

CS223-4M
CS223-4N

SURFACE MOUNT
4 AMP SILICON SCR
600 THRU 800 VOLTS



SOT-223 CASE



www.centralemi.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	$V_{\text{DRM}}, V_{\text{RRM}}$	600	800	V
RMS On-State Current ($T_C=85^\circ\text{C}$)	$I_{\text{T(RMS)}}$		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	$P_{\text{G(AV)}}$		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)

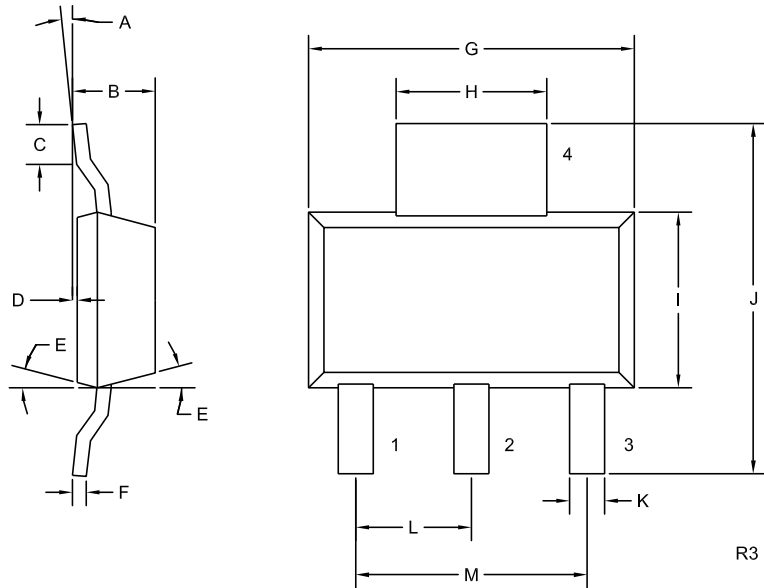
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1\text{K}\Omega$			10	μA
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1\text{K}\Omega, T_C=125^\circ\text{C}$			200	μA
I_{GT}	$V_{\text{D}}=12\text{V}, R_{\text{L}}=10\Omega$	20	38	200	μA
I_{H}	$I_{\text{T}}=50\text{mA}, R_{\text{GK}}=1\text{K}\Omega$		0.25	2.0	mA
V_{GT}	$V_{\text{D}}=12\text{V}, R_{\text{L}}=10\Omega$		0.55	0.8	V
V_{TM}	$I_{\text{TM}}=8.0\text{A}, t_p=380\mu\text{s}$		2.0	2.2	V
dv/dt	$V_{\text{D}}=2/3 V_{\text{DRM}}, R_{\text{GK}}=1\text{K}\Omega, T_C=125^\circ\text{C}$	10			$\text{V}/\mu\text{s}$

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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)

R2 (30-November 2011)