

## 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 1% 0.5V Reference Voltage
- 0.5V to 3.3V Adjustable Output Range
- 4.5V to 28V Battery Input Range
- Integrated Boost Diode
- OVP & UVP
- 1.5ms Voltage Servo Soft-Start
- Drives Large Synchronous-Rectifier FETs
- Power-Good Indicator
- Thermal Shutdown (Non-latch)

### Applications

- Notebook Computers
- CPU Core Supply
- I/O Supply
- Chipset/RAM Supply as Low as 0.5V

### General Description

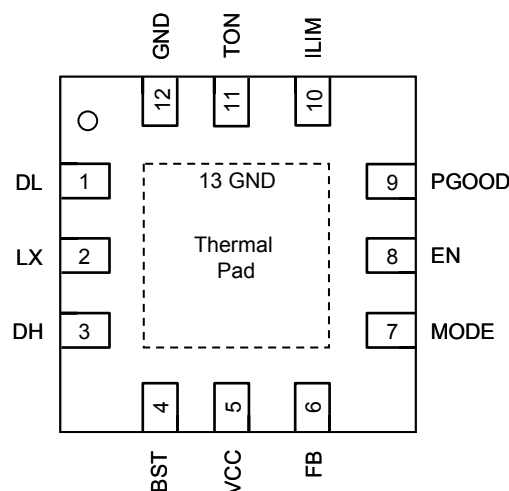
G5338 uses constant on-time control scheme to handle wide input/output voltage ratios with ease and provides 100ns “instant-on” response to load transients while maintaining a relatively constant switching frequency. The G5338 achieves high efficiency at a reduced cost by eliminating the current-sense resistor found in traditional current-mode PWMs. Efficiency is further enhanced by an ability to drive very large synchronous rectifier MOSFETs. Single-stage buck conversion allows these devices to directly step down high-voltage batteries for the highest possible efficiency. The noiseless pulse-skipping mode setting maintains the switching frequency above 25kHz to eliminates the audio noise. The G5338 is intended for CPU core, chipset, DRAM, or other low-voltage supplies as low as 0.5V. The G5338 is available in TQFN2X2-12 package.

### Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5338K71U	5338	-40°C to +85°C	TQFN2X2-12

Note: K7: TQFN2X2-12  
 1: Bonding Code  
 U : Tape & Reel

### Pin Configuration



G5338 TQFN2X2-12