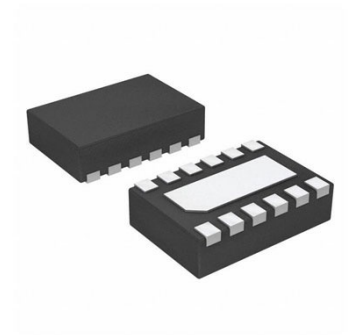


## DC/DC Cntrlr Single-OUT Step Up 2200kHz Automotive 12-Pin WSON EP T/R



Images are for reference only

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** WSON-12

**Product Type:** Power Management ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

[Inquiry](#)

### General Description

The LM5155x-Q1 (LM5155-Q1 and LM51551-Q1) is a wide input range, non-synchronous boost controller that uses peak current mode control. The device can be used in boost, SEPIC, and flyback topologies.

The LM5155x-Q1 can start up from a 1-cell battery with a minimum of 2.97 V if the BIAS pin is connected to the VCC pin. It can operate with the input supply voltage as low as 1.5 V if the BIAS pin is greater than 3.5 V.

## Key Features

AEC-Q100 qualified for automotive applications  
Temperature grade 1:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  T<sub>A</sub>

Functional Safety-Capable  
Documentation available to aid functional safety system design

Wide input operating range for car and portable battery applications  
3.5-V to 45-V Operating range

2.97-V to 16-V When BIAS = VCC

Minimum boost supply voltage 1.5 V when BIAS  $\geq$  3.5 V

Input transient protection up to 50 V

Minimized battery drain  
Low shutdown current ( $I_Q \leq 2.6 \mu\text{A}$ )

Low operating current ( $I_Q \leq 480 \mu\text{A}$ )

Small solution size and low cost  
Maximum switching frequency of 2.2 MHz

12-Pin WSON package (3 mm  $\times$  2 mm) with wettable flanks

Integrated error amplifier allows primary-side regulation without optocoupler (flyback)

Minimized undershoot during cranking (start-stop application)

Higher efficiency with low-power dissipation  
100-mV  $\pm$ 7% Low current limit threshold

Strong 1.5-A peak standard MOSFET driver

Supports external VCC supply

Avoid AM band interference and crosstalk  
Optional clock synchronization

Dynamically programmable switching frequency from 100 kHz to 2.2 MHz

Integrated protection features  
Constant peak current limiting over input voltage

Optional hiccup mode short-circuit protection (see the *Device Comparison Table*)

Programmable line UVLO

OVP protection

Thermal shutdown

Accurate  $\pm$ 1% accuracy feedback reference

Programmable extra slope compensation

Adjustable soft start

PGOOD indicator

Create a custom design using the LM5155x with the WEBENCH power designer

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## Recommended For You

**AVAQ SEMICONDUCTOR CO., LIMITED**

**Email: [sales@avaq.com](mailto:sales@avaq.com)**

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**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

WSO-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

WSO-10

**LM5160QPWPRQ1**

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HTSSOP14

**LM5576MH**

Texas Instruments, Inc

TSSOP20

**LMQ61460AFSQRJRRQ1**

Texas Instruments, Inc

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