

FCC Appendix RF Test Data

FCC ID : 2BMBM-VV18

Company: : Shenzhen Lanxiaoer Technology Co., Ltd

EUT : Wireless Earphone

Model Number : VV18

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	0.942	2401.553	2402.495	---	---
		2441	0.939	2440.547	2441.486	---	---
		2480	0.951	2479.550	2480.501	---	---
2DH5	Ant1	2402	1.323	2401.346	2402.669	---	---
		2441	1.311	2440.355	2441.666	---	---
		2480	1.332	2479.346	2480.678	---	---
3DH5	Ant1	2402	1.272	2401.388	2402.660	---	---
		2441	1.278	2440.382	2441.660	---	---
		2480	1.293	2479.376	2480.669	---	---

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

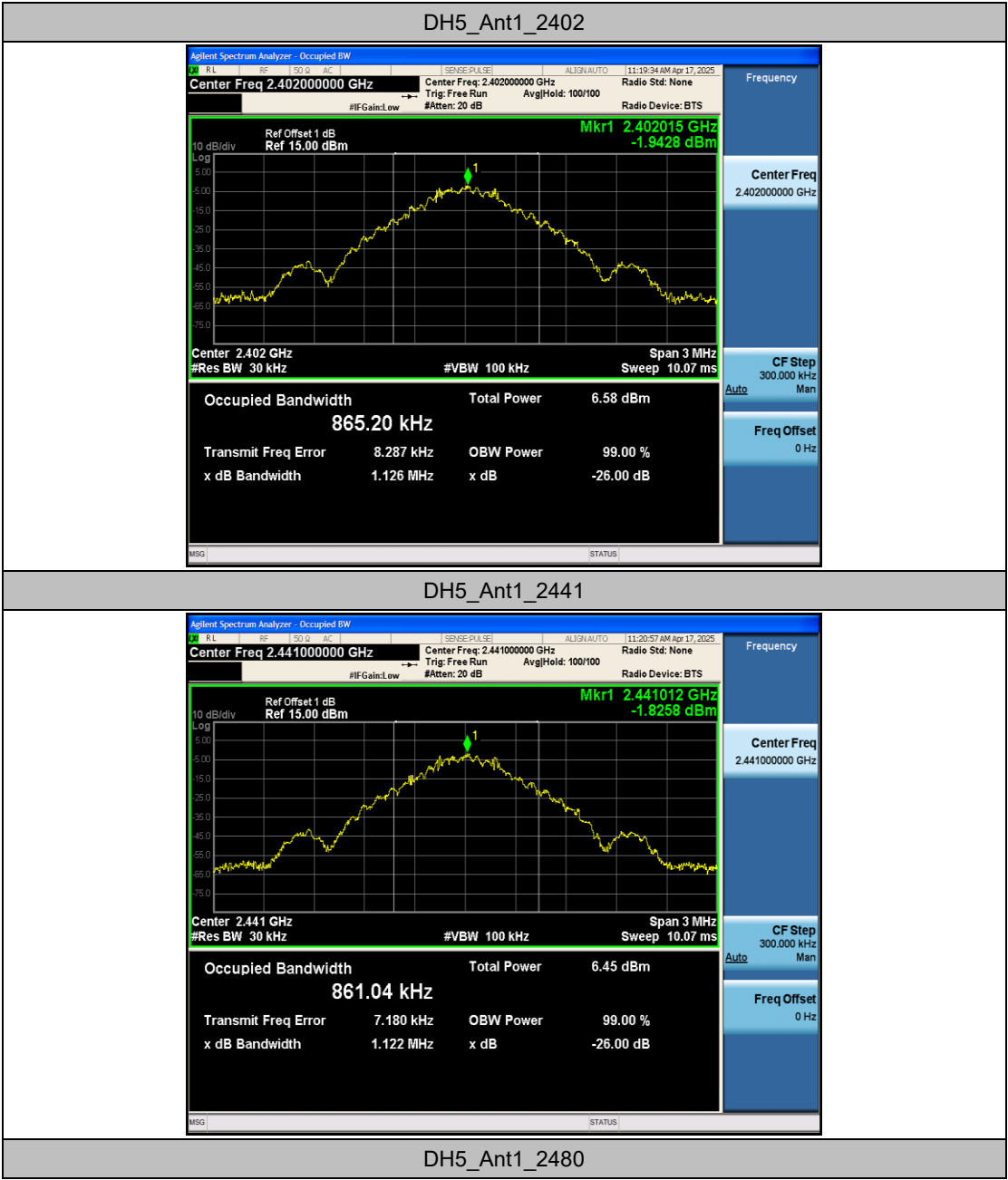


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86520	2401.5757	2402.4409	---	---
		2441	0.86104	2440.5767	2441.4377	---	---
		2480	0.87013	2479.5748	2480.4450	---	---
2DH5	Ant1	2402	1.1832	2401.4192	2402.6024	---	---
		2441	1.1895	2440.4159	2441.6054	---	---
		2480	1.1881	2479.4173	2480.6054	---	---
3DH5	Ant1	2402	1.1891	2401.4164	2402.6055	---	---
		2441	1.1929	2440.4153	2441.6082	---	---
		2480	1.1880	2479.4162	2480.6042	---	---

Test Graphs

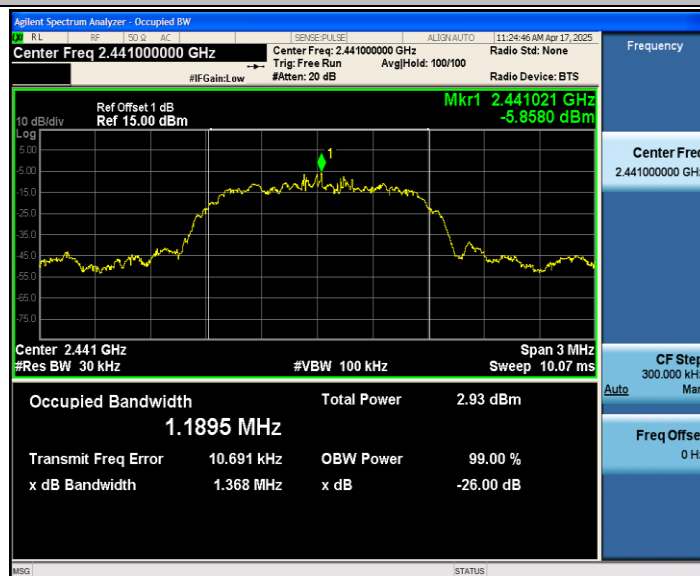




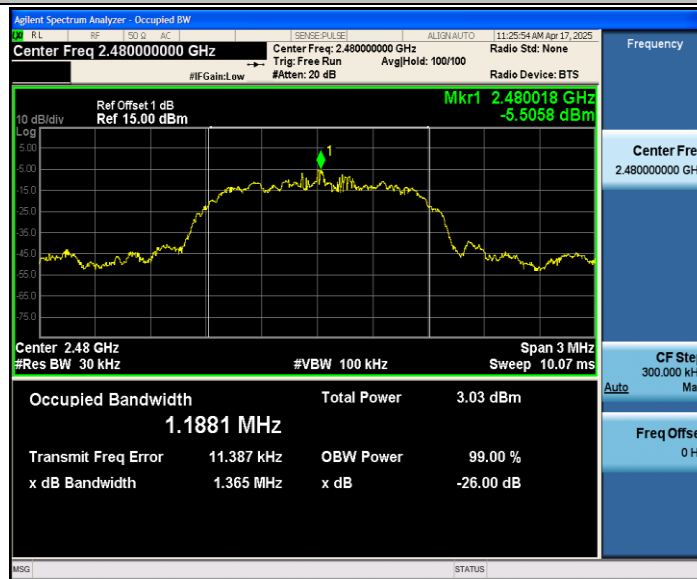
2DH5_Ant1_2402



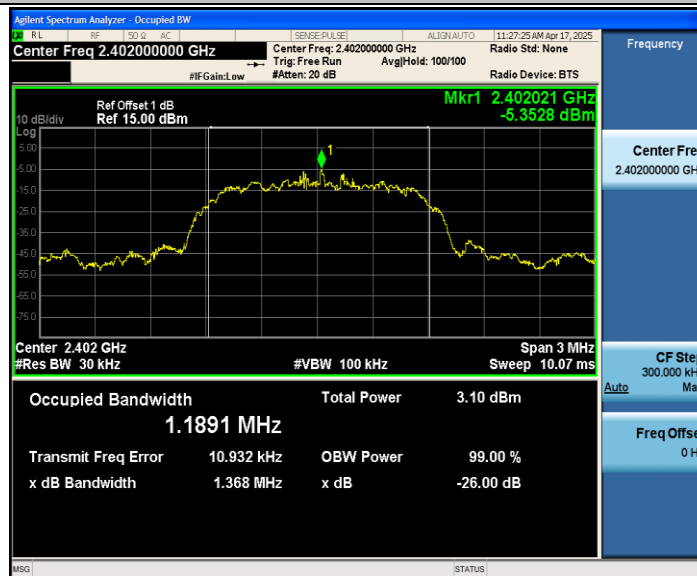
2DH5_Ant1_2441



2DH5_Ant1_2480



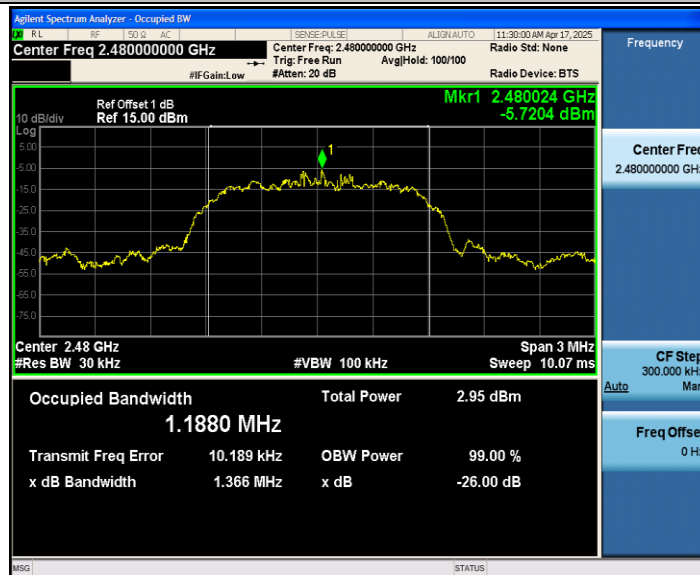
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

Left:

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.55	≤20.97	PASS
		2441	0.36	≤20.97	PASS
		2480	0.35	≤20.97	PASS
2DH5	Ant1	2402	-0.27	≤20.97	PASS
		2441	-0.41	≤20.97	PASS
		2480	-0.46	≤20.97	PASS
3DH5	Ant1	2402	-0.24	≤20.97	PASS
		2441	-0.45	≤20.97	PASS
		2480	-0.49	≤20.97	PASS

Right:

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-0.89	≤20.97	PASS
		2441	-0.49	≤20.97	PASS
		2480	-0.76	≤20.97	PASS
2DH5	Ant1	2402	-1.15	≤20.97	PASS
		2441	-1.32	≤20.97	PASS
		2480	-1.15	≤20.97	PASS
3DH5	Ant1	2402	-1.25	≤20.97	PASS
		2441	-1.38	≤20.97	PASS
		2480	-1.29	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.008	≥ 0.951	PASS
2DH5	Ant1	Hop	1.164	≥ 0.888	PASS
3DH5	Ant1	Hop	1.104	≥ 0.862	PASS

DH5_Ant1_Hop

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.442000000 GHz

Ref Offset 1 dB
Ref 11.00 dBm

ΔMkr2 1.008 MHz
0.014 dB

Start 2.440000 GHz
#Res BW 300 kHz
#VBW 300 kHz
Sweep (#Swp) 1.000 ms (1001 pts)

Stop 2.444000 GHz

Frequency

Auto Tune

Center Freq
2.442000000 GHz

Start Freq
2.440000000 GHz

Stop Freq
2.444000000 GHz

CF Step
400.000 kHz
Auto Man

Freq Offset
0 Hz

2DH5_Ant1_Hop

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.442000000 GHz

Ref Offset 1 dB
Ref 11.00 dBm

ΔMkr2 1.164 MHz
-0.525 dB

Start 2.440000 GHz
#Res BW 300 kHz
#VBW 300 kHz
Sweep (#Swp) 1.000 ms (1001 pts)

Stop 2.444000 GHz

Frequency

Auto Tune

Center Freq
2.442000000 GHz

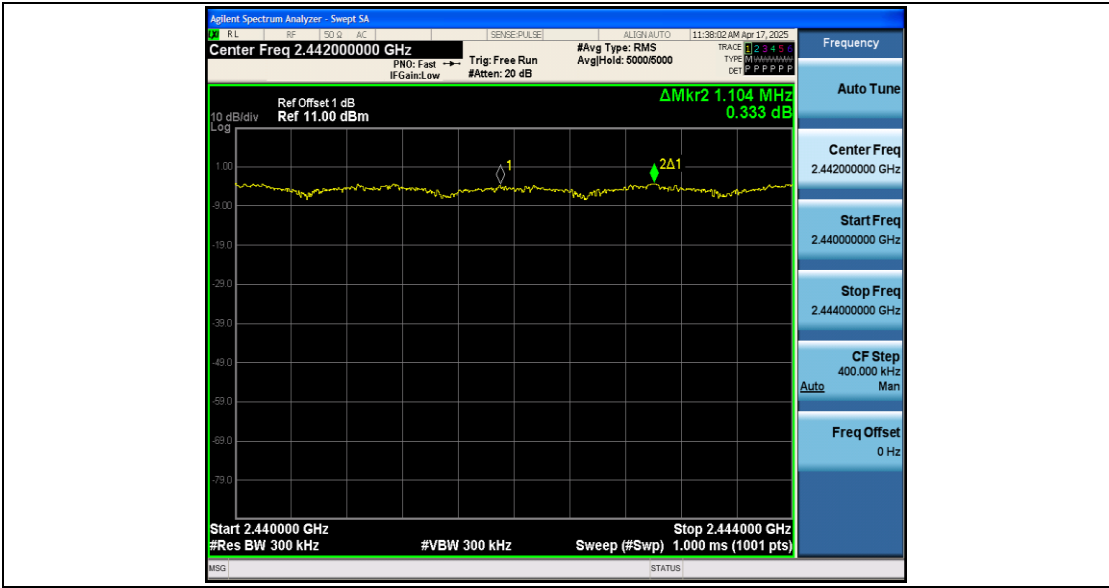
Start Freq
2.440000000 GHz

Stop Freq
2.444000000 GHz

CF Step
400.000 kHz
Auto Man

Freq Offset
0 Hz

3DH5_Ant1_Hop

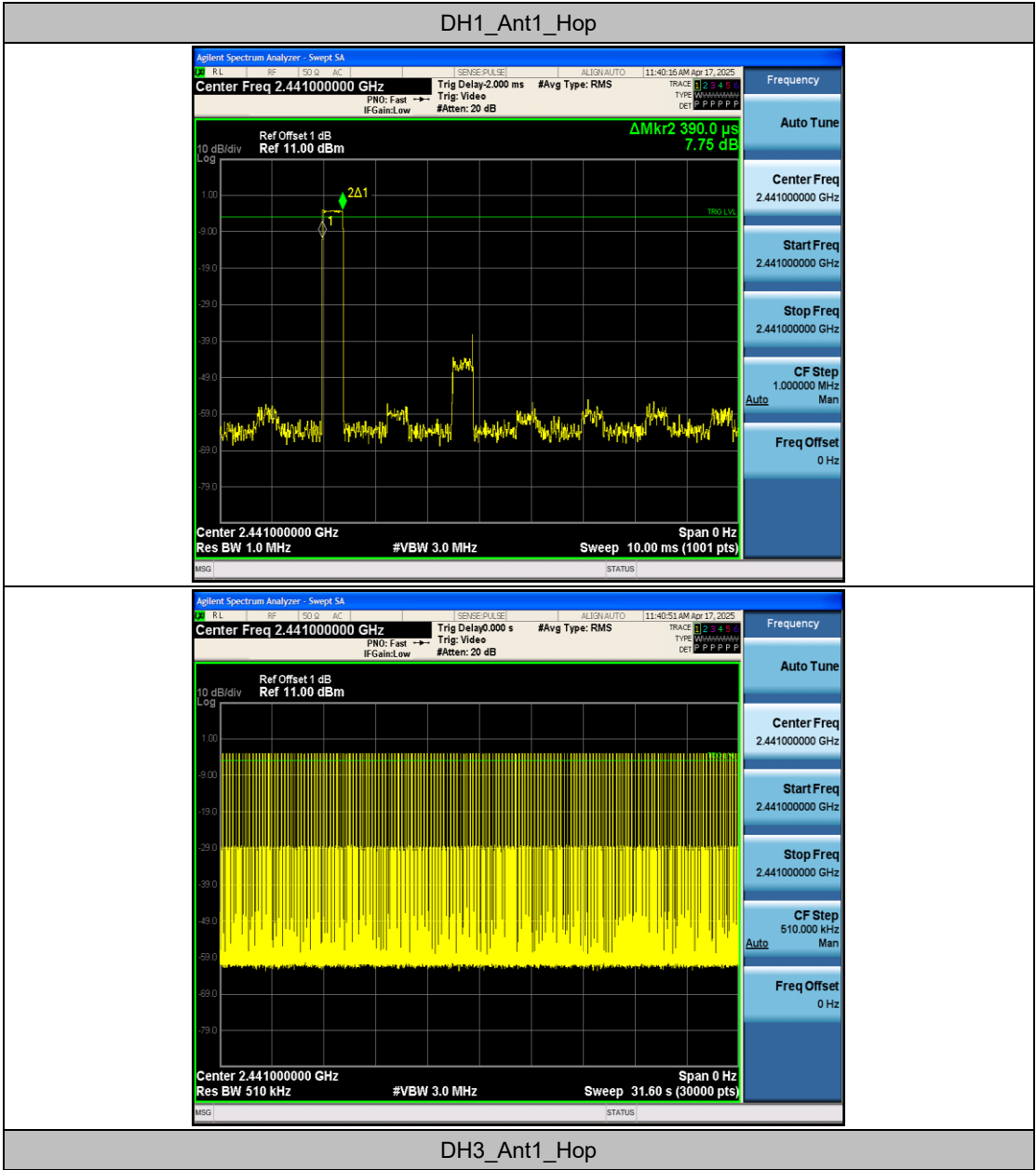


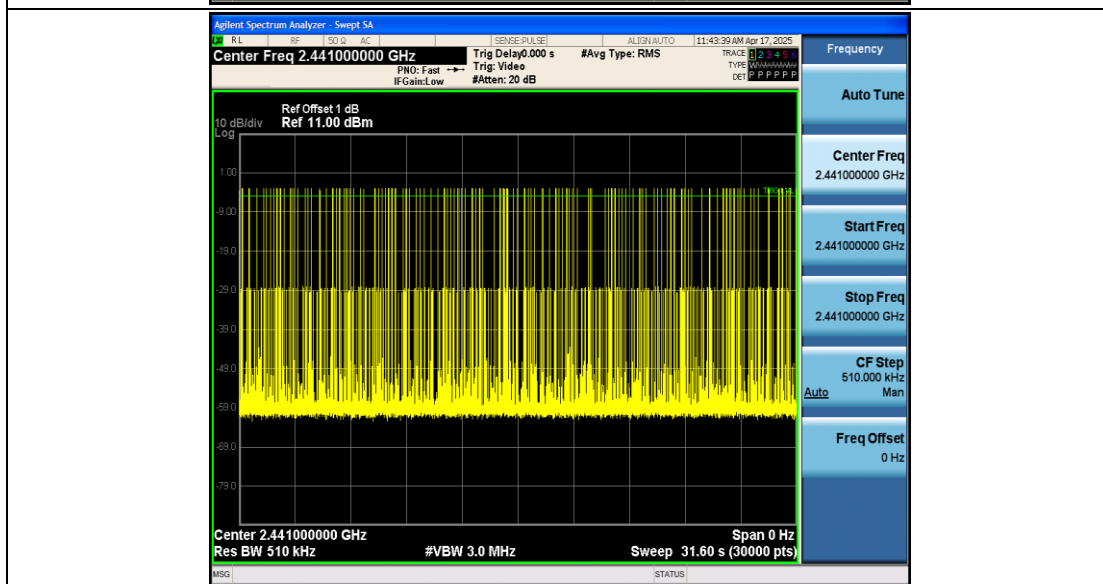
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	318	0.124	≤0.4	PASS
DH3	Ant1	Hop	1.640	156	0.256	≤0.4	PASS
DH5	Ant1	Hop	2.890	100	0.289	≤0.4	PASS
2DH1	Ant1	Hop	0.390	317	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.640	164	0.269	≤0.4	PASS
2DH5	Ant1	Hop	2.900	110	0.319	≤0.4	PASS
3DH1	Ant1	Hop	0.390	318	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.650	158	0.261	≤0.4	PASS
3DH5	Ant1	Hop	2.900	114	0.331	≤0.4	PASS

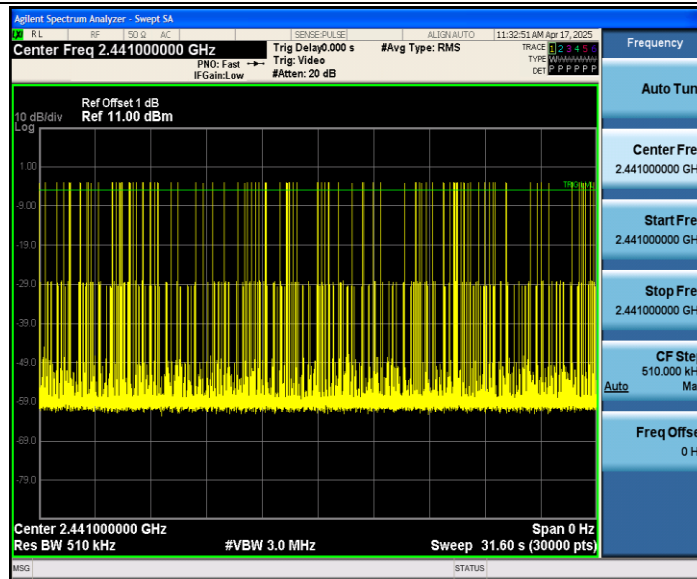
Test Graphs



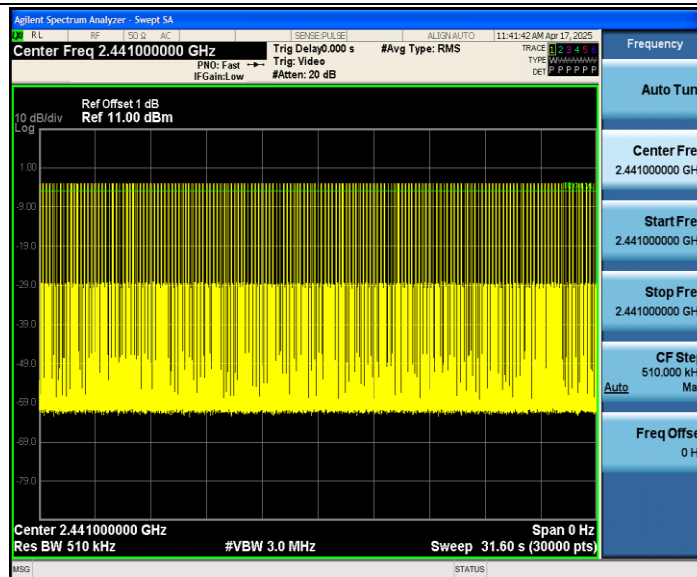
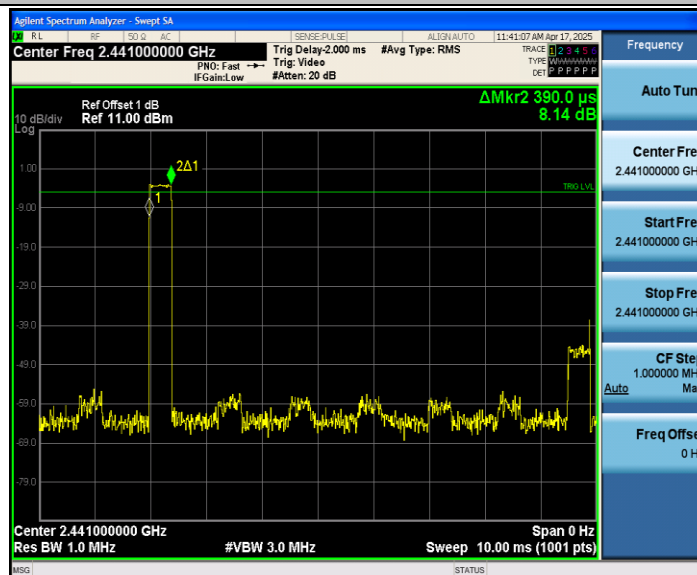


DH5_Ant1_Hop

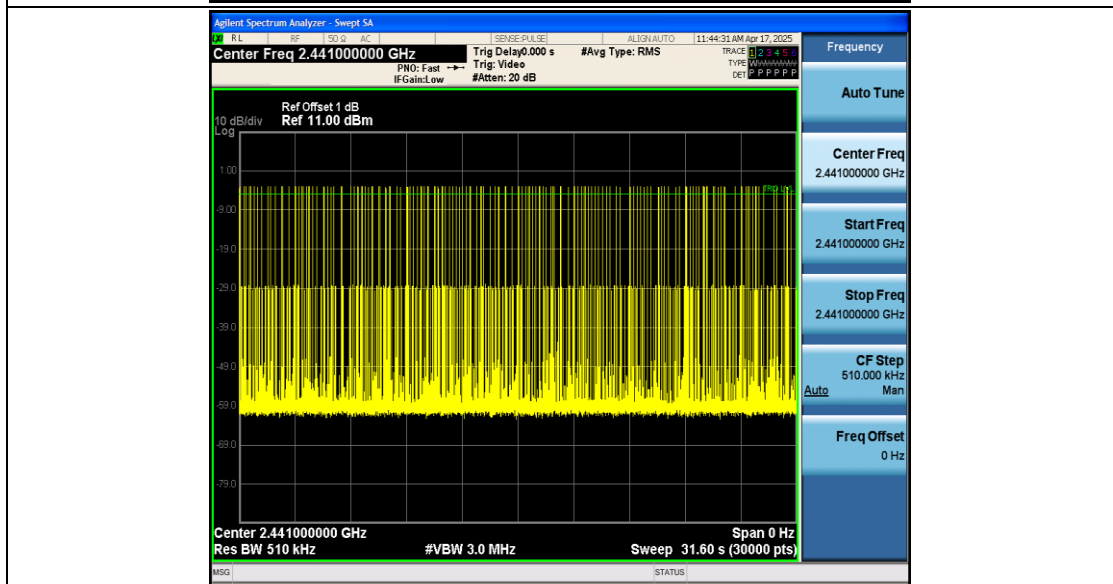
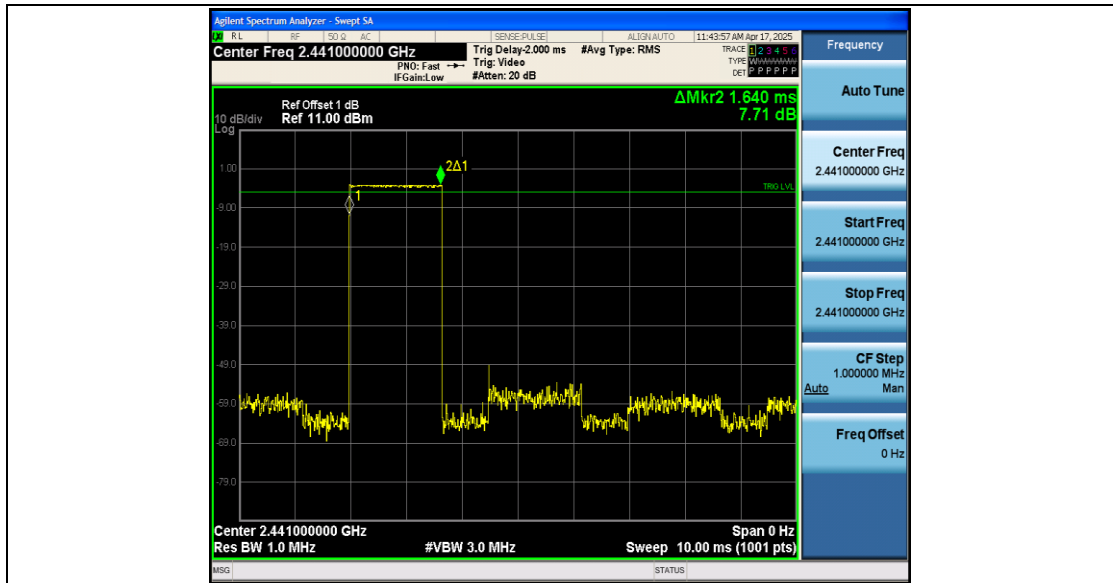




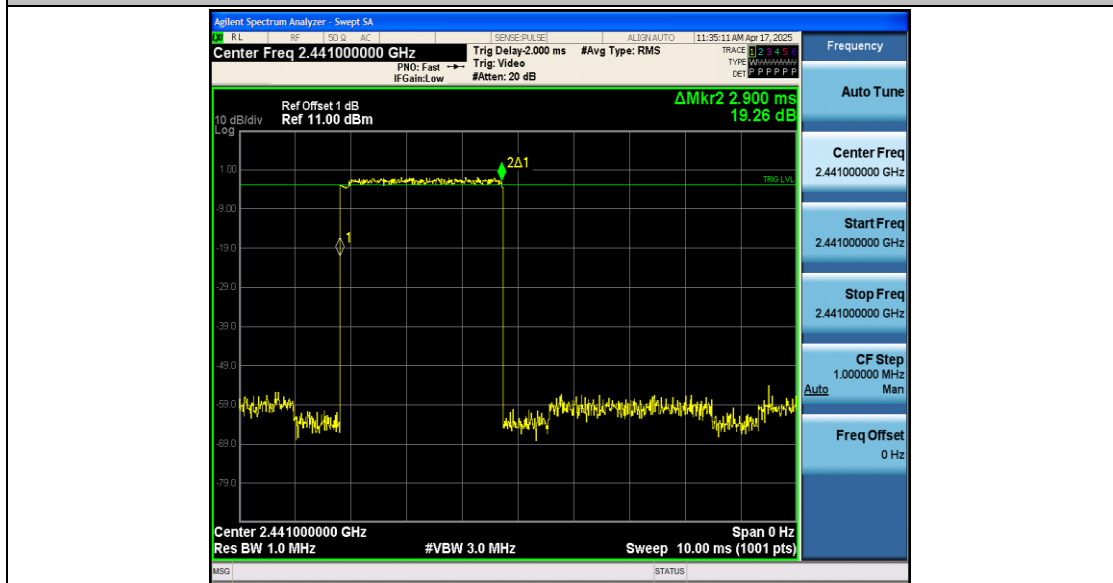
2DH1_Ant1_Hop

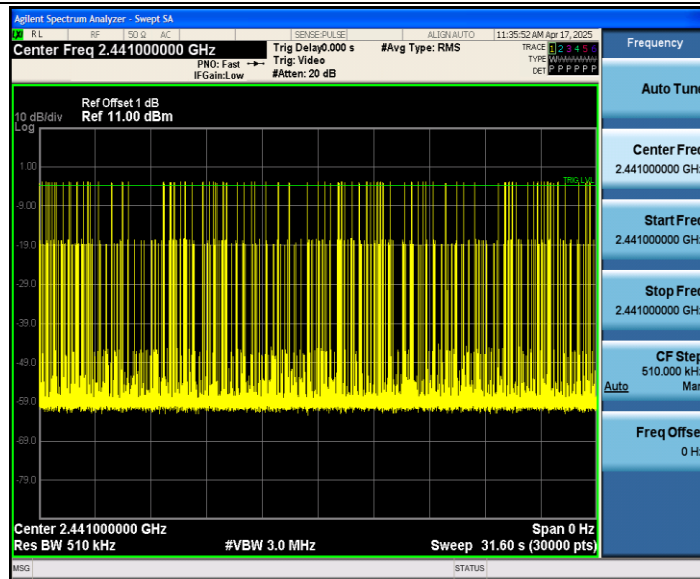


2DH3_Ant1_Hop

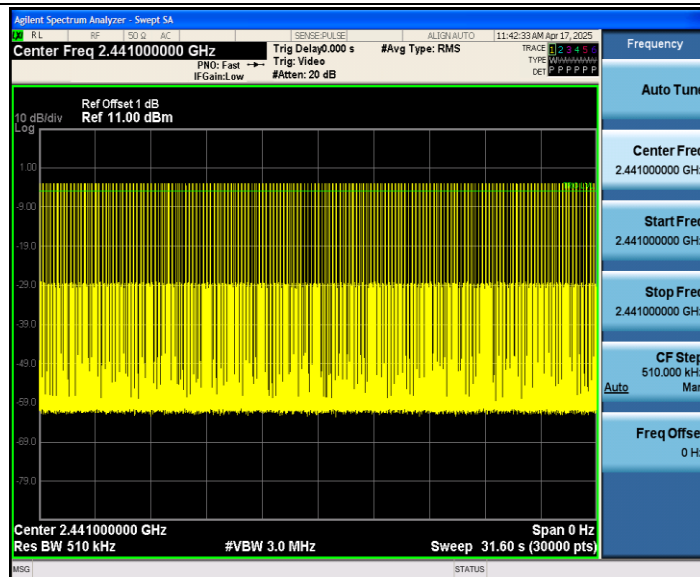
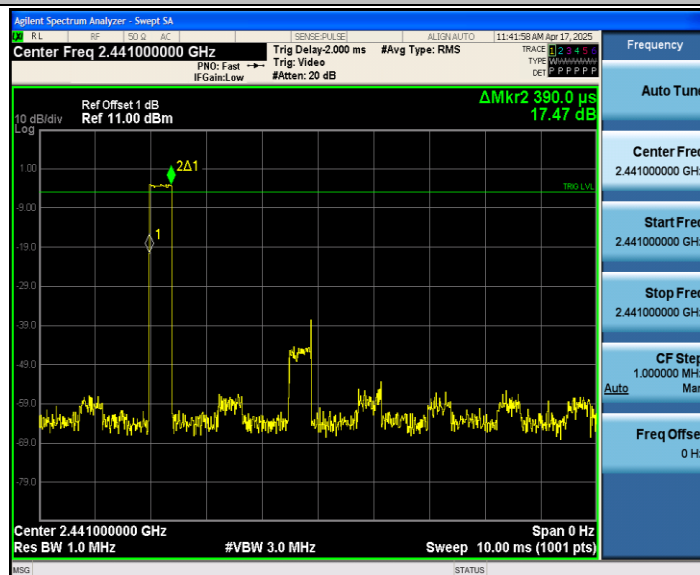


2DH5_Ant1_Hop

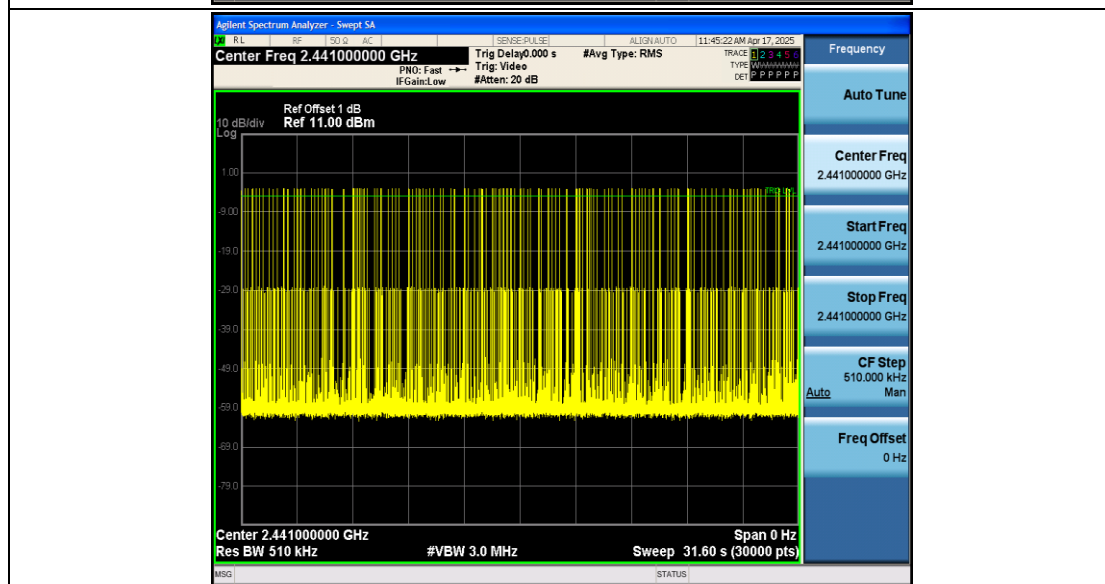




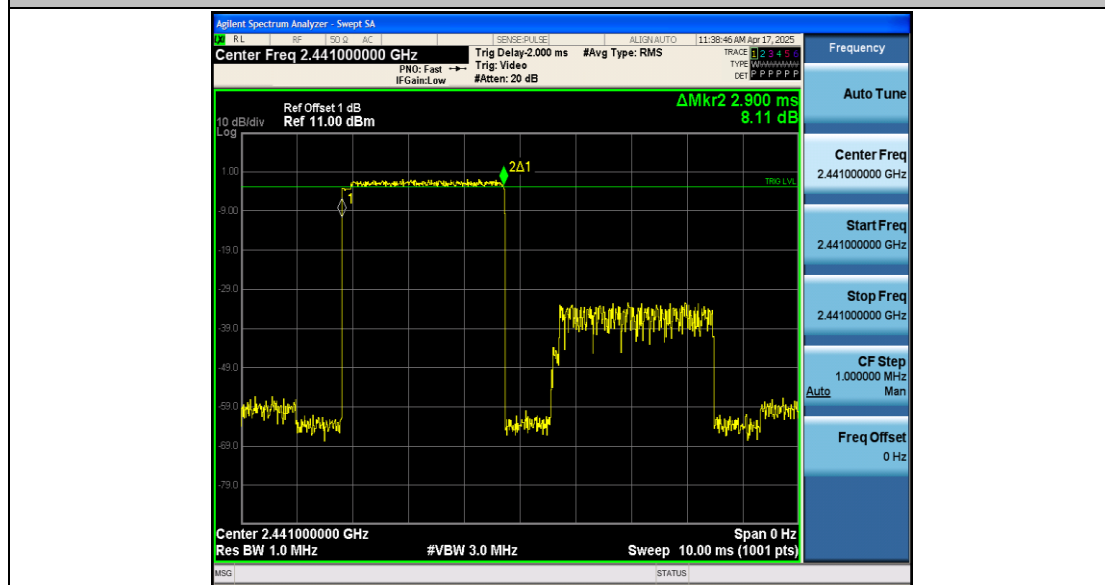
3DH1_Ant1_Hop

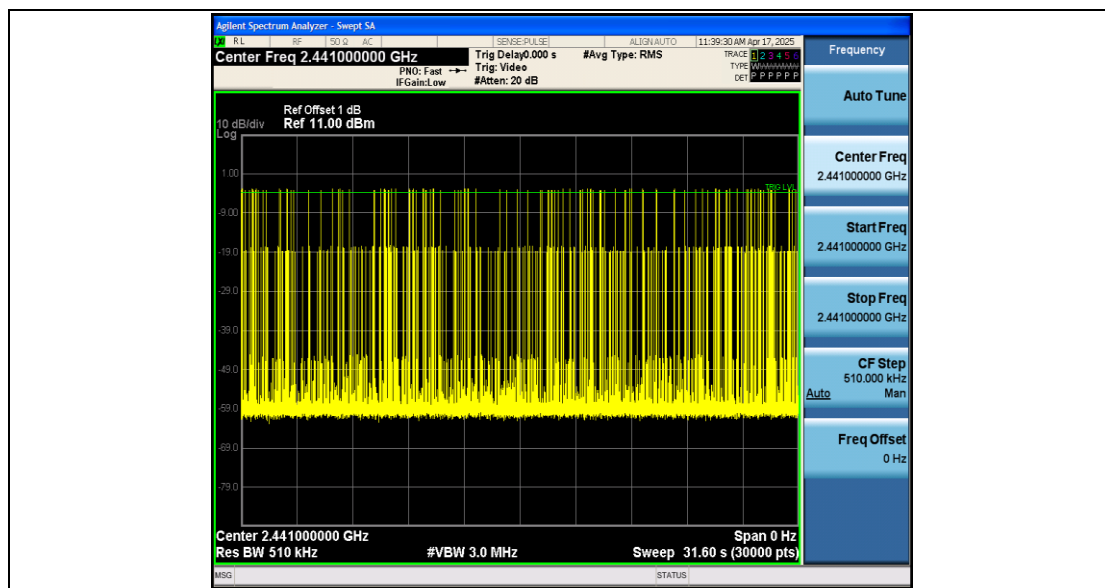


3DH3_Ant1_Hop



3DH5_Ant1_Hop





Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	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





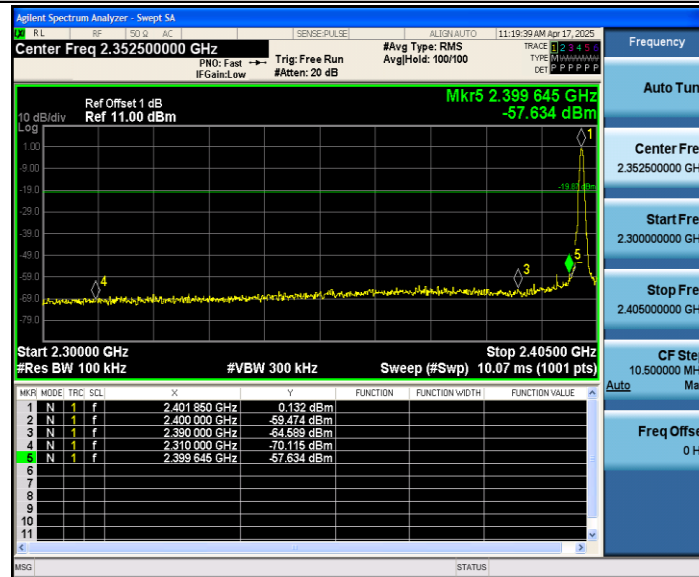
Appendix G: Band edge measurements

Test Result

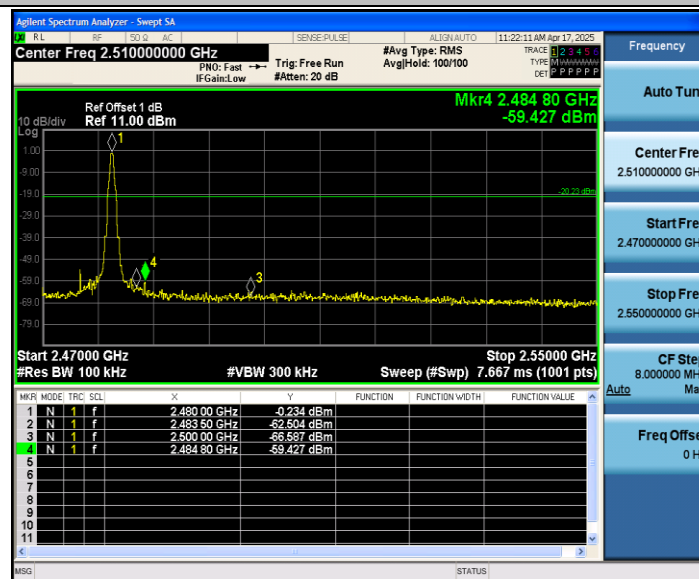
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.13	-57.63	≤-19.87	PASS
		High	2480	-0.23	-59.43	≤-20.23	PASS
		Low	Hop_2402	-3.91	-58.93	≤-23.91	PASS
		High	Hop_2480	-3.20	-63.55	≤-23.2	PASS
2DH5	Ant1	Low	2402	-4.08	-55.28	≤-24.08	PASS
		High	2480	-4.07	-63.44	≤-24.07	PASS
		Low	Hop_2402	-2.80	-61.08	≤-22.8	PASS
		High	Hop_2480	-3.20	-60.7	≤-23.2	PASS
3DH5	Ant1	Low	2402	-2.98	-58.18	≤-22.98	PASS
		High	2480	-3.91	-63.38	≤-23.91	PASS
		Low	Hop_2402	-3.76	-62.18	≤-23.76	PASS
		High	Hop_2480	-4.22	-63.94	≤-24.22	PASS

Test Graphs

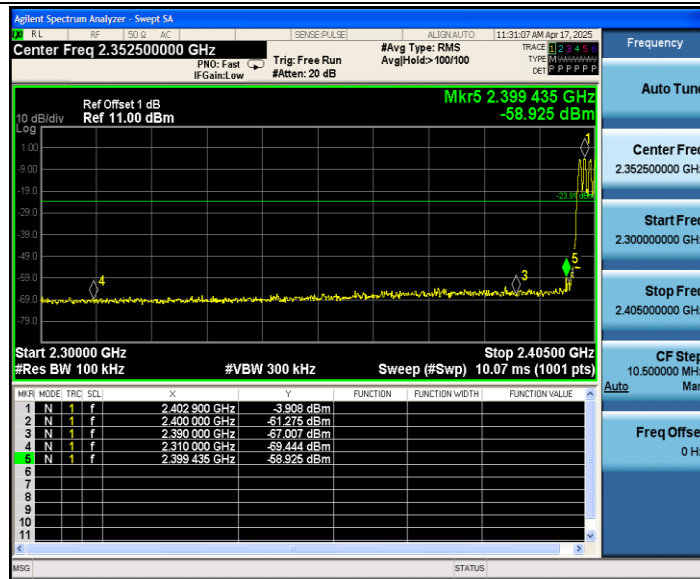
DH5_Ant1_Low_2402



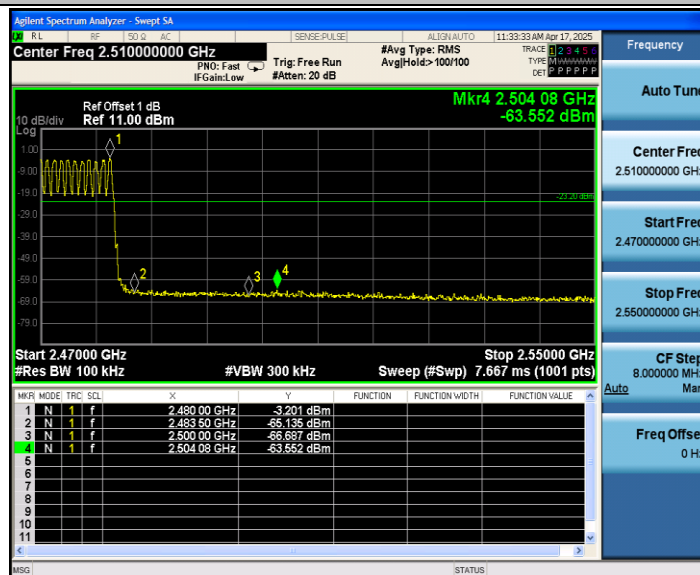
DH5_Ant1_High_2480



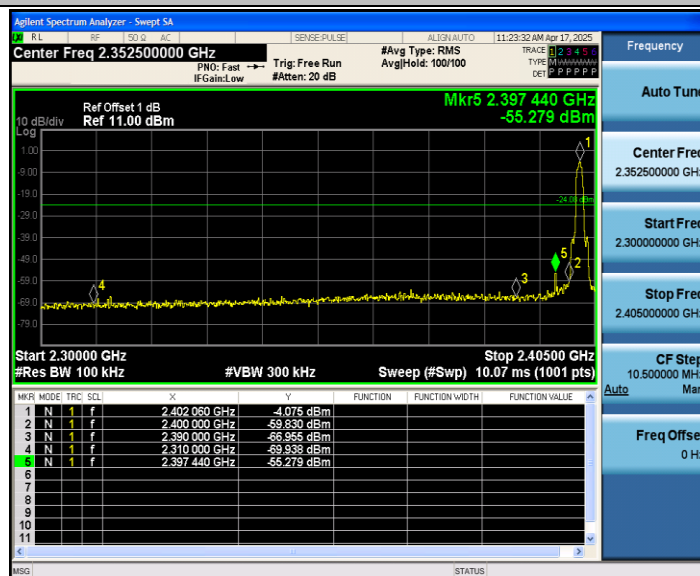
DH5_Ant1_Low_Hop_2402



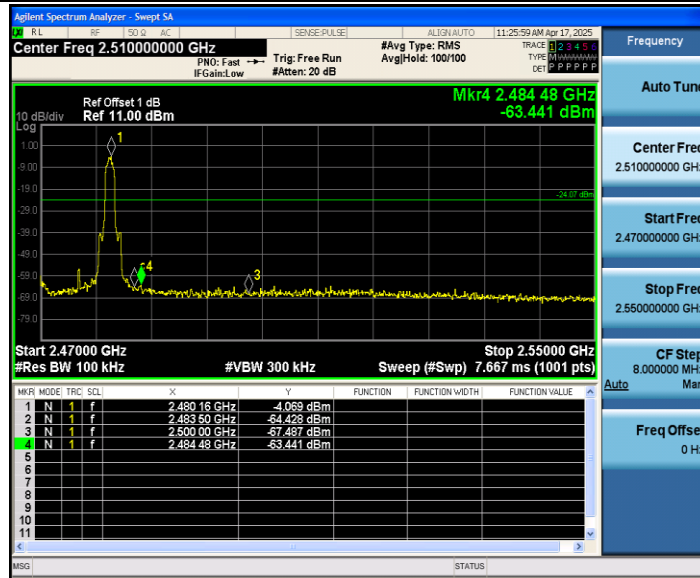
DH5_Ant1_High_Hop_2480



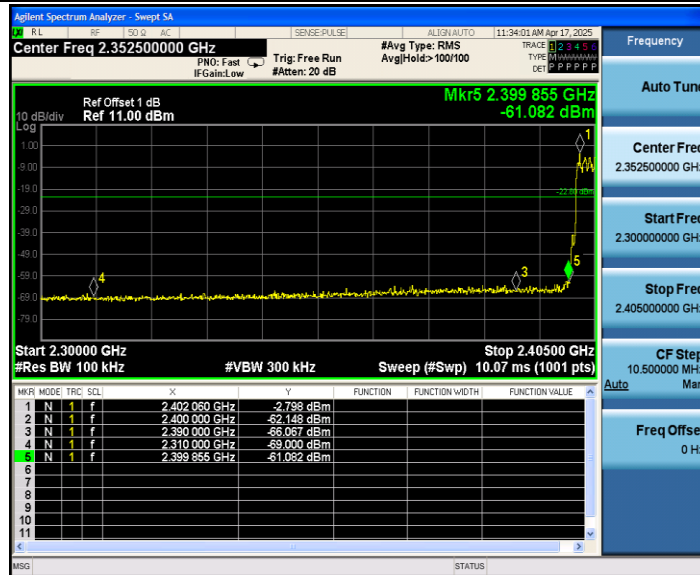
2DH5_Ant1_Low_2402



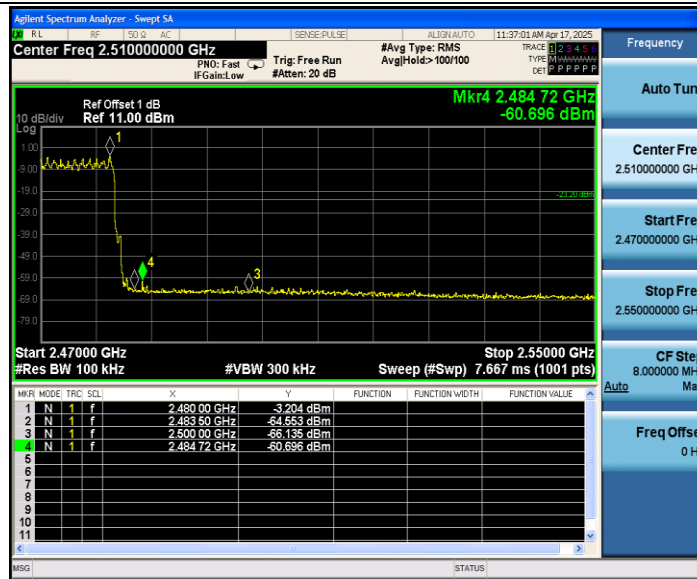
2DH5_Ant1_High_2480



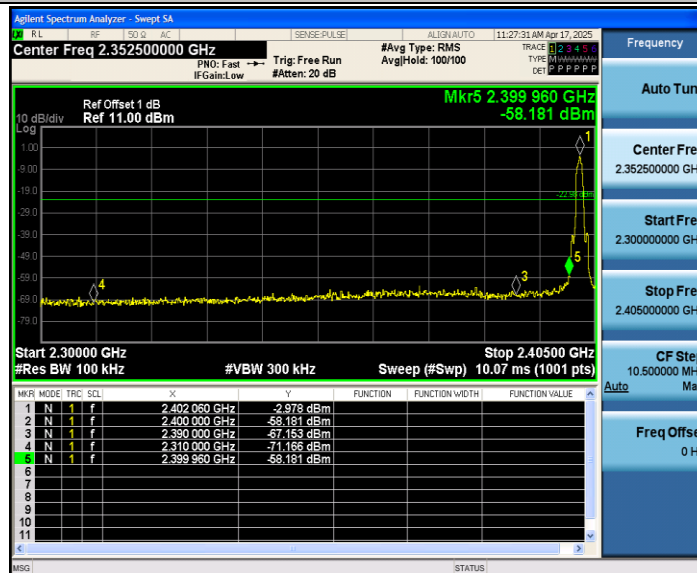
2DH5_Ant1_Low_Hop_2402



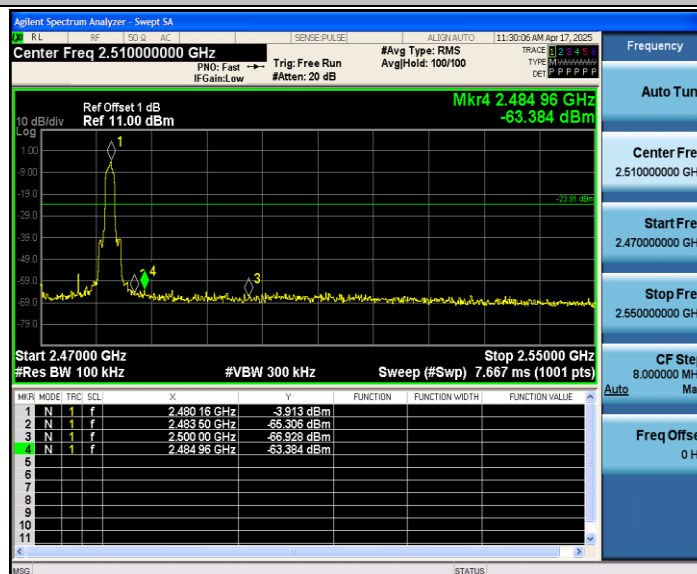
2DH5_Ant1_High_Hop_2480



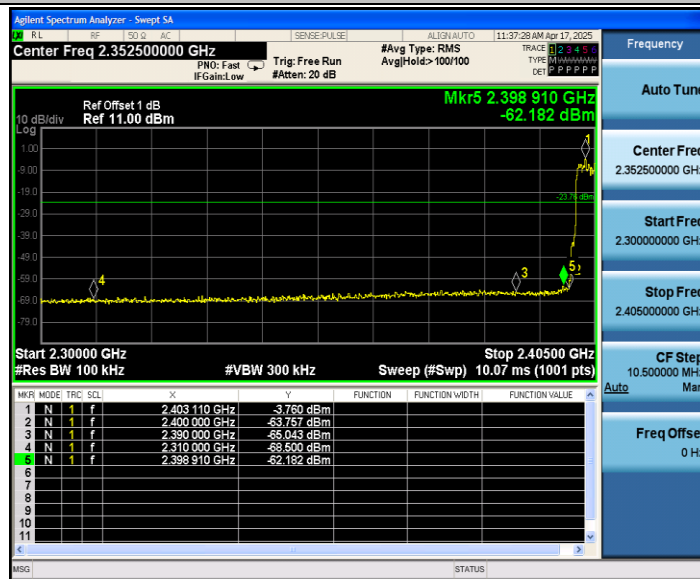
3DH5_Ant1_Low_2402



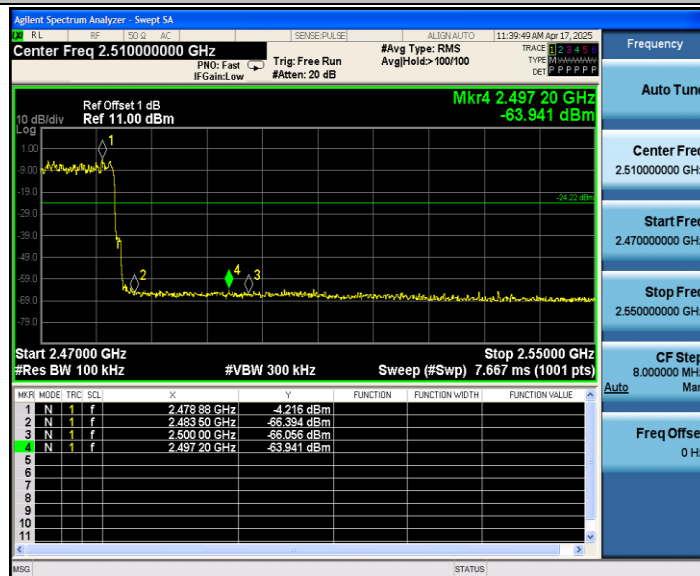
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

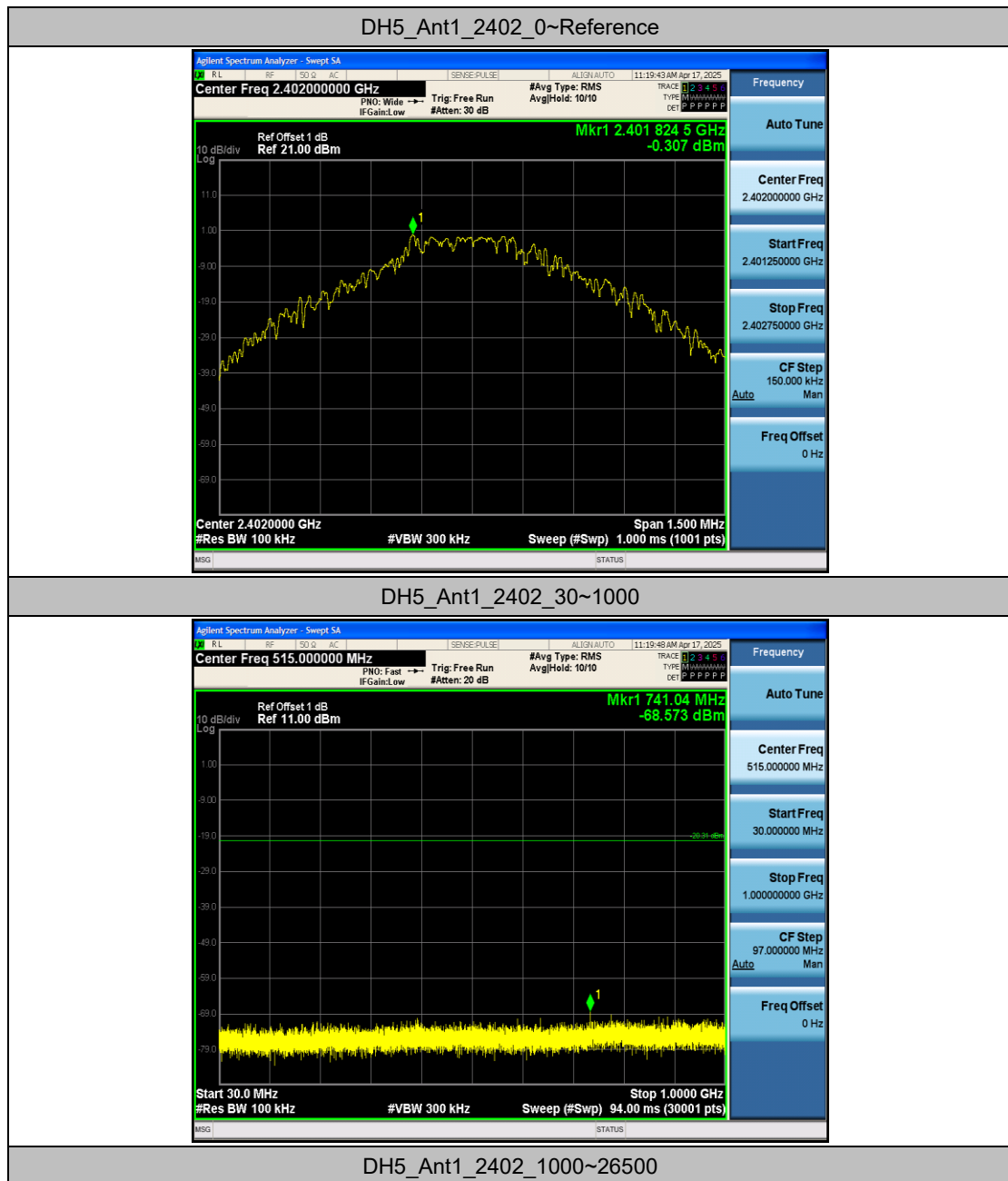


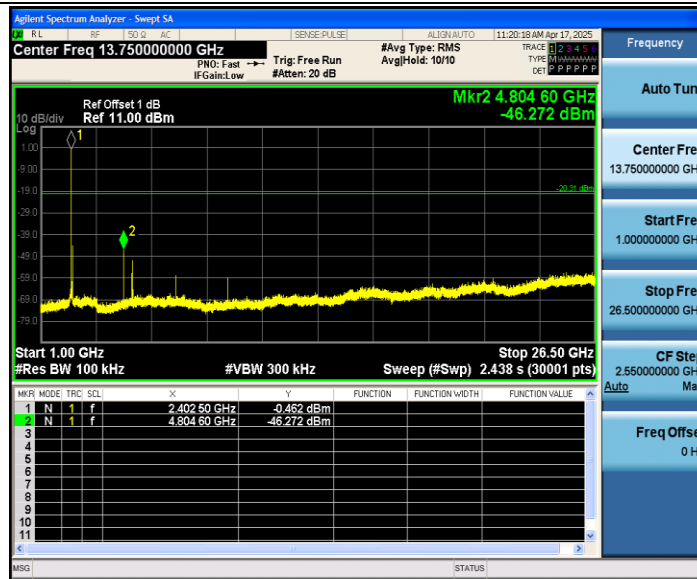
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.31	-0.31	---	PASS
			30~1000	-0.31	-68.57	≤-20.31	PASS
			1000~26500	-0.31	-46.27	≤-20.31	PASS
		2441	Reference	-0.93	-0.93	---	PASS
			30~1000	-0.93	-69.41	≤-20.93	PASS
			1000~26500	-0.93	-43.5	≤-20.93	PASS
		2480	Reference	-0.80	-0.80	---	PASS
			30~1000	-0.80	-68.21	≤-20.8	PASS
			1000~26500	-0.80	-44.54	≤-20.8	PASS
2DH5	Ant1	2402	Reference	-4.98	-4.98	---	PASS
			30~1000	-4.98	-69.69	≤-24.98	PASS
			1000~26500	-4.98	-47.62	≤-24.98	PASS
		2441	Reference	-5.52	-5.52	---	PASS
			30~1000	-5.52	-69.53	≤-25.52	PASS
			1000~26500	-5.52	-49.29	≤-25.52	PASS
		2480	Reference	-4.56	-4.56	---	PASS
			30~1000	-4.56	-69.2	≤-24.56	PASS
			1000~26500	-4.56	-49.15	≤-24.56	PASS
3DH5	Ant1	2402	Reference	-3.67	-3.67	---	PASS
			30~1000	-3.67	-68.51	≤-23.67	PASS
			1000~26500	-3.67	-50.62	≤-23.67	PASS
		2441	Reference	-5.55	-5.55	---	PASS
			30~1000	-5.55	-68.98	≤-25.55	PASS
			1000~26500	-5.55	-46.75	≤-25.55	PASS
		2480	Reference	-6.60	-6.60	---	PASS
			30~1000	-6.60	-69.57	≤-26.6	PASS
			1000~26500	-6.60	-49.11	≤-26.6	PASS

Test Graphs

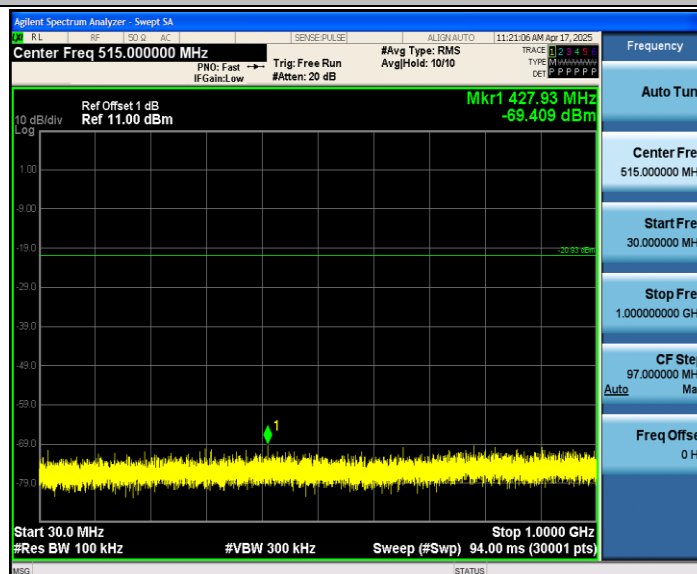




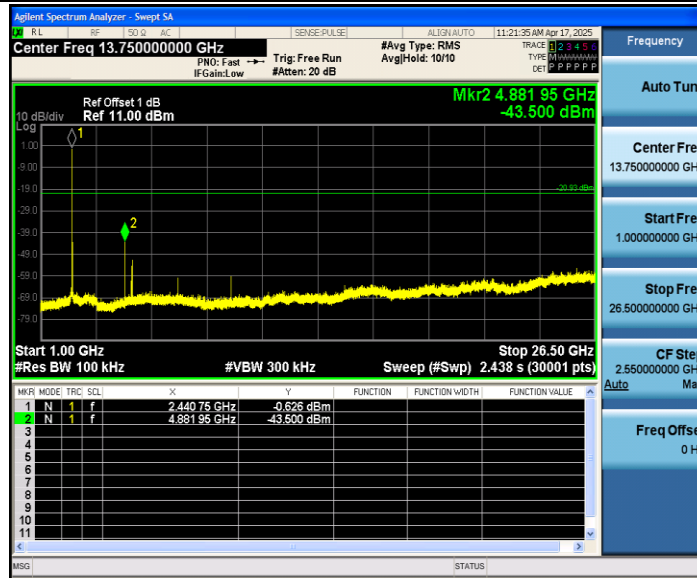
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



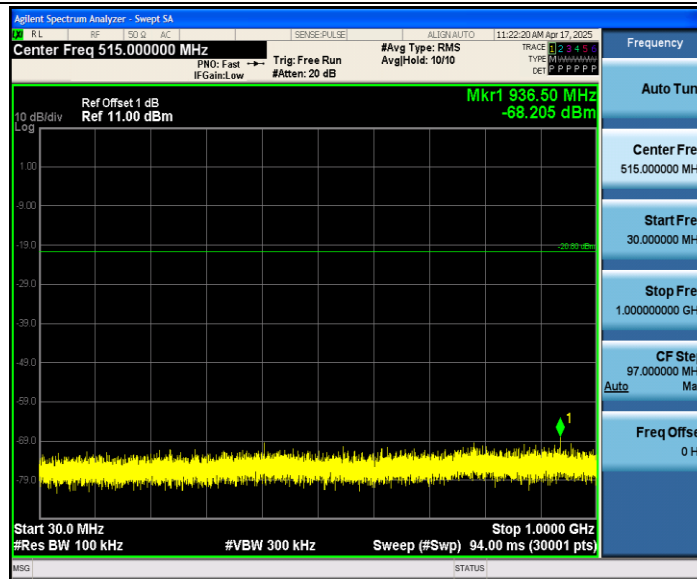
DH5_Ant1_2441_1000~26500



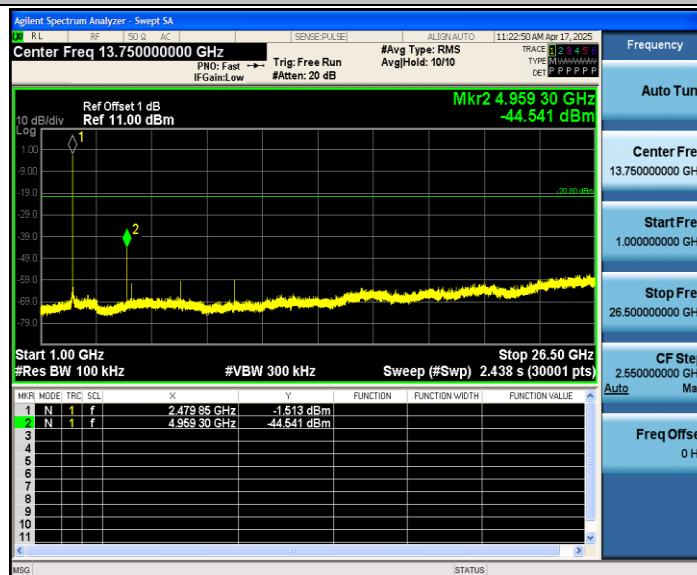
DH5_Ant1_2480_0~Reference



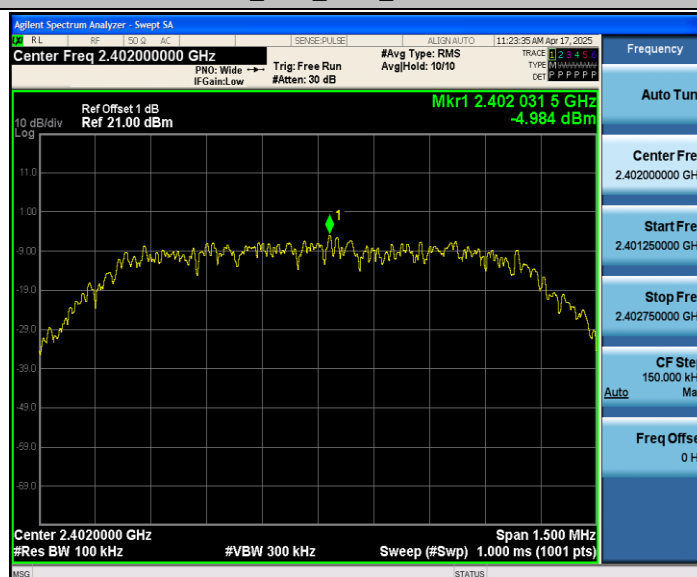
DH5_Ant1_2480_30~1000



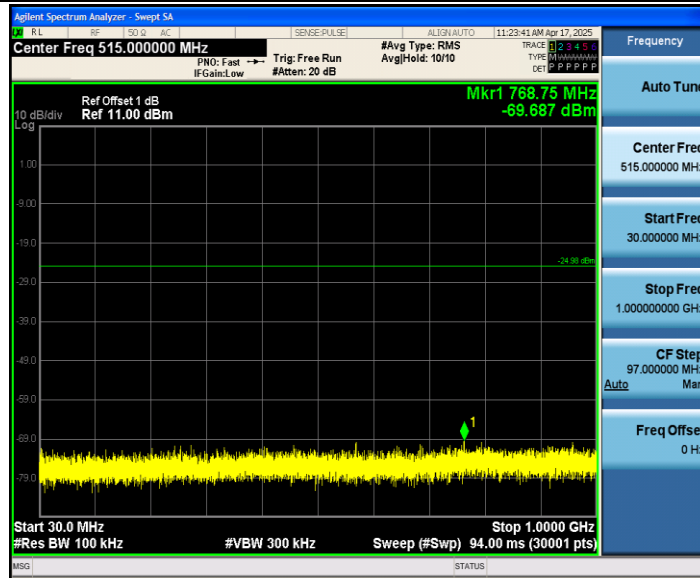
DH5_Ant1_2480_1000~26500



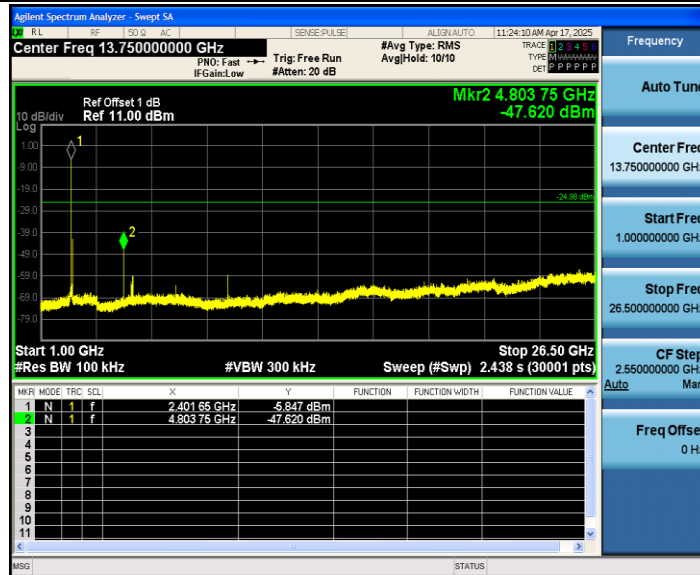
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference