

## Device Information

### ISL95835

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#### 3+1 and 1+1 Voltage Regulator for IMVP-7/VR12™ CPUs

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### Datasheet



#### ISL95835

The ISL95835, ISL95837 datasheet is restricted to a very limited number of customers. To request a datasheet please email Jia Wei at [jwei@intersil.com](mailto:jwei@intersil.com)

$V_{IN}$ (min) (V)	4.5
$V_{IN}$ (max) (V)	5.5
$V_{OUT}$ (min) (V)	0
$V_{OUT}$ (max) (V)	1.52
$I_{OUT}$ (max) (A)	90
$V_{BIAS}$ (V)	5
Applications	VR12/IMVP7
Max # of outputs	2
Max # of phases	3
Droop	Y
Integrated MOSFET Driver	Y

### Product Information

#### Key Features

Serial Data Bus

Dual Outputs:

Configurable 3-, 2- or 1-phase for the 1st Output using 2 integrated Gate Drivers  
1-phase for the 2nd Output using an Integrated Gate Driver

0.5% System Accuracy Over-Temperature

Supports Multiple Current Sensing Methods

Lossless Inductor DCR Current Sensing

Precision Resistor Current Sensing

Differential Remote Voltage Sensing

Programmable  $V_{BOOT}$  Voltage at Start-up

Resistor Programmable  $I_{MAX}$ ,  $T_{MAX}$  for Both Outputs

Adaptive Body Diode Conduction Time Reduction

#### Description

Compliant with IMVP-7/VR12™, the ISL95835 provides a complete solution for microprocessor and graphic processor core power supply. It provides two Voltage Regulators (VRs) with three integrated gate drivers. The first VR can be configured as

3-, 2- or 1-phase VR while the second output is 1-phase VR, providing maximum flexibility. The two VRs share the serial control bus to communicate with the CPU and achieve lower cost and smaller board area compared with the two-chip approach.

Based on Intersil's Robust Ripple Regulator (R3) technology™, the PWM modulator compared to traditional modulators, has faster transient settling time, variable switching frequency during load transients and has improved light load efficiency with its ability to automatically change switching frequency.


The ISL95835 has several other key features. Both outputs support DCR current sensing with single NTC thermistor for DCR temperature compensation or accurate resistor current sensing. Both outputs come with remote voltage sense, programmable  $V_{BOOT}$  voltage, programmable  $I_{MAX}$ ,  $T_{MAX}$ , adjustable switching frequency, OC protection and separate Power-Good.

The ISL95837 can be considered as ISL95835 dedicated for 1+1 application. VR1 and VR2 are both 1-phase VR.

## Pricing / Packaging / Samples / Ordering














 iBuy direct from Intersil

 iBuy direct - out of stock

 Request samples

 Check distributor inventory

 Available in RoHS/Pb-Free

Part No.	Design-In Status	Temp.	Package	MSL	Price US \$			
ISL95835HRZ	Active	Hi-Temp Comm	40 Ld QFN	3				
ISL95835HRZ-T	Active	Hi-Temp Comm	40 Ld QFN T+R	3				
ISL95835IRZ	Active	Ind	40 Ld QFN	3				
ISL95835IRZ-T	Active	Ind	40 Ld QFN T+R	3				

The price listed is the manufacturer's suggested retail price for quantities of 1K units. However, prices in today's market are fluid and may change without notice.

MSL = Moisture Sensitivity Level - per IPC/JEDEC J-STD-020

SMD = Standard Microcircuit Drawing

## Technical Documentation

Datasheet(s):

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## Tools And Support

### iSim Design Simulation

No Models Available

### Applications

IMVP-7/VR12 Compliant Computers

### Related Devices

- [ISL6353](#) Multiphase PWM Regulator for VR12 DDR Memory Systems
- [ISL6363](#) Multiphase PWM Regulator for VR12™ Desktop CPUs
- [ISL6364](#) Dual 4-Phase + 1-Phase PWM Controller for VR12/IMVP7 Applications
- [ISL6364C](#) Dual 4-Phase + 1-Phase PWM Controller for VR12 Desktop Applications
- [ISL6366](#) Dual 6-Phase + 1-Phase PWM Controller for VR12/IMVP7 Applications
- [ISL95831](#) 3+1 Voltage Regulator for IMVP-7/VR12 CPUs
- [ISL95837](#) 3+1 and 1+1 Voltage Regulator for IMVP-7/VR12™ CPUs

 [Parametric Table](#)

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