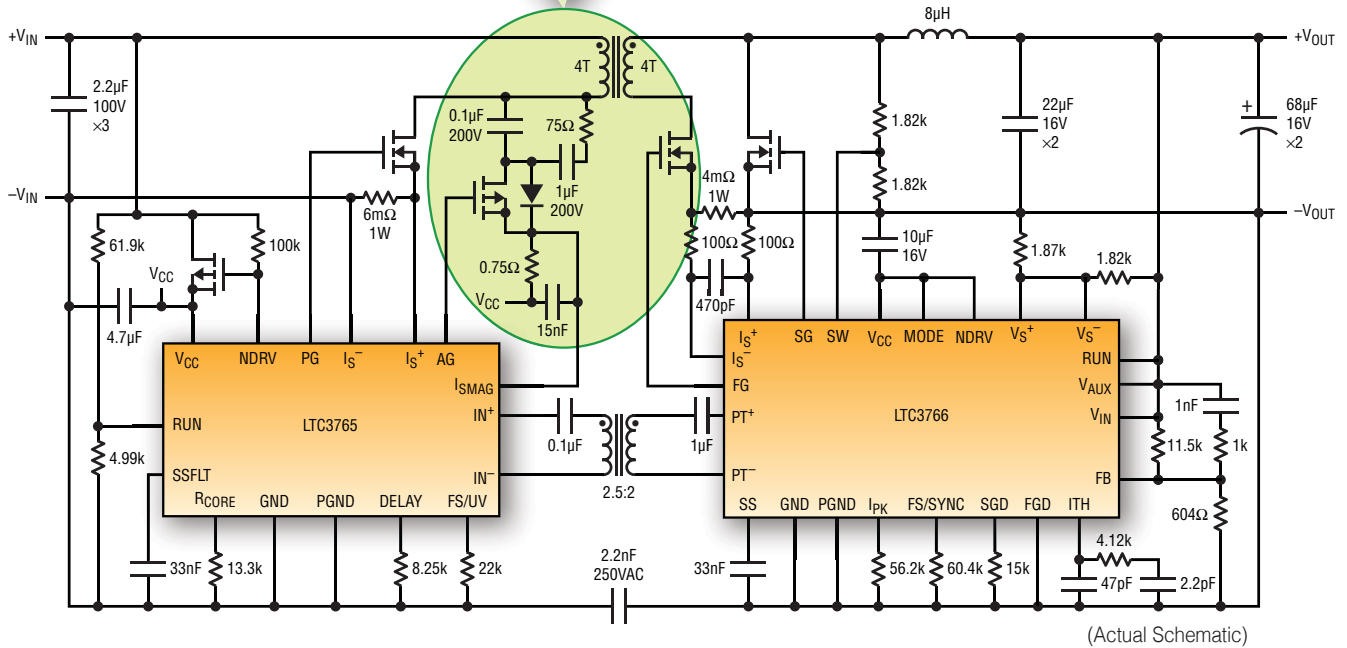


LTC3765/LTC3766 Isolated Forward Converter

**DIRECT FLUX LIMIT GUARANTEES
NO TRANSFORMER SATURATION
ACTIVE CLAMP RESET**



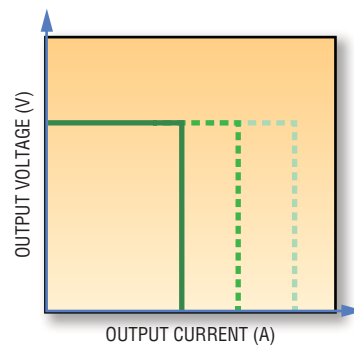
Improved Forward Converter Technology

The LTC[®]3765 and LTC3766 chipset combine to form an advanced feature set, low component count, isolated synchronous forward converter. Direct Flux Limit[™] technology prevents transformer saturation under all conditions. Active clamp transformer reset increases efficiency and reduces the solution size. Secondary-side control ensures reliable control of the output voltage and current while providing the fastest transient response.

LTC3765/LTC3766 Features/Benefits

- Direct Flux Limit Feature
- Synchronous Rectification
- Active Clamp Transformer Reset
- Secondary-Side Control
- Fast and Accurate Average Current Limit
- Self-Starting Architecture
- Multiphase Capable (Up to 250W/Phase)
- True Remote Output Voltage Sense
- No Opto-Coupler Required
- Very Fast Transient Response
- Clean Start-Up into a Prebiased Load
- Overtemperature/OVP Protection

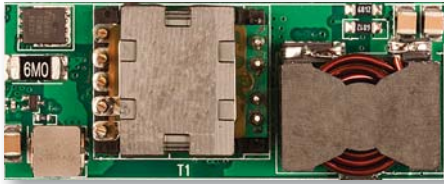
Accurate and Adjustable Current Limit



LT, LT, LTC, LTM, Linear Technology and the Linear logo are registered trademarks and Direct Flux Limit is a trademark of Linear Technology Corporation. All other trademarks are the property of their respective owners.

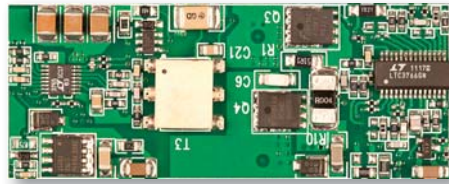
LTC3765/LTC3766 Demo Board 1/8th Brick (0.9" × 2.3" × 0.47")

Top View



(Actual Size)

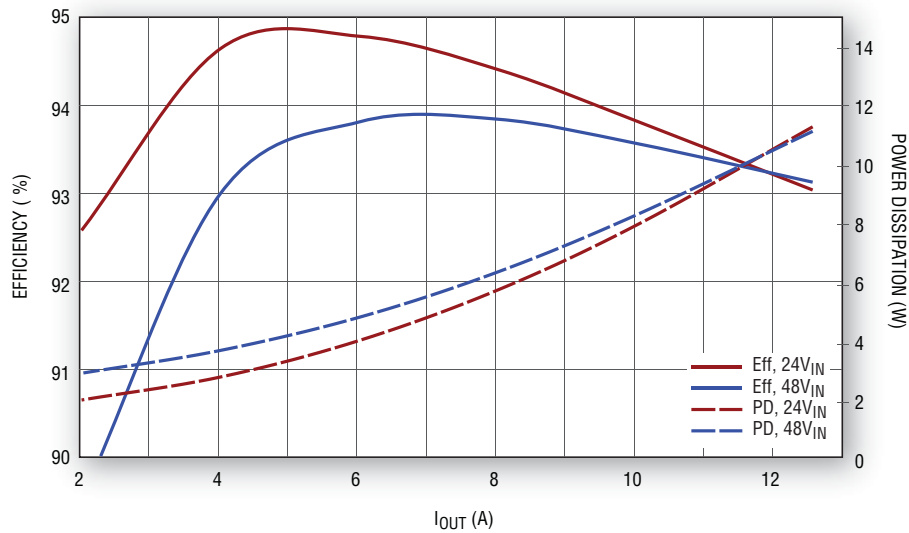
Bottom View



(Actual Size)

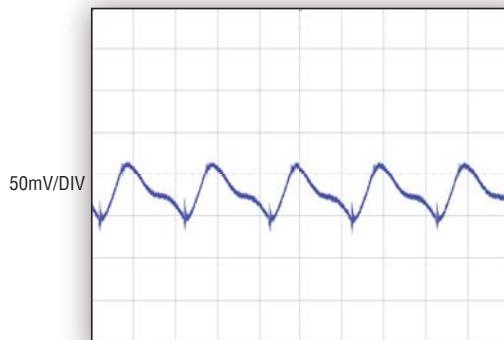
This circuit demonstrates a high level of performance, efficiency and small solution size attainable using these parts in an active-clamp-reset isolated forward converter power supply. It produces a regulated 12V, 12.5A output from an input voltage range of 18V to 72V, making it well suited for telecom, datacom and industrial applications.

Demo Board Performance Curves 12V/12.5A Output from 18V to 72V Input



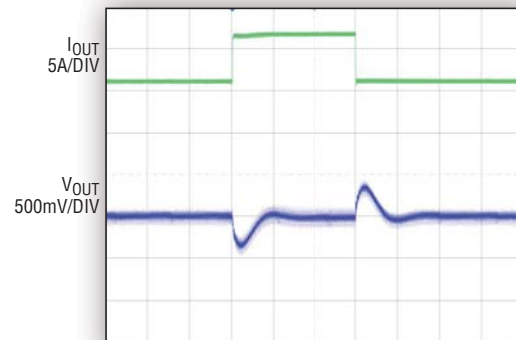
Efficiency and Power Loss Curves

Output Ripple, 20MHz BW



CONDITIONS: 48V_{IN}, 12V at 11A_{OUT}

Transient Response Waveforms



CONDITIONS: 48V_{IN}, 6A to 12A STEP LOAD