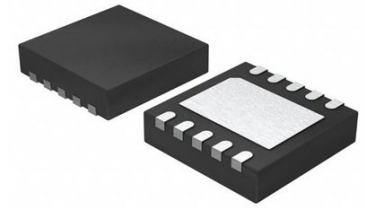


## DC/DC Cntrlr Single-OUT Flyback 350kHz Automotive 8-Pin WSON EP T/R



Images are for reference only

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

**Package/Case:** WSON8

**Product Type:** Power Management ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

[Inquiry](#)

### General Description

The LM5180-Q1 is a primary-side regulated (PSR) flyback converter with high efficiency over a wide input voltage range of 4.5 V to 65 V. The isolated output voltage is sampled from the primary-side flyback voltage, eliminating the need for an optocoupler, voltage reference, or third winding from the transformer for output voltage regulation. The high level of integration results in a simple, reliable and high-density design with only one component crossing the isolation barrier. Boundary conduction mode (BCM) switching enables a compact magnetic solution and better than  $\pm 1.5\%$  load and line regulation performance. An integrated 100-V power MOSFET provides output power up to 7 W with enhanced headroom for line transients.

The LM5180-Q1 converter simplifies implementation of isolated DC/DC supplies with optional features to optimize performance for the target end equipment. The output voltage is set by one resistor, while an optional resistor improves output voltage accuracy by negating the thermal coefficient of the flyback diode voltage drop. Additional features include an internally-fixed or externally-programmable soft start, optional bias supply connection for higher efficiency, precision enable input with hysteresis for adjustable line UVLO, hiccup-mode overload protection, and thermal shutdown protection with automatic recovery. The LM5180-Q1 is qualified to automotive AEC-Q100 grade 1 and is available in 8-pin WSON package with 0.8-mm pin pitch and wettable flanks.

## Key Features

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

Designed for reliable and rugged applications  
Wide input voltage range of 4.5 V to 65 V

Robust solution with only one component crossing the isolation barrier

±1.5% total output regulation accuracy

Optional  $V_{OUT}$  temperature compensation

6- $\mu$ s internal or programmable soft start

Input UVLO and thermal shutdown protection

Hiccup-mode overcurrent fault protection

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

Integration reduces solution size and cost  
Integrated 100-V, 0.4- $\Omega$  power MOSFET

No opto-coupler or transformer auxiliary winding required for  $V_{OUT}$  regulation

Low EMI operation to meet CISPR 25

High efficiency PSR flyback operation  
Quasi-resonant switching in boundary conduction mode (BCM) at heavy load

External bias option for improved efficiency

Single- and multi-output implementations

Create a custom regulator design using WEBENCH Power Designer

## Recommended For You

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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  
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

WSON-10

**LM5160QPWPRQ1**

Texas Instruments, Inc

HTSSOP14

**LM5576MH**

Texas Instruments, Inc

TSSOP20

**LMQ61460AFSQRJRRQ1**

Texas Instruments, Inc

VQFN-14