

## Non-isolated Quasi-Resonant Buck LED Power Switch

### FEATURES

- Integrated with 500V MOSFET
- No Auxiliary Winding Needed
- Quasi-Resonant for High Efficiency
- Built-in Thermal Foldback
- Built-in Charging Circuit for Fast Start-Up
- $\pm 4\%$  CC Regulation
- Very Low VDD Operation Current
- Built-in AC Line CC Compensation
- Build in Protections:
  - LED Short/Open 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, TO-92 and SOT23-3L Package

### GENERAL DESCRIPTION

KP1051X is a highly integrated power switch with Quasi-Resonant Buck (QR-Buck) constant current (CC) control for LED lighting applications.

KP1051X combines a 500V power MOSFET switch with a power controller in one chip. The IC also integrates high voltage startup/IC supply circuit and a novel transformer demagnetization circuit, which eliminates transformer auxiliary winding. The IC adopts Quasi-Resonant control for high efficiency.

KP1051X 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 Open/Short Protection, etc.

### APPLICATIONS

- LED Lighting

### TYPICAL APPLICATION CIRCUIT

