

2N4036
2N4037

PNP SILICON TRANSISTOR



TO-39 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4036, 2N4037 are epitaxial planar PNP Silicon Transistors designed for small signal, medium power, general purpose industrial applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$)

| | |
|----------------------------------------------|--|
| Collector-Base Voltage | |
| Collector-Emitter Voltage | |
| Emitter-Base Voltage | |
| Continuous Collector Current | |
| Continuous Base Current | |
| Power Dissipation | |
| Power Dissipation ($T_A=25^\circ\text{C}$) | |
| Operating and Storage Junction Temperature | |
| Thermal Resistance | |

| SYMBOL | 2N4036 | 2N4037 | UNITS |
|----------------|--------|-------------|--------------------|
| V_{CBO} | 90 | 60 | V |
| V_{CEO} | 65 | 40 | V |
| V_{EBO} | 7.0 | 7.0 | V |
| I_C | | 1.0 | A |
| I_B | | 0.5 | A |
| P_D | | 5.0 | W |
| P_D | | 1.0 | W |
| T_J, T_{stg} | | -65 to +200 | $^\circ\text{C}$ |
| θ_{JC} | | 35 | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | 2N4036 | | 2N4037 | | UNITS |
|---------------|------------------------------------------------------------------|--------|------|--------|------|---------------|
| | | MIN | MAX | MIN | MAX | |
| I_{CBO} | $V_{CB}=90\text{V}$ | - | 1.0 | - | - | μA |
| I_{CBO} | $V_{CB}=60\text{V}$ | - | - | - | 0.25 | μA |
| I_{CEX} | $V_{CE}=85\text{V}, V_{EB}=1.5\text{V}$ | - | 100 | - | - | μA |
| I_{CEX} | $V_{CE}=30\text{V}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$ | - | - | - | 100 | mA |
| I_{EBO} | $V_{EB}=7.0\text{V}$ | - | 10 | - | - | μA |
| I_{EBO} | $V_{EB}=5.0\text{V}$ | - | - | - | 1.0 | μA |
| BV_{CEO} | $I_C=100\text{mA}$ | 65 | - | 40 | - | V |
| $V_{CE(SAT)}$ | $I_C=150\text{mA}, I_B=15\text{mA}$ | - | 0.65 | - | 1.4 | V |
| $V_{BE(SAT)}$ | $I_C=150\text{mA}, I_B=15\text{mA}$ | - | 1.4 | - | - | V |
| $V_{BE(ON)}$ | $V_{CE}=10\text{V}, I_C=150\text{mA}$ | - | - | - | 1.5 | V |
| h_{FE} | $V_{CE}=10\text{V}, I_C=0.1\text{mA}$ | 20 | - | - | - | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=1.0\text{mA}$ | - | - | 15 | - | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=150\text{mA}$ | 40 | 140 | 50 | 250 | |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=150\text{mA}$ | 20 | 200 | - | - | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=500\text{mA}$ | 20 | - | - | - | |
| f_T | $V_{CE}=10\text{V}, I_C=50\text{mA}, f=20\text{MHz}$ | 60 | - | 60 | - | MHz |
| C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | - | 30 | - | 30 | pF |
| t_{on} | $V_{CE}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$ | - | 110 | - | - | ns |
| t_{off} | $V_{CE}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$ | - | 700 | - | - | ns |

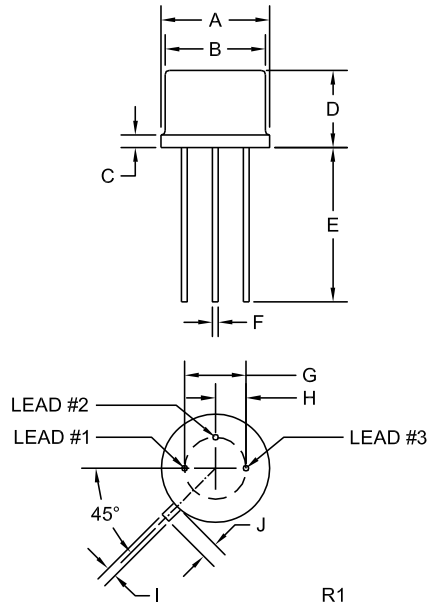
R1 (1-April 2010)

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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)

R1 (1-April 2010)

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).

CONTACT US

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