Central™
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Manufacturers of World Class Discrete Semiconductors

CS218I-30B
CS218I-30D
CS218I-30M
CS218I-30N
CS218I-30P
CS218I-30PB

ISOLATED TAB SCR
30 AMP, 200 THRU 1200 VOLTS

TO-218 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CS218I-30B 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-30B	CS218 I-30D	CS218 I-30M	CS218 I-30N	CS218 I-30P	CS218 I-30PB	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	200	400	600	800	1000	1200	V
RMS On-State Current (T_C=85°C)	$I_{T(RMS)}$			30				A
Peak One Cycle Surge (t=10ms)	I_{TSM}			400				A
I^2t Value for Fusing (t=10ms)	I^2t			800				A^2s
Peak Gate Power (tp=10μs)	P_{GM}			50				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	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}			1.1				°C/W
Isolation Voltage	V_{ISO}			2500				$V_{(RMS)}$

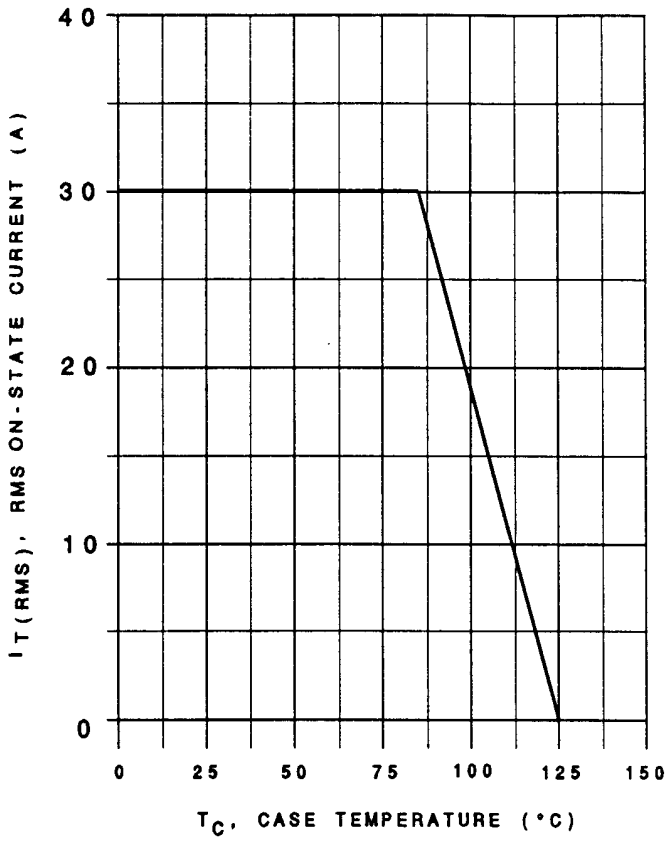
ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise noted)

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			50	mA
I_H	I_T=500mA			75	mA
V_{GT}	V_D=12V; R_L=33Ω			1.50	V
V_{TM}	I_{TM}=60A, tp=380ms			2.10	V
dv/dt	V_D=⅔V_{DRM}, R_{GK}=∞, T_C=125°C, V_{DRM} ≤800V	500			V/μs
dv/dt	V_D=⅔V_{DRM}, R_{GK}=∞, T_C=125°C, V_{DRM} ≥1000V	250			V/μs

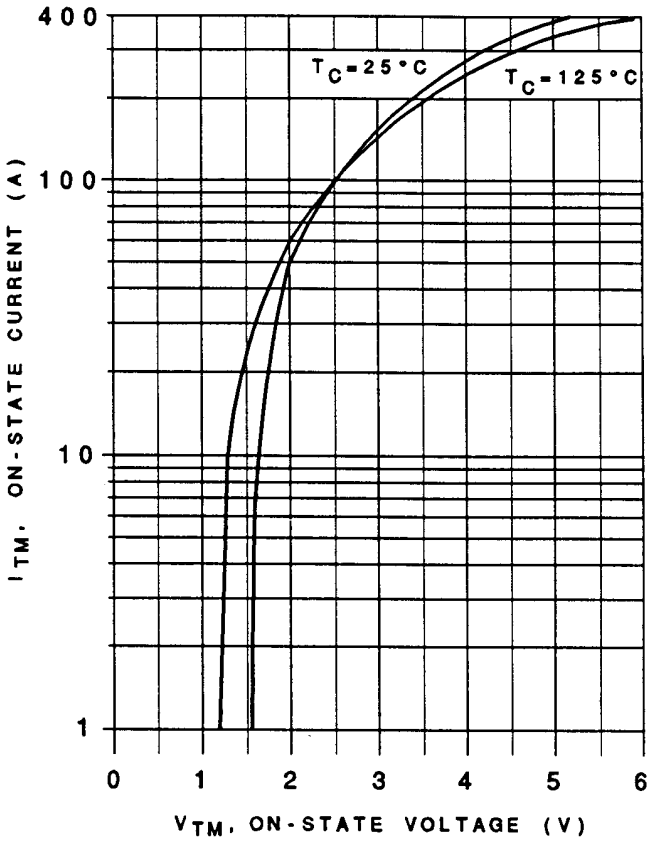
(OVER)

CS218I-30B SERIES RATING AND CHARACTERISTIC CURVES

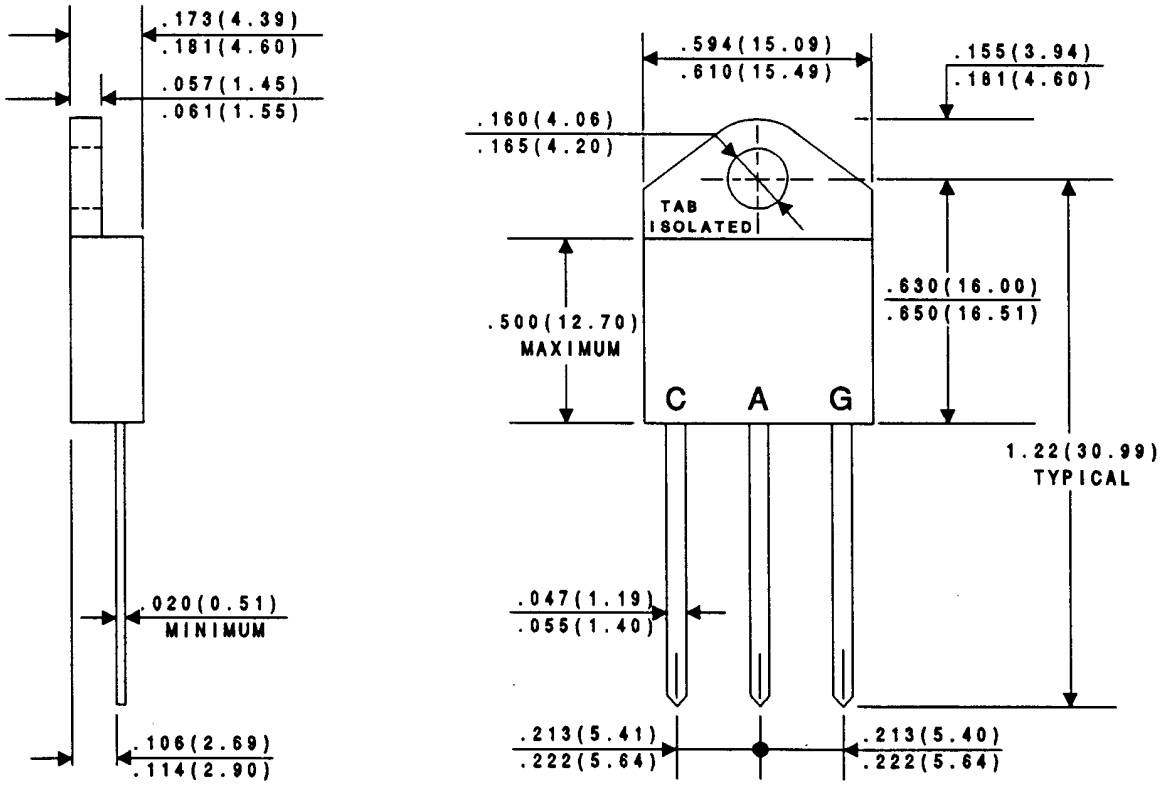
RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL OUTLINE



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All Dimensions in Inches (mm).