

CMPD914E

**ENHANCED SPECIFICATION  
SURFACE MOUNT  
HIGH SPEED  
SILICON SWITCHING DIODE**



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPD914E is an Enhanced version of the CMPD914 High Speed Switching Diode in a SOT-23 surface mount package, designed for high speed applications.

**MARKING CODE: C5DE**

**FEATURED ENHANCED SPECIFICATIONS:**

- ◆  $BV_R$  from 100V min to 120V min. (150V TYP)
- ◆  $V_F$  from 1.0V max to 0.85V max. (0.72V TYP)



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

|  |
|--|
| Continuous Reverse Voltage                       |
| ◆ <b>Peak Repetitive Reverse Voltage</b>         |
| Continuous Forward Current                       |
| Peak Repetitive Forward Current                  |
| Peak Forward Surge Current, $t_p=1.0\mu\text{s}$ |
| Peak Forward Surge Current, $t_p=1.0\text{ms}$   |
| Peak Forward Surge Current, $t_p=1.0\text{s}$    |
| Power Dissipation                                |
| Operating and Storage Junction Temperature       |
| Thermal Resistance                               |

| SYMBOL         |             | UNITS              |
|----------------|-------------|--------------------|
| $V_R$          | 75          | V                  |
| $V_{RRM}$      | <b>120</b>  | <b>V</b>           |
| $I_F$          | 250         | mA                 |
| $I_{FRM}$      | 250         | mA                 |
| $I_{FSM}$      | 4000        | mA                 |
| $I_{FSM}$      | 2000        | mA                 |
| $I_{FSM}$      | 1000        | mA                 |
| $P_D$          | 350         | mW                 |
| $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| $\Theta_{JA}$  | 357         | $^\circ\text{C/W}$ |

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

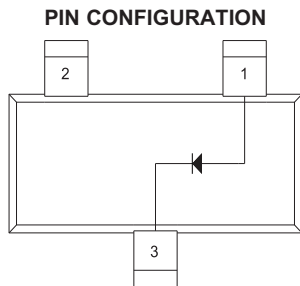
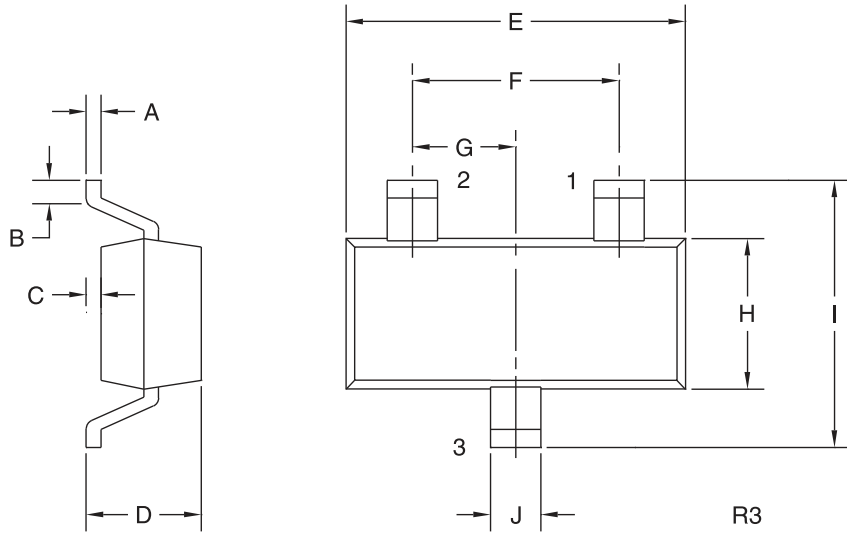
| SYMBOL   | TEST CONDITIONS   | MIN        | TYP          | MAX          | UNITS         |
|----------|---|------------|--------------|--------------|---------------|
| $I_R$    | $V_R=20\text{V}$  |            |              | 25           | nA            |
| $I_R$    | $V_R=75\text{V}$  |            |              | 5.0          | $\mu\text{A}$ |
| ◆ $BV_R$ | $I_R=100\mu\text{A}$  | <b>120</b> | <b>150</b>   |              | <b>V</b>      |
| ◆ $V_F$  | $I_F=10\text{mA}$   |            | <b>0.720</b> | <b>0.850</b> | <b>V</b>      |
| ◆◆ $V_F$ | $I_F=100\text{mA}$  |            | <b>0.915</b> | <b>0.970</b> | <b>V</b>      |
| $C_T$    | $V_R=0, f=1.0\text{MHz}$  |            |              | 2.0          | pF            |
| $t_{rr}$ | $I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0\text{ mA}$ |            |              | 4.0          | ns            |

- ◆ Enhanced specification.
- ◆◆ Additional Enhanced specification.

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**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**  
 1) Anode  
 2) No Connection  
 3) Cathode

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| <b>DIMENSIONS</b> |        |       |             |      |
|-------------------|--------|-------|-------------|------|
| 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)

R3 (25-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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