

CS223M

**SURFACE MOUNT
0.8 AMP SILICON SCR
600 VOLTS**



SOT-223 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS223M type is an epoxy molded Silicon Controlled Rectifier designed for circuit sensing, detection and control applications including lamp drivers and small motor control

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$ unless otherwise noted)	SYMBOL		UNITS
Peak Repetitive Off-State Voltage	$V_{\text{DRM}}, V_{\text{RRM}}$	600	V
RMS On-State Current ($T_C=60^\circ\text{C}$)	$I_{\text{T(RMS)}}$	0.8	A
Peak One Cycle Surge, $t=10\text{ms}$	I_{TSM}	10	A
I^2t Value for Fusing, $t=10\text{ms}$	I^2t	0.24	A^2s
Peak Gate Power, $t_p=10\mu\text{s}$	P_{GM}	2.0	W
Average Gate Power Dissipation	$P_{\text{G(AV)}}$	0.1	W
Peak Gate Current, $t_p=10\mu\text{s}$	I_{GM}	1.0	A
Peak Gate Voltage, $t_p=10\mu\text{s}$	V_{GM}	8.0	V
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	$^\circ\text{C/W}$

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 $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1\text{K}\Omega$			1.0	μA
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1\text{K}\Omega, T_C=125^\circ\text{C}$			100	μA
I_{GT}	$V_{\text{D}}=12\text{V}$		20	200	μA
I_{H}	$R_{\text{GK}}=1\text{K}\Omega$		0.25	5.0	mA
V_{GT}	$V_{\text{D}}=12\text{V}$		0.61	0.8	V
V_{TM}	$I_{\text{TM}}=1.0\text{A}, t_p=380\mu\text{s}$		1.2	1.7	V
dv/dt	$V_{\text{D}}=2/3 V_{\text{DRM}}, R_{\text{GK}}=1\text{K}\Omega, T_C=125^\circ\text{C}$	25			$\text{V}/\mu\text{s}$

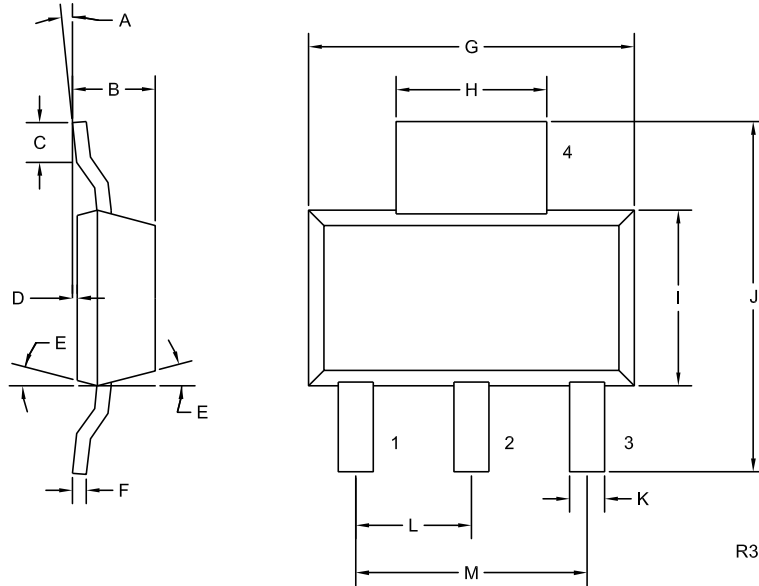
R1 (12-February 2010)

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

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