

2N2484

NPN SILICON TRANSISTOR



TO-18 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N2484 type is an NPN silicon transistor designed for low noise amplifier 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  
Thermal Resistance

SYMBOL

$V_{CBO}$  60  
 $V_{CEO}$  60  
 $V_{EBO}$  6.0  
 $I_C$  50  
 $P_D$  360  
 $T_J, T_{stg}$  -65 to +200  
 $\theta_{JA}$  486

UNITS

V  
V  
V  
mA  
mW  
 $^{\circ}\text{C}$   
 $^{\circ}\text{C/W}$

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

| SYMBOL        | TEST CONDITIONS                                                  | MIN | MAX  | UNITS            |
|---------------|------------------------------------------------------------------|-----|------|------------------|
| $I_{CBO}$     | $V_{CB}=45\text{V}$                                              |     | 10   | nA               |
| $I_{CBO}$     | $V_{CB}=45\text{V}, T_A=150^{\circ}\text{C}$                     |     | 10   | $\mu\text{A}$    |
| $I_{CEO}$     | $V_{CE}=5.0\text{V}$                                             |     | 2.0  | nA               |
| $I_{EBO}$     | $V_{EB}=5.0\text{V}$                                             |     | 10   | nA               |
| $BV_{CBO}$    | $I_C=10\mu\text{A}$                                              | 60  |      | V                |
| $BV_{CEO}$    | $I_C=10\text{mA}$                                                | 60  |      | V                |
| $BV_{EBO}$    | $I_E=10\mu\text{A}$                                              | 6.0 |      | V                |
| $V_{CE(SAT)}$ | $I_C=1.0\text{mA}, I_B=100\mu\text{A}$                           |     | 0.35 | V                |
| $V_{BE(ON)}$  | $V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$                         | 0.5 | 0.7  | V                |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=1.0\mu\text{A}$                         | 30  |      |                  |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$                          | 100 | 500  |                  |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=10\mu\text{A}, T_A=-55^{\circ}\text{C}$ | 20  |      |                  |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$                         | 175 |      |                  |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=500\mu\text{A}$                         | 200 |      |                  |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$                           | 250 |      |                  |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$                            |     | 800  |                  |
| $h_{fe}$      | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$          | 150 | 900  |                  |
| $f_T$         | $V_{CE}=5.0\text{V}, I_C=50\mu\text{A}, f=5.0\text{MHz}$         | 15  |      | MHz              |
| $f_T$         | $V_{CE}=5.0\text{V}, I_C=0.5\text{mA}, f=30\text{MHz}$           | 60  |      | MHz              |
| $h_{ie}$      | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$          | 3.5 | 24   | k $\Omega$       |
| $h_{oe}$      | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$          |     | 40   | $\mu\text{S}$    |
| $h_{re}$      | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$          |     | 800  | $\times 10^{-6}$ |
| $C_{ob}$      | $V_{CB}=5.0\text{V}, I_E=0, f=140\text{kHz}$                     |     | 6.0  | pF               |
| $C_{ib}$      | $V_{EB}=0.5\text{V}, I_C=0, f=140\text{kHz}$                     |     | 6.0  | pF               |

R1 (30-May 2012)

2N2484

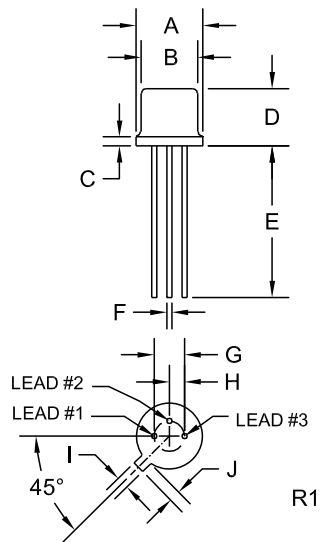
NPN SILICON TRANSISTOR



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

| SYMBOL | TEST CONDITIONS                                                                                                      | MAX | UNITS |
|--------|----------------------------------------------------------------------------------------------------------------------|-----|-------|
| NF     | $V_{CE}=5.0\text{V}$ , $I_C=10\mu\text{A}$ , $R_S=10\text{k}\Omega$<br>$BW=15.7\text{kHz}$ , 3.0dB PTS @ 10Hz, 10kHz | 3.0 | dB    |
| NF     | $V_{CE}=5.0\text{V}$ , $I_C=10\mu\text{A}$ , $R_S=10\text{k}\Omega$ , $f=100\text{Hz}$ , $BW=20\text{Hz}$            | 10  | dB    |
| NF     | $V_{CE}=5.0\text{V}$ , $I_C=10\mu\text{A}$ , $R_S=10\text{k}\Omega$ , $f=1.0\text{kHz}$ , $BW=200\text{Hz}$          | 3.0 | dB    |
| NF     | $V_{CE}=5.0\text{V}$ , $I_C=10\mu\text{A}$ , $R_S=10\text{k}\Omega$ , $f=10\text{kHz}$ , $BW=2.0\text{kHz}$          | 2.0 | dB    |

**TO-18 CASE - MECHANICAL OUTLINE**



| SYMBOL  | DIMENSIONS |             | MIN   | MAX  |
|---------|------------|-------------|-------|------|
|         | INCHES     | MILLIMETERS |       |      |
| A (DIA) | 0.209      | 0.230       | 5.31  | 5.84 |
| B (DIA) | 0.178      | 0.195       | 4.52  | 4.95 |
| C       | -          | 0.030       | -     | 0.76 |
| D       | 0.170      | 0.210       | 4.32  | 5.33 |
| E       | 0.500      | -           | 12.70 | -    |
| F (DIA) | 0.016      | 0.019       | 0.41  | 0.48 |
| G (DIA) | 0.100      | -           | 2.54  | -    |
| H       | 0.050      | -           | 1.27  | -    |
| I       | 0.036      | 0.046       | 0.91  | 1.17 |
| J       | 0.028      | 0.048       | 0.71  | 1.22 |

TO-18 (REV: R1)

**LEAD CODE:**

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

**MARKING:**  
**FULL PART NUMBER**

R1 (30-May 2012)

## 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

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