

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

General Description of EUT	
EUT Name:	TV BOX
Model:	GD2
Sample ID:	HC-C-202408-0094-02-01
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	24.7°C
Ambient Humidity:	47.2%RH
Test Power Supply:	DC 12V
Test Engineer:	Mike Yan
Note: For a more detailed features description, please refer to the report TBR-C-202408-0094-11	

Contents

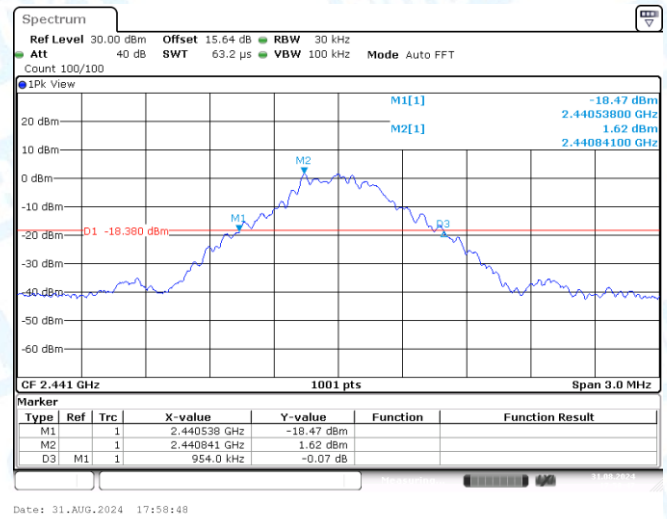
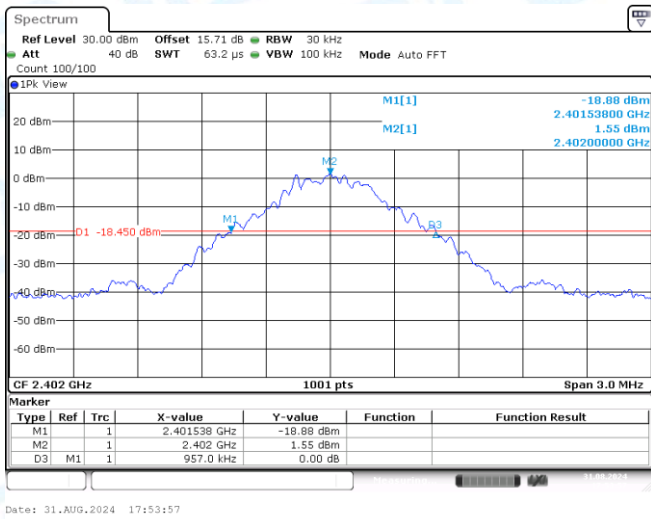
1: 20dB Emission Bandwidth	3
1.1 Test Result	3
1.2 Test Graphs	4
2: Occupied Channel Bandwidth	6
2.1 Test Result	6
2.2 Test Graphs	7
3: Maximum conducted output power	9
3.1 Test Result Peak	9
3.2 Test Graphs	10
4: Carrier frequency separation	12
4.1 Test Result	12
4.2 Test Graphs	13
5: Time of occupancy	14
5.1 Test Result	14
5.2 Test Graphs	15
6: Number of hopping channels	18
6.1 Test Result	18
6.2 Test Graphs	19
7: Band edge measurements	20
7.1 Test Result	20
7.2 Test Graphs	21
8: Conducted Spurious Emission	23
8.1 Test Result	23
8.2 Test Graphs	24
9: Duty Cycle	29
9.1 Test Result	29
9.2 Test Graphs	30

1: 20dB Emission Bandwidth

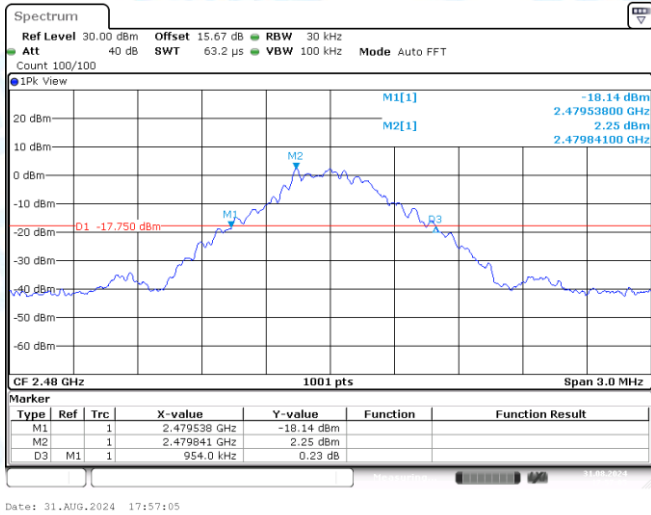
1.1 Test Result

Test Mode	Antenna	Frequency[MHz]	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.96	2401.54	2402.50	---	---
DH5	Ant1	2441	0.95	2440.54	2441.49	---	---
DH5	Ant1	2480	0.95	2479.54	2480.49	---	---
2DH5	Ant1	2402	1.28	2401.38	2402.66	---	---
2DH5	Ant1	2441	1.28	2440.38	2441.66	---	---
2DH5	Ant1	2480	1.28	2479.38	2480.66	---	---
3DH5	Ant1	2402	1.29	2401.36	2402.65	---	---
3DH5	Ant1	2441	1.29	2440.36	2441.65	---	---
3DH5	Ant1	2480	1.29	2479.36	2480.65	---	---

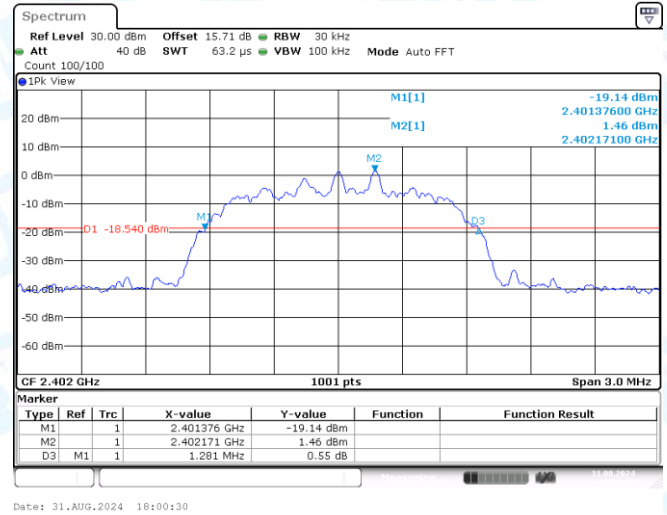
1.2 Test Graphs



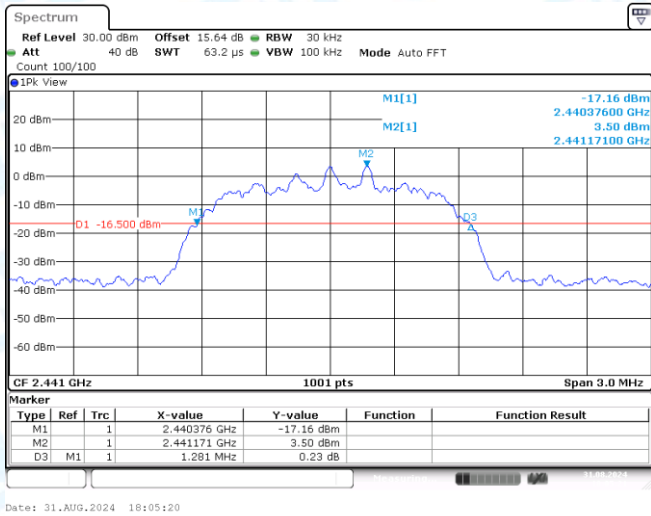
DH5-Ant1-2402



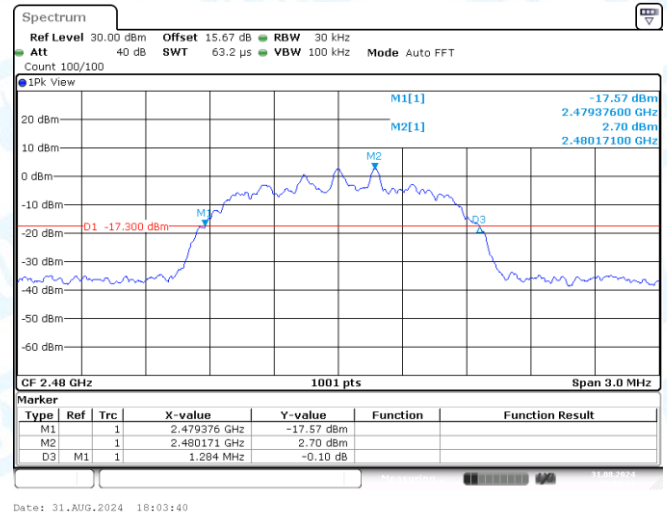
DH5-Ant1-2441



DH5-Ant1-2480

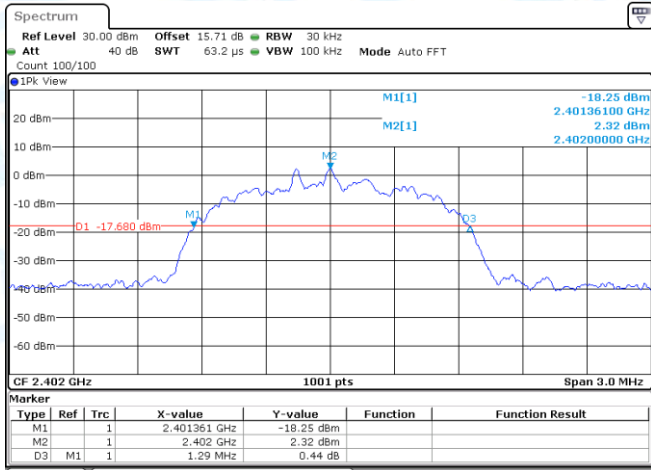


2DH5-Ant1-2402



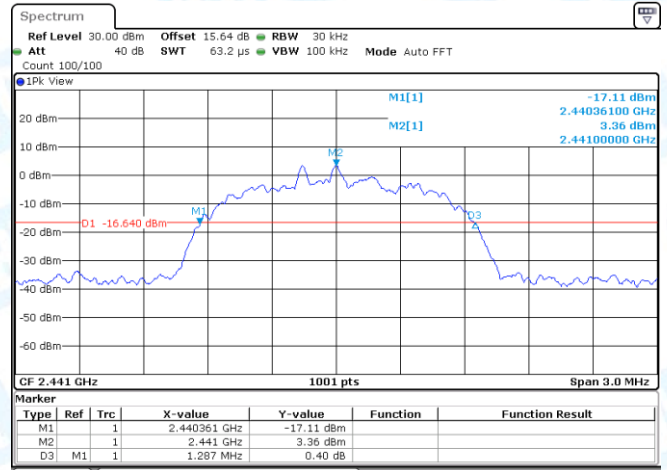
2DH5-Ant1-2441

2DH5-Ant1-2480



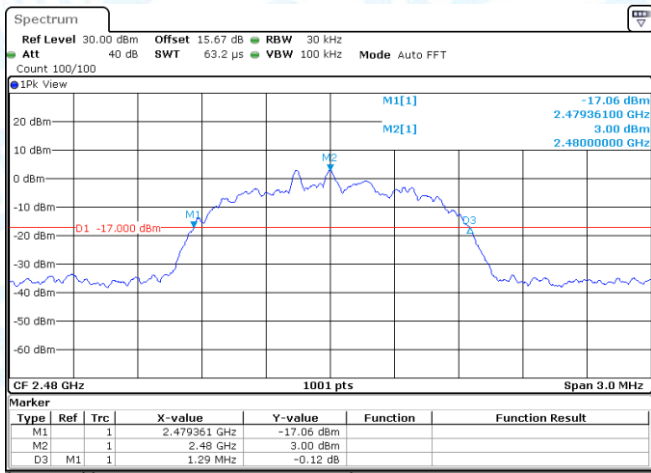
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3DH5-Ant1-2402



Date: 31.AUG.2024 18:11:32

3DH5-Ant1-2441



Date: 31.AUG.2024 18:09:56

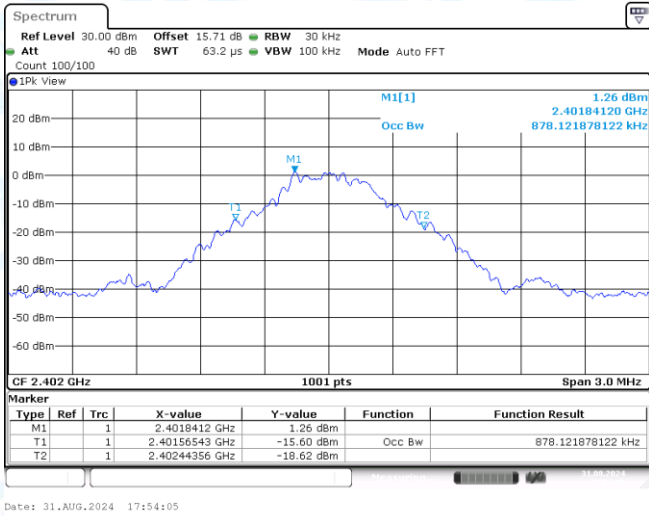
3DH5-Ant1-2480

2: Occupied Channel Bandwidth

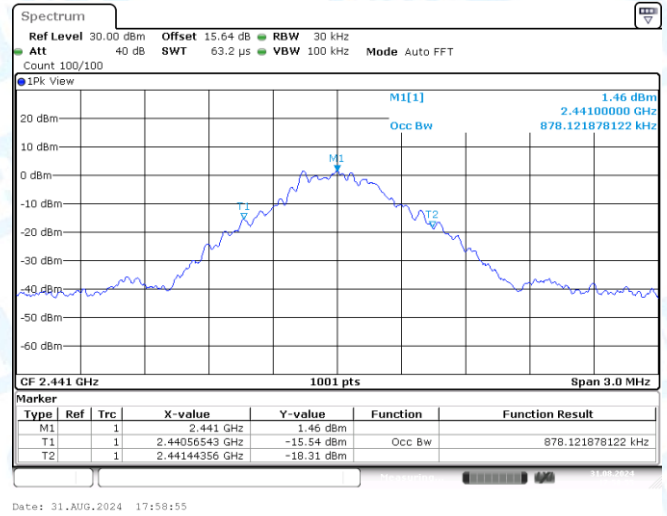
2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.878	2401.5654	2402.4436	---	---
DH5	Ant1	2441	0.878	2440.5654	2441.4436	---	---
DH5	Ant1	2480	0.875	2479.5654	2480.4406	---	---
2DH5	Ant1	2402	1.166	2401.4216	2402.5874	---	---
2DH5	Ant1	2441	1.172	2440.4186	2441.5904	---	---
2DH5	Ant1	2480	1.172	2479.4186	2480.5904	---	---
3DH5	Ant1	2402	1.169	2401.4216	2402.5904	---	---
3DH5	Ant1	2441	1.178	2440.4186	2441.5964	---	---
3DH5	Ant1	2480	1.184	2479.4156	2480.5994	---	---

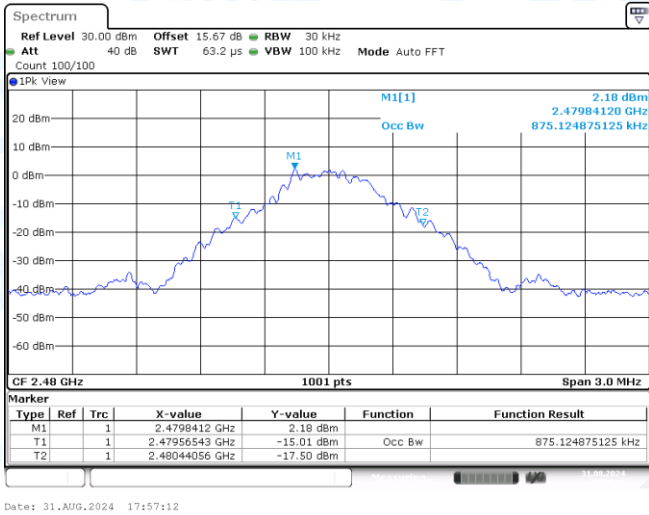
2.2 Test Graphs



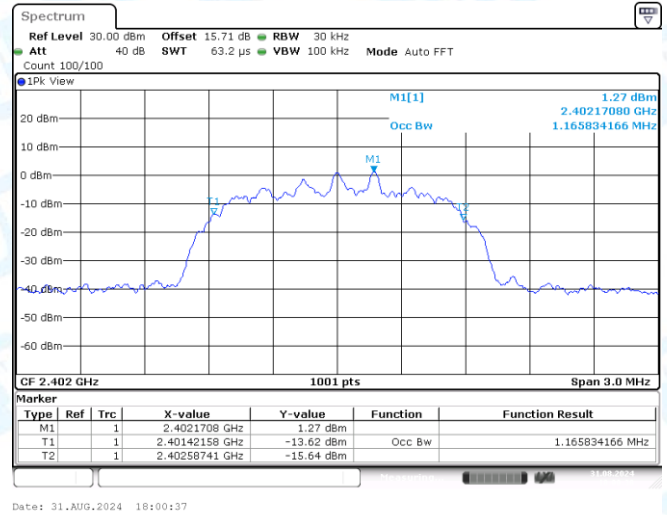
DH5-Ant1-2402



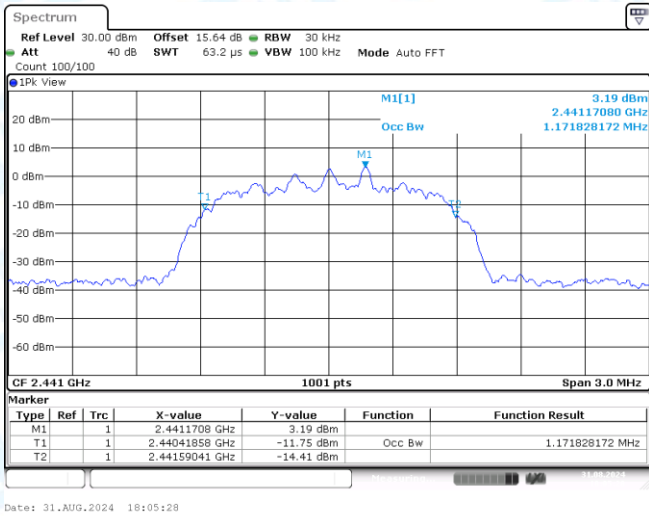
DH5-Ant1-2441



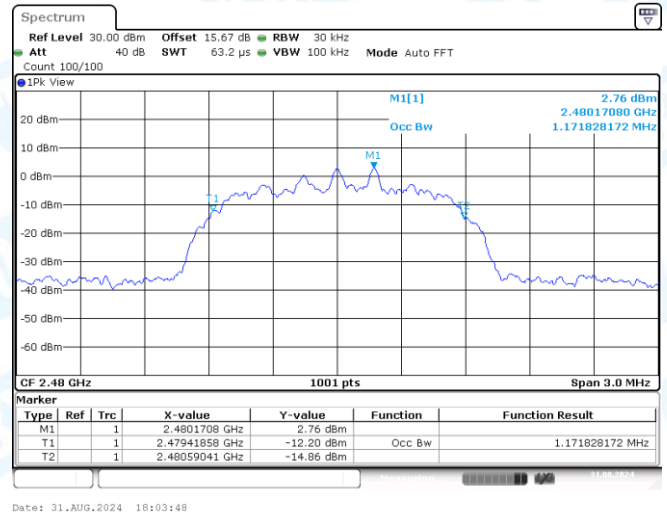
DH5-Ant1-2480



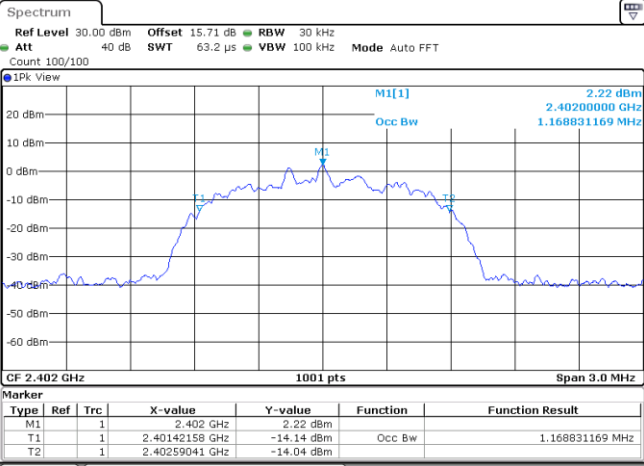
2DH5-Ant1-2402



2DH5-Ant1-2441

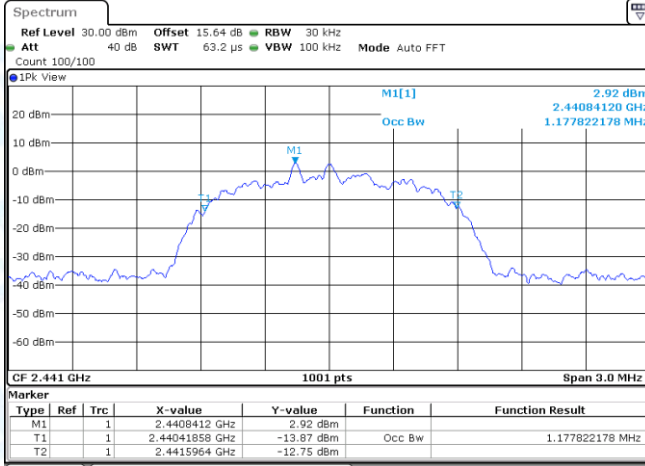


2DH5-Ant1-2480



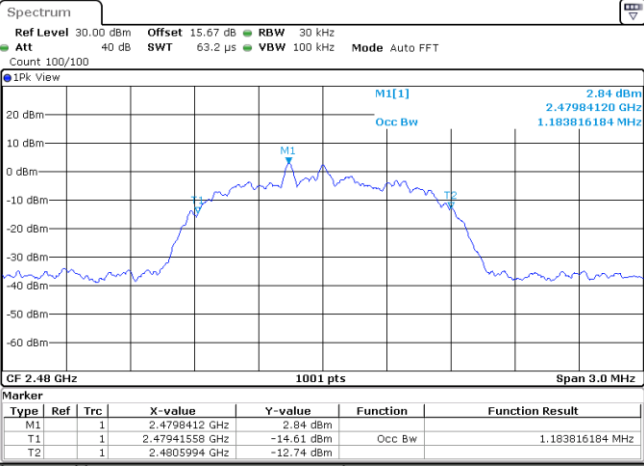
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3DH5-Ant1-2402



Date: 31.AUG.2024 18:11:40

3DH5-Ant1-2441



Date: 31.AUG.2024 18:10:04

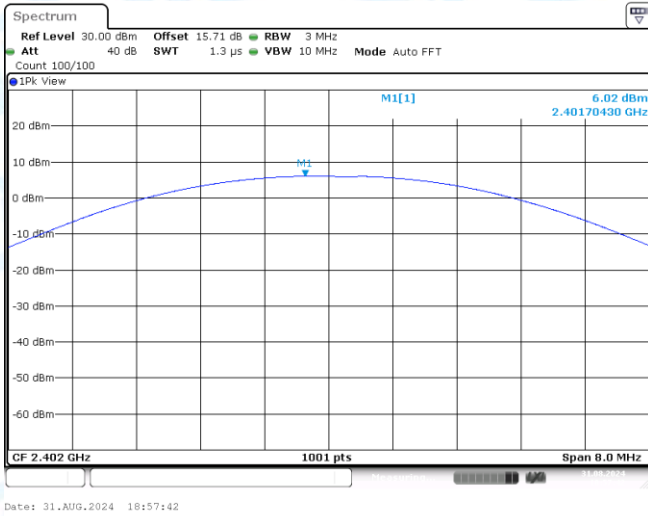
3DH5-Ant1-2480

3: Maximum conducted output power

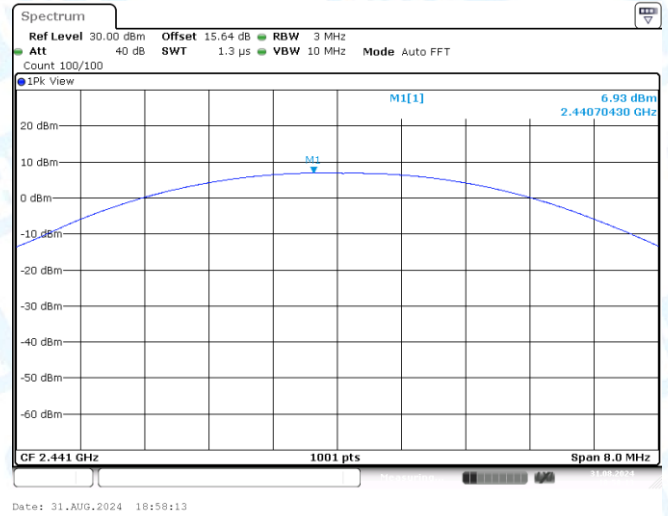
3.1 Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	6.02	≤30	PASS
DH5	Ant1	2441	6.93	≤30	PASS
DH5	Ant1	2480	5.67	≤30	PASS
2DH5	Ant1	2402	6.37	≤30	PASS
2DH5	Ant1	2441	8.13	≤30	PASS
2DH5	Ant1	2480	7.94	≤30	PASS
3DH5	Ant1	2402	7.63	≤30	PASS
3DH5	Ant1	2441	8.42	≤30	PASS
3DH5	Ant1	2480	8.09	≤30	PASS

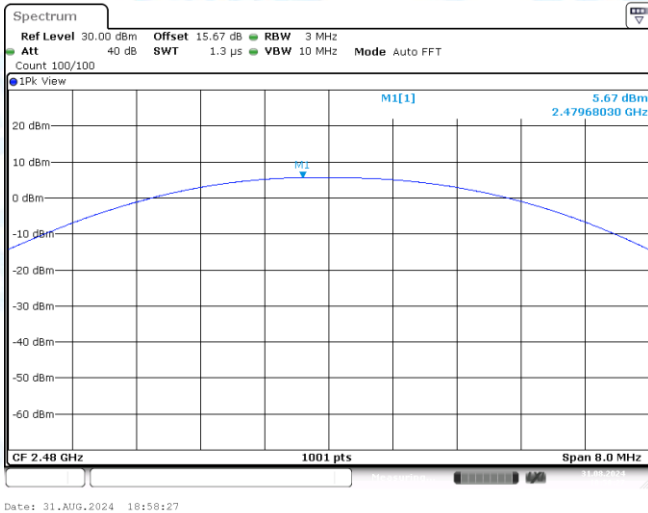
3.2 Test Graphs



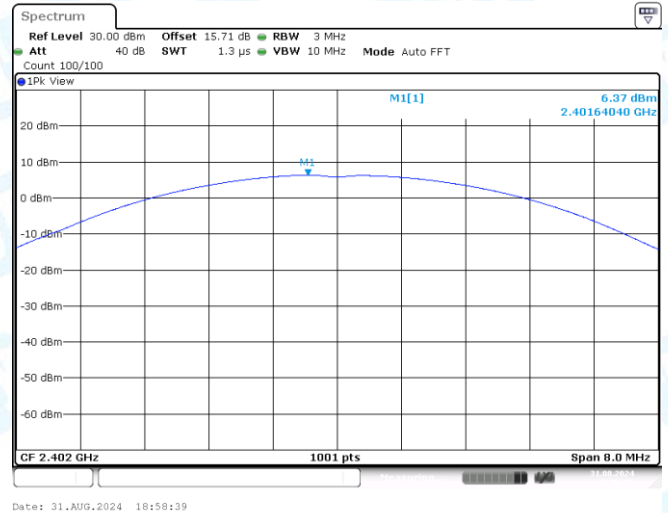
DH5-Ant1-2402-PASS



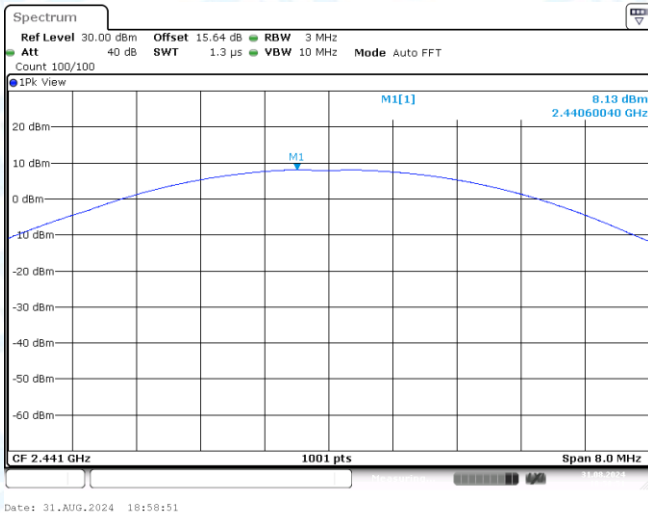
DH5-Ant1-2441-PASS



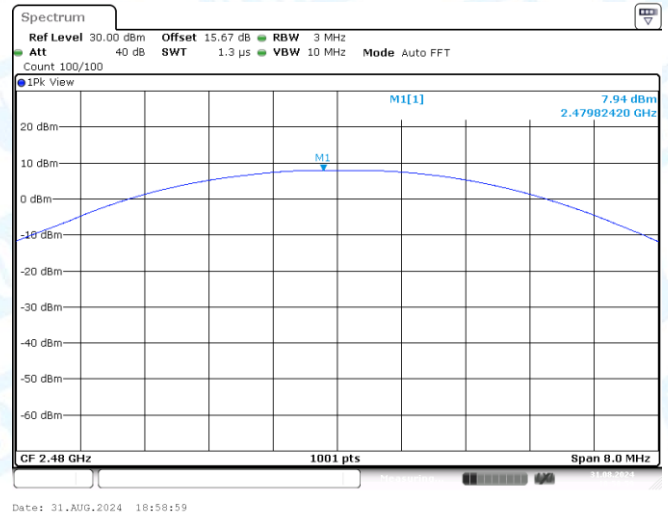
DH5-Ant1-2480-PASS



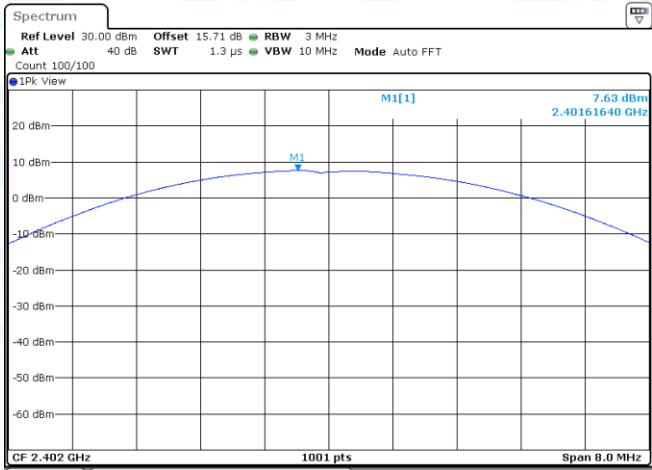
2DH5-Ant1-2402-PASS



2DH5-Ant1-2441-PASS

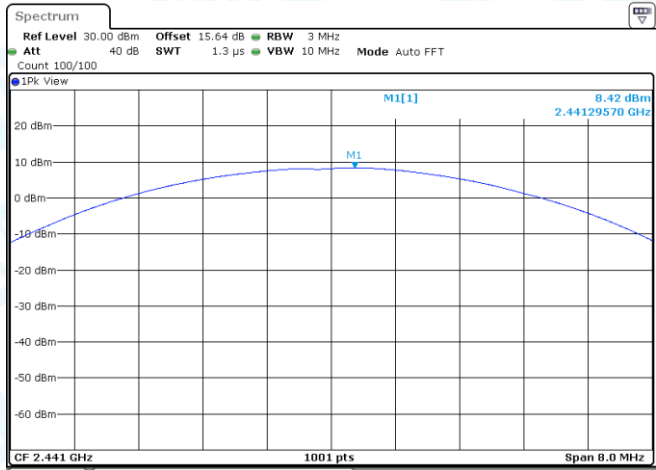


2DH5-Ant1-2480-PASS



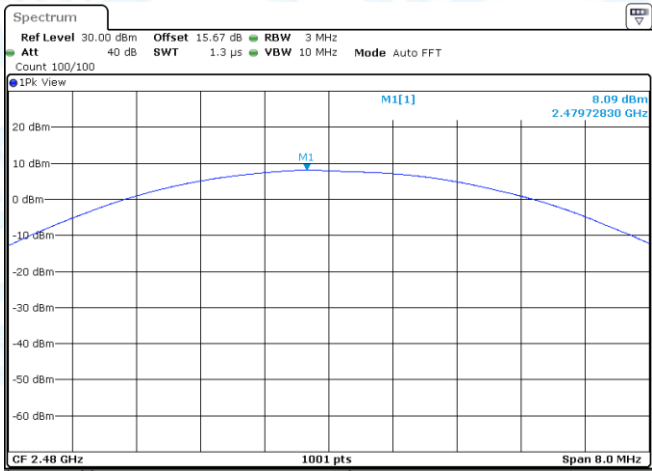
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3DH5-Ant1-2402-PASS



Date: 31.AUG.2024 18:59:19

3DH5-Ant1-2441-PASS



Date: 31.AUG.2024 18:59:28

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	≥ 0.960	PASS
2DH5	Ant1	Hop	1.333	≥ 1.280	PASS
3DH5	Ant1	Hop	1.328	≥ 1.290	PASS

4.2 Test Graphs

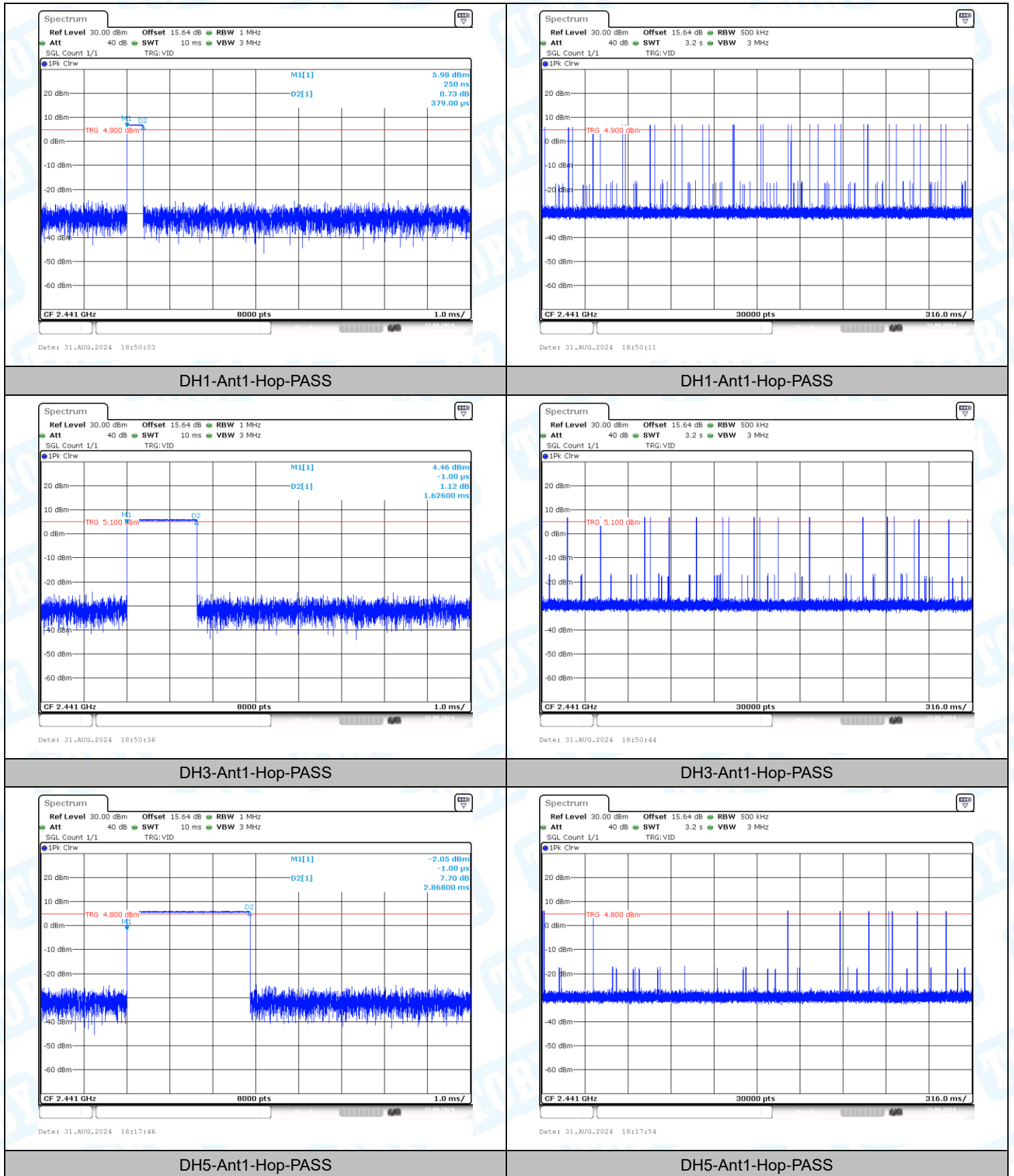


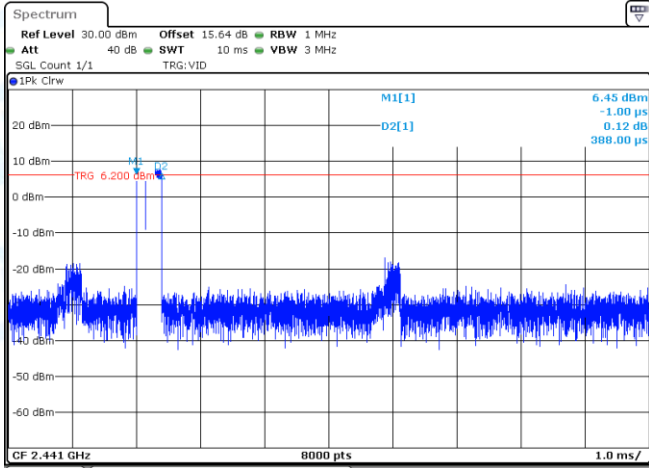
5: Time of occupancy

5.1 Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.379	330	0.125	≤0.4	PASS
DH3	Ant1	Hop	1.626	200	0.325	≤0.4	PASS
DH5	Ant1	Hop	2.868	100	0.287	≤0.4	PASS
2DH1	Ant1	Hop	0.388	330	0.128	≤0.4	PASS
2DH3	Ant1	Hop	1.633	140	0.229	≤0.4	PASS
2DH5	Ant1	Hop	2.868	110	0.315	≤0.4	PASS
3DH1	Ant1	Hop	0.388	330	0.128	≤0.4	PASS
3DH3	Ant1	Hop	1.630	190	0.31	≤0.4	PASS
3DH5	Ant1	Hop	2.874	100	0.287	≤0.4	PASS

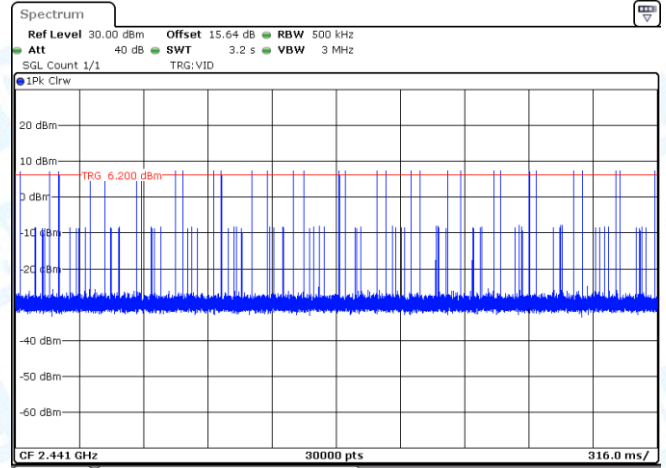
5.2 Test Graphs





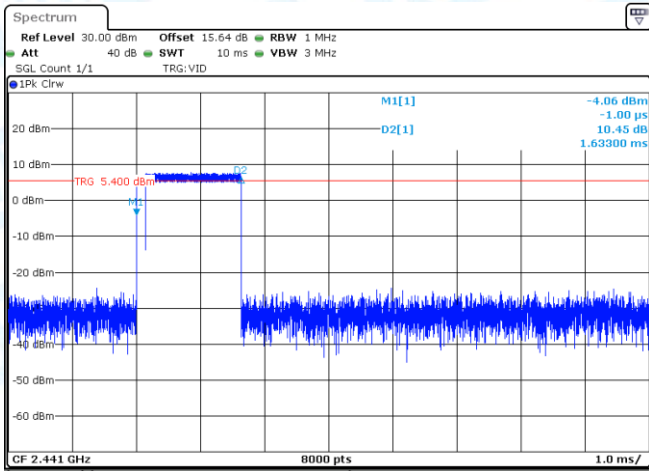
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2DH1-Ant1-Hop-PASS



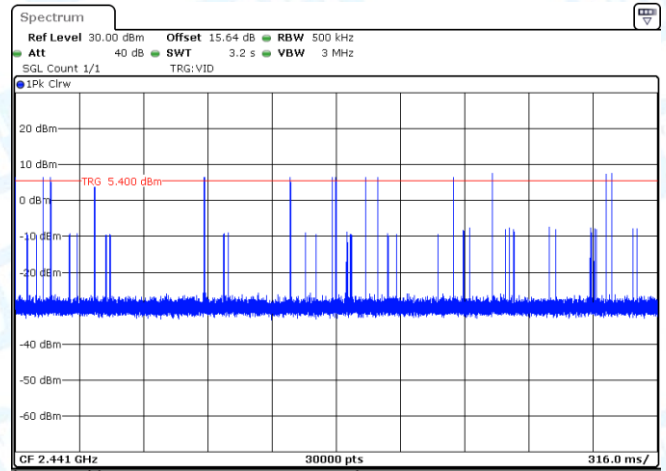
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2DH1-Ant1-Hop-PASS



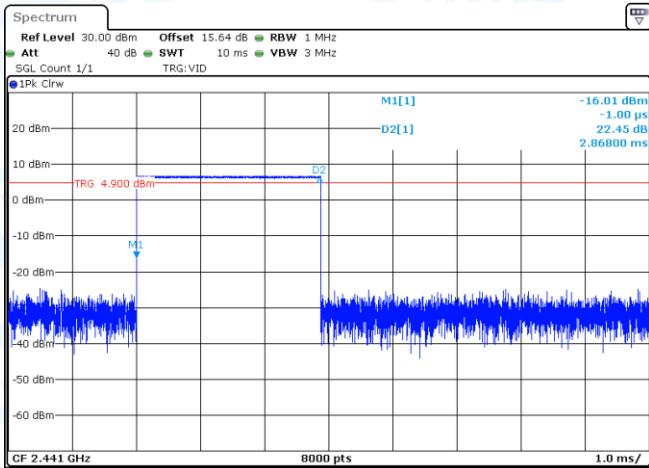
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2DH3-Ant1-Hop-PASS



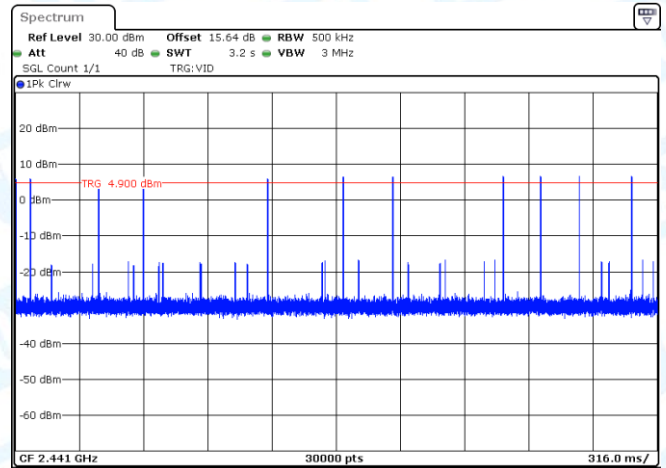
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2DH3-Ant1-Hop-PASS



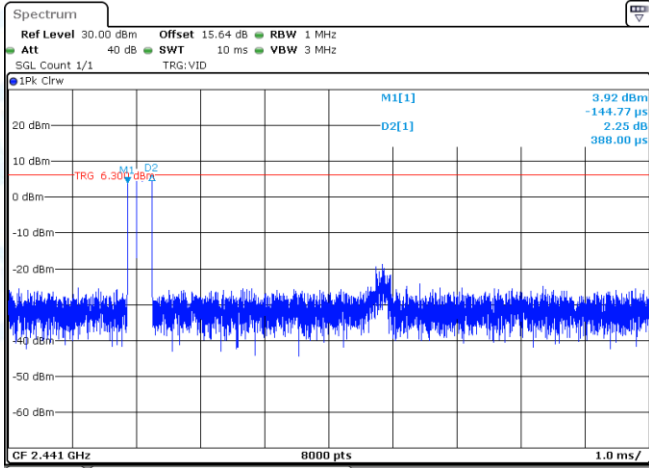
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2DH5-Ant1-Hop-PASS



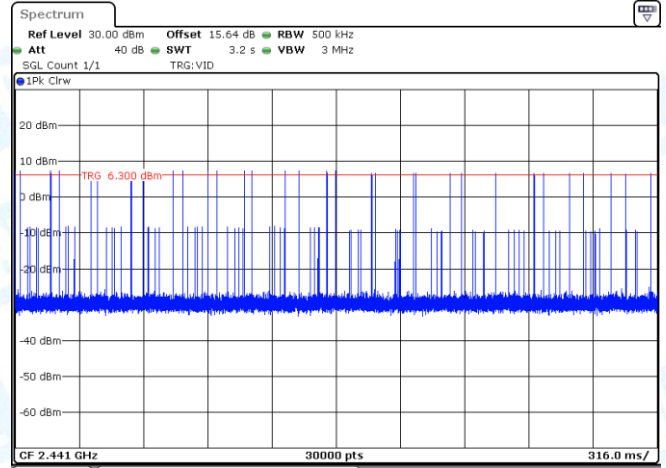
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2DH5-Ant1-Hop-PASS



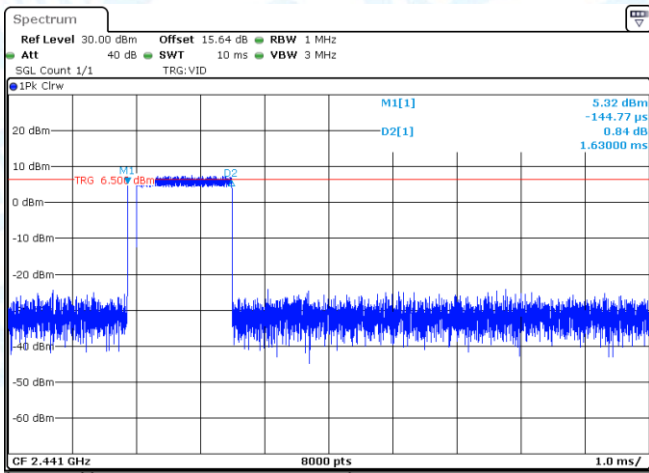
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3DH1-Ant1-Hop-PASS



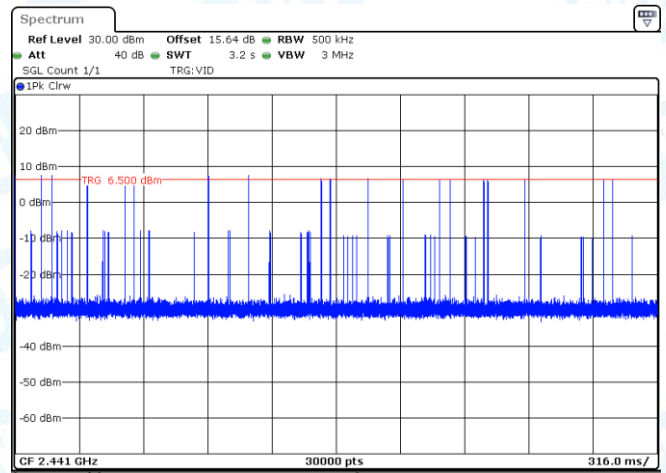
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3DH1-Ant1-Hop-PASS



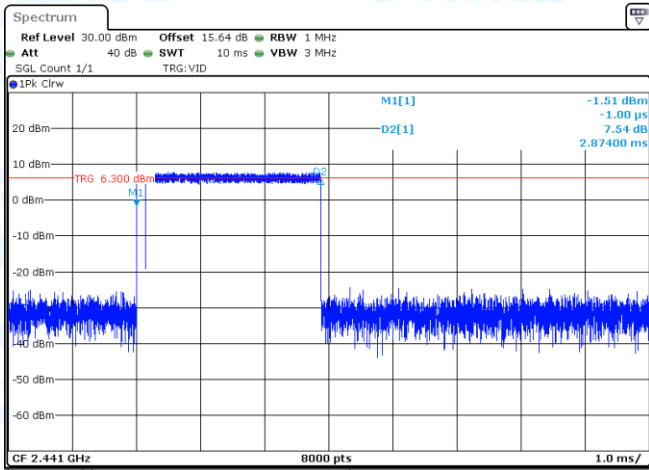
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3DH3-Ant1-Hop-PASS



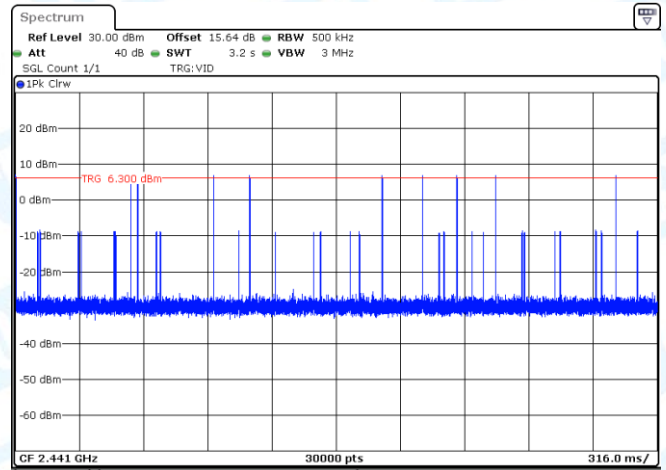
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3DH3-Ant1-Hop-PASS



Date: 31.AUG.2024 18:37:08

3DH5-Ant1-Hop-PASS



Date: 31.AUG.2024 18:37:16

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

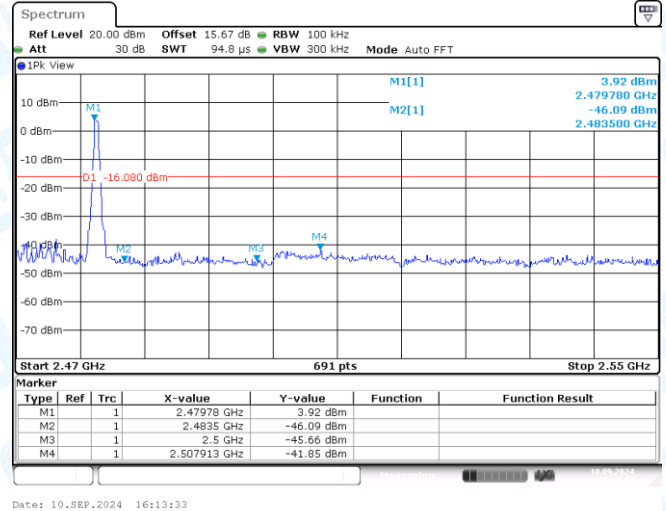
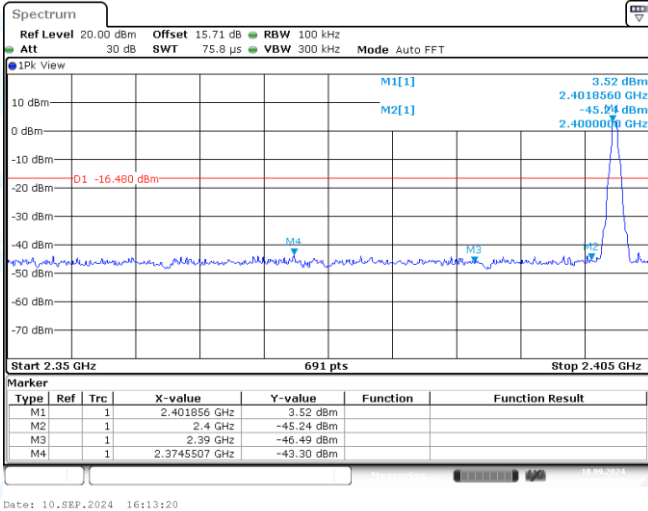


7: Band edge measurements

7.1 Test Result

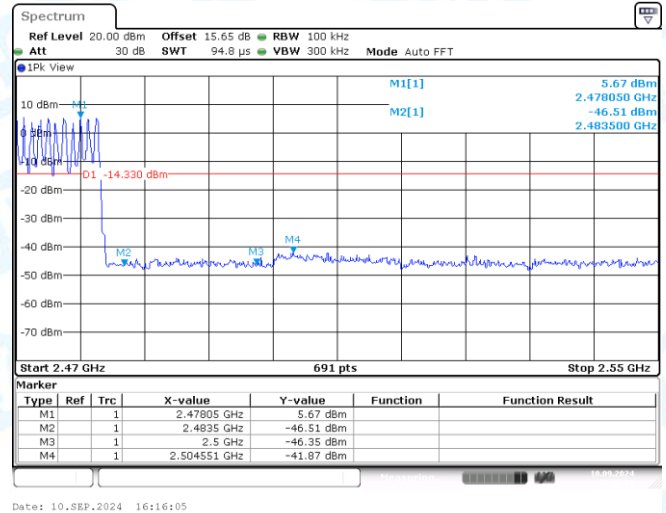
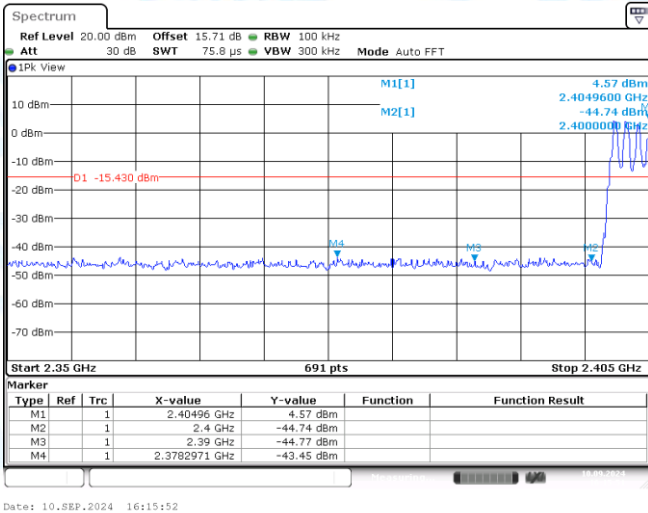
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	3.52	-43.3	≤-16.48	PASS
DH5	Ant1	High	2480	3.92	-41.85	≤-16.08	PASS
DH5	Ant1	Low	Hop_2402	4.57	-43.45	≤-15.43	PASS
DH5	Ant1	High	Hop_2480	5.67	-41.87	≤-14.33	PASS
2DH5	Ant1	Low	2402	4.40	-43.71	≤-15.6	PASS
2DH5	Ant1	High	2480	5.12	-41.67	≤-14.88	PASS
2DH5	Ant1	Low	Hop_2402	5.61	-43.33	≤-14.39	PASS
2DH5	Ant1	High	Hop_2480	5.39	-41.82	≤-14.61	PASS
3DH5	Ant1	Low	2402	3.71	-43.91	≤-16.29	PASS
3DH5	Ant1	High	2480	5.01	-42.44	≤-14.99	PASS
3DH5	Ant1	Low	Hop_2402	2.76	-42.56	≤-17.24	PASS
3DH5	Ant1	High	Hop_2480	5.63	-42.34	≤-14.37	PASS

7.2 Test Graphs



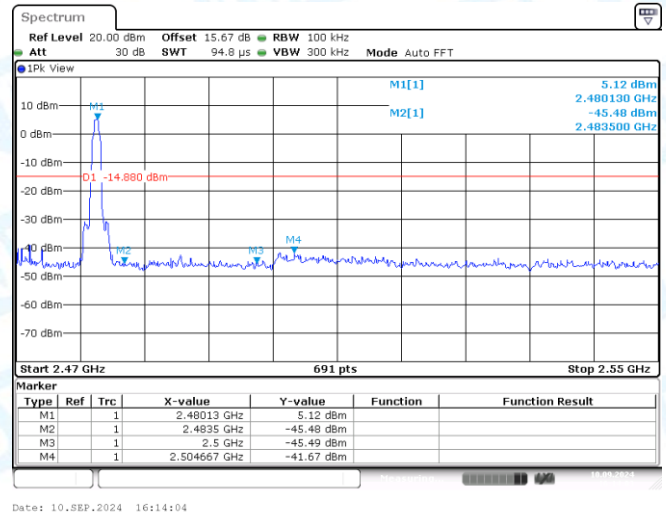
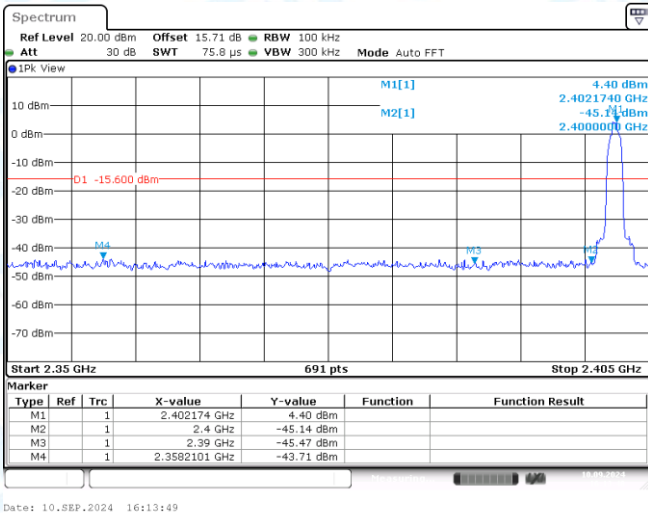
DH5-Ant1-2402-PASS

DH5-Ant1-2480-PASS



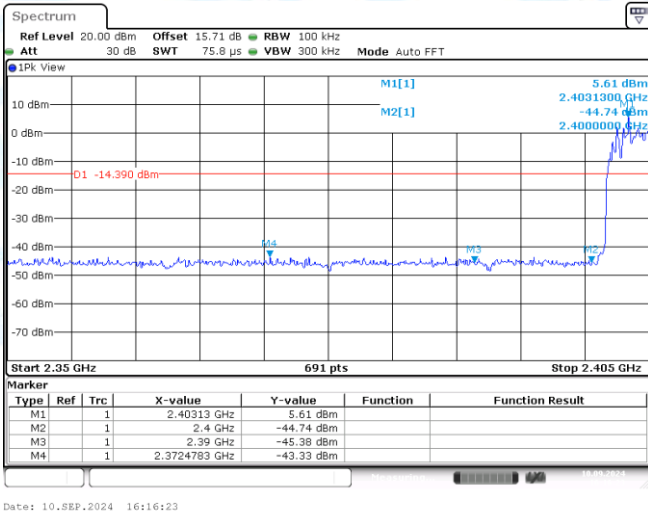
DH5-Ant1-Hop_2402-PASS

DH5-Ant1-Hop_2480-PASS

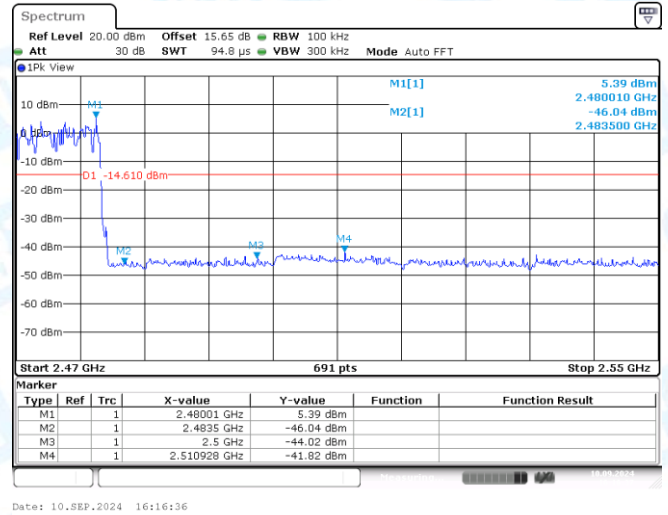


2DH5-Ant1-2402-PASS

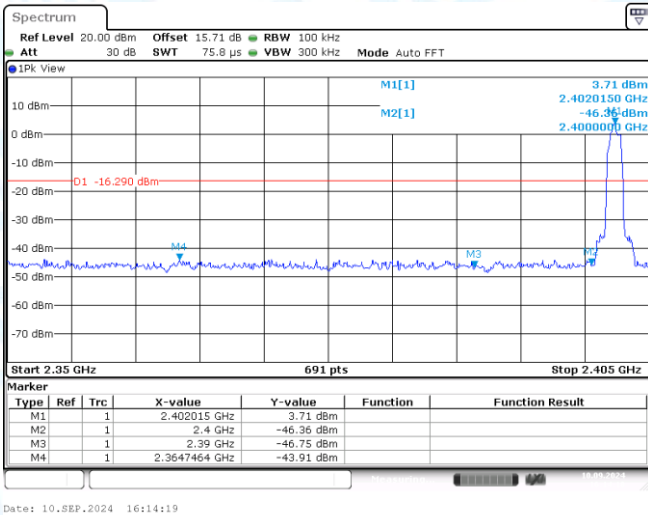
2DH5-Ant1-2480-PASS



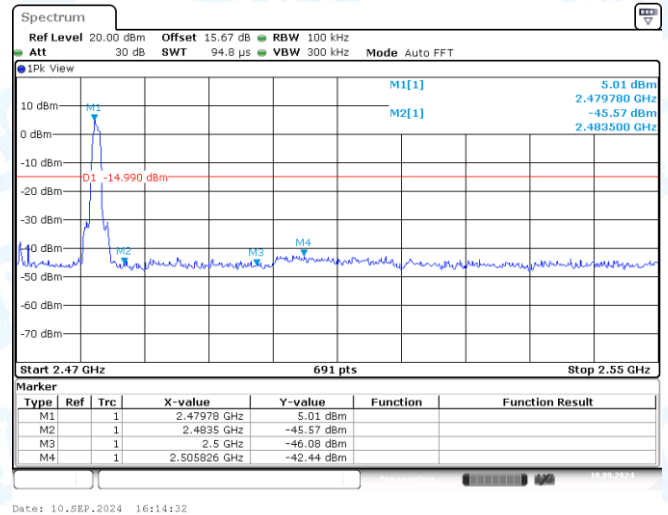
2DH5-Ant1-Hop_2402-PASS



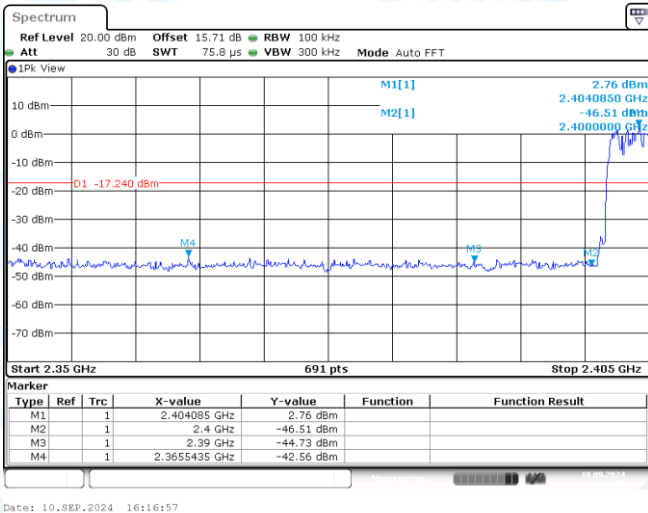
2DH5-Ant1-Hop_2480-PASS



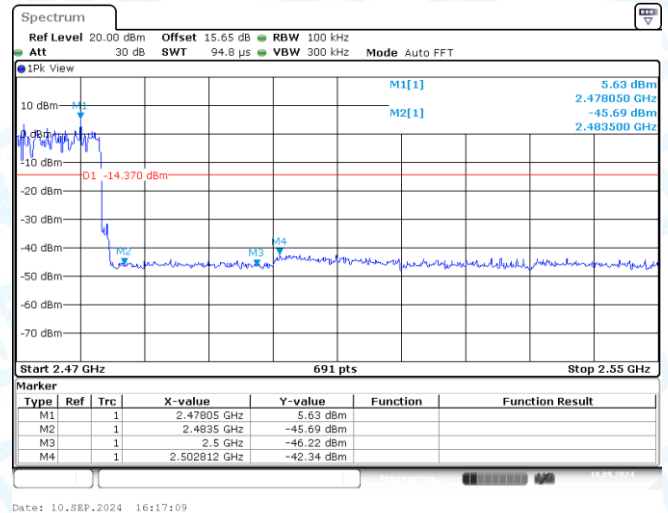
3DH5-Ant1-2402-PASS



3DH5-Ant1-2480-PASS



3DH5-Ant1-Hop_2402-PASS



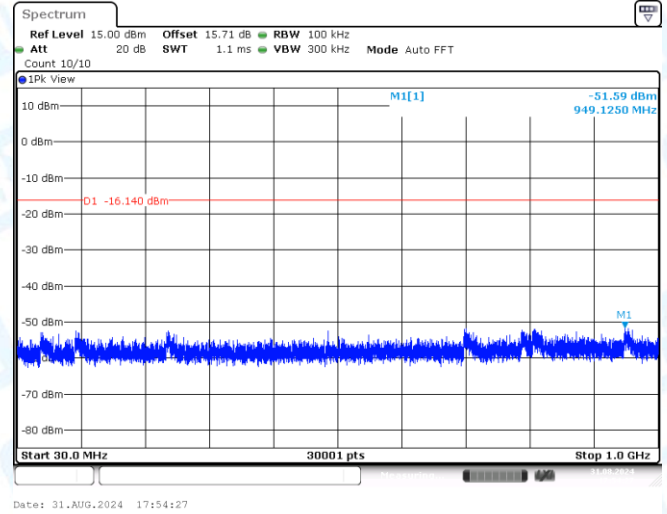
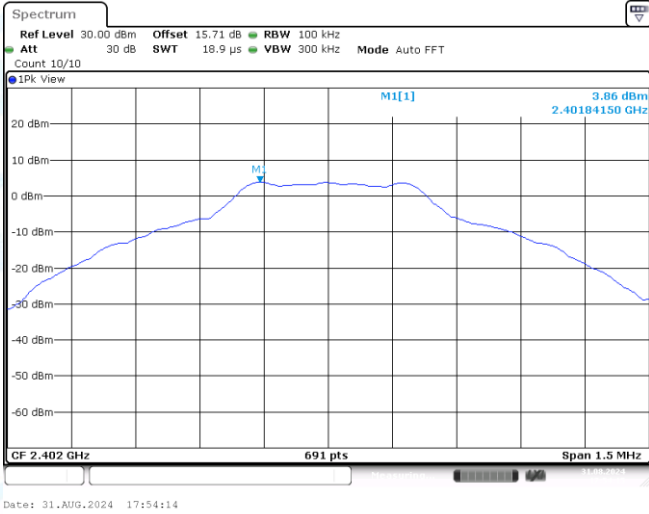
3DH5-Ant1-Hop_2480-PASS

8: Conducted Spurious Emission

8.1 Test Result

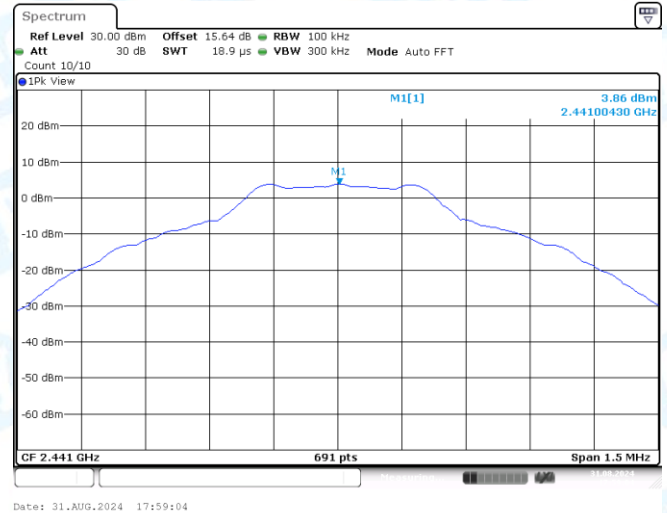
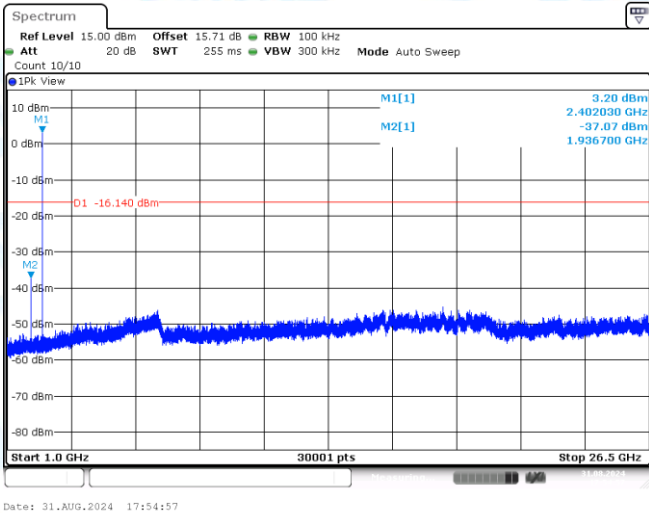
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	3.86	3.86	---	PASS
DH5	Ant1	2402	30~1000	3.86	-51.59	≤-16.14	PASS
DH5	Ant1	2402	1000~26500	3.86	-37.07	≤-16.14	PASS
DH5	Ant1	2441	0~Reference	3.86	3.86	---	PASS
DH5	Ant1	2441	30~1000	3.86	-50.59	≤-16.14	PASS
DH5	Ant1	2441	1000~26500	3.86	-45.15	≤-16.14	PASS
DH5	Ant1	2480	0~Reference	4.87	4.87	---	PASS
DH5	Ant1	2480	30~1000	4.87	-49.55	≤-15.13	PASS
DH5	Ant1	2480	1000~26500	4.87	-45.33	≤-15.13	PASS
2DH5	Ant1	2402	0~Reference	3.65	3.65	---	PASS
2DH5	Ant1	2402	30~1000	3.65	-50.93	≤-16.35	PASS
2DH5	Ant1	2402	1000~26500	3.65	-45.86	≤-16.35	PASS
2DH5	Ant1	2441	0~Reference	5.60	5.60	---	PASS
2DH5	Ant1	2441	30~1000	5.60	-50.91	≤-14.4	PASS
2DH5	Ant1	2441	1000~26500	5.60	-45.54	≤-14.4	PASS
2DH5	Ant1	2480	0~Reference	5.07	5.07	---	PASS
2DH5	Ant1	2480	30~1000	5.07	-50.3	≤-14.93	PASS
2DH5	Ant1	2480	1000~26500	5.07	-45.81	≤-14.93	PASS
3DH5	Ant1	2402	0~Reference	4.52	4.52	---	PASS
3DH5	Ant1	2402	30~1000	4.52	-50.2	≤-15.48	PASS
3DH5	Ant1	2402	1000~26500	4.52	-44.72	≤-15.48	PASS
3DH5	Ant1	2441	0~Reference	5.55	5.55	---	PASS
3DH5	Ant1	2441	30~1000	5.55	-50.84	≤-14.45	PASS
3DH5	Ant1	2441	1000~26500	5.55	-45.47	≤-14.45	PASS
3DH5	Ant1	2480	0~Reference	5.56	5.56	---	PASS
3DH5	Ant1	2480	30~1000	5.56	-51.14	≤-14.44	PASS
3DH5	Ant1	2480	1000~26500	5.56	-45.06	≤-14.44	PASS

8.2 Test Graphs



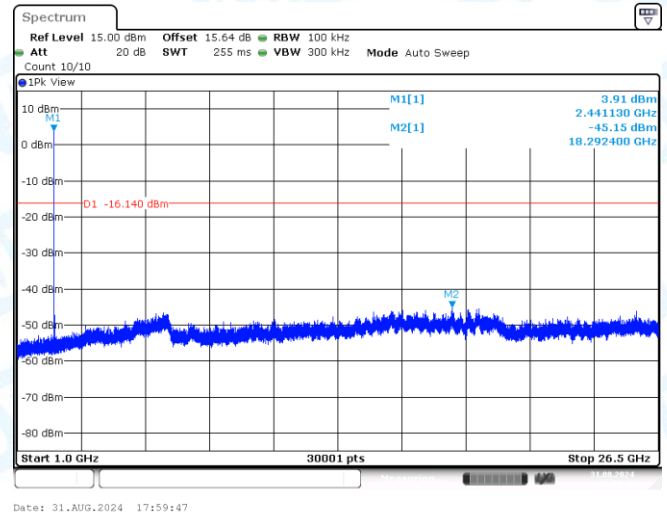
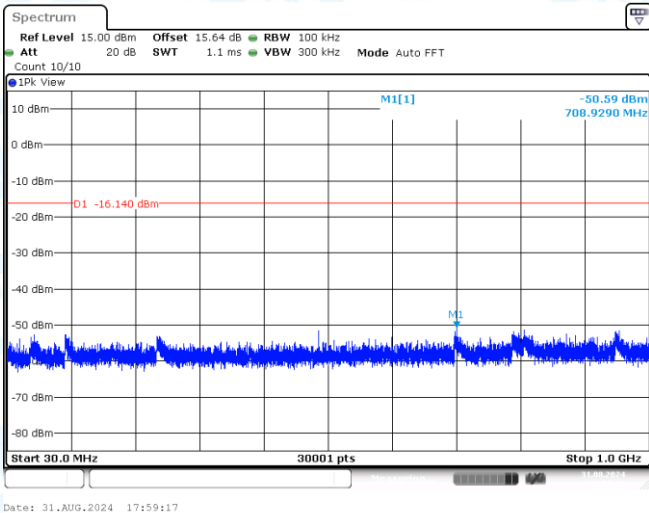
DH5-Ant1-2402-0~Reference-PASS

DH5-Ant1-2402-30~1000-PASS



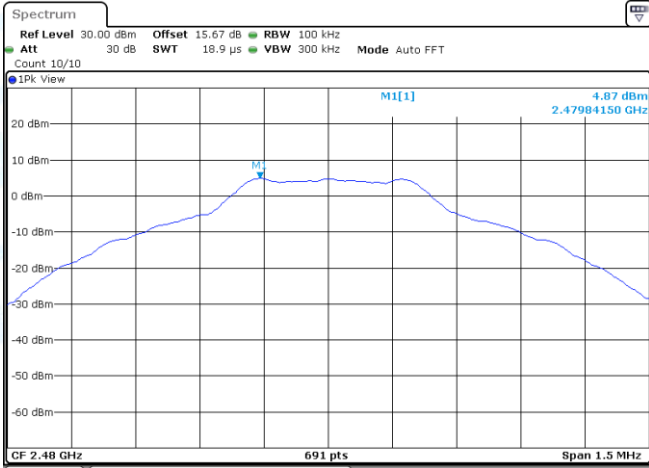
DH5-Ant1-2402-1000~26500-PASS

DH5-Ant1-2441-0~Reference-PASS



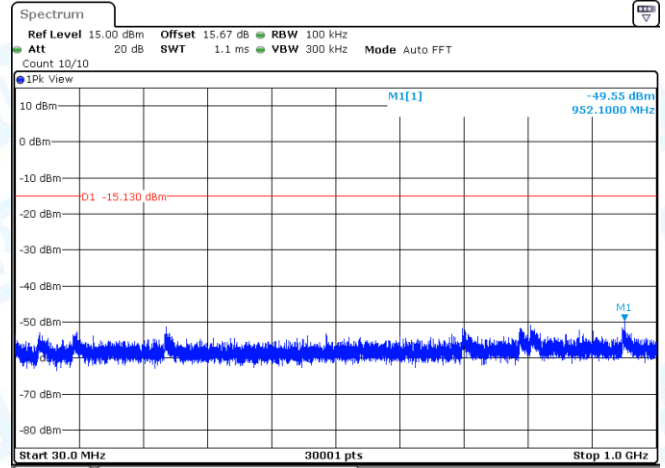
DH5-Ant1-2441-30~1000-PASS

DH5-Ant1-2441-1000~26500-PASS



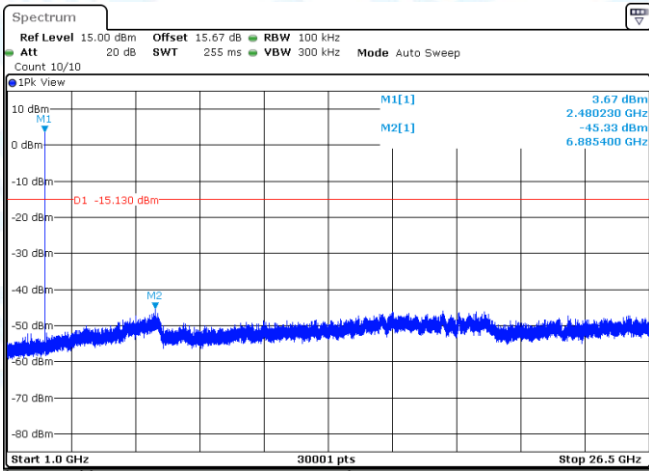
Date: 31.AUG.2024 17:57:21

DH5-Ant1-2480-0~Reference-PASS



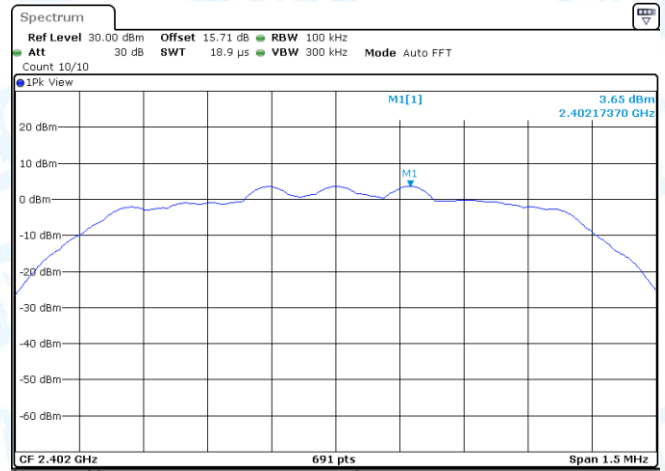
Date: 31.AUG.2024 17:57:34

DH5-Ant1-2480-30~1000-PASS



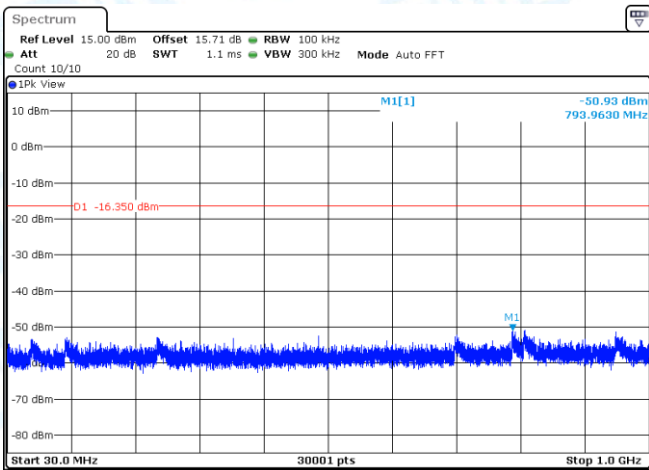
Date: 31.AUG.2024 17:58:04

DH5-Ant1-2480-1000~26500-PASS



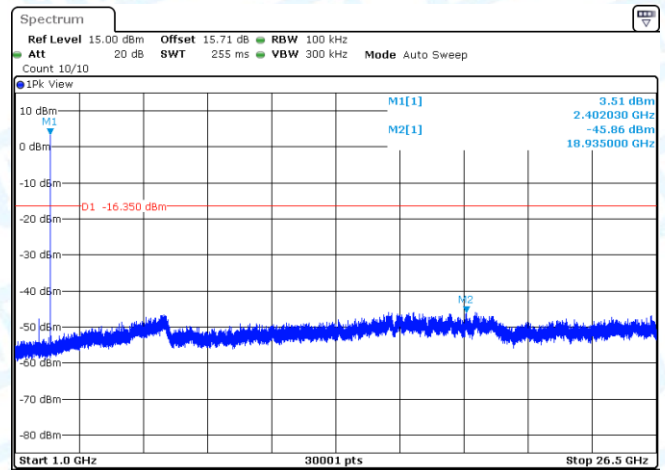
Date: 31.AUG.2024 18:00:47

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



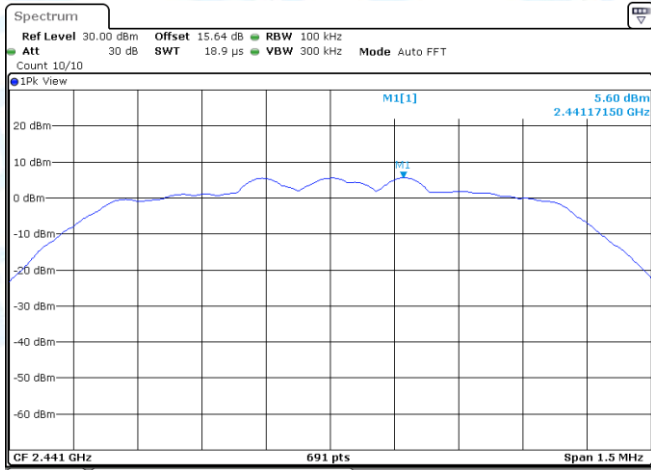
Date: 31.AUG.2024 18:01:00

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



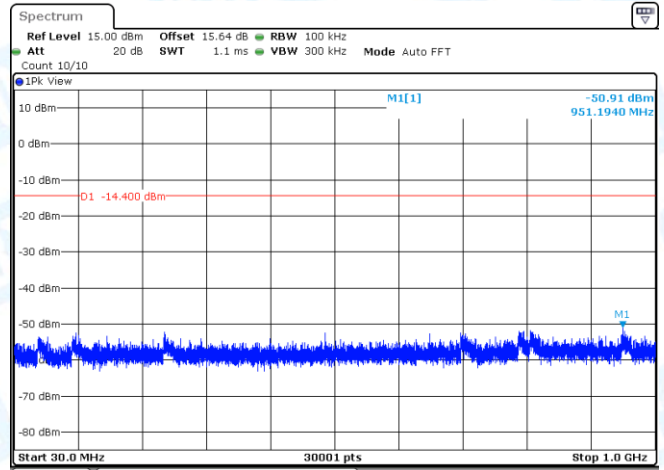
Date: 31.AUG.2024 18:01:30

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



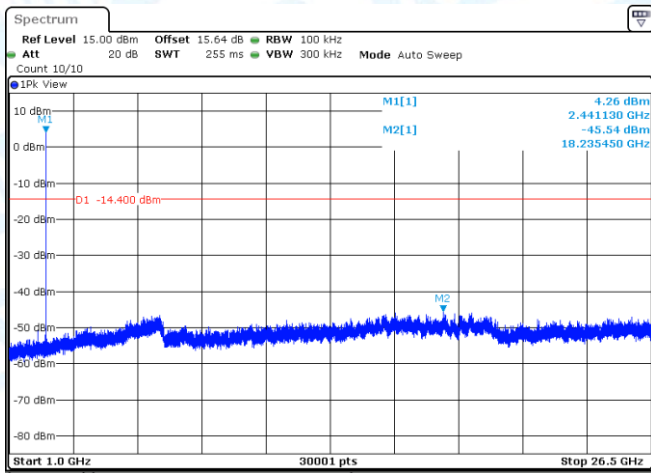
Date: 31.AUG.2024 18:05:37

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



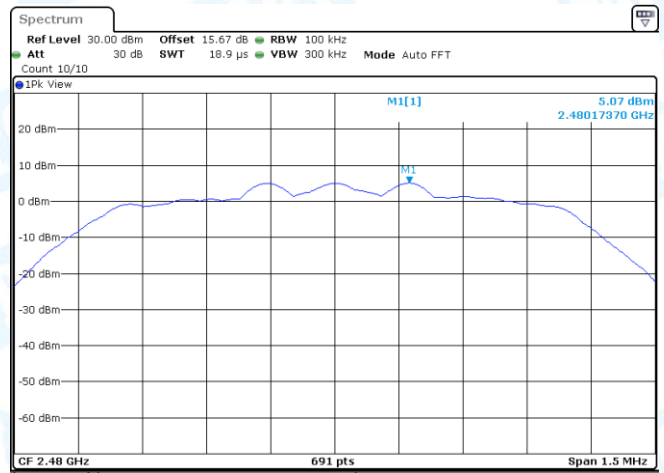
Date: 31.AUG.2024 18:05:50

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



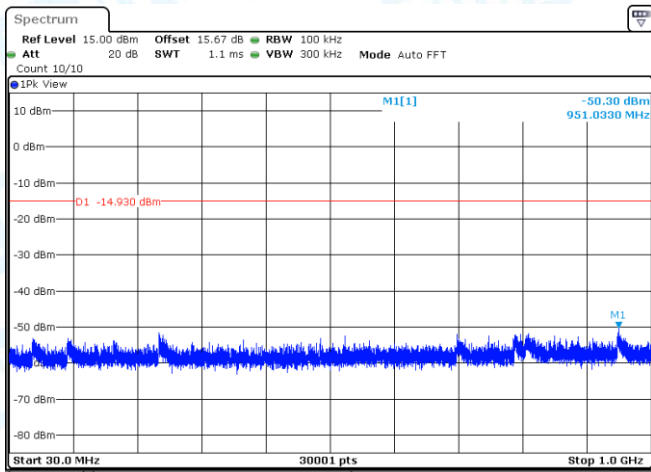
Date: 31.AUG.2024 18:06:20

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



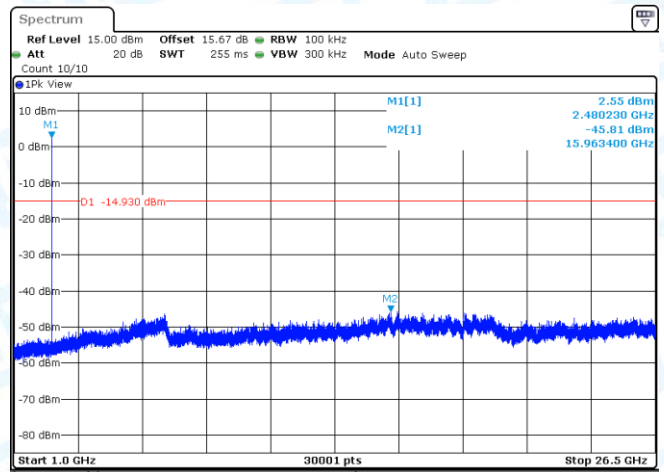
Date: 31.AUG.2024 18:03:57

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



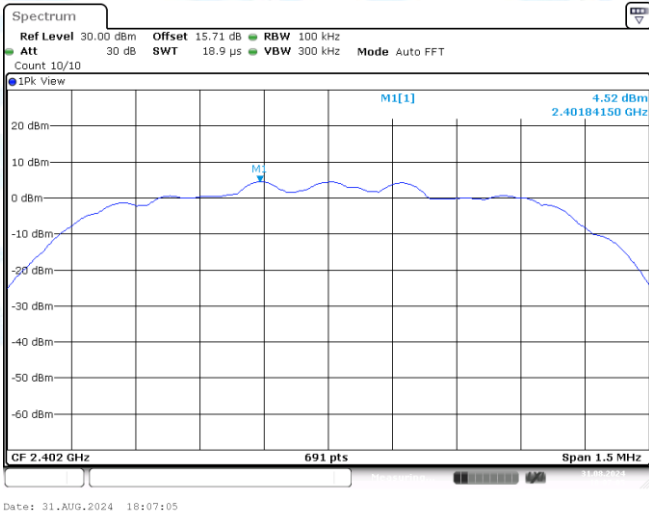
Date: 31.AUG.2024 18:04:10

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

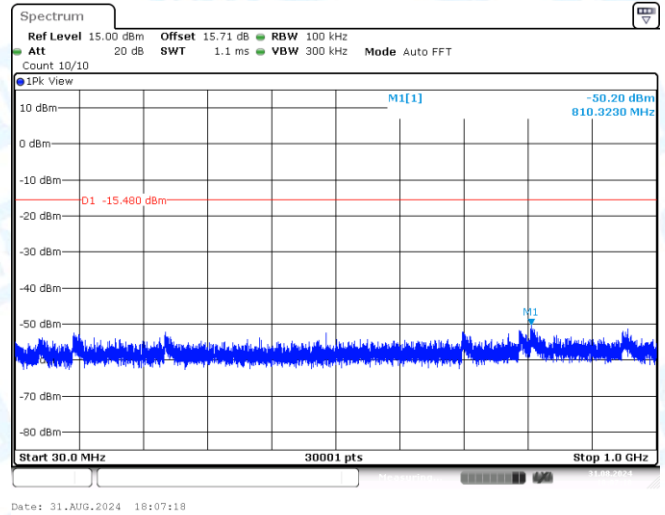


Date: 31.AUG.2024 18:04:40

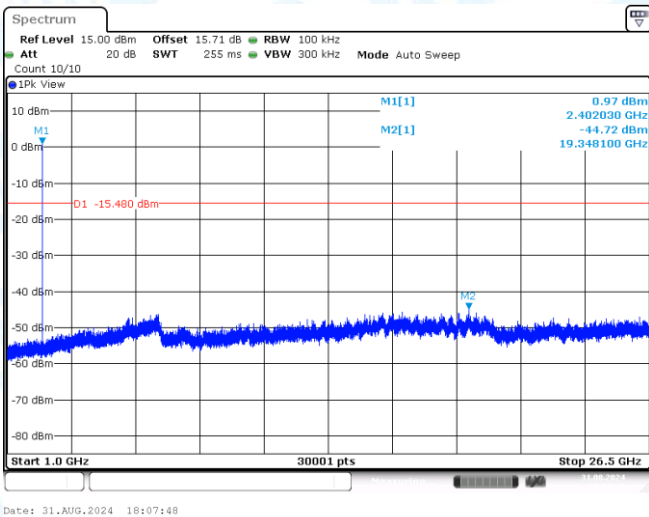
2DH5-Ant1-2480-1000~26500-PASS



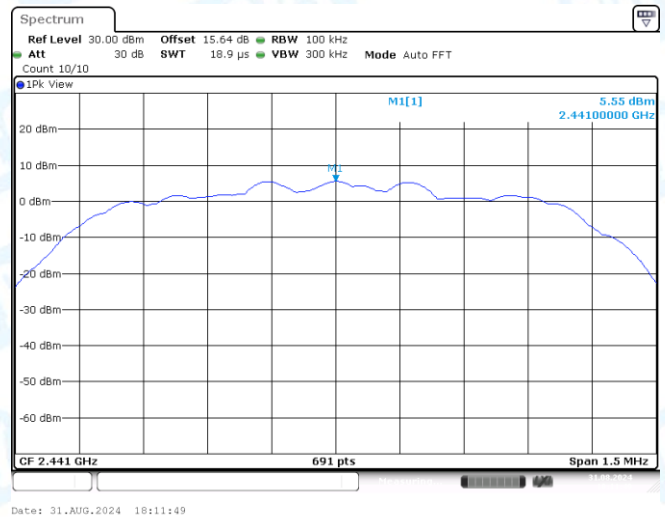
3DH5-Ant1-2402-0~Reference-PASS



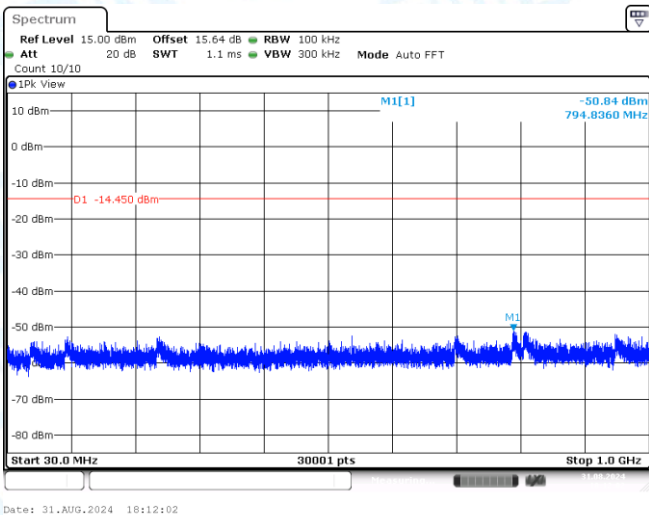
3DH5-Ant1-2402-30~1000-PASS



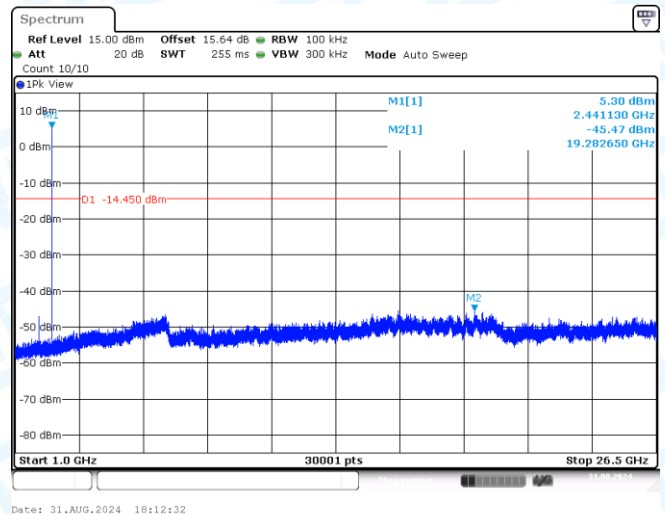
3DH5-Ant1-2402-1000~26500-PASS



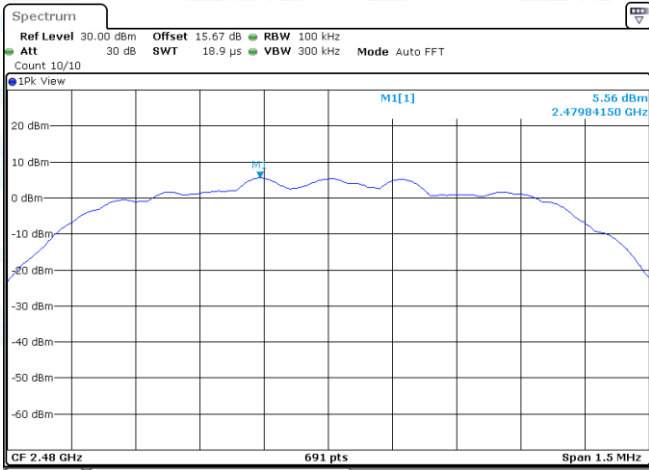
3DH5-Ant1-2441-0~Reference-PASS



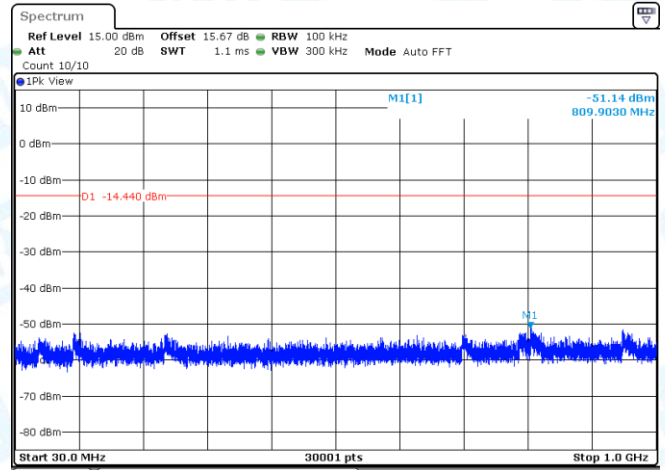
3DH5-Ant1-2441-30~1000-PASS



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



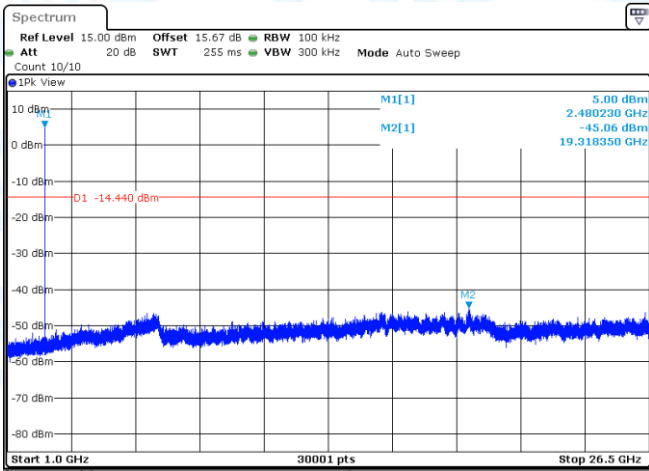
Date: 31.AUG.2024 18:10:13



Date: 31.AUG.2024 18:10:26

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

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



Date: 31.AUG.2024 18:10:56

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

9: Duty Cycle

9.1 Test Result

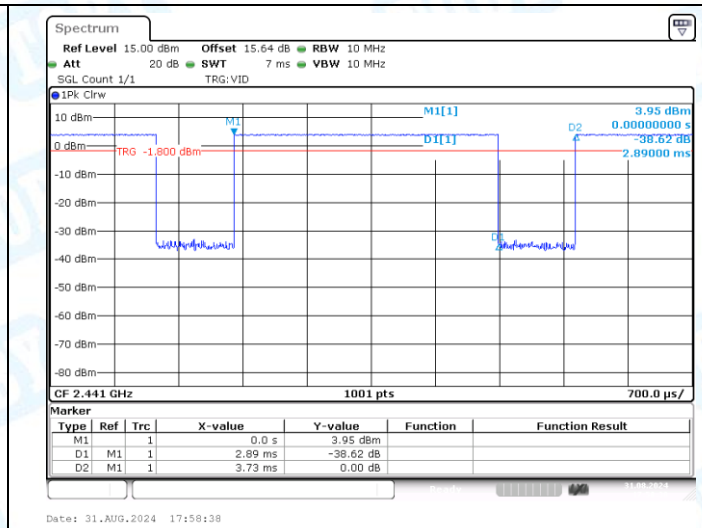
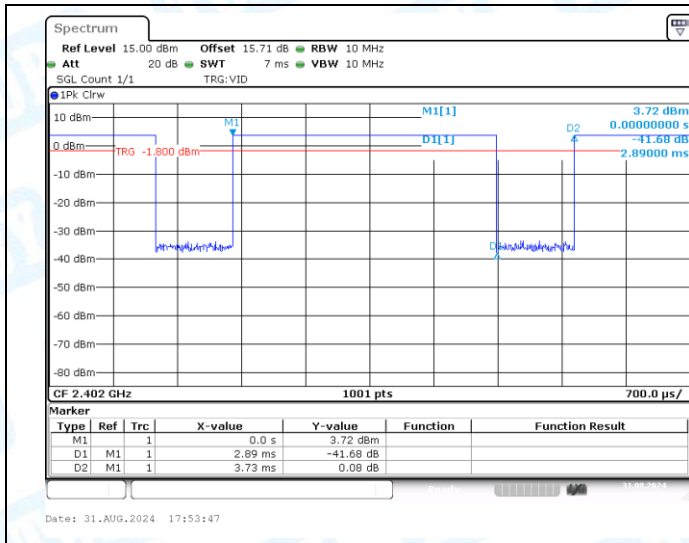
TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
DH5	Ant1	2402	2.89	3.73	77.48	1.11	0.35
DH5	Ant1	2441	2.89	3.73	77.48	1.11	0.35
DH5	Ant1	2480	2.89	3.73	77.48	1.11	0.35
2DH5	Ant1	2402	2.89	3.74	77.27	1.12	0.35
2DH5	Ant1	2441	2.89	3.73	77.48	1.11	0.35
2DH5	Ant1	2480	2.89	3.73	77.48	1.11	0.35
3DH5	Ant1	2402	2.89	3.73	77.48	1.11	0.35
3DH5	Ant1	2441	2.89	3.73	77.48	1.11	0.35
3DH5	Ant1	2480	2.89	3.74	77.27	1.12	0.35

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

2, DC Factory=10*Log₁₀(1/Duty Cycle)

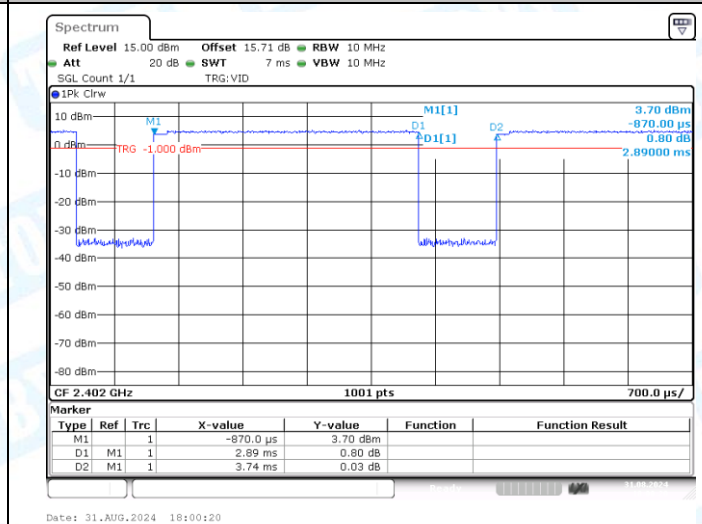
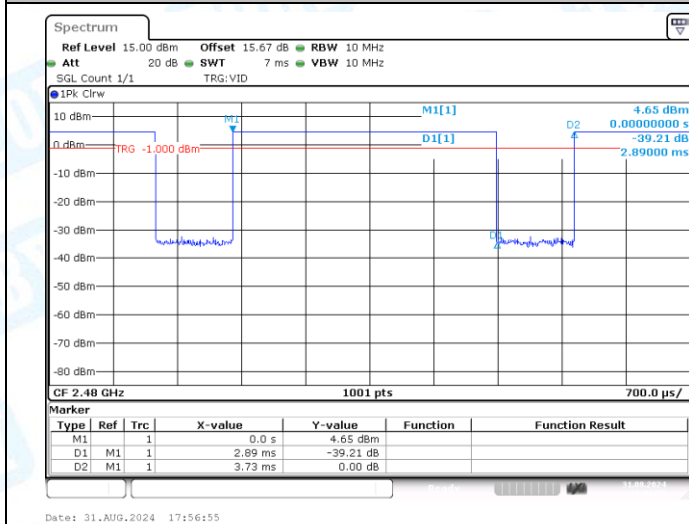
3, 1/T=1/ Transmission Duration

9.2 Test Graphs



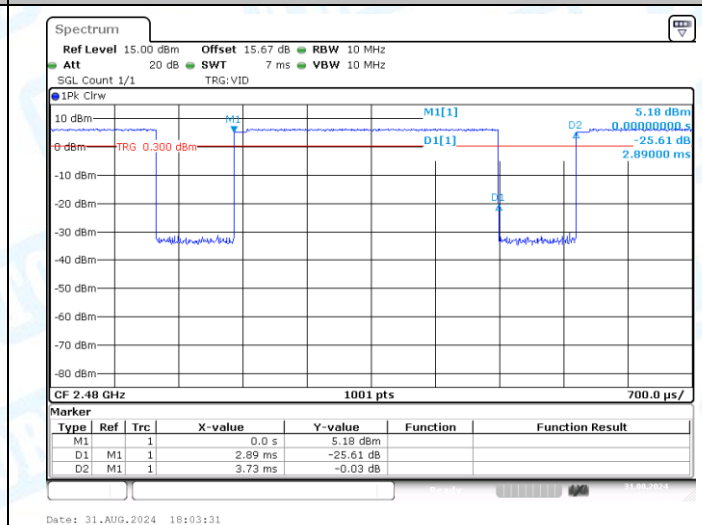
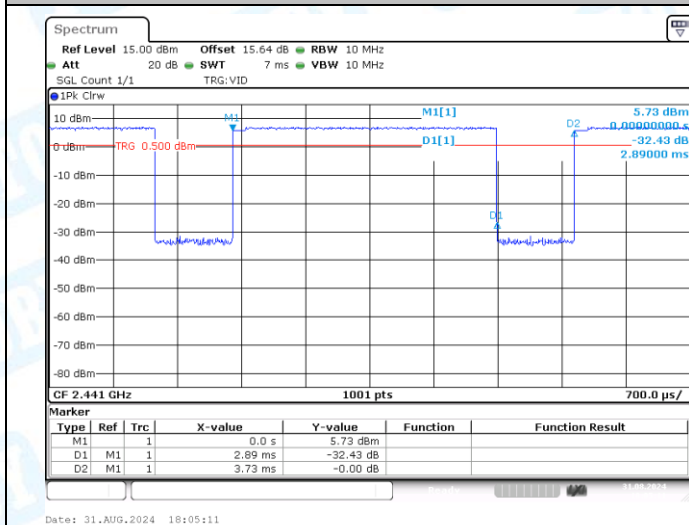
NTNV-DH5-Ant1-2402

NTNV-DH5-Ant1-2441



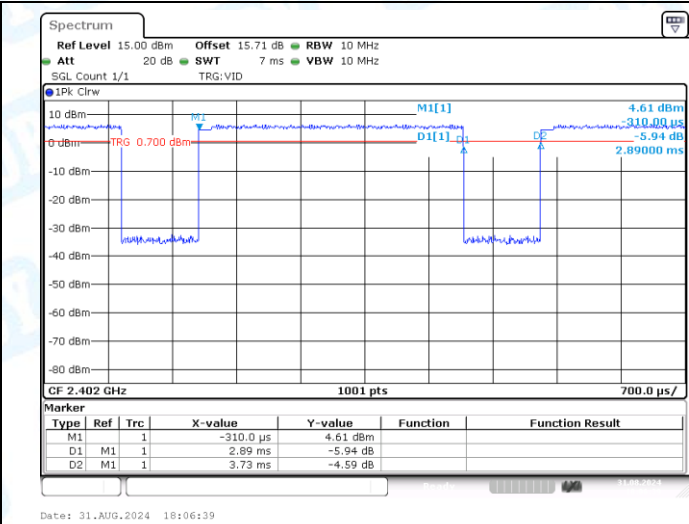
NTNV-DH5-Ant1-2480

NTNV-2DH5-Ant1-2402

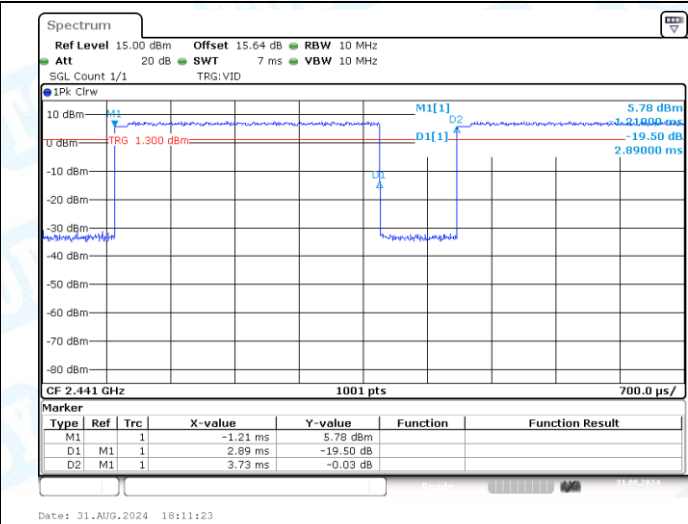


NTNV-2DH5-Ant1-2441

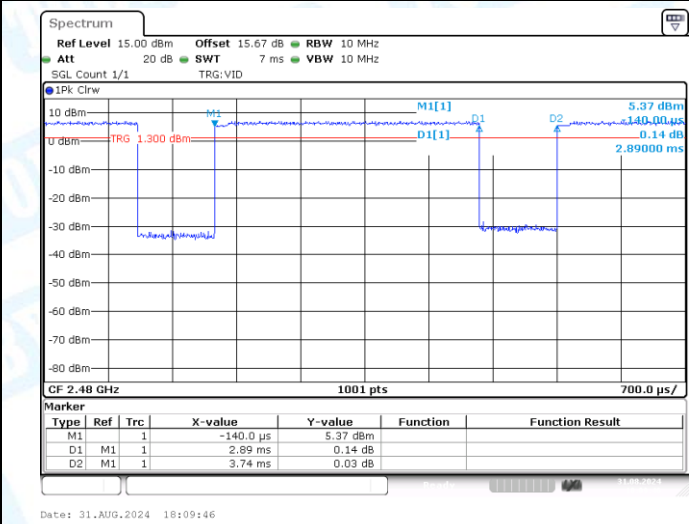
NTNV-2DH5-Ant1-2480



NTNV-3DH5-Ant1-2402



NTNV-3DH5-Ant1-2441



NTNV-3DH5-Ant1-2480

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