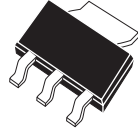


CQ223-2M
CQ223-2N

2.0 AMP TRIAC
600 THRU 800 VOLTS



SOT-223 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CQ223-2M series type is an Epoxy Molded Silicon Triac designed for full wave AC control applications featuring gate triggering in all four (4) quadrants.

MARKING CODE: FULL PART NUMBER

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

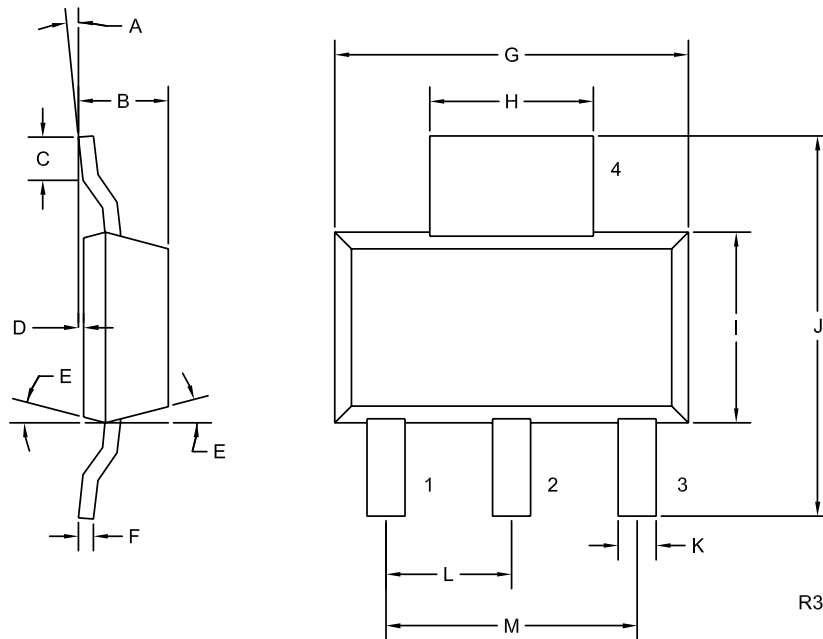
	SYMBOL	CQ223 -2M	CQ223 -2N	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}	600	800	V
RMS On-State Current ($T_C=80^{\circ}\text{C}$)	$I_{\text{T(RMS)}}$	2.0		A
Peak One Cycle Surge ($t=10\text{ms}$)	I_{TSM}	20		A
I^2t Value for Fusing ($t=10\text{ms}$)	I^2t	2.0		A^2s
Peak Gate Power ($t_p=10\mu\text{s}$)	P_{GM}	3.0		W
Average Gate Power Dissipation	$P_{\text{G(AV)}}$	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	θ_{JA}	62.5		$^{\circ}\text{C/W}$

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

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

R0 (11-May 2004)

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 (11-May 2004)