

Power Switch Hi Side 1-OUT 4A 0.016Ohm Automotive 8-Pin WSON EP T/R

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|----------------------|--|---|
| Manufacturer: | Texas Instruments, Inc | <input type="text" value="TPS22965QWDSGRQ1 Image"/> |
| Package/Case: | WSON-8 | Images are for reference only |
| Product Type: | Switches | Inquiry |
| RoHS: | RoHS Compliant/Lead free  | |
| Lifecycle: | Active | |

General Description

The TPS22965x-Q1 is a small, ultra-low-R_{ON}, single-channel load switch with controlled turn-on. The device contains an N-channel MOSFET that can operate over an input voltage range of 0.8 V to 5.5 V and can support a maximum continuous current of 4 A. The V_{OUT} rise time is configurable so that inrush current can be reduced. The TPS22965-Q1 and TPS22965W-Q1 devices include a 225-Ω on-chip load resistor for quick output discharge when the switch is turned off.

The TPS22965x-Q1 devices are available in a small, space-saving 2-mm × 2-mm 8-pin WSON package (DSG0008A) with integrated thermal pad allowing for high power dissipation. The TPS22965-Q1 and TPS22965N-Q1 devices are characterized for operation over the free-air temperature range of -40°C to 105°C. Furthermore, the TPS22965W-Q1 and TPS22965NW-Q1 devices feature wettable flanks in the same WSON package (DSG0008B) and it is characterized for operation over the free-air temperature range of -40°C to +125°C.

Key Features

Qualified for automotive applications
AEC-Q100 qualified

Device temperature grade 2: -40°C to $+105^{\circ}\text{C}$ (TPS22965-Q1, TPS22965N-Q1)

Device temperature grade 1: -40°C to $+125^{\circ}\text{C}$ (TPS22965W-Q1, TPS22965NW-Q1)

Device HBM ESD classification level 3A

Device CDM ESD classification level C6

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

Integrated single channel load switch

Input voltage range: 0.8 V to 5.5 V

Ultra-low on resistance (R_{ON})
 $R_{\text{ON}} = 16\text{ m}$ at $V_{\text{IN}} = 5\text{ V}$ ($V_{\text{BIAS}} = 5\text{ V}$)

$R_{\text{ON}} = 16\text{ m}$ at $V_{\text{IN}} = 3.6\text{ V}$ ($V_{\text{BIAS}} = 5\text{ V}$)

$R_{\text{ON}} = 16\text{ m}$ at $V_{\text{IN}} = 1.8\text{ V}$ ($V_{\text{BIAS}} = 5\text{ V}$)

4-A maximum continuous switch current

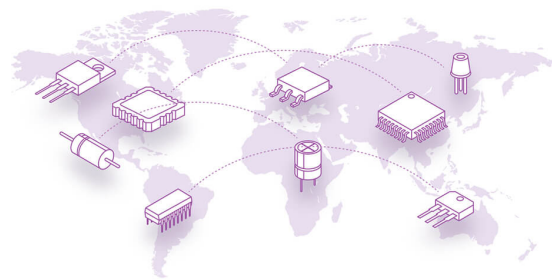
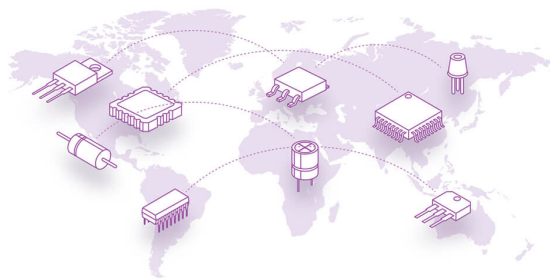
Low quiescent current (50 μA)

Low control input threshold enables use of 1.2-, 1.8-, 2.5- and 3.3-V logic

Configurable rise time

Quick Output Discharge (QOD) (TPS22965-Q1 and TPS22965W-Q1 only)

WSON 8-pin package with thermal pad



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

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