

Appendix: Bluetooth Classic

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**Appendix A: 20dB Emission Bandwidth****Test Result**

Test Mode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.035	2401.475	2402.510	---	---
		2441	1.032	2440.478	2441.510	---	---
		2480	1.056	2479.460	2480.516	---	---
2DH5	Ant1	2402	1.206	2401.385	2402.591	---	---
		2441	1.203	2440.385	2441.588	---	---
		2480	1.206	2479.385	2480.591	---	---
3DH5	Ant1	2402	1.257	2401.352	2402.609	---	---
		2441	1.245	2440.361	2441.606	---	---
		2480	1.248	2479.355	2480.603	---	---

## Test Graphs

DH5\_Ant1\_2402



DH5\_Ant1\_2441



DH5\_Ant1\_2480



2DH5\_Ant1\_2402



2DH5\_Ant1\_2441





2D H5\_Ant1\_2480



3D H5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480

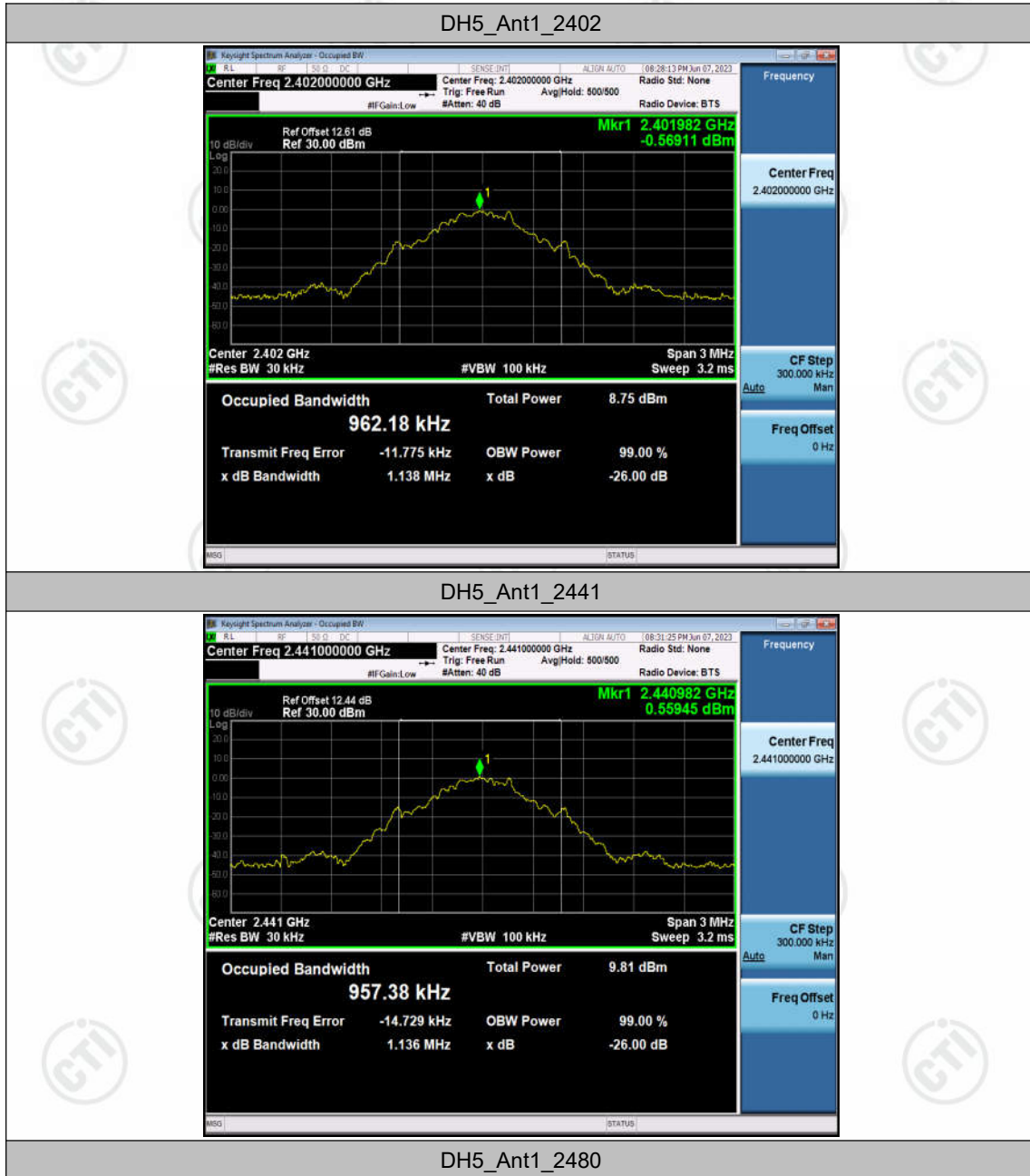




**Appendix B: Occupied Channel Bandwidth****Test Result**

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz ]	Verdict
DH5	Ant1	2402	0.96218	2401.5071	2402.4693	---	---
		2441	0.95738	2440.5066	2441.4640	---	---
		2480	0.93336	2479.5406	2480.4739	---	---
2DH5	Ant1	2402	1.1433	2401.4162	2402.5595	---	---
		2441	1.1446	2440.4147	2441.5593	---	---
		2480	1.1362	2479.4194	2480.5556	---	---
3DH5	Ant1	2402	1.1451	2401.4194	2402.5645	---	---
		2441	1.1449	2440.4192	2441.5641	---	---
		2480	1.1433	2479.4214	2480.5647	---	---

## Test Graphs





2DH5\_Ant1\_2402



2DH5\_Ant1\_2441



2DH5\_Ant1\_2480



3DH5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480

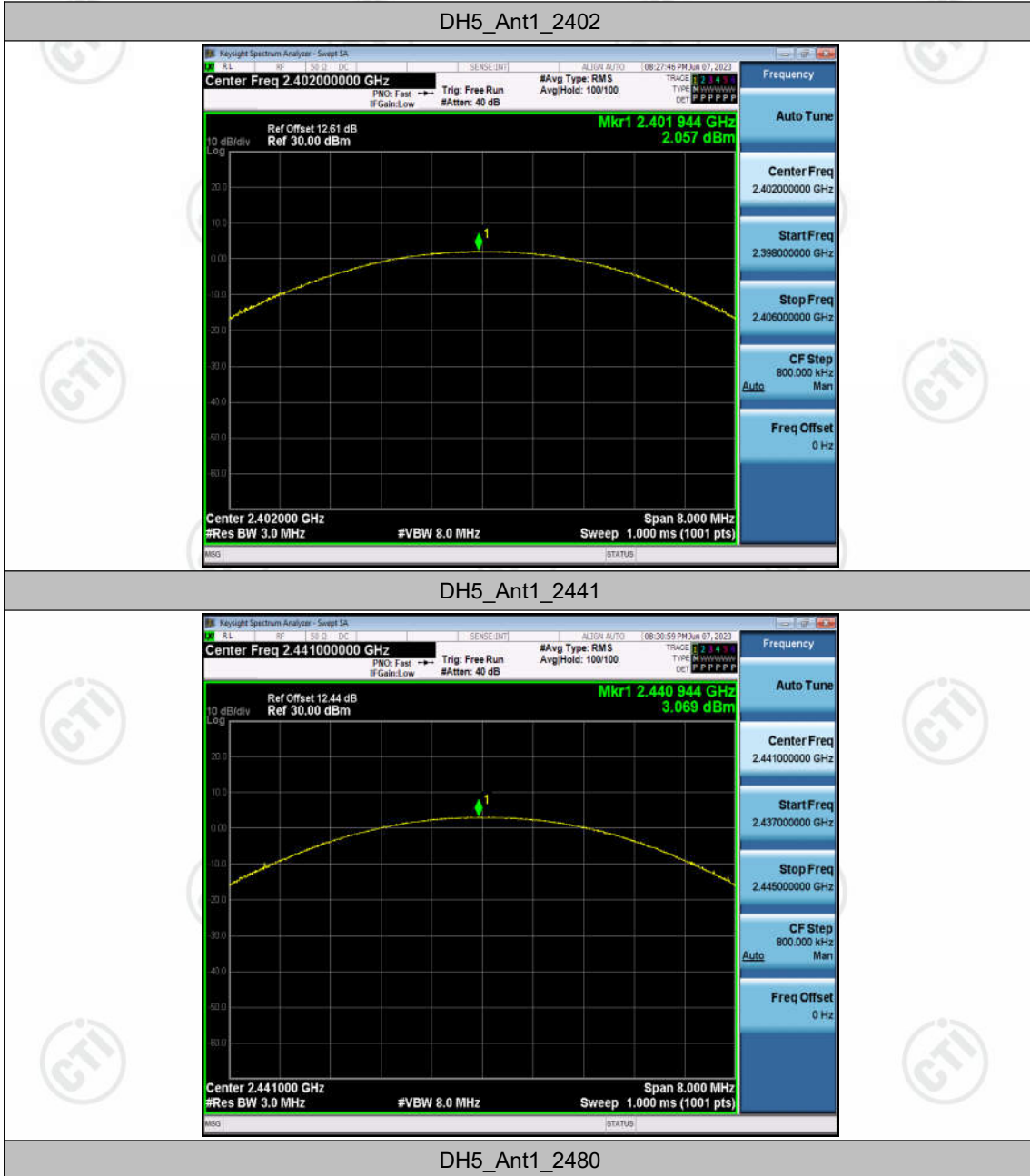




**Appendix C: Maximum conducted output power****Test Result**

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	2.06	≤30	PASS
		2441	3.07	≤20.97	PASS
		2480	2.5	≤20.97	PASS
2DH5	Ant1	2402	2.07	≤30	PASS
		2441	2.97	≤20.97	PASS
		2480	2.49	≤20.97	PASS
3DH5	Ant1	2402	2.03	≤30	PASS
		2441	2.98	≤20.97	PASS
		2480	2.45	≤20.97	PASS

## Test Graphs





2DH5\_Ant1\_2402



2DH5\_Ant1\_2441



2DH5\_Ant1\_2480



3DH5\_Ant1\_2402

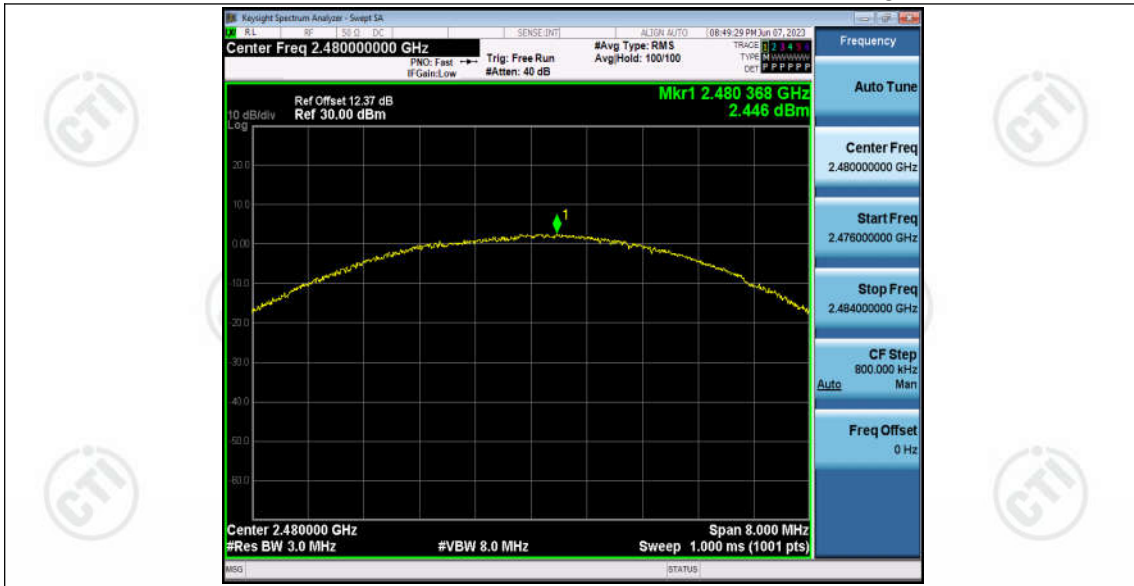




3DH5\_Ant1\_2441



3DH5\_Ant1\_2480

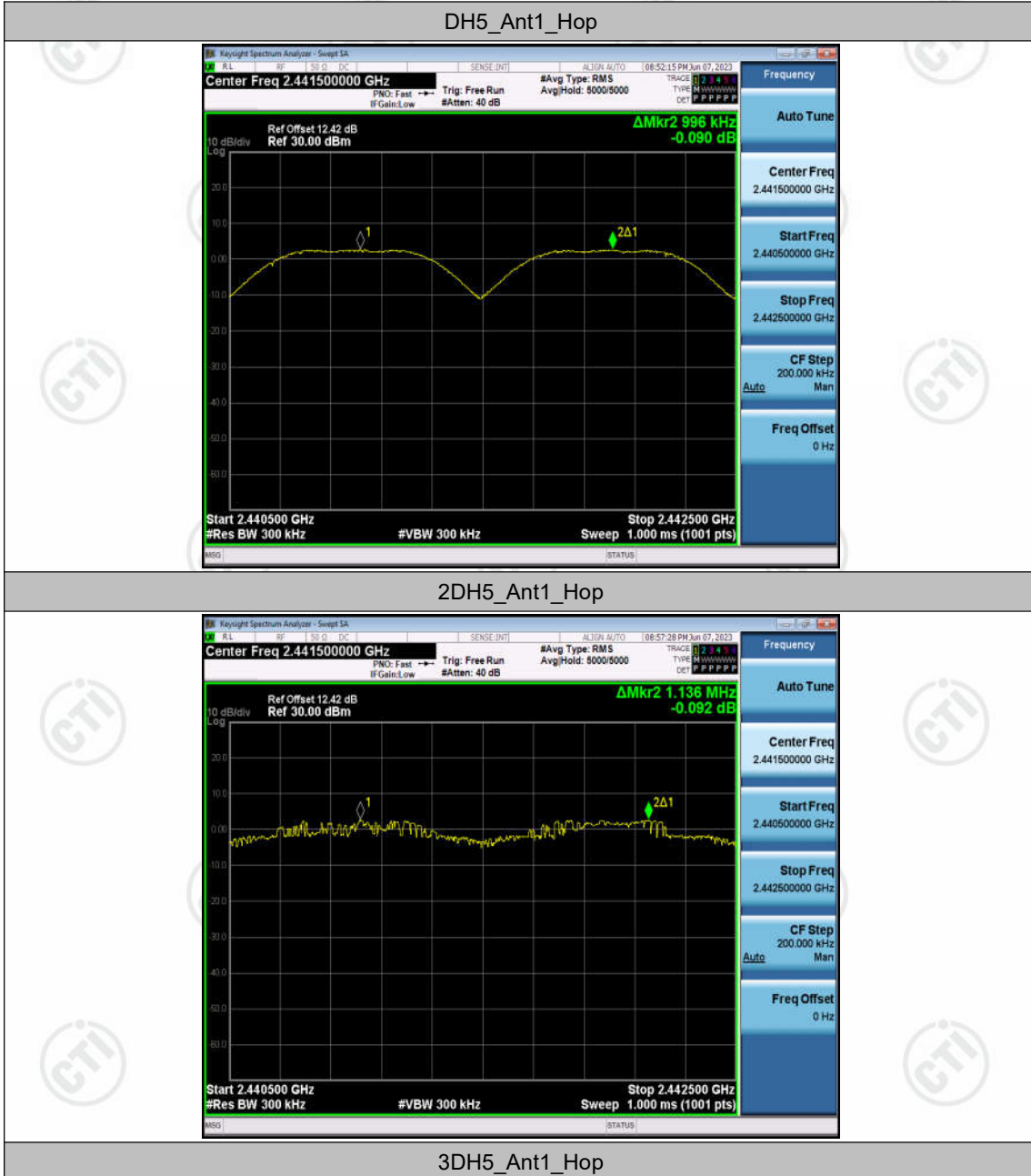


## Appendix D: Carrier frequency separation

### Test Result

Test Mode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.996	$\geq 0.704$	PASS
2DH5	Ant1	Hop	1.136	$\geq 0.804$	PASS
3DH5	Ant1	Hop	1.184	$\geq 0.838$	PASS

## Test Graphs



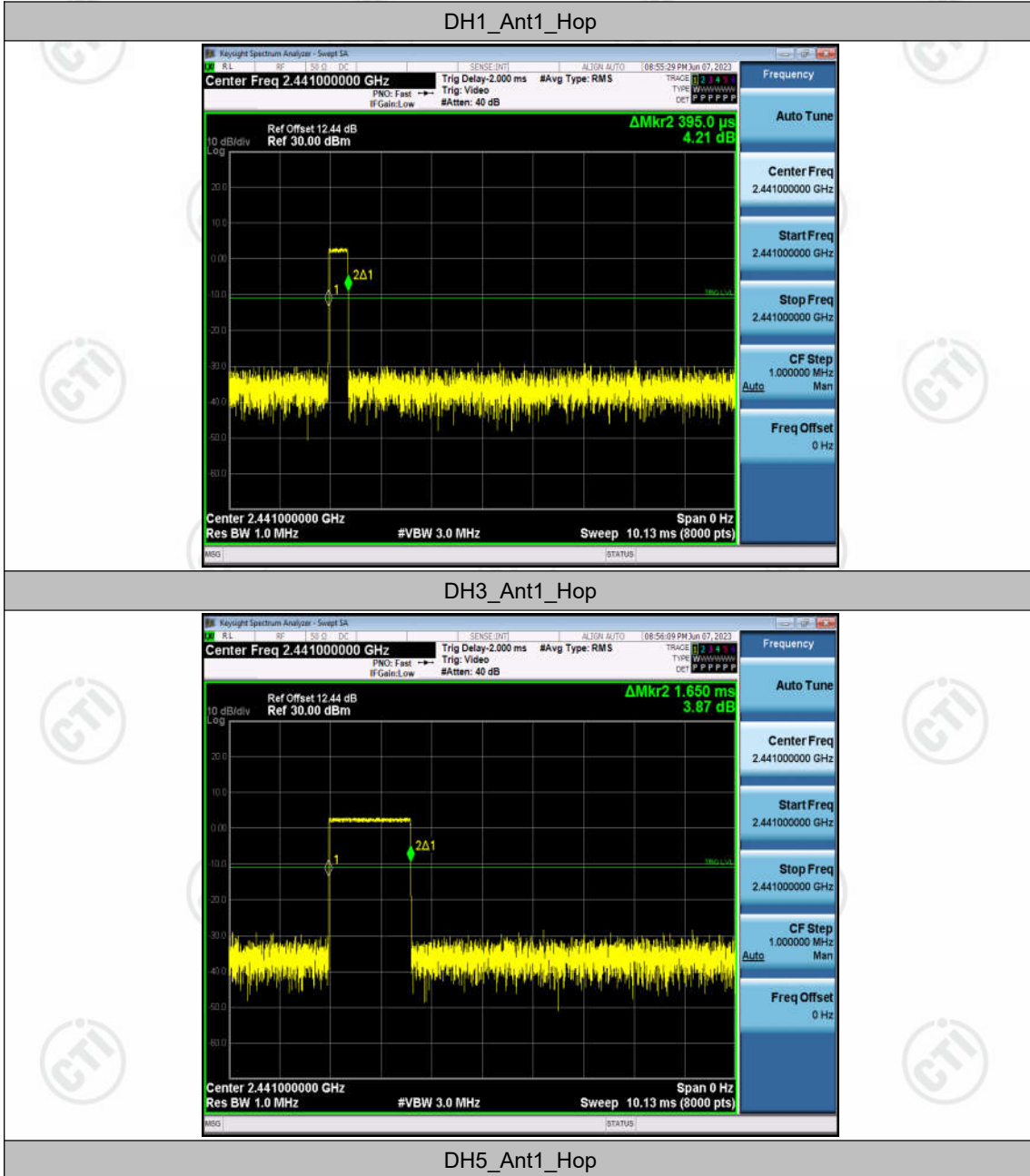


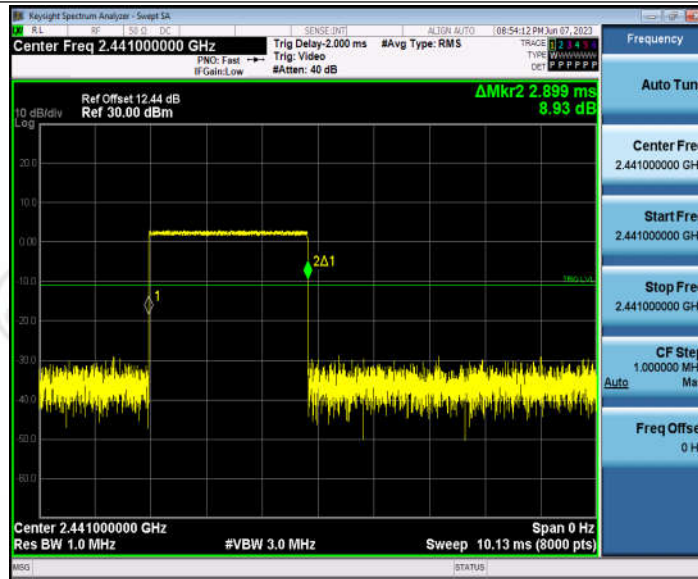


**Appendix E: Time of occupancy****Test Result**

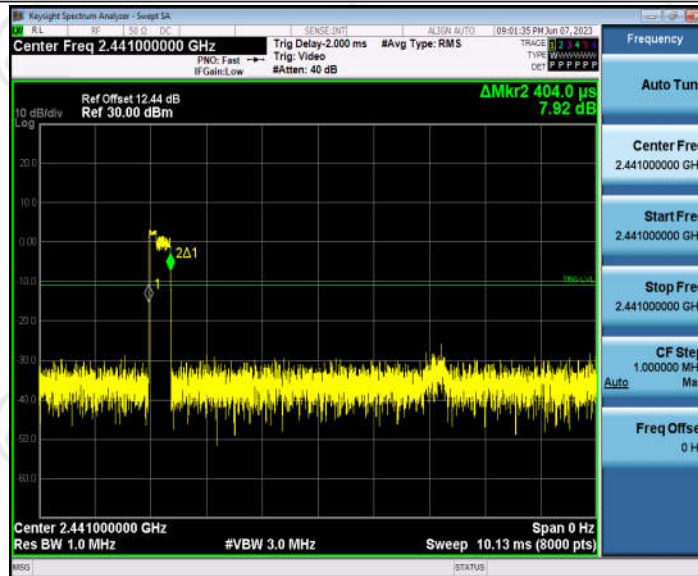
Test Mode	Antenna	Frequency[MHz]	Burst Width [ms]	Total Hops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.395	320	0.126	≤0.4	PASS
DH3	Ant1	Hop	1.650	160	0.264	≤0.4	PASS
DH5	Ant1	Hop	2.899	106.67	0.309	≤0.4	PASS
2DH1	Ant1	Hop	0.404	320	0.129	≤0.4	PASS
2DH3	Ant1	Hop	1.656	160	0.265	≤0.4	PASS
2DH5	Ant1	Hop	2.904	106.67	0.31	≤0.4	PASS
3DH1	Ant1	Hop	0.404	320	0.129	≤0.4	PASS
3DH3	Ant1	Hop	1.654	160	0.265	≤0.4	PASS
3DH5	Ant1	Hop	2.904	106.67	0.31	≤0.4	PASS

## Test Graphs

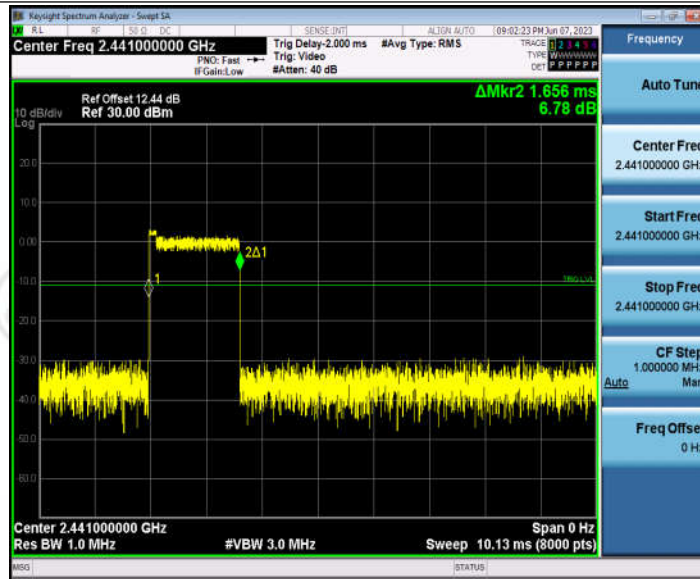




2DH1\_Ant1\_Hop



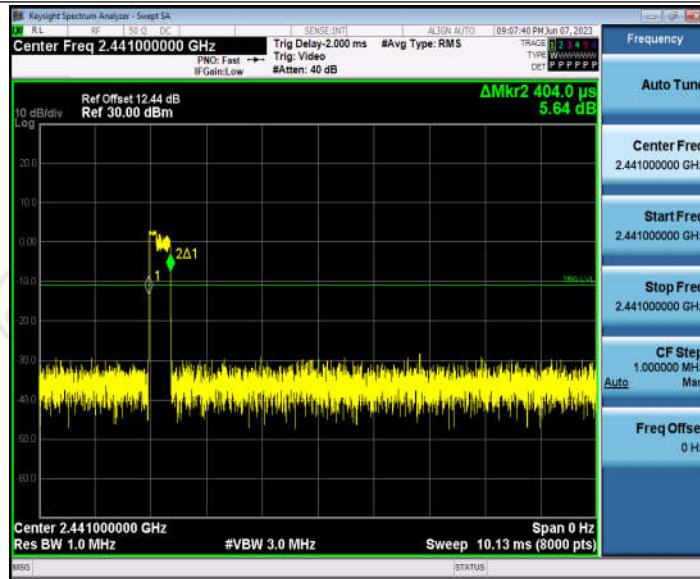
2DH3\_Ant1\_Hop



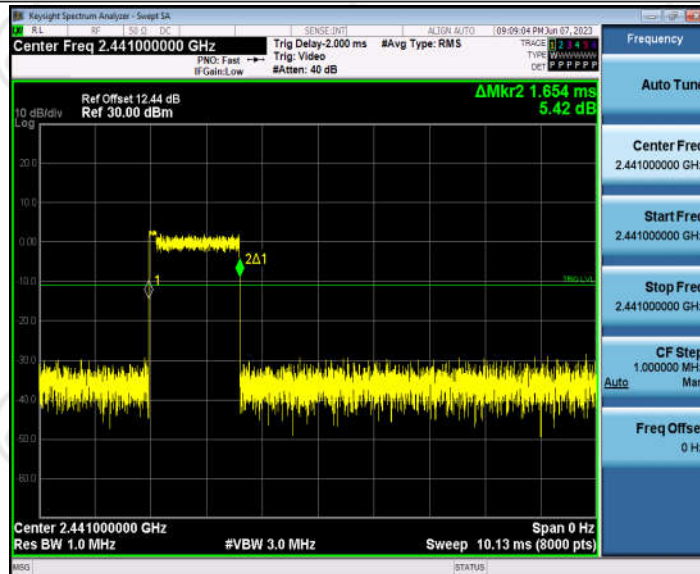
2DH5\_Ant1\_Hop



3DH1\_Ant1\_Hop

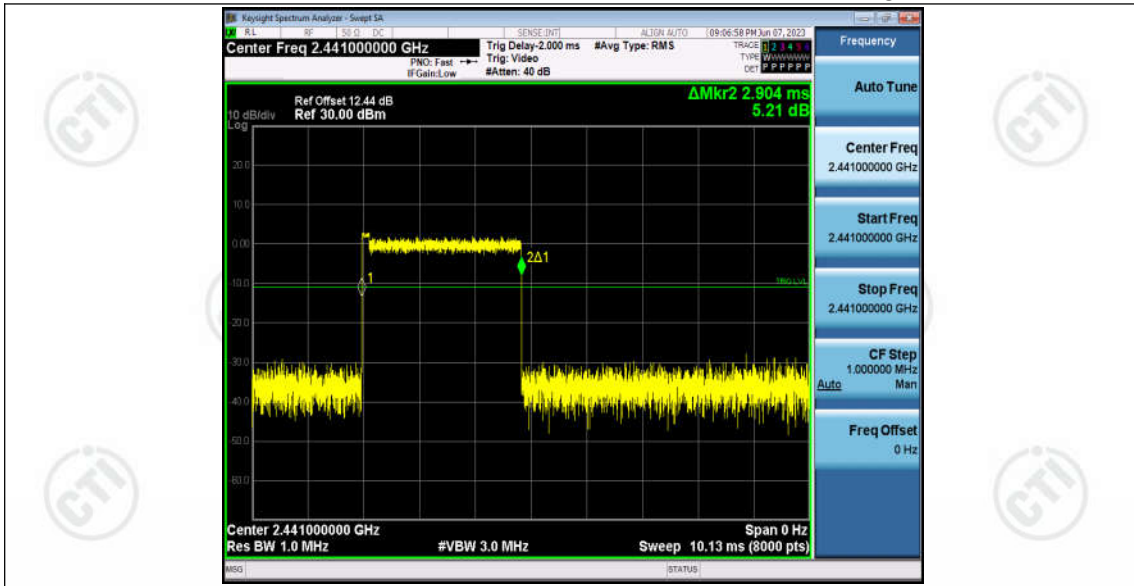


3DH3\_Ant1\_Hop



3DH5\_Ant1\_Hop

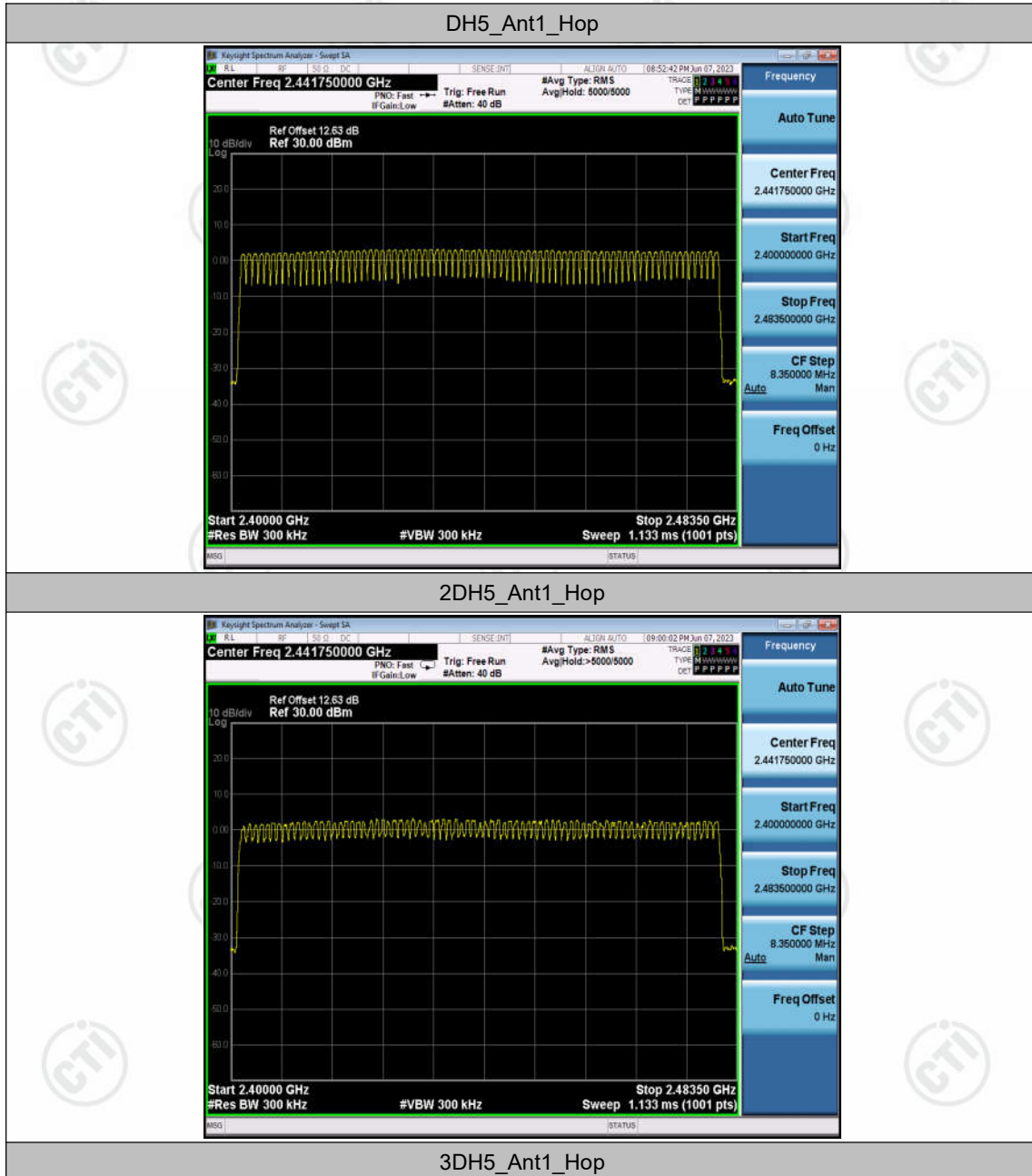


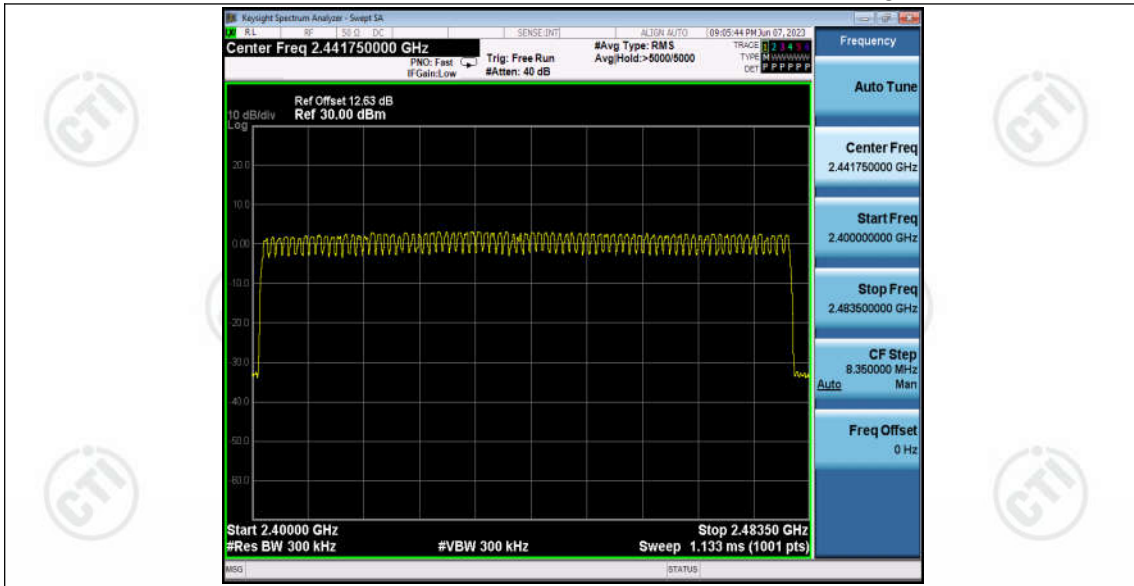


**Appendix F: Number of hopping channels****Test Result**

Test Mode	Antenna	Frequency[MHz]	Result[ Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

## Test Graphs





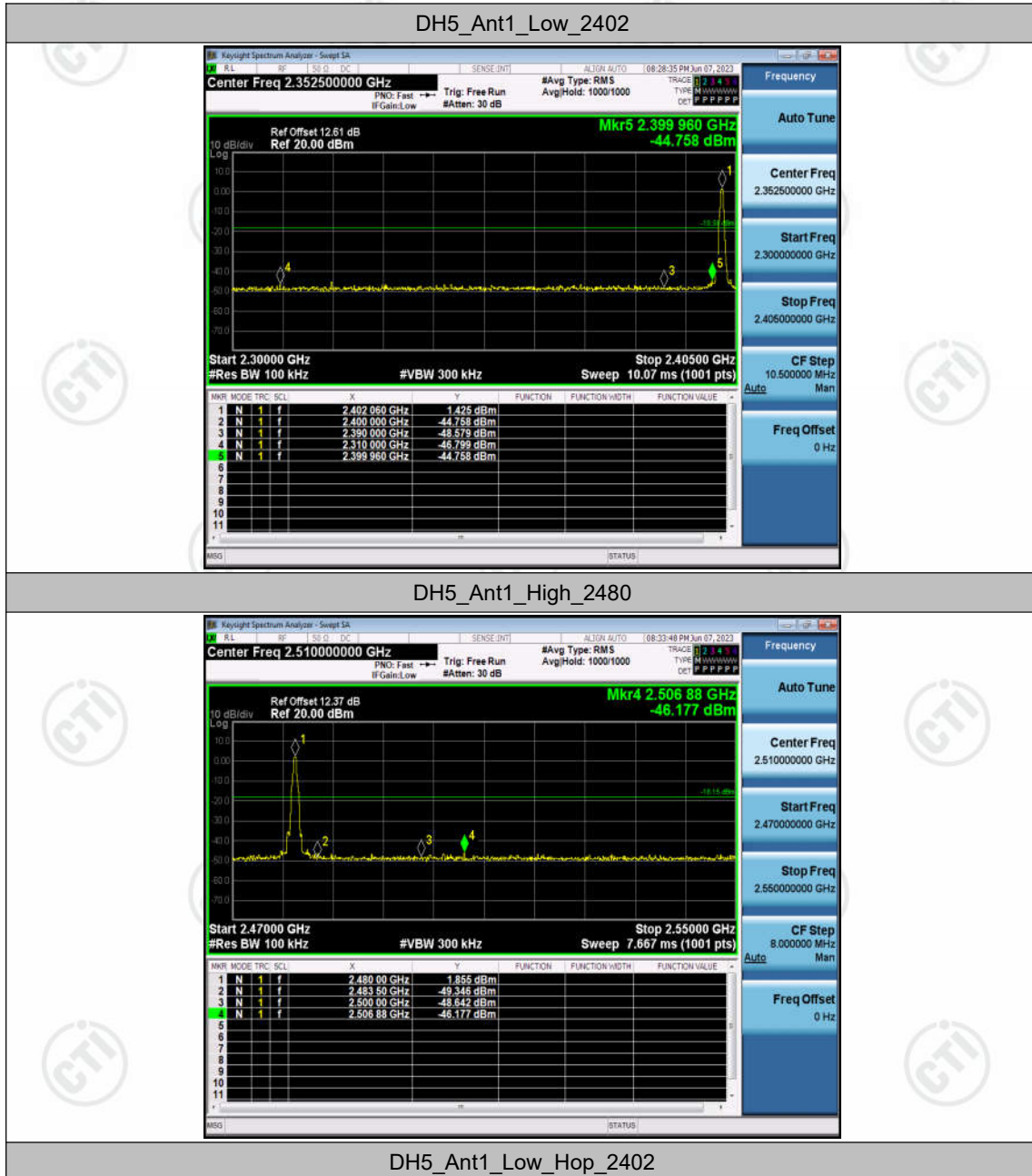
## Appendix G: Band edge measurements

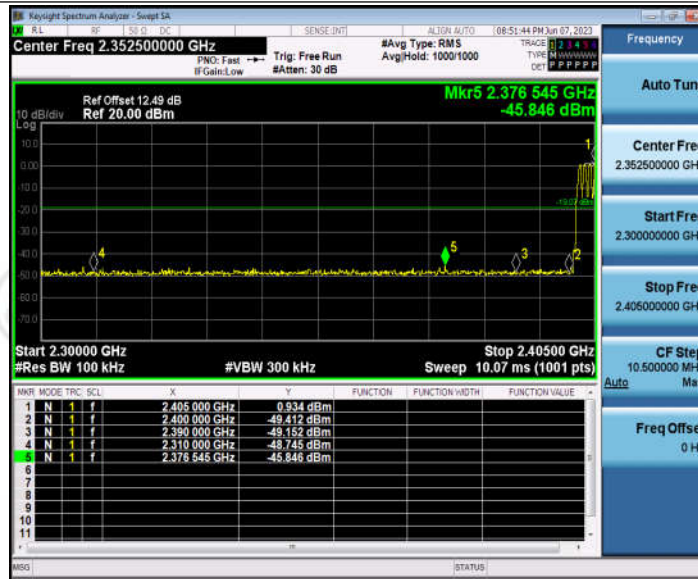
### Test Result

Test Mode	Antenna	Ch Name	Frequency[MHz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	1.43	-44.76	≤-18.58	PASS
		High	2480	1.86	-46.18	≤-18.15	PASS
		Low	Hop_2402	0.93	-45.85	≤-19.07	PASS
		High	Hop_2480	1.79	-47	≤-18.21	PASS
2DH5	Ant1	Low	2402	1.50	-46.46	≤-18.5	PASS
		High	2480	1.15	-45.27	≤-18.85	PASS
		Low	Hop_2402	-0.61	-45.76	≤-20.61	PASS
		High	Hop_2480	0.90	-46.29	≤-19.11	PASS
3DH5	Ant1	Low	2402	1.50	-46.39	≤-18.5	PASS
		High	2480	1.14	-45.51	≤-18.86	PASS
		Low	Hop_2402	-3.80	-46.15	≤-23.8	PASS
		High	Hop_2480	1.74	-46.9	≤-18.27	PASS

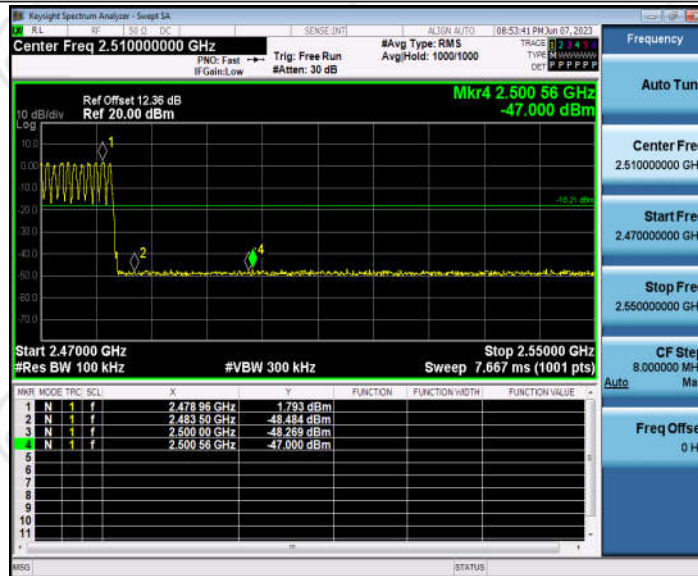


## Test Graphs

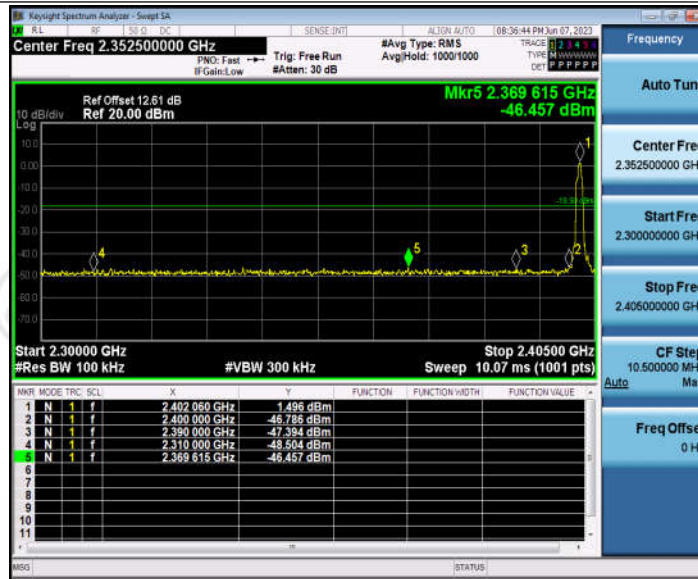




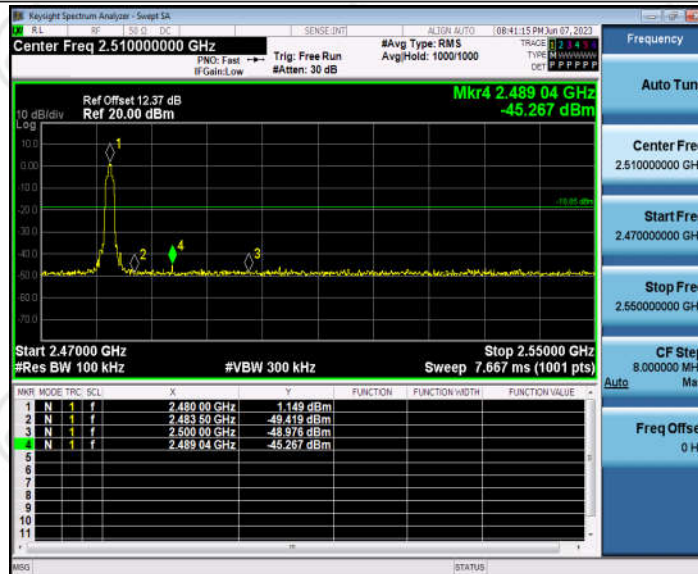
DH5\_Ant1\_High\_Hop\_2480



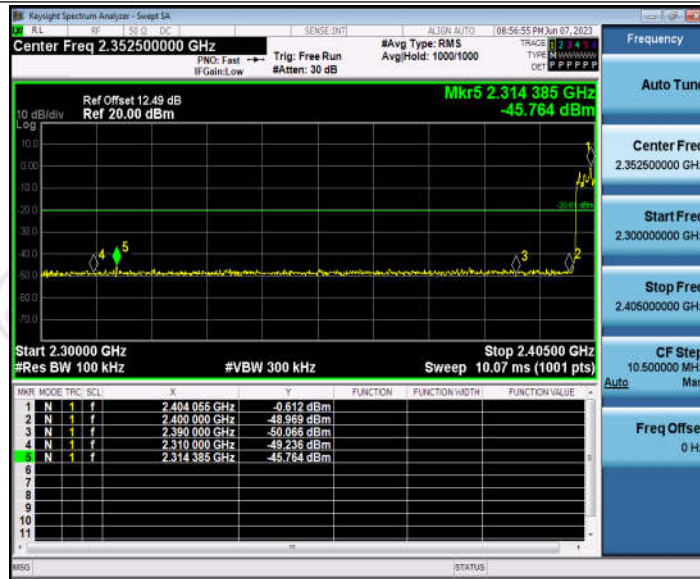
2DH5\_Ant1\_Low\_2402



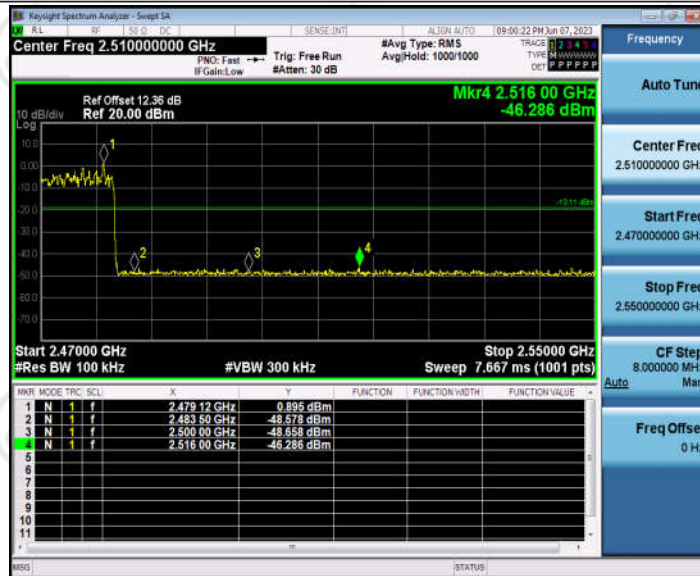
2DH5\_Ant1\_High\_2480



2DH5\_Ant1\_Low\_Hop\_2402

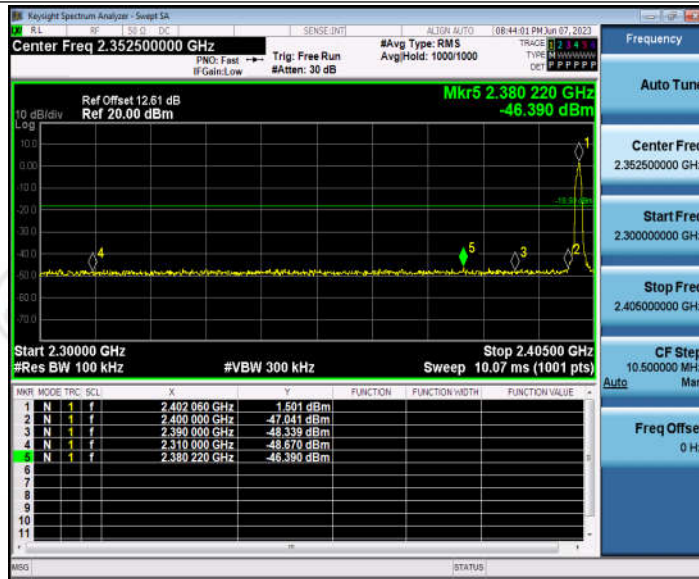


2DH5\_Ant1\_High\_Hop\_2480

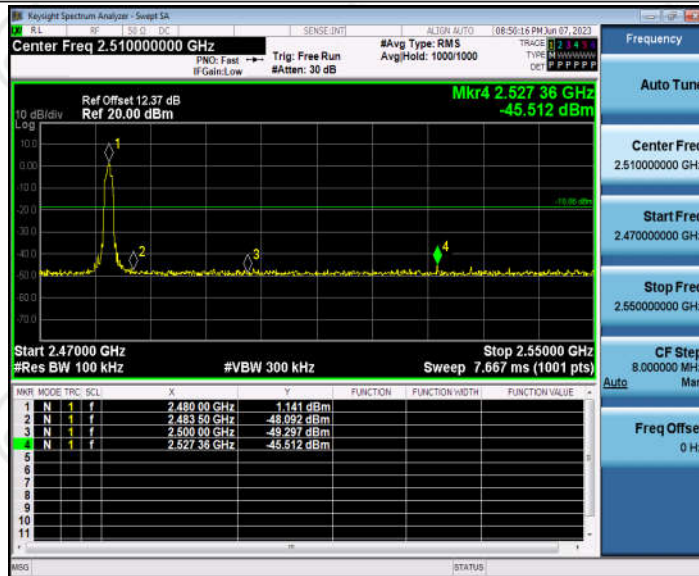


3DH5\_Ant1\_Low\_2402



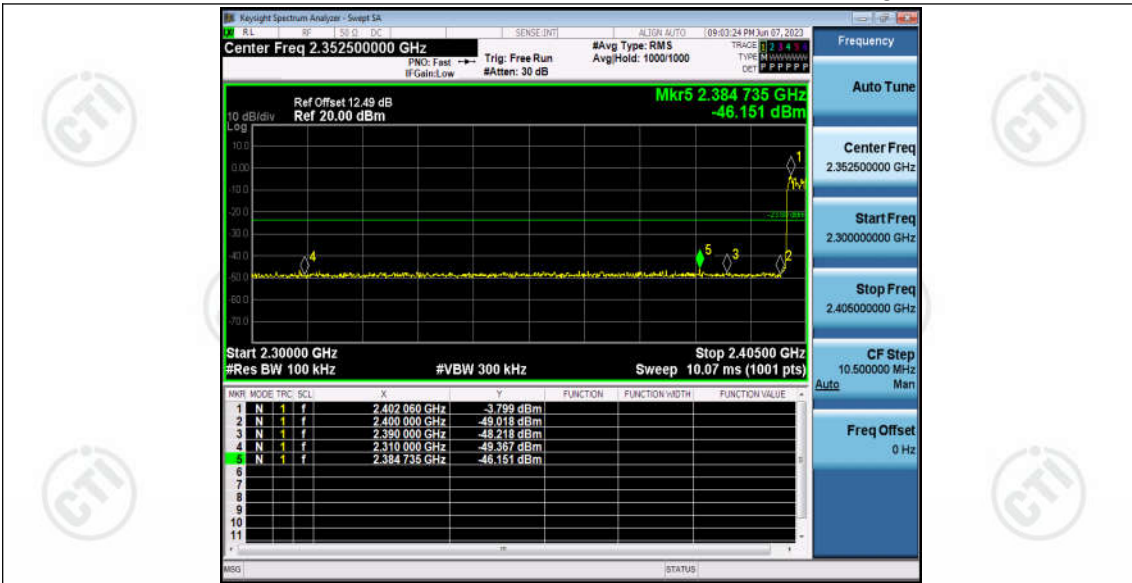


3DH5\_Ant1\_High\_2480

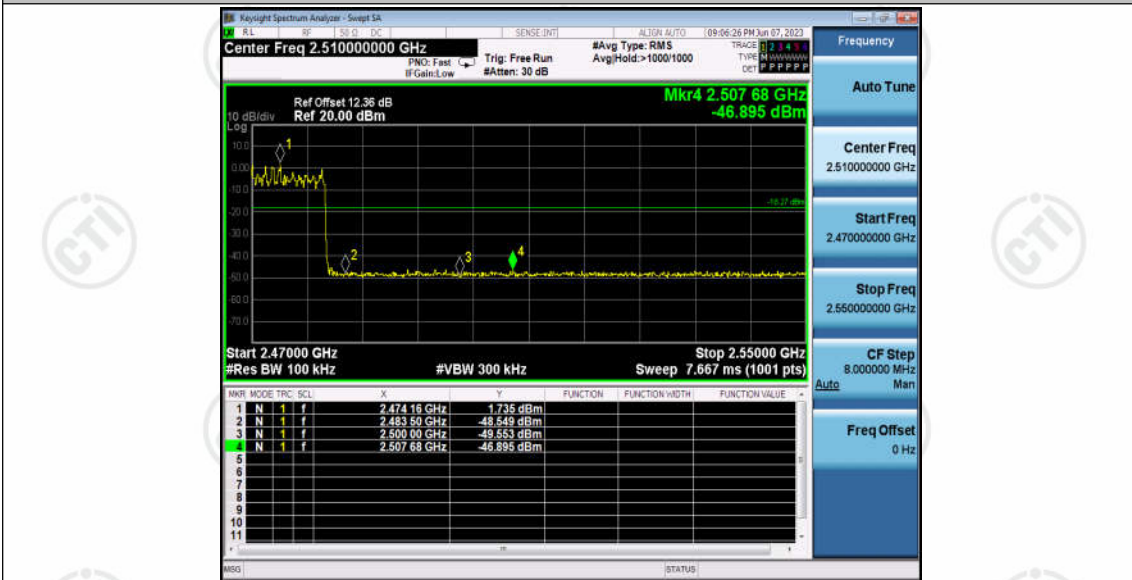


3DH5\_Ant1\_Low\_Hop\_2402





3DH5\_Ant1\_High\_Hop\_2480

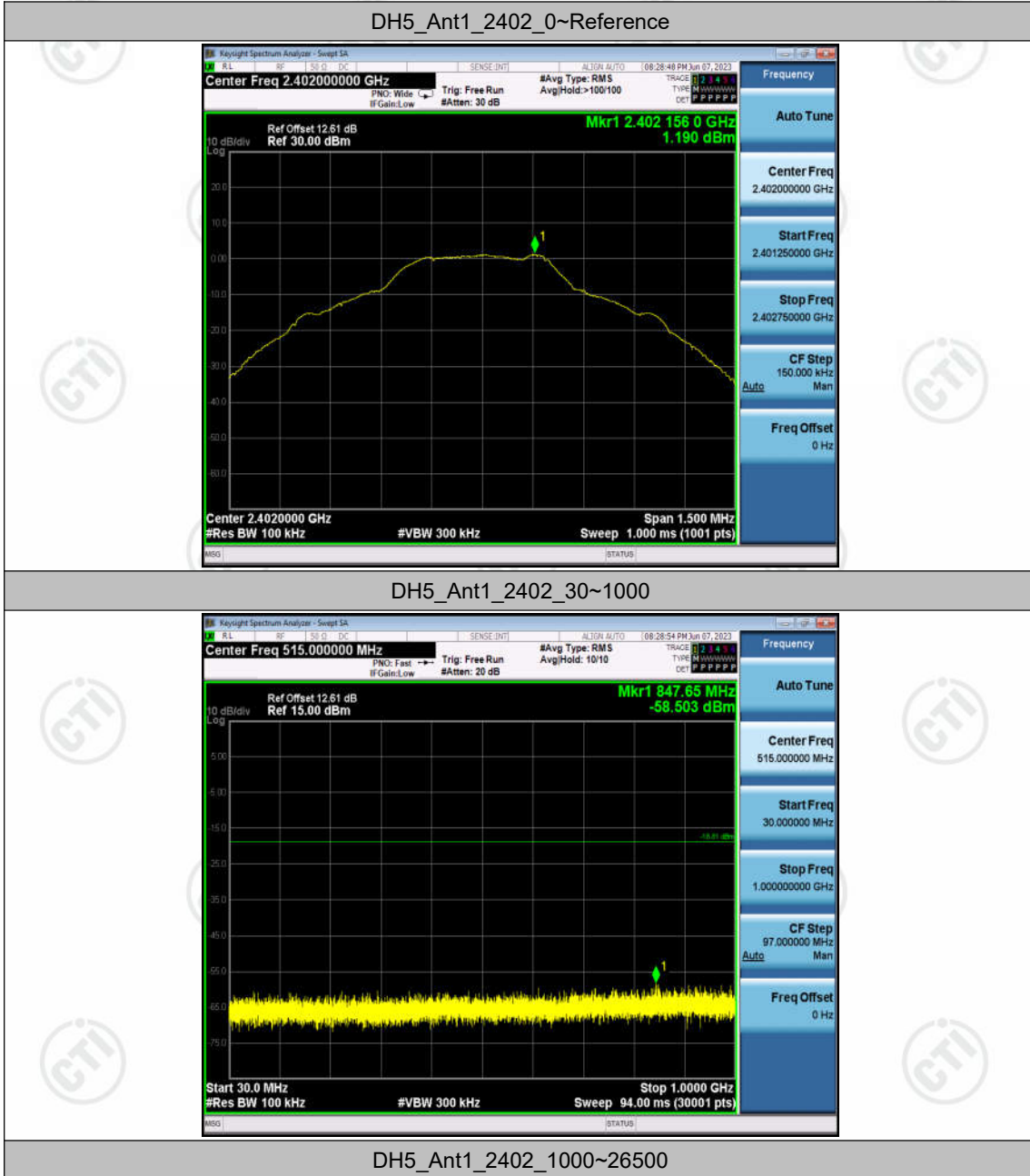


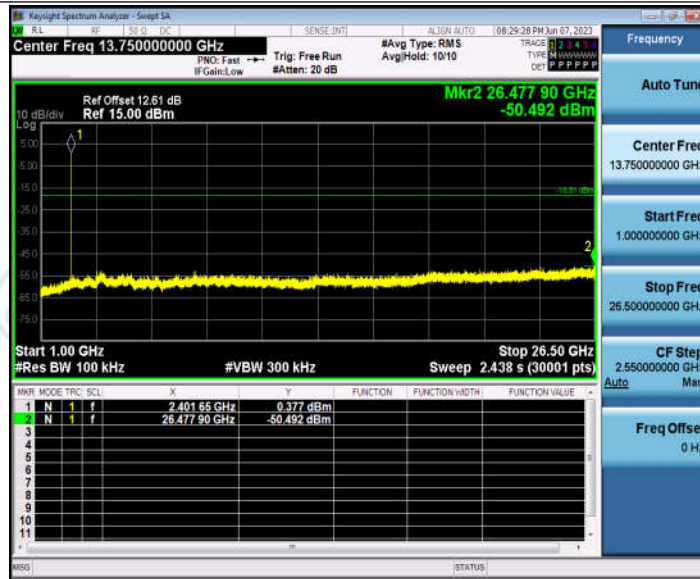
## Appendix H: Conducted Spurious Emission

### Test Result

Test Mode	Antenna	Frequency[MHz]	Freq Range [MHz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	1.19	1.19	---	PASS
			30~1000	1.19	-58.5	≤-18.81	PASS
			1000~26500	1.19	-50.49	≤-18.81	PASS
		2441	Reference	2.18	2.18	---	PASS
			30~1000	2.18	-58.7	≤-17.82	PASS
			1000~26500	2.18	-49.77	≤-17.82	PASS
		2480	Reference	1.66	1.66	---	PASS
			30~1000	1.66	-58.56	≤-18.34	PASS
			1000~26500	1.66	-51.06	≤-18.34	PASS
2DH5	Ant1	2402	Reference	0.99	0.99	---	PASS
			30~1000	0.99	-58.94	≤-19.01	PASS
			1000~26500	0.99	-50.8	≤-19.01	PASS
		2441	Reference	1.56	1.56	---	PASS
			30~1000	1.56	-58.97	≤-18.44	PASS
			1000~26500	1.56	-50.61	≤-18.44	PASS
		2480	Reference	1.48	1.48	---	PASS
			30~1000	1.48	-58.65	≤-18.52	PASS
			1000~26500	1.48	-50.62	≤-18.52	PASS
3DH5	Ant1	2402	Reference	0.56	0.56	---	PASS
			30~1000	0.56	-58.25	≤-19.44	PASS
			1000~26500	0.56	-50.9	≤-19.44	PASS
		2441	Reference	1.70	1.70	---	PASS
			30~1000	1.70	-58.9	≤-18.3	PASS
			1000~26500	1.70	-50.74	≤-18.3	PASS
		2480	Reference	1.39	1.39	---	PASS
			30~1000	1.39	-59.09	≤-18.61	PASS
			1000~26500	1.39	-50.3	≤-18.61	PASS

## Test Graphs



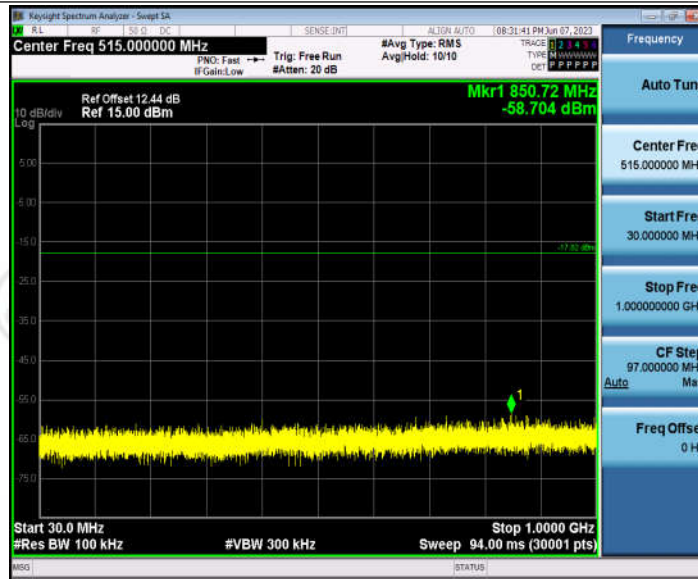


DH5\_Ant1\_2441\_0~Reference

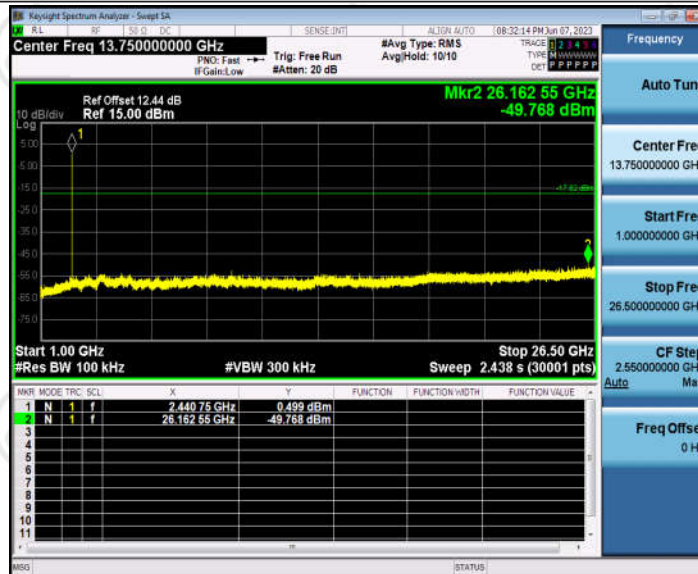


DH5\_Ant1\_2441\_30~1000





DH5\_Ant1\_2441\_1000~26500

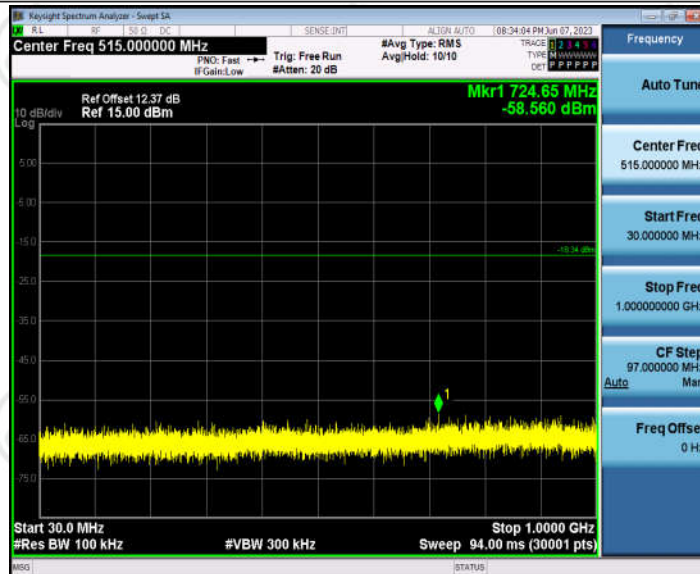


DH5\_Ant1\_2480\_0~Reference

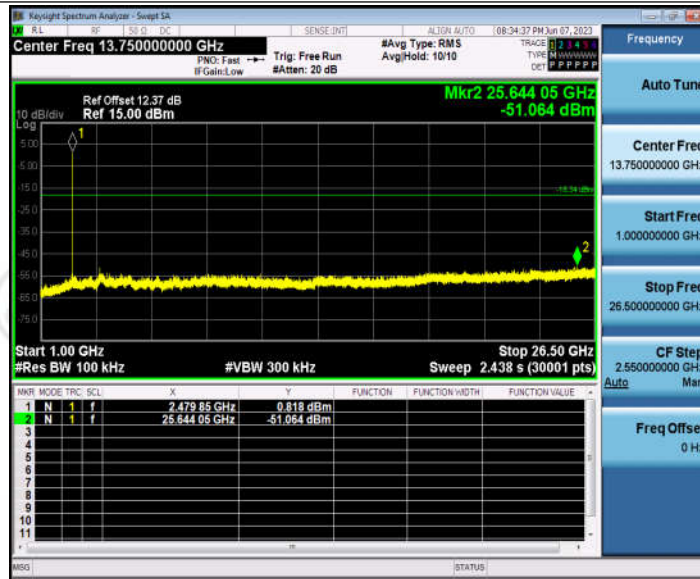




DH5\_Ant1\_2480\_30~1000



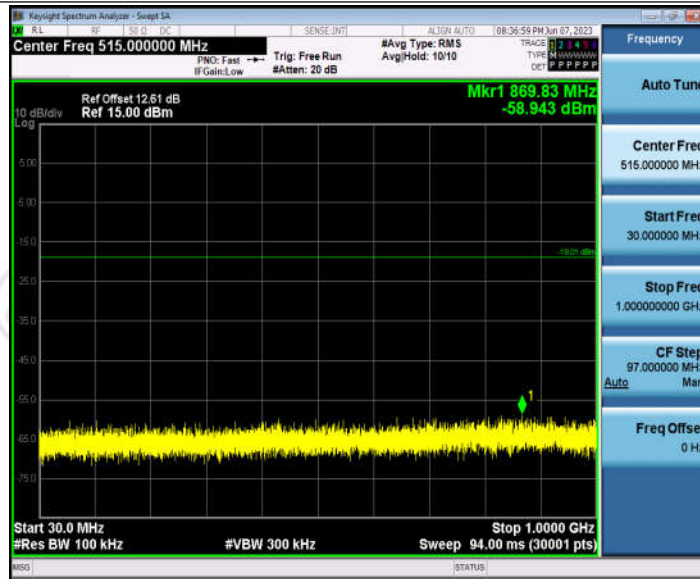
DH5\_Ant1\_2480\_1000~26500



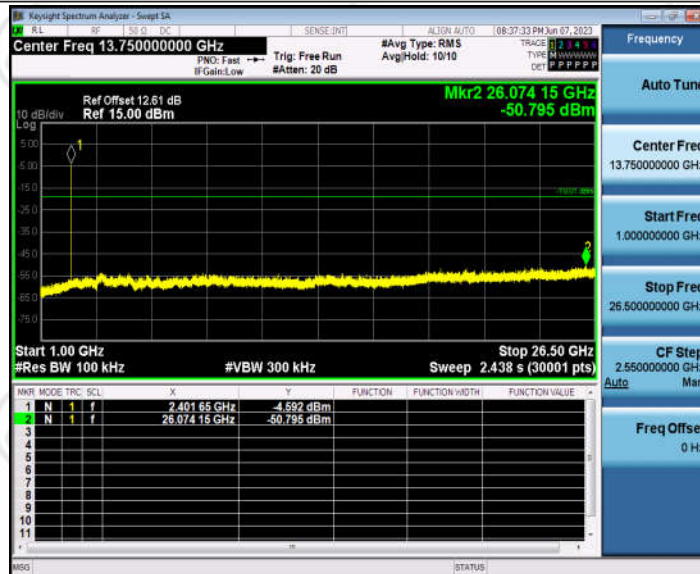
2DH5\_Ant1\_2402\_0~Reference



2DH5\_Ant1\_2402\_30~1000



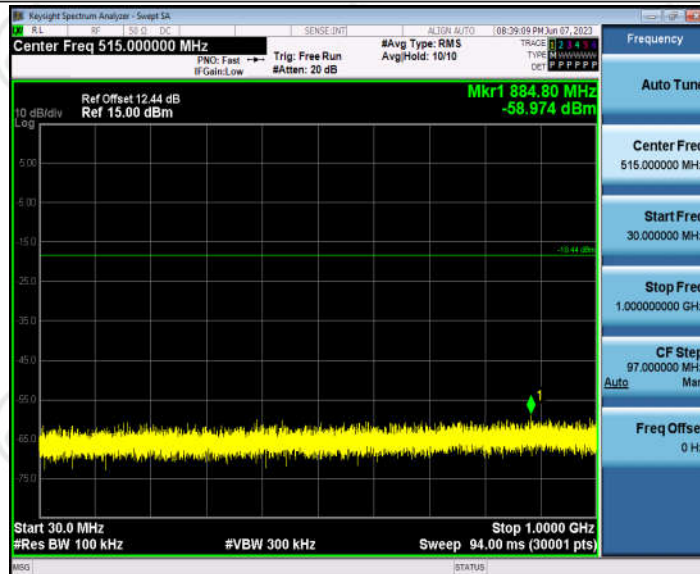
2DH5\_Ant1\_2402\_1000~26500



2DH5\_Ant1\_2441\_0~Reference

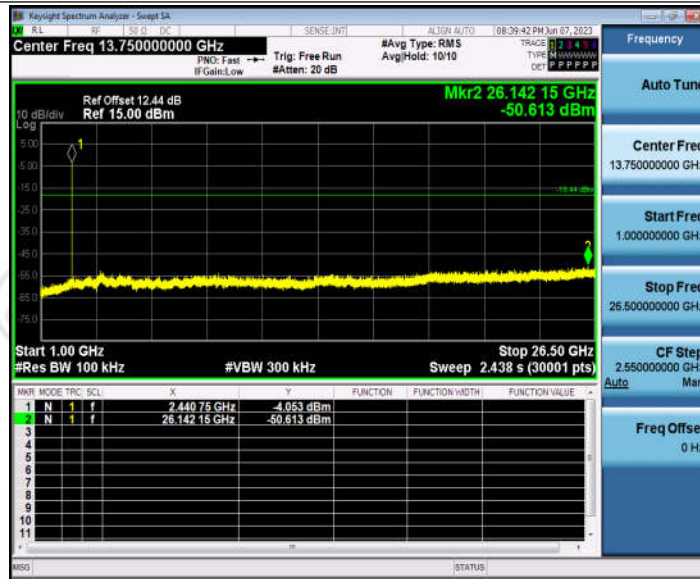


2DH5\_Ant1\_2441\_30~1000



2DH5\_Ant1\_2441\_1000~26500



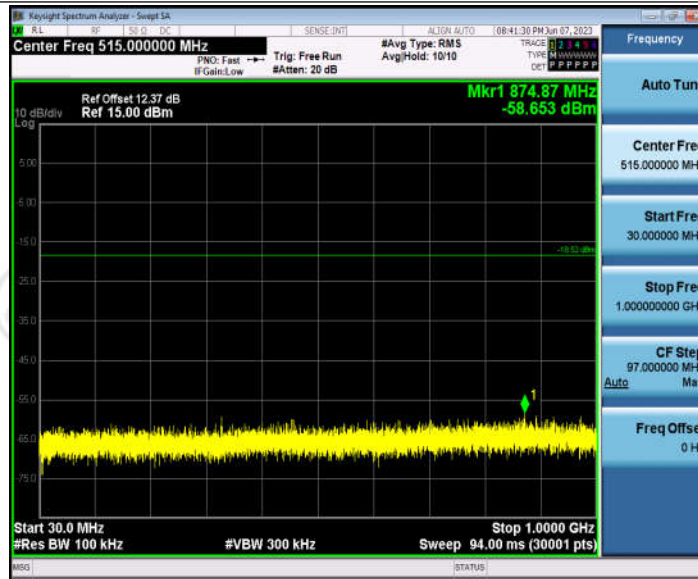


2DH5\_Ant1\_2480\_0~Reference

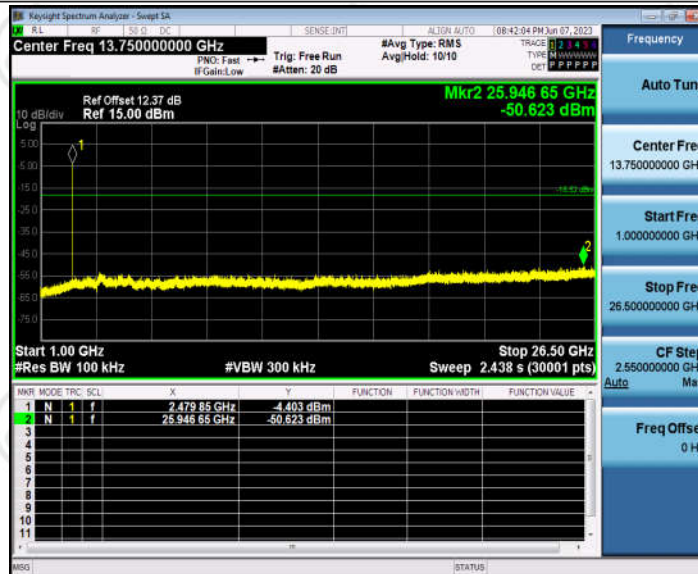


2DH5\_Ant1\_2480\_30~1000





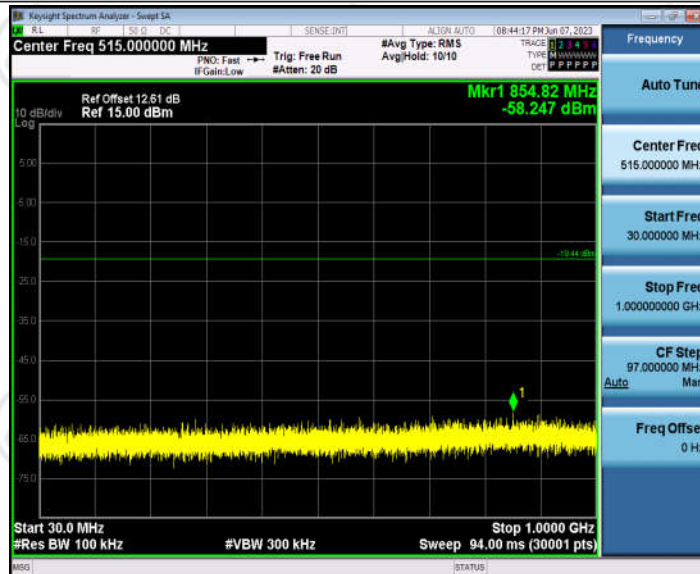
2DH5\_Ant1\_2480\_1000~26500



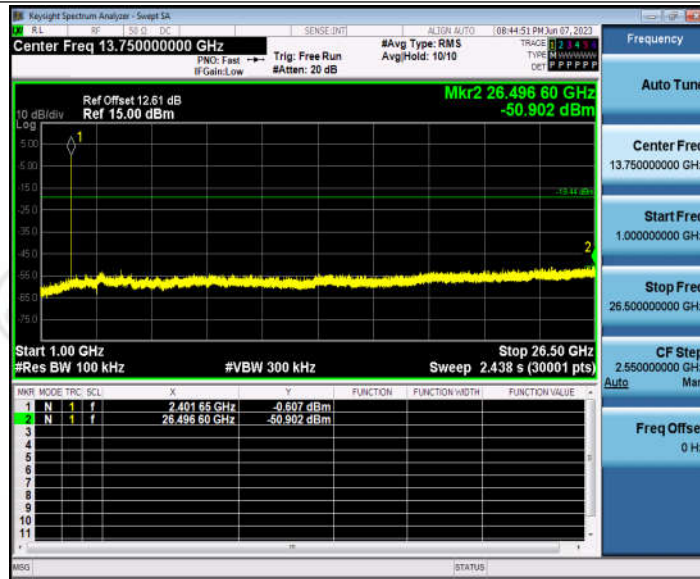
3DH5\_Ant1\_2402\_0~Reference



3DH5\_Ant1\_2402\_30~1000



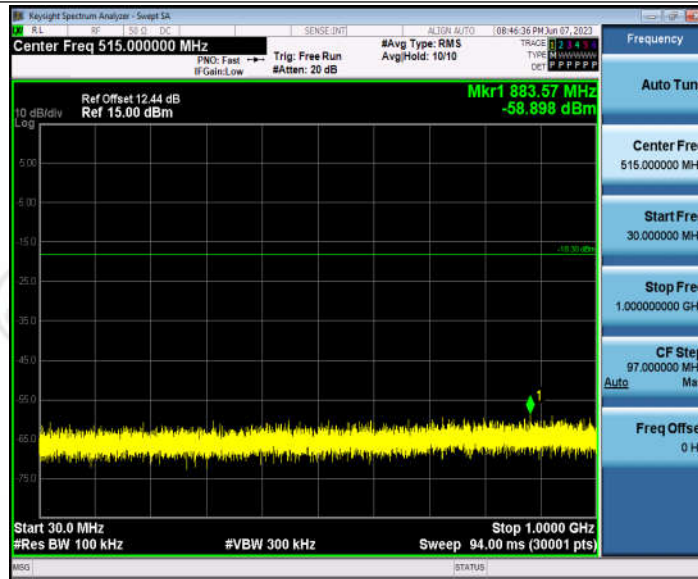
3DH5\_Ant1\_2402\_1000~26500



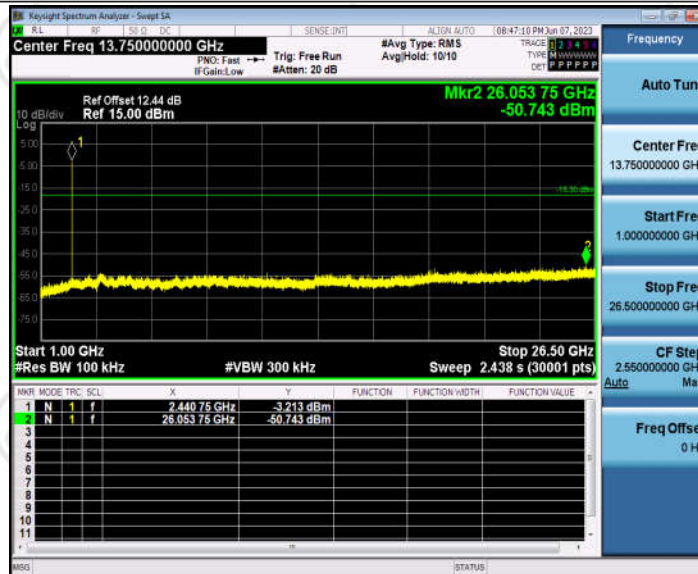
3DH5\_Ant1\_2441\_0~Reference



3DH5\_Ant1\_2441\_30~1000



3DH5\_Ant1\_2441\_1000~26500

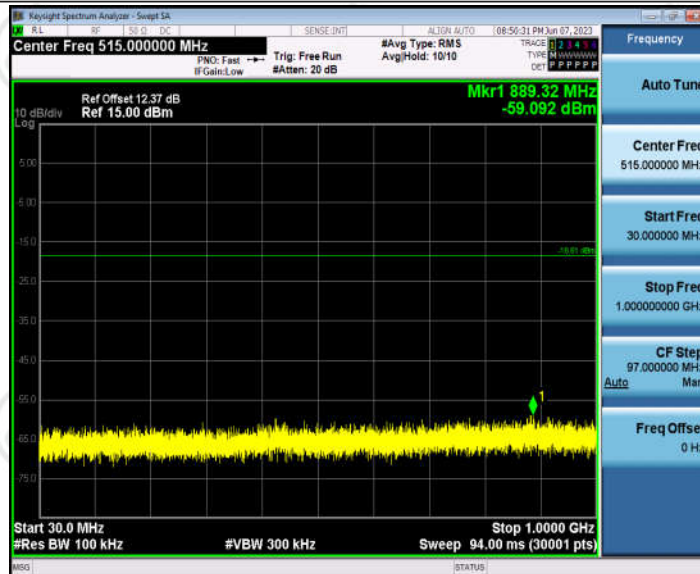


3DH5\_Ant1\_2480\_0~Reference



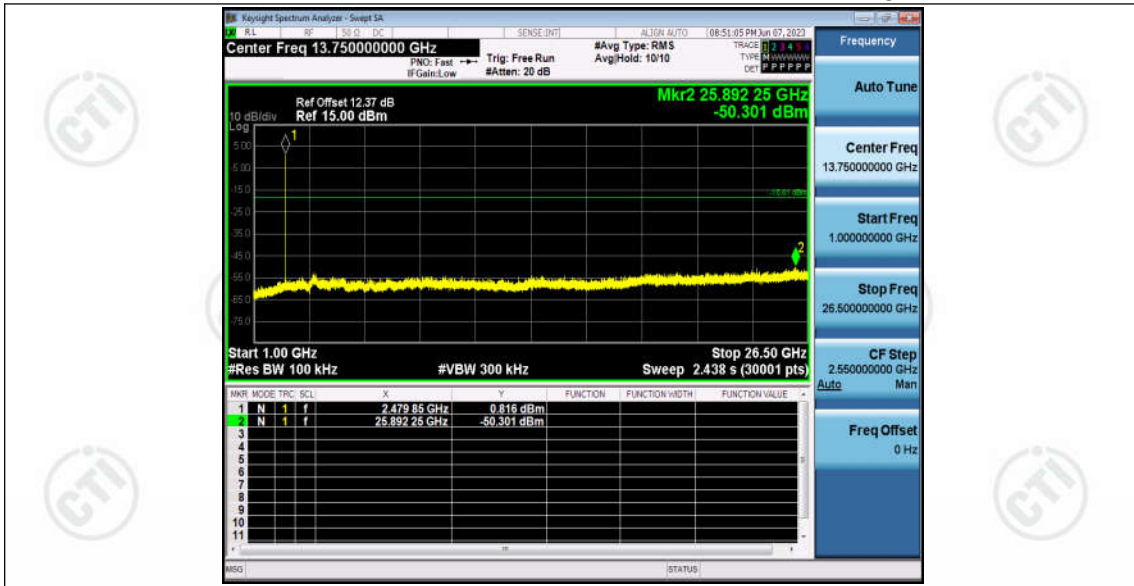


3DH5\_Ant1\_2480\_30~1000



3DH5\_Ant1\_2480\_1000~26500



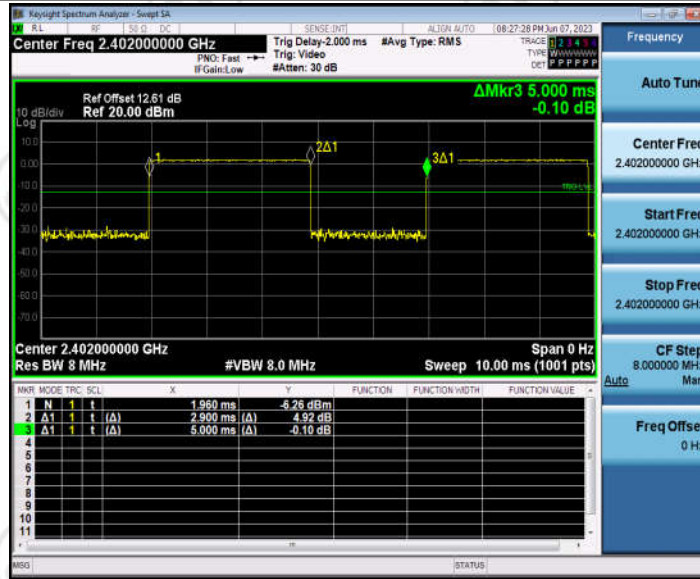


**Appendix I: Duty Cycle****Test Result**

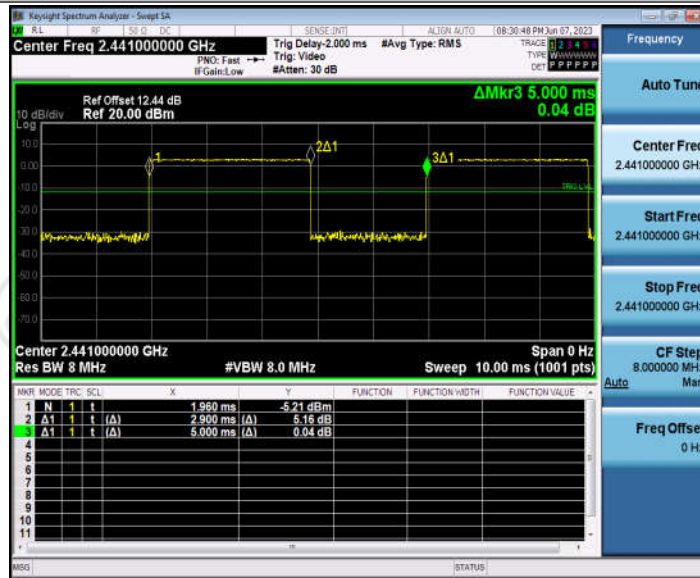
Test Mode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
DH5	Ant1	2402	2.90	5.00	58.00	2.37
		2441	2.90	5.00	58.00	2.37
		2480	2.90	5.00	58.00	2.37
2DH5	Ant1	2402	2.91	5.00	58.20	2.35
		2441	2.91	5.00	58.20	2.35
		2480	2.91	5.00	58.20	2.35
3DH5	Ant1	2402	2.90	5.00	58.00	2.37
		2441	2.90	5.00	58.00	2.37
		2480	2.90	5.00	58.00	2.37

## Test Graphs

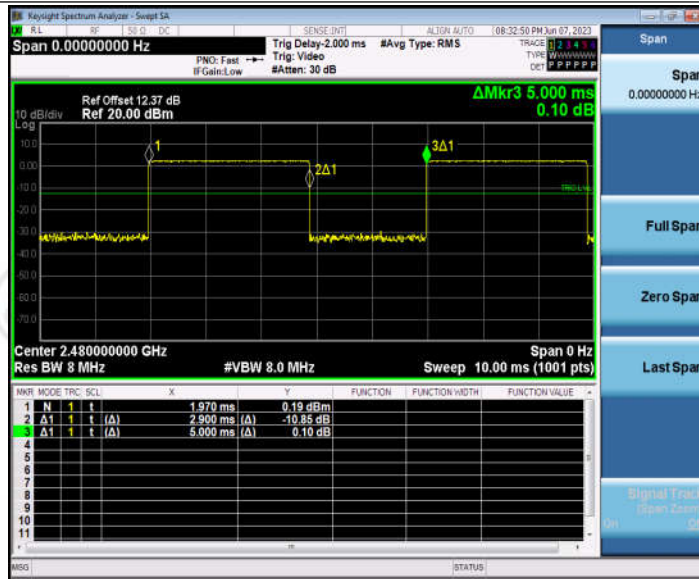
DH5\_Ant1\_2402



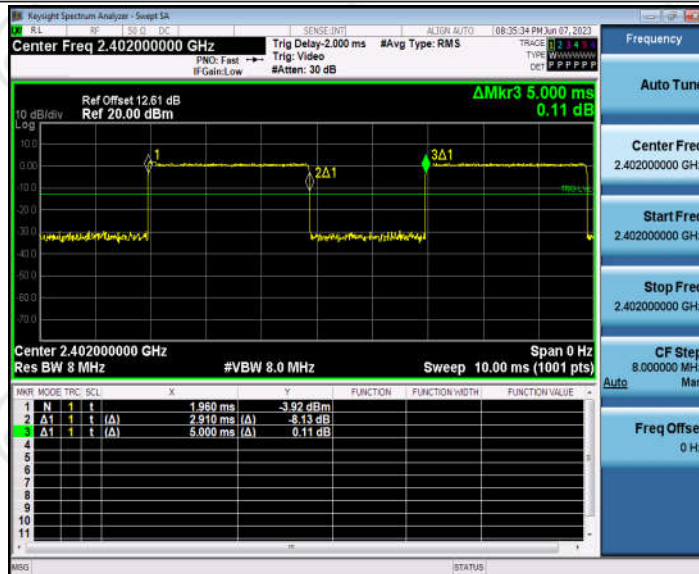
DH5\_Ant1\_2441



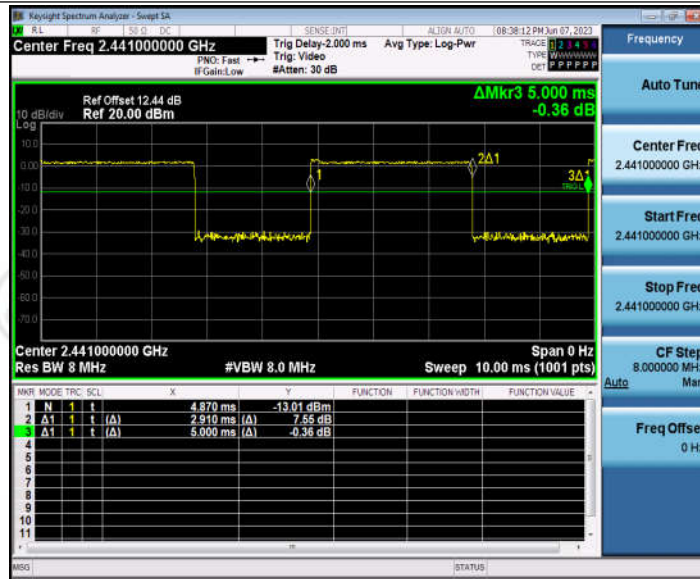
DH5\_Ant1\_2480



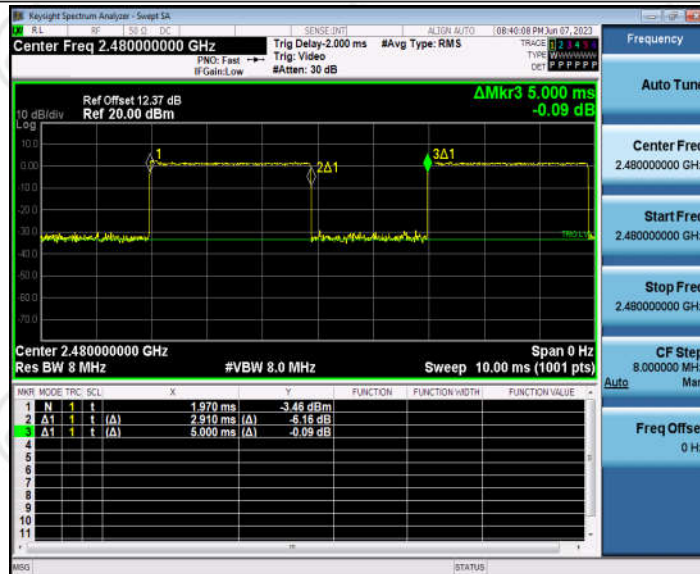
2DH5\_Ant1\_2402



2DH5\_Ant1\_2441

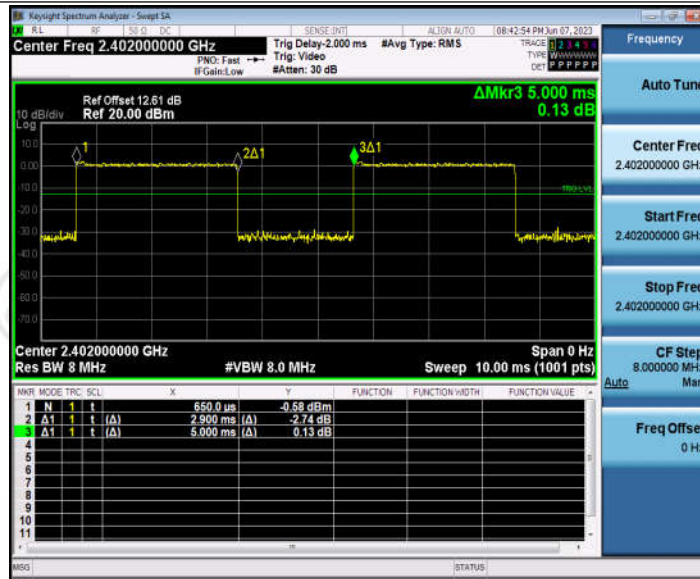


2DH5\_Ant1\_2480

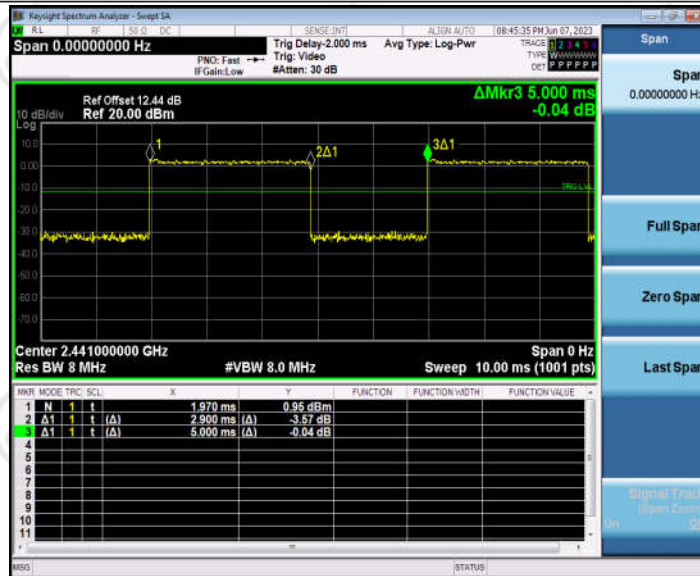


3DH5\_Ant1\_2402

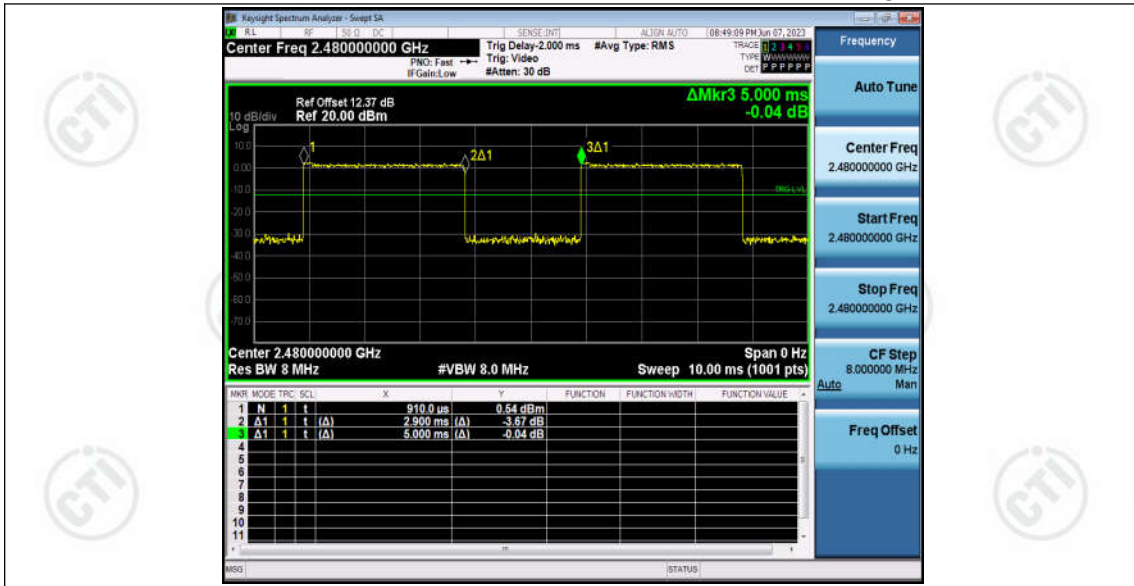




3DH5\_Ant1\_2441



3DH5\_Ant1\_2480



\*\*\* End of Report \*\*\*