YX20105 – 100V_{IN}, 95V_{OUT}, Synchronous Buck CC/CV Controller

1 Features

- **Pin to Pin to YX2065 to upgrade to 100V**
- Support driving GaN and Silicon MOSFET
- Wide VIN range: 4V to 100V
- Wide VOUT range: 0 to 95V
- Regulation Loops: CC2, FB
- CC/CV regulation capability
- Power good reporting
- 5V Gate Drive Voltage
- External Clock Sync
- Frequency Spread Spectrum (FSS)
- output current sense ISMON2
- Support LED Driver
- Up to 98% Power efficiency
- Ultra-wide switching frequency: 50KHz to 3MHz
- Gate driver: 0.5Ω pull-down, 1Ω pull-up
- 32-Lead QFN (5mmx5mm)

2 Applications

- Buck DC-DC supplies
- Automotive infotainment
- Solar energy MPPT optimizer/controller

3 Description

The YX20105 is a Buck controller suited for driving silicon MOSFET or Gallium Nitride (GaN) power transistors in highly efficient power converters. It supports wide input and output range up to 100V . It also supports LED Driver. The YX20105 integrates both high side and low side gate drivers with UVLO protections. It provides programmable inductor peak current limit and output current limit functions with output instant current monitoring capability through ISMON2. The CC/CV regulation capability allows it to be fitting in battery charging systems.

The YX20105 supports ultra-wide switching frequency range from 50KHz up to 3MHz and integrates frequency spread spectrum (FSS) for EMI optimization. Optional external clock synchronization function facilitates the parallel operation. It also features external compensation, programmable soft-start to reduce the inrush current during start up.

The YX20105 is available in 5mmx5mm 32-lead QFN package.

Ordering Information appears at page2 of datasheet.

4 Device Information

PART NUMBER	PACKAGE	BODY SIZE (NOM)
YX20105CAJBE	32L QFN	5mm × 5mm

5 Typical Application circuit for Buck Converter