

TO-92 Plastic-Encapsulate Transistors

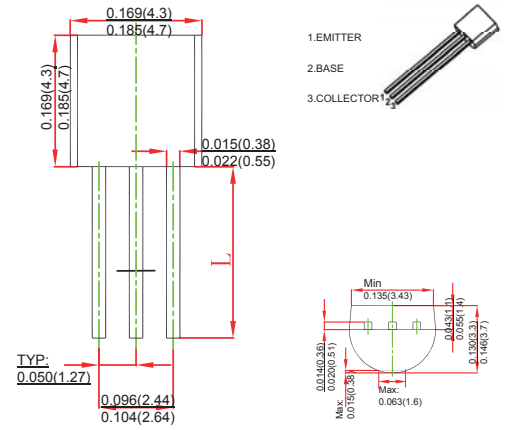
FEATURES

- Complement To KSB564A
- Low $V_{CE(sat)}$
- TRANSISTOR (NPN)

MECHANICAL DATA

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

TO-92



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------|---|-----------|-------|
| V_{CBO} | Collector-Base Voltage | 40 | V |
| V_{CEO} | Collector-Emitter Voltage | 30 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 1 | A |
| P_D | Collector Power Dissipation | 800 | mW |
| $R_{\theta JA}$ | Thermal Resistance from Junction to Ambient | 150 | °C /W |
| T_j | Junction Temperature | 150 | °C |
| T_{stg} | Storage Temperature | -55 ~+150 | °C |

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

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = 0.1\text{mA}, I_E = 0$ | 40 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = 10\text{mA}, I_B = 0$ | 30 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = 0.1\text{mA}, I_C = 0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 30\text{V}, I_E = 0$ | | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE} = 1\text{V}, I_C = 100\text{mA}$ | 70 | | 400 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 1\text{A}, I_B = 0.1\text{A}$ | | | 0.5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = 1\text{A}, I_B = 0.1\text{A}$ | | | 1.2 | V |
| Collector output capacitance | C_{ob} | $V_{CB} = 6\text{V}, I_E = 0, f = 1\text{MHz}$ | | 16 | | pF |
| Transition frequency | f_T | $V_{CE} = 6\text{V}, I_C = 10\text{mA}$ | | 130 | | MHz |

CLASSIFICATION OF h_{FE}

| RANK | O | Y | G |
|-------|--------|---------|---------|
| RANGE | 70-140 | 120-240 | 200-400 |

RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

