

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

General Description of EUT	
EUT Name:	White noise Bluetooth speaker
Model:	WEALHOME D16
Sample ID:	HC-C-202412-0033-01-2#
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	24.3℃
Ambient Humidity:	46%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-202412-0033-8 The report only show the worst case data.	

Contents

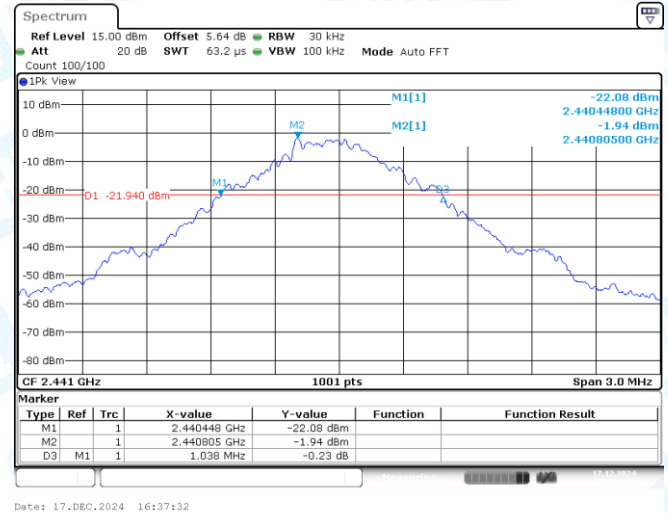
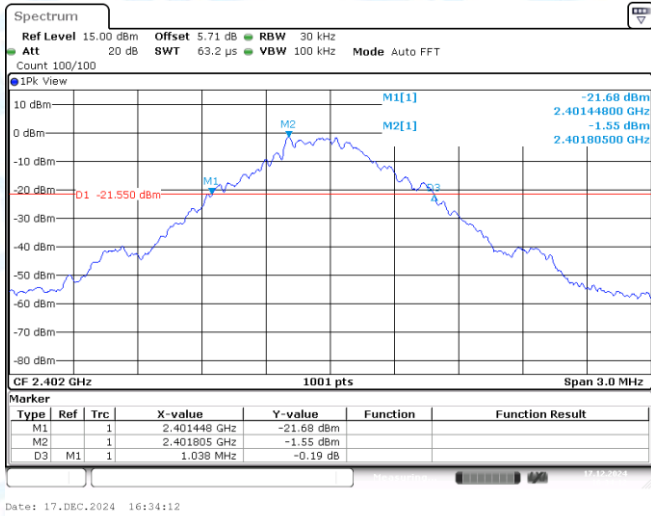
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1. 20dB Emission Bandwidth

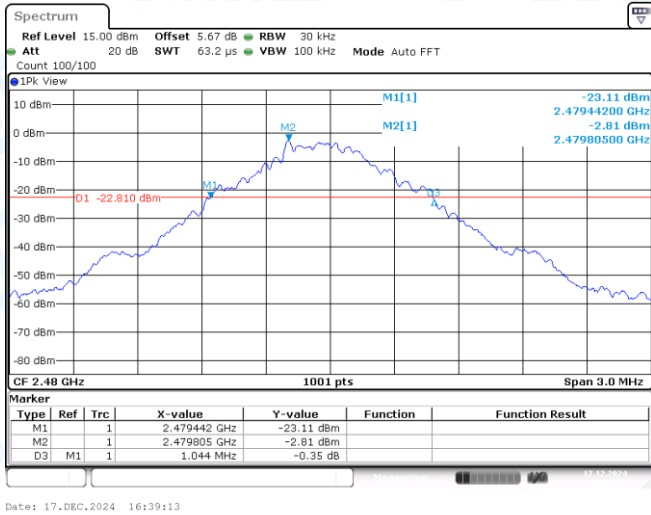
1.1 Test Result

Test Mode	Antenna	Frequency[MHz]	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.04	2401.45	2402.49	---	---
DH5	Ant1	2441	1.04	2440.45	2441.49	---	---
DH5	Ant1	2480	1.04	2479.44	2480.49	---	---
2DH5	Ant1	2402	1.34	2401.30	2402.64	---	---
2DH5	Ant1	2441	1.34	2440.30	2441.64	---	---
2DH5	Ant1	2480	1.34	2479.30	2480.64	---	---
3DH5	Ant1	2402	1.29	2401.32	2402.62	---	---
3DH5	Ant1	2441	1.29	2440.32	2441.61	---	---
3DH5	Ant1	2480	1.29	2479.32	2480.61	---	---

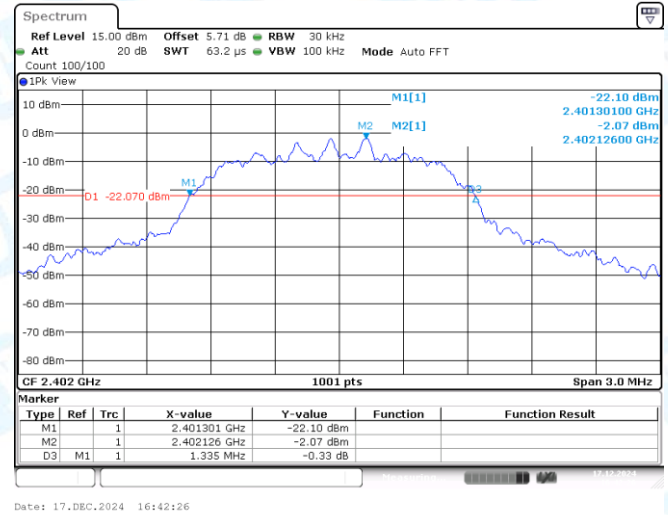
1.2 Test Graphs



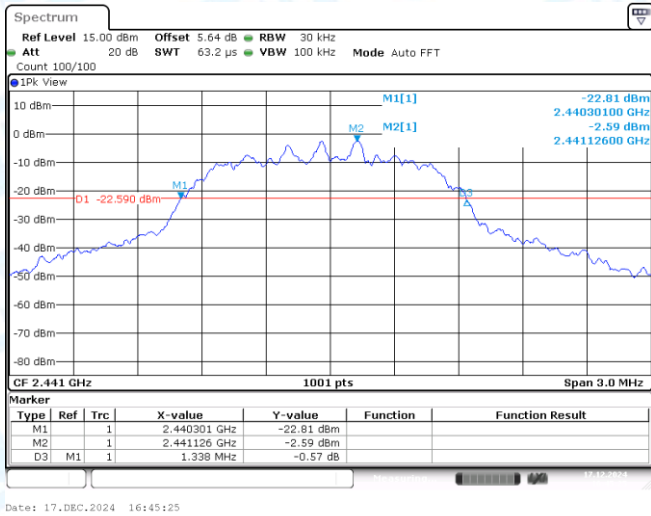
DH5-Ant1-2402



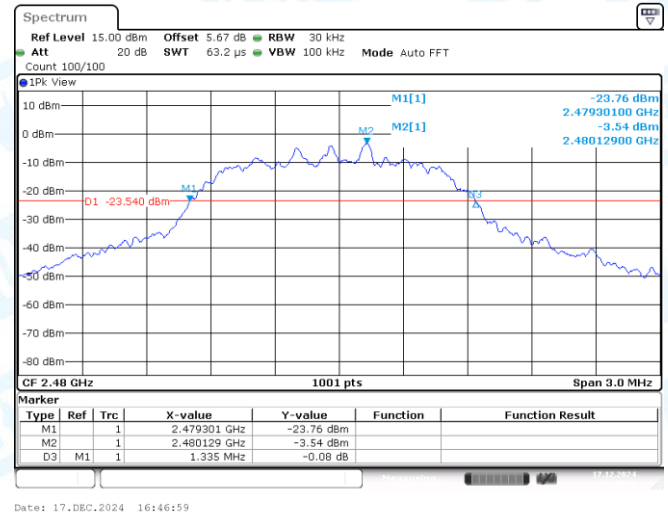
DH5-Ant1-2441



DH5-Ant1-2480

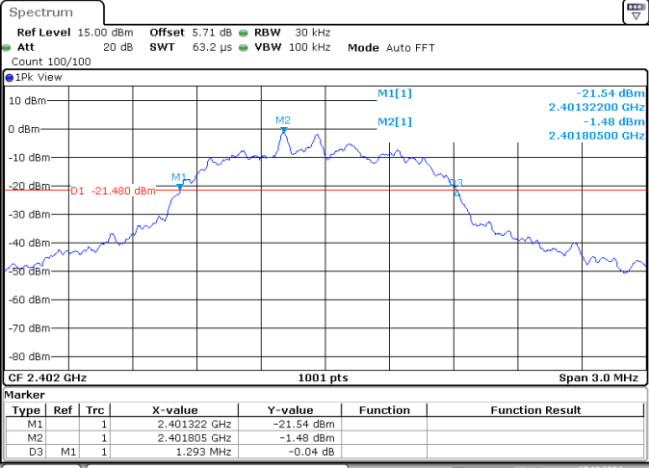


2DH5-Ant1-2402

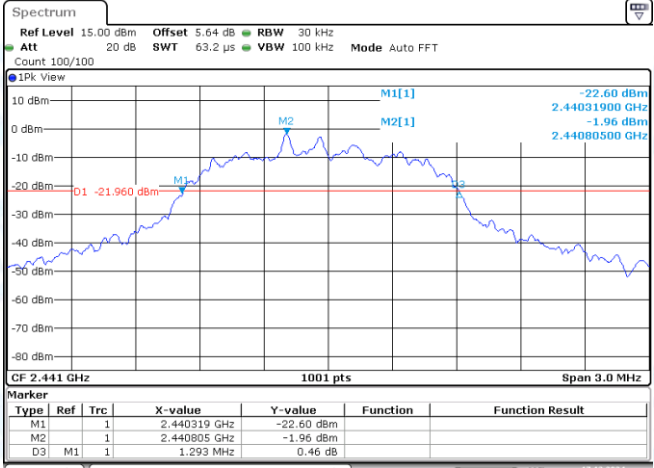


2DH5-Ant1-2441

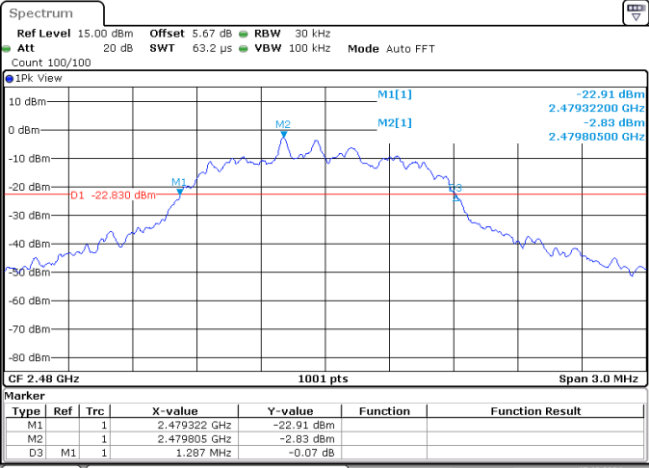
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



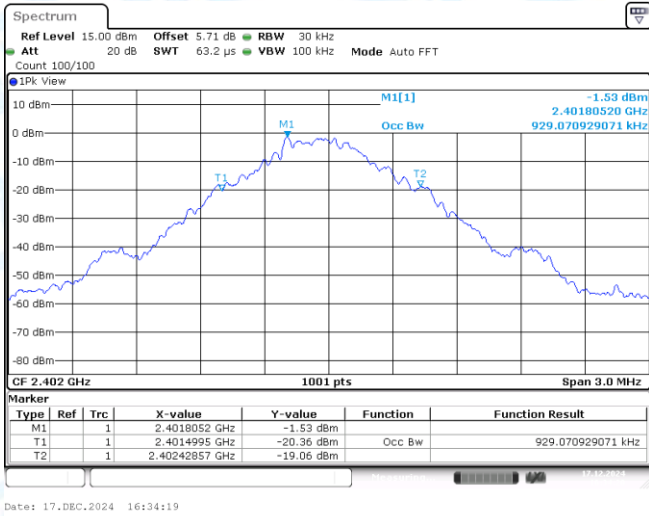
3DH5-Ant1-2480

2. Occupied Channel Bandwidth

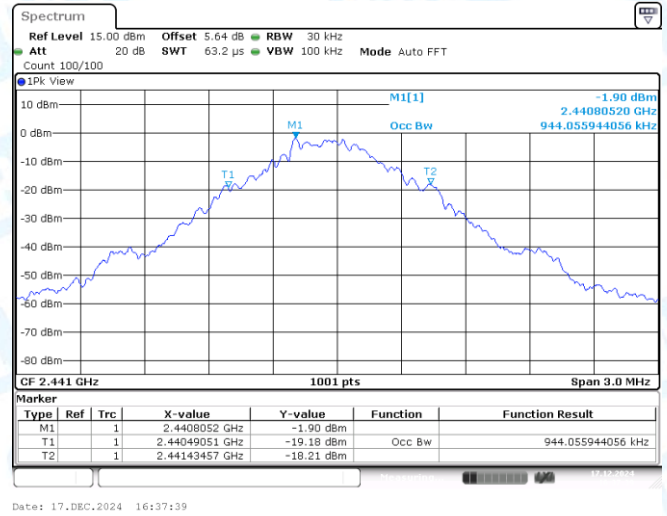
2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.929	2401.4995	2402.4286	---	---
DH5	Ant1	2441	0.944	2440.4905	2441.4346	---	---
DH5	Ant1	2480	0.959	2479.4815	2480.4406	---	---
2DH5	Ant1	2402	1.208	2401.3676	2402.5754	---	---
2DH5	Ant1	2441	1.211	2440.3646	2441.5754	---	---
2DH5	Ant1	2480	1.226	2479.3616	2480.5874	---	---
3DH5	Ant1	2402	1.205	2401.3616	2402.5664	---	---
3DH5	Ant1	2441	1.211	2440.3586	2441.5694	---	---
3DH5	Ant1	2480	1.208	2479.3616	2480.5694	---	---

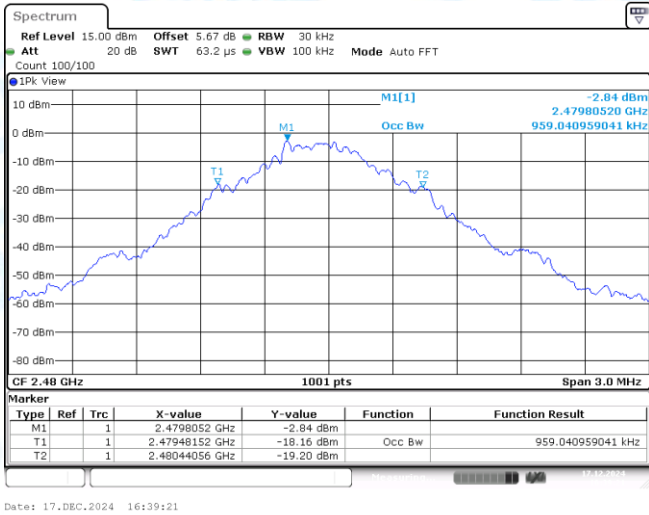
2.2 Test Graphs



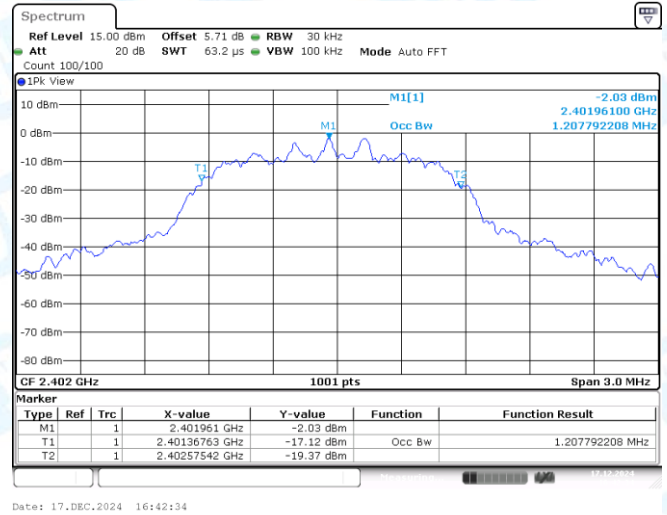
DH5-Ant1-2402



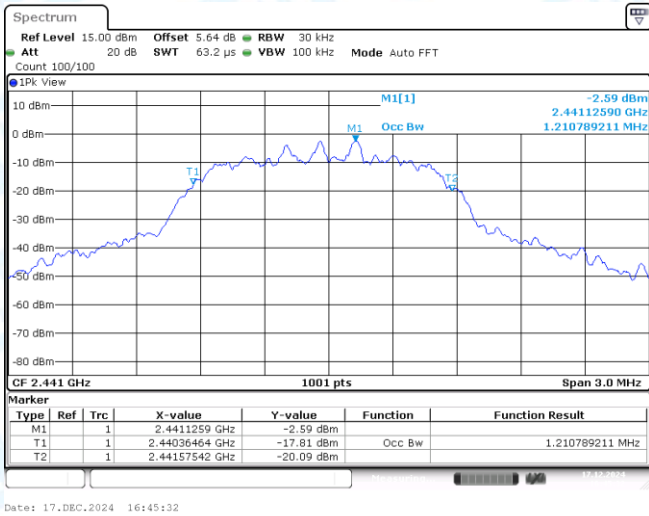
DH5-Ant1-2441



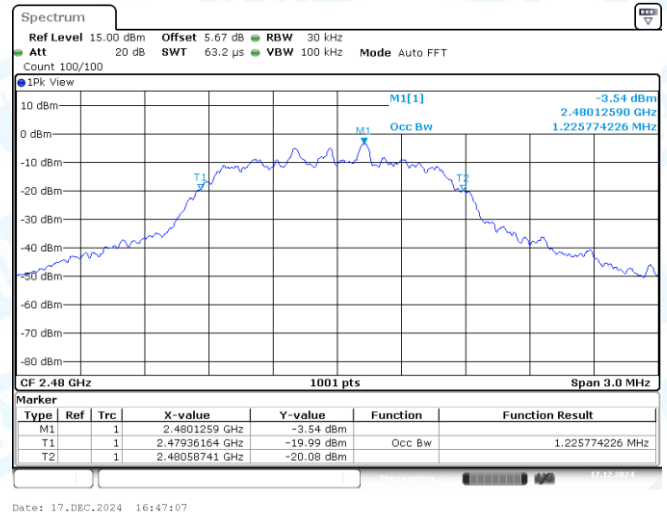
DH5-Ant1-2480



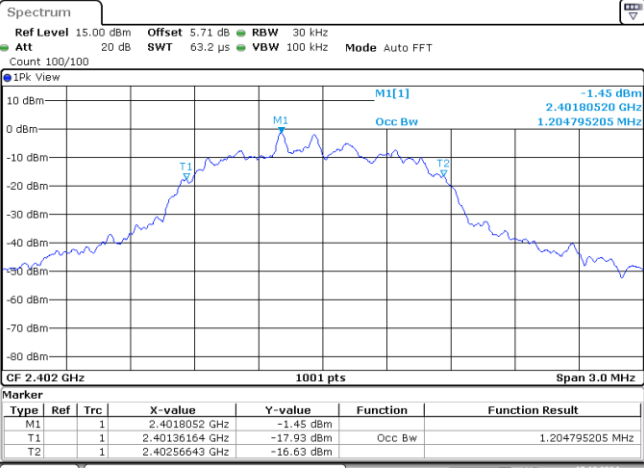
2DH5-Ant1-2402



2DH5-Ant1-2441

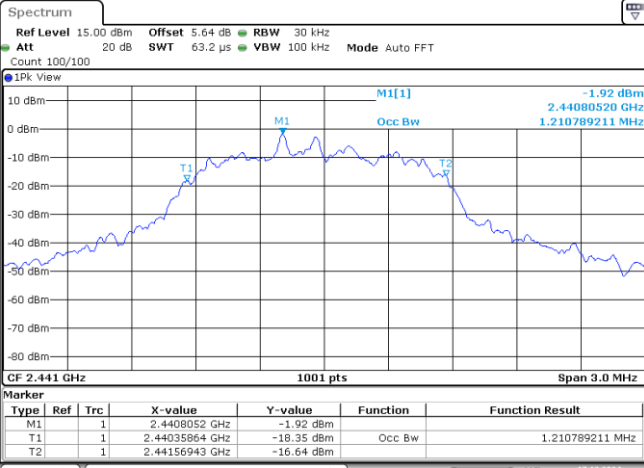


2DH5-Ant1-2480



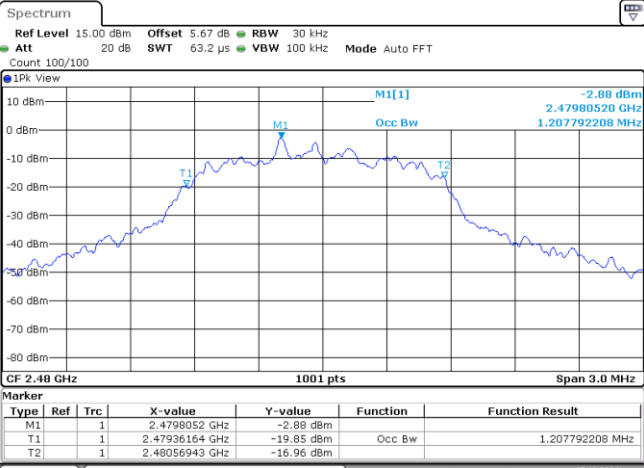
Date: 17.DEC.2024 16:50:02

3DH5-Ant1-2402



Date: 17.DEC.2024 16:52:44

3DH5-Ant1-2441



Date: 17.DEC.2024 16:54:15

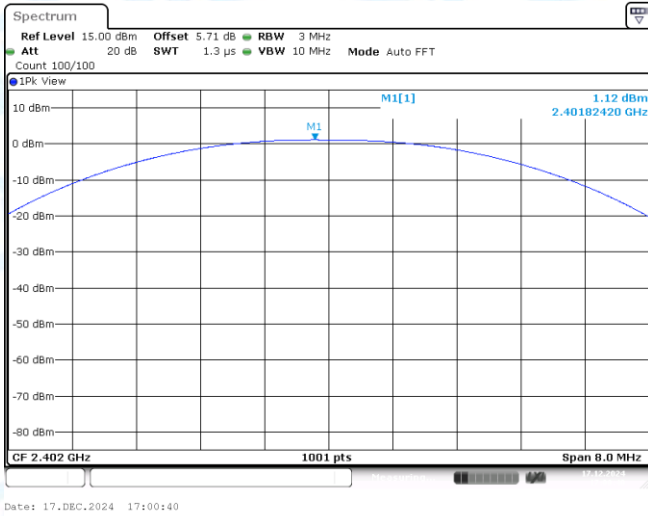
3DH5-Ant1-2480

3. Maximum conducted output power

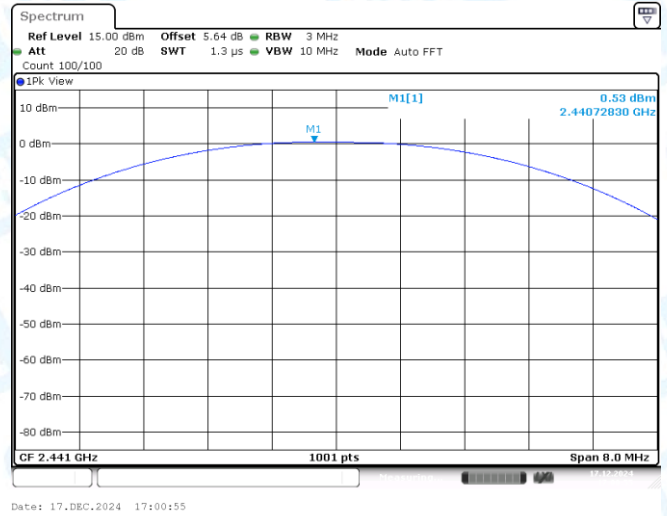
3.1 Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	1.12	≤20.97	PASS
DH5	Ant1	2441	0.53	≤20.97	PASS
DH5	Ant1	2480	-0.40	≤20.97	PASS
2DH5	Ant1	2402	1.74	≤20.97	PASS
2DH5	Ant1	2441	1.25	≤20.97	PASS
2DH5	Ant1	2480	0.35	≤20.97	PASS
3DH5	Ant1	2402	2.03	≤20.97	PASS
3DH5	Ant1	2441	1.48	≤20.97	PASS
3DH5	Ant1	2480	0.32	≤20.97	PASS

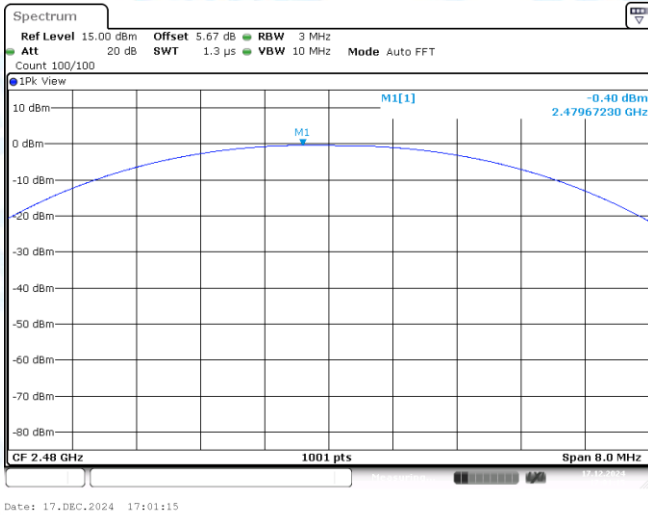
3.2 Test Graphs



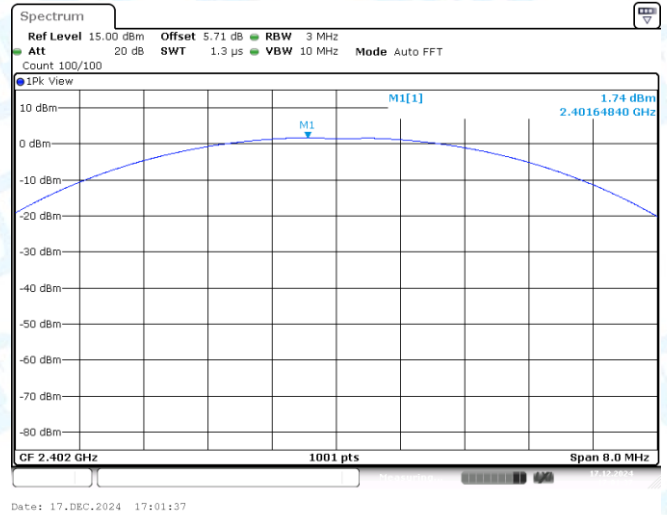
DH5-Ant1-2402-PASS



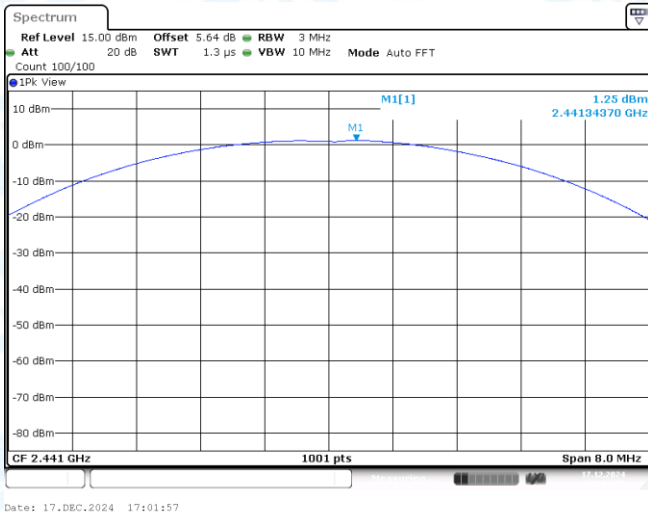
DH5-Ant1-2441-PASS



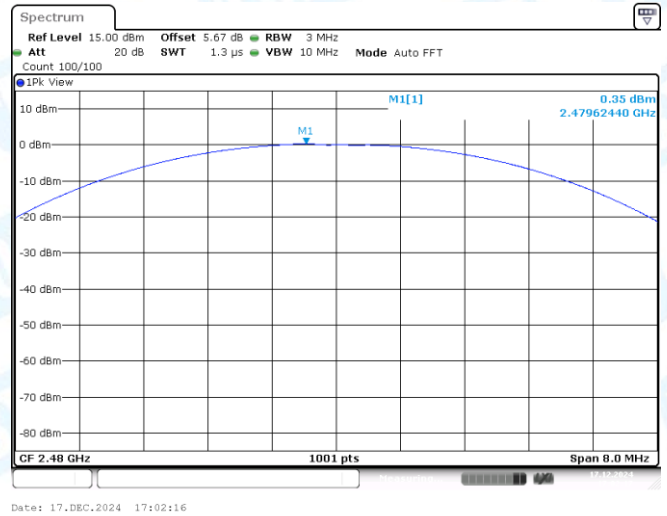
DH5-Ant1-2480-PASS



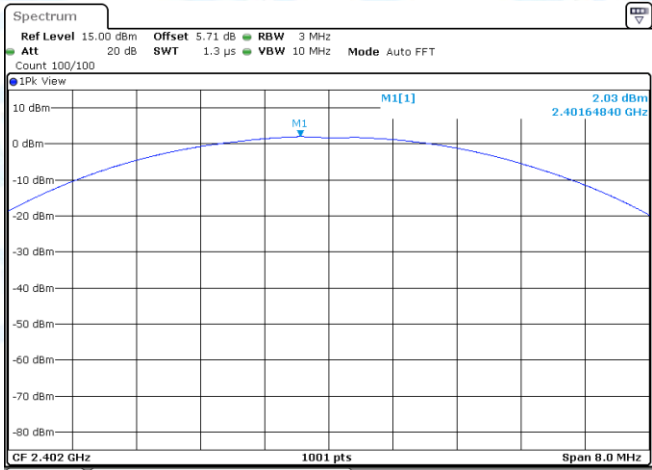
2DH5-Ant1-2402-PASS



2DH5-Ant1-2441-PASS

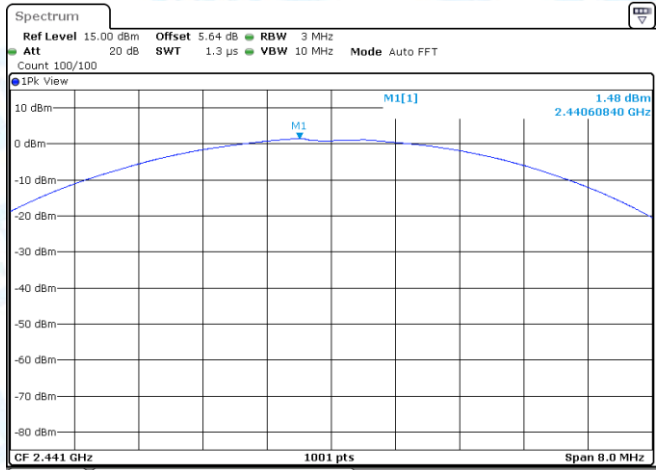


2DH5-Ant1-2480-PASS



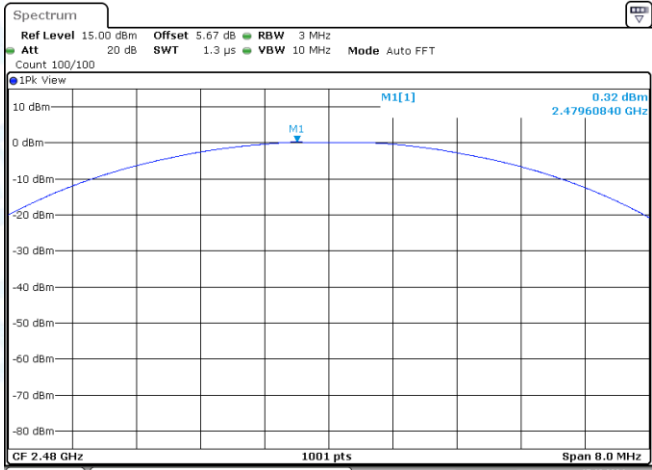
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3DH5-Ant1-2402-PASS



Date: 17.DEC.2024 17:02:51

3DH5-Ant1-2441-PASS



Date: 17.DEC.2024 17:03:03

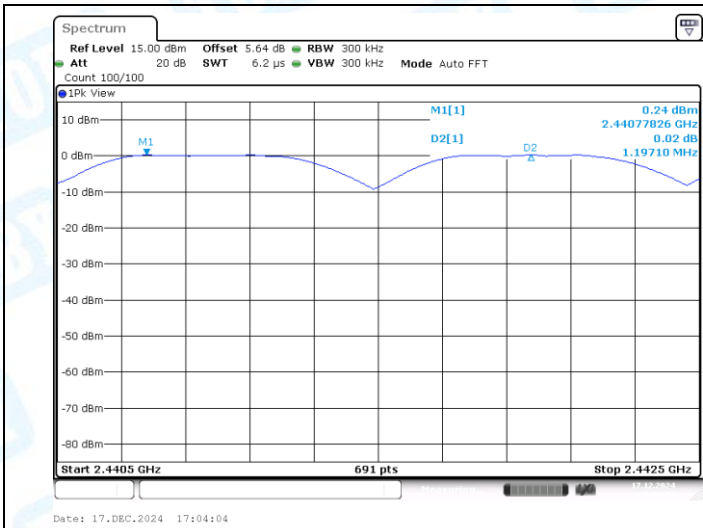
3DH5-Ant1-2480-PASS

4. Carrier frequency separation

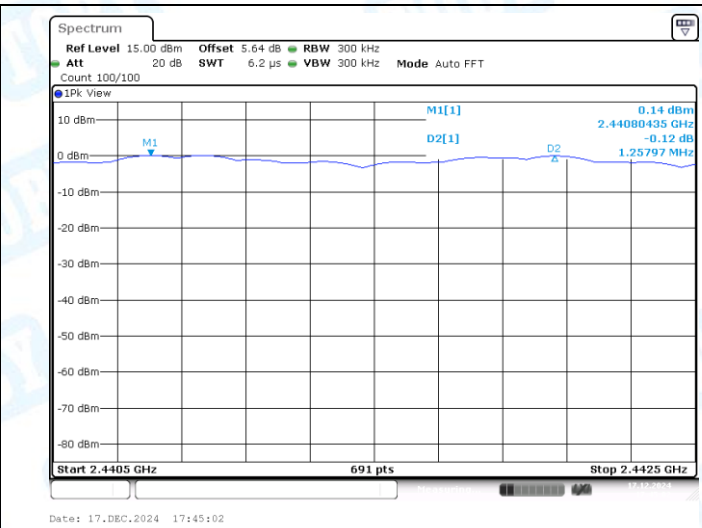
4.1 Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.197	≥1.040	PASS
2DH5	Ant1	Hop	1.258	≥0.893	PASS
3DH5	Ant1	Hop	0.928	≥0.860	PASS

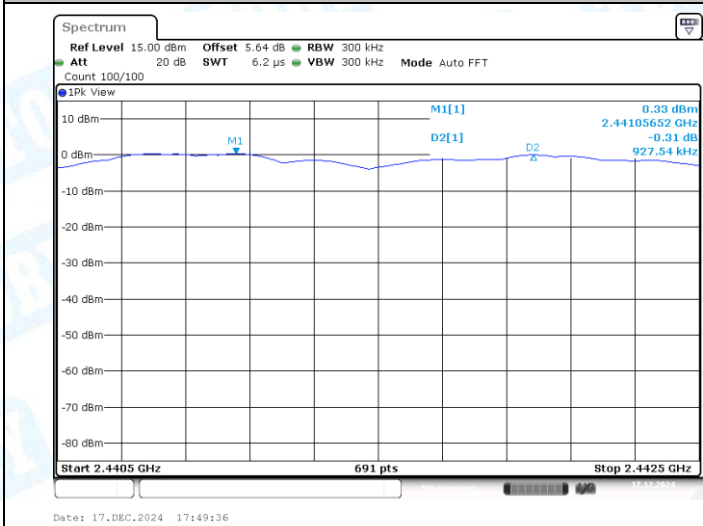
4.2 Test Graphs



DH5-Ant1-Hop-PASS



2DH5-Ant1-Hop-PASS



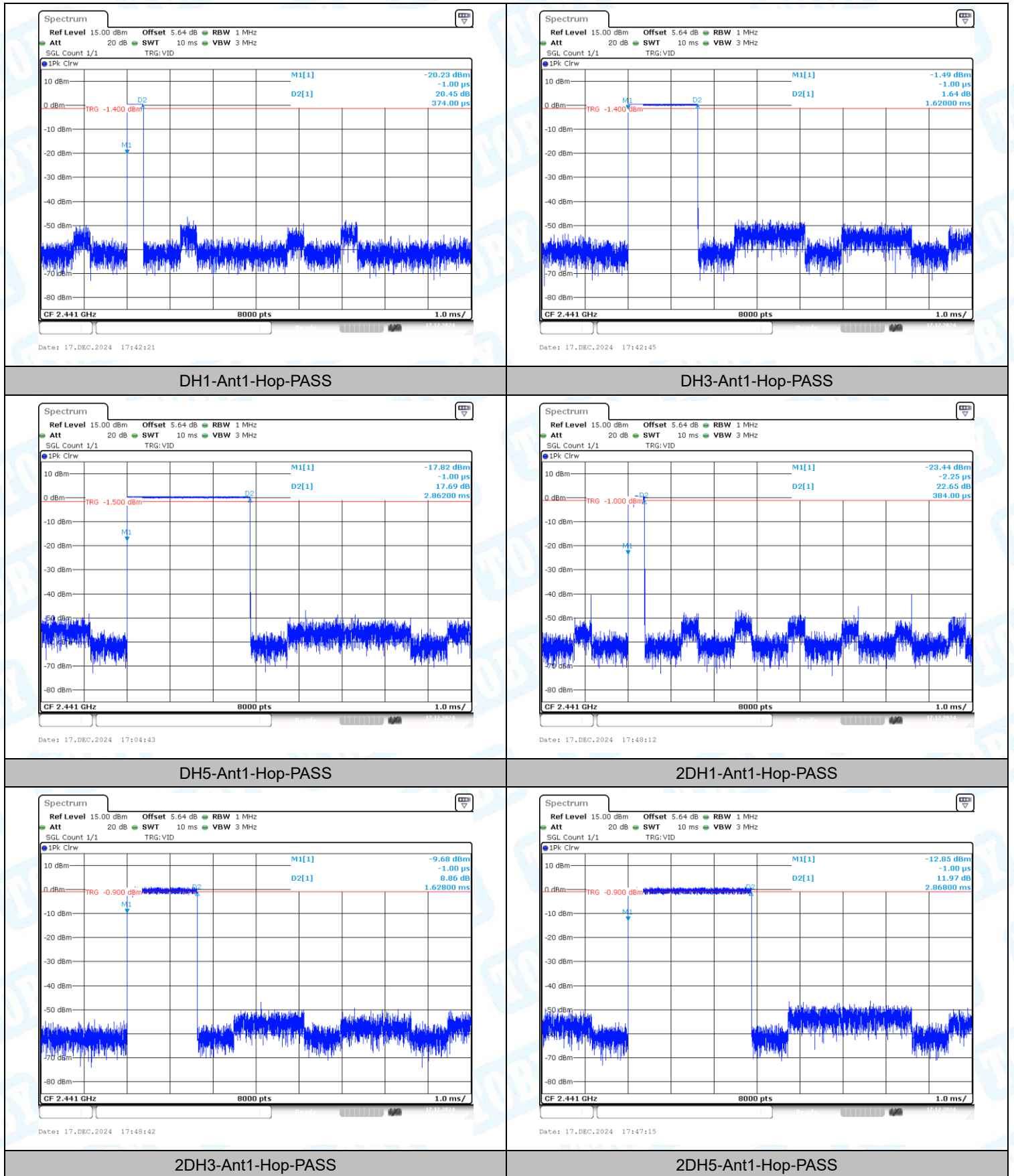
3DH5-Ant1-Hop-PASS

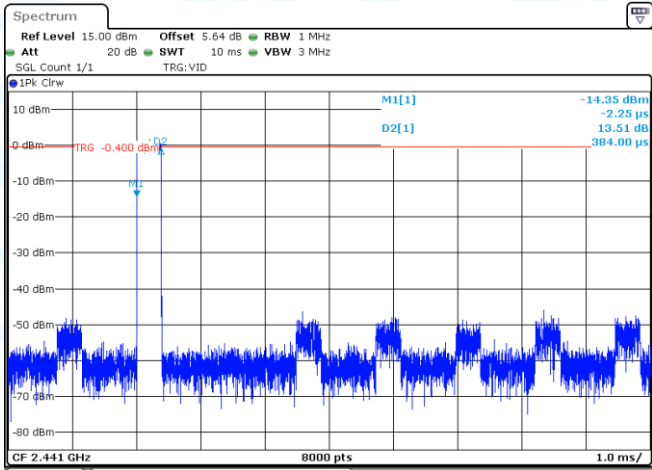
5. Time of occupancy

5.1 Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.374	320	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.620	160	0.259	≤0.4	PASS
DH5	Ant1	Hop	2.862	106.67	0.305	≤0.4	PASS
2DH1	Ant1	Hop	0.384	320	0.123	≤0.4	PASS
2DH3	Ant1	Hop	1.628	160	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.868	106.67	0.306	≤0.4	PASS
3DH1	Ant1	Hop	0.384	320	0.123	≤0.4	PASS
3DH3	Ant1	Hop	1.625	160	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.869	106.67	0.306	≤0.4	PASS

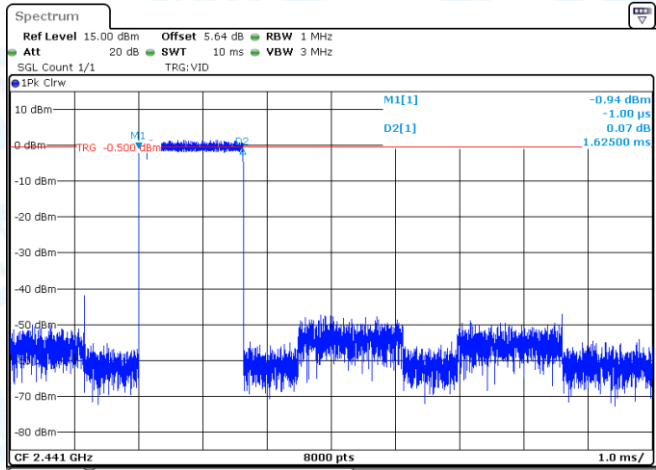
5.2 Test Graphs





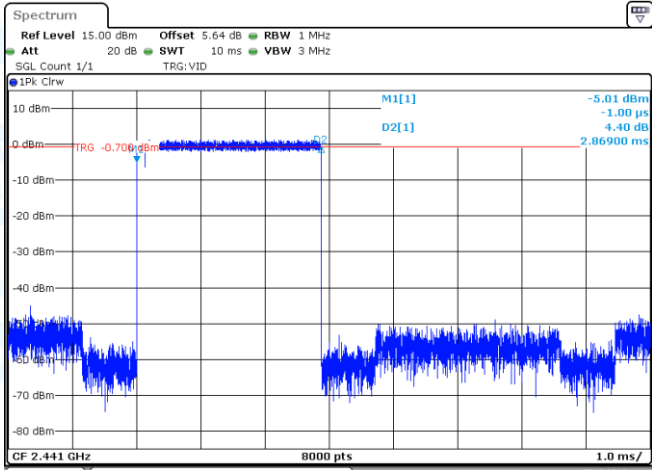
Date: 17.DEC.2024 17:51:24

3DH1-Ant1-Hop-PASS



Date: 17.DEC.2024 17:51:50

3DH3-Ant1-Hop-PASS



Date: 17.DEC.2024 17:50:22

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

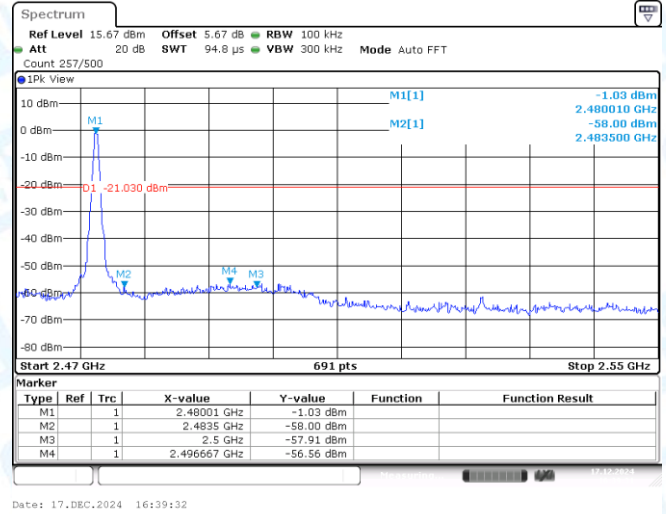
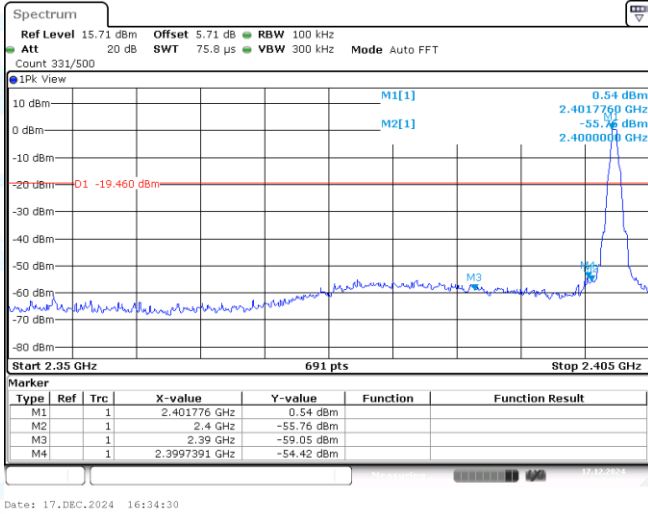


7. Band edge measurements

7.1 Test Result

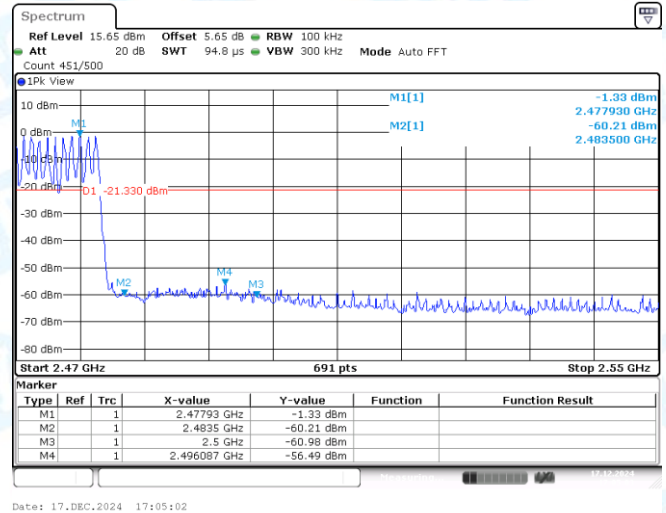
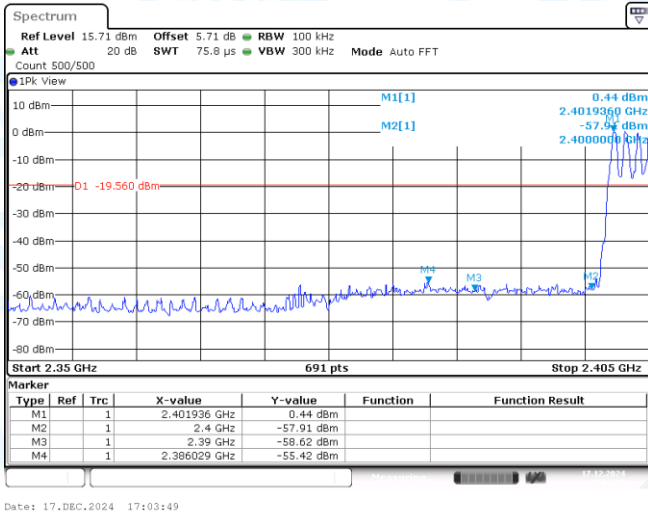
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.54	-54.42	≤-19.46	PASS
DH5	Ant1	High	2480	-1.03	-56.56	≤-21.03	PASS
DH5	Ant1	Low	Hop_2402	0.44	-55.42	≤-19.56	PASS
DH5	Ant1	High	Hop_2480	-1.33	-56.49	≤-21.33	PASS
2DH5	Ant1	Low	2402	0.85	-54.92	≤-19.15	PASS
2DH5	Ant1	High	2480	-0.79	-56.09	≤-20.79	PASS
2DH5	Ant1	Low	Hop_2402	-0.43	-55.14	≤-20.43	PASS
2DH5	Ant1	High	Hop_2480	-1.23	-55.92	≤-21.23	PASS
3DH5	Ant1	Low	2402	0.39	-54	≤-19.61	PASS
3DH5	Ant1	High	2480	-1.01	-56.53	≤-21.01	PASS
3DH5	Ant1	Low	Hop_2402	-2.87	-55.94	≤-22.87	PASS
3DH5	Ant1	High	Hop_2480	-0.81	-56.19	≤-20.81	PASS

7.2 Test Graphs



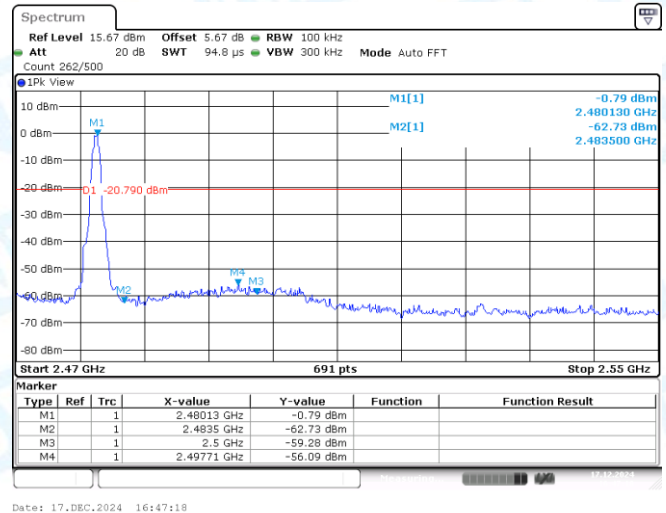
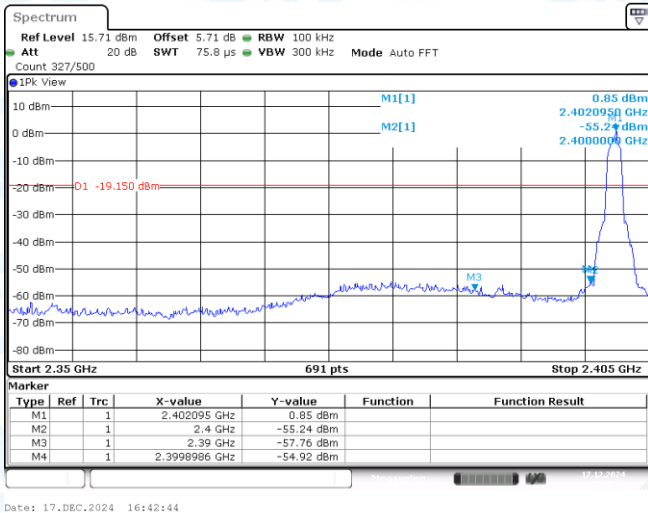
DH5-Ant1-2402-PASS

DH5-Ant1-2480-PASS



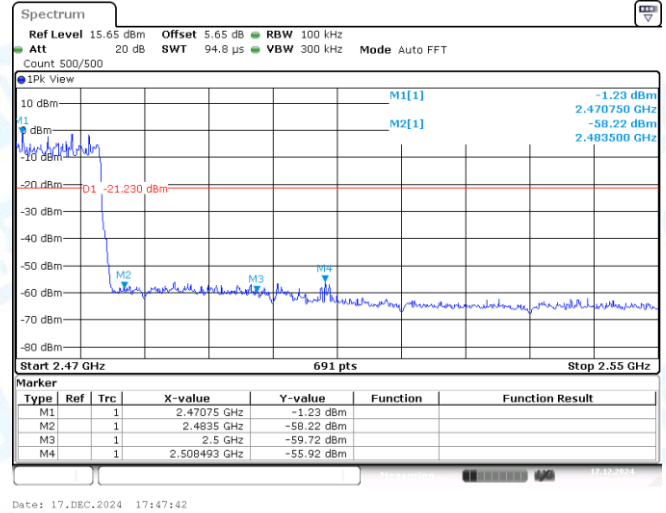
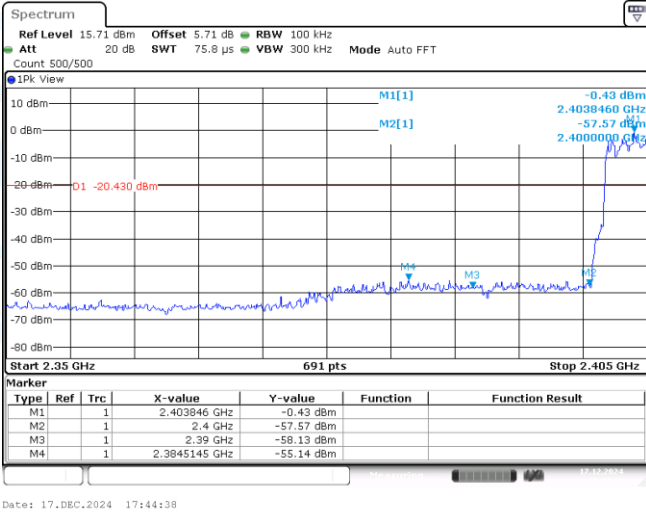
DH5-Ant1-Hop_2402-PASS

DH5-Ant1-Hop_2480-PASS



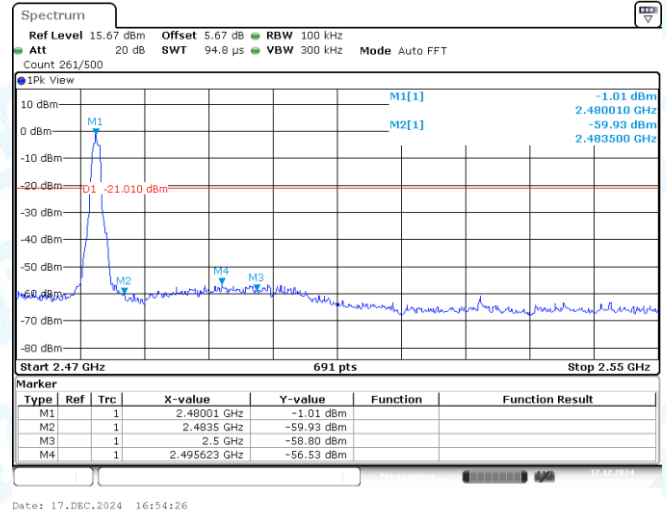
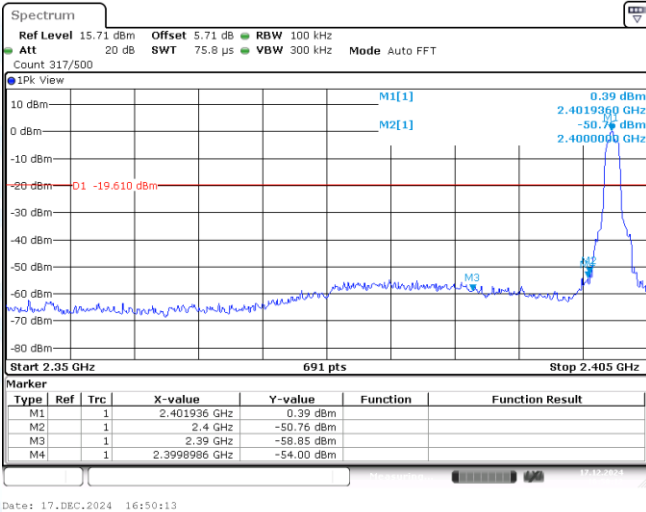
2DH5-Ant1-2402-PASS

2DH5-Ant1-2480-PASS



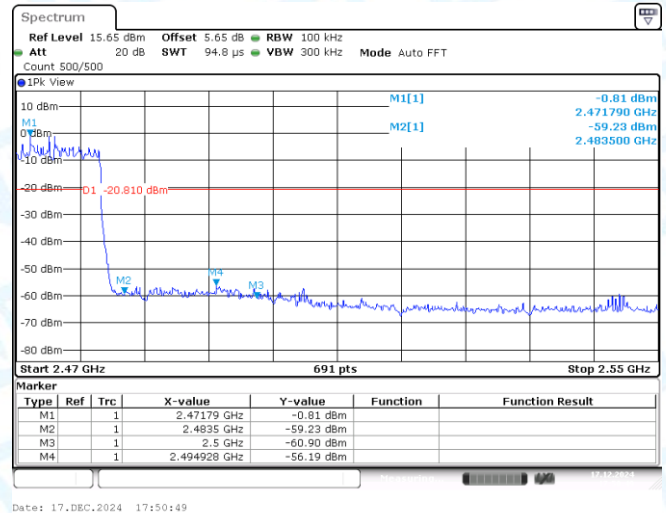
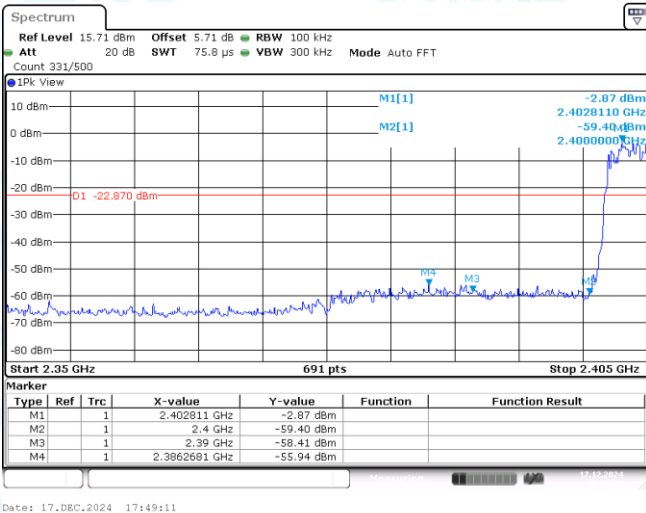
2DH5-Ant1-Hop_2402-PASS

2DH5-Ant1-Hop_2480-PASS



3DH5-Ant1-2402-PASS

3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS

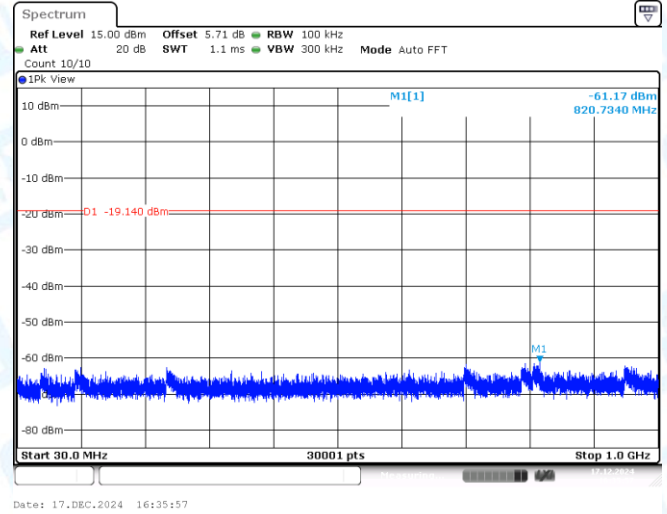
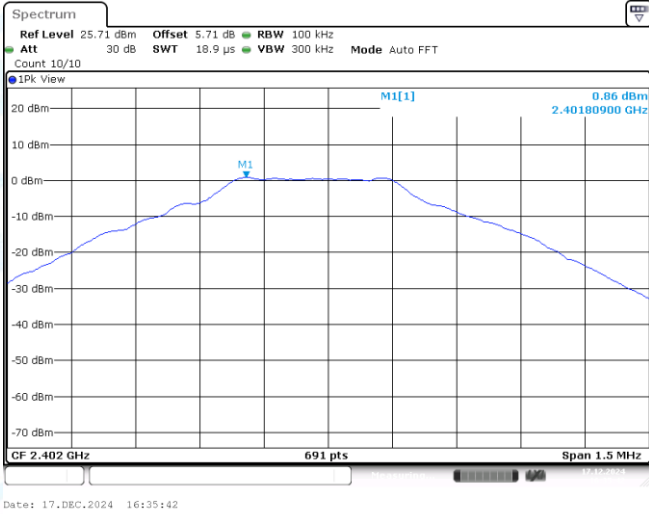
3DH5-Ant1-Hop_2480-PASS

8. Conducted Spurious Emission

8.1 Test Result

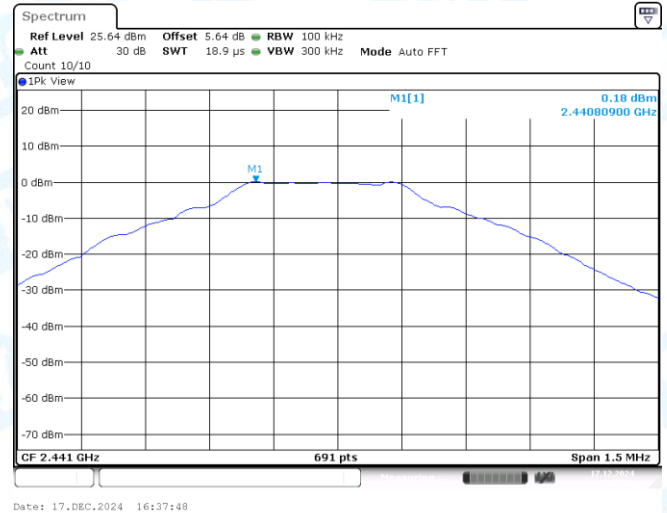
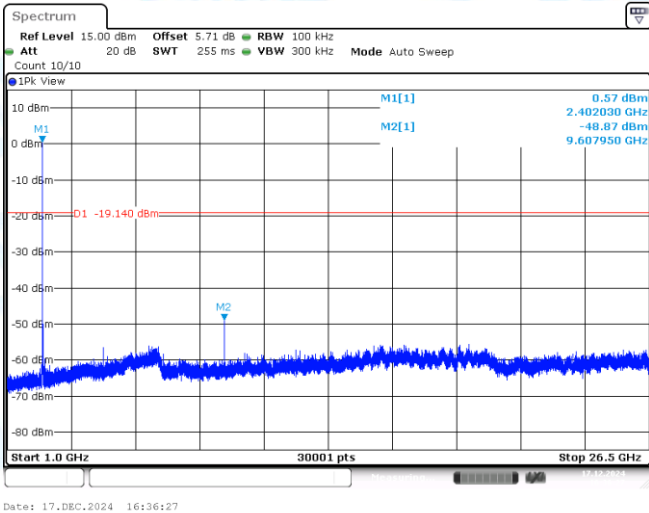
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	0.86	0.86	---	PASS
DH5	Ant1	2402	30~1000	0.86	-61.17	≤-19.14	PASS
DH5	Ant1	2402	1000~26500	0.86	-48.87	≤-19.14	PASS
DH5	Ant1	2441	0~Reference	0.18	0.18	---	PASS
DH5	Ant1	2441	30~1000	0.18	-60.87	≤-19.82	PASS
DH5	Ant1	2441	1000~26500	0.18	-48.14	≤-19.82	PASS
DH5	Ant1	2480	0~Reference	-0.79	-0.79	---	PASS
DH5	Ant1	2480	30~1000	-0.79	-61.18	≤-20.79	PASS
DH5	Ant1	2480	1000~26500	-0.79	-52.23	≤-20.79	PASS
2DH5	Ant1	2402	0~Reference	0.78	0.78	---	PASS
2DH5	Ant1	2402	30~1000	0.78	-60.27	≤-19.22	PASS
2DH5	Ant1	2402	1000~26500	0.78	-47.13	≤-19.22	PASS
2DH5	Ant1	2441	0~Reference	0.08	0.08	---	PASS
2DH5	Ant1	2441	30~1000	0.08	-60.71	≤-19.92	PASS
2DH5	Ant1	2441	1000~26500	0.08	-48.81	≤-19.92	PASS
2DH5	Ant1	2480	0~Reference	-0.88	-0.88	---	PASS
2DH5	Ant1	2480	30~1000	-0.88	-61.29	≤-20.88	PASS
2DH5	Ant1	2480	1000~26500	-0.88	-51.24	≤-20.88	PASS
3DH5	Ant1	2402	0~Reference	0.79	0.79	---	PASS
3DH5	Ant1	2402	30~1000	0.79	-60.96	≤-19.21	PASS
3DH5	Ant1	2402	1000~26500	0.79	-47.11	≤-19.21	PASS
3DH5	Ant1	2441	0~Reference	0.13	0.13	---	PASS
3DH5	Ant1	2441	30~1000	0.13	-60.87	≤-19.87	PASS
3DH5	Ant1	2441	1000~26500	0.13	-48.44	≤-19.87	PASS
3DH5	Ant1	2480	0~Reference	-0.81	-0.81	---	PASS
3DH5	Ant1	2480	30~1000	-0.81	-60.71	≤-20.81	PASS
3DH5	Ant1	2480	1000~26500	-0.81	-52.01	≤-20.81	PASS

8.2 Test Graphs



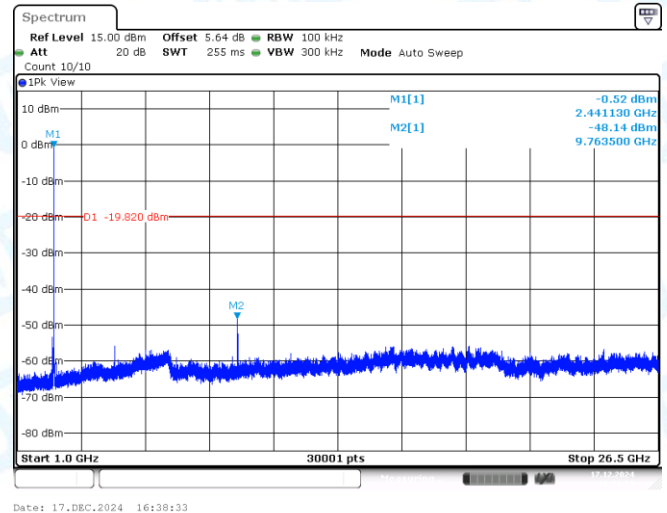
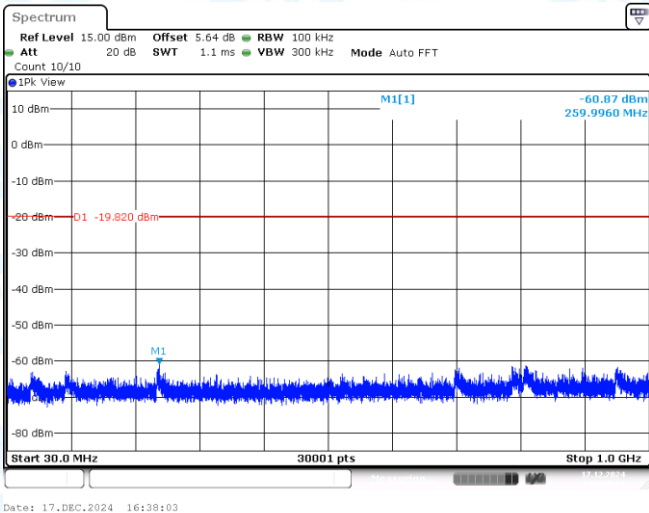
DH5-Ant1-2402-0~Reference-PASS

DH5-Ant1-2402-30~1000-PASS



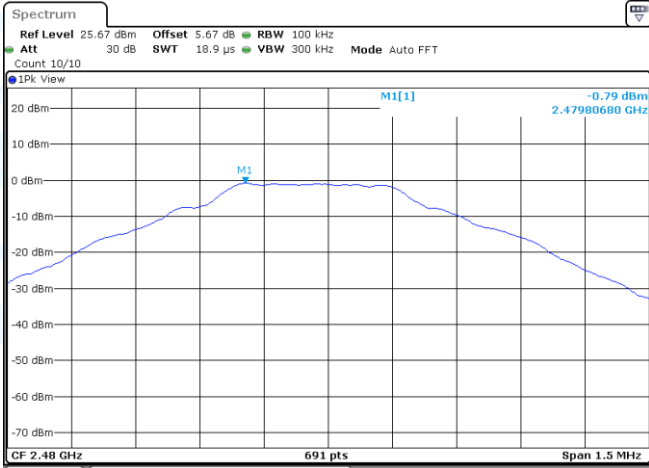
DH5-Ant1-2402-1000~26500-PASS

DH5-Ant1-2441-0~Reference-PASS



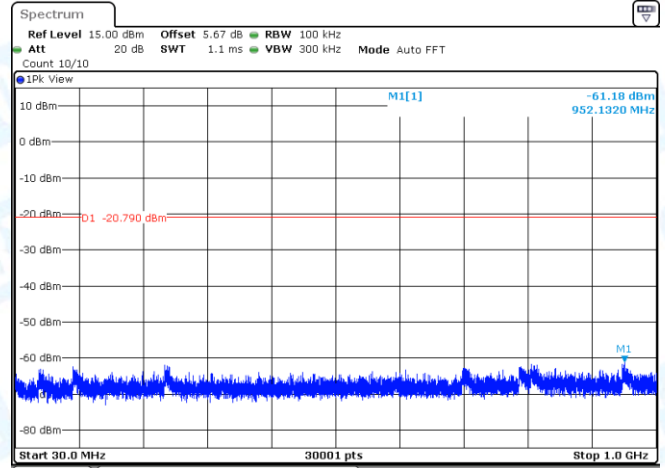
DH5-Ant1-2441-30~1000-PASS

DH5-Ant1-2441-1000~26500-PASS



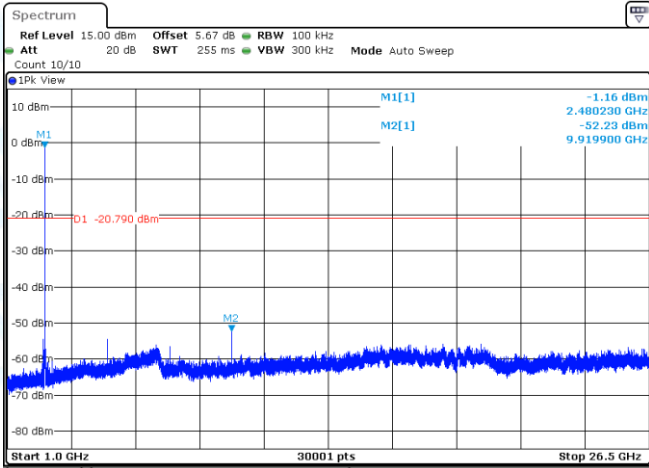
Date: 17.DEC.2024 16:40:44

DH5-Ant1-2480-0~Reference-PASS



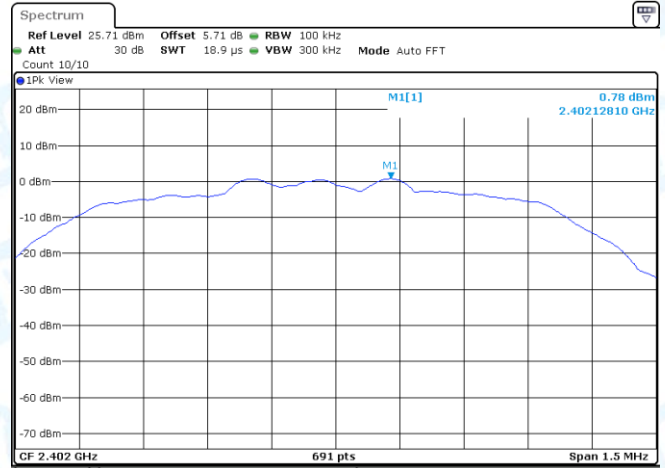
Date: 17.DEC.2024 16:40:58

DH5-Ant1-2480-30~1000-PASS



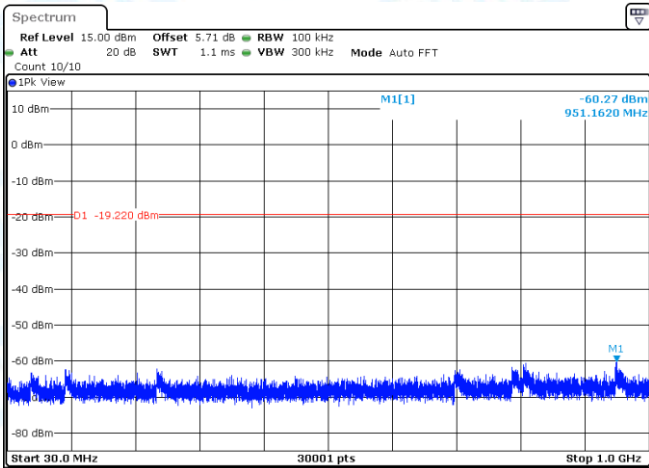
Date: 17.DEC.2024 16:41:28

DH5-Ant1-2480-1000~26500-PASS



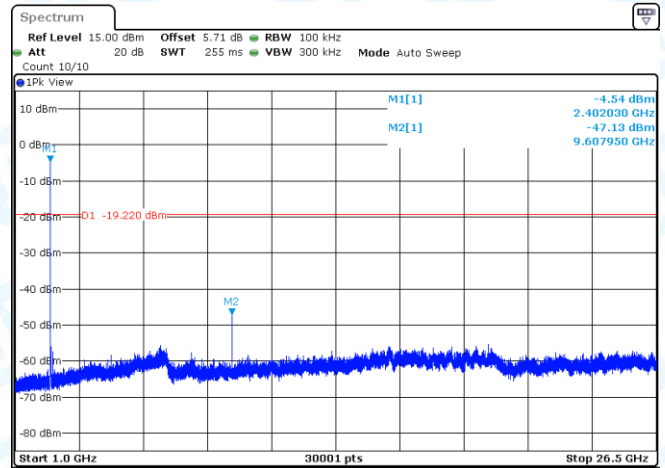
Date: 17.DEC.2024 16:43:56

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



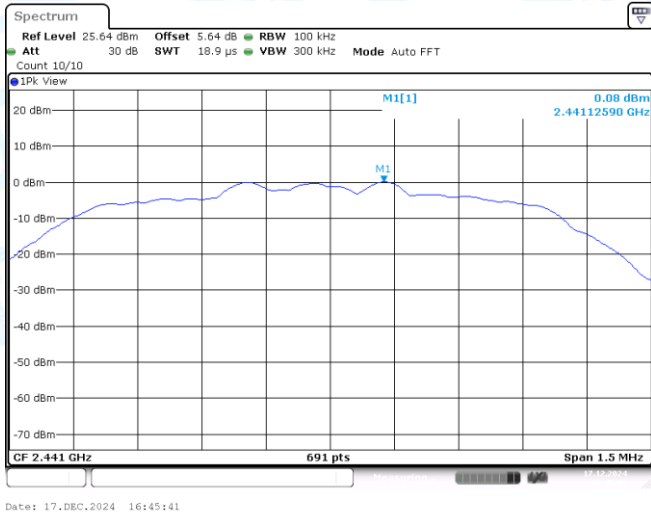
Date: 17.DEC.2024 16:44:11

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

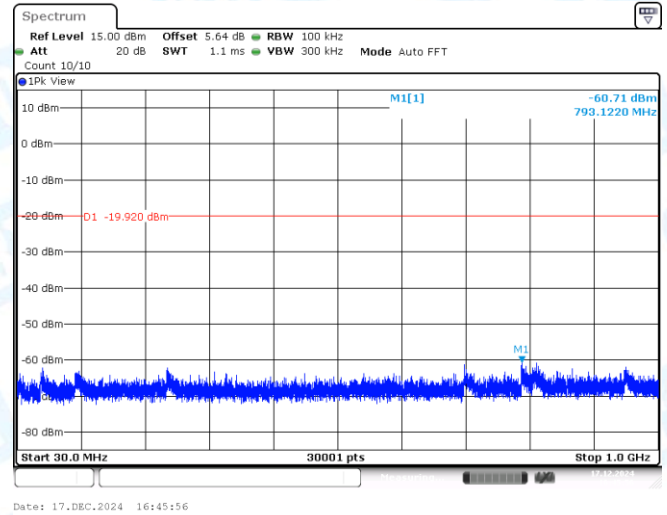


Date: 17.DEC.2024 16:44:41

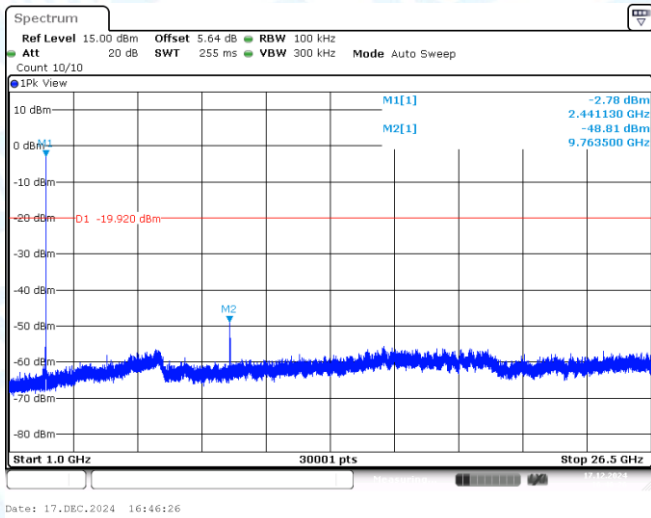
2DH5-Ant1-2402-1000~26500-PASS



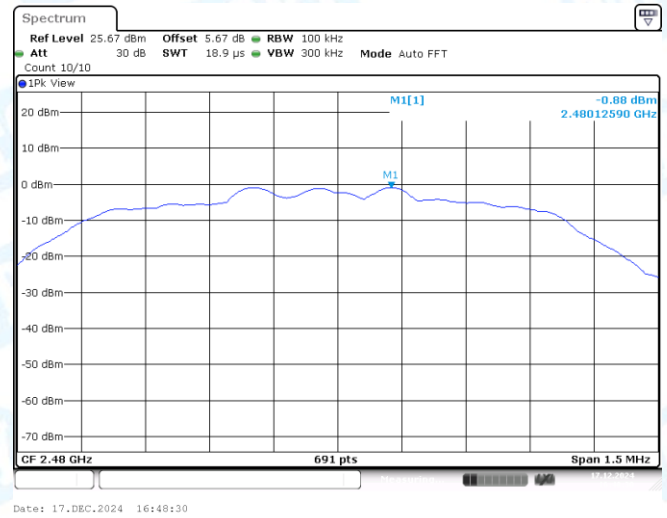
2DH5-Ant1-2441-0~Reference-PASS



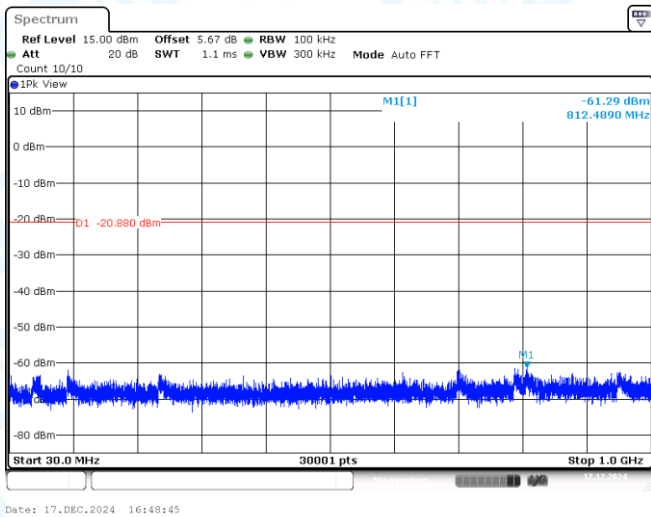
2DH5-Ant1-2441-30~1000-PASS



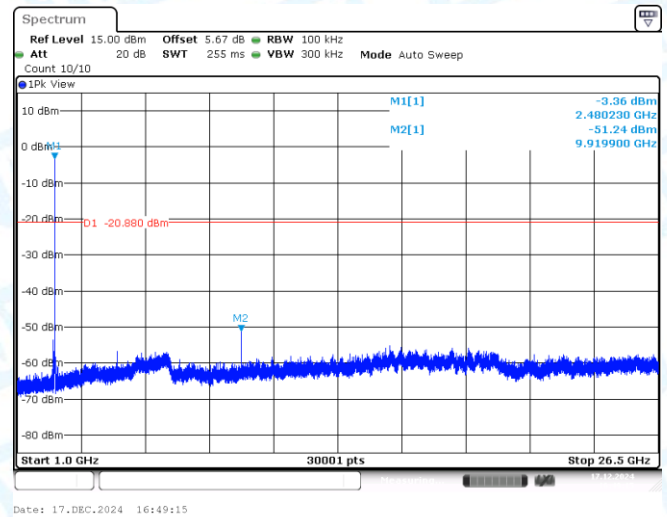
2DH5-Ant1-2441-1000~26500-PASS



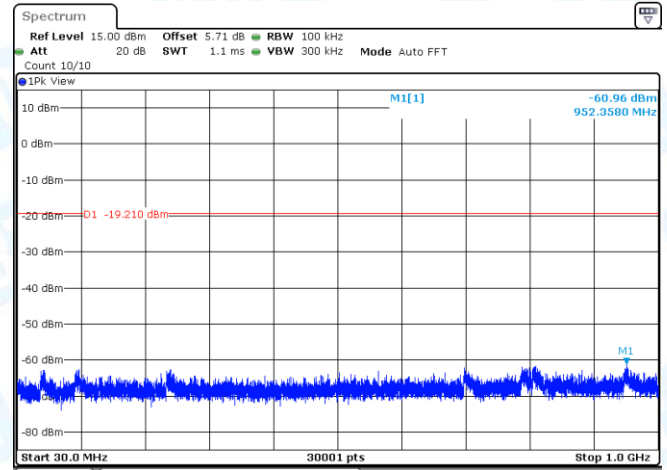
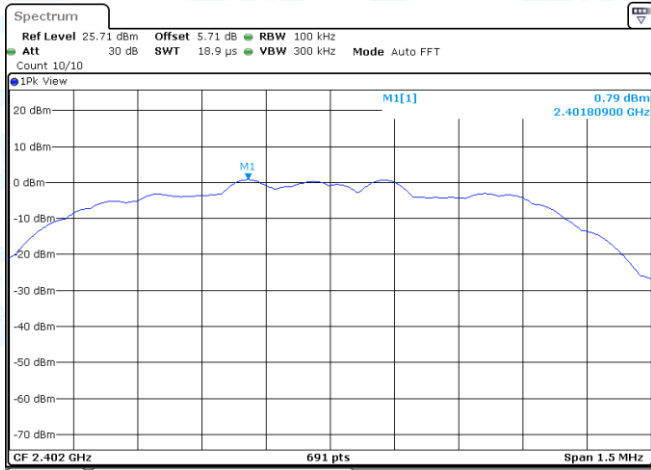
2DH5-Ant1-2480-0~Reference-PASS



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

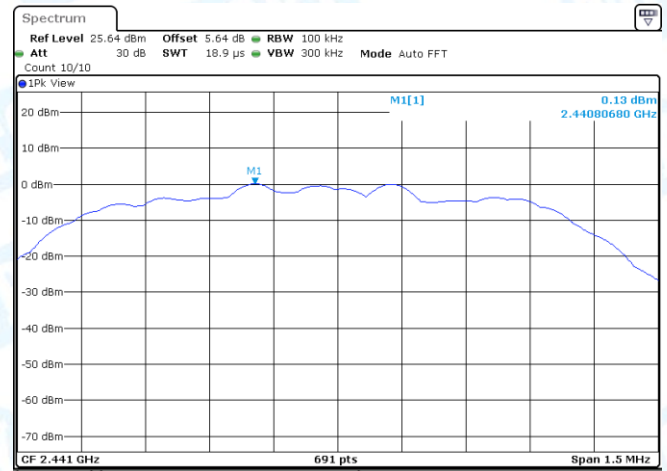
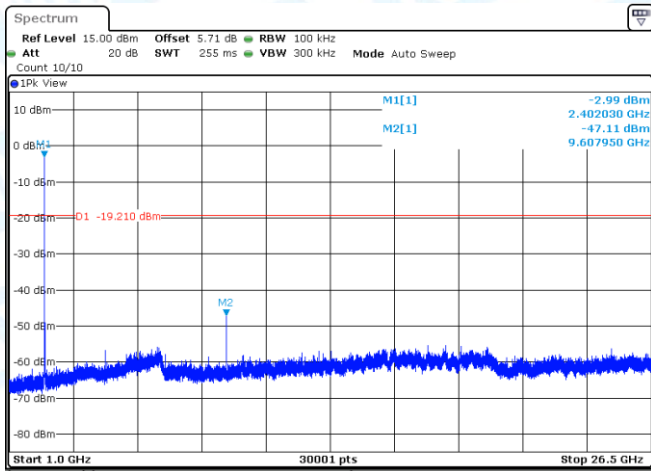


2DH5-Ant1-2480-1000~26500-PASS



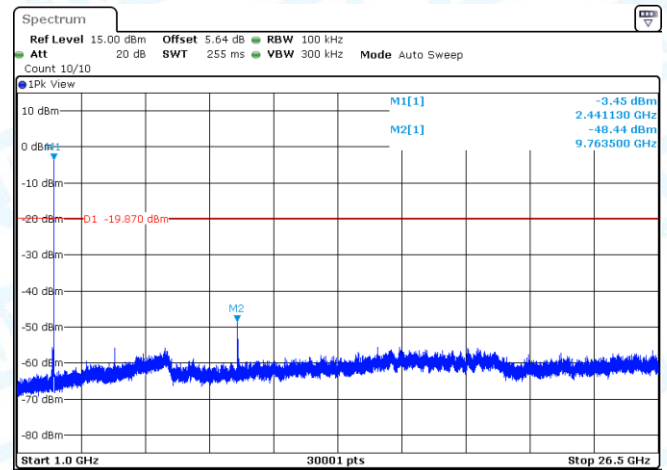
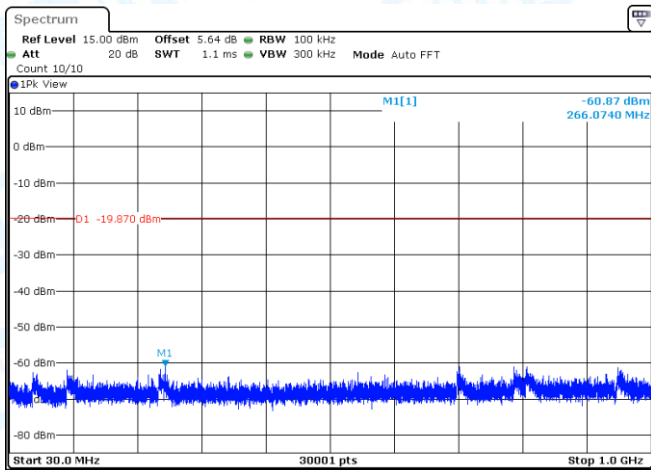
3DH5-Ant1-2402-0~Reference-PASS

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



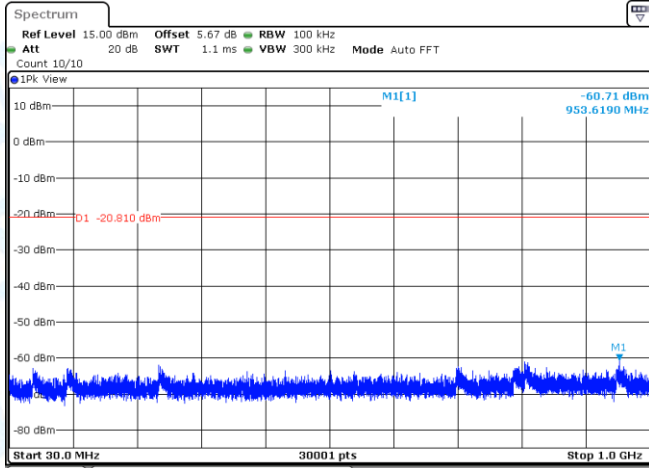
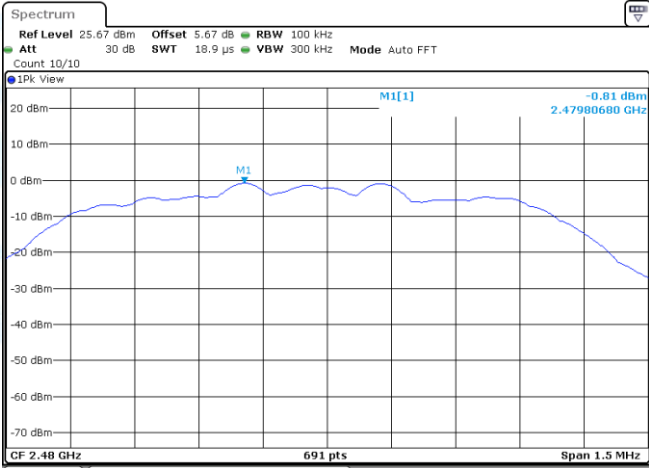
3DH5-Ant1-2402-1000~26500-PASS

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



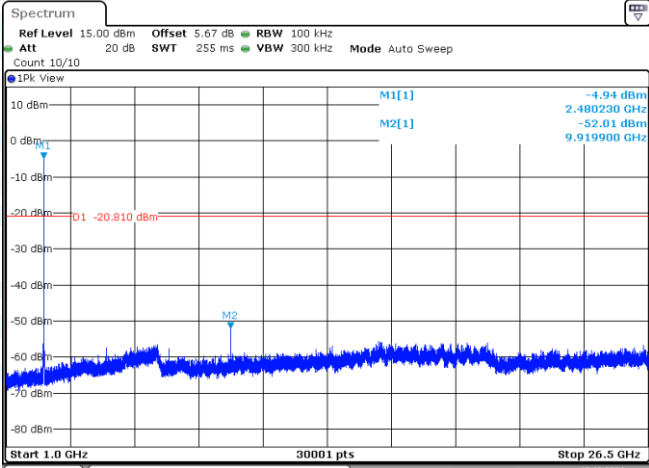
3DH5-Ant1-2441-30~1000-PASS

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



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

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



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

9. Duty Cycle

9.1 Test Result

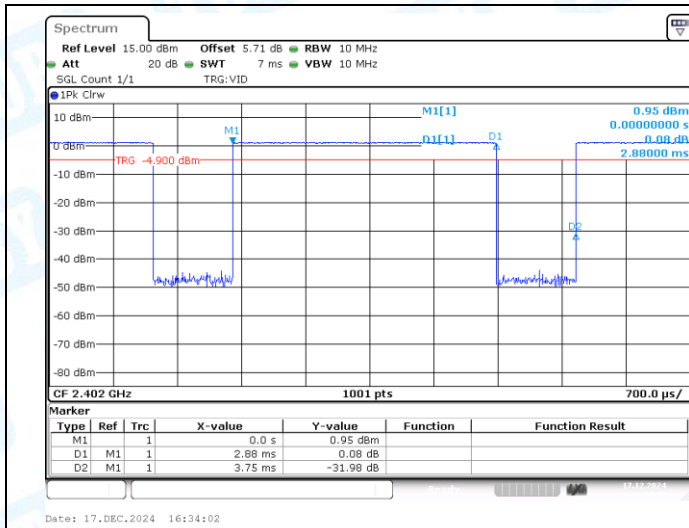
TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
DH5	Ant1	2402	2.88	3.75	76.80	1.15	0.35
DH5	Ant1	2441	2.88	3.75	76.80	1.15	0.35
DH5	Ant1	2480	2.88	3.75	76.80	1.15	0.35
2DH5	Ant1	2402	2.89	3.75	77.07	1.13	0.35
2DH5	Ant1	2441	2.88	3.75	76.80	1.15	0.35
2DH5	Ant1	2480	2.88	3.74	77.01	1.13	0.35
3DH5	Ant1	2402	2.89	3.75	77.07	1.13	0.35
3DH5	Ant1	2441	2.88	3.75	76.80	1.15	0.35
3DH5	Ant1	2480	2.88	3.74	77.01	1.13	0.35

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

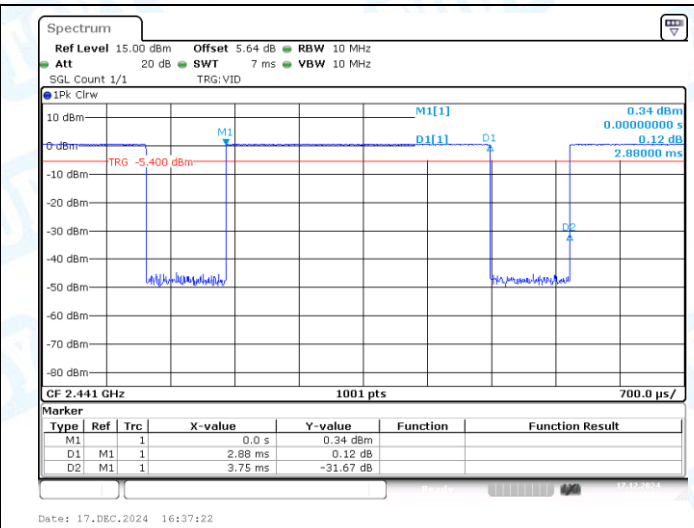
2, DC Factory=10*Log₁₀(1/Duty Cycle)

3, 1/T=1/ Transmission Duration

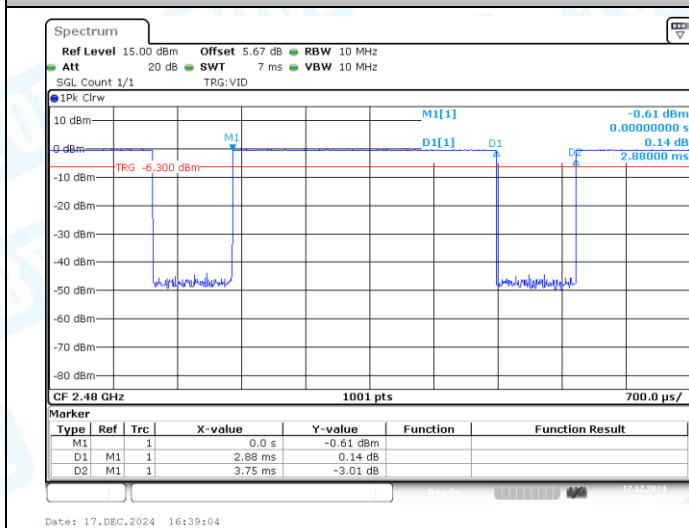
9.2 Test Graphs



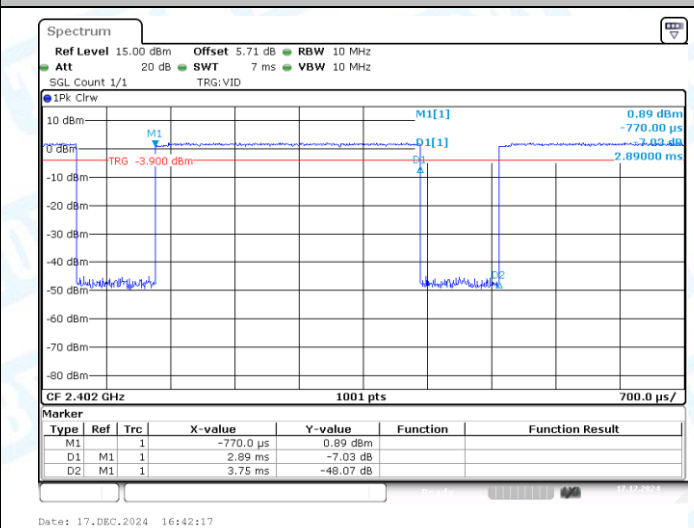
NTNV-DH5-Ant1-2402



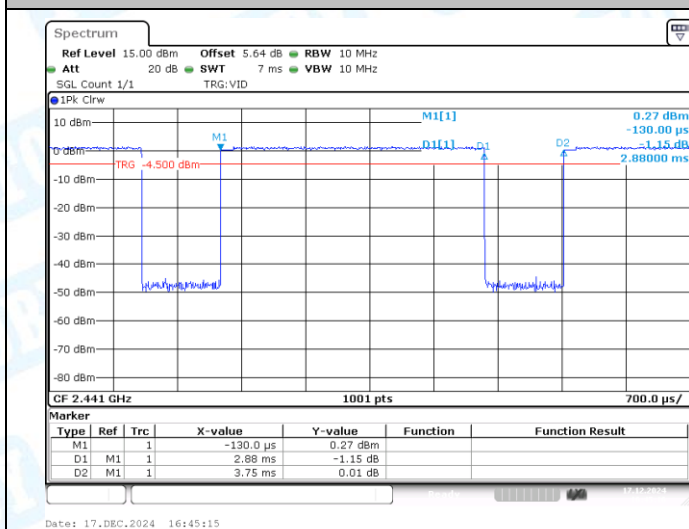
NTNV-DH5-Ant1-2441



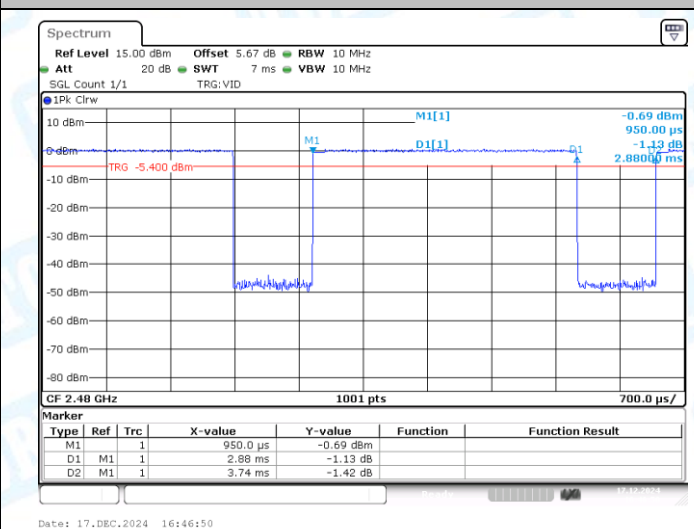
NTNV-DH5-Ant1-2480



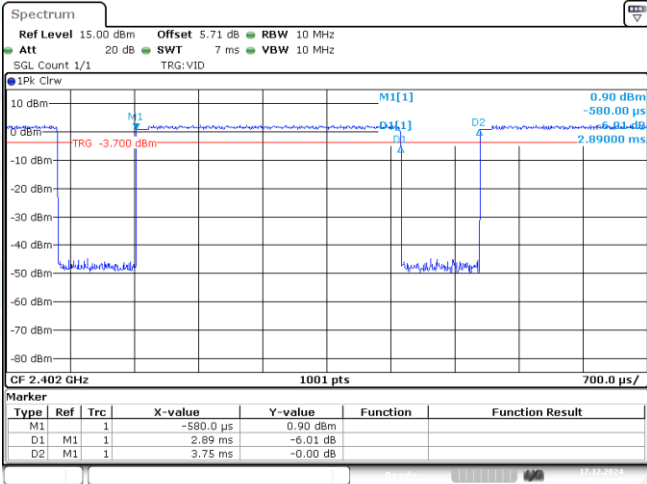
NTNV-2DH5-Ant1-2402



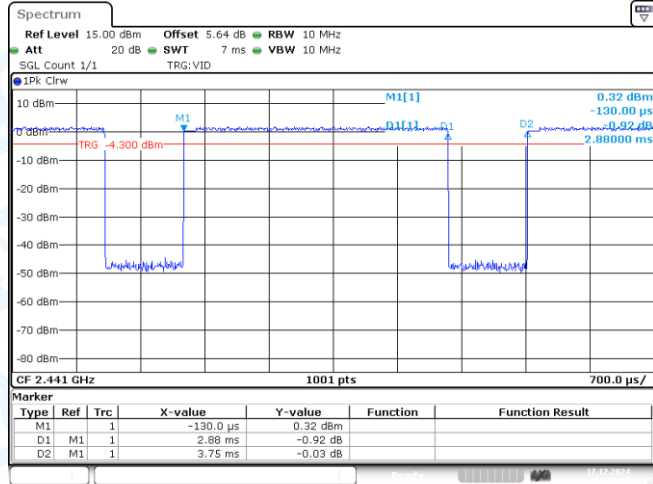
NTNV-2DH5-Ant1-2441



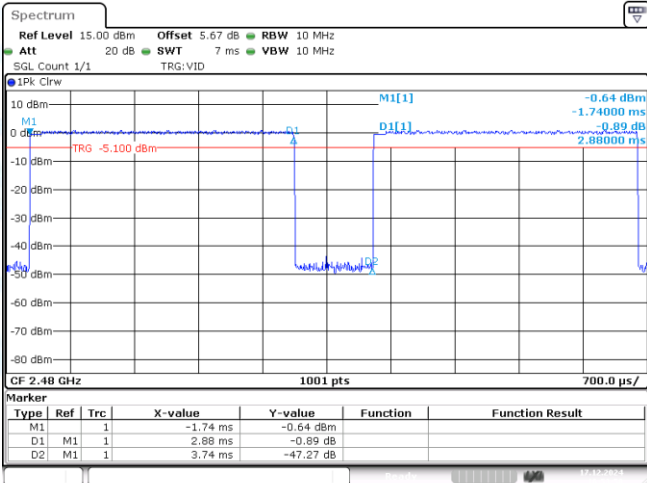
NTNV-2DH5-Ant1-2480



NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441



NTNV-3DH5-Ant1-2480

10. Emissions in Restricted Bands

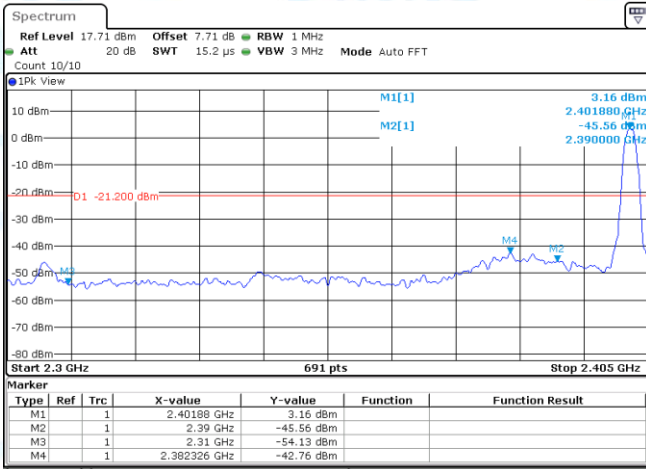
10.1 Test Result

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	-45.56	≤-21.20	49.64	≤74	PASS
DH5	Ant1	Low	2402	Peak	2310.000	-54.13	≤-21.20	41.07	≤74	PASS
DH5	Ant1	Low	2402	Peak	2382.326	-42.76	≤-21.20	52.44	≤74	PASS
DH5	Ant1	Low	2402	AV	2390.000	-56.65	≤-41.20	38.55	≤54	PASS
DH5	Ant1	Low	2402	AV	2310.000	-64.57	≤-41.20	30.63	≤54	PASS
DH5	Ant1	Low	2402	AV	2380.500	-55.17	≤-41.20	40.03	≤54	PASS
DH5	Ant1	High	2480	Peak	2483.500	-50.26	≤-21.20	44.94	≤74	PASS
DH5	Ant1	High	2480	Peak	2500.000	-45.5	≤-21.20	49.70	≤74	PASS
DH5	Ant1	High	2480	Peak	2497.362	-45.3	≤-21.20	49.90	≤74	PASS
DH5	Ant1	High	2480	AV	2483.500	-58.56	≤-41.20	36.64	≤54	PASS
DH5	Ant1	High	2480	AV	2500.000	-56.27	≤-41.20	38.93	≤54	PASS
DH5	Ant1	High	2480	AV	2498.522	-56.18	≤-41.20	39.02	≤54	PASS
2DH5	Ant1	Low	2402	Peak	2390.000	-45.14	≤-21.20	50.06	≤74	PASS
2DH5	Ant1	Low	2402	Peak	2310.000	-54.55	≤-21.20	40.65	≤74	PASS
2DH5	Ant1	Low	2402	Peak	2381.109	-43.07	≤-21.20	52.13	≤74	PASS
2DH5	Ant1	Low	2402	AV	2390.000	-56.63	≤-41.20	38.57	≤54	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-64.54	≤-41.20	30.66	≤54	PASS
2DH5	Ant1	Low	2402	AV	2383.239	-54.95	≤-41.20	40.25	≤54	PASS
2DH5	Ant1	High	2480	Peak	2483.500	-48.73	≤-21.20	46.47	≤74	PASS
2DH5	Ant1	High	2480	Peak	2500.000	-45.58	≤-21.20	49.62	≤74	PASS
2DH5	Ant1	High	2480	Peak	2498.058	-44.35	≤-21.20	50.85	≤74	PASS
2DH5	Ant1	High	2480	AV	2483.500	-59.37	≤-41.20	35.83	≤54	PASS
2DH5	Ant1	High	2480	AV	2500.000	-56.38	≤-41.20	38.82	≤54	PASS
2DH5	Ant1	High	2480	AV	2498.058	-56.17	≤-41.20	39.03	≤54	PASS
3DH5	Ant1	Low	2402	Peak	2390.000	-45.37	≤-21.20	49.83	≤74	PASS
3DH5	Ant1	Low	2402	Peak	2310.000	-53.57	≤-21.20	41.63	≤74	PASS
3DH5	Ant1	Low	2402	Peak	2379.435	-42.96	≤-21.20	52.24	≤74	PASS
3DH5	Ant1	Low	2402	AV	2390.000	-56.48	≤-41.20	38.72	≤54	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-64.54	≤-41.20	30.66	≤54	PASS
3DH5	Ant1	Low	2402	AV	2382.326	-55.16	≤-41.20	40.04	≤54	PASS
3DH5	Ant1	High	2480	Peak	2483.500	-50.47	≤-21.20	44.73	≤74	PASS
3DH5	Ant1	High	2480	Peak	2500.000	-45.54	≤-21.20	49.66	≤74	PASS
3DH5	Ant1	High	2480	Peak	2499.565	-44.81	≤-21.20	50.39	≤74	PASS
3DH5	Ant1	High	2480	AV	2483.500	-59.25	≤-41.20	35.95	≤54	PASS
3DH5	Ant1	High	2480	AV	2500.000	-56.24	≤-41.20	38.96	≤54	PASS
3DH5	Ant1	High	2480	AV	2497.594	-56.05	≤-41.20	39.15	≤54	PASS

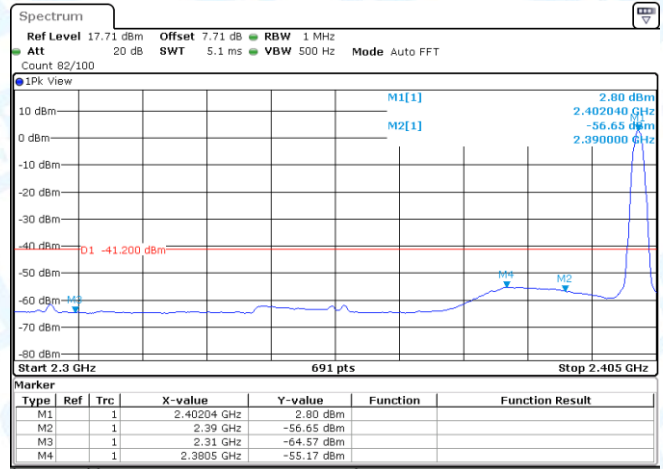
Note:

- 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



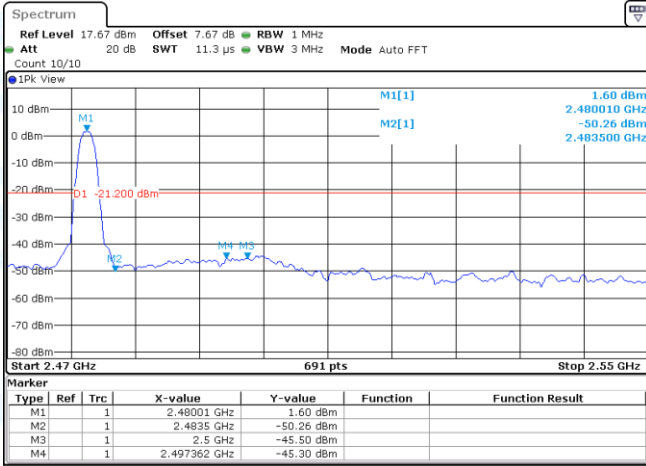
Date: 17.DEC.2024 16:35:16



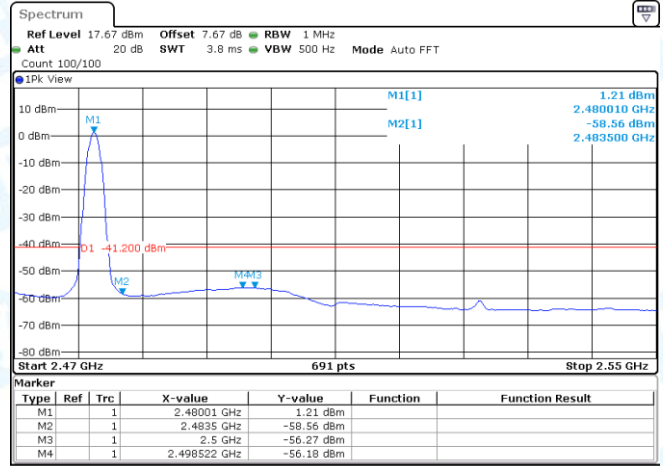
Date: 17.DEC.2024 16:35:32

DH5-Ant1-2402-PASS

DH5-Ant1-2402-PASS



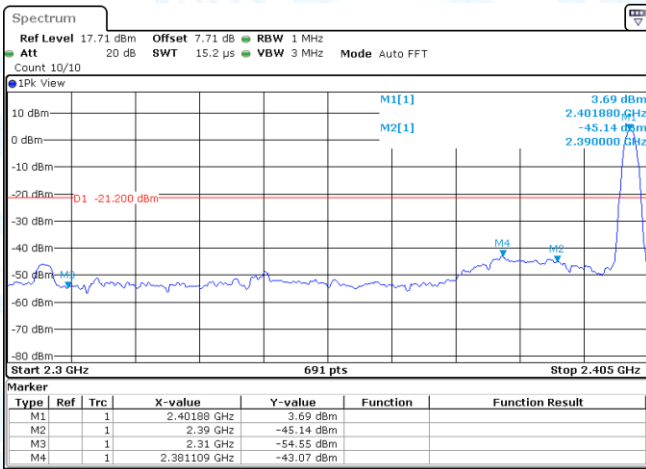
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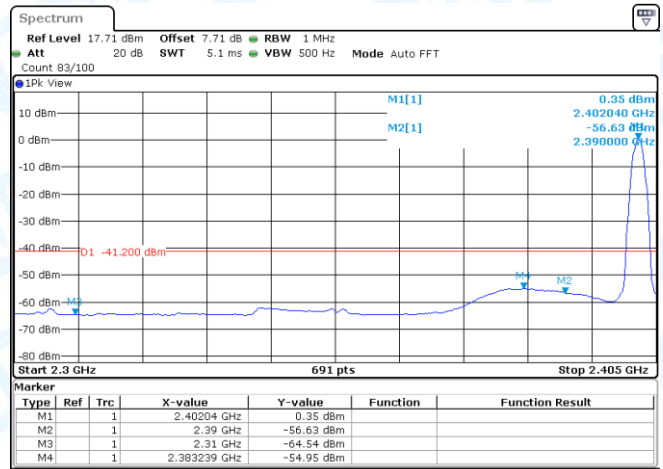
Date: 17.DEC.2024 16:40:33

DH5-Ant1-2480-PASS

DH5-Ant1-2480-PASS



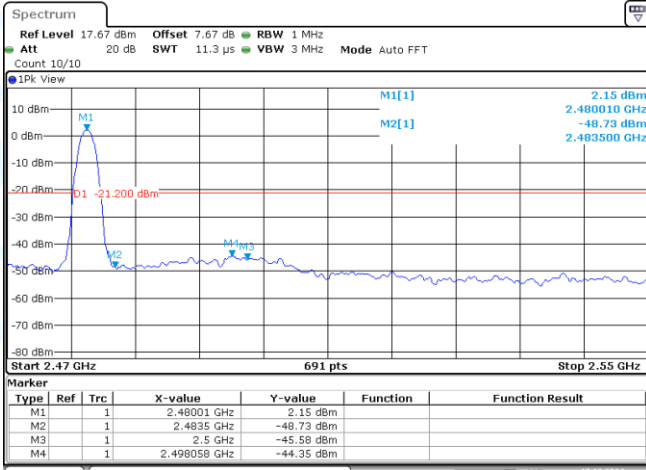
Date: 17.DEC.2024 16:43:30



Date: 17.DEC.2024 16:43:46

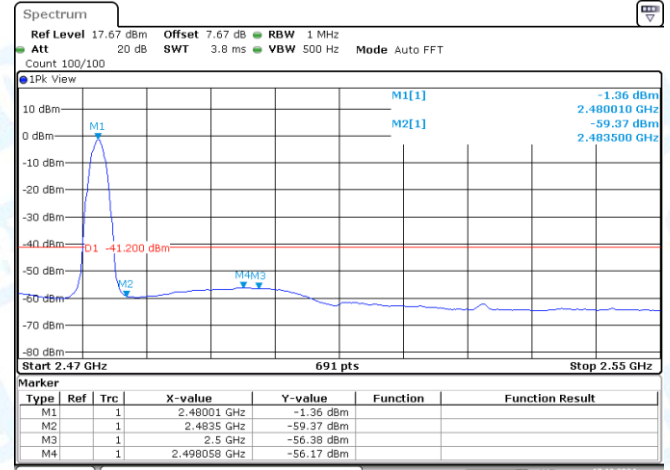
2DH5-Ant1-2402-PASS

2DH5-Ant1-2402-PASS



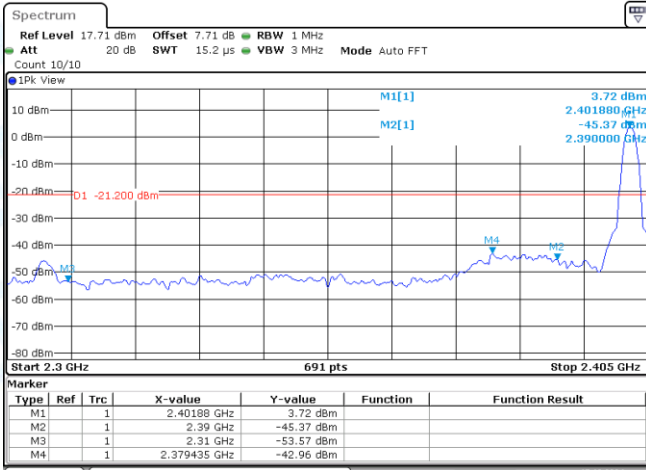
Date: 17.DEC.2024 16:48:04

2DH5-Ant1-2480-PASS



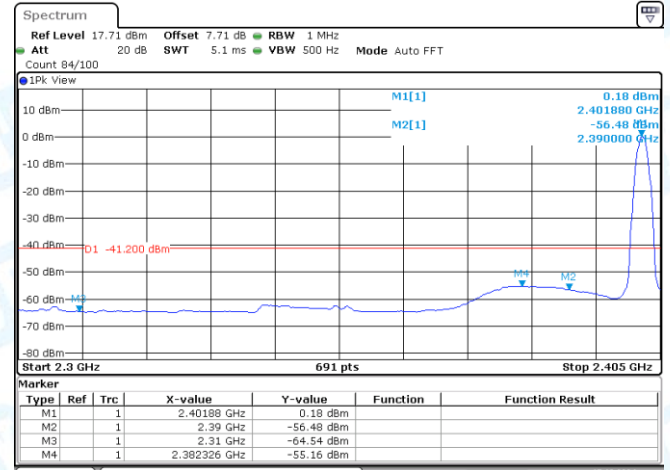
Date: 17.DEC.2024 16:48:20

2DH5-Ant1-2480-PASS



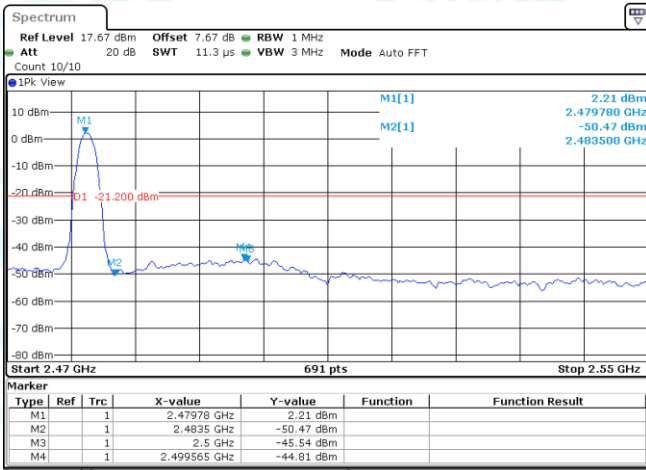
Date: 17.DEC.2024 16:50:59

3DH5-Ant1-2402-PASS



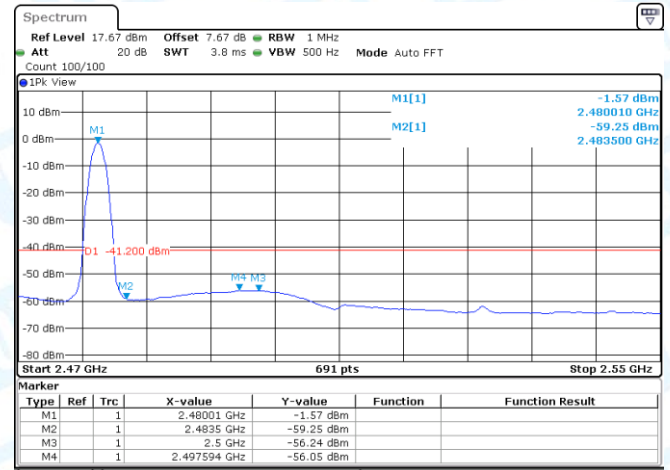
Date: 17.DEC.2024 16:51:14

3DH5-Ant1-2402-PASS



Date: 17.DEC.2024 16:55:12

3DH5-Ant1-2480-PASS



Date: 17.DEC.2024 16:55:28

3DH5-Ant1-2480-PASS

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