

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

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Manufacturers of World Class Discrete Semiconductors

CS92BZ  
CS92DZ  
CS92MZ

SILICON CONTROLLED RECTIFIER  
0.8 AMPS, 200 THRU 600 VOLTS

JEDEC TO-92 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CS92BZ series type are epoxy molded silicon controlled rectifiers designed for control systems and sensing circuit applications.

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

	SYMBOL	CS92BZ	CS92DZ	CS92MZ	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub> , V <sub>RRM</sub>	200	400	600	V
RMS On-State Current (T <sub>C</sub> = 60°C)	I <sub>T(RMS)</sub>		0.8		A
Peak One Cycle Surge (t = 10ms)	I <sub>TSM</sub>		10		A
I <sup>2</sup> t Value for Fusing (t = 10ms)	I <sup>2</sup> t		0.24		A <sup>2</sup> s
Peak Gate Power (tp = 10μs)	P <sub>GM</sub>		2.0		W
Average Gate Power Dissipation	P <sub>G(AV)</sub>		0.1		W
Peak Gate Current (tp = 10μs)	I <sub>GM</sub>		1.0		A
Peak Gate Voltage (tp = 10μs)	V <sub>GM</sub>		8.0		V
Storage Temperature	T <sub>stg</sub>		-40 to +125		°C
Junction Temperature	T <sub>J</sub>		-40 to +125		°C
Thermal Resistance	θ <sub>J-A</sub>		200		°C/W
Thermal Resistance	θ <sub>J-C</sub>		100		°C/W

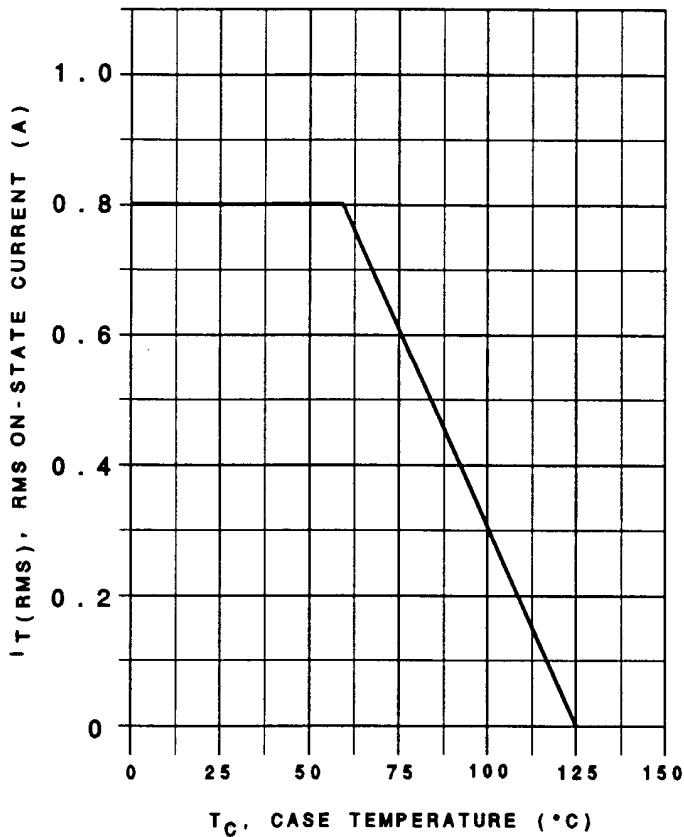
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

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			1.00	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			100	μA
I <sub>GT</sub>	V <sub>D</sub> = 12V			20	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> = 1.0A			1.70	V
dv/dt	V <sub>D</sub> = .67 x V <sub>DRM</sub> , R <sub>GK</sub> = 1KΩ, T <sub>C</sub> = 125°C	50			V/μs

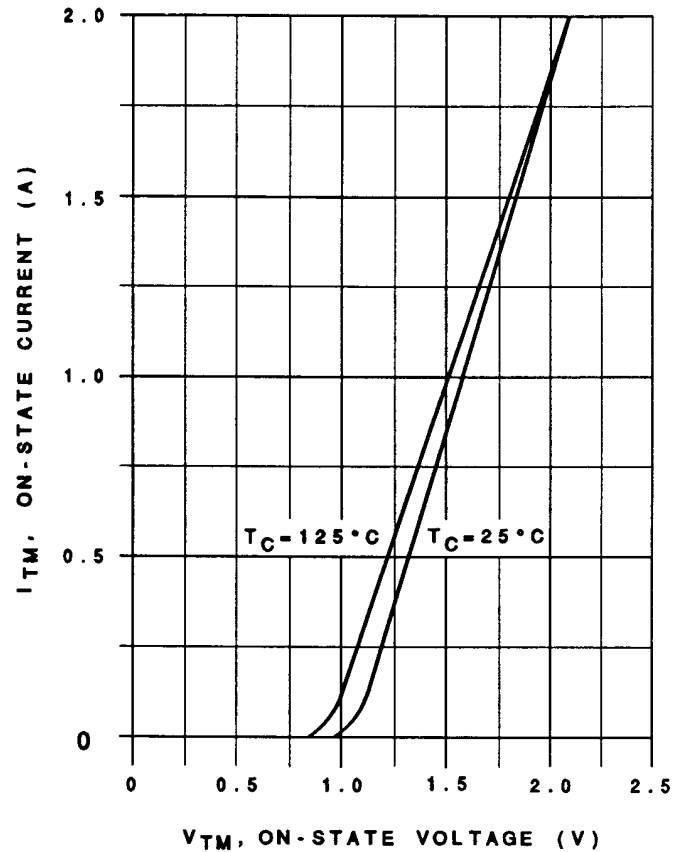
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# CS92BZ SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



## MECHANICAL OUTLINE

