

# 30V, 3A Synchronous Step-Down DC/DC Converter with Adjustable Soft-start Time

## FEATURES

- High Efficiency: Up to 95% @ 12V to 5V
- Wide input voltage: 4.5V ~ 30V
- Up to 3A Output Current
- Low Typical 3 $\mu$ A Shutdown Current
- Adjustable Soft-Start Time
- Fixed 340kHz Switching Frequency
- Stable with Low ESR Ceramic Output
- Peak Current Mode with External Compensation
- PFM in Light Load Condition
- 0.925V Voltage Reference with  $\pm 2\%$  Accuracy
- Thermal Shutdown
- Cycle-by-cycle Current Limit Protection
- Over Current Protection with Hiccup Mode
- ESOP8 Package

## GENERAL DESCRIPTION

TMI3344 is a wide input voltage of 4.5V to 30V, high efficiency current mode, synchronous step-down DC/DC converter capable of delivering 3A current with adjustable soft-start time. TMI3344 integrates main switch and synchronous switch with low  $R_{DS(on)}$  to minimize the conduction loss.

The device integrates 120m $\Omega$  High-Side and 80m $\Omega$  Low-side Power MOS, and has advanced features include UVLO, Thermal Shutdown, Soft Start, input OVP.

## APPLICATIONS

- Smart Home Applications
- Vacuum Robot
- Printer
- Consumer Applications: TV and Set Top Box
- General 5V, 12V, 24V DC/DC Power Bus Supply

## TYPICAL APPLICATION

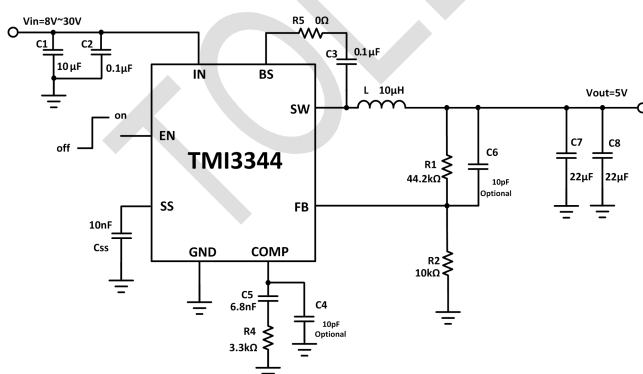


Figure 1. Basic Application Circuit

### Efficiency

$V_{OUT}=5V$ ,  $I_{OUT}=0.01A$  to 3.3A,  $T_A=25^{\circ}C$

