

FCC Appendix RF Test Data

FCC ID : 2AE6G-GPK-200PK
Company : Innovative Concepts and Design LLC
EUT : Bluetooth Speaker
Model Number : GPK-200PK
Report No. : CTA25070300202
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.945	2401.547	2402.492	---	---
		2441	0.960	2440.544	2441.504	---	---
		2480	0.942	2479.553	2480.495	---	---
2DH5	Ant1	2402	1.293	2401.373	2402.666	---	---
		2441	1.335	2440.340	2441.675	---	---
		2480	1.278	2479.382	2480.660	---	---
3DH5	Ant1	2402	1.311	2401.358	2402.669	---	---
		2441	1.293	2440.364	2441.657	---	---
		2480	1.317	2479.355	2480.672	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



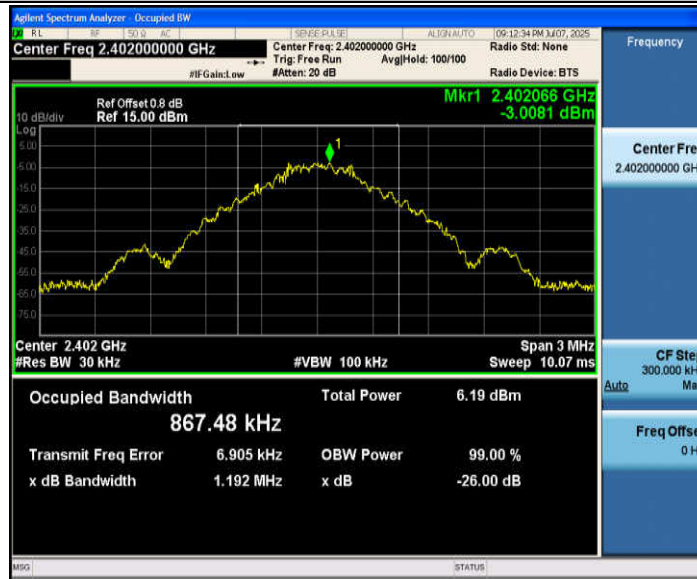
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86748	2401.5732	2402.4406	---	---
		2441	0.87095	2440.5717	2441.4427	---	---
		2480	0.86596	2479.5755	2480.4415	---	---
2DH5	Ant1	2402	1.1902	2401.4148	2402.6050	---	---
		2441	1.1911	2440.4144	2441.6055	---	---
		2480	1.1911	2479.4143	2480.6054	---	---
3DH5	Ant1	2402	1.1853	2401.4161	2402.6014	---	---
		2441	1.1821	2440.4198	2441.6019	---	---
		2480	1.1906	2479.4139	2480.6045	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



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	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.27	≤20.97	PASS
		2441	0.03	≤20.97	PASS
		2480	-0.02	≤20.97	PASS
2DH5	Ant1	2402	-0.53	≤20.97	PASS
		2441	-0.76	≤20.97	PASS
		2480	-0.87	≤20.97	PASS
3DH5	Ant1	2402	-0.15	≤20.97	PASS
		2441	-0.40	≤20.97	PASS
		2480	-0.49	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.16	≥ 0.640	PASS
2DH5	Ant1	Hop	1.068	≥ 0.890	PASS
3DH5	Ant1	Hop	0.992	≥ 0.878	PASS

Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

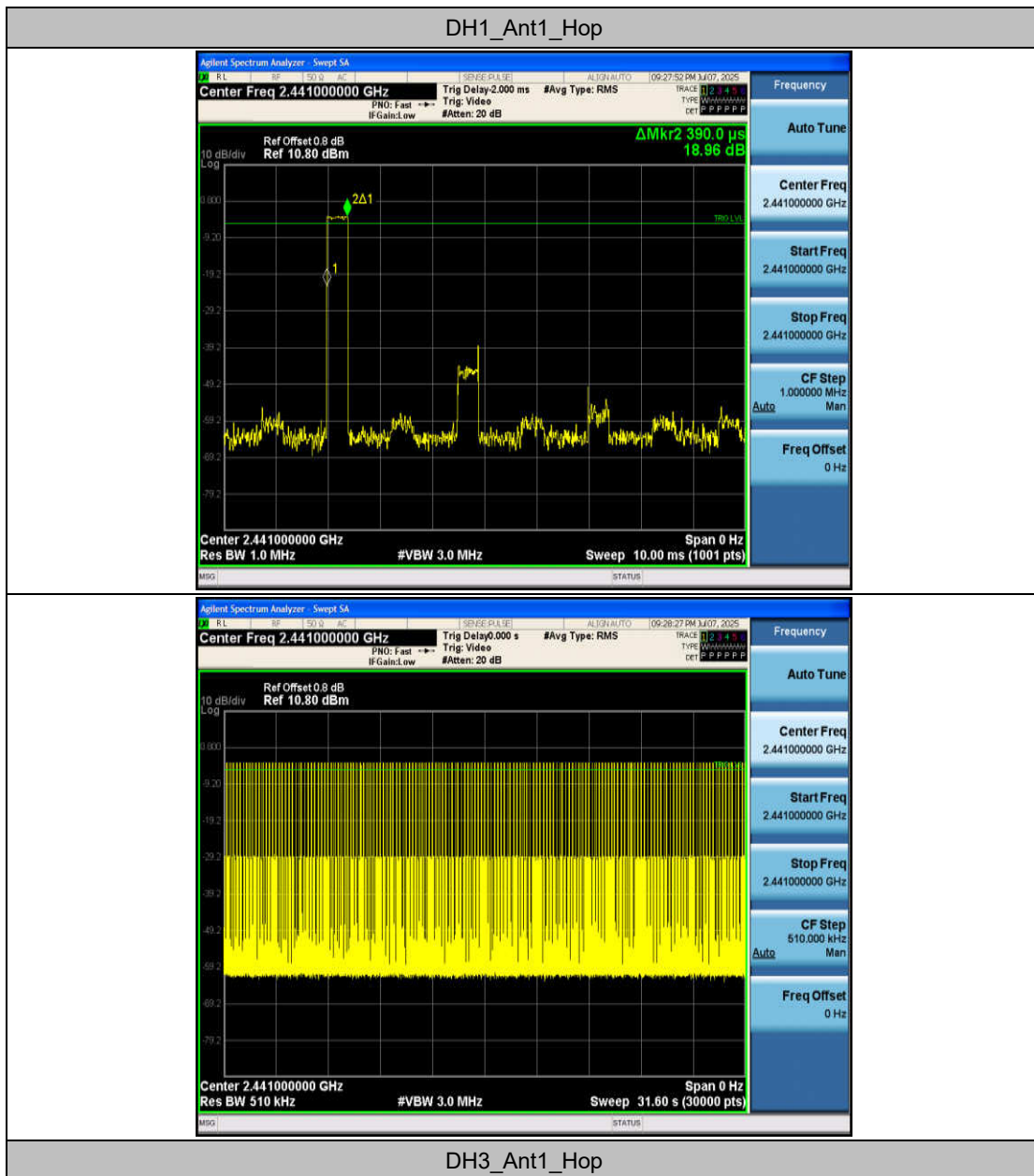


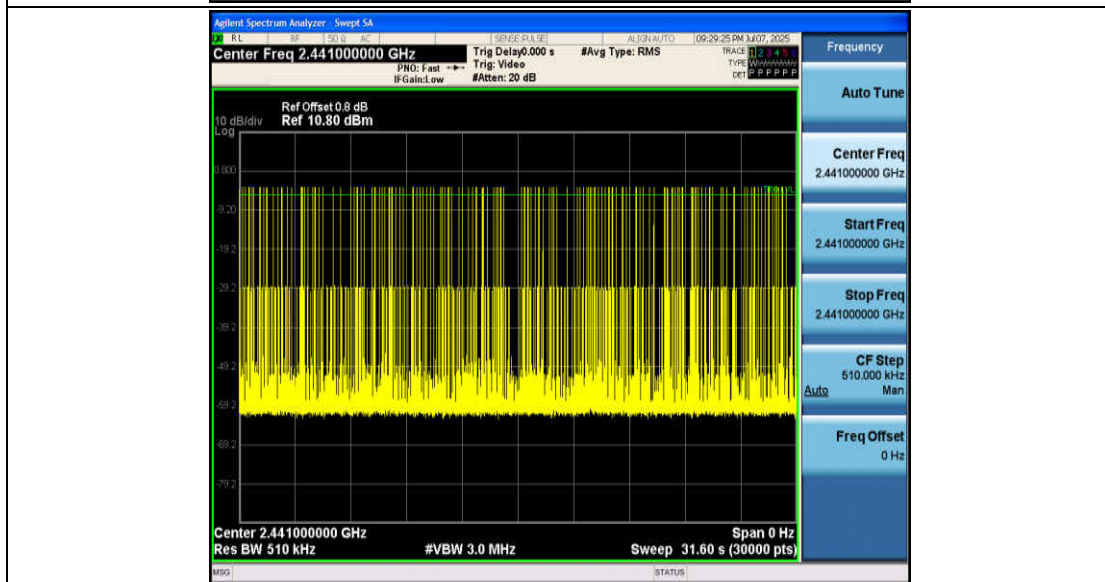
Appendix E: Time of occupancy

Test Result

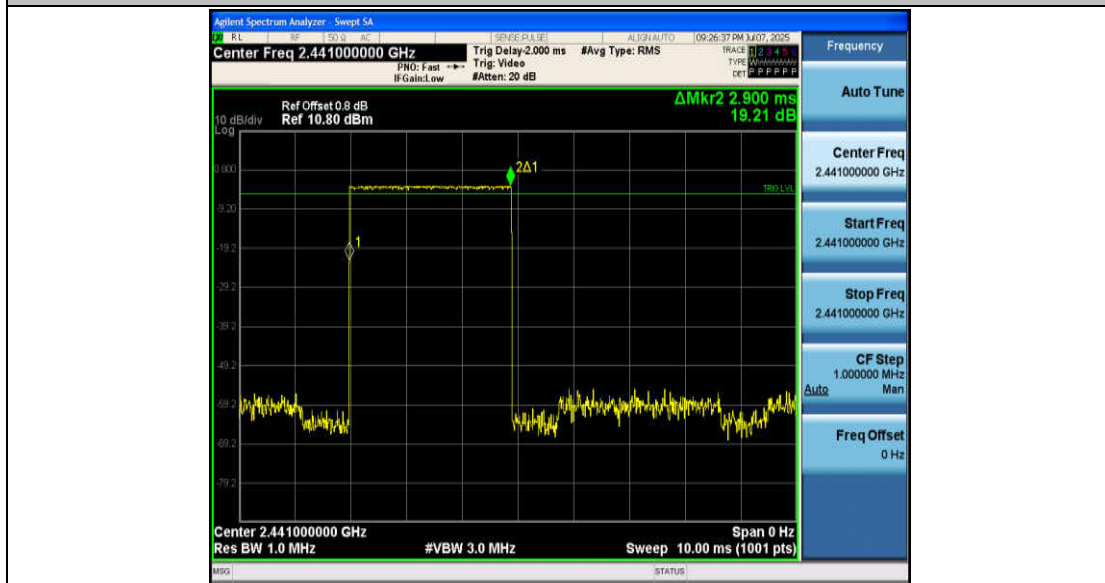
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
DH3	Ant1	Hop	1.650	158	0.261	≤0.4	PASS
DH5	Ant1	Hop	2.900	105	0.305	≤0.4	PASS
2DH1	Ant1	Hop	0.400	318	0.127	≤0.4	PASS
2DH3	Ant1	Hop	1.650	156	0.257	≤0.4	PASS
2DH5	Ant1	Hop	2.900	104	0.302	≤0.4	PASS
3DH1	Ant1	Hop	0.400	314	0.126	≤0.4	PASS
3DH3	Ant1	Hop	1.650	166	0.274	≤0.4	PASS
3DH5	Ant1	Hop	2.900	94	0.273	≤0.4	PASS

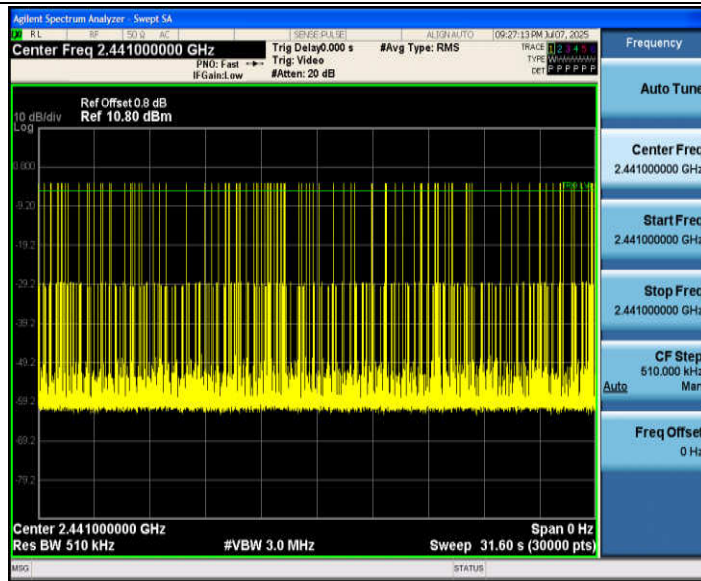
Test Graphs



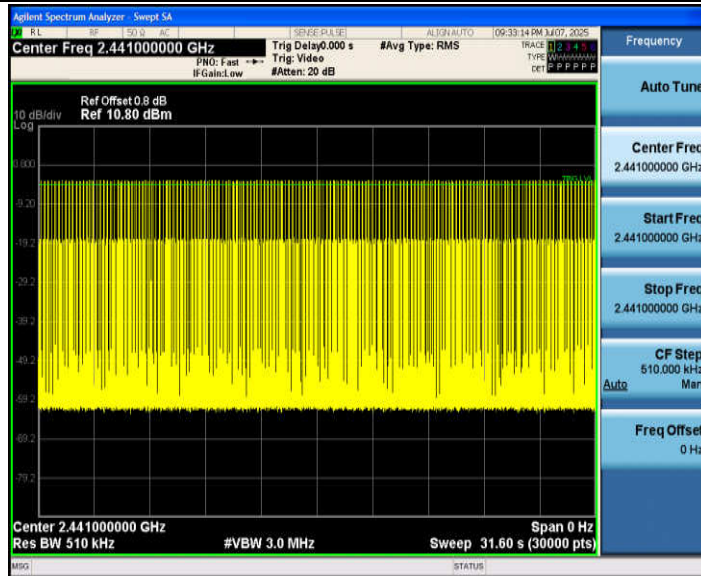
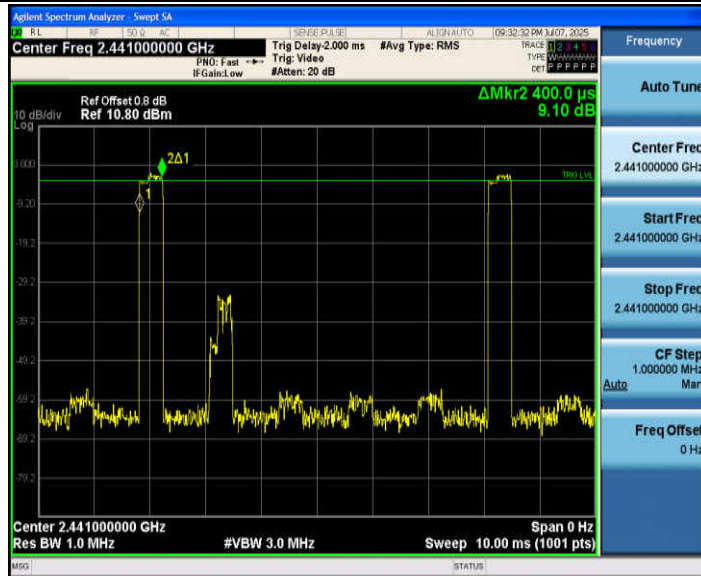


DH5_Ant1_Hop

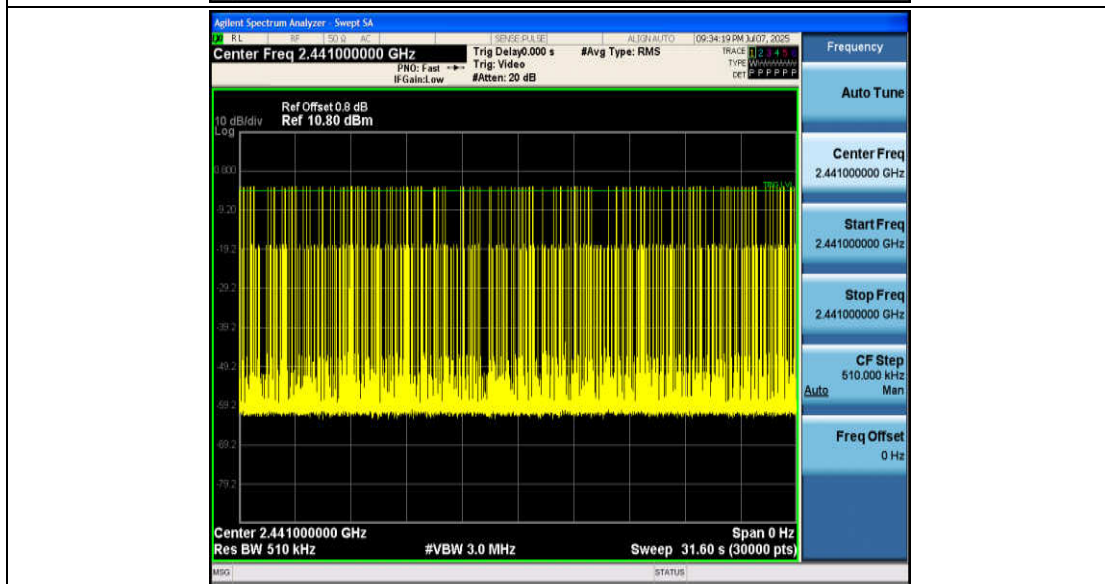
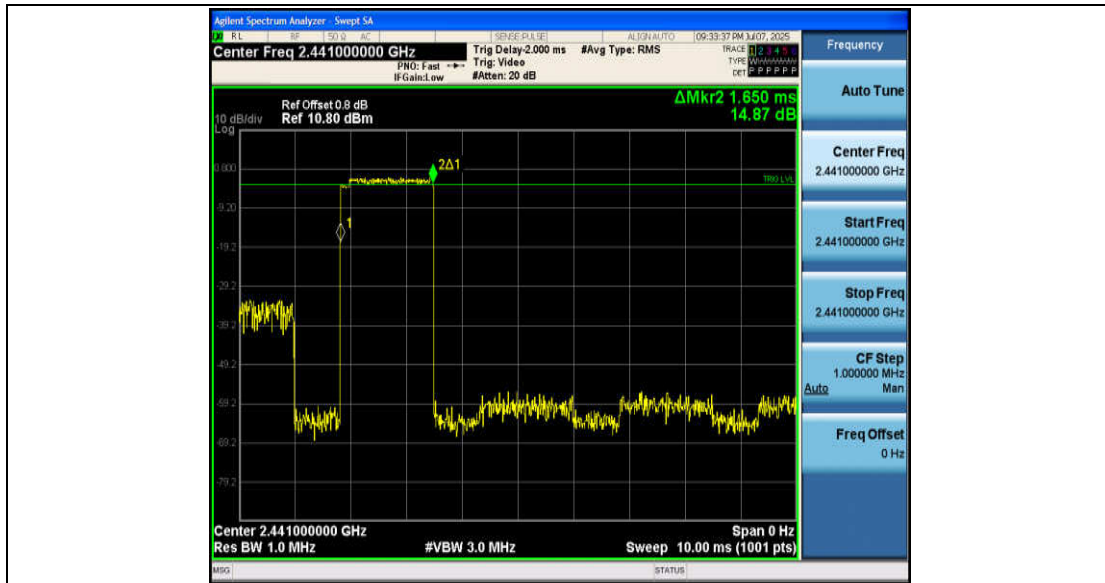




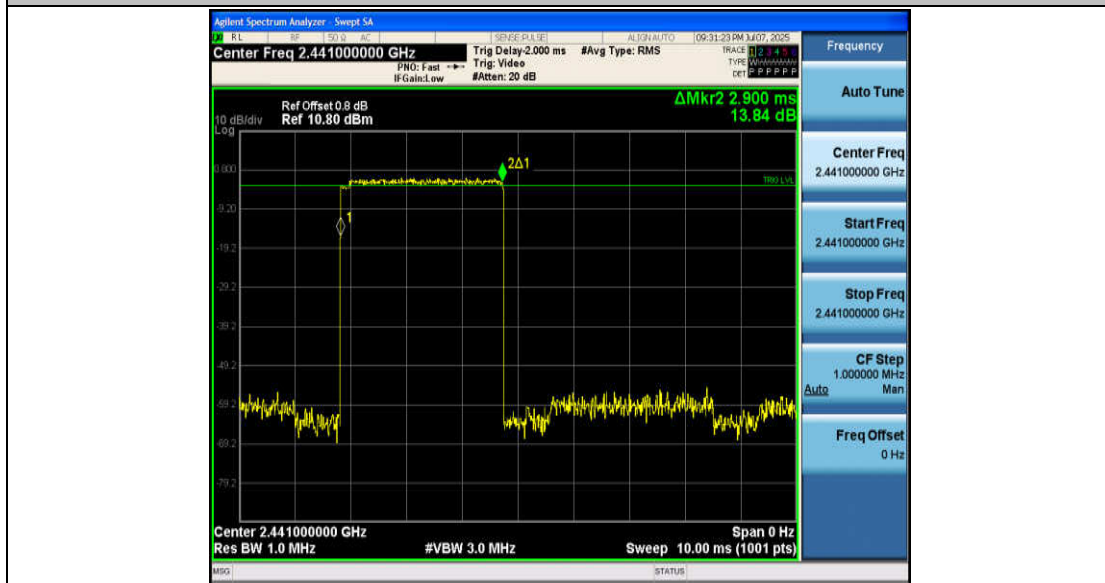
2DH1_Ant1_Hop

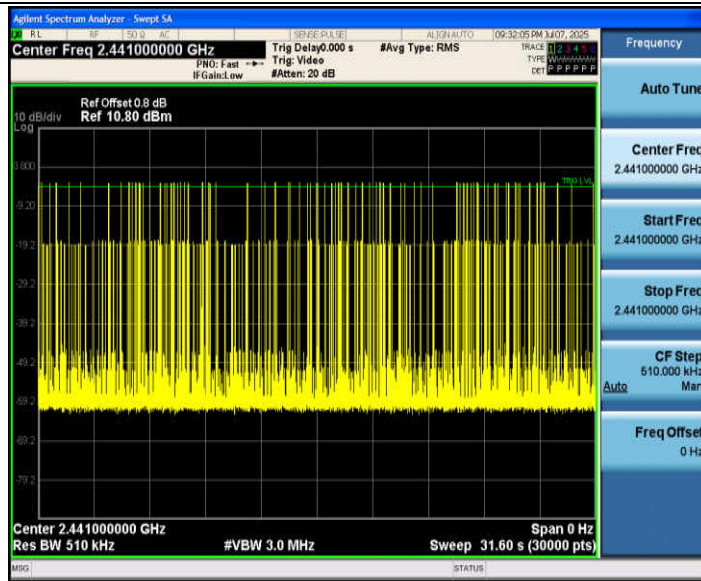


2DH3_Ant1_Hop

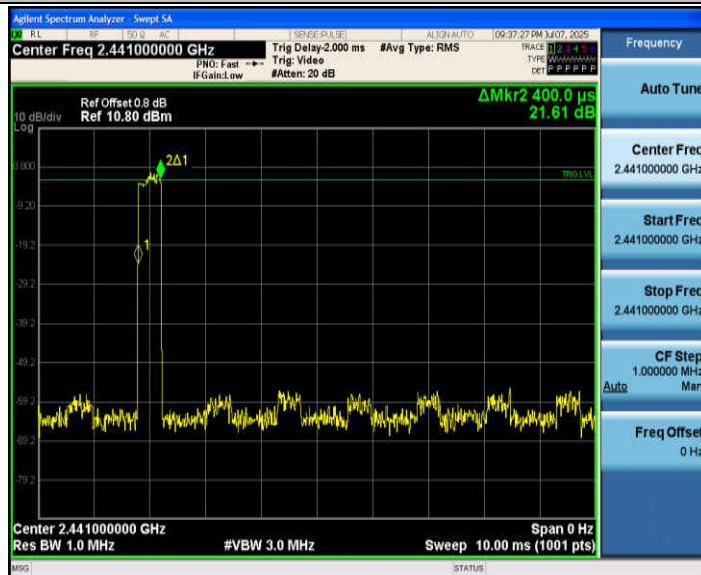


2DH5_Ant1_Hop

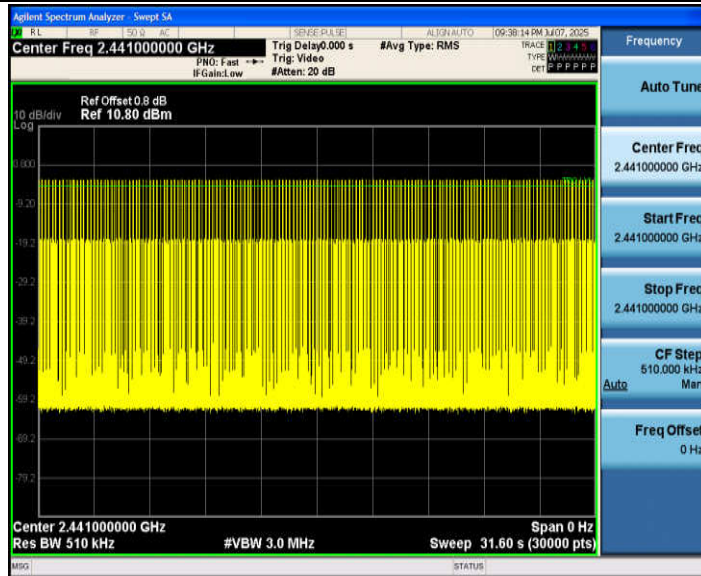




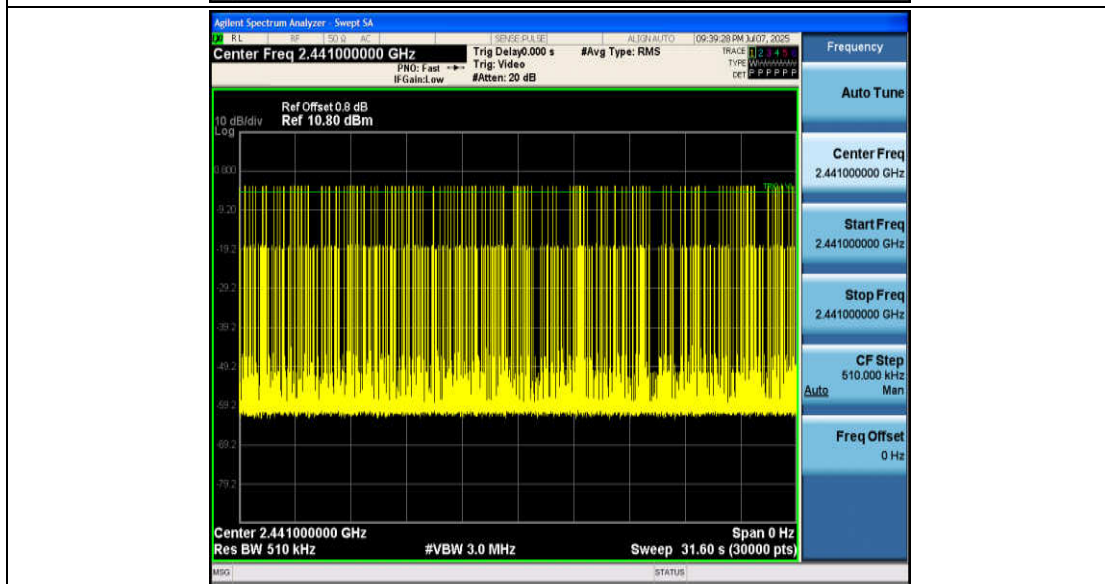
3DH1_Ant1_Hop



3DH1_Ant1_Hop

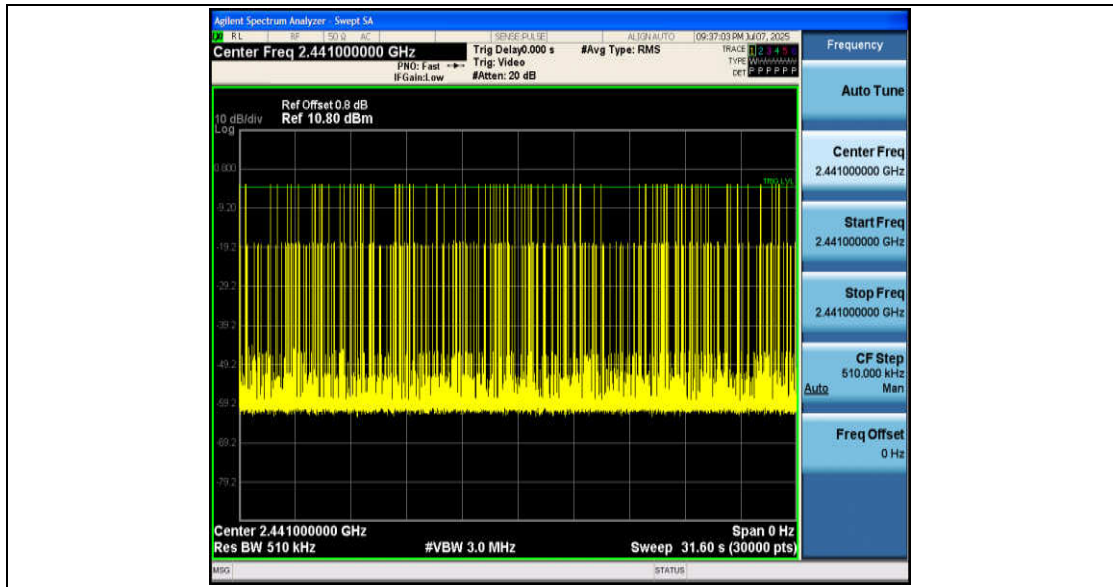


3DH3_Ant1_Hop



3DH5_Ant1_Hop





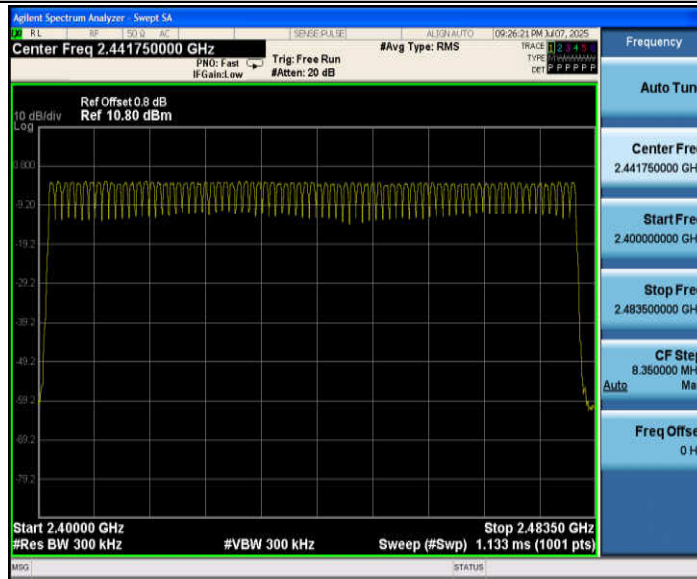
Appendix F: Number of hopping channels

Test Result

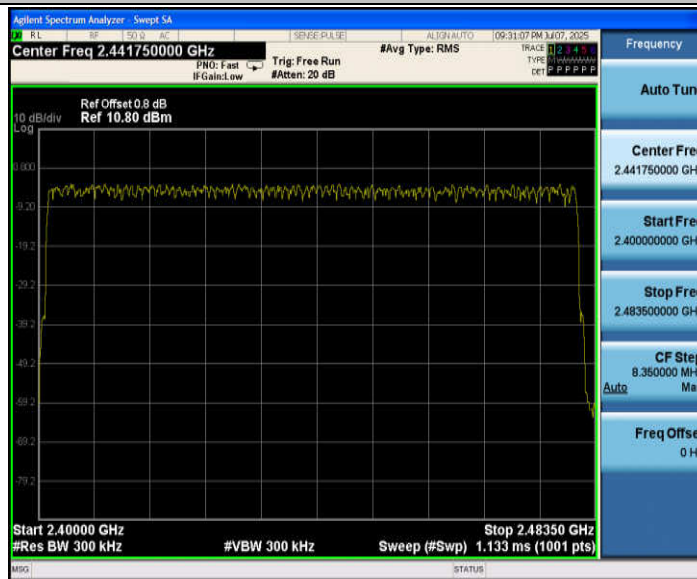
TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

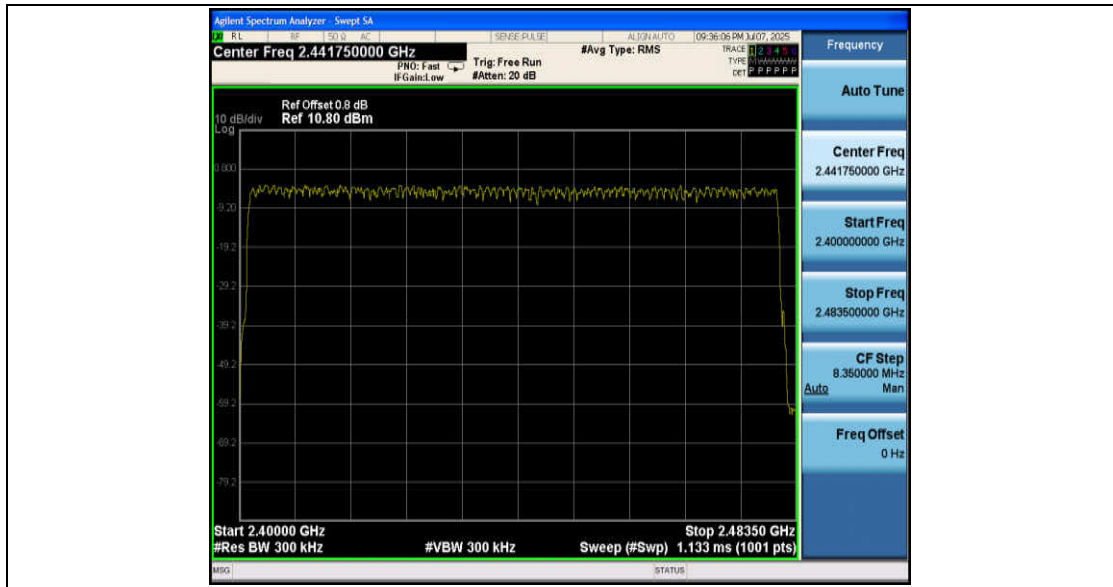
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



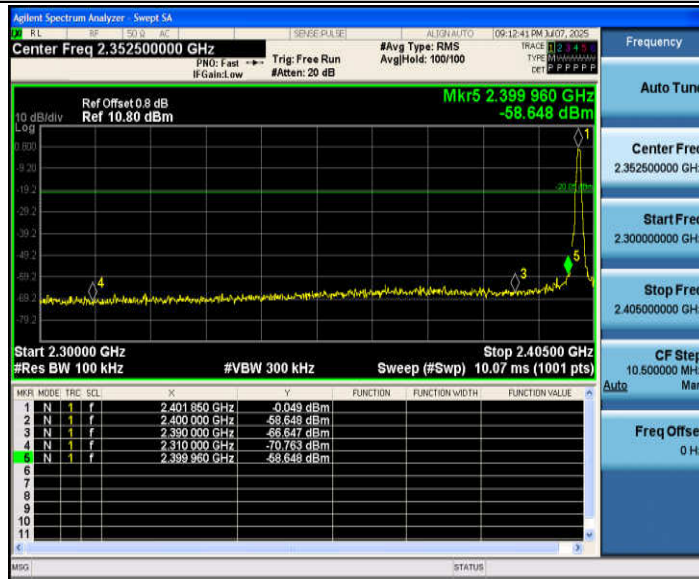
Appendix G: Band edge measurements

Test Result

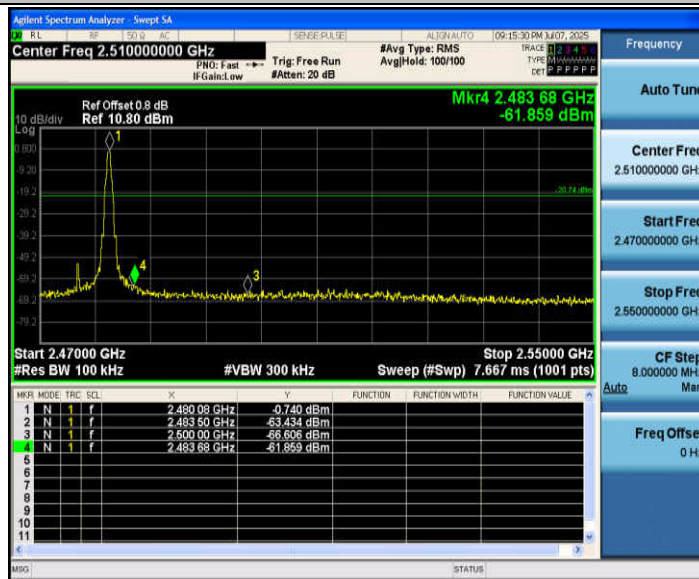
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.05	-58.65	≤-20.05	PASS
		High	2480	-0.74	-61.86	≤-20.74	PASS
		Low	Hop_2402	-3.27	-54.32	≤-23.27	PASS
		High	Hop_2480	-3.53	-64.16	≤-23.53	PASS
2DH5	Ant1	Low	2402	-3.71	-60.51	≤-23.71	PASS
		High	2480	-3.51	-56.03	≤-23.51	PASS
		Low	Hop_2402	-4.47	-63.67	≤-24.47	PASS
		High	Hop_2480	-3.68	-63	≤-23.68	PASS
3DH5	Ant1	Low	2402	-3.14	-56.99	≤-23.14	PASS
		High	2480	-4.51	-55.31	≤-24.51	PASS
		Low	Hop_2402	-4.99	-61.49	≤-24.99	PASS
		High	Hop_2480	-3.65	-63.99	≤-23.65	PASS

Test Graphs

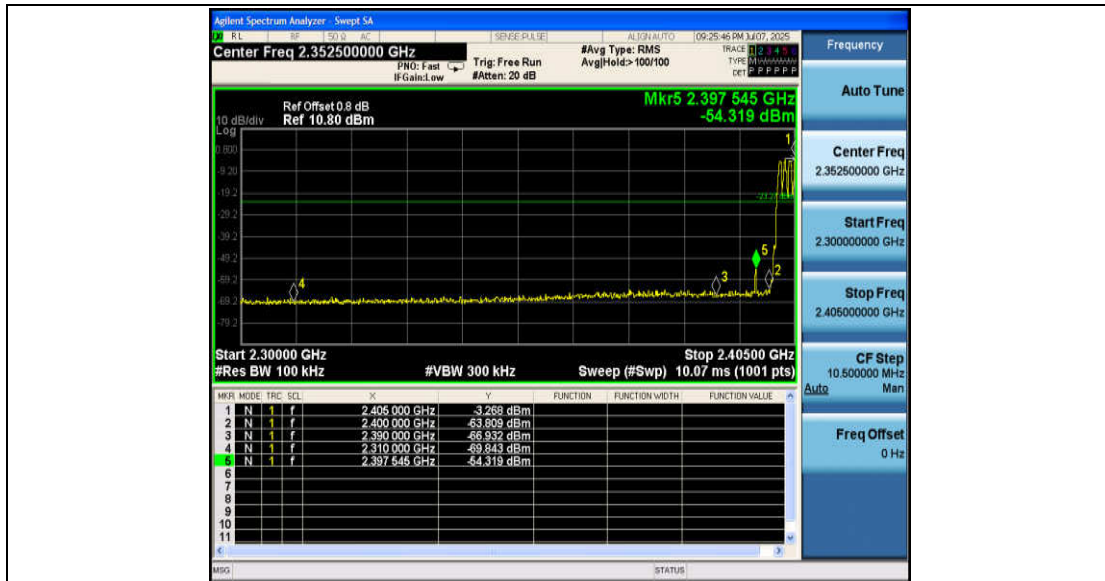
DH5_Ant1_Low_2402



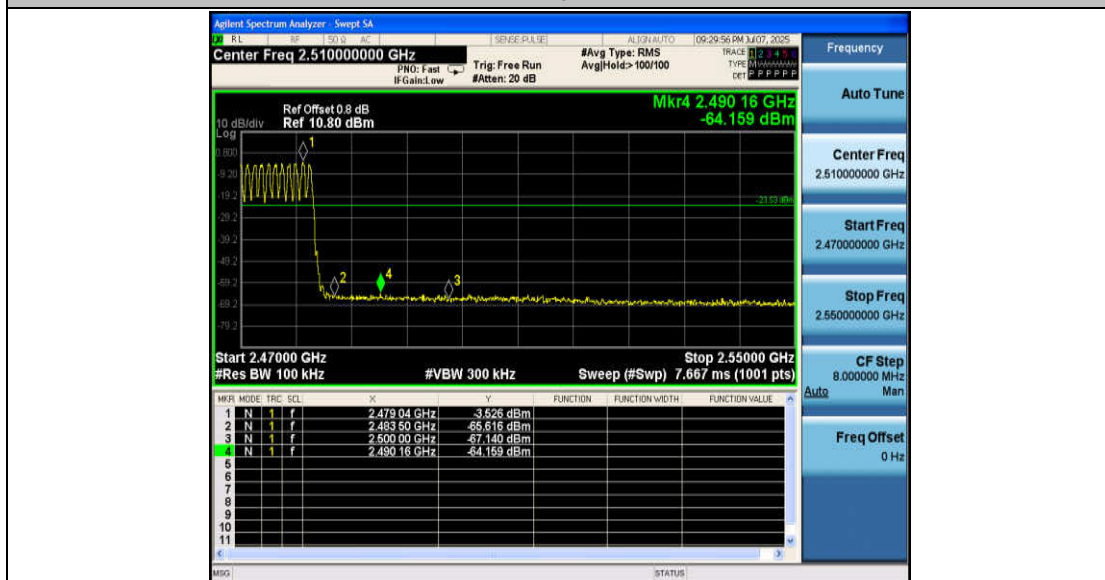
DH5_Ant1_High_2480



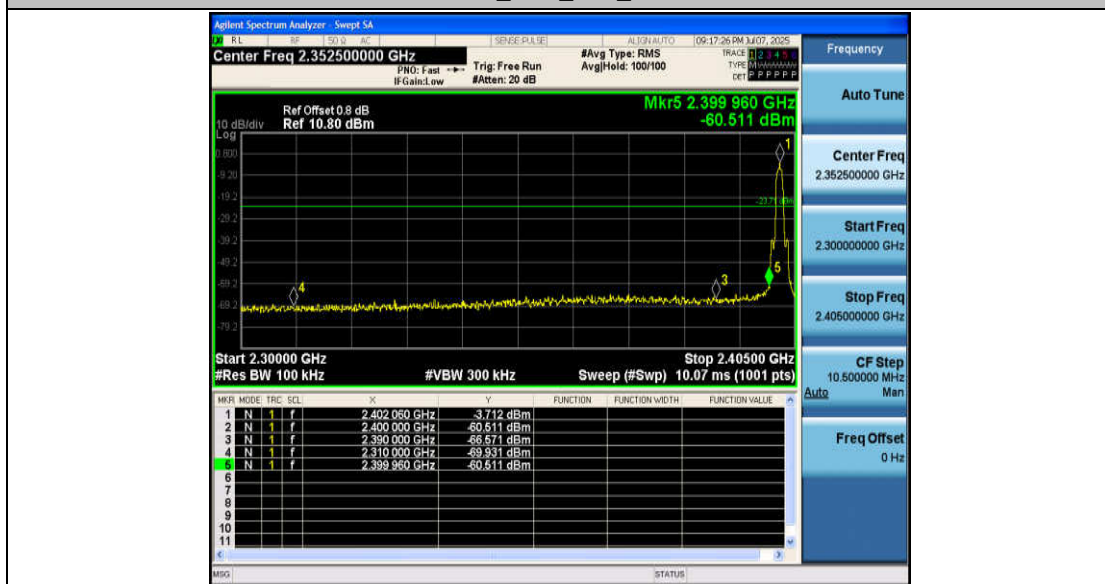
DH5_Ant1_Low_Hop_2402



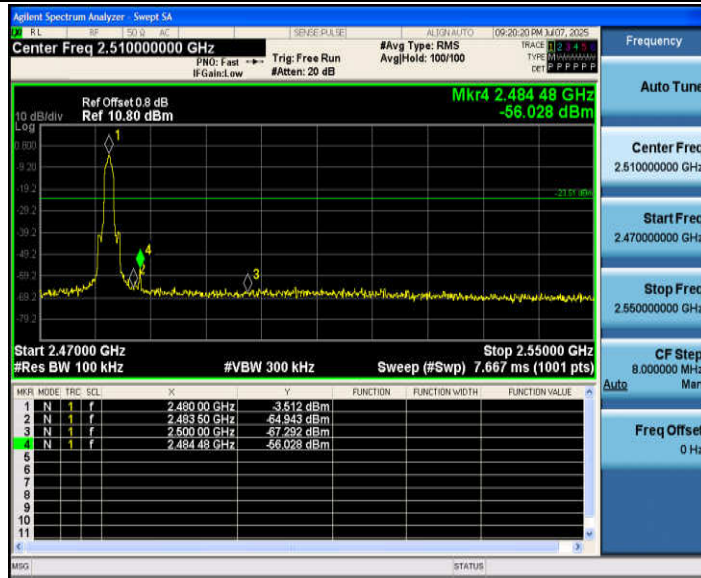
DH5_Ant1_High_Hop_2480



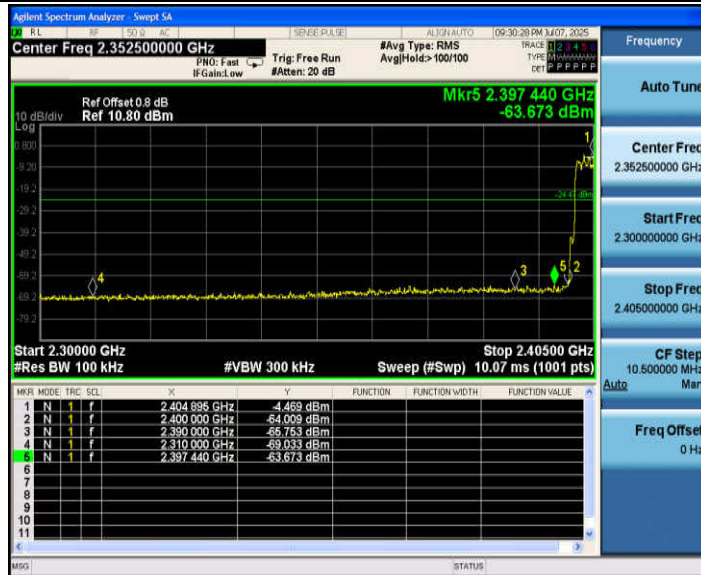
2DH5_Ant1_Low_2402



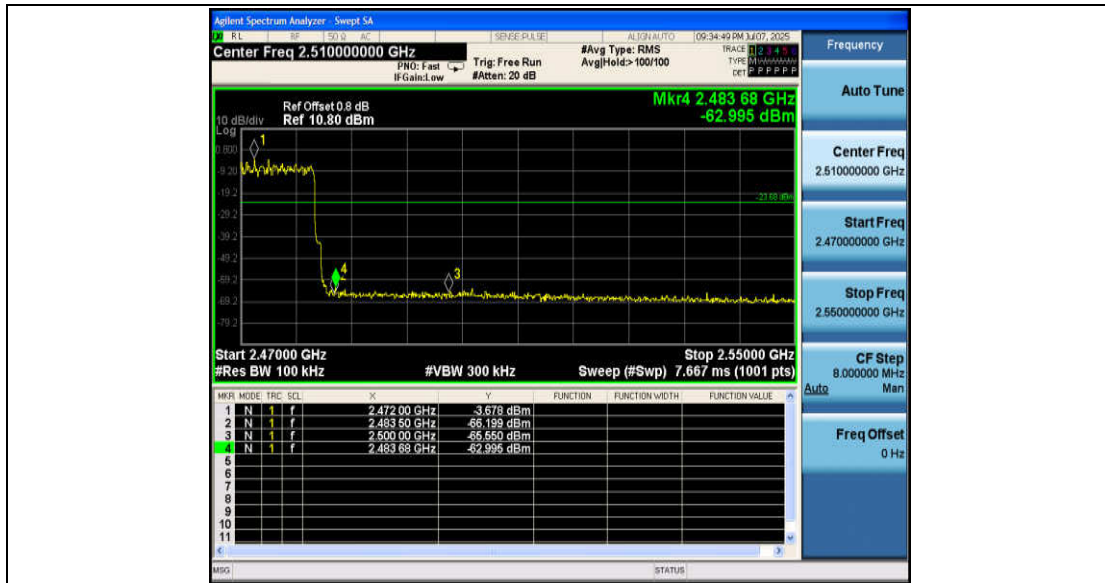
2DH5_Ant1_High_2480



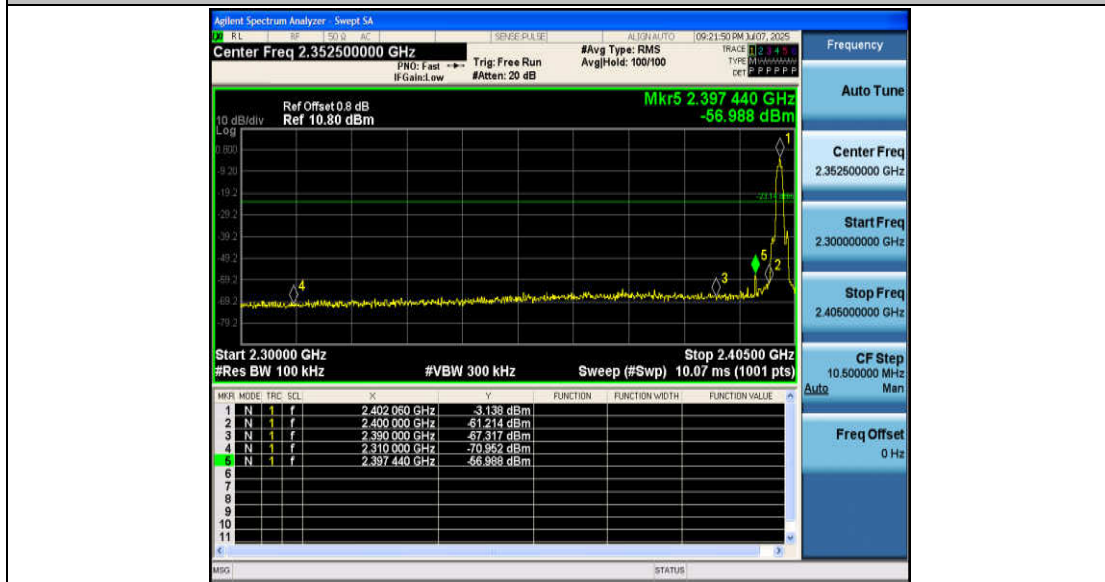
2DH5_Ant1_Low_Hop_2402



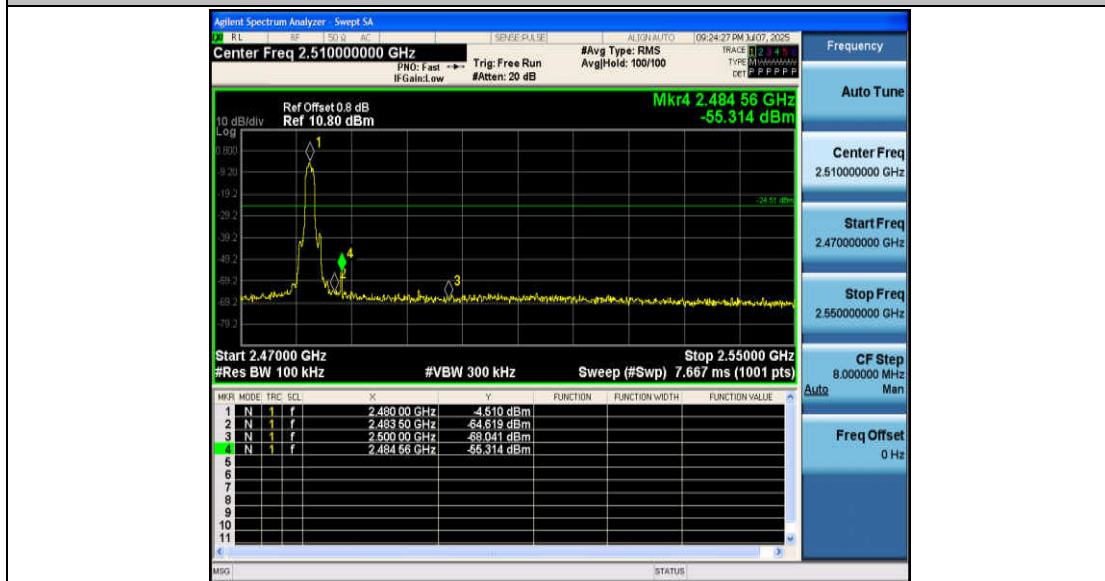
2DH5_Ant1_High_Hop_2480



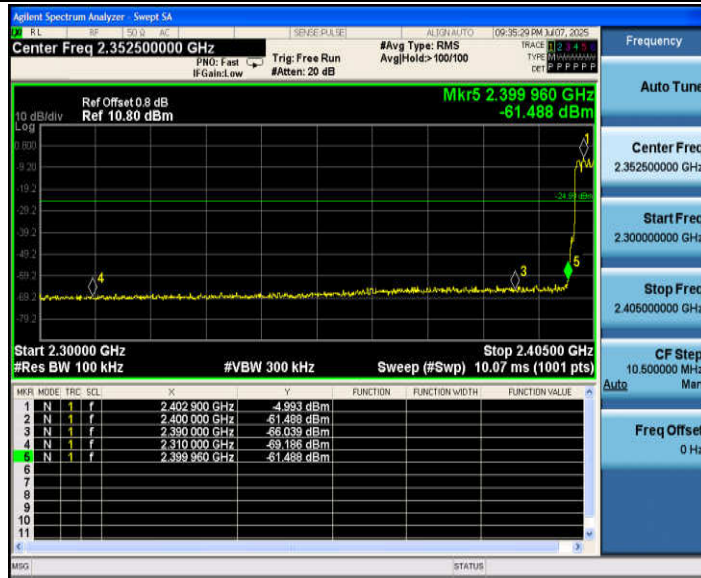
3DH5_Ant1_Low_2402



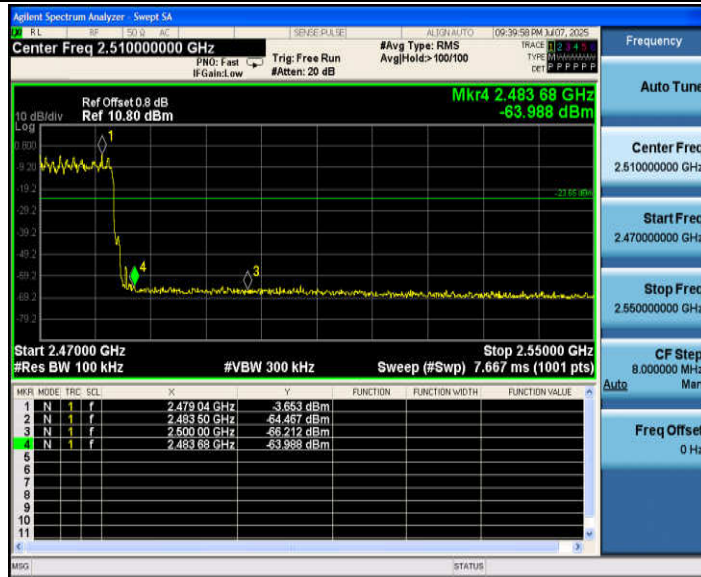
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



Appendix H: Conducted Spurious Emission

Test Result

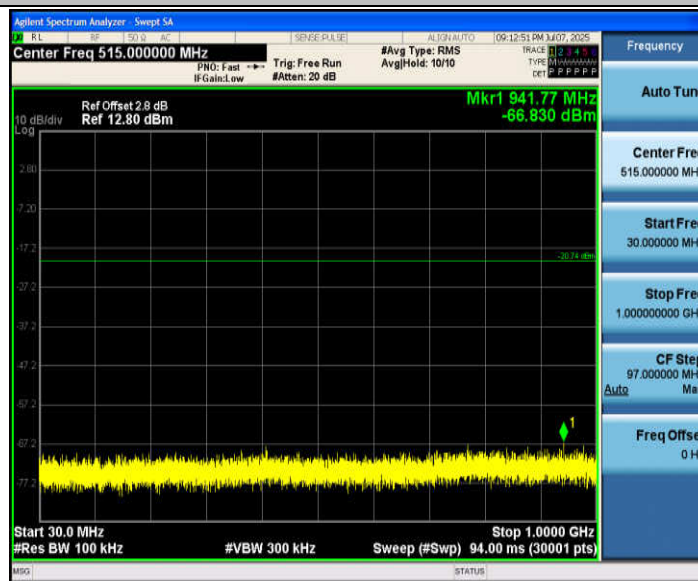
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.74	-0.74	---	PASS
			30~1000	-0.74	-66.83	≤-20.74	PASS
			1000~26500	-0.74	-42.02	≤-20.74	PASS
		2441	Reference	-0.94	-0.94	---	PASS
			30~1000	-0.94	-66.35	≤-20.94	PASS
			1000~26500	-0.94	-44.69	≤-20.94	PASS
		2480	Reference	-1.20	-1.20	---	PASS
			30~1000	-1.20	-67.91	≤-21.2	PASS
			1000~26500	-1.20	-43.67	≤-21.2	PASS
2DH5	Ant1	2402	Reference	-5.66	-5.66	---	PASS
			30~1000	-5.66	-68.05	≤-25.66	PASS
			1000~26500	-5.66	-47.61	≤-25.66	PASS
		2441	Reference	-5.33	-5.33	---	PASS
			30~1000	-5.33	-67.15	≤-25.33	PASS
			1000~26500	-5.33	-46.79	≤-25.33	PASS
		2480	Reference	-5.59	-5.59	---	PASS
			30~1000	-5.59	-68.11	≤-25.59	PASS
			1000~26500	-5.59	-50.32	≤-25.59	PASS
3DH5	Ant1	2402	Reference	-5.14	-5.14	---	PASS
			30~1000	-5.14	-67.07	≤-25.14	PASS
			1000~26500	-5.14	-46.73	≤-25.14	PASS
		2441	Reference	-6.52	-6.52	---	PASS
			30~1000	-6.52	-67.56	≤-26.52	PASS
			1000~26500	-6.52	-49.27	≤-26.52	PASS
		2480	Reference	-5.27	-5.27	---	PASS
			30~1000	-5.27	-67.88	≤-25.27	PASS
			1000~26500	-5.27	-50.81	≤-25.27	PASS

Test Graphs

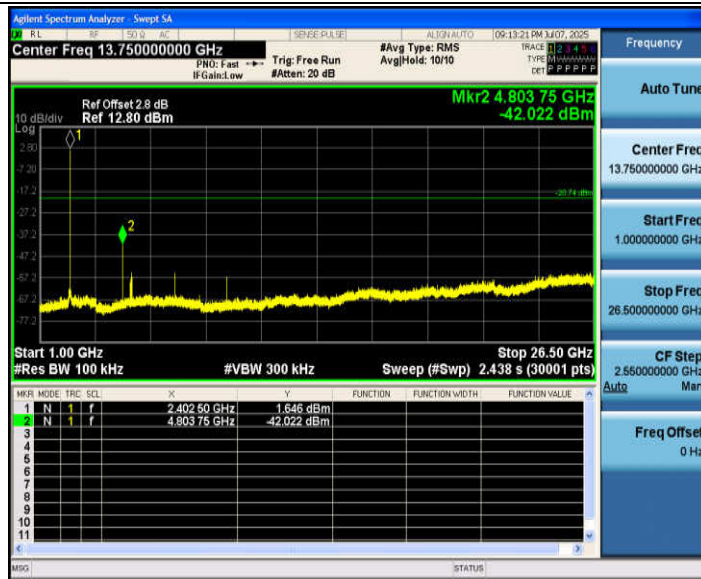
DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



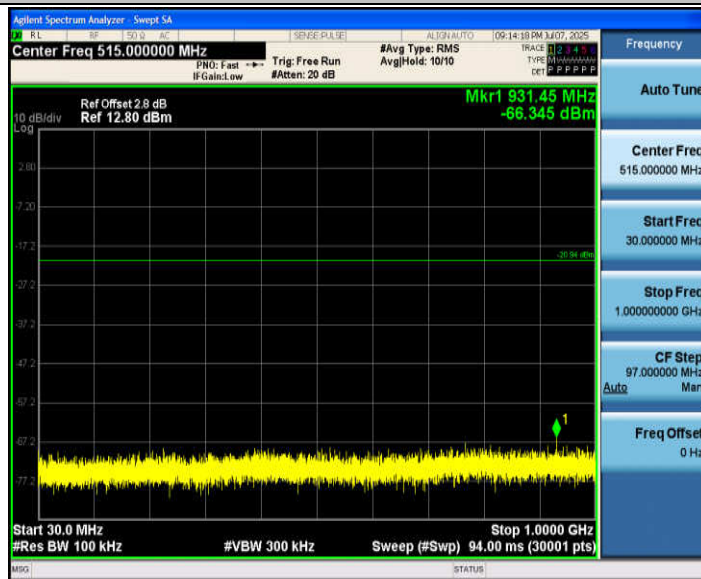
DH5_Ant1_2402_1000~26500



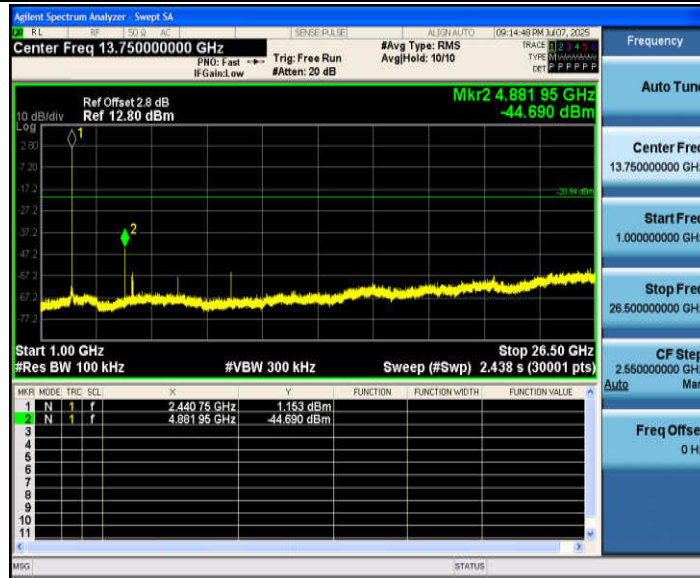
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



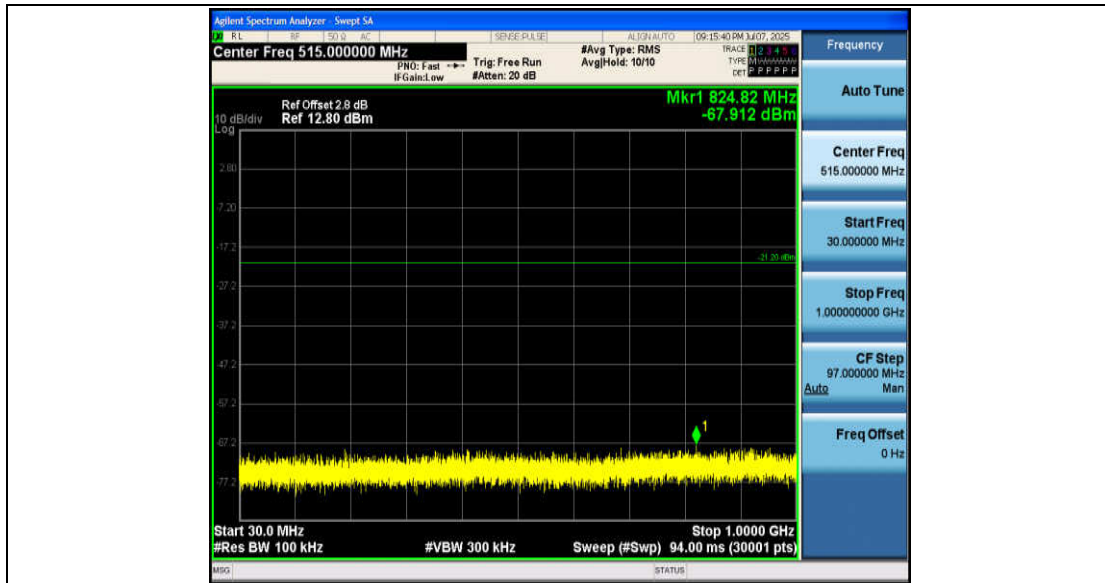
DH5_Ant1_2441_1000~26500



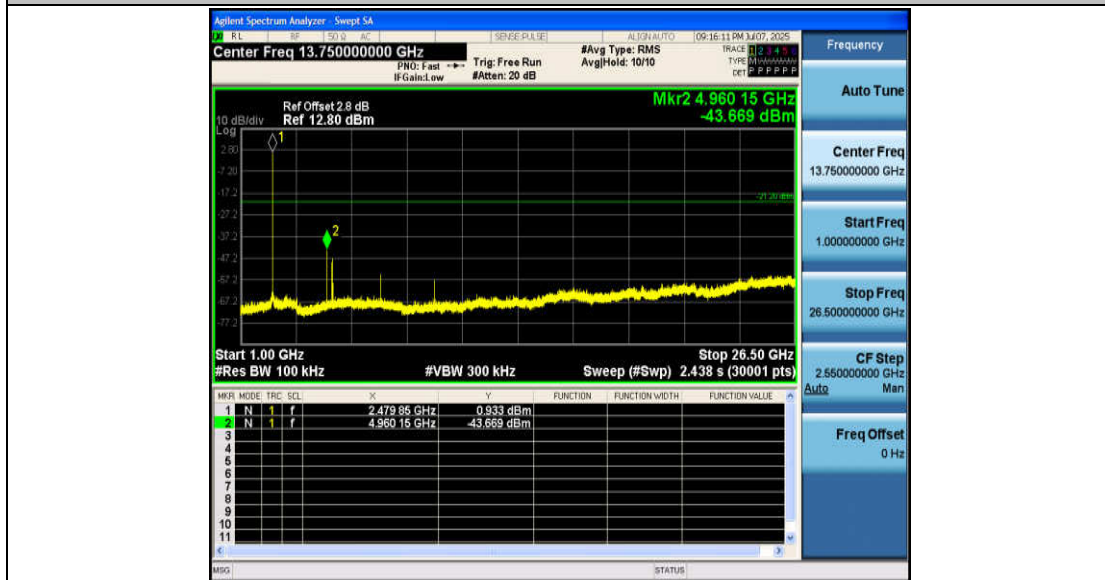
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



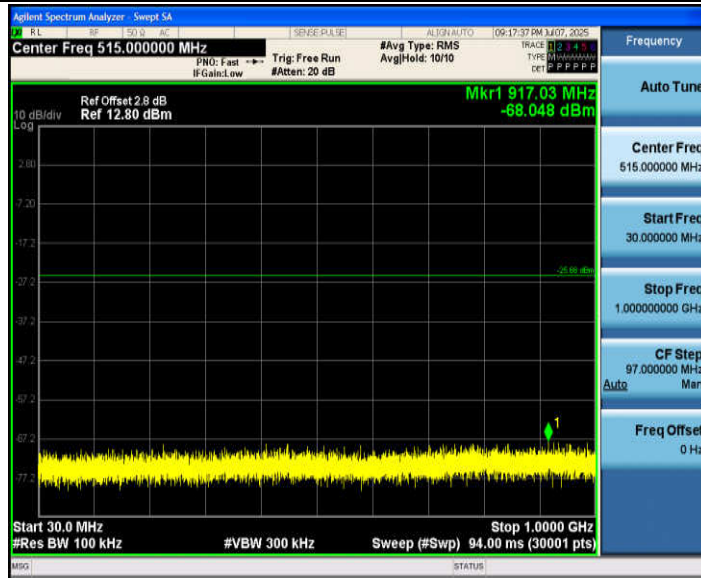
DH5_Ant1_2480_1000~26500



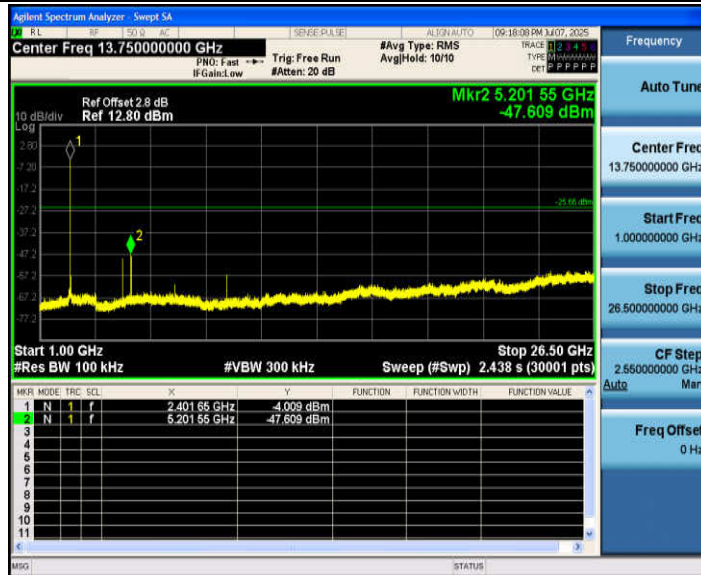
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



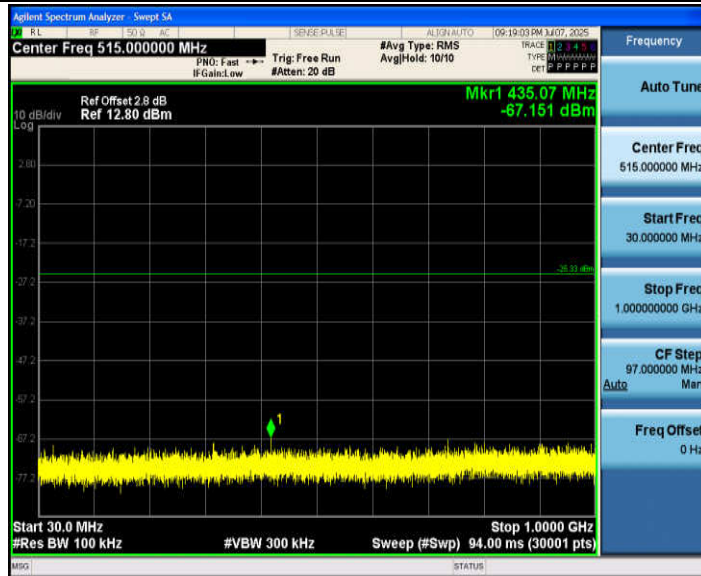
2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



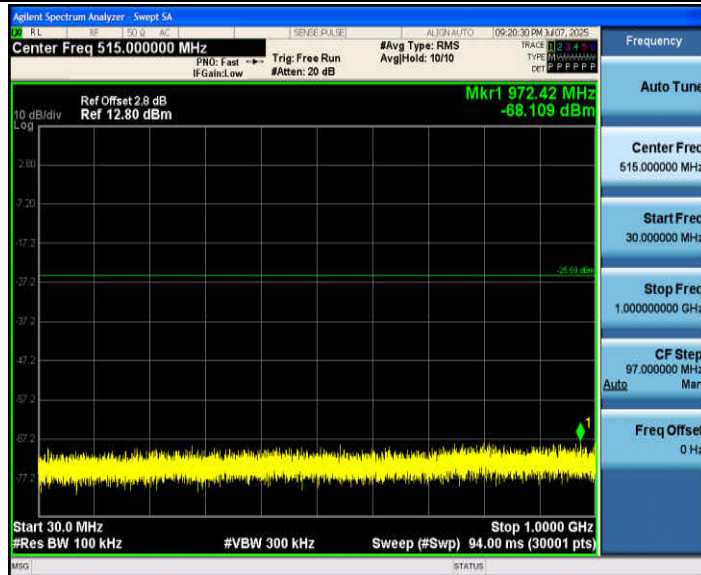
2DH5_Ant1_2441_1000~26500



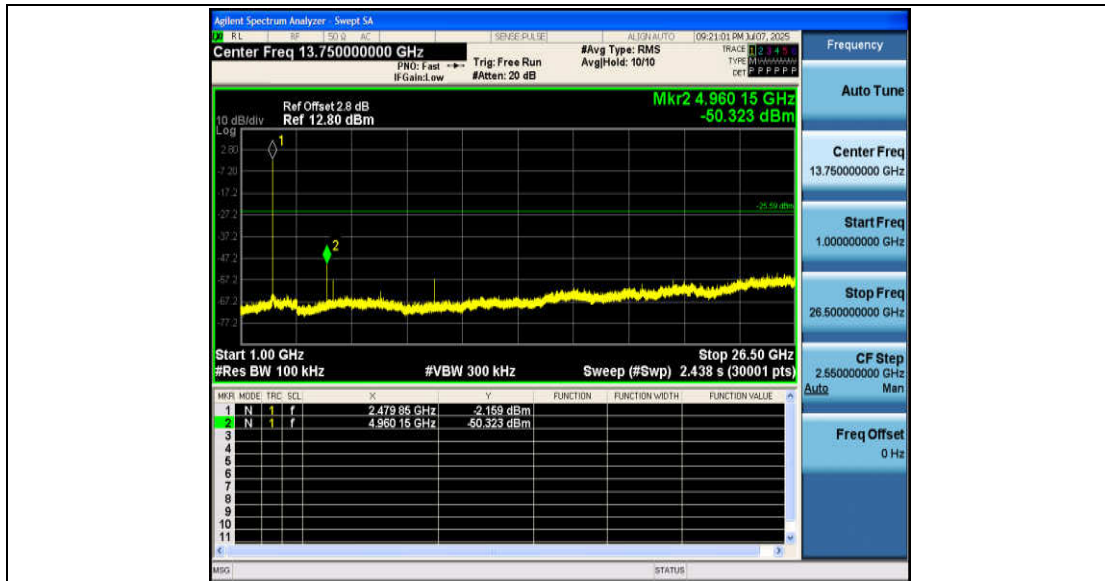
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



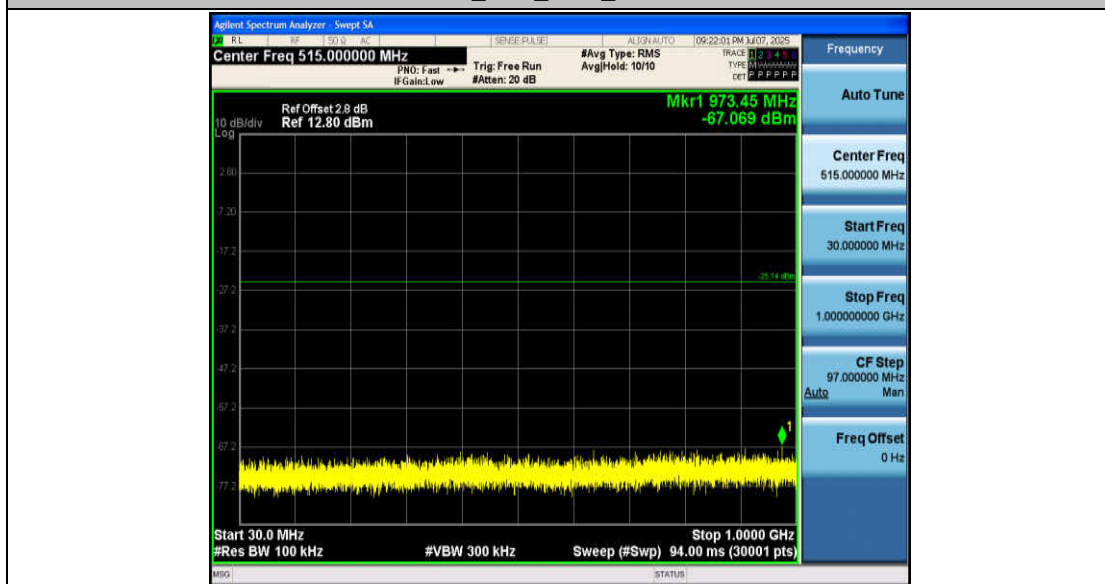
2DH5_Ant1_2480_1000~26500



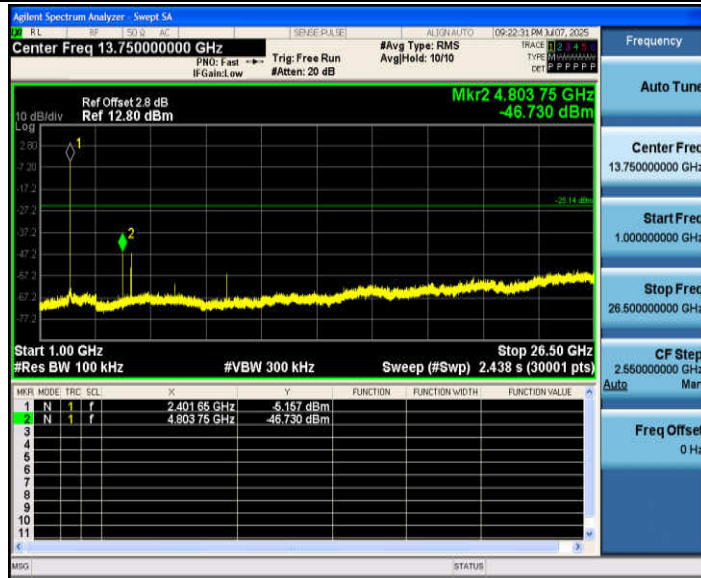
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



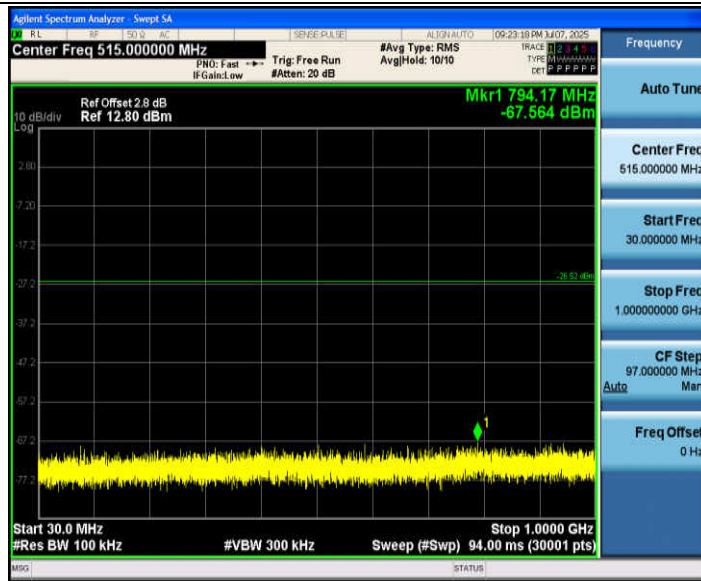
3DH5_Ant1_2402_1000~26500



3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



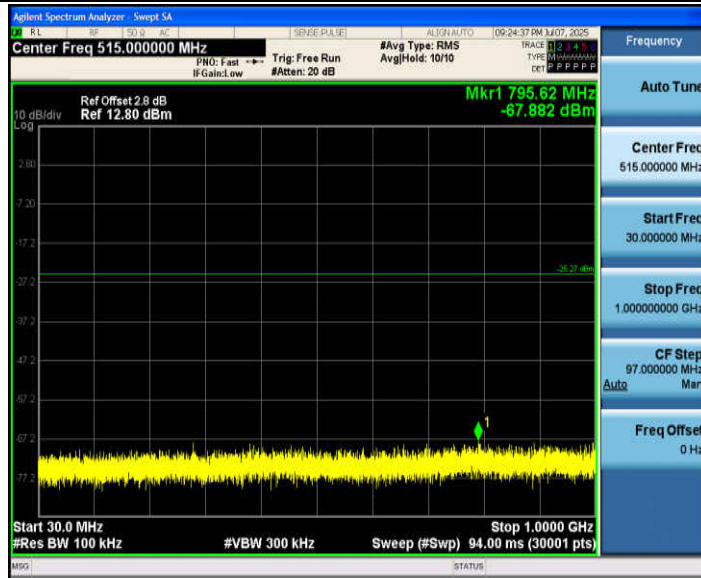
3DH5_Ant1_2441_1000~26500



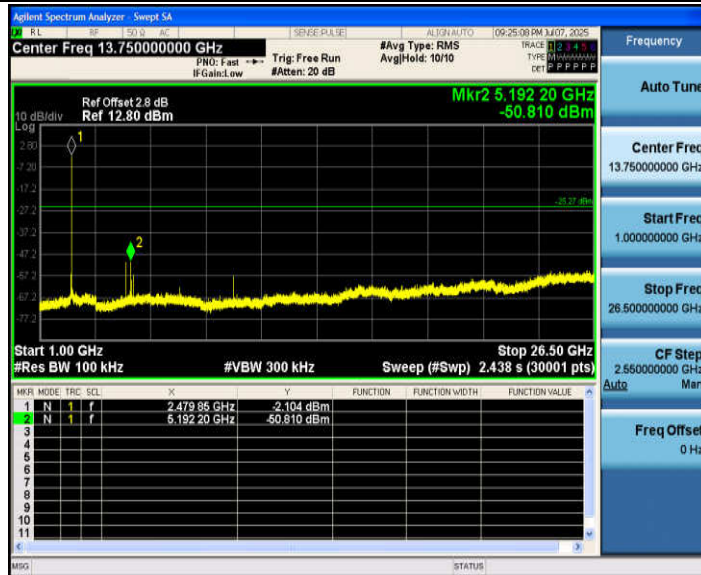
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



Appendix I: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.75	77.87	1.09	---	---
3DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.75	77.87	1.09	---	---

Test Graphs

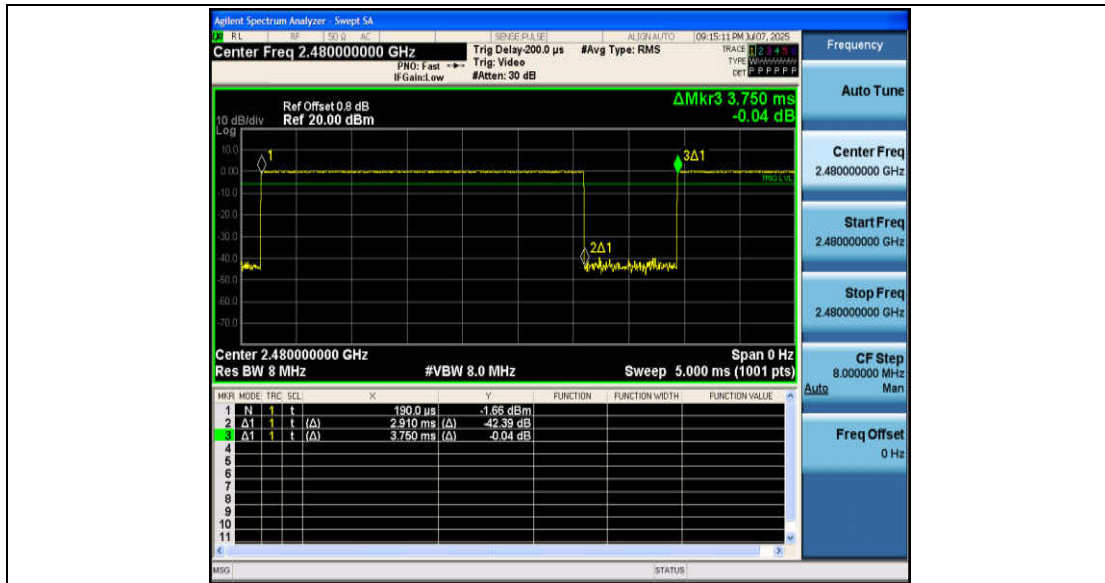
DH5_Ant1_2402



DH5_Ant1_2441



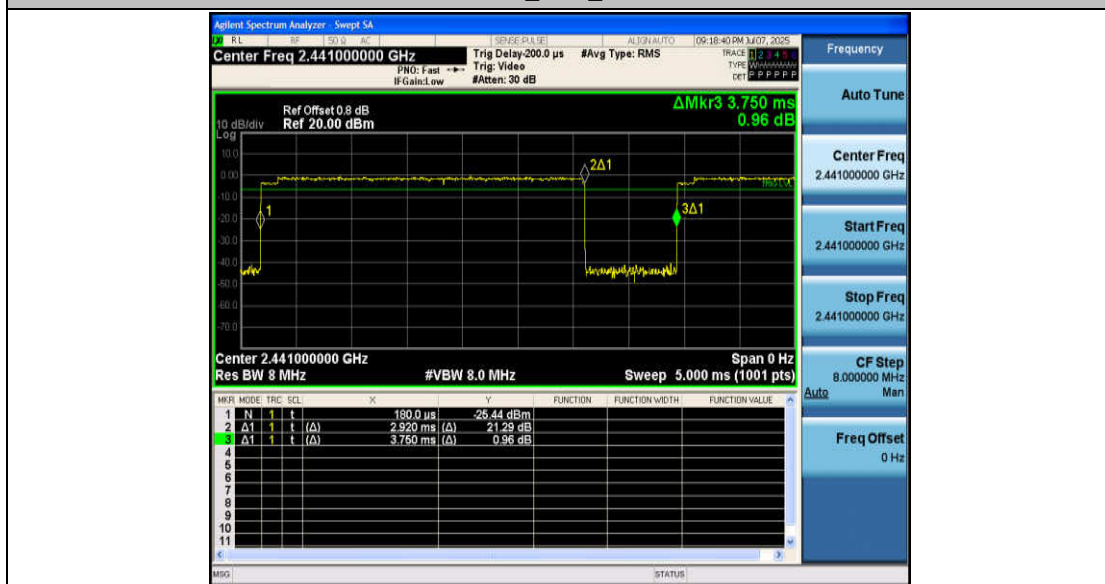
DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



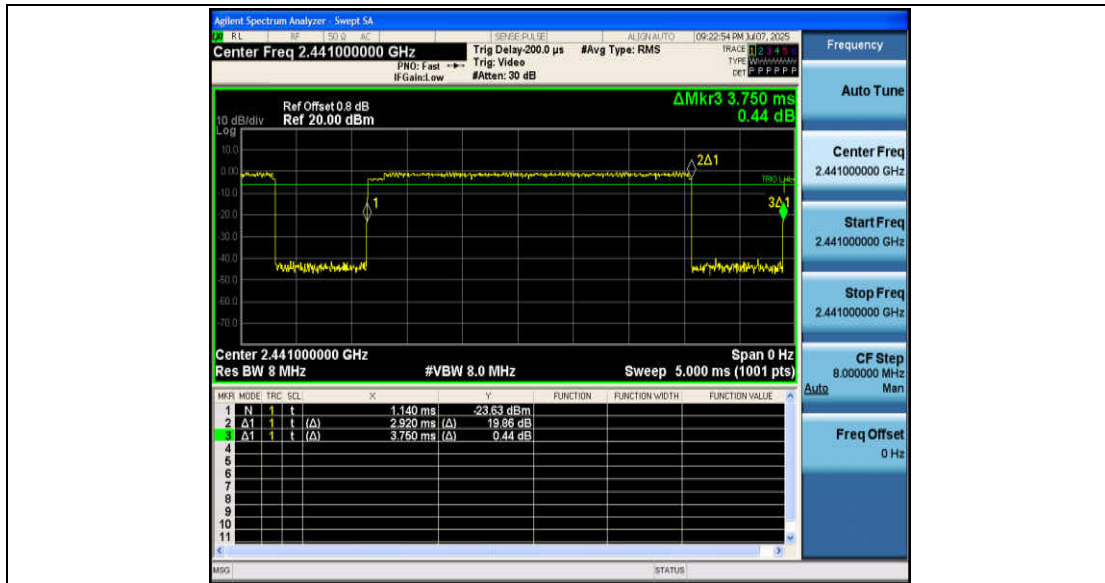
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

