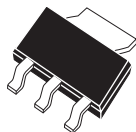


CZT2955 PNP  
CZT3055 NPN

2.0W SURFACE MOUNT  
COMPLEMENTARY SILICON  
POWER TRANSISTOR

POWER™  
223



SOT-223 CASE

**Central**™  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZT2955 and CZT3055 types are surface mount epoxy molded complementary silicon transistors manufactured by the epitaxial base process, designed for surface mounted power amplifier applications up to 6.0 amps.

**MARKING CODE: FULL PART NUMBER**

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

|                           | SYMBOL         |             | UNITS              |
|---------------------------|----------------|-------------|--------------------|
| Collector-Base Voltage    | $V_{CBO}$      | 100         | V                  |
| Collector-Emitter Voltage | $V_{CER}$      | 70          | V                  |
| Collector-Emitter Voltage | $V_{CEO}$      | 60          | V                  |
| Emitter-Base Voltage      | $V_{EBO}$      | 7.0         | V                  |
| Collector Current         | $I_C$          | 6.0         | A                  |
| Base Current              | $I_B$          | 3.0         | A                  |
| Power Dissipation         | $P_D$          | 2.0         | W                  |
| Operating and Storage     |                |             |                    |
| Junction Temperature      | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance        | $\theta_{JA}$  | 62.5        | $^\circ\text{C/W}$ |

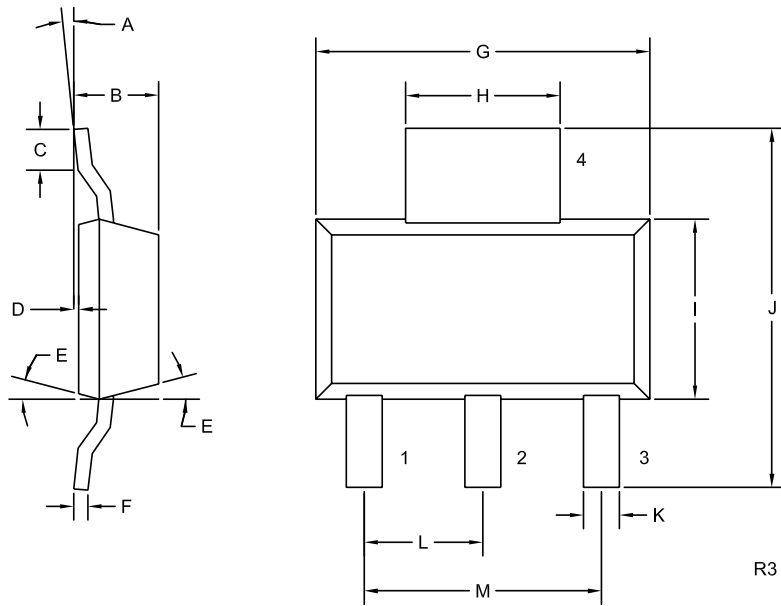
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL          | TEST CONDITIONS  | MIN | MAX | UNITS         |
|-----------------|--|-----|-----|---------------|
| $I_{CEO}$       | $V_{CE}=30\text{V}$                                    |     | 700 | $\mu\text{A}$ |
| $I_{CEV}$       | $V_{CE}=100\text{V}, V_{EB}=1.5\text{V}$               |     | 1.0 | mA            |
| $I_{EBO}$       | $V_{EB}=7.0\text{V}$                                   |     | 5.0 | mA            |
| $BV_{CER}$      | $I_C=30\text{mA}, R_{BE}=100\Omega$                    | 70  |     | V             |
| $BV_{CEO}$      | $I_C=30\text{mA}$                                      | 60  |     | V             |
| * $V_{CE(SAT)}$ | $I_C=4.0\text{A}, I_B=400\text{mA}$                    |     | 1.1 | V             |
| * $V_{BE(ON)}$  | $V_{CE}=4.0\text{V}, I_C=4.0\text{A}$                  |     | 1.5 | V             |
| * $h_{FE}$      | $V_{CE}=4.0\text{V}, I_C=4.0\text{A}$                  | 20  | 70  |               |
| * $h_{FE}$      | $V_{CE}=4.0\text{V}, I_C=6.0\text{A}$                  | 5.0 |     |               |
| $f_T$           | $V_{CE}=10\text{V}, I_C=500\text{mA}, f=1.0\text{MHz}$ | 2.5 |     | MHz           |

\* Pulsed, 2% D.C.

R3 (17-June 2004)

SOT-223 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

- 1) BASE
- 2) COLLECTOR
- 3) EMITTER
- 4) COLLECTOR

**MARKING CODE:  
FULL PART NUMBER**

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

R3 (17-June 2004)