

Success at slowing down the explosive escalation of my derivation / rendition of William Jay Fogal's Charged Barrier Semiconductor / Transistor.

Let entropy overtake this circuit (when it is intentionally slowed down) rather than trying to "shut it OFF".



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There are several techniques for slowing down the escalation of this explosive circuit:

1. Increase the number of modules (each module surrounds a single transistor), all of which are connected in parallel to a single sine voltage source, and only magnetically couple the three coils of merely one of the multiple modules. Or, ...
2. Short out each of the three combinations of paired terminals of the transistor through an additional piece of wire in parallel with each coil. Each coil is, also, already shorting out each combinatorial pairing of transistor terminals. So, you'd be adding another parallel pathway for a shorted connection with less resistance and no impedance. Or, ...
3. Raise the magnetic coupling among the three coils to as high a percentage as is possible. In the alternative, if you wanted to accelerate the escalation of this explosive circuit, then you'd lower the magnetic coupling percentage among the three coils to as close to 50% as is possible while remaining above 50%. So,

50.0000001% will explosively escalate much more quickly than will 50.01%.

4. Making the magnetic coupling, of the three coils, positive (rather than negative) will stop the explosive escalation of this circuit versus making the coupling of the three coils negative which will engage an explosive escalation. But altering the polarity of magnetic coupling, while the circuit is running, might be a challenge. I certainly don't know how to do this in a smooth manner.
5. Minimize resistance along each and every branch within this circuit. Because if you should elevate resistance along any of the shorted pathways which interconnect any two terminals of any transistor, this will hasten this circuit's explosion.

Mix and/or match any of these techniques of your choice.

Probably the easiest technique for arresting the explosive escalation of this circuit — rather than attempting to turn it OFF — is to slow it down so as to give entropy a gainful advantage. Because if you attempt to turn the sine wave voltage source OFF, your attempt may backfire with an even greater propensity for this circuit to quickly explode. I say, it *may backfire* since I can't say for certain. Simulating this is impossible since all switches possess resistances which is not a true switch. And modifying resistance (within this circuit) will merely regulate the rate of its explosive tendency without succeeding at turning it OFF.

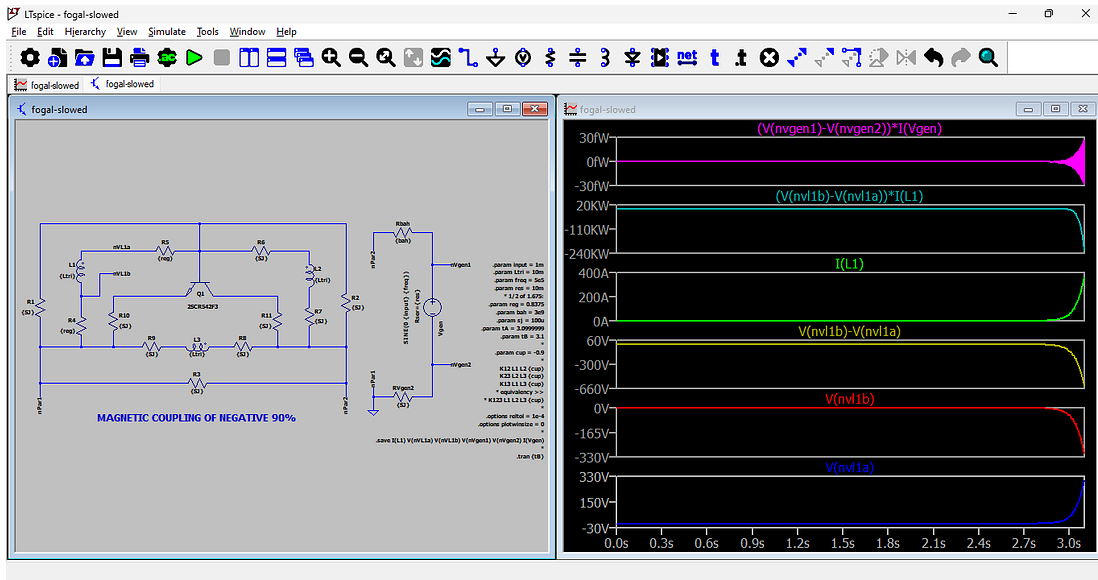
Don't let LTSpice errors discourage you. In this circuit, errors are most likely due to a too rapid rise of amplitude. LTSpice can't handle rapid changes occurring with amplitude. It's not likely that any other type of error will occur.

Put your load wherever you want. You can't kill this circuit with too much load since this circuit thrives on elevated resistances and elevated

(inductive) impedances feeding it more voltage from which it readily converts into current.

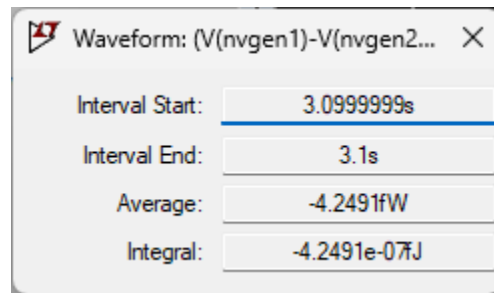
You may notice that there are no capacitors in this circuit despite that's what Bill Fogal claimed his invention was all about the customization of an electrolytic capacitor. I removed all capacitances since their inclusion makes it more difficult for LTSpice to calculate what is happening — and, thus, makes it more difficult for the simulator to render a result, and it also makes it more likely for explosive escalation of amplitude to occur. So, I use inductances and little or no resistances — and, certainly, no capacitances — to ease this circuit into its preferred stance (of modality) in which it desperately wants to explode. We can't prevent it — at least not with this rendition which I derived (by way of inspiration) from Fogal's handiwork.

In the following example, I gave myself the task of achieving roughly 100kW in three seconds on one inductor: L1, in the following schematic plus its tracings upon the passage of 3.1 seconds:

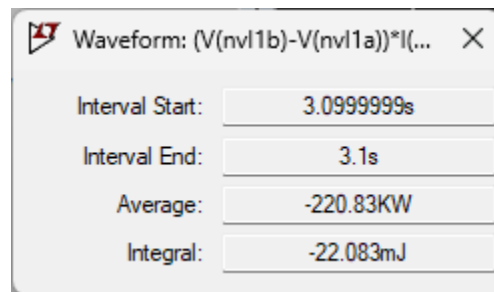


This was accomplished with a coupling coefficient of negative 90% and an average cost of 4 and a quarter femto watts spent at the sine

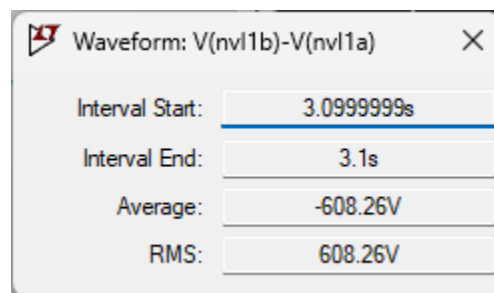
wave generator vibrating at half a million cycles per second:



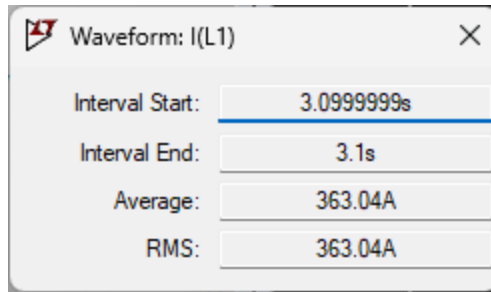
Delivering, not consuming, over 220 negative kilowatts:



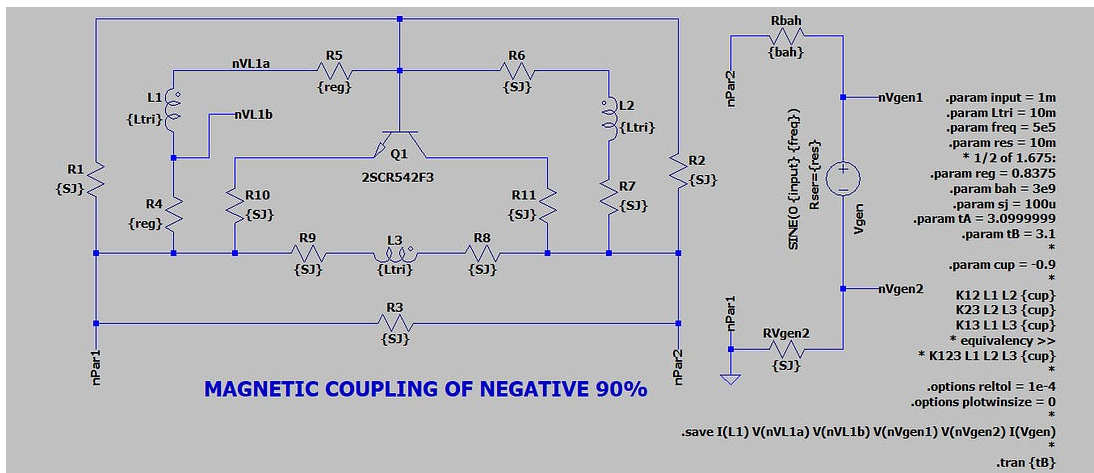
The voltage of L1 averaged at over 600V:



Its amperage averaged over 360A:



Here's the full schematic:



Here is the netlist:

* D:\Documents\Sims\LTSpice\2026\05 - May\17\fogal-slowed.asc

* Generated by LTSpice 24.1.9 for Windows.

Vgen nVgen1 nVgen2 SINE(0 {input} {freq}) Rser={res}

Rbah nPar2 nVgen1 {bah}

RVgen2 0 nVgen2 {SJ}

R2 nPar2 N001 {SJ}

Q1 N004 N001 N003 0 2SCR542F3

```
R4 0 nVL1b {reg}

L2 N005 N002 {Ltri} Rser={Ltri}

L1 nVL1b nVL1a {Ltri} Rser={Ltri}

L3 N006 N007 {Ltri} Rser={Ltri}

R7 nPar2 N005 {SJ}

R8 nPar2 N007 {SJ}

R9 N006 0 {SJ}

R5 nVL1a N001 {reg}

R6 N001 N002 {SJ}

R10 0 N003 {SJ}

R11 nPar2 N004 {SJ}

R1 0 N001 {SJ}

R3 0 nPar2 {SJ}

.model NPN NPN

.model PNP PNP

.lib C:\Users\vinya\AppData\Local\LTspice\lib\cmp\standard.bjt

.param input = 1m

.param Ltri = 10m

.param freq = 5e5
```

```
.param res = 10m

* 1/2 of 1.675:

.param reg = 0.8375

.param bah = 3e9

.param sj = 100u

.param tA = 3.0999999

.param tB = 3.1

*

.param cup = -0.9

*

K12 L1 L2 {cup}

K23 L2 L3 {cup}

K13 L1 L3 {cup}

* equivalency >>

* K123 L1 L2 L3 {cup}

*

.options reltol = 1e-4

.options plotwinsize = 0

*
```

```
.save I(L1) V(nVL1a) V(nVL1b) V(nVgen1) V(nVgen2) I(Vgen)
```

```
*
```

```
.tran {tB}
```

```
* MAGNETIC COUPLING OF NEGATIVE 90%
```

```
.backanno
```

```
.end
```

[Download this circuit's simulation files.](#)
