

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CQ48-35B  
CQ48-35D  
CQ48-35M  
CQ48-35N

35 AMP TRIAC  
200 THRU 800 VOLTS

JEDEC TO-48 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ48-35B 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 $(T_C = 25^\circ\text{C}$ unless otherwise noted)

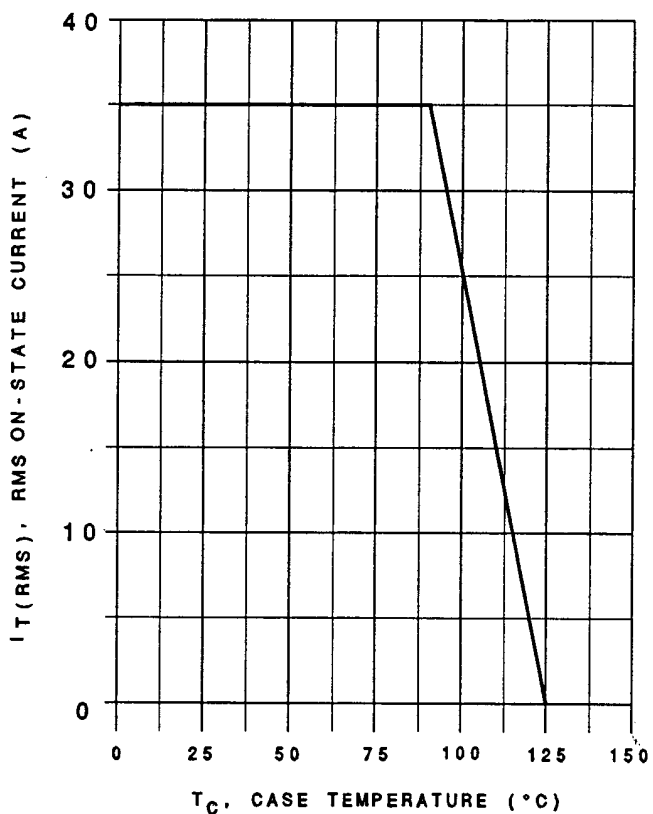
	SYMBOL	CQ48 -35B	CQ48 -35D	CQ48 -35M	CQ48 -35N	UNITS
Peak Repetitive Off-State Voltage	$V_{\text{DRM}}$	200	400	600	800	V
RMS On-State Current $(T_C = 90^\circ\text{C})$	$I_{\text{T(RMS)}}$			35		A
Peak One Cycle Surge $(t = 10\text{ms})$	$I_{\text{TSM}}$			300		A
$I^2t$ Value for Fusing $(t = 10\text{ms})$	$I^2t$			450		$\text{A}^2\text{s}$
Peak Gate Power $(t_p = 10\mu\text{s})$	$P_{\text{GM}}$			40		W
Average Gate Power Dissipation	$P_{\text{G(AV)}}$			1.0		W
Peak Gate Current $(t_p = 10\mu\text{s})$	$I_{\text{GM}}$			6.0		A
Peak Gate Voltage $(t_p = 10\mu\text{s})$	$V_{\text{GM}}$			16		V
Critical Rate of Rise of On-State Current						
Repetitive $(F = 50\text{Hz})$	$di/dt$			20		$\text{A}/\mu\text{s}$
Storage Temperature	$T_{\text{stg}}$		-40 to +150			$^\circ\text{C}$
Junction Temperature	$T_{\text{J}}$		-40 to +125			$^\circ\text{C}$
Thermal Resistance	$\theta_{\text{J-C}}$			1.1		$^\circ\text{C}/\text{W}$

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

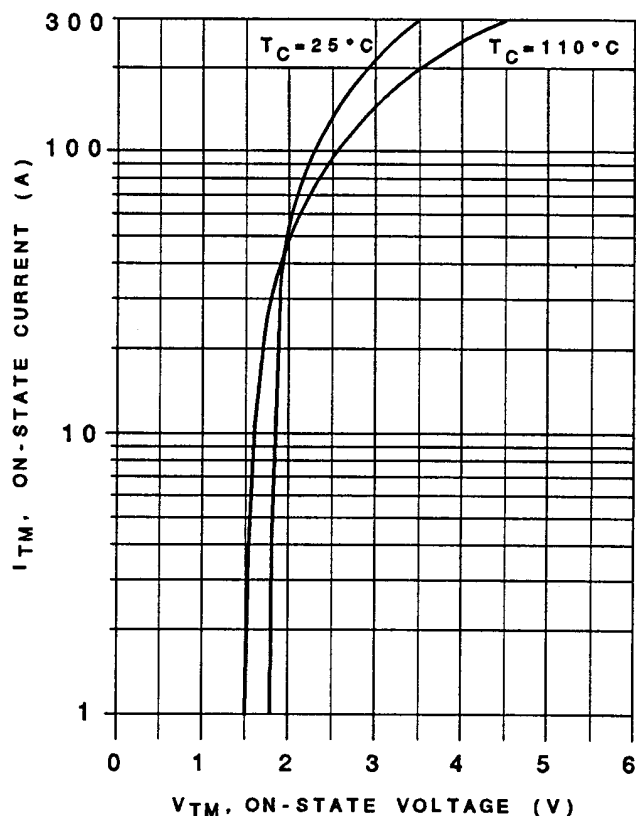
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{\text{DRM}}$	Rated $V_{\text{DRM}}$			0.02	mA
$I_{\text{DRM}}$	Rated $V_{\text{DRM}}$ , $T_C = 110^\circ\text{C}$			4.00	mA
$I_{\text{GT}}$	$V_{\text{D}} = 12\text{V}$ , $R_{\text{L}} = 33\Omega$ , QUAD I,II,III			100	mA
$I_{\text{GT}}$	$V_{\text{D}} = 12\text{V}$ , $R_{\text{L}} = 33\Omega$ , QUAD IV			150	mA
$I_{\text{H}}$	$I_{\text{T}} = 500\text{mA}$			100	mA
$V_{\text{GT}}$	$V_{\text{D}} = 12\text{V}$ , $R_{\text{L}} = 33\Omega$ , QUAD I,II,III,IV			1.50	V
$V_{\text{TM}}$	$I_{\text{TM}} = 49\text{A}$ , $t_p = 10\text{ms}$			2.00	V
$dv/dt$	$V_{\text{D}} = \frac{2}{3}V_{\text{DRM}}$ , $R_{\text{GK}} = \infty$ , $T_C = 110^\circ\text{C}$	250			$\text{V}/\mu\text{s}$

# CQ48-35B SERIES RATING AND CHARACTERISTIC CURVES

RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



## MECHANICAL DIMENSIONS

