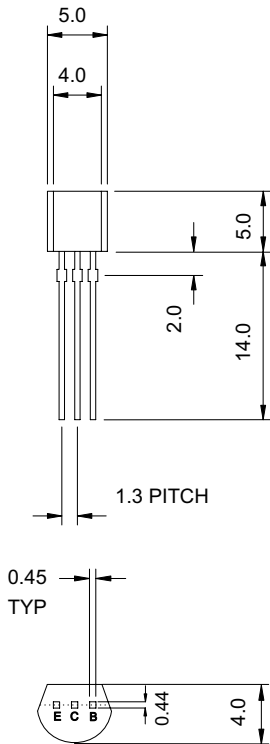


MECHANICAL DATA

Dimensions in mm



TO92

NPN EPITAXIAL PLANAR SILICON TRANSISTOR

Ideal for low voltage applications requiring low loss devices

FEATURES

- **LOW $V_{CE(SAT)}$**
- **HIGH CURRENT**
- **GAIN LINEARITY OVER FULL CURRENT RANGE**
- **LOW COST**

APPLICATIONS

- **LOW VOLTAGE BATTERY APPLICATIONS**
- **LIGHTING INVERTERS**

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

| | | |
|-------------|--|--------------|
| V_{CBO} | Collector – Base voltage | 30V |
| V_{CEX} | Collector – Emitter voltage ($V_{BE} = -1.5V$) | 20V |
| V_{CEO} | Collector – Emitter voltage ($I_B = 0$) | 10V |
| V_{EBO} | Emitter – Base voltage | 6V |
| I_C | Collector current | 3A |
| $I_{C(PK)}$ | Peak Collector current | 5A |
| P_{tot} | Total Dissipation at $T_{case} = 25^{\circ}C$ | 750mW |
| T_{stg} | Storage Temperature | -55 to 150°C |
| T_j | Maximum Operating Junction Temperature | 150°C |

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

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit. |
|--|-------------------------------|------|------|------|---------|
| $V_{(BR)CEO}$ Collector – Emitter Breakdown Voltage | $I_C = 1mA$ $R_{BE} = \infty$ | 10 | | | V |
| $V_{(BR)CEX}$ Collector – Emitter Voltage | $I_C = 1mA$ $V_{BE} = -3V$ | 20 | | | V |
| $V_{(BR)CBO}$ Collector – Base Breakdown Voltage | $I_C = 10\mu A$ $I_E = 0$ | 30 | | | V |
| $V_{(BR)EBO}$ Emitter – Base Breakdown Voltage | $I_C = 0$ $I_E = 10\mu A$ | 6 | | | V |
| I_{CBO} Collector Cut-Off Current | $V_{CB} = 20V$ $I_E = 0$ | | | 1 | μA |
| I_{EBO} Emitter Cut-Off Current | $I_C = 0$ $V_{BE} = 4V$ | | | 1 | μA |
| $V_{CE(sat)^*}$ Collector – Emitter Saturation Voltage | $I_C = 3A$ $I_B = 60mA$ | | 0.3 | 0.4 | V |
| h_{FE}^* DC Current Gain | $V_{CE} = 2V$ $I_C = 3A$ | 140 | 210 | | — |
| f_T Transition frequency | $V_{CE} = 10V$ $I_C = 50mA$ | | 200 | | MHz |
| C_{ob} Output Capacitance | $V_{CB} = 10V$ $f = 1MHz$ | | 30 | | pF |

* Pulse test $t_p = 300\mu s$, $\delta \leq 2\%$

