APFC Buck LED Power Switch

FEATURES

- **Active Power Factor Correction**
- **PF>0.9， THD<15% with high line input**
- **Built-in HV Power Supply Circuit**
- **Internal 600V/650V Power MOSFET**
- **No VDD, COMP Capacitor Design**
- **Programmable OVP**
- **QR Operation Mode for High Efficiency**
- **High Output Current Accuracy<±3%**
- **Ultra-low Operation Current**
- **Good Line and Load Regulation**
- **Built-in Protections:**
  - **Output Over Voltage Protection (OVP)**
  - **Cycle by Cycle Current Limit (OCP)**
  - **Leading Edge Blanking (LEB)**
  - **LED Open and Short Protection**
  - **Line OVP**
  - **Thermal Fold-back (OTP)**
- **Package Available with SOP-7, DIP-7**

APPLICATIONS

- **LED Driver**

GENERAL DESCRIPTION

KP127XN is a family of highly integrated Constant Current LED power switch. The IC utilizes Quasi-Resonant (QR) Buck topology with active PFC control for high PF, low THD, and high efficiency.

KP127XN integrates internal demagnetization detection circuit and 650V/600V power MOSFET with high voltage startup, which eliminates auxiliary winding for power supply and demagnetization and simplifies the design and production cost of the system. Additionally, the system surge performance is also optimized in KP127XN to pass 2.5kV surge level with minimum system cost. The IC adopts accurate current sensing, close loop constant current control to achieve high precision CC control with excellent line and load regulation.

KP127XN integrates functions and protections of Cycle-by-cycle Current Limiting (OCP), Thermal Fold-back (OTP), Line OVP, Output Over Voltage Protection (OVP), LED Open/Short Protection, etc.

TYPICAL APPLICATION CIRCUIT