

Re: PSpice Convergence Problem

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- *From:* Jim Thompson <thegreatone@xxxxxxxxxxxxx>
 - *Date:* Thu, 15 Sep 2005 07:39:56 -0700
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On Wed, 14 Sep 2005 21:04:29 -0700, Bob Penoyer
<bob@xxxxxxxxxxxxxxxxxxxxxxxx> wrote:

>I have a circuit comprising one OP-77/AD op-amp that is basically a
>Sallen-Key filter with some other resistors and capacitors around it.
>All capacitors use a tolerance (10%) and all resistors use both a
>tolerance (1%) and a tempco (100 ppm/C).
>
>I've had convergence problems during worst-case simulations at some
>temperatures. The OP-77/AD seems to be at the heart of the problem but
>I'm stuck with it because I'm analyzing an existing circuit.
>
>All of the power supplies (+/-15V for the op-amp, and +5 for another
>item) have both 5% voltage tolerances and 200 mVpp noise at 20 kHz
>bandwidth.
>
>I've made these modifications to the default simulation settings:
>VNTOL = 1E-4
>ABSTOL = 1E-10
>GMIN = 1E-9
>ITL1 = 5000
>ITL2 = 2000
>ITL4 = 2000
>
>Is there something else I should do to enhance convergence?
>
>What about the solver? Is the default best? What are solver 0 and
>solver 1?

SOLVER=0 is the old original solver before it was "new and improved".
I have found the setting SOLVER=0 will often work on difficult
circuits.

>
>Is selecting GMIN stepping helpful?

Sometimes ;-)

>

Re: PSpice Convergence Problem

>Thanks,
>
>Bob Penoyer

...Jim Thompson

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I love to cook with wine. Sometimes I even put it in the food.

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• **References:**

◆ **PSpice Convergence Problem**

◇ From: Bob Penoyer

- Prev by Date: **Re: Protel 2004 answer to Brad Velandier.**
- Next by Date: **Re: Impedance vs common mode impedance**