Central™
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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)

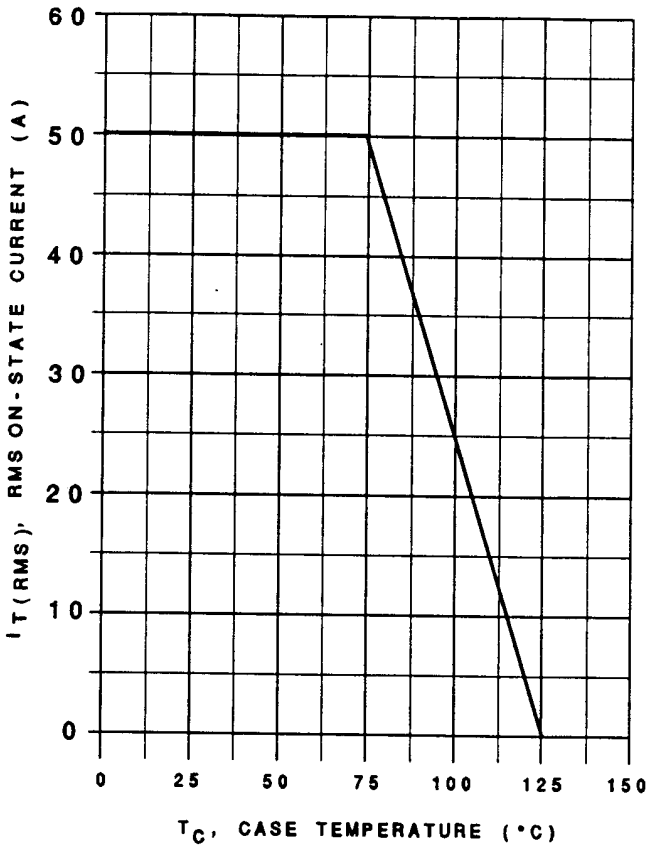
	SYMBOL	CS218 I-50B	CS218 I-50D	CS218 I-50M	CS218 I-50N	CS218 I-50P	CS218 I-50PB	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	200	400	600	800	1000	1200	V
RMS On-State Current ($T_C = 75°C$)	$I_{T(RMS)}$			50				A
Peak One Cycle Surge (t = 10ms)	I_{TSM}			500				A
I^2t Value for Fusing (t = 10ms)	I^2t			1250				A^2s
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)

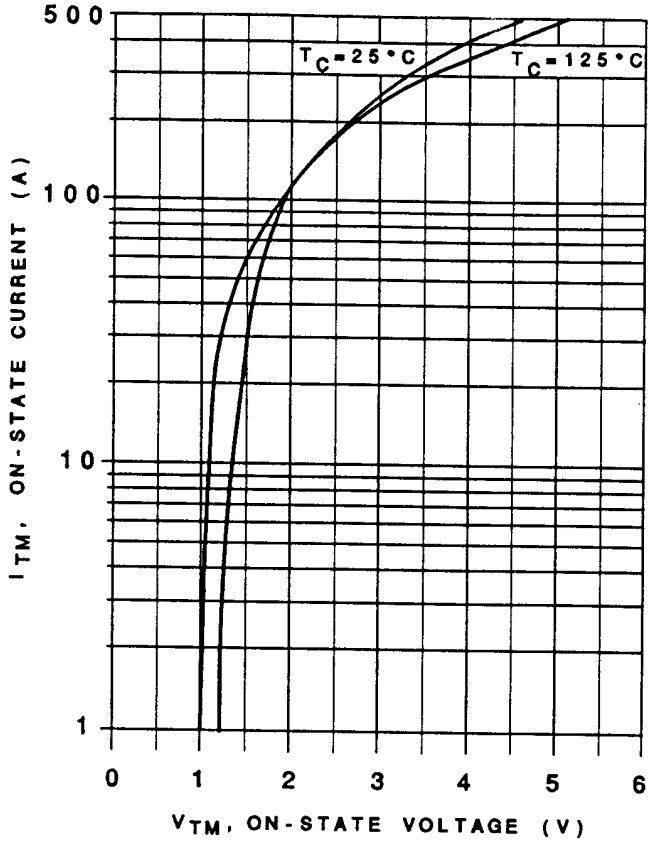
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}			0.02	mA
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}, $T_C = 125°C$			6.00	mA
I_{GT}	$V_D = 12V$, $R_L = 33\Omega$			80	mA
I_H	$I_T = 500mA$			80	mA
V_{GT}	$V_D = 12V$, $R_L = 33\Omega$			1.50	V
V_{TM}	$I_{TM} = 100A$, tp = 380ms			1.90	V
dv/dt	$V_D = \frac{2}{3}V_{DRM}$, $R_{GK} = \infty$, $T_C = 125°C$, $V_{DRM} \leq 800V$	500			V/μs
dv/dt	$V_D = \frac{2}{3}V_{DRM}$, $R_{GK} = \infty$, $T_C = 125°C$, $V_{DRM} \geq 1000V$	250			V/μs

CS218I-50B SERIES RATING AND CHARACTERISTIC CURVES

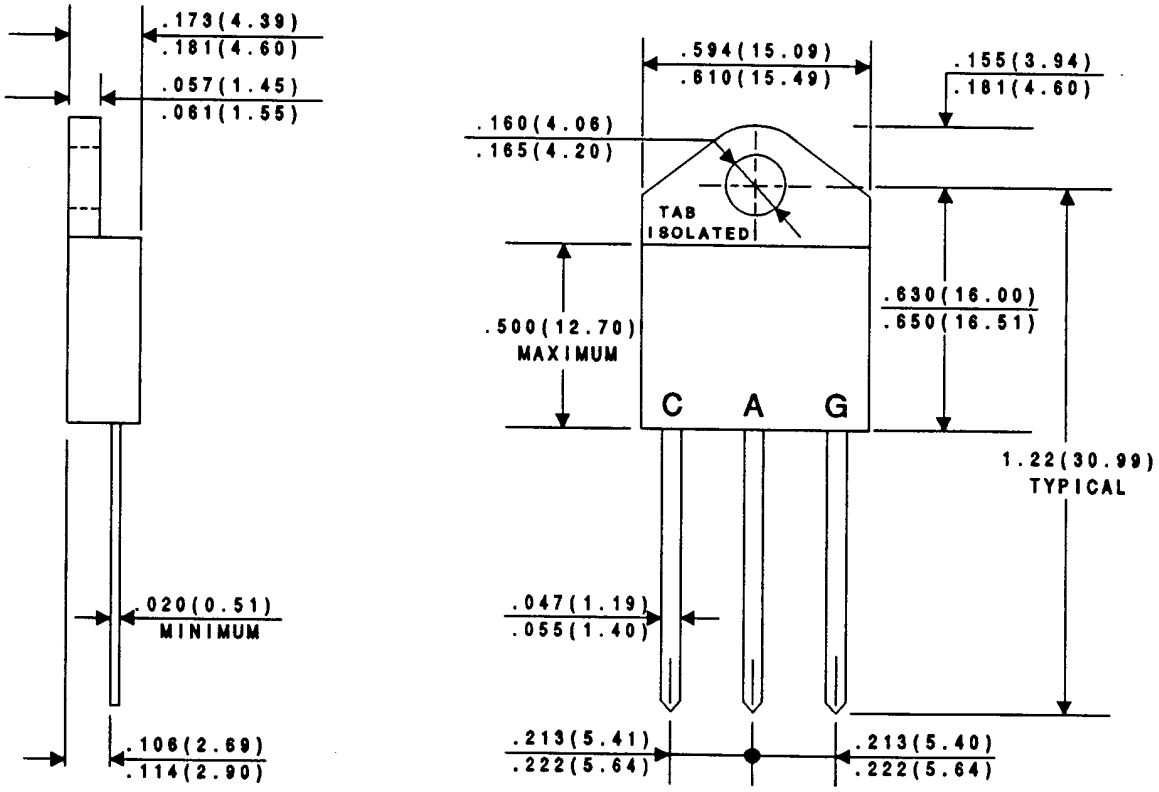
RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL OUTLINE



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All Dimensions in Inches (mm).