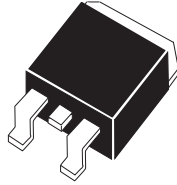


CSDD-8M
CSDD-8N

SILICON CONTROLLED RECTIFIER
8.0 AMP, 600 THRU 800 VOLTS



D²PAK CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

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

MARKING CODE: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

| | SYMBOL | CSDD -8M | CSDD -8N | UNITS |
|---|--------------------|-------------|-------------|--------------------|
| Peak Repetitive Off-State Voltage | V_{DRM}, V_{RRM} | 600 | 800 | V |
| RMS On-State Current ($T_C=90^\circ\text{C}$) | $I_T(\text{RMS})$ | | 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 ² 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/ μs |
| Storage Temperature | T_{stg} | -40 to +150 | | $^\circ\text{C}$ |
| Junction Temperature | T_J | -40 to +125 | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | | 60 | $^\circ\text{C/W}$ |
| Thermal Resistance | θ_{JC} | | 2.5 | $^\circ\text{C/W}$ |

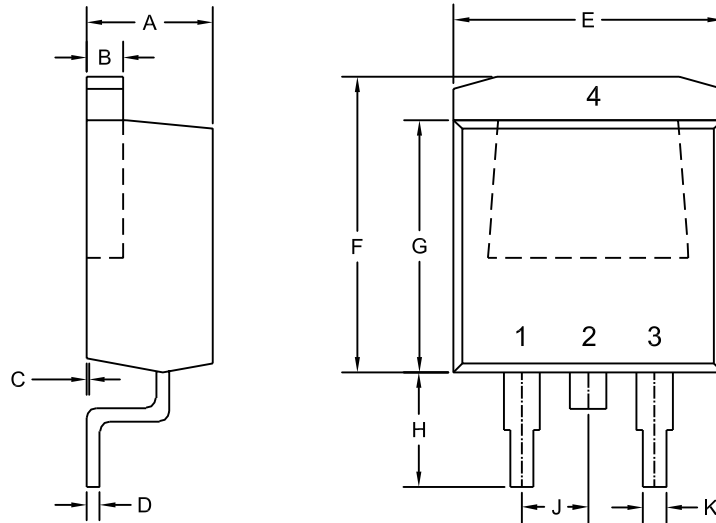
ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--------------------|---|-----|-----|-----|------------------|
| I_{DRM}, I_{RRM} | Rated V_{DRM}, V_{RRM} | | | 10 | μA |
| 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/ μs |

R1 (24-September 2004)

SILICON CONTROLLED RECTIFIER
8.0 AMP, 600 THRU 800 VOLTS

D²PAK CASE - MECHANICAL OUTLINE



R2

LEAD CODE:

- 1) CATHODE
- 2) ANODE
- 3) GATE
- 4) ANODE

MARKING CODE:

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)

R1 (24-September 2004)