

Applicant: CARPLAY TECHNOLOGY (CHINA) LIMITED

Case No. : TH2405493-C02

EUT: Wireless CarPlay / Android Auto Kits

M/N: Cp1

Standard: FCC Part15 Subpart C, Section 15.247

Test Power Supply: NA

Ambient Condition: 24.1 °C, 36 %RH, 101.325 kPa

Test Date: 2024.06.06

Test Engineer: Blue

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.984	---	---	---	---
		2441	0.999	---	---	---	---
		2480	1.029	---	---	---	---
2DH5	Ant1	2402	1.341	---	---	---	---
		2441	1.371	---	---	---	---
		2480	1.317	---	---	---	---
3DH5	Ant1	2402	1.320	---	---	---	---
		2441	1.338	---	---	---	---
		2480	1.323	---	---	---	---

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	0.87114	2401.5584	2402.4295	---	---
		2441	0.80791	2440.5944	2441.4023	---	---
		2480	0.86004	2479.5867	2480.4468	---	---
2DH5	Ant1	2402	1.2199	2401.3899	2402.6098	---	---
		2441	1.1848	2440.3947	2441.5795	---	---
		2480	1.1717	2479.3927	2480.5644	---	---
3DH5	Ant1	2402	1.1561	2401.4137	2402.5698	---	---
		2441	1.2354	2440.3885	2441.6239	---	---
		2480	1.2055	2479.3780	2480.5835	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



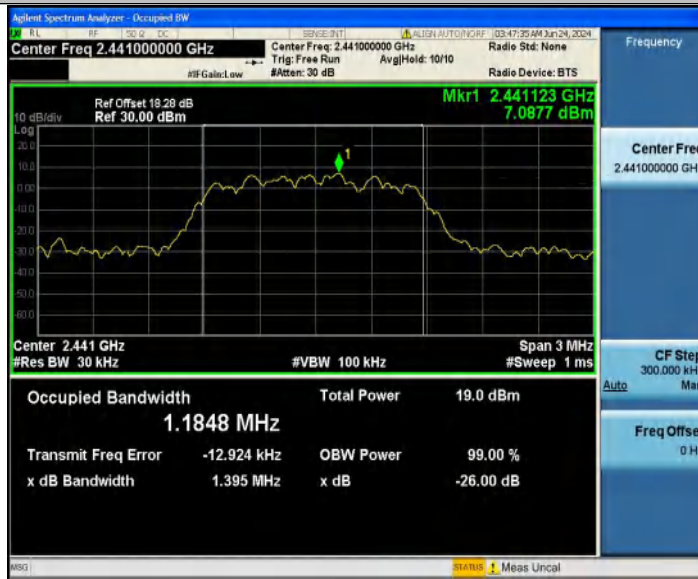
DH5_Ant1_2480



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	Channel	Conducted Peak Power[MHz]	Conducted Limit[MHz]	Verdict
DH5	Ant1	2402	5.86	≤20.97	PASS
		2441	6.09	≤20.97	PASS
		2480	5.61	≤20.97	PASS
2DH5	Ant1	2402	4.68	≤20.97	PASS
		2441	4.83	≤20.97	PASS
		2480	4.4	≤20.97	PASS
3DH5	Ant1	2402	4.66	≤20.97	PASS
		2441	4.81	≤20.97	PASS
		2480	4.43	≤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	1	≥ 0.686	PASS
2DH5	Ant1	Hop	0.964	≥ 0.914	PASS
3DH5	Ant1	Hop	1.33	≥ 0.892	PASS

Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



Appendix E: Time of occupancy

Test Result

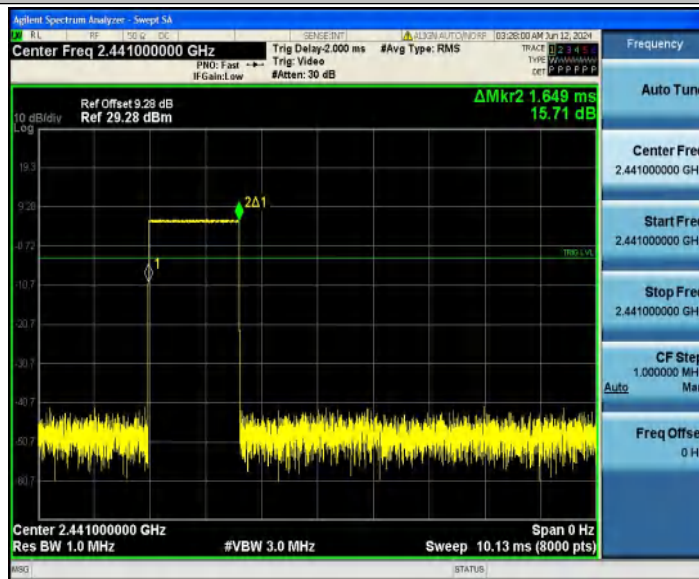
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.393	320	0.126	≤0.4	PASS
DH3	Ant1	Hop	1.649	160	0.264	≤0.4	PASS
DH5	Ant1	Hop	2.896	106.67	0.309	≤0.4	PASS
2DH1	Ant1	Hop	0.403	320	0.129	≤0.4	PASS
2DH3	Ant1	Hop	1.654	160	0.265	≤0.4	PASS
2DH5	Ant1	Hop	2.903	106.67	0.31	≤0.4	PASS
3DH1	Ant1	Hop	0.403	320	0.129	≤0.4	PASS
3DH3	Ant1	Hop	1.653	160	0.264	≤0.4	PASS
3DH5	Ant1	Hop	2.904	106.67	0.31	≤0.4	PASS

Test Graphs

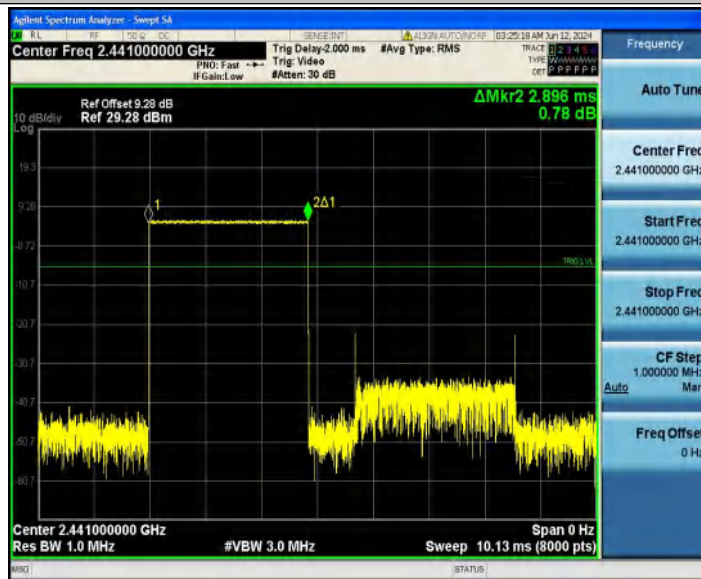
DH1_Ant1_Hop



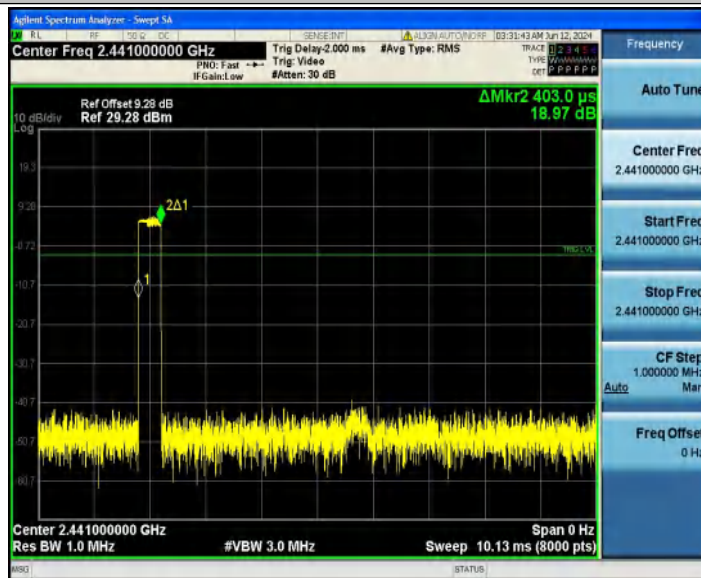
DH3_Ant1_Hop



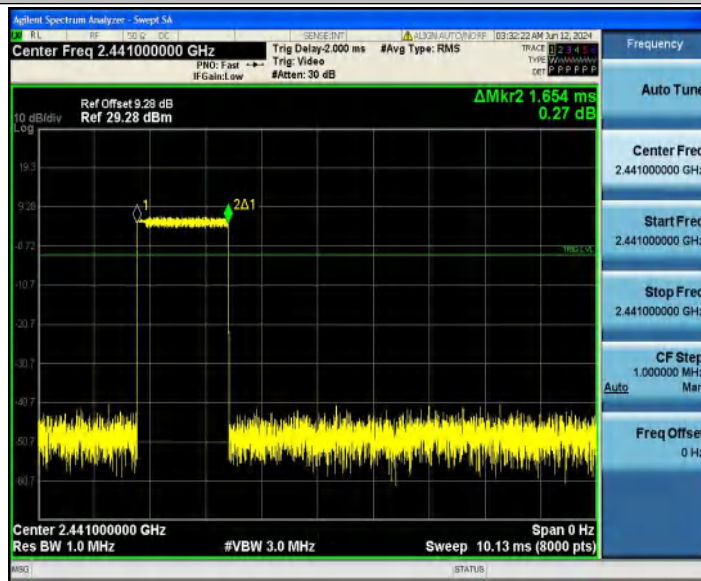
DH5_Ant1_Hop



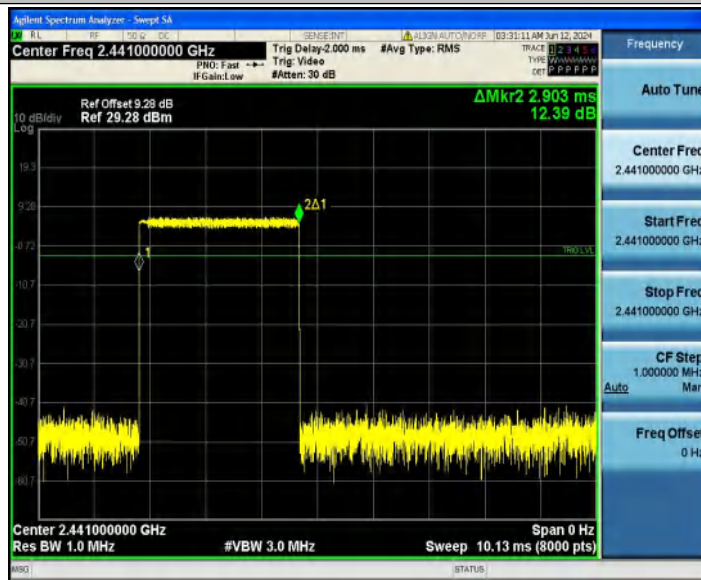
2DH1_Ant1_Hop



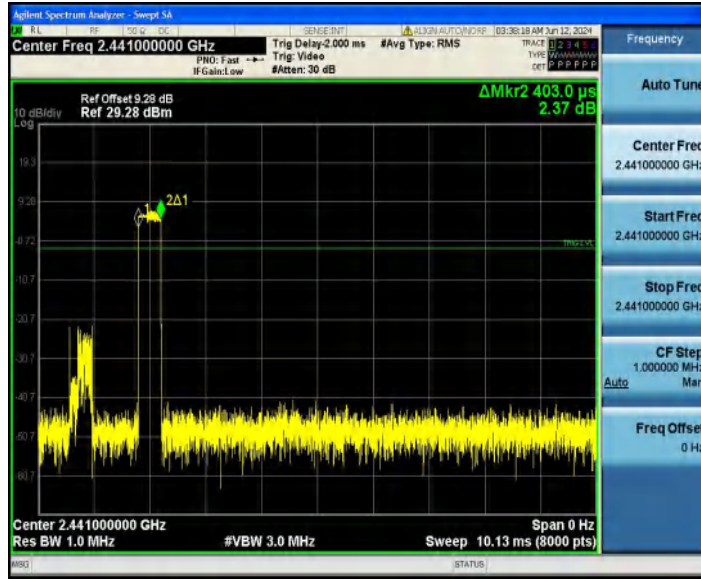
2DH3_Ant1_Hop



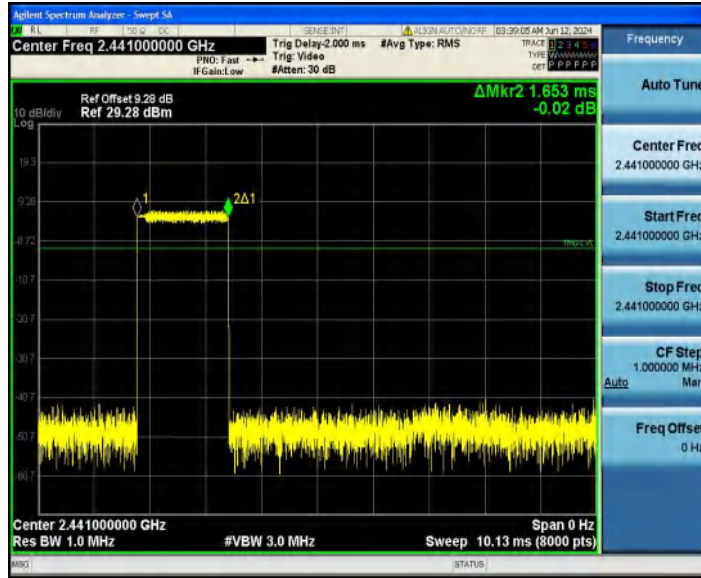
2DH5_Ant1_Hop



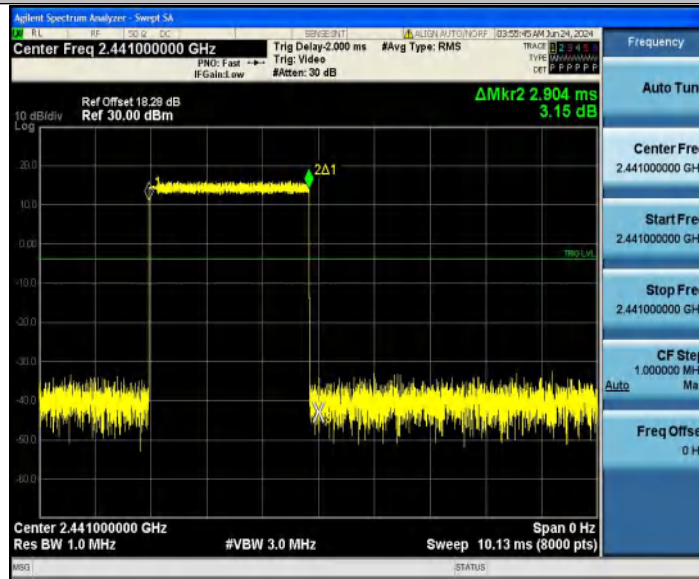
3DH1_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop



Appendix F: Number of hopping channels

Test Result

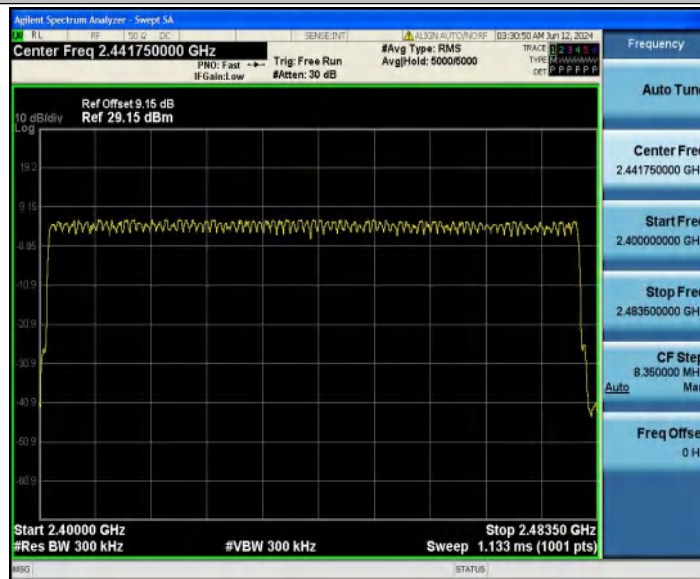
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

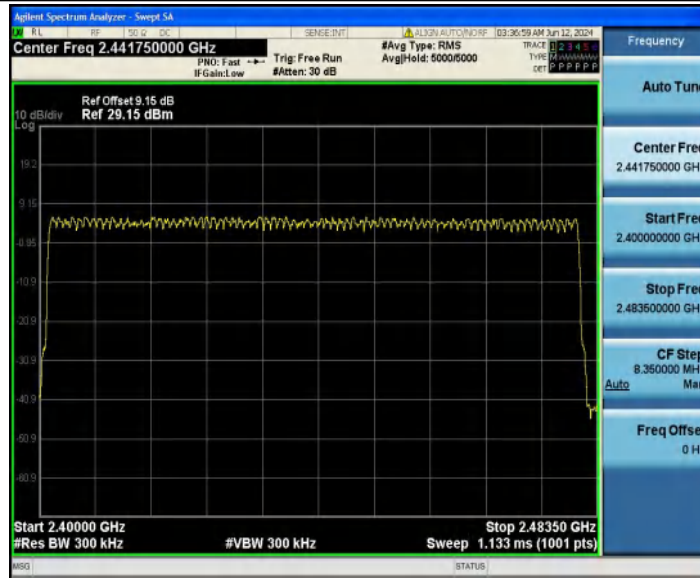
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



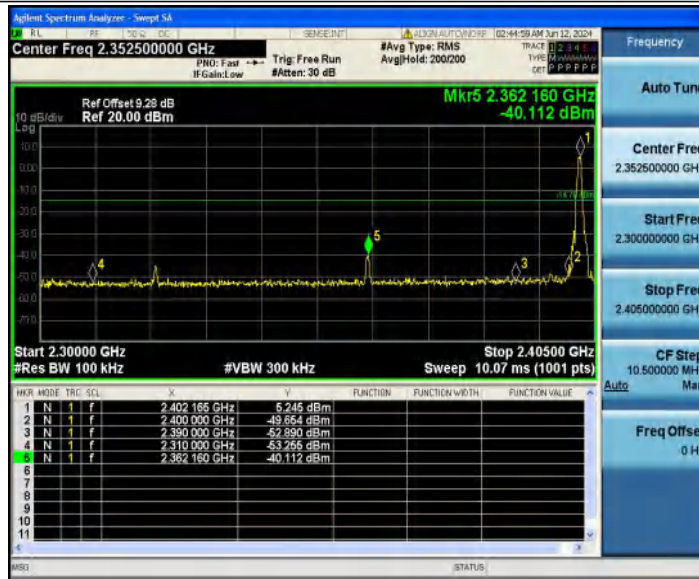
Appendix G: Band edge measurements

Test Result

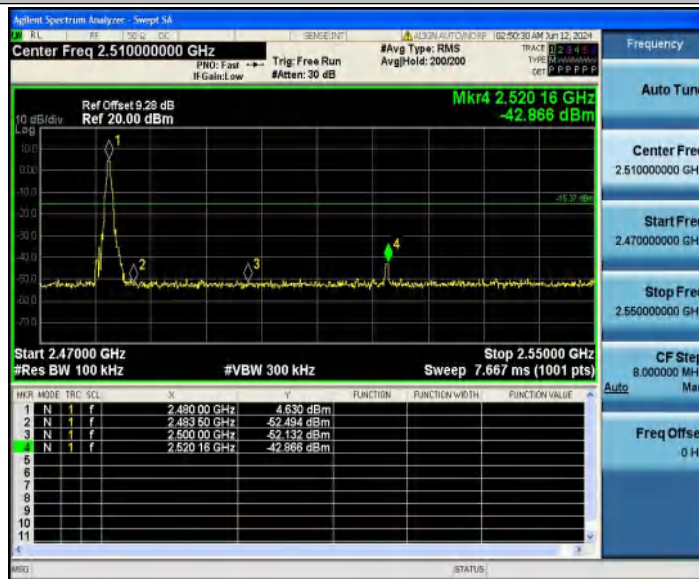
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	5.25	-40.11	≤-14.76	PASS
		High	2480	4.63	-42.87	≤-15.37	PASS
		Low	Hop_2402	4.97	-41.53	≤-15.03	PASS
		High	Hop_2480	4.69	-42.87	≤-15.31	PASS
2DH5	Ant1	Low	2402	5.29	-40.24	≤-14.71	PASS
		High	2480	4.19	-43.28	≤-15.81	PASS
		Low	Hop_2402	2.00	-41.94	≤-18.01	PASS
		High	Hop_2480	2.39	-44.25	≤-17.61	PASS
3DH5	Ant1	Low	2402	5.33	-41.12	≤-14.67	PASS
		High	2480	4.86	-42.38	≤-15.14	PASS
		Low	Hop_2402	2.41	-42.54	≤-17.59	PASS
		High	Hop_2480	2.85	-44.41	≤-17.15	PASS

Test Graphs

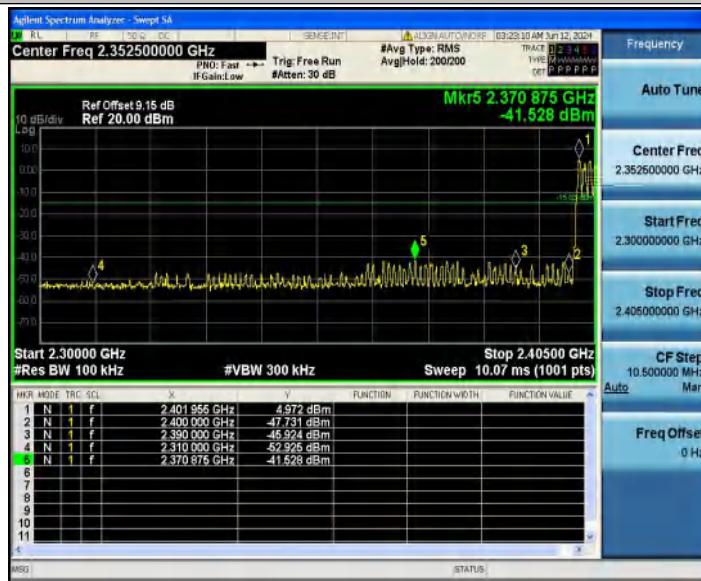
DH5_Ant1_Low_2402



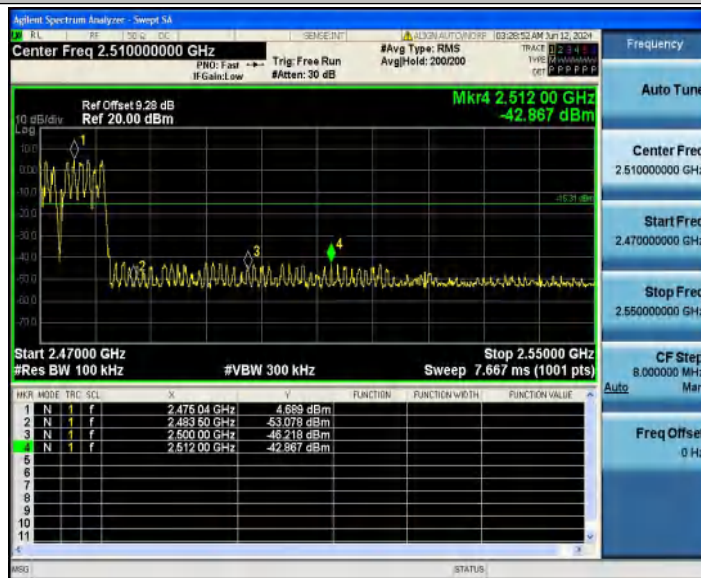
DH5_Ant1_High_2480



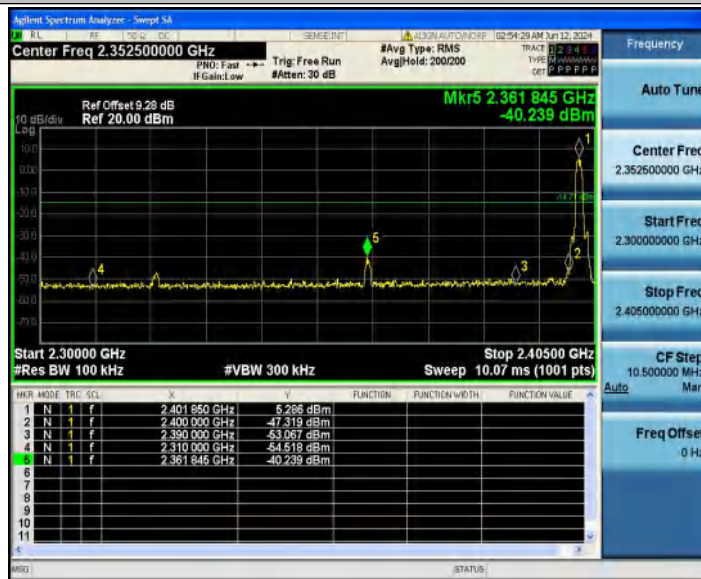
DH5_Ant1_Low_Hop_2402



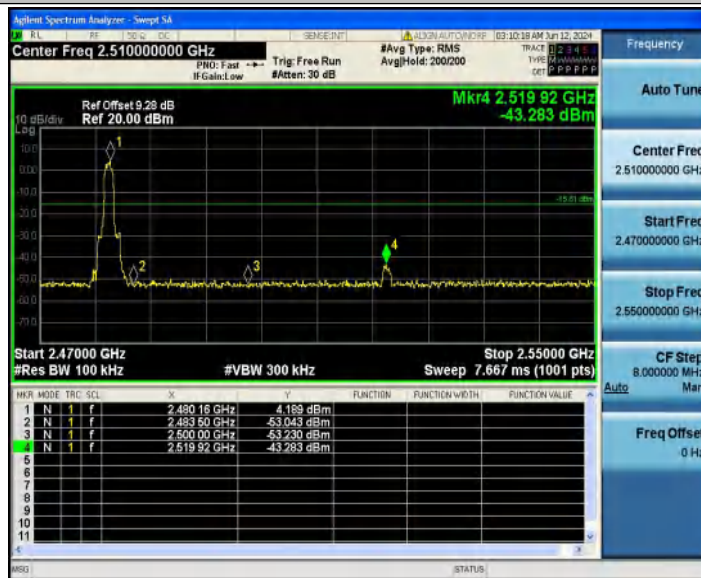
DH5_Ant1_High_Hop_2480



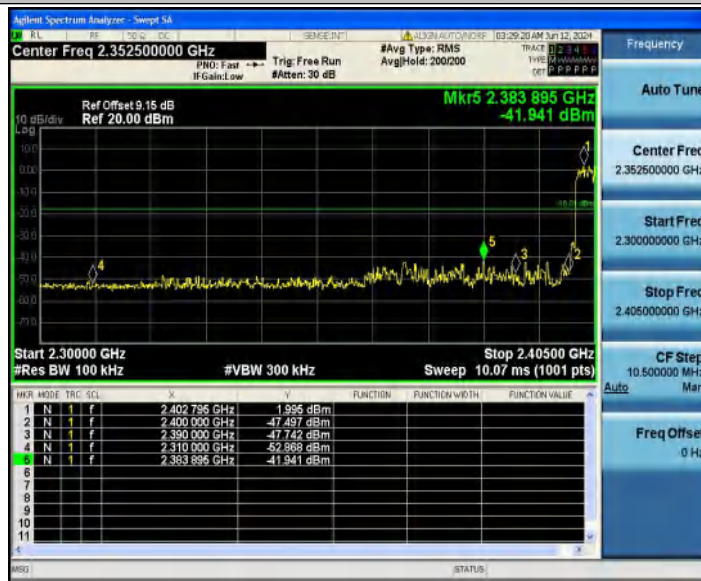
2DH5_Ant1_Low_2402



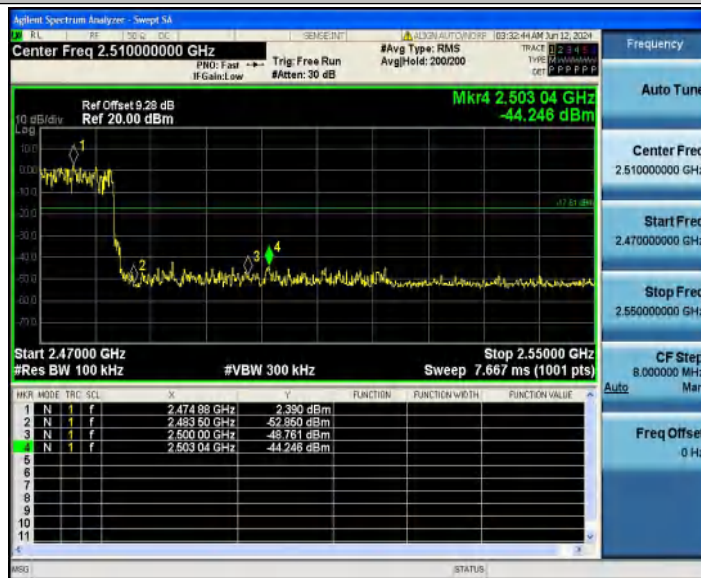
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



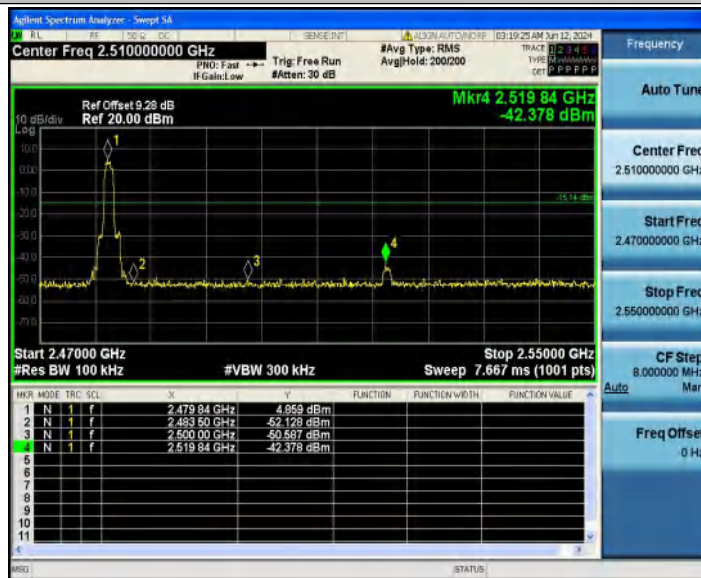
2DH5_Ant1_High_Hop_2480



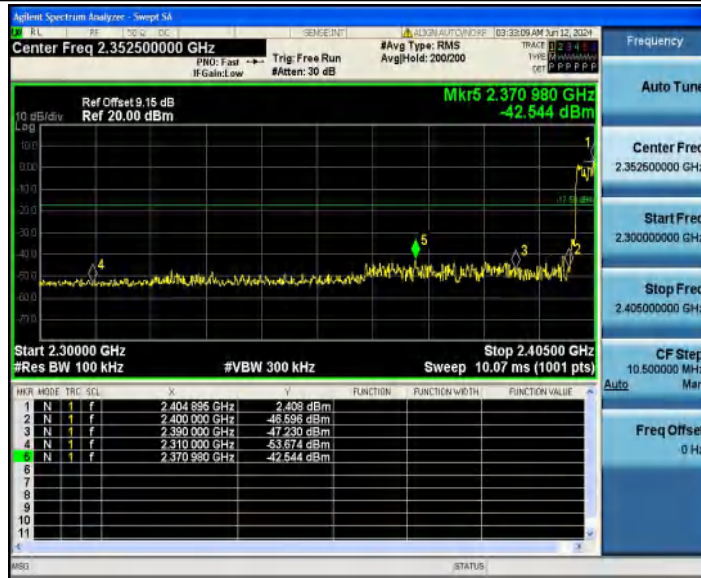
3DH5_Ant1_Low_2402



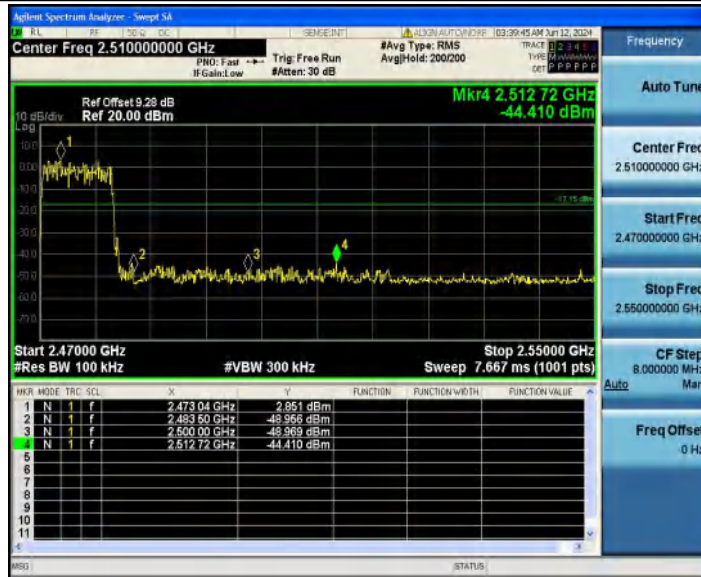
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



Appendix H: Conducted Spurious Emission

Test Result

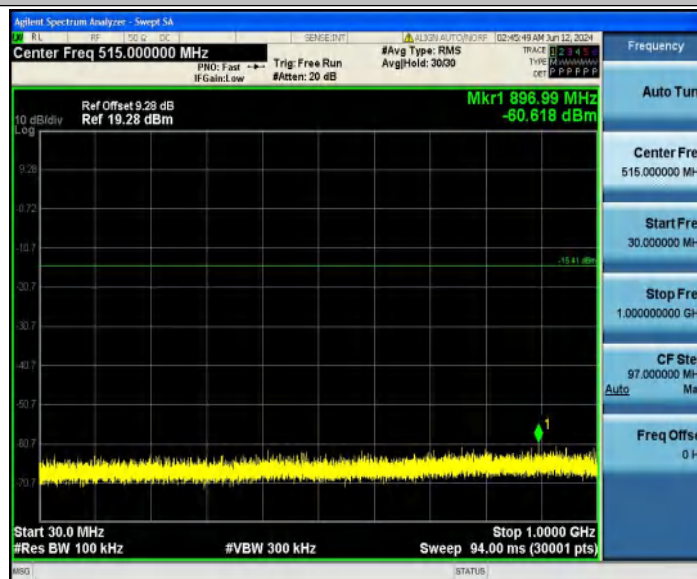
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	4.59	4.59	---	PASS
			30~1000	4.59	-60.62	≤-15.41	PASS
			1000~26500	4.59	-42.81	≤-15.41	PASS
		2441	Reference	5.31	5.31	---	PASS
			30~1000	5.31	-61.01	≤-14.69	PASS
			1000~26500	5.31	-41.98	≤-14.69	PASS
		2480	Reference	3.88	3.88	---	PASS
			30~1000	3.88	-61.9	≤-16.12	PASS
			1000~26500	3.88	-44.31	≤-16.12	PASS
2DH5	Ant1	2402	Reference	5.24	5.24	---	PASS
			30~1000	5.24	-61.31	≤-14.76	PASS
			1000~26500	5.24	-41.11	≤-14.76	PASS
		2441	Reference	4.47	4.47	---	PASS
			30~1000	4.47	-61.45	≤-15.53	PASS
			1000~26500	4.47	-44.52	≤-15.53	PASS
		2480	Reference	-23.32	-23.32	---	PASS
			30~1000	-23.32	-60.91	≤-43.32	PASS
			1000~26500	-23.32	-44.29	≤-43.32	PASS
3DH5	Ant1	2402	Reference	2.22	2.22	---	PASS
			30~1000	2.22	-61.79	≤-17.78	PASS
			1000~26500	2.22	-43.35	≤-17.78	PASS
		2441	Reference	2.64	2.64	---	PASS
			30~1000	2.64	-61.04	≤-17.36	PASS
			1000~26500	2.64	-42.12	≤-17.36	PASS
		2480	Reference	4.40	4.40	---	PASS
			30~1000	4.40	-61.36	≤-15.6	PASS
			1000~26500	4.40	-47.5	≤-15.6	PASS

Test Graphs

DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



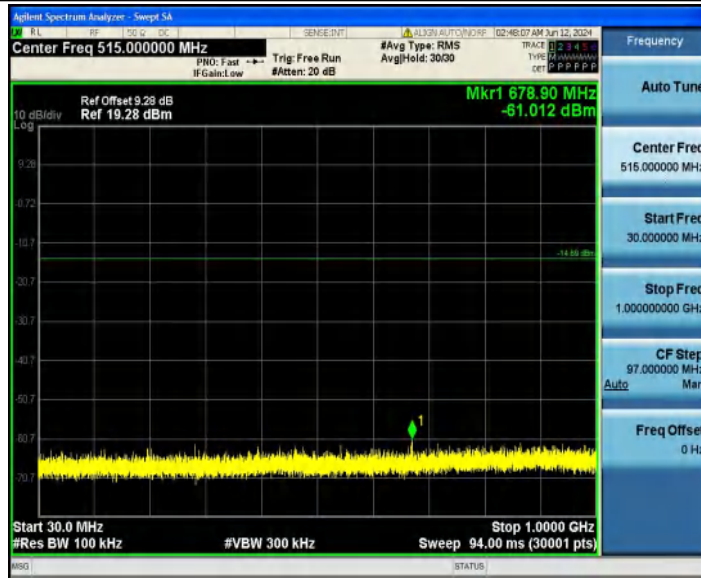
DH5_Ant1_2402_1000~26500



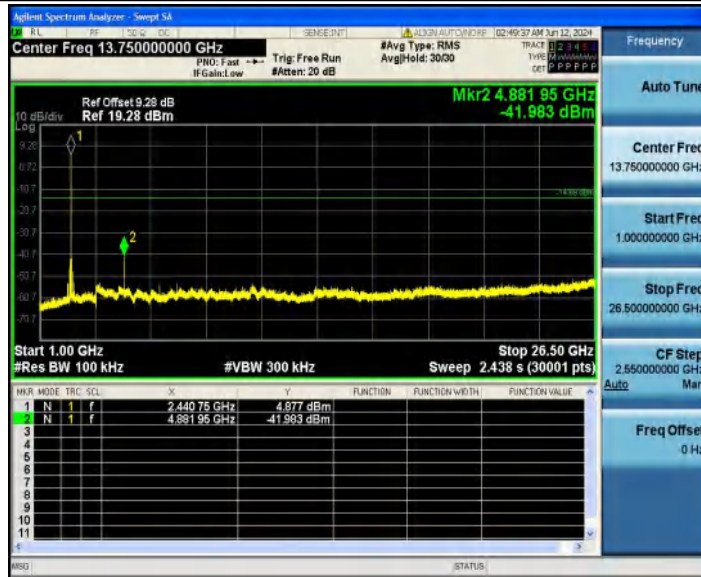
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



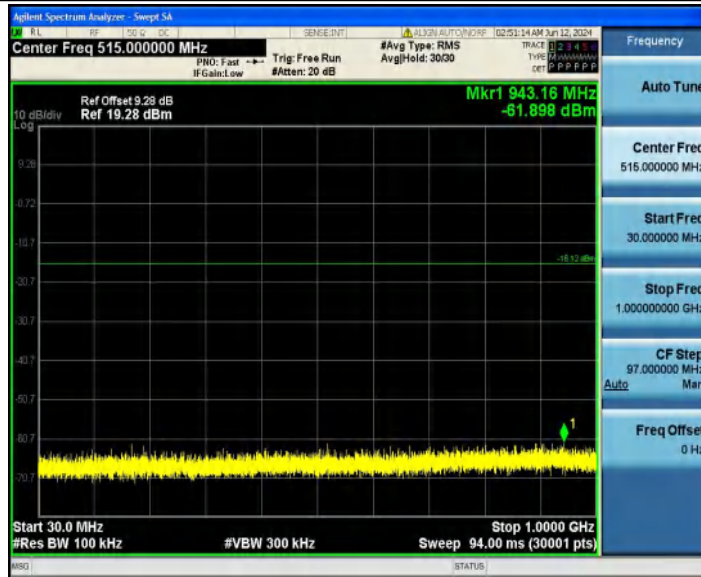
DH5_Ant1_2441_1000~26500



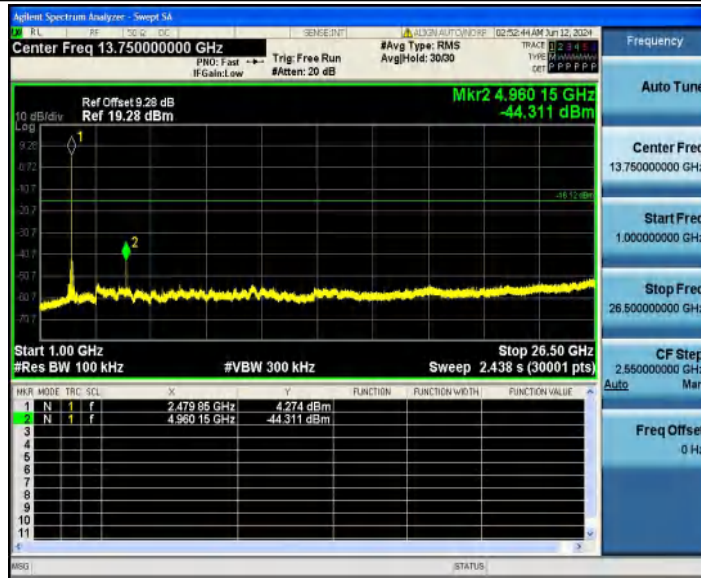
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



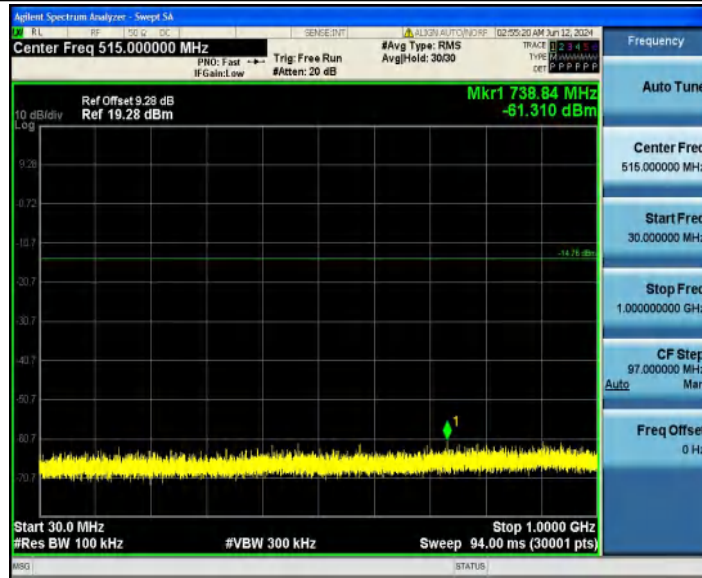
DH5_Ant1_2480_1000~26500



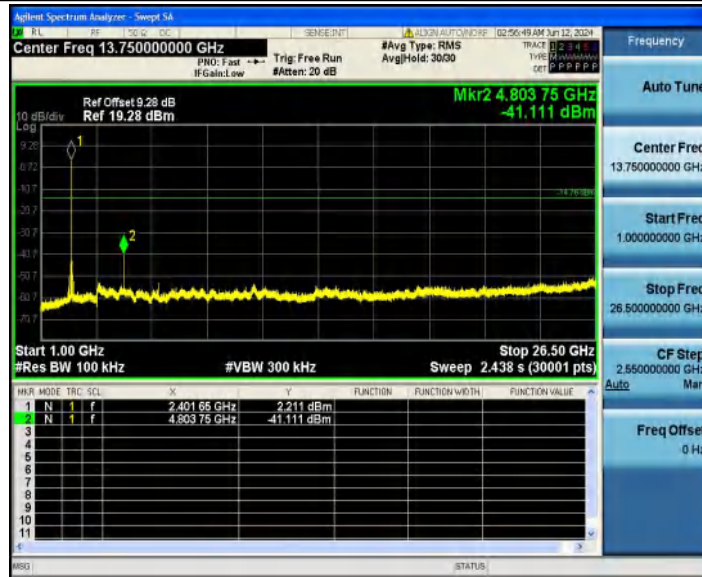
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



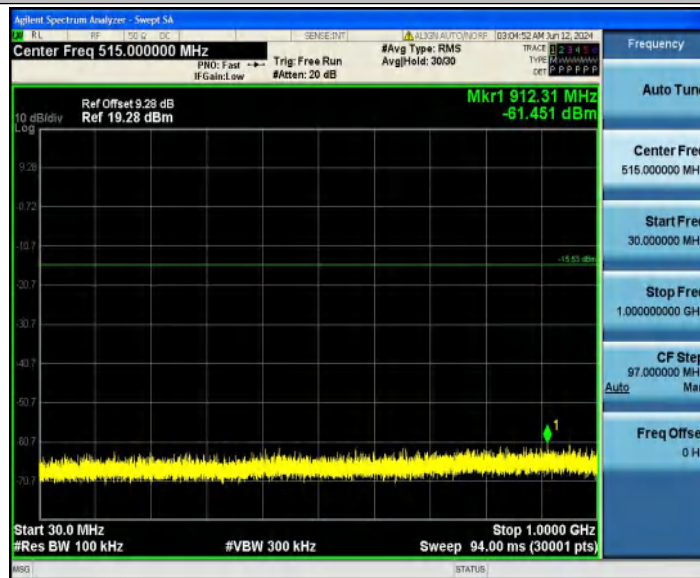
2DH5_Ant1_2402_1000~26500



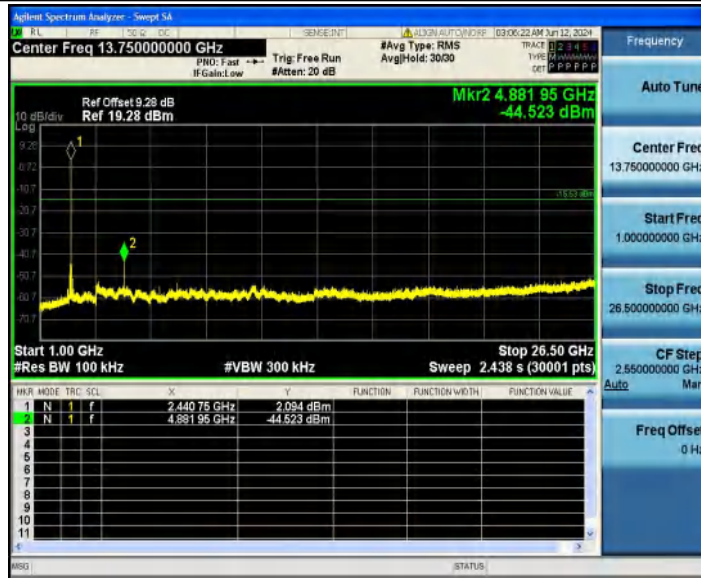
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



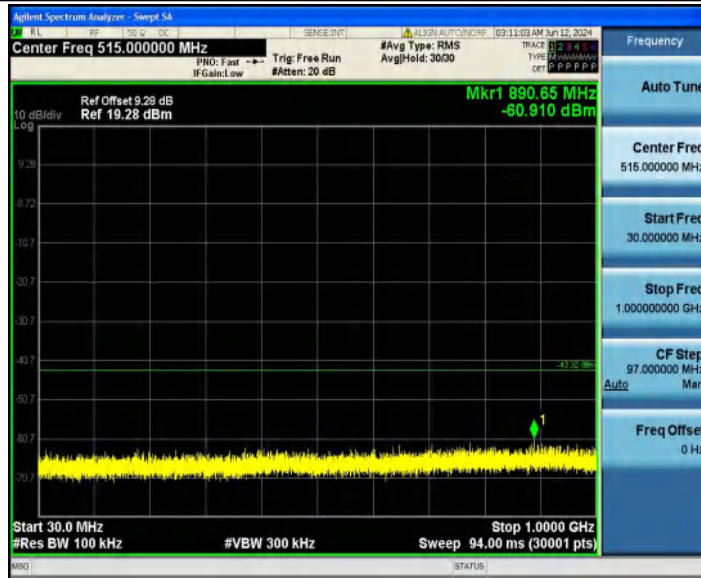
2DH5_Ant1_2441_1000~26500



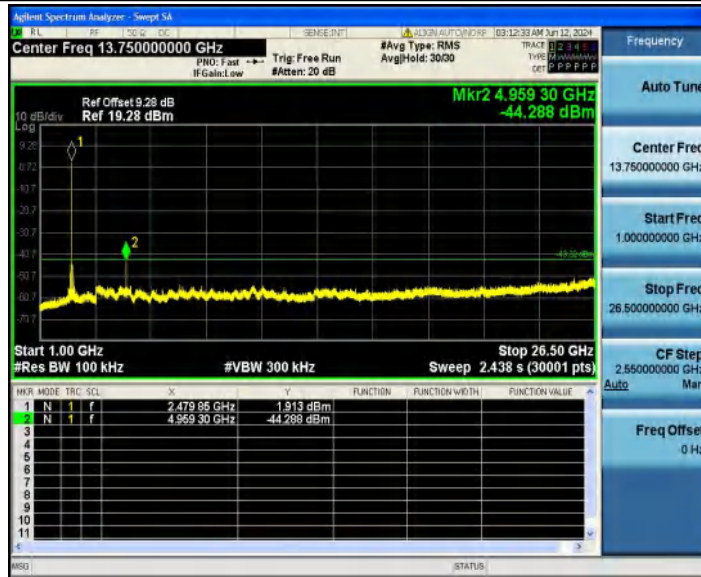
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



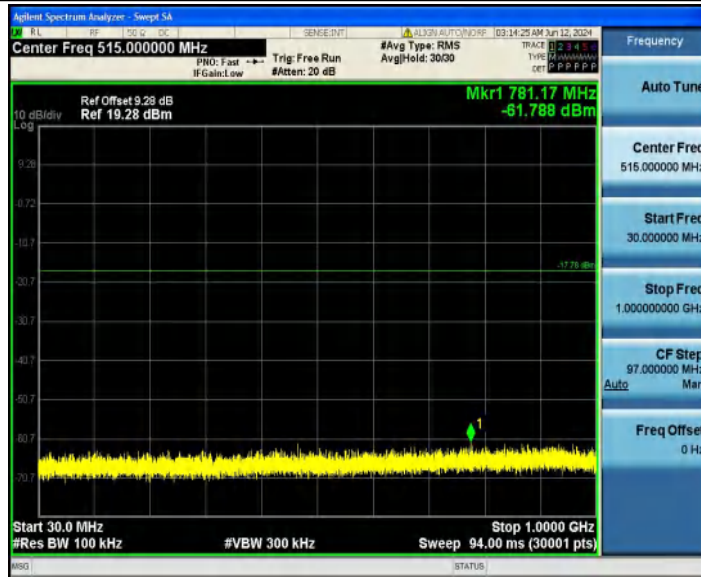
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



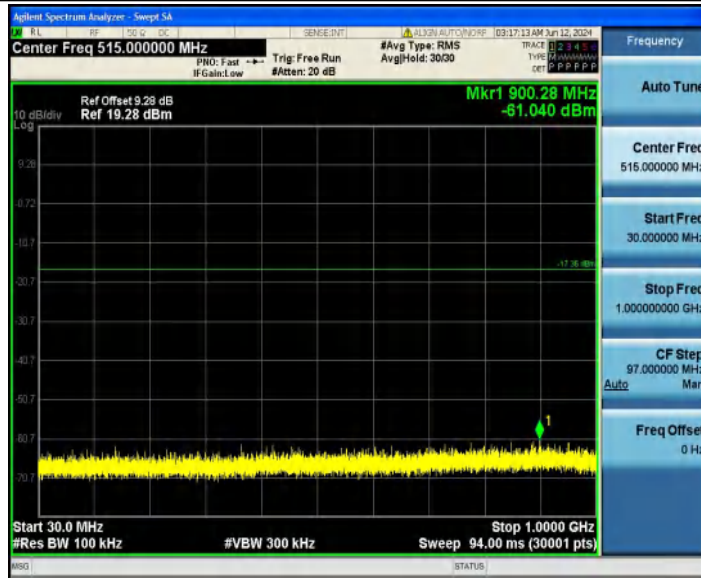
3DH5_Ant1_2402_1000~26500



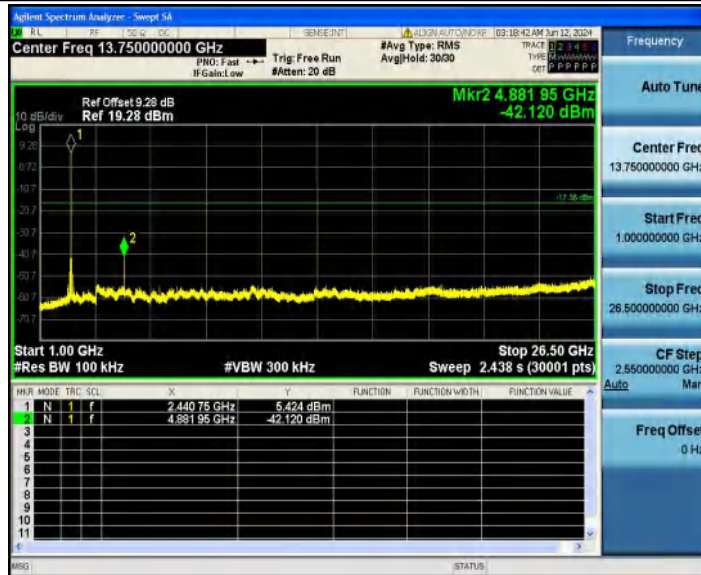
3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000

