

DESCRIPTION

RS2321A is especially designed for high power factor non-isolated LED driver. The building in perfect current compensation function ensures the accurate output current. RS2321A has very less external components because of high integrated and simple topology. Thanks to novel power supply, RS2321A need not use transformer and it could simplify PCB design. RS2321A integrates cycle-by-cycle current limit, inductor anti-saturation and thermal shutdown circuitry onto a monolithic IC.

The integrated auto-restart circuit and FB detection in the RS2321A safely limits output power during fault conditions such as LED short to circuit or open loop, reducing component count and system-level load protection cost.

PROTECTION FEATURES

- VDD 36V over-voltage protection
- Gate 18V clamped voltage
- Building in hysteresis OTP (150°C)
- Cycle-by-cycle current limiting
- Transformer anti-saturation
- FB pin short to GND
- FB pin open protection
- CS pin open protection
- LED open protection
- LED+ and LED- short protection

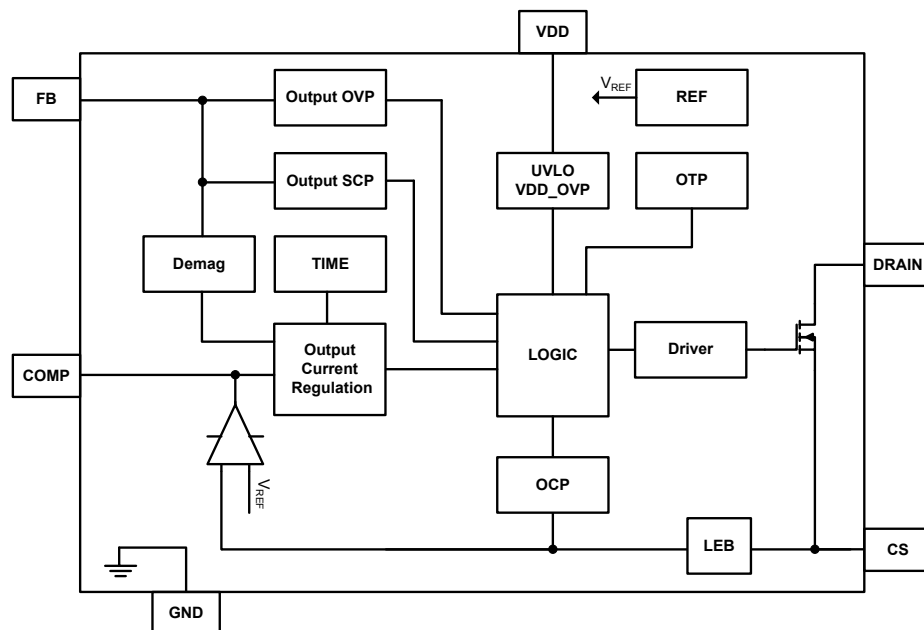
FEATURES

- High power factor (More than 0.9)
- High precision output current regulation ($\pm 3\%$) when universal AC input voltage (85VAC~265VAC)
- Lowest cost and very less component count solution
- Need not transformer to simplify design
- Operation in Quasi-Resonant mode
- Programmable output current setting
- Under voltage lockout
- Low startup current ($< 20\mu\text{A}$)
- Building in current compensation
- Building in 300ns LEB time for CS pin
- 4000V HBM ESD
- SOP-7L Green Package

APPLICATIONS

- Non-Isolated LED Lighting Power Supply

BLOCK DIAGRAM



APPLICATION CIRCUITS

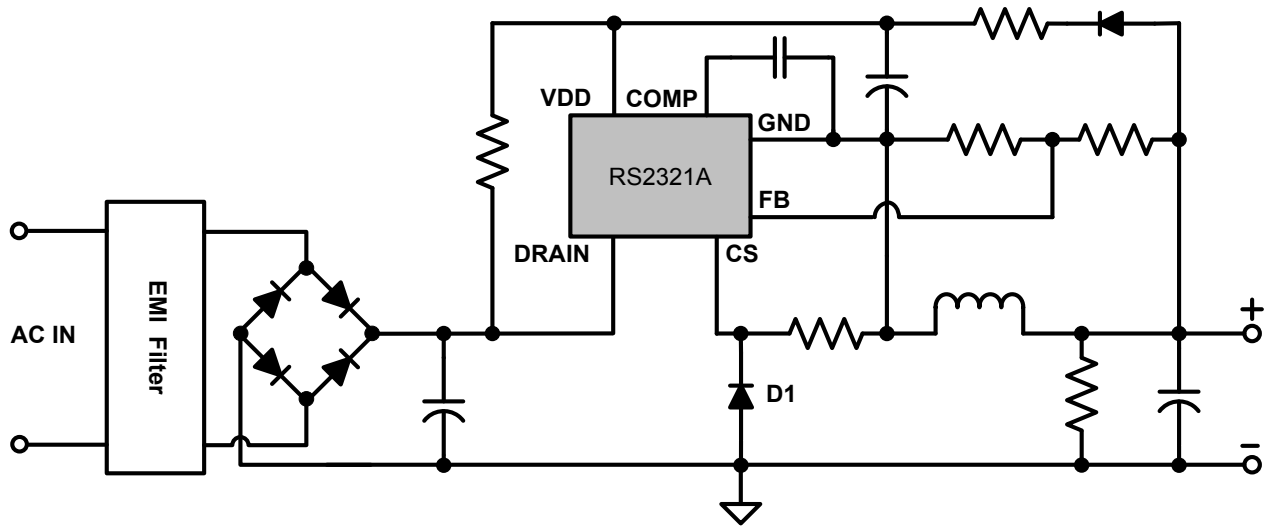


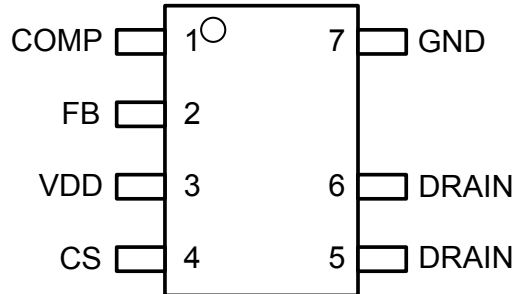
Fig. 1 : RS2321 Typical application

Note: Diode D1 must be ultra-fast diode.

ORDER INFORMATION

Device	Device Code
RS2321A Y Z	Y is package & Pin Assignments designator: S : SOP-7 Z is Lead Free designator: P: Commercial Standard, Lead (Pb) Free and Phosphorous (P) Free Package G: Green (Halogen Free with Commercial Standard)

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	Description	Pin No.
COMP	Compensation capacitor	1
FB	Voltage detect and protection	2
VDD	Power supply	3
CS	Current sense pin, a resistor sense the MOSFET current	4
DRAIN	HV MOSFET Drain pin	5, 6
GND	Reference ground	7

IMPORTANT NOTICE

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