

MOSFET DRIVER 8DFN

Manufacturers	Renesas Technology Corp
Package/Case	DFN-8
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ISL95808HRZ-T or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ISL95808 is a high frequency, dual MOSFET driver with low shutdown current, optimized to drive two N-Channel power MOSFETs in a synchronous-rectified buck converter topology. It is especially suited for mobile computing applications that require high efficiency and excellent thermal performance. The driver, combined with an Intersil multiphase Buck PWM controller, forms a complete single-stage core-voltage regulator solution for advanced mobile microprocessors. The ISL95808 features a 4A typical sinking current for the lower gate driver. This current is capable of holding the lower MOSFET gate off during the rising edge of the phase node. This prevents shoot-through power loss caused by the high dv/dt of phase voltages. The operating voltage matches the 30V breakdown voltage of the MOSFETs commonly used in mobile computer power supplies. The ISL95808 also features a three-state PWM input. This PWM input, working together with Intersil's multiphase PWM controllers, will prevent negative voltage output during CPU shutdown. This feature eliminates a protective Schottky diode usually seen in microprocessor power systems. MOSFET gates can be efficiently switched up to 2MHz using the ISL95808. Each driver is capable of driving a 3000pF load with propagation delays of 8ns and transition times under 10ns. Bootstrapping is implemented with an internal Schottky diode. This reduces system cost and complexity, while allowing for the use of higher performance MOSFETs. Adaptive shoot-through protection is integrated to prevent both MOSFETs from conducting simultaneously. A diode emulation feature is integrated in the ISL95808 to enhance converter efficiency at light load conditions. This feature also allows for monotonic start-up into prebiased outputs. When diode emulation is enabled, the driver will allow discontinuous conduction mode by detecting when the inductor current reaches zero and subsequently turning off the low-side MOSFET gate. The ISL95808 also features very low shutdown supply current (5V, 3µA) to ensure the low power consumption.

Features

Dual MOSFET drivers for synchronous rectified bridge

Adaptive shoot-through protection

0.5Ω ON-resistance and 4A sink current capability

Supports high switching frequency up to 2MHz

Fast output rise and fall time

Low propagation delay

Three-state PWM input for power stage shutdown

Internal bootstrap Schottky diode

Low shutdown supply current (5V, 3μA)

Diode emulation for enhanced light-load efficiency and prebiased start-up applications

VCC POR (Power-On Reset) feature integrated

Low three-state shutdown hold-off time (typical 160ns)

DFN package

Pb-free (RoHS compliant)

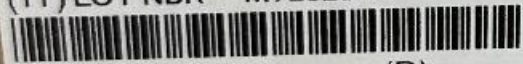
(P) CUST P/N



(1P) RENESAS P/N ISL95808HRZ-T



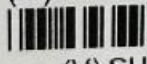
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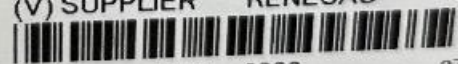
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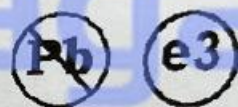
(V) SUPPLIER RENESAS



MSL 1 PBT: 260 Deg C

LLQ: 6000

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40-WFQFN Exposed Pad



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8pin-DFN