

### Features

- Maximum 3A Low-Dropout Voltage Regulator
- Ultra Low Dropout Voltage  
Typically 250mV at 3A Output Current
- Low Quiescent Current, Typically 110uA
- High Output Accuracy over Line, Load and Temperature
- Build-In Soft-Start
- Two kind of vfb voltage, 0.8V & 0.6V
- Power-On-Reset Monitoring on Both  $V_{DD}$  and  $V_{IN}$  Pins
- Power-OK Output function
- Foldback over Current Protection and Thermal shutdown
- 0.1μA (typ) Shutdown Supply Current
- Low ESR Output Capacitor(Multi-layer Chip Capacitors (MLCC)) Applicable
- Vout Pull Low Resistance when Disable
- PSOP-8, TDFN10-3x3
- Green Product (RoHS, Lead-Free, Halogen-Free Compliant)

### Applications

- Notebook PC Applications
- Motherboard Applications
- Low Voltage Logic Supplies
- Microprocessor and Chipset Supplies
- Graphic Cards
- Cordless phones

### General Description

The GS7158 can deliver up to 3A of continuous output current with a typical dropout voltage of only 250mV using internal n-channel MOSFETs. The linear regulator uses a separate VDD supply to power the control circuitry and drive the Internal n-channel MOSFETs. The output voltage is adjustable from 0.8V/0.6V to the voltage that is very close to  $V_{IN}$ .

The GS7158 allows the use of low-ESR ceramic capacitor as low as 10uF. Moreover the IC provides good performance on both line transient response and load transient response.

The GS7158 provides foldback over current limit and thermal shutdown to prevent the linear regulator from damage. Built-in soft-start minimizes stress on the input power source by reducing capacitive inrush current on start-up. During start-up, POK remain low until the output reaches 92% of its rating value.

The GS7158 is available in PSOP-8 package or TDFN10- 3x3 package.