

# PFC Bridge-Less1 Pin=10kW

## PFC Bridge-Less1 Simulation Circuit

Input: Pin=10kW

Vps=200Vac ~ 240Vac

fps=50Hz

Output: Vo=350Vdc ~ 500Vdc

Gate Drive: Vd=10V

fsw=20kHz ~ 100kHz

Rg source=2Ω

Rg sink=1Ω

Q1,Q2: R6076ENZ1  
MOSFET (600V 76A)

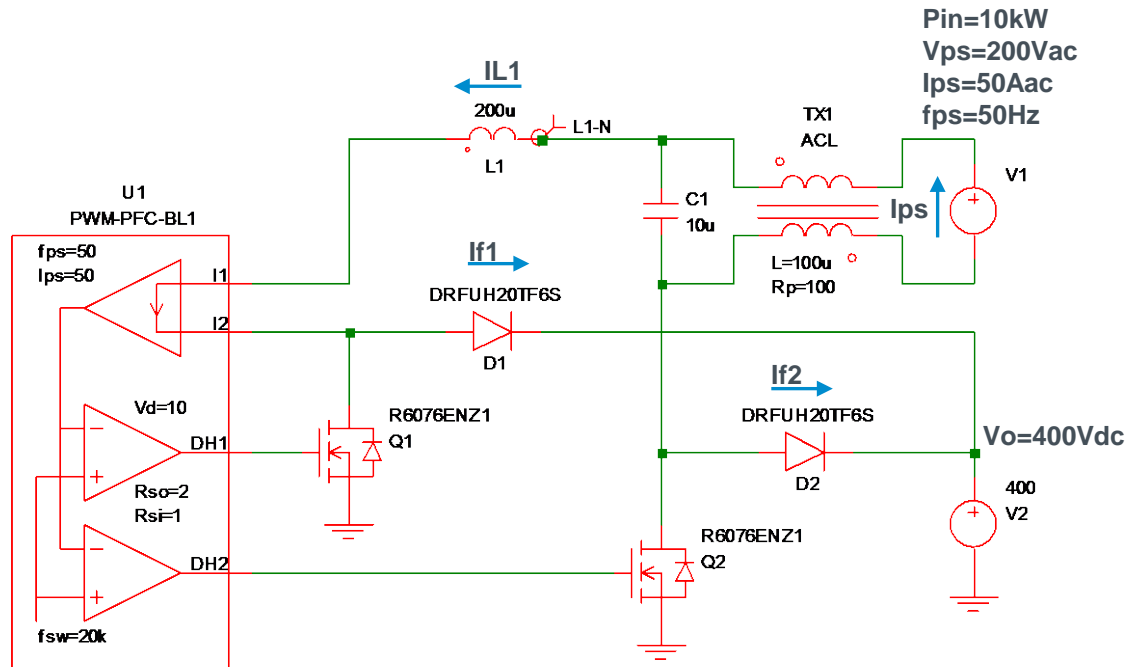
D1,D2: DRFUH20TF6S  
FRD (600V 20A)

L1: 200uH

TX1: 100uH / 100Ω

C1: 10uF

Tj: -25°C ~ 125°C



## SIMetrix SPICE Simulation Data File



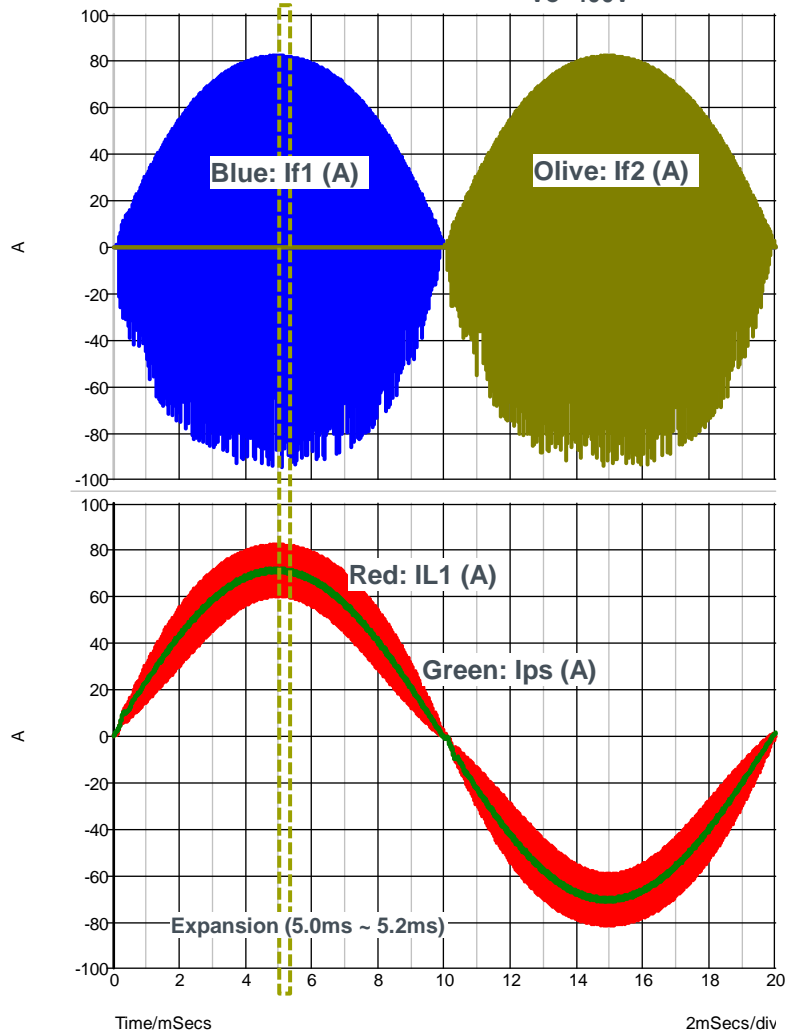
PFC Bridge-Less1 Pin=10kW.sxsch

# Simulation Waveform

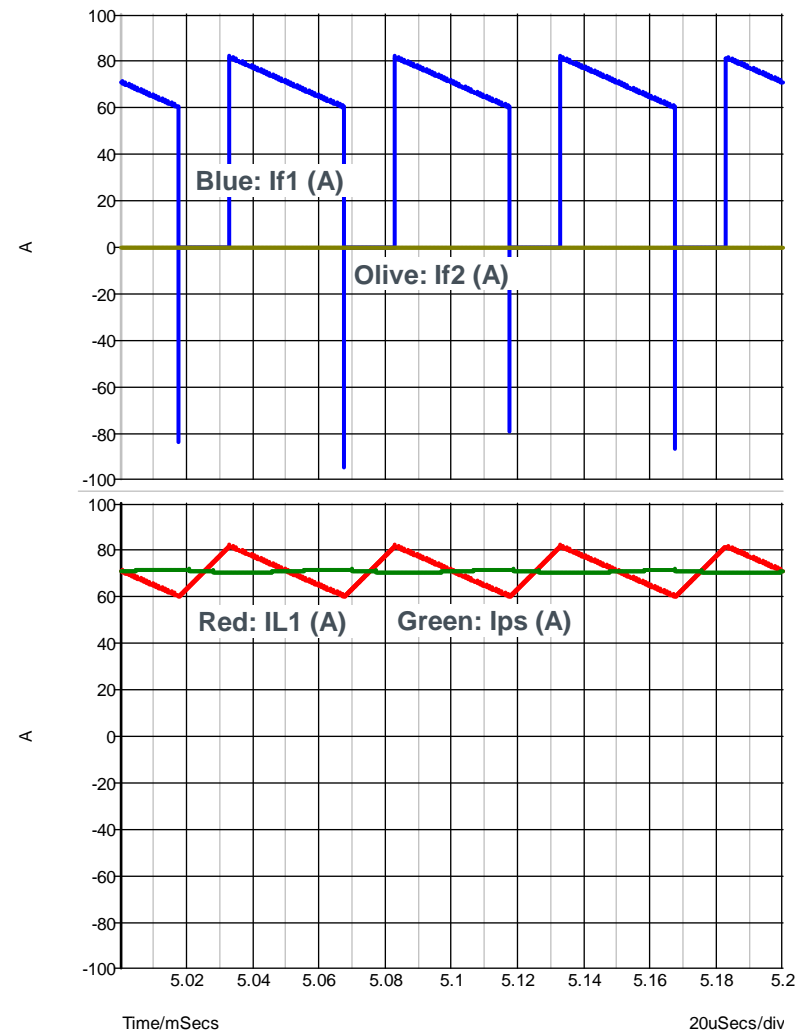
ROHM PD SimG

Pin=10kW  
Vps=200Vac  
fsw=20kHz  
Vo=400V

## Current Waveform

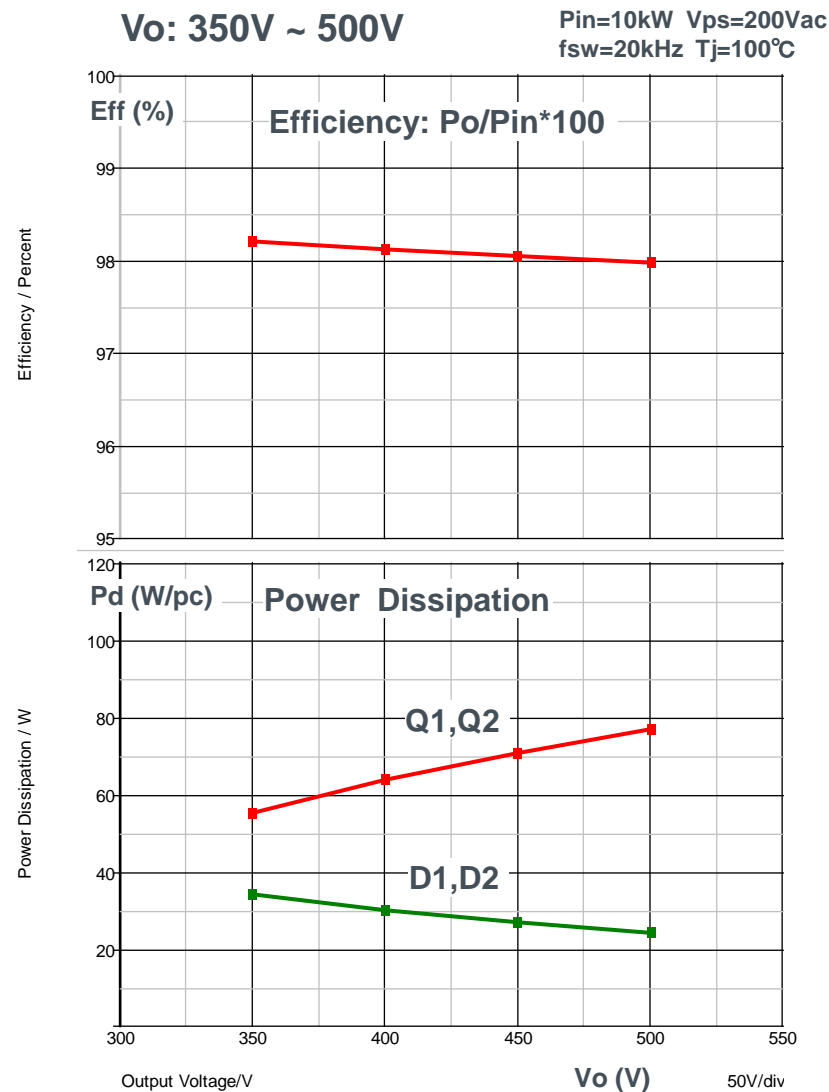
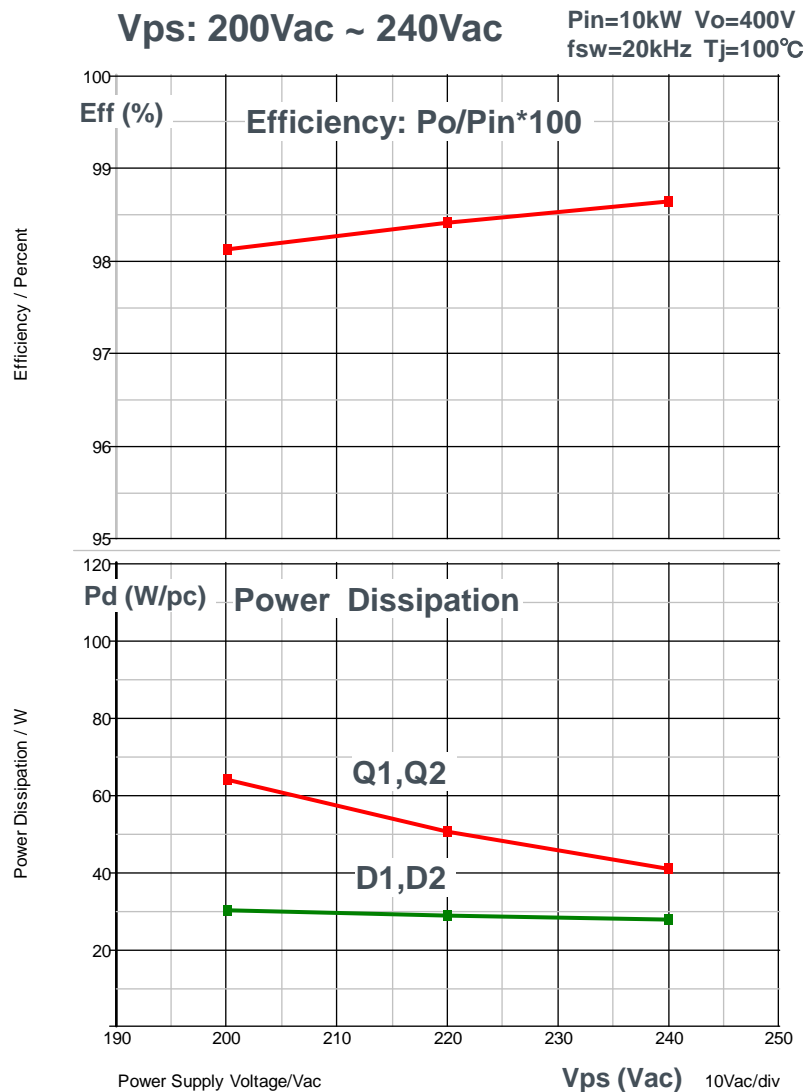


## Expansion (5.0ms ~ 5.2ms)



# Efficiency, Power Dissipation 1

## ROHM PD SimG



# Efficiency, Power Dissipation 2

## ROHM PD SimG

