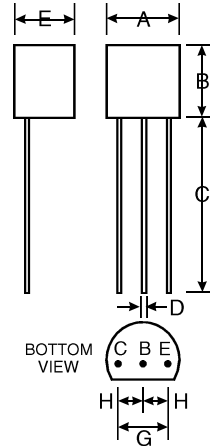


Features

For General Purpose Switching and Amplifier Applications
Especially Suitable for AF Driver and Low Power Output Stages

Mechanical Data

Case: TO-92, Plastic
Leads: Solderable per MIL STD 202, Method 208
Pin Connections: See Diagram
Approx. Weight: 0.18 grams



| TO-92 | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 4.32 | 4.83 |
| B | 4.32 | 4.78 |
| C | 12.50 | 15.62 |
| D | 0.36 | 0.56 |
| E | 3.15 | 3.94 |
| G | 2.29 | 2.79 |
| H | 1.14 | 1.40 |
| All Dimensions in mm | | |

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|----------------|-------------|------------------|
| Collector-Emitter Voltage | V_{CE0} | 25 | V |
| Collector-Base Voltage | V_{CBO} | 30 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 200 | mA |
| Peak Collector Current | I_{CM} | 800 | mA |
| Base Current | I_B | 50 | mA |
| Power Dissipation (Note 1) | P_d | 625 | mW |
| Thermal Resistance, Junction to Ambient (Note 1) | R_{JA} | 200 | K/W |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +150 | $^\circ\text{C}$ |

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Conditions |
|--------------------------------------|---------------|-----|-----|------|------|---|
| DC Current Gain | h_{FE} | 120 | 60 | 360 | — | $V_{CE} = 1.0\text{V}, I_C = 2.0\text{mA}$ $V_{CE} = 1.0\text{V}, I_C = 50\text{mA}$ |
| Collector-Base Cutoff Current | I_{CBO} | — | — | 50 | nA | $V_{CB} = 20\text{V}$ |
| Emitter-Base Cutoff Current | I_{EBO} | — | — | 50 | nA | $V_{EB} = 3.0\text{V}$ |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | — | — | 0.3 | V | $I_C = 50\text{mA}, I_B = 5.0\text{mA}$ |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)}$ | — | — | 0.95 | V | $I_C = 50\text{mA}, I_B = 5.0\text{mA}$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 25 | — | — | V | $I_C = 1.0\text{mA}$ |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 30 | — | — | V | $I_C = 10\mu\text{A}$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 5.0 | — | — | V | $I_E = 10\mu\text{A}$ |
| Gain Bandwidth Product | f_T | — | 200 | — | MHz | $V_{CE} = 5.0\text{V}, I_C = 10\text{mA}, f = 50\text{MHz}$ |
| Collector-Base Capacitance | C_{CBO} | — | — | 12 | pF | $V_{CB} = 10\text{V}, f = 1.0\text{MHz}$ |

Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 2.0mm from case.