G5318

High-Speed Step-Down Controller

Features

- **Ultra-High Efficiency**
- **4700ppm/°C $R_{DS(ON)}$ Current Sensing (without Current-Sense Resistor)**
- **Quasi-PWM with 100ns Load-Step Response**
- **Built-in 0.5% 0.7V Reference**
- **0.7V to 2.6V Adjustable Output Range**
- **4.5V to 28V Battery Input Range**
- **4 Selectable Frequency Setting**
- **Integrated Boost Switch**
- **OVP & UVP**
- **1.5ms Voltage Servo Soft-Start**
- **Drives Large Synchronous-Rectifier FETs**
- **Power-Good Indicator**
- **Thermal Shutdown (Non-latch)**

General Description

G5318 is a small-sized step-down controller uses constant on-time control scheme to handle wide input/output voltage ratios with ease and provides 100ns "instant-on" response to load transients while maintaining a relatively constant switching frequency. The G5318 achieves high efficiency at a reduced cost by eliminating the current-sense resistor found in traditional current-mode PWMs. Efficiency is further enhanced by an ability to drive very large synchronous rectifier MOSFETs. The G5318 is intended for CPU core, chipset, DRAM, or other low-voltage supplies as low as 0.7V. The G5318 is available in TDFN3X3-10 package.

Applications

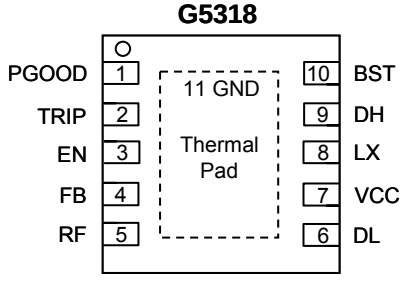
- **Notebook Computers**
- **CPU Core Supply**
- **I/O Supply**
- **Chipset/RAM Supply as Low as 0.7V**

Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5318RE1U	5318	-40°C to +85°C	TDFN3X3-10
G5318RE1D	5318	-40°C to +85°C	TDFN3X3-10

Note: RE: TDFN3X3-10
1: Bonding Code
U & D : Tape & Reel

Pin Configuration



TDFN3X3-10