

## YX2145

### 45V<sub>IN</sub>, 45V<sub>OUT</sub> Synchronous Boost CC/CV Controller

#### PRODUCT INTRODUCTION

The YX2145 is a synchronous boost controller suited for driving silicon (Si) MOSFET or Gallium Nitride (GaN) power transistors in highly efficient power converters. It supports a wide input ranges up to 45V with maximum 98% power efficiency. The YX2145 integrates both high side and low side gate drivers with UVLO protections. It provides programmable input/ output current limit, load current monitoring, and power good reporting. The CC/CV feature makes it suitable for battery charging application. It also supports adjustable dead time control for optimal turn on/off of power switches to reduce switching loss for high efficiency.

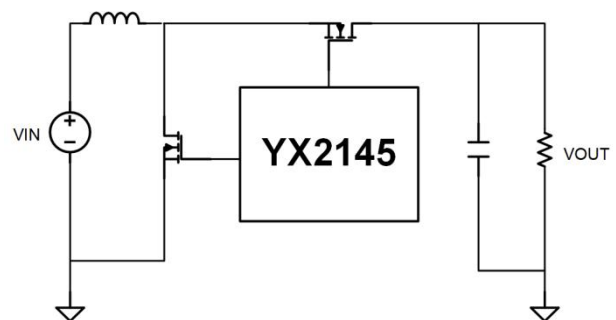
The YX2145 supports ultra-wide switching frequency range from 50KHz up to 3MHz and integrates frequency spread spectrum (FSS) for EMI optimization. It also features external compensation, programmable soft-start to reduce the inrush current during start up.

#### FEATURES

- Wide input and output voltage range up to 45V
- Up to 98% power efficiency
- Ultra-wide switching frequency: 50KHz to 3MHz
- 5V driver voltage for Si FETs or GaN FETs
- Gate driver: 0.6Ω pull-down, 1.2Ω pull-up resistance
- CC/CV regulation capability
- Drive supply rail UVLO protection
- Adjustable dead time control
- Frequency spread spectrum (FSS)
- Integrated high accuracy (±1%) 1.8V VREF
- 32-Lead side-wettable QFN Package

#### APPLICATIONS

- Boost DC-DC regulator
- Consumer, Industrial and Automotive
- USB-C PD and Chargers
- Class D power



Simplified Circuit Diagram