ISL6262ACRZ

Data Sheet

Switching Controllers TWO-PHS DC/DC BUCK CNTRLR IMVP-6 4 8LD

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

Images are for reference only

Please submit RFQ for ISL6262ACRZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ISL6262A is a two-phase buck converter regulator implementing Intel® IMVP-6+ protocol with embedded gate drivers. The two-phase buck converter uses two interleaved channels to effectively double the output voltage ripple frequency, and thereby reduce output voltage ripple amplitude with fewer components; lower component cost; reduced power dissipation; and smaller real estate area. The heart of the ISL6262A is the patented R3 Technology™, Intersil's Robust Ripple Regulator modulator. Compared with the traditional multiphase buck regulator, the R3 Technology™ has the fastest transient response. This is due to the R3 modulator commanding variable switching frequency during a load transient. Intel® Mobile Voltage Positioning (IMVP) is a smart voltage regulation technology, which effectively reduces power dissipation in Intel® Pentium processors. To boost battery life, the ISL6262A supports DPRSLPVR (deeper sleep), DPRSTP# and PSI# functions, and maximizes the efficiency via automatically enabling different phase operation modes. At heavy load operation of the active mode, the regulator commands the two phase continuous conduction mode (CCM) operation. While the PSI# is asserted with medium load in active mode, the ISL6262A smoothly disables one phase and operates in one-phase CCM. When the CPU enters deeper sleep mode, the ISL6262A enables diode emulation to maximize the efficiency at light load. For better system power management of the portable computer, the ISL6262A also provides a CPU power monitor output. The analog output at the power monitor pin can be fed into an A/D converter to report instantaneous or average CPU power. A 7-bit digital-to-analog converter (DAC) allows dynamic adjustment of the core output voltage from 0.300V to 1.500V. A 0.5% system accuracy of the core output voltage over-temperature is achieved by the ISL6262A. A unity-gain differential amplifier is provided for remote CPU die sensing. This allows the voltage on the CPU die to be accurately measured and regulated per Intel® IMVP-6+ specifications. Current sensing can be realized using either lossless inductor DCR sensing, or precision resistor sensing. A single NTC thermistor network thermally compensates the gain and the time constant of the DCR variations.

Features

Precision Two/One-phase CORE Voltage Regulator

0.5% System Accuracy Over-Temperature

Enhanced Load Line Accuracy

Internal Gate Driver with 2A Driving Capability

Dynamic Phase Adding/Dropping

Microprocessor Voltage Identification Input

7-Bit VID Input

0.300V to 1.500V in 12.5mV Steps

Support VID Change On-the-Fly

Multiple Current Sensing Schemes Supported

Lossless Inductor DCR Current Sensing

Precision Resistive Current Sensing

CPU Power Monitor

Thermal Monitor

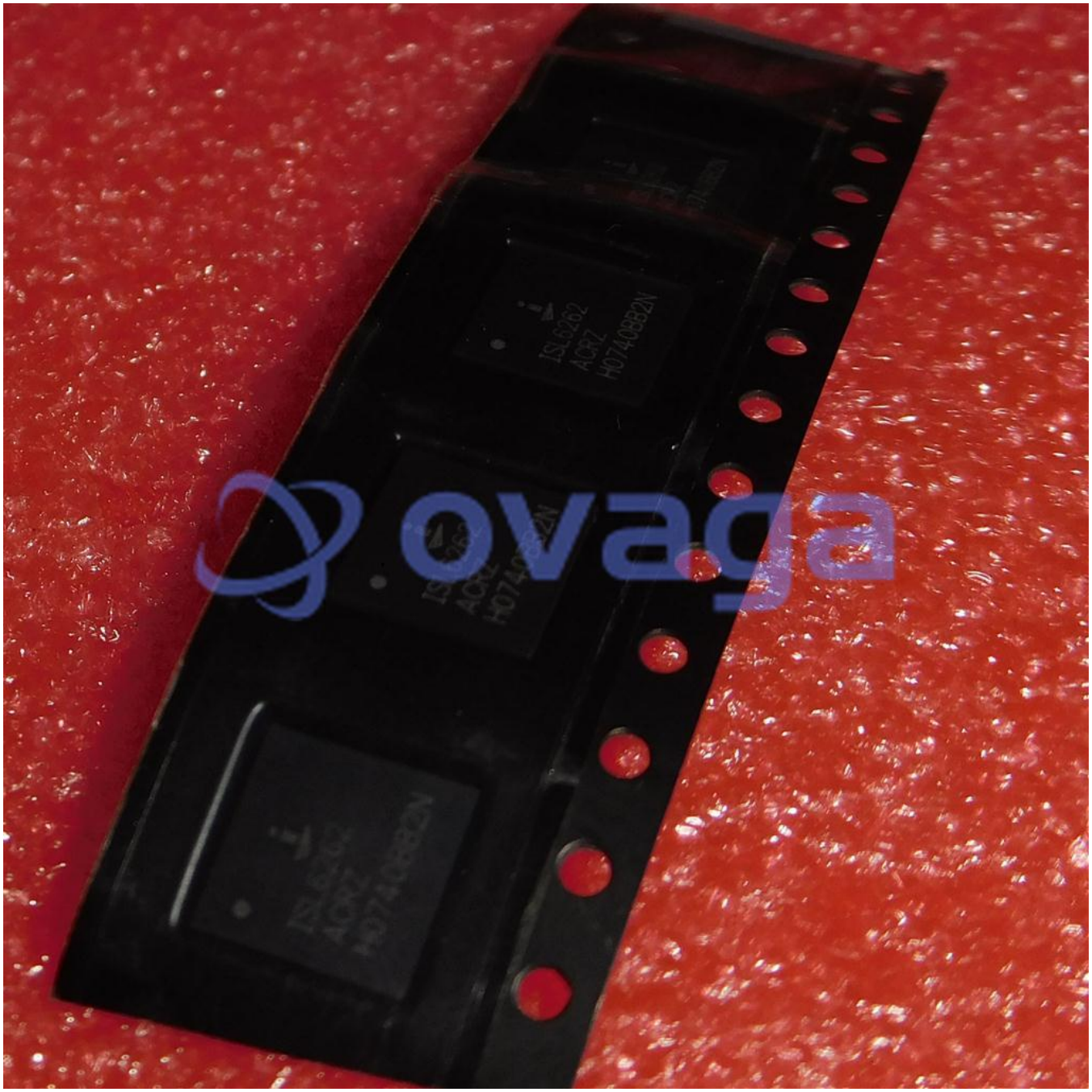
User Programmable Switching Frequency

Differential Remote CPU Die Voltage Sensing

Static and Dynamic Current Sharing

Overvoltage, Undervoltage, and Overcurrent Protection

Pb-Free (RoHS Compliant)



Related Products

[ISL6294IRZ-T](#)

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QFN-8

[ISL21080CIH315Z-TK](#)

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QFN-48

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