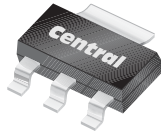


CS223-4M
CS223-4N

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



SOT-223 CASE



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 | | | $\text{V}/\mu\text{s}$ |

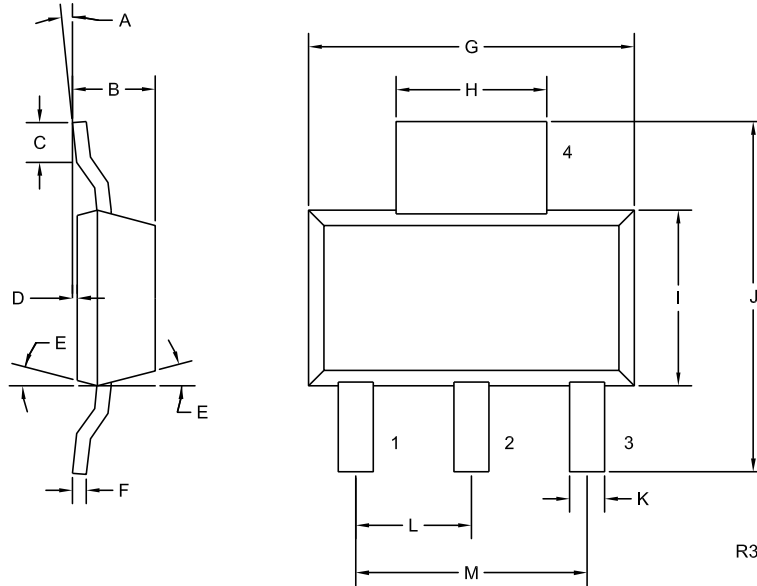
R1 (12-February 2010)

CS223-4M
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SURFACE MOUNT
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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)