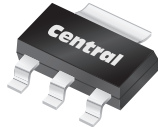


CS223-4M  
CS223-4N

**SURFACE MOUNT  
SILICON CONTROLLED RECTIFIERS  
4.0 AMP, 600 AND 800 VOLT**



**SOT-223 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CS223-4M and CS223-4N are epoxy molded SCRs designed for sensing circuit applications and control systems.

**MARKING: FULL PART NUMBER**

<b>MAXIMUM RATINGS:</b> ( $T_C=25^\circ\text{C}$ unless otherwise noted)	<b>SYMBOL</b>	<b>CS223-4M</b>	<b>CS223-4N</b>	<b>UNITS</b>
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		$\text{A}^2\text{s}$
Peak Gate Power, $t_p=20\mu\text{s}$	$P_{GM}$	3.0		W
Average Gate Power Dissipation	$P_G(\text{AV})$	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	$T_J$	-50 to +125		$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-50 to +150		$^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	120		$^\circ\text{C}/\text{W}$

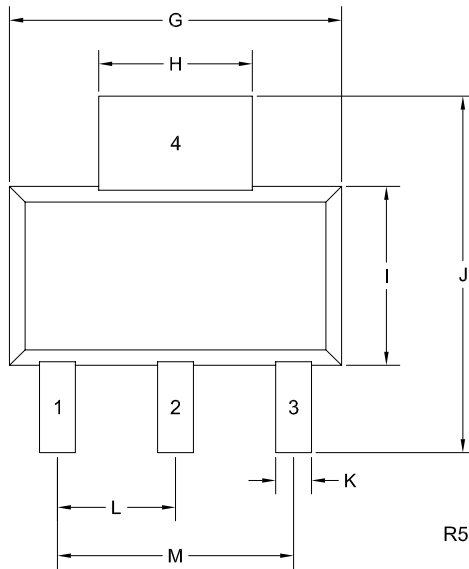
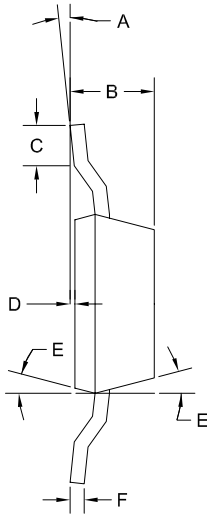
<b>ELECTRICAL CHARACTERISTICS:</b> ( $T_C=25^\circ\text{C}$ unless otherwise noted)					
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega$			10	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$			100	$\mu\text{A}$
$I_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		38	200	$\mu\text{A}$
$I_H$	$I_T=50\text{mA}, R_{GK}=1.0\text{K}\Omega$		1.0	2.0	mA
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		0.55	0.8	V
$V_{TM}$	$I_{TM}=8.0\text{A}, t_p=380\mu\text{s}$		2.0	2.2	V
$dv/dt$	$V_D=2/3 V_{DRM}, R_{GK}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$	10			$\text{V}/\mu\text{s}$

CS223-4M  
CS223-4N

**SURFACE MOUNT  
SILICON CONTROLLED RECTIFIERS  
4.0 AMP, 600 AND 800 VOLT**



**SOT-223 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS		DIMENSIONS	
	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	10°		10°	
F	0.009	0.014	0.23	0.35
G	0.248	0.270	6.30	6.85
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: R5)

R7 (09-January 2023)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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