

2N5172 NPN  
2N6076 PNP

**COMPLEMENTARY  
SILICON TRANSISTORS**



**TO-92 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N5172 and 2N6076 are complementary silicon small signal transistors designed for general purpose 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

| SYMBOL         |             | UNITS            |
|----------------|-------------|------------------|
| $V_{CB0}$      | 25          | V                |
| $V_{CEO}$      | 25          | V                |
| $V_{EBO}$      | 5.0         | V                |
| $I_C$          | 100         | mA               |
| $P_D$          | 625         | mW               |
| $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$ |

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

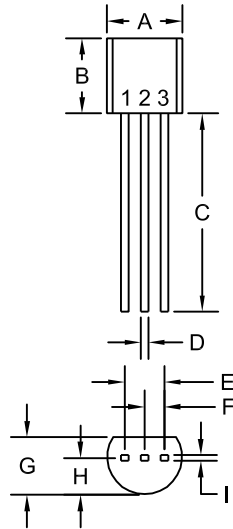
| SYMBOL        | TEST CONDITIONS                                       | MIN | TYP | MAX  | UNITS         |
|---------------|---|-----|-----|------|---------------|
| $I_{CB0}$     | $V_{CB}=25\text{V}$                                   |     |     | 100  | nA            |
| $I_{CBO}$     | $V_{CB}=25\text{V}, T_A=100^\circ\text{C}$            |     |     | 10   | $\mu\text{A}$ |
| $I_{CES}$     | $V_{CE}=25\text{V}$                                   |     |     | 100  | nA            |
| $I_{EBO}$     | $V_{EB}=5.0\text{V}$ (2N5172)                         |     |     | 100  | nA            |
| $I_{EBO}$     | $V_{EB}=3.0\text{V}$ (2N6076)                         |     |     | 100  | nA            |
| $BV_{CEO}$    | $I_C=10\text{mA}$                                     | 25  |     |      | V             |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$                   |     |     | 0.25 | V             |
| $V_{BE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$                   |     |     | 0.80 | V             |
| $V_{BE(ON)}$  | $V_{CE}=10\text{V}, I_C=10\text{mA}$                  | 0.5 |     | 1.2  | V             |
| $h_{FE}$      | $V_{CE}=10\text{V}, I_C=10\text{mA}$                  | 100 |     | 500  |               |
| $h_{fe}$      | $V_{CE}=10\text{V}, I_C=10\text{mA}, f=1.0\text{kHz}$ | 100 |     | 750  |               |
| $f_T$         | $V_{CB}=5.0\text{V}, I_C=2.0\text{mA}$                |     | 200 |      | MHz           |
| $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$           | 1.0 |     | 13   | pF            |

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TO-92 CASE - MECHANICAL OUTLINE



R1

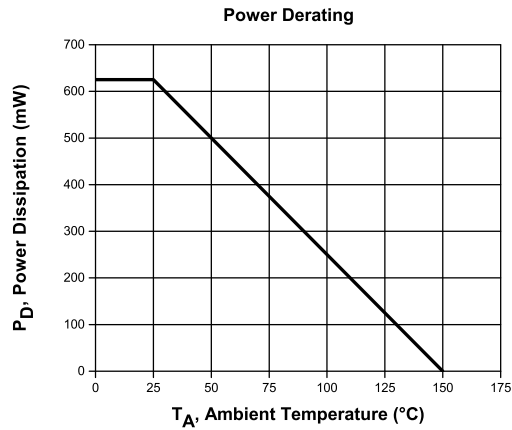
| SYMBOL  | DIMENSIONS |       |             |      |
|---------|------------|-------|-------------|------|
|         | INCHES     |       | MILLIMETERS |      |
|         | MIN        | MAX   | MIN         | MAX  |
| A (DIA) | 0.175      | 0.205 | 4.45        | 5.21 |
| B       | 0.170      | 0.210 | 4.32        | 5.33 |
| C       | 0.500      | -     | 12.70       | -    |
| D       | 0.016      | 0.022 | 0.41        | 0.56 |
| E       | 0.100      |       | 2.54        |      |
| F       | 0.050      |       | 1.27        |      |
| G       | 0.125      | 0.165 | 3.18        | 4.19 |
| H       | 0.080      | 0.105 | 2.03        | 2.67 |
| I       | 0.015      |       | 0.38        |      |

TO-92 (REV: R1)

LEAD CODE:

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

MARKING:  
 FULL PART NUMBER



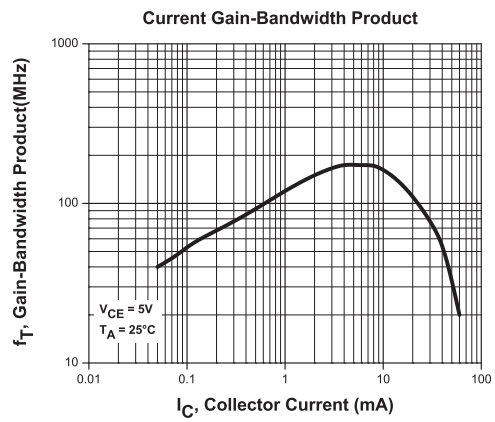
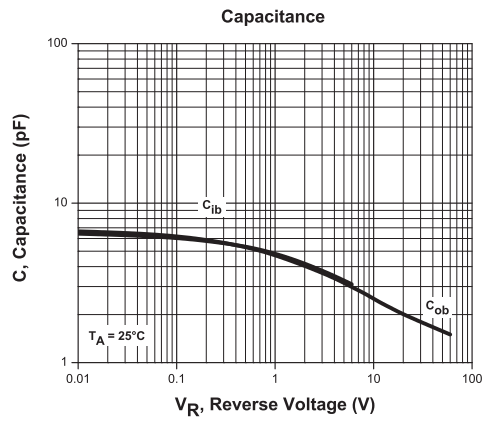
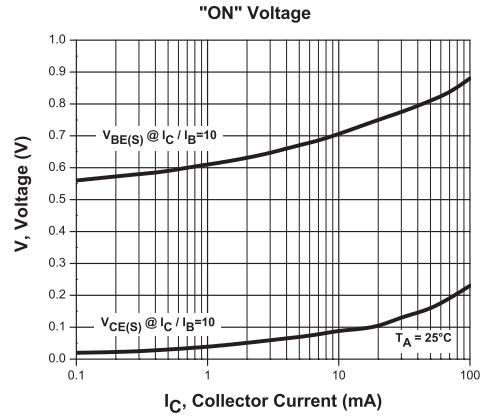
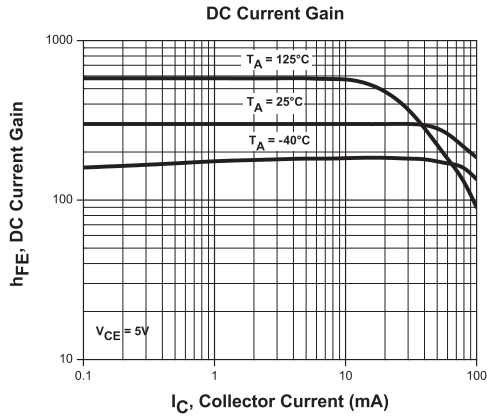
R1 (7-February 2014)

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NPN TYPICAL ELECTRICAL CHARACTERISTICS



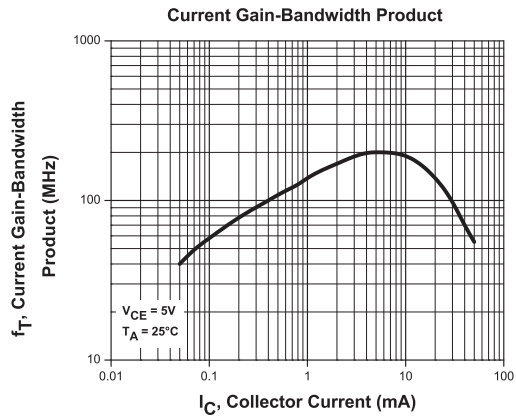
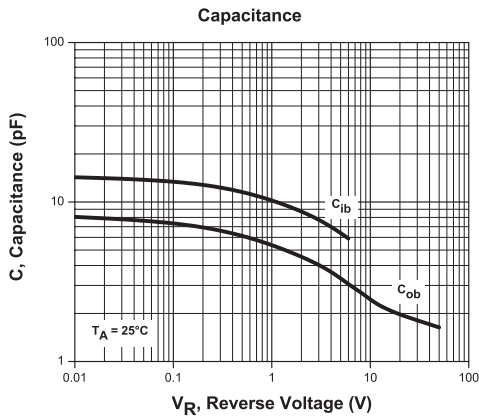
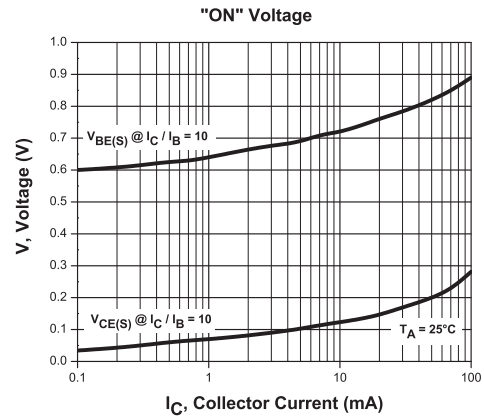
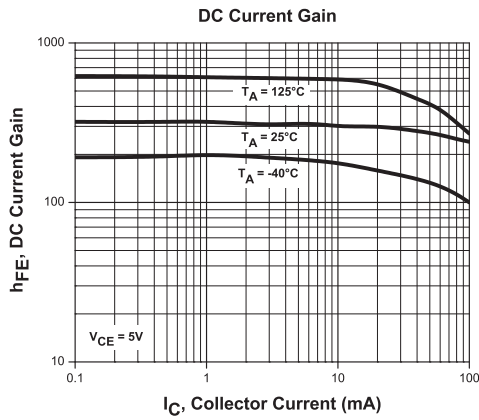
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PNP TYPICAL ELECTRICAL CHARACTERISTICS



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