

PE26100

Document category: Product Brief

High efficiency multi-level buck converter for fast charging



Features

- Operating modes:
 - 3- and 4-level regulated buck converter
 - Divide-by-2 and -3 charge pump, switched capacitor
 - Multi-level reverse boost
- 6A current delivery in buck and charge pump modes
- Parallel capability for faster battery charging
- High efficiency and low power loss for <1 mm solutions
- Accurate input and output current and voltage, internal temperature monitoring, and telemetry using I²C
- Full protection, including:
 - Input and output under-voltage lockout (UVLO)
 - Input and output over-voltage protection (OVP)
 - Input and output over-current protection (OCP)
 - IC over-temperature with fault and warning status
- User-triggered thermal throttle
- Dual external disconnect switch control
- V_{IN} range 4.5V to 18.5V compatible with the latest wired and wireless standards
- Packaging: WLCSP

Application circuit

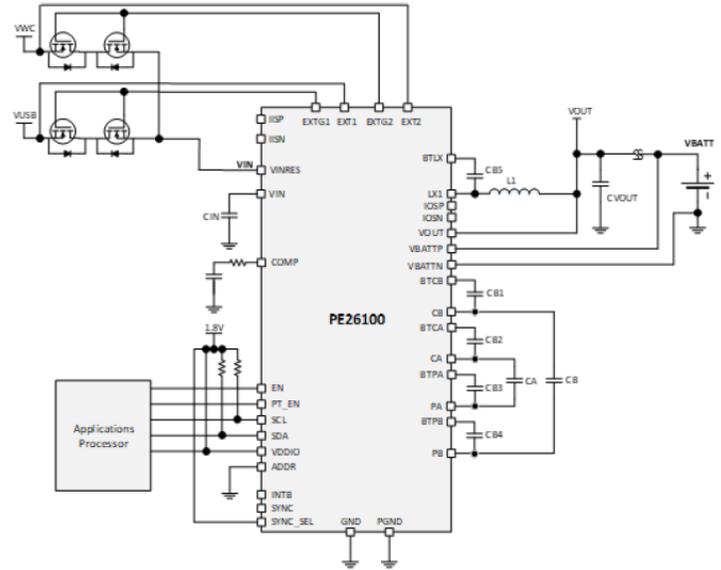


Figure 1. PE26100 typical application circuit

Applications

- Smartphones
- Tablets
- Portable electronics

Product description

The PE26100 is a high efficiency multi-level buck converter capable of providing low-profile, fast-charging solutions for single-cell lithium batteries.

The device operates as a regulated multi-level buck converter (4-level or 3-level modes) when a fixed input voltage—such as a USB power delivery (USB_PD)—is applied. The reduced inductance associated with the multi-level buck converter allows the PE26100 to provide highly efficient 6A power delivery in a low-profile (< 1 mm height) compact solution size. The PE26100 can be configured as a charge pump capacitor divider in divide-by-2 or divide-by-3 modes when a variable source—such as a USB programmable power source (USB_PPS)—is applied. Devices can be connected in parallel to increase fast-charging capability. Reverse boost support is available for on-the-go (OTG) or reverse wireless charging up to 10W. Accurate telemetry measurements are available through an I²C interface. The PE26100 operates over a wide range input from 4.5–18.5V, is compatible with the latest USB and Qi wireless charging standards and is available in a wafer-level chip scale package (WLCSP).

Ordering information

Order code	Description	Packaging	Shipping method
PE26100A-R	PE26100 high efficiency multi-level buck converter	WLCSP	5000 units/T&R
PE26100A-V ^(*)			250 units/T&R
PE26100A-G ^(*)			Sample waffle tray

 * Not for production use.

Document categories

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