RedHawk-SC ET™ Application Notes

Version 2020 R3.0

October, 2020

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Introduction

In early design, RedHawk-SC Electrothermal (RHSC-ET) now can import transient power file (FSDB) which generated by PowerArtist.

PA Flow in RHSC-ET

Transient Power Model Setup

In **Chip Model**, create a heat source model and define the power block (Figure 1), then select "**Transient Setup**", the transient setting will be displayed, and click **Import File** button to import the FSDB file.

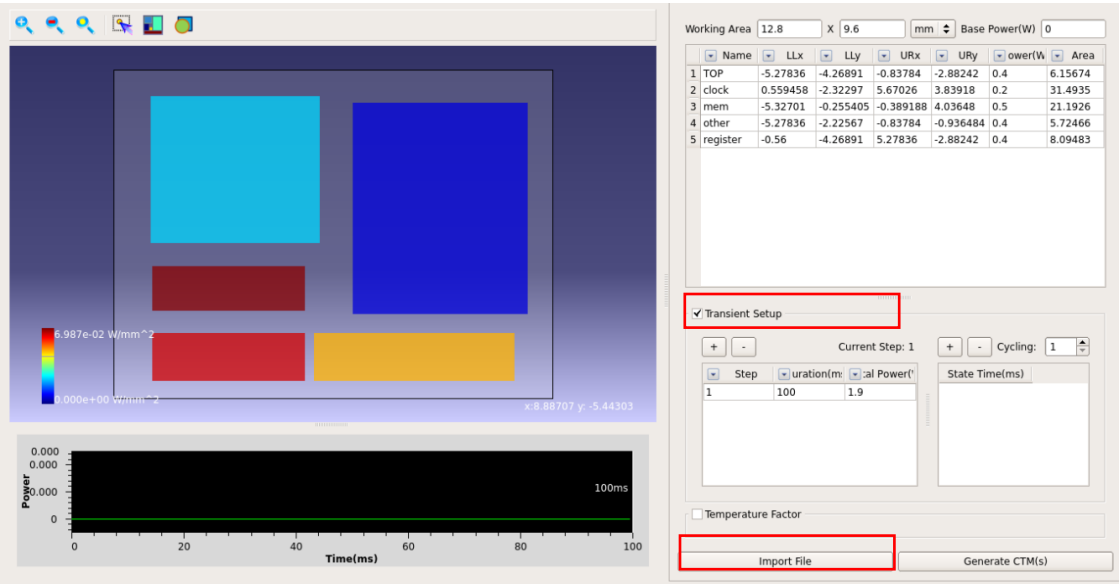

Figure 1– Create Heat Source Model

After importing the FSDB file, users need to link the curve to the block. To link the curve to the block, select curve and block name at the same time, and then click **Link** button to do the link, if you want to unlink, just need to click the block and click the **Unlink** button. Click **OK** to finish the setup.

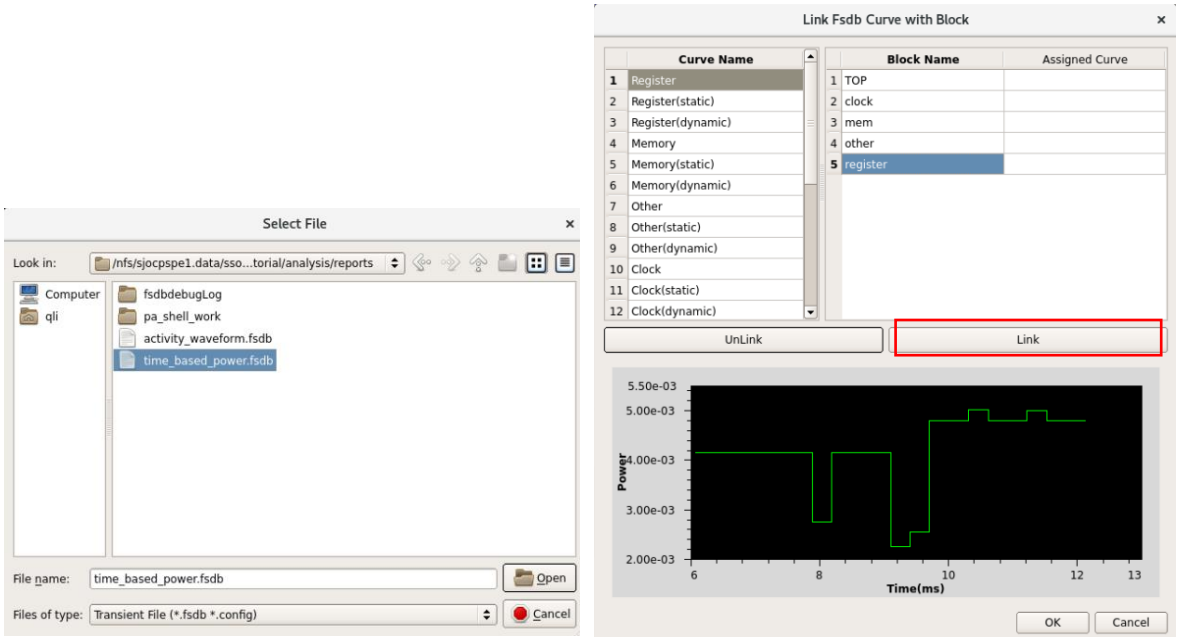

Figure 2 – Import FSDB File

After finishing the FSDB file setup, the step and duration will be generated automatically (Figure 3). You can us **Cycling** to repeat the curve. If users do not specify the state time, RHSC-ET will generate the state in transient setup according to the step, if users define the state time, RHSC-ET will calculate the RMS power in each state window and generate the state in transient setup according both step and state time.

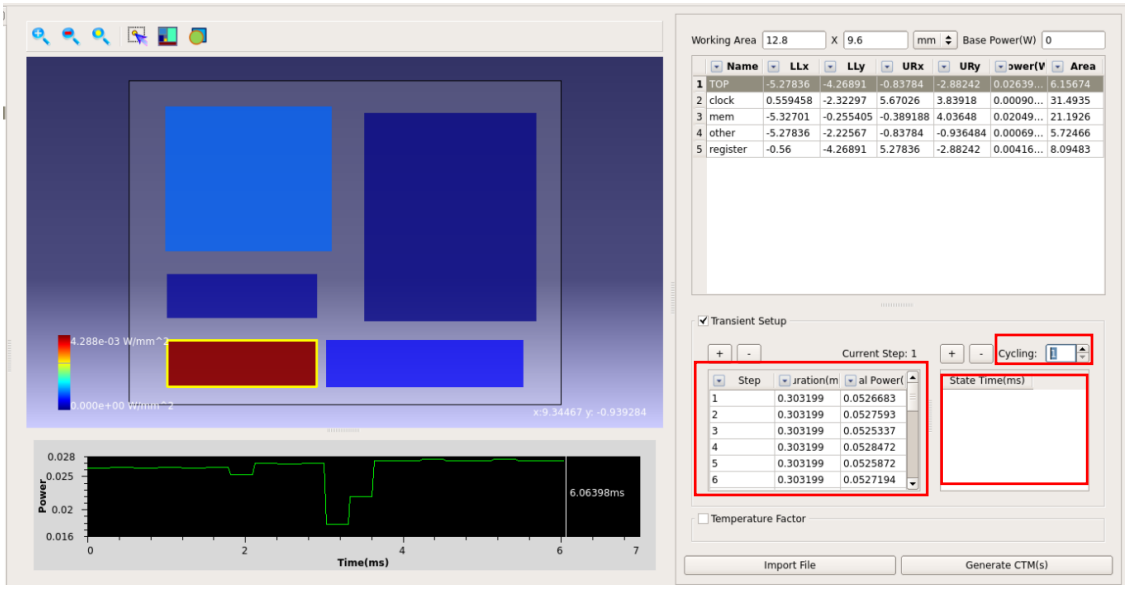

Figure 3 – Transient Power Model Setup

Transient Setup

Open the transient analysis setup dialog, click **Create from Transient Power** button, select the die name and power source, click **OK**, the state and activity would be generated automatically (Figure 4). After finishing simulation, you can view the transient result (Figure 5).

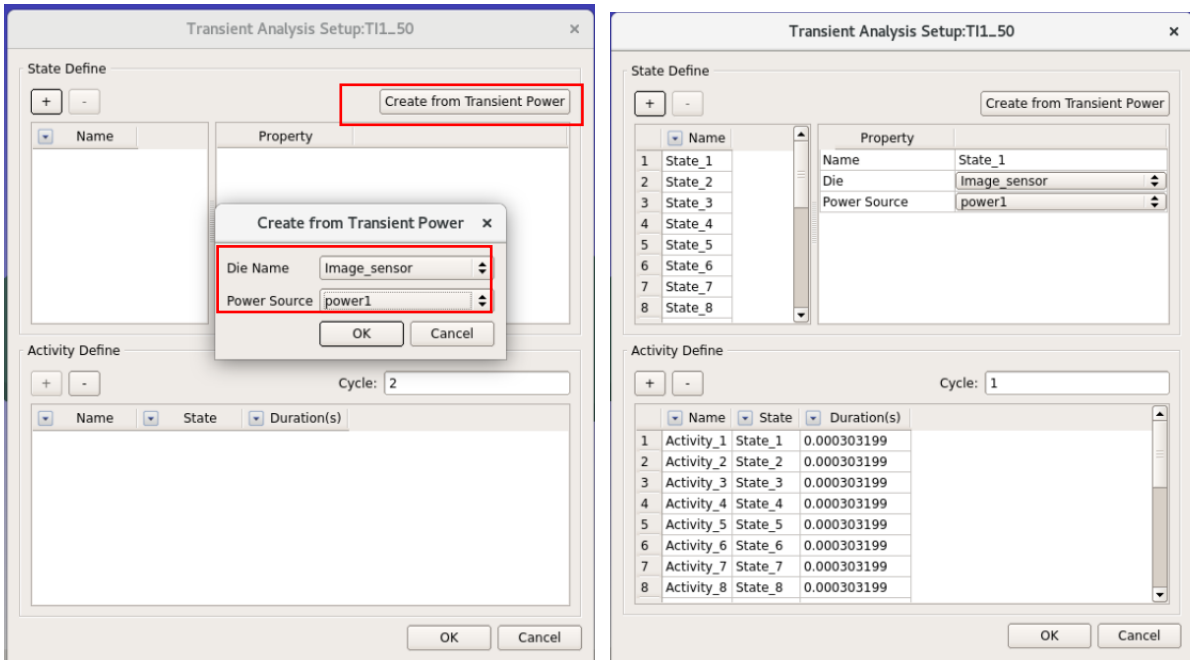

Figure 4 – Transient Setup

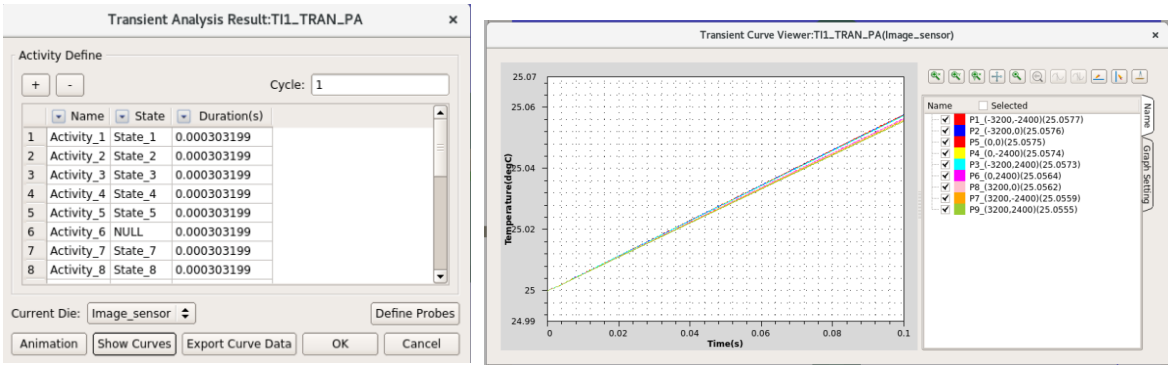

Figure 5 – Transient Thermal Result

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