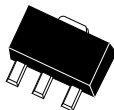




**CQ89DS  
CQ89MS  
CQ89NS**

**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.

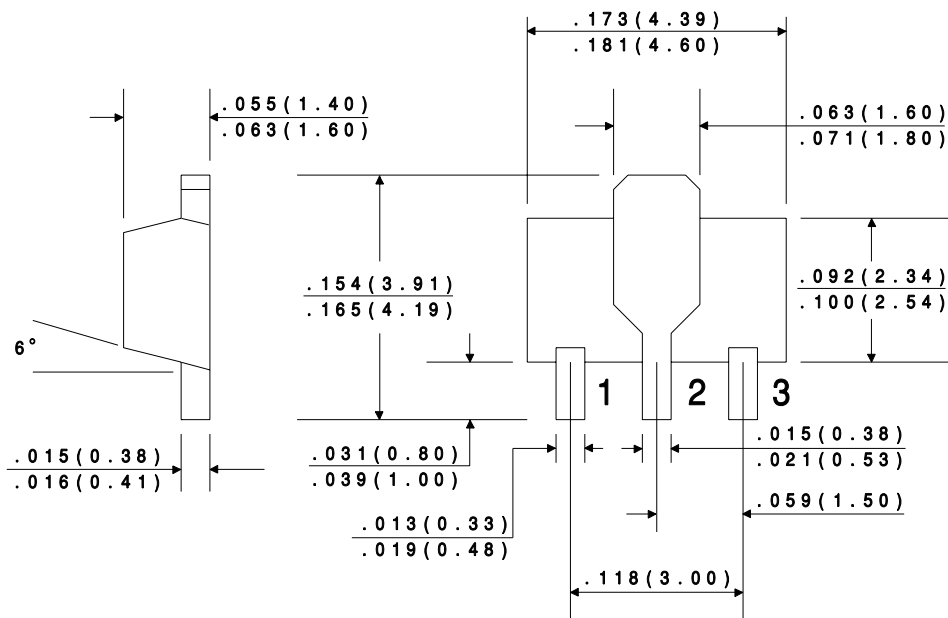
## MAXIMUM RATINGS (T<sub>C</sub>=25°C)

	SYMBOL	CQ89DS	CQ89MS	CQ89NS	UNITS
Peak Repetitive Off-State Voltage	V <sub>DRM</sub>	400	600	800	V
RMS On-State Current (T <sub>C</sub> =80°C)	I <sub>T(RMS)</sub>		2.0		A
Peak One Cycle Surge (10ms)	I <sub>TSM</sub>		10		A
Peak Gate Current	I <sub>GM</sub>		1.0		A
Average Gate Power Dissipation	P <sub>G(AV)</sub>		0.1		W
Storage Temperature	T <sub>stg</sub>		-45 to +150		°C
Junction Temperature	T <sub>J</sub>		-45 to +125		°C
Thermal Resistance	Θ <sub>J-C</sub>		10		°C/W

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>DRM</sub>	V <sub>D</sub> =Rated V <sub>DRM</sub>			5.0	μA
I <sub>DRM</sub>	V <sub>D</sub> =Rated V <sub>DRM</sub> , T <sub>C</sub> =125°C			200	μA
I <sub>GT</sub>	V <sub>D</sub> =12V, QUAD I, II, III, IV			5.0	mA
I <sub>H</sub>	V <sub>D</sub> =12V			5.0	mA
V <sub>GT</sub>	V <sub>D</sub> =12V			2.0	V
V <sub>TM</sub>	I <sub>T</sub> =3.0A			1.75	V
dv/dt	V <sub>D</sub> =2/3 V <sub>DRM</sub> , T <sub>C</sub> =125°C	30			V/μs

All dimensions in inches (mm).



LEAD CODE:

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