

YX201052 – 100V_{IN}, 100V_{OUT} Synchronous Buck Converter with CC/CV

1 Features

- **Integrated Two 23mΩ VDMOS Power FETs**
- Compact system design for up to 12A current
- Wide V_{IN}: 4V to 100V, Wide V_{OUT}: 2V to 100V
- Up to 98% power efficiency
- Ultra-wide switching frequency: 50KHz to 3MHz
- Programmable output current limits, with load current sensing at ISMON
- **Clock Synchronization with SYNCI/SYNCO**
- CC/CV regulation capability
- Drive supply rail UVLO protection
- **Adjustable dead time: 40ns/80ns**
- Frequency spread spectrum (FSS)
- External compensation with user programmable soft-start
- Integrated high accuracy ($\pm 1\%$) 1.8V VREF
- Power good reporting
- 47-Lead QFN Package (6mmx6mm)

2 Applications

- Buck DC-DC regulator
- Consumer, Industrial and Automotive

3 Description

The YX201052 is a highly efficient power synchronous buck converter with fully-integrated high-side and low-side 23mΩ VDMOS Power MOSFETs. It supports a wide input range up to 60V with maximum 98% power efficiency. The YX201052 integrates dead time control and VCC UVLO protections, supporting load current up to 12A and external compensation for different applications. It provides accurate input, output current monitoring, and current sensing output with power good reporting.

The YX201052 supports ultra-wide switching frequency range from 50KHz up to 3MHz as well as integrates frequency spread spectrum (FSS) for EMI optimization. It also features external compensation, programmable soft-start to reduce the inrush current during start up. The YX201052 is available in 6mmx6mm 47-lead QFN package, with large exposed pad for thermal dissipation.

4 Device Information

PART NUMBER	PACKAGE	BODY SIZE (NOM)
YX201052	47L QFN	6mm × 6mm

5 Typical Application for Buck converter & Power Efficiency

