

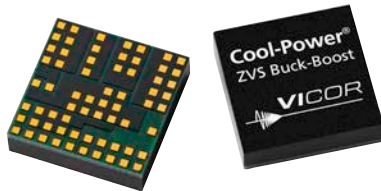
38V to 60V_{IN}, 28V to 60V_{OUT}, 200W Cool-Power ZVS Buck-Boost

Product Description

The PI3756-00 is a high efficiency, wide input range DC-DC ZVS-Buck-Boost regulator. This high density module integrates controller, power switches, and support components. The integration of a high performance Zero-Voltage Switching (ZVS) topology, within the PI3756-00, increases point of load performance providing best in class power efficiency.

The PI3756-00 requires an externally applied 5V bias to the VDR input, an external inductor, resistive divider and minimal capacitors to form a complete DC-DC switching mode buck-boost regulator.

The ZVS architecture also enables high frequency operation while minimizing switching losses and maximizing efficiency. 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. The PI3756-00 sustains high switching frequency up to the rated input voltage without sacrificing efficiency and supports large conversion ratios.



Features & Benefits

- 98% efficiency at 1.5MHz FSW
- Wide input voltage range of 38V to 60V
- Wide output voltage range of 28V to 60V
- 200W continuous output power
- Power density exceeding 8000W/in³
- Fast transient response in VRM 12.X applications
- Light load mode < 200mW no load power dissipation
- VTM compatibility mode
- User configurable differential amplifier
- Input / Output Over / Undervoltage Protection
- Overtemperature protection
- Fast and slow current limits
- -40°C to 115°C operating range (T_J)

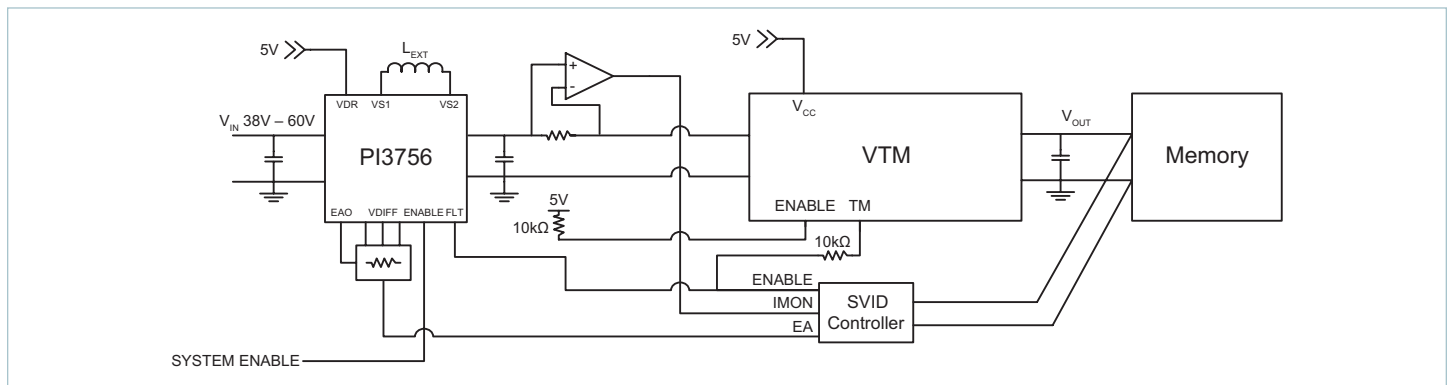
Applications

- VR12.X Factorized Power Solution (when coupled with a VTM™ device)
- Computing, Communications, DDR Memory
- 48V to POL Power Solutions

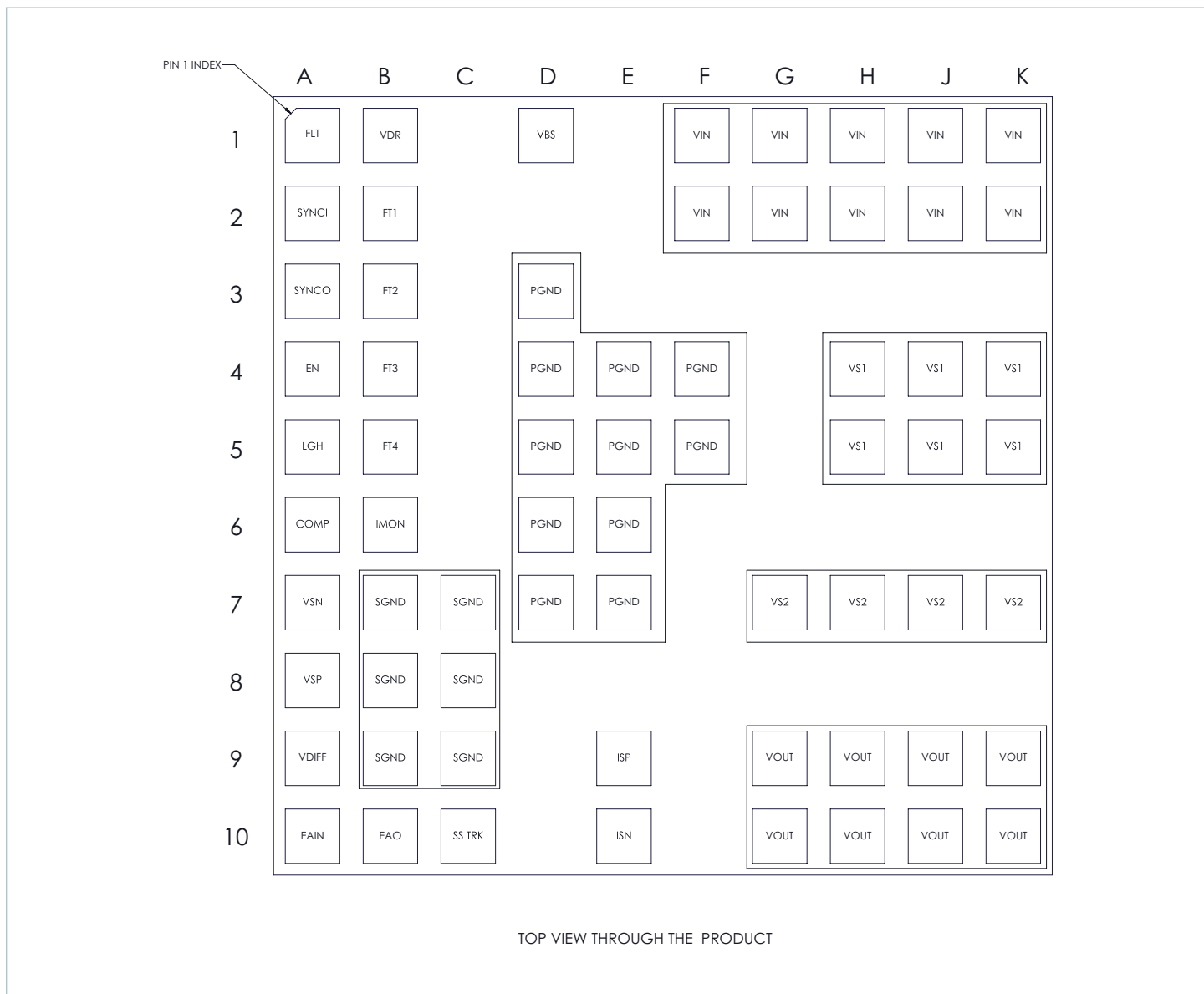
Package Information

- 10mm x 10mm x 2.56mm Land Grid Array Module

Typical Application



Package Pin-Out



Large Pin Blocks

Pin Block Name	Group of pins
VIN	F1-2, G1-2, H1-2, J1-2, K1-2
VS1	H4-5, J4-5, K4-5
PGND	D3-7, E4-7, F4-5
VS2	G7, H7, J7, K7
VOUT	G9-10, H9-10, J9-10, K9-10
SGND	B7-9, C7-9

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