

CMOD2004

ULTRAmi<sup>TM</sup>  
SURFACE MOUNT HIGH VOLTAGE  
SWITCHING DIODE

ULTRAmi<sup>TM</sup>



SOD-523 CASE

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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMOD2004 type is a high voltage silicon switching diode manufactured by the epitaxial planar process, epoxy molded in a ULTRAmi<sup>TM</sup> surface mount package, designed for applications requiring high voltage capability. Marking code is 04.

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

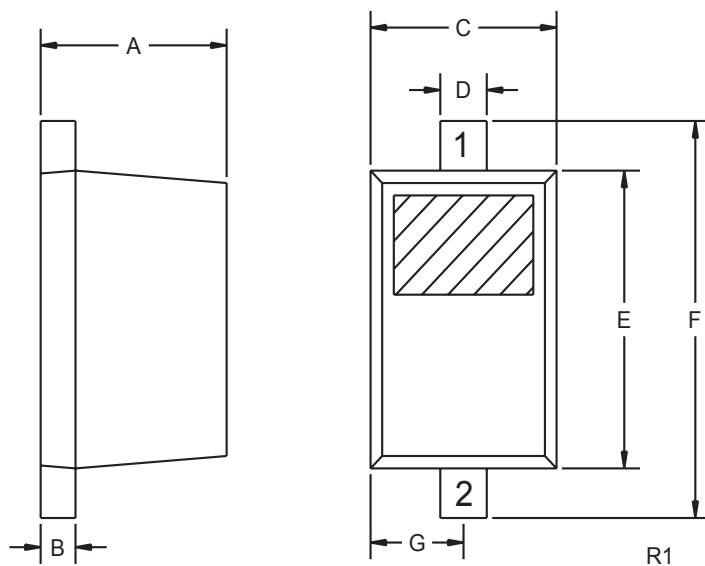
|                                             | SYMBOL         |             | UNITS                |
|---------------------------------------------|----------------|-------------|----------------------|
| Continuous Reverse Voltage                  | $V_R$          | 240         | V                    |
| Peak Repetitive Reverse Voltage             | $V_{RRM}$      | 300         | V                    |
| Peak Repetitive Reverse Current             | $I_O$          | 200         | mA                   |
| Continuous Forward Current                  | $I_F$          | 225         | mA                   |
| Peak Repetitive Forward Current             | $I_{FRM}$      | 625         | mA                   |
| Forward Surge Current, $t_p=1\ \mu\text{s}$ | $I_{FSM}$      | 4000        | mA                   |
| Forward Surge Current, $t_p=1\ \text{s}$    | $I_{FSM}$      | 1000        | mA                   |
| Power Dissipation                           | $P_D$          | 250         | mW                   |
| Operating and Storage                       |                |             |                      |
| 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 | UNIT          |
|----------|----------------------------------------------------------|-----|-----|---------------|
| $BV_R$   | $I_R=100\ \mu\text{A}$                                   | 300 |     | V             |
| $I_R$    | $V_R=240\text{V}$                                        |     | 100 | nA            |
| $I_R$    | $V_R=240\text{V}, T_A=150^{\circ}\text{C}$               |     | 100 | $\mu\text{A}$ |
| $V_F$    | $I_F=100\text{mA}$                                       |     | 1.0 | V             |
| $C_T$    | $V_R=0, f=1\ \text{MHz}$                                 |     | 5.0 | pF            |
| $t_{rr}$ | $I_F=I_R=30\text{mA}$ , Rec. To 3.0mA, $R_L=100\ \Omega$ |     | 50  | ns            |

R1 ( 26-June 2001)

SOD-523 CASE MECHANICAL OUTLINE



Lead Code:

1) Cathode

2) Anode

| 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)

R1 ( 26-June 2001)