

Re: Electronic dimmer as Variac

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sci.electronics.basics,sci.electronics.design,sci.electronics.misc,sci.electronics.repair,
DaveC <me@privacy.net> wrote:

>I want to turn up a switching power supply slowly after repairing it, so as
>to see if anything else is damaged. I have no Variac, and I could use the
>series light bulb trick, but I already have a light dimmer I'm using as a
>variable-temperature control for my soldering iron that could do double-duty
>in this application.

>

>I know that the SMPS, when running correctly, will be a load pulse at 75 kHz.
>Has anyone tried using a dimmer as an "electronic variac"? Is it feasible?

My immediate response is don't do this. The SMPS will pull large amounts of current as the voltage approaches peak (rectifier from power line charging main capacitor), and it may exceed the peak current rating of the dimmer, even accounting for the fact that light filaments pull a large amount of current when cold (at least they heat up rather quickly and pull less current).

My advice is (with all the caps discharged) double-check all the rectifiers and other 'main' semiconductors (such as the main flyback transistor), then stand back and give it full power.

But then I'm posting from SED and don't do much repair. If you don't want me steering you wrong, don't crosspost outside the *.repair group.

>Thanks,