LT1372/LT1377
500kHz and 1MHz High Efficiency 1.5A Switching Regulators

FEATURES

- Faster Switching with Increased Efficiency
- Uses Small Inductors: 4.7μH
- All Surface Mount Components
- Only 0.5 Square Inch of Board Space
- Low Minimum Supply Voltage: 2.7V
- Quiescent Current: 4mA Typ
- Current Limited Power Switch: 1.5A
- Regulates Positive or Negative Outputs
- Shutdown Supply Current: 12μA Typ
- Easy External Synchronization
- Small 8-Pin SO or MiniDIP Packages

APPLICATIONS

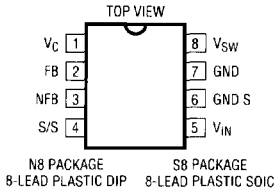
- Boost Regulators
- CCFL Backlight Driver
- Laptop Computer Supplies
- Multiple Output Flyback Supplies
- Inverting Supplies

DESCRIPTION

The LT®1372/LT1377 are monolithic high frequency switching regulators. They can be operated in all standard switching configurations including boost, buck, flyback, forward, inverting, SEPIC and "Cuk." A 1.5A high efficiency switch is included on the die along with all oscillator, control, and protection circuitry. All functions of the LT1372/LT1377 are integrated into 8-pin SO/miniDIP packages.

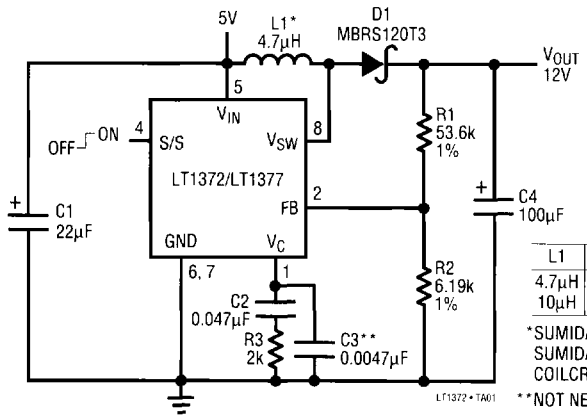
The LT1372/LT1377 typically consumes only 4mA quiescent current and has higher efficiency than previous parts. High frequency switching allows for very small inductors to be used. All surface mount components consume less than 0.5 square inch of board space.

New design techniques increase flexibility and maintain ease of use. Switching is easily synchronized to an external logic level source. A logic low on the shutdown pin reduces supply current to 12μA. Unique error amplifier circuitry can regulate positive or negative output voltage while maintaining simple frequency compensation techniques. Nonlinear error amplifier transconductance reduces output overshoot on start-up or overload recovery. Oscillator frequency shifting protects external components during overload conditions.



LT1372CN8
LT1372CS8
LT1377CN8
LT1377CS8

5V-to-12V Boost Converter



L1	I_{OUT}
4.7μH	0.25A
10μH	0.35A

*SUMIDA CD43-4R7 (4.7μH) OR
SUMIDA CD73-100KC (10μH) OR
COILCRAFT DT3316-103 (10μH)

**NOT NEEDED IN MANY APPLICATIONS

12V Output Efficiency