LLC Resonant Converter Vo=50V Io=50A

ROHM PD SimG

LLC Resonant Converter Simulation Circuit

Input: Vin=300V ~ 500V

Output: Vo=50V Iout=10A ~ 50A

PFM: fsw=50kHz ~ 100kHz

Gate Drive: Vd=10V / Vs=-5V
td1,td2=50ns
Rg source=5Ω
Rg sink=2Ω

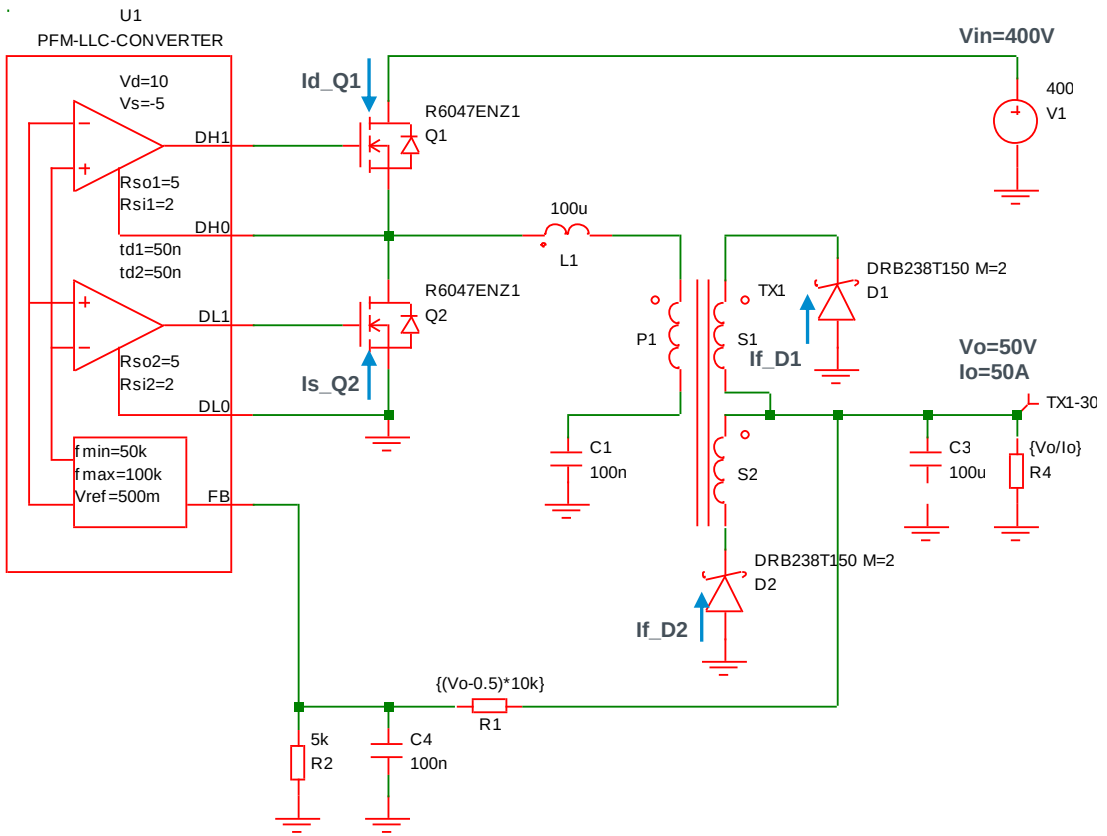
Q1,2: R6047ENZ1 MOSFET (600V 47A)
D1,2: RB238T150 SBD (150V 40A)

TX1: 500uH : 80uH + 80uH K=1

L1: 100uH

C1: 100nF

Tj: -25℃ ~ 125℃

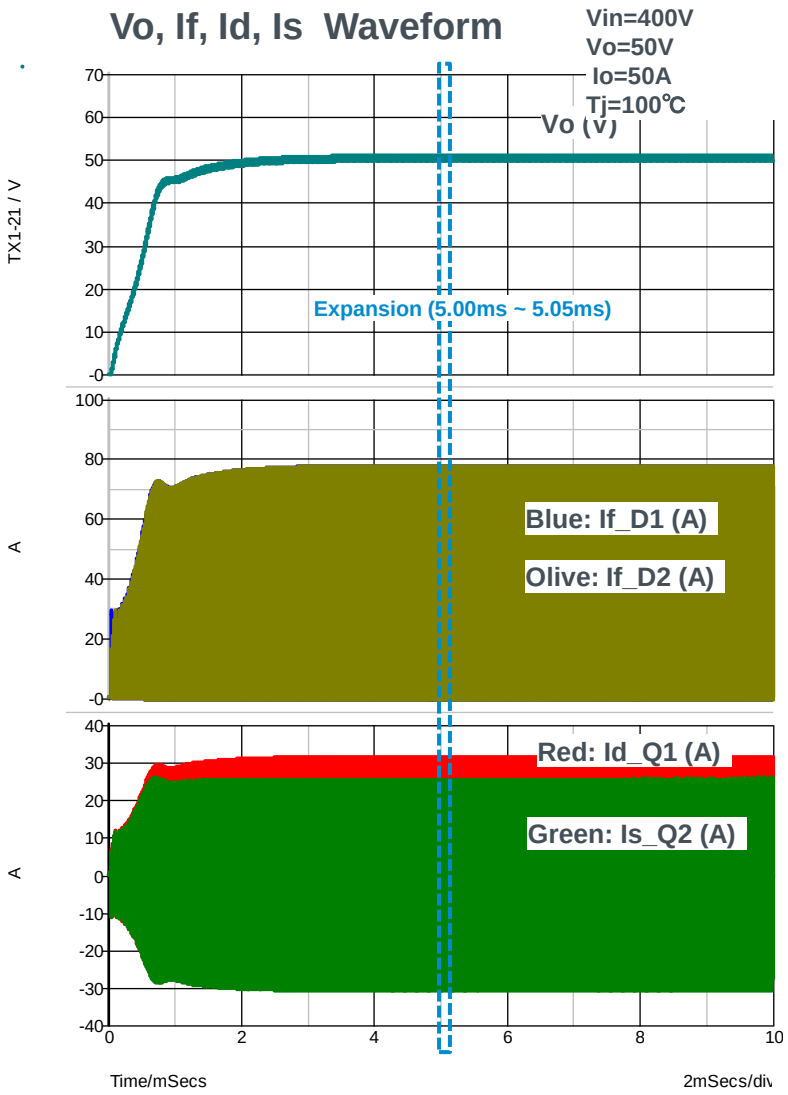


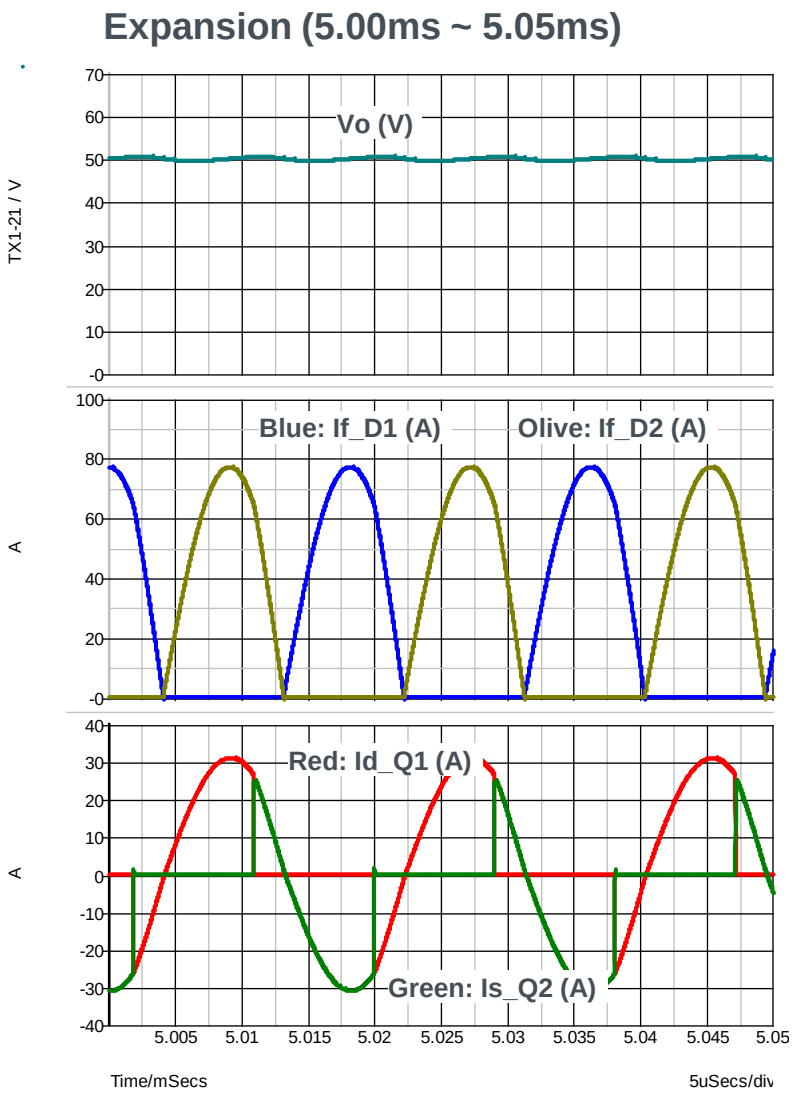
SIMetrix SPICE Simulation Data File

DC-DC LLC Resonant Converter Vo=50V Io=50A.sxsch

Simulation Waveform 1

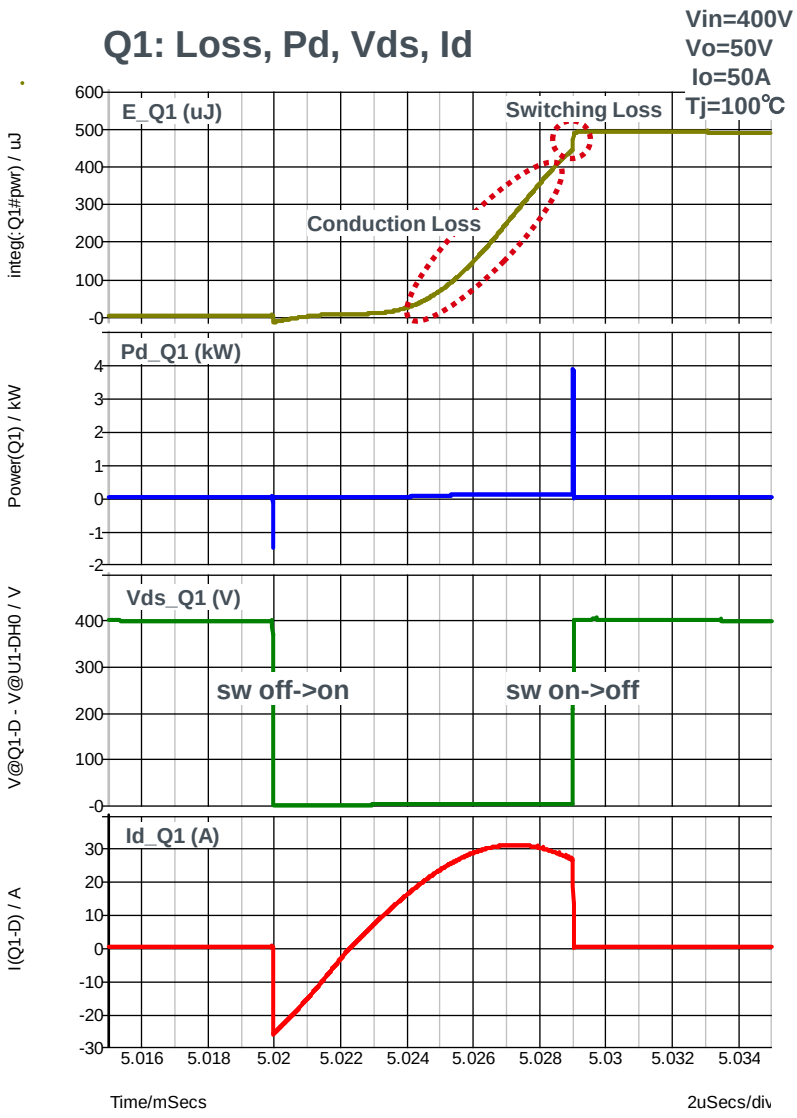
ROHM PD SimG

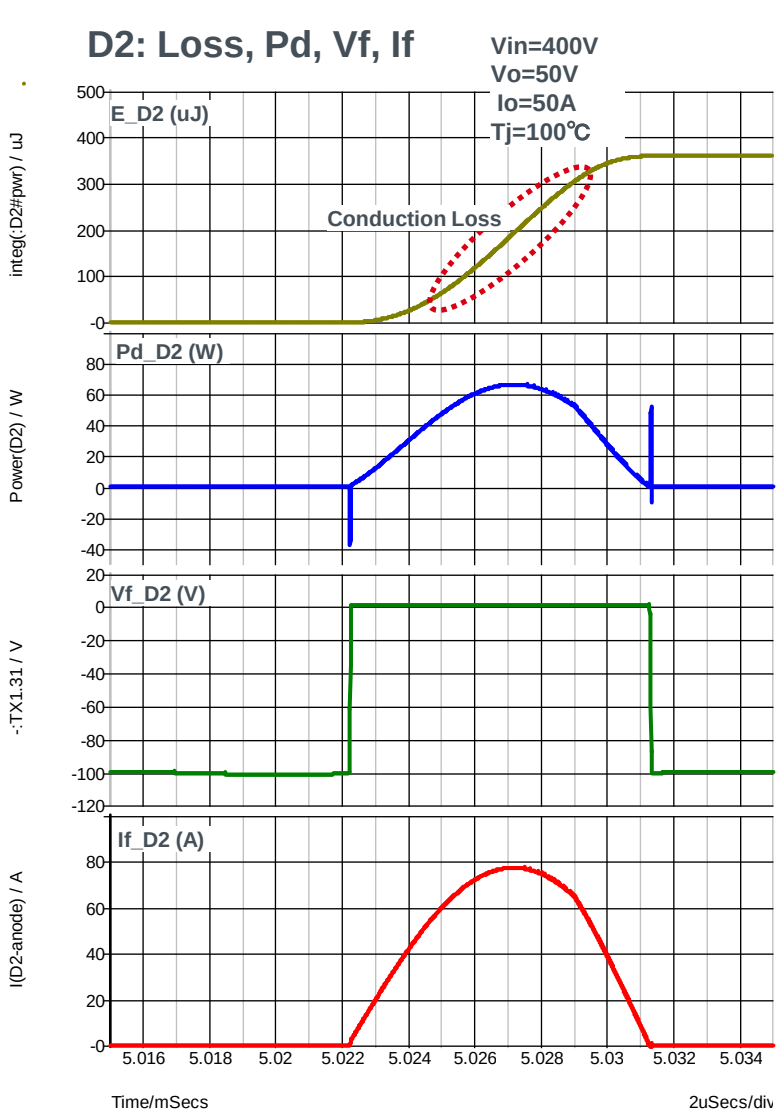




Simulation Waveform 2

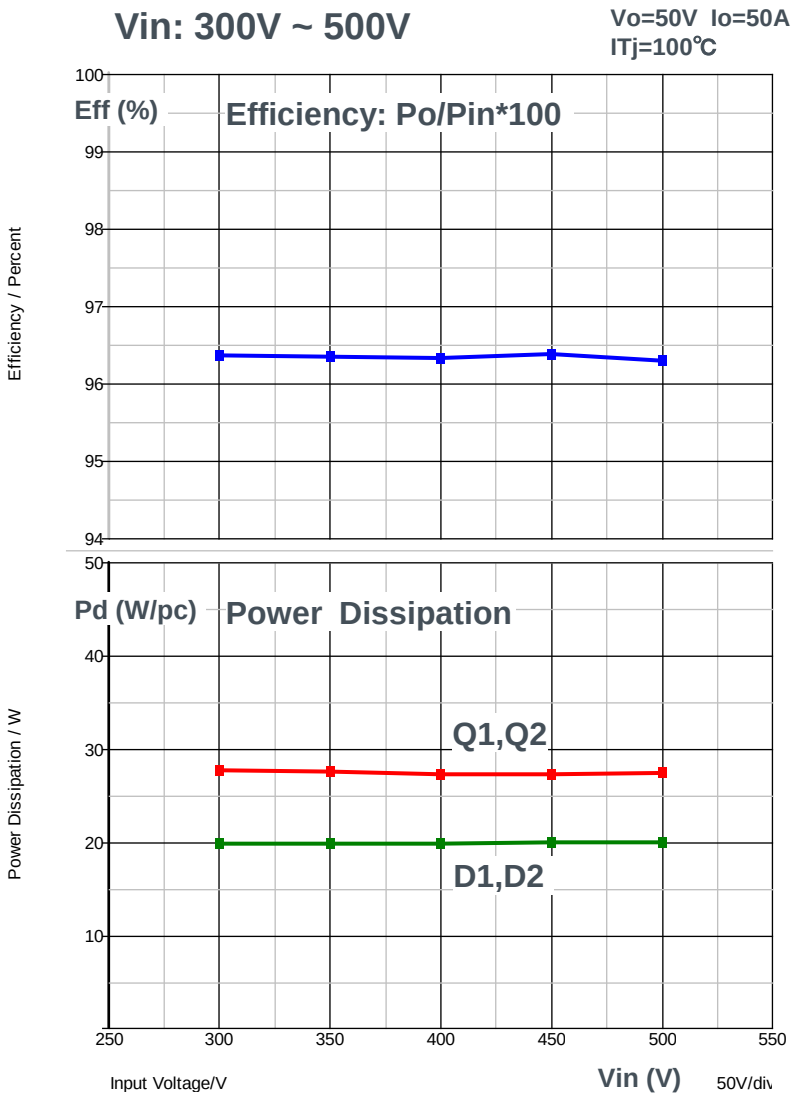
ROHM PD SimG

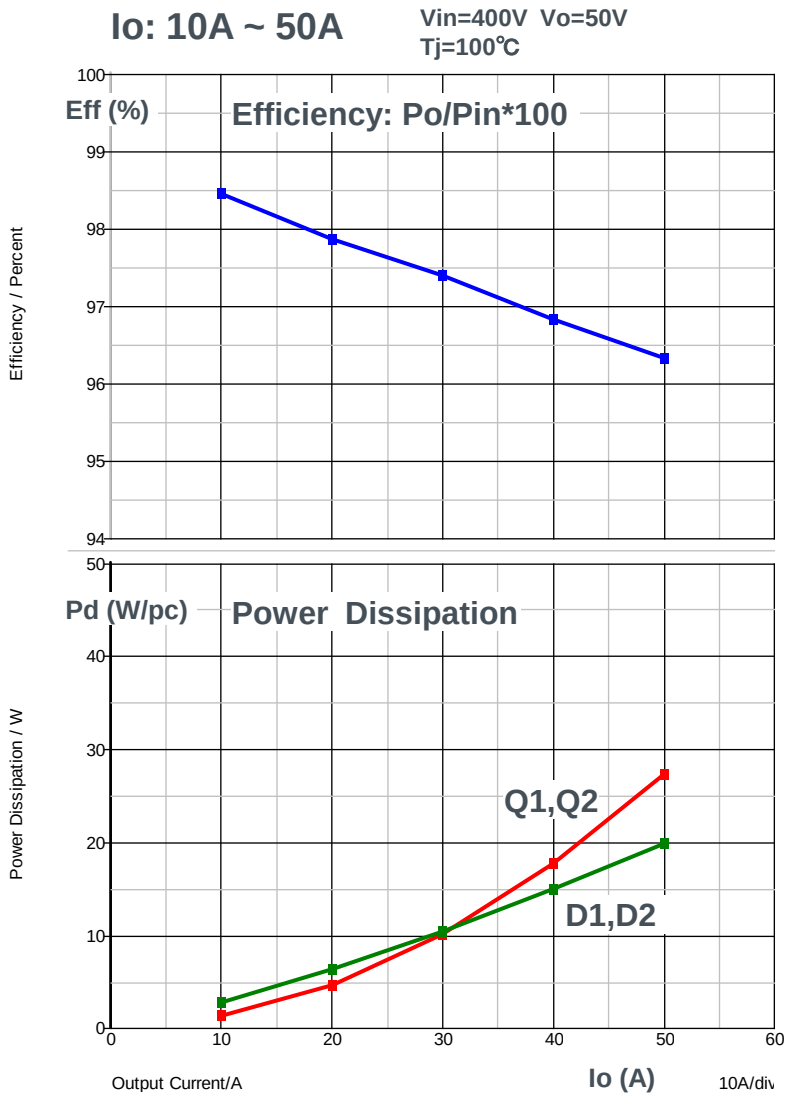




Efficiency, Power Dissipation 1

ROHM PD SimG





Efficiency, Power Dissipation 2

ROHM PD SimG