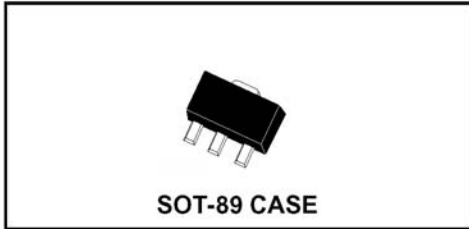


**CQ89DS**  
**CQ89MS**  
**CQ89NS**  
  
**2.0 AMP TRIAC**  
**400 THRU 800 VOLTS**



# 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.

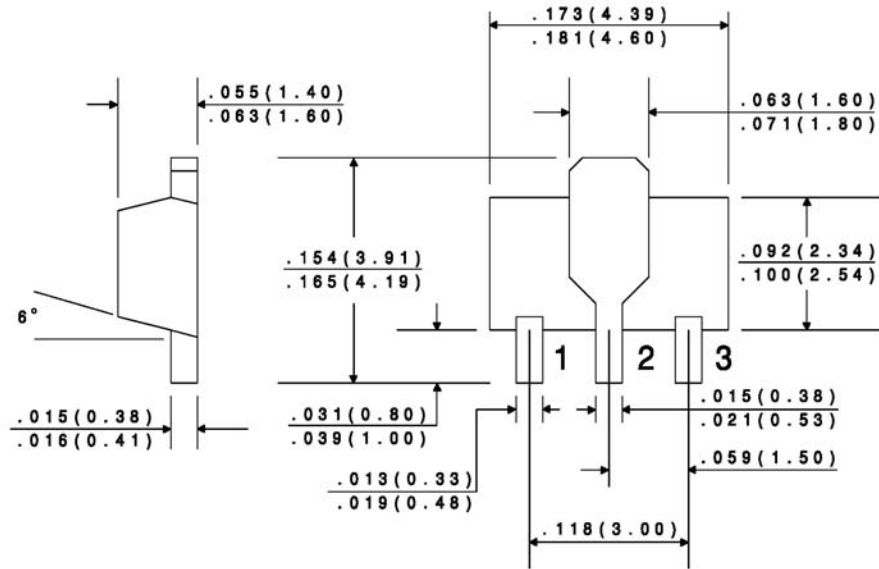
**MAXIMUM RATINGS** ( $T_C=25^{\circ}\text{C}$ )

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

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

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

All dimensions in inches (mm).



LEAD CODE:

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