

## Multi-Mode Primary Side Regulation (PSR)/QR-Buck CV/CC Power Switch

### FEATURES

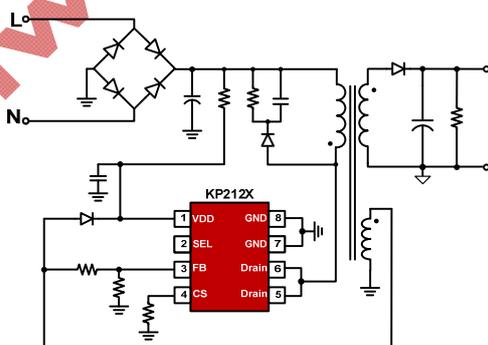
- Integrated with 650V MOSFET
- Support Flyback and Buck Topology:
  - Flyback PSR Control (SEL= Floating)
  - QR-Buck Control (SEL= GND)
- Multi Mode PSR Control
- Audio Noise Free Operation for PSR
- Optimized Dynamic Response for PSR
- Low Standby Power <70mW
- $\pm 4\%$  CC and CV Regulation
- Programmable Cable Drop Compensation (CDC) in PSR CV Mode
- Built-in AC Line & Load CC Compensation
- Build in Protections:
  - Short Load Protection (SLP)
  - On-Chip Thermal Shutdown (OTP)
  - Cycle-by-Cycle Current Limiting
  - Leading Edge Blanking (LEB)
  - Pin Floating Protection
  - VDD UVLO, OVP & Clamp
- Available with SOP-8 and DIP-8 Package

### APPLICATIONS

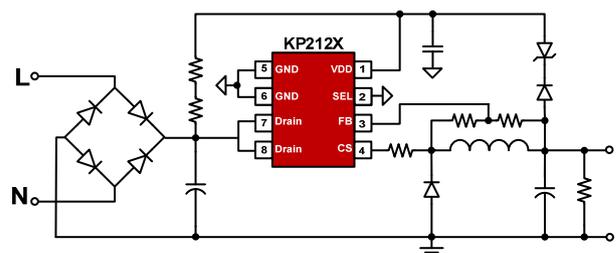
- Battery Chargers for Cellular Phones
- AC/DC Power Adapter and LED Lightings

### TYPICAL APPLICATION CIRCUIT

Charger Application



Intelligent LED Lighting Application



### GENERAL DESCRIPTION

KP212X is a family of a high performance Primary Side Regulation (PSR) power switch with high precision CV/CC control ideal for charger applications. The IC can also support Quasi-Resonant (QR) Buck CC&CV topology for LED lighting if SEL pin is short to GND.

In CV mode, KP212X adopts Multi Mode Control which uses the hybrid of AM (Amplitude Modulation) mode and (Frequency Modulation) FM mode to improve system efficiency and reliability. In CC mode, the IC uses PFM control with line and load CC compensation. The IC can achieve audio noise free operation and optimized dynamic response. The built-in Cable Drop Compensation (CDC) function can provide excellent CV performance.

KP212X integrates functions and protections of Under Voltage Lockout (UVLO), VDD over Voltage Protection (VDD OVP), Cycle-by-cycle Current Limiting (OCP), Short Load Protection (SLP), and VDD Clamping.