

CS18B
CS18D
CS18M
CS18N

**SILICON CONTROLLED RECTIFIER
1 AMP, 200 THRU 800 VOLTS**



TO-18 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS18B series types are hermetically sealed silicon controlled rectifiers manufactured in a TO-18 case, designed for control systems and sensing circuit applications.

MARKING: FULL PART NUMBER

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

| | SYMBOL | CS18B | CS18D | CS18M | CS18N | UNITS |
|---|--------------------|-------|-------------|-------|-------|----------------------|
| Peak Repetitive Off-State Voltage | V_{DRM}, V_{RRM} | 200 | 400 | 600 | 800 | V |
| RMS On-State Current ($T_C=90^\circ\text{C}$) | $I_T(\text{RMS})$ | | | 1.0 | | A |
| Nonrept. On-State Current | I_{TSM} | | | 10 | | A |
| Fusing Current ($t=10\text{ms}$) | I^2t | | | 0.24 | | A^2s |
| Peak Gate Current ($t=10\mu\text{s}$) | I_{GM} | | | 1.0 | | A |
| Peak Gate Dissipation ($t=10\mu\text{s}$) | P_{GM} | | | 2.0 | | W |
| Gate Dissipation | $P_{G(AV)}$ | | | 0.1 | | W |
| Operating Junction Temperature | T_J | | -40 to +125 | | | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -40 to +150 | | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JC} | | | 32 | | $^\circ\text{C/W}$ |
| Thermal Resistance | θ_{JA} | | | 200 | | $^\circ\text{C/W}$ |

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

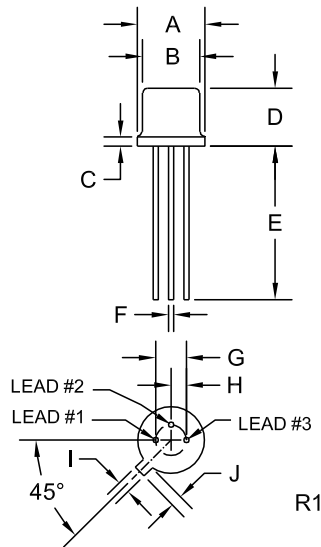
| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--------------------|--|-----|------|------|------------------------|
| I_{DRM}, I_{RRM} | Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega$ | | | 1.0 | μA |
| I_{DRM}, I_{RRM} | Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$ | | | 0.1 | mA |
| V_{TM} | $I_T=2.0\text{A}$ | | 1.6 | 2.15 | V |
| I_{GT} | $V_D=12\text{V}, R_L=10\Omega$ | | 20 | 200 | μA |
| V_{GT} | $V_D=12\text{V}, R_L=10\Omega$ | | 0.65 | 0.8 | V |
| I_H | $R_{GK}=1.0\text{K}\Omega$ | | 0.5 | 5.0 | mA |
| dv/dt | $V_D=0.67\text{V} \times V_{DRM}, R_{GK}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$ | 25 | | | $\text{V}/\mu\text{s}$ |

CS18B
 CS18D
 CS18M
 CS18N

SILICON CONTROLLED RECTIFIER
 1 AMP, 200 THRU 800 VOLTS



TO-18 CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A (DIA) | 0.209 | 0.230 | 5.31 | 5.84 |
| B (DIA) | 0.178 | 0.195 | 4.52 | 4.95 |
| C | - | 0.030 | - | 0.76 |
| D | 0.170 | 0.210 | 4.32 | 5.33 |
| E | 0.500 | - | 12.70 | - |
| F (DIA) | 0.016 | 0.019 | 0.41 | 0.48 |
| G (DIA) | 0.100 | | 2.54 | |
| H | 0.050 | | 1.27 | |
| I | 0.036 | 0.046 | 0.91 | 1.17 |
| J | 0.028 | 0.048 | 0.71 | 1.22 |

TO-18 (REV: R1)

LEAD CODE:

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

MARKING:

FULL PART NUMBER

R2 (18-January 2010)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms