

CS92B  
CS92D  
CS92M  
CS92N

SILICON CONTROLLED RECTIFIER  
0.8 AMP, 200 THRU 800 VOLTS



TO-92 CASE

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CS92B 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)

	<u>SYMBOL</u>	<u>CS92B</u>	<u>CS92D</u>	<u>CS92M</u>	<u>CS92N</u>	<u>UNITS</u>
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	200	400	600	800	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_T(\text{RMS})$		0.8			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			$^\circ\text{C/W}$

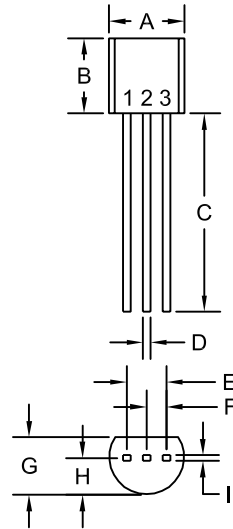
**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega$			1.0	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$			100	$\mu\text{A}$
$I_{GT}$	$V_D=12\text{V}$			200	$\mu\text{A}$
$I_H$	$I_T=100\text{mA}, R_{GK}=1\text{K}\Omega$			5.0	mA
$V_{GT}$	$V_D=12\text{V}$			0.8	V
$V_{TM}$	$I_{TM}=1.0\text{A}, t_p=380\mu\text{s}$			1.7	V
dv/dt	$V_D=2/3 V_{DRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$	25			V/ $\mu\text{s}$

R3 (22-April 2004)

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

**TO-92 CASE - MECHANICAL OUTLINE**



R1

**LEAD CODE:**

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

**MARKING CODE:**

**FULL PART NUMBER**

DIMENSIONS				
SYMBOL	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)

R3 (22-April 2004)

## 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 (2<sup>nd</sup> 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](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://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](http://www.centrasemi.com/terms)