

Case No. : <u>GTS20241014025-3-1</u>	
Ambient Condition: <u>23</u> °C, <u>52</u> %RH	
According Standard: ■Part15C	
Test Date: <u>2024.11.15</u>	Test Engineer: <u>Evan ouyang</u>

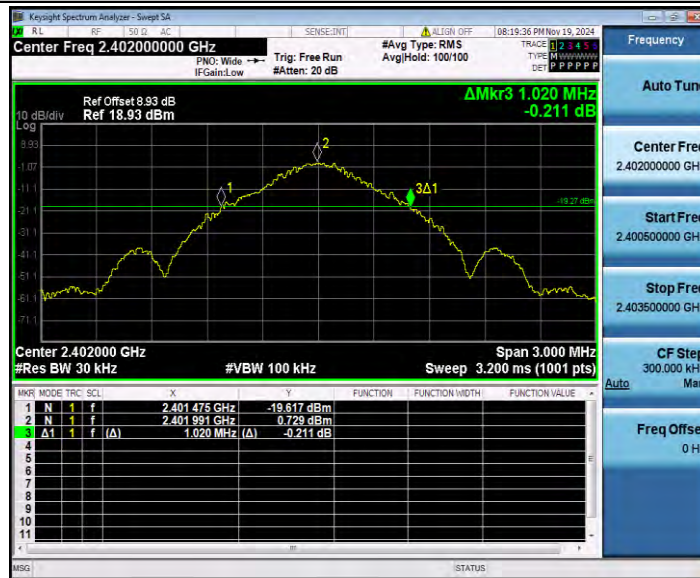
Appendix A.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	1.020	2401.475	2402.495	---	---
		2441	1.008	2440.511	2441.519	---	---
		2480	0.999	2479.490	2480.489	---	---
2DH1	Ant1	2402	1.350	2401.313	2402.663	---	---
		2441	1.356	2440.322	2441.678	---	---
		2480	1.335	2479.331	2480.666	---	---
3DH1	Ant1	2402	1.359	2401.316	2402.675	---	---
		2441	1.377	2440.301	2441.678	---	---
		2480	1.338	2479.322	2480.660	---	---

Test Graphs

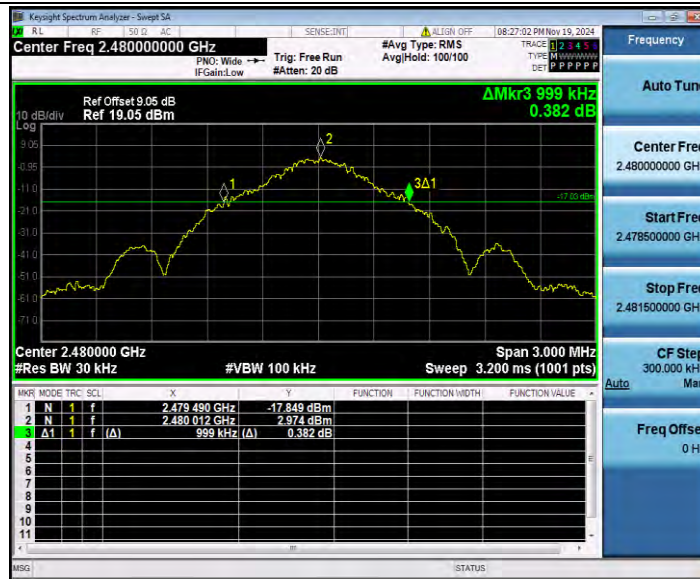
DH1_Ant1_2402



DH1_Ant1_2441



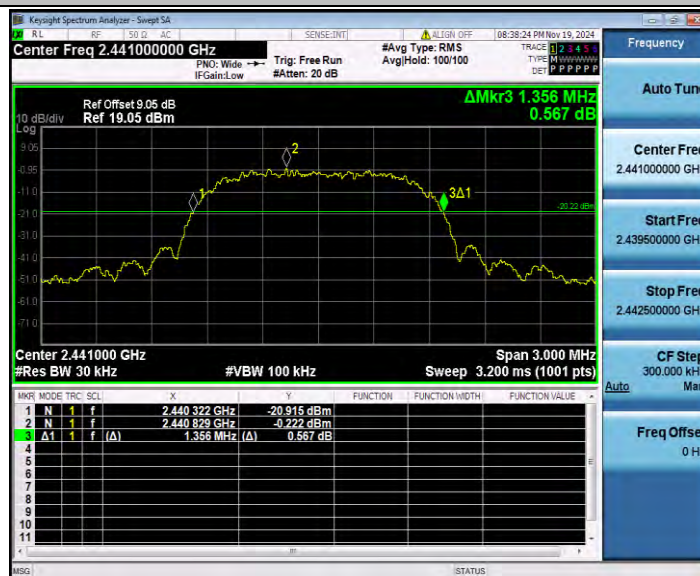
DH1_Ant1_2480



2DH1_Ant1_2402



2DH1_Ant1_2441



2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441

Keysight Spectrum Analyzer - Sweep SA

Center Freq 2.480000000 GHz

Ref Offset 9.05 dB
Ref 19.05 dBm

ΔMkr3 1.338 MHz
0.385 dB

Center 2.4800000 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3.000 MHz
Sweep 3.200 ms (1001 pts)

MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.479 322 GHz	-20.201 dBm			
2	N	1	f	2.479 955 GHz	0.408 dBm			
3	Δ	1	f (Δ)	1.338 MHz (Δ)	0.385 dB			

Frequency

Auto Tune

Center Freq
2.480000000 GHz

Start Freq
2.478500000 GHz

Stop Freq
2.481500000 GHz

CF Step
300.000 kHz
Man

Auto

Freq Offset
0 Hz

Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.88675	2401.5505	2402.4372	---	---
		2441	0.89997	2440.5449	2441.4449	---	---
		2480	0.90205	2479.5440	2480.4460	---	---
2DH1	Ant1	2402	1.1962	2401.3946	2402.5908	---	---
		2441	1.1931	2440.4018	2441.5949	---	---
		2480	1.1900	2479.4038	2480.5938	---	---
3DH1	Ant1	2402	1.1913	2401.4019	2402.5932	---	---
		2441	1.1979	2440.3988	2441.5967	---	---
		2480	1.1956	2479.3987	2480.5943	---	---

Test Graphs

DH1_Ant1_2402



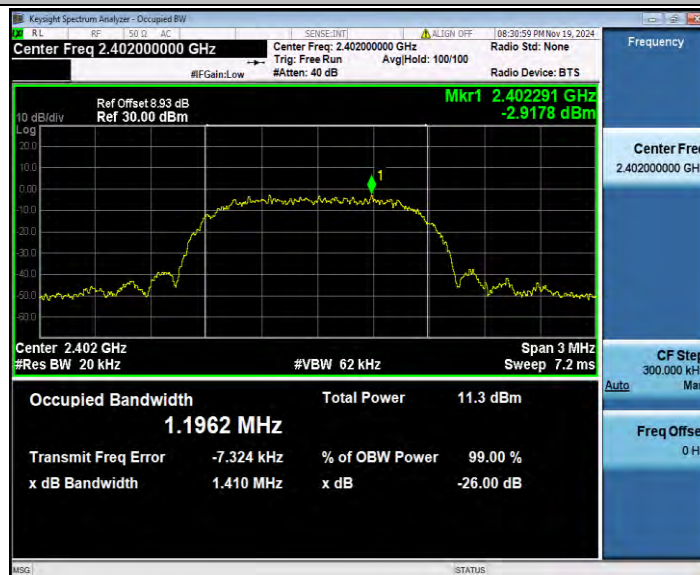
DH1_Ant1_2441



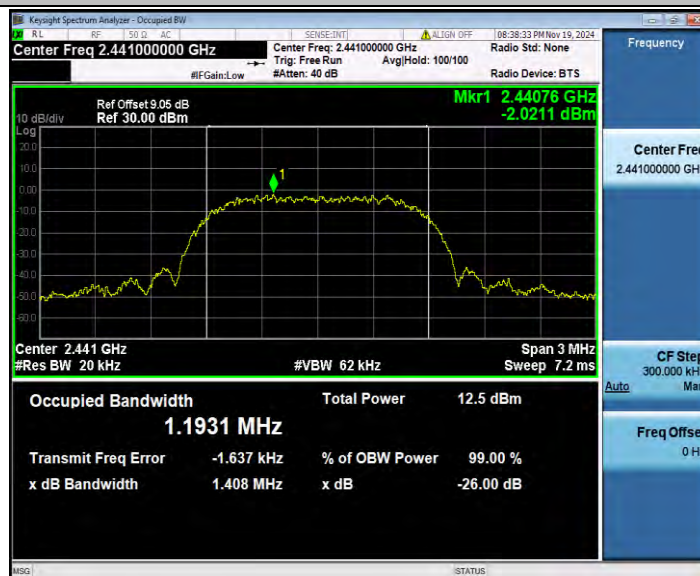
DH1_Ant1_2480



2DH1_Ant1_2402



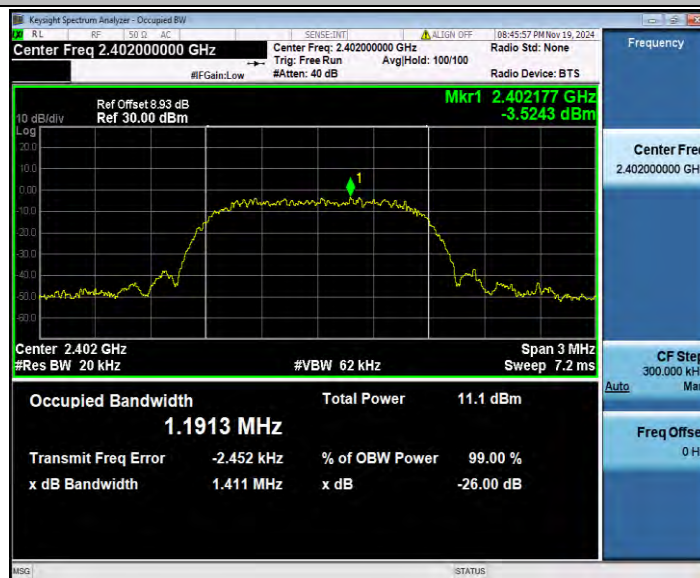
2DH1_Ant1_2441



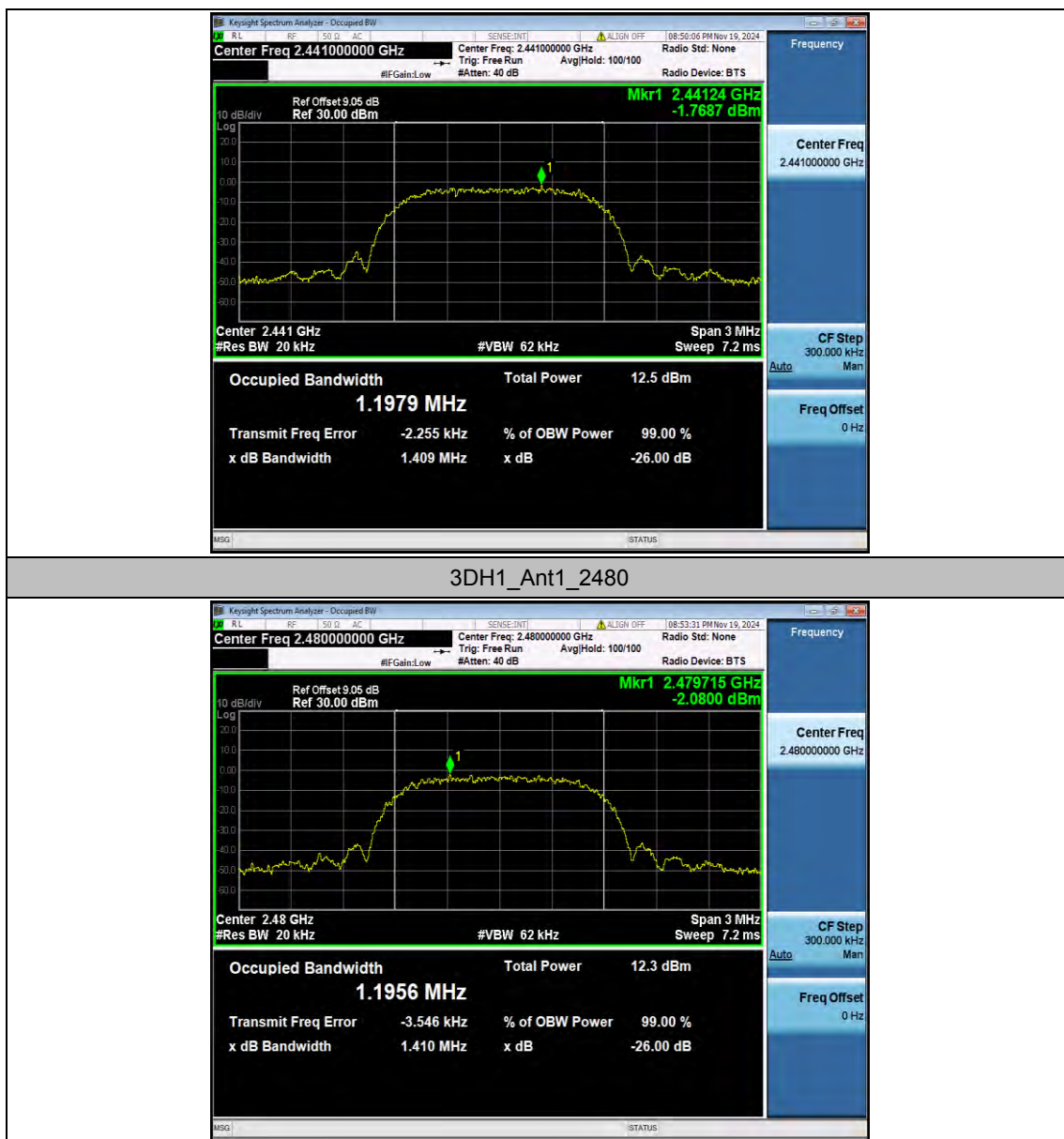
2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



Appendix A.3: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	3.43	≤20.97	PASS
		2441	5.12	≤20.97	PASS
		2480	5.10	≤20.97	PASS
2DH1	Ant1	2402	6.18	≤20.97	PASS
		2441	7.35	≤20.97	PASS
		2480	7.29	≤20.97	PASS
3DH1	Ant1	2402	6.66	≤20.97	PASS
		2441	7.84	≤20.97	PASS
		2480	7.88	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.002	≥ 0.680	PASS
		Hop_2441	0.994	≥ 0.680	PASS
		Hop_2480	0.956	≥ 0.680	PASS
2DH1	Ant1	Hop_2402	1.334	≥ 0.904	PASS
		Hop_2441	0.996	≥ 0.904	PASS
		Hop_2480	1.008	≥ 0.904	PASS
3DH1	Ant1	Hop_2402	1.006	≥ 0.918	PASS
		Hop_2441	1.064	≥ 0.918	PASS
		Hop_2480	1.144	≥ 0.918	PASS

Test Graphs

DH1_Ant1_Hop_2402



DH1_Ant1_Hop_2441



DH1_Ant1_Hop_2480



2DH1_Ant1_Hop_2402



2DH1_Ant1_Hop_2441



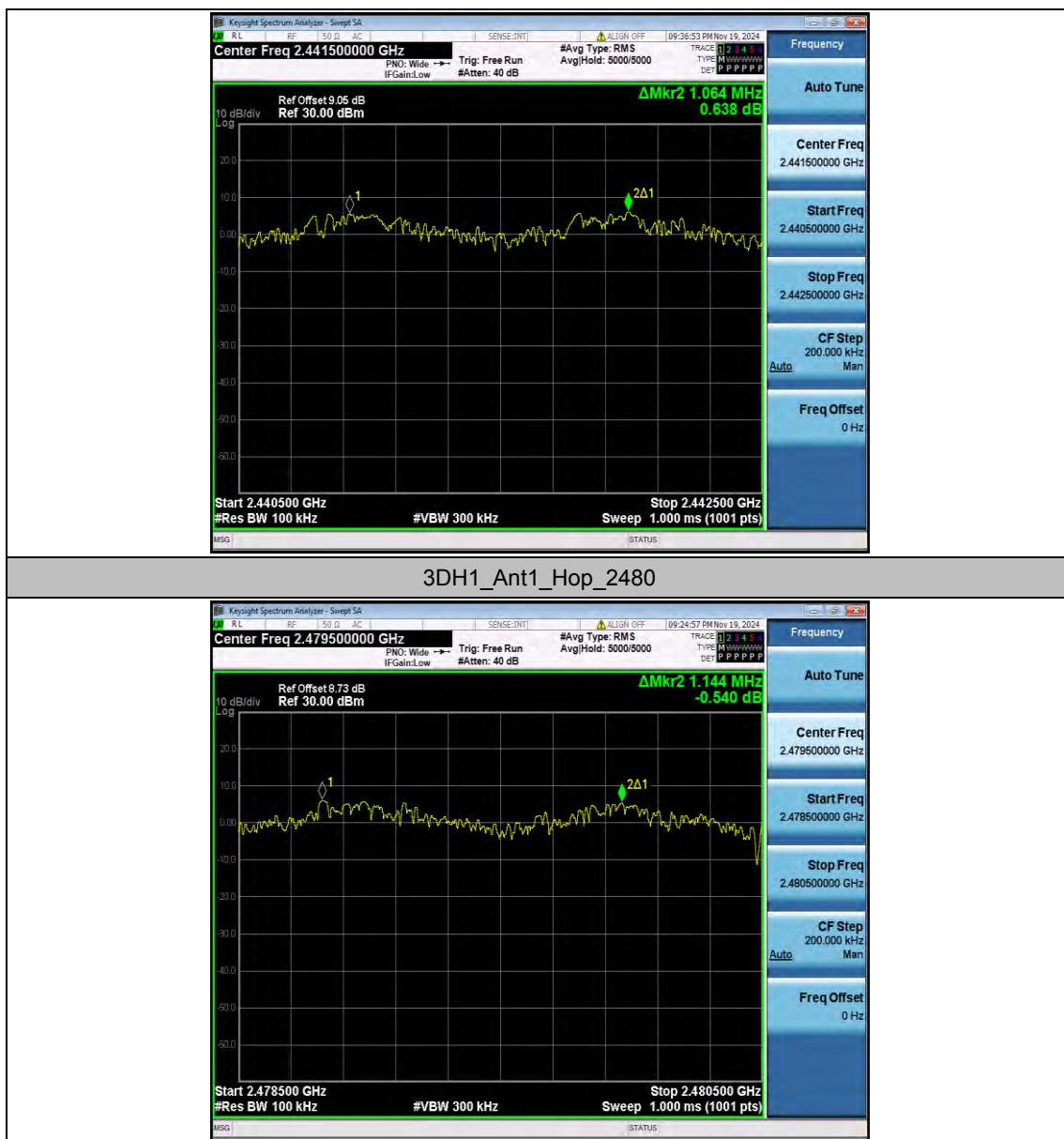
2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441

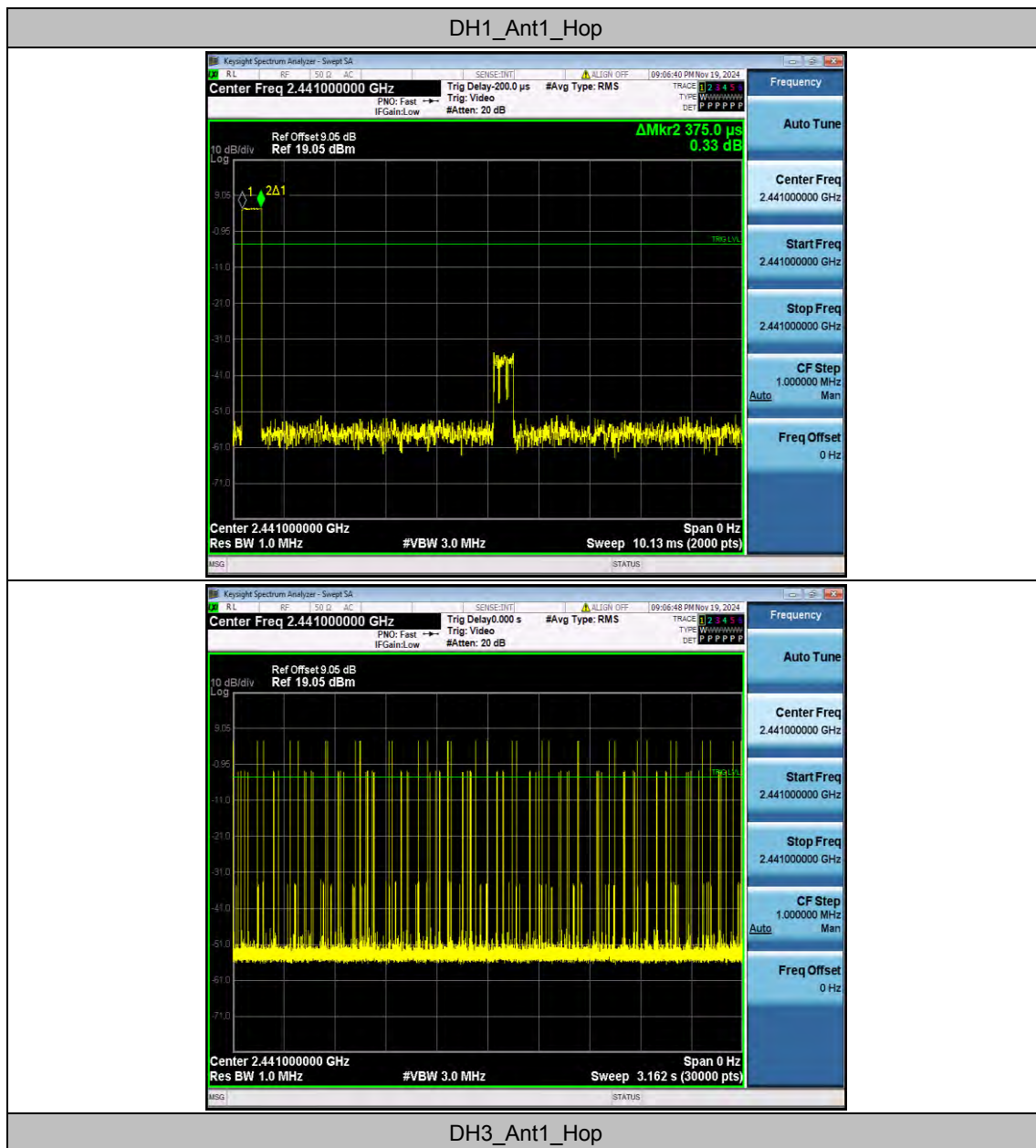


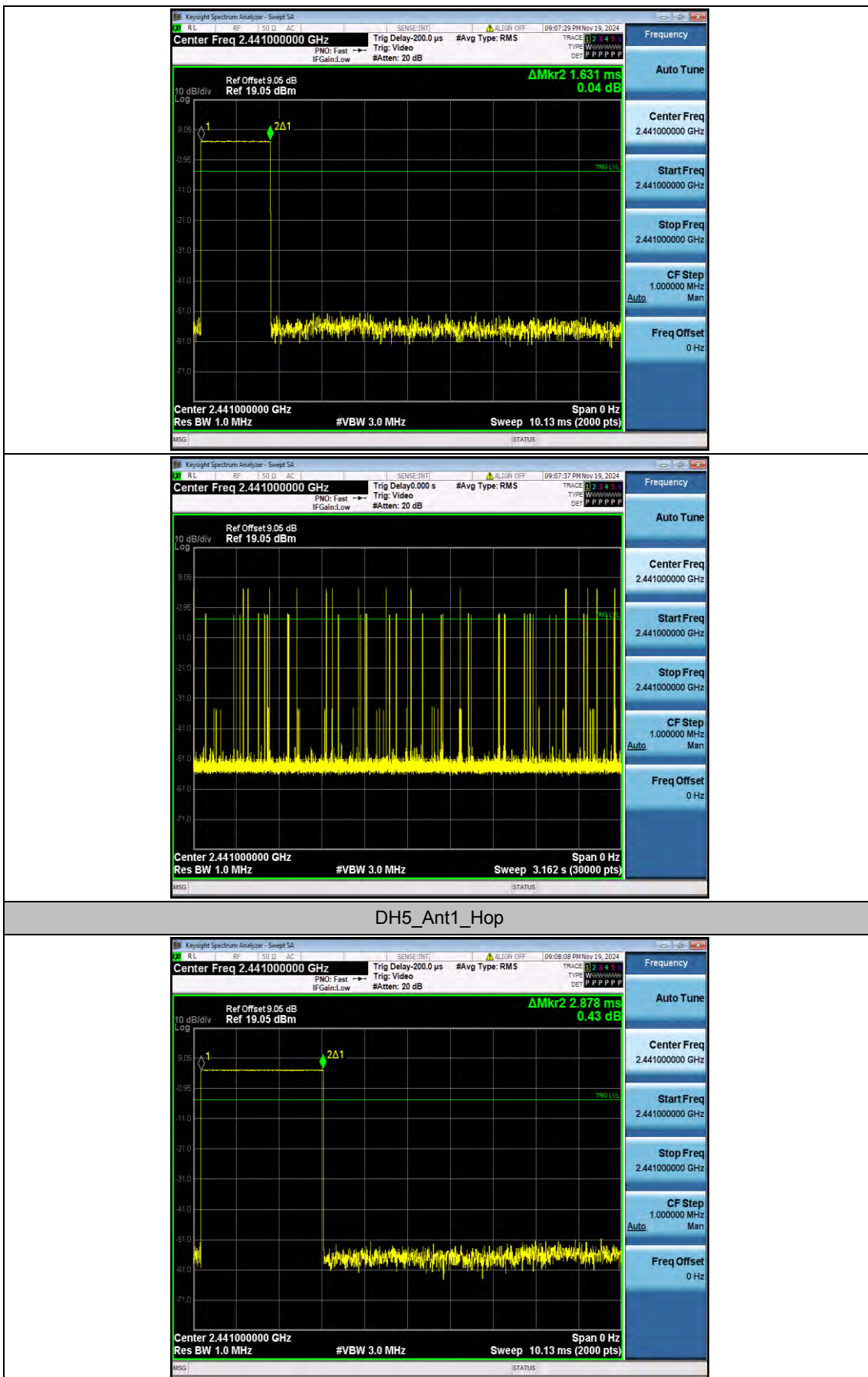
Appendix A.5: Time of occupancy

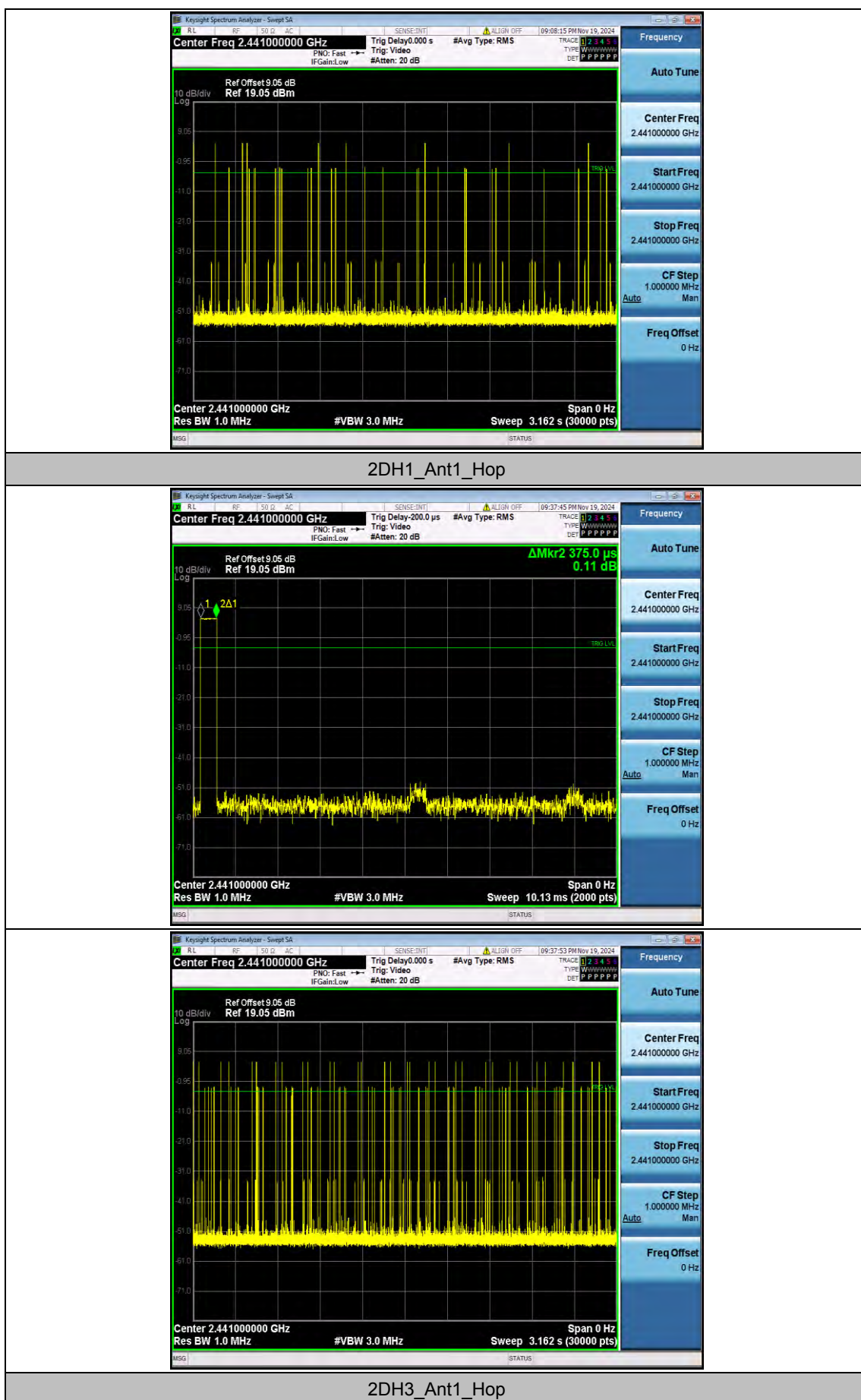
Test Result

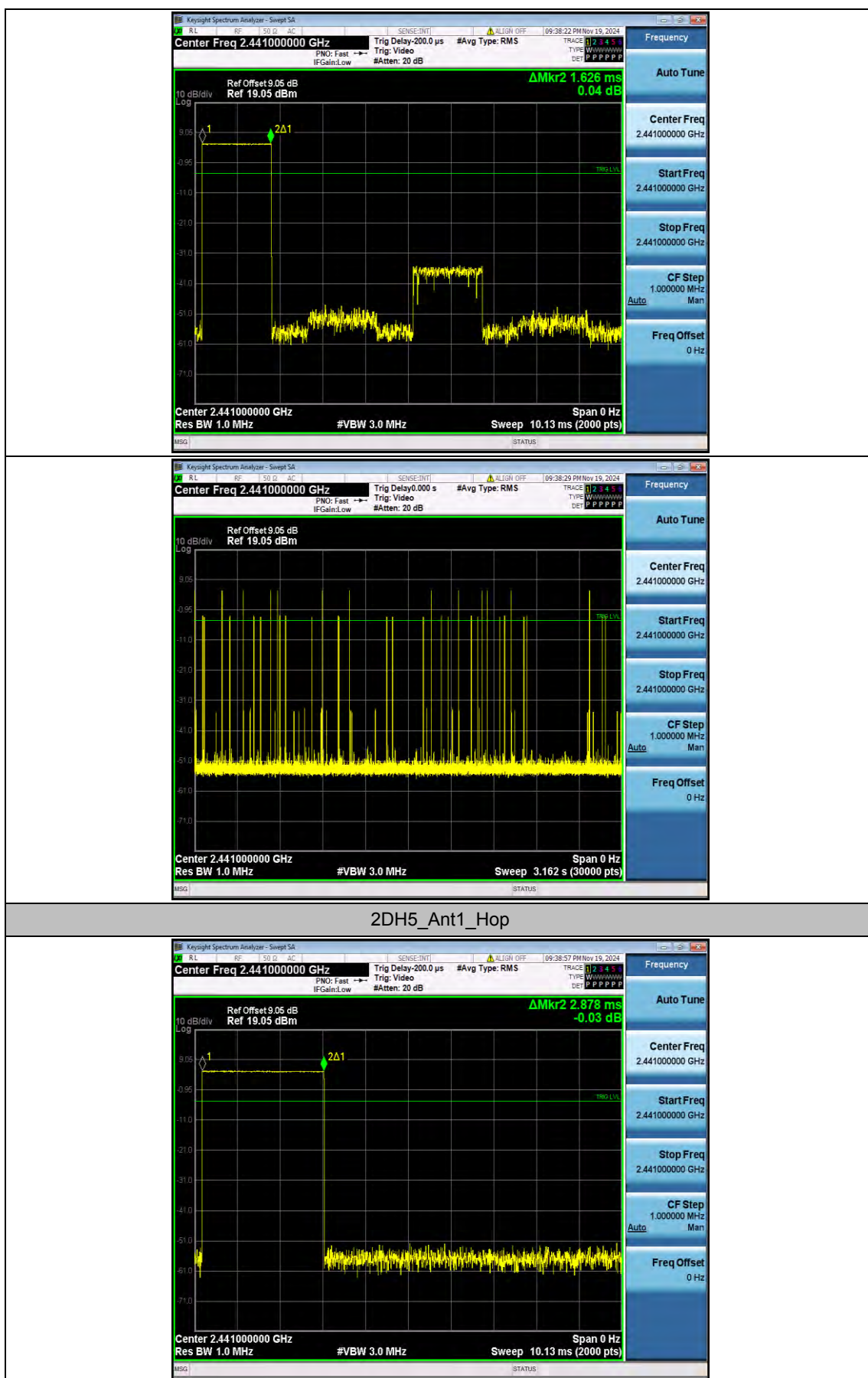
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.375	330	0.124	≤0.4	PASS
DH3	Ant1	Hop	1.631	160	0.261	≤0.4	PASS
DH5	Ant1	Hop	2.878	90	0.259	≤0.4	PASS
2DH1	Ant1	Hop	0.375	320	0.12	≤0.4	PASS
2DH3	Ant1	Hop	1.626	130	0.211	≤0.4	PASS
2DH5	Ant1	Hop	2.878	120	0.345	≤0.4	PASS
3DH1	Ant1	Hop	0.375	320	0.12	≤0.4	PASS
3DH3	Ant1	Hop	1.631	180	0.294	≤0.4	PASS
3DH5	Ant1	Hop	2.878	120	0.345	≤0.4	PASS

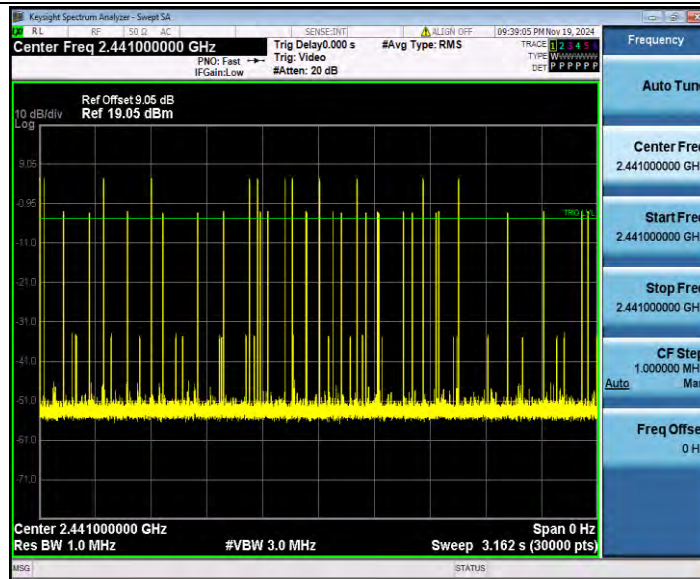
Test Graphs



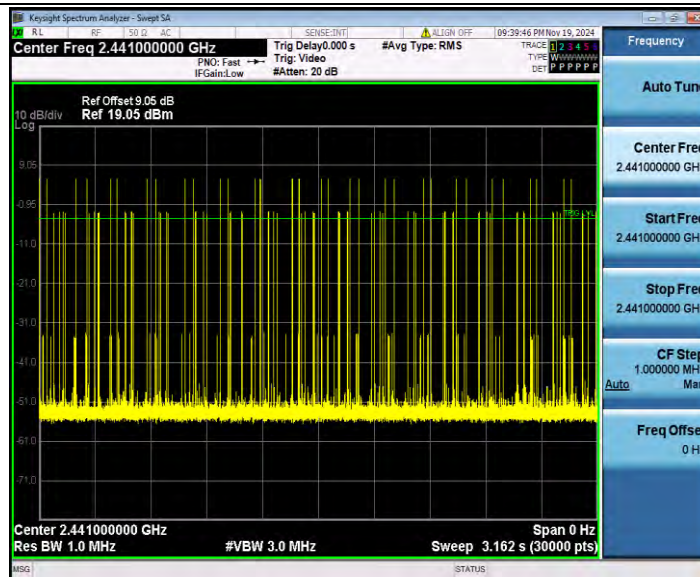
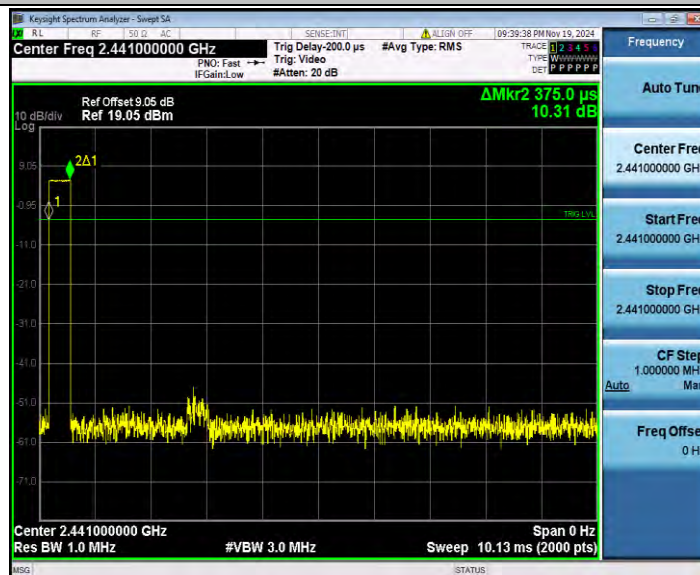




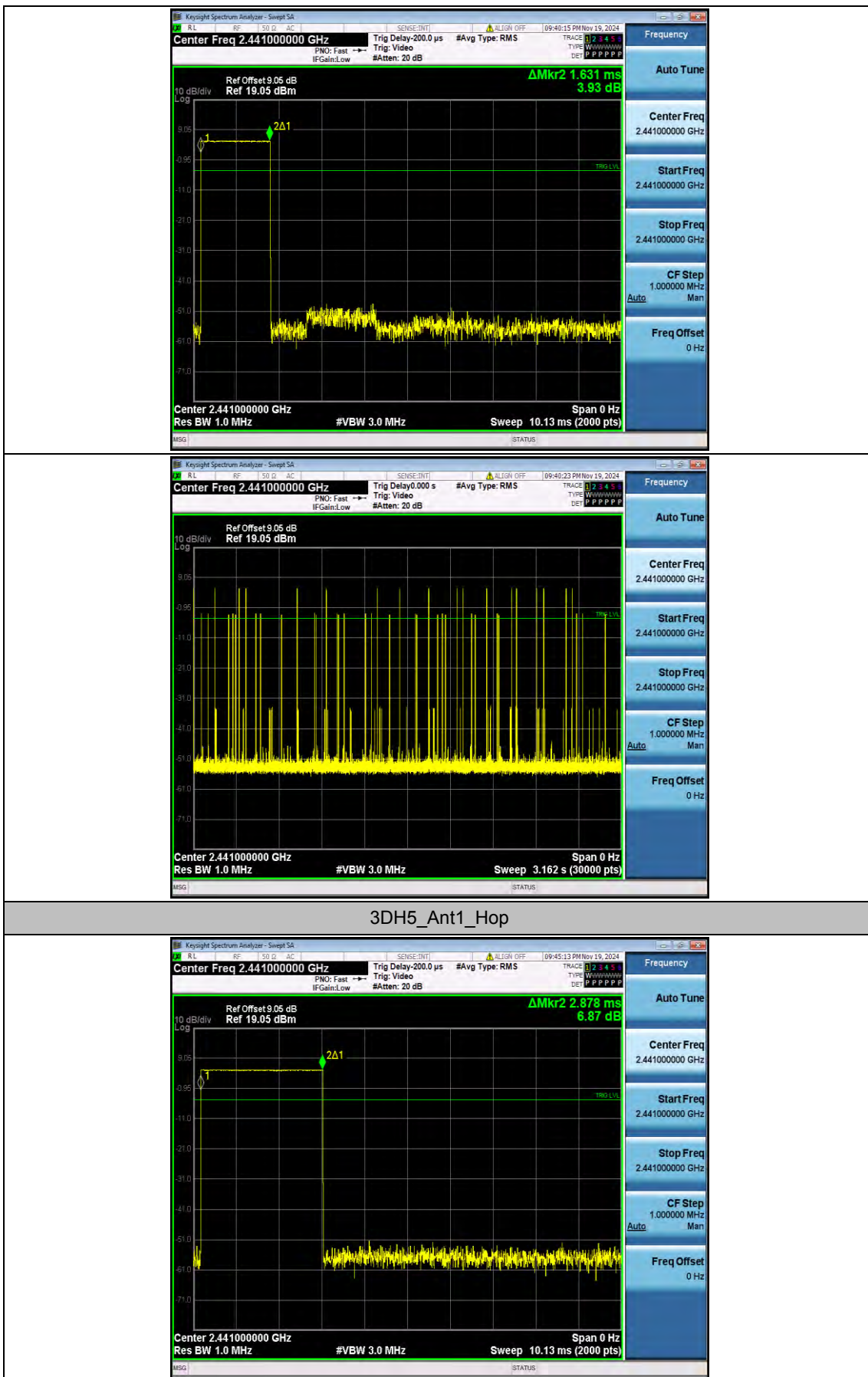


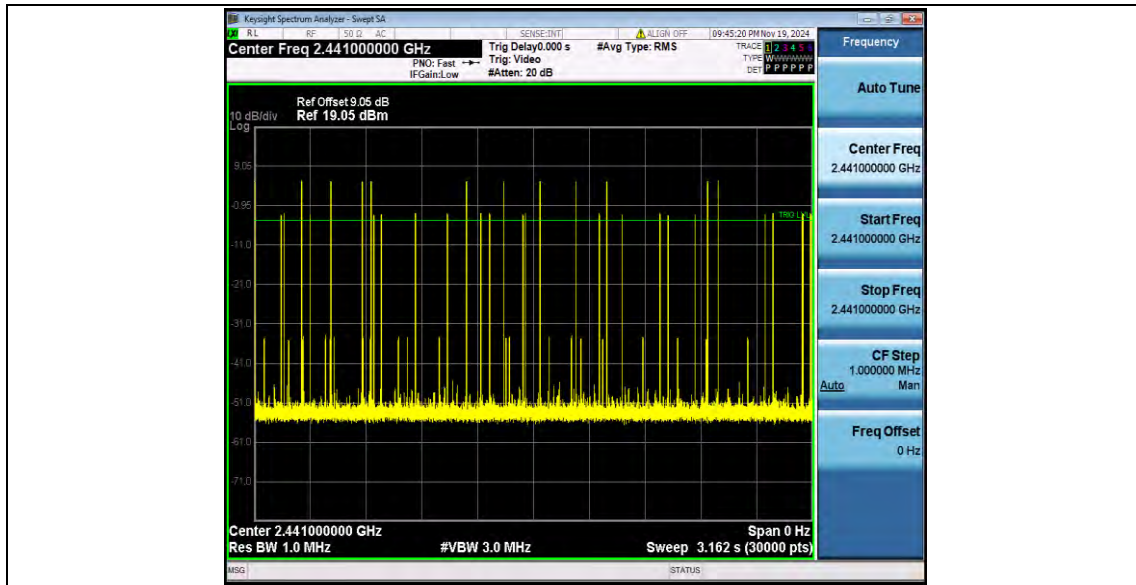


3DH1_Ant1_Hop



3DH3_Ant1_Hop



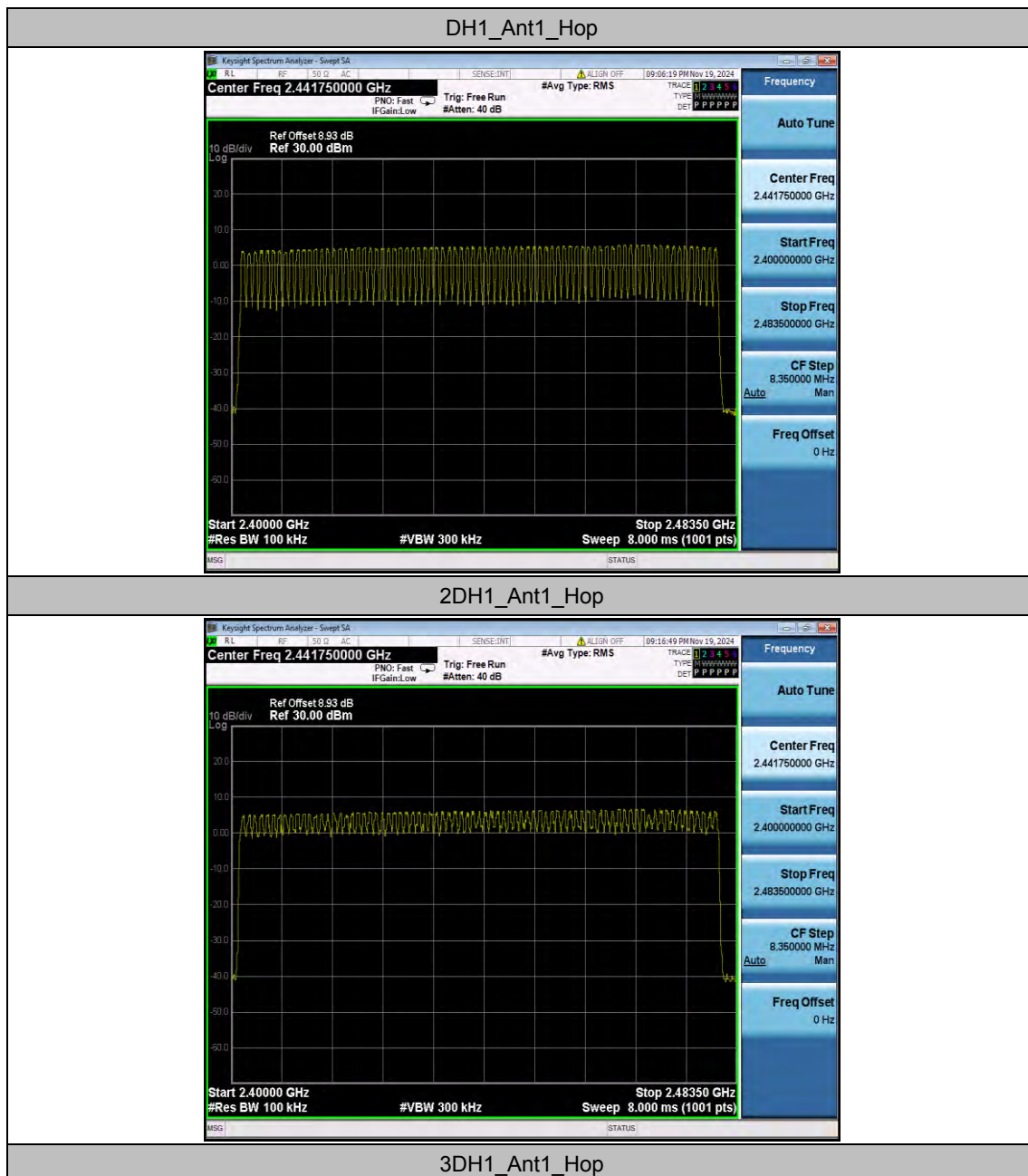


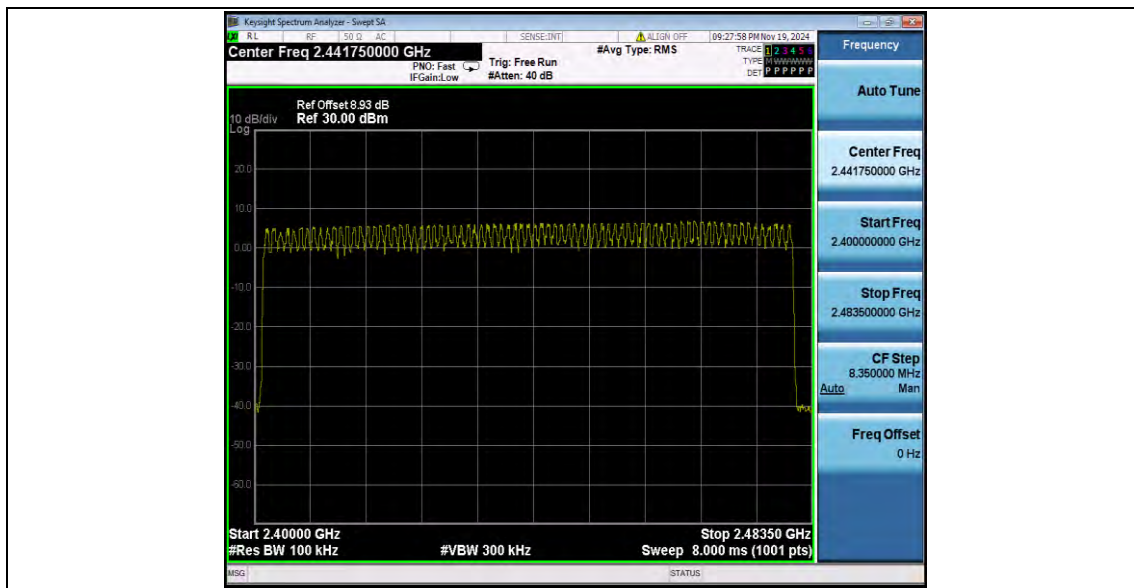
Appendix A.6: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS
3DH1	Ant1	Hop	79	≥15	PASS

Test Graphs





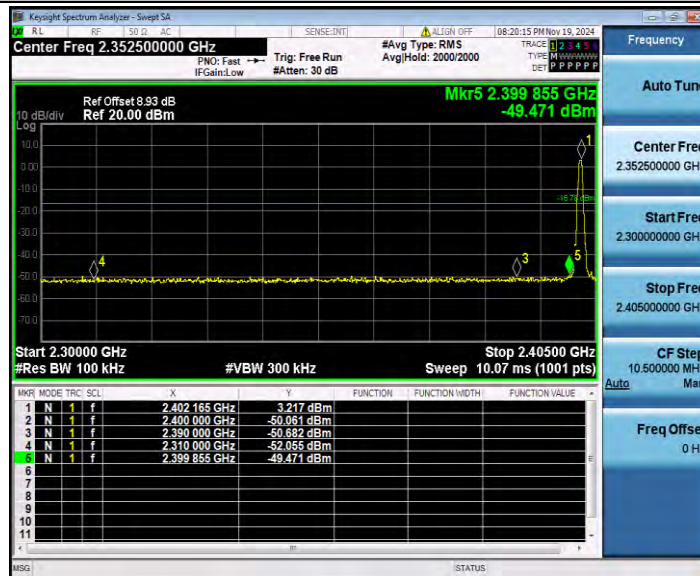
Appendix A.7: Band edge measurements

Test Result

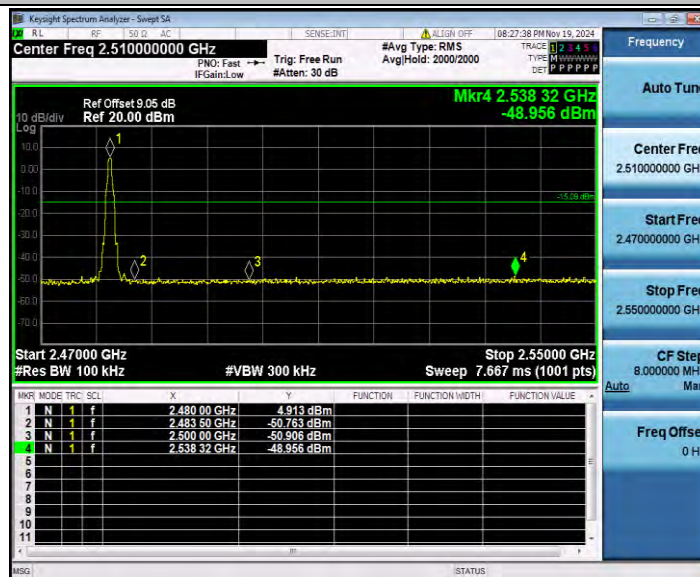
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	3.22	-49.47	≤ -16.78	PASS
		High	2480	4.91	-48.96	≤ -15.09	PASS
		Low	Hop_2402	3.94	-49.37	≤ -16.06	PASS
		High	Hop_2480	5.20	-48.77	≤ -14.8	PASS
2DH1	Ant1	Low	2402	3.13	-47.92	≤ -16.87	PASS
		High	2480	3.87	-48.66	≤ -16.13	PASS
		Low	Hop_2402	4.77	-49.38	≤ -15.23	PASS
		High	Hop_2480	5.49	-48.13	≤ -14.51	PASS
3DH1	Ant1	Low	2402	2.90	-48.54	≤ -17.1	PASS
		High	2480	4.24	-48.54	≤ -15.76	PASS
		Low	Hop_2402	4.94	-49.65	≤ -15.07	PASS
		High	Hop_2480	5.49	-49.21	≤ -14.51	PASS

Test Graphs

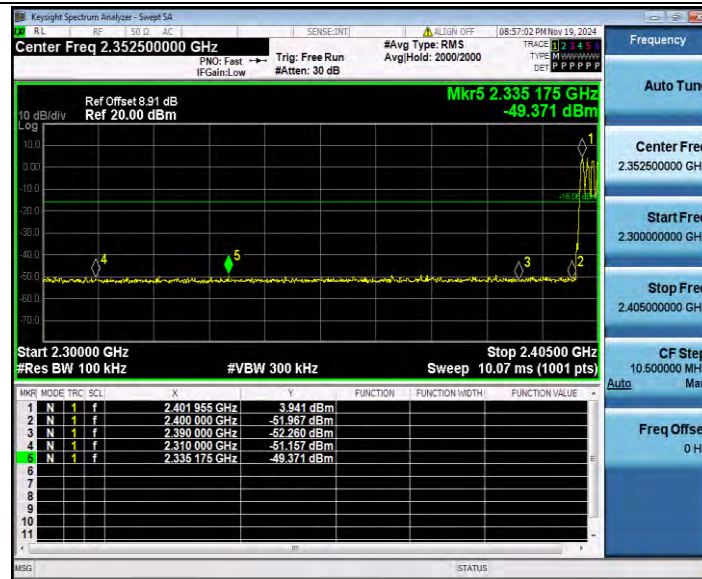
DH1_Ant1_Low_2402



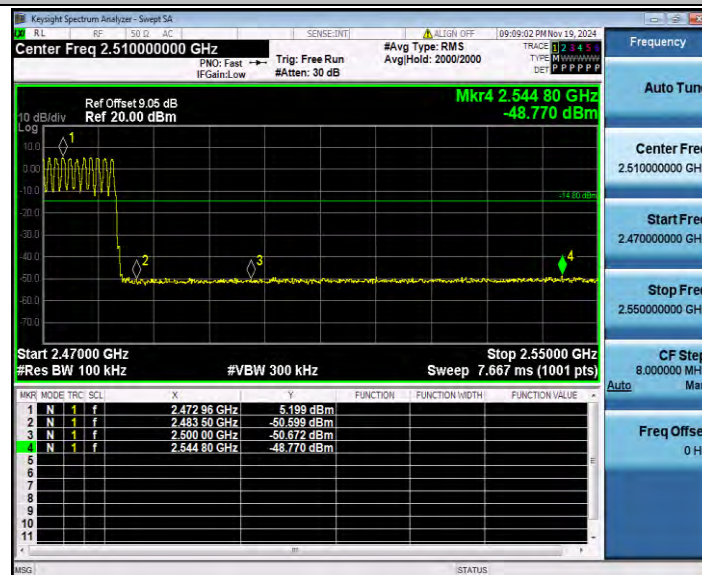
DH1_Ant1_High_2480



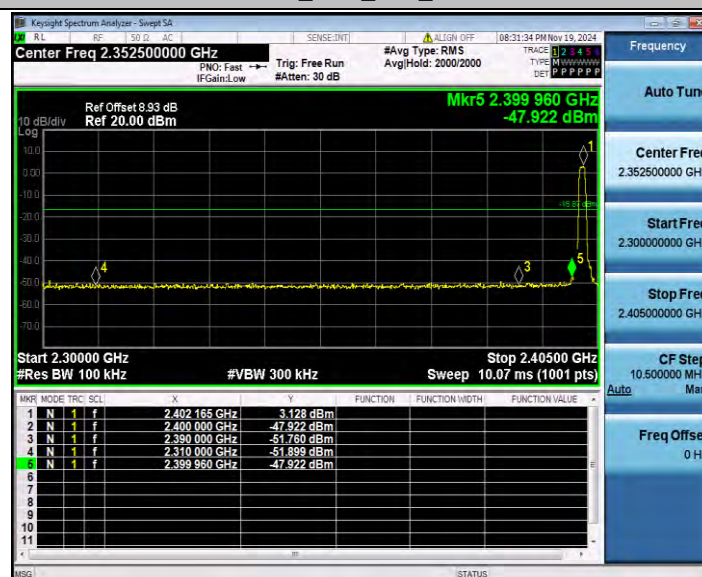
DH1_Ant1_Low_Hop_2402



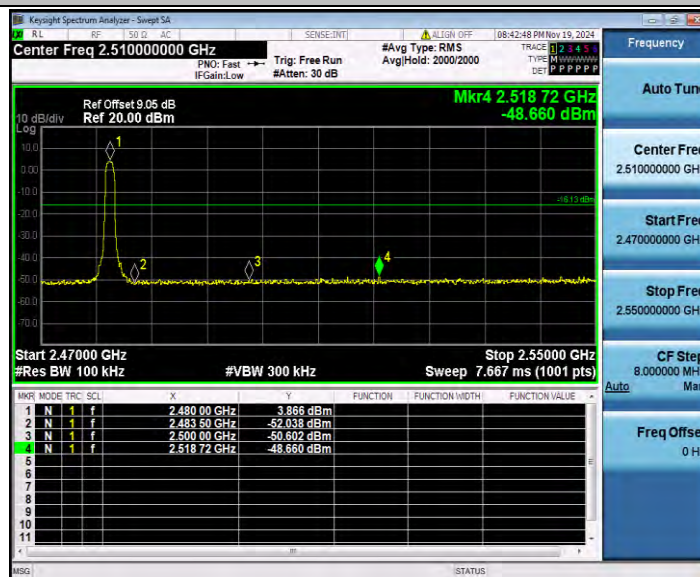
DH1_Ant1_High_Hop_2480



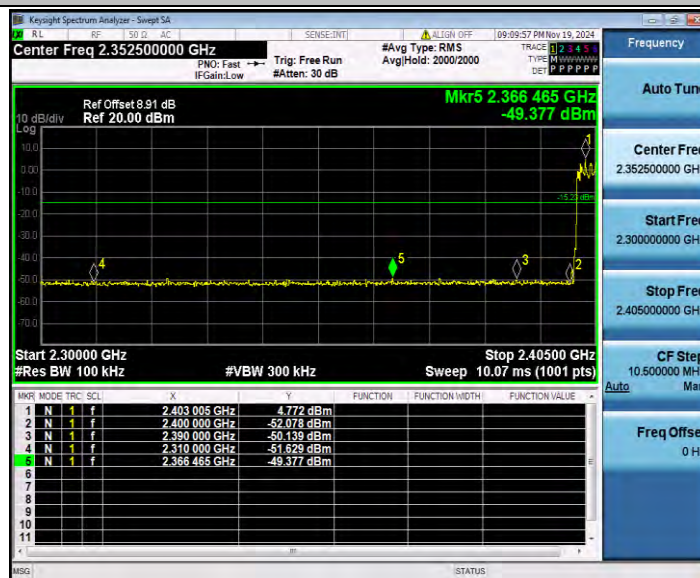
2DH1_Ant1_Low_2402



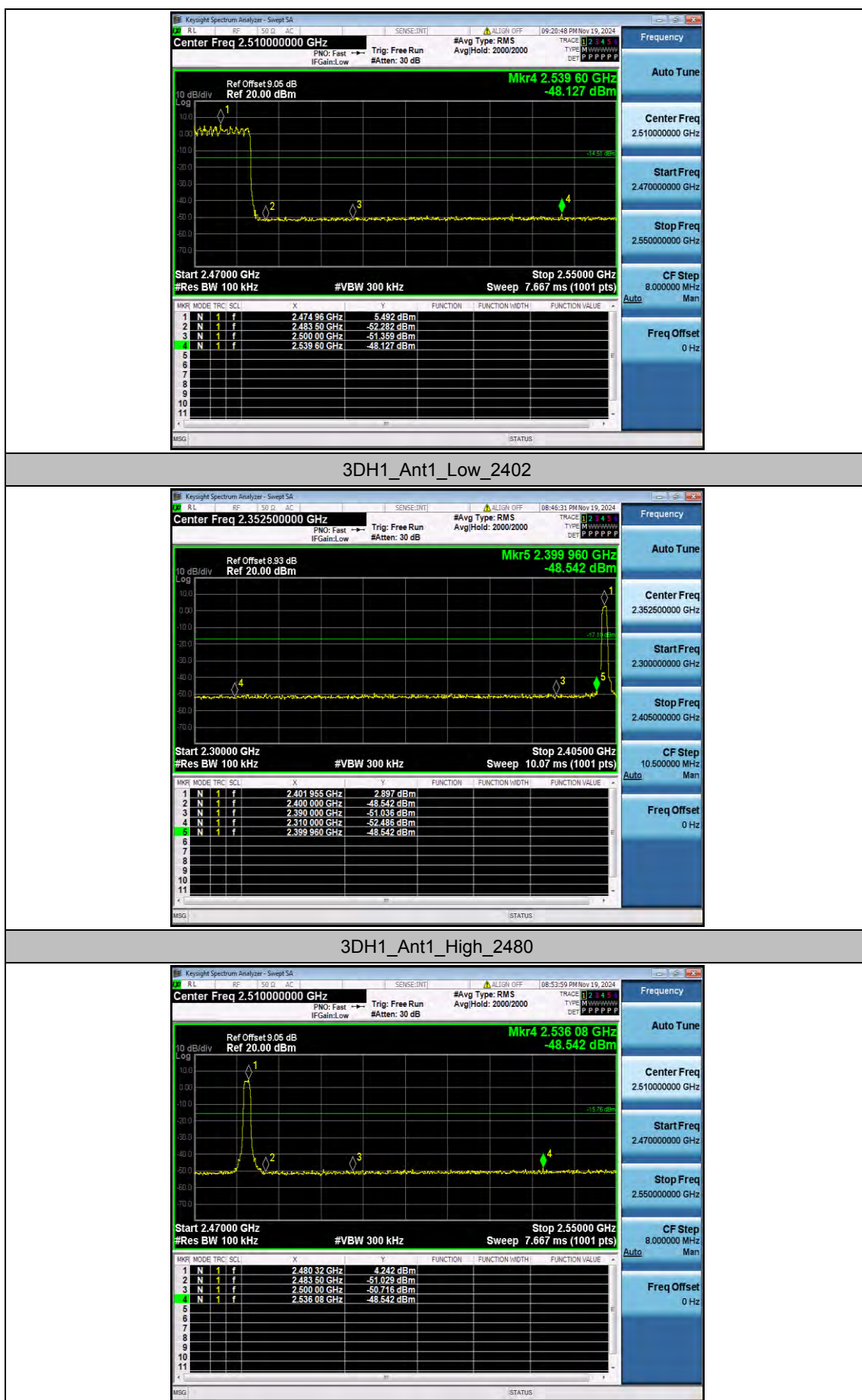
2DH1_Ant1_High_2480



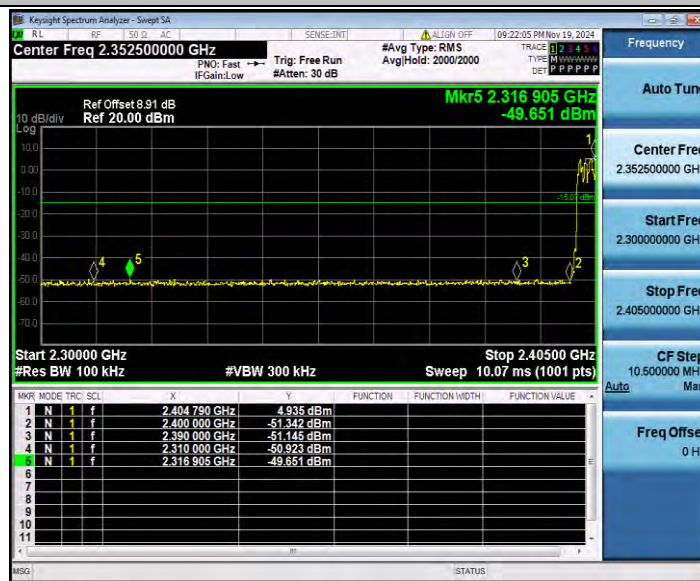
2DH1_Ant1_Low_Hop_2402



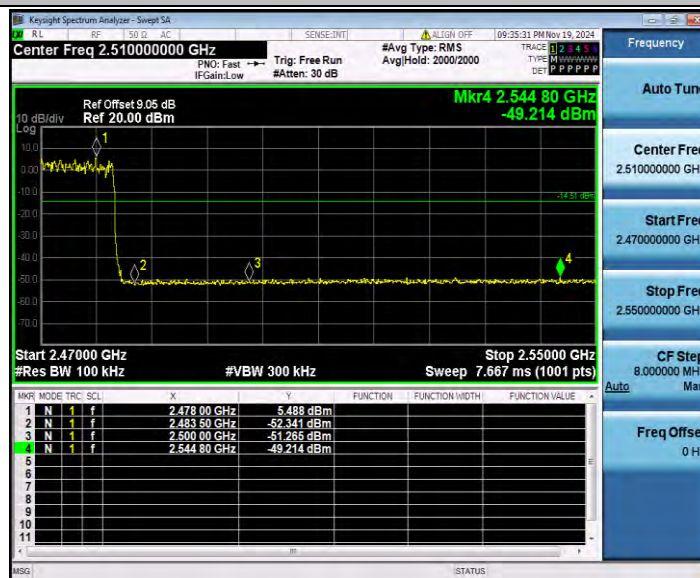
2DH1_Ant1_High_Hop_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480

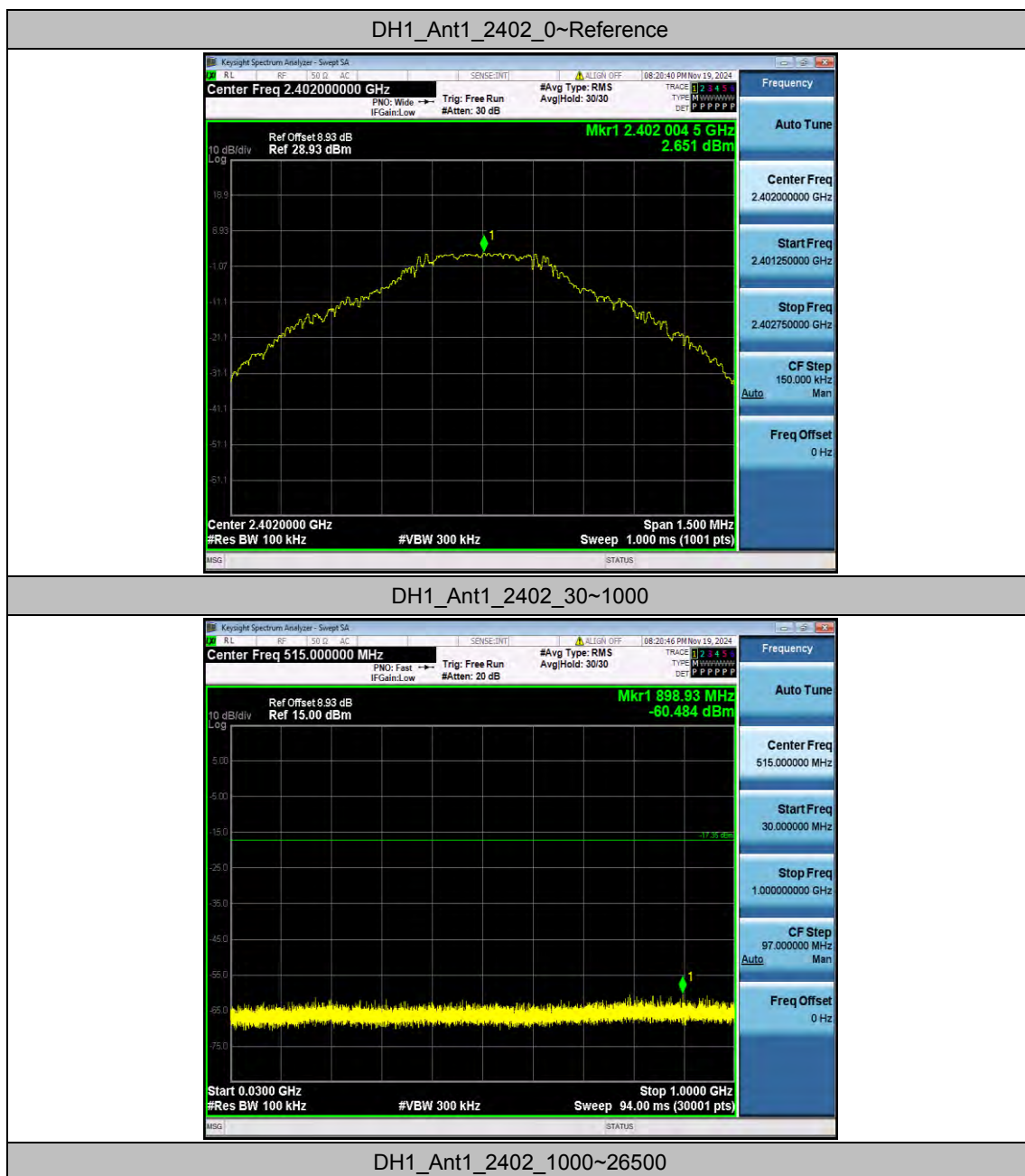


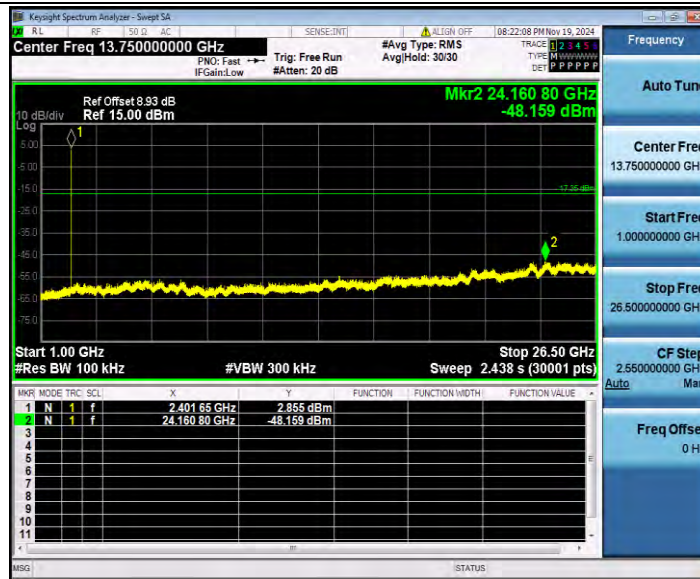
Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	2.65	2.65	---	PASS
			30~1000	2.65	-60.48	≤ -17.35	PASS
			1000~26500	2.65	-48.16	≤ -17.35	PASS
		2441	Reference	4.42	4.42	---	PASS
			30~1000	4.42	-60.92	≤ -15.58	PASS
			1000~26500	4.42	-48.38	≤ -15.58	PASS
		2480	Reference	4.75	4.75	---	PASS
			30~1000	4.75	-60.48	≤ -15.25	PASS
			1000~26500	4.75	-47.69	≤ -15.25	PASS
2DH1	Ant1	2402	Reference	2.66	2.66	---	PASS
			30~1000	2.66	-61.01	≤ -17.34	PASS
			1000~26500	2.66	-47.48	≤ -17.34	PASS
		2441	Reference	3.27	3.27	---	PASS
			30~1000	3.27	-60.8	≤ -16.73	PASS
			1000~26500	3.27	-48.17	≤ -16.73	PASS
		2480	Reference	3.38	3.38	---	PASS
			30~1000	3.38	-60.36	≤ -16.62	PASS
			1000~26500	3.38	-47.45	≤ -16.62	PASS
3DH1	Ant1	2402	Reference	2.59	2.59	---	PASS
			30~1000	2.59	-60.6	≤ -17.41	PASS
			1000~26500	2.59	-47.16	≤ -17.41	PASS
		2441	Reference	3.02	3.02	---	PASS
			30~1000	3.02	-60.73	≤ -16.98	PASS
			1000~26500	3.02	-47.81	≤ -16.98	PASS
		2480	Reference	3.10	3.10	---	PASS
			30~1000	3.10	-60.17	≤ -16.9	PASS
			1000~26500	3.10	-47.82	≤ -16.9	PASS

Test Graphs

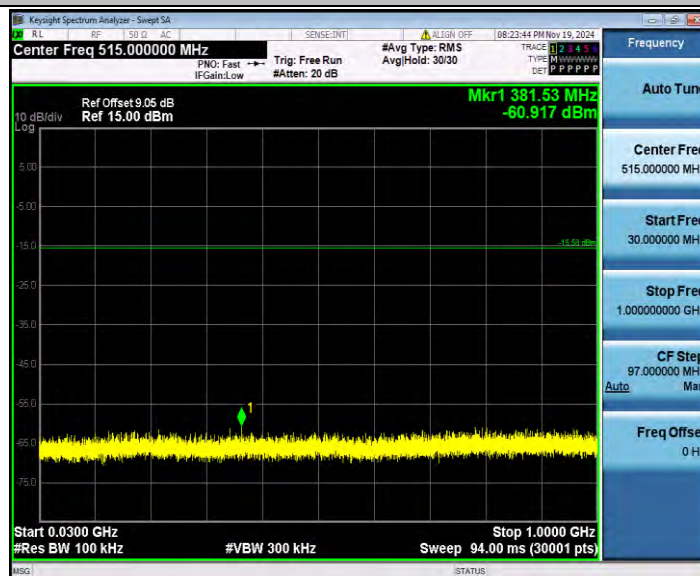


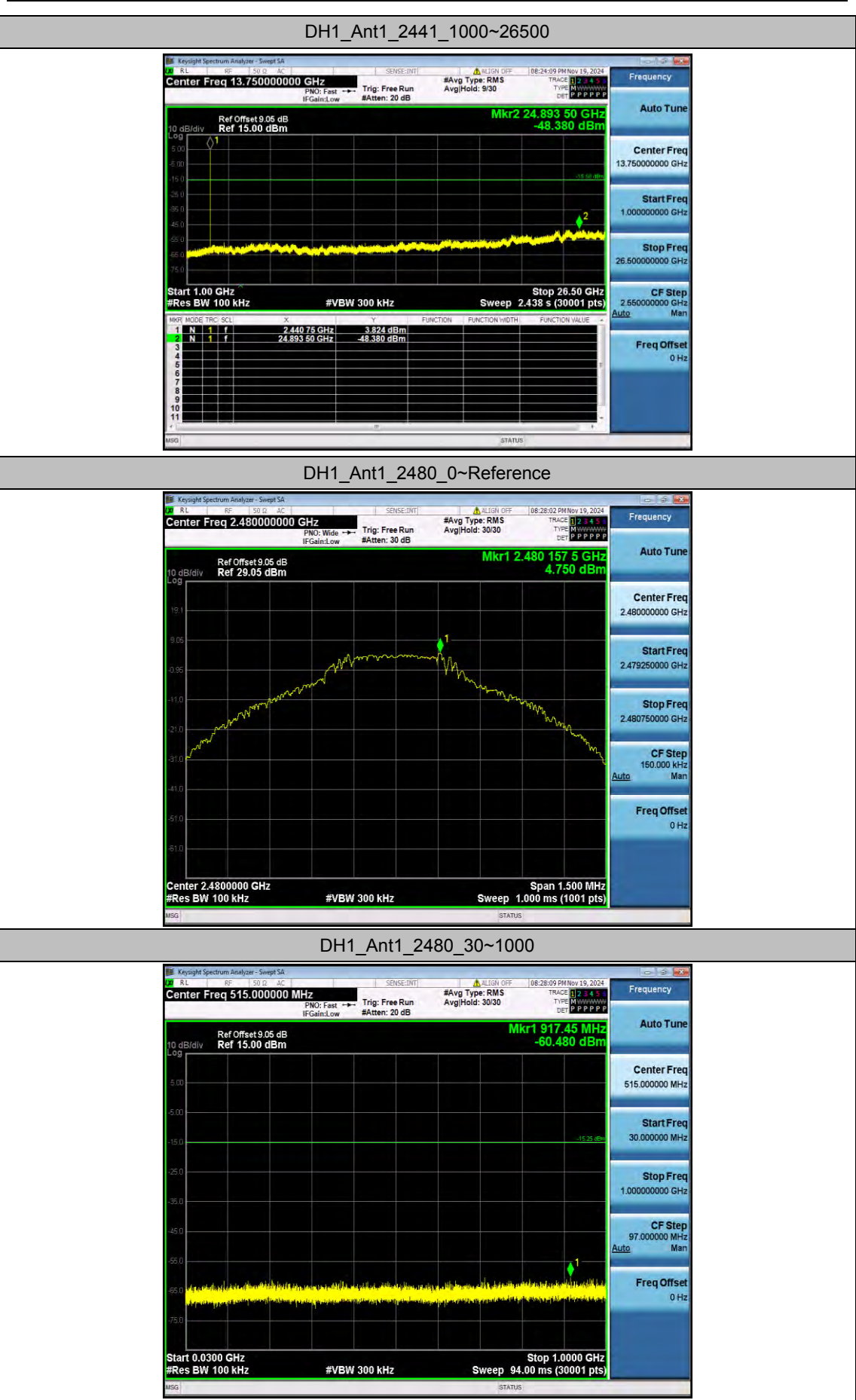


DH1_Ant1_2441_0~Reference



DH1_Ant1_2441_30~1000





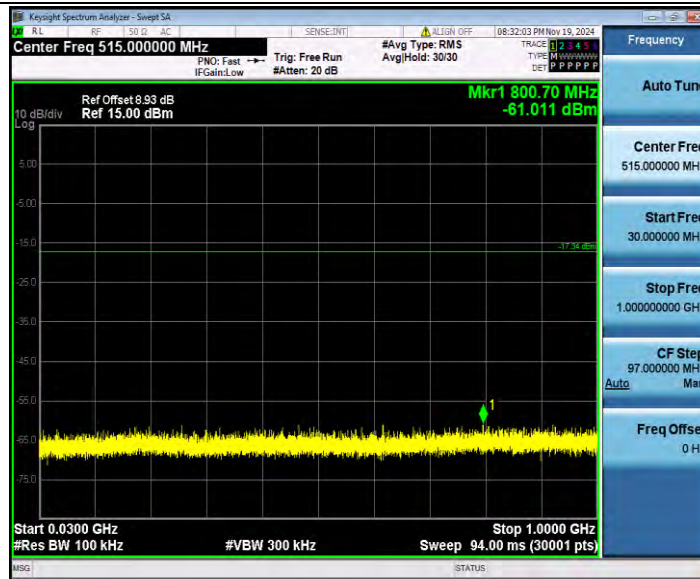
DH1_Ant1_2480_1000~26500



2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



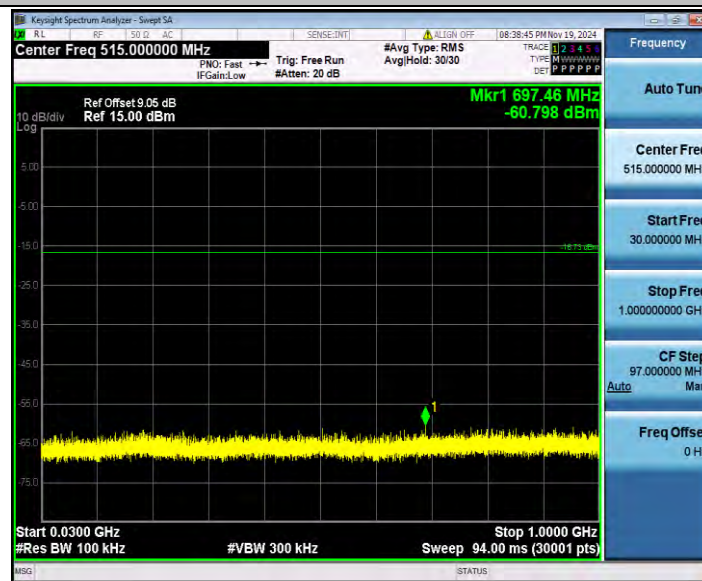
2DH1_Ant1_2402_1000~26500



2DH1_Ant1_2441_0~Reference



2DH1_Ant1_2441_30~1000



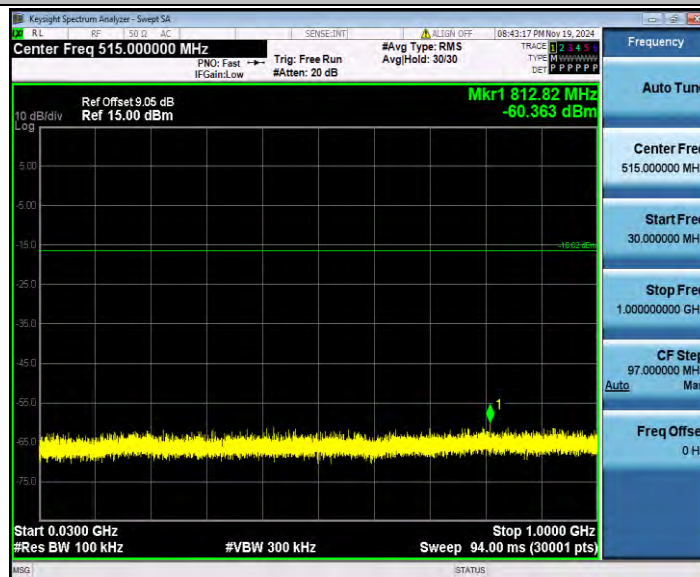
2DH1_Ant1_2441_1000~26500



2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



2DH1_Ant1_2480_1000~26500



3DH1_Ant1_2402_0~Reference



3DH1_Ant1_2402_30~1000



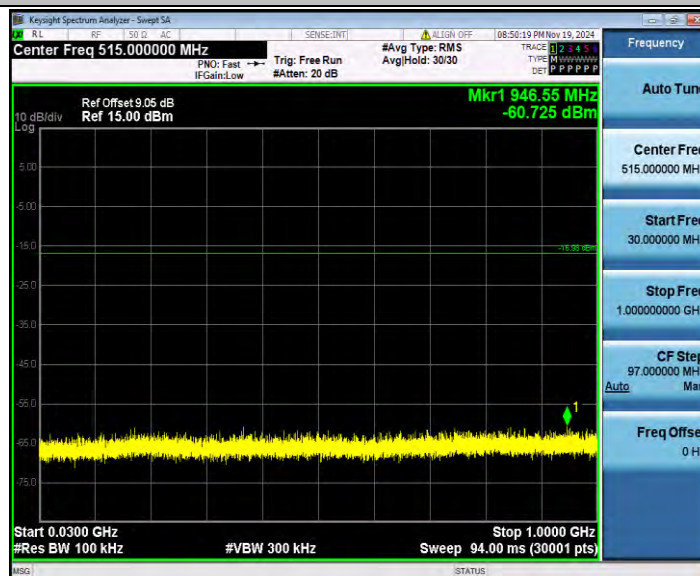
3DH1_Ant1_2402_1000~26500



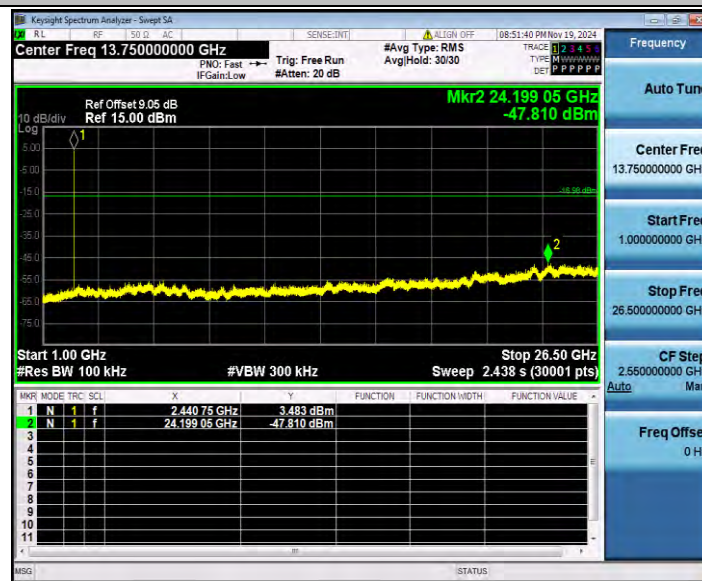
3DH1_Ant1_2441_0~Reference



3DH1_Ant1_2441_30~1000



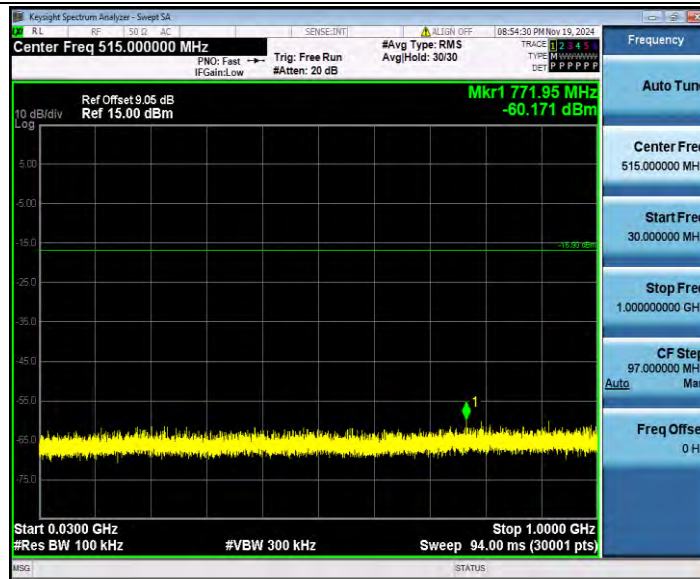
3DH1_Ant1_2441_1000~26500



3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000



3DH1_Ant1_2480_1000~26500

