

**CMLD2838**  
**SURFACE MOUNT**  
**PICOmini™**  
**DUAL PAIR,**  
**SILICON SWITCHING DIODES**

**PICOmini™**



**SOT-563 CASE**

**Central™**  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMLD2838 type is a dual pair of common cathode silicon switching diodes manufactured by the epitaxial planar process and packaged in an epoxy molded PICOmini™ surface mount case. This device is ideal for high speed switching applications.

**MARKING CODE:** CSQ

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

|   | SYMBOL         |             | UNITS              |
|---|----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage               | $V_{RRM}$      | 75          | V                  |
| Average Forward Current                       | $I_O$          | 200         | mA                 |
| Peak Forward Current                          | $I_{FM}$       | 300         | mA                 |
| Power Dissipation                             | $P_D$          | 250         | mW                 |
| Operating and Storage<br>Junction Temperature | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance                            | $\theta_{JA}$  | 500         | $^\circ\text{C/W}$ |

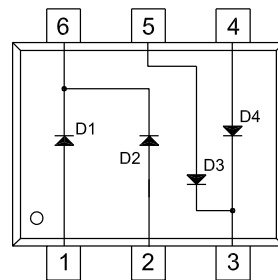
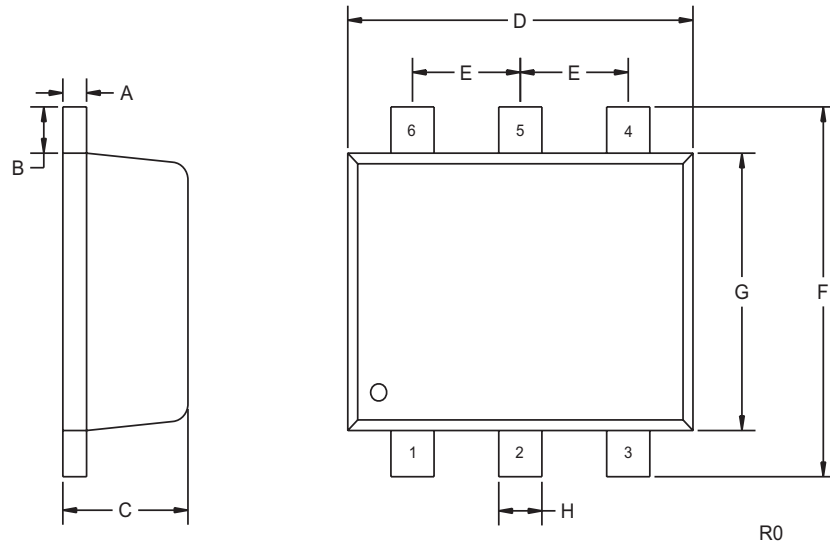
**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL   | TEST CONDITIONS  | MIN | MAX | UNITS |
|----------|--|-----|-----|-------|
| $I_R$    | $V_R=50\text{V}$   |     | 100 | nA    |
| $BV_R$   | $I_R=100\mu\text{A}$   | 75  |     | V     |
| $V_F$    | $I_F=10\text{mA}$  |     | 1.0 | V     |
| $V_F$    | $I_F=50\text{mA}$  |     | 1.0 | V     |
| $V_F$    | $I_F=100\text{mA}$   |     | 1.2 | V     |
| $C_T$    | $V_R=0, f=1\text{ MHz}$  |     | 4.0 | pF    |
| $t_{rr}$ | $I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0\text{mA}$ |     | 4.0 | ns    |

R0 (22-March 2005)

**SURFACE MOUNT  
PICOmini<sup>TM</sup>  
DUAL PAIR,  
SILICON SWITCHING DIODES**

**SOT-563 CASE - MECHANICAL OUTLINE**



| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.004      | 0.007 | 0.10        | 0.18 |
| B      | 0.008      |       | 0.20        |      |
| C      | 0.022      | 0.024 | 0.56        | 0.60 |
| D      | 0.059      | 0.067 | 1.50        | 1.70 |
| E      | 0.020      |       | 0.50        |      |
| F      | 0.061      | 0.067 | 1.55        | 1.70 |
| G      | 0.047      |       | 1.20        |      |
| H      | 0.006      | 0.012 | 0.15        | 0.30 |

SOT-563 (REV: R0)

**CMLD2838**

Lead Code:

- 1) Anode D1
- 2) Anode D2
- 3) Cathode D3, D4
- 4) Anode D4
- 5) Anode D3
- 6) Cathode D1, D2

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