

PFC CCM Vin=200V Iin=2.5A

Input :
 Vin=200Vac Iin=2.5Aac
 fps=50HZ

Output : Vo=500Vdc

Gate Drive : Vd=18V
 R source=5Ω
 R sink=2Ω

Q1: SCT2450KE
 SiC MOSFET (1200V 10A)

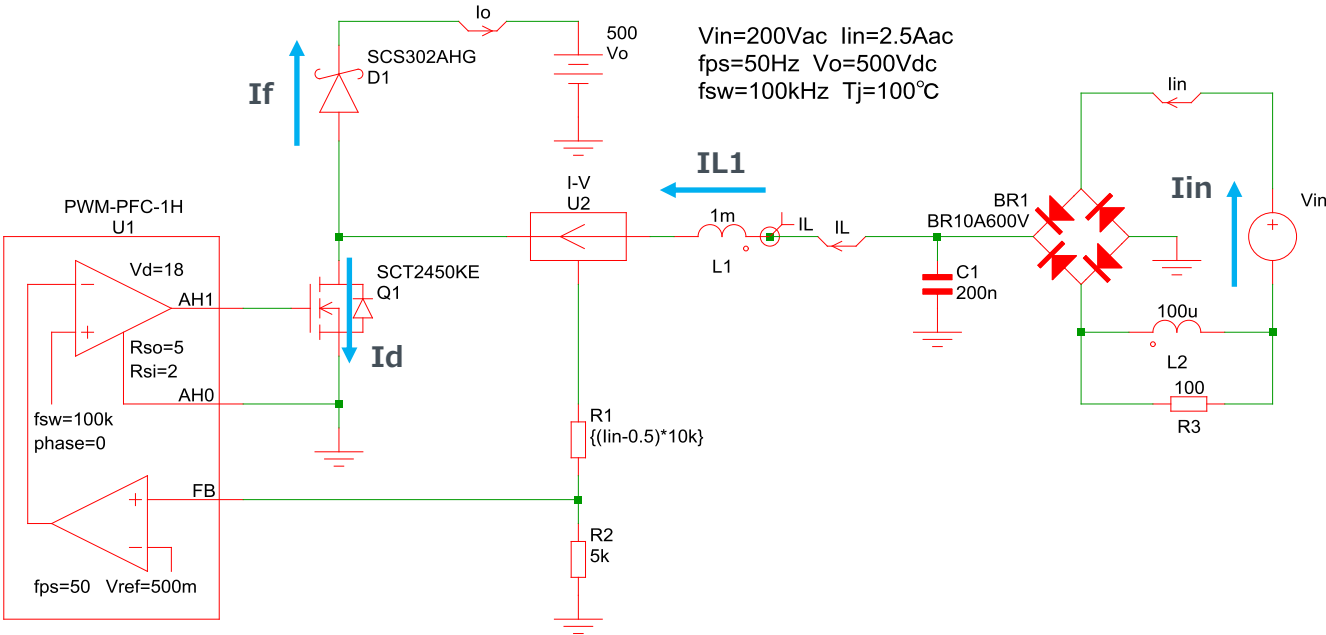
D1: SCS302AHG
 SiC SBD (650V 2A)

L1 : 1mH , L2 : 100uH

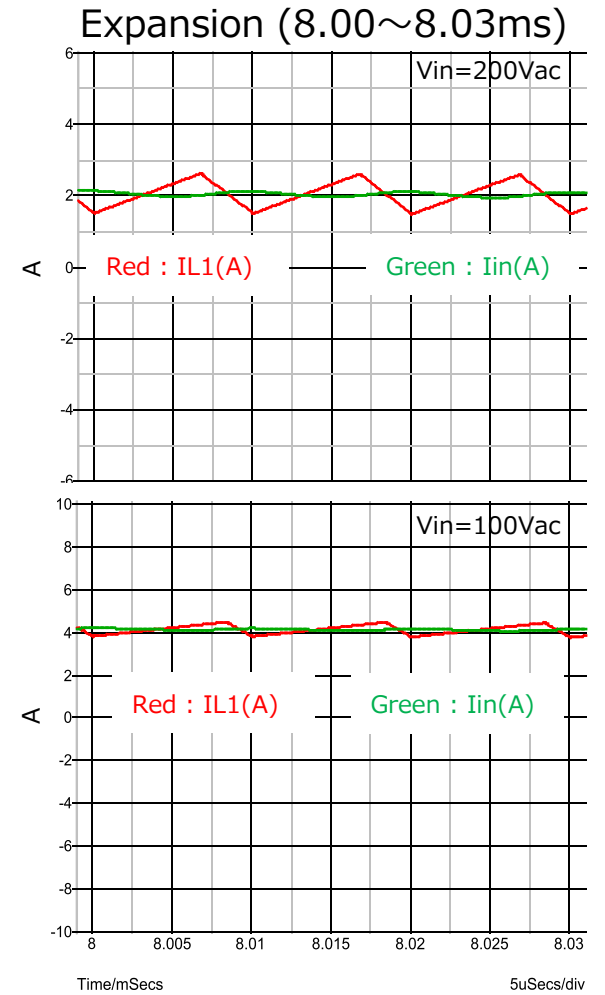
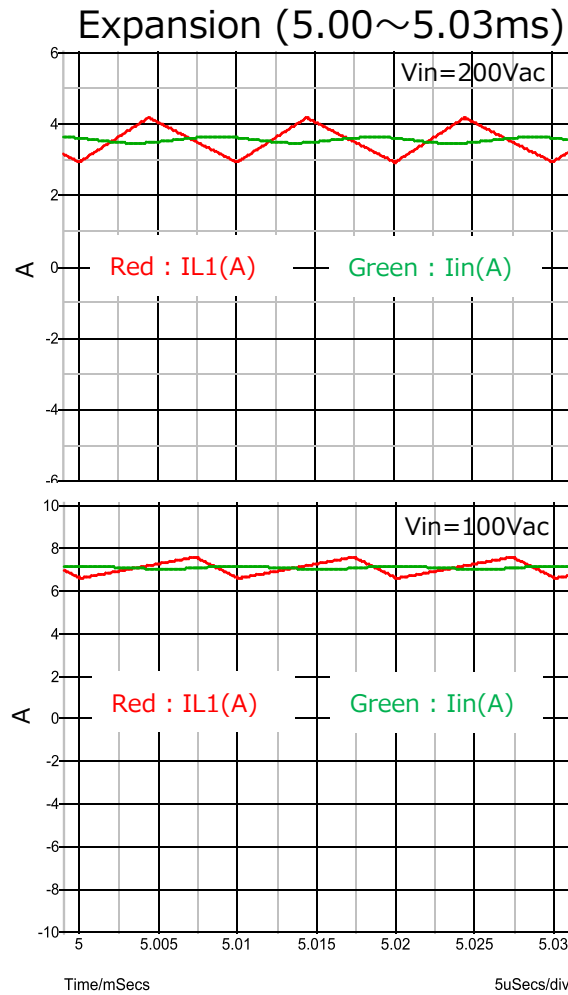
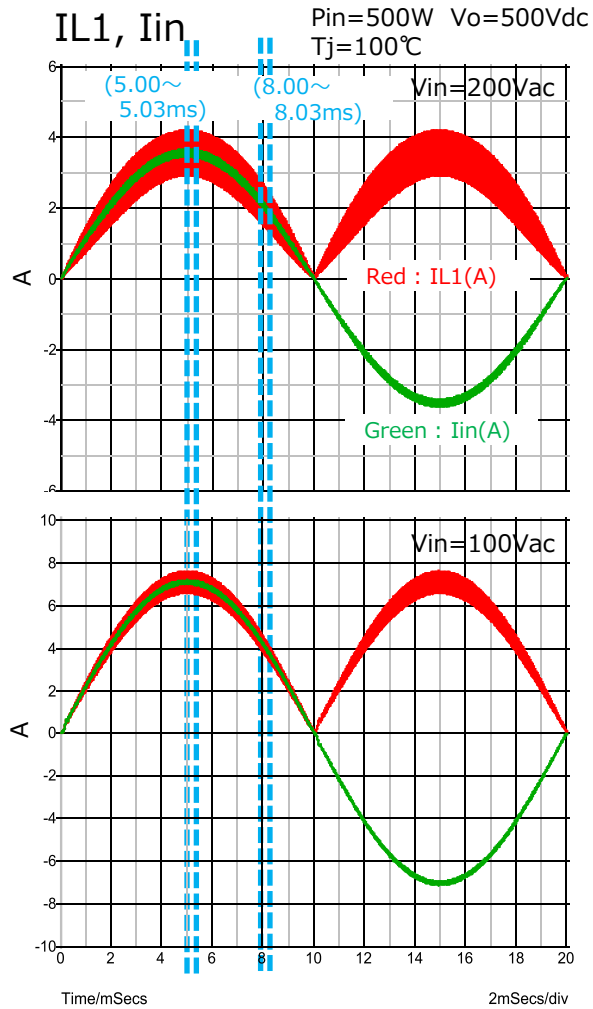
C1 : 200nF

Tj : 100°C

PFC Continuous Current Mode Vin=200V Iin=2.5A Simulation Circuit

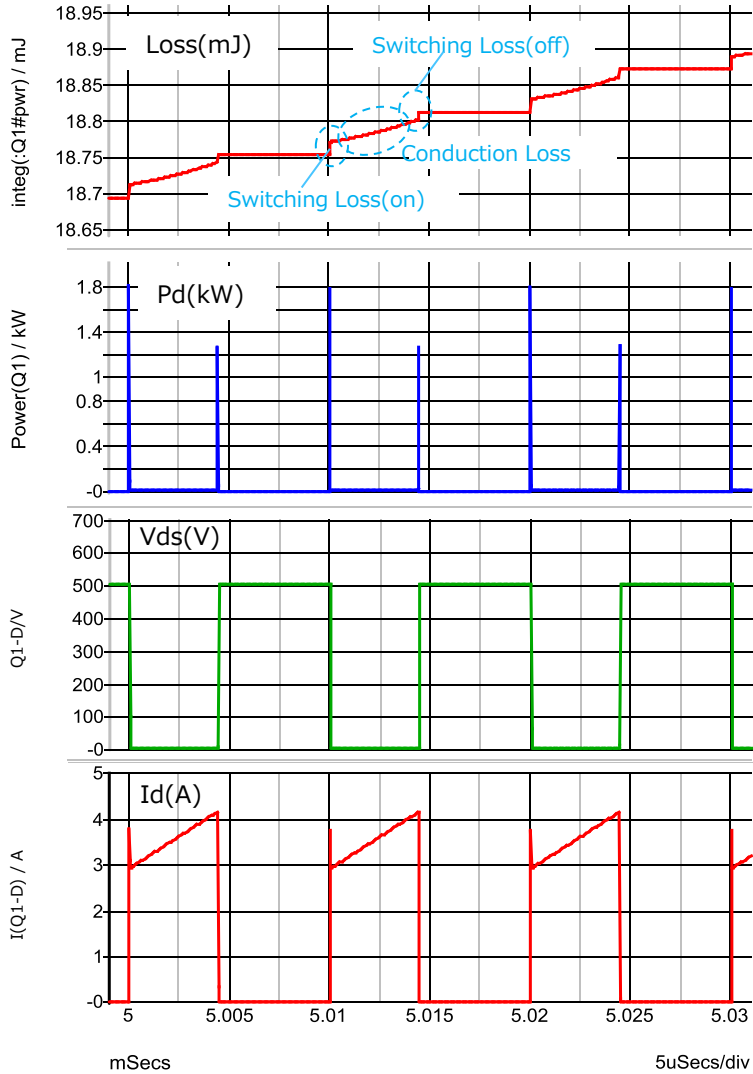


Simulation Waveform 1

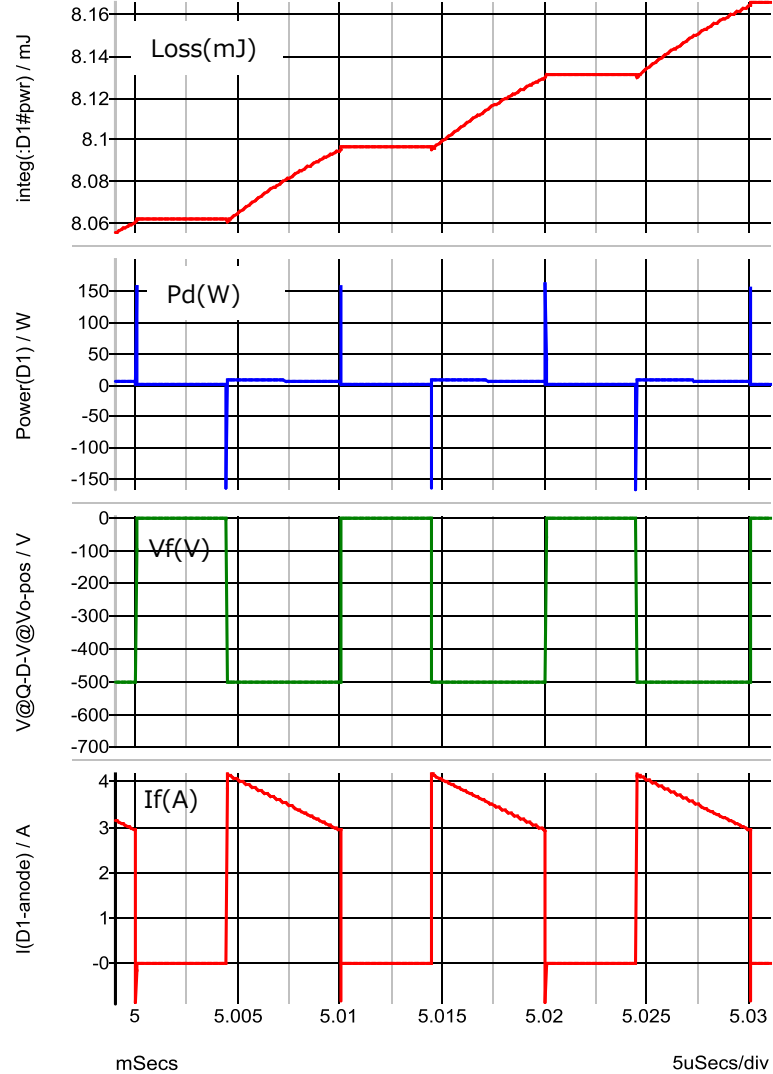


Simulation Waveform 2

Q1_Loss, Pd, Vds, Id Vin=200Vac Iin=2.5Aac
Vo=500Vdc Tj=100°C



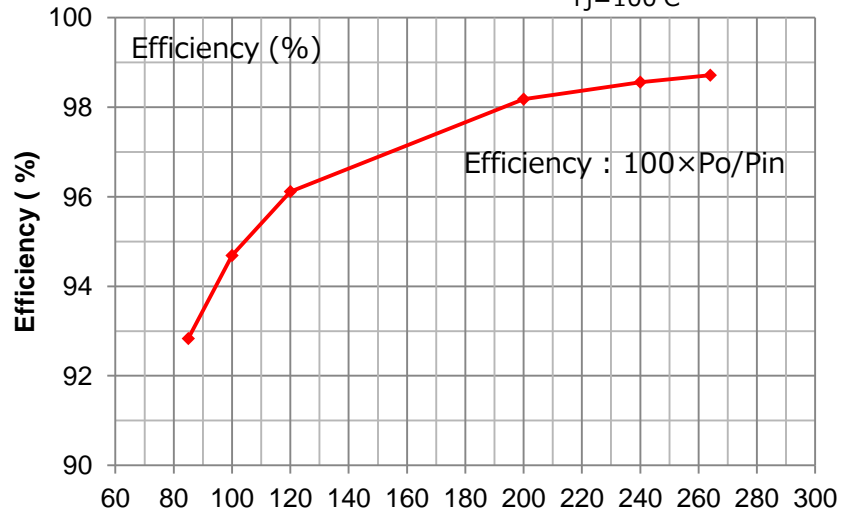
D1_Loss, Pd, Vf, If Vin=200Vac Iin=2.5Aac
Vo=500Vdc Tj=100°C



Efficiency, Power Dissipation 1

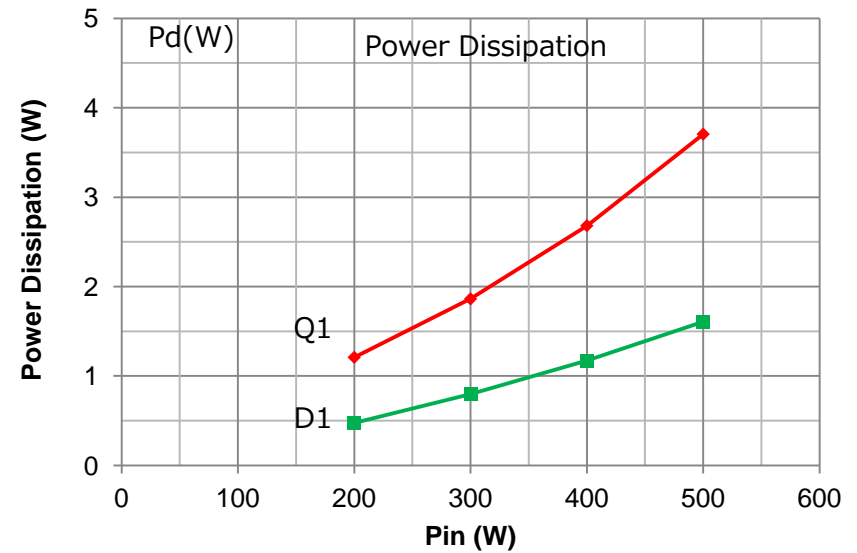
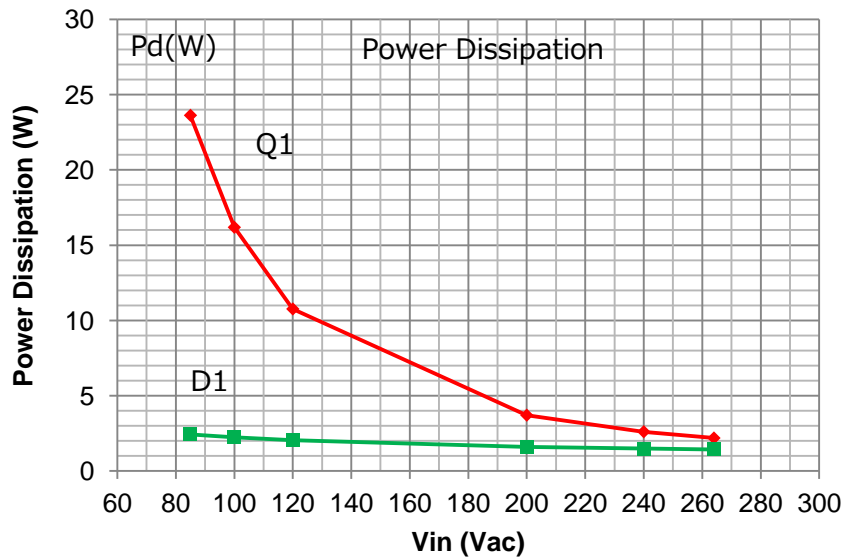
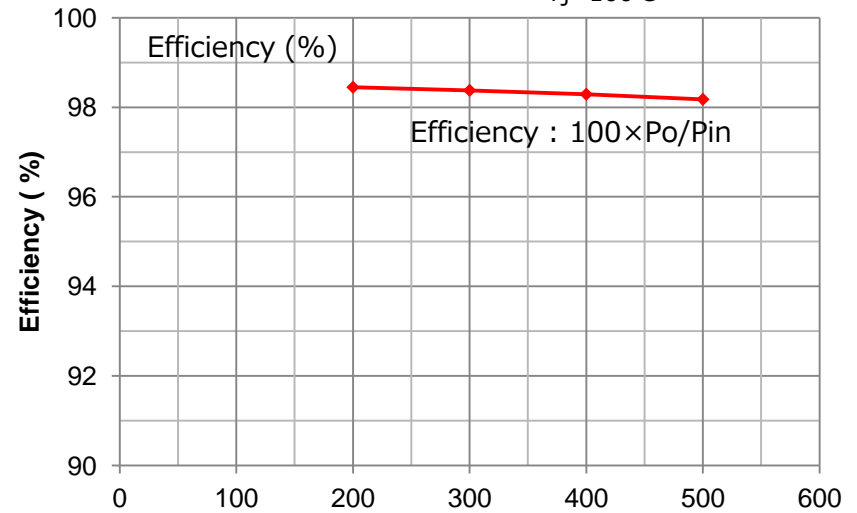
Vin : 85Vac~264Vac

Pin=500W Vo=500Vdc
Tj=100°C



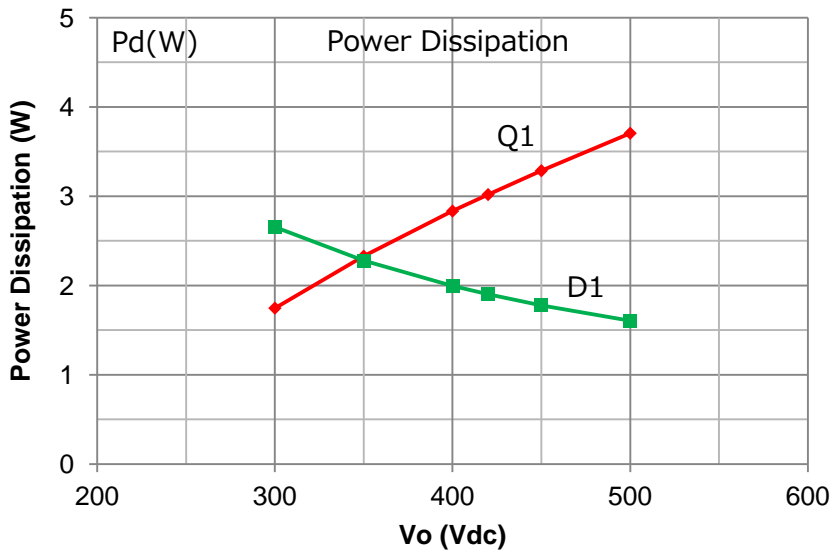
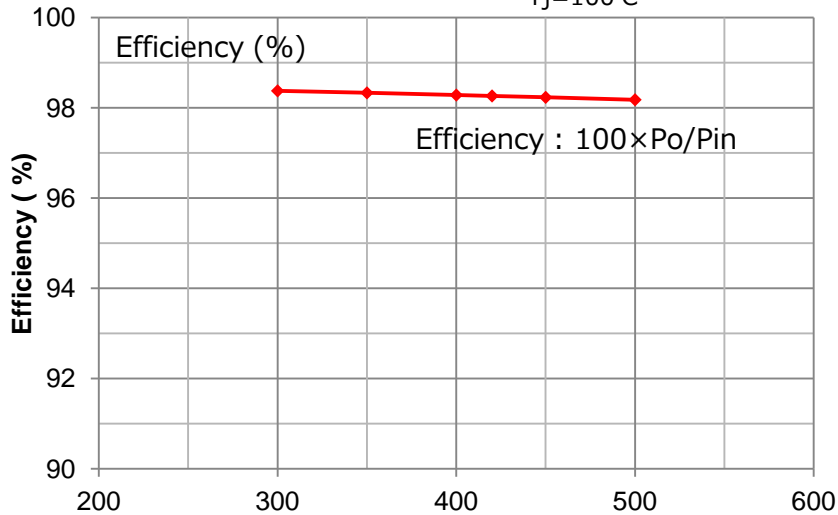
Pin : 200W~500W

Vin=200Vac Vo=500Vdc
Tj=100°C



Efficiency, Power Dissipation 2

Vo : 300Vdc~500Vdc Vin=200Vac Iin=2.5Aac Tj=100°C



Tj : -25°C~125°C Vin=200Vac Iin=2.5Aac Vo=500Vdc

