

<b>Case No. :</b> <u>GTS20231018019-1-1</u>
<b>Ambient Condition:</b> <u>23</u> °C, <u>49</u> %RH, Atmos100.1Kpa,
<b>Test Date:</b> <u>2023.11.6</u> <b>Test Engineer:</b> <u>Evan ouyang</u>

## Appendix A.1: 20dB Emission Bandwidth

### Test Result

Test Mode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.927	2401.601	2402.528	---	---
		2441	0.903	2440.613	2441.516	---	---
		2480	1.026	2479.598	2480.624	---	---
2DH1	Ant1	2402	1.278	2401.475	2402.753	---	---
		2441	1.290	2440.481	2441.771	---	---
		2480	1.278	2479.490	2480.768	---	---
3DH1	Ant1	2402	1.251	2401.490	2402.741	---	---
		2441	1.236	2440.490	2441.726	---	---
		2480	1.248	2479.493	2480.741	---	---

## 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

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.87033	2401.671	2402.541	---	---
		2441	0.88651	2440.658	2441.545	---	---
		2480	0.93468	2479.638	2480.573	---	---
2DH1	Ant1	2402	1.1685	2401.525	2402.693	---	---
		2441	1.1825	2440.520	2441.702	---	---
		2480	1.2000	2479.517	2480.717	---	---
3DH1	Ant1	2402	1.1623	2401.542	2402.704	---	---
		2441	1.1656	2440.539	2441.705	---	---
		2480	1.1732	2479.537	2480.710	---	---

## 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	1.35	≤20.97	PASS
		2441	2.54	≤20.97	PASS
		2480	2.00	≤20.97	PASS
2DH1	Ant1	2402	2.03	≤20.97	PASS
		2441	3.27	≤20.97	PASS
		2480	2.72	≤20.97	PASS
3DH1	Ant1	2402	2.68	≤20.97	PASS
		2441	3.79	≤20.97	PASS
		2480	3.20	≤20.97	PASS

## Appendix A.4: Carrier frequency separation

### Test Result

Test Mode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.012	$\geq 0.684$	PASS
		Hop_2441	1.01	$\geq 0.684$	PASS
		Hop_2480	1.004	$\geq 0.684$	PASS
2DH1	Ant1	Hop_2402	1.004	$\geq 0.860$	PASS
		Hop_2441	0.992	$\geq 0.860$	PASS
		Hop_2480	1.016	$\geq 0.860$	PASS
3DH1	Ant1	Hop_2402	1.004	$\geq 0.834$	PASS
		Hop_2441	0.998	$\geq 0.834$	PASS
		Hop_2480	1.002	$\geq 0.834$	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

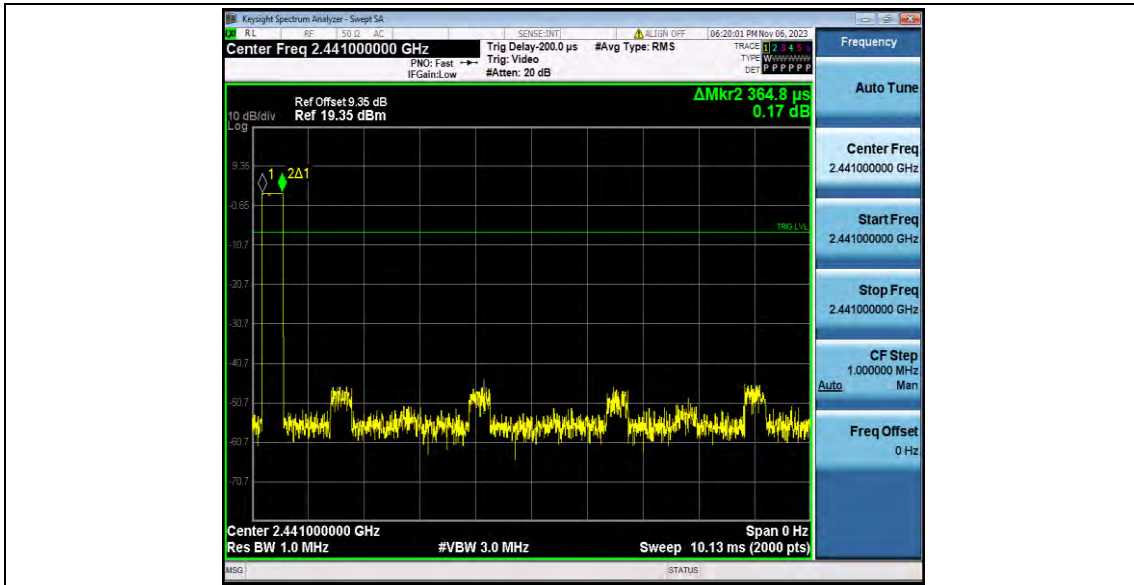


## Appendix A.5: Time of occupancy

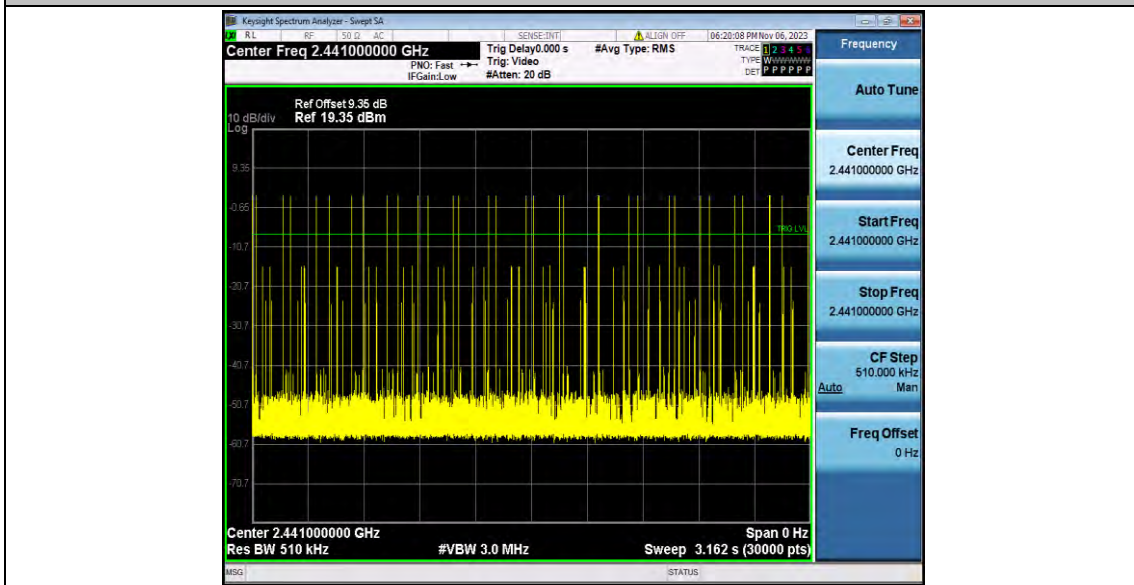
### Test Result

Test Mode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.36	330	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.63	220	0.358	≤0.4	PASS
DH5	Ant1	Hop	2.87	120	0.344	≤0.4	PASS
2DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.63	120	0.195	≤0.4	PASS
2DH5	Ant1	Hop	2.88	90	0.259	≤0.4	PASS
3DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
3DH3	Ant1	Hop	1.63	150	0.244	≤0.4	PASS
3DH5	Ant1	Hop	2.88	90	0.259	≤0.4	PASS

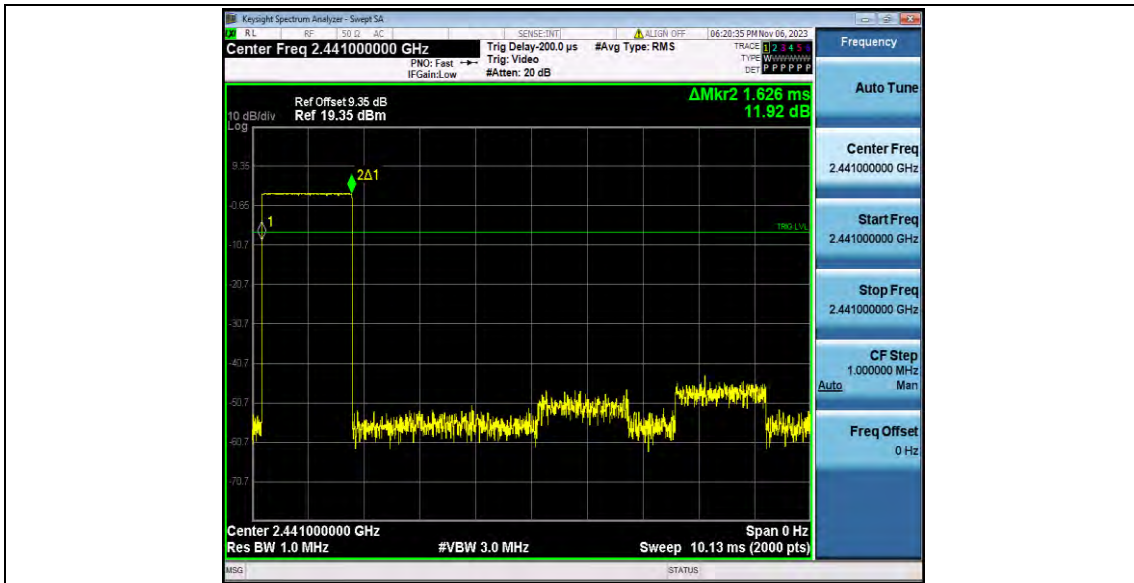
## Test Graphs



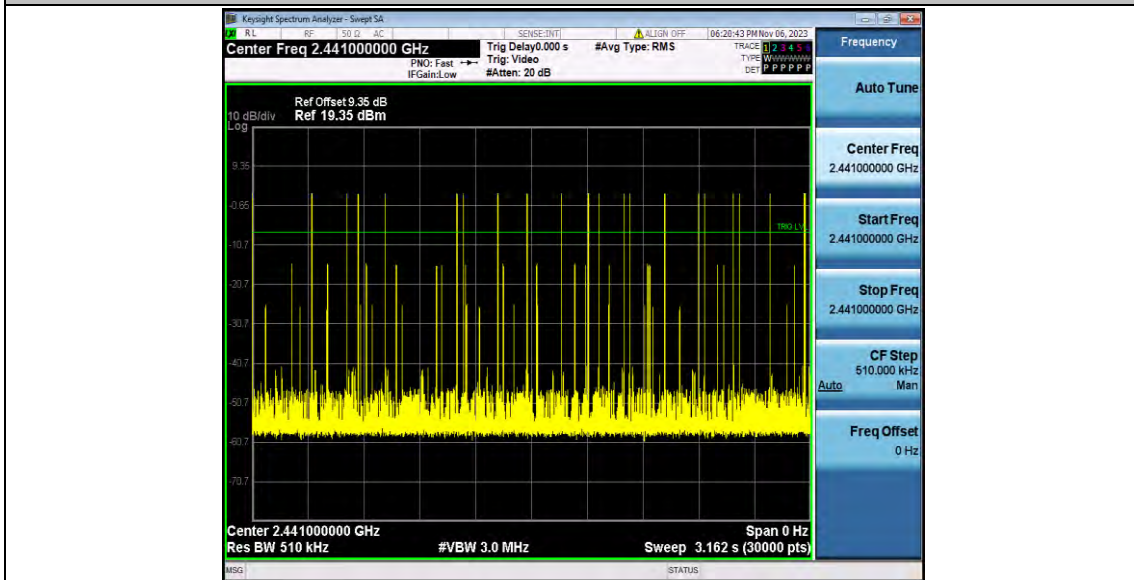
DH1\_Ant1\_Hop



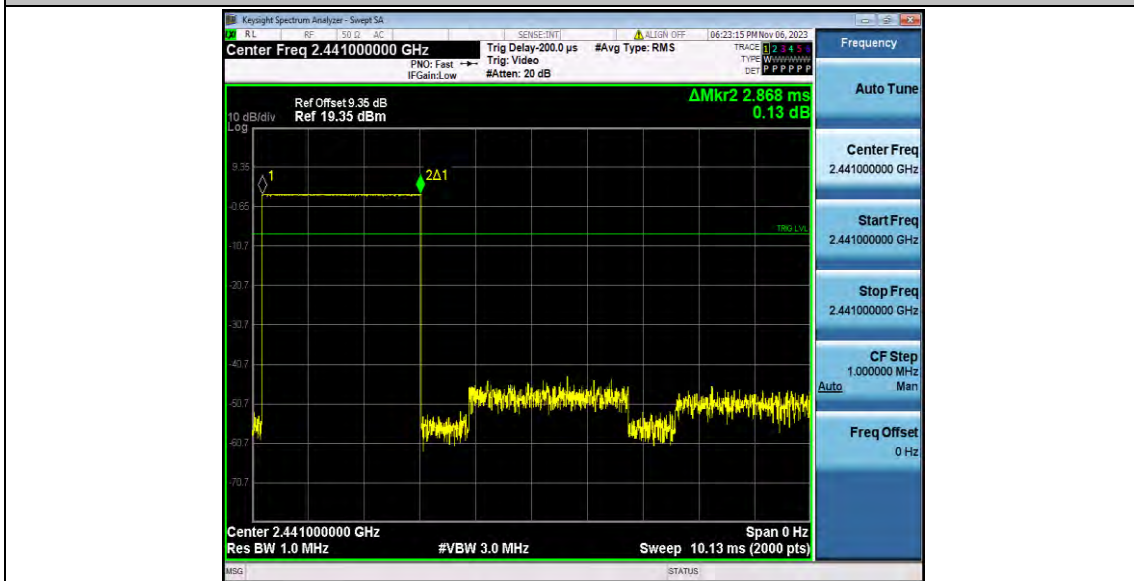
DH1\_Ant1\_Hop



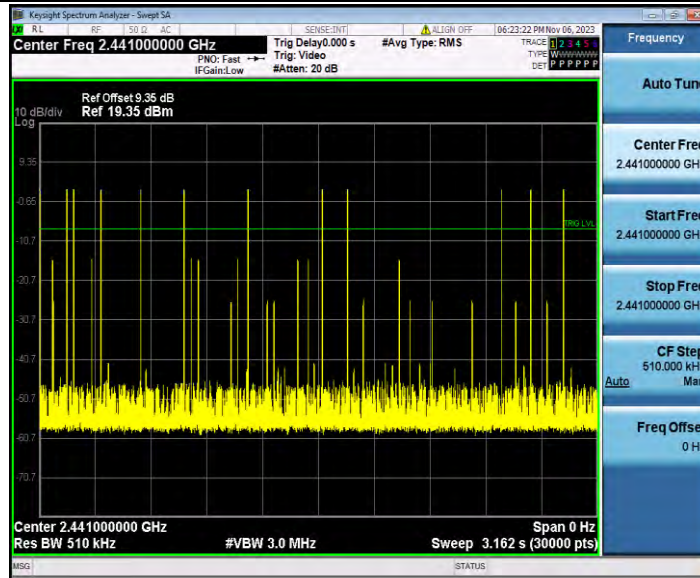
DH3\_Ant1\_Hop



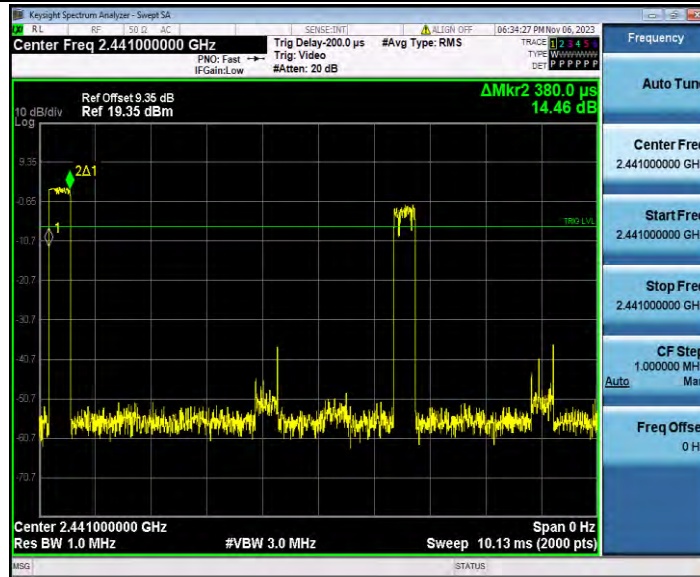
DH3\_Ant1\_Hop



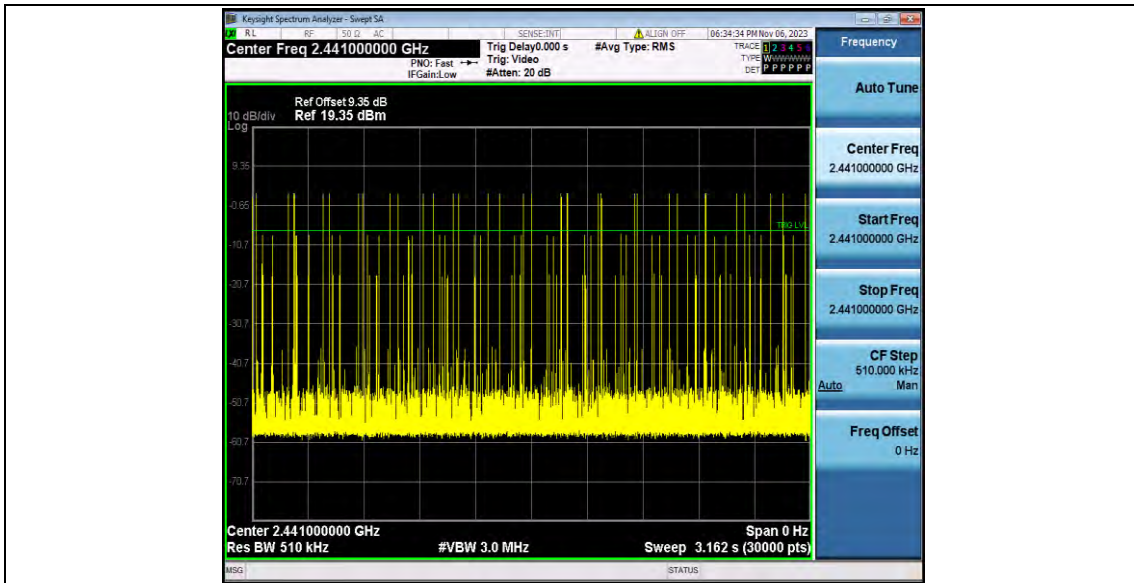
DH5\_Ant1\_Hop



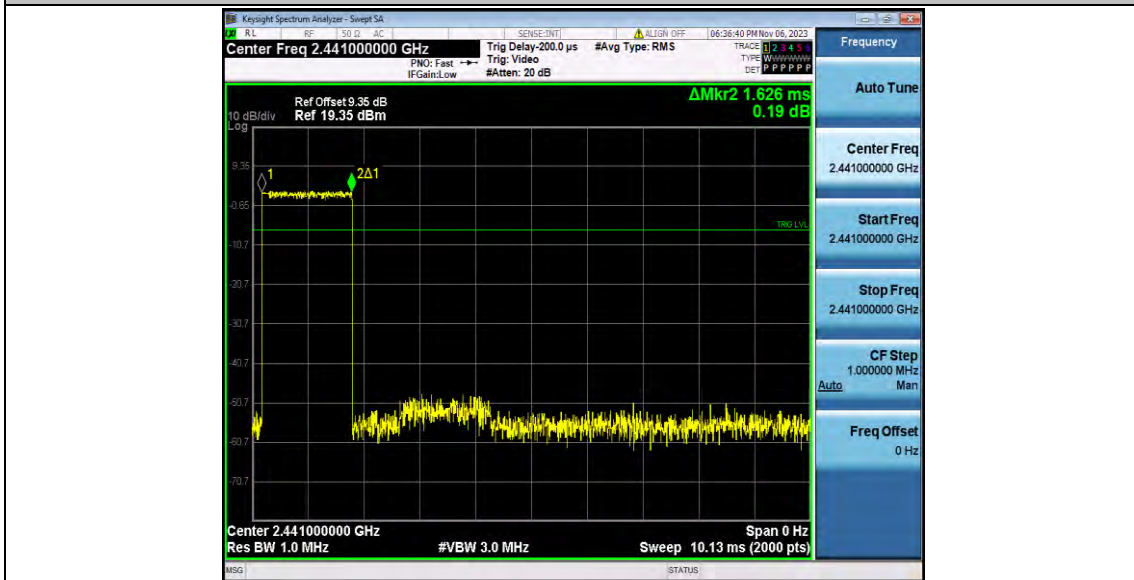
DH5\_Ant1\_Hop



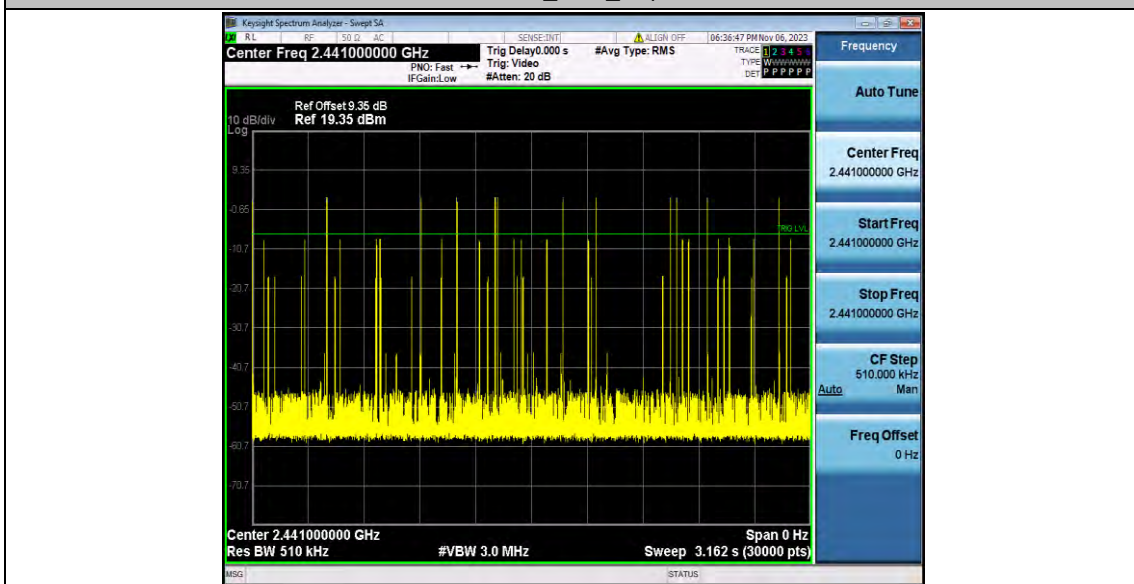
2DH1\_Ant1\_Hop



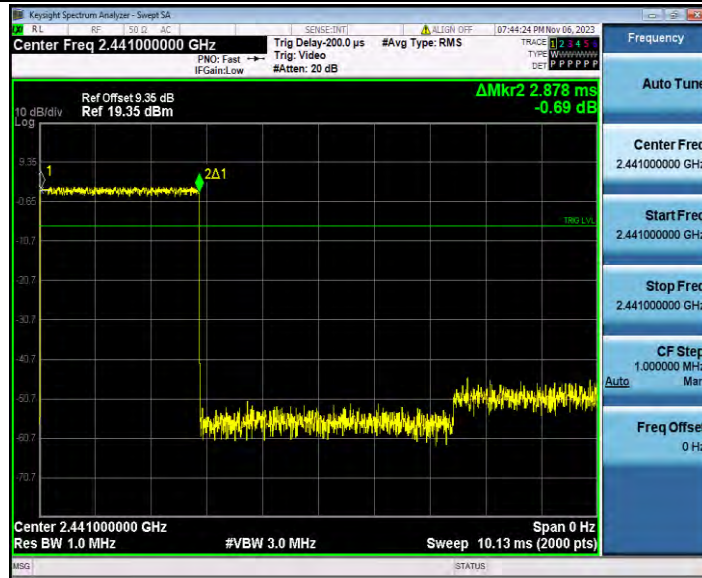
2DH1\_Ant1\_Hop



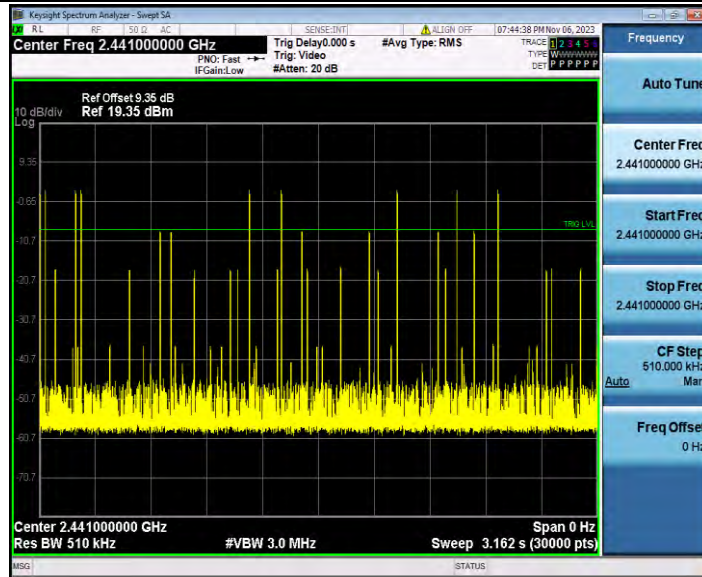
2DH3\_Ant1\_Hop



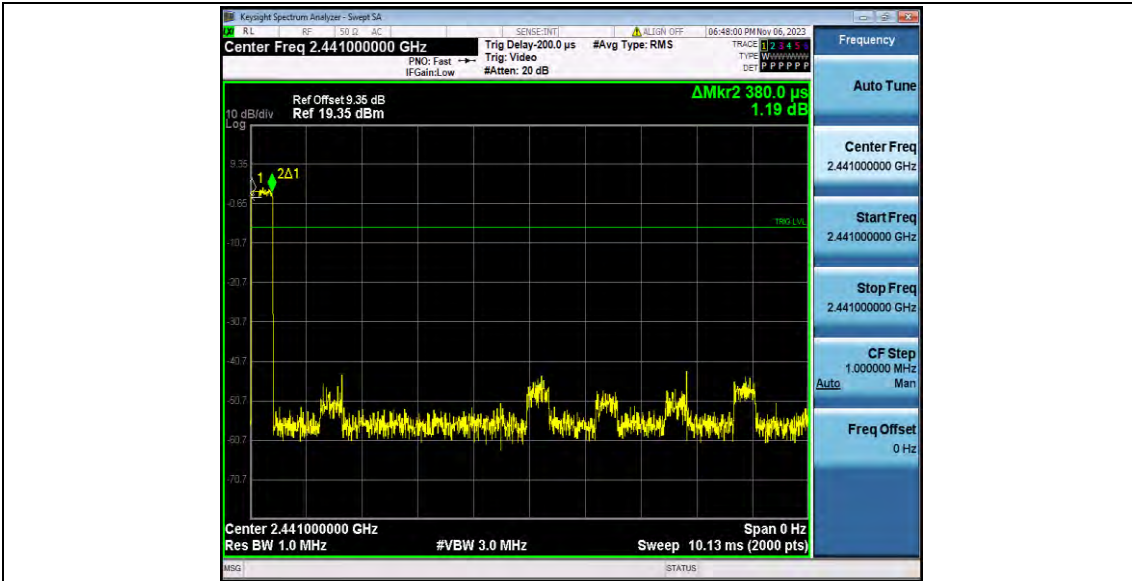
2DH3\_Ant1\_Hop



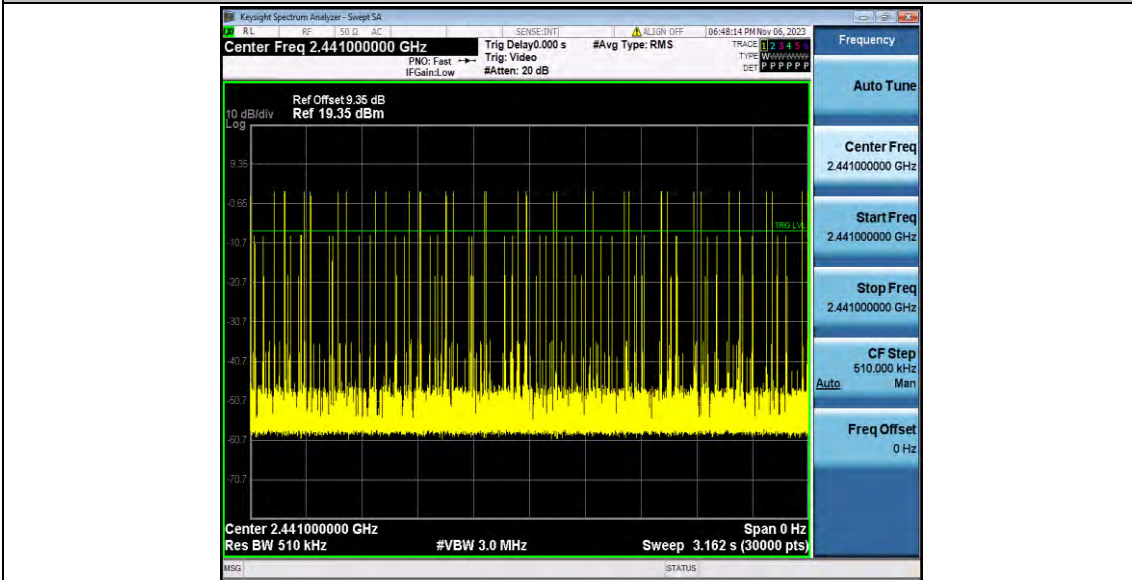
2DH5\_Ant1\_Hop



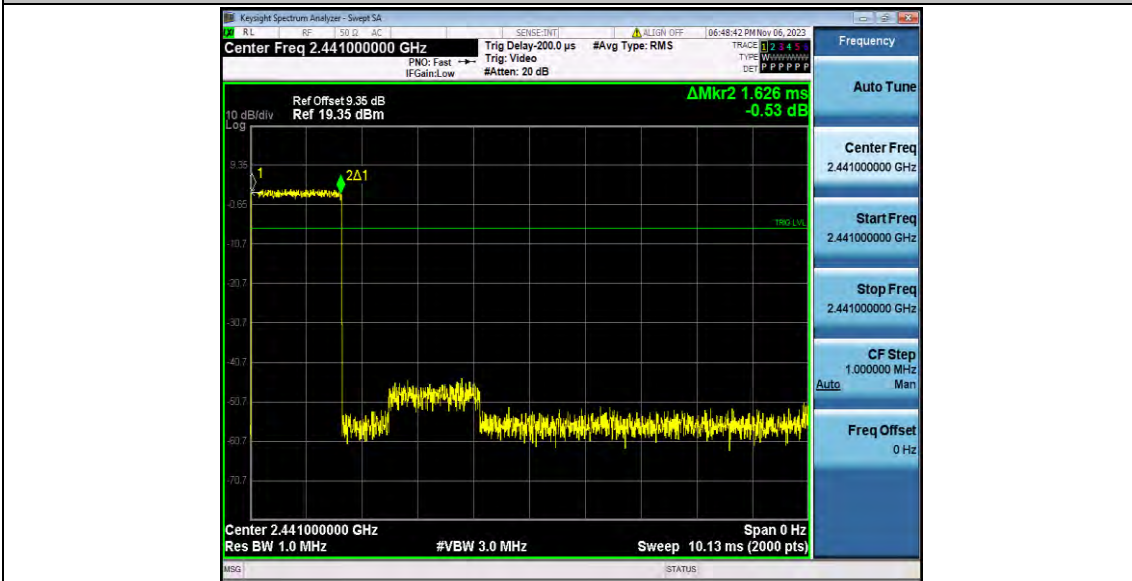
2DH5\_Ant1\_Hop



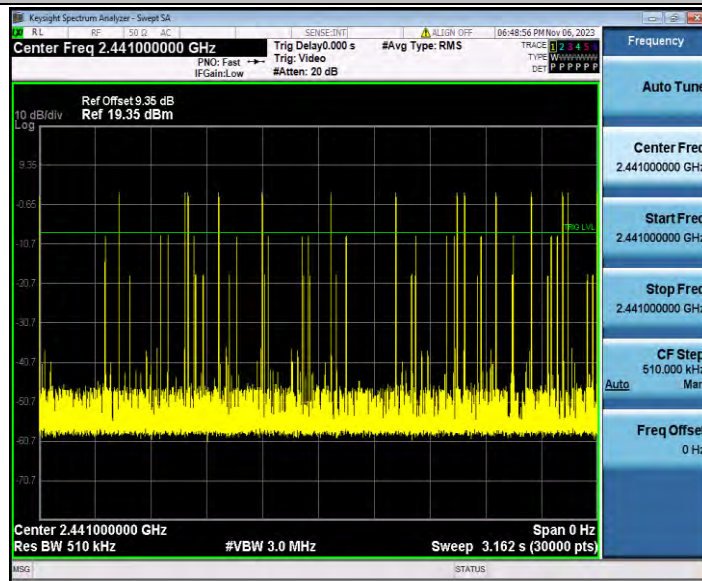
3DH1\_Ant1\_Hop



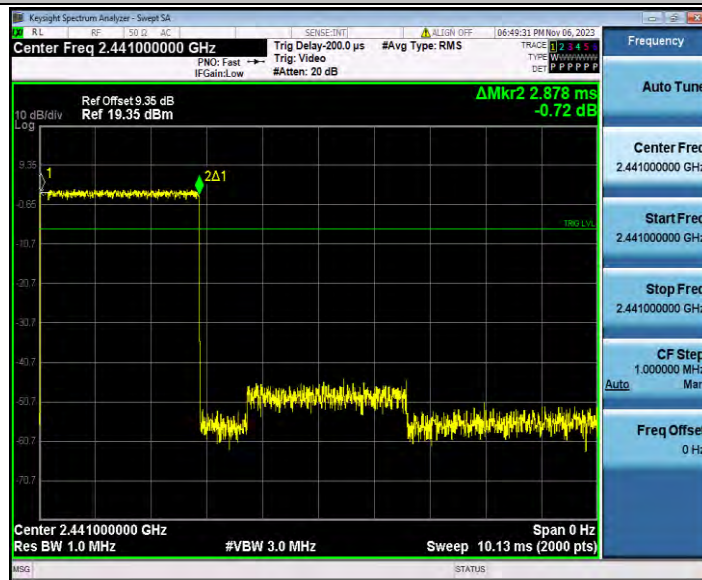
3DH1\_Ant1\_Hop



3DH3\_Ant1\_Hop

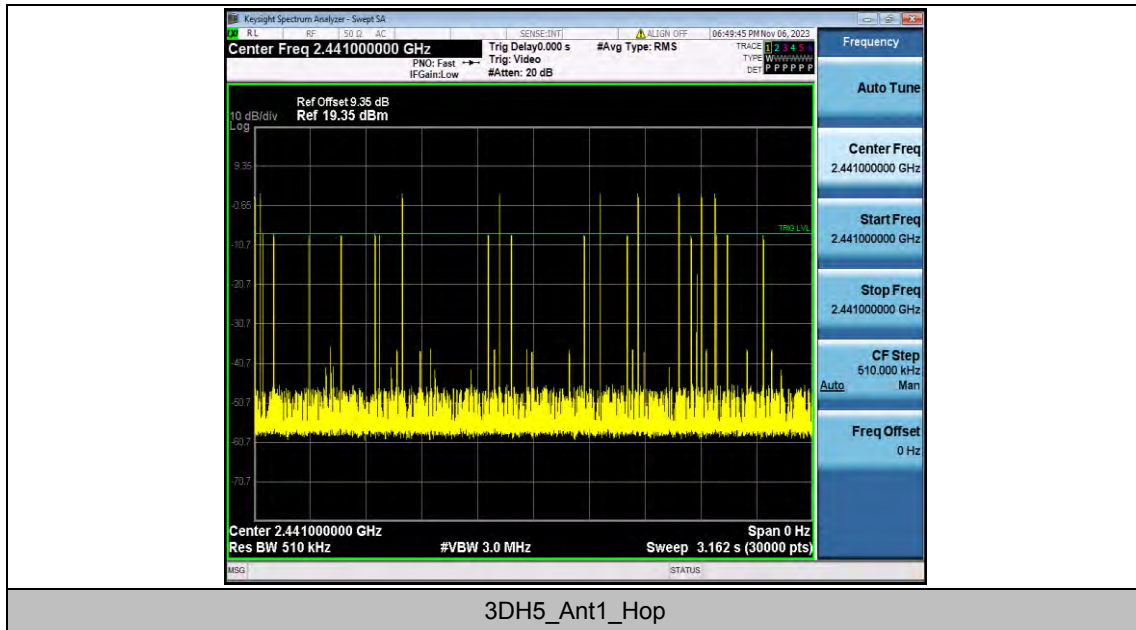


3DH3\_Ant1\_Hop



3DH5\_Ant1\_Hop





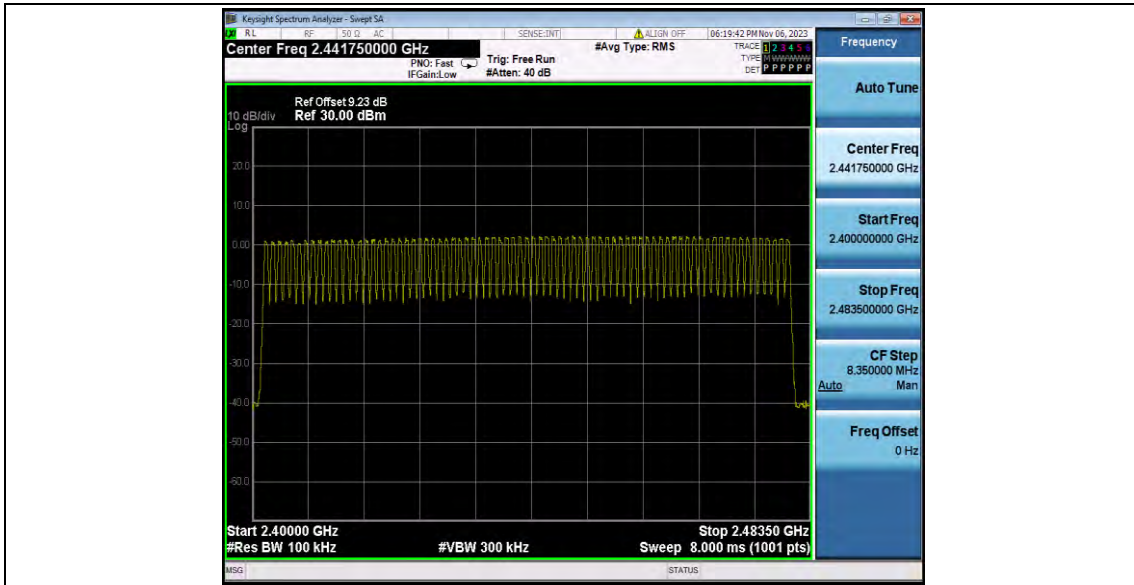
3DH5\_Ant1\_Hop

## Appendix A.6: Number of hopping channels

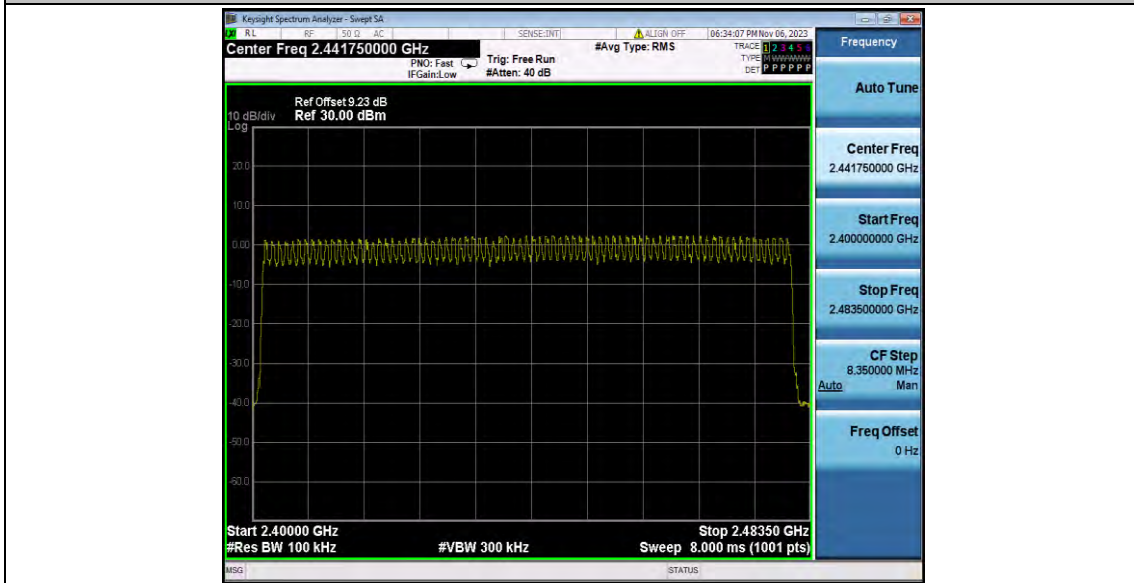
### Test Result

Test Mode	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

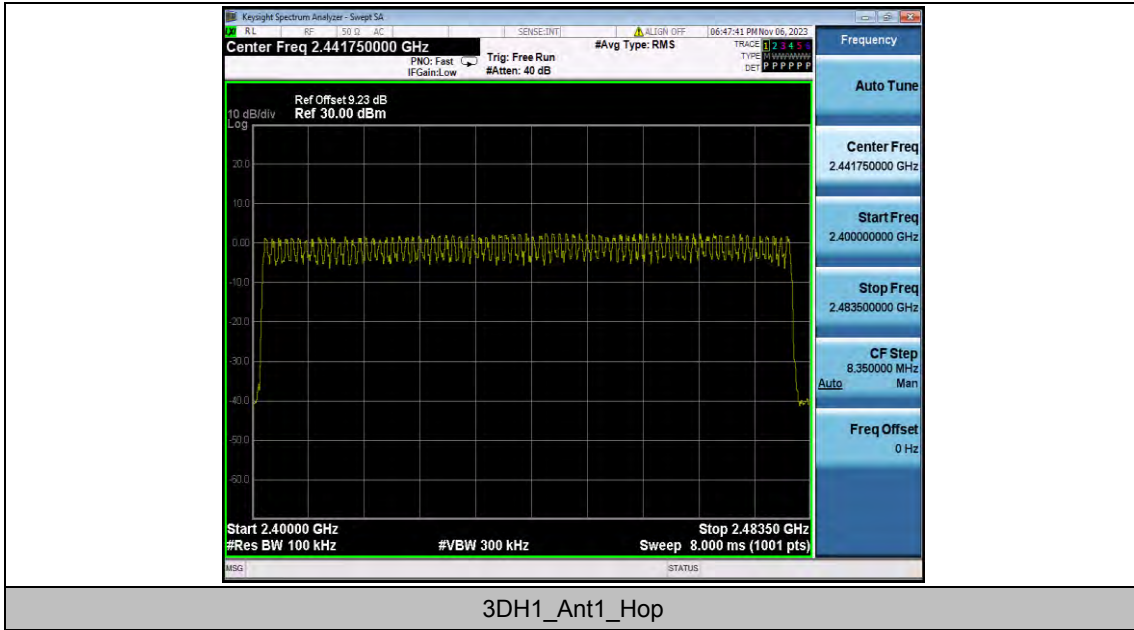
## Test Graphs



DH1\_Ant1\_Hop



2DH1\_Ant1\_Hop

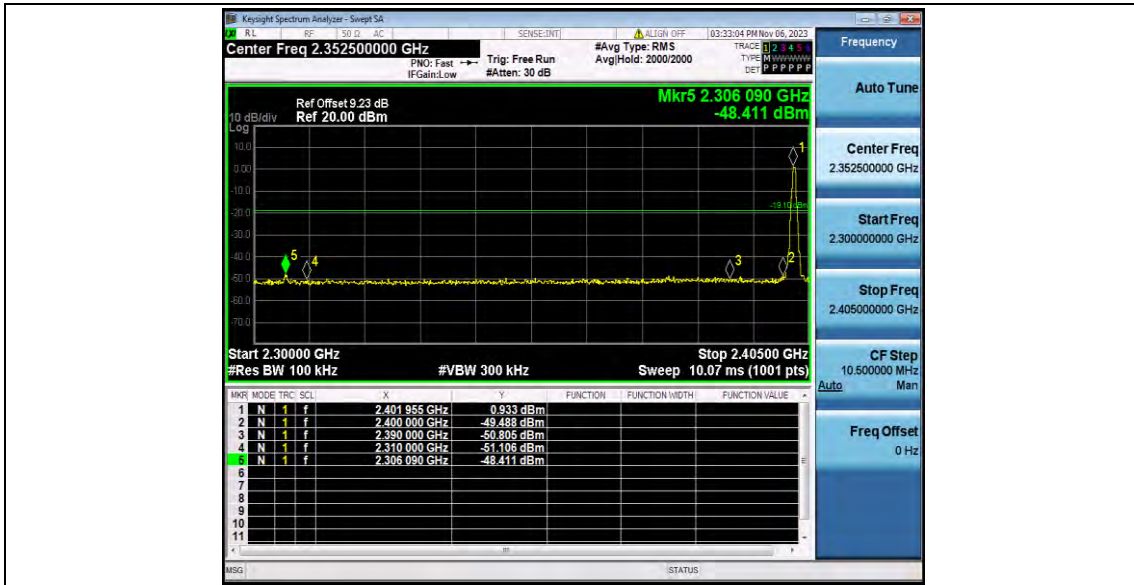


## Appendix A.7: Band edge measurements

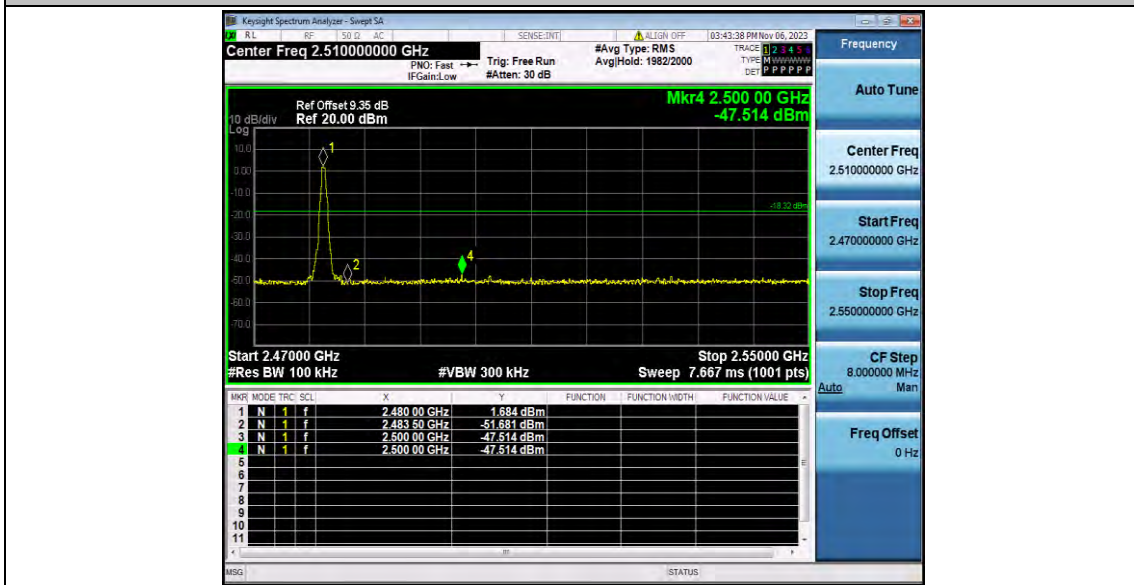
### Test Result

Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	0.90	-48.41	≤-19.1	PASS
		High	2480	1.68	-47.51	≤-18.32	PASS
		Low	Hop_2402	1.00	-48	≤-19	PASS
		High	Hop_2480	2.03	-46.08	≤-17.97	PASS
2DH1	Ant1	Low	2402	1.01	-35.82	≤-18.99	PASS
		High	2480	1.75	-48.79	≤-18.25	PASS
		Low	Hop_2402	1.11	-46.73	≤-18.89	PASS
		High	Hop_2480	1.87	-48.49	≤-18.13	PASS
3DH1	Ant1	Low	2402	1.13	-48.33	≤-18.87	PASS
		High	2480	1.76	-48.1	≤-18.25	PASS
		Low	Hop_2402	1.19	-48.71	≤-18.81	PASS
		High	Hop_2480	1.77	-44.74	≤-18.23	PASS

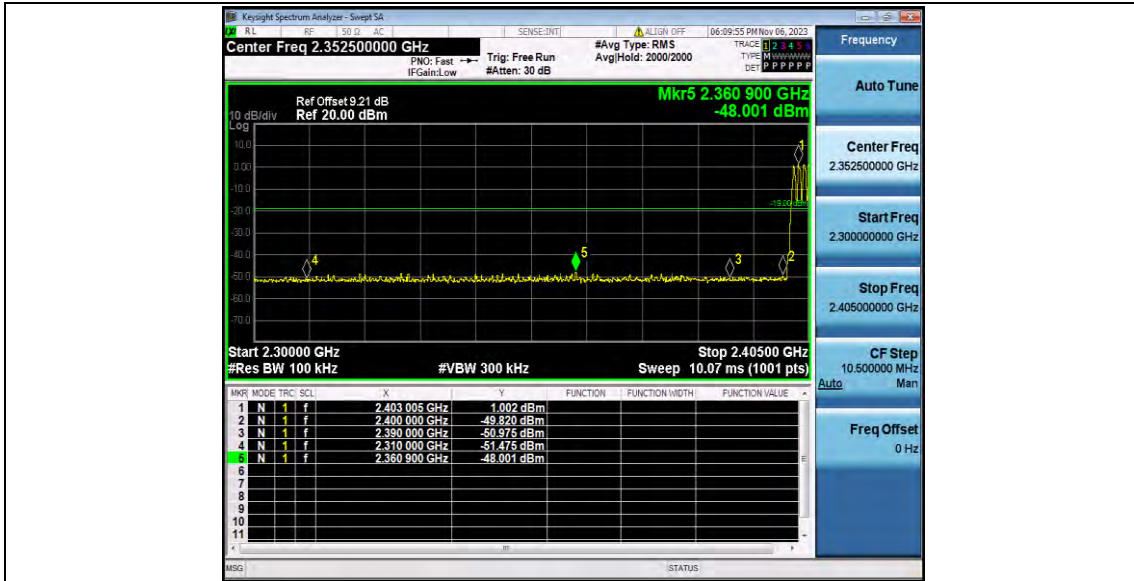
## Test Graphs



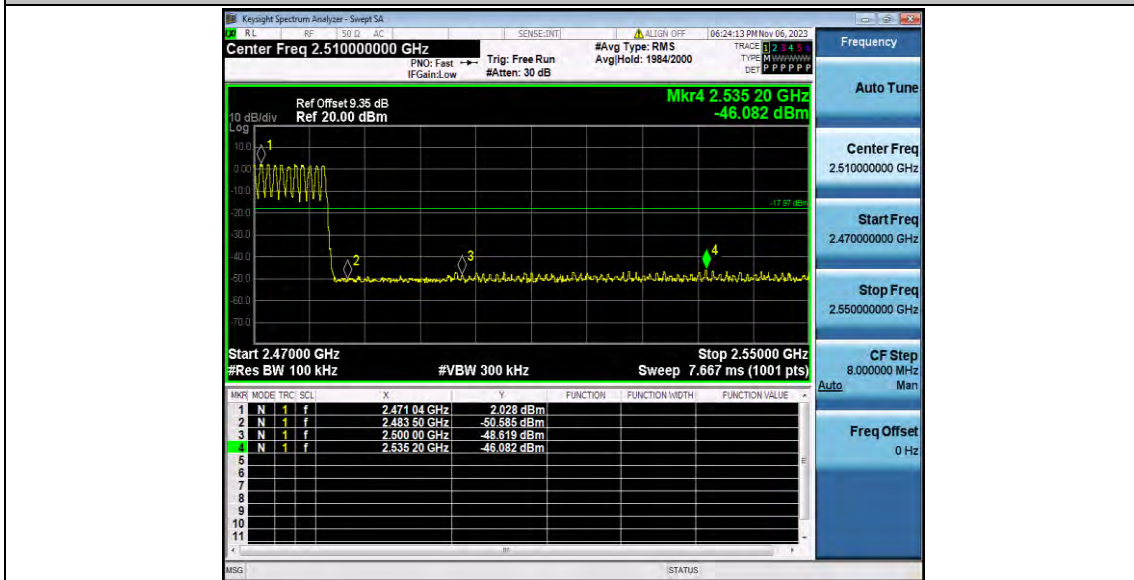
DH1\_Ant1\_Low\_2402



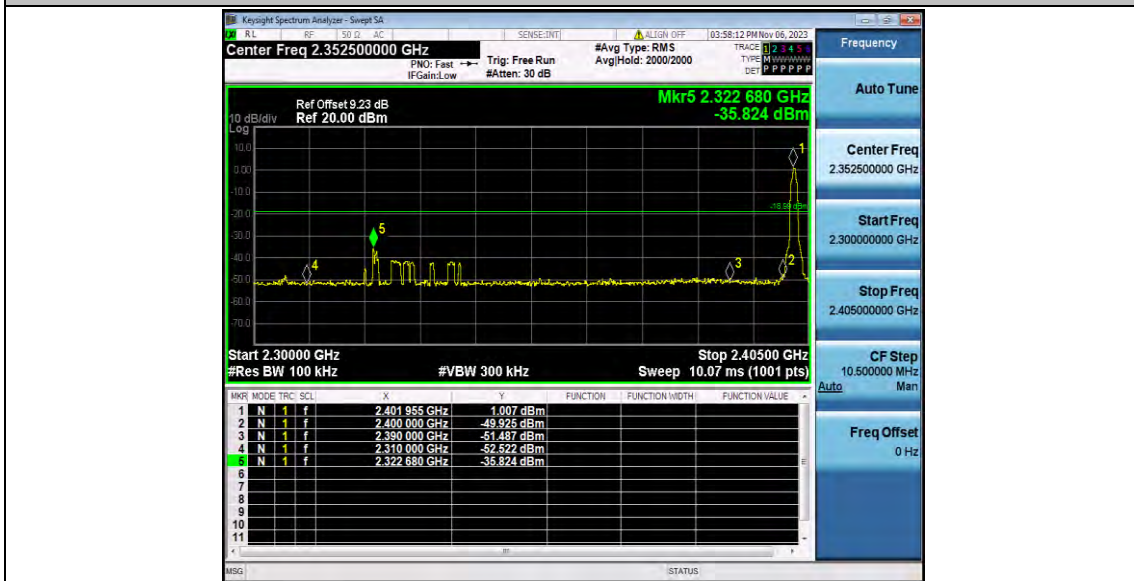
DH1\_Ant1\_High\_2480



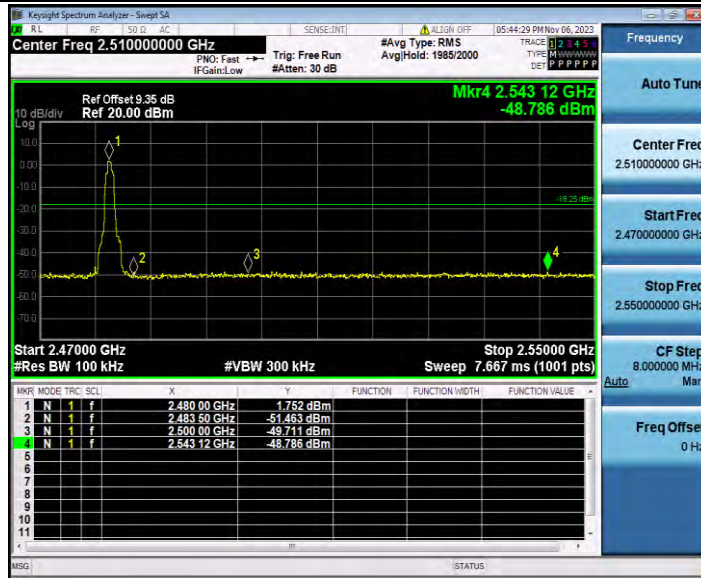
DH1\_Ant1\_Low\_Hop\_2402



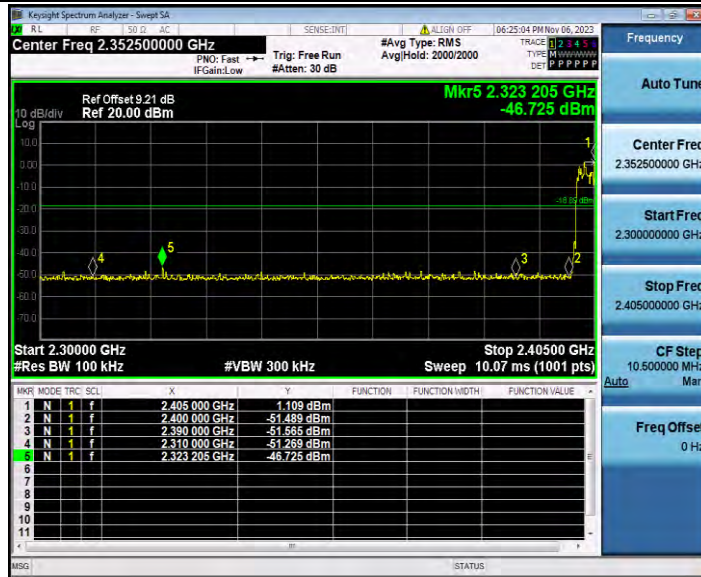
DH1\_Ant1\_High\_Hop\_2480



2DH1\_Ant1\_Low\_2402

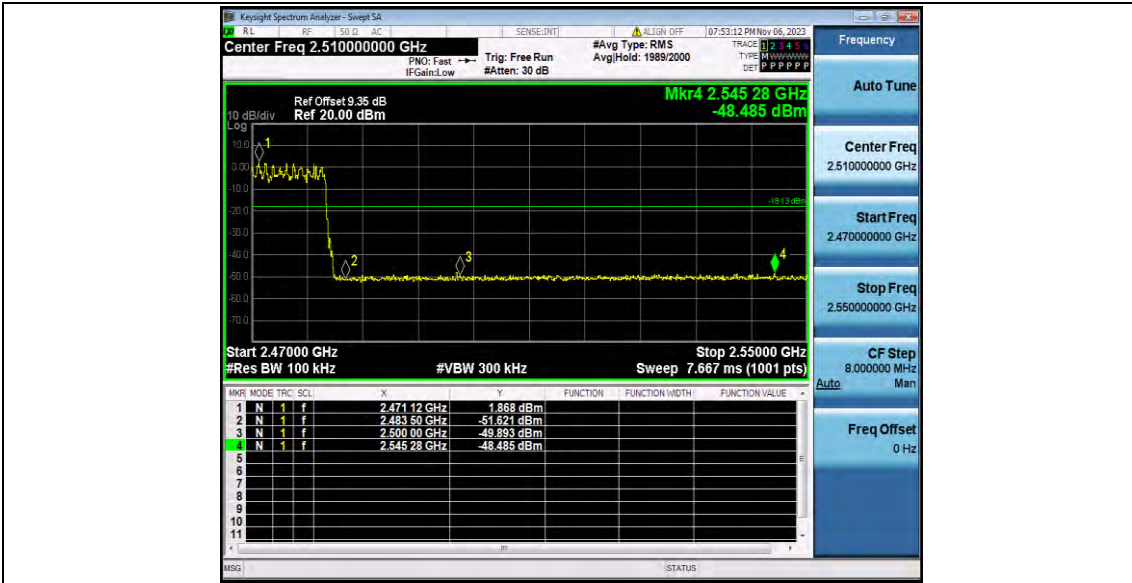


2DH1\_Ant1\_High\_2480

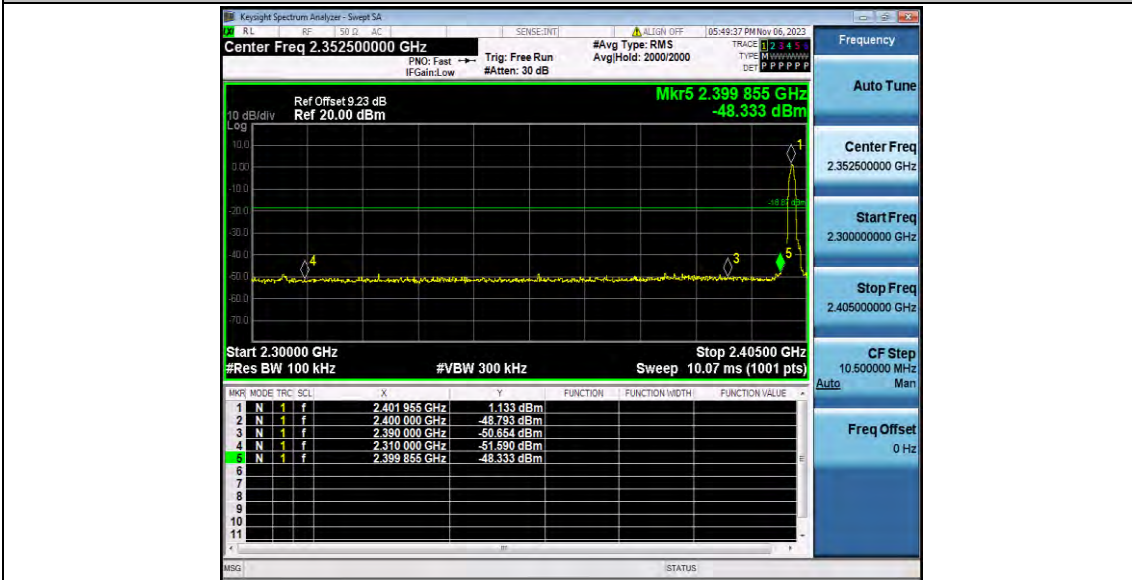


2DH1\_Ant1\_Low\_Hop\_2402

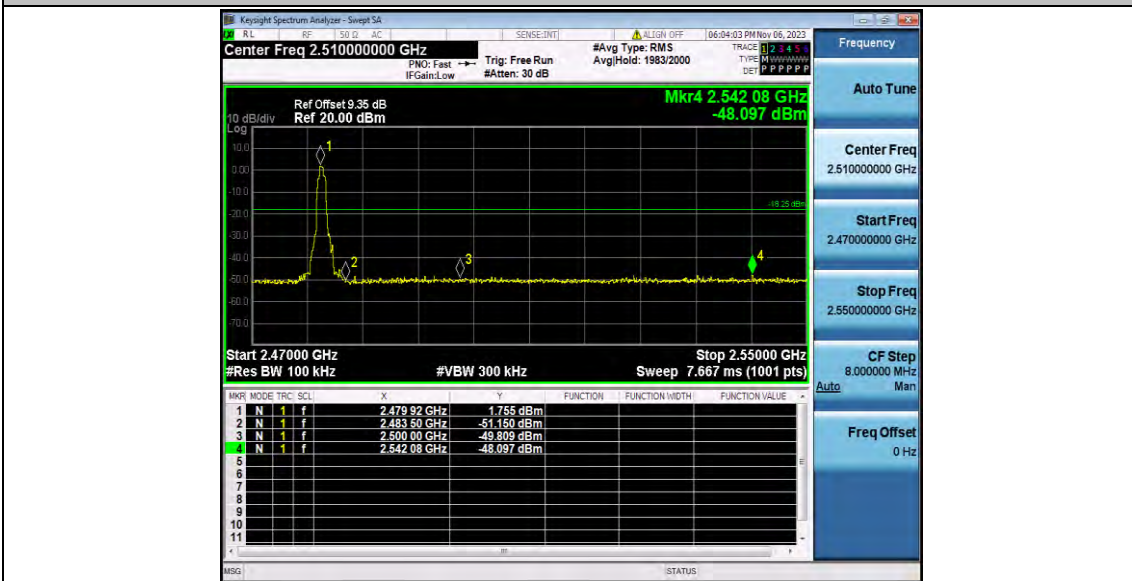




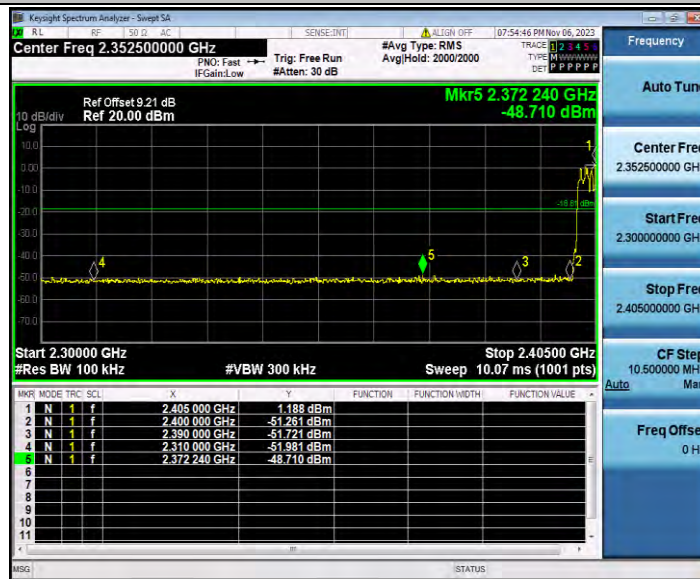
2D H1\_Ant1\_High\_Hop\_2480



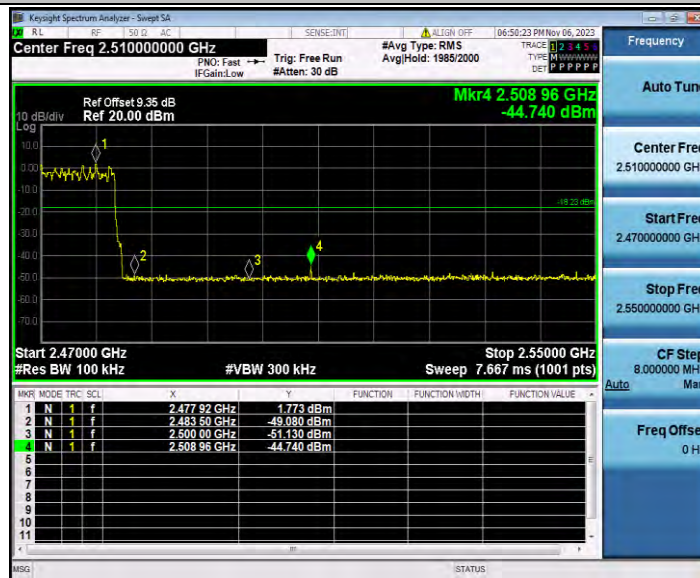
3D H1\_Ant1\_Low\_2402



3DH1\_Ant1\_High\_2480



3DH1\_Ant1\_Low\_Hop\_2402



3DH1\_Ant1\_High\_Hop\_2480

## Appendix A.8: Conducted Spurious Emission

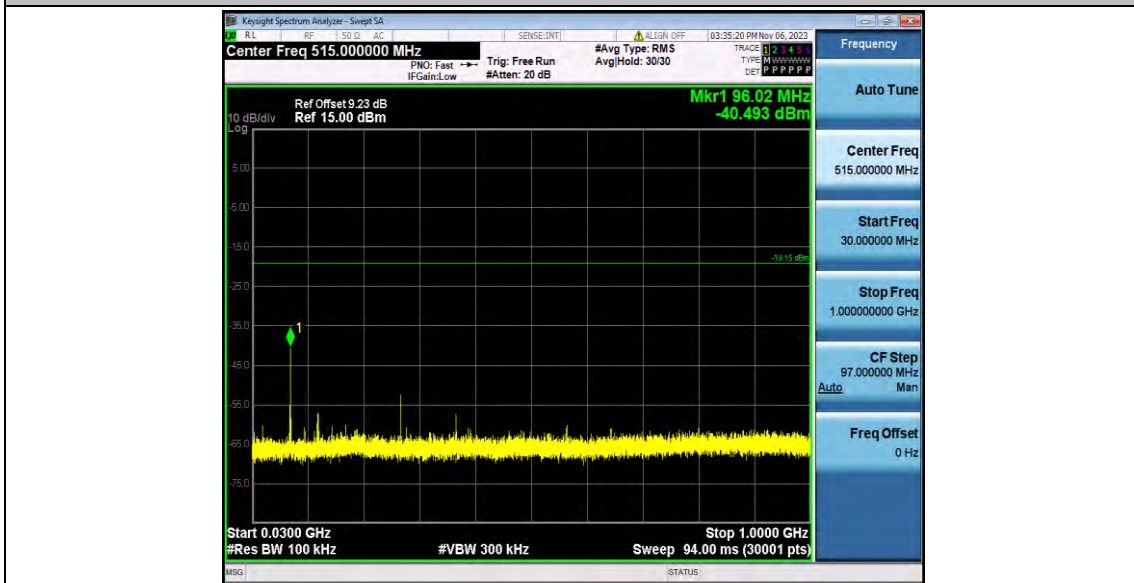
### Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-40.49	≤-19.15	PASS
			1000~26500	0.85	-46.52	≤-19.15	PASS
		2441	Reference	1.51	1.51	---	PASS
			30~1000	1.51	-40.77	≤-18.49	PASS
			1000~26500	1.51	-41.51	≤-18.49	PASS
		2480	Reference	0.97	0.97	---	PASS
			30~1000	0.97	-40.23	≤-19.03	PASS
			1000~26500	0.97	-40.92	≤-19.03	PASS
2DH1	Ant1	2402	Reference	0.46	0.46	---	PASS
			30~1000	0.46	-40.62	≤-19.54	PASS
			1000~26500	0.46	-43.48	≤-19.54	PASS
		2441	Reference	1.55	1.55	---	PASS
			30~1000	1.55	-39.92	≤-18.45	PASS
			1000~26500	1.55	-44.19	≤-18.45	PASS
		2480	Reference	1.11	1.11	---	PASS
			30~1000	1.11	-40.52	≤-18.89	PASS
			1000~26500	1.11	-43.96	≤-18.89	PASS
3DH1	Ant1	2402	Reference	0.04	0.04	---	PASS
			30~1000	0.04	-51.46	≤-19.96	PASS
			1000~26500	0.04	-43.99	≤-19.96	PASS
		2441	Reference	2.16	2.16	---	PASS
			30~1000	2.16	-51.81	≤-17.84	PASS
			1000~26500	2.16	-40.83	≤-17.84	PASS
		2480	Reference	0.67	0.67	---	PASS
			30~1000	0.67	-40.14	≤-19.33	PASS
			1000~26500	0.67	-41.91	≤-19.33	PASS

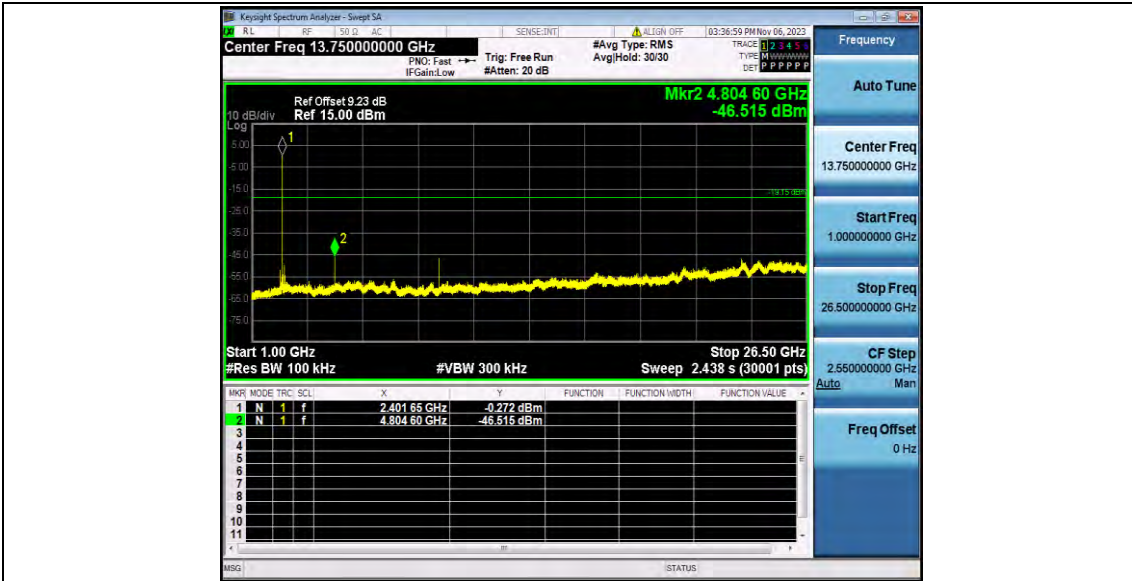
## Test Graphs



DH1\_Ant1\_2402\_0~Reference



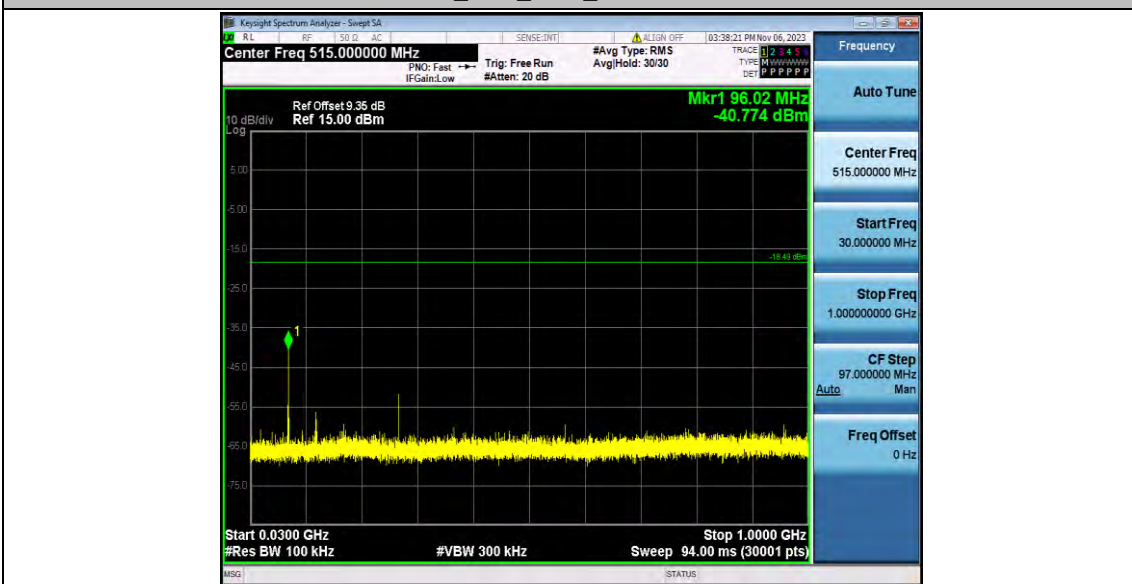
DH1\_Ant1\_2402\_30~1000



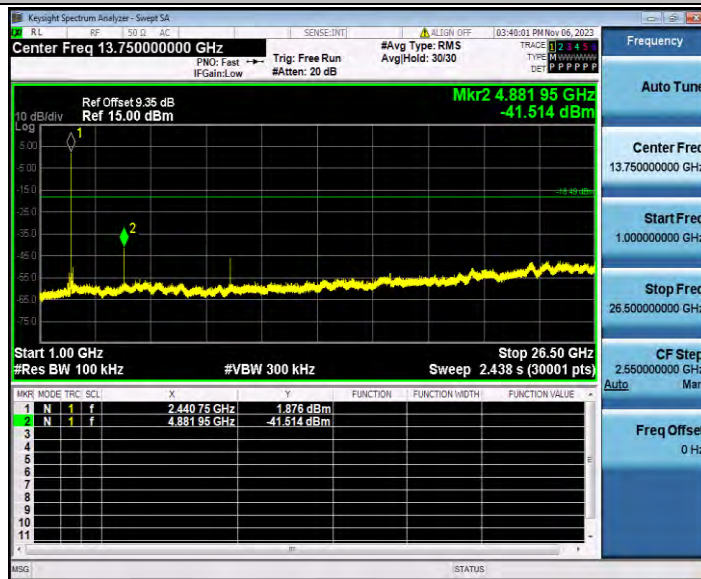
DH1\_Ant1\_2402\_1000~26500



DH1\_Ant1\_2441\_0~Reference



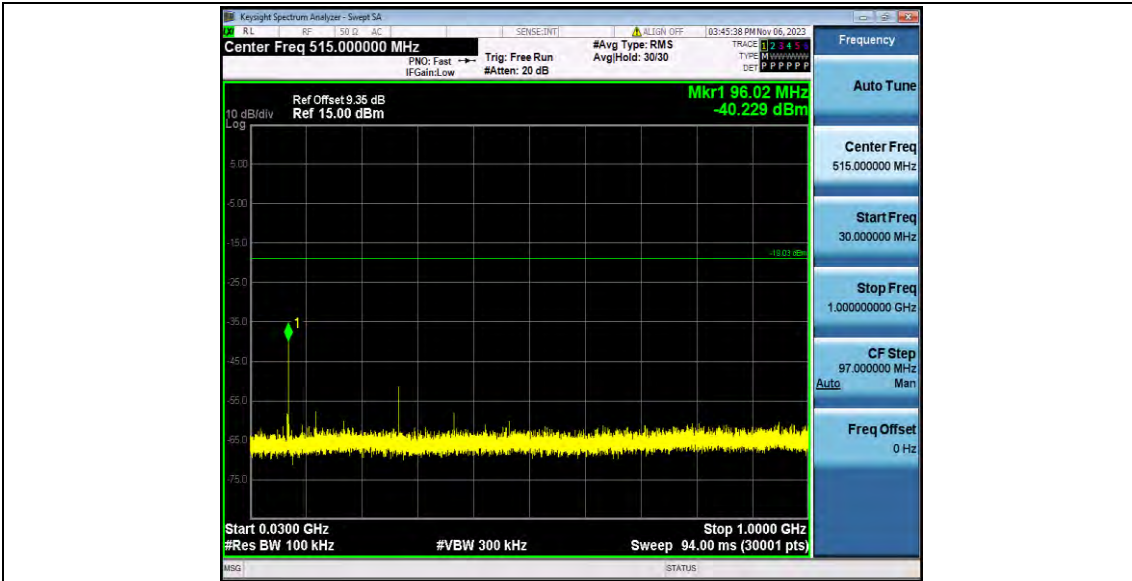
DH1\_Ant1\_2441\_30~1000



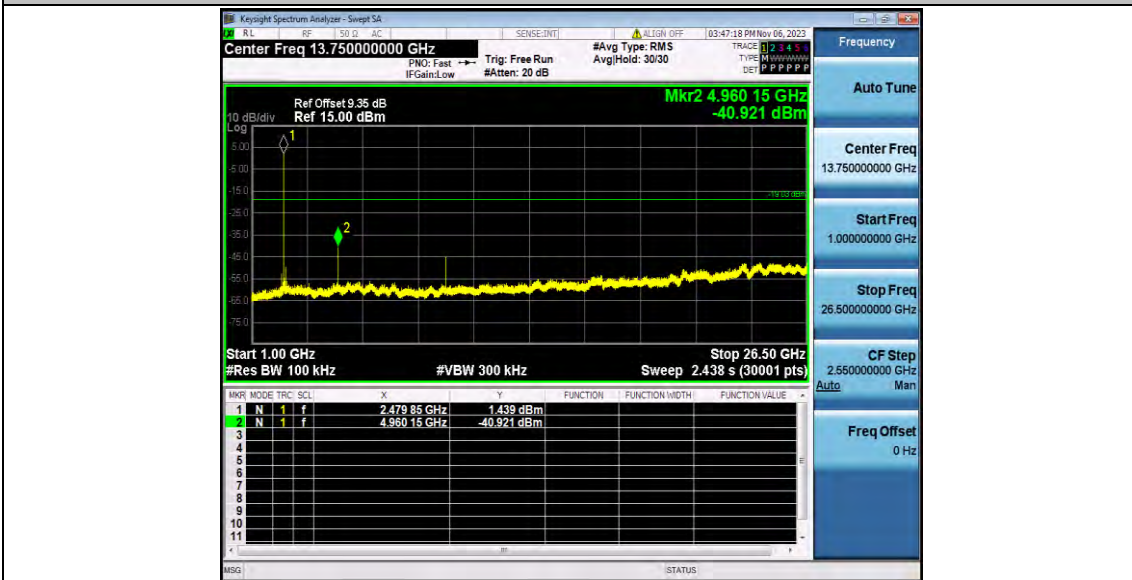
DH1\_Ant1\_2441\_1000~26500



DH1\_Ant1\_2480\_0~Reference



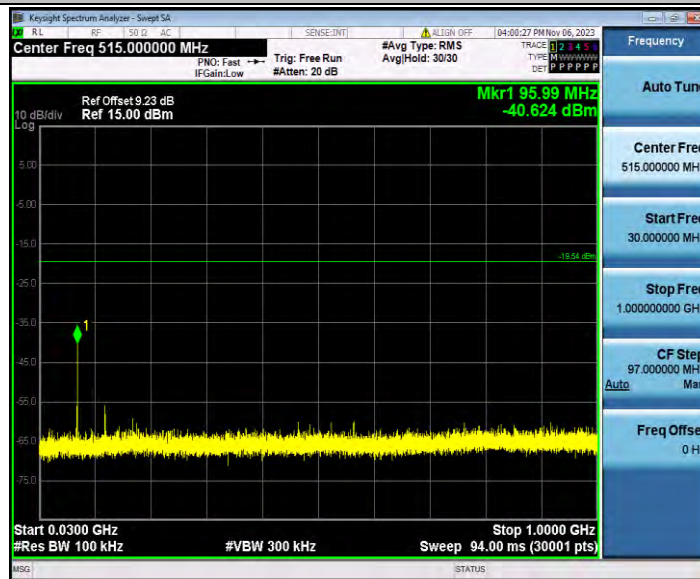
DH1\_Ant1\_2480\_30~1000



DH1\_Ant1\_2480\_1000~26500



2DH1\_Ant1\_2402\_0~Reference



2DH1\_Ant1\_2402\_30~1000

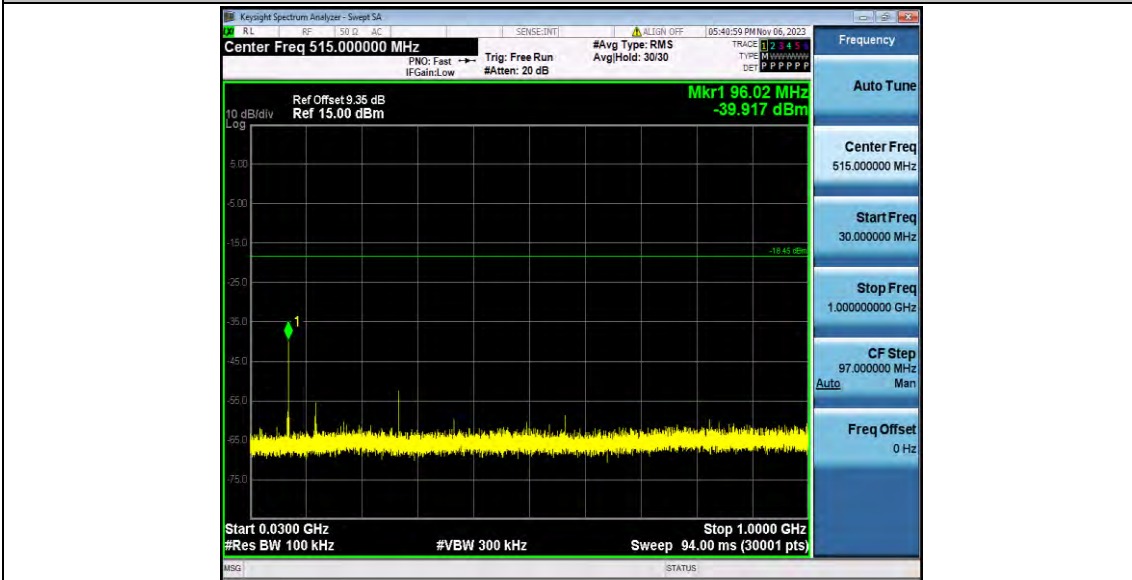


2DH1\_Ant1\_2402\_1000~26500

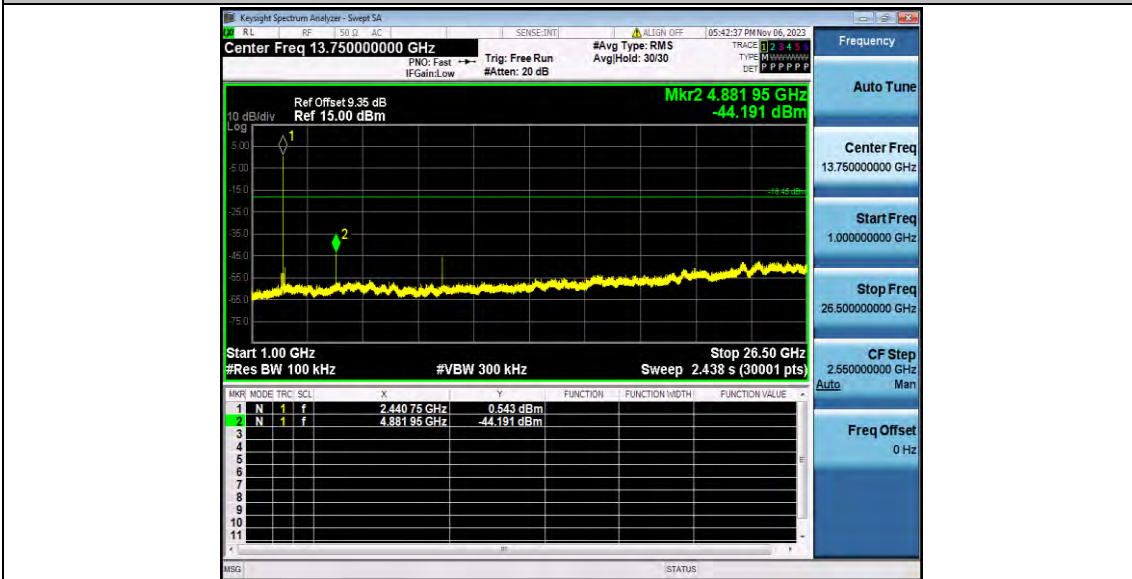




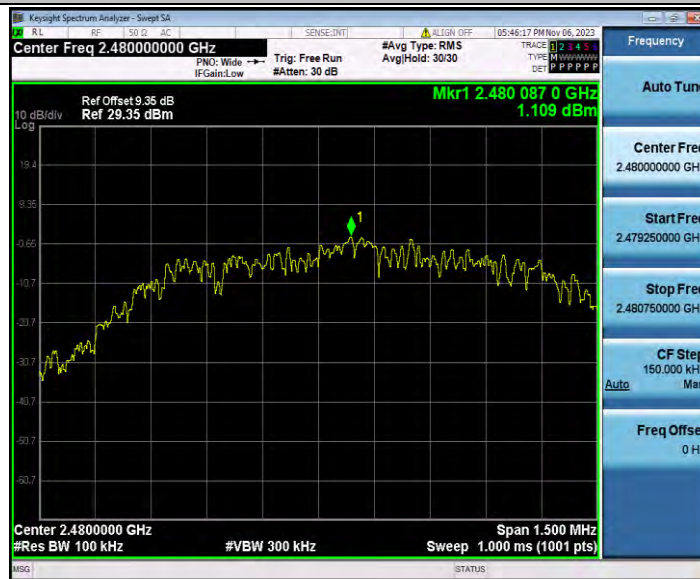
2DH1\_Ant1\_2441\_0~Reference



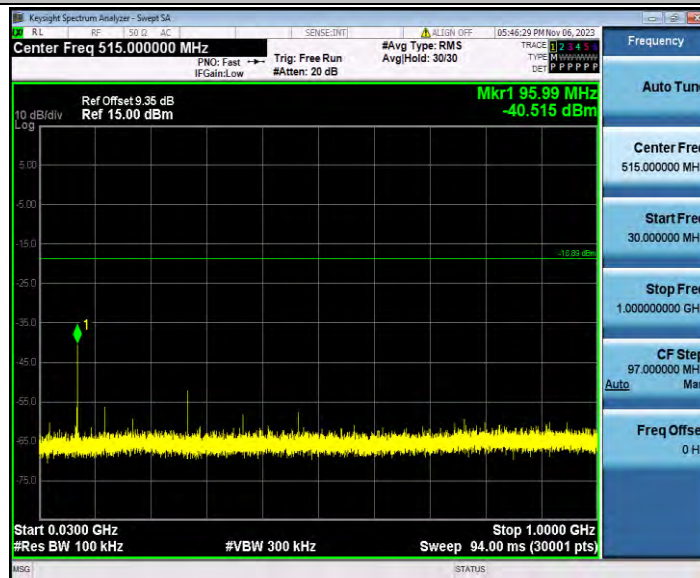
2DH1\_Ant1\_2441\_30~1000



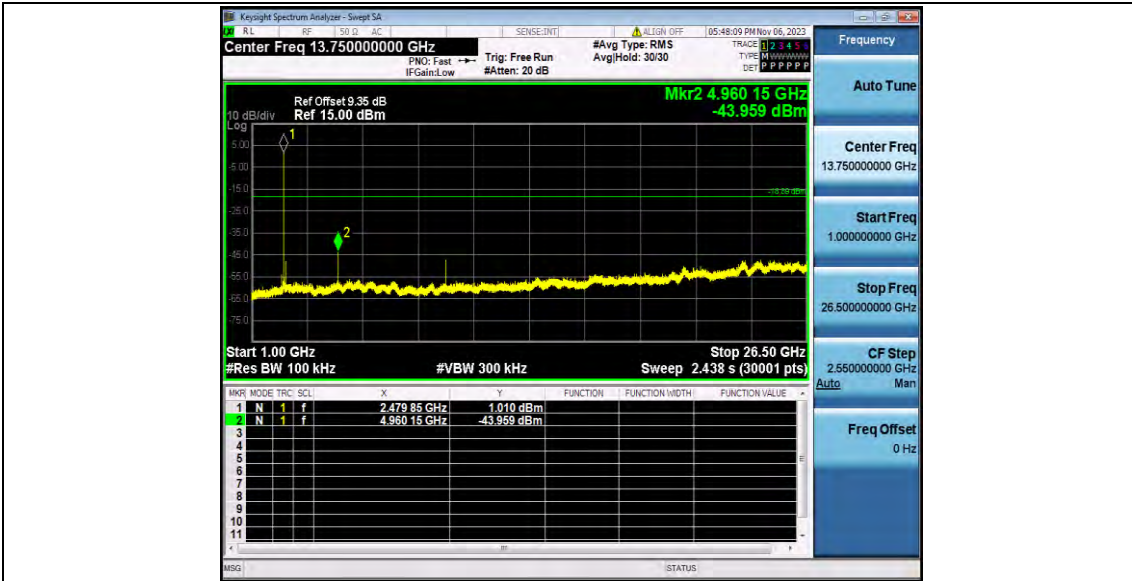
2DH1\_Ant1\_2441\_1000~26500



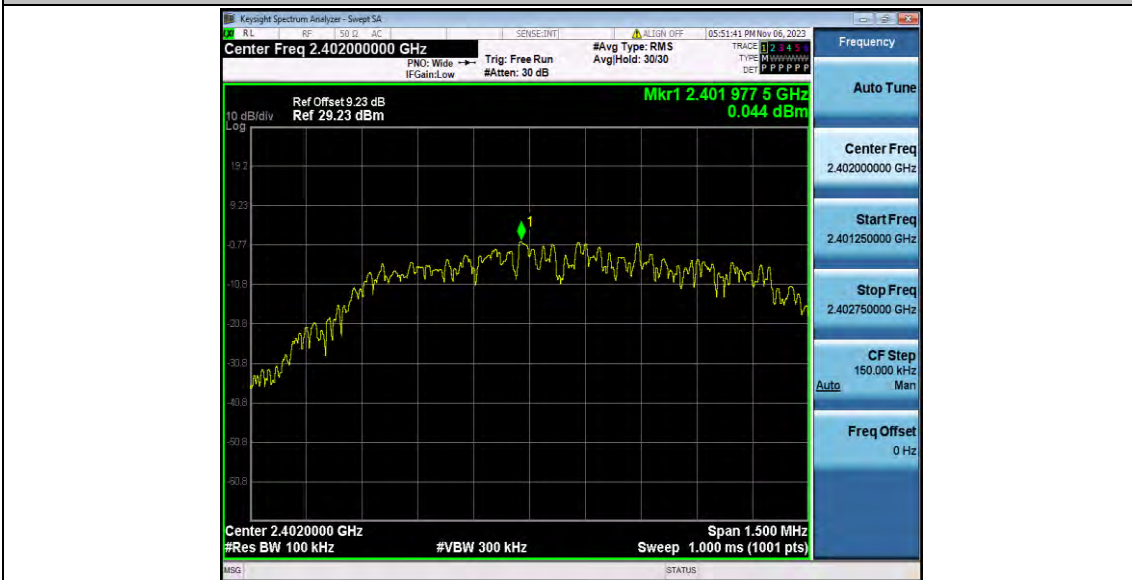
2DH1\_Ant1\_2480\_0~Reference



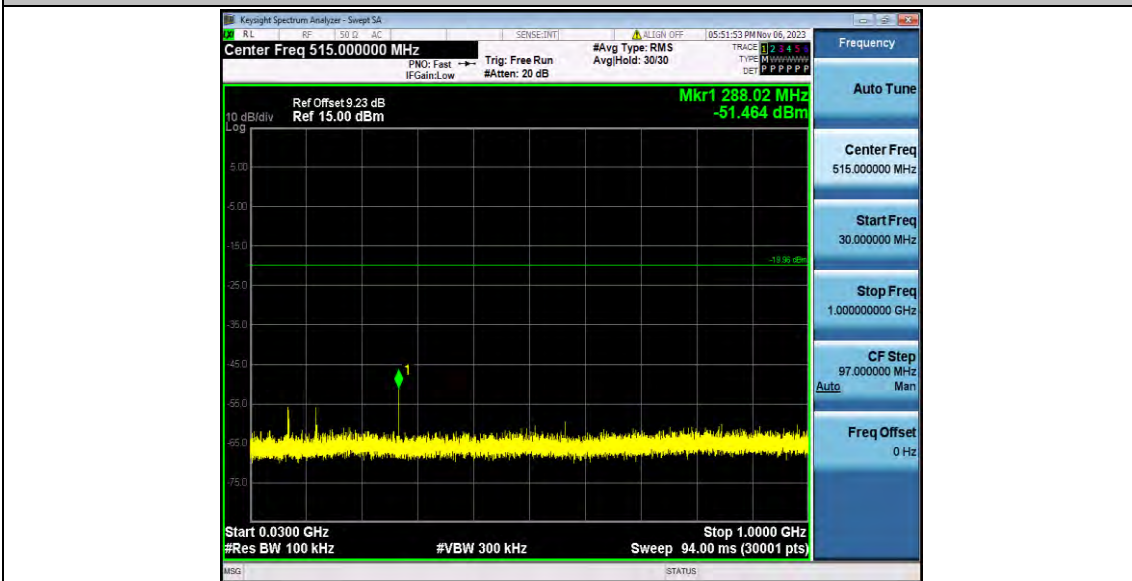
2DH1\_Ant1\_2480\_30~1000



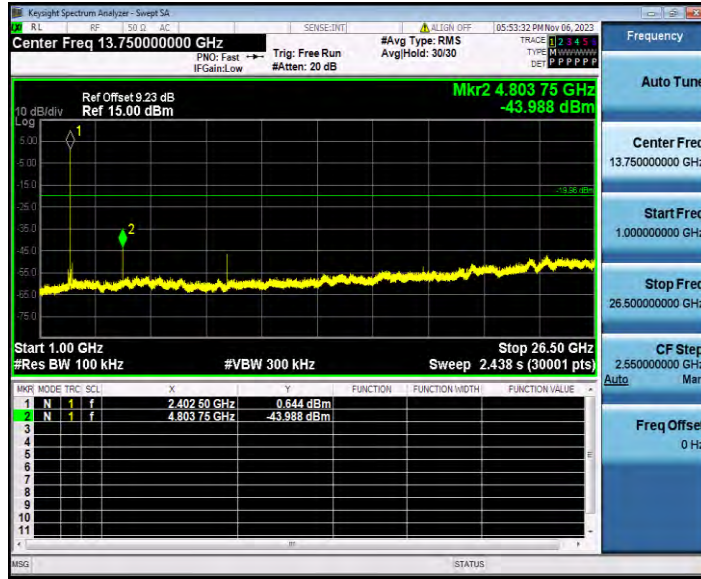
2DH1\_Ant1\_2480\_1000~26500



3DH1\_Ant1\_2402\_0~Reference



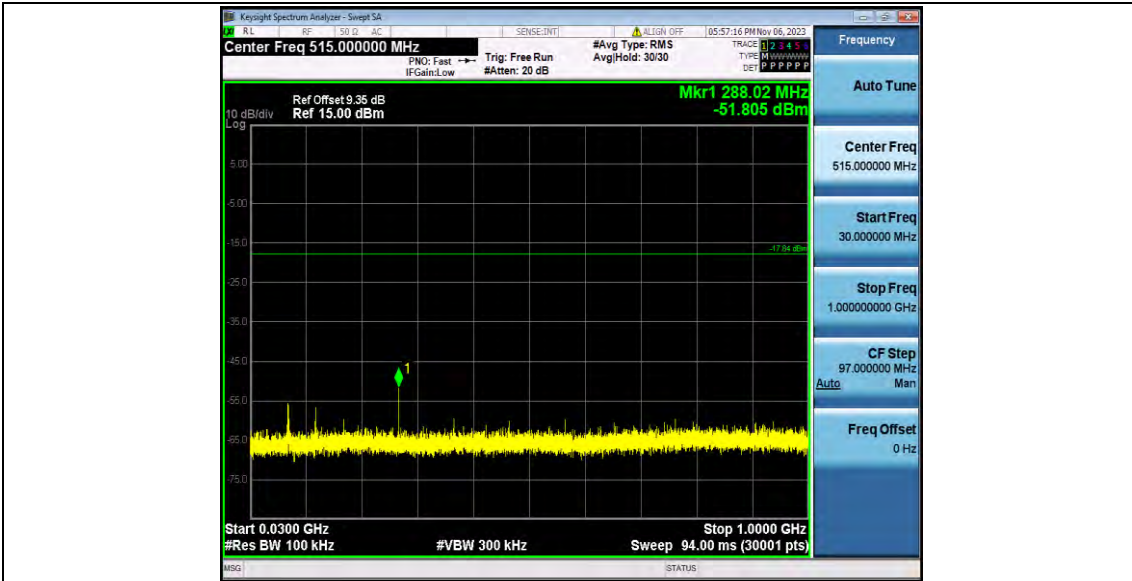
3DH1\_Ant1\_2402\_30~1000



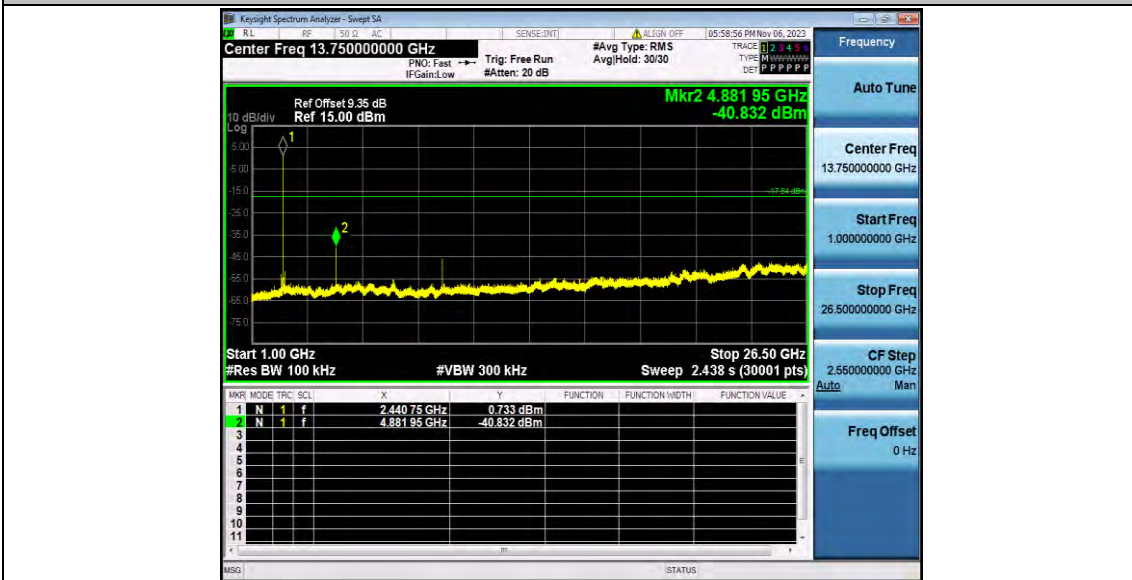
3DH1\_Ant1\_2402\_1000~26500



3DH1\_Ant1\_2441\_0~Reference



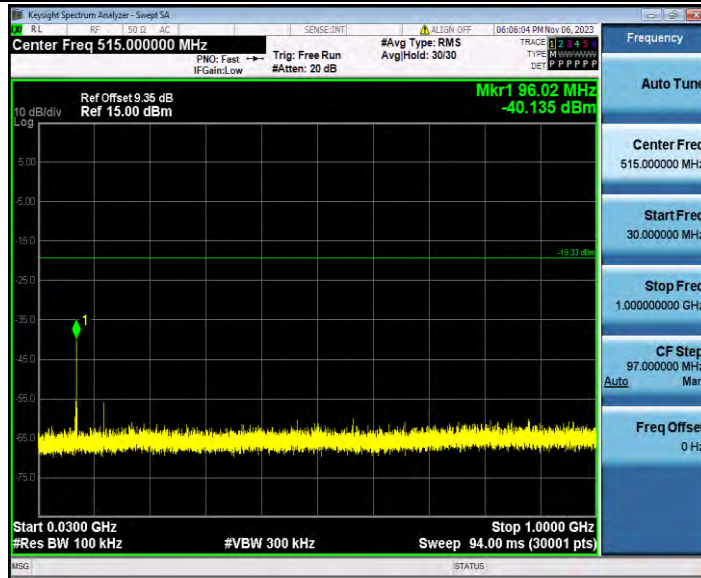
3DH1\_Ant1\_2441\_30~100



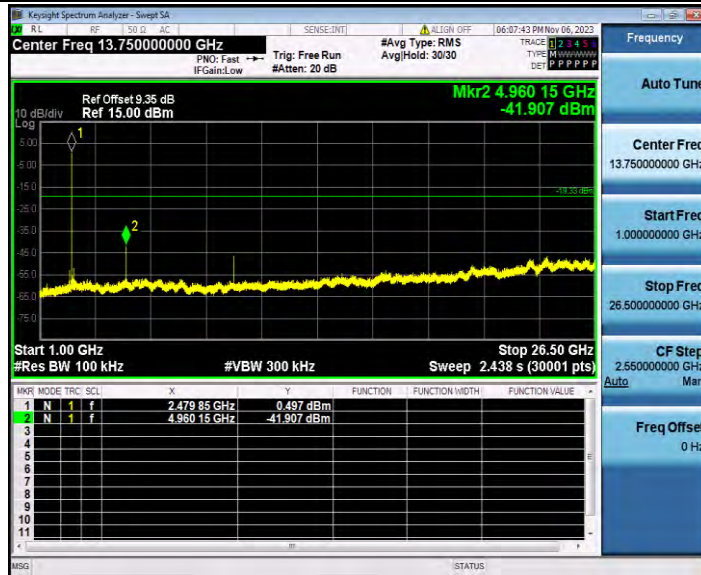
3DH1\_Ant1\_2441\_1000~26500



3DH1\_Ant1\_2480\_0~Reference



3DH1\_Ant1\_2480\_30~1000



3DH1\_Ant1\_2480\_1000~26500

## Appendix A.9: Emissions in Restricted Bands

### Test Result

TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-49.21	≤-41.20	45.99	≤54	PASS
				AV	2378.225	-47.89	≤-41.20	47.31	≤54	PASS
				AV	2390.000	-48.33	≤-41.20	46.87	≤54	PASS
				Peak	2310.000	-42.45	≤-21.20	52.75	≤74	PASS
				Peak	2383.685	-38.35	≤-21.20	56.85	≤74	PASS
				Peak	2390.000	-40.59	≤-21.20	54.61	≤74	PASS
		High	2480	AV	2483.500	-47.95	≤-41.20	47.25	≤54	PASS
				AV	2497.360	-47.49	≤-41.20	47.71	≤54	PASS
				AV	2500.000	-47.63	≤-41.20	47.57	≤54	PASS
				Peak	2483.500	-41.27	≤-21.20	53.93	≤74	PASS
				Peak	2488.640	-38.11	≤-21.20	57.09	≤74	PASS
				Peak	2500.000	-39.51	≤-21.20	55.69	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.14	≤-41.20	46.06	≤54	PASS
				AV	2383.160	-47.92	≤-41.20	47.28	≤54	PASS
				AV	2390.000	-48.17	≤-41.20	47.03	≤54	PASS
				Peak	2310.000	-42.14	≤-21.20	53.06	≤74	PASS
				Peak	2353.760	-37.9	≤-21.20	57.30	≤74	PASS
				Peak	2390.000	-41.48	≤-21.20	53.72	≤74	PASS
		High	2480	AV	2483.500	-47.64	≤-41.20	47.56	≤54	PASS
				AV	2499.360	-47.41	≤-41.20	47.79	≤54	PASS
				AV	2500.000	-47.56	≤-41.20	47.64	≤54	PASS
				Peak	2483.500	-39.65	≤-21.20	55.55	≤74	PASS
				Peak	2497.920	-37.6	≤-21.20	57.60	≤74	PASS
				Peak	2500.000	-40.5	≤-21.20	54.70	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.08	≤-41.20	46.12	≤54	PASS
				AV	2384.420	-47.81	≤-41.20	47.39	≤54	PASS
				AV	2390.000	-48.2	≤-41.20	47.00	≤54	PASS
				Peak	2310.000	-42.03	≤-21.20	53.17	≤74	PASS
				Peak	2381.585	-38.08	≤-21.20	57.12	≤74	PASS
				Peak	2390.000	-41.75	≤-21.20	53.45	≤74	PASS
		High	2480	AV	2483.500	-47.64	≤-41.20	47.56	≤54	PASS
				AV	2499.520	-47.47	≤-41.20	47.73	≤54	PASS
				AV	2500.000	-47.48	≤-41.20	47.72	≤54	PASS
				Peak	2483.500	-39.7	≤-21.20	55.50	≤74	PASS

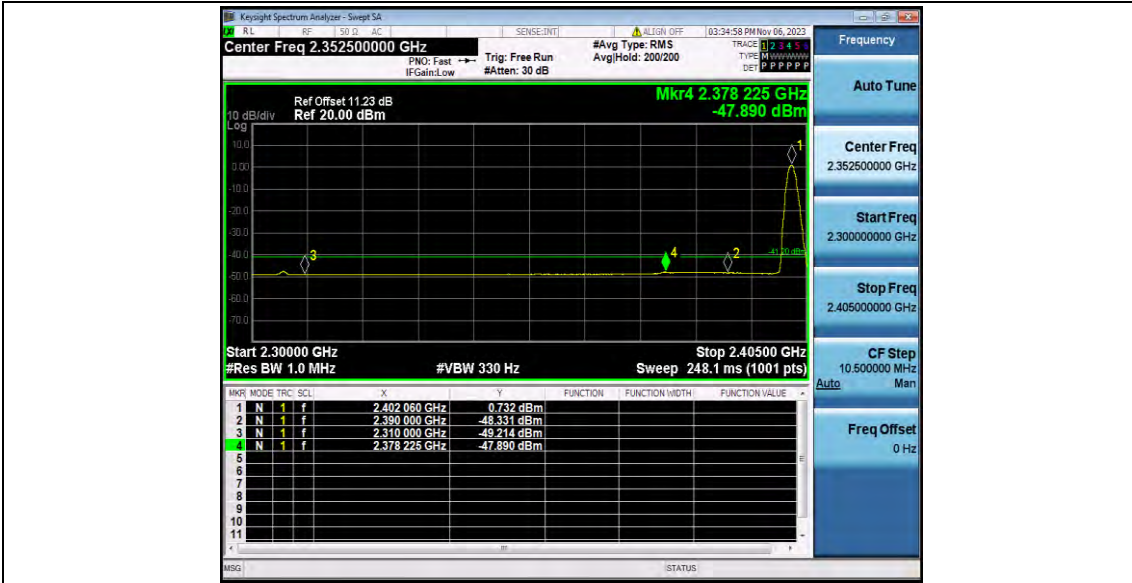
				Peak	2483.760	-34.41	$\leq -21.20$	60.79	$\leq 74$	PASS
				Peak	2500.000	-41.41	$\leq -21.20$	53.79	$\leq 74$	PASS

**Note:**

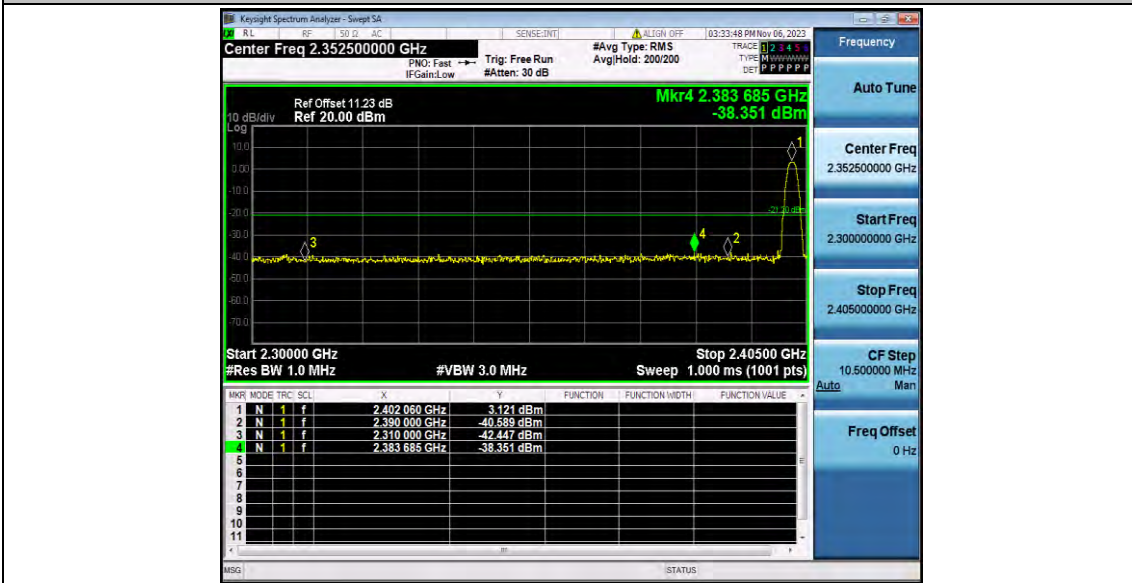
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



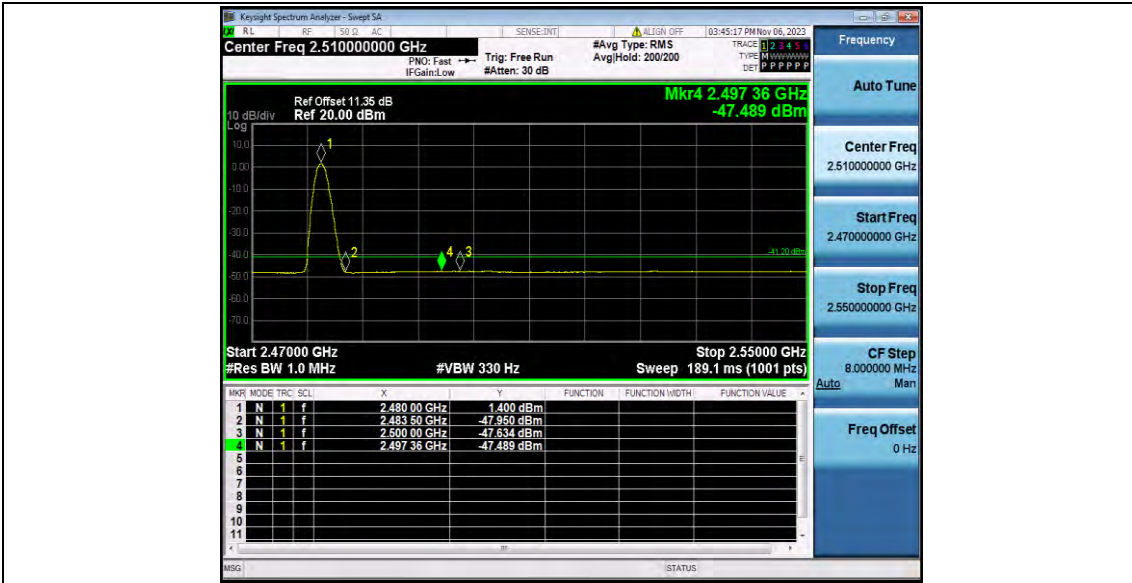
### Test Graphs



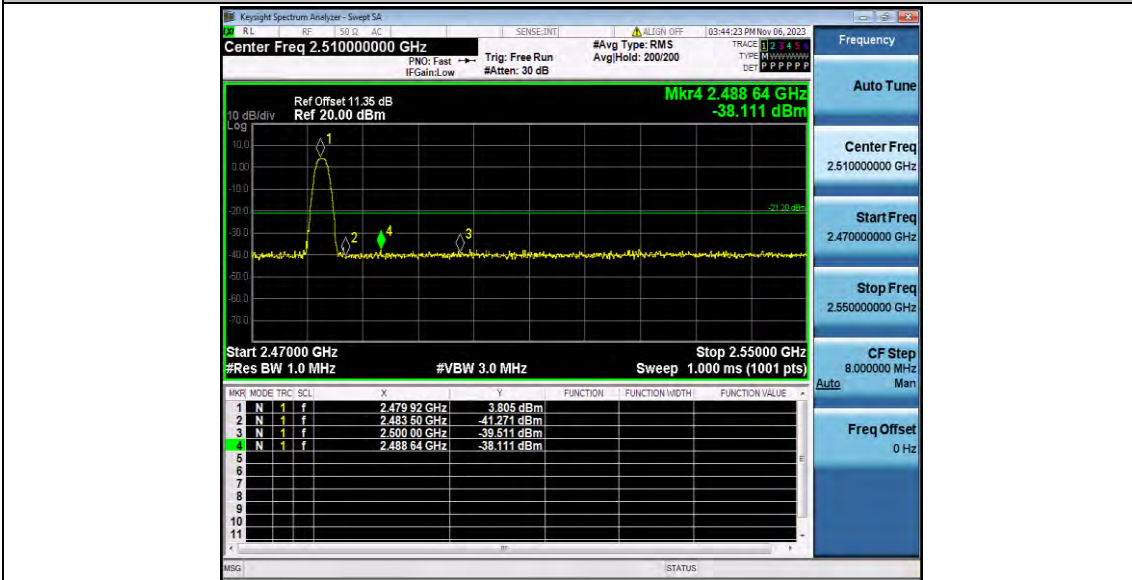
DH1\_Ant1\_Low\_2402\_AV



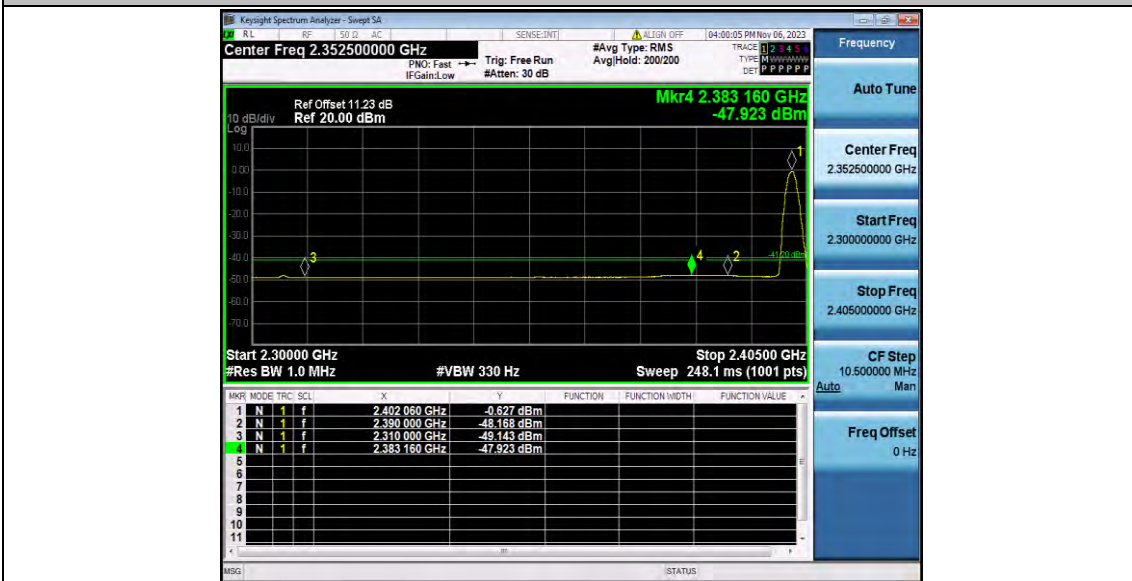
DH1\_Ant1\_Low\_2402\_Peak



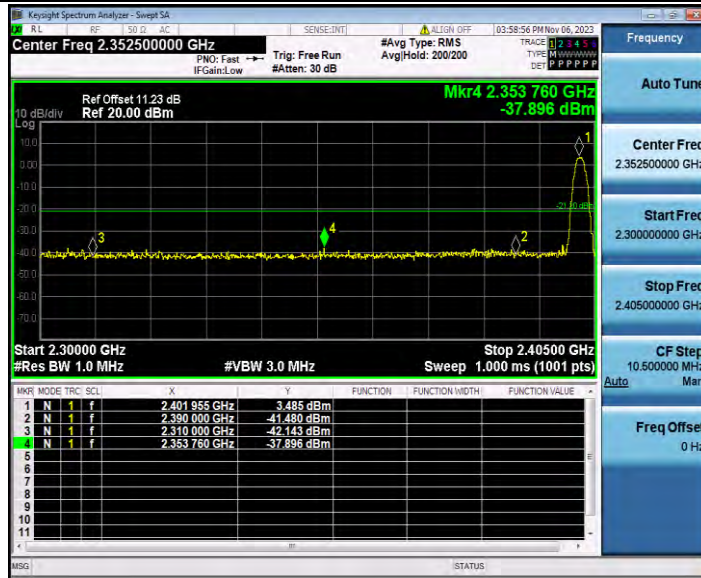
DH1\_Ant1\_High\_2480\_AV



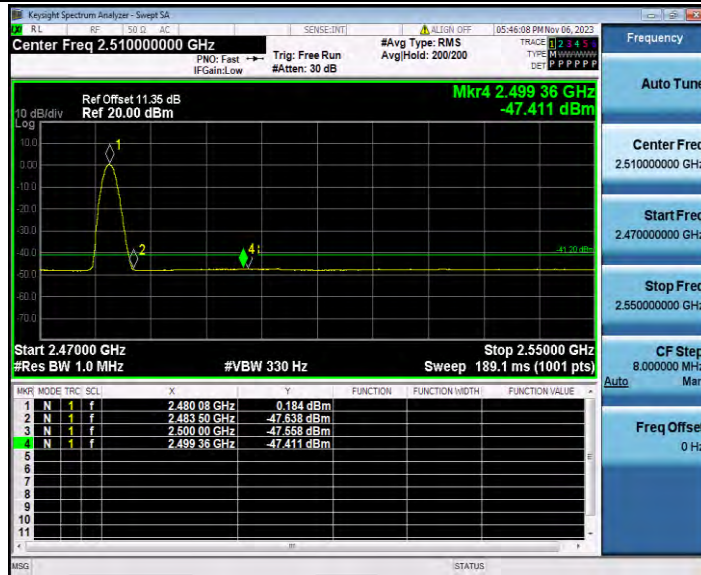
DH1\_Ant1\_High\_2480\_Peak



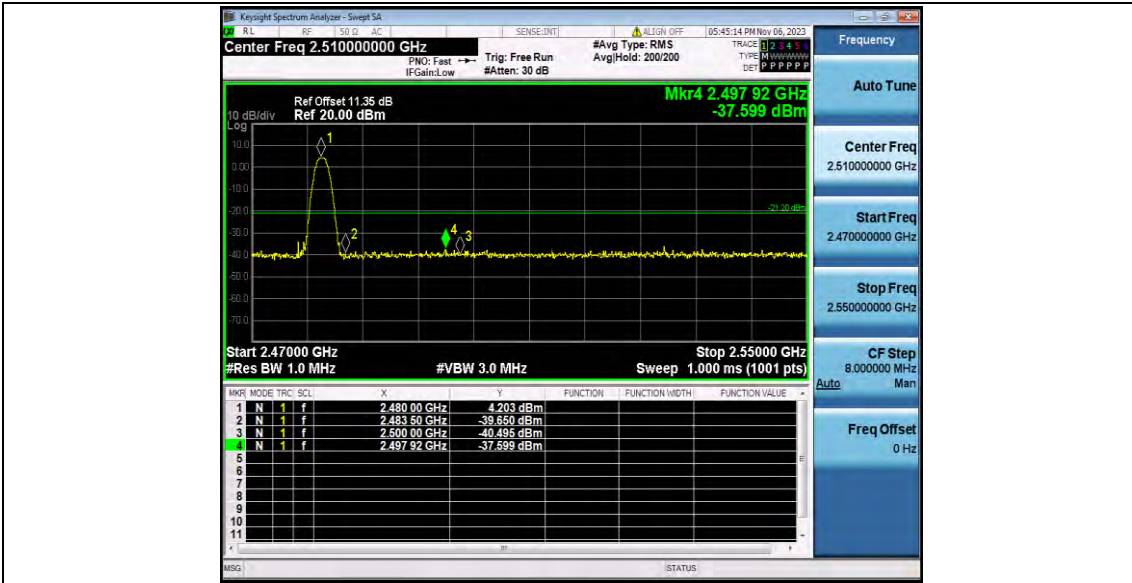
2DH1\_Ant1\_Low\_2402\_AV



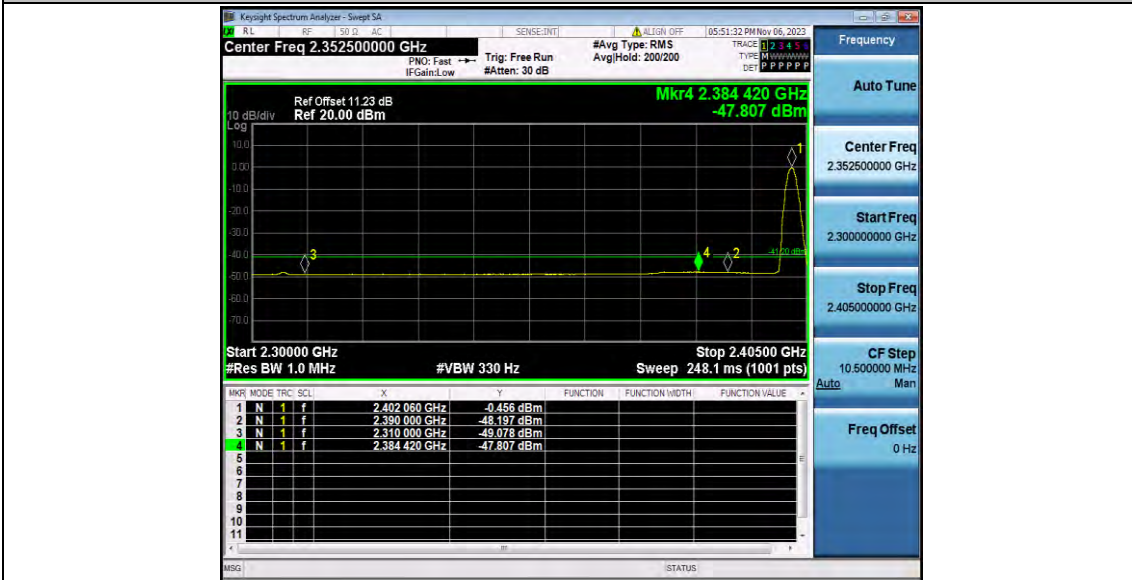
2DH1\_Ant1\_Low\_2402\_Peak



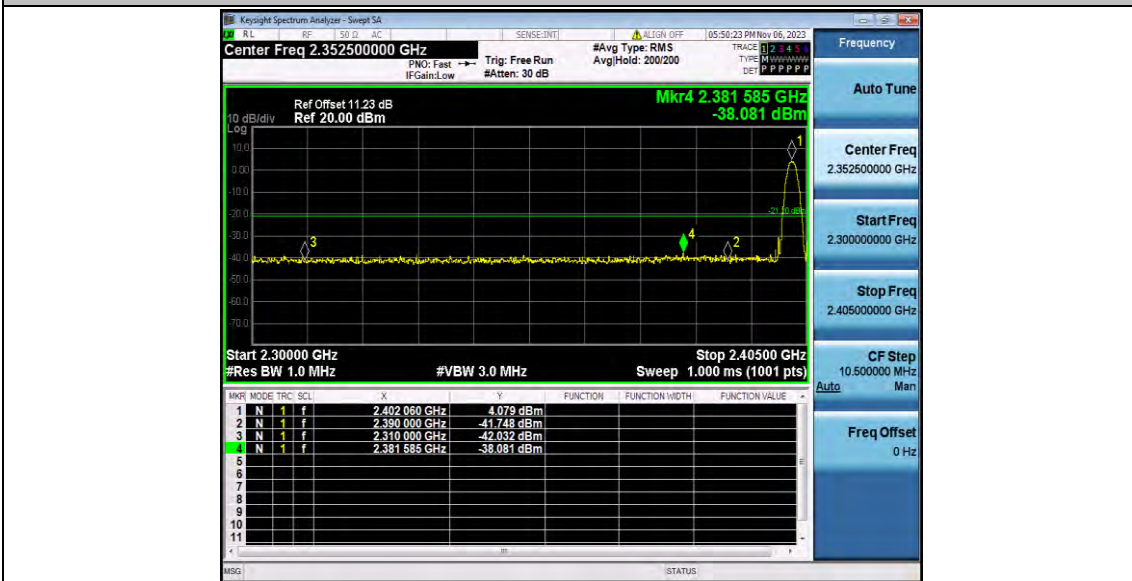
2DH1\_Ant1\_High\_2480\_AV



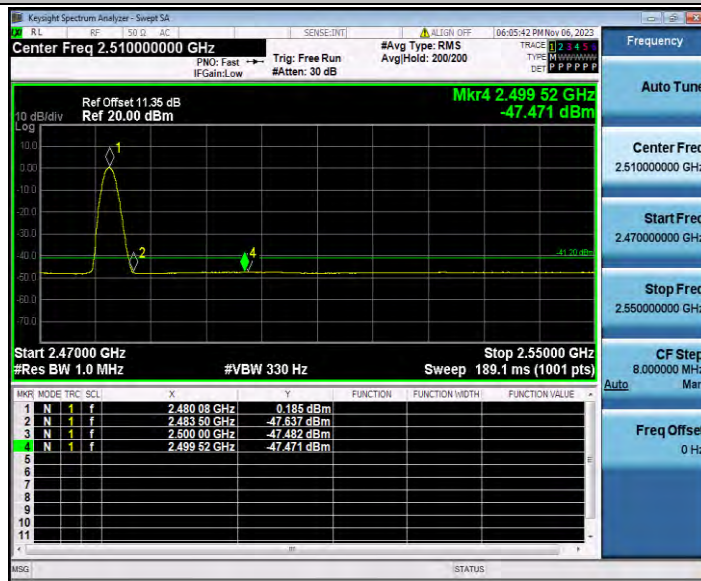
2DH1\_Ant1\_High\_2480\_Peak



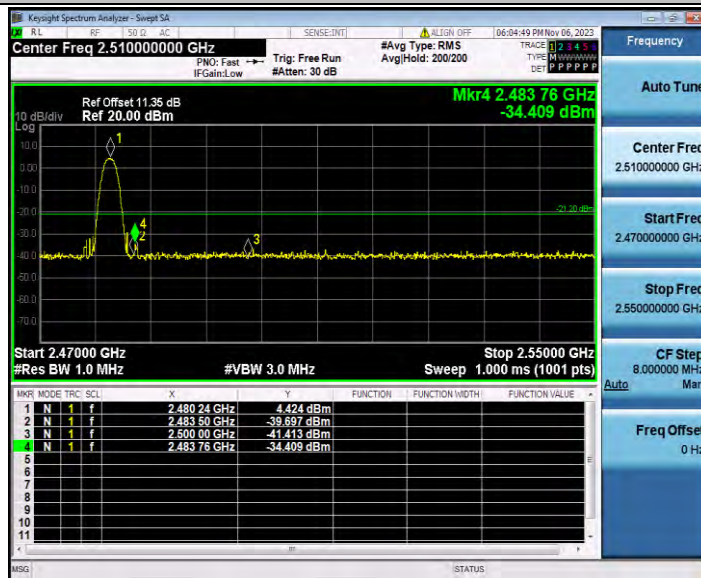
3DH1\_Ant1\_Low\_2402\_AV



3DH1\_Ant1\_Low\_2402\_Peak



3DH1\_Ant1\_High\_2480\_AV



3DH1\_Ant1\_High\_2480\_Peak