

**CMHD4448**  
**HIGH SPEED**  
**SWITCHING DIODE**



**SOD-123 CASE**

# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMHD4448 type is a ultra-high speed silicon switching diode manufactured by the epitaxial planar process, epoxy molded in a SOD-123 surface mount package, designed for high speed switching applications. **Marking code is C48.**

MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

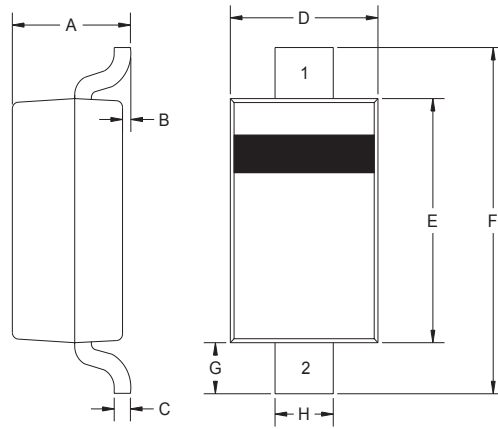
|  | <u>SYMBOL</u>                     |             | <u>UNITS</u> |
|--|-----------------------------------|-------------|--------------|
| Continuous Reverse Voltage                         | V <sub>R</sub>                    | 75          | V            |
| Peak Repetitive Reverse Voltage                    | V <sub>RRM</sub>                  | 100         | V            |
| Average Rectified Current                          | I <sub>O</sub>                    | 150         | mA           |
| Forward Surge Current, tp<1s, T <sub>C</sub> =25°C | I <sub>FSM</sub>                  | 500         | mA           |
| Power Dissipation                                  | P <sub>D</sub>                    | 400         | mW           |
| Operating and Storage                              |                                   |             |              |
| Junction Temperature                               | T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C           |
| Thermal Resistance                                 | θ <sub>JA</sub>                   | 312.5       | °C/W         |

ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

| <u>SYMBOL</u>   | <u>TEST CONDITIONS</u>  | <u>MIN</u> | <u>MAX</u> | <u>UNITS</u> |
|-----------------|---|------------|------------|--------------|
| I <sub>R</sub>  | V <sub>R</sub> =20V   |            | 25         | nA           |
| I <sub>R</sub>  | V <sub>R</sub> =20V, T <sub>C</sub> =25°C   |            | 50         | µA           |
| I <sub>R</sub>  | V <sub>R</sub> =75V   |            | 5.0        | µA           |
| V <sub>BR</sub> | I <sub>R</sub> =100µA   | 100        |            | V            |
| V <sub>F</sub>  | I <sub>F</sub> =5.0mA   | 0.62       | 0.72       | V            |
| V <sub>F</sub>  | I <sub>F</sub> =10mA  |            | 1.0        | V            |
| C <sub>T</sub>  | V <sub>R</sub> =0, f=1 MHz  |            | 4.0        | pF           |
| t <sub>rr</sub> | V <sub>R</sub> =6.0V, I <sub>F</sub> =10mA, I <sub>R</sub> =1.0mA, R <sub>L</sub> =100Ω |            | 4.0        | ns           |

**HIGH SPEED  
SWITCHING DIODE**

**MECHANICAL OUTLINE - SOD-123**



R3

| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.037  | 0.053 | 0.95        | 1.35 |
| B          | -      | 0.005 | -           | 0.12 |
| C          | -      | 0.008 | -           | 0.20 |
| D          | 0.055  | 0.071 | 1.40        | 1.80 |
| E          | 0.098  | 0.112 | 2.50        | 2.84 |
| F          | 0.140  | 0.154 | 3.55        | 3.90 |
| G          | 0.010  | -     | 0.25        | -    |
| H          | 0.020  | 0.028 | 0.50        | 0.70 |

SOD-123 (REV:R3)

**Lead Code:**

- 1) Cathode**
- 2) Anode**

**Marking code is C48.**