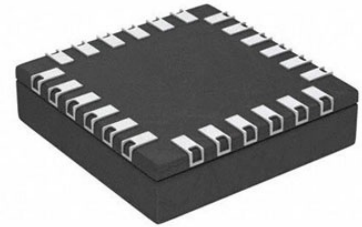


DC/DC Switching Regulators 3 PHS PWM BUCKG FOR MICROPROC PWR SUP

Manufacturers	Renesas Technology Corp
Package/Case	48-WFQFN
Product Type	Power Management ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for ISL62883BHRTZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ISL62883 is a multiphase PWM buck regulator for microprocessor core power supply. The multiphase buck converter uses interleaved phase to reduce the total output voltage ripple with each phase carrying a portion of the total load current, providing better system performance, superior thermal management, lower component cost, reduced power dissipation, and smaller implementation area. The ISL62883 uses two integrated gate drivers and an external gate driver to provide a complete solution. The PWM modulator is based on Intersil's Robust Ripple Regulator (R3) technology™. Compared with traditional modulators, the R3™ modulator commands variable switching frequency during load transients, achieving faster transient response. With the same modulator, the switching frequency is reduced at light load, increasing the regulator efficiency. The ISL62883 is fully compliant with IMVP-6.5™ specifications. It responds to PSI# and DPRSLPVR signals by adding or dropping PWM3 and Phase-2 respectively, adjusting overcurrent protection threshold accordingly, and entering/exiting diode emulation mode. It reports the regulator output current through the IMON pin. It senses the current by using either a discrete resistor or inductor DCR whose variation over temperature can be thermally compensated by a single NTC thermistor. It uses differential remote voltage sensing to accurately regulate the processor die voltage. The adaptive body diode conduction time reduction function minimizes the body diode conduction loss in diode emulation mode. User-selectable overshoot reduction function offers an option to aggressively reduce the output capacitors as well as the option to disable it for users concerned about increased system thermal stress. In 2-Phase configuration, the ISL62883 offers the FB2 function to optimize 1-Phase performance. The ISL62883B has the same functions as the ISL62883, but comes in a different package.

Features

Precision Multiphase Core Voltage Regulation

0.5% System Accuracy Over-Temperature

Enhanced Load Line Accuracy

Microprocessor Voltage Identification Input

7-Bit VID Input, 0.300V to 1.500V in 12.5mV Steps

Supports VID Changes On-The-Fly

Supports Multiple Current Sensing Methods

Lossless Inductor DCR Current Sensing

Precision Resistor Current Sensing

Supports PSI# and DPRSLPVR modes

Superior Noise Immunity and Transient Response

Current Monitor and Thermal Monitor

Differential Remote Voltage Sensing

High Efficiency Across Entire Load Range

Programmable 1-, 2- or 3-Phase Operation

Two Integrated Gate Drivers

Excellent Dynamic Current Balance Between Phases

FB2 Function in 2-Phase Configuration to Optimize 1-Phase Performance

Adaptive Body Diode Conduction Time Reduction

User-selectable Overshoot Reduction Function

Small Footprint 40 Ld 5x5 or 48 Ld 6x6 QFN Package

Pb-Free (RoHS Compliant)

Related Products



[ISL6262ACRZ](#)

Renesas Technology Corp
QFN-48



[ISL6294IRZ-T](#)

Renesas Technology Corp
QFN-8



[ISL21080CIH315Z-TK](#)

Renesas Technology Corp
SOT-23-3



[ISL6377HRZ-T](#)

Renesas Technology Corp
QFN-48



[ISL62771HRTZ](#)

Renesas Technology Corp
QFN40



[ISL6506BCBZ](#)

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SOP-8



[ISL62771HRTZ-T](#)

Renesas Technology Corp
40-WFQFN Exposed Pad



[ISL95808HRZ-T](#)

Renesas Technology Corp
DFN-8