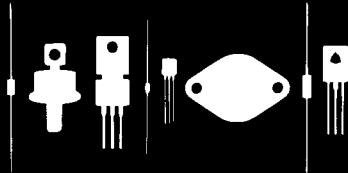


Central  
Semiconductor Corp.

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Semiconductor Corp.**

145 Adams Avenue  
Hauppauge, New York 11788



CS3P-40B  
CS3P-40D  
CS3P-40M  
CS3P-40N  
CS3P-40P  
CS3P-40PB

ISOLATED 40 AMP SCR  
200 THRU 1200 VOLTS

TO-3P CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CS3P-40B series types are Epoxy Molded Silicon Controlled Rectifiers mounted on an isolated TO-3 metal platform, designed for sensing circuit applications and control systems .

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

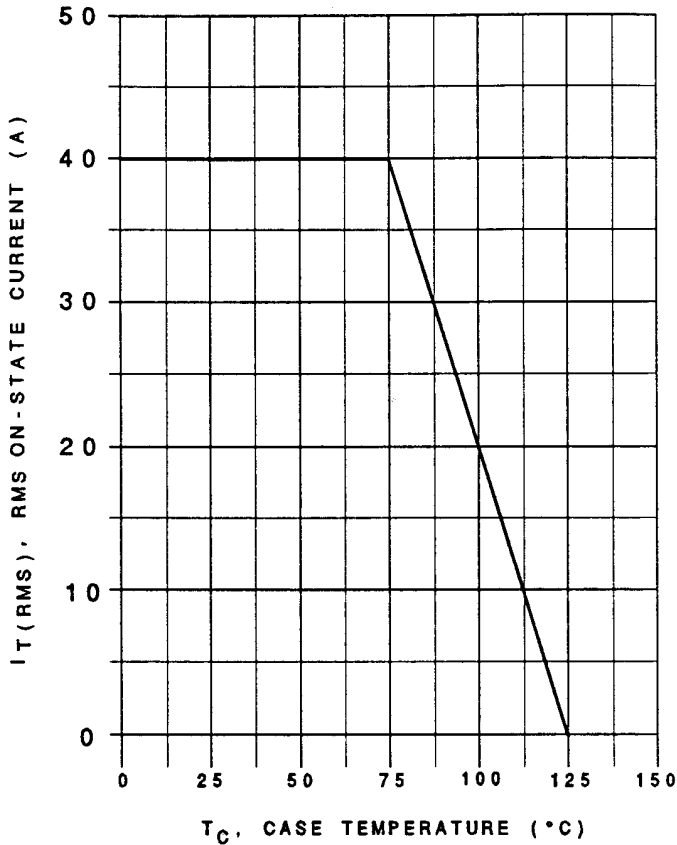
	SYMBOL	CS3P -40B	CS3P -40D	CS3P -40M	CS3P -40N	CS3P -40P	CS3P -40PB	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub> , V <sub>RRM</sub>	200	400	600	800	1000	1200	V
RMS On-State Current (T <sub>C</sub> = 75°C)	I <sub>T(RMS)</sub>				40			A
Peak One Cycle Surge (t = 10ms)	I <sub>TSM</sub>				500			A
I <sup>2</sup> t Value for Fusing (t = 10ms)	I <sup>2</sup> t				1250			A <sup>2</sup> s
Peak Gate Power (tp = 10µs)	P <sub>GM</sub>				50			W
Average Gate Power Dissipation	P <sub>G(AV)</sub>				1.0			W
Peak Forward Gate Current (tp = 10µs)	I <sub>FGM</sub>				4.0			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
Isolation Voltage	V <sub>ISO</sub>				2500			V <sub>(RMS)</sub>

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

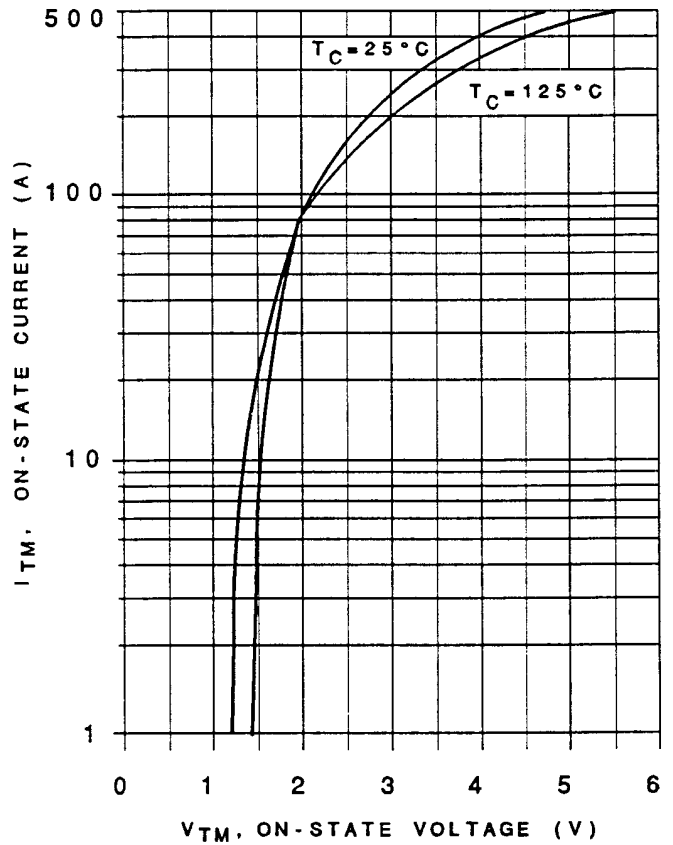
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub>			0.02	mA
I <sub>DRM</sub> , I <sub>RRM</sub>	Rated V <sub>DRM</sub> , V <sub>RRM</sub> , T <sub>C</sub> = 125°C			6.00	mA
I <sub>GT</sub>	V <sub>D</sub> = 12V, R <sub>L</sub> = 33Ω			80	mA
I <sub>H</sub>	I <sub>T</sub> = 500mA			150	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> = 80A, tp = 10ms			2.00	V
dv/dt	V <sub>D</sub> = .67 x V <sub>DRM</sub> , T <sub>C</sub> = 125°C, V <sub>DRM</sub> ≤ 800V	500			V/µs
dv/dt	V <sub>D</sub> = .67 x V <sub>DRM</sub> , T <sub>C</sub> = 125°C, V <sub>DRM</sub> ≥ 1000V	250			V/µs

# CS3P-40B SERIES RATING AND CHARACTERISTIC CURVES

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



**MAXIMUM ON-STATE CHARACTERISTICS**



## MECHANICAL OUTLINE

