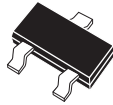


CMPTA06 NPN  
CMPTA56 PNP

SURFACE MOUNT  
COMPLEMENTARY  
SILICON TRANSISTORS



SOT-23 CASE

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTA06, CMPTA56 types are complementary silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose and switching applications.

**MARKING CODES:** CMPTA06 : C1G  
CMPTA56 : C2G

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

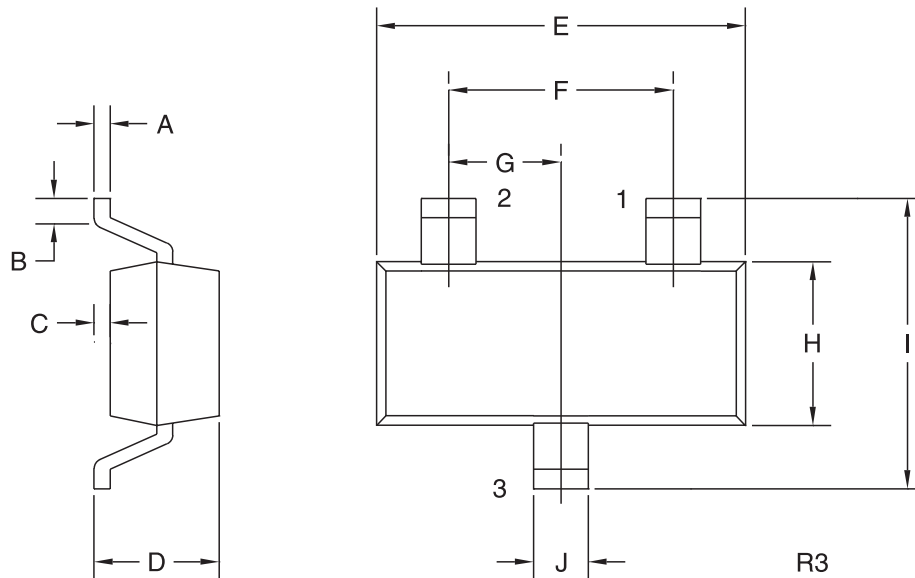
|                           | SYMBOL         |             | UNITS              |
|---------------------------|----------------|-------------|--------------------|
| Collector-Base Voltage    | $V_{CB0}$      | 80          | V                  |
| Collector-Emitter Voltage | $V_{CEO}$      | 80          | V                  |
| Emitter-Base Voltage      | $V_{EBO}$      | 4.0         | V                  |
| Collector Current         | $I_C$          | 500         | mA                 |
| Base Current              | $I_B$          | 100         | mA                 |
| Peak Base Current         | $I_{BM}$       | 200         | 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 | MAX  | UNITS         |
|---------------|---|-----|------|---------------|
| $I_{CBO}$     | $V_{CB}=80\text{V}$   |     | 100  | nA            |
| $I_{CBO}$     | $V_{CB}=80\text{V}, T_A=150^\circ\text{C}$                        |     | 20   | $\mu\text{A}$ |
| $I_{CEO}$     | $V_{CE}=60\text{V}$   |     | 100  | nA            |
| $BV_{CEO}$    | $I_C=1.0\text{mA}$  | 80  |      | V             |
| $BV_{EBO}$    | $I_E=100\mu\text{A}$  | 4.0 |      | V             |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$                               |     | 0.25 | V             |
| $V_{BE(ON)}$  | $V_{CE}=1.0\text{V}, I_C=100\text{mA}$                            |     | 1.20 | V             |
| $h_{FE}$      | $V_{CE}=1.0\text{V}, I_C=10\text{mA}$                             | 100 |      |               |
| $h_{FE}$      | $V_{CE}=1.0\text{V}, I_C=100\text{mA}$                            | 100 |      |               |
| $f_T$         | $V_{CE}=2.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ (CMPTA06)  | 100 |      | MHz           |
| $f_T$         | $V_{CE}=1.0\text{V}, I_C=100\text{mA}, f=100\text{MHz}$ (CMPTA56) | 50  |      | MHz           |

R5 (13-November 2002)

SOT-23 CASE - MECHANICAL OUTLINE



**LEAD CODE:**

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

**MARKING CODE:**

CMPTA06: C1G  
CMPTA56: C2G

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