

**CMPTA29**  
**SURFACE MOUNT**  
**HIGH VOLTAGE**  
**NPN SILICON**  
**DARLINGTON TRANSISTOR**



**SOT-23 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTA29 is an NPN silicon darlington transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high voltage and high gain.

**MARKING CODE: C29**

**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**

|                |             |
|----------------|-------------|
| $V_{CBO}$      | 100         |
| $V_{CES}$      | 100         |
| $V_{EBO}$      | 12          |
| $I_C$          | 500         |
| $P_D$          | 350         |
| $T_J, T_{stg}$ | -65 to +150 |
| $\theta_{JA}$  | 357         |

**UNITS**

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

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

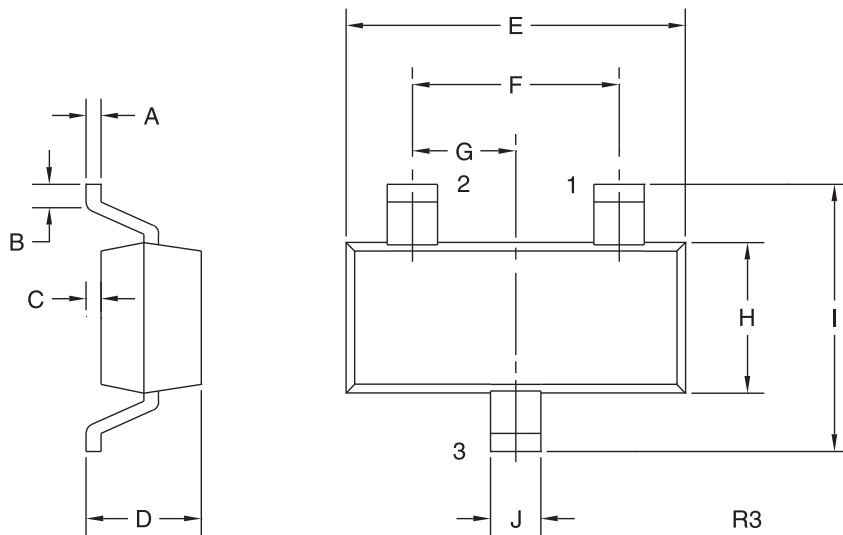
| SYMBOL        | TEST CONDITIONS                                        | MIN    | MAX | UNITS |
|---------------|--------------------------------------------------------|--------|-----|-------|
| $I_{CES}$     | $V_{CE}=80\text{V}$                                    |        | 500 | nA    |
| $I_{CBO}$     | $V_{CB}=80\text{V}$                                    |        | 100 | nA    |
| $I_{EBO}$     | $V_{BE}=10\text{V}$                                    |        | 100 | nA    |
| $BV_{CES}$    | $I_C=100\mu\text{A}$                                   | 100    |     | V     |
| $BV_{CBO}$    | $I_C=100\mu\text{A}$                                   | 100    |     | V     |
| $BV_{EBO}$    | $I_E=10\mu\text{A}$                                    | 12     |     | V     |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=10\mu\text{A}$                   |        | 1.2 | V     |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=100\mu\text{A}$                 |        | 1.5 | V     |
| $V_{BE(ON)}$  | $V_{CE}=5.0\text{V}, I_C=100\text{mA}$                 |        | 2.0 | V     |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$                  | 10,000 |     |       |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=100\text{mA}$                 | 10,000 |     |       |
| $f_T$         | $V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ | 125    |     | MHz   |
| $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$            |        | 8.0 | pF    |

R4 (3-February 2010)

**CMPTA29**  
**SURFACE MOUNT**  
**HIGH VOLTAGE**  
**NPN SILICON**  
**DARLINGTON TRANSISTOR**



**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING CODE: C29**

| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| 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)

R4 (3-February 2010)

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Central Semiconductor:](#)

[CMPTA29 TR](#)