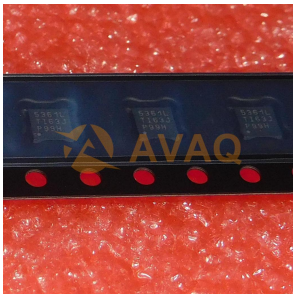
LM53601LQDSXTQ1

Conv DC-DC 3.55V to 36V Synchronous Step Down Single-Out 5V 1A Automotive 10-Pin WSON EP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	WSON-10
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active



Images are for reference only

Inquiry

General Description

The LM53600-Q1 and LM53601-Q1 synchronous buck regulator devices are optimized for automotive applications, providing an output voltage of 5 V, 3.3 V, or an adjustable output. Load current up to 650 mA is supported by the LM53600-Q1, while the LM53601-Q1 supports up to 1000 mA. Advanced high-speed circuitry allows the LM53600-Q1 and LM53601-Q1 devices to regulate from an input of 18 V to an output of 3.3 V at a fixed frequency of 2.1 MHz. Innovative architecture allows the device to regulate a 3.3-V output from an input voltage of only 3.8 V. The input voltage range up to 36 V, with transient tolerance of up to 42 V, eases input surge protection design. An open drain reset output, with filtering and delayed release, provides a true indication of system status. This feature negates the requirement for an additional supervisory component, saving cost and board space. Seamless transitions between PWM and PFM modes, along with a quiescent current of only 23 µA, ensures high efficiency and superior transient response at all loads. Few external components are needed allowing the generation of compact PCB layout. While the LM53600-Q1 and LM53601-Q1 devices are Q1 rated, electrical characteristics are guaranteed across a junction temperature range of –40°C up to 150°C.

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 Range

Device HBM Classification Level 2

Device CDM Classification Level C5

Wide Operating Input Voltage: 3.55 V to 36 V

Spread Spectrum Option Available

2.1-MHz Fixed Switching Frequency

Low Quiescent Current: 23 µA

Shutdown Current: 1.8 µA

Adjustable, 3.3-V, or 5-V Output

Maximum Current Load: 650 mA for LM53600-Q1,

1000 mA for LM53601-Q1

Pin Selectable Forced PWM Mode

RESET Output with Filter and Delay Release

External Frequency Synchronization

Internal Compensation, Soft Start, Current Limit,

and UVLO

10-Lead, 3-mm × 3-mm SON Package with

Wettable Flanks

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

VQFN-14