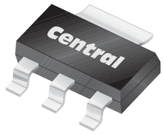
CQ223-2M
CQ223-2N

SURFACE MOUNT
2 AMP SILICON TRIAC
600 THRU 800 VOLTS



SOT-223 CASE

Central Semiconductor Corp.
www.centralsemi.com

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: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°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°C)	$I_{T(RMS)}$	2.0		A
Peak One Cycle Surge, t=10ms	I_{TSM}	10		A
I^2t Value for Fusing, t=10ms	I^2t	0.5		A^2s
Peak Gate Power, tp=10μs	P_{GM}	3.0		W
Average Gate Power Dissipation	$P_{G(AV)}$	0.2		W
Peak Gate Current, tp=10μs	I_{GM}	1.2		A
Operating Junction Temperature	T_J	-40 to +125		°C
Storage Temperature	T_{stg}	-40 to +150		°C
Thermal Resistance	Θ_{JA}	62.5		°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{DRM}	Rated V_{DRM}, R_{GK}=1KΩ			5.0	μA
I_{DRM}	Rated V_{DRM}, R_{GK}=1KΩ, T_C=125°C			200	μA
I_{GT}	V_D=12V, QUAD I, II, III		1.35	5.00	mA
I_{GT}	V_D=12V, QUAD IV		3.75	8.00	mA
I_H	R_{GK}=1KΩ		1.2	5.0	mA
V_{GT}	V_D=12V, QUAD I, II, III, IV		1.1	1.8	V
V_{TM}	I_{TM}=2.0A, tp=380μs		1.50	1.75	V
V_{TM}	I_{TM}=3.0A, tp=380μs		1.7	2.0	V
dv/dt	V_D=$^2/_3$ V_{DRM}, T_C=125°C	2.5			V/μs

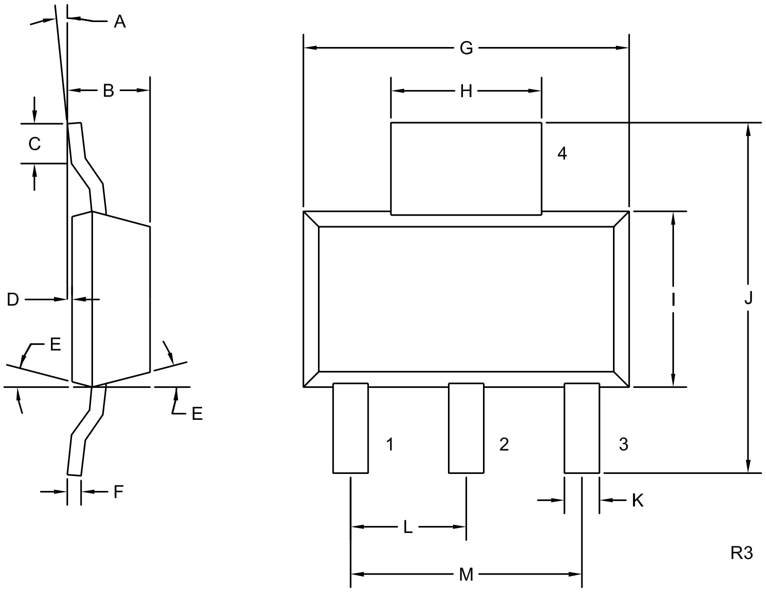
R1 (24-June 2010)

CQ223-2M
CQ223-2N

SURFACE MOUNT
2 AMP SILICON TRIAC
600 THRU 800 VOLTS

Central
Semiconductor Corp.

SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:
1) MT1
2) MT2
3) Gate
4) MT2

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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)

R1 (24-June 2010)