

CentralTM Semiconductor Corp.

145 Adams Ave., Hauppauge, NY 11788 USA

Phone (631) 435-1110 FAX (631) 435-1824

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 CASEDESCRIPTION

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

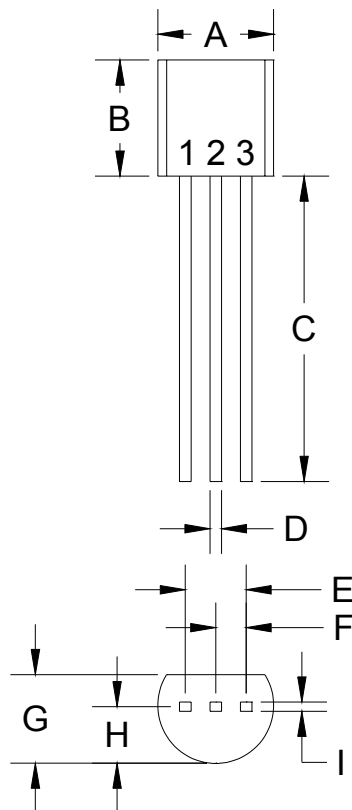
MAXIMUM RATINGS ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

	<u>SYMBOL</u>	<u>C103Y</u>	<u>C103YY</u>	<u>C103A</u>	<u>C103B</u>	<u>UNITS</u>
Peak Repetitive Off-State Voltage	$V_{\text{DRM}}, V_{\text{RRM}}$	30	60	100	200	V
RMS On-State Current ($T_C=60^{\circ}\text{C}$)	$I_{\text{T(RMS)}}$		0.8			A
Peak One Cycle Surge	I_{TSM}		8.0			A
Peak Forward Gate Current	I_{GM}		0.5			A
Peak Reverse Gate Voltage	V_{GM}		8.0			V
Peak Gate Power Dissipation ($t_p=8.3\text{ms}$)	P_{GM}		1.0			W
Average Gate Power Dissipation	$P_{\text{G(AV)}}$		0.01			W
Storage Temperature	T_{stg}		-65 to +150			$^{\circ}\text{C}$
Junction Temperature	T_{J}		-65 to +125			$^{\circ}\text{C}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1\text{K}\Omega$			1.0	μA
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, T_C=125^{\circ}\text{C}, R_{\text{GK}}=1\text{K}\Omega$			50	μA
I_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega, R_{\text{GK}}=1\text{K}\Omega$			200	μA
I_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega, R_{\text{GK}}=1\text{K}\Omega, T_C=-65^{\circ}\text{C}$			500	μA
I_{H}	$R_{\text{GK}}=1\text{K}\Omega$			5.0	mA
I_{H}	$R_{\text{GK}}=1\text{K}\Omega, T_C=-65^{\circ}\text{C}$			10	mA
V_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega$			0.8	V
V_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=100\Omega, T_C=-65^{\circ}\text{C}$			1.0	V
V_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=1\text{K}\Omega, T_C=125^{\circ}\text{C}$	0.1			V
V_{TM}	$I_{\text{TM}}=1.0\text{A}$			1.5	V
dv/dt	$V_{\text{D}}=V_{\text{DRM}}, T_C=125^{\circ}\text{C}, R_{\text{GK}}=1\text{K}\Omega$		20		V/ μs

(SEE REVERSE SIDE)

TO-92 PACKAGE - MECHANICAL OUTLINE

R1

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

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