

**CMPD4448**  
**SURFACE MOUNT**  
**HIGH SPEED**  
**SILICON SWITCHING DIODE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPD4448 type is an ultra-high speed silicon switching diode manufactured by the epitaxial planar process, in an epoxy molded surface mount package, designed for high speed switching applications.

**MARKING CODE: AAD**



**SOT-23 CASE**

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

|  |
|--|
| Continuous Reverse Voltage                       |
| Peak Repetitive Reverse Voltage                  |
| Continuous Forward Current                       |
| Peak Repetitive Forward Current                  |
| Peak Forward Surge Current, $t_p=1.0\mu\text{s}$ |
| Peak Forward Surge Current, $t_p=1.0\text{s}$    |
| Power Dissipation                                |
| Operating and Storage Junction Temperature       |
| Thermal Resistance                               |

**SYMBOL**

|                |             |
|----------------|-------------|
| $V_R$          | 75          |
| $V_{RRM}$      | 100         |
| $I_F$          | 250         |
| $I_{FRM}$      | 500         |
| $I_{FSM}$      | 4.0         |
| $I_{FSM}$      | 1.0         |
| $P_D$          | 350         |
| $T_J, T_{stg}$ | -65 to +150 |
| $\theta_{JA}$  | 357         |

**UNITS**

|                    |
|--------------------|
| V                  |
| V                  |
| mA                 |
| mA                 |
| A                  |
| A                  |
| mW                 |
| $^\circ\text{C}$   |
| $^\circ\text{C/W}$ |

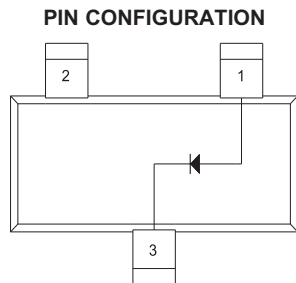
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| <b>SYMBOL</b> | <b>TEST CONDITIONS</b>   | <b>MIN</b> | <b>MAX</b> | <b>UNITS</b> |
|---------------|--|------------|------------|--------------|
| $I_R$         | $V_R=20\text{V}$   |            | 25         | nA           |
| $BV_R$        | $I_R=5.0\mu\text{A}$   | 75         |            | V            |
| $BV_R$        | $I_R=100\mu\text{A}$   | 100        |            | V            |
| $V_F$         | $I_F=5.0\text{mA}$   | 0.62       | 0.72       | V            |
| $V_F$         | $I_F=100\text{mA}$   |            | 1.0        | V            |
| $C_T$         | $V_R=0, f=1.0\text{MHz}$   |            | 4.0        | pF           |
| $t_{rr}$      | $I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0\text{mA}$ |            | 4.0        | ns           |

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**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**  
 1) Anode  
 2) No Connection  
 3) Cathode

**MARKING CODE: AAD**

| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.003  | 0.007 | 0.08        | 0.18 |
| B      | 0.006  | -     | 0.15        | -    |
| C      | -      | 0.005 | -           | 0.13 |
| D      | 0.035  | 0.043 | 0.89        | 1.09 |
| E      | 0.110  | 0.120 | 2.80        | 3.05 |
| F      | 0.075  |       | 1.90        |      |
| G      | 0.037  |       | 0.95        |      |
| H      | 0.047  | 0.055 | 1.19        | 1.40 |
| I      | 0.083  | 0.098 | 2.10        | 2.49 |
| J      | 0.014  | 0.020 | 0.35        | 0.50 |

SOT-23 (REV: R3)

R7 (25-January 2010)

## 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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