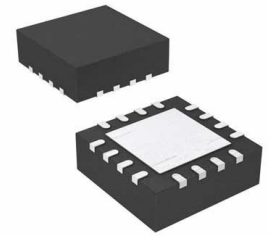


Conv DC-DC 3V to 36V Synchronous Step Down Single-Out 1V to 34.2V 6A Automotive 16-Pin VQFN-HR T/R



Images are for reference only

Manufacturer: [Texas Instruments, Inc](#)

Package/Case: VQFN16

Product Type: Power Management ICs

RoHS: RoHS Compliant/Lead free 

Lifecycle: Active

[Inquiry](#)

General Description

The LM6x4xx-Q1 buck regulator family are automotive-focused regulators providing either fixed or an adjustable output voltage which can be set from 1 V to 95% of expected input voltage. These regulators operate under a wide input voltage range of 3 to 36V and has transient tolerance up to 42 V.

The family is designed for low EMI. The device incorporates pin selectable spread spectrum, and an adjustable SW node rise time. Dual Random Spread Spectrum (DRSS) frequency hopping is set to $\pm 4\%$ (typical), drastically reducing peak emissions through a combination of triangular and pseudorandom modulation, and includes advanced techniques to reduce output voltage ripple caused by spread spectrum modulation.

An open-drain $\overline{\text{RESET}}$ output, with filtering and delayed release, gives a true indication of system status. In auto mode the device automatically transitions between Fixed frequency Pulse Width Modulation (FPWM) and Pulse Frequency Modulation (PFM) modes of operation, allowing an unloaded current consumption of only 5 μA (typical). Electrical characteristics are specified over a junction temperature range of -40°C to $+150^{\circ}\text{C}$.

Key Features

AEC-Q100 qualified for automotive applications:

Temperature grade 1: -40°C to +125°C, T

A

Functional Safety-Capable

Documentation available to aid functional safety system design

Input voltage range from 3 V to 36 V

RESET

Designed for low EMI:

Pin-configurable spread spectrum

Adjustable SW node rise time

Above and below AM band operation: pin configurable 400 kHz and 2.2 MHz fixed or adjustable from 200 kHz – 2.2 MHz

Low EMI symmetrical pinout

Light load mode is pin-configurable for constant frequency or pulse frequency modulation (PFM)

High-efficiency solution

95% efficient for an 8-A load

5- μ A input current while unloaded in auto mode

High power density

Built-in compensation, soft start, current limit, thermal shutdown, and UVLO

4.5-mm \times 3.5-mm wettable flank QFN package

JA

LM61495RPHEVM

Recommended For You

LM2637M

Texas Instruments, Inc

SOP24

LM5116MH

Texas Instruments, Inc

TSSOP20

LM234Z-3

Texas Instruments, Inc

TO-92

LM27761DSGR

Texas Instruments, Inc

WSO8

LM74700QDBVRQ1

Texas Instruments, Inc

SOT23-6

LM2991S

Texas Instruments, Inc

TO-263

LM74800QDRRRQ1

Texas Instruments, Inc
WSN-12

LMR14030SDDAR

Texas Instruments, Inc
SOP8

LM2940CT-12

Texas Instruments, Inc
TO-220

LM536035QPWPTQ1

Texas Instruments, Inc
HTSSOP-16

LM5575MH

Texas Instruments, Inc
TSSOP16

LM536013QDSXTQ1

Texas Instruments, Inc
WSN-10

LM5160QPWPRQ1

Texas Instruments, Inc
HTSSOP14

LM5576MH

Texas Instruments, Inc
TSSOP20

LMQ61460AFSQRJRRQ1

Texas Instruments, Inc
VQFN-14