

CMDD3003

**SUPERmini™
SURFACE MOUNT
LOW LEAKAGE
SWITCHING DIODE**

SUPERmini™



SOD-323 CASE

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMDD3003 type is a silicon switching diode manufactured by the epitaxial planar process, epoxy molded in a SUPERmini™ surface mount package, designed for switching applications requiring a extremely low leakage diode.

MARKING CODE: 03C

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

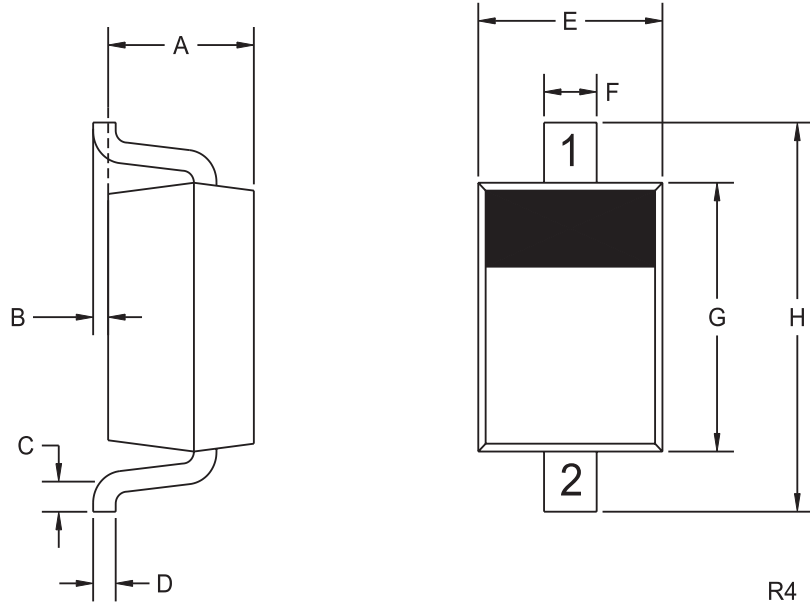
| | SYMBOL | | UNITS |
|---|----------------|-------------|--------------------|
| Continuous Reverse Voltage | V_R | 180 | V |
| Average Rectified Current | I_O | 200 | mA |
| Continuous Forward Current | I_F | 600 | mA |
| Peak Repetitive Forward Current | I_{FRM} | 700 | mA |
| Forward Surge Current, $t_p=1.0 \mu\text{sec.}$ | I_{FSM} | 2.0 | A |
| Forward Surge Current, $t_p=1.0 \text{ sec.}$ | I_{FSM} | 1.0 | A |
| Power Dissipation | P_D | 250 | mW |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 500 | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|--|------------|------------|---------------|
| I_R | $V_R=125\text{V}$ | | 1.0 | nA |
| I_R | $V_R=125\text{V}, T_A=150^\circ\text{C}$ | | 3.0 | μA |
| I_R | $V_R=180\text{V}$ | | 10 | nA |
| I_R | $V_R=180\text{V}, T_A=150^\circ\text{C}$ | | 5.0 | μA |
| BV_R | $I_R=5.0\mu\text{A}$ | 200 | | V |
| V_F | $I_F=1.0\text{mA}$ | 0.62 | 0.72 | V |
| V_F | $I_F=10\text{mA}$ | 0.72 | 0.83 | V |
| V_F | $I_F=50\text{mA}$ | 0.80 | 0.89 | V |
| V_F | $I_F=100\text{mA}$ | 0.83 | 0.93 | V |
| V_F | $I_F=200\text{mA}$ | 0.87 | 1.10 | V |
| V_F | $I_F=300\text{mA}$ | 0.90 | 1.15 | V |
| C_T | $V_R=0, f=1 \text{ MHz}$ | | 4.0 | pF |

R0 (07-June 2004)

SOD-323 - MECHANICAL OUTLINE



LEAD CODE:

- 1) CATHODE
- 2) ANODE

MARKING CODE: 03C

| DIMENSIONS | | | | |
|------------|--------|-------|-------------|------|
| SYMBOL | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.031 | 0.039 | 0.80 | 1.00 |
| B | 0.000 | 0.004 | 0.00 | 0.10 |
| C | 0.008 | - | 0.20 | - |
| D | 0.004 | 0.007 | 0.11 | 0.19 |
| E | 0.045 | 0.053 | 1.15 | 1.35 |
| F | - | 0.014 | - | 0.35 |
| G | 0.063 | 0.071 | 1.60 | 1.80 |
| H | 0.094 | 0.102 | 2.40 | 2.60 |

SOD-323 (REV: R4)