

CZTA96

**SURFACE MOUNT  
EXTREMELY HIGH VOLTAGE  
PNP SILICON TRANSISTOR**



**SOT-223 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZTA96 type is a surface mount epoxy molded PNP silicon planar epitaxial transistors designed for extremely high voltage applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

|  |
|--|
| Collector-Base Voltage                     |
| Collector-Emitter Voltage                  |
| Emitter-Base Voltage                       |
| Continuous Collector Current               |
| Power Dissipation                          |
| Operating and Storage Junction Temperature |
| Thermal Resistance                         |

**SYMBOL**

|                |             |
|----------------|-------------|
| $V_{CB0}$      | 450         |
| $V_{CEO}$      | 450         |
| $V_{EBO}$      | 6.0         |
| $I_C$          | 500         |
| $P_D$          | 2.0         |
| $T_J, T_{stg}$ | -65 to +150 |
| $\theta_{JA}$  | 62.5        |

**UNITS**

|                    |
|--------------------|
| V                  |
| V                  |
| V                  |
| mA                 |
| W                  |
| $^\circ\text{C}$   |
| $^\circ\text{C/W}$ |

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL        | TEST CONDITIONS                                      | MIN | TYP  | MAX  | UNITS |
|---------------|--|-----|------|------|-------|
| $I_{CBO}$     | $V_{CB}=400\text{V}$                                 |     |      | 100  | nA    |
| $I_{EBO}$     | $V_{BE}=4.0\text{V}$                                 |     |      | 100  | nA    |
| $BV_{CBO}$    | $I_C=100\mu\text{A}$                                 | 450 | 500  |      | V     |
| $BV_{CEO}$    | $I_C=1.0\text{mA}$                                   | 450 | 490  |      | V     |
| $BV_{EBO}$    | $I_E=10\mu\text{A}$                                  | 6.0 | 9.7  |      | V     |
| $V_{CE(SAT)}$ | $I_C=1.0\text{mA}, I_B=0.1\text{mA}$                 |     |      | 0.20 | V     |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$                  |     |      | 0.30 | V     |
| $V_{CE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$                  |     | 0.15 | 0.50 | V     |
| $V_{BE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$                  |     |      | 1.0  | V     |
| $h_{FE}$      | $V_{CE}=10\text{V}, I_C=1.0\text{mA}$                | 40  |      |      |       |
| $h_{FE}$      | $V_{CE}=10\text{V}, I_C=10\text{mA}$                 | 50  | 120  | 200  |       |
| $h_{FE}$      | $V_{CE}=10\text{V}, I_C=50\text{mA}$                 | 45  |      |      |       |
| $h_{FE}$      | $V_{CE}=10\text{V}, I_C=100\text{mA}$                | 25  | 35   |      |       |
| $f_T$         | $V_{CE}=10\text{V}, I_C=10\text{mA}, f=10\text{MHz}$ | 20  |      |      | MHz   |
| $C_{ob}$      | $V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$          |     |      | 7.0  | pF    |
| $C_{ib}$      | $V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$         |     |      | 130  | pF    |

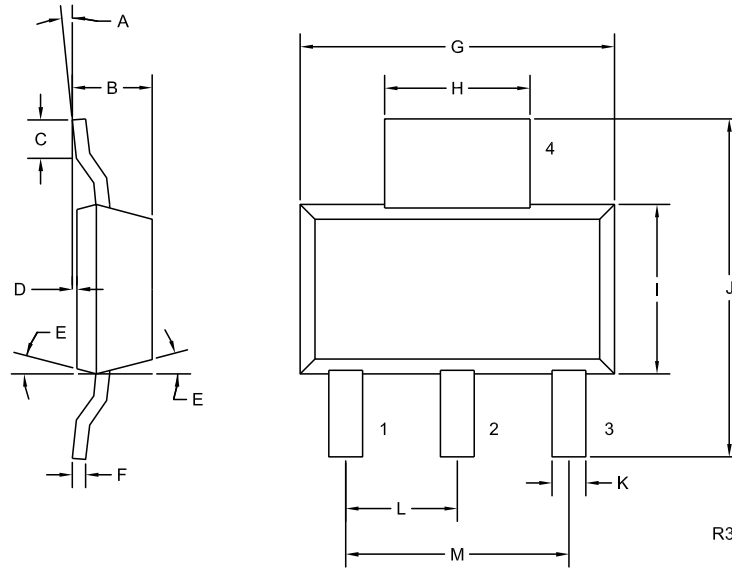
R4 (1-March 2010)

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**SOT-223 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Base
- 2) Collector
- 3) Emitter
- 4) Collector

**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)

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