Boost Converter 2P-Interleave Pin=5kW

1. Boost Converter 2P-Interleave Simulation Circuit

Input: Vin=250V (50V～400V)
Iin=20A

Output: Vo=400V

PWM: fsw=20kHz 2P-Interleave

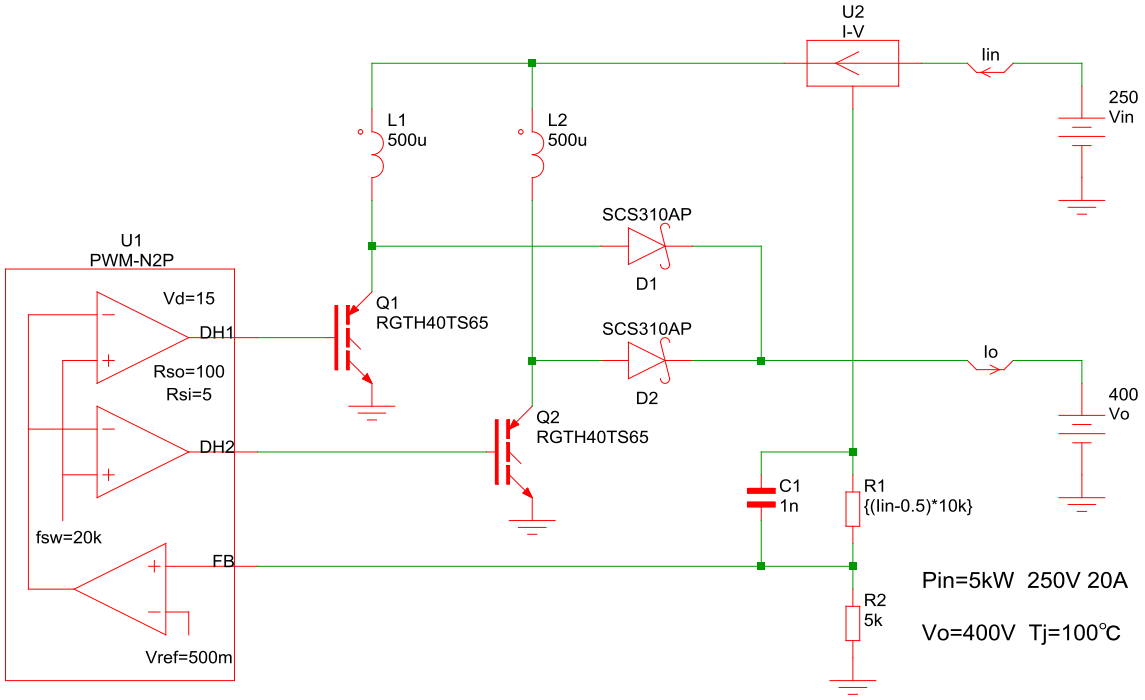
Gate Drive: Vd=15V
R source=100Ω
R sink=5Ω

Q1,Q2: RGTH40TS65 x2
IGBT (650V 20A)

D1,D2: SCS310AP x2
SiC SBD (650V 10A)

L1,L2: 500uH

Tj=100℃



SIMetrix SPICE Simulation Data File

DC-DC Boost Converter 2P-Interleave Pin=5kW.wxsch

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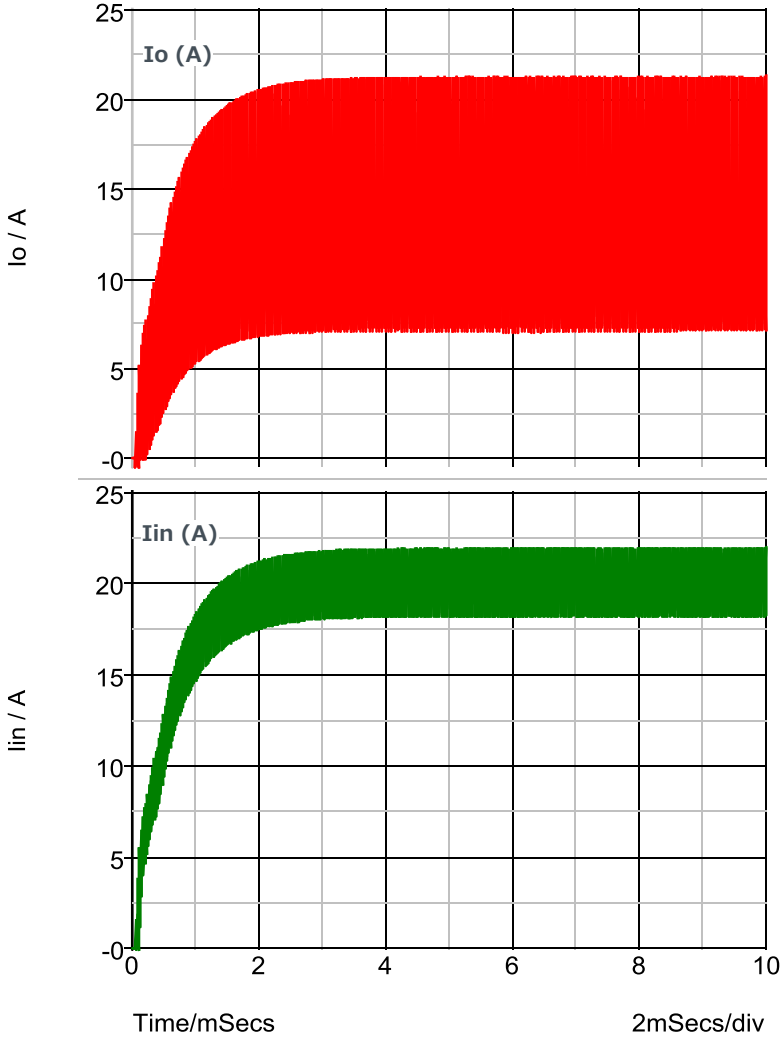
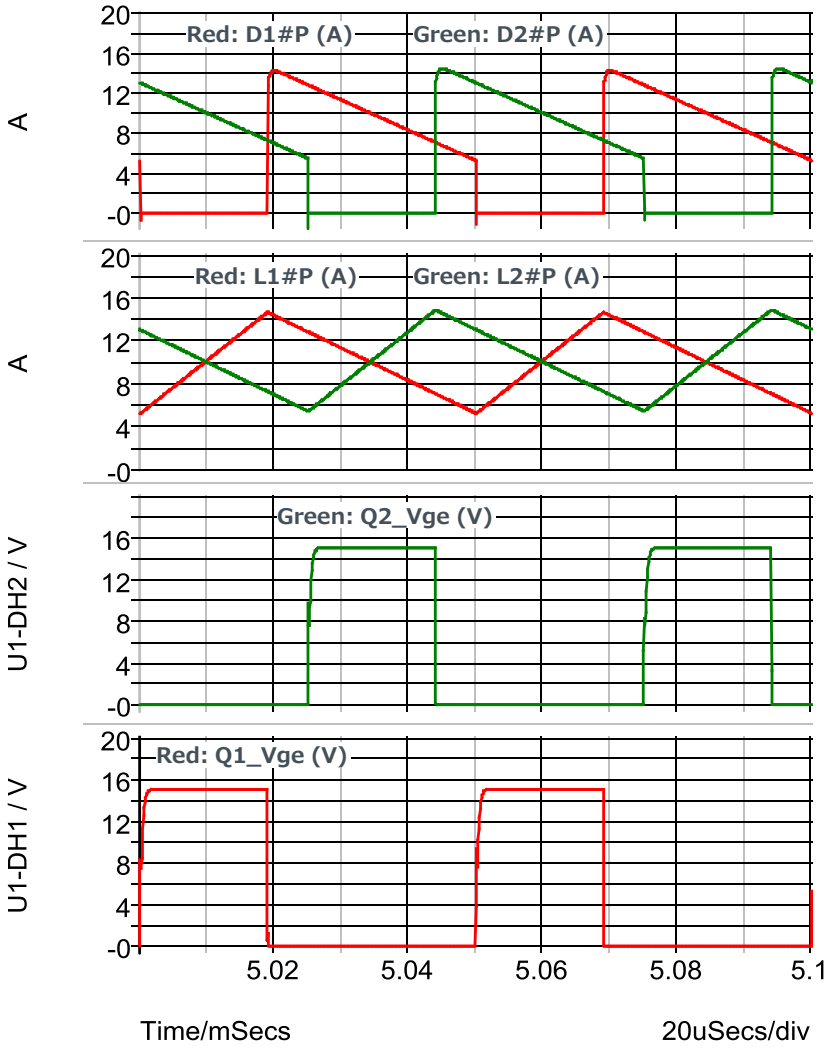
Simulation Waveform 1

Io, Iin (0~20ms)



ID, IL, Vge (5.00ms~5.10ms)



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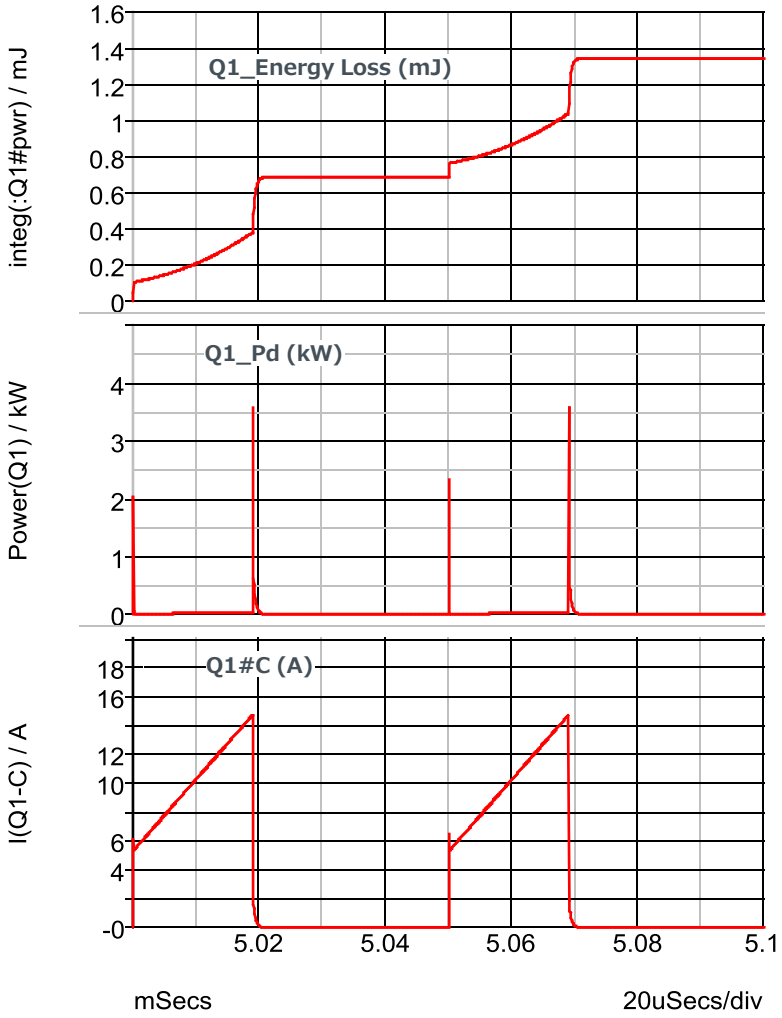
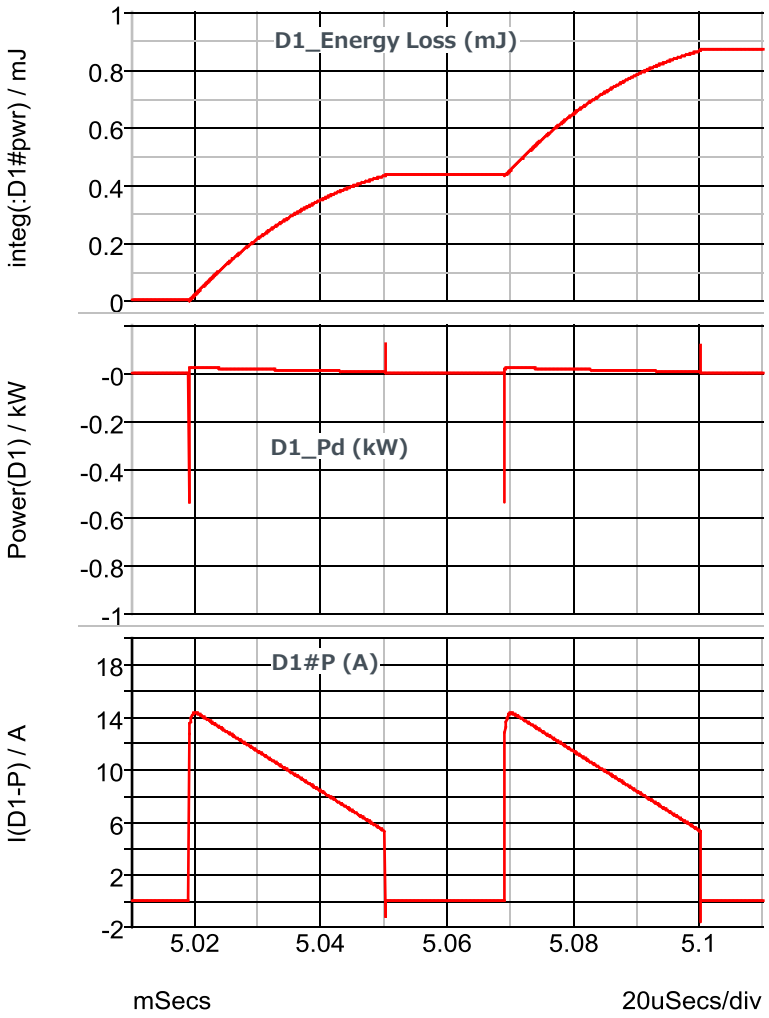
Simulation Waveform 2

Q1_E Loss, Pd, Ic (5.00ms~5.10ms)



D1_E Loss, Pd, Ip (5.01ms~5.11ms)



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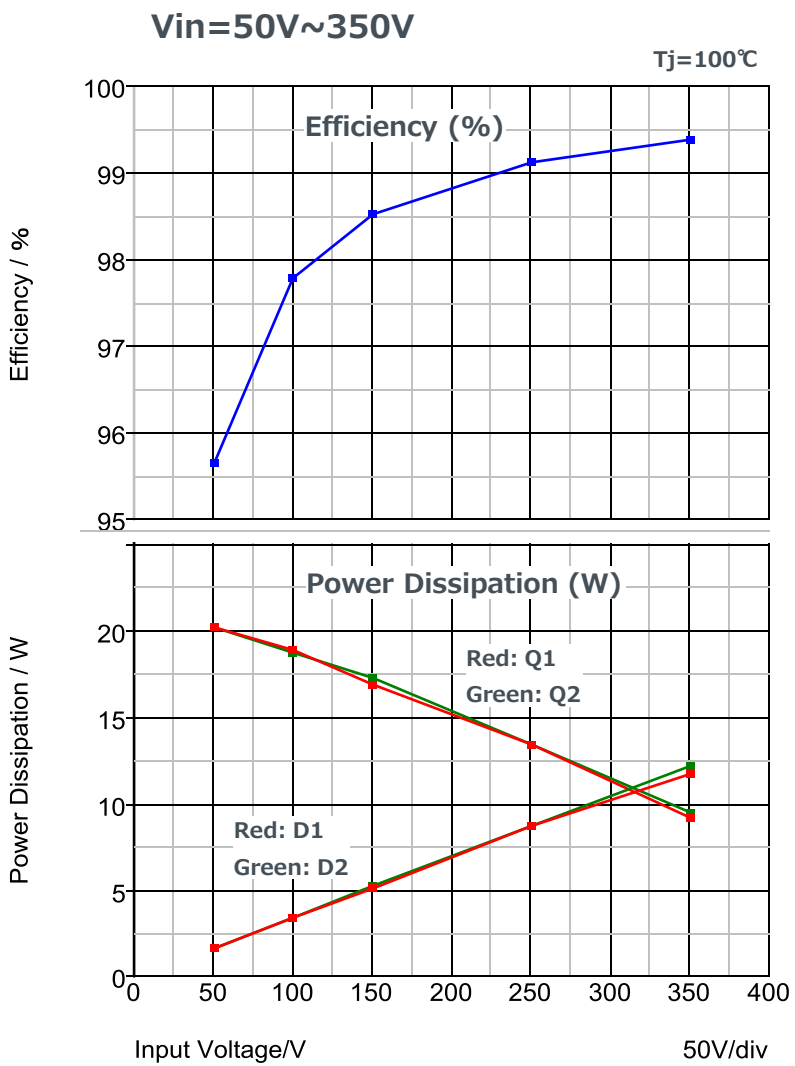
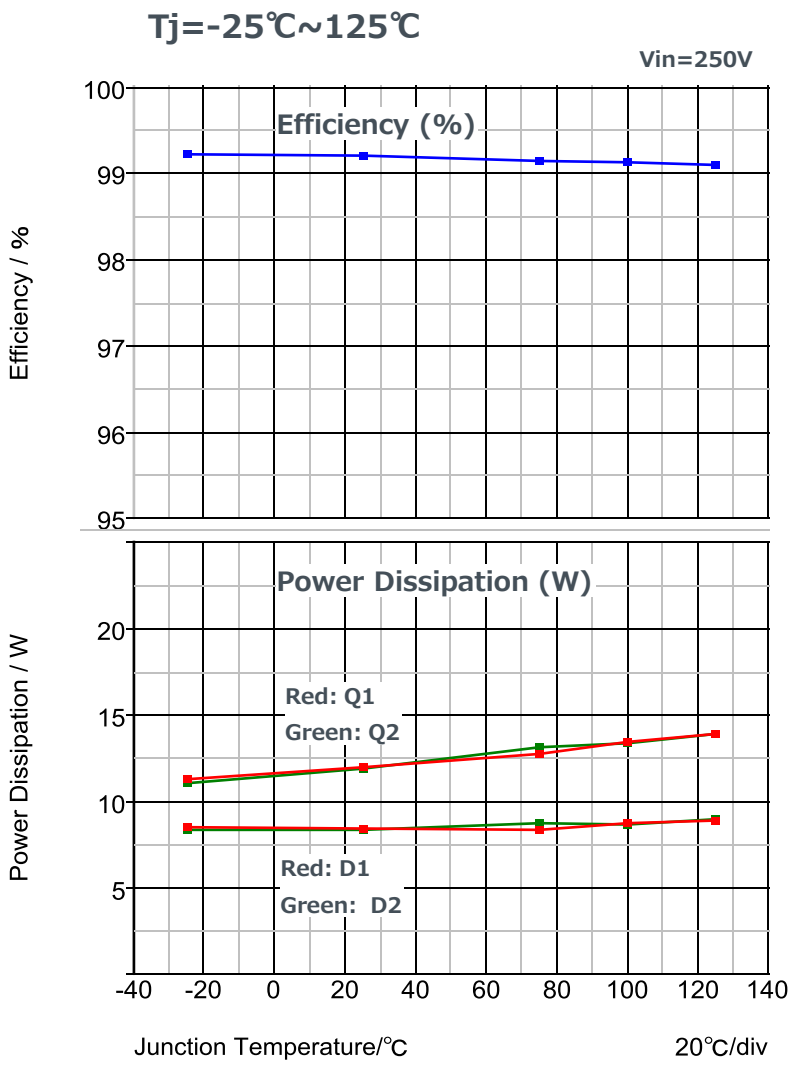
Efficiency, Power Dissipation





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