

**CMPTA96****SURFACE MOUNT  
EXTREMELY HIGH VOLTAGE  
PNP SILICON TRANSISTOR**
[www.centrasemi.com](http://www.centrasemi.com)
**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTA96 type is a surface mount epoxy molded PNP silicon planar epitaxial transistor designed for extremely high voltage applications.

**MARKING CODE: C96****SOT-23 CASE****MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

|  | SYMBOL         |             | UNITS              |
|--|----------------|-------------|--------------------|
| Collector-Base Voltage                     | $V_{CBO}$      | 450         | V                  |
| Collector-Emitter Voltage                  | $V_{CEO}$      | 450         | V                  |
| Emitter-Base Voltage                       | $V_{EBO}$      | 6.0         | V                  |
| Continuous Collector Current               | $I_C$          | 500         | mA                 |
| Power Dissipation                          | $P_D$          | 350         | mW                 |
| Operating and Storage Junction Temperature | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance                         | $\theta_{JA}$  | 357         | $^\circ\text{C/W}$ |

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

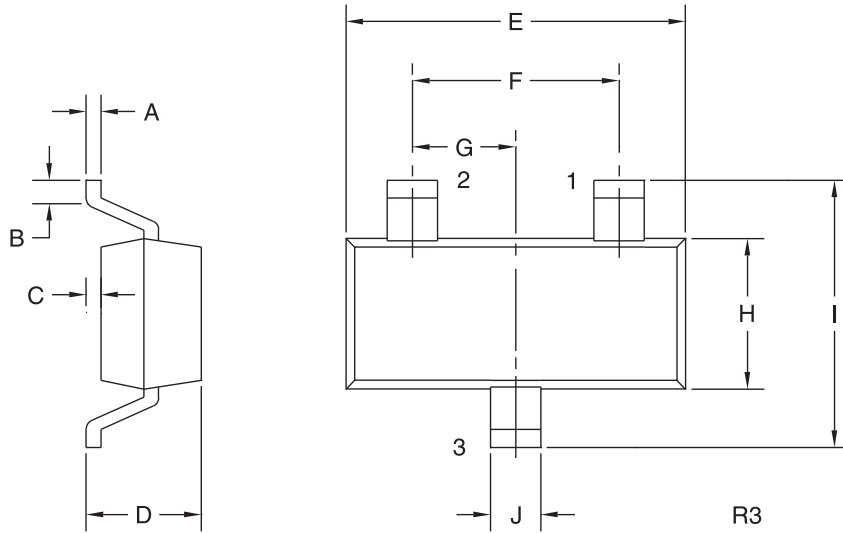
| SYMBOL        | TEST CONDITIONS                                      | MIN | TYP  | MAX  | UNITS |
|---------------|--|-----|------|------|-------|
| $I_{CBO}$     | $V_{CB}=400\text{V}$                                 |     |      | 100  | nA    |
| $I_{EBO}$     | $V_{BE}=4.0\text{V}$                                 |     |      | 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    |

R3 (3-February 2010)

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**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING CODE: C96**

| <b>DIMENSIONS</b> |        |       |             |      |
|-------------------|--------|-------|-------------|------|
| SYMBOL            | INCHES |       | MILLIMETERS |      |
|                   | MIN    | MAX   | MIN         | MAX  |
| A                 | 0.003  | 0.007 | 0.08        | 0.18 |
| B                 | 0.006  | -     | 0.15        | -    |
| C                 | -      | 0.005 | -           | 0.13 |
| D                 | 0.035  | 0.043 | 0.89        | 1.09 |
| E                 | 0.110  | 0.120 | 2.80        | 3.05 |
| F                 | 0.075  |       | 1.90        |      |
| G                 | 0.037  |       | 0.95        |      |
| H                 | 0.047  | 0.055 | 1.19        | 1.40 |
| I                 | 0.083  | 0.098 | 2.10        | 2.49 |
| J                 | 0.014  | 0.020 | 0.35        | 0.50 |

SOT-23 (REV: R3)

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