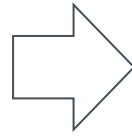


How to add (change) a new component

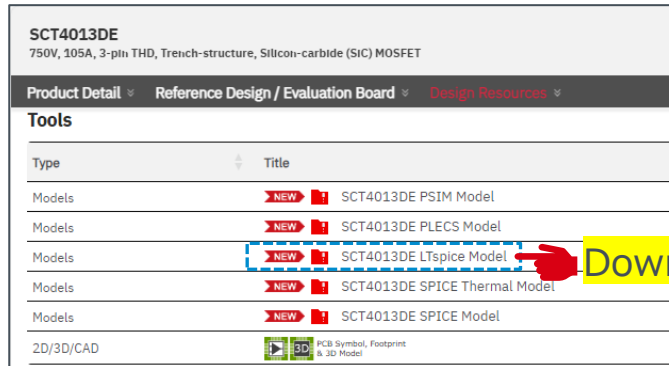
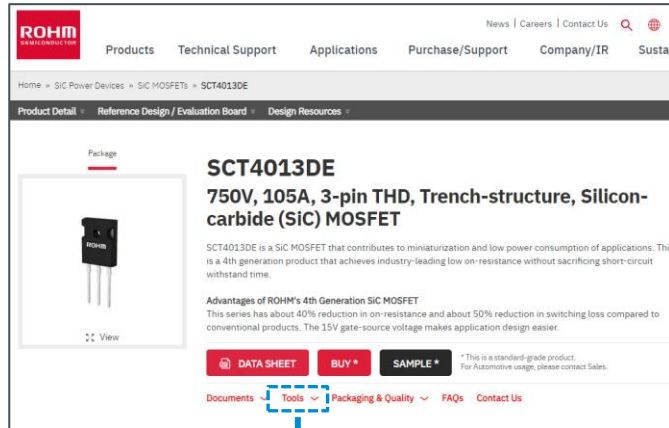
Download LTspice® model from ROHM website.



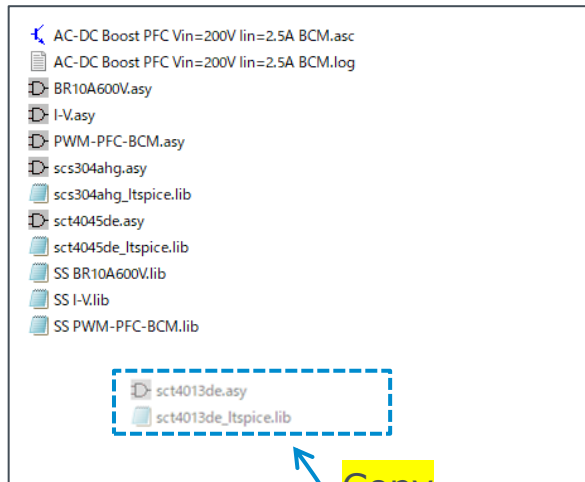
Save LTspice® model in the same folder as the schematic file.



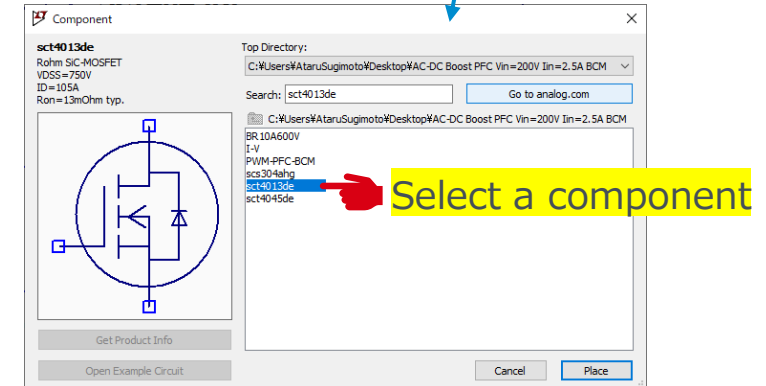
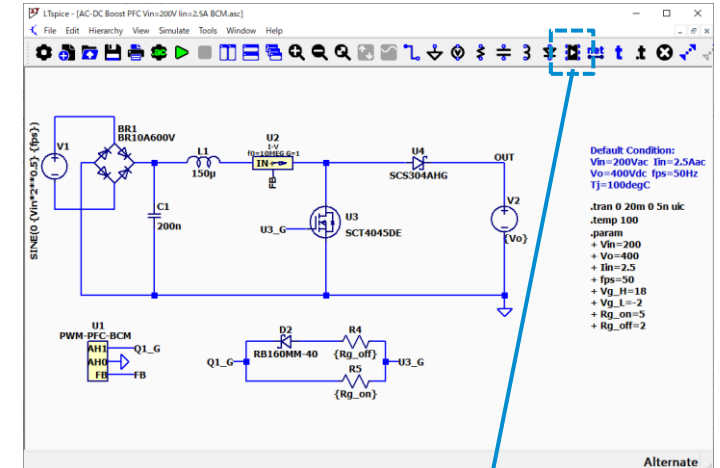
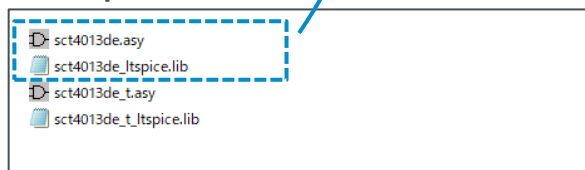
Click on the “Component” icon from the toolbar to add a new component to the schematic.



LTspice® schematic file

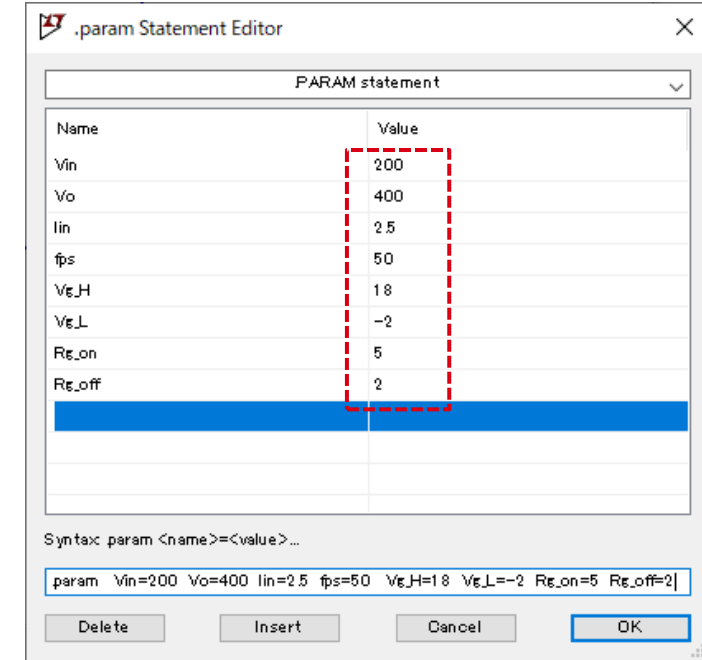
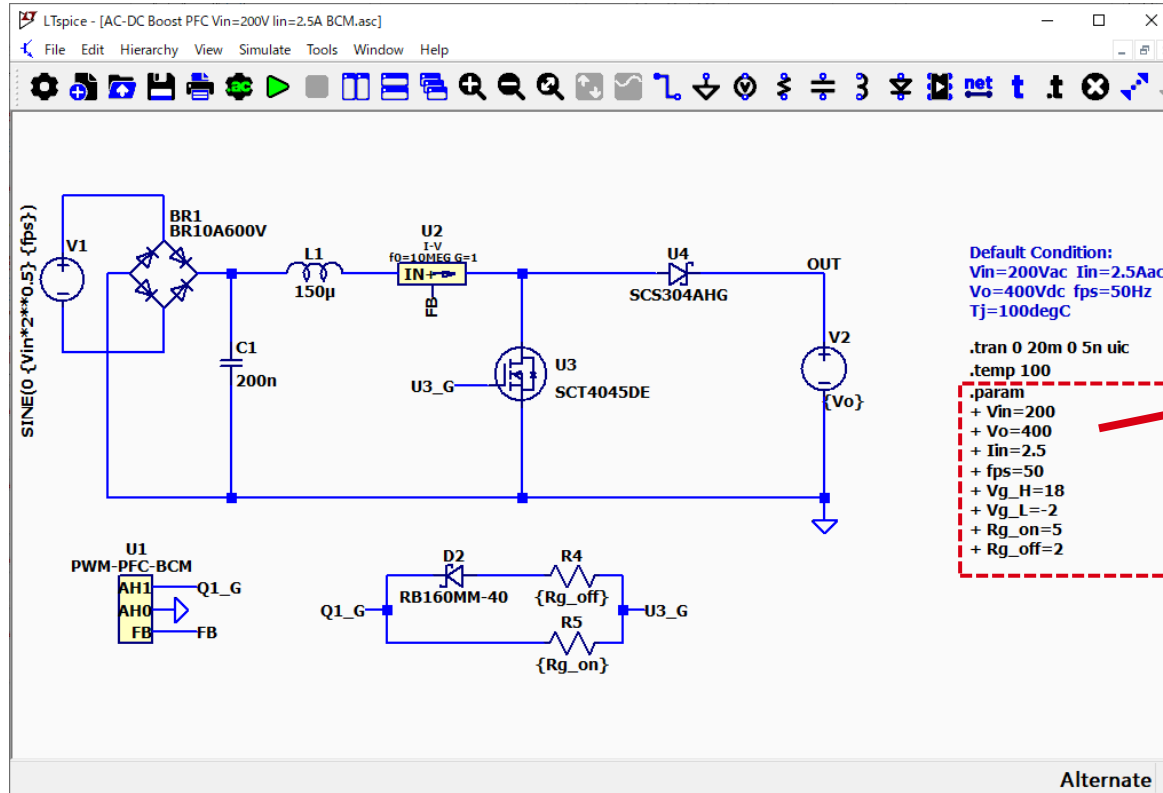


LTspice® model

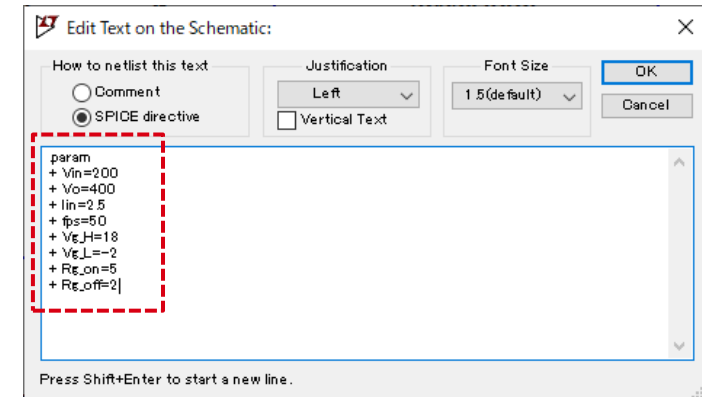


How to change the Simulation Conditions

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.

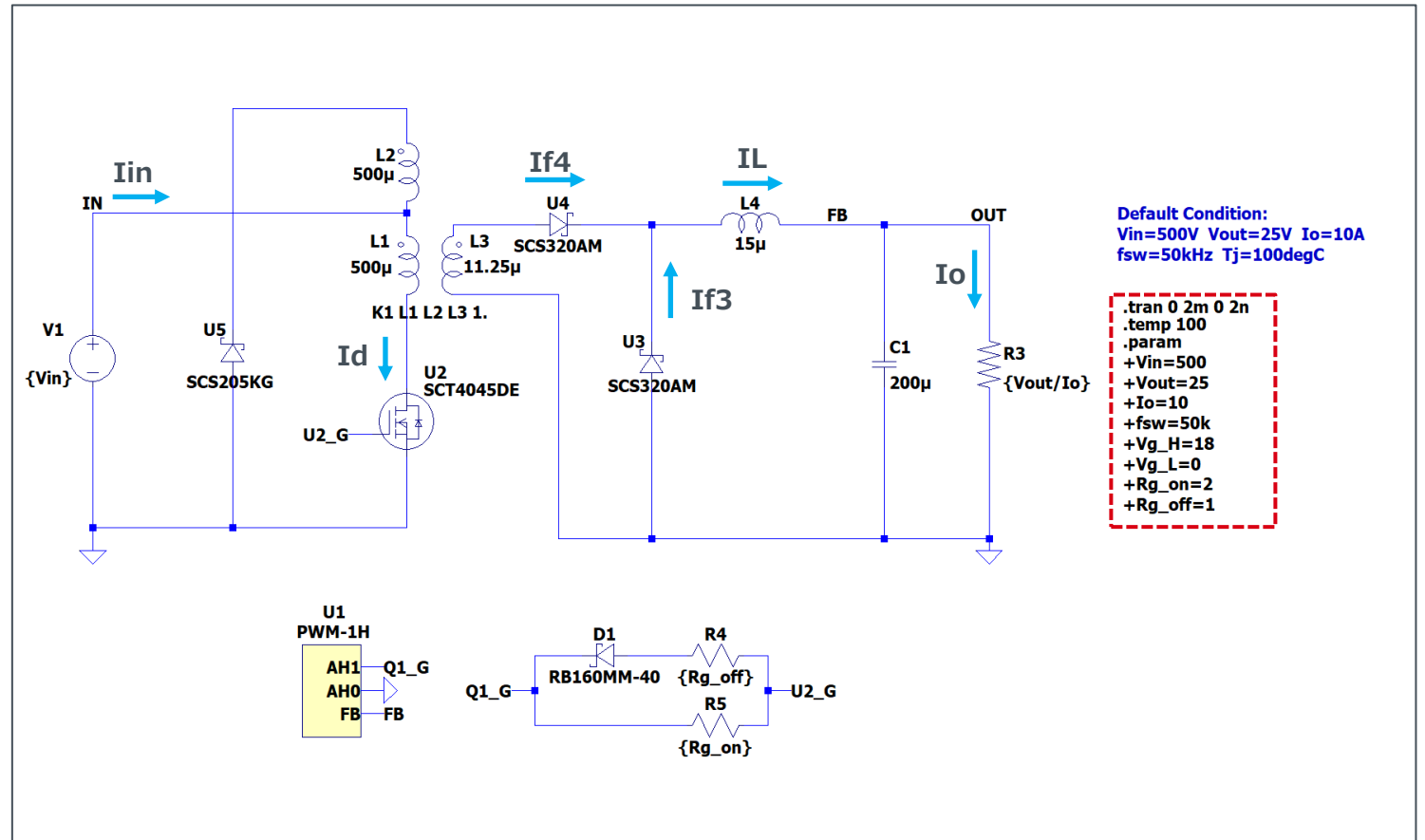
Simulation Parameters

Param name	Unit	Description
Vin	V	Input Voltage
Vout	V	Output Voltage
Io	A	Output Current
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
U2	SiC MOSFET	SCT4045DE
U3,4	SiC SBD	SCS320AM
U5	SiC SBD	SCS205KG
D1	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

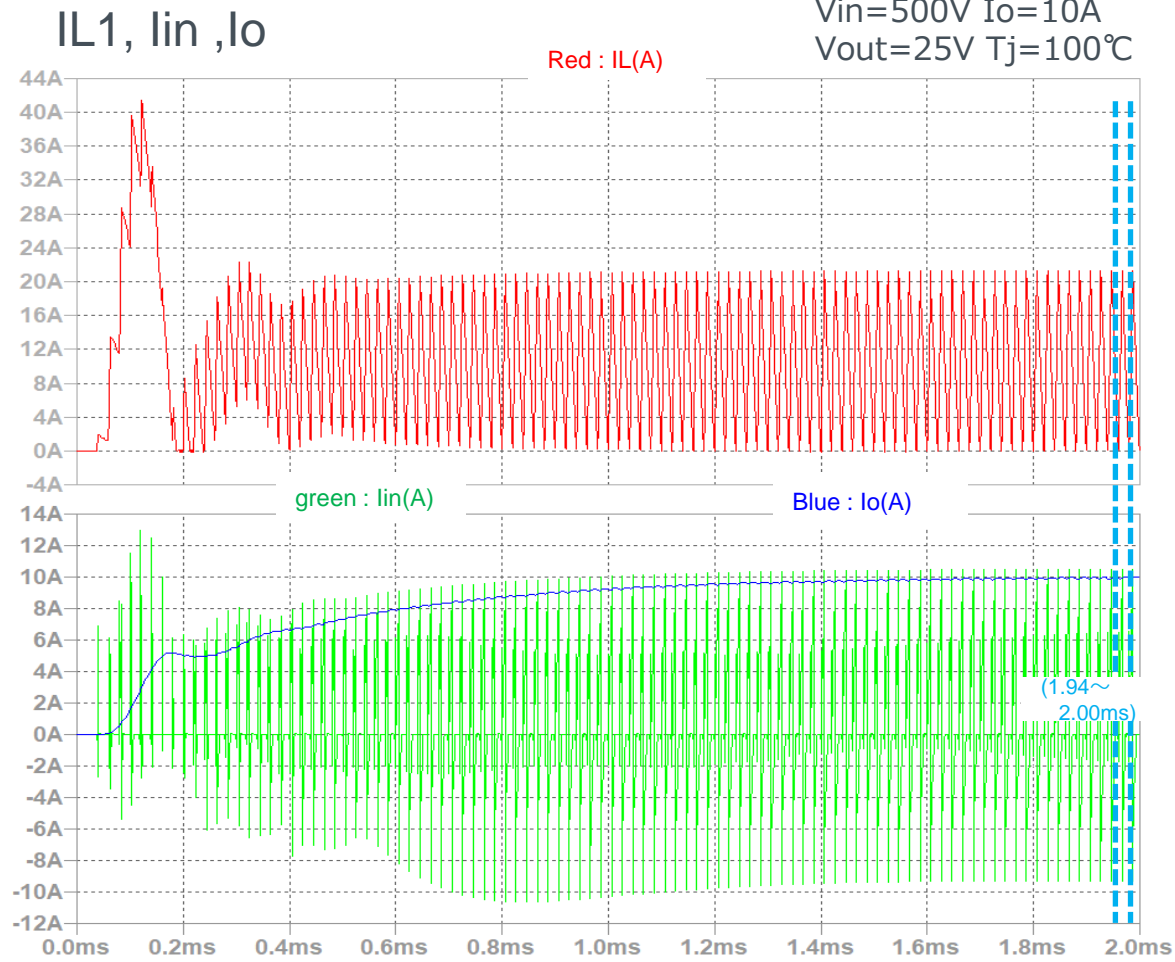
[LTspice®モデルの使い方](#)、[デザインモデル](#) : 日本語版

Simulation Result Waveform1

U2 : SiC MOSFET SCT4045DE
U3,4 : SiC SBD SCS320AM
U5 : SiC SBD SCS205KG

2025 Jan.
67UG119E Rev.001

Vin=500V Io=10A
Vout=25V Tj=100°C

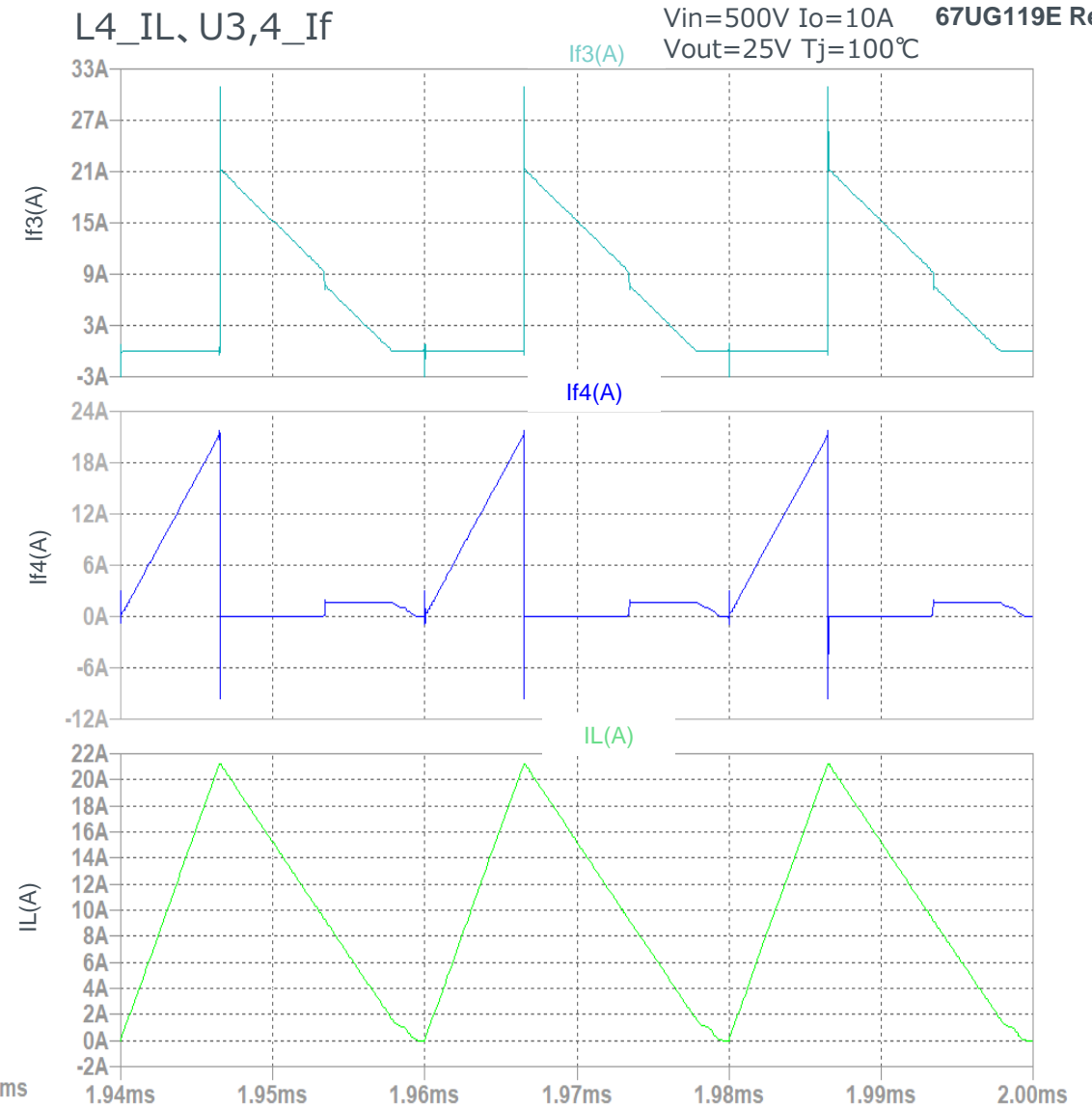
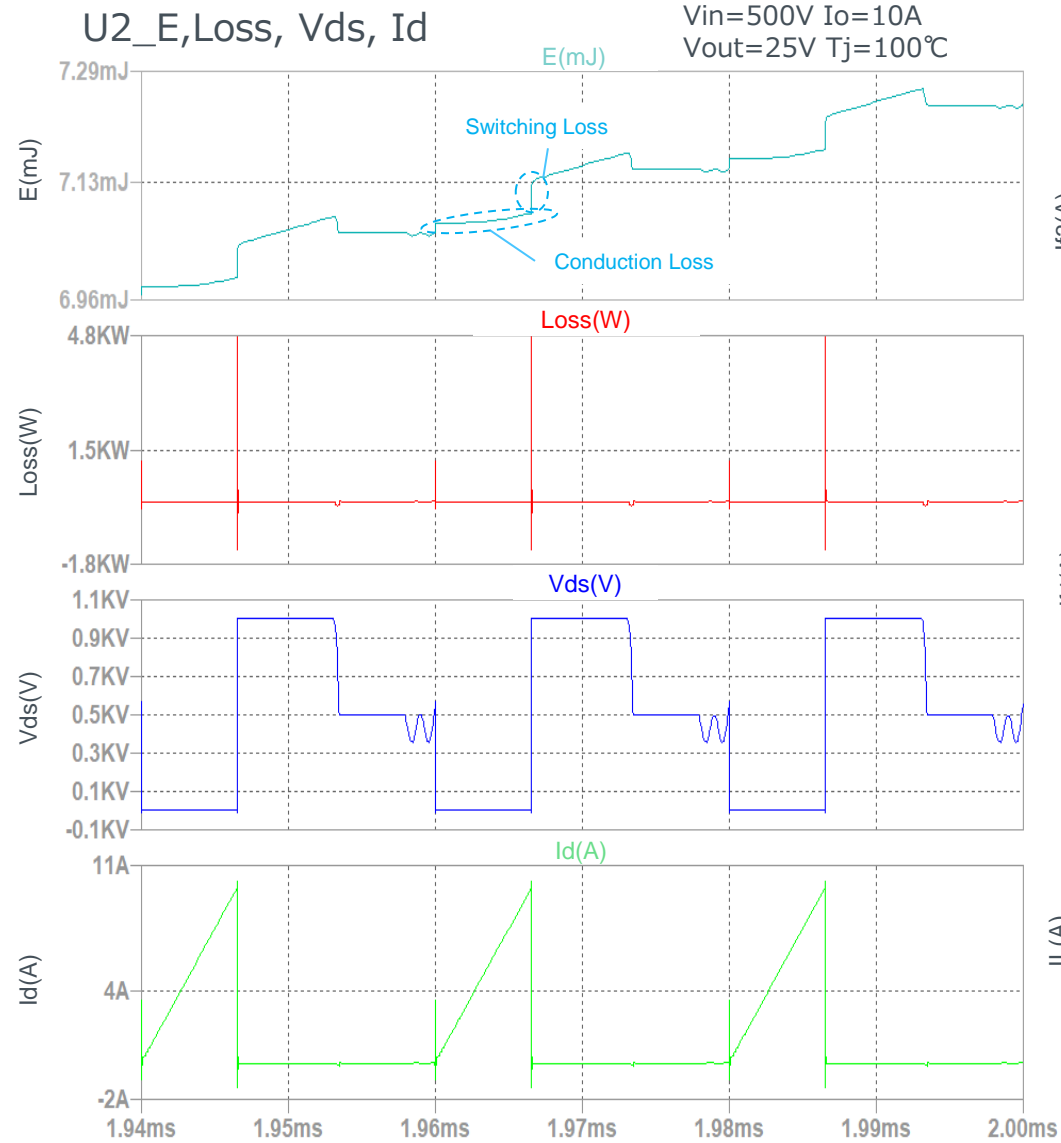


Expansion (1.94~2.00ms)



Simulation Result Waveform2

U2 : SiC MOSFET
SCT4045DE
U3,4 : SiC SBD
SCS320AM
U5 : SiC SBD
SCS205KG



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: 2n

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 2n

Cancel OK

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