

2N834A

SILICON

NPN TRANSISTOR



TO-18 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N834A is a silicon NPN transistor designed for high speed switching 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

V_{CBO} 40
 V_{CES} 30
 V_{EBO} 5.0
 I_C 200
 P_D 300
 T_J, T_{stg} -65 to +200

UNITS

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

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

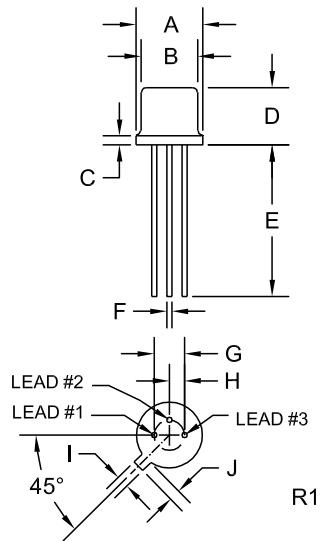
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|-----|------|---------------|
| I_{CBO} | $V_{CB}=20\text{V}$ | | 500 | nA |
| I_{CBO} | $V_{CB}=20\text{V}, T_A=150^{\circ}\text{C}$ | | 30 | μA |
| I_{CES} | $V_{CE}=30\text{V}$ | | 10 | μA |
| BV_{CBO} | $I_C=10\mu\text{A}$ | 40 | | V |
| BV_{CES} | $I_C=1.0\text{mA}$ | 30 | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$ | | 0.25 | V |
| $V_{CE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$ | | 0.40 | V |
| $V_{BE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$ | | 0.90 | V |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=10\text{mA}$ | 25 | | |
| f_T | $V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ | 500 | | MHz |
| C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$ | | 4.0 | pF |
| t_{on} | $I_C=10\text{mA}, I_{B1}=3.0\text{mA}, I_{B2}=1.0\text{mA}$ | | 33 | ns |
| t_{off} | $I_C=10\text{mA}, I_{B1}=3.0\text{mA}, I_{B2}=1.0\text{mA}$ | | 75 | ns |

R0 (15-January 2014)

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TO-18 CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| 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

R0 (15-January 2014)

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.

- Free quick ship samples (2nd 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

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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