

FCC Appendix RF Test Data for BT

FCC ID : 2BTRQ-MSA-7908MX

Company : MITZU GLOBAL LLC

EUT : Speaker

Model Number : MSA-7908MX

Report No. : CTA25120801701

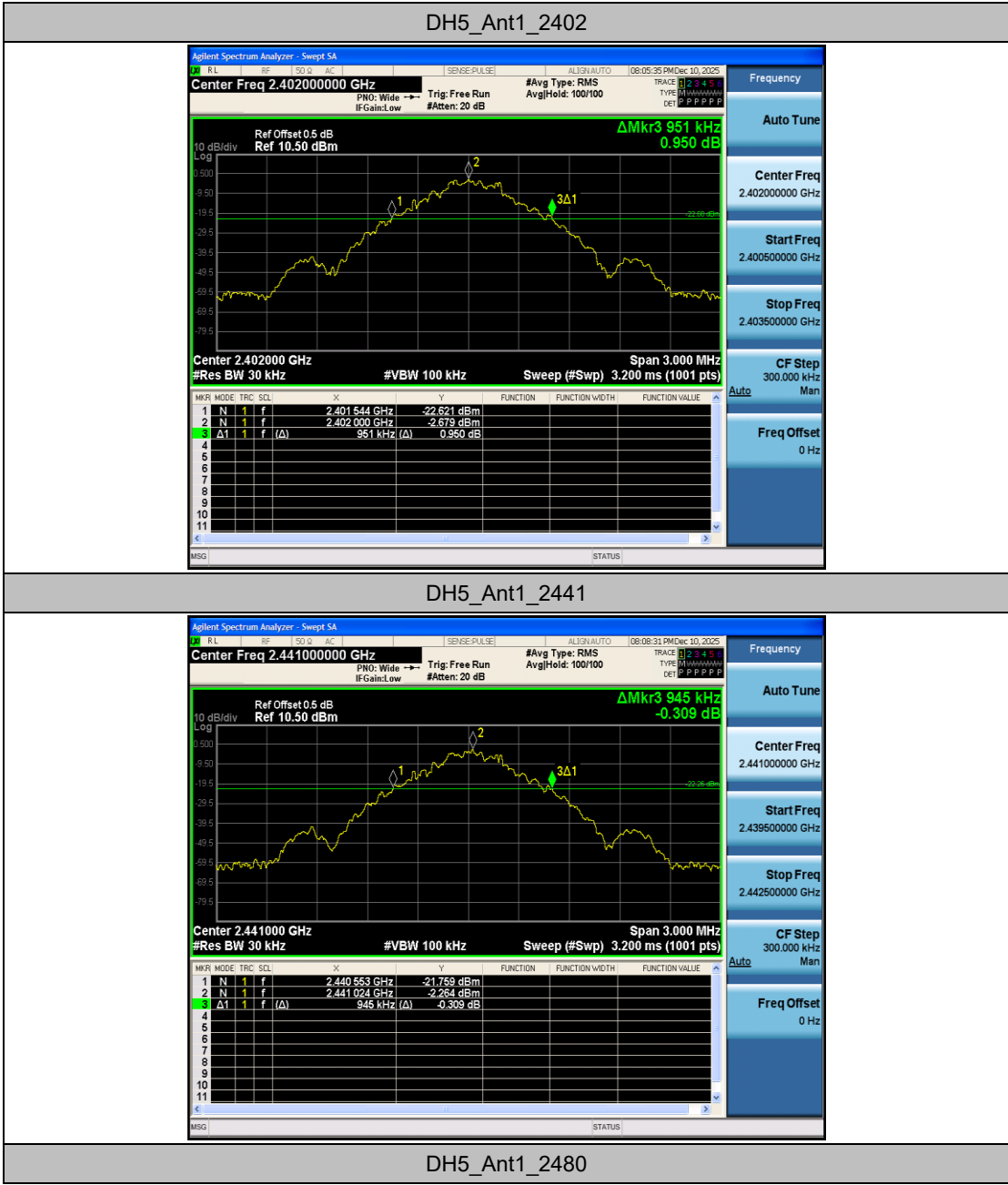
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.951	2401.544	2402.495	---	---
		2441	0.945	2440.553	2441.498	---	---
		2480	0.951	2479.550	2480.501	---	---
2DH5	Ant1	2402	1.320	2401.346	2402.666	---	---
		2441	1.281	2440.379	2441.660	---	---
		2480	1.275	2479.394	2480.669	---	---
3DH5	Ant1	2402	1.281	2401.367	2402.648	---	---
		2441	1.284	2440.373	2441.657	---	---
		2480	1.287	2479.367	2480.654	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



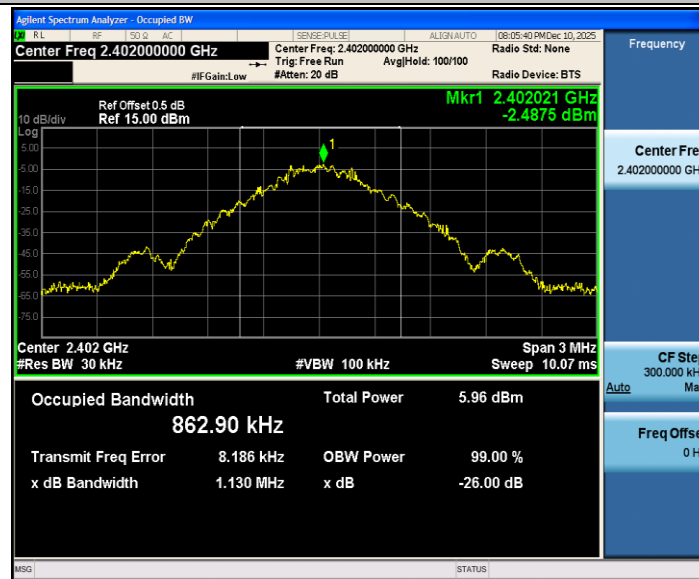
Appendix B: Occupied Channel Bandwidth

Test Result

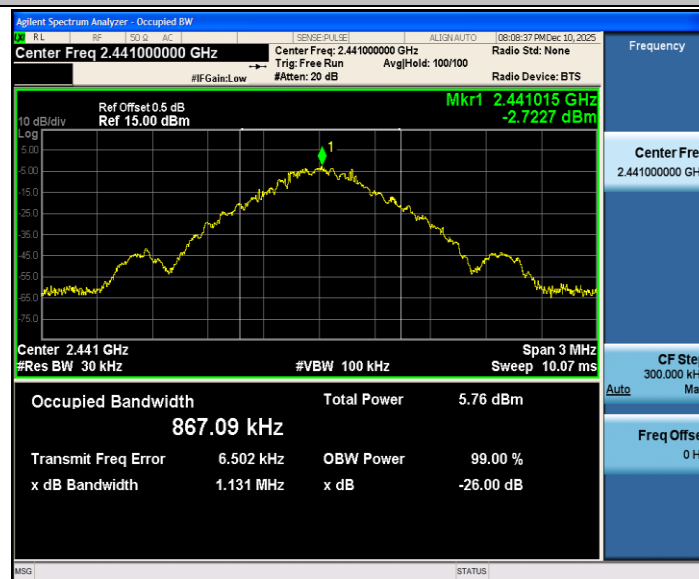
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86290	2401.5767	2402.4396	---	---
		2441	0.86709	2440.5730	2441.4400	---	---
		2480	0.87115	2479.5727	2480.4439	---	---
2DH5	Ant1	2402	1.1868	2401.4178	2402.6046	---	---
		2441	1.1873	2440.4162	2441.6035	---	---
		2480	1.1873	2479.4173	2480.6046	---	---
3DH5	Ant1	2402	1.1881	2401.4181	2402.6062	---	---
		2441	1.1860	2440.4187	2441.6047	---	---
		2480	1.1868	2479.4179	2480.6047	---	---

Test Graphs

DH5_Ant1_2402



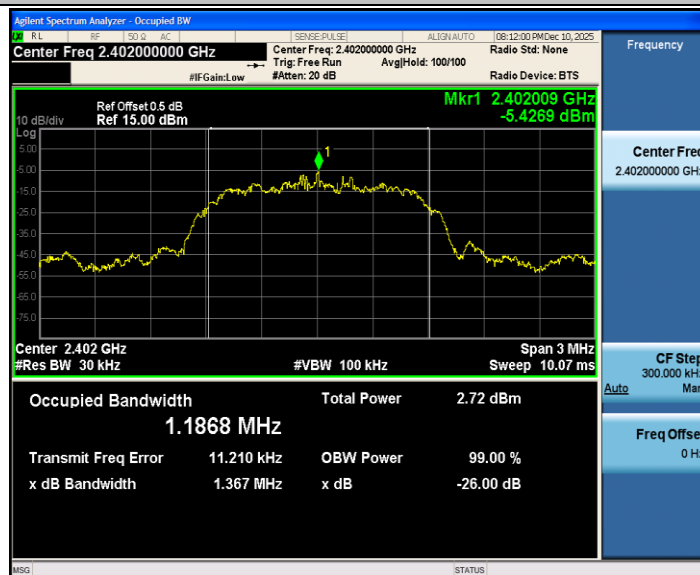
DH5_Ant1_2441



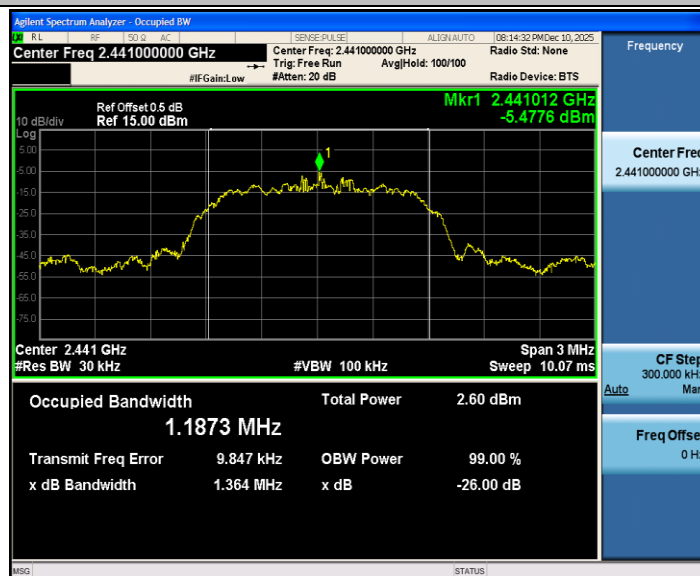
DH5_Ant1_2480



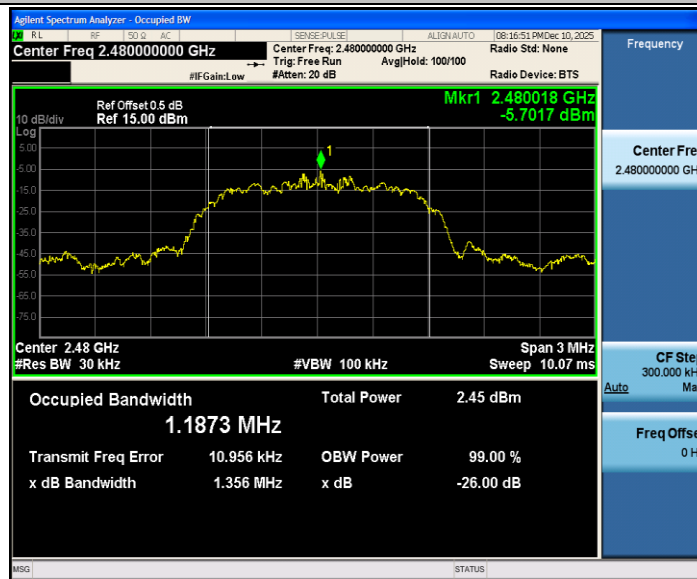
2DH5_Ant1_2402



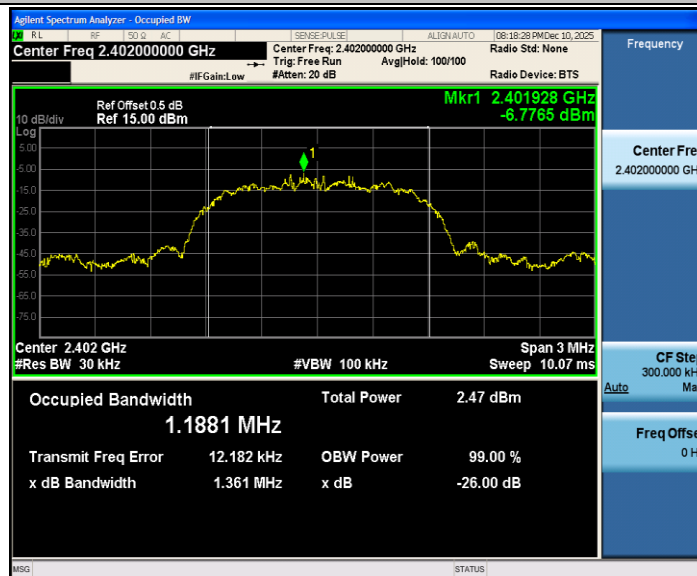
2DH5_Ant1_2441



2DH5_Ant1_2480



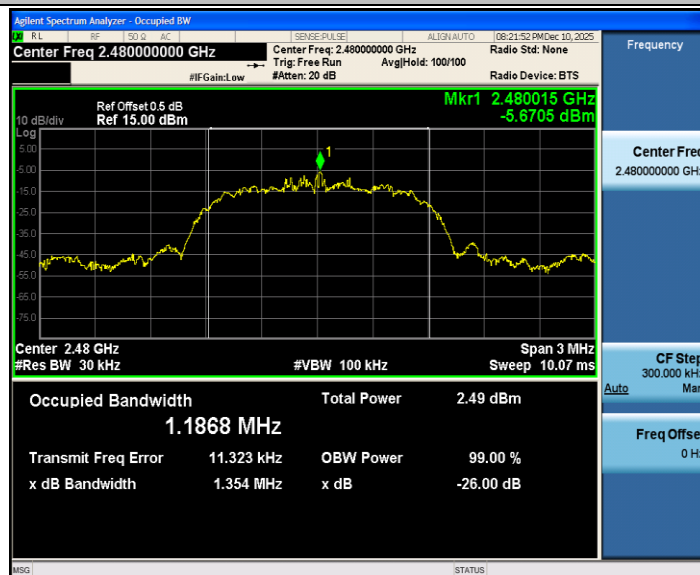
3DH5_Ant1_2402



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	0.06	≤20.97	PASS
		2441	-0.20	≤20.97	PASS
		2480	-0.24	≤20.97	PASS
2DH5	Ant1	2402	-0.72	≤20.97	PASS
		2441	-0.99	≤20.97	PASS
		2480	-1.00	≤20.97	PASS
3DH5	Ant1	2402	-0.39	≤20.97	PASS
		2441	-0.63	≤20.97	PASS
		2480	-0.65	≤20.97	PASS

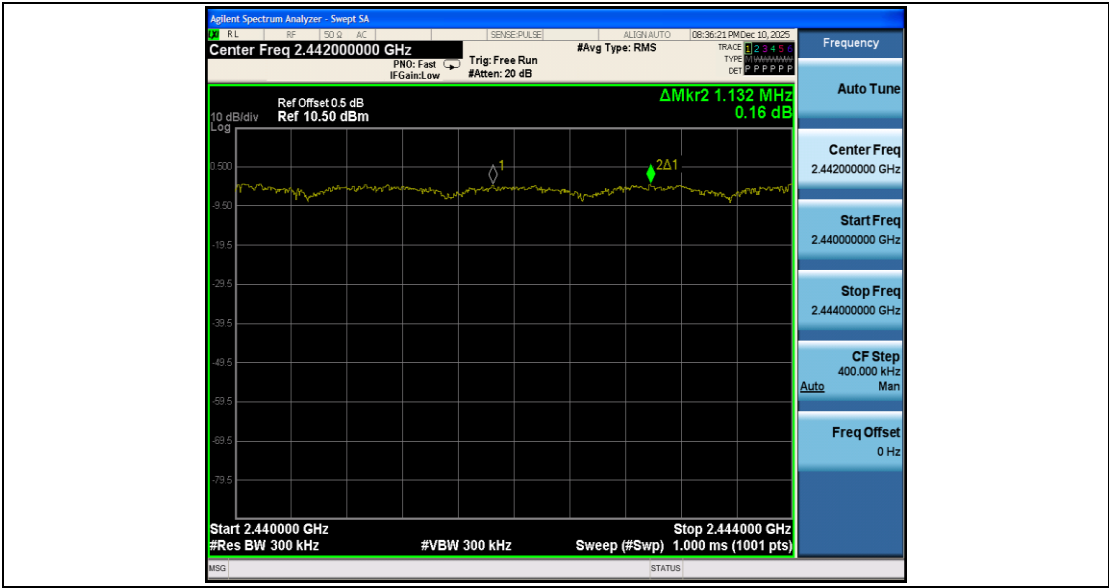
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.036	≥ 0.951	PASS
2DH5	Ant1	Hop	0.992	≥ 0.880	PASS
3DH5	Ant1	Hop	1.132	≥ 0.858	PASS

Test Graphs



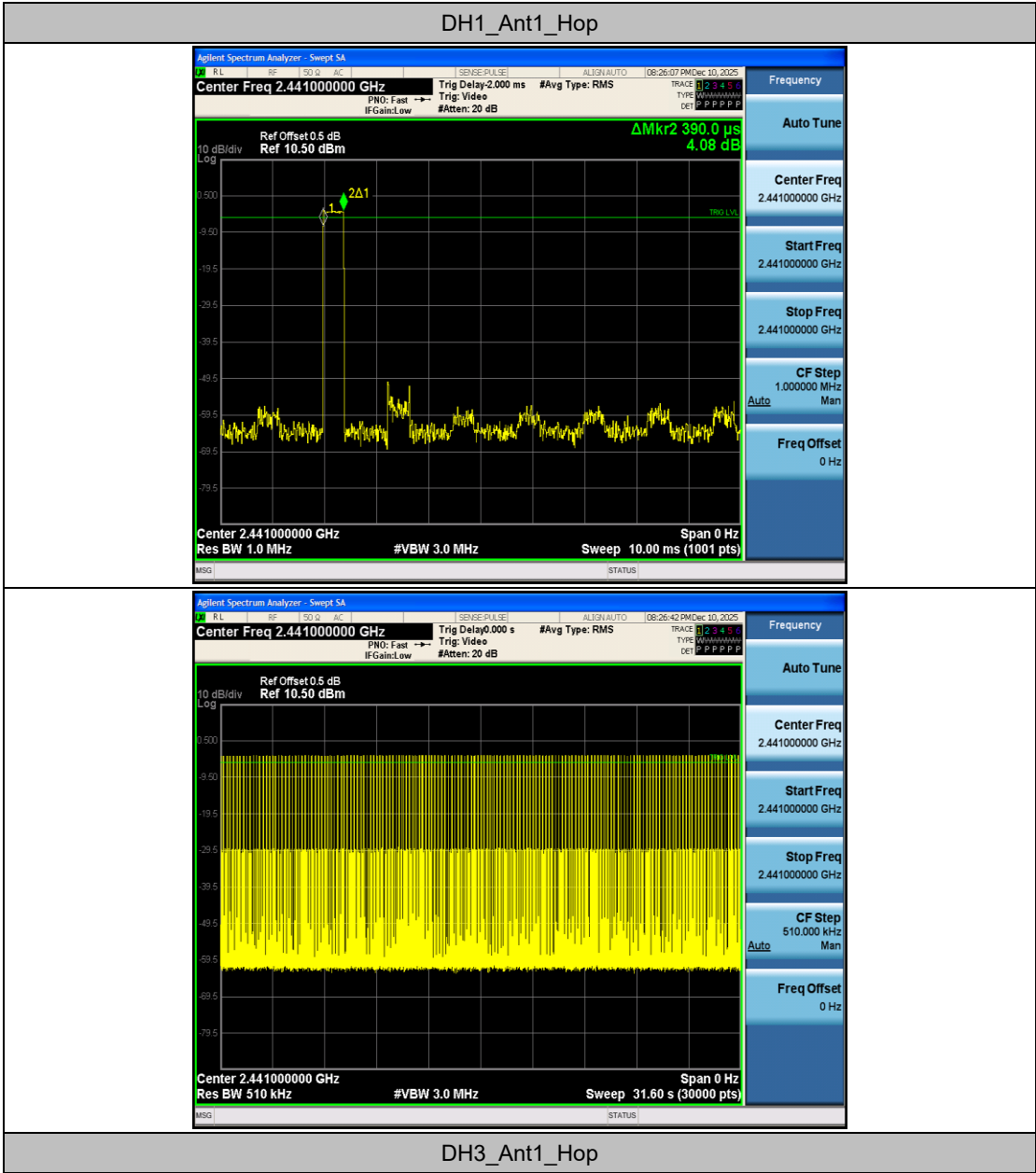


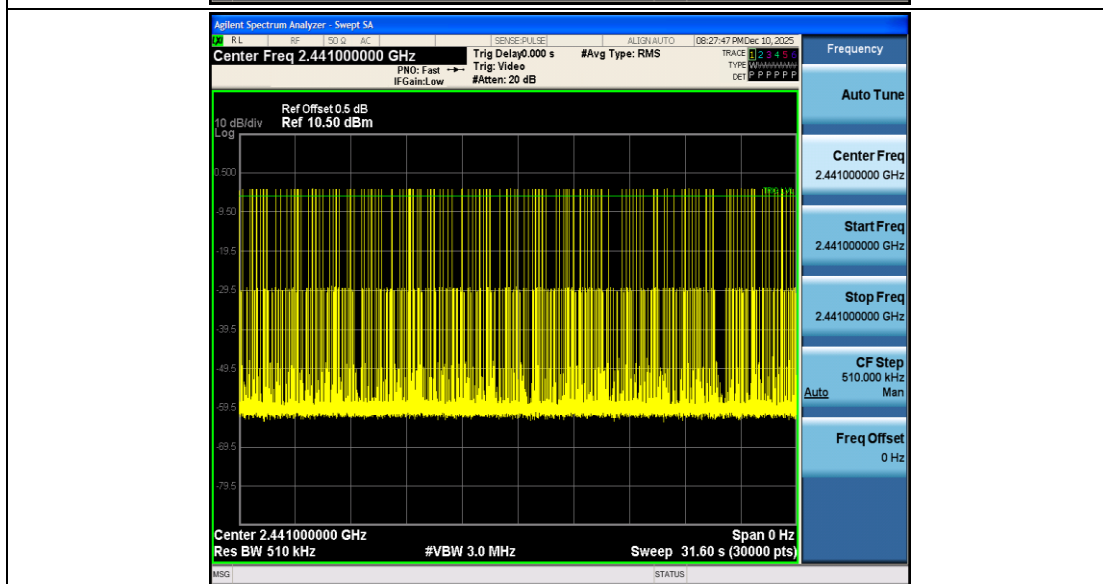
Appendix E: Time of occupancy

Test Result

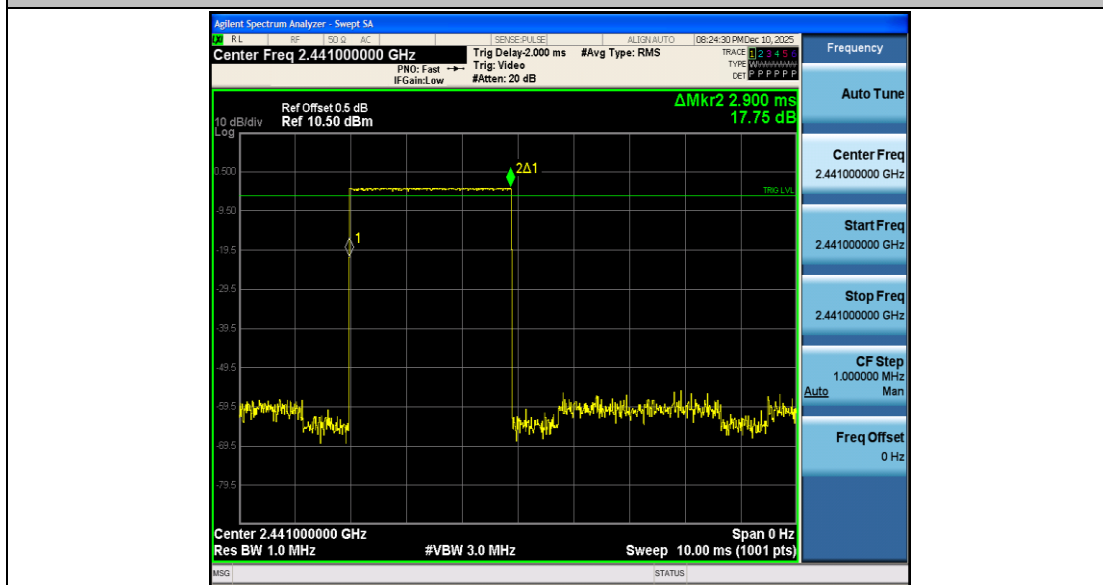
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
DH3	Ant1	Hop	1.640	164	0.269	≤0.4	PASS
DH5	Ant1	Hop	2.900	103	0.299	≤0.4	PASS
2DH1	Ant1	Hop	0.400	319	0.128	≤0.4	PASS
2DH3	Ant1	Hop	1.650	165	0.272	≤0.4	PASS
2DH5	Ant1	Hop	2.890	116	0.335	≤0.4	PASS
3DH1	Ant1	Hop	0.400	317	0.127	≤0.4	PASS
3DH3	Ant1	Hop	1.650	154	0.254	≤0.4	PASS
3DH5	Ant1	Hop	2.900	103	0.299	≤0.4	PASS

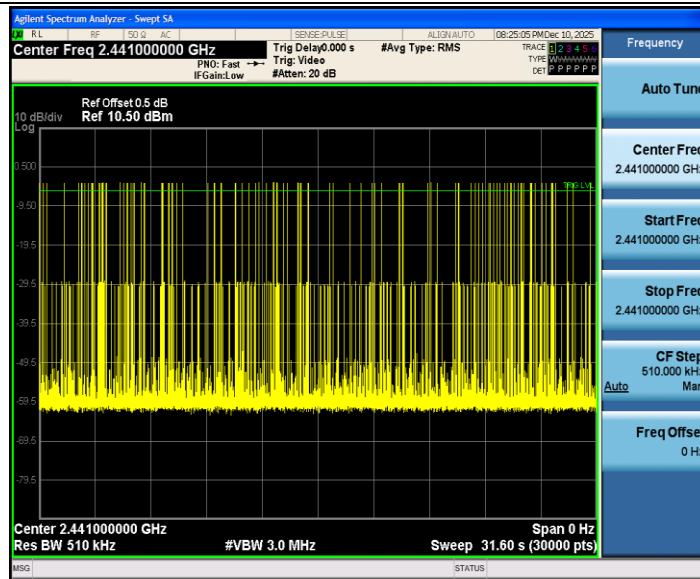
Test Graphs



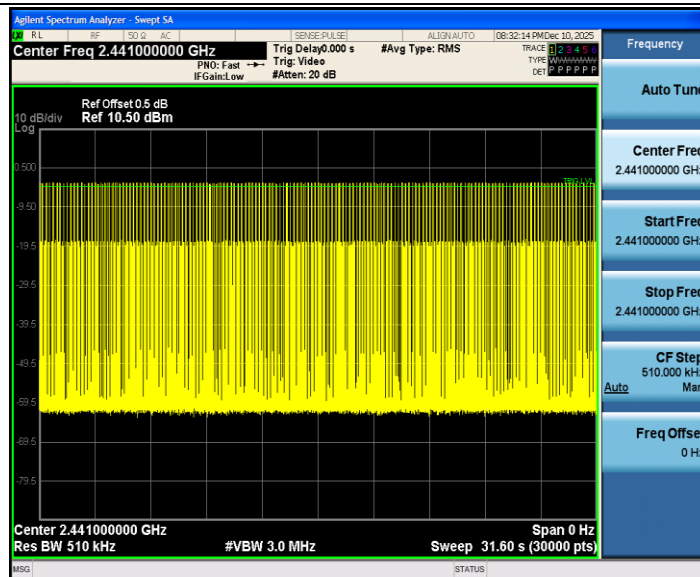
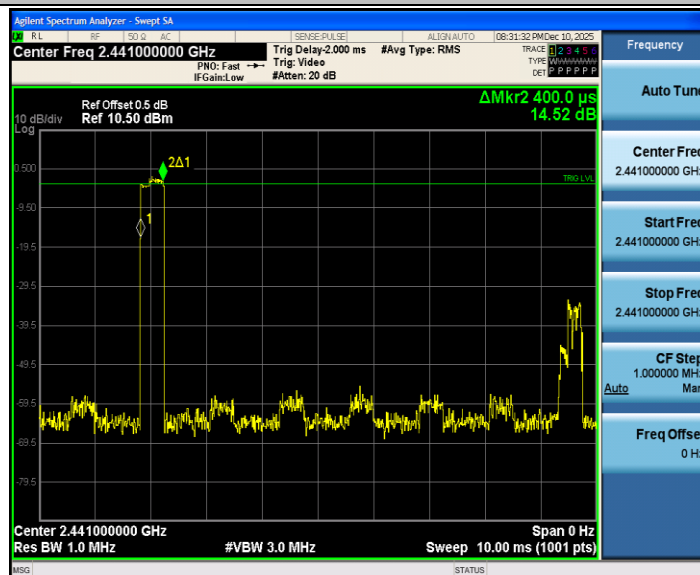


DH5_Ant1_Hop

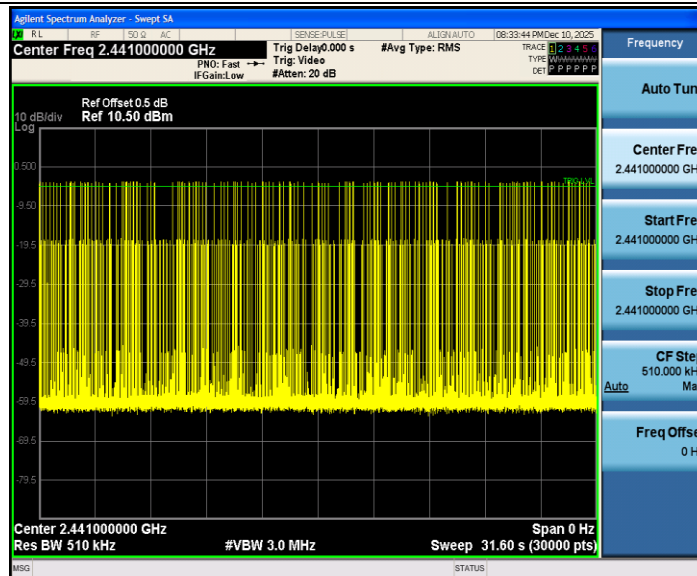




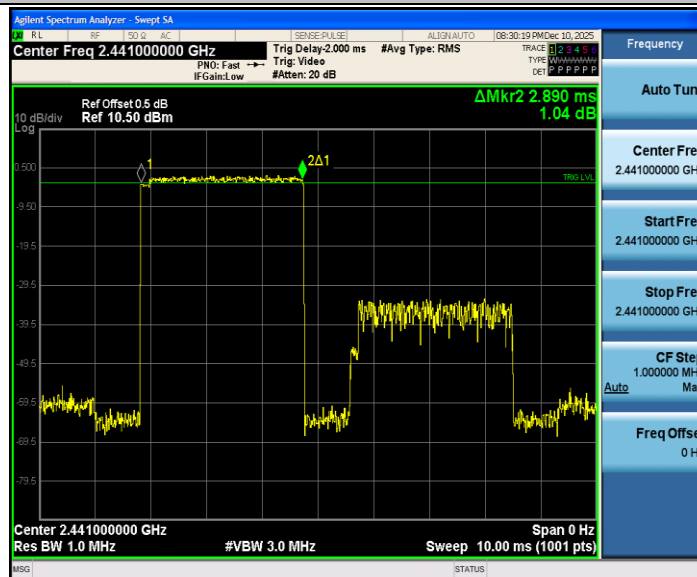
2DH1_Ant1_Hop

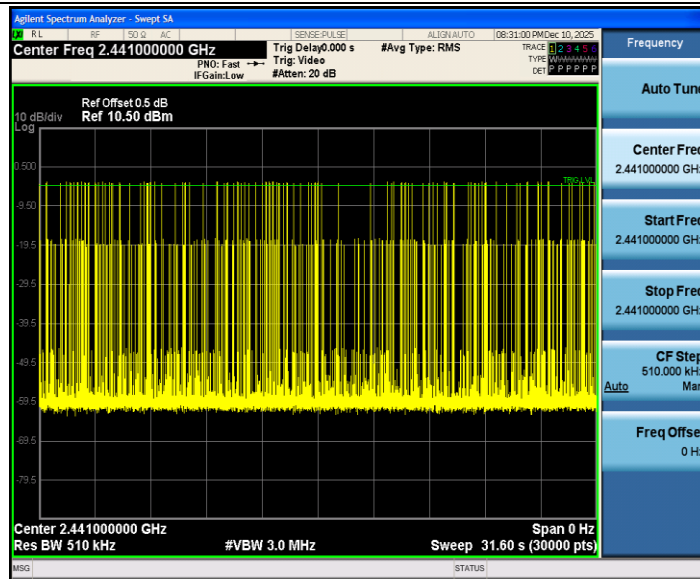


2DH3_Ant1_Hop

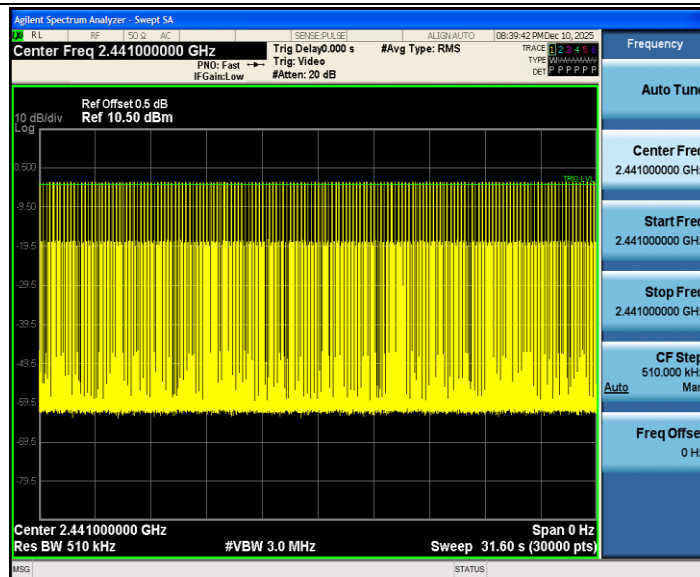
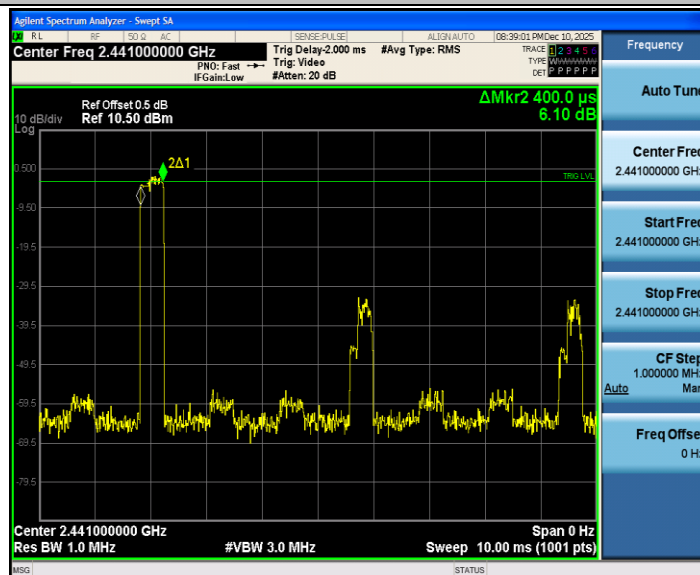


2DH5_Ant1_Hop

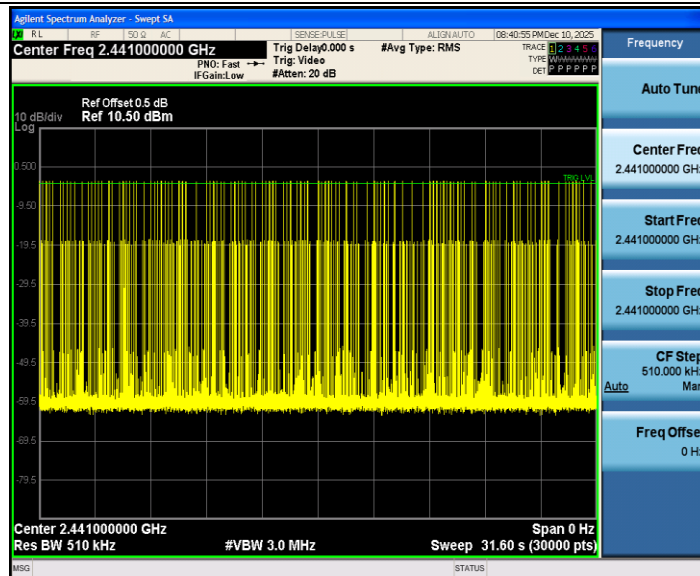
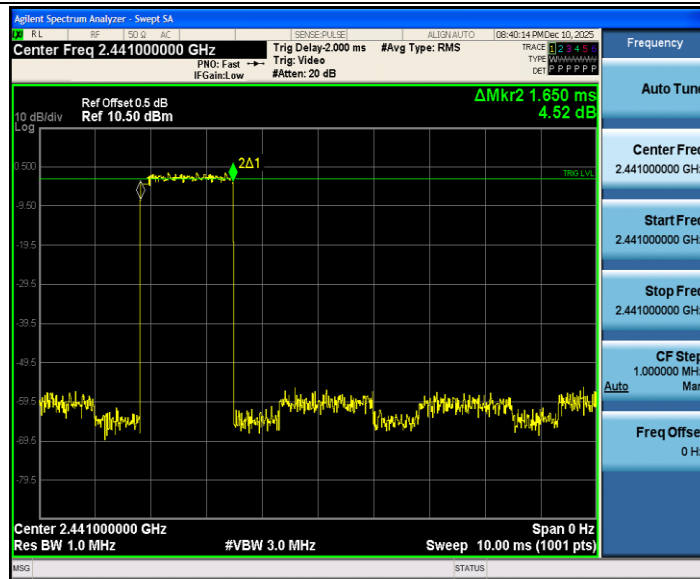




3DH1_Ant1_Hop

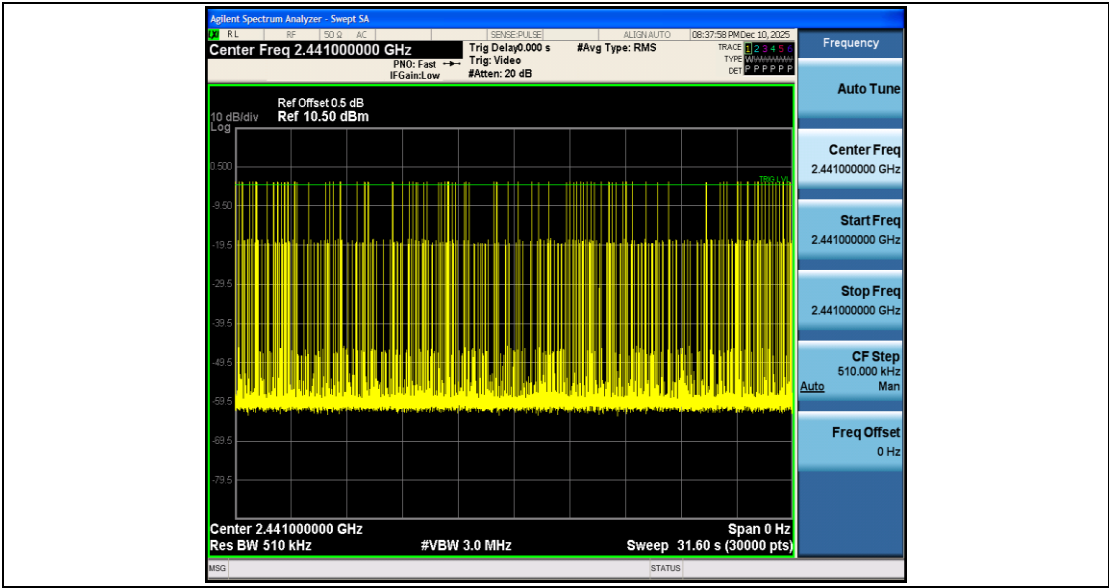


3DH3_Ant1_Hop



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

DH5_Ant1_Hop

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.441750000 GHz

Ref Offset 0.5 dB
Ref 10.50 dBm

Start 2.400000 GHz
#Res BW 300 kHz

Stop 2.483500 GHz
#VBW 300 kHz
Sweep (#Swp) 1.133 ms (1001 pts)

Frequency

Auto Tune

Center Freq 2.441750000 GHz

Start Freq 2.400000000 GHz

Stop Freq 2.483500000 GHz

CF Step 8.350000 MHz
Auto

Freq Offset 0 Hz

2DH5_Ant1_Hop

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.441750000 GHz

Ref Offset 0.5 dB
Ref 10.50 dBm

Start 2.400000 GHz
#Res BW 300 kHz

Stop 2.483500 GHz
#VBW 300 kHz
Sweep (#Swp) 1.133 ms (1001 pts)

Frequency

Auto Tune

Center Freq 2.441750000 GHz

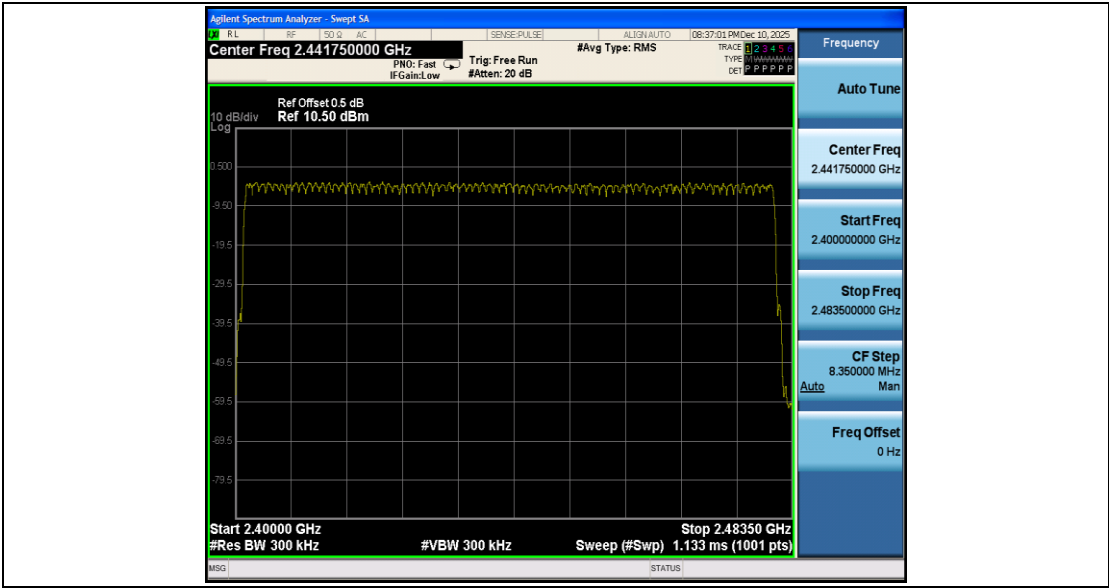
Start Freq 2.400000000 GHz

Stop Freq 2.483500000 GHz

CF Step 8.350000 MHz
Auto

Freq Offset 0 Hz

3DH5_Ant1_Hop

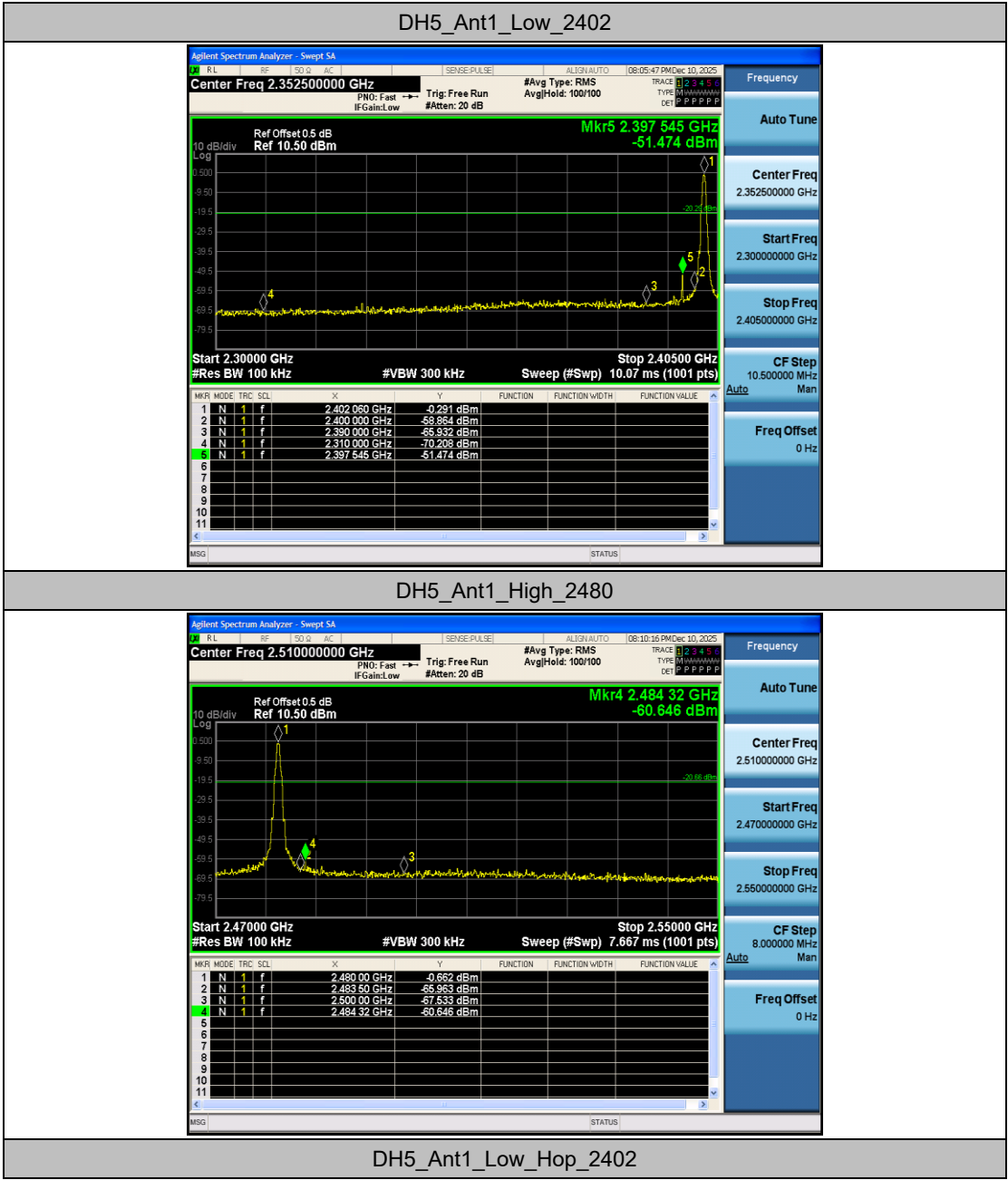


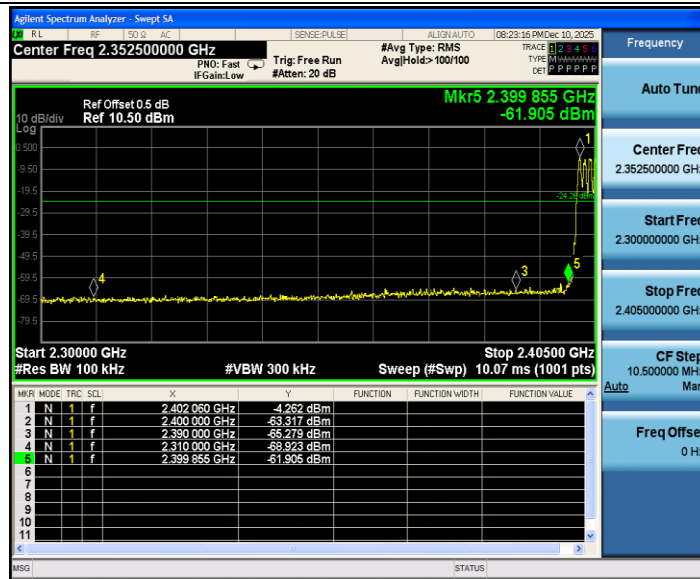
Appendix G: Band edge measurements

Test Result

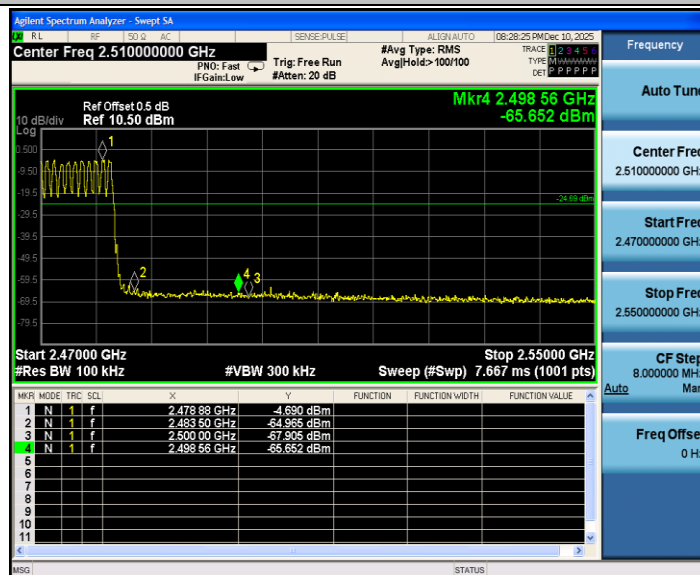
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.29	-51.47	≤-20.29	PASS
		High	2480	-0.66	-60.65	≤-20.66	PASS
		Low	Hop_2402	-4.26	-61.91	≤-24.26	PASS
		High	Hop_2480	-4.69	-65.65	≤-24.69	PASS
2DH5	Ant1	Low	2402	-3.80	-56.06	≤-23.8	PASS
		High	2480	-4.56	-64.52	≤-24.56	PASS
		Low	Hop_2402	-4.20	-62.93	≤-24.2	PASS
		High	Hop_2480	-3.91	-64.17	≤-23.91	PASS
3DH5	Ant1	Low	2402	-3.91	-59.41	≤-23.91	PASS
		High	2480	-4.76	-63.26	≤-24.76	PASS
		Low	Hop_2402	-5.84	-62.11	≤-25.84	PASS
		High	Hop_2480	-6.22	-63.54	≤-26.22	PASS

Test Graphs

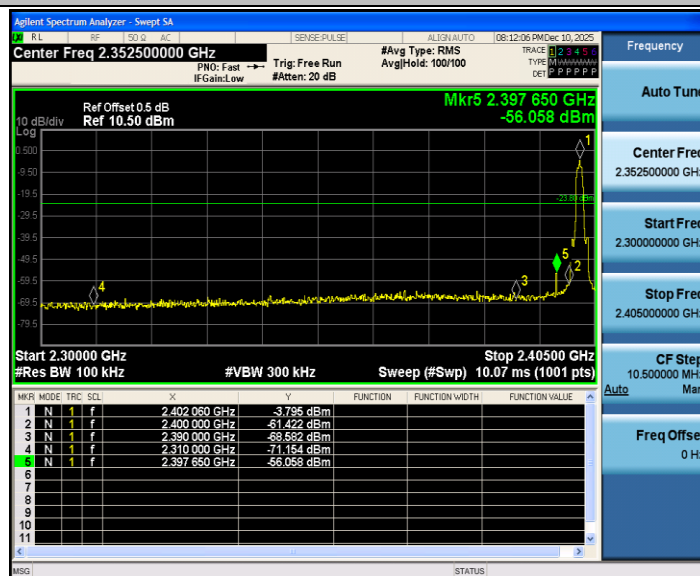




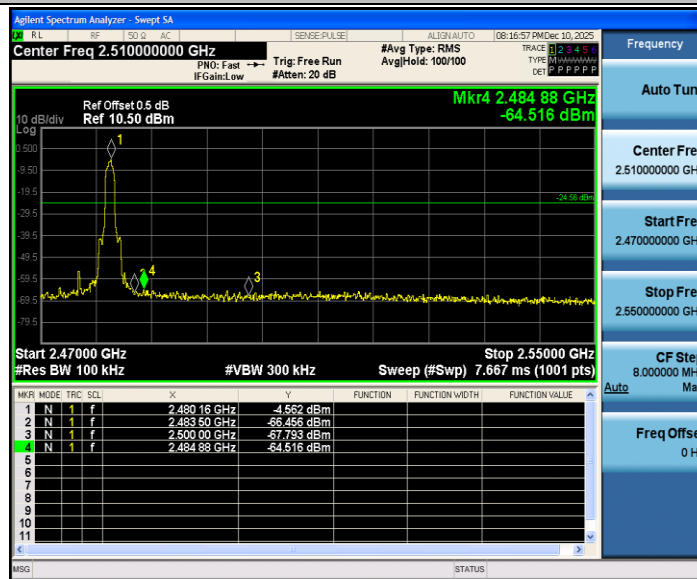
DH5_Ant1_High_Hop_2480



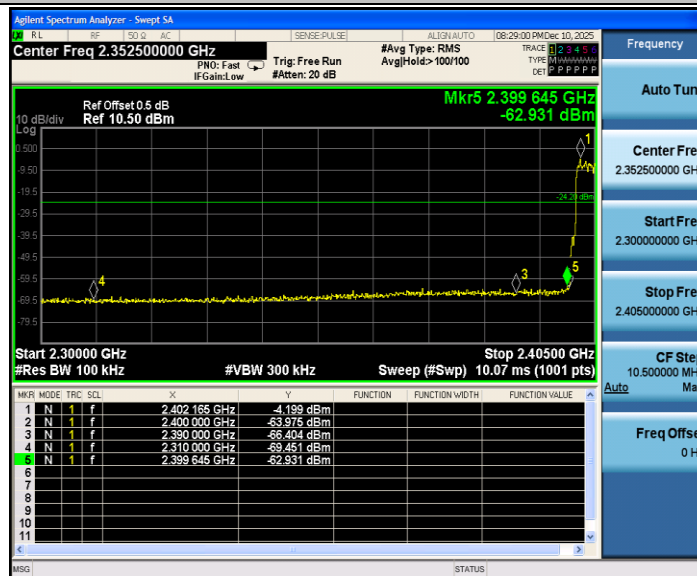
2DH5_Ant1_Low_2402



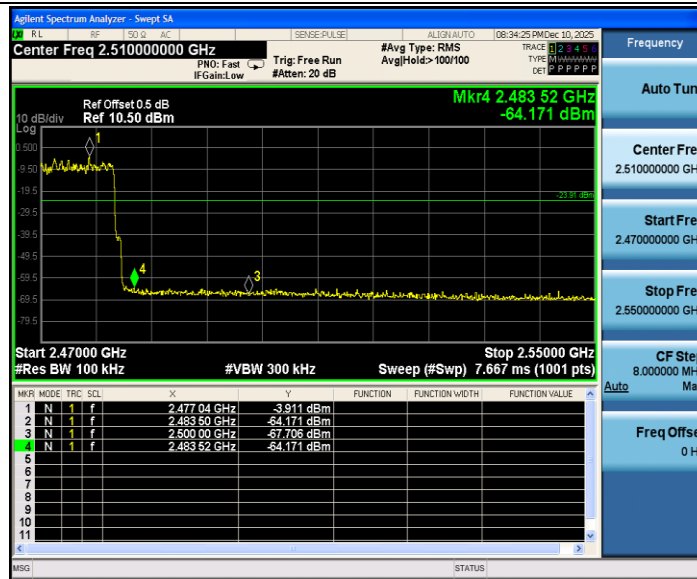
2DH5_Ant1_High_2480



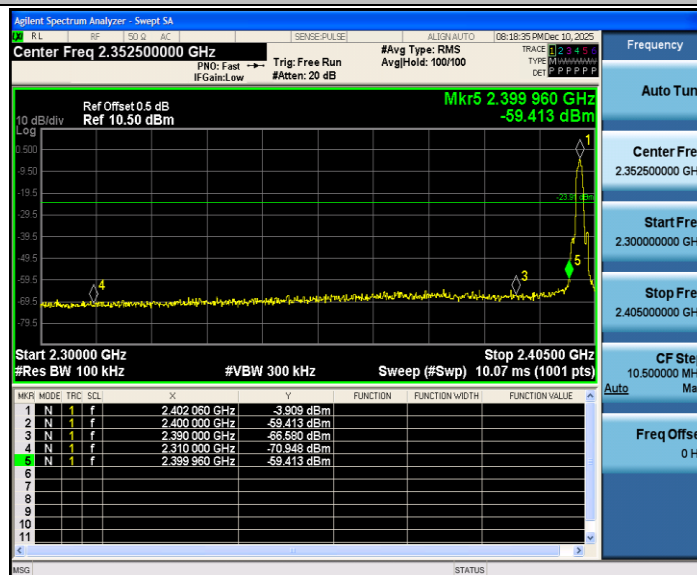
2DH5_Ant1_Low_Hop_2402



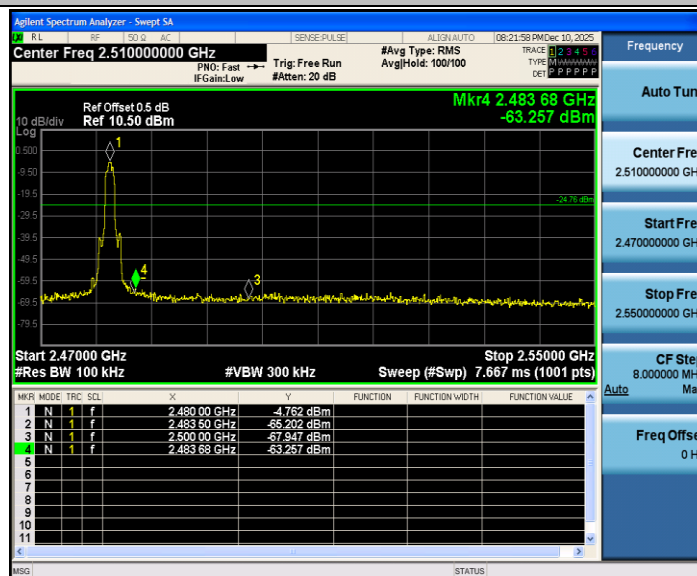
2DH5_Ant1_High_Hop_2480



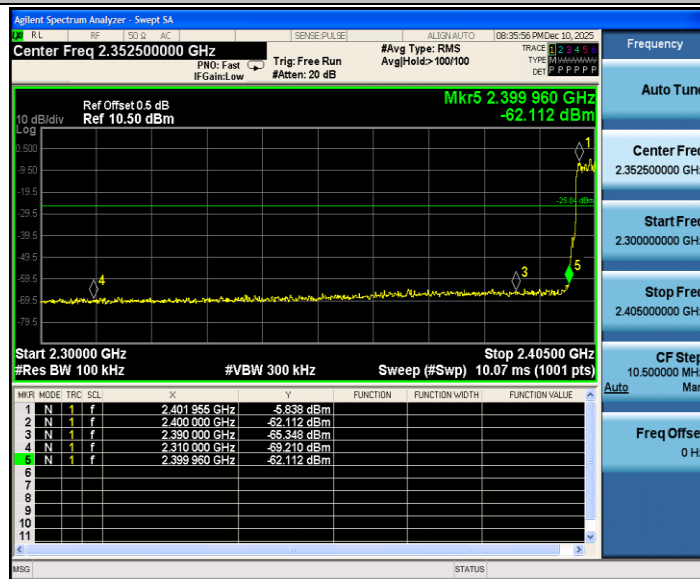
3DH5_Ant1_Low_2402



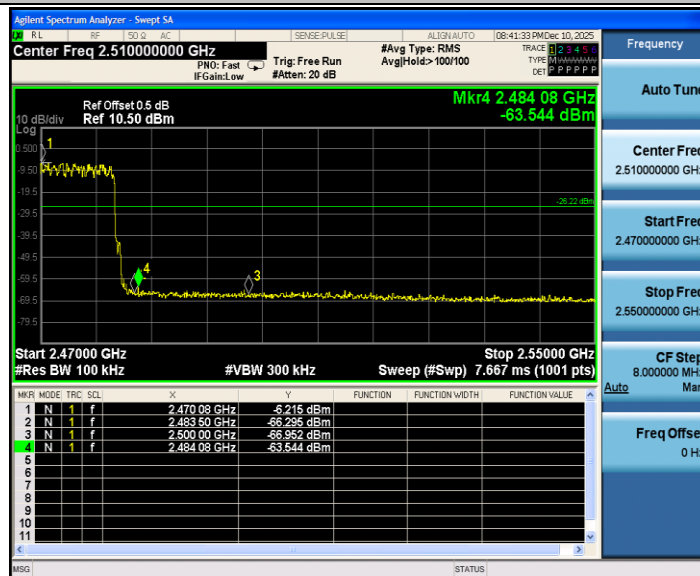
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

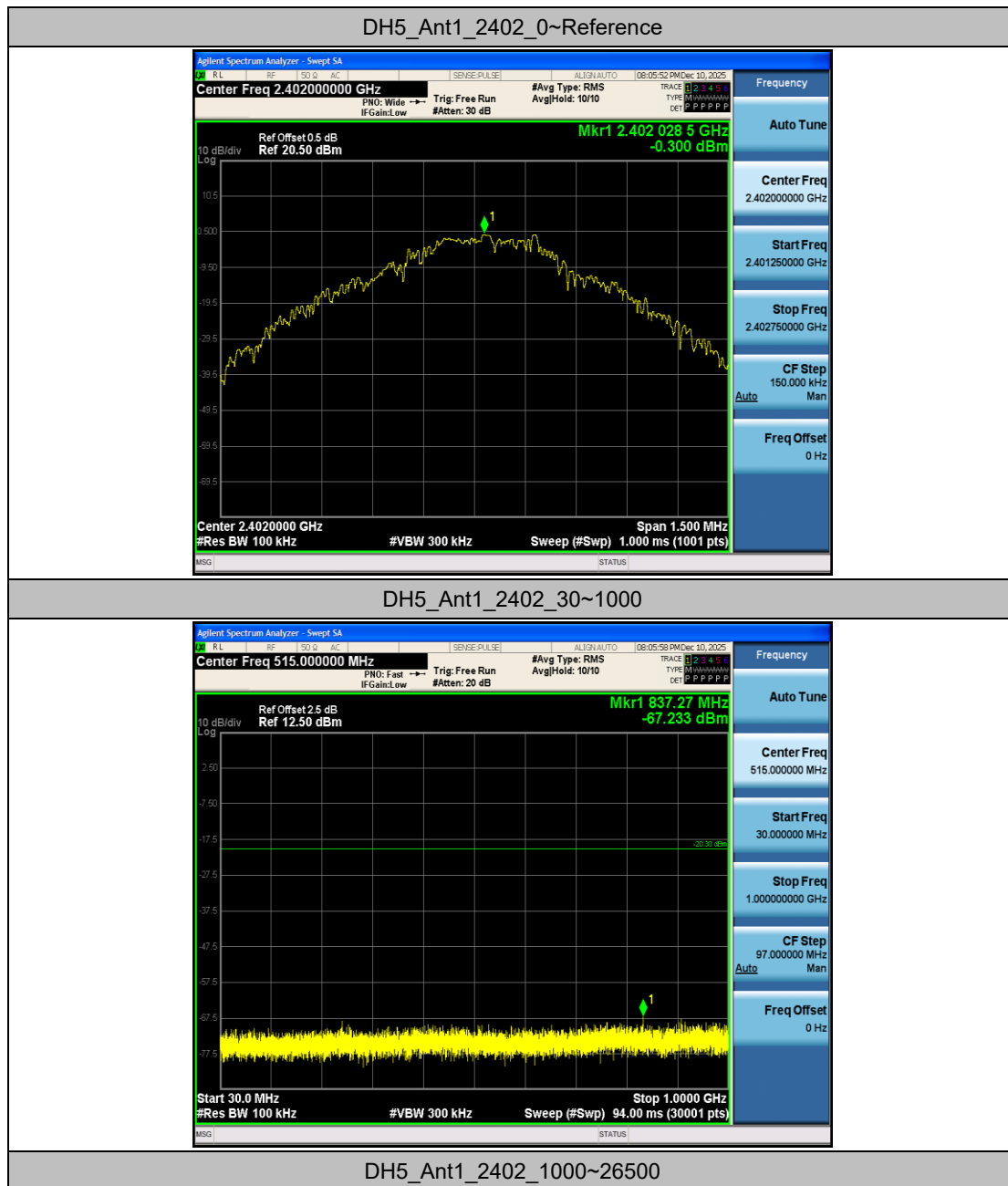


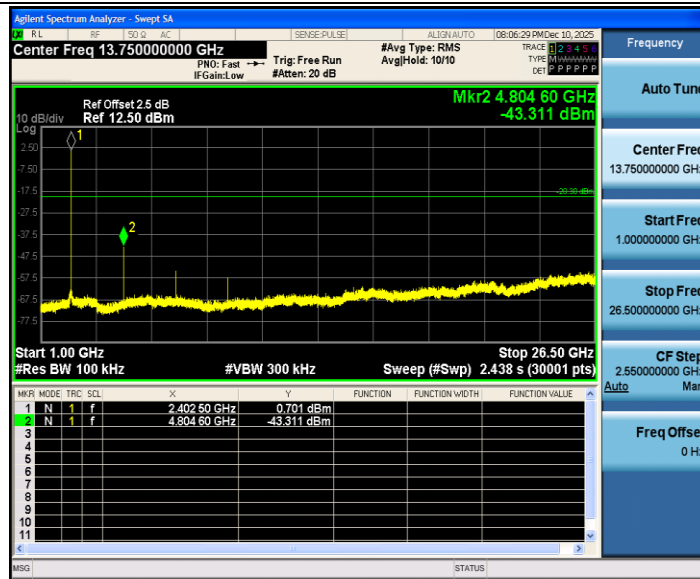
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.30	-0.30	---	PASS
			30~1000	-0.30	-67.23	≤-20.3	PASS
			1000~26500	-0.30	-43.31	≤-20.3	PASS
		2441	Reference	-1.35	-1.35	---	PASS
			30~1000	-1.35	-68.53	≤-21.35	PASS
			1000~26500	-1.35	-43.8	≤-21.35	PASS
		2480	Reference	-0.82	-0.82	---	PASS
			30~1000	-0.82	-67.59	≤-20.82	PASS
			1000~26500	-0.82	-42.5	≤-20.82	PASS
2DH5	Ant1	2402	Reference	-3.57	-3.57	---	PASS
			30~1000	-3.57	-67.76	≤-23.57	PASS
			1000~26500	-3.57	-49.32	≤-23.57	PASS
		2441	Reference	-4.78	-4.78	---	PASS
			30~1000	-4.78	-68.25	≤-24.78	PASS
			1000~26500	-4.78	-48.47	≤-24.78	PASS
		2480	Reference	-5.78	-5.78	---	PASS
			30~1000	-5.78	-64.76	≤-25.78	PASS
			1000~26500	-5.78	-50.13	≤-25.78	PASS
3DH5	Ant1	2402	Reference	-4.36	-4.36	---	PASS
			30~1000	-4.36	-67.8	≤-24.36	PASS
			1000~26500	-4.36	-46.48	≤-24.36	PASS
		2441	Reference	-6.59	-6.59	---	PASS
			30~1000	-6.59	-67.97	≤-26.59	PASS
			1000~26500	-6.59	-49.87	≤-26.59	PASS
		2480	Reference	-5.01	-5.01	---	PASS
			30~1000	-5.01	-67.71	≤-25.01	PASS
			1000~26500	-5.01	-37.95	≤-25.01	PASS

Test Graphs

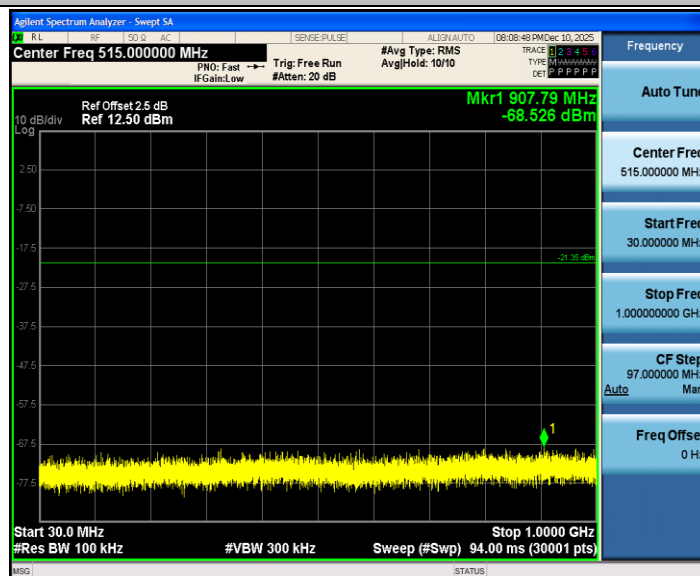




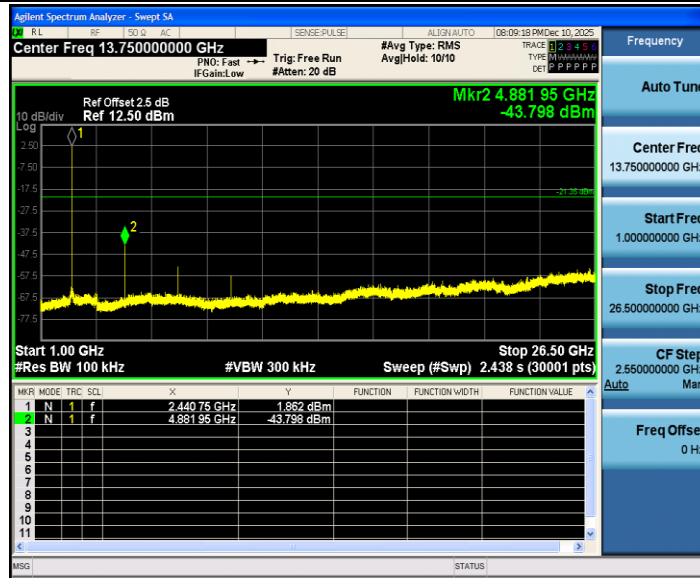
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000