

3.0MHz High Efficiency Low I_Q Synchronous Boost

Features

- Wide Input Voltage Range: 2.5V to 5.5V
- Output Voltage 5.0V
- I_{OUT} up to 1.0 A at $V_{OUT} = 5.0\text{ V}$, $V_{IN} \geq 3.0\text{ V}$
- 3MHz PWM Switching Frequency
- High Efficiency and Low Quiescent Current
 - ▶ Over 95% Efficiency
 - ▶ 1 μA Shutdown Current
 - ▶ 35 μA Quiescent Current in Pass Through
 - ▶ 55 μA Quiescent Current in PFM Operation
- $\pm 2\%$ DC Voltage Accuracy in PWM mode
- Undervoltage Lockout (UVLO)
- Short Circuit Protection
- Hiccup Current Limit
- Over Temperature Protection
- Selectable Pass Through Mode or True Load Disconnect During Shutdown
- Output Capacitor Pre-Charge and Soft-Start
- Pb-free 9-Bump, WLCSP 1.38mm x 1.38mm
- RoHS and Green Compliant
- -40°C to 85°C Operating Temperature Range

Brief Description

The KTC2110 features a high-efficiency, micropower synchronous boost for Lithium-Ion/Polymer battery applications. It offers true output disconnect to achieve a shutdown quiescent current of less than 1.0 μA , extending battery life.

High efficiency over a wide output current range is achieved by selecting PWM/PFM mode automatically depending on the output load conditions.

A Pass Through mode allows to transfer the input power directly to output (not boosting) with over current protection.

The constant on-time design does not require any external compensation components, simplifying the design and providing ultra-fast transient response.

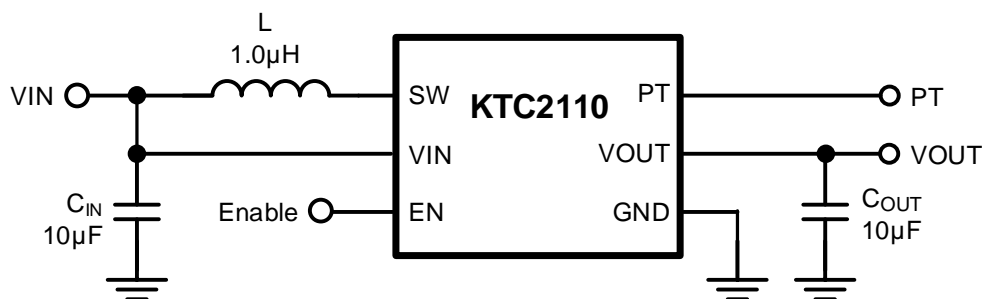
The inrush current-limiting feature minimizes the voltage droop on the battery supply when the device is turned on.

The KTC2110 is packaged in advanced, RoHS and Green compliant, 1.38mm x 1.38mm, 9-balls Wafer-Level Chip-Scale Package (WLCSP).

Applications

- Smartphones and Tablets
- Mobile Internet Devices
- USB OTG
- Wearables
- Portable Devices

Typical Application



Ordering Information

Part Number	V _{OUT}	Marking ¹	Operating Temperature	Package
KTC2110ECAA-TR	5.0V	NOXXYYZZZZ	-40°C to +85°C	WLCSP33-9

1. XX = Date Code, YY = Assembly Code, ZZZZ = Serial Number.

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