

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

General Description of EUT	
Product Name:	PCM-UR02
Test Model:	PCM-UR02
Sample ID:	202208-0126-1-02
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 12V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202208-0126-1	

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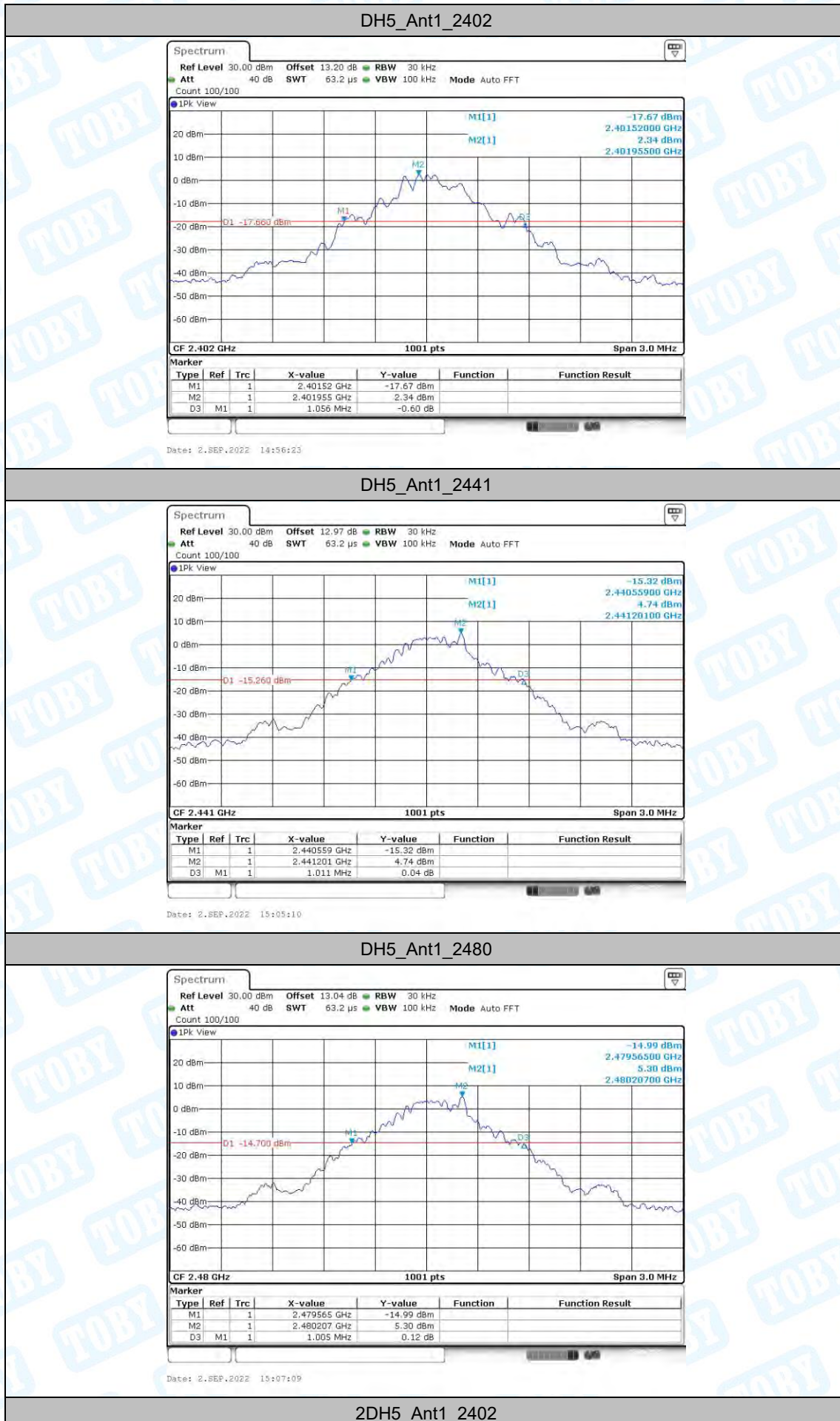
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1. 20dB Emission Bandwidth

1.1. Test Result

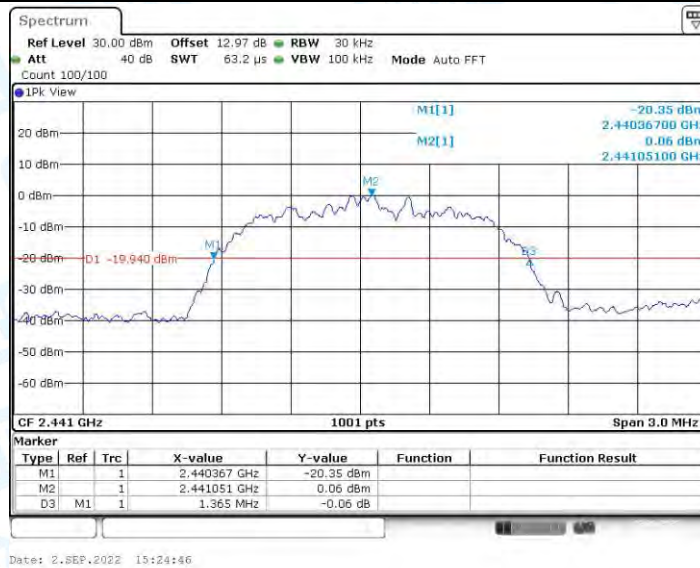
TestMode	Antenna	Channel	20db EBW[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.06	---	---
		2441	1.01	---	---
		2480	1.01	---	---
2DH5	Ant1	2402	1.37	---	---
		2441	1.36	---	---
		2480	1.36	---	---
3DH5	Ant1	2402	1.34	---	---
		2441	1.31	---	---
		2480	1.31	---	---

1.2. Test Graphs





2DH5_Ant1_2441



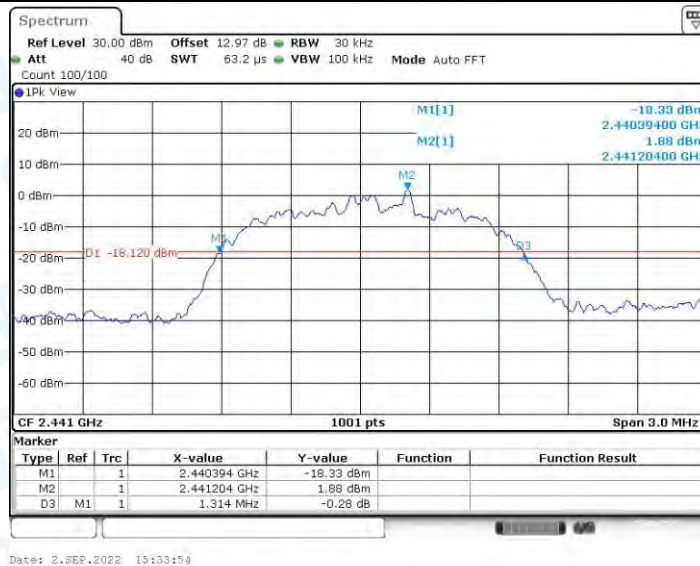
2DH5_Ant1_2480



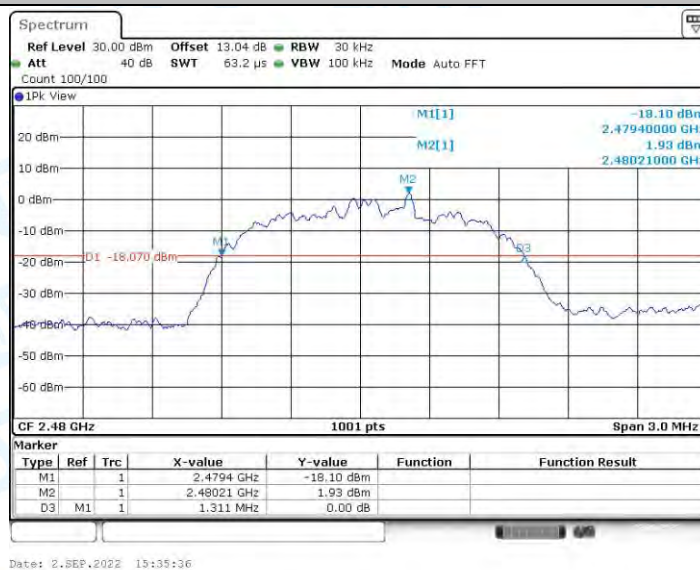
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

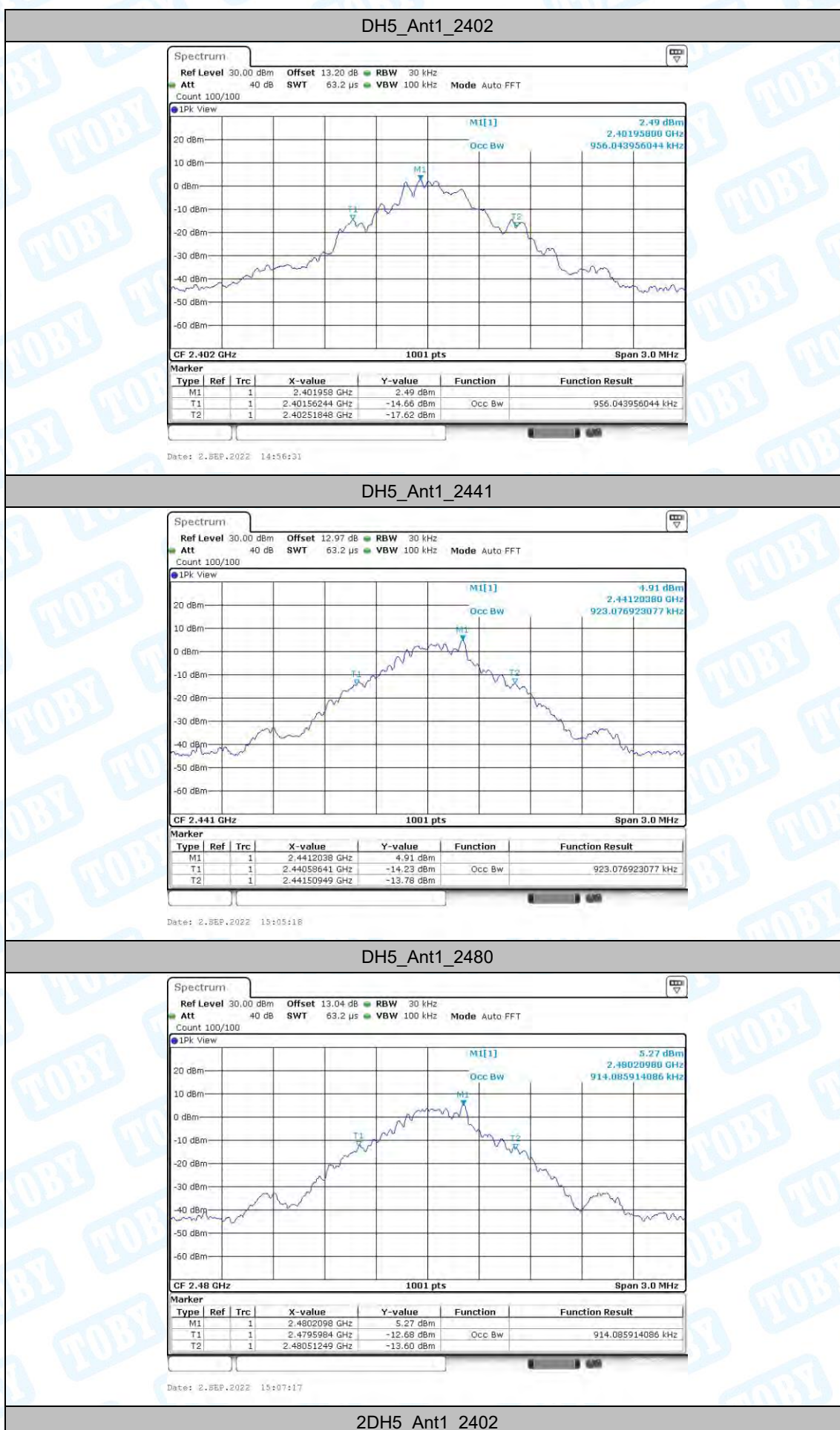


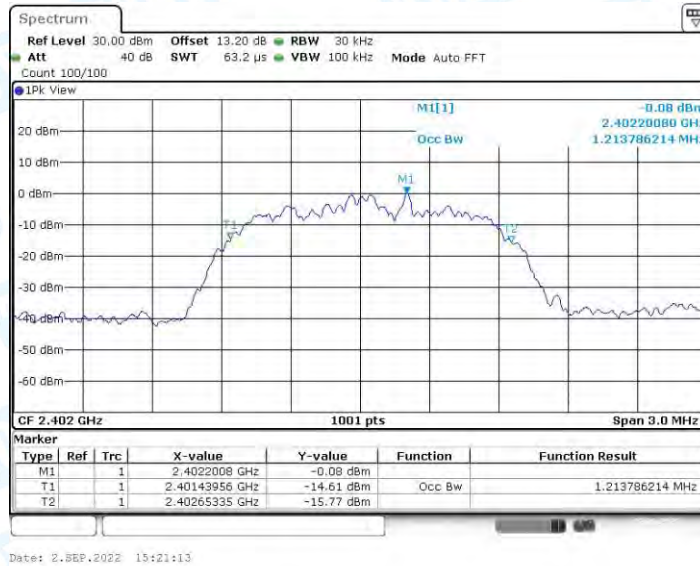
2. Occupied Channel Bandwidth

2.1. Test Result

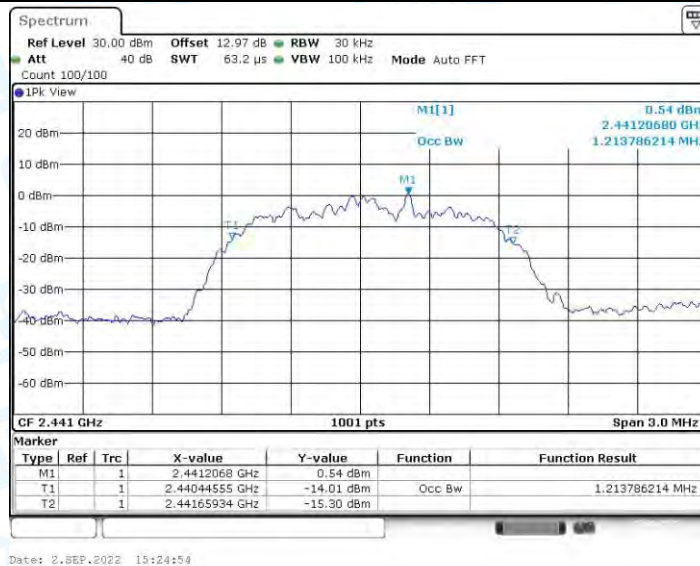
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.956	2401.5624	2402.5185	---	---
		2441	0.923	2440.5864	2441.5095	---	---
		2480	0.914	2479.5984	2480.5125	---	---
2DH5	Ant1	2402	1.214	2401.4396	2402.6533	---	---
		2441	1.214	2440.4456	2441.6593	---	---
		2480	1.217	2479.4486	2480.6653	---	---
3DH5	Ant1	2402	1.208	2401.4366	2402.6444	---	---
		2441	1.214	2440.4396	2441.6533	---	---
		2480	1.208	2479.4486	2480.6563	---	---

2.2. Test Graphs

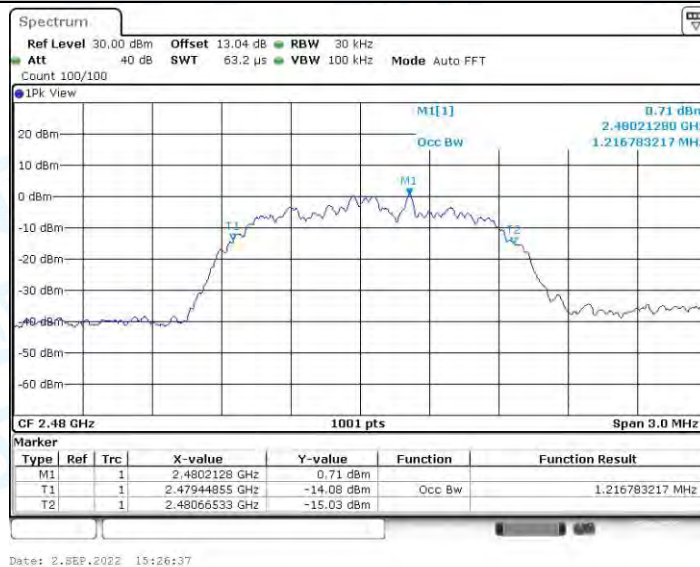




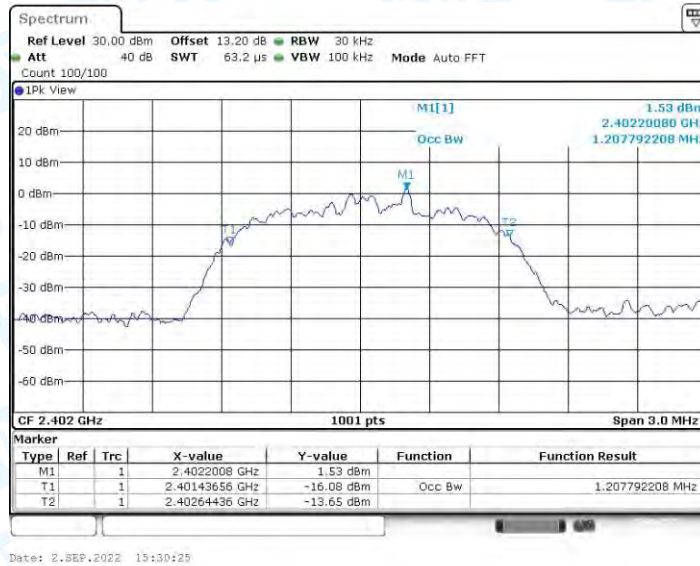
2DH5_Ant1_2441



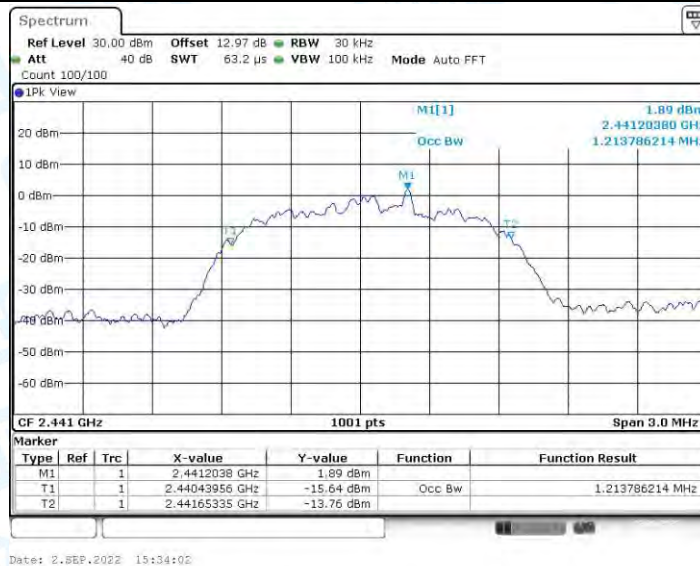
2DH5_Ant1_2480



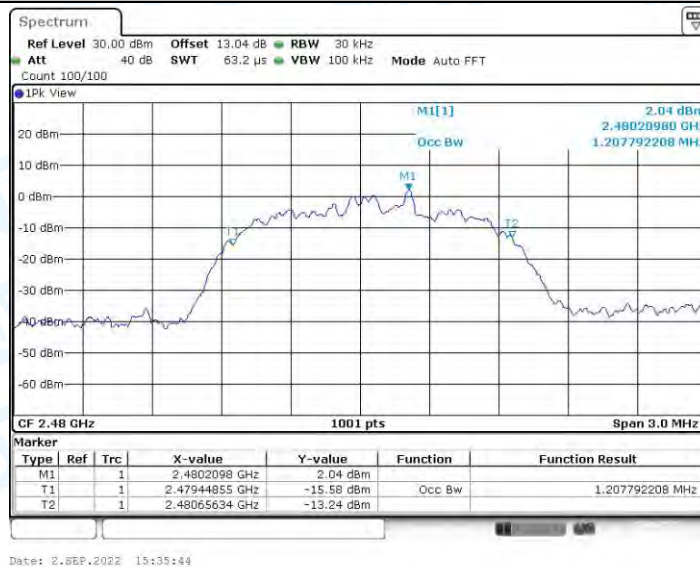
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



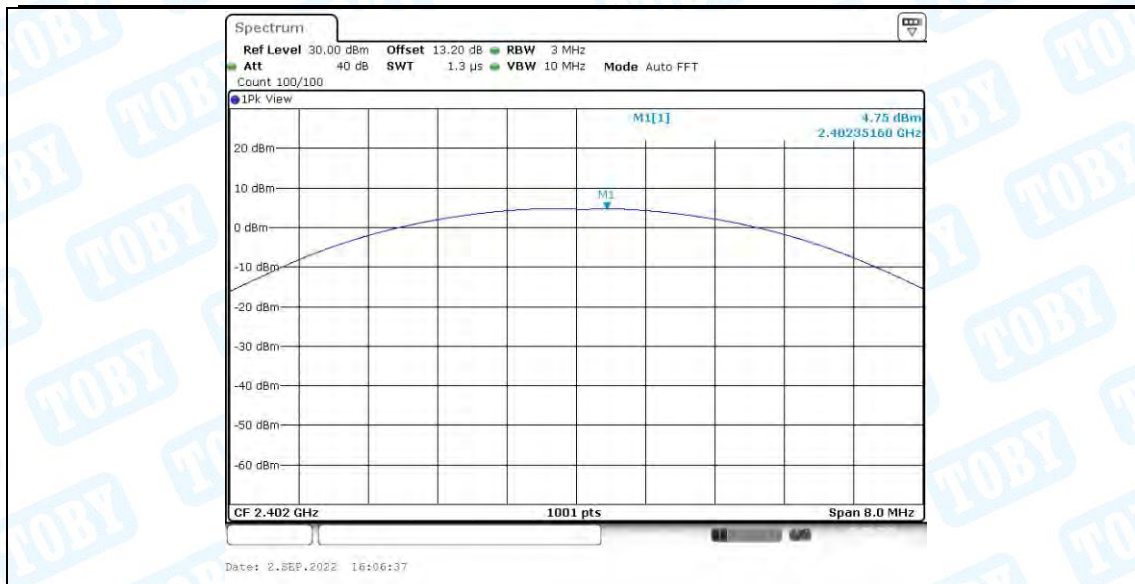
3. Maximum conducted output power

3.1. Test Result

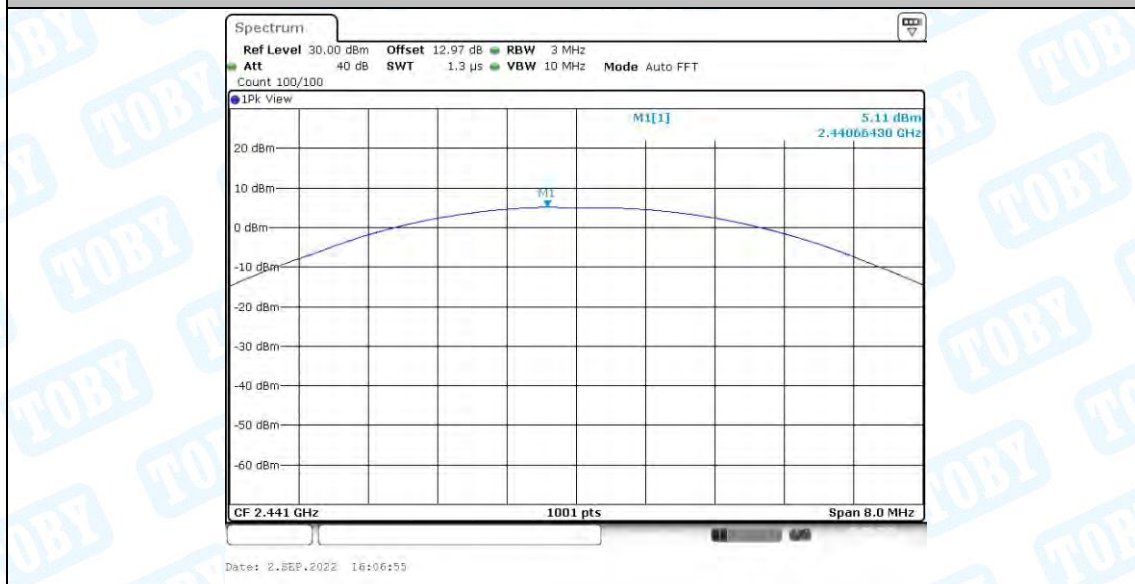
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	5.79	≤20.97	PASS
		2441	6.31	≤20.97	PASS
		2480	6.75	≤20.97	PASS
2DH5	Ant1	2402	4.75	≤20.97	PASS
		2441	5.11	≤20.97	PASS
		2480	5.42	≤20.97	PASS
3DH5	Ant1	2402	5.27	≤20.97	PASS
		2441	5.4	≤20.97	PASS
		2480	5.58	≤20.97	PASS

3.2.Test Graphs

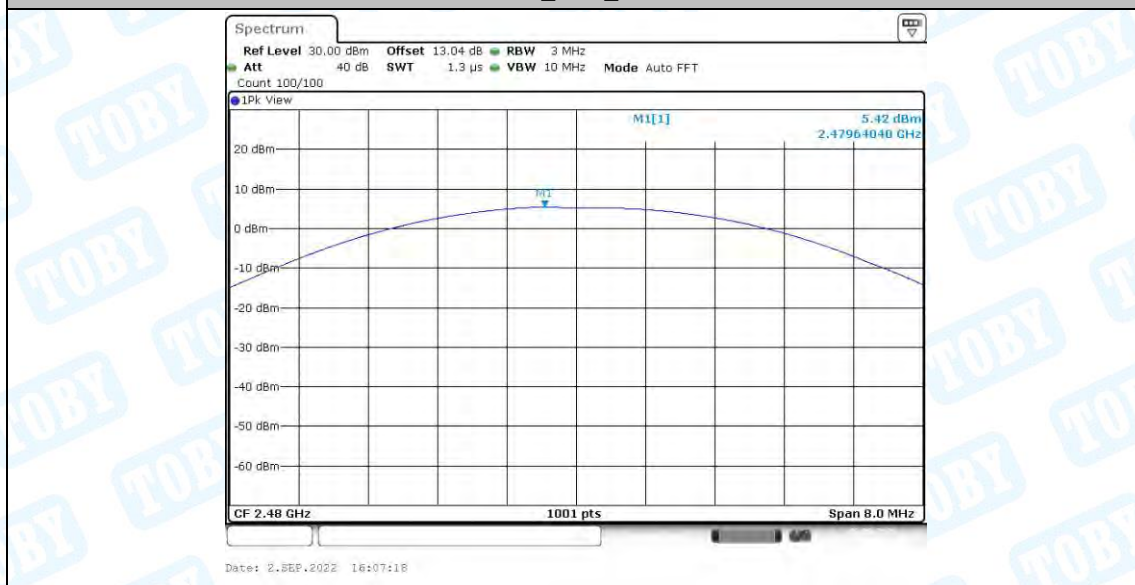




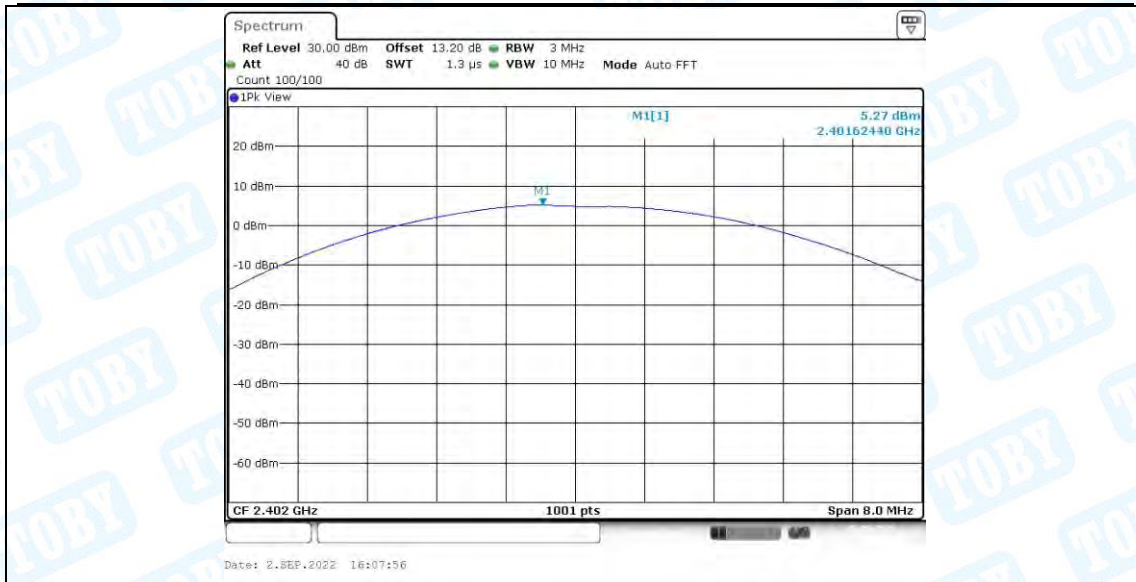
2DH5_Ant1_2441



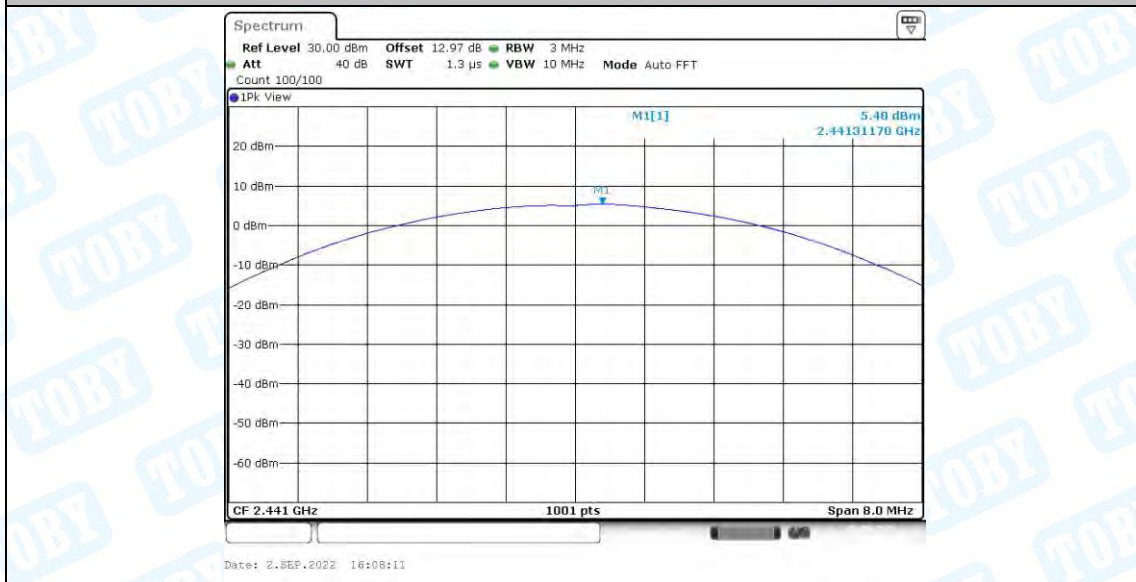
2DH5_Ant1_2480



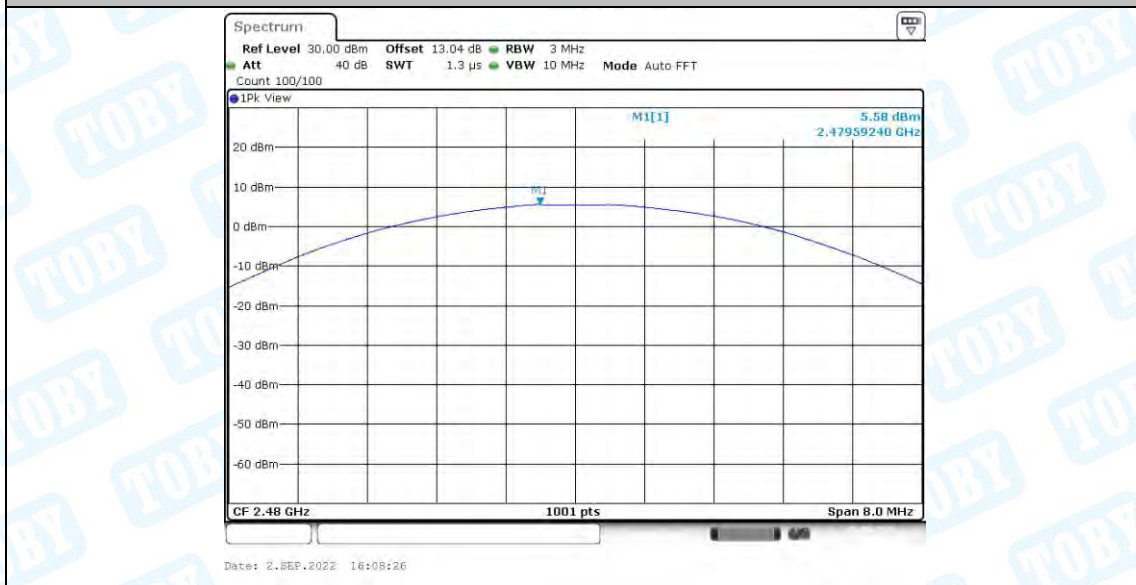
3DH5_Ant1_2402



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	≥ 0.707	PASS
2DH5	Ant1	Hop	0.997	≥ 0.913	PASS
3DH5	Ant1	Hop	0.936	≥ 0.893	PASS

4.2.Test Graphs

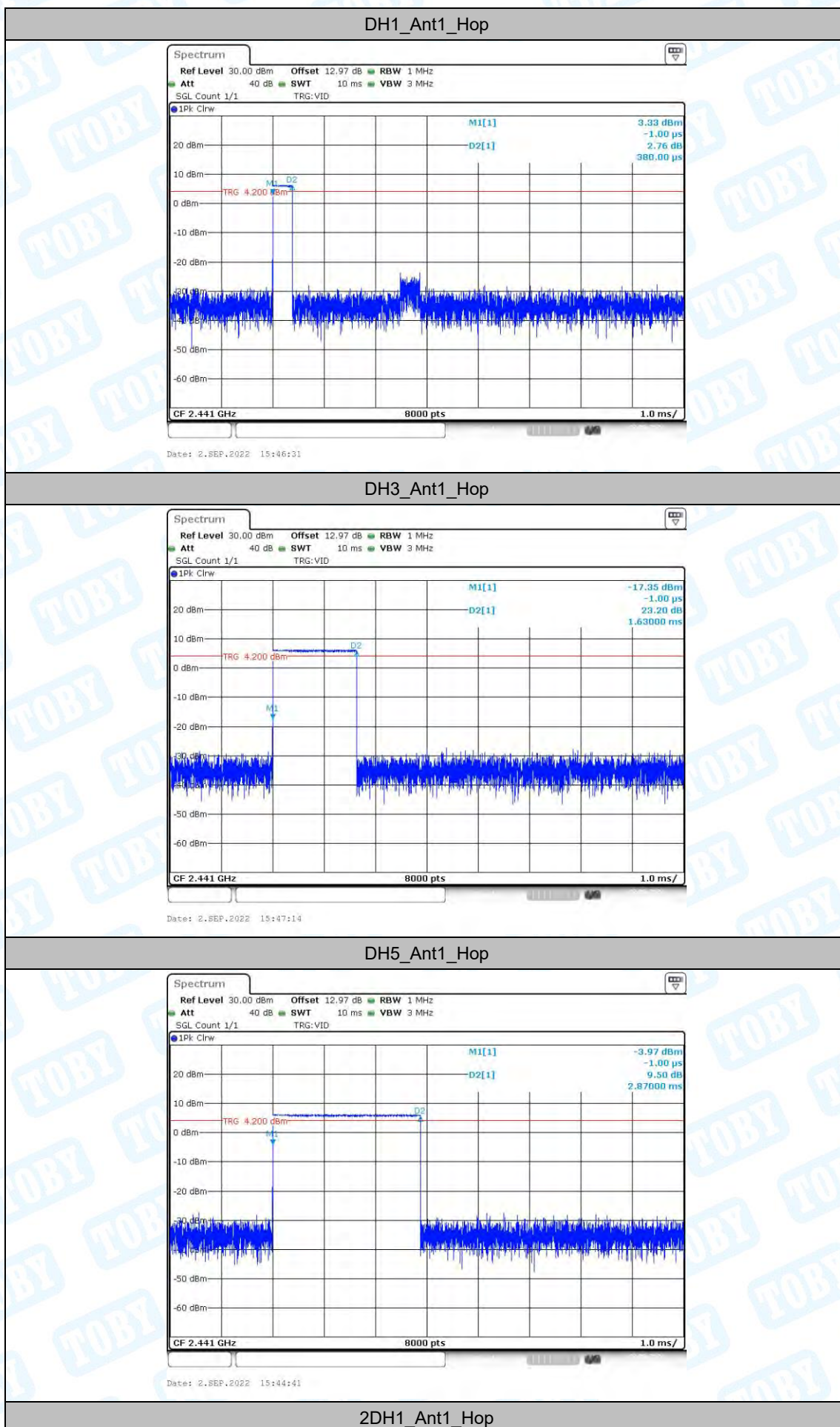


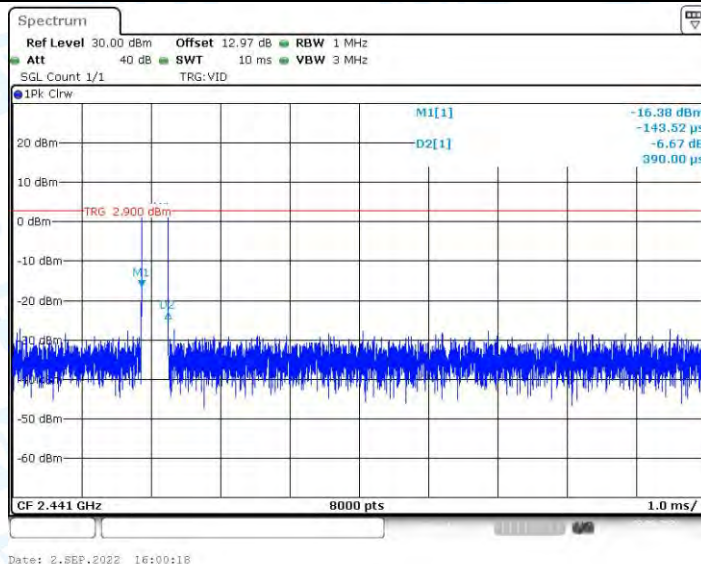
5. Time of occupancy

5.1. Test Result

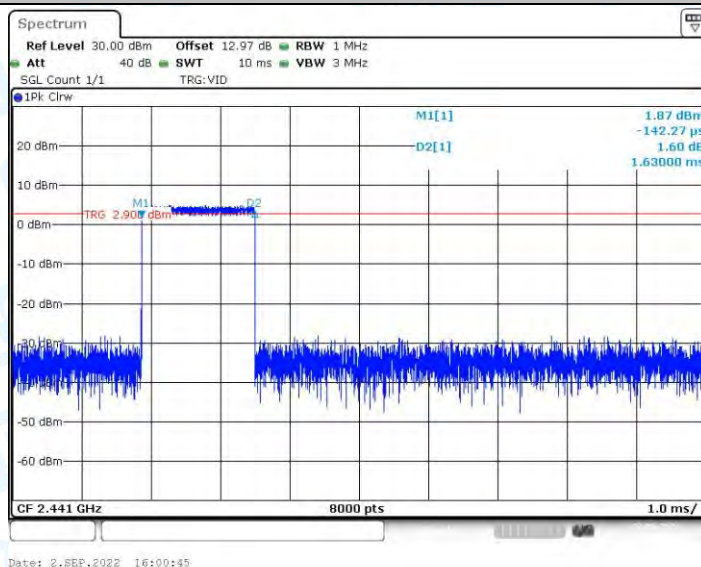
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.38	320	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.63	160	0.261	≤0.4	PASS
DH5	Ant1	Hop	2.87	106.67	0.306	≤0.4	PASS
2DH1	Ant1	Hop	0.39	320	0.125	≤0.4	PASS
2DH3	Ant1	Hop	1.63	160	0.261	≤0.4	PASS
2DH5	Ant1	Hop	2.87	106.67	0.306	≤0.4	PASS
3DH1	Ant1	Hop	0.39	320	0.125	≤0.4	PASS
3DH3	Ant1	Hop	1.63	160	0.261	≤0.4	PASS
3DH5	Ant1	Hop	2.87	106.67	0.306	≤0.4	PASS

5.2. Test Graphs

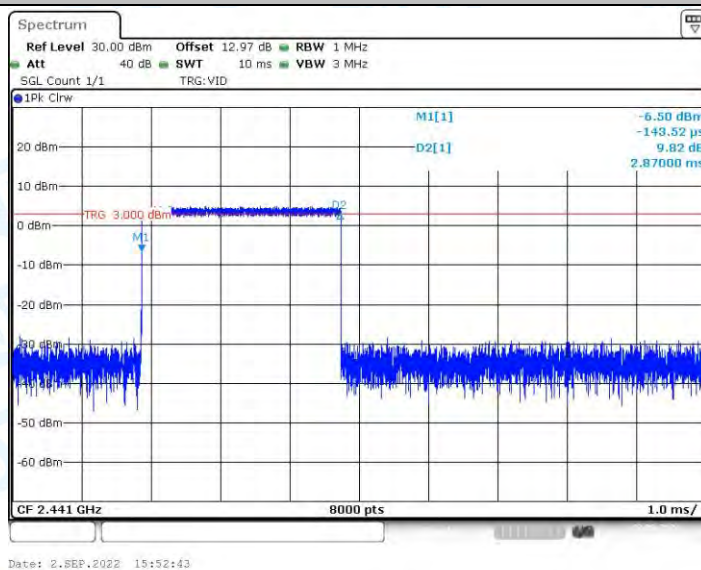




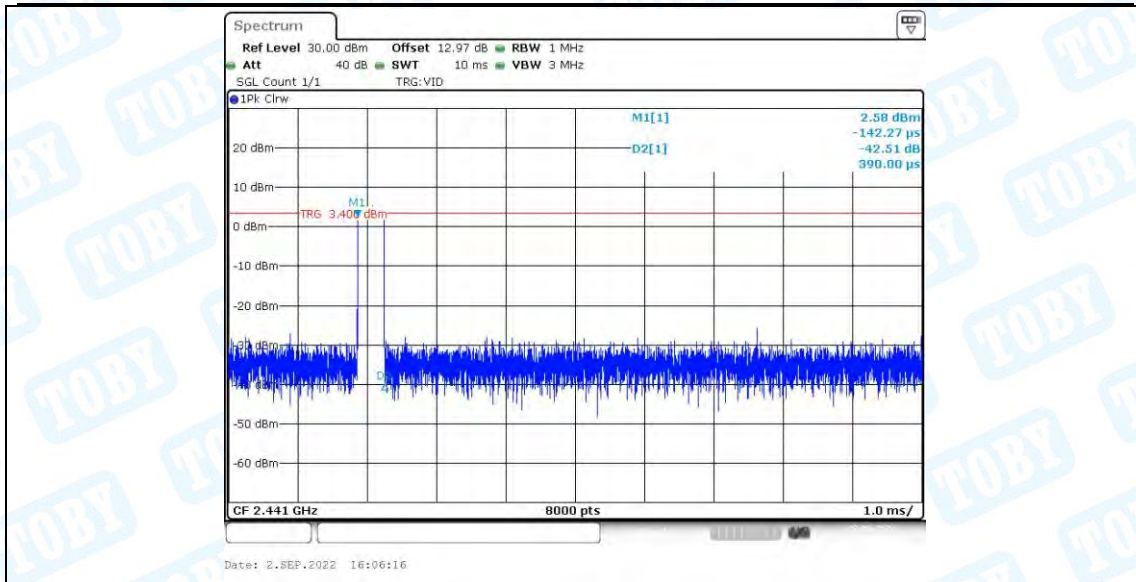
2DH3_Ant1_Hop



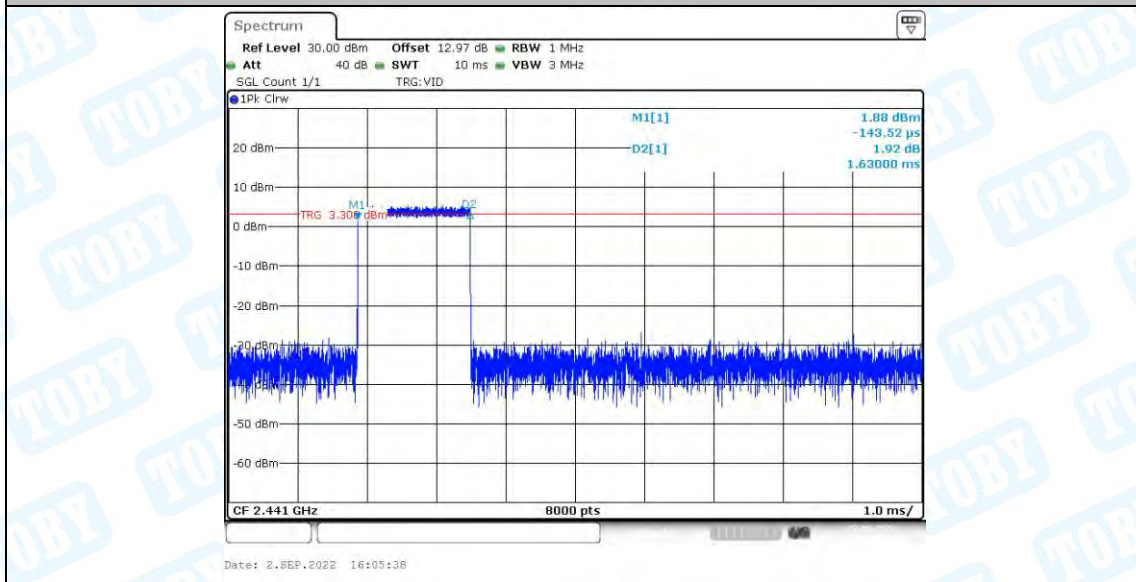
2DH5_Ant1_Hop



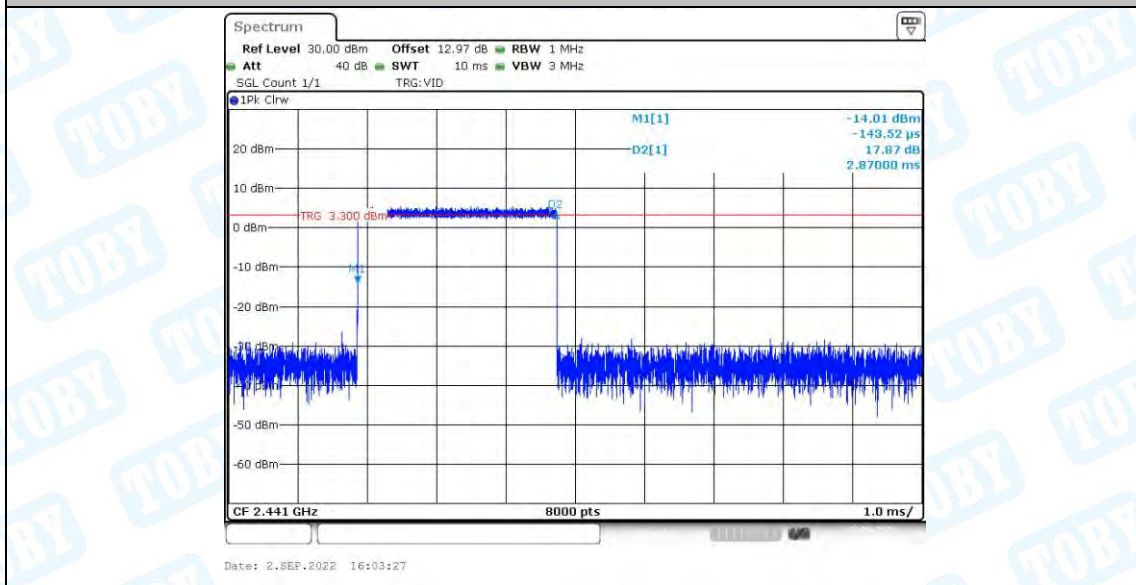
3DH1_Ant1_Hop



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

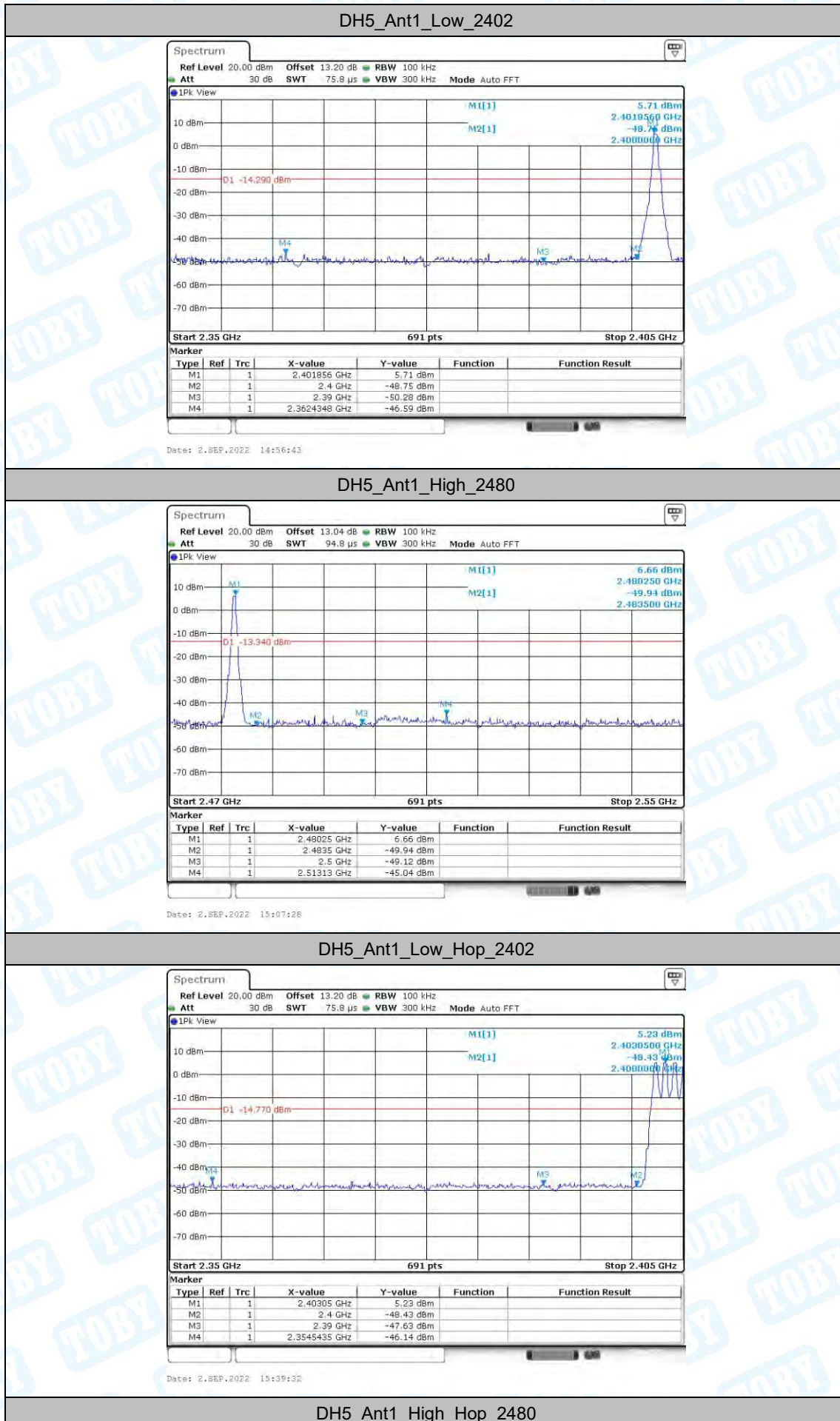


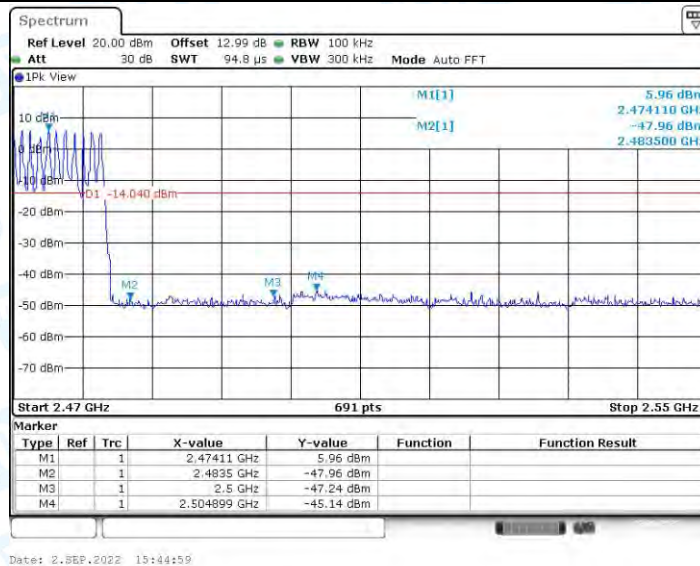
7. Band edge measurements

7.1. Test Result

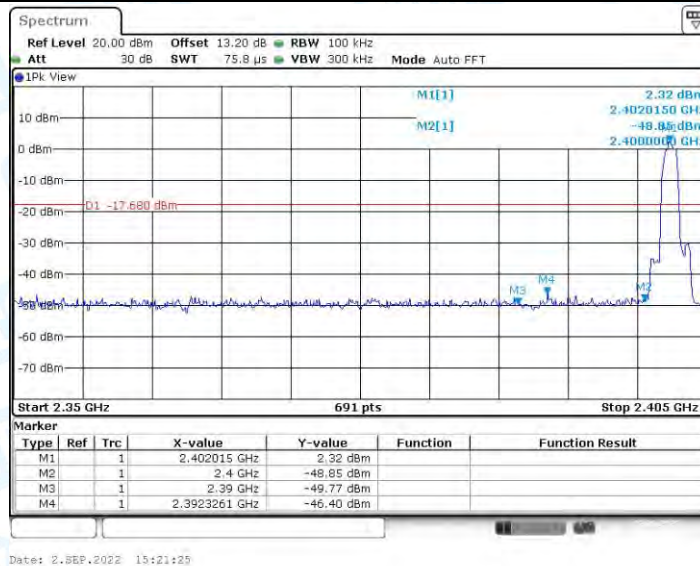
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	5.71	-46.59	≤ -14.29	PASS
		High	2480	6.66	-45.04	≤ -13.34	PASS
		Low	Hop_2402	5.23	-46.14	≤ -14.77	PASS
		High	Hop_2480	5.96	-45.14	≤ -14.04	PASS
2DH5	Ant1	Low	2402	2.32	-46.4	≤ -17.68	PASS
		High	2480	3.09	-44.95	≤ -16.91	PASS
		Low	Hop_2402	1.80	-46.97	≤ -18.2	PASS
		High	Hop_2480	3.06	-44.62	≤ -16.94	PASS
3DH5	Ant1	Low	2402	2.67	-46.31	≤ -17.33	PASS
		High	2480	3.41	-45.17	≤ -16.59	PASS
		Low	Hop_2402	2.00	-46.82	≤ -18	PASS
		High	Hop_2480	1.64	-45.53	≤ -18.36	PASS

7.2. Test Graphs

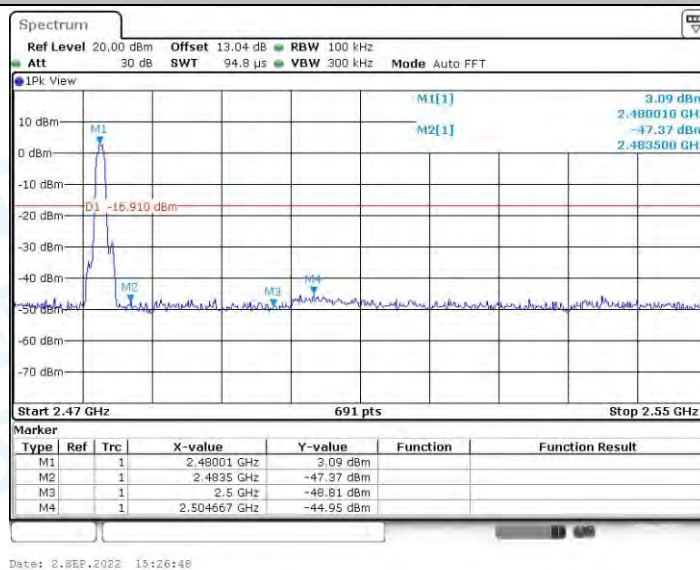




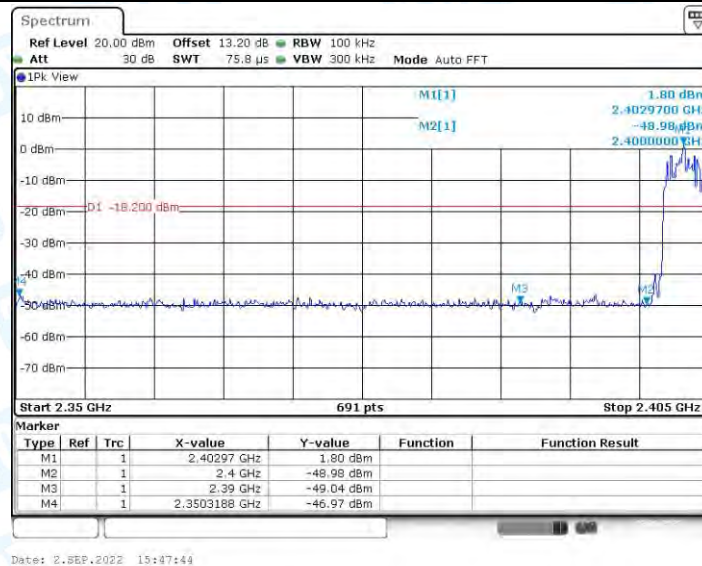
2DH5_Ant1_Low_2402



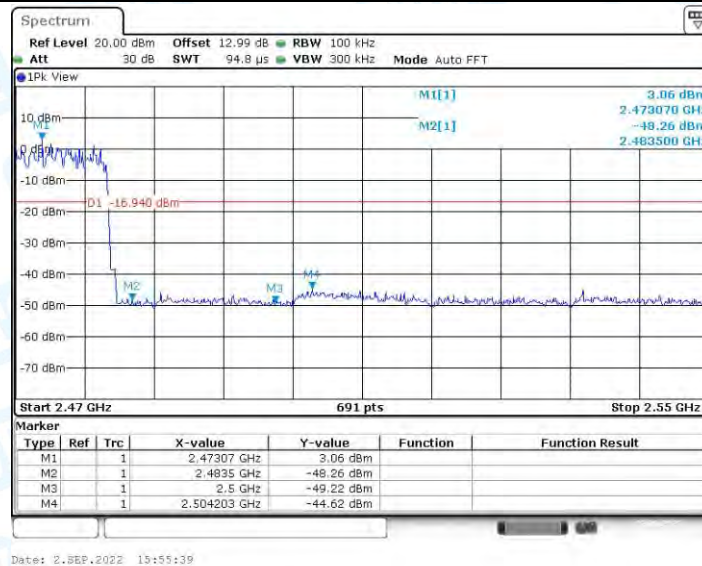
2DH5_Ant1_High_2480



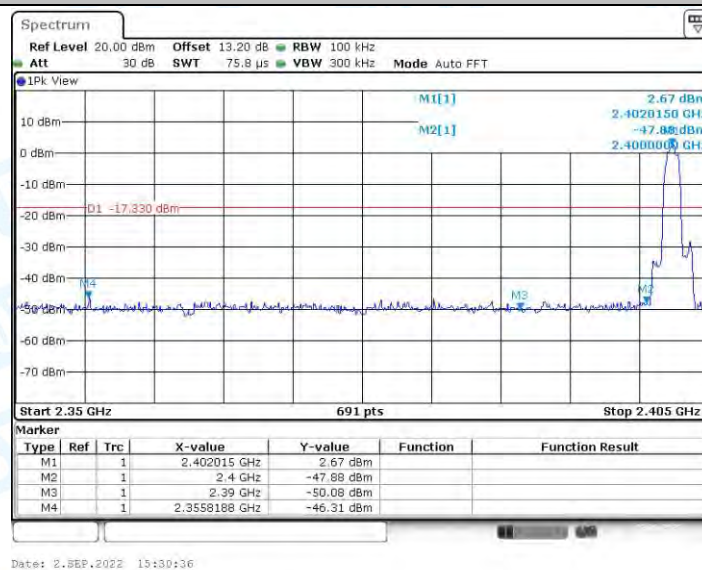
2DH5_Ant1_Low_Hop_2402



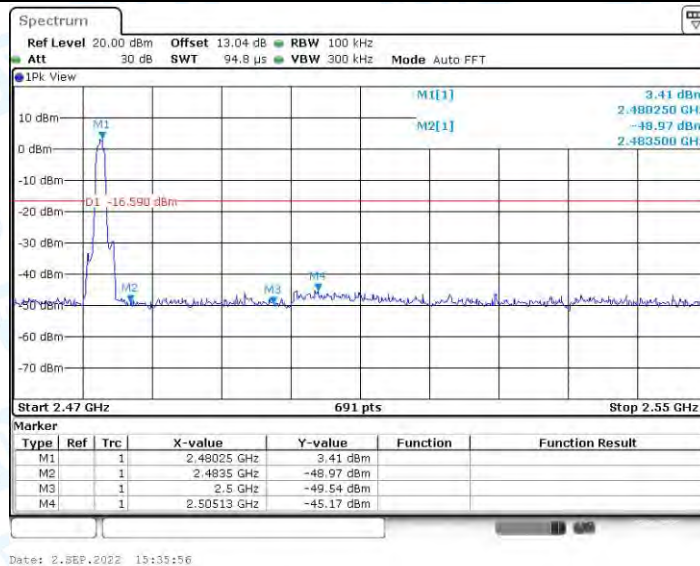
2DH5_Ant1_High_Hop_2480



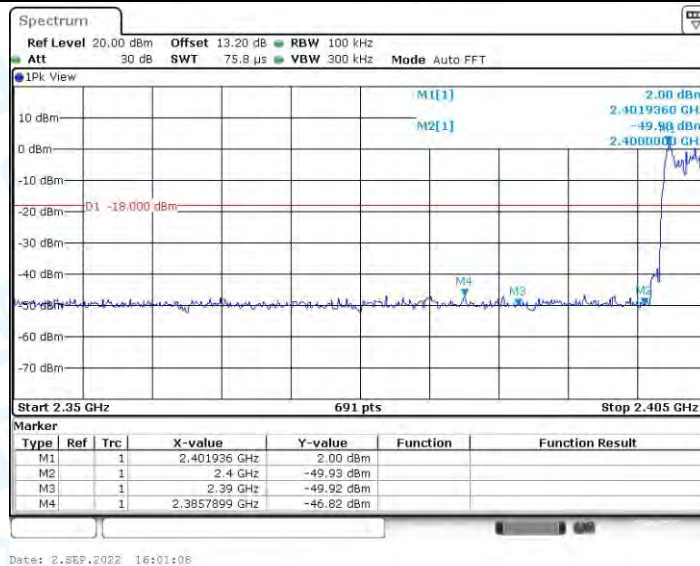
3DH5_Ant1_Low_2402



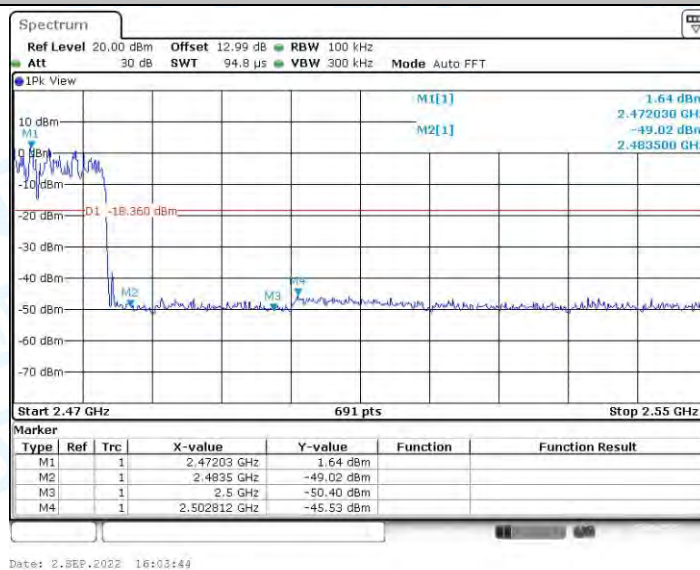
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

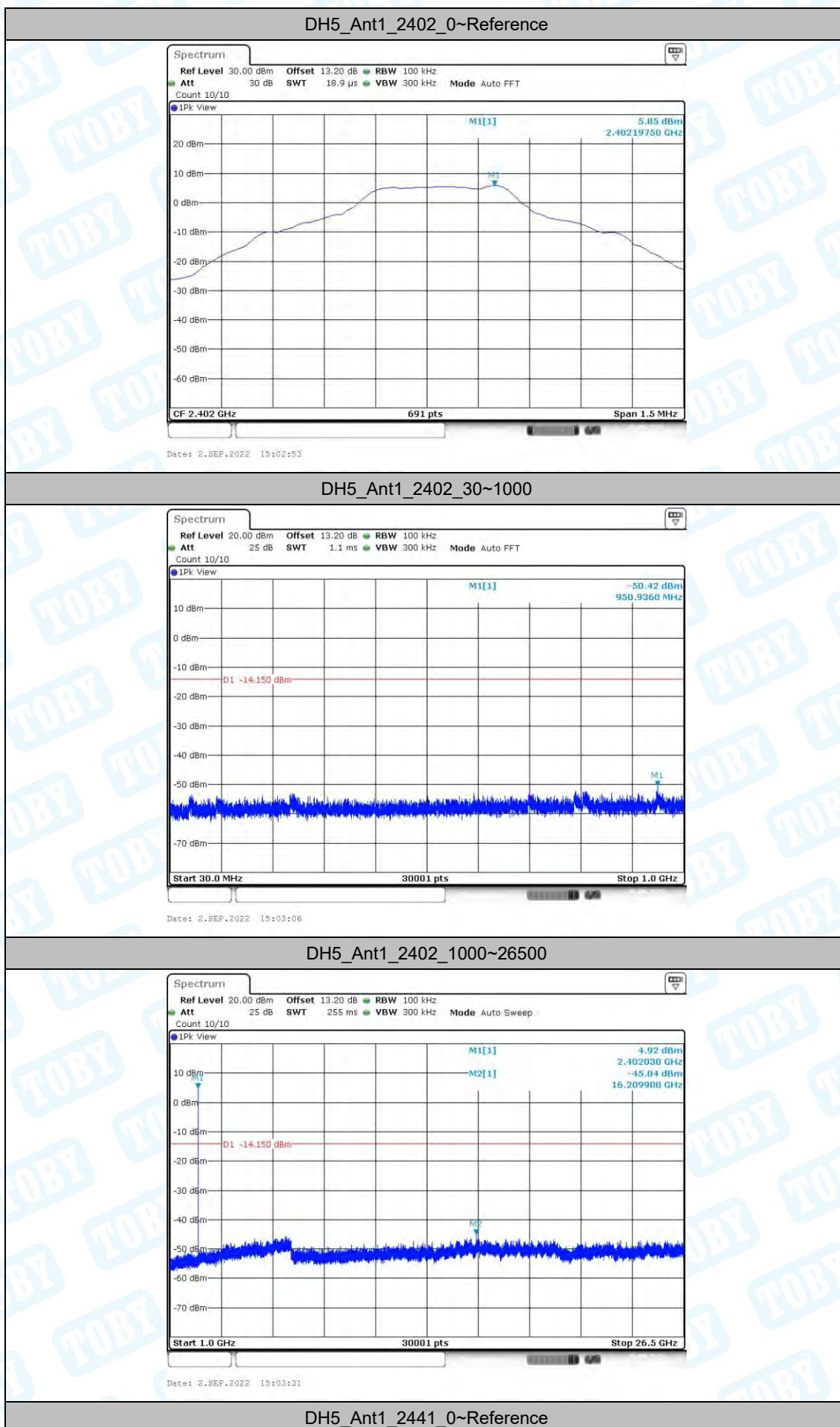


8. Conducted Spurious Emission

8.1. Test Result

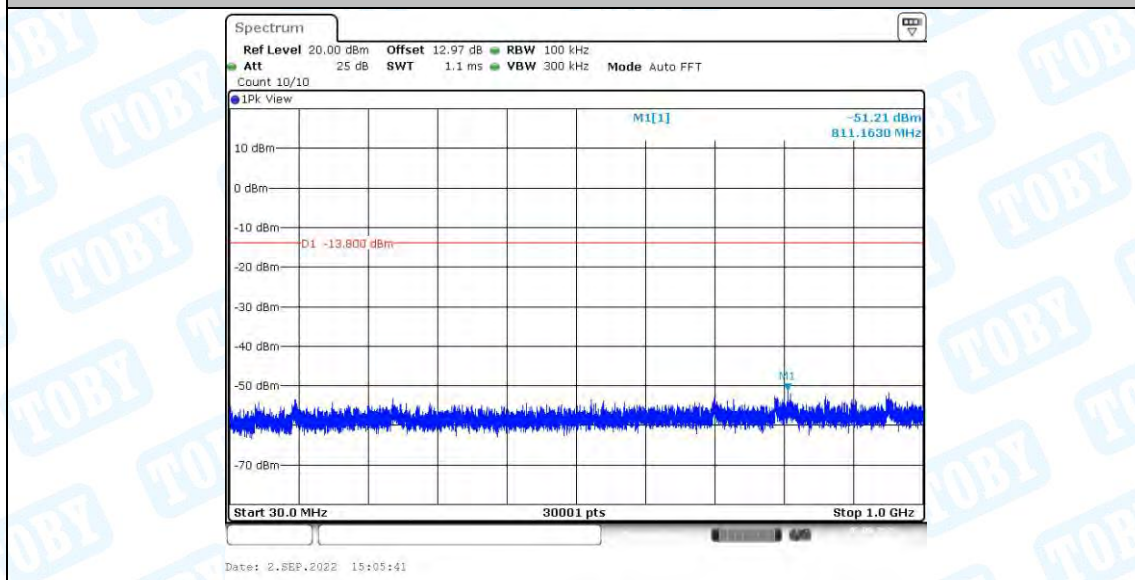
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	5.85	5.85	---	PASS
			30~1000	5.85	-50.42	≤-14.15	PASS
			1000~26500	5.85	-45.04	≤-14.15	PASS
		2441	Reference	6.20	6.20	---	PASS
			30~1000	6.20	-51.21	≤-13.8	PASS
			1000~26500	6.20	-45.57	≤-13.8	PASS
		2480	Reference	6.60	6.60	---	PASS
			30~1000	6.60	-52.18	≤-13.4	PASS
			1000~26500	6.60	-44.68	≤-13.4	PASS
2DH5	Ant1	2402	Reference	2.56	2.56	---	PASS
			30~1000	2.56	-51.59	≤-17.44	PASS
			1000~26500	2.56	-45.82	≤-17.44	PASS
		2441	Reference	3.11	3.11	---	PASS
			30~1000	3.11	-51.67	≤-16.89	PASS
			1000~26500	3.11	-45.82	≤-16.89	PASS
		2480	Reference	3.20	3.20	---	PASS
			30~1000	3.20	-51.03	≤-16.8	PASS
			1000~26500	3.20	-45.74	≤-16.8	PASS
3DH5	Ant1	2402	Reference	2.87	2.87	---	PASS
			30~1000	2.87	-51.09	≤-17.13	PASS
			1000~26500	2.87	-45.43	≤-17.13	PASS
		2441	Reference	3.23	3.23	---	PASS
			30~1000	3.23	-51.24	≤-16.77	PASS
			1000~26500	3.23	-45.61	≤-16.77	PASS
		2480	Reference	3.38	3.38	---	PASS
			30~1000	3.38	-52.04	≤-16.62	PASS
			1000~26500	3.38	-45.99	≤-16.62	PASS

8.2. Test Graphs

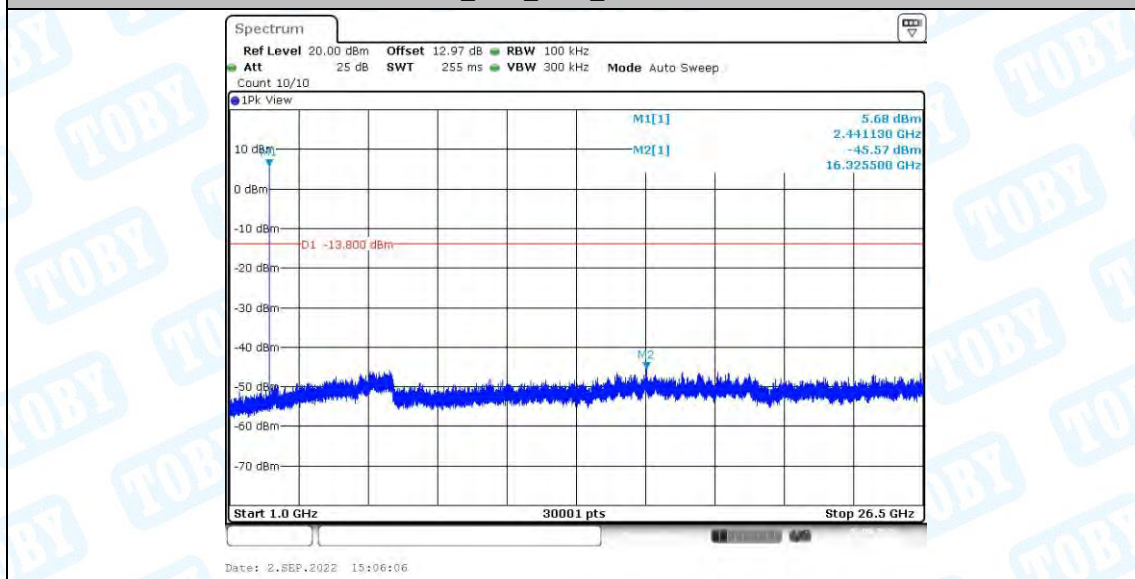




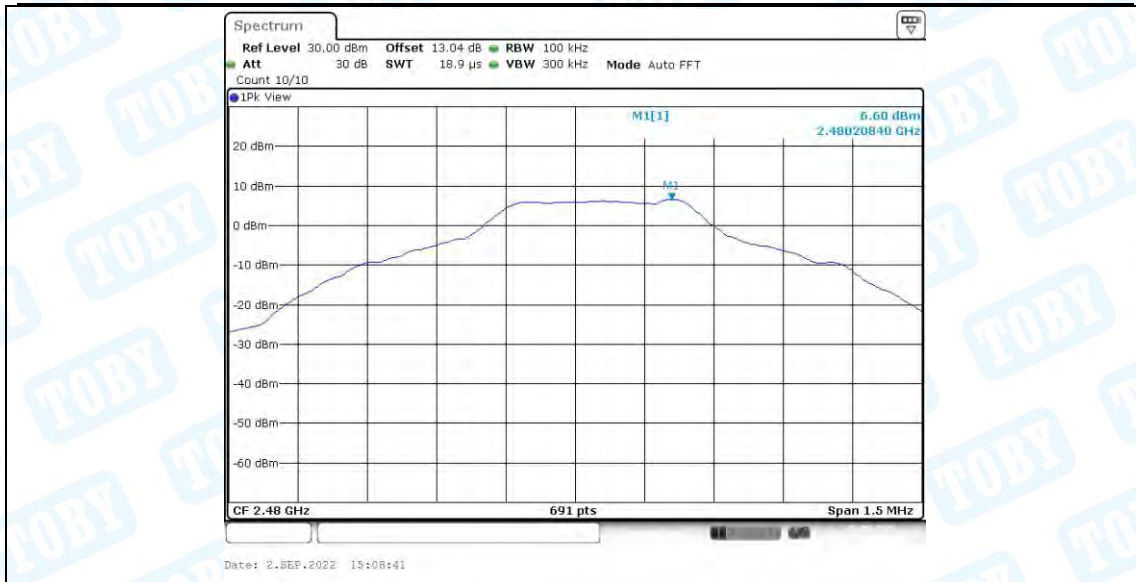
DH5_Ant1_2441_30~1000



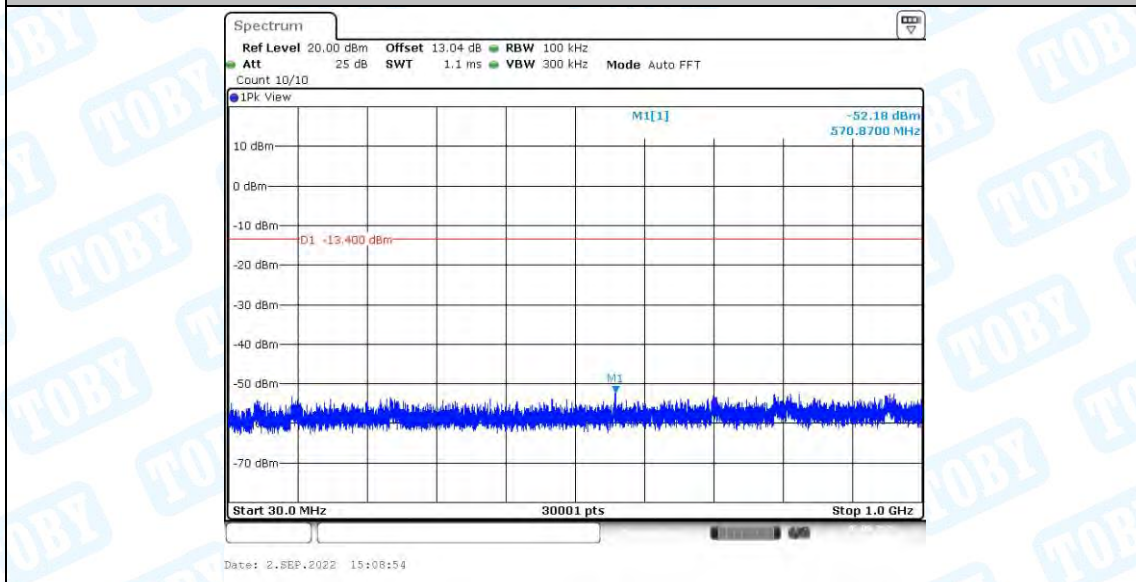
DH5_Ant1_2441_1000~26500



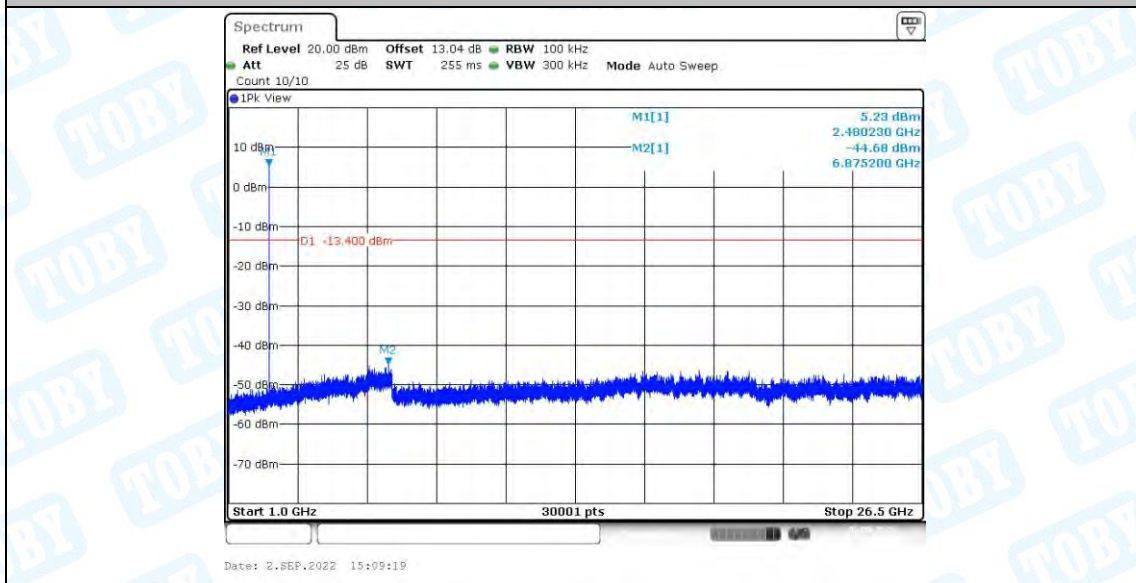
DH5_Ant1_2480_0~Reference



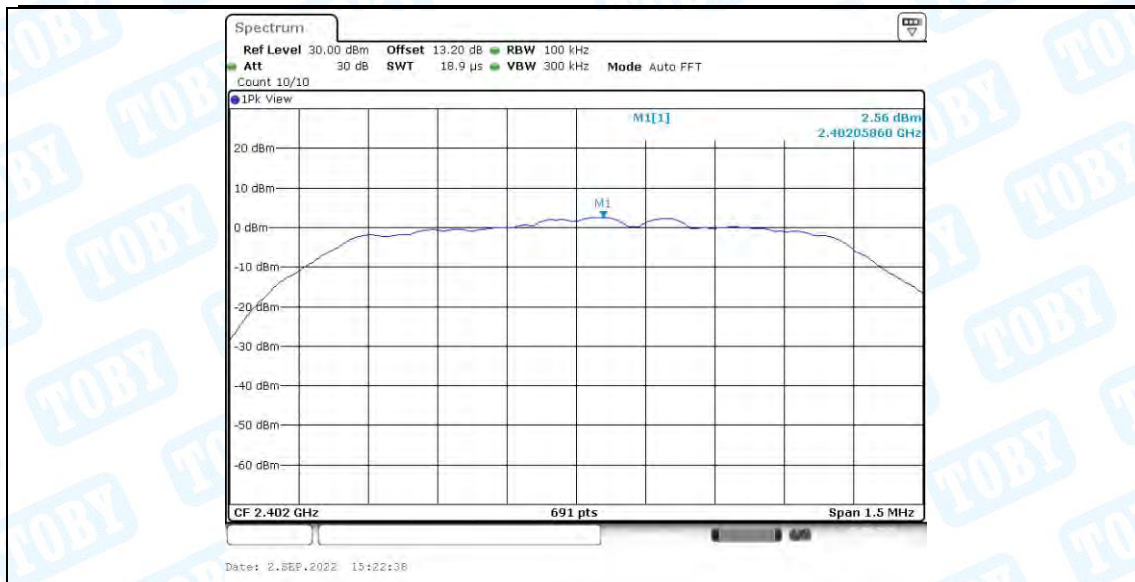
DH5_Ant1_2480_30~1000



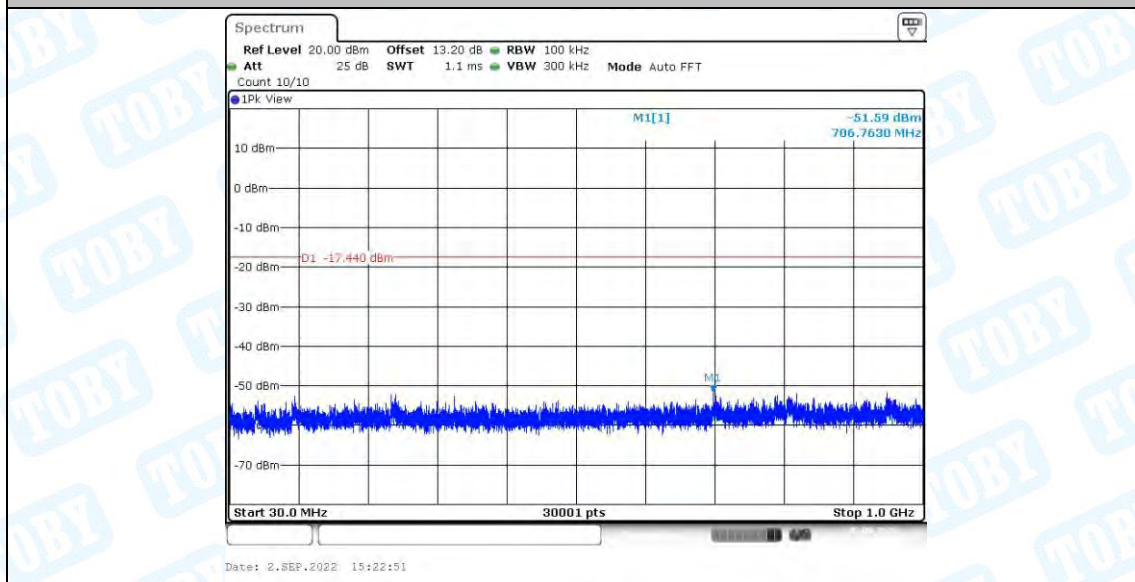
DH5_Ant1_2480_1000~26500



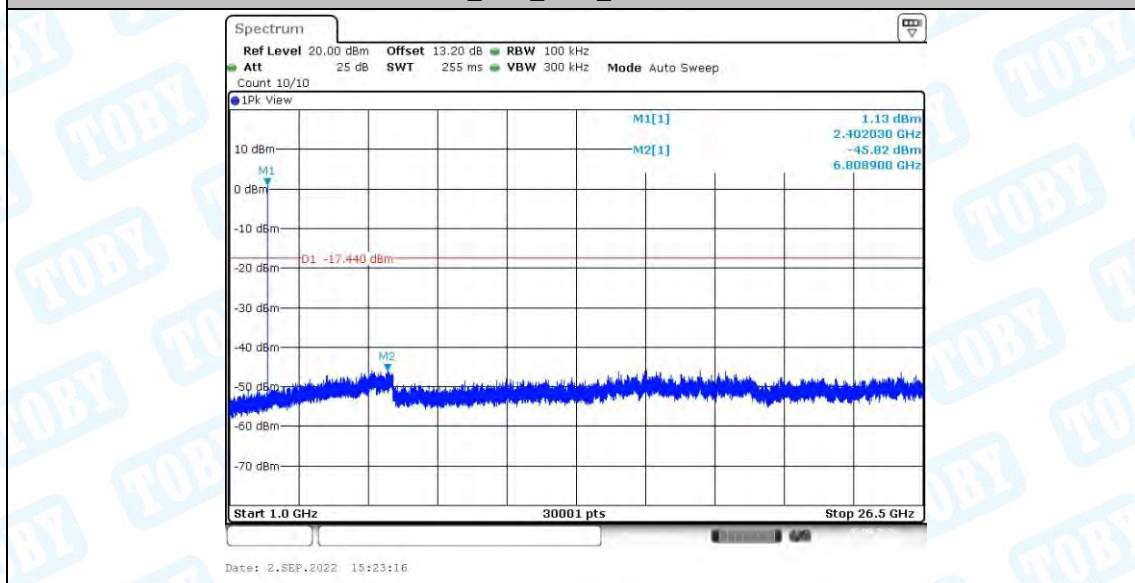
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



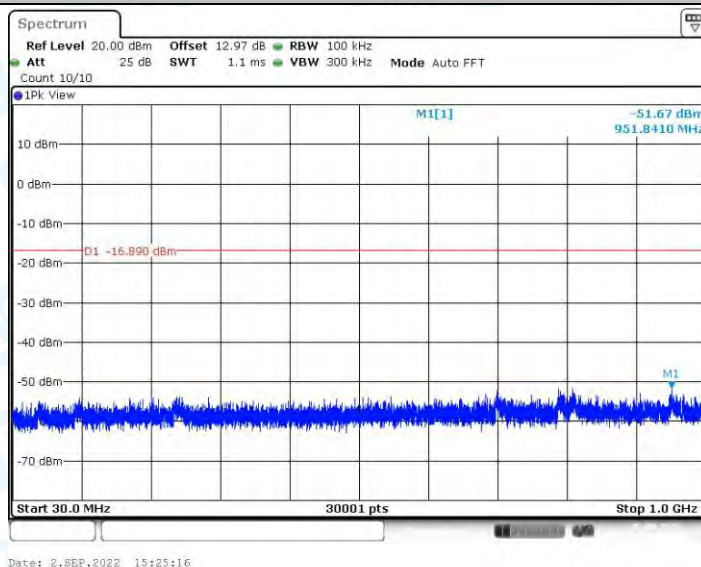
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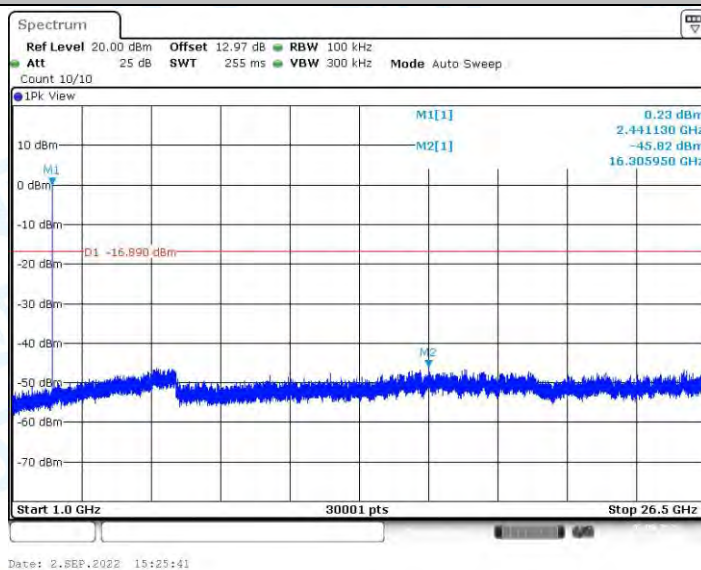
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



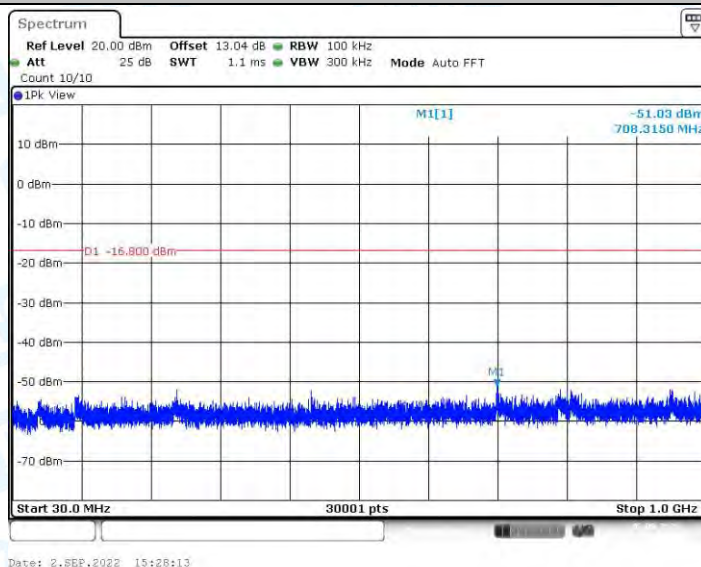
2DH5_Ant1_2441_1000~26500



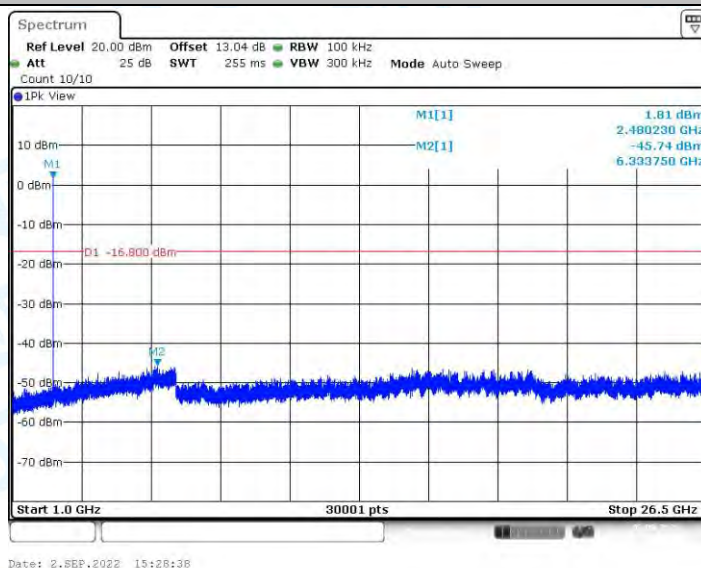
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



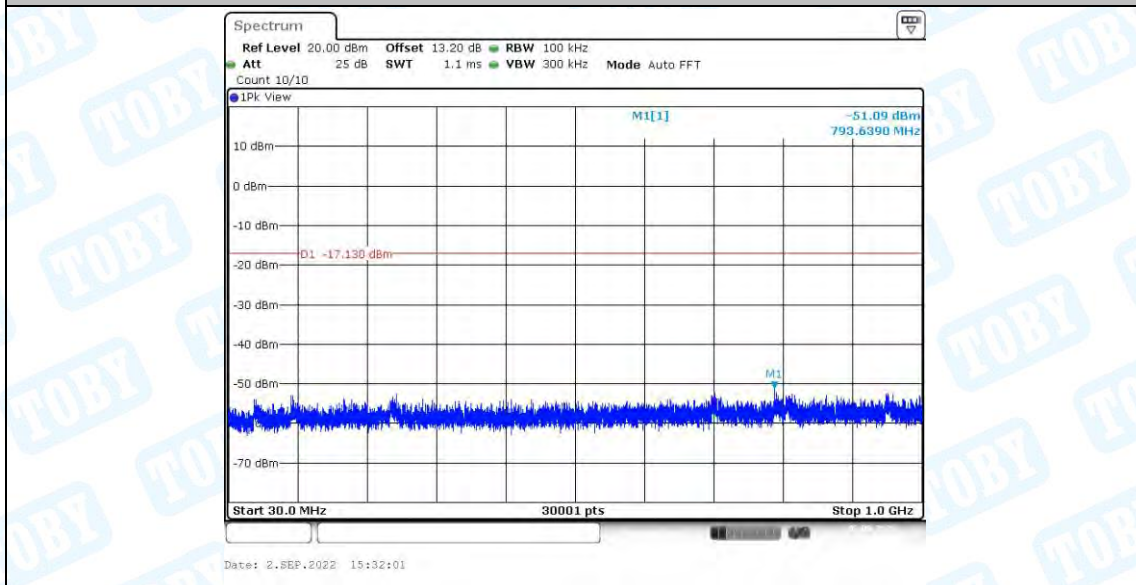
2DH5_Ant1_2480_1000~26500



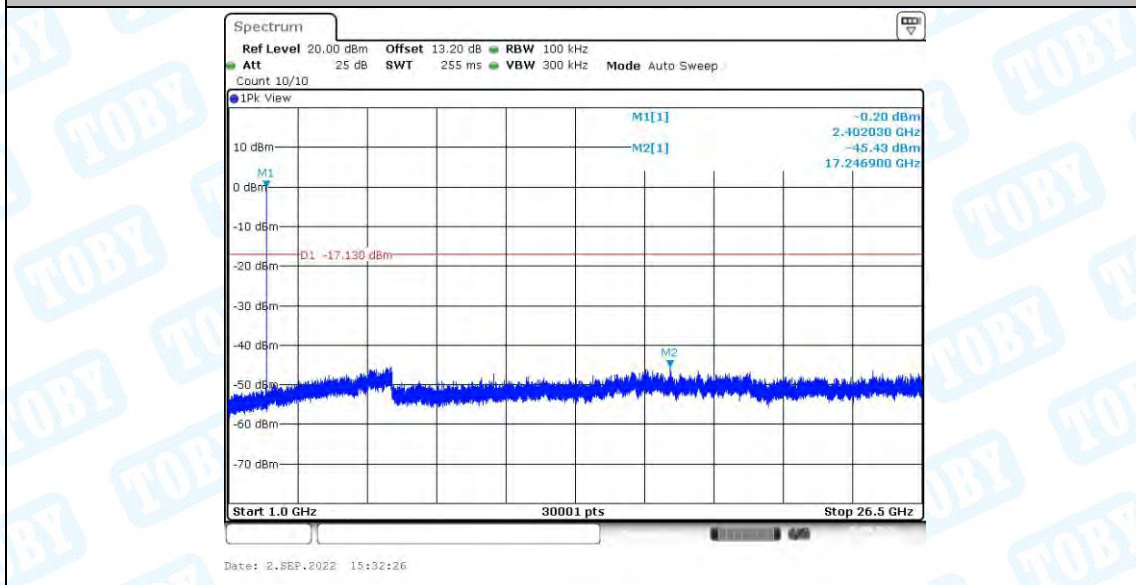
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



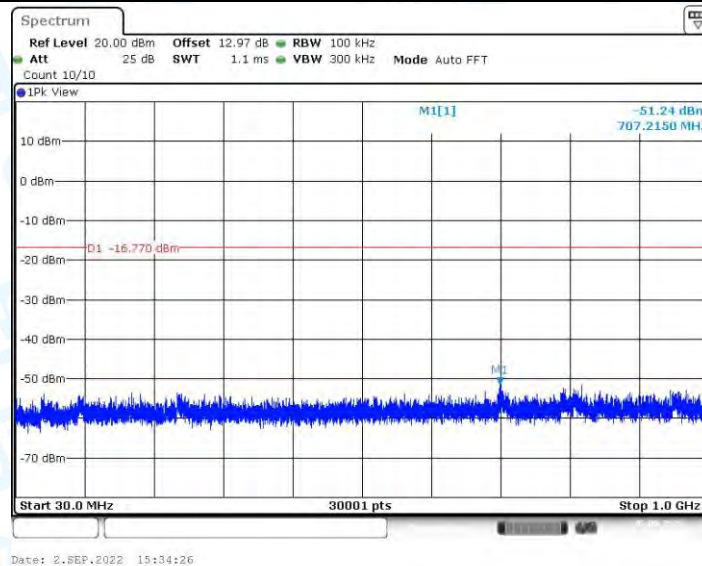
3DH5_Ant1_2402_1000~26500



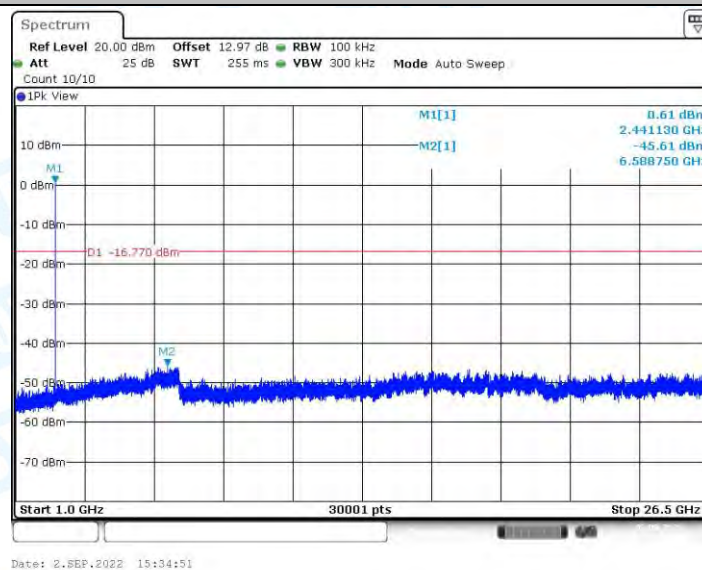
3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



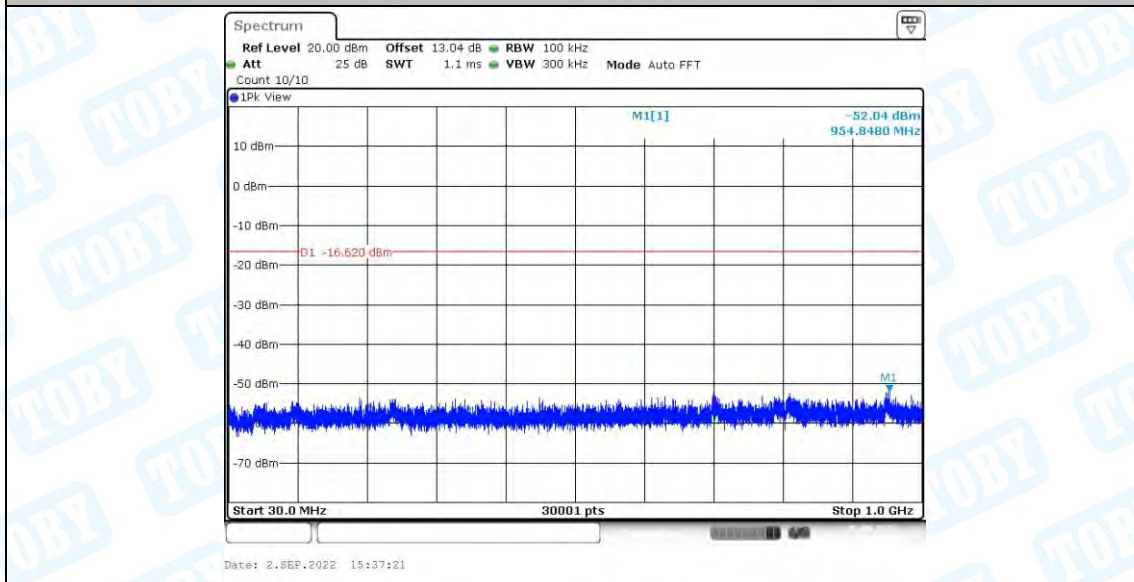
3DH5_Ant1_2441_1000~26500



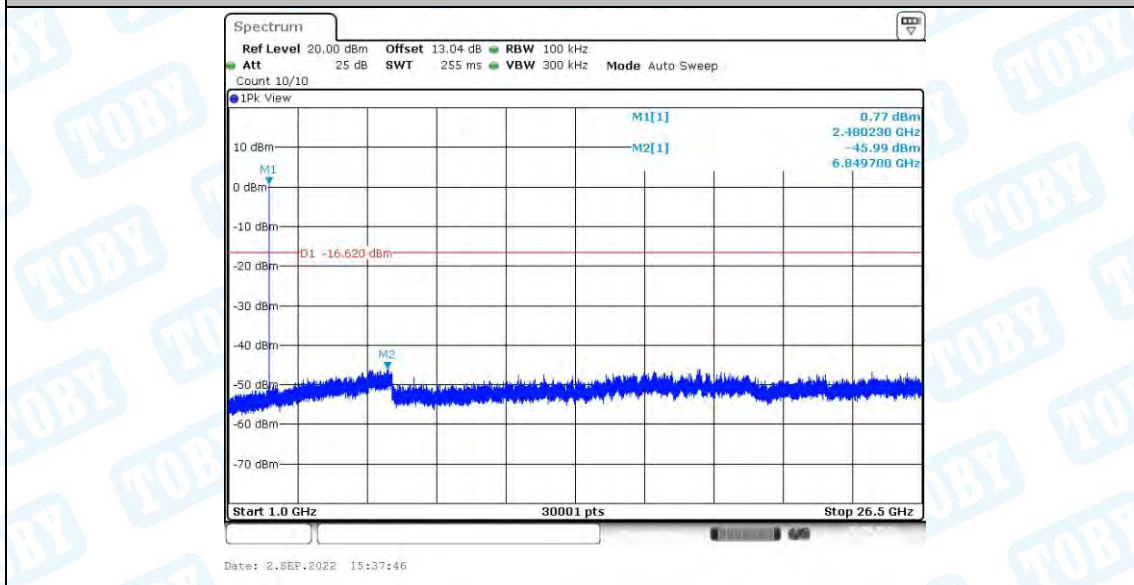
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500

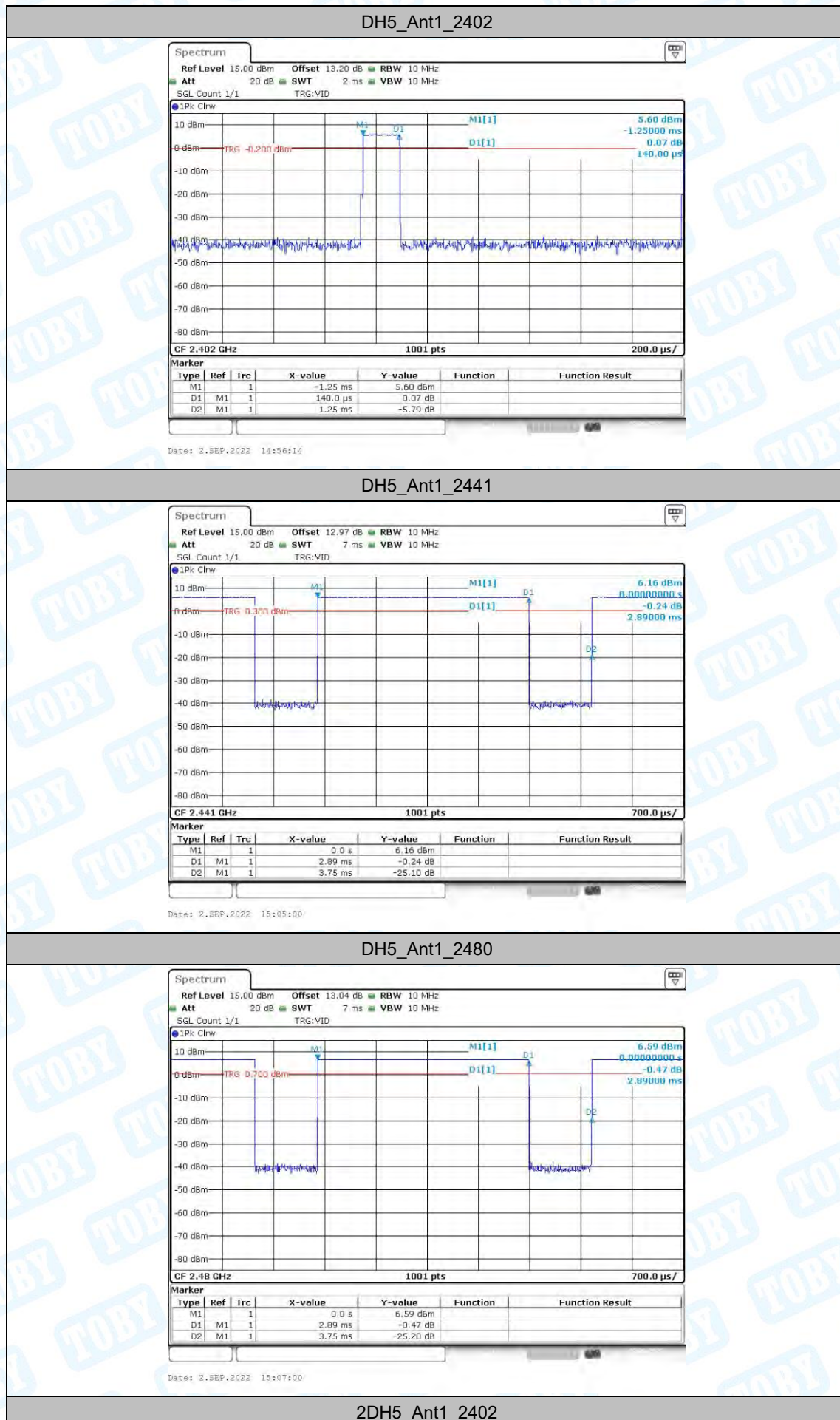


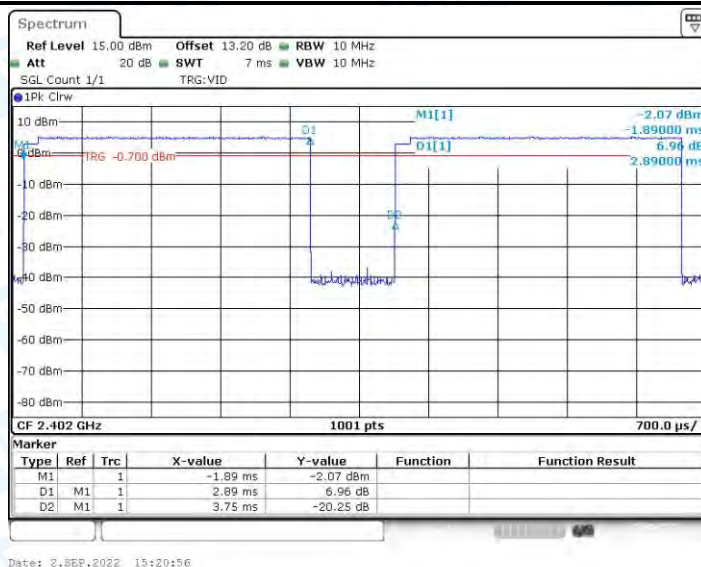
9. Duty Cycle

9.1. Test Result

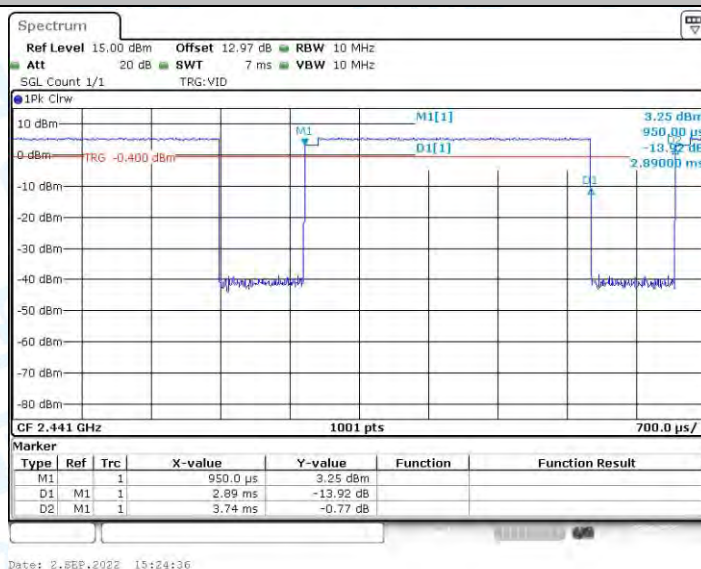
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
DH5	Ant1	2402	0.14	1.25	11.20	---	---
		2441	2.89	3.75	77.07	---	---
		2480	2.89	3.75	77.07	---	---
2DH5	Ant1	2402	2.89	3.75	77.07	---	---
		2441	2.89	3.74	77.27	---	---
		2480	2.89	3.75	77.07	---	---
3DH5	Ant1	2402	2.89	3.75	77.07	---	---
		2441	2.89	3.75	77.07	---	---
		2480	2.89	3.75	77.07	---	---

9.2. Test Graphs

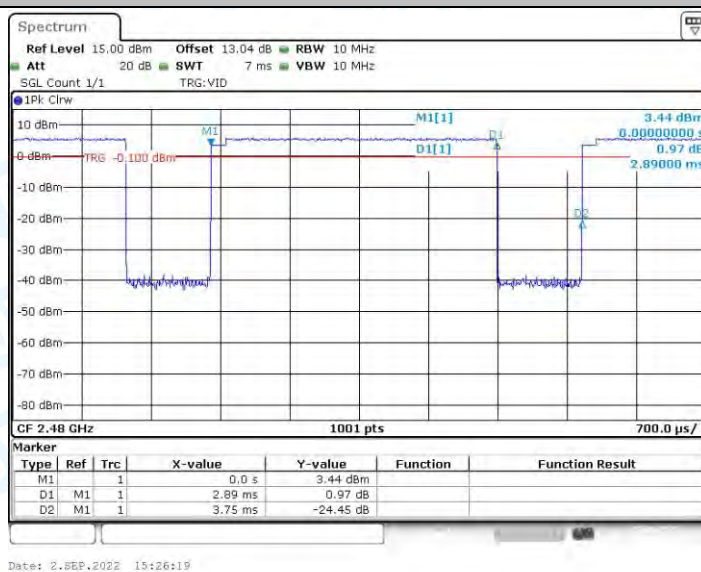




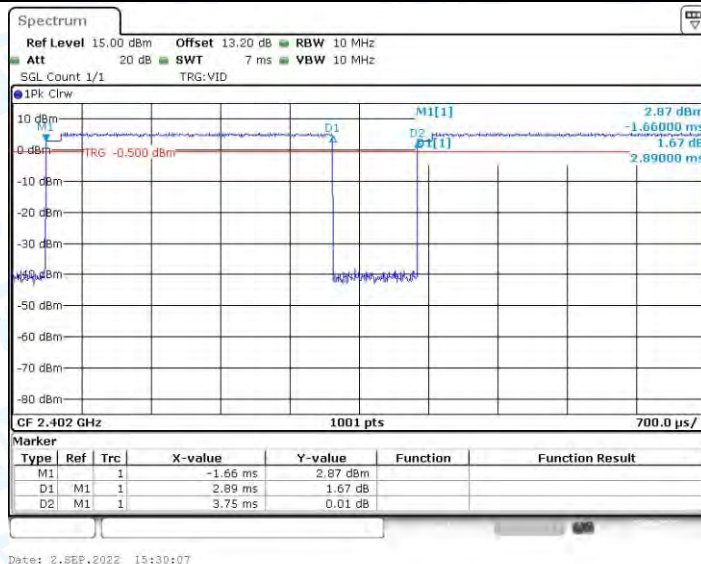
2DH5_Ant1_2441



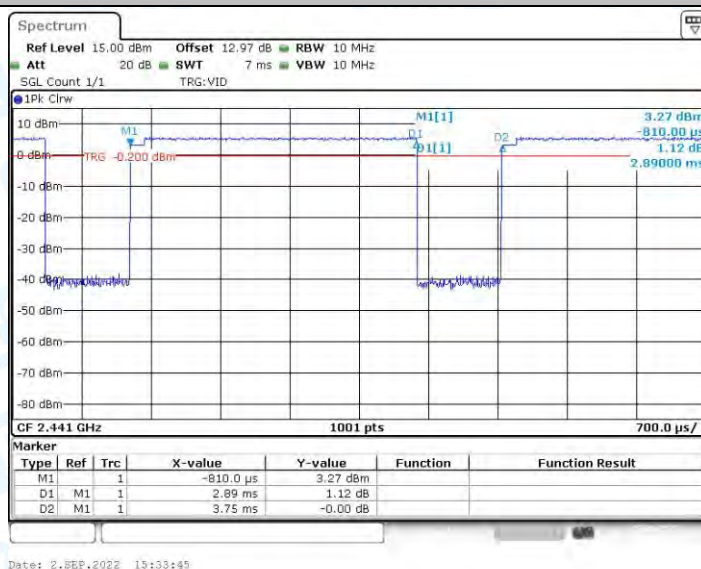
2DH5_Ant1_2480



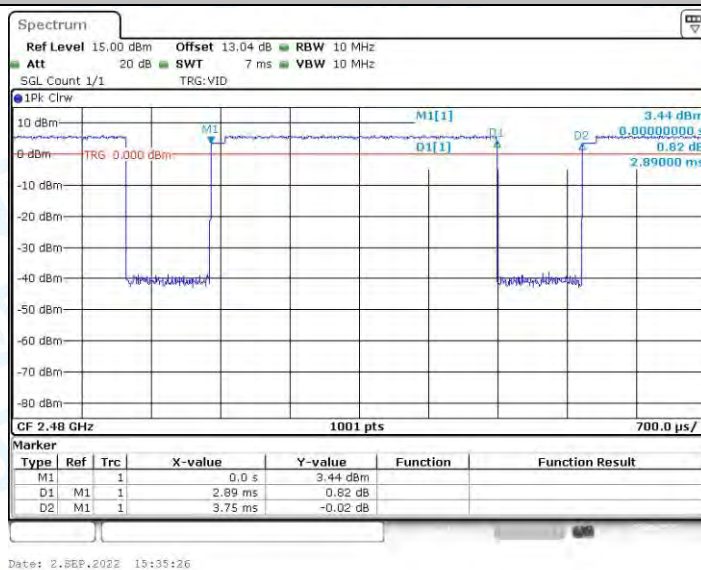
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



10. Emissions in Restricted Bands

10.1. Test Result

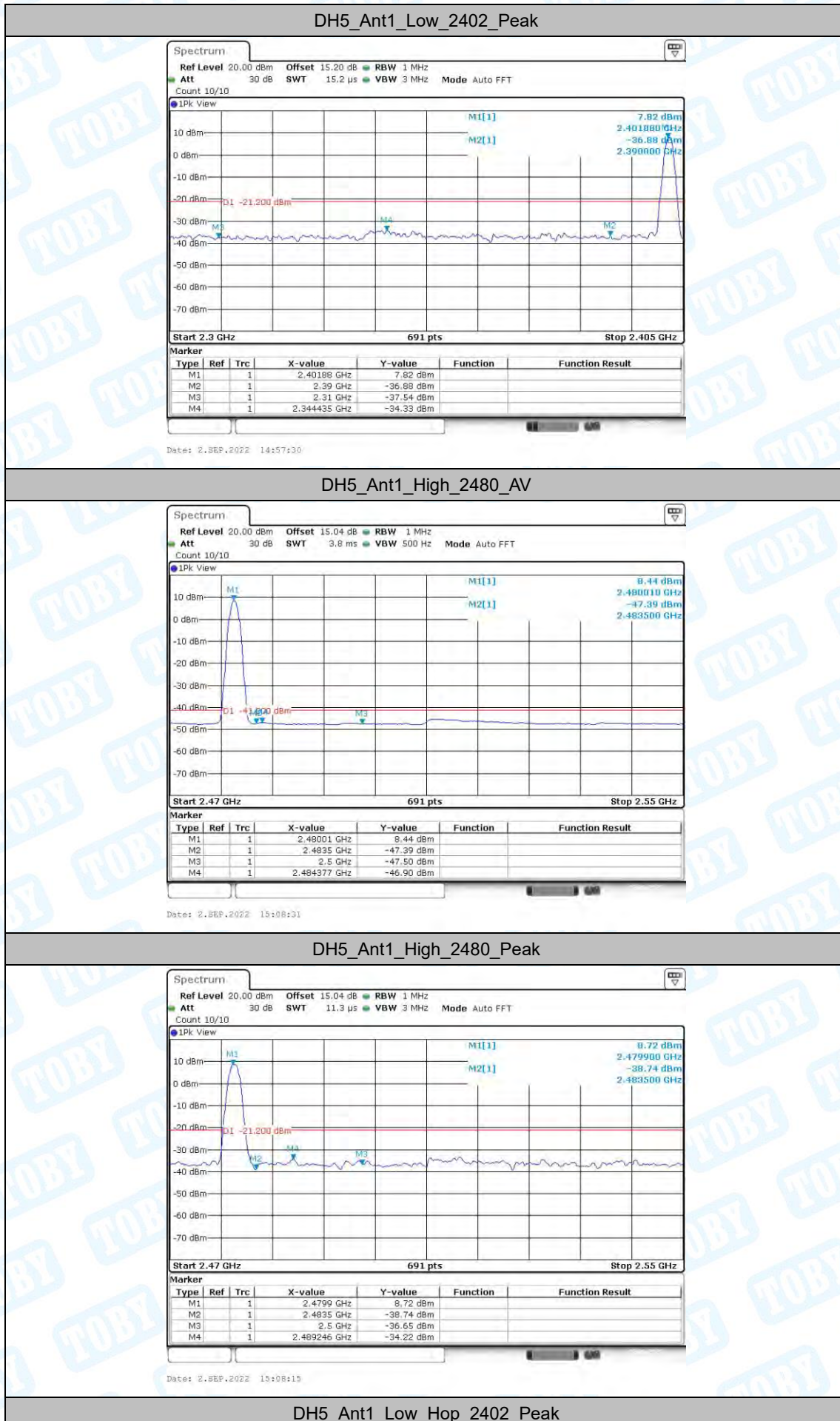
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	Peak	2310.000	-37.54	≤-21.20	PASS
				Peak	2344.435	-34.33	≤-21.20	PASS
				Peak	2390.000	-36.88	≤-21.20	PASS
		High	2480	AV	2483.500	-47.39	≤-41.20	PASS
				AV	2484.377	-46.9	≤-41.20	PASS
				AV	2500.000	-47.5	≤-41.20	PASS
				Peak	2483.500	-38.74	≤-21.20	PASS
				Peak	2489.246	-34.22	≤-21.20	PASS
				Peak	2500.000	-36.65	≤-21.20	PASS
		Low	Hop_240 2	Peak	2310.000	-36.62	≤-21.20	PASS
				Peak	2340.174	-34.2	≤-21.20	PASS
				Peak	2390.000	-37.09	≤-21.20	PASS
		High	Hop_248 0	Peak	2483.500	-37.26	≤-21.20	PASS
				Peak	2499.449	-35.35	≤-21.20	PASS
				Peak	2500.000	-37.09	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.26	≤-41.20	PASS
				AV	2341.239	-46	≤-41.20	PASS
				AV	2390.000	-48.35	≤-41.20	PASS
				Peak	2310.000	-37.51	≤-21.20	PASS
				Peak	2341.391	-34.36	≤-21.20	PASS
				Peak	2390.000	-37.57	≤-21.20	PASS
		High	2480	AV	2483.500	-47.38	≤-41.20	PASS
				AV	2485.536	-47.09	≤-41.20	PASS
				AV	2500.000	-47.42	≤-41.20	PASS
				Peak	2483.500	-38.28	≤-21.20	PASS
				Peak	2495.623	-34.84	≤-21.20	PASS
				Peak	2500.000	-36.49	≤-21.20	PASS
		Low	Hop_240 2	Peak	2310.000	-36.86	≤-21.20	PASS
				Peak	2340.326	-34.22	≤-21.20	PASS
				Peak	2390.000	-37.96	≤-21.20	PASS
		High	Hop_248 0	Peak	2483.500	-38.73	≤-21.20	PASS
				Peak	2492.609	-34.76	≤-21.20	PASS
				Peak	2500.000	-36.1	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-48.34	≤-41.20	PASS
				AV	2341.391	-45.97	≤-41.20	PASS
				AV	2390.000	-48.15	≤-41.20	PASS
				Peak	2310.000	-37.13	≤-21.20	PASS
				Peak	2343.826	-33.64	≤-21.20	PASS
				Peak	2390.000	-37.12	≤-21.20	PASS
		High	2480	AV	2483.500	-47.34	≤-41.20	PASS
				AV	2497.478	-47.05	≤-41.20	PASS

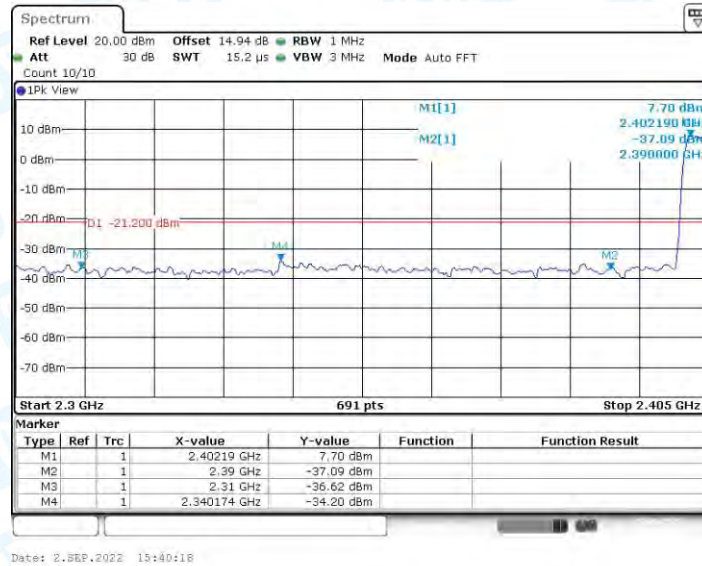
				AV	2500.000	-47.58	≤ -41.20	PASS
				Peak	2483.500	-38.77	≤ -21.20	PASS
				Peak	2485.536	-35.36	≤ -21.20	PASS
				Peak	2500.000	-35.52	≤ -21.20	PASS
		Low	Hop_240 2	Peak	2310.000	-37.36	≤ -21.20	PASS
				Peak	2344.130	-34.24	≤ -21.20	PASS
				Peak	2390.000	-37.07	≤ -21.20	PASS
		High	Hop_248 0	Peak	2483.500	-38.4	≤ -21.20	PASS
				Peak	2485.304	-34.39	≤ -21.20	PASS
				Peak	2500.000	-36.44	≤ -21.20	PASS

Note:

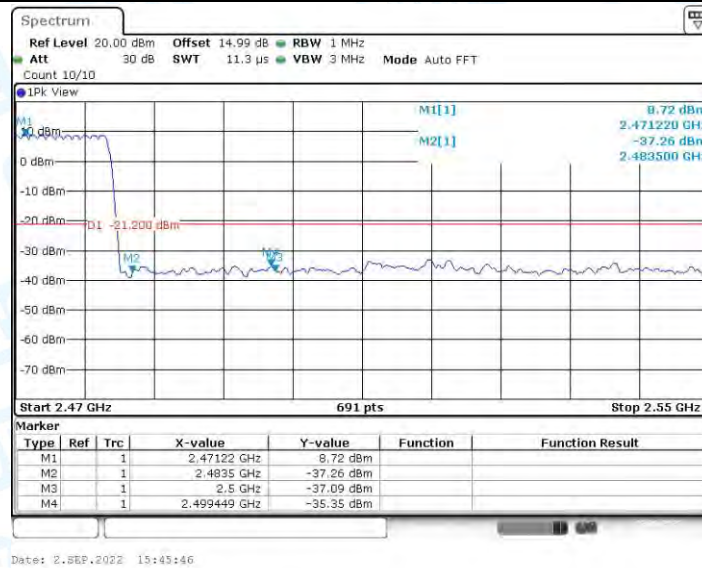
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

10.2. Test Graphs

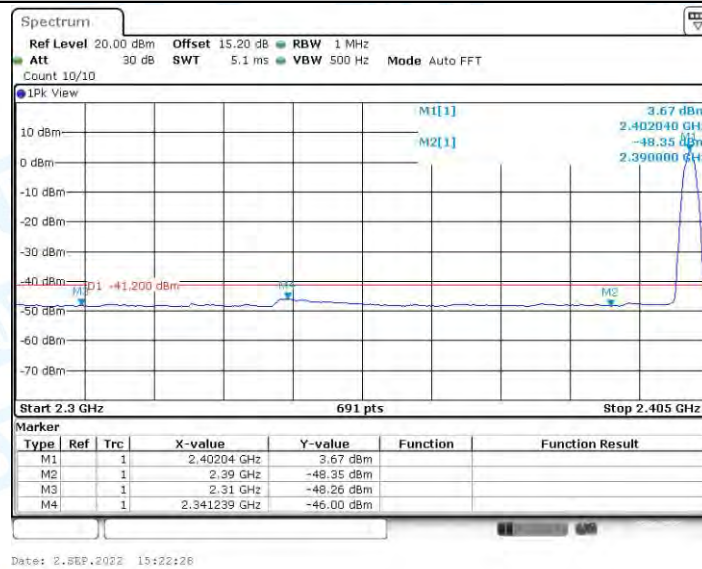




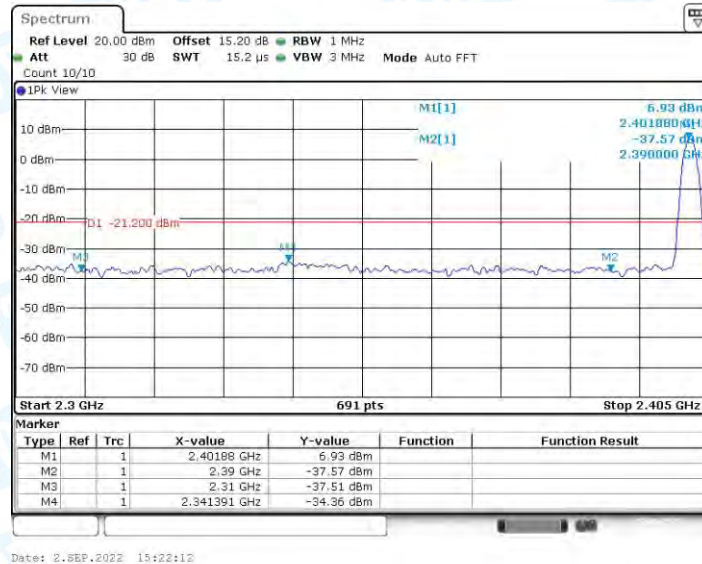
DH5_Ant1_High_Hop_2480_Peak



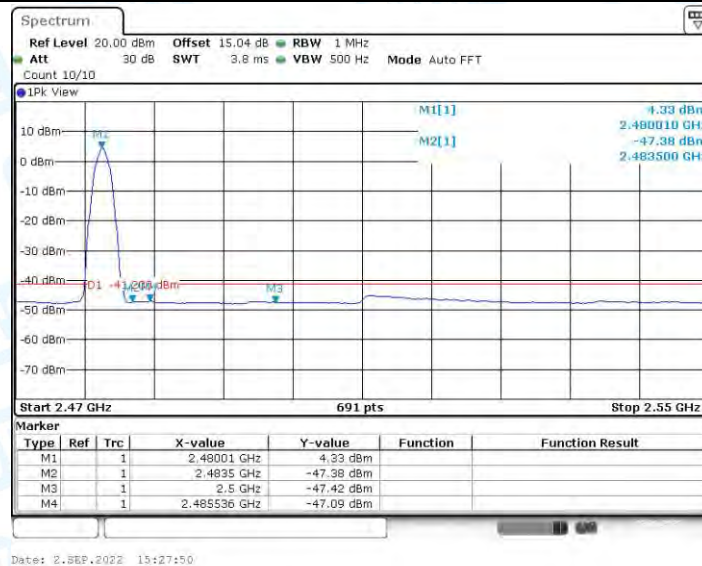
2DH5_Ant1_Low_2402_AV



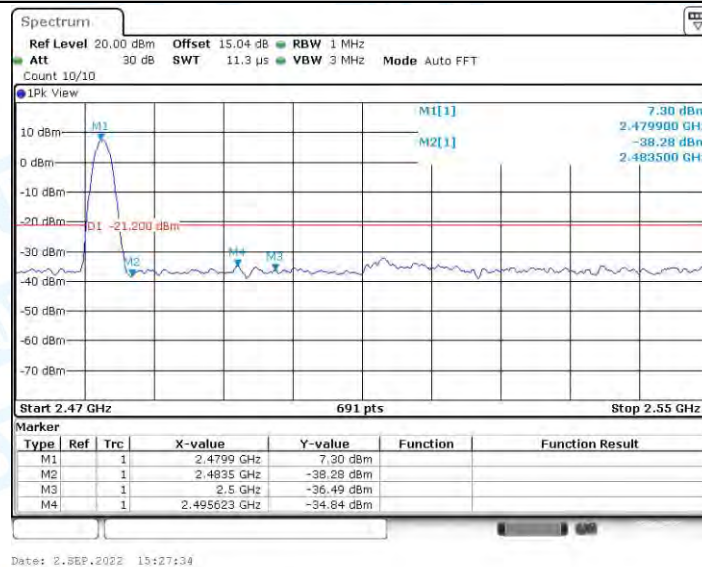
2DH5_Ant1_Low_2402_Peak



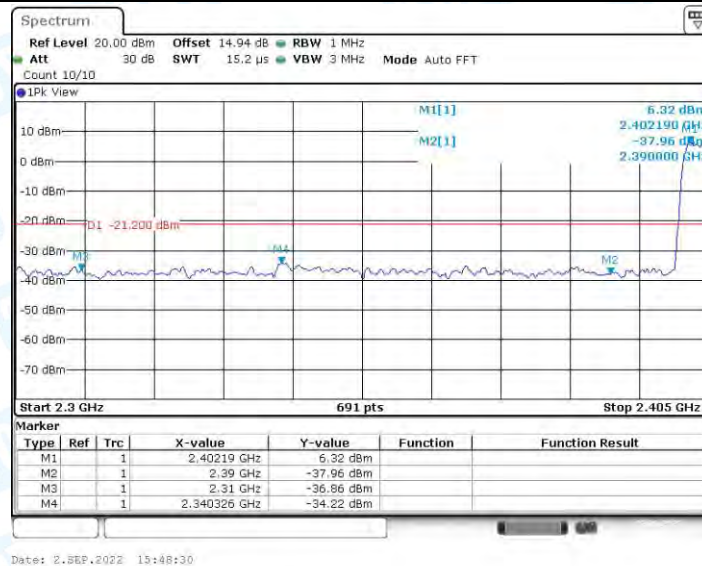
2DH5_Ant1_High_2480_AV



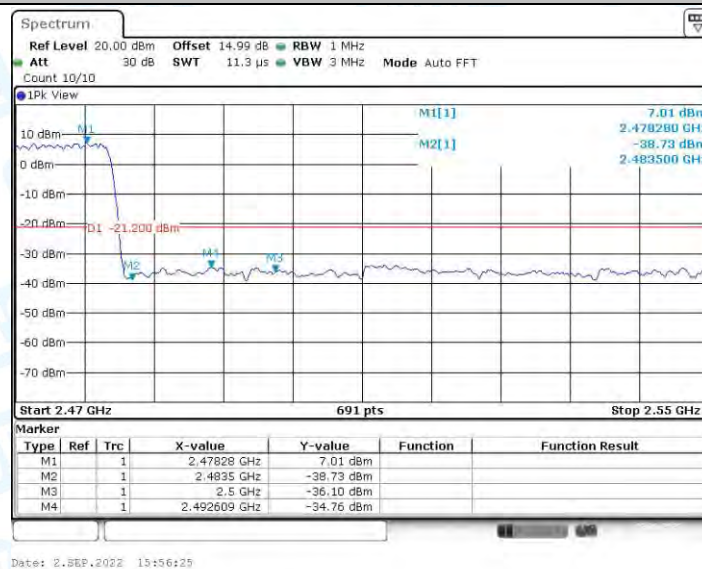
2DH5_Ant1_High_2480_Peak



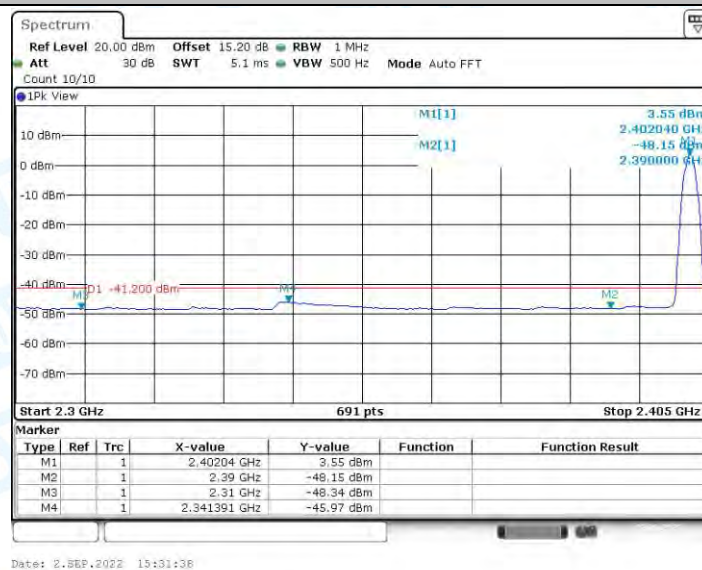
2DH5_Ant1_Low_Hop_2402_Peak



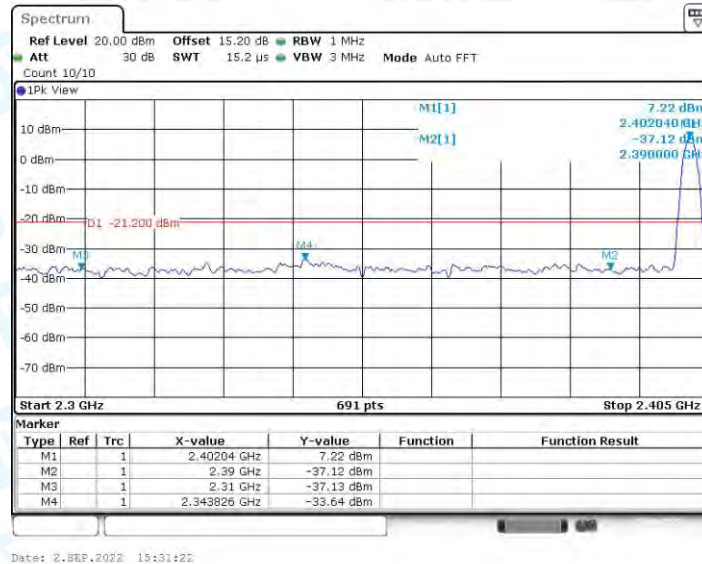
2DH5_Ant1_High_Hop_2480_Peak



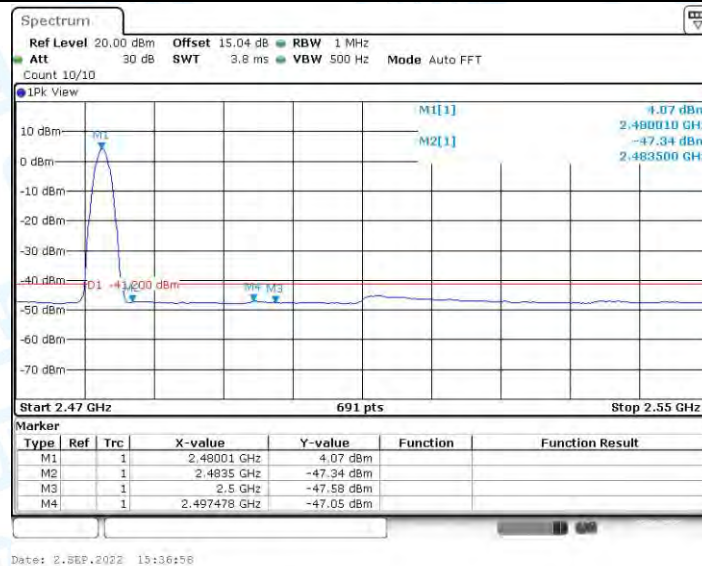
3DH5_Ant1_Low_2402_AV



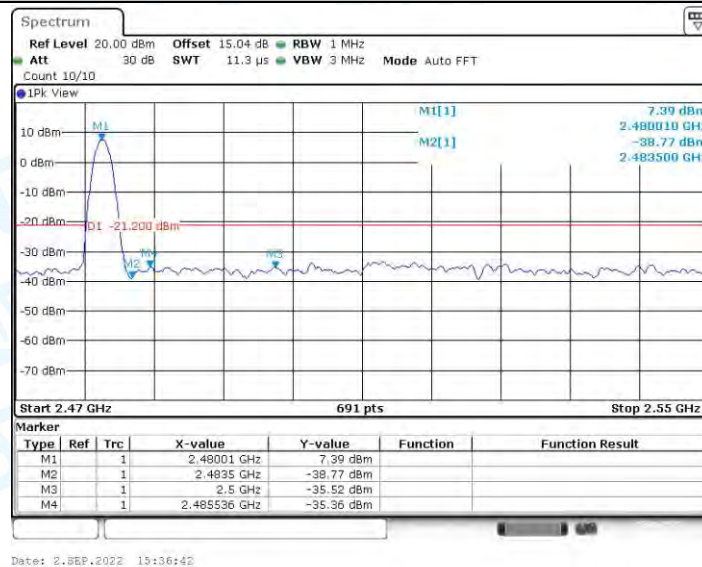
3DH5_Ant1_Low_2402_Peak



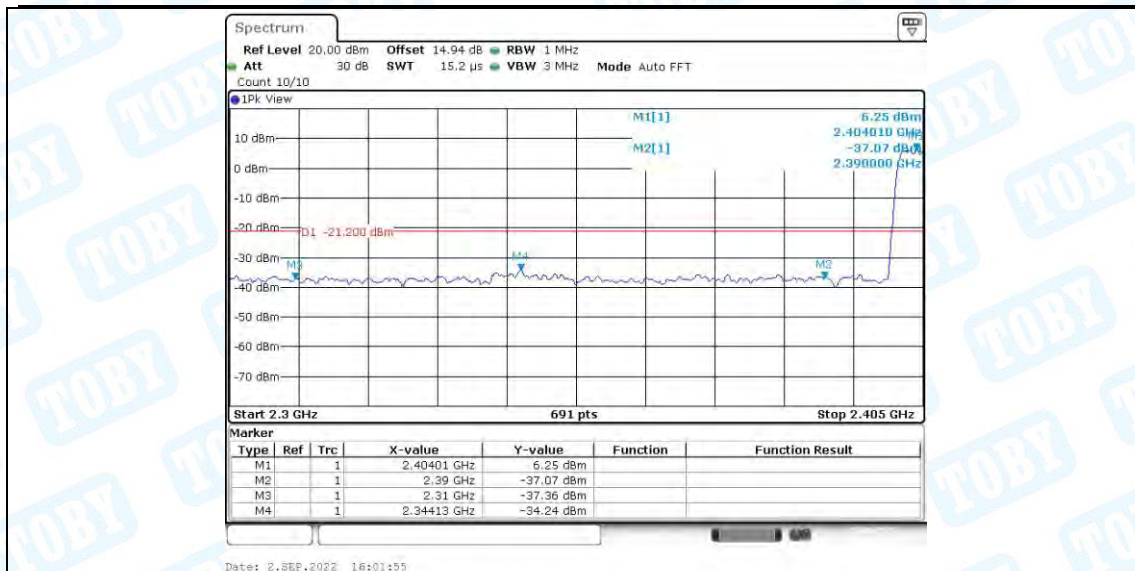
3DH5_Ant1_High_2480_AV



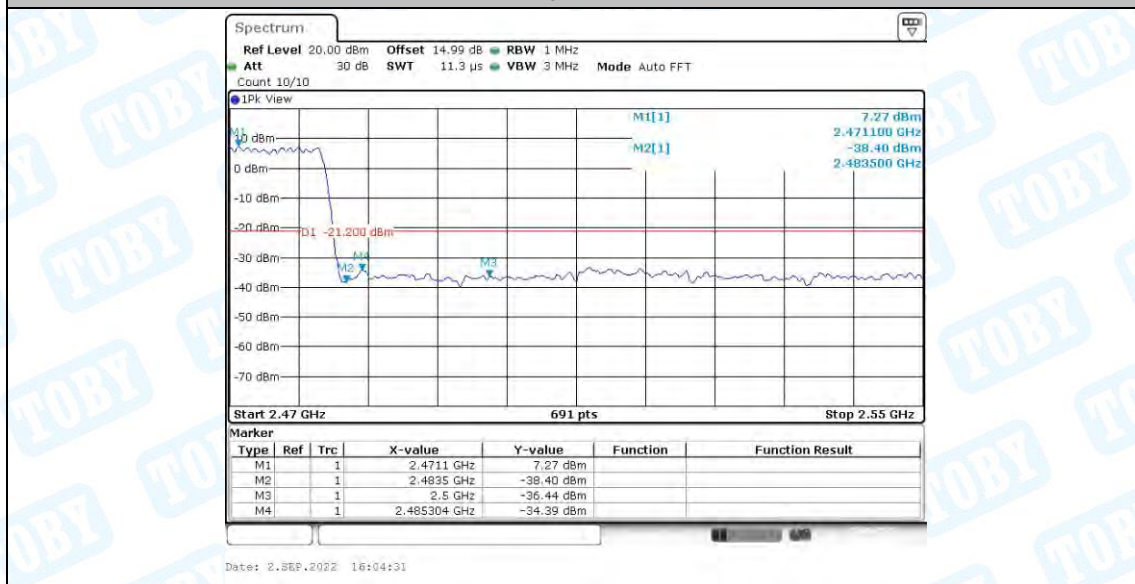
3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



3DH5_Ant1_High_Hop_2480_Peak



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