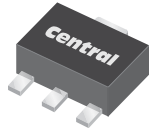


CQ89-2M
CQ89-2N

**SURFACE MOUNT
2 AMP SILICON TRIAC
600 THRU 800 VOLTS**



SOT-89 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CQ89-2M series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$ unless otherwise noted)	SYMBOL	CQ89-2M	CQ89-2N	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	600	800	V
RMS On-State Current ($T_C=50^\circ\text{C}$)	$I_{T(RMS)}$	2.0		A
Peak One Cycle Surge, $t=10\text{ms}$	I_{TSM}	20		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
Peak Gate Voltage, $t_p=10\mu\text{s}$	V_{GM}	8.0		V
Operating Junction Temperature	T_J	-40 to +125		$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +150		$^\circ\text{C}$
Thermal Resistance	θ_{JA}	180		$^\circ\text{C}/\text{W}$
Thermal Resistance	θ_{JC}	90		$^\circ\text{C}/\text{W}$

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

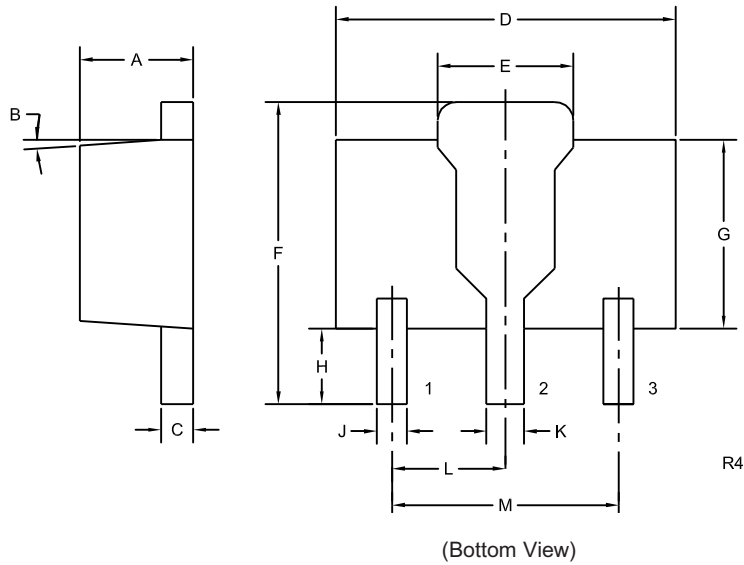
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}	Rated V_{DRM} , $R_{GK}=1\text{K}\Omega$			5.0	μA
I_{DRM}	Rated V_{DRM} , $R_{GK}=1\text{K}\Omega$, $T_C=125^\circ\text{C}$			200	μA
I_{GT}	$V_D=12\text{V}$, QUAD I, II, III		1.35	5.00	mA
I_{GT}	$V_D=12\text{V}$, QUAD IV		3.75	8.00	mA
I_H	$R_{GK}=1\text{K}\Omega$		1.2	5.0	mA
V_{GT}	$V_D=12\text{V}$, QUAD I, II, III, IV		1.1	1.8	V
V_{TM}	$I_{TM}=2.0\text{A}$, $t_p=380\mu\text{s}$		1.50	1.75	V
V_{TM}	$I_{TM}=3.0\text{A}$, $t_p=380\mu\text{s}$		1.7	2.0	V
dv/dt	$V_D=2/3 V_{DRM}$, $T_C=125^\circ\text{C}$	2.5			$\text{V}/\mu\text{s}$

CQ89-2M
CQ89-2N

SURFACE MOUNT
2 AMP SILICON TRIAC
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SOT-89 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Gate
- 2) MT2
- 3) MT1

MARKING:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.014	0.018	0.35	0.46
D	0.173	0.185	4.40	4.70
E	0.064	0.074	1.62	1.87
F	0.146	0.177	3.70	4.50
G	0.090	0.106	2.29	2.70
H	0.028	0.051	0.70	1.30
J	0.014	0.019	0.36	0.48
K	0.017	0.023	0.44	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R4)

R1 (12-February 2010)