

File Edit Format View Help

```

*****
*****STMicroelectronics MOSFET, IGBT and Bipolar Library *****
*****
*
* Models provided by STMicroelectronics are not guaranteed to
* fully represent all the specifications and operating
* characteristics of the product behavior that they reproduce.
* The model describes the characteristics of a typical device.
* In all cases, the current product data sheet contains all
* information to be used like final design guidelines and the
* only actual performance specification.
* Although models can be a useful tool in evaluating device
* performance, they cannot model exact device performance unde
* all conditions.
* STMicroelectronics therefore does not assume any
* responsibility arising from their use.
* STMicroelectronics reserves the right to change models
* without prior notice.
*
*****

```

```
.SUBCKT SCT020HU120G3AG_LT drain gate source
```

```

VLd drain 1x 0
VLg gate 2x 0
VLs source 3x 0

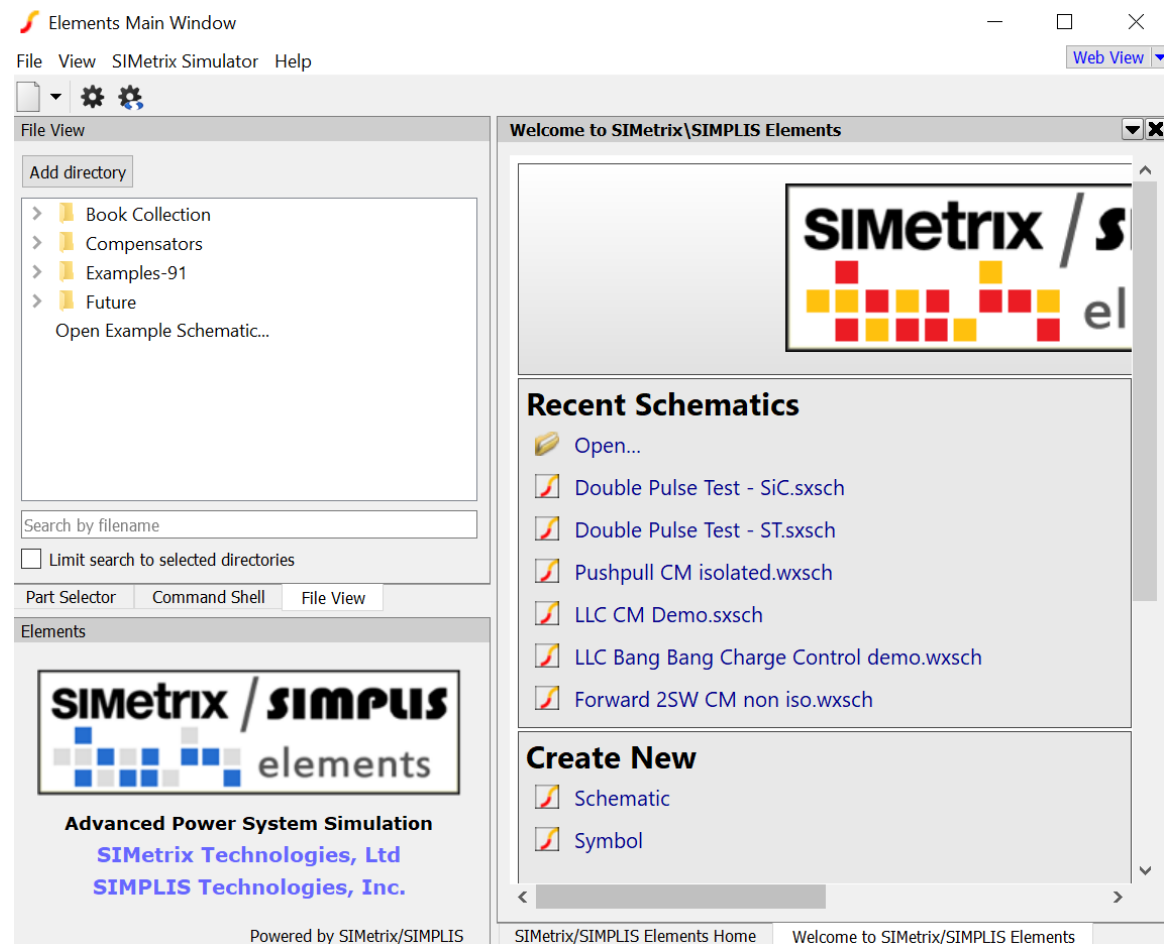
```

```

MOS1 1x 2x 3x 3x MOS
*MOS2 1x 2x 3x 3x MOS
*MOS3 1x 2x 3x 3x MOS
*MOS4 1x 2x 3x 3x MOS

```

You received a SPICE model in the form of a .LIB file and you would like to import the model in SIMetrix and associate it with a symbol. The process is fairly easy: start SIMetrix (full version or Elements):



Drag'n'drop the .LIB file in the File View window

Elements Main Window

File View SIMetrix Simulator Help

File View

Add directory

- > Book Collection
- > Compensators
- > Examples-91
- > Future


Open Example Schematic...

Search by filename

Limit search to selected directories

Part Selector Command Shell File View


Elements



Advanced Power System Simulation
SIMetrix Technologies, Ltd
SIMPLIS Technologies, Inc.

Powered by SIMetrix/SIMPLIS

Welcome to SIMetrix/SIMPLIS Elements



Recent Schematics

- Open...
- Double Pulse Test - SiC.sxsch
- Double Pulse Test - ST.sxsch
- Pushpull CM isolated.wxsch
- LLC CM Demo.sxsch
- LLC Bang Bang Charge Control demo.wxsch
- Forward 2SW CM non iso.wxsch

Create New

- Schematic
- Symbol

SIMetrix/SIMPLIS Elements Home Welcome to SIMetrix/SIMPLIS Elements

SiC MOSFET Spice@Kempower

File Home Share View

Clipboard Organize Open

Pin to Quick access Copy Paste

SiC > SiC M...

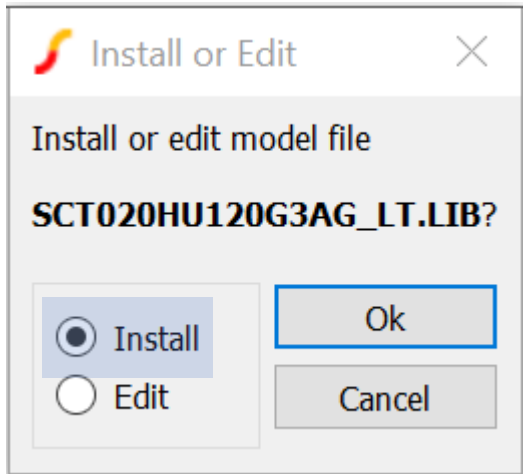
Name

- SCT016HU120G3AG_V2.LIB
- SCT020HU120G3AG_LT.LIB
- SCT025HU120G3AG_V2K.LIB

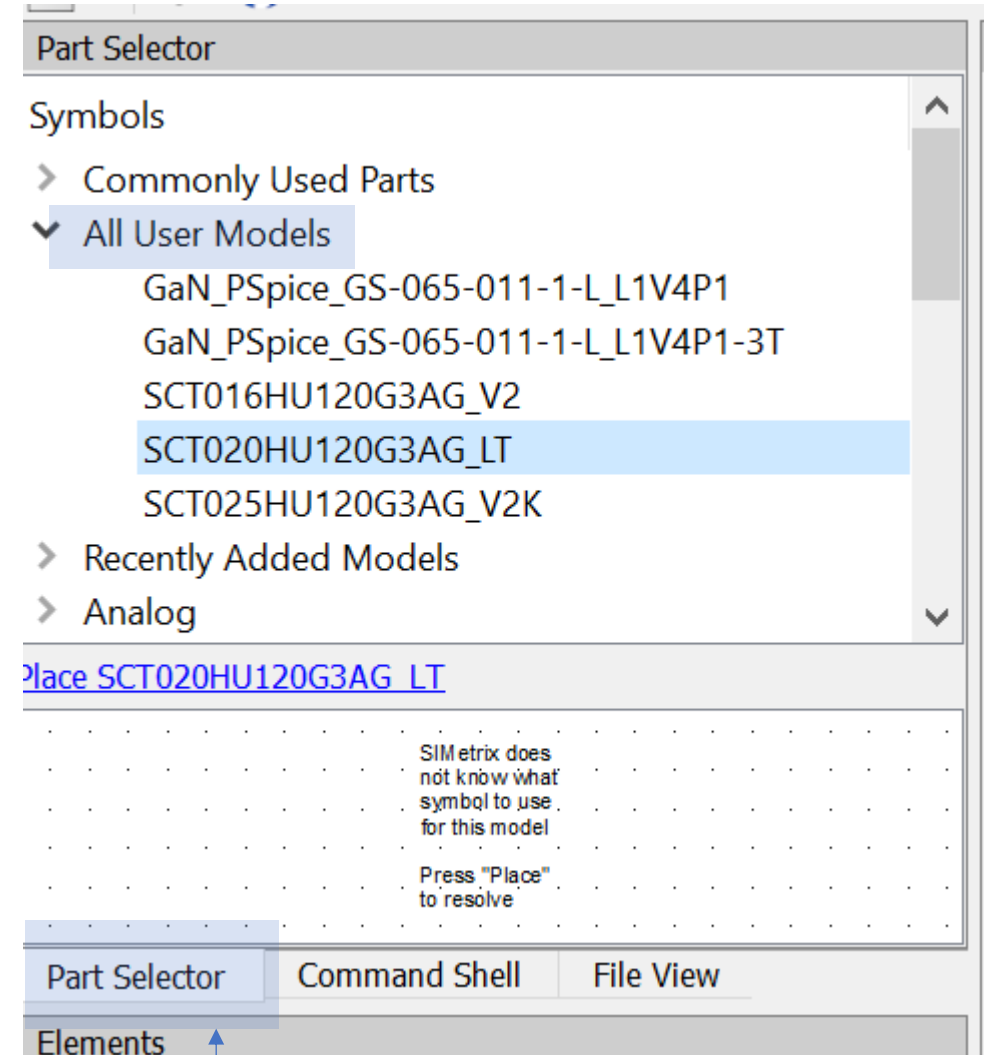
Quick access

- Desktop
- Downloads
- Documents
- Pictures
- Book Collection
- Introduction to tri-phase
- SiC
- SiC MOSFET Spice@Kempower
- OneDrive - Future Electronic
- This PC
- 3D Objects
- Desktop
- Documents
- Downloads
- Music
- Pictures

This screen pops up:



The added part shows up in the All User Models:



Press install

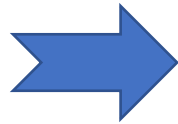
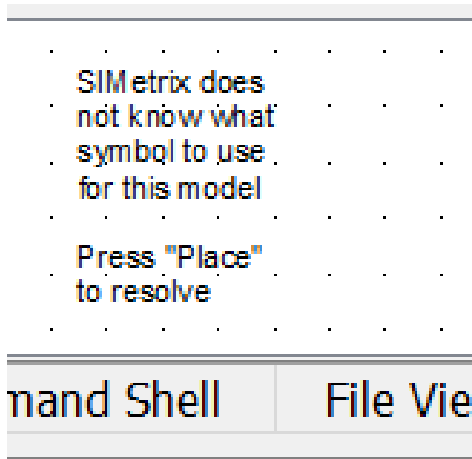
If everything goes well...

Welcome to **SIMetrix/SIMPLIS Elements**. For help using this application, please use the help menu located above.

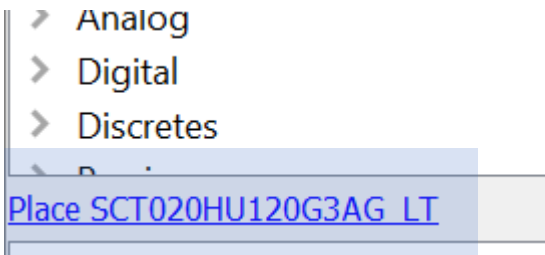
Model library changed. Rebuilding catalogs, please wait...

Completed

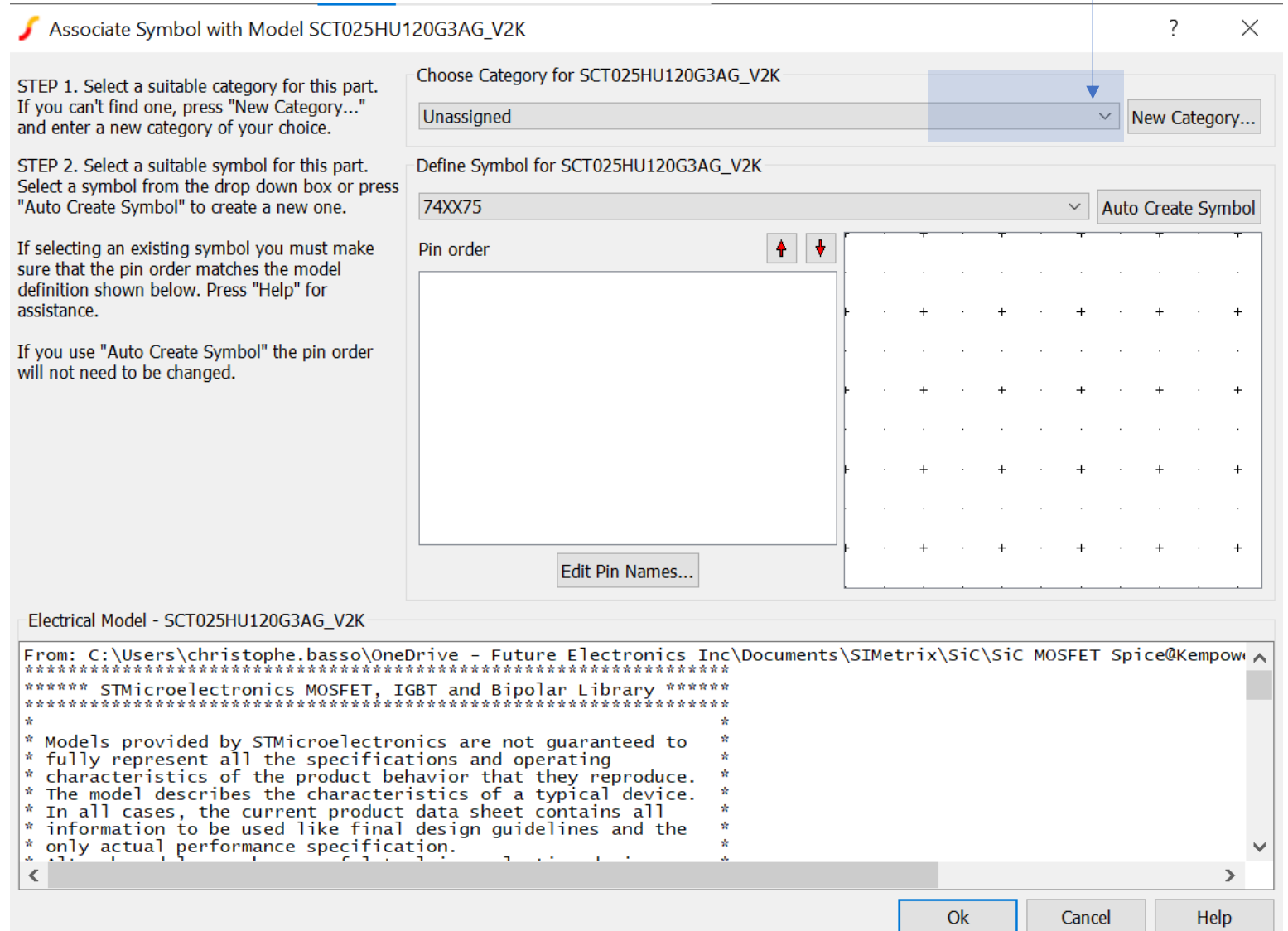
You have to link the .LIB model to a symbol:



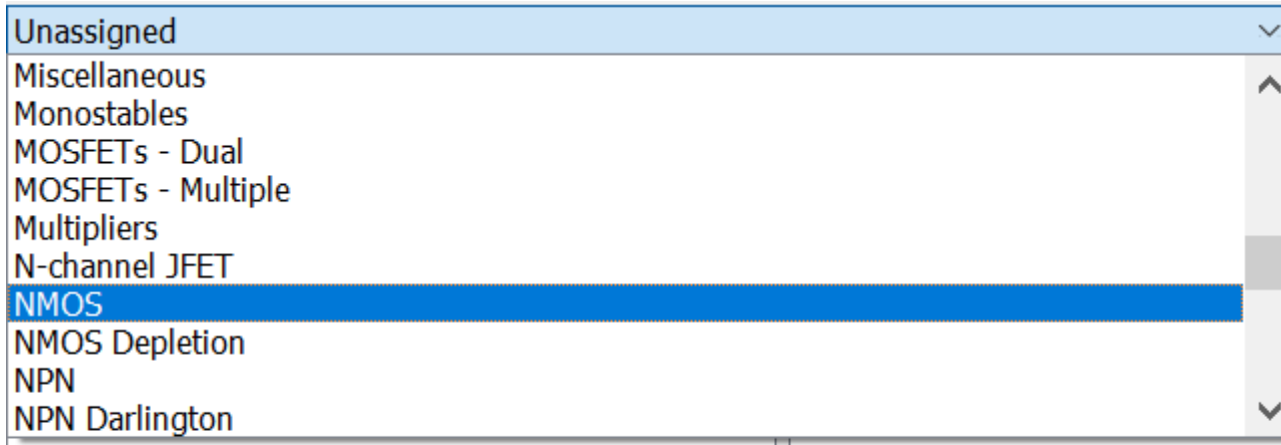
Press place or double-click on the part:



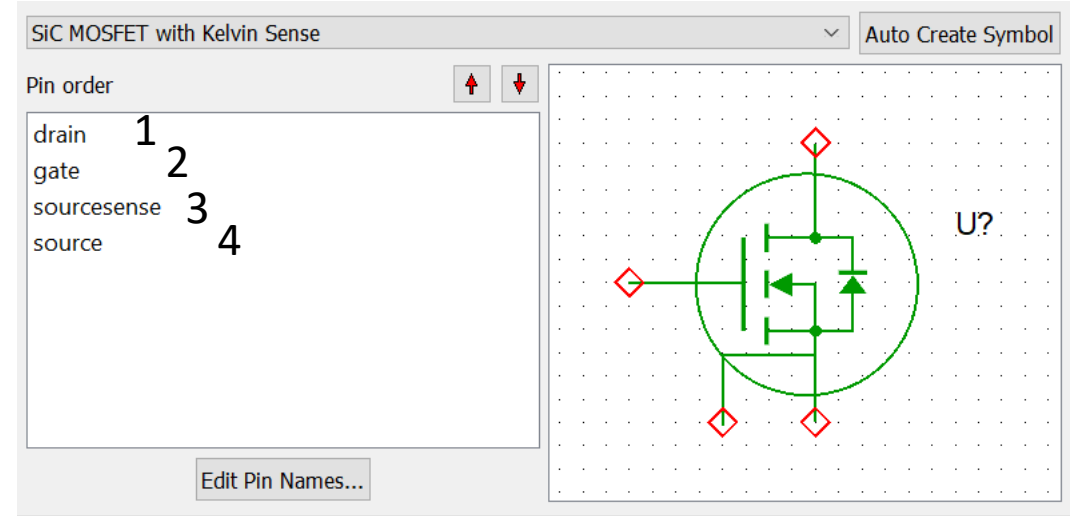
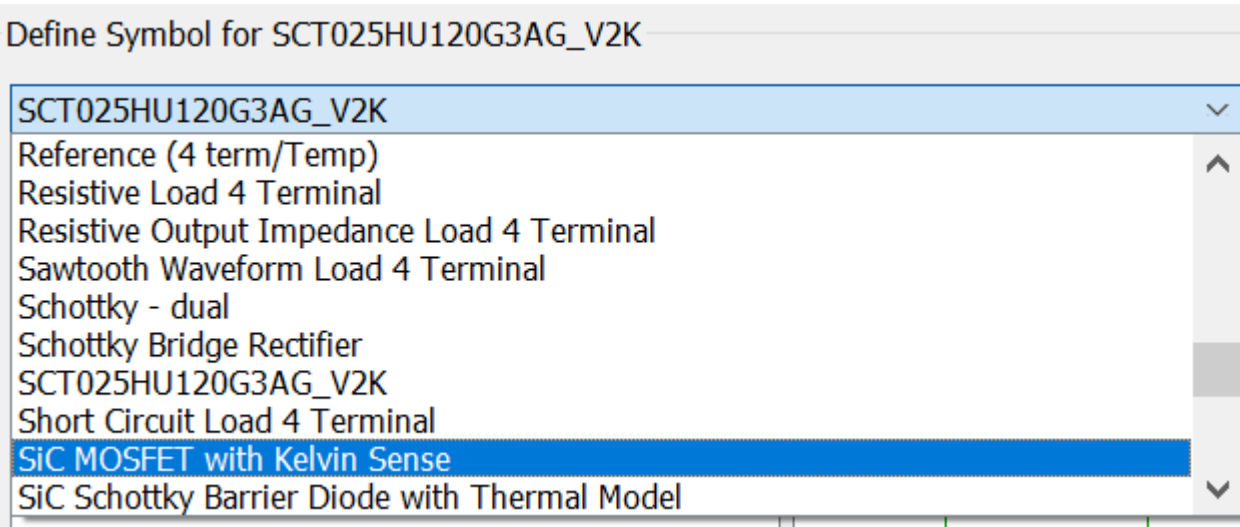
Press this one



For a MOSFET, I select a NMOS category



Then click on Define symbol



Check the pin order matches the subcircuit in the .LIB file



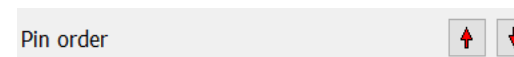
1 2 4 3

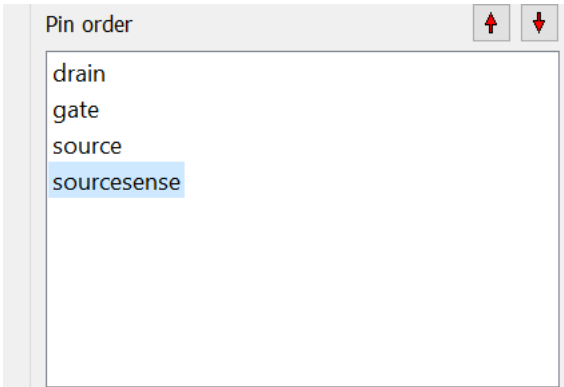
```
.subckt SCT025HU120G3AG_V2K drain gate source kelvin PARAMS
```

```
Rkelvin kelvin s2 5m
```

```
Ckelvin kelvin s2 1p
```

Here, it does not match so simply press the arrows to rectify the pin sort:





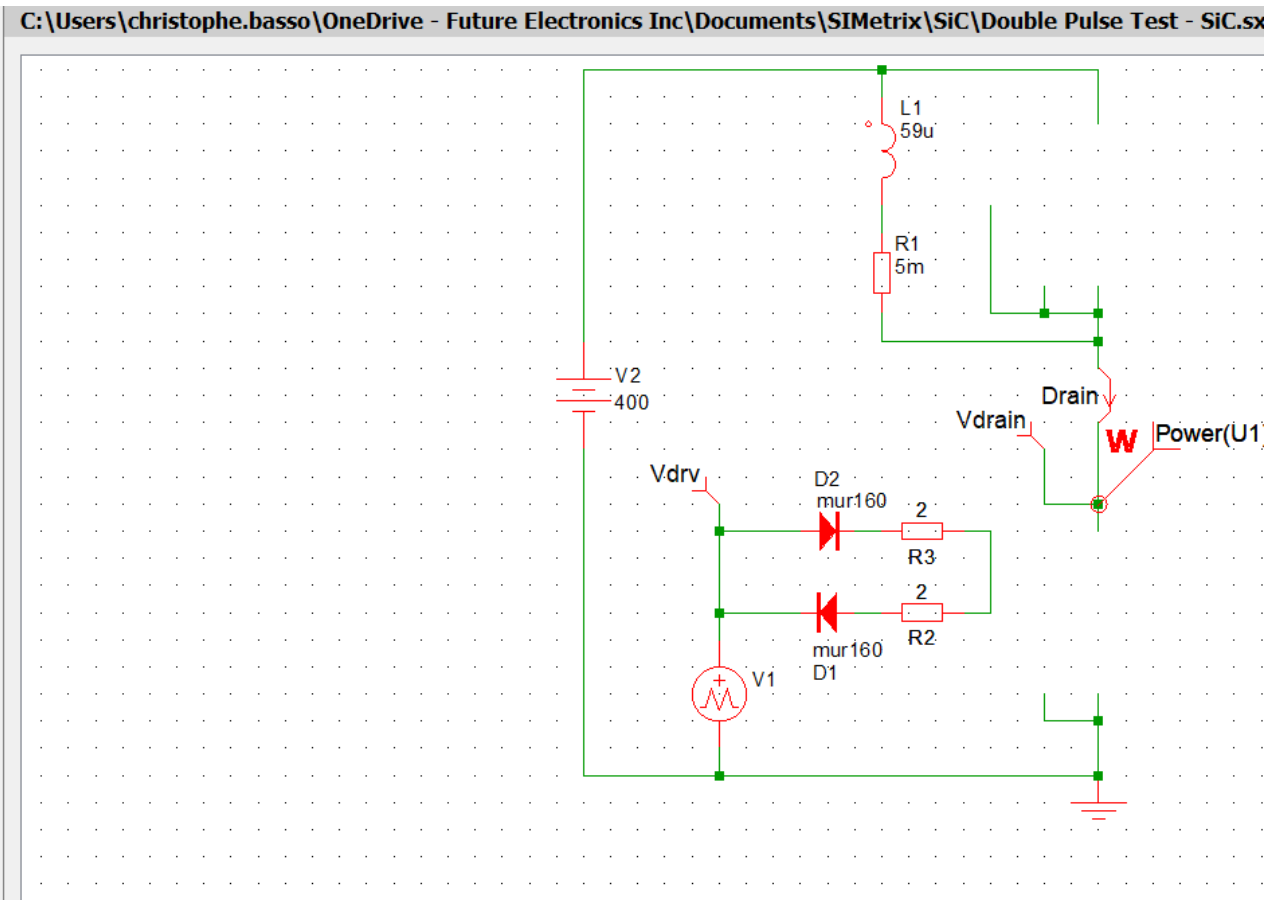
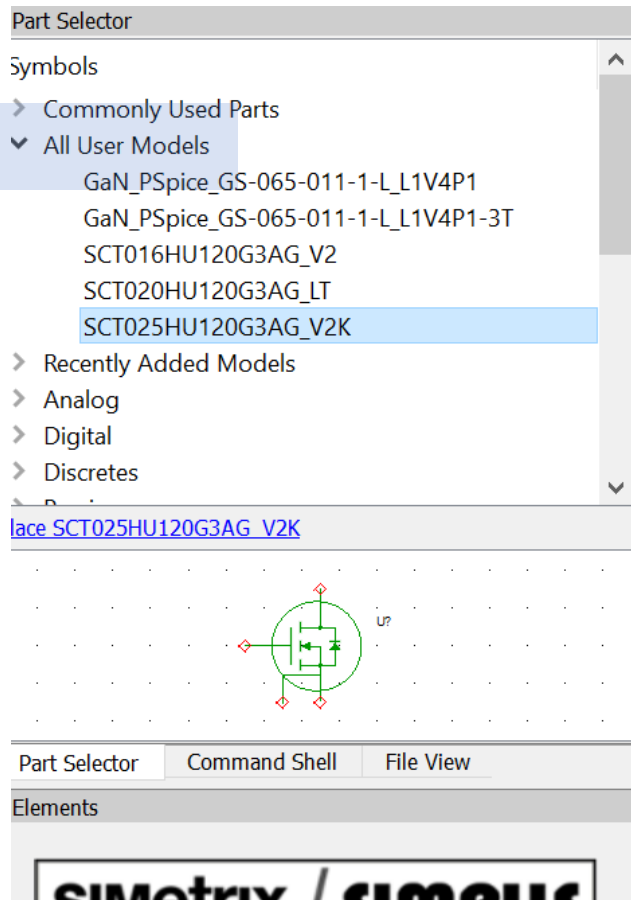
It is ok now

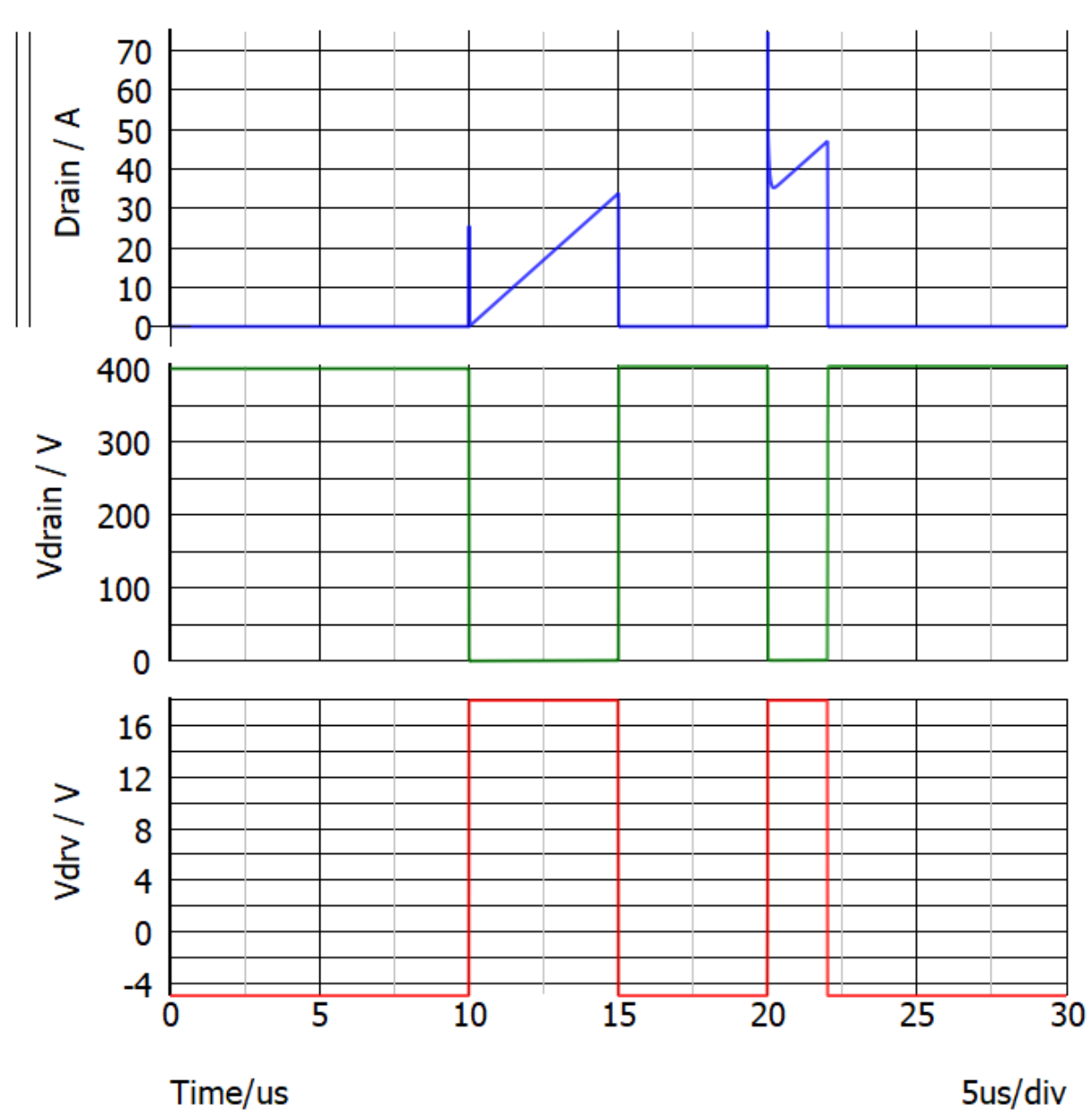
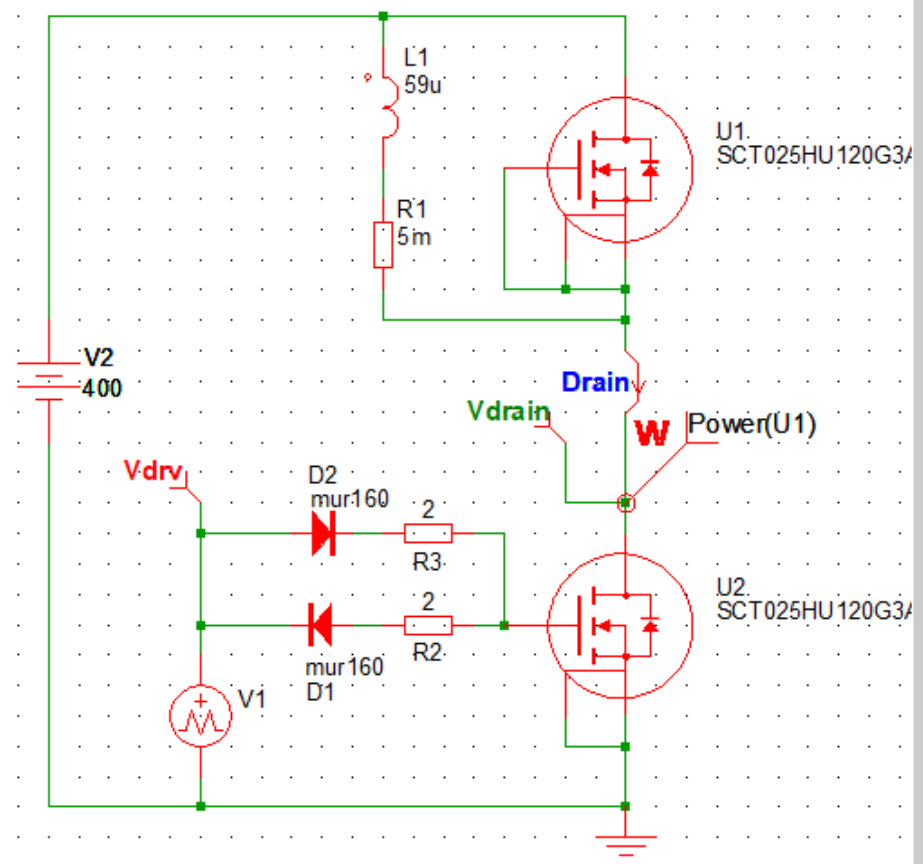
```
**** ok percorso di gate ****
```

```
*****
```

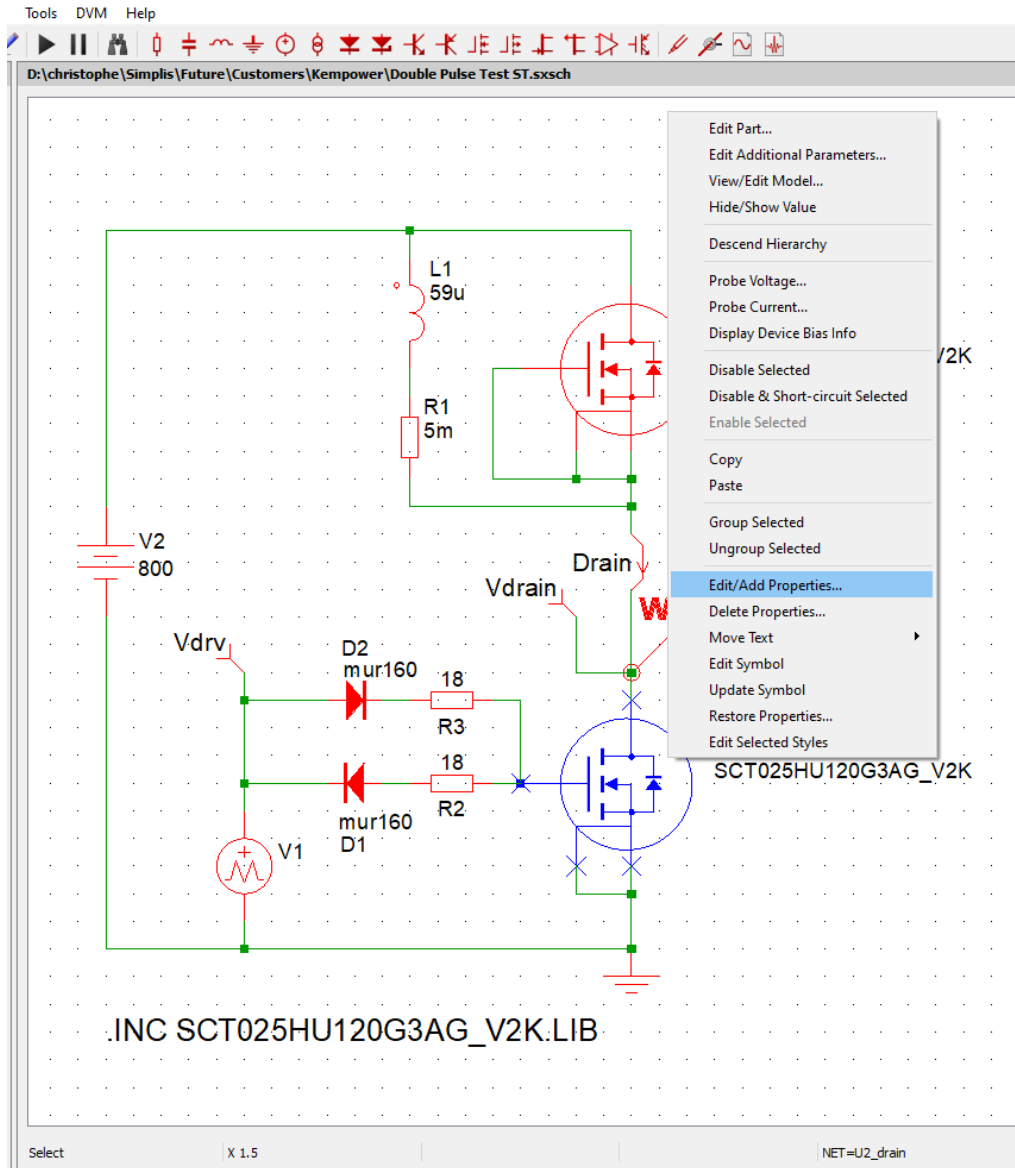
```
.subckt SCT025HU120G3AG_V2K drain gate source kelvin PARAMS: dR=0 dvth=0 dvsd=0 dCi=0 dCr=0 dCo=0
Rkelvin kelvin s2 5m
```

Now capture your test setup and pick your part in All User Models





If you would like to change the SiC model, simply change the property tab:



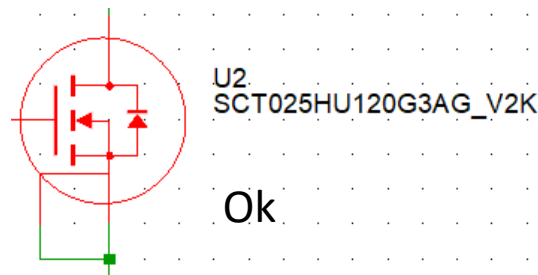
Enter the name of the select transistor .subckt (in the .lib file):

The screenshot shows the 'Edit Property' dialog box. The 'Name' field contains 'SCT025HU120G3AG_V2K'. The 'Text Location' section has 'Absolute' selected. The 'Property Attributes' section has 'Default' selected for 'Font style' and 'DefaultAnnotation' for the style. The 'Properties' panel on the right shows a table of properties for the selected component.

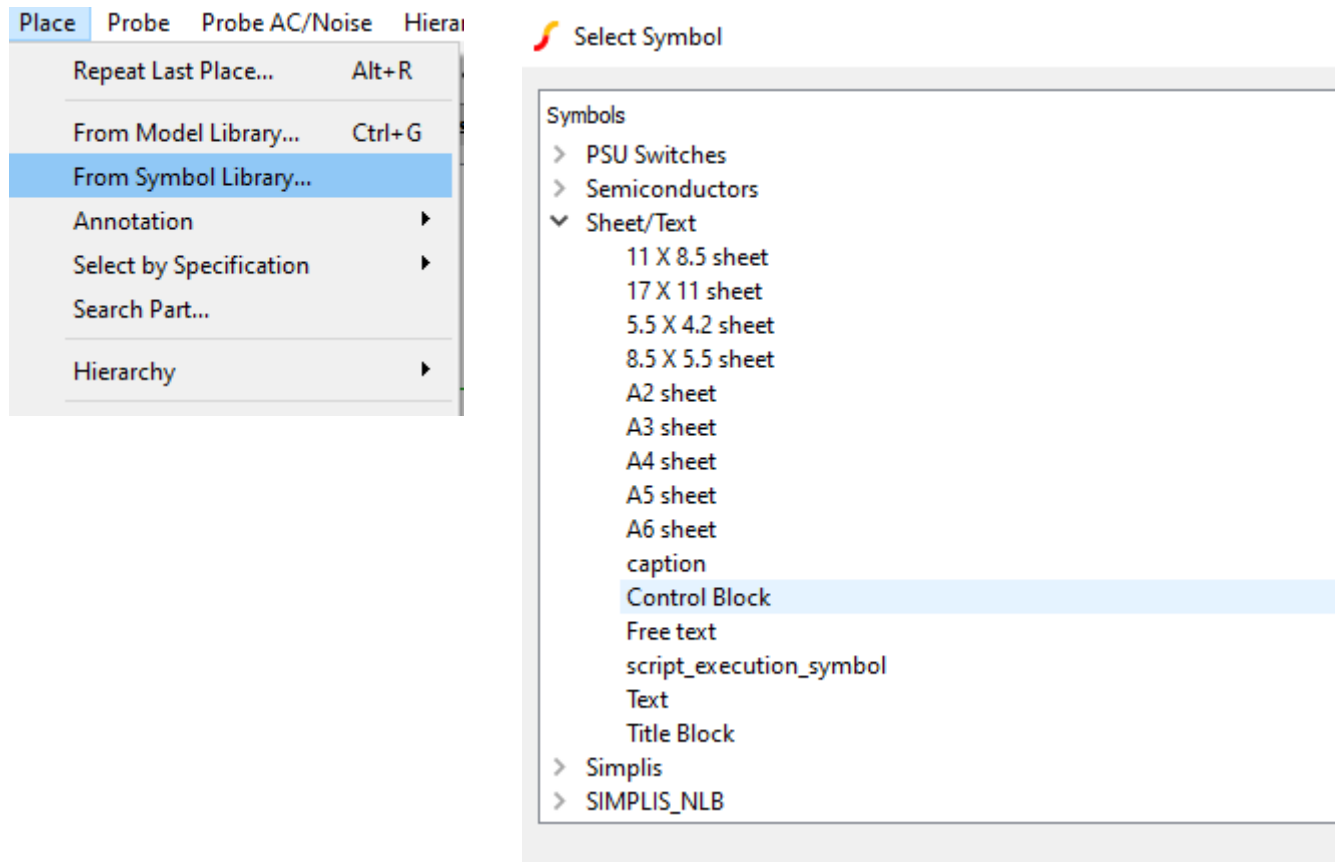
Name	Value
*Handle	I12
guid	{30ff4f7d-fd56-4c41-a1d1-642bec30eee7}
mapping	1,2,4,3
model	X
ref	U2
StyleNormal	DefaultInstance
StyleSelected	DefaultSelected
value	SCT025HU120G3AG_V2K

```

*****
.subckt SCT025HU120G3AG_V2K drain gate source kelvin PARAMS: dR=0 dVth=0 dVsd=0 dCi=0 dCr=0 dCo=0
Rkelvin kelvin s2 5m
Ckelvin kelvin s2 1p
E1 Tj val_T VALUE={TEMP}
R1 val_T 0 1m
    
```



Now, place a directive on the schematic:



Note that you could also insert the .INC directive in the control window by pressing F11.

↓ Include the file

.INC SCT025HU120G3AG_V2K.LIB