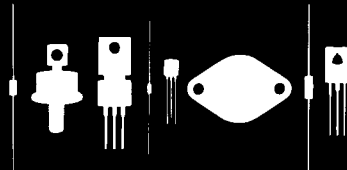


Central Semiconductor Corp.  
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 145 Adams Avenue  
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CS220-10B  
 CS220-10D  
 CS220-10M  
 CS220-10N

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

	SYMBOL	CS220 -10B	CS220 -10D	CS220 -10M	CS220 -10N	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	200	400	600	800	V
RMS On-State Current ( $T_C = 90^{\circ}\text{C}$ )	$I_T(\text{RMS})$			10		A
Peak One Cycle Surge ( $t = 10\text{ms}$ )	$I_{TSM}$			100		A
$I^2t$ Value for Fusing ( $t = 10\text{ms}$ )	$I^2t$			50		$\text{A}^2\text{s}$
Peak Gate Power ( $t_p = 10\mu\text{s}$ )	$P_{GM}$			40		W
Average Gate Power Dissipation	$P_{G(AV)}$			1.0		W
Peak Forward Gate Current ( $t_p = 10\mu\text{s}$ )	$I_{FGM}$			4.0		A
Peak Forward Gate Voltage ( $t_p = 10\mu\text{s}$ )	$V_{FGM}$			16		V
Peak Reverse Gate Voltage ( $t_p = 10\mu\text{s}$ )	$V_{RGM}$			5.0		V
Critical Rate of Rise of On-State Current	$di/dt$			50		$\text{A}/\mu\text{s}$
Storage Temperature	$T_{stg}$		-40 to +150			$^{\circ}\text{C}$
Junction Temperature	$T_J$		-40 to +110			$^{\circ}\text{C}$
Thermal Resistance	$\theta_{J-A}$			60		$^{\circ}\text{C}/\text{W}$
Thermal Resistance	$\theta_{J-C}$			2.5		$^{\circ}\text{C}/\text{W}$

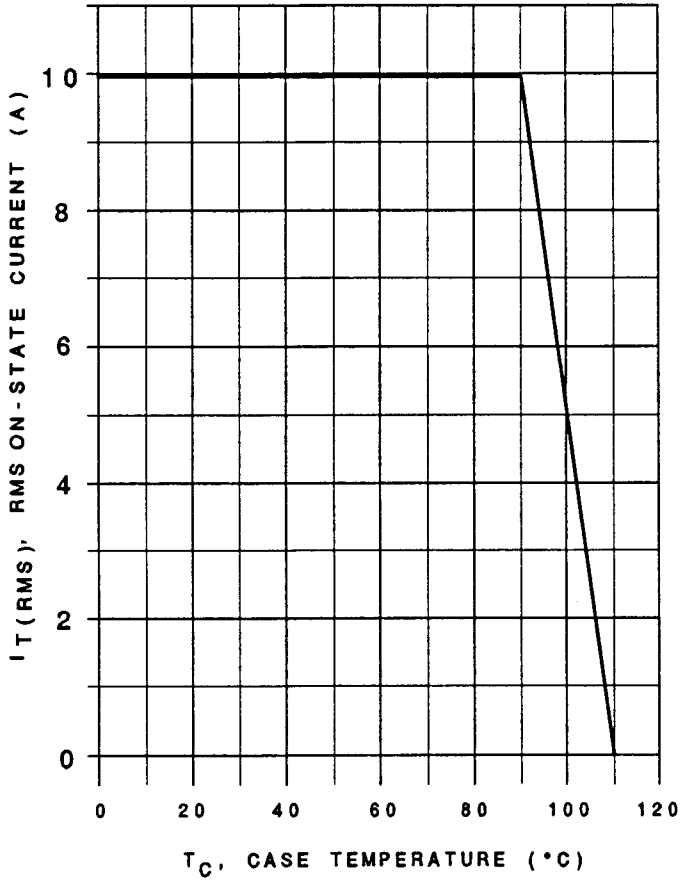
**ELECTRICAL CHARACTERISTICS** ( $T_C = 25^{\circ}\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}$			0.01	mA
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, T_C = 110^{\circ}\text{C}$			2.00	mA
$I_{GT}$	$V_D = 12\text{V}, R_L = 33\Omega$			15	mA
$I_H$	$I_T = 100\text{mA}$			30	mA
$V_{GT}$	$V_D = 12\text{V}, R_L = 33\Omega$			1.50	V
$V_{TM}$	$I_{TM} = 20\text{A}, t_p = 10\text{ms}$			1.60	V
$dv/dt$	$V_D = .67 \times V_{DRM}, T_C = 110^{\circ}\text{C}$	200			$\text{V}/\mu\text{s}$

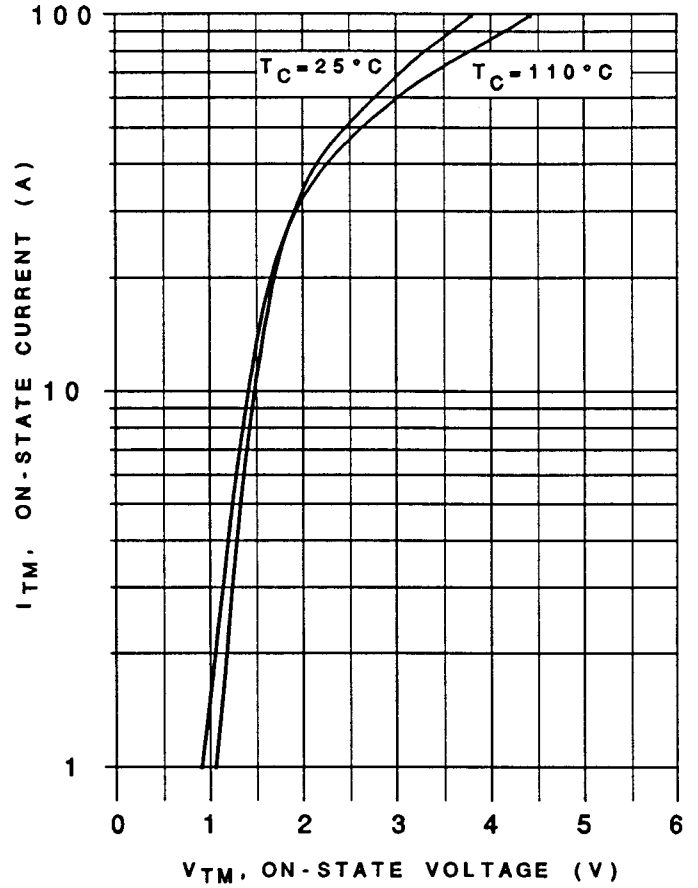
(OVER)

# CS220-10B SERIES RATING AND CHARACTERISTIC CURVES

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



**MAXIMUM ON-STATE CHARACTERISTICS**



## MECHANICAL DIMENSIONS

All Dimensions in Inches (mm).

