

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

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Manufacturers of World Class Discrete Semiconductors

2N5366  
2N5367

PNP SILICON TRANSISTOR

JEDEC TO-92 CASE (ECB)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5366, 2N5367 types are PNP Silicon Planar Epitaxial Transistors designed for general purpose switching and amplifier applications.

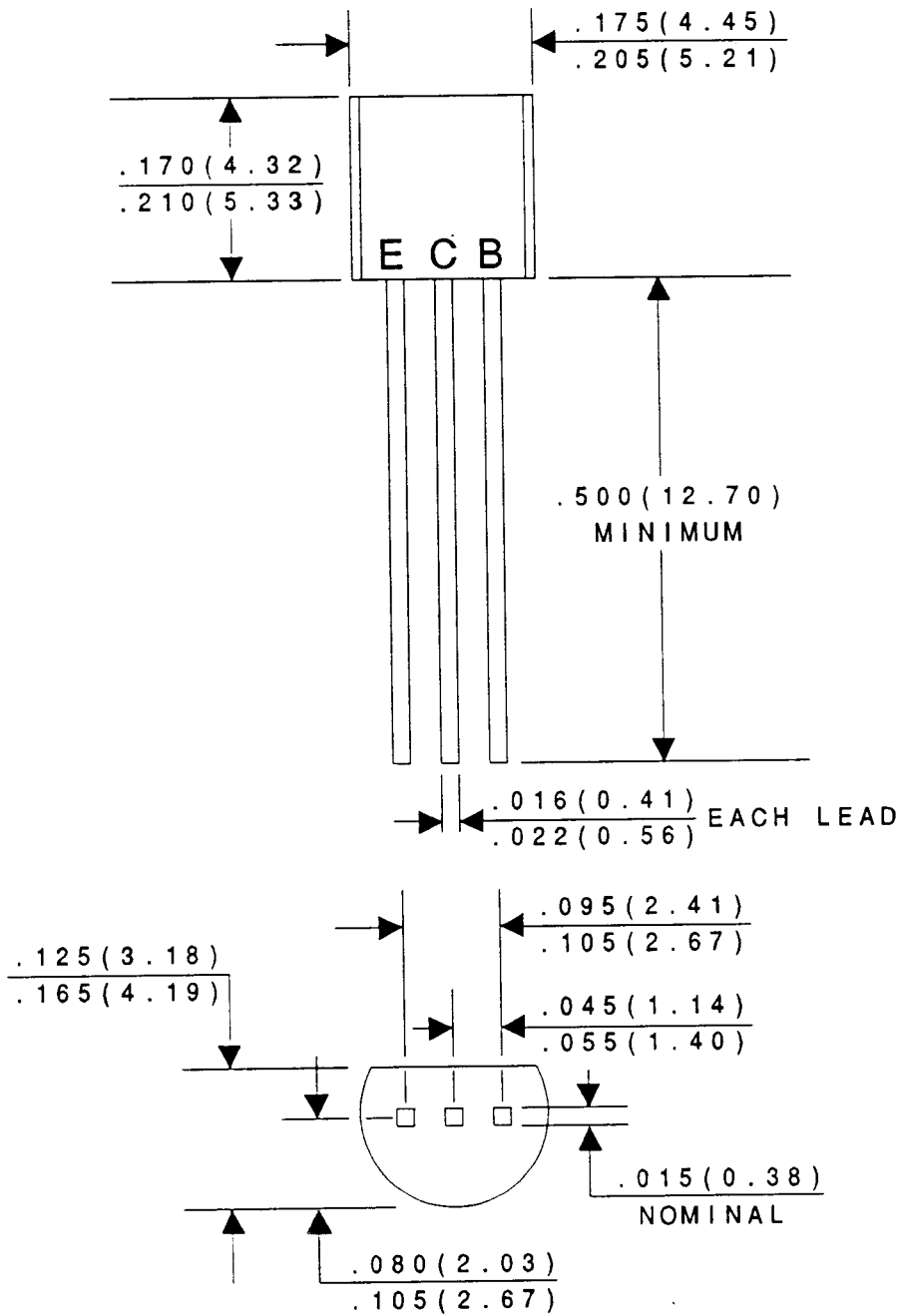
## MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

|                                | SYMBOL                            |             | UNITS |
|--------------------------------|-----------------------------------|-------------|-------|
| Collector-Base Voltage         | V <sub>CBO</sub>                  | 40          | V     |
| Collector-Emitter Voltage      | V <sub>CEO</sub>                  | 40          | V     |
| Emitter-Base Voltage           | V <sub>EBO</sub>                  | 4.0         | V     |
| Continuous Collector Current   | I <sub>C</sub>                    | 300         | mA    |
| Collector Current (t = 10μsec) | I <sub>C</sub>                    | 700         | mA    |
| Power Dissipation              | P <sub>D</sub>                    | 625         | mW    |
| Operating and Storage          |                                   |             |       |
| Junction Temperature           | T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C    |
| Thermal Resistance             | θ <sub>JA</sub>                   | 0.2         | °C/mW |

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

| SYMBOL               | TEST CONDITIONS   | 2N5366 |         | 2N5367 |         | UNITS |
|----------------------|---|--------|---------|--------|---------|-------|
|                      |   | MIN    | MAX     | MIN    | MAX     |       |
| I <sub>CBO</sub>     | V <sub>CB</sub> = 40V                                     |        | 100     |        | 100     | nA    |
| I <sub>CBO</sub>     | V <sub>CB</sub> = 40V, T <sub>A</sub> = 100°C             |        | 10      |        | 10      | μA    |
| I <sub>CES</sub>     | V <sub>CB</sub> = 40V                                     |        | 100     |        | 100     | nA    |
| I <sub>EBO</sub>     | V <sub>EB</sub> = 4.0V                                    |        | 10      |        | 10      | μA    |
| BV <sub>CEO</sub>    | I <sub>C</sub> = 10mA                                     | 40     |         | 40     |         | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> = 50mA, I <sub>B</sub> = 2.5mA             |        | 0.25    |        | 0.25    | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> = 300mA, I <sub>B</sub> = 30mA             |        | 1.0     |        | 1.0     | V     |
| V <sub>BE(SAT)</sub> | I <sub>C</sub> = 50mA, I <sub>B</sub> = 2.5mA             |        | 1.1     |        | 1.1     | V     |
| V <sub>BE(SAT)</sub> | I <sub>C</sub> = 300mA, I <sub>B</sub> = 30mA             |        | 2.0     |        | 2.0     | V     |
| V <sub>BE(ON)</sub>  | V <sub>CE</sub> = 10V, I <sub>C</sub> = 2.0mA             | 0.5    | 0.8     | 0.5    | 0.8     | V     |
| h <sub>FE</sub>      | V <sub>CE</sub> = 10V, I <sub>C</sub> = 2.0mA             | 80     |         | 200    |         |       |
| h <sub>FE</sub>      | V <sub>CE</sub> = 1.0V, I <sub>C</sub> = 50mA             | 100    | 300     | 250    | 500     |       |
| h <sub>FE</sub>      | V <sub>CE</sub> = 5.0V, I <sub>C</sub> = 300mA            | 40     |         | 75     |         |       |
| C <sub>ob</sub>      | V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f = 1.0MHz     |        | 8.0     |        | 8.0     | pF    |
| C <sub>ib</sub>      | V <sub>EB</sub> = 0.5V, I <sub>C</sub> = 0, f = 1.0MHz    |        | 35      |        | 35      | pF    |
| h <sub>fe</sub>      | V <sub>CE</sub> = 10V, I <sub>C</sub> = 2.0mA, f = 1.0kHz | 80     | 450     | 200    | 750     |       |
| f <sub>T</sub>       | V <sub>CE</sub> = 10V, I <sub>C</sub> = 2.0mA             |        | 250 TYP |        | 250 TYP | MHz   |

# JEDEC TO-92 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> day air)
- 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

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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