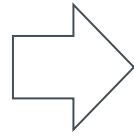


How to add (change) a new component

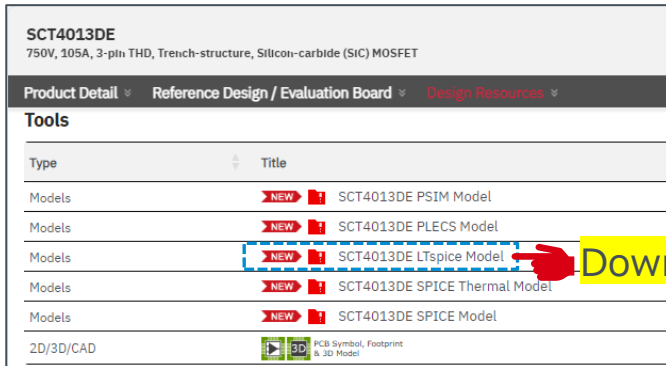
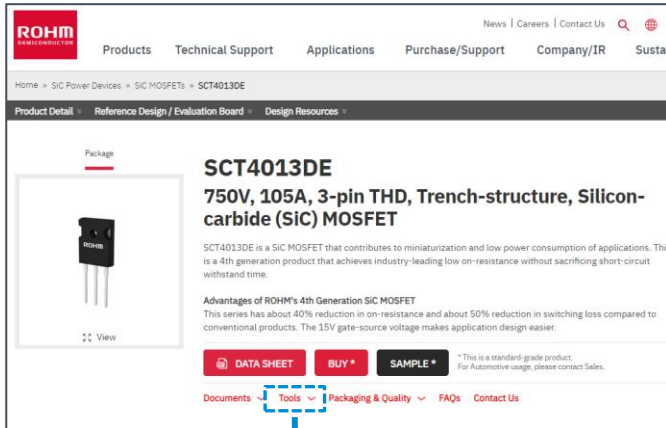
Download LTspice® model from ROHM website.



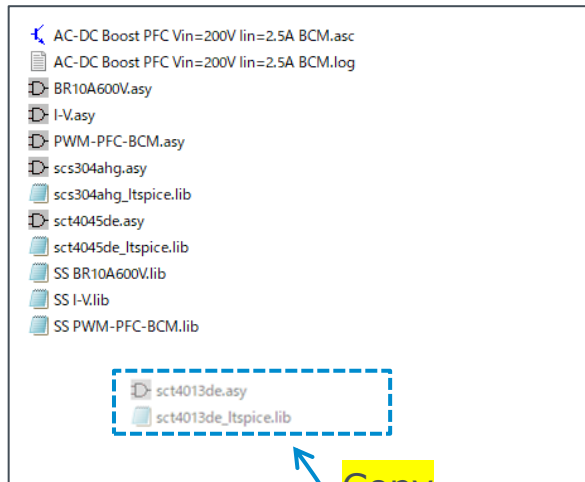
Save LTspice® model in the same folder as the schematic file.



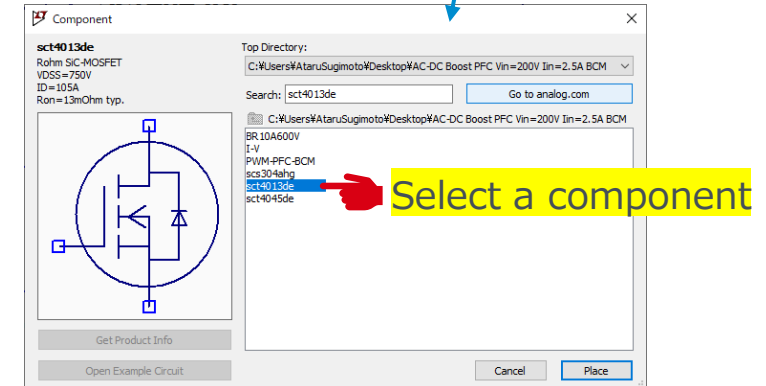
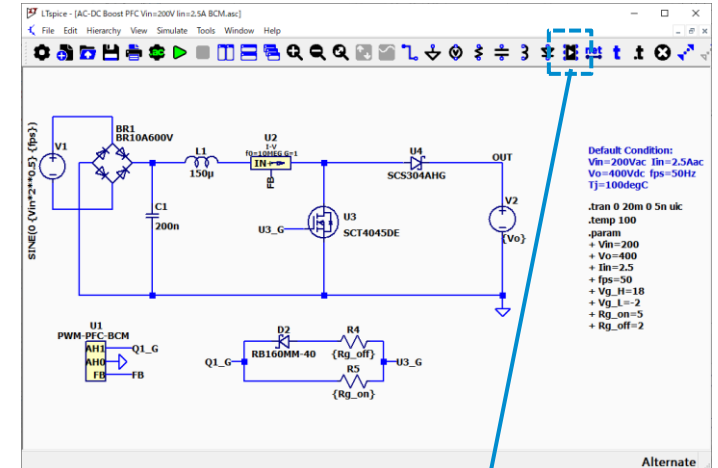
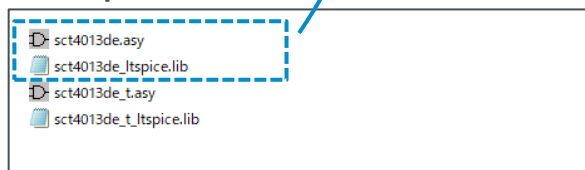
Click on the "Component" icon from the toolbar to add a new component to the schematic.



LTspice® schematic file

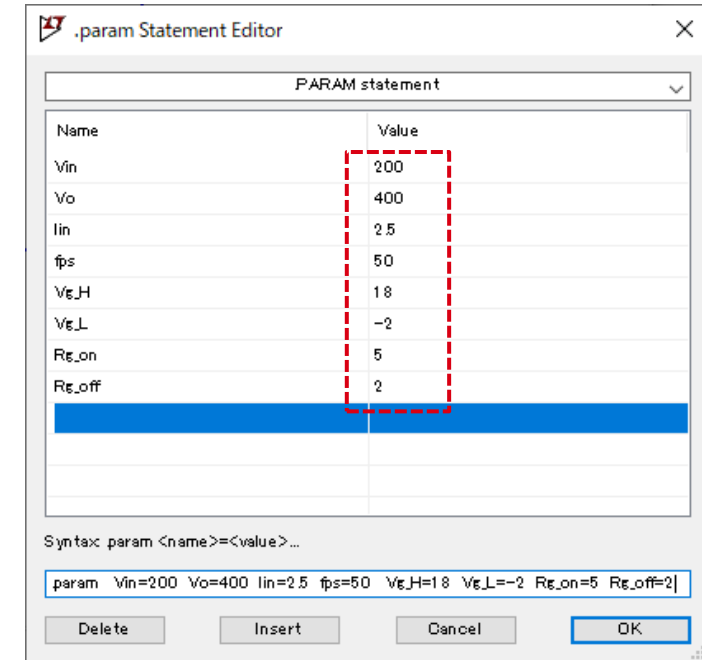
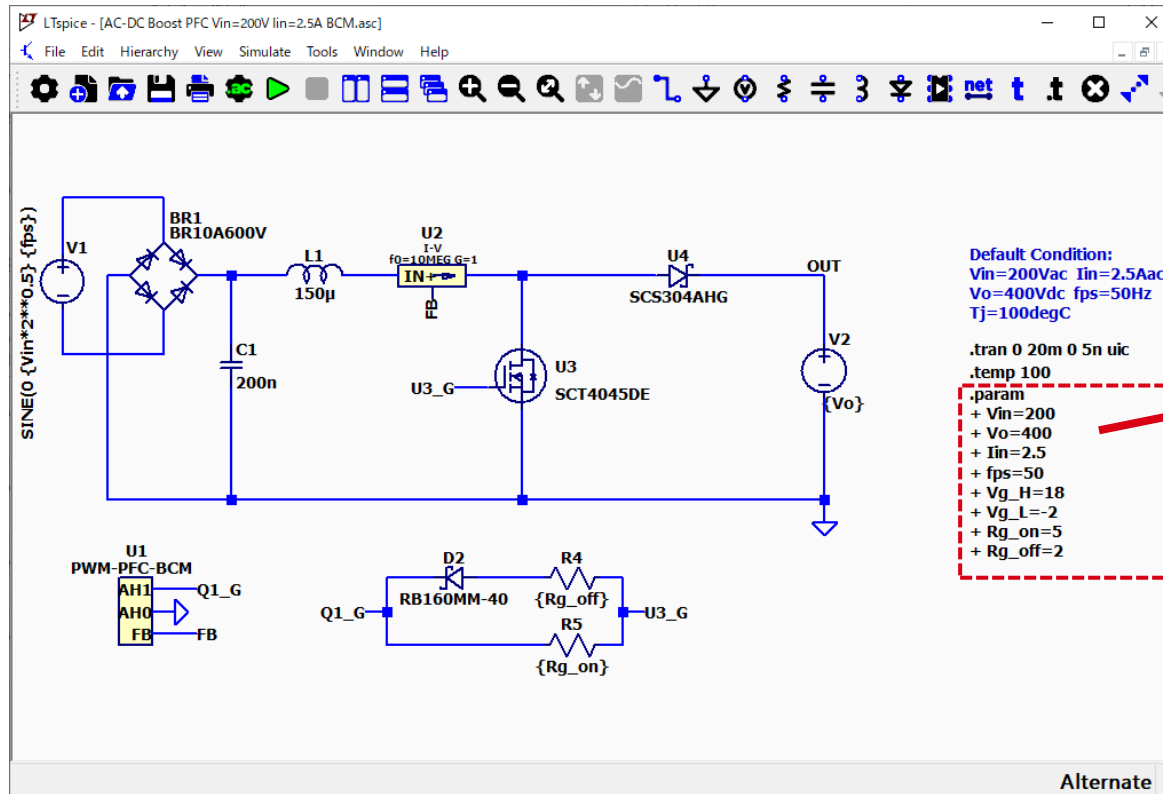


LTspice® model

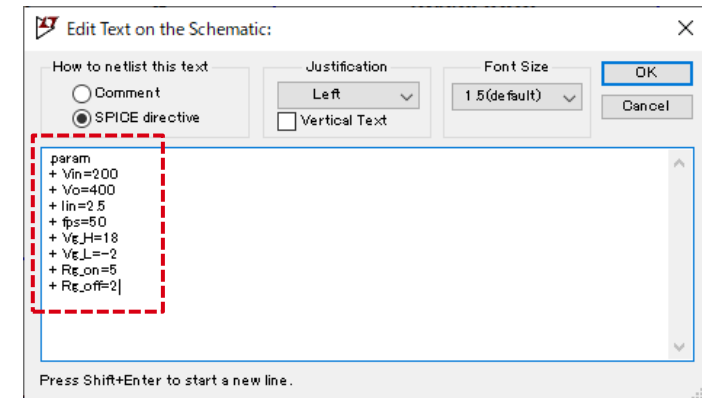


How to change the Simulation Conditions

Simulation Schematic



or



Right-click on the “.param” text on the schematic to launch the “.param Statement Editor” or “Text Editor. Change the parameters as necessary.

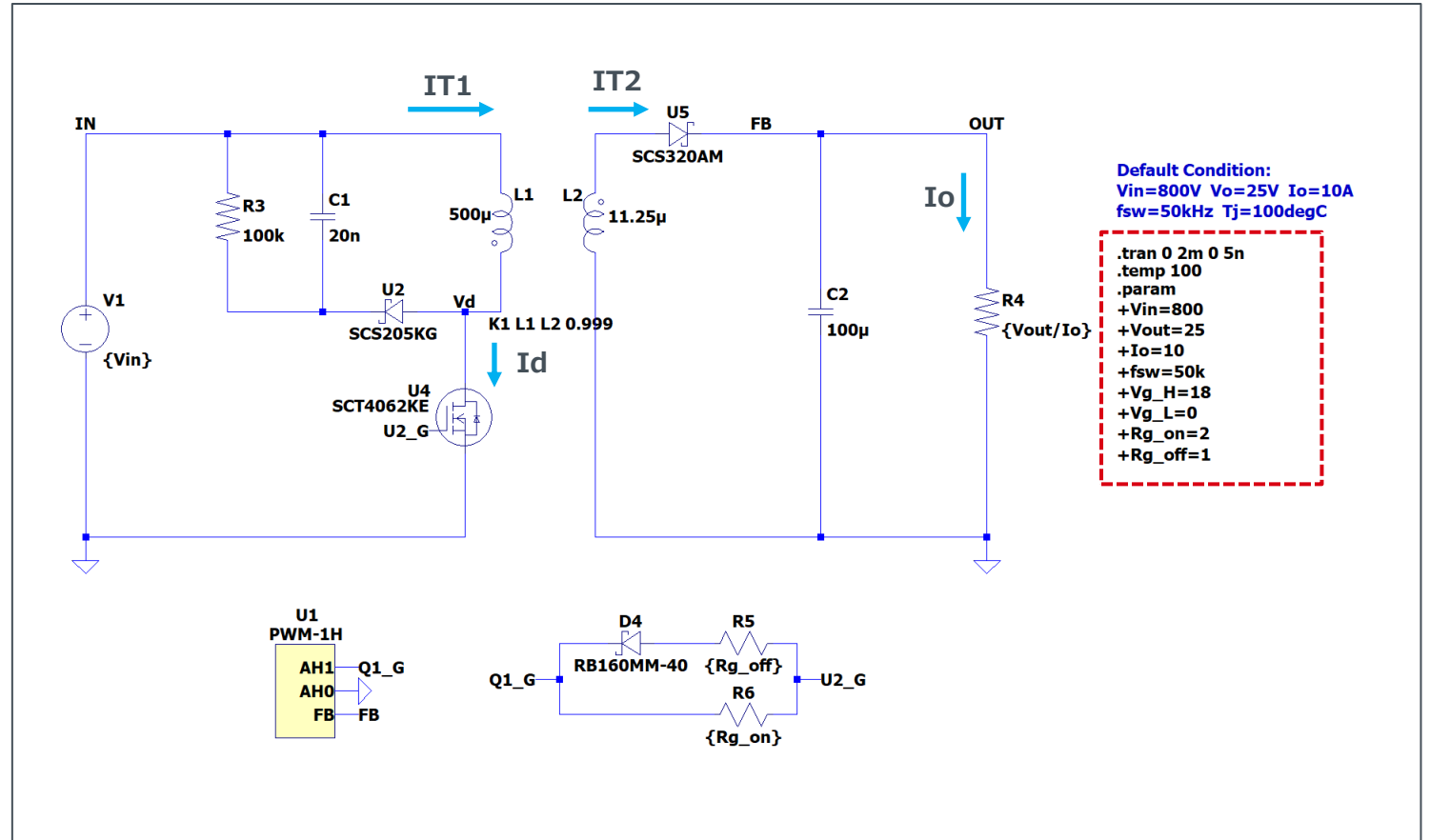
Simulation Parameters

| Param name | Unit | Description |
|------------|----------|-------------------------|
| Vin | V | Input Voltage |
| Vout | V | Output Voltage |
| Io | A | Output Current |
| fsw | Hz | Switching frequency |
| Vg_H | V | Gate Drive Voltage High |
| Vg_L | V | Gate Drive Voltage Low |
| Rg_on | Ω | Gate Resistance ON |
| Rg_off | Ω | Gate Resistance OFF |

Components

| Instance name | Type | Default |
|---------------|------------|------------|
| U4 | SiC MOSFET | SCT4062KE |
| U2 | SiC SBD | SCS205KG |
| U5 | SiC SBD | SCS320AM |
| D4 | SBD | RB160MM-40 |

Simulation Schematic



You can download and exchange other component models. See the link below for details.

[How to Use LTspice® Models](#)、[Design Simulation Models](#) : English version

[LTspice®モデルの使い方](#)、[デザインモデル](#) : 日本語版

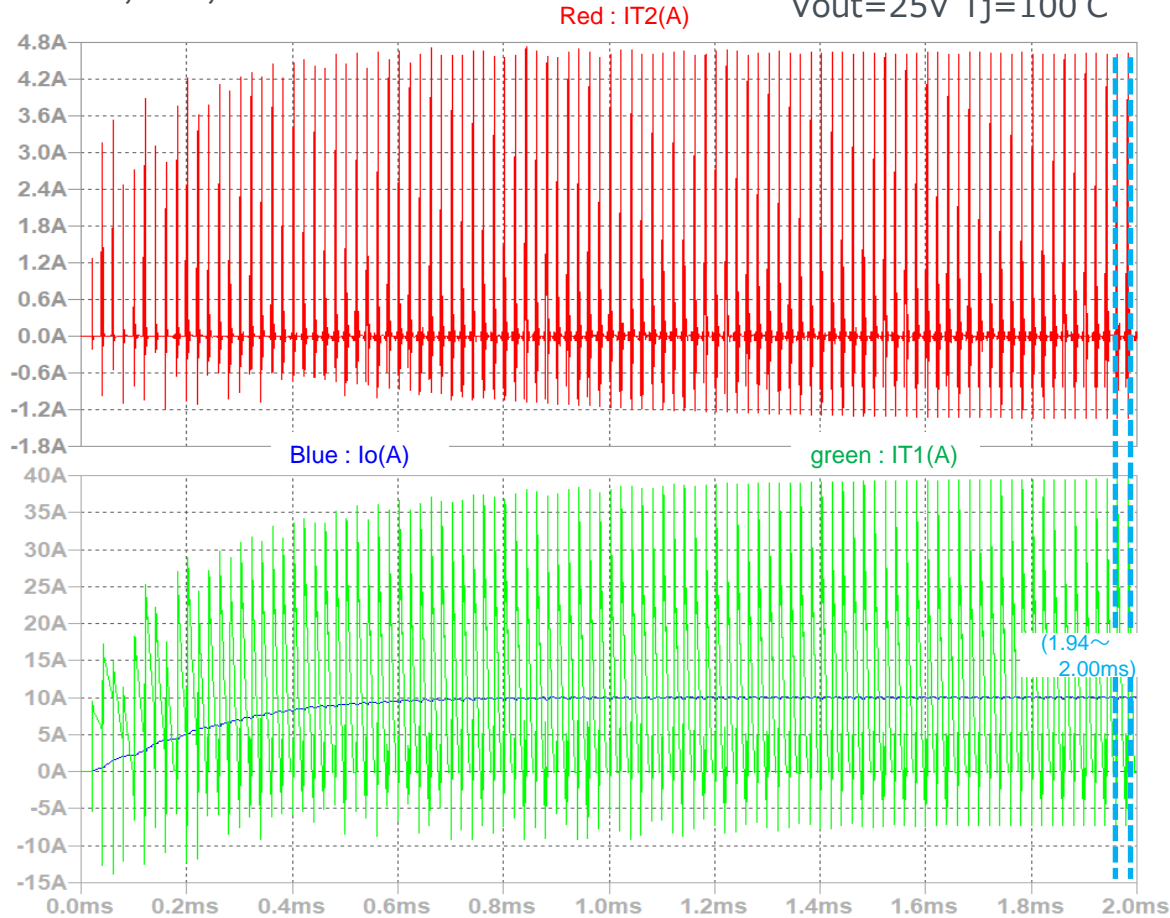
Simulation Result Waveform1

U4 : SiC MOSFET SCT4062KE
U2 : SiC SBD SCS205KG
U5 : SiC SBD SCS320AM

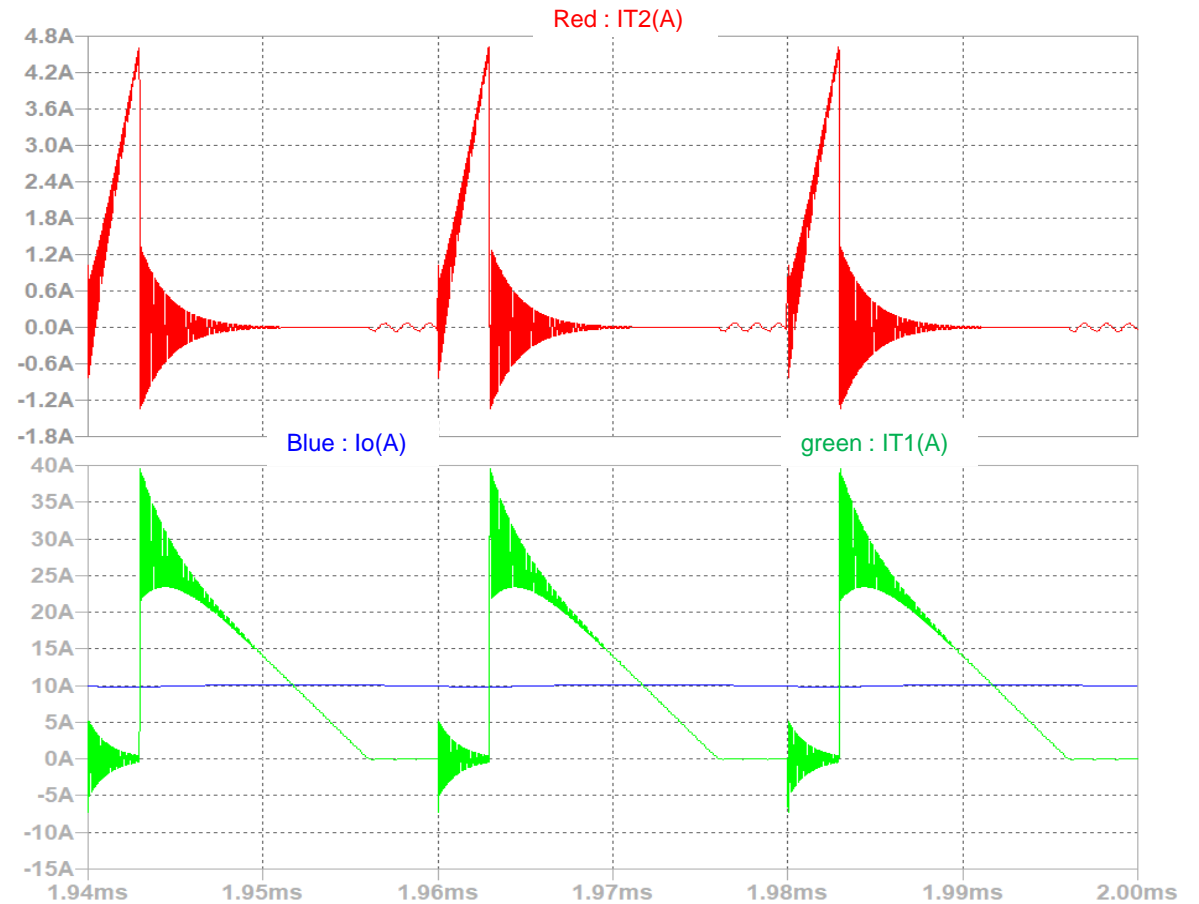
2025 Jan.
67UG118E Rev.001

Vin=800V Io=10A
Vout=25V Tj=100°C

IT1,IT2,Io

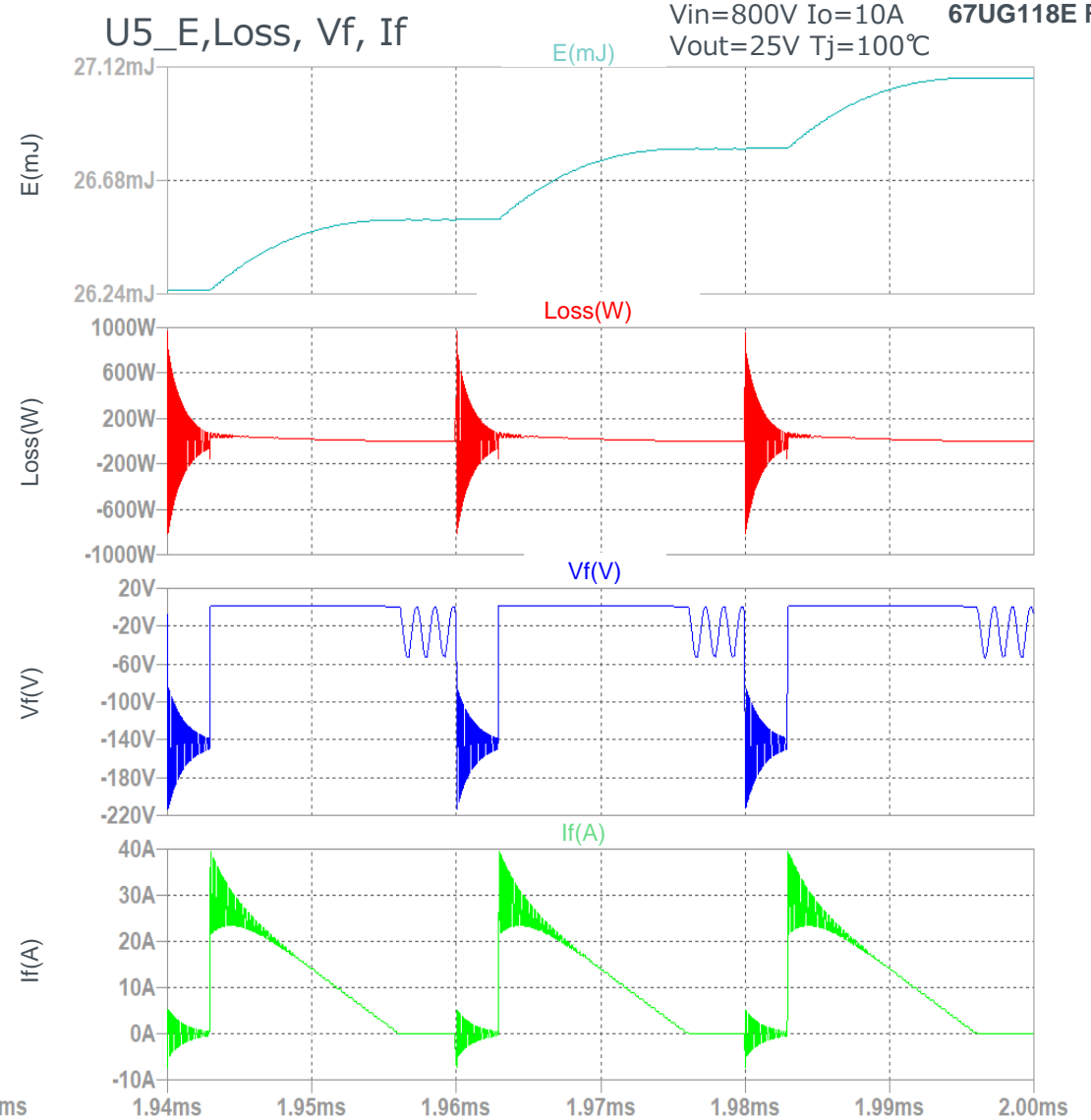
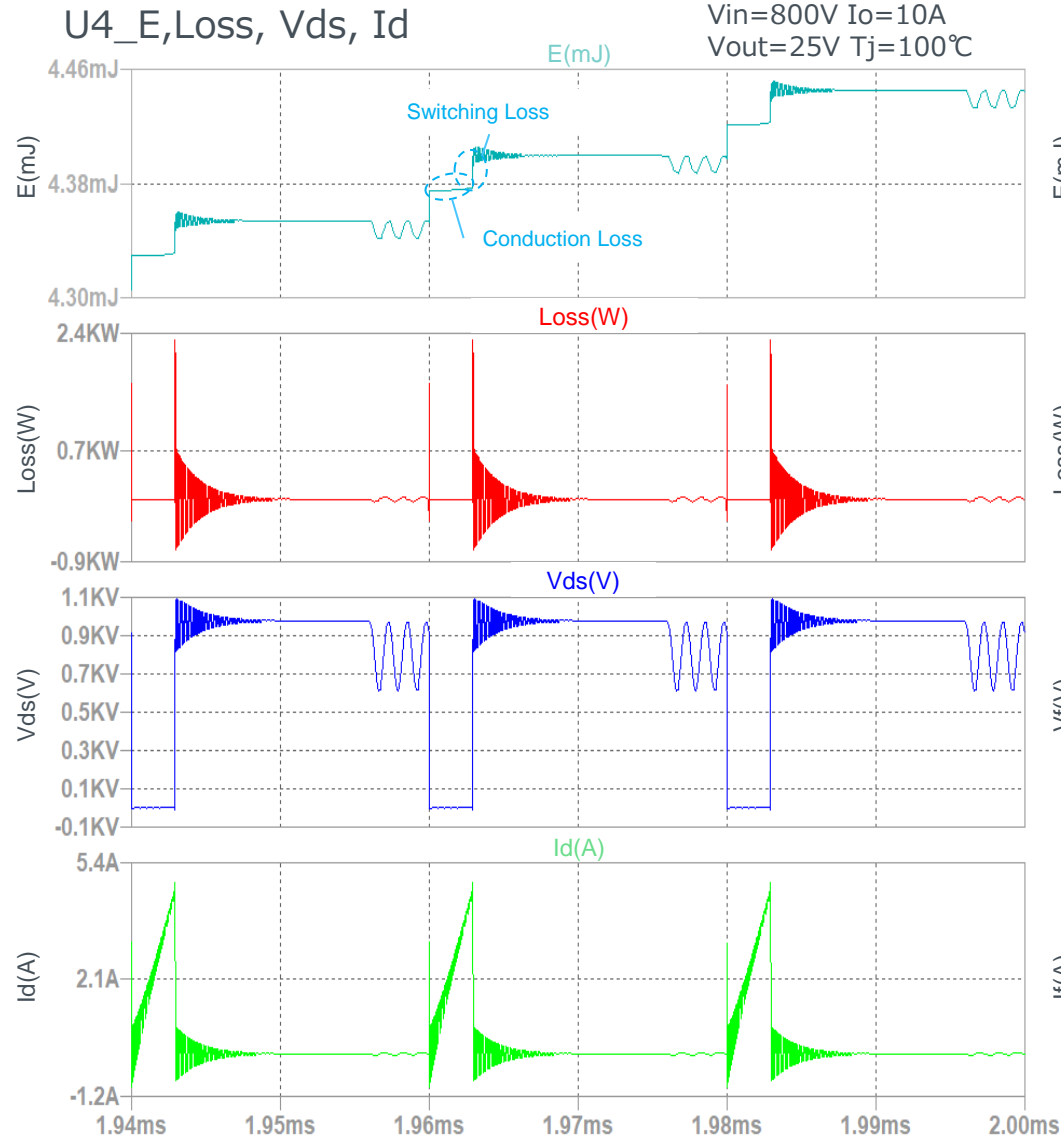


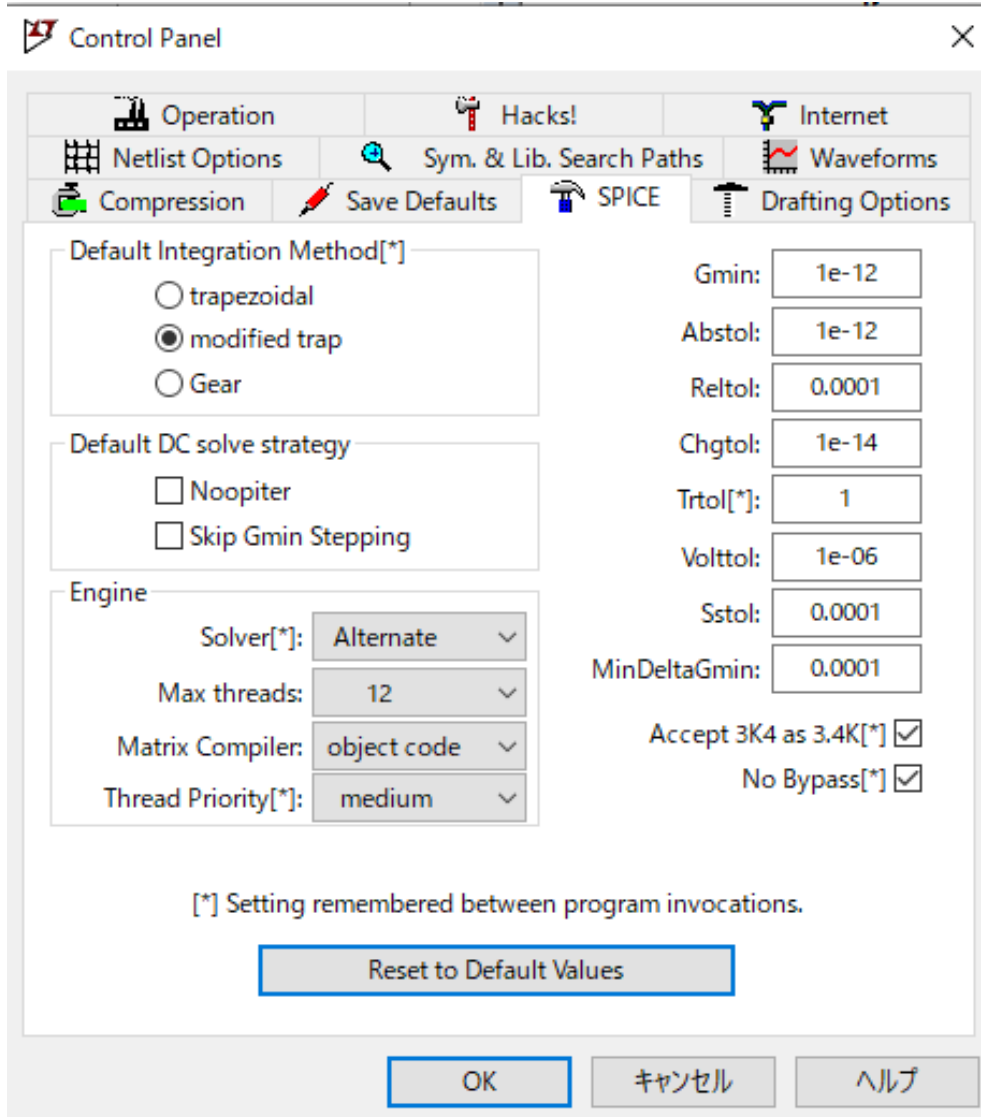
Expansion (1.94~2.00ms)



Simulation Result Waveform2

U4 : SiC MOSFET
SCT4062KE
U2 : SiC SBD
SCS205KG
U5 : SiC SBD
SCS320AM





Control Panel

Operation Hacks! Internet
Netlist Options Sym. & Lib. Search Paths Waveforms
Compression Save Defaults SPICE Drafting Options

Default Integration Method[*]
 trapezoidal
 modified trap
 Gear

Default DC solve strategy
 Noopiter
 Skip Gmin Stepping

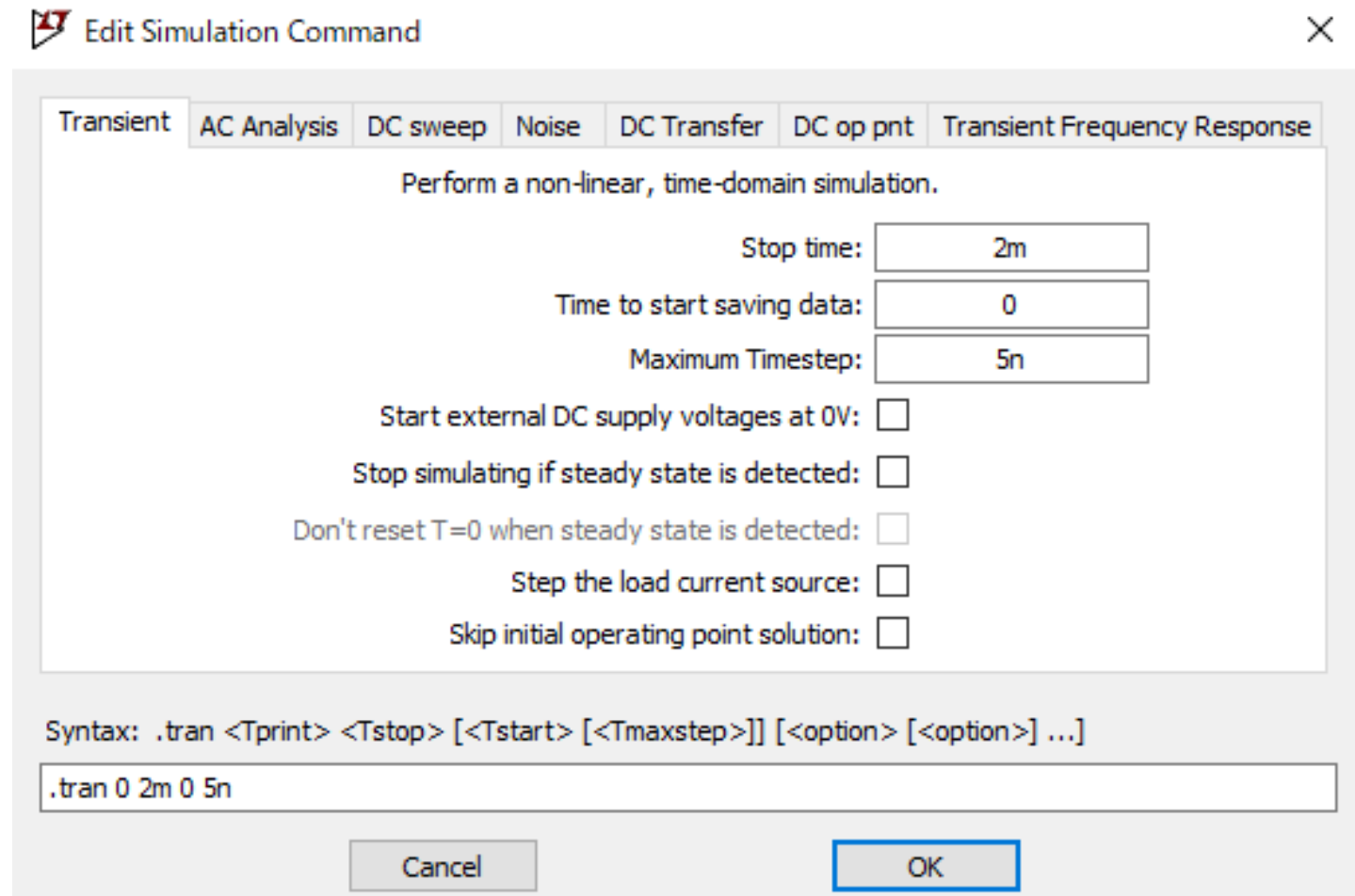
Engine
Solver[*]: Alternate
Max threads: 12
Matrix Compiler: object code
Thread Priority[*]: medium

Gmin: 1e-12
Abstol: 1e-12
Reltol: 0.0001
Chgtol: 1e-14
Titol[*]: 1
Volltol: 1e-06
Sstol: 0.0001
MinDeltaGmin: 0.0001
Accept 3K4 as 3.4K[*]
No Bypass[*]

[*] Setting remembered between program invocations.

Reset to Default Values

OK キャンセル ヘルプ



Edit Simulation Command

Transient AC Analysis DC sweep Noise DC Transfer DC op pnt Transient Frequency Response

Perform a non-linear, time-domain simulation.

Stop time: 2m
Time to start saving data: 0
Maximum Timestep: 5n

Start external DC supply voltages at 0V:
Stop simulating if steady state is detected:
Don't reset T=0 when steady state is detected:
Step the load current source:
Skip initial operating point solution:

Syntax: .tran <Tprint> <Tstop> [<Tstart> [<Tmaxstep>]] [<option> [<option>] ...]

.tran 0 2m 0 5n

Cancel OK

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