

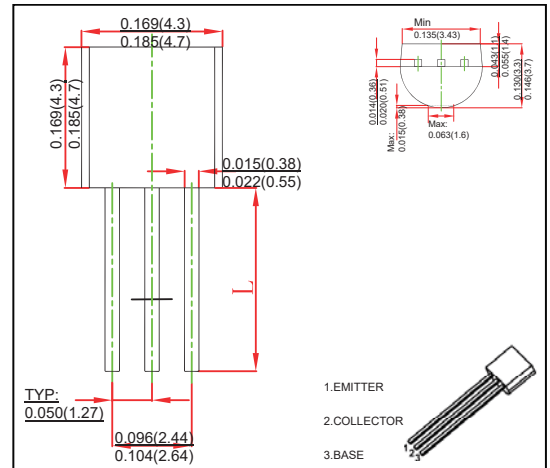
## TO-92 Plastic-Encapsulate Transistors

### FEATURES

- General Purpose convertor
- Low Frequency Power Amplifie
- Suitable for Driver Stage of Small Motor
- Transistor NPN

### MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter                                   | Symbol          | Value      | Unit  |
|---|-----------------|------------|-------|
| Collector-Base Voltage                      | $V_{CB0}$       | 40         | V     |
| Collector-Emitter Voltage                   | $V_{CEO}$       | 25         | V     |
| Emitter-Base Voltage                        | $V_{EBO}$       | 5          | V     |
| Collector Current                           | $I_C$           | 1.5        | A     |
| Collector Power Dissipation                 | $P_C$           | 1          | W     |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | 125        | °C /W |
| Junction Temperature                        | $T_J$           | 150        | °C    |
| Storage Temperature                         | $T_{stg}$       | -55 ~ +150 | °C    |

| Parameter                            | Symbol        | Test Conditions                       | Min | Typ | Max | Unit    |
|--------------------------------------|---------------|---------------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = 0.1mA, I_E = 0$                | 40  |     |     | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = 0.1mA, I_B = 0$                | 25  |     |     | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = 0.1mA, I_C = 0$                | 5   |     |     | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 40V, I_E = 0$               |     |     | 0.1 | $\mu A$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = 20V, I_B = 0$               |     |     | 0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 5V, I_C = 0$                |     |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = 1V, I_C = 100mA$            | 85  |     | 300 |         |
|                                      | $h_{FE(2)}$   | $V_{CE} = 1V, I_C = 800mA$            | 40  |     |     |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 800mA, I_B = 80mA$             |     |     | 0.5 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = 800mA, I_B = 80mA$             |     |     | 1.2 | V       |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE} = 1V, I_C = 10mA$             |     |     | 1.0 | V       |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = 10V, I_E = 0, f = 1MHz$     |     |     | 15  | pF      |
| Transition frequency                 | $f_T$         | $V_{CE} = 10V, I_C = 50mA, f = 30MHz$ | 100 |     |     | MHz     |

# RATINGS AND CHARACTERISTIC CURVES

