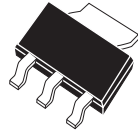


CQ223-4M  
CQ223-4N  
  
4.0 AMP TRIAC  
600 THRU 800 VOLTS



SOT-223 CASE

# Central<sup>TM</sup>

Semiconductor Corp.

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CQ223-4M series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

**MARKING CODE: FULL PART NUMBER**

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

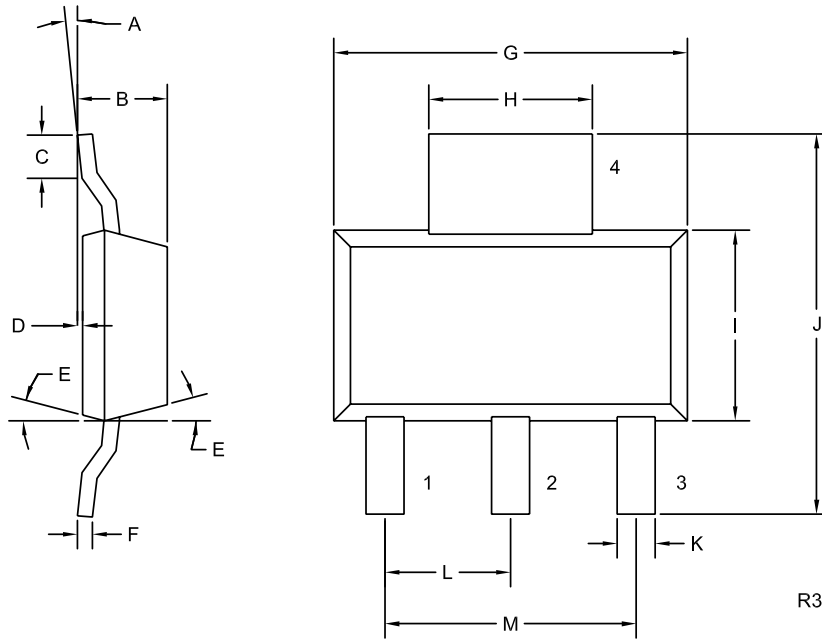
	SYMBOL	CQ223 -4M	CQ223 -4N	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}$	600	800	V
RMS On-State Current ( $T_C=80^\circ\text{C}$ )	$I_T(\text{RMS})$		4.0	A
Peak Non-Repetitive Surge Current ( $t=8.3\text{ms}$ )	$I_{TSM}$		40	A
Peak Non-Repetitive Surge Current ( $t=10\text{ms}$ )	$I_{TSM}$		35	A
$I^2t$ Value for Fusing ( $t=10\text{ms}$ )	$I^2t$		6.0	$\text{A}^2\text{s}$
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
Storage Temperature	$T_{stg}$	-40 to +150		$^\circ\text{C}$
Junction Temperature	$T_J$	-40 to +125		$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$		62.5	$^\circ\text{C}/\text{W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}$	Rated $V_{DRM}$ , $R_{GK}=1\text{K}\Omega$			10	$\mu\text{A}$
$I_{DRM}$	Rated $V_{DRM}$ , $R_{GK}=1\text{K}\Omega$ , $T_C=125^\circ\text{C}$			200	$\mu\text{A}$
$I_{GT}$	$V_D=12\text{V}$ , QUAD I, II, III		2.5	5.0	mA
$I_{GT}$	$V_D=12\text{V}$ , QUAD IV		5.4	9.0	mA
$I_H$	$R_{GK}=1\text{K}\Omega$		1.6	5.0	mA
$V_{GT}$	$V_D=12\text{V}$ , QUAD I, II, III, IV		0.95	1.75	V
$V_{TM}$	$I_{TM}=6.0\text{A}$ , $t_p=380\mu\text{s}$		1.25	1.75	V
dv/dt	$V_D=2/3 V_{DRM}$ , $T_C=125^\circ\text{C}$	11			$\text{V}/\mu\text{s}$

R1 (27-June 2005)

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)