

RF Test Data for Bluetooth (BR+EDR) (Conducted Measurements)

General Description of EUT	
EUT Name:	Smart Watch
Model:	Endeavour
Sample ID:	HC-C-202412-0014-01-01-2#
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	24.3℃
Ambient Humidity:	49%RH
Test Power Supply:	DC 3.7V
Test Engineer:	Zkn.zhou
Note: For a more detailed features description, please refer to the report TBR-C-202412-0014-6	

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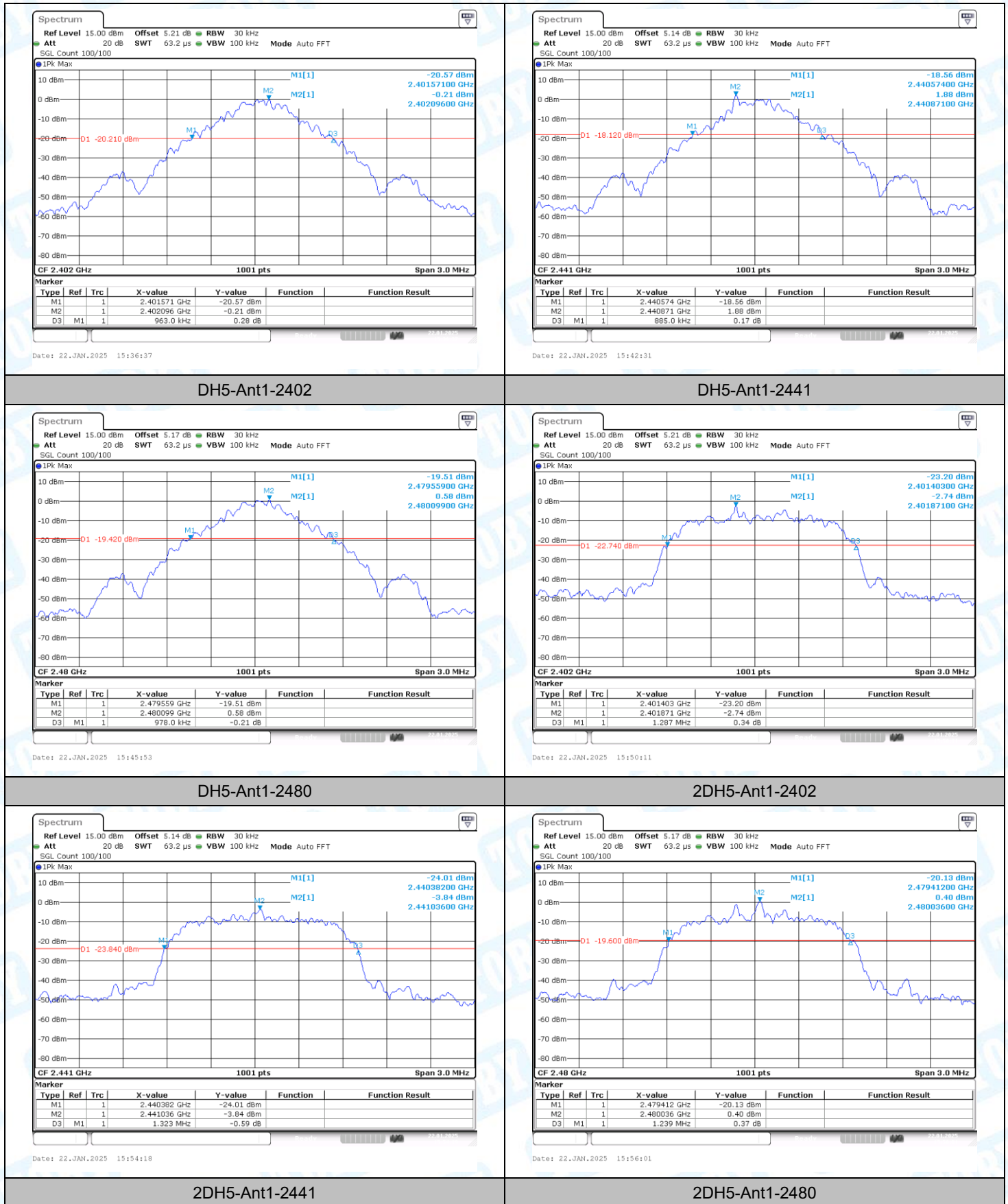
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1: 20dB Emission Bandwidth

1.1 Test Result

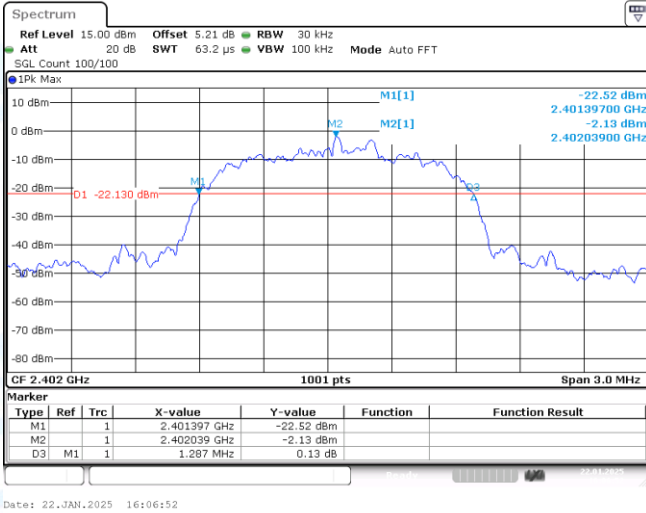
Test Mode	Antenna	Frequency[MHz]	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.96	2401.57	2402.53	---	---
DH5	Ant1	2441	0.88	2440.57	2441.46	---	---
DH5	Ant1	2480	0.98	2479.56	2480.54	---	---
2DH5	Ant1	2402	1.29	2401.40	2402.69	---	---
2DH5	Ant1	2441	1.32	2440.38	2441.71	---	---
2DH5	Ant1	2480	1.24	2479.41	2480.65	---	---
3DH5	Ant1	2402	1.29	2401.40	2402.68	---	---
3DH5	Ant1	2441	1.19	2440.46	2441.65	---	---
3DH5	Ant1	2480	1.20	2479.45	2480.65	---	---

1.2 Test Graphs

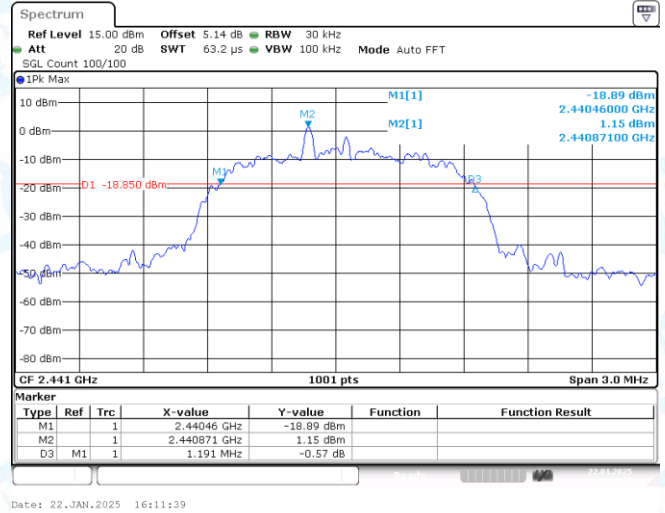


2DH5-Ant1-2441

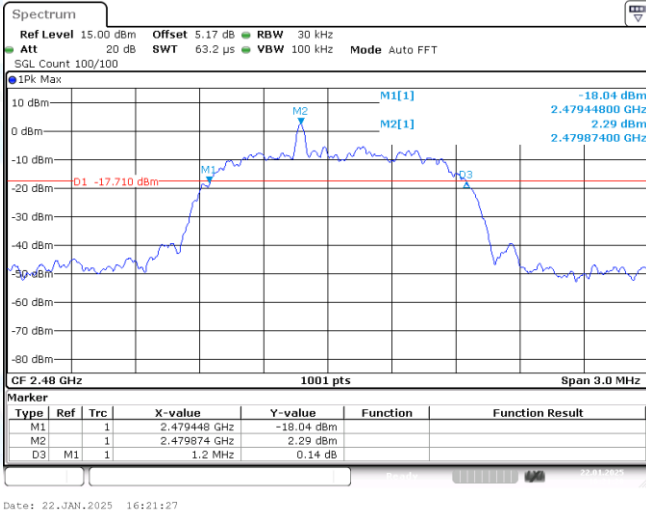
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



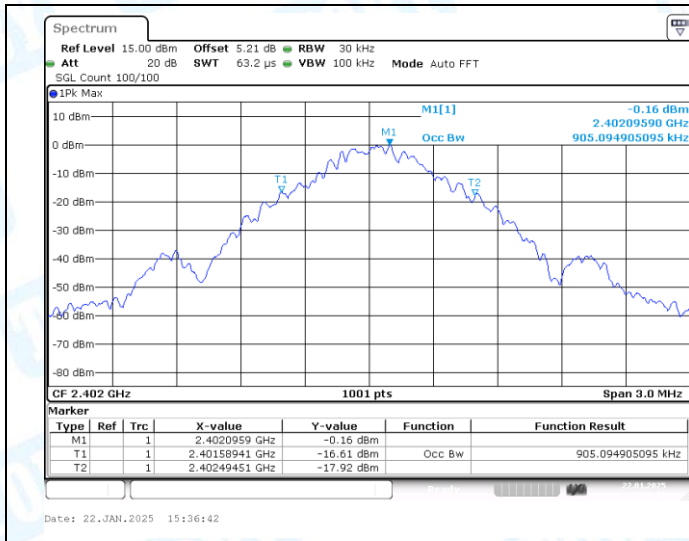
3DH5-Ant1-2480

2: Occupied Channel Bandwidth

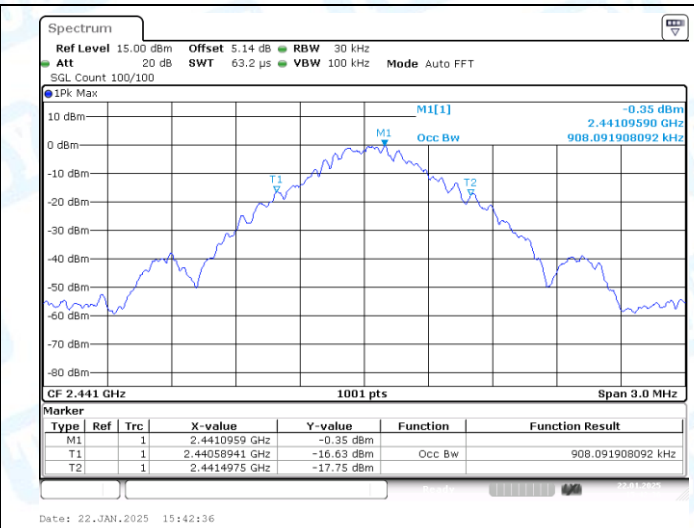
2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.905	2401.5894	2402.4945	---	---
DH5	Ant1	2441	0.908	2440.5894	2441.4975	---	---
DH5	Ant1	2480	0.878	2479.5984	2480.4765	---	---
2DH5	Ant1	2402	1.163	2401.4515	2402.6144	---	---
2DH5	Ant1	2441	1.169	2440.4515	2441.6204	---	---
2DH5	Ant1	2480	1.157	2479.4575	2480.6144	---	---
3DH5	Ant1	2402	1.148	2401.4635	2402.6114	---	---
3DH5	Ant1	2441	1.172	2440.4545	2441.6264	---	---
3DH5	Ant1	2480	1.133	2479.4755	2480.6084	---	---

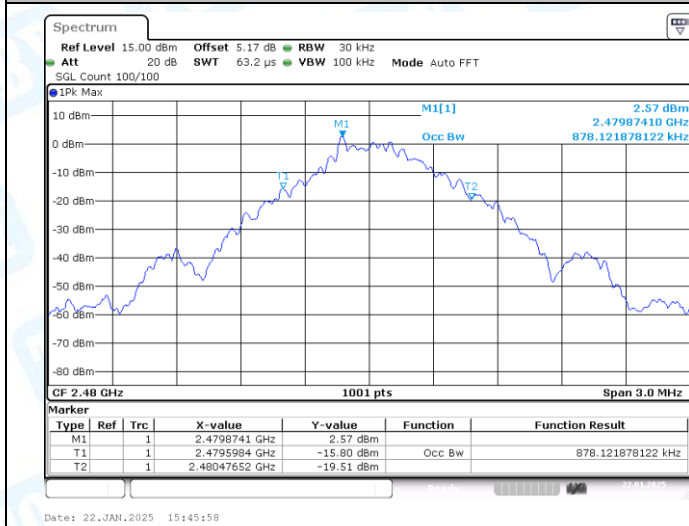
2.2 Test Graphs



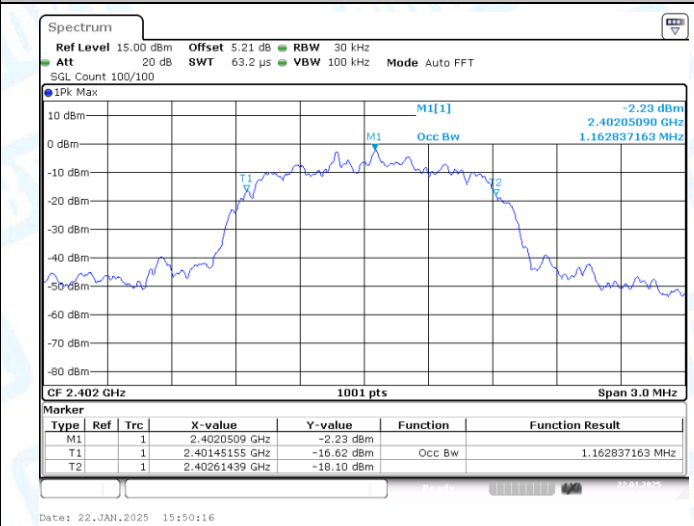
DH5-Ant1-2402



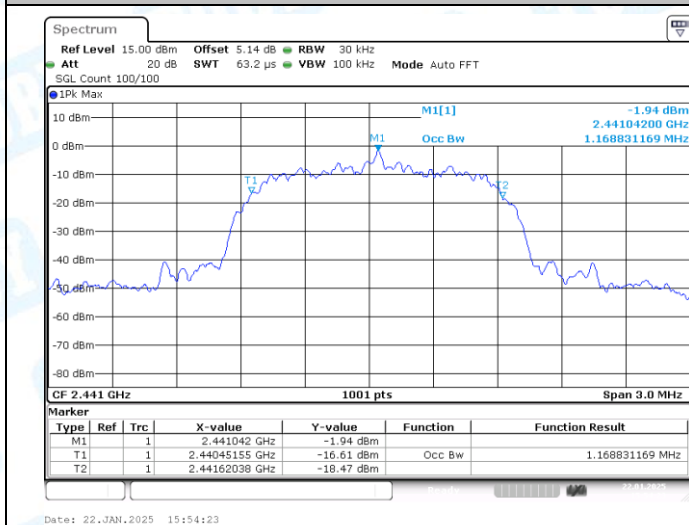
DH5-Ant1-2441



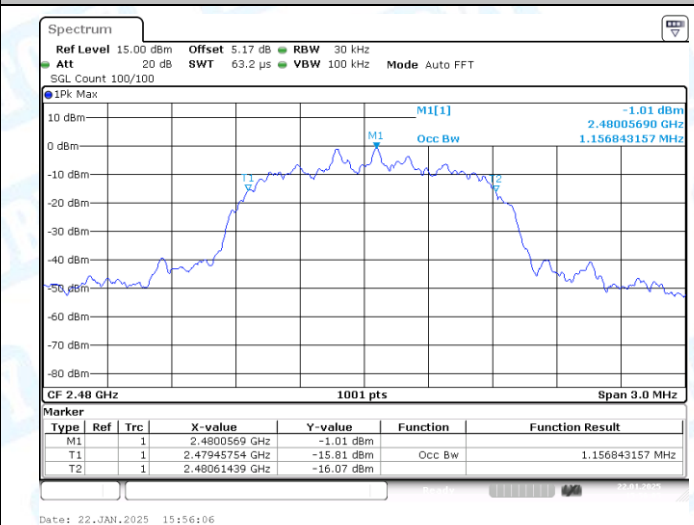
DH5-Ant1-2480



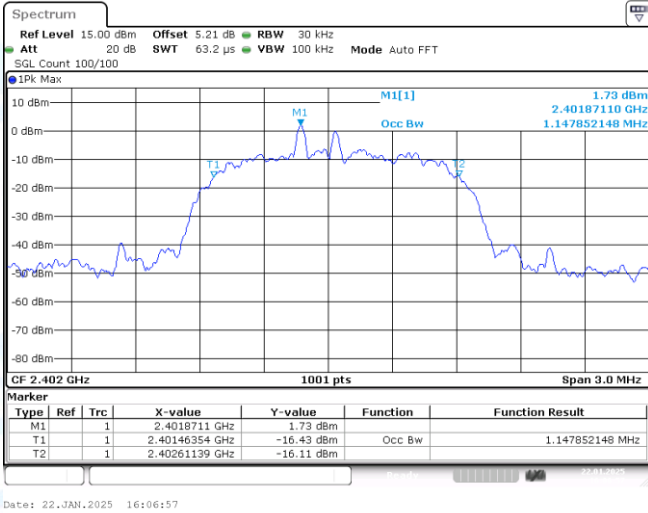
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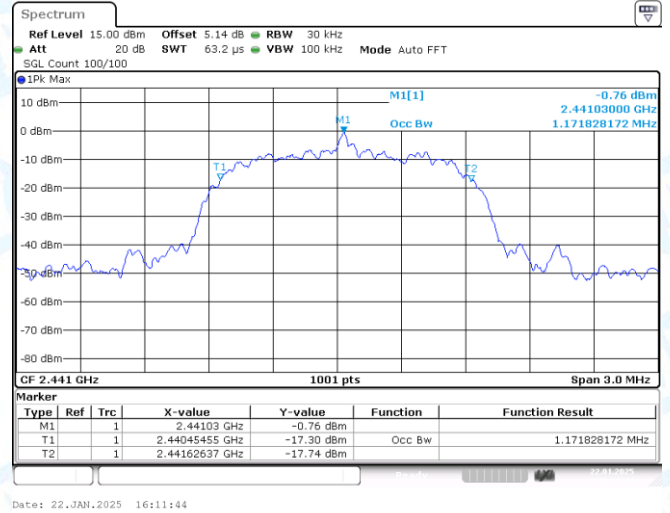
2DH5-Ant1-2441



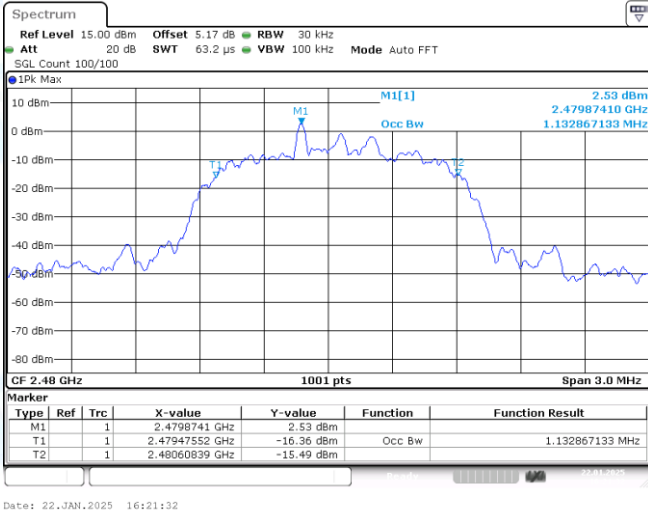
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



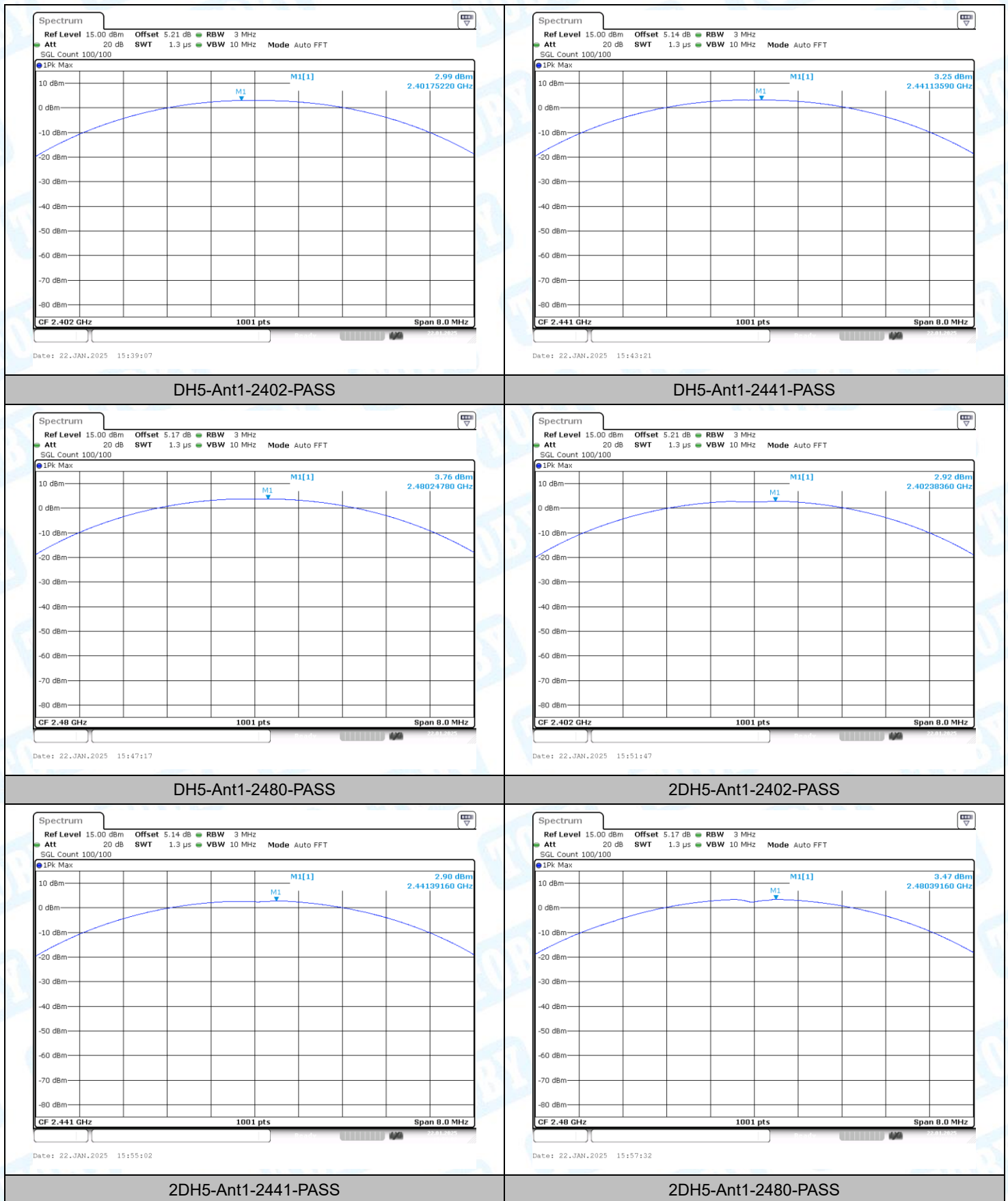
3DH5-Ant1-2480

3: Maximum conducted output power

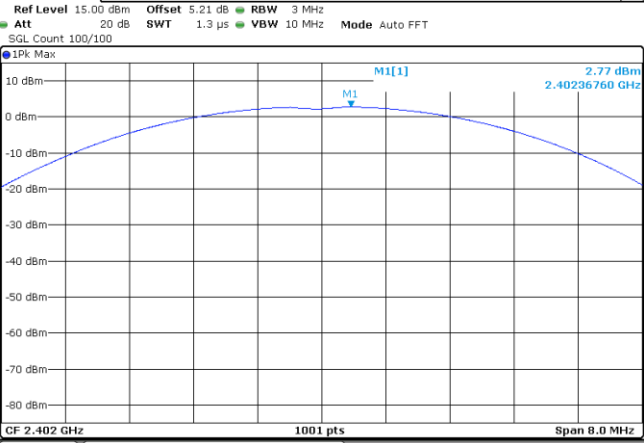
3.1 Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	2.99	≤21	PASS
DH5	Ant1	2441	3.25	≤21	PASS
DH5	Ant1	2480	3.76	≤21	PASS
2DH5	Ant1	2402	2.92	≤21	PASS
2DH5	Ant1	2441	2.90	≤21	PASS
2DH5	Ant1	2480	3.47	≤21	PASS
3DH5	Ant1	2402	2.77	≤21	PASS
3DH5	Ant1	2441	3.10	≤21	PASS
3DH5	Ant1	2480	3.70	≤21	PASS

3.2 Test Graphs



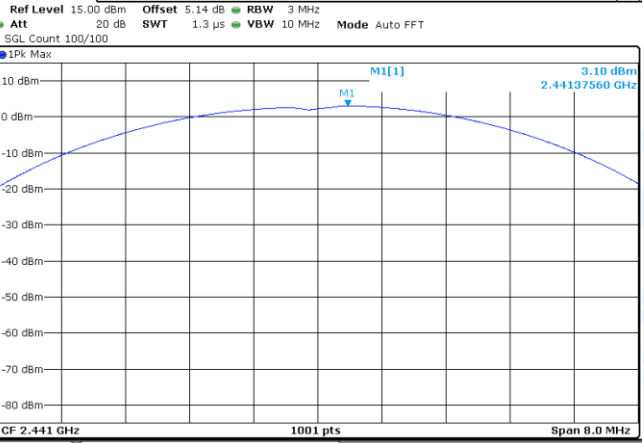
Spectrum



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3DH5-Ant1-2402-PASS

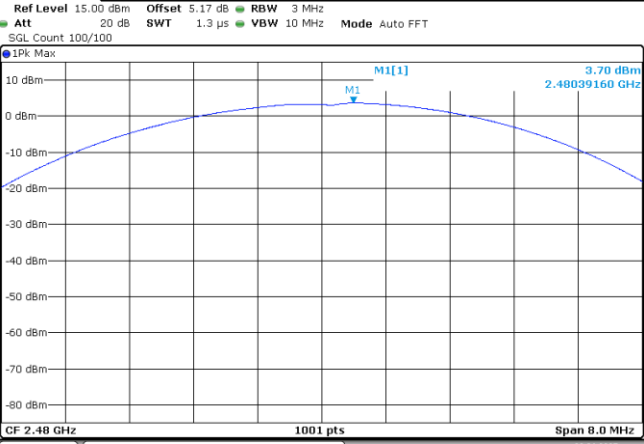
Spectrum



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3DH5-Ant1-2441-PASS

Spectrum



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3DH5-Ant1-2480-PASS

4: Carrier frequency separation

4.1 Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.991	≥0.640	PASS
2DH5	Ant1	Hop	1.023	≥0.880	PASS
3DH5	Ant1	Hop	1.009	≥0.860	PASS

4.2 Test Graphs

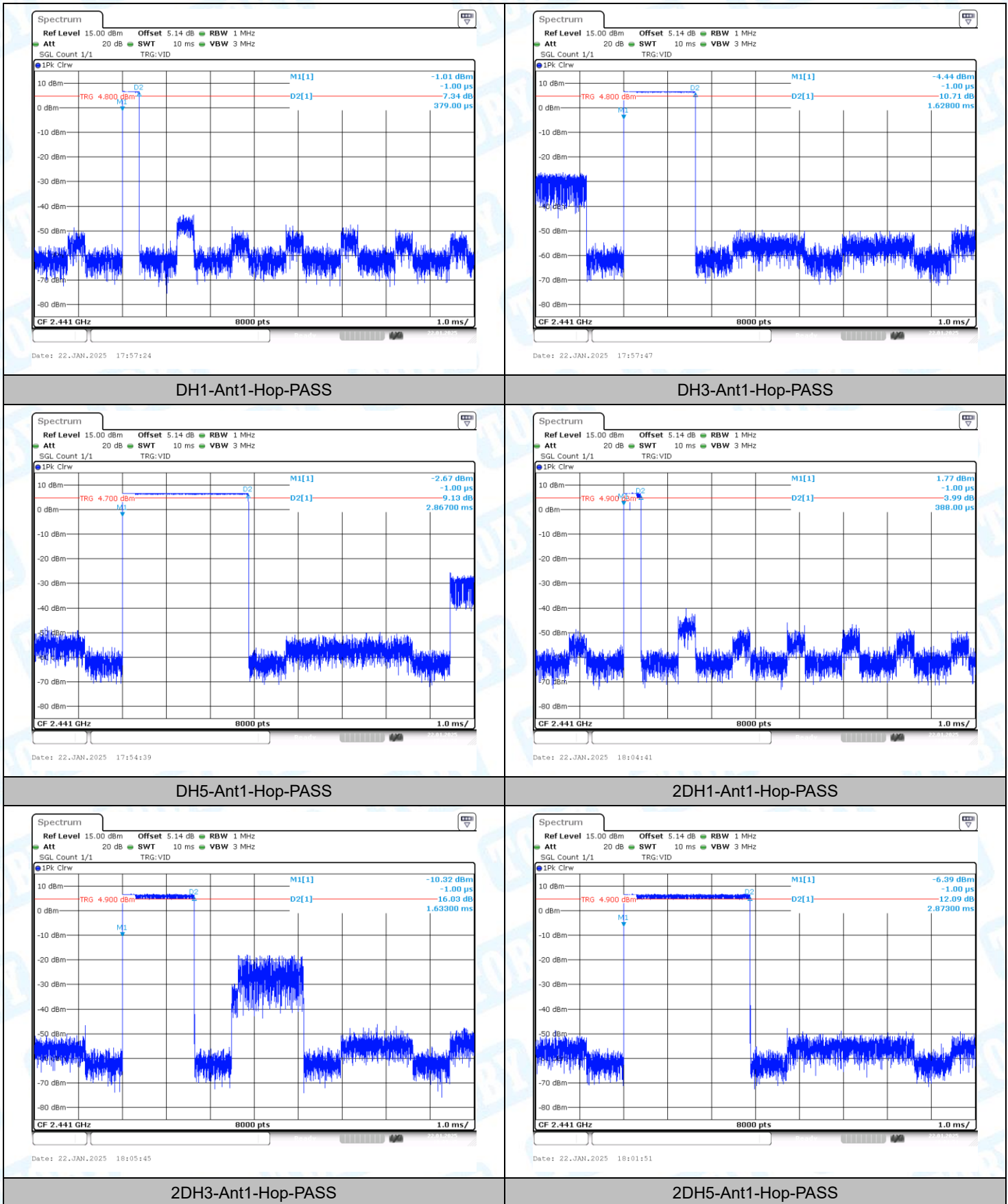


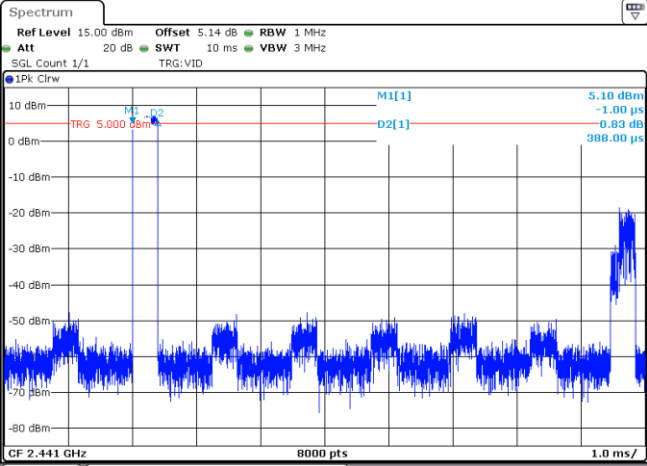
5: Time of occupancy

5.1 Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.379	320	0.121	≤0.4	PASS
DH3	Ant1	Hop	1.628	160	0.26	≤0.4	PASS
DH5	Ant1	Hop	2.867	106.67	0.306	≤0.4	PASS
2DH1	Ant1	Hop	0.388	320	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.633	160	0.261	≤0.4	PASS
2DH5	Ant1	Hop	2.873	106.67	0.306	≤0.4	PASS
3DH1	Ant1	Hop	0.388	320	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.631	160	0.261	≤0.4	PASS
3DH5	Ant1	Hop	2.875	106.67	0.307	≤0.4	PASS

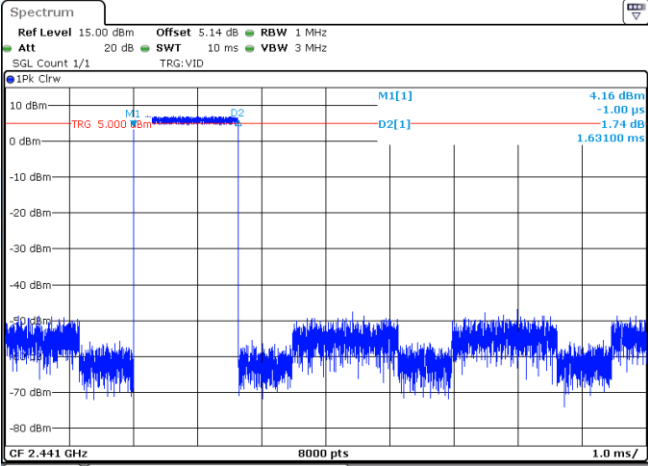
5.2 Test Graphs





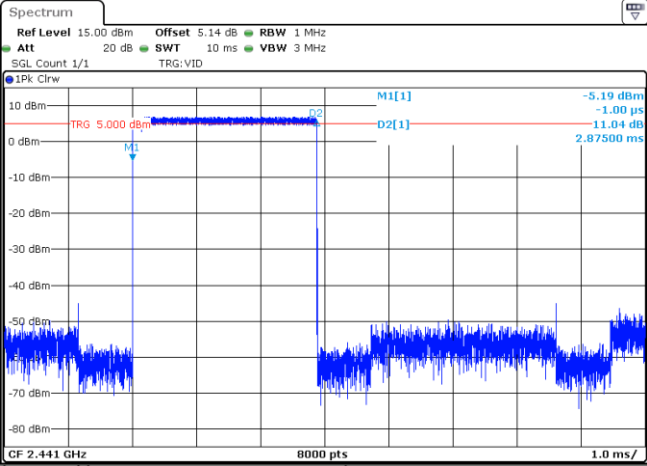
Date: 22.JAN.2025 17:49:03

3DH1-Ant1-Hop-PASS



Date: 22.JAN.2025 17:49:26

3DH3-Ant1-Hop-PASS



Date: 22.JAN.2025 17:47:46

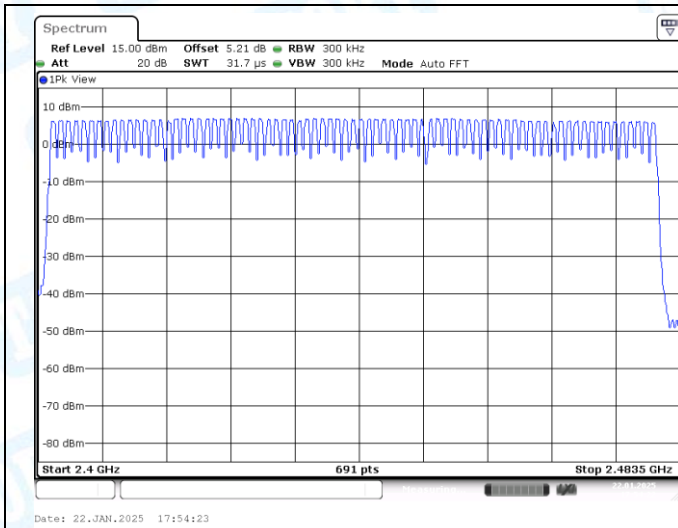
3DH5-Ant1-Hop-PASS

6: Number of hopping channels

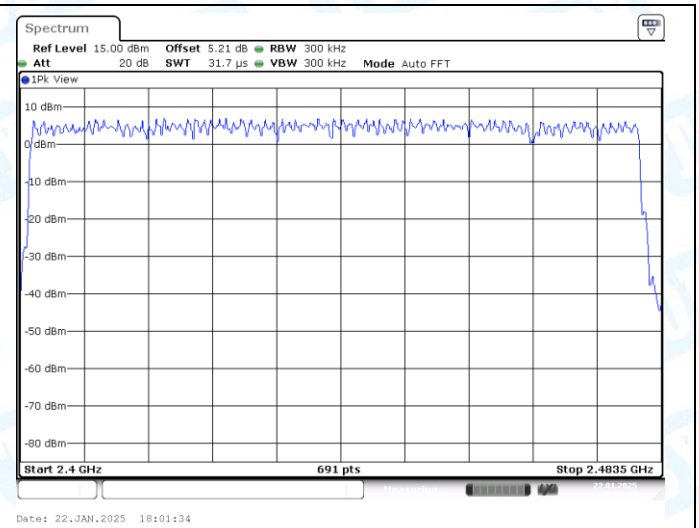
6.1 Test Result

TestMode	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

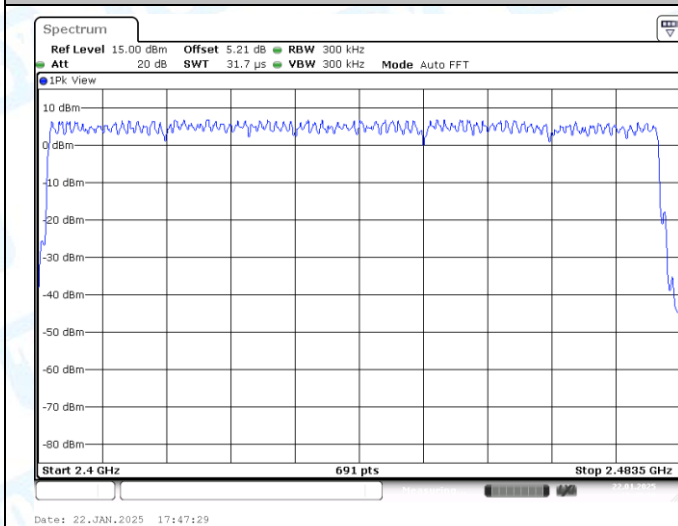
6.2 Test Graphs



DH5-Ant1-Hop-PASS



2DH5-Ant1-Hop-PASS



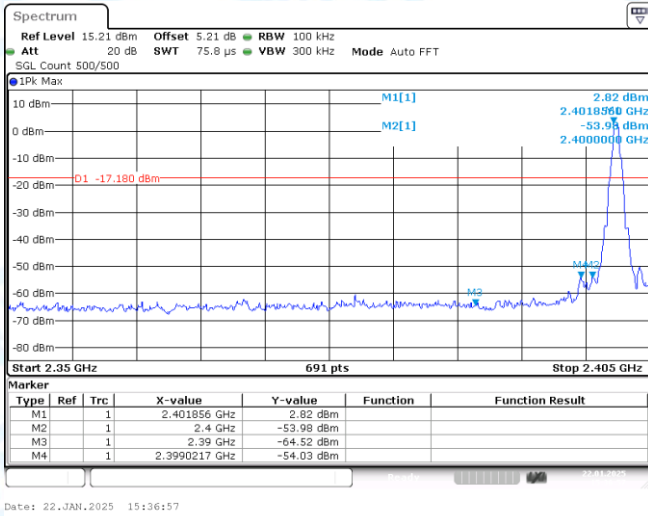
3DH5-Ant1-Hop-PASS

7: Band edge measurements

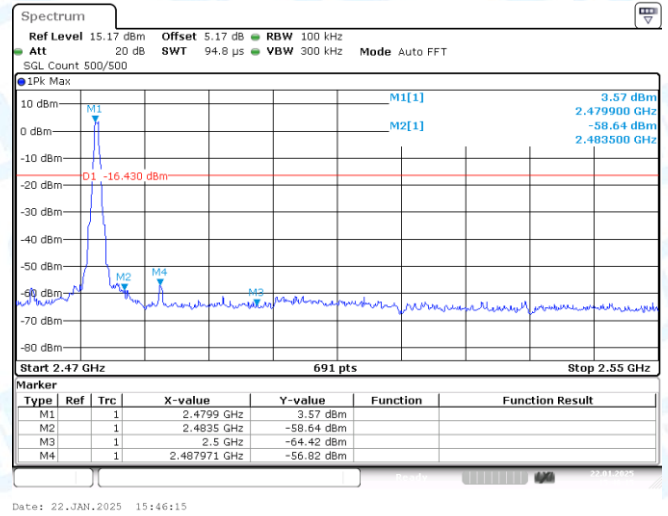
7.1 Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	2.82	-54.03	≤-17.18	PASS
DH5	Ant1	High	2480	3.57	-56.82	≤-16.43	PASS
DH5	Ant1	Low	Hop_2402	5.44	-40.77	≤-14.56	PASS
DH5	Ant1	High	Hop_2480	5.50	-50.37	≤-14.5	PASS
2DH5	Ant1	Low	2402	2.13	-54.57	≤-17.87	PASS
2DH5	Ant1	High	2480	3.36	-58.95	≤-16.64	PASS
2DH5	Ant1	Low	Hop_2402	2.24	-43.24	≤-17.76	PASS
2DH5	Ant1	High	Hop_2480	2.32	-51.69	≤-17.68	PASS
3DH5	Ant1	Low	2402	2.75	-54.85	≤-17.25	PASS
3DH5	Ant1	High	2480	3.52	-59	≤-16.48	PASS
3DH5	Ant1	Low	Hop_2402	2.21	-44.09	≤-17.79	PASS
3DH5	Ant1	High	Hop_2480	5.74	-53.91	≤-14.26	PASS

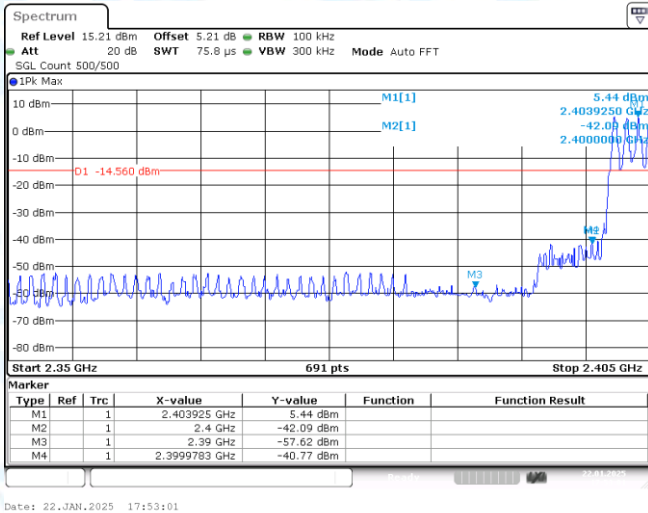
7.2 Test Graphs



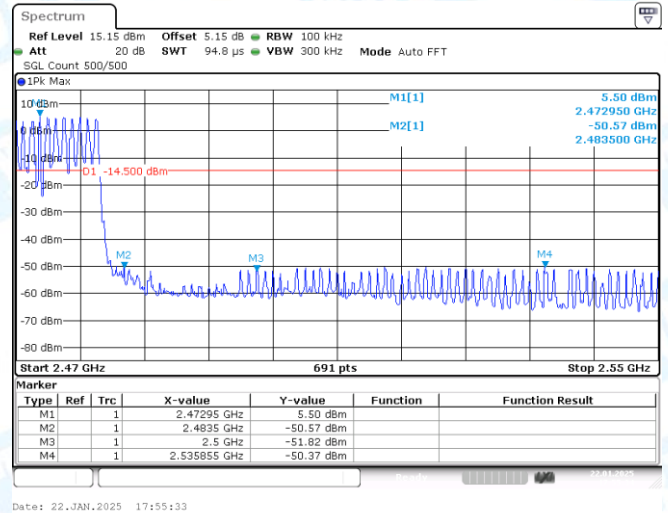
DH5-Ant1-2402-PASS



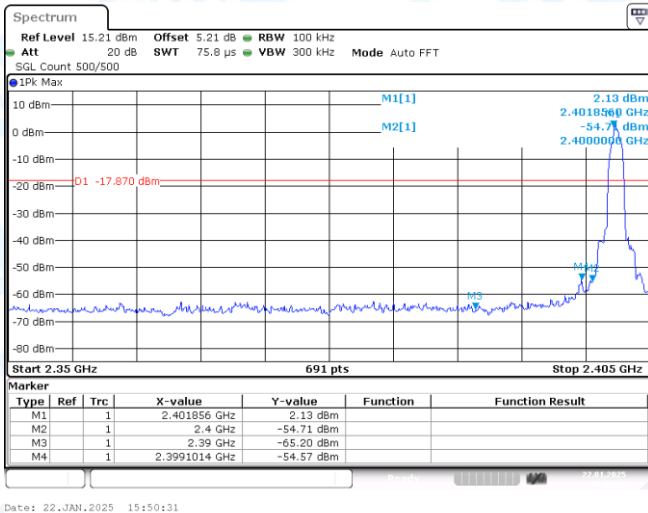
DH5-Ant1-2480-PASS



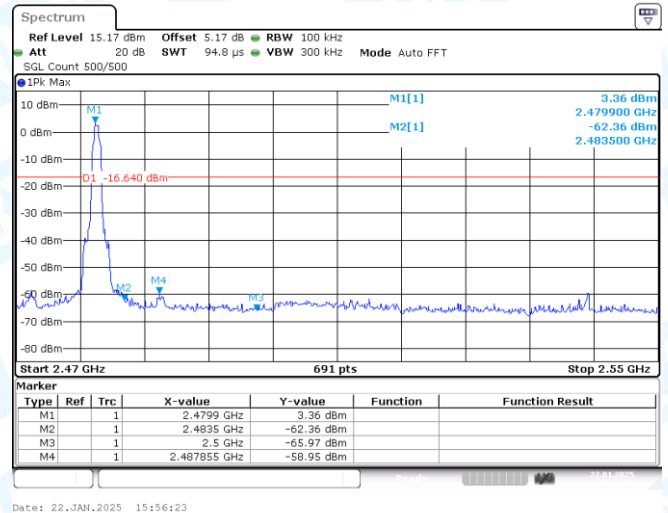
DH5-Ant1-Hop_2402-PASS



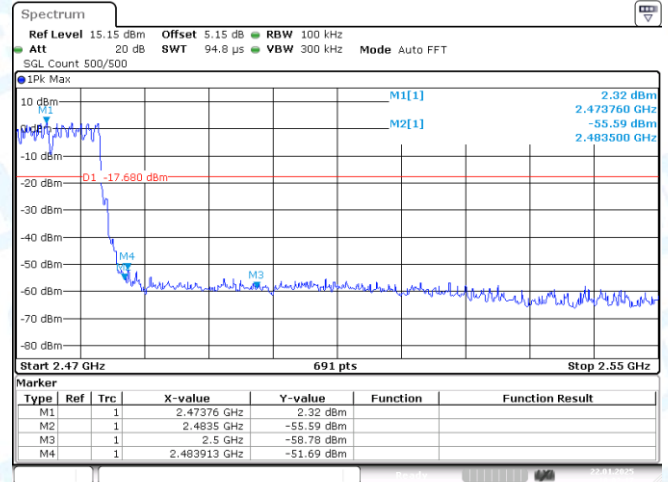
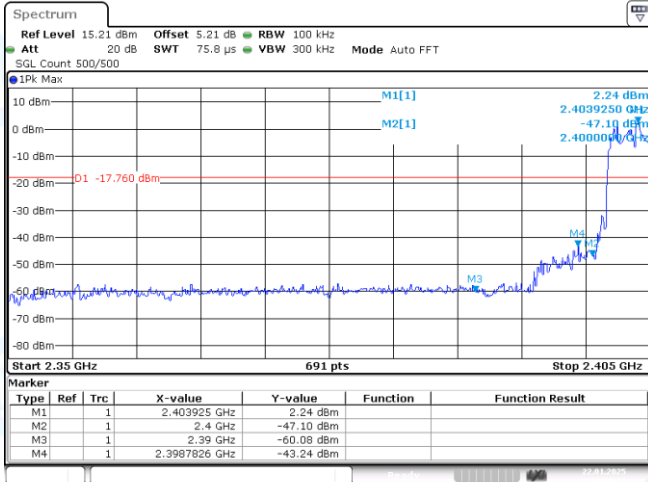
DH5-Ant1-Hop_2480-PASS



2DH5-Ant1-2402-PASS

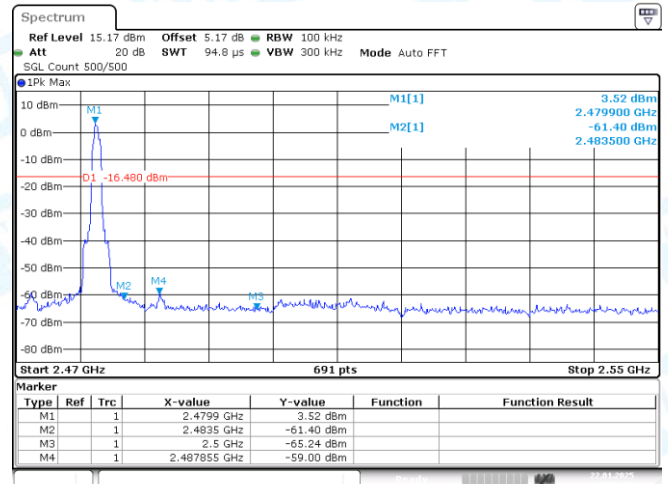
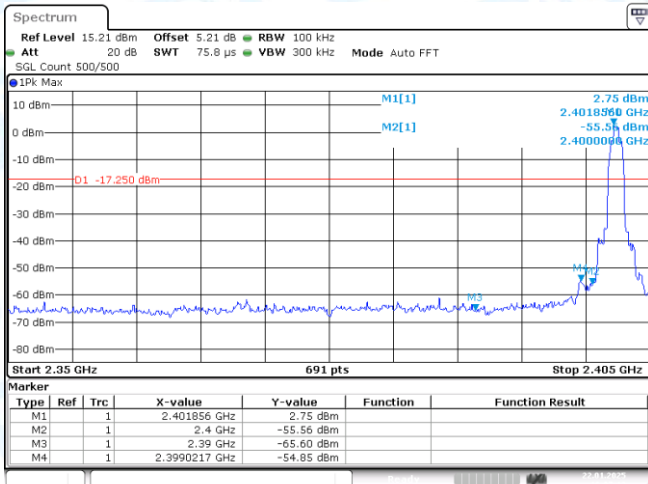


2DH5-Ant1-2480-PASS



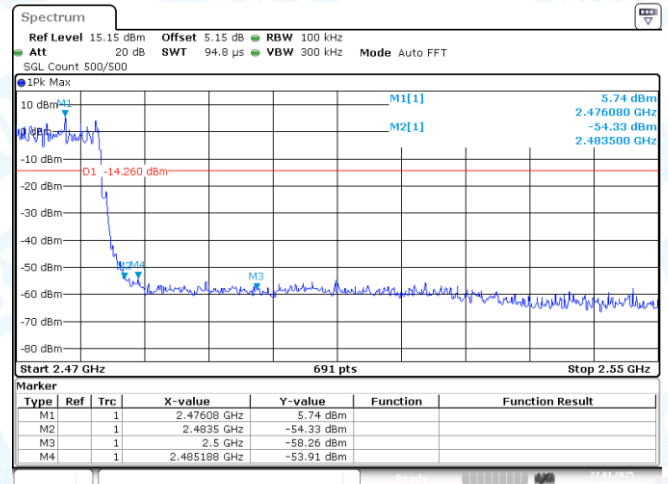
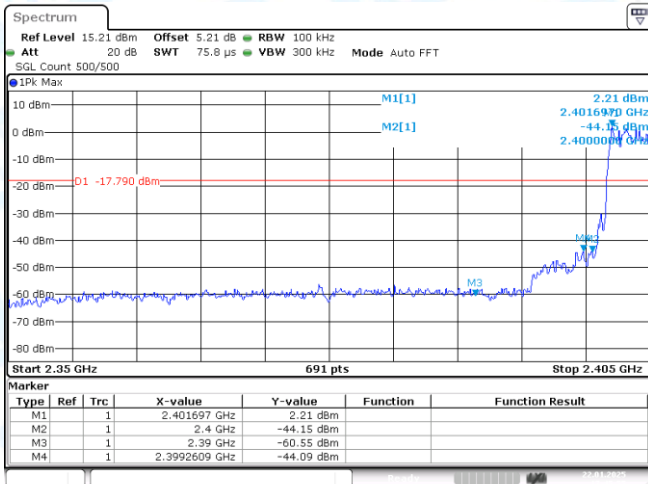
2DH5-Ant1-Hop_2402-PASS

2DH5-Ant1-Hop_2480-PASS



3DH5-Ant1-2402-PASS

3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS

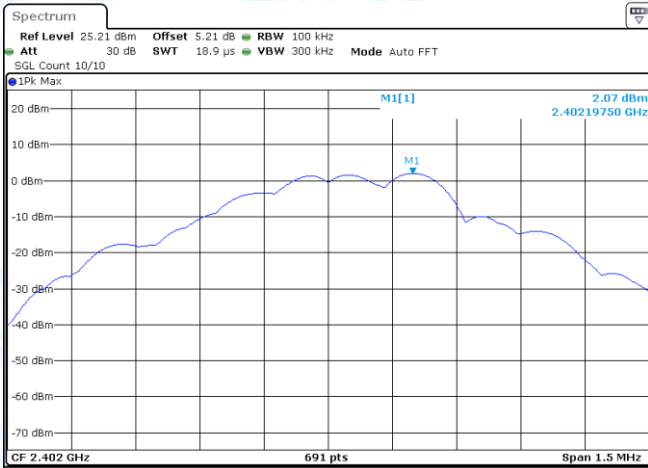
3DH5-Ant1-Hop_2480-PASS

8: Conducted Spurious Emission

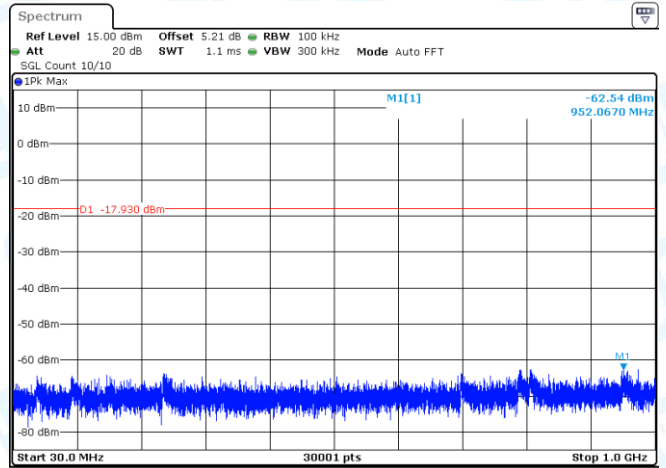
8.1 Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	2.07	2.07	---	PASS
DH5	Ant1	2402	30~1000	2.07	-62.54	≤-17.93	PASS
DH5	Ant1	2402	1000~26500	2.07	-45.04	≤-17.93	PASS
DH5	Ant1	2441	0~Reference	2.16	2.16	---	PASS
DH5	Ant1	2441	30~1000	2.16	-62.1	≤-17.84	PASS
DH5	Ant1	2441	1000~26500	2.16	-46.21	≤-17.84	PASS
DH5	Ant1	2480	0~Reference	2.49	2.49	---	PASS
DH5	Ant1	2480	30~1000	2.49	-62.61	≤-17.51	PASS
DH5	Ant1	2480	1000~26500	2.49	-45.02	≤-17.51	PASS
2DH5	Ant1	2402	0~Reference	-3.61	-3.61	---	PASS
2DH5	Ant1	2402	30~1000	-3.61	-61.79	≤-23.61	PASS
2DH5	Ant1	2402	1000~26500	-3.61	-45.78	≤-23.61	PASS
2DH5	Ant1	2441	0~Reference	1.14	1.14	---	PASS
2DH5	Ant1	2441	30~1000	1.14	-62.43	≤-18.86	PASS
2DH5	Ant1	2441	1000~26500	1.14	-45.89	≤-18.86	PASS
2DH5	Ant1	2480	0~Reference	0.90	0.90	---	PASS
2DH5	Ant1	2480	30~1000	0.90	-61.85	≤-19.1	PASS
2DH5	Ant1	2480	1000~26500	0.90	-45.92	≤-19.1	PASS
3DH5	Ant1	2402	0~Reference	0.05	0.05	---	PASS
3DH5	Ant1	2402	30~1000	0.05	-62.09	≤-19.95	PASS
3DH5	Ant1	2402	1000~26500	0.05	-45.55	≤-19.95	PASS
3DH5	Ant1	2441	0~Reference	-4.30	-4.30	---	PASS
3DH5	Ant1	2441	30~1000	-4.30	-61.04	≤-24.3	PASS
3DH5	Ant1	2441	1000~26500	-4.30	-47.79	≤-24.3	PASS
3DH5	Ant1	2480	0~Reference	-3.00	-3.00	---	PASS
3DH5	Ant1	2480	30~1000	-3.00	-62.54	≤-23	PASS
3DH5	Ant1	2480	1000~26500	-3.00	-52.53	≤-23	PASS

8.2 Test Graphs



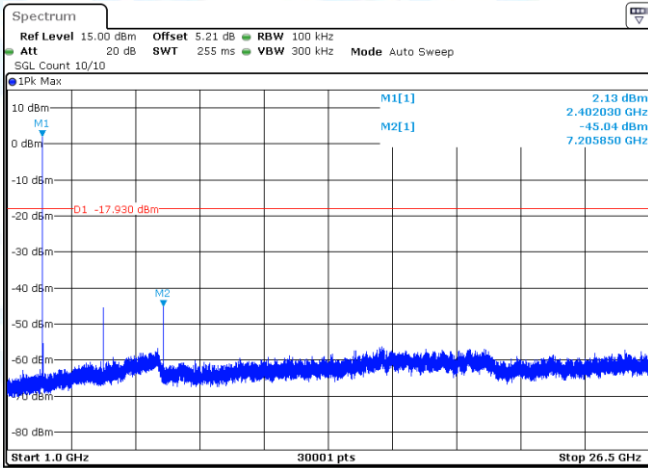
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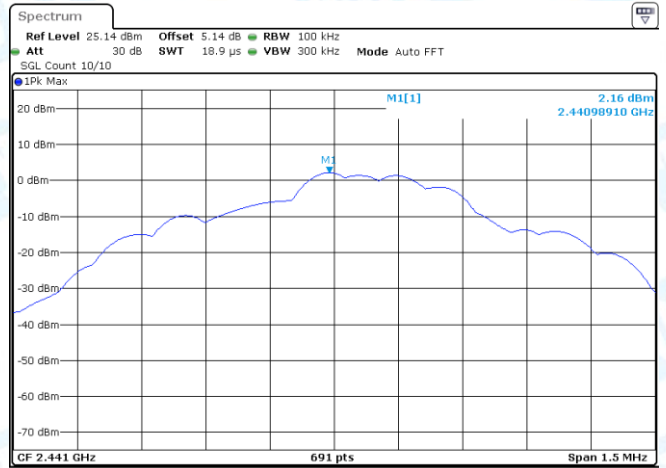
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DH5-Ant1-2402-0~Reference-PASS

DH5-Ant1-2402-30~1000-PASS



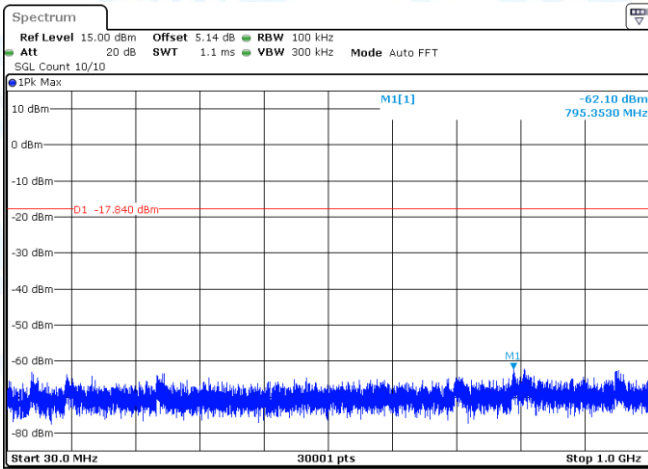
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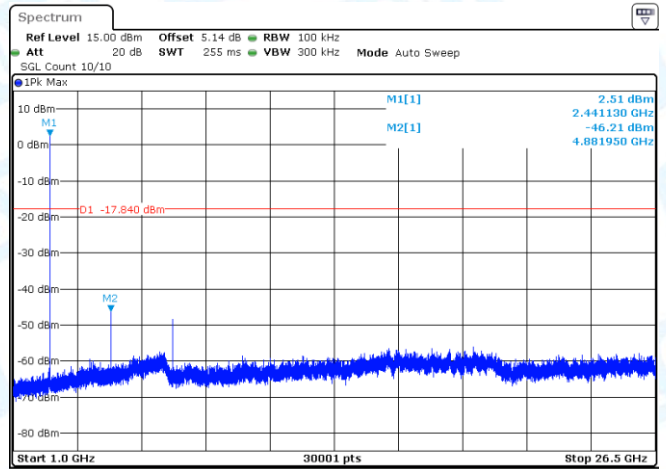
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DH5-Ant1-2402-1000~26500-PASS

DH5-Ant1-2441-0~Reference-PASS



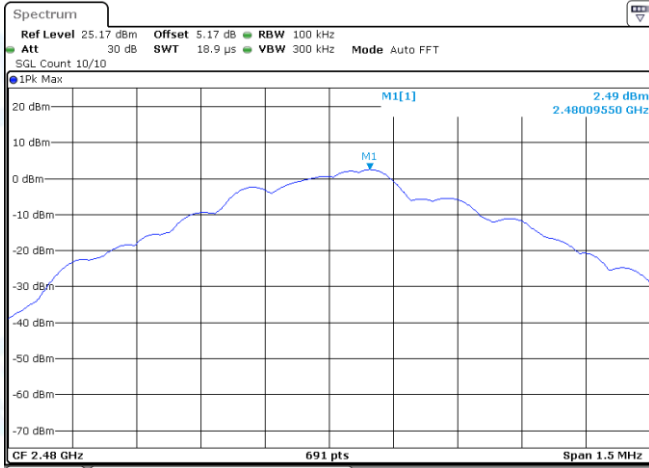
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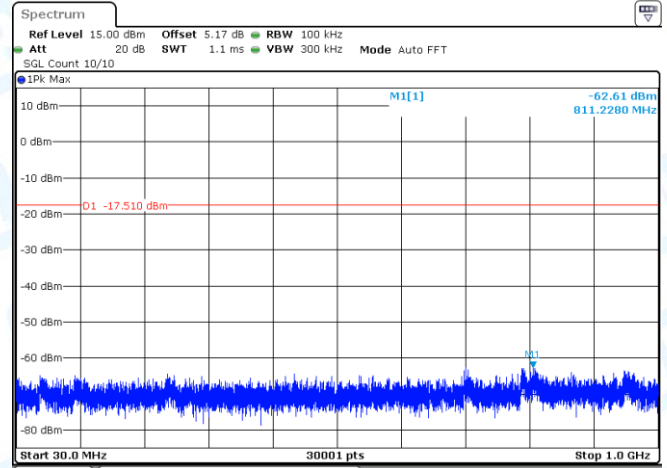
DH5-Ant1-2441-30~1000-PASS

DH5-Ant1-2441-1000~26500-PASS



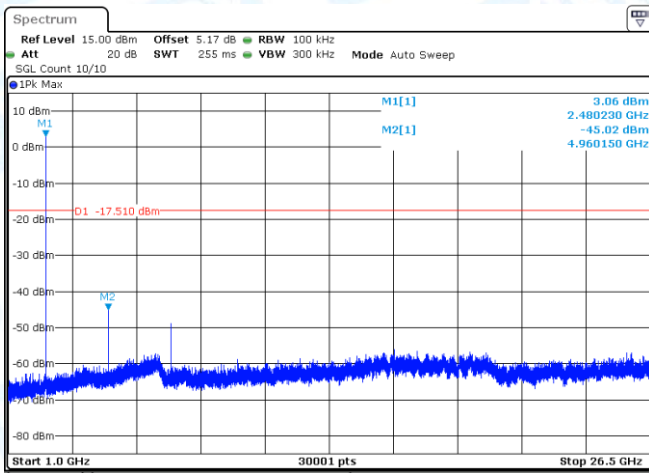
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DH5-Ant1-2480-0~Reference-PASS



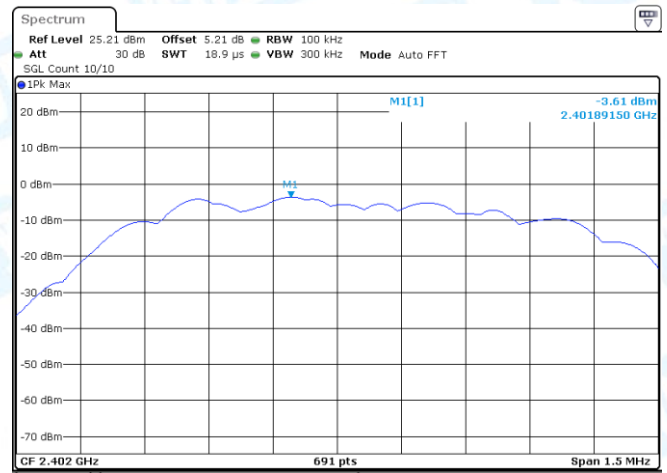
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DH5-Ant1-2480-30~1000-PASS



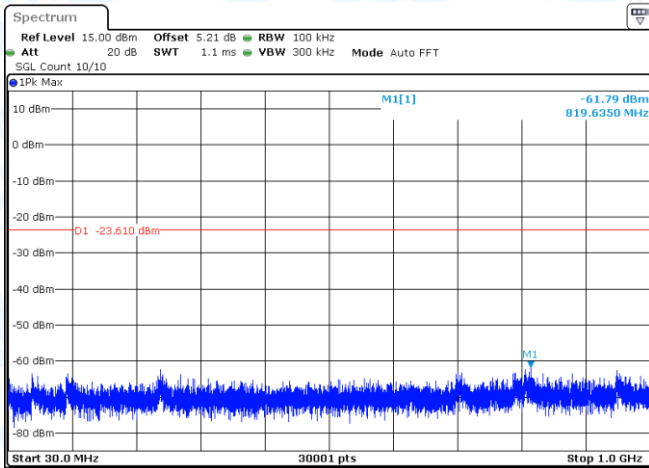
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DH5-Ant1-2480-1000~26500-PASS



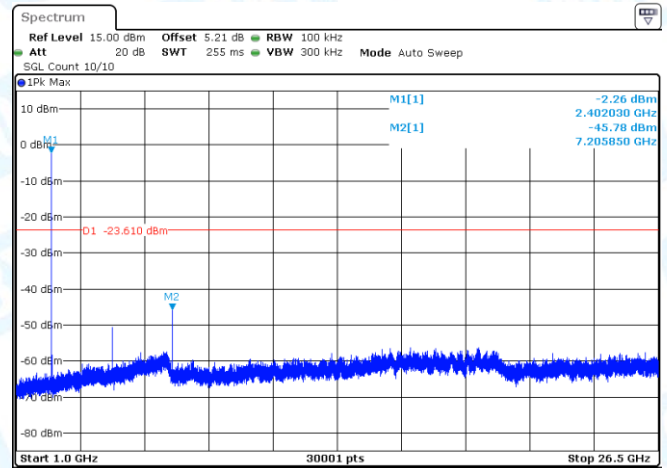
Date: 22.JAN.2025 15:51:06

2DH5-Ant1-2402-0~Reference-PASS



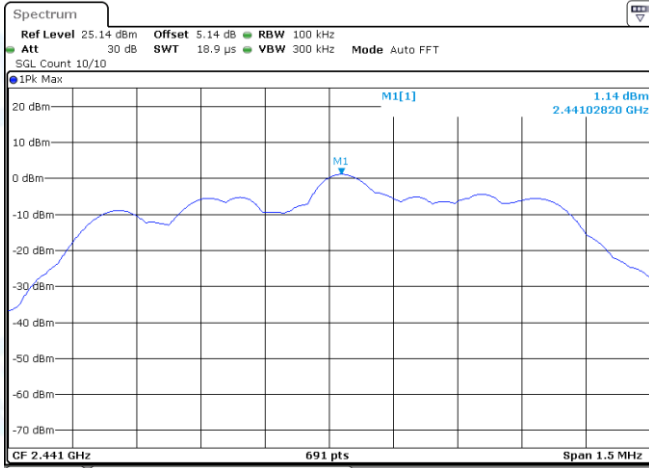
Date: 22.JAN.2025 15:51:13

2DH5-Ant1-2402-30~1000-PASS



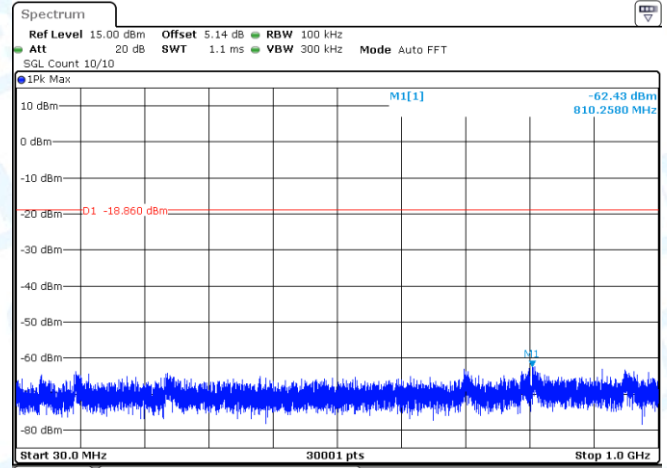
Date: 22.JAN.2025 15:51:30

2DH5-Ant1-2402-1000~26500-PASS



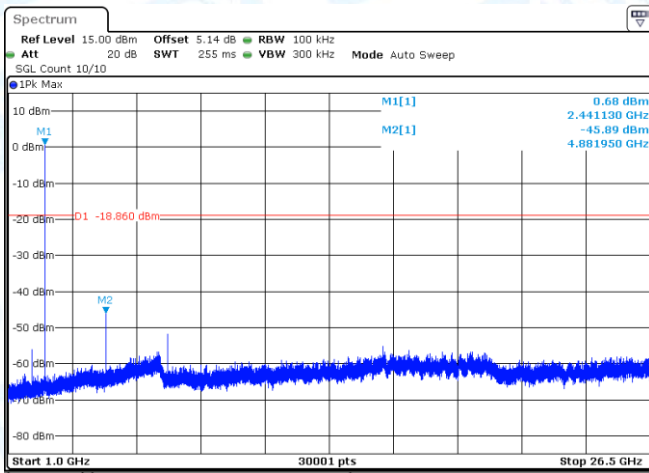
Date: 22.JAN.2025 15:54:28

2DH5-Ant1-2441-0~Reference-PASS



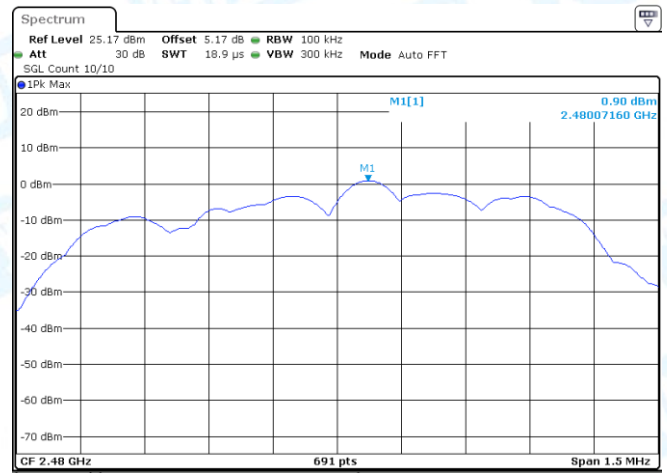
Date: 22.JAN.2025 15:54:35

2DH5-Ant1-2441-30~1000-PASS



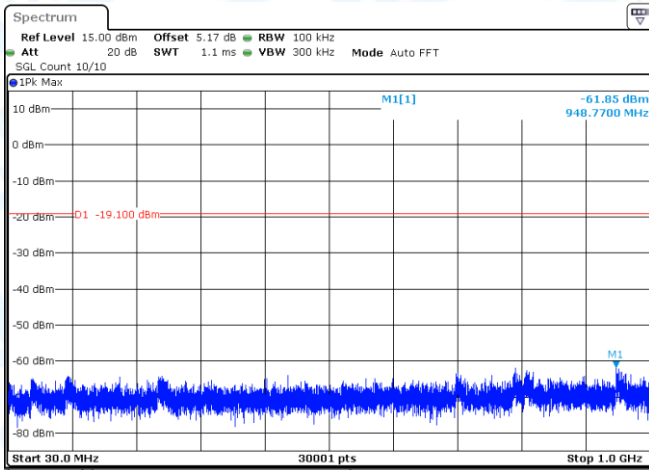
Date: 22.JAN.2025 15:54:53

2DH5-Ant1-2441-1000~26500-PASS



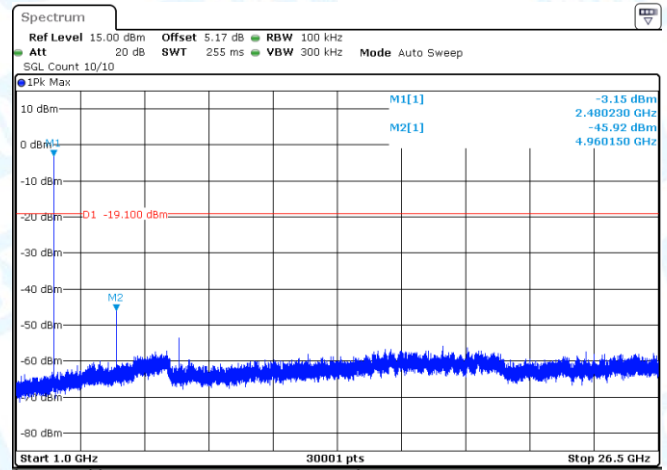
Date: 22.JAN.2025 15:56:50

2DH5-Ant1-2480-0~Reference-PASS



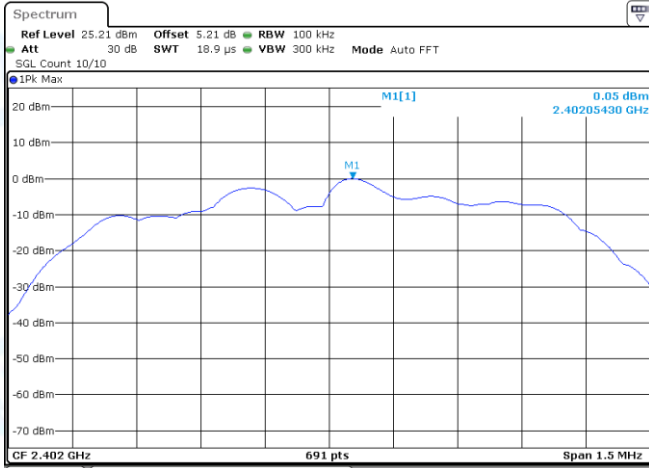
Date: 22.JAN.2025 15:56:58

2DH5-Ant1-2480-30~1000-PASS



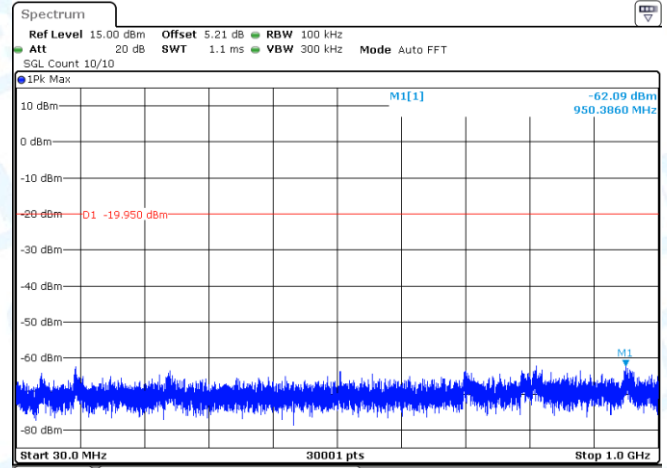
Date: 22.JAN.2025 15:57:15

2DH5-Ant1-2480-1000~26500-PASS



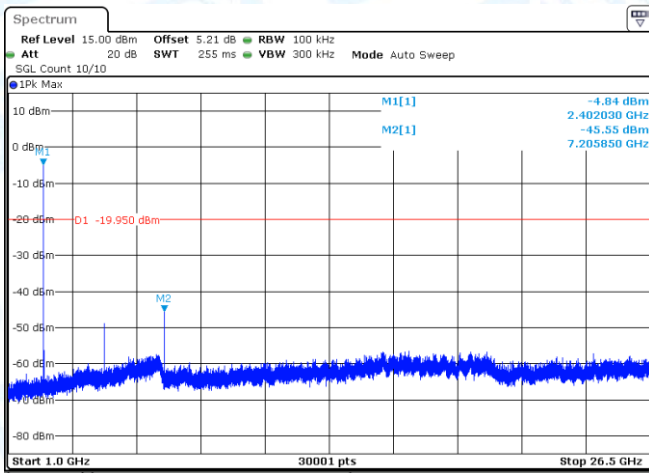
Date: 22.JAN.2025 16:07:46

3DH5-Ant1-2402-0~Reference-PASS



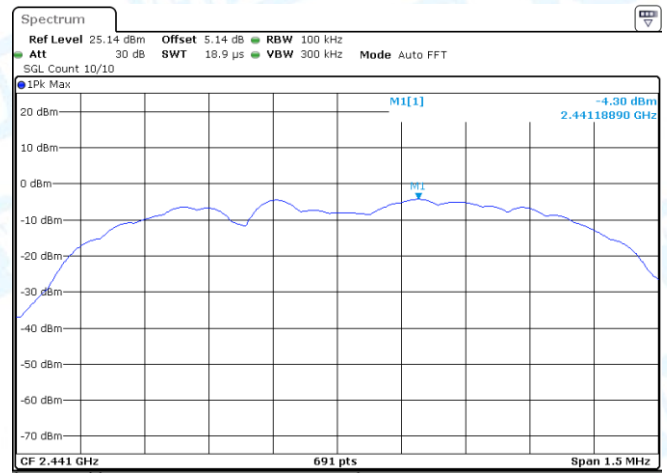
Date: 22.JAN.2025 16:07:54

3DH5-Ant1-2402-30~1000-PASS



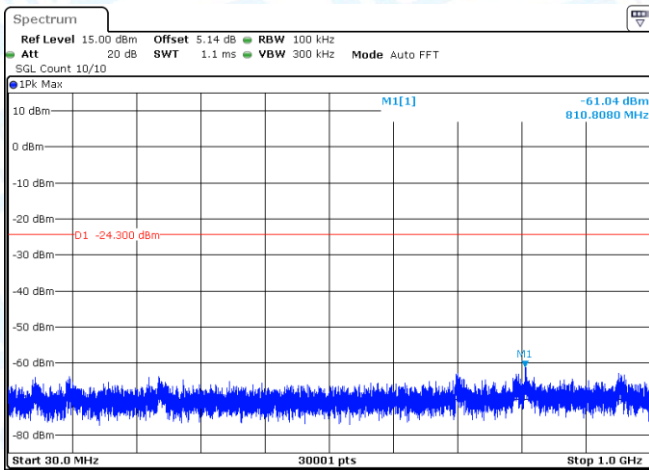
Date: 22.JAN.2025 16:08:11

3DH5-Ant1-2402-1000~26500-PASS



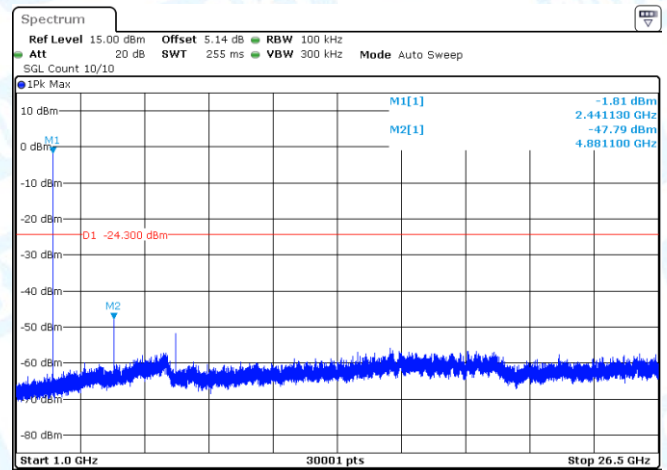
Date: 22.JAN.2025 16:11:49

3DH5-Ant1-2441-0~Reference-PASS



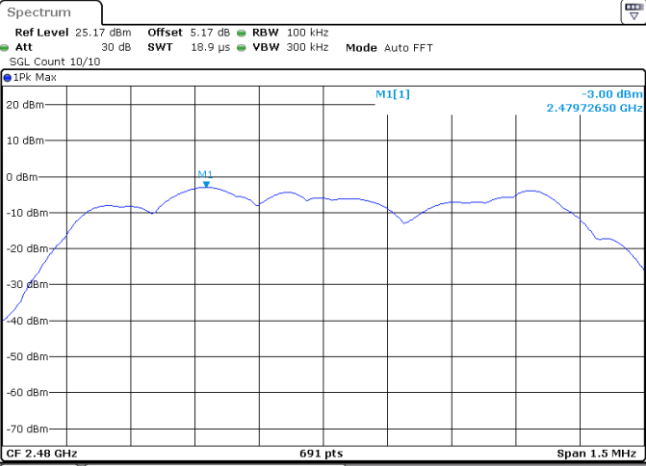
Date: 22.JAN.2025 16:11:56

3DH5-Ant1-2441-30~1000-PASS



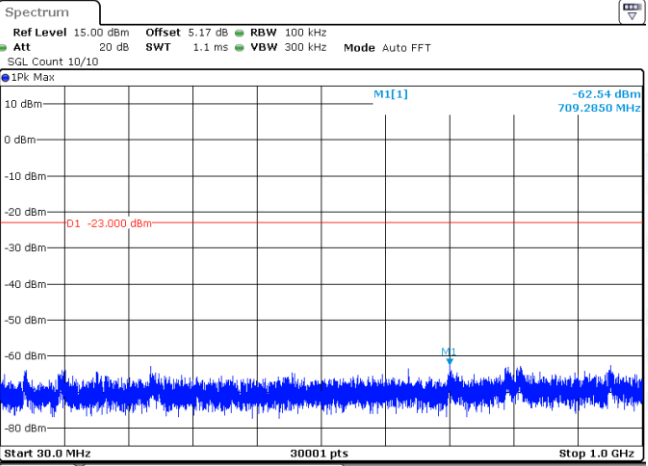
Date: 22.JAN.2025 16:12:14

3DH5-Ant1-2441-1000~26500-PASS



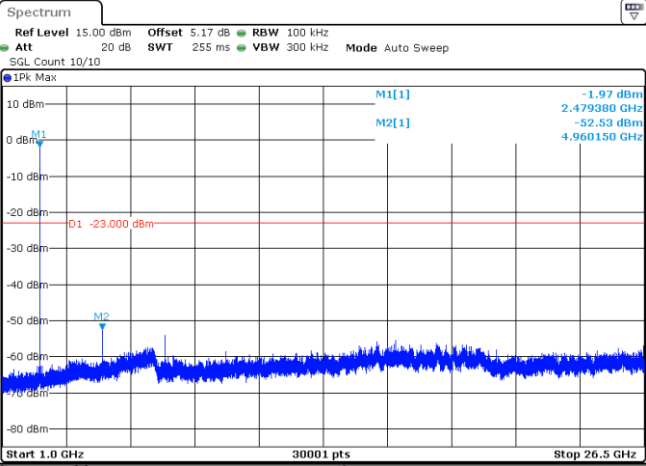
Date: 22.JAN.2025 16:22:18

3DH5-Ant1-2480-0~Reference-PASS



Date: 22.JAN.2025 16:22:25

3DH5-Ant1-2480-30~1000-PASS



Date: 22.JAN.2025 16:22:43

3DH5-Ant1-2480-1000~26500-PASS

9: Duty Cycle

9.1 Test Result

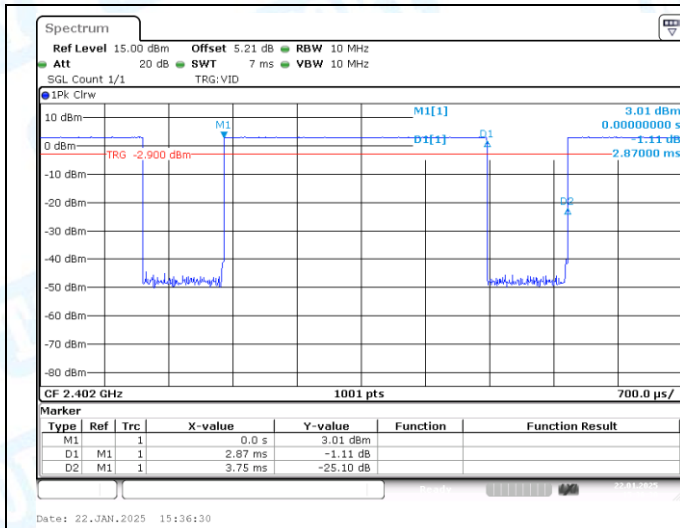
TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
DH5	Ant1	2402	2.87	3.75	76.53	1.16	0.35
DH5	Ant1	2441	2.87	3.75	76.53	1.16	0.35
DH5	Ant1	2480	2.87	3.75	76.53	1.16	0.35
2DH5	Ant1	2402	2.88	3.75	76.80	1.15	0.35
2DH5	Ant1	2441	2.88	3.75	76.80	1.15	0.35
2DH5	Ant1	2480	2.88	3.75	76.80	1.15	0.35
3DH5	Ant1	2402	2.88	3.75	76.80	1.15	0.35
3DH5	Ant1	2441	2.88	3.75	76.80	1.15	0.35
3DH5	Ant1	2480	2.88	3.75	76.80	1.15	0.35

Note: 1, Duty Cycle= Transmission Duration/ Transmission Period

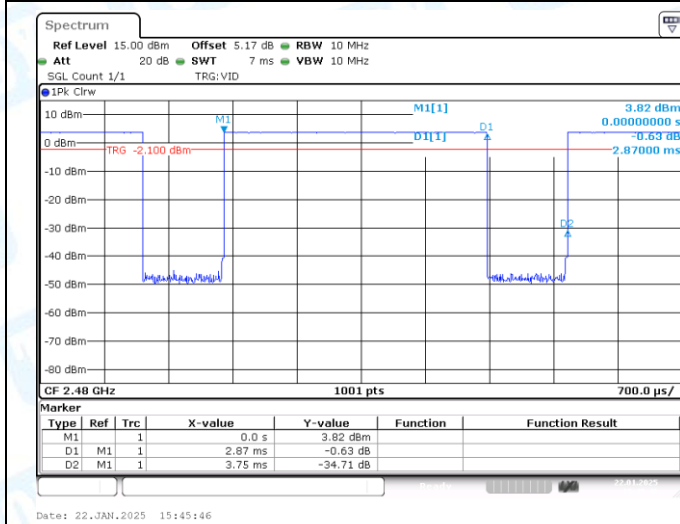
2, DC Factory=10*Log₁₀(1/Duty Cycle)

3, 1/T=1/ Transmission Duration

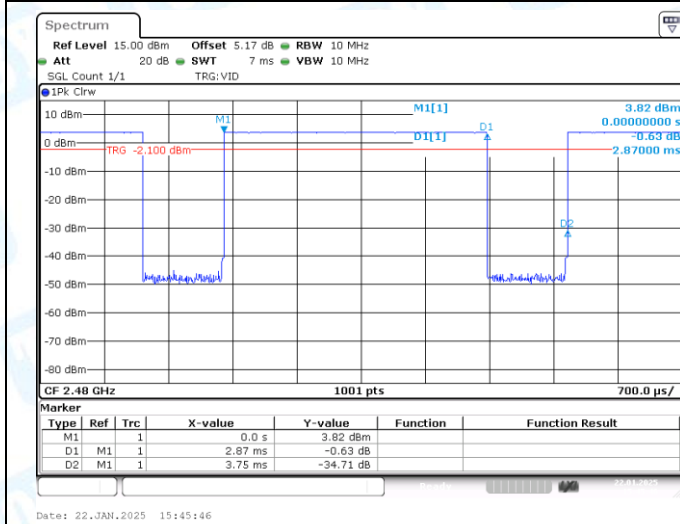
9.2 Test Graphs



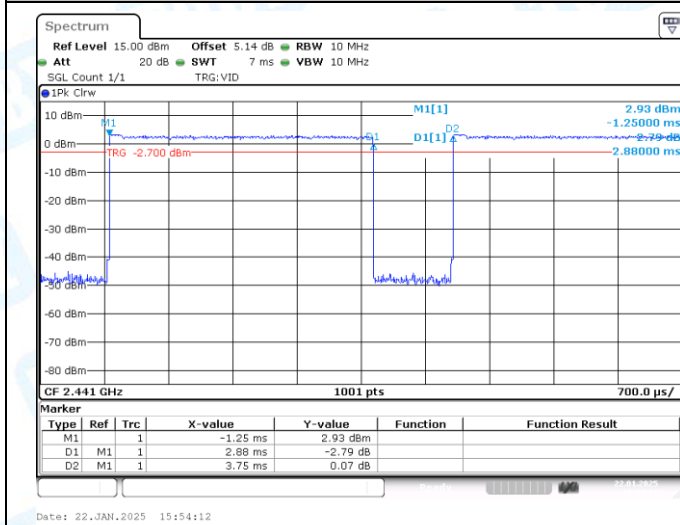
NTVN-DH5-Ant1-2402



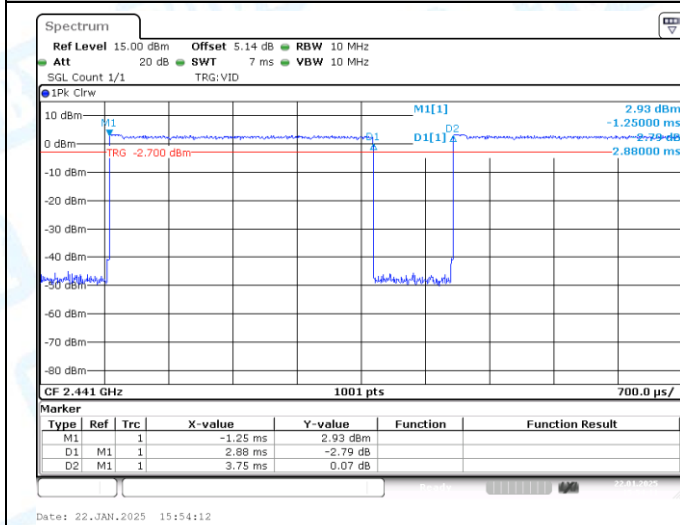
NTVN-DH5-Ant1-2441



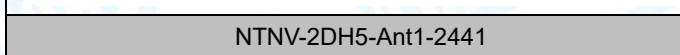
NTVN-DH5-Ant1-2480



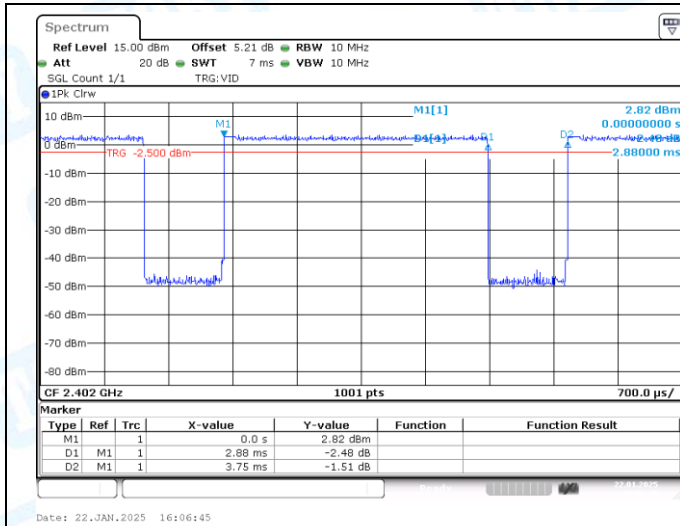
NTVN-2DH5-Ant1-2402



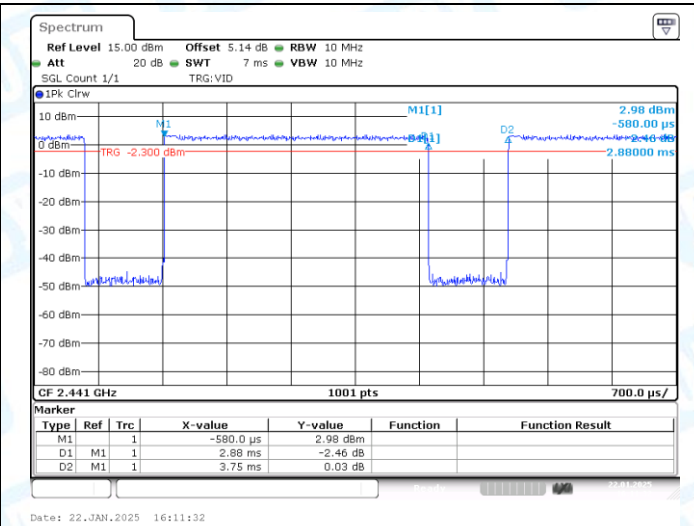
NTVN-2DH5-Ant1-2441



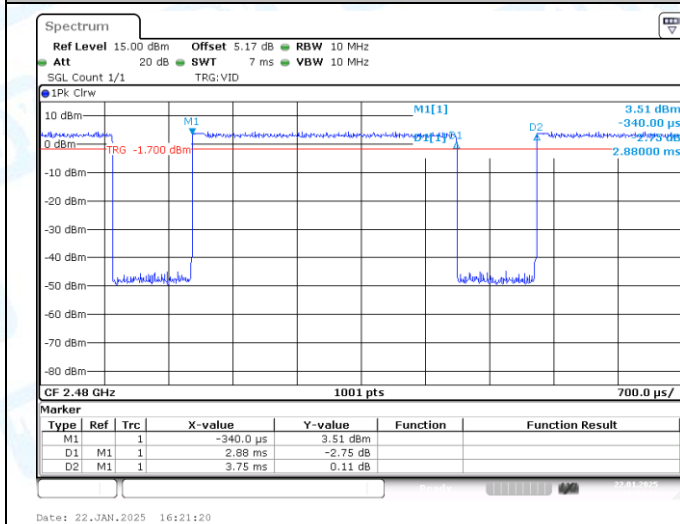
NTVN-2DH5-Ant1-2480



NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441



NTNV-3DH5-Ant1-2480

10: Emissions in Restricted Bands

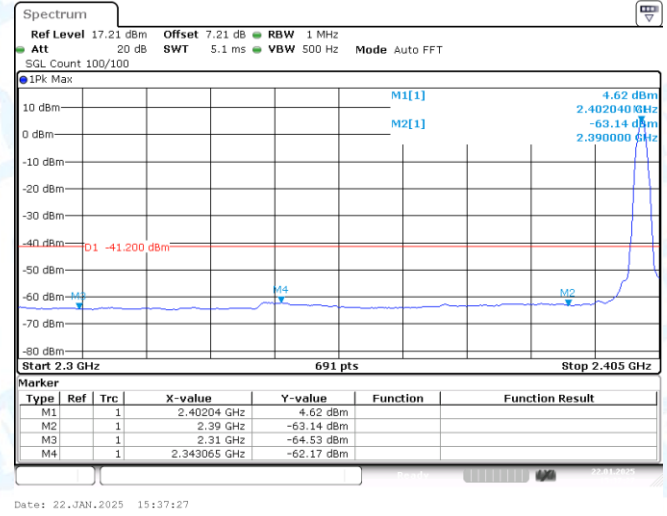
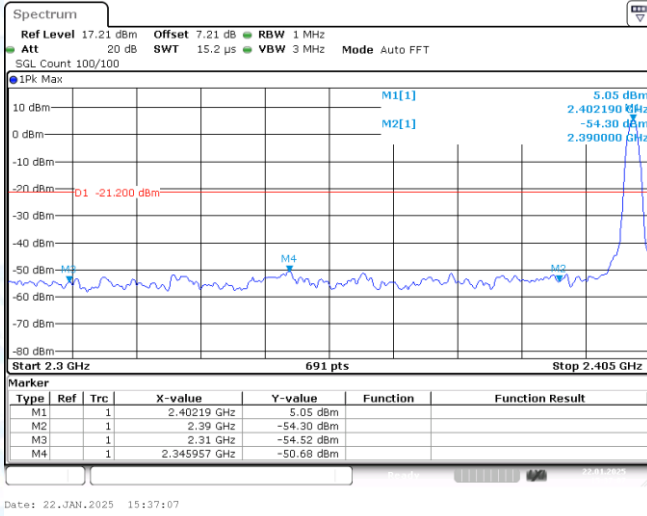
10.1 Test Result

Test Mode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	Peak	2390.000	-54.3	≤-21.20	40.90	≤74	PASS
DH5	Ant1	Low	2402	Peak	2310.000	-54.52	≤-21.20	40.68	≤74	PASS
DH5	Ant1	Low	2402	Peak	2345.957	-50.68	≤-21.20	44.52	≤74	PASS
DH5	Ant1	Low	2402	AV	2390.000	-63.14	≤-41.20	32.06	≤54	PASS
DH5	Ant1	Low	2402	AV	2310.000	-64.53	≤-41.20	30.67	≤54	PASS
DH5	Ant1	Low	2402	AV	2343.065	-62.17	≤-41.20	33.03	≤54	PASS
DH5	Ant1	High	2480	Peak	2483.500	-49.74	≤-21.20	45.46	≤74	PASS
DH5	Ant1	High	2480	Peak	2500.000	-54.19	≤-21.20	41.01	≤74	PASS
DH5	Ant1	High	2480	Peak	2483.681	-49.02	≤-21.20	46.18	≤74	PASS
DH5	Ant1	High	2480	AV	2483.500	-58.38	≤-41.20	36.82	≤54	PASS
DH5	Ant1	High	2480	AV	2500.000	-62.98	≤-41.20	32.22	≤54	PASS
DH5	Ant1	High	2480	AV	2487.971	-57.44	≤-41.20	37.76	≤54	PASS
2DH5	Ant1	Low	2402	Peak	2390.000	-55.04	≤-21.20	40.16	≤74	PASS
2DH5	Ant1	Low	2402	Peak	2310.000	-55.41	≤-21.20	39.79	≤74	PASS
2DH5	Ant1	Low	2402	Peak	2342.913	-49.37	≤-21.20	45.83	≤74	PASS
2DH5	Ant1	Low	2402	AV	2390.000	-63.95	≤-41.20	31.25	≤54	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-64.54	≤-41.20	30.66	≤54	PASS
2DH5	Ant1	Low	2402	AV	2340.630	-62.27	≤-41.20	32.93	≤54	PASS
2DH5	Ant1	High	2480	Peak	2483.500	-50.38	≤-21.20	44.82	≤74	PASS
2DH5	Ant1	High	2480	Peak	2500.000	-53.7	≤-21.20	41.50	≤74	PASS
2DH5	Ant1	High	2480	Peak	2483.681	-49.44	≤-21.20	45.76	≤74	PASS
2DH5	Ant1	High	2480	AV	2483.500	-60.25	≤-41.20	34.95	≤54	PASS
2DH5	Ant1	High	2480	AV	2500.000	-63.81	≤-41.20	31.39	≤54	PASS
2DH5	Ant1	High	2480	AV	2483.565	-60.41	≤-41.20	34.79	≤54	PASS
3DH5	Ant1	Low	2402	Peak	2390.000	-55.47	≤-21.20	39.73	≤74	PASS
3DH5	Ant1	Low	2402	Peak	2310.000	-55.81	≤-21.20	39.39	≤74	PASS
3DH5	Ant1	Low	2402	Peak	2379.587	-51.52	≤-21.20	43.68	≤74	PASS
3DH5	Ant1	Low	2402	AV	2390.000	-64.1	≤-41.20	31.10	≤54	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-64.66	≤-41.20	30.54	≤54	PASS
3DH5	Ant1	Low	2402	AV	2340.478	-62.24	≤-41.20	32.96	≤54	PASS
3DH5	Ant1	High	2480	Peak	2483.500	-53.22	≤-21.20	41.98	≤74	PASS
3DH5	Ant1	High	2480	Peak	2500.000	-55.13	≤-21.20	40.07	≤74	PASS
3DH5	Ant1	High	2480	Peak	2485.188	-50.21	≤-21.20	44.99	≤74	PASS
3DH5	Ant1	High	2480	AV	2483.500	-60.18	≤-41.20	35.02	≤54	PASS
3DH5	Ant1	High	2480	AV	2500.000	-63.83	≤-41.20	31.37	≤54	PASS
3DH5	Ant1	High	2480	AV	2483.565	-60.24	≤-41.20	34.96	≤54	PASS

Note:

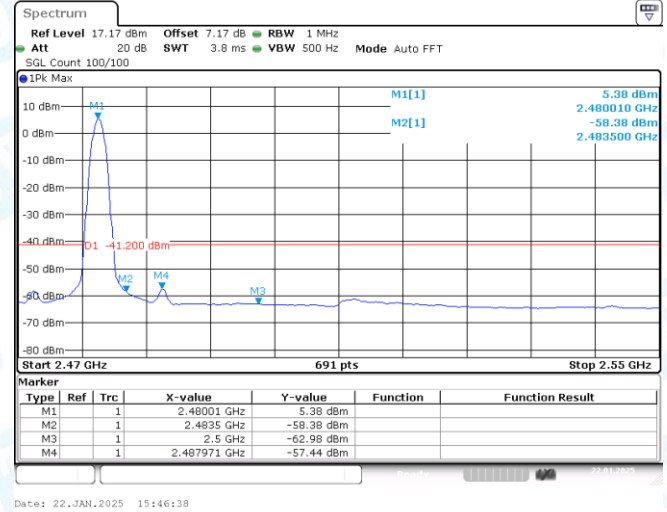
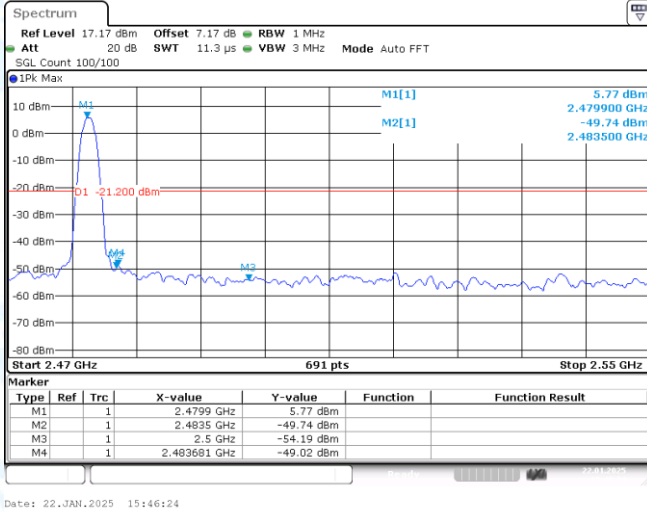
- The Antenna Gain is compensated in the graph.
- The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

10.2 Test Graphs



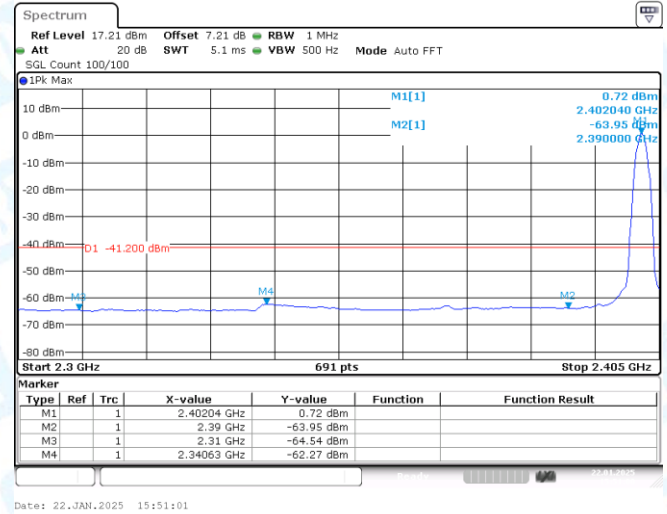
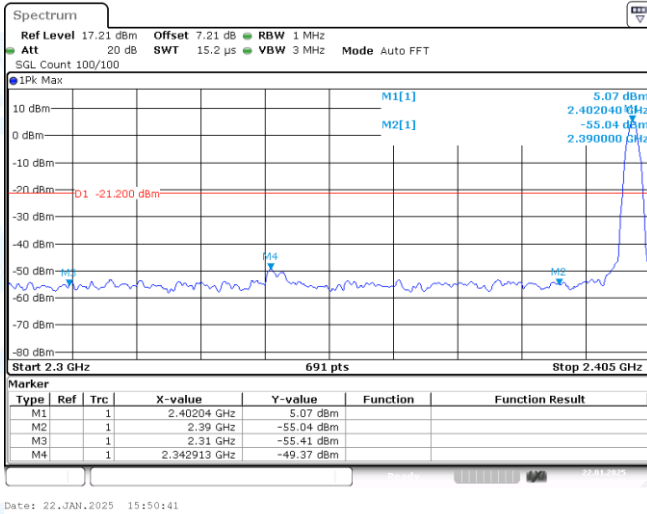
DH5-Ant1-2402-PASS

DH5-Ant1-2402-PASS



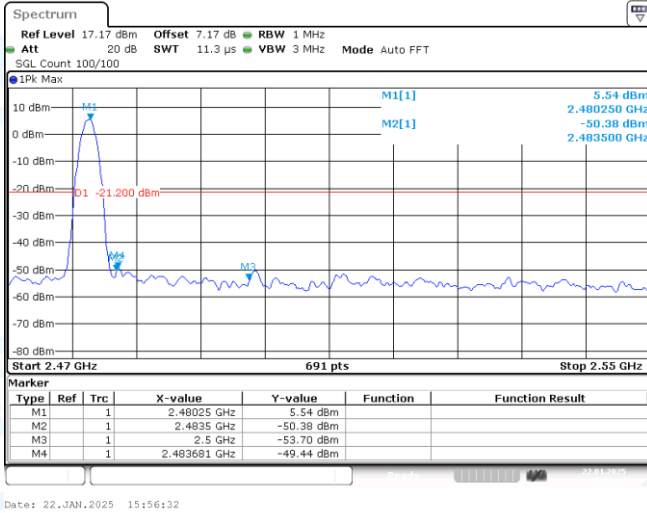
DH5-Ant1-2480-PASS

DH5-Ant1-2480-PASS

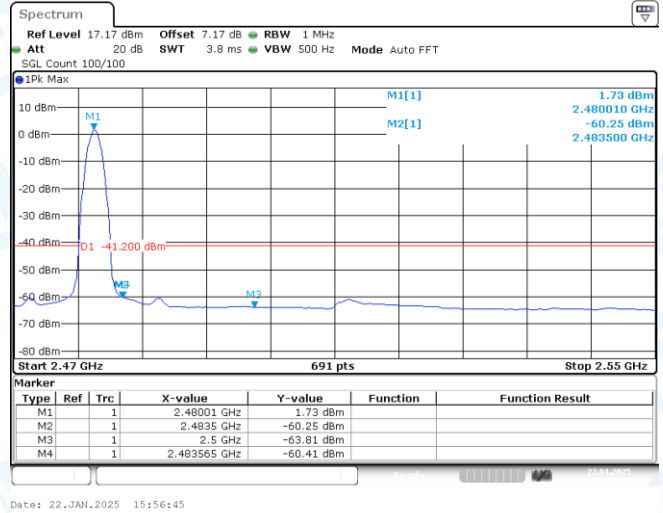


2DH5-Ant1-2402-PASS

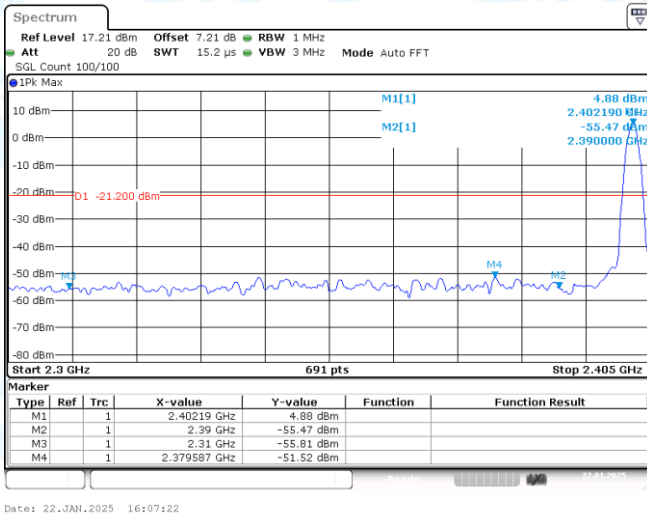
2DH5-Ant1-2402-PASS



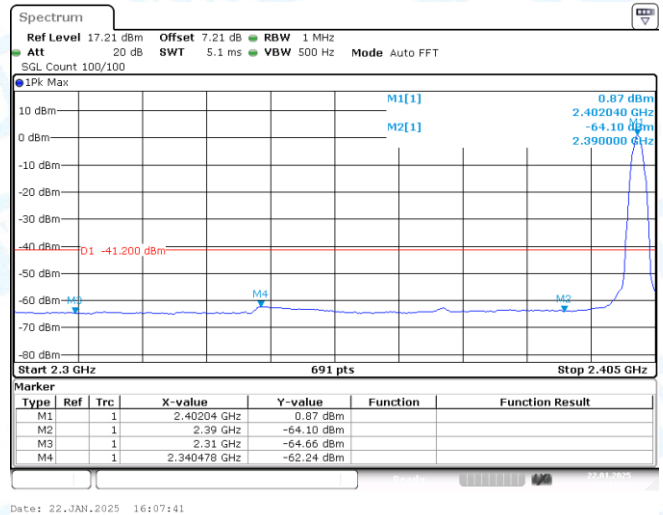
2DH5-Ant1-2480-PASS



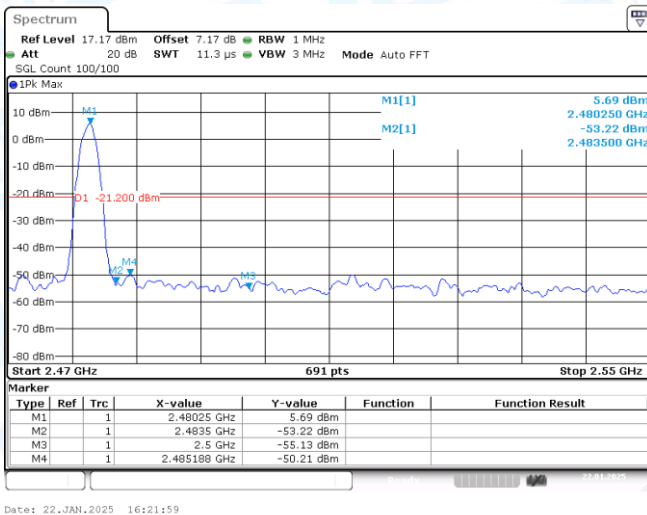
2DH5-Ant1-2480-PASS



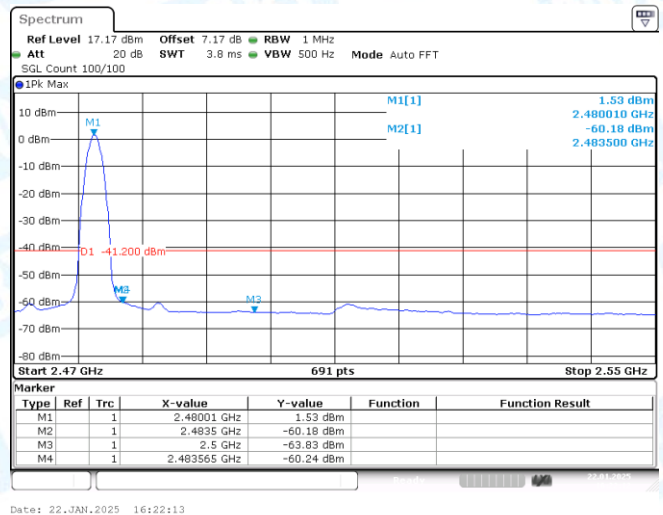
3DH5-Ant1-2402-PASS



3DH5-Ant1-2402-PASS



3DH5-Ant1-2480-PASS



3DH5-Ant1-2480-PASS

-----END OF THE REPORT-----