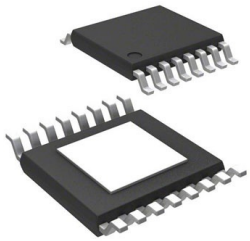
LM43603AQPWPRQ1

Conv DC-DC 3.5V to 36V Synchronous Step Down Single-Out 1V to 28V 3A 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



Images are for reference only

Inquiry

General Description

The LM43603-Q1 regulator is an easy-to-use synchronous step-down DC-DC converter capable of driving up to 3 A of load current from an input voltage ranging from 3.5 V to 36 V (42 V absolute maximum). The LM43603-Q1 provides exceptional efficiency, output accuracy, and dropout voltage in a very small solution size. An extended family is available in 0.5-A, 1-A, and 2-A load current options in pin-to-pin compatible packages. Peak current mode control is employed to achieve simple control loop compensation and cycle-by-cycle current limiting. Optional features such as programmable switching frequency, synchronization, power-good flag, precision enable, internal soft-start, extendable soft start, and tracking provide a flexible and easy to use platform for a wide range of applications. Discontinuous conduction and automatic frequency modulation at light loads improve light load efficiency. The family requires few external components and pin arrangement allows simple, optimum PCB layout. Protection features include thermal shutdown, V_{CC} undervoltage lockout, cycle-by-cycle current limit, and output short circuit protection. The LM43603-Q1 device is available in the HTSSOP (PWP) 16-pin leaded package (6.6 mm × 5.1 mm × 1.2 mm). The LM43603A-Q1 version is optimized for PFM operation and recommended for new design. The device is pin-to-pin compatible with LM4360x and LM4600x family.

Key Features

Qualified for Automotive Applications

AEC-Q100 Qualified With the Following Results:
Device Temperature Grade 1: –40°C to +125°C Operating Junction Temperature

27-µA Quiescent Current in Regulation

High Efficiency at Light Load (DCM and PFM)

Meets EN55022/CISPR 22 EMI Standards

Integrated Synchronous Rectification

Adjustable Frequency Range: 200 kHz to 2.2 MHz (500 kHz default)

Frequency Synchronization to External Clock

Internal Compensation

Stable With Almost any Combination of Ceramic, Polymer, Tantalum, and Aluminum Capacitors

Power-Good Flag

Soft Start into a Pre-Biased Load

Internal Soft Start: 4.1 ms

Extendable Soft-Start Time by External Capacitor

Output Voltage Tracking Capability

Precision Enable to a Program System UVLO

Output Short Circuit Protection with Hiccup Mode

Overtemperature Thermal Shutdown Protection

Create a Custom Design Using the LM43603-Q1 With the WEBENCH Power Designer

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

Texas Instruments, Inc

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