

Non-isolated Quasi-Resonant Buck LED Power Switch

FEATURES

- Integrated with 500V MOSFET
- Fixed Output 100mA Output Current
- Integrated HV LDO and Current Sensing
- No VDD Cap, No Current Sensing Resistor
- Single Winding Inductor Design
- Quasi-Resonant for High Efficiency
- $\pm 4\%$ CC Regulation
- Very Low VDD Operation Current
- Built-in AC Line CC Compensation
- Build in Protections:
 - LED Short Protection
 - On-Chip Thermal Fold-back (OTP)
 - Cycle-by-Cycle Current Limiting
 - Leading Edge Blanking (LEB)
 - Pin Floating Protection
 - VDD UVLO
- Available with SOP-8 and SOT33-4 Package

GENERAL DESCRIPTION

KP1053B is a highly integrated power switch with Quasi-Resonant Buck (QR-Buck) constant current (CC) control for LED lighting applications.

KP1053B combines a 500V power MOSFET switch with a power controller in one chip. The IC also integrates high voltage LDO supply circuit without VDD Cap, Current sampling circuit and a novel transformer demagnetization circuit, which eliminates transformer auxiliary winding. The IC adopts Quasi-Resonant control for high efficiency.

KP1053B integrates functions and protections of Current Limit and Leading Edge Blanking, Under Voltage Lockout (UVLO), Cycle-by-cycle Current Limiting (OCP), Thermal Foldback (OTP), LED Short Protection, etc.

APPLICATIONS

- LED Lighting

TYPICAL APPLICATION CIRCUIT

