

**CMSD4448**  
**SURFACE MOUNT**  
**HIGH SPEED**  
**SILICON SWITCHING DIODE**



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

**SUPERmini™**



**SOT-323 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSD4448 type is a ultra-high speed silicon switching diode manufactured by the epitaxial planar process, in an epoxy molded SUPERmini™ surface mount package, designed for high switching applications.

**MARKING CODE: ADA**

**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         |
| $P_D$          | 275         |
| $T_J, T_{stg}$ | -65 to +150 |
| $\theta_{JA}$  | 455         |

**UNITS**

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

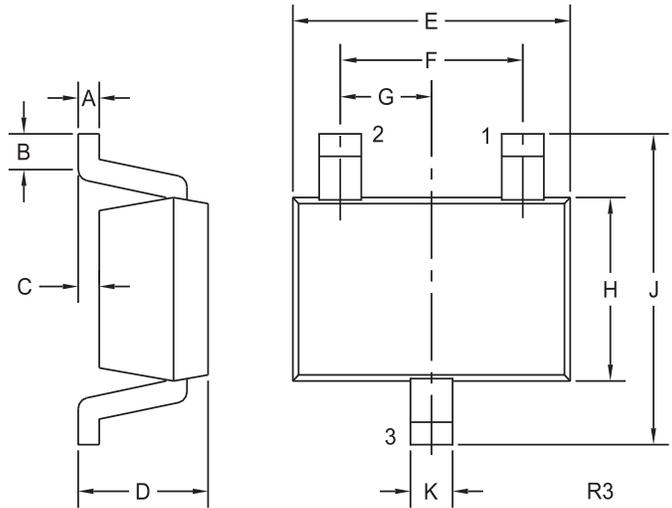
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL   | TEST CONDITIONS   | MIN  | MAX  | UNITS |
|----------|---|------|------|-------|
| $I_R$    | $V_R=20\text{V}$  |      | 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    |
| $t_{rr}$ | $I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$ |      | 4.0  | ns    |

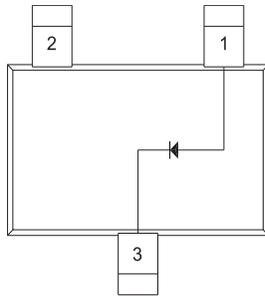
**CMSD4448**  
**SURFACE MOUNT**  
**HIGH SPEED**  
**SILICON SWITCHING DIODE**



**SOT-323 CASE - MECHANICAL OUTLINE**



**PIN CONFIGURATION**



**LEAD CODE:**

- 1) Anode
- 2) No Connection
- 3) Cathode

**MARKING CODE: ADA**

| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.002  | 0.008 | 0.05        | 0.20 |
| B      | 0.004  | -     | 0.10        | -    |
| C      | -      | 0.004 | -           | 0.10 |
| D      | 0.031  | 0.043 | 0.80        | 1.10 |
| E      | 0.071  | 0.087 | 1.80        | 2.20 |
| F      | 0.051  |       | 1.30        |      |
| G      | 0.026  |       | 0.65        |      |
| H      | 0.045  | 0.053 | 1.15        | 1.35 |
| J      | 0.079  | 0.087 | 2.00        | 2.20 |
| K      | 0.008  | 0.016 | 0.20        | 0.40 |

SOT-323 (REV: R3)

R5 (8-February 2010)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



---

### 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

---

### 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

---

### 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).

---

### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)