
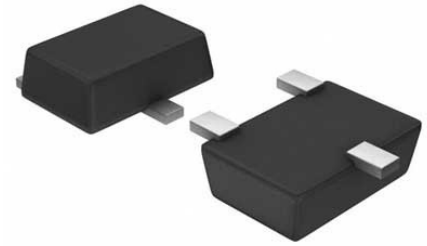


## DIST Single 5.5V 0.85A Automotive 6-Pin SOT-23 T/R

|                      |  |
|----------------------|--|
| <b>Manufacturer:</b> | <a href="#">Texas Instruments, Inc</a>   |
| <b>Package/Case:</b> | SOT23-6  |
| <b>Product Type:</b> | Switches   |
| <b>RoHS:</b>         | RoHS Compliant/Lead free  |
| <b>Lifecycle:</b>    | Active   |



Images are for reference only

[Inquiry](#)**General Description**

The TPD3S014-Q1 is an integrated device that features a current-limited load switch and a two-channel transient voltage suppressor (TVS) based electrostatic discharge (ESD) protection diode array for USB interfaces.

The TPD3S014-Q1 device is intended for applications such as USB where heavy capacitive loads and short-circuits are likely to be encountered; the TPD3S014-Q1 provides short-circuit protection and overcurrent protection. The TPD3S014-Q1 limits the output current to a safe level by operating in constant current mode when the output load exceeds the current limit threshold. The fast overload response eases the burden on the main 5 V power supply by quickly regulating the power when the output is shorted. The rise and fall times for the current limit switch are controlled to minimize current surges when turning the device on and off.

The TPD3S014-Q1 allows 0.5 A of continuous current. The TVS diode array is rated to dissipate ESD strikes above the maximum level specified in the IEC 61000-4-2 international standard.

The high level of integration, combined with its easy-to-route DBV package, allows this device to provide great circuit protection for USB interfaces in applications like head units, USB hubs, and media interfaces.

## Key Features

AEC-Q100 Qualified (Grade 2)

Ambient Temperature Range: -40°C to +105°C

Functional Safety-Capable

Documentation available to aid functional safety system design

Continuous Current Rating of 0.5 A

Fixed, Constant Current Limits of 0.85 A (typical)

Fast Overcurrent Response – 2  $\mu$ s

Integrated Output Discharge

Reverse Current Blocking

Short-Circuit Protection

Over Temperature Protection With Auto-Restart

Built-In Soft Start

IEC 61000-4-2 Level 4 ESD Protection (External Pins)

$\pm$ 12-kV Contact Discharge (IEC 61000-4-2)

$\pm$ 15-kV Air Gap Discharge (IEC 61000-4-2)

ISO 10605 330-pF, 330- ESD Protection (External Pins)

$\pm$ 8-kV Contact Discharge

$\pm$ 15-kV Air Gap Discharge

6-Pin SOT-23 Package (2.90 mm  $\times$  1.60 mm)

## Recommended For You

---

### 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

**TPS65150QPWRQ1**

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