

2N3114

NPN SILICON TRANSISTOR



TO-39 CASE

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N3114 is a NPN Silicon Transistor, mounted in a hermetically sealed package, designed for general purpose amplifier applications.

MARKING: FULL PART NUMBER

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

| | SYMBOL | | UNITS |
|--|----------------|-------------|------------------|
| Collector-Base Voltage | V_{CB0} | 150 | V |
| Collector-Emitter Voltage | V_{CEO} | 150 | V |
| Emitter-Base Voltage | V_{EBO} | 5.0 | V |
| Continuous Collector Current | I_C | 200 | mA |
| Power Dissipation | P_D | 0.8 | W |
| Power Dissipation ($T_C=25^\circ\text{C}$) | P_D | 5.0 | W |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +200 | $^\circ\text{C}$ |

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

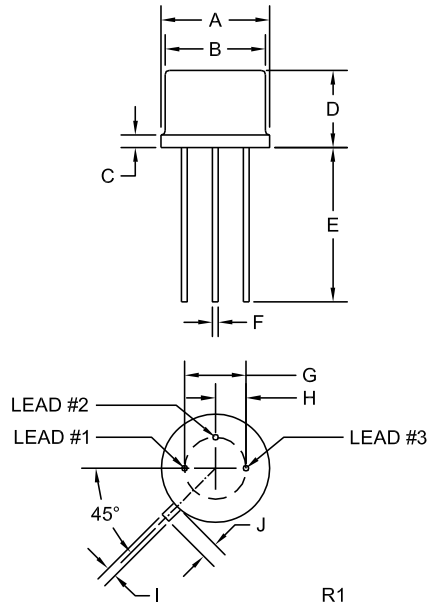
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|-----|-----|---------------|
| I_{CBO} | $V_{CB}=100\text{V}$ | | 10 | nA |
| I_{CBO} | $V_{CB}=100\text{V}, T_A=150^\circ\text{C}$ | | 10 | μA |
| I_{EBO} | $V_{EB}=4.0\text{V}$ | | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 150 | | V |
| BV_{CEO} | $I_C=30\text{mA}$ | 150 | | V |
| BV_{EBO} | $I_E=100\mu\text{A}$ | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$ | | 1.0 | V |
| $V_{BE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$ | | 0.9 | V |
| h_{FE} | $V_{CE}=10\text{V}, I_C=0.1\text{mA}$ | 15 | | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=30\text{mA}$ | 30 | 120 | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=30\text{mA}, T_A=-55^\circ\text{C}$ | 12 | | |
| f_T | $V_{CE}=10\text{V}, I_C=30\text{mA}, f=20\text{MHz}$ | 40 | | MHz |
| C_{ob} | $V_{CB}=20\text{V}, I_E=0, f=140\text{kHz}$ | | 9.0 | pF |
| C_{ib} | $V_{EB}=0.5\text{V}, I_C=0, f=140\text{kHz}$ | | 80 | pF |

R0 (4-November 2010)

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TO-39 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING: FULL PART NUMBER

| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A (DIA) | 0.335 | 0.370 | 8.51 | 9.40 |
| B (DIA) | 0.315 | 0.335 | 8.00 | 8.51 |
| C | - | 0.040 | - | 1.02 |
| D | 0.240 | 0.260 | 6.10 | 6.60 |
| E | 0.500 | - | 12.70 | - |
| F (DIA) | 0.016 | 0.021 | 0.41 | 0.53 |
| G (DIA) | 0.200 | | 5.08 | |
| H | 0.100 | | 2.54 | |
| I | 0.028 | 0.034 | 0.71 | 0.86 |
| J | 0.029 | 0.045 | 0.74 | 1.14 |

TO-39 (REV: R1)

R0 (4-November 2010)