

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

<b>Manufacturer:</b>	<a href="#">Texas Instruments, Inc</a>	<input type="text" value="TPS22965TDSGRQ1 Image"/>
<b>Package/Case:</b>	WSON-8	Images are for reference only
<b>Product Type:</b>	Switches	<input type="button" value="Inquiry"/>
<b>RoHS:</b>	RoHS Compliant/Lead free 	
<b>Lifecycle:</b>	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- $\Omega$  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  $\times$  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  $-40^{\circ}\text{C}$  to  $105^{\circ}\text{C}$ . 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  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

## Key Features

Qualified for automotive applications  
AEC-Q100 qualified

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

Device temperature grade 1:  $-40^{\circ}\text{C}$  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 ( $R_{\text{ON}}$ )  
 $R_{\text{ON}} = 16\text{ m}$  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

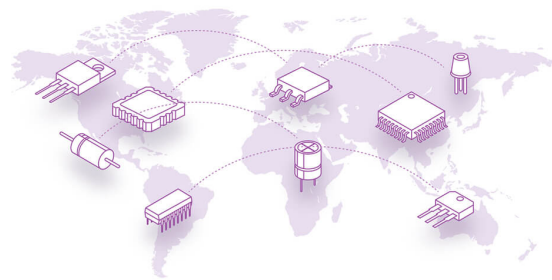
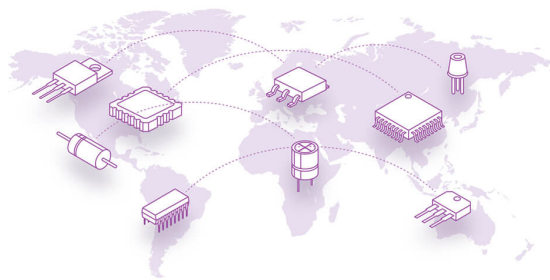
Low quiescent current (50  $\mu\text{A}$ )

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

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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