

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 | $^\circ\text{C}$   |
| $\theta_{JA}$  | 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  | $\mu\text{A}$ |
| $I_R$    | $V_R=100\text{V}$  |      |      | 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

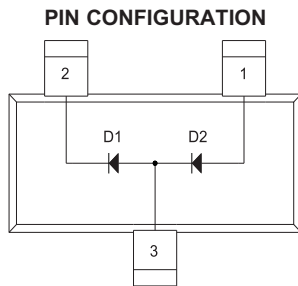
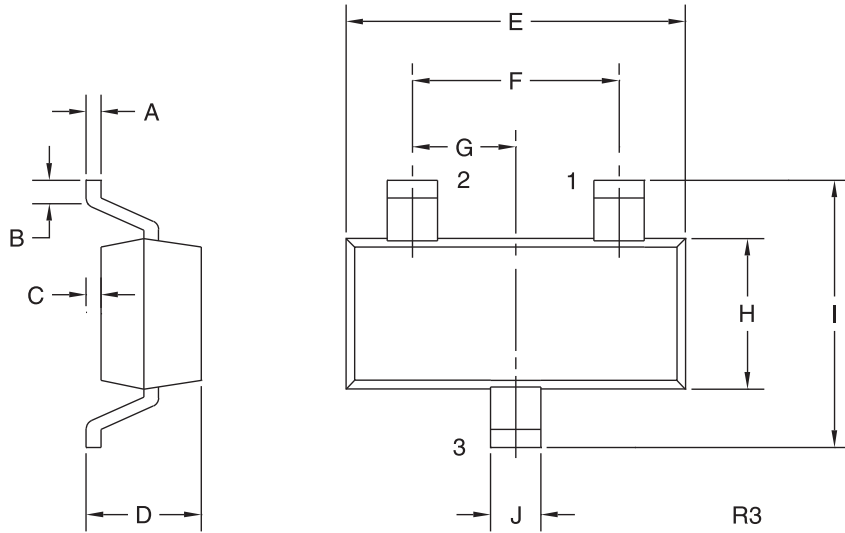
R4 (27-January 2010)

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**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING CODE: C5CE**

| 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)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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