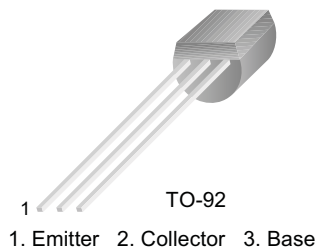


BC212LB

BC212LB

PNP General Purpose Amplifier

- This device is designed for general purpose amplifier application at collector currents to 100mA.
- Sourced from process 68.



Absolute Maximum Ratings* $T_C=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|----------------|--|------------|------------------|
| V_{CEO} | Collector-Emitter Voltage | 50 | V |
| V_{CBO} | Collector-Base Voltage | 60 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current - Continuous | 100 | mA |
| T_J, T_{STG} | Operating and Storage Junction Temperature Range | - 55 ~ 150 | $^\circ\text{C}$ |

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

1. These ratings are based on a maximum junction temperature of 150°C .
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|-------------------------------------|--------------------------------------|---|----------|------|------|-------|
| Off Characteristics | | | | | | |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = 2\text{mA}$ | 50 | | | V |
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = 10\mu\text{A}$ | 60 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = 10\mu\text{A}$ | 5 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = 30\text{V}$ | | | 15 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = 4\text{V}$ | | | 15 | nA |
| On Characteristics* | | | | | | |
| h_{FE} | DC Current Gain | $V_{CE} = 5\text{V}, I_C = 10\mu\text{A}$ $V_{CE} = 5\text{V}, I_C = 2\text{mA}$ | 40 60 | | | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = 100\text{mA}, I_B = 5\text{mA}$ | | | 0.6 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = 100\text{mA}, I_B = 5\text{mA}$ | | | 1.4 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $V_{CE} = 5\text{V}, I_C = 2\text{mA}$ | 0.6 | | 0.72 | V |
| Small Signal Characteristics | | | | | | |
| C_{ob} | Output Capacitance | $V_{CE} = 10\text{V}, f = 1\text{MHz}$ | | | 6 | pF |
| h_{FE} | Small Signal Current Gain | $V_{CE} = 5\text{V}, I_C = 2\text{mA}, f = 1\text{KHz}$ | 60 | | | |
| NF | Noise Figure | $V_{CE} = 5\text{V}, I_C = 200\mu\text{A}, f = 1\text{KHz}$ $R_G = 2\text{K}\Omega, BW = 200\text{Hz}$ | | | 10 | dB |

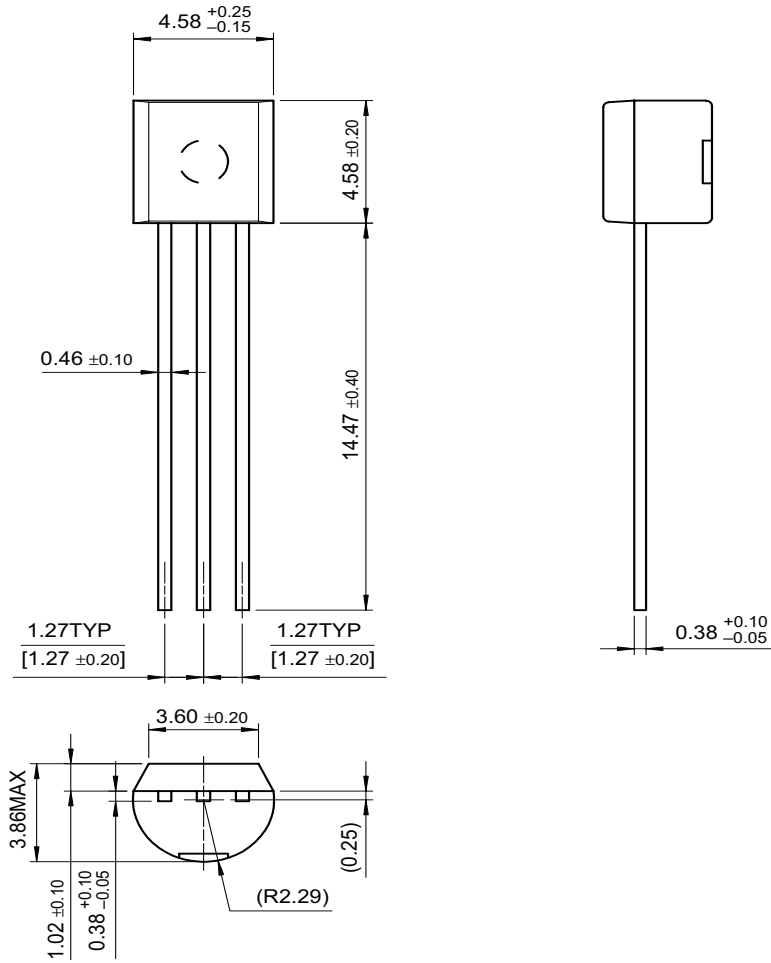
* Pulse Test: Pulse Width < 300 μs , Duty Cycle < 2.0%

Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Max. | Units |
|-----------------|---|------|----------------------------|
| P_D | Total Device Dissipation | 350 | mW |
| | Derate above 25°C | 2.8 | $\text{mW}/^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 357 | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | 125 | $^\circ\text{C}/\text{W}$ |

Package Dimensions

TO-92



Dimensions in Millimeters

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|--------------------------|------------------------|---|
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