

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CS220-12B
CS220-12D
CS220-12M
CS220-12N
CS220-12P

SILICON CONTROLLED RECTIFIER
12 AMP, 200 THRU 1000 VOLTS

JEDEC TO-220AB CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CS220-12B series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

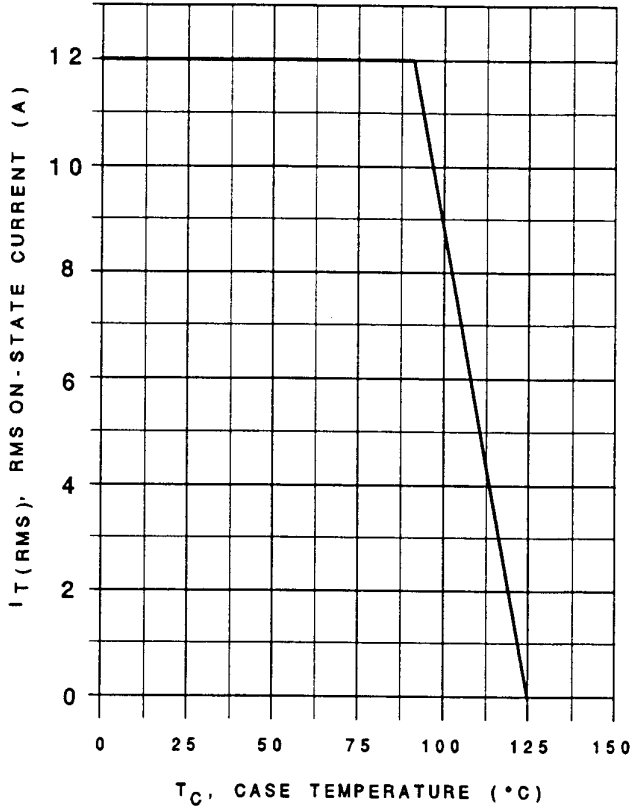
	SYMBOL	CS220 -12B	CS220 -12D	CS220 -12M	CS220 -12N	CS220 -12P	UNITS
Peak Repetitive Off-State Voltage	V _{DRM} , V _{RRM}	200	400	600	800	1000	V
RMS On-State Current (T _C = 90°C)	I _{T(RMS)}			12			A
Peak One Cycle Surge (t = 10ms)	I _{TSM}			120			A
I ² t Value for Fusing (t = 10ms)	I ² t			72			A ² s
Peak Gate Power (tp = 10μs)	P _{GM}			40			W
Average Gate Power Dissipation	P _{G(AV)}			1.0			W
Peak Forward Gate Current (tp = 10μs)	I _{FGM}			4.0			A
Peak Forward Gate Voltage (tp = 10μs)	V _{FGM}			16			V
Peak Reverse Gate Voltage (tp = 10μs)	V _{RGM}			5.0			V
Critical Rate of Rise of On-State Current	di/dt			100			A/μs
Storage Temperature	T _{stg}			-40 to +150			°C
Junction Temperature	T _J			-40 to +125			°C
Thermal Resistance	Θ _{J-A}			60			°C/W
Thermal Resistance	Θ _{J-C}			2.5			°C/W

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

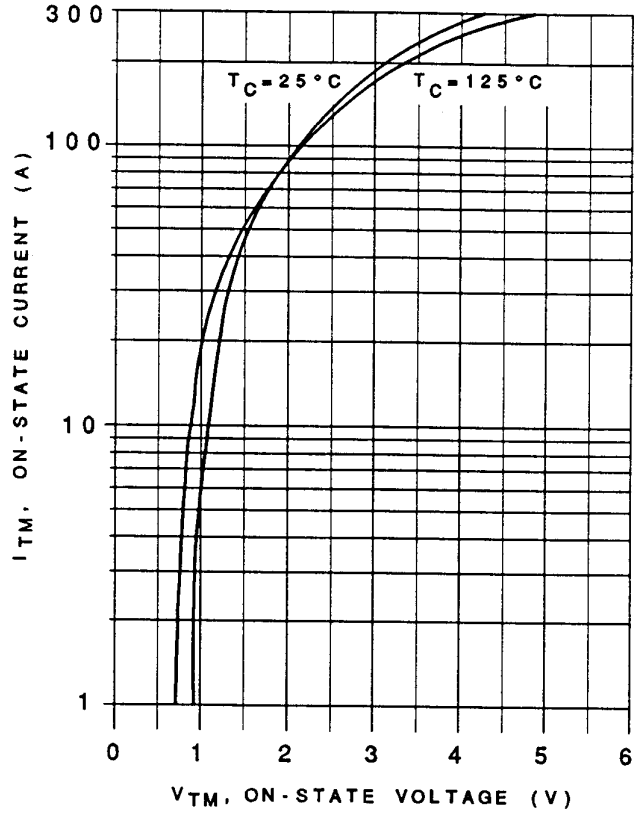
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM}			0.01	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C = 125°C			3.00	mA
I _{GT}	V _D = 12V, R _L = 33Ω			15	mA
I _H	I _T = 100mA			30	mA
V _{GT}	V _D = 12V, R _L = 33Ω			1.50	V
V _{TM}	I _{TM} = 24A, tp = 10ms			1.60	V
dv/dt	V _D = .67 x V _{DRM} , T _C = 125°C	200			V/μs

CS220-12B SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL DIMENSIONS

All Dimensions in inches (mm).

