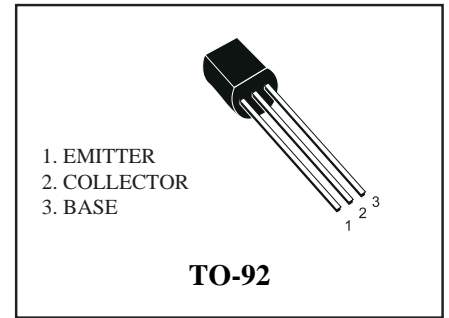


PNP Plastic-Encapsulate Transistor

 Lead(Pb)-Free

FEATURES :

- Excellent h_{FE} Linearity
- Low noise



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

| Parameter | Symbol | Value | Units |
|-------------------------------|-----------|---------|--------------------|
| Collector-Base Voltage | V_{CBO} | -50 | V |
| Collector-Emitter Voltage | V_{CEO} | -50 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current -Continuous | I_C | -0.15 | A |
| Collector Power Dissipation | P_C | 625 | mW |
| Junction Temperature | T_J | 150 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{stg} | -55-150 | $^{\circ}\text{C}$ |

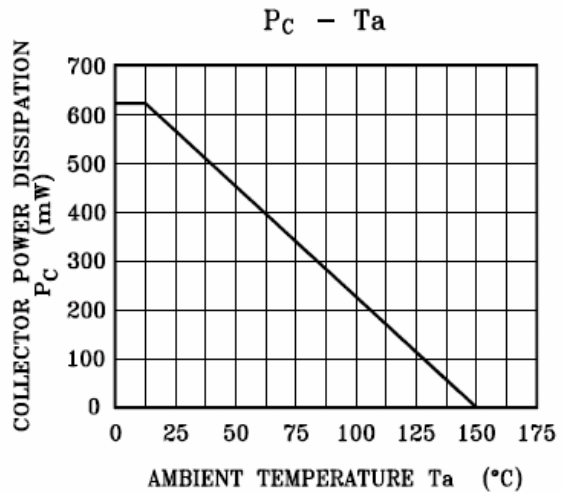
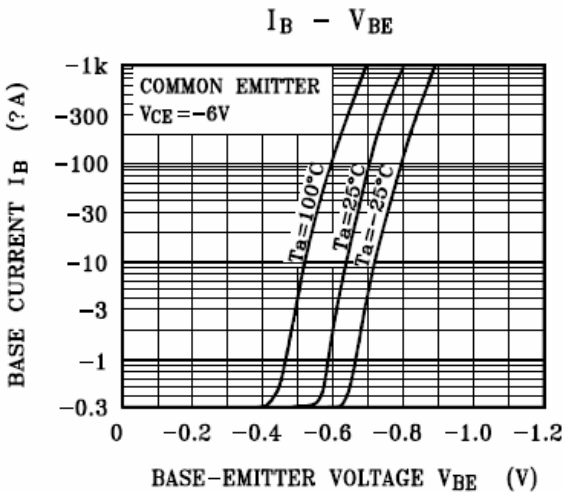
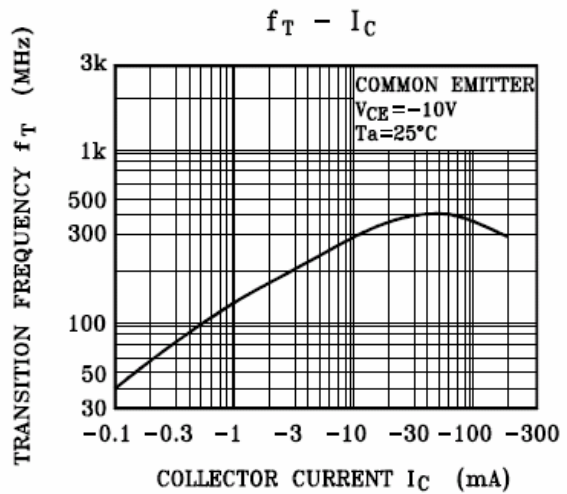
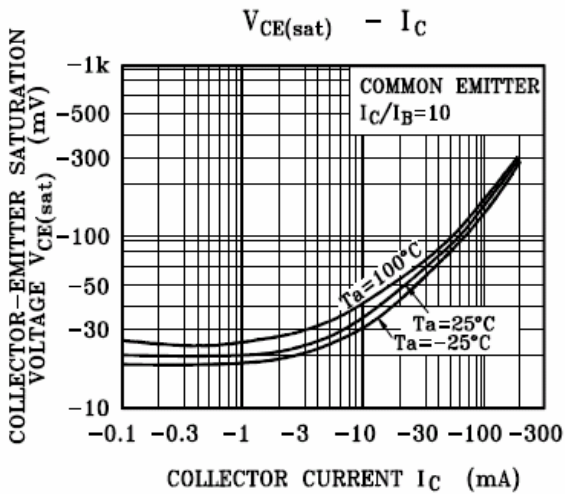
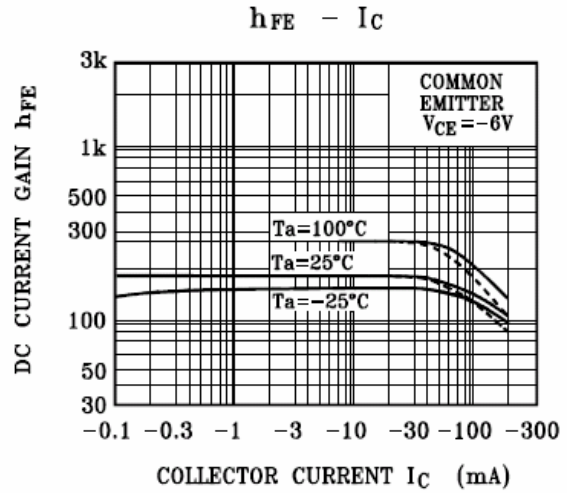
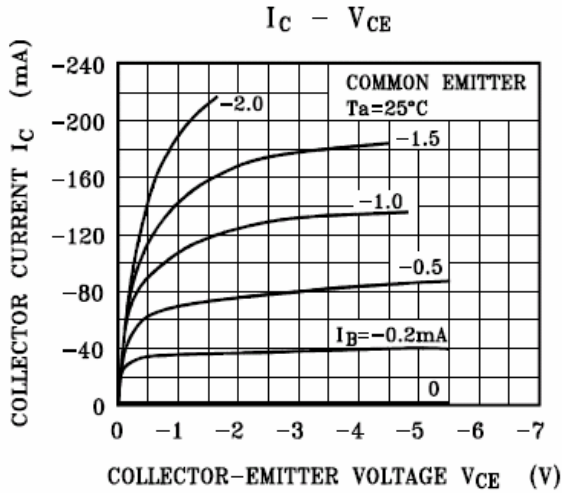
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = -100\mu\text{A}, I_E = 0$ | -50 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -1\text{mA}, I_B = 0$ | -50 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -100\mu\text{A}, I_C = 0$ | -5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -50\text{V}, I_E = 0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5\text{V}, I_C = 0$ | | | -0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = -6\text{V}, I_C = -2\text{mA}$ | 70 | | 400 | |
| | $h_{FE(2)}$ | $V_{CE} = -6\text{V}, I_C = -150\text{mA}$ | 25 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100\text{mA}, I_B = -10\text{mA}$ | | | -0.3 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -100\text{mA}, I_B = -10\text{mA}$ | | | -1.1 | V |
| Transition frequency | f_T | $V_{CE} = -10\text{V}, I_C = -1\text{mA}$ | 80 | | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$ | | | 7 | pF |
| Noise figure | NF | $V_{CE} = -6\text{V}, I_C = -0.1\text{mA}, f = 1\text{KHz}, R_g = 10\text{K}\Omega$ | | | 10 | dB |

CLASSIFICATION OF $h_{FE(1)}$

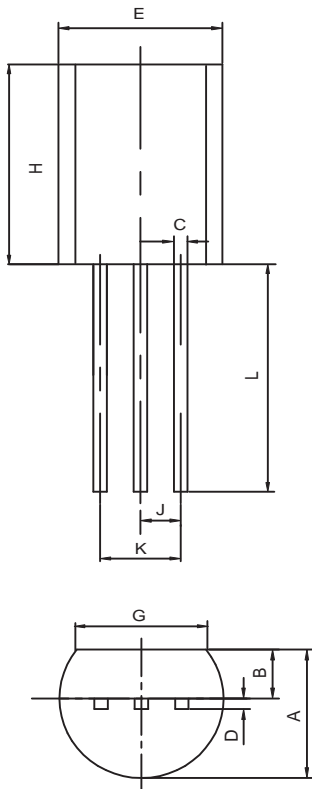
| Rank | O | V | GR |
|---------|----------|-----------|-----------|
| Range | 70 - 140 | 120 - 240 | 200 - 400 |
| Marking | | | |

Typical Characteristics



TO-92 Outline Dimensions

unit:mm



| TO-92 | | |
|--------------|------------|------------|
| Dim | Min | Max |
| A | 3.30 | 3.70 |
| B | 1.10 | 1.40 |
| C | 0.38 | 0.55 |
| D | 0.36 | 0.51 |
| E | 4.40 | 4.70 |
| G | 3.43 | - |
| H | 4.30 | 4.70 |
| J | 1.270TYP | |
| K | 2.44 | 2.64 |
| L | 14.10 | 14.50 |