

## Excellent Integrated System Limited

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**CMXD2004TO**

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

**SUPERmini™**



**SOT-26 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**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<sub>A</sub>=25°C)

|                                            |
|--------------------------------------------|
| Continuous Reverse Voltage                 |
| Peak Repetitive Reverse Voltage            |
| Average Forward Current                    |
| Continuous Forward Current                 |
| Peak Repetitive Forward Current            |
| Peak Forward Surge Current, tp=1.0μs       |
| Peak Forward Surge Current, tp=1.0s        |
| Power Dissipation                          |
| Operating and Storage Junction Temperature |
| Thermal Resistance                         |

**SYMBOL**

|                                   |             |
|-----------------------------------|-------------|
| V <sub>R</sub>                    | 240         |
| V <sub>RRM</sub>                  | 300         |
| I <sub>O</sub>                    | 200         |
| I <sub>F</sub>                    | 225         |
| I <sub>FRM</sub>                  | 625         |
| I <sub>FSM</sub>                  | 4.0         |
| I <sub>FSM</sub>                  | 1.0         |
| P <sub>D</sub>                    | 350         |
| T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 |
| Θ <sub>JA</sub>                   | 357         |

**UNITS**

|      |
|------|
| V    |
| V    |
| mA   |
| mA   |
| mA   |
| A    |
| A    |
| mW   |
| °C   |
| °C/W |

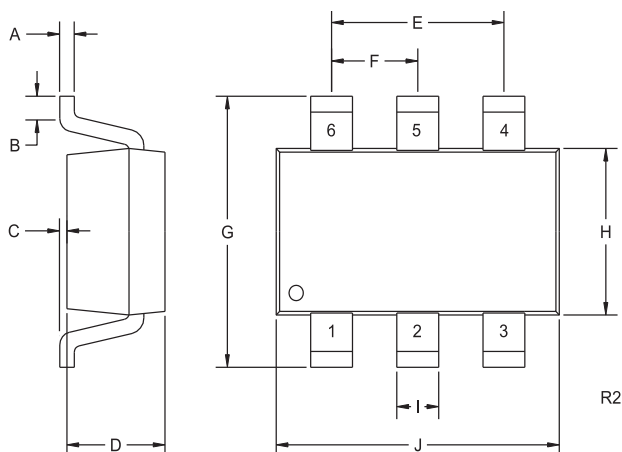
**ELECTRICAL CHARACTERISTICS PER DIODE:** (T<sub>A</sub>=25°C unless otherwise noted)

| SYMBOL          | TEST CONDITIONS                                                                    | MIN | MAX | UNITS |
|-----------------|------------------------------------------------------------------------------------|-----|-----|-------|
| I <sub>R</sub>  | V <sub>R</sub> =240V                                                               |     | 100 | nA    |
| I <sub>R</sub>  | V <sub>R</sub> =240V, T <sub>A</sub> =150°C                                        |     | 100 | μA    |
| BV <sub>R</sub> | I <sub>R</sub> =100μA                                                              | 300 |     | V     |
| V <sub>F</sub>  | I <sub>F</sub> =100mA                                                              |     | 1.0 | V     |
| C <sub>T</sub>  | V <sub>R</sub> =0, f=1.0MHz                                                        |     | 5.0 | pF    |
| t <sub>rr</sub> | I <sub>F</sub> =I <sub>R</sub> =30mA, I <sub>rr</sub> =3.0mA, R <sub>L</sub> =100Ω |     | 50  | ns    |

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



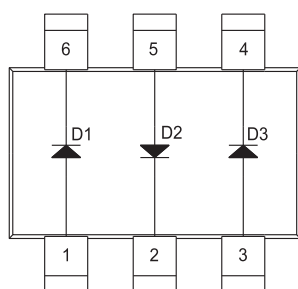
**SOT 26 CASE - MECHANICAL OUTLINE**



| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | 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**

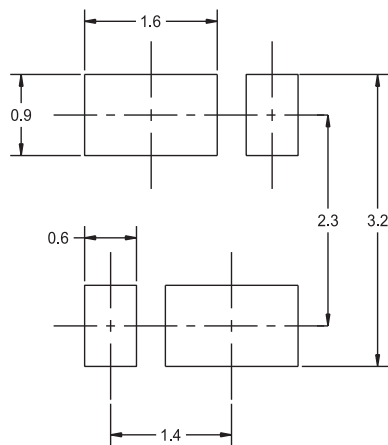


**LEAD CODE:**

- 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)



R0

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)
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- 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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