

DC-DC Step-Up/Down Converter $V_o=400V$ $I_o=40A$

Input : $V_{in}=200V\sim 800V$

Output : $V_o=400V$
 $I_o=40A$

Gate Drive : $V_d=18V$
 $R_{source}=2\Omega$
 $R_{sink}=1\Omega$

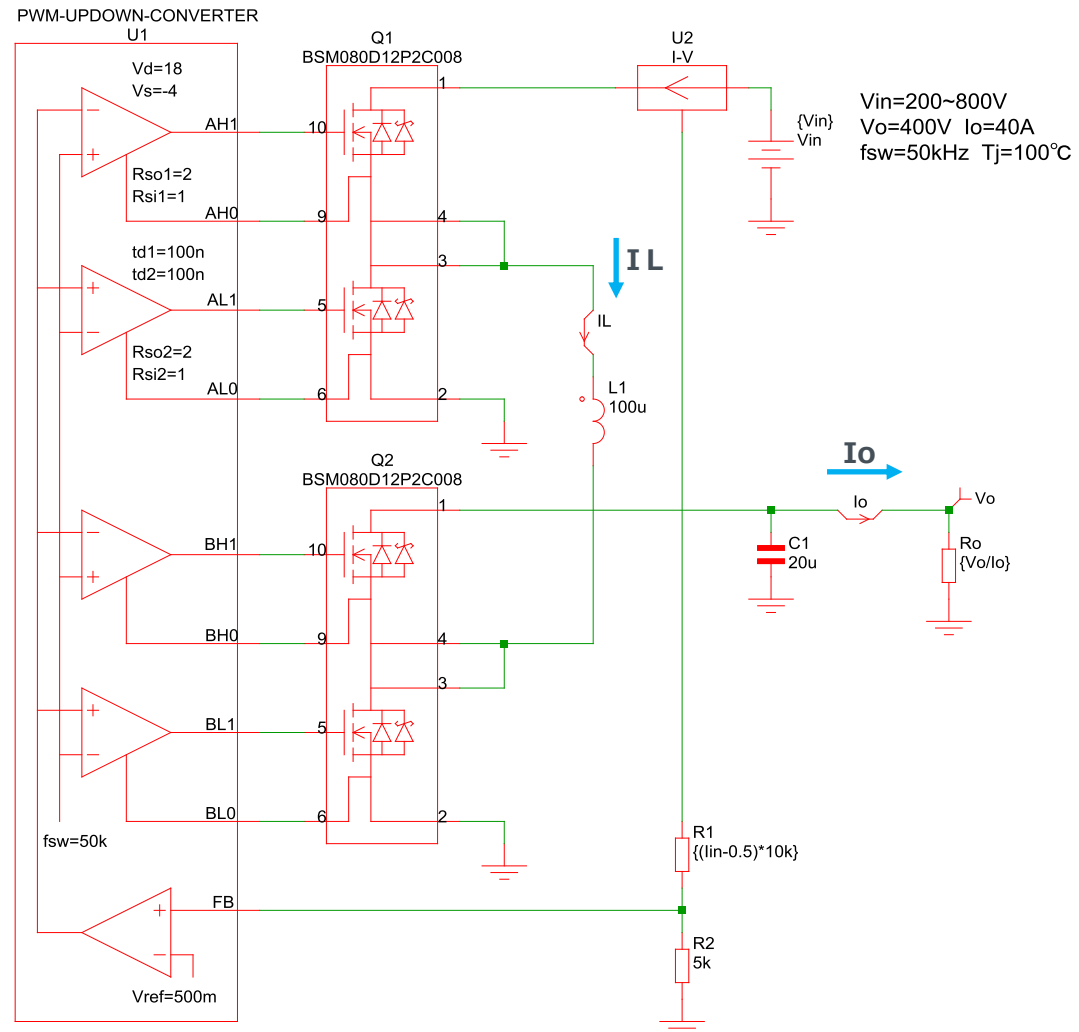
Q1,Q2 : BSM080D12P2C008
SiC Power Module
(1200V 80A)

L1 : 100uH

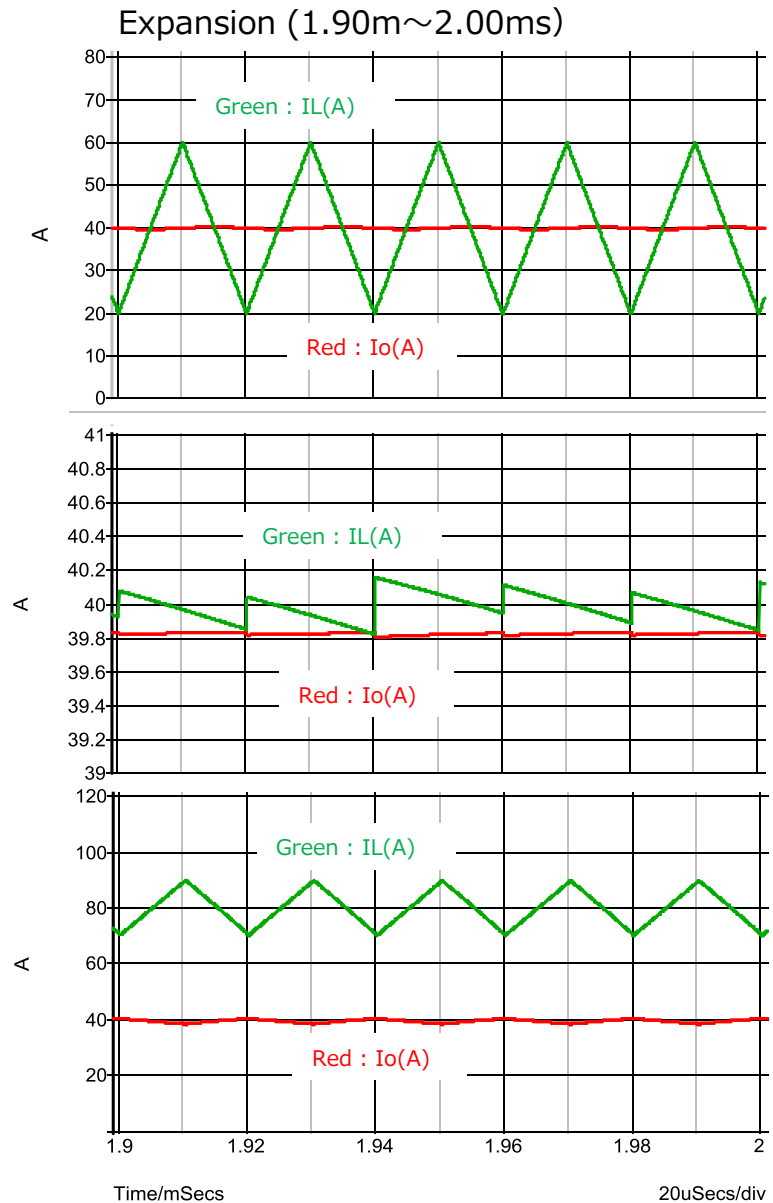
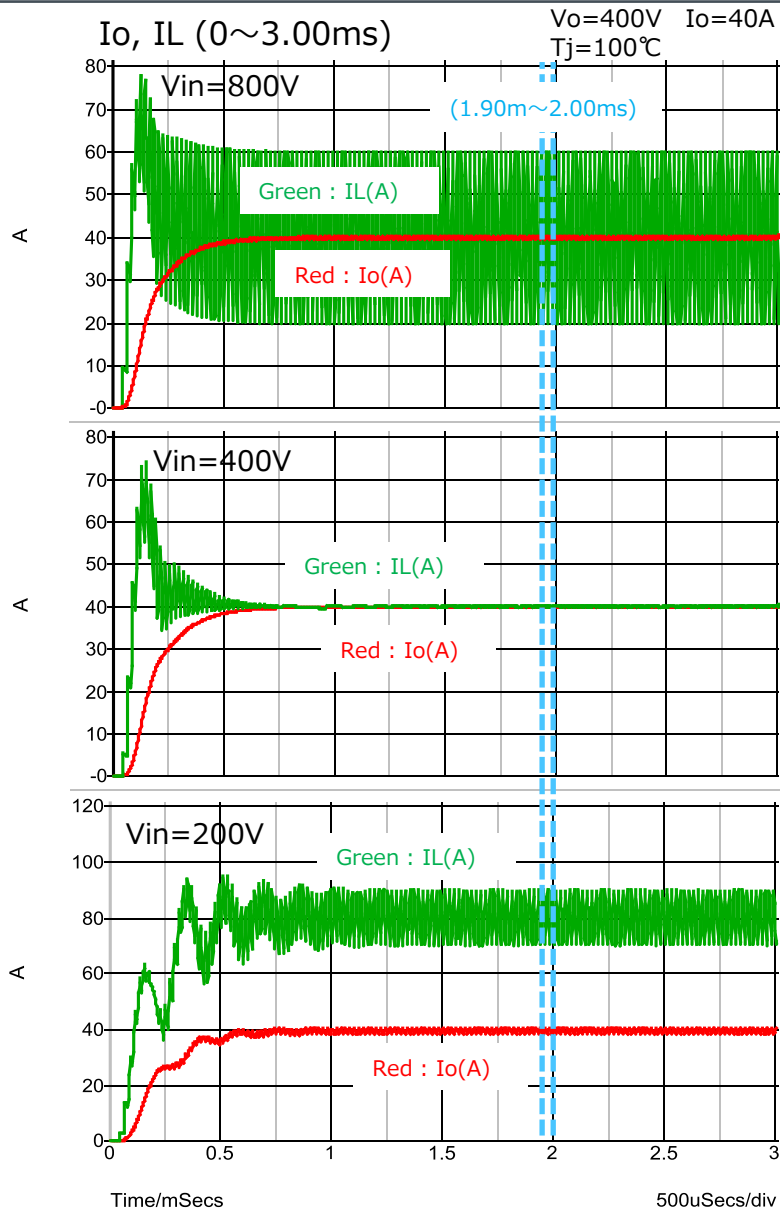
C1 : 20uF

$T_j=100^\circ C$

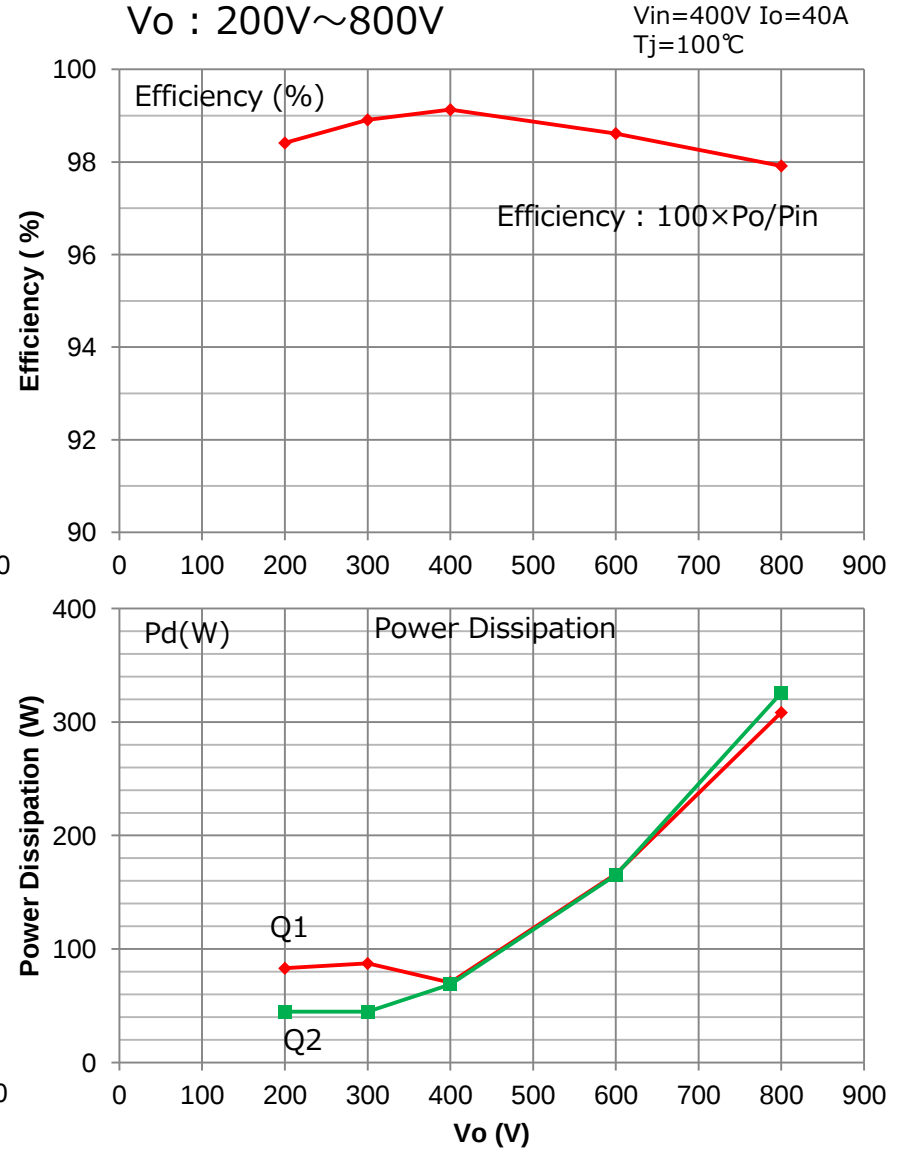
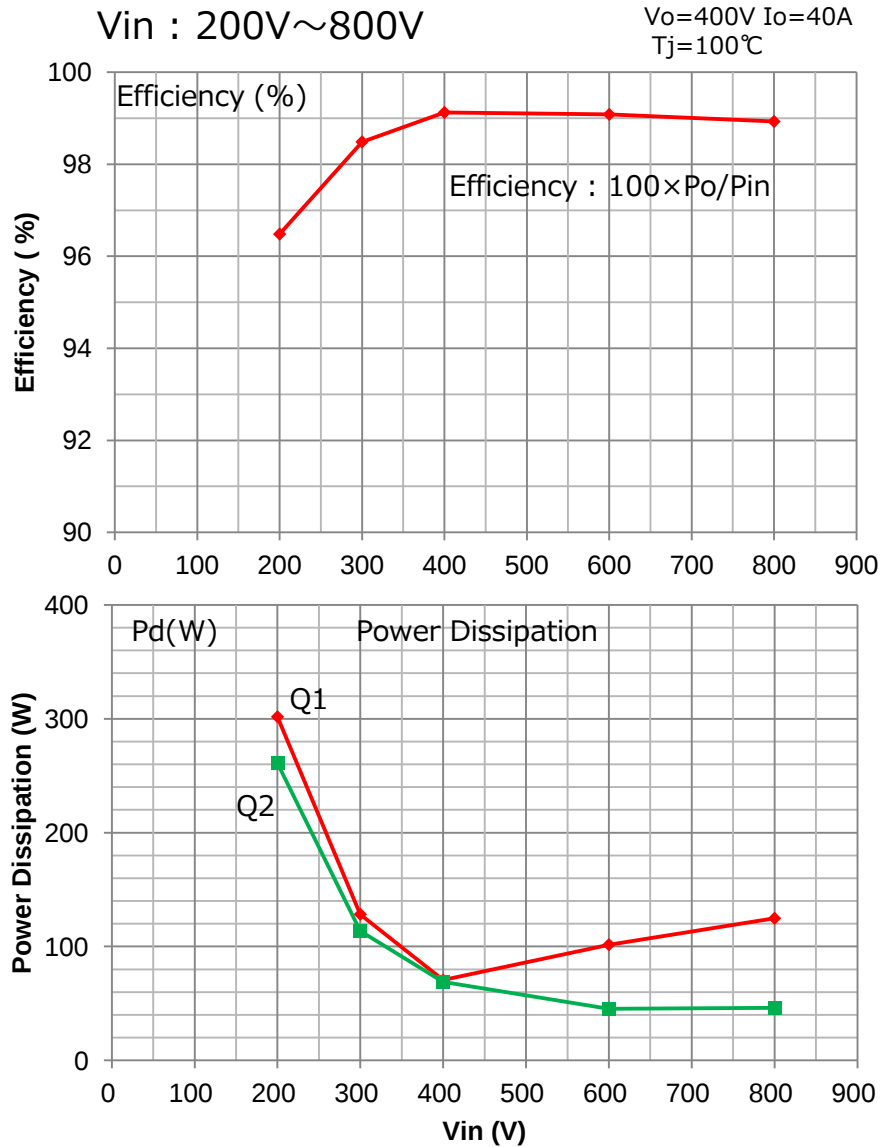
DC-DC Step-Up/Down Converter $V_o=400V$ $I_o=40A$ Simulation Circuit



Simulation Waveform



Efficiency, Power Dissipation 1



Efficiency, Power Dissipation 2

