

Quick Circuit Datas

Efficiency : 84% @ 25°C

Output Power : 12W

Losses

Output : 665mW

I_{peak} Primary : 410mA

V_IPer at 49°C : 537mW

Primary Inductance: 2.8mH

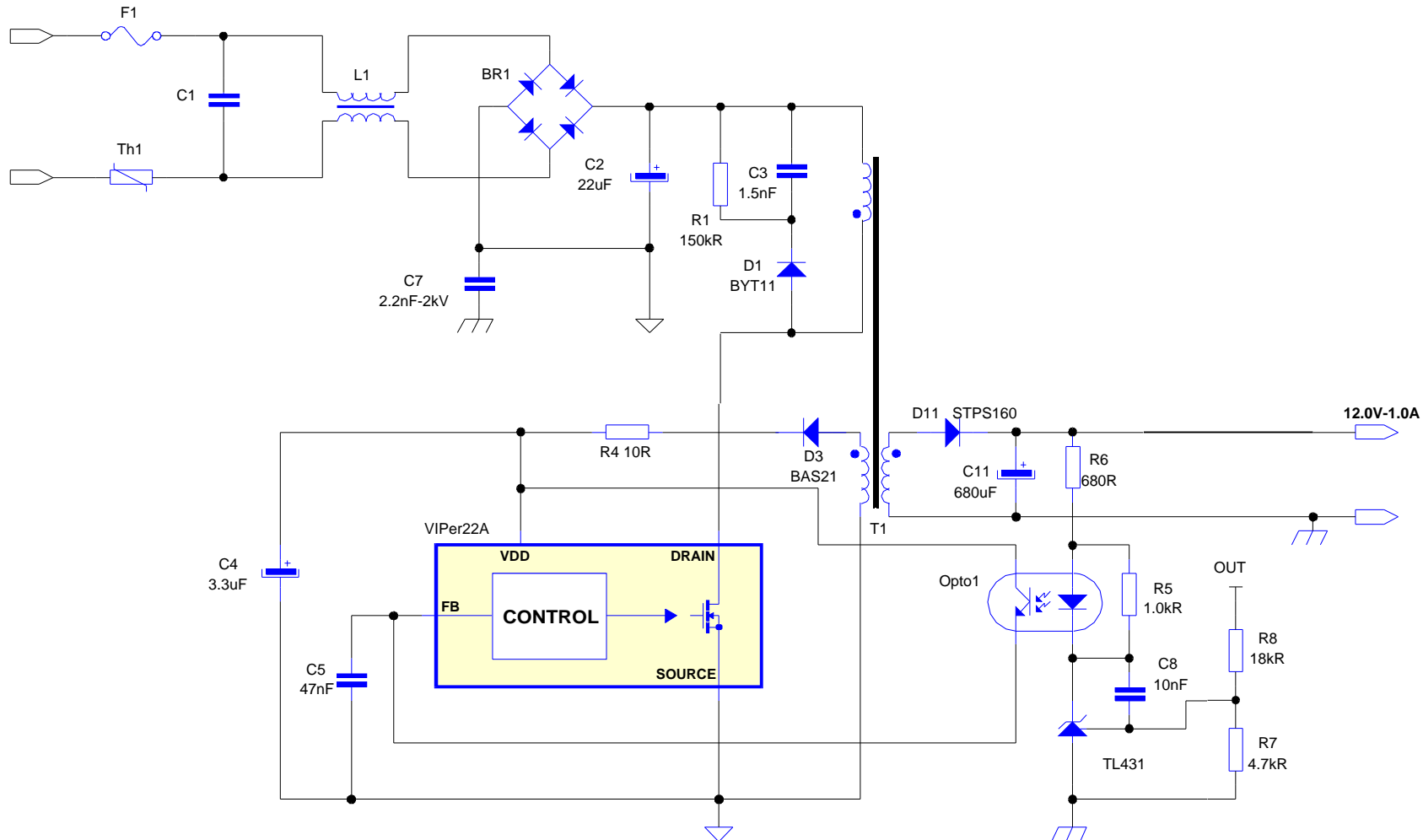
Clamper : 400mW

Continuous Mode : Never

Transformer : 715mW

Duty Cycle at V_{min} : 28%

Project Name :



Input Components

BR1 - 411mA - 373V - Diode Bridge

C2 - 22uF - 373Vmin - Filtering Capacitor

C7 - 2.2nF - 2KV - Common Mode Capacitor

Clamper Components

C3 - 1.5nF - 373Vmin - Surge Clamping Capacitor

R1 - 150kOhm - 373Vmin - 401mWmin - Dissipating Resistor

BYT11 - 600V - Clamper Rectifier Diode

VIPer Components

VIPer22A - 170hm - 730V - 720mA

D3 - BAS21 - Auxiliary Supply Rectifying Diode

R4 - 100hm - Auxiliary Supply Drop Voltage Resistor

C4 - 3.3uF - Start-Up and Decoupling Capacitor

C5 - 4.7nF - Noise Filtering Capacitor

Transformer

Primary Inductance : 2.8mH

Leakage Inductance : 83uH

Imax : 411mA With Bmax=236mT

Core Material : PC40 - TDK - Bsat=390mT

Geometry : E16/8/5

Primary Winding : 239 - AWG 35 // 1

Auxiliary Winding : 60 - AWG 44 // 1

Main Output Winding : 30 - AWG 24 // 1

Main Output Components

D11 - STPS160 - Rectifying Diode

C11 - 680uF // 1, Irms=1.1A, ESR=103mOhm - 16V - First Cell Filtering Capacitor

Regulation Components

Opto-Coupler : Gain= 1

TL431 - Shunt Regulator

R5 - 1.0kOhm - TL431 Supply Sustain Current Resistor

R6 - 680Ohm - Gain Resistor

C8 - 10nF - Compensation Capacitor

R7 - 4.7kOhm - Bridge Grounded Resistor

R8 - 18kOhm - Output Regulation Resistor
