

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

145 Adams Avenue, Hauppauge, NY 11788 USA  
Tel: (631) 435-1110 • Fax: (631) 435-1824

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<sub>C</sub> = 25°C unless otherwise noted)

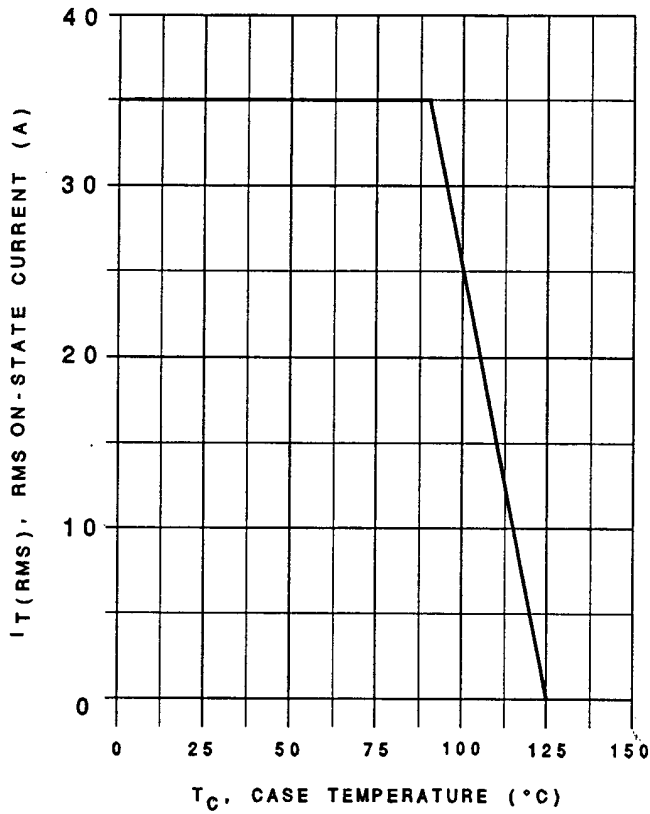
	SYMBOL	CQ48 -35B	CQ48 -35D	CQ48 -35M	CQ48 -35N	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub>	200	400	600	800	V
RMS On-State Current (T <sub>C</sub> = 90°C)	I <sub>T(RMS)</sub>			35		A
Peak One Cycle Surge (t = 10ms)	I <sub>TSM</sub>			300		A
I <sup>2</sup> t Value for Fusing (t = 10ms)	I <sup>2</sup> t			450		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>			1.1		°C/W

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

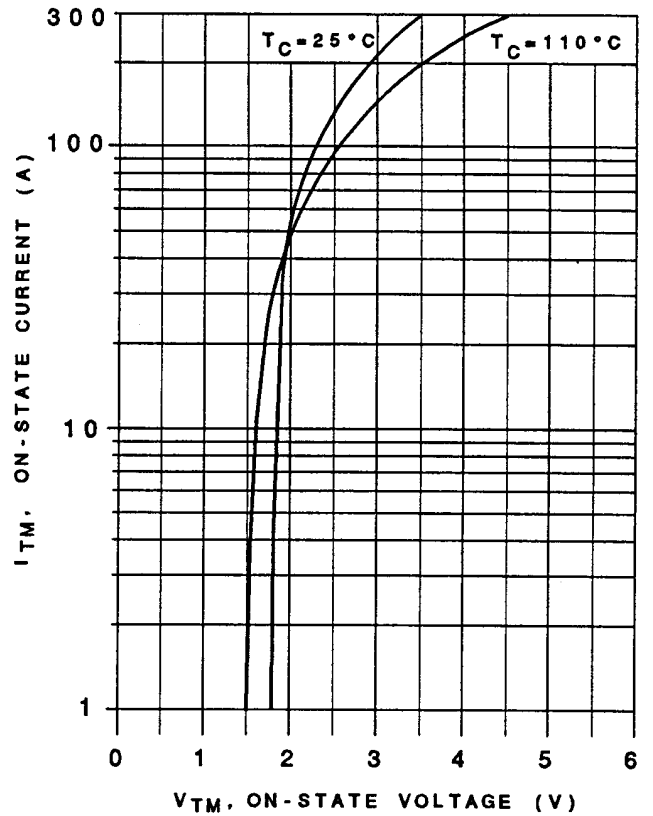
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub>	Rated V <sub>DRM</sub>			0.02	mA
I <sub>DRM</sub>	Rated V <sub>DRM</sub> , T <sub>C</sub> = 110°C			4.00	mA
I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω, QUAD I,II,III			100	mA
I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 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> = 49A, 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

# CQ48-35B SERIES RATING AND CHARACTERISTIC CURVES

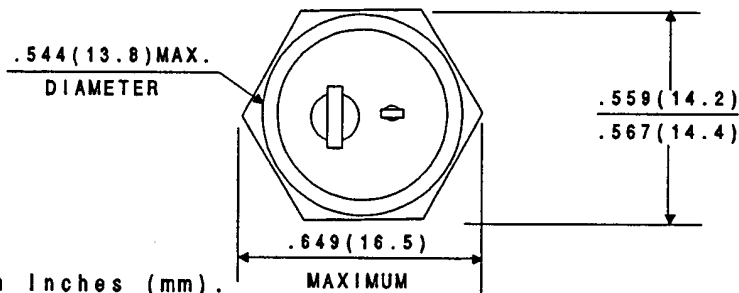
**RMS ON-STATE CURRENT vs. CASE TEMPERATURE**



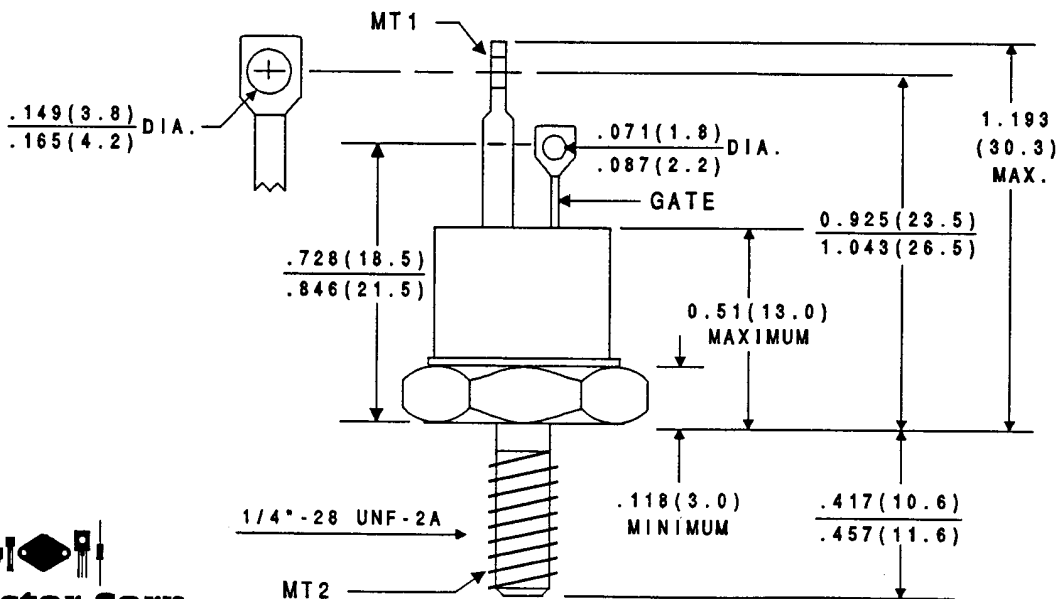
**MAXIMUM ON-STATE CHARACTERISTICS**



## MECHANICAL DIMENSIONS



All Dimensions in Inches (mm).



## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

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