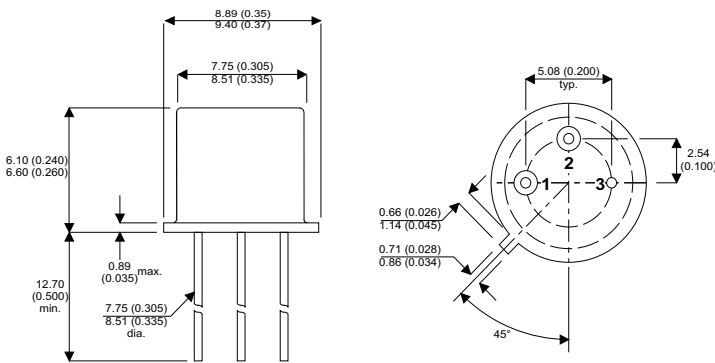


MECHANICAL DATA

Dimensions in mm(inches)

PNP SILICON TRANSISTOR



FEATURES

- FAST SWITCHING
- HIGH PULSE POWER

APPLICATIONS

- POWER SWITCHING CIRCUITS
- MOTOR CONTROL

TO39

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

| | | |
|-----------|--|-----------------|
| V_{CBO} | Collector – Base Voltage | 100V |
| V_{CEO} | Collector – Emitter Voltage | 80V |
| V_{EBO} | Emitter – Base Voltage | 5V |
| I_C | Collector Current | 3A |
| I_B | Base Current | 2A |
| P_{tot} | Total Power Dissipation at $T_{case} \leq 25^{\circ}C$ | 1W |
| T_{amb} | Ambient Operating Temperature | -55°C to +200°C |
| T_{stg} | Storage Temperature | -55°C to +200°C |

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated)

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit | |
|-----------------|---|--|--|------|-------------|---------------|
| h_{21E} | Static Value of Common Emitter Forward Current Transfer Ratio | $V_{CE} = 10\text{V}$ $I_C = 0.15$ | 50 | | 250 | — |
| | | $V_{CE} = 10\text{V}$ $I_C = 2\text{A}$ | 15 | | | |
| | | $V_{CE} = 10\text{V}$ $I_C = 1\text{mA}$ | 20 | | | |
| f_T | Transistor Frequency | $V_{CE} = 5\text{V}$ $f = 20\text{MHz}$ | $I_C = 100\text{mA}$ | 50 | | MHz |
| I_{CBO} | Collector Base Cut- Off Current. | $V_{CB} = 80\text{V}$ | $I_E = 0$ | | 100 | nA |
| | | | $t = 150^{\circ}\text{C}$ | | 100 | μA |
| I_{EBO} | Emitter–Base Cut-off Current | | | | 100 | nA |
| h_{21e} | Small Signal Common Emitter Forward Current Transfer Ratio | $V_{EB} = 4\text{V}$ $V_{CE} = 5\text{V}$ | $I_C = 10\text{mA}$ | 25 | | — |
| $V_{CE(sat)^*}$ | Collector – Emitter Saturation Voltage* | $f = 1\text{KHz}$ | | | 0.3 | V |
| | | $I_C = 150\text{mA}$ $I_B = 15\text{mA}$ | | | 0.6 | |
| $V_{BE(sat)^*}$ | Base – Emitter Saturation Voltage* | $I_C = 1\text{A}$ $I_C = 150\text{mA}$ | $I_B = 0.1\text{A}$ $I_B = 15\text{mA}$ | | 0.95 1.3 | V |
| | | $V_{CB} = 10\text{V}$ $f = 1\text{MHz}$ | $I_E = 0$ | | | |

*Pulse Conditions: Pulse Length = $300\mu\text{s}$ duty cycle = 1.5%



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