

FCC Appendix RF Test Data for BT

FCC ID : **2AOMX-KAR-990**

Company : **QFX Inc.**

EUT : **Speaker**

Model Number : **KAR-990**

Report No. : **CTA26060300501**

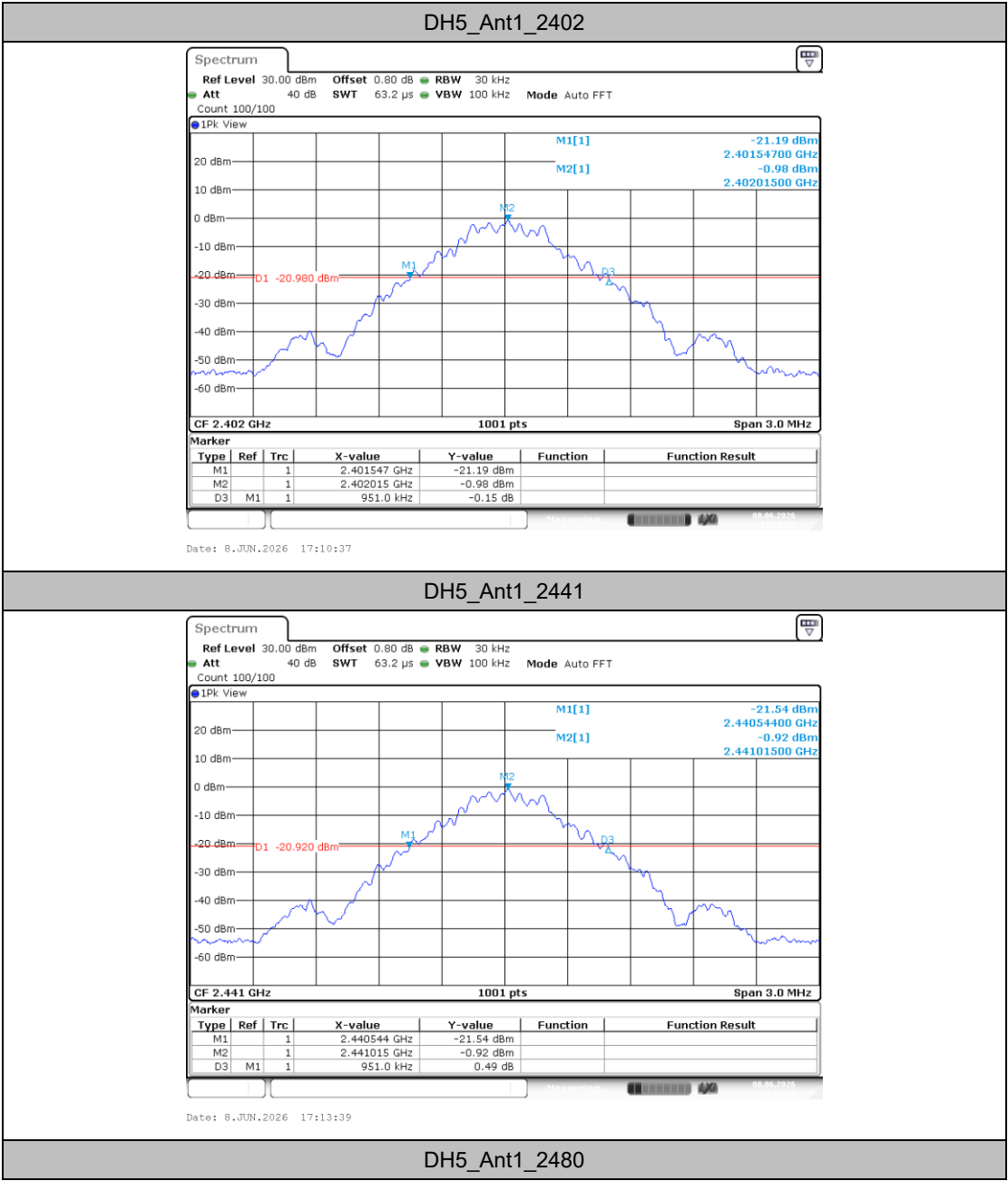
Reviewed By : **Eric Wang**

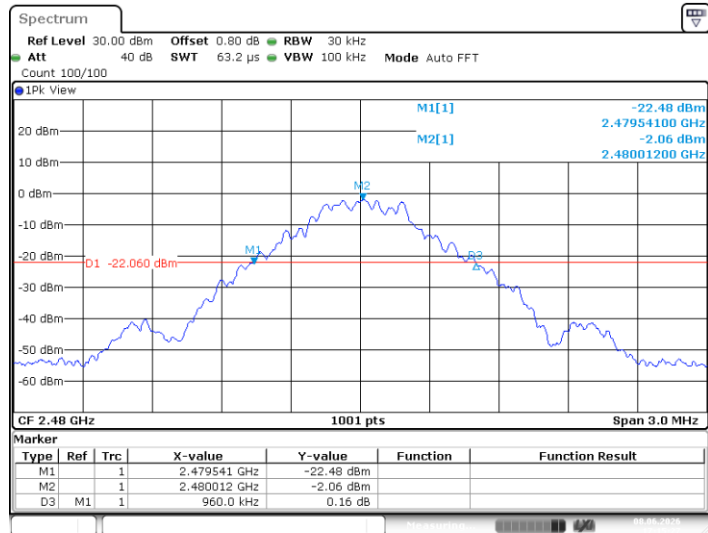
Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.95	2401.55	2402.50	---	---
		2441	0.95	2440.54	2441.50	---	---
		2480	0.96	2479.54	2480.50	---	---
2DH5	Ant1	2402	1.29	2401.38	2402.67	---	---
		2441	1.29	2440.38	2441.67	---	---
		2480	1.29	2479.38	2480.67	---	---
3DH5	Ant1	2402	1.29	2401.37	2402.65	---	---
		2441	1.31	2440.36	2441.67	---	---
		2480	1.29	2479.37	2480.66	---	---

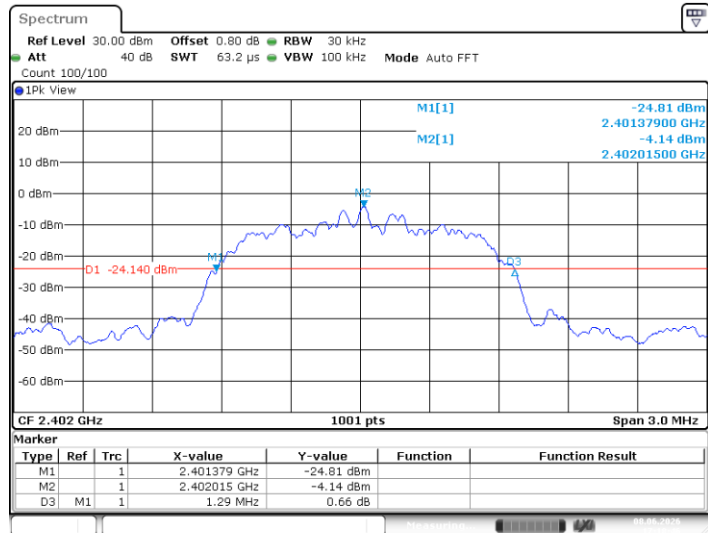
Test Graphs





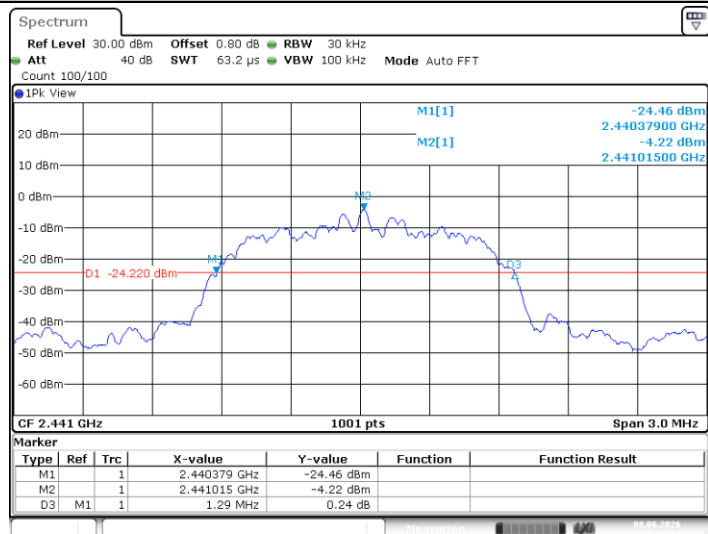
Date: 8.JUN.2026 17:15:27

2DH5_Ant1_2402



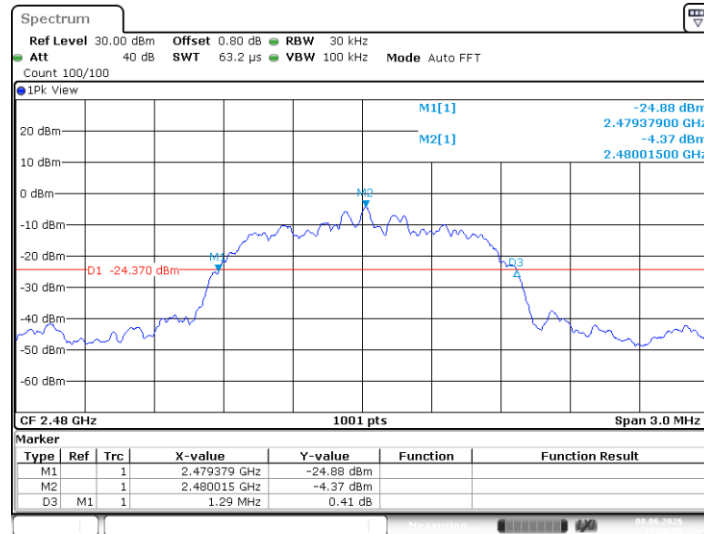
Date: 8.JUN.2026 17:18:45

2DH5_Ant1_2441



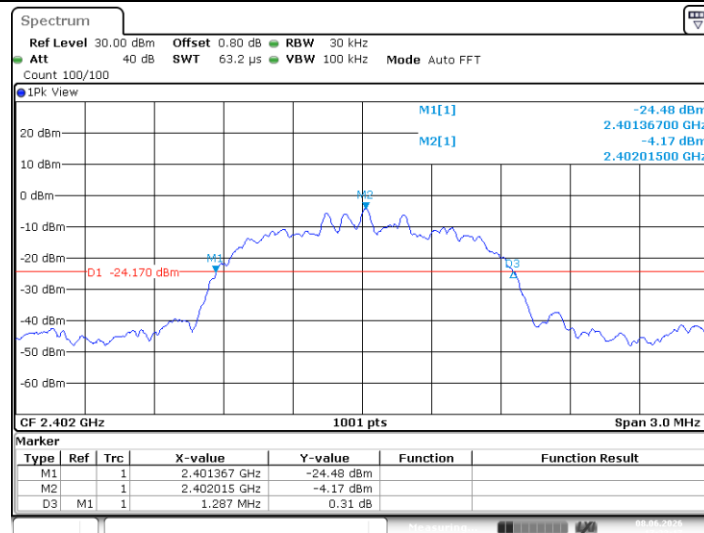
Date: 8.JUN.2026 17:26:13

2DH5_Ant1_2480



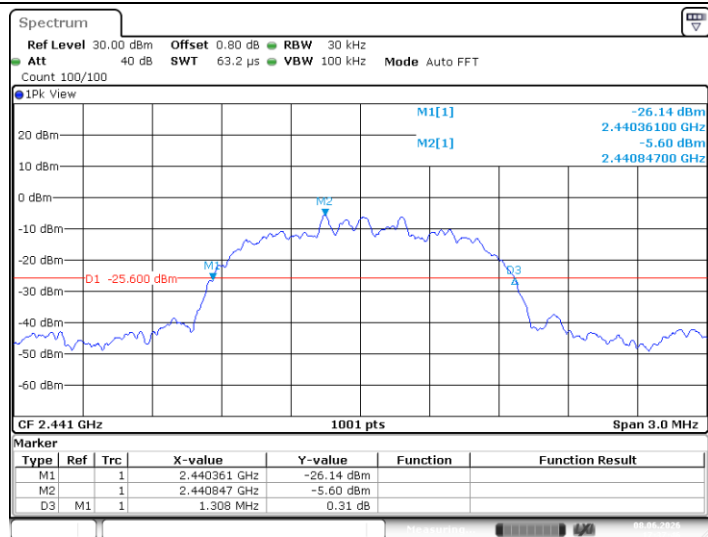
Date: 8.JUN.2026 17:28:34

3DH5_Ant1_2402



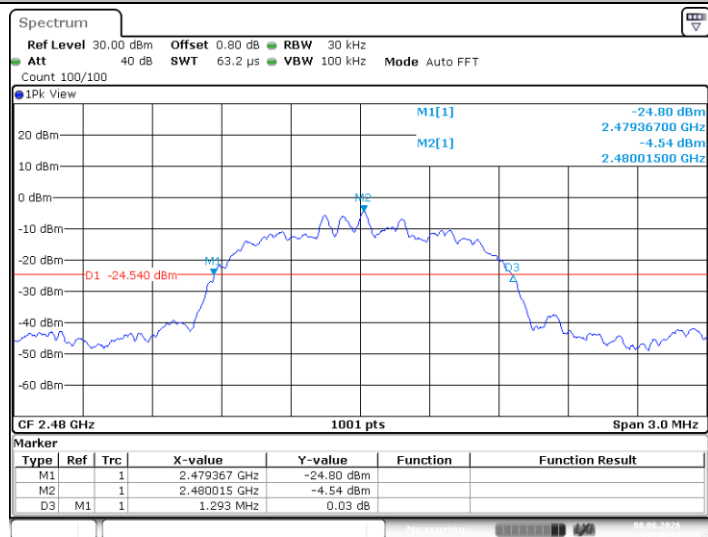
Date: 8.JUN.2026 17:33:18

3DH5_Ant1_2441



Date: 8.JUN.2026 17:37:46

3DH5_Ant1_2480



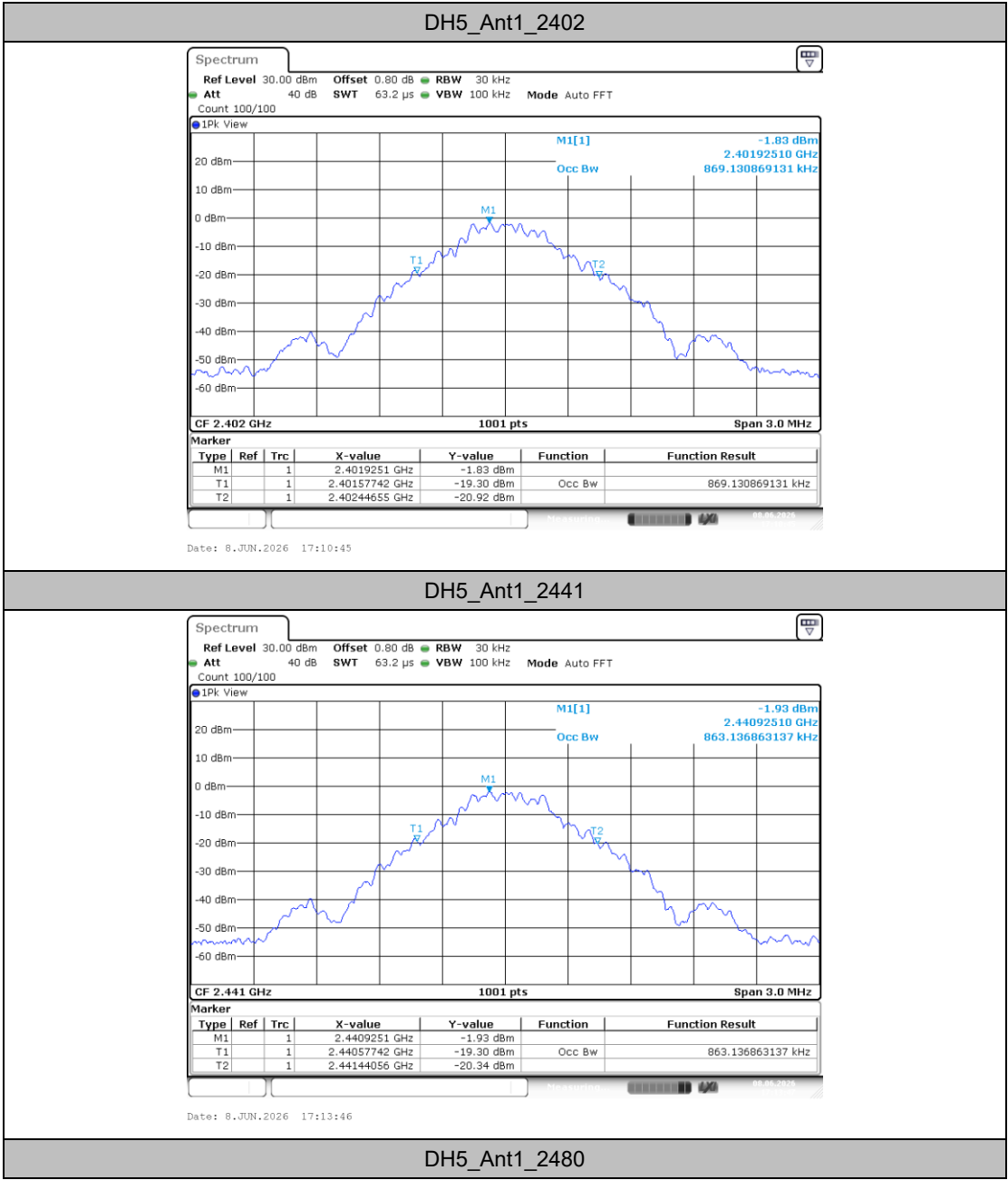
Date: 8.JUN.2026 17:46:12

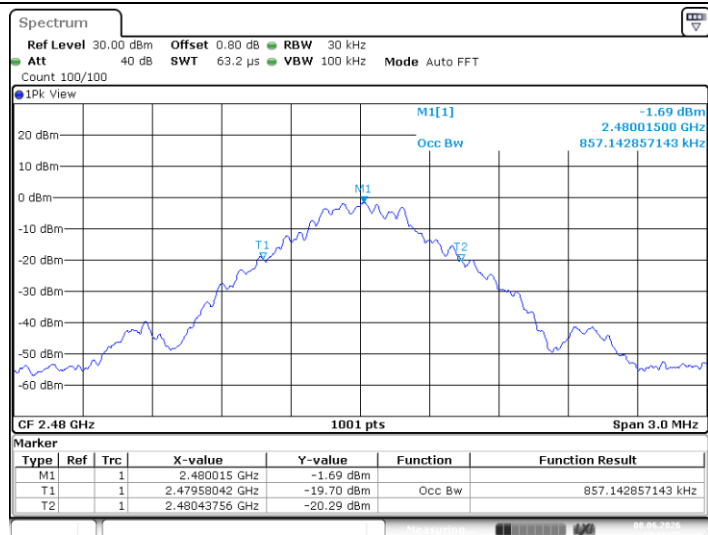
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86913	2401.5774	2402.4466	---	---
		2441	0.86314	2440.5774	2441.4406	---	---
		2480	0.85714	2479.5804	2480.4376	---	---
2DH5	Ant1	2402	1.1748	2401.4246	2402.5994	---	---
		2441	1.1778	2440.4216	2441.5994	---	---
		2480	1.1748	2479.4216	2480.5964	---	---
3DH5	Ant1	2402	1.1718	2401.4276	2402.5994	---	---
		2441	1.1718	2440.4276	2441.5994	---	---
		2480	1.1718	2479.4276	2480.5994	---	---

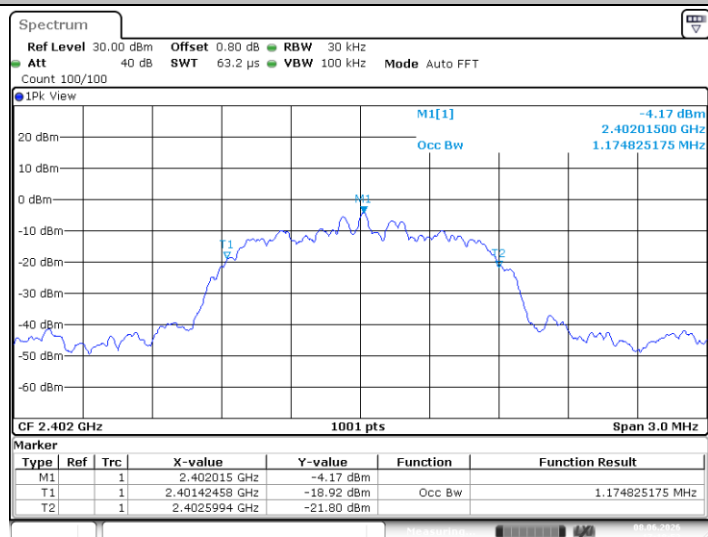
Test Graphs





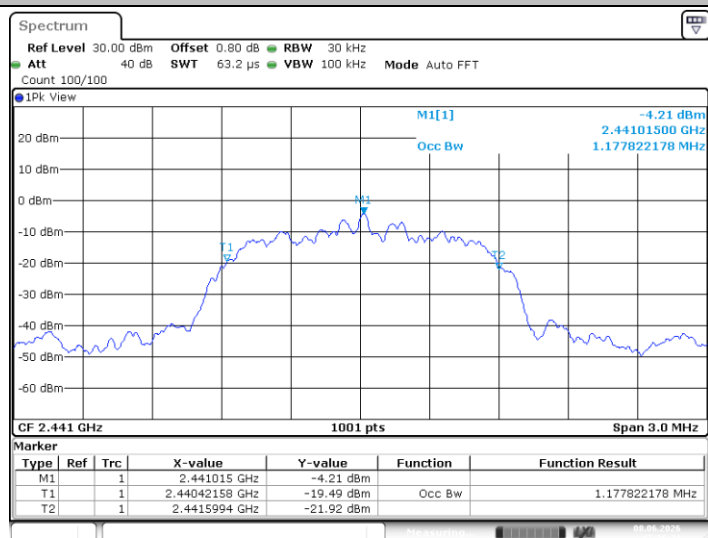
Date: 8.JUN.2026 17:15:34

2DH5_Ant1_2402



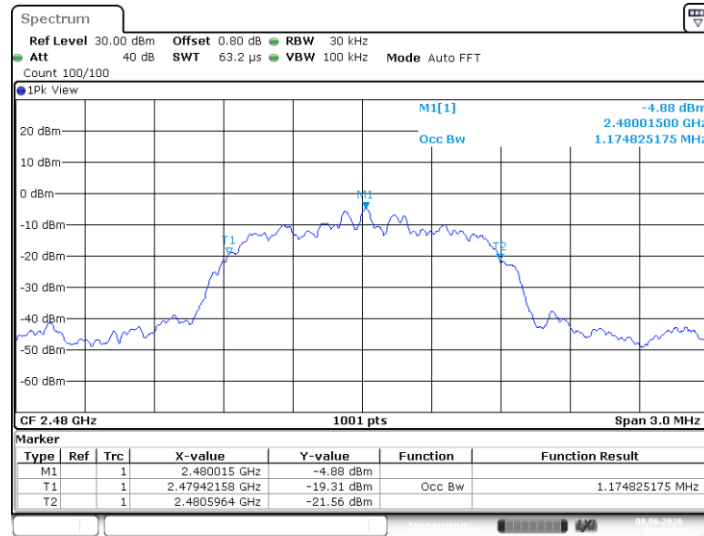
Date: 8.JUN.2026 17:18:52

2DH5_Ant1_2441



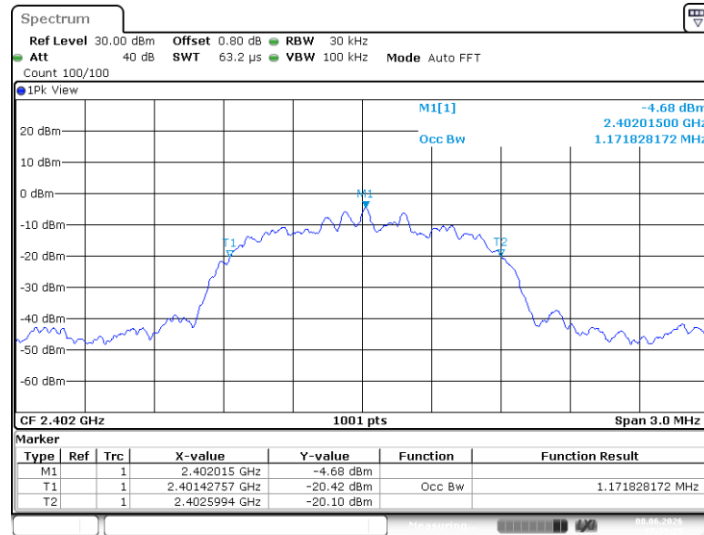
Date: 8.JUN.2026 17:26:21

2DH5_Ant1_2480



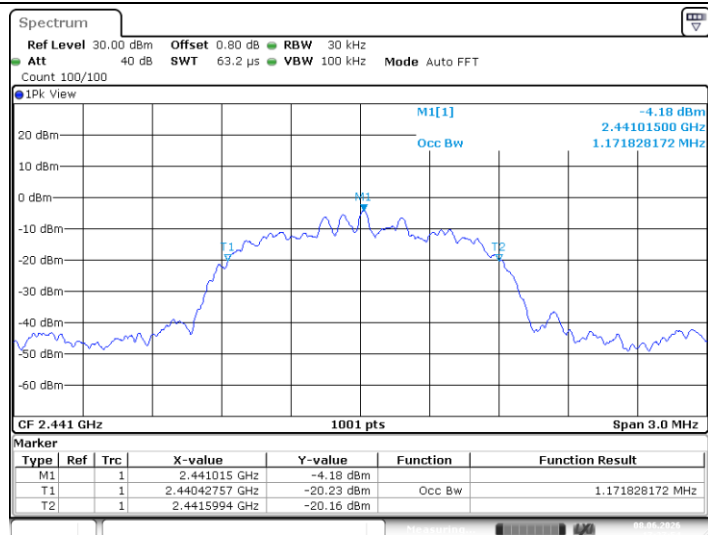
Date: 8.JUN.2026 17:28:41

3DH5_Ant1_2402



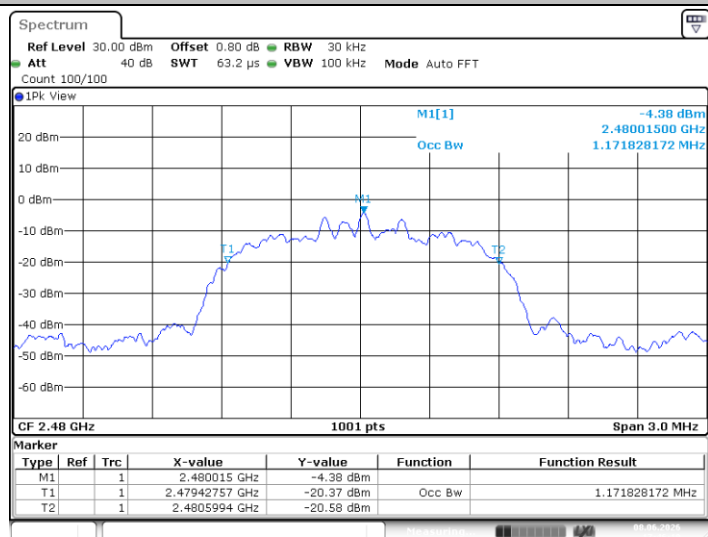
Date: 8.JUN.2026 17:33:25

3DH5_Ant1_2441



Date: 8.JUN.2026 17:37:53

3DH5_Ant1_2480



Date: 8.JUN.2026 17:46:19

Appendix C: Maximum conducted output power

Test Result Peak

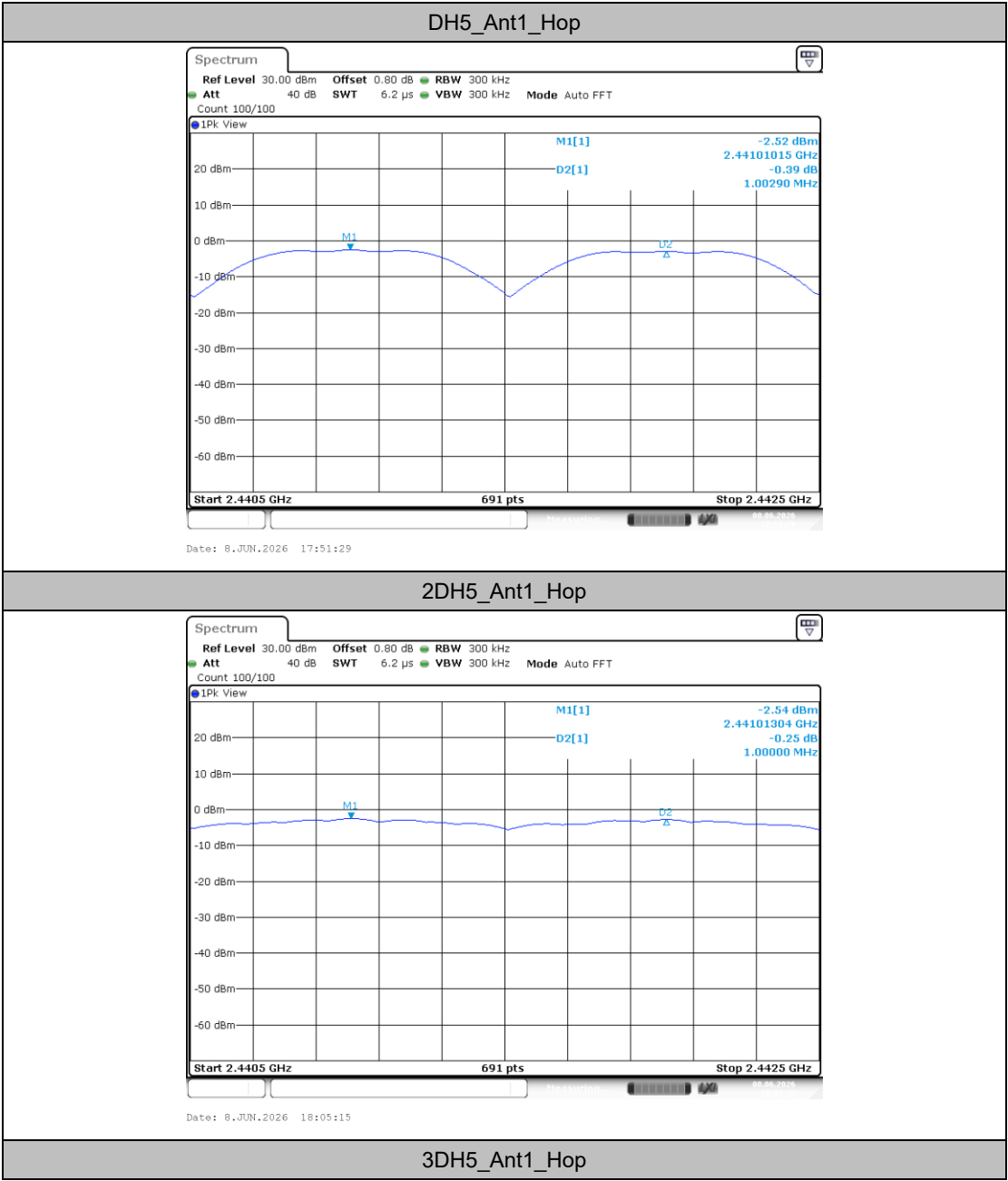
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	1.21	≤20.97	PASS
		2441	1.14	≤20.97	PASS
		2480	1.00	≤20.97	PASS
2DH5	Ant1	2402	-0.13	≤20.97	PASS
		2441	0.05	≤20.97	PASS
		2480	-0.21	≤20.97	PASS
3DH5	Ant1	2402	0.35	≤20.97	PASS
		2441	0.19	≤20.97	PASS
		2480	0.20	≤20.97	PASS

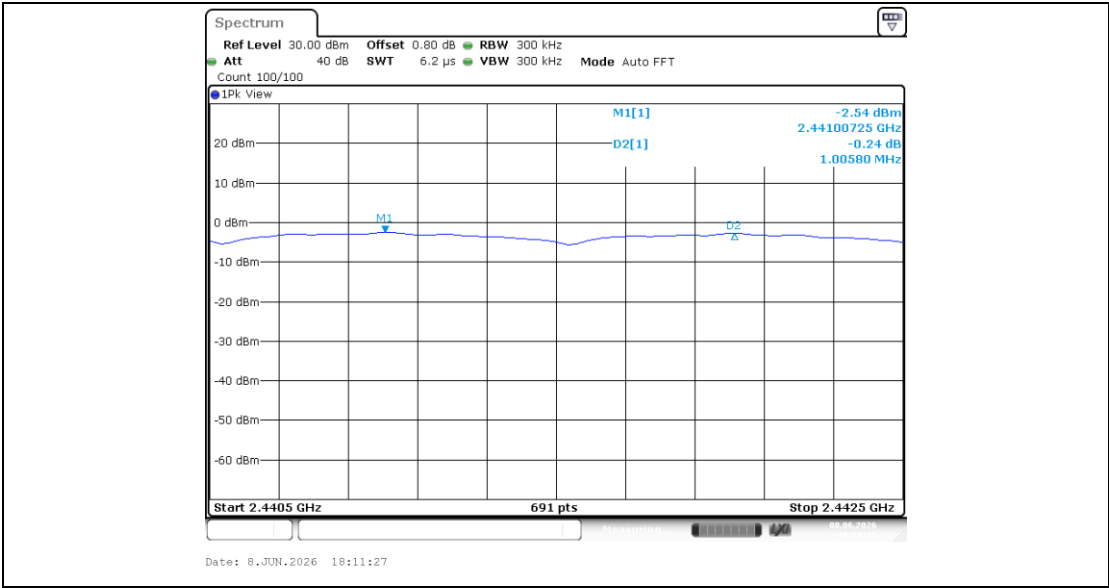
Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.003	≥ 0.960	PASS
2DH5	Ant1	Hop	1	≥ 0.860	PASS
3DH5	Ant1	Hop	1.006	≥ 0.873	PASS

Test Graphs



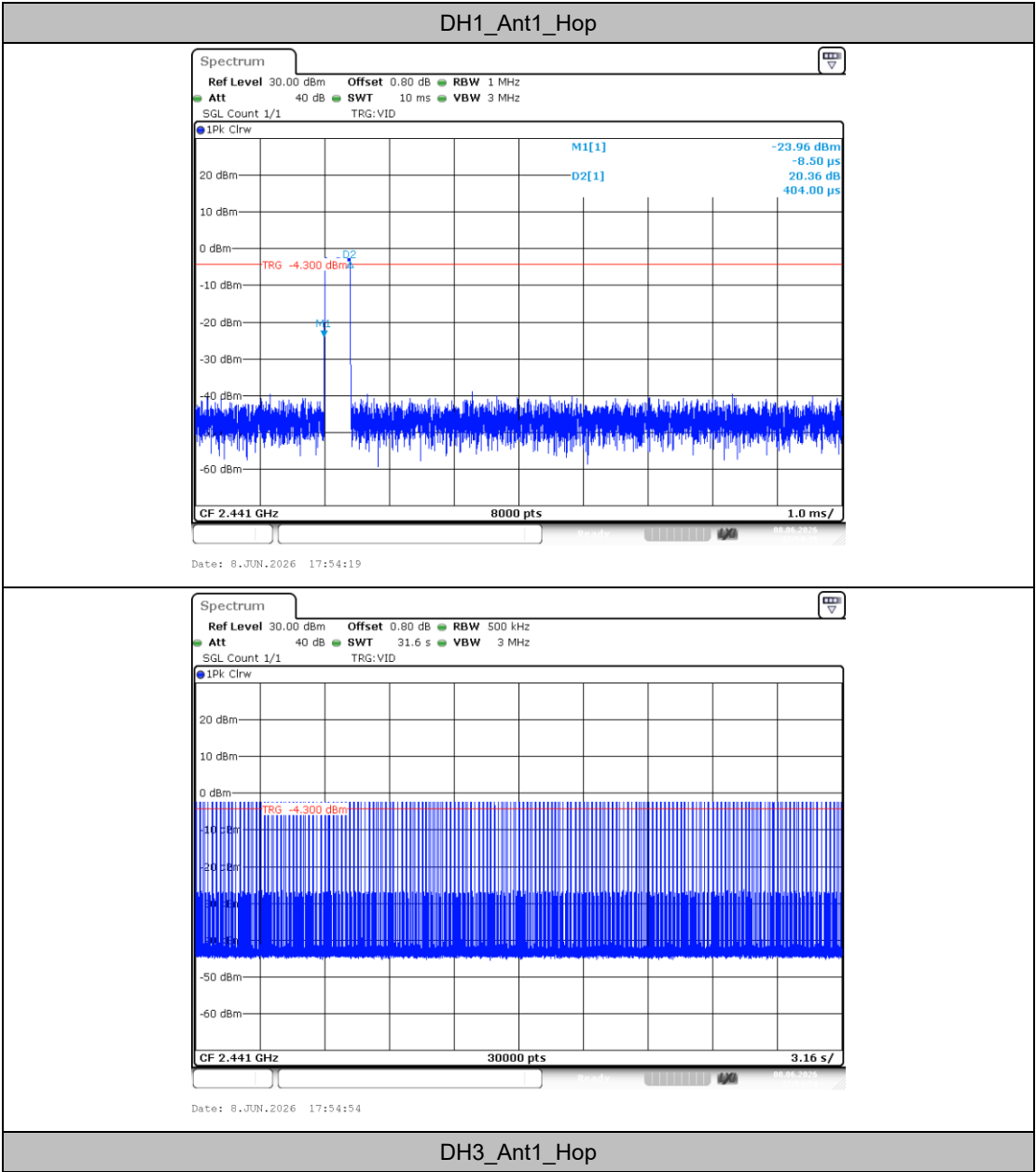


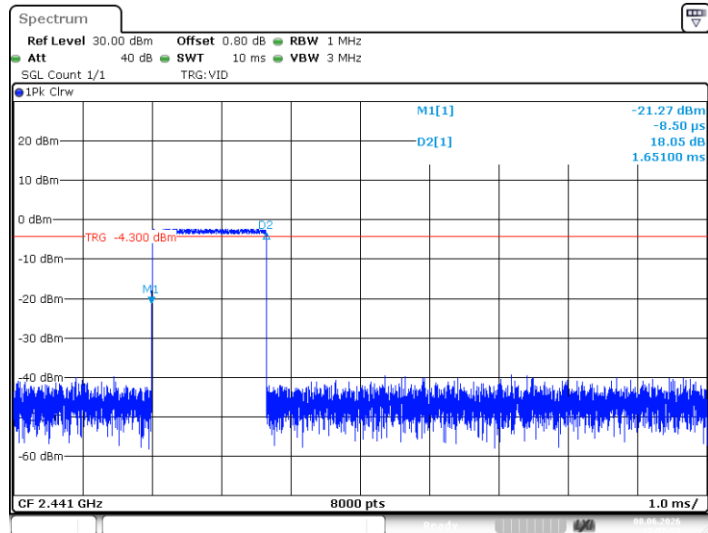
Appendix E: Time of occupancy

Test Result

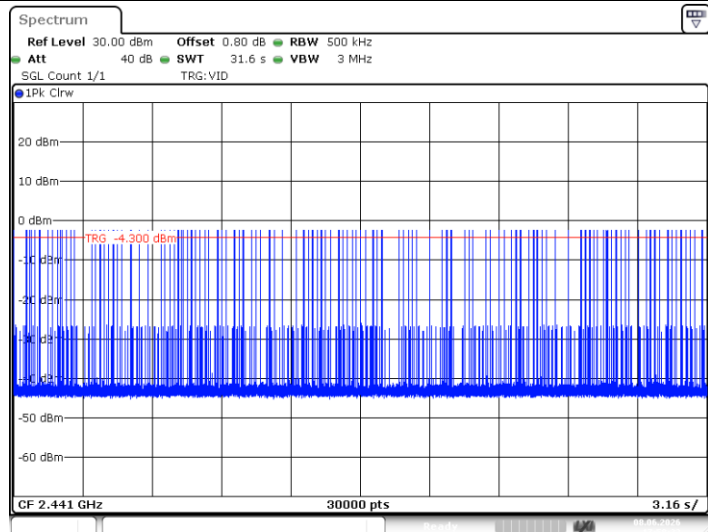
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.404	320	0.129	≤0.4	PASS
DH3	Ant1	Hop	1.651	151	0.249	≤0.4	PASS
DH5	Ant1	Hop	2.892	98	0.283	≤0.4	PASS
2DH1	Ant1	Hop	0.414	321	0.133	≤0.4	PASS
2DH3	Ant1	Hop	1.658	151	0.25	≤0.4	PASS
2DH5	Ant1	Hop	2.898	107	0.31	≤0.4	PASS
3DH1	Ant1	Hop	0.413	319	0.132	≤0.4	PASS
3DH3	Ant1	Hop	1.655	161	0.266	≤0.4	PASS
3DH5	Ant1	Hop	2.899	96	0.278	≤0.4	PASS

Test Graphs



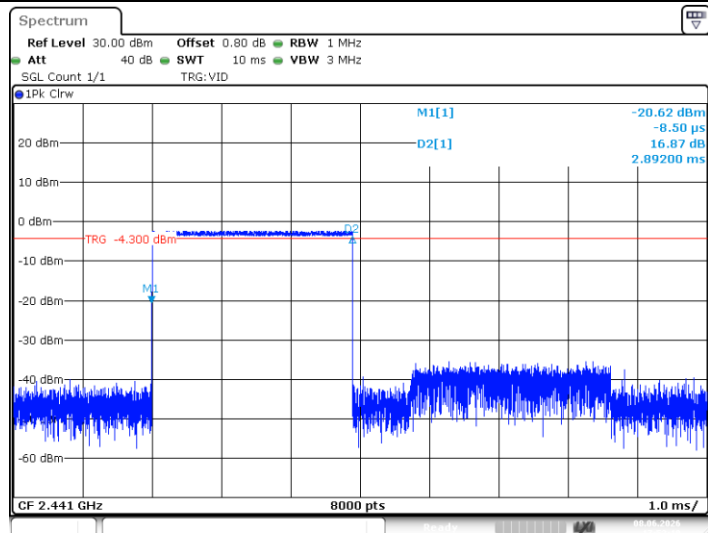


Date: 8.JUN.2026 17:57:58

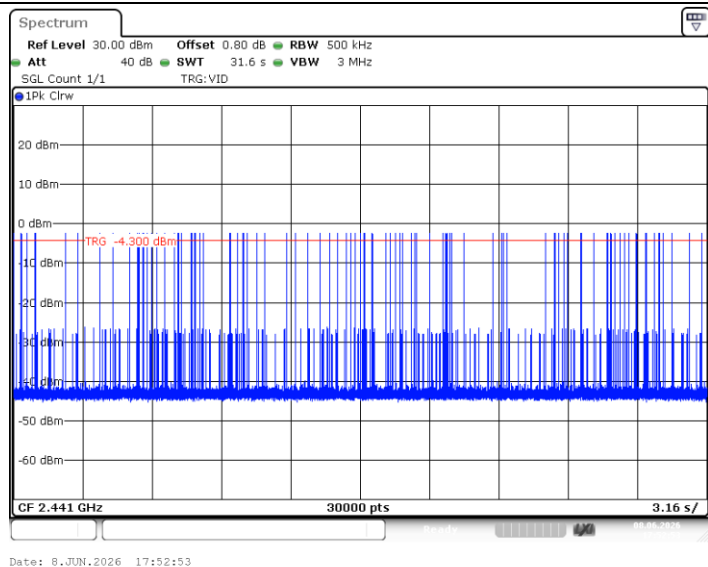


Date: 8.JUN.2026 17:58:33

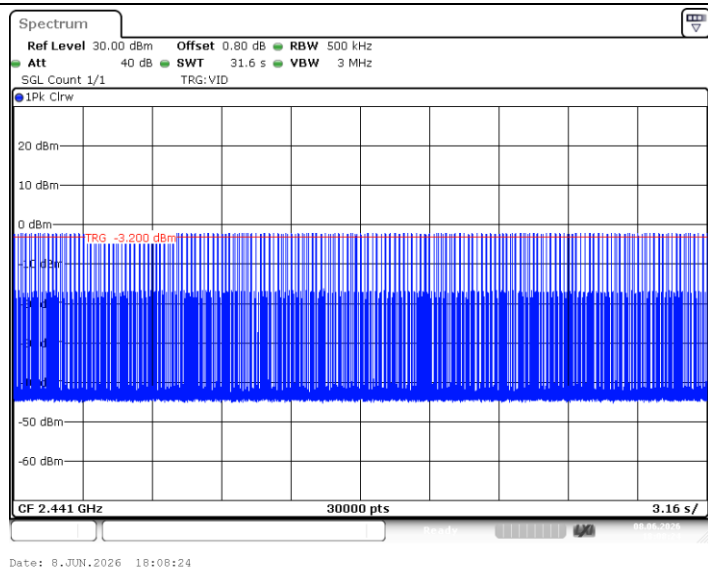
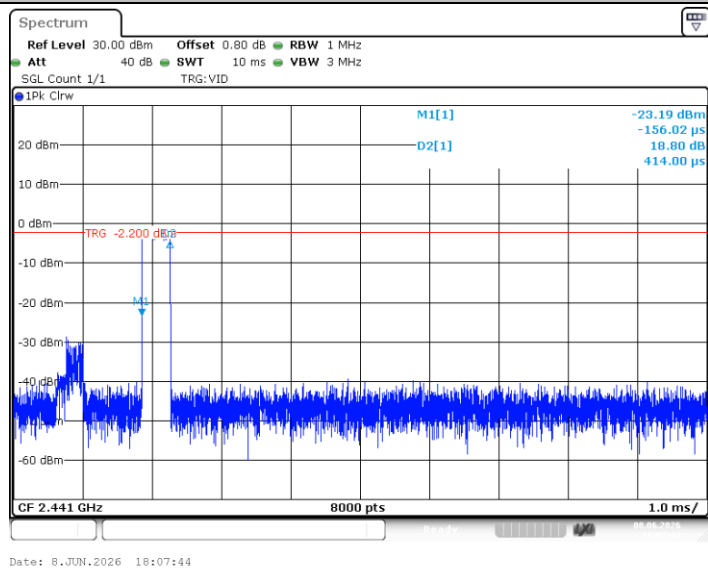
DH5_Ant1_Hop



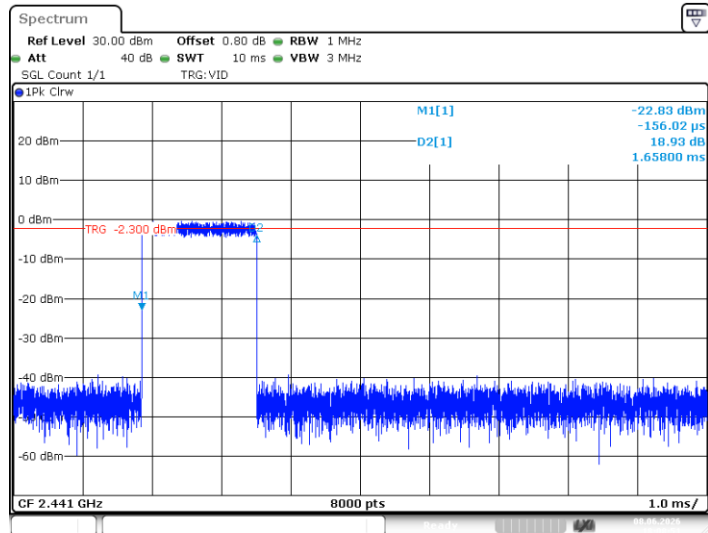
Date: 8.JUN.2026 17:52:19



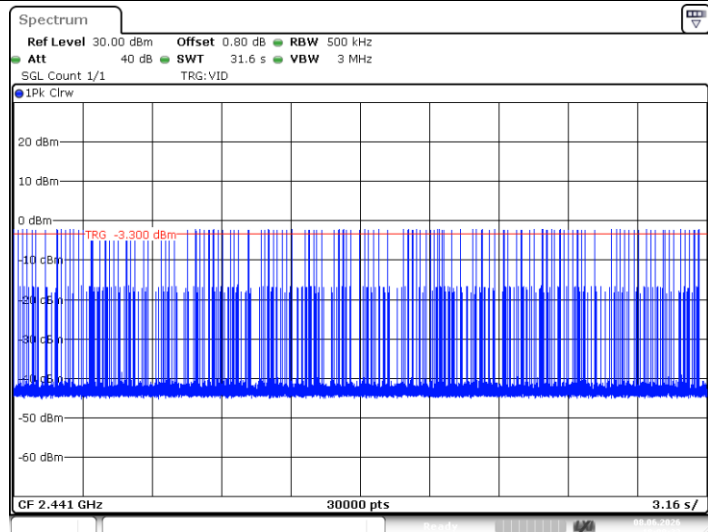
2DH1_Ant1_Hop



2DH3_Ant1_Hop

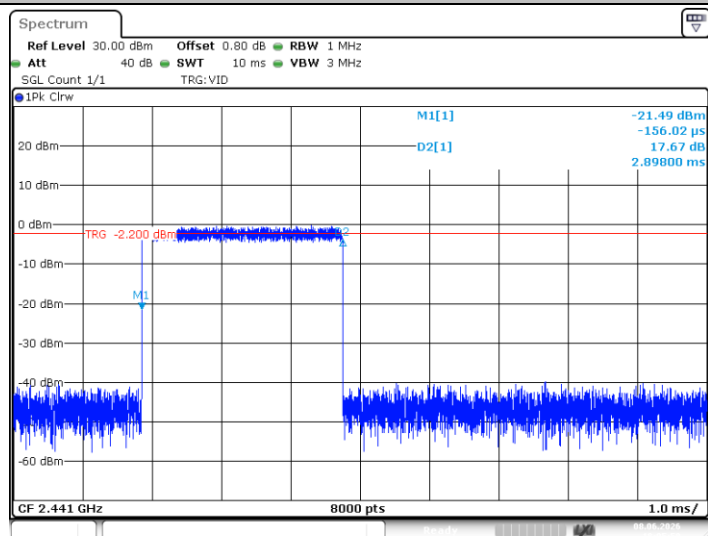


Date: 8.JUN.2026 18:08:52

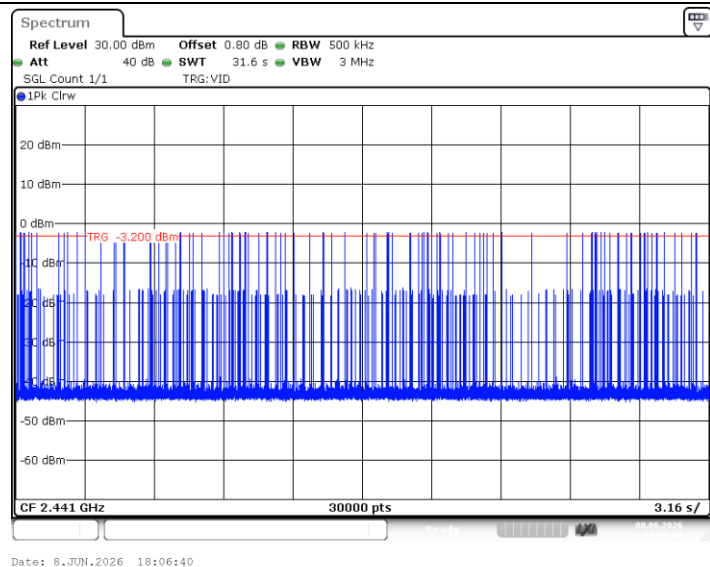


Date: 8.JUN.2026 18:09:32

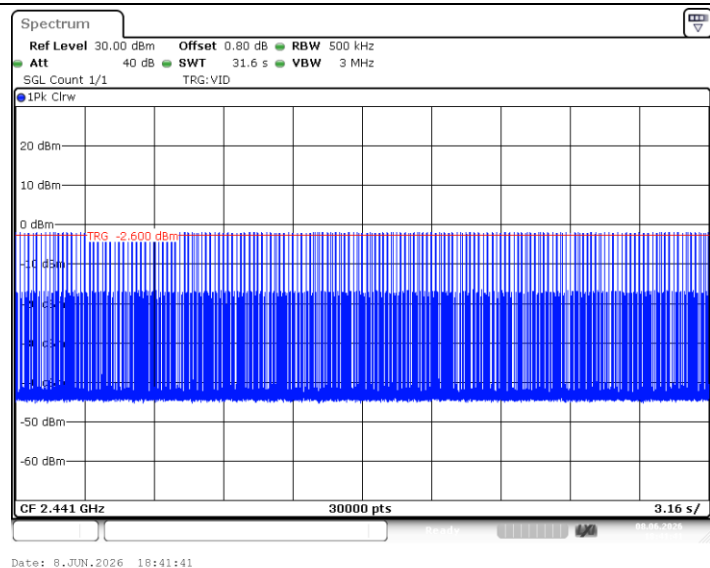
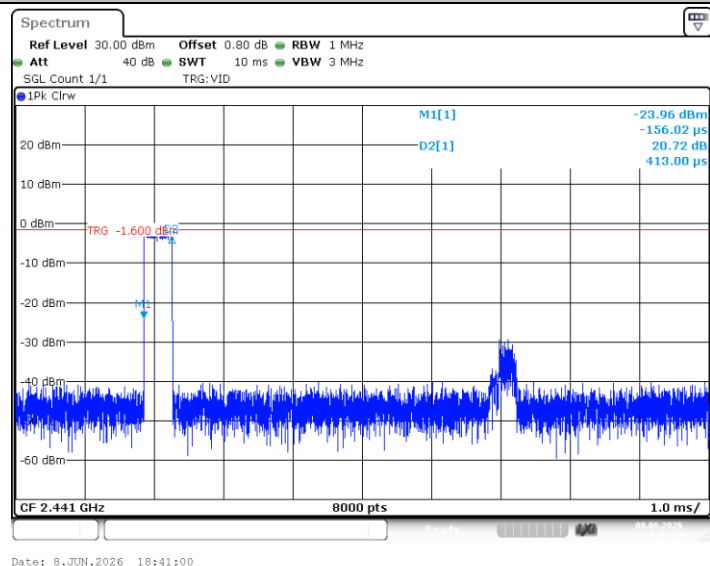
2DH5_Ant1_Hop



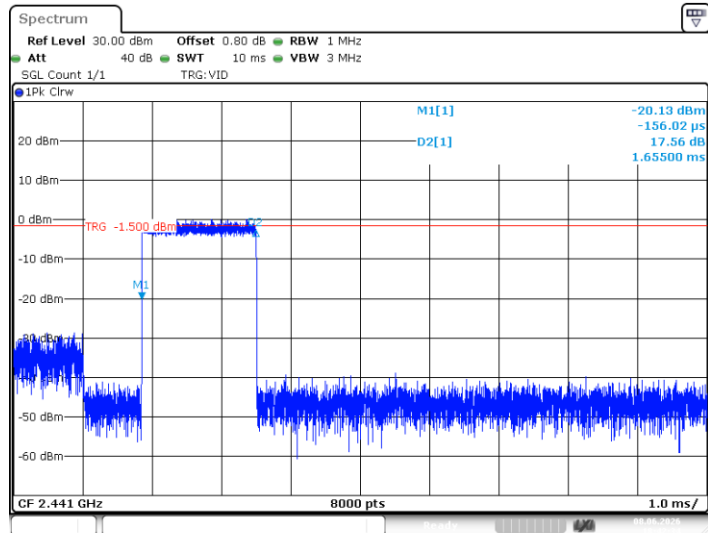
Date: 8.JUN.2026 18:06:00



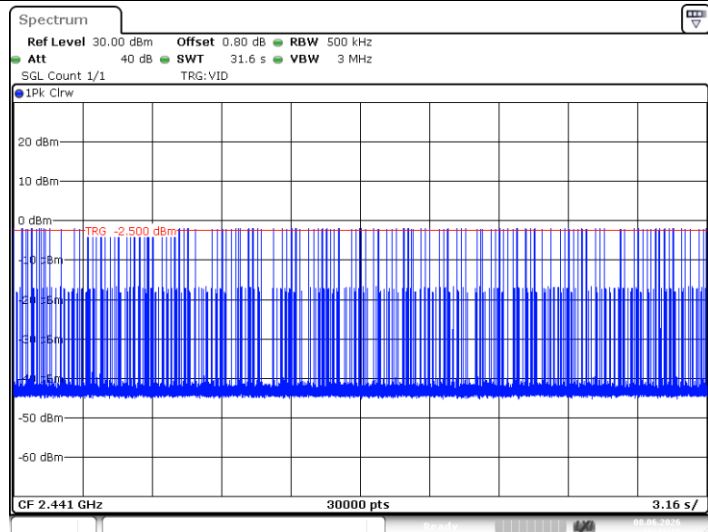
3DH1_Ant1_Hop



3DH3_Ant1_Hop

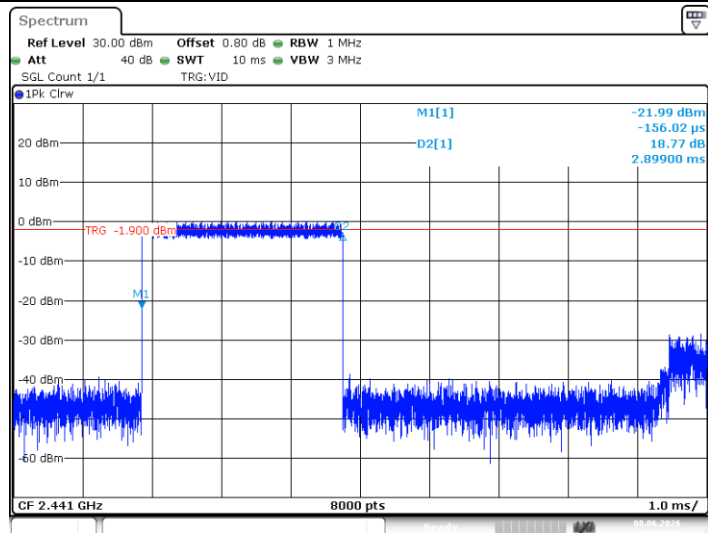


Date: 8.JUN.2026 18:42:34

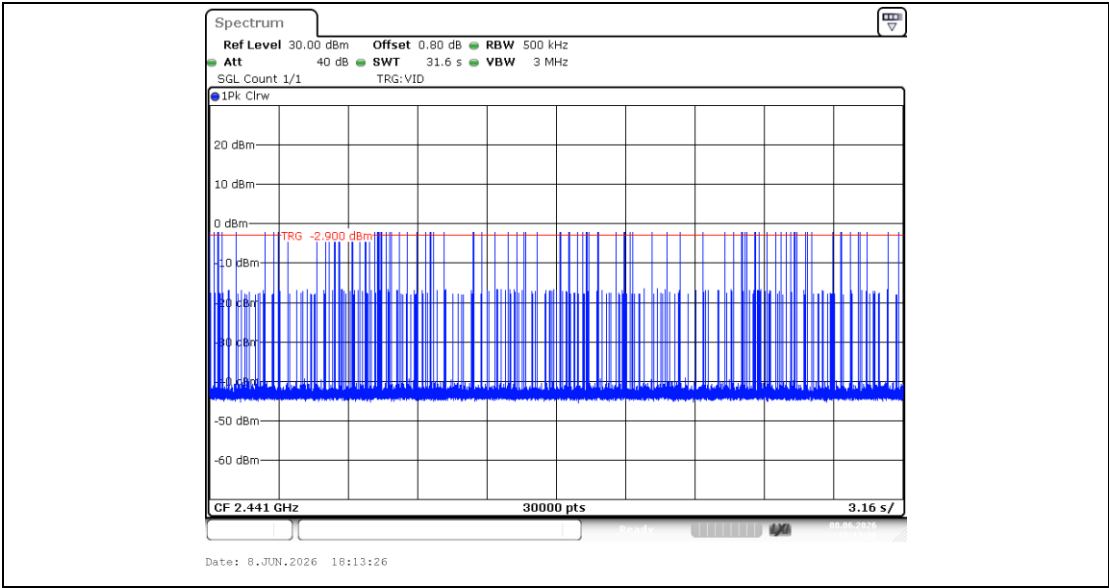


Date: 8.JUN.2026 18:43:15

3DH5_Ant1_Hop



Date: 8.JUN.2026 18:12:46

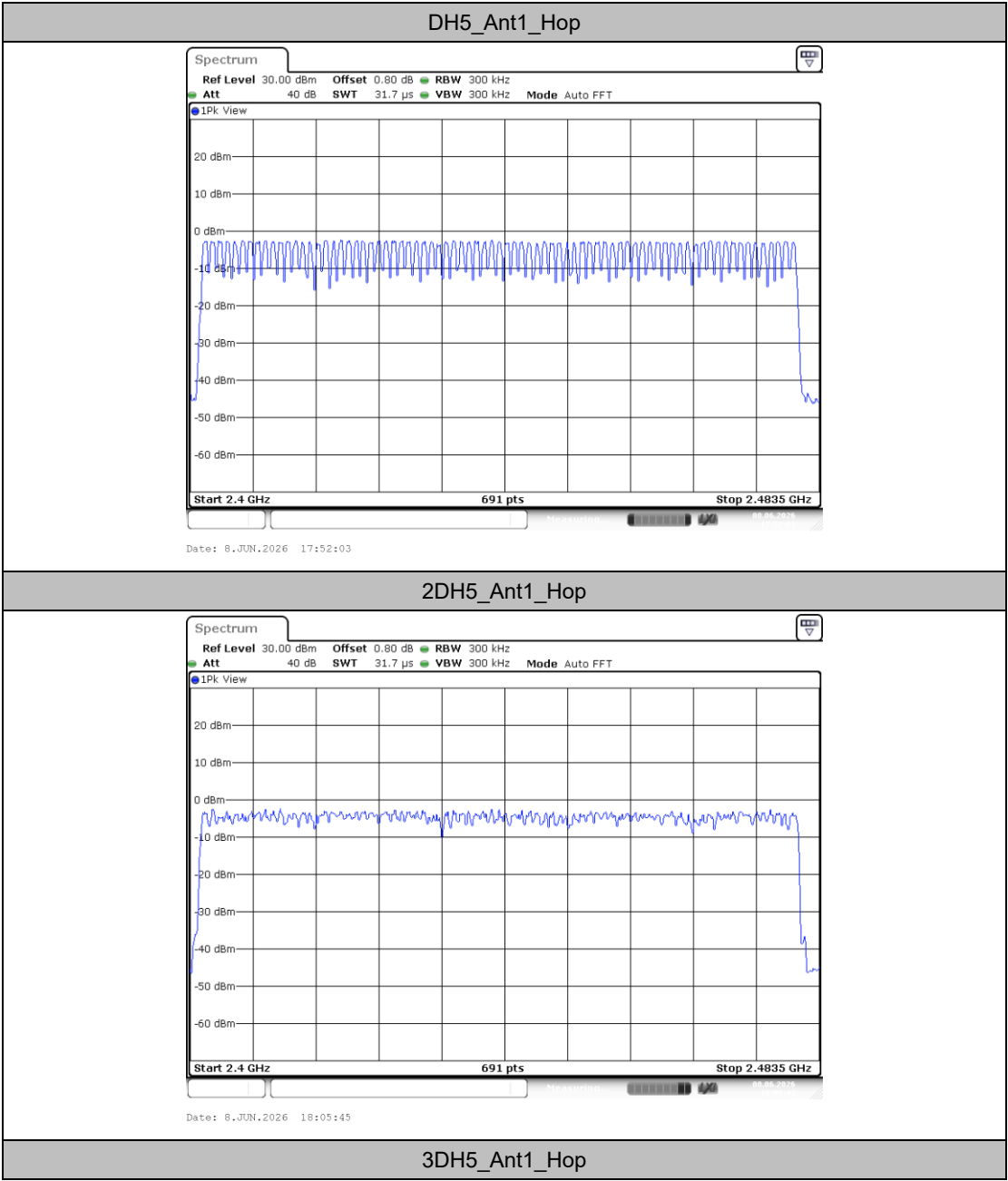


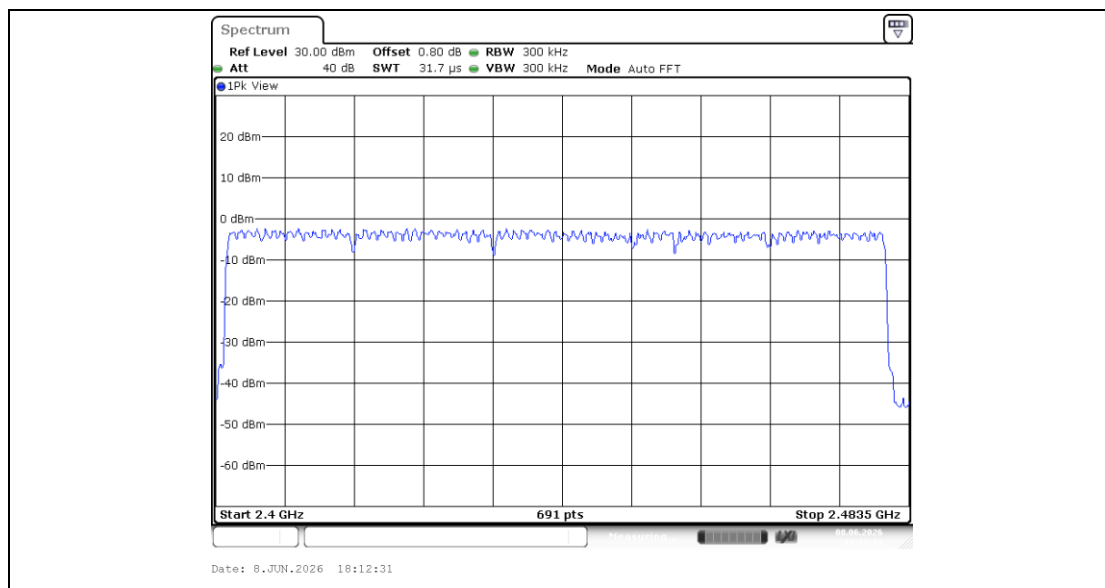
Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Freq(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



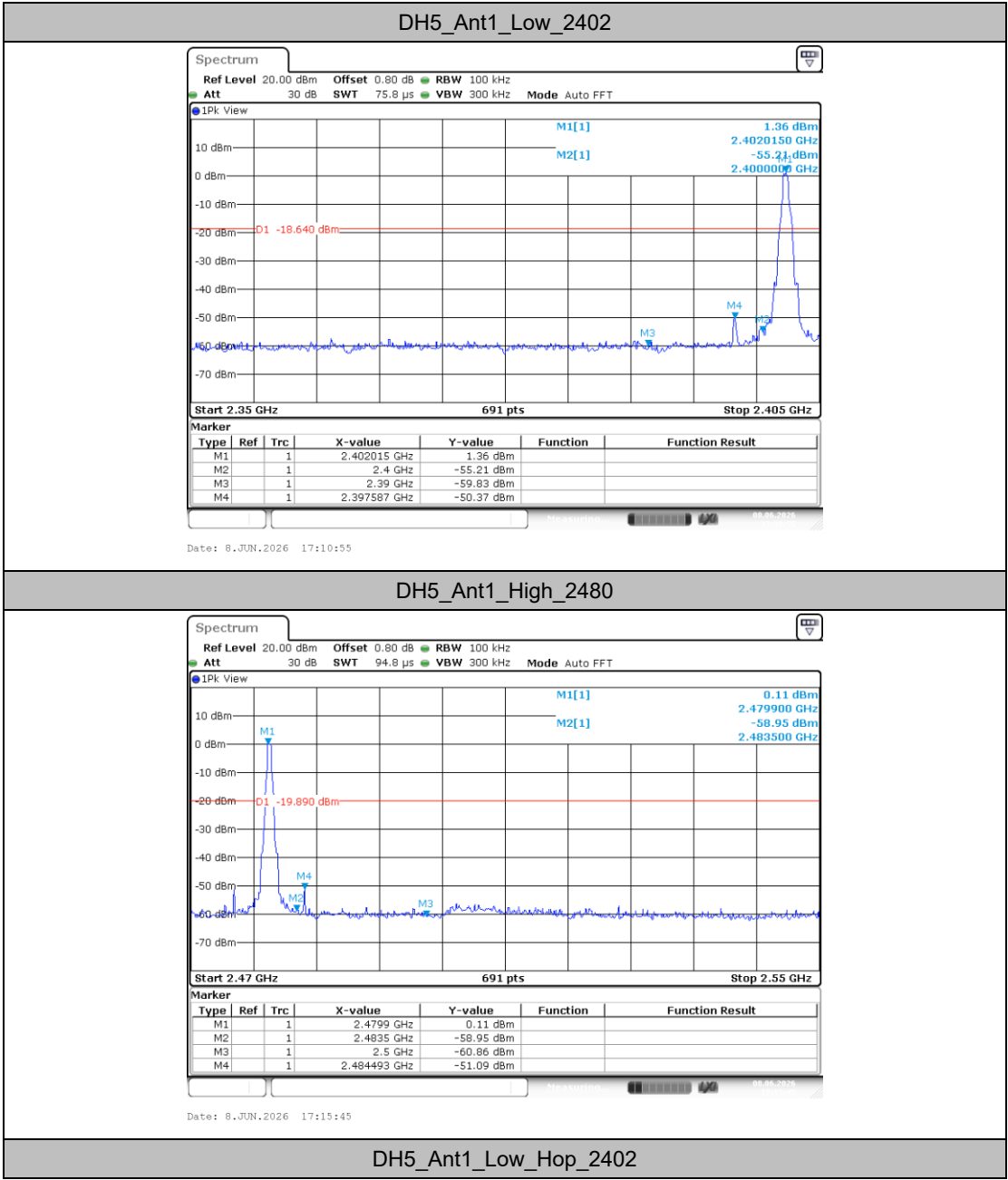


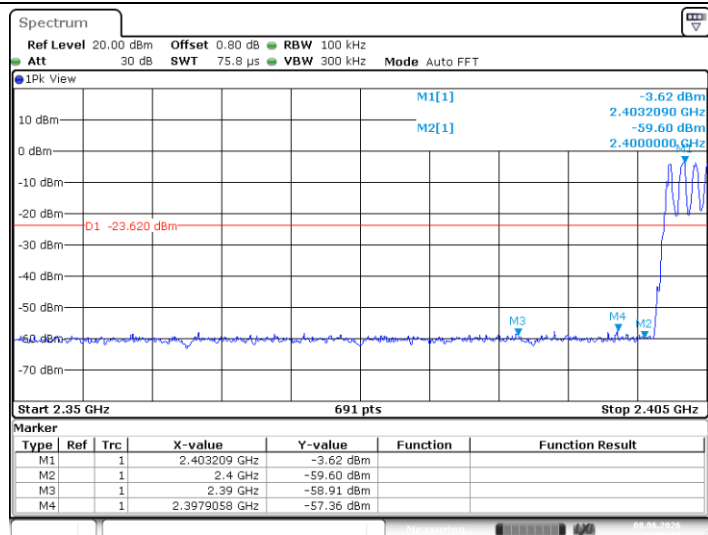
Appendix G: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	1.36	-50.37	≤-18.64	PASS
		High	2480	0.11	-51.09	≤-19.89	PASS
		Low	Hop_2402	-3.62	-57.36	≤-23.62	PASS
		High	Hop_2480	-2.71	-56.87	≤-22.71	PASS
2DH5	Ant1	Low	2402	-2.29	-55.48	≤-22.29	PASS
		High	2480	-4.20	-56.61	≤-24.2	PASS
		Low	Hop_2402	-2.42	-56.64	≤-22.42	PASS
		High	Hop_2480	-5.96	-56.48	≤-25.96	PASS
3DH5	Ant1	Low	2402	-2.32	-57.29	≤-22.32	PASS
		High	2480	-2.86	-56.6	≤-22.86	PASS
		Low	Hop_2402	-5.38	-58.07	≤-25.38	PASS
		High	Hop_2480	-4.33	-57.1	≤-24.33	PASS

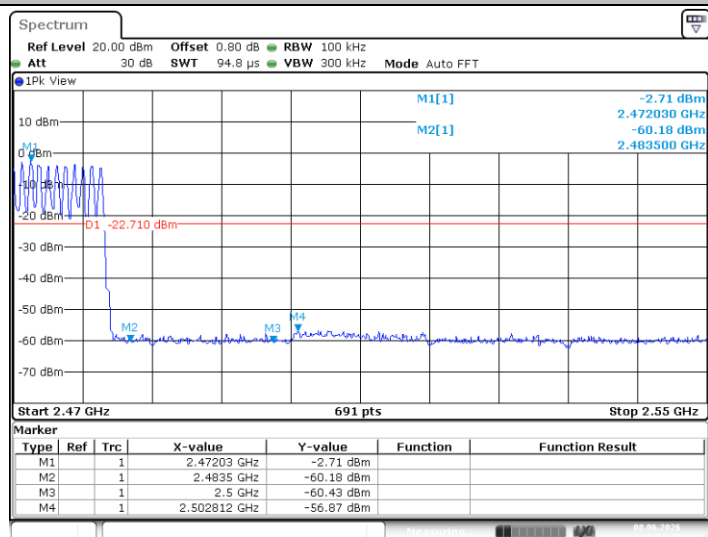
Test Graphs





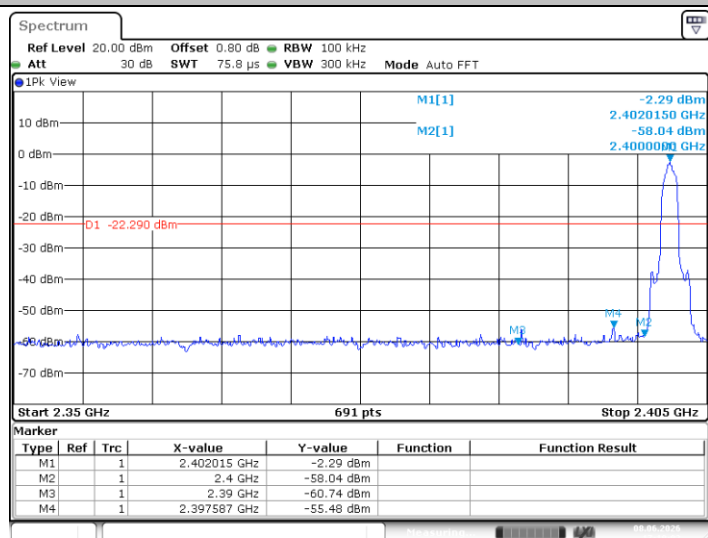
Date: 8.JUN.2026 17:50:24

DH5_Ant1_High_Hop_2480



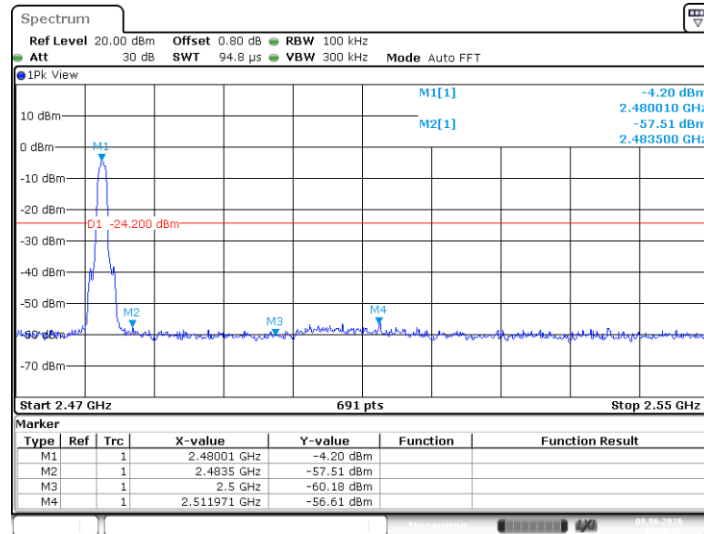
Date: 8.JUN.2026 18:02:37

2DH5_Ant1_Low_2402



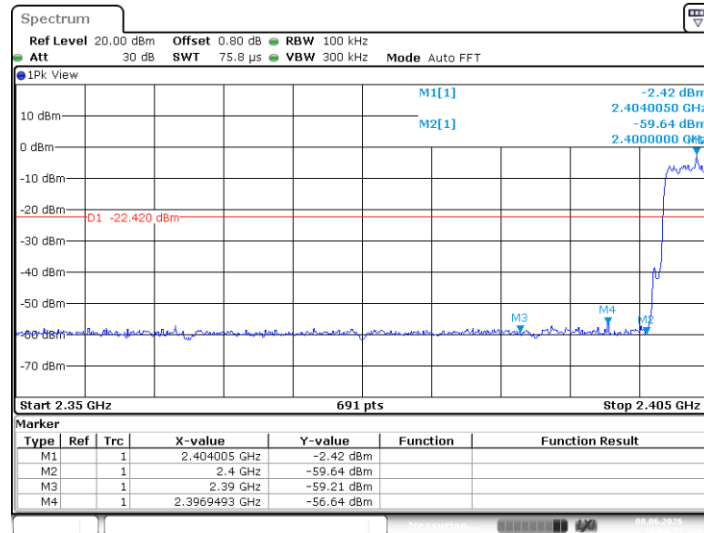
Date: 8.JUN.2026 17:19:03

2DH5_Ant1_High_2480



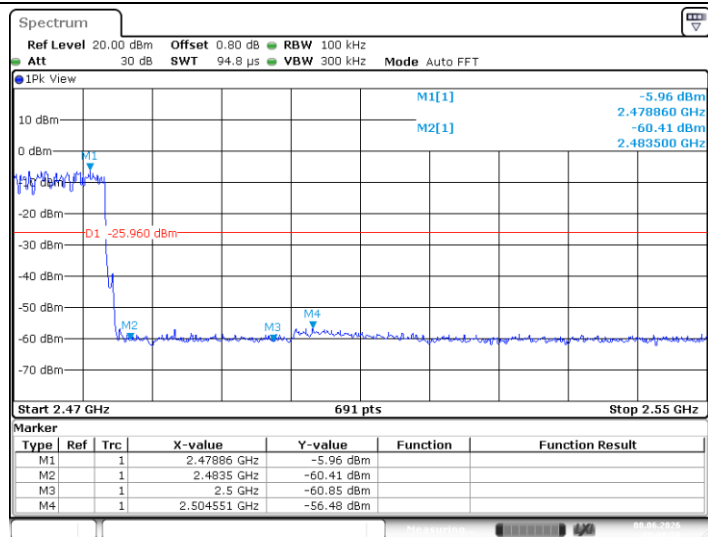
Date: 8.JUN.2026 17:28:52

2DH5_Ant1_Low_Hop_2402



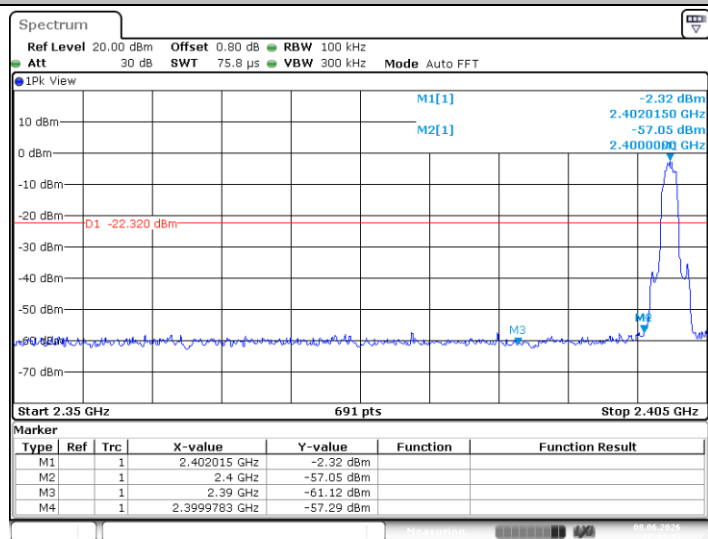
Date: 8.JUN.2026 18:04:33

2DH5_Ant1_High_Hop_2480



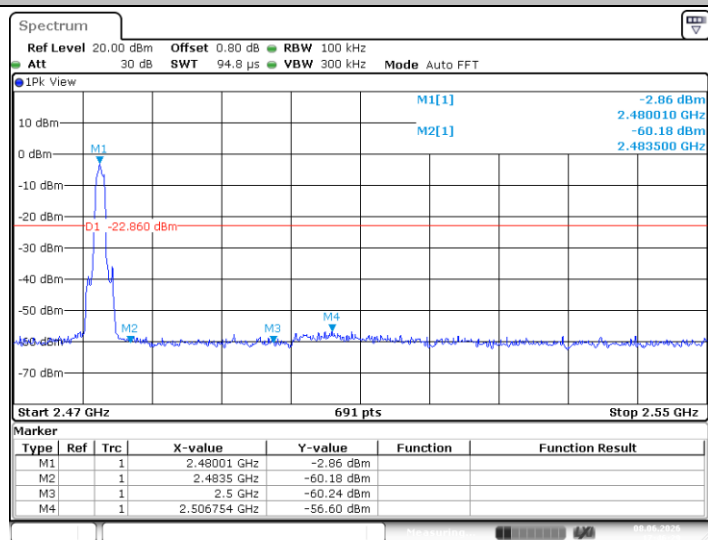
Date: 8.JUN.2026 18:09:59

3DH5_Ant1_Low_2402



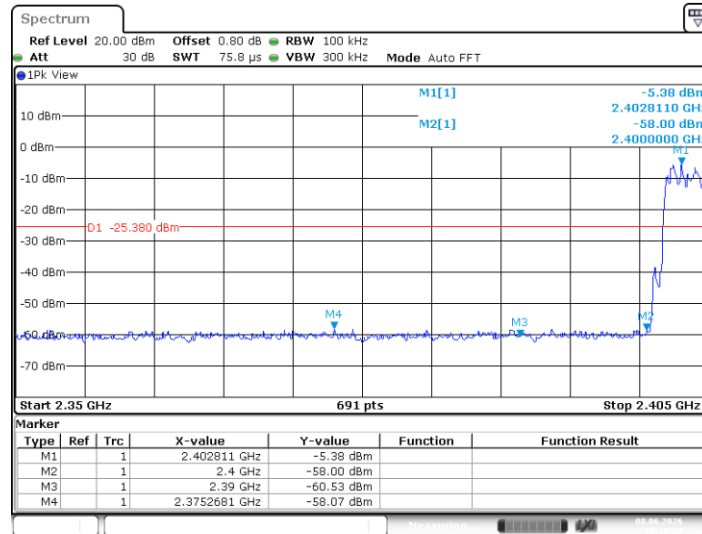
Date: 8.JUN.2026 17:33:35

3DH5_Ant1_High_2480



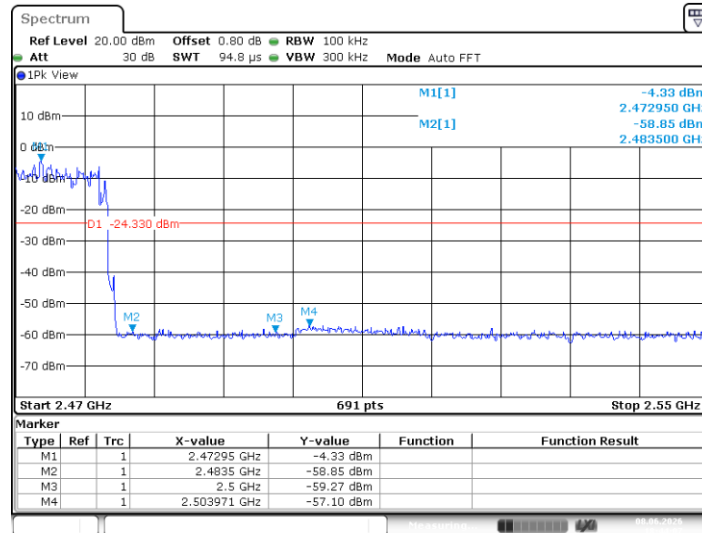
Date: 8.JUN.2026 17:46:29

3DH5_Ant1_Low_Hop_2402



Date: 8.JUN.2026 18:10:22

3DH5_Ant1_High_Hop_2480



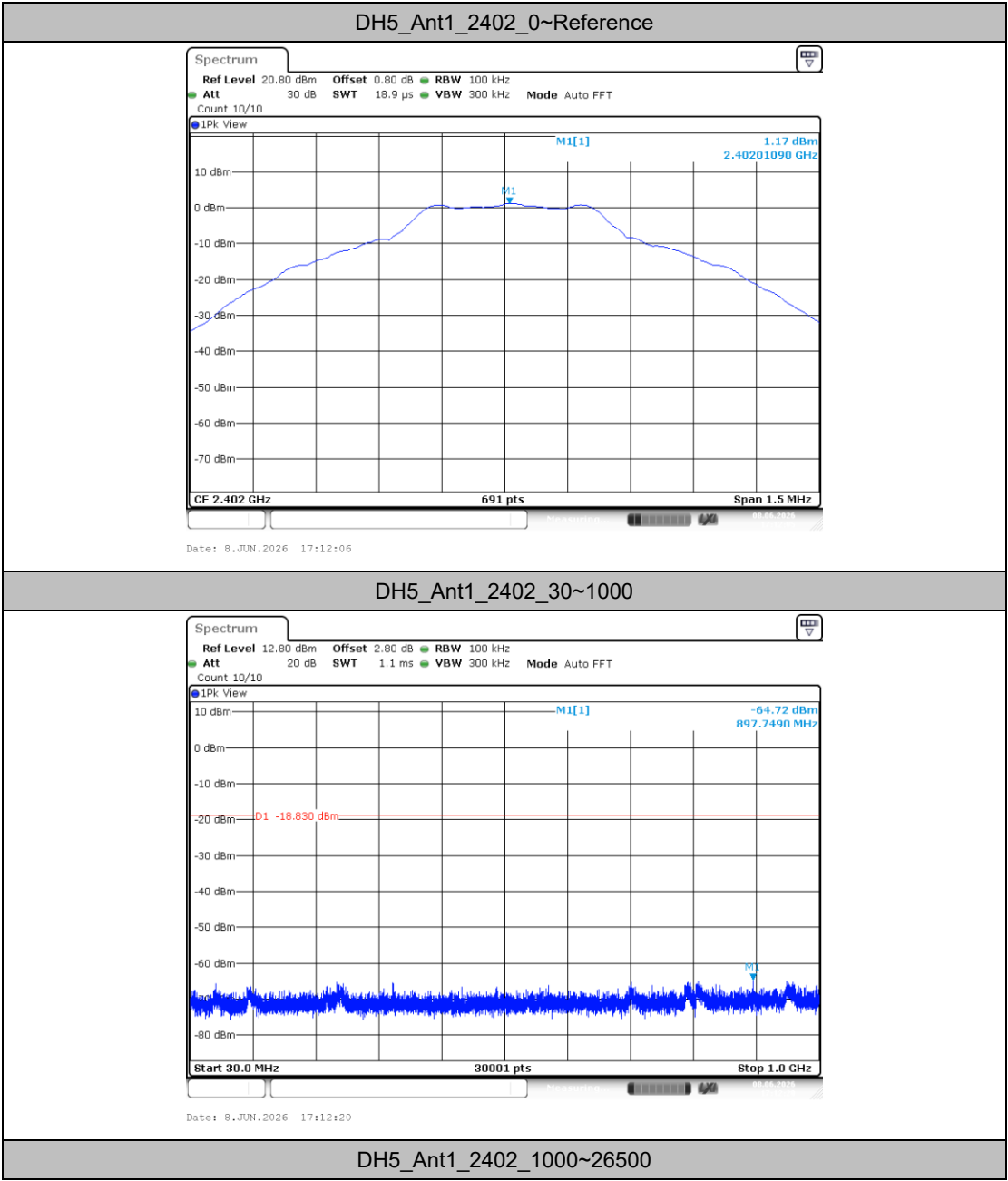
Date: 8.JUN.2026 18:44:07

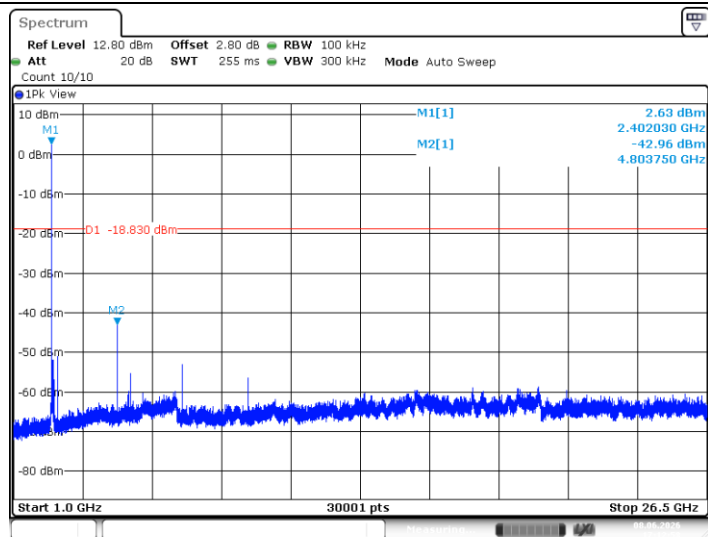
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	1.17	1.17	---	PASS
			30~1000	1.17	-64.72	≤-18.83	PASS
			1000~26500	1.17	-42.96	≤-18.83	PASS
		2441	Reference	1.09	1.09	---	PASS
			30~1000	1.09	-64.08	≤-18.91	PASS
			1000~26500	1.09	-41.82	≤-18.91	PASS
		2480	Reference	0.80	0.80	---	PASS
			30~1000	0.80	-64.42	≤-19.2	PASS
			1000~26500	0.80	-42.57	≤-19.2	PASS
2DH5	Ant1	2402	Reference	-2.34	-2.34	---	PASS
			30~1000	-2.34	-63.03	≤-22.34	PASS
			1000~26500	-2.34	-48.84	≤-22.34	PASS
		2441	Reference	-2.50	-2.50	---	PASS
			30~1000	-2.50	-64.84	≤-22.5	PASS
			1000~26500	-2.50	-46.85	≤-22.5	PASS
		2480	Reference	-2.75	-2.75	---	PASS
			30~1000	-2.75	-64.67	≤-22.75	PASS
			1000~26500	-2.75	-48.27	≤-22.75	PASS
3DH5	Ant1	2402	Reference	-2.38	-2.38	---	PASS
			30~1000	-2.38	-63.72	≤-22.38	PASS
			1000~26500	-2.38	-49.58	≤-22.38	PASS
		2441	Reference	-2.50	-2.50	---	PASS
			30~1000	-2.50	-62.96	≤-22.5	PASS
			1000~26500	-2.50	-45.32	≤-22.5	PASS
		2480	Reference	-2.79	-2.79	---	PASS
			30~1000	-2.79	-64.21	≤-22.79	PASS
			1000~26500	-2.79	-47.86	≤-22.79	PASS

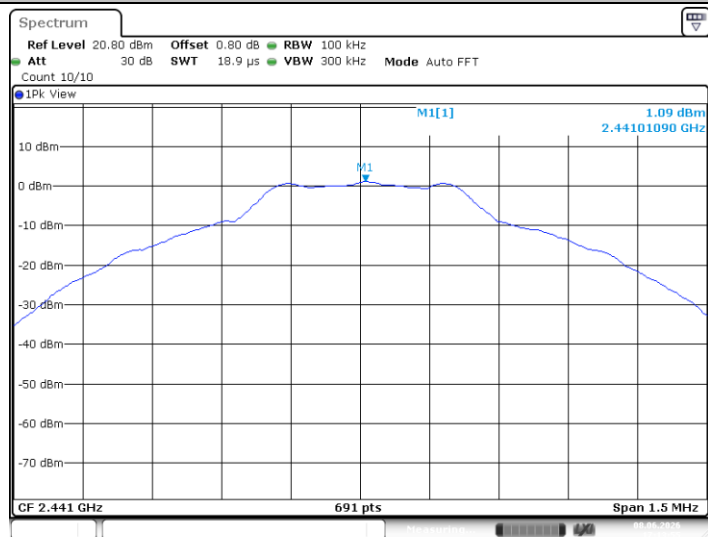
Test Graphs





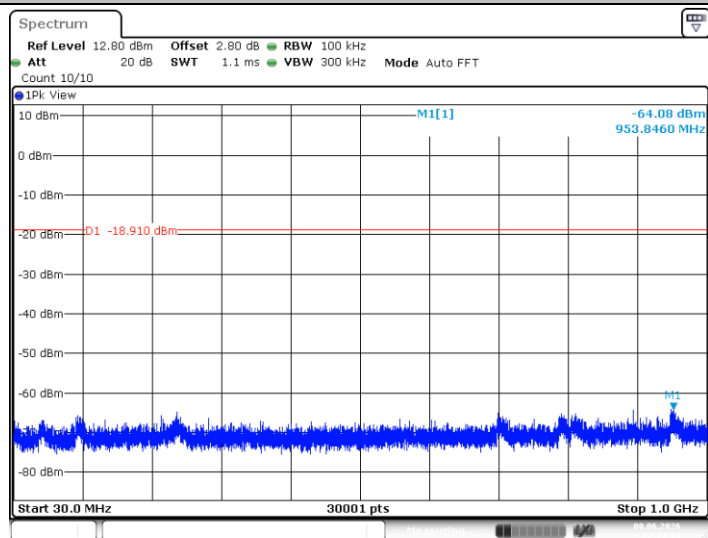
Date: 8.JUN.2026 17:12:58

DH5_Ant1_2441_0~Reference



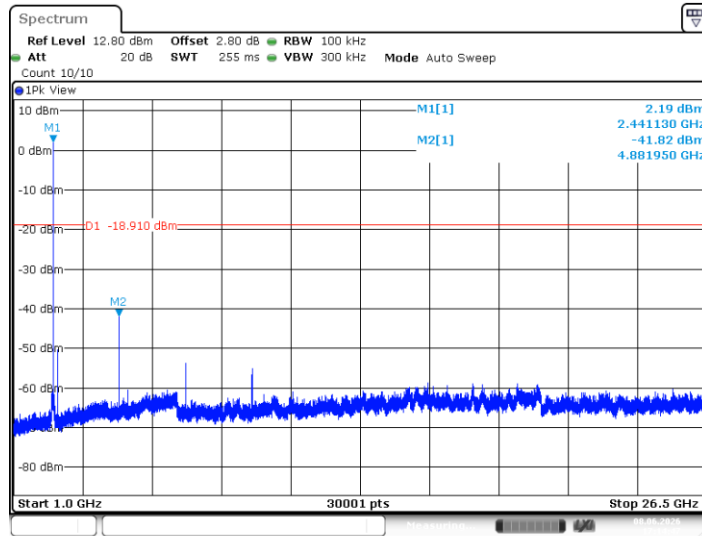
Date: 8.JUN.2026 17:13:55

DH5_Ant1_2441_30~1000



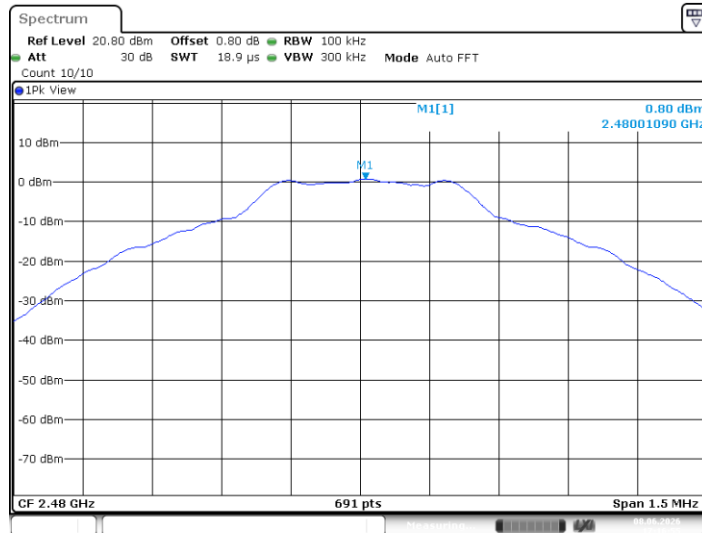
Date: 8.JUN.2026 17:14:10

DH5_Ant1_2441_1000~26500



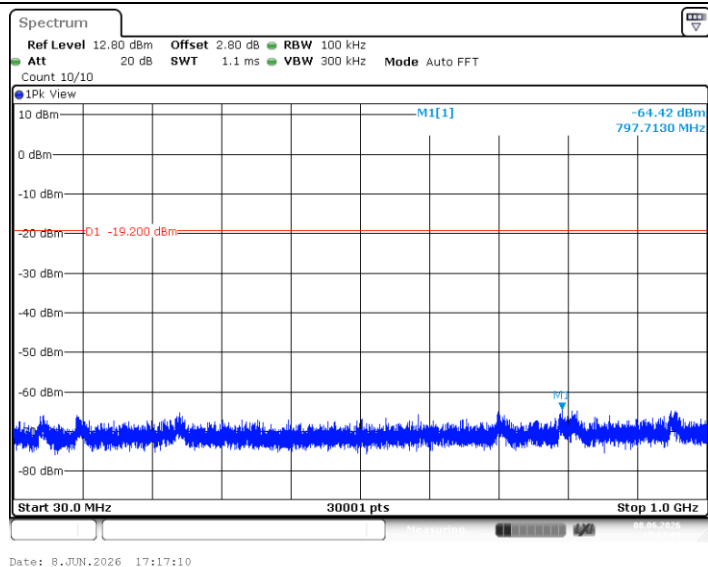
Date: 8.JUN.2026 17:14:47

DH5_Ant1_2480_0~Reference

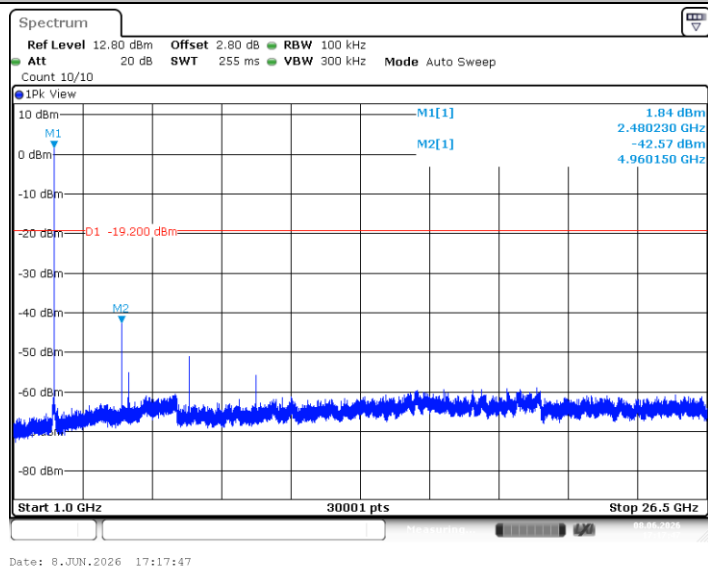


Date: 8.JUN.2026 17:16:55

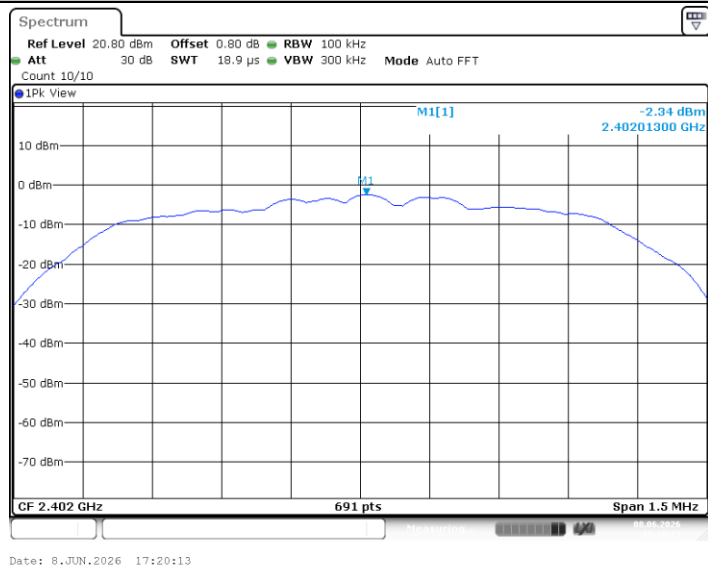
DH5_Ant1_2480_30~1000

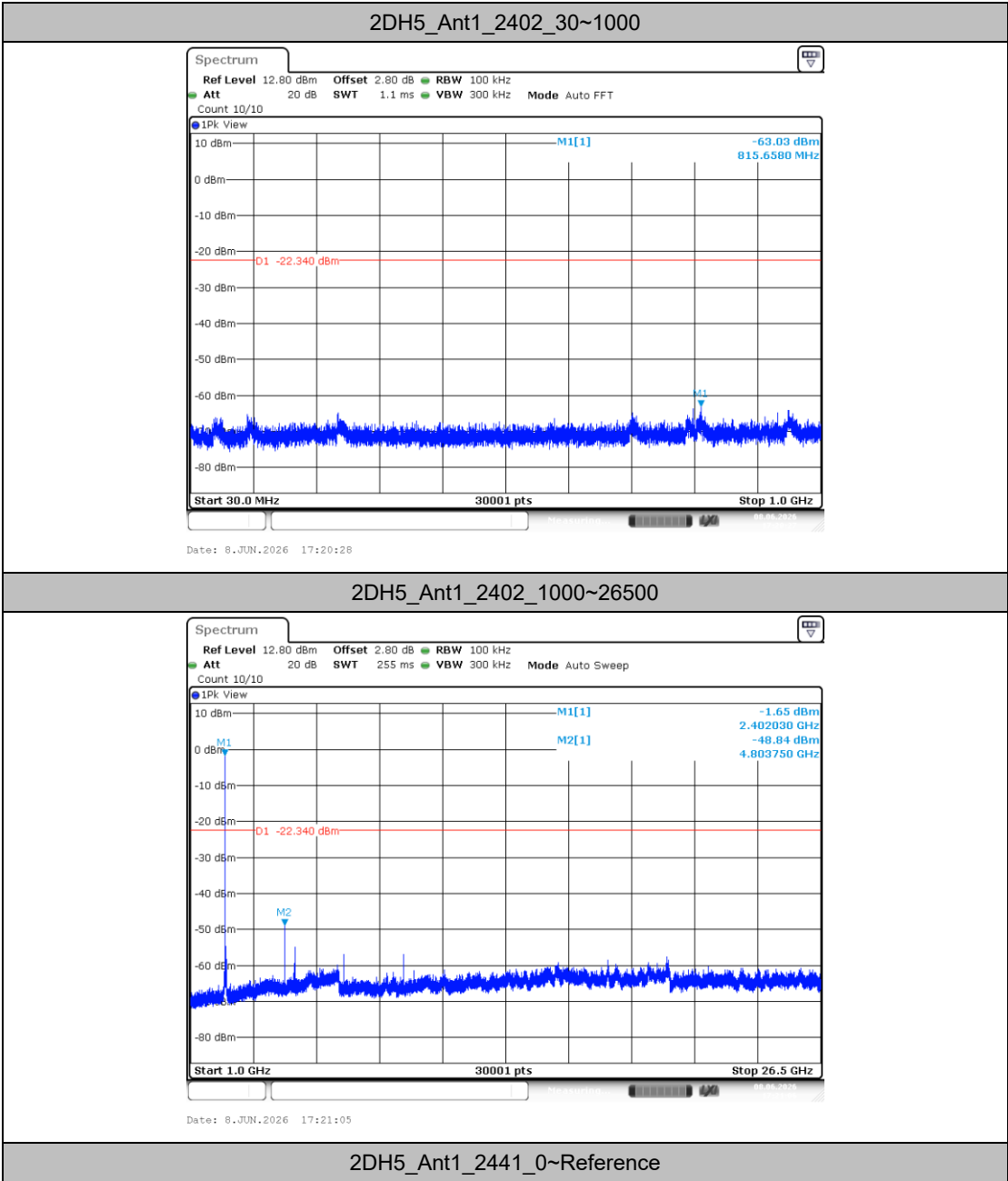


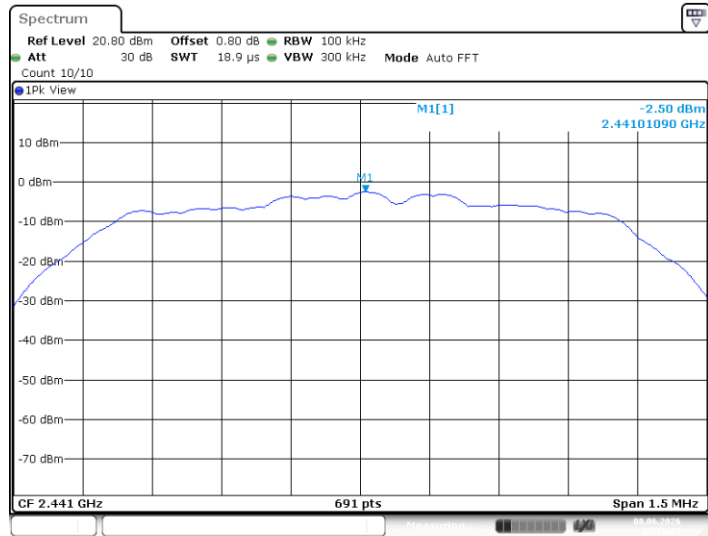
DH5_Ant1_2480_1000~26500



2DH5_Ant1_2402_0~Reference

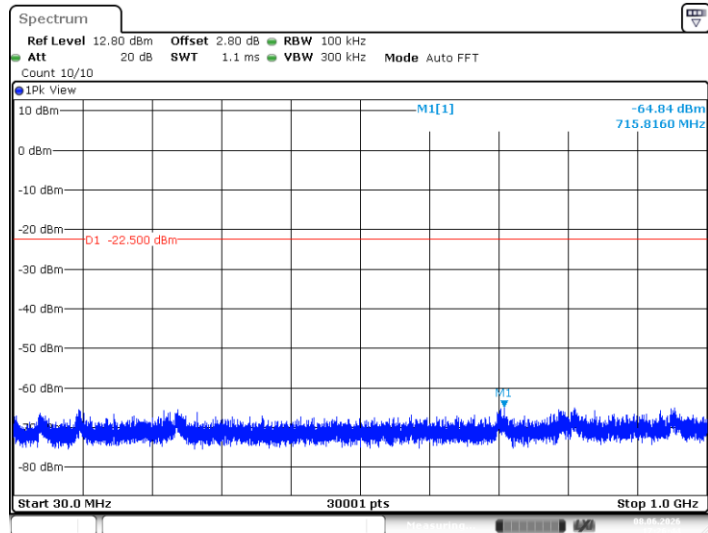






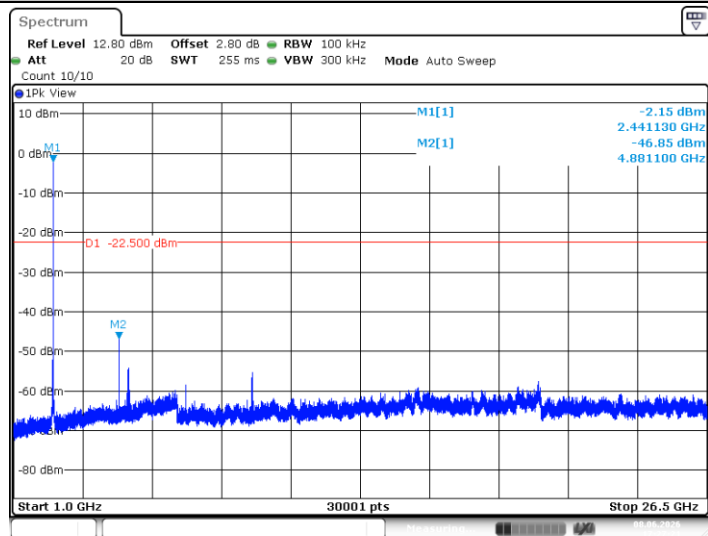
Date: 8.JUN.2026 17:26:29

2DH5_Ant1_2441_30~1000



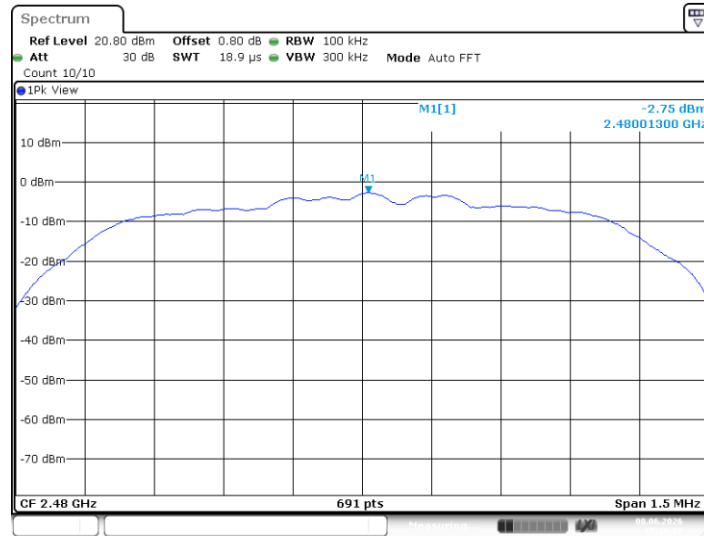
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2DH5_Ant1_2441_1000~26500



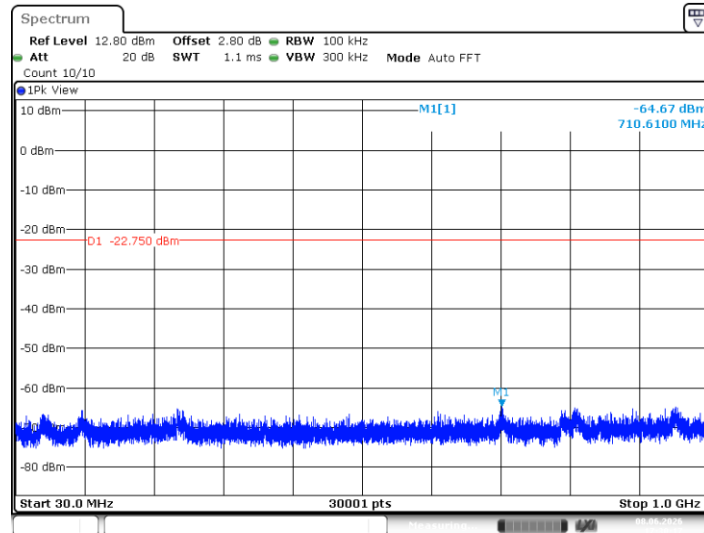
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2DH5_Ant1_2480_0~Reference



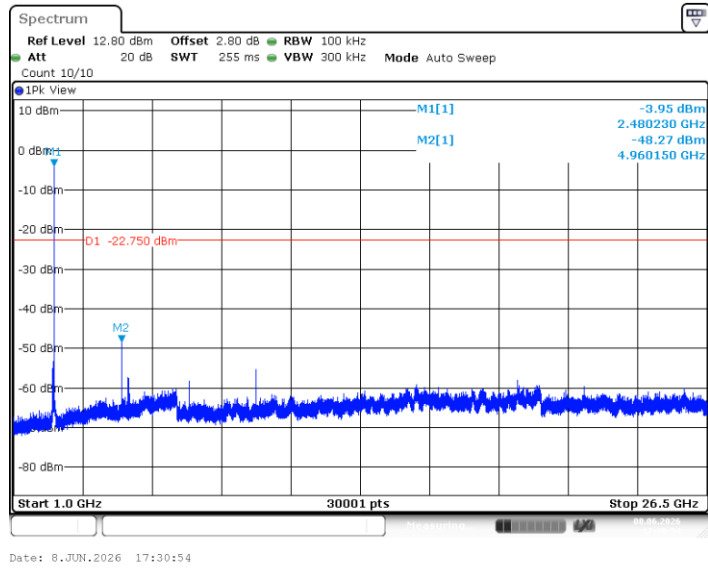
Date: 8.JUN.2026 17:30:02

2DH5_Ant1_2480_30~1000

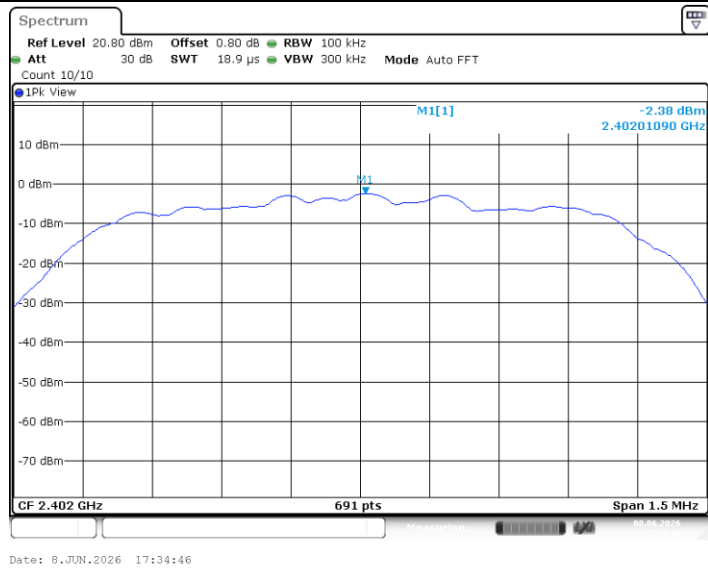


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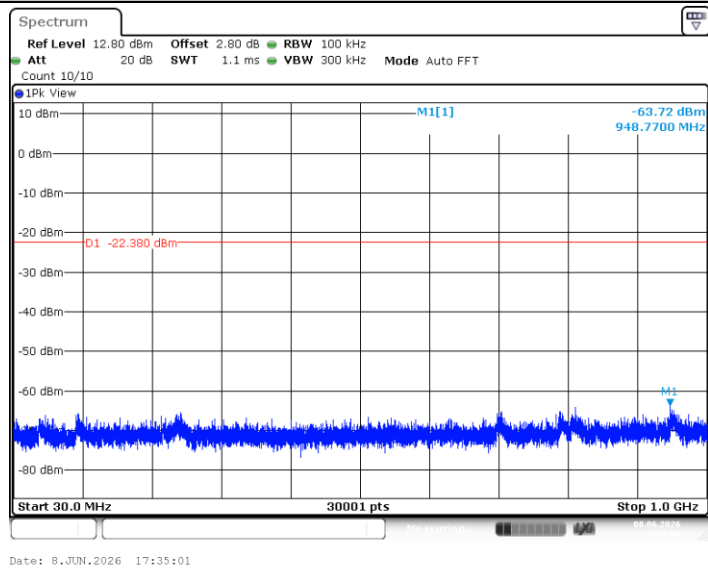
2DH5_Ant1_2480_1000~26500



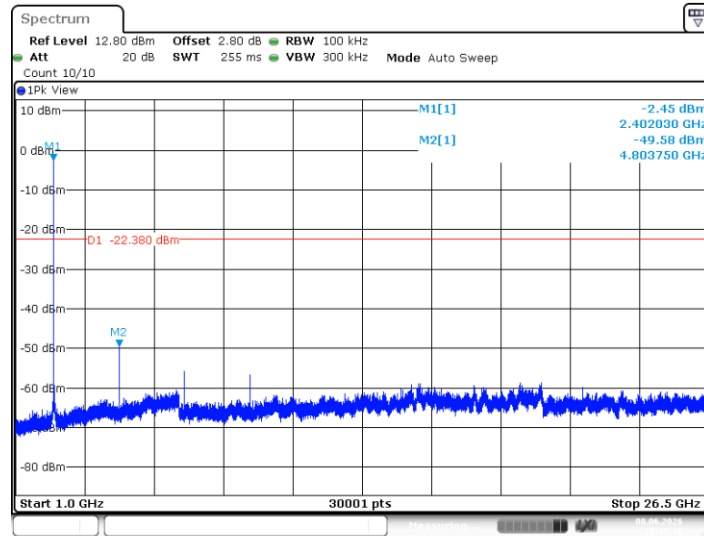
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000

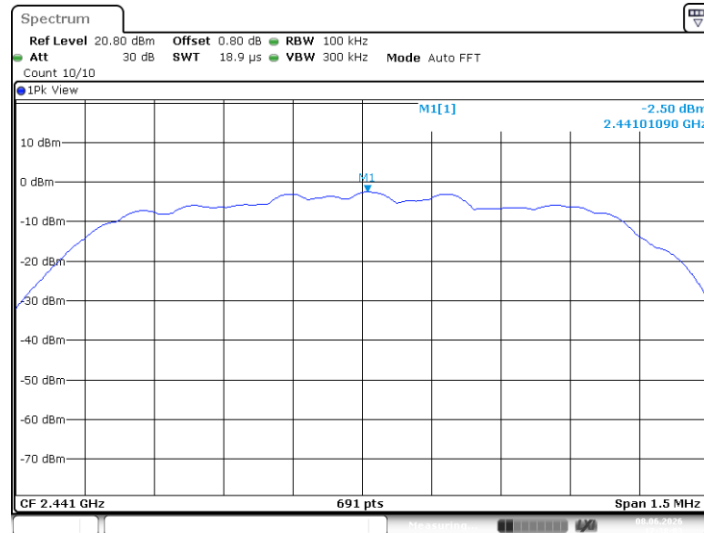


3DH5_Ant1_2402_1000~26500



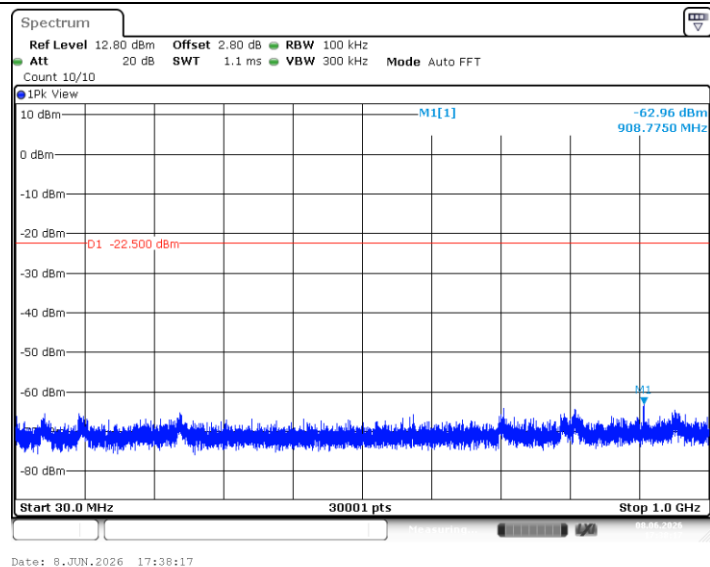
Date: 8.JUN.2026 17:35:38

3DH5_Ant1_2441_0~Reference

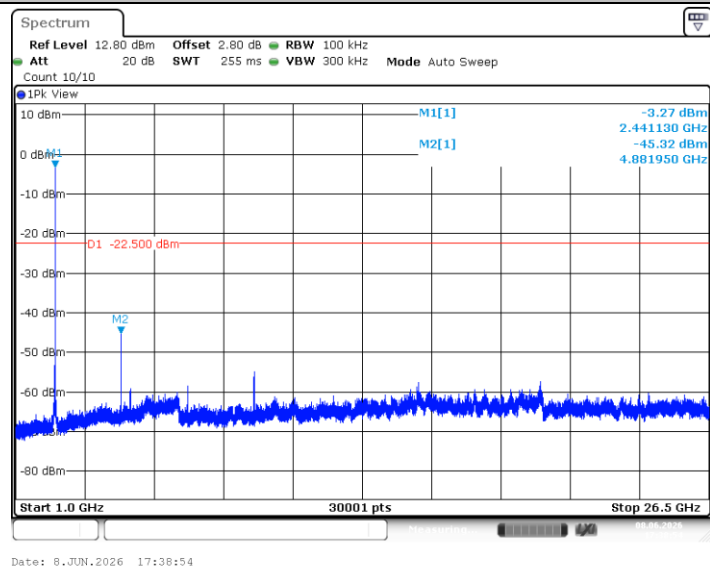


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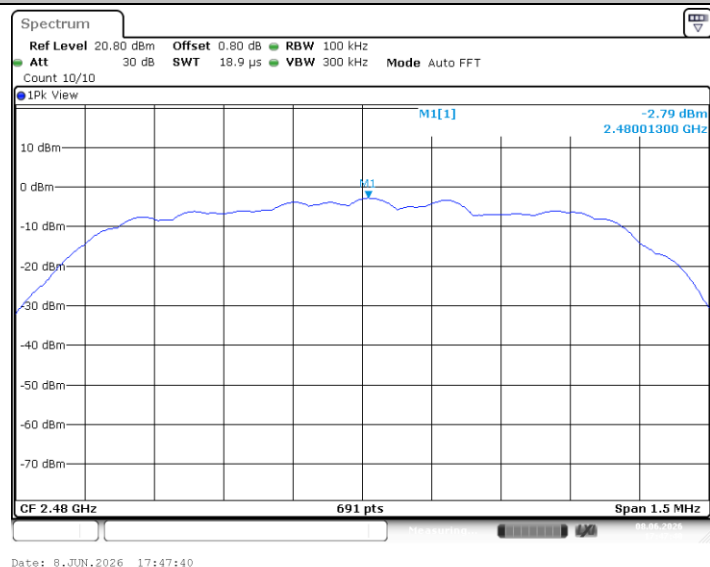
3DH5_Ant1_2441_30~1000

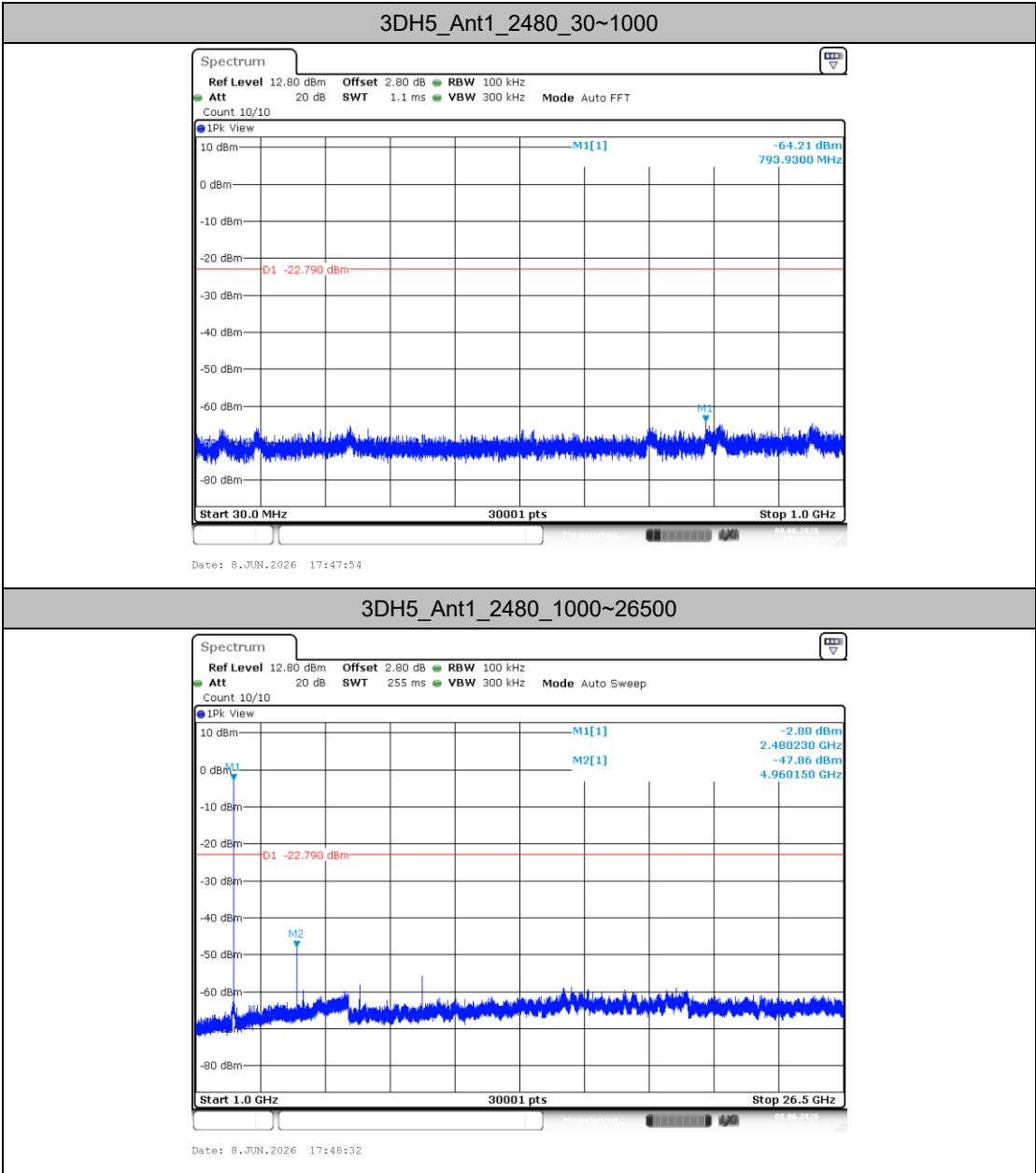


3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference



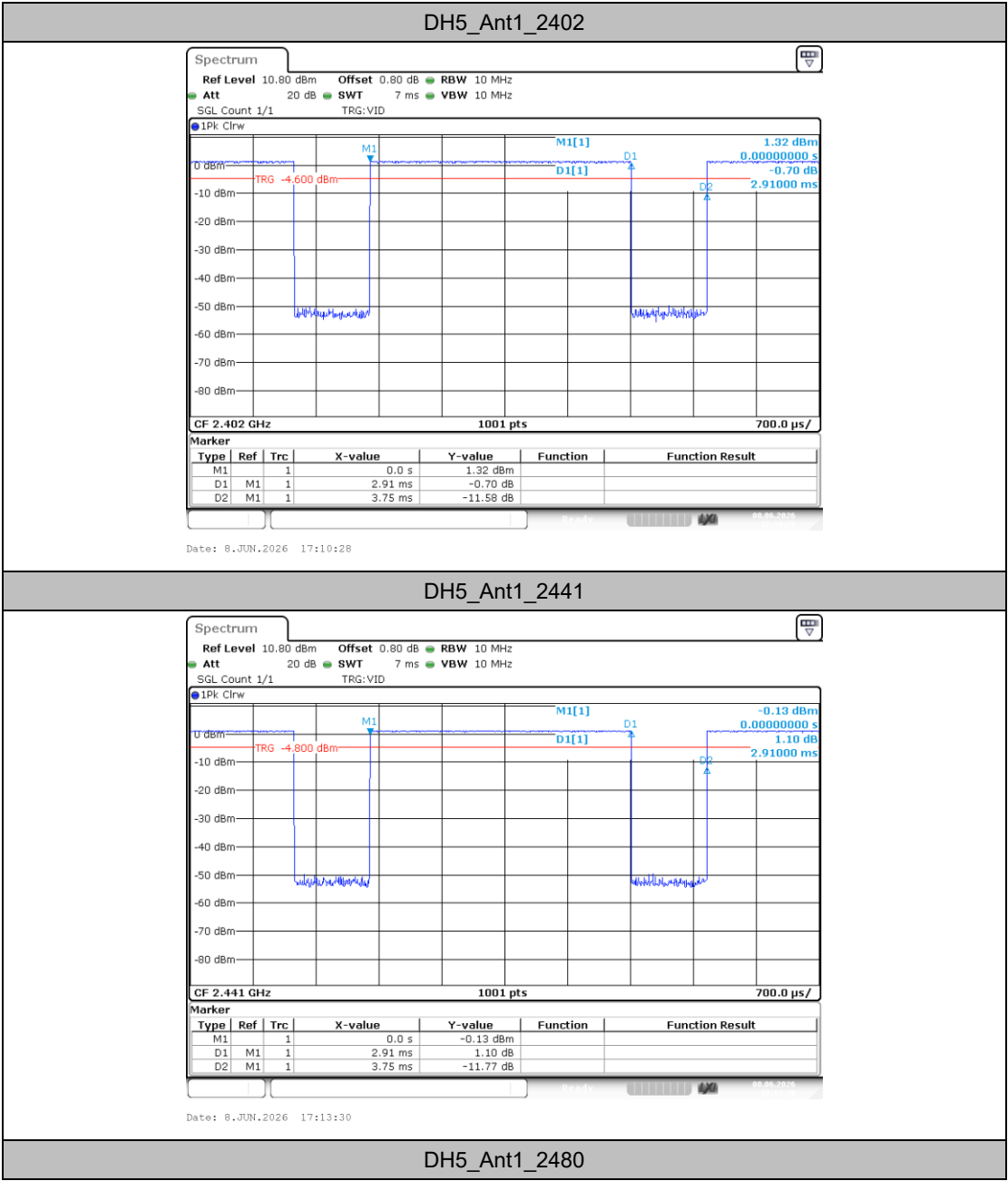


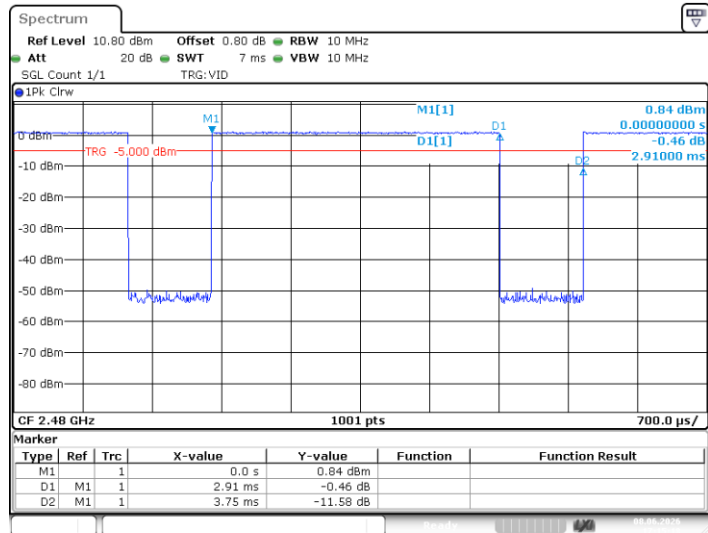
Appendix I: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.91	3.74	77.81	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.75	77.87	1.09	---	---
3DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.92	3.76	77.66	1.10	---	---

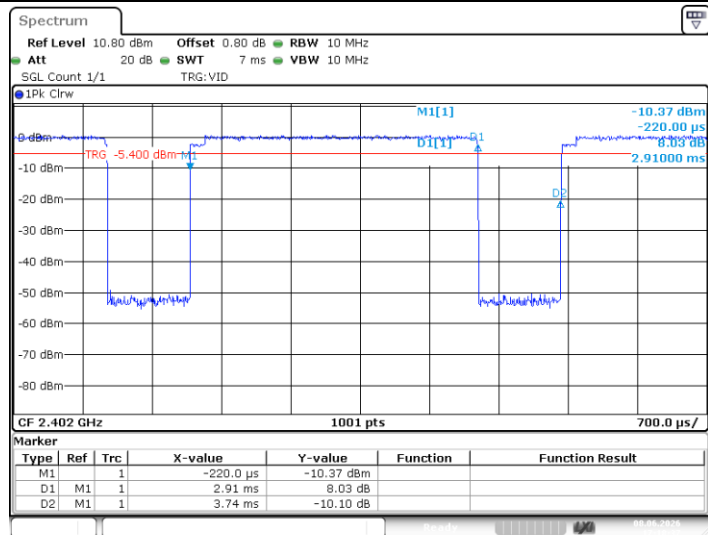
Test Graphs





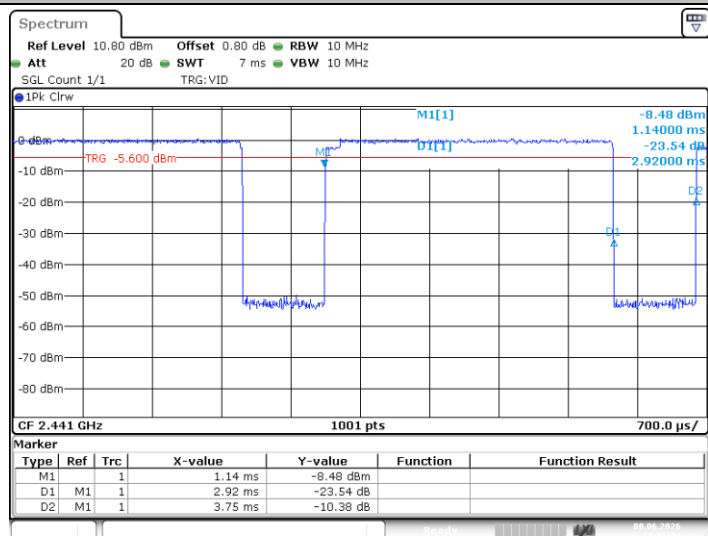
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2DH5_Ant1_2402



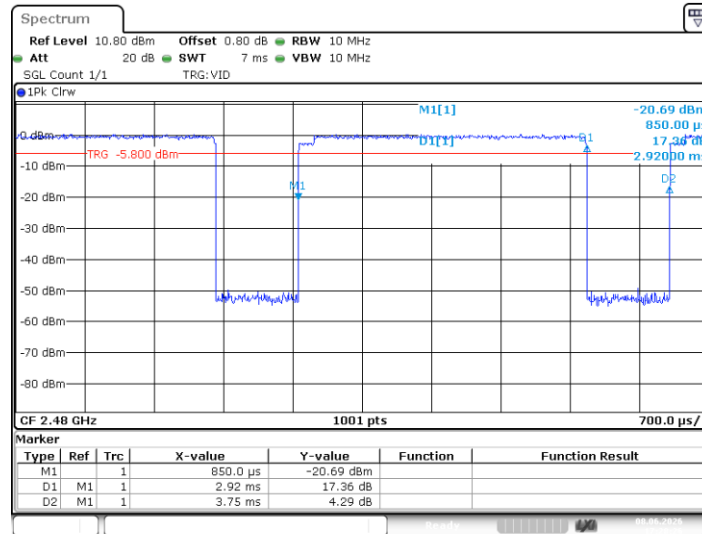
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2DH5_Ant1_2441



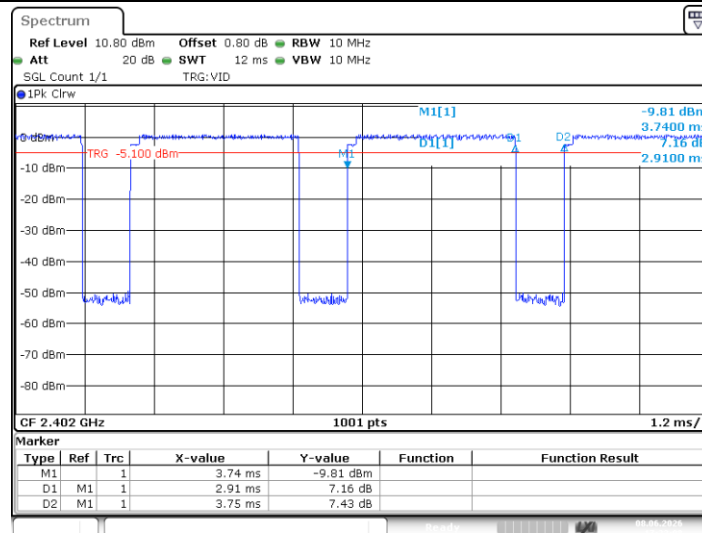
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2DH5_Ant1_2480



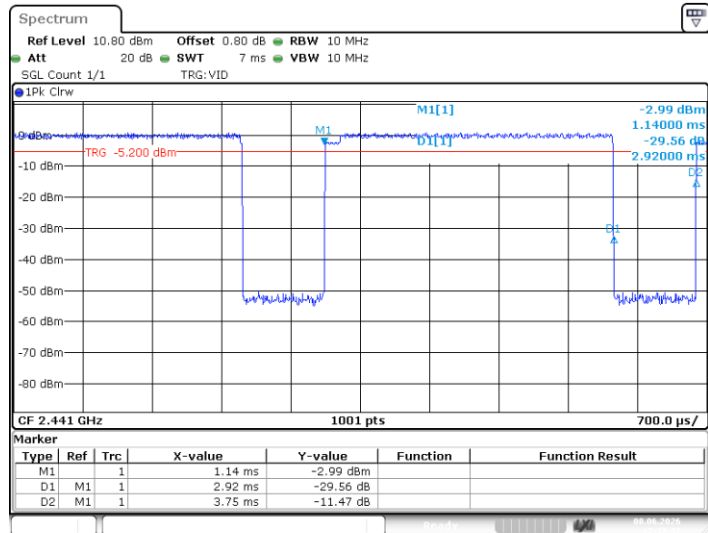
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3DH5_Ant1_2402



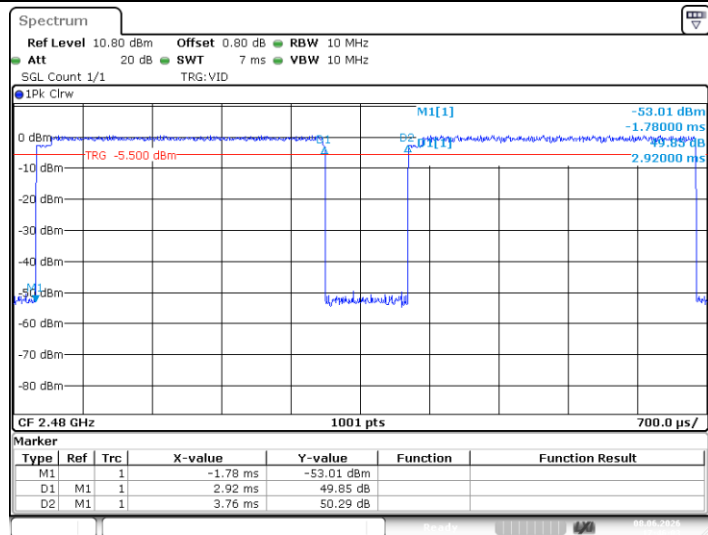
Date: 8.JUN.2026 17:33:09

3DH5_Ant1_2441



Date: 8.JUN.2026 17:37:37

3DH5_Ant1_2480



Date: 8.JUN.2026 17:46:03

Appendix J: Emissions in Restricted Bands

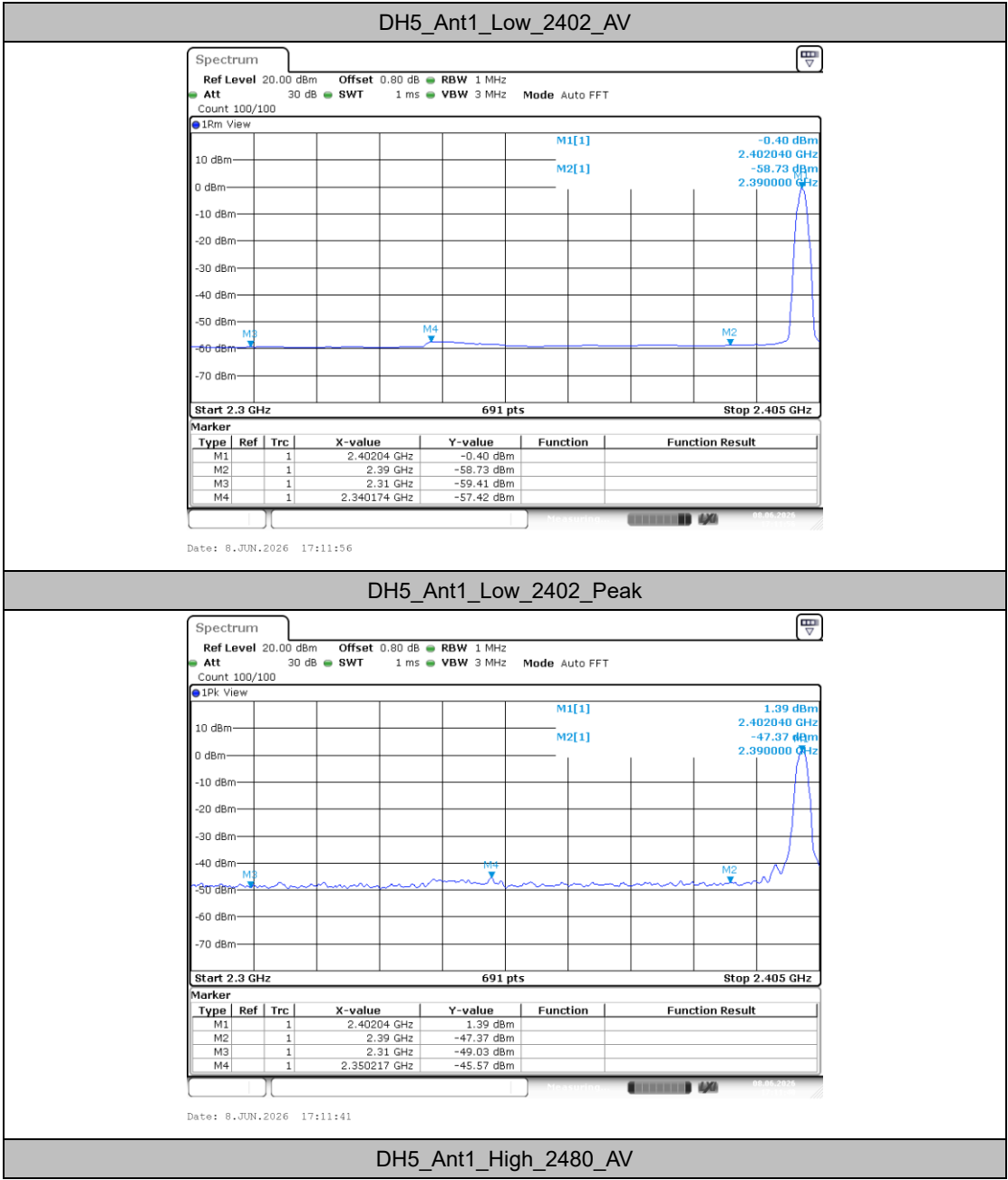
Test Result

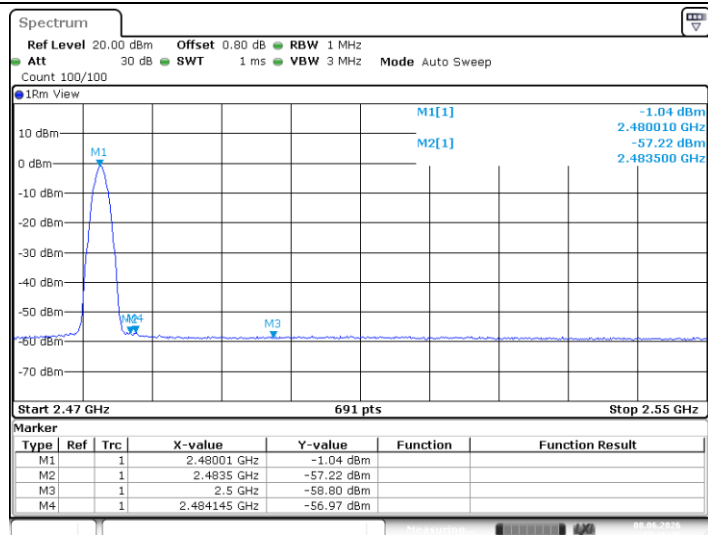
TestMod e	Antenn a	ChNam e	Freq(MH z)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-59.41	2.00	1.10	38.89	≤54	PASS
				AV	2340.174	-57.42	2.00	1.10	40.88	≤54	PASS
				AV	2390.000	-58.73	2.00	1.10	39.57	≤54	PASS
				Peak	2310.000	-49.03	2.00	0.00	48.17	≤74	PASS
				Peak	2350.217	-45.57	2.00	0.00	51.63	≤74	PASS
				Peak	2390.000	-47.37	2.00	0.00	49.83	≤74	PASS
		High	2480	AV	2483.500	-57.22	2.00	1.10	41.08	≤54	PASS
				AV	2484.145	-56.97	2.00	1.10	41.33	≤54	PASS
				AV	2500.000	-58.8	2.00	1.10	39.50	≤54	PASS
				Peak	2483.500	-46.18	2.00	0.00	51.02	≤74	PASS
				Peak	2484.261	-40.47	2.00	0.00	56.73	≤74	PASS
				Peak	2500.000	-48.12	2.00	0.00	49.08	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-59.45	2.00	1.09	38.84	≤54	PASS
				AV	2340.478	-57.41	2.00	1.09	40.88	≤54	PASS
				AV	2390.000	-58.94	2.00	1.09	39.35	≤54	PASS
				Peak	2310.000	-49.13	2.00	0.00	48.07	≤74	PASS
				Peak	2341.087	-45.35	2.00	0.00	51.85	≤74	PASS
				Peak	2390.000	-48.16	2.00	0.00	49.04	≤74	PASS
		High	2480	AV	2483.500	-57.75	2.00	1.09	40.54	≤54	PASS
				AV	2483.565	-57.9	2.00	1.09	40.39	≤54	PASS
				AV	2500.000	-58.78	2.00	1.09	39.51	≤54	PASS
				Peak	2483.500	-46.21	2.00	0.00	50.99	≤74	PASS
				Peak	2484.377	-44.83	2.00	0.00	52.37	≤74	PASS
				Peak	2500.000	-47.54	2.00	0.00	49.66	≤74	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-59.44	2.00	1.10	38.86	≤54	PASS
				AV	2340.935	-57.4	2.00	1.10	40.90	≤54	PASS
				AV	2390.000	-59.01	2.00	1.10	39.29	≤54	PASS
				Peak	2310.000	-47.67	2.00	0.00	49.53	≤74	PASS
				Peak	2341.848	-45.32	2.00	0.00	51.88	≤74	PASS
				Peak	2390.000	-47.5	2.00	0.00	49.70	≤74	PASS
		High	2480	AV	2483.500	-58.31	2.00	1.10	39.99	≤54	PASS
				AV	2483.797	-57.97	2.00	1.10	40.33	≤54	PASS
				AV	2500.000	-58.85	2.00	1.10	39.45	≤54	PASS
				Peak	2483.500	-46.37	2.00	0.00	50.83	≤74	PASS
				Peak	2484.493	-43.57	2.00	0.00	53.63	≤74	PASS
				Peak	2500.000	-48.09	2.00	0.00	49.11	≤74	PASS

Note:

1. 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.

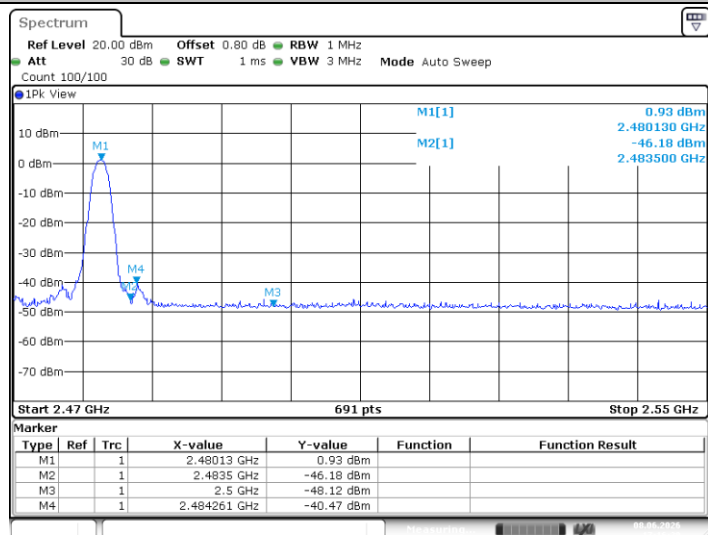
Test Graphs





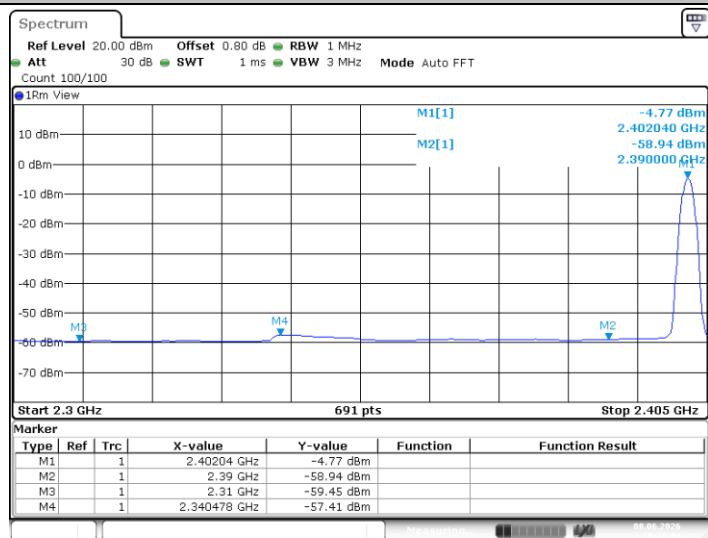
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DH5_Ant1_High_2480_Peak



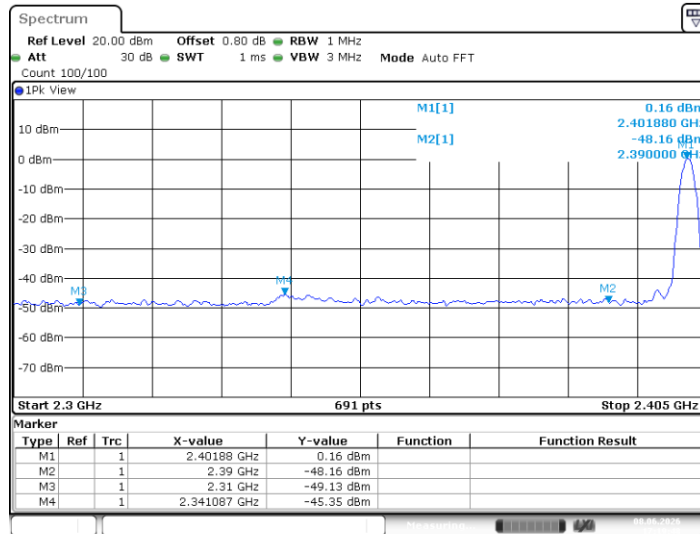
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2DH5_Ant1_Low_2402_AV



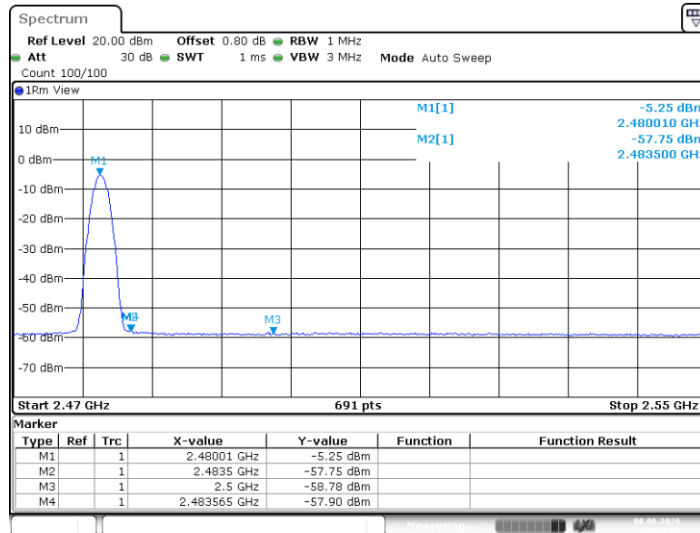
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2DH5_Ant1_Low_2402_Peak



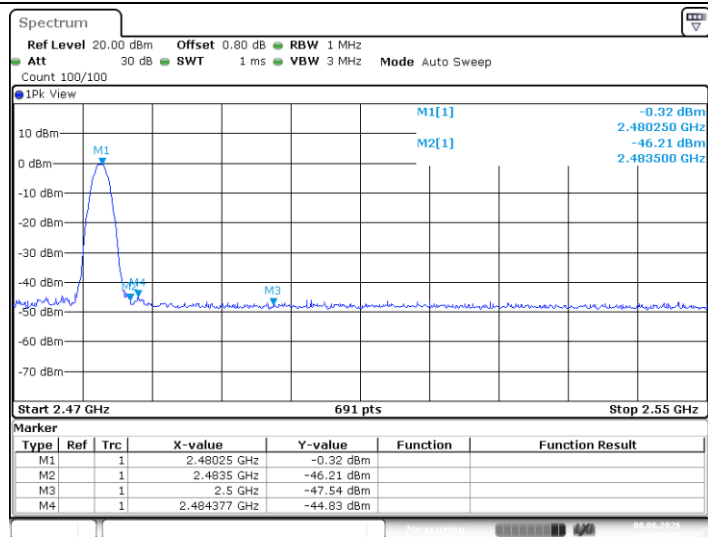
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2DH5_Ant1_High_2480_AV



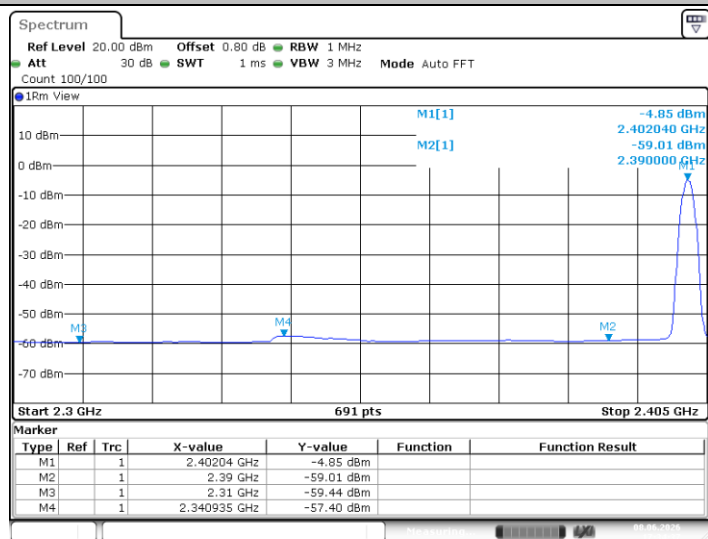
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2DH5_Ant1_High_2480_Peak



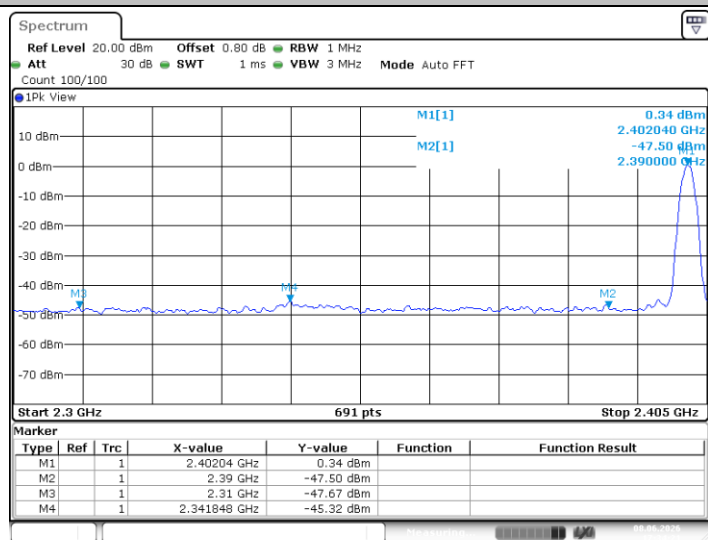
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3DH5_Ant1_Low_2402_AV



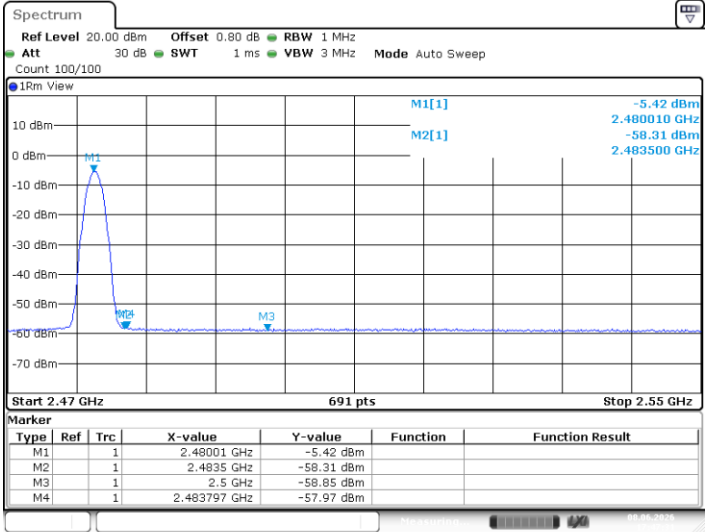
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3DH5_Ant1_Low_2402_Peak



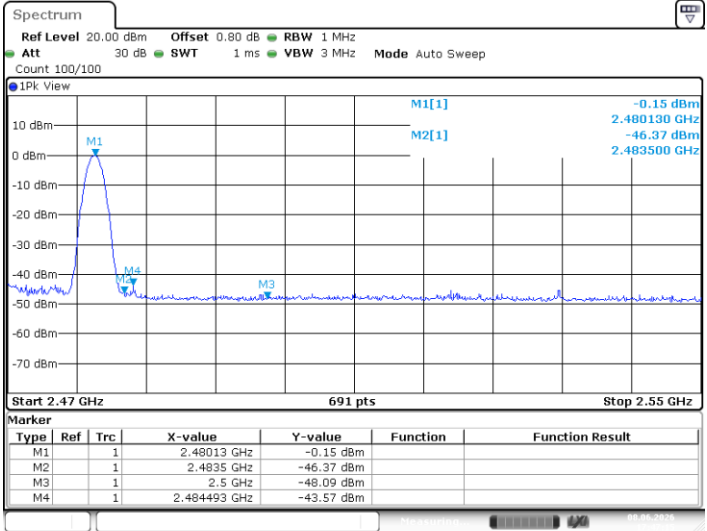
Date: 8.JUN.2026 17:34:21

3DH5_Ant1_High_2480_AV



Date: 8.JUN.2026 17:47:30

3DH5_Ant1_High_2480_Peak



Date: 8.JUN.2026 17:47:15