

DESCRIPTION

The RS2322 integrates active power factor correction and works in quasi resonance mode in order to reduce the MOSFET switching losses. The multi-protection features of RS2322 greatly enhance the system reliability and safety. The RS2322 features over voltage protection, short circuit protection, cycle-by-cycle current limit, VDD UVLO and auto-restart over-temperature protection. The driver output voltage is clamped at maximal 19V to protect the external power MOSFET.

The RS2322 is especially designed for non-isolated LED driver. The building in perfect current compensation function ensures the accurate output current. RS2322 has very less external components because of high integrated and simple topology. Thanks to novel power supply, RS2322 need not use transformer and it could simplify PCB design.

PROTECTION FEATURES

- VDD 26V over-voltage protection
- Gate 19V clamped voltage
- Building in hysteresis OTP (145°C)
- Cycle-by-cycle current limiting
- Inductor anti-saturation
- ZCD pin short to GND
- ZCD pin open
- CS pin open
- LED open protection
- LED+ and LED- short protection

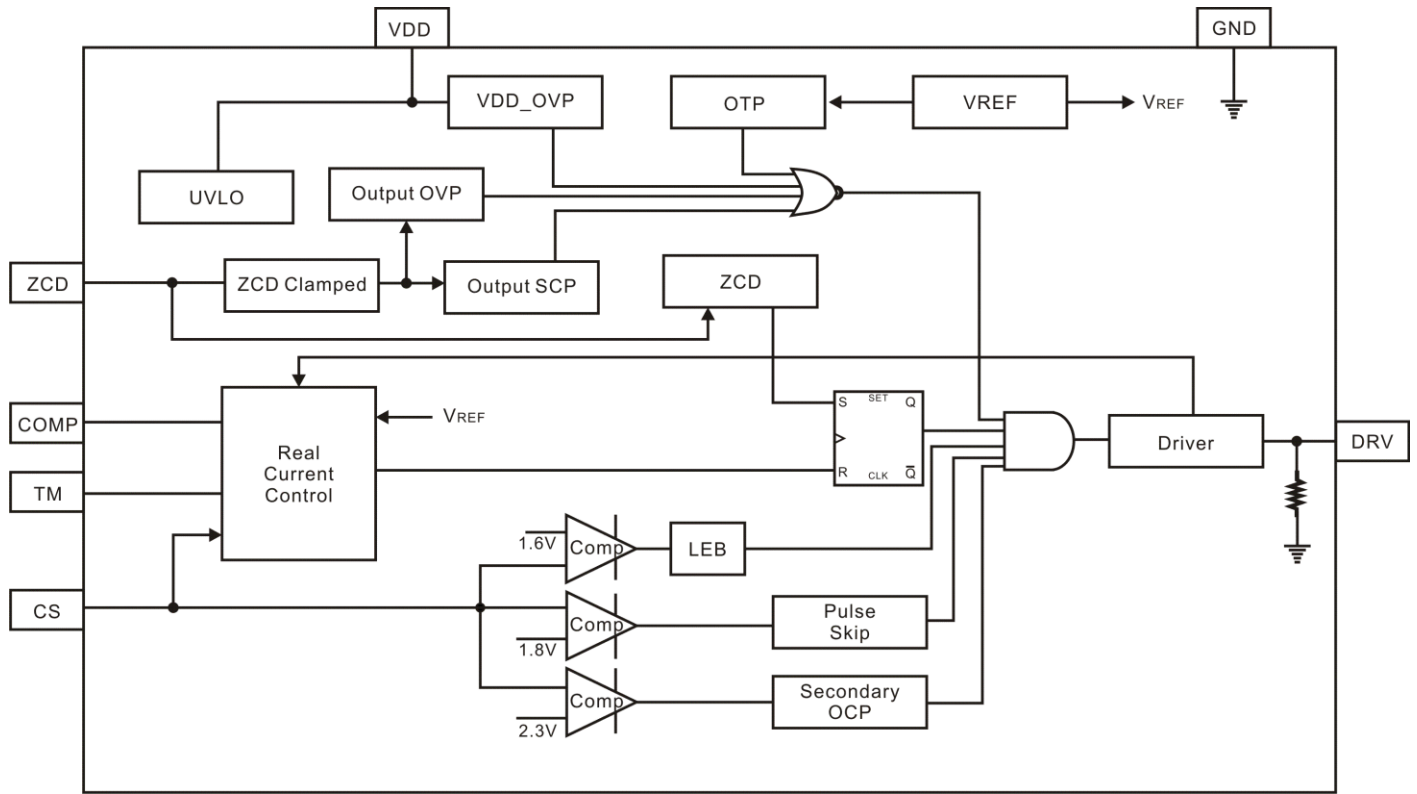
FEATURES

- High efficiency (Reach 90%)
- Active Power Factor Correction (>0.9)
- High precision output current regulation (-3%~+3%) when universal AC input voltage (85VAC~265VAC)
- Lowest cost and very less component count solution
- Non-Isolated Buck-Boost application
- Need not transformer to simplify design
- Accurate Constant Current Output
- Quasi Resonance Mode for High Efficiency
- Support no electrolytic capacitor
- Programmable output current setting
- Tight tolerances and negligible temperature variation
- Frequency jittering dramatically reduces EMI, minimizes EMI filter cost
- Building in current compensation
- Building in 450nS LEB time for CS pin
- Audio noise free operation
- SOP-8 Pb free package

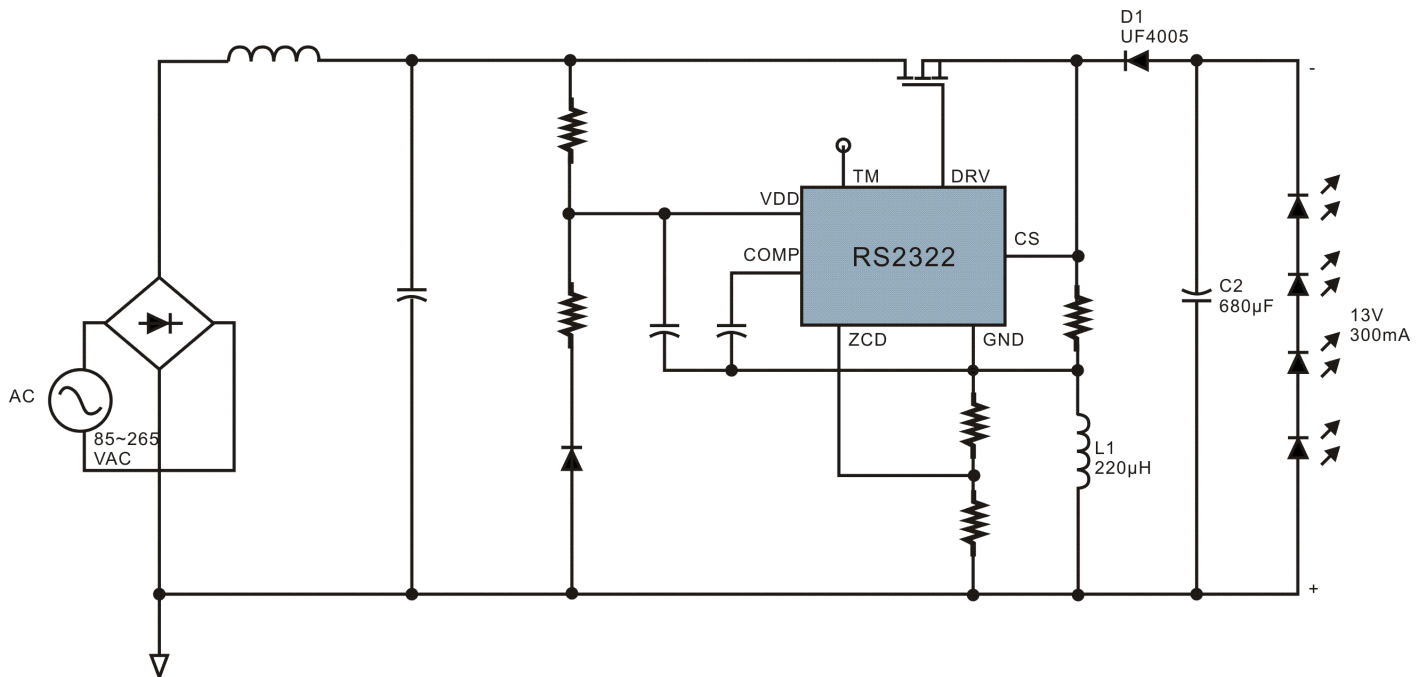
APPLICATIONS

- Cell phone charger
- Small power adaptor
- LED lamp
- Industrial controls

BLOCK DIAGRAM



APPLICATION CIRCUIT

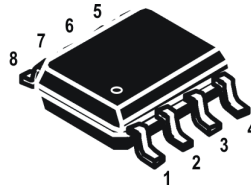


Note: Diode D1 must be ultra-fast diode.

ORDER INFORMATION

Device	Device Code
RS2322 Y Z	Y is package & Pin Assignments designator : S : SOP-8 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	Loop Compensation pin. Connect a compensation network to stabilize the LED driver.	1
GND	Reference GND.	2
CS	Current sense pin, a resistor sense the MOSFET current.	3
DRV	Drive external power MOSFET.	4
VDD	Power Supply.	5
ZCD	Zero current detection pin. A negative going edge triggers the turn on signal of the external MOSFET. Over-voltage conditions are detected through ZCD. If ZCD voltage is higher than the over-voltage-protection (OVP) threshold after a blanking time 600ns, the over-voltage condition is detected.	6
TM	Inside test pin.	7
NC	No connect	8

IMPORTANT NOTICE

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