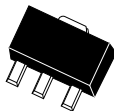




**CQ89DS  
CQ89MS  
CQ89NS**

**2.0 AMP TRIAC  
400 THRU 800 VOLTS**



**SOT-89 CASE**

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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CQ89DS series types are epoxy molded silicon triacs designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

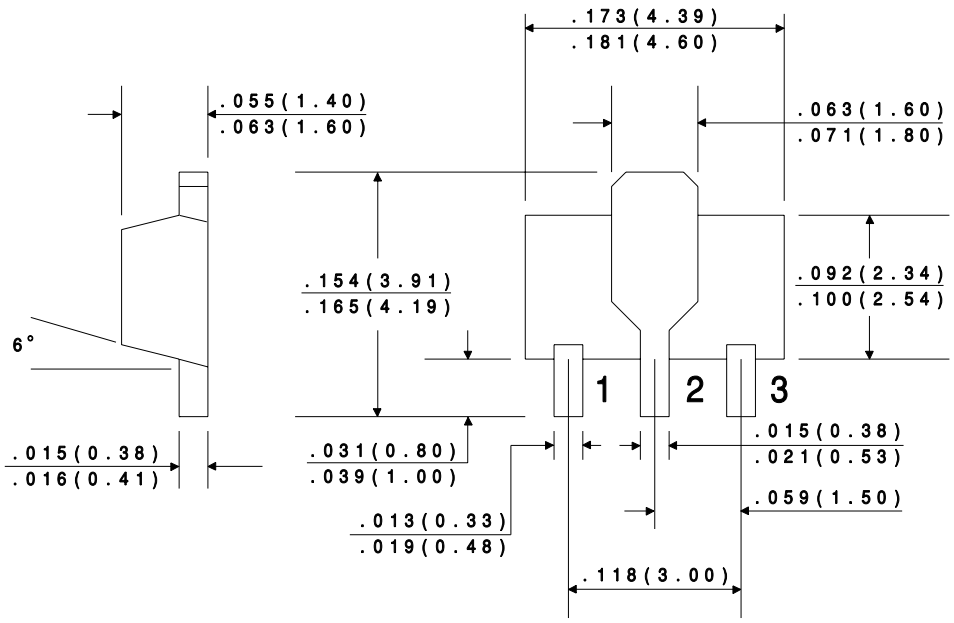
**MAXIMUM RATINGS** ( $T_C=25^\circ\text{C}$ )

	<b>SYMBOL</b>	<b>CQ89DS</b>	<b>CQ89MS</b>	<b>CQ89NS</b>	<b>UNITS</b>
Peak Repetitive Off-State Voltage	$V_{DRM}$	400	600	800	V
RMS On-State Current ( $T_C=80^\circ\text{C}$ )	$I_T(\text{RMS})$		2.0		A
Peak One Cycle Surge (10ms)	$I_{TSM}$		10		A
Peak Gate Current	$I_{GM}$		1.0		A
Average Gate Power Dissipation	$P_{G(AV)}$		0.1		W
Storage Temperature	$T_{stg}$		-45 to +150		$^\circ\text{C}$
Junction Temperature	$T_J$		-45 to +125		$^\circ\text{C}$
Thermal Resistance	$\Theta_{J-C}$		10		$^\circ\text{C/W}$

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

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_{DRM}$	$V_D=\text{Rated } V_{DRM}$			5.0	$\mu\text{A}$
$I_{DRM}$	$V_D=\text{Rated } V_{DRM}, T_C=125^\circ\text{C}$			200	$\mu\text{A}$
$I_{GT}$	$V_D=12\text{V}, \text{QUAD I, II, III, IV}$			5.0	mA
$I_H$	$V_D=12\text{V}$			5.0	mA
$V_{GT}$	$V_D=12\text{V}$			2.0	V
$V_{TM}$	$I_T=3.0\text{A}$			1.75	V
dv/dt	$V_D=2/3 V_{DRM}, T_C=125^\circ\text{C}$	30			V/ $\mu\text{s}$

All dimensions in inches (mm).



LEAD CODE:

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