

Case No. : GTS20221216016-1-11	
Ambient Condition: 25 °C, 45 %RH, Atmos100.1Kpa,	
Test Date: 2023.1.5	Test Engineer: Jenny zeng

Appendix A.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.984	2401.490	2402.474	---	---
		2441	0.993	2440.493	2441.486	---	---
		2480	0.939	2479.496	2480.435	---	---
2DH1	Ant1	2402	1.278	2401.367	2402.645	---	---
		2441	1.293	2440.364	2441.657	---	---
		2480	1.257	2479.397	2480.654	---	---
3DH1	Ant1	2402	1.221	2401.406	2402.627	---	---
		2441	1.218	2440.409	2441.627	---	---
		2480	1.248	2479.373	2480.621	---	---

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



3DH1_Ant1_2480



Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.84615	2401.577	2402.423	---	---
		2441	0.86871	2440.561	2441.430	---	---
		2480	0.90374	2479.540	2480.444	---	---
2DH1	Ant1	2402	1.1596	2401.424	2402.584	---	---
		2441	1.1725	2440.415	2441.588	---	---
		2480	1.1863	2479.412	2480.598	---	---
3DH1	Ant1	2402	1.1583	2401.435	2402.594	---	---
		2441	1.1607	2440.432	2441.592	---	---
		2480	1.1634	2479.429	2480.592	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2DH1_Ant1_2402



2DH1_Ant1_2441



2DH1_Ant1_2480



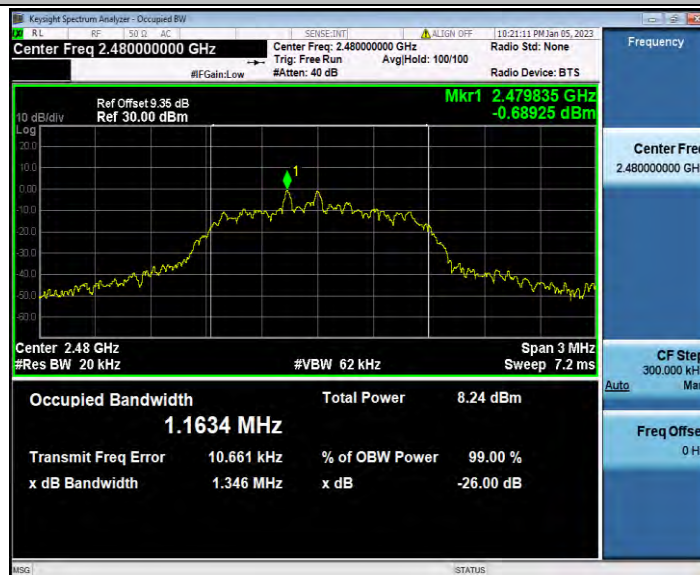
3DH1_Ant1_2402



3DH1_Ant1_2441



3DH1_Ant1_2480



Appendix A.3: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	1.74	≤30.00	PASS
		2441	1.87	≤30.00	PASS
		2480	2.71	≤30.00	PASS
2DH1	Ant1	2402	2.53	≤20.97	PASS
		2441	2.64	≤20.97	PASS
		2480	3.51	≤20.97	PASS
3DH1	Ant1	2402	3.1	≤20.97	PASS
		2441	3.16	≤20.97	PASS
		2480	3.89	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.006	≥ 0.993	PASS
		Hop_2441	1.018	≥ 0.993	PASS
		Hop_2480	1.014	≥ 0.993	PASS
2DH1	Ant1	Hop_2402	0.99	≥ 0.862	PASS
		Hop_2441	0.99	≥ 0.862	PASS
		Hop_2480	0.99	≥ 0.862	PASS
3DH1	Ant1	Hop_2402	0.992	≥ 0.832	PASS
		Hop_2441	1.016	≥ 0.832	PASS
		Hop_2480	0.838	≥ 0.832	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



3DH1_Ant1_Hop_2480



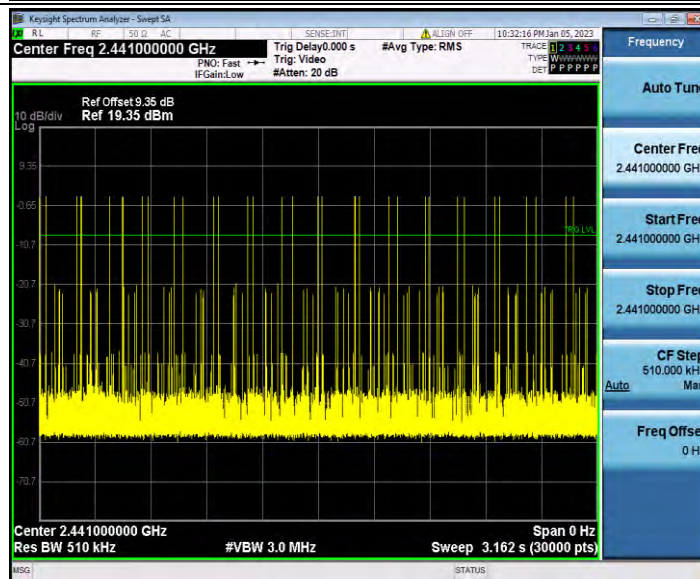
Appendix A.5: Time of occupancy

Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.36	320	0.117	≤0.4	PASS
DH3	Ant1	Hop	1.63	180	0.293	≤0.4	PASS
DH5	Ant1	Hop	2.87	60	0.172	≤0.4	PASS
2DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.63	180	0.293	≤0.4	PASS
2DH5	Ant1	Hop	2.88	60	0.173	≤0.4	PASS
3DH1	Ant1	Hop	0.37	330	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.63	170	0.276	≤0.4	PASS
3DH5	Ant1	Hop	2.88	130	0.374	≤0.4	PASS

Test Graphs

DH1_Ant1_Hop



DH3_Ant1_Hop

Keylight Spectrum Analyzer - Sprint SA

Center Freq 2.441000000 GHz

Trig Delay: 200.0 μ s

#Avg Type: RMS

Trace 10 2 4 4

Type W W W W W W W W W W

Def D D D D D D D D D D

Ref Offset 9.35 dBm

Ref 19.35 dBm

Δ Mkr2 2.873 ms

-0.04 dB

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

Stop Freq 2.441000000 GHz

CF Stop 1.000000 MHz

Auto

Freq Offset 0 Hz

Center 2.441000000 GHz

Res BW 1.0 MHz

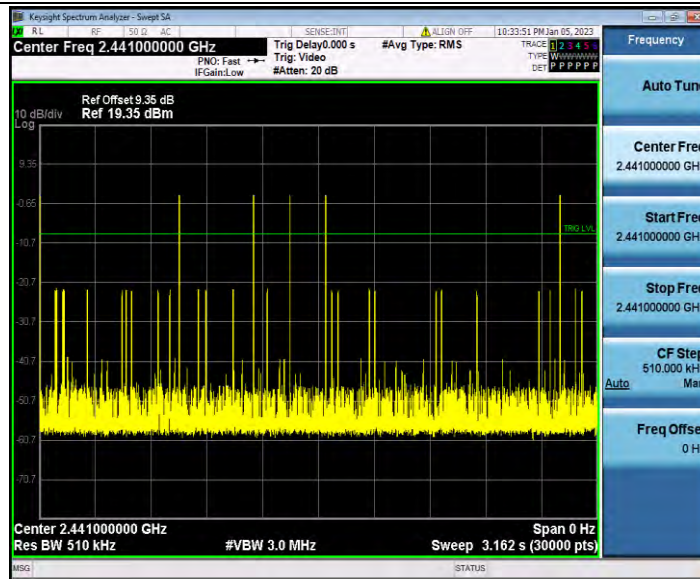
#VBW 3.0 MHz

Sweep 10.13 ms (2000 pts)

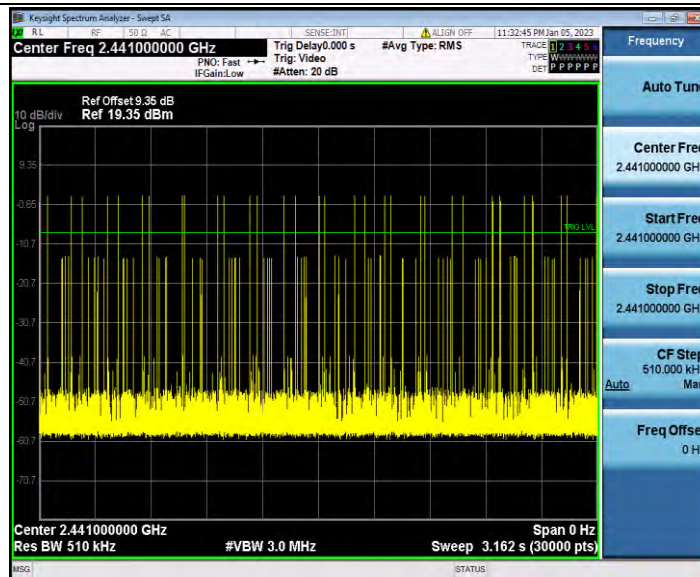
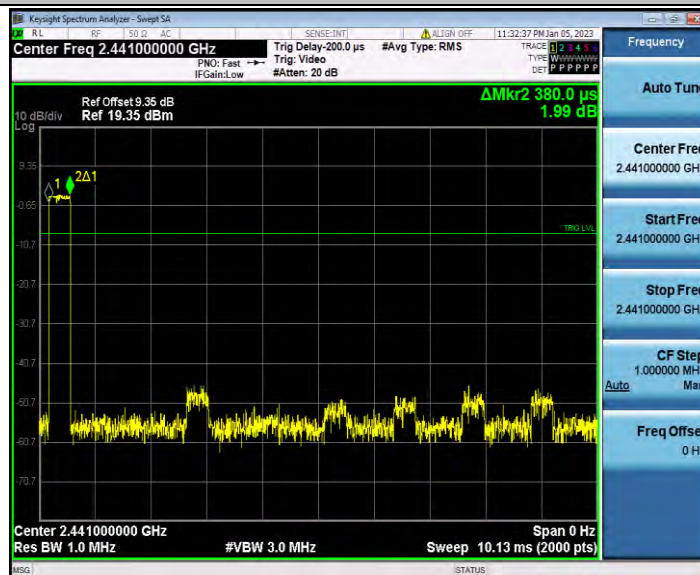
Span 0 Hz

MSG

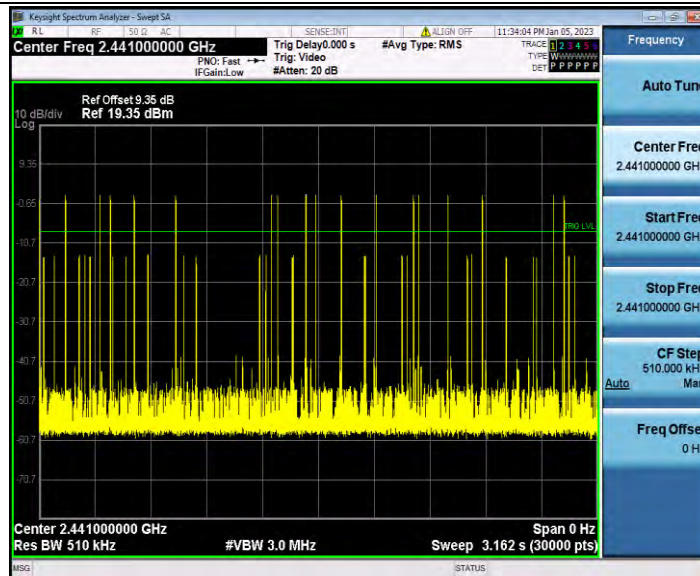
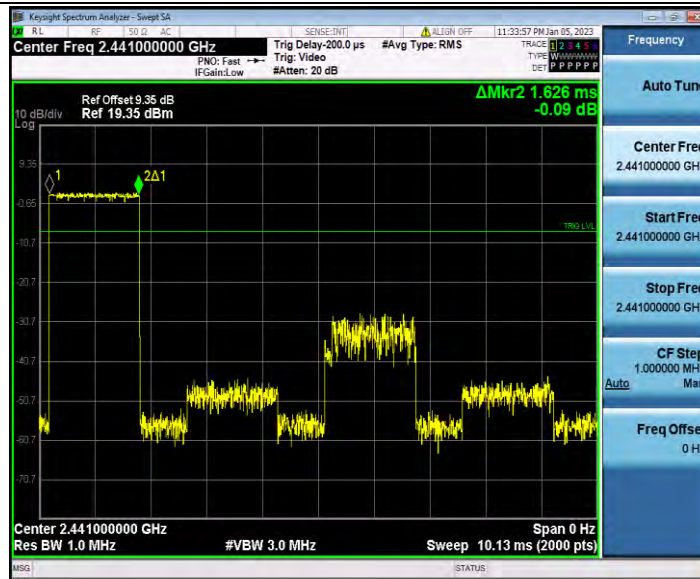
STATUS



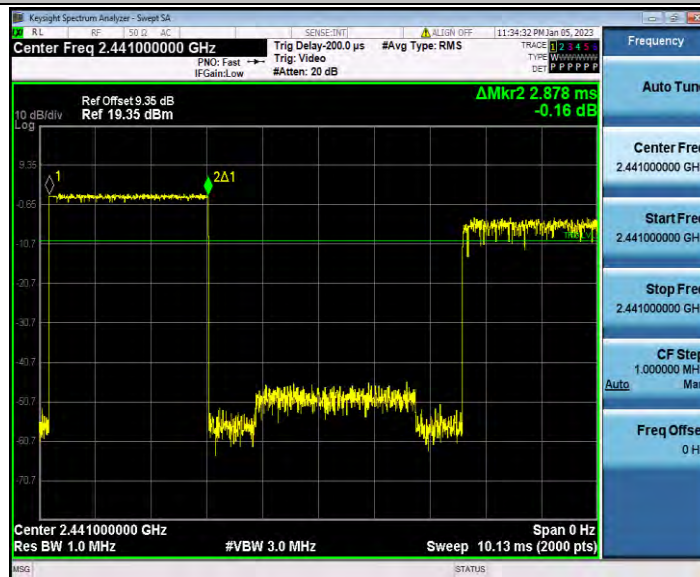
2DH1_Ant1_Hop

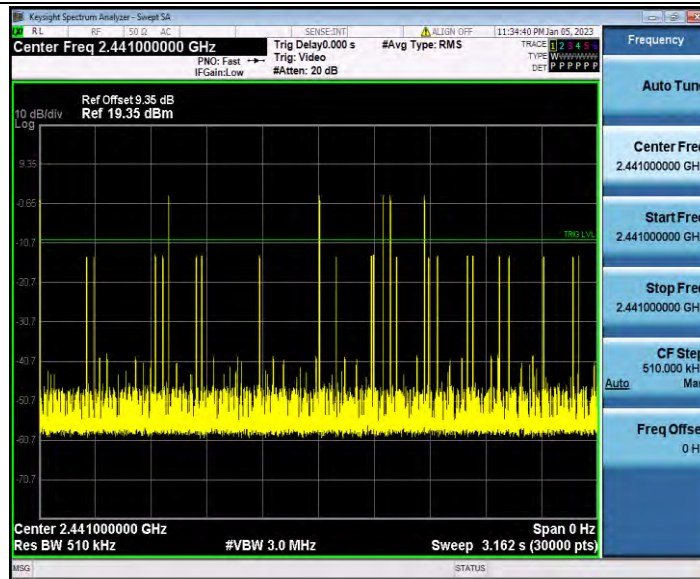


2DH3_Ant1_Hop

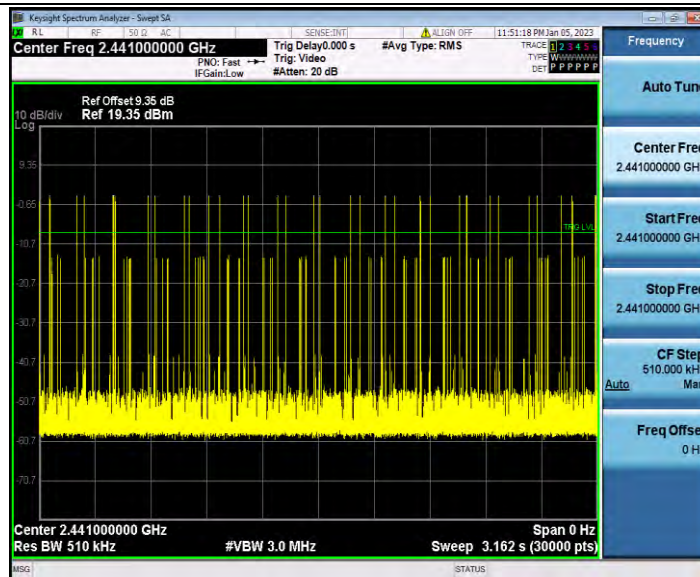
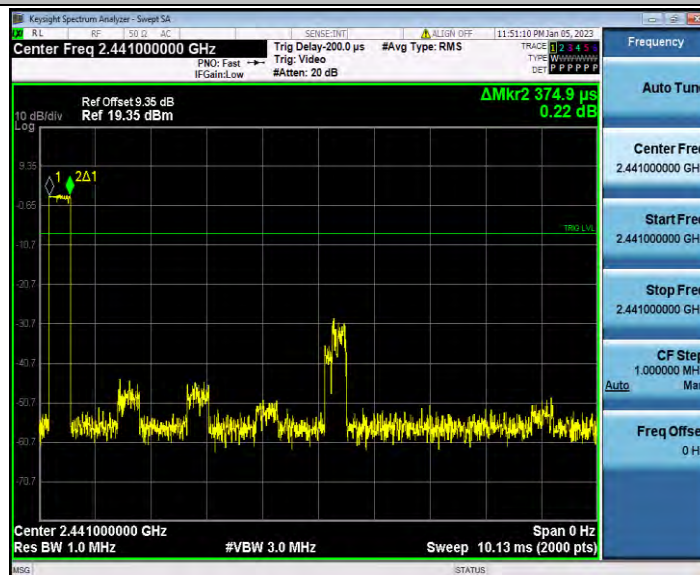


2DH5_Ant1_Hop

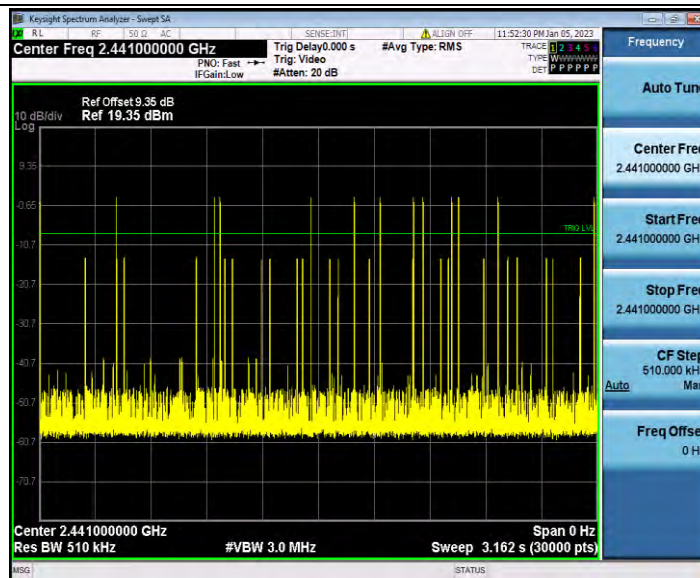




3DH1_Ant1_Hop



3DH3_Ant1_Hop



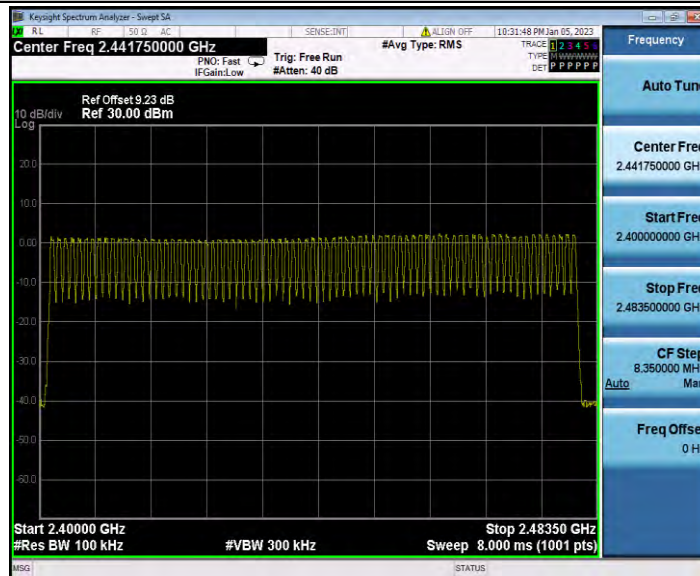
Appendix A.6: Number of hopping channels

Test Result

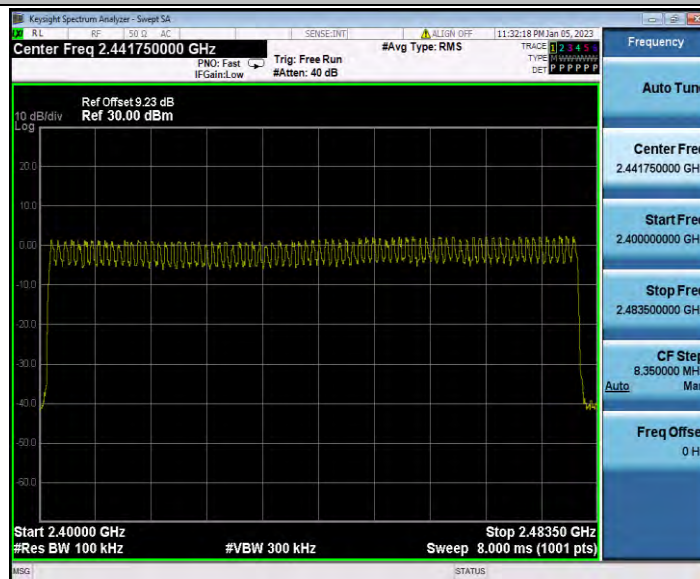
TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS
3DH1	Ant1	Hop	79	≥15	PASS

Test Graphs

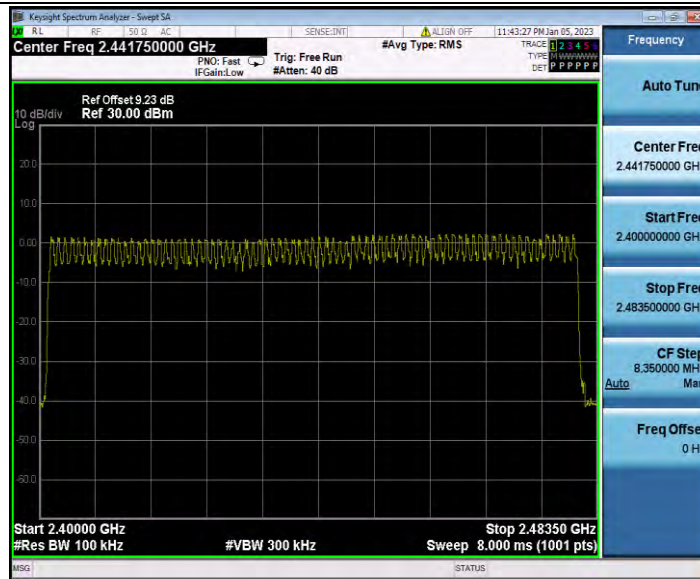
DH1_Ant1_Hop



2DH1_Ant1_Hop



3DH1_Ant1_Hop



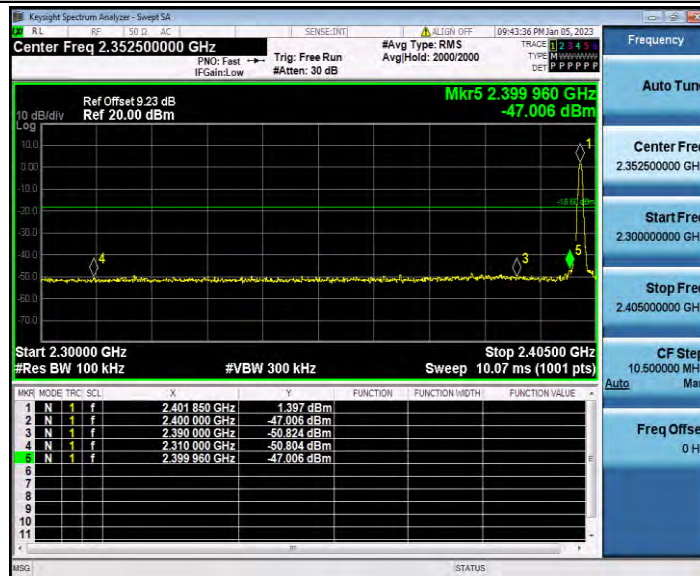
Appendix A.7: Band edge measurements

Test Result

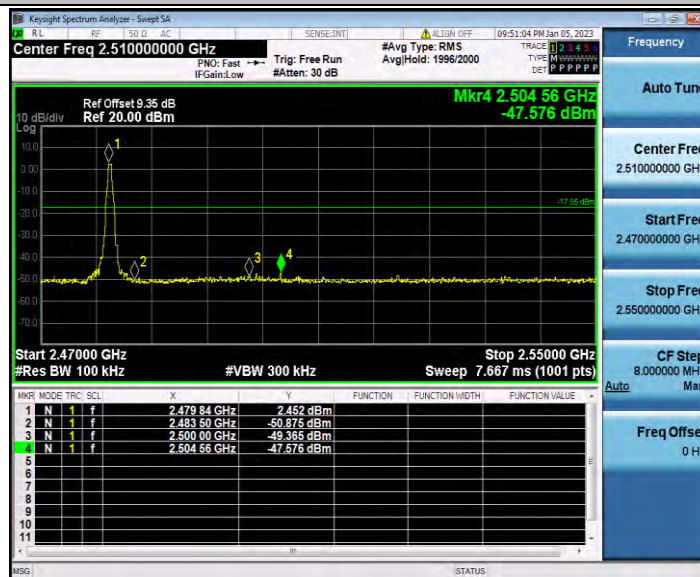
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	1.40	-47.01	≤-18.6	PASS
		High	2480	2.45	-47.58	≤-17.55	PASS
		Low	Hop_2402	1.16	-48.65	≤-18.84	PASS
		High	Hop_2480	2.11	-48.6	≤-17.89	PASS
2DH1	Ant1	Low	2402	1.51	-47.5	≤-18.49	PASS
		High	2480	2.49	-48	≤-17.51	PASS
		Low	Hop_2402	1.25	-48.92	≤-18.75	PASS
		High	Hop_2480	2.16	-46.83	≤-17.84	PASS
3DH1	Ant1	Low	2402	1.47	-46.51	≤-18.53	PASS
		High	2480	2.38	-47.64	≤-17.62	PASS
		Low	Hop_2402	0.18	-48.88	≤-19.82	PASS
		High	Hop_2480	1.97	-48.53	≤-18.03	PASS

Test Graphs

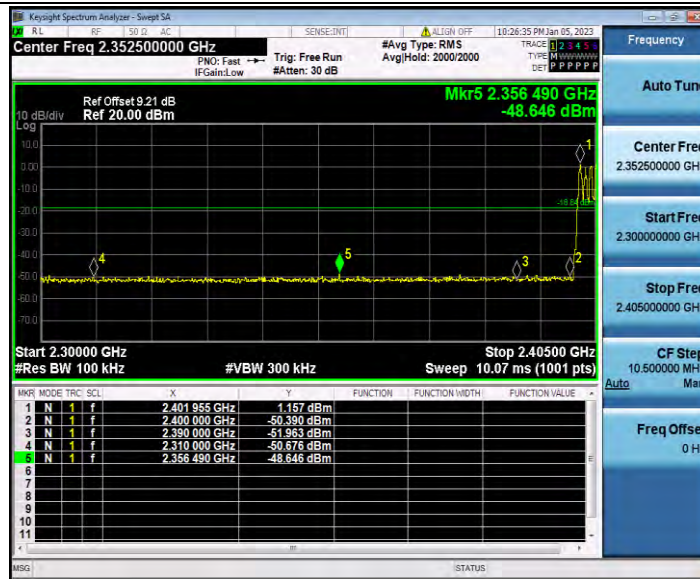
DH1_Ant1_Low_2402



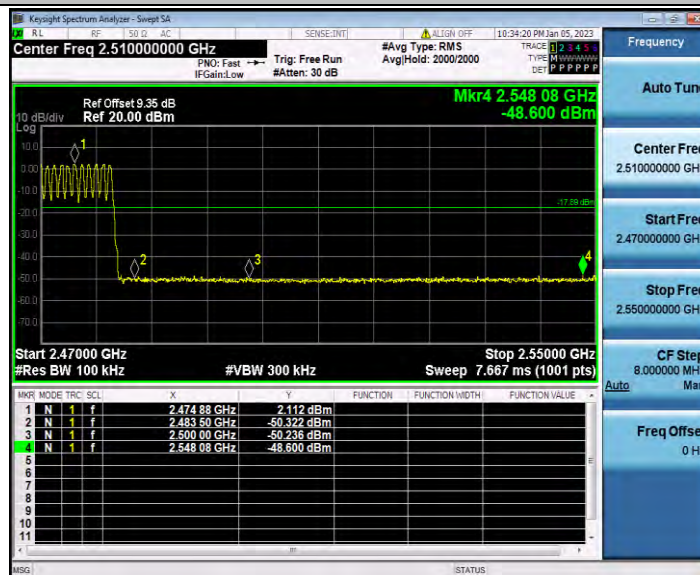
DH1_Ant1_High_2480



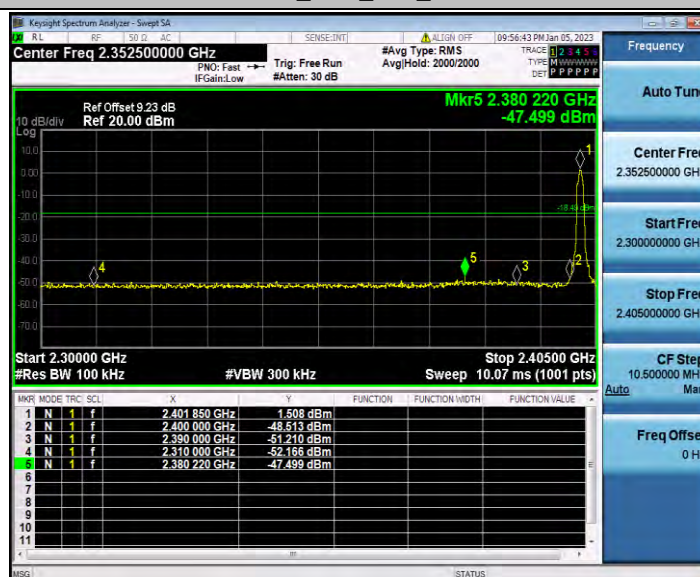
DH1_Ant1_Low_Hop_2402



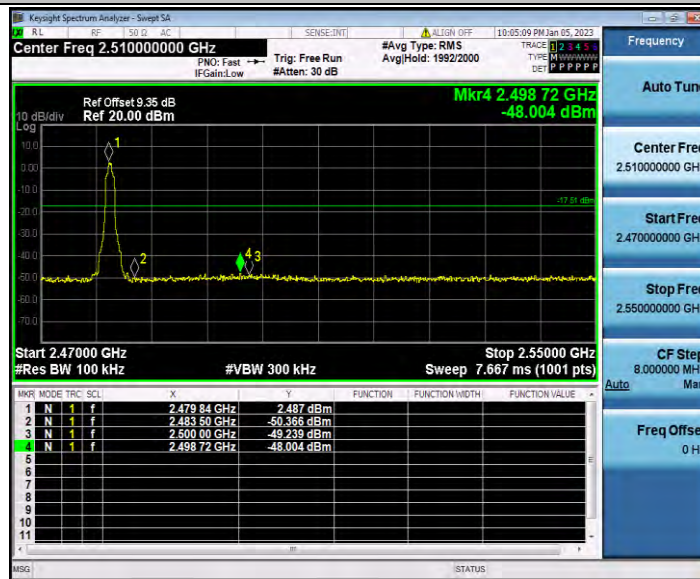
DH1_Ant1_High_Hop_2480



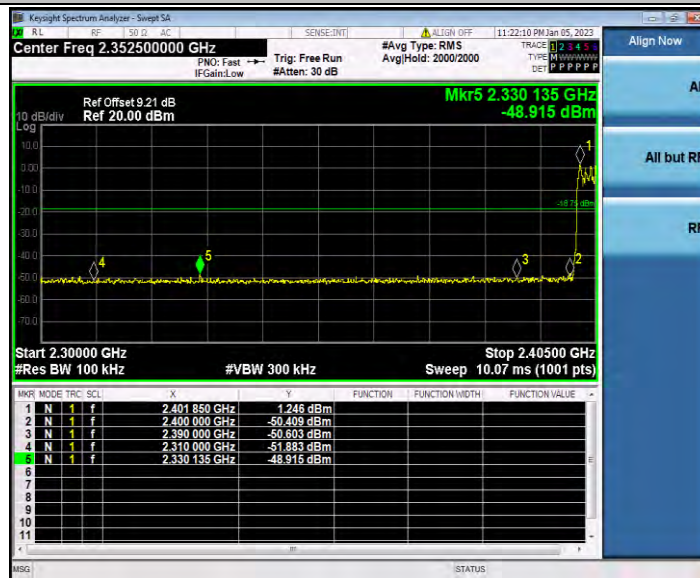
2DH1_Ant1_Low_2402



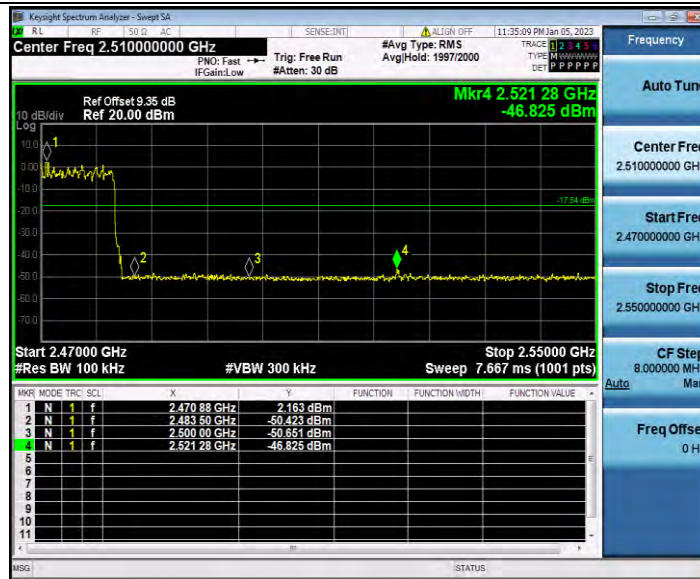
2DH1_Ant1_High_2480



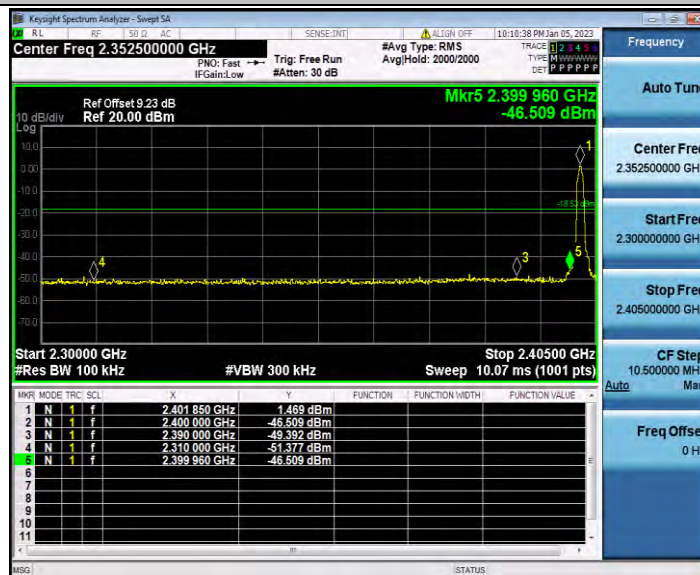
2DH1_Ant1_Low_Hop_2402



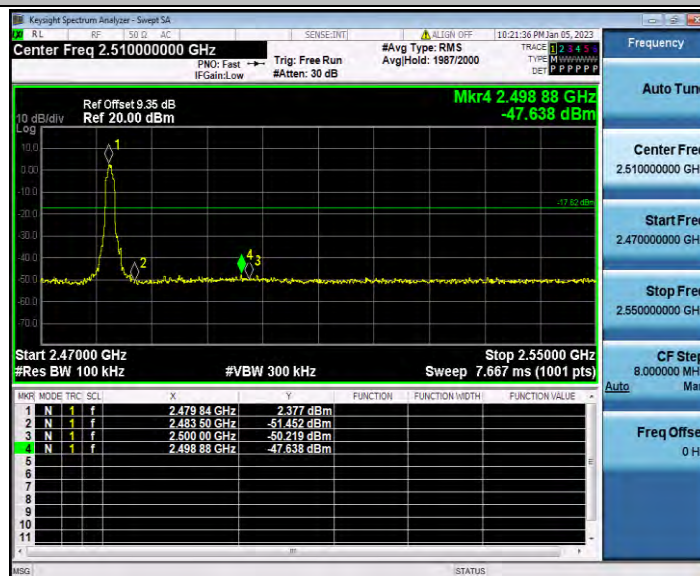
2DH1_Ant1_High_Hop_2480



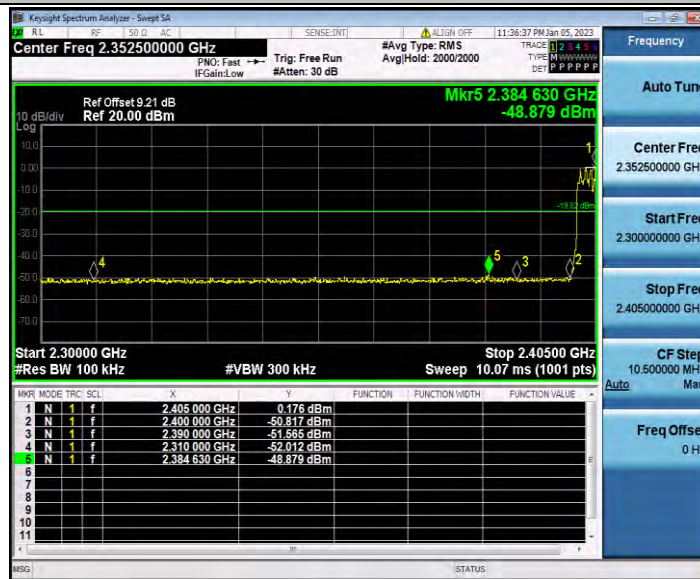
3DH1_Ant1_Low_2402



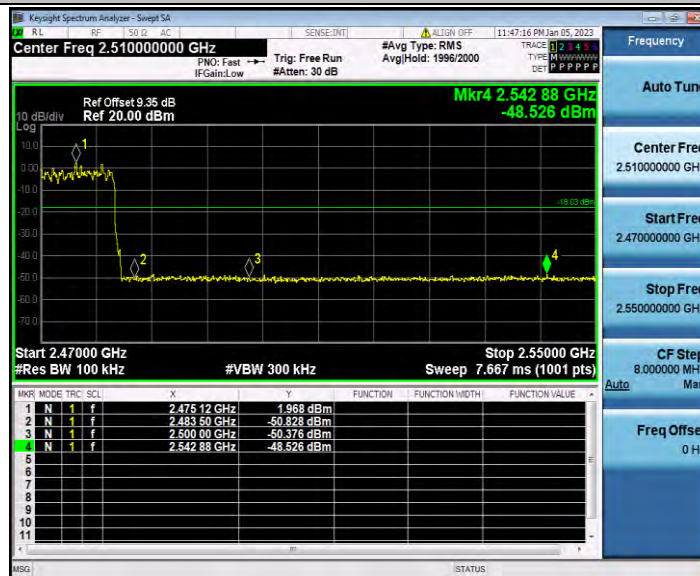
3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480



Appendix A.8: Conducted Spurious Emission

Test Result

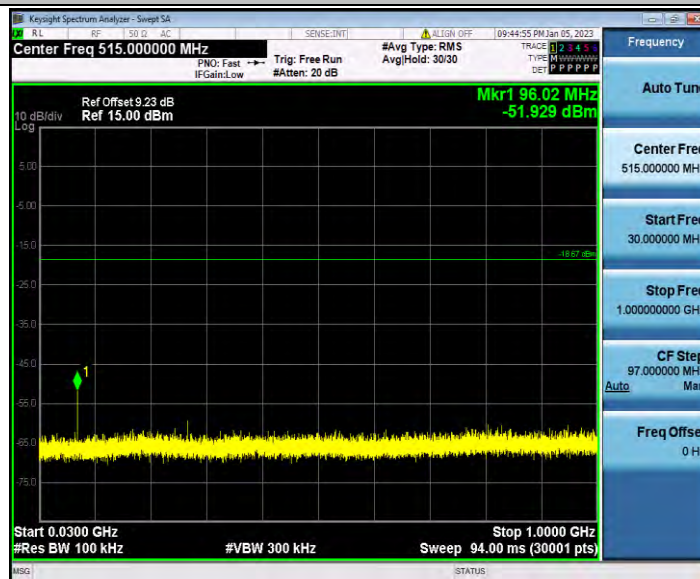
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	1.33	1.33	---	PASS
			30~1000	1.33	-51.93	≤-18.67	PASS
			1000~26500	1.33	-47.42	≤-18.67	PASS
		2441	Reference	1.41	1.41	---	PASS
			30~1000	1.41	-52.63	≤-18.59	PASS
			1000~26500	1.41	-47.88	≤-18.59	PASS
		2480	Reference	2.06	2.06	---	PASS
			30~1000	2.06	-52.05	≤-17.94	PASS
			1000~26500	2.06	-47.28	≤-17.94	PASS
2DH1	Ant1	2402	Reference	1.02	1.02	---	PASS
			30~1000	1.02	-51.62	≤-18.98	PASS
			1000~26500	1.02	-47.53	≤-18.98	PASS
		2441	Reference	1.41	1.41	---	PASS
			30~1000	1.41	-51.64	≤-18.59	PASS
			1000~26500	1.41	-47.72	≤-18.59	PASS
		2480	Reference	2.26	2.26	---	PASS
			30~1000	2.26	-60.81	≤-17.74	PASS
			1000~26500	2.26	-47.53	≤-17.74	PASS
3DH1	Ant1	2402	Reference	1.28	1.28	---	PASS
			30~1000	1.28	-52.52	≤-18.72	PASS
			1000~26500	1.28	-47.53	≤-18.72	PASS
		2441	Reference	1.39	1.39	---	PASS
			30~1000	1.39	-51.76	≤-18.61	PASS
			1000~26500	1.39	-48.24	≤-18.61	PASS
		2480	Reference	1.14	1.14	---	PASS
			30~1000	1.14	-51.66	≤-18.86	PASS
			1000~26500	1.14	-47.47	≤-18.86	PASS

Test Graphs

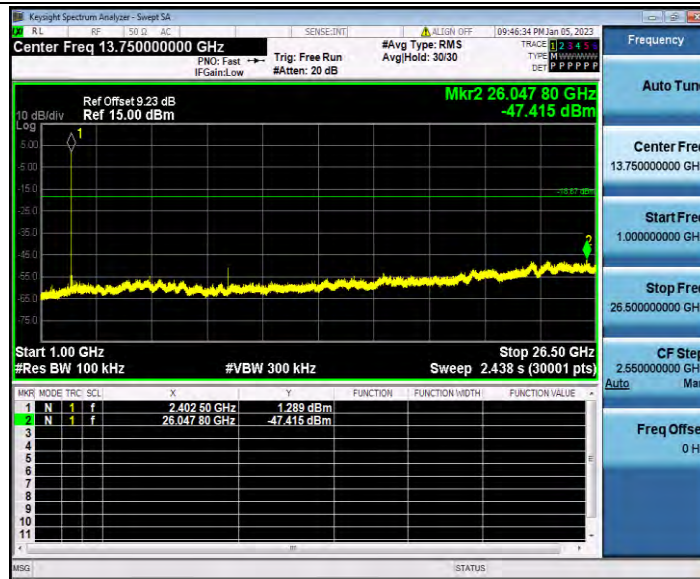
DH1_Ant1_2402_0~Reference



DH1_Ant1_2402_30~1000



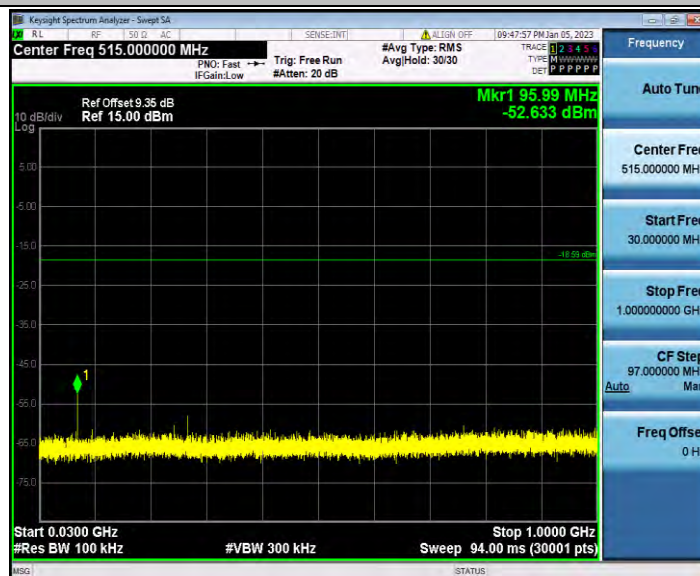
DH1_Ant1_2402_1000~26500



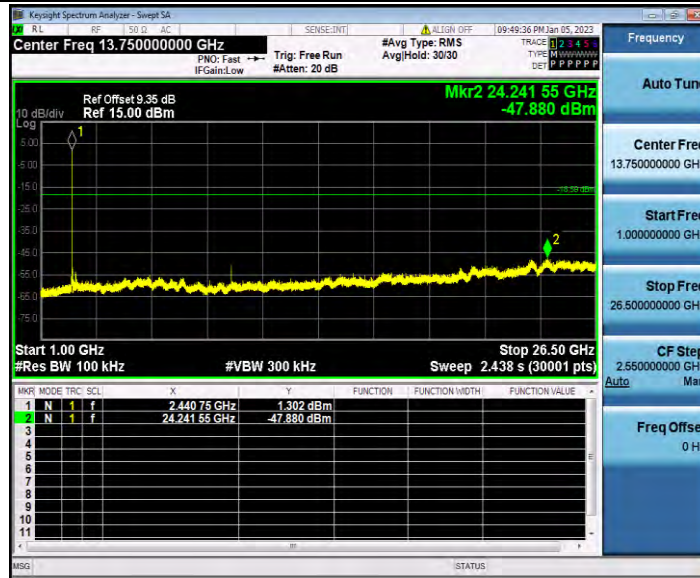
DH1_Ant1_2441_0~Reference



DH1_Ant1_2441_30~1000



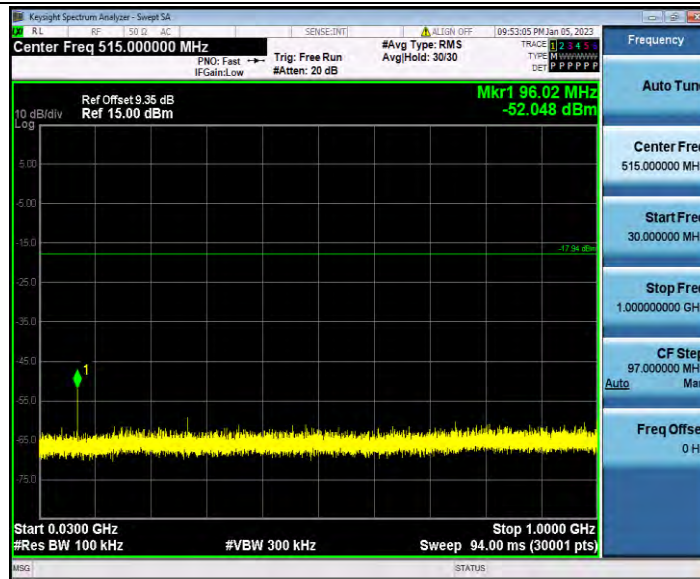
DH1_Ant1_2441_1000~26500



DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000



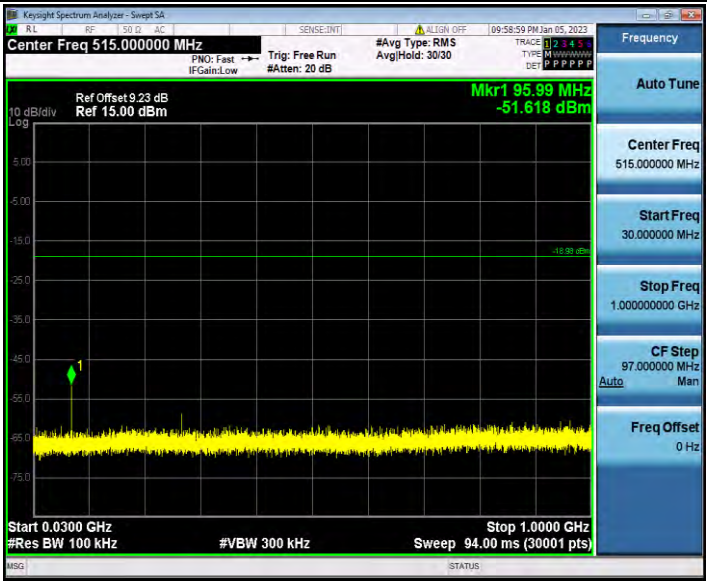
DH1_Ant1_2480_1000~26500



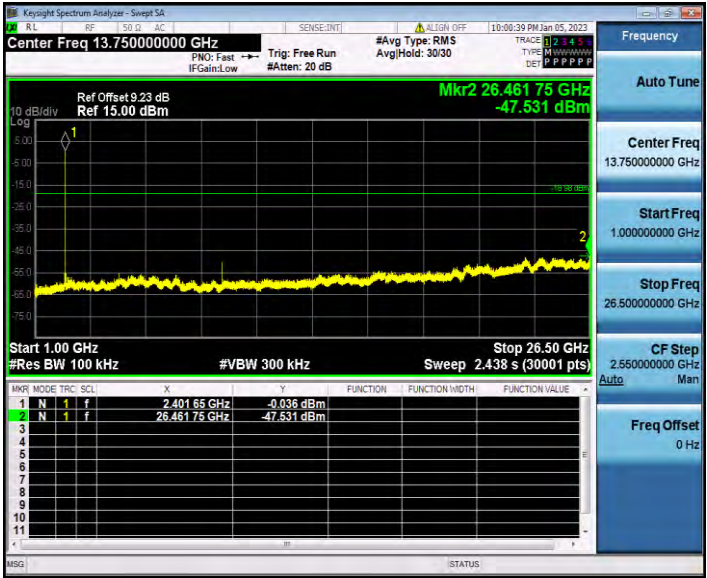
2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



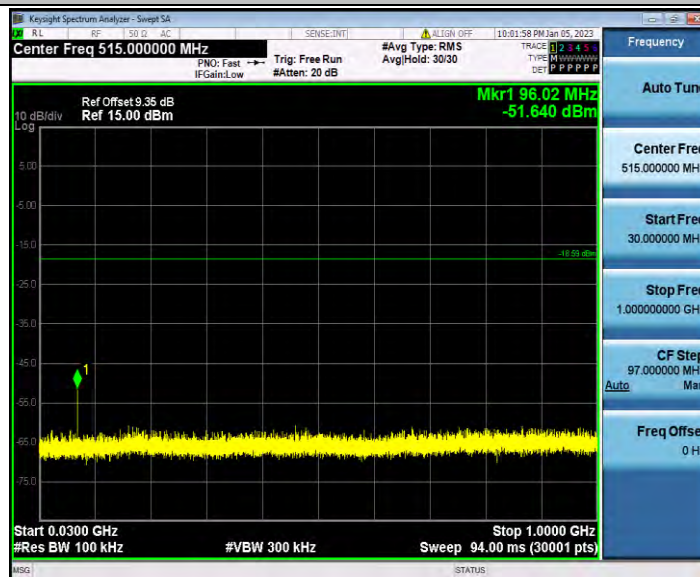
2DH1_Ant1_2402_1000~26500



2DH1_Ant1_2441_0~Reference



2DH1_Ant1_2441_30~1000



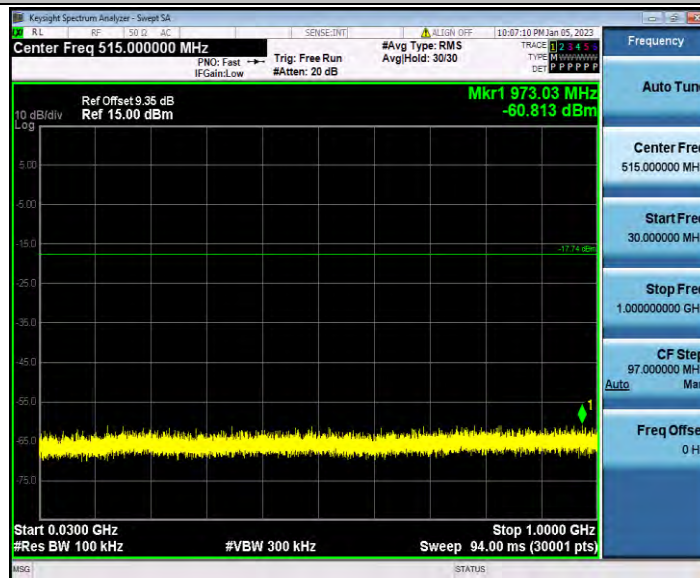
2DH1_Ant1_2441_1000~26500



2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



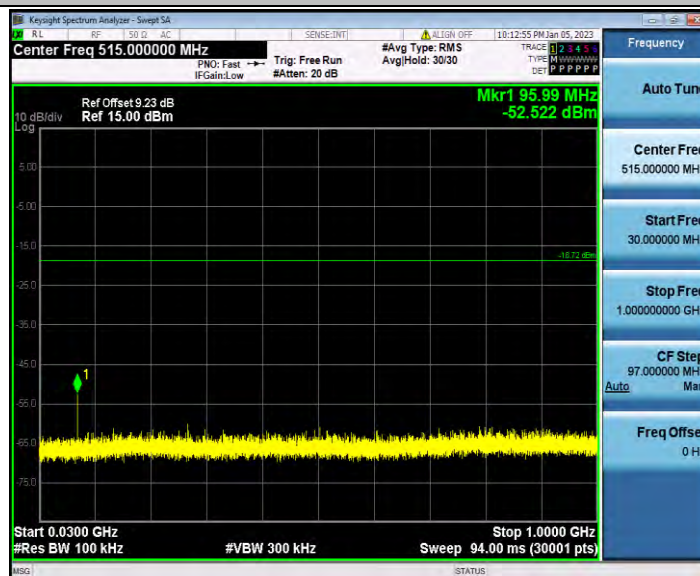
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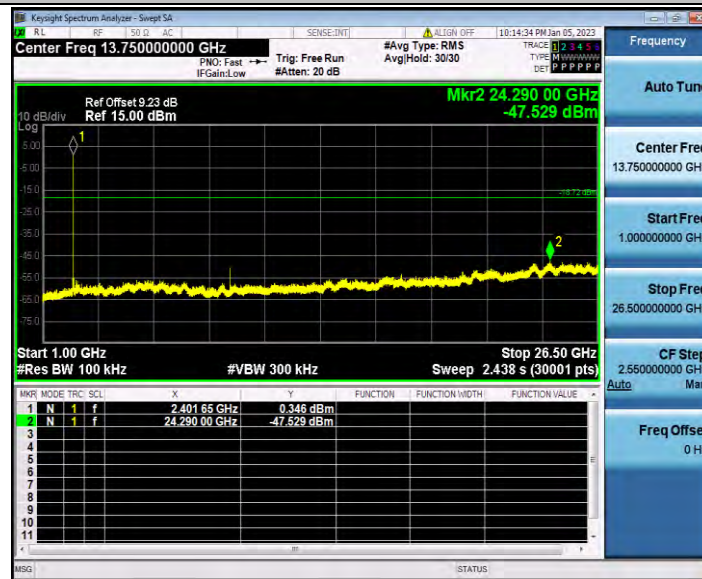
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3DH1_Ant1_2402_30~1000



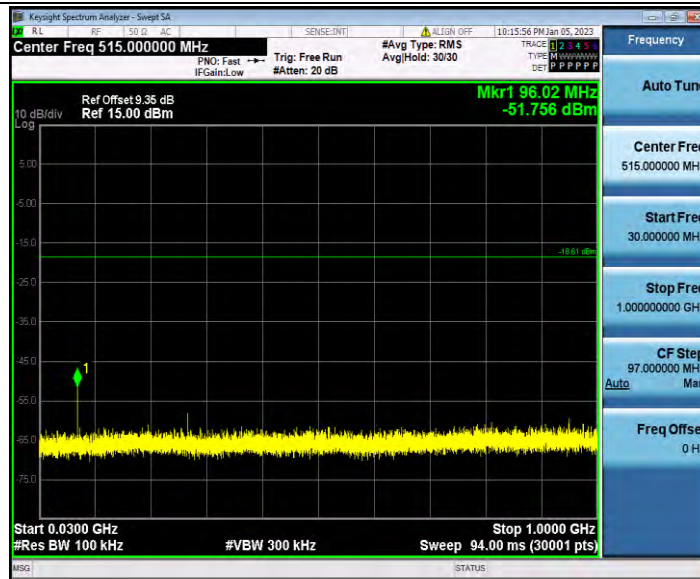
3DH1_Ant1_2402_1000~26500



3DH1_Ant1_2441_0~Reference



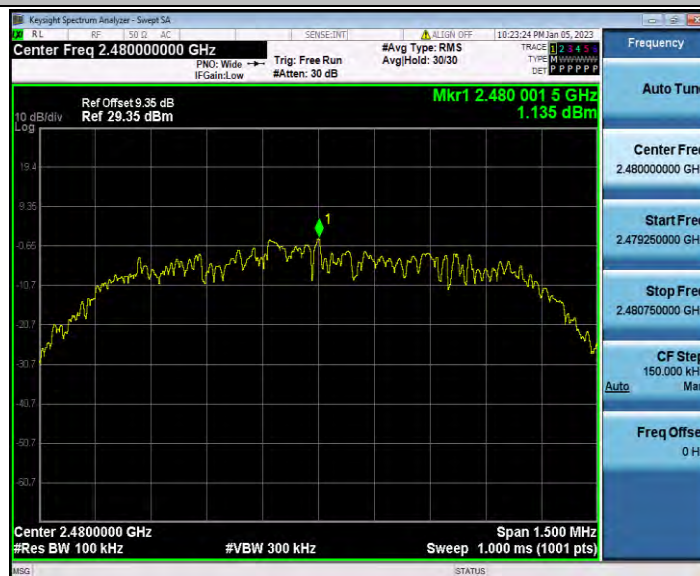
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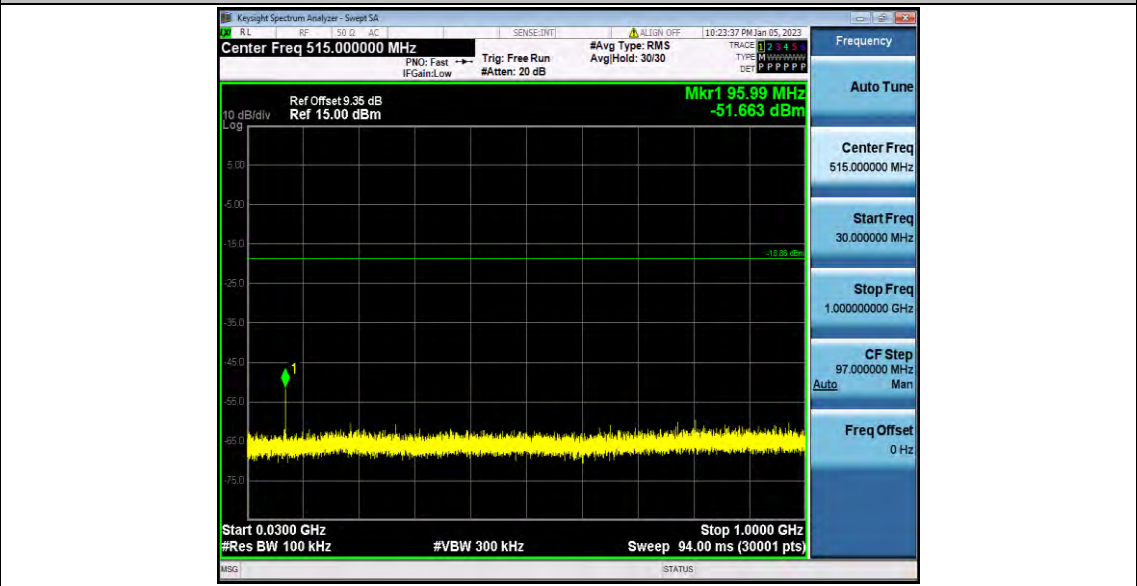
3DH1_Ant1_2441_1000~26500



3DH1_Ant1_2480_0~Reference



3DH1_Ant1_2480_30~1000



3DH1_Ant1_2480_1000~26500

