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

General Description of EUT	
Product Name:	**Bluetooth Adapter**
Test Model:	**M8**
Sample ID:	**202202-0190_02-04**
Environmental Conditions	
Temperature:	**25℃**
Relative Humidity:	**55%**
Test Voltage:	**DC 3.7V**
Test Engineer:	**Huangjianping**
Note: For a more detailed features description, please refer to the report TBR-C-202202-0190-2	

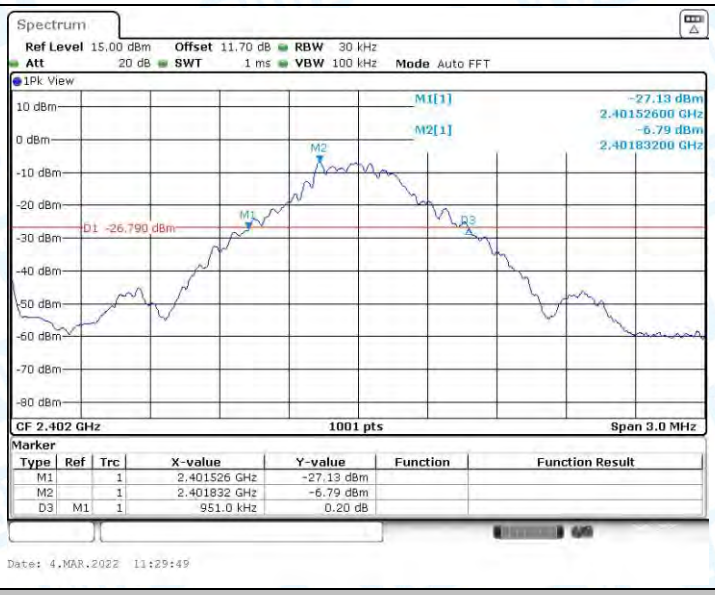
Contents

1. 20dB Emission Bandwidth

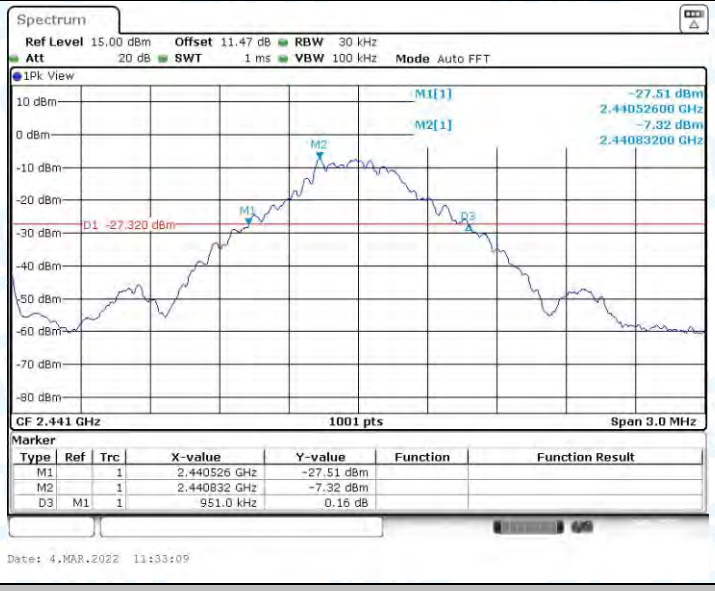
1.1.Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.95	---	---
		2441	0.95	---	---
		2480	0.95	---	---
2DH5	Ant1	2402	1.29	---	---
		2441	1.29	---	---
		2480	1.29	---	---
3DH5	Ant1	2402	1.29	---	---
		2441	1.29	---	---
		2480	1.29	---	---

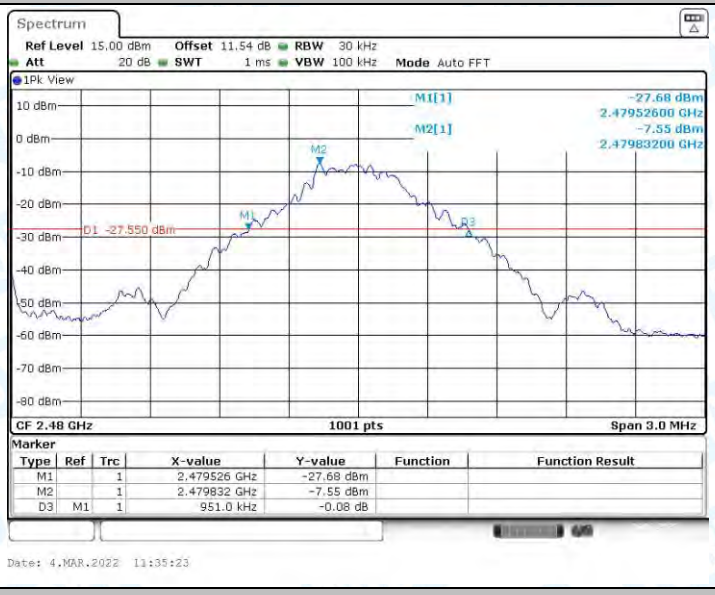
1.2.Test Graphs



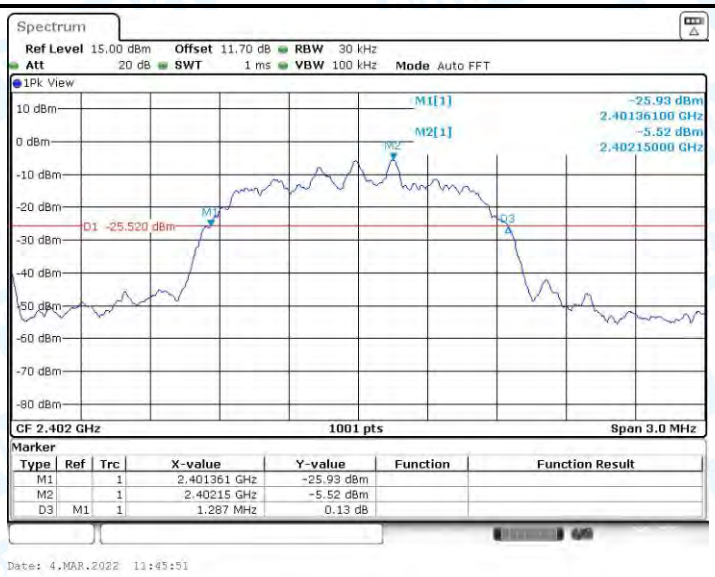
DH5_Ant1_2402



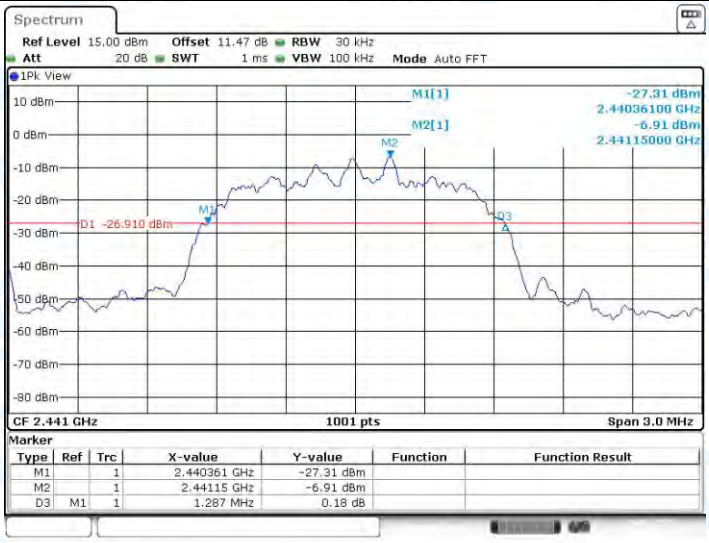
DH5_Ant1_2441



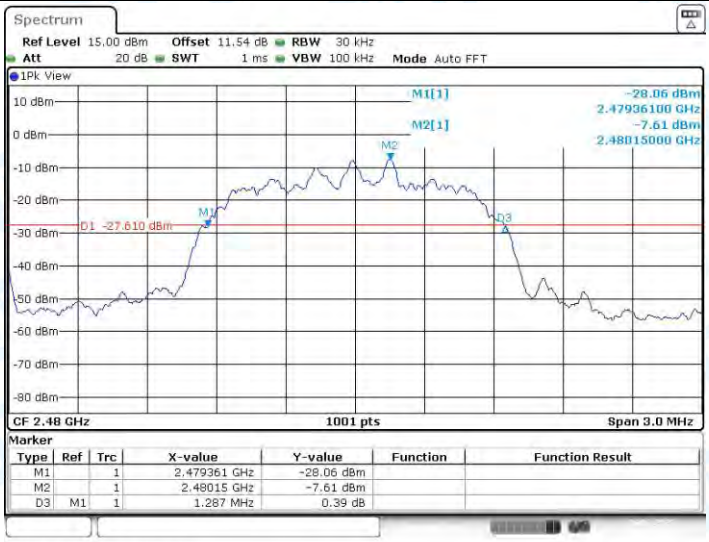
DH5_Ant1_2480



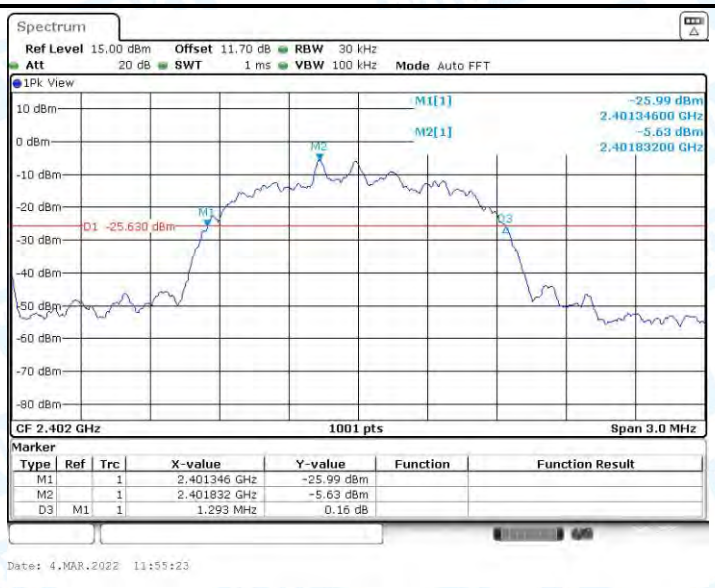
2DH5_Ant1_2402



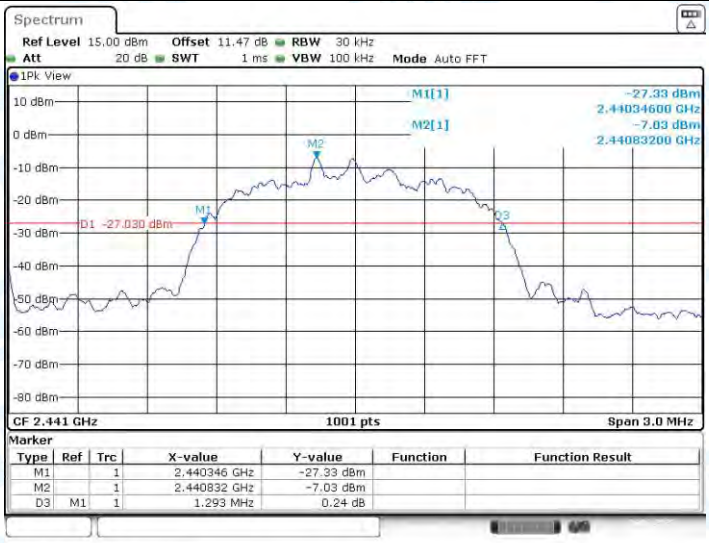
2DH5_Ant1_2441



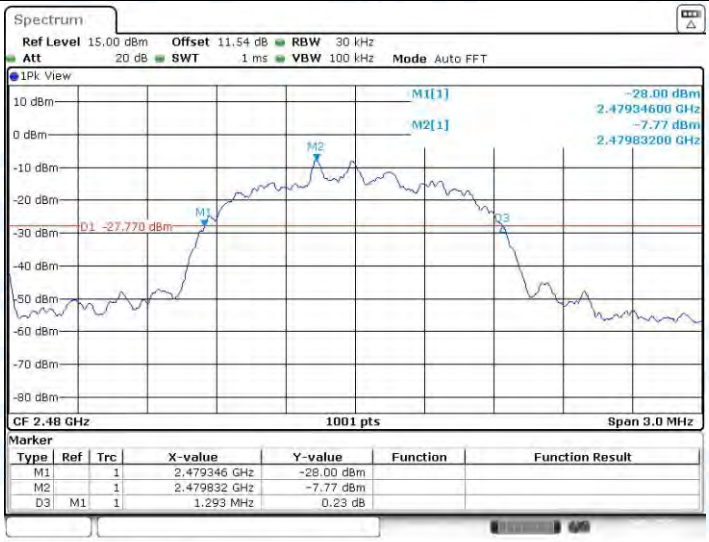
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



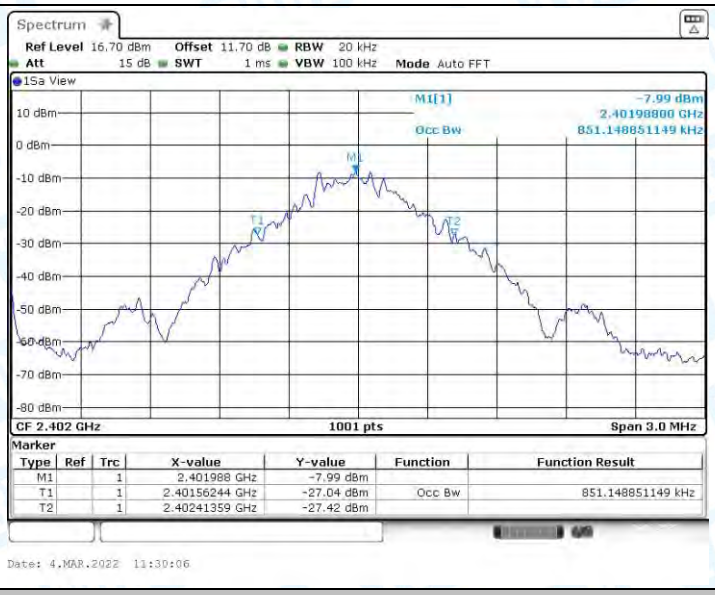
3DH5_Ant1_2480

2. Occupied Channel Bandwidth

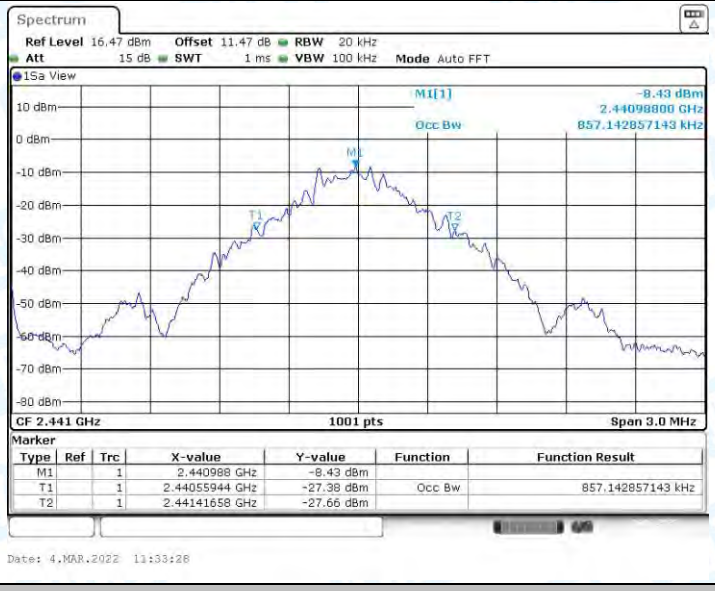
2.1.Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.851	2401.562	2402.414	---	---
		2441	0.857	2440.559	2441.417	---	---
		2480	0.854	2479.562	2480.417	---	---
2DH5	Ant1	2402	1.175	2401.404	2402.578	---	---
		2441	1.172	2440.404	2441.575	---	---
		2480	1.172	2479.404	2480.575	---	---
3DH5	Ant1	2402	1.181	2401.401	2402.581	---	---
		2441	1.181	2440.398	2441.578	---	---
		2480	1.178	2479.401	2480.578	---	---

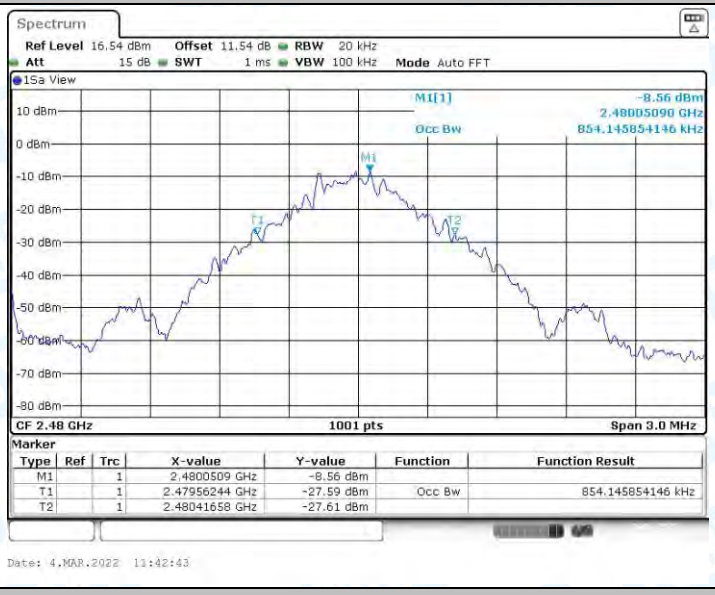
2.2.Test Graphs



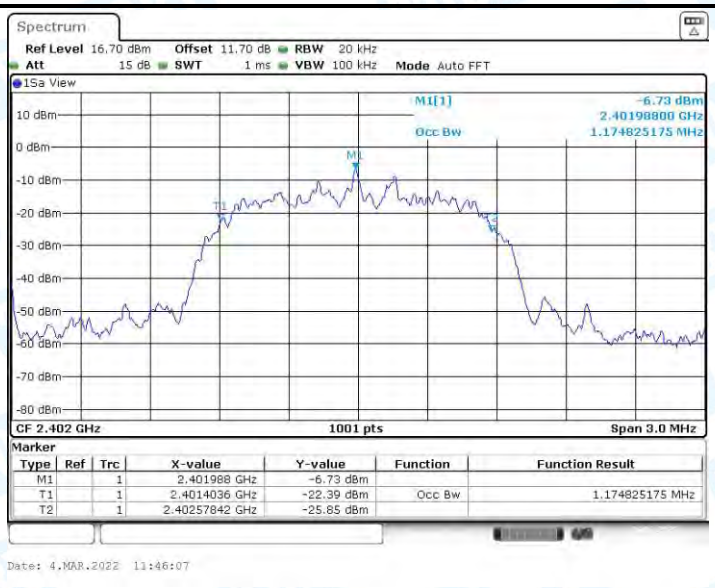
DH5_Ant1_2402



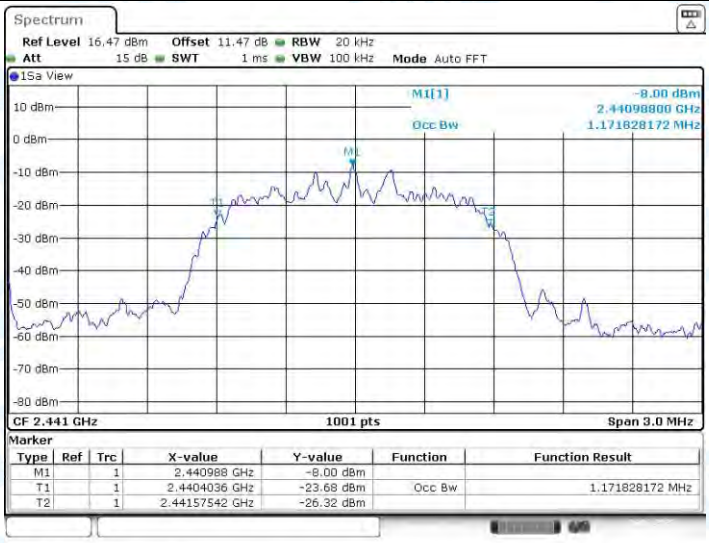
DH5_Ant1_2441



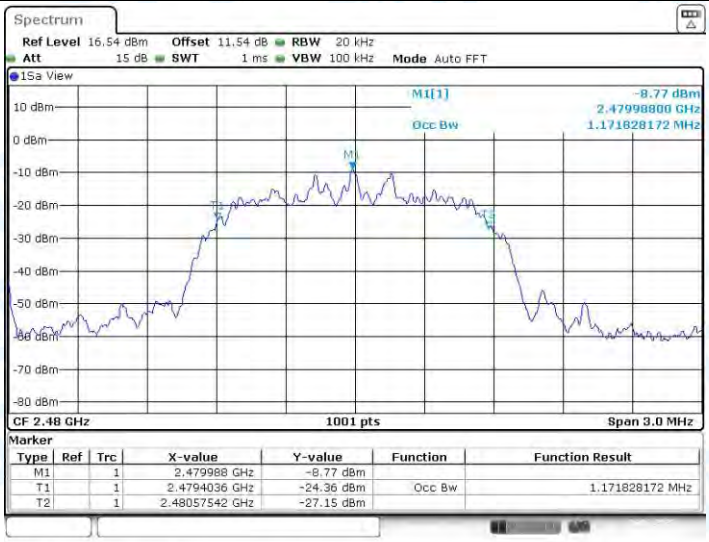
DH5_Ant1_2480



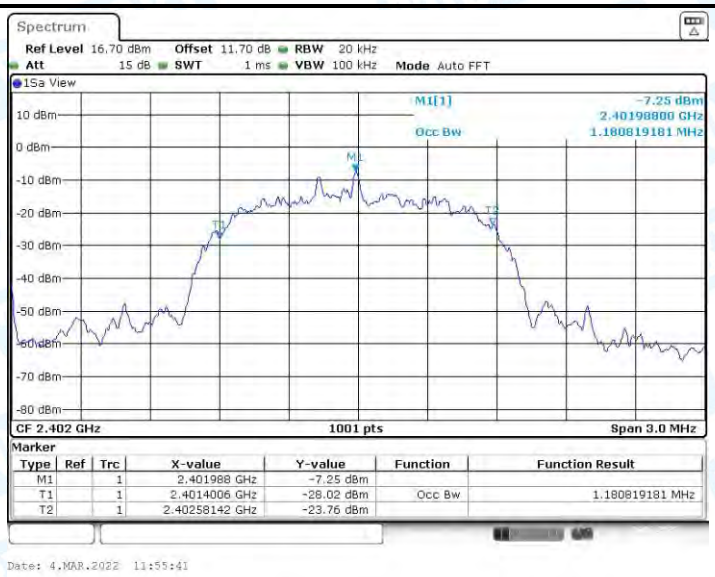
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



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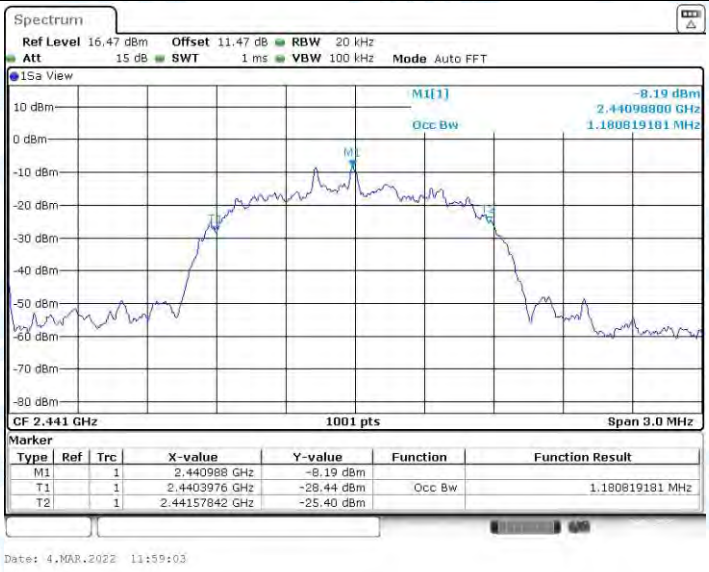
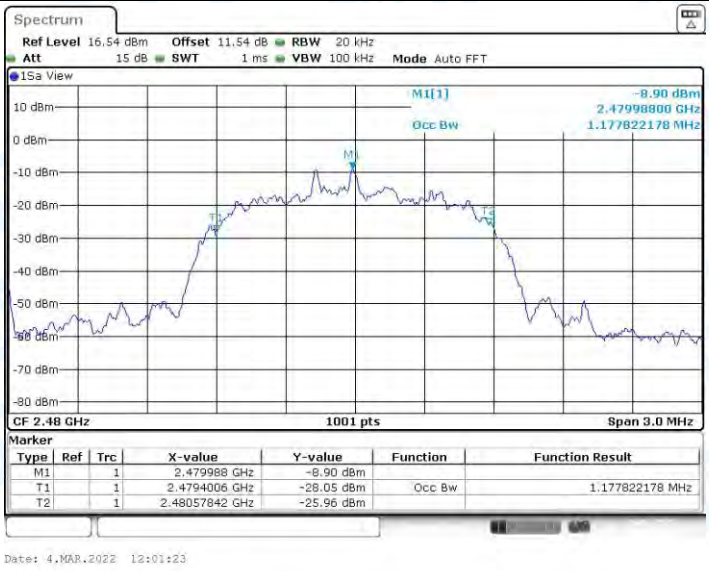


3DH5_Ant1_2441



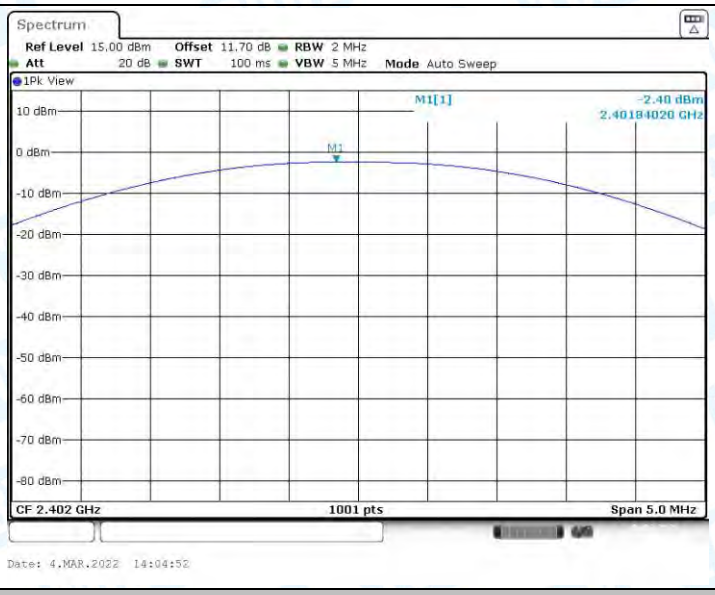
3DH5_Ant1_2480

3. Maximum conducted output power

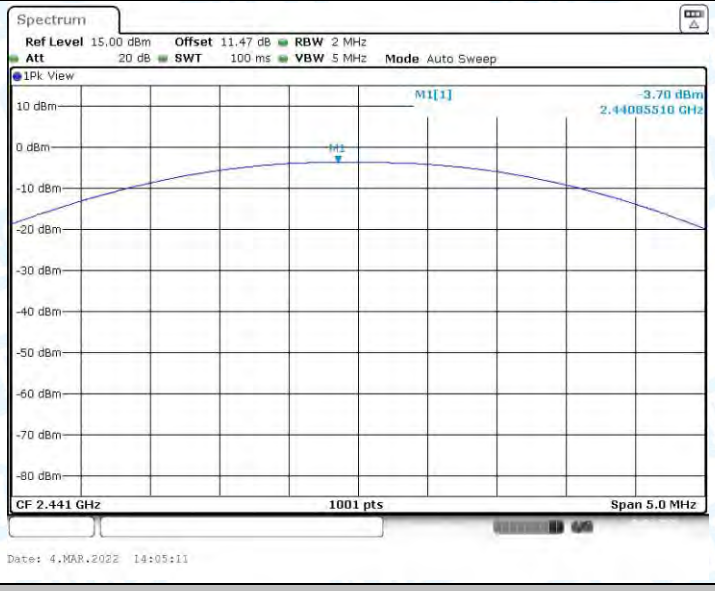
3.1.Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-2.4	≤20.97	PASS
		2441	-3.7	≤20.97	PASS
		2480	-4.5	≤20.97	PASS
2DH5	Ant1	2402	-1.56	≤20.97	PASS
		2441	-2.85	≤20.97	PASS
		2480	-3.59	≤20.97	PASS
3DH5	Ant1	2402	-1.18	≤20.97	PASS
		2441	-2.48	≤20.97	PASS
		2480	-3.06	≤20.97	PASS

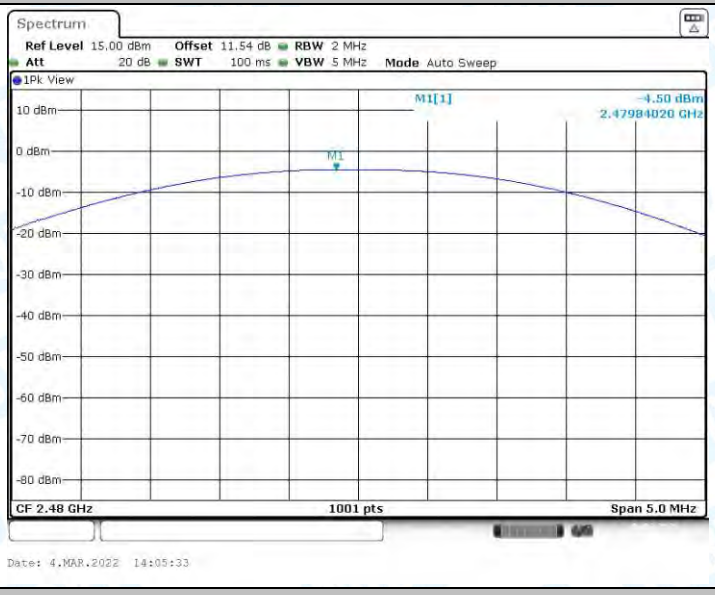
3.2.Test Graphs



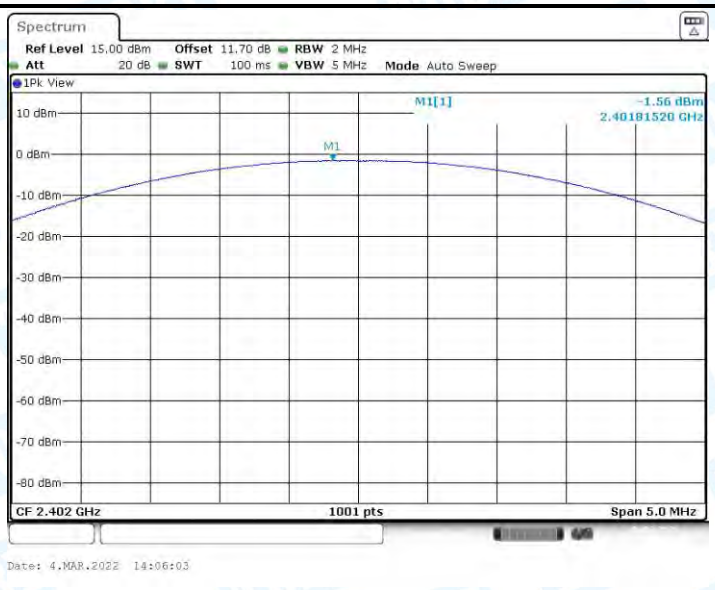
DH5_Ant1_2402



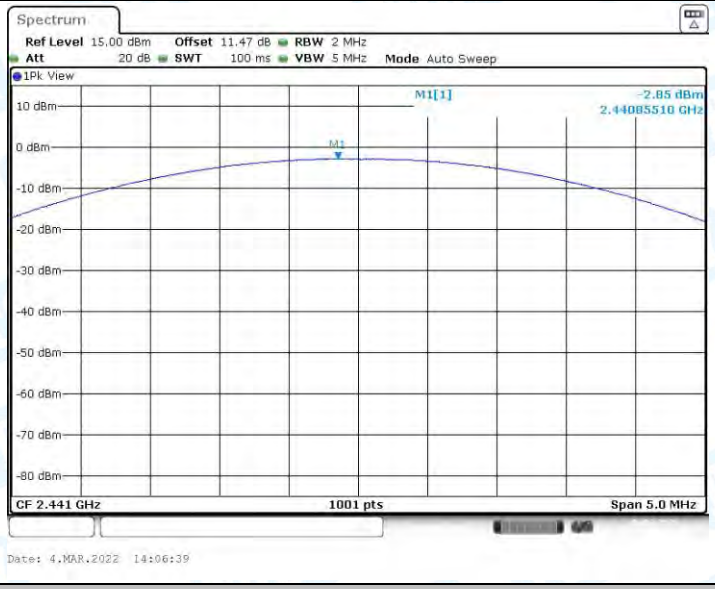
DH5_Ant1_2441



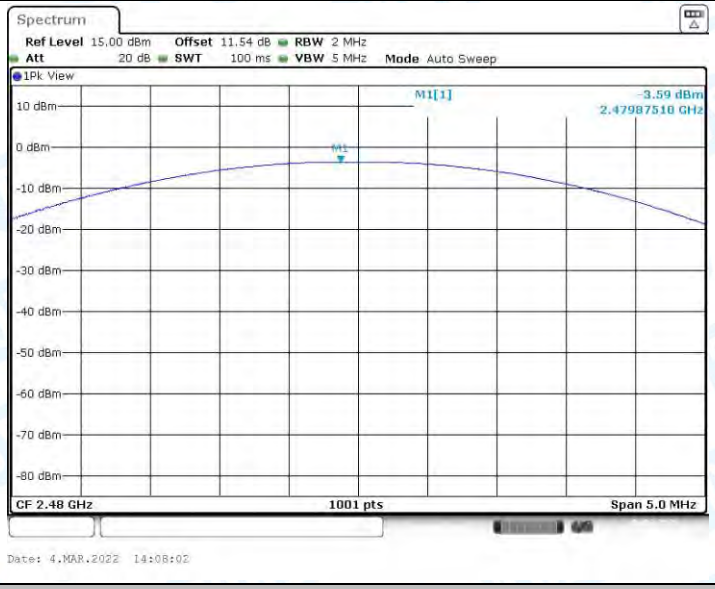
DH5_Ant1_2480



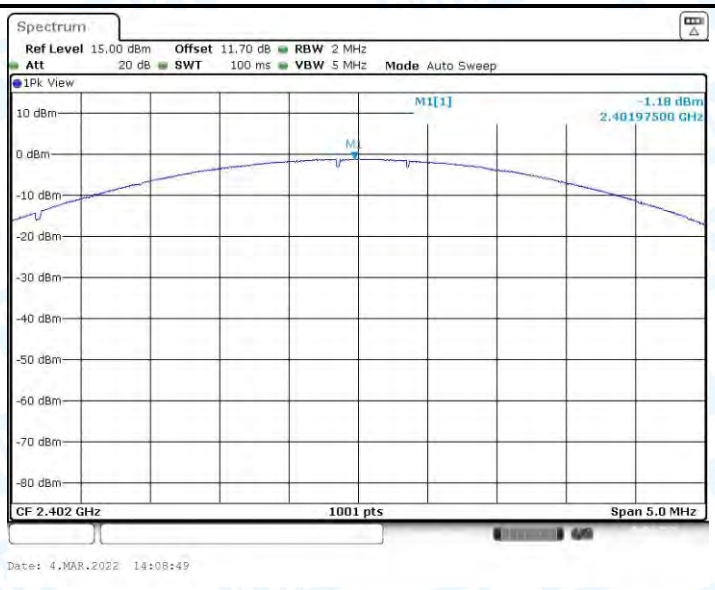
2DH5_Ant1_2402



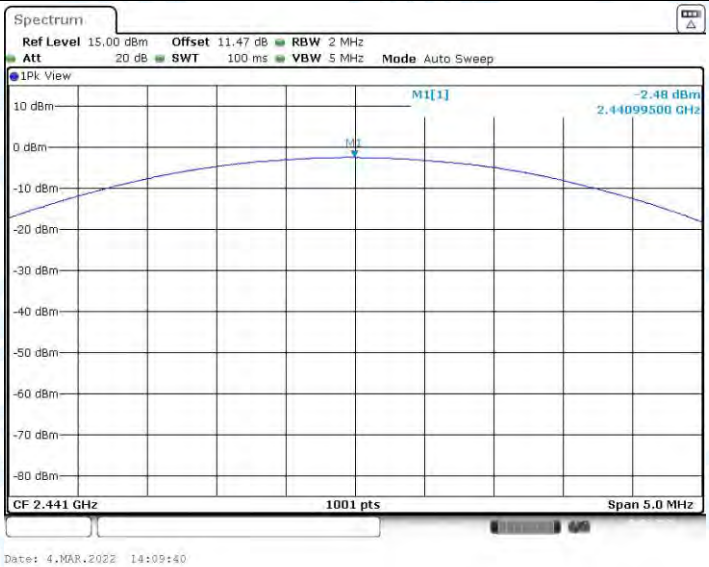
2DH5_Ant1_2441



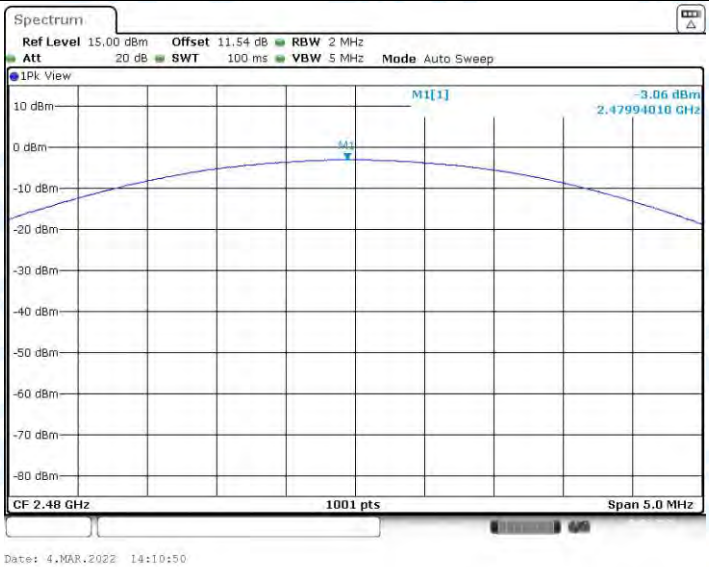
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



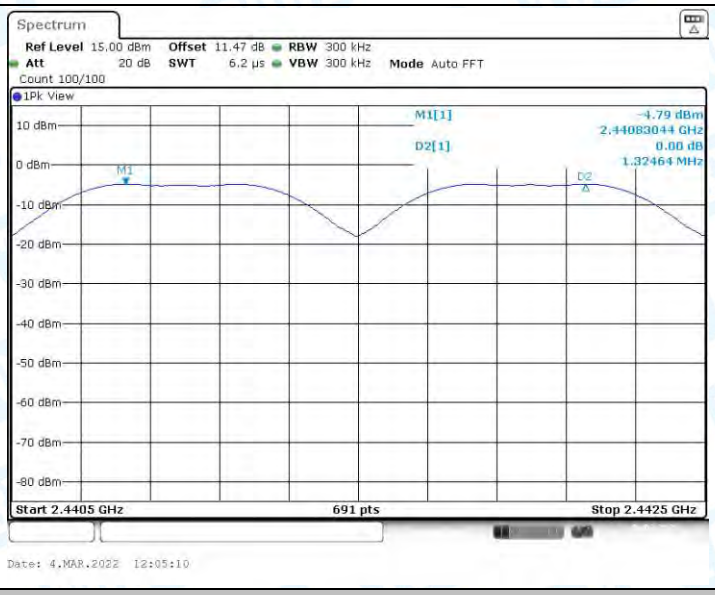
3DH5_Ant1_2480

4. Carrier frequency separation

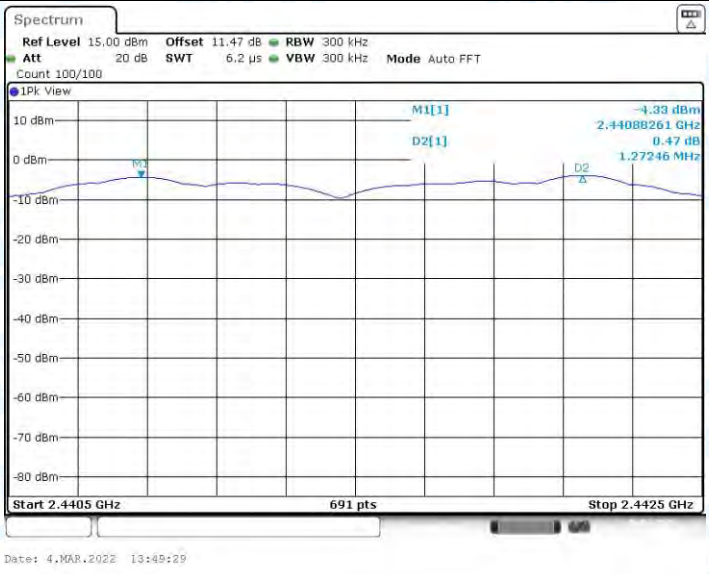
4.1.Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.325	≥0.950	PASS
2DH5	Ant1	Hop	1.272	≥0.860	PASS
3DH5	Ant1	Hop	0.997	≥0.860	PASS

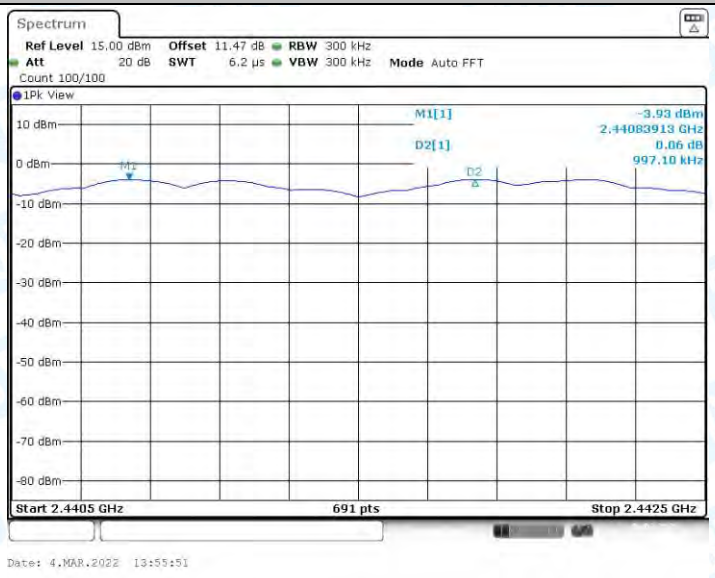
4.2.Test Graphs



DH5_Ant1_Hop



2DH5_Ant1_Hop



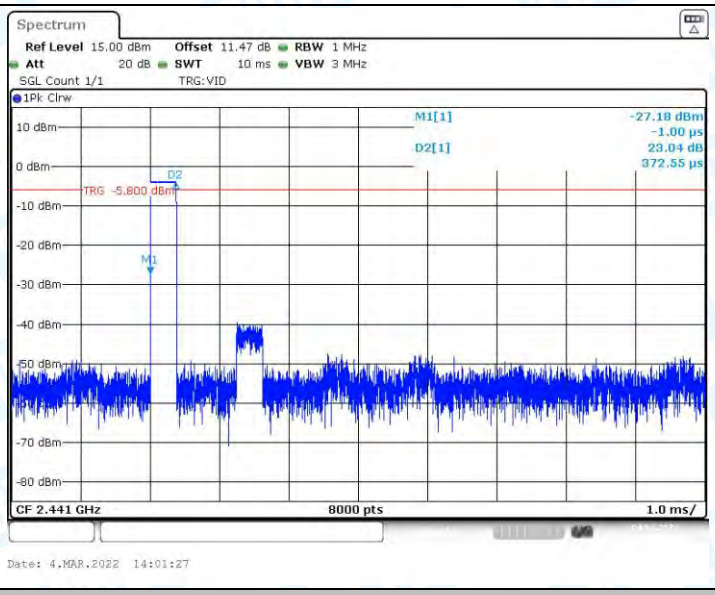
3DH5_Ant1_Hop

5. Time of occupancy

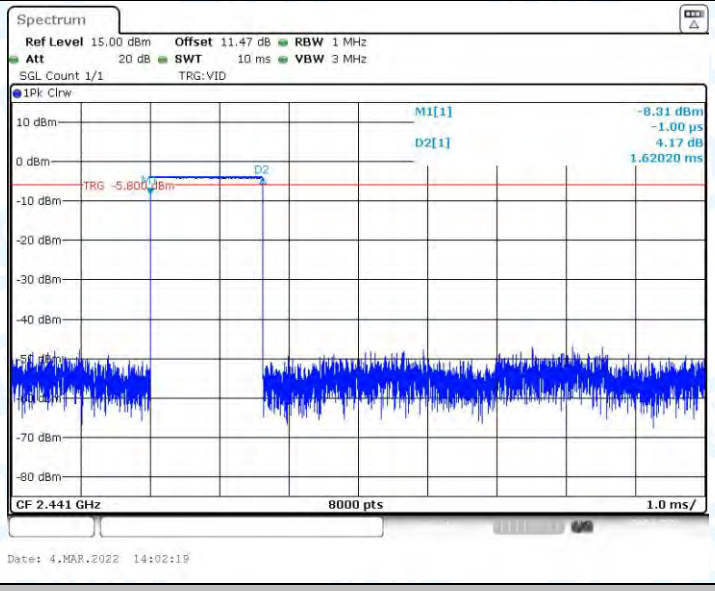
5.1.Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	320	0.119	≤0.4	PASS
DH3	Ant1	Hop	1.62	160	0.259	≤0.4	PASS
DH5	Ant1	Hop	2.86	106.67	0.305	≤0.4	PASS
2DH1	Ant1	Hop	0.38	320	0.122	≤0.4	PASS
2DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
2DH5	Ant1	Hop	2.87	106.67	0.306	≤0.4	PASS
3DH1	Ant1	Hop	0.38	320	0.122	≤0.4	PASS
3DH3	Ant1	Hop	1.63	160	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.87	106.67	0.306	≤0.4	PASS

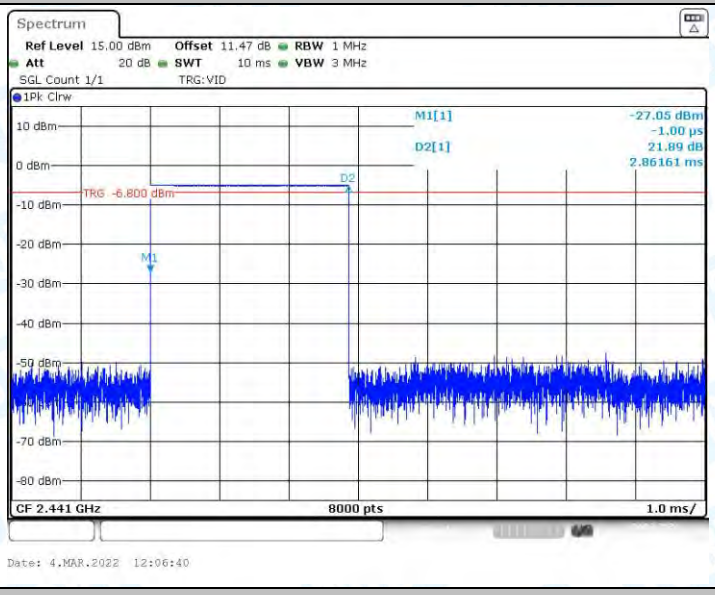
5.2.Test Graphs



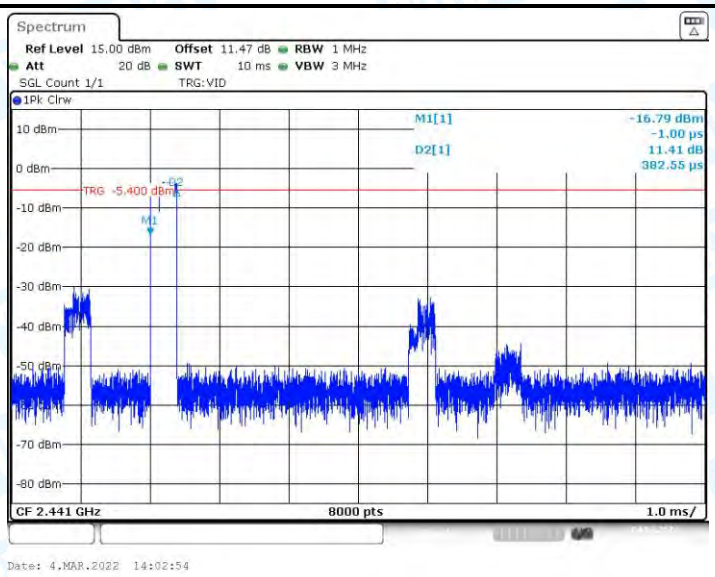
DH1_Ant1_Hop



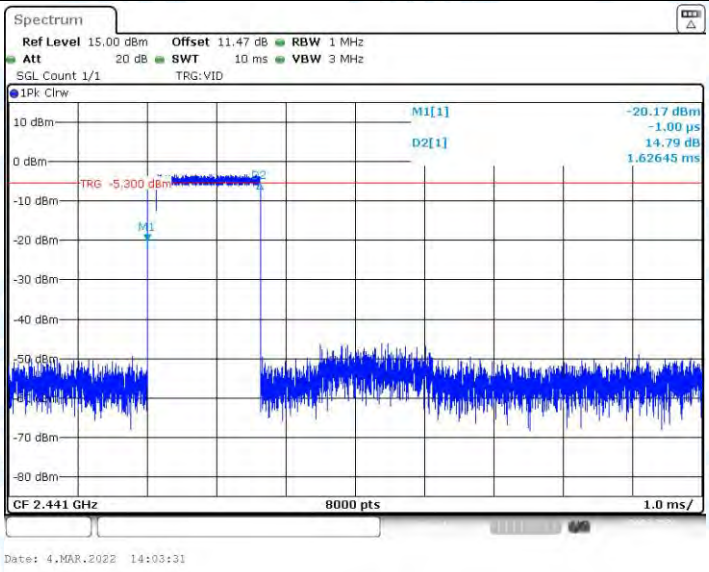
DH3_Ant1_Hop



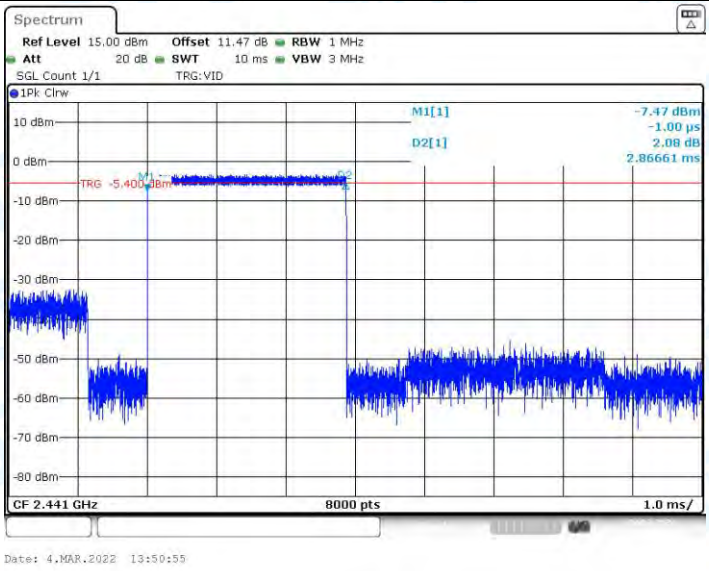
DH5_Ant1_Hop



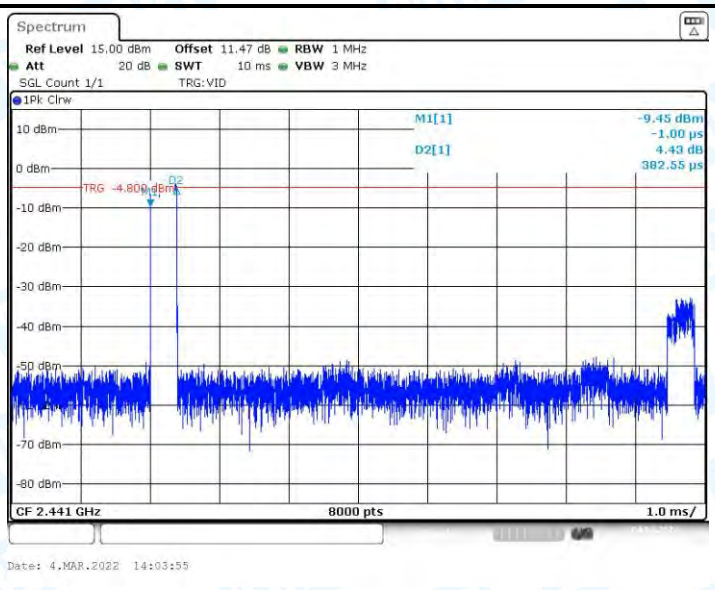
2DH1_Ant1_Hop



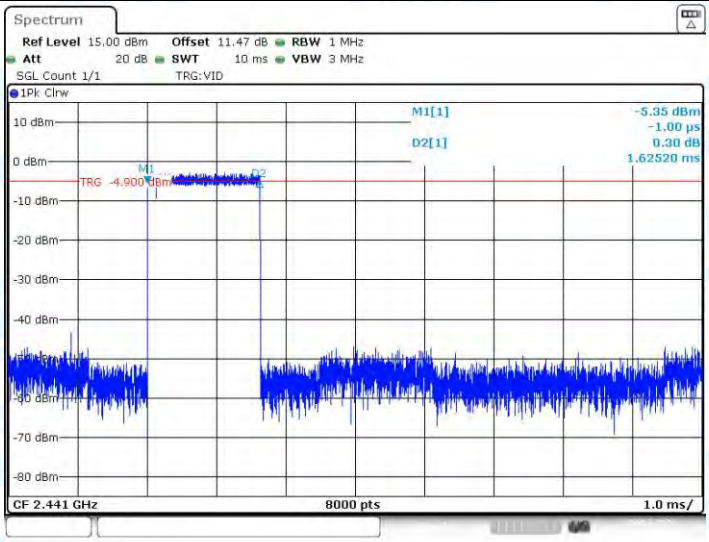
2DH3_Ant1_Hop



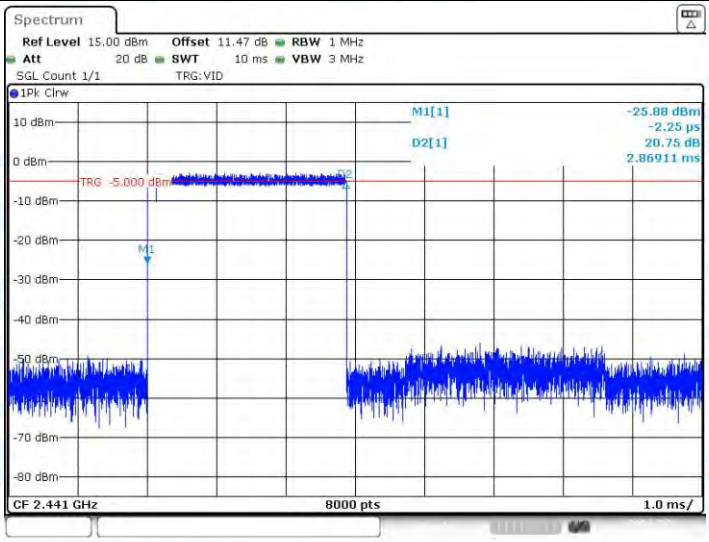
2DH5_Ant1_Hop



3DH1_Ant1_Hop



3DH3_Ant1_Hop



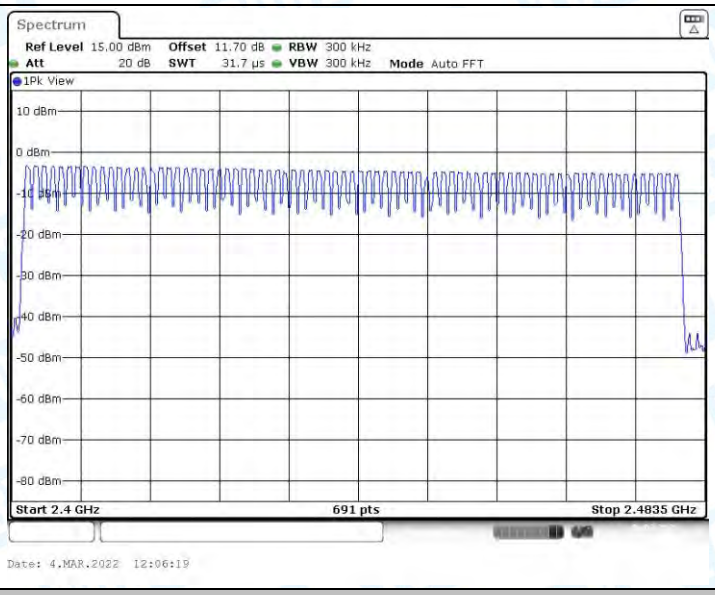
3DH5_Ant1_Hop

6. Number of hopping channels

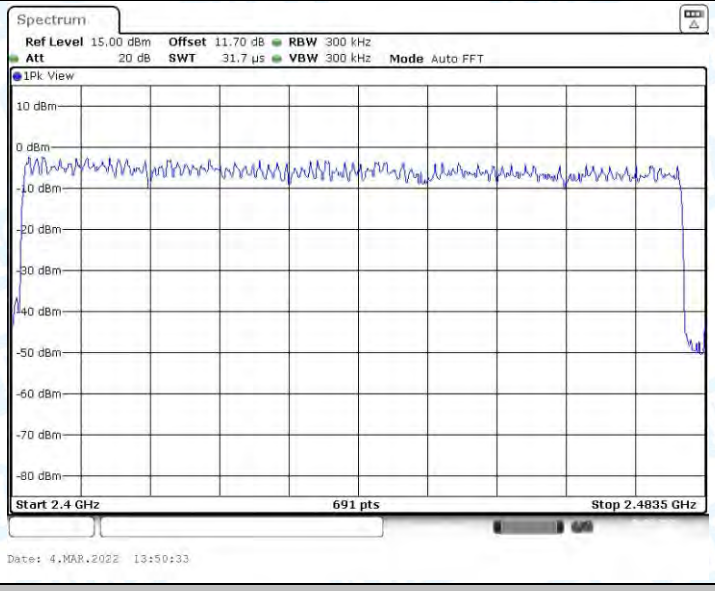
6.1.Test Result

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

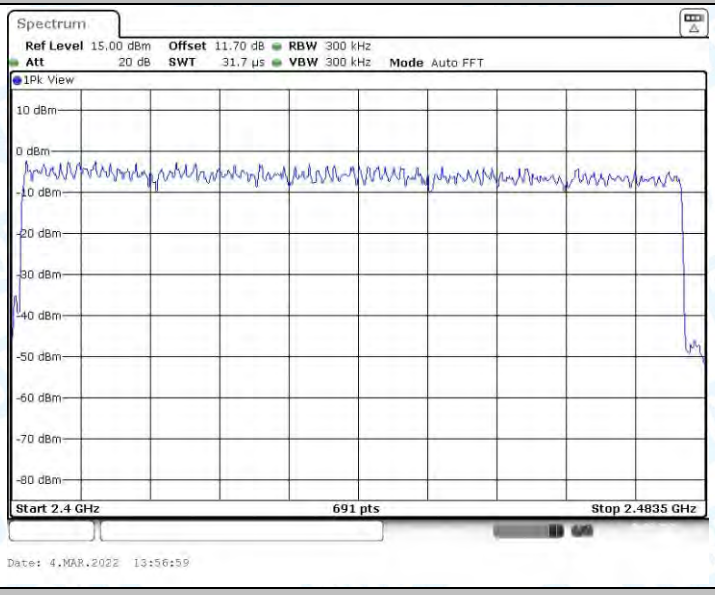
6.2.Test Graphs



DH5_Ant1_Hop



2DH5_Ant1_Hop



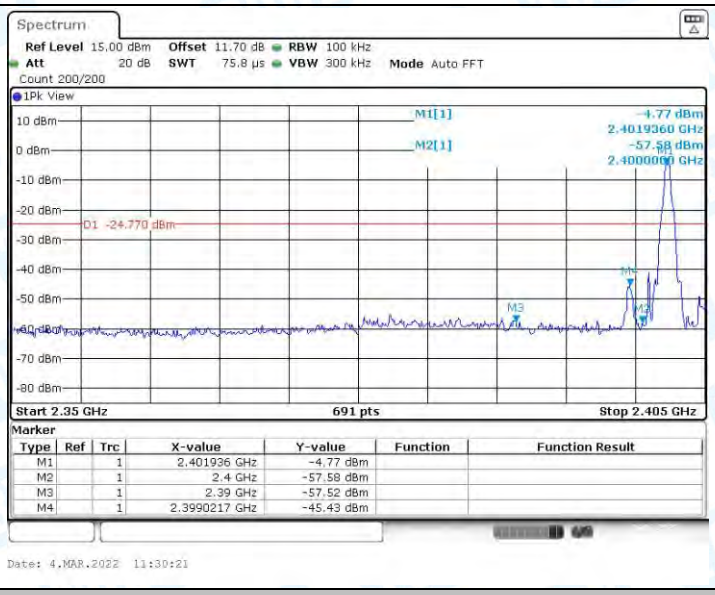
3DH5_Ant1_Hop

7.Band edge measurements

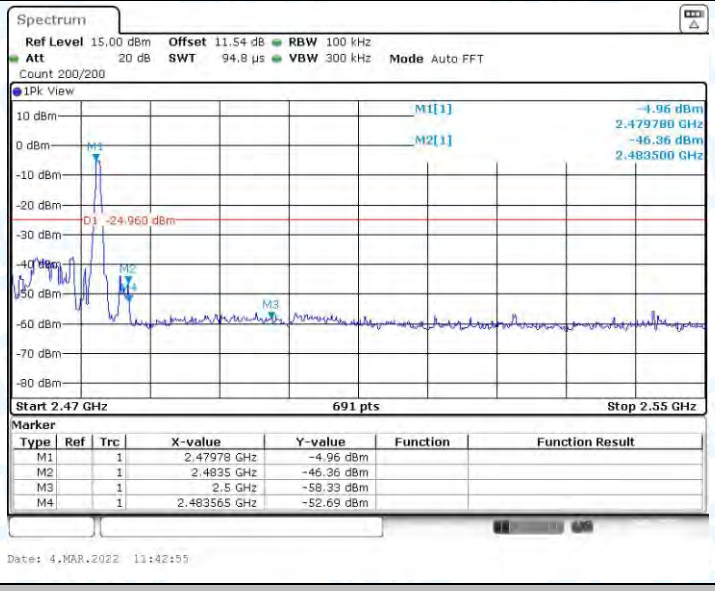
7.1.Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.77	-45.43	≤-24.77	PASS
		High	2480	-4.96	-52.69	≤-24.96	PASS
		Low	Hop_2402	-3.80	-52.25	≤-23.8	PASS
		High	Hop_2480	-5.63	-50.34	≤-25.63	PASS
2DH5	Ant1	Low	2402	-5.05	-46.17	≤-25.05	PASS
		High	2480	-5.18	-53.58	≤-25.18	PASS
		Low	Hop_2402	-6.17	-52.23	≤-26.17	PASS
		High	Hop_2480	-5.65	-54.4	≤-25.65	PASS
3DH5	Ant1	Low	2402	-3.27	-44.77	≤-23.27	PASS
		High	2480	-6.05	-51.57	≤-26.05	PASS
		Low	Hop_2402	-2.53	-52.09	≤-22.53	PASS
		High	Hop_2480	-8.57	-55.14	≤-28.57	PASS

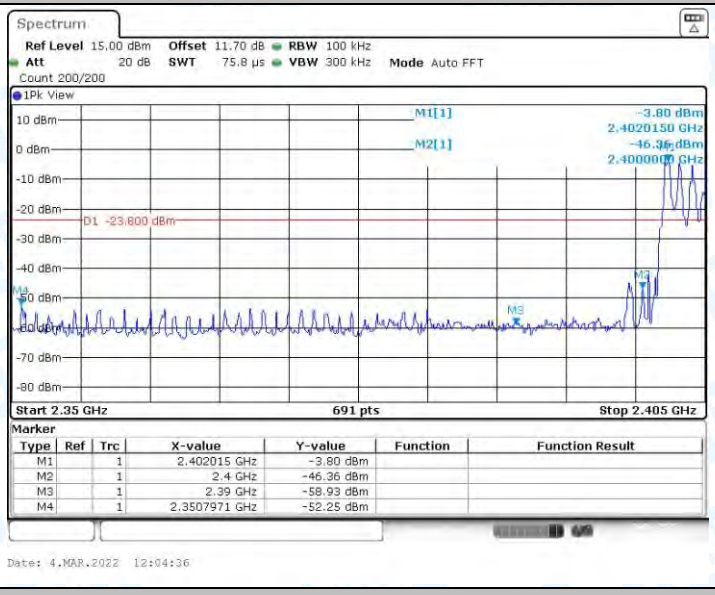
7.2.Test Graphs



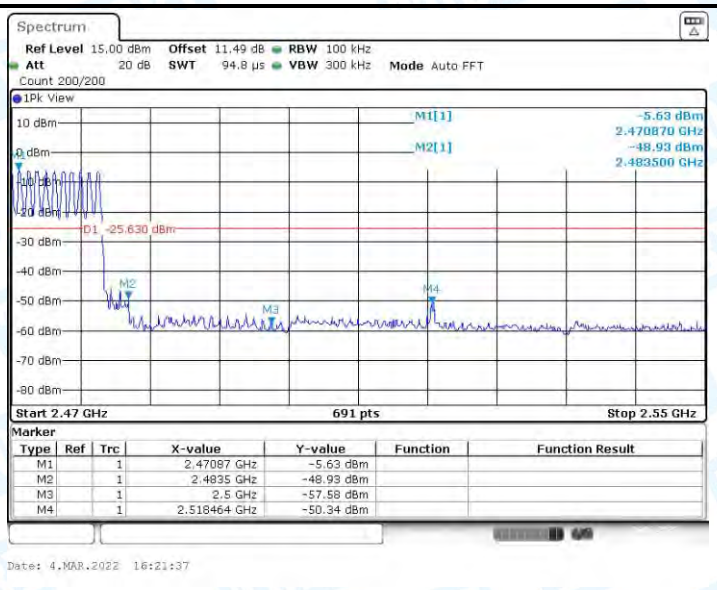
DH5_Ant1_Low_2402



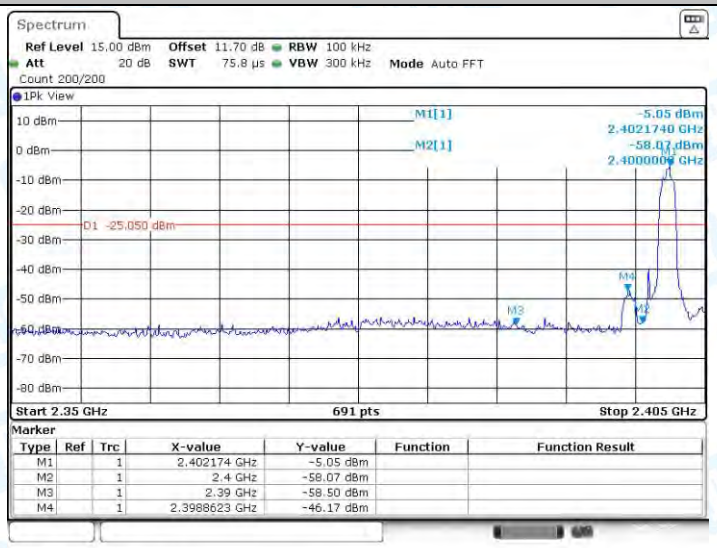
DH5_Ant1_High_2480



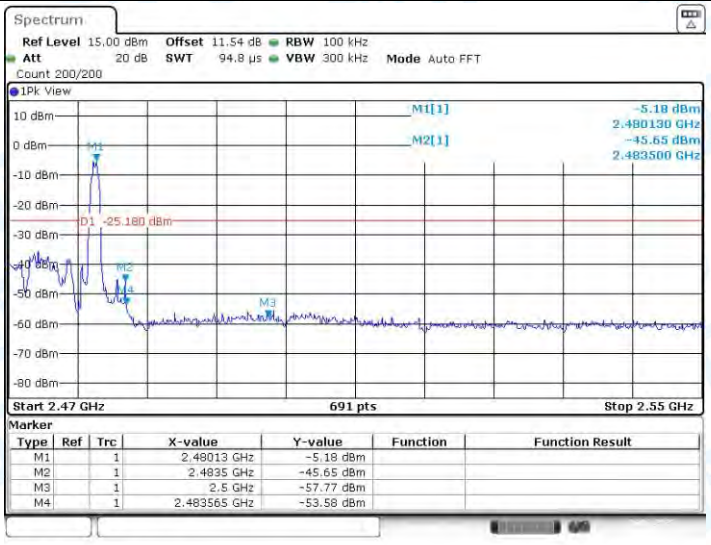
DH5_Ant1_Low_Hop_2402



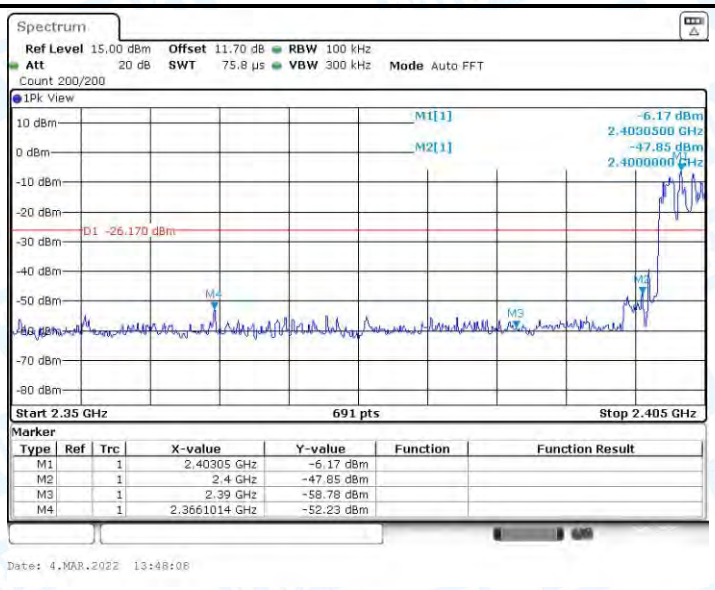
DH5_Ant1_High_Hop_2480



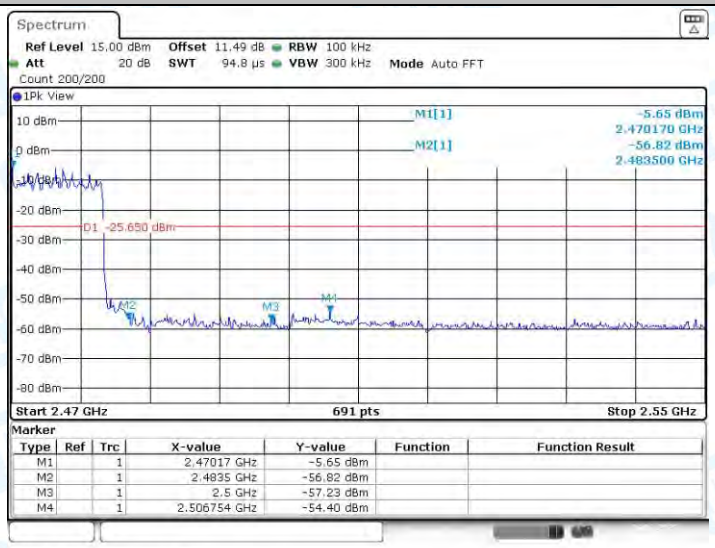
2DH5_Ant1_Low_2402



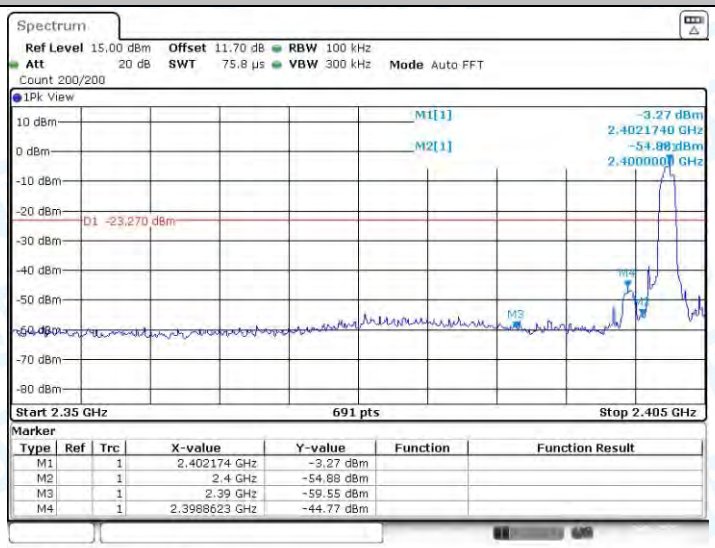
2DH5_Ant1_High_2480



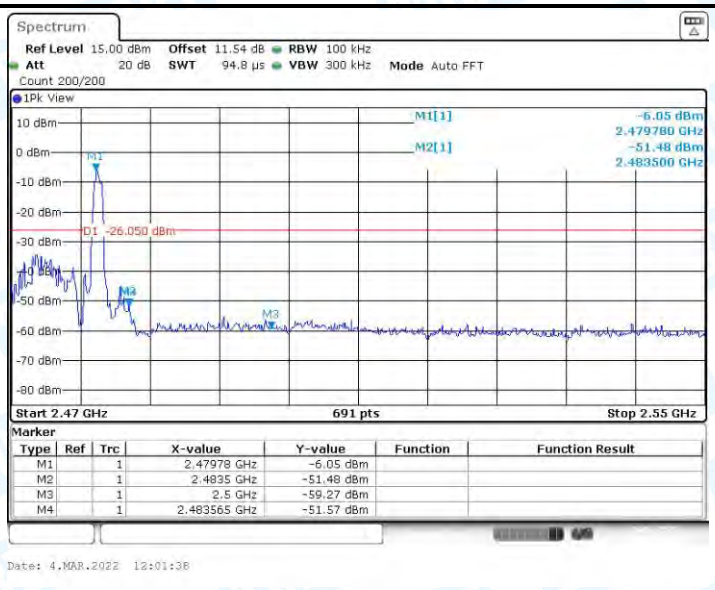
2DH5_Ant1_Low_Hop_2402



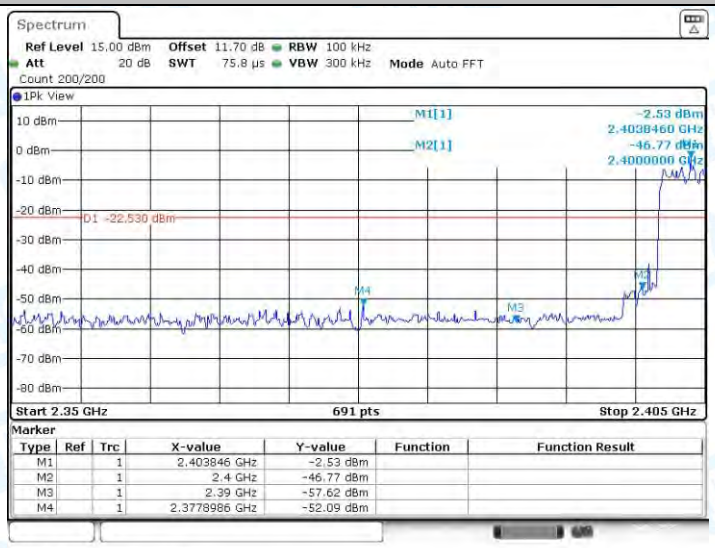
2DH5_Ant1_High_Hop_2480



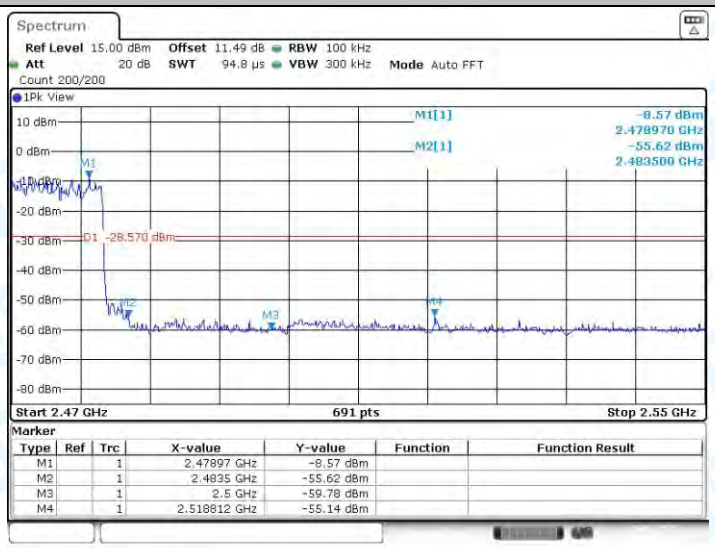
3DH5_Ant1_Low_2402



3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



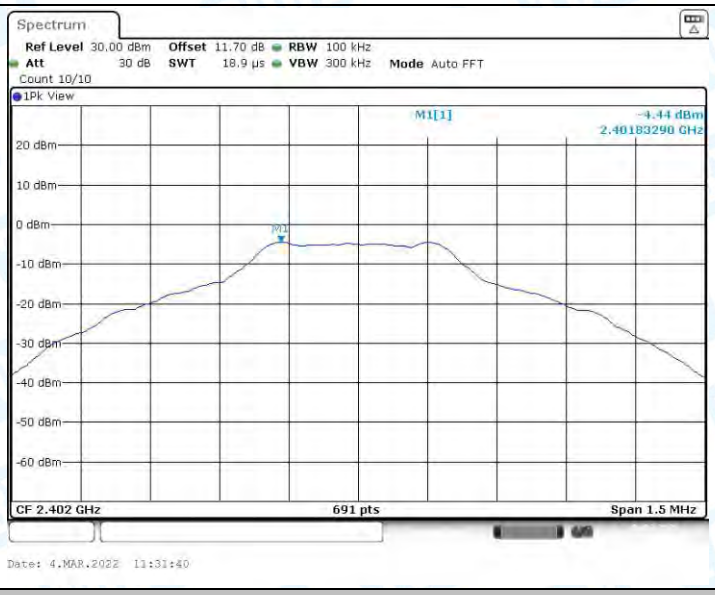
3DH5_Ant1_High_Hop_2480

8. Conducted Spurious Emission

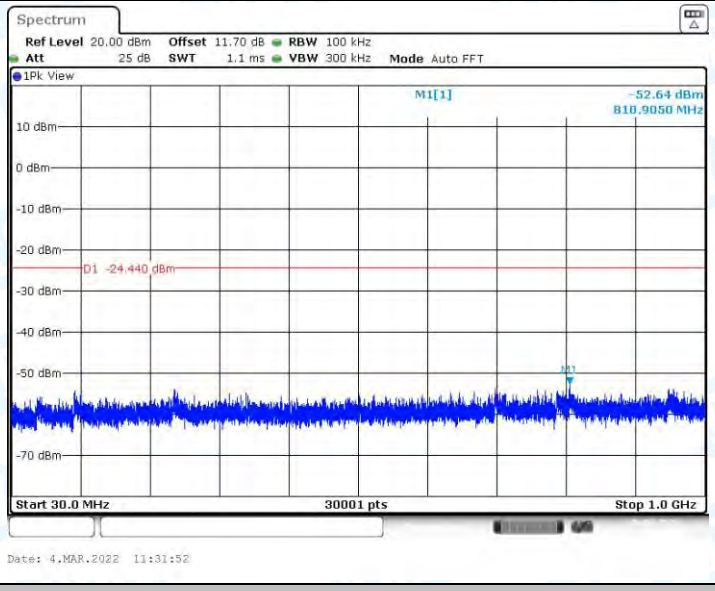
8.1.Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-4.44	-4.44	---	PASS
			30~1000	-4.44	-52.64	≤-24.44	PASS
			1000~26500	-4.44	-47.14	≤-24.44	PASS
		2441	Reference	-4.92	-4.92	---	PASS
			30~1000	-4.92	-51.44	≤-24.92	PASS
			1000~26500	-4.92	-47.24	≤-24.92	PASS
		2480	Reference	-5.03	-5.03	---	PASS
			30~1000	-5.03	-50.59	≤-25.03	PASS
			1000~26500	-5.03	-46.82	≤-25.03	PASS
2DH5	Ant1	2402	Reference	-3.16	-3.16	---	PASS
			30~1000	-3.16	-51.31	≤-23.16	PASS
			1000~26500	-3.16	-46.5	≤-23.16	PASS
		2441	Reference	-4.65	-4.65	---	PASS
			30~1000	-4.65	-51.05	≤-24.65	PASS
			1000~26500	-4.65	-46.95	≤-24.65	PASS
		2480	Reference	-5.31	-5.31	---	PASS
			30~1000	-5.31	-52.15	≤-25.31	PASS
			1000~26500	-5.31	-47.04	≤-25.31	PASS
3DH5	Ant1	2402	Reference	-3.24	-3.24	---	PASS
			30~1000	-3.24	-53.12	≤-23.24	PASS
			1000~26500	-3.24	-46.95	≤-23.24	PASS
		2441	Reference	-4.69	-4.69	---	PASS
			30~1000	-4.69	-52.26	≤-24.69	PASS
			1000~26500	-4.69	-47.29	≤-24.69	PASS
		2480	Reference	-5.41	-5.41	---	PASS
			30~1000	-5.41	-52.91	≤-25.41	PASS
			1000~26500	-5.41	-47.17	≤-25.41	PASS

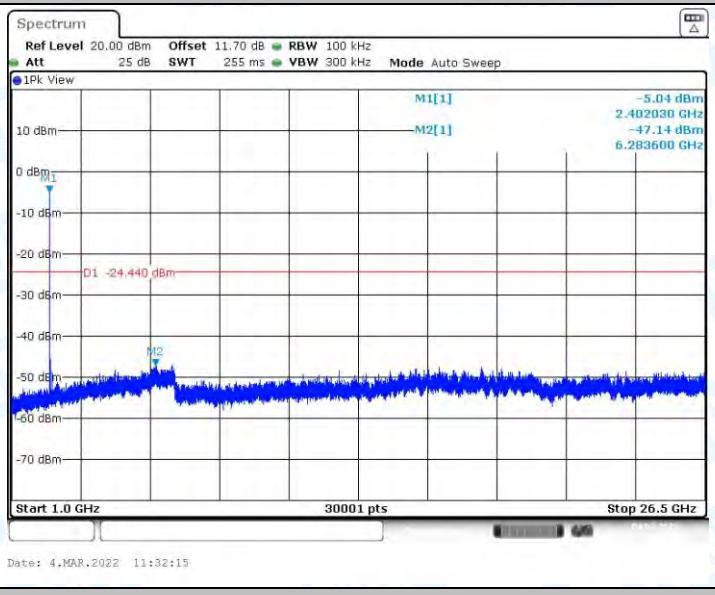
8.2.Test Graphs



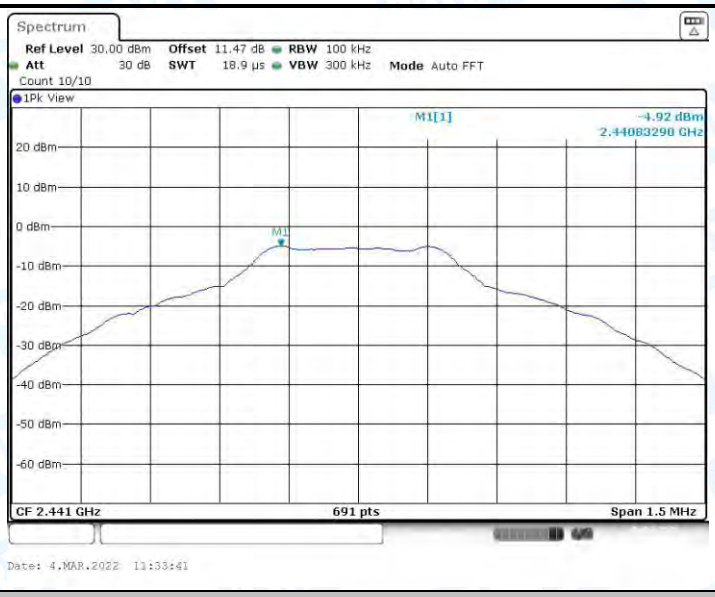
DH5_Ant1_2402_0~Reference



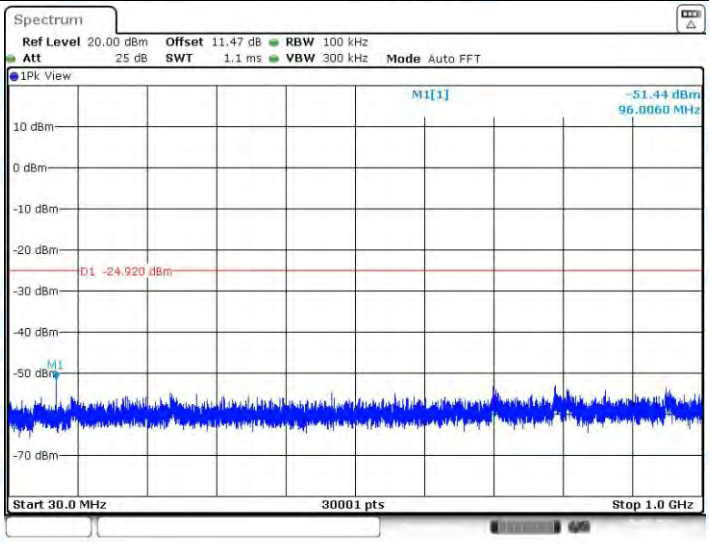
DH5_Ant1_2402_30~1000



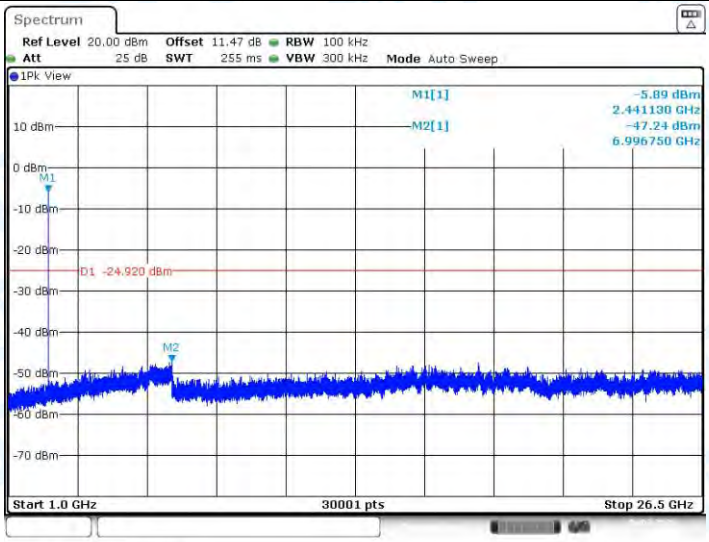
DH5_Ant1_2402_1000~26500



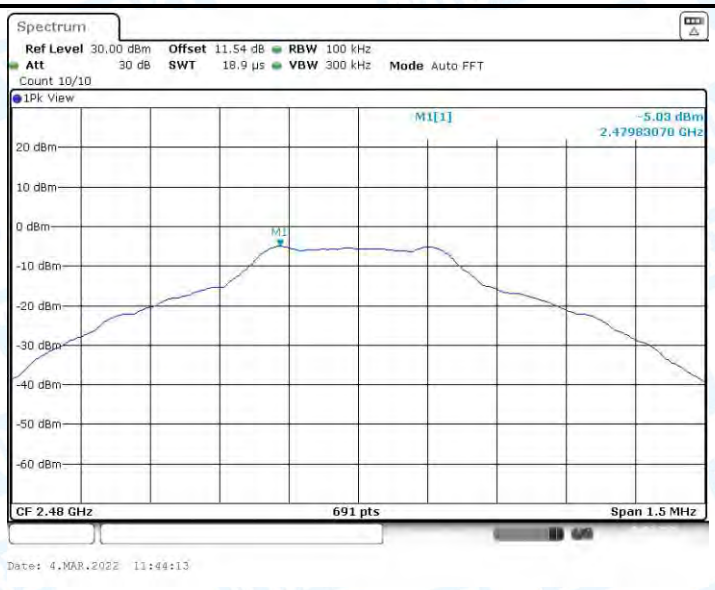
DH5_Ant1_2441_0~Reference



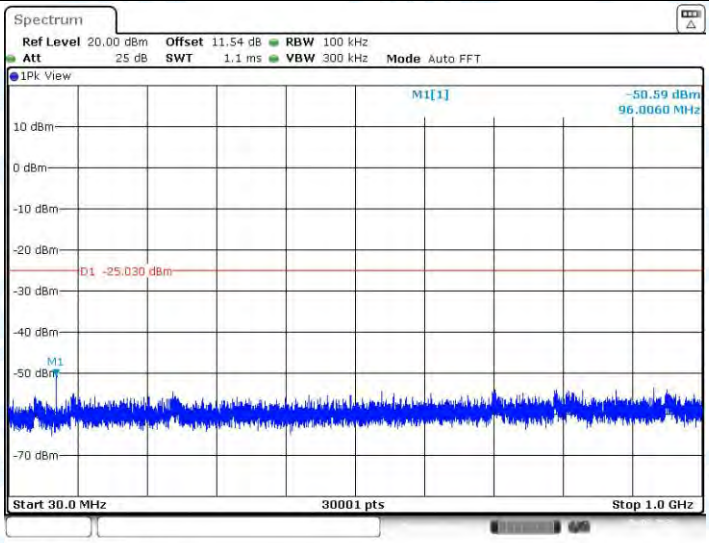
DH5_Ant1_2441_30~1000



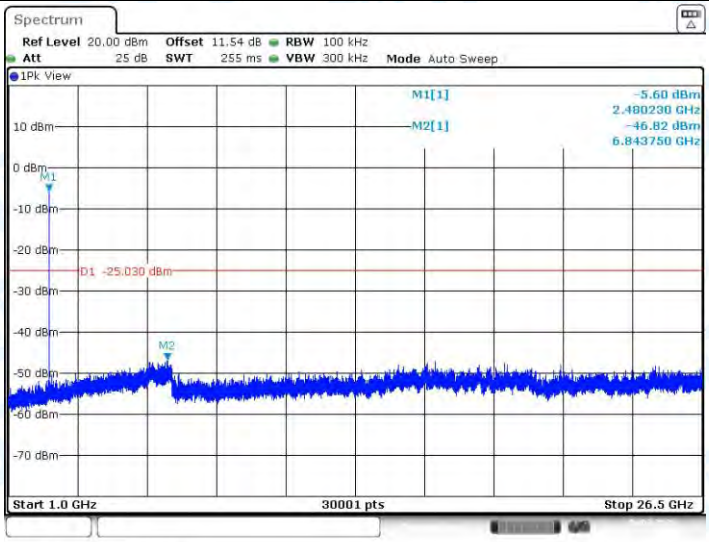
DH5_Ant1_2441_1000~26500



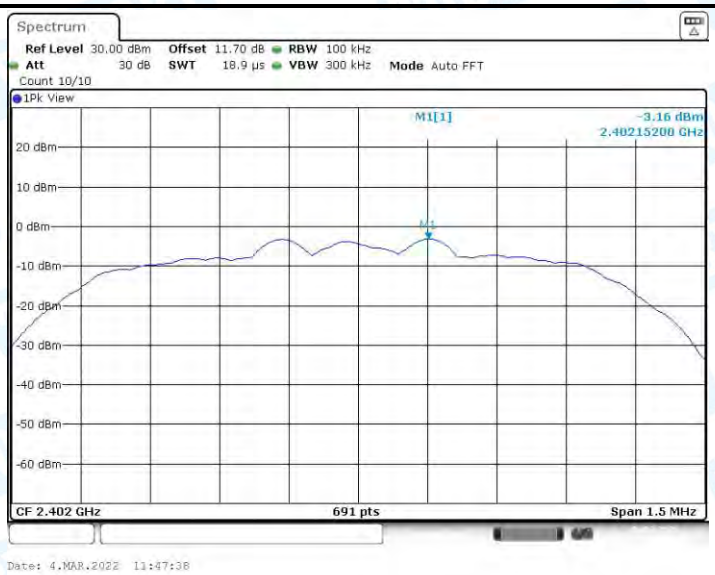
DH5_Ant1_2480_0~Reference



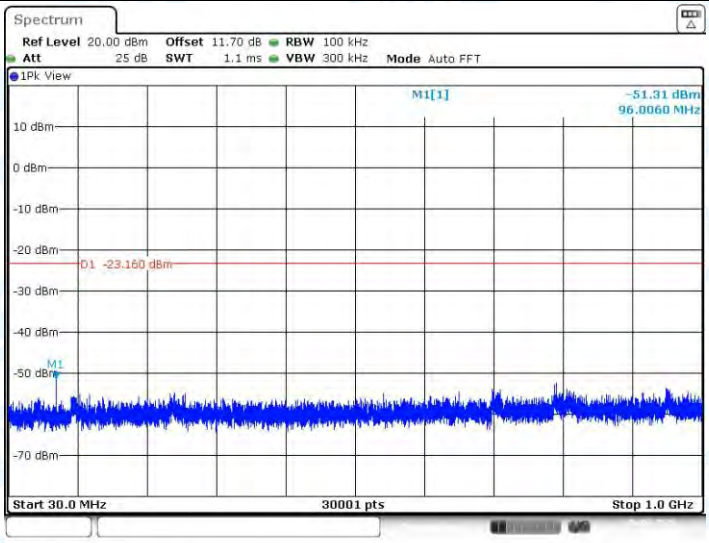
DH5_Ant1_2480_30~1000



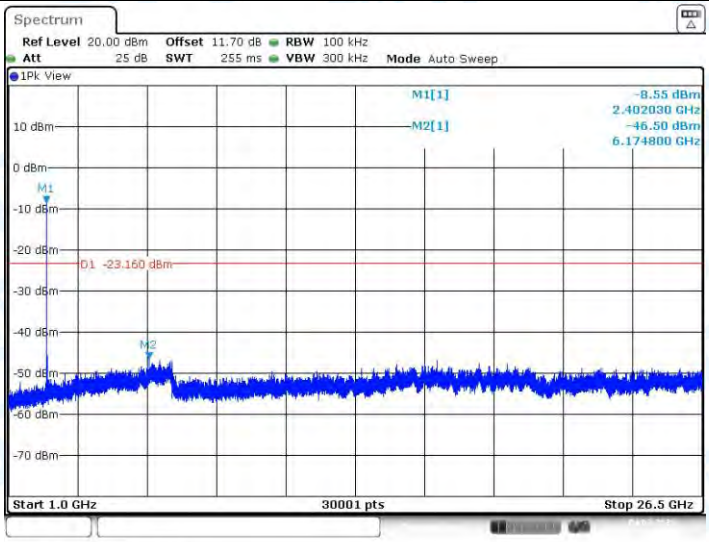
DH5_Ant1_2480_1000~26500



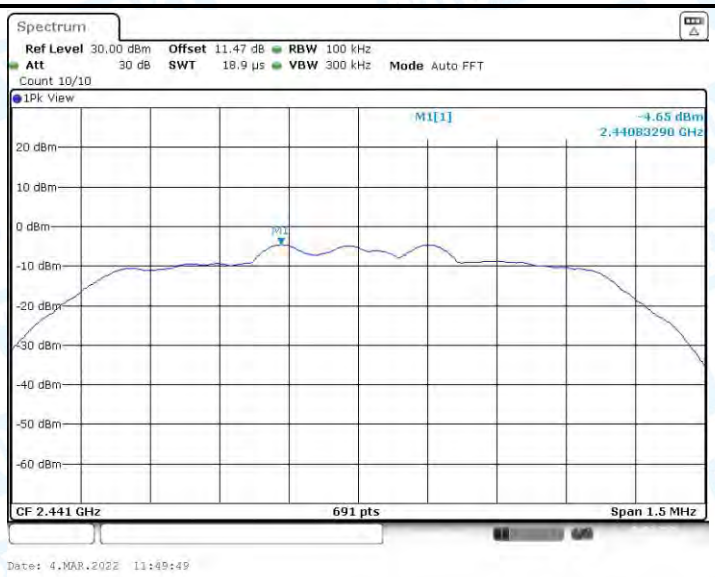
2DH5_Ant1_2402_0~Reference



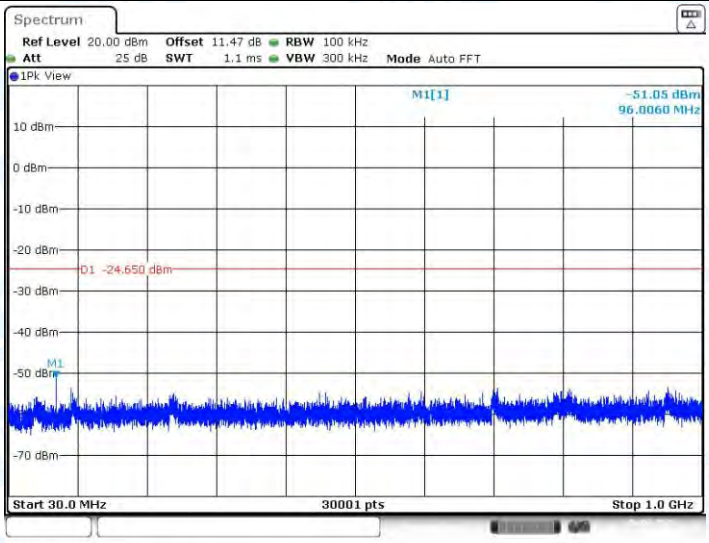
2DH5_Ant1_2402_30~1000



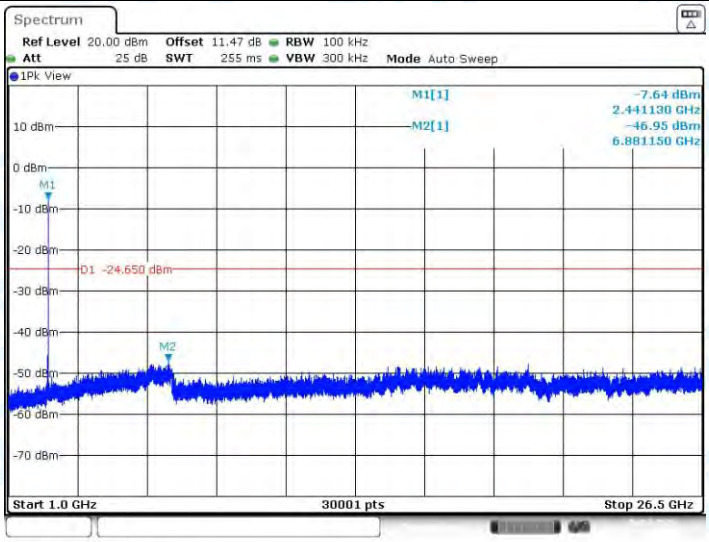
2DH5_Ant1_2402_1000~26500



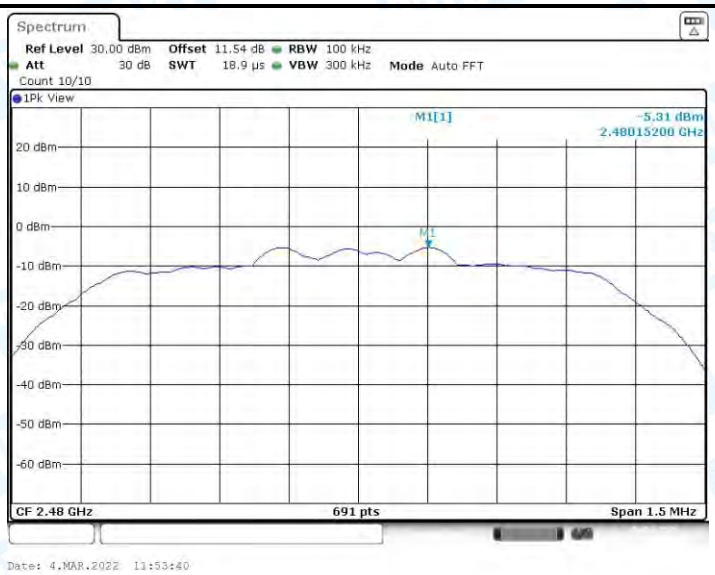
2DH5_Ant1_2441_0~Reference



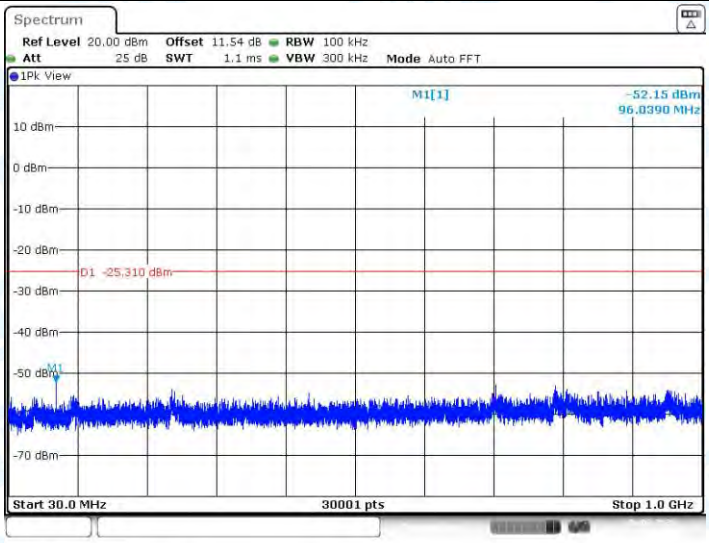
2DH5_Ant1_2441_30~1000



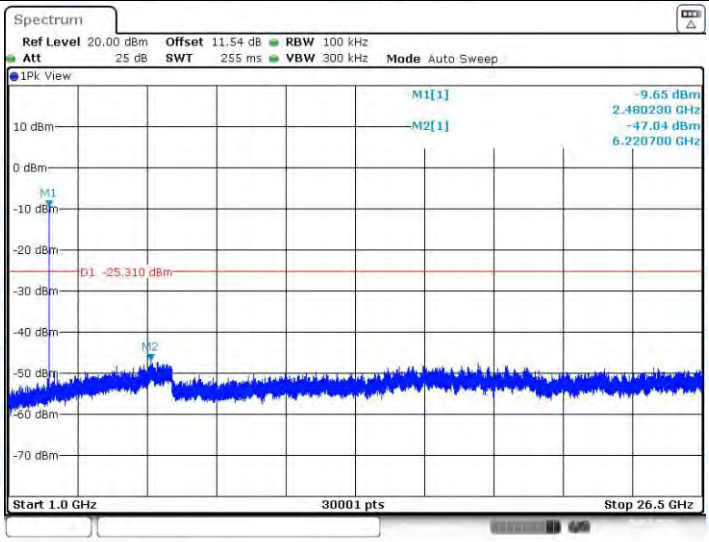
2DH5_Ant1_2441_1000~26500



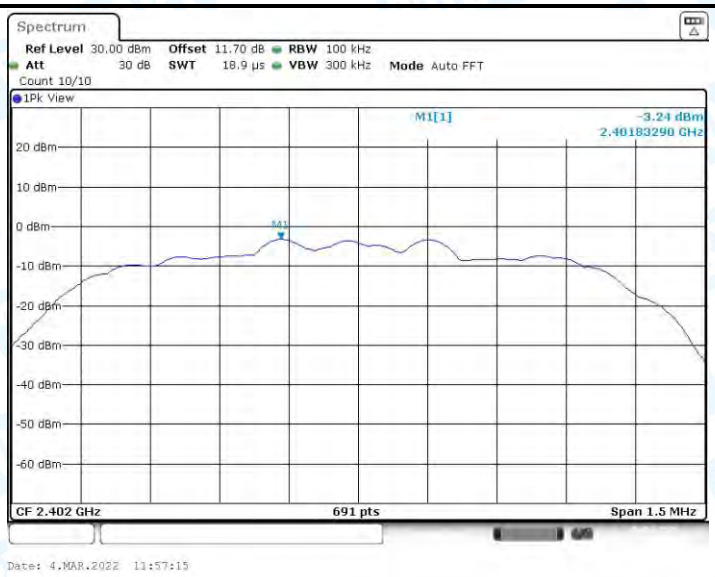
2DH5_Ant1_2480_0~Reference



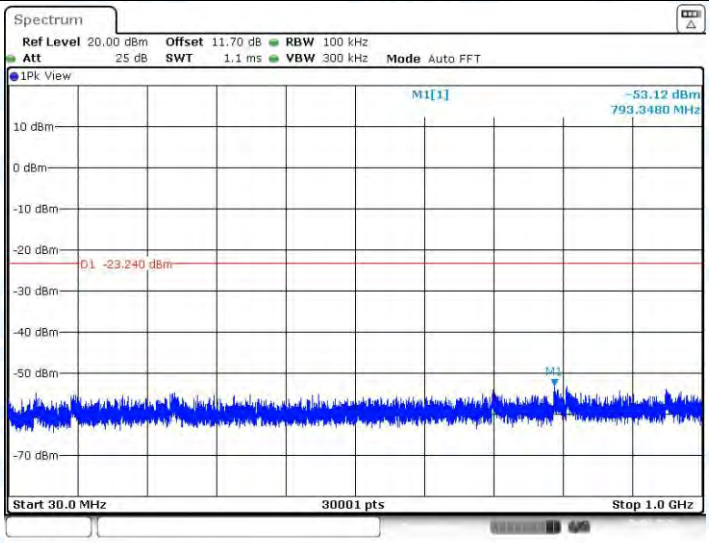
2DH5_Ant1_2480_30~1000



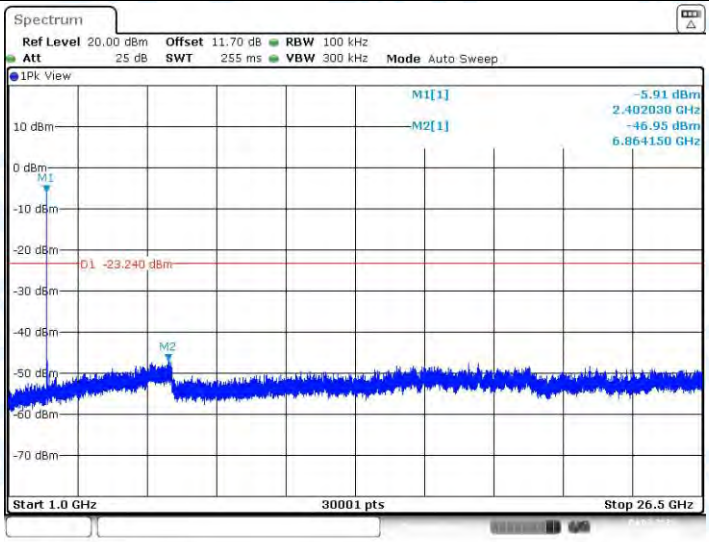
2DH5_Ant1_2480_1000~26500



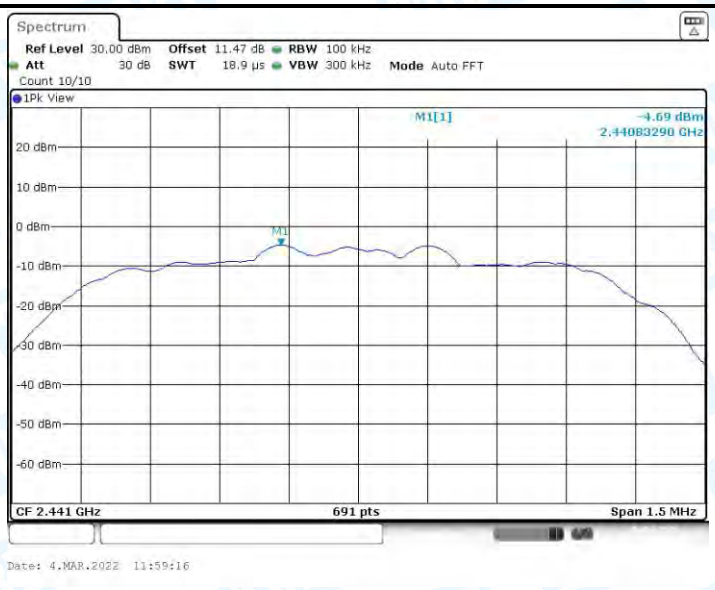
3DH5_Ant1_2402_0~Reference



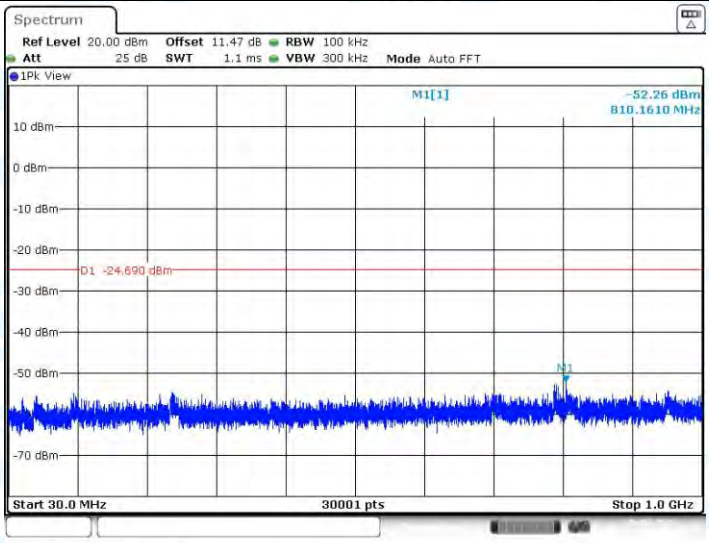
3DH5_Ant1_2402_30~1000



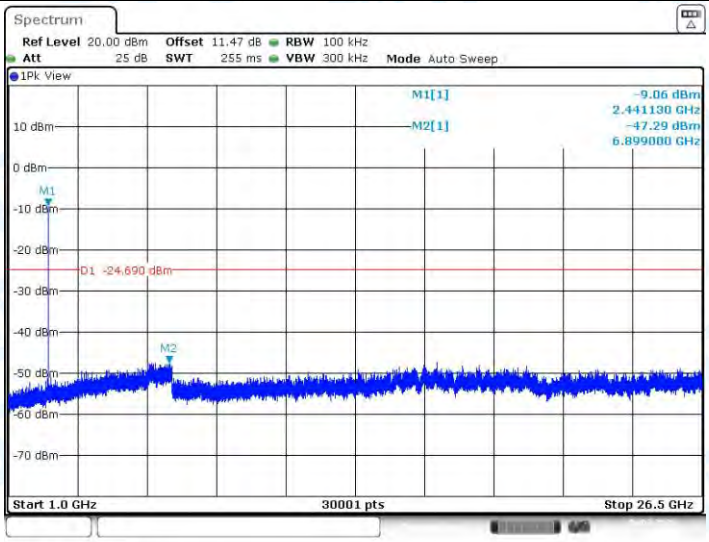
3DH5_Ant1_2402_1000~26500



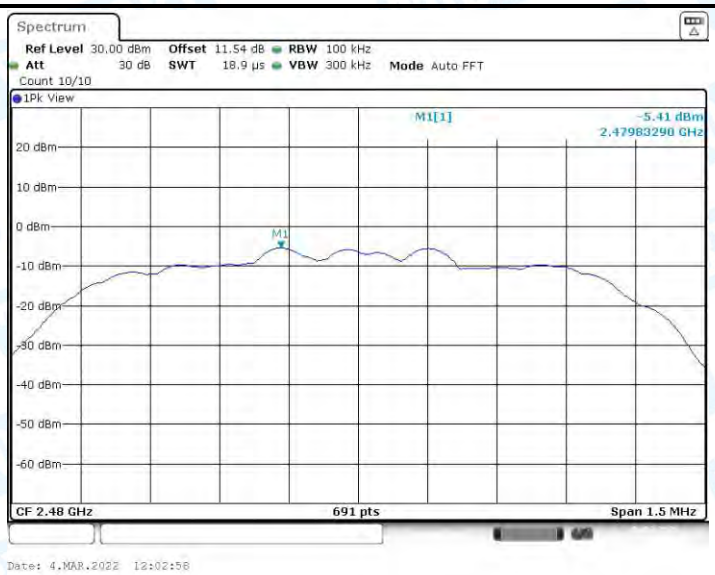
3DH5_Ant1_2441_0~Reference



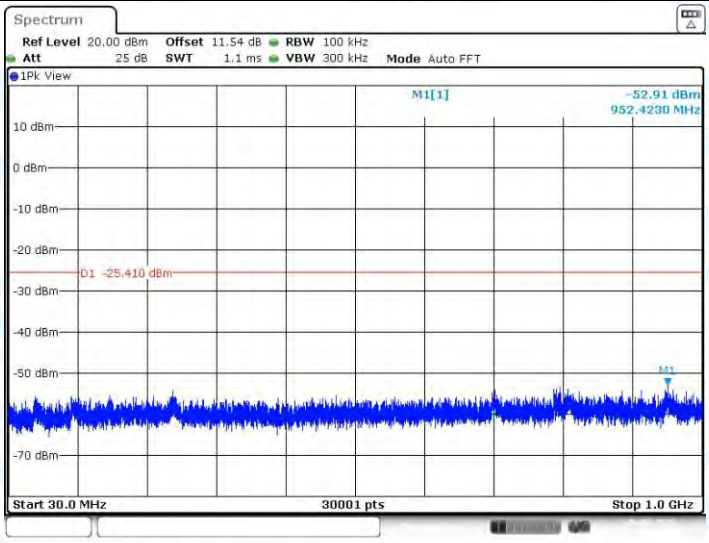
3DH5_Ant1_2441_30~1000



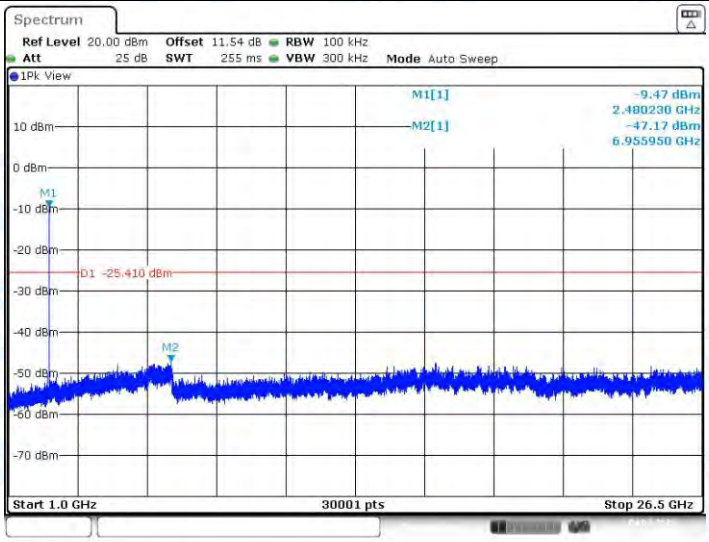
3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



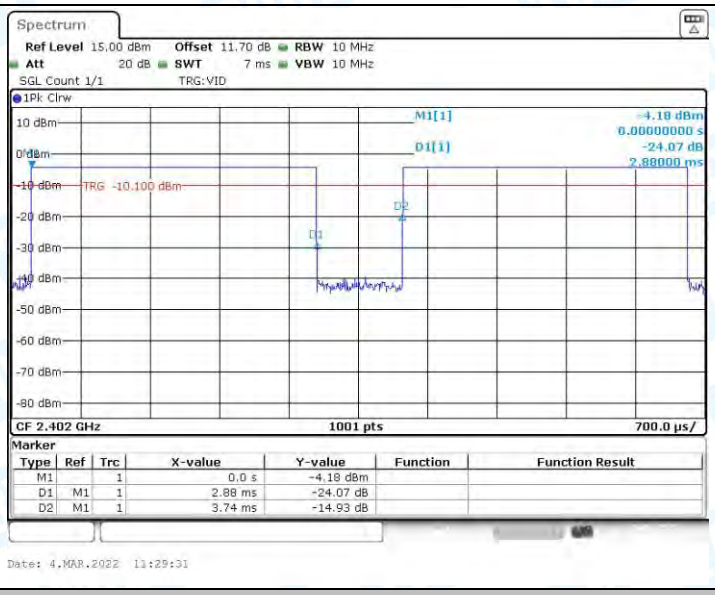
3DH5_Ant1_2480_1000~26500

9. Duty Cycle

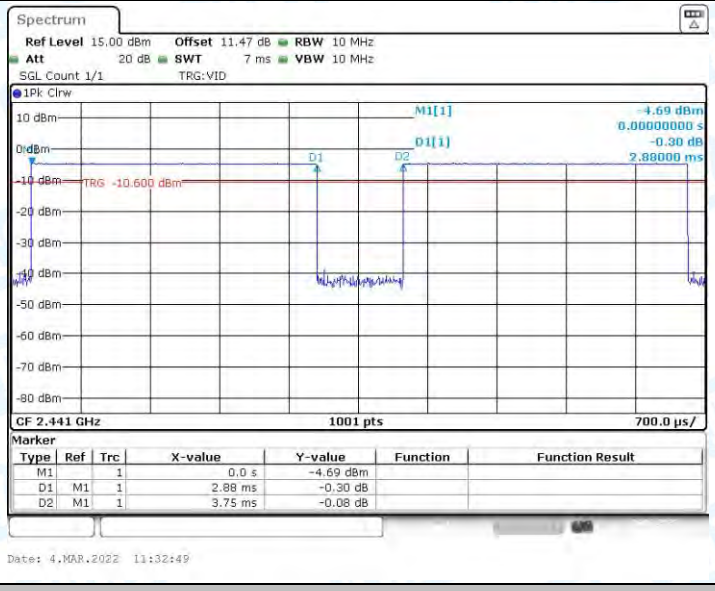
9.1.Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
DH5	Ant1	2402	2.88	3.74	77.01	---	---
		2441	2.88	3.75	76.80	---	---
		2480	2.88	3.74	77.01	---	---
2DH5	Ant1	2402	2.89	3.75	77.07	---	---
		2441	2.89	3.75	77.07	---	---
		2480	2.89	3.75	77.07	---	---
3DH5	Ant1	2402	2.89	3.75	77.07	---	---
		2441	2.89	3.75	77.07	---	---
		2480	2.89	3.76	76.86	---	---

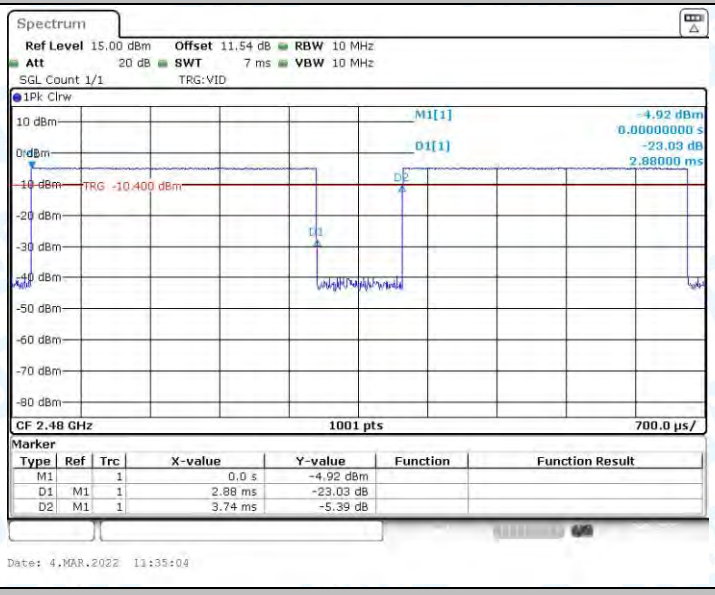
9.2.Test Graphs



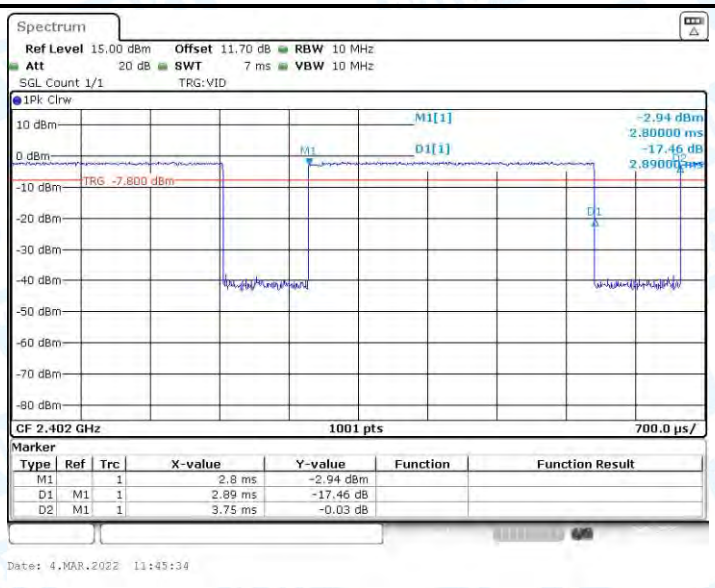
DH5_Ant1_2402



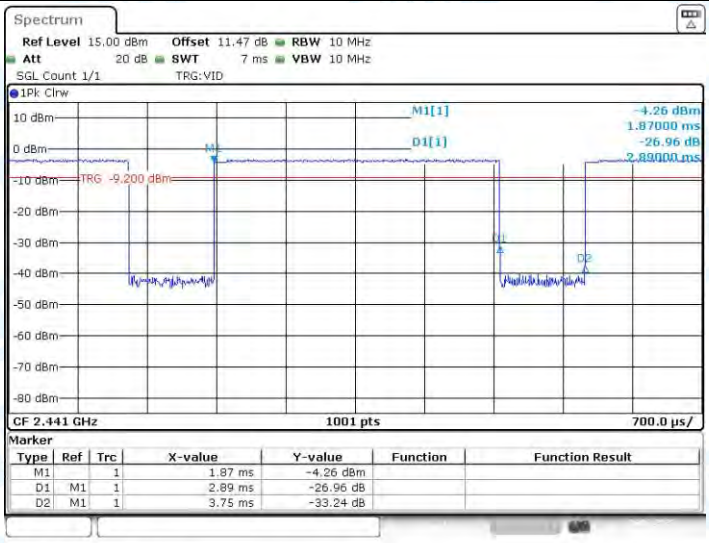
DH5_Ant1_2441



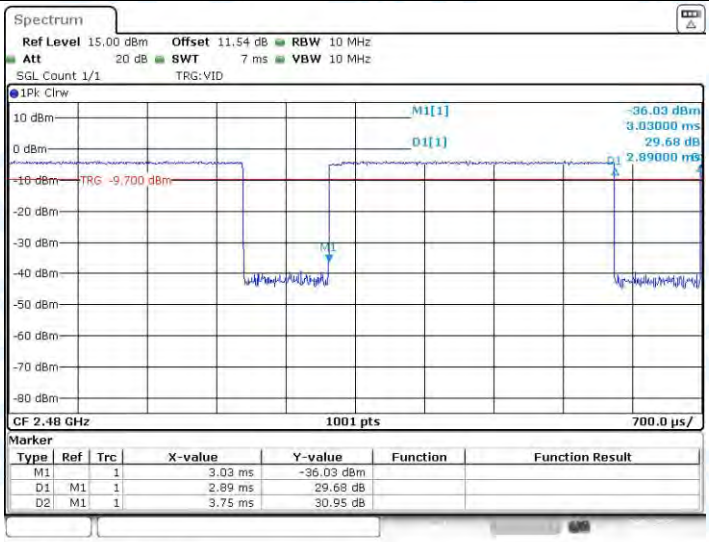
DH5_Ant1_2480



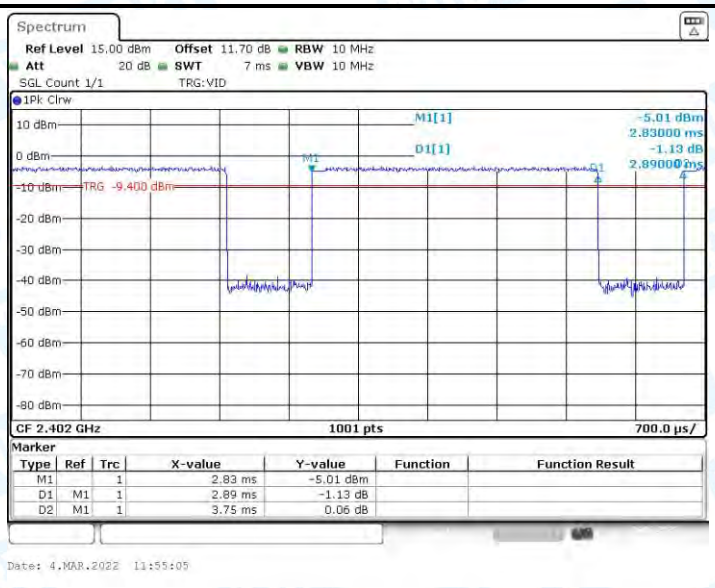
2DH5_Ant1_2402



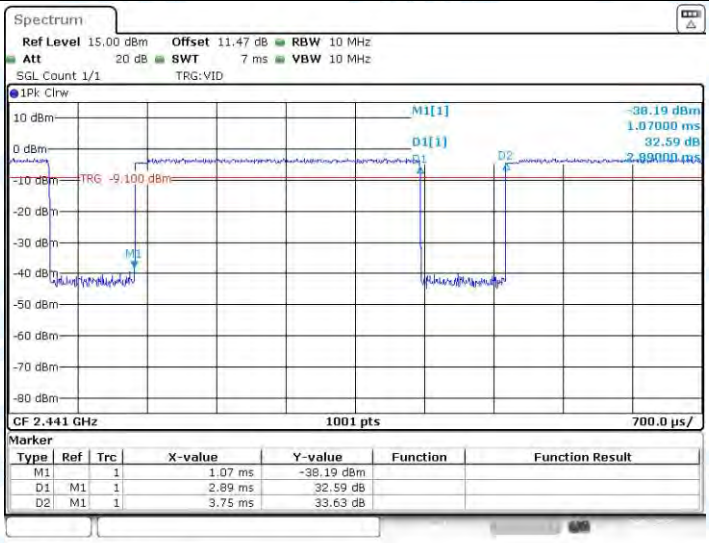
2DH5_Ant1_2441



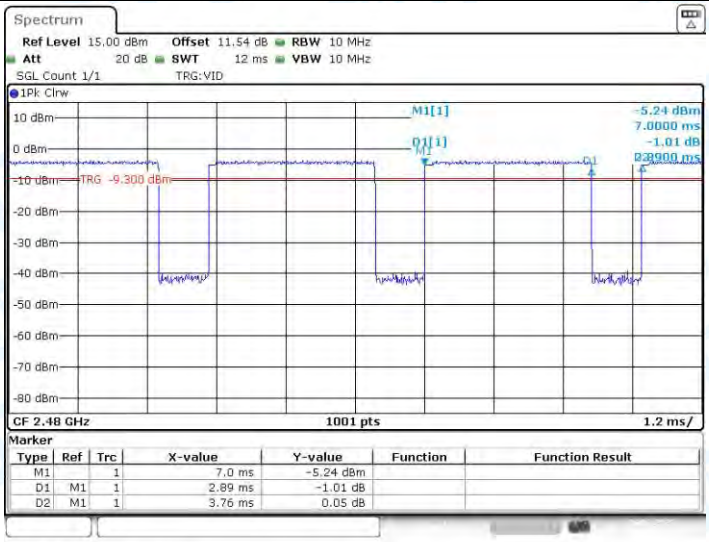
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

10. Emissions in Restricted Bands

10.1.Test Result

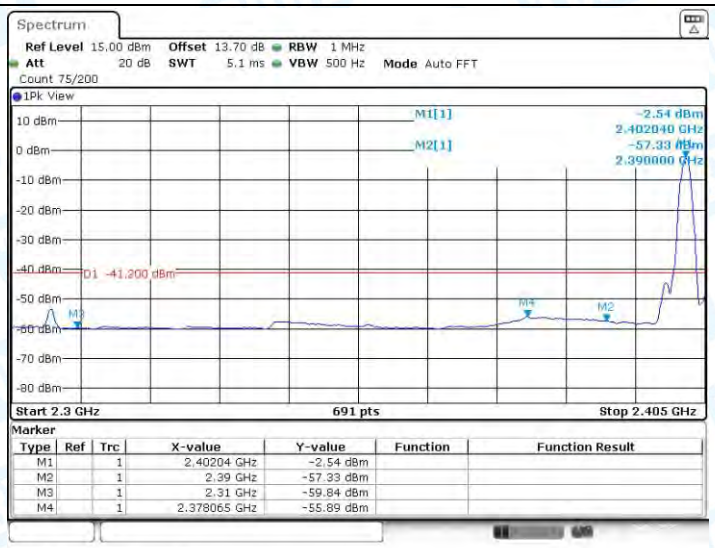
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-59.84	≤-41.20	PASS
				AV	2378.065	-55.89	≤-41.20	PASS
				AV	2390.000	-57.33	≤-41.20	PASS
				Peak	2310.000	-48.47	≤-21.20	PASS
				Peak	2386.739	-44.2	≤-21.20	PASS
				Peak	2390.000	-47.28	≤-21.20	PASS
		High	2480	AV	2483.500	-47.76	≤-41.20	PASS
				AV	2483.565	-49.01	≤-41.20	PASS
				AV	2500.000	-56.52	≤-41.20	PASS
				Peak	2483.500	-41.59	≤-21.20	PASS
				Peak	2483.681	-41.07	≤-21.20	PASS
				Peak	2500.000	-45.97	≤-21.20	PASS
		Low	Hop_2402	Peak	2310.000	-47.54	≤-21.20	PASS
				Peak	2343.522	-43.36	≤-21.20	PASS
				Peak	2390.000	-45.99	≤-21.20	PASS
		High	Hop_2480	Peak	2483.500	-44.57	≤-21.20	PASS
				Peak	2483.681	-43.59	≤-21.20	PASS
				Peak	2500.000	-45.42	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-59.86	≤-41.20	PASS
				AV	2378.217	-55.33	≤-41.20	PASS
				AV	2390.000	-57.21	≤-41.20	PASS
				Peak	2310.000	-48.55	≤-21.20	PASS
				Peak	2382.630	-44.33	≤-21.20	PASS
				Peak	2390.000	-46.33	≤-21.20	PASS
		High	2480	AV	2483.500	-51.2	≤-41.20	PASS
				AV	2483.565	-51.88	≤-41.20	PASS
				AV	2500.000	-56.46	≤-41.20	PASS
				Peak	2483.500	-42.59	≤-21.20	PASS
				Peak	2483.565	-42.59	≤-21.20	PASS
				Peak	2500.000	-46.33	≤-21.20	PASS
		Low	Hop_2402	Peak	2310.000	-46.54	≤-21.20	PASS
				Peak	2385.522	-43.81	≤-21.20	PASS
				Peak	2390.000	-45.73	≤-21.20	PASS
		High	Hop_2480	Peak	2483.500	-46.9	≤-21.20	PASS
				Peak	2483.913	-44.26	≤-21.20	PASS
				Peak	2500.000	-48.27	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-59.9	≤-41.20	PASS
				AV	2381.413	-55.57	≤-41.20	PASS
				AV	2390.000	-57.33	≤-41.20	PASS
				Peak	2310.000	-48.72	≤-21.20	PASS
				Peak	2338.196	-43.29	≤-21.20	PASS

				Peak	2390.000	-46.48	≤-21.20	PASS
		High	2480	AV	2483.500	-51.18	≤-41.20	PASS
				AV	2483.565	-51.69	≤-41.20	PASS
				AV	2500.000	-56.63	≤-41.20	PASS
				Peak	2483.500	-41.34	≤-21.20	PASS
				Peak	2483.565	-41.54	≤-21.20	PASS
				Peak	2500.000	-46.09	≤-21.20	PASS
		Low	Hop_2402	Peak	2310.000	-48.23	≤-21.20	PASS
				Peak	2381.717	-43.88	≤-21.20	PASS
				Peak	2390.000	-46.6	≤-21.20	PASS
		High	Hop_2480	Peak	2483.500	-46.11	≤-21.20	PASS
				Peak	2495.507	-44.6	≤-21.20	PASS
				Peak	2500.000	-47.59	≤-21.20	PASS

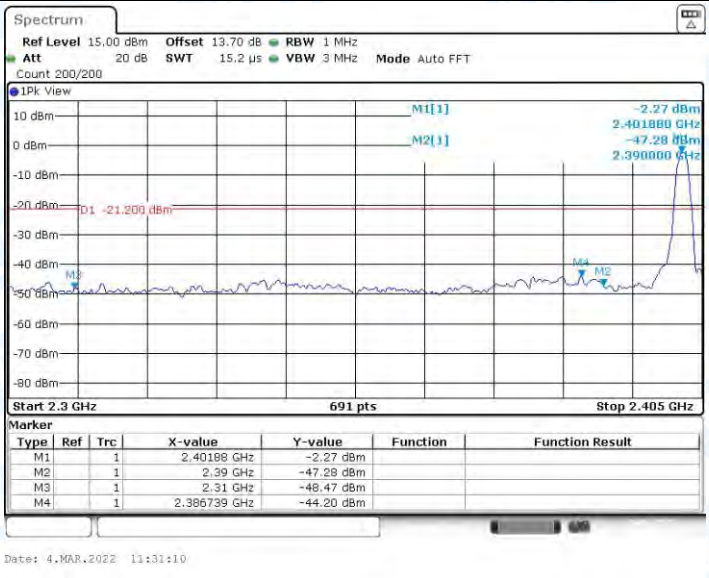
Note：

1. The Antenna Gain is compensated in the graph.
2. 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.

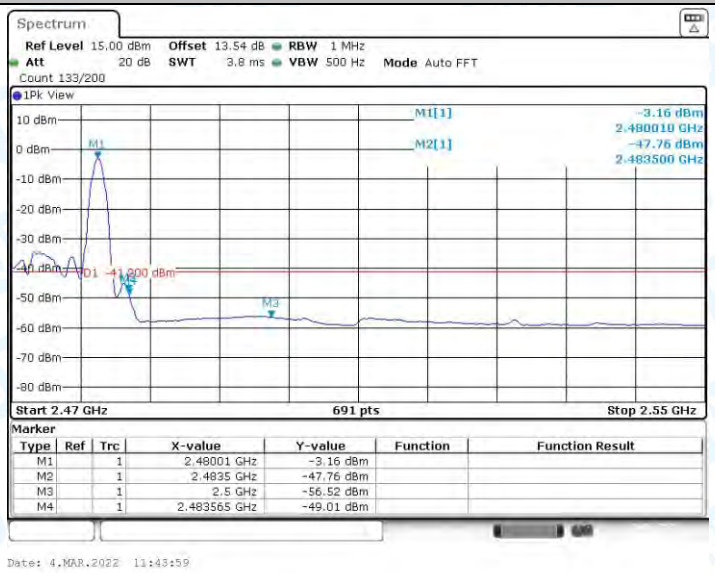
10.2.Test Graphs



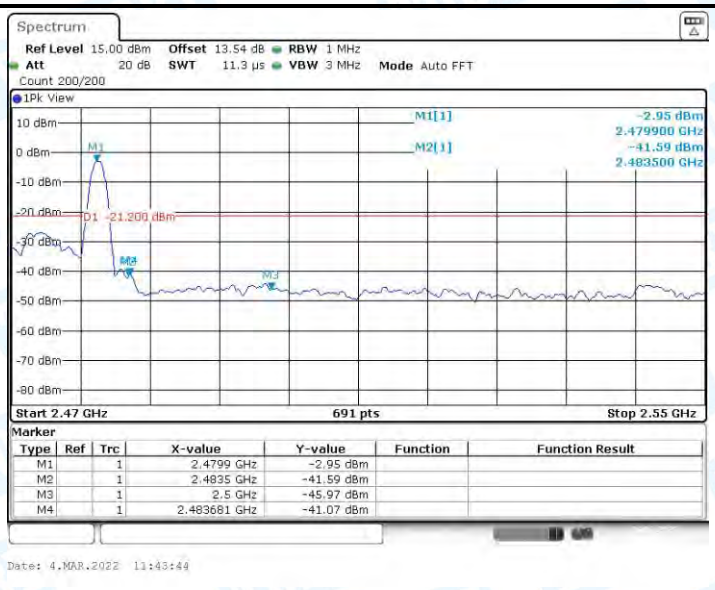
DH5_Ant1_Low_2402_AV



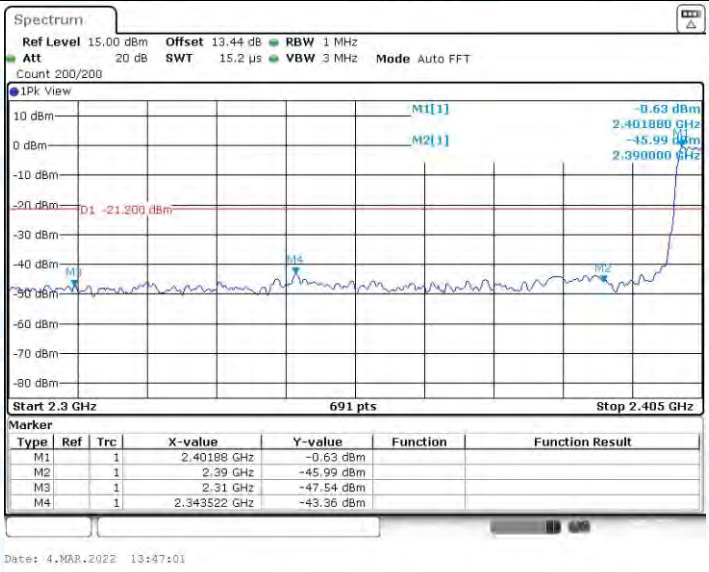
DH5_Ant1_Low_2402_Peak



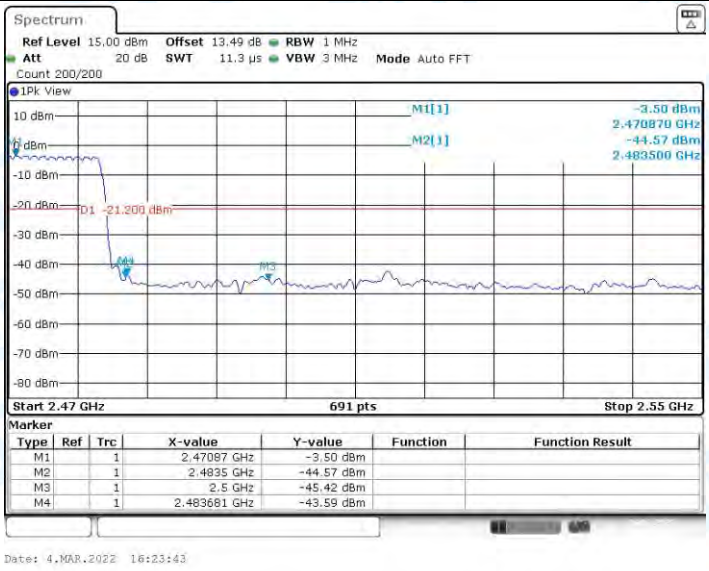
DH5_Ant1_High_2480_AV



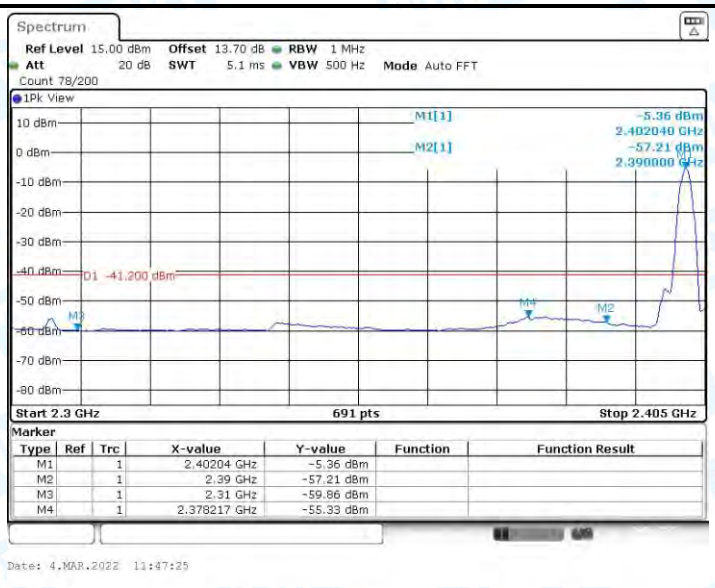
DH5_Ant1_High_2480_Peak



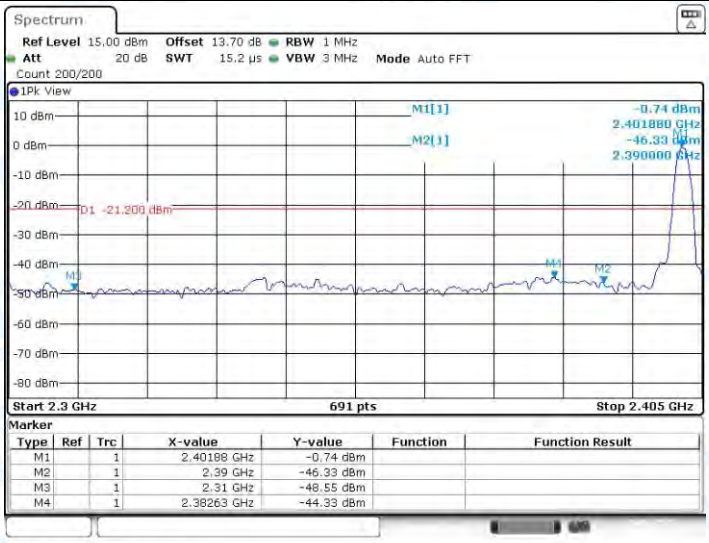
DH5_Ant1_Low_Hop_2402_Peak



DH5_Ant1_High_Hop_2480_Peak



2DH5_Ant1_Low_2402_AV



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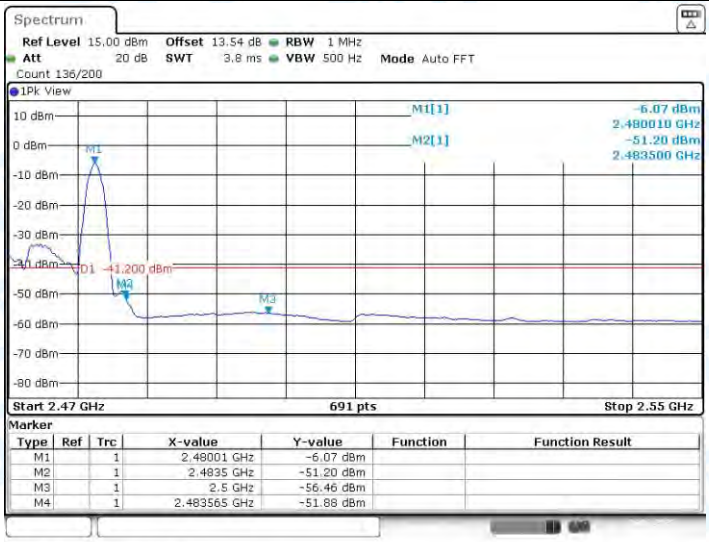

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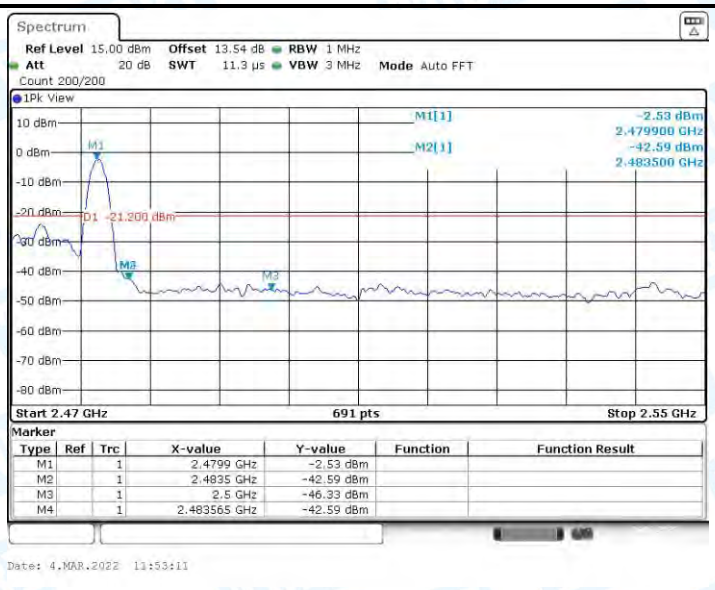

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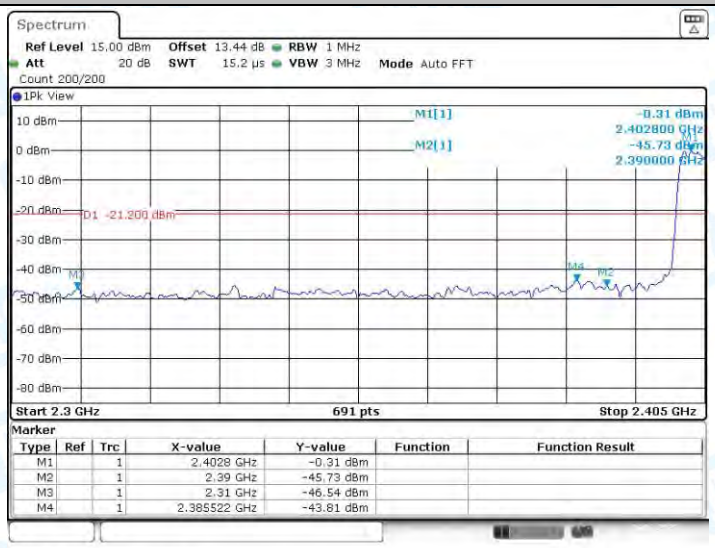
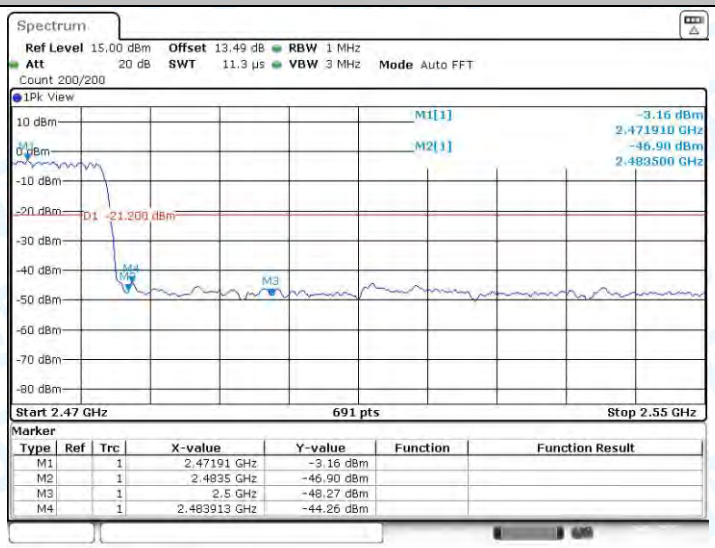
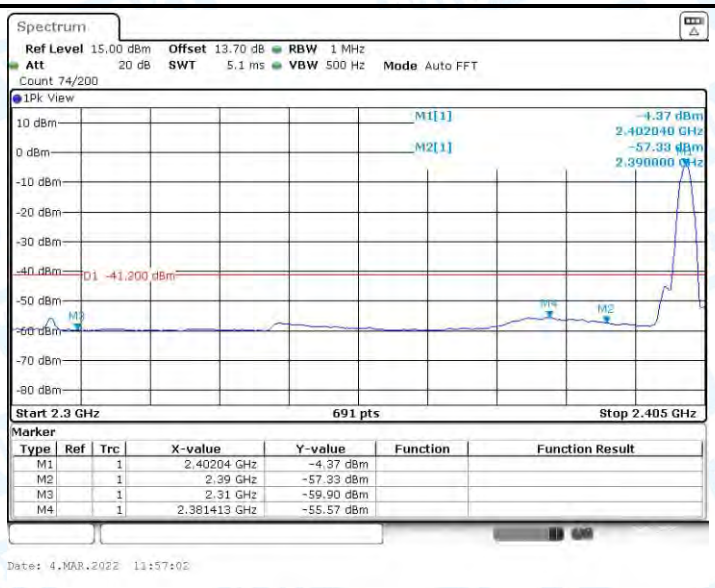


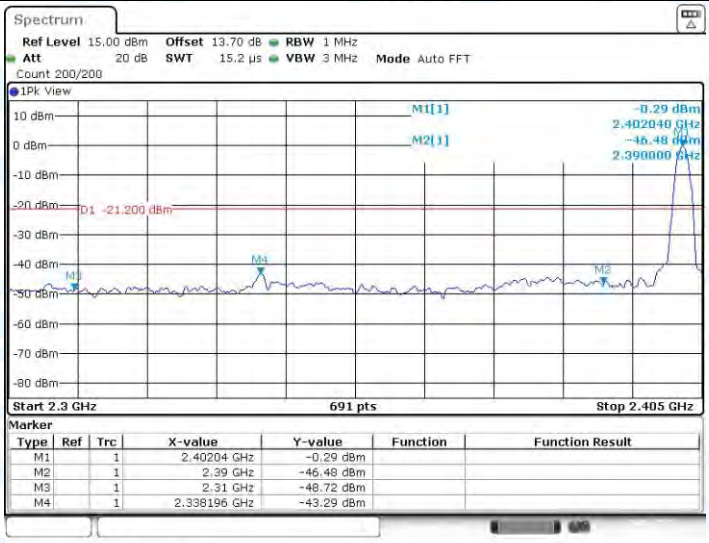
2DH5_Ant1_Low_Hop_2402_Peak



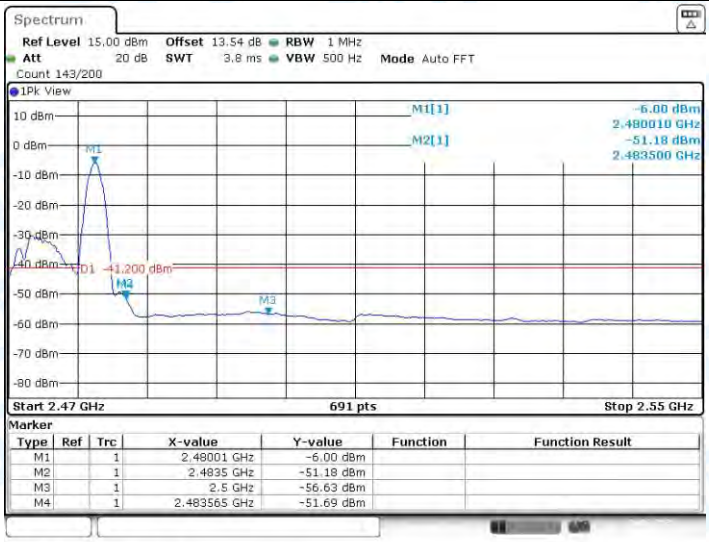
2DH5_Ant1_High_Hop_2480_Peak



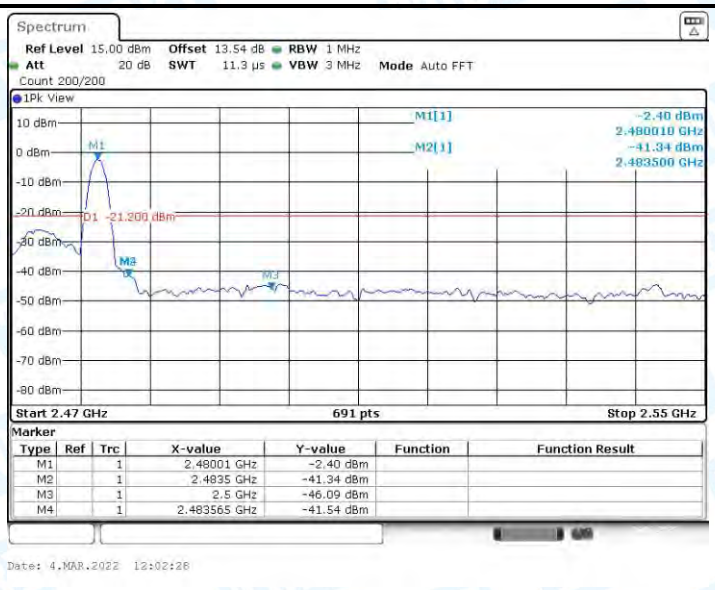
3DH5_Ant1_Low_2402_AV



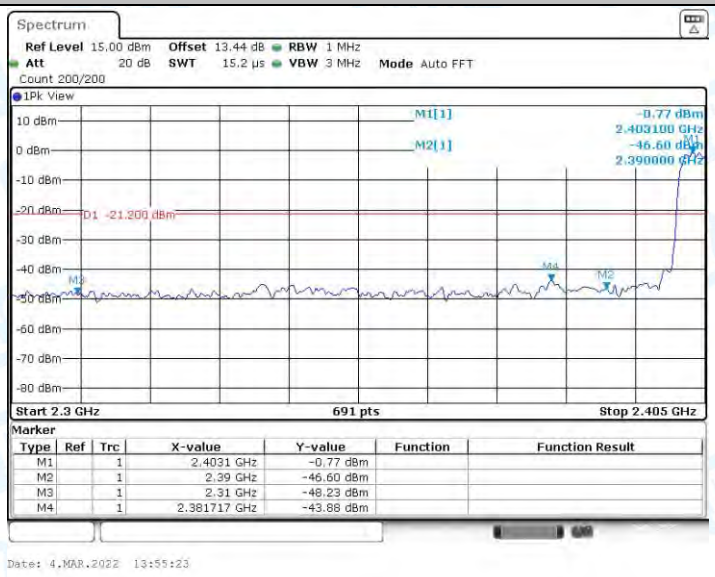
3DH5_Ant1_Low_2402_Peak



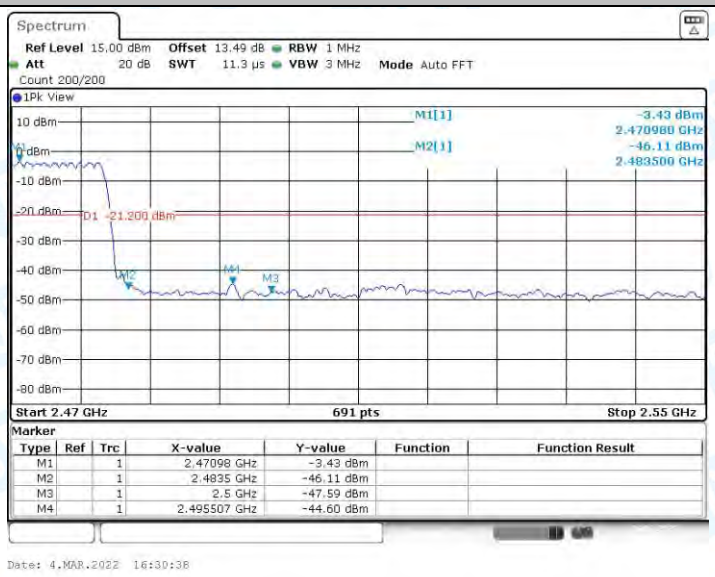
3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



3DH5_Ant1_High_Hop_2480_Peak

-----End of the report-----