

DC-DC Forward Converter $V_{in}=500V$ $V_o=25V$ $I_o=10A$

Input : $V_{in}=500V$

Output : $V_o=25V$
 $I_o=10A$

Gate Drive : $V_d=18V$
 $R_{source}=5\Omega$
 $R_{sink}=2\Omega$

Q1 : SCT2450KE
SiC MOSFET (1200V 10A)

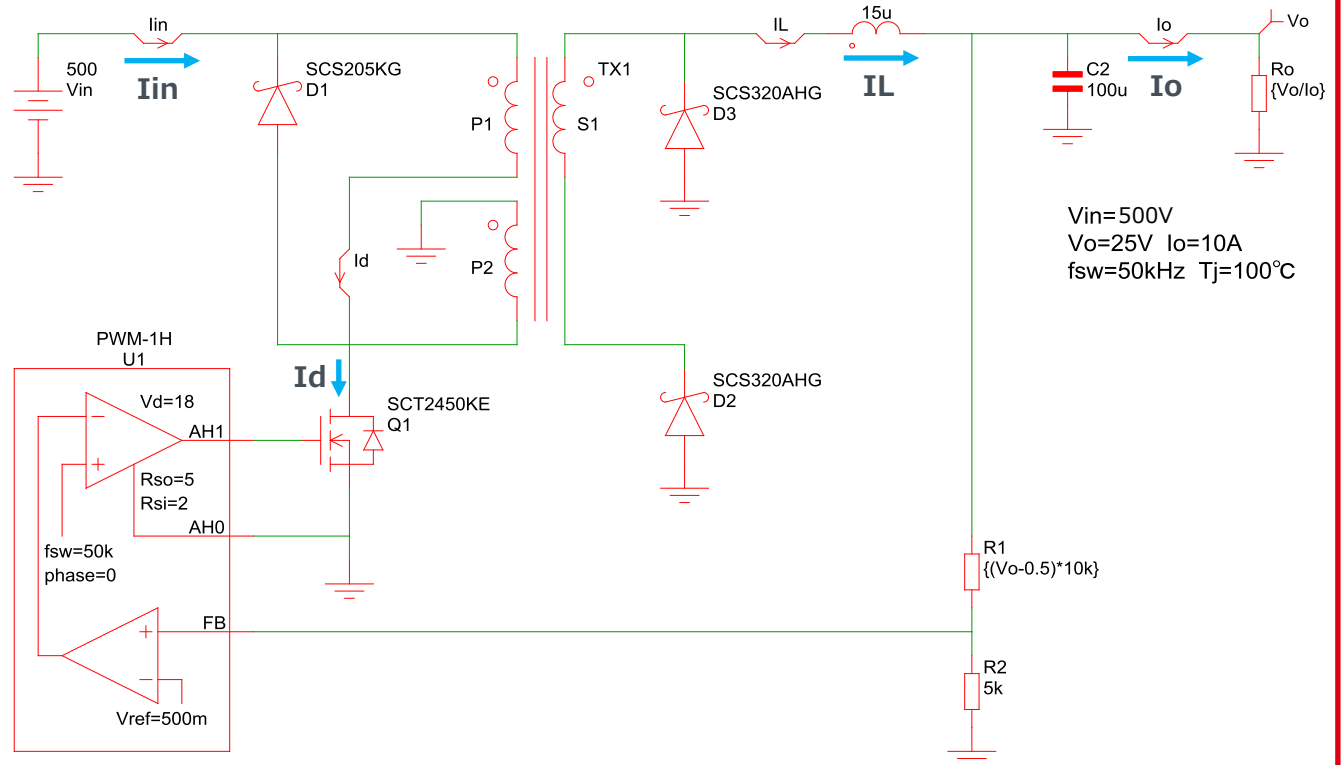
D1 : SCS205KG
SiC SBD (1200V 5A)

D2,D3 : SCS320AHG
SiC SBD (650V 20A)

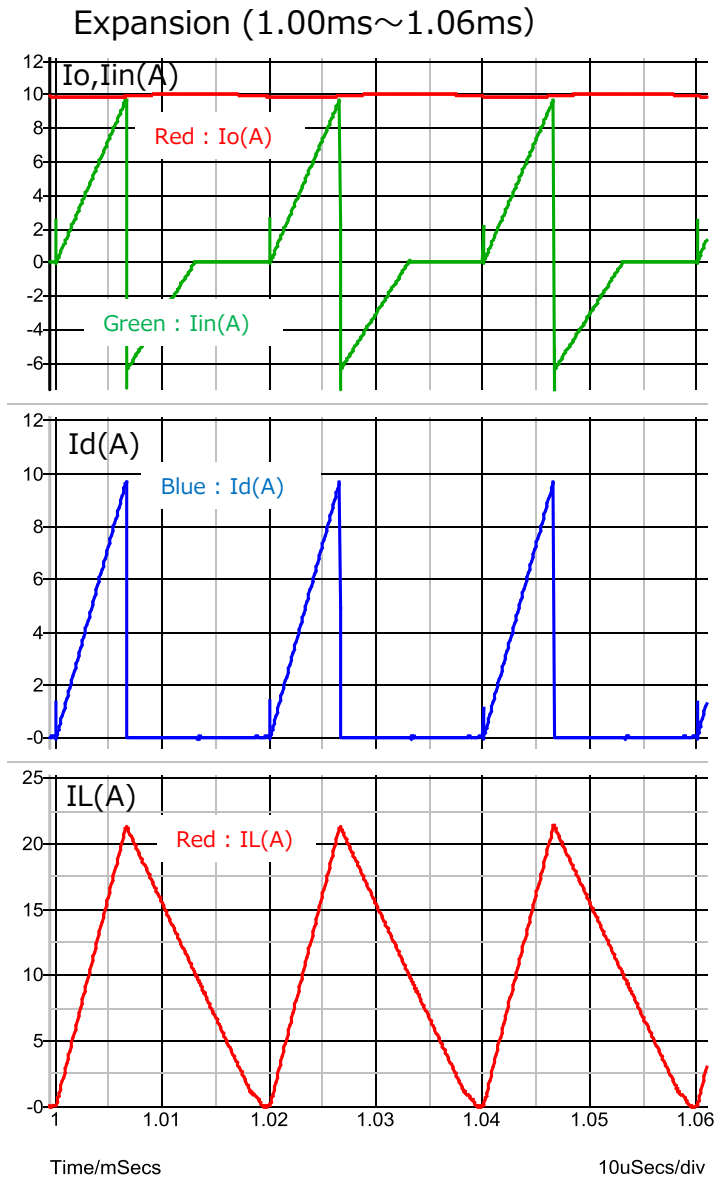
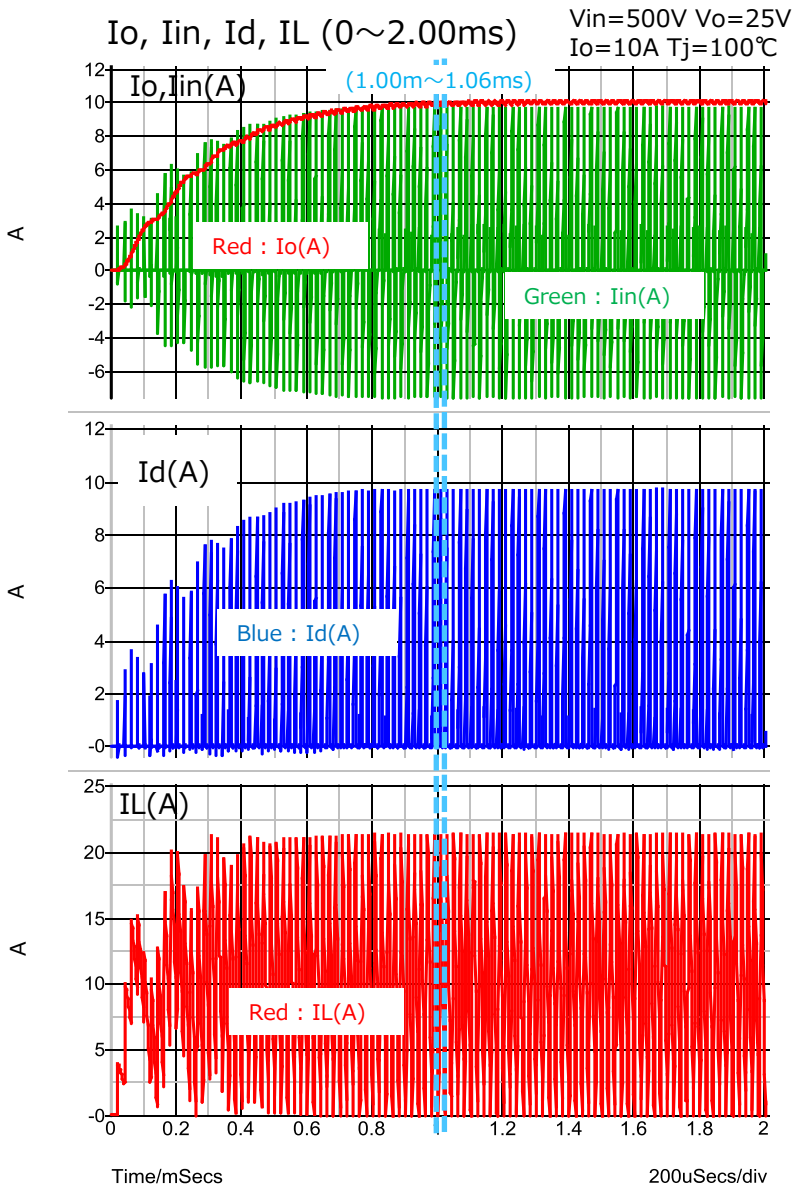
C1 : 100uF

$T_j=100^\circ C$

DC-DC Forward Converter $V_{in}=500V$ $V_o=25V$ $I_o=10A$ Simulation Circuit



Simulation Waveform



Efficiency, Power Dissipation

