

CQ89D
CQ89M
CQ89N

2.0 AMP TRIAC
400 THRU 800 VOLTS



SOT-89 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CQ89D series types are epoxy molded silicon triacs designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

MARKING CODE: FULL PART NUMBER

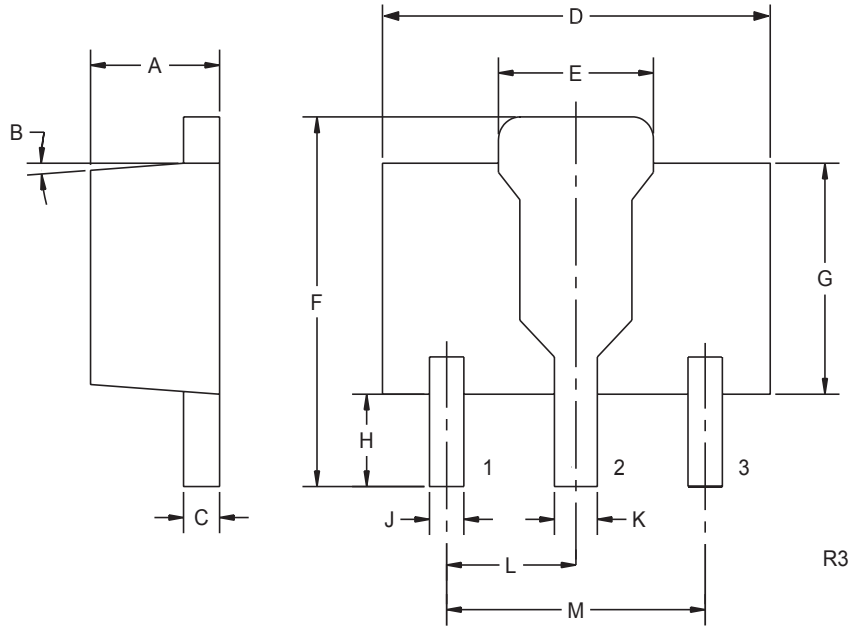
MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$)

	SYMBOL	CQ89D	CQ89M	CQ89N	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	400	600	800	V
RMS On-State Current ($T_C=80^\circ\text{C}$)	I_T (RMS)		2.0		A
Peak One Cycle Surge (10 mS)	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	θ_{JC}		10		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}	$V_D = \text{Rated } V_{DRM}$			5.00	μA
I_{DRM}	$V_D = \text{Rated } V_{DRM}, T_C = 125^\circ\text{C}$			200	μA
I_{GT}	$V_D = 12\text{V}, \text{QUAD I, II, III, IV}$			25	mA
I_H	$V_D = 12\text{V}$			25	mA
V_{GT}	$V_D = 12\text{V}$			2.00	V
V_{TM}	$I_T = 3.0\text{A}$			1.75	V
dv/dt	$V_D = 2/3 V_{DRM}, T_C = 125^\circ\text{C}$	100			V/ μS

SOT-89 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.016	0.018	0.40	0.46
D	0.173	0.185	4.40	4.70
E	0.070	0.074	1.79	1.87
F	0.146	0.177	3.70	4.50
G	0.094	0.106	2.40	2.70
H	0.028	0.051	0.70	1.30
J	0.015	0.019	0.38	0.48
K	0.019	0.023	0.48	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R3)

R3 (26-September 2002)