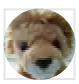
Toning down the explosive capability of too much capacitive reactance in my replication of Bill Fogal's Charge-Barrier Transistor by introducing more instances of inductive reactances.

Less likely to explode without any guarantees that it will not explode which would validate an inexpensive electrical bomb.



VINYASI

MAY 07, 2026

The inherent nature of capacitive reactance is akin to a spark gap. This is not surprising since Micro-Cap’s macro (equivalent circuit to the behavior) / of a / for a / neon bulb has two capacitors, in addition to a resistor, in parallel with its two terminals to suggest that what the macro is emulating (in the real world) is a capacitor when the spark gap / neon bulb / gas discharge tube / has not become energized, yet, and remains quiescent.

Mechanical switches behave likewise: their two contacts, when their switch element is open, are spread apart with a gap of air between them. This gap serves as a dielectric separating the two contacts of that switch and, thus, allows for the storage of charge within this so-called empty space between these two metallic switching contacts.

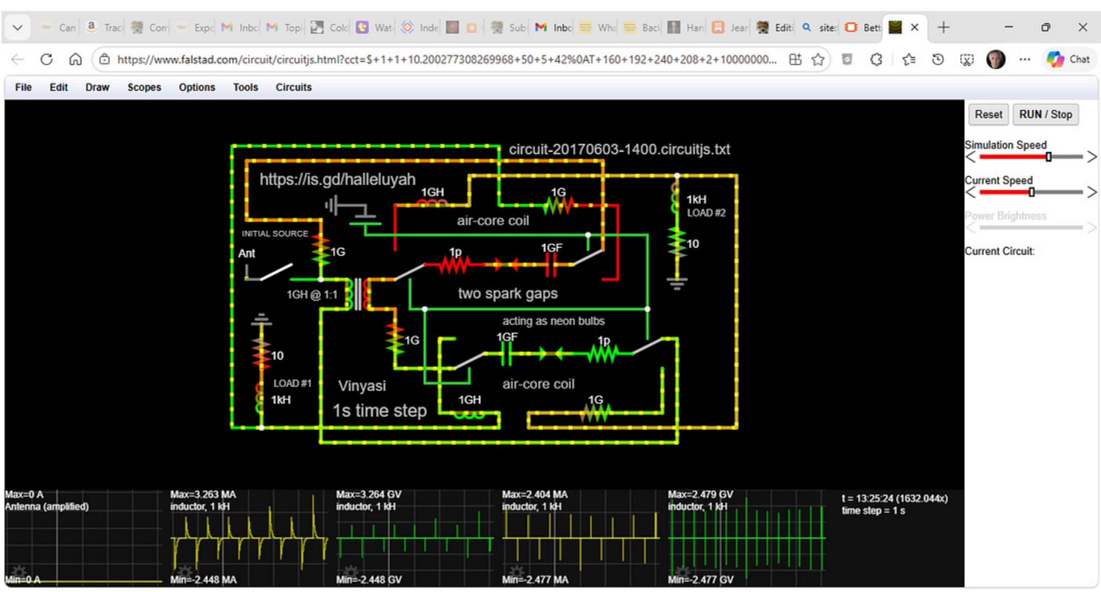
Well, it came to me in a flash that that’s what’s missing: more inductances placed in series (inline and adjacent to) any instance of elevated resistance.

I learned this when I devised one of my variations of my “lightning oscillator” on Paul Falstad’s simulator. This was so named by someone on the All About Circuits Forum who claimed that my (“free energy”) oscillator wasn’t anything new since he’s seen it before as natural lightning. So, I looked up the magnitude of voltage versus amperage for lightning, and he wasn’t too far off in his estimation of natural lightning’s analogousness to my simulation since natural lightning is around a thousand times less powerful.

> The potential difference between cloud and ground is of the order of 10 to 100 million volts, and the peak currents in return strokes to negative leaders are typically about 30,000 amperes.

This oscillator uses two grounds. Each ground takes turns discharging, or its alternate direction of the flow of its current during alternate phases. And each ground uses a coil of one kilo Henry in series, inline, with a resistor of ten ohms. Each is labeled as the “loads” of this circuit, namely: Load #1 and Load #2.

This was the first time I learned of the value of considering an electrical branch of a more complicated circuit as a potentially likely candidate for serving as a load.



https://is.gd/4UteVd

Here's the long-version of the shortened link, above:

https://www.falstad.com/circuit/circuitjs.html?
ctz=DwYwIgTgBAZgvAIgIwKgFwM6JVMJsAMAdAEwEEkDsIAzAQBwkBs
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Bwo4GIqkIo8tsI5MKVrNEB1KC8GvCmBE15Ay1JMio6BABJAAcoM-
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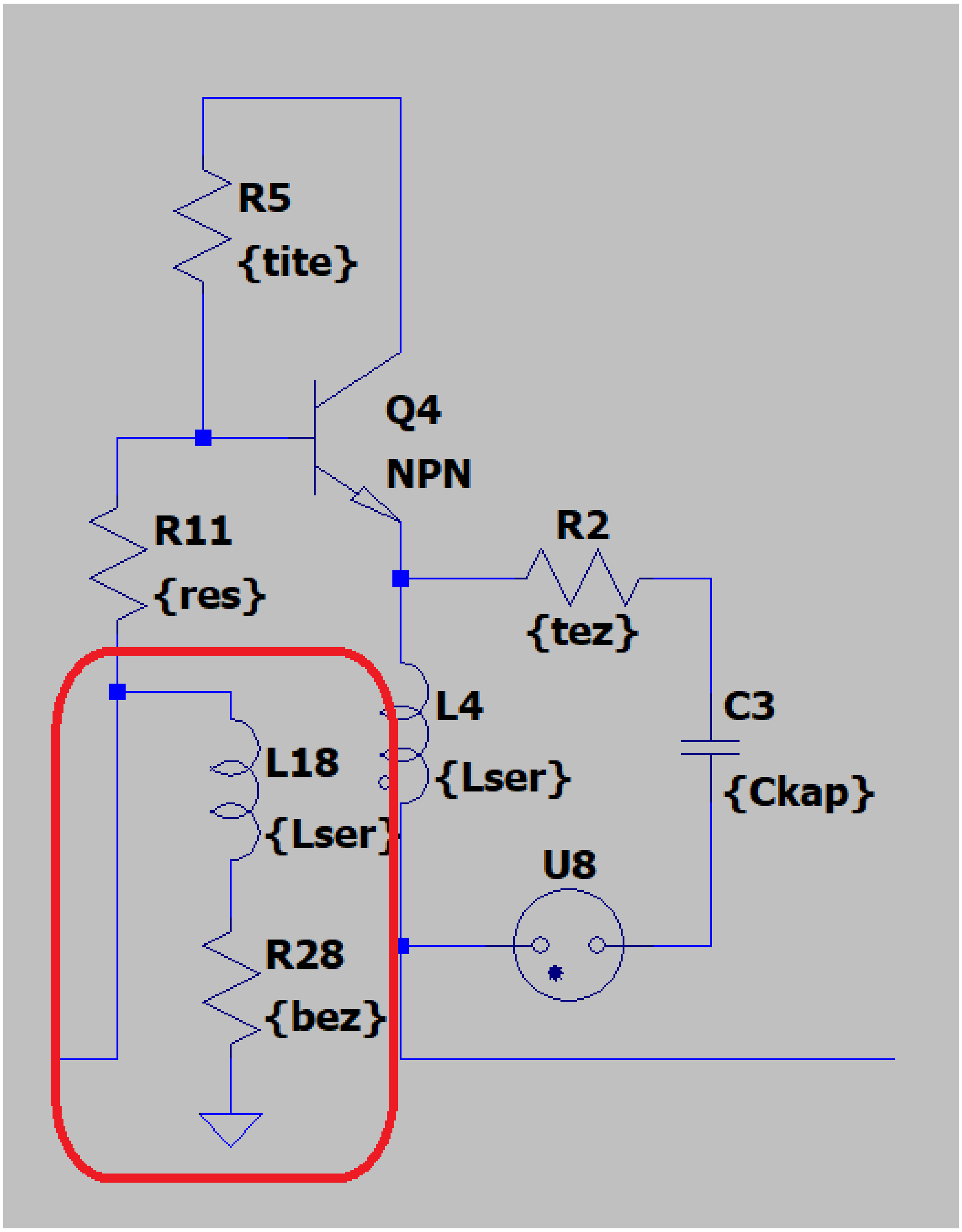
VroVqqAaIOV9AFXu3pcqxIDQ0UasyFqrQwBUhWW0EAA

So, I decided to try and implement the same concept to my recent attempt at fine-tuning my attempt at replicating Bill Fogal’s Charge-Barrier Transistor and it works fine. All I had to do was adjust the parameters of any of the coils, caps and resistors such that an explosive condition was encouraged to occur, rather than a wimpy pulsation, and then add lots of grounds in all the right places with each ground-path incorporating a coil and a resistor on its singular leg, like so:



This one act of improvement even solved my simulator's sensitivity towards error by making it possible for me to reduce its relative tolerance setting (RELTOL) so as to conform to conventional, good engineering principles. :-)

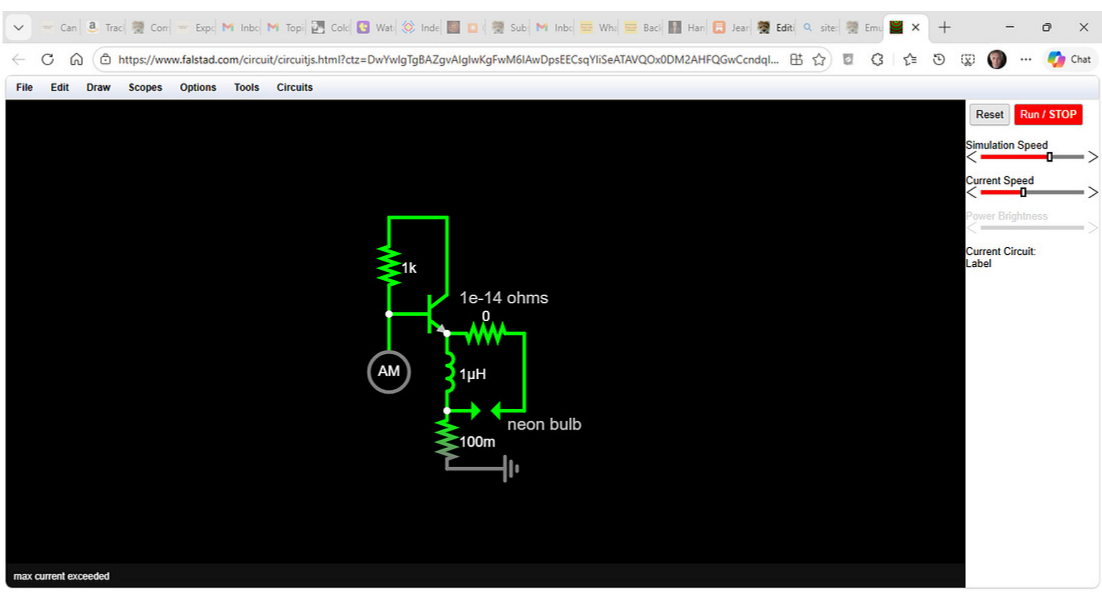
Considering how difficult it is to "sell" (ie, convince) engineers on overunity — within the context of a circuit whose inputs are not proportional to its outputs, I'd say this is a sure-fire winner!

Reducing RELTOL too far results in lessening the output until reducing RELTOL far enough results in this circuit blowing up. So, maybe there's no way to regulate this circuit against its tendency to explode? I don't know …

I'll just keep it equal to or above a RELTOL of 0.00006 (6e-5). This is still not bad. Hardly anyone could find fault with this shortcoming, could they?

I just, now, discovered somethings which are interesting:

First, it doesn't matter whether the capacitor/s are electrolytic or normal. And in Paul Falstad's simulator, it doesn't matter whether any capacitor is present there:

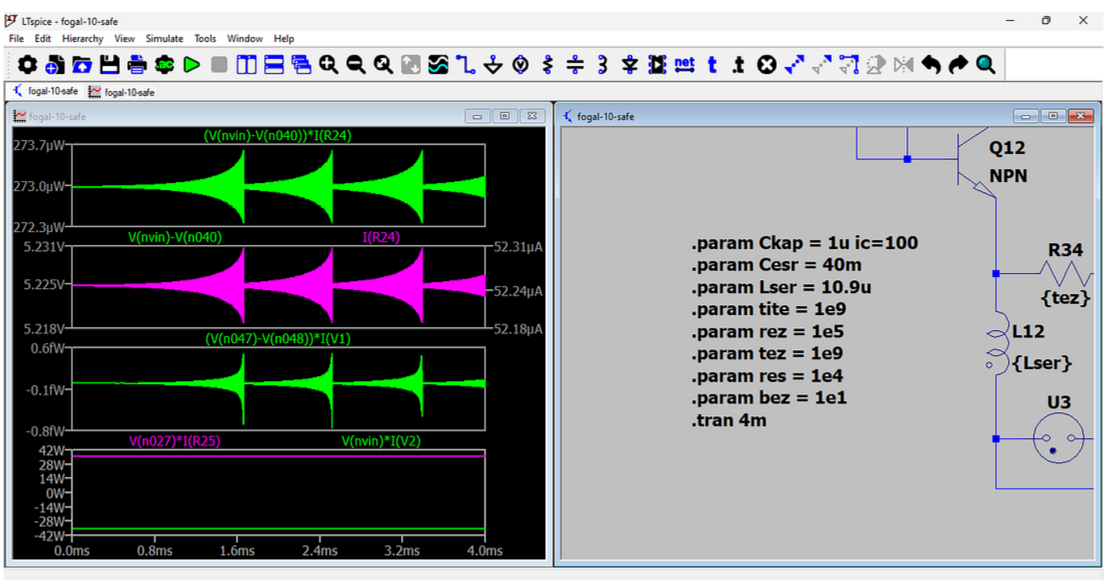


But in LTSpice, it matters since without a capacitor in that position, the simulation becomes unstable and it fatally errors. So, it lends some sort of stability to the circuit.

Consequently, it doesn't matter what value of capacitance you set the capacitors to. But it does matter whether you set them to extremely small equivalent series resistance (ESR) since that will destabilize the consistent pulses and replace pulsations with an explosive tendency.

So, try as I might, I have failed to raise the power level of pulsation mode. Yet, I've learned how to make explosive mode less likely but without any guarantees since all you have to do to induce an explosion is to lower RELTOL below 0.00006.

BTW, resistor R24, at the top of the display (below), is not a load. Nor is it a source. It is a hybrid between the two since it's literally in between a source (the battery) and the circuit.



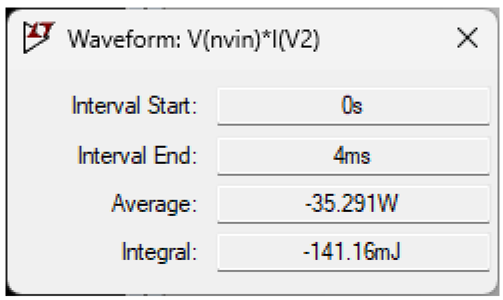
I chose it since it looked like it had the largest output. And if the battery represents a mast in real life, then you could consider it to be a load since you won't be paying for it.

It doesn't seem like much, harboring an average of 270 microwatts. But the sine wave frequency generator (on the far right of the schematic) is costing -0.00027816fW! That's -2.7816e-19W! … Far less than 270 microwatts:

+2.7e-4W R24, plus …

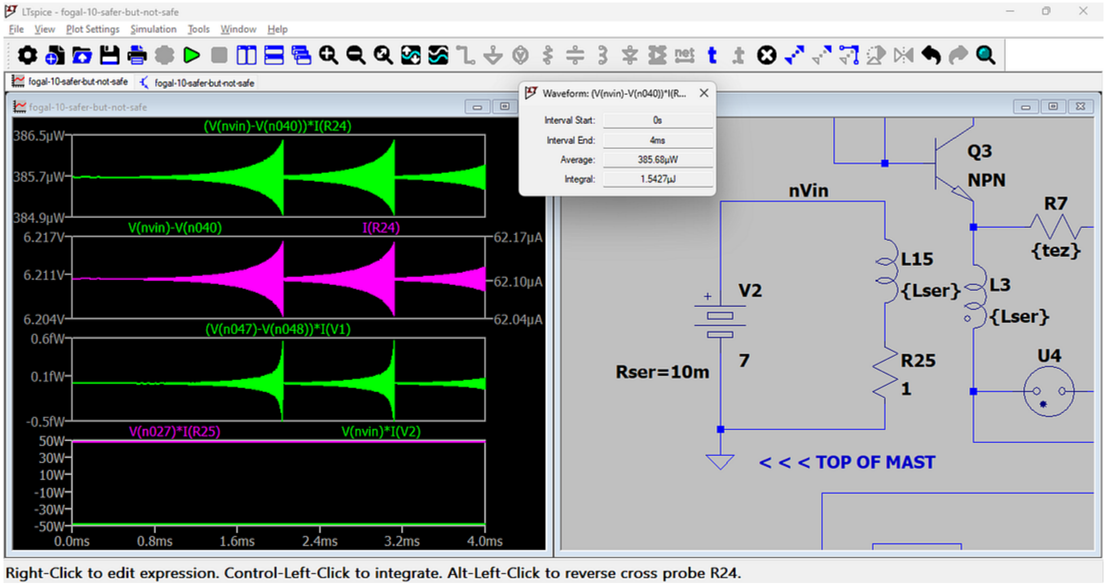
-2.7816e-19W V1, equals only slightly less than …

+2.7e-4W, since subtraction of -2.7816e-19W is so small that it's hardly anything to take stock of.



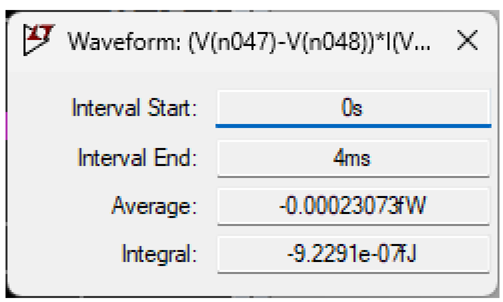
And the -35.291W coming from the mast (represented by the battery) is for free since it's coming from the charge difference between the Earth's ground and a sufficient height above ground to yield a voltage of at least 6V.

Raising the height of the mast will raise the voltage available for this circuit and, thus, will increase its output of power.

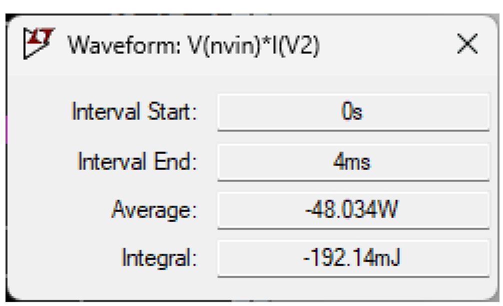


But whether this gain is worthwhile, given any other circuits out there which may be more efficient, I don't know.

The sine wave frequency generator, V1, will be costing less:

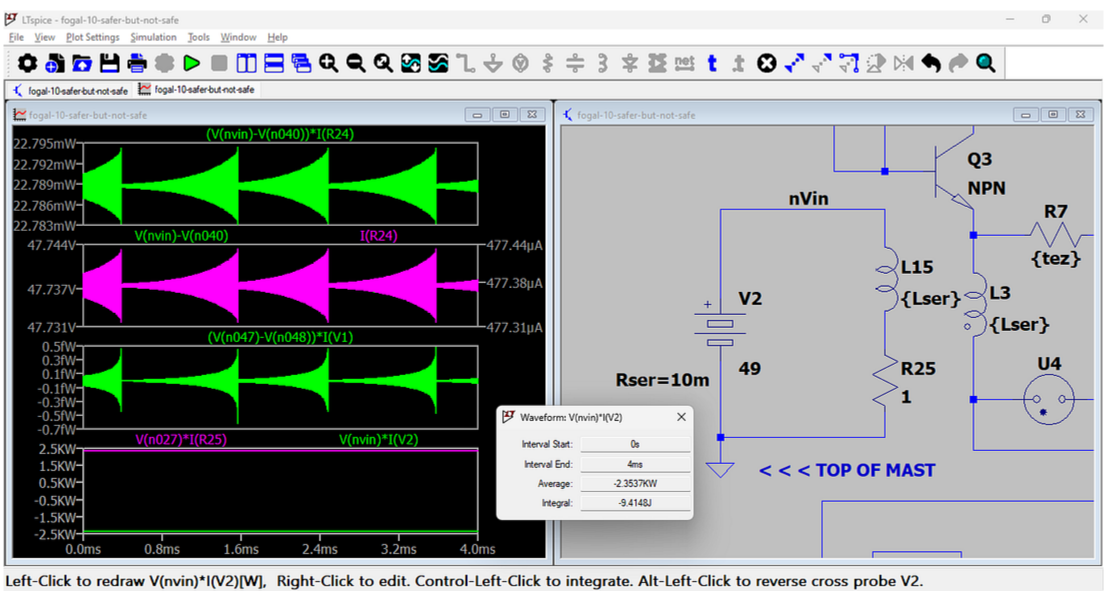


if the mast (simulated by the battery) is providing more (7V):

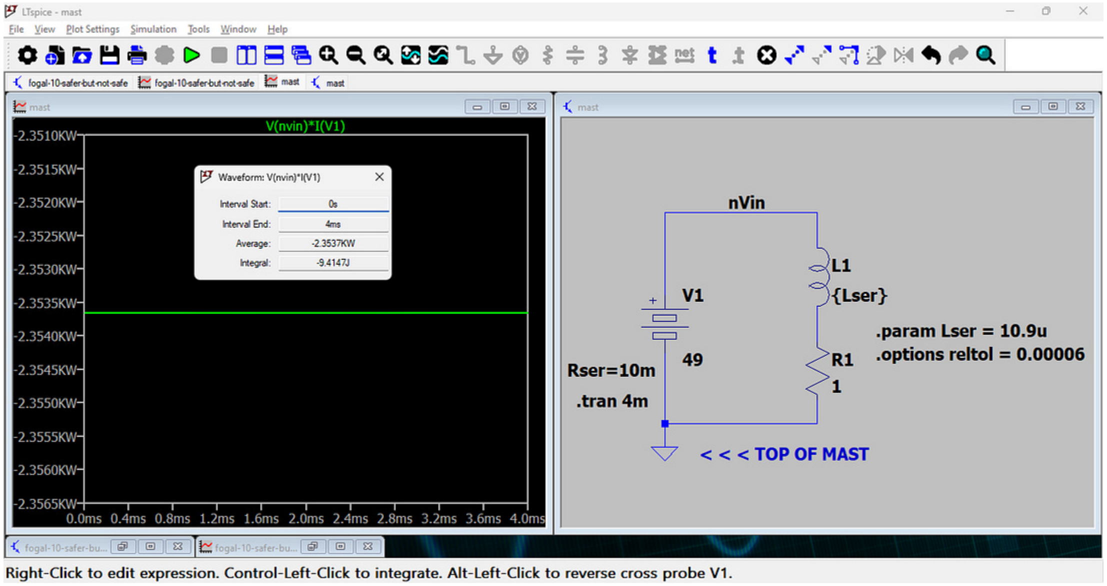


Since AI claimed the other day that a mast of merely 6cm in height will offer a voltage difference of 6V between its tippy top and its grounded bottom, it could be speculated that not much more height than this would be needed to render a substantial output — although I doubt AI's figures hold true at ground level. My guess is that they are averaged over 100m (since that's what they are derived from) which allows for the doubt that this voltage difference per height from ground of less than one meter may not be proportional to any height above ground which is greater than one meter. I don't know.

At two meters, assuming that a mast this high will possess a voltage difference of 200V, the simulator explodes. The largest voltage of the battery/mast without exploding must be no more than 49V. At this voltage input, the output at resistor R24 is nearly 23 milliwatts. Meanwhile, the mast is humming at two and one-third kilowatts.



And the mast, by itself, yields the same value:



Seems to me that this series of circuit experiments have been a waste of time!

Oh, well. It was fun.

Here's the download link. And here's the netlist:

* D:\Documents\Sims\LTSpice\2026\05 - May\07\fogal-10-safer-but-not-safe.asc

* Generated by LTspice 24.1.9 for Windows.

L1 N021 N036 {Lser} Rser={Lser}

R1 N022 N021 {tez}

Q1 N008 N012 N021 0 NPN

R3 0 N006 {rez}

L2 N019 N026 {Lser} Rser={Lser}

R4 N020 N019 {tez}

```
Q2 N005 N011 N019 0 NPN

R6 N005 N011 {tite}

L3 N013 N023 {Lser} Rser={Lser}

R7 N014 N013 {tez}

Q3 N002 N001 N013 0 NPN

R9 N002 N001 {tite}

L7 N059 N075 {Lser} Rser={Lser}

R19 N060 N059 {tez}

Q7 N046 N052 N059 0 NPN

R21 N046 N052 {tite}

L11 N057 N066 {Lser} Rser={Lser}

R31 N058 N057 {tez}

Q11 N045 N051 N057 0 NPN

R33 N045 N051 {tite}

L12 N061 N063 {Lser} Rser={Lser}

R34 N062 N061 {tez}

Q12 N042 N039 N061 0 NPN

R36 N042 N039 {tite}

V1 N047 N048 SINE(0 1m 4e5) Rser={res}
```

R37 N026 N012 {res}

R38 N025 N011 {res}

R42 N065 N051 {res}

R46 N066 N052 {res}

R47 N041 nVin {rez}

X§U1 N076 N075 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

X§U2 N074 N066 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

X§U3 N077 N063 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

X§U4 N032 N023 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

X§U5 N035 N026 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

X§U6 N037 N036 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

L4 N017 N025 {Lser} Rser={Lser}

R2 N018 N017 {tez}

Q4 N004 N010 N017 0 NPN

R5 N004 N010 {tite}

L5 N055 N065 {Lser} Rser={Lser}

R8 N056 N055 {tez}

Q5 N044 N050 N055 0 NPN

R10 N044 N050 {tite}

R11 N024 N010 {res}

R12 N064 N050 {res}

X§U7 N073 N065 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

X§U8 N034 N025 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

L6 N015 N024 {Lser} Rser={Lser}

R13 N016 N015 {tez}

Q6 N003 N009 N015 0 NPN

R14 N003 N009 {tite}

R15 N023 N009 {res}

X§U9 N033 N024 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

L8 N053 N064 {Lser} Rser={Lser}

R16 N054 N053 {tez}

Q8 N043 N049 N053 0 NPN

R17 N043 N049 {tite}

R18 N063 N049 {res}

X§U10 N072 N064 neonbulb Vstrike=100 Vhold=50 Zon=2K Ihold=200u Tau=100u

R20 0 N007 {rez}

R22 N038 N047 {rez}

R23 N048 N067 {rez}

R24 nVin N040 {rez}

V2 nVin 0 6 Rser=10m

R25 N027 0 1

R26 0 N030 {bez}

R27 0 N031 {bez}

L9 N026 N031 {Lser} Rser={Lser}

L10 N025 N030 {Lser} Rser={Lser}

L13 N040 N039 {Lser} Rser={Lser}

L14 N036 N041 {Lser} Rser={Lser}

L15 nVin N027 {Lser} Rser={Lser}

L16 N006 N012 {Lser} Rser={Lser}

L17 N007 N008 {Lser} Rser={Lser}

R28 0 N029 {bez}

L18 N024 N029 {Lser} Rser={Lser}

R29 0 N028 {bez}

L19 N023 N028 {Lser} Rser={Lser}

R30 0 N071 {bez}

L20 N066 N071 {Lser} Rser={Lser}

R32 0 N070 {bez}

L21 N065 N070 {Lser} Rser={Lser}

R35 0 N069 {bez}

L22 N064 N069 {Lser} Rser={Lser}

R39 0 N068 {bez}

L23 N063 N068 {Lser} Rser={Lser}

L24 N001 N038 {Lser} Rser={Lser}

L25 N067 N075 {Lser} Rser={Lser}

C1 N022 N037 {Ckap} Rser={Cesr}

C2 N020 N035 {Ckap} Rser={Cesr}

C3 N018 N034 {Ckap} Rser={Cesr}

C4 N016 N033 {Ckap} Rser={Cesr}

C5 N014 N032 {Ckap} Rser={Cesr}

C6 N062 N077 {Ckap} Rser={Cesr}

C7 N054 N072 {Ckap} Rser={Cesr}

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C8 N056 N073 {Ckap} Rser={Cesr}

C9 N058 N074 {Ckap} Rser={Cesr}

C10 N060 N076 {Ckap} Rser={Cesr}

.model NPN NPN

.model PNP PNP

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.param Cesr = 40m

.param Lser = 10.9u

.param tite = 1e9

.param rez = 1e5

.param tez = 1e9

.param res = 1e4

.param bez = 1e1

.tran 4m

K0 L1 L2 L3 L4 L5 L6 L7 L8 L11 L12 -1

.options reltol = 0.00006

* optimal: reltol <= 0.00006

* < < < GROUND
```

* < < < TOP OF MAST

.lib neonbulb.sub

.backanno

.end
