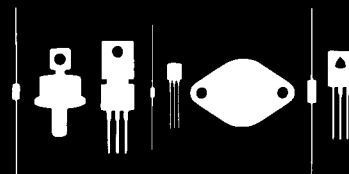


National  
 Electronic Components Corp.  
**Central  
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 145 Adams Avenue  
 Hauppauge, New York 11788



CQ48-25B  
 CQ48-25D  
 CQ48-25M  
 CQ48-25N

25 AMP TRIAC  
 200 THRU 800 VOLTS

JEDEC TO-48 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ48-25B series types are Power Triacs, utilizing a Glass Passivated Process, mounted in a hermetically sealed metal case, designed for AC control applications featuring gate triggering in all four (4) quadrants.

## MAXIMUM RATINGS (T<sub>C</sub> = 25°C unless otherwise noted)

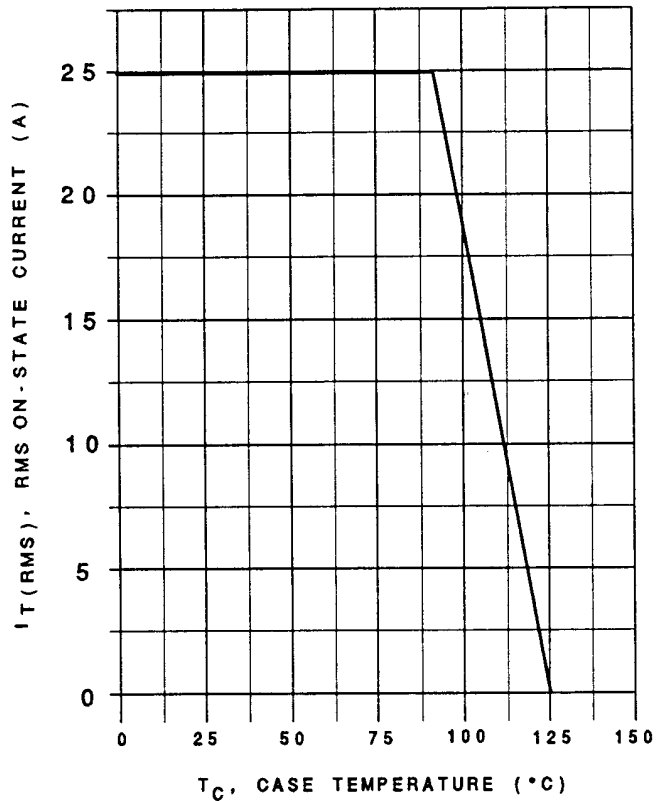
	SYMBOL	CQ48 -25B	CQ48 -25D	CQ48 -25M	CQ48 -25N	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub>	200	400	600	800	V
RMS On-State Current (T <sub>C</sub> = 90°C)	I <sub>T(RMS)</sub>			25		A
Peak One Cycle Surge (t = 10ms)	I <sub>TSM</sub>			250		A
I <sup>2</sup> t Value for Fusing (t = 10ms)	I <sup>2</sup> t			312.5		A <sup>2</sup> s
Peak Gate Power (tp = 10μs)	P <sub>GM</sub>			40		W
Average Gate Power Dissipation	P <sub>G(AV)</sub>			1.0		W
Peak Gate Current (tp = 10μs)	I <sub>GM</sub>			6.0		A
Peak Gate Voltage (tp = 10μs)	V <sub>GM</sub>			16		V
Critical Rate of Rise of On-State Current						
Repetitive (F = 50Hz)	di/dt			20		A/μs
Storage Temperature	T <sub>stg</sub>		-40 to +150			°C
Junction Temperature	T <sub>J</sub>		-40 to +125			°C
Thermal Resistance	θ <sub>J-C</sub>		1.2			°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

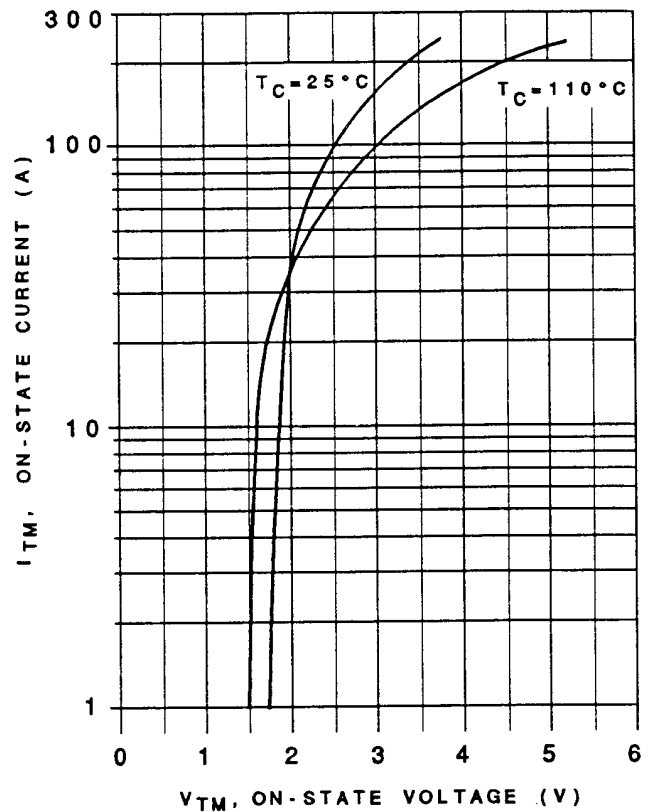
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub>	Rated V <sub>DRM</sub>			0.02	mA
I <sub>DRM</sub>	Rated V <sub>DRM</sub> , T <sub>C</sub> = 110°C			5.00	mA
I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω, QUAD I,II,III			100	mA
I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω, QUAD IV			150	mA
I <sub>H</sub>	I <sub>T</sub> = 500mA			100	mA
V <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω, QUAD I,II,III,IV			1.50	V
V <sub>TM</sub>	I <sub>TM</sub> = 35A, tp = 10ms			2.00	V
dv/dt	V <sub>D</sub> = 2/3 V <sub>DRM</sub> , R <sub>GK</sub> = ∞, T <sub>C</sub> = 110°C	250			V/μs

# CQ48-25B SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



## MECHANICAL DIMENSIONS

