

Features

- 39mΩ/20mΩ Low $R_{DS(ON)}$ internal FETs
- Force PWM Operation Mode
- Wide Input Range: 4.5V to 18V
- Feedback Voltage Accuracy $0.6V \pm 1.5\%$
- 600kHz Switch Frequency Typical
- Up to 5A Output Current
- COT control to achieve fast transient responses
- 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 SOT23-6 Package

Description

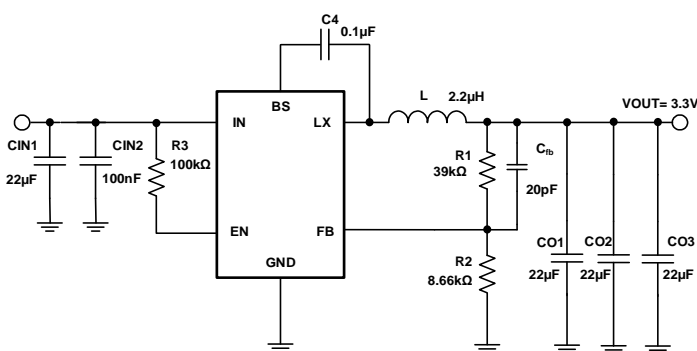
The TCS4815 is a high efficiency, Constant on-Time (COT) control mode synchronous step-down DC-DC converter capable of delivering up to 5A current. TCS4815 integrates main switch and synchronous switch with very low $R_{DS(ON)}$ to minimize the conduction loss. Low output voltage ripple and small external inductor and capacitor size are achieved with typical 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 TCS4815 requires a minimum number of readily available standard external components and is available in a 6-pin SOT23-6 RoHS compliant package.

Application

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

Typical Application



TCS4815 Typical Application Circuits

Efficiency

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

