

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

145 Adams Avenue, Hauppauge, NY 11788 USA  
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

CS39-4B  
CS39-4D  
CS39-4M  
CS39-4N

SILICON CONTROLLED RECTIFIER  
4.0 AMP, 200 THRU 800 VOLTS

JEDEC TO-39 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CS39-4B series type is a Hermetically Sealed Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

## MAXIMUM RATINGS (T<sub>C</sub> = 25°C unless otherwise noted)

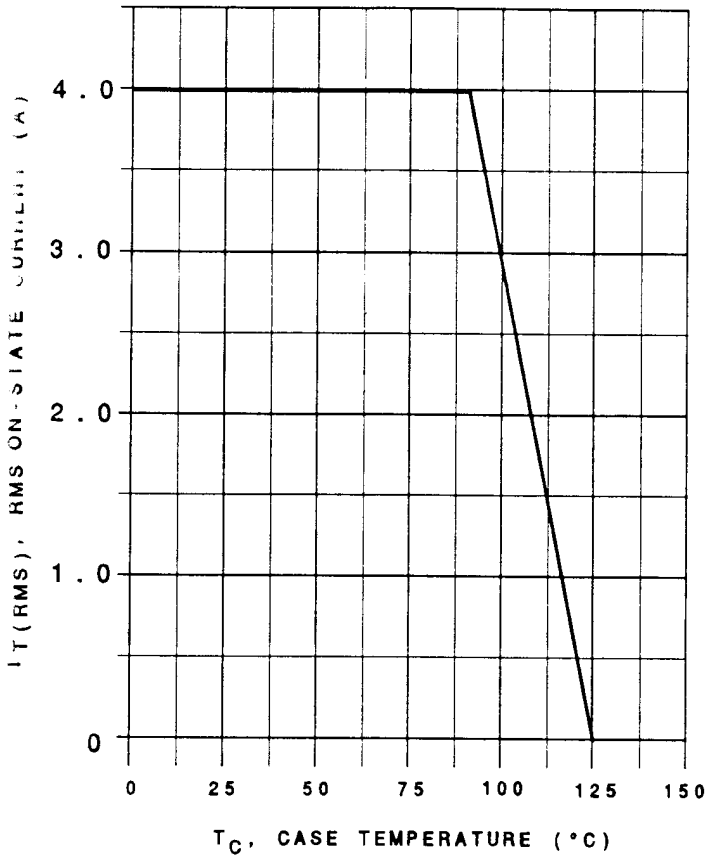
	SYMBOL	CS39 -4B	CS39 -4D	CS39 -4M	CS39 -4N	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub> , V <sub>RRM</sub>	200	400	600	800	V
RMS On-State Current (T <sub>C</sub> = 90°C)	I <sub>T(RMS)</sub>		4.0			A
Peak One Cycle Surge (t = 10ms)	I <sub>TSM</sub>		35			A
I <sup>2</sup> t Value for Fusing (t = 10ms)	I <sup>2</sup> t		4.5			A <sup>2</sup> s
Peak Reverse Gate Voltage	V <sub>GRM</sub>		8.0			V
Peak Gate Power (tp = 10μs)	P <sub>GM</sub>		3.0			W
Average Gate Power Dissipation	P <sub>G(AV)</sub>		0.2			W
Peak Gate Current (tp = 10μs)	I <sub>GM</sub>		1.2			A
Storage Temperature	T <sub>stg</sub>		-55 to + 150			°C
Junction Temperature	T <sub>J</sub>		-55 to + 125			°C
Thermal Resistance	θ <sub>J-A</sub>		180			°C/W
Thermal Resistance	θ <sub>J-C</sub>		10			°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

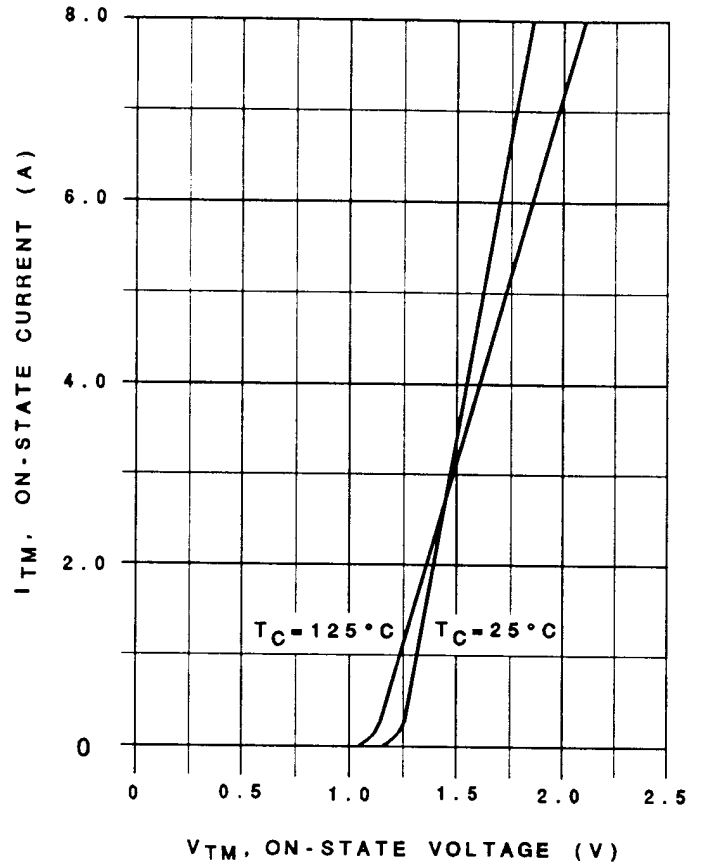
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub> , R <sub>GK</sub> = 1KΩ			5.00	μA
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub> , R <sub>GK</sub> = 1KΩ, T <sub>C</sub> = 125°C			200	μA
I <sub>GT</sub>	V <sub>D</sub> = 12V			200	μA
I <sub>H</sub>	R <sub>GK</sub> = 1KΩ			5.00	mA
V <sub>GT</sub>	V <sub>D</sub> = 12V			0.8	V
V <sub>TM</sub>	I <sub>TM</sub> = 8.0A			1.95	V
dv/dt	V <sub>D</sub> = .67 x V <sub>DRM</sub> , R <sub>GK</sub> = 1KΩ, T <sub>C</sub> = 125°C	25			V/μs

# CS39-4B SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



## MECHANICAL OUTLINE

ALL DIMENSIONS  
IN INCHES (mm).

