

Features

- 70mΩ/35mΩ Low $R_{DS(ON)}$ internal FETs
- High Efficiency Synchronous-Mode Operation
- Wide Input Range:4.5V to 18V
- Output Voltage from 0.8V(TCS4318) 0.765V(TCS4318B)
- 600kHz Switch Frequency
- Up to 3A, 3.5A@1.2V 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 SOT23-6 Package

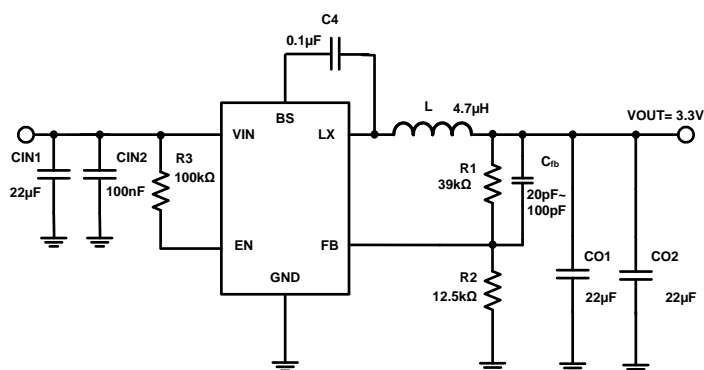
Description

The TCS4318 is a high efficiency 600kHz, Constant on-Time (COT) control mode synchronous step-down DC-DC converter capable of delivering up to 3A current. TCS4318 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 to achieve fast transient responses for high voltage step down applications. The TCS4318 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
- Notebook computer
- Wireless and DSL Modems

Typical Application



Typical Application Circuits ($V_{REF}=0.8V$)

Efficiency

$V_{OUT}=3.3V$, $I_{OUT}=0.01A$ to $3A$, $T_A=25^{\circ}C$

