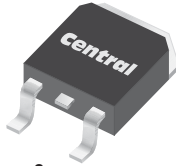


CSDD-8M  
CSDD-8N

**SURFACE MOUNT  
SILICON CONTROLLED RECTIFIER  
8 AMP, 600 THRU 800 VOLTS**



**D<sup>2</sup>PAK CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CSDD-8M series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

**MARKING: FULL PART NUMBER**

| <b>MAXIMUM RATINGS:</b> ( $T_C=25^\circ\text{C}$ unless otherwise noted) | <b>SYMBOL</b>      | <b>CSDD-8M</b> | <b>CSDD-8N</b> | <b>UNITS</b>       |
|--|--------------------|----------------|----------------|--------------------|
| Peak Repetitive Off-State Voltage  | $V_{DRM}, V_{RRM}$ | 600            | 800            | V                  |
| RMS On-State Current ( $T_C=90^\circ\text{C}$ )                          | $I_{T(RMS)}$       |                | 8.0            | A                  |
| Peak One Cycle Surge, $t=10\text{ms}$                                    | $I_{TSM}$          |                | 70             | A                  |
| $I^2t$ Value for Fusing, $t=10\text{ms}$                                 | $I^2t$             |                | 24             | A <sup>2</sup> s   |
| Peak Gate Power, $t_p=10\mu\text{s}$                                     | $P_{GM}$           |                | 40             | W                  |
| Average Gate Power Dissipation   | $P_{G(AV)}$        |                | 1.0            | W                  |
| Peak Forward Gate Current, $t_p=10\mu\text{s}$                           | $I_{FGM}$          |                | 4.0            | A                  |
| Peak Forward Gate Voltage, $t_p=10\mu\text{s}$                           | $V_{FGM}$          |                | 16             | V                  |
| Peak Reverse Gate Voltage, $t_p=10\mu\text{s}$                           | $V_{RGM}$          |                | 5.0            | V                  |
| Critical Rate of Rise of On-State Current                                | $di/dt$            |                | 50             | A/ $\mu\text{s}$   |
| Operating Junction Temperature   | $T_J$              | -40 to +125    |                | $^\circ\text{C}$   |
| Storage Temperature  | $T_{stg}$          | -40 to +150    |                | $^\circ\text{C}$   |
| Thermal Resistance   | $\theta_{JA}$      | 60             |                | $^\circ\text{C/W}$ |
| Thermal Resistance   | $\theta_{JC}$      | 2.5            |                | $^\circ\text{C/W}$ |

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

| <b>SYMBOL</b>      | <b>TEST CONDITIONS</b>                          | <b>MIN</b> | <b>TYP</b> | <b>MAX</b> | <b>UNITS</b>     |
|--------------------|---|------------|------------|------------|------------------|
| $I_{DRM}, I_{RRM}$ | Rated $V_{DRM}, V_{RRM}$                        |            |            | 10         | $\mu\text{A}$    |
| $I_{DRM}, I_{RRM}$ | Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}$ |            |            | 2.0        | mA               |
| $I_{GT}$           | $V_D=12\text{V}, R_L=10\Omega$                  |            | 3.0        | 15         | mA               |
| $I_H$              | $I_T=100\text{mA}$                              |            | 7.3        | 20         | mA               |
| $V_{GT}$           | $V_D=12\text{V}, R_L=10\Omega$                  |            | 0.9        | 1.5        | V                |
| $V_{TM}$           | $I_{TM}=16\text{A}, t_p=380\mu\text{s}$         |            | 1.3        | 1.8        | V                |
| $dv/dt$            | $V_D=2/3 V_{DRM}, T_C=125^\circ\text{C}$        | 200        |            |            | V/ $\mu\text{s}$ |

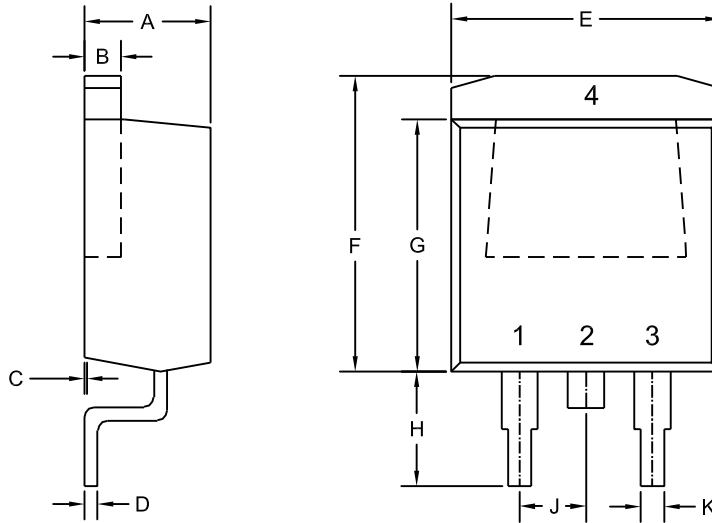
R2 (17-February 2010)

CSDD-8M  
CSDD-8N

**SURFACE MOUNT  
SILICON CONTROLLED RECTIFIER  
8 AMP, 600 THRU 800 VOLTS**



**D<sup>2</sup>PAK CASE - MECHANICAL OUTLINE**



R2

**LEAD CODE:**

- 1) Cathode
- 2) Anode
- 3) Gate
- 4) Anode

**MARKING:**

**FULL PART NUMBER**

| DIMENSIONS |        |       |             |       |
|------------|--------|-------|-------------|-------|
| SYMBOL     | INCHES |       | MILLIMETERS |       |
|            | MIN    | MAX   | MIN         | MAX   |
| A          | 0.163  | 0.189 | 4.14        | 4.80  |
| B          | 0.045  | 0.055 | 1.14        | 1.40  |
| C          | 0.000  | 0.010 | 0.00        | 0.25  |
| D          | 0.012  | 0.028 | 0.30        | 0.70  |
| E          | 0.386  | 0.409 | 9.80        | 10.40 |
| F          | 0.378  | 0.417 | 9.60        | 10.60 |
| G          | 0.335  | 0.358 | 8.50        | 9.10  |
| H          | 0.197  | 0.236 | 5.00        | 6.00  |
| J          | 0.093  | 0.108 | 2.35        | 2.75  |
| K          | 0.030  | 0.035 | 0.75        | 0.90  |

D2PAK (REV: R2)

R2 (17-February 2010)