

# PI37xx Series ZVS Buck-Boost Regulators

General purpose and VTM compatible Buck-Boost regulators



For use in Computing, Communications, Industrial, 48 V<sub>IN</sub> Bus Rail, 24 V<sub>IN</sub> Bus Rail, Battery Line Stabilization

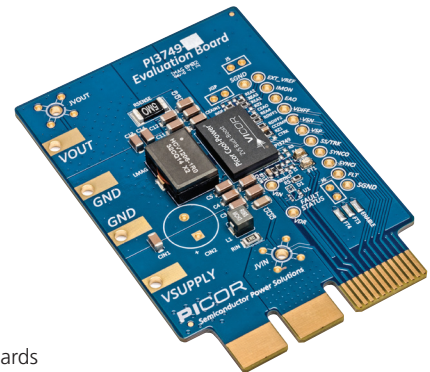
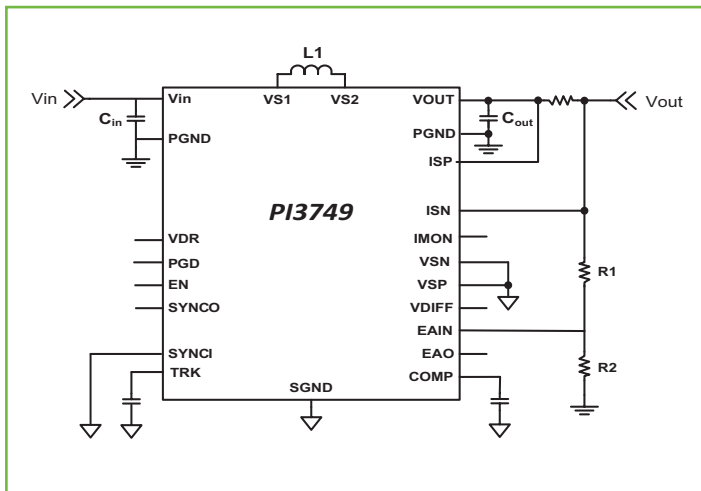
## Description

The PI37xx is a series of high efficiency, wide input range DC-DC ZVS-Buck-Boost regulators integrating controller, power switches, and support components all within a high density System-in-Package (SiP). The high switching frequency operation reduces the size of the external filtering components, improves power density, and enables very fast dynamic response to line and load transients, sustaining high switching frequency up to the rated input voltage without sacrificing efficiency while also supporting large conversion ratios.

## Features

- Over 98% efficiency at >800 kHz FSW
- Fast transient response
- Parallel capable with single wire current sharing
- External frequency synchronization/interleaving
- High-Side current sense amplifier
- General purpose amplifier
- Input over/under voltage lockout (OVLO/UVLO)
- Output overvoltage protection (OVP)
- Over temperature protection (OTP)
- Fast and slow current limits
- -40°C to 125°C operating range (T<sub>J</sub>)

## PI3749 Typical Application

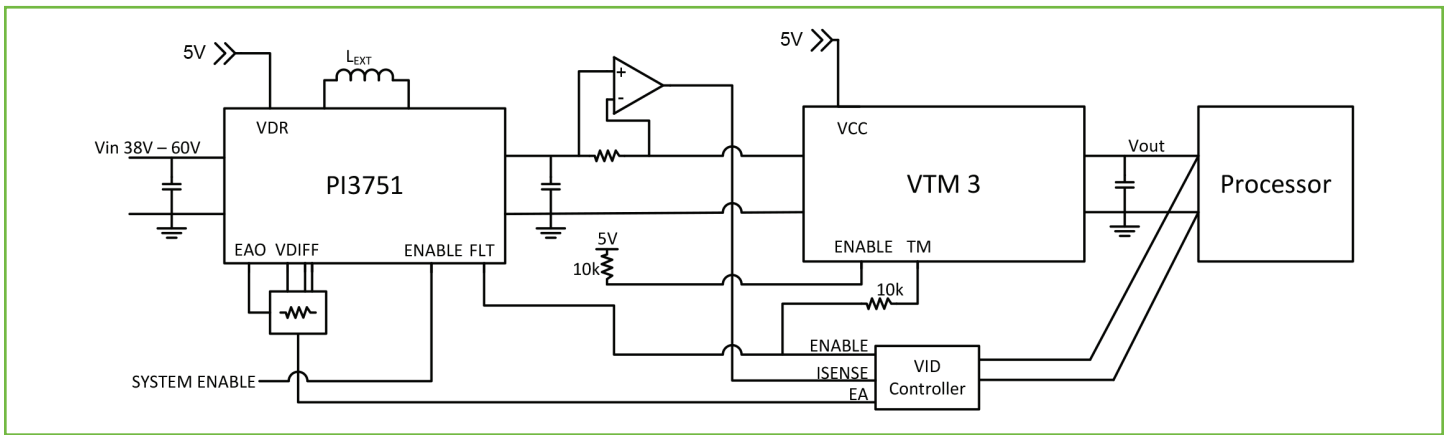


Evaluation Boards for PI3749 available online.

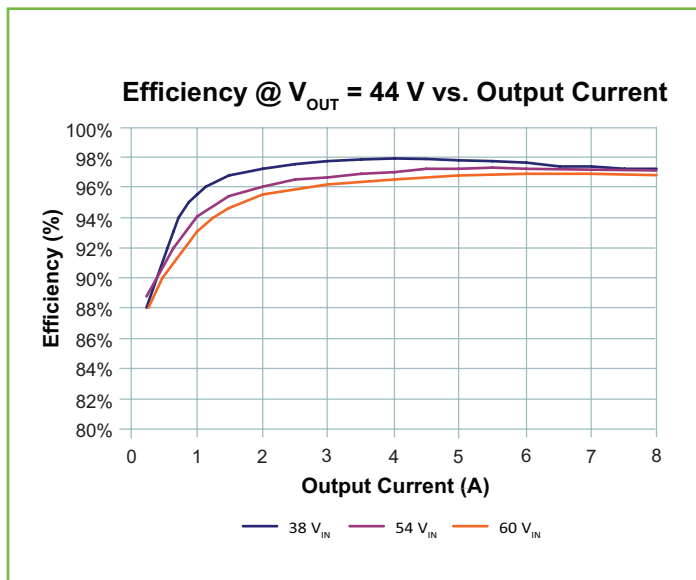
## Part Numbering

Cool-Power	Input (V)	Output (V)	Power (W)	Package
<b>General Purpose Buck-Boost</b>				
PI3749-00-LGIZ	16 – 34	12 – 34	200	LGA SIP: 10 x 14 x 2.56 mm
<b>VTM Compatible PRM</b>				
PI3751-00-LGIZ	38 – 60	38 – 50	200	LGA SIP: 10 x 14 x 2.56 mm
PI3755-01-LGIZ	38 – 60	28 – 54	100	LGA SIP: 10 x 10 x 2.56 mm

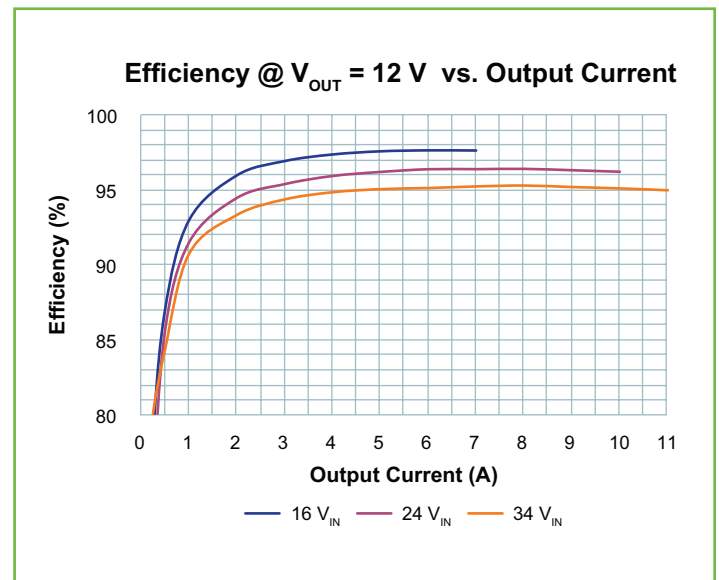
## PI3751 Used within a 48 V to Processor VRx Solution



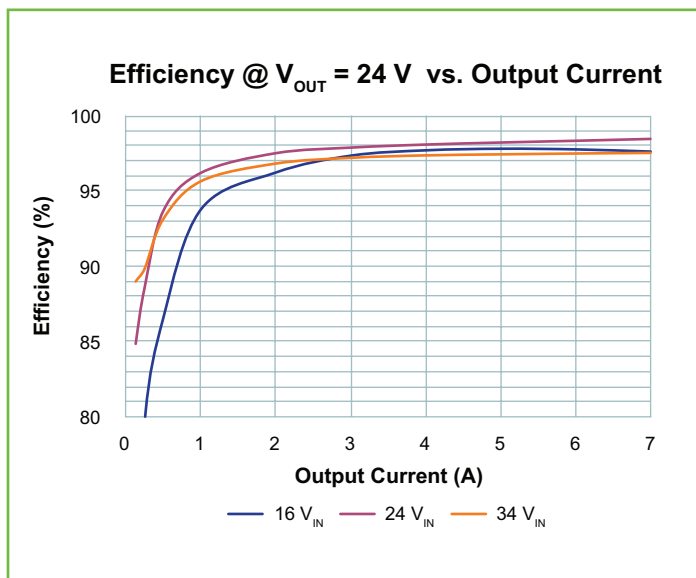
### Efficiency PI3751



### Efficiency PI3749, 12 V



### Efficiency PI3749, 24 V



### Efficiency PI3749, 28 V

