

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

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Manufacturers of World Class Discrete Semiconductors  
www.centrasemi.com

C103Y  
C103YY  
C103A  
C103B

**SILICON CONTROLLED RECTIFIER  
0.8 AMP, 30 THRU 200 VOLTS**

**TO-92 CASE**

## DESCRIPTION

The CENTRAL SEMICONDUCTOR C103 Series types are Epoxy Molded Silicon Controlled Rectifiers designed for control systems and sensing circuit applications.

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

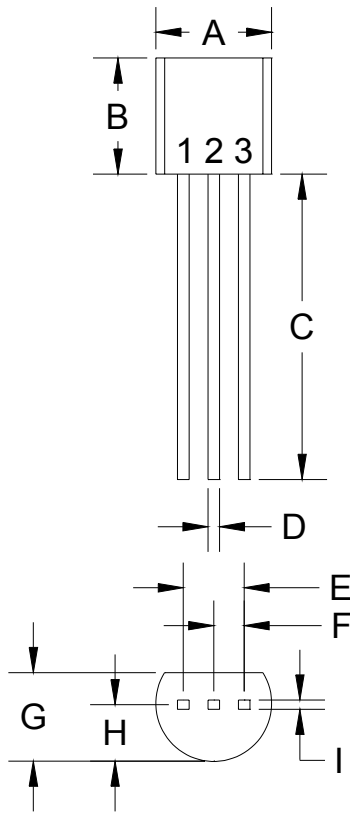
	SYMBOL	C103Y	C103YY	C103A	C103B	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub> , V <sub>R RM</sub>	30	60	100	200	V
RMS On-State Current (T <sub>C</sub> =60°C)	I <sub>T(RMS)</sub>		0.8			A
Peak One Cycle Surge	I <sub>TSM</sub>		8.0			A
Peak Forward Gate Current	I <sub>GM</sub>		0.5			A
Peak Reverse Gate Voltage	V <sub>GM</sub>		8.0			V
Peak Gate Power Dissipation (tp=8.3ms)	P <sub>GM</sub>		1.0			W
Average Gate Power Dissipation	P <sub>G(AV)</sub>		0.01			W
Storage Temperature	T <sub>stg</sub>		-65 to +150			°C
Junction Temperature	T <sub>J</sub>		-65 to +125			°C

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub> , I <sub>R RM</sub>	Rated V <sub>DRM</sub> , V <sub>R RM</sub> , R <sub>GK</sub> =1KΩ			1.0	μA
I <sub>DRM</sub> , I <sub>R RM</sub>	Rated V <sub>DRM</sub> , V <sub>R RM</sub> , T <sub>C</sub> =125°C, R <sub>GK</sub> =1KΩ			50	μA
I <sub>GT</sub>	V <sub>D</sub> =6.0V, R <sub>L</sub> =100Ω, R <sub>GK</sub> =1KΩ			200	μA
I <sub>GT</sub>	V <sub>D</sub> =6.0V, R <sub>L</sub> =100Ω, R <sub>GK</sub> =1KΩ, T <sub>C</sub> =-65°C			500	μA
I <sub>H</sub>	R <sub>GK</sub> =1KΩ			5.0	mA
I <sub>H</sub>	R <sub>GK</sub> =1KΩ, T <sub>C</sub> =-65°C			10	mA
V <sub>GT</sub>	V <sub>D</sub> =6.0V, R <sub>L</sub> =100Ω			0.8	V
V <sub>GT</sub>	V <sub>D</sub> =6.0V, R <sub>L</sub> =100Ω, T <sub>C</sub> =-65°C			1.0	V
V <sub>GT</sub>	V <sub>D</sub> =6.0V, R <sub>L</sub> =1KΩ, T <sub>C</sub> =125°C	0.1			V
V <sub>TM</sub>	I <sub>TM</sub> =1.0A			1.5	V
dv/dt	V <sub>D</sub> =V <sub>DRM</sub> , T <sub>C</sub> =125°C, R <sub>GK</sub> =1KΩ		20		V/μs

(SEE REVERSE SIDE)

TO-92 PACKAGE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

Lead Code: 1) Anode  
 2) Gate  
 3) Cathode

R1

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