Re: Stupid polarized capacitor tricks

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- *From*: John Fields <jfields@xxxxxxxxxxxxxxxxxxxxxx>
- *Date*: Wed, 26 Sep 2007 20:01:01 −0500

On Thu, 27 Sep 2007 12:32:40 +1200, Terry Given <my_name@xxxxxxxx>
wrote:

> John Larkin wrote:
>
> > On Wed, 26 Sep 2007 15:37:43 −0700, "Joel Kolstad"
> > <JKolstad71HatesSpam@xxxxxxxxx> wrote:
> >
> > > I was reading a circuits book today that spent more time on
> > > the construction
> > > and modeling of components than most do. When I came to
> > > the section on
> > > regular old polarized electrolytic capacitors it occurred to me
> > > that you just
> > > might be able to turn an electrolytic capacitor into one bit of
> > > non−volatile
> > > memory by purposely applying the correct or reverse polarity
> > > to form or remove
> > > the dielectric ("write"), and then test for this (by checking to
> > > see if the
> > > cap behaves more like a cap or a short :−)) later ("read").
> > >
> > > Does anyone know if this is feasible? In my mind it would
> > > make electrolytic
> > > caps sort the "dual" to core memory, which of course leave
> > > ferromagnetic
> > > materials near one end or the other of their B−H curves for
> > > later recall.
> >
> > Feasible, but write operations would be sort of slow.
> >
> > > −−−Joel

> > I think that high−K ceramic caps may have enough c−v hysteresis to be
> > able to store data... maybe even multiple bits per cap, like some
> > Flash memories.
> >
> > Ceramic caps are certainly nonlinear enough to make parametric power
> > amplifiers, and high−voltage nonlinear shock lines.
> >
> > John
>
> and temperature sensors :)

−−−
And accelerometers, microphones, and dynamic pressure sensors.

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JF
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