

<b>Case No. :</b> <u>CTA24050902201</u>	
<b>Ambient Condition:</b> <u>23</u> °C, <u>51</u> %RH	
<b>According Standard:</b> ■Part15C	
<b>Test Date:</b> <u>2024.4.26</u>	<b>Test Engineer:</b> <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	0.840	2401.562	2402.402	---	---
		2441	0.834	2440.562	2441.396	---	---
		2480	0.828	2479.556	2480.384	---	---
2DH1	Ant1	2402	1.257	2401.364	2402.621	---	---
		2441	1.257	2440.370	2441.627	---	---
		2480	1.245	2479.367	2480.612	---	---
3DH1	Ant1	2402	1.245	2401.367	2402.612	---	---
		2441	1.230	2440.391	2441.621	---	---
		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



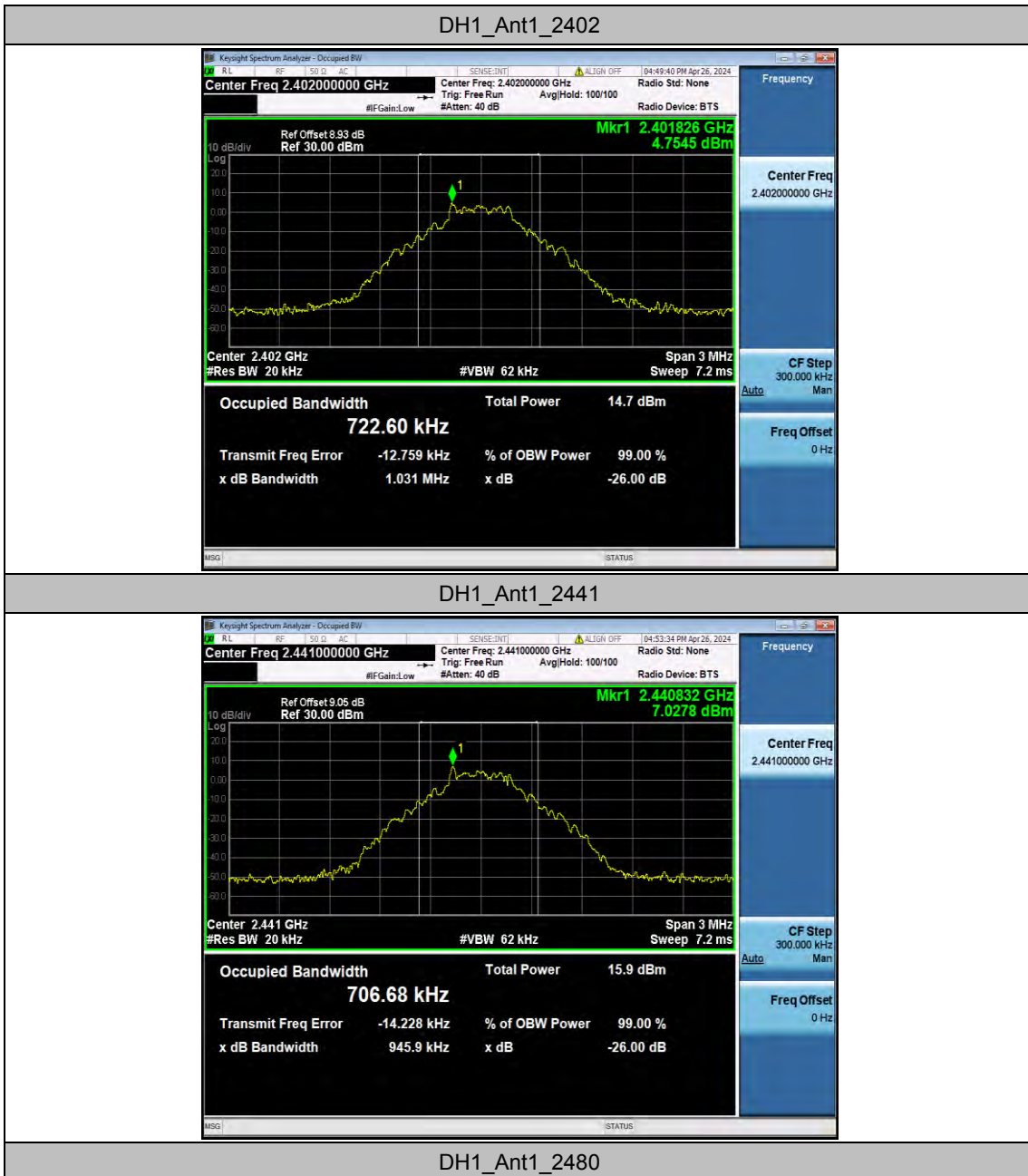
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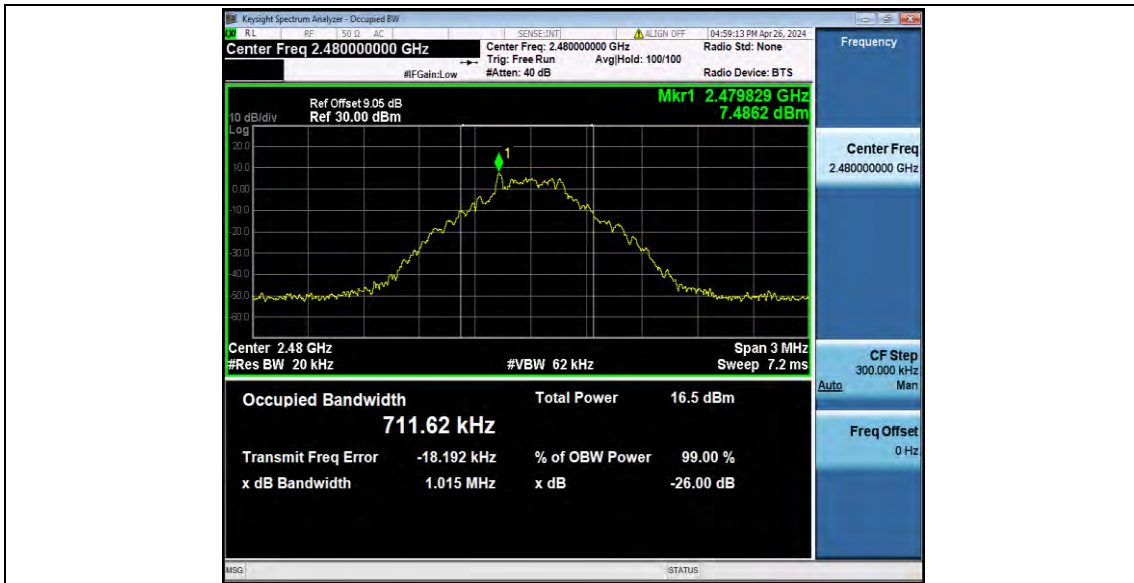
## Appendix A.2: Occupied Channel Bandwidth

### Test Result

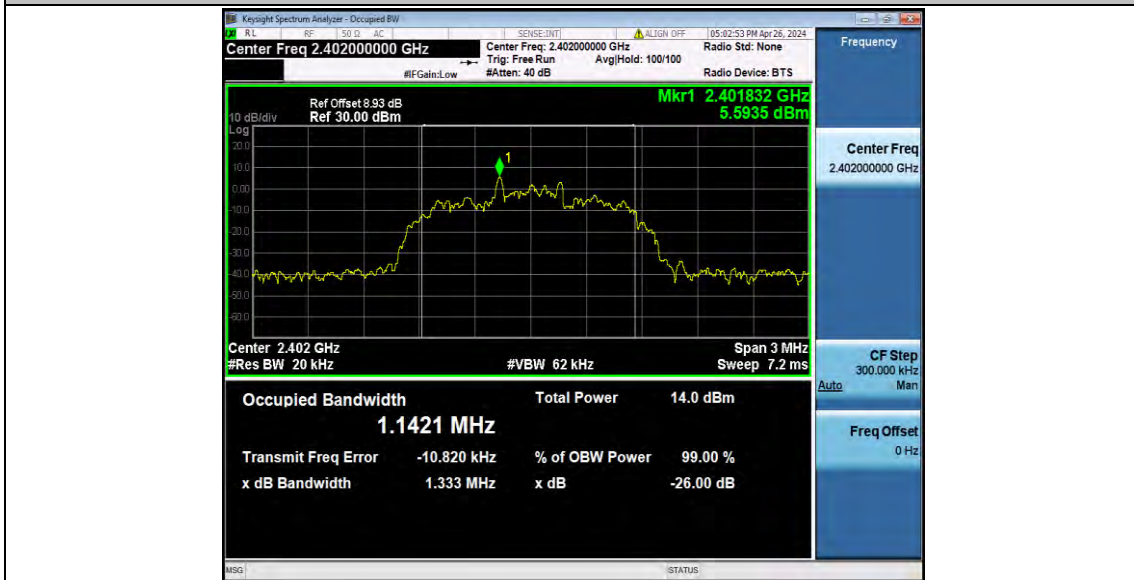
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.72260	2401.6259	2402.3485	---	---
		2441	0.70668	2440.6324	2441.3391	---	---
		2480	0.71162	2479.6260	2480.3376	---	---
2DH1	Ant1	2402	1.1421	2401.4181	2402.5602	---	---
		2441	1.1398	2440.4209	2441.5607	---	---
		2480	1.1422	2479.4186	2480.5608	---	---
3DH1	Ant1	2402	1.1520	2401.4292	2402.5812	---	---
		2441	1.1390	2440.4338	2441.5728	---	---
		2480	1.1413	2479.4336	2480.5749	---	---

## Test Graphs





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	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	8.88	≤30.00	PASS
		2441	8.12	≤30.00	PASS
		2480	8.67	≤30.00	PASS
2DH1	Ant1	2402	8.58	≤20.97	PASS
		2441	8.15	≤20.97	PASS
		2480	8.99	≤20.97	PASS
3DH1	Ant1	2402	8.41	≤20.97	PASS
		2441	8.15	≤20.97	PASS
		2480	8.96	≤20.97	PASS

Note:

1.The Duty Cycle Factor and RBW Factor is compensated in the data.

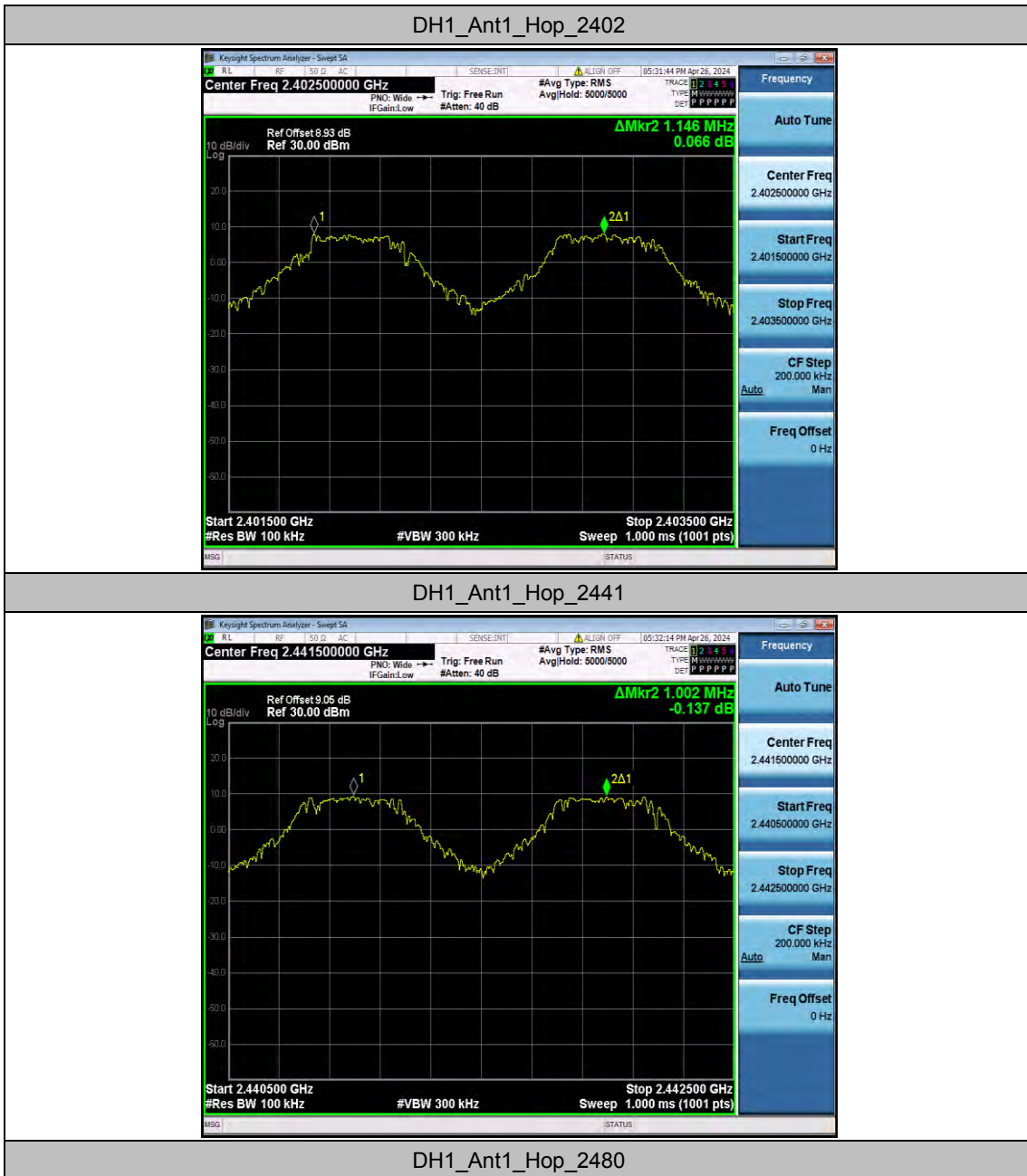
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## Appendix A.4: Carrier frequency separation

### Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.146	≥0.840	PASS
		Hop_2441	1.002	≥0.840	PASS
		Hop_2480	1.006	≥0.840	PASS
2DH1	Ant1	Hop_2402	1.002	≥0.838	PASS
		Hop_2441	1.03	≥0.838	PASS
		Hop_2480	1.146	≥0.838	PASS
3DH1	Ant1	Hop_2402	1.13	≥0.836	PASS
		Hop_2441	0.99	≥0.836	PASS
		Hop_2480	1.28	≥0.836	PASS

## Test Graphs





2DH1\_Ant1\_Hop\_2402



2DH1\_Ant1\_Hop\_2441



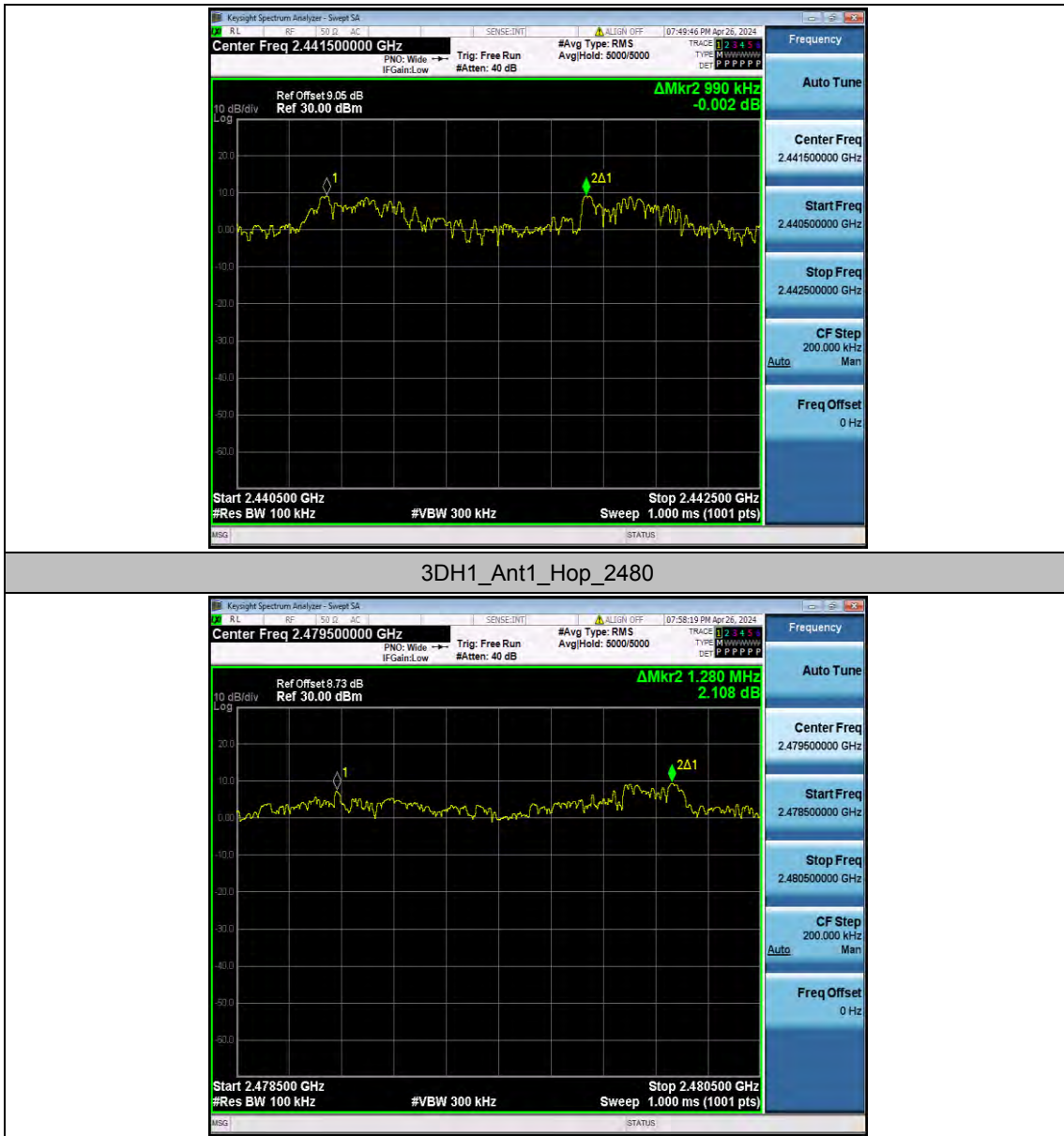
2DH1\_Ant1\_Hop\_2480



3DH1\_Ant1\_Hop\_2402



3DH1\_Ant1\_Hop\_2441



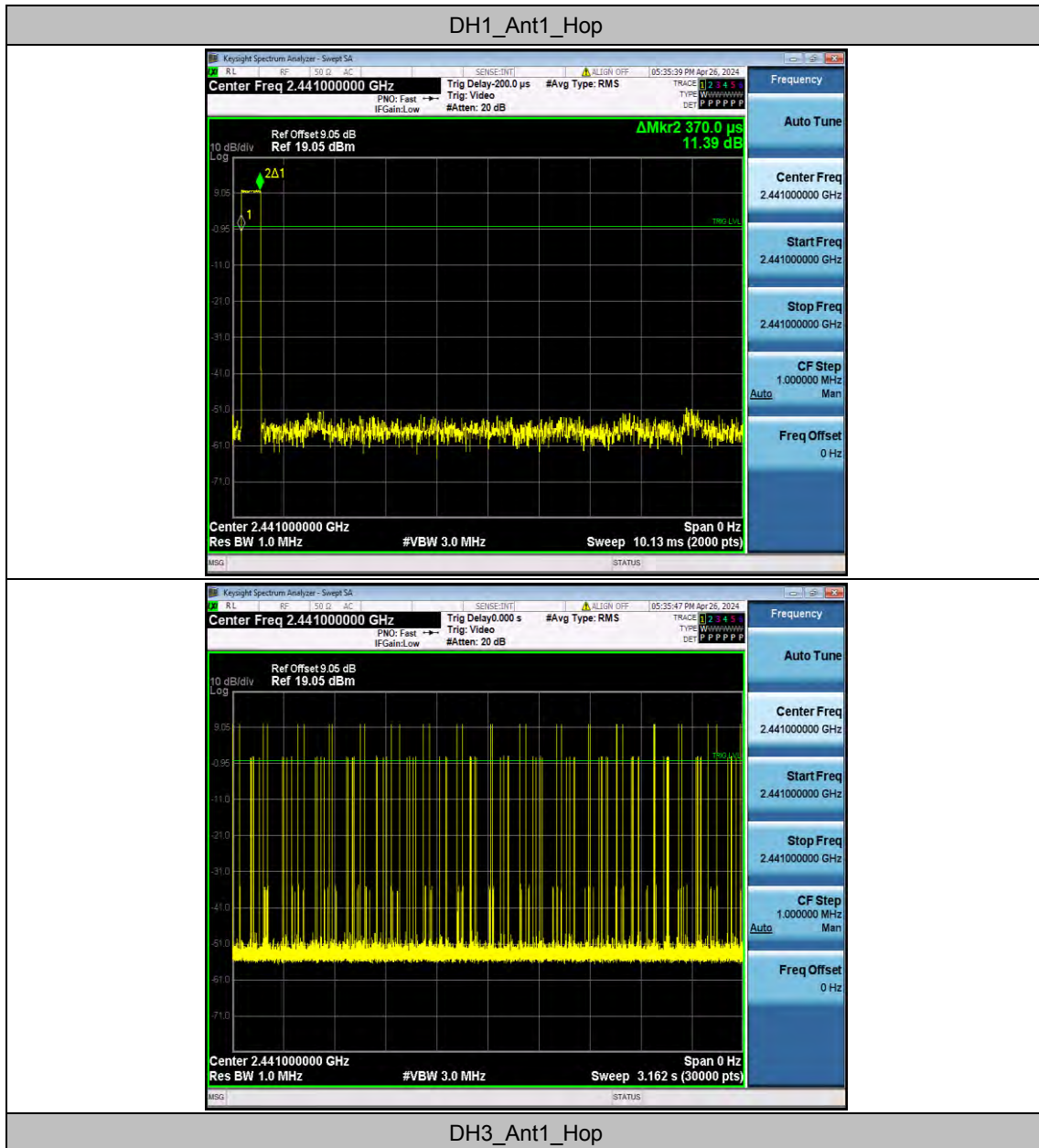


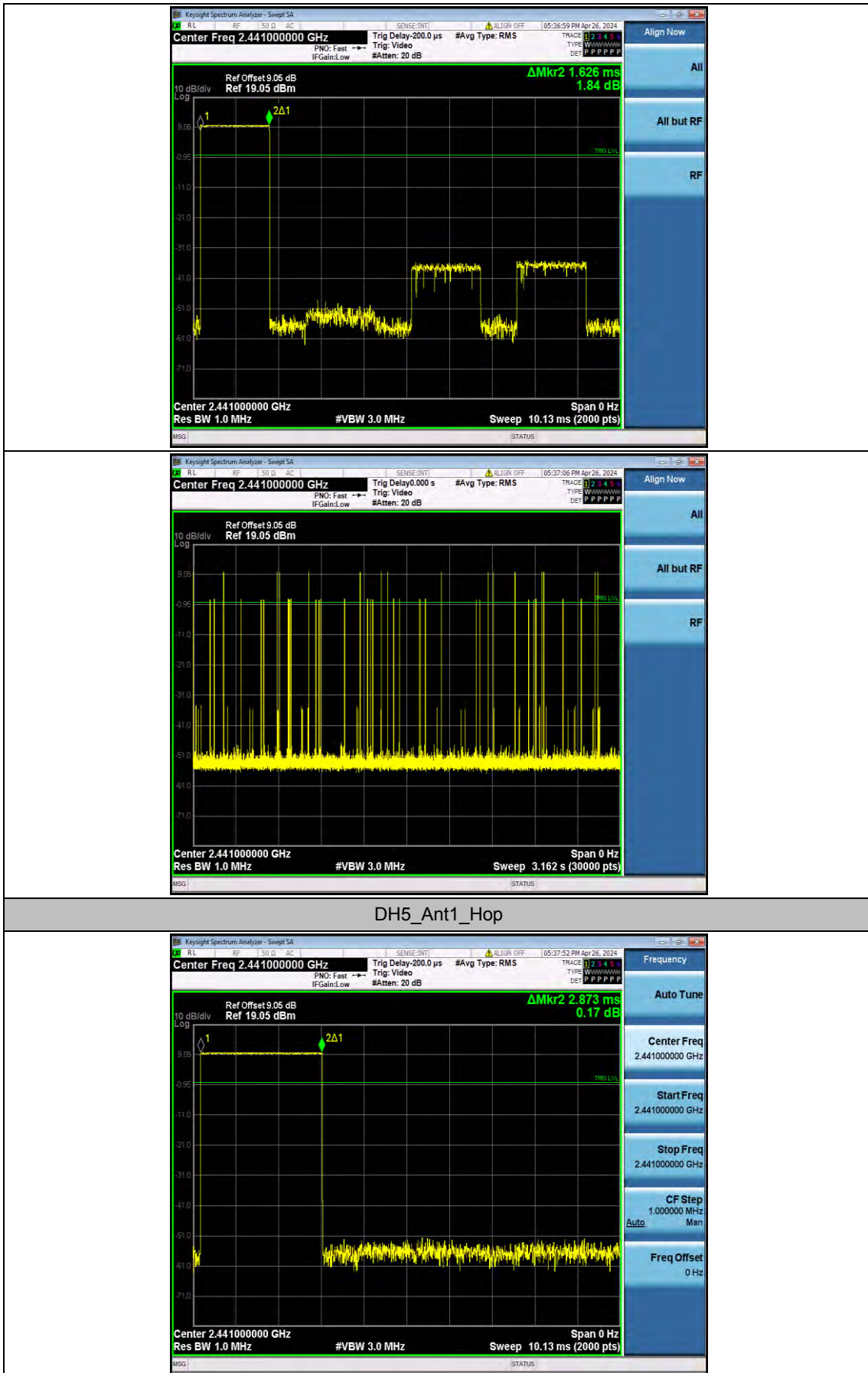
## Appendix A.5: Time of occupancy

### Test Result

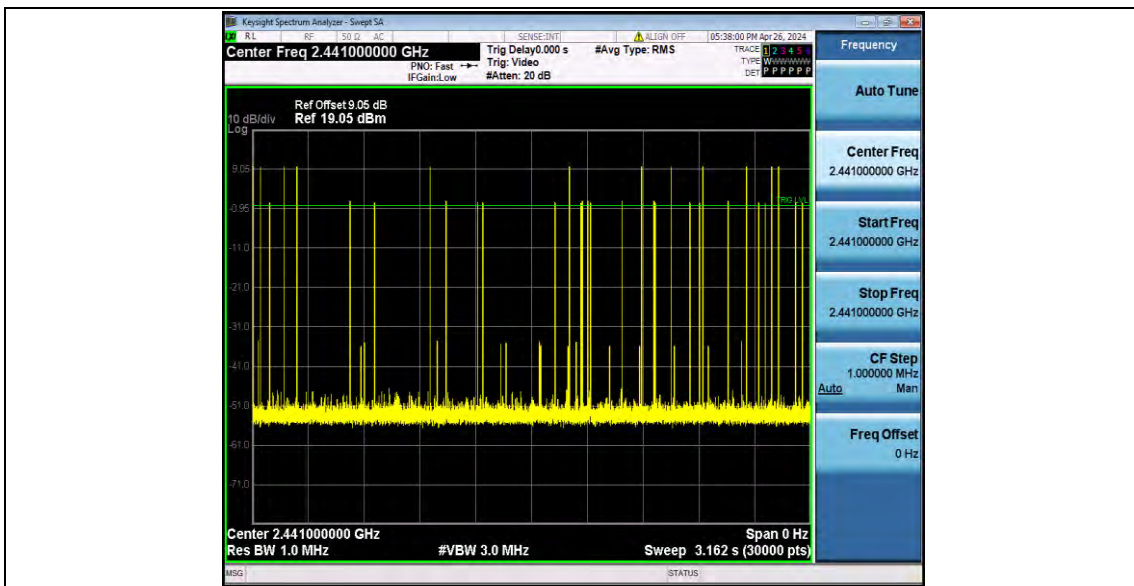
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.370	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.626	160	0.26	≤0.4	PASS
DH5	Ant1	Hop	2.873	120	0.345	≤0.4	PASS
2DH1	Ant1	Hop	0.375	330	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.626	140	0.228	≤0.4	PASS
2DH5	Ant1	Hop	2.878	120	0.345	≤0.4	PASS
3DH1	Ant1	Hop	0.375	330	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.631	190	0.31	≤0.4	PASS
3DH5	Ant1	Hop	2.878	120	0.345	≤0.4	PASS

## Test Graphs

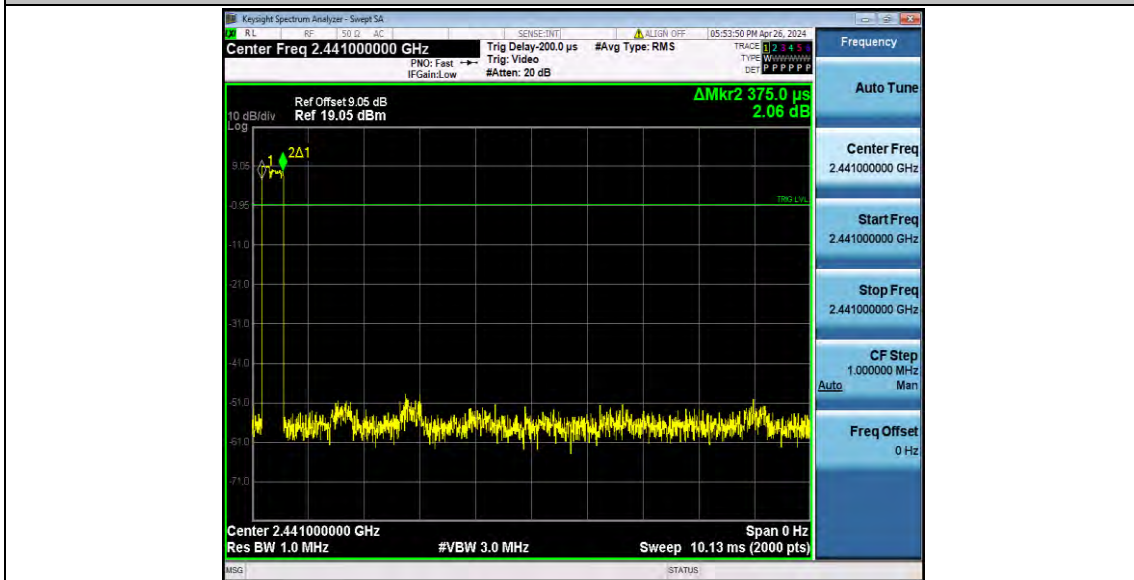




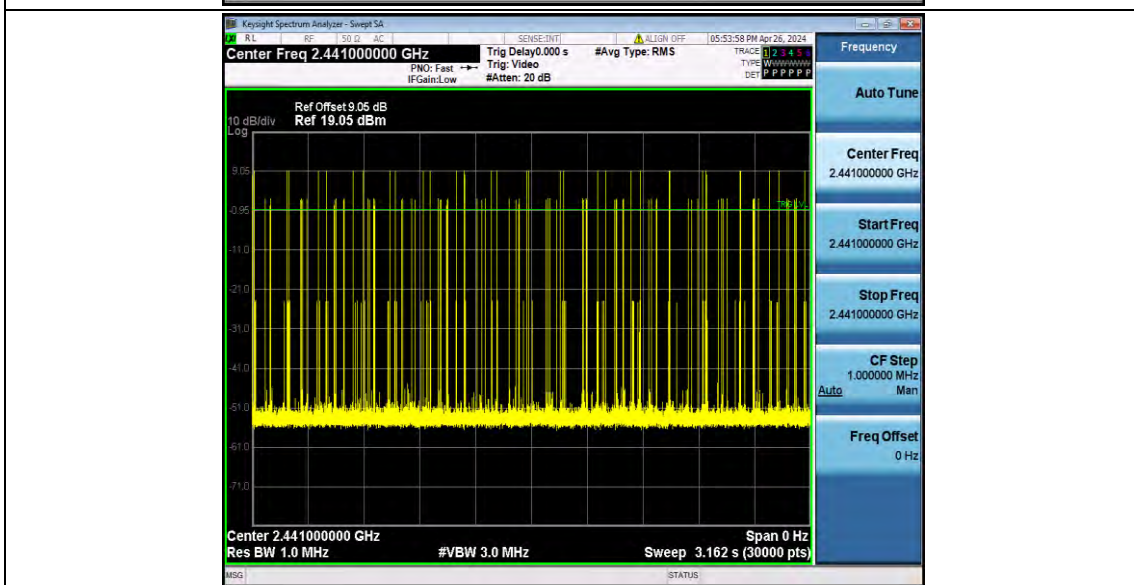
DH5\_Ant1\_Hop

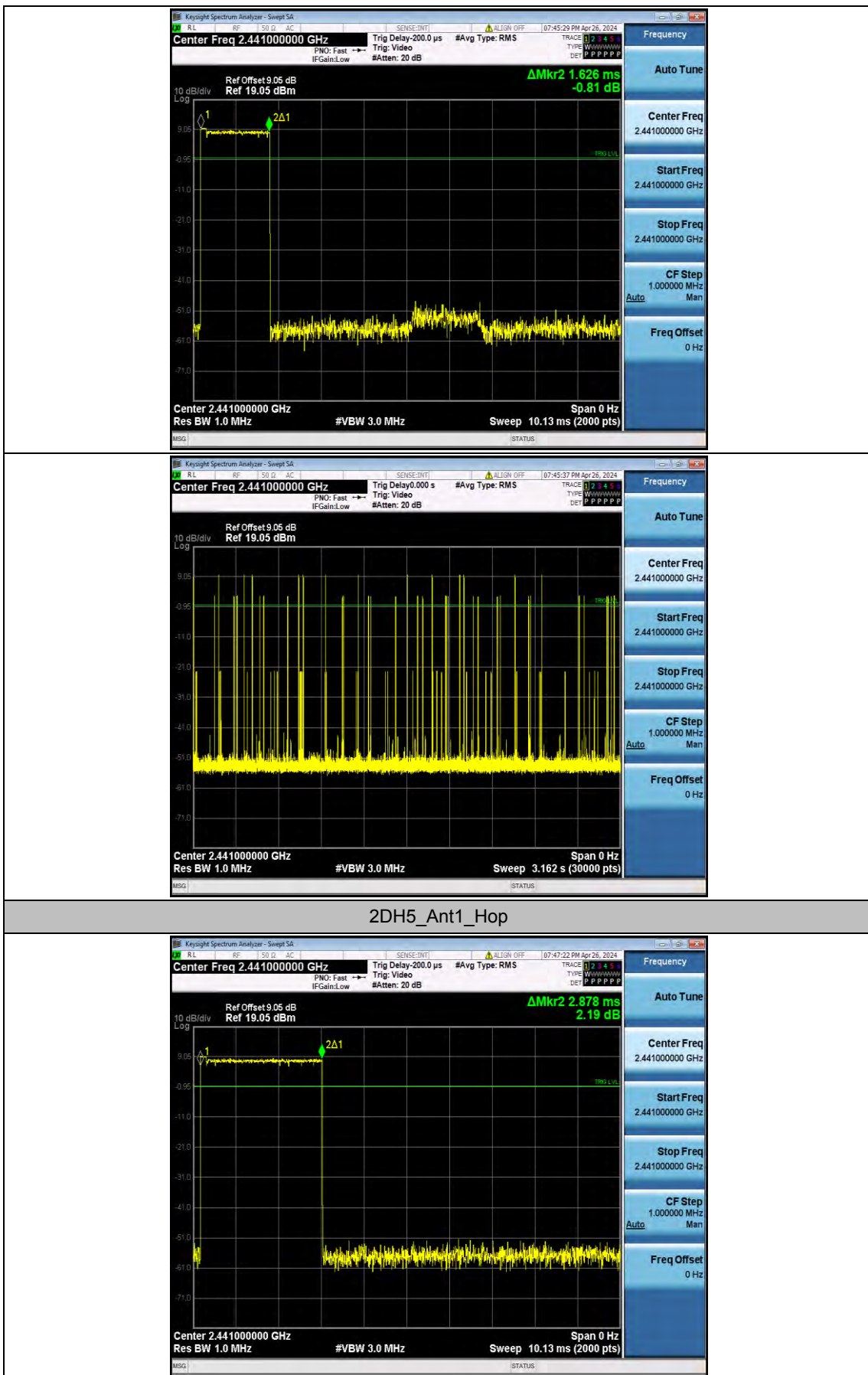


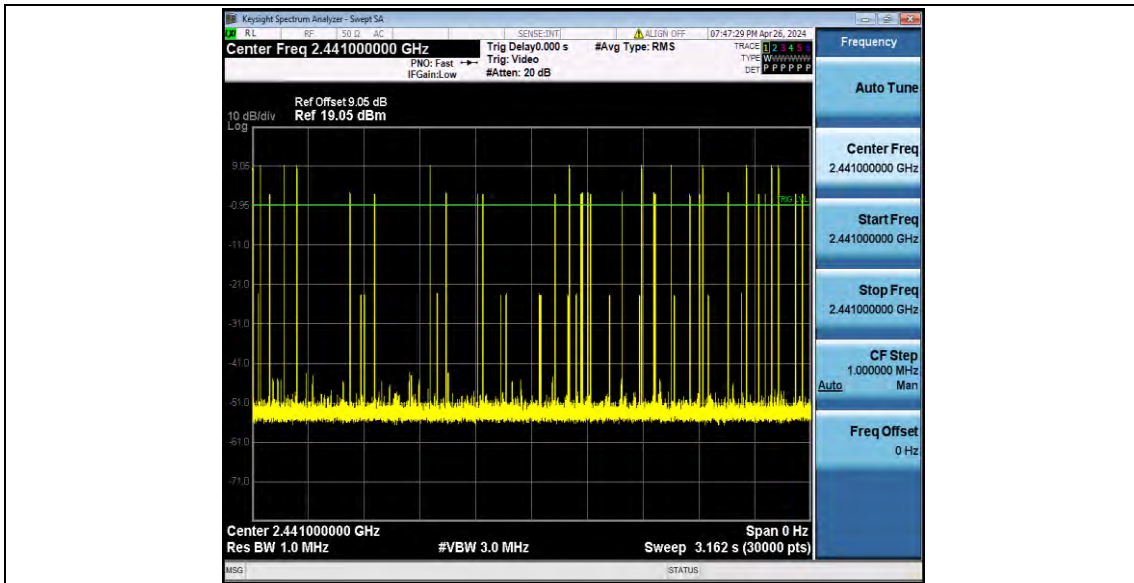
2DH1\_Ant1\_Hop



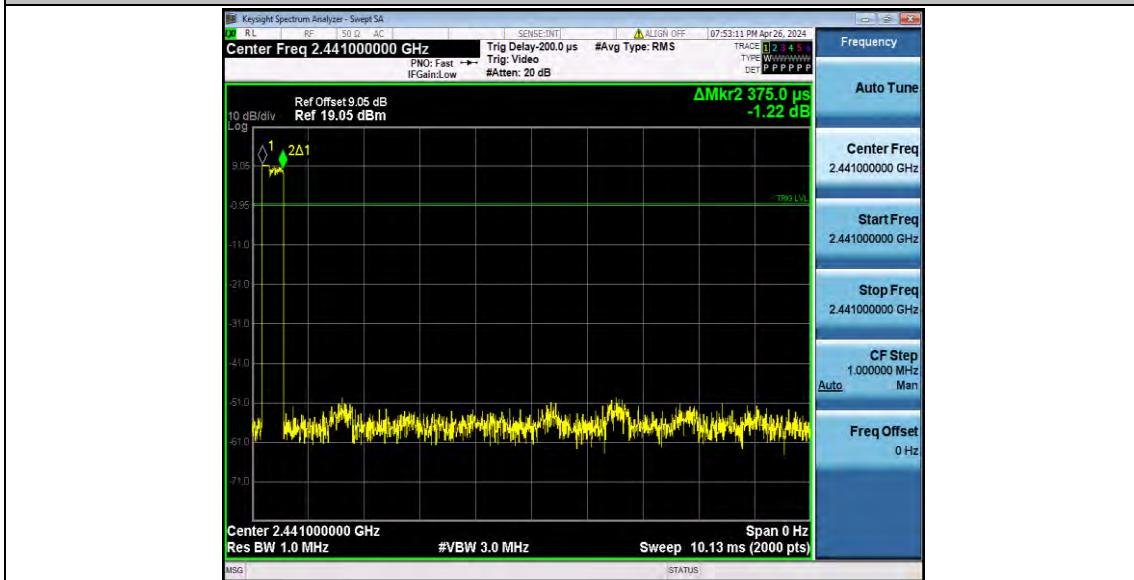
2DH3\_Ant1\_Hop



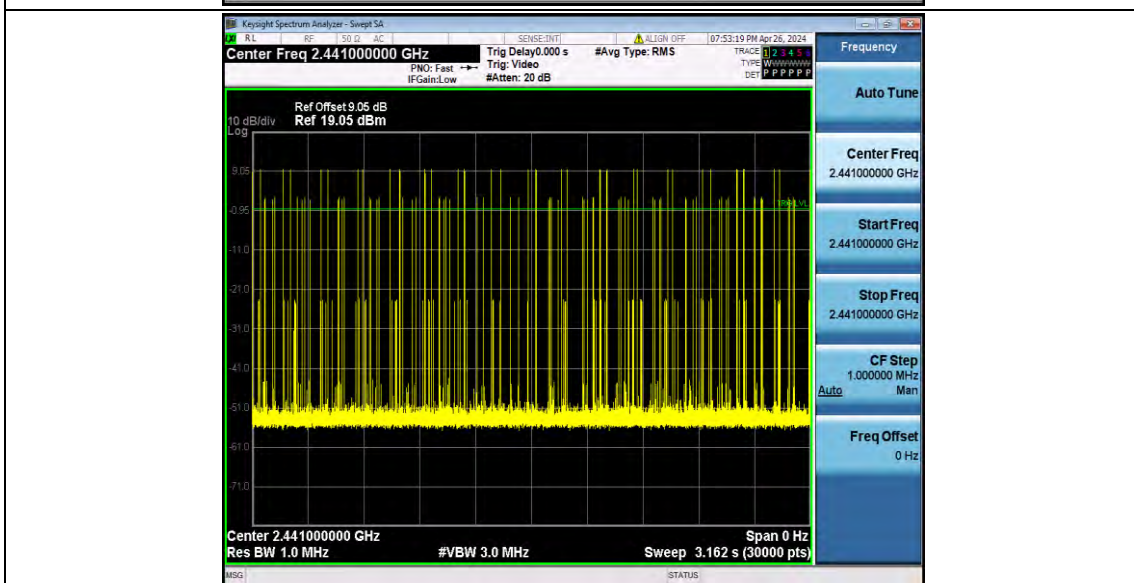


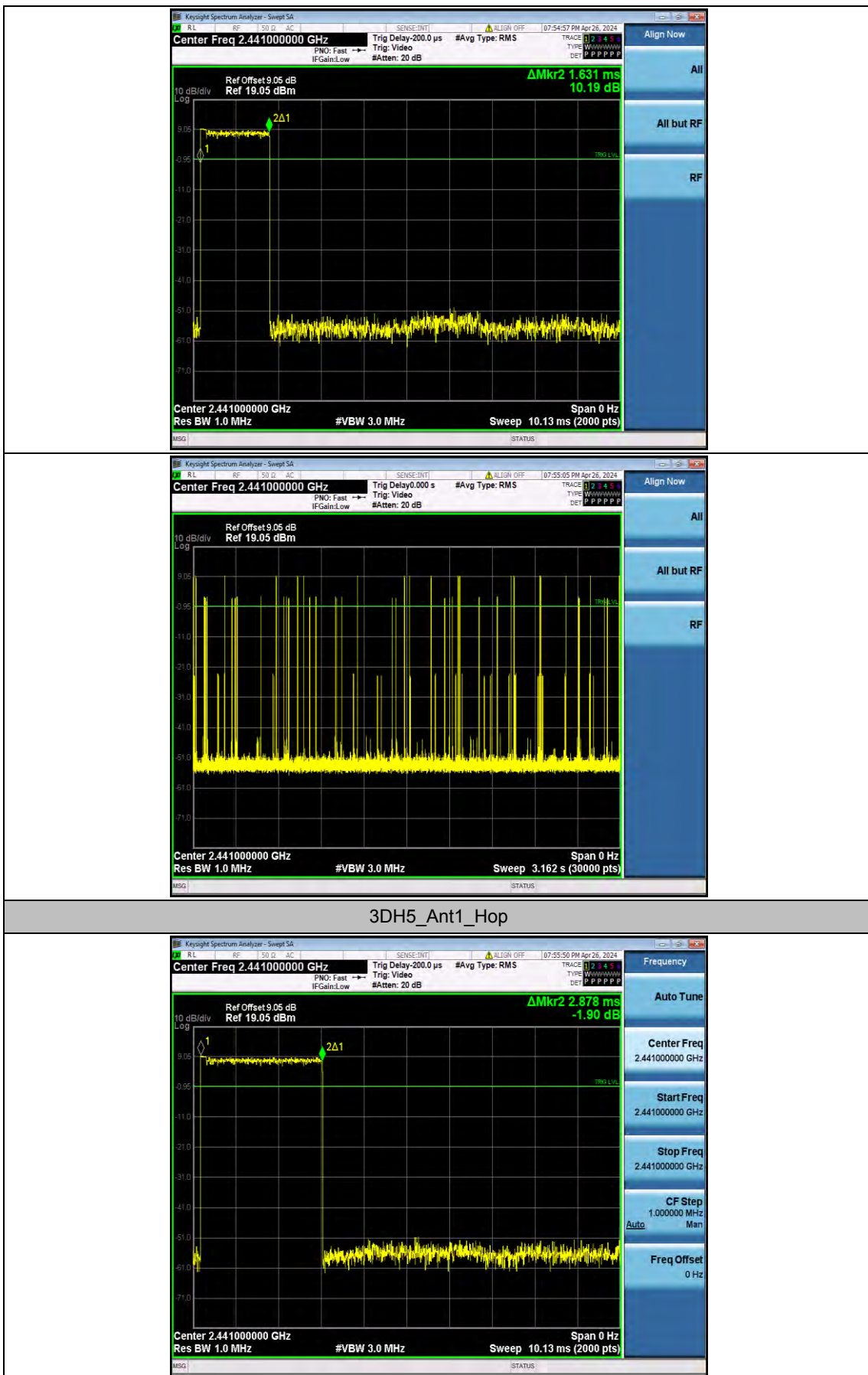


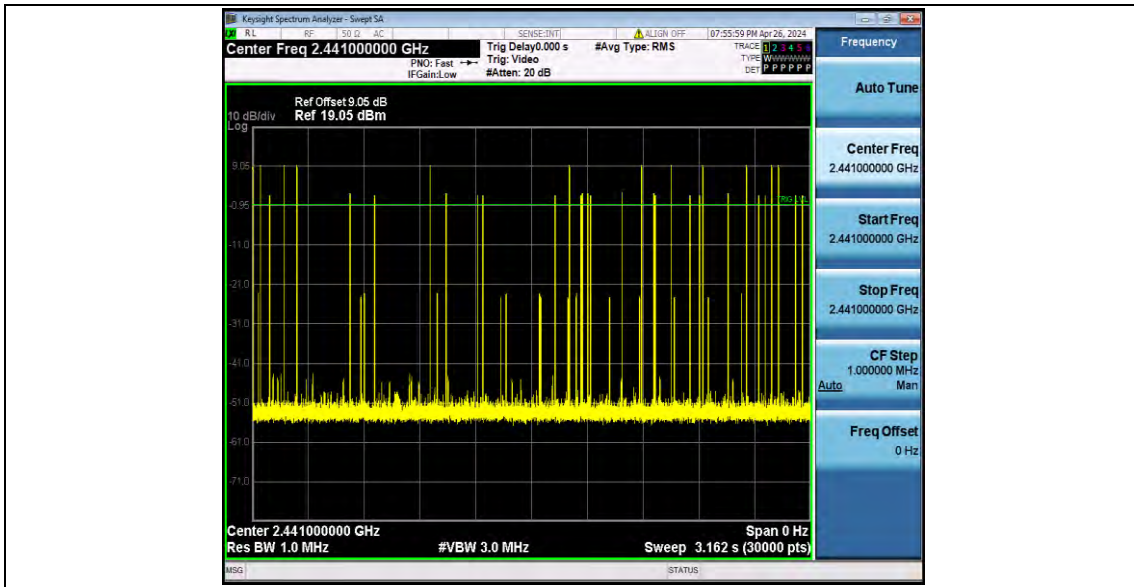
3DH1\_Ant1\_Hop



3DH3\_Ant1\_Hop







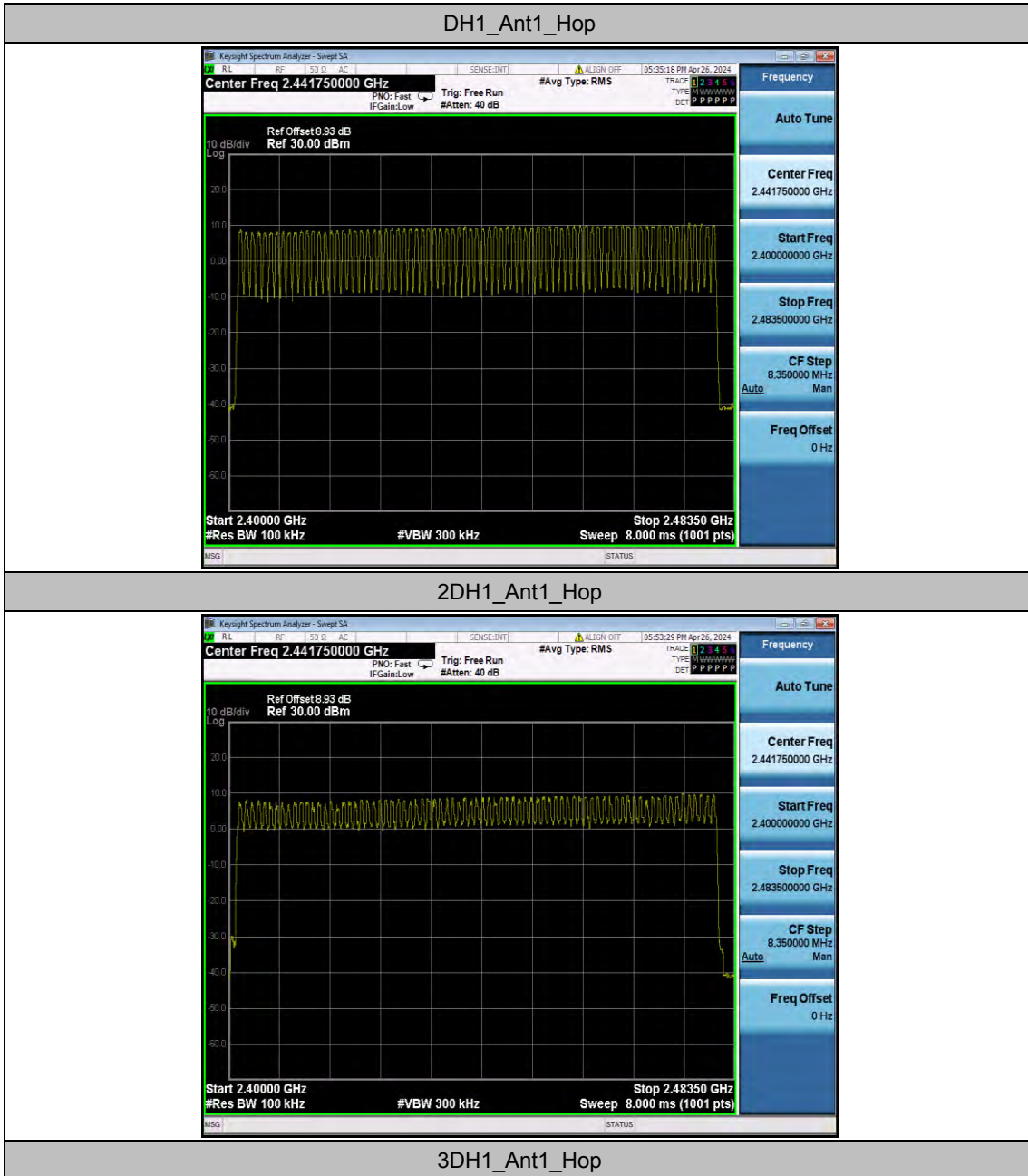


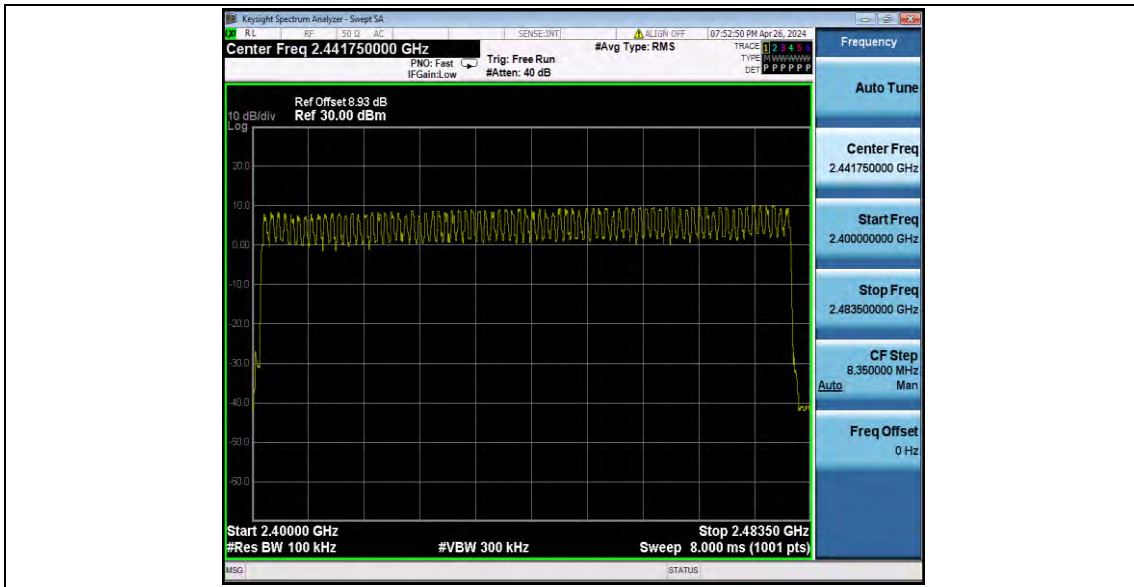
## Appendix A.6: Number of hopping channels

### 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



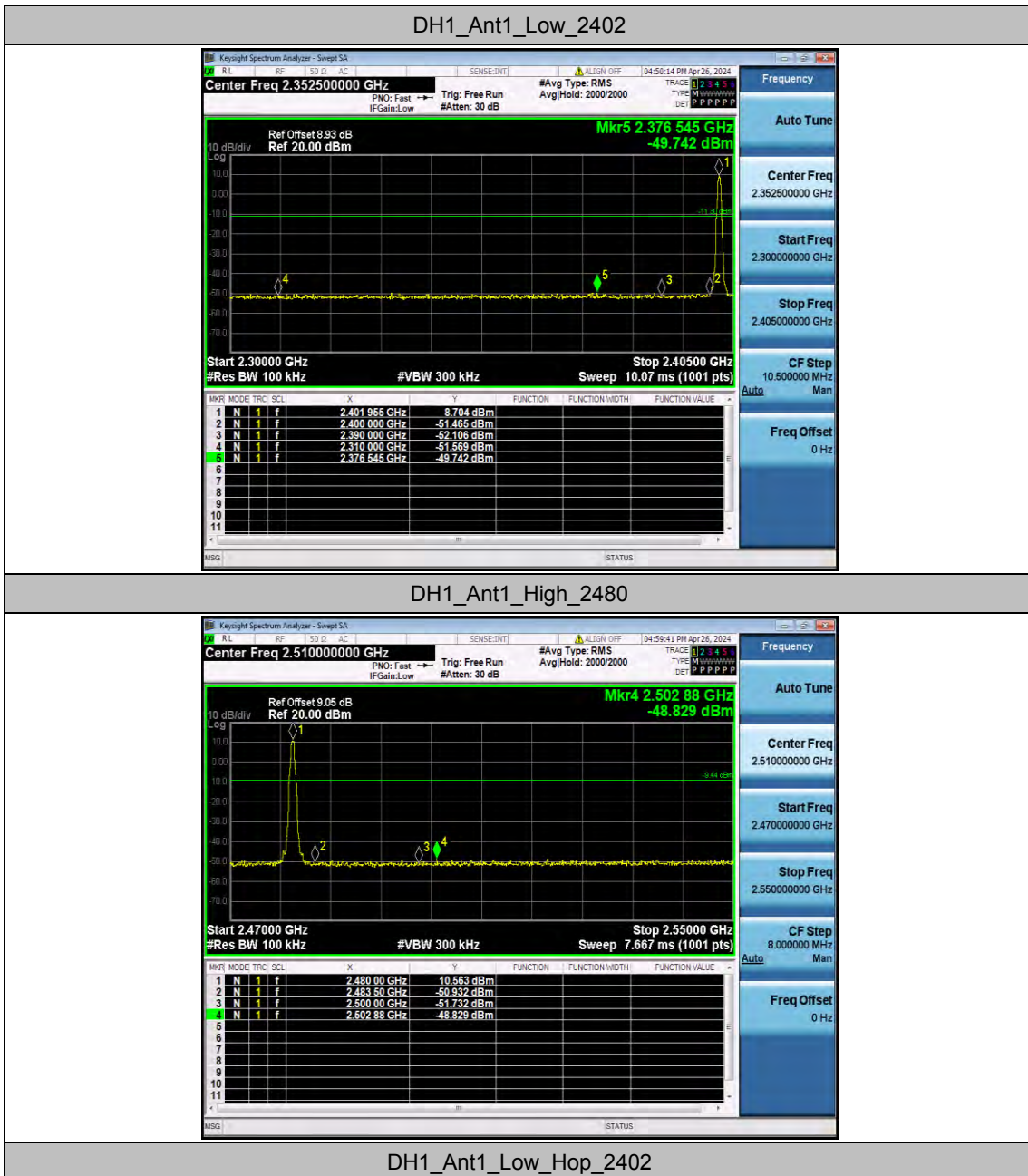


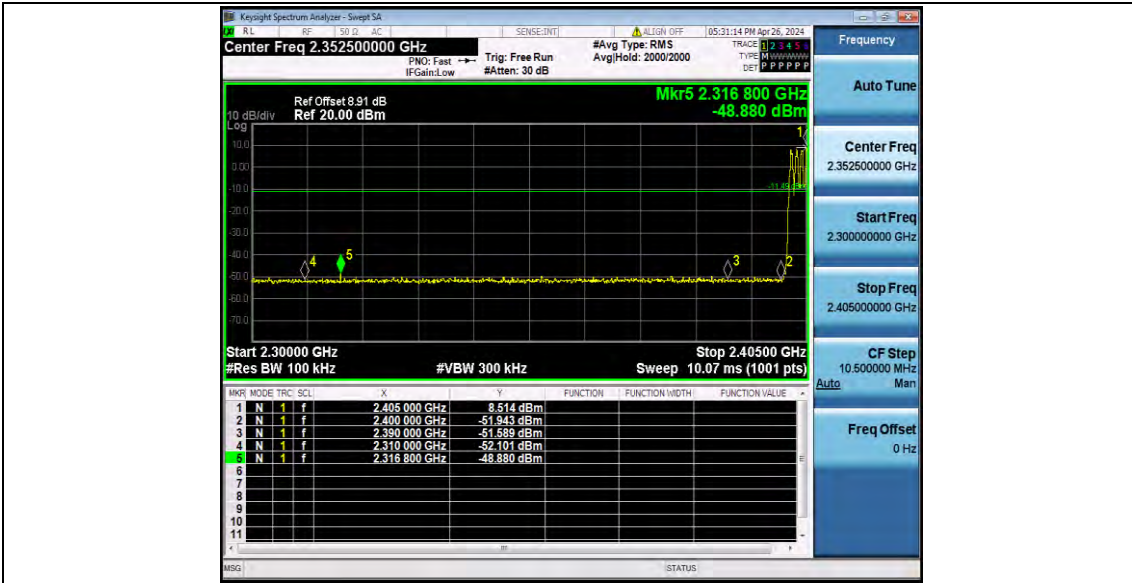
## Appendix A.7: Band edge measurements

### Test Result

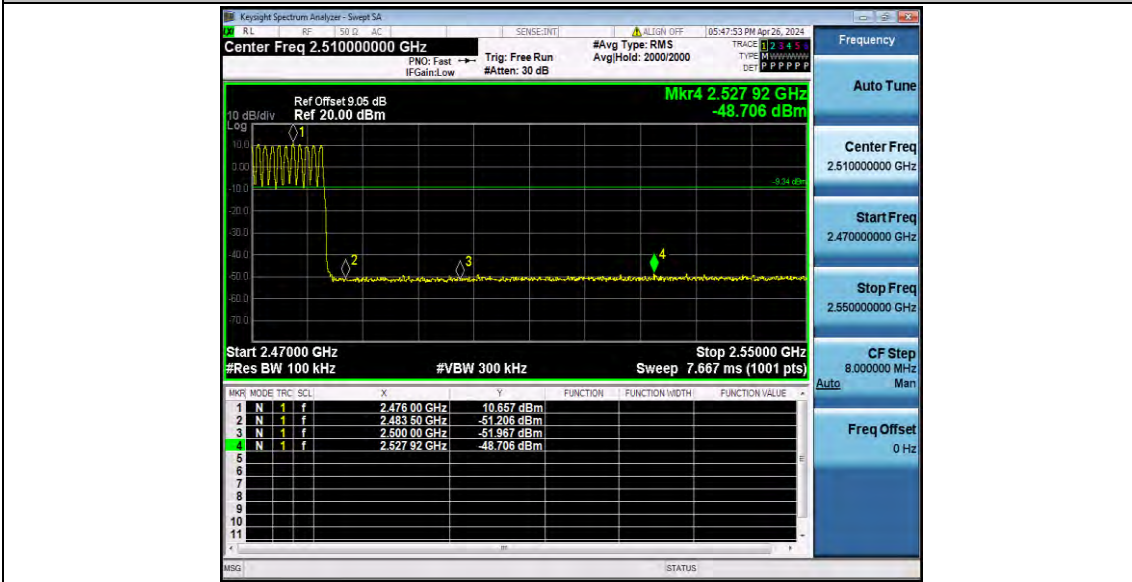
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	8.70	-49.74	≤-11.3	PASS
		High	2480	10.56	-48.83	≤-9.44	PASS
		Low	Hop_2402	8.51	-48.88	≤-11.49	PASS
		High	Hop_2480	10.66	-48.71	≤-9.34	PASS
2DH1	Ant1	Low	2402	8.06	-46.96	≤-11.94	PASS
		High	2480	9.85	-48.55	≤-10.15	PASS
		Low	Hop_2402	8.24	-49.77	≤-11.76	PASS
		High	Hop_2480	9.40	-48.83	≤-10.61	PASS
3DH1	Ant1	Low	2402	8.13	-45.51	≤-11.87	PASS
		High	2480	9.75	-48.85	≤-10.25	PASS
		Low	Hop_2402	7.64	-49.39	≤-12.36	PASS
		High	Hop_2480	9.53	-48.93	≤-10.47	PASS

## Test Graphs

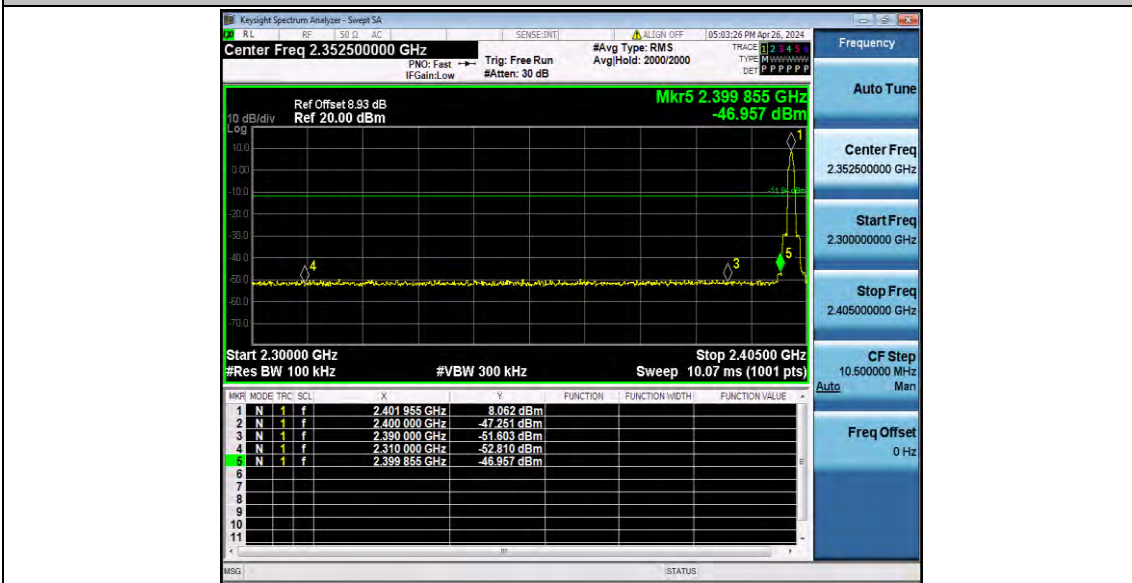

**DH1\_Ant1\_High\_2480**
**DH1\_Ant1\_Low\_Hop\_2402**



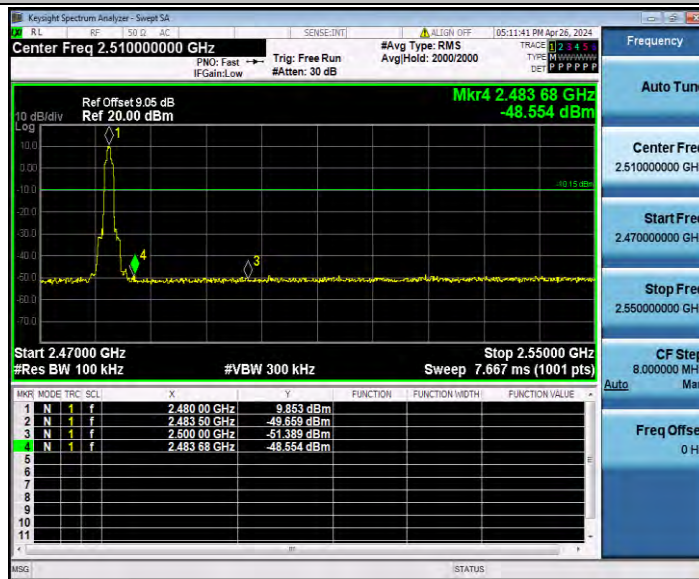
DH1\_Ant1\_High\_Hop\_2480



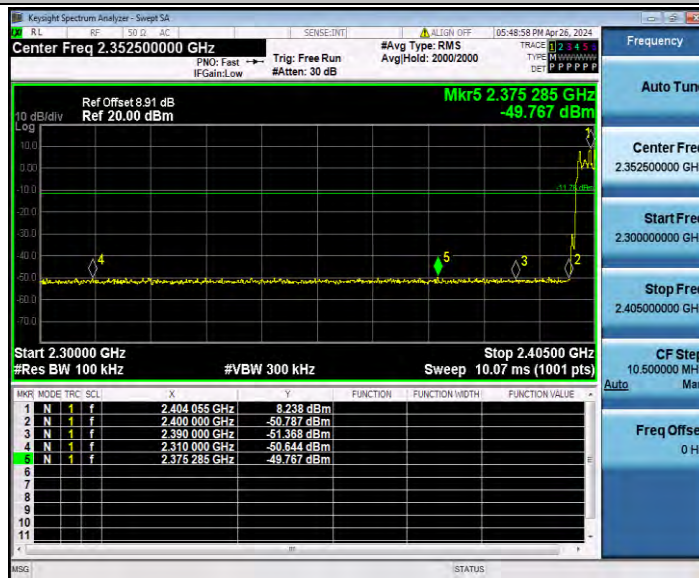
2D11\_Ant1\_Low\_2402



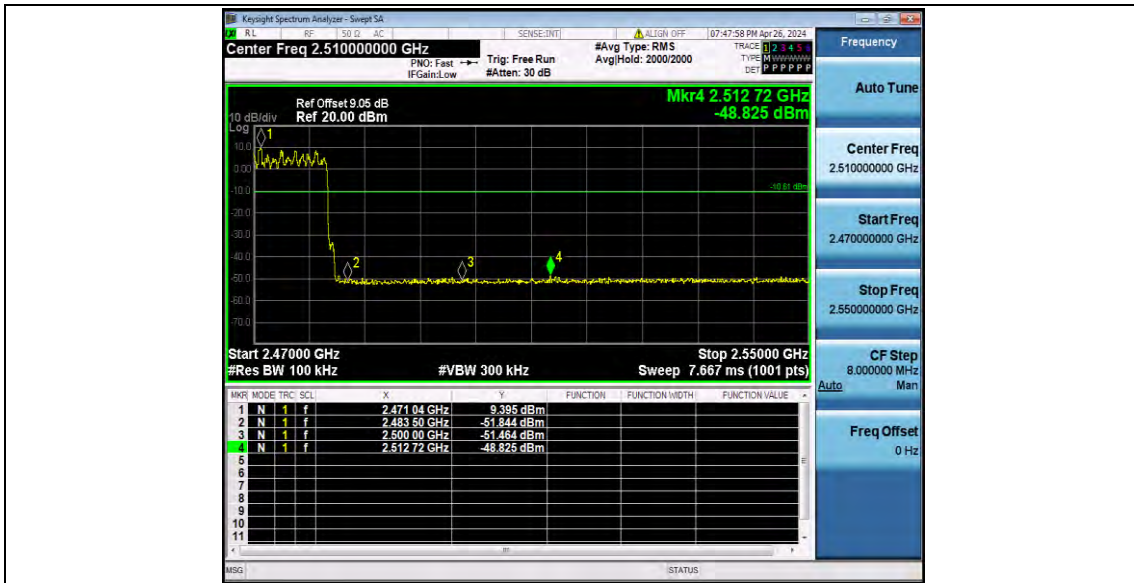
2DH1\_Ant1\_High\_2480



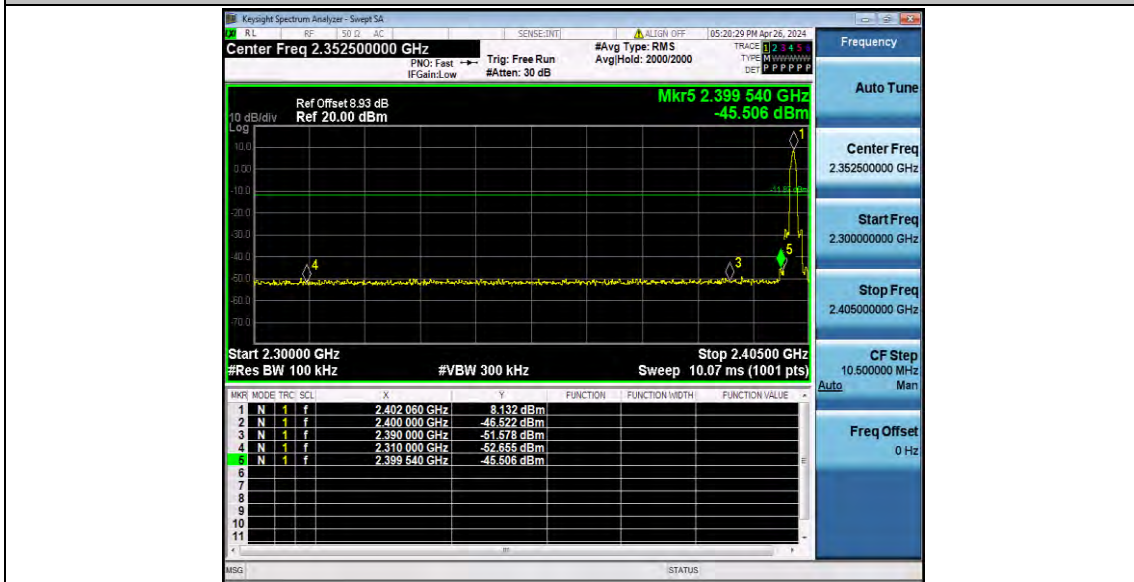
2DH1\_Ant1\_Low\_Hop\_2402



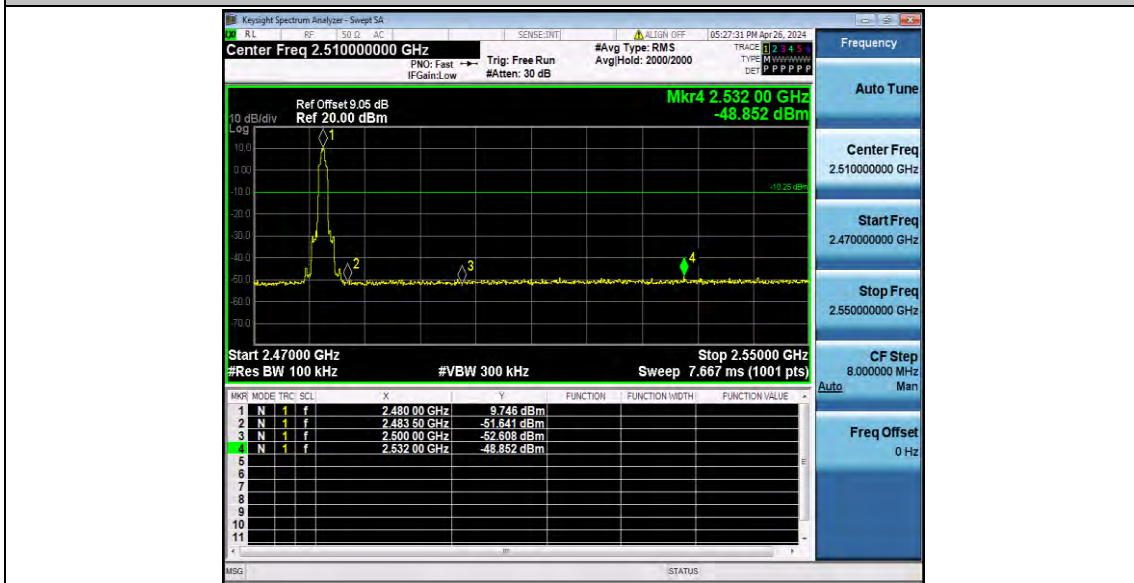
2DH1\_Ant1\_High\_Hop\_2480



3D H1\_Ant1\_Low\_2402

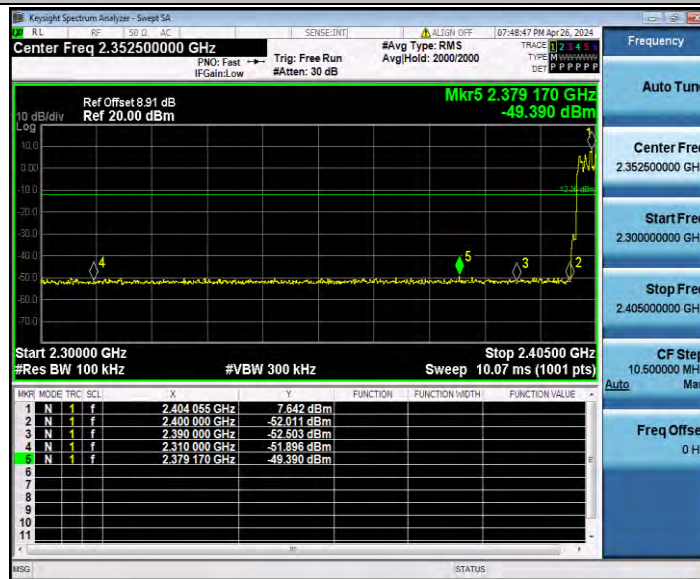


3D H1\_Ant1\_High\_2480

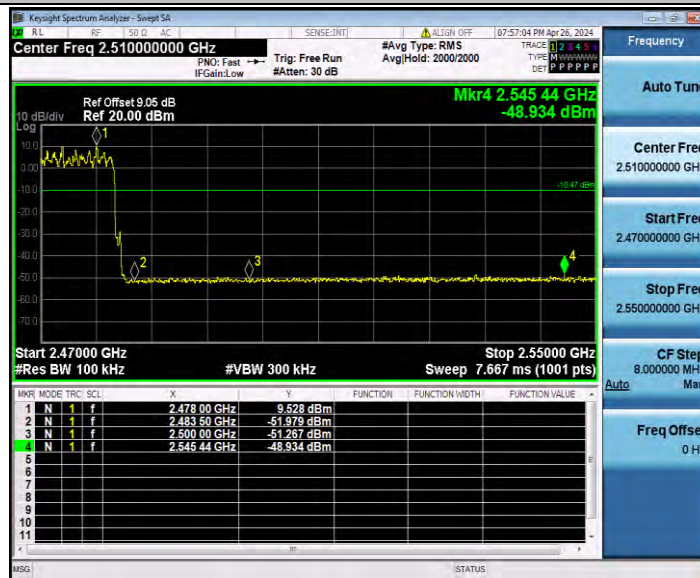




3DH1\_Ant1\_Low\_Hop\_2402



3DH1\_Ant1\_High\_Hop\_2480

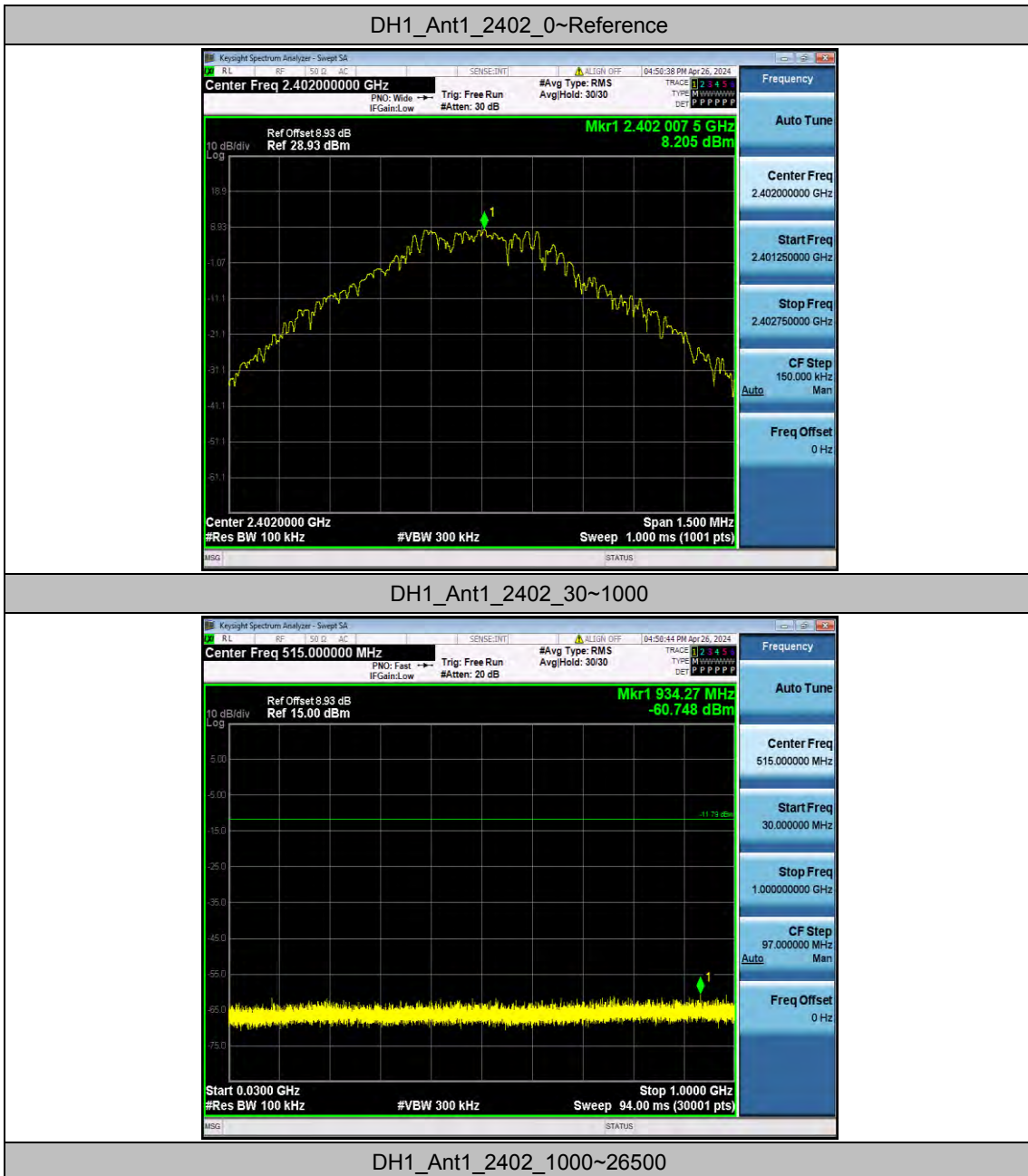


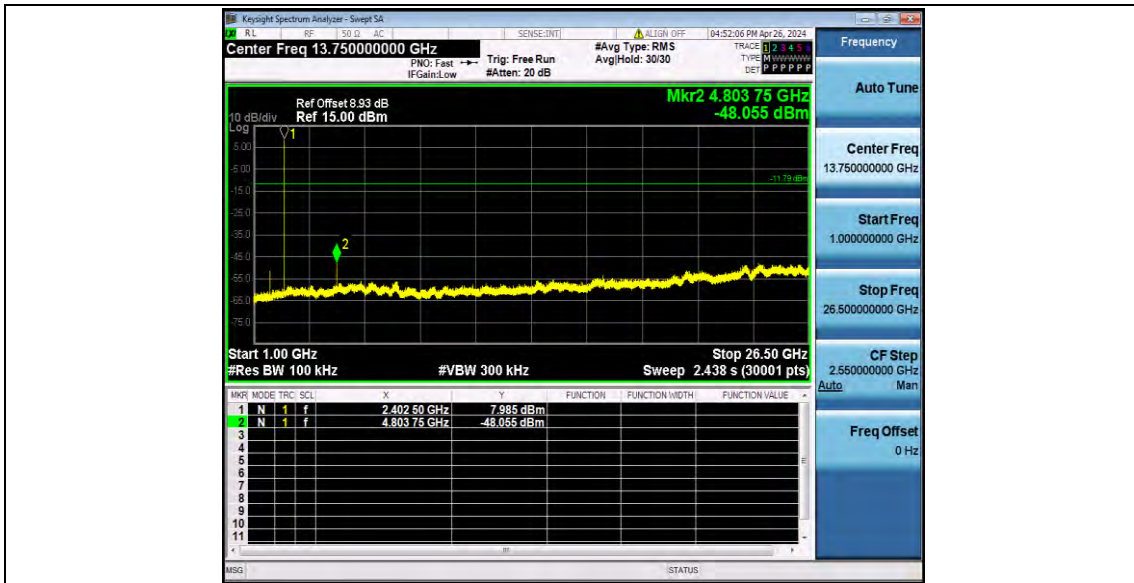
## Appendix A.8: Conducted Spurious Emission

### Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	8.21	8.21	---	PASS
			30~1000	8.21	-60.75	≤-11.79	PASS
			1000~26500	8.21	-48.06	≤-11.79	PASS
		2441	Reference	9.19	9.19	---	PASS
			30~1000	9.19	-60.71	≤-10.81	PASS
			1000~26500	9.19	-48.19	≤-10.81	PASS
		2480	Reference	10.05	10.05	---	PASS
			30~1000	10.05	-60.43	≤-9.95	PASS
			1000~26500	10.05	-48.07	≤-9.95	PASS
2DH1	Ant1	2402	Reference	7.67	7.67	---	PASS
			30~1000	7.67	-60.73	≤-12.33	PASS
			1000~26500	7.67	-47.63	≤-12.33	PASS
		2441	Reference	8.66	8.66	---	PASS
			30~1000	8.66	-43.11	≤-11.34	PASS
			1000~26500	8.66	-48.33	≤-11.34	PASS
		2480	Reference	9.59	9.59	---	PASS
			30~1000	9.59	-60.47	≤-10.41	PASS
			1000~26500	9.59	-47.96	≤-10.41	PASS
3DH1	Ant1	2402	Reference	7.88	7.88	---	PASS
			30~1000	7.88	-60.67	≤-12.12	PASS
			1000~26500	7.88	-47.99	≤-12.12	PASS
		2441	Reference	8.84	8.84	---	PASS
			30~1000	8.84	-60.3	≤-11.16	PASS
			1000~26500	8.84	-48.01	≤-11.16	PASS
		2480	Reference	8.33	8.33	---	PASS
			30~1000	8.33	-60.51	≤-11.67	PASS
			1000~26500	8.33	-47.69	≤-11.67	PASS

## Test Graphs

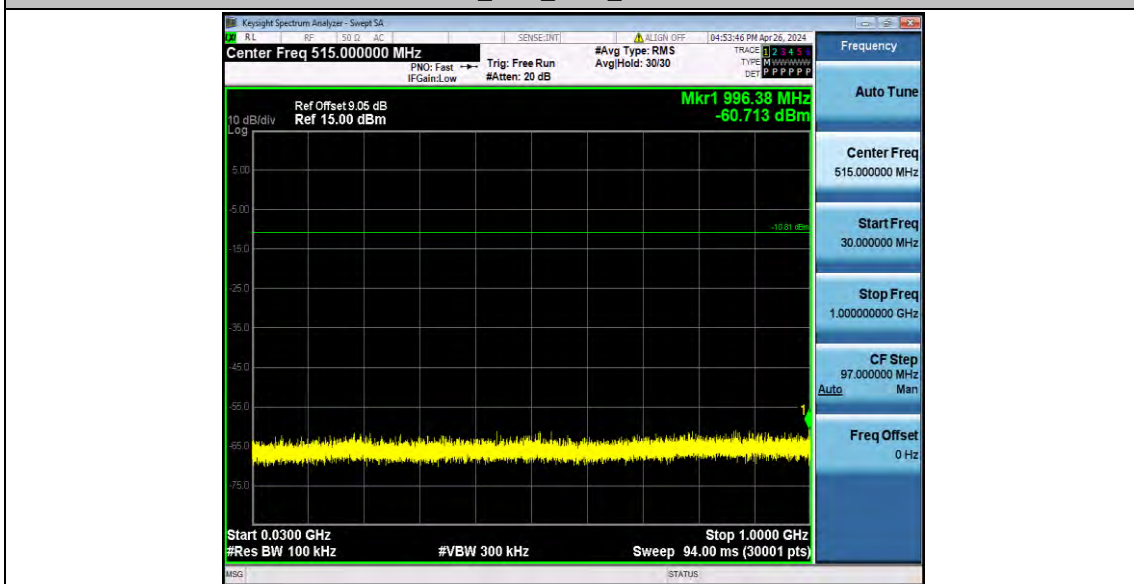




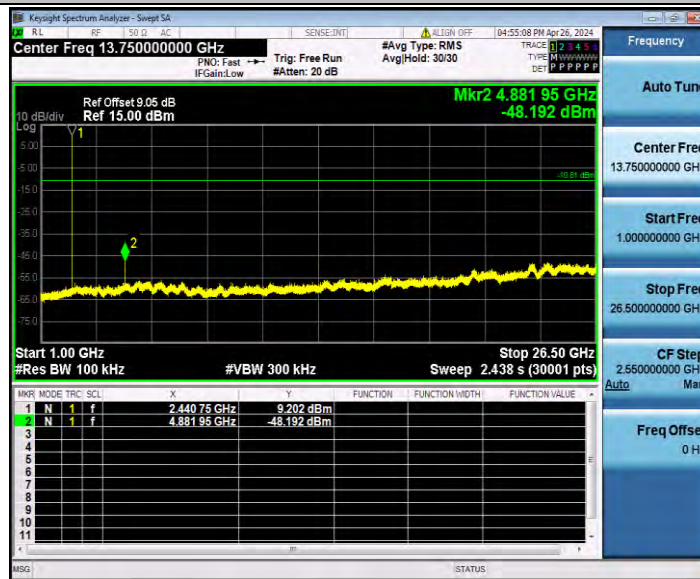
DH1\_Ant1\_2441\_0~Reference



DH1\_Ant1\_2441\_30~1000



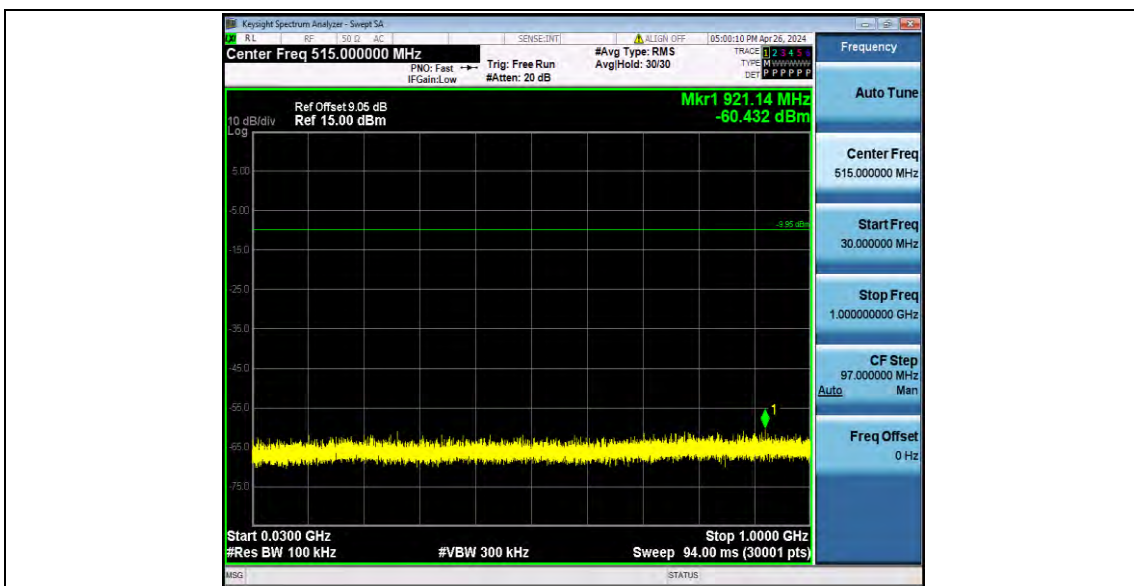
DH1\_Ant1\_2441\_1000~26500



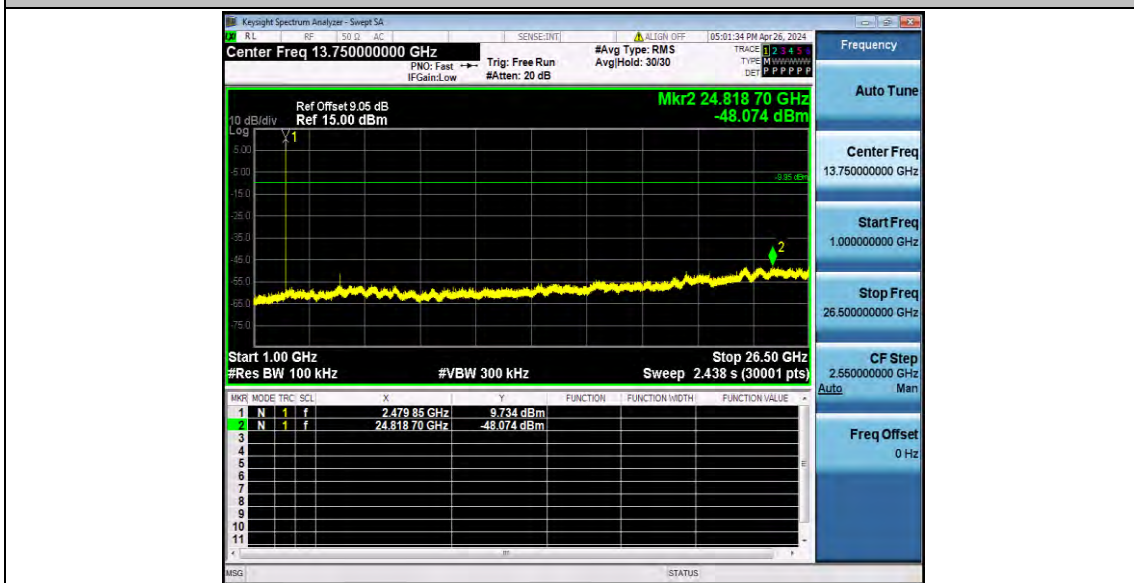
DH1\_Ant1\_2480\_0~Reference



DH1\_Ant1\_2480\_30~1000



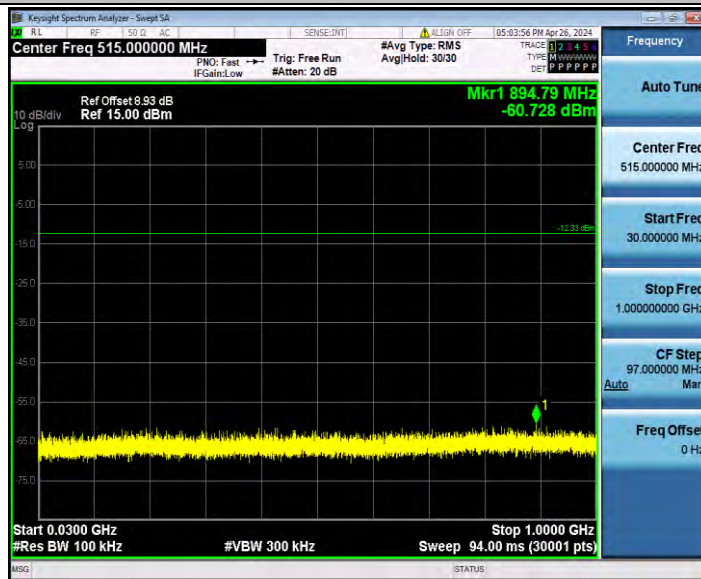
DH1\_Ant1\_2480\_1000~26500



2DH1\_Ant1\_2402\_0~Reference



2DH1\_Ant1\_2402\_30~1000



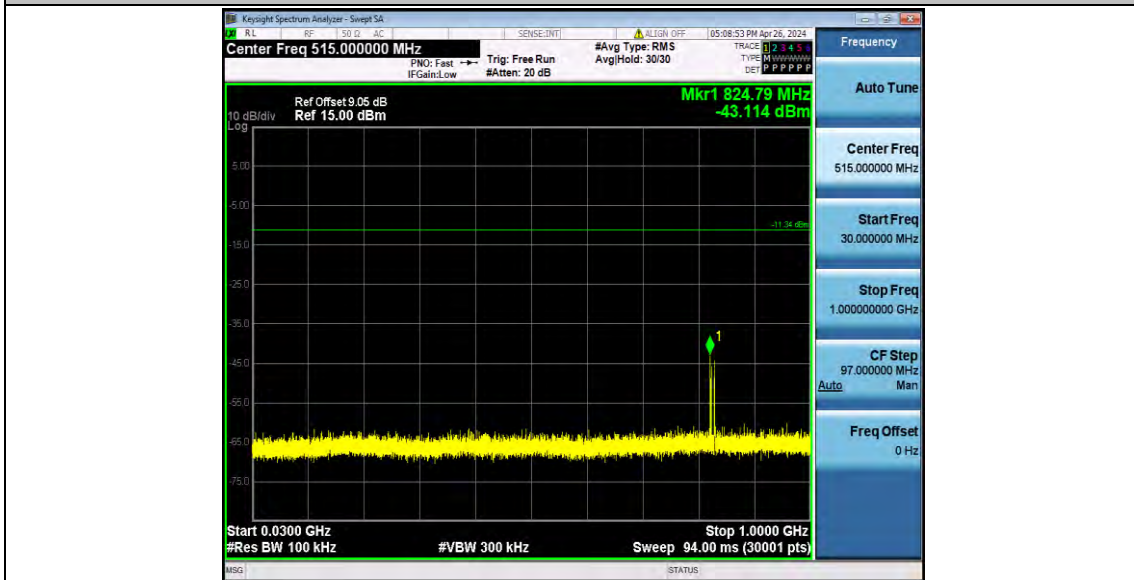
2DH1\_Ant1\_2402\_1000~26500



2DH1\_Ant1\_2441\_0~Reference



2DH1\_Ant1\_2441\_30~100



2DH1\_Ant1\_2441\_1000~26500

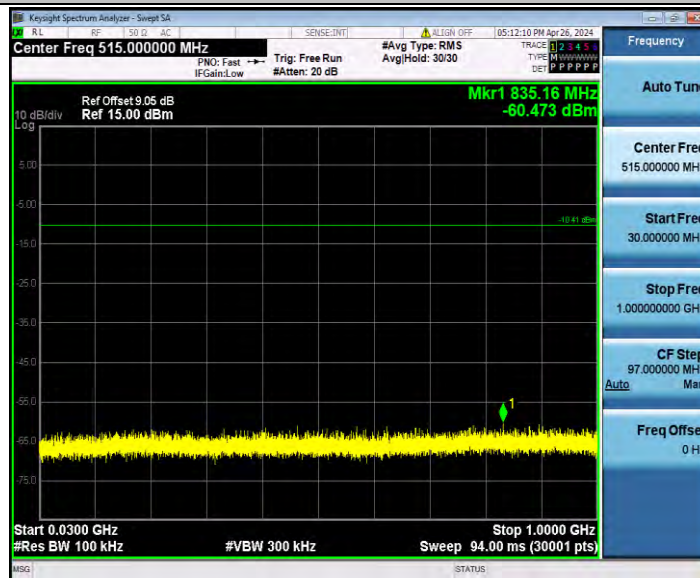




2DH1\_Ant1\_2480\_0~Reference



2DH1\_Ant1\_2480\_30~1000



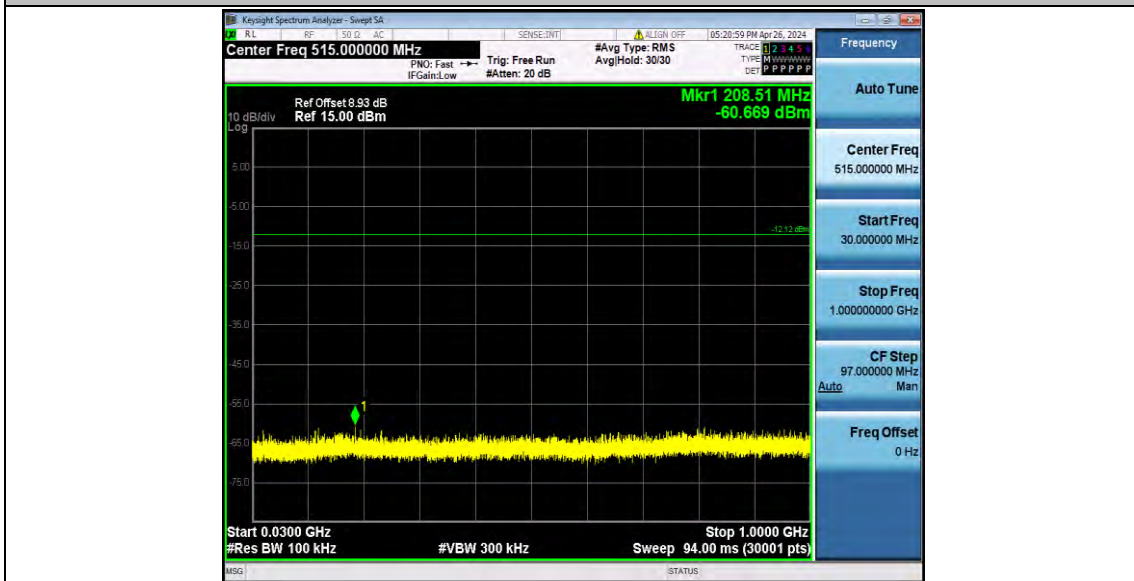
2DH1\_Ant1\_2480\_1000~26500



3DH1\_Ant1\_2402\_0~Reference



3DH1\_Ant1\_2402\_30~1000



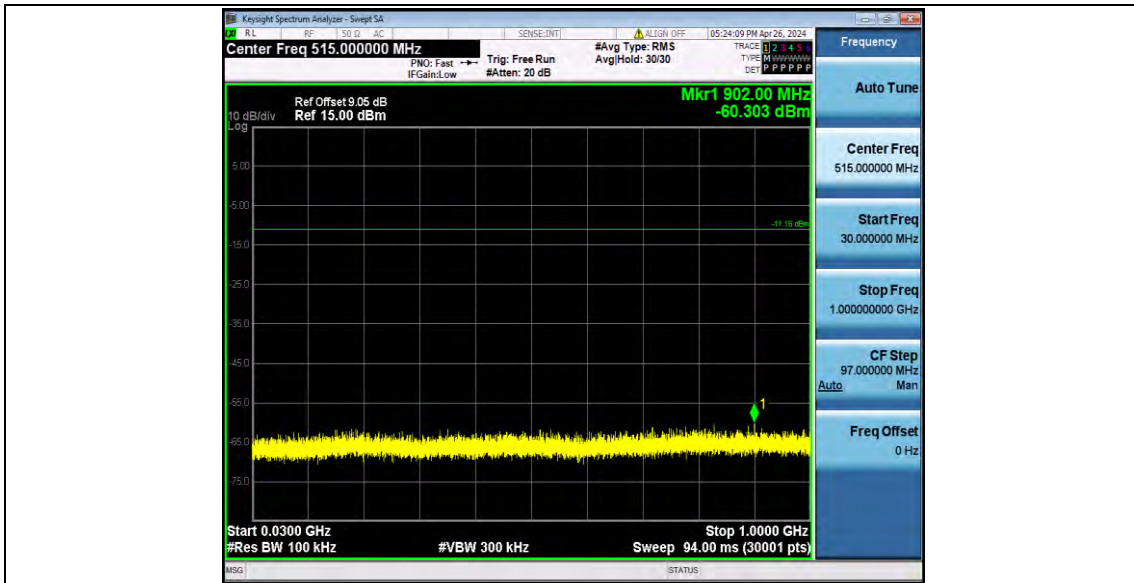
3DH1\_Ant1\_2402\_1000~26500



3DH1\_Ant1\_2441\_0~Reference



3DH1\_Ant1\_2441\_30~1000



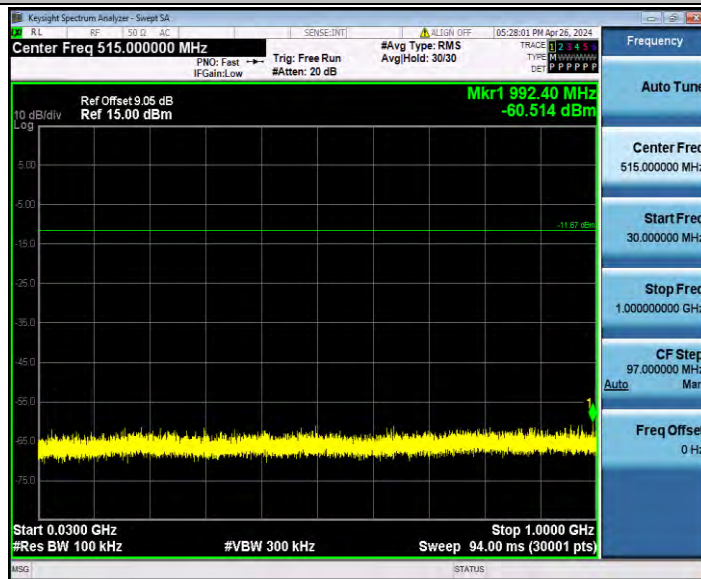
3DH1\_Ant1\_2441\_1000~26500



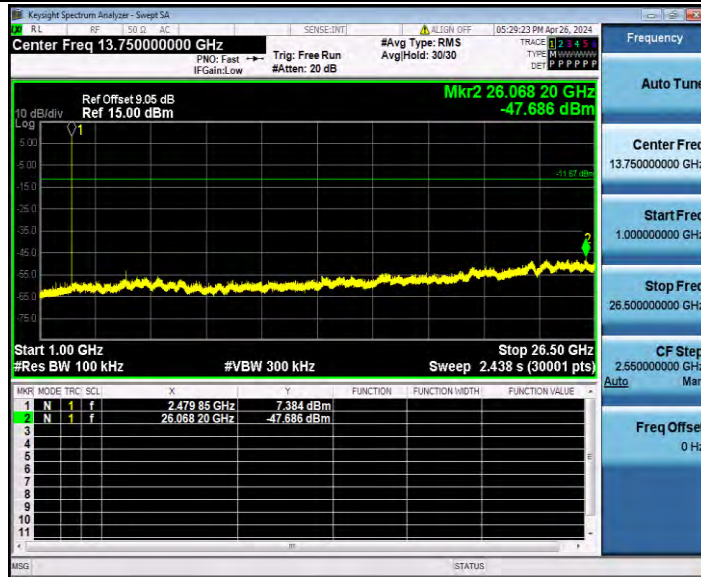
3DH1\_Ant1\_2480\_0~Reference



3DH1\_Ant1\_2480\_30~1000



3DH1\_Ant1\_2480\_1000~26500



## Appendix A.9: Emissions in Restricted Bands

### Test Result

TestMode	Antenna	ChName	Freq(MHz )	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH1	Ant1	Low	2402	AV	2310.000	-49.33	≤-41.20	45.87	≤54	PASS
				AV	2387.465	-48.95	≤-41.20	46.25	≤54	PASS
				AV	2390.000	-49.21	≤-41.20	45.99	≤54	PASS
				Peak	2310.000	-40.95	≤-21.20	54.25	≤74	PASS
				Peak	2330.555	-38.87	≤-21.20	56.33	≤74	PASS
				Peak	2390.000	-40.66	≤-21.20	54.54	≤74	PASS
		High	2480	AV	2483.500	-47.48	≤-41.20	47.72	≤54	PASS
				AV	2483.520	-47.48	≤-41.20	47.72	≤54	PASS
				AV	2500.000	-48.7	≤-41.20	46.50	≤54	PASS
				Peak	2483.500	-41.52	≤-21.20	53.68	≤74	PASS
				Peak	2491.600	-38.86	≤-21.20	56.34	≤74	PASS
				Peak	2500.000	-41.5	≤-21.20	53.70	≤74	PASS
2DH1	Ant1	Low	2402	AV	2310.000	-49.48	≤-41.20	45.72	≤54	PASS
				AV	2388.095	-48.95	≤-41.20	46.25	≤54	PASS
				AV	2390.000	-49.08	≤-41.20	46.12	≤54	PASS
				Peak	2310.000	-41.11	≤-21.20	54.09	≤74	PASS
				Peak	2387.885	-38.83	≤-21.20	56.37	≤74	PASS
				Peak	2390.000	-41.15	≤-21.20	54.05	≤74	PASS
		High	2480	AV	2483.500	-47.22	≤-41.20	47.98	≤54	PASS
				AV	2483.520	-47.22	≤-41.20	47.98	≤54	PASS
				AV	2500.000	-48.76	≤-41.20	46.44	≤54	PASS
				Peak	2483.500	-41.35	≤-21.20	53.85	≤74	PASS
				Peak	2490.240	-38.88	≤-21.20	56.32	≤74	PASS
				Peak	2500.000	-39.95	≤-21.20	55.25	≤74	PASS
3DH1	Ant1	Low	2402	AV	2310.000	-49.55	≤-41.20	45.65	≤54	PASS
				AV	2375.810	-48.99	≤-41.20	46.21	≤54	PASS
				AV	2390.000	-49.19	≤-41.20	46.01	≤54	PASS
				Peak	2310.000	-40.99	≤-21.20	54.21	≤74	PASS
				Peak	2377.805	-38.45	≤-21.20	56.75	≤74	PASS
				Peak	2390.000	-40.99	≤-21.20	54.21	≤74	PASS
		High	2480	AV	2483.500	-47.38	≤-41.20	47.82	≤54	PASS
				AV	2483.520	-47.38	≤-41.20	47.82	≤54	PASS
				AV	2500.000	-48.88	≤-41.20	46.32	≤54	PASS
				Peak	2483.500	-40.49	≤-21.20	54.71	≤74	PASS
Peak	2484.400	-38.96	≤-21.20	56.24	≤74	PASS				

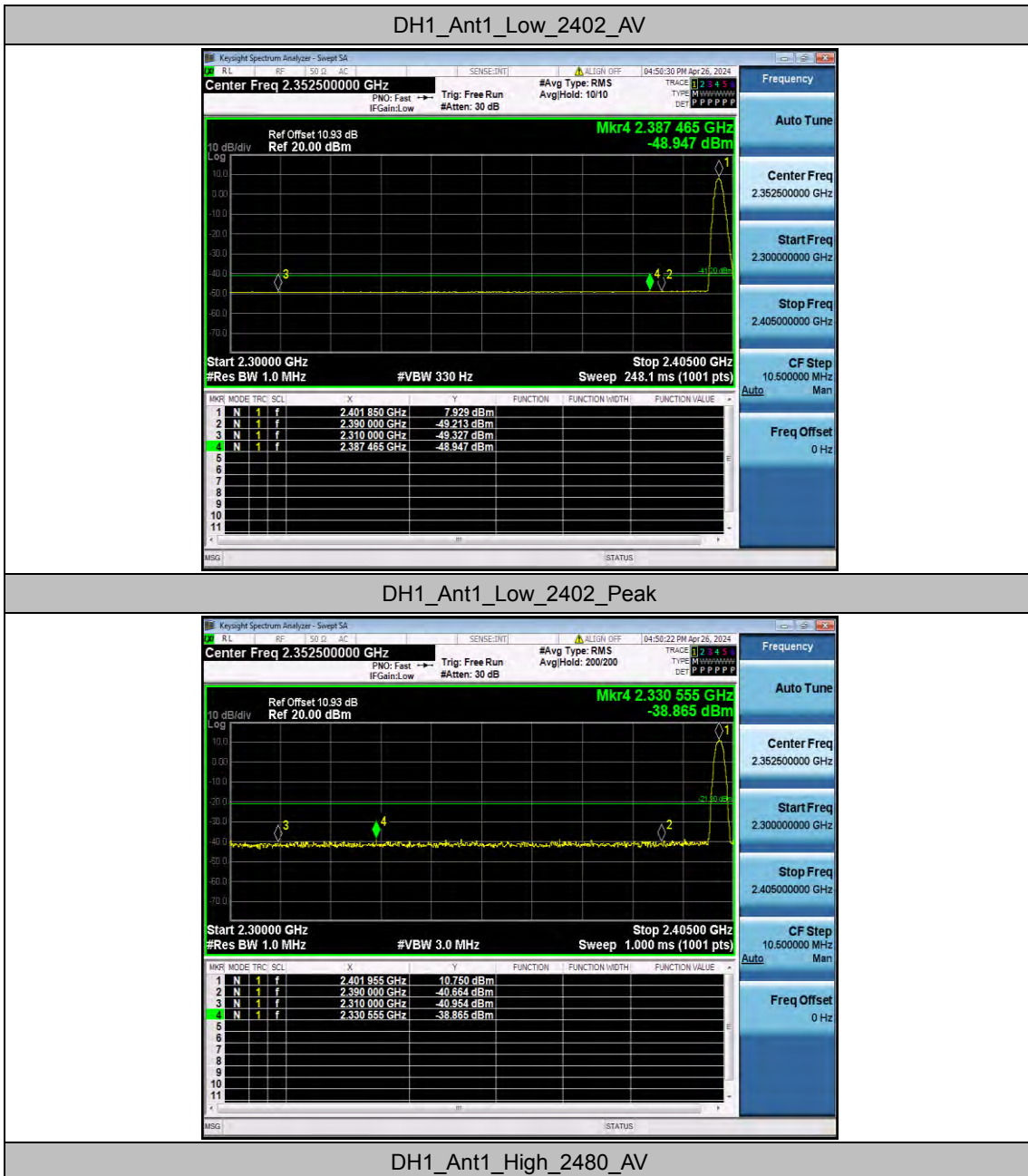
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				Peak	2500.000	-41.2	≤-21.20	54.00	≤74	PASS
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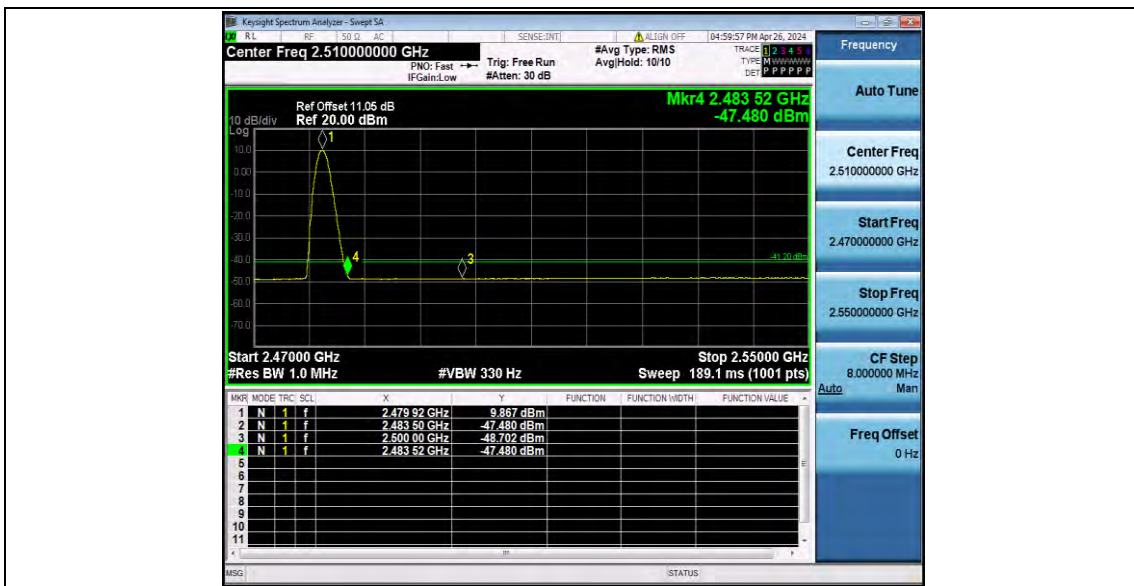
Note:

1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. 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.

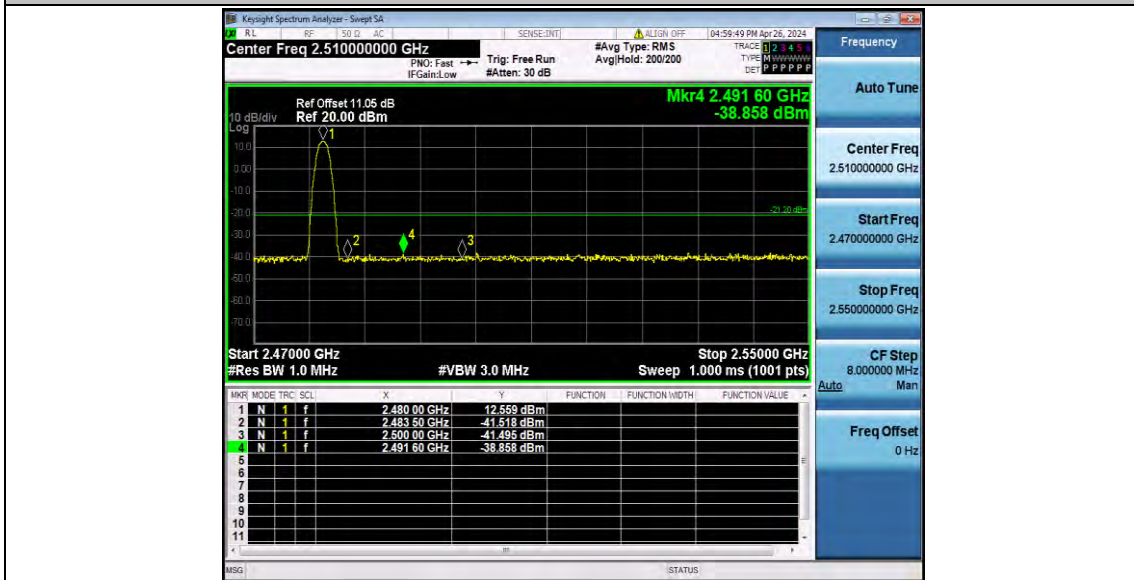
## Test Graphs



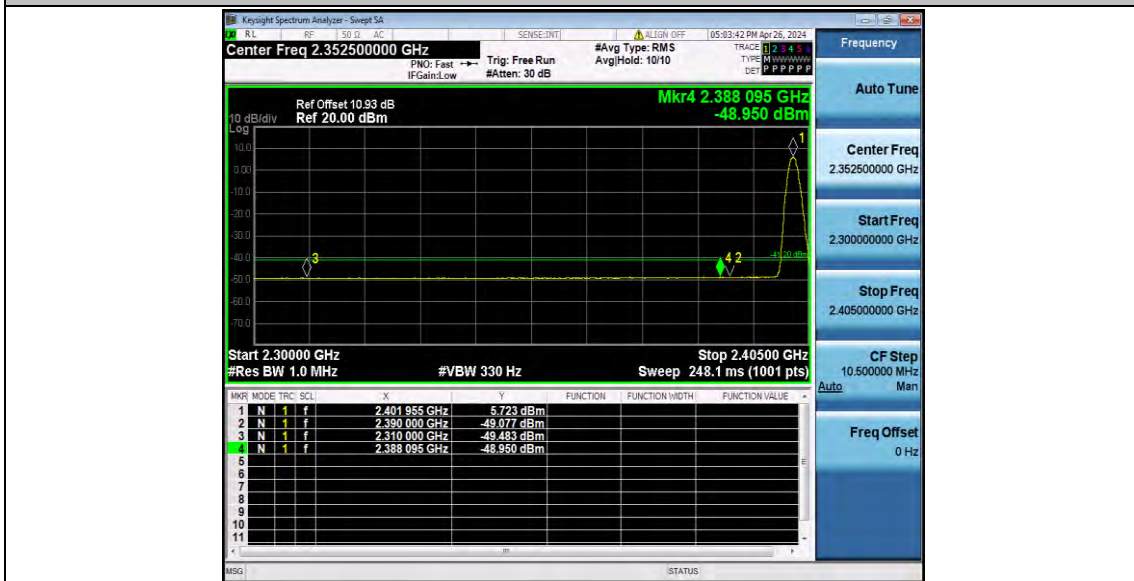




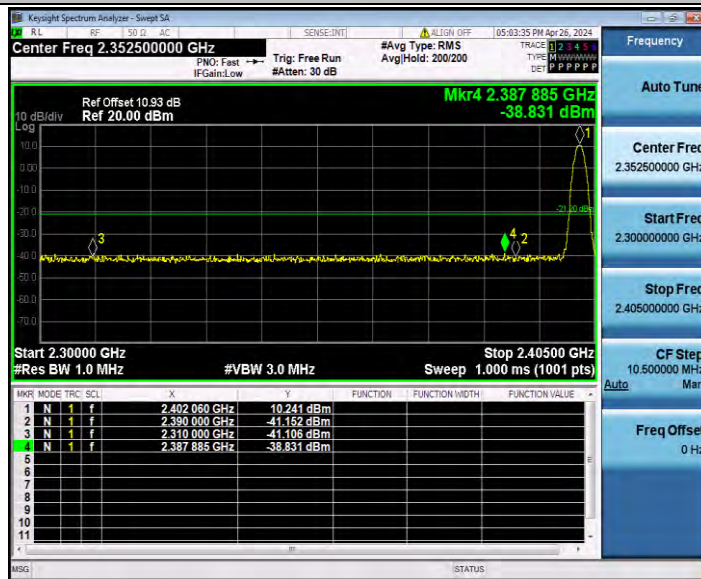
DH1\_Ant1\_High\_2480\_Peak



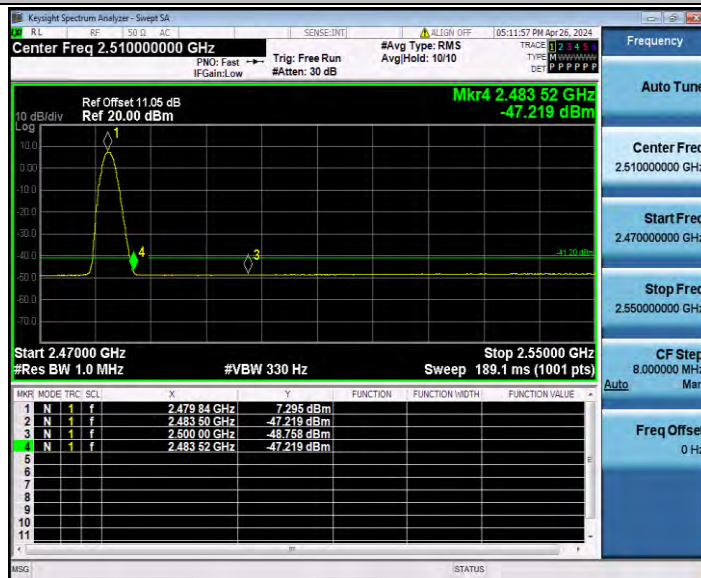
2DH1\_Ant1\_Low\_2402\_AV



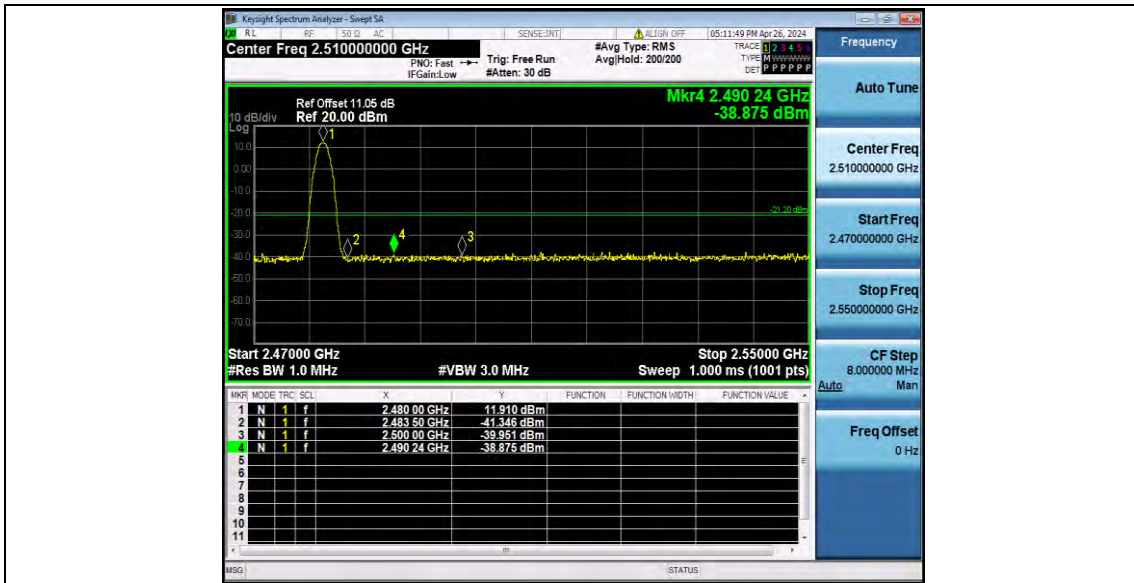
2DH1\_Ant1\_Low\_2402\_Peak



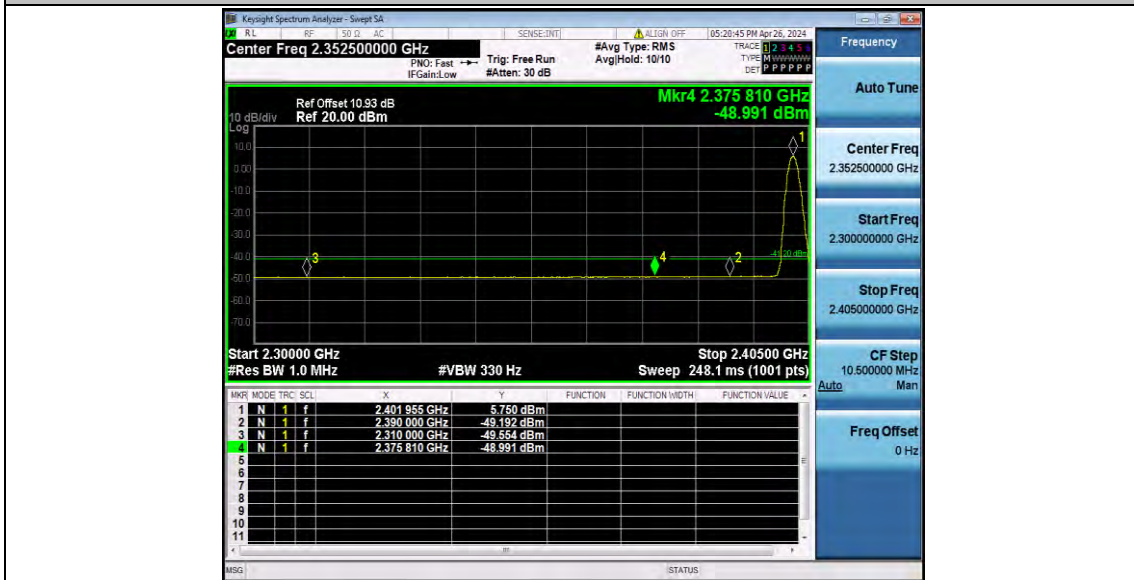
2DH1\_Ant1\_High\_2480\_AV



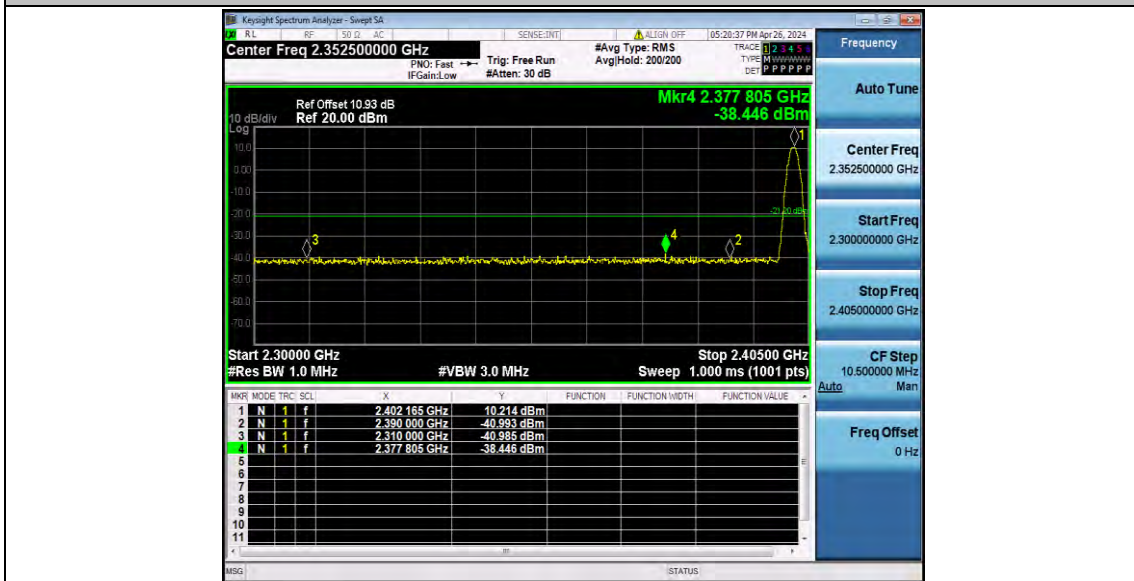
2DH1\_Ant1\_High\_2480\_Peak



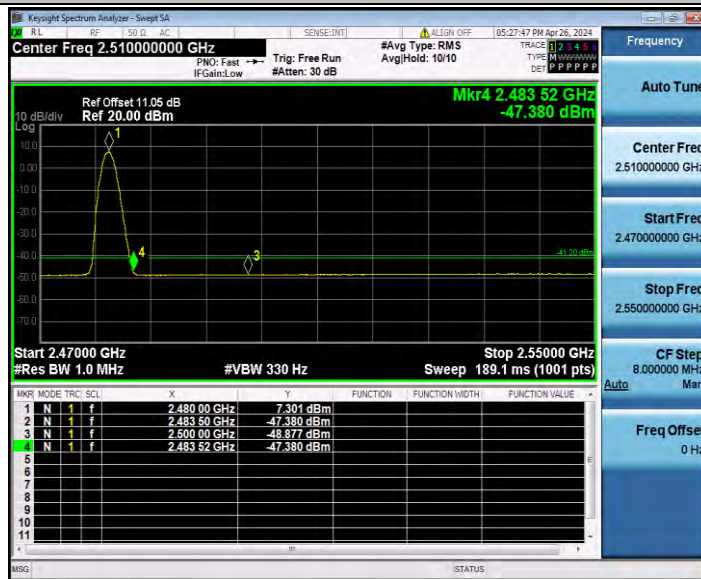
3DH1\_Ant1\_Low\_2402\_AV



3DH1\_Ant1\_Low\_2402\_Peak



3DH1\_Ant1\_High\_2480\_AV



3DH1\_Ant1\_High\_2480\_Peak

