

**MPS4992**

**SILICON**  
**BI-DIRECTIONAL SWITCH**



**TO-92 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR MPS4992 is a silicon bi-directional switch designed for full-wave TRIAC and half-wave SCR triggering applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

|  | SYMBOL    |             | UNITS              |
|--|-----------|-------------|--------------------|
| DC Forward Current   | $I_F$     | 200         | mA                 |
| Peak Repetitive Forward Current ( $T_A=100^{\circ}\text{C}$ )<br>(1% Duty Cycle, $t_p=10\mu\text{s}$ ) | $I_{FM}$  | 2.0         | A                  |
| DC Gate Current (off-state)  | $I_G$     | 5.0         | mA                 |
| Power Dissipation  | $P_D$     | 500         | mW                 |
| Operating Junction Temperature   | $T_J$     | -55 to +125 | $^{\circ}\text{C}$ |
| Storage Temperature  | $T_{stg}$ | -65 to +150 | $^{\circ}\text{C}$ |

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

| CHARACTERISTIC             | SYMBOL | TEST CONDITIONS    | MIN | MAX | UNITS         |
|----------------------------|--------|--------------------|-----|-----|---------------|
| Switching Voltage          | $V_S$  |                    | 7.5 | 9.0 | V             |
| Switching Current          | $I_S$  |                    |     | 120 | $\mu\text{A}$ |
| Holding Current            | $I_H$  |                    |     | 500 | $\mu\text{A}$ |
| Off-state Blocking Current | $I_B$  | $V_F=5.0\text{V}$  |     | 0.1 | $\mu\text{A}$ |
| Forward Voltage            | $V_F$  | $I_F=200\text{mA}$ |     | 1.7 | V             |

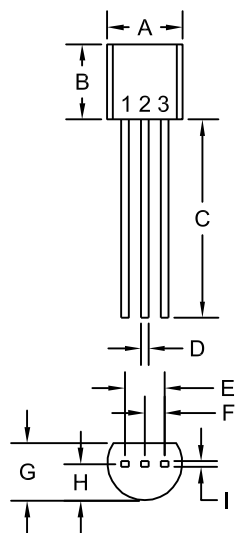
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**TO-92 CASE - MECHANICAL OUTLINE**



| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A (DIA)    | 0.175  | 0.205 | 4.45        | 5.21 |
| B          | 0.170  | 0.210 | 4.32        | 5.33 |
| C          | 0.500  | -     | 12.70       | -    |
| D          | 0.016  | 0.022 | 0.41        | 0.56 |
| E          | 0.100  |       | 2.54        |      |
| F          | 0.050  |       | 1.27        |      |
| G          | 0.125  | 0.165 | 3.18        | 4.19 |
| H          | 0.080  | 0.105 | 2.03        | 2.67 |
| I          | 0.015  |       | 0.38        |      |

TO-92 (REV: R1)

**LEAD CODE:**

- 1) MT1
- 2) Gate
- 3) MT2

**MARKING: FULL PART NUMBER**

R1

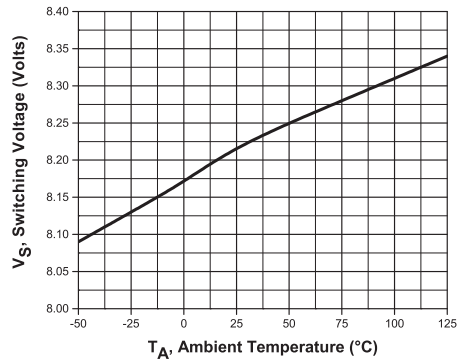
R3 (16-April 2013)

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**BI-DIRECTIONAL SWITCH**

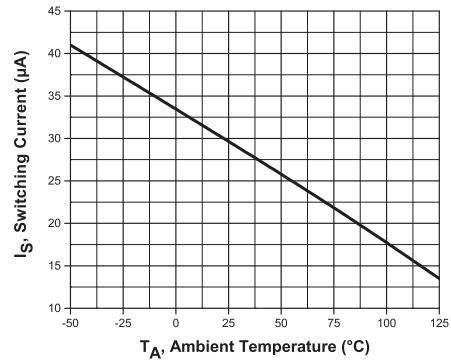


**TYPICAL ELECTRICAL CHARACTERISTICS**

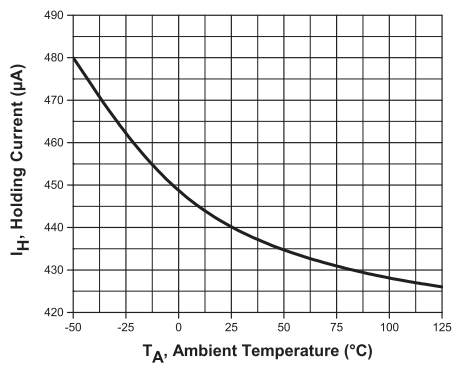
**Switching Voltage**



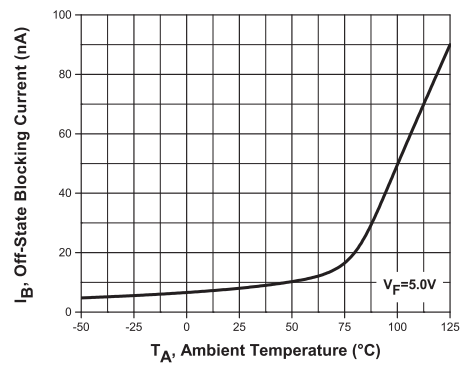
**Switching Current**



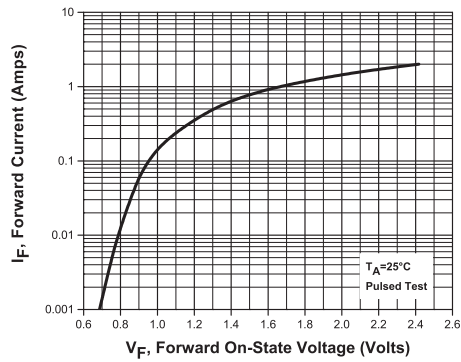
**Holding Current**



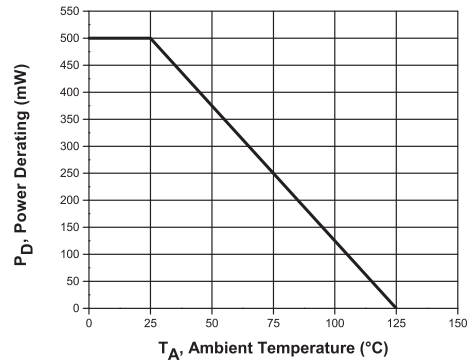
**Off-State Blocking Current**



**Forward On-State Voltage**



**Power Derating**



R3 (16-April 2013)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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