AN5367

SIMetrix / eDSim model import

Introduction

SIMetrix / eDSim are spice based simulators, therefore they are compatible with models developed with Orcad PSpice.

This document shows an example of protection model import on SIMetrix / eDSim:

- When only spice library file is available, example with ESDCAN04-2BWY
- When symbol and spice library files are available, for example with SM30TY TVS electrothermal models.

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www.st.com

1 ESDCAN04-2BWY model import on SIMetrix / eDSim

SIMetrix / eDSim provide a procedure to import an external spice model.

The same procedure has been performed to import the ESDCAN04-2BWY PSpice model, using the SIMetrix / eDSim version 9.10e.

First step: Download and unzip the ESDCAN library on the www.st.com web site (on ESDCAN04-2BWY web page), you get two files, esdcan.lib and esdcan.olb.

The second step: Launch SIMetrix or eDSim, select the menu (File / New / SIMetrix Schematic) to open a new schematic.

The third step: Drag and drop esdcan.lib into the command shell window.

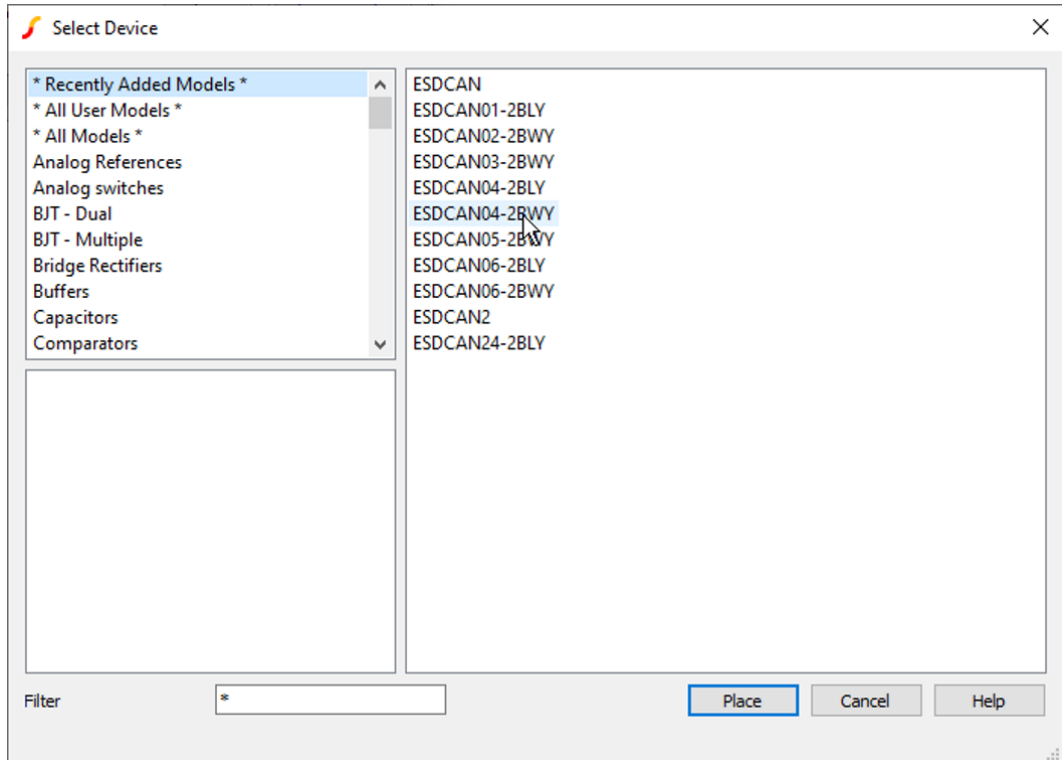**Figure 1. Drag and drop lib on SIMetrix / eDSim**
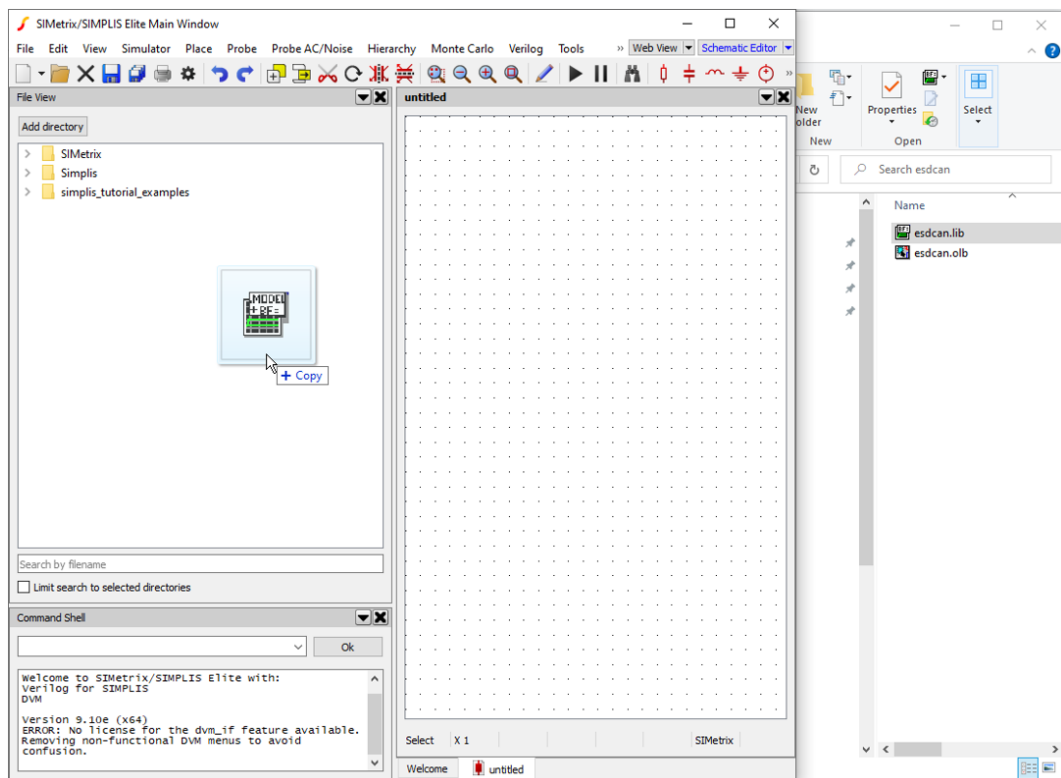
Then, if the following window appears, select "Install".

Figure 2. Library installation
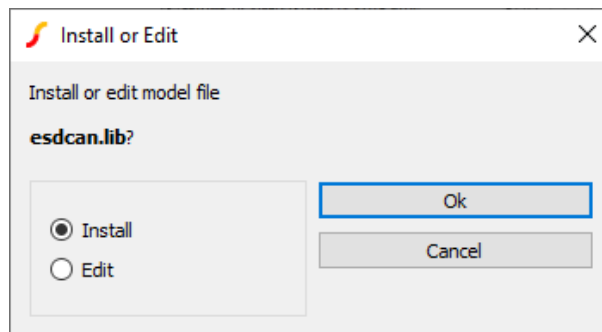
The fourth step: Place the ESDCAN04-2BWY on the schematic, by selecting the menu (Place / From Model Library), and on the following window, select ESDCAN04-2BWY and then click on the "Place" button.

Figure 3. Part selection window

The software then asks you to associate a symbol to the model: connections between symbol and model are made by putting in order the symbol pin in the same way as the model.
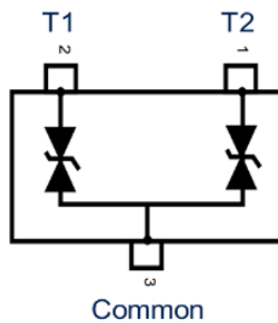
Figure 4. Correspondence between part pins and symbol

Figure 5. Association of symbol with model

The ESDCAN04-2BWY is ready to be used in your SIMetrix / eDSim simulation.

Figure 6. Part on schematic

2   TVS electrothermal model import on SIMetrix / eDSim

TVS electrothermal models, for SIMetrix and eDSim are provided with a symbol file: this eases the model importation. Let us take the SM30TY TVS family.

First step: Download and unzip "sm30ty-series electro-thermal model (.lib) for SIMetrix and eDSim" library on www.st.com, you get two files, TVS_Symbols.sxslb, sm30ty_thermal_xxxx.lb.

The second step: Launch SIMetrix or eDSim, select the menu (File / New / SIMetrix Schematic) to open a new schematic.

The third step: To import the symbol file, select the menu (File / Symbol Manager...), click on Add, and select TVS_Symbols.sxslb and then close.

Figure 7. Importing symbol file
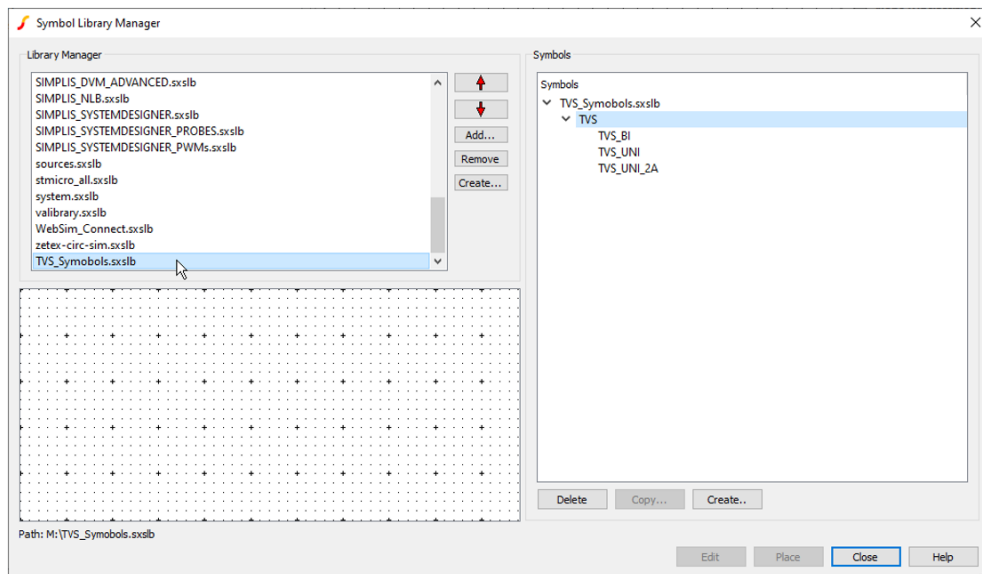
The fourth step: Drag and drop sm30ty_thermal_xxxx.lb into the command shell window.

Figure 8. Drag and drop lib on SIMetrix / eDSim
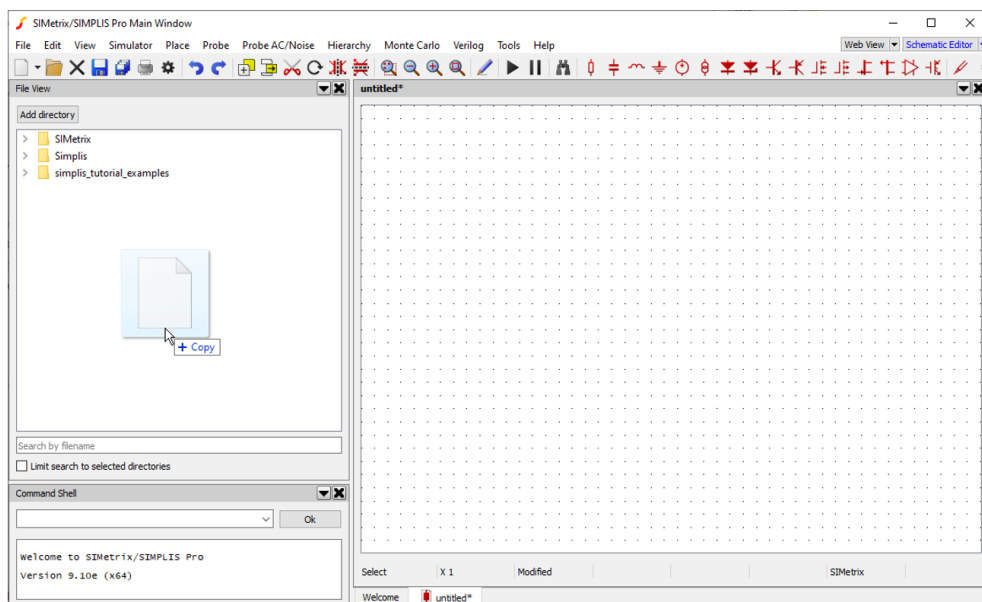
Then, if the following window appears, select Install.

Figure 9. Library installation
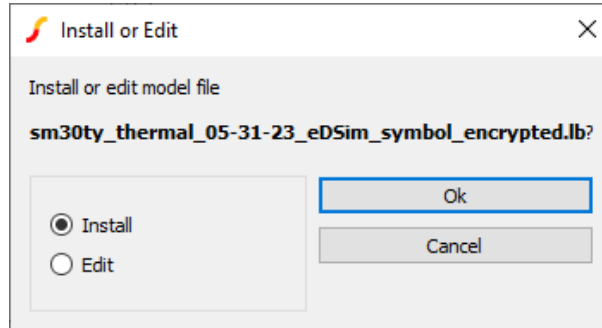
The fifth step: Place TVS on the schematic, select the menu (Place / From Model Library...), select the TVS category, and choose the TVS.

Figure 10. TVS selection
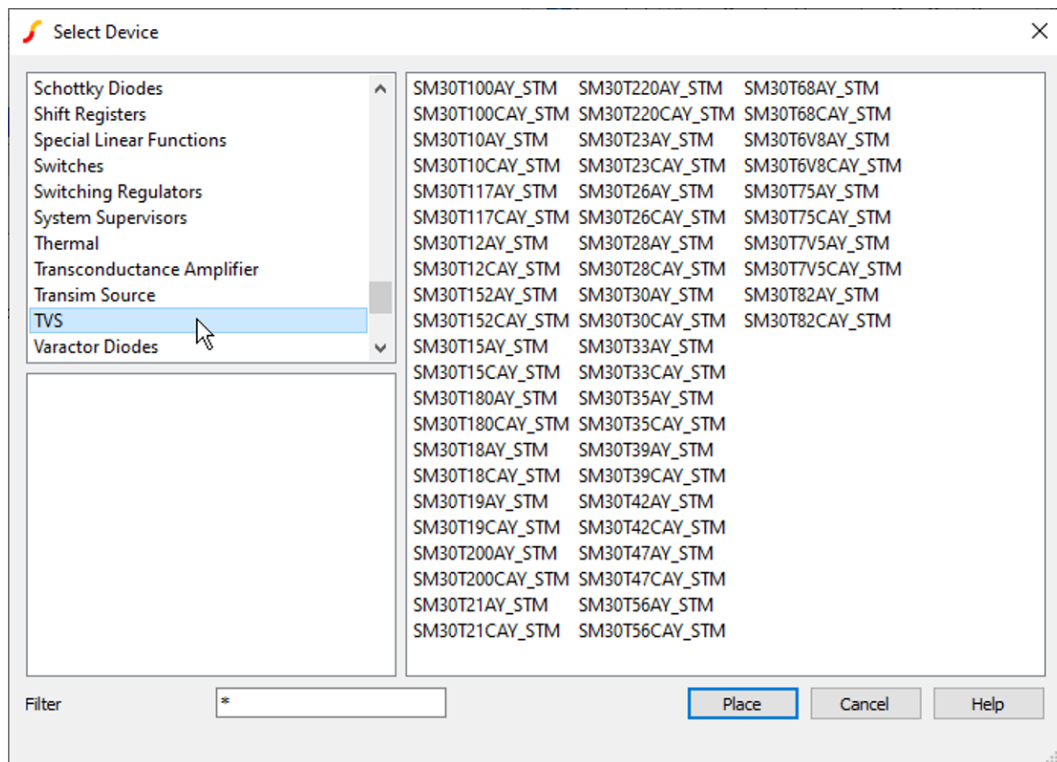
With these two procedures, all protection device models available on www.st.com can be imported on SIMetrix / eDSim.

Revision history

Table 1. Document revision history

Date	Revision	Changes
02-Jul-2019	1	Initial release.
17-Oct-2023	2	Updated Figure 1, Figure 2, Figure 3, and Figure 6. Added Section 2 TVS electrothermal model import on SIMetrix / eDSim.

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IMPORTANT NOTICE – READ CAREFULLY