

CMPD914E

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



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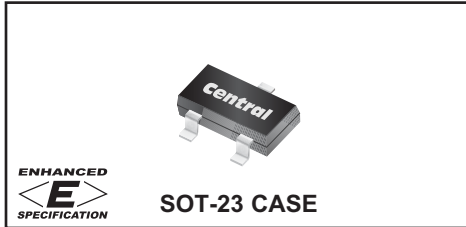
DESCRIPTION:

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 |
| ◆ Peak Repetitive Reverse Voltage |
| 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} | 120 | V |
| 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 | $^\circ\text{C}$ |
| Θ_{JA} | 357 | $^\circ\text{C/W}$ |

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

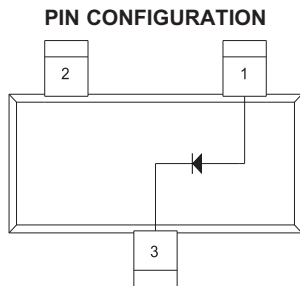
| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|----------|---|------------|--------------|--------------|---------------|
| I_R | $V_R=20\text{V}$ | | | 25 | nA |
| I_R | $V_R=75\text{V}$ | | | 5.0 | μA |
| ◆ BV_R | $I_R=100\mu\text{A}$ | 120 | 150 | | V |
| ◆ V_F | $I_F=10\text{mA}$ | | 0.720 | 0.850 | V |
| ◆◆ V_F | $I_F=100\text{mA}$ | | 0.915 | 0.970 | V |
| 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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| 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)

R3 (25-January 2010)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

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