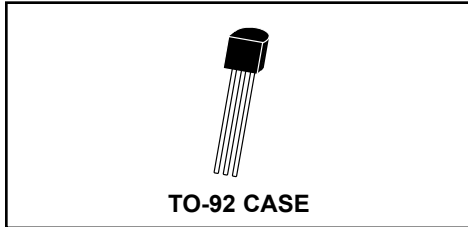


**CS92-2M**  
**CS92-2N\***

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



# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CS92-2M and CS92-2N are epoxy molded Silicon Controlled Rectifiers designed for sensing circuit applications and control systems.

**MARKING CODE: FULL PART NUMBER**

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

|   | <u>SYMBOL</u>      | <u>CS92-2M</u> | <u>CS92-2N*</u> | <u>UNITS</u>         |
|---|--------------------|----------------|-----------------|----------------------|
| Peak Repetitive Off-State Voltage               | $V_{DRM}, V_{RRM}$ | 600            | 800             | V                    |
| RMS On-State Current ( $T_C=60^\circ\text{C}$ ) | $I_T(\text{RMS})$  |                | 2.0             | A                    |
| Peak One Cycle Surge ( $t=10\text{ms}$ )        | $I_{TSM}$          |                | 10              | A                    |
| $I^2t$ Value for Fusing ( $t=10\text{ms}$ )     | $I^2t$             |                | 0.24            | $\text{A}^2\text{s}$ |
| Peak Gate Power ( $t_p=10\mu\text{s}$ )         | $P_{GM}$           |                | 2.0             | W                    |
| Average Gate Power Dissipation                  | $P_G(\text{AV})$   |                | 0.1             | W                    |
| Peak Gate Current ( $t_p=10\mu\text{s}$ )       | $I_{GM}$           |                | 1.0             | A                    |
| Peak Gate Voltage ( $t_p=10\mu\text{s}$ )       | $V_{GM}$           |                | 8.0             | V                    |
| Storage Temperature                             | $T_{stg}$          | -40 to +150    |                 | $^\circ\text{C}$     |
| Junction Temperature                            | $T_J$              | -40 to +125    |                 | $^\circ\text{C}$     |
| Thermal Resistance                              | $\theta_{JA}$      | 200            |                 | $^\circ\text{C/W}$   |
| Thermal Resistance                              | $\theta_{JC}$      | 100            |                 | $^\circ\text{C/W}$   |

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

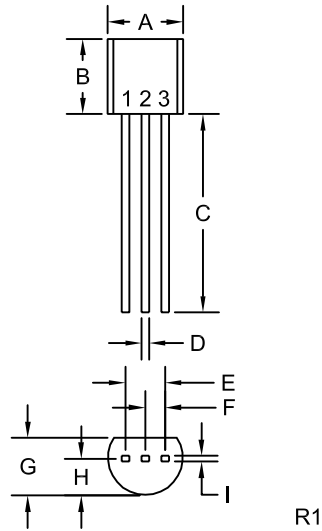
| <u>SYMBOL</u>      | <u>TEST CONDITIONS</u>  | <u>MIN</u> | <u>TYP</u> | <u>MAX</u> | <u>UNITS</u>     |
|--------------------|---|------------|------------|------------|------------------|
| $I_{DRM}, I_{RRM}$ | Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega$                        |            |            | 10         | $\mu\text{A}$    |
| $I_{DRM}, I_{RRM}$ | Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$ |            |            | 100        | $\mu\text{A}$    |
| $I_{GT}$           | $V_D=12\text{V}$  |            | 20         | 200        | $\mu\text{A}$    |
| $I_H$              | $I_T=100\text{mA}, R_{GK}=1\text{K}\Omega$                              |            |            | 2.0        | mA               |
| $V_{GT}$           | $V_D=12\text{V}$  |            |            | 0.8        | V                |
| $V_{TM}$           | $I_{TM}=4.0\text{A}, t_p=380\mu\text{s}$                                |            | 1.4        | 1.7        | V                |
| dv/dt              | $V_D=2/3 V_{DRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$        | 10         |            |            | V/ $\mu\text{s}$ |

\* Available on request. Please consult factory.

R0 (22-April 2004)

SILICON CONTROLLED RECTIFIER  
2.0 AMP, 600 THRU 800 VOLTS

TO-92 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

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

**MARKING CODE:**

**FULL PART NUMBER**

| SYMBOL  | DIMENSIONS |       |             |      |
|---------|------------|-------|-------------|------|
|         | INCHES     |       | MILLIMETERS |      |
|         | MIN        | MAX   | MIN         | MAX  |
| A (DIA) | 0.175      | 0.205 | 4.45        | 5.21 |
| B       | 0.170      | 0.210 | 4.32        | 5.33 |
| C       | 0.500      | -     | 12.70       | -    |
| D       | 0.016      | 0.022 | 0.41        | 0.56 |
| E       | 0.100      |       | 2.54        |      |
| F       | 0.050      |       | 1.27        |      |
| G       | 0.125      | 0.165 | 3.18        | 4.19 |
| H       | 0.080      | 0.105 | 2.03        | 2.67 |
| I       | 0.015      |       | 0.38        |      |

TO-92 (REV: R1)

R0 (22-April 2004)