



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Robotic Pool Cleaner

Test Model: D10P

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng



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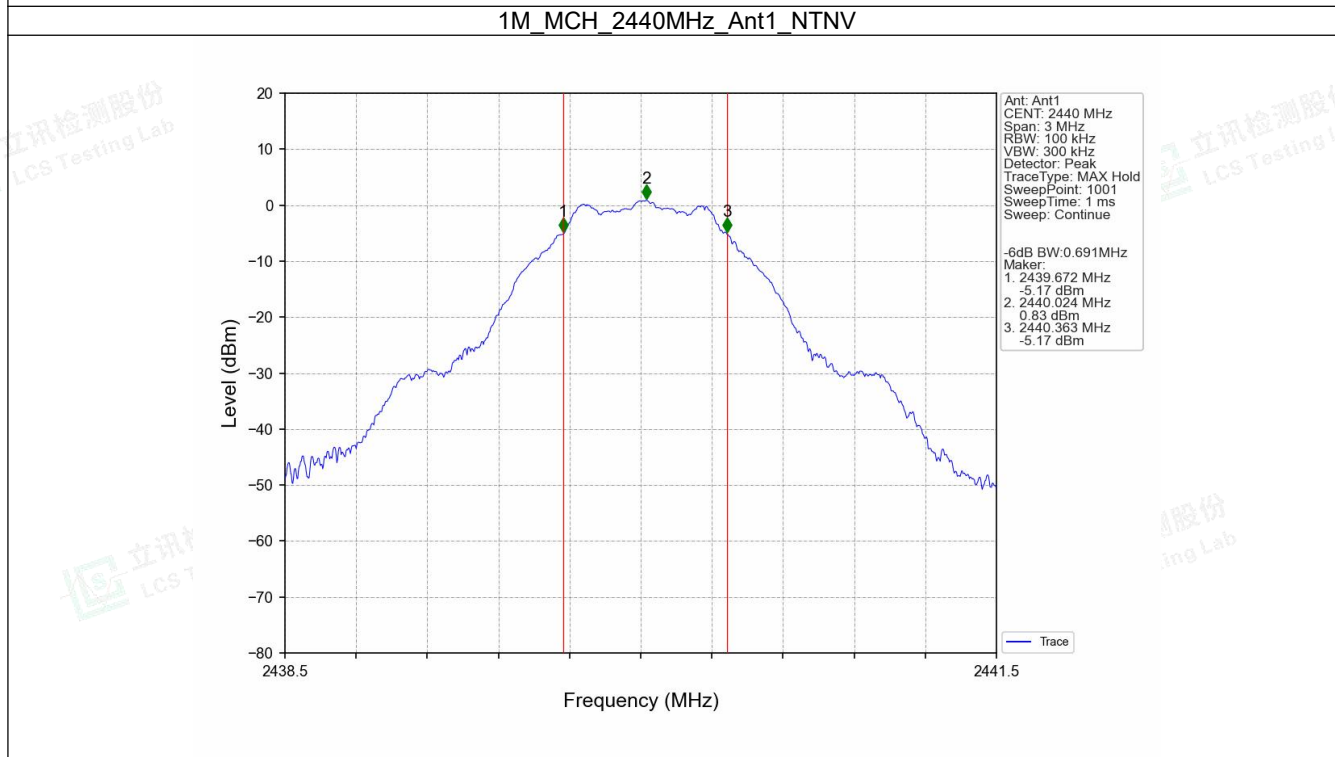
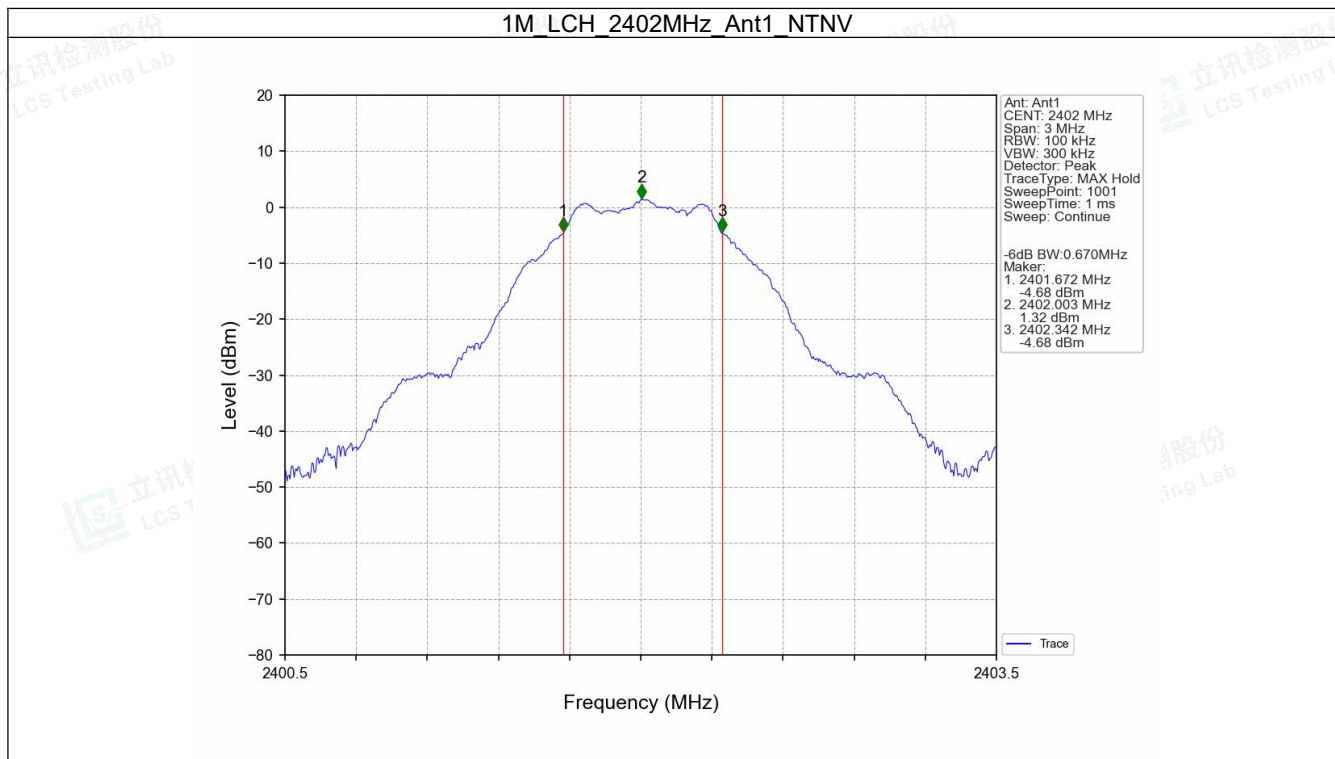


A.1 -6dB Bandwidth

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.670	≥ 0.5	Pass
		2440	1	0.691	≥ 0.5	Pass
		2480	1	0.675	≥ 0.5	Pass
2M	SISO	2402	1	1.148	≥ 0.5	Pass
		2440	1	1.173	≥ 0.5	Pass
		2480	1	1.165	≥ 0.5	Pass

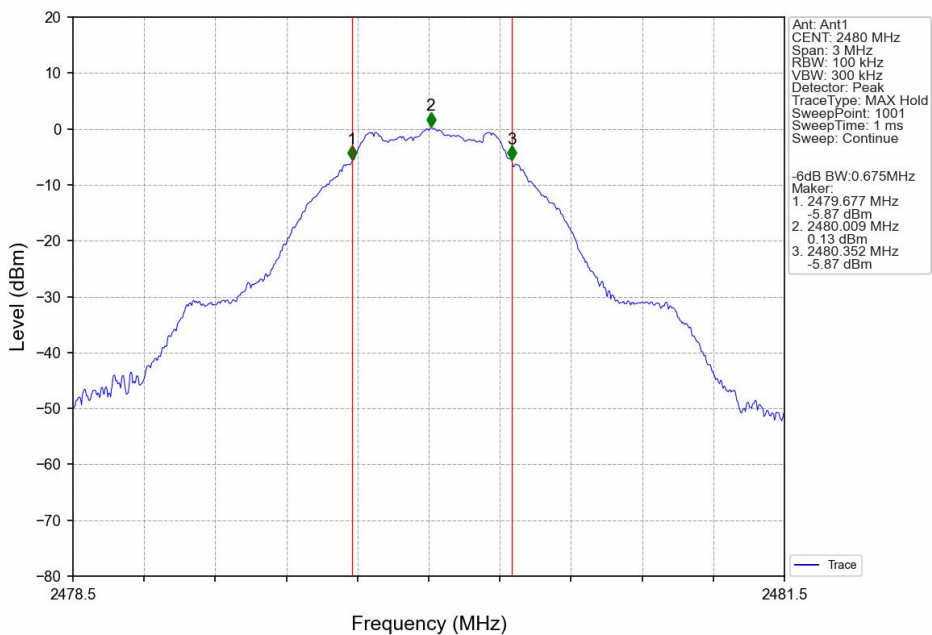


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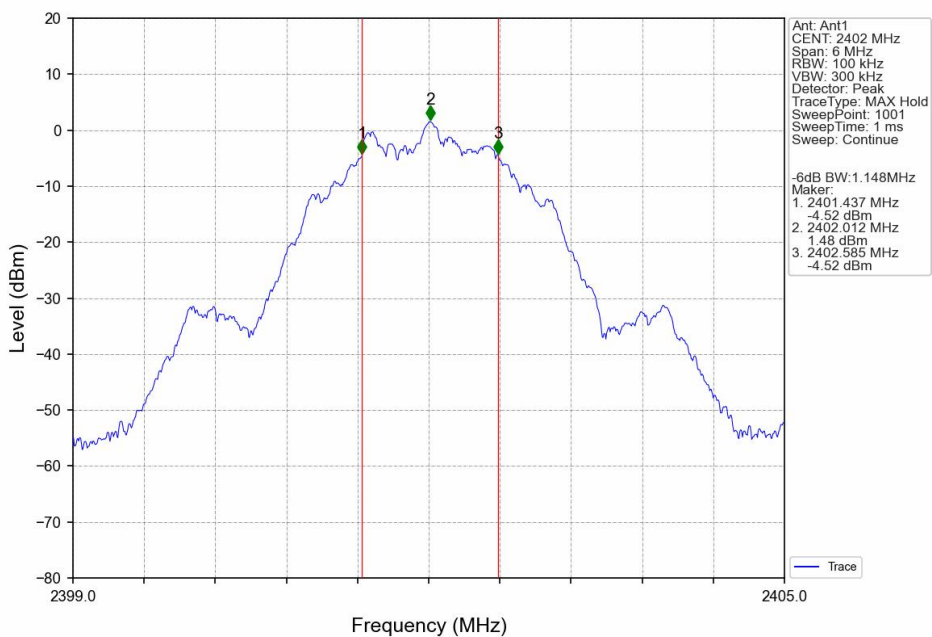




1M_HCH_2480MHz_Ant1_NTNV

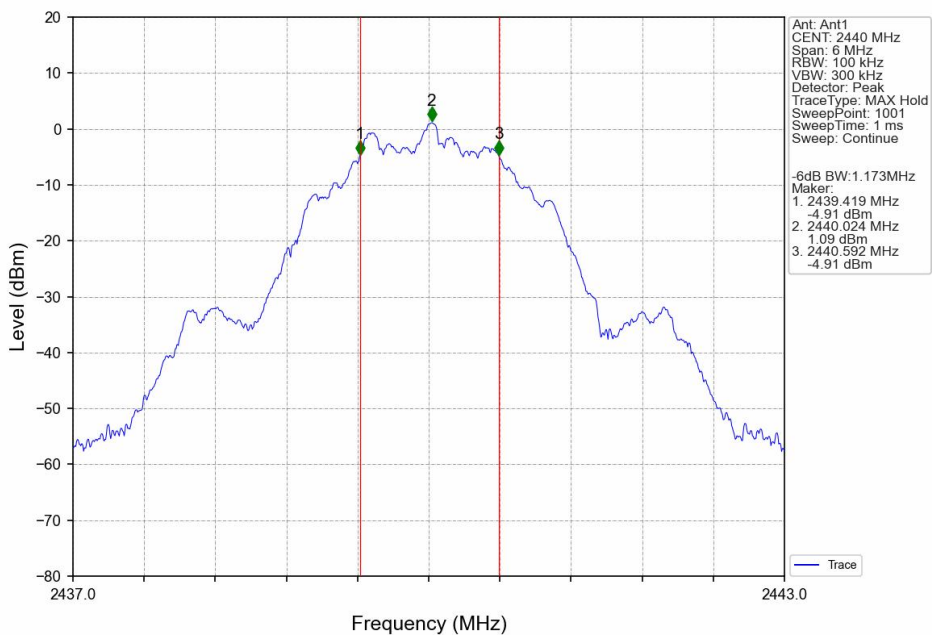


2M_LCH_2402MHz_Ant1_NTNV

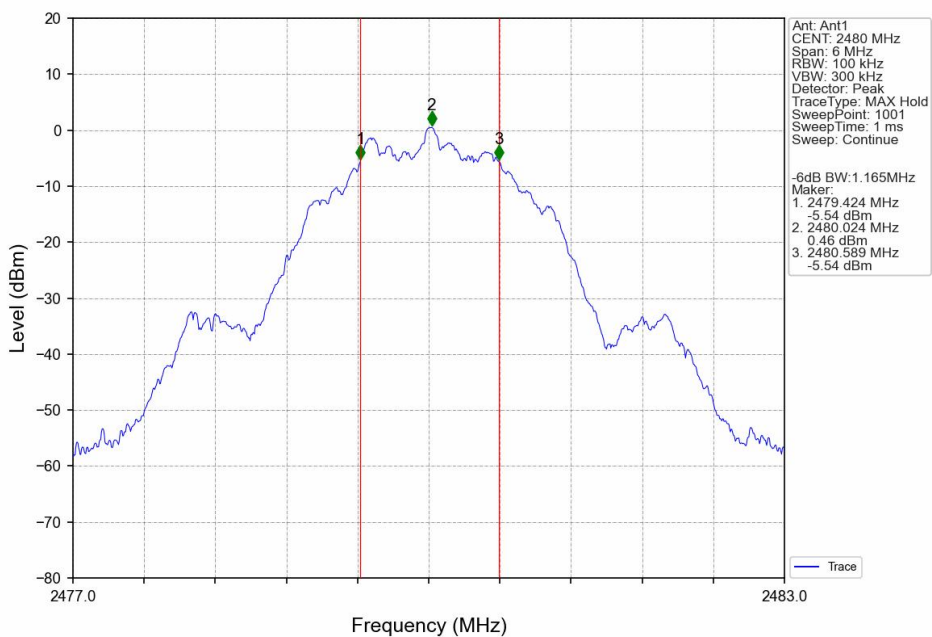




2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





A.2 Maximum Peak Conducted Output Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	1.49	<=30	Pass
		2440	1.01	<=30	Pass
		2480	0.33	<=30	Pass
2M	SISO	2402	1.61	<=30	Pass
		2440	1.19	<=30	Pass
		2480	0.51	<=30	Pass

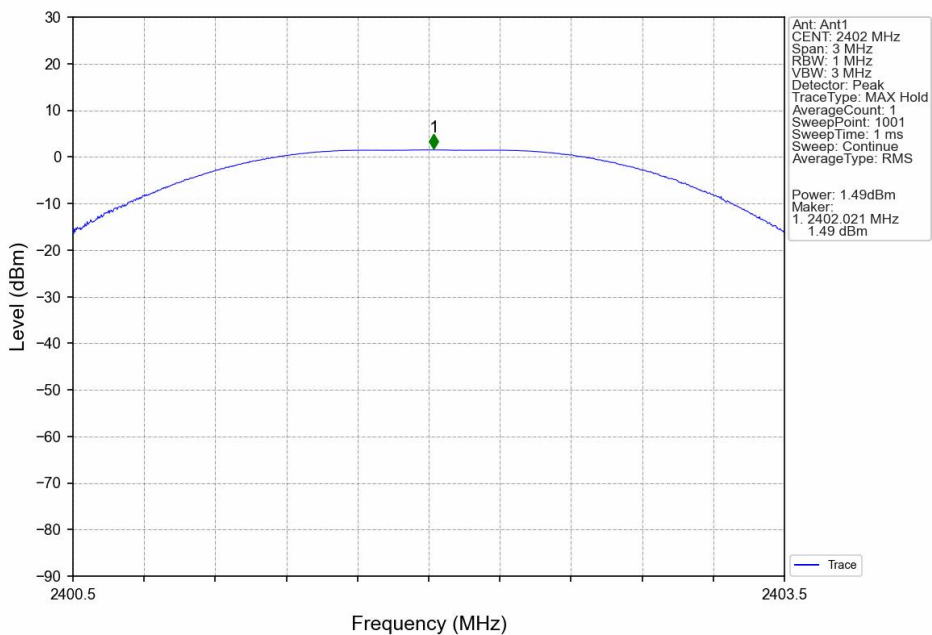
Note1: Antenna Gain: Ant1: 0.00dBi;



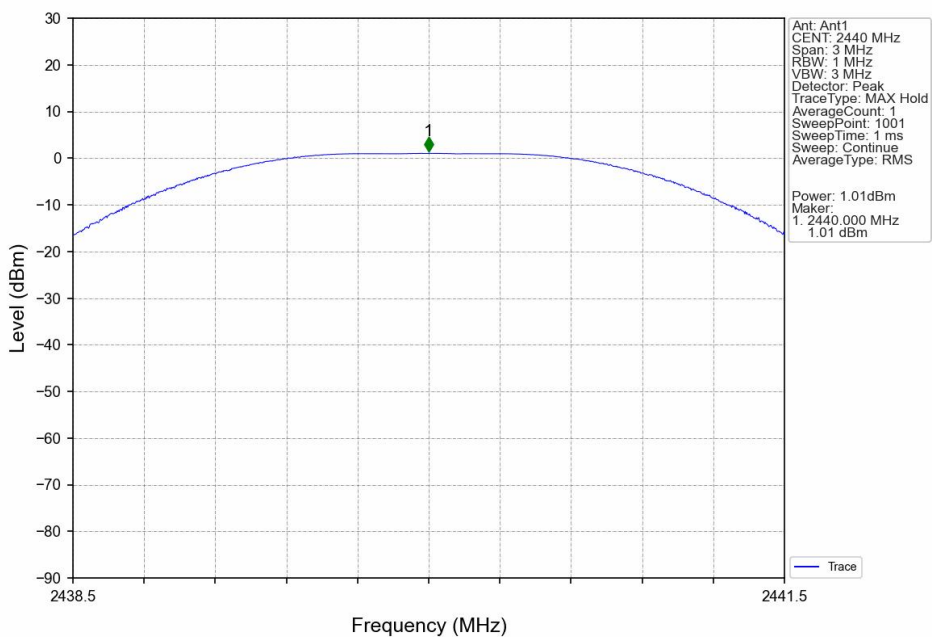
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1M_LCH_2402MHz_Ant1_NTNV

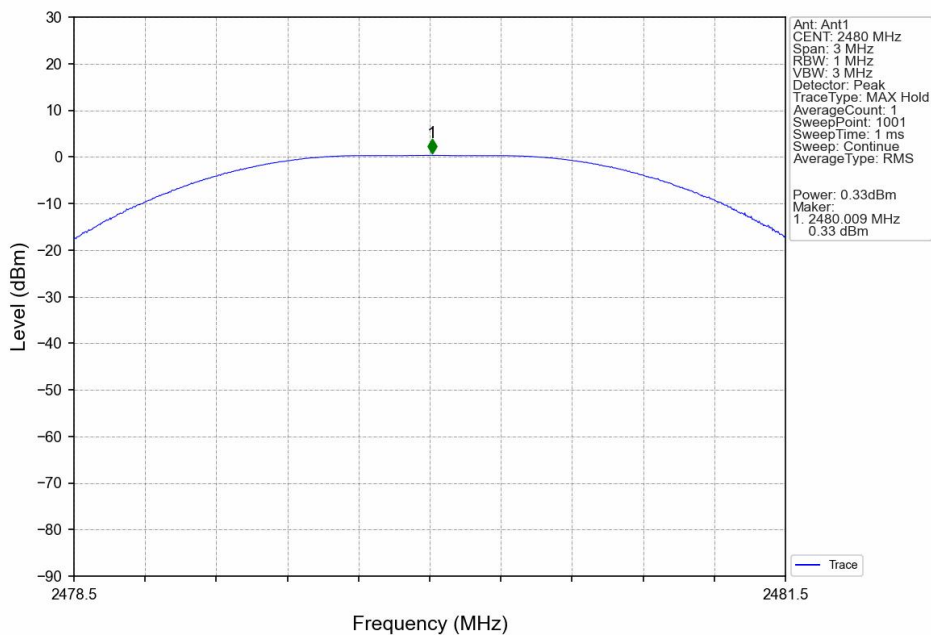


1M_MCH_2440MHz_Ant1_NTNV

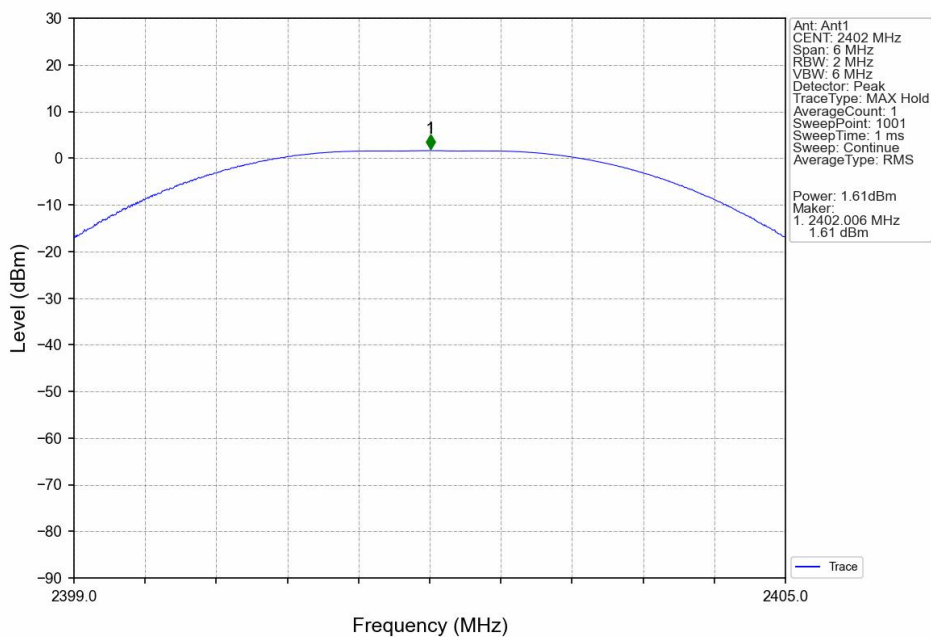




1M_HCH_2480MHz_Ant1_NTNV

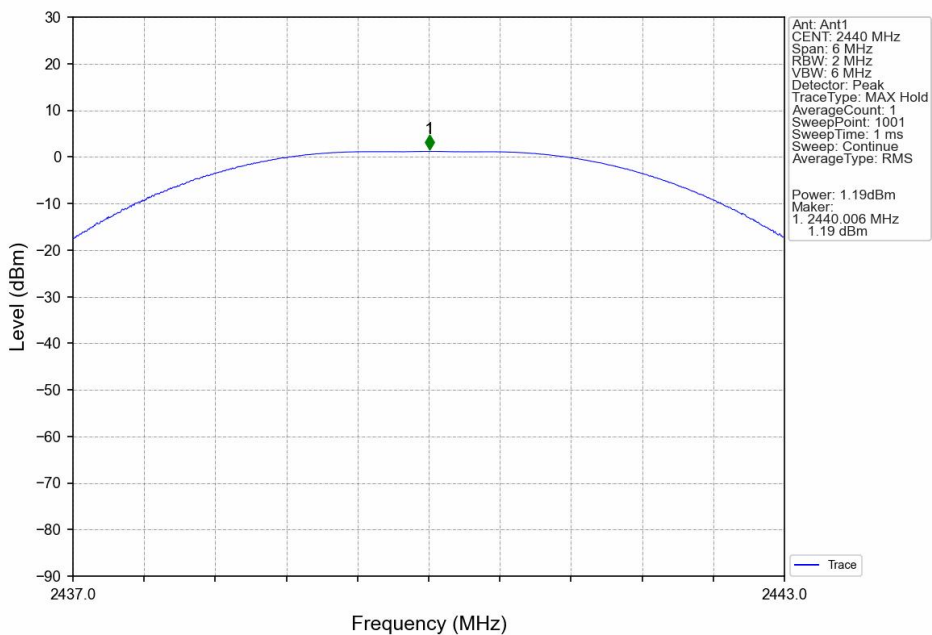


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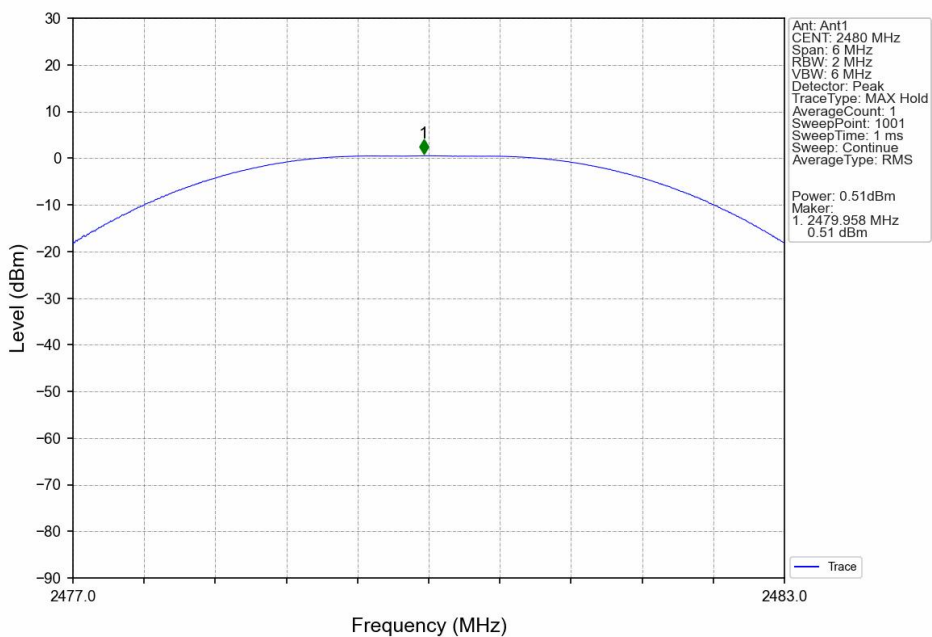




2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





A.3 Maximum Power Spectral Density

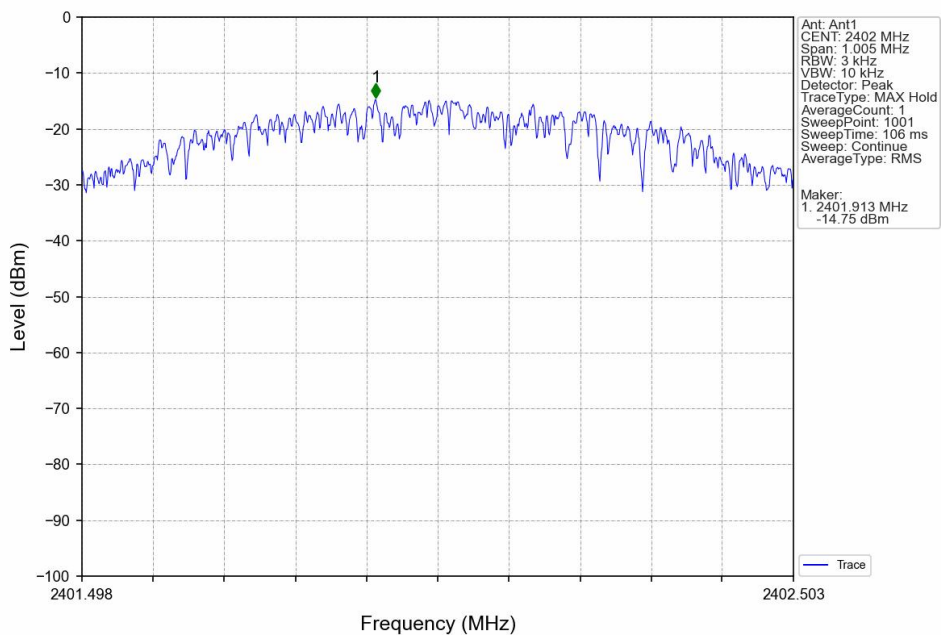
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-14.75	<=8	Pass
		2440	-15.18	<=8	Pass
		2480	-15.45	<=8	Pass
2M	SISO	2402	-16.41	<=8	Pass
		2440	-16.76	<=8	Pass
		2480	-17.54	<=8	Pass

Note1: Antenna Gain: Ant1: 0.00dBi;

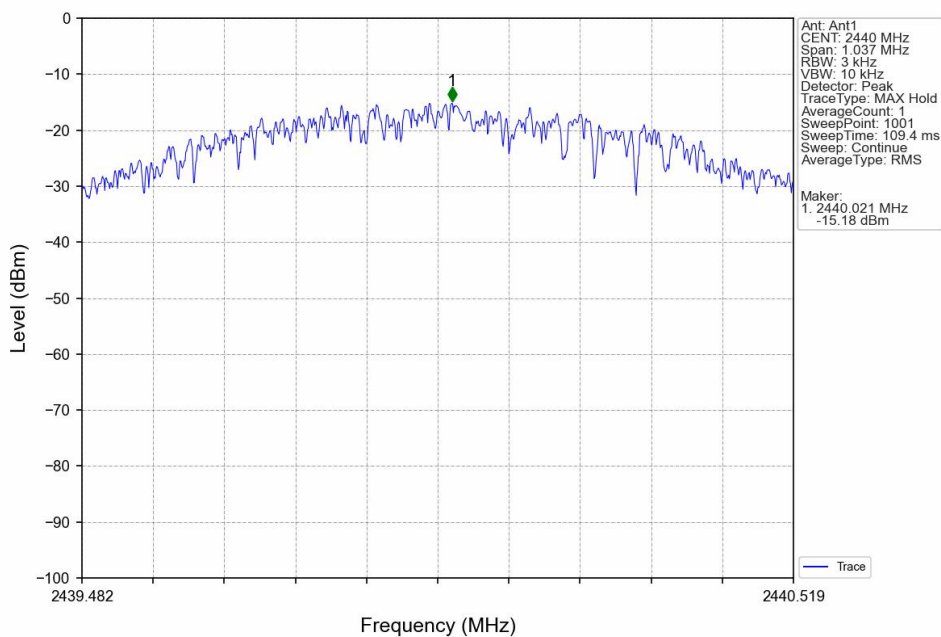


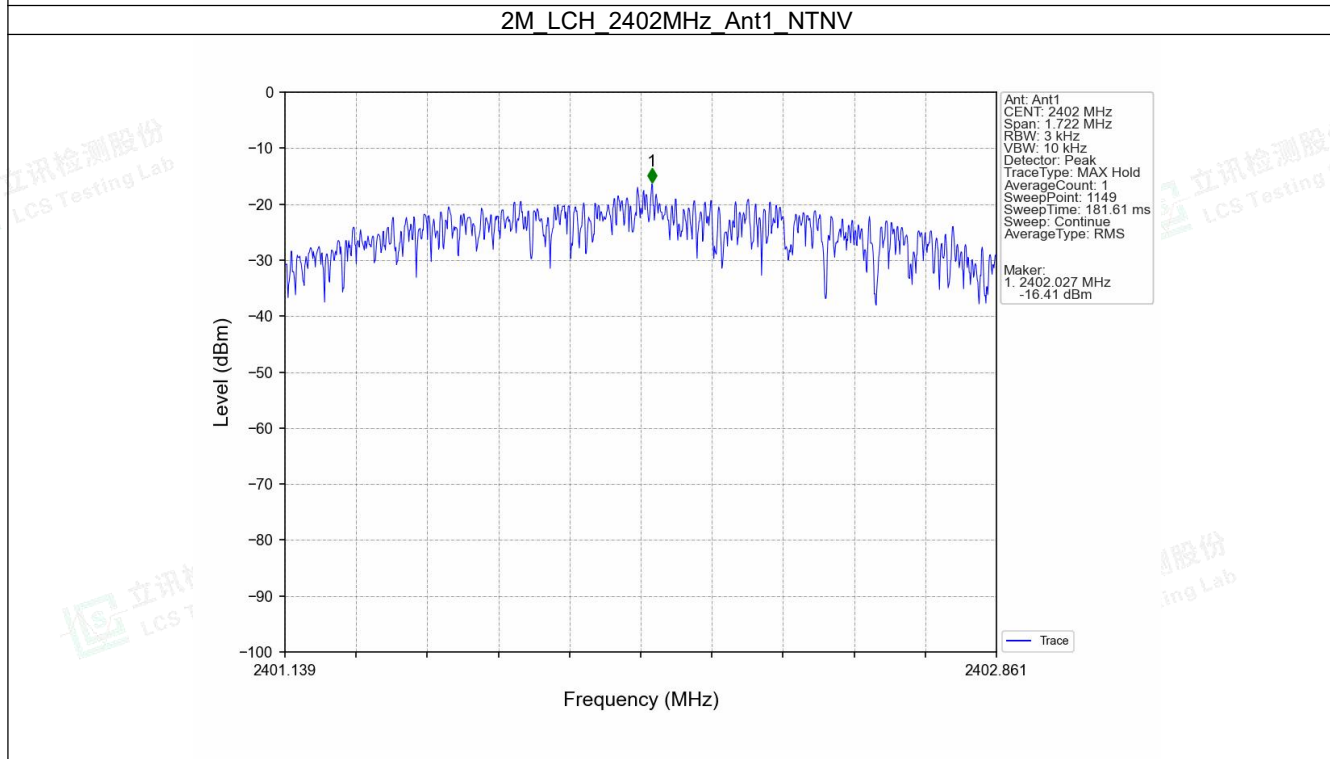
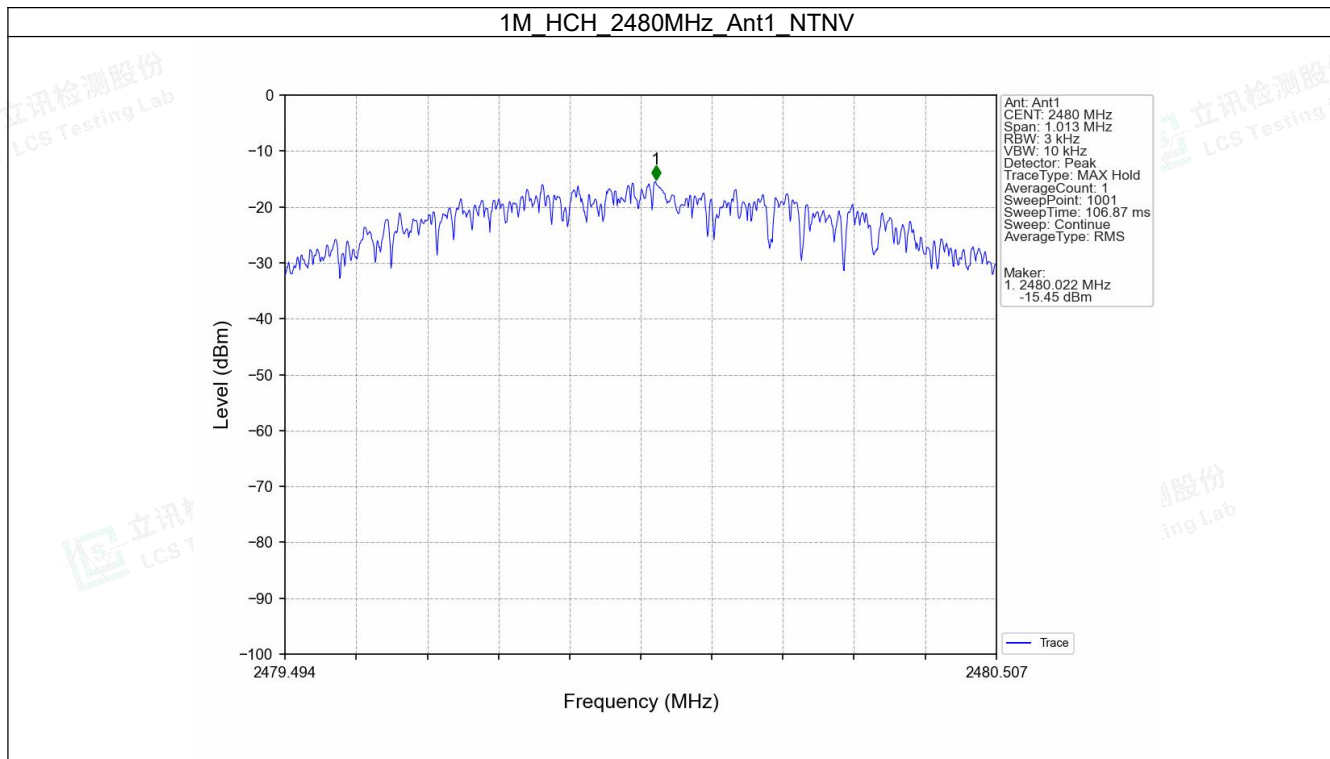


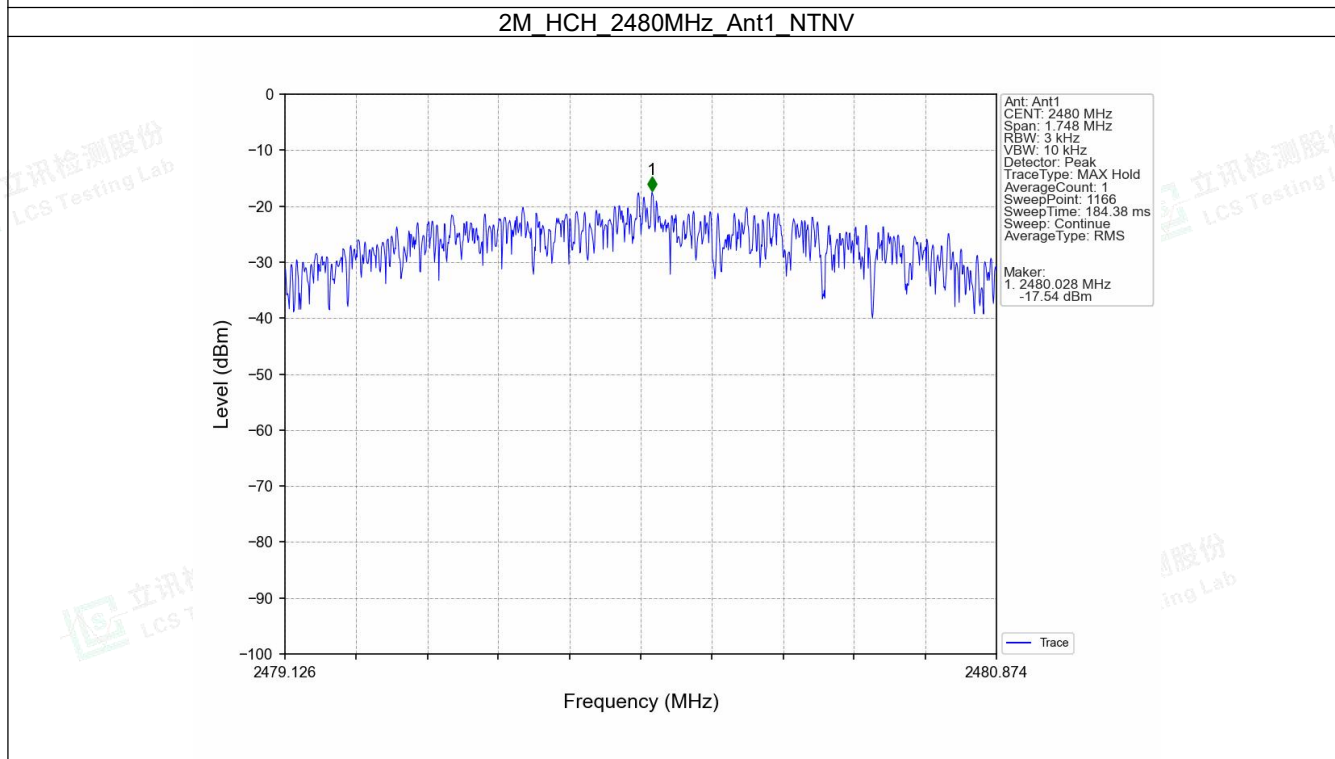
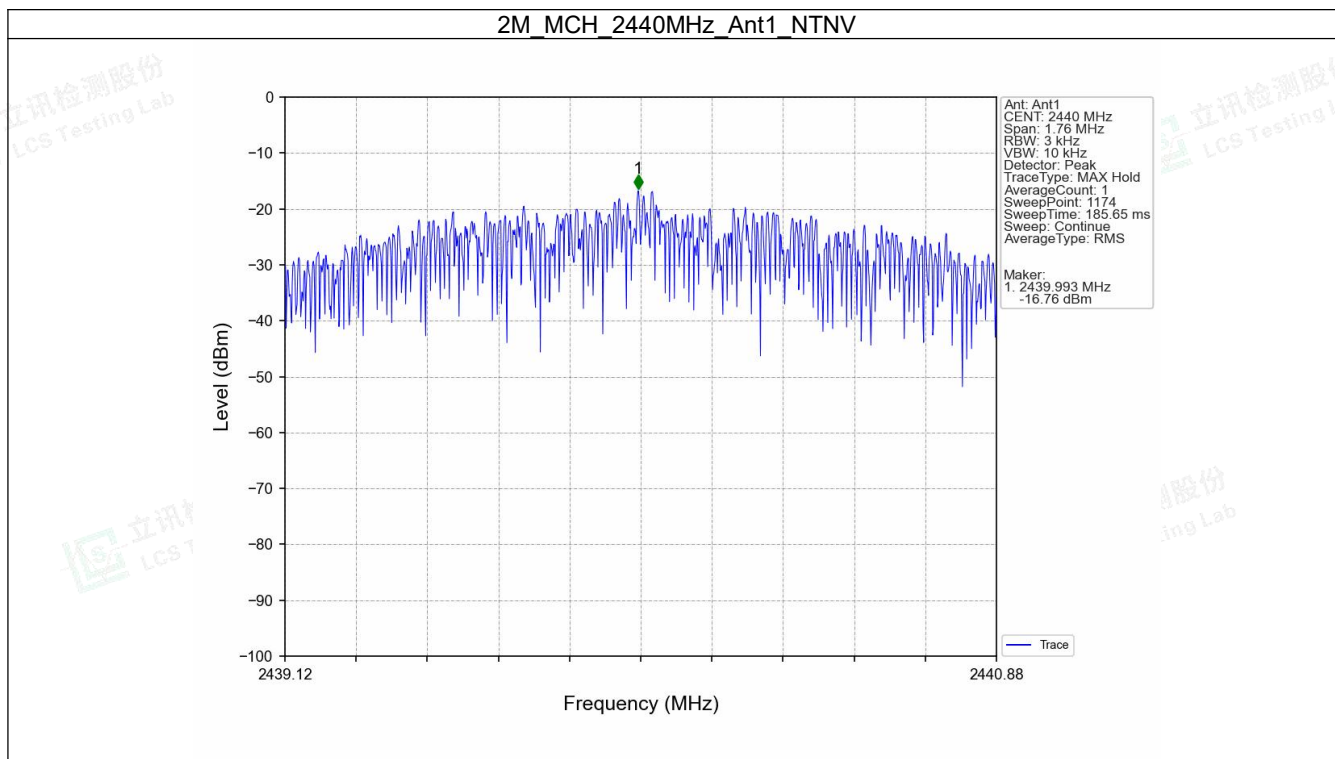
1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV









A.4 Band Edge

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	1.25	-18.75	Pass
		2440	1	0.77	-19.23	Pass
		2480	1	0.13	-19.87	Pass
2M	SISO	2402	1	1.33	-18.67	Pass
		2440	1	0.86	-19.14	Pass
		2480	1	0.29	-19.71	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



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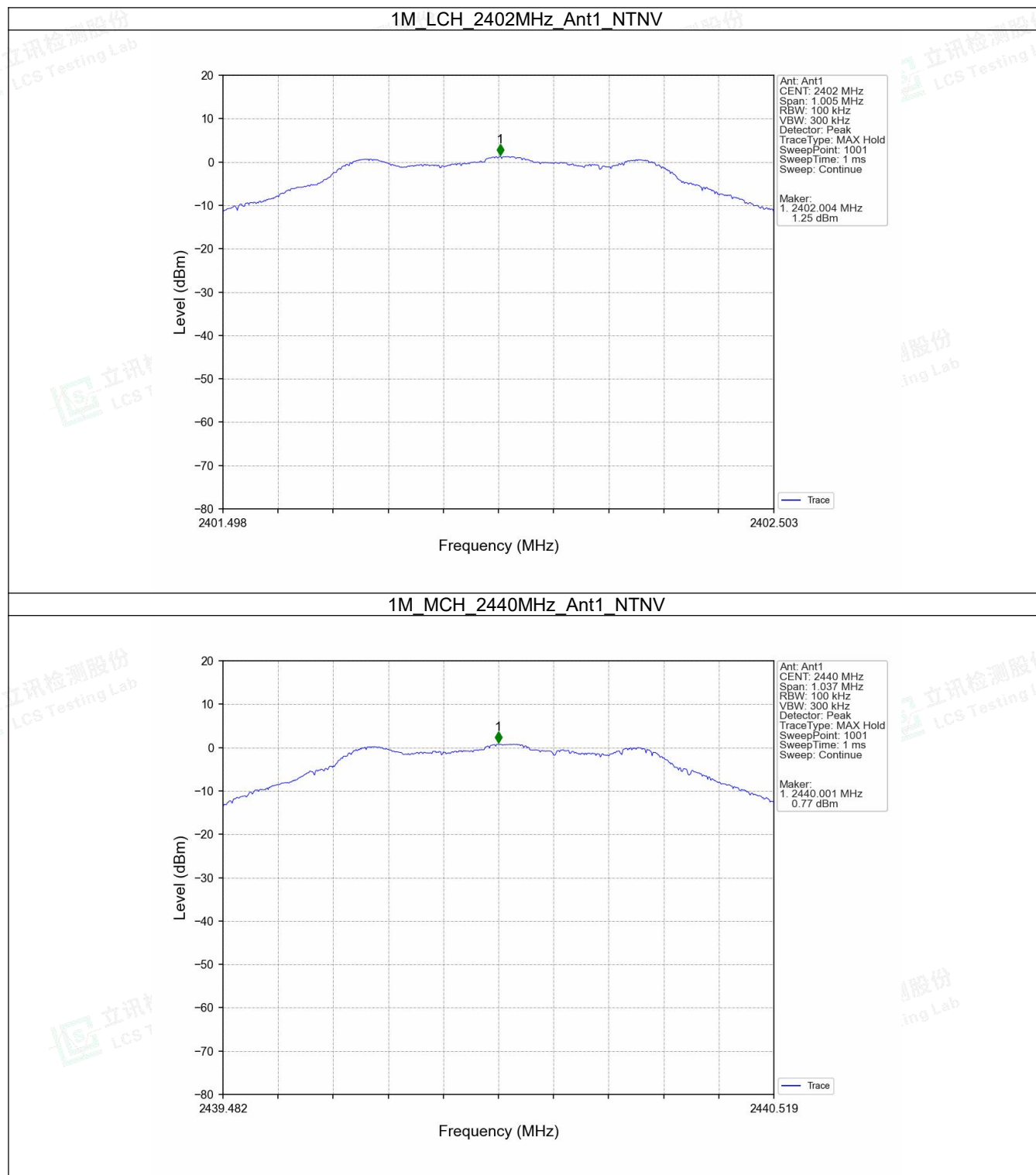
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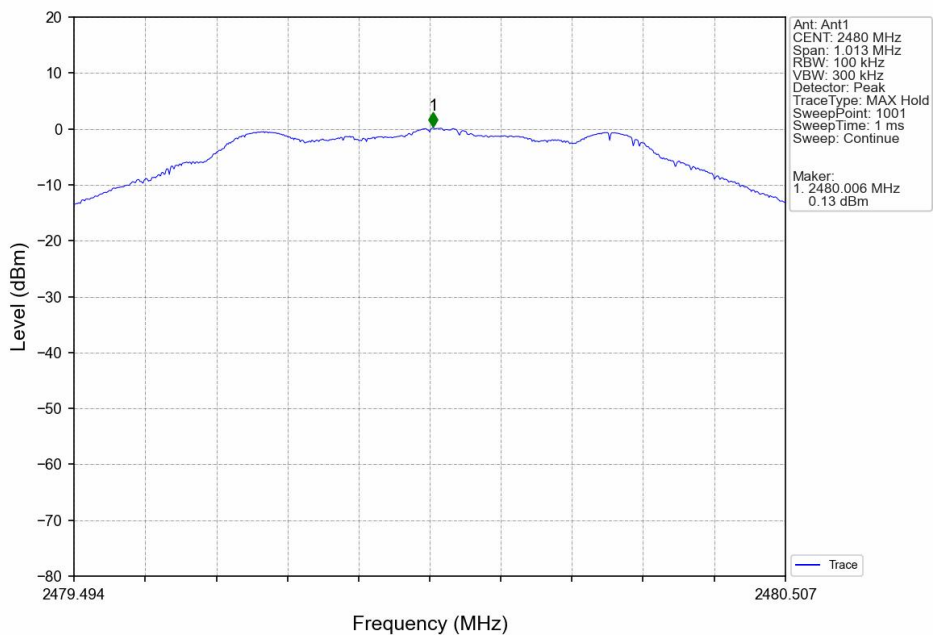


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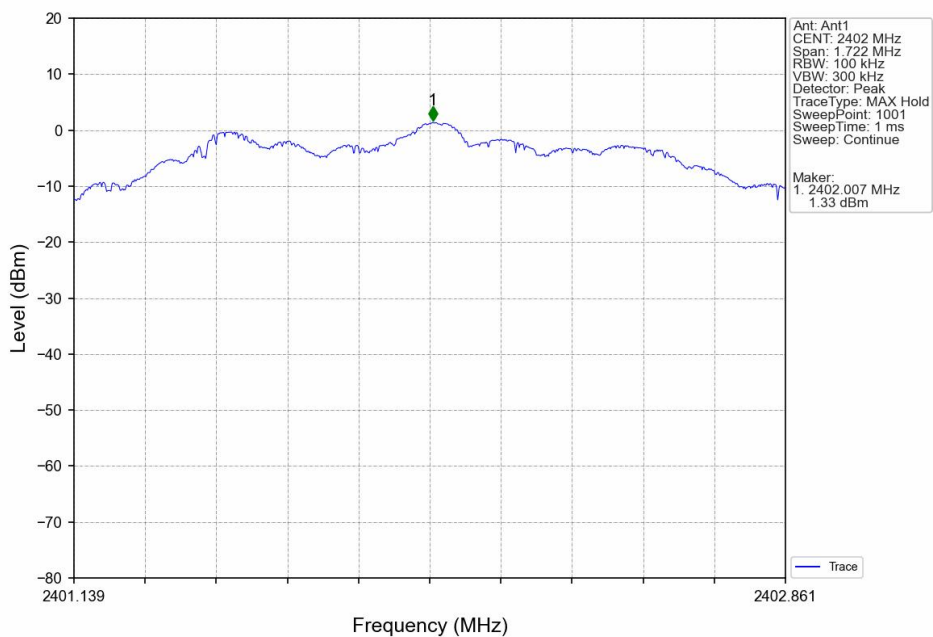




1M_HCH_2480MHz_Ant1_NTNV

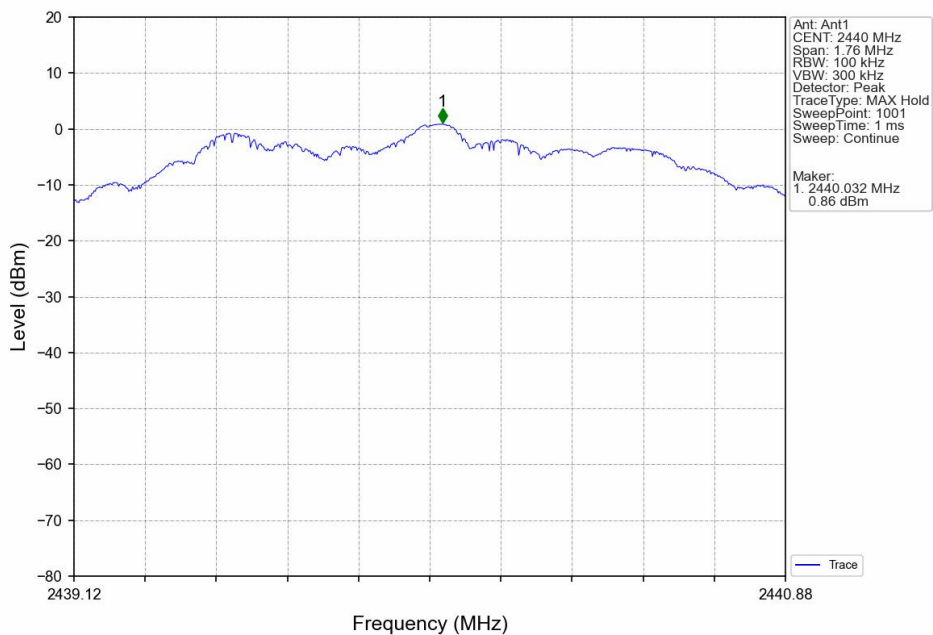


2M_LCH_2402MHz_Ant1_NTNV

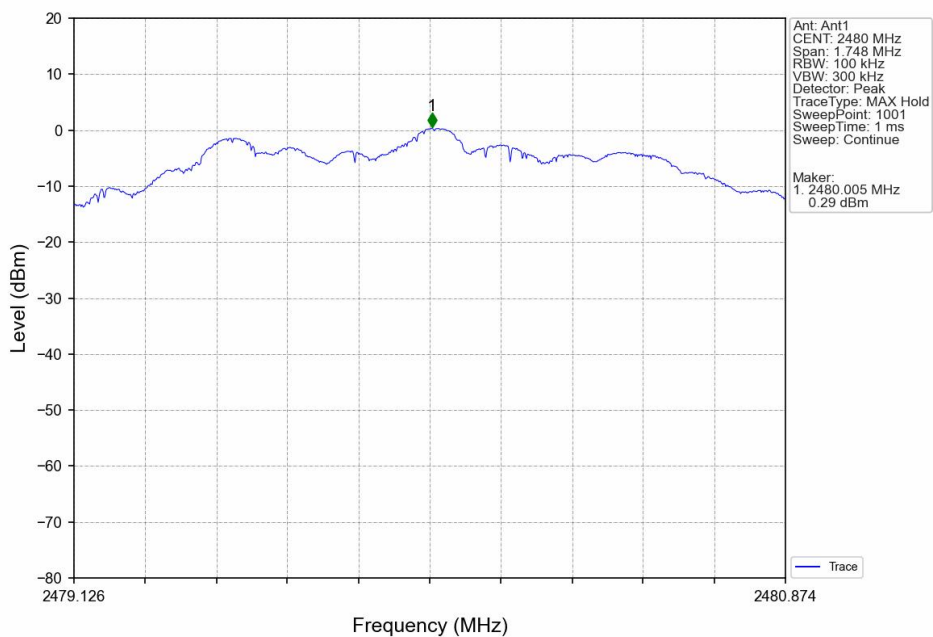




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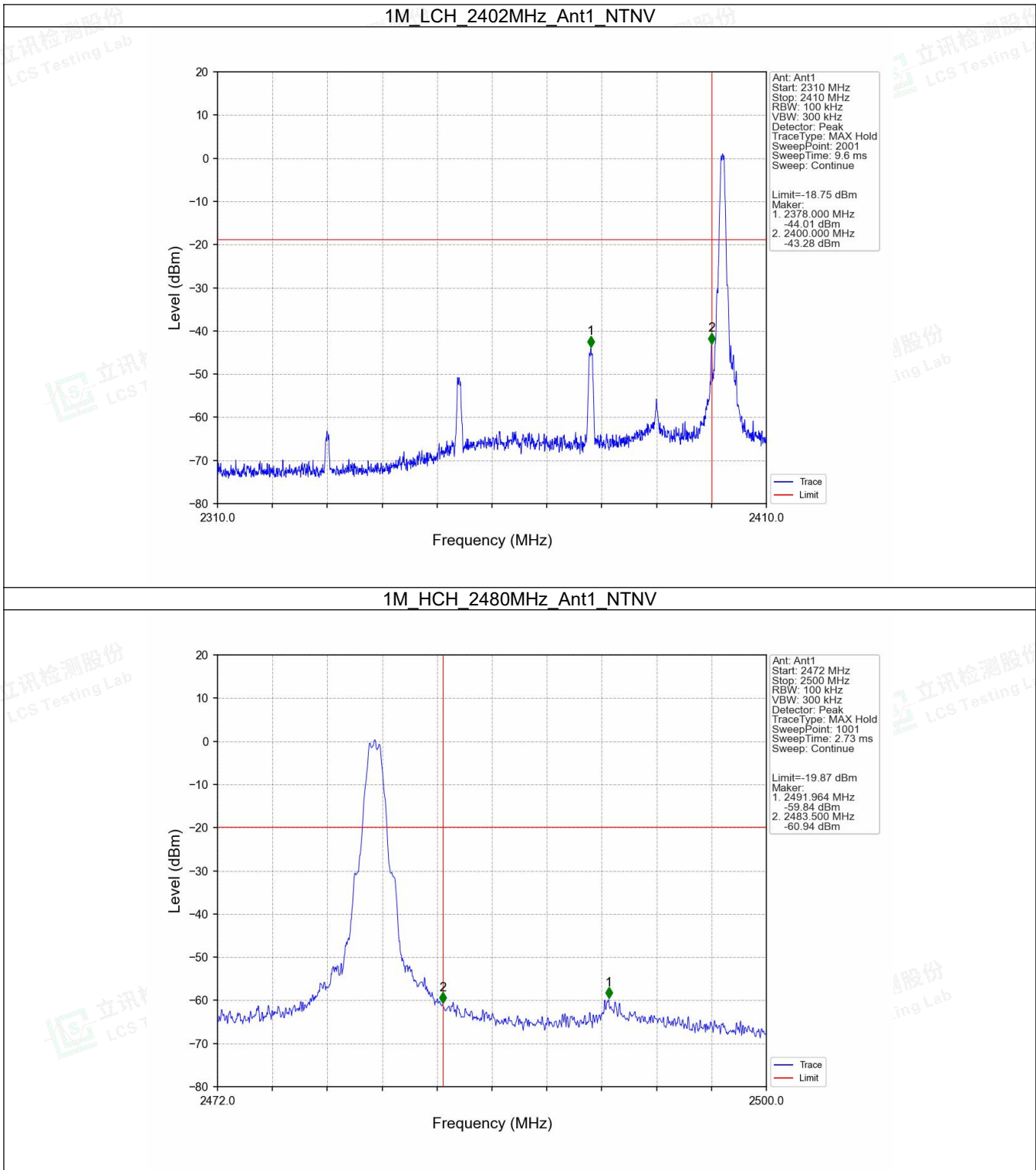


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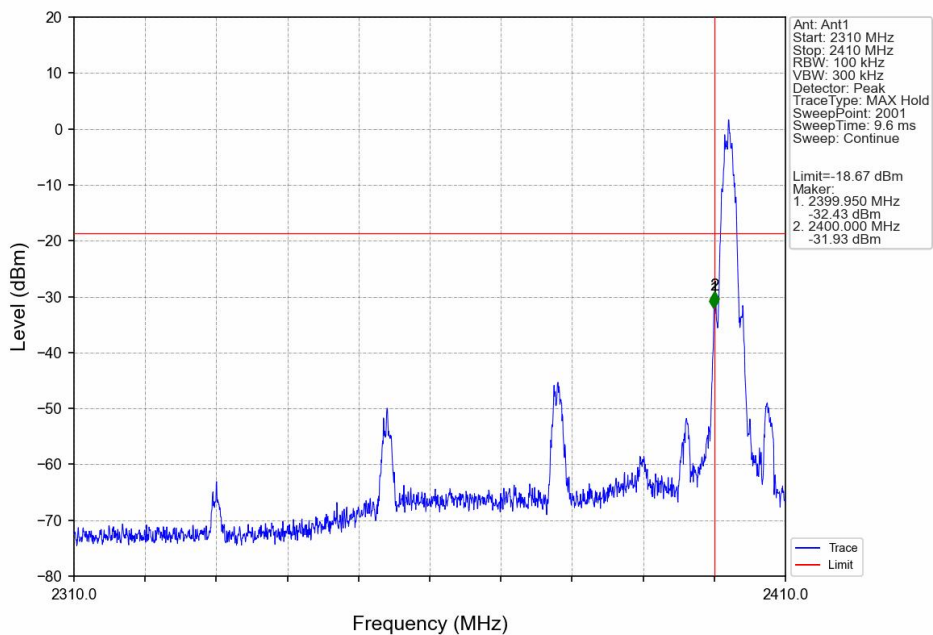


Band Edge

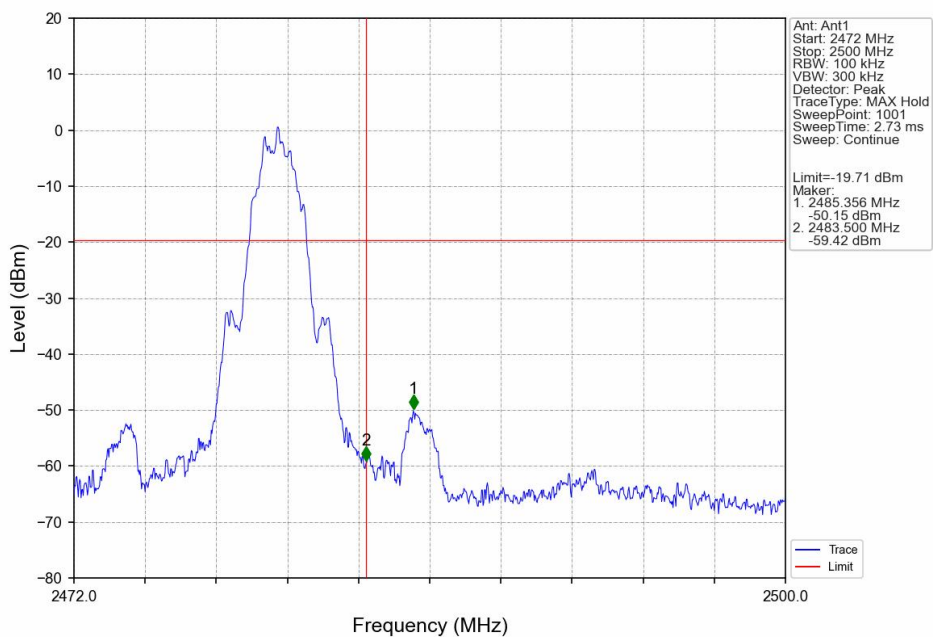




2M_LCH_2402MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



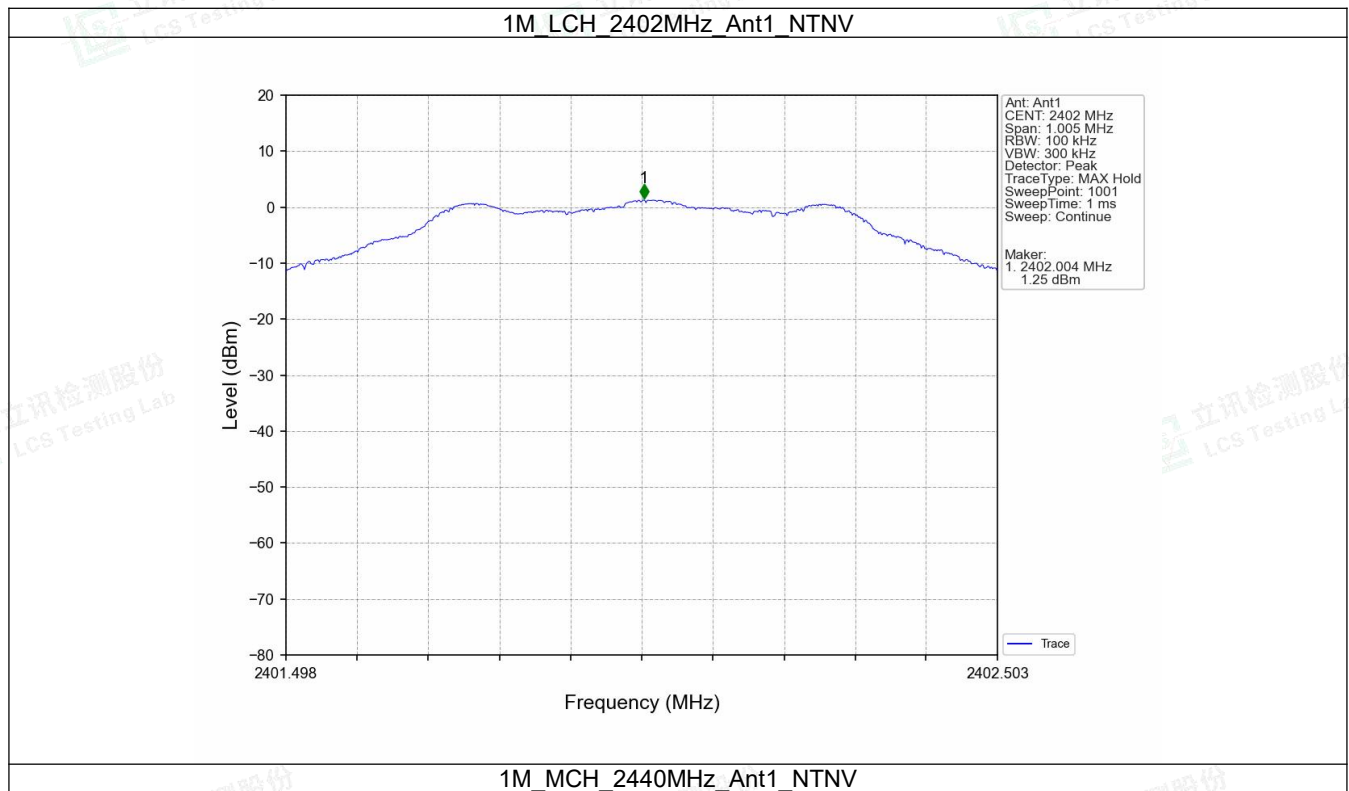


A.5 Conducted RF Spurious Emission

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	1.25
		2440	1	0.77
		2480	1	0.13
2M	SISO	2402	1	1.33
		2440	1	0.86
		2480	1	0.29

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

Ref

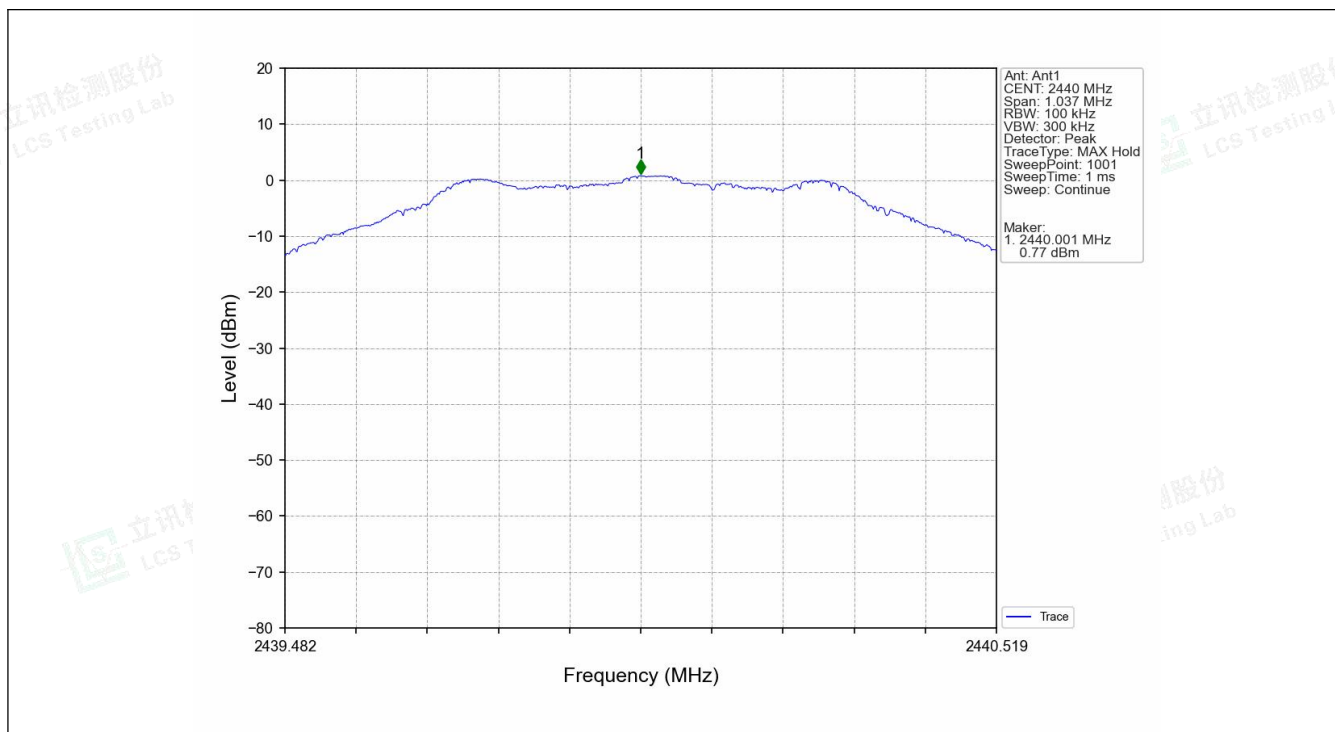


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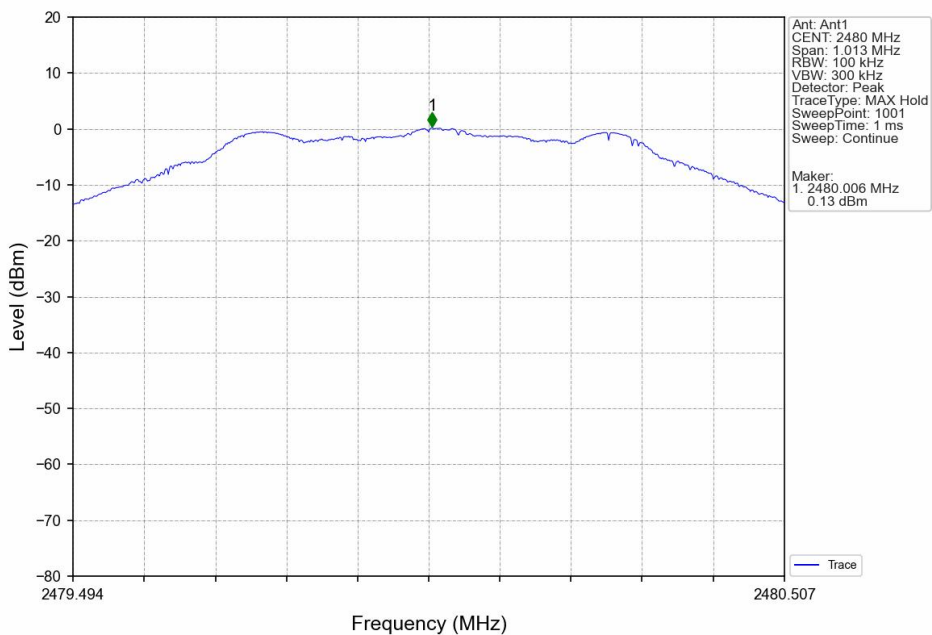
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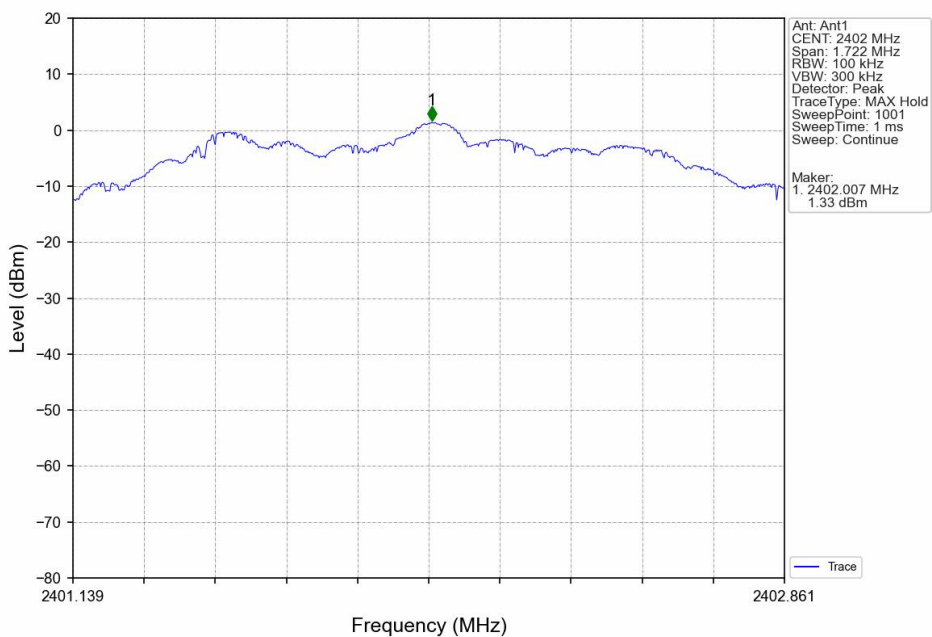




1M_HCH_2480MHz_Ant1_NTNV

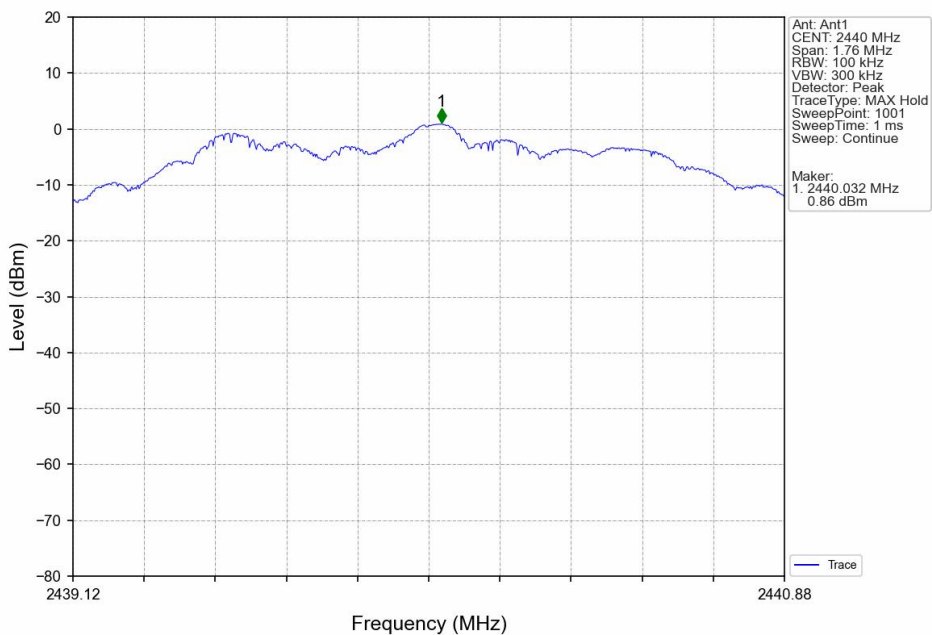


2M_LCH_2402MHz_Ant1_NTNV

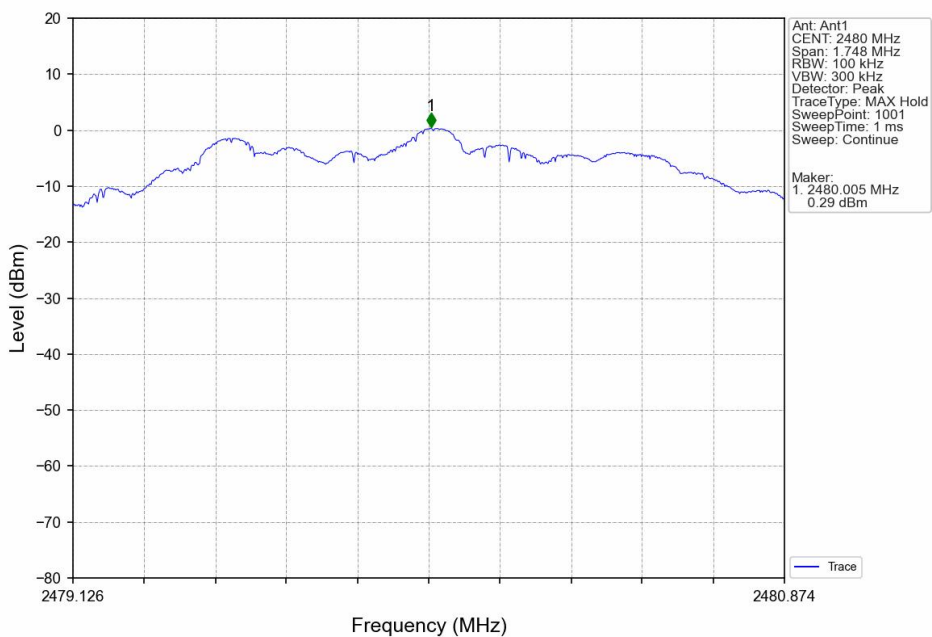




2M_MCH_2440MHz_Ant1_NTNV

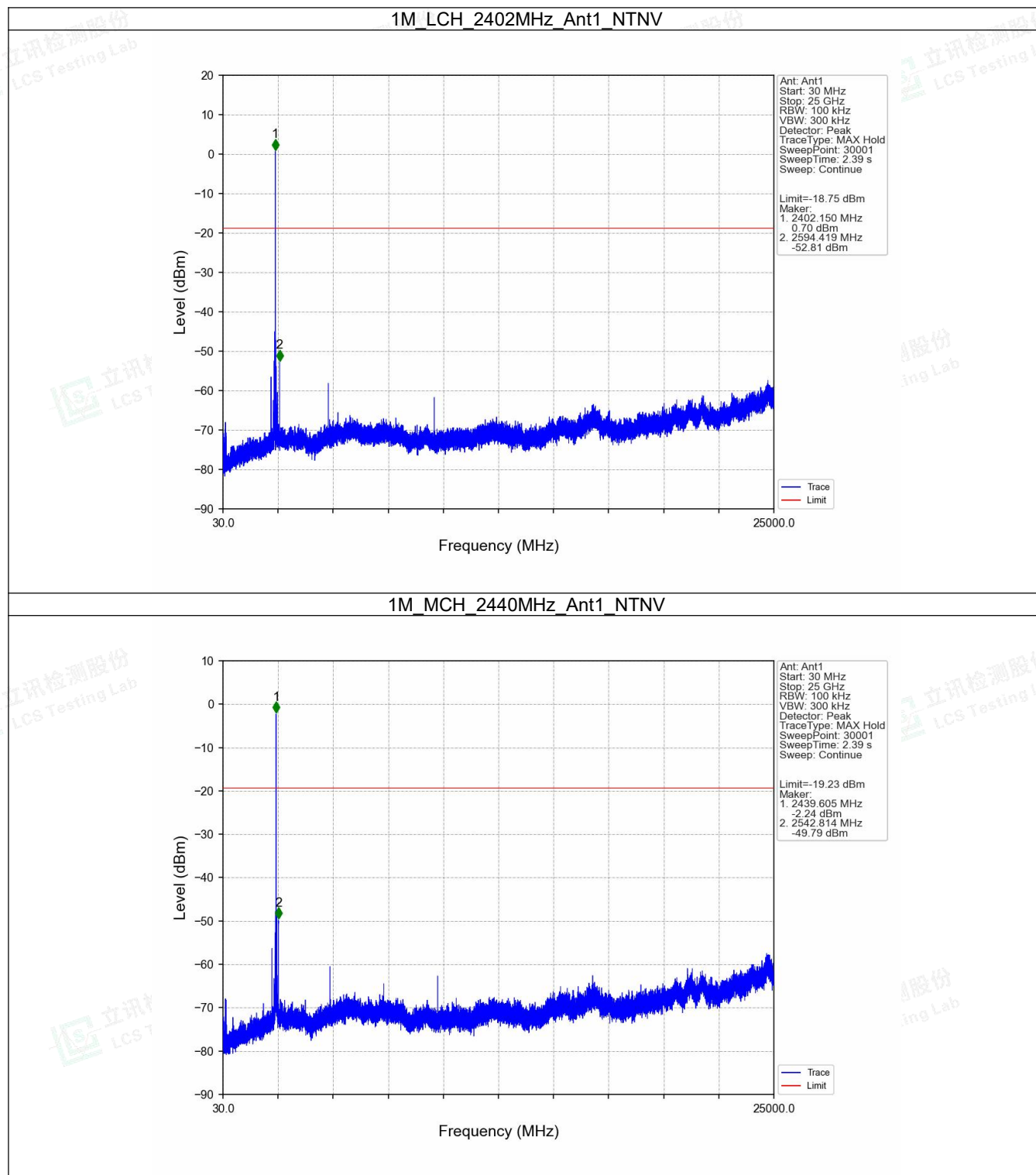


2M_HCH_2480MHz_Ant1_NTNV





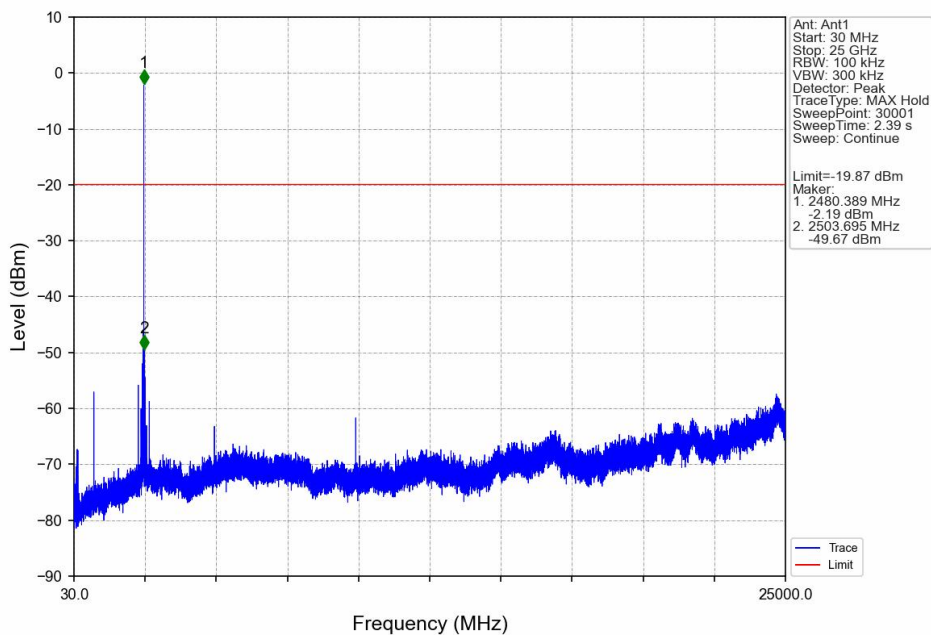
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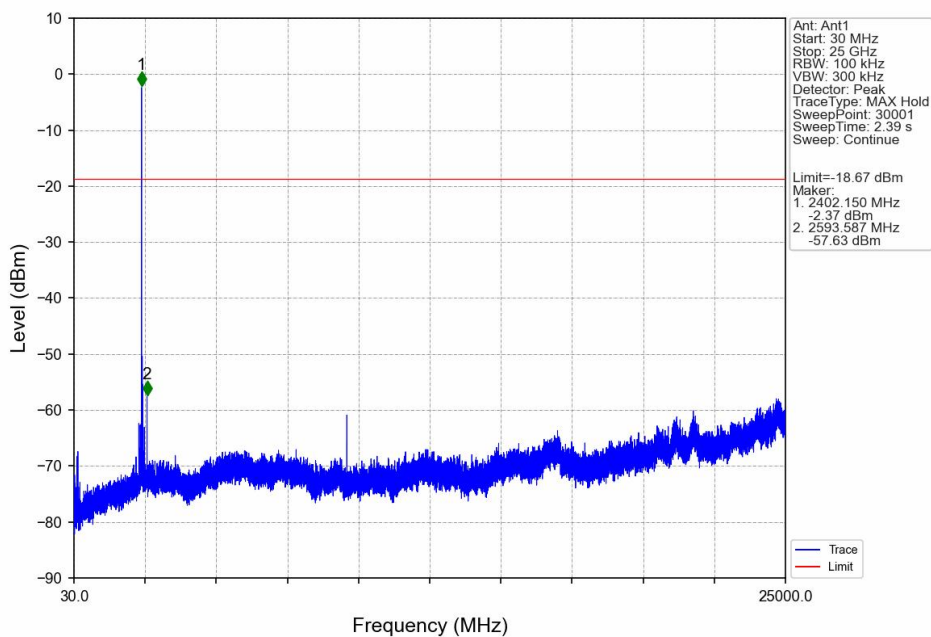
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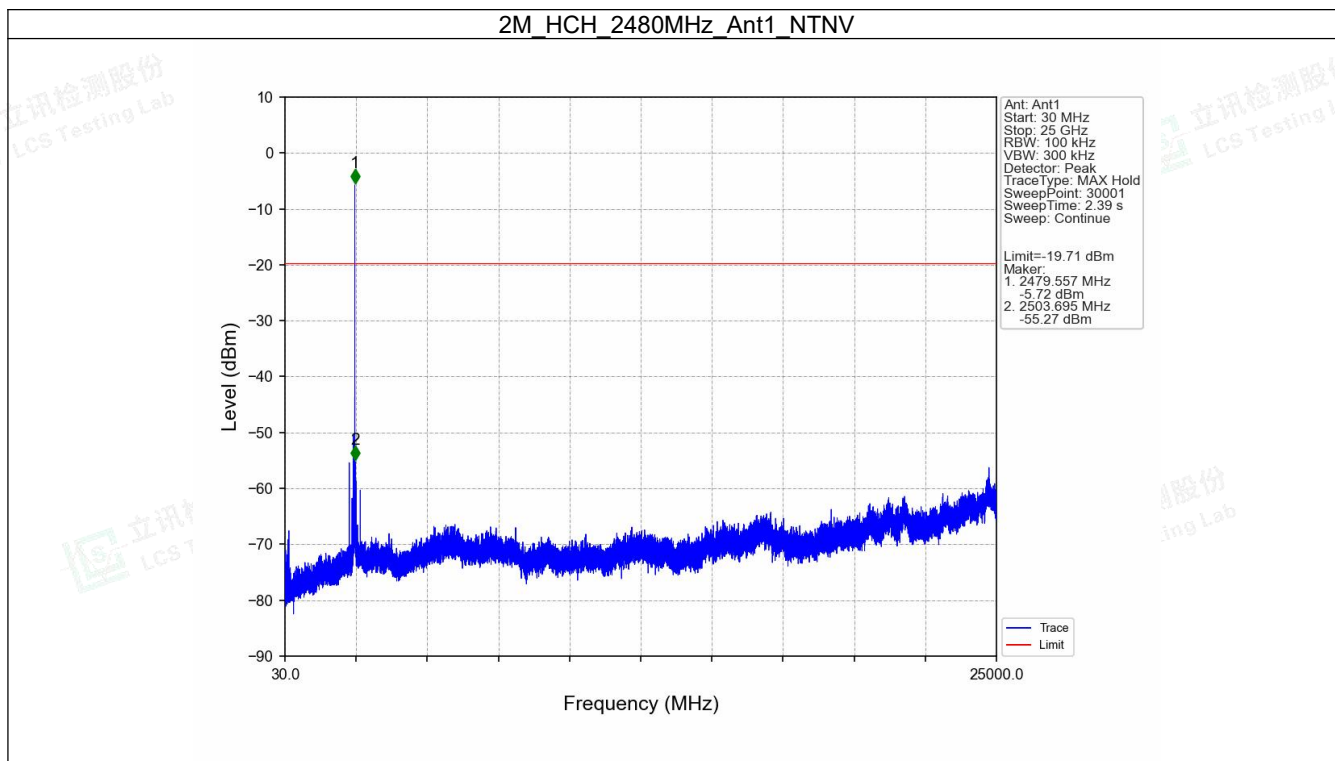


1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV







A.6 Duty Cycle

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	0.537	1.251	42.93	3.67	0.03
		2440	0.537	1.250	42.96	3.67	0.03
		2480	0.537	1.251	42.93	3.67	0.03
2M	SISO	2402	0.281	1.250	22.48	6.48	0.04
		2440	0.281	1.250	22.48	6.48	0.03
		2480	0.281	1.250	22.48	6.48	0.03



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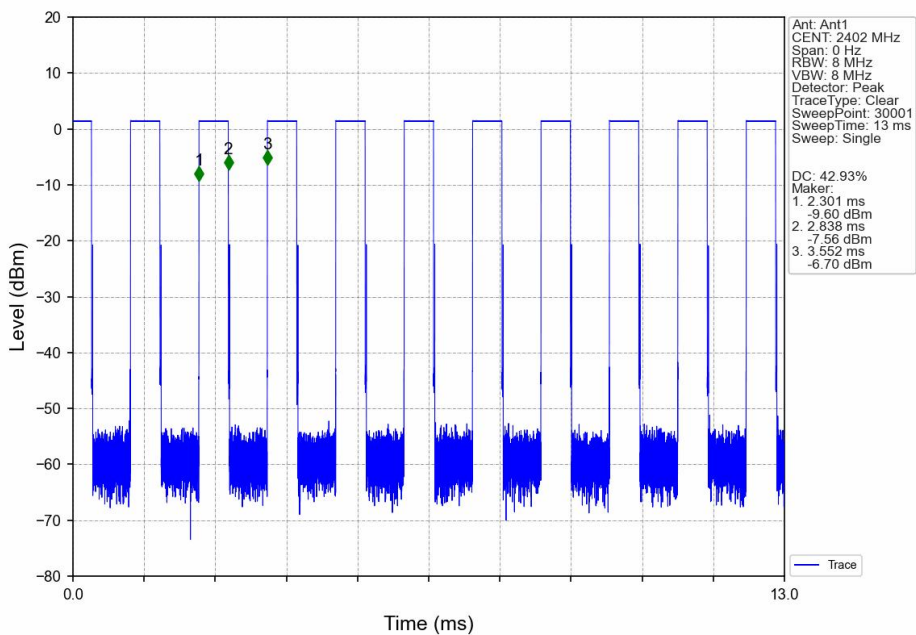
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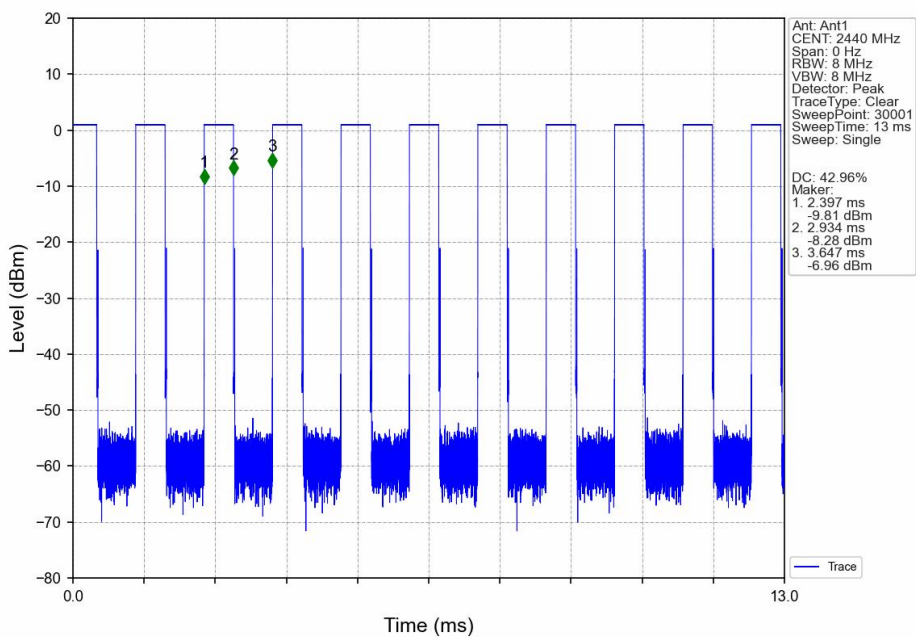
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1M_LCH_2402MHz_Ant1_NTNV

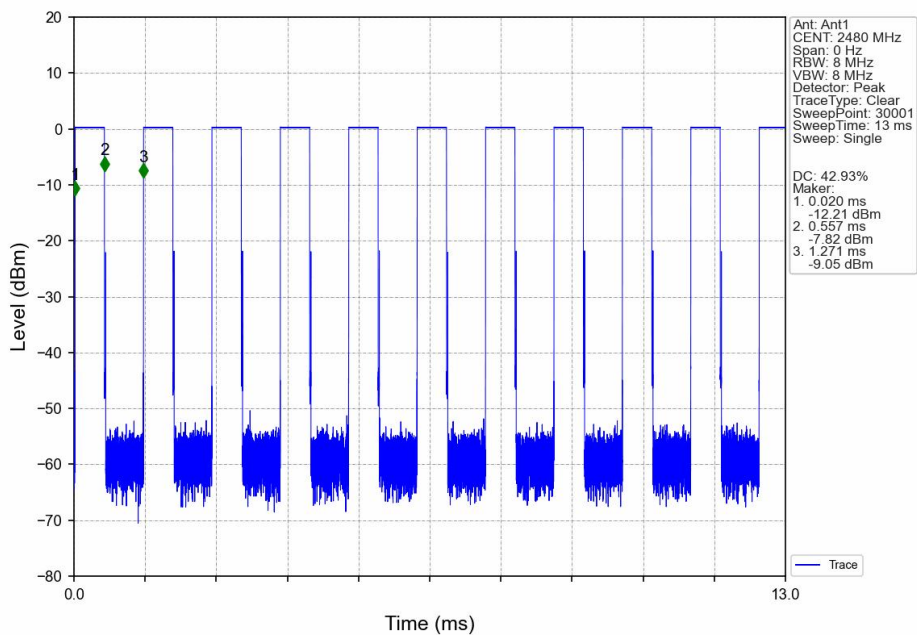


1M_MCH_2440MHz_Ant1_NTNV

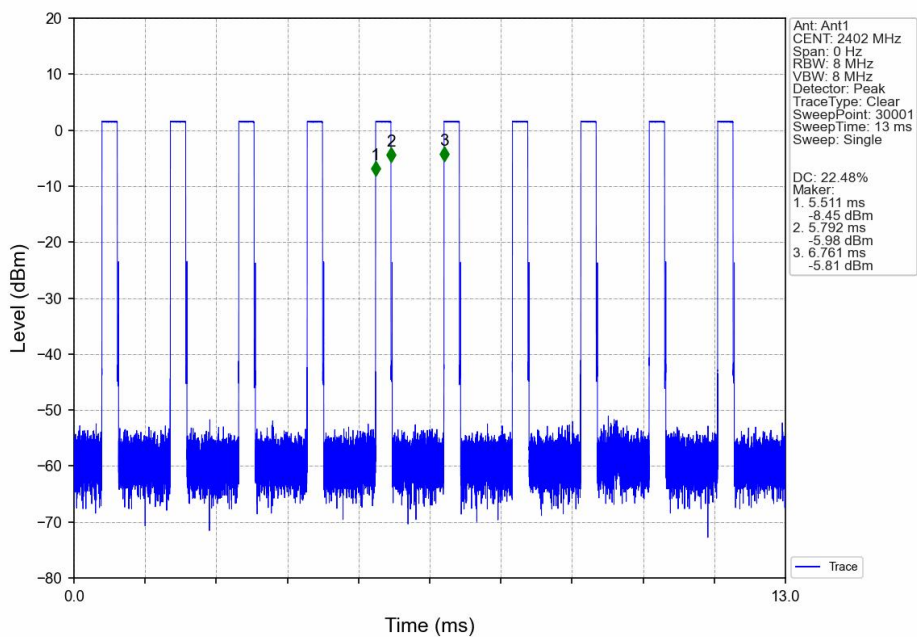




1M_HCH_2480MHz_Ant1_NTNV

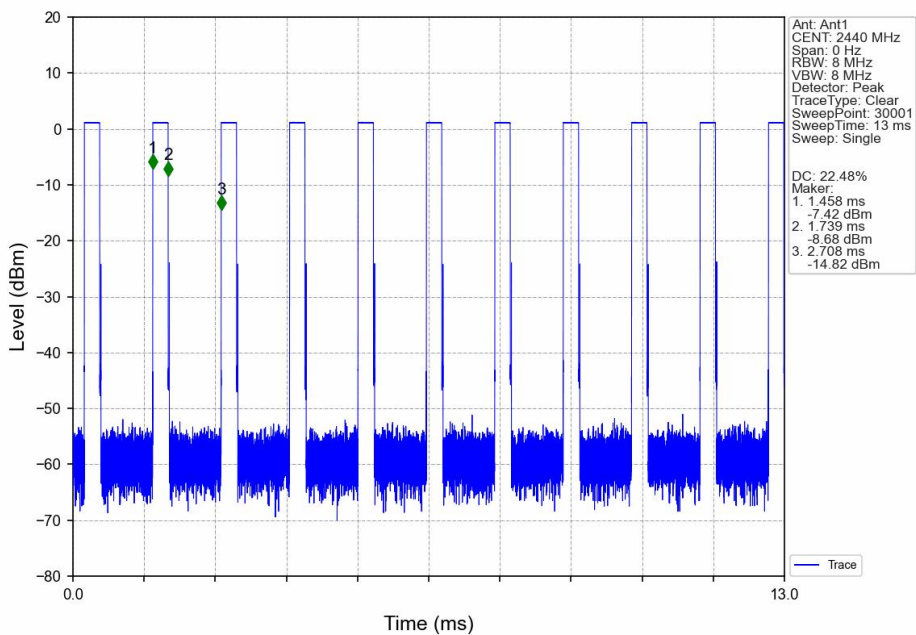


2M_LCH_2402MHz_Ant1_NTNV

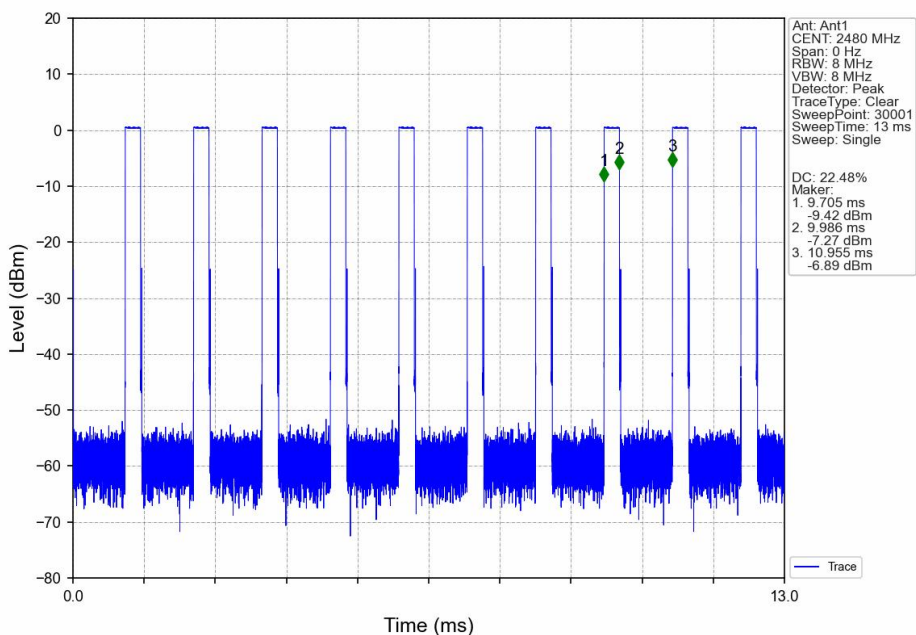




2M_MCH_2440MHz_Ant1_NTNV



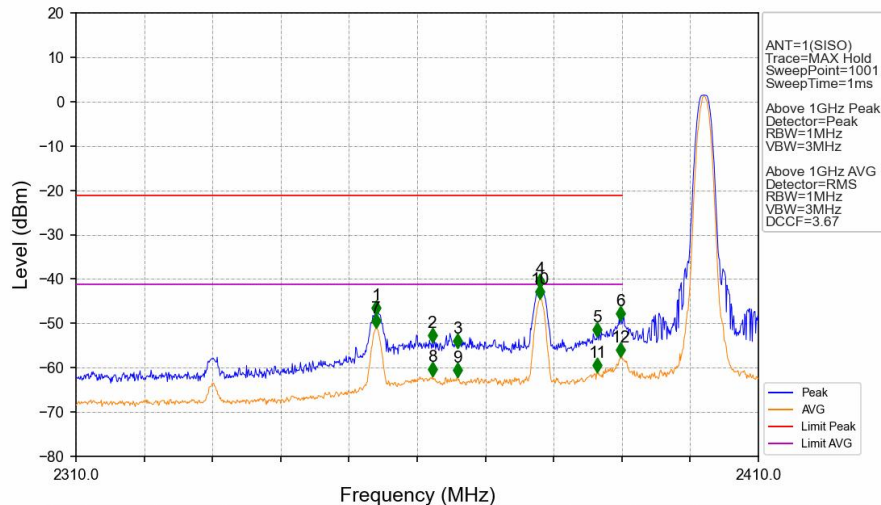
2M_HCH_2480MHz_Ant1_NTNV





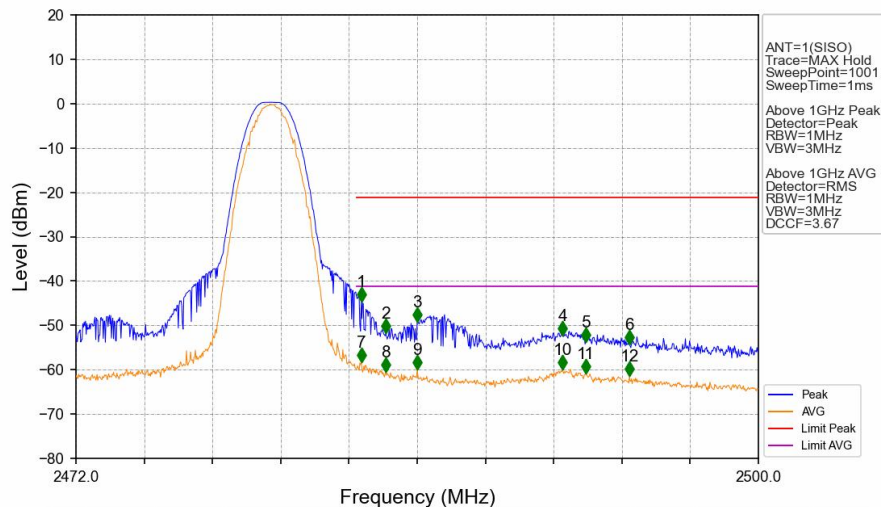
A.7 Restrict Band

1M_LCH_2402MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2354.000	-48.12	-21.20	26.92	Pass	Peak	7	2354.000	-51.01	-41.20	9.81	Pass	AVG
2	2362.200	-54.28	-21.20	33.08	Pass	Peak	8	2362.200	-61.98	-41.20	20.78	Pass	AVG
3	2365.900	-55.49	-21.20	34.29	Pass	Peak	9	2365.900	-62.17	-41.20	20.97	Pass	AVG
4	2378.000	-42.01	-21.20	20.81	Pass	Peak	10	2378.000	-44.51	-41.20	3.31	Pass	AVG
5	2386.400	-52.94	-21.20	31.74	Pass	Peak	11	2386.400	-60.94	-41.20	19.74	Pass	AVG
6	2389.800	-49.31	-21.20	28.11	Pass	Peak	12	2389.800	-57.46	-41.20	16.26	Pass	AVG

1M_HCH_2480MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2483.704	-44.58	-21.20	23.38	Pass	Peak	7	2483.704	-58.33	-41.20	17.13	Pass	AVG
2	2484.712	-51.76	-21.20	30.56	Pass	Peak	8	2484.712	-60.42	-41.20	19.22	Pass	AVG
3	2486.000	-49.17	-21.20	27.97	Pass	Peak	9	2486.000	-59.98	-41.20	18.78	Pass	AVG
4	2491.964	-52.19	-21.20	30.99	Pass	Peak	10	2491.964	-59.87	-41.20	18.67	Pass	AVG
5	2492.916	-53.75	-21.20	32.55	Pass	Peak	11	2492.916	-60.90	-41.20	19.70	Pass	AVG
6	2494.708	-54.29	-21.20	33.09	Pass	Peak	12	2494.708	-61.37	-41.20	20.17	Pass	AVG



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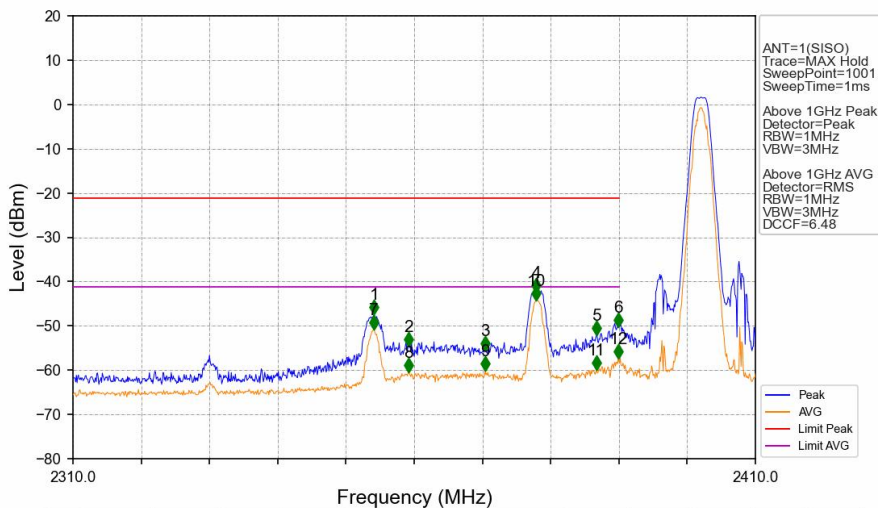
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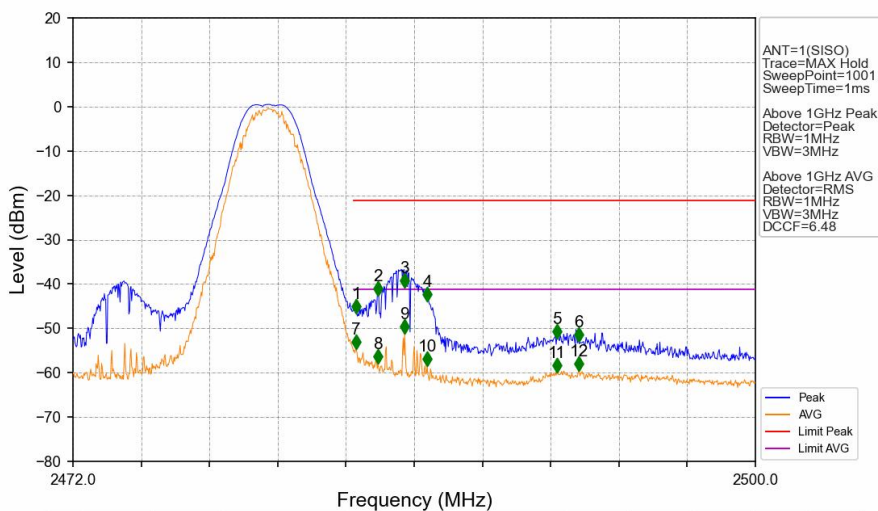


2M_LCH_2402MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2354.100	-47.40	-21.20	26.20	Pass	Peak	7	2354.100	-50.82	-41.20	9.62	Pass	AVG
2	2359.200	-54.71	-21.20	33.51	Pass	Peak	8	2359.200	-60.51	-41.20	19.31	Pass	AVG
3	2370.400	-55.46	-21.20	34.26	Pass	Peak	9	2370.400	-60.08	-41.20	18.88	Pass	AVG
4	2377.900	-42.39	-21.20	21.19	Pass	Peak	10	2377.900	-44.24	-41.20	3.04	Pass	AVG
5	2386.700	-52.13	-21.20	30.93	Pass	Peak	11	2386.700	-59.98	-41.20	18.78	Pass	AVG
6	2389.900	-50.22	-21.20	29.02	Pass	Peak	12	2389.900	-57.38	-41.20	16.18	Pass	AVG

2M_HCH_2480MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2483.620	-46.56	-21.20	25.36	Pass	Peak	7	2483.620	-54.68	-41.20	13.48	Pass	AVG
2	2484.516	-42.59	-21.20	21.39	Pass	Peak	8	2484.516	-57.95	-41.20	16.75	Pass	AVG
3	2485.608	-40.77	-21.20	19.57	Pass	Peak	9	2485.608	-51.15	-41.20	9.95	Pass	AVG
4	2486.532	-43.82	-21.20	22.62	Pass	Peak	10	2486.532	-58.49	-41.20	17.29	Pass	AVG
5	2491.852	-52.32	-21.20	31.12	Pass	Peak	11	2491.852	-59.85	-41.20	18.65	Pass	AVG
6	2492.748	-52.96	-21.20	31.76	Pass	Peak	12	2492.748	-59.47	-41.20	18.27	Pass	AVG



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