



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

Product Name: Walkie-talkie

Trade Mark: /

Test Model: LY-099

FCC ID: 2A8MFD02LY-099

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	0.975	2401.499	2402.474	---	---
DH5	Ant1	2441	0.945	2440.517	2441.462	---	---
DH5	Ant1	2480	0.939	2479.514	2480.453	---	---
2DH5	Ant1	2402	1.287	2401.343	2402.630	---	---
2DH5	Ant1	2441	1.287	2440.340	2441.627	---	---
2DH5	Ant1	2480	1.272	2479.349	2480.621	---	---
3DH5	Ant1	2402	1.263	2401.334	2402.597	---	---
3DH5	Ant1	2441	1.272	2440.340	2441.612	---	---
3DH5	Ant1	2480	1.269	2479.343	2480.612	---	---

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	0.86926	2401.5424	2402.4116	---	---
DH5	Ant1	2441	0.88517	2440.5383	2441.4235	---	---
DH5	Ant1	2480	0.87378	2479.5390	2480.4128	---	---
2DH5	Ant1	2402	1.1805	2401.3863	2402.5668	---	---
2DH5	Ant1	2441	1.1775	2440.3840	2441.5615	---	---
2DH5	Ant1	2480	1.1810	2479.3808	2480.5618	---	---
3DH5	Ant1	2402	1.1972	2401.3760	2402.5732	---	---
3DH5	Ant1	2441	1.1849	2440.3831	2441.5680	---	---
3DH5	Ant1	2480	1.1929	2479.3788	2480.5717	---	---

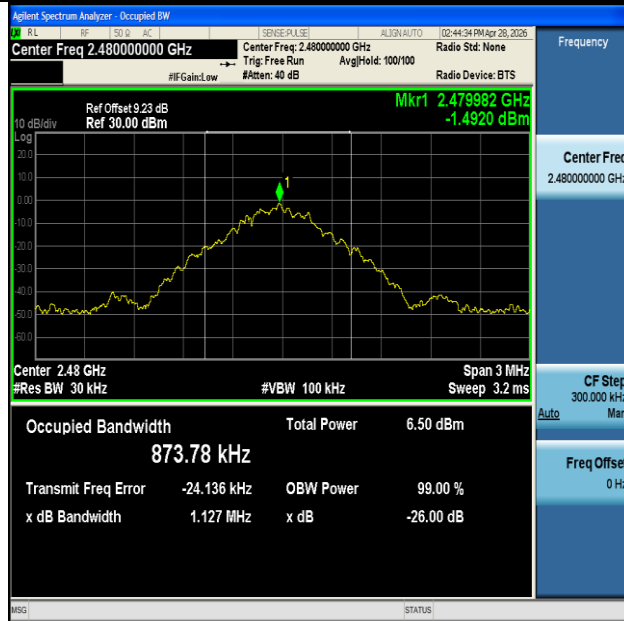
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



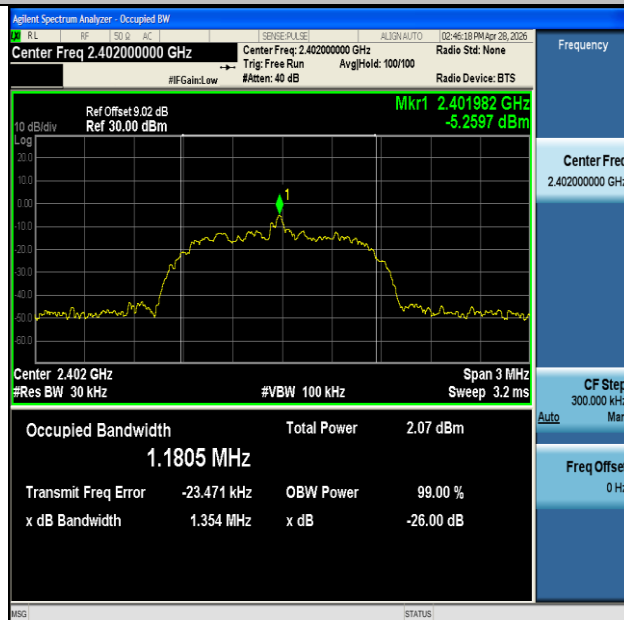


Test Graphs



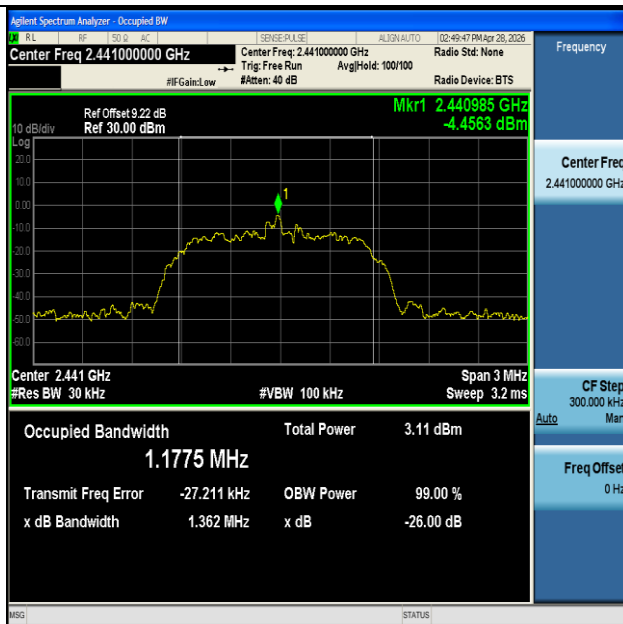


DH5-Ant1-2480

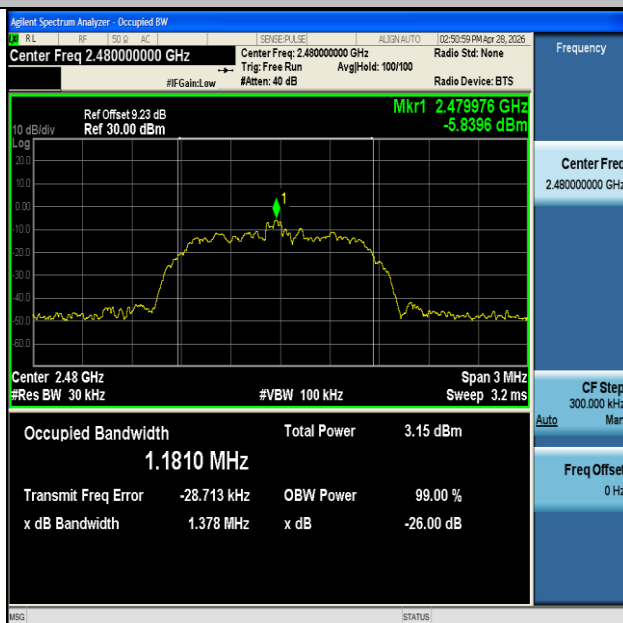


2DH5-Ant1-2402



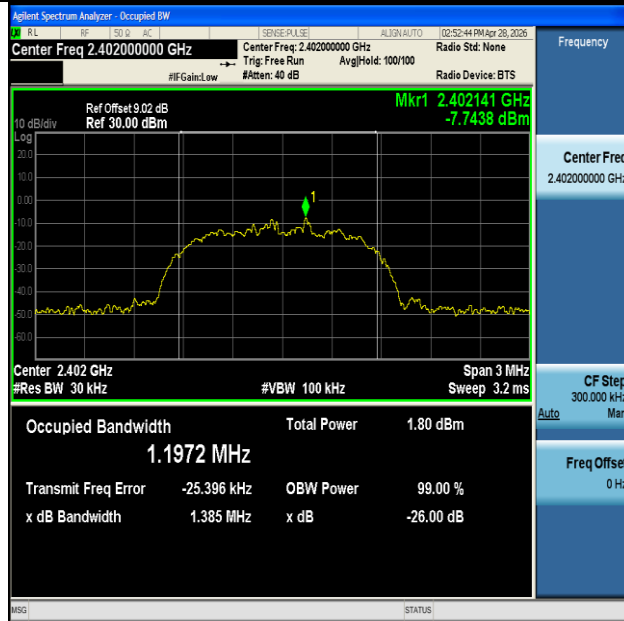


2DH5-Ant1-2441

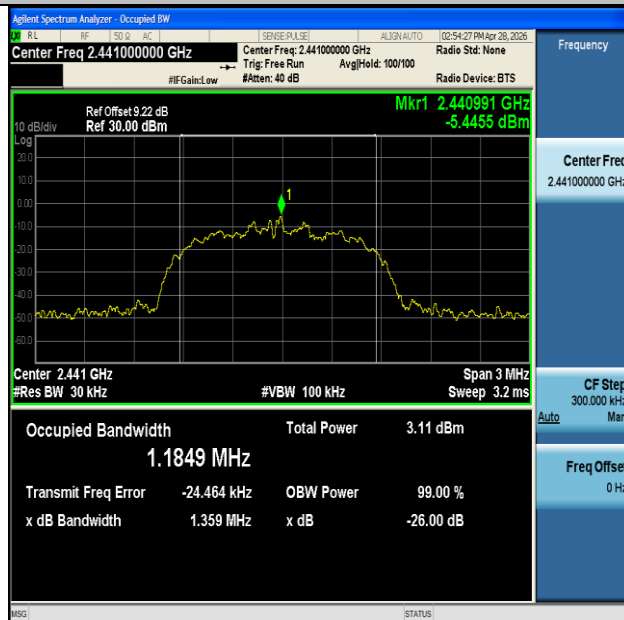


2DH5-Ant1-2480



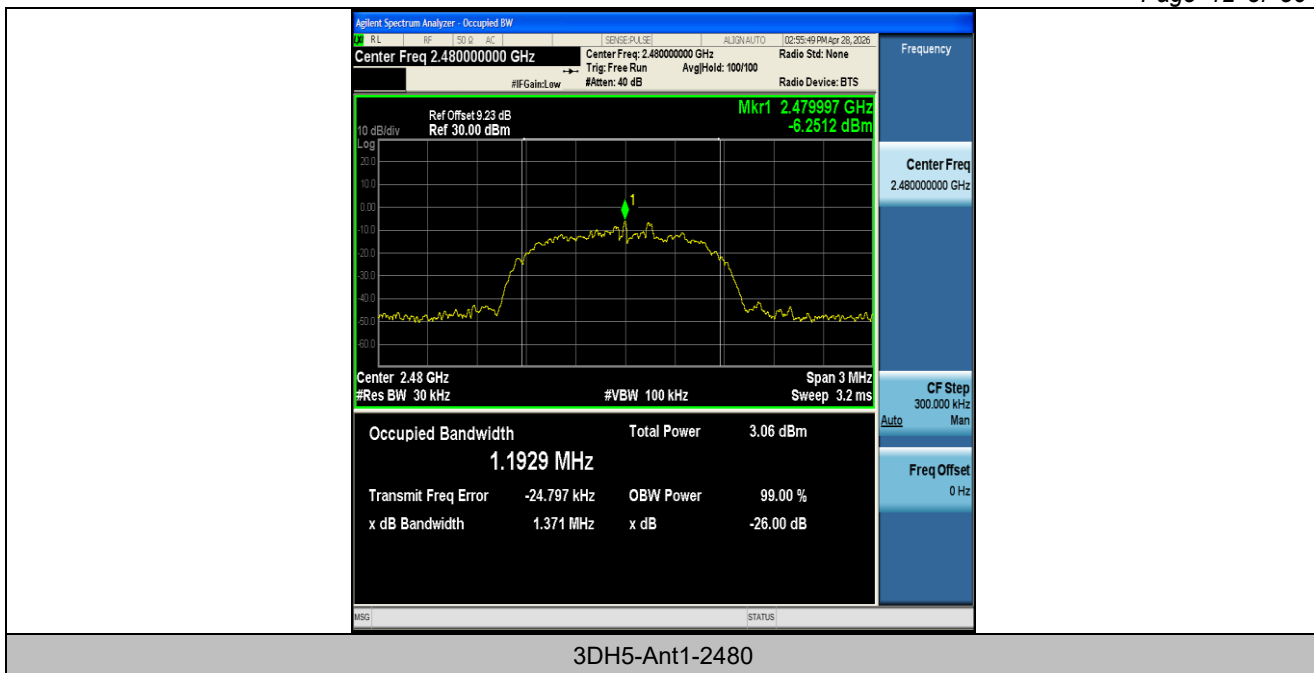


3DH5-Ant1-2402



3DH5-Ant1-2441







Appendix C: Maximum peak conducted output power

Test Result

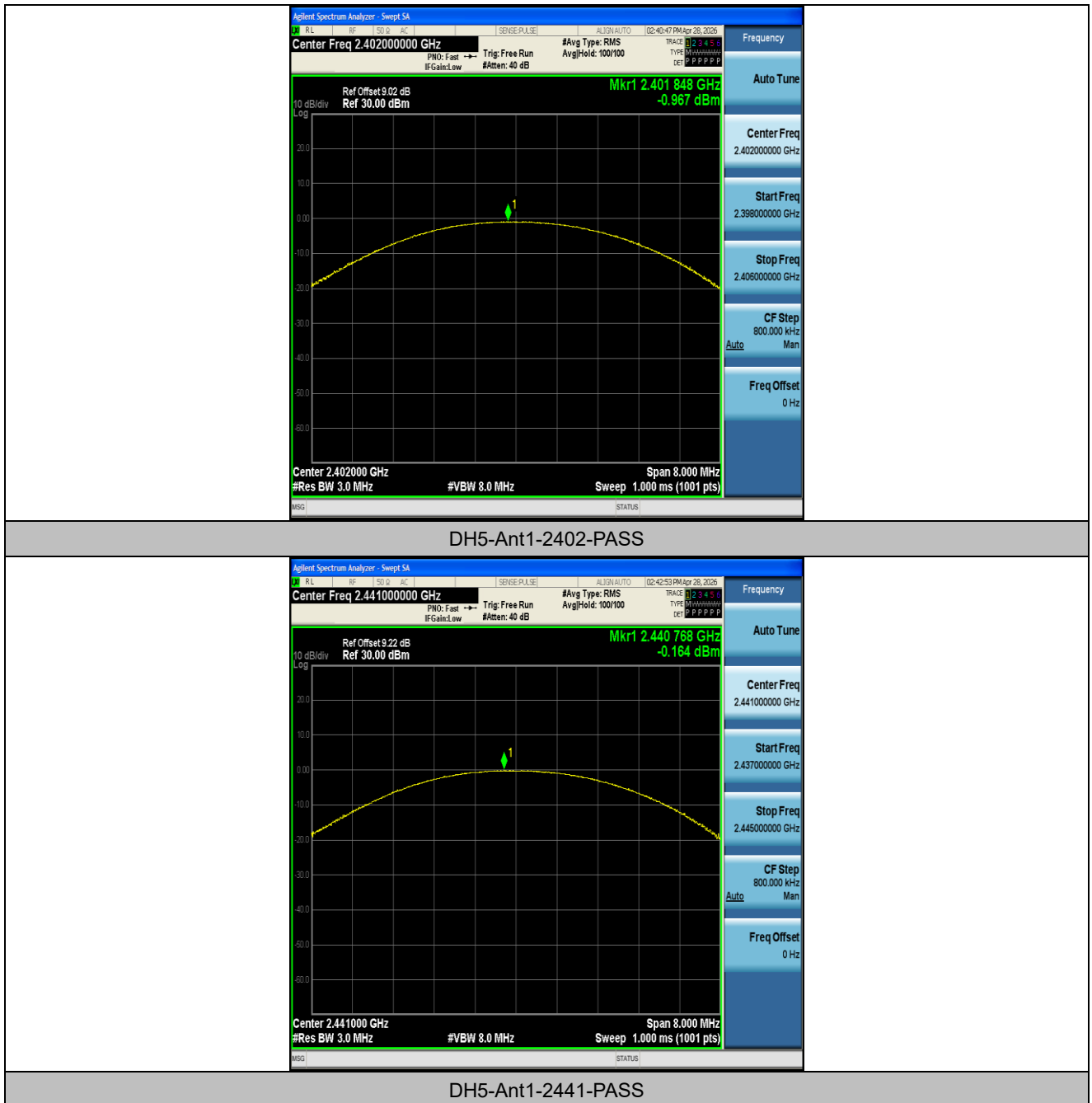
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	-0.97	≤30	PASS
DH5	Ant1	2441	-0.16	≤30	PASS
DH5	Ant1	2480	0.06	≤30	PASS
2DH5	Ant1	2402	-2.47	≤20.97	PASS
2DH5	Ant1	2441	-1.63	≤20.97	PASS
2DH5	Ant1	2480	-1.53	≤20.97	PASS
3DH5	Ant1	2402	-2.27	≤20.97	PASS
3DH5	Ant1	2441	-1.36	≤20.97	PASS
3DH5	Ant1	2480	-1.17	≤20.97	PASS

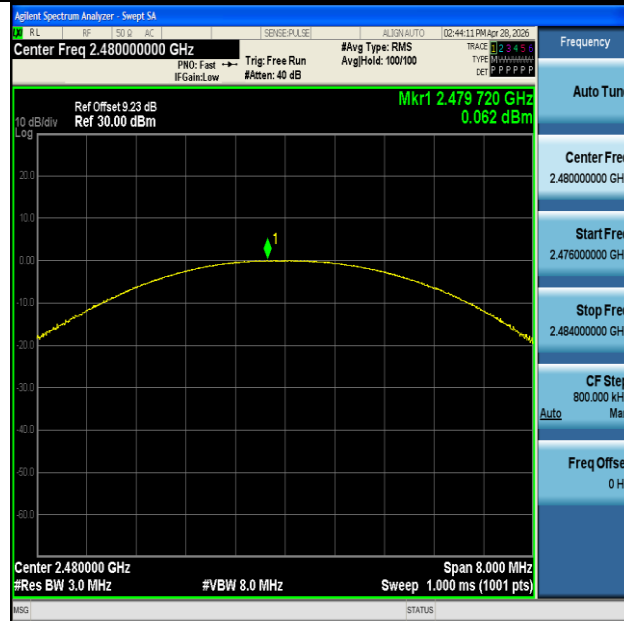
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



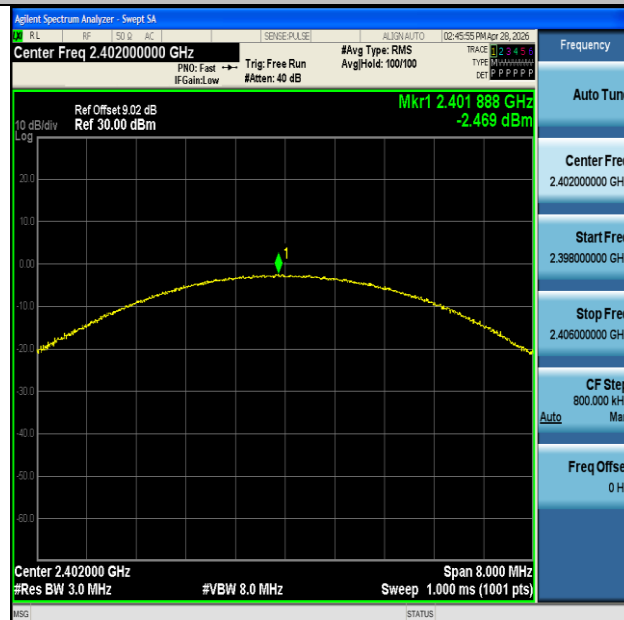


Test Graphs



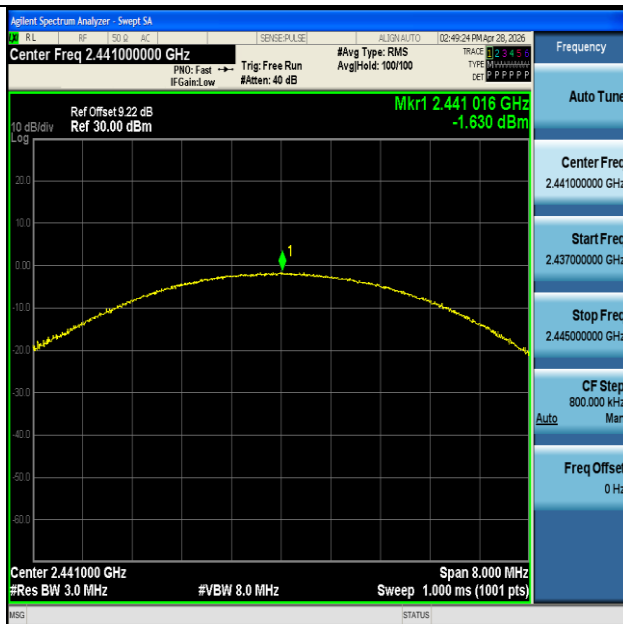


DH5-Ant1-2480-PASS

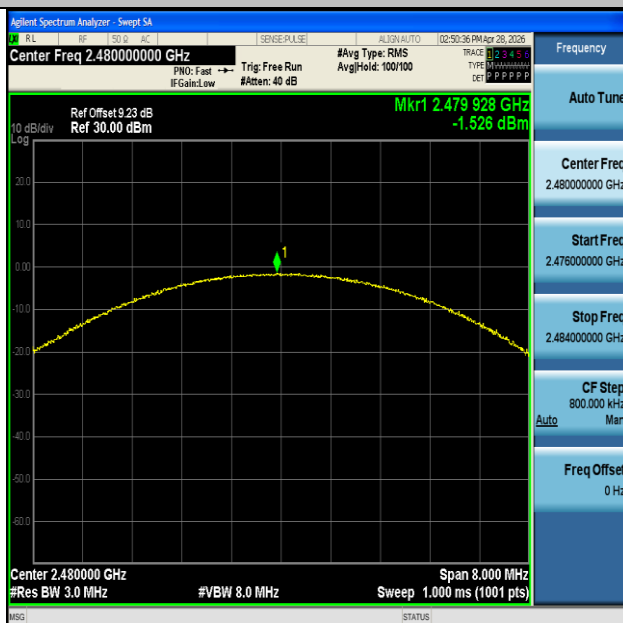


2DH5-Ant1-2402-PASS



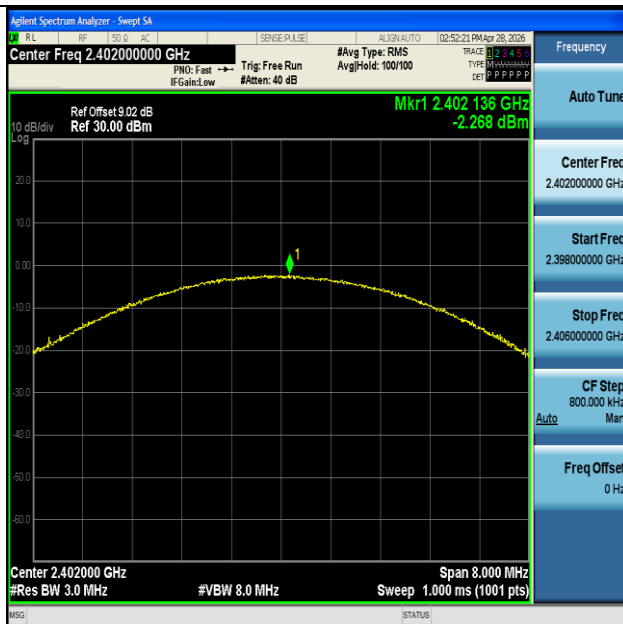


2DH5-Ant1-2441-PASS

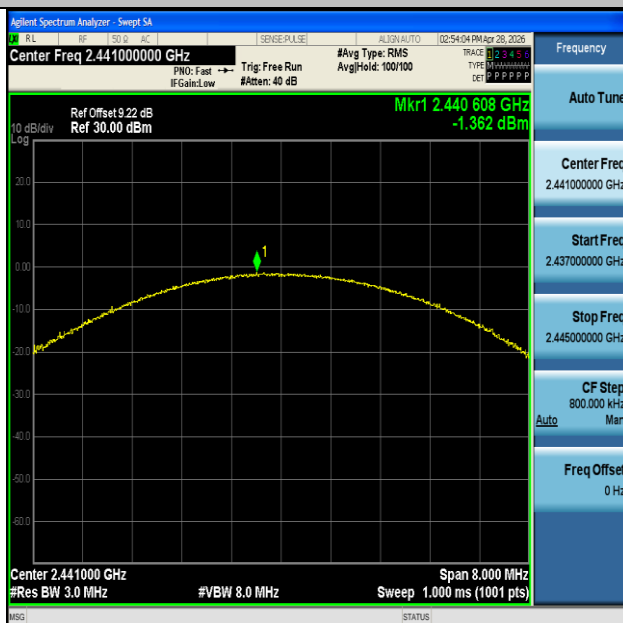


2DH5-Ant1-2480-PASS



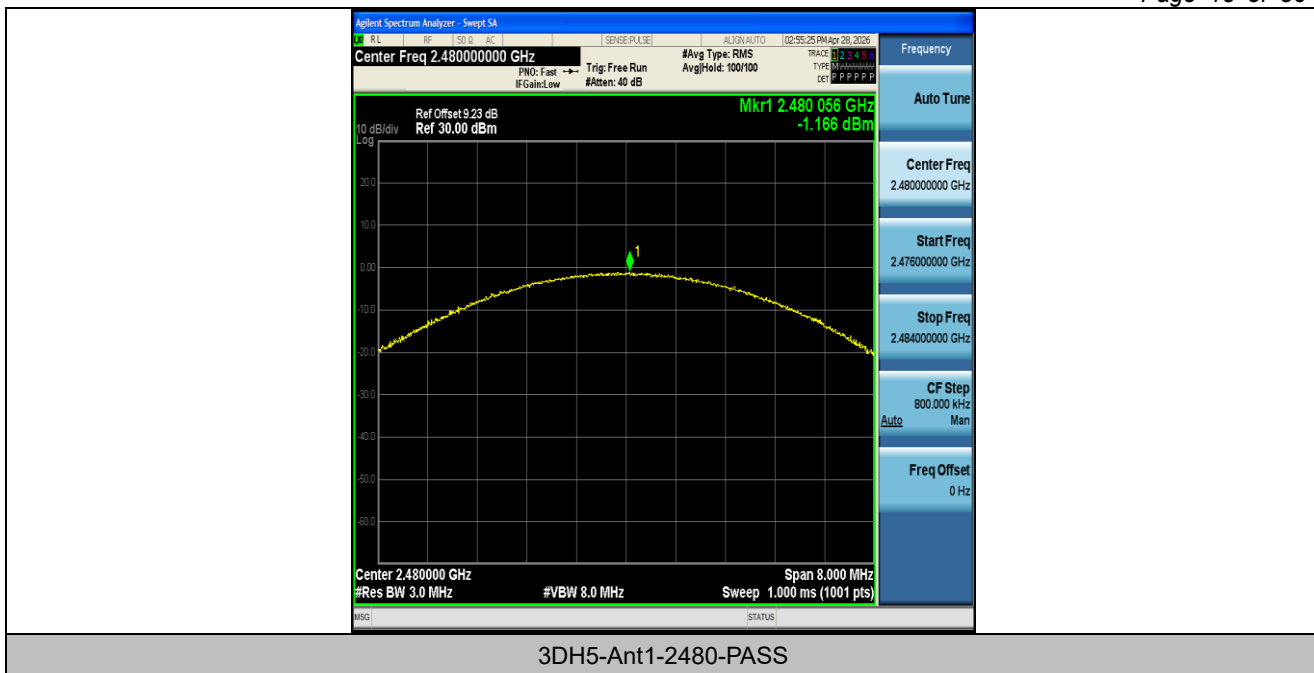


3DH5-Ant1-2402-PASS



3DH5-Ant1-2441-PASS







Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	0.982	≥ 0.975	PASS
2DH5	Ant1	Hop	1.032	≥ 0.858	PASS
3DH5	Ant1	Hop	1.054	≥ 0.848	PASS

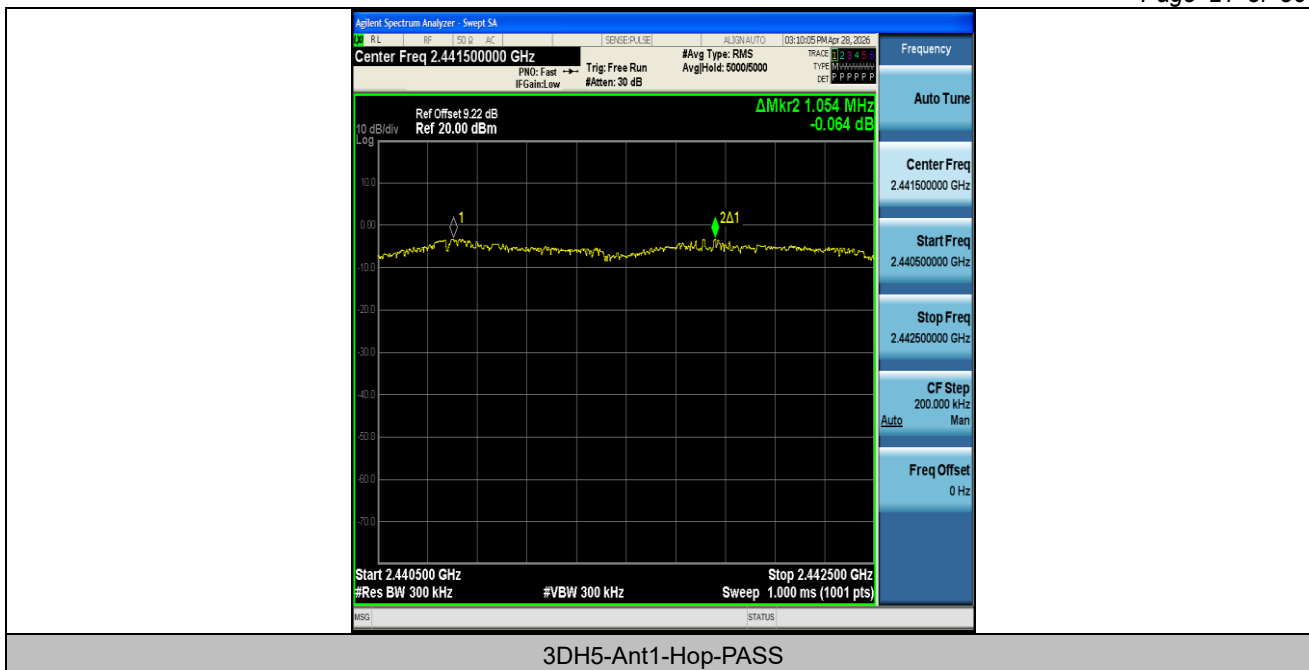
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs







Appendix E: Time of occupancy

Test Result

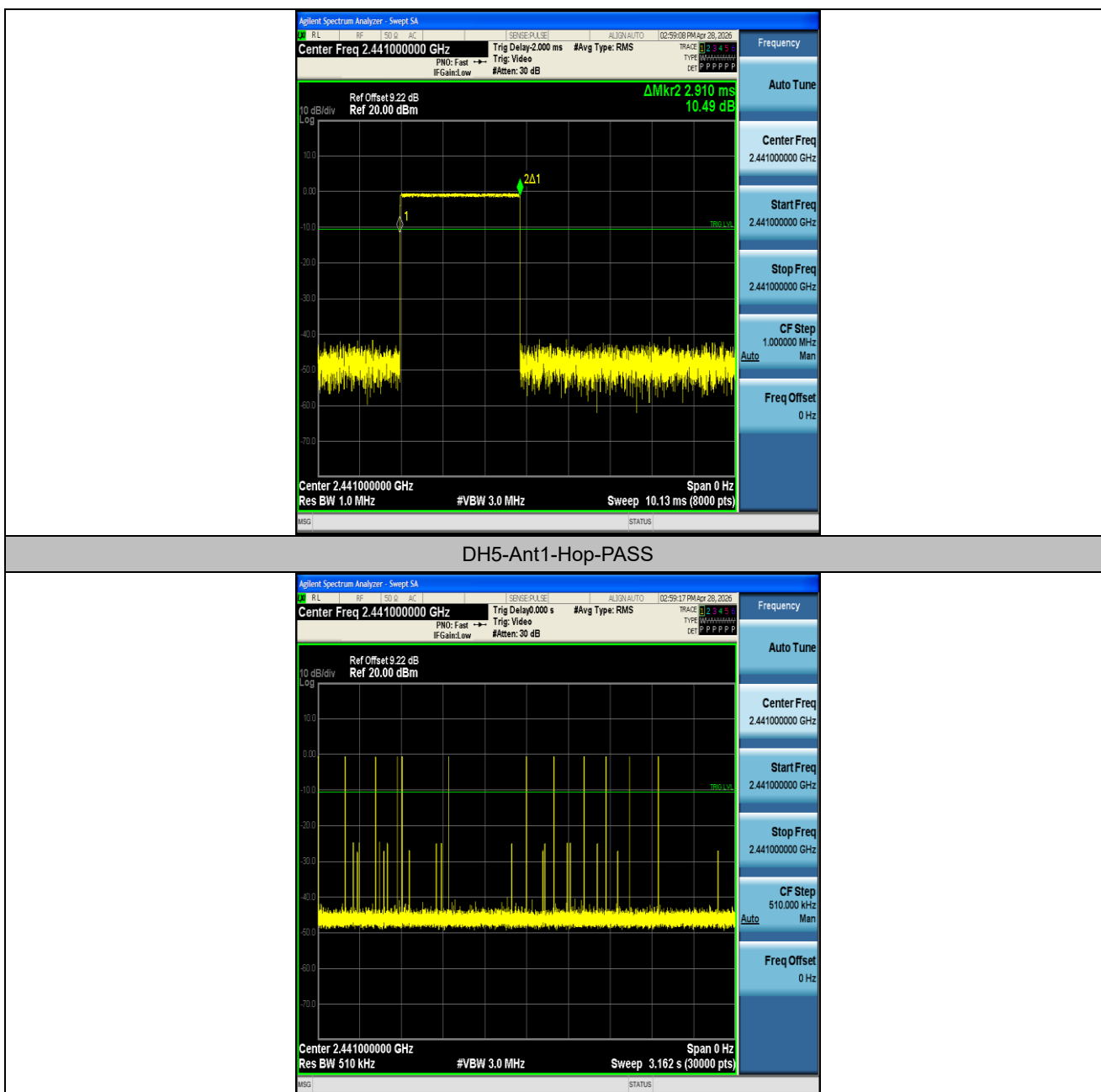
Test Mode	Antenna	Frequency [MHz]	Burst Width [ms]	TotalHops [Num]	Result [s]	Limit [s]	Verdict
DH5	Ant1	Hop	2.910	120	0.349	≤0.4	PASS
2DH5	Ant1	Hop	2.916	110	0.321	≤0.4	PASS
3DH5	Ant1	Hop	2.917	70	0.204	≤0.4	PASS

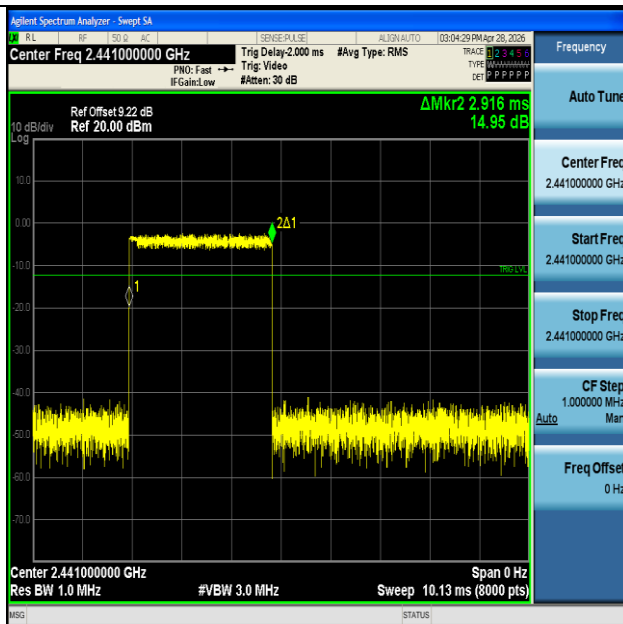
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



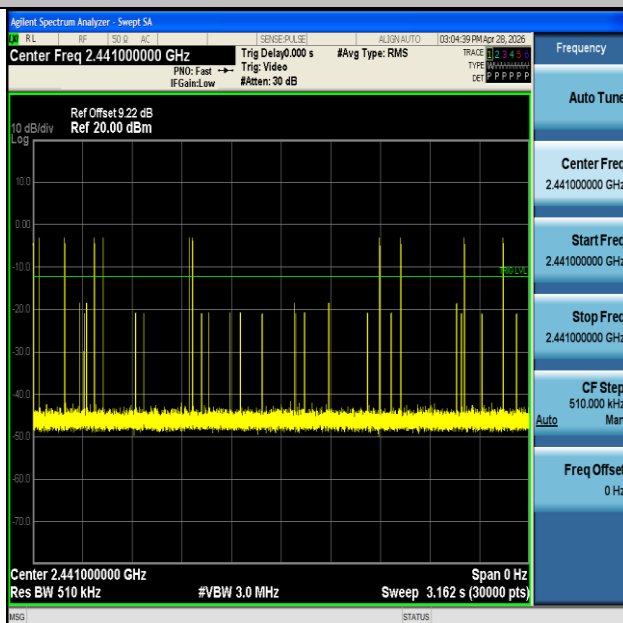


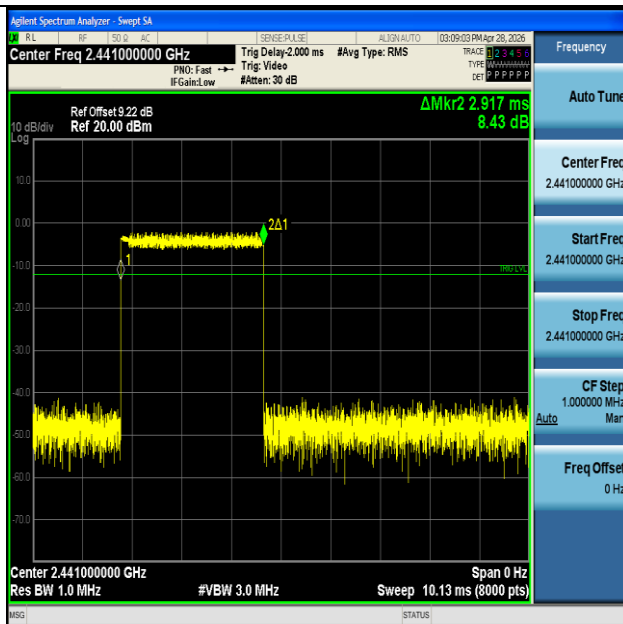
Test Graphs



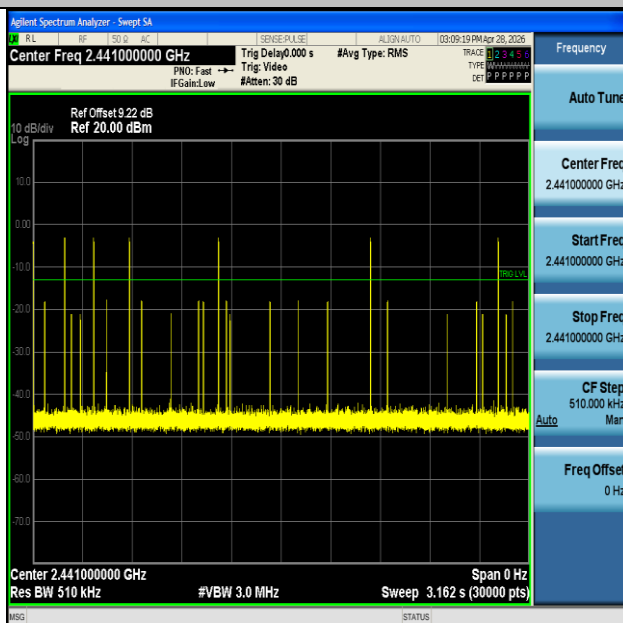


2DH5-Ant1-Hop-PASS





3DH5-Ant1-Hop-PASS





Appendix F: Number of hopping channels

Test Result

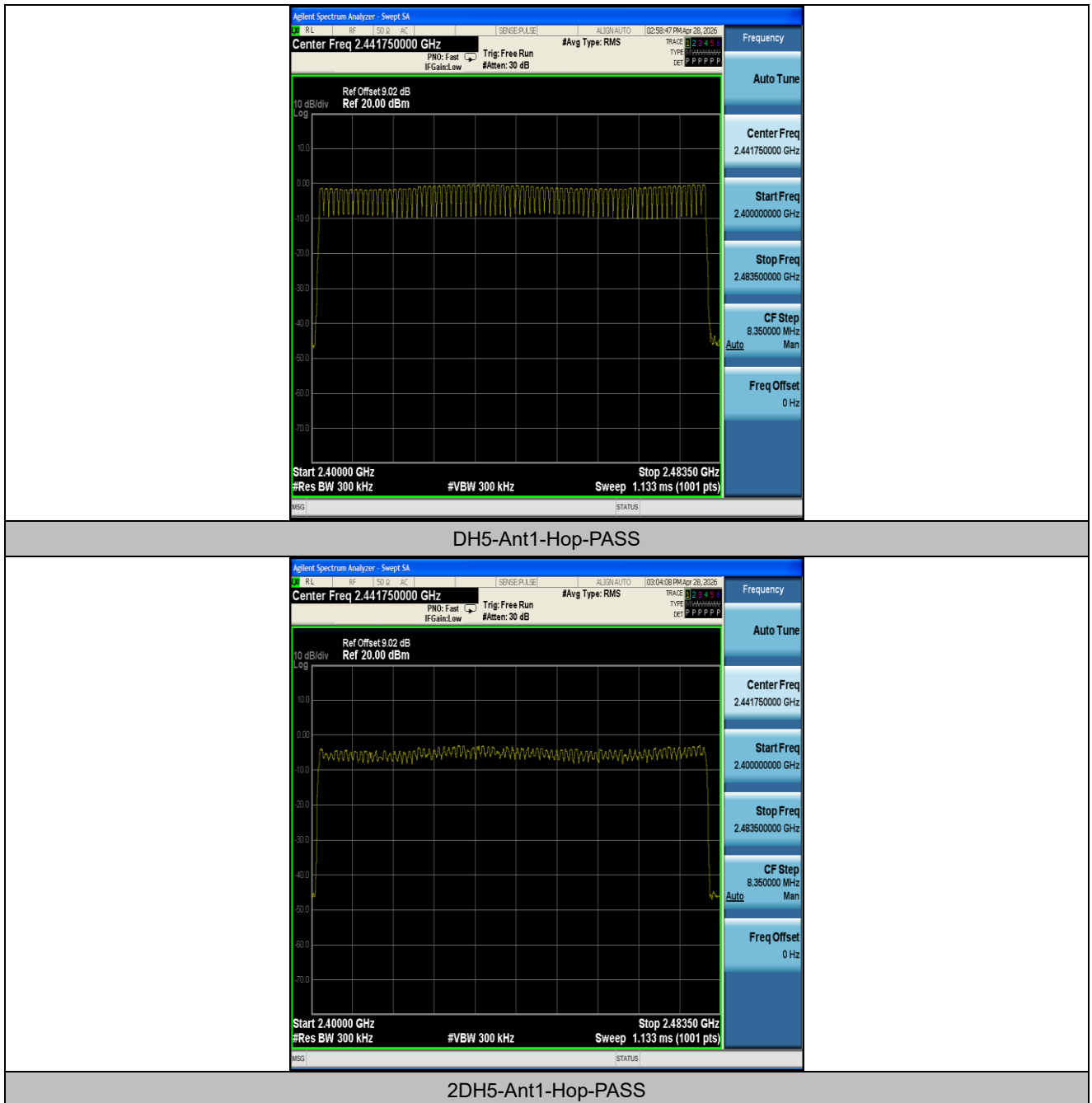
Test Mode	Antenna	Frequency [MHz]	Result [Num]	Limit [Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

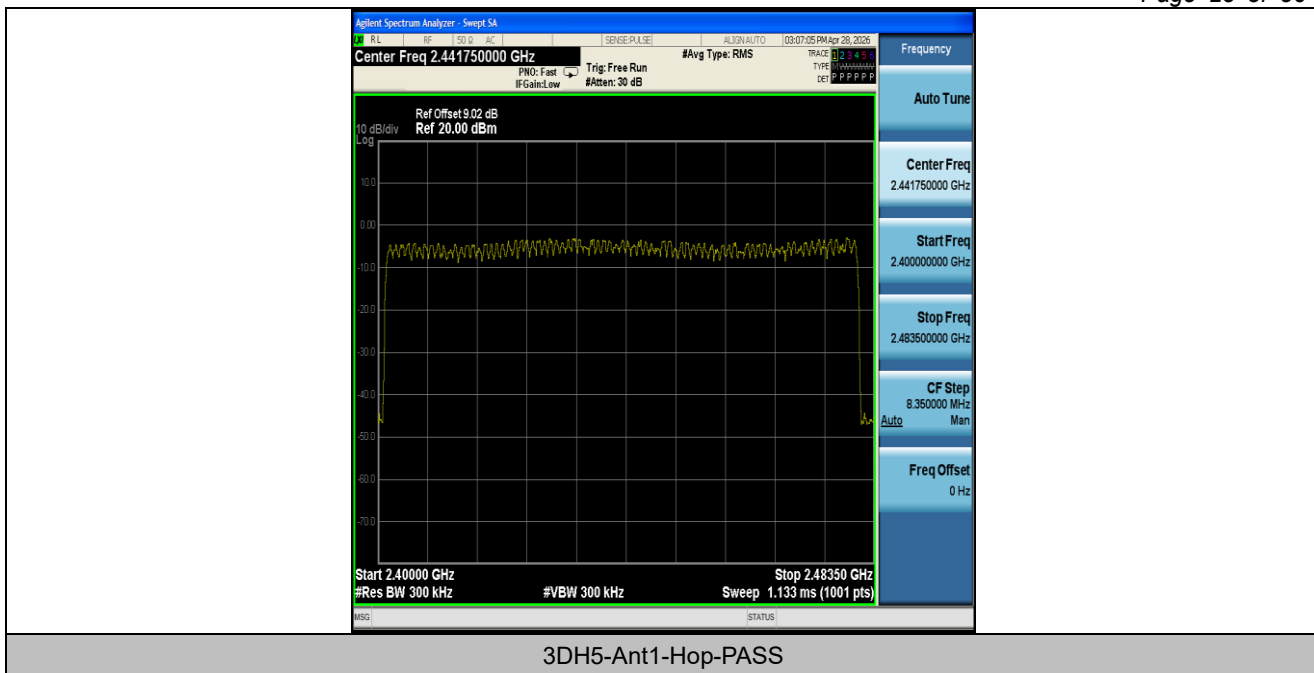
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)





Test Graphs







Appendix G: Band edge measurements

Test Result

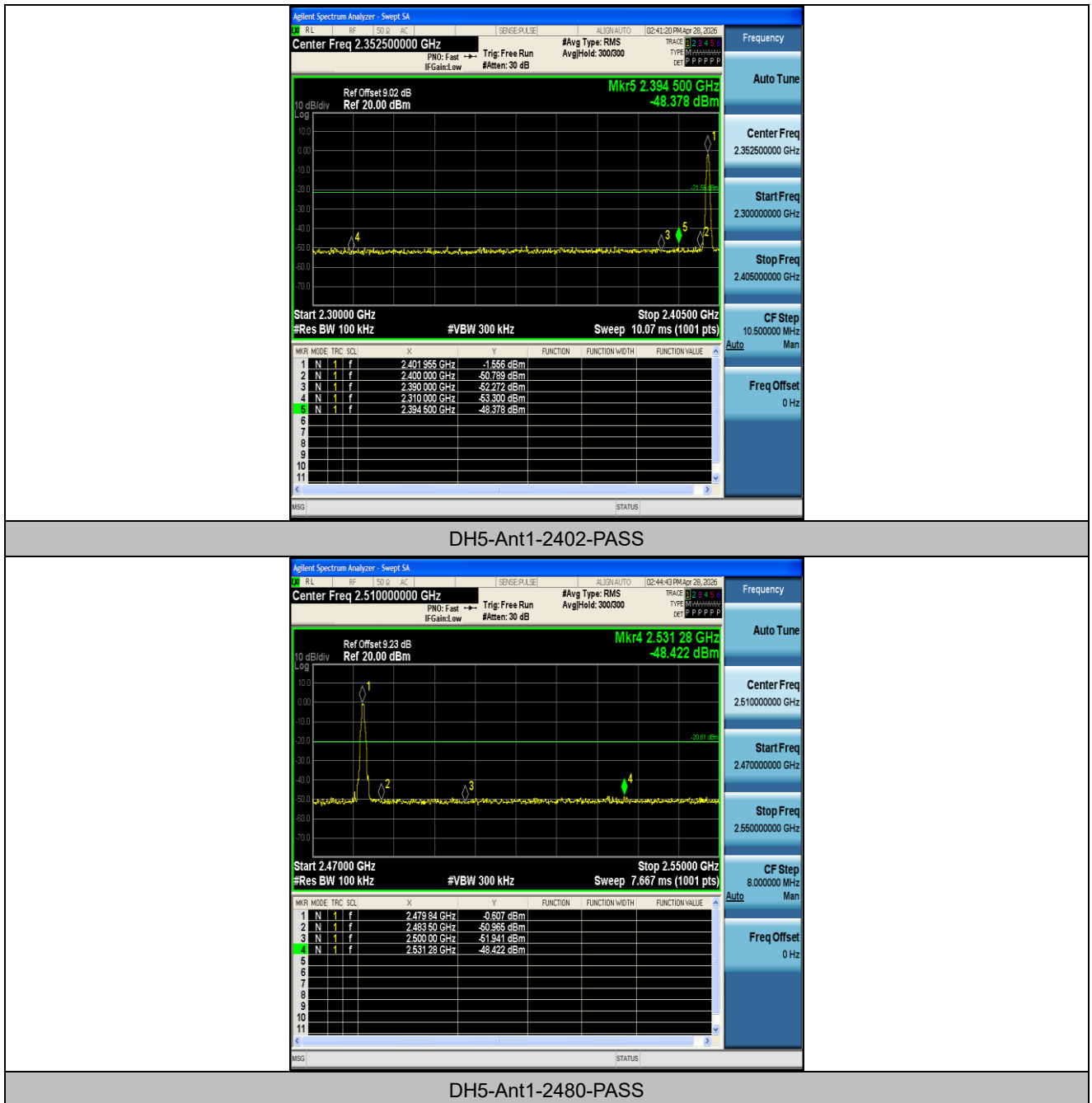
Test Mode	Antenna	Ch.Name	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-1.56	-48.38	≤-21.56	PASS
DH5	Ant1	High	2480	-0.61	-48.42	≤-20.61	PASS
DH5	Ant1	Low	Hop_2402	-2.33	-48.97	≤-22.33	PASS
DH5	Ant1	High	Hop_2480	-0.95	-46.73	≤-20.95	PASS
2DH5	Ant1	Low	2402	-4.62	-49.19	≤-24.62	PASS
2DH5	Ant1	High	2480	-3.07	-48.46	≤-23.07	PASS
2DH5	Ant1	Low	Hop_2402	-8.23	-48.8	≤-28.23	PASS
2DH5	Ant1	High	Hop_2480	-4.00	-47.94	≤-24	PASS
3DH5	Ant1	Low	2402	-4.69	-48.99	≤-24.69	PASS
3DH5	Ant1	High	2480	-3.13	-40.77	≤-23.13	PASS
3DH5	Ant1	Low	Hop_2402	-8.25	-49.17	≤-28.25	PASS
3DH5	Ant1	High	Hop_2480	-5.09	-47.46	≤-25.09	PASS

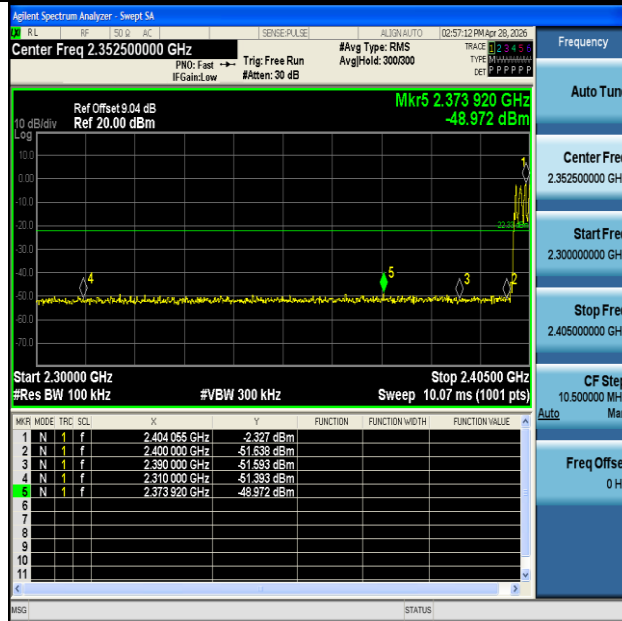
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)



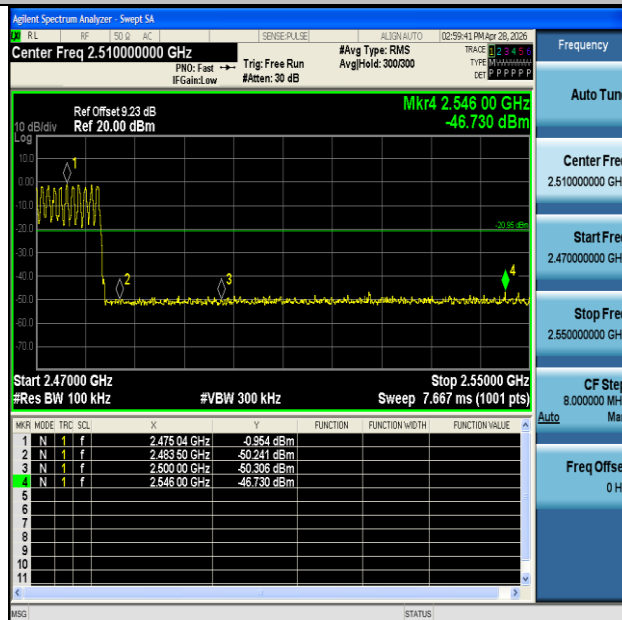


Test Graphs



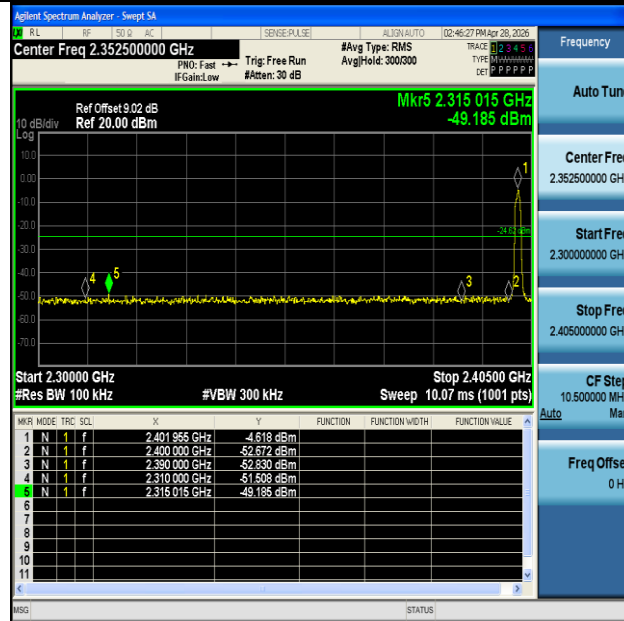


DH5-Ant1-Hop_2402-PASS

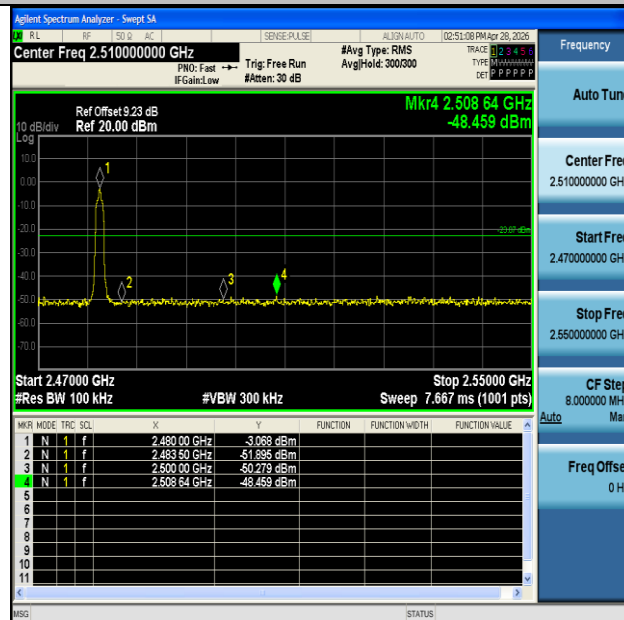


DH5-Ant1-Hop_2480-PASS





2DH5-Ant1-2402-PASS

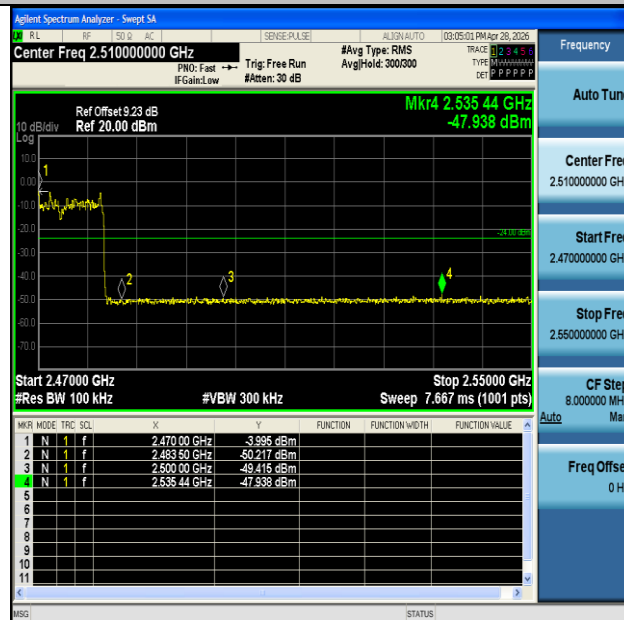


2DH5-Ant1-2480-PASS



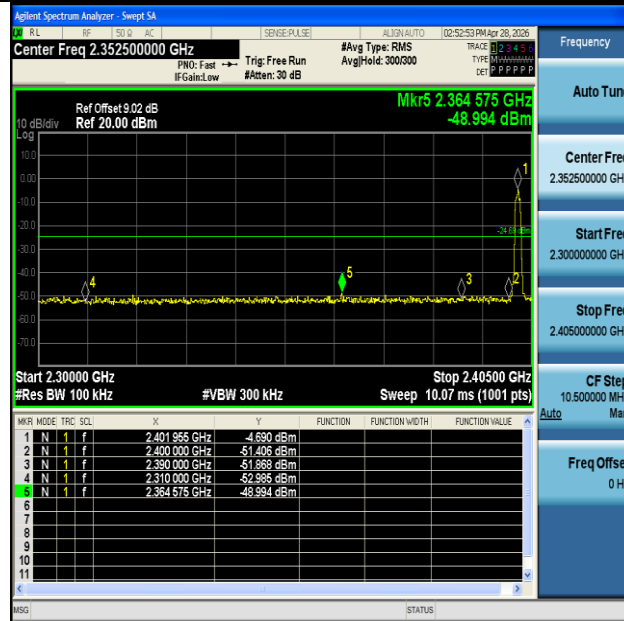


2DH5-Ant1-Hop_2402-PASS

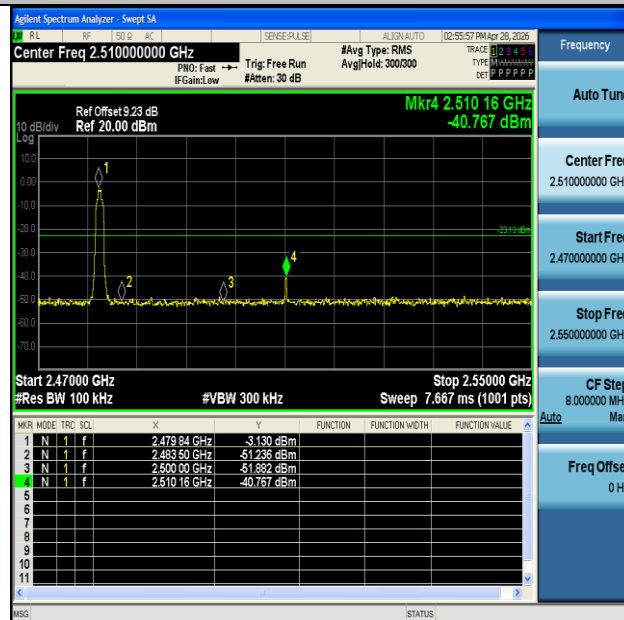


2DH5-Ant1-Hop_2480-PASS



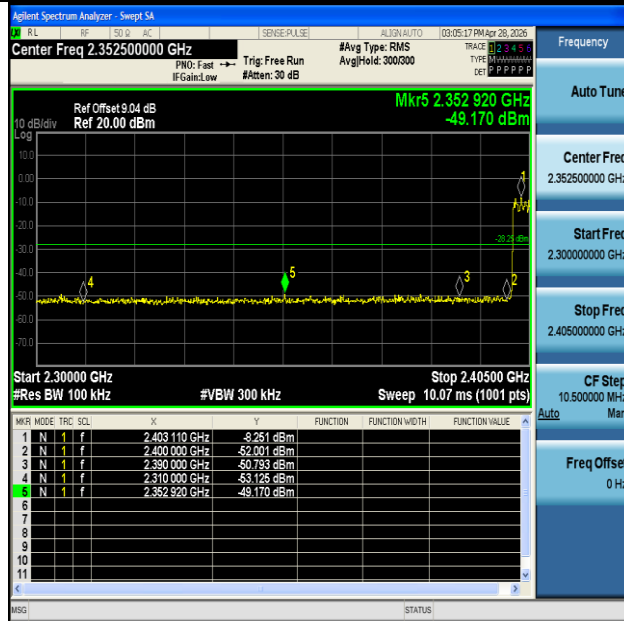


3DH5-Ant1-2402-PASS

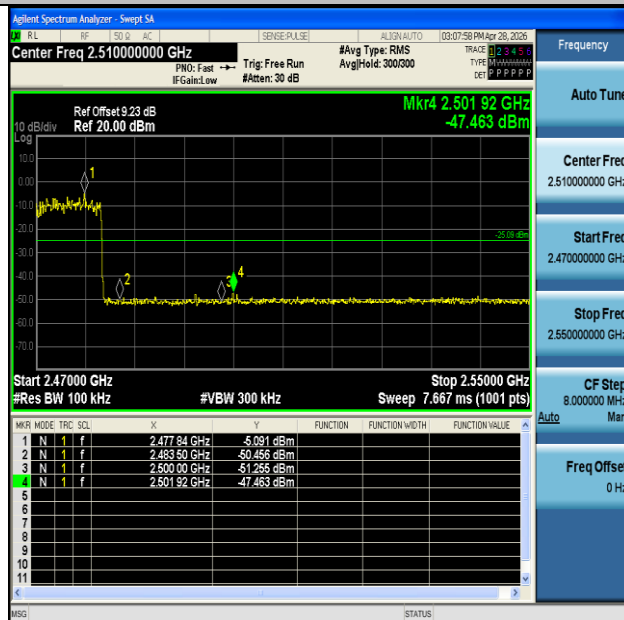


3DH5-Ant1-2480-PASS





3DH5-Ant1-Hop_2402-PASS



3DH5-Ant1-Hop_2480-PASS





Appendix H: Conducted Spurious Emission

Test Result

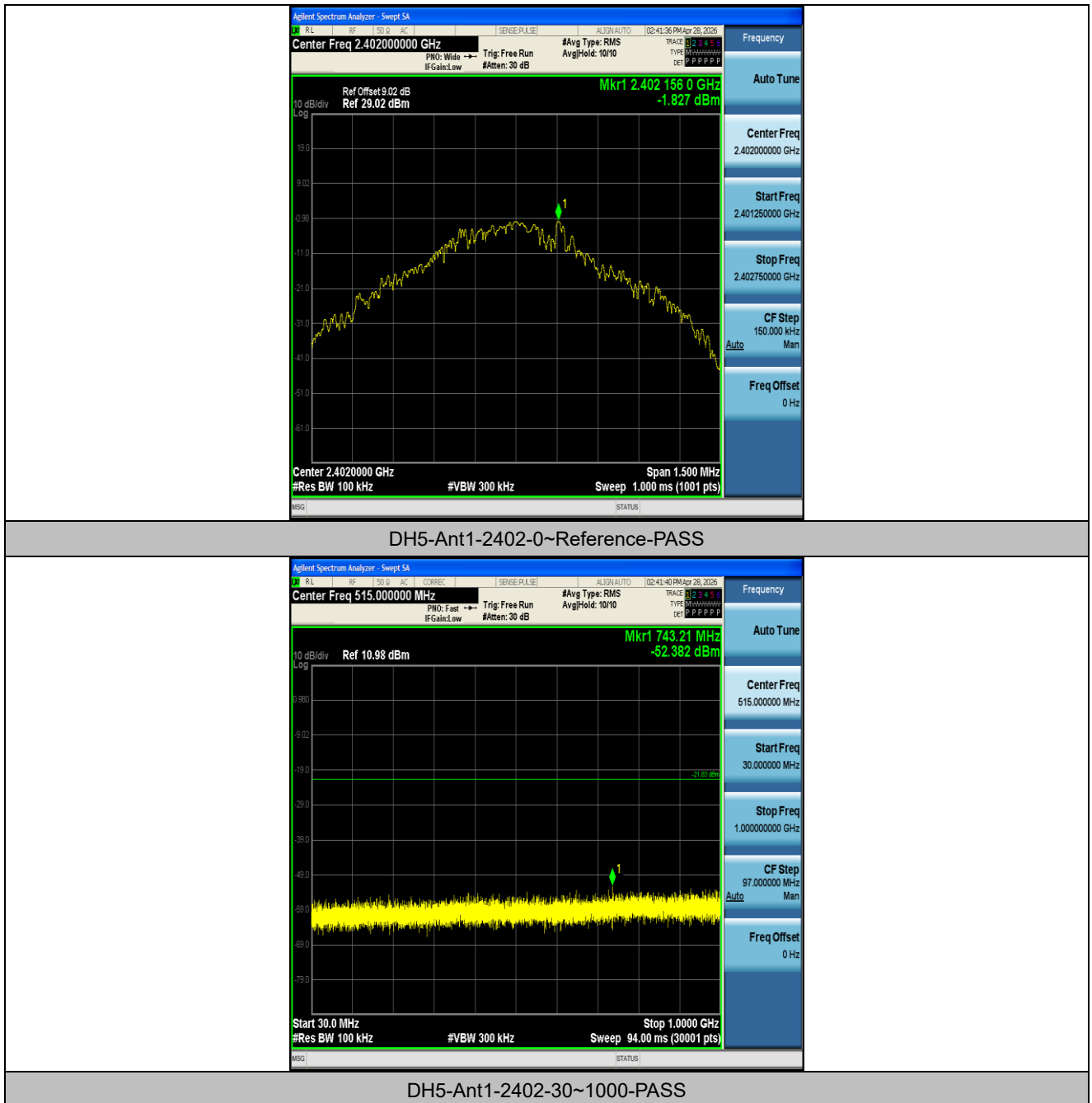
Test Mode	Antenna	Frequency [MHz]	Freq. Range [MHz]	Ref. Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-1.83	-1.83	---	PASS
DH5	Ant1	2402	30~1000	-1.83	-52.38	≤-21.83	PASS
DH5	Ant1	2402	1000~26500	-1.83	-26.83	≤-21.83	PASS
DH5	Ant1	2441	0~Reference	-1.66	-1.66	---	PASS
DH5	Ant1	2441	30~1000	-1.66	-46.9	≤-21.66	PASS
DH5	Ant1	2441	1000~26500	-1.66	-27.66	≤-21.66	PASS
DH5	Ant1	2480	0~Reference	-1.35	-1.35	---	PASS
DH5	Ant1	2480	30~1000	-1.35	-50.09	≤-21.35	PASS
DH5	Ant1	2480	1000~26500	-1.35	-27.68	≤-21.35	PASS
2DH5	Ant1	2402	0~Reference	-4.52	-4.52	---	PASS
2DH5	Ant1	2402	30~1000	-4.52	-55.5	≤-24.52	PASS
2DH5	Ant1	2402	1000~26500	-4.52	-37.35	≤-24.52	PASS
2DH5	Ant1	2441	0~Reference	-7.26	-7.26	---	PASS
2DH5	Ant1	2441	30~1000	-7.26	-60.37	≤-27.26	PASS
2DH5	Ant1	2441	1000~26500	-7.26	-37	≤-27.26	PASS
2DH5	Ant1	2480	0~Reference	-3.64	-3.64	---	PASS
2DH5	Ant1	2480	30~1000	-3.64	-55.1	≤-23.64	PASS
2DH5	Ant1	2480	1000~26500	-3.64	-37.69	≤-23.64	PASS
3DH5	Ant1	2402	0~Reference	-6.29	-6.29	---	PASS
3DH5	Ant1	2402	30~1000	-6.29	-56	≤-26.29	PASS
3DH5	Ant1	2402	1000~26500	-6.29	-37.64	≤-26.29	PASS
3DH5	Ant1	2441	0~Reference	-4.30	-4.30	---	PASS
3DH5	Ant1	2441	30~1000	-4.30	-54.82	≤-24.3	PASS
3DH5	Ant1	2441	1000~26500	-4.30	-37.97	≤-24.3	PASS
3DH5	Ant1	2480	0~Reference	-4.31	-4.31	---	PASS
3DH5	Ant1	2480	30~1000	-4.31	-54.48	≤-24.31	PASS
3DH5	Ant1	2480	1000~26500	-4.31	-37.9	≤-24.31	PASS

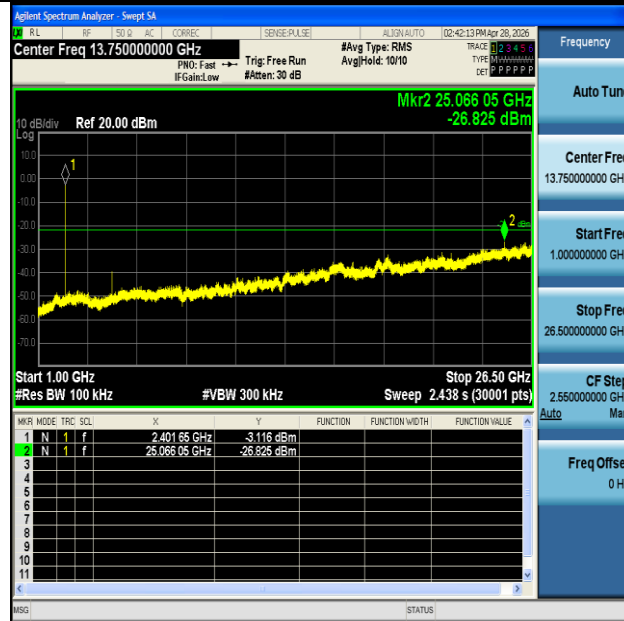
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 26.5GHz, the cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.



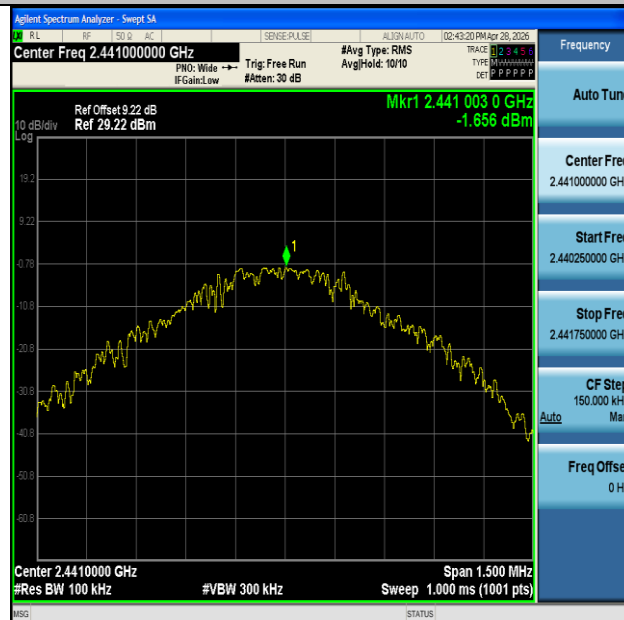


Test Graphs





DH5-Ant1-2402-1000~26500-PASS

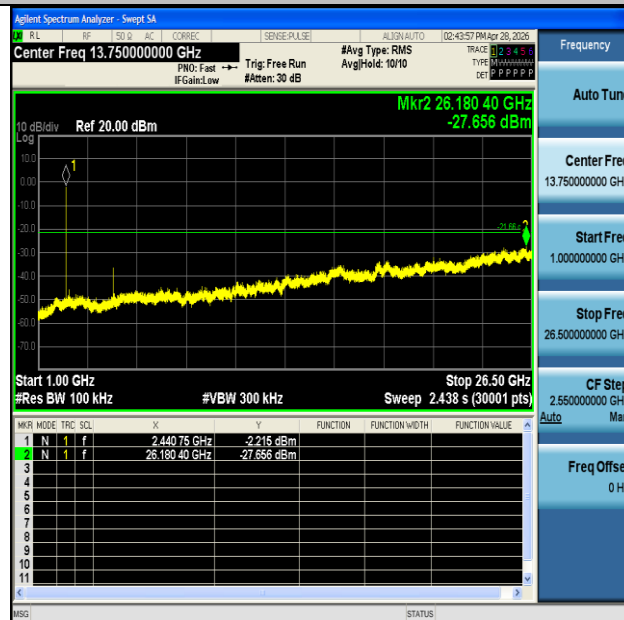


DH5-Ant1-2441-0~Reference-PASS





DH5-Ant1-2441-30~1000-PASS

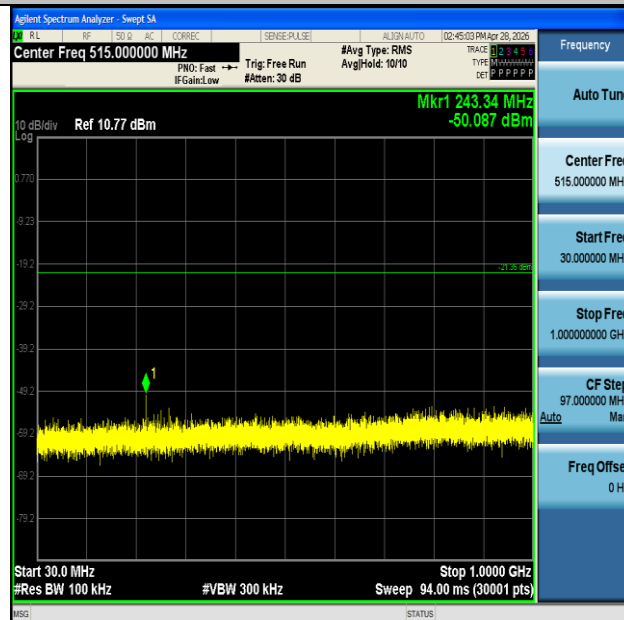


DH5-Ant1-2441-1000~26500-PASS



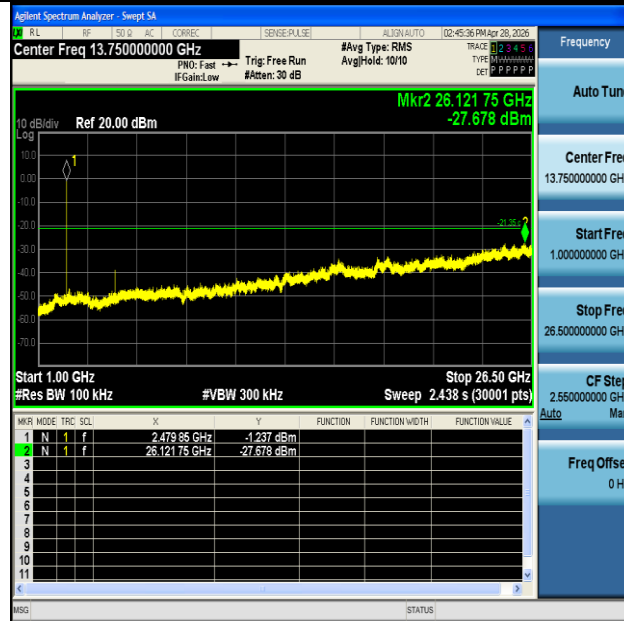


DH5-Ant1-2480-0~Reference-PASS



DH5-Ant1-2480-30~1000-PASS



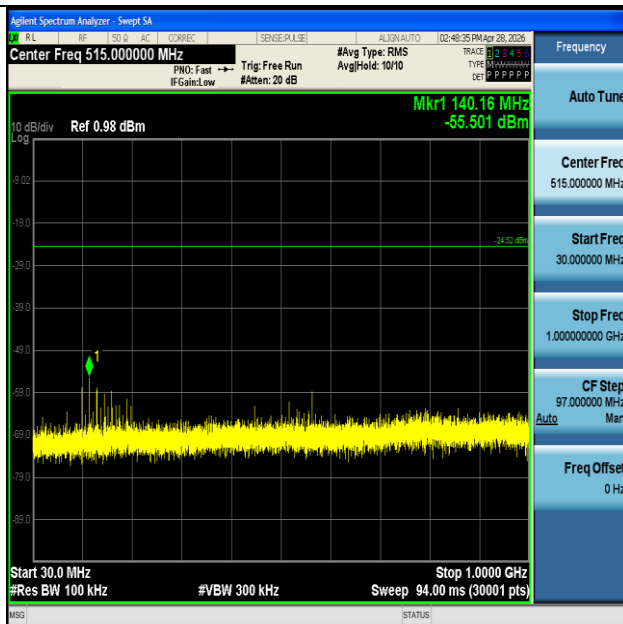


DH5-Ant1-2480-1000~26500-PASS

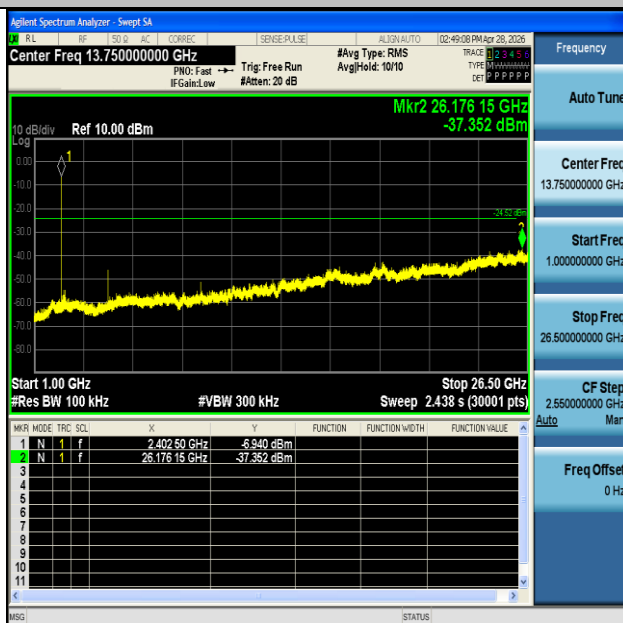


2DH5-Ant1-2402-0~Reference-PASS



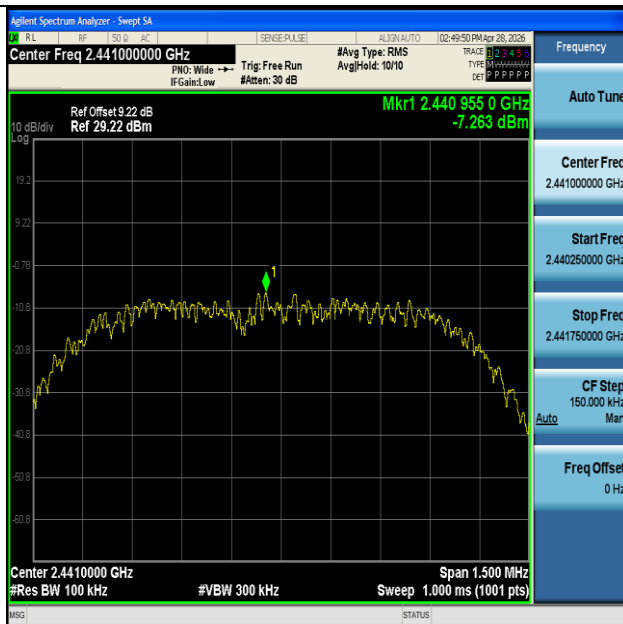


2DH5-Ant1-2402-30~1000-PASS

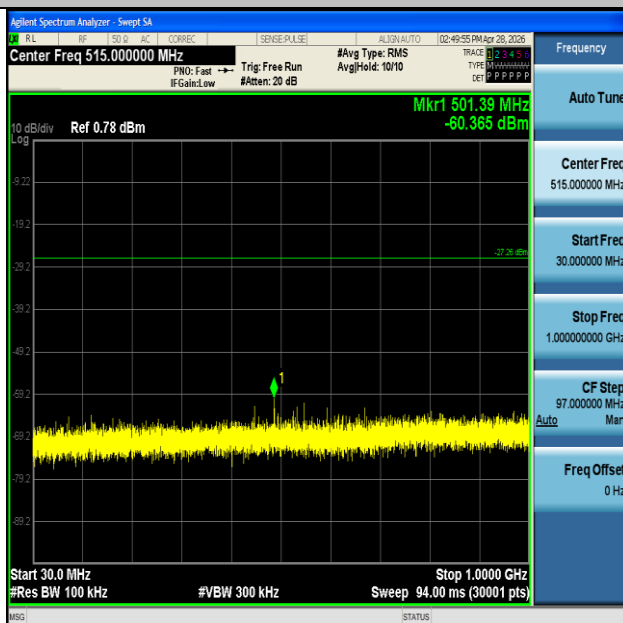


2DH5-Ant1-2402-1000~26500-PASS



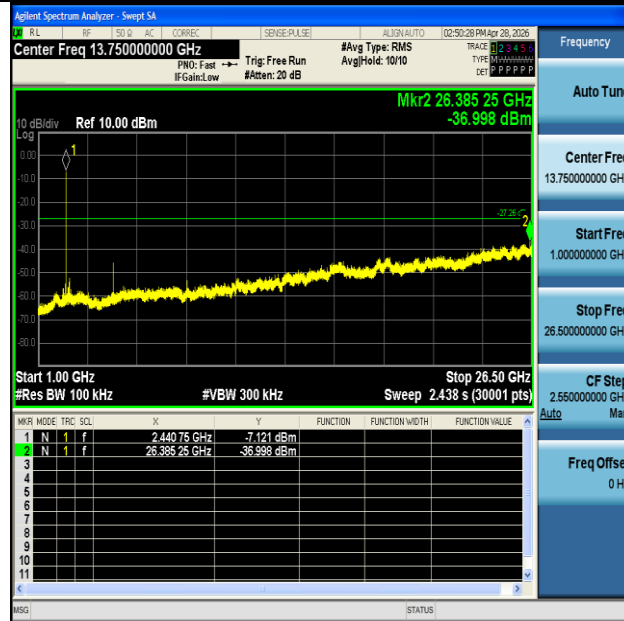


2DH5-Ant1-2441-0~Reference-PASS

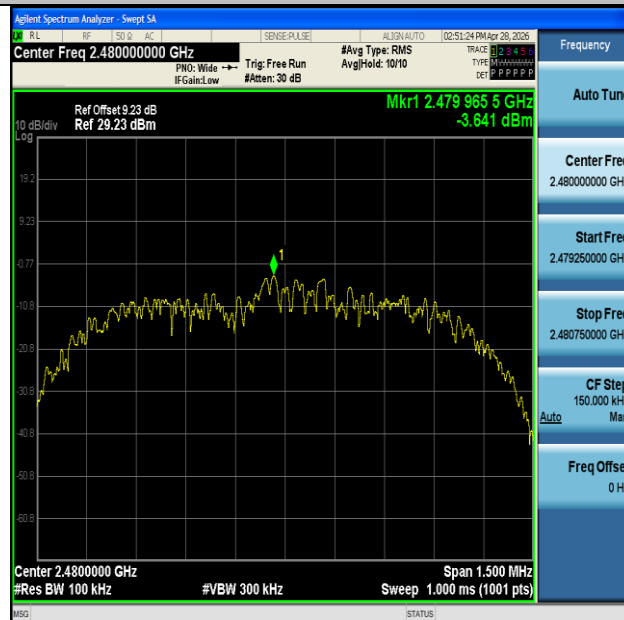


2DH5-Ant1-2441-30~1000-PASS



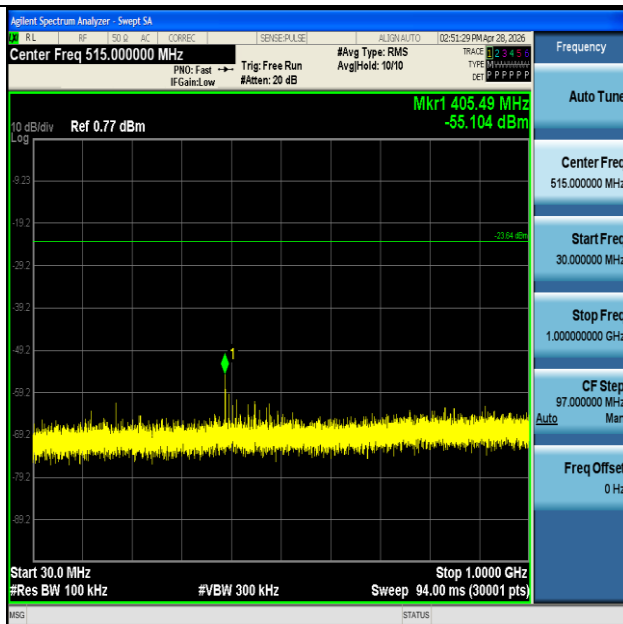


2DH5-Ant1-2441-1000~26500-PASS

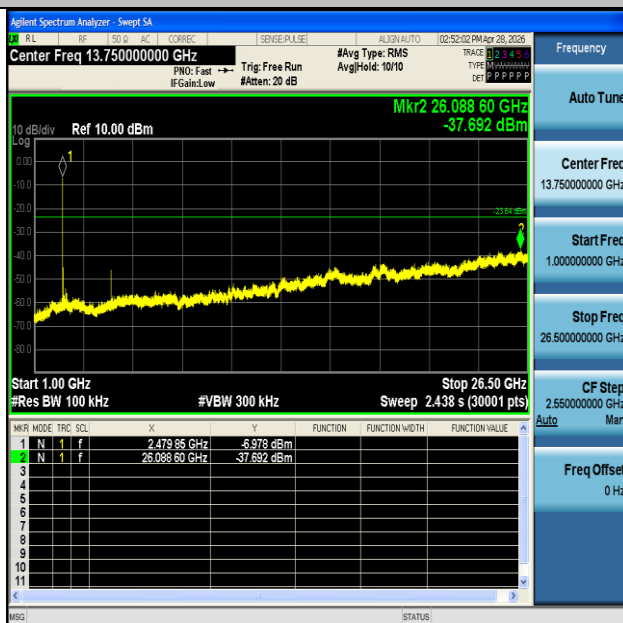


2DH5-Ant1-2480-0~Reference-PASS



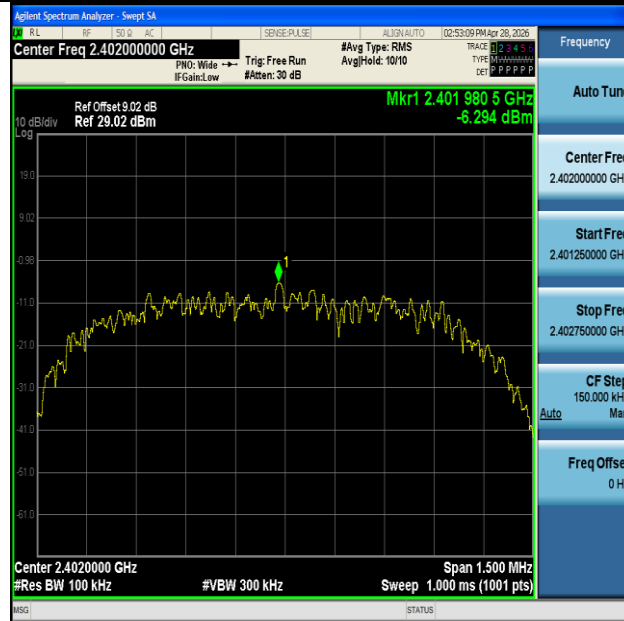


2DH5-Ant1-2480-30~1000-PASS

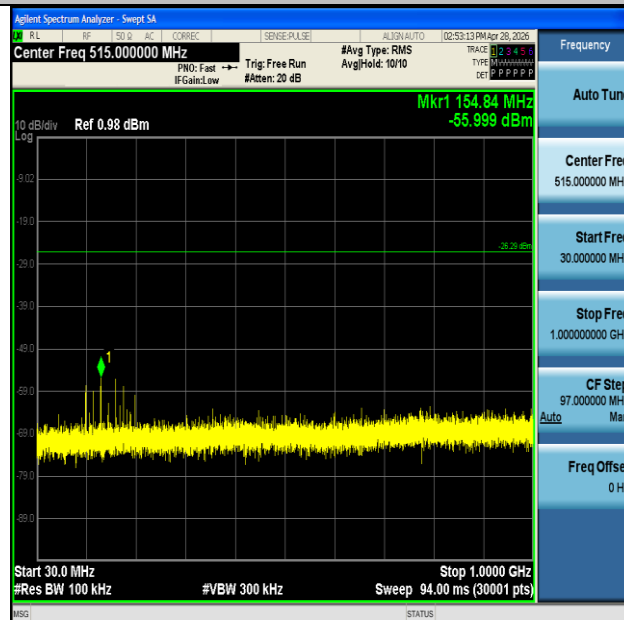


2DH5-Ant1-2480-1000~26500-PASS





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

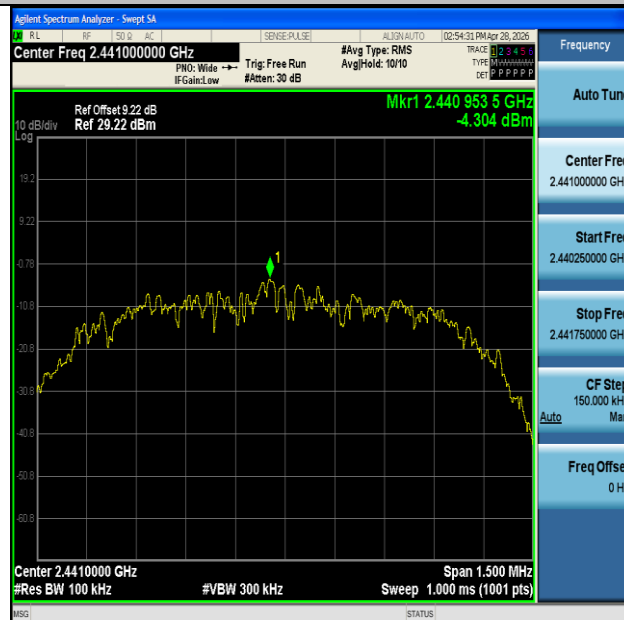


3DH5-Ant1-2402-30~1000-PASS





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

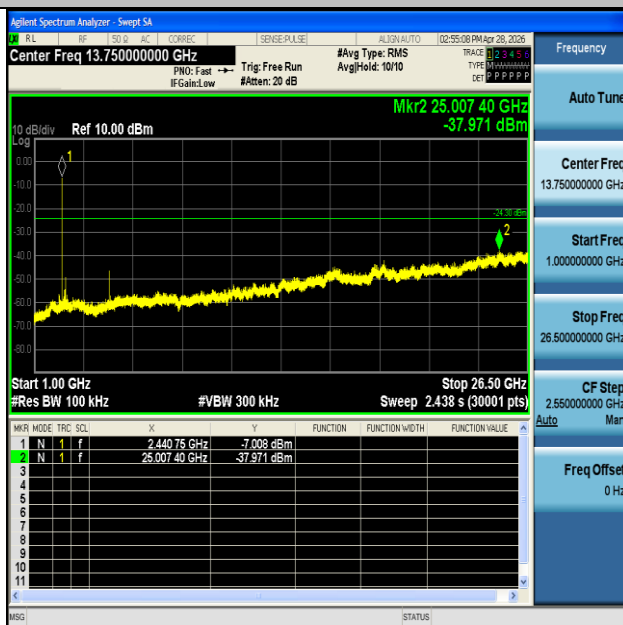


3DH5-Ant1-2441-0~Reference-PASS



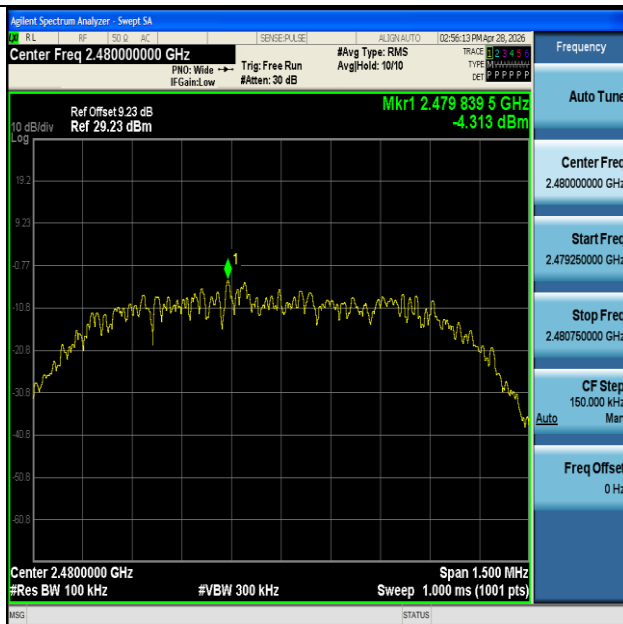


3DH5-Ant1-2441-30~1000-PASS

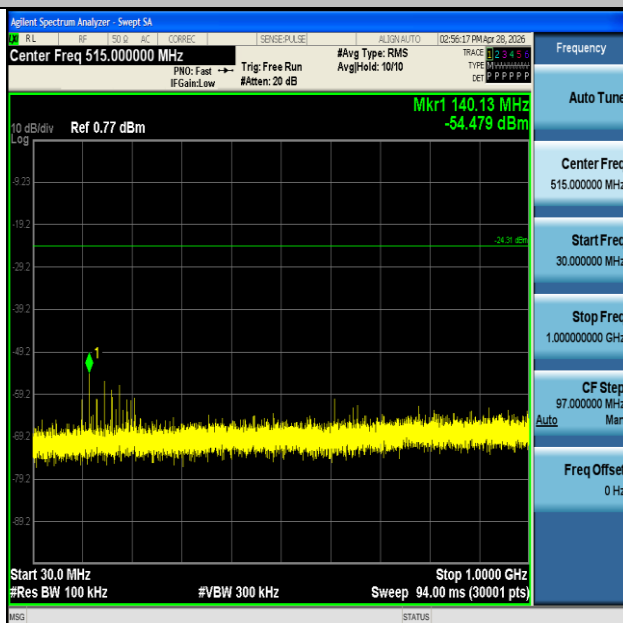


3DH5-Ant1-2441-1000~26500-PASS



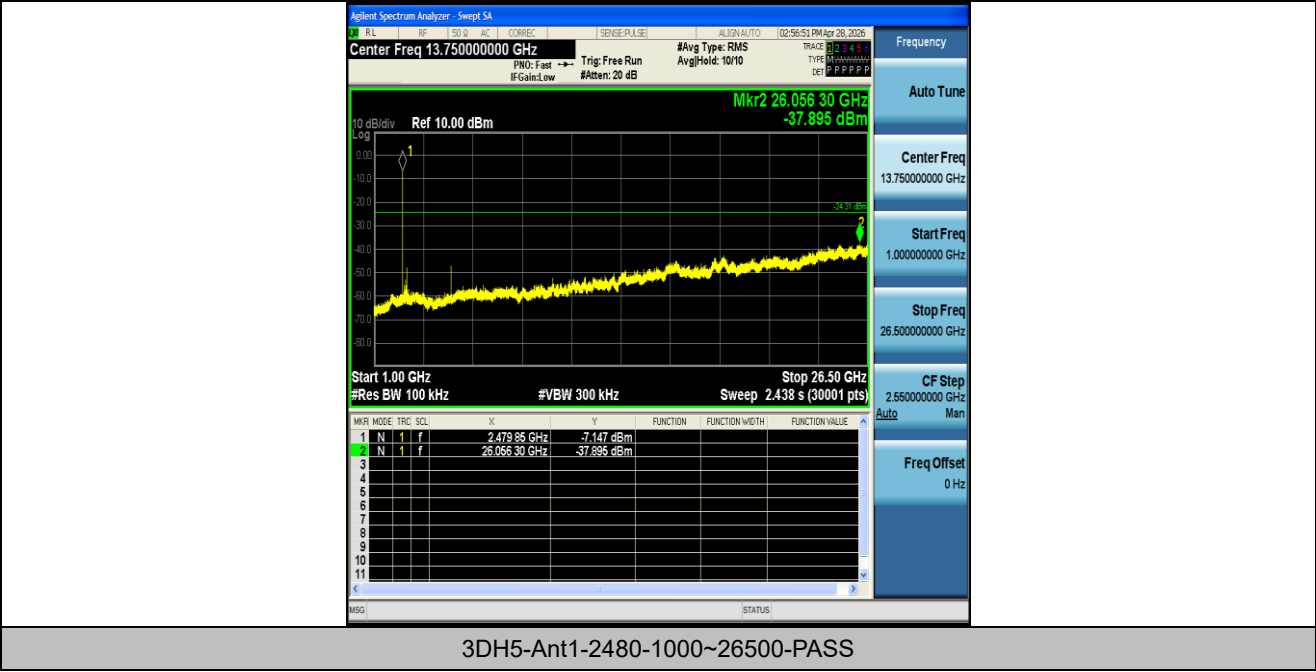


3DH5-Ant1-2480-0~Reference-PASS



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







Appendix I: Duty Cycle

Test Result

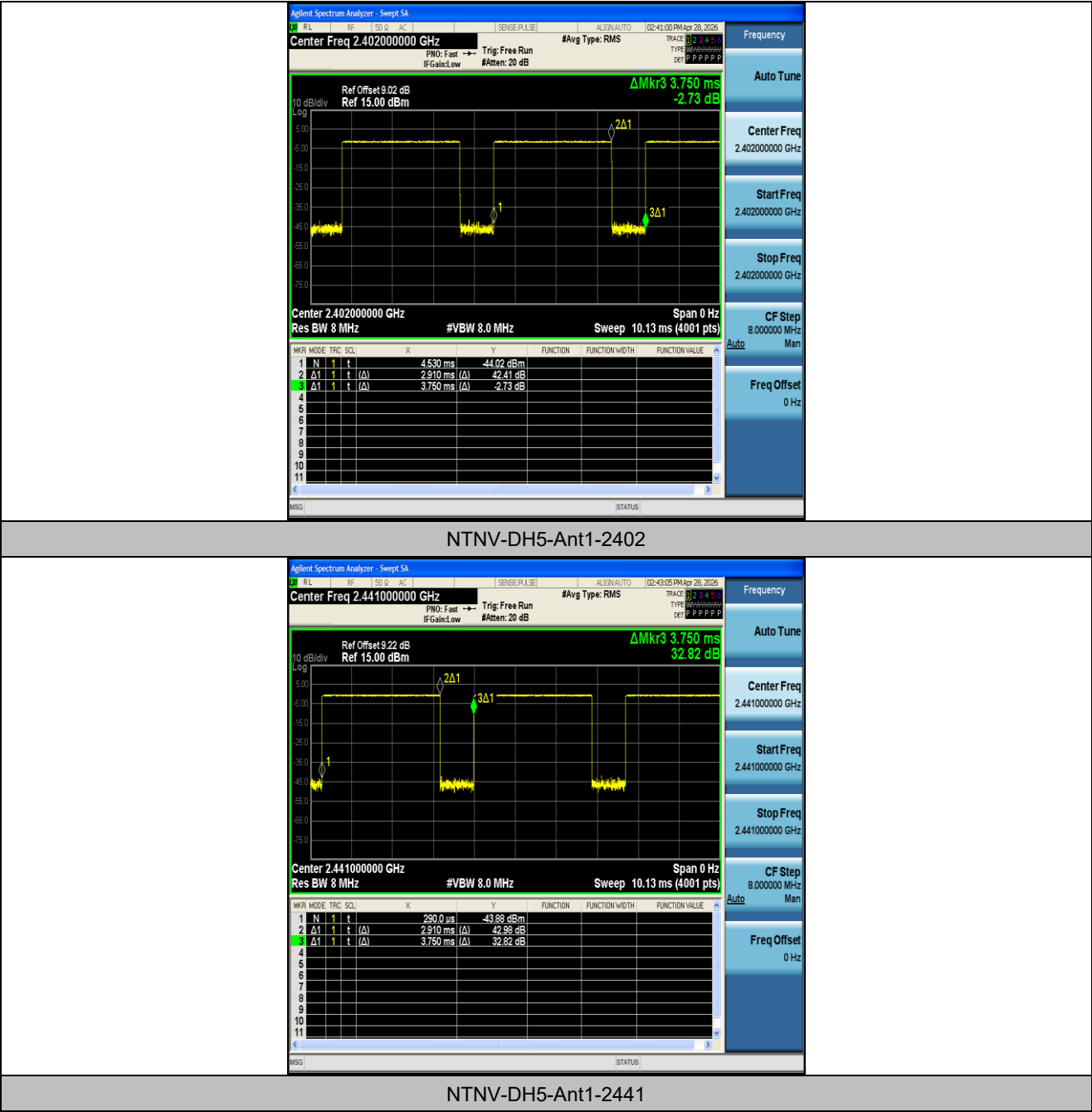
Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.91	3.75	77.60	1.10
DH5	Ant1	2441	2.91	3.75	77.60	1.10
DH5	Ant1	2480	2.91	3.75	77.60	1.10
2DH5	Ant1	2402	2.91	3.75	77.60	1.10
2DH5	Ant1	2441	2.91	3.74	77.81	1.09
2DH5	Ant1	2480	2.91	3.75	77.60	1.10
3DH5	Ant1	2402	2.92	3.75	77.87	1.09
3DH5	Ant1	2441	2.92	3.75	77.87	1.09
3DH5	Ant1	2480	2.91	3.75	77.60	1.10

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



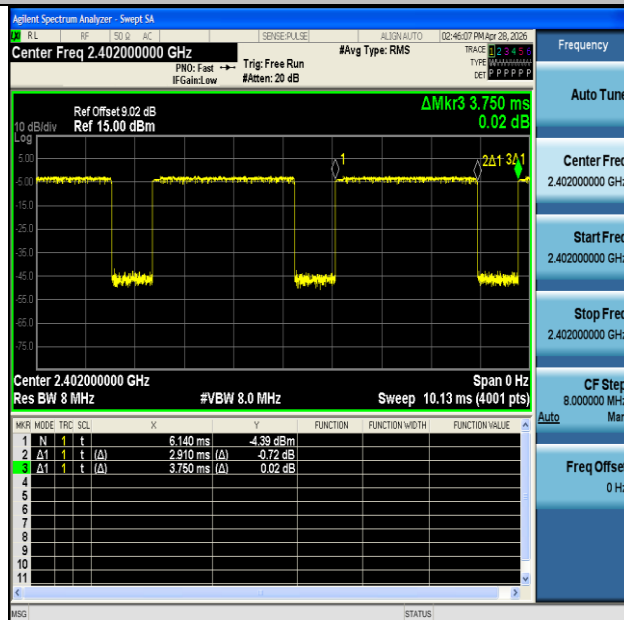


Test Graphs



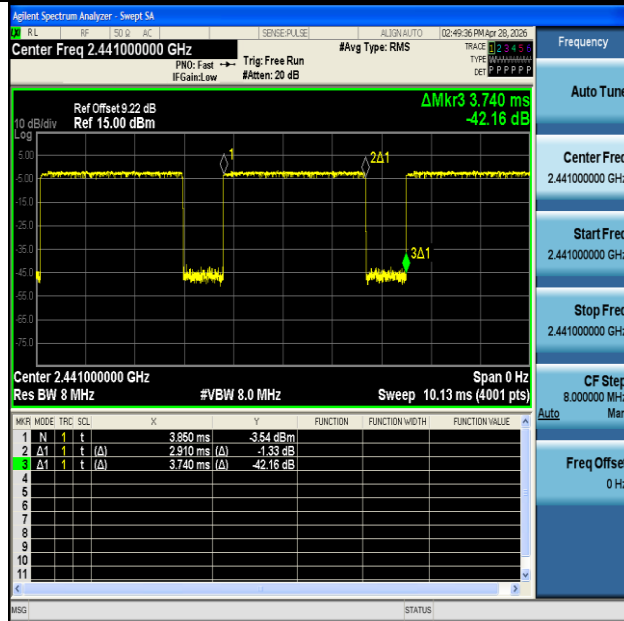


NTNV-DH5-Ant1-2480

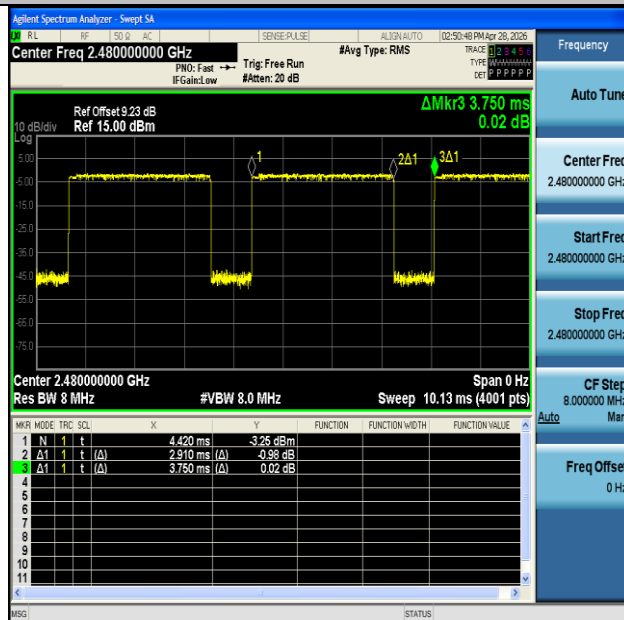


NTNV-2DH5-Ant1-2402



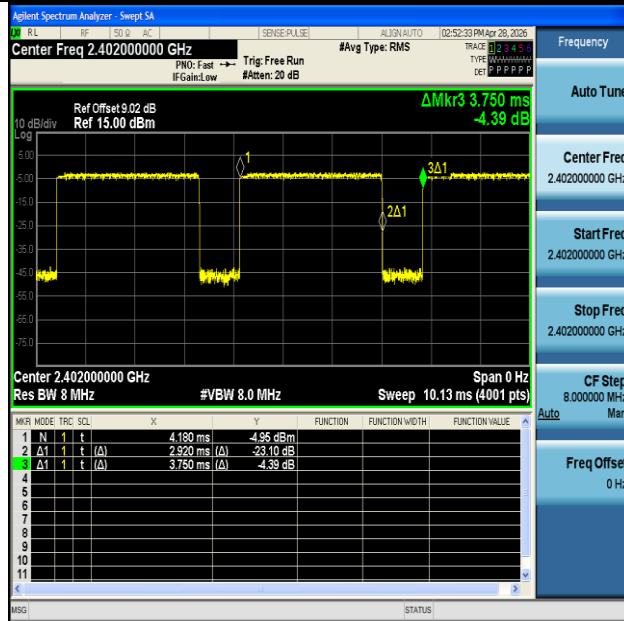


NTNV-2DH5-Ant1-2441

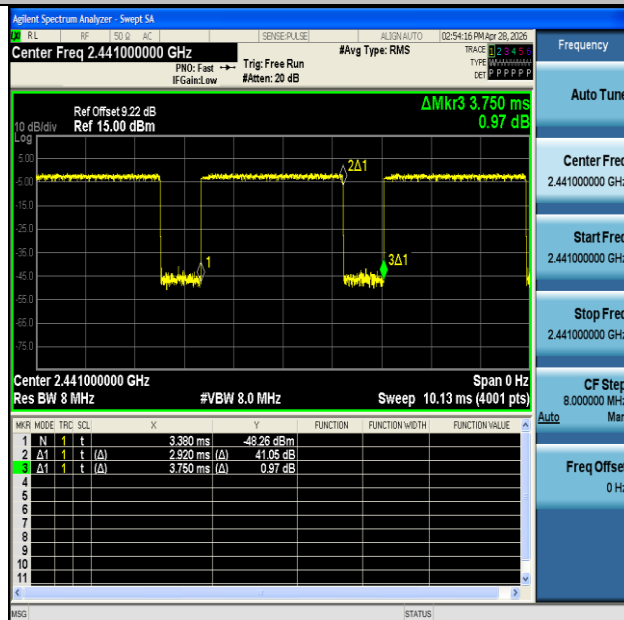


NTNV-2DH5-Ant1-2480



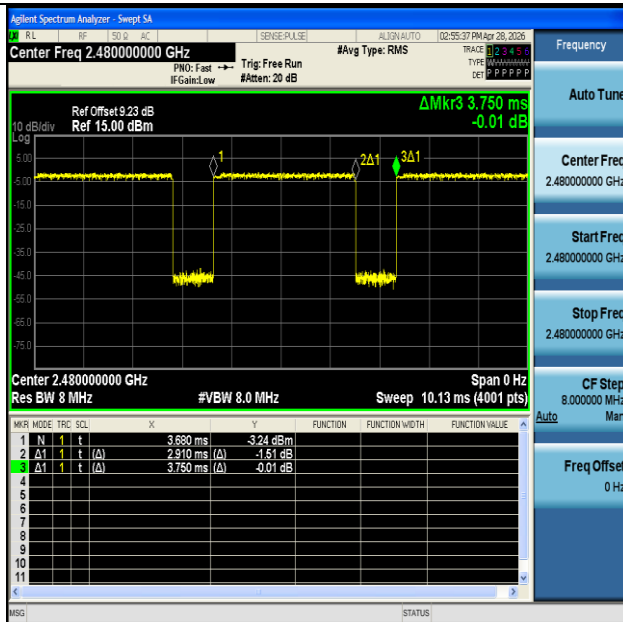


NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441





NTNV-3DH5-Ant1-2480

