

**CMOD4448**

**ULTRAmi<sup>TM</sup>**  
**HIGH SPEED**  
**SWITCHING DIODE**

**ULTRAmi<sup>TM</sup>**



**SOD-523 CASE**

**Central<sup>TM</sup>**  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMOD4448 type is a ultra-high speed silicon switching diode manufactured by the epitaxial planar process, epoxy molded in an ULTRAmi<sup>TM</sup> surface mount package, designed for high speed switching applications. Marking code is **48**.

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

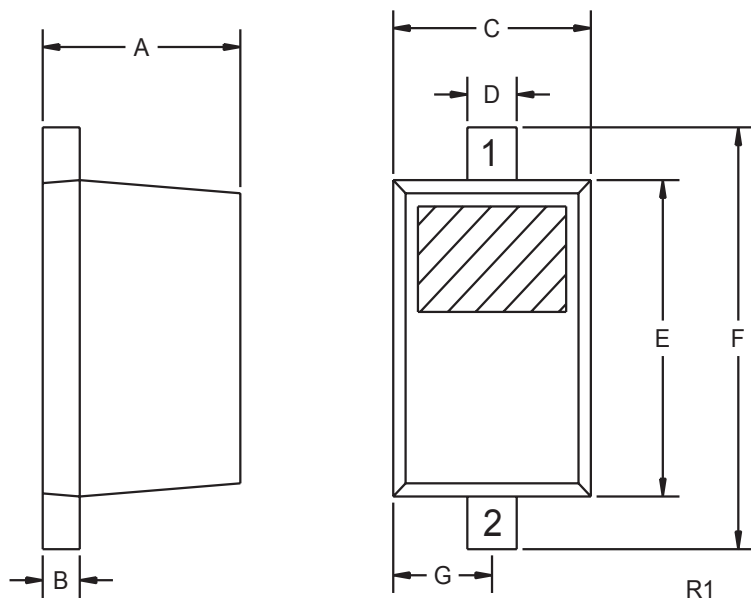
|                                                | SYMBOL         |             | UNITS                |
|------------------------------------------------|----------------|-------------|----------------------|
| Continuous Reverse Voltage                     | $V_R$          | 75          | V                    |
| Peak Repetitive Reverse Voltage                | $V_{RRM}$      | 100         | V                    |
| Continuous Forward Current                     | $I_F$          | 250         | mA                   |
| Peak Repetitive Forward Current                | $I_{FRM}$      | 250         | mA                   |
| Forward Surge Current, $t_p=1\ \mu\text{sec.}$ | $I_{FSM}$      | 4000        | mA                   |
| Forward Surge Current, $t_p=1\ \text{sec.}$    | $I_{FSM}$      | 1000        | mA                   |
| Power Dissipation                              | $P_D$          | 250         | mW                   |
| Operating and Storage<br>Junction Temperature  | $T_J, T_{stg}$ | -65 to +150 | $^{\circ}\text{C}$   |
| Thermal Resistance                             | $\Theta_{JA}$  | 500         | $^{\circ}\text{C/W}$ |

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

| SYMBOL   | TEST CONDITIONS                                                      | MIN  | MAX  | UNITS |
|----------|----------------------------------------------------------------------|------|------|-------|
| $V_{BR}$ | $I_R=5.0\ \mu\text{A}$                                               | 75   |      | V     |
| $V_{BR}$ | $I_R=100\ \mu\text{A}$                                               | 100  |      | V     |
| $I_R$    | $V_R=20\text{V}$                                                     |      | 25   | nA    |
| $V_F$    | $I_F=5.0\text{mA}$                                                   | 0.62 | 0.72 | V     |
| $V_F$    | $I_F=100\text{mA}$                                                   |      | 1.0  | V     |
| $C_T$    | $V_R=0, f=1\ \text{MHz}$                                             |      | 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    |

R1 ( 20-July 2001)

SOD-523 - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode

MARKING CODE: 48

| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.020  | 0.031 | 0.50        | 0.80 |
| B          | 0.004  | 0.008 | 0.10        | 0.20 |
| C          | 0.028  | 0.035 | 0.70        | 0.90 |
| D          | 0.008  | 0.011 | 0.20        | 0.28 |
| E          | 0.039  | 0.055 | 1.00        | 1.40 |
| F          | 0.055  | 0.071 | 1.40        | 1.80 |
| G          | 0.016  |       | 0.40        |      |

SOD-523 (REV: R1)

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