

Multi-Mode Primary Side Regulation (PSR)/QR-Buck CV/CC Controller

FEATURES

- Support Flyback and Buck Topology:
 - Flyback PSR Control (SEL= Floating)
 - QR-Buck CC 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 OVP & UVLO & Clamp
- Available with SOT23-6L Package

APPLICATIONS

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

TYPICAL APPLICATION CIRCUIT

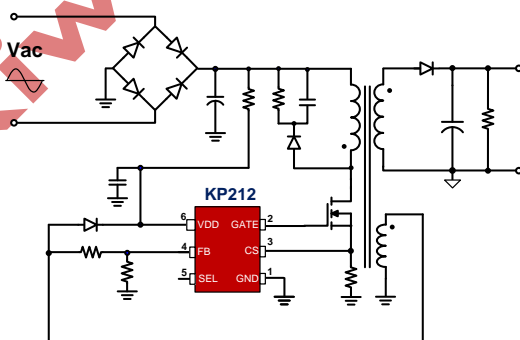
GENERAL DESCRIPTION

KP212 is a high performance Primary Side Regulation (PSR) controller with high precision CV/CC control ideal for charger applications. The IC can also support Quasi-Resonant (QR) Buck constant current topology for LED lighting if SEL pin is short to GND.

In CV mode, KP212 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.

KP212 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), Gate Clamping, and VDD Clamping.

Charger Application



LED Lighting Application

