

CMPD7000E

**ENHANCED SPECIFICATION
SURFACE MOUNT
DUAL, IN SERIES
SILICON SWITCHING DIODES**



www.centrasemi.com



SOT-23 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPD7000E is an Enhanced version of the CMPD7000 Dual, Series Configuration, Ultra-High Speed Switching Diode. This device is manufactured by the epitaxial planar process, in an epoxy molded surface mount SOT-23 package, designed for high speed switching applications.

MARKING CODE: C5CE

FEATURED ENHANCED SPECIFICATIONS:

- ◆ BV_R from 100V min to 120V min.
- ◆ V_F from 1.1V max to 1.0V max.

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

- ◆ **Peak Repetitive Reverse Voltage**
- Average Forward Current
- Peak Forward Current
- Power Dissipation
- Operating and Storage Junction Temperature
- Thermal Resistance

| SYMBOL | | UNITS |
|----------------|-------------|--------------------|
| V_{RRM} | 120 | V |
| I_O | 200 | mA |
| I_{FM} | 500 | mA |
| P_D | 350 | mW |
| T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| θ_{JA} | 357 | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|----------|--|------|------|------|---------------|
| I_R | $V_R=50\text{V}$ | | | 300 | nA |
| I_R | $V_R=50\text{V}, T_A=125^\circ\text{C}$ | | | 100 | μA |
| I_R | $V_R=100\text{V}$ | | | 500 | nA |
| ◆ BV_R | $I_R=100\mu\text{A}$ | 120 | 150 | | V |
| ◆ V_F | $I_F=1.0\text{mA}$ | 0.55 | 0.59 | 0.65 | V |
| ◆ V_F | $I_F=10\text{mA}$ | 0.67 | 0.72 | 0.77 | V |
| ◆ V_F | $I_F=100\text{mA}$ | 0.85 | 0.91 | 1.0 | V |
| C_T | $V_R=0, f=1.0\text{MHz}$ | | 1.5 | 2.6 | pF |
| t_{rr} | $I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0\text{mA}$ | | 2.0 | 4.0 | ns |

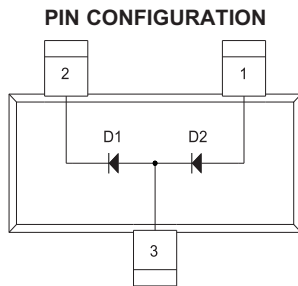
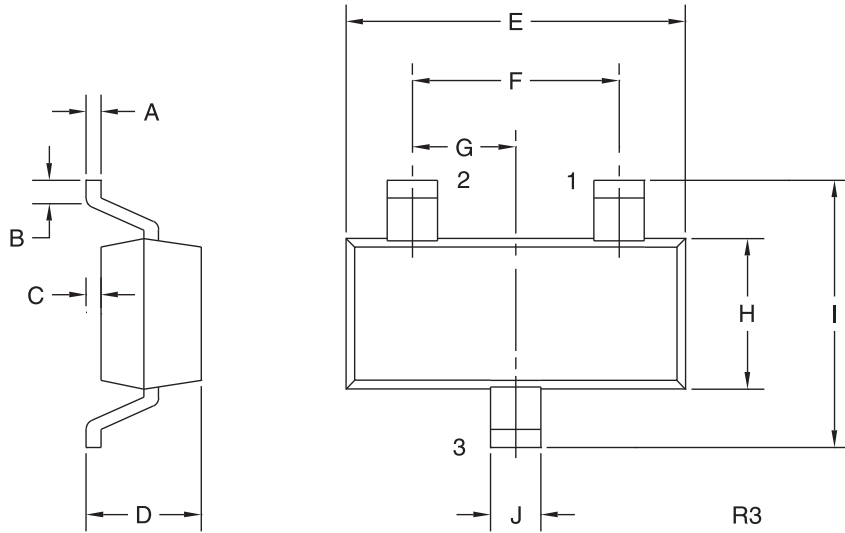
◆ Enhanced Specification

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Anode D2
- 2) Cathode D1
- 3) Anode D1, Cathode D2

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| DIMENSIONS | | | | |
|-------------------|---------------|------------|--------------------|------------|
| SYMBOL | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.003 | 0.007 | 0.08 | 0.18 |
| B | 0.006 | - | 0.15 | - |
| C | - | 0.005 | - | 0.13 |
| D | 0.035 | 0.043 | 0.89 | 1.09 |
| E | 0.110 | 0.120 | 2.80 | 3.05 |
| F | 0.075 | | 1.90 | |
| G | 0.037 | | 0.95 | |
| H | 0.047 | 0.055 | 1.19 | 1.40 |
| I | 0.083 | 0.098 | 2.10 | 2.49 |
| J | 0.014 | 0.020 | 0.35 | 0.50 |

SOT-23 (REV: R3)

R4 (27-January 2010)