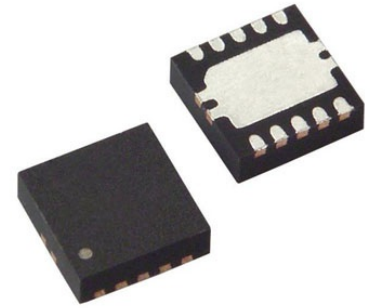


Buck Converter to Automotive 26-Pin VQFN-HR EP T/R**Manufacturer:** [Texas Instruments, Inc](#)**Package/Case:** VQFN-HR-26**Product Type:** Power Management ICs**Lifecycle:** Active

Images are for reference only

[Inquiry](#)**General Description**

The LP87524B/J/P-Q1 is designed to meet the power management requirements of the latest processors and platforms in various automotive power applications. The device contains four step-down DC-DC converter cores, which are configured as 4 single phase outputs. The device is controlled by an I²C-compatible serial interface and by enable signals.

The automatic PFM/PWM (AUTO mode) operation maximizes efficiency over a wide output-current range. The LP87524B/J/P-Q1 supports remote voltage sensing to compensate IR drop between the regulator output and the point-of-load (POL) thus improving the accuracy of the output voltage. In addition the switching clock can be forced to PWM mode and also synchronized to an external clock to minimize the disturbances.

The LP87524B/J/P-Q1 device supports load-current measurement without the addition of external current-sense resistors. In addition, the LP87524B/J/P-Q1 supports programmable start-up and shutdown delays and sequences synchronized to enable signals. The sequences can also include GPIO signals to control external regulators, load switches and processor reset. During start-up and voltage change, the device controls the output slew rate to minimize output voltage overshoot and the in-rush current.

Key Features

Qualified for Automotive Applications

AEC-Q100 Qualified With the Following Results:

Device Temperature Grade 1: -40°C to +125°C Ambient Operating Temperature

Input Voltage: 2.8 V to 5.5 V

Output Voltage: 0.6 V to 3.36 V

Four High-Efficiency Step-Down DC-DC Converter Cores:

Total Output Current Up To 10 A

Output Voltage Slew-Rate 3.8 mV/μs

4-MHz Switching Frequency

Spread-Spectrum Mode and Phase Interleaving

Configurable General Purpose I/O (GPIOs)

1

2

C-Compatible Interface which Supports Standard (100 kHz), Fast (400 kHz), Fast+ (1 MHz), and High-Speed (3.4 MHz) Modes

Interrupt Function with Programmable Masking

Programmable Power Good Signal (PGOOD)

Output Short-Circuit and Overload Protection

Overtemperature Warning and Protection

Overvoltage Protection (OVP) and Undervoltage Lockout (UVLO)

Recommended For You

LP2997MR

Texas Instruments, Inc

SOP-8

LP2951-50QDRGRQ1

Texas Instruments, Inc

SON-8

TL431ILP

Texas Instruments, Inc

TO-92

LP3966ES-ADJ/NOPB

Texas Instruments, Inc

TO263

TPL7407LPWR

Texas Instruments, Inc

TSSOP16

LP2997MR/NOPB

Texas Instruments, Inc

SOP8

TL431CLP

Texas Instruments, Inc

TO-92

LP2996MR/NOPB

Texas Instruments, Inc

SOP-8

LP2951-50QDRQ1

Texas Instruments, Inc

SOP8

LP5912Q1.8DRVRQ1

Texas Instruments, Inc

WSN-6

LP5912Q3.3DRVRQ1

Texas Instruments, Inc

WSN-6

LP2996MX

Texas Instruments, Inc

SOP-8

LP2996MX/NOPB

Texas Instruments, Inc

SOP8

LP2989AIM-3.3/NOPB

Texas Instruments, Inc

SOP8

LP2998MAX/NOPB

Texas Instruments, Inc

SOP8