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

Product Name: Two Outputs Marine Bluetooth Controller

Trade Mark: NOAM

Test Model: NBC

FCC ID: 2BDOH-NBC

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

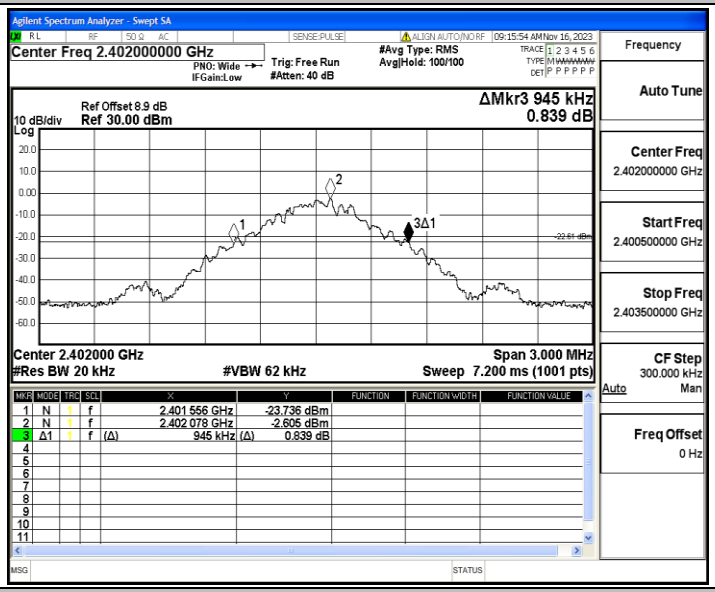
Appendix A: 20dB Emission Bandwidth

Test Result

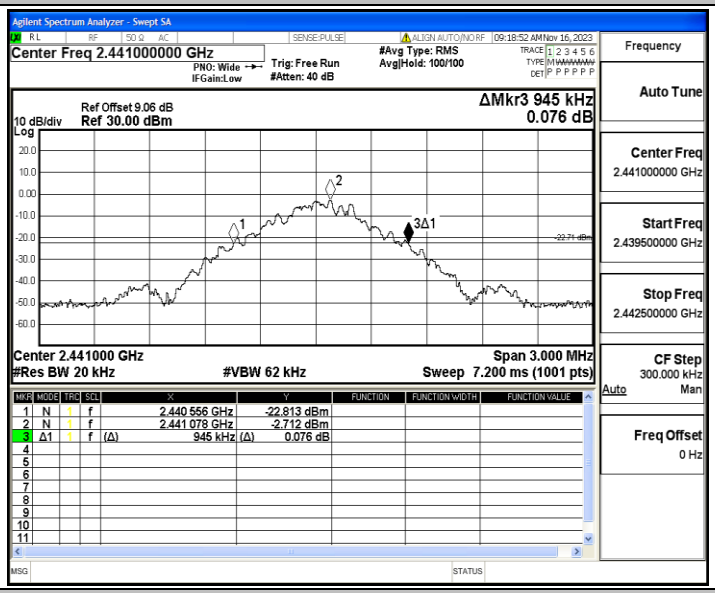
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.945	2401.556	2402.501	---	---
		2441	0.945	2440.556	2441.501	---	---
		2480	0.942	2479.556	2480.498	---	---
2DH5	Ant1	2402	1.308	2401.364	2402.672	---	---
		2441	1.317	2440.358	2441.675	---	---
		2480	1.290	2479.361	2480.651	---	---
3DH5	Ant1	2402	1.308	2401.364	2402.672	---	---
		2441	1.281	2440.367	2441.648	---	---
		2480	1.281	2479.367	2480.648	---	---

Test Graphs

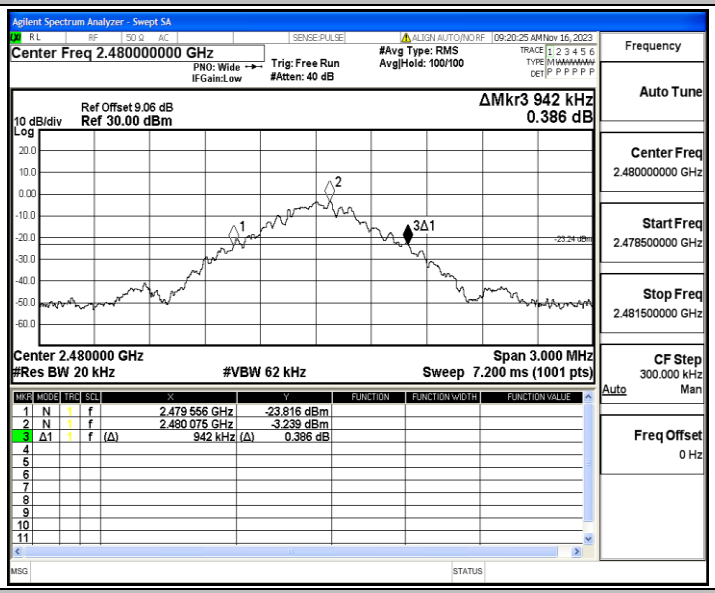
DH5_Ant1_2402



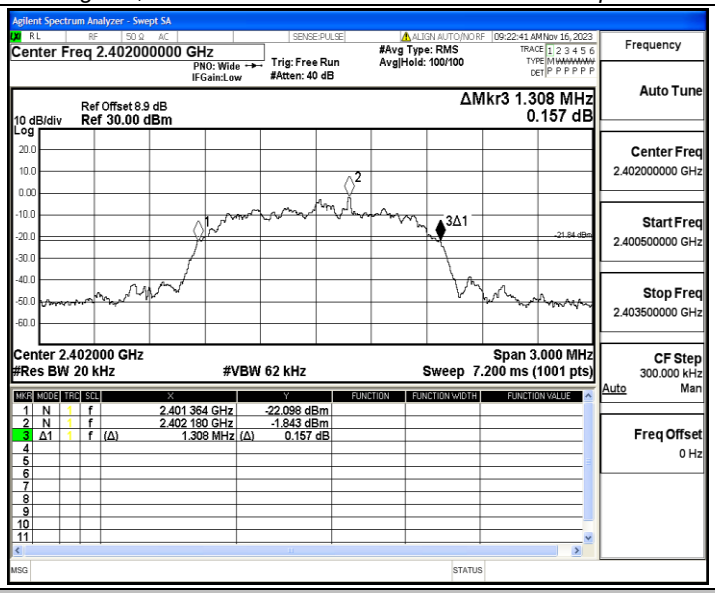
DH5_Ant1_2441



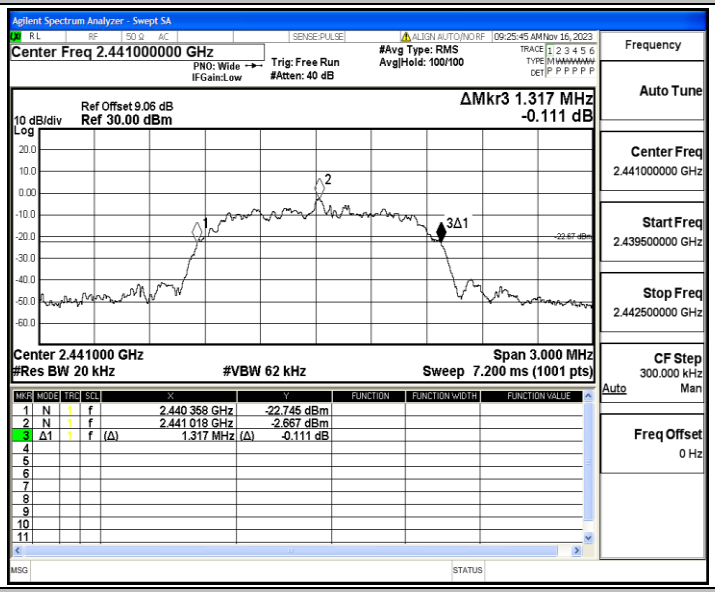
DH5_Ant1_2480



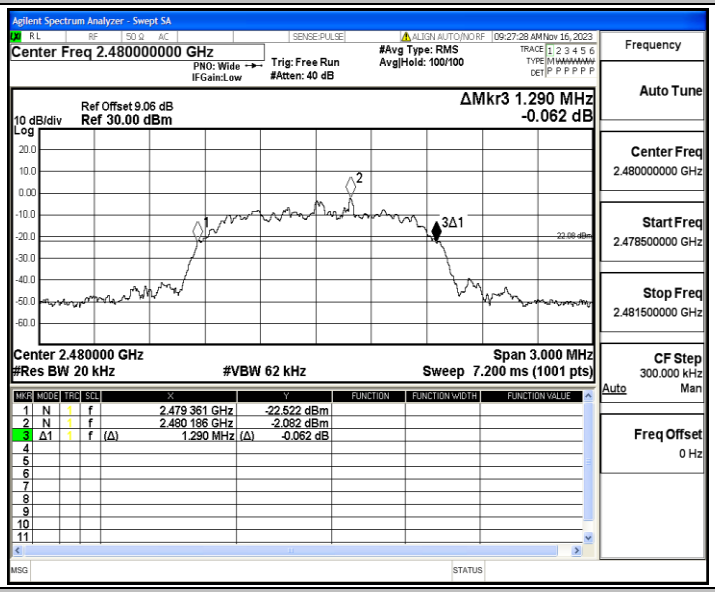
2DH5_Ant1_2402



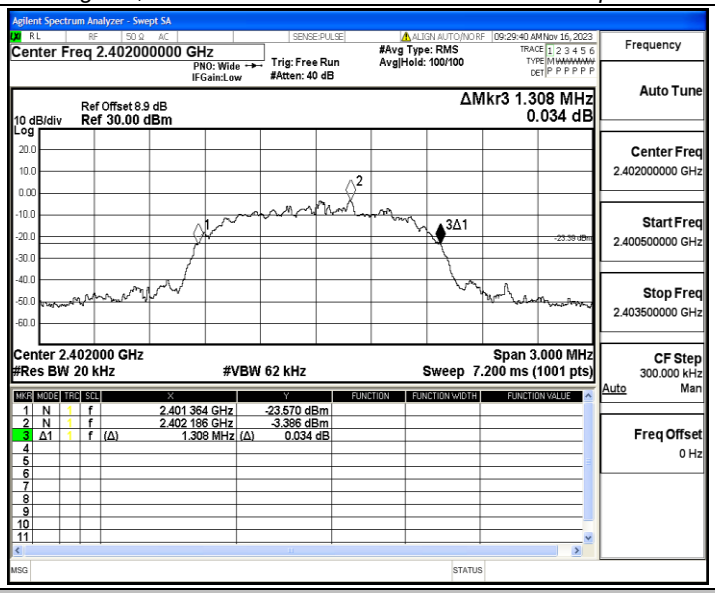
2DH5_Ant1_2441



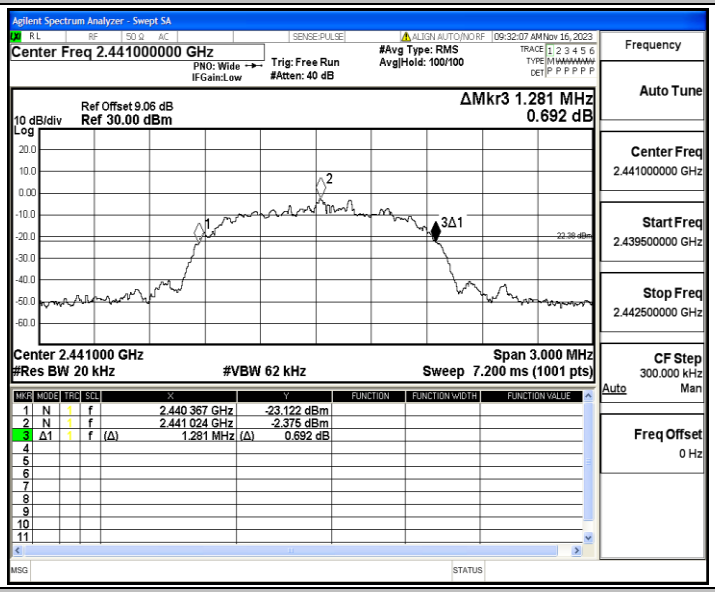
2DH5_Ant1_2480



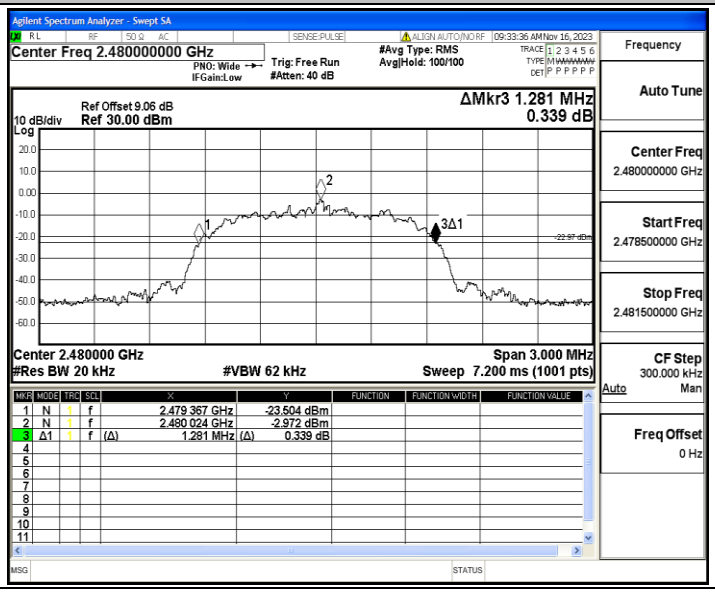
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



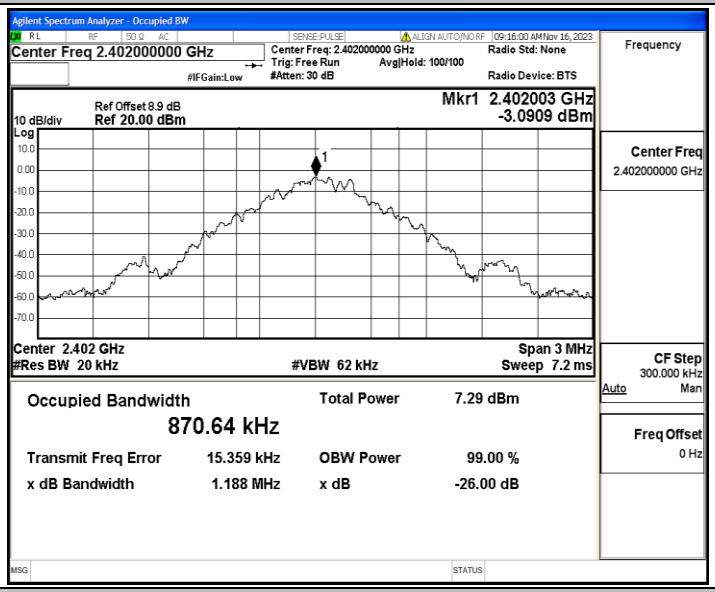
Appendix B: Occupied Channel Bandwidth

Test Result

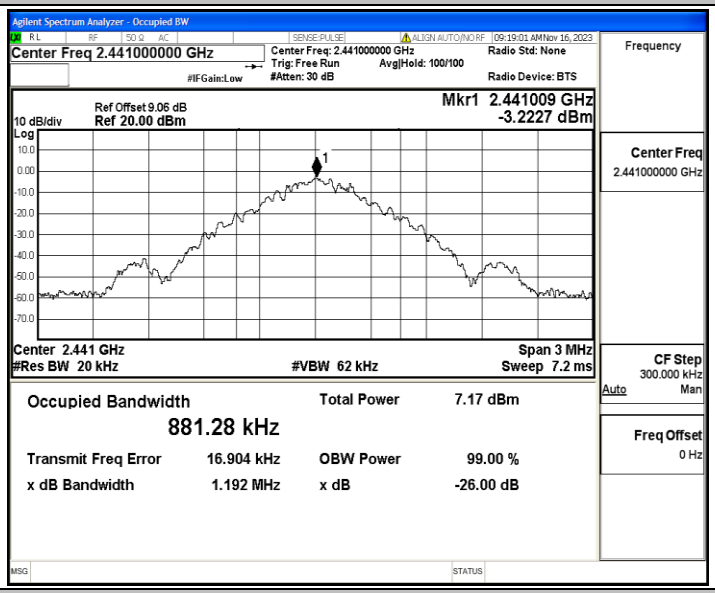
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87064	2401.5800	2402.4507	---	---
		2441	0.88128	2440.5763	2441.4575	---	---
		2480	0.88639	2479.5755	2480.4619	---	---
2DH5	Ant1	2402	1.1701	2401.4299	2402.6000	---	---
		2441	1.1728	2440.4284	2441.6012	---	---
		2480	1.1757	2479.4285	2480.6042	---	---
3DH5	Ant1	2402	1.1726	2401.4286	2402.6012	---	---
		2441	1.1672	2440.4327	2441.5999	---	---
		2480	1.1825	2479.4197	2480.6022	---	---

Test Graphs

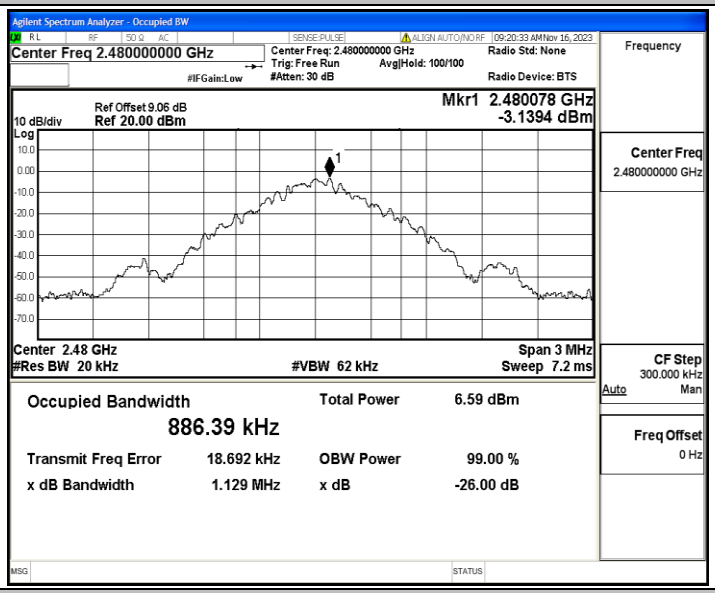
DH5_Ant1_2402



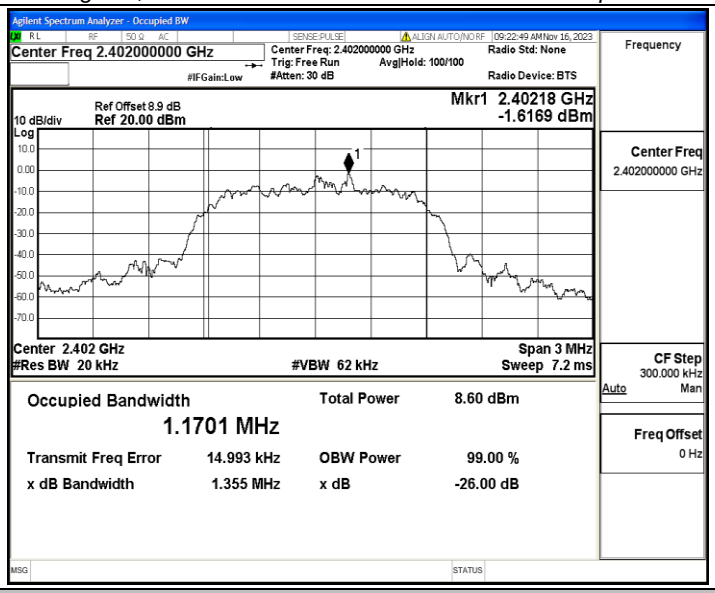
DH5_Ant1_2441



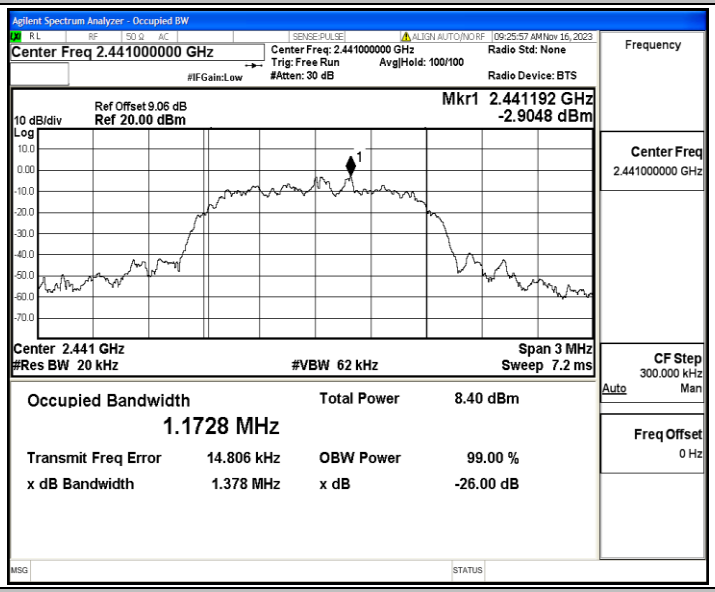
DH5_Ant1_2480



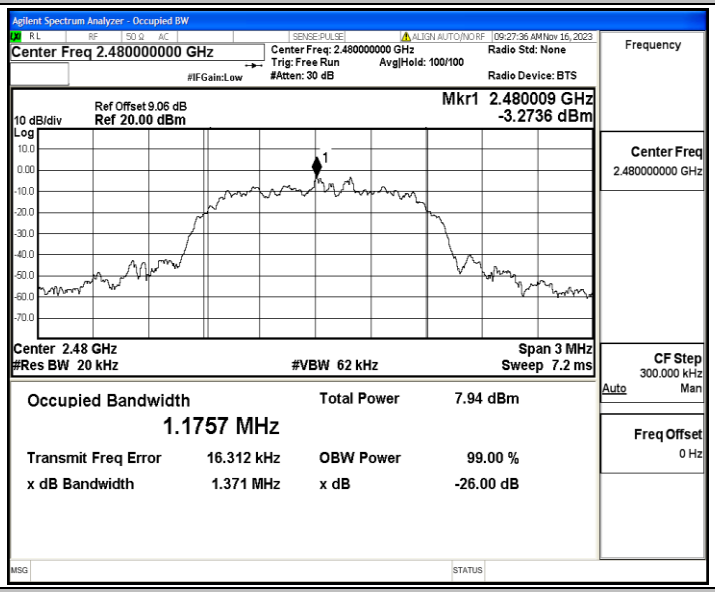
2DH5_Ant1_2402



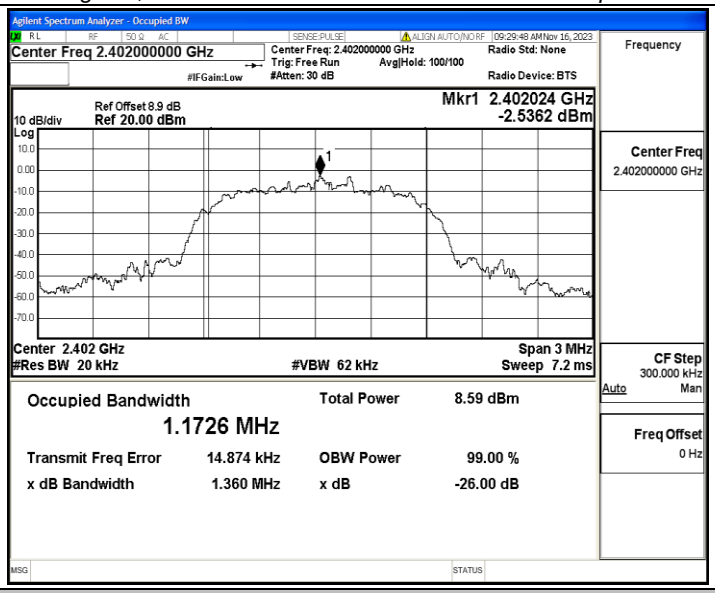
2DH5_Ant1_2441



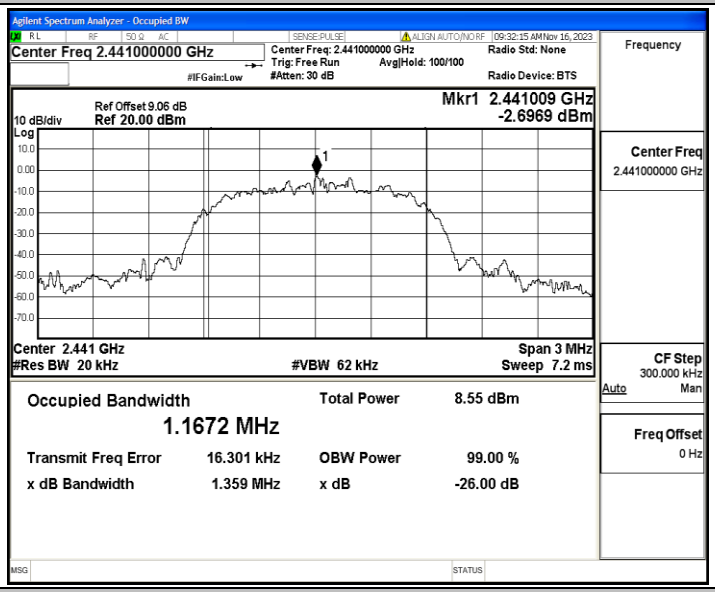
2DH5_Ant1_2480



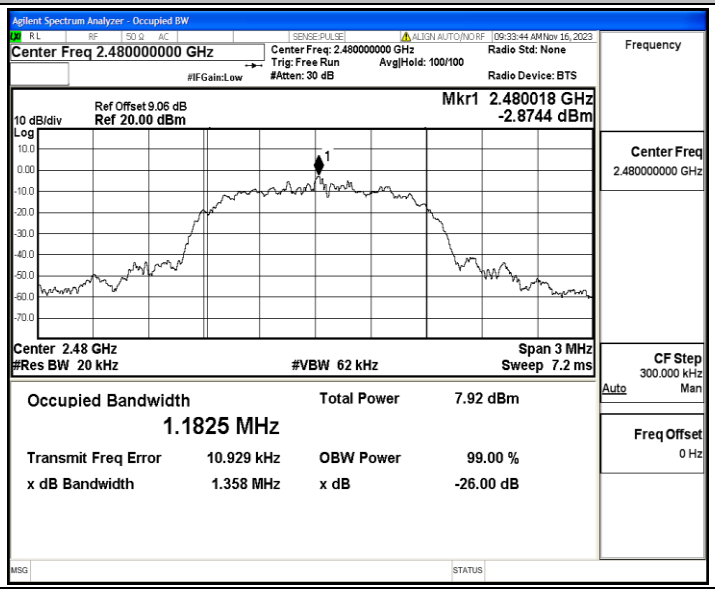
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



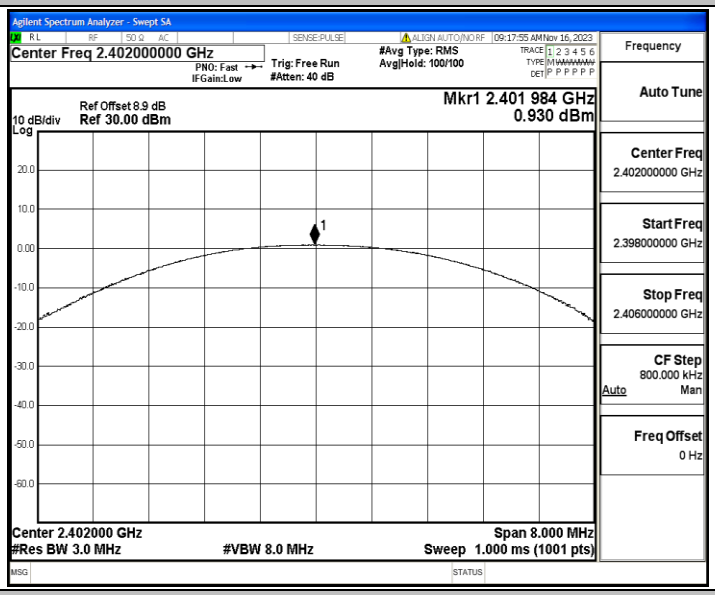
Appendix C: Maximum Peak conducted output power

Test Result

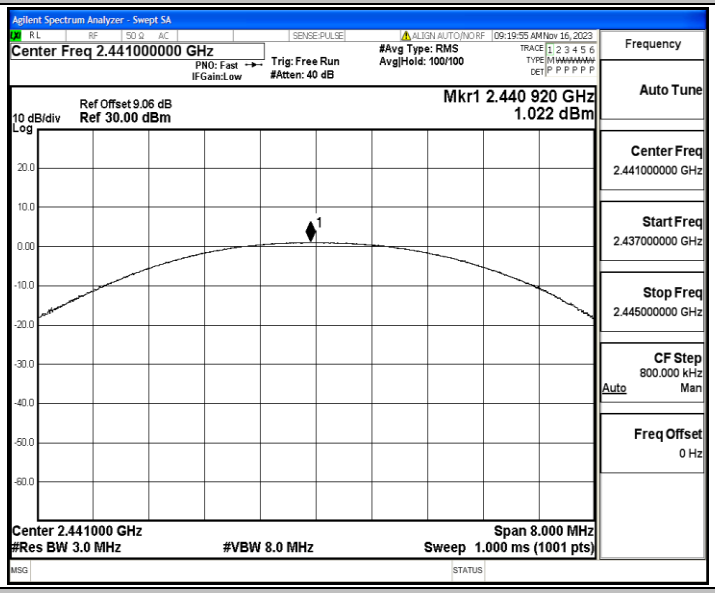
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	0.93	≤30	PASS
		2441	1.02	≤30	PASS
		2480	0.49	≤30	PASS
2DH5	Ant1	2402	3.72	≤20.97	PASS
		2441	3.78	≤20.97	PASS
		2480	3.23	≤20.97	PASS
3DH5	Ant1	2402	4.27	≤20.97	PASS
		2441	4.3	≤20.97	PASS
		2480	3.74	≤20.97	PASS

Test Graphs

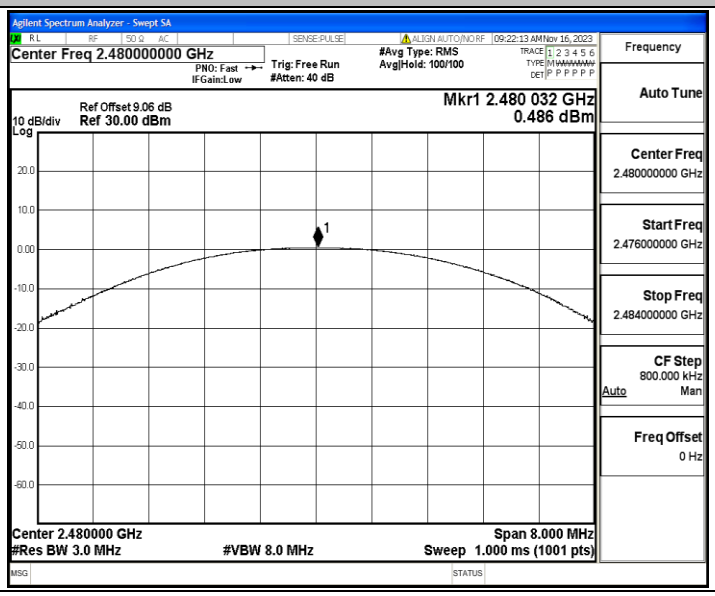
DH5_Ant1_2402



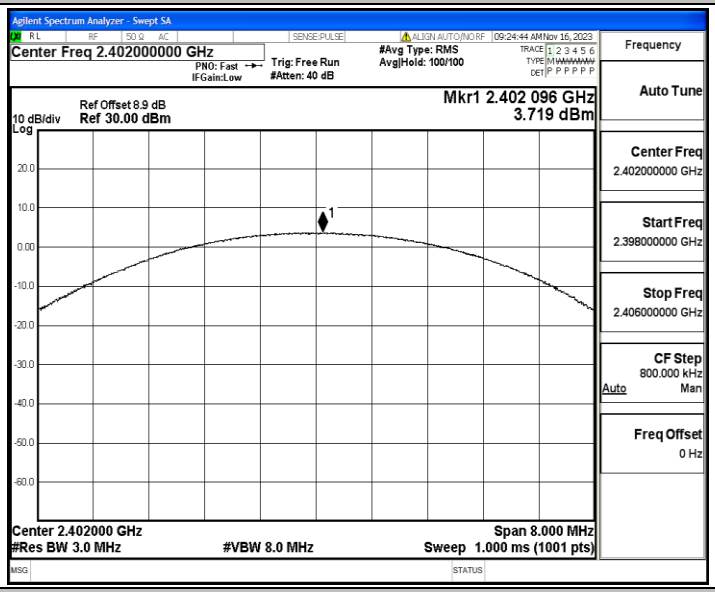
DH5_Ant1_2441



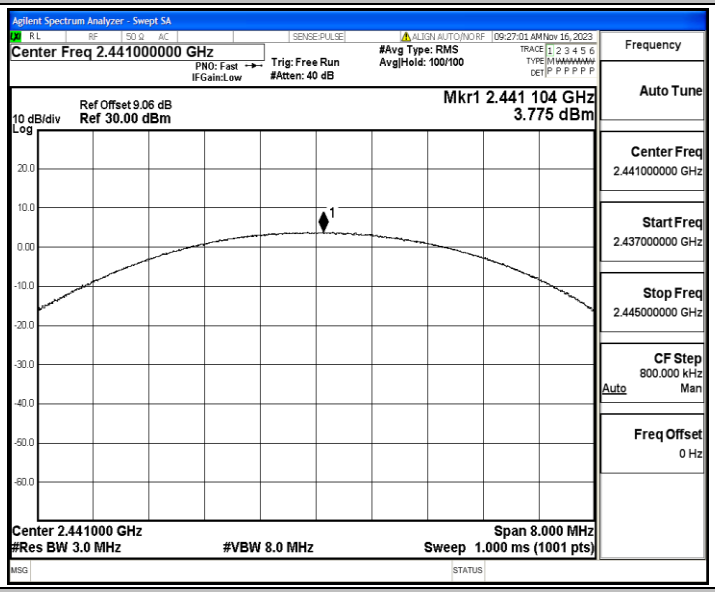
DH5_Ant1_2480



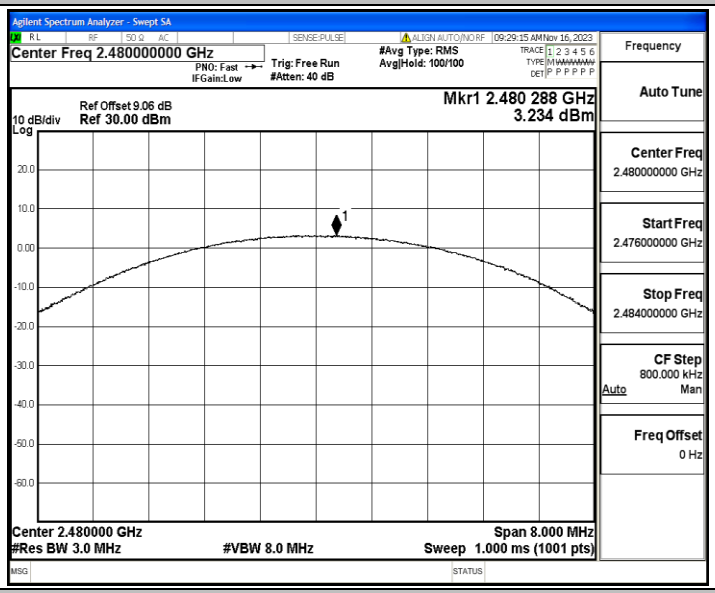
2DH5_Ant1_2402



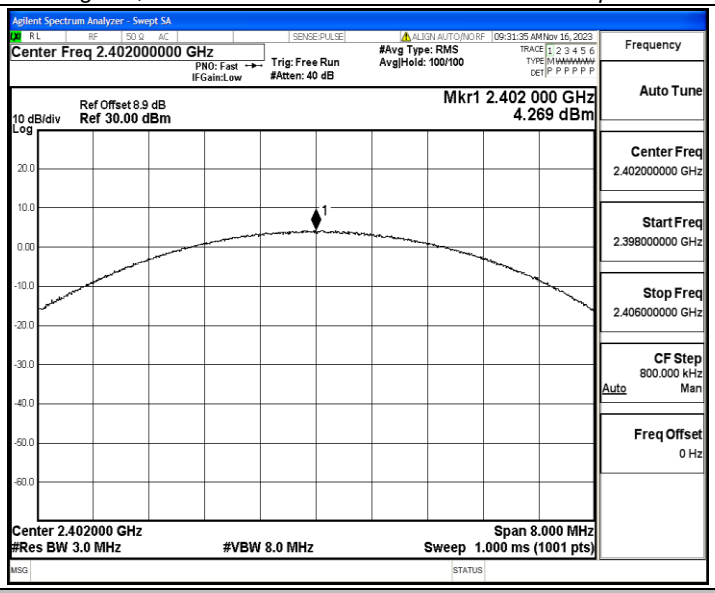
2DH5_Ant1_2441



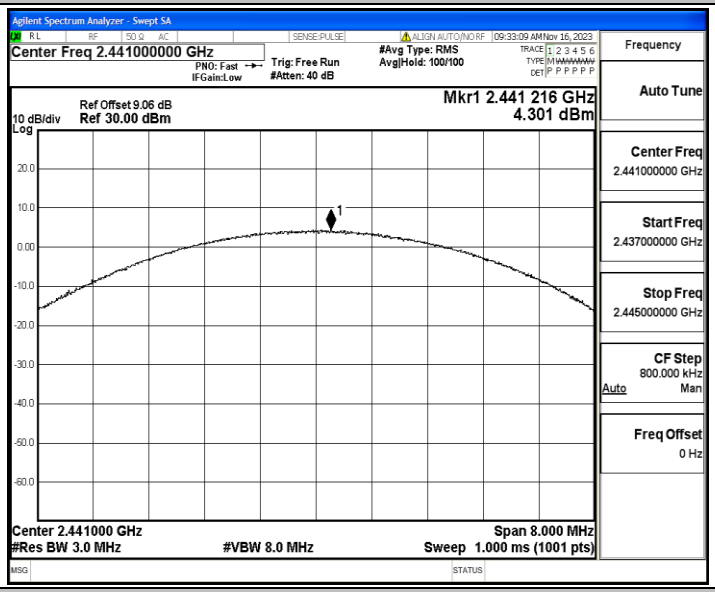
2DH5_Ant1_2480



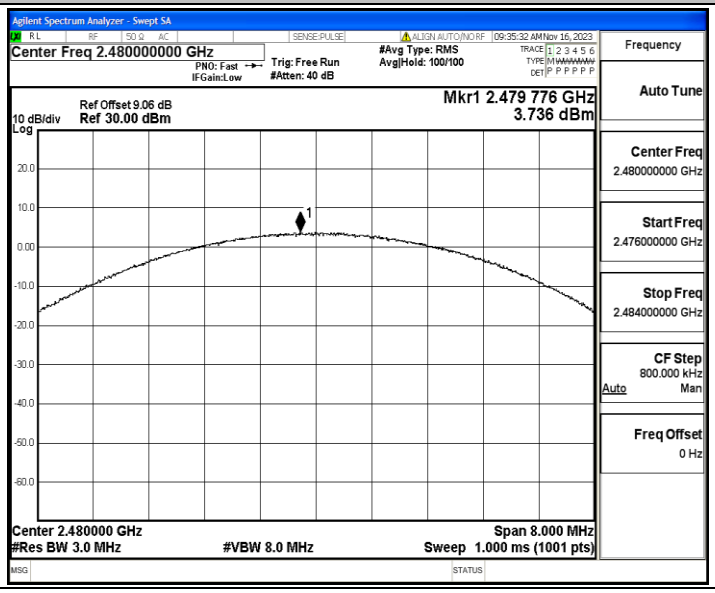
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



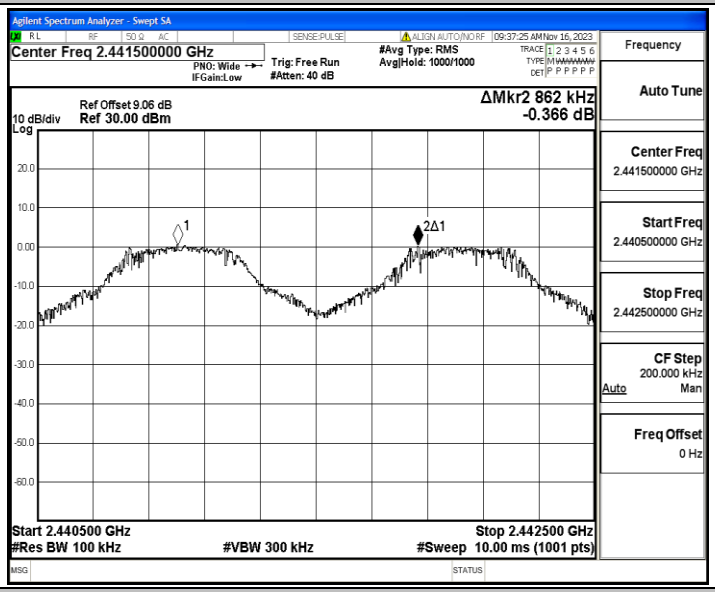
Appendix D: Carrier frequency separation

Test Result

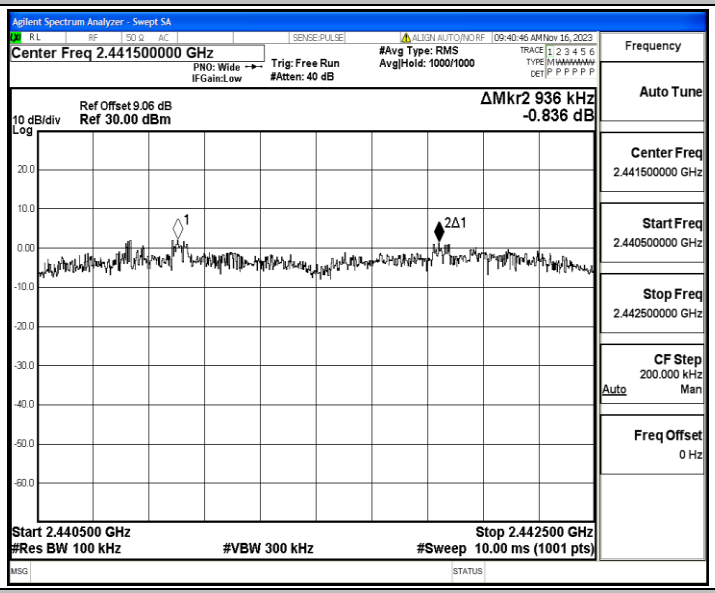
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.862	≥0.630	PASS
2DH5	Ant1	Hop	0.936	≥0.878	PASS
3DH5	Ant1	Hop	1.008	≥0.872	PASS

Test Graphs

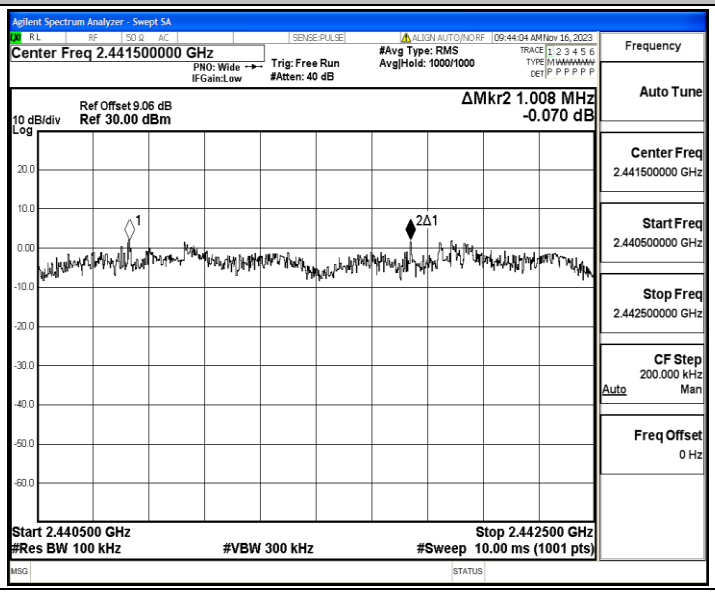
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



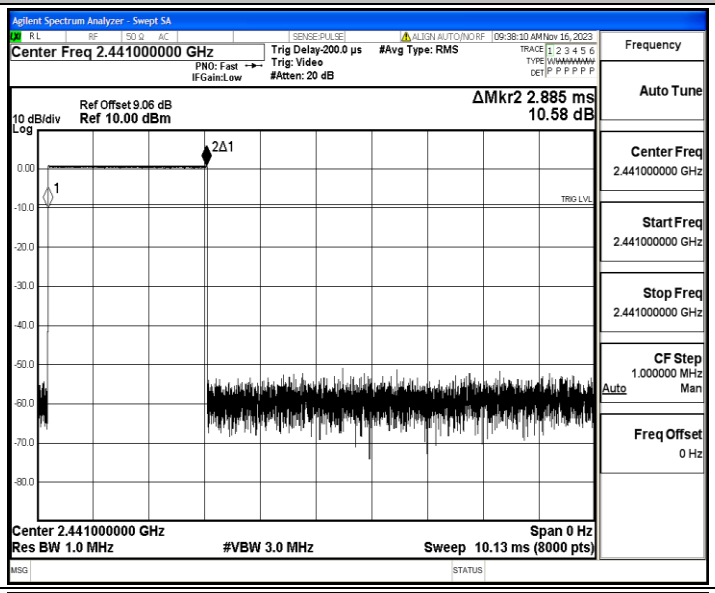
Appendix E: Time of occupancy

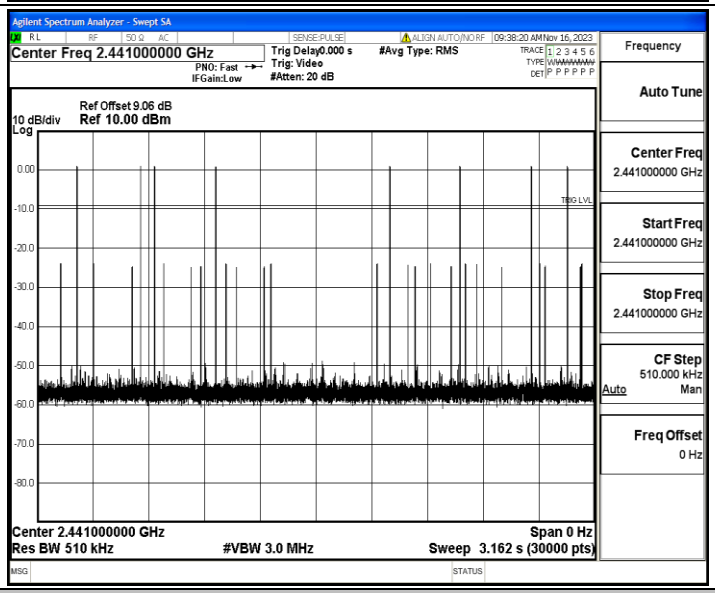
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.885	90	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.889	130	0.376	≤0.4	PASS
3DH5	Ant1	Hop	2.892	50	0.145	≤0.4	PASS

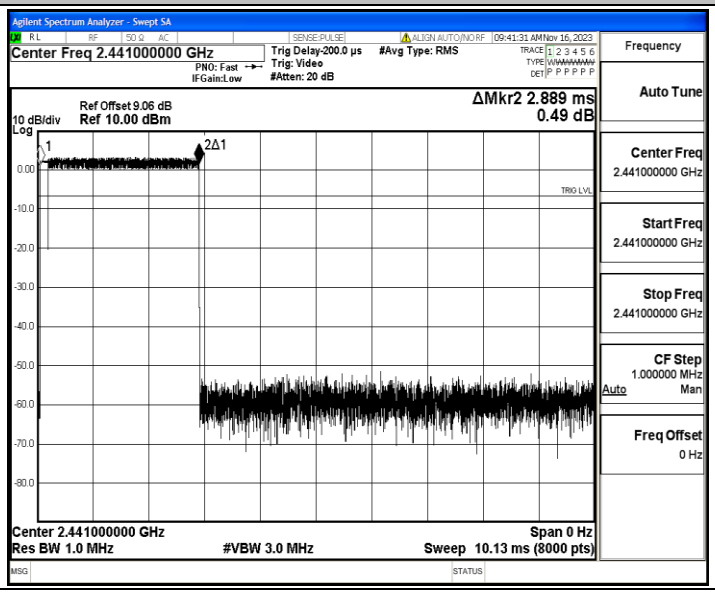
Test Graphs

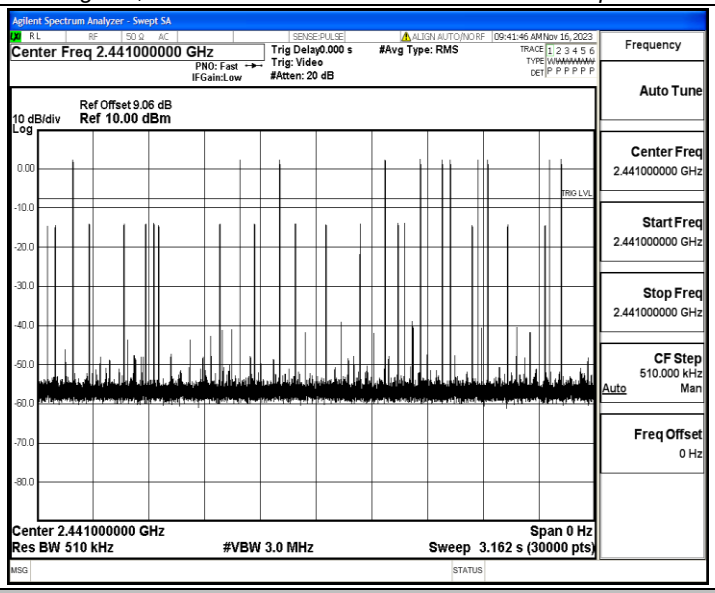
DH5_Ant1_Hop



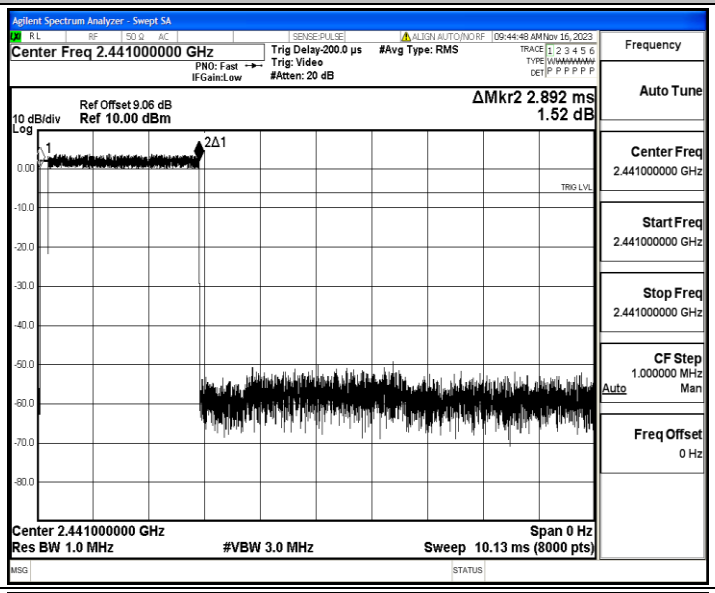


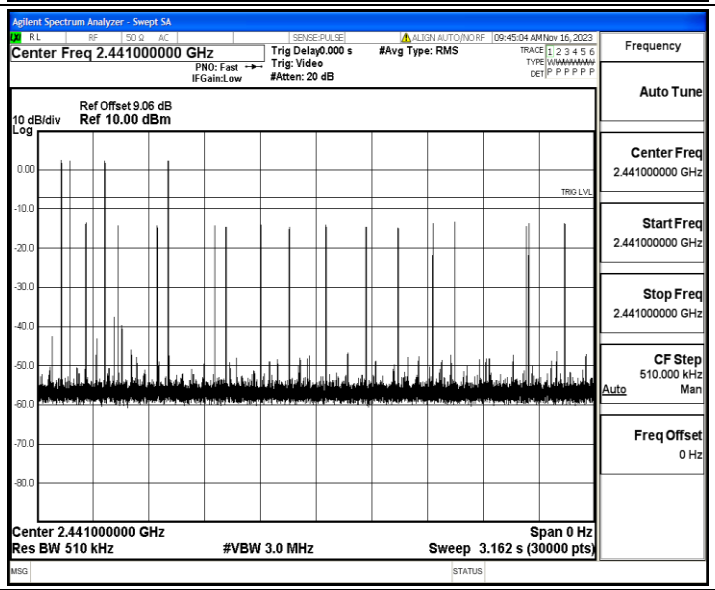
2DH5_Ant1_Hop





3DH5_Ant1_Hop





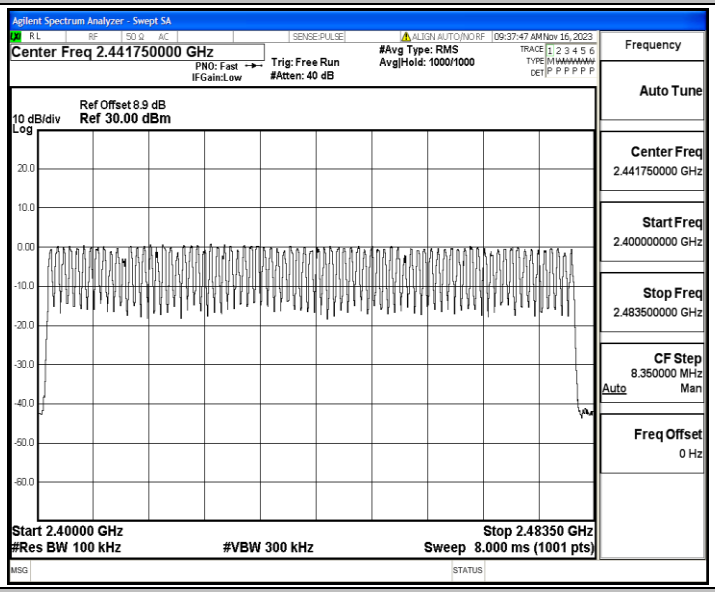
Appendix F: Number of hopping channels

Test Result

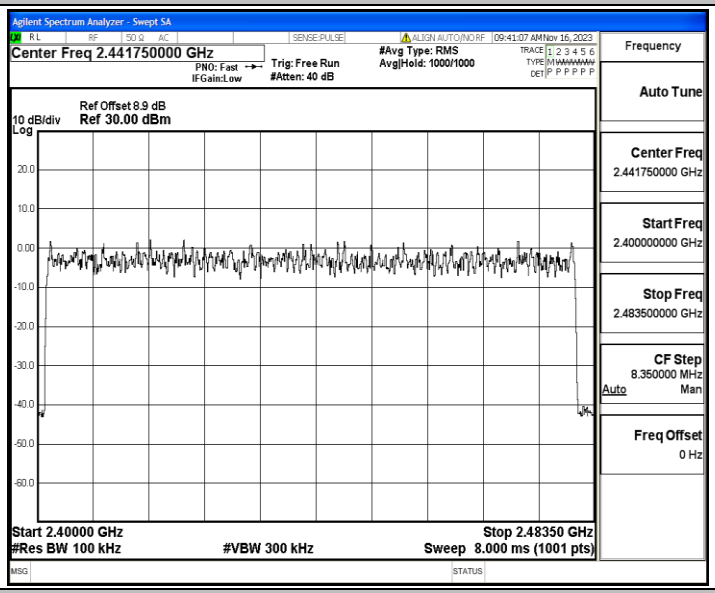
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

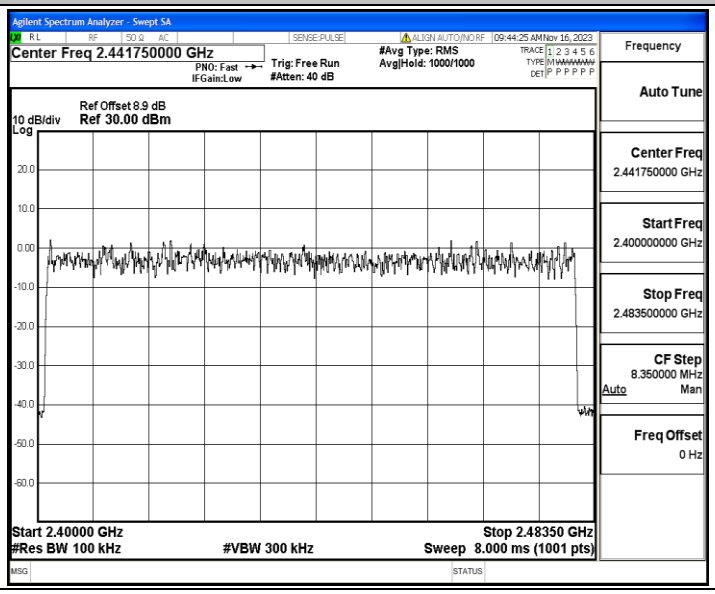
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



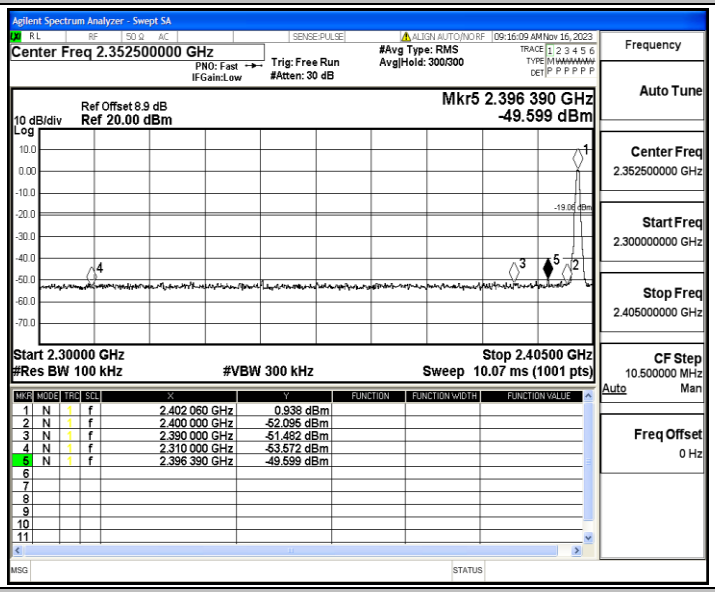
Appendix G: Band edge measurements

Test Result

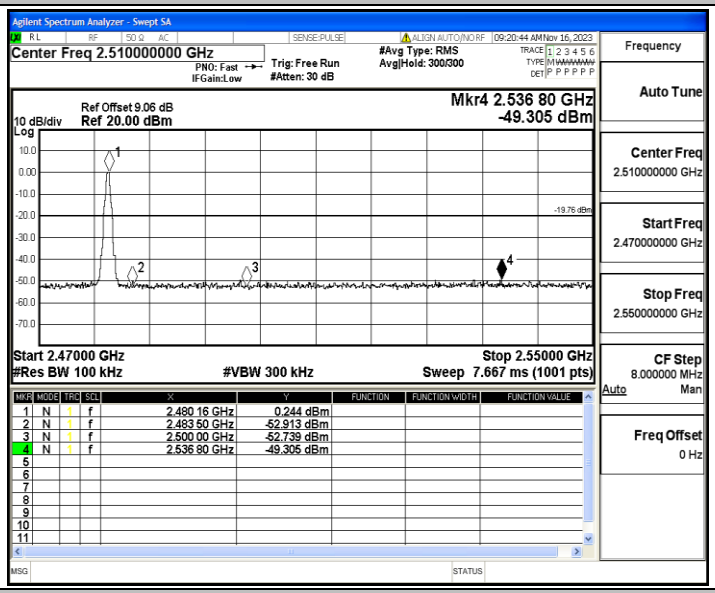
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.94	-49.6	≤-19.06	PASS
		High	2480	0.24	-49.31	≤-19.76	PASS
		Low	Hop_2402	-0.44	-50.3	≤-20.44	PASS
		High	Hop_2480	0.03	-48.56	≤-19.97	PASS
2DH5	Ant1	Low	2402	1.29	-50.69	≤-18.71	PASS
		High	2480	1.17	-49.01	≤-18.83	PASS
		Low	Hop_2402	-1.83	-50.38	≤-21.83	PASS
		High	Hop_2480	0.14	-49.83	≤-19.86	PASS
3DH5	Ant1	Low	2402	2.16	-50.42	≤-17.84	PASS
		High	2480	1.32	-48.86	≤-18.68	PASS
		Low	Hop_2402	-2.34	-50.67	≤-22.34	PASS
		High	Hop_2480	0.19	-49.28	≤-19.81	PASS

Test Graphs

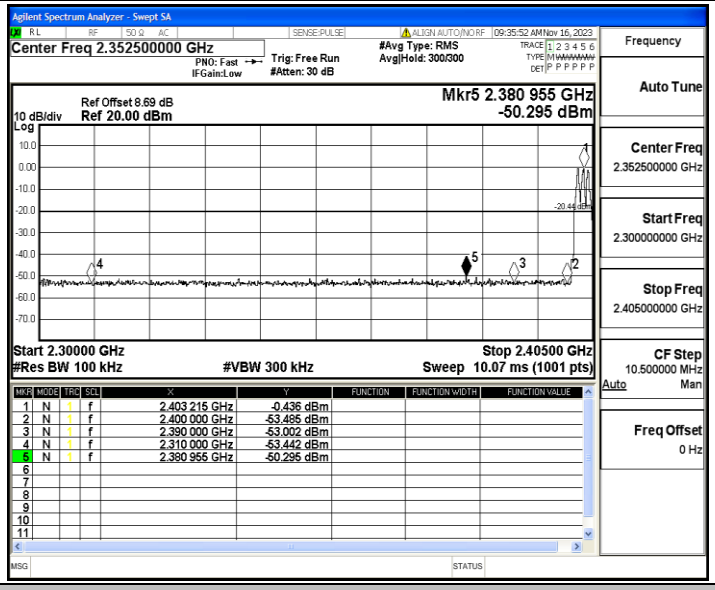
DH5_Ant1_Low_2402



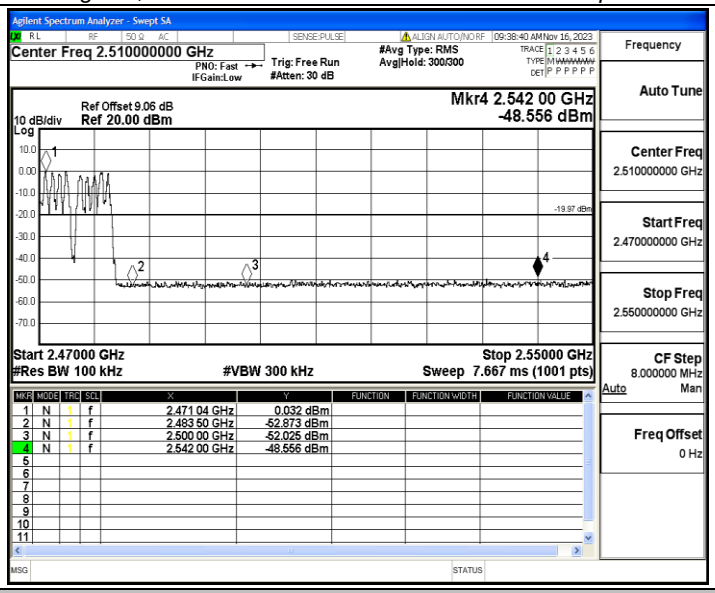
DH5_Ant1_High_2480



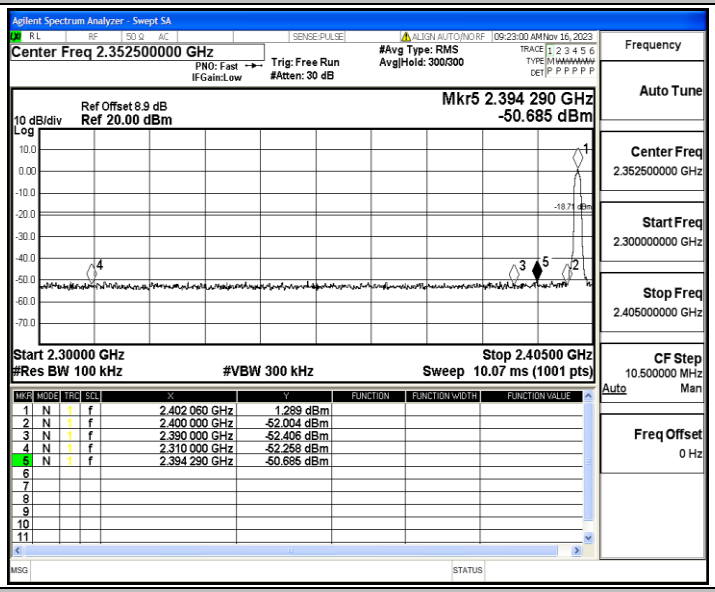
DH5_Ant1_Low_Hop_2402



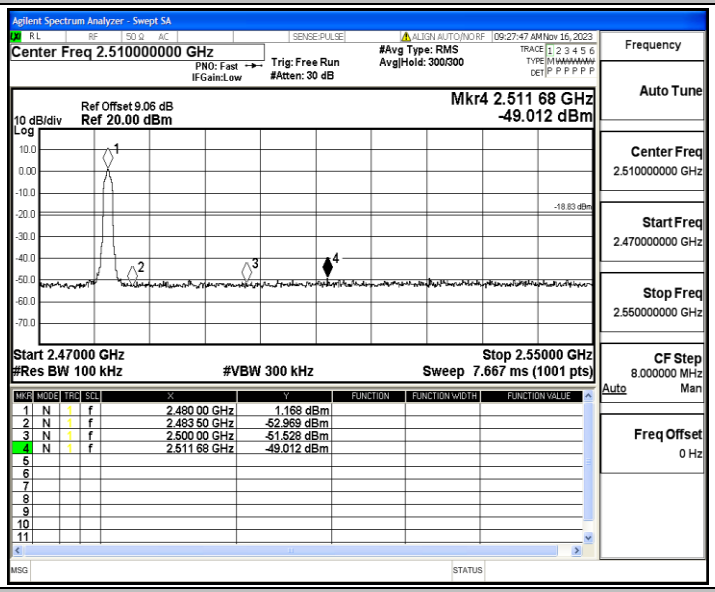
DH5_Ant1_High_Hop_2480



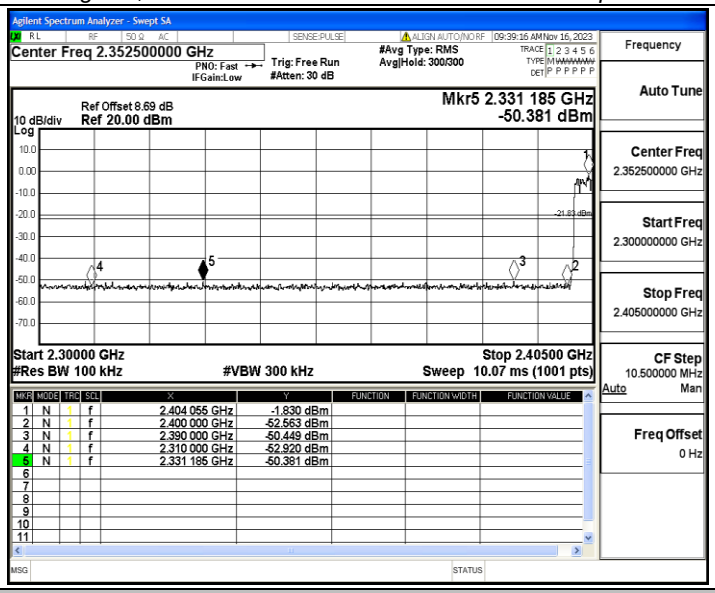
2DH5_Ant1_Low_2402



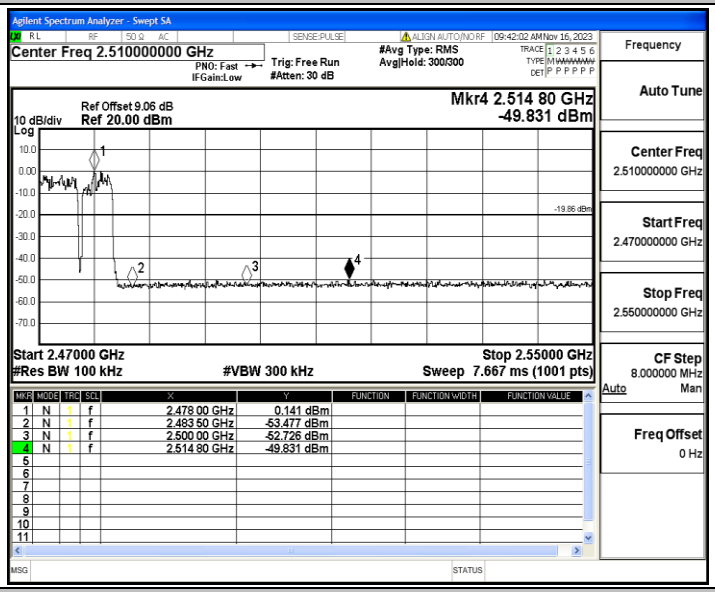
2DH5_Ant1_High_2480



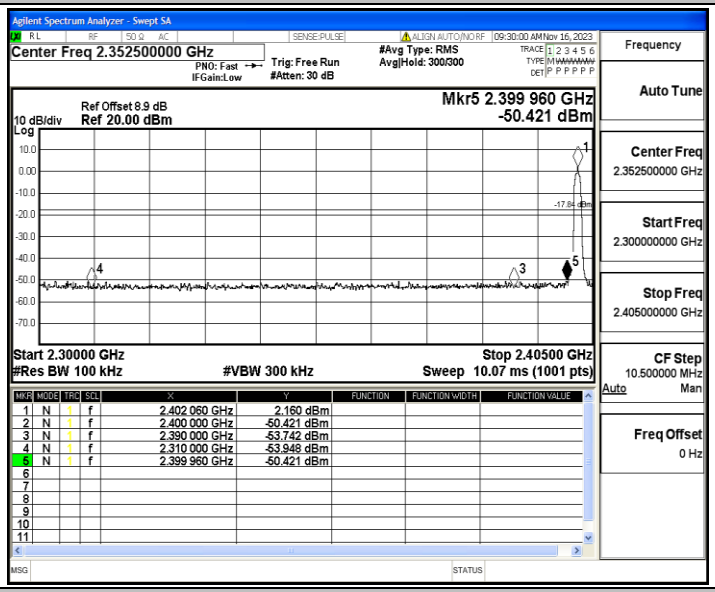
2DH5_Ant1_Low_Hop_2402



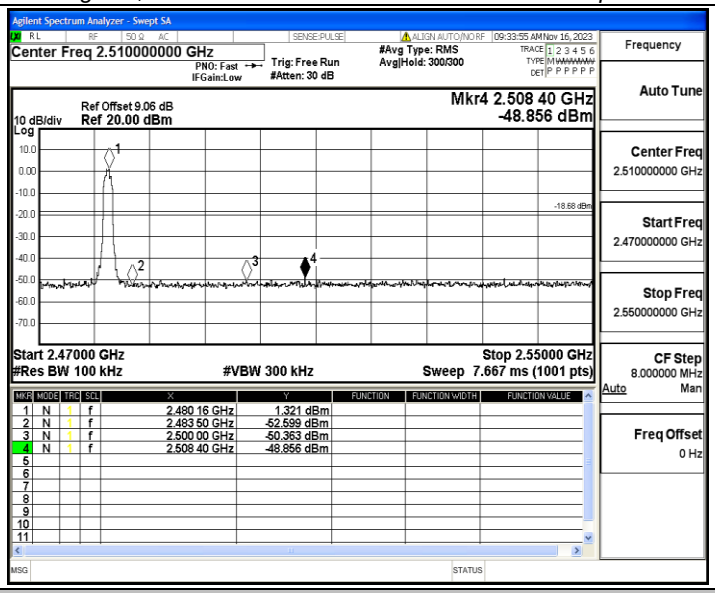
2DH5_Ant1_High_Hop_2480



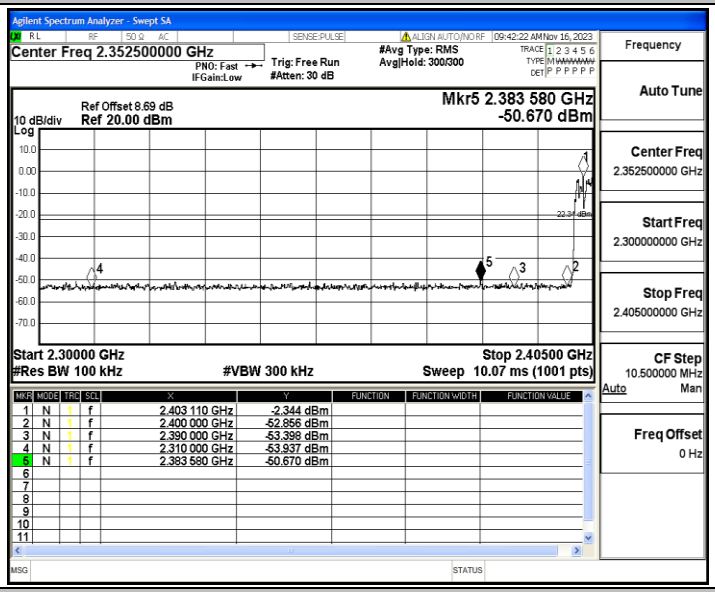
3DH5_Ant1_Low_2402



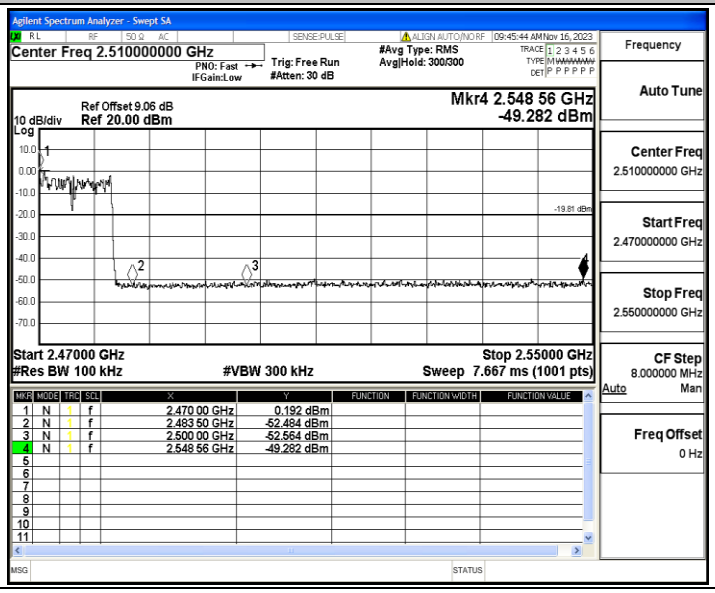
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



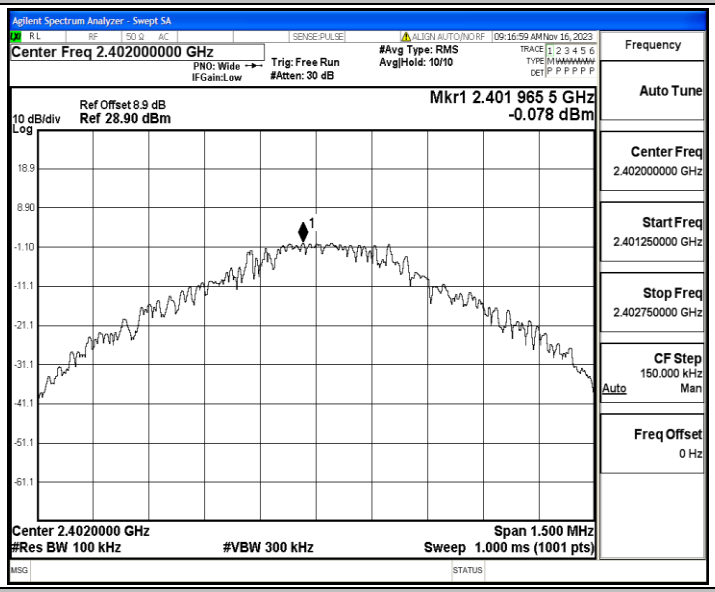
Appendix H: Conducted Spurious Emission

Test Result

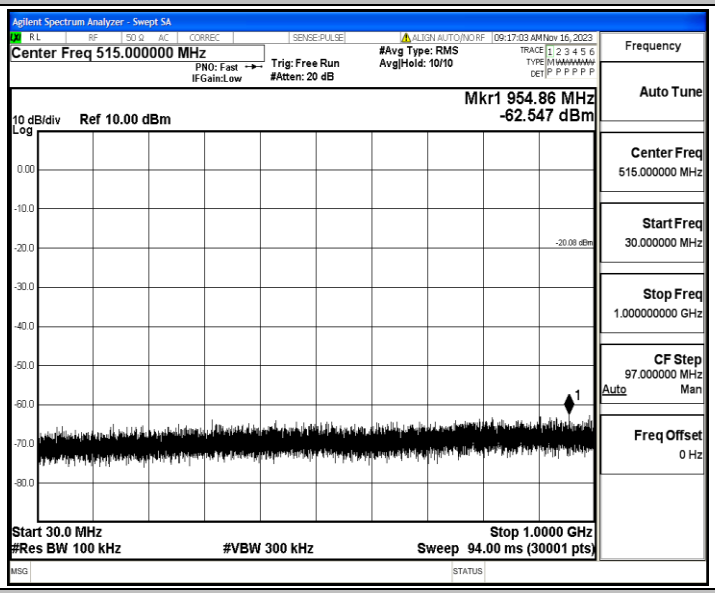
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.08	-0.08	---	PASS
			30~1000	-0.08	-62.55	≤-20.08	PASS
			1000~26500	-0.08	-50.84	≤-20.08	PASS
		2441	Reference	-0.11	-0.11	---	PASS
			30~1000	-0.11	-62.26	≤-20.11	PASS
			1000~26500	-0.11	-50.78	≤-20.11	PASS
		2480	Reference	-0.48	-0.48	---	PASS
			30~1000	-0.48	-62.48	≤-20.48	PASS
			1000~26500	-0.48	-50.05	≤-20.48	PASS
2DH5	Ant1	2402	Reference	-0.91	-0.91	---	PASS
			30~1000	-0.91	-62.84	≤-20.91	PASS
			1000~26500	-0.91	-49.82	≤-20.91	PASS
		2441	Reference	0.73	0.73	---	PASS
			30~1000	0.73	-61.74	≤-19.27	PASS
			1000~26500	0.73	-50.25	≤-19.27	PASS
		2480	Reference	1.65	1.65	---	PASS
			30~1000	1.65	-62.25	≤-18.35	PASS
			1000~26500	1.65	-50.59	≤-18.35	PASS
3DH5	Ant1	2402	Reference	-0.84	-0.84	---	PASS
			30~1000	-0.84	-62.73	≤-20.84	PASS
			1000~26500	-0.84	-50.95	≤-20.84	PASS
		2441	Reference	1.79	1.79	---	PASS
			30~1000	1.79	-62.89	≤-18.21	PASS
			1000~26500	1.79	-50.5	≤-18.21	PASS
		2480	Reference	-0.72	-0.72	---	PASS
			30~1000	-0.72	-62.88	≤-20.72	PASS
			1000~26500	-0.72	-49.09	≤-20.72	PASS

Test Graphs

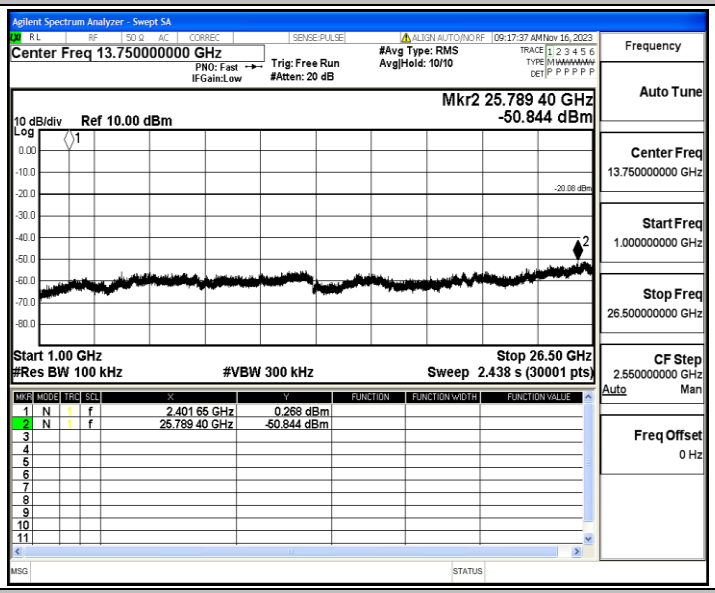
DH5_Ant1_2402_0~Reference



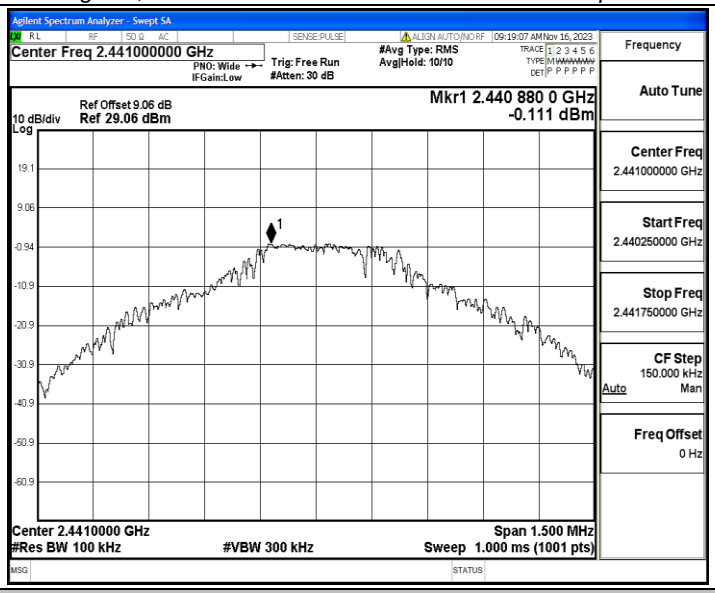
DH5_Ant1_2402_30~1000



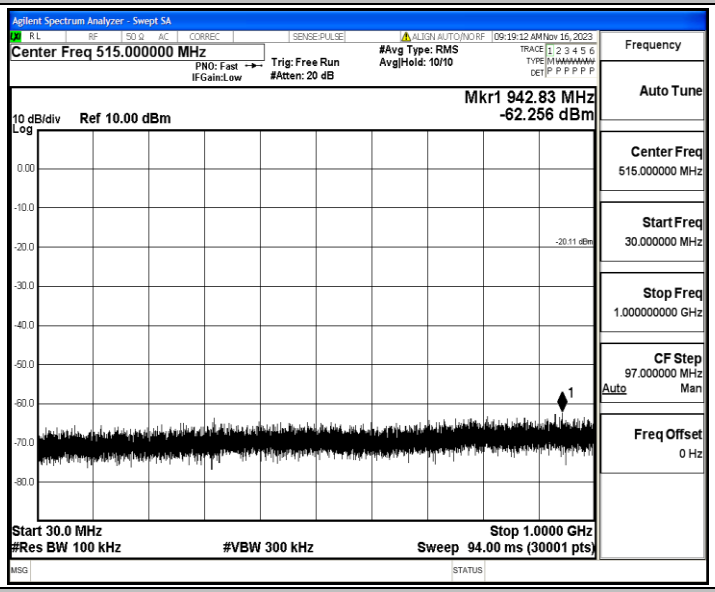
DH5_Ant1_2402_1000~26500



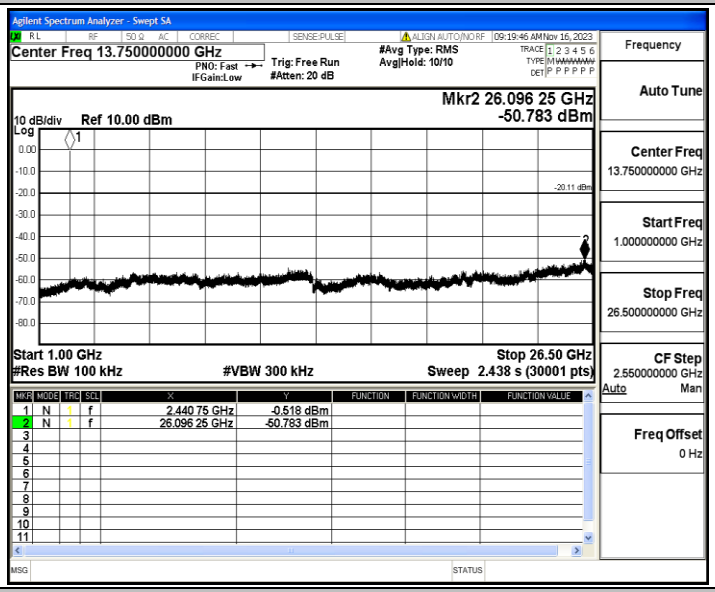
DH5_Ant1_2441_0~Reference



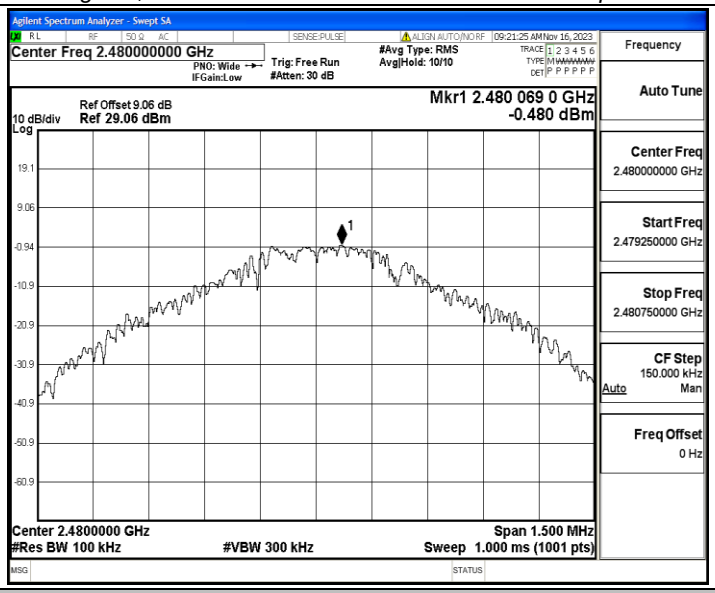
DH5_Ant1_2441_30~1000



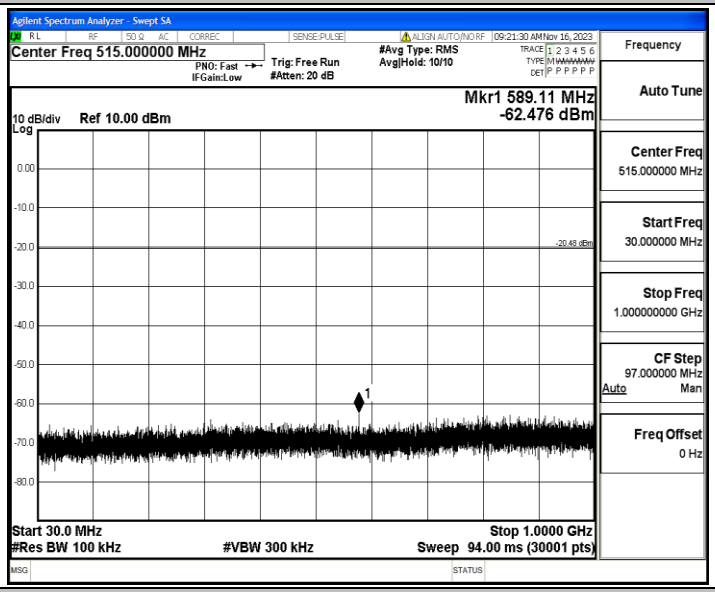
DH5_Ant1_2441_1000~26500



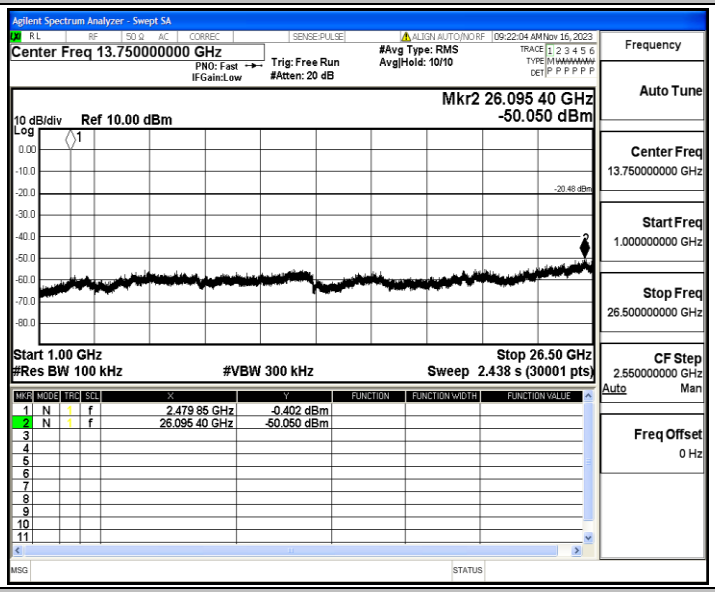
DH5_Ant1_2480_0~Reference



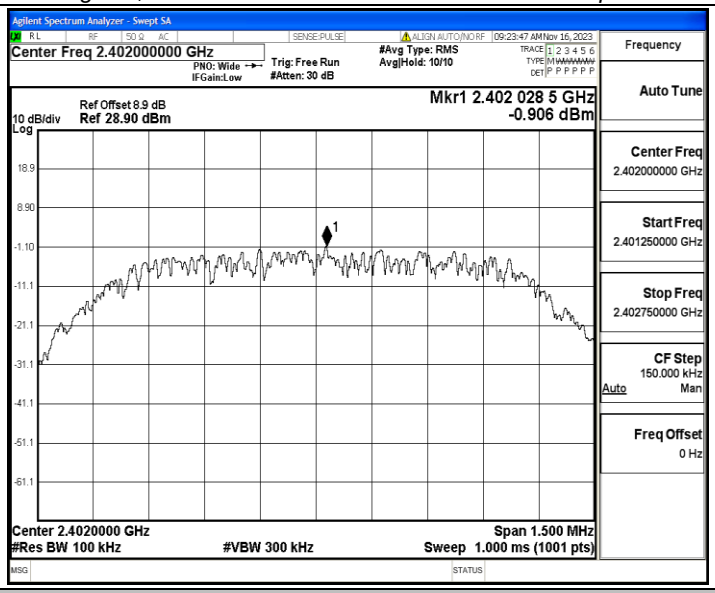
DH5_Ant1_2480_30~1000



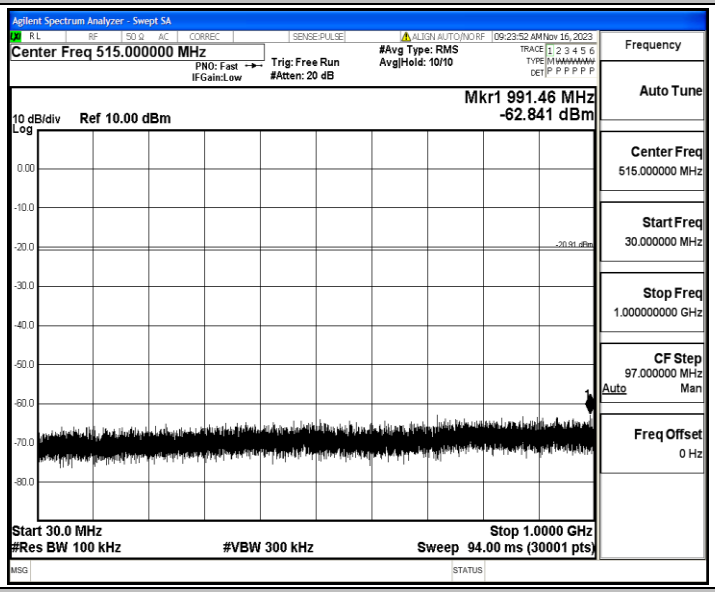
DH5_Ant1_2480_1000~26500



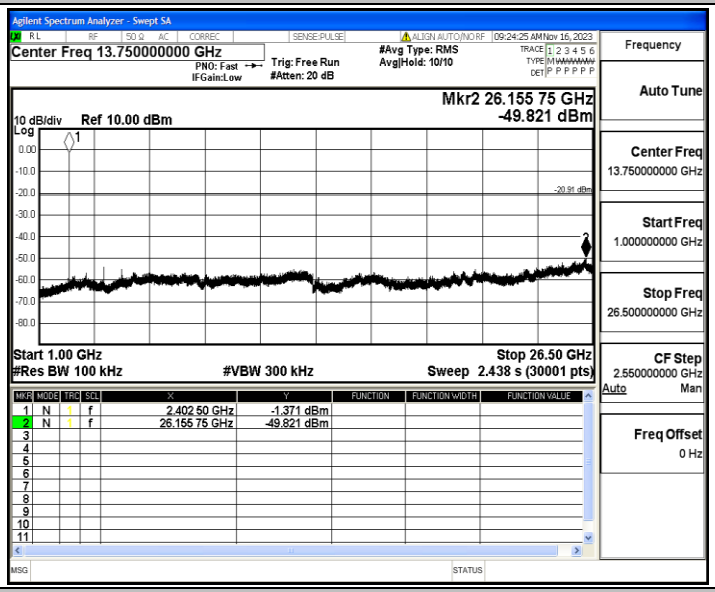
2DH5_Ant1_2402_0~Reference



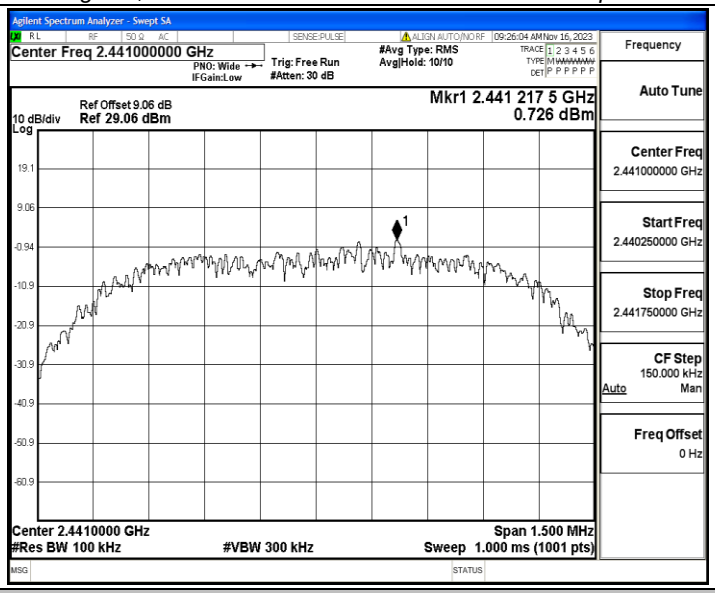
2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference



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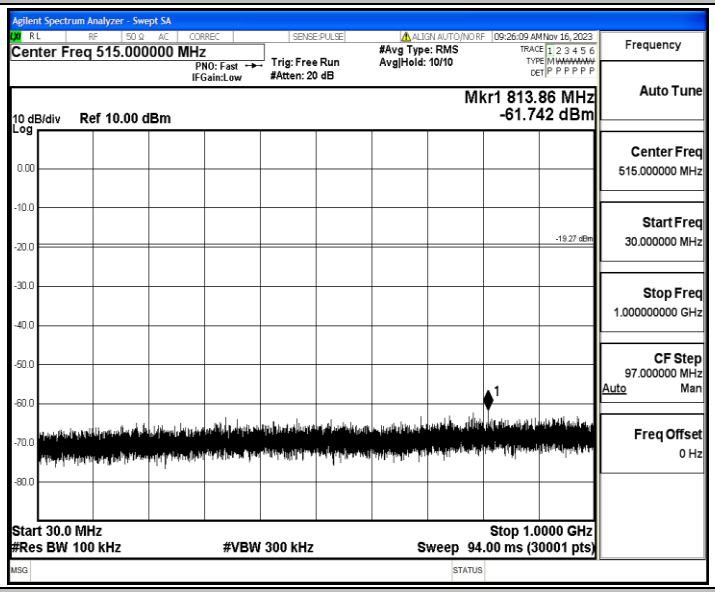
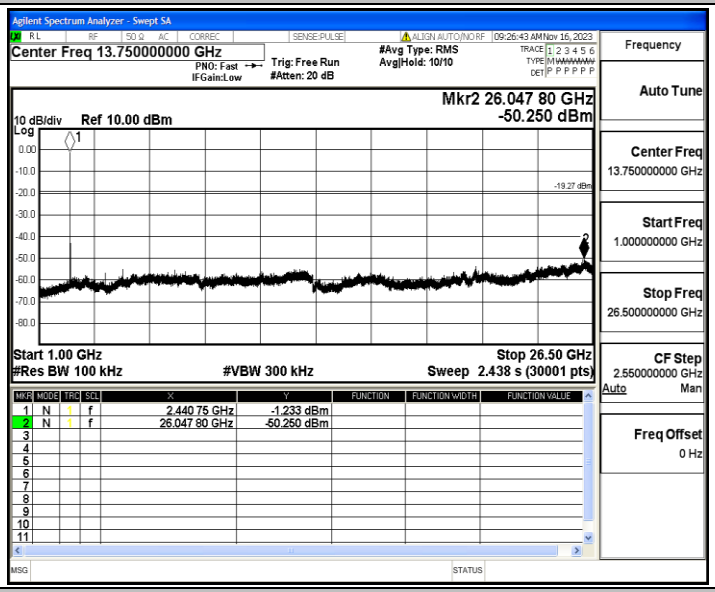
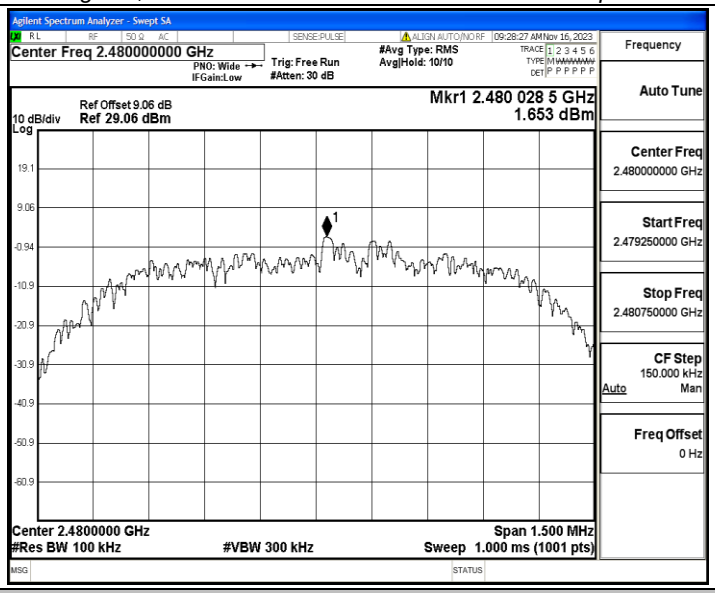


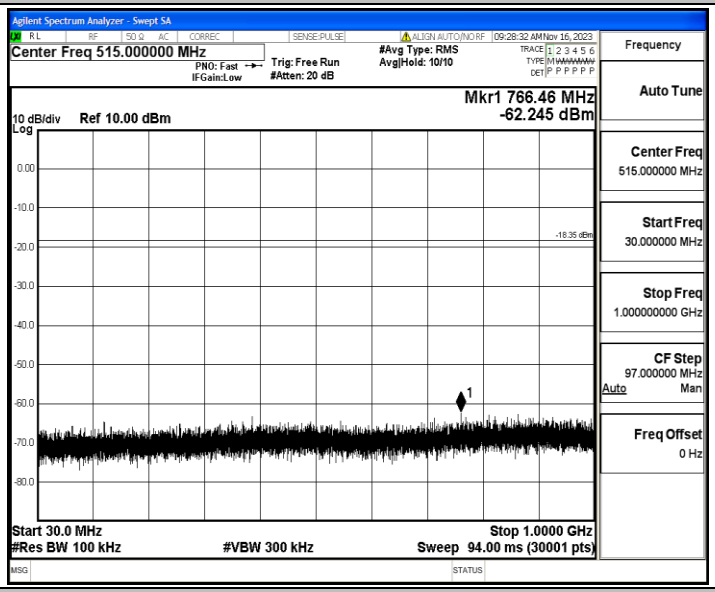
2DH5_Ant1_2441_1000~26500



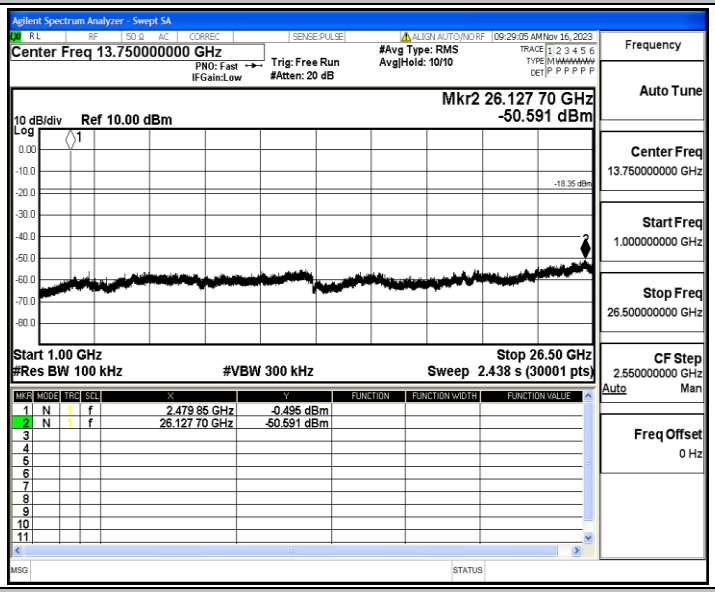
2DH5_Ant1_2480_0~Reference



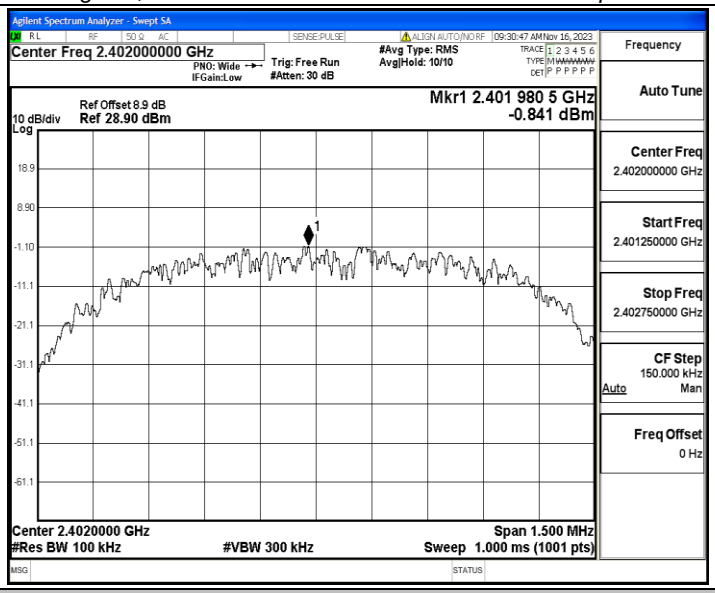
2DH5_Ant1_2480_30~1000



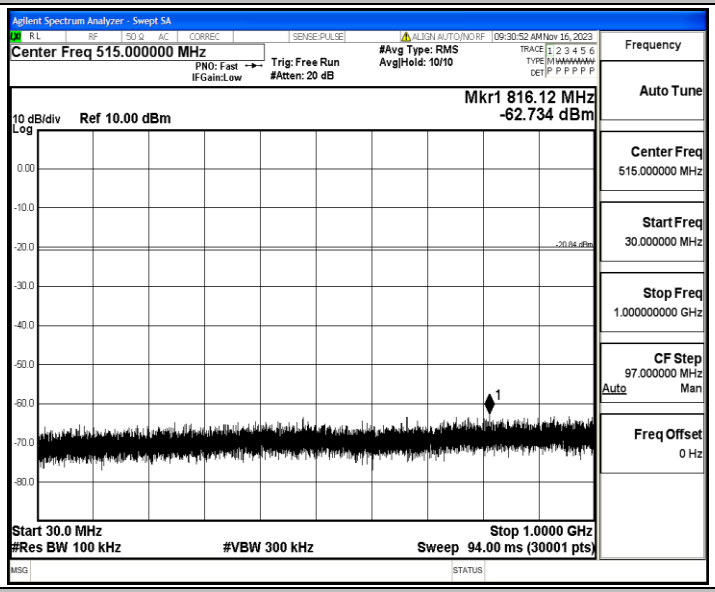
2DH5_Ant1_2480_1000~26500



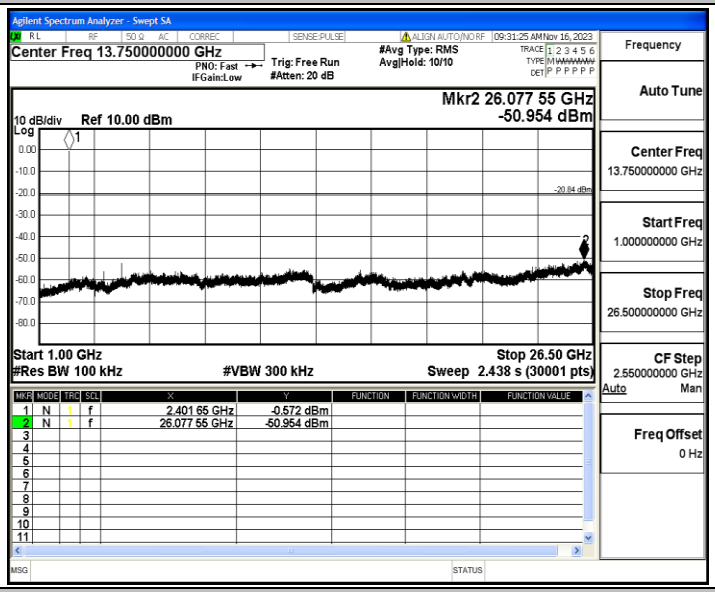
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



3DH5_Ant1_2402_1000~26500



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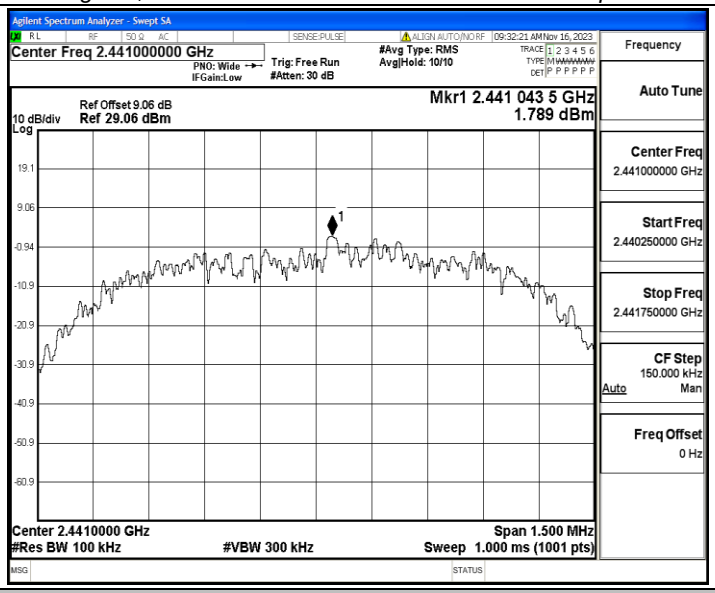

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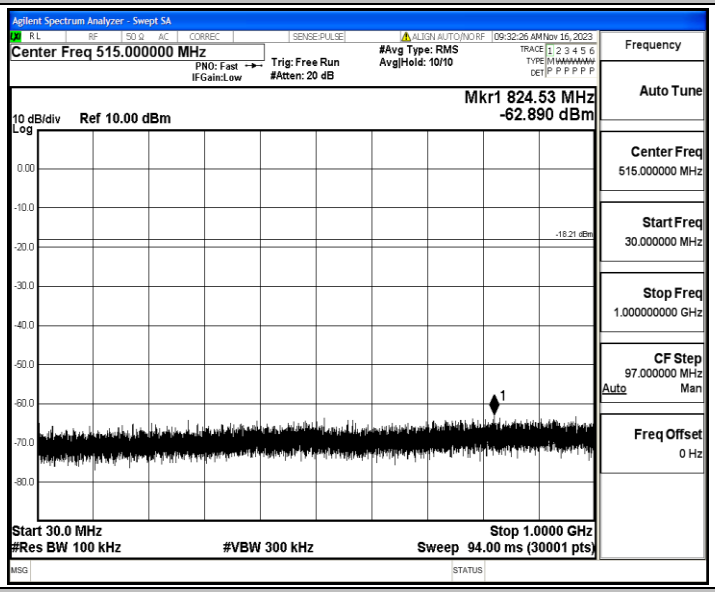
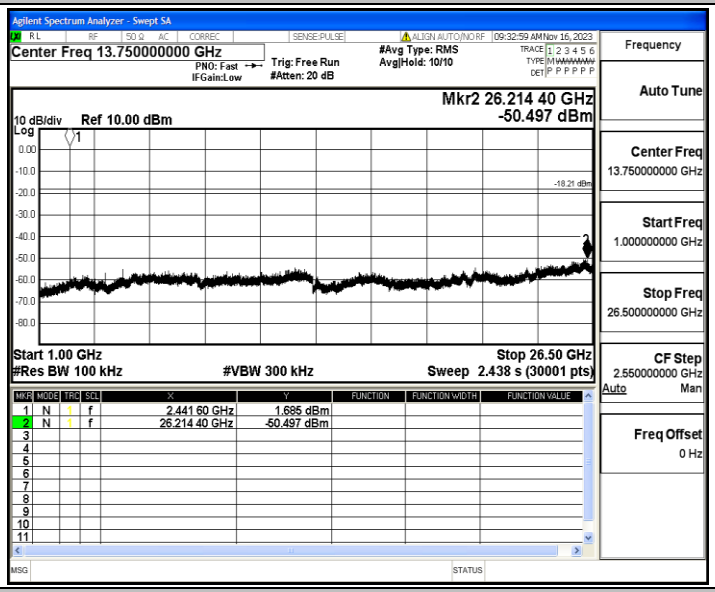


3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference