

Appendix: Bluetooth Classic

Contents

Appendix A: 20dB Emission Bandwidth	3
Test Result	3
Test Graphs	4
Appendix B: Occupied Channel Bandwidth	9
Test Result	9
Test Graphs	10
Appendix C: Maximum conducted output power	15
Test Result	15
Test Graphs	16
Appendix D: Carrier frequency separation	21
Test Result	21
Test Graphs	22
Appendix E: Time of occupancy	24
Test Result	24
Test Graphs	25
Appendix F: Number of hopping channels	34
Test Result	34
Test Graphs	35
Appendix G: Band edge measurements	37
Test Result	37
Test Graphs	38
Appendix H: Conducted Spurious Emission	44
Test Result	44
Test Graphs	45
Appendix I: Duty Cycle	59
Test Result	59
Test Graphs	60

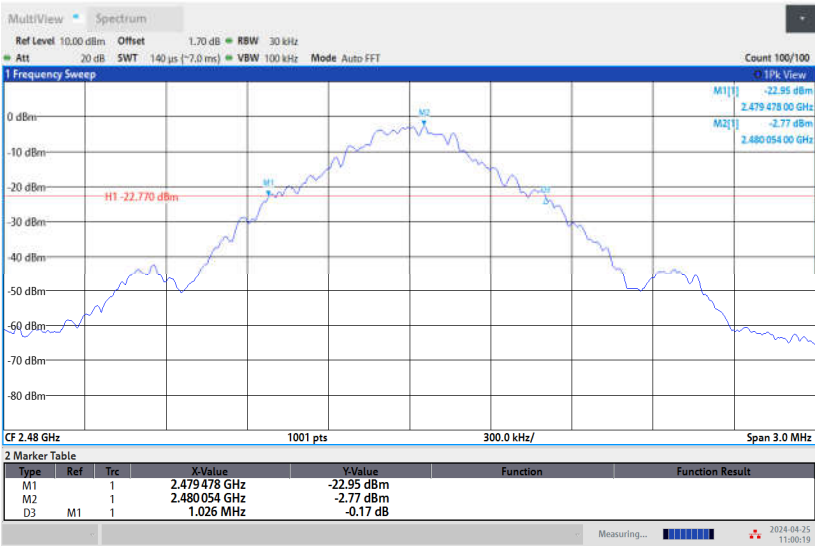
Appendix A: 20dB Emission Bandwidth

Test Result

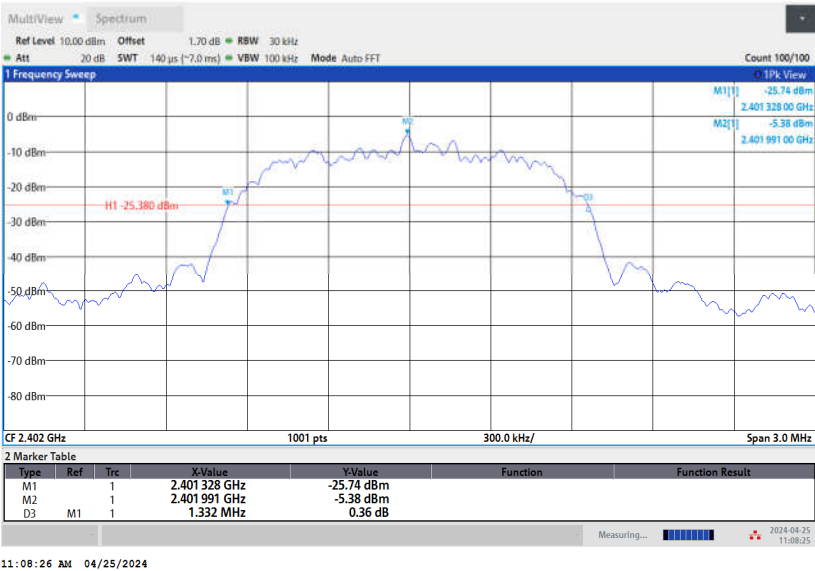
Test Mode	Antenna	Frequency [MHz]	20db EBW [MHz]	FL [MHz]	FH[MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	1.02	2401.50	2402.52	---	---
		2441	1.00	2440.53	2441.53	---	---
		2480	1.03	2479.48	2480.50	---	---
2DH5	Ant1	2402	1.33	2401.33	2402.66	---	---
		2441	1.36	2440.32	2441.68	---	---
		2480	1.34	2479.33	2480.67	---	---
3DH5	Ant1	2402	1.30	2401.35	2402.65	---	---
		2441	1.32	2440.33	2441.65	---	---
		2480	1.32	2479.33	2480.65	---	---

Test Graphs

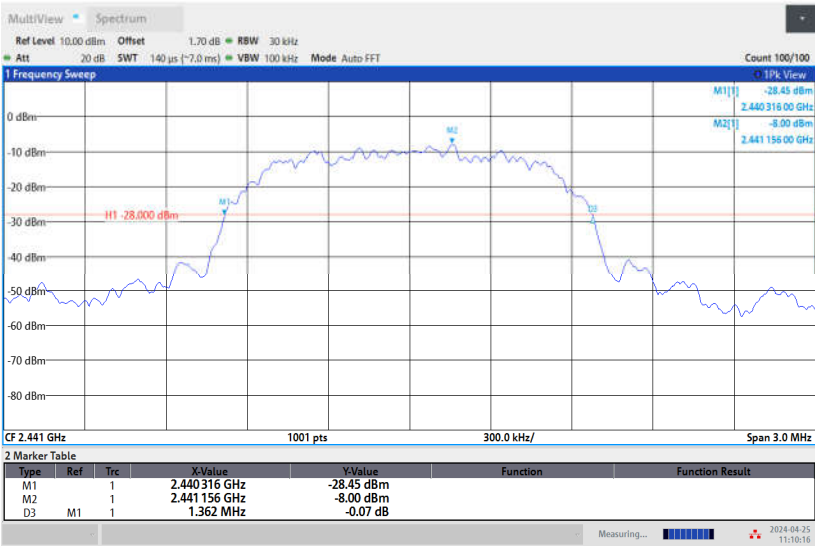




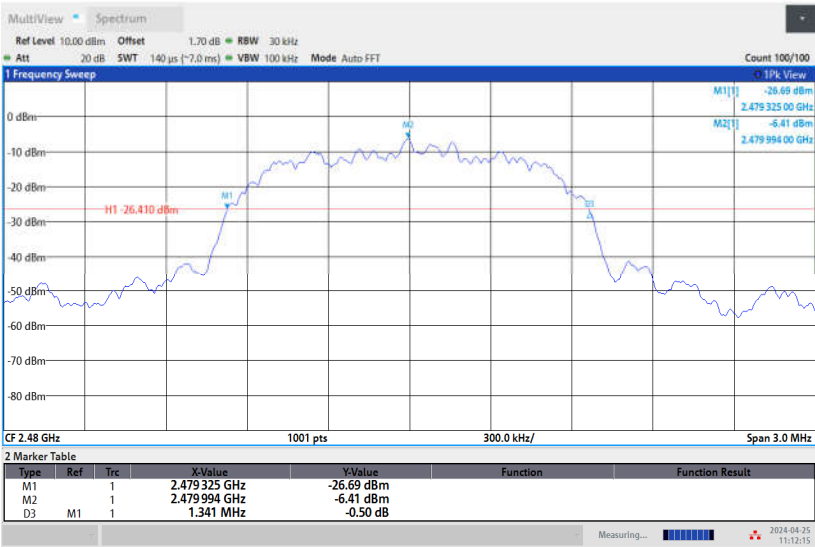
DH5_Ant1_2480



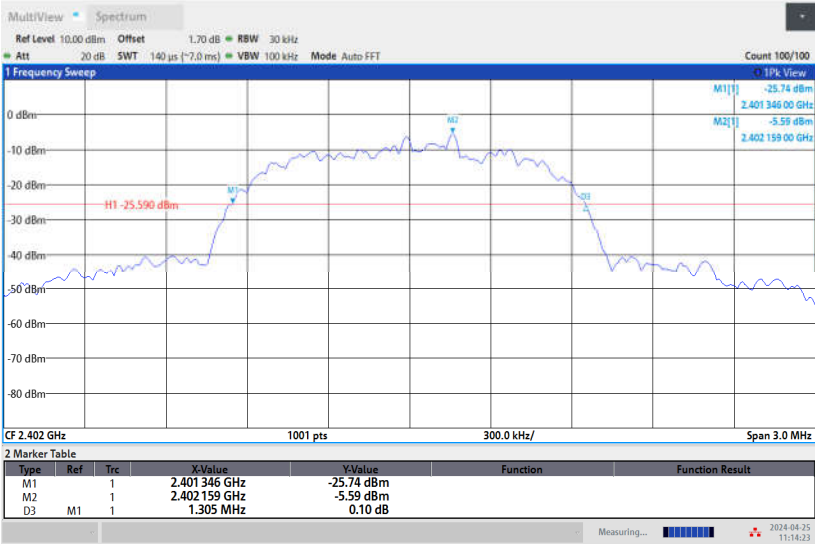
2DH5_Ant1_2402



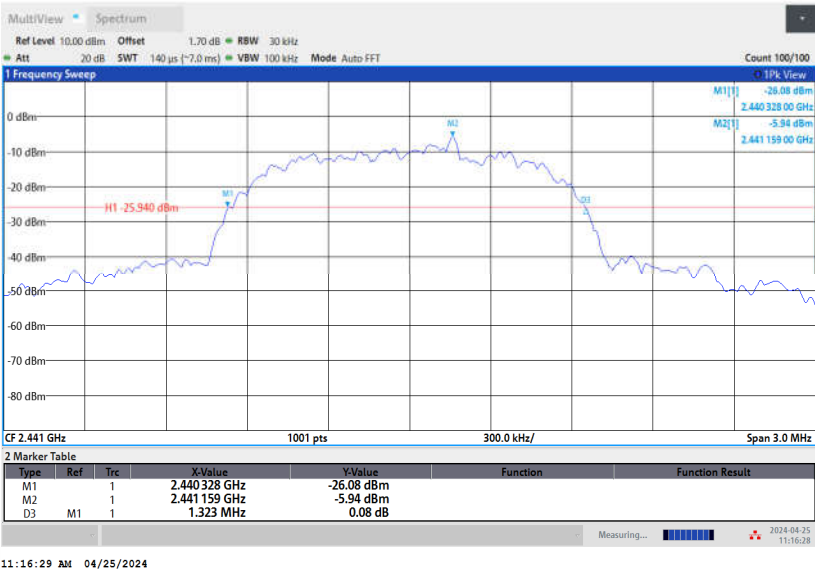
2DH5_Ant1_2441



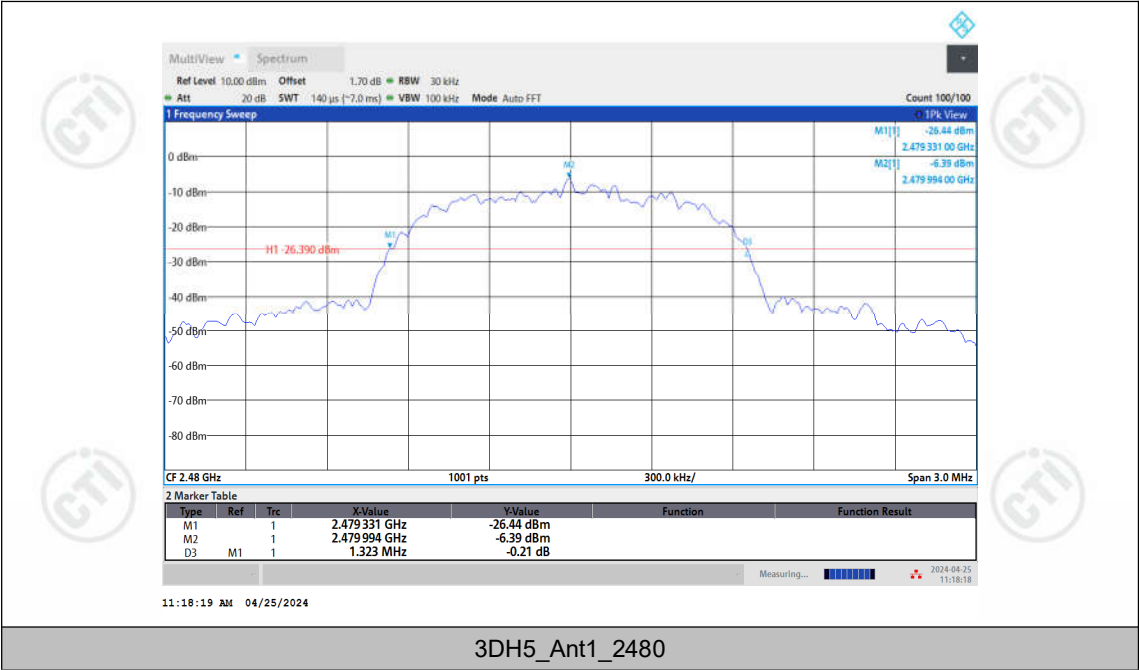
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



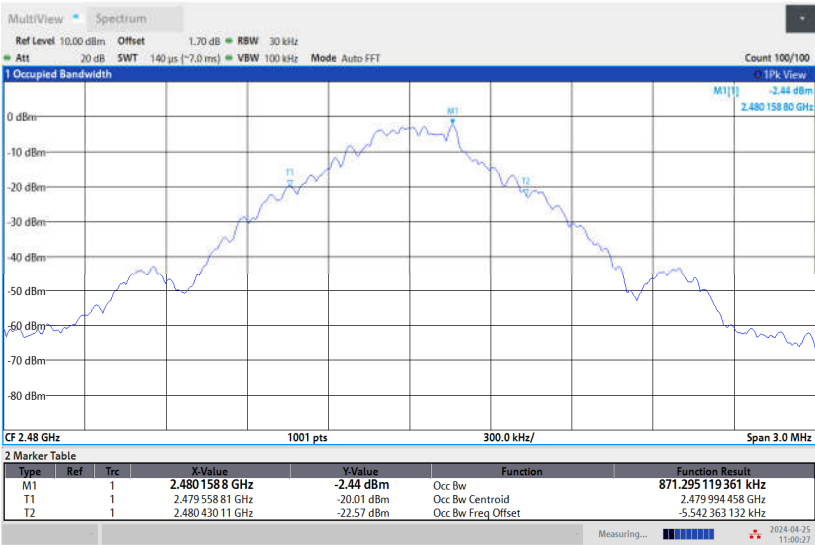
Appendix B: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
DH5	Ant1	2402	0.896	2401.561	2402.458	---	---
		2441	0.915	2440.541	2441.457	---	---
		2480	0.871	2479.559	2480.430	---	---
2DH5	Ant1	2402	1.193	2401.400	2402.593	---	---
		2441	1.189	2440.401	2441.591	---	---
		2480	1.195	2479.399	2480.594	---	---
3DH5	Ant1	2402	1.193	2401.398	2402.591	---	---
		2441	1.193	2440.399	2441.591	---	---
		2480	1.203	2479.391	2480.595	---	---

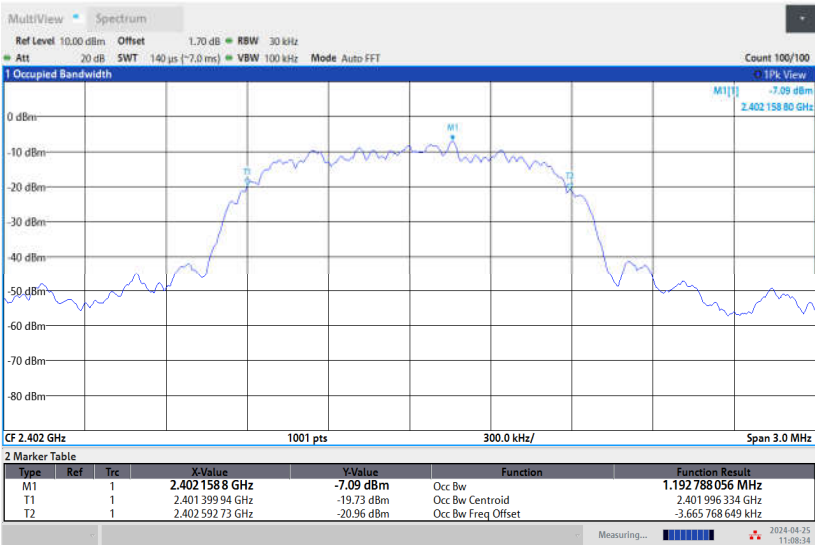
Test Graphs





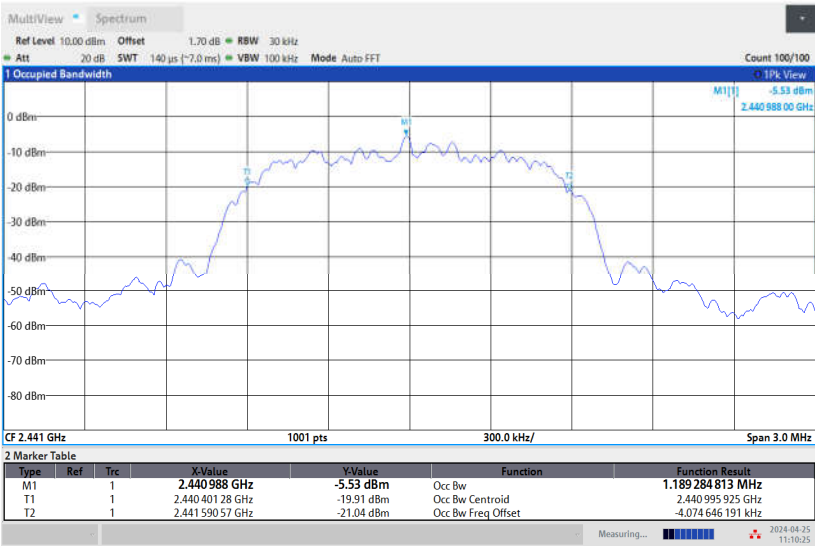
11:00:28 AM 04/25/2024

DH5_Ant1_2480



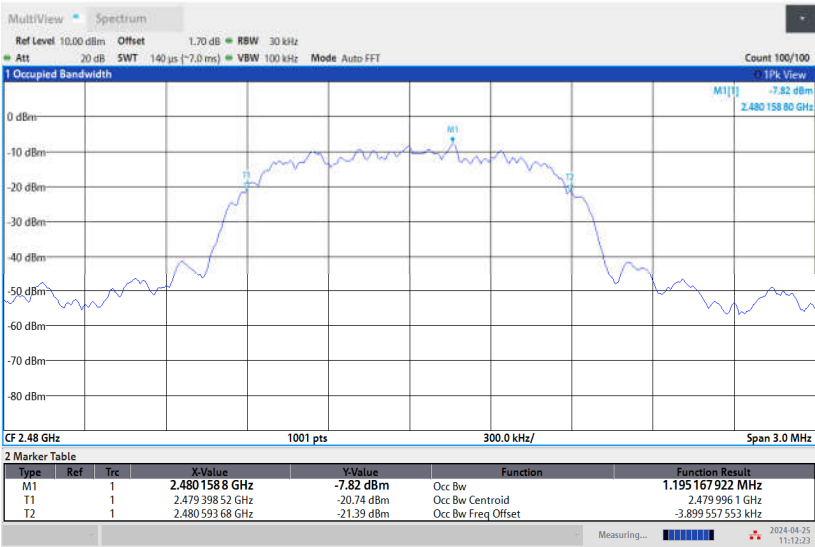
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2DH5_Ant1_2402



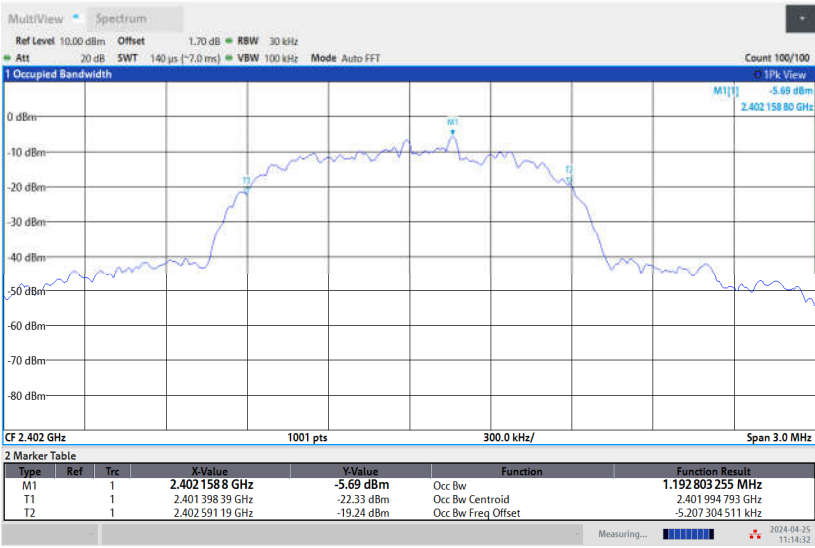
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2DH5_Ant1_2441



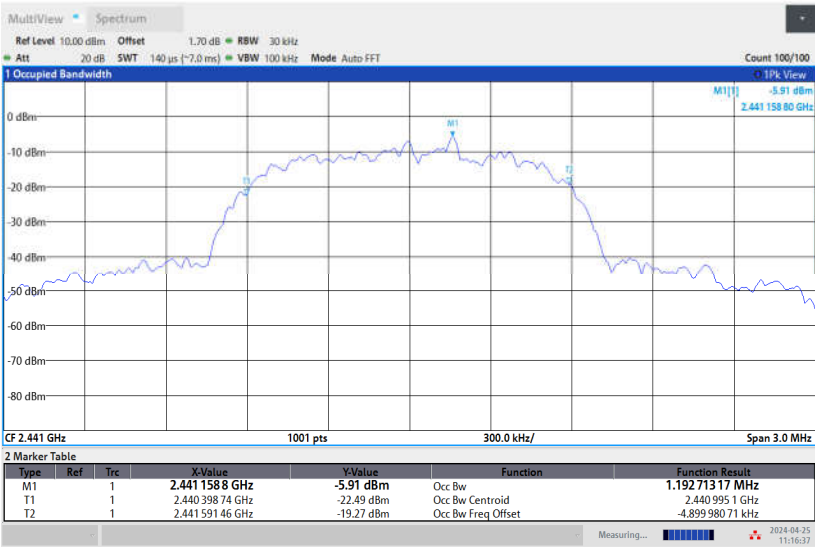
11:12:24 AM 04/25/2024

2DH5_Ant1_2480



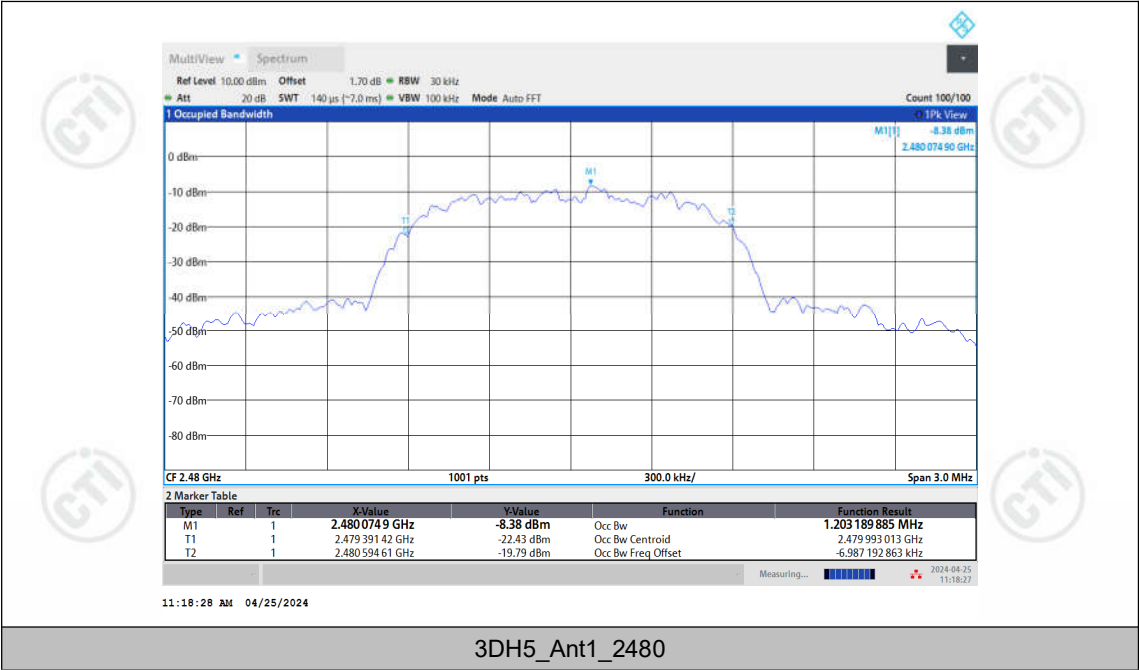
11:14:33 AM 04/25/2024

3DH5_Ant1_2402



11:16:38 AM 04/25/2024

3DH5_Ant1_2441

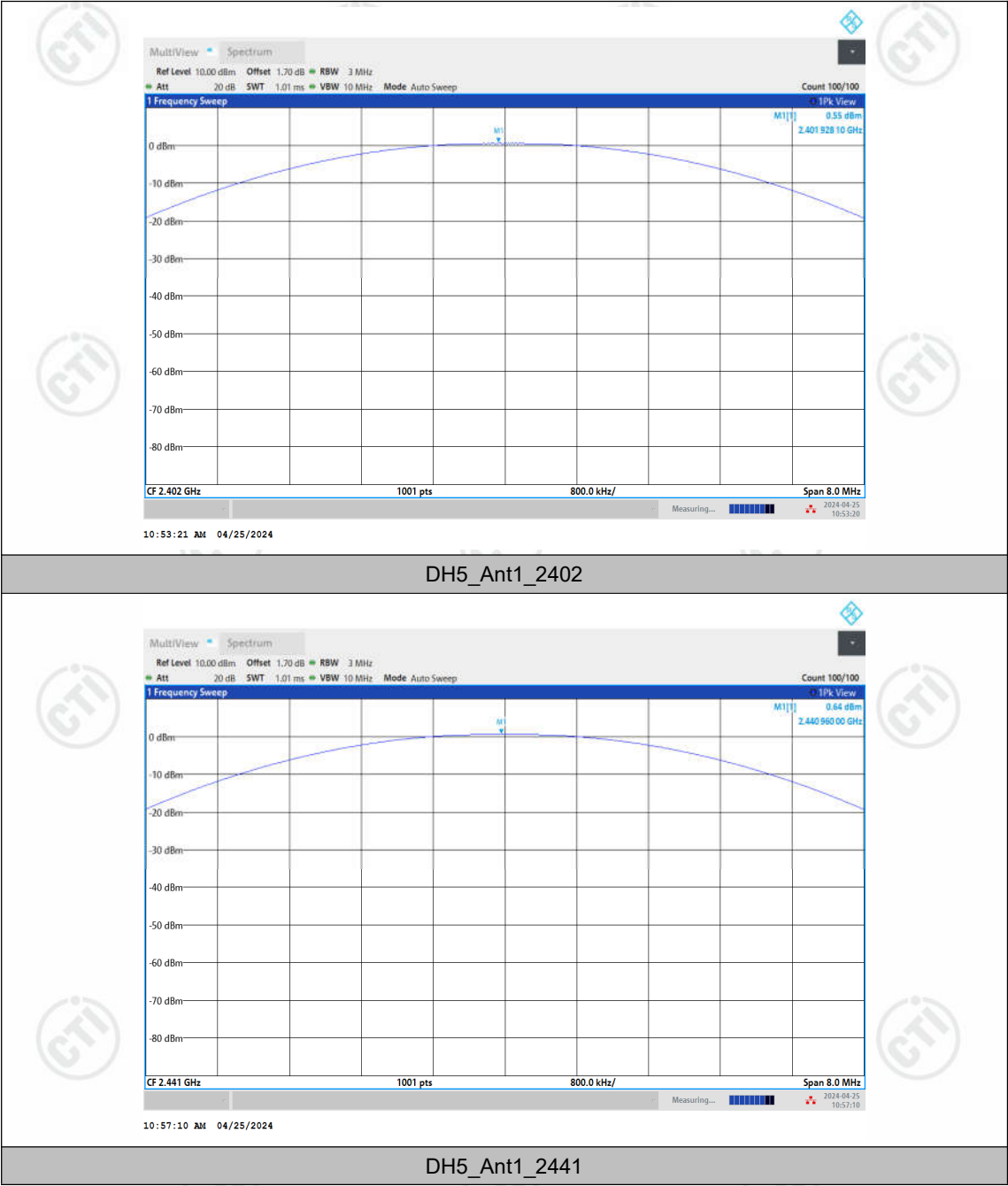


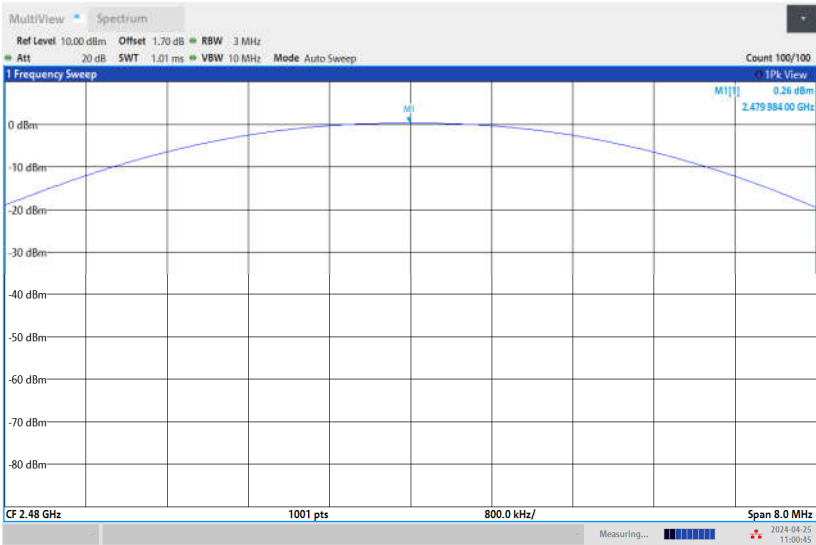
Appendix C: Maximum conducted output power

Test Result

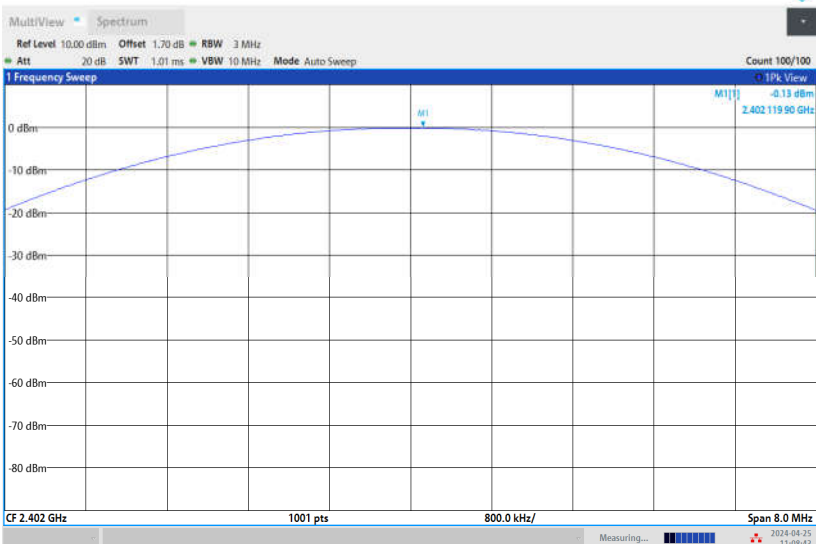
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Powert [dBm]	Conducted Limit [dBm]	Verdict
DH5	Ant1	2402	0.55	≤20.97	PASS
		2441	0.64	≤20.97	PASS
		2480	0.26	≤20.97	PASS
2DH5	Ant1	2402	-0.13	≤20.97	PASS
		2441	-0.04	≤20.97	PASS
		2480	-0.42	≤20.97	PASS
3DH5	Ant1	2402	0.39	≤20.97	PASS
		2441	0.13	≤20.97	PASS
		2480	0.10	≤20.97	PASS

Test Graphs

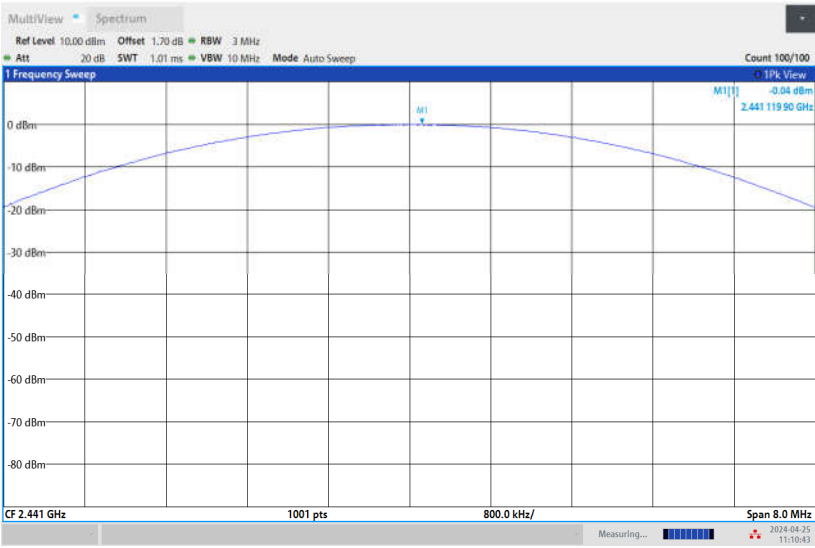




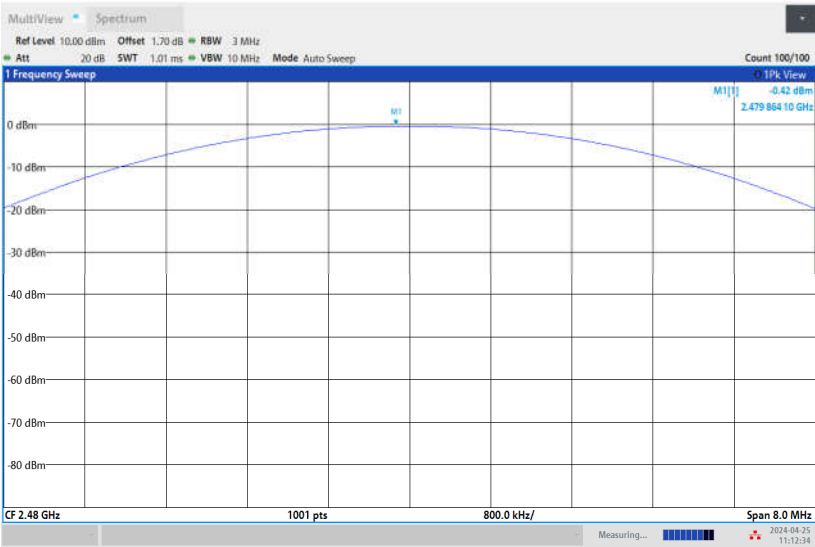
DH5_Ant1_2480



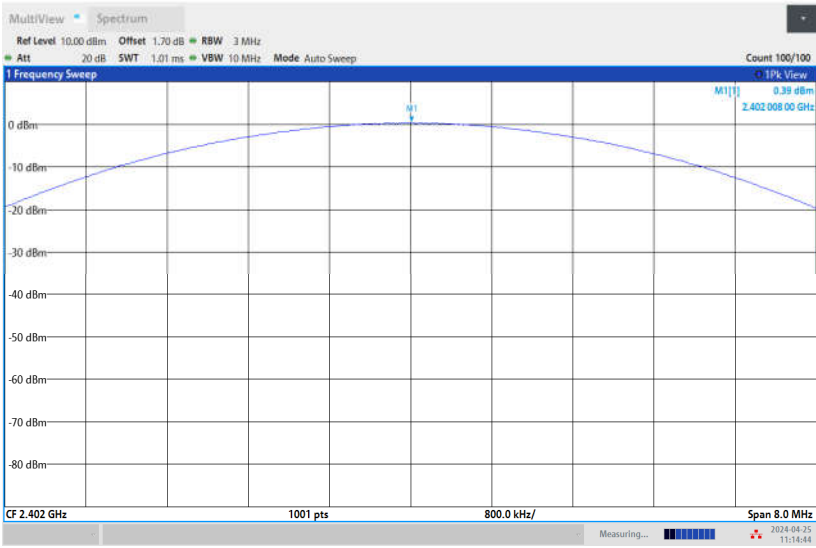
2DH5_Ant1_2402



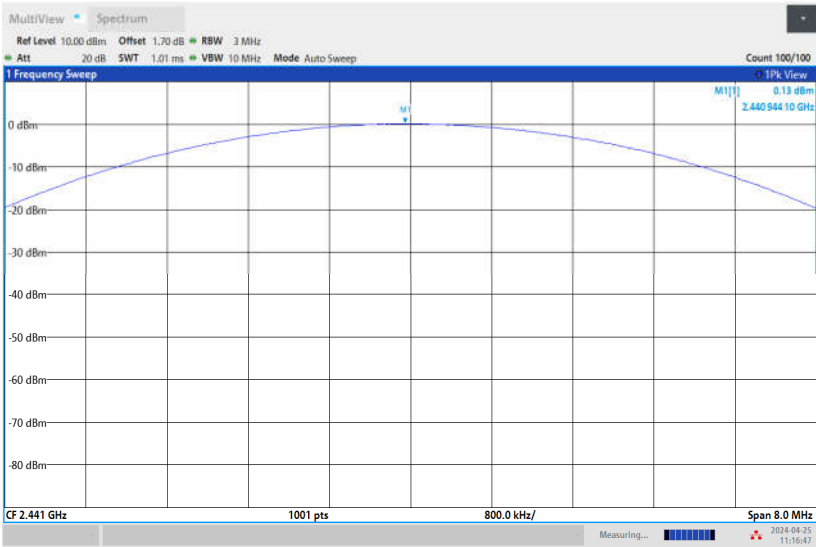
2DH5_Ant1_2441



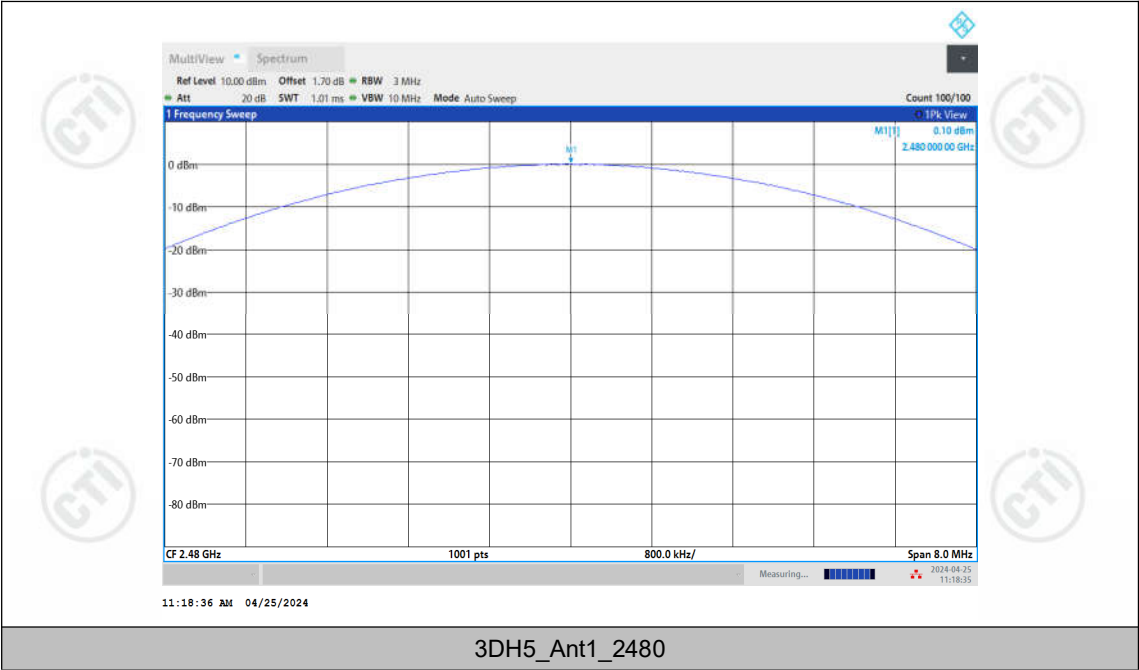
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



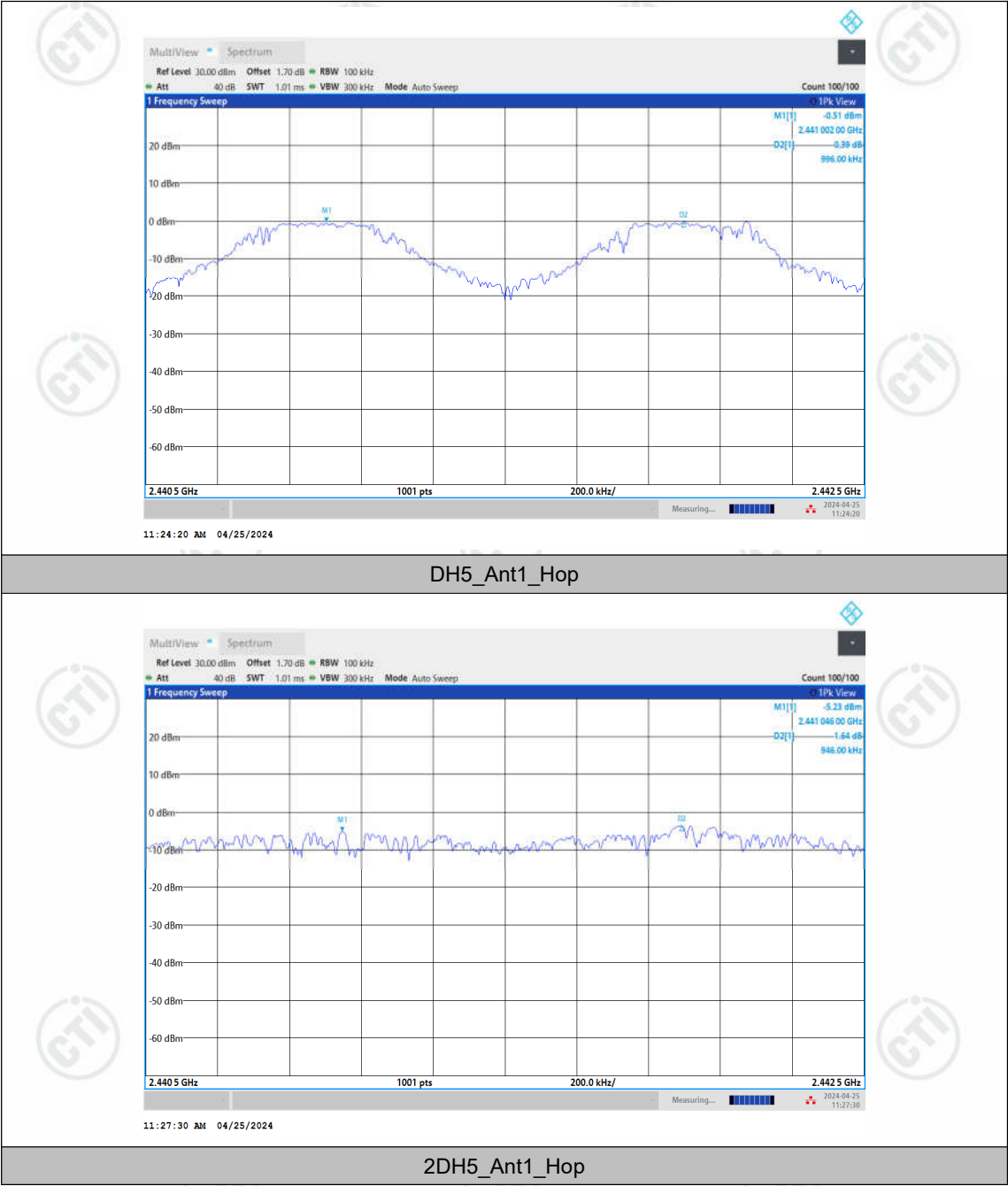
3DH5_Ant1_2480

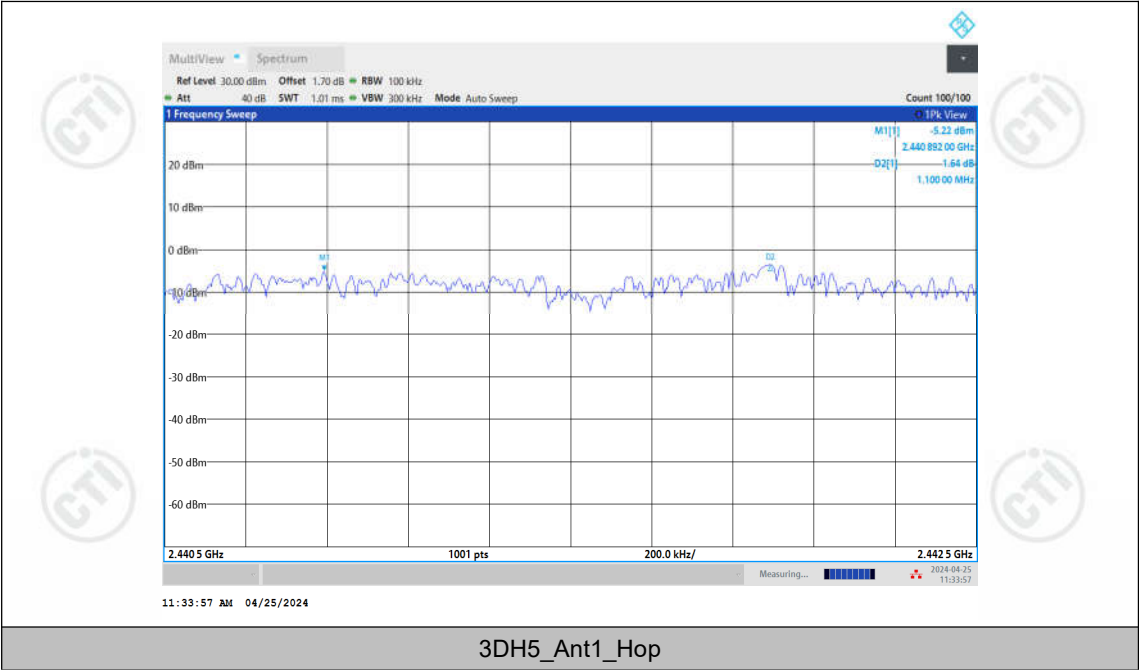
Appendix D: Carrier frequency separation

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Ant1	Hop	0.996	≥0.687	PASS
2DH5	Ant1	Hop	0.946	≥0.907	PASS
3DH5	Ant1	Hop	1.1	≥0.880	PASS

Test Graphs



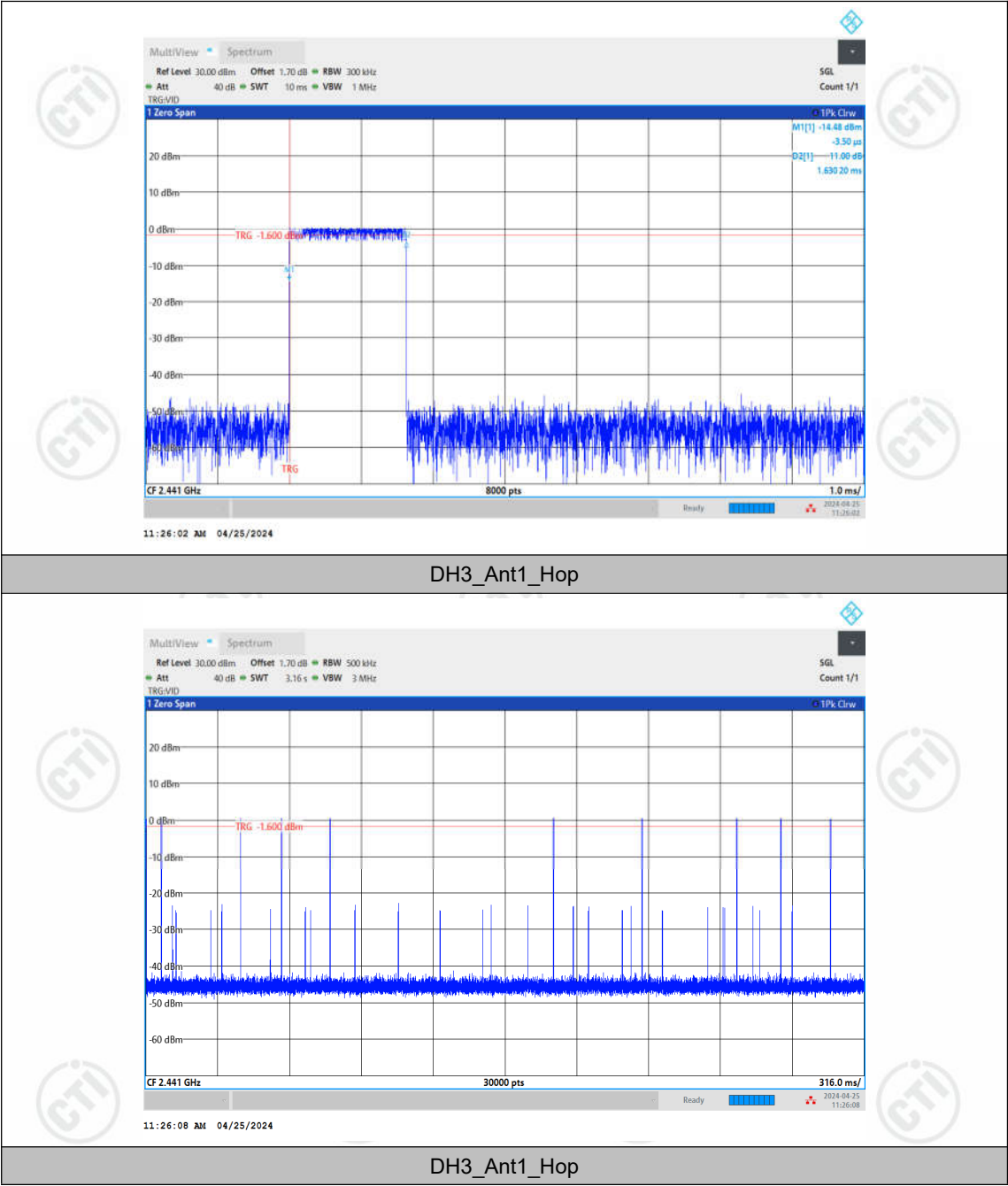


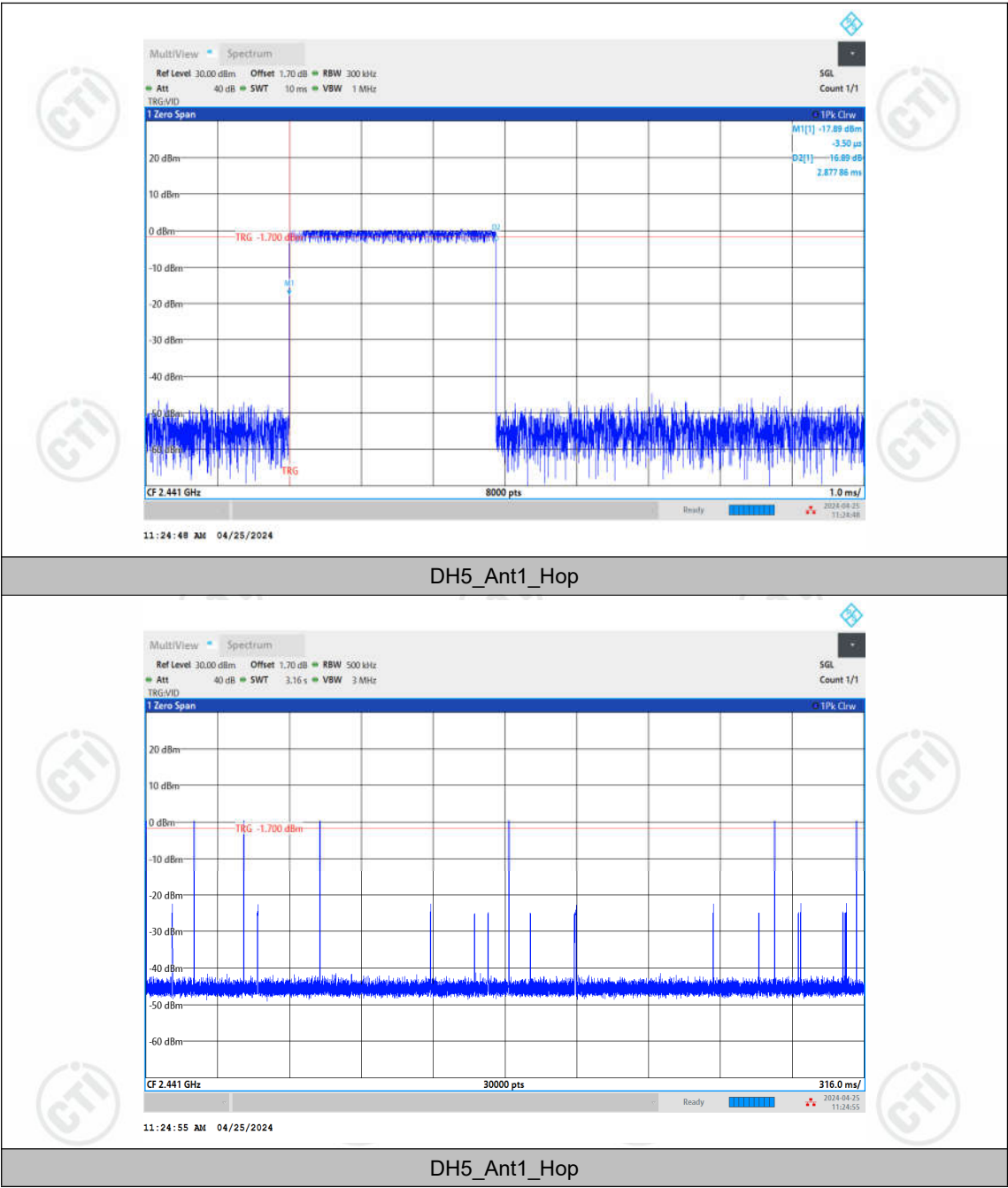
Appendix E: Time of occupancy

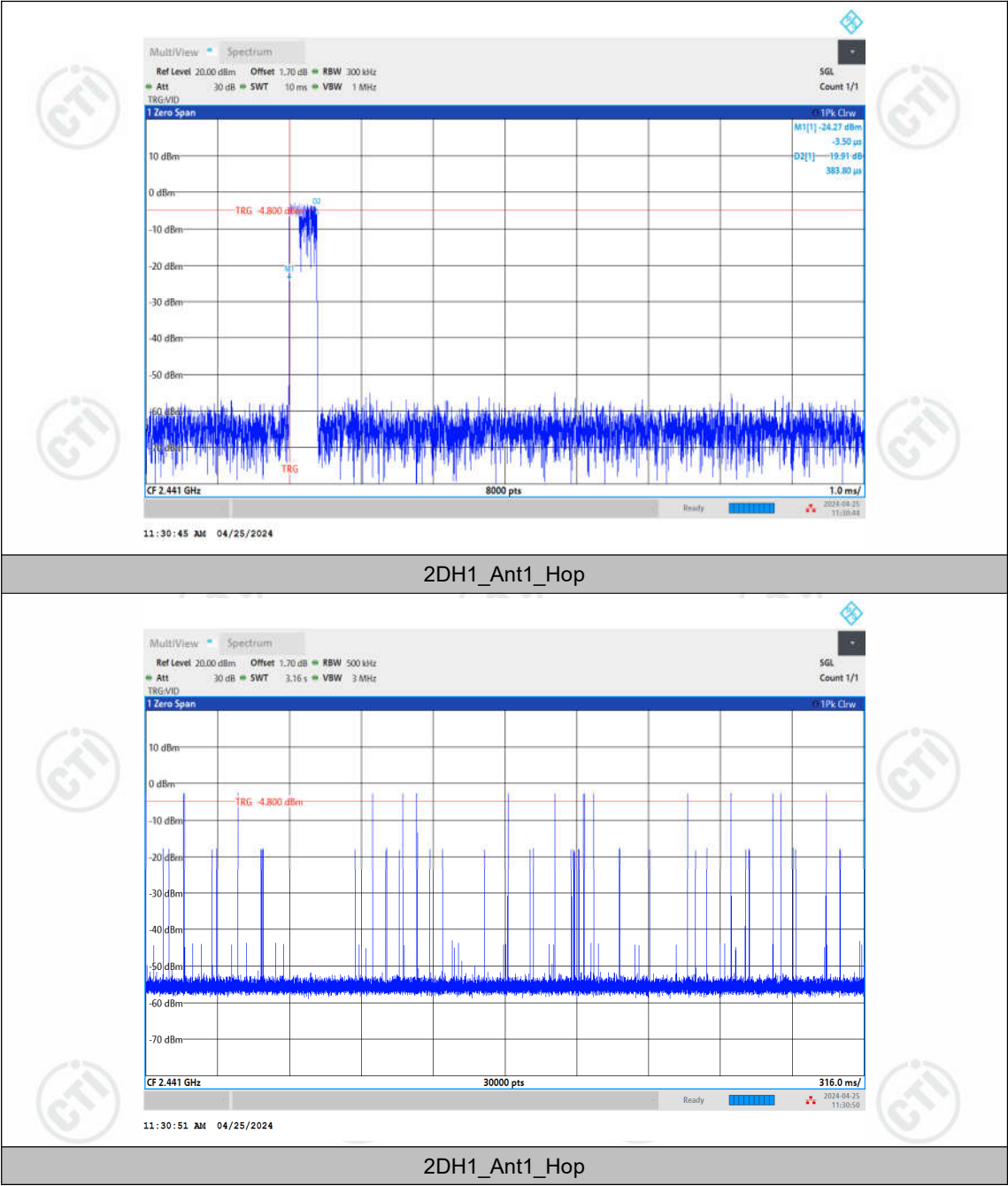
Test Result

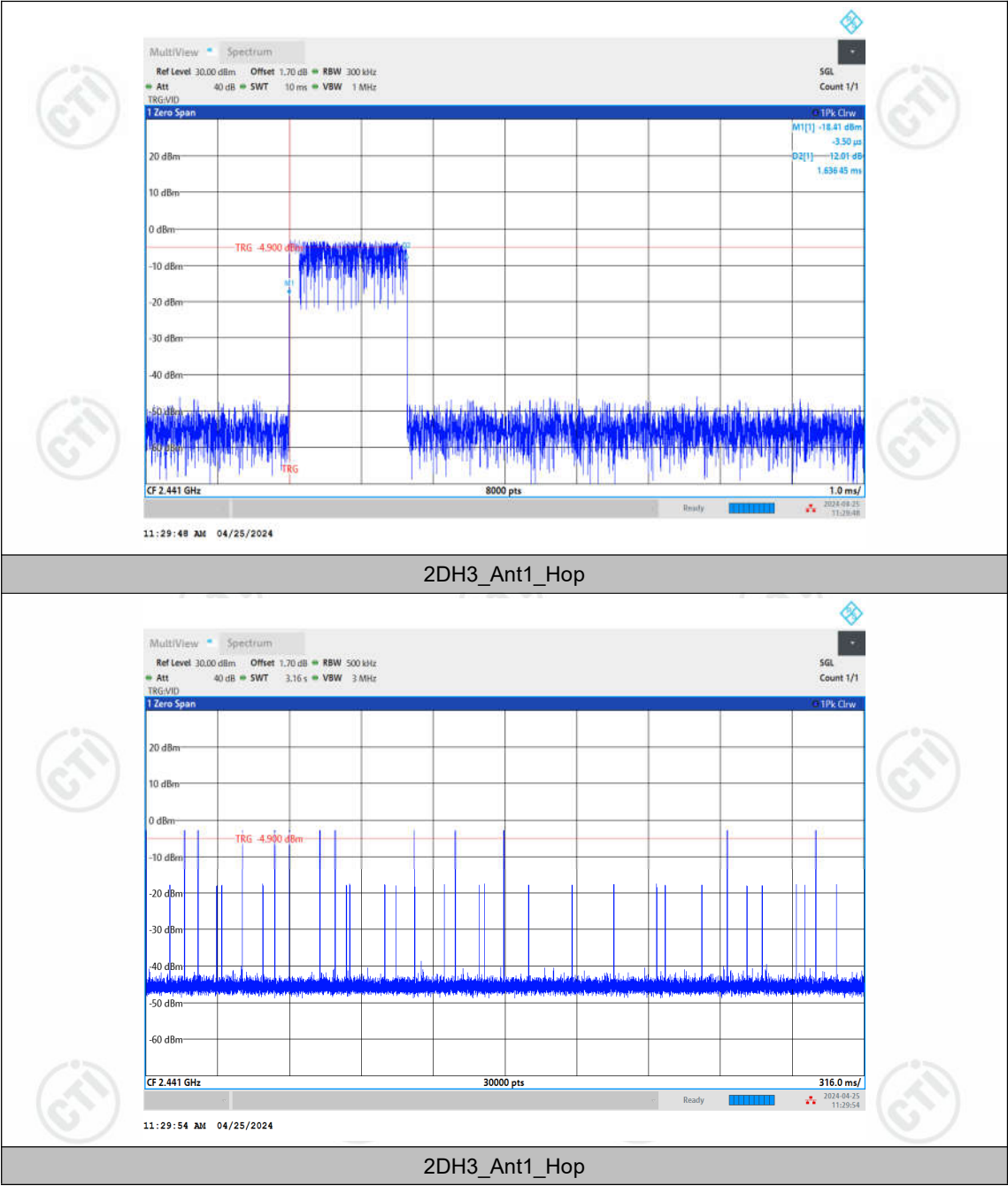
Test Mode	Antenna	Frequency [MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	160	0.06	≤0.4	PASS
DH3	Ant1	Hop	1.63	100	0.163	≤0.4	PASS
DH5	Ant1	Hop	2.88	70	0.201	≤0.4	PASS
2DH1	Ant1	Hop	0.38	150	0.058	≤0.4	PASS
2DH3	Ant1	Hop	1.64	130	0.213	≤0.4	PASS
2DH5	Ant1	Hop	2.88	100	0.288	≤0.4	PASS
3DH1	Ant1	Hop	0.38	170	0.065	≤0.4	PASS
3DH3	Ant1	Hop	1.63	150	0.245	≤0.4	PASS
3DH5	Ant1	Hop	2.89	70	0.202	≤0.4	PASS

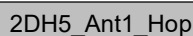
The top screenshot displays a spectrum analyzer interface with the following settings: Ref Level 30.00 dBm, Offset 1.70 dB, RBW 300 kHz, Att 40 dB, SWT 10 ms, VBW 1 MHz. The trigger level is set to -1.600 dBm. The signal is captured at CF 2.441 GHz with 8000 points. The bottom screenshot shows the same interface but with a different trigger level of -1.600 dBm and a sweep time of 3.16 s. The signal is captured at CF 2.441 GHz with 30000 points. The total duration of the capture is 316.0 ms.

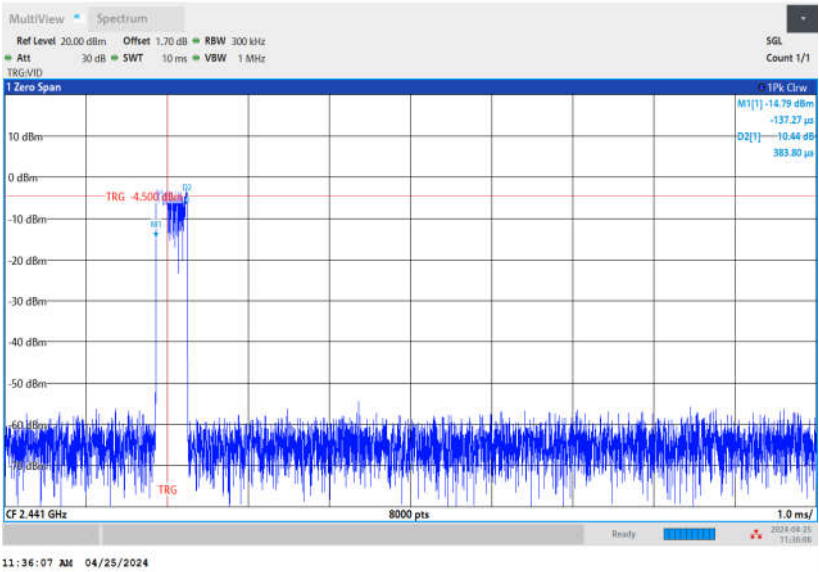




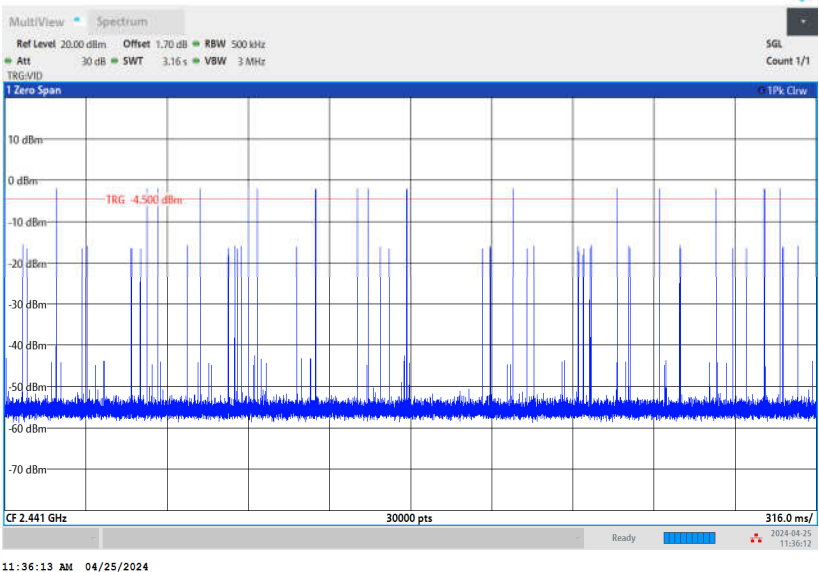




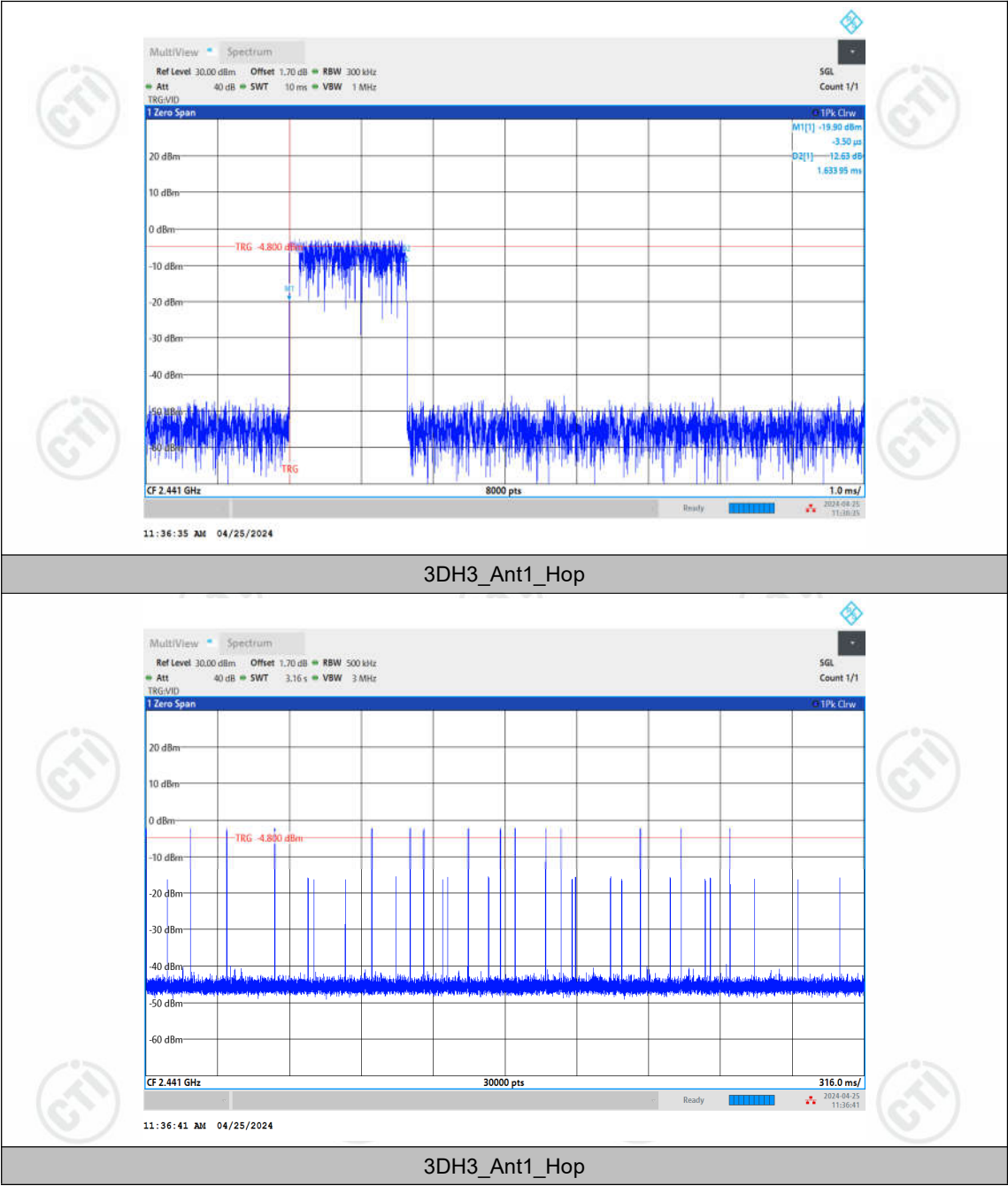


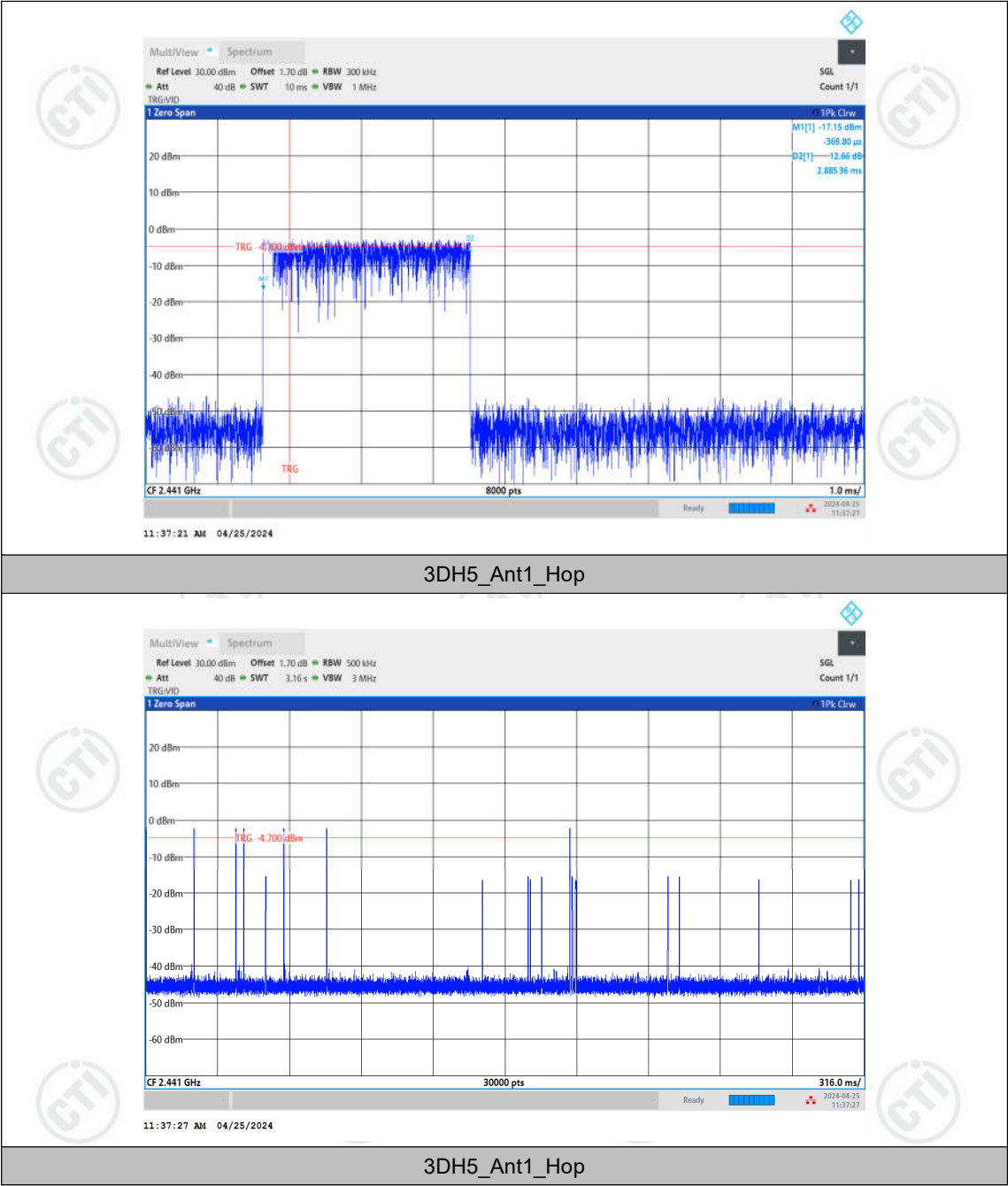


3DH1_Ant1_Hop



3DH1_Ant1_Hop





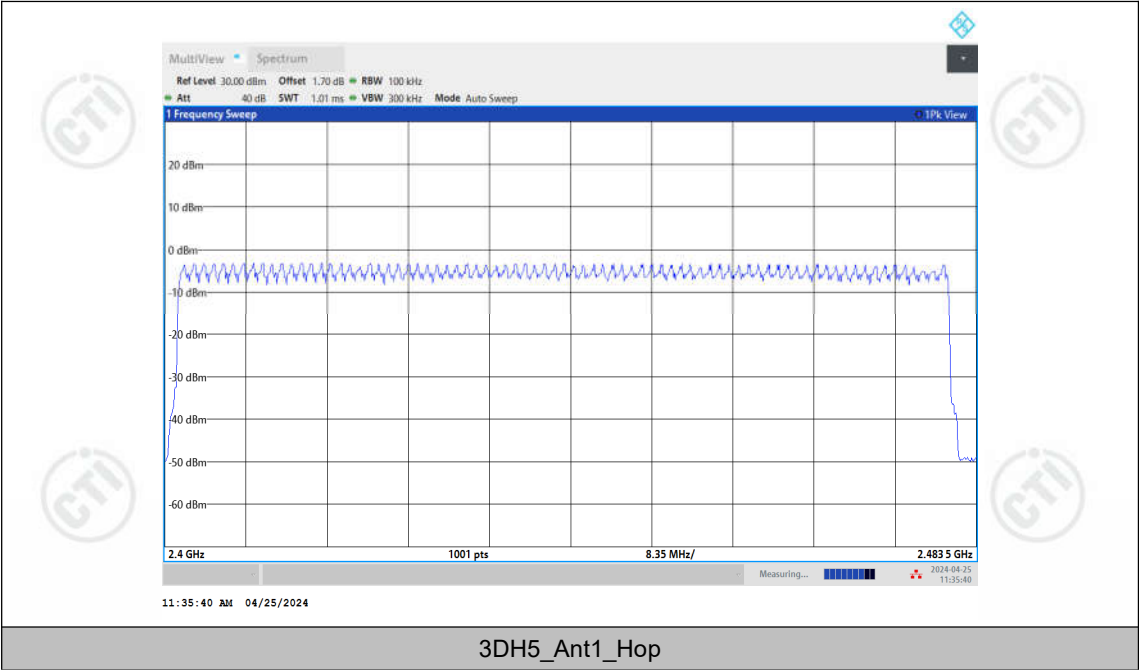
Appendix F: Number of hopping channels

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



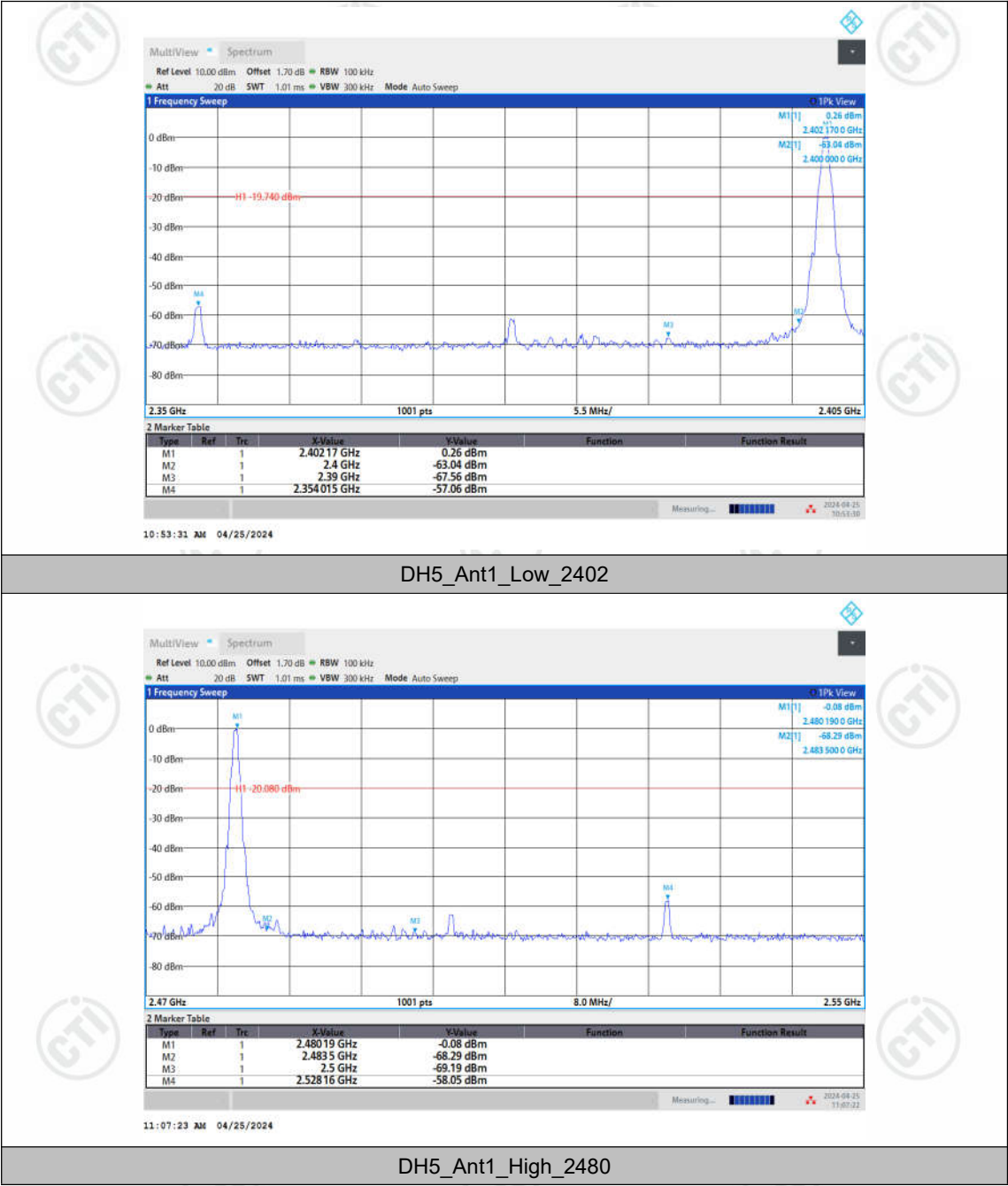


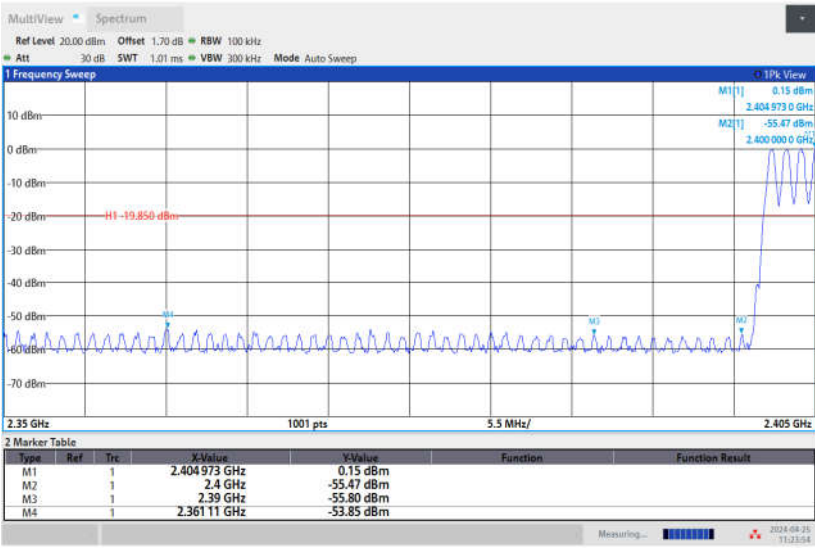
Appendix G: Band edge measurements

Test Result

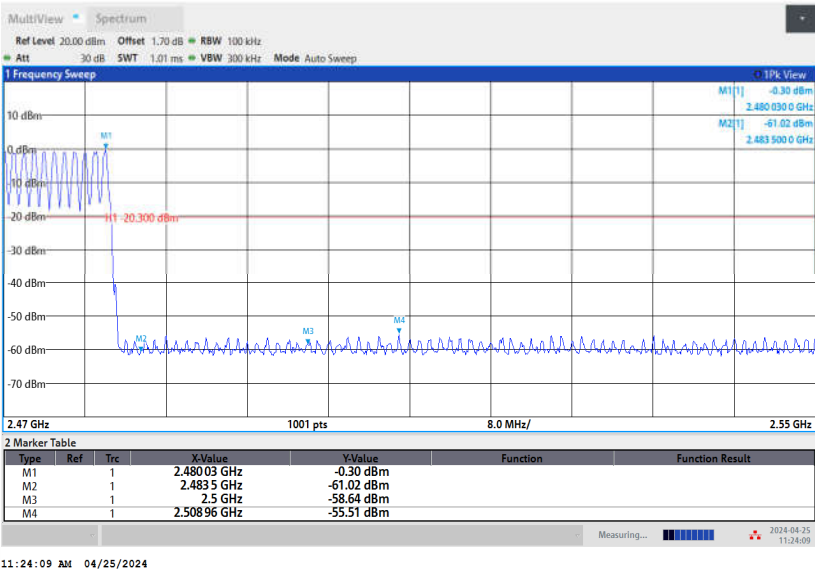
Test Mode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.26	-57.06	≤ -19.74	PASS
		High	2480	-0.08	-58.05	≤ -20.08	PASS
		Low	Hop_2402	0.15	-53.85	≤ -19.85	PASS
		High	Hop_2480	-0.30	-55.51	≤ -20.3	PASS
2DH5	Ant1	Low	2402	-3.16	-49.01	≤ -23.16	PASS
		High	2480	-3.55	-57.3	≤ -23.55	PASS
		Low	Hop_2402	-3.12	-54.25	≤ -23.12	PASS
		High	Hop_2480	-3.51	-55.63	≤ -23.51	PASS
3DH5	Ant1	Low	2402	-3.18	-48.46	≤ -23.18	PASS
		High	2480	-3.55	-57.59	≤ -23.55	PASS
		Low	Hop_2402	-3.03	-54.7	≤ -23.03	PASS
		High	Hop_2480	-3.50	-54.82	≤ -23.5	PASS

Test Graphs

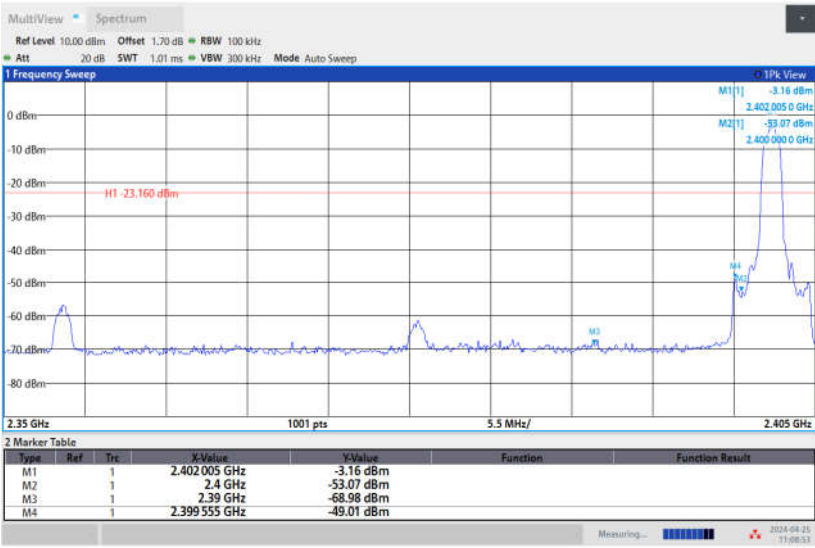




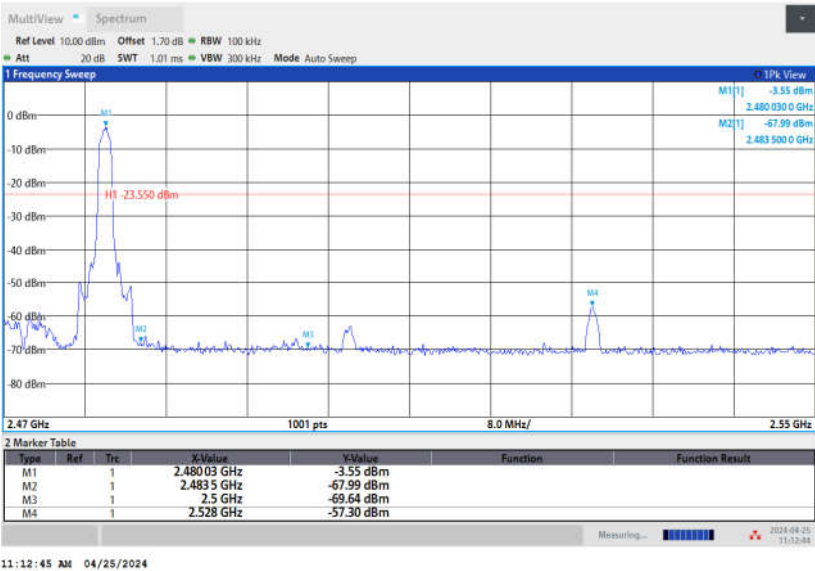
DH5_Ant1_Low_Hop_2402



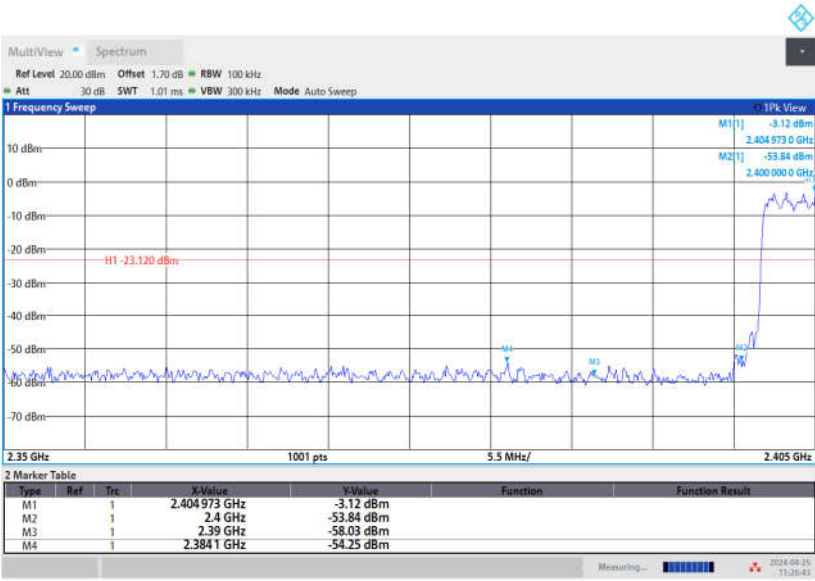
DH5_Ant1_High_Hop_2480



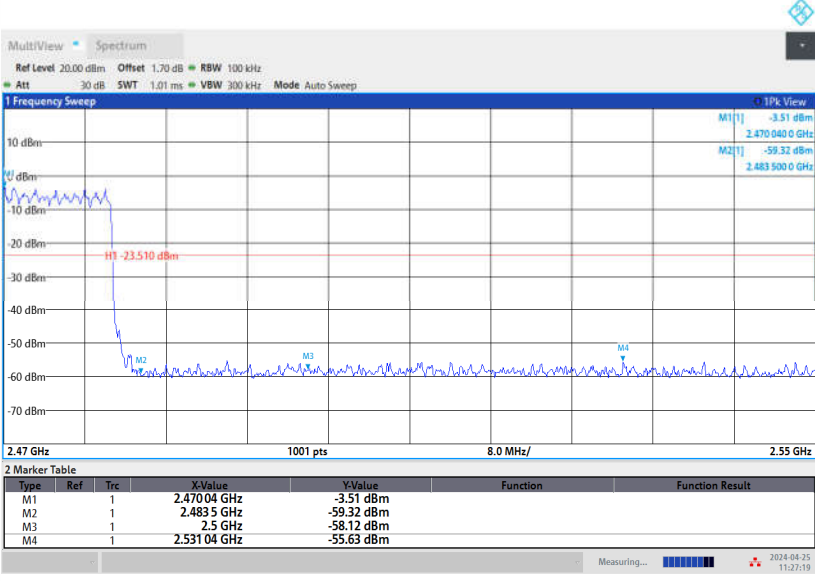
2DH5_Ant1_Low_2402



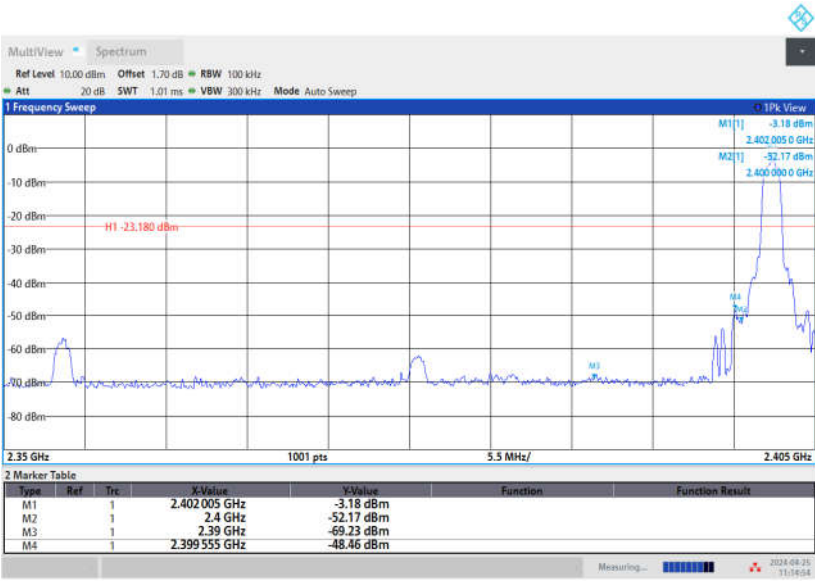
2DH5_Ant1_High_2480



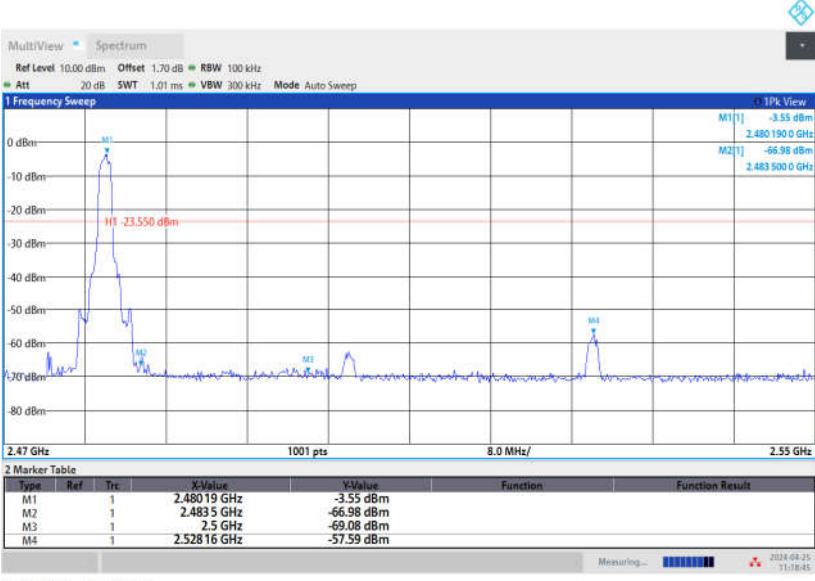
2DH5_Ant1_Low_Hop_2402



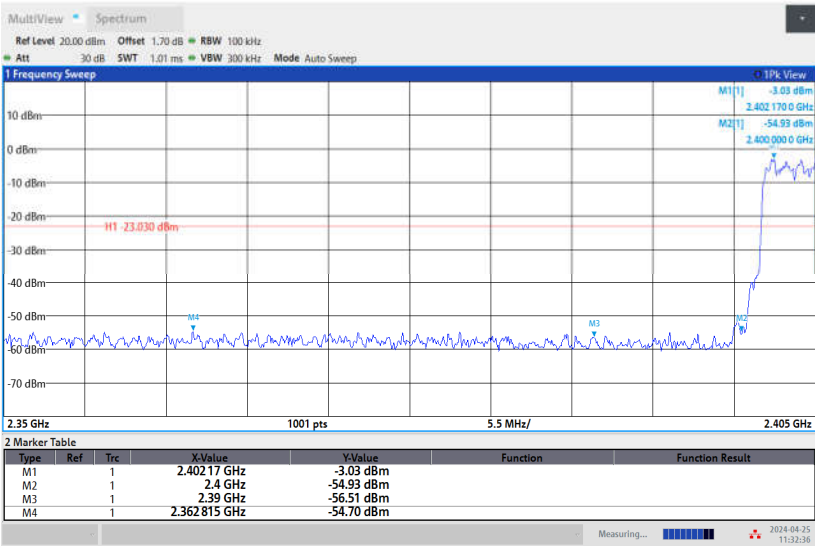
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402

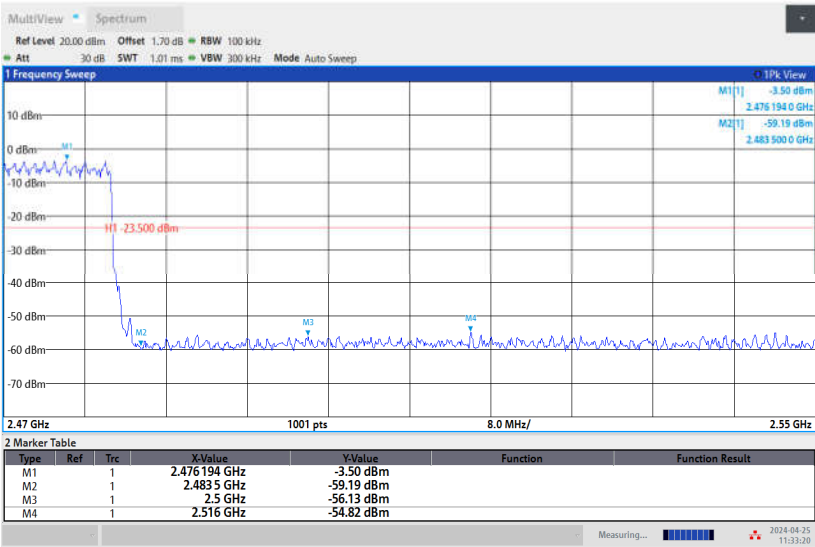


3DH5_Ant1_High_2480



11:32:36 AM 04/25/2024

3DH5_Ant1_Low_Hop_2402



11:33:20 AM 04/25/2024

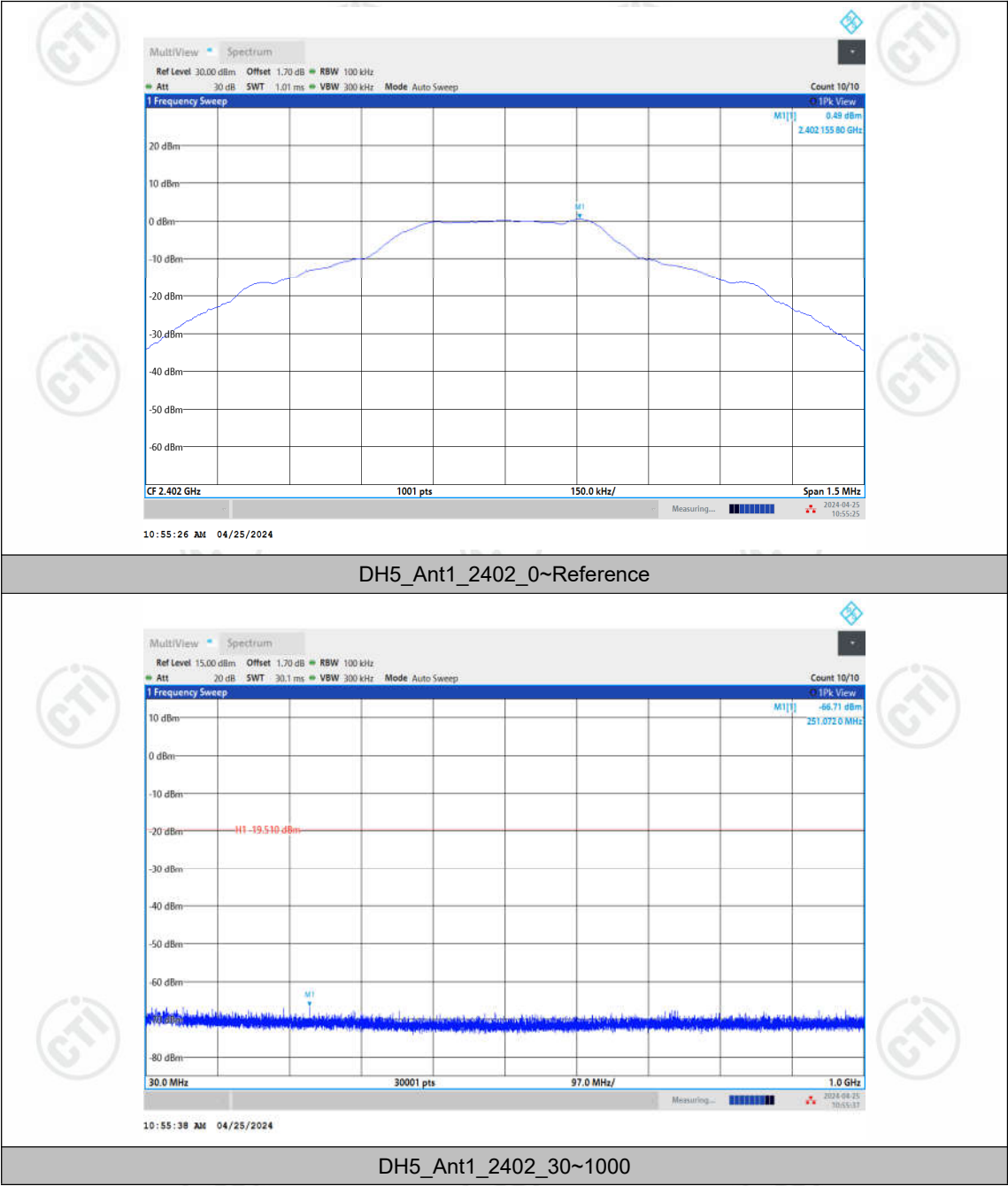
3DH5_Ant1_High_Hop_2480

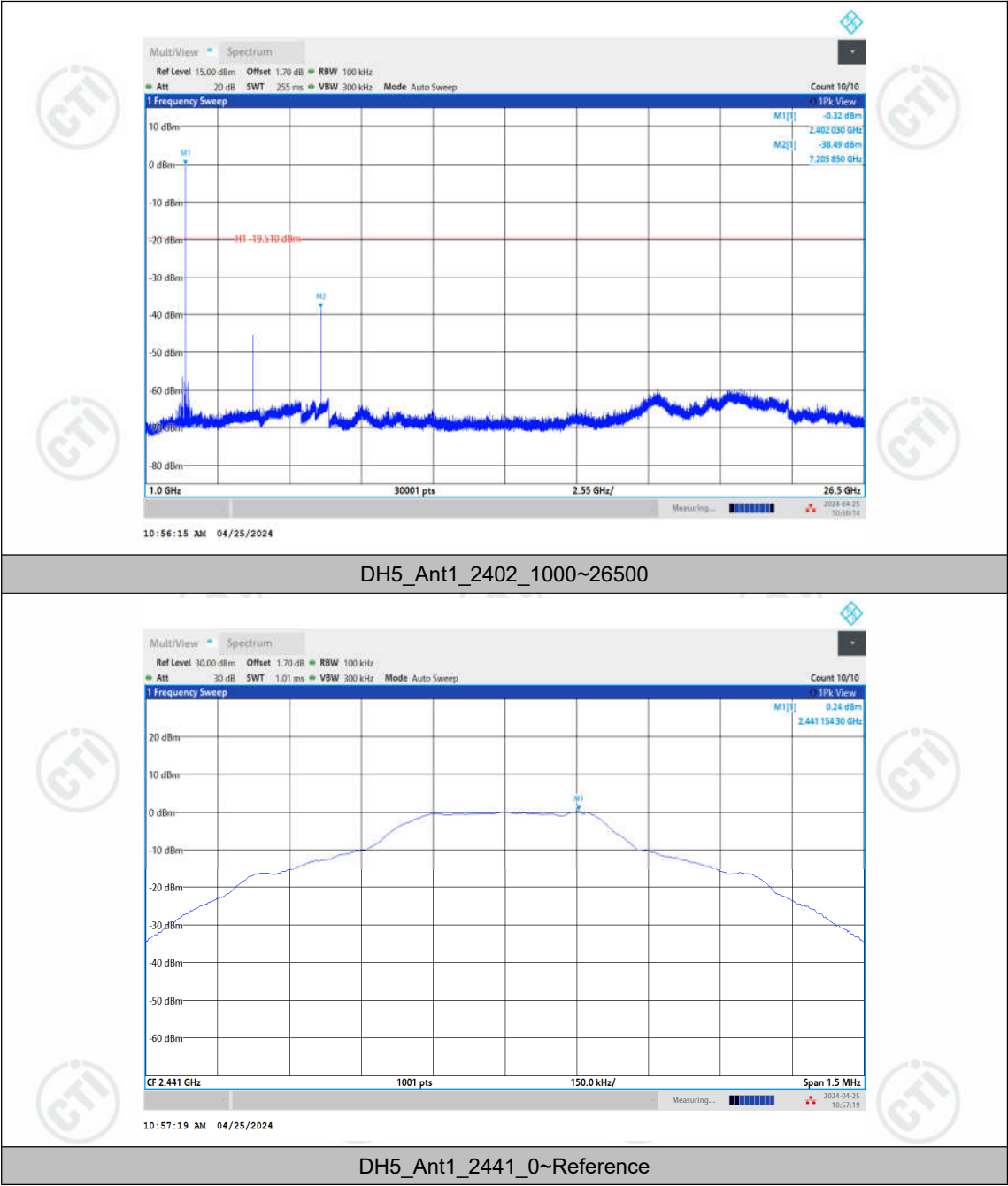
Appendix H: Conducted Spurious Emission

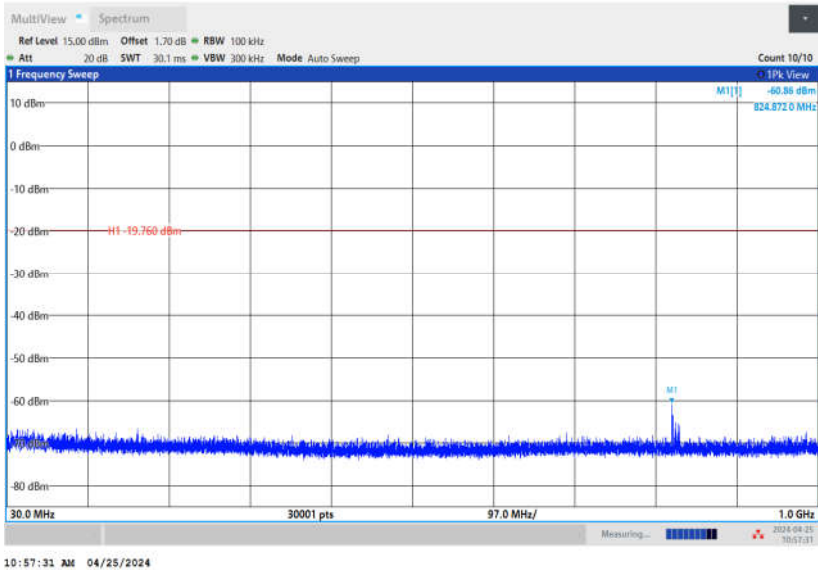
Test Result

Test Mode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.49	0.49	---	PASS
			30~1000	0.49	-66.71	≤-19.51	PASS
			1000~26500	0.49	-38.49	≤-19.51	PASS
		2441	Reference	0.24	0.24	---	PASS
			30~1000	0.24	-60.86	≤-19.76	PASS
			1000~26500	0.24	-39.77	≤-19.76	PASS
		2480	Reference	-0.03	-0.03	---	PASS
			30~1000	-0.03	-66.5	≤-20.03	PASS
			1000~26500	-0.03	-41.44	≤-20.03	PASS
2DH5	Ant1	2402	Reference	-2.95	-2.95	---	PASS
			30~1000	-2.95	-66.95	≤-22.95	PASS
			1000~26500	-2.95	-48.74	≤-22.95	PASS
		2441	Reference	-3.20	-3.20	---	PASS
			30~1000	-3.20	-66.66	≤-23.2	PASS
			1000~26500	-3.20	-49.86	≤-23.2	PASS
		2480	Reference	-3.58	-3.58	---	PASS
			30~1000	-3.58	-66.74	≤-23.58	PASS
			1000~26500	-3.58	-51.27	≤-23.58	PASS
3DH5	Ant1	2402	Reference	-2.85	-2.85	---	PASS
			30~1000	-2.85	-66.95	≤-22.85	PASS
			1000~26500	-2.85	-49.23	≤-22.85	PASS
		2441	Reference	-3.07	-3.07	---	PASS
			30~1000	-3.07	-66.75	≤-23.07	PASS
			1000~26500	-3.07	-49.63	≤-23.07	PASS
		2480	Reference	-3.51	-3.51	---	PASS
			30~1000	-3.51	-67.16	≤-23.51	PASS
			1000~26500	-3.51	-51.88	≤-23.51	PASS

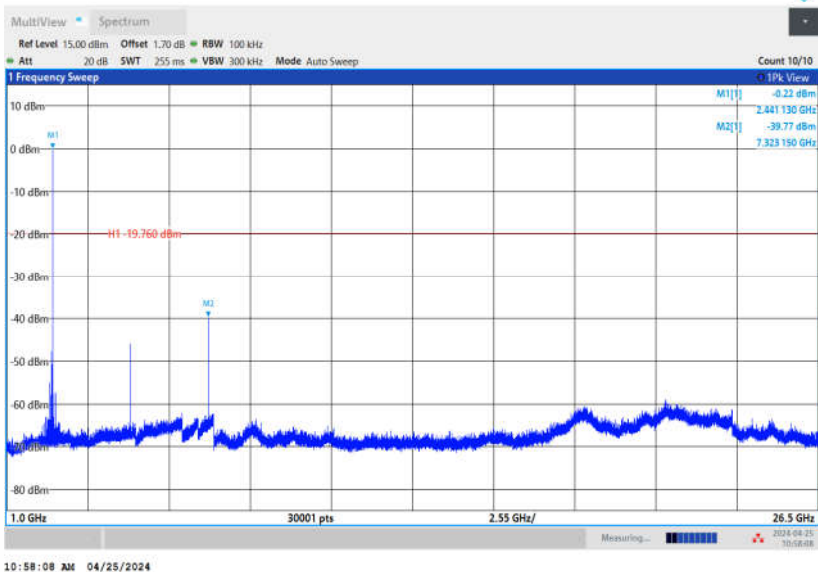
Test Graphs



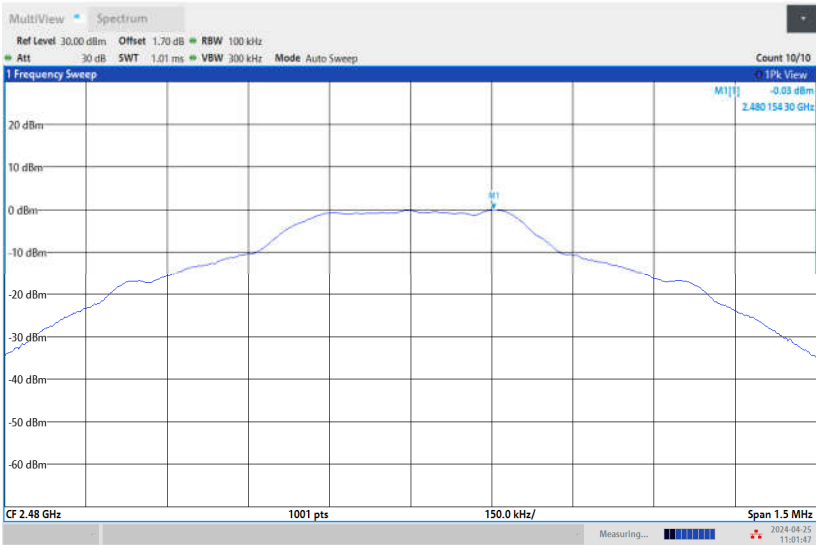




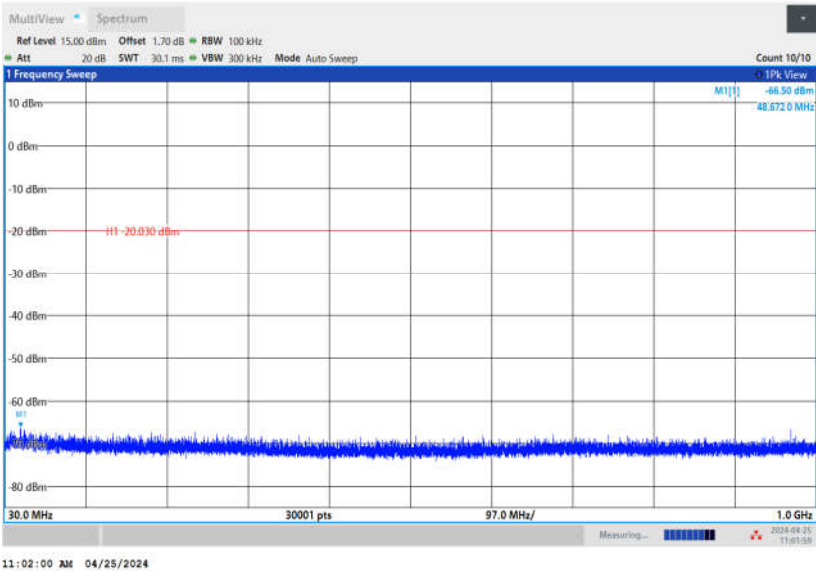
DH5_Ant1_2441_30~1000



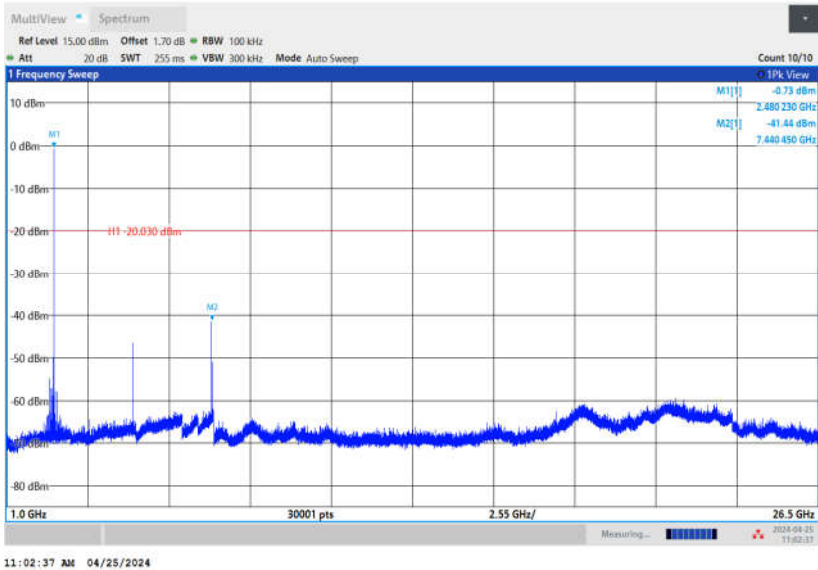
DH5_Ant1_2441_1000~26500



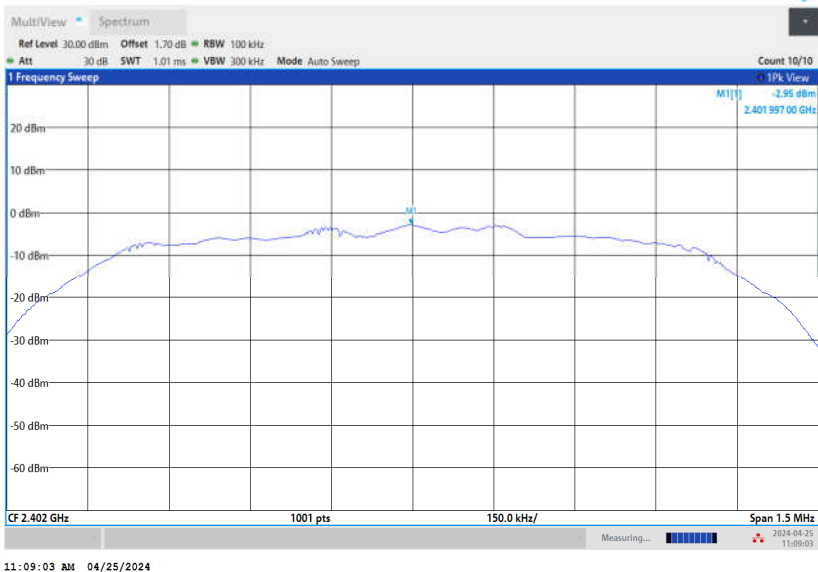
DH5_Ant1_2480_0~Reference



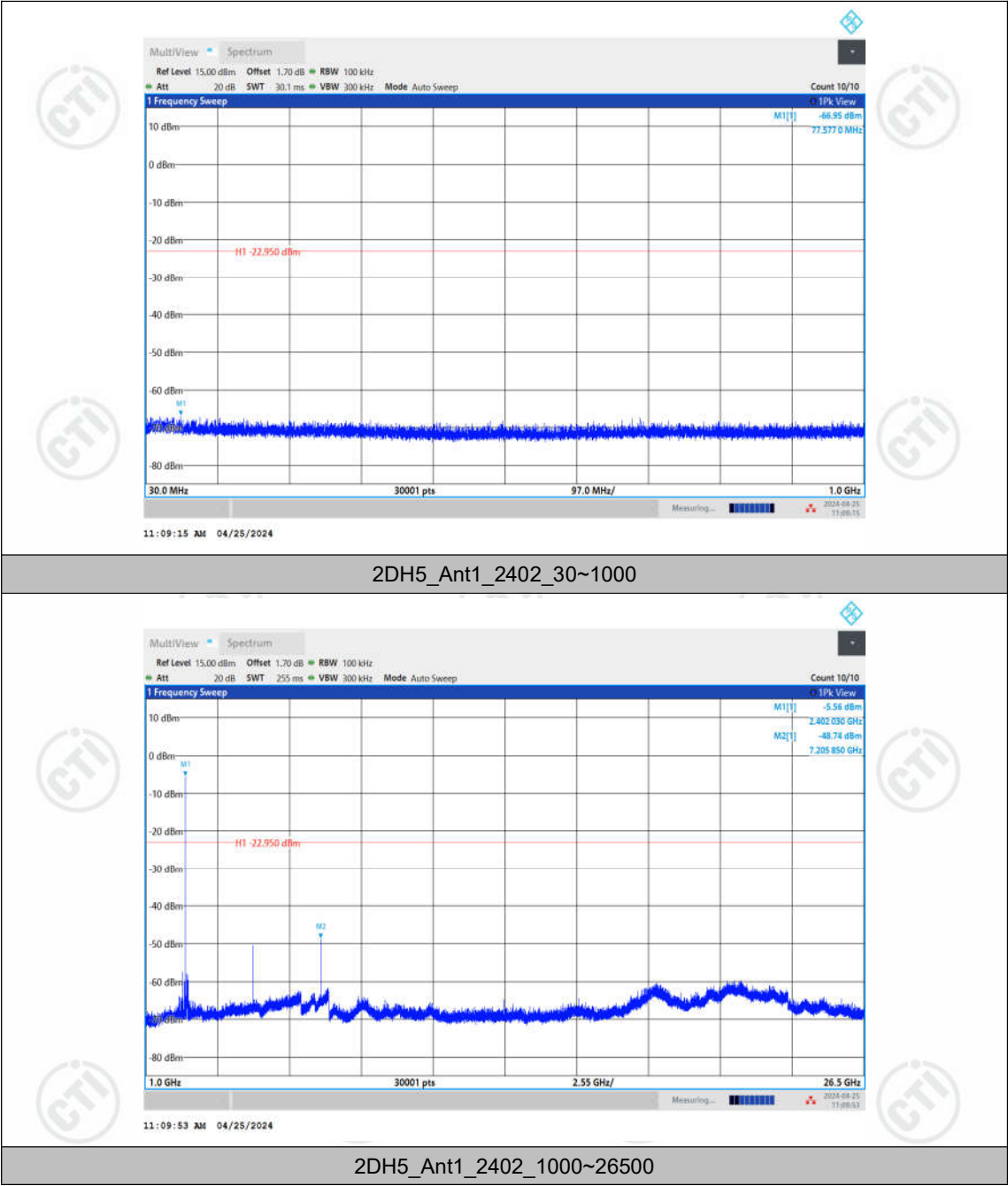
DH5_Ant1_2480_30~1000

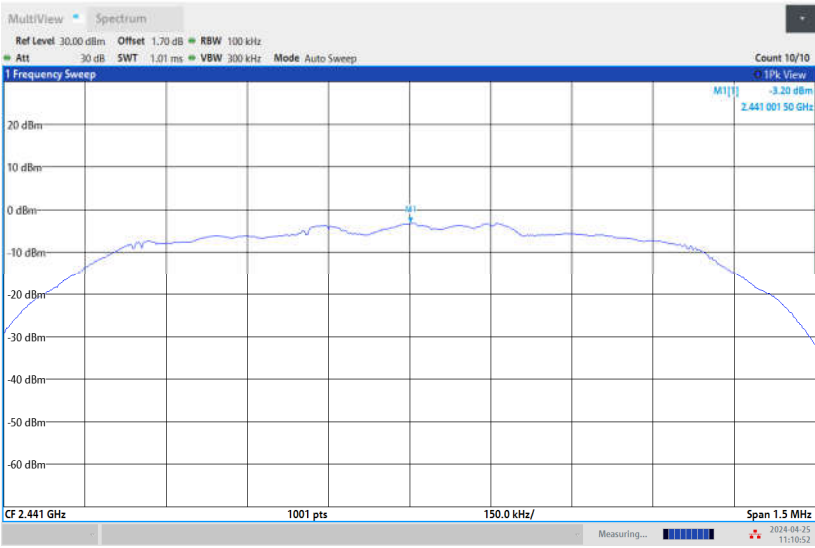


DH5_Ant1_2480_1000~26500

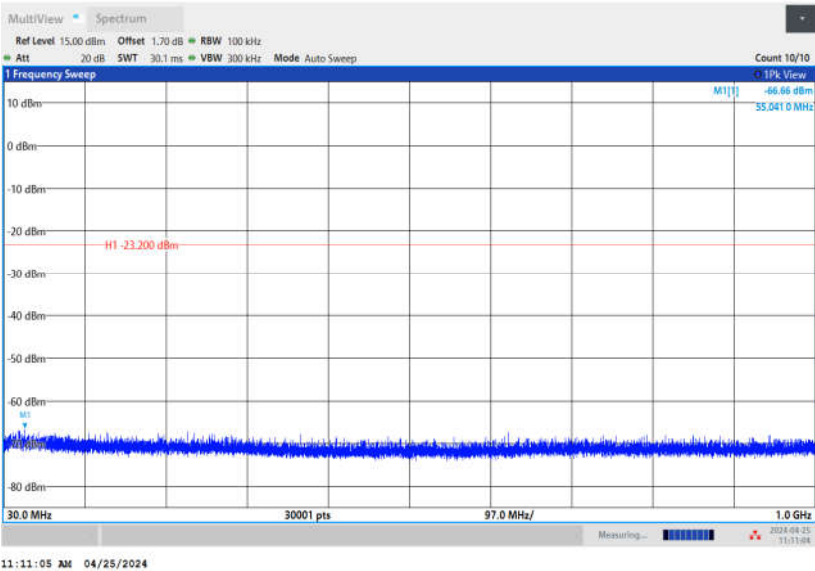


2DH5_Ant1_2402_0~Reference

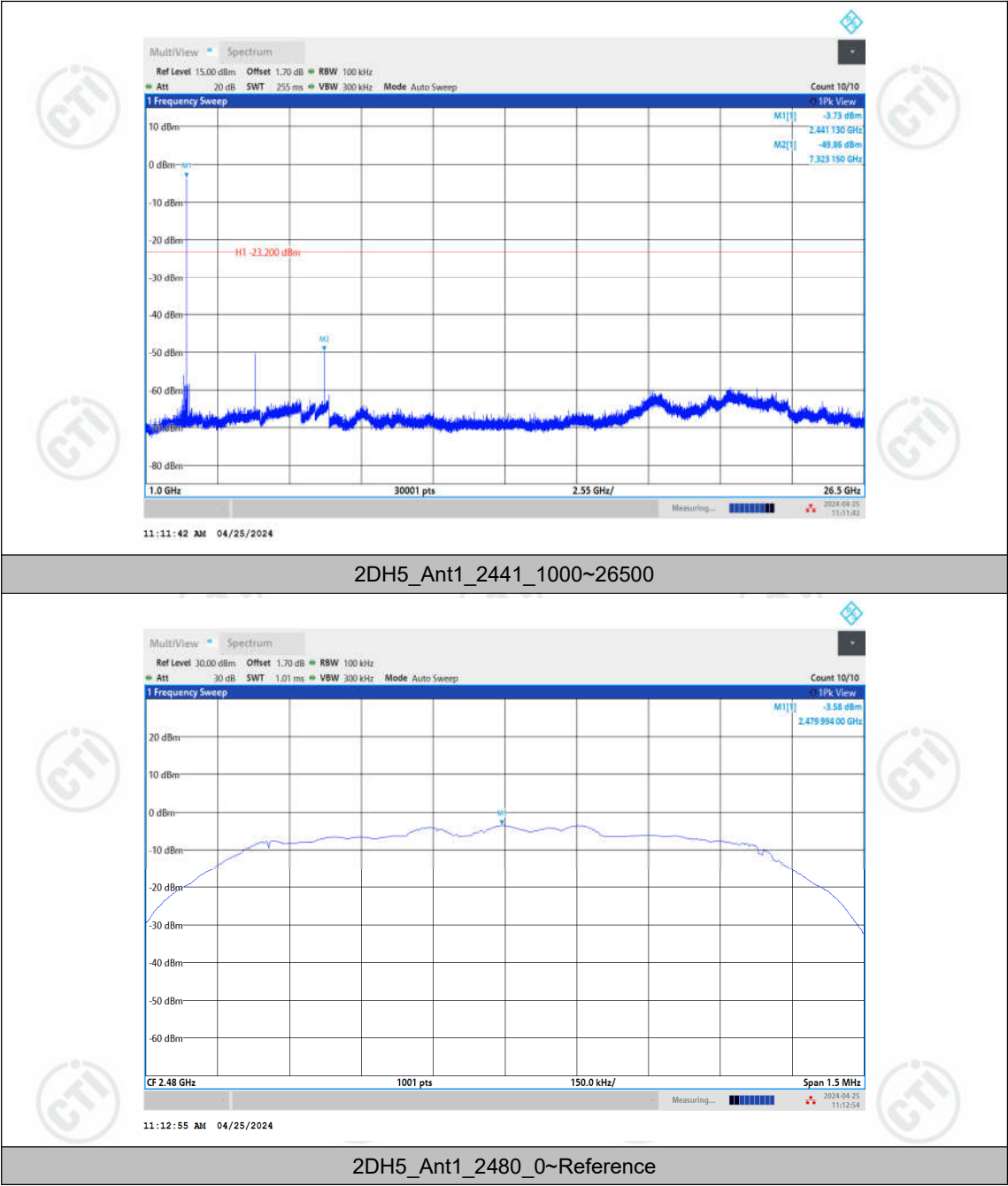


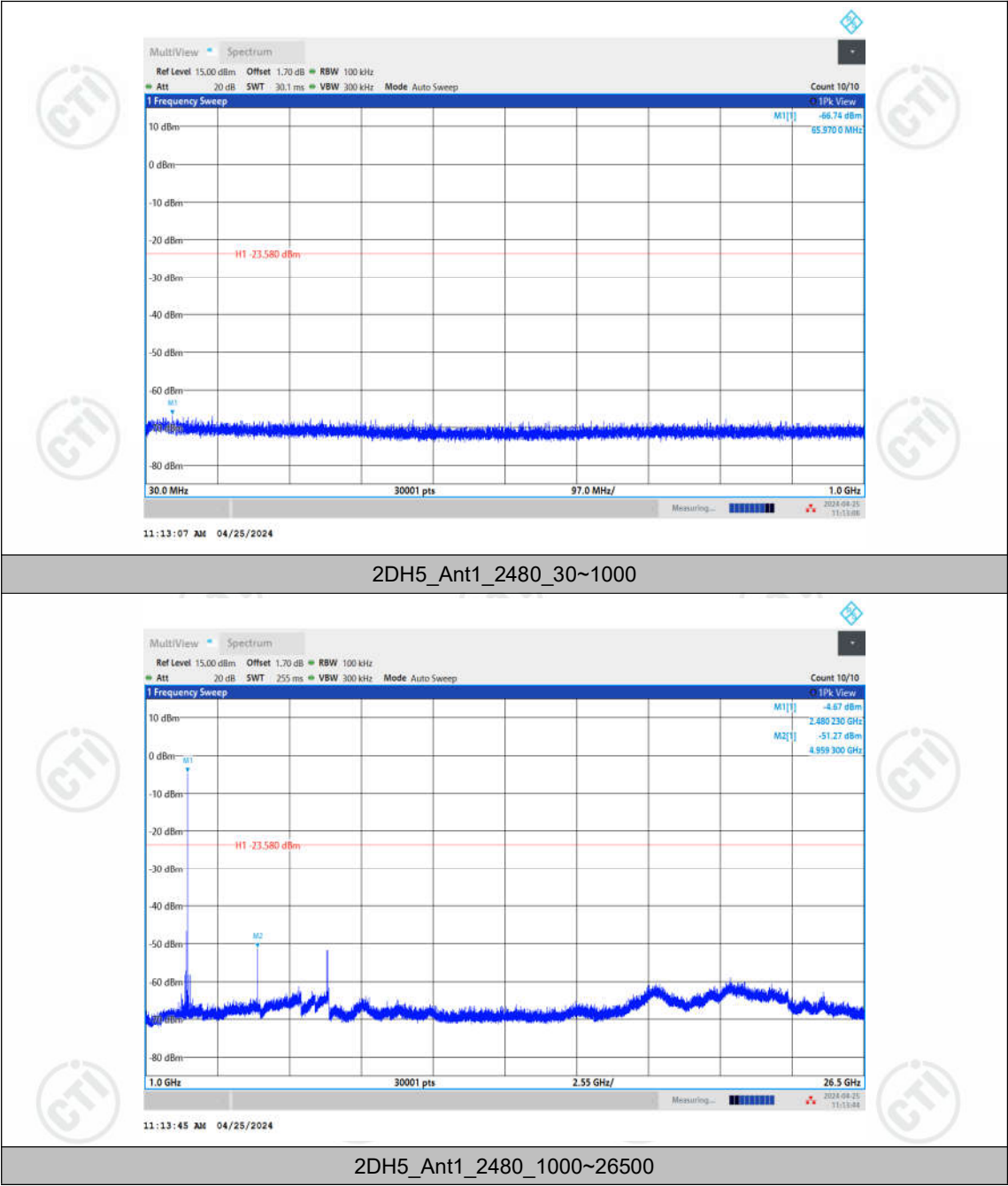


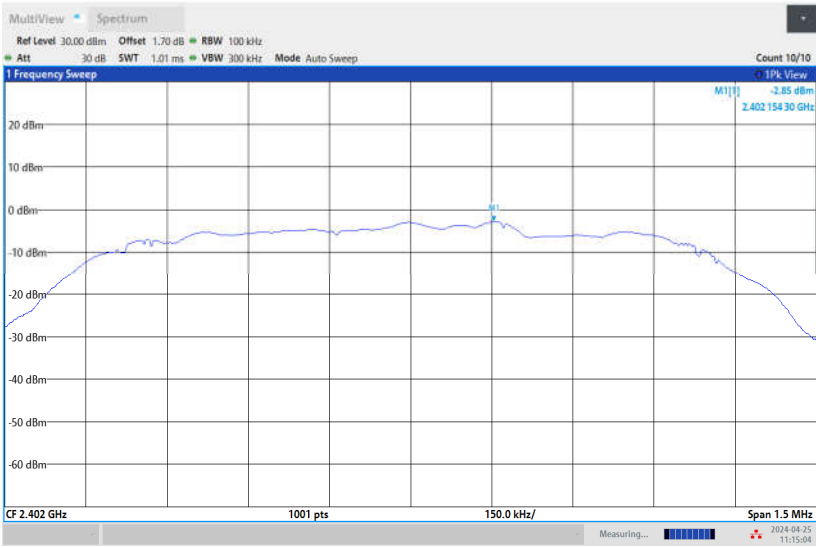
2DH5_Ant1_2441_0~Reference



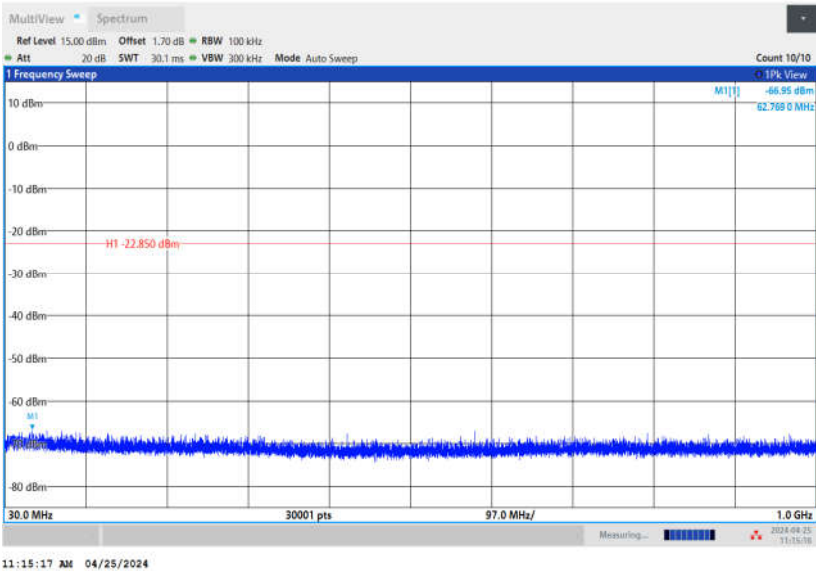
2DH5_Ant1_2441_30~1000



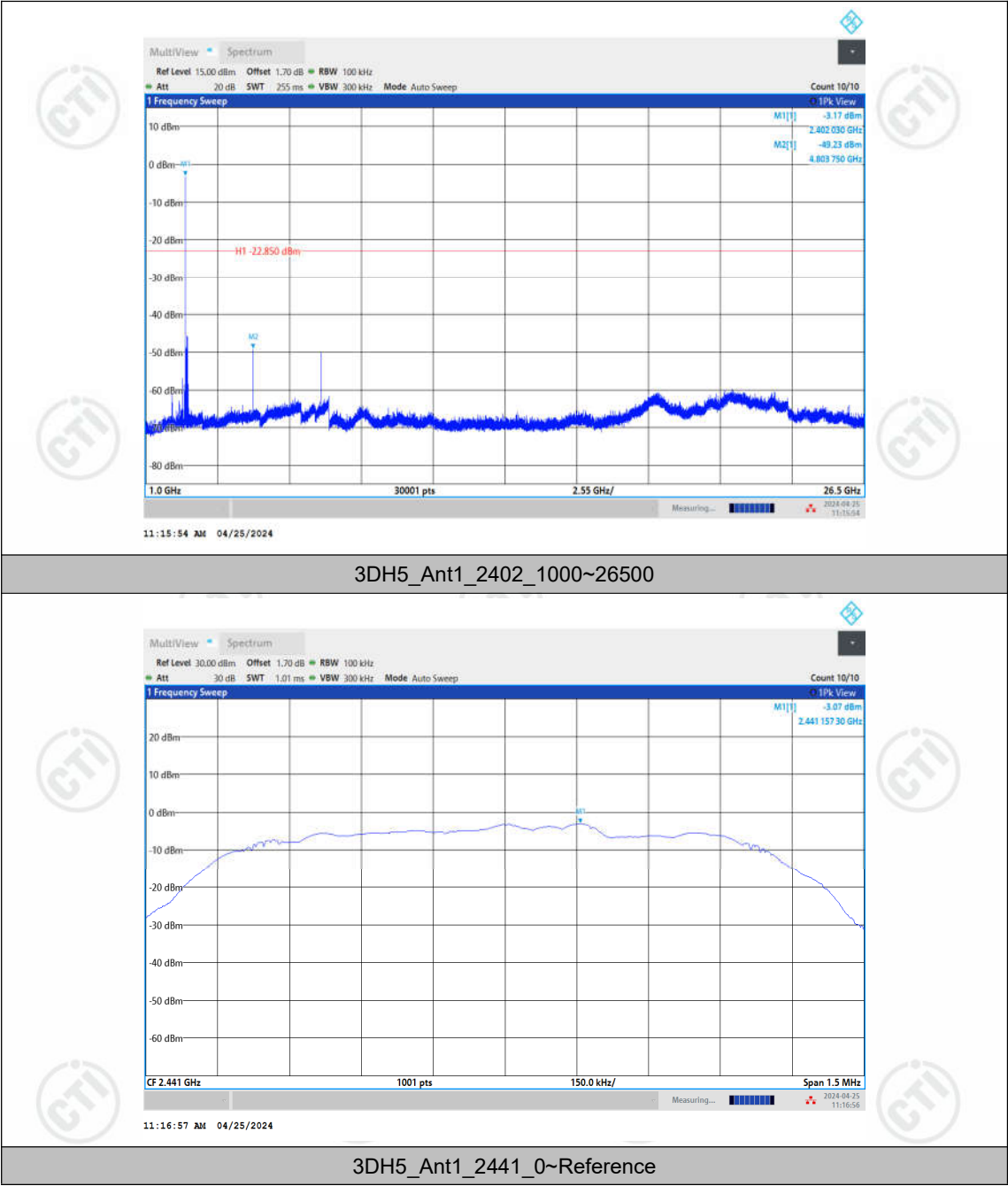


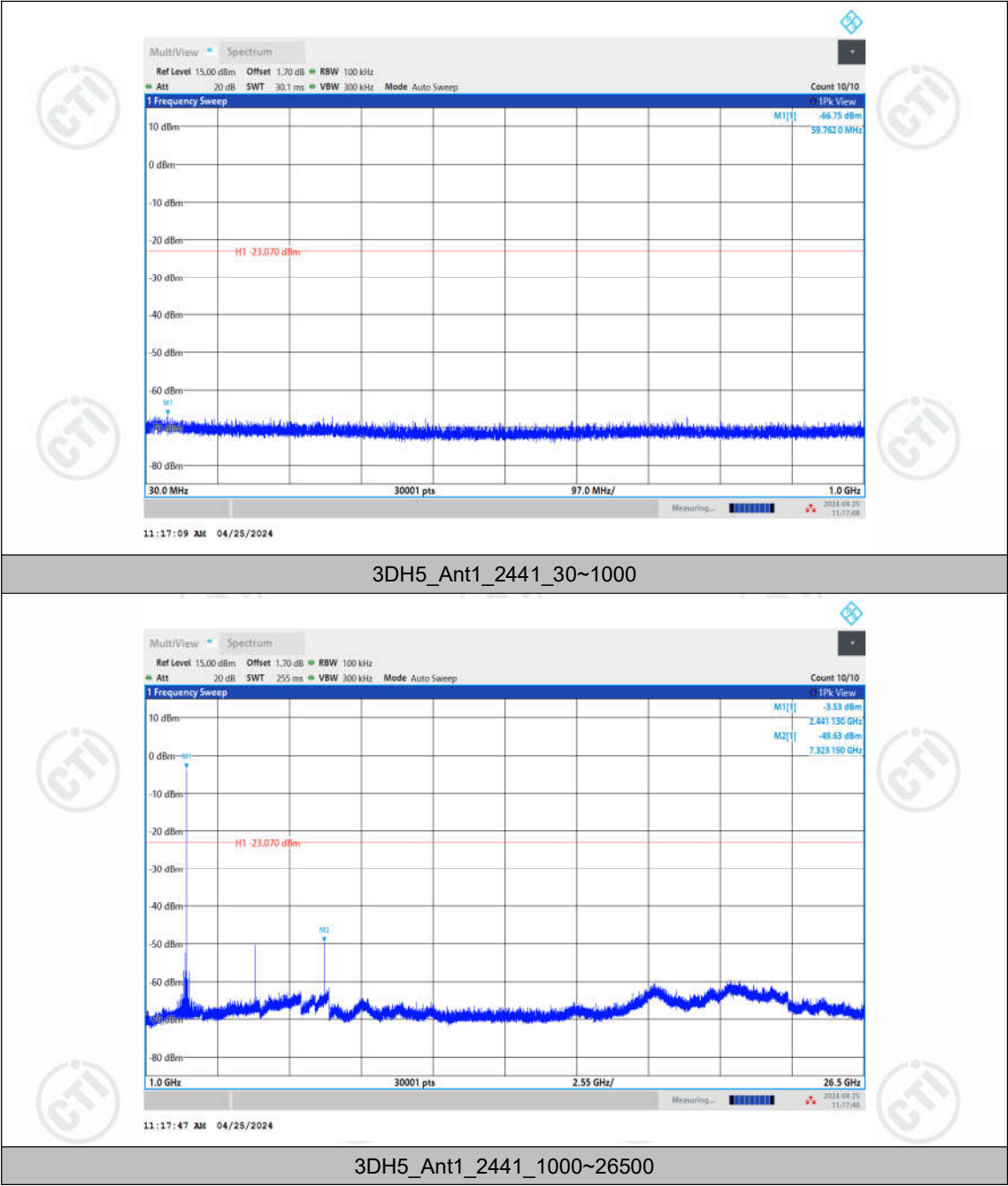


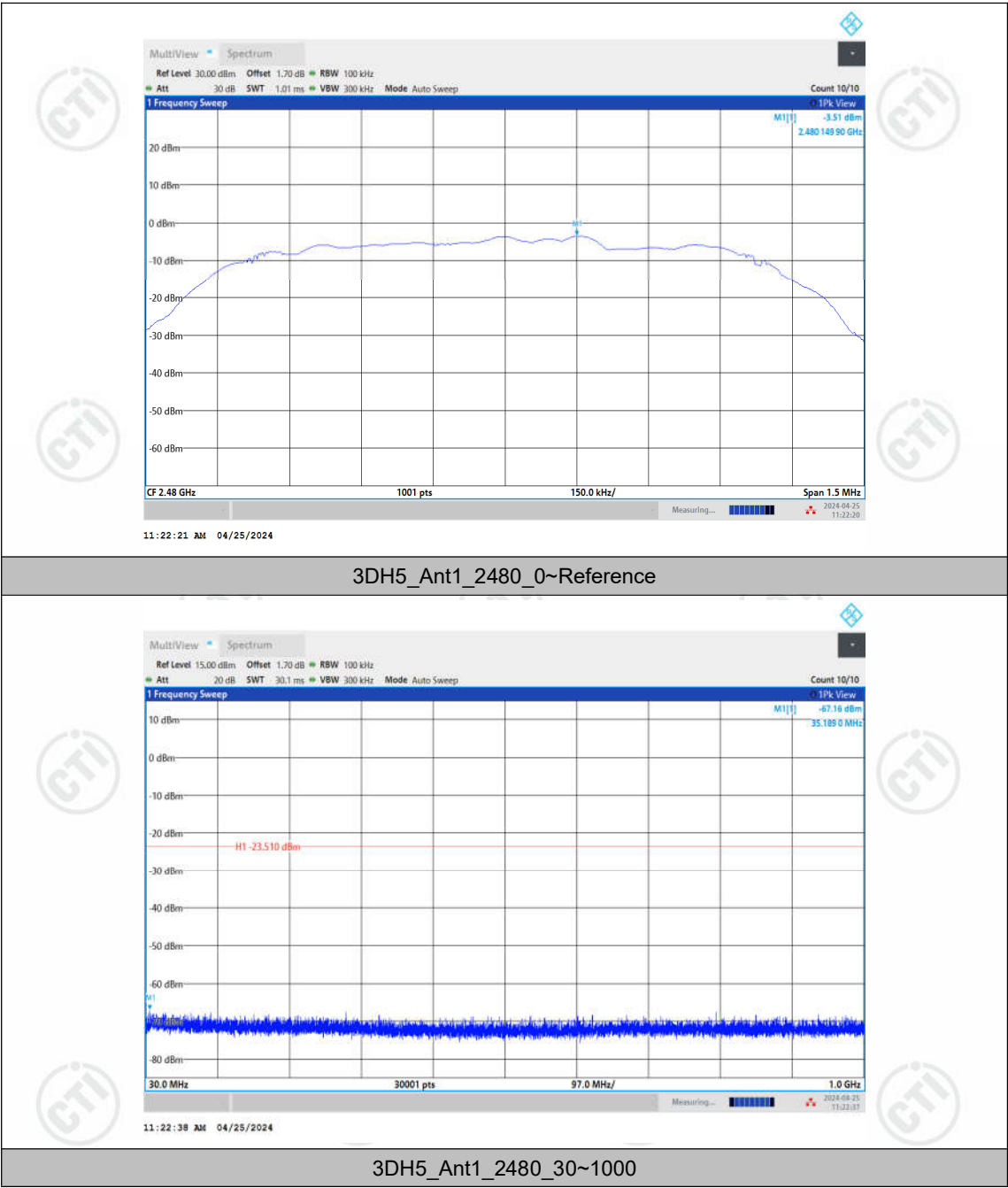
3DH5_Ant1_2402_0~Reference

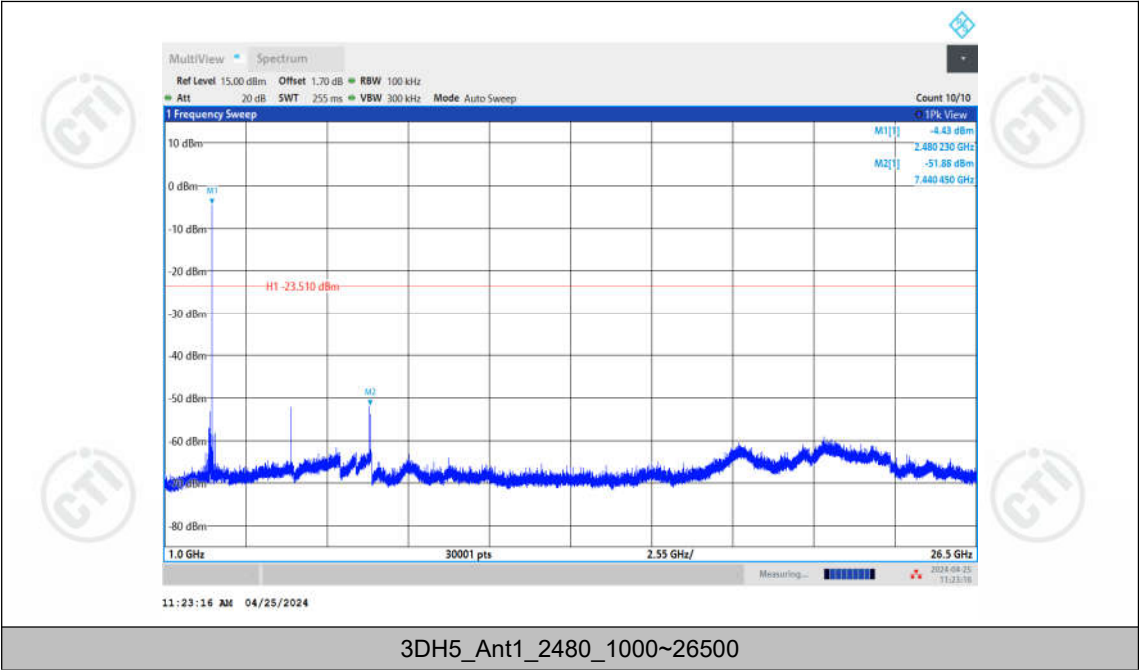


3DH5_Ant1_2402_30~1000









Appendix I: Duty Cycle

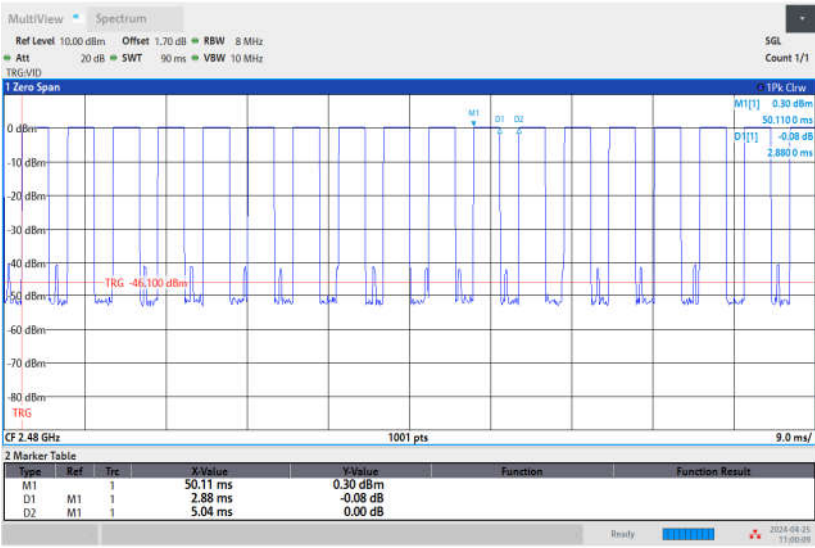
Test Result

Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor [dB]
DH5	Ant1	2402	2.88	5.04	57.14	2.43
		2441	2.88	5.04	57.14	2.43
		2480	2.88	5.04	57.14	2.43
2DH5	Ant1	2402	2.88	5.04	57.14	2.43
		2441	2.88	5.04	57.14	2.43
		2480	2.88	5.04	57.14	2.43
3DH5	Ant1	2402	2.88	5.04	57.14	2.43
		2441	2.88	5.04	57.14	2.43
		2480	2.88	5.04	57.14	2.43

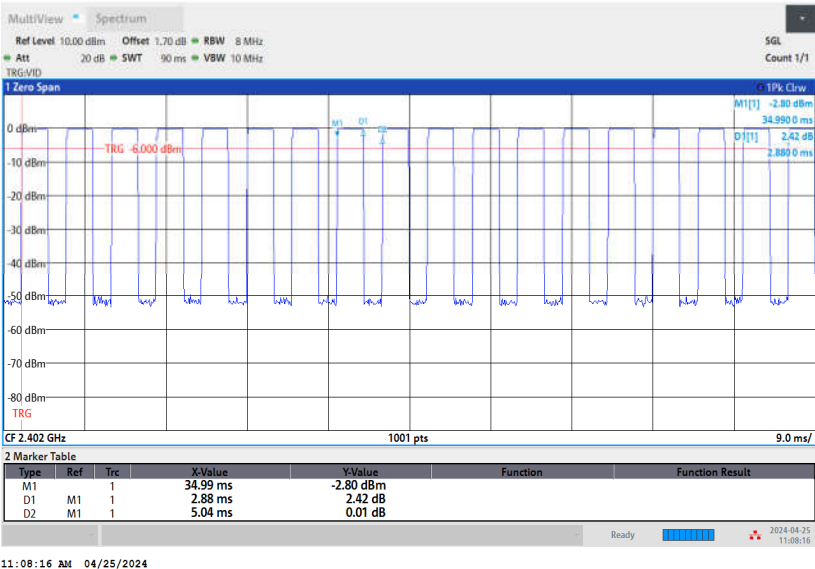
Note:Duty Cycle Factor[dB]=10*Ig(Duty Cycle);

Test Graphs

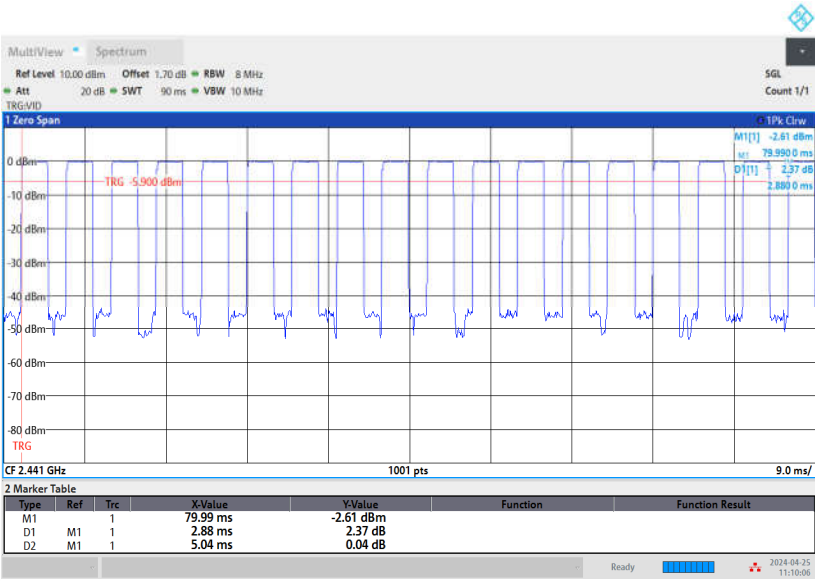




DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480





*** End of Report ***