

## LDO Regulator Pos 3.3V 1A Automotive 20-Pin HTSSOP EP

T/R

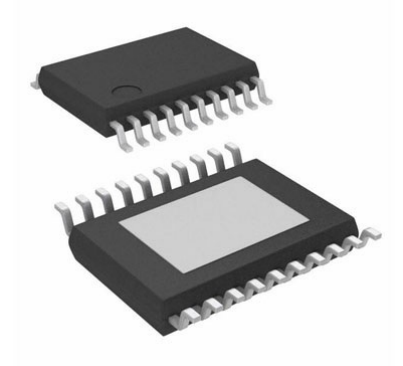
**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** HTSSOP20

**Product Type:** Power Management ICs

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active



Images are for reference only

[Inquiry](#)

### General Description

This device is designed to have a fast transient response and be stable with 10  $\mu$ F capacitors. This combination provides high performance at a reasonable cost.

Because the PMOS device behaves as a low-value resistor, the dropout voltage is very low (typically 230 mV at an output current of 1 A for the TPS76850-Q1) and is directly proportional to the output current. Additionally, because the PMOS pass element is a voltage-driven device, the quiescent current is very low and independent of output loading (typically 85  $\mu$ A over the full range of output current, 0 mA to 1 A). These two key specifications yield a significant improvement in operating life for battery-powered systems. This LDO family also features a shutdown mode; applying a TTL high signal to the enable ( $\overline{EN}$ ) input shuts down the regulator, reducing the quiescent current to less than 1  $\mu$ A at  $T_J = 25^\circ\text{C}$ .

Power good (PG) is an active-high output, which can be used to implement a power-on reset or a low-battery indicator.

The TPS768xx-Q1 is offered in 1.8-V, 2.5-V, 3.3-V, and 5-V fixed-voltage versions and in an adjustable version (programmable over the range of 1.2 V to 5.5 V). Output voltage tolerance is specified as a maximum of 2% over line, load, and temperature ranges. The TPS768xx-Q1 family is available in a 20-pin PWP package.

## 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 ESD Classification Level H2

Device CDM ESD Classification Level C4B

1-A Low-Dropout (LDO) Voltage Regulator

Available in 1.8-V, 2.5-V, 3.3-V, and 5-V Fixed-Output and an Adjustable Version

Dropout Voltage Down to 230 mV at 1 A (TPS76850-Q1)

Ultralow 85- $\mu$ A Typical Quiescent Current

Fast Transient Response

2% Tolerance Over Specified Conditions for Fixed-Output Versions

Open-Drain Power Good (See TPS767xx-Q1 for Power-On Reset With 200-ms Delay Option)

20-Pin TSSOP (PWP) Package

Thermal Shutdown Protection

## Recommended For You

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### TPD3S014DBVR

Texas Instruments, Inc

SOT23-6

### TPS2065CDBVR

Texas Instruments, Inc

SOT23-5

### TPS2557DRBT

Texas Instruments, Inc

SON8

### TPS2042BDR

Texas Instruments, Inc

SOP8

### TPS2051BDR

Texas Instruments, Inc

SOP8

### TPL7407LPWR

Texas Instruments, Inc

TSSOP16

### TPS23753APWR

Texas Instruments, Inc

TSSOP14

### TPS2116DRLR

Texas Instruments, Inc

SOT5X3-8

### TPS259460ARPWR

Texas Instruments, Inc

VQFN-10

### TPS23751PWPR

Texas Instruments, Inc

HTSSOP16

### TPS65150QPWPRQ1

Texas Instruments, Inc

HTSSOP-24

### TPS2410PWR

Texas Instruments, Inc

TSSOP-14

**TPS22914BYFPR**

Texas Instruments, Inc

DSBGA4

**TPS2115ADRBR**

Texas Instruments, Inc

VSON8

**TPS2113ADRBR**

Texas Instruments, Inc

SON8