

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

General Description of EUT	
Product Name:	Projector
HVIN/Models No.:	H1
Blueooth Module:	BCM43569PKFFBG(Module2)
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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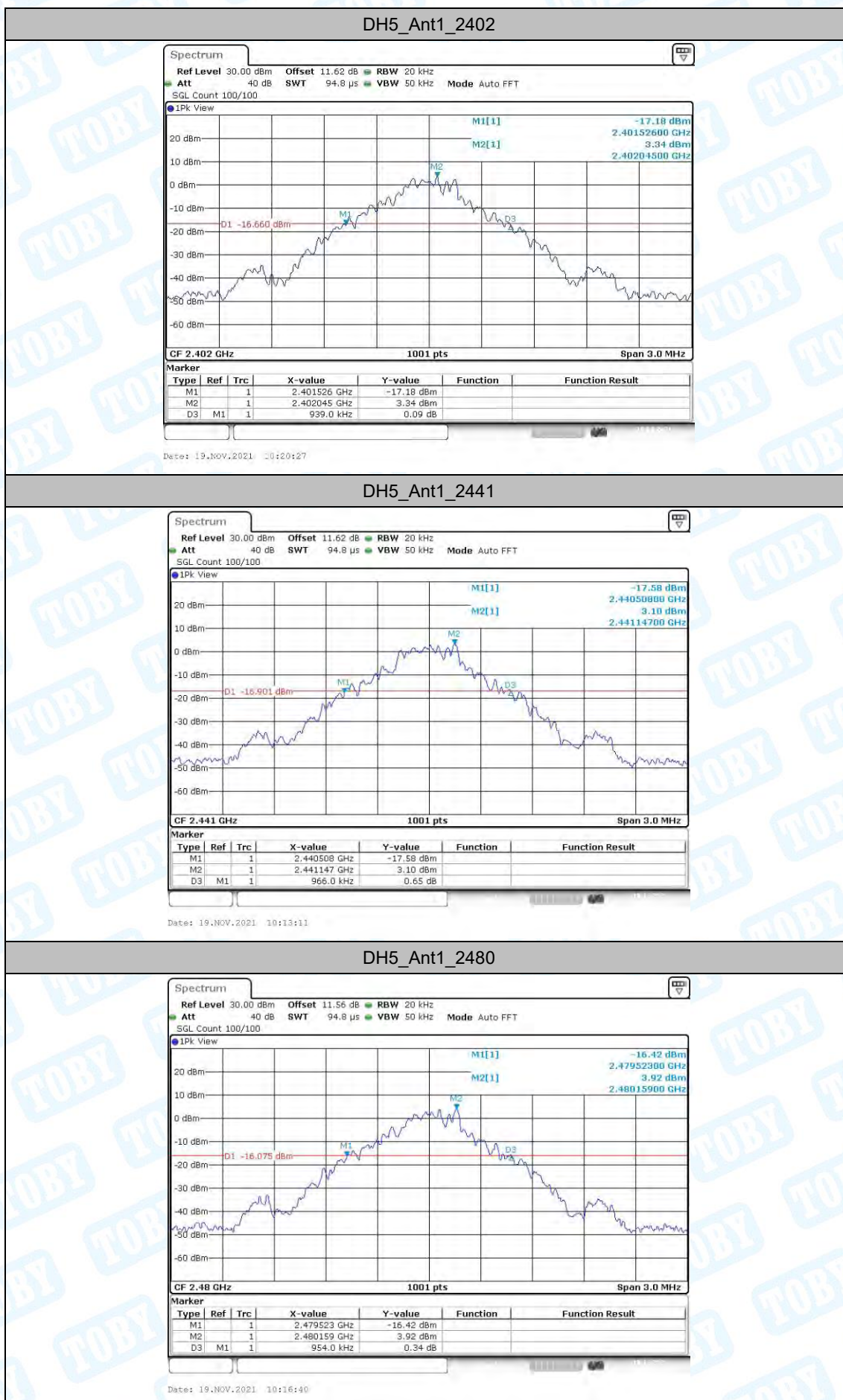
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1. 20dB Emission Bandwidth

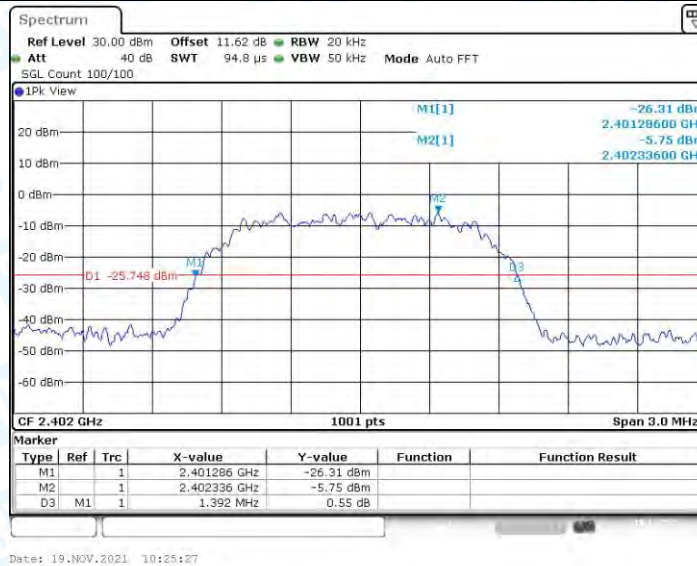
1.1. Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.939	2401.526	2402.465	---	PASS
		2441	0.966	2440.508	2441.474	---	PASS
		2480	0.954	2479.523	2480.477	---	PASS
2DH5	Ant1	2402	1.392	2401.286	2402.678	---	PASS
		2441	1.344	2440.325	2441.669	---	PASS
		2480	1.329	2479.337	2480.666	---	PASS
3DH5	Ant1	2402	1.353	2401.307	2402.660	---	PASS
		2441	1.320	2440.340	2441.660	---	PASS
		2480	1.320	2479.328	2480.648	---	PASS

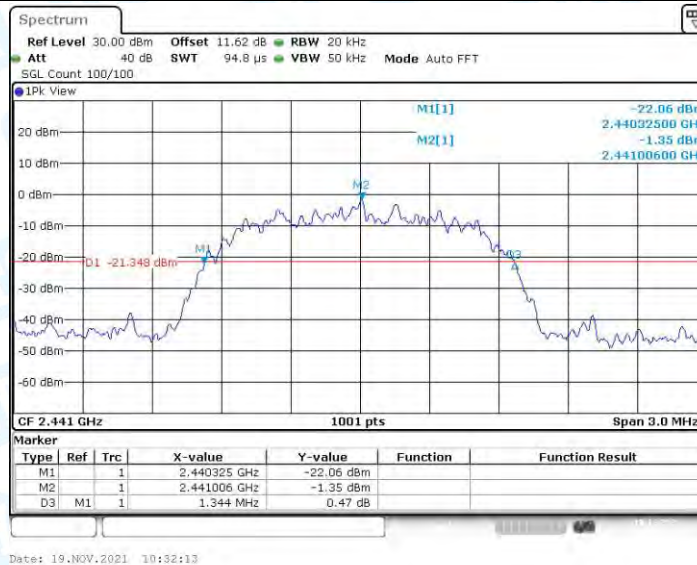
1.2. Test Graphs



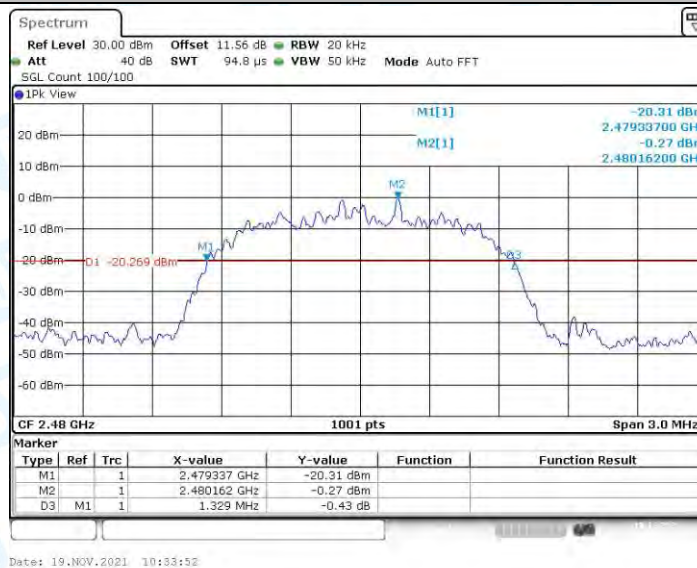
2DH5_Ant1_2402



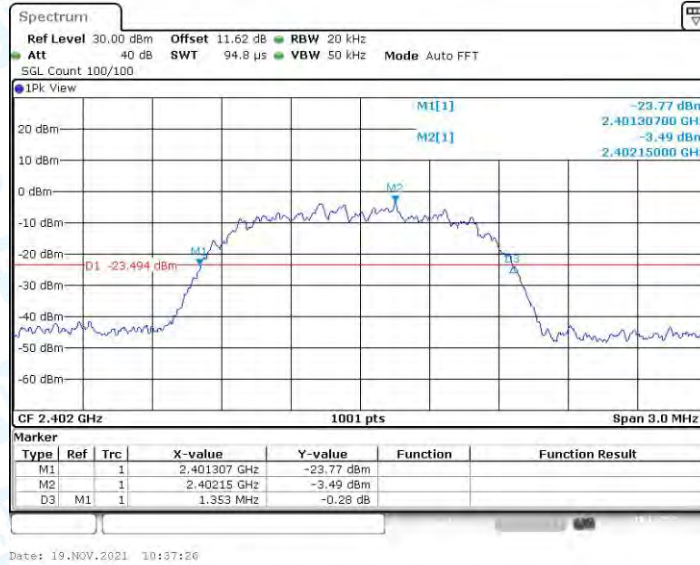
2DH5_Ant1_2441



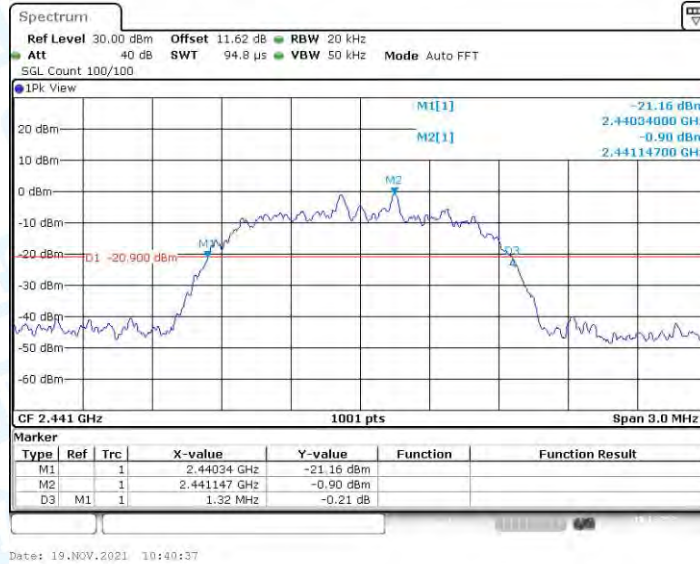
2DH5_Ant1_2480



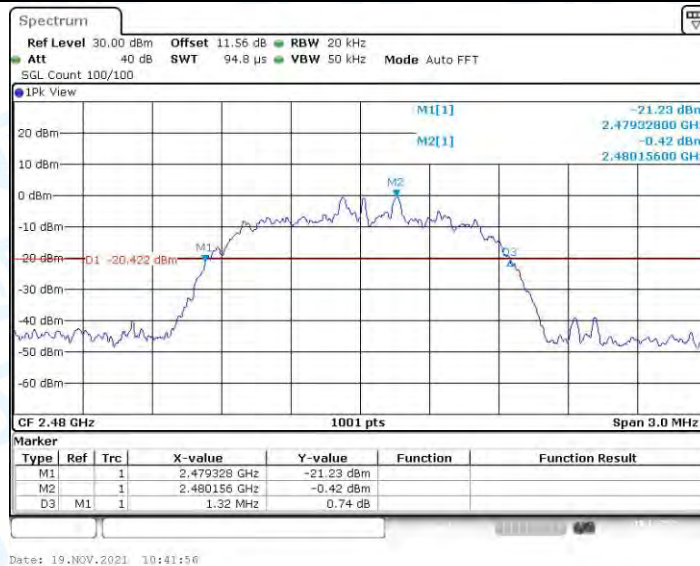
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



2. Occupied Channel Bandwidth

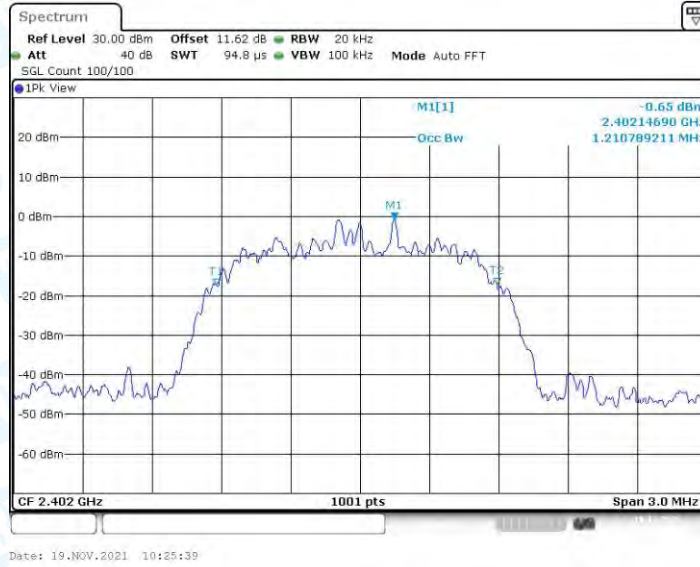
2.1. Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.923	2401.526	2402.450	---	PASS
		2441	0.869	2440.559	2441.429	---	PASS
		2480	0.896	2479.553	2480.450	---	PASS
2DH5	Ant1	2402	1.211	2401.380	2402.590	---	PASS
		2441	1.208	2440.389	2441.596	---	PASS
		2480	1.211	2479.392	2480.602	---	PASS
3DH5	Ant1	2402	1.214	2401.371	2402.584	---	PASS
		2441	1.217	2440.377	2441.593	---	PASS
		2480	1.205	2479.395	2480.599	---	PASS

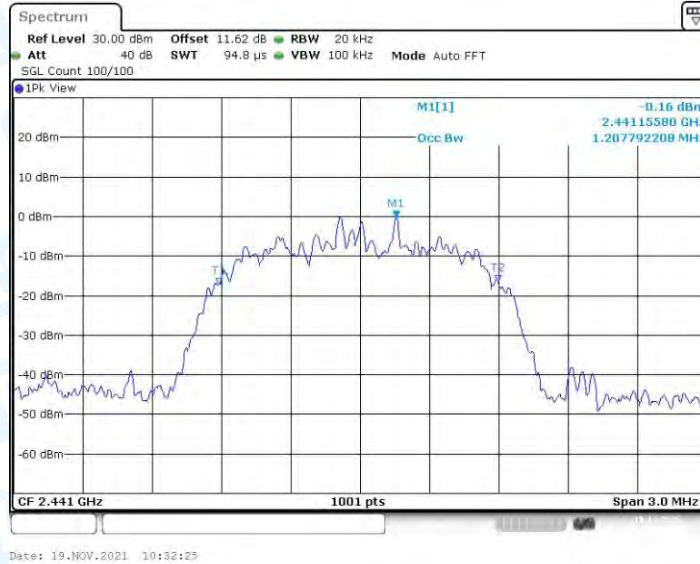
2.2. Test Graphs



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	7.15	≤21	PASS
		2441	7.37	≤21	PASS
		2480	7.52	≤21	PASS
2DH5	Ant1	2402	4.95	≤21	PASS
		2441	5.44	≤21	PASS
		2480	5.6	≤21	PASS
3DH5	Ant1	2402	4.95	≤21	PASS
		2441	5.42	≤21	PASS
		2480	5.7	≤21	PASS

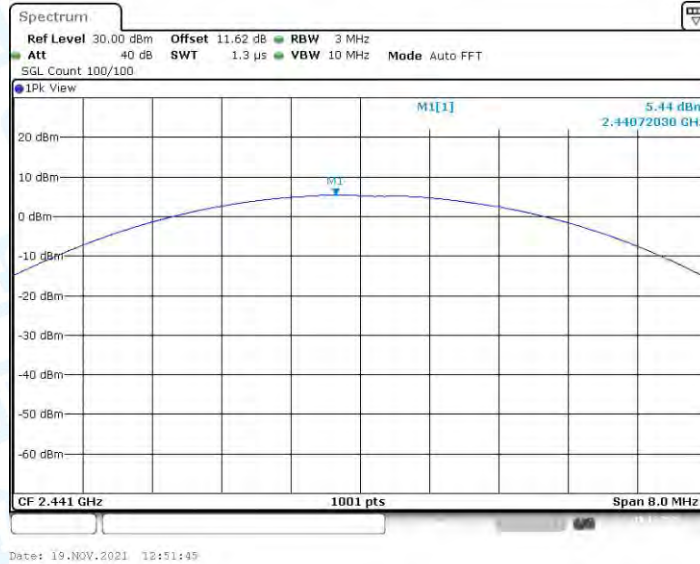
3.2.Test Graphs



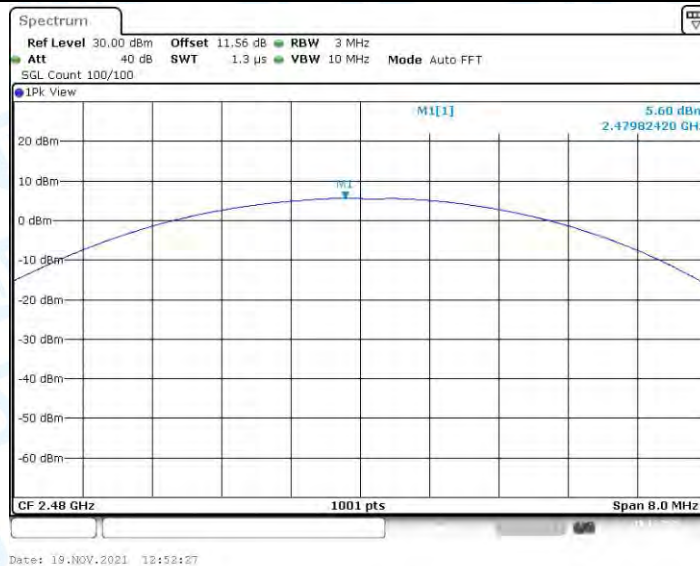
2DH5_Ant1_2402



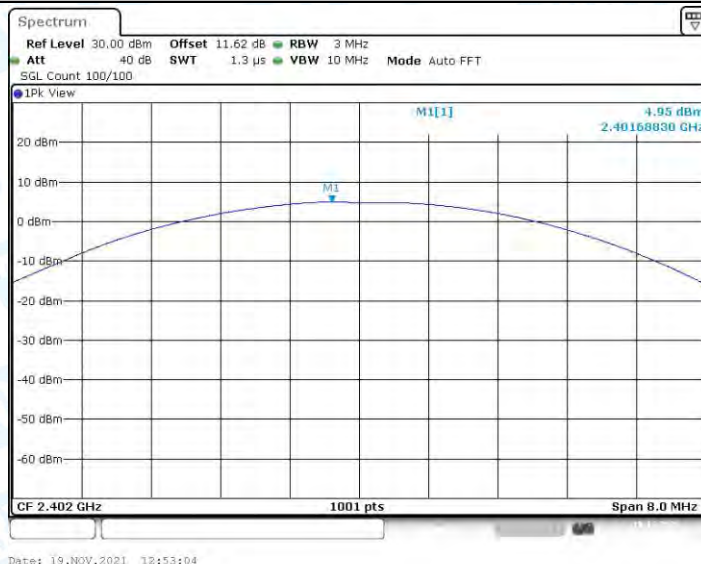
2DH5_Ant1_2441



2DH5_Ant1_2480



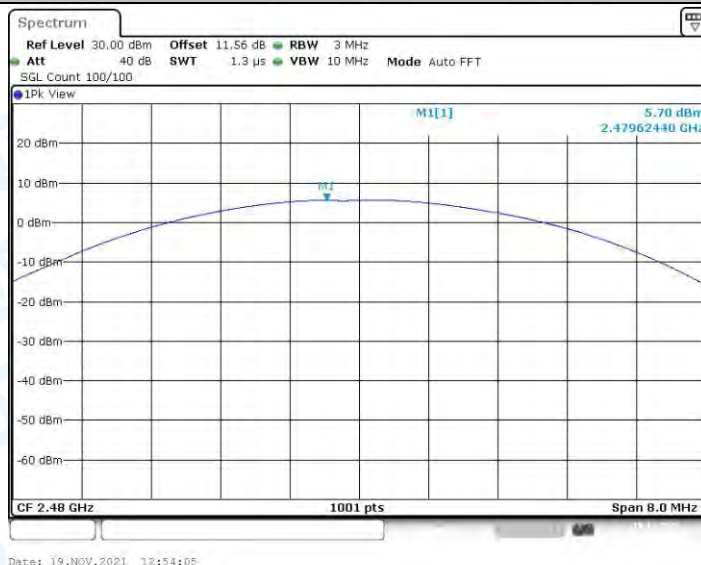
3DH5_Ant1_2402



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	1.29	≥ 0.966	PASS
2DH5	Ant1	Hop	1.296	≥ 0.928	PASS
3DH5	Ant1	Hop	1.061	≥ 0.902	PASS

4.2.Test Graphs

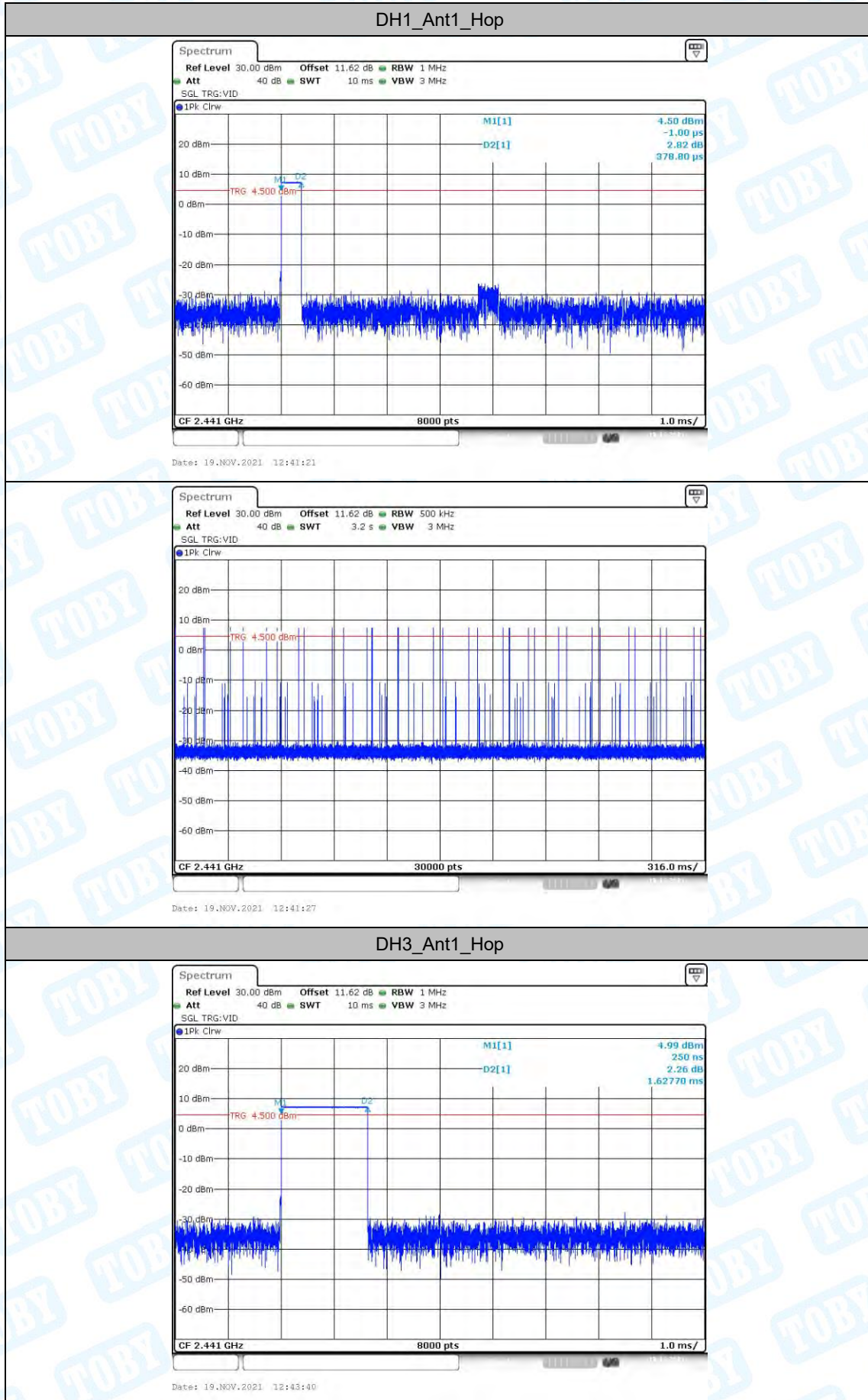


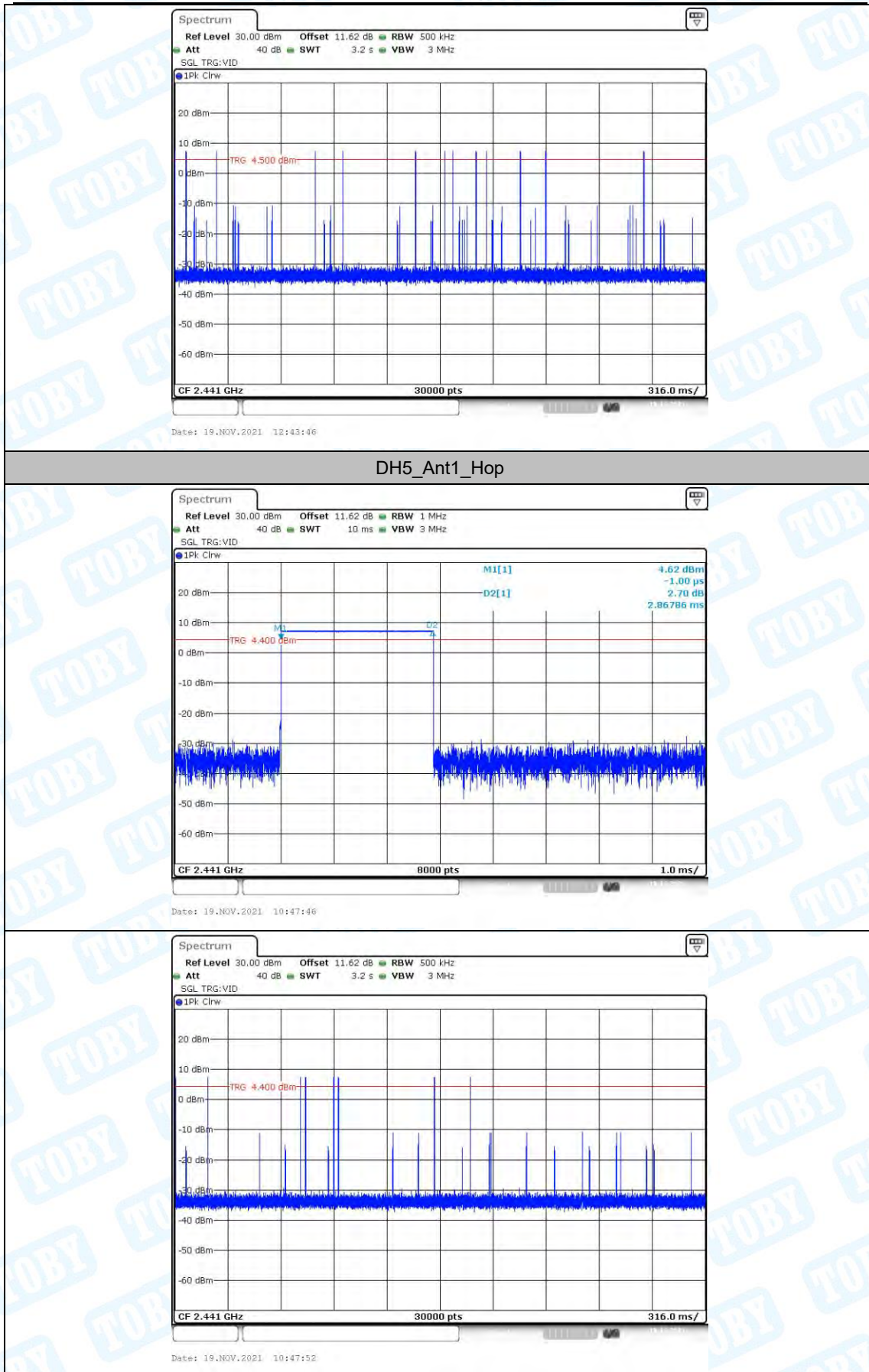
5. Time of occupancy

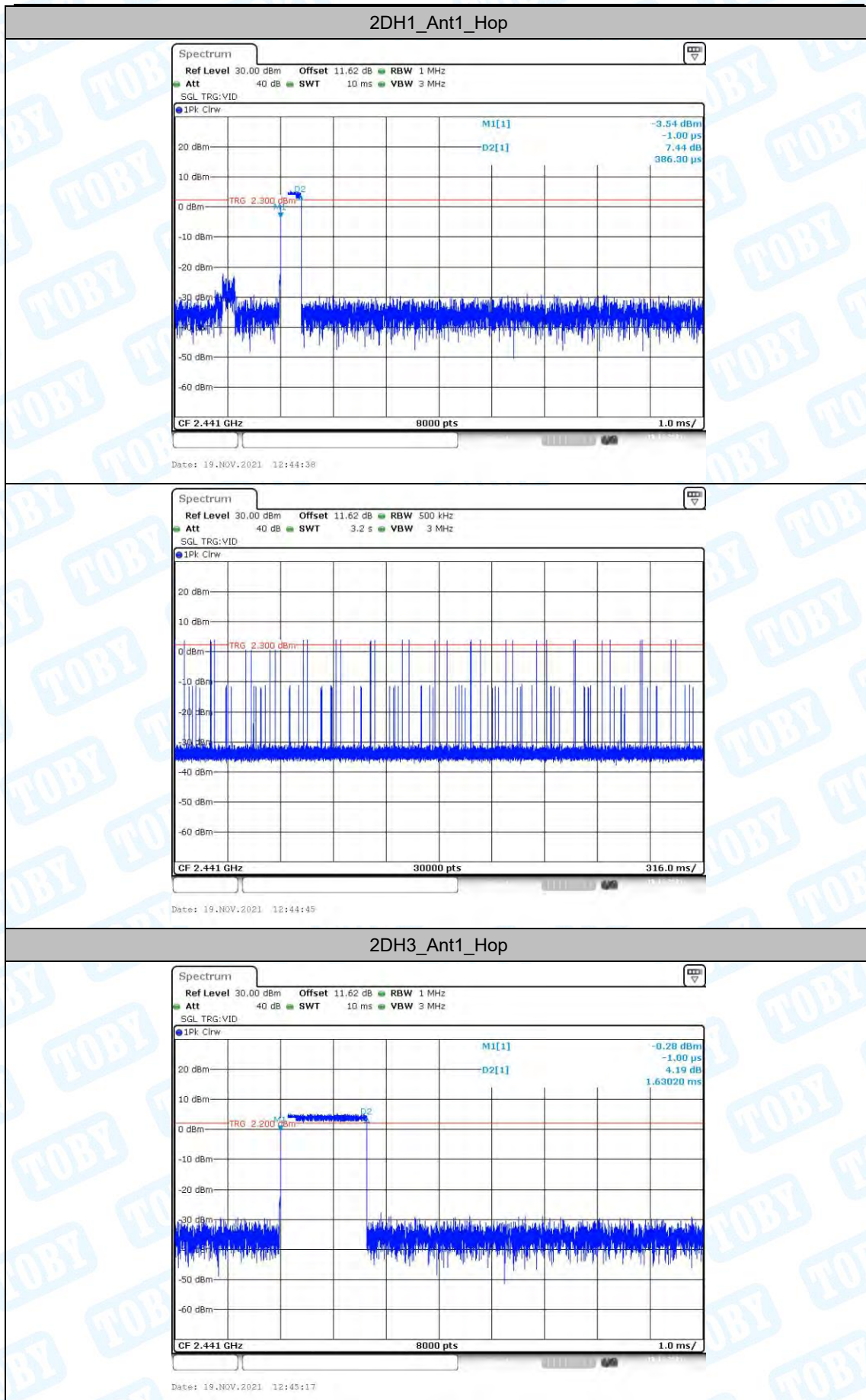
5.1. Test Result

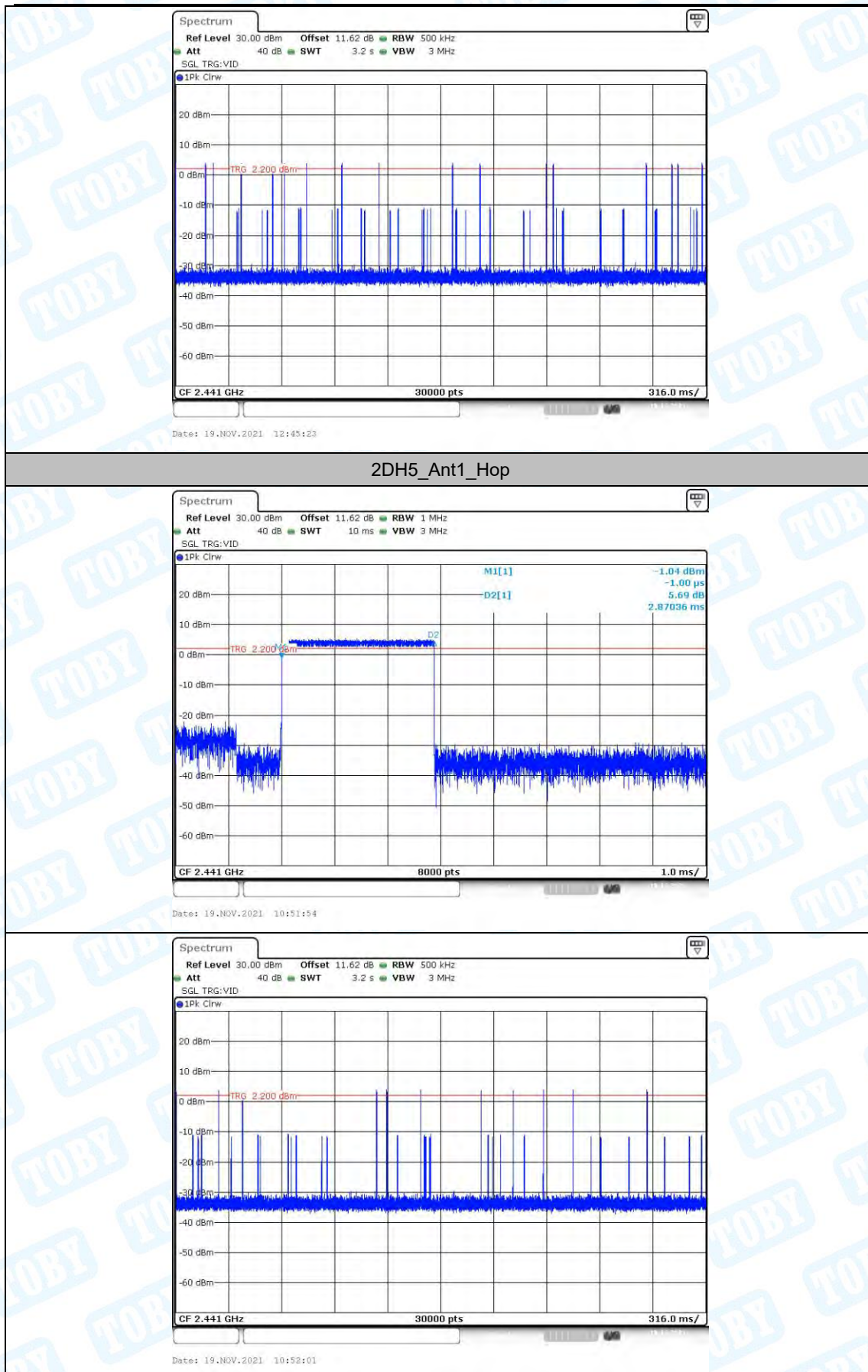
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.38	330	0.125	≤0.4	PASS
DH3	Ant1	Hop	1.63	140	0.228	≤0.4	PASS
DH5	Ant1	Hop	2.87	80	0.229	≤0.4	PASS
2DH1	Ant1	Hop	0.39	320	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.63	170	0.277	≤0.4	PASS
2DH5	Ant1	Hop	2.87	110	0.316	≤0.4	PASS
3DH1	Ant1	Hop	1.63	160	0.261	≤0.4	PASS
3DH3	Ant1	Hop	2.87	60	0.172	≤0.4	PASS
3DH5	Ant1	Hop	2.87	70	0.201	≤0.4	PASS

5.2.Test Graphs

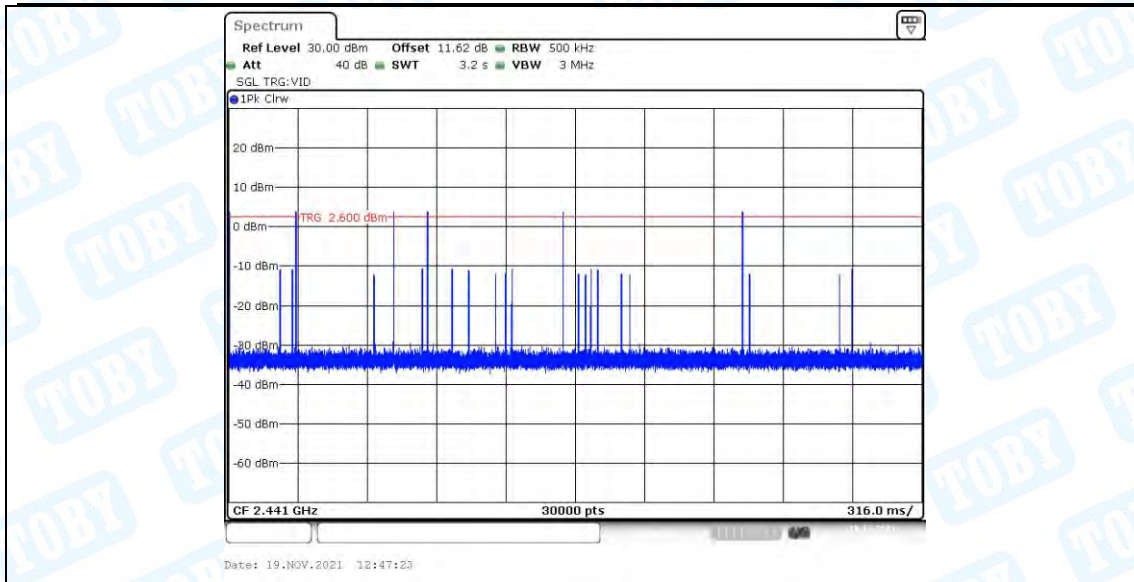




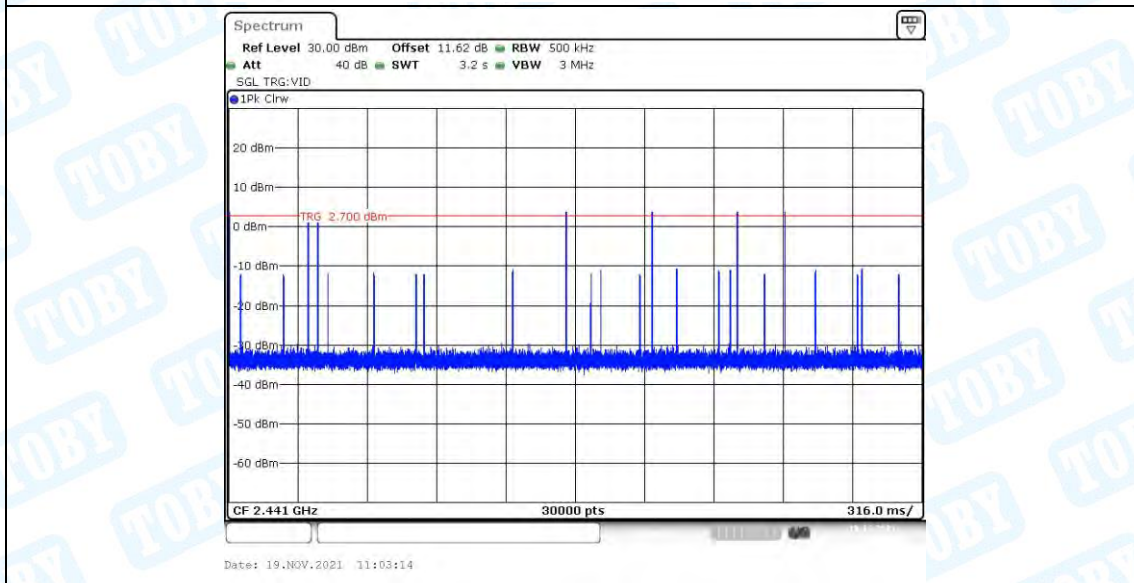
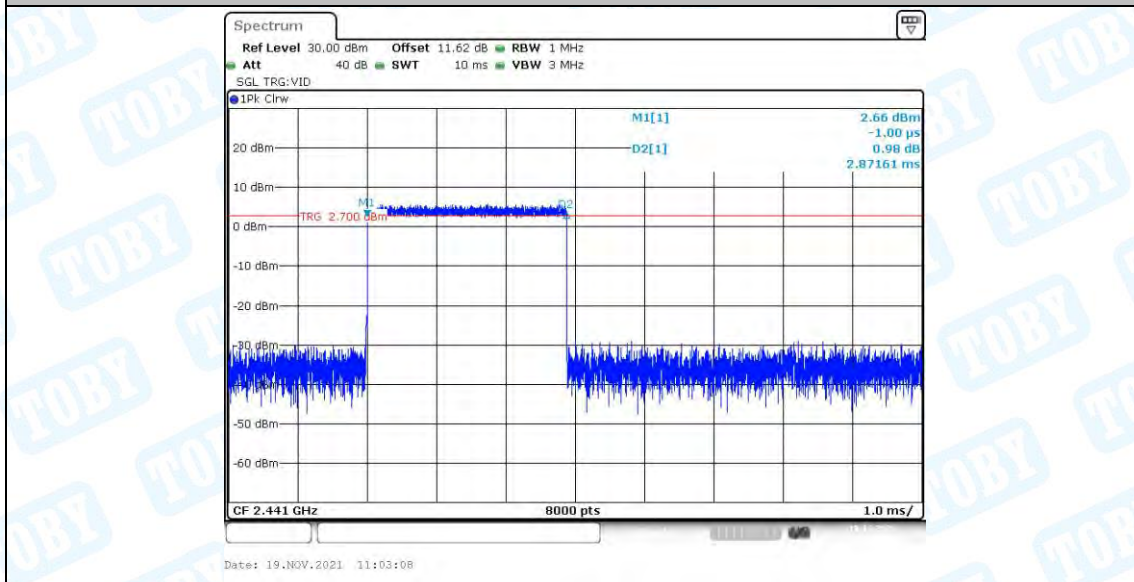








3DH5_Ant1_Hop



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

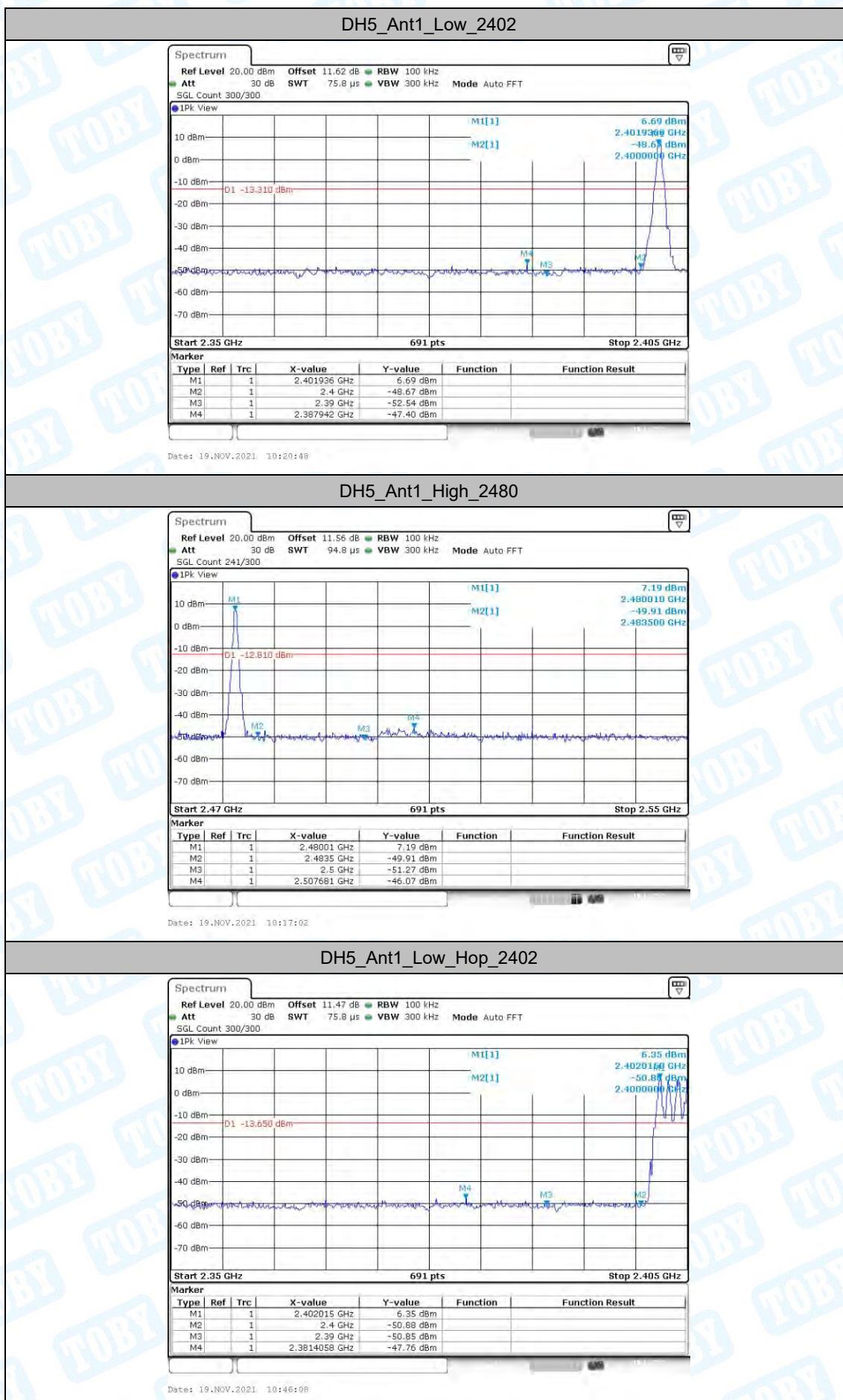


7. Band edge measurements

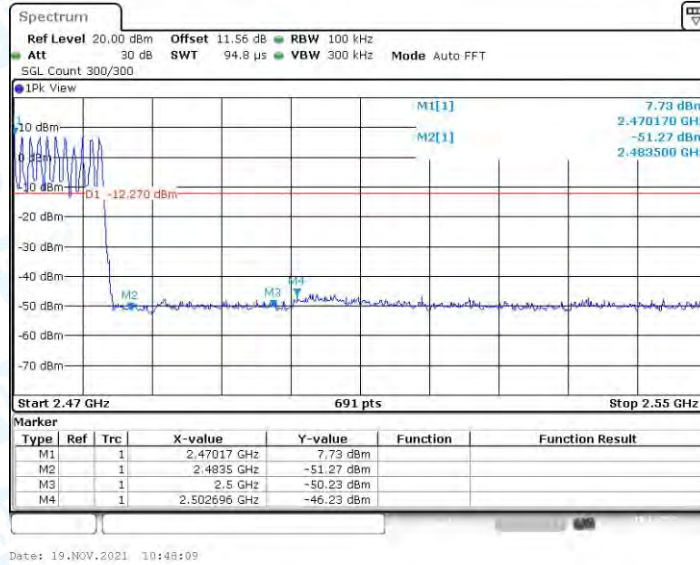
7.1. Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	6.69	-47.4	≤ -13.31	PASS
		High	2480	7.19	-46.07	≤ -12.81	PASS
		Low	Hop_2402	6.35	-47.76	≤ -13.65	PASS
		High	Hop_2480	7.73	-46.23	≤ -12.27	PASS
2DH5	Ant1	Low	2402	2.47	-47.39	≤ -17.53	PASS
		High	2480	2.83	-46.44	≤ -17.17	PASS
		Low	Hop_2402	1.41	-48.53	≤ -18.59	PASS
		High	Hop_2480	3.52	-47	≤ -16.48	PASS
3DH5	Ant1	Low	2402	3.14	-47.11	≤ -16.86	PASS
		High	2480	3.29	-46.22	≤ -16.71	PASS
		Low	Hop_2402	-0.47	-47.89	≤ -20.47	PASS
		High	Hop_2480	1.04	-46.1	≤ -18.96	PASS

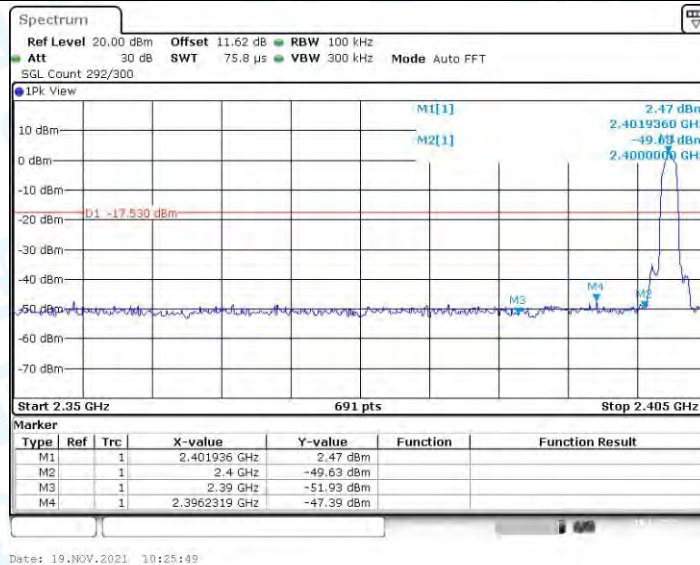
7.2. Test Graphs



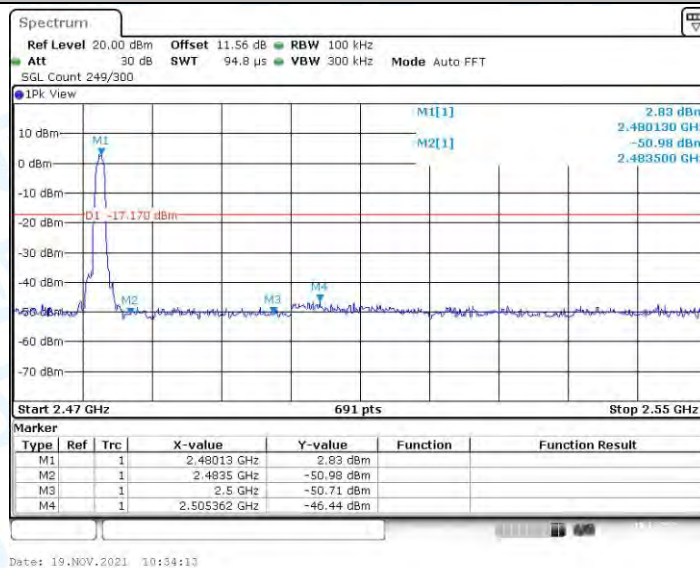
DH5_Ant1_High_Hop_2480



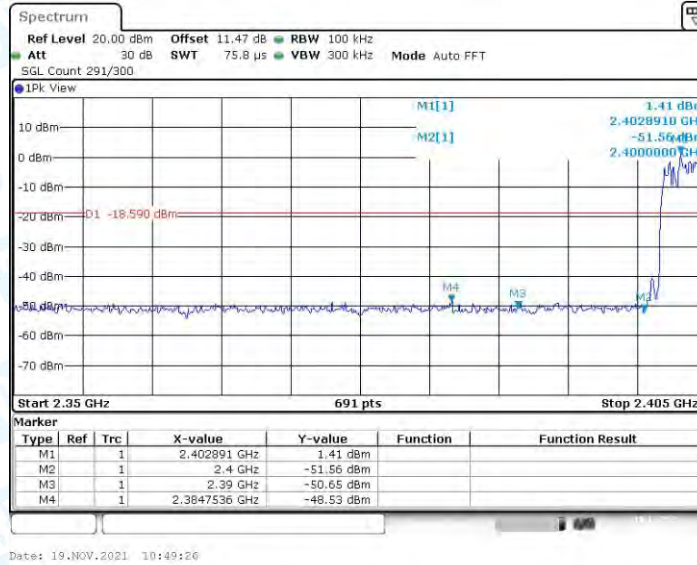
2DH5_Ant1_Low_2402



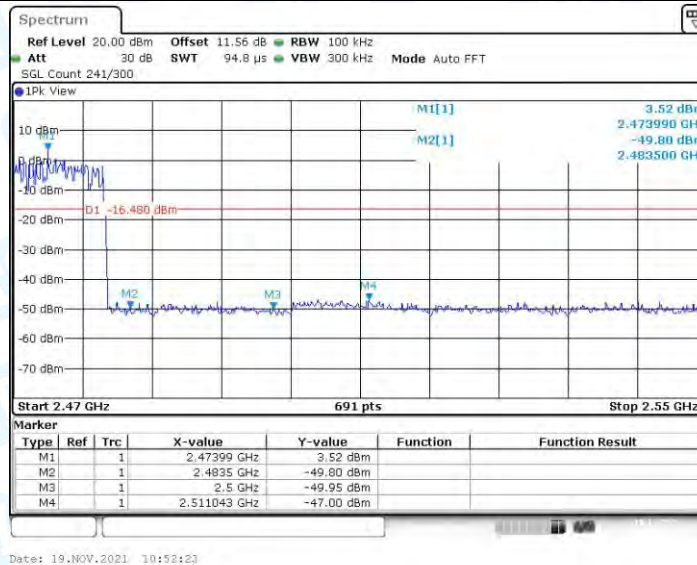
2DH5_Ant1_High_2480



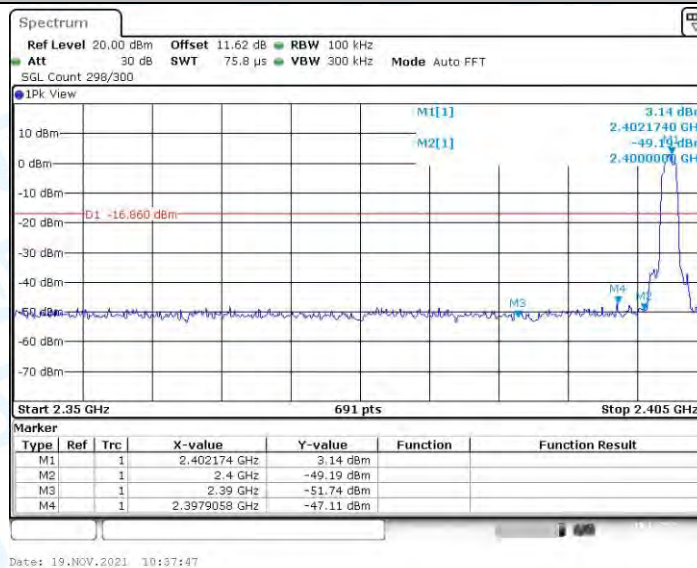
2DH5_Ant1_Low_Hop_2402



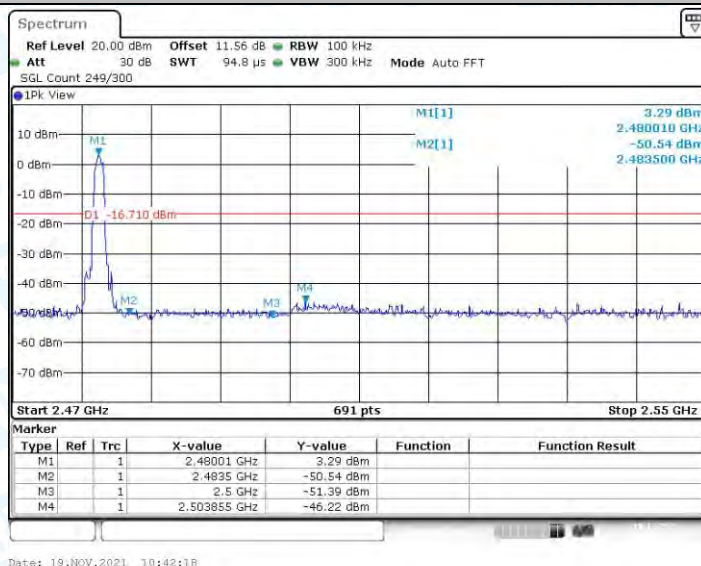
2DH5_Ant1_High_Hop_2480



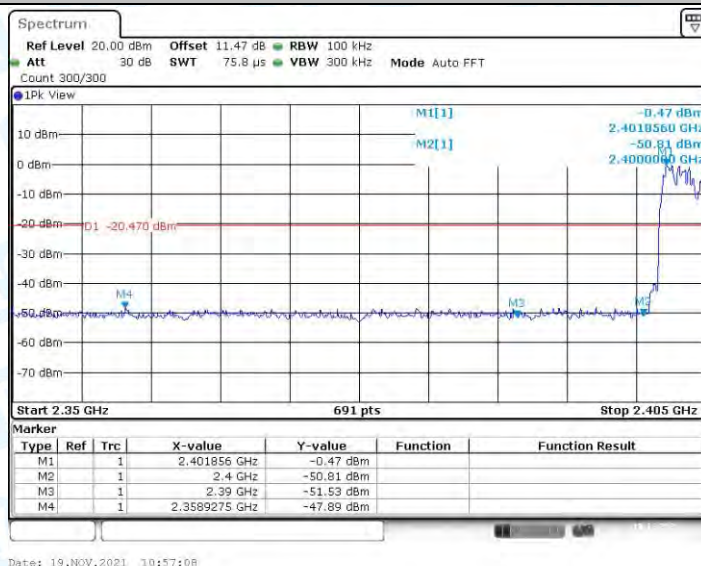
3DH5_Ant1_Low_2402



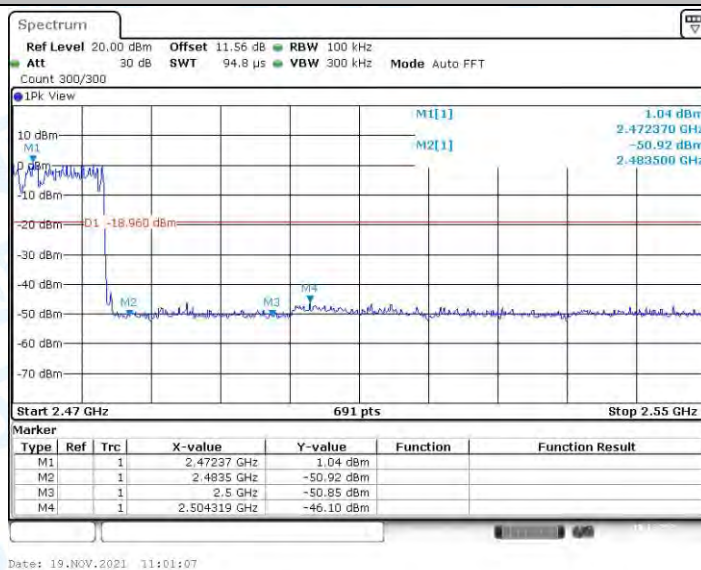
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

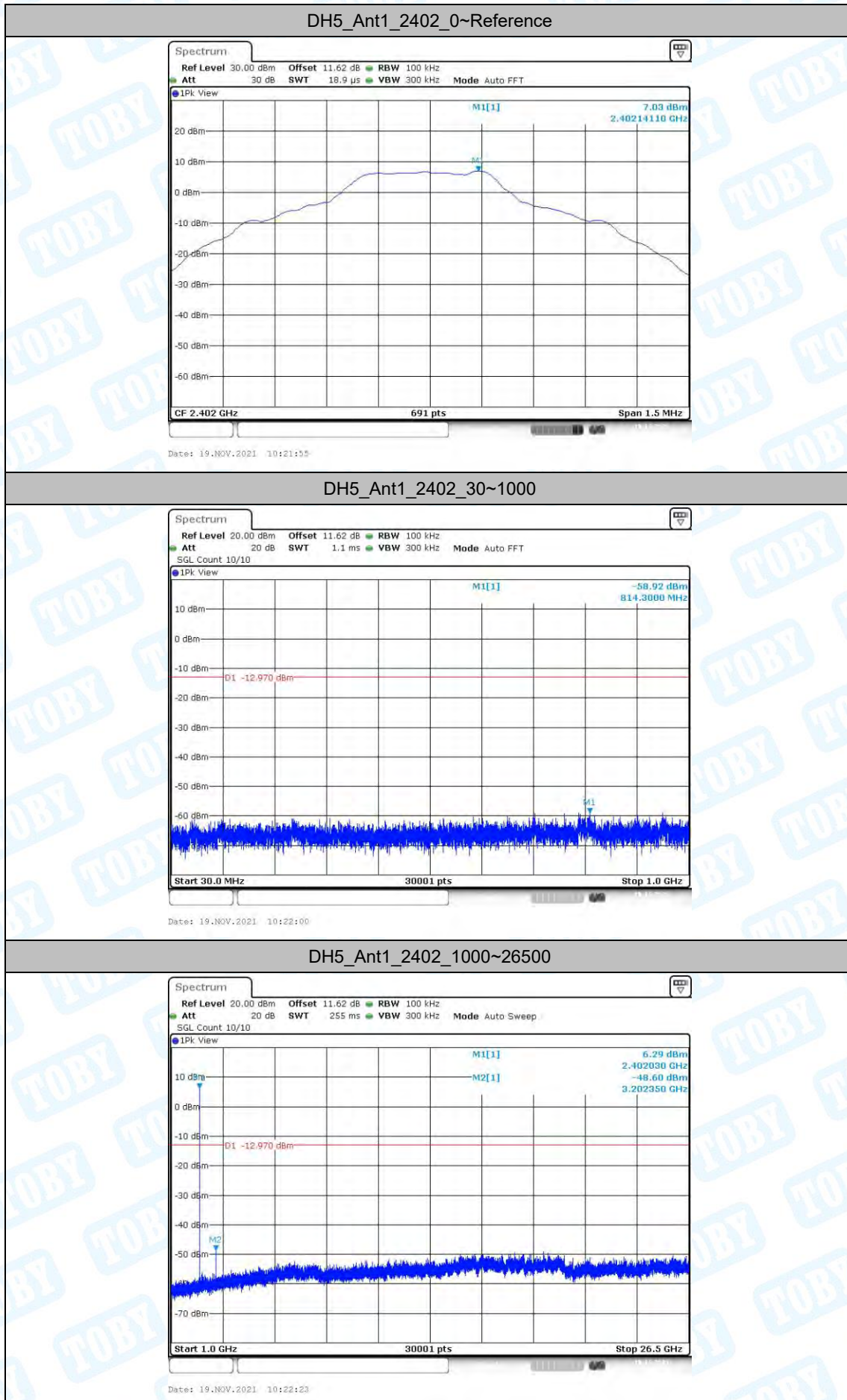


8. Conducted Spurious Emission

8.1. Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	7.03	7.03	---	PASS
			30~1000	7.03	-58.92	≤-12.97	PASS
			1000~26500	7.03	-48.6	≤-12.97	PASS
		2441	Reference	7.43	7.43	---	PASS
			30~1000	7.43	-58.38	≤-12.57	PASS
			1000~26500	7.43	-49.59	≤-12.57	PASS
		2480	Reference	7.35	7.35	---	PASS
			30~1000	7.35	-58.31	≤-12.65	PASS
			1000~26500	7.35	-48.52	≤-12.65	PASS
2DH5	Ant1	2402	Reference	2.95	2.95	---	PASS
			30~1000	2.95	-59.13	≤-17.05	PASS
			1000~26500	2.95	-49.26	≤-17.05	PASS
		2441	Reference	3.13	3.13	---	PASS
			30~1000	3.13	-59.68	≤-16.87	PASS
			1000~26500	3.13	-48.69	≤-16.87	PASS
		2480	Reference	3.14	3.14	---	PASS
			30~1000	3.14	-58.63	≤-16.86	PASS
			1000~26500	3.14	-48.91	≤-16.86	PASS
3DH5	Ant1	2402	Reference	3.08	3.08	---	PASS
			30~1000	3.08	-58.23	≤-16.92	PASS
			1000~26500	3.08	-48.88	≤-16.92	PASS
		2441	Reference	3.31	3.31	---	PASS
			30~1000	3.31	-58.34	≤-16.69	PASS
			1000~26500	3.31	-49.24	≤-16.69	PASS
		2480	Reference	3.37	3.37	---	PASS
			30~1000	3.37	-58.83	≤-16.63	PASS
			1000~26500	3.37	-47.76	≤-16.63	PASS

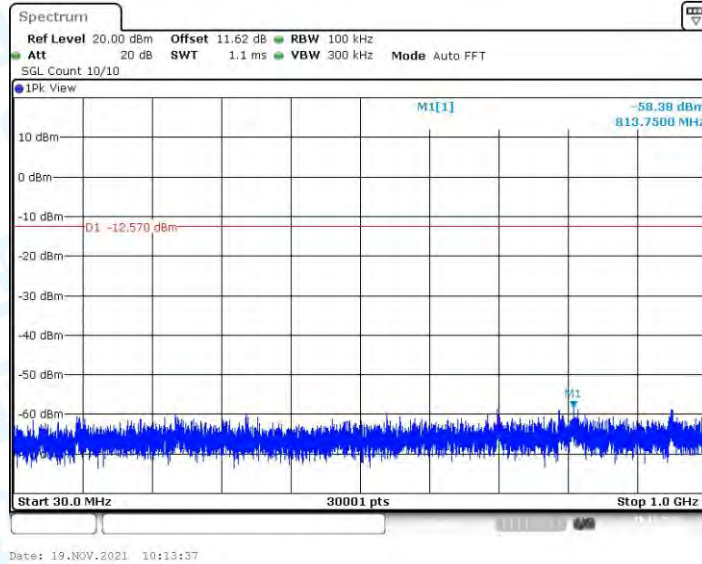
8.2.Test Graphs



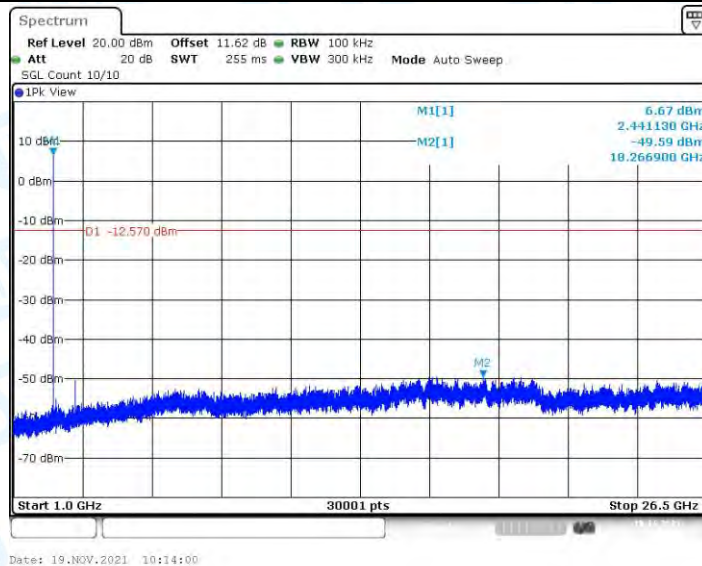
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



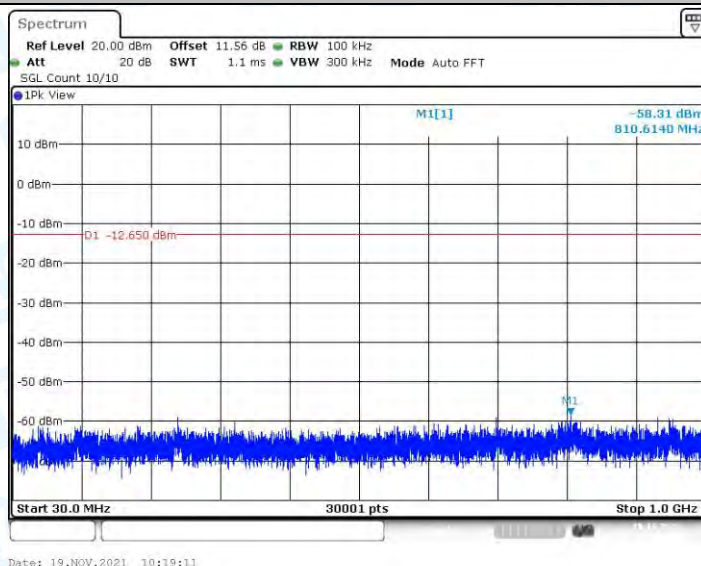
DH5_Ant1_2441_1000~26500



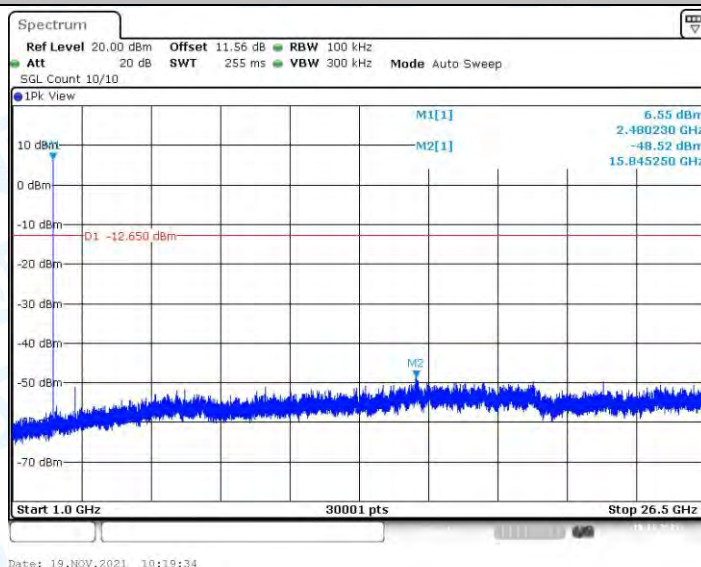
DH5_Ant1_2480_0~Reference



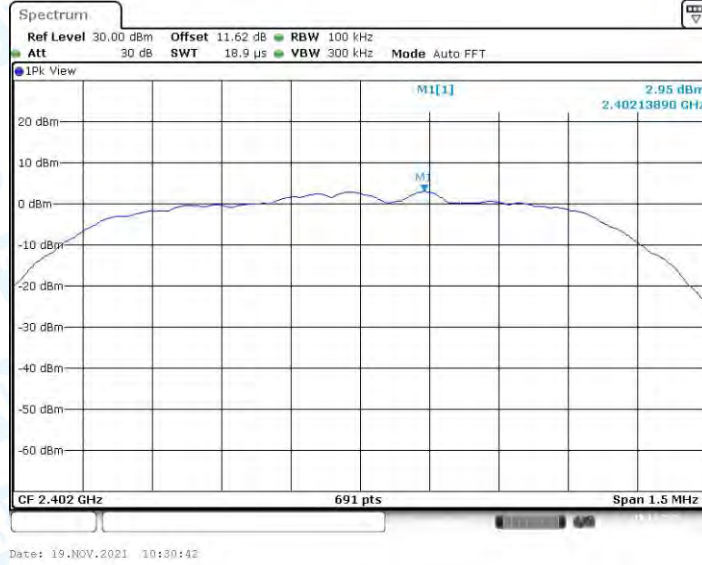
DH5_Ant1_2480_30~1000



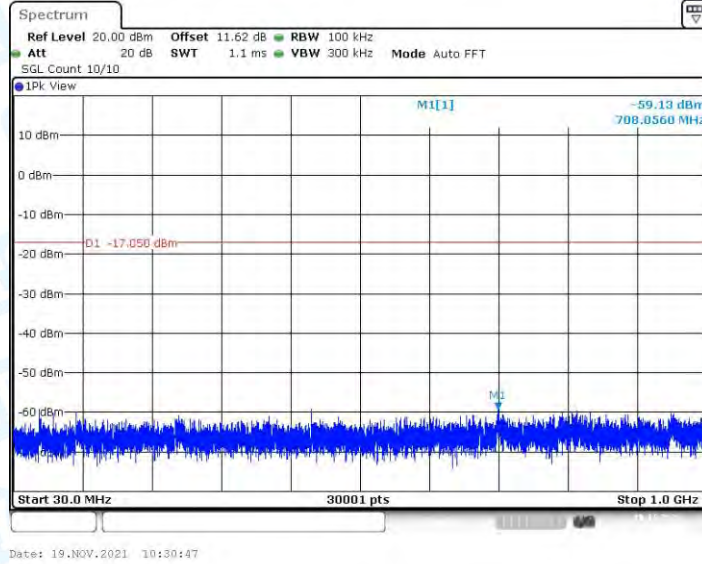
DH5_Ant1_2480_1000~26500



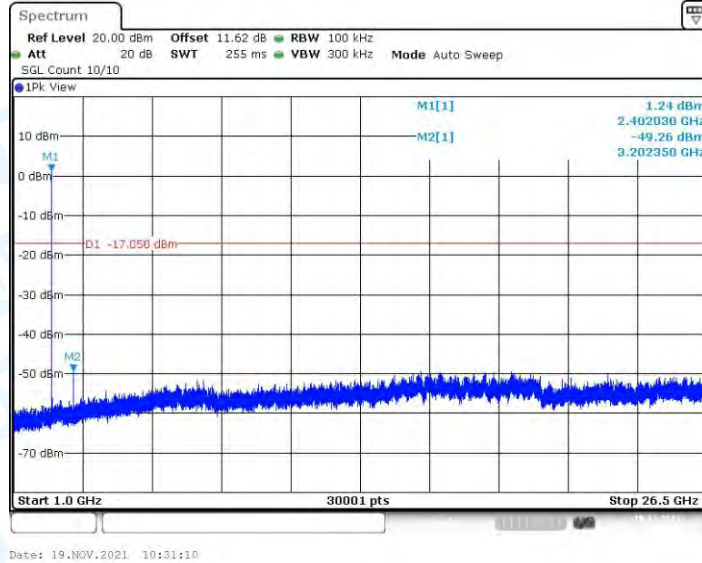
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2DH5_Ant1_2402_30~1000



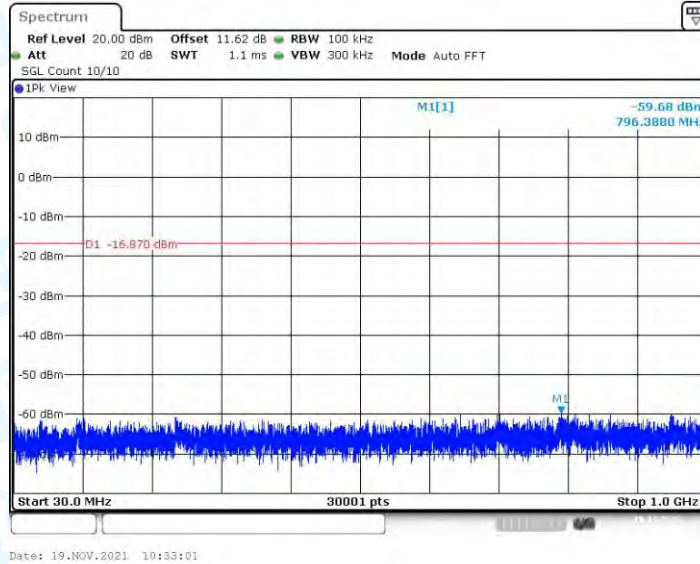
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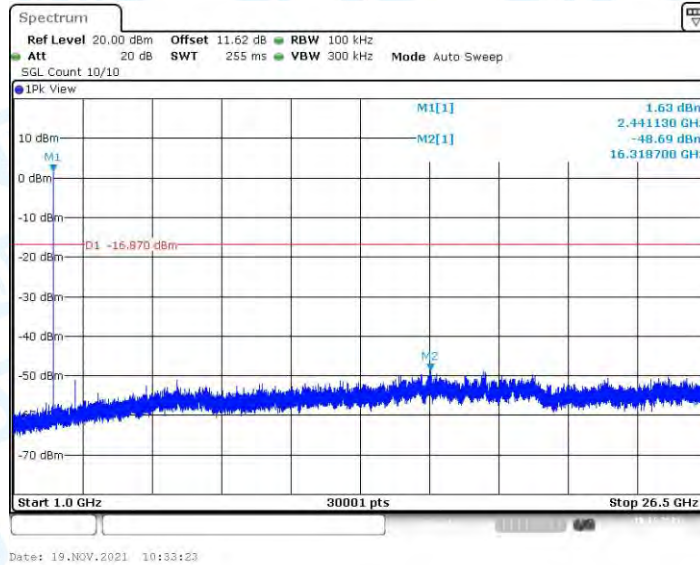
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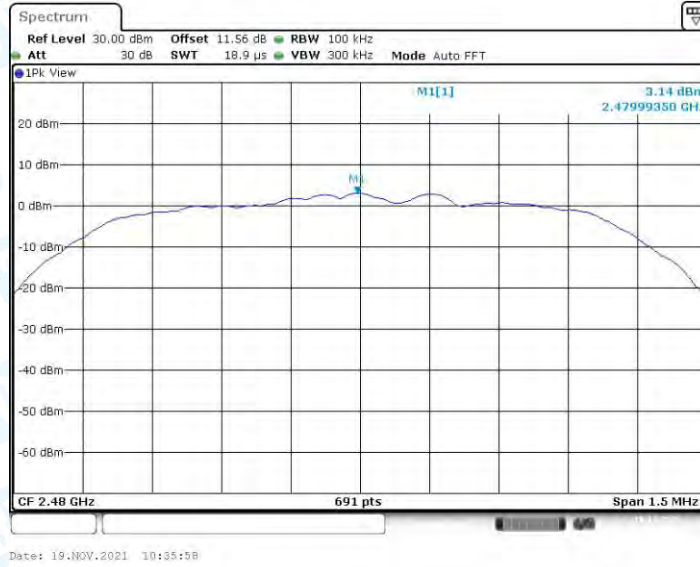
2DH5_Ant1_2441_30~1000



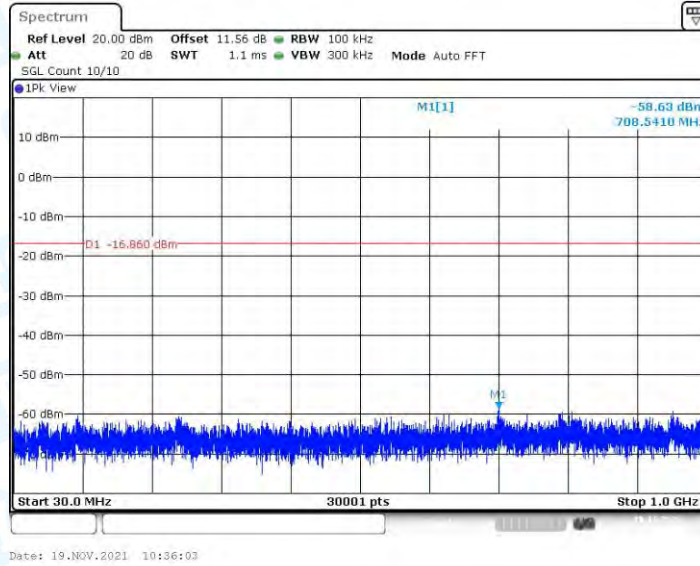
2DH5_Ant1_2441_1000~26500



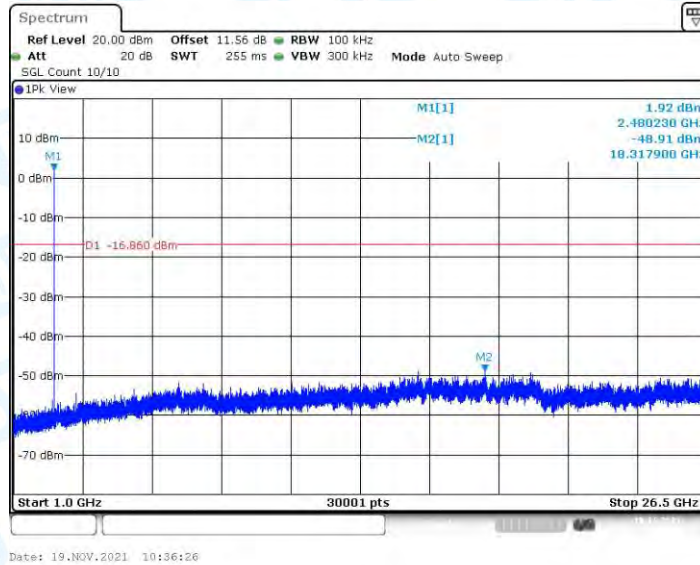
2DH5_Ant1_2480_0~Reference



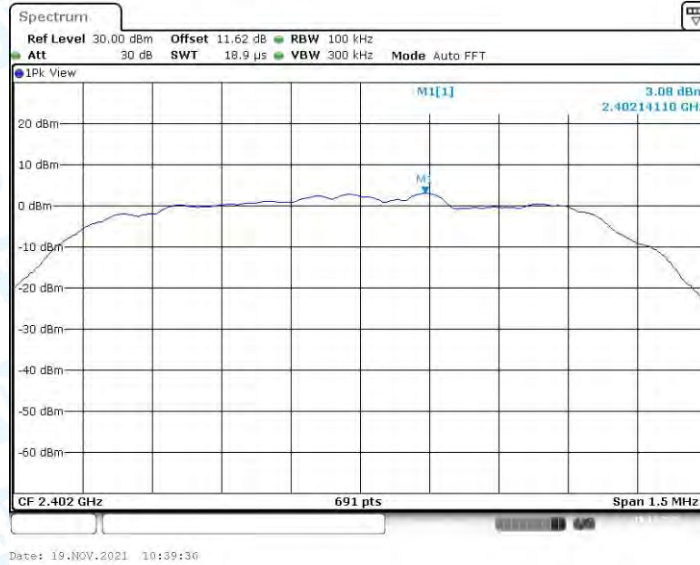
2DH5_Ant1_2480_30~1000



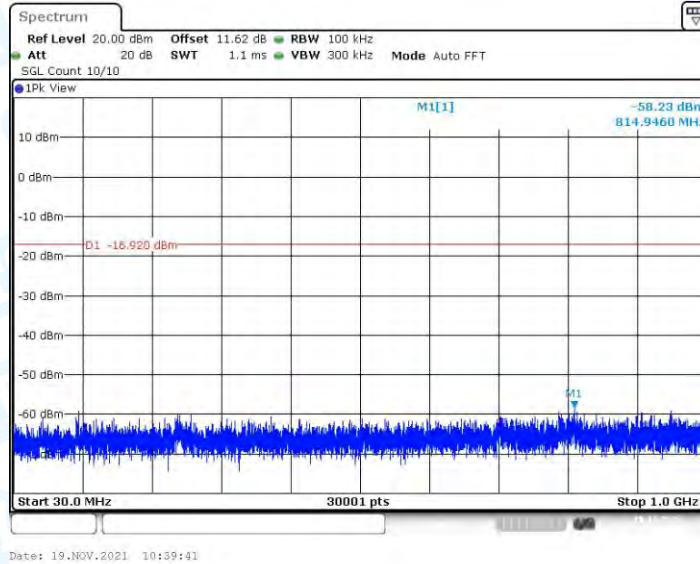
2DH5_Ant1_2480_1000~26500



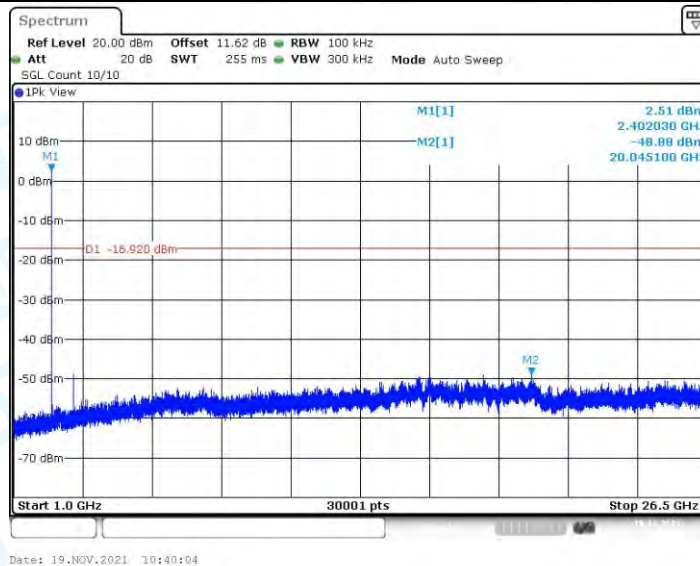
3DH5_Ant1_2402_0~Reference



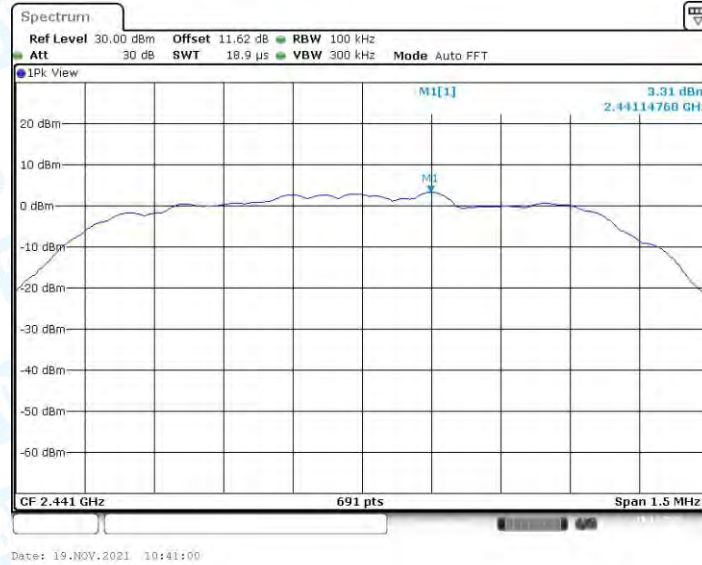
3DH5_Ant1_2402_30~1000



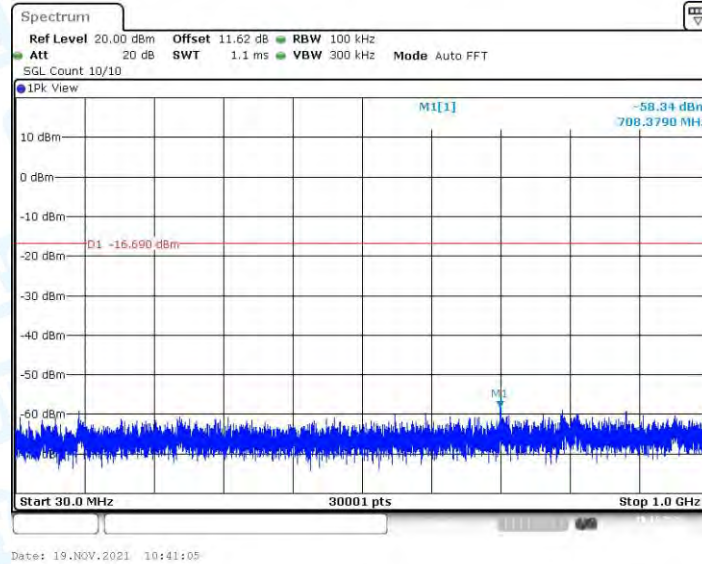
3DH5_Ant1_2402_1000~26500



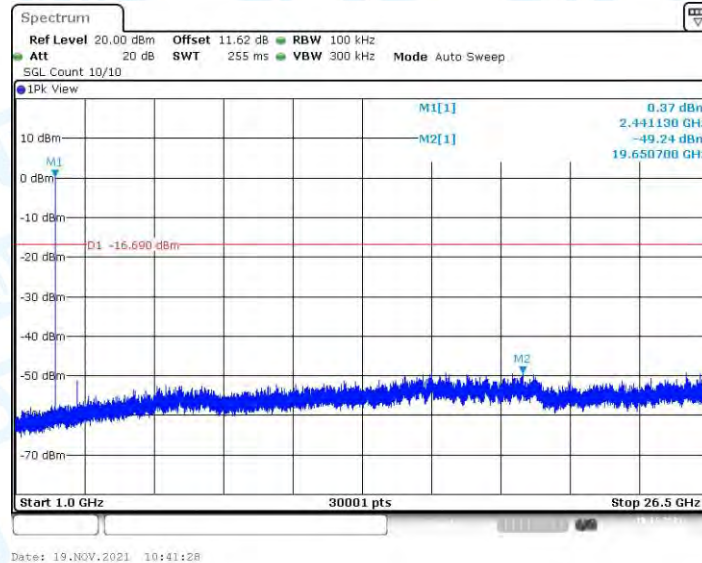
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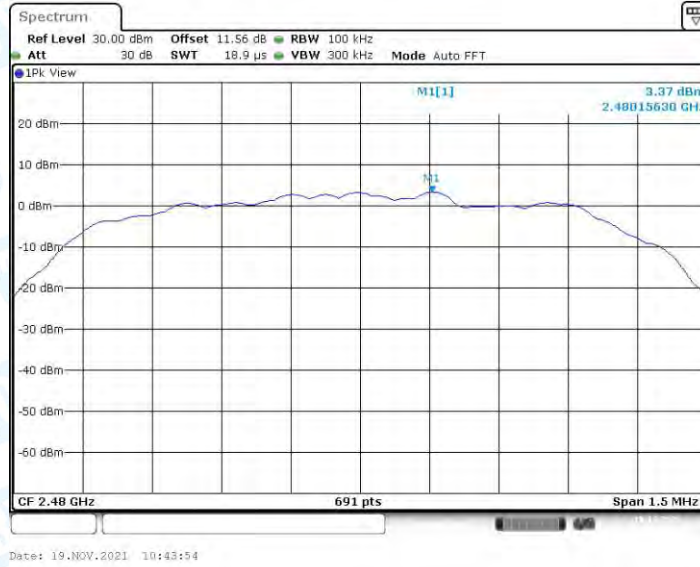
3DH5_Ant1_2441_30~1000



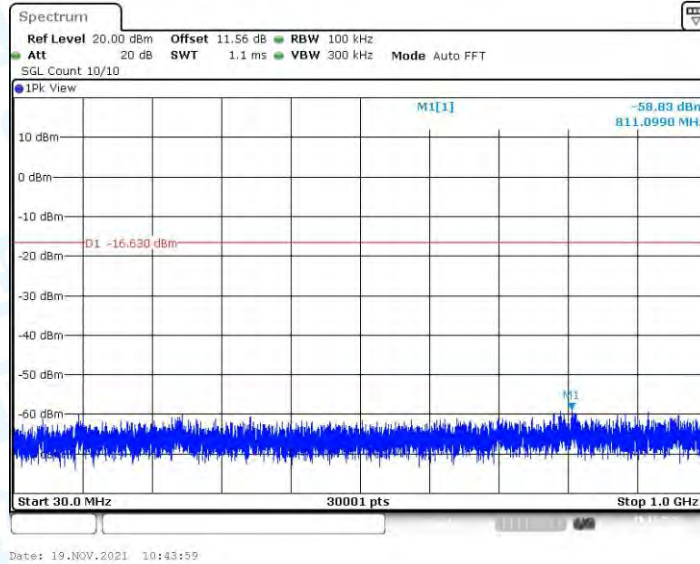
3DH5_Ant1_2441_1000~26500



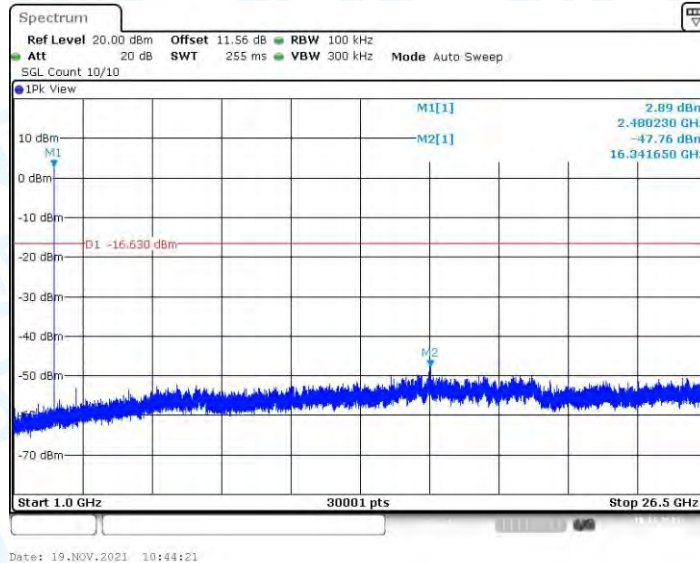
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



9. Emissions in Restricted Bands

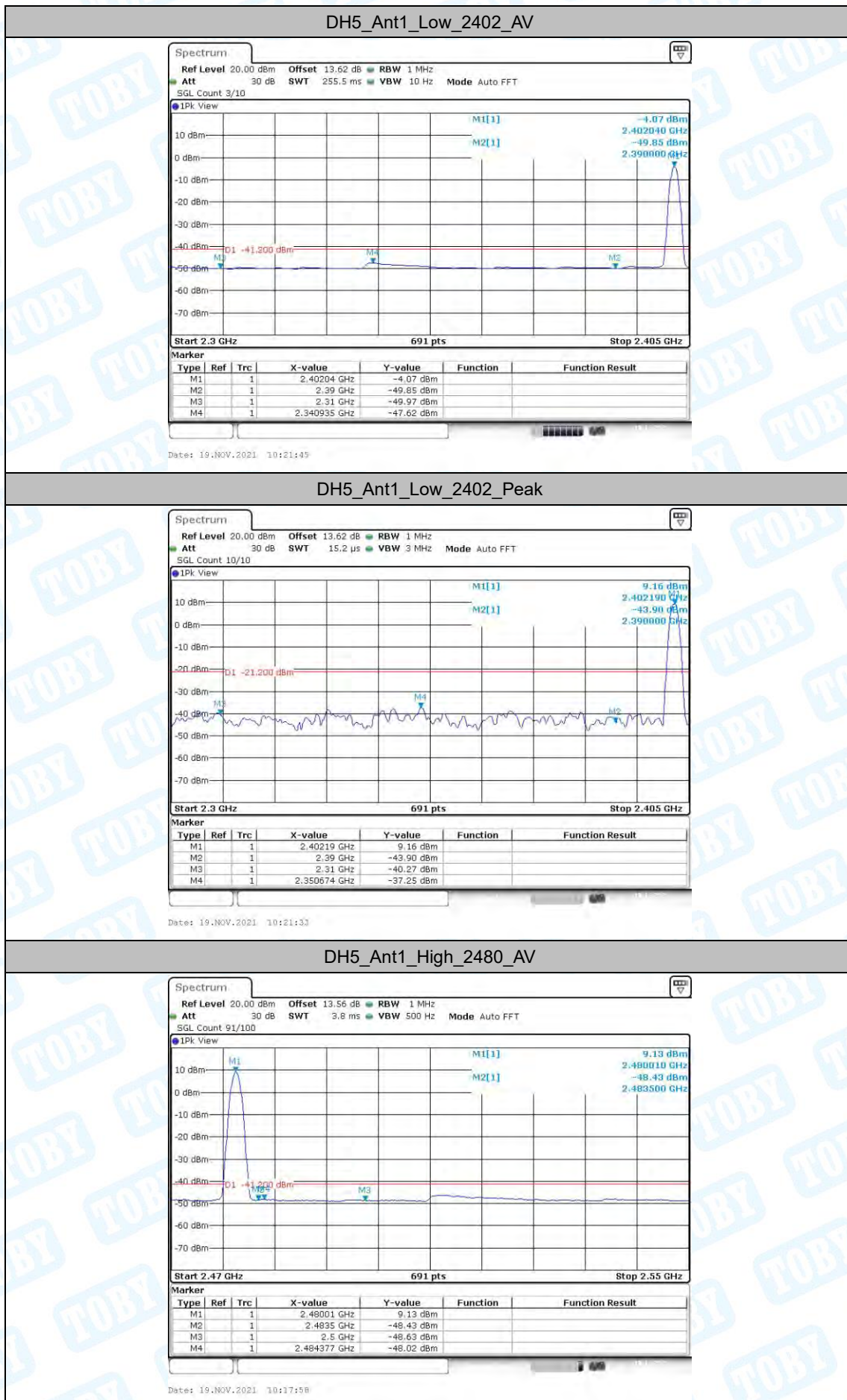
9.1. Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-49.97	≤-41.20	PASS
				AV	2340.935	-47.62	≤-41.20	PASS
				AV	2390.000	-49.85	≤-41.20	PASS
				Peak	2310.000	-40.27	≤-21.20	PASS
				Peak	2350.674	-37.25	≤-21.20	PASS
				Peak	2390.000	-43.9	≤-21.20	PASS
		High	2480	AV	2483.500	-48.43	≤-41.20	PASS
				AV	2484.377	-48.02	≤-41.20	PASS
				AV	2500.000	-48.63	≤-41.20	PASS
				Peak	2483.500	-39.98	≤-21.20	PASS
				Peak	2499.449	-37.62	≤-21.20	PASS
				Peak	2500.000	-39.25	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.92	≤-41.20	PASS
				AV	2341.087	-47.58	≤-41.20	PASS
				AV	2390.000	-49.85	≤-41.20	PASS
				Peak	2310.000	-40.22	≤-21.20	PASS
				Peak	2379.435	-36.85	≤-21.20	PASS
				Peak	2390.000	-38.81	≤-21.20	PASS
		High	2480	AV	2483.500	-48.86	≤-41.20	PASS
				AV	2484.029	-48.72	≤-41.20	PASS
				AV	2500.000	-49.02	≤-41.20	PASS
				Peak	2483.500	-39.4	≤-21.20	PASS
				Peak	2490.174	-35.68	≤-21.20	PASS
				Peak	2500.000	-40.5	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-49.97	≤-41.20	PASS
				AV	2340.935	-47.59	≤-41.20	PASS
				AV	2390.000	-49.84	≤-41.20	PASS
				Peak	2310.000	-39.72	≤-21.20	PASS
				Peak	2343.217	-35.39	≤-21.20	PASS
				Peak	2390.000	-40.92	≤-21.20	PASS
		High	2480	AV	2483.500	-48.86	≤-41.20	PASS
				AV	2483.913	-48.71	≤-41.20	PASS
				AV	2500.000	-49.04	≤-41.20	PASS
				Peak	2483.500	-38.7	≤-21.20	PASS
				Peak	2489.942	-37.29	≤-21.20	PASS
				Peak	2500.000	-39.5	≤-21.20	PASS

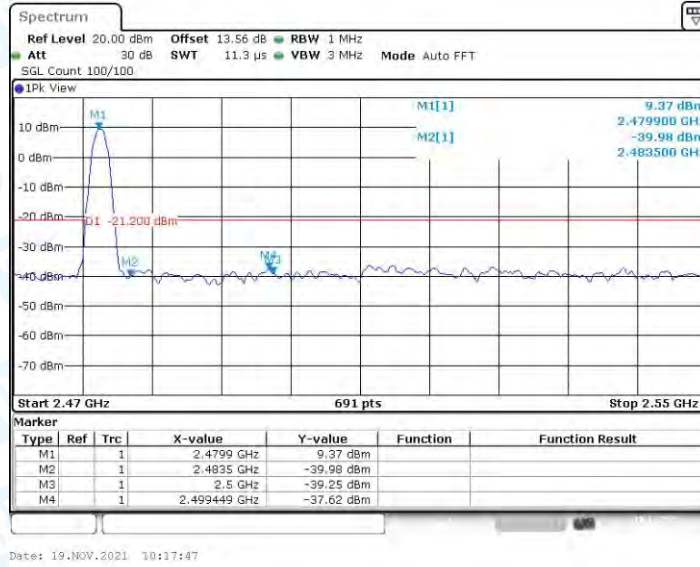
Note:

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.

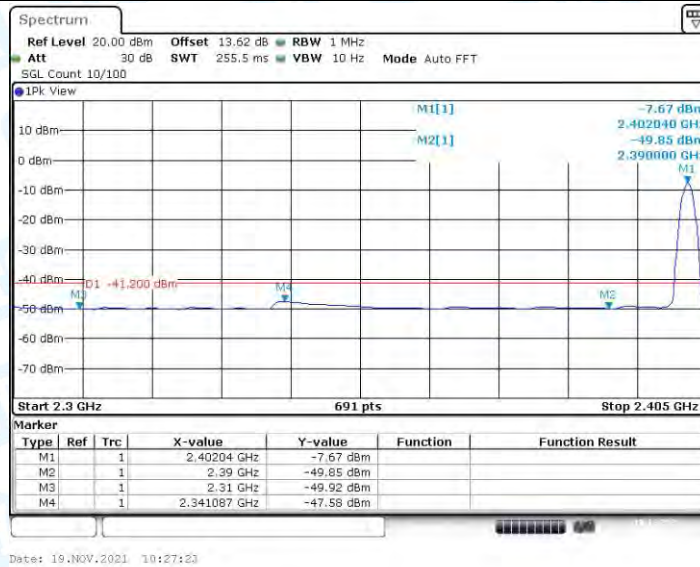
9.2.Test Graphs



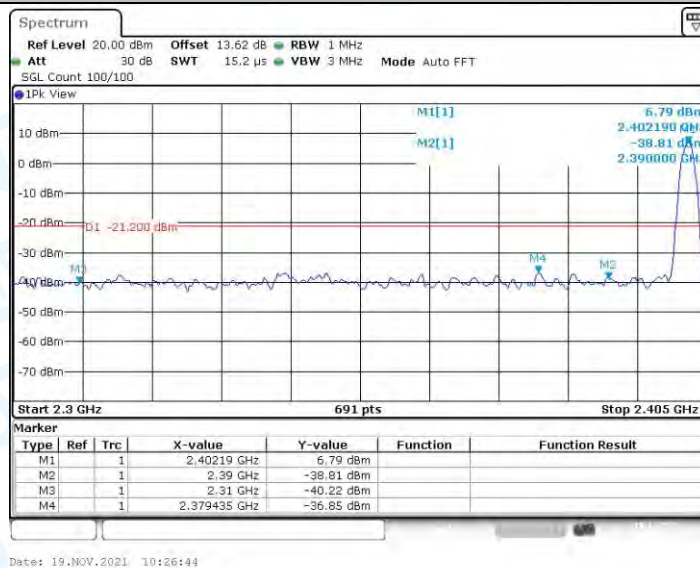
DH5_Ant1_High_2480_Peak

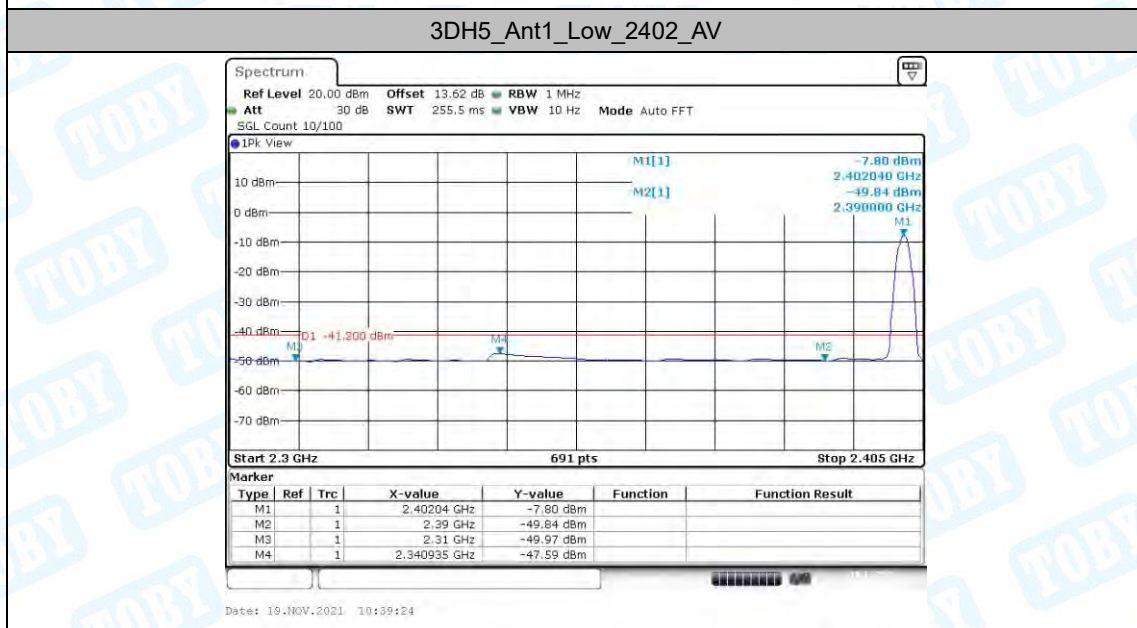
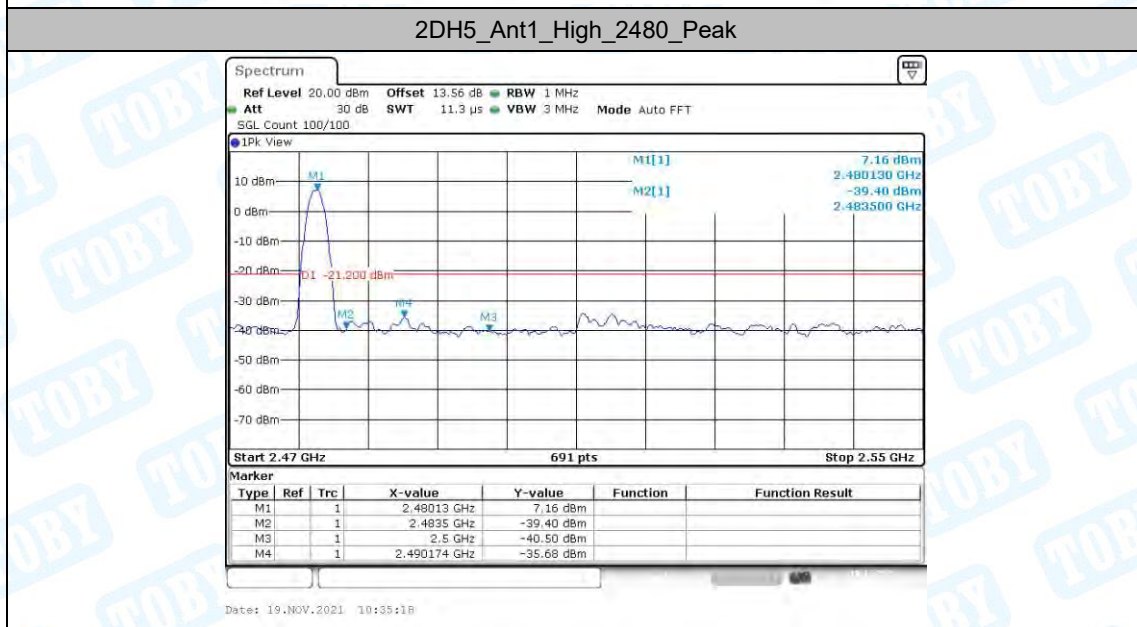
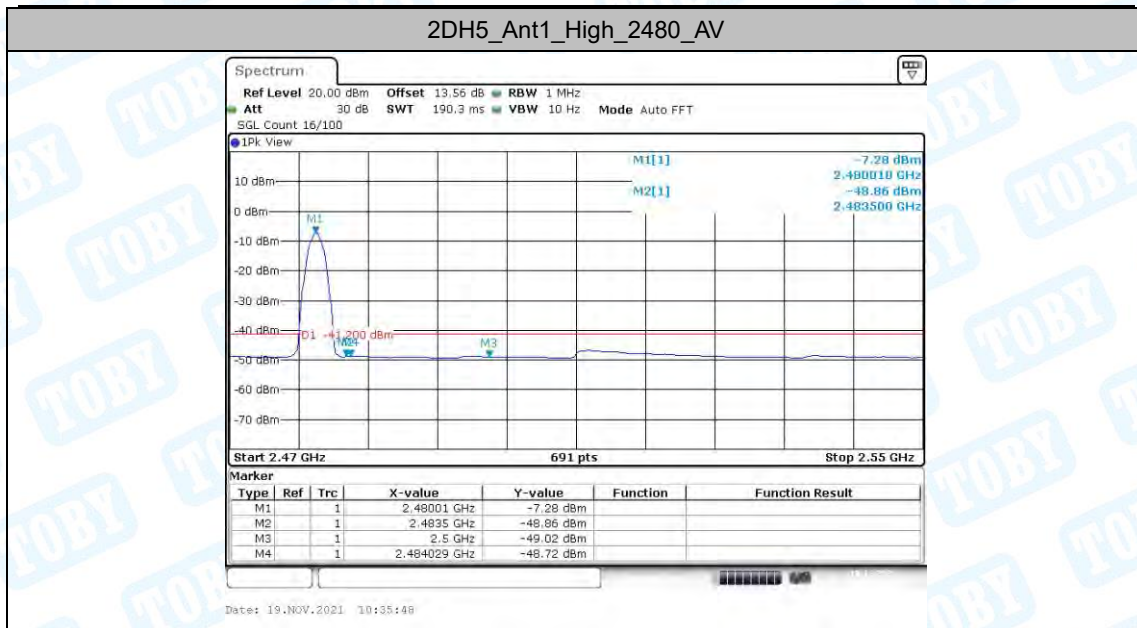


2DH5_Ant1_Low_2402_AV

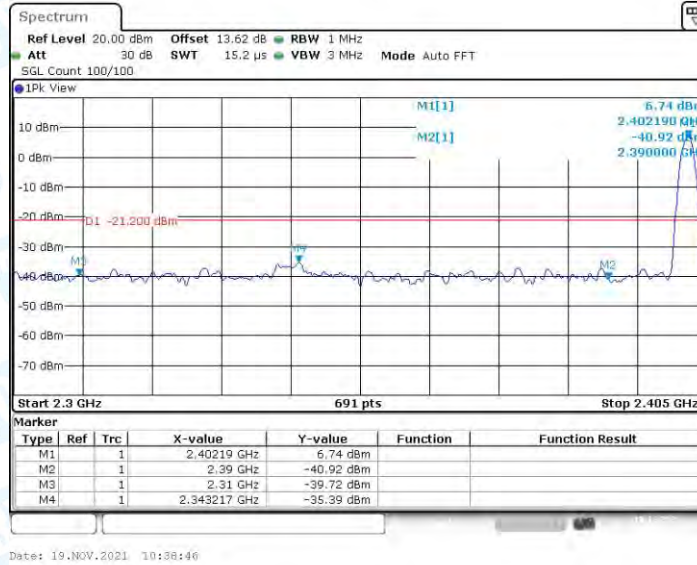


2DH5_Ant1_Low_2402_Peak

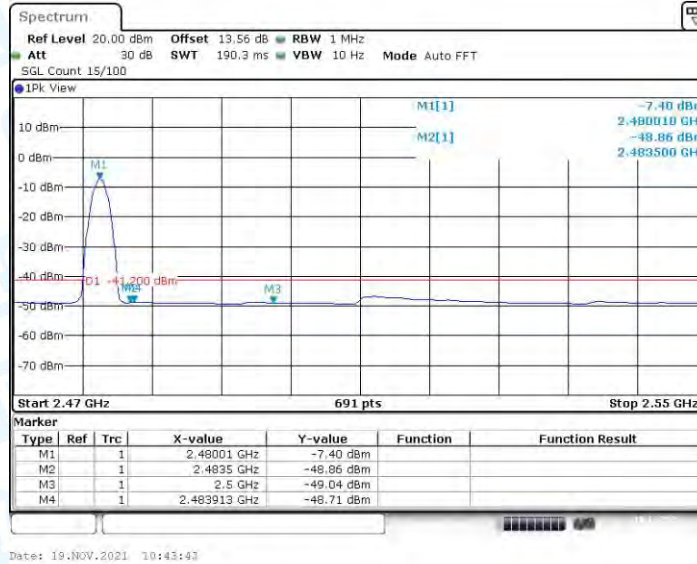




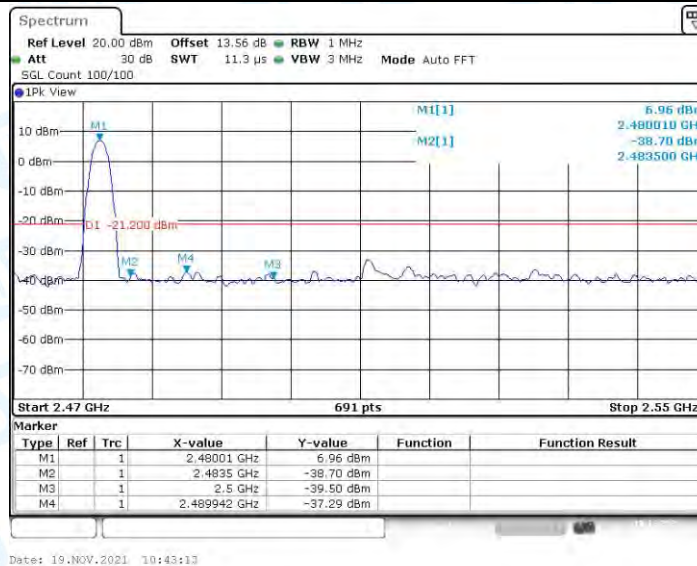
3DH5_Ant1_Low_2402_Peak



3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak



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