

Ringling Choke Converter V1

This is a Simplis simulation model of a 400V input Ringling Choke Converter. The output voltage is 5V and capable of up to 2.5A.

To better view the schematic, do the following from the SIMetrix command shell to set up the fonts for the text:

File → Options → Font → Schematic – user 1 → Arial,Bold,14

File → Options → Font → Schematic – user 2 → Times New Roman,Bold,22

The following are simulation circuits:

RCC_Combo.sxsch - This finds the periodic operating point, then performs an AC analysis and last performs a load transient of 1A at 200usec. Takes 8 sec to run on a 1Ghz machine.

RCC_Startup.sxsch - This model shows how the converter starts up. Takes 12 sec to run on a 1Ghz machine.

The following are required models to run the simulation circuits: The internal schematic can be viewed by highlighting the component, and clicking on Hierarchy → Descend Into

Gen_Opto.sxcmp - This is a component model of a general purpose optocoupler.