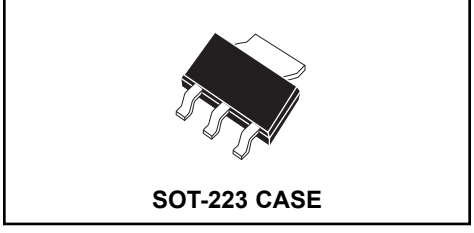


PRELIMINARY

**CQ223M  
CQ223N**

**1.0 AMP TRIAC  
600 THRU 800 VOLTS**



# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**  
The CENTRAL SEMICONDUCTOR CQ223M 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**

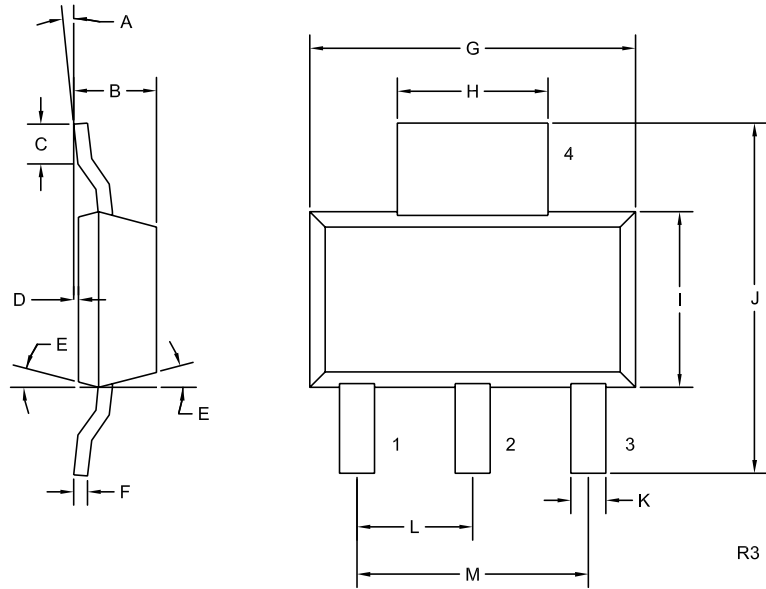
**MAXIMUM RATINGS:** ( $T_C=25^\circ\text{C}$ )

	<b>SYMBOL</b>	<b>CQ223M</b>	<b>CQ223N</b>	<b>UNITS</b>
Peak Repetitive Off-State Voltage	$V_{DRM}$	600	800	V
RMS On-State Current ( $T_C=80^\circ\text{C}$ )	$I_T$ (RMS)		1.0	A
Peak One Cycle Surge ( $t_p=10$ 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	$T_{stg}$		-40 to +150	$^\circ\text{C}$
Junction Temperature	$T_J$		-40 to +125	$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$		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>
$I_{DRM}$	$V_D=\text{Rated } V_{DRM}$			10	$\mu\text{A}$
$I_{DRM}$	$V_D=\text{Rated } V_{DRM}, T_C=125^\circ\text{C}$			200	$\mu\text{A}$
$I_{GT}$	$V_D=12\text{V}, \text{QUAD I, II, III, IV}$			10	mA
$I_H$	$V_D=12\text{V}$			10	mA
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega, \text{QUAD I, II, III}$			2.0	V
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega, \text{QUAD IV}$			2.5	V
$V_{TM}$	$I_T=1.0\text{A}$			2.0	V
dv/dt	$V_D=2/3 V_{DRM}, T_C=125^\circ\text{C}$	5.0			V/ $\mu\text{s}$

SOT-223 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

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

**MARKING CODE:**

**FULL PART NUMBER**

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	10°	0°	10°
B	0.059	0.071	1.50	1.80
C	0.018	---	0.45	---
D	0.000	0.004	0.00	0.10
E	15°		15°	
F	0.009	0.014	0.23	0.35
G	0.248	0.264	6.30	6.70
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.70
J	0.264	0.287	6.70	7.30
K	0.024	0.033	0.60	0.85
L	0.091		2.30	
M	0.181		4.60	

SOT-223 (REV: R3)

R0 (10-June 2004)