LM76202QPWPRQ1

OR Controller Single 0.168Ohm Automotive 16-Pin HTSSOP EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	HTSSOP16
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

LM76202QPWPRQ1 Image

Images are for reference only

Inquiry

General Description

The LM76202-Q1 device is a compact, feature-rich 60-V integrated ideal diode with a full suite of protection features. The wide supply input range allows control of 12-V and 24-V automotive battery driven applications. The device withstands and protects the loads from positive and negative supply voltages up to ±60 V. Load, source and device protection are provided with many programmable features including overcurrent, inrush current control, overvoltage and undervoltage thresholds. The internal robust protection control blocks along with the 60-V rating of the device simplifies the system design for ISO standard pulse tesing.

A shutdown pin provides external control for enabling and disabling the internal FETs and places the device in a low current shutdown mode. For system status monitoring and downstream load control, the device provides fault output and precise current monitor output. The MODE pin allows flexibility to configure the device between the three current-limiting fault responses (circuit breaker, latch off, and auto-retry modes). The device monitors $V_{(IN)}$ and $V_{(OUT)}$ to provide reverse current blocking when V(IN) < (V(OUT)-10mV). This function protects system bus from overvoltages during output short to battery faults and also helps in voltage holdup requirements during power fail and brownout conditions.

The device is available in a 5 mm × 4.4 mm 16-pin HTSSOP and is fully specified over a –40°C to +125°C temperature range.

Key Features

AEC-Q100 qualified for automotive applications
Temperature grade 1: –40°C ≤ T_A ≤ +125°C

AEC-Q100-012 short circuit reliability Grade A

HBM ESD classification level 2

CDM ESD classification level C6

4.2-V to 60-V operating voltage, 62-V maximum

Integrated reverse input polarity protection down to –60-V

Integrated back-to-back MOSFETs with 150 mΩ total RON

Transient immunity up-to 65 V

0.1-A to 2.23-A adjustable current limit
(±5% accuracy at 1 A)

Load protection during ISO7637 and ISO16750-2 testing

Short to battery and short to ground protection

Reverse current blocking for protection from output short to battery

IMON current indicator output (±8.5% accuracy)

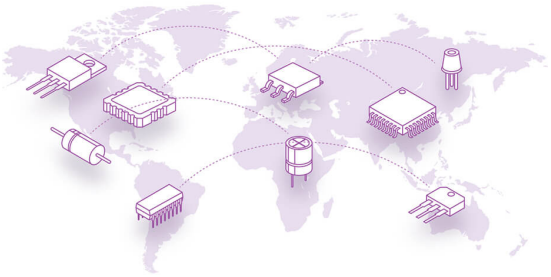
Low quiescent current (285 µA in operating, 16 µA in shutdown)

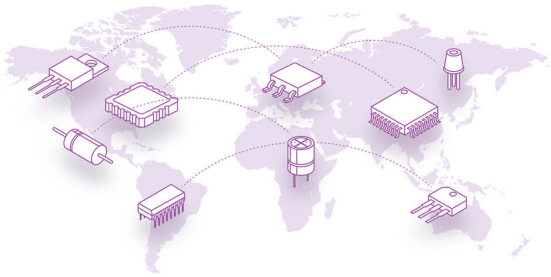
Adjustable UVLO, OVP cut off, inrush current control

Factory set 38-V overvoltage clamp option

Selectable current-limiting fault response options (auto-retry, latch off, CB modes)

Available in easy to use 16-Pin HTSSOP package





Recommended For You

LM2637M

Texas Instruments, Inc

SOP24

LM5116MH

Texas Instruments, Inc

TSSOP20

LM234Z-3

Texas Instruments, Inc

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

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VQFN-14