

**CMXD2004TO**  
**SURFACE MOUNT**  
**TRIPLE ISOLATED OPPOSING**  
**HIGH VOLTAGE**  
**SILICON SWITCHING DIODES**



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**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMXD2004TO consists of three (3) Isolated High Voltage Silicon Switching Diodes arranged in an alternating configuration in a SUPERmini SOT-26 surface mount package, and designed for high voltage switching applications. This device can be configured as a 900V switching diode. See optional mounting pad configuration.

**MARKING CODE: X04TO**

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

Continuous Reverse Voltage  
 Peak Repetitive Reverse Voltage  
 Average Forward Current  
 Continuous Forward Current  
 Peak Repetitive Forward Current  
 Peak Forward Surge Current,  $t_p=1.0\mu\text{s}$   
 Peak Forward Surge Current,  $t_p=1.0\text{s}$   
 Power Dissipation  
 Operating and Storage Junction Temperature  
 Thermal Resistance

**SYMBOL**

$V_R$                     240  
 $V_{RRM}$                 300  
 $I_O$                       200  
 $I_F$                       225  
 $I_{FRM}$                 625  
 $I_{FSM}$                 4.0  
 $I_{FSM}$                 1.0  
 $P_D$                     350  
 $T_J, T_{stg}$            -65 to +150  
 $\theta_{JA}$                    357

**UNITS**

V  
 V  
 mA  
 mA  
 mA  
 A  
 A  
 mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

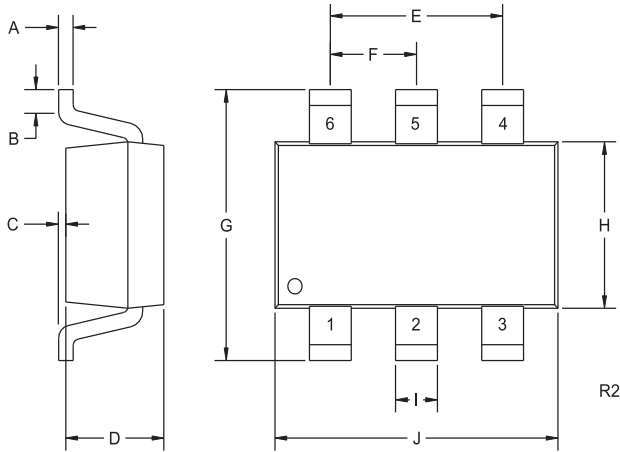
**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL   | TEST CONDITIONS   | MIN | MAX | UNITS         |
|----------|---|-----|-----|---------------|
| $I_R$    | $V_R=240\text{V}$   |     | 100 | nA            |
| $I_R$    | $V_R=240\text{V}, T_A=150^\circ\text{C}$                  |     | 100 | $\mu\text{A}$ |
| $BV_R$   | $I_R=100\mu\text{A}$                                      | 300 |     | V             |
| $V_F$    | $I_F=100\text{mA}$  |     | 1.0 | V             |
| $C_T$    | $V_R=0, f=1.0\text{MHz}$                                  |     | 5.0 | pF            |
| $t_{rr}$ | $I_F=I_R=30\text{mA}, I_{rr}=3.0\text{mA}, R_L=100\Omega$ |     | 50  | ns            |

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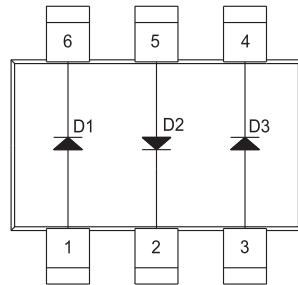
**SOT 26 CASE - MECHANICAL OUTLINE**



| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.004  | 0.007 | 0.11        | 0.19 |
| B      | 0.016  | -     | 0.40        | -    |
| C      | -      | 0.004 | -           | 0.10 |
| D      | 0.039  | 0.047 | 1.00        | 1.20 |
| E      | 0.074  | 0.075 | 1.88        | 1.92 |
| F      | 0.037  | 0.038 | 0.93        | 0.97 |
| G      | 0.102  | 0.118 | 2.60        | 3.00 |
| H      | 0.059  | 0.067 | 1.50        | 1.70 |
| I      | 0.016  |       | 0.41        |      |
| J      | 0.110  | 0.118 | 2.80        | 3.00 |

SOT-26 (REV: R2)

**PIN CONFIGURATION**

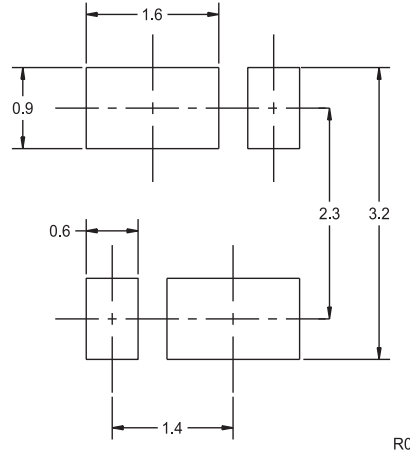


**LEAD CODE:**

- 1) Anode D1
- 2) Cathode D2
- 3) Anode D3
- 4) Cathode D3
- 5) Anode D2
- 6) Cathode D1

**MARKING CODE: X04TO**

**OPTIONAL MOUNTING PADS**  
**For 900V Series Configuration**  
 (Dimensions in mm)



R2 (12-February 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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