

Appendix: Bluetooth classic

Contents

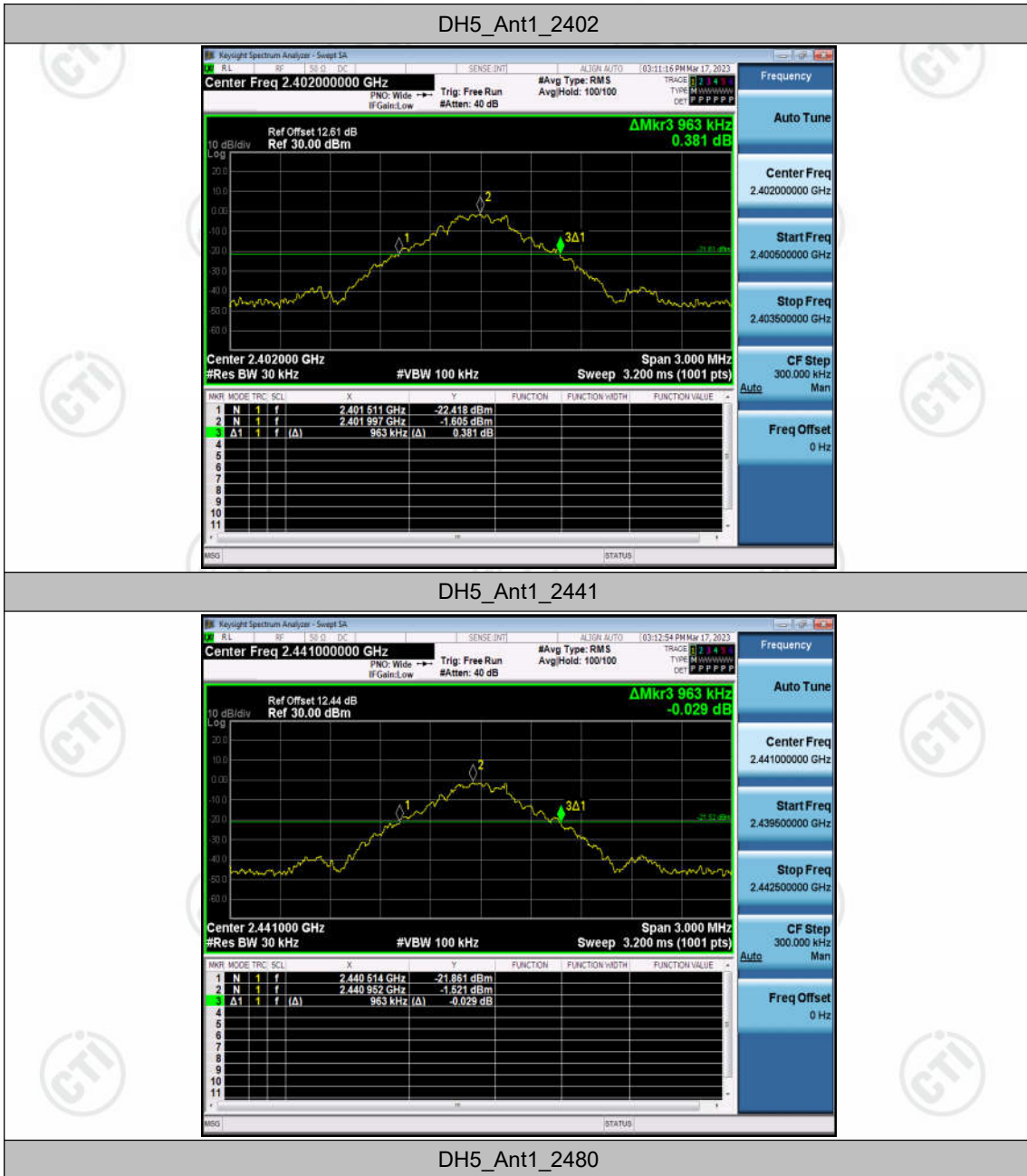
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Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.963	2401.511	2402.474	---	---
		2441	0.963	2440.514	2441.477	---	---
		2480	1.017	2479.451	2480.468	---	---
2DH5	Ant1	2402	1.266	2401.358	2402.624	---	---
		2441	1.275	2440.346	2441.621	---	---
		2480	1.281	2479.343	2480.624	---	---
3DH5	Ant1	2402	1.308	2401.325	2402.633	---	---
		2441	1.281	2440.331	2441.612	---	---
		2480	1.296	2479.328	2480.624	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



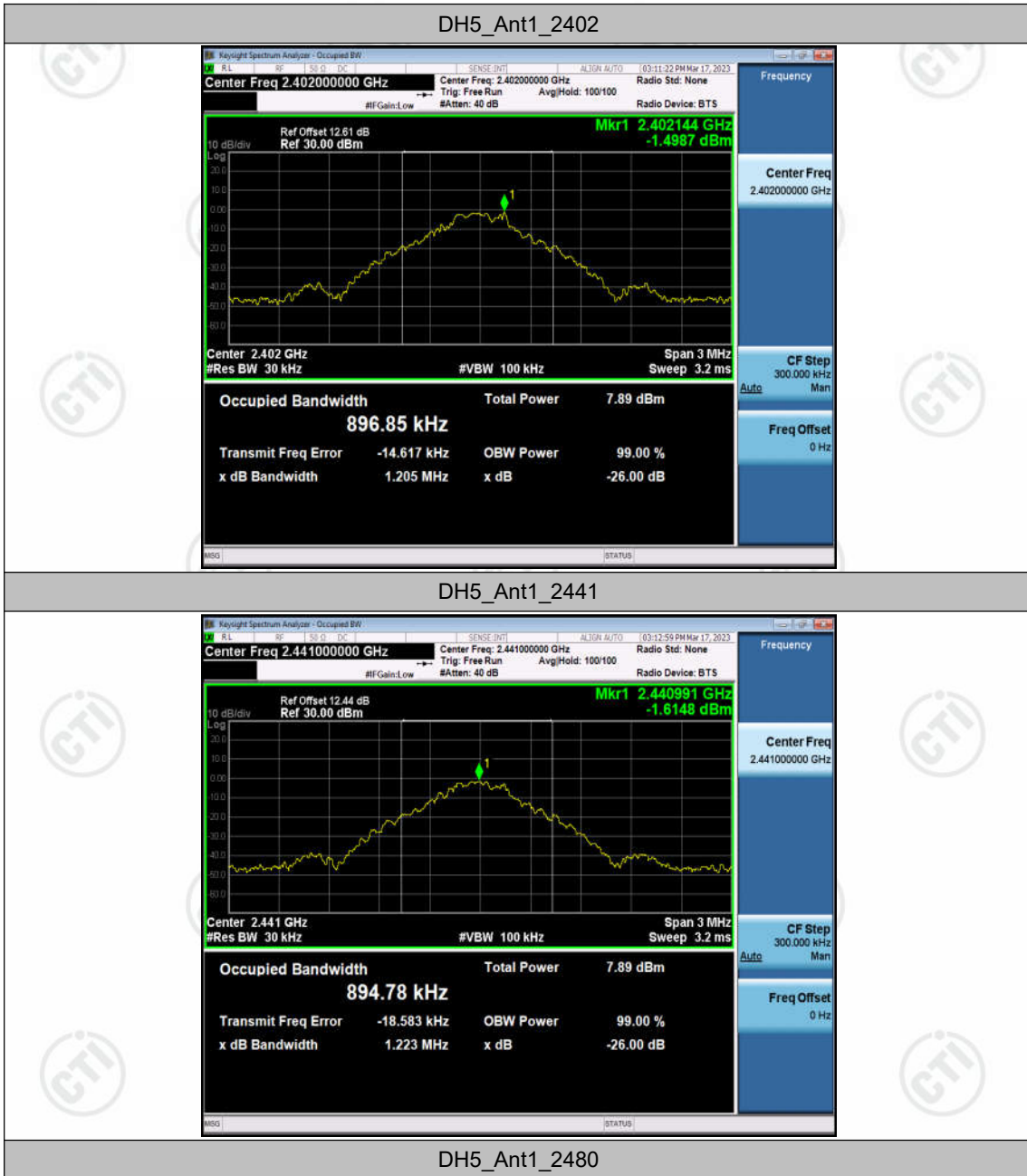
3DH5_Ant1_2480



Appendix B: Occupied Channel Bandwidth**Test Result**

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.89685	2401.5370	2402.4338	---	---
		2441	0.89478	2440.5340	2441.4288	---	---
		2480	0.90077	2479.5325	2480.4332	---	---
2DH5	Ant1	2402	1.1694	2401.3914	2402.5608	---	---
		2441	1.1737	2440.3917	2441.5654	---	---
		2480	1.1807	2479.3852	2480.5659	---	---
3DH5	Ant1	2402	1.1754	2401.3941	2402.5695	---	---
		2441	1.1876	2440.3838	2441.5714	---	---
		2480	1.1620	2479.3976	2480.5596	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



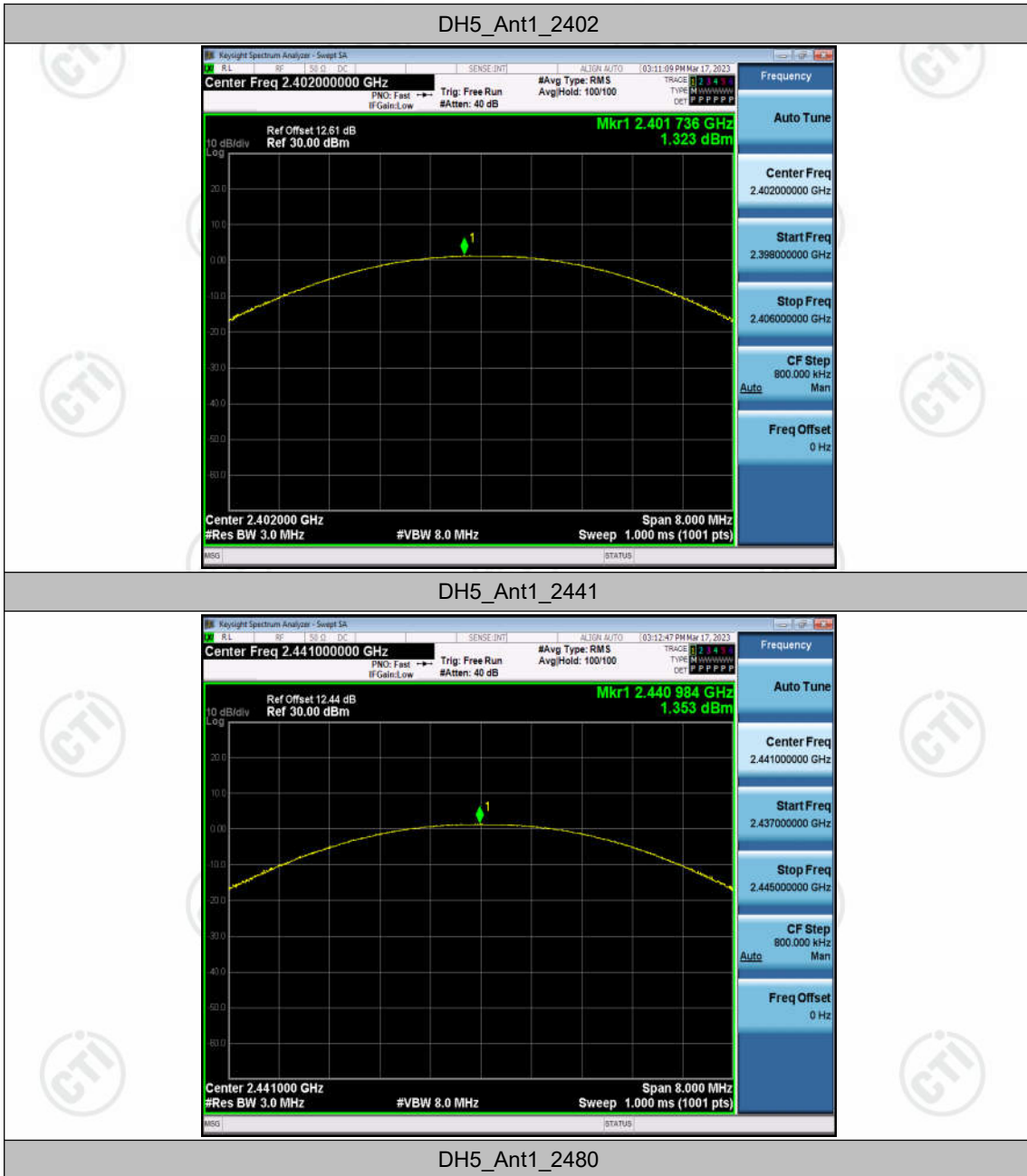
Appendix C: Maximum conducted output power

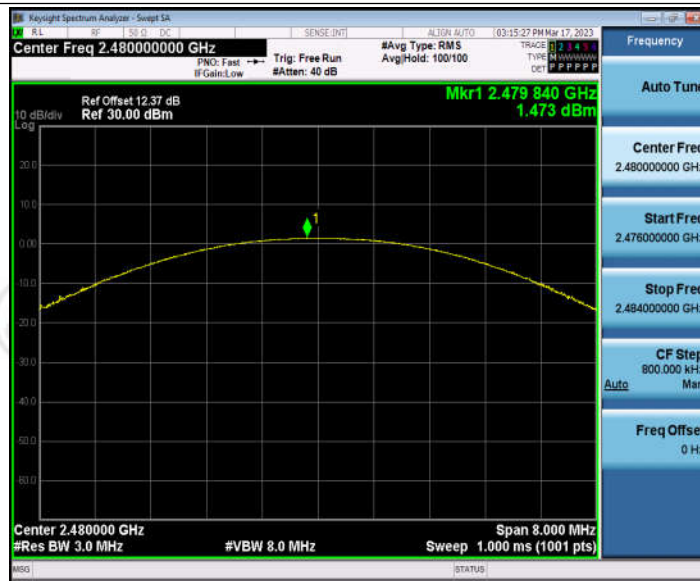
Test Result Peak

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power [dBm]	Conducted Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
DH5	Ant1	2402	1.32	≤30	3.37	≤36	PASS
		2441	1.35	≤20.97	3.40	≤36	PASS
		2480	1.47	≤20.97	3.52	≤36	PASS
2DH5	Ant1	2402	2.15	≤30	4.20	≤36	PASS
		2441	2.16	≤20.97	4.21	≤36	PASS
		2480	1.41	≤20.97	3.46	≤36	PASS
3DH5	Ant1	2402	2.25	≤30	4.30	≤36	PASS
		2441	2.29	≤20.97	4.34	≤36	PASS
		2480	1.52	≤20.97	3.57	≤36	PASS

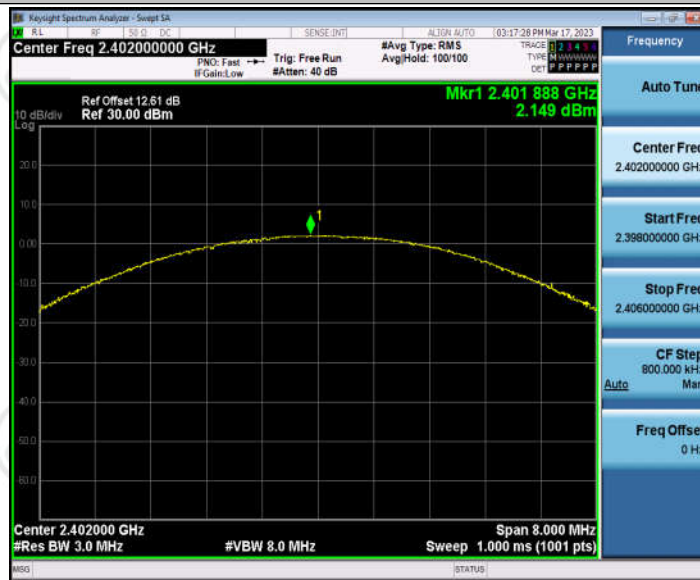
Note: $EIRP[dBm] = \text{Conducted Peak Power}[dBm] + \text{antenna gain}(dBi)$

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

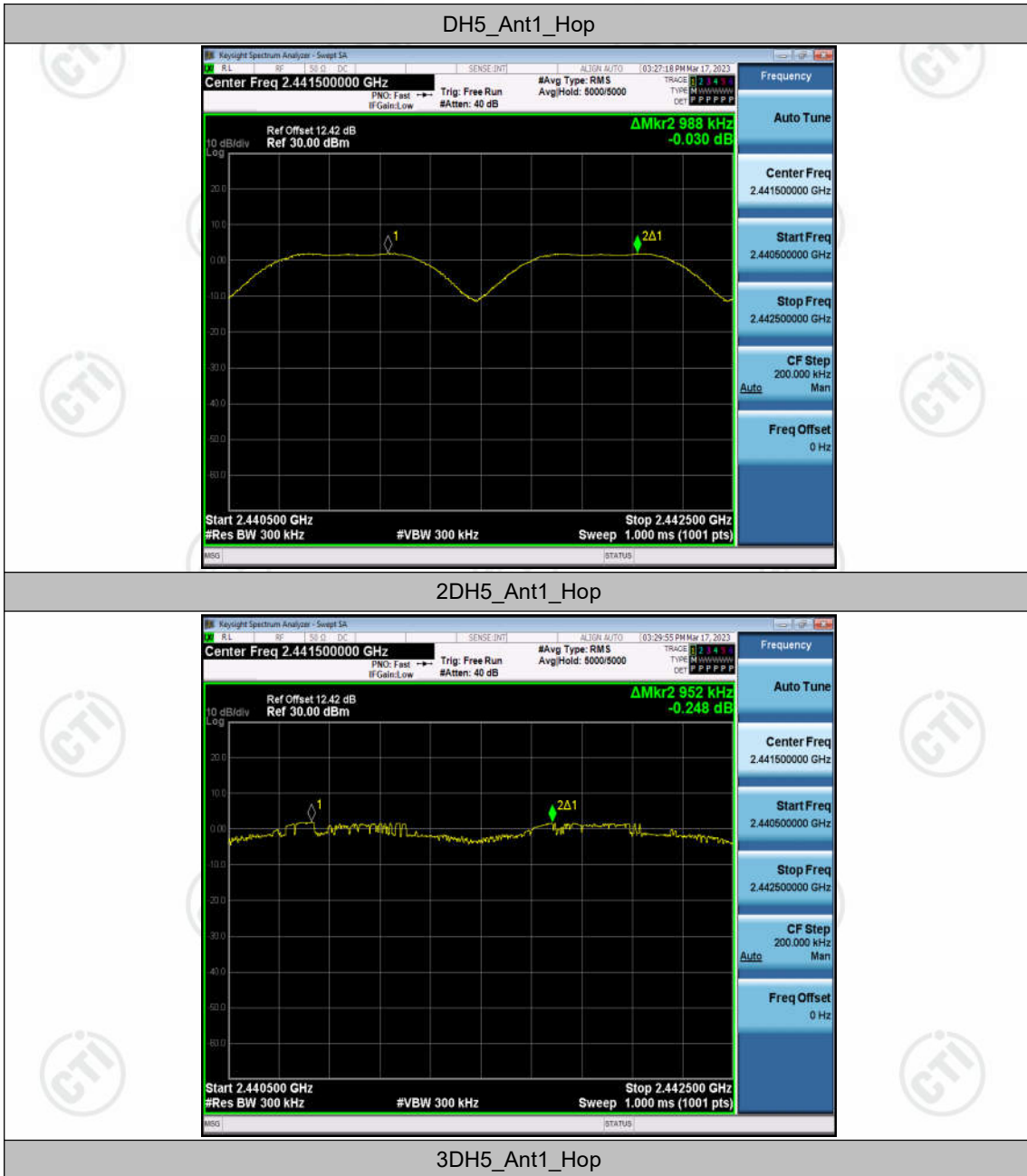


Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.988	≥0.678	PASS
2DH5	Ant1	Hop	0.952	≥0.854	PASS
3DH5	Ant1	Hop	1.004	≥0.872	PASS

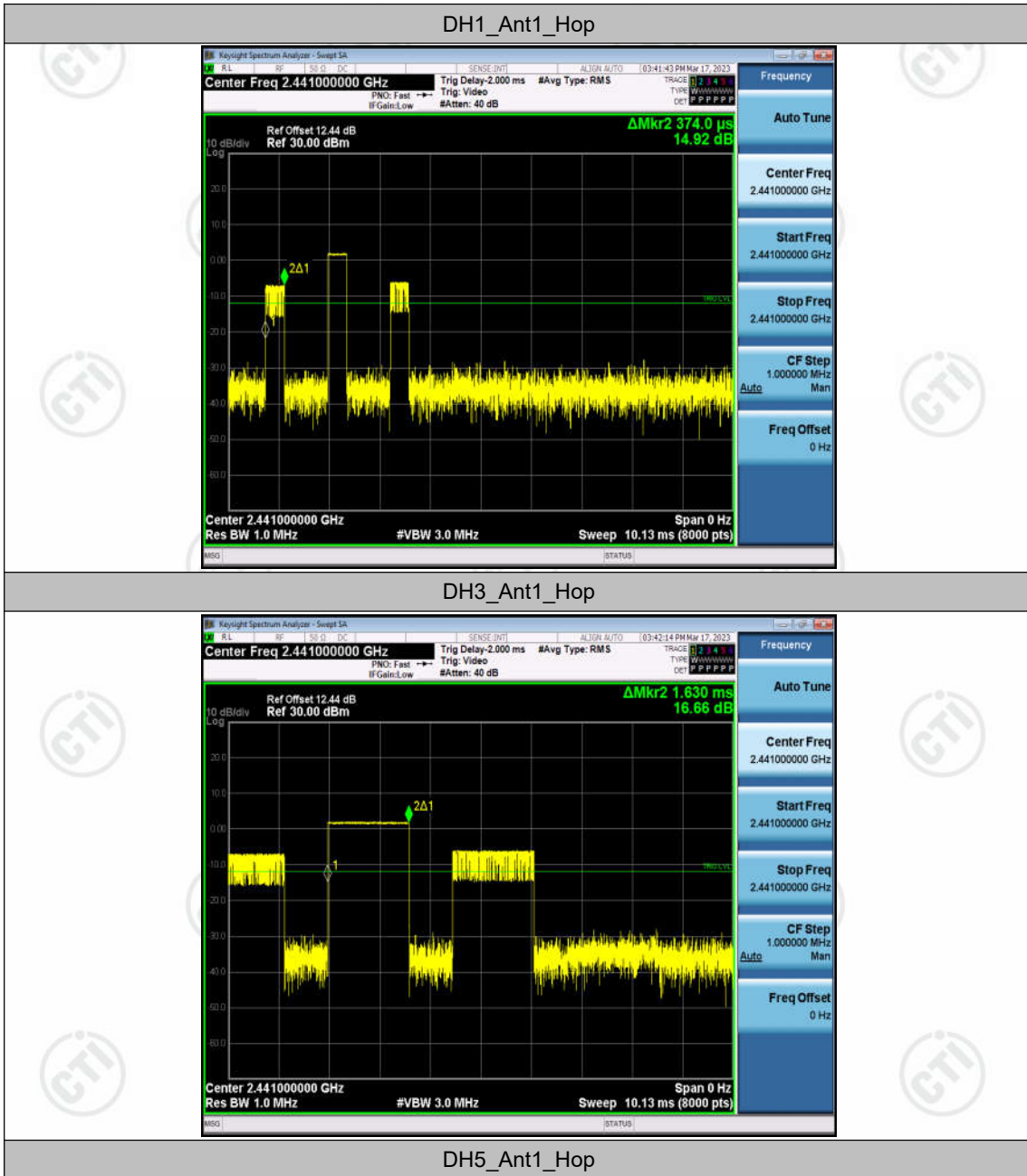
Test Graphs

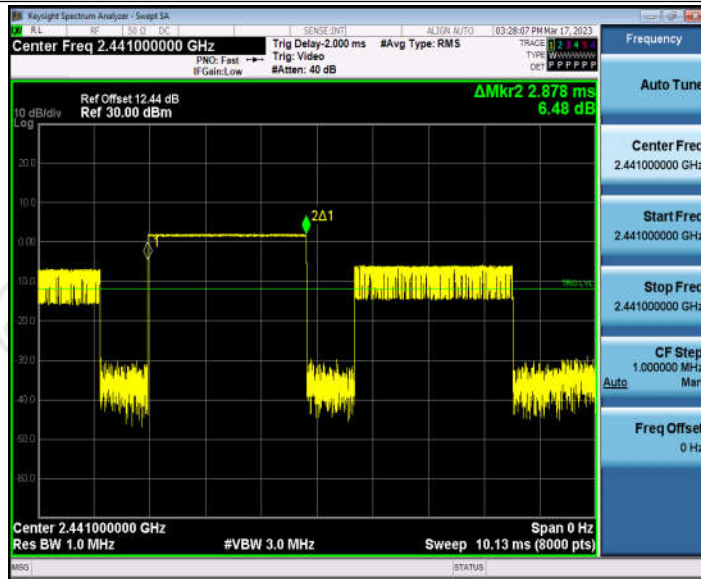


Appendix E: Time of occupancy**Test Result**

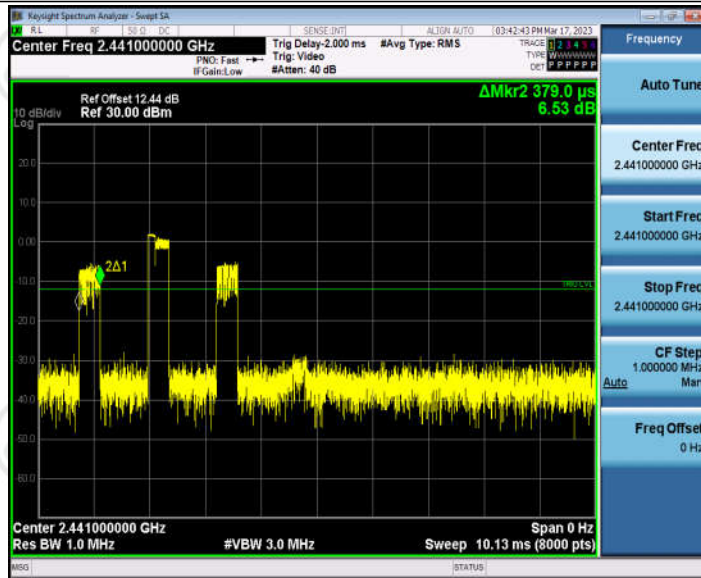
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.374	320	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.630	160	0.261	≤0.4	PASS
DH5	Ant1	Hop	2.878	106.67	0.307	≤0.4	PASS
2DH1	Ant1	Hop	0.379	320	0.121	≤0.4	PASS
2DH3	Ant1	Hop	1.631	160	0.261	≤0.4	PASS
2DH5	Ant1	Hop	2.879	106.67	0.307	≤0.4	PASS
3DH1	Ant1	Hop	0.379	320	0.121	≤0.4	PASS
3DH3	Ant1	Hop	1.631	160	0.261	≤0.4	PASS
3DH5	Ant1	Hop	2.882	106.67	0.307	≤0.4	PASS

Test Graphs





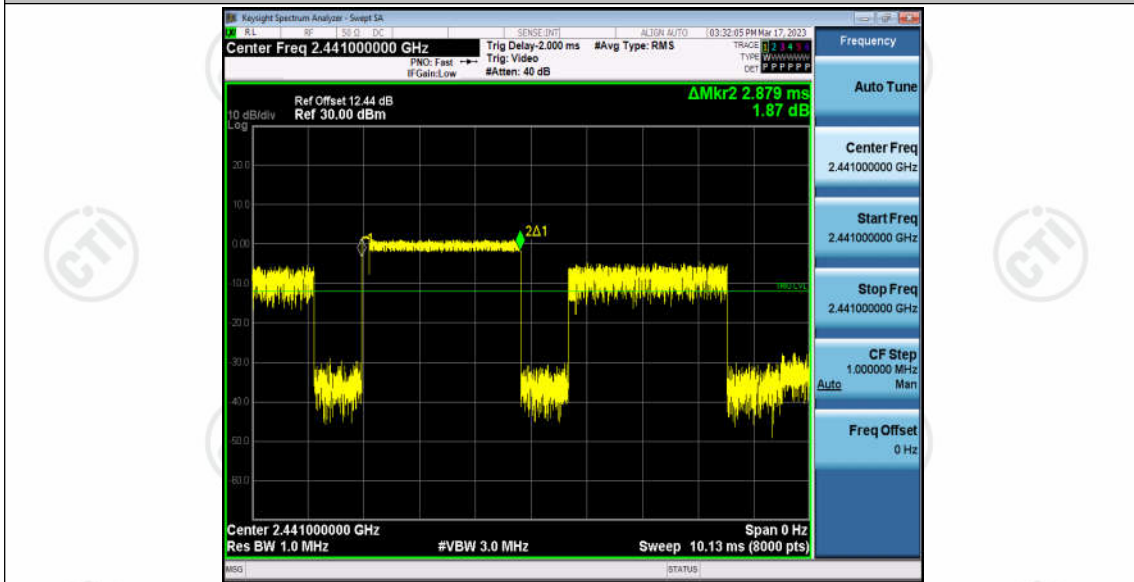
2DH1_Ant1_Hop



2DH3_Ant1_Hop



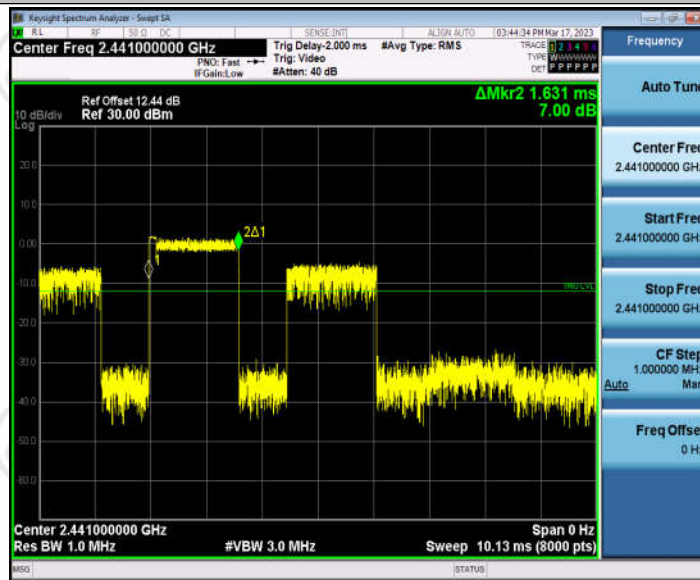
2DH5_Ant1_Hop



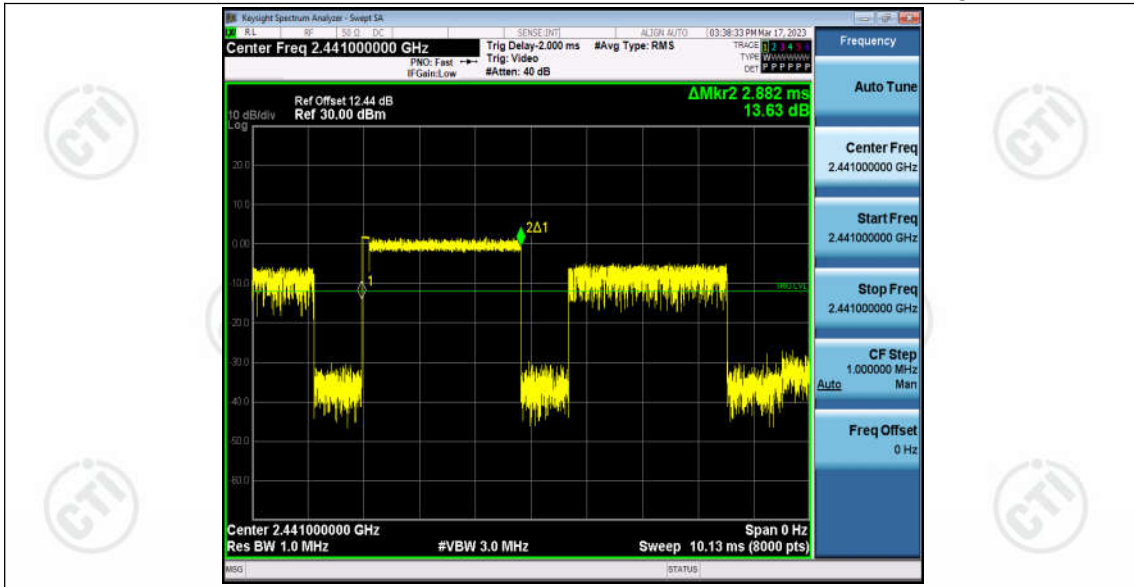
3DH1_Ant1_Hop



3DH3_Ant1_Hop



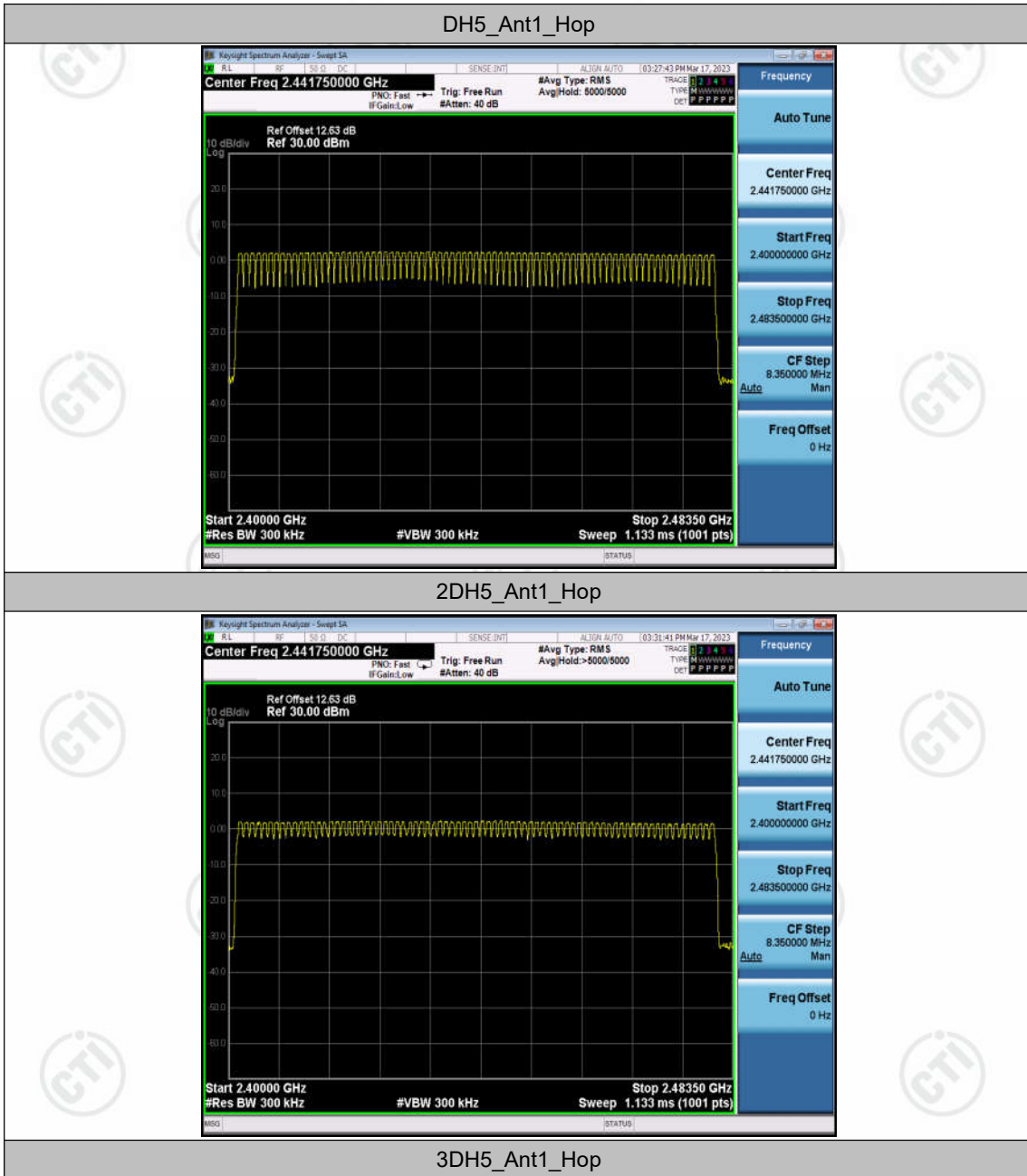
3DH5_Ant1_Hop

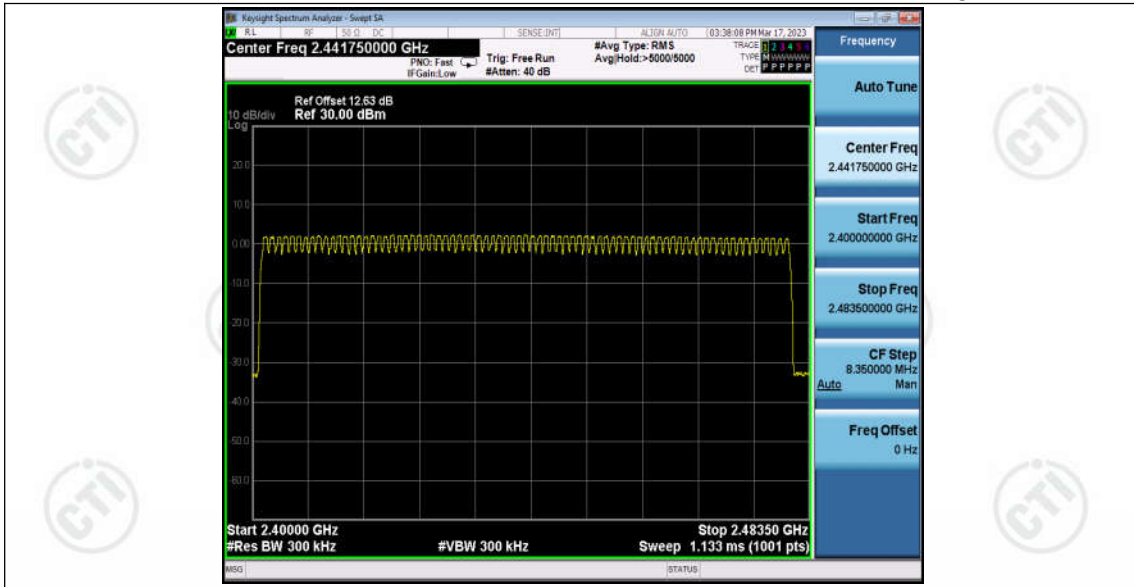


Appendix F: Number of hopping channels**Test Result**

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



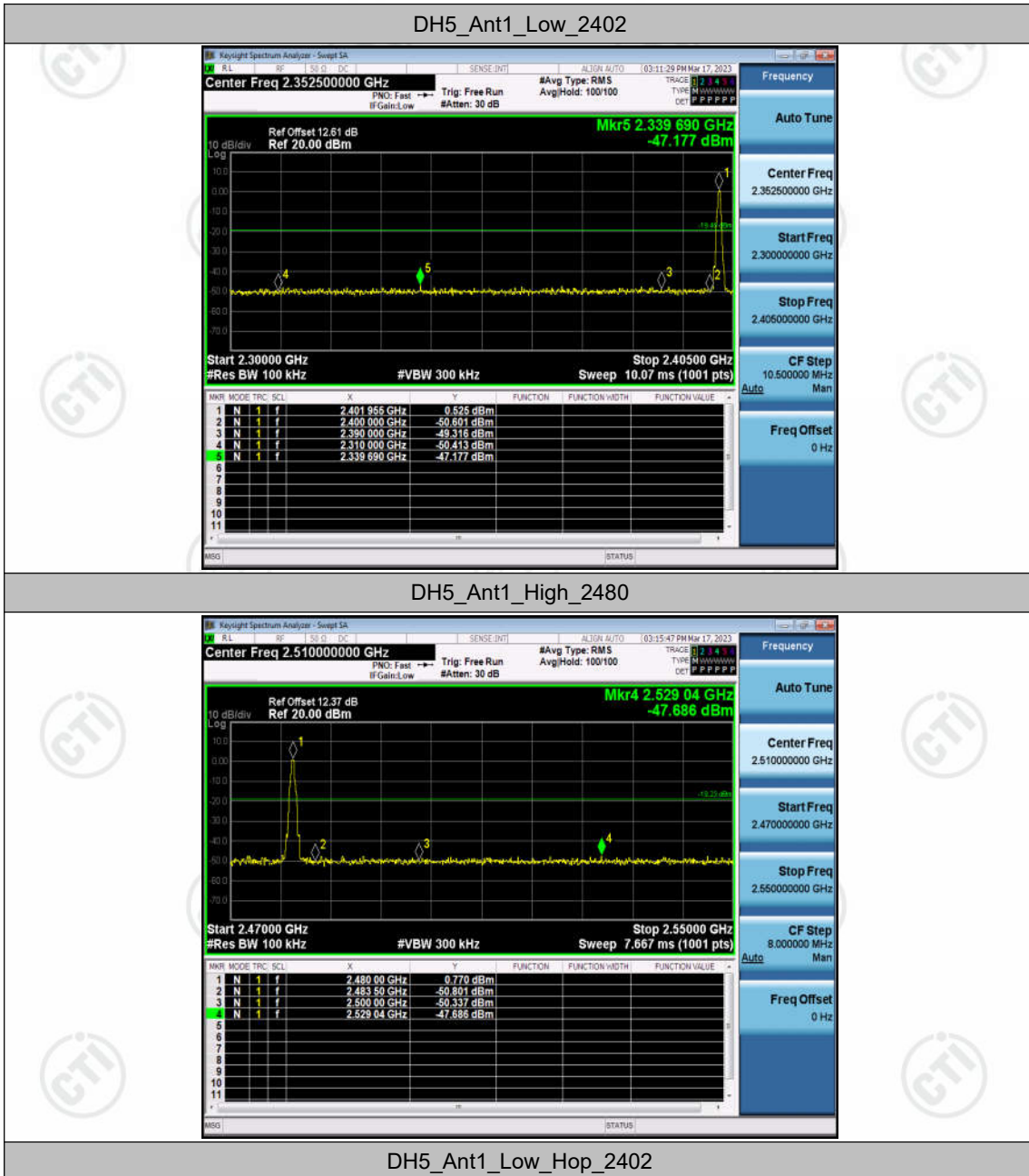


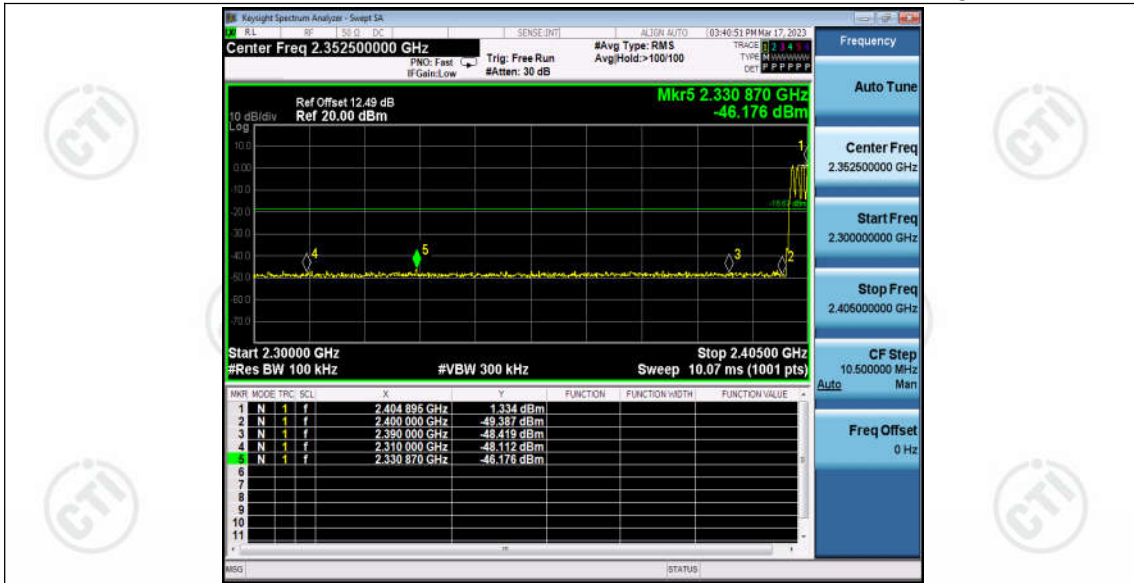
Appendix G: Band edge measurements

Test Result

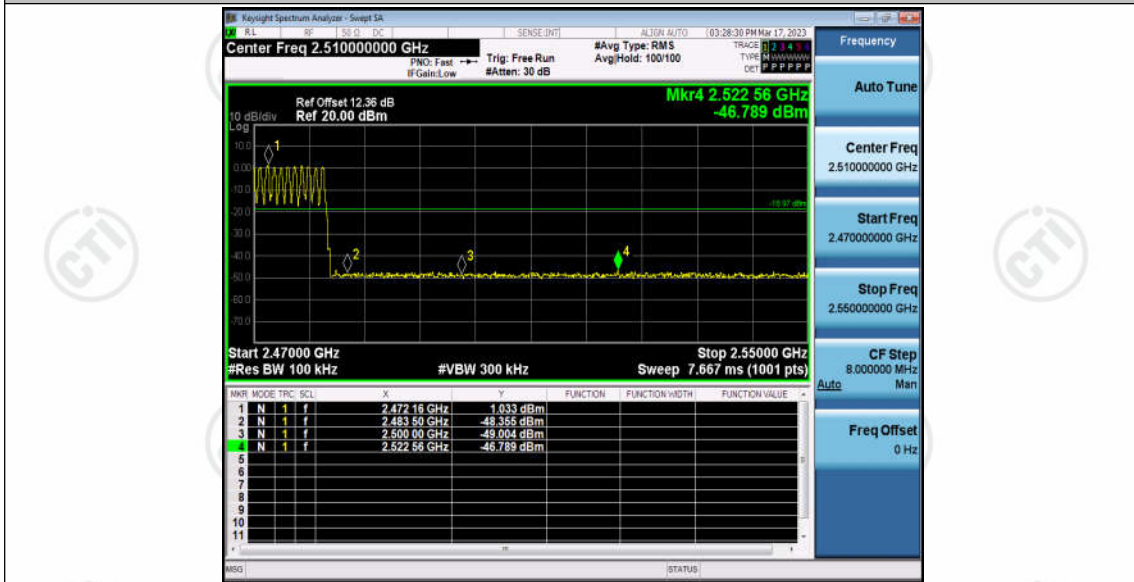
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.53	-47.18	≤-19.48	PASS
		High	2480	0.77	-47.69	≤-19.23	PASS
		Low	Hop_2402	1.33	-46.18	≤-18.67	PASS
		High	Hop_2480	1.03	-46.79	≤-18.97	PASS
2DH5	Ant1	Low	2402	1.14	-46.78	≤-18.86	PASS
		High	2480	1.02	-47.59	≤-18.99	PASS
		Low	Hop_2402	1.27	-46.11	≤-18.73	PASS
		High	Hop_2480	1.05	-45.53	≤-18.95	PASS
3DH5	Ant1	Low	2402	1.74	-46.6	≤-18.26	PASS
		High	2480	1.03	-47.04	≤-18.98	PASS
		Low	Hop_2402	1.58	-45.8	≤-18.42	PASS
		High	Hop_2480	1.12	-46.38	≤-18.88	PASS

Test Graphs

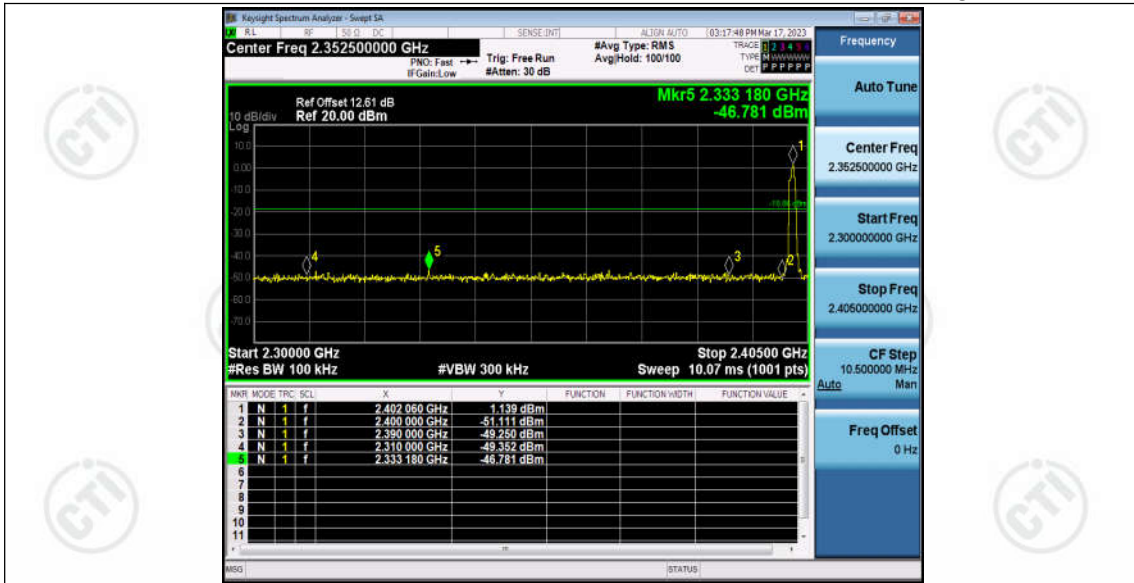




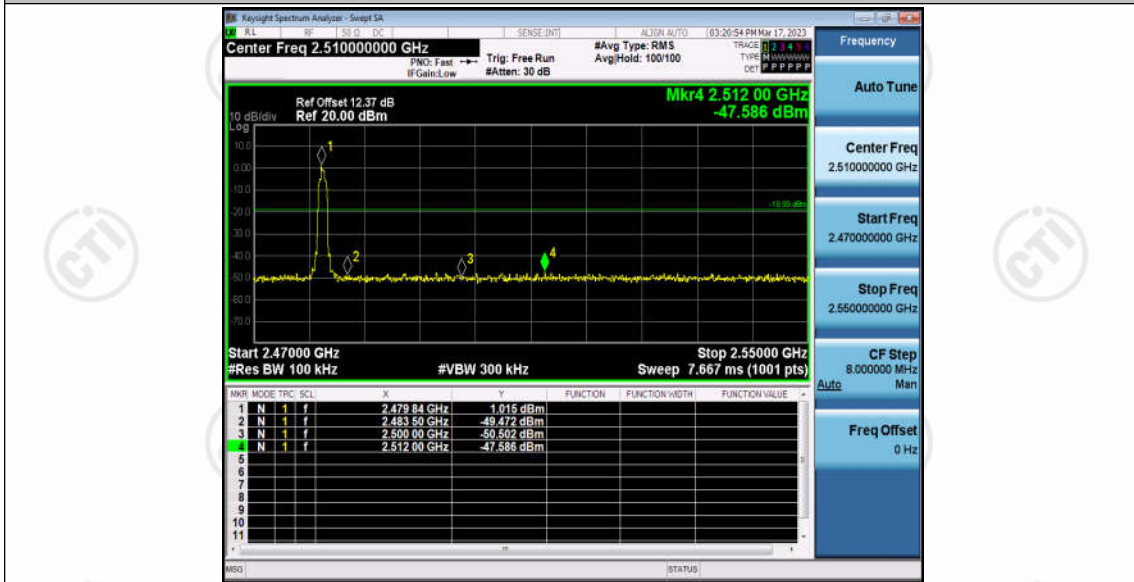
DH5_Ant1_High_Hop_2480



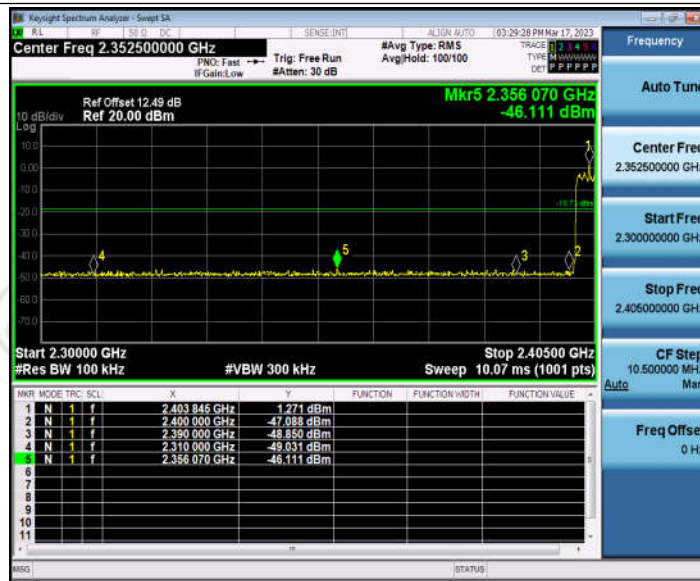
2DH5_Ant1_Low_2402



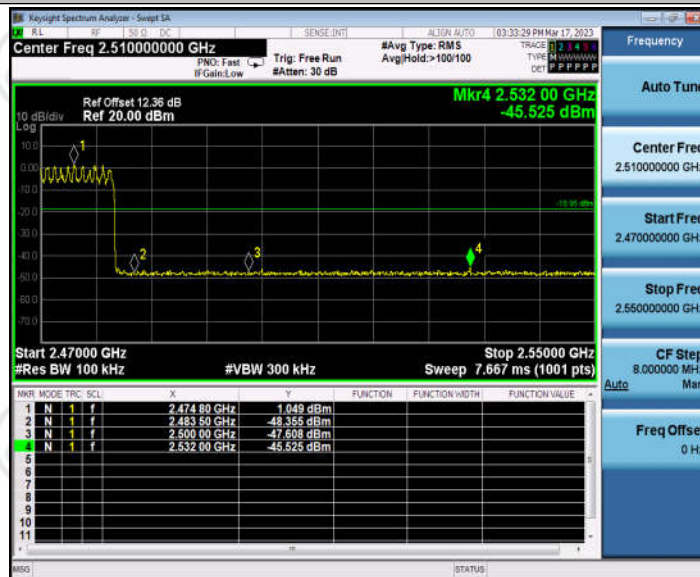
2DH5_Ant1_High_2480



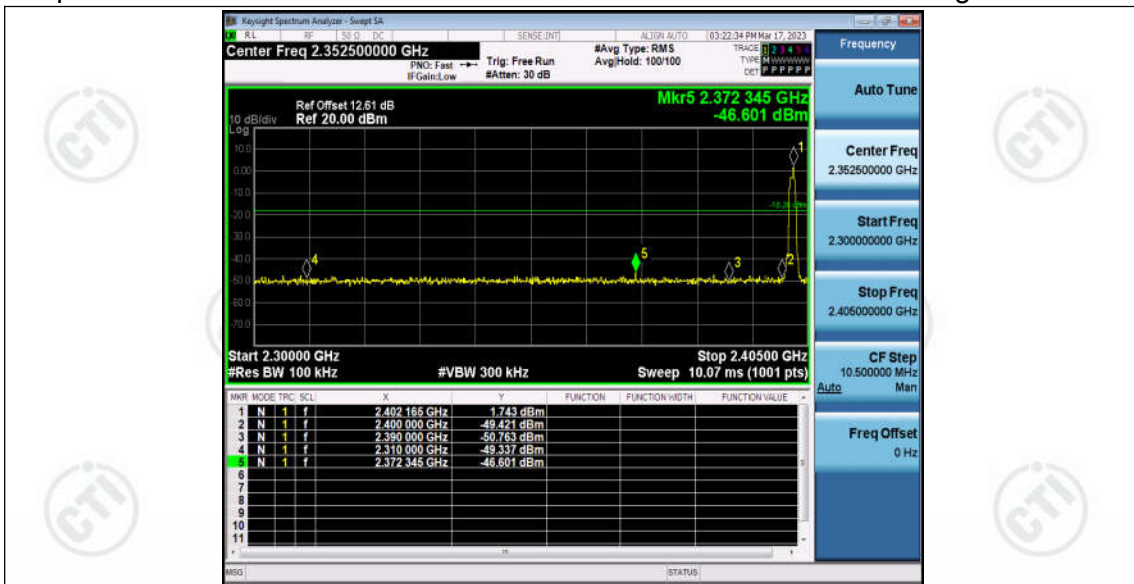
2DH5_Ant1_Low_Hop_2402



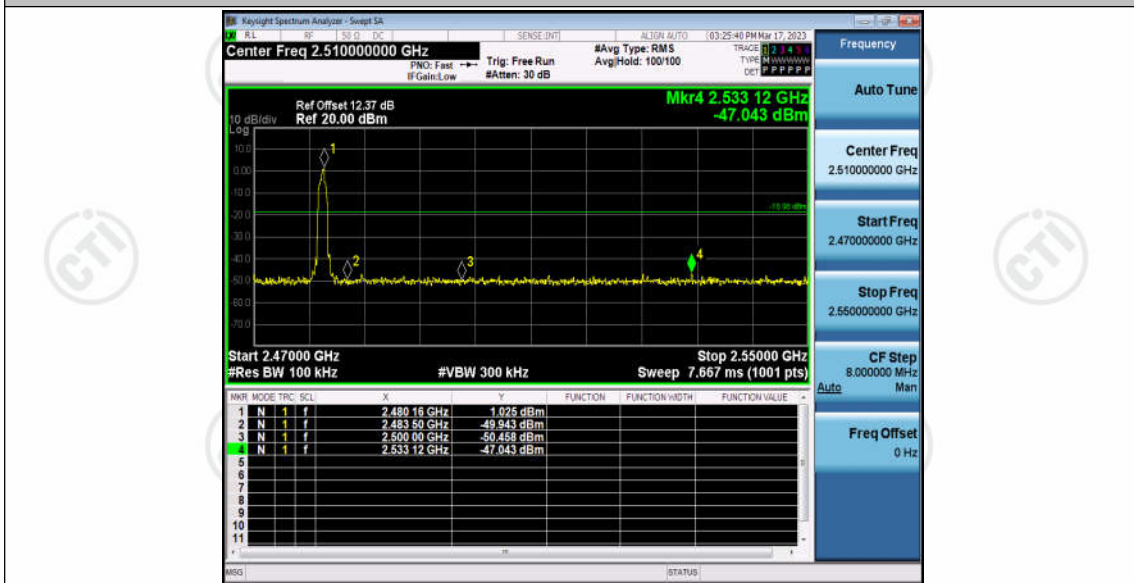
2DH5_Ant1_High_Hop_2480



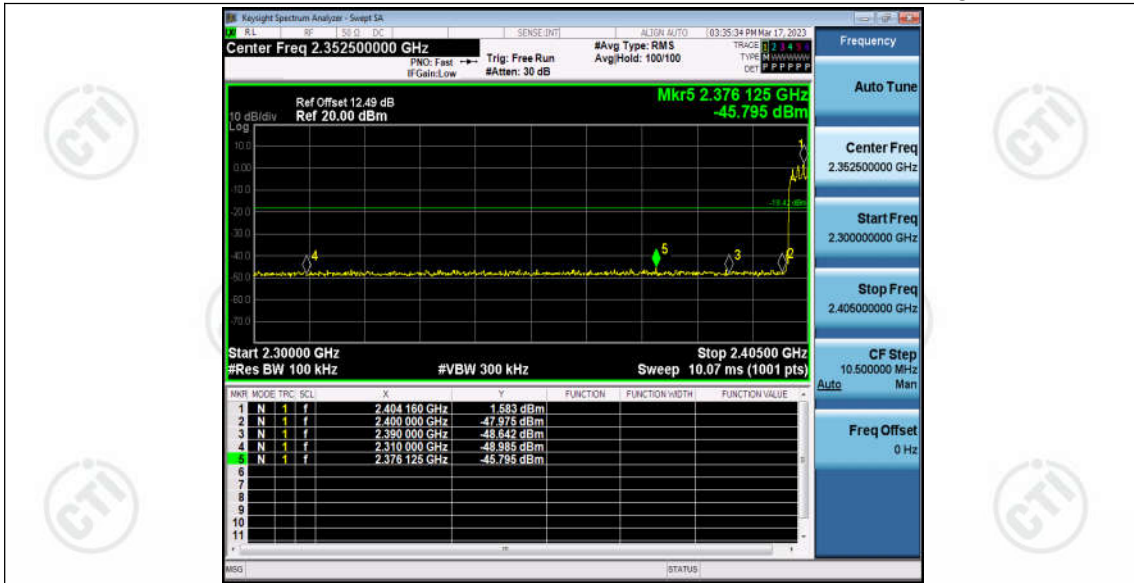
3DH5_Ant1_Low_2402



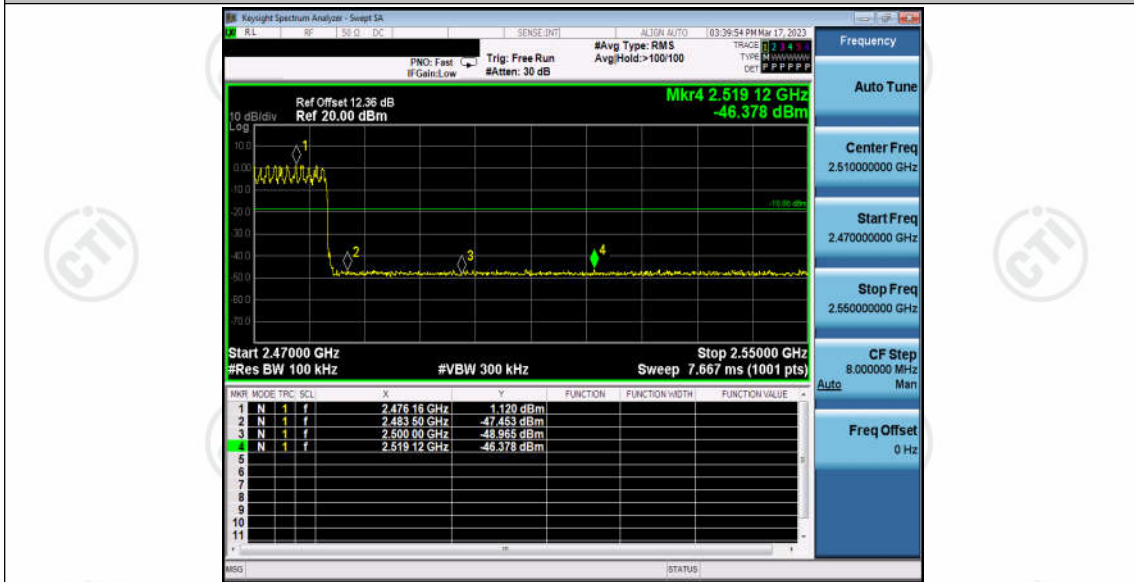
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

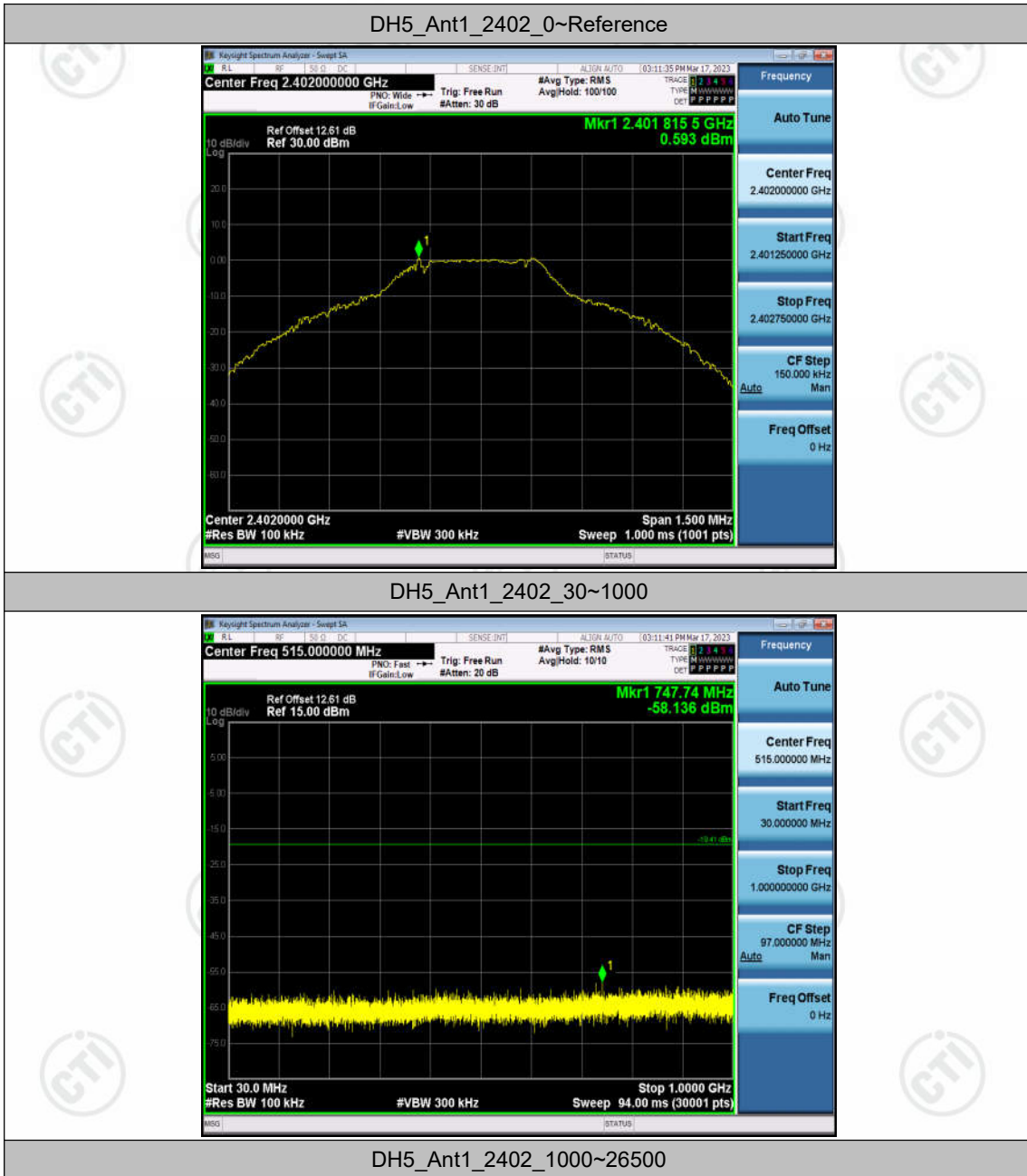


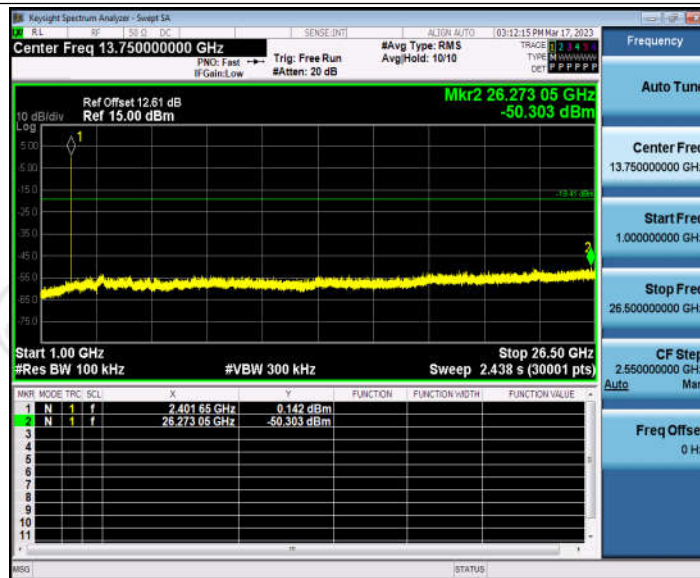
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.59	0.59	---	PASS
			30~1000	0.59	-58.14	≤-19.41	PASS
			1000~26500	0.59	-50.3	≤-19.41	PASS
		2441	Reference	0.91	0.91	---	PASS
			30~1000	0.91	-58.99	≤-19.09	PASS
			1000~26500	0.91	-50.08	≤-19.09	PASS
		2480	Reference	0.99	0.99	---	PASS
			30~1000	0.99	-58.93	≤-19.01	PASS
			1000~26500	0.99	-50.66	≤-19.01	PASS
2DH5	Ant1	2402	Reference	1.74	1.74	---	PASS
			30~1000	1.74	-58.78	≤-18.26	PASS
			1000~26500	1.74	-50.39	≤-18.26	PASS
		2441	Reference	1.85	1.85	---	PASS
			30~1000	1.85	-58.51	≤-18.15	PASS
			1000~26500	1.85	-50.18	≤-18.15	PASS
		2480	Reference	0.96	0.96	---	PASS
			30~1000	0.96	-58.65	≤-19.04	PASS
			1000~26500	0.96	-51.09	≤-19.04	PASS
3DH5	Ant1	2402	Reference	1.59	1.59	---	PASS
			30~1000	1.59	-58.79	≤-18.41	PASS
			1000~26500	1.59	-50.79	≤-18.41	PASS
		2441	Reference	1.73	1.73	---	PASS
			30~1000	1.73	-59.16	≤-18.27	PASS
			1000~26500	1.73	-49.96	≤-18.27	PASS
		2480	Reference	0.97	0.97	---	PASS
			30~1000	0.97	-58.77	≤-19.03	PASS
			1000~26500	0.97	-50.84	≤-19.03	PASS

Test Graphs

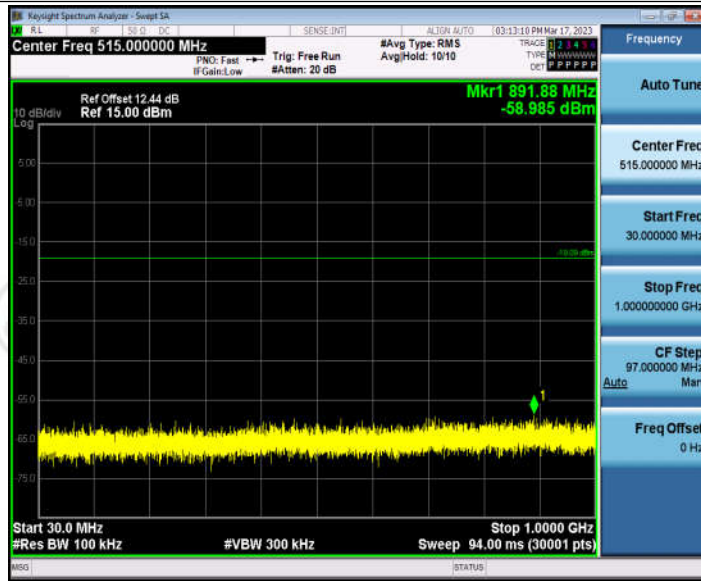




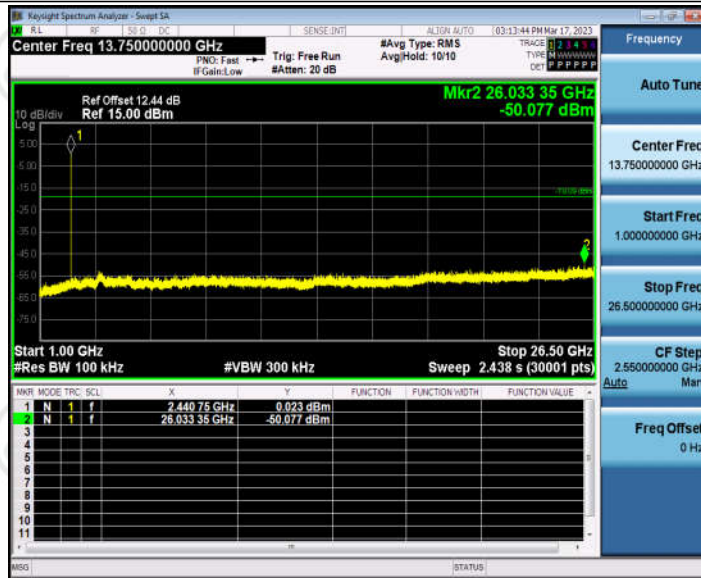
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



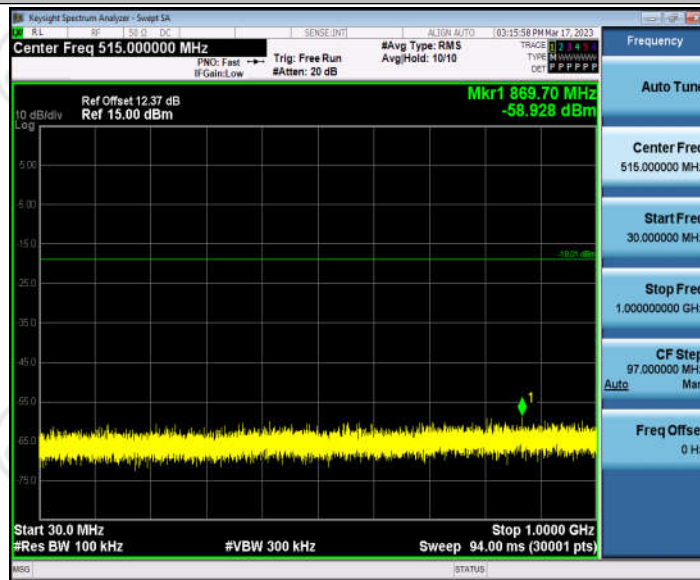
DH5_Ant1_2441_1000~26500



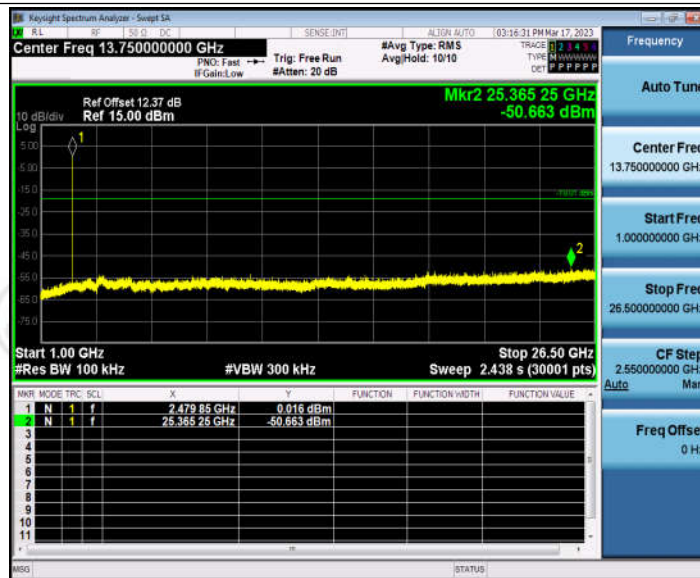
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



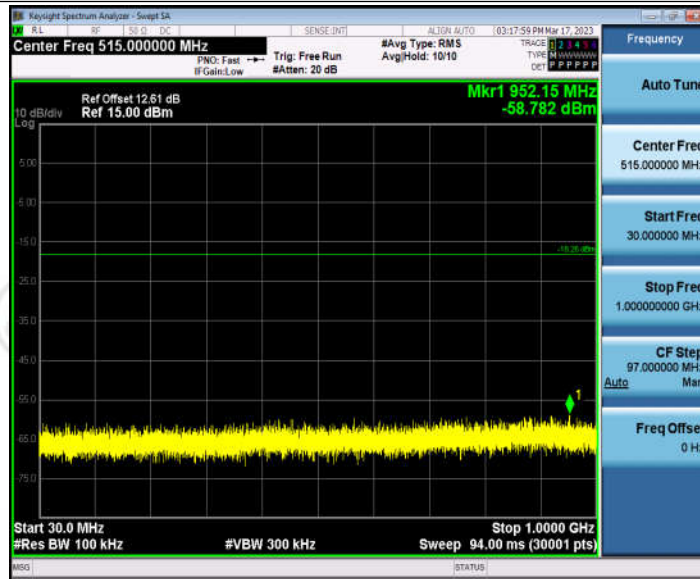
DH5_Ant1_2480_1000~26500



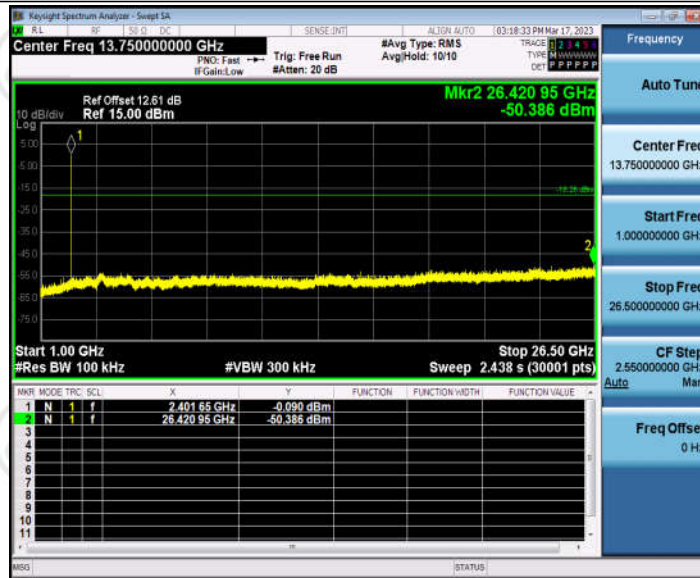
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



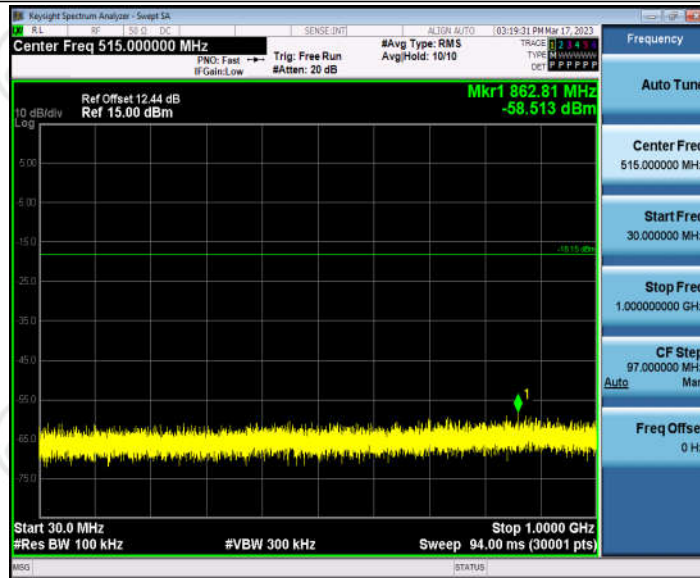
2DH5_Ant1_2402_1000~26500



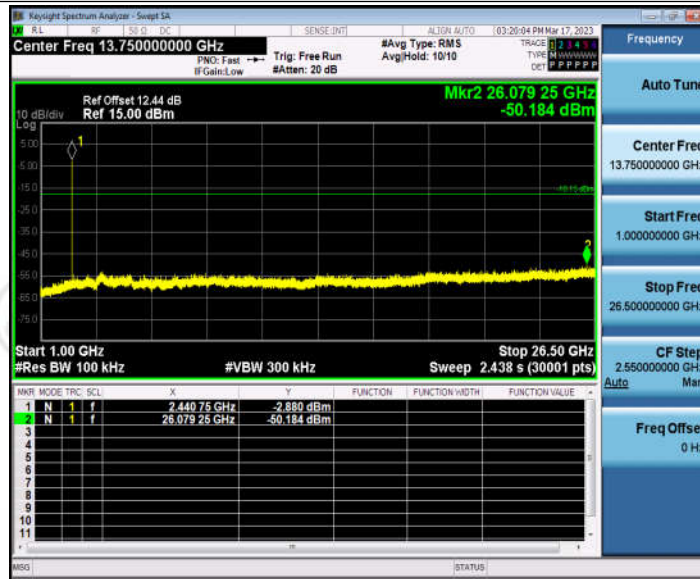
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



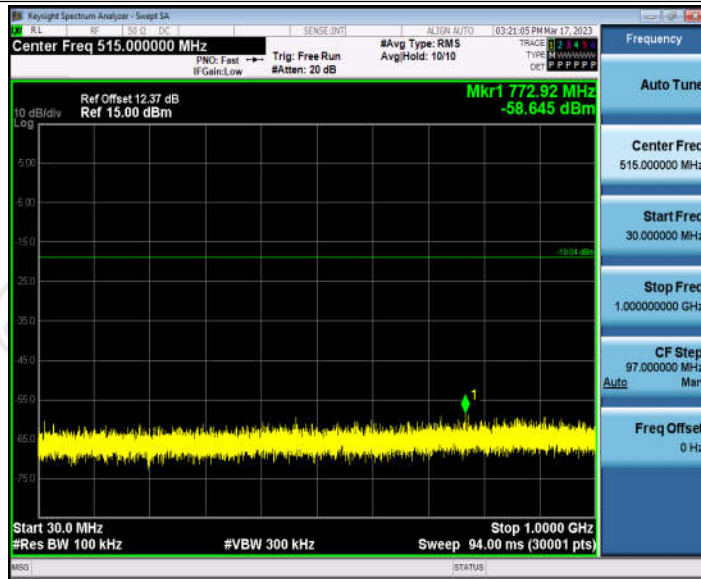
2DH5_Ant1_2441_1000~26500



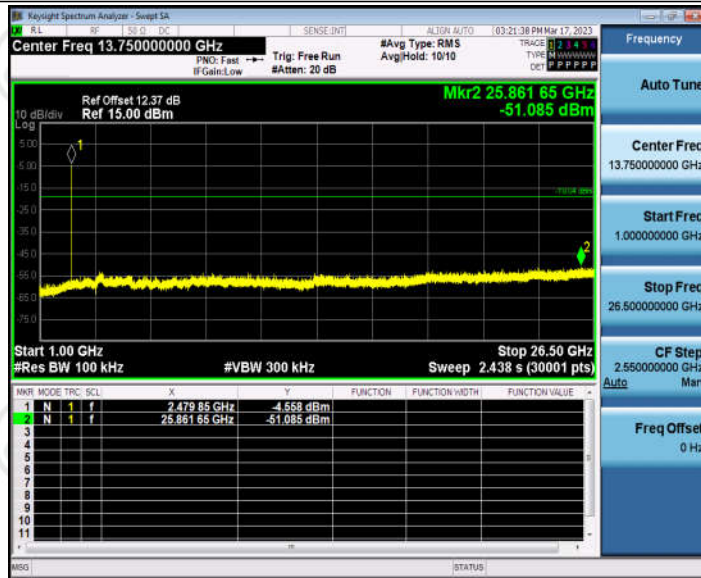
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



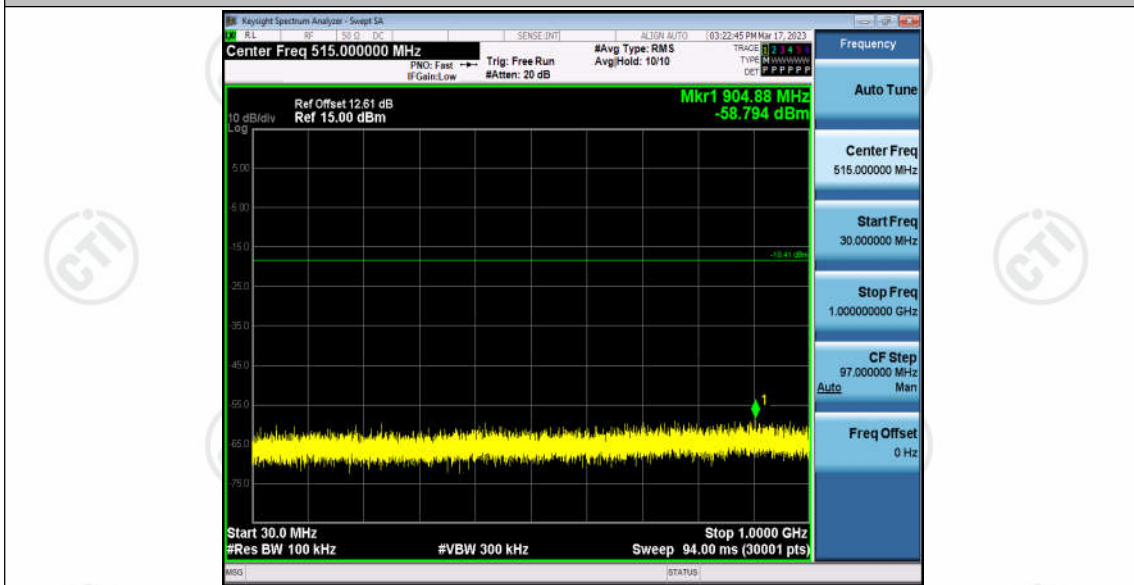
2DH5_Ant1_2480_1000~26500



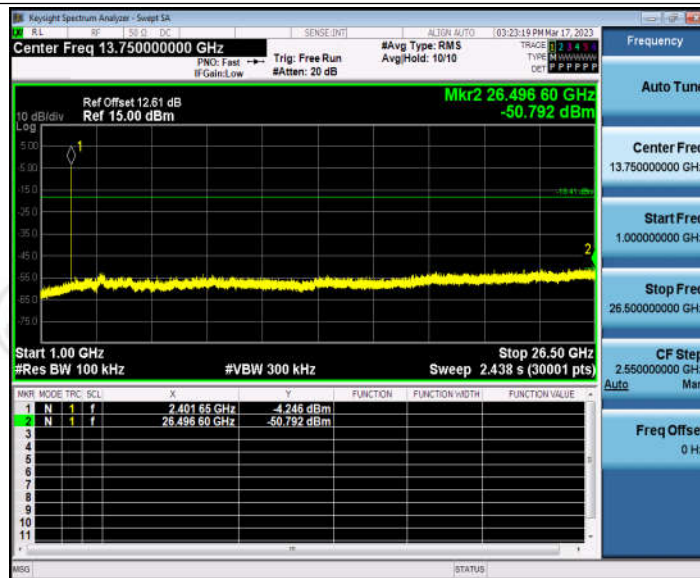
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



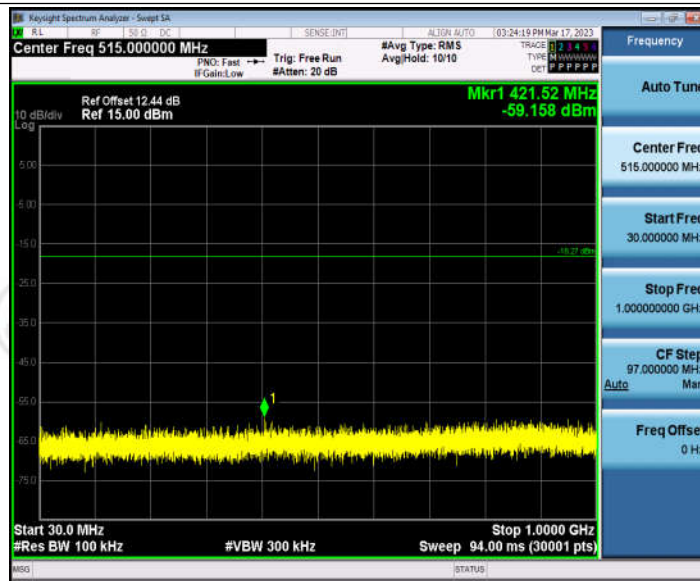
3DH5_Ant1_2402_1000~26500



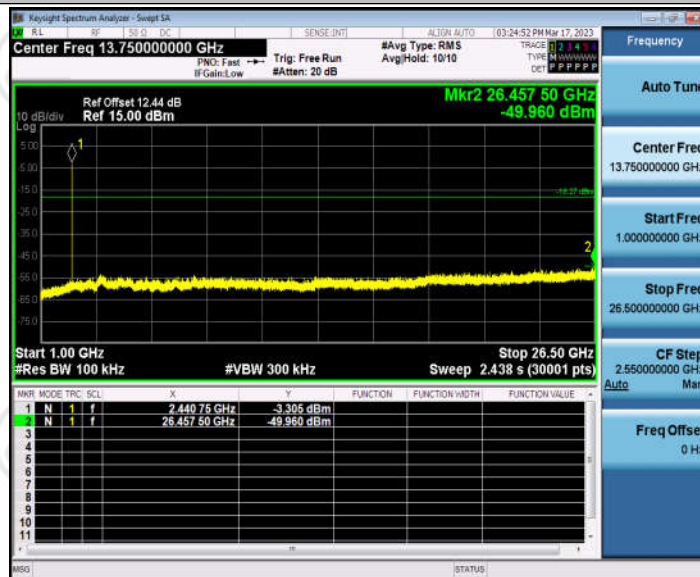
3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



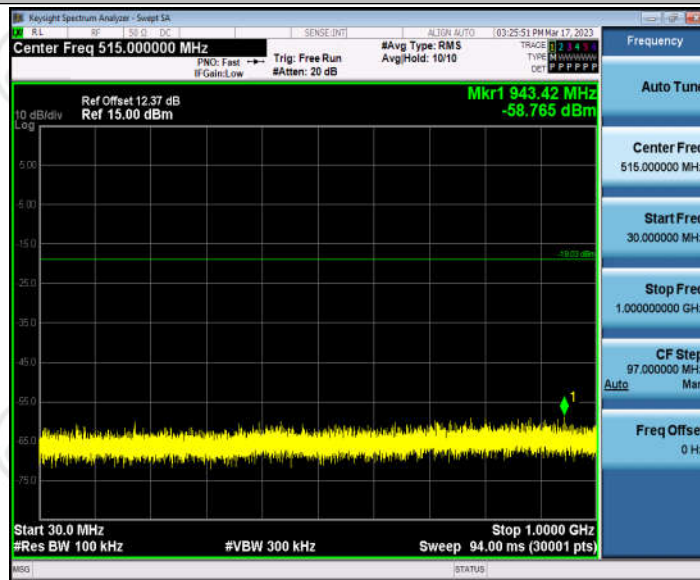
3DH5_Ant1_2441_1000~26500



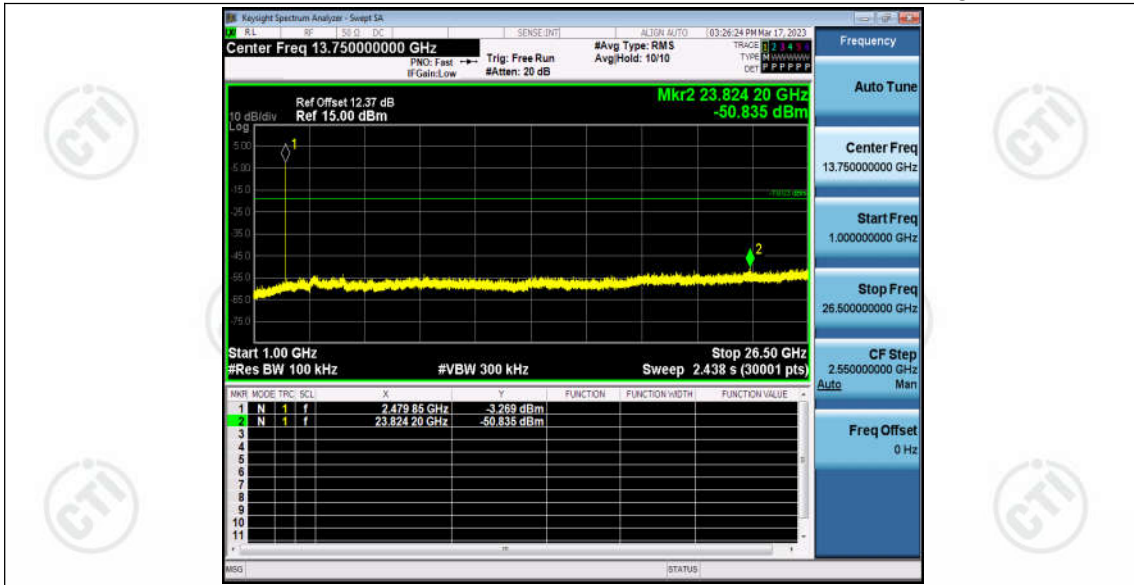
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



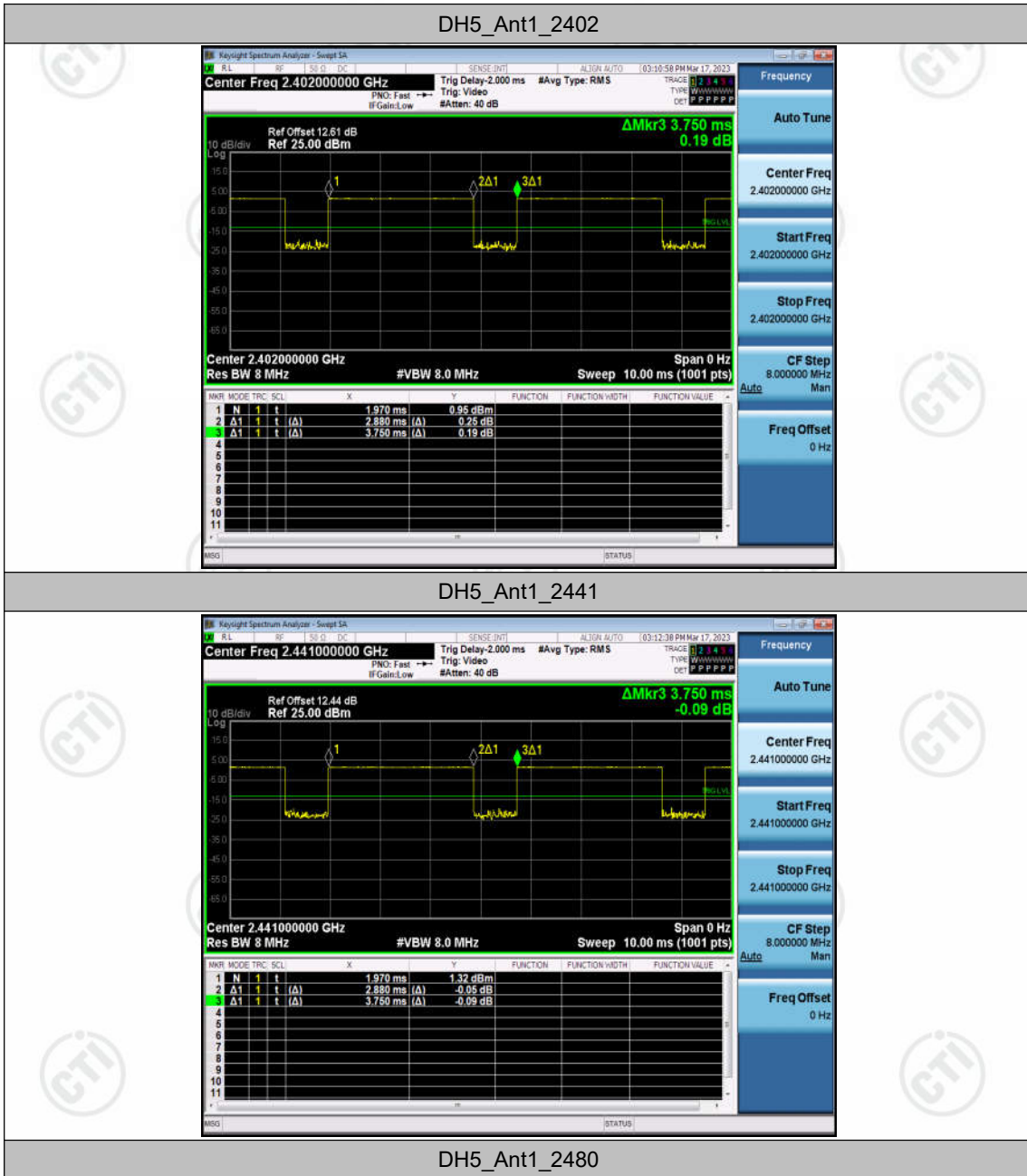
3DH5_Ant1_2480_1000~26500

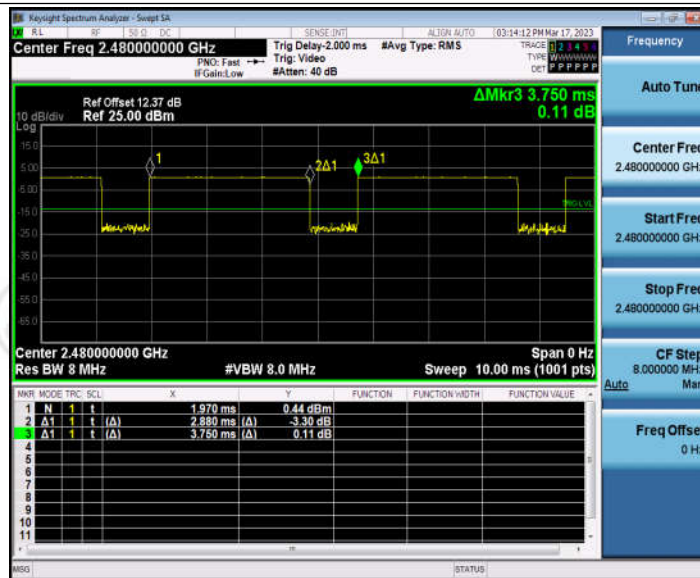


Appendix I: Duty Cycle**Test Result**

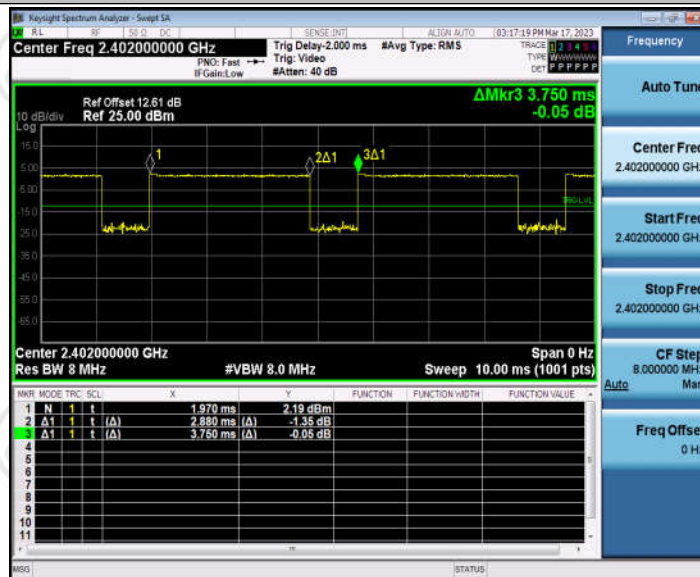
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
DH5	Ant1	2402	2.88	3.75	76.80	1.15
		2441	2.88	3.75	76.80	1.15
		2480	2.88	3.75	76.80	1.15
2DH5	Ant1	2402	2.88	3.75	76.80	1.15
		2441	2.88	3.75	76.80	1.15
		2480	2.88	3.75	76.80	1.15
3DH5	Ant1	2402	2.88	3.75	76.80	1.15
		2441	2.89	3.75	77.07	1.13
		2480	2.88	3.75	76.80	1.15

Test Graphs

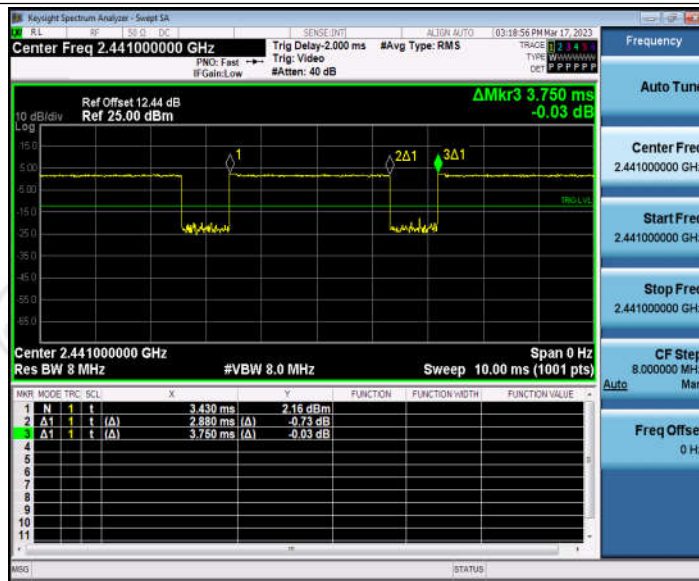




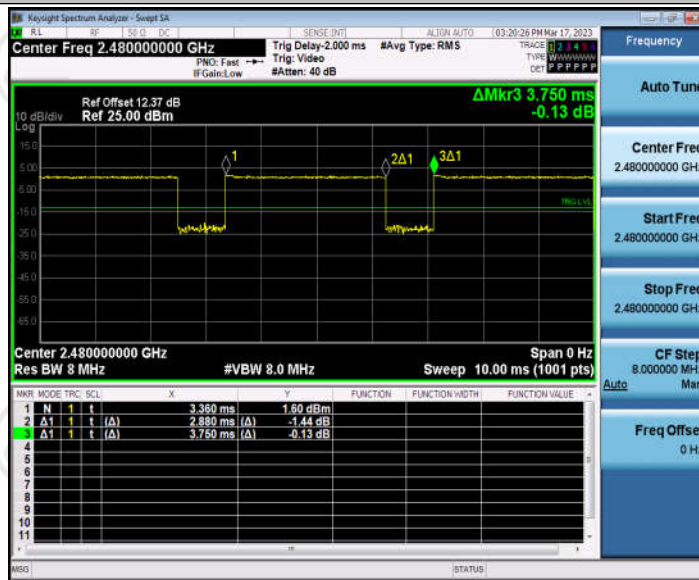
2DH5_Ant1_2402



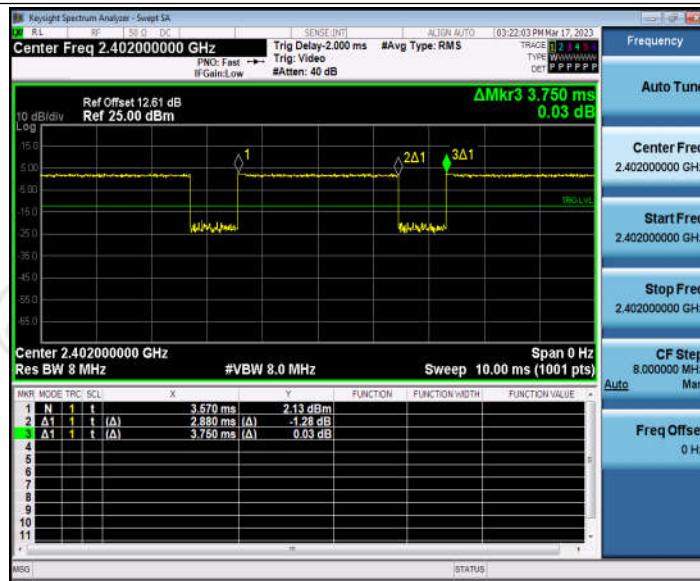
2DH5_Ant1_2441



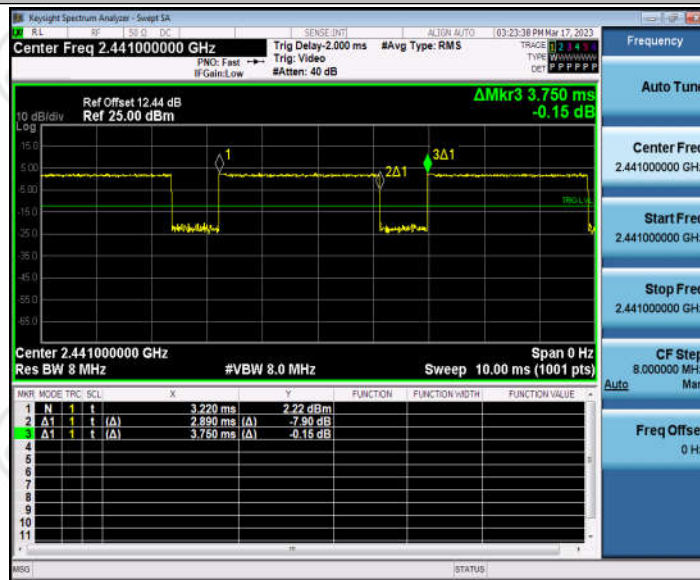
2DH5_Ant1_2480



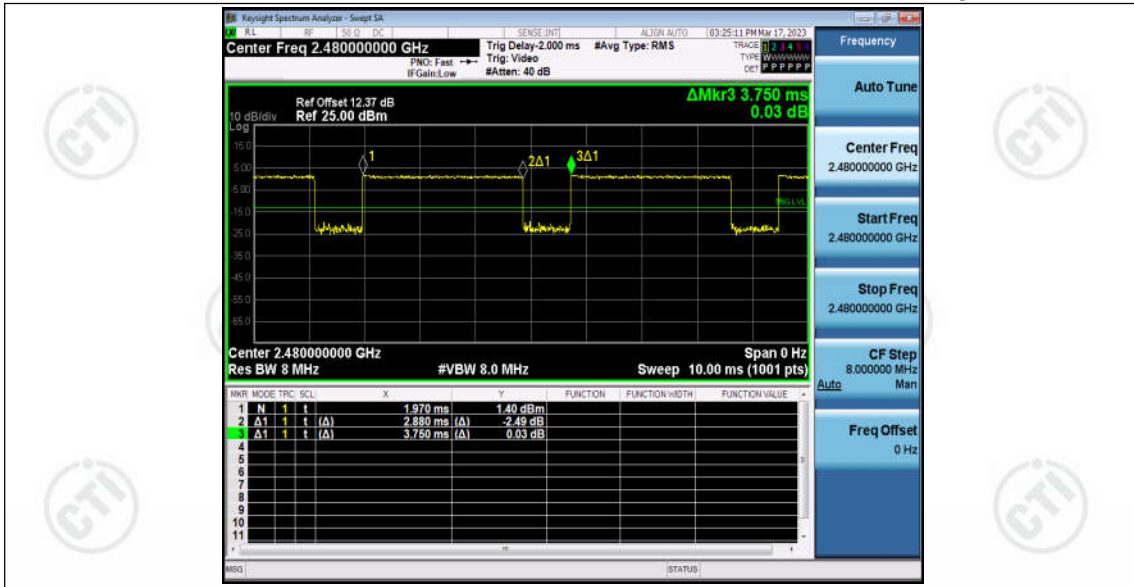
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



END OF REPORT