

# 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

CS48-35B  
CS48-35D  
CS48-35M  
CS48-35N  
CS48-35P  
CS48-35PB

**SILICON CONTROLLED RECTIFIER  
35 AMP, 200 THRU 1200 VOLTS**

**JEDEC TO-48 CASE**

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CS48-35B series types are High Power Silicon Controlled Rectifiers designed for phase control applications.

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

	SYMBOL	CS48 -35B	CS48 -35D	CS48 -35M	CS48 -35N	CS48 -35P	CS48 -35PB	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub> , V <sub>RRM</sub>	200	400	600	800	1000	1200	V
RMS On-State Current (T <sub>C</sub> = 75°C)	I <sub>T(RMS)</sub>				35			A
Peak One Cycle Surge (t = 10ms)	I <sub>TSM</sub>				330			A
I <sup>2</sup> t Value for Fusing (t = 10ms)	I <sup>2</sup> t				545			A <sup>2</sup> s
Peak Gate Power (tp = 10μs)	P <sub>GM</sub>				60			W
Average Gate Power Dissipation	P <sub>G(AV)</sub>				1.0			W
Peak Forward Gate Current (tp = 10μs)	I <sub>FGM</sub>				10			A
Peak Forward Gate Voltage (tp = 10μs)	V <sub>FGM</sub>				16			V
Peak Reverse Gate Voltage (tp = 10μs)	V <sub>RGM</sub>				5.0			V
Critical Rate of Rise of On-State Current	di/dt				100			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>				1.0			°C/W

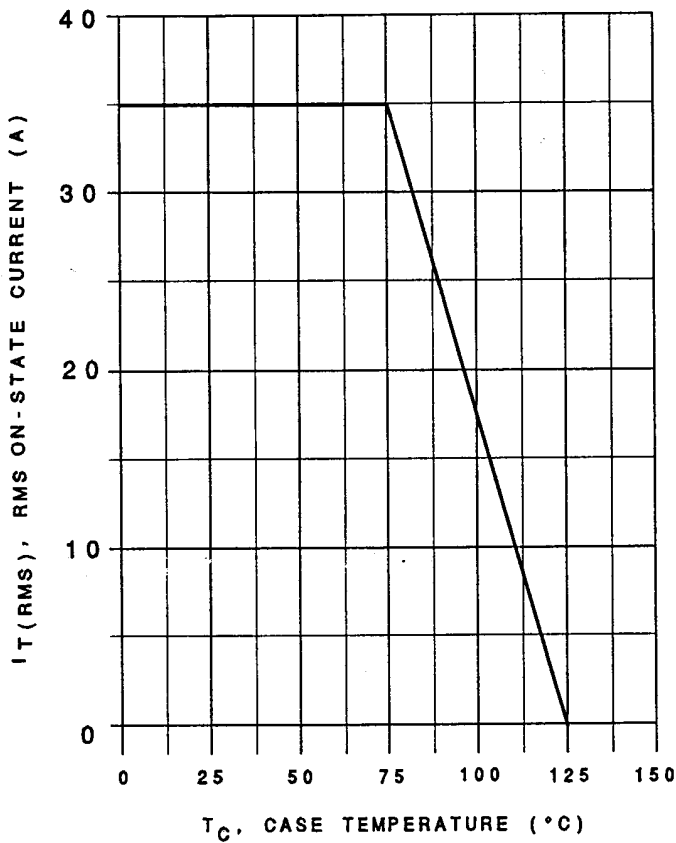
## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub>			0.02	mA
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub> , T <sub>C</sub> = 125°C			3.30	mA
I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω			40	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			1.50	V
V <sub>TM</sub>	I <sub>TM</sub> = 70A, tp = 10ms			2.30	V
dv/dt	V <sub>D</sub> = .67 x V <sub>DRM</sub> , T <sub>C</sub> = 125°C	200			V/μs

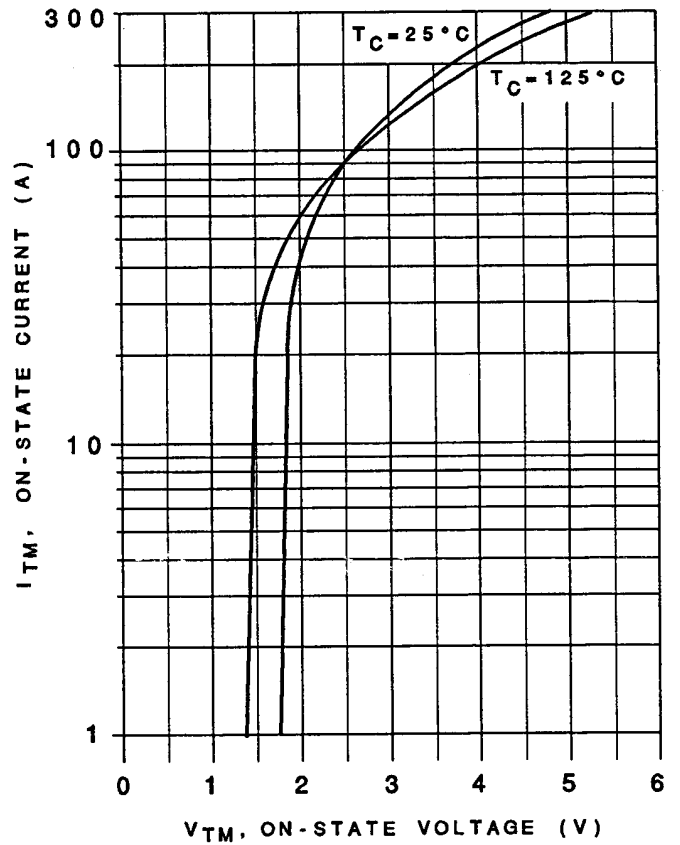
(OVER)

# CS48-35B SERIES RATING AND CHARACTERISTIC CURVES

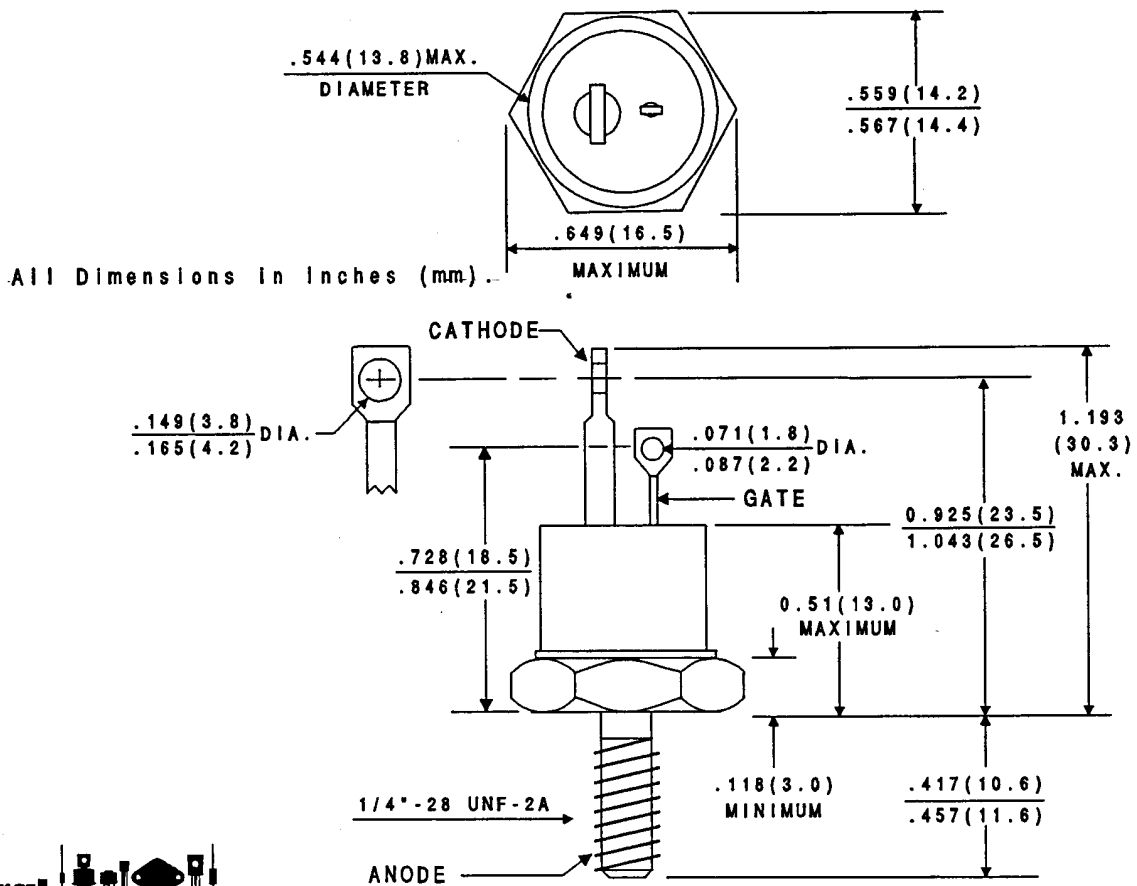
RMS ON-STATE CURRENT vs. CASE TEMPERATURE



MAXIMUM ON-STATE CHARACTERISTICS



## MECHANICAL DIMENSIONS



## 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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