**2N4234**
**2N4235**
**2N4236**

**SILICON**
**PNP TRANSISTORS**


**TO-39 CASE**

Central Semiconductor Corp.

www.centralsemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N4234, 2N4235, and 2N4236 are silicon PNP transistors mounted in a hermetically sealed metal case, designed for power amplifier, power driver, and switching power supply applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ($T_C$=25°C unless otherwise noted)

| | SYMBOL | 2N4234 | 2N4235 | 2N4236 | UNITS |
|---|---|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 40 | 60 | 80 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 40 | 60 | 80 | V |
| Emitter-Base Voltage | $V_{EBO}$ | | 7.0 | | V |
| Continuous Collector Current | $I_C$ | | 1.0 | | A |
| Peak Collector Current | $I_{CM}$ | | 3.0 | | A |
| Continuous Base Current | $I_B$ | | 0.2 | | A |
| Power Dissipation | $P_D$ | | 6.0 | | W |
| Power Dissipation ($T_A$=25°C) | $P_D$ | | 1.0 | | W |
| Operating and Storage Junction Temperature | $T_J$, $T_{stg}$ | | -65 to +200 | | °C |
| Thermal Resistance | $\Theta_{JC}$ | | 29 | | °C/W |

**ELECTRICAL CHARACTERISTICS:** ($T_A$=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---|---|---|---|---|
| $I_{CBO}$ | $V_{CB}$=Rated $V_{CBO}$ | | 100 | μA |
| $I_{CEX}$ | $V_{CE}$=Rated $V_{CEO}$, $V_{BE}$=1.5V | | 100 | μA |
| $I_{CEX}$ | $V_{CE}$=30V, $V_{BE}$=1.5V, $T_C$=150°C (2N4234) | | 1.0 | mA |
| $I_{CEX}$ | $V_{CE}$=40V, $V_{BE}$=1.5V, $T_C$=150°C (2N4235) | | 1.0 | mA |
| $I_{CEX}$ | $V_{CE}$=60V, $V_{BE}$=1.5V, $T_C$=150°C (2N4236) | | 1.0 | mA |
| $I_{CEO}$ | $V_{CE}$=30V (2N4234) | | 1.0 | mA |
| $I_{CEO}$ | $V_{CE}$=40V (2N4235) | | 1.0 | mA |
| $I_{CEO}$ | $V_{CE}$=60V (2N4236) | | 1.0 | mA |
| $I_{EBO}$ | $V_{EB}$=7.0V | | 500 | μA |
| $BV_{CEO}$ | $I_C$=100mA (2N4234) | 40 | | V |
| $BV_{CEO}$ | $I_C$=100mA (2N4235) | 60 | | V |
| $BV_{CEO}$ | $I_C$=100mA (2N4236) | 80 | | V |
| $V_{CE(SAT)}$ | $I_C$=1.0A, $I_B$=125mA | | 0.6 | V |
| $V_{BE(SAT)}$ | $I_C$=1.0A, $I_B$=100mA | | 1.5 | V |
| $V_{BE(ON)}$ | $V_{CE}$=1.0V, $I_C$=250mA | | 1.0 | V |

R0 (22-October 2013)

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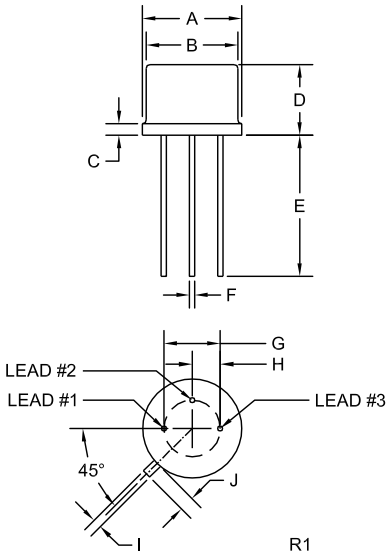
**ELECTRICAL CHARACTERISTICS - Continued:** ($T_A$=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---|---|---|---|---|
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=100mA | 40 | | |
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=250mA | 30 | 150 | |
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=500mA | 20 | | |
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=1.0A | 10 | | |
| $h_{fe}$ | $V_{CE}$=10V, $I_C$=50mA, f=1.0kHz | 25 | | |
| $f_T$ | $V_{CE}$=10V, $I_C$=100mA, f=1.0MHz | 3.0 | | MHz |
| $C_{ob}$ | $V_{CB}$=10V, $I_E$=0, f=100kHz | | 100 | pF |

## TO-39 CASE - MECHANICAL OUTLINE




| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | 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)

**LEAD CODE:**
1) Emitter
2) Base
3) Collector

**MARKING: FULL PART NUMBER**