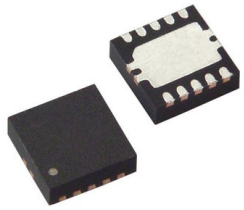
LMR36015FSCQRNXTQ1

Conv DC-DC 4.2V to 60V Synchronous Step Down Single-Out 1V to 58V 1.5A Automotive 12-Pin VQFN-HR T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	VQFN12
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active



Images are for reference only

Inquiry

General Description

The LMR36015 regulator is an easy-to-use, synchronous, step-down DC/DCconverter. With integrated high-side and low-side power MOSFETs, up to1.5 A of outputcurrent is delivered over a wide input voltage range of 4.2 V to60V. Tolerance goes up to 66 V. The transient tolerance reduces the necessary design effort to protectagainst overvoltages and meets the surge immunity requirements of IEC 61000-4-5.

The LMR36015 uses peak-current-mode control to provide optimal efficiencyand output voltage accuracy. Load transient performance is improved with FPWM feature in the 1-MHz regulator.Precision enable gives flexibility by enabling a direct connection to the wide input voltageor precise control over device start-up and shutdown. The power-good flag, with built-in filteringand delay, offers a true indication of system status eliminating the requirement for an externalsupervisor.

The LMR36015 is in a HotRod package whichenables low noise, higher efficiency, and the smallest package to dieratio. The device requires few external components and has a pinout designed for simple PCBlayout. The small solution size and feature set of the LMR36015 are designed tosimplify implementation for a wide range of end equipment, includingspace critical applications of ultra-small field transmitters and vision sensors.

Key Features

Designed for reliable and rugged applications

Input transient protection up to 66 V

Junction temperature range –40°C to +150°C

Protection features: thermal shutdown, input undervoltage lockout, cycle-by-cycle current limit, hiccup short-circuit protection

0.4-V dropout with 1.5-A load (typical)

Suited for scalable industrial power supplies

Pin compatible with:

LMR36006 (60 V, 0.6 A)

LMR33620/LMR33630 (36 V, 2 A, or 3 A)

400-kHz, 1-MHz frequency options

Low power dissipation across load spectrum

90% efficiency at 400 kHz (24VIN, 5VOUT, 1A)

93% efficiency at 400 kHz (12VIN, 5VOUT, 1A)

Increased light load efficiency in PFM

Low operating quiescent current of 26 µA

Small 2-mm × 3-mm HotRod package

Solution with few external components

LMR36006-Q1 and LMR36015-Q1 available in 400 kHz and 2.1 MHz, adjustable output, and fixed 3.3 VOUT

Optimized for ultra low EMI requirements

Meets CISPR25 class 5 standard

Hotrod package minimizes switch node ringing

Parallel input path minimizes parasitic inductance

Spread spectrum reduces peak emissions

Create a custom design using the LMR36015 with the WEBENCH Power Designer

Recommended For You

LM2637M	**LM5116MH**	**LM234Z-3**
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
SOP24	TSSOP20	TO-92

LM27761DSGR

Texas Instruments, Inc

WSON8

LM74700QDBVRQ1

Texas Instruments, Inc

SOT23-6

LM2991S

Texas Instruments, Inc

TO-263

LM74800QDRRRQ1

Texas Instruments, Inc

WSON-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

WSON-10

LM5160QPWPRQ1

Texas Instruments, Inc

HTSSOP14

LM5576MH

Texas Instruments, Inc

TSSOP20

LMQ61460AFSQRJRRQ1

Texas Instruments, Inc

VQFN-14