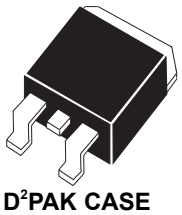
# CSDD-16M
# CSDD-16N

**SILICON CONTROLLED RECTIFIER**
**16 AMP, 600 THRU 800 VOLTS**

Central™ Semiconductor Corp.



**D²PAK CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CSDD-16M 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°C unless otherwise noted)

| | SYMBOL | CSDD -16M | CSDD -16N | UNITS |
|---|---|---|---|---|
| Peak Repetitive Off-State Voltage | $V_{DRM}$, $V_{RRM}$ | 600 | 800 | V |
| RMS On-State Current ($T_C$=90°C) | $I_{T(RMS)}$ | 16 | | A |
| Peak One Cycle Surge (t=10ms) | $I_{TSM}$ | 160 | | A |
| $I^2t$ Value for Fusing (t=10ms) | $I^2t$ | 128 | | $A^2s$ |
| Peak Gate Power (tp=10μs) | $P_{GM}$ | 40 | | W |
| Average Gate Power Dissipation | $P_{G\ (AV)}$ | 1.0 | | W |
| Peak Forward Gate Current (tp=10μs) | $I_{FGM}$ | 4.0 | | A |
| Peak Forward Gate Voltage (tp=10μs) | $V_{FGM}$ | 16 | | V |
| Peak Reverse Gate Voltage (tp=10μs) | $V_{RGM}$ | 5.0 | | V |
| Critical Rate of Rise of On-State Current | di/dt | 100 | | A/μs |
| Storage Temperature | $T_{stg}$ | -40 to +150 | | °C |
| Junction Temperature | $T_J$ | -40 to +125 | | °C |
| Thermal Resistance | $\Theta_{JA}$ | 60 | | °C/W |
| Thermal Resistance | $\Theta_{JC}$ | 2.0 | | °C/W |

**ELECTRICAL CHARACTERISTICS:** ($T_C$=25°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°C | | | 2.0 | mA |
| $I_{GT}$ | $V_D$=12V, $R_L$=10Ω | | 3.4 | 15 | mA |
| $I_H$ | $I_T$=100mA | | 8.8 | 20 | mA |
| $V_{GT}$ | $V_D$=12V, $R_L$=10Ω | | 0.64 | 1.50 | V |
| $V_{TM}$ | $I_{TM}$=32A, tp=380μs | | 1.40 | 1.60 | V |
| dv/dt | $V_D$=$^2/_3$ $V_{DRM}$, $T_C$=125°C | 500 | | | V/μs |

R0 (15-June 2004)

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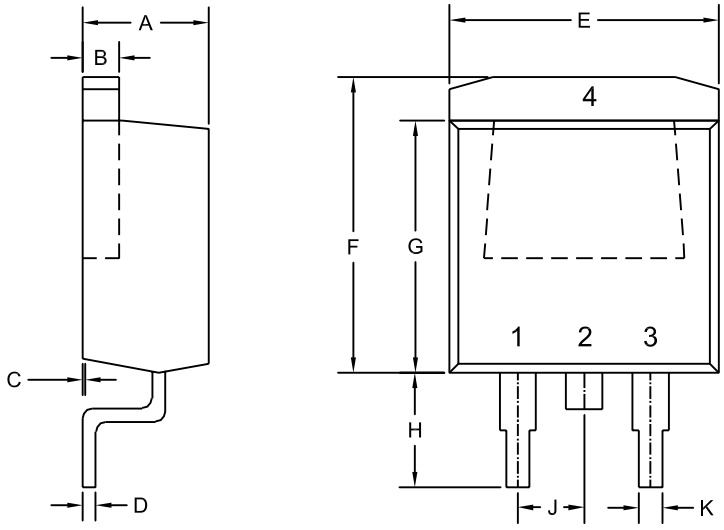
## D²PAK CASE - MECHANICAL OUTLINE




R2

**LEAD CODE:**
1) CATHODE
2) ANODE
3) GATE
4) ANODE

**MARKING CODE:**
**FULL PART NUMBER**

| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | 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)

R0 (15-June 2004)