

CS223-4M
CS223-4N

**SURFACE MOUNT
4 AMP SILICON SCR
600 THRU 800 VOLTS**



SOT-223 CASE

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS223-4M series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$ unless otherwise noted)	SYMBOL	CS223-4M	CS223-4N	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	600	800	V
RMS On-State Current ($T_C=85^\circ\text{C}$)	$I_T(\text{RMS})$		4.0	A
Peak One Cycle Surge, $t=10\text{ms}$	I_{TSM}		30	A
I^2t Value for Fusing, $t=10\text{ms}$	I^2t		4.5	A^2s
Peak Gate Power, $t_p=20\mu\text{s}$	P_{GM}		3.0	W
Average Gate Power Dissipation	$P_{G(AV)}$		0.2	W
Peak Gate Current, $t_p=20\mu\text{s}$	I_{GM}		1.2	A
Critical Rate of Rise of On-State Current	di/dt		50	$\text{A}/\mu\text{s}$
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}		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}, I_{RRM}	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega$			10	μA
I_{DRM}, I_{RRM}	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$			200	μA
I_{GT}	$V_D=12\text{V}, R_L=10\Omega$	20	38	200	μA
I_H	$I_T=50\text{mA}, R_{GK}=1\text{K}\Omega$		0.25	2.0	mA
V_{GT}	$V_D=12\text{V}, R_L=10\Omega$		0.55	0.8	V
V_{TM}	$I_{TM}=8.0\text{A}, t_p=380\mu\text{s}$		1.6	1.8	V
dv/dt	$V_D=2/3 V_{DRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$	10			$\text{V}/\mu\text{s}$

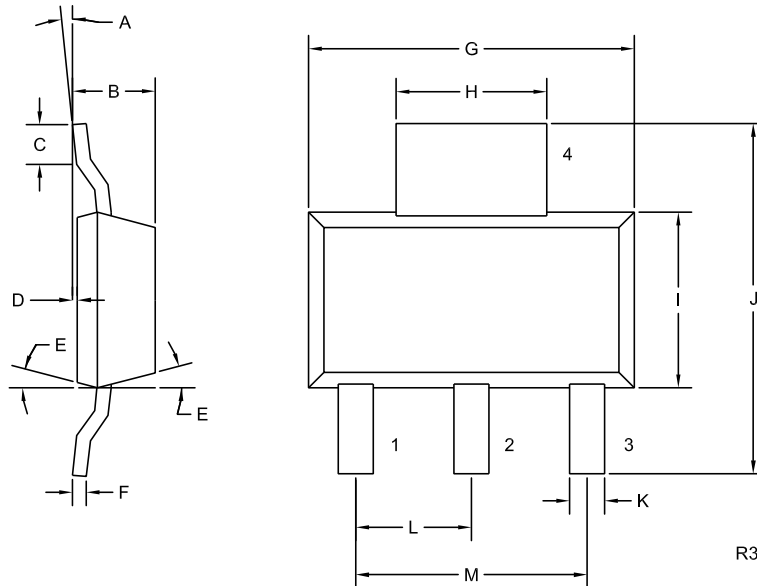
R1 (12-February 2010)

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode
- 3) Gate
- 4) Anode

MARKING:

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)

R1 (12-February 2010)

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