

Re: Resistor vs transformer

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2006-02/msg01625.html>

- *From:* John Fields <jfields@xxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Wed, 08 Feb 2006 10:41:16 -0600
-

On 8 Feb 2006 07:32:53 -0800, "lemonjuice" <exskimos@xxxxxxxxxxxx> wrote:

Haven't thoroughly examined your analysis as I got a tight work schedule here ... but I'll be back to you tomorrow morning.

I see from the rest of your post that you don't understand what's being discussed, so your "analysis" will hardly be of any consequence.

Save yourself some grief and concentrate on your work, it'll probably serve you better in the long run.

In the meantime ... the secondary is left unconnected in the application so flux induced there, currents flowing there have nothing to do with the problem.

had you taken a little more time to read my post, instead of firing back some half-baked, irrelevant response, you would have seen (well, maybe...) that that eventuality had already been covered.

Then you are assuming wire radius and type is constant which isn't necessarily true for different transformer types and that is going to vary all the impedances, flux you have calculated.

Again, had you read the article with a little more care you might have found that the discussion was based on using Sloman's example of a transformer with a couple of 120V primaries being used as an

Re: Resistor vs transformer

autotransformer, and that my examples were all based on using that transformer's core in order to keep apples equal to apples.

You also assume A 240V has to have twice the windings of the 120V and that depends on what the transformer is designed to do. It doesn't always have to be like that, especially if you are considering different transformer types.

Read my post again. And again, and again, until it makes sense to you, if you can, then come back with any question you may have.

Even across the same types you could use a 240V dual to whatever voltage you want with a 120V to a lower voltage and you'd have the same resistance of the primaries.

Flux density, voltage, and primary turns is what we're talking about, dear boy.

Besides, the resistance of identical primary windings in parallel is going to be half that of the same primaries in series, you know.

I see you mentioning regulation. It only makes sense to talk about that if you have an output voltage . In this case our secondary is left unconnected.

I suppose, then, that the voltage being fed into the load (which is taken from one of the autotransformers' primaries) doesn't really qualify as an output because there's no secondary?

Go back and read the article again before you embarrass yourself further.

John Fields
Professional Circuit Designer

.