

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CS218I-50B
CS218I-50D
CS218I-50M
CS218I-50N
CS218I-50P
CS218I-50PB

ISOLATED TAB SCR
50 AMP, 200 THRU 1200 VOLTS

TO-218 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CS218I-50B series type is an Epoxy Molded Silicon SCR designed for sensing circuit applications and control systems. This device is mounted in a TO-218 case with an isolated mounting tab.

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

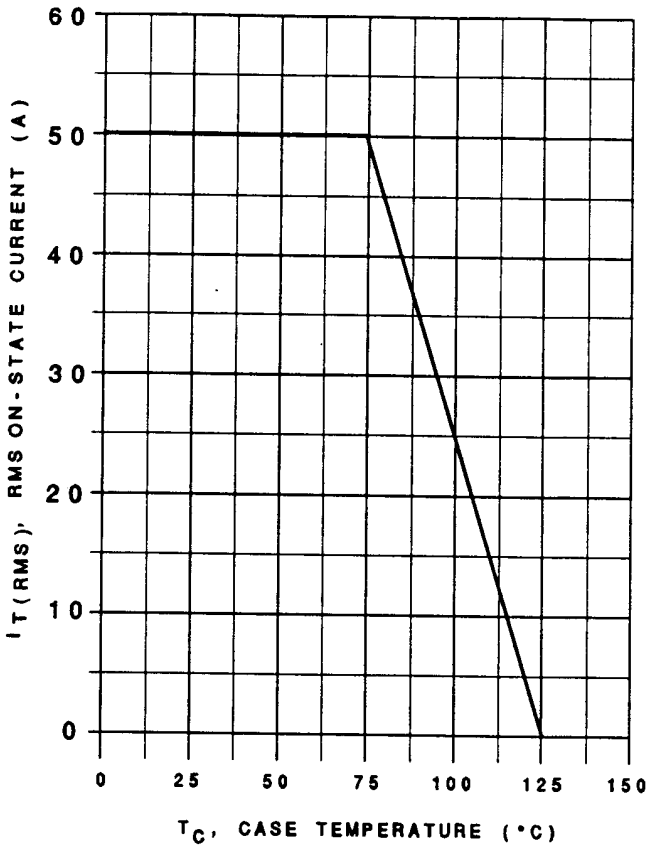
SYMBOL	CS218	CS218	CS218	CS218	CS218	CS218	UNITS	
	I-50B	I-50D	I-50M	I-50N	I-50P	I-50PB		
Peak Repetitive Off-State Voltage	V _{DRM} , V _{RRM}	200	400	600	800	1000	1200	V
RMS On-State Current (T _C = 75°C)	I _{T(RMS)}			50				A
Peak One Cycle Surge (t = 10ms)	I _{TSM}			500				A
I ² t Value for Fusing (t = 10ms)	I ² t			1250				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}			8.0				A
Peak Forward Gate Voltage (tp = 10μs)	V _{FGM}			16				V
Peak Reverse Gate Voltage	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}			50				°C/W
Thermal Resistance	θ _{J-C}			0.9				°C/W
Isolation Voltage	V _{ISO}			2500				V(RMS)

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

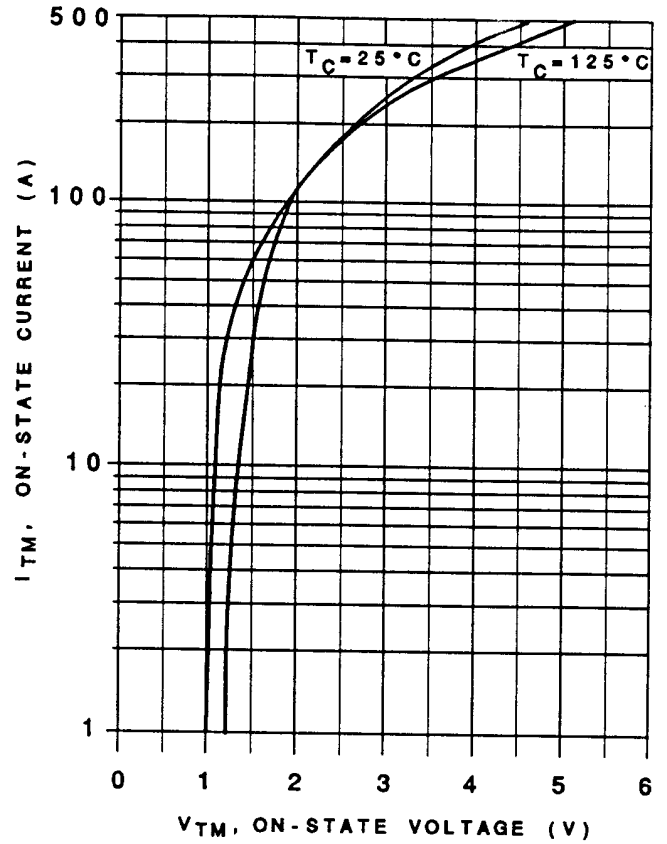
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM}			0.02	mA
I _{DRM} , I _{RRM}	Rated V _{DRM} , V _{RRM} , T _C = 125°C			6.00	mA
I _{GT}	V _D = 12V, R _L = 33Ω			80	mA
I _H	I _T = 500mA			80	mA
V _{GT}	V _D = 12V, R _L = 33Ω			1.50	V
V _{TM}	I _{TM} = 100A, tp = 380ms			1.90	V
dv/dt	V _D = 2/3 V _{DRM} , R _{GK} = ∞, T _C = 125°C, V _{DRM} ≤ 800V	500			V/μs
dv/dt	V _D = 2/3 V _{DRM} , R _{GK} = ∞, T _C = 125°C, V _{DRM} ≥ 1000V	250			V/μs

CS218I-50B SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL OUTLINE

