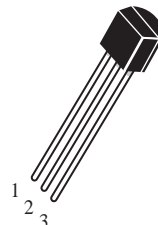


Driver PNP Transistors

 Lead(Pb)-Free

TO-92

1. EMITTER
2. BASE
3. COLLECTOR



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| Rating | Symbol | MPSA55 | MPSA56 | Unit |
|---|------------------|-------------|--------|------|
| Collector-Emitter Voltage | V _{CEO} | -60 | -80 | Vdc |
| Collector-Base Voltage | V _{CBO} | -60 | -80 | Vdc |
| Emitter-Base Voltage | V _{EBO} | -4.0 | | Vdc |
| Collector Current | I _C | -500 | | mAdc |
| Total Device Dissipation T _A =25°C | P _D | 0.625 | | W |
| Junction Temperature | T _j | 150 | | °C |
| Storage, Temperature | T _{stg} | -55 to +150 | | °C |

ELECTRICAL CHARACTERISTICS

| Characteristics | Symbol | Min | Max | Unit |
|--|----------------------|------------|------|------|
| Collector-Emitter Breakdown Voltage (I _C = -1.0 mAdc, I _B =0) MPSA55 MPSA56 | V _{(BR)CEO} | -60 -80 | - | Vdc |
| Collector-Base Breakdown Voltage (I _C = -100 uAdc, I _E =0) MPSA55 MPSA56 | V _{(BR)CBO} | -60 -80 | - | Vdc |
| Emitter-Base Breakdown Voltage (I _E = -100 uAdc, I _C =0) | V _{(BR)EBO} | -4.0 | - | Vdc |
| Collector Cutoff Current (V _{CE} = 50 Vdc, I _B =0) MPSA55 (V _{CE} = 60 Vdc, I _B =0) MPSA56 | I _{CEO} | - | -0.1 | uAdc |
| Collector Cutoff Current (V _{CE} = -60 Vdc, I _B =0) MPSA55 (V _{CE} = -80 Vdc, I _B =0) MPSA56 | I _{CBO} | - | -0.1 | uAdc |
| Emitter Cutoff Current (V _{EB} = -3.0Vdc, I _C =0) | I _{EBO} | - | -0.1 | uAdc |

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

| Characteristics | Symbol | Min | TYP | Max | Unit |
|-----------------|--------|-----|-----|-----|------|
|-----------------|--------|-----|-----|-----|------|

ON CHARACTERISTICS

| | | | | | |
|---|---------------|-----|---|-------|-----|
| DC Current Gain ($I_C = -100\text{ mA}$, $V_{CE} = 1.0\text{ Vdc}$) | $h_{FE} (1)$ | 100 | - | - | - |
| Collector-Emitter Saturation Voltage ($I_C = -100\text{ mA}$, $I_B = -10\text{ mA}$) | $V_{CE(sat)}$ | - | - | -0.25 | Vdc |
| Base-Emitter Saturation Voltage ($I_C = -100\text{ mA}$, $I_B = -10\text{ mA}$) | $V_{BE(sat)}$ | - | - | -1.2 | Vdc |
| Current-Gain-Bandwidth Product ($I_C = -10\text{ mA}$, $V_{CE} = -2.0\text{ Vdc}$, $f = 100\text{ MHz}$) | f_T | 100 | - | - | MHz |

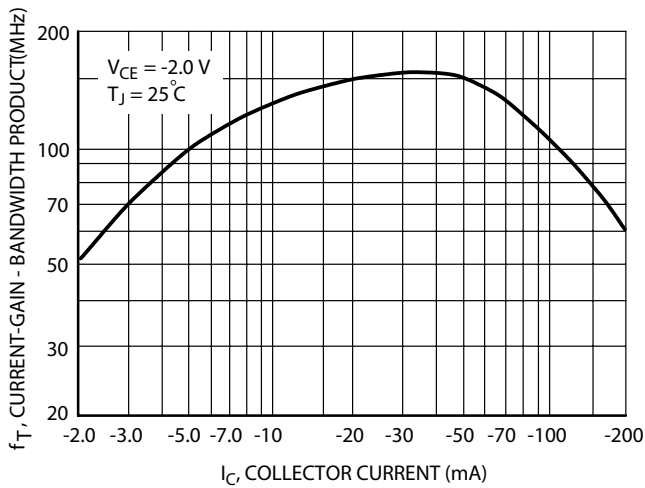


FIG1. Current-Gain Bandwidth Product

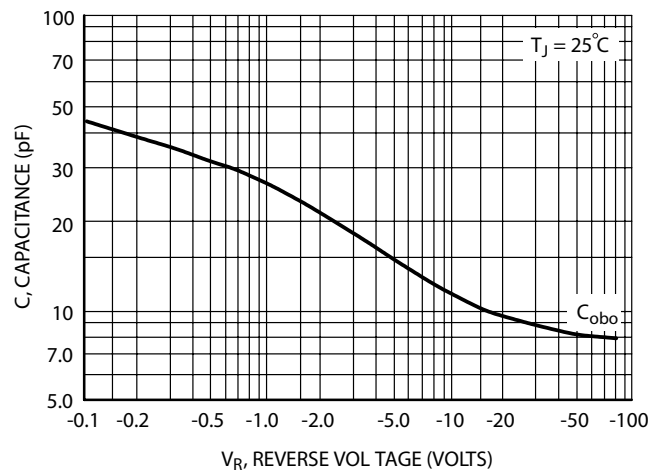


FIG2. Capacitance

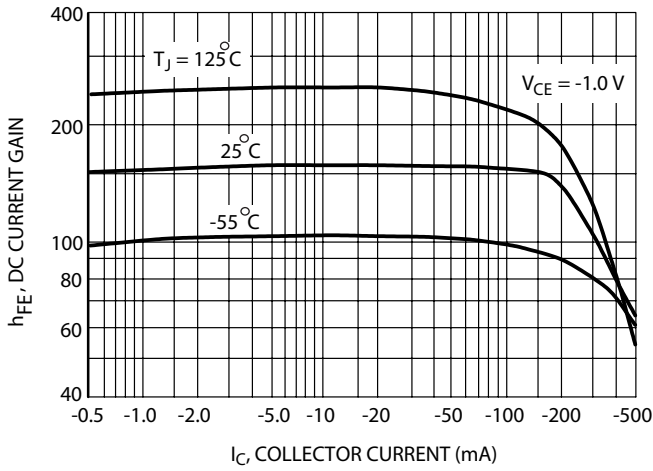


FIG3. DC Current Gain

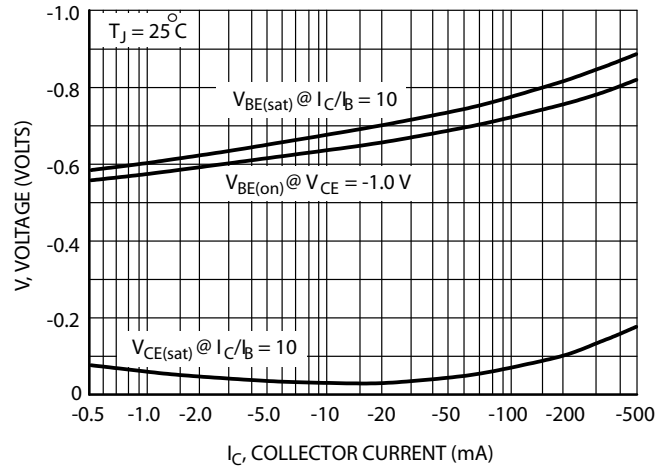


FIG4. "ON" Voltages

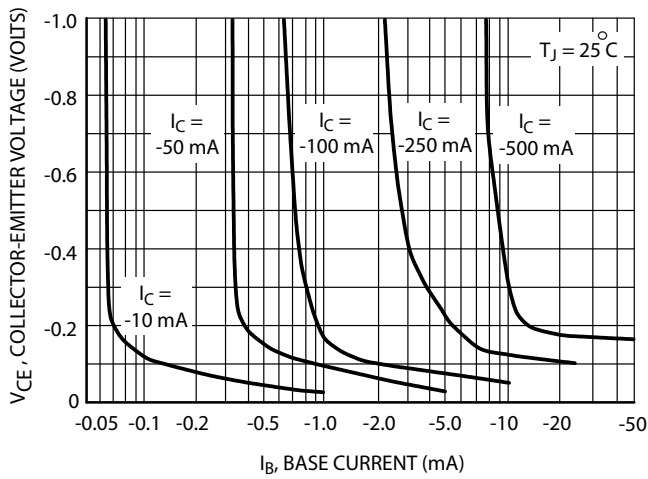


FIG5. Collector Saturation Region

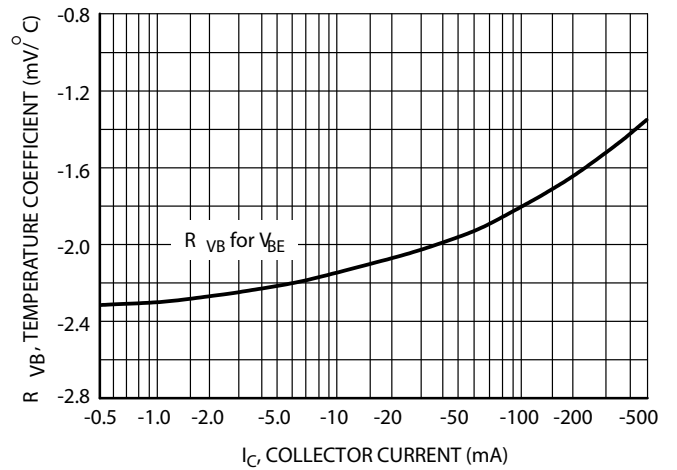
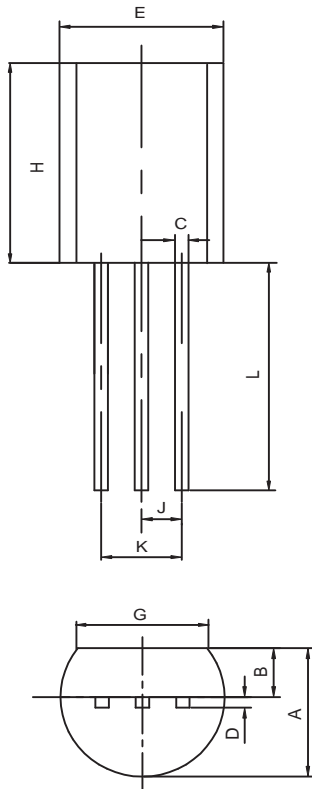


FIG6. Base-Emitter Temperature Coefficient

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 |