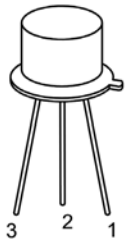
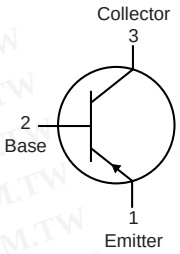
# Bipolar Transistor

multicomp



RoHS Compliant




## Description:

A Silicon epitaxial PNP planer transistor in a TO-39 type package designed for use as drivers for high transistors in general purpose amplifier and switching circuits.

## Maximum Ratings:

| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Collector Emitter Voltage | $V_{CEO}$ | 100 | V |
| Collector Base Voltage | ($I_E$ = 0), $V_{CBO}$ | | |
| Emitter Base Voltage | ($I_C$ = 0), $V_{EBO}$ | 4 | |
| Collector Current | $I_C$ | 1 | A |
| Base Current | $I_B$ | 500 | mA |
| Total Device Dissipation | ($T_C$ = +25°C), $P_{tot}$ | 10 | W |
| Total Device Dissipation | ($T_A$ = +25°C), $P_{tot}$ | 1 | |
| Operating Junction Temperature, | $T_J$ | +200 | °C |
| Storage Temperature Range, | $T_{stg}$ | -65 to +200 | |
| Thermal Resistance, Junction-to-Case, | $R_{thJC}$ | 17.4 | °C/W |
| Thermal Resistance, Junction-to-Ambient, | $R_{thJA}$ | 175 | °C/W°C |

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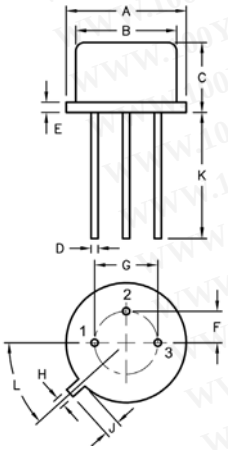
## Electrical Characteristics: $T_A$ = +25°C unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Max | Unit |
|---|---|---|---|---|---|
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$ = 100V, $I_E$ = 0 | - | 1 | µA |
| | $I_{CEO}$ | $V_{CE}$ = 70V, $I_B$ = 0 | | 10 | |
| | $I_{CEV}$ | $V_{CE}$ = 100V, $V_{BE}$ = -1.5V | | 1 | |
| | | $V_{CE}$ = 100V, $V_{BE}$ = -1.5V ,$T_C$ = +150°C | | | mA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$ = 4V, $I_C$ = 0 | | | µA |
| Collector-Emitter Sustaining Voltage | $V_{CEO(SUS)}$ | $I_C$ = 10mA, $I_B$ = 0, Note 1 | 100 | - | V |
| Collector-Emitter Saturation Voltage | $V_{CE(Sat)}$ | $I_C$= 250mA, $I_B$ = 25mA, Note 1 | - | 0.6 | |
| | | $I_C$ = 500mA, $I_B$ = 50mA, Note 1 | | 1 | |
| | | $I_C$ = 1A, $I_B$ = 200mA, Note1 | | 2 | |
| Base-Emitter Voltage | $V_{BE(on)}$ | $V_{CE}$ = 2V, $I_C$ = 250mA | | 1 | |
| DC Current Gain | $h_{FE}$ | $I_C$ = 250mA, $V_{CE}$ = 2V, Note 1 | 40 | 150 | |
| | | $I_C$ = 1A, $V_{CE}$ = 2V, Note 1 | 5 | - | |
| Transition Frequency | $f_T$ | $V_{CE}$ = 10V, $I_C$ = 100mA, f = 10MHz | 30 | | MHz |
| Collector-Base Capacitance | $C_{cbo}$ | $V_{CB}$ = 20V, $I_E$ = 0, f = 1MHz | - | 50 | pF |
| Small-Signal Current Gain | $h_{fe}$ | $V_{CE}$ = 1.5V, $I_C$ = 200mA, f = 1kHz | 40 | - | |

**Note**:
1. Pulse Duration: 300µs, Duty Cycle ≦2%




| Dimensions | A | B | C | D | E | F | G | H | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Min. | 8.5 | 7.74 | 6.09 | 0.4 | - | 2.41 | 4.82 | 0.71 | 0.73 | 12.7 | 42° |
| Max. | 9.39 | 8.5 | 6.6 | 0.53 | 0.88 | 2.66 | 5.33 | 0.86 | 1.02 | - | 48° |

Dimensions : Millimetres

**Pin Configuration:**
1. Emitter
2. Base
3. Collector

## Part Number Table

| Description | Part Number |
|---|---|
| Transistor, PNP, 1A, 100V, TO-39 | 2N5679 |