

SCHEMATIC

Continuous Conduction Mode
Discontinuous Conduction Mode

Continuous Conduction Mode

DESIGN SPECS

System

System Specification

Input

Type AC DC

Vin Min (V_{RMS}) Vin Max (V_{RMS}) No. of Outputs

Vin Max > Vin Min

Output

OUT 1: (V)

IOUT 1: (A)

Transformer

Output Capacitor

V₁ (V)

Transformer

DESIGN RESULTS

Output Power

Power

Pout1 Max 32 W CHANGED

Pout Max 32 W CHANGED

Pin Max 34.78 W CHANGED

CLEAR ●

Power

CLEAR ●

Input Capacitor

CLEAR ●

Power Switches

CLEAR ●

Transformer Primary Inductance

CLEAR ●

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图一：系统规格输入

SCHEMATIC

Transformer
Ripple Factor

Equivalent Transformer Circuit

Leakage inductance (L_k, L_{ks}) results from imperfectly coupled transformer coil. The less coupled transformer's coils are, the more leakage inductance will exhibit from the transformer

DESIGN SPECS

- System
- Transformer
- Output Capacitor
- RCD Snubber
- Control

Transformer

Transformer Primary Inductance
Primary Side Leakage Inductance Factor (%)

Ripple Factor

[How to debug your design](#) +

DESIGN RESULTS

Transformer Primary Inductance

Output Power

Primary Inductance - L_p 1036.42 μH CHANGED

Leakage Inductance - L_k 51.82 μH CHANGED

RMS Primary Current 0.44 A CHANGED

Maximum Primary Peak Current 1 A CHANGED

Required Turn Ratio N_p/N_{s1} 3.2 CHANGED

Required Turn Ratio N_p/N_{aux} 8.68 CHANGED

Output Reflected Voltage 104.14 V CHANGED

Minimum Working Duty Cycle 0.22 CHANGED

Maximum Working Duty Cycle 0.45

Secondary Current

RMS Secondary Current 1 1.54 A CHANGED

Secondary 1 Current Peak 3.99 A CHANGED

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- CLEAR ● Power
- CLEAR ● Input Capacitor
- CLEAR ● Power Switches
- CLEAR ● Transformer Primary Inductance
- CLEAR ● Output Capacitor
- CLEAR ● RCD Snubber
- CLEAR ● Control
- Changes (45)
- CLEAR ALL

图二： 变压器设计结果

| Transformer Primary Inductance | | |
|--------------------------------|------------|---------|
| Output Power | | |
| Primary Inductance - Lp | 1036.42 uH | CHANGED |
| Leakage Inductance - Lk | 51.82 uH | CHANGED |
| RMS Primary Current | 0.44 A | CHANGED |
| Maximum Primary Peak Current | 1 A | CHANGED |
| Required Turn Ratio Np/Ns1 | 3.2 | CHANGED |
| Required Turn Ratio Np/Naux | 8.68 | CHANGED |
| Output Reflected Voltage | 104.14 V | CHANGED |
| Minimum Working Duty Cycle | 0.22 | CHANGED |
| Maximum Working Duty Cycle | 0.45 | |
| Secondary Current | | |
| RMS Secondary Current 1 | 1.54 A | CHANGED |
| Secondary 1 Current Peak | 3.99 A | CHANGED |

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图三：MPS 变压器参数详情