

Features

- 40mΩ/25mΩ Low $R_{DS(ON)}$ internal FETs
- Force PWM Operation Mode
- Wide Input Range: 4.5V to 18V
- Feedback Voltage Accuracy $0.765V \pm 1.5\%$
- 600kHz Switch Frequency
- Up to 6A Output Current
- COT control to achieve fast transient responses
- Power Save Mode at Light Load
- Integrated internal compensation
- Stable with Low ESR Ceramic Output Capacitors
- Over Current Protection with Hiccup Mode
- Thermal Shutdown
- Inrush Current Limit and Soft Start
- Build in Input Over Voltage Protection
- Available in ESOP8 Package

Description

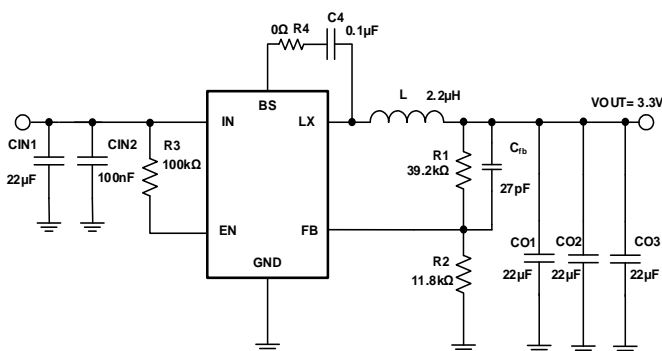
The TCS4816 is a high efficiency 600kHz, Constant on-Time (COT) control mode synchronous step-down DC-DC converter capable of delivering up to 6A current. TCS4816 integrates main switch and synchronous switch with very low $R_{DS(ON)}$ to minimize the conduction loss. Low output voltage ripple and small external inductor and capacitor size are achieved with 600kHz switching frequency. It adopts the COT architecture and force PWM operation in steady state to achieve fast transient responses for high voltage step down applications.

The TCS4816 requires a minimum number of readily available standard external components and is available in ESOP8 RoHS compliant package.

Application

- Digital Set Top Boxes
- Flat Panel Television and Monitors
- Notebook computer
- Wireless and DSL Modems

Typical Application



TCS4816 Typical Application Circuits

Efficiency

$V_{OUT}=3.3V$, $I_{OUT}=1mA$ to $5A$, $T_A=25^\circ C$

