

## YX2180

### ***65V<sub>IN</sub>, 65V<sub>OUT</sub> Synchronous Boost GaN CC/CV Controller***

#### **PRODUCT INTRODUCTION**

The YX2180 is a synchronous boost GaN controller suited for driving Gallium Nitride (GaN) power transistors in highly efficient power converters. It supports a wide input ranges up to 65V with maximum 98% power efficiency. The YX2180 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.

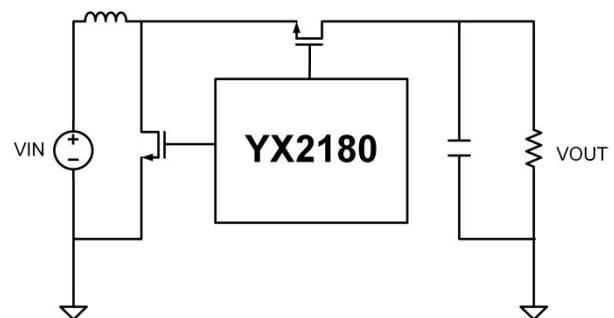
The YX2180 supports ultra-wide switching frequency range from 50KHz up to 3MHz and integrates frequency spread spectrum (FSS) for EMI optimization. It also features external compensation, programmable soft-start to reduce the inrush current during start up.

#### **FEATURES**

- Wide input and output voltage range up to 65V
- Up to 98% power efficiency
- Ultra-wide switching frequency: 50KHz to 3MHz
- 5V driver voltage for 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 ( $\pm 1\%$ ) 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