Central™
Semiconductor Corp.
145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

# CS202-4B
# CS202-4D
# CS202-4M

## SILICON CONTROLLED RECTIFIER
## 4.0 AMP, 200 THRU 600 VOLTS

## JEDEC TO-202 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CS202-4B series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

## MAXIMUM RATINGS ($T_C$=25°C unless otherwise noted)

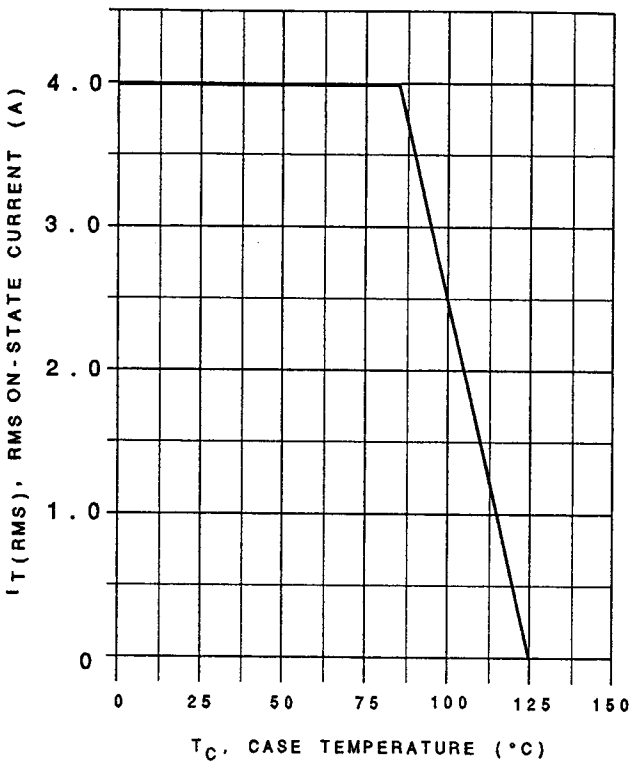
| | SYMBOL | CS202-4B | CS202-4D | CS202-4M | UNITS |
|---|---|---|---|---|---|
| Peak Repetitive Off-State Voltage | $V_{DRM}$, $V_{RRM}$ | 200 | 400 | 600 | V |
| RMS On-State Current ($T_C$=85°C) | $I_{T(RMS)}$ | | 4.0 | | A |
| Peak One Cycle Surge (t=10ms) | $I_{TSM}$ | | 30 | | A |
| $I^2t$ Value for Fusing (t=10ms) | $I^2t$ | | 4.5 | | $A^2s$ |
| Peak Gate Power (tp=20μs) | $P_{GM}$ | | 3.0 | | W |
| Average Gate Power Dissipation | $P_{G(AV)}$ | | 0.2 | | W |
| Peak Gate Current (tp=20μs) | $I_{GM}$ | | 1.2 | | A |
| Critical Rate of Rise of On-State Current | di/dt | | 50 | | A/μs |
| Storage Temperature | $T_{stg}$ | | -40 to +150 | | °C |
| Junction Temperature | $T_J$ | | -40 to +125 | | °C |
| Thermal Resistance | $\Theta_{J-A}$ | | 80 | | °C/W |
| Thermal Resistance | $\Theta_{J-C}$ | | 7.5 | | °C/W |

## ELECTRICAL CHARACTERISTICS ($T_C$=25°C unless otherwise noted)

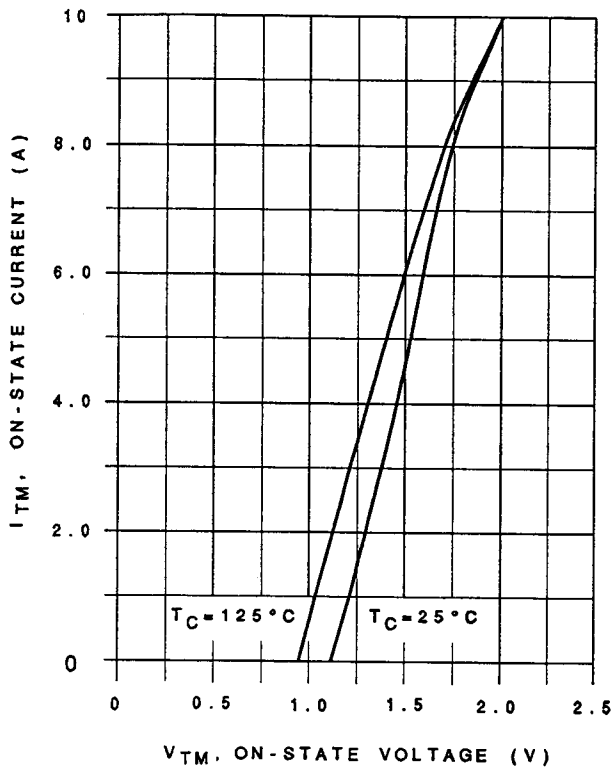
| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|---|---|---|---|---|---|
| $I_{DRM}$, $I_{RRM}$ | Rated $V_{DRM}$, $V_{RRM}$ $R_{GK}$=1KΩ | | | 5.0 | μA |
| $I_{DRM}$, $I_{RRM}$ | Rated $V_{DRM}$, $V_{RRM}$, $R_{GK}$=1KΩ, $T_C$=110°C | | | 200 | μA |
| $I_{GT}$ | $V_D$=12V, $R_L$=140Ω | 20 | | 200 | μA |
| $I_H$ | $I_T$=50mA, $R_{GK}$=1KΩ | | | 5.0 | mA |
| $V_{GT}$ | $V_D$=12V, $R_L$=140Ω | | | 0.8 | V |
| $V_{TM}$ | $I_{TM}$=8.0A | | | 1.8 | V |
| dv/dt | $V_D$=.67 x $V_{DRM}$, $R_{GK}$=1KΩ, $T_C$=110°C | | 20 | | V/μs |

(OVER)

RMS ON-STATE CURRENT vs. CASE TEMPERATURE

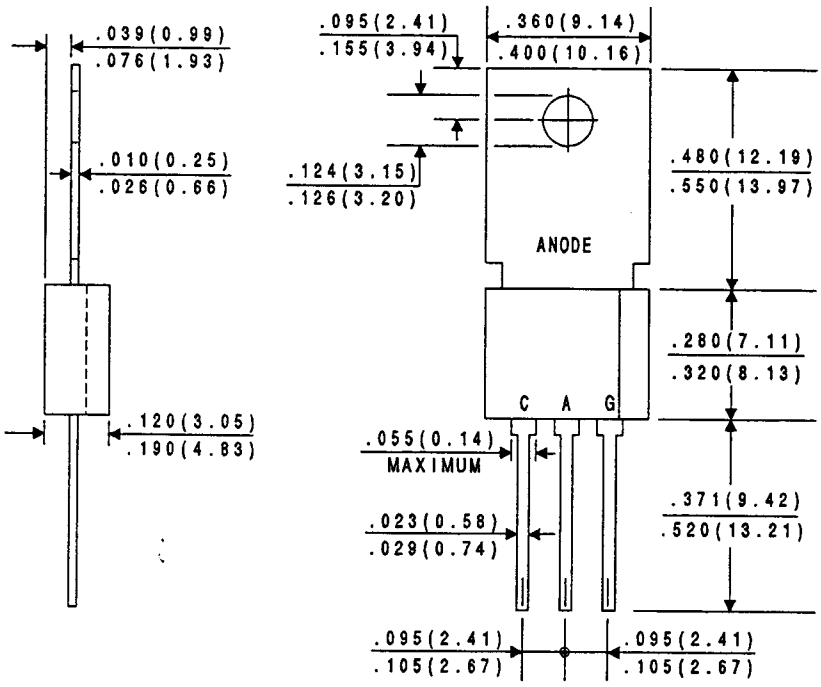



MAXIMUM ON-STATE CHARACTERISTICS




## MECHANICAL OUTLINE

ALL DIMENSIONS IN INCHES (mm).




**Central™**
**Semiconductor Corp.**