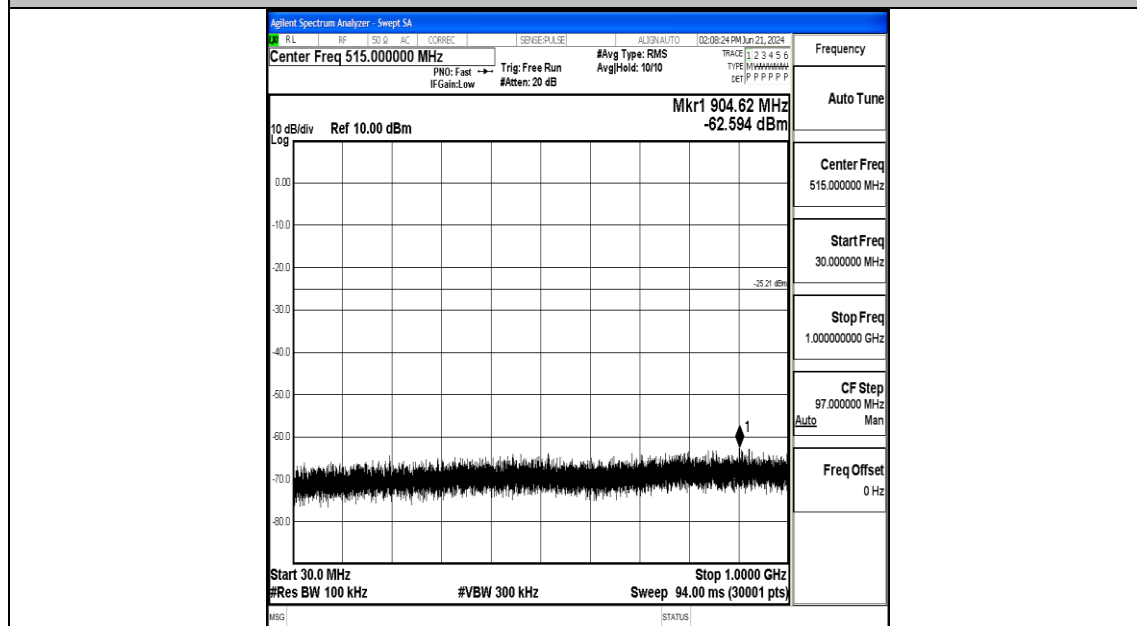
3DH5-Ant1-2402-30~1000-PASS



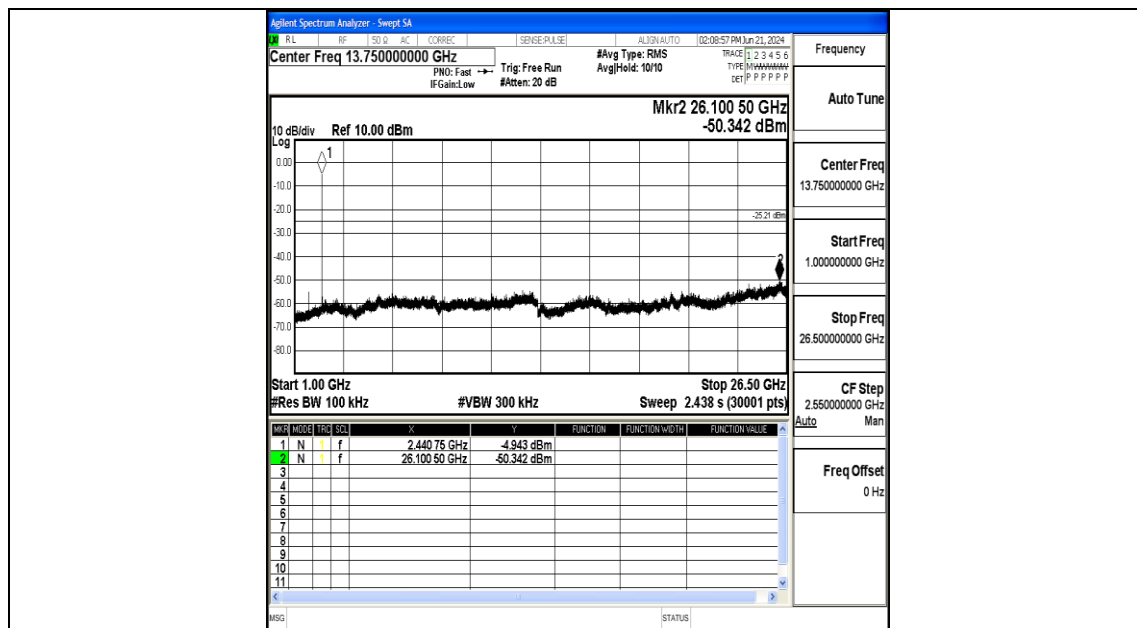
3DH5-Ant1-2402-1000~26500-PASS



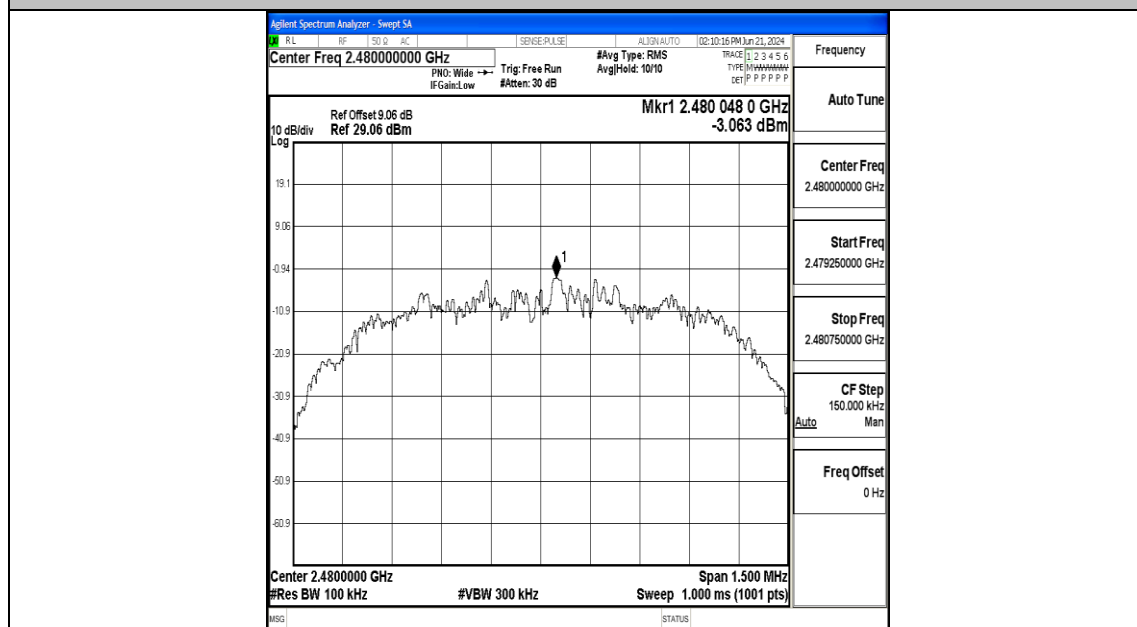
3DH5-Ant1-2441-0~Reference-PASS



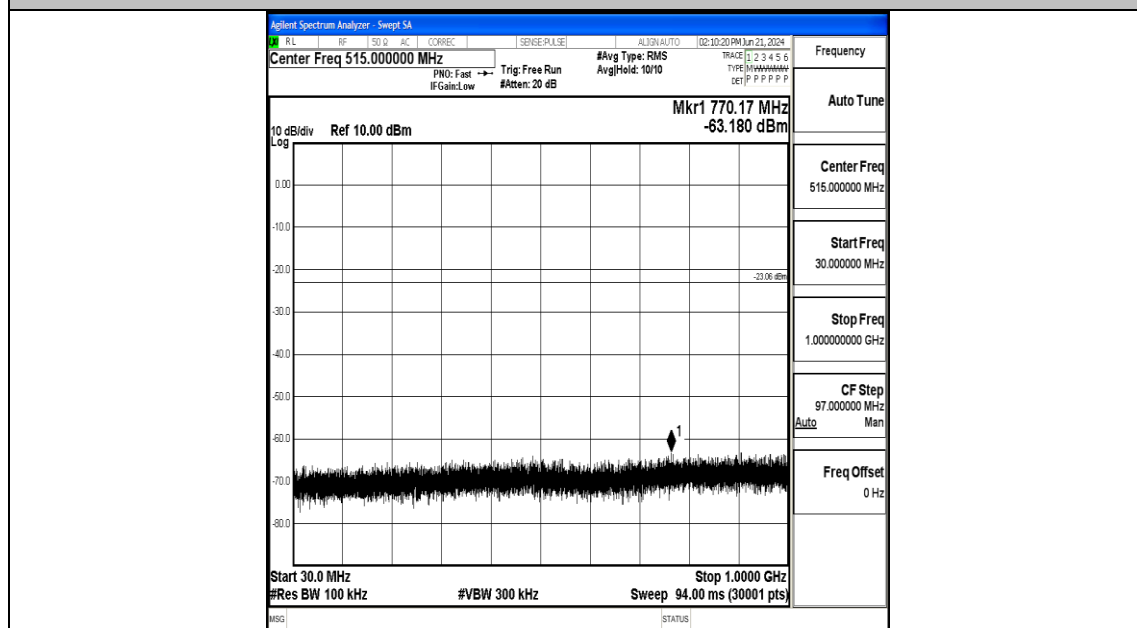
3DH5-Ant1-2441-30~1000-PASS



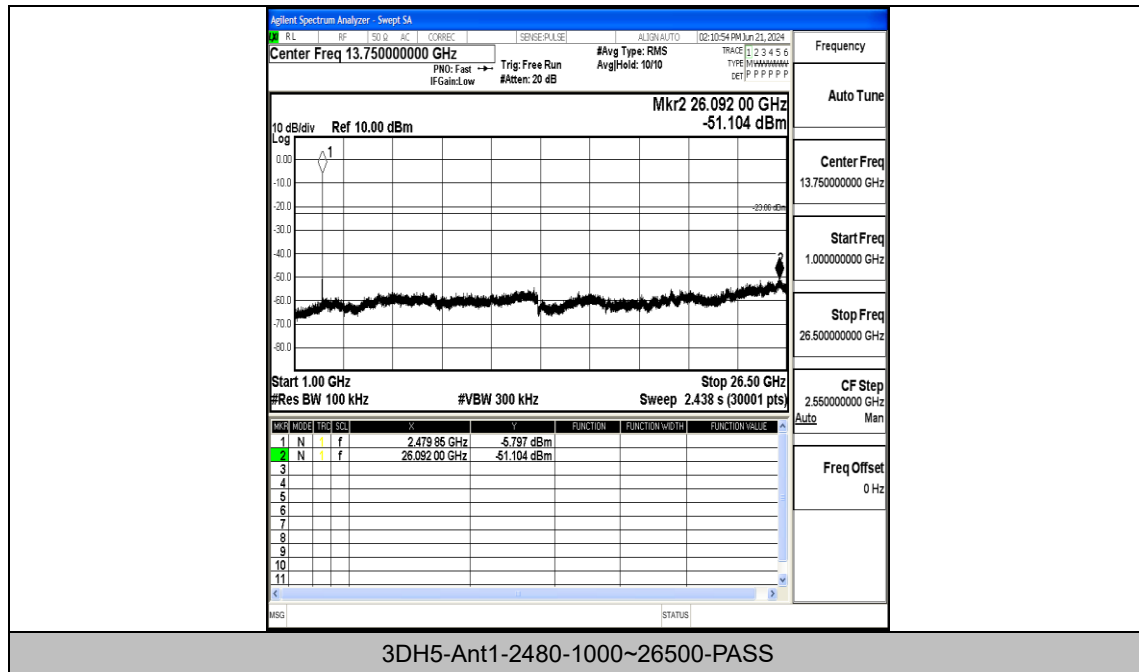
3DH5-Ant1-2441-1000~26500-PASS



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



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

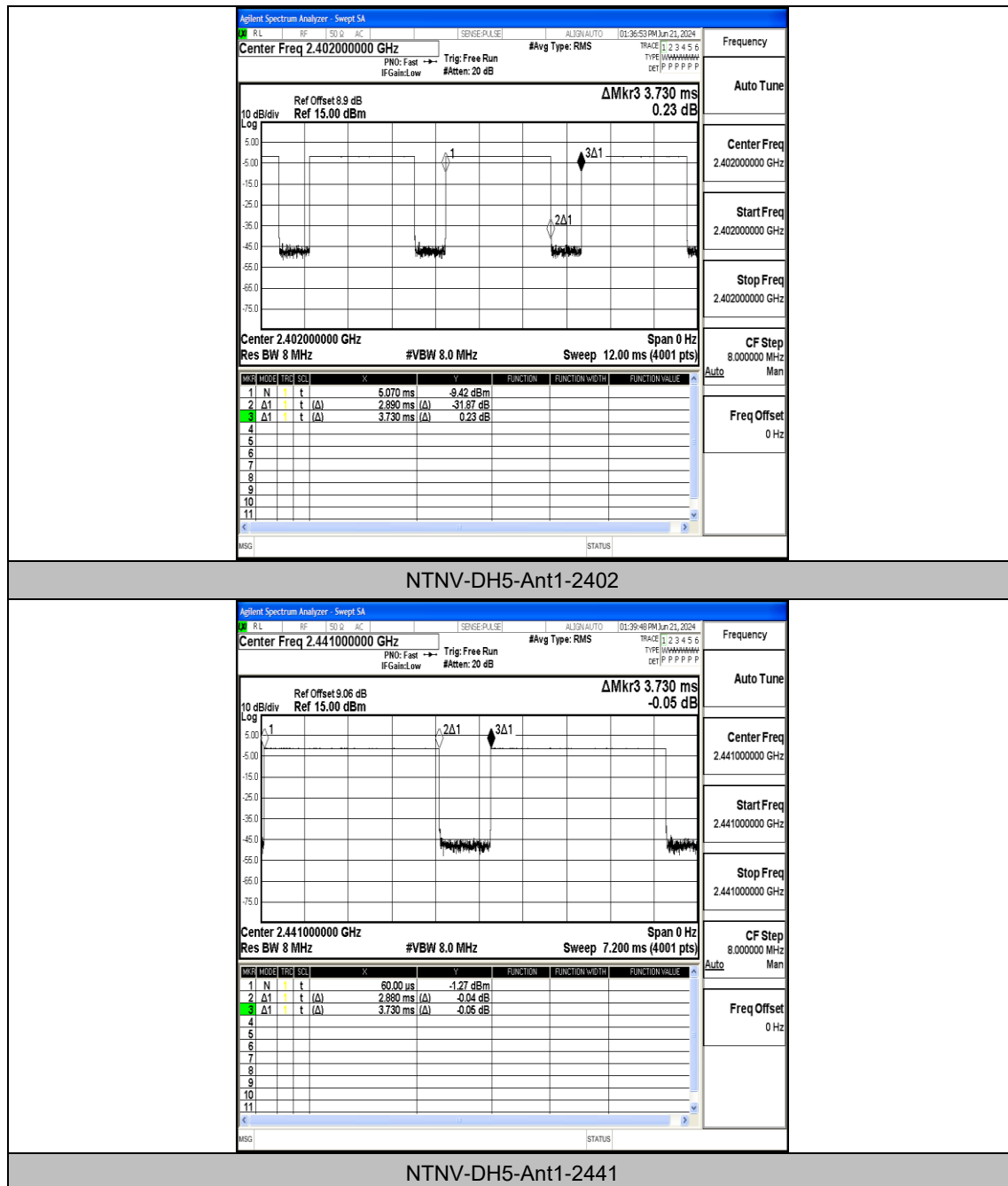


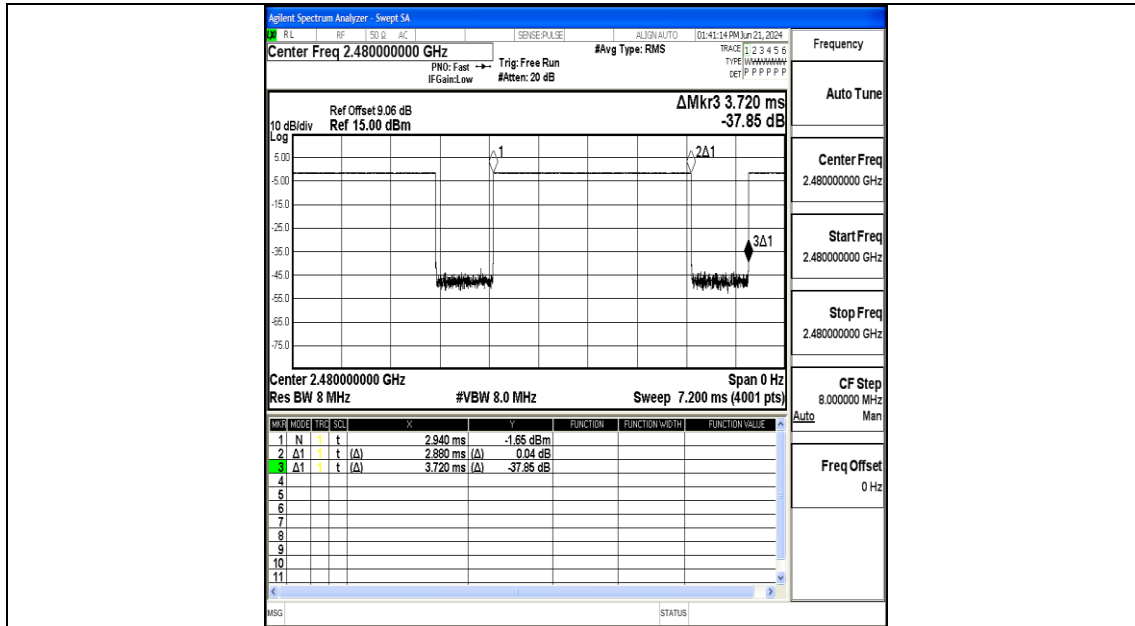
Appendix I: Duty Cycle

Test Result

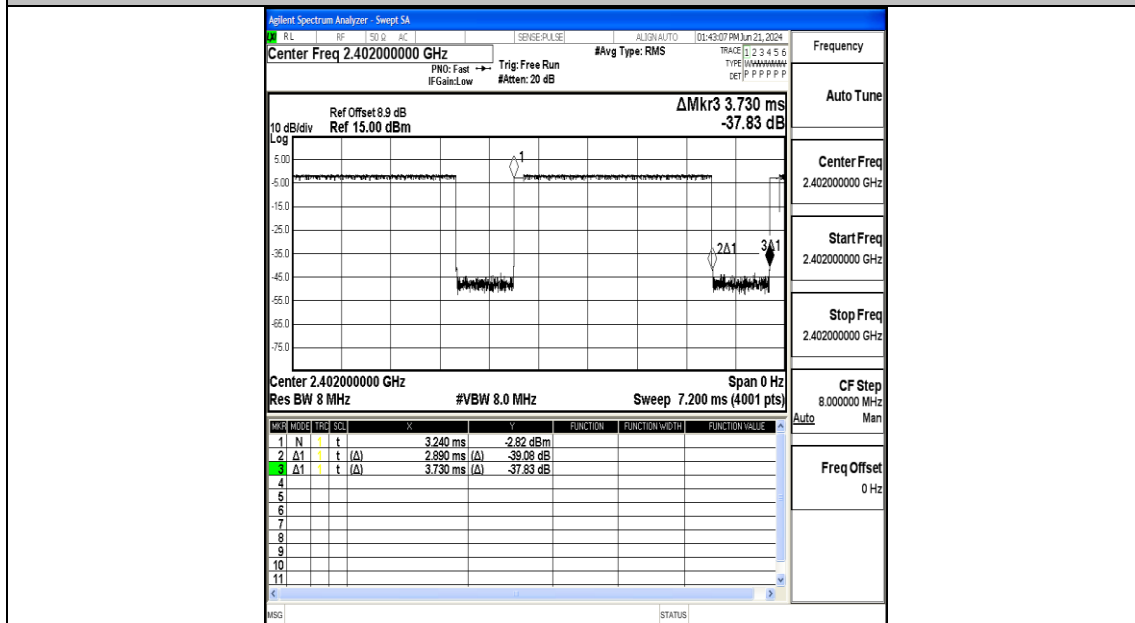
TestMode	Antenna	Frequency[MHz]	ON Time[ms]	Period[ms]	Duty Cycle[%]	Duty Cycle Factor[dB]
DH5	Ant1	2402	2.89	3.73	77.48	1.11
DH5	Ant1	2441	2.88	3.73	77.21	1.12
DH5	Ant1	2480	2.88	3.72	77.42	1.11
2DH5	Ant1	2402	2.89	3.73	77.48	1.11
2DH5	Ant1	2441	2.89	3.74	77.27	1.12
2DH5	Ant1	2480	2.88	3.73	77.21	1.12
3DH5	Ant1	2402	2.89	3.74	77.27	1.12
3DH5	Ant1	2441	2.89	3.74	77.27	1.12
3DH5	Ant1	2480	2.88	3.73	77.21	1.12

Test Graphs

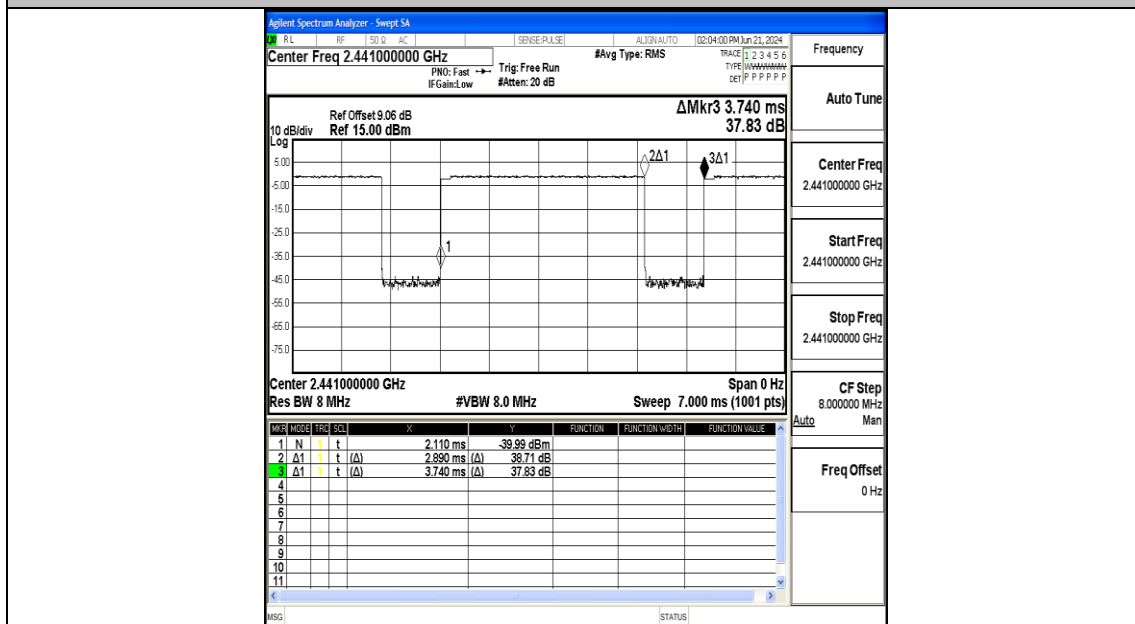




NTNV-DH5-Ant1-2480



NTNV-2DH5-Ant1-2402



NTNV-2DH5-Ant1-2441

