

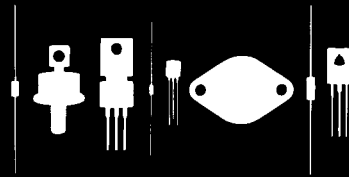
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145 Adams Avenue  
Hauppauge, New York 11788



CS220-10B  
CS220-10D  
CS220-10M  
CS220-10N

SILICON CONTROLLED RECTIFIER  
10 AMP, 200 THRU 800 VOLTS

JEDEC TO-220AB CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CS220-10B series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

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

	SYMBOL	CS220 -10B	CS220 -10D	CS220 -10M	CS220 -10N	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>			10		A
Peak One Cycle Surge (t = 10ms)	I <sub>TSM</sub>			100		A
I <sup>2</sup> t Value for Fusing (t = 10ms)	I <sup>2</sup> t			50		A <sup>2</sup> s
Peak Gate Power (tp = 10μs)	P <sub>GM</sub>			40		W
Average Gate Power Dissipation	P <sub>G(AV)</sub>			1.0		W
Peak Forward Gate Current (tp = 10μs)	I <sub>FGM</sub>			4.0		A
Peak Forward Gate Voltage (tp = 10μs)	V <sub>FGM</sub>			16		V
Peak Reverse Gate Voltage (tp = 10μs)	V <sub>RGM</sub>			5.0		V
Critical Rate of Rise of On-State Current	di/dt			50		A/μs
Storage Temperature	T <sub>stg</sub>		-40 to +150			°C
Junction Temperature	T <sub>J</sub>		-40 to +110			°C
Thermal Resistance	θ <sub>J-A</sub>		60			°C/W
Thermal Resistance	θ <sub>J-C</sub>		2.5			°C/W

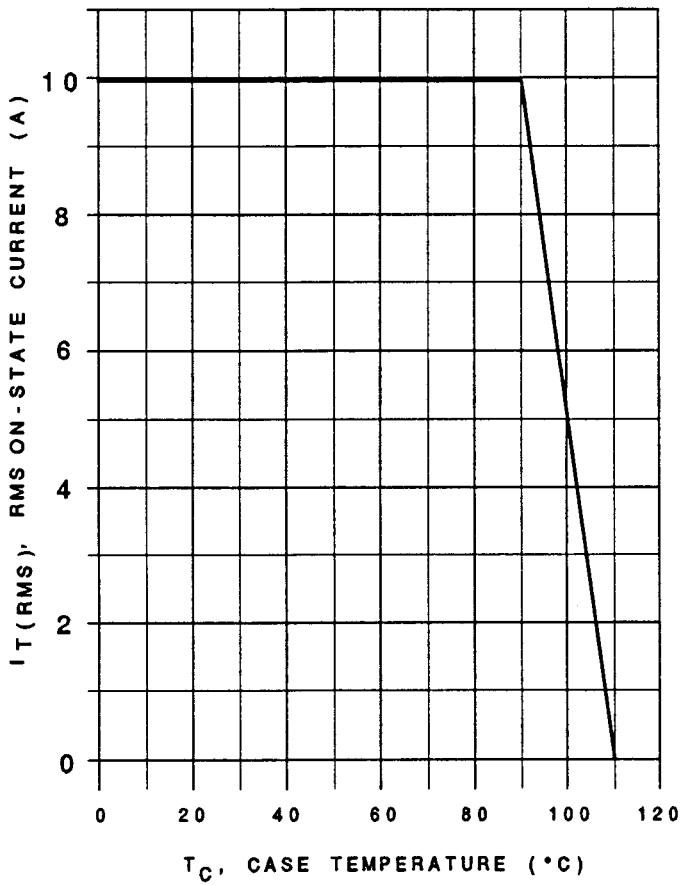
## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub>			0.01	mA
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub> , T <sub>C</sub> = 110°C			2.00	mA
I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω			15	mA
I <sub>H</sub>	I <sub>T</sub> = 100mA			30	mA
V <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω			1.50	V
V <sub>TM</sub>	I <sub>TM</sub> = 20A, tp = 10ms			1.60	V
dv/dt	V <sub>D</sub> = .67 x V <sub>DRM</sub> , T <sub>C</sub> = 110°C	200			V/μs

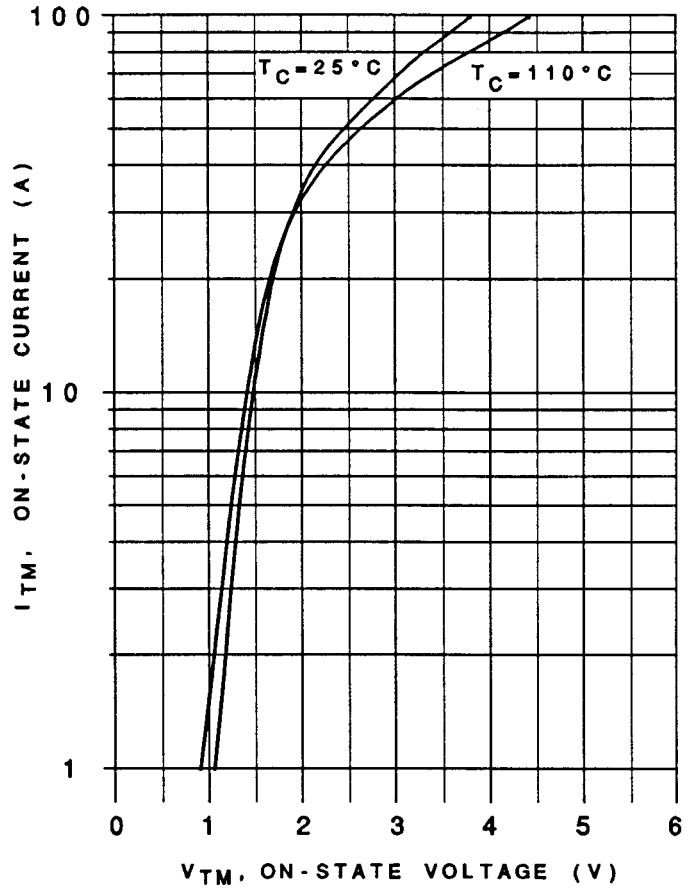
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# CS220-10B SERIES RATING AND CHARACTERISTIC CURVES

**RMS ON-STATE CURRENT vs. CASE TEMPERATURE**



**MAXIMUM ON-STATE CHARACTERISTICS**



## MECHANICAL DIMENSIONS

