

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CQ218I-40B
CQ218I-40D
CQ218I-40M
CQ218I-40N

ISOLATED TAB TRIAC
40 AMP, 200 THRU 800 VOLTS

TO-218 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ218I-40B series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants. This device is mounted in a TO-218 case with an isolated mounting tab.

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

	SYMBOL	CQ218I -40B	CQ218I -40D	CQ218I -40M	CQ218I -40N	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	200	400	600	800	V
RMS On-State Current ($T_C = 90^\circ\text{C}$)	$I_T(\text{RMS})$			40		A
Peak One Cycle Surge ($t = 10\text{ms}$)	I_{TSM}			300		A
I^2t Value for Fusing ($t = 10\text{ms}$)	I^2t			450		A^2s
Peak Gate Power ($t_p = 10\mu\text{s}$)	P_{GM}			40		W
Average Gate Power Dissipation	$P_{G(AV)}$			1.0		W
Peak Gate Current ($t_p = 10\mu\text{s}$)	I_{GM}			10		A
Peak Gate Voltage ($t_p = 10\mu\text{s}$)	V_{GM}			16		V
Critical Rate of Rise of On-State Current						
Repetitive ($F = 50\text{Hz}$)	di/dt			10		$\text{A}/\mu\text{s}$
Storage Temperature	T_{stg}		-40 to +150			$^\circ\text{C}$
Junction Temperature	T_J		-40 to +125			$^\circ\text{C}$
Thermal Resistance	θ_{J-A}		50			$^\circ\text{C}/\text{W}$
Thermal Resistance	θ_{J-C}		1.2			$^\circ\text{C}/\text{W}$
Isolation Voltage	V_{ISO}		2500			$V_{(\text{RMS})}$

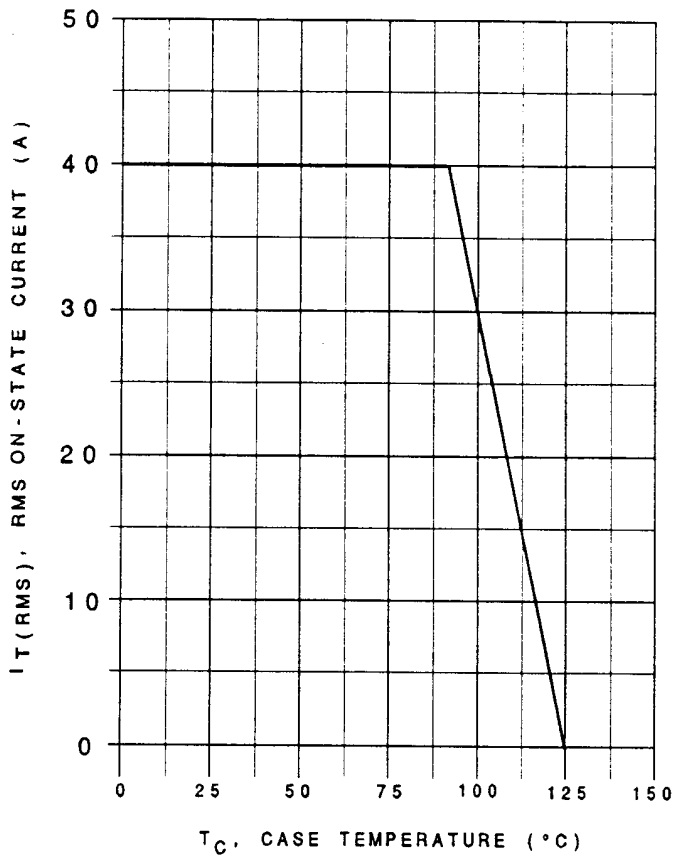
ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}	Rated V_{DRM}			0.01	mA
I_{DRM}	Rated V_{DRM} , $T_C = 125^\circ\text{C}$			6.00	mA
I_{GT}	$V_D = 12\text{V}$, $R_L = 33\Omega$, QUAD I,II,III			50	mA
I_{GT}	$V_D = 12\text{V}$, $R_L = 33\Omega$, QUAD IV			100	mA
I_H	$I_T = 500\text{mA}$			80	mA
V_{GT}	$V_D = 12\text{V}$, $R_L = 33\Omega$, QUAD I,II,III,IV			1.50	V
V_{TM}	$I_{TM} = 56\text{A}$, $t_p = 10\text{ms}$			1.80	V
dv/dt	$V_D = \frac{2}{3}V_{DRM}$, $R_{GK} = \infty$, $T_C = 125^\circ\text{C}$	250			$\text{V}/\mu\text{s}$

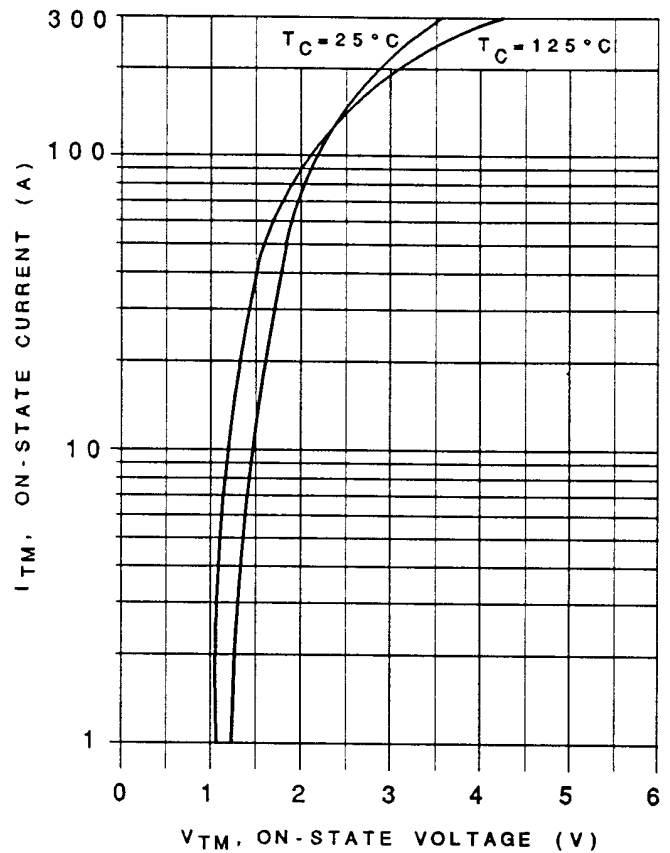
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CQ218I-40B SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



MECHANICAL OUTLINE

ALL DIMENSIONS IN INCHES (mm).

