

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

General Description of EUT	
Product Name:	Projector
HVIN/Models No.:	H1
Blueooth Module:	JHEB14F5B(Module1)
Sample ID:	20211018-05-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 10.8V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TB-RF184572	

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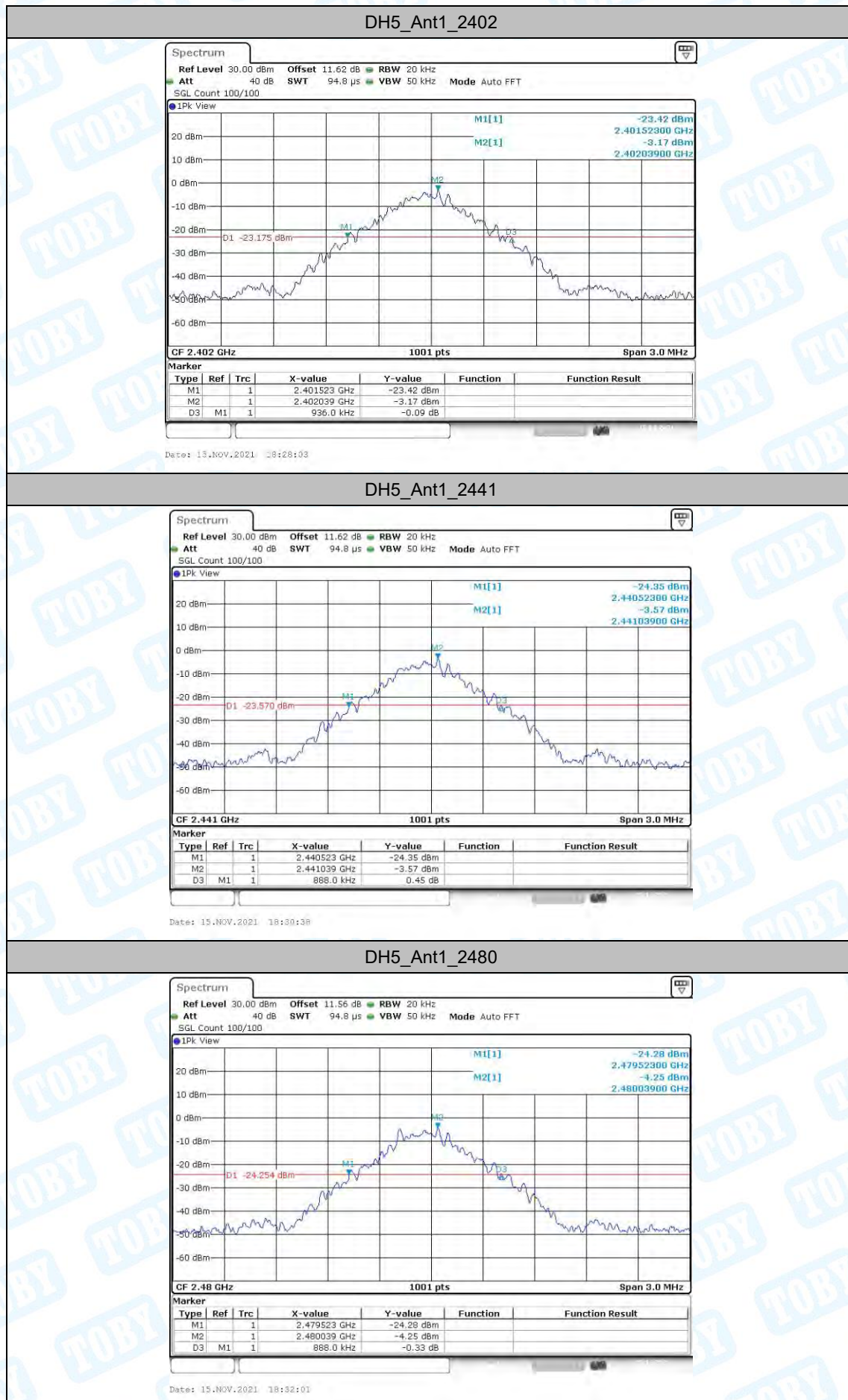
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1. 20dB Emission Bandwidth

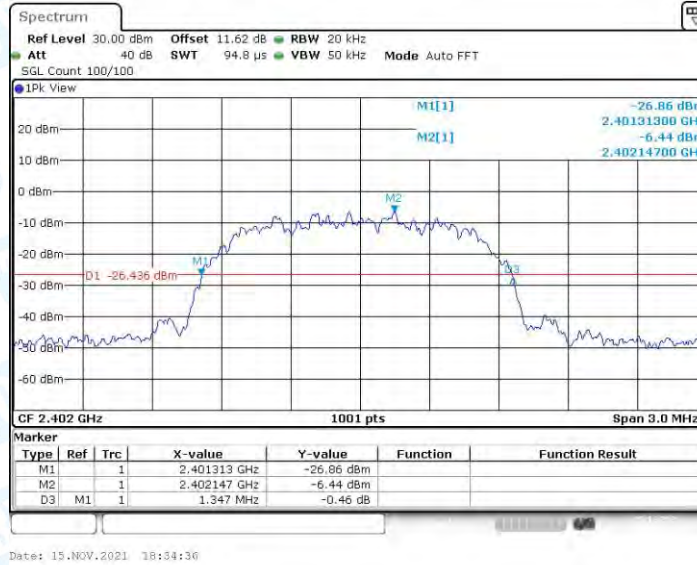
1.1. Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.936	2401.523	2402.459	---	PASS
		2441	0.888	2440.523	2441.411	---	PASS
		2480	0.888	2479.523	2480.411	---	PASS
2DH5	Ant1	2402	1.347	2401.313	2402.660	---	PASS
		2441	1.335	2440.319	2441.654	---	PASS
		2480	1.326	2479.319	2480.645	---	PASS
3DH5	Ant1	2402	1.338	2401.310	2402.648	---	PASS
		2441	1.338	2440.307	2441.645	---	PASS
		2480	1.296	2479.331	2480.627	---	PASS

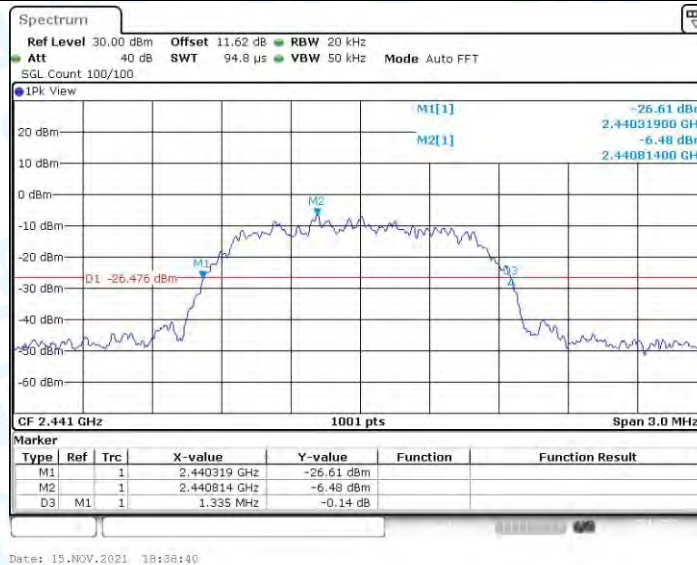
1.2. Test Graphs



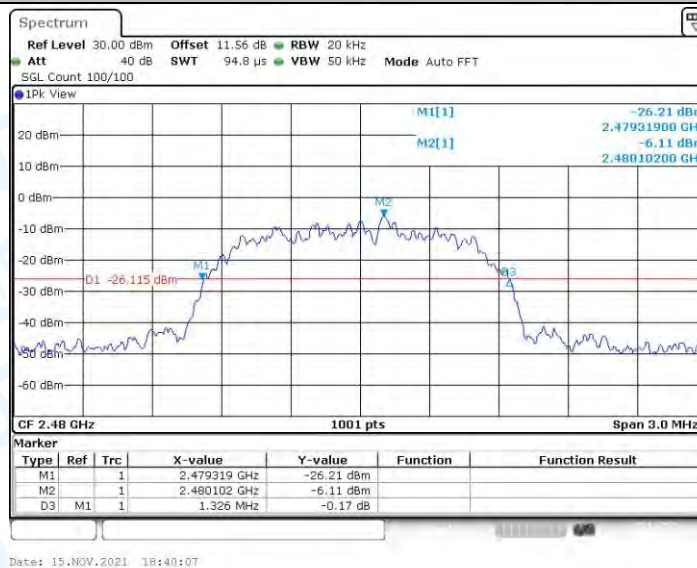
2DH5_Ant1_2402



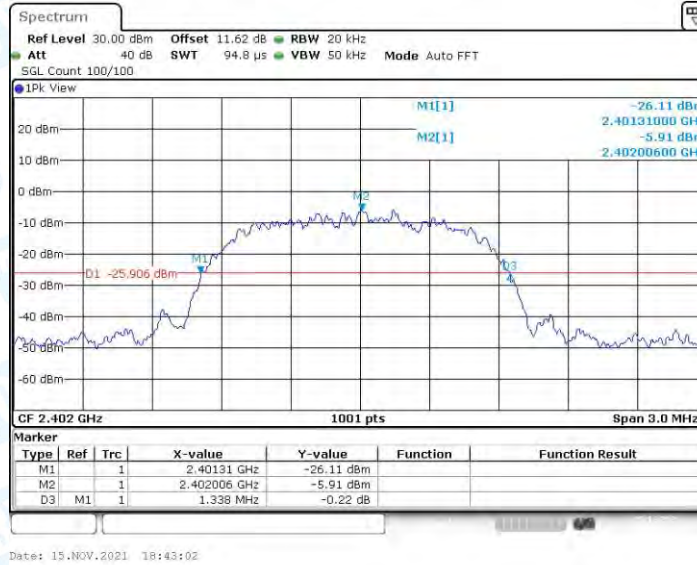
2DH5_Ant1_2441



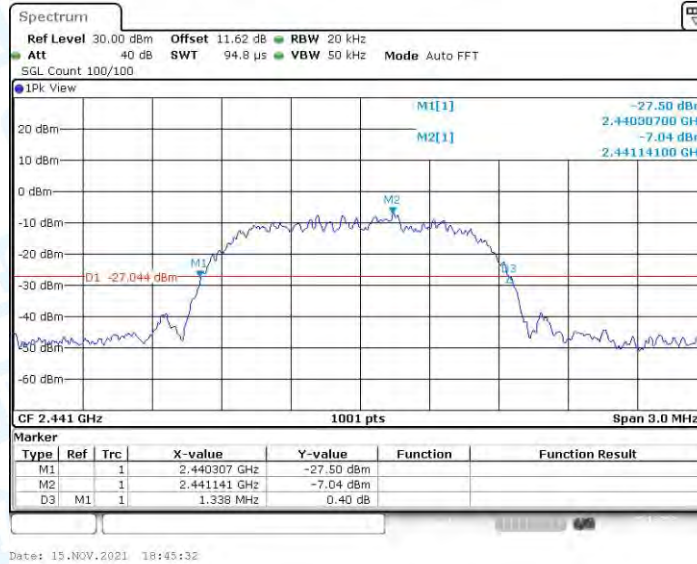
2DH5_Ant1_2480



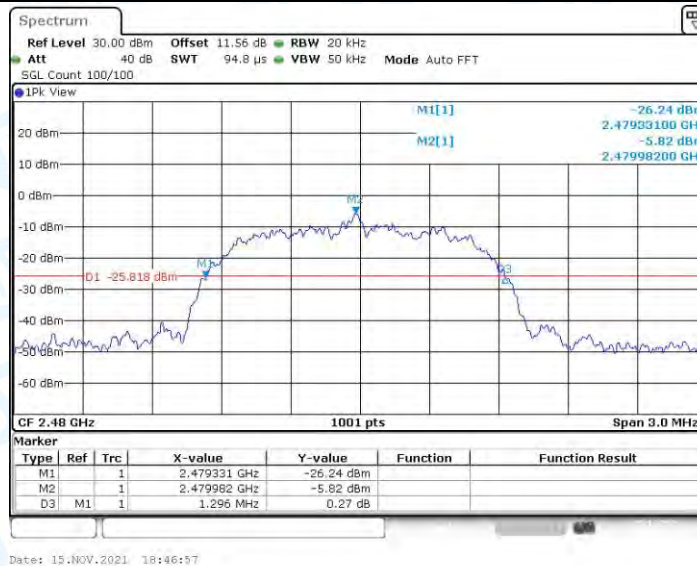
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

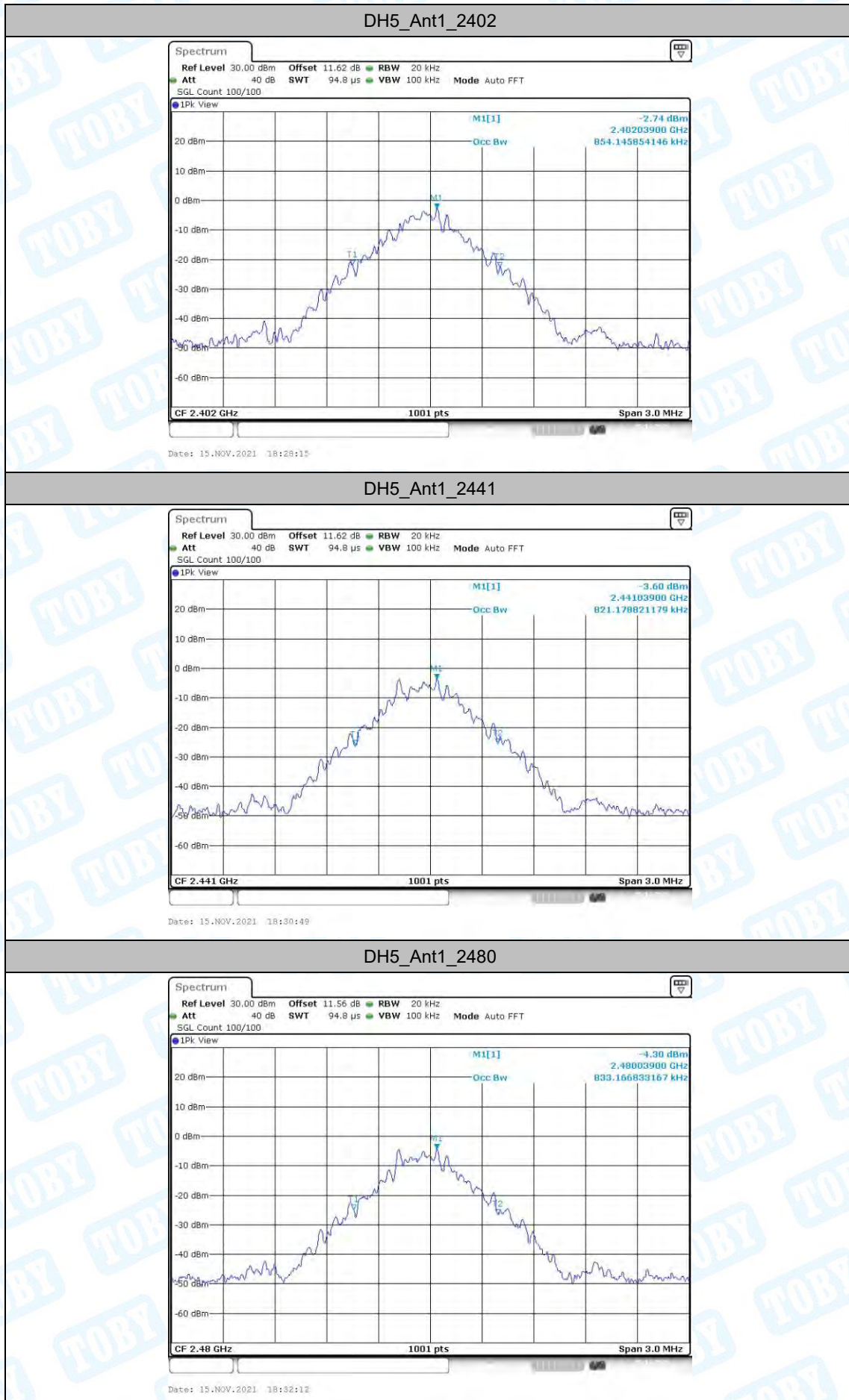


2. Occupied Channel Bandwidth

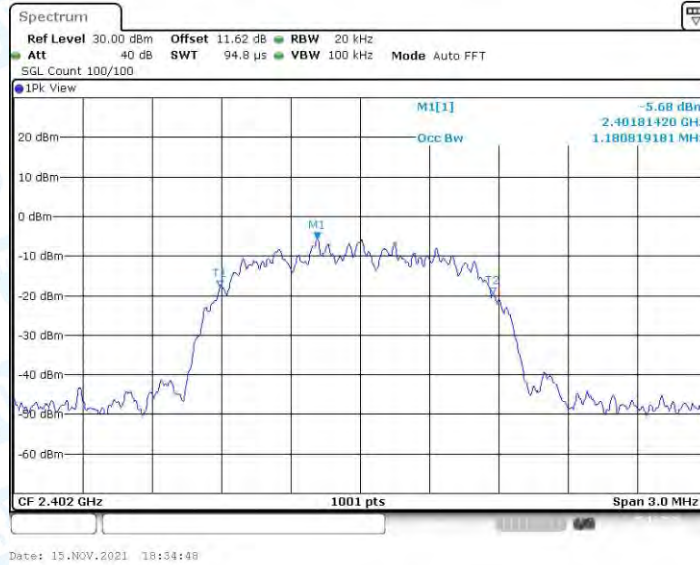
2.1. Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.854	2401.547	2402.402	---	PASS
		2441	0.821	2440.568	2441.390	---	PASS
		2480	0.833	2479.556	2480.390	---	PASS
2DH5	Ant1	2402	1.181	2401.392	2402.572	---	PASS
		2441	1.19	2440.389	2441.578	---	PASS
		2480	1.193	2479.386	2480.578	---	PASS
3DH5	Ant1	2402	1.172	2401.401	2402.572	---	PASS
		2441	1.178	2440.389	2441.566	---	PASS
		2480	1.163	2479.404	2480.566	---	PASS

2.2.Test Graphs



2DH5_Ant1_2402



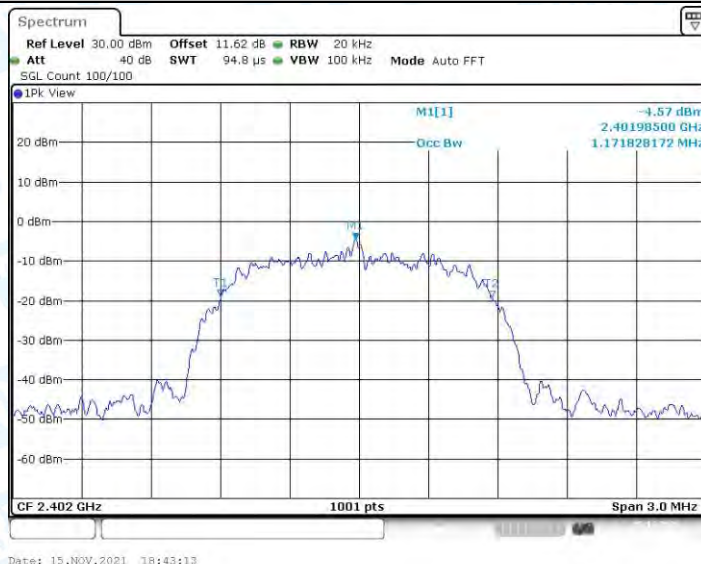
2DH5_Ant1_2441



2DH5_Ant1_2480



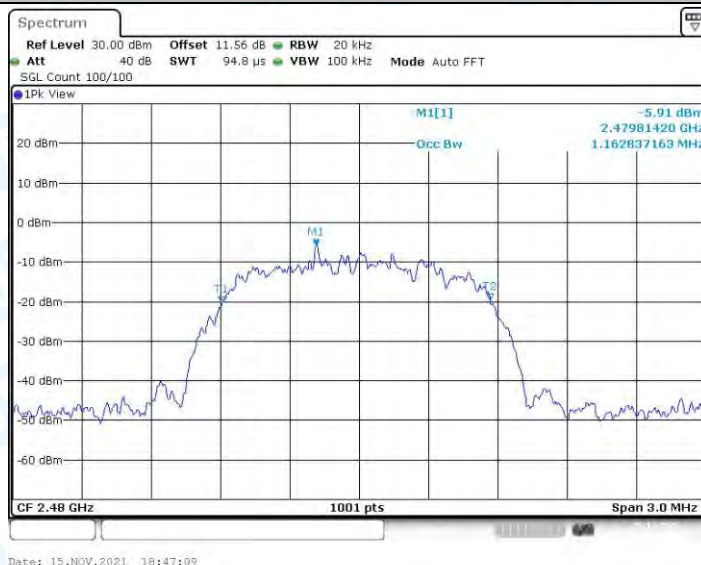
3DH5_Ant1_2402



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	1.14	≤21	PASS
		2441	0.24	≤21	PASS
		2480	-0.35	≤21	PASS
2DH5	Ant1	2402	2.84	≤21	PASS
		2441	2.06	≤21	PASS
		2480	1.34	≤21	PASS
3DH5	Ant1	2402	3.06	≤21	PASS
		2441	2.01	≤21	PASS
		2480	1.78	≤21	PASS

3.2.Test Graphs



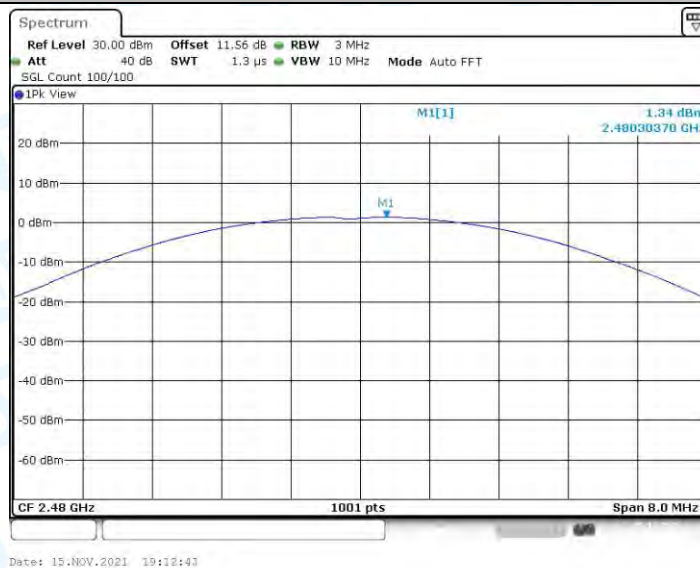
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



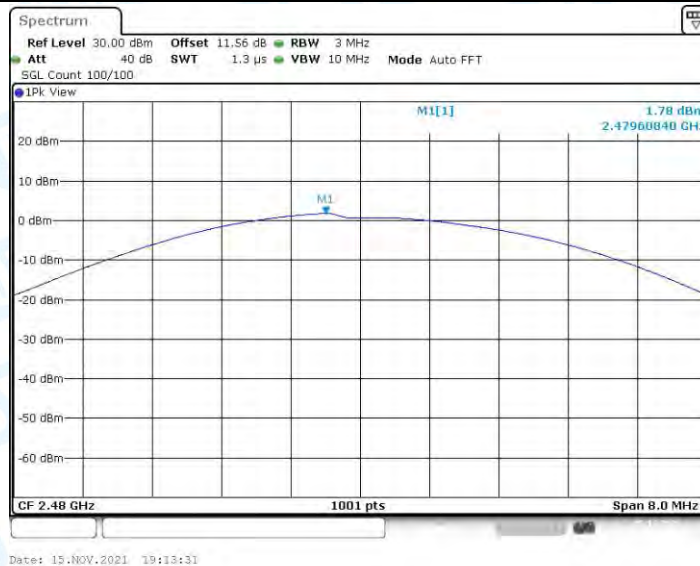
3DH5_Ant1_2402



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	1.023	≥ 0.936	PASS
2DH5	Ant1	Hop	1.31	≥ 0.898	PASS
3DH5	Ant1	Hop	1.157	≥ 0.892	PASS

4.2. Test Graphs

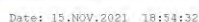
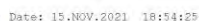


5. Time of occupancy

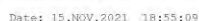
5.1. Test Result

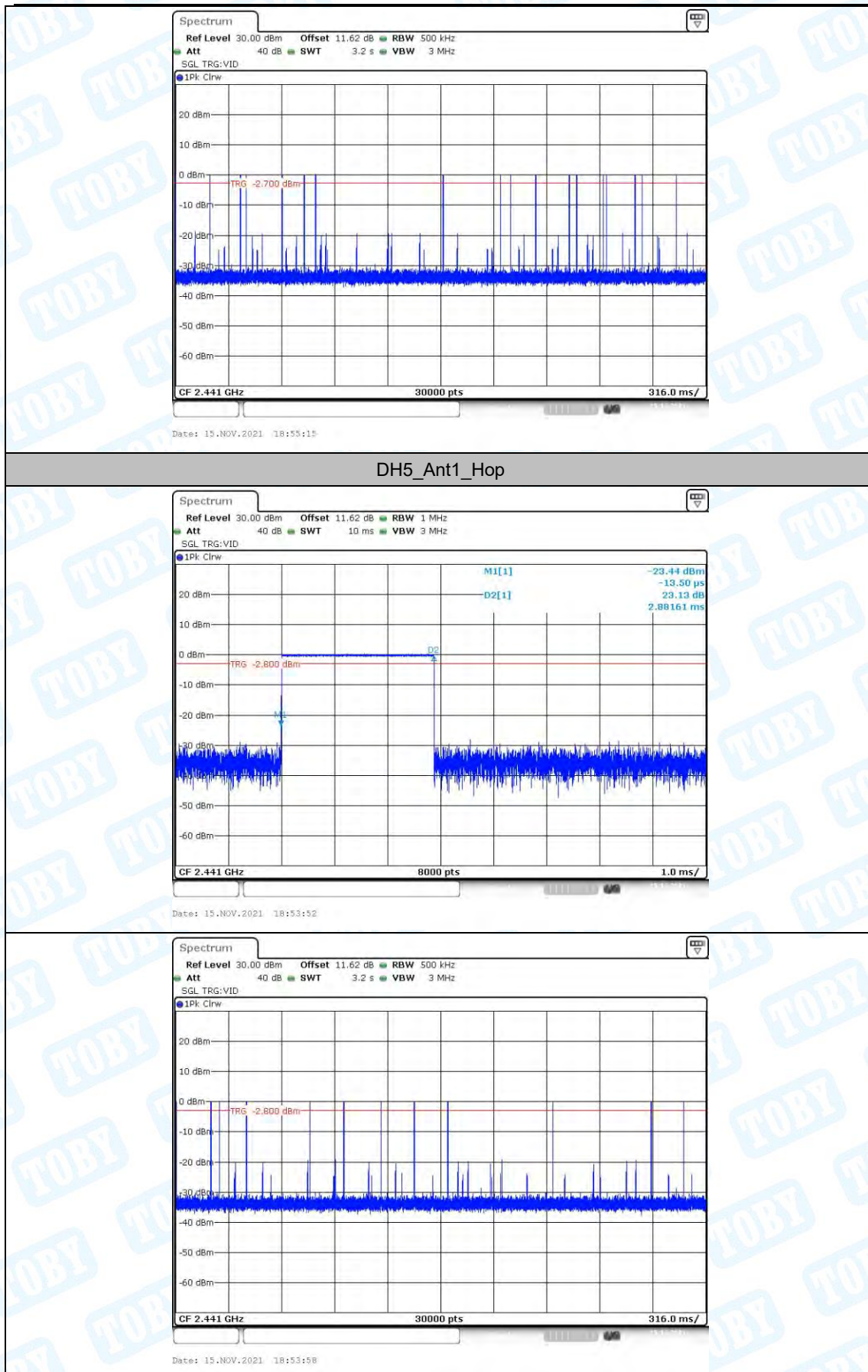
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.39	330	0.13	≤0.4	PASS
DH3	Ant1	Hop	1.64	180	0.295	≤0.4	PASS
DH5	Ant1	Hop	2.88	120	0.346	≤0.4	PASS
2DH1	Ant1	Hop	0.40	320	0.129	≤0.4	PASS
2DH3	Ant1	Hop	1.63	180	0.293	≤0.4	PASS
2DH5	Ant1	Hop	2.89	110	0.318	≤0.4	PASS
3DH1	Ant1	Hop	0.41	330	0.134	≤0.4	PASS
3DH3	Ant1	Hop	1.65	170	0.28	≤0.4	PASS
3DH5	Ant1	Hop	2.89	80	0.231	≤0.4	PASS

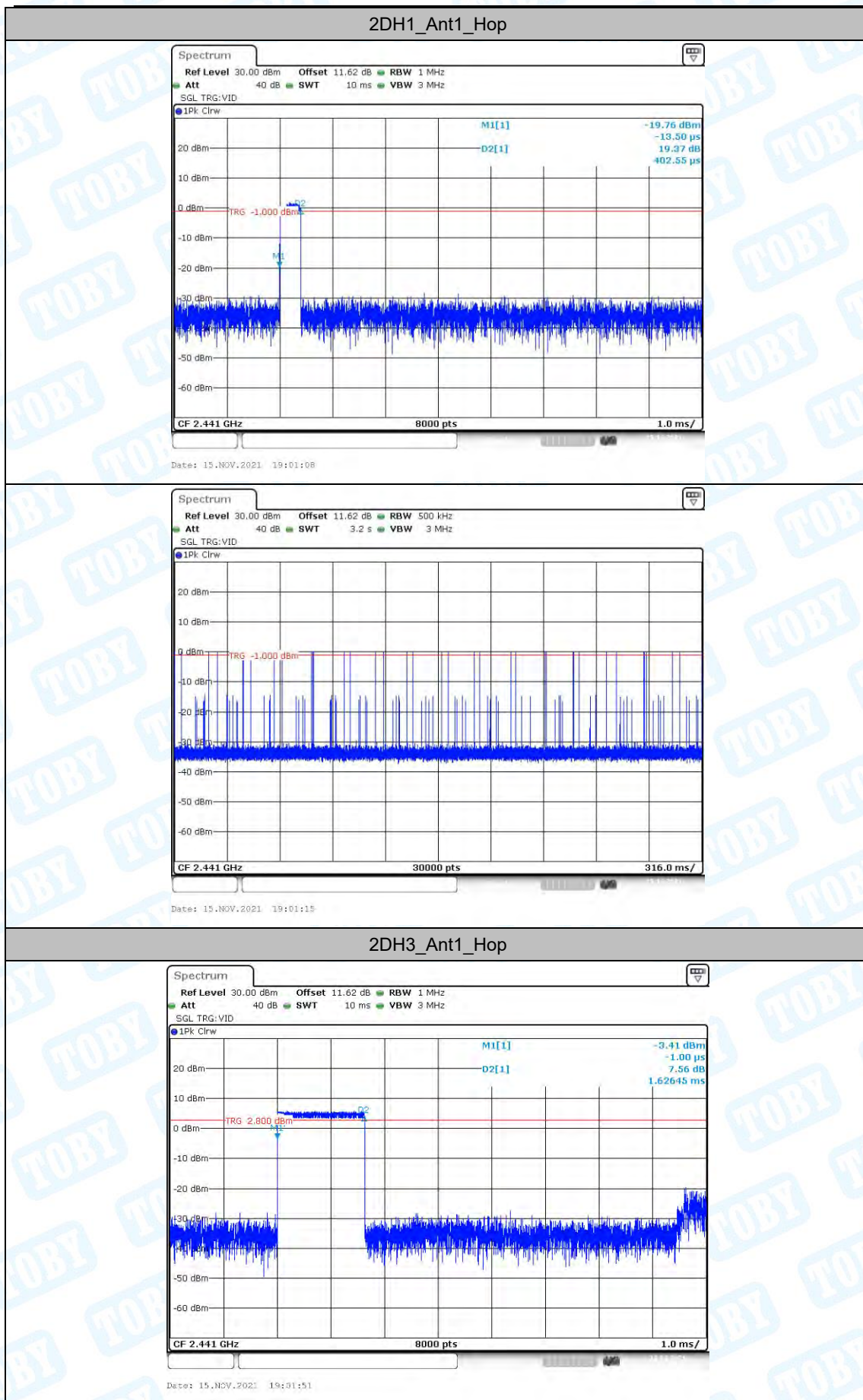
DH1 Ant1 Hop

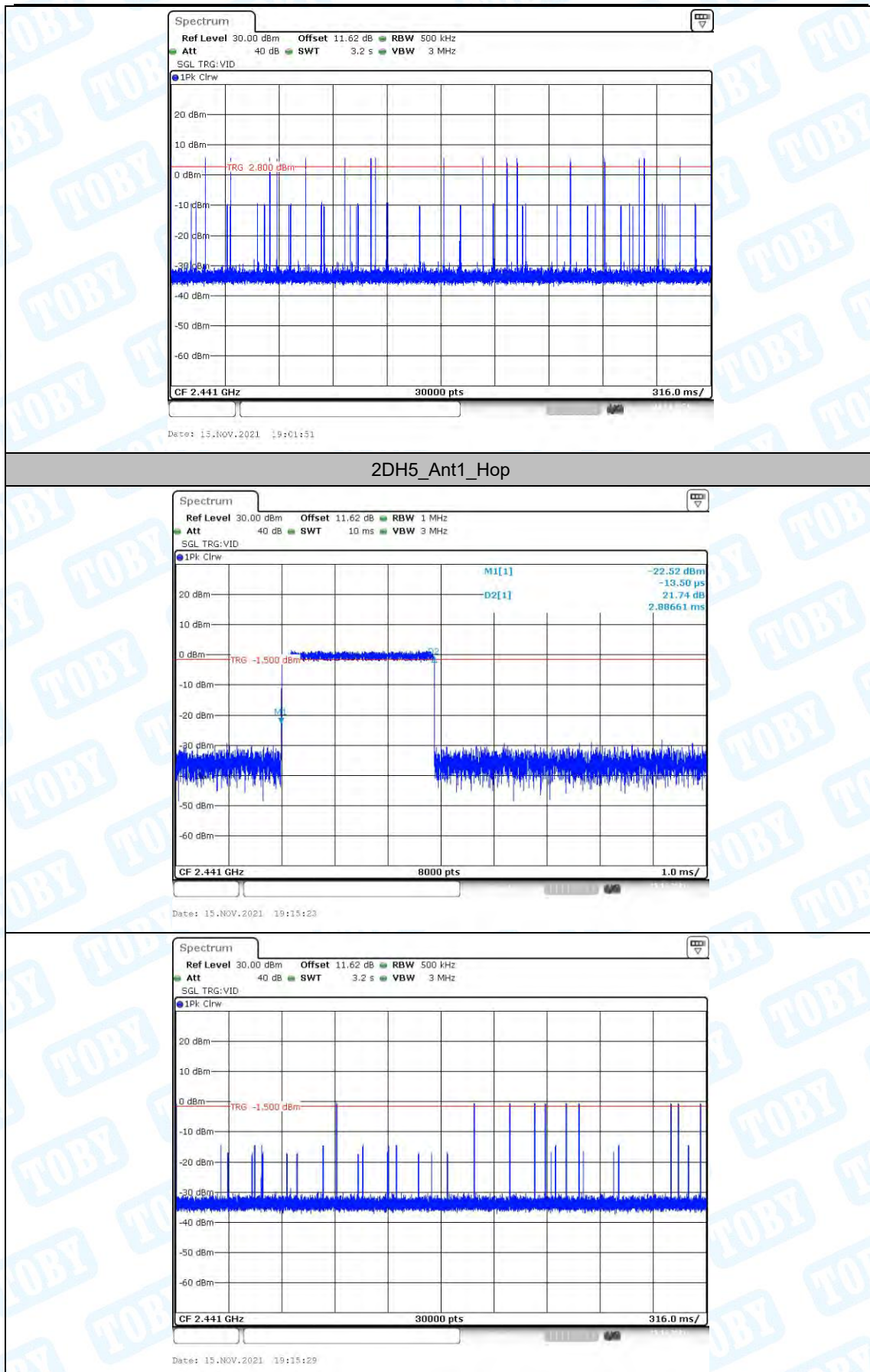


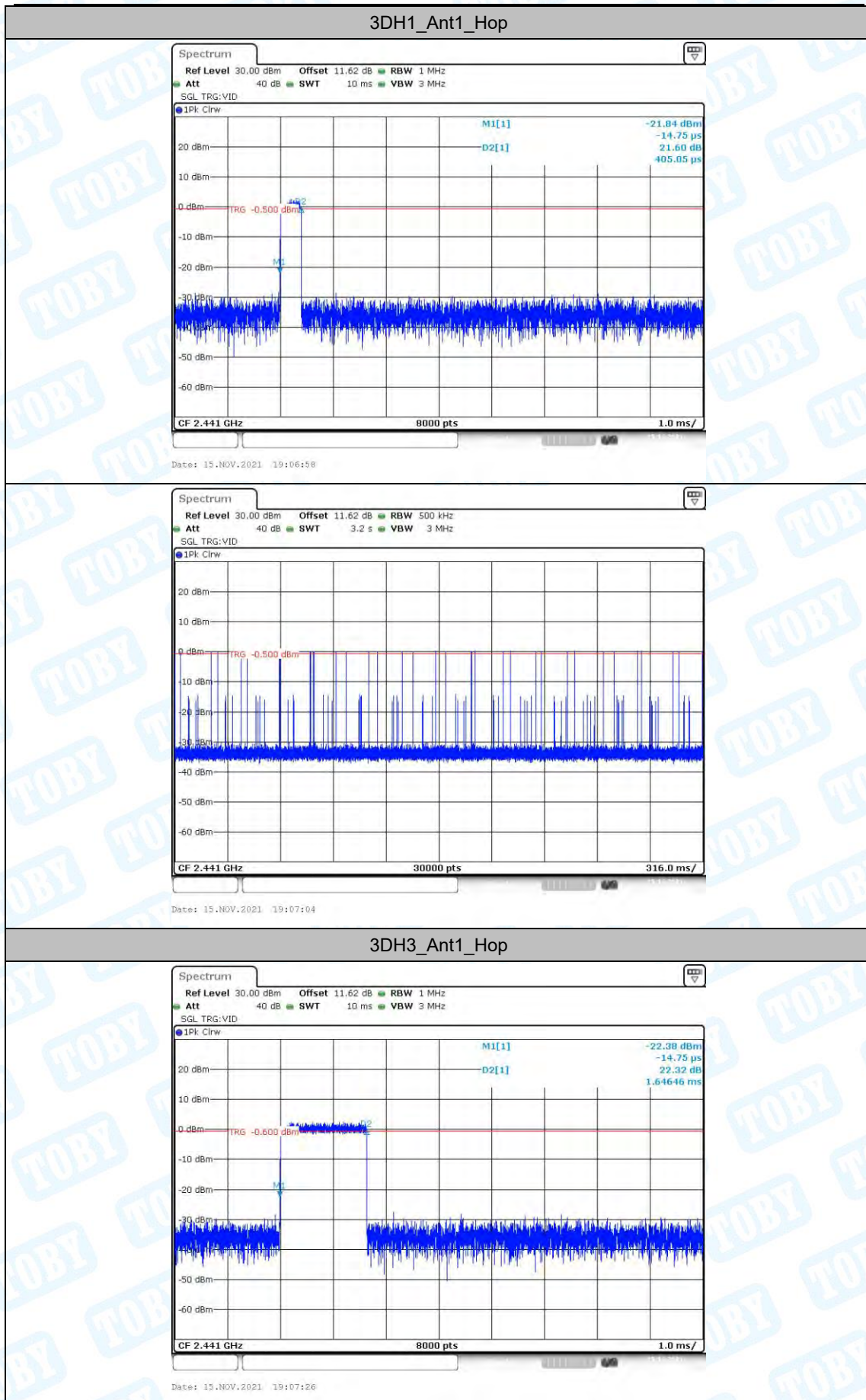
DH3_Ant1_Hop

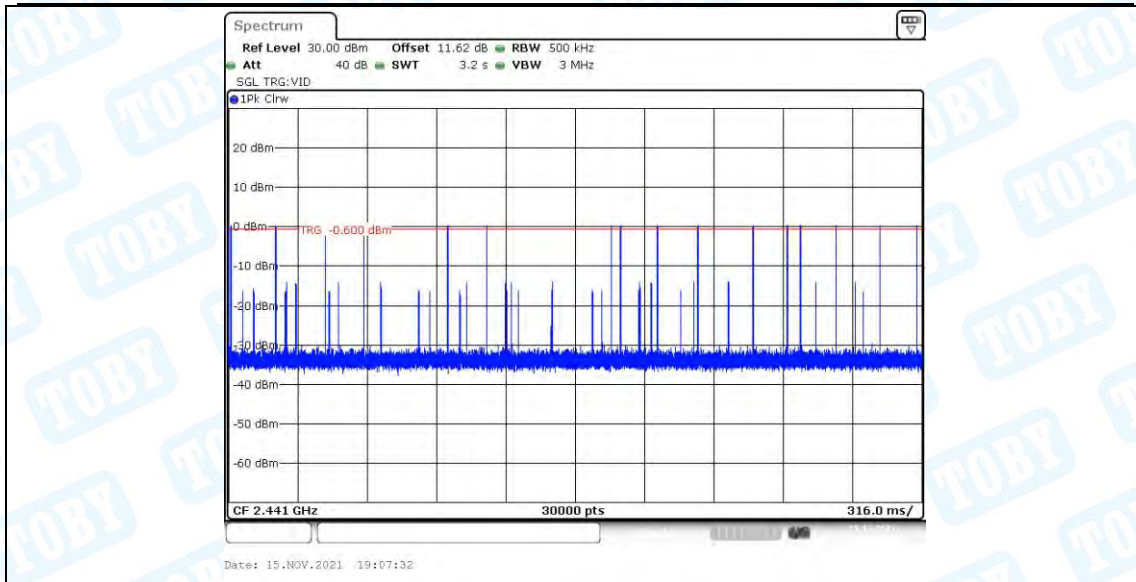




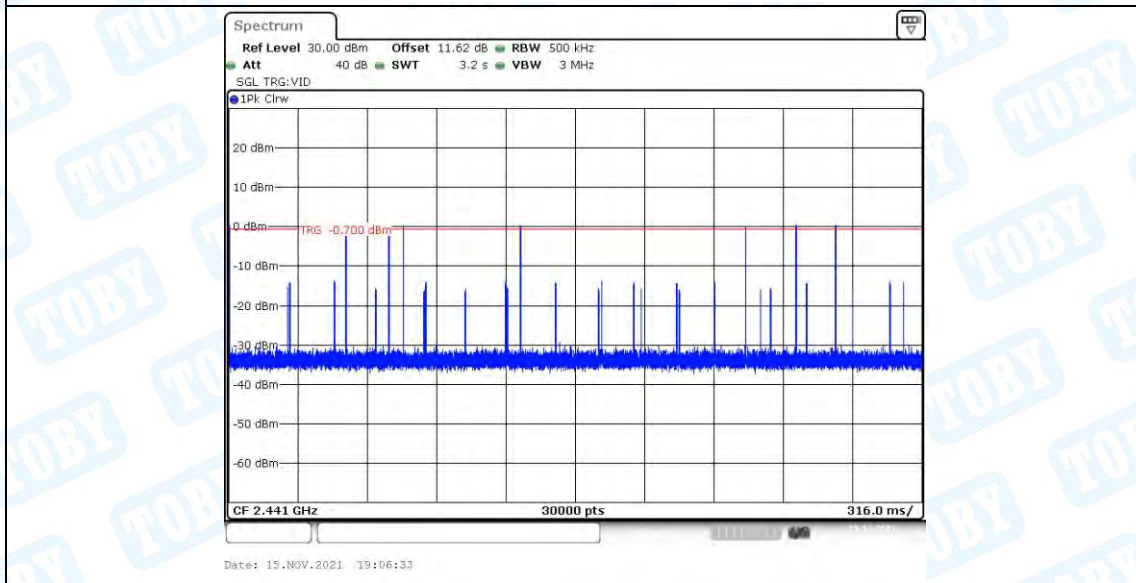
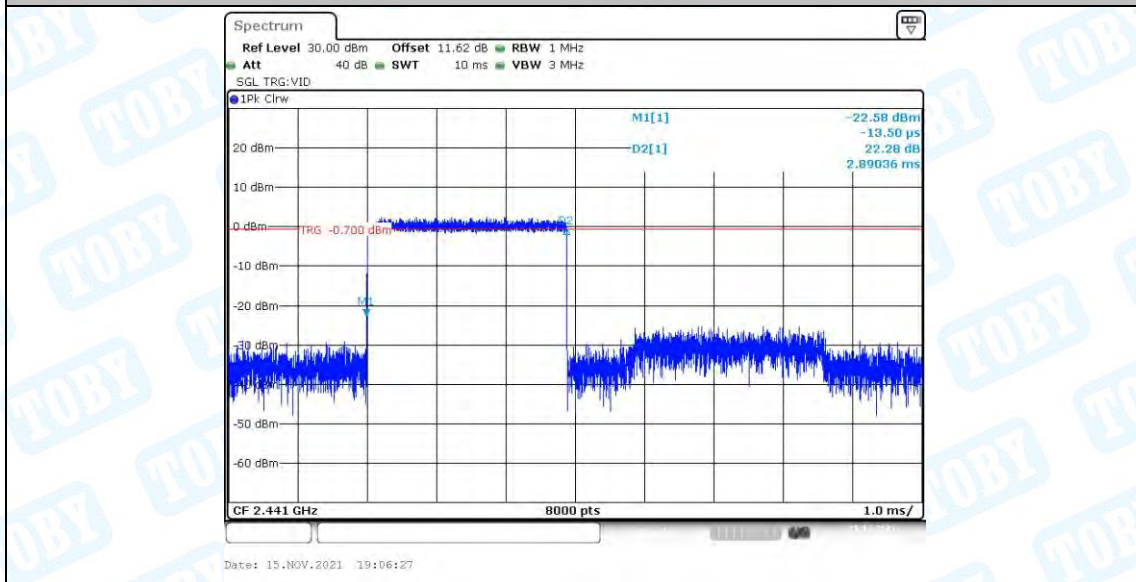








3DH5_Ant1_Hop



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

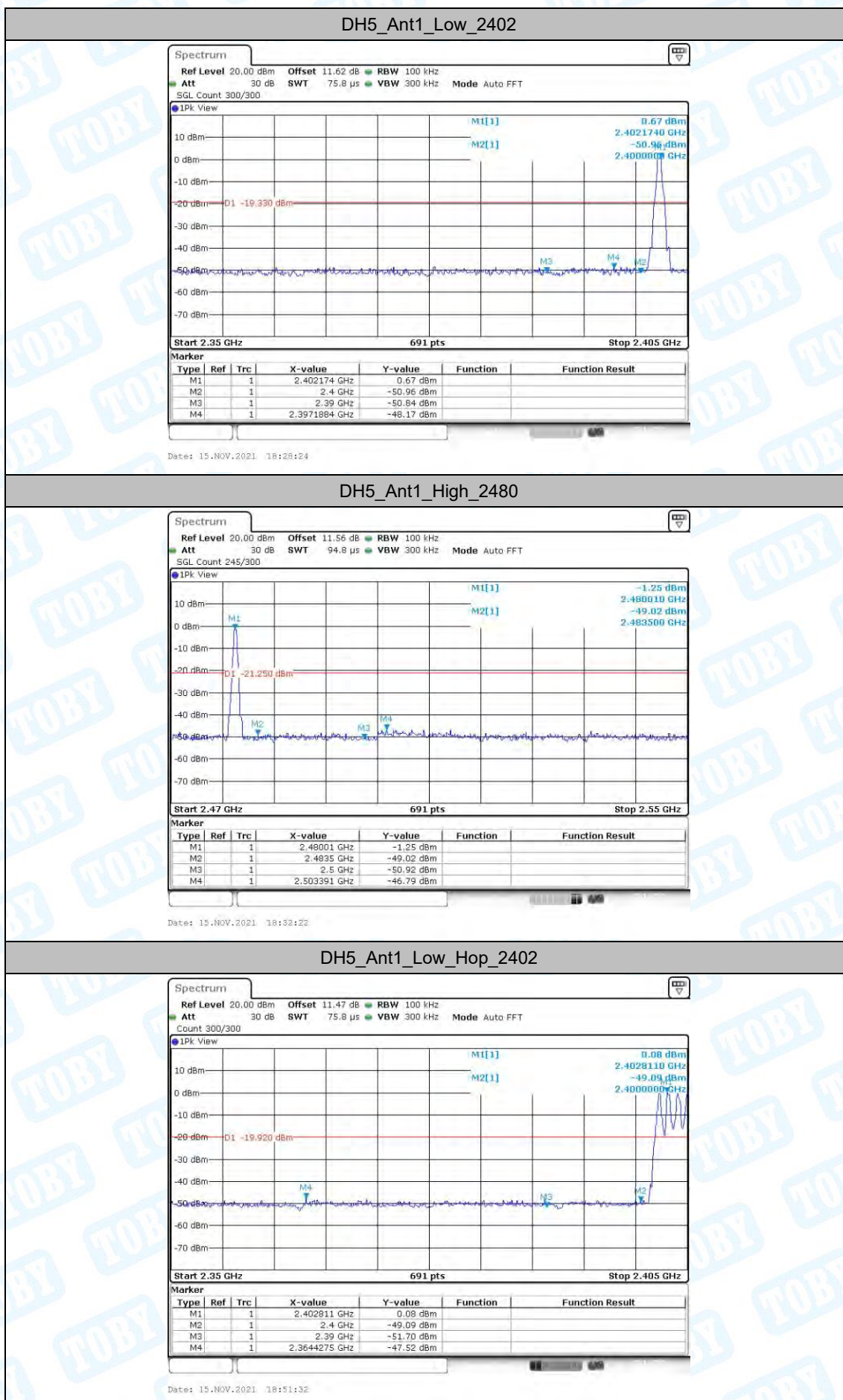


7. Band edge measurements

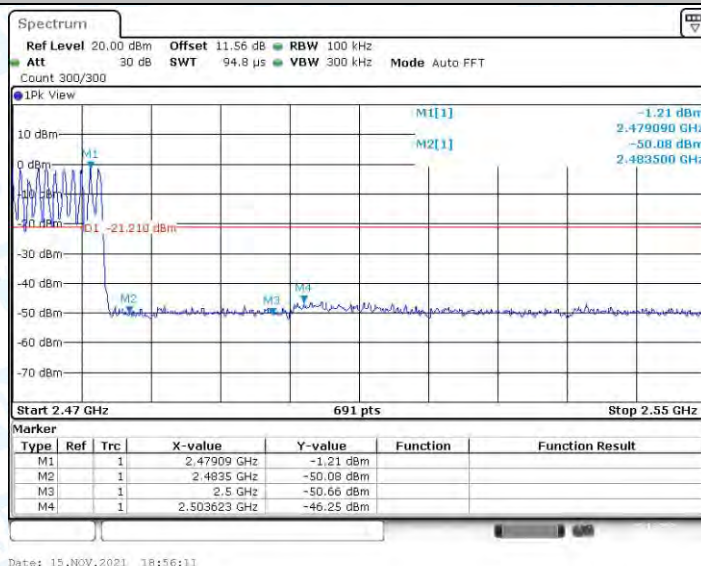
7.1. Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.67	-48.17	≤ -19.33	PASS
		High	2480	-1.25	-46.79	≤ -21.25	PASS
		Low	Hop_2402	0.08	-47.52	≤ -19.92	PASS
		High	Hop_2480	-1.21	-46.25	≤ -21.21	PASS
2DH5	Ant1	Low	2402	0.73	-47.88	≤ -19.27	PASS
		High	2480	-0.75	-45.91	≤ -20.75	PASS
		Low	Hop_2402	-1.25	-47.14	≤ -21.25	PASS
		High	Hop_2480	-1.62	-45.77	≤ -21.62	PASS
3DH5	Ant1	Low	2402	0.69	-48.31	≤ -19.31	PASS
		High	2480	-0.63	-46.31	≤ -20.63	PASS
		Low	Hop_2402	0.23	-48.36	≤ -19.77	PASS
		High	Hop_2480	-0.70	-46.04	≤ -20.7	PASS

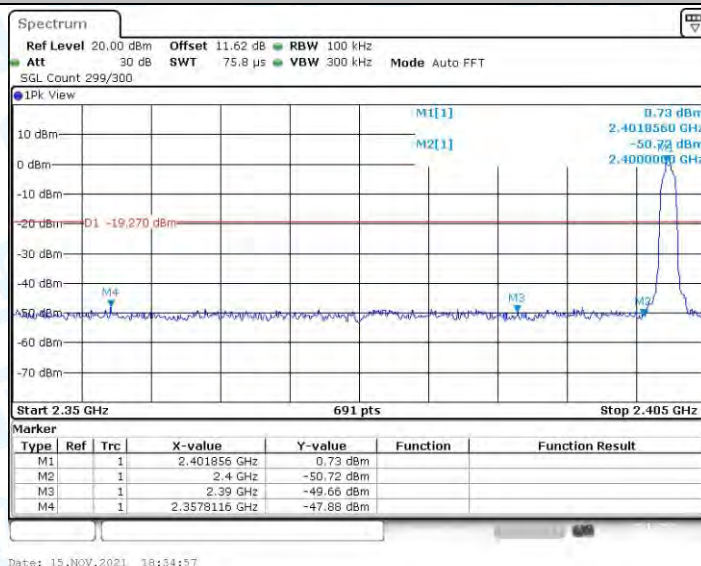
7.2. Test Graphs



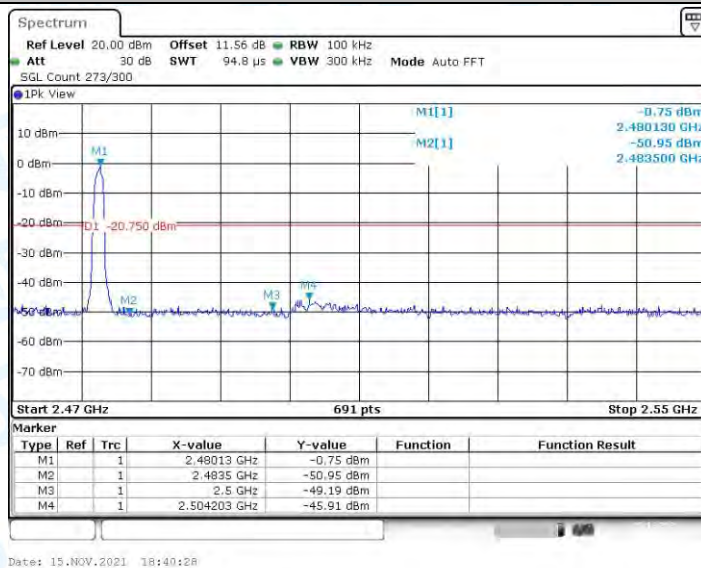
DH5_Ant1_High_Hop_2480



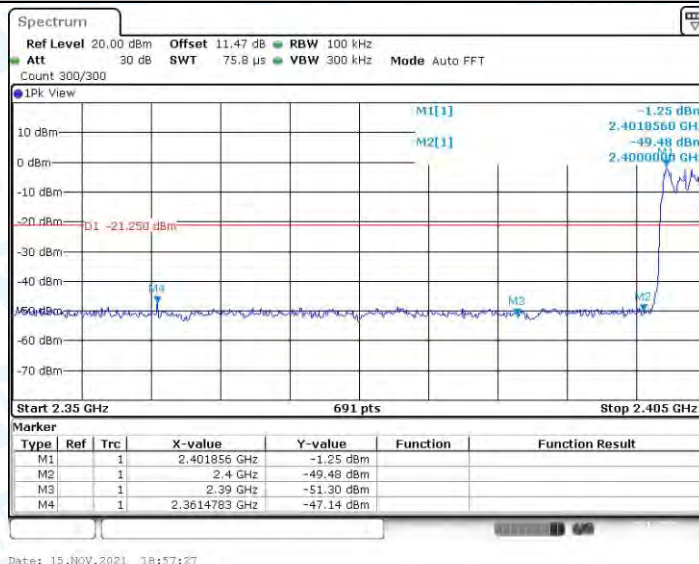
2DH5_Ant1_Low_2402



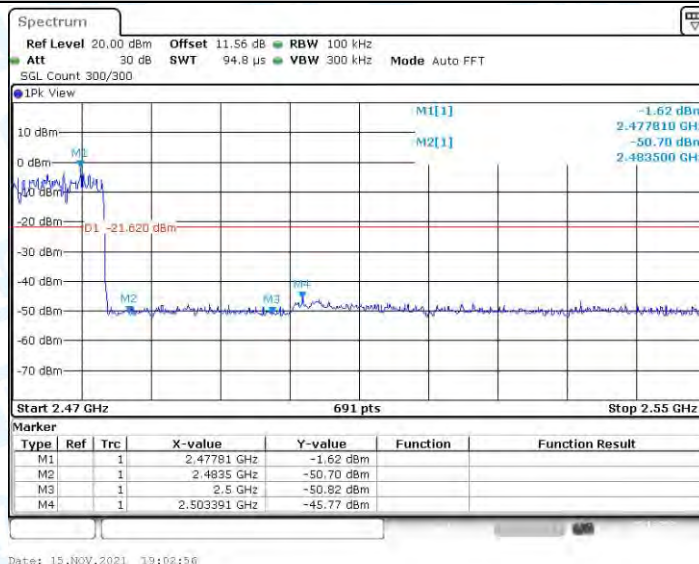
2DH5_Ant1_High_2480



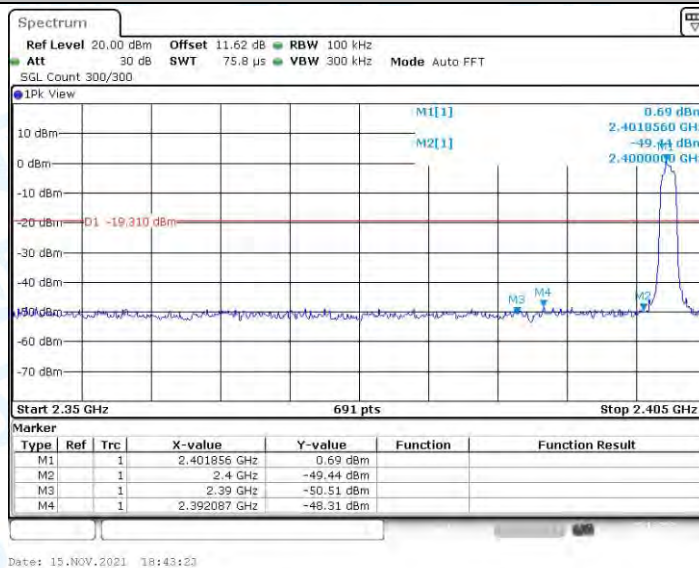
2DH5_Ant1_Low_Hop_2402



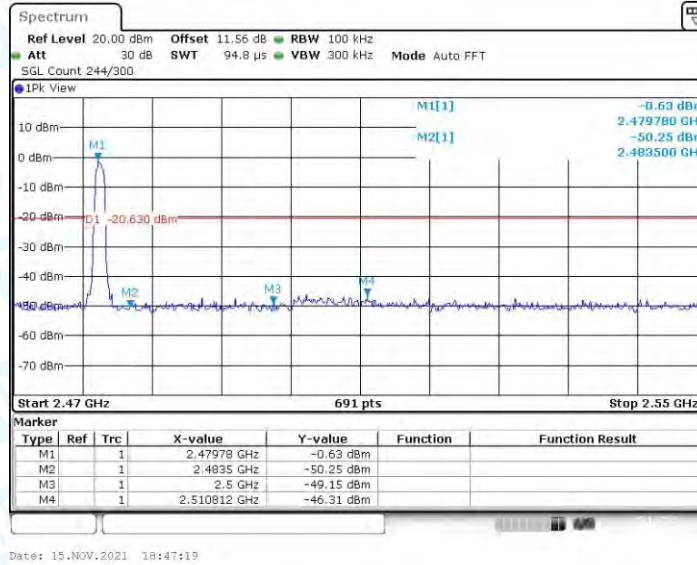
2DH5_Ant1_High_Hop_2480



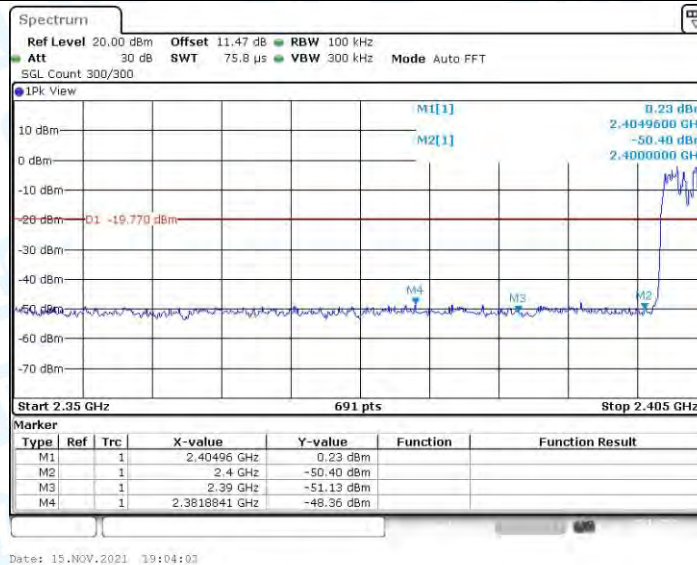
3DH5_Ant1_Low_2402



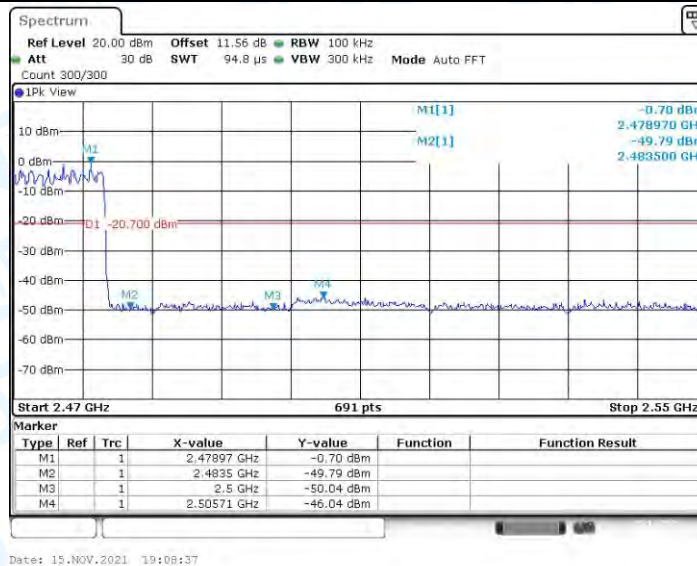
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

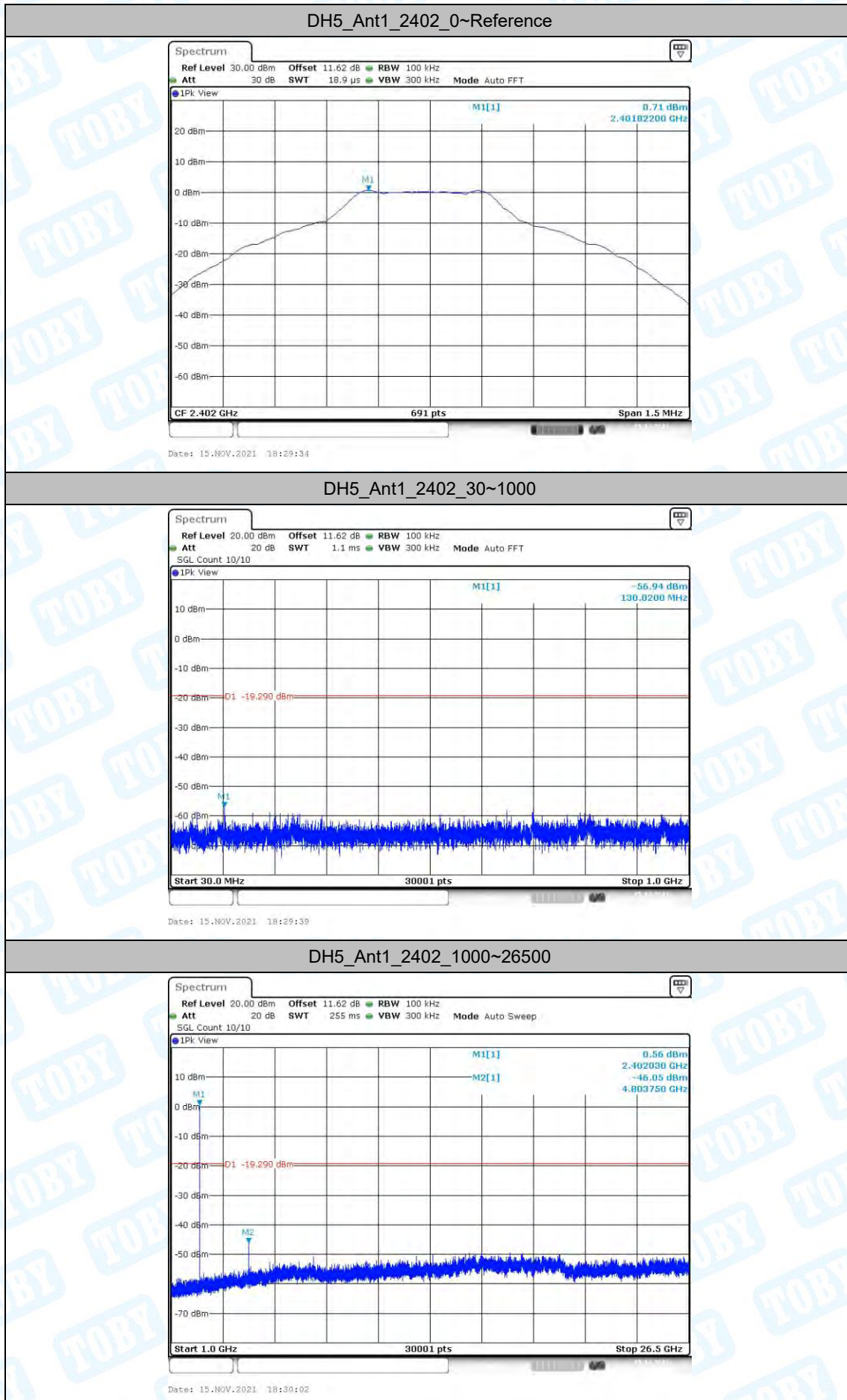


8. Conducted Spurious Emission

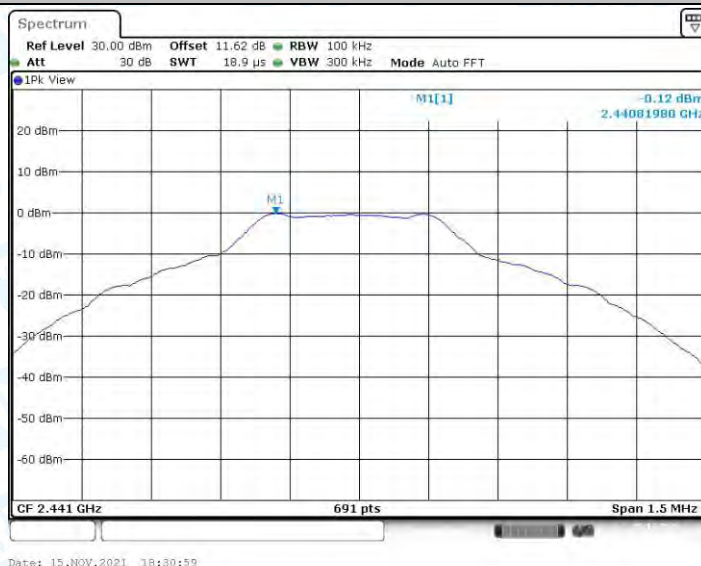
8.1. Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.71	0.71	---	PASS
			30~1000	0.71	-56.94	≤-19.29	PASS
			1000~26500	0.71	-46.05	≤-19.29	PASS
		2441	Reference	-0.12	-0.12	---	PASS
			30~1000	-0.12	-58.56	≤-20.12	PASS
			1000~26500	-0.12	-44.87	≤-20.12	PASS
		2480	Reference	-5.86	-5.86	---	PASS
			30~1000	-5.86	-57.1	≤-25.86	PASS
			1000~26500	-5.86	-45.54	≤-25.86	PASS
2DH5	Ant1	2402	Reference	0.63	0.63	---	PASS
			30~1000	0.63	-57.31	≤-19.37	PASS
			1000~26500	0.63	-47.78	≤-19.37	PASS
		2441	Reference	-0.14	-0.14	---	PASS
			30~1000	-0.14	-57.14	≤-20.14	PASS
			1000~26500	-0.14	-46.95	≤-20.14	PASS
		2480	Reference	-0.82	-0.82	---	PASS
			30~1000	-0.82	-56.02	≤-20.82	PASS
			1000~26500	-0.82	-44.58	≤-20.82	PASS
3DH5	Ant1	2402	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-57.41	≤-19.15	PASS
			1000~26500	0.85	-48.15	≤-19.15	PASS
		2441	Reference	-0.05	-0.05	---	PASS
			30~1000	-0.05	-58.04	≤-20.05	PASS
			1000~26500	-0.05	-43.96	≤-20.05	PASS
		2480	Reference	-0.83	-0.83	---	PASS
			30~1000	-0.83	-57.15	≤-20.83	PASS
			1000~26500	-0.83	-48.01	≤-20.83	PASS

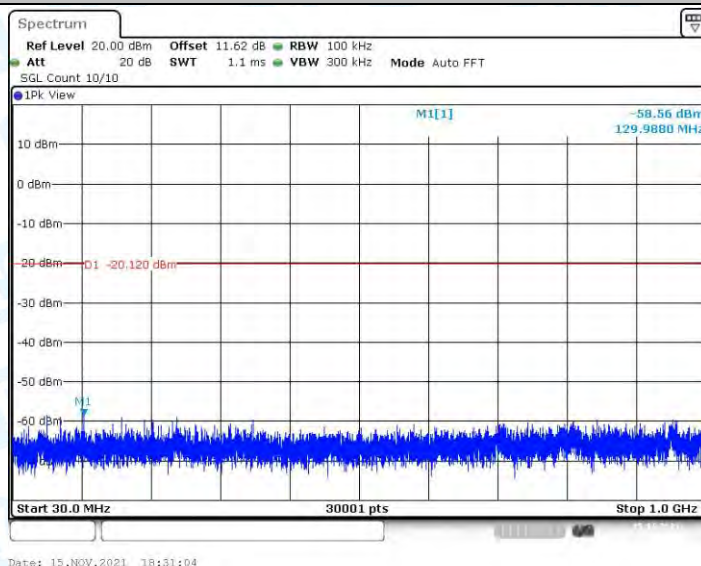
8.2.Test Graphs



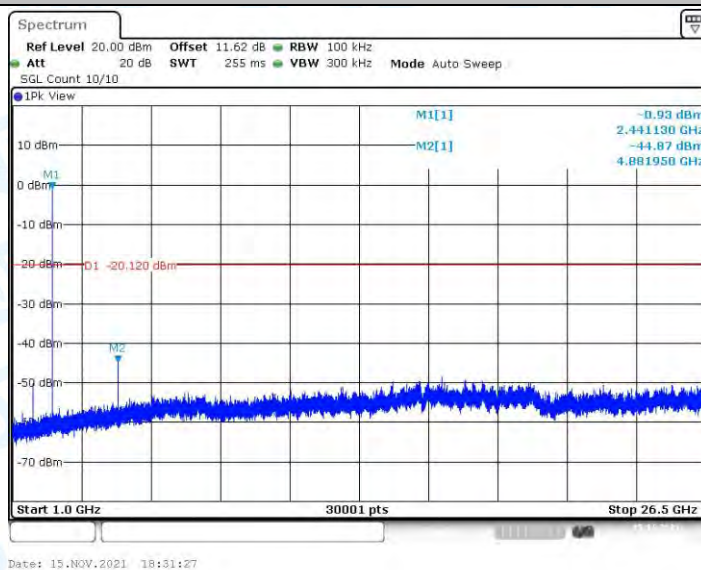
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



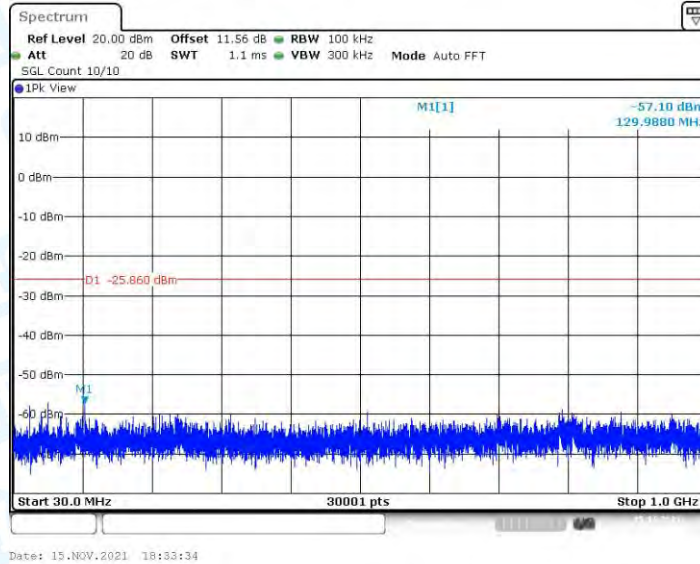
DH5_Ant1_2441_1000~26500



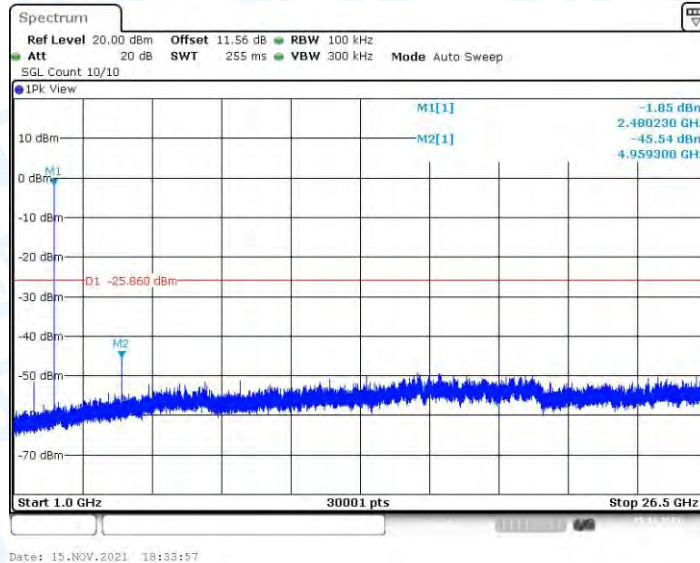
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



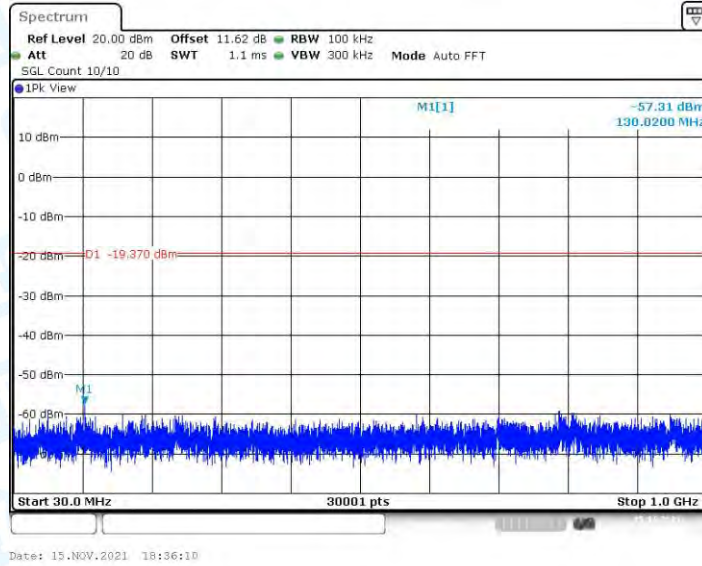
DH5_Ant1_2480_1000~26500



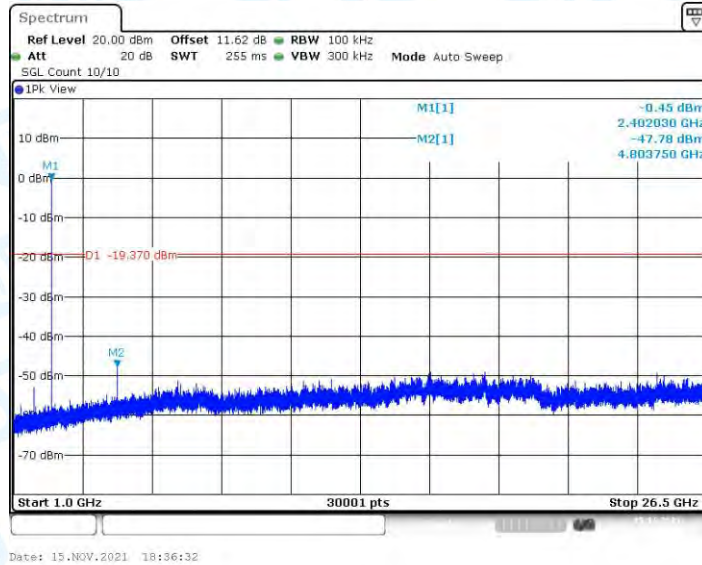
2DH5_Ant1_2402_0~Reference



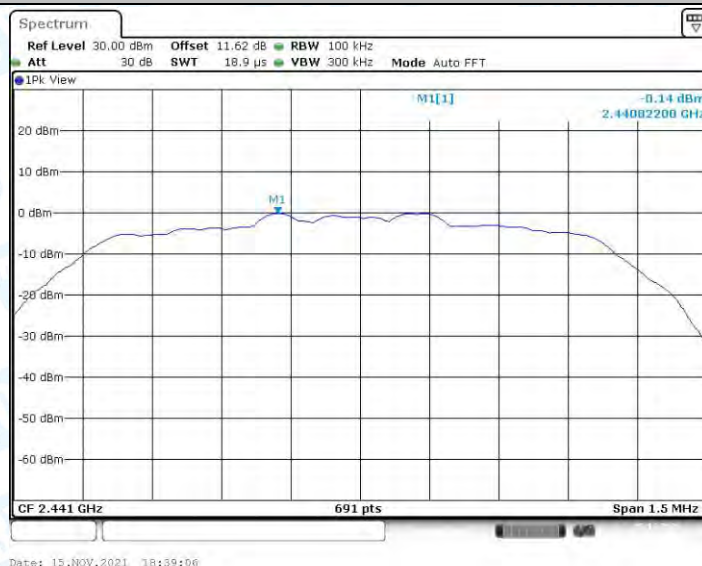
2DH5_Ant1_2402_30~1000



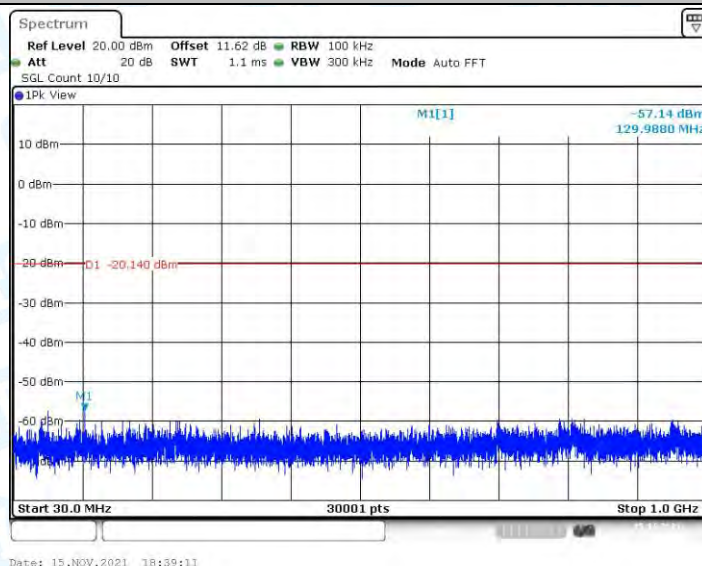
2DH5_Ant1_2402_1000~26500



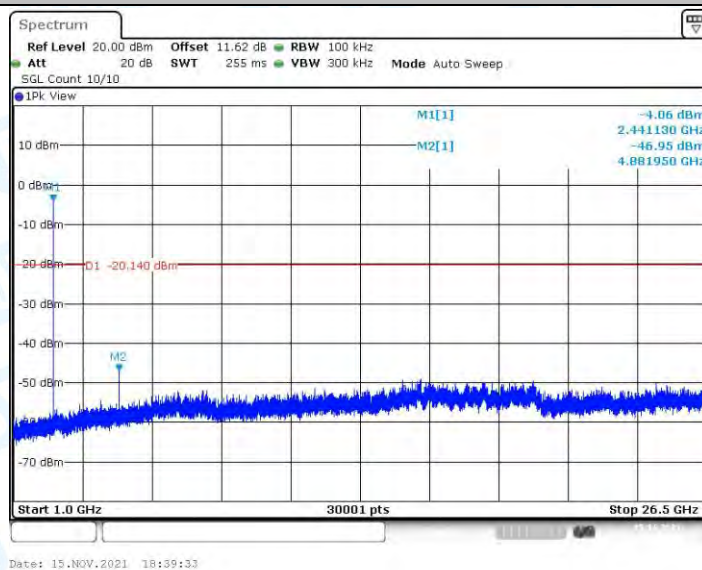
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



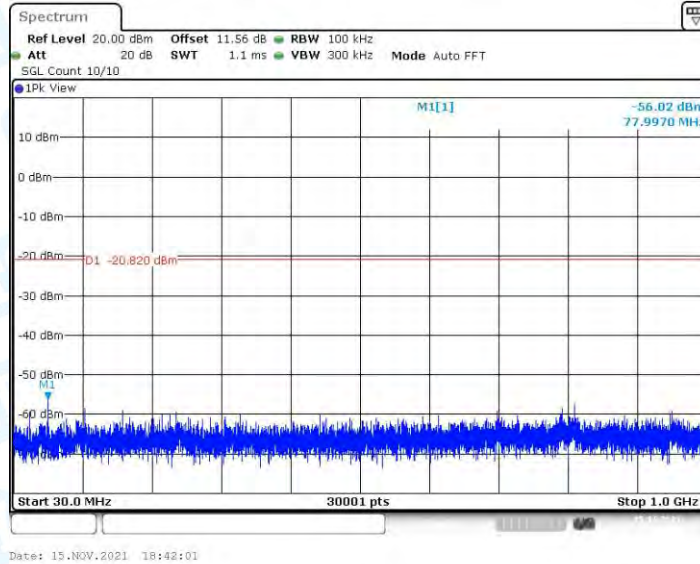
2DH5_Ant1_2441_1000~26500



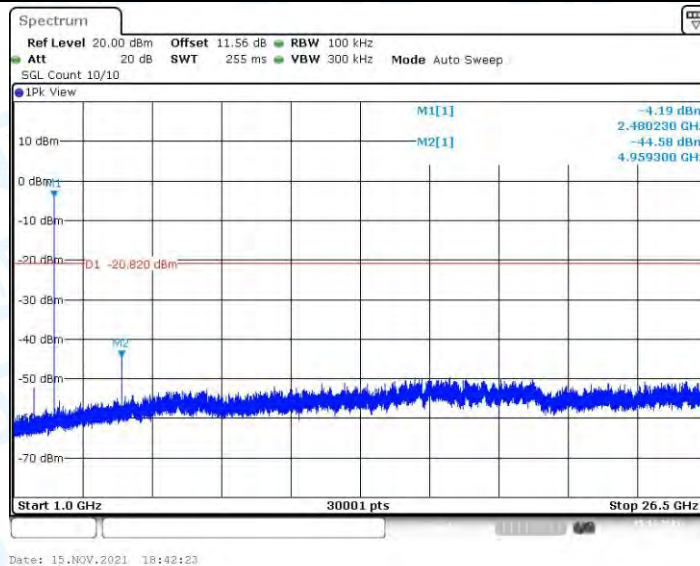
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



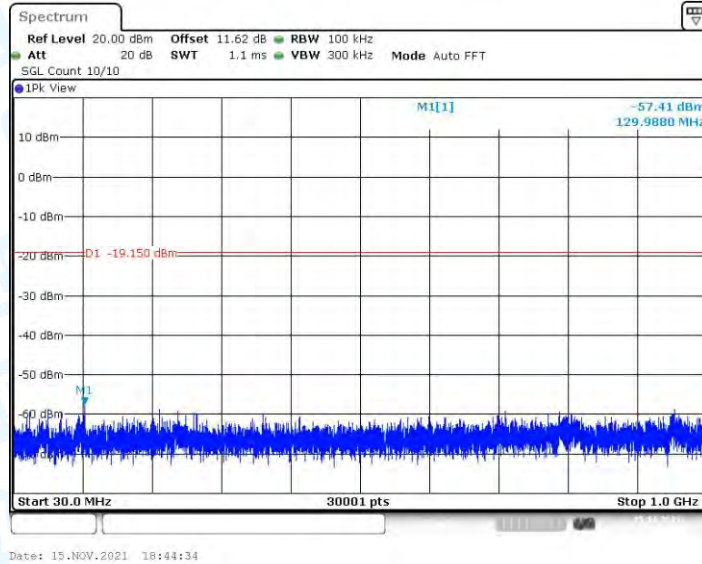
2DH5_Ant1_2480_1000~26500



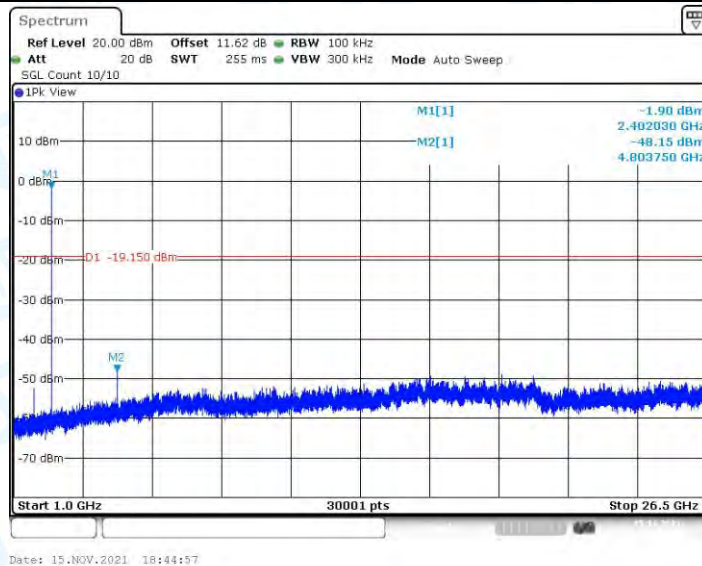
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



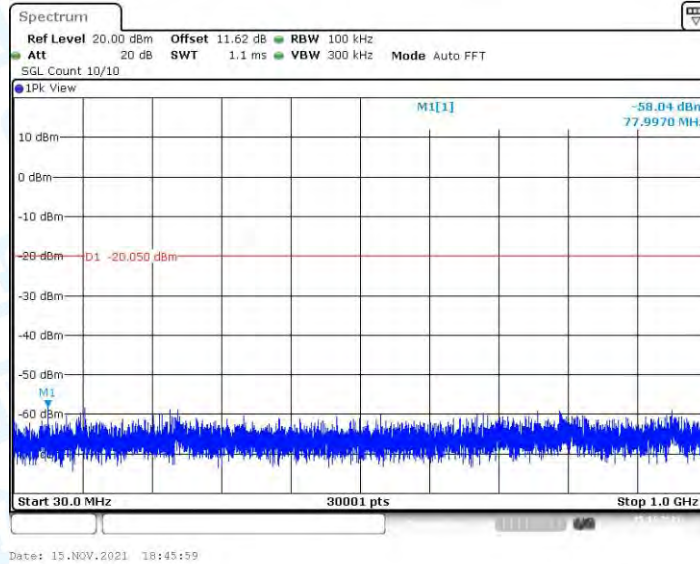
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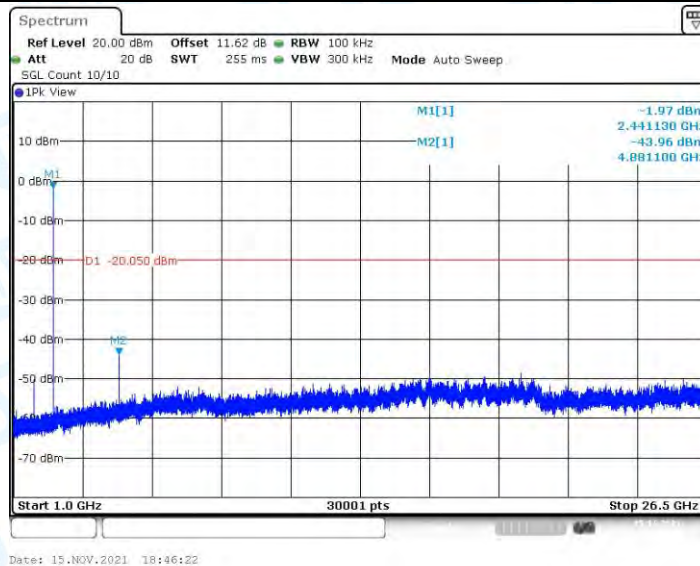
3DH5_Ant1_2441_0~Reference



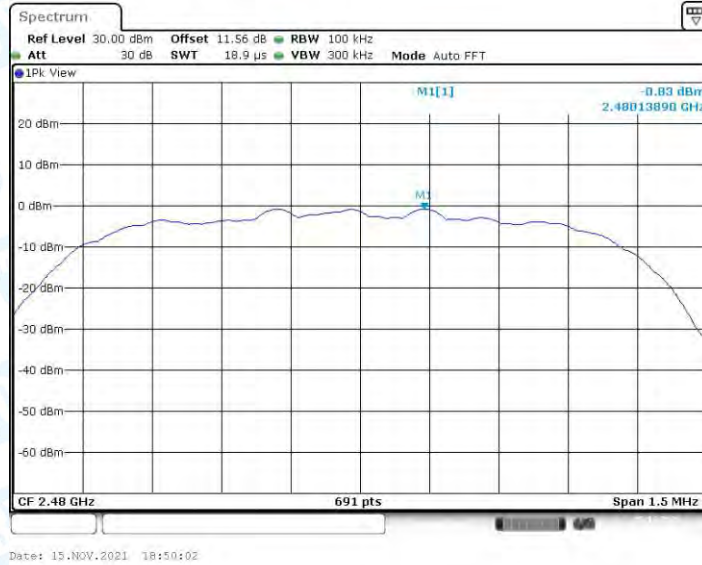
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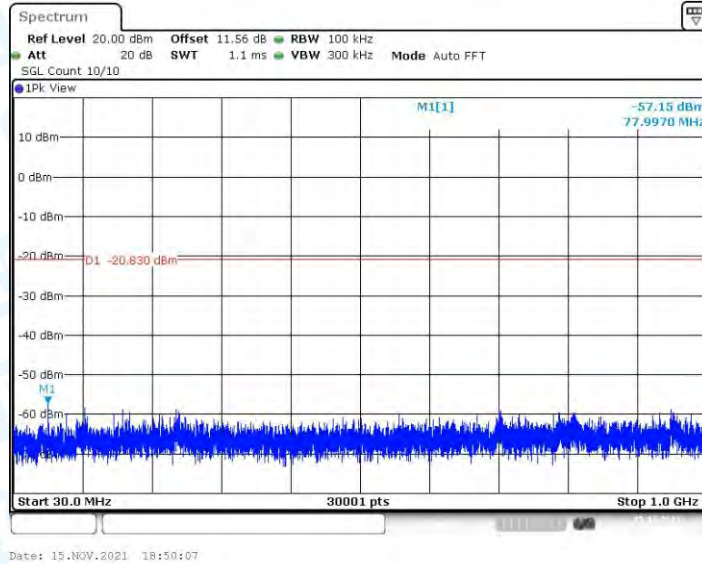
3DH5_Ant1_2441_1000~26500



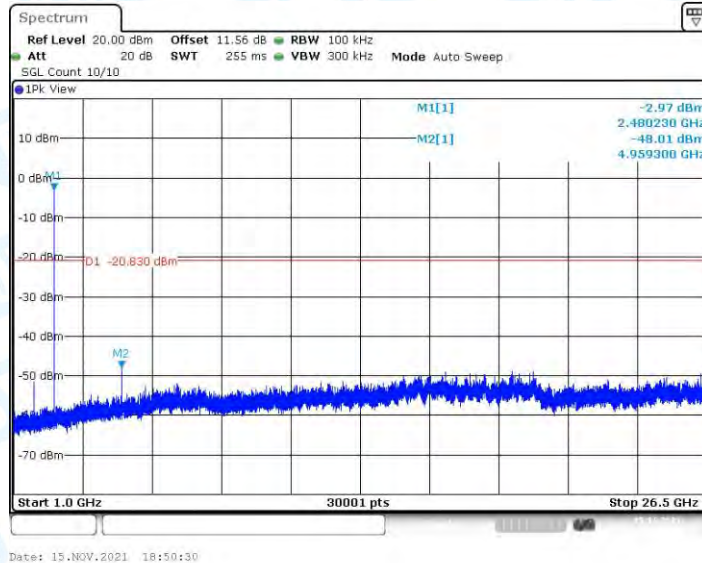
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



9. Emissions in Restricted Bands

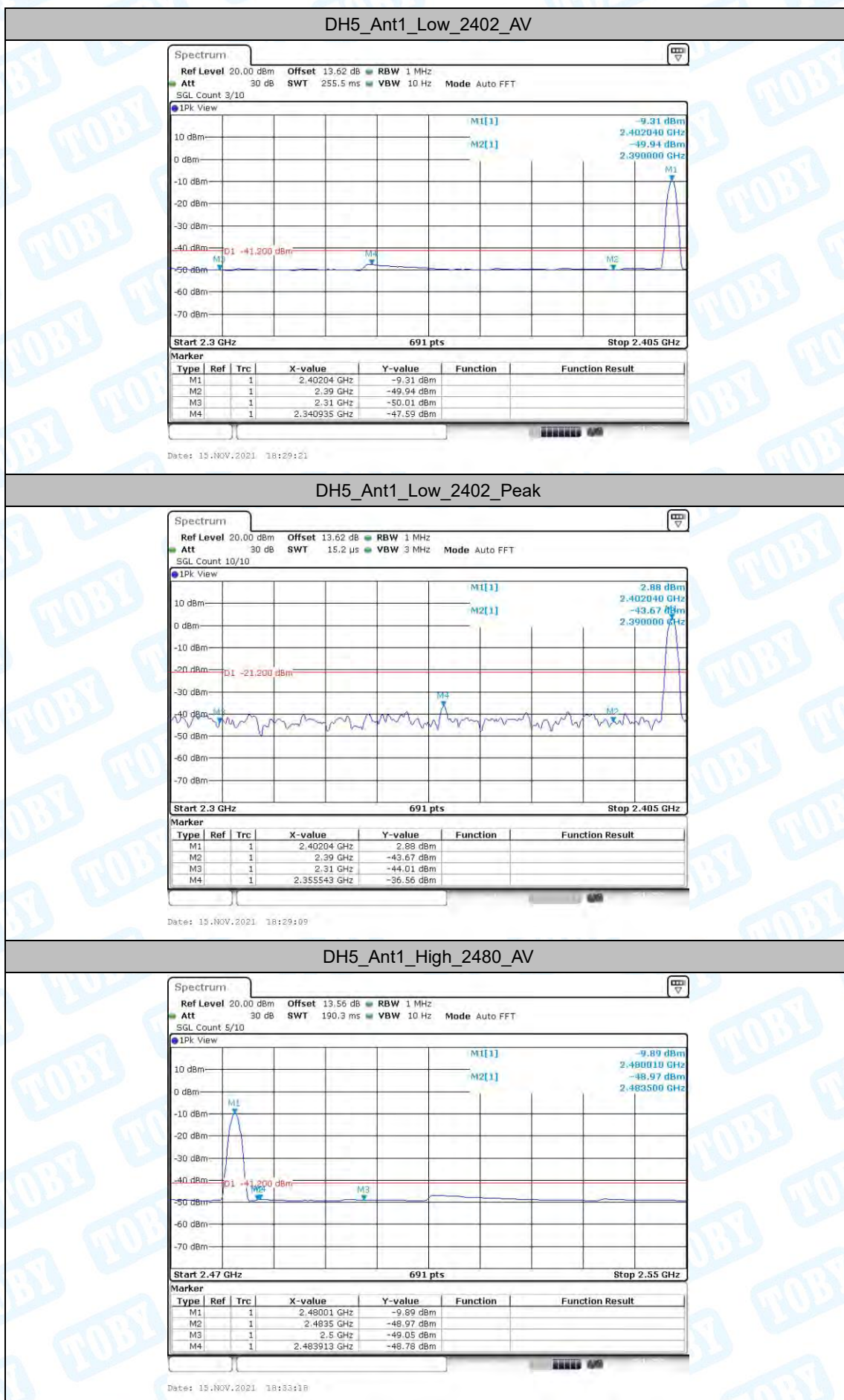
9.1. Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-50.01	≤-41.20	PASS
				AV	2340.935	-47.59	≤-41.20	PASS
				AV	2390.000	-49.94	≤-41.20	PASS
				Peak	2310.000	-44.01	≤-21.20	PASS
				Peak	2355.543	-36.56	≤-21.20	PASS
				Peak	2390.000	-43.67	≤-21.20	PASS
		High	2480	AV	2483.500	-48.97	≤-41.20	PASS
				AV	2483.913	-48.78	≤-41.20	PASS
				AV	2500.000	-49.05	≤-41.20	PASS
				Peak	2483.500	-43.12	≤-21.20	PASS
				Peak	2484.377	-38.2	≤-21.20	PASS
				Peak	2500.000	-42.83	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.99	≤-41.20	PASS
				AV	2340.783	-47.62	≤-41.20	PASS
				AV	2390.000	-49.93	≤-41.20	PASS
				Peak	2310.000	-43.06	≤-21.20	PASS
				Peak	2384.152	-37.99	≤-21.20	PASS
				Peak	2390.000	-42.8	≤-21.20	PASS
		High	2480	AV	2483.500	-48.94	≤-41.20	PASS
				AV	2483.913	-48.78	≤-41.20	PASS
				AV	2500.000	-49.07	≤-41.20	PASS
				Peak	2483.500	-44.89	≤-21.20	PASS
				Peak	2498.638	-38.41	≤-21.20	PASS
				Peak	2500.000	-41.51	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-49.99	≤-41.20	PASS
				AV	2340.783	-47.53	≤-41.20	PASS
				AV	2390.000	-49.92	≤-41.20	PASS
				Peak	2310.000	-42.75	≤-21.20	PASS
				Peak	2340.022	-37.54	≤-21.20	PASS
				Peak	2390.000	-45.57	≤-21.20	PASS
		High	2480	AV	2483.500	-48.95	≤-41.20	PASS
				AV	2483.913	-48.77	≤-41.20	PASS
				AV	2500.000	-49.05	≤-41.20	PASS
				Peak	2483.500	-43.07	≤-21.20	PASS
				Peak	2488.551	-38.03	≤-21.20	PASS
				Peak	2500.000	-44.74	≤-21.20	PASS

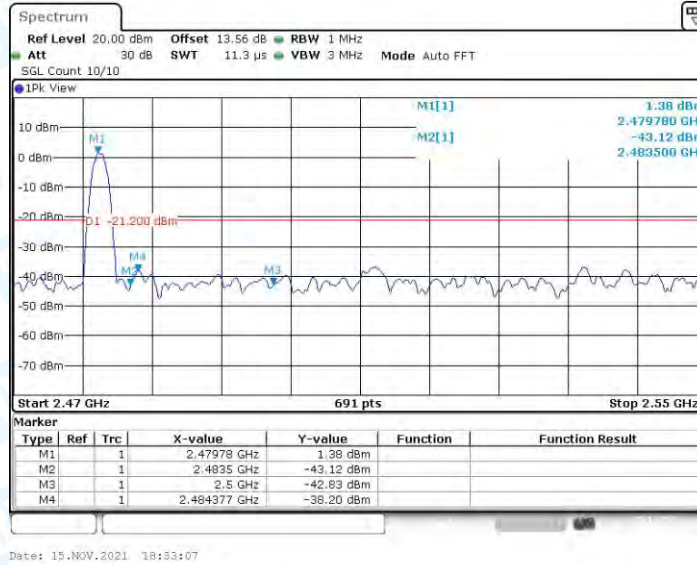
Note:

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.

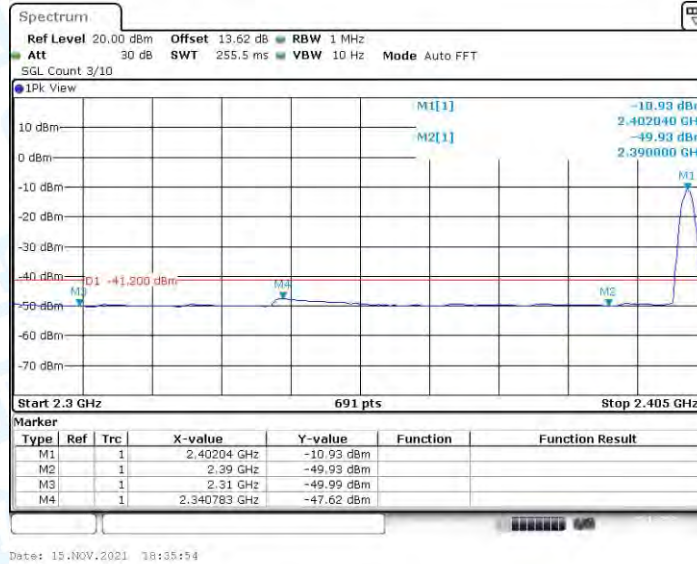
9.2. Test Graphs



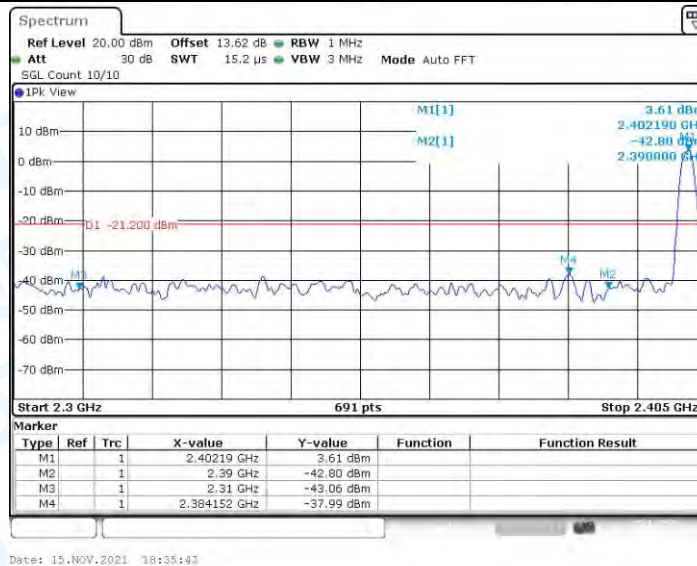
DH5_Ant1_High_2480_Peak



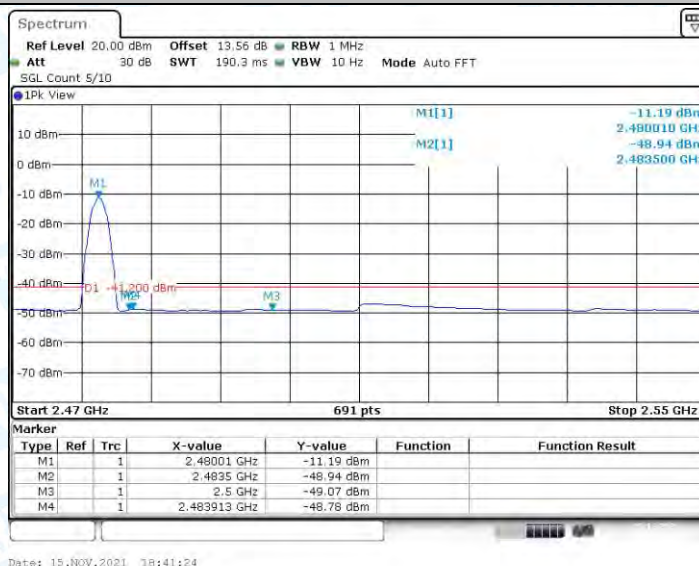
2DH5_Ant1_Low_2402_AV



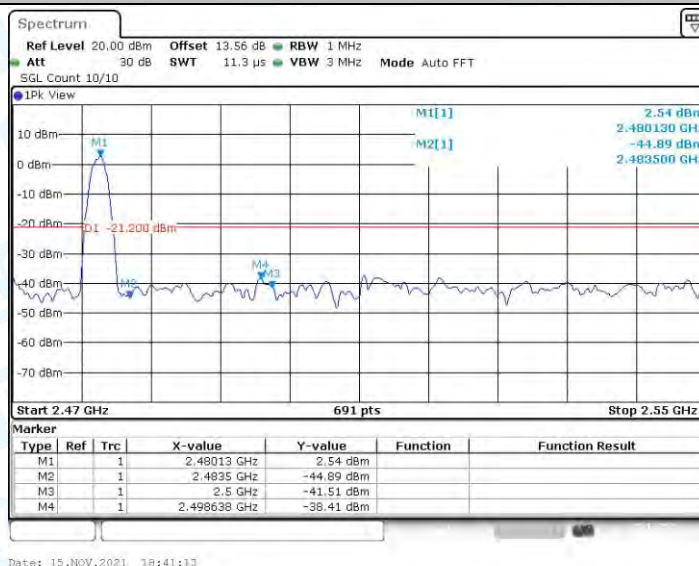
2DH5_Ant1_Low_2402_Peak



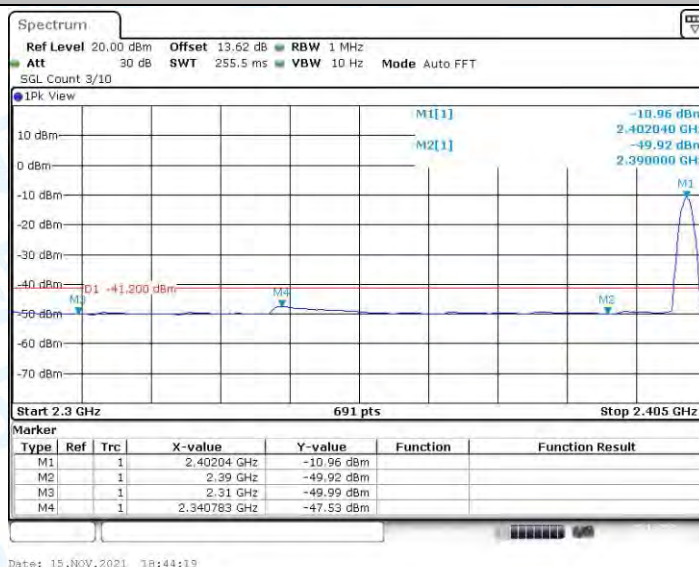
2DH5_Ant1_High_2480_AV



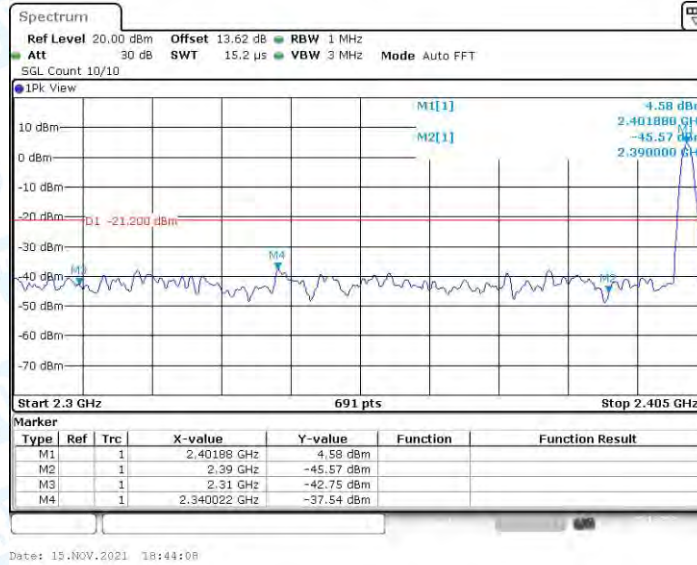
2DH5_Ant1_High_2480_Peak



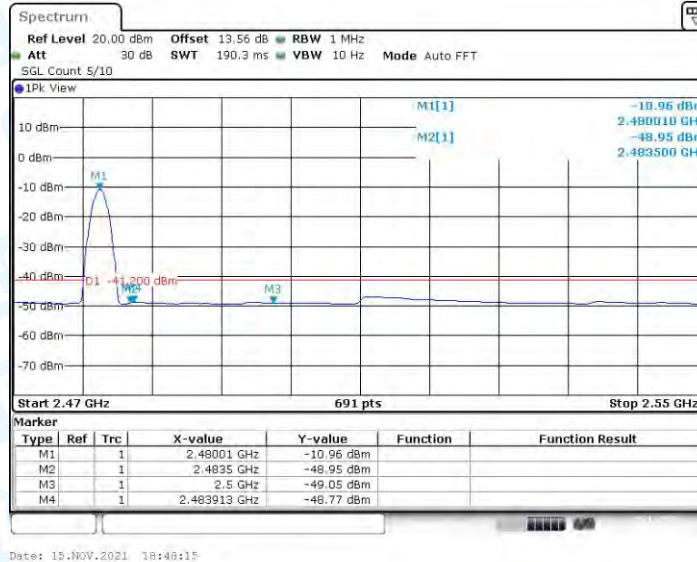
3DH5_Ant1_Low_2402_AV



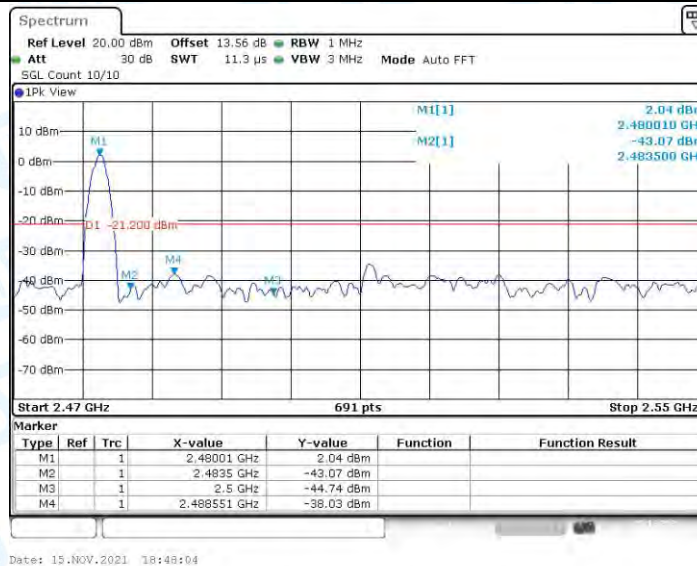
3DH5_Ant1_Low_2402_Peak



3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak



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