

No Negative Magnetic Coupling is Required when Four Panels of William Jay Fogal's Charged Barrier Transistor are Built into a Tetrahedron.

Whoopee!



VINYASI

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This post is a continuation of:

Tetrahedron (2-Compound) for Negating Mutual Inductance among Three Coils

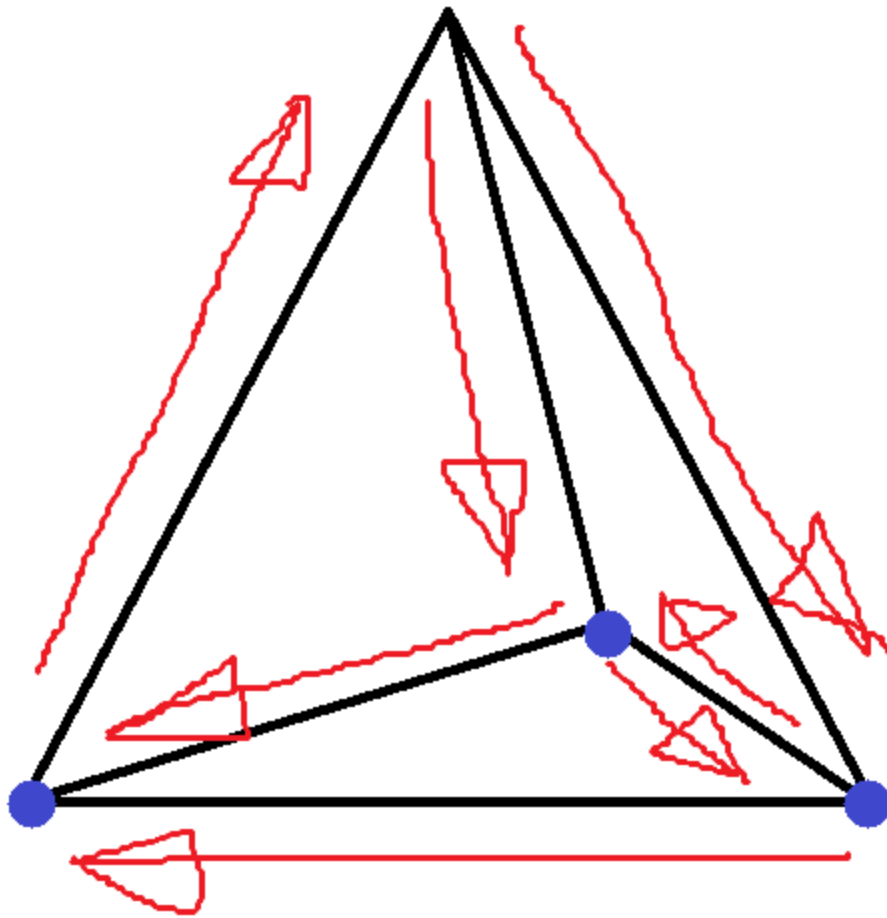
VINYASI · MAY 27



As I stated in my latest podcast, I made a mistake in assuming that a triple figure-eight could induce a negation of mutual inductance. I was wrong.

[Read full story](#)

I thought to myself, if the tetrahedron is so good at looking promising that it could negate the flow of magnetism travelling through magnetizable iron, or whatnot, then why not consider the possibility that it may also neutralize the need to negatively couple inductors together? Maybe it can also negate current all on its own?



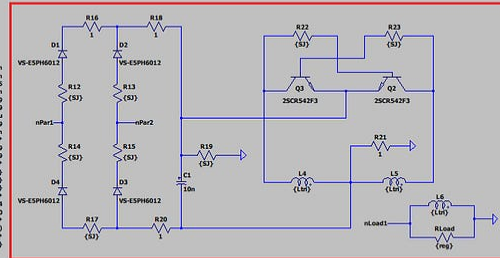
Well, yes, it can. I actually did not ask that last question. But it sounds nice, so I put it in now after the fact...after discovering that that is the case.

So, I constructed a multiplied version of the simplistic derivation of Charged Barrier Transistor of William Jay Fogal made from four panels of a tetrahedron since staring at the left side of this circuit suggested that it may be possible:

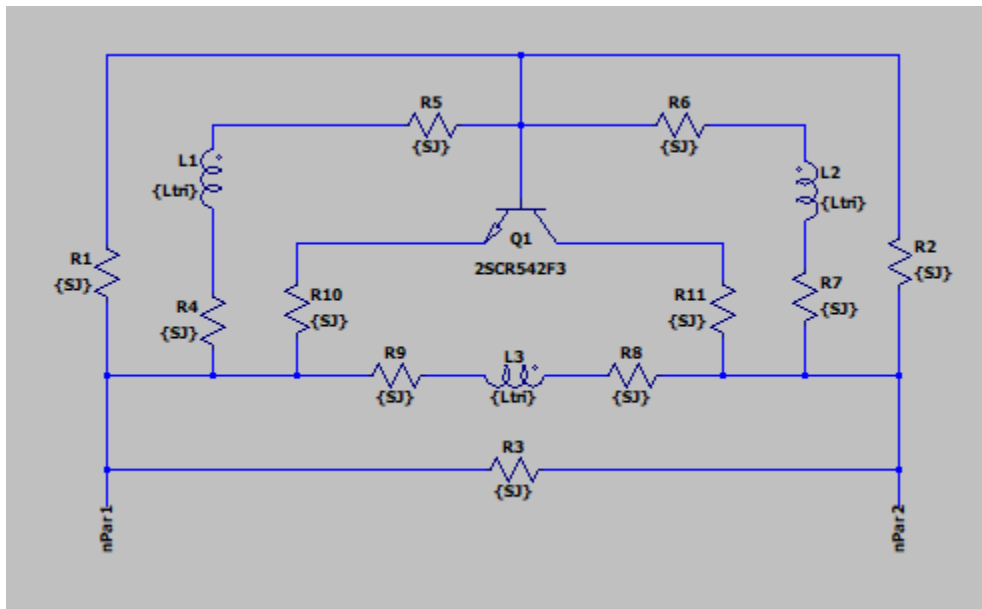
FOGAL'S CIRCUIT



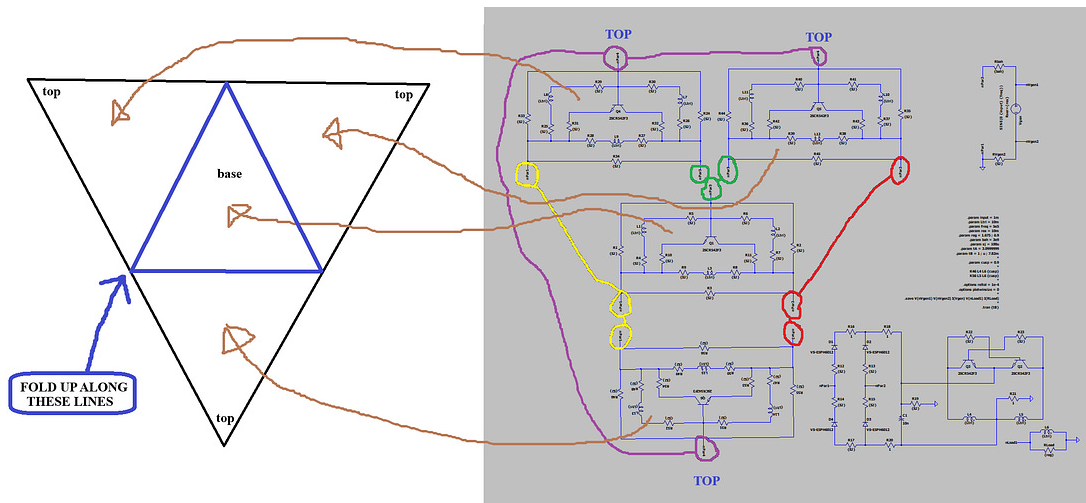
DON SMITH'S AC TO DC



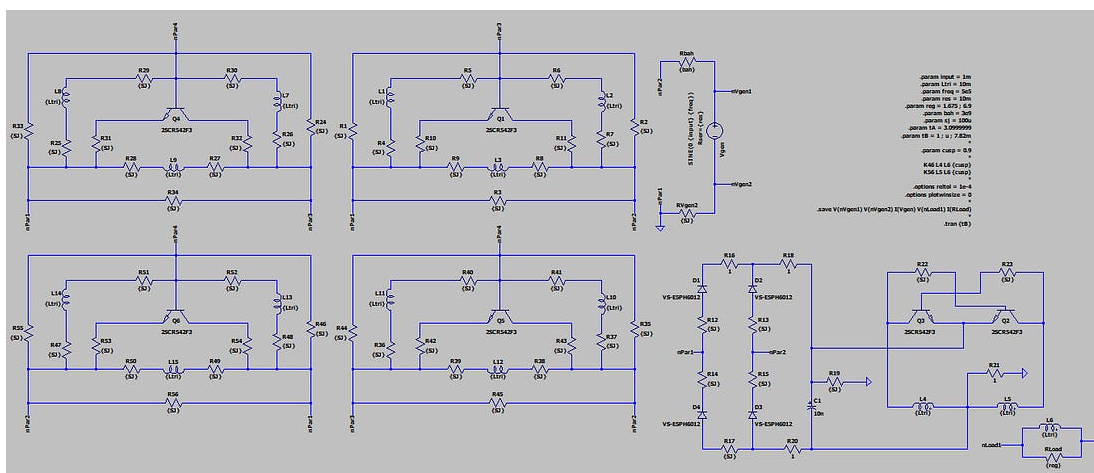
So, let's imagine a single panel, from the above (since that's all we need to produce explosive results if we can somehow negate its current),



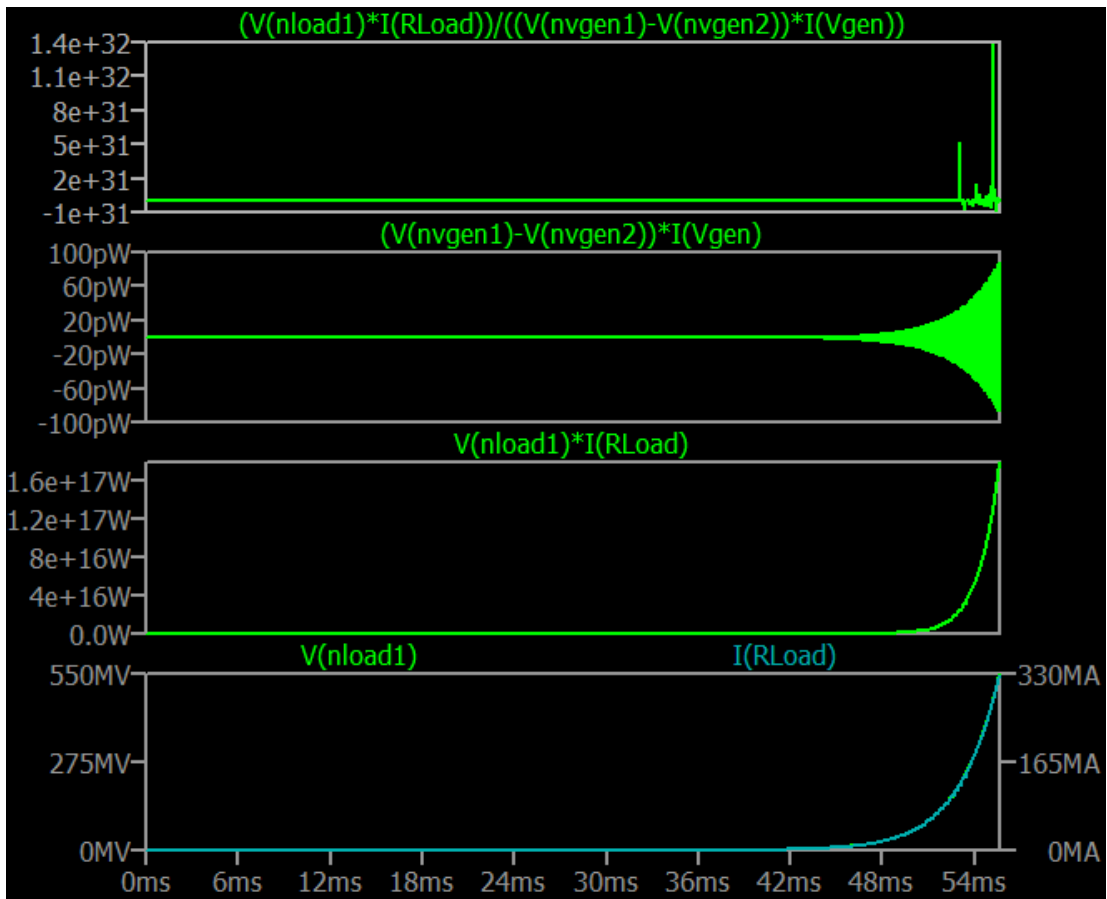
And let's build up a tetrahedral fold-out that will fold up into a tetrahedron by way of the connections that will be made among its labeled nodes:



Becomes this:



To produce this result:



Using this netlist and no negative magnetic coupling:

* D:\Documents\Sims\LTSpice\2026\05 - May\27\tetral-fogal.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 nPar3 {SJ}

Q1 N008 nPar3 N007 0 2SCR542F3

R4 0 N012 {SJ}

L2 N010 N004 {Ltri} Rser={Ltri}

L1 N012 N003 {Ltri} Rser={Ltri}

L3 N015 N016 {Ltri} Rser={Ltri}

R7 nPar2 N010 {SJ}

R8 nPar2 N016 {SJ}

R9 N015 0 {SJ}

R5 N003 nPar3 {SJ}

R6 nPar3 N004 {SJ}

R10 0 N007 {SJ}

R11 nPar2 N008 {SJ}

R1 0 nPar3 {SJ}

R3 0 nPar2 {SJ}

D1 N028 N017 VS-E5PH6012

R12 0 N028 {SJ}

R13 nPar2 N029 {SJ}

R14 N043 0 {SJ}

R15 N044 nPar2 {SJ}

R16 N018 N017 1

R17 N046 N045 {SJ}

R18 N019 N018 1

R19 0 N019 {SJ}

R20 N042 N046 1

R21 0 N042 1

C1 N019 N042 10n Rser=1m

Q2 N023 N021 N019 0 2SCR542F3

Q3 N020 N022 N019 0 2SCR542F3

R22 N021 N020 {SJ}

R23 N023 N022 {SJ}

L4 N020 N042 {Ltri} Rser={Ltri}

L5 N042 N023 {Ltri} Rser={Ltri}

L6 nLoad1 0 {Ltri} Rser={Ltri}

RLoad nLoad1 0 {reg}

D2 N029 N018 VS-E5PH6012

D3 N046 N044 VS-E5PH6012

D4 N045 N043 VS-E5PH6012

R24 nPar3 nPar4 {SJ}

Q4 N006 nPar4 N005 0 2SCR542F3

R25 0 N011 {SJ}

L7 N009 N002 {Ltri} Rser={Ltri}

L8 N011 N001 {Ltri} Rser={Ltri}

L9 N013 N014 {Ltri} Rser={Ltri}

R26 nPar3 N009 {SJ}

R27 nPar3 N014 {SJ}

R28 N013 0 {SJ}

R29 N001 nPar4 {SJ}

R30 nPar4 N002 {SJ}

R31 0 N005 {SJ}

R32 nPar3 N006 {SJ}

R33 0 nPar4 {SJ}

R34 0 nPar3 {SJ}

R35 nPar2 nPar4 {SJ}

Q5 N033 nPar4 N032 0 2SCR542F3

R36 nPar3 N037 {SJ}

L10 N035 N027 {Ltri} Rser={Ltri}

L11 N037 N026 {Ltri} Rser={Ltri}

L12 N040 N041 {Ltri} Rser={Ltri}

R37 nPar2 N035 {SJ}

R38 nPar2 N041 {SJ}

R39 N040 nPar3 {SJ}

R40 N026 nPar4 {SJ}

R41 nPar4 N027 {SJ}

R42 nPar3 N032 {SJ}

R43 nPar2 N033 {SJ}

R44 nPar3 nPar4 {SJ}

R45 nPar3 nPar2 {SJ}

R46 0 nPar4 {SJ}

Q6 N031 nPar4 N030 0 2SCR542F3

R47 nPar2 N036 {SJ}

L13 N034 N025 {Ltri} Rser={Ltri}

L14 N036 N024 {Ltri} Rser={Ltri}

L15 N038 N039 {Ltri} Rser={Ltri}

R48 0 N034 {SJ}

R49 0 N039 {SJ}

R50 N038 nPar2 {SJ}

R51 N024 nPar4 {SJ}

R52 nPar4 N025 {SJ}

R53 nPar2 N030 {SJ}

R54 0 N031 {SJ}

R55 nPar2 nPar4 {SJ}

R56 nPar2 0 {SJ}

.model D D

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

.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

.param reg = 1.675 ; 6.9

.param bah = 3e9

.param sj = 100u

.param tA = 3.0999999

.param tB = 1 ; u ; 7.82m

*

```
.param cusp = 0.9

*

K46 L4 L6 {cusp}

K56 L5 L6 {cusp}

*

.options reltol = 1e-4

.options plotwinsize = 0

*

.save V(nVgen1) V(nVgen2) I(Vgen) V(nLoad1) I(RLoad)

*

.tran {tB}

.backanno

.end
```

[Download this simulation.](#)