

Case No. : <u>GTS20220525010</u>	
Ambient Condition: <u>22</u> °C, <u>46</u> %RH,	
Test Date: <u>2022/6/9</u>	Test Engineer: <u>Kelvin</u>

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	0.876	2401.583	2402.459	---	---
		2441	0.885	2440.574	2441.459	---	---
		2480	0.879	2479.580	2480.459	---	---
2DH1	Ant1	2402	1.287	2401.367	2402.654	---	---
		2441	1.296	2440.361	2441.657	---	---
		2480	1.242	2479.409	2480.651	---	---
3DH1	Ant1	2402	1.230	2401.391	2402.621	---	---
		2441	1.242	2440.382	2441.624	---	---
		2480	1.254	2479.367	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	0.81248	2401.621	2402.433	---	---
		2441	0.83192	2440.606	2441.438	---	---
		2480	0.80541	2479.623	2480.429	---	---
2DH1	Ant1	2402	1.1660	2401.431	2402.597	---	---
		2441	1.1721	2440.429	2441.601	---	---
		2480	1.1750	2479.429	2480.604	---	---
3DH1	Ant1	2402	1.1451	2401.435	2402.580	---	---
		2441	1.1354	2440.441	2441.576	---	---
		2480	1.1407	2479.439	2480.579	---	---

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: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.004	≥ 0.885	PASS
		Hop_2441	1.002	≥ 0.885	PASS
		Hop_2480	1.002	≥ 0.885	PASS
2DH1	Ant1	Hop_2402	1.002	≥ 0.864	PASS
		Hop_2441	1.008	≥ 0.864	PASS
		Hop_2480	1.016	≥ 0.864	PASS
3DH1	Ant1	Hop_2402	0.992	≥ 0.828	PASS
		Hop_2441	1.000	≥ 0.828	PASS
		Hop_2480	0.828	≥ 0.828	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



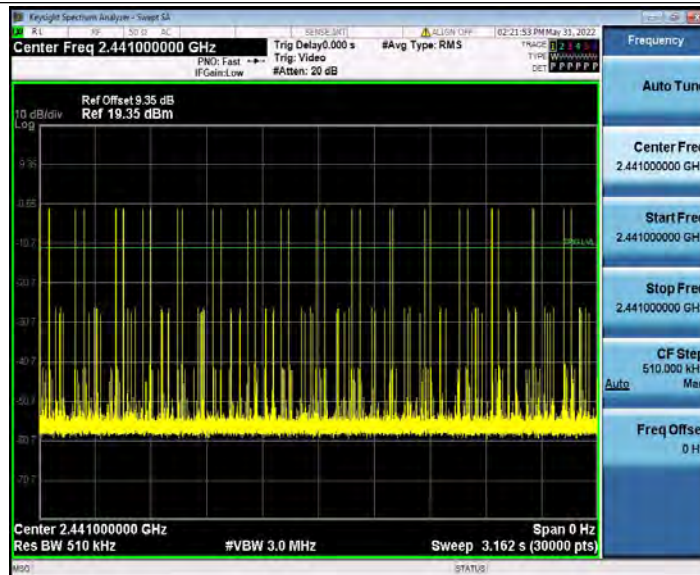
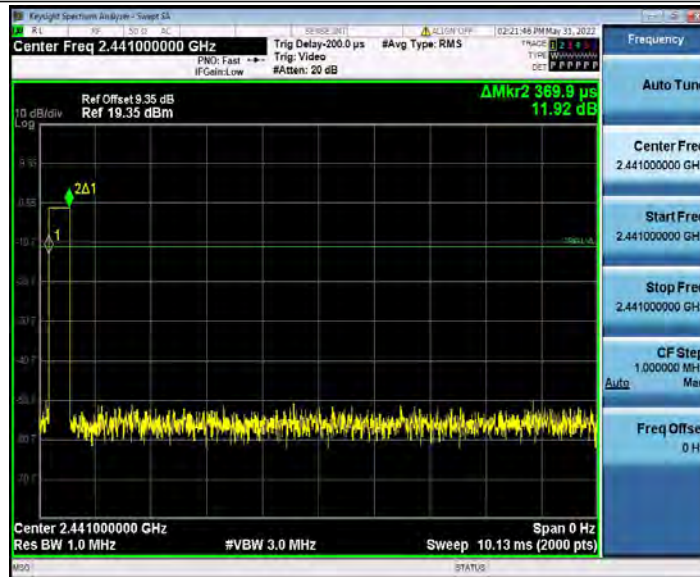
Appendix A.4: Time of occupancy

Test Result

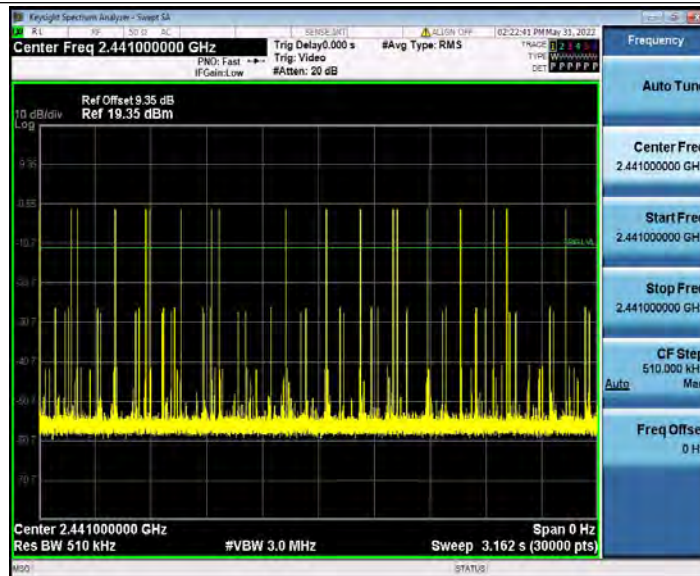
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	320	0.118	≤0.4	PASS
DH3	Ant1	Hop	1.62	190	0.308	≤0.4	PASS
DH5	Ant1	Hop	2.87	120	0.345	≤0.4	PASS
2DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.63	180	0.293	≤0.4	PASS
2DH5	Ant1	Hop	2.87	120	0.345	≤0.4	PASS
3DH1	Ant1	Hop	0.37	330	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.63	140	0.228	≤0.4	PASS
3DH5	Ant1	Hop	2.88	120	0.345	≤0.4	PASS

Test Graphs

DH1_Ant1_Hop

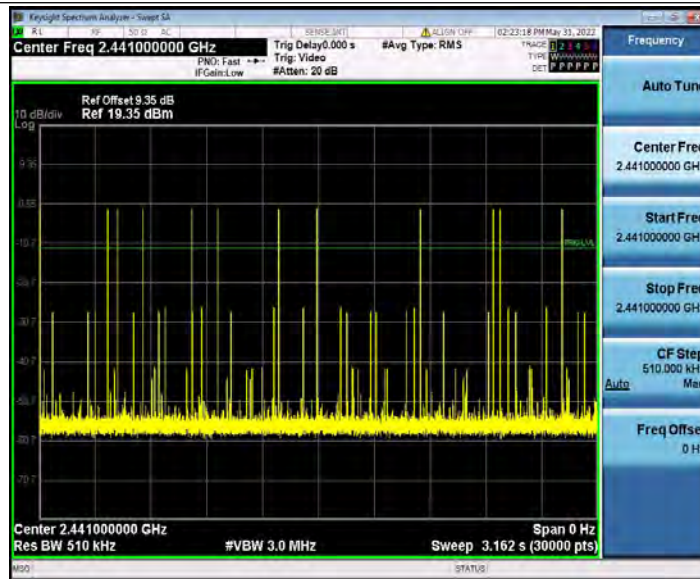


DH3_Ant1_Hop

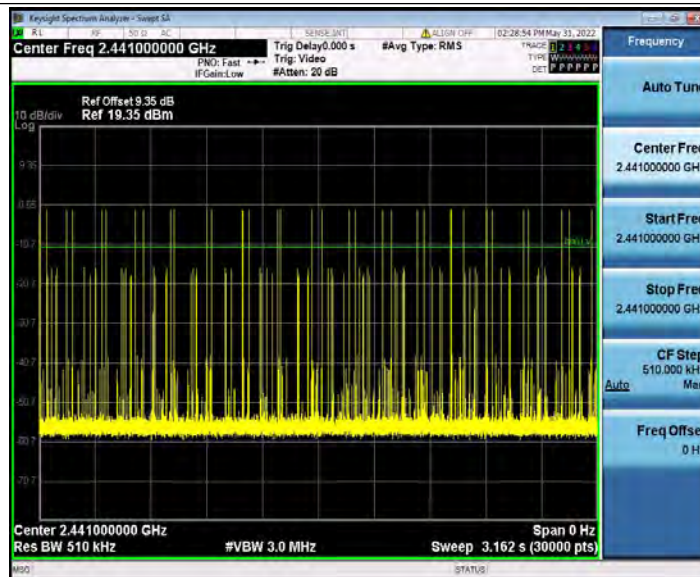


DH5_Ant1_Hop

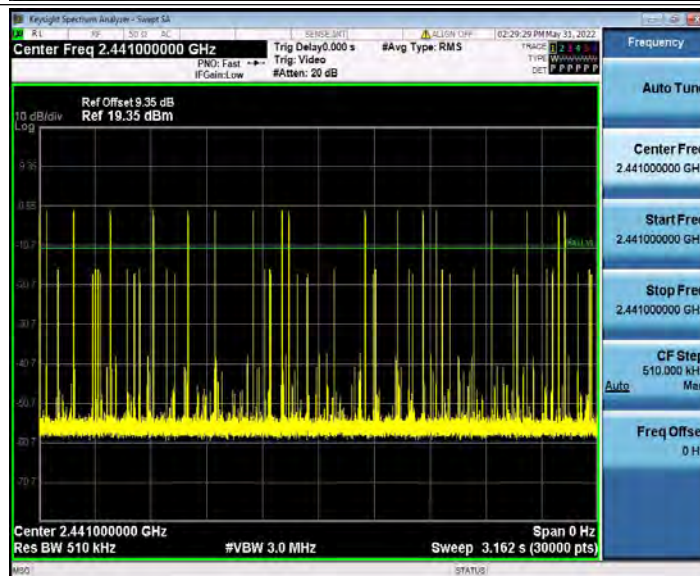




2DH1_Ant1_Hop

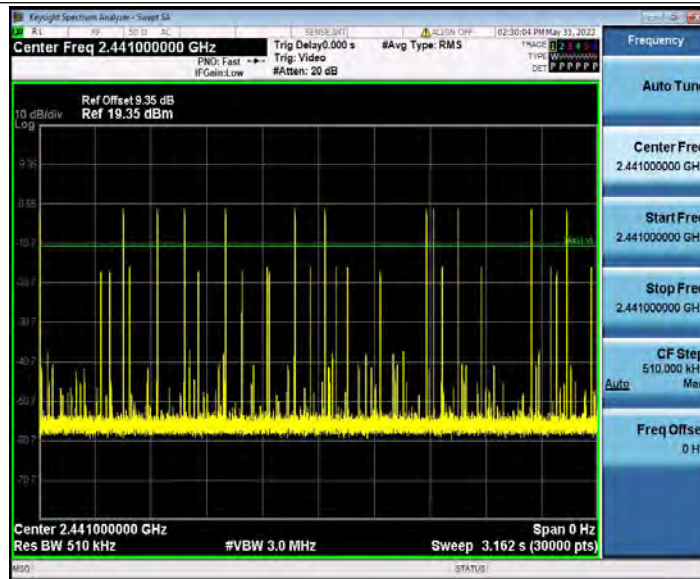


2DH3_Ant1_Hop

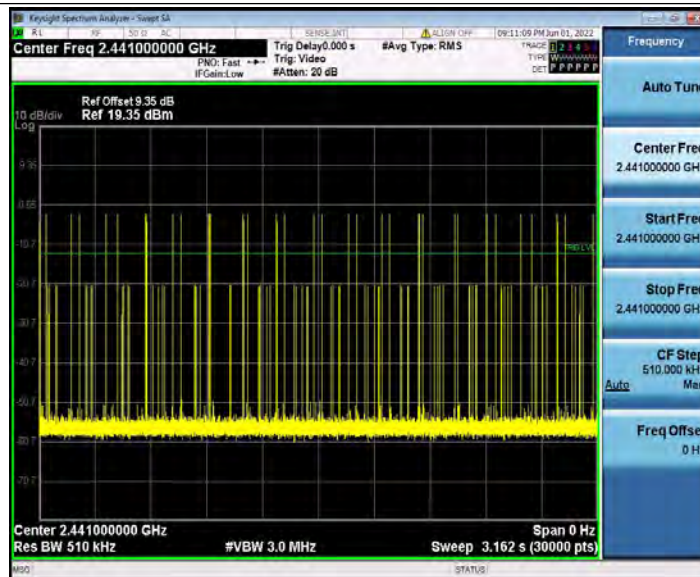
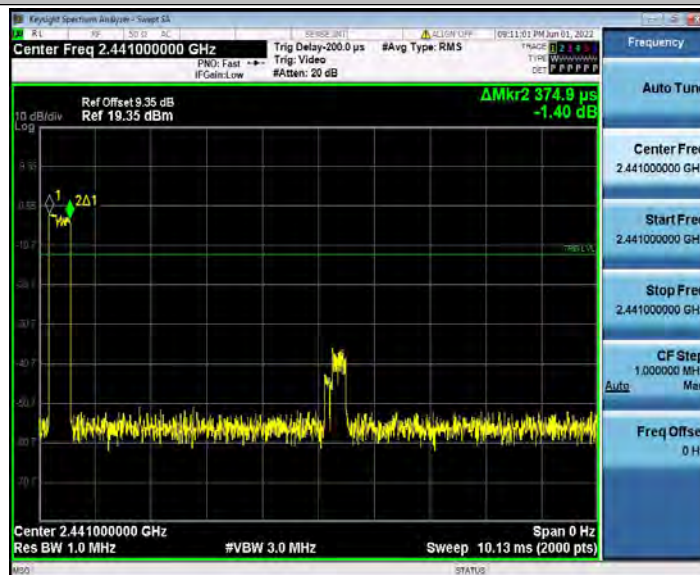


2DH5_Ant1_Hop

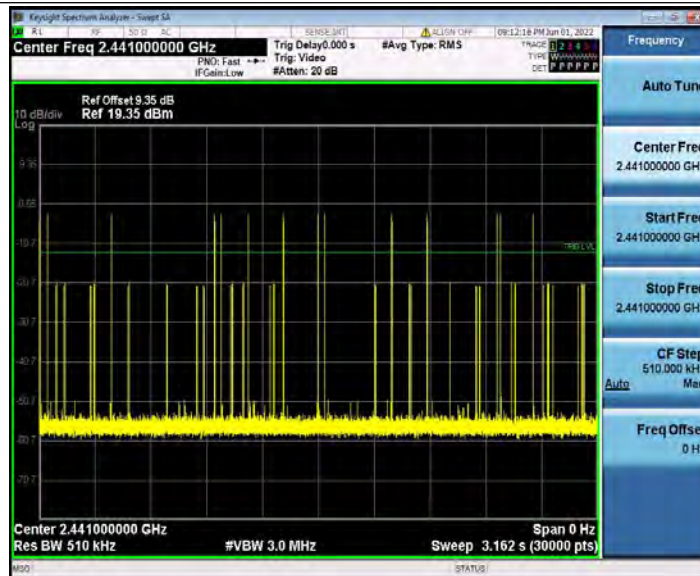




3DH1_Ant1_Hop

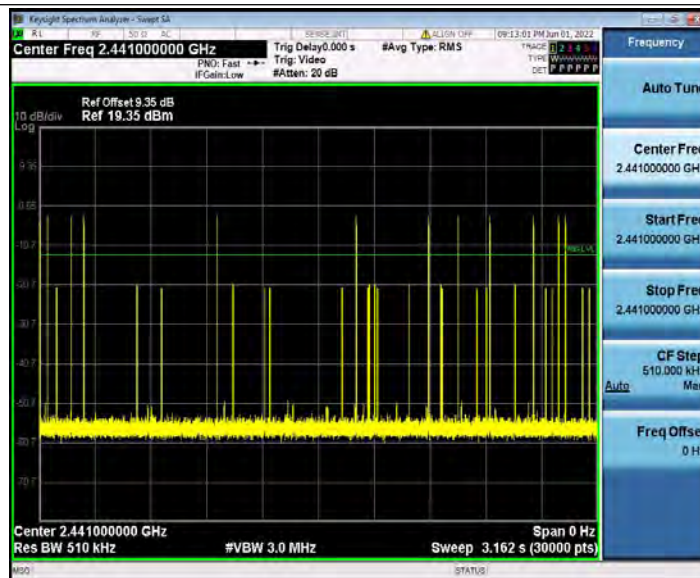


3DH3_Ant1_Hop



3DH5_Ant1_Hop



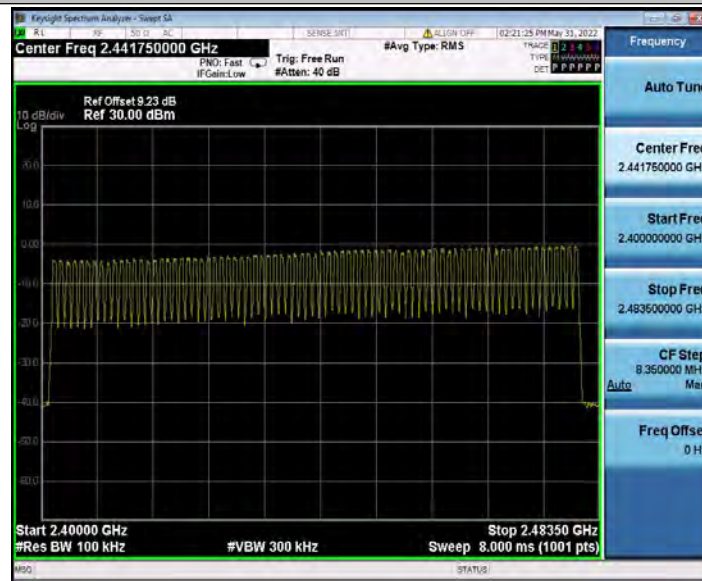


Appendix A.5: Number of hopping channels

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

DH1_Ant1_Hop



Keysight Spectrum Analyzer - Sweep SA

AL RF SD DC AC

SENSE: BW11

ALONG OFF

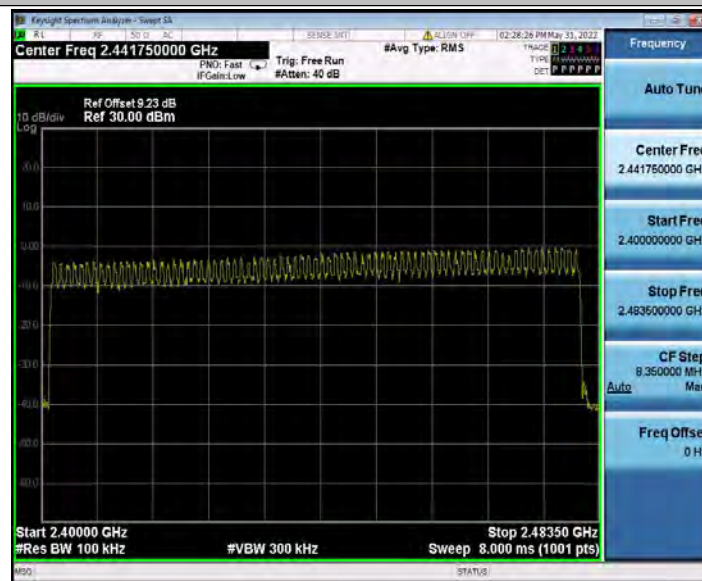
02:28:26 PM May 31, 2022

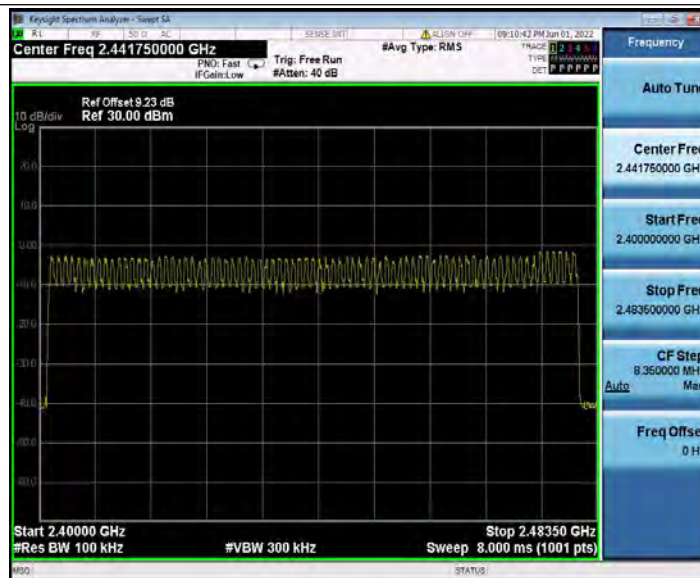
Center Freq 2.441750000 GHz

#Avg Type: RMS

TRACE 0 1 2 3 4 5

Frequency





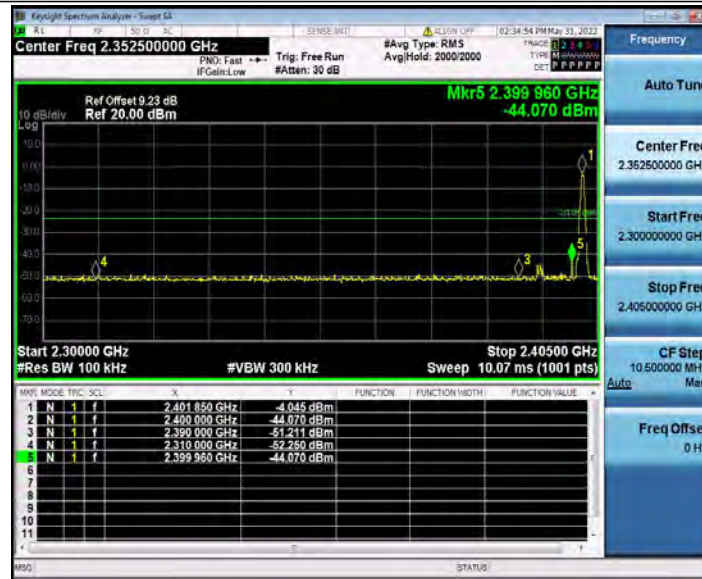
Appendix A.6: Band edge measurements

Test Result

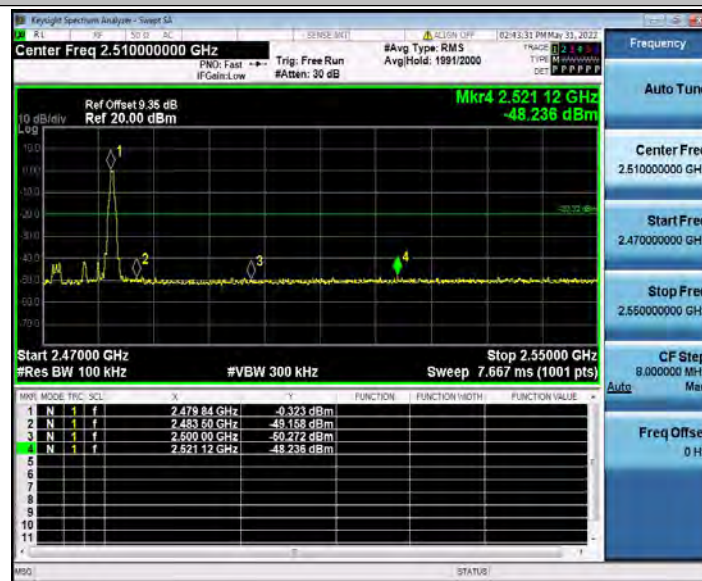
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	-4.05	-44.07	≤ -24.05	PASS
		High	2480	-0.32	-48.24	≤ -20.32	PASS
		Low	Hop_2402	-4.68	-49.35	≤ -24.68	PASS
		High	Hop_2480	-0.58	-48.26	≤ -20.58	PASS
2DH1	Ant1	Low	2402	-3.94	-35.53	≤ -23.94	PASS
		High	2480	-0.30	-48.59	≤ -20.3	PASS
		Low	Hop_2402	-4.48	-49.62	≤ -24.48	PASS
		High	Hop_2480	-0.66	-48.89	≤ -20.66	PASS
3DH1	Ant1	Low	2402	-2.64	-48.7	≤ -22.64	PASS
		High	2480	-1.45	-48.66	≤ -21.45	PASS
		Low	Hop_2402	-3.18	-49.6	≤ -23.18	PASS
		High	Hop_2480	-1.69	-48.27	≤ -21.69	PASS

Test Graphs

DH1_Ant1_Low_2402



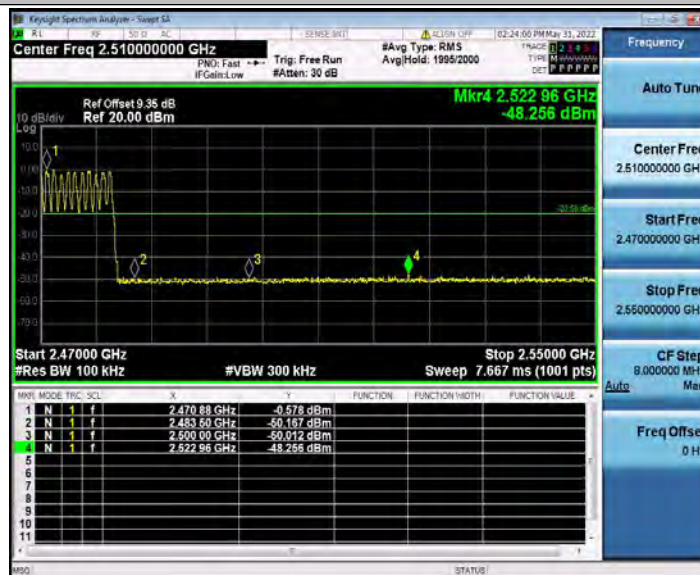
DH1_Ant1_High_2480



DH1_Ant1_Low_Hop_2402



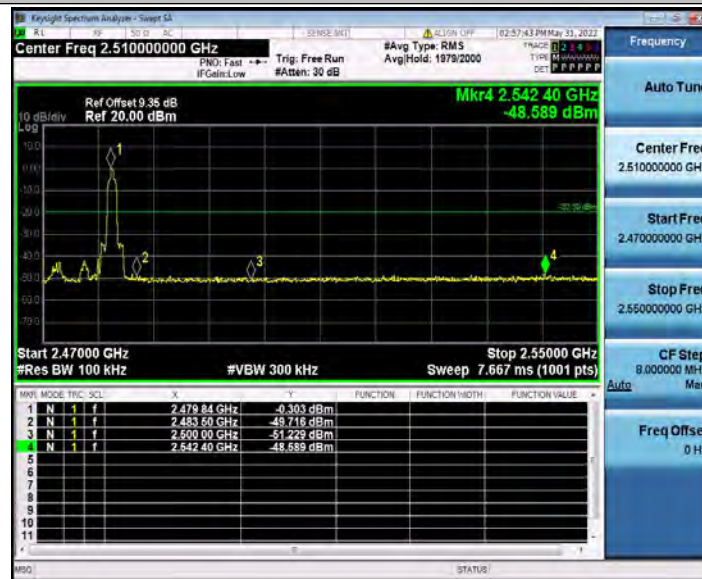
DH1_Ant1_High_Hop_2480



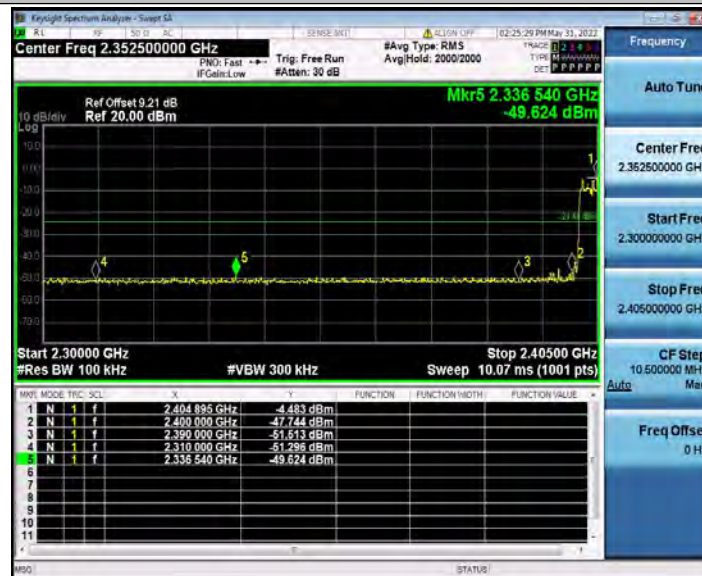
2DH1_Ant1_Low_2402



2DH1_Ant1_High_2480



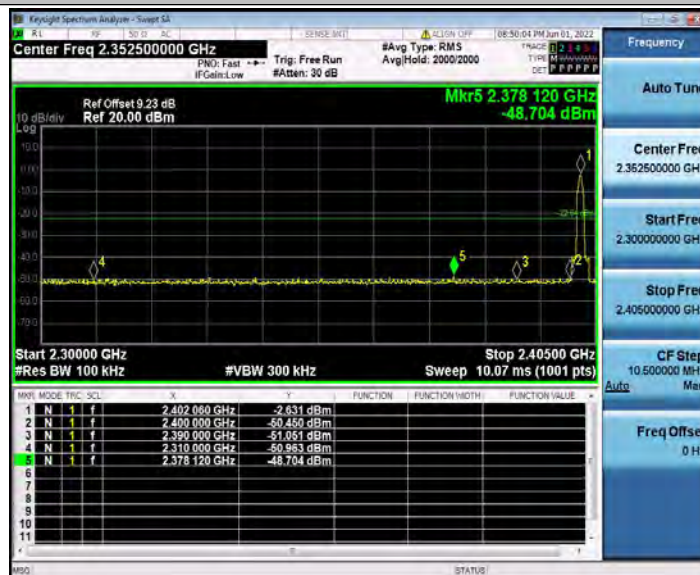
2DH1_Ant1_Low_Hop_2402



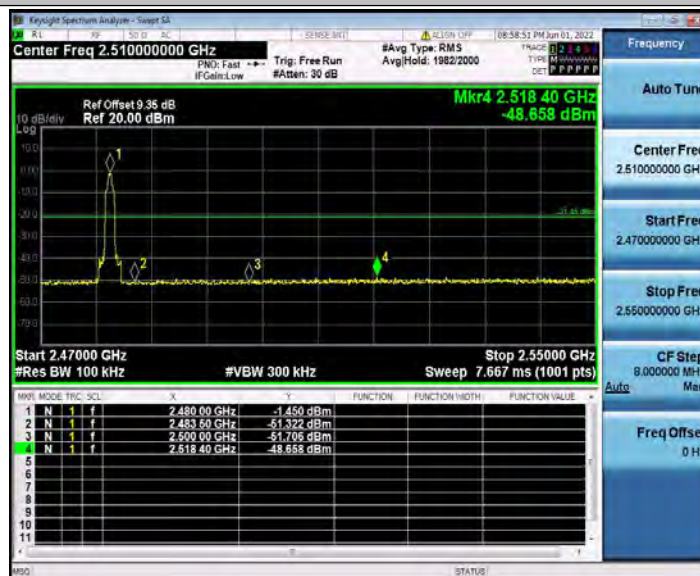
2DH1_Ant1_High_Hop_2480



3DH1_Ant1_Low_2402



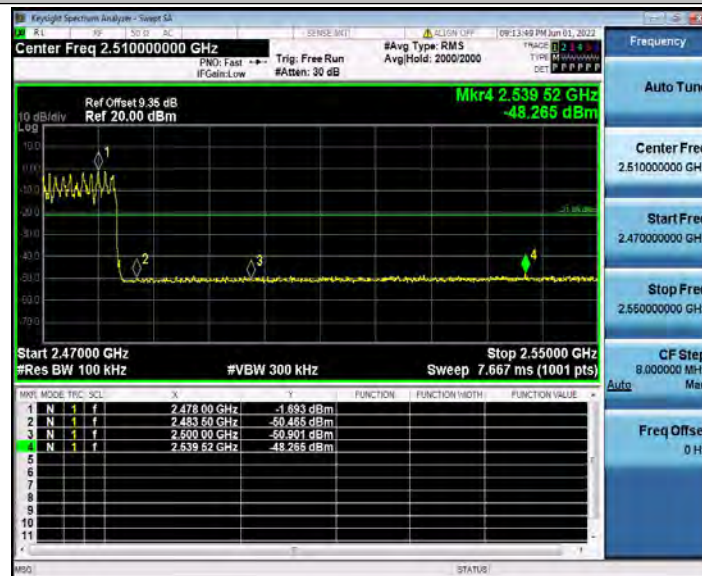
3DH1_Ant1_High_2480



3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480



Appendix A.7: Conducted Spurious Emission

Test Result

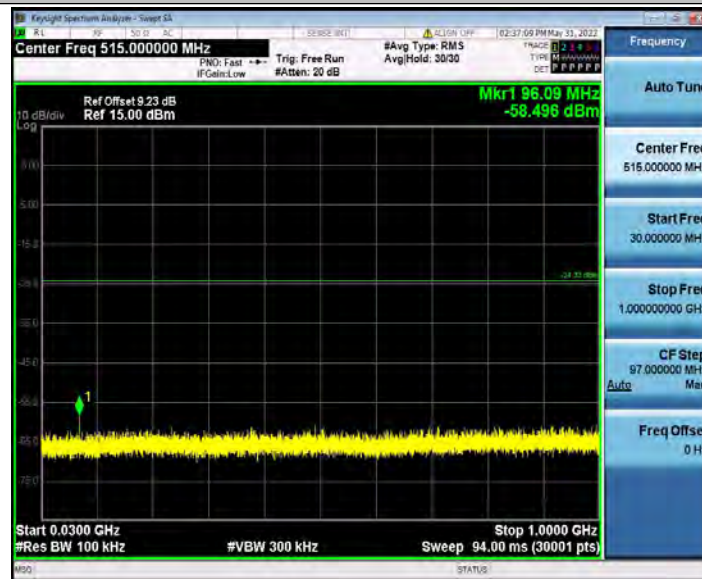
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	-4.33	-4.33	---	PASS
			30~1000	-4.33	-58.5	≤-24.33	PASS
			1000~26500	-4.33	-47.18	≤-24.33	PASS
		2441	Reference	-2.21	-2.21	---	PASS
			30~1000	-2.21	-59.39	≤-22.21	PASS
			1000~26500	-2.21	-47.63	≤-22.21	PASS
		2480	Reference	-0.38	-0.38	---	PASS
			30~1000	-0.38	-59.93	≤-20.38	PASS
			1000~26500	-0.38	-47.27	≤-20.38	PASS
2DH1	Ant1	2402	Reference	-4.00	-4.00	---	PASS
			30~1000	-4.00	-57.63	≤-24	PASS
			1000~26500	-4.00	-47.11	≤-24	PASS
		2441	Reference	-2.05	-2.05	---	PASS
			30~1000	-2.05	-60.13	≤-22.05	PASS
			1000~26500	-2.05	-48	≤-22.05	PASS
		2480	Reference	-0.61	-0.61	---	PASS
			30~1000	-0.61	-59.97	≤-20.61	PASS
			1000~26500	-0.61	-47.57	≤-20.61	PASS
3DH1	Ant1	2402	Reference	-2.85	-2.85	---	PASS
			30~1000	-2.85	-60.09	≤-22.85	PASS
			1000~26500	-2.85	-48.04	≤-22.85	PASS
		2441	Reference	-3.75	-3.75	---	PASS
			30~1000	-3.75	-60.65	≤-23.75	PASS
			1000~26500	-3.75	-46.74	≤-23.75	PASS
		2480	Reference	-1.69	-1.69	---	PASS
			30~1000	-1.69	-59.65	≤-21.69	PASS
			1000~26500	-1.69	-46.7	≤-21.69	PASS

Test Graphs

DH1_Ant1_2402_0~Reference



DH1_Ant1_2402_30~1000



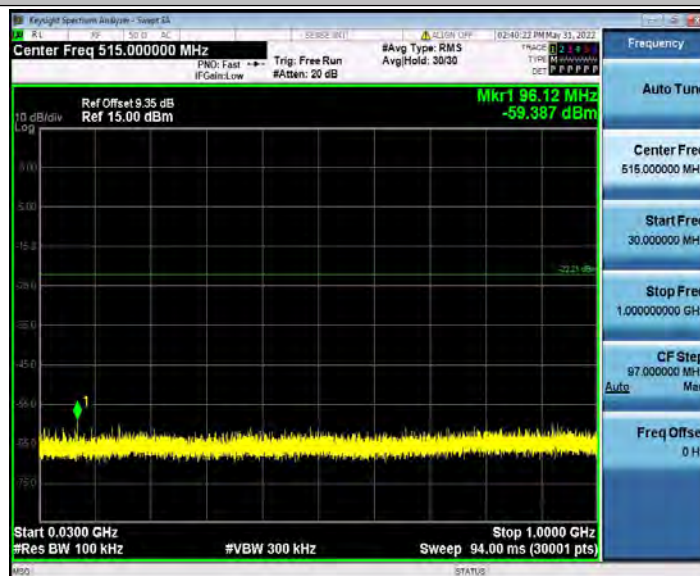
DH1_Ant1_2402_1000~26500



DH1_Ant1_2441_0~Reference



DH1_Ant1_2441_30~1000



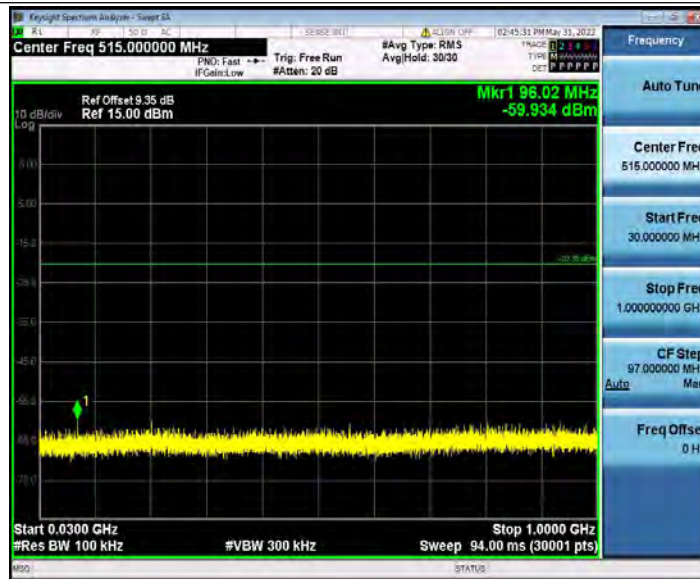
DH1_Ant1_2441_1000~26500



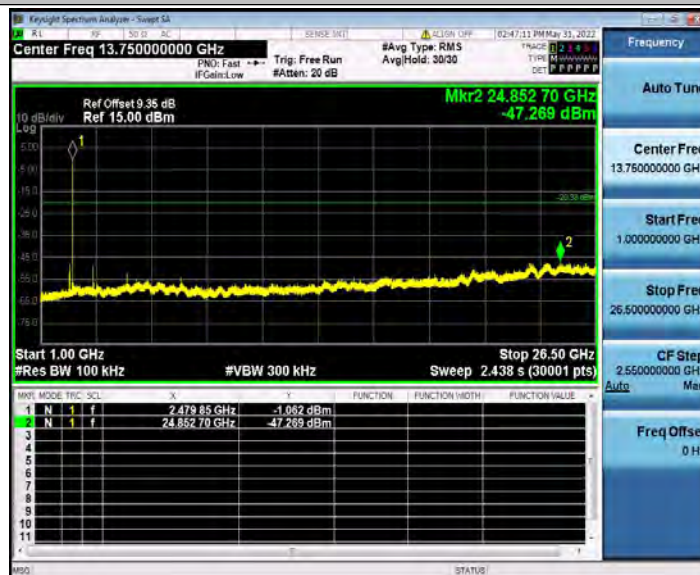
DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000



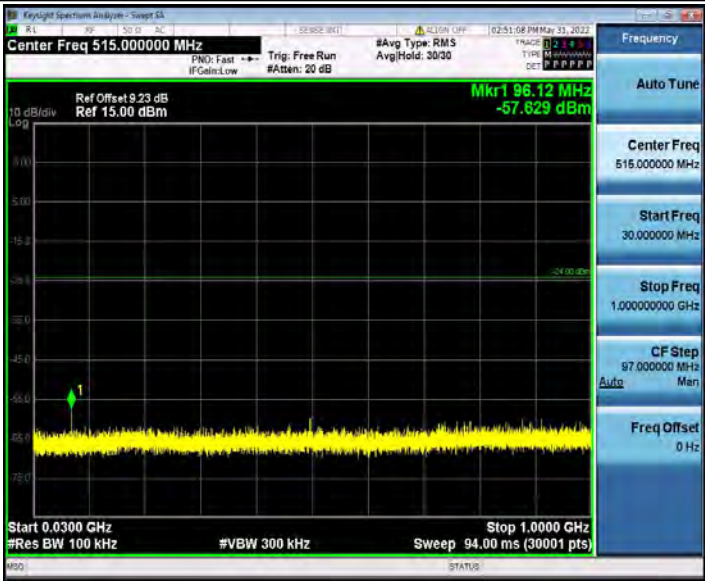
DH1_Ant1_2480_1000~26500



2DH1_Ant1_2402_0~Reference



2DH1_Ant1_2402_30~1000



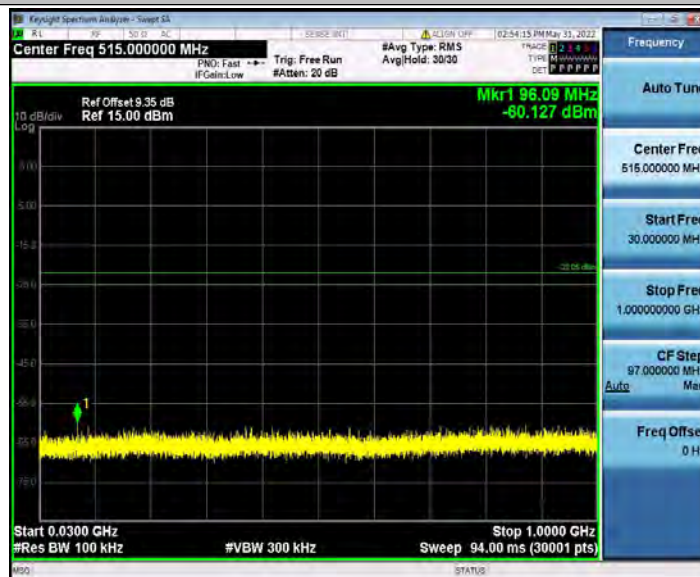
2DH1_Ant1_2402_1000~26500



2DH1_Ant1_2441_0~Reference



2DH1_Ant1_2441_30~1000



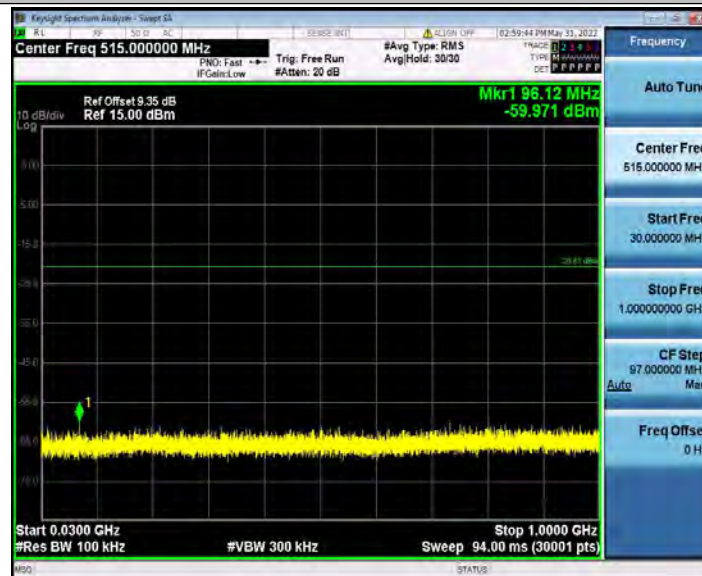
2DH1_Ant1_2441_1000~26500



2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



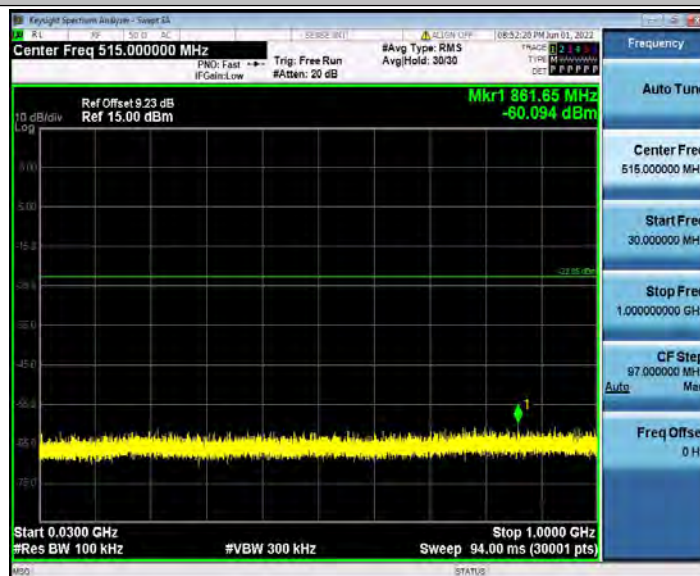
2DH1_Ant1_2480_1000~26500



3DH1_Ant1_2402_0~Reference



3DH1_Ant1_2402_30~1000



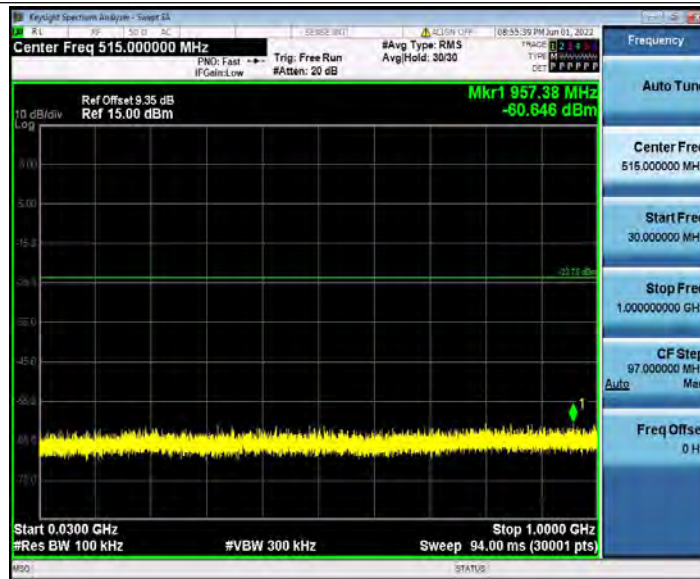
3DH1_Ant1_2402_1000~26500



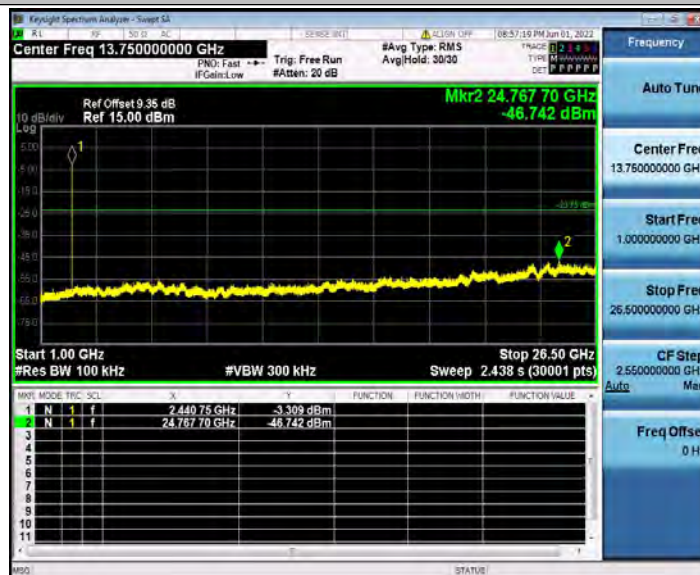
3DH1_Ant1_2441_0~Reference



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

