

PN3565
SILICON
NPN TRANSISTOR



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR PN3565 is a silicon NPN epitaxial planar transistor designed for low noise applications.



TO-92 CASE

MARKING: FULL PART NUMBER

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

| | | | |
|--|----------------|-------------|--------------------|
| Collector-Base Voltage | V_{CBO} | 30 | V |
| Collector-Emitter Voltage | V_{CEO} | 25 | V |
| Emitter-Base Voltage | V_{EBO} | 6.0 | V |
| Continuous Collector Current | I_C | 50 | mA |
| Power Dissipation | P_D | 625 | mW |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 200 | $^\circ\text{C/W}$ |

SYMBOL

| | | |
|----------------|-------------|--------------------|
| V_{CBO} | 30 | V |
| V_{CEO} | 25 | V |
| V_{EBO} | 6.0 | V |
| I_C | 50 | mA |
| P_D | 625 | mW |
| T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| θ_{JA} | 200 | $^\circ\text{C/W}$ |

UNITS

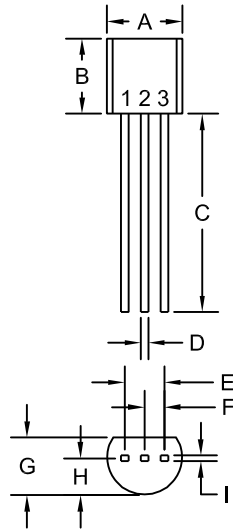
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|-----|------|------------------|
| I_{CBO} | $V_{CB}=25\text{V}$ | | 50 | nA |
| I_{CBO} | $V_{CB}=25\text{V}, T_A=65^\circ\text{C}$ | | 3.0 | μA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 30 | | V |
| BV_{CEO} | $I_C=2.0\text{mA}$ | 25 | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 6.0 | | V |
| $V_{CE(SAT)}$ | $I_C=1.0\text{mA}, I_B=0.1\text{mA}$ | | 0.35 | V |
| h_{FE} | $V_{CE}=10\text{V}, I_C=100\mu\text{A}$ | 70 | | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=1.0\text{mA}$ | 150 | 600 | |
| h_{fe} | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$ | 120 | 750 | |
| f_T | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=20\text{MHz}$ | 40 | 240 | MHz |
| h_{ie} | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$ | 2.0 | 20 | $\text{k}\Omega$ |
| h_{oe} | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$ | 0.5 | 100 | μS |
| C_{ob} | $V_{CB}=5.0\text{V}, I_E=0, f=140\text{kHz}$ | | 4.0 | pF |

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TO-92 CASE - MECHANICAL OUTLINE



R1

| SYMBOL | 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) Base
- 3) Collector

MARKING: FULL PART NUMBER

R1 (8-June 2016)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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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- Environmental regulation compliance
- Customer specific screening
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- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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