
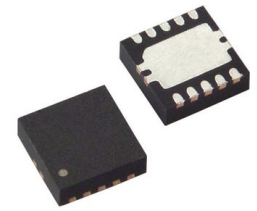


Conv DC-DC 3.5V to 42V Synchronous Step Down Single-Out 3.2V to 10V 2.5A Automotive 22-Pin VQFN-HR T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	VQFN22
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The LM53625-Q1/LM53635-Q1 synchronous buck regulator is optimized for automotive applications, providing an output voltage of 5 V, 3.3 V, or an adjustable output. Advanced high-speed circuitry allows the LM53625-Q1/LM53635-Q1 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 this device to regulate a 3.3-V output from an input voltage of only 3.55 V. All aspects of the LM53625-Q1/LM53635-Q1 are optimized for automotive and performance-driven industrial customers. An input voltage range up to 36 V, with transient tolerance up to 42 V, eases input surge protection design. The automotive-qualified Hotrod QFN package with wettable flanks reduces parasitic inductance and resistance while increasing efficiency, minimizing switch node ringing, and dramatically lowering electromagnetic interference (EMI). An open-drain reset output, with built-in filtering and delay, provides a true indication of system status. This feature negates the requirement for an additional supervisory component, saving cost and board space. Seamless transition between PWM and PFM modes and low quiescent current (only 15 μ A for the 3.3 V option) ensure high efficiency and superior transient responses at all loads.

Key Features

AEC-Q100 automotive qualified:
Device temperature grade 1: -40°C to +125°C ambient operating temperature range

Device HBM classification level 2

Device CDM classification level C6

-40°C to +150°C junction temperature range

15- μ A quiescent current at no load (typical) with 3.3-V output

5.0-mm \times 4.0-mm VQFN package with or without wettable flanks and 0.6-mm V_{IN} spacing

Low EMI and switch noise

Spread spectrum option

External frequency synchronization

$\overline{\text{RESET}}$ output with internal filter and 3-ms release timer

Pin-selectable forced PWM mode

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

0.6-V dropout at 3.5 A at 105°C T_A

$\pm 1\%$ output voltage tolerance (-40°C to 125°C T_J)

Available with fixed 5-V, 3.3-V or adjustable output

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

WSO8-12

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

WSO8-10

LM5160QPWRQ1

Texas Instruments, Inc

HTSSOP14

LM5576MH

Texas Instruments, Inc

TSSOP20

LMQ61460AFSQRJRRQ1

Texas Instruments, Inc

VQFN-14