

Convert Model Parameter to AWR Model

To run this script

Select **Scripts > Models > Circuit_Model_Parameter_Read** from the Menus.

Or, in versions that support the script, you can run the utility directly from this page using this button.

Description

This script reads a file containing an HSPICE or Spectre circuit model definition, adds the appropriate model to the active schematic and assigns all the model parameters specified in the file. There is significant error checking to make sure things go smoothly with this process.

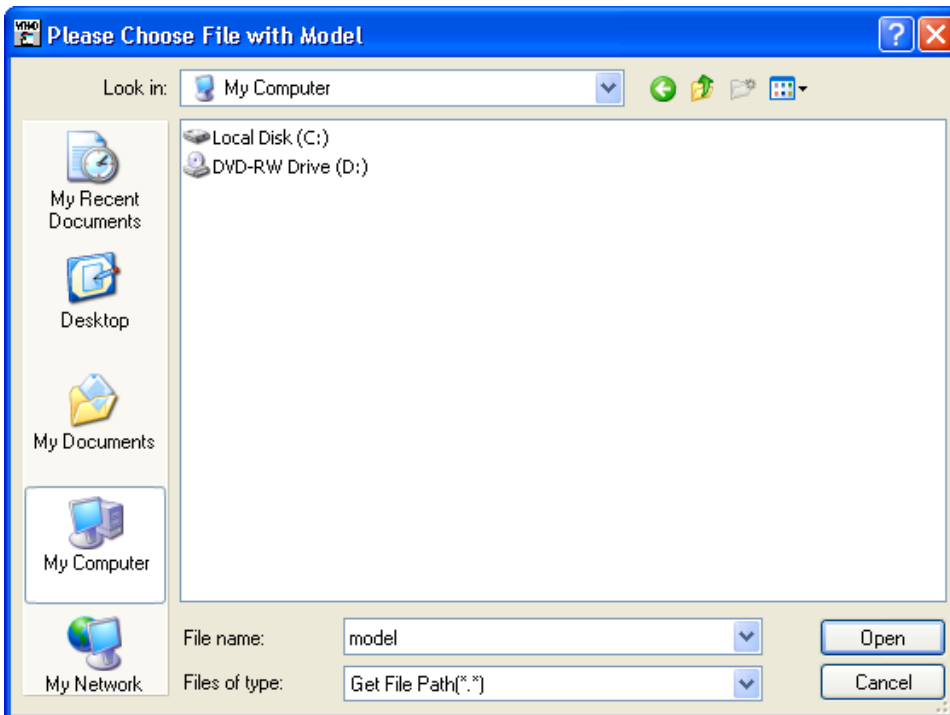
To use the script:

1. Prepare your file. The file must only contain the .model statement from the netlist. You must also prepare the file to specify the appropriate AWR model. In these files there are model lines, they either being with "model" or ".model". The 3rd word on that line defines the name of the model that will be used. If necessary, replace this 3rd word with the corresponding AWR element model name, e.g. "SDIODE", "GBJT3", "MOSN3_4A", etc. There are some common names that are already mapped to the appropriate models including:

- NPN in the netlist will use the GBJT AWR model.
- BSIM3V3 in the netlist will use the BSIM3 AWR model.
- PNP in the netlist will use the GBJT_PNP AWR model.

If there is more text on this line, insert a line break after the model name, and then insert a "+" at the start of the new line.

2. Open the schematic where you would like the model to be created.
3. Run the script as described above
4. A dialog will open asking you to browse to your file.



5. When you are finished, you will see the model in your schematic. You will also see a log indicating what model parameters were changed.

```
Model_Read_Log (Text)
Identified AWR model as GBJT
setting model parameter IS to 69.28E-18, original value was 1E-16
setting model parameter XTI to 3, original value was 3
setting model parameter EG to 1.11, original value was 1.11
setting model parameter VAF to 100, original value was 10000000000
setting model parameter BF to 308.6, original value was 100
setting model parameter NE to 1.197, original value was 1.5
setting model parameter ISE to 69.28E-18, original value was 0
setting model parameter IKF to 22.83E-3, original value was 10000000000000
setting model parameter XTB to 1.5, original value was 0
setting model parameter BR to 1.11, original value was 1
setting model parameter NC to 2, original value was 2
setting model parameter IKR to 0, original value was 10000000000000
setting model parameter RC to 4, original value was 0.01
setting model parameter CJC to 1.042E-12, original value was 0
setting model parameter MJC to 0.2468, original value was 0.33
setting model parameter VJC to 0.75, original value was 0.75
setting model parameter FC to 0.5, original value was 0.5
setting model parameter CJE to 1.52E-12, original value was 0
setting model parameter MJE to 0.3223, original value was 0.33
setting model parameter VJE to 0.75, original value was 0.75
setting model parameter TR to 1.558E-9, original value was 0
setting model parameter TF to 135.8E-12, original value was 0
setting model parameter ITF to 0.27, original value was 0
setting model parameter VTF to 10, original value was 10000000000
setting model parameter XTF to 30, original value was 0
setting model parameter RB to 10, original value was 0.01
```

If the script runs across any model parameters it doesn't recognize, they are also listed in the log as such.

```
Model_Read_Log (Text)
Identified AWR model as GBJT
Model GBJT does not have a parameter ISA
setting model parameter XTI to 3, original value was 3
setting model parameter EG to 1.11, original value was 1.11
setting model parameter VAF to 100, original value was 10000000000
```