

2N5172 NPN
2N6076 PNP

**COMPLEMENTARY
SILICON TRANSISTORS**



TO-92 CASE



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_{CE0} | 25 | V |
| V_{EB0} | 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_{CB0} | $V_{CB}=25\text{V}, T_A=100^\circ\text{C}$ | | | 10 | μA |
| 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_{CE0} | $I_C=10\text{mA}$ | 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 |

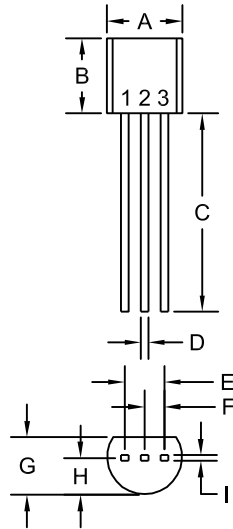
R1 (7-February 2014)

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TO-92 CASE - MECHANICAL OUTLINE



R1

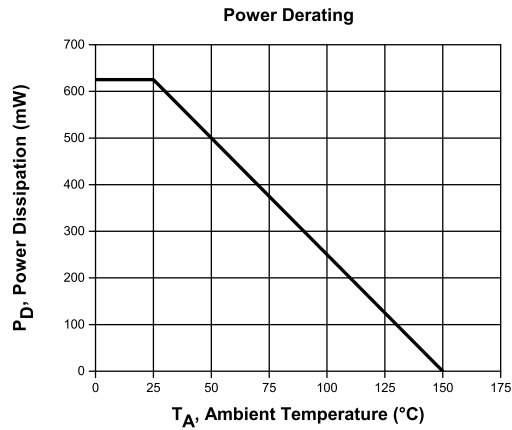
| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A (DIA) | 0.175 | 0.205 | 4.45 | 5.21 |
| B | 0.170 | 0.210 | 4.32 | 5.33 |
| C | 0.500 | - | 12.70 | - |
| D | 0.016 | 0.022 | 0.41 | 0.56 |
| E | 0.100 | | 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



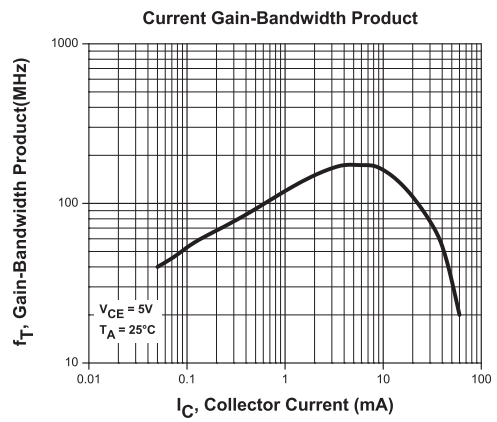
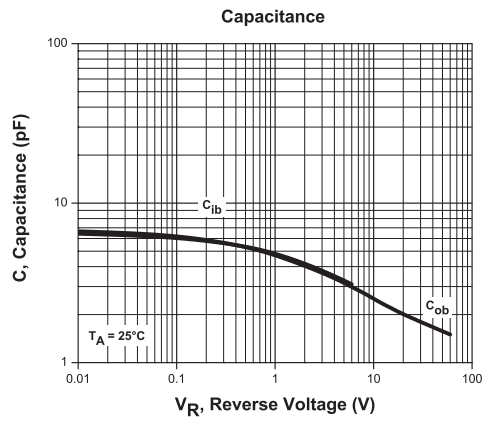
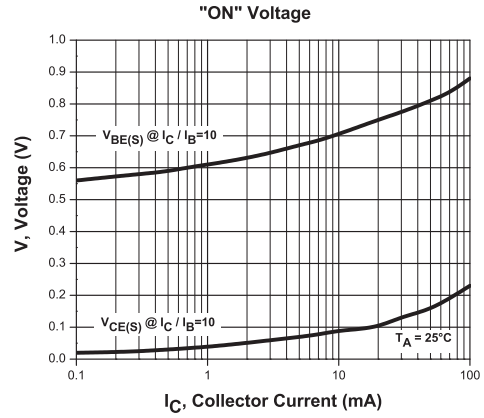
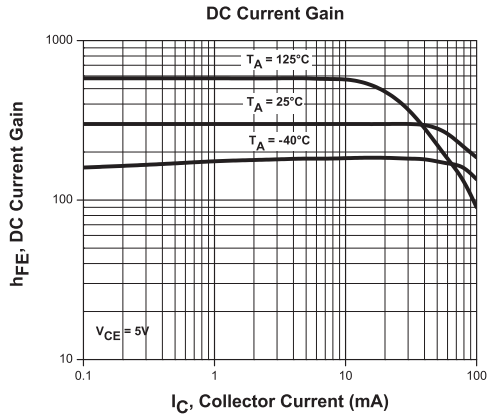
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NPN TYPICAL ELECTRICAL CHARACTERISTICS



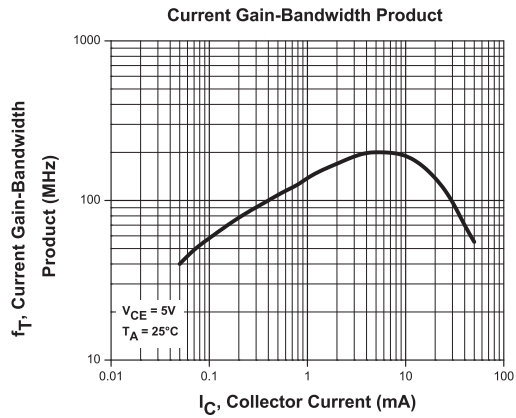
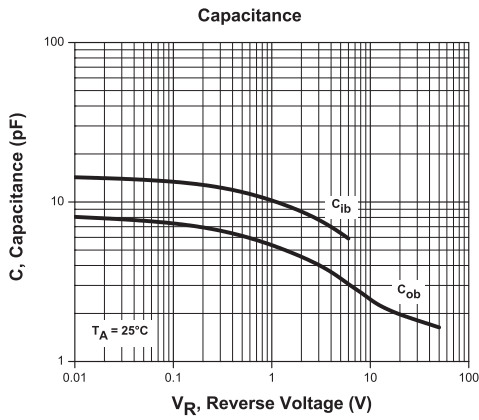
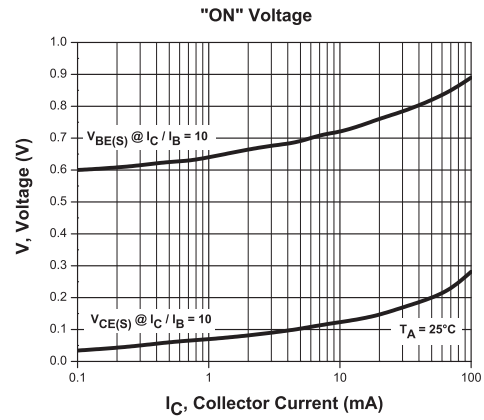
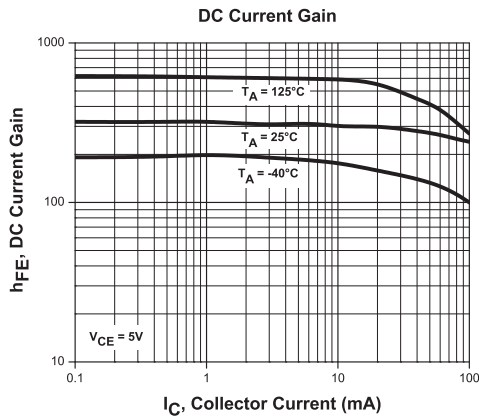
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PNP TYPICAL ELECTRICAL CHARACTERISTICS



R1 (7-February 2014)

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PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

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- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

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