

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.centralsemi.com

CQ39BS
CQ39DS
CQ39MS

4.0 AMP TRIAC
200 THRU 600 VOLTS

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CQ39BS series type is a Hermetically Sealed Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

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

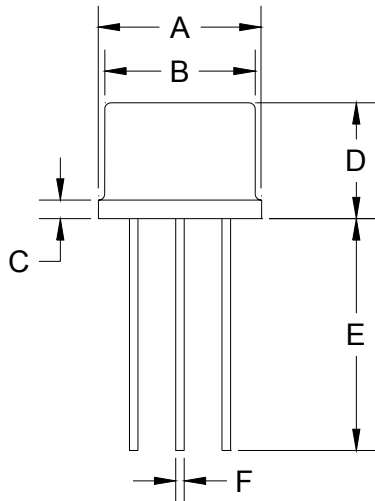
	<u>SYMBOL</u>	<u>CQ39BS</u>	<u>CQ39DS</u>	<u>CQ39MS</u>	<u>UNITS</u>
Peak Repetitive Off-State Voltage	V_{DRM}	200	400	600	V
RMS On-State Current ($T_C=80^\circ\text{C}$)	$I_{T(RMS)}$		4.0		A
Peak One Cycle Surge ($t=10\text{ms}$)	I_{TSM}		35		A
I^2t Value for Fusing ($t=10\text{ms}$)	I^2t		2.0		A^2s
Peak Gate Power ($t_p=10\mu\text{s}$)	P_{GM}		3.0		W
Average Gate Power Dissipation	$P_{G(AV)}$		0.2		W
Peak Gate Current ($t_p=10\mu\text{s}$)	I_{GM}		1.2		A
Storage Temperature	T_{stg}		-40 to +150		$^\circ\text{C}$
Junction Temperature	T_J		-40 to +125		$^\circ\text{C}$
Thermal Resistance	Θ_{JA}		160		$^\circ\text{C}/\text{W}$
Thermal Resistance	Θ_{JC}		9.0		$^\circ\text{C}/\text{W}$

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_{DRM}	Rated V_{DRM} , $R_{GK}=1\text{K}\Omega$			5.00	μA
I_{DRM}	Rated V_{DRM} , $R_{GK}=1\text{K}\Omega$, $T_C=125^\circ\text{C}$			200	μA
I_{GT}	$V_D=12\text{V}$, QUAD I,II,III,IV			5.00	mA
I_H	$R_{GK}=1\text{K}\Omega$			5.00	mA
V_{GT}	$V_D=12\text{V}$, QUAD I,II,III,IV			2.00	V
V_{TM}	$I_{TM}=4.5\text{A}$			2.10	V
dv/dt	$V_D=\frac{2}{3}V_{DRM}$, $T_C=125^\circ\text{C}$	30			V/ μs

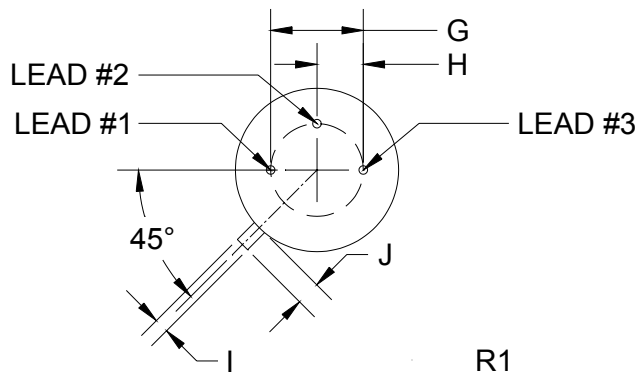
(SEE REVERSE SIDE)

TO-39 PACKAGE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)



LEAD CODE:

- 1) MT1
- 2) GATE
- 3) MT2

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