

DESCRIPTION

MT9527RF is a high-PF, non-isolate, APFC, Buck IC for LED driver with integrated rectifier bridge and ultra-fast recovery freewheeling diode. MT9527RF works in Quasi-Resonant Mode (QRM), which improves both of efficiency and EMI performance.

MT9527RF integrates the ultra-high voltage power supply circuit. The external VDD capacitor is not needed. The system realizes error integration through internal digital integrator, which eliminates COMP pin and COMP capacitor. MT9527RF can meet low THD and odd harmonic requirements through internal THD compensation circuit.

MT9527RF provides various protections with self-recovery, such as input over voltage protection (OVP), cycle-by-cycle over current protection (OCP), over temperature regulation (OTR), output short-circuit protection, output open-circuit protection, etc. to improve reliability.

MT9527RF integrates rectifier bridge, freewheeling diode, feedback circuit and high voltage MOS, which further simplifies external the circuit and saves the BOM cost.

APPLICATIONS

- LED bulb, Spotlight
- LED tube
- Other LED lighting applications

FEATURES

- Single-stage active power factor correction (PF > 0.90)
- Integrates rectifier bridge
- Internal ultra-fast recovery freewheeling diode
- Integrates ultra-high voltage power supply without external VDD capacitor and external power supply circuit
- Embedded with digital integrator, no COMP capacitor needed
- Integrates THD compensation circuit
- Integrates odd harmonic compensation circuit for high subharmonic distortion suppression
- Internal line voltage compensation
- Internal demagnetization sensing, no external feedback circuit needed
- High accurate LED current
- Output current foldback at low input voltage
- Good line and load regulation
- Operates in QRM
- Integrates input OVP, when input voltage is higher than 400Vac, turns off the power switch, resumes at input voltage below 320Vac. Enhances anti-surge capability and improves system reliability
- Various protections with self-recovery
- Power on soft-start
- Available in ASOP7 package

TYPICAL APPLICATION CIRCUIT

