

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

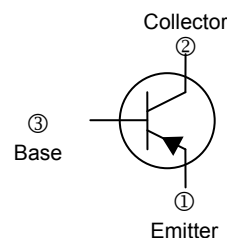
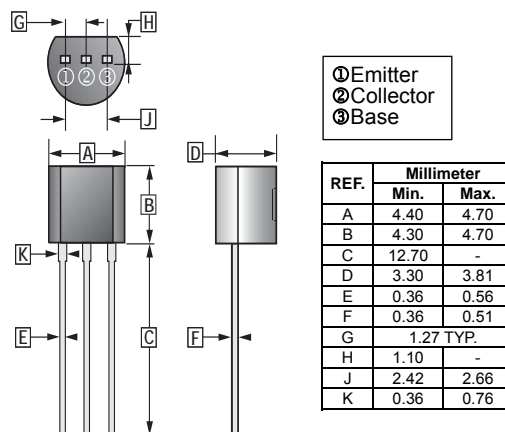
## FEATURES

- Allow Supply with The Radial Taping

## CLASSIFICATION OF $h_{FE}$ (1)

| Product-Rank | 2SB1322A-Q | 2SB1322A-R | 2SB1322A-S |
|--------------|------------|------------|------------|
| Range        | 85~170     | 120~240    | 170~340    |

## TO-92



## ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                                   | Symbol          | Rating       | Unit                        |
|---|-----------------|--------------|-----------------------------|
| Collector to Base Voltage                   | $V_{CBO}$       | -60          | V                           |
| Collector to Emitter Voltage                | $V_{CEO}$       | -50          | V                           |
| Emitter to Base Voltage                     | $V_{EBO}$       | -5           | V                           |
| Collector Current - Continuous              | $I_C$           | -1           | A                           |
| Collector Power Dissipation                 | $P_C$           | 0.625        | W                           |
| Thermal Resistance From Junction to Ambient | $R_{\theta JA}$ | 200          | $^\circ\text{C} / \text{W}$ |
| Junction, Storage Temperature               | $T_J, T_{STG}$  | 150, -55~150 | $^\circ\text{C}$            |

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                               | Symbol        | Min | Typ | Max  | Unit          | Test condition   |
|---|---------------|-----|-----|------|---------------|--|
| Collector to Base Breakdown Voltage     | $V_{(BR)CBO}$ | -60 | -   | -    | V             | $I_C = -0.01\text{mA}, I_E = 0$                                |
| Collector to Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | -50 | -   | -    | V             | $I_C = -2\text{mA}, I_B = 0$                                   |
| Emitter to Base Breakdown Voltage       | $V_{(BR)EBO}$ | -5  | -   | -    | V             | $I_E = -0.01\text{mA}, I_C = 0$                                |
| Collector Cut-Off Current               | $I_{CBO}$     | -   | -   | -0.1 | $\mu\text{A}$ | $V_{CB} = -20\text{V}, I_E = 0$                                |
| Emitter Cut-Off Current                 | $I_{EBO}$     | -   | -   | -0.1 | $\mu\text{A}$ | $V_{EB} = -5\text{V}, I_C = 0$                                 |
| DC Current Gain                         | $h_{FE(1)}$   | 85  | -   | 340  |               | $V_{CE} = -10\text{V}, I_C = -0.5\text{A}$                     |
|   | $h_{FE(2)}$   | 50  | -   | -    |               | $V_{CE} = -5\text{V}, I_C = -1\text{A}$                        |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | -   | -   | -0.4 | V             | $I_C = -0.5\text{A}, I_B = -0.05\text{A}$                      |
| Base to Emitter Saturation Voltage      | $V_{BE(sat)}$ | -   | -   | -1.2 | V             | $I_C = -0.5\text{A}, I_B = -0.05\text{A}$                      |
| Collector-Base Capacitance              | $C_{cb}$      | -   | -   | 30   | pF            | $V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$               |
| Transition Frequency                    | $f_T$         | -   | 200 | -    | MHz           | $V_{CE} = -10\text{V}, I_C = -0.05\text{A}, f = 200\text{MHz}$ |