



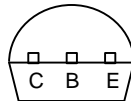
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MPSA92

Features

- Through Hole Package
- Operating & Storage Temperature: -55°C to +150°C
- Marking Code: A92

Pin Configuration
Bottom View



Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|---------------------|---|------|-------|------------------|
| OFF CHARACTERISTICS | | | | |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage* ($I_C = -1.0\text{mA}$, $I_B = 0$) | -300 | | Vdc |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C = -100\mu\text{A}$, $I_E = 0$) | -300 | | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E = -10\mu\text{A}$, $I_C = 0$) | -5.0 | | Vdc |
| I_{EBO} | Emitter Cutoff Current ($V_{EB} = -3.0\text{Vdc}$, $I_C = 0$) | | -0.25 | μA dc |
| I_{CBO} | Collector Cutoff Current ($V_{CB} = -200\text{Vdc}$, $I_E = 0$) | | -0.25 | μA dc |

ON CHARACTERISTICS

| | | | | |
|---------------|--|----------------|------|-----|
| h_{FE} | DC Current Gain* ($I_C = -1.0\text{mA}$, $V_{CE} = -10\text{Vdc}$) ($I_C = -10\text{mA}$, $V_{CE} = -10\text{Vdc}$) ($I_C = -50\text{mA}$, $V_{CE} = -10\text{Vdc}$) | 25 80 25 | 250 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C = -20\text{mA}$, $I_B = -2.0\text{mA}$) | | -0.5 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage ($I_C = -20\text{mA}$, $I_B = -2.0\text{mA}$) | | -0.9 | Vdc |

SMALL-SIGNAL CHARACTERISTICS

| | | | | |
|----------|---|----|-----|-----|
| f_T | Current Gain-Bandwidth Product ($I_C = -10\text{mA}$, $V_{CE} = -5\text{Vdc}$, $f = 30\text{MHz}$) | 50 | | MHz |
| C_{cb} | Collector-Base Capacitance ($V_{CB} = -20\text{Vdc}$, $I_E = 0$, $f = 1.0\text{MHz}$) | | 6.0 | pF |

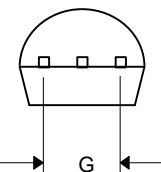
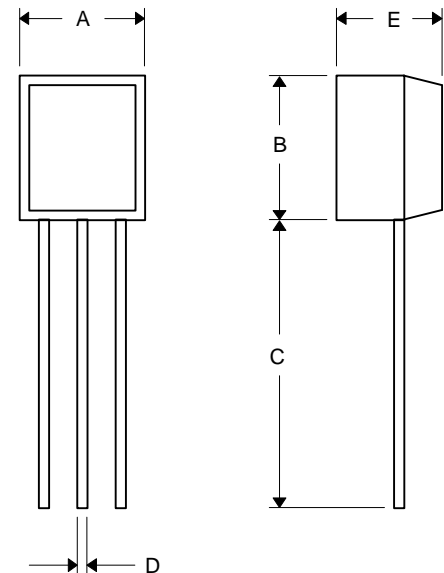
*Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

MAXIMUM RATINGS

| Symbol | Characteristic | MPSA92 | Unit |
|-----------------|---|--------|-------|
| V_{CEO} | Collector-Emitter Voltage | -300 | Vdc |
| V_{CBO} | Collector-Base Voltage | -300 | Vdc |
| V_{EBO} | Emitter-Base Voltage | -5.0 | Vdc |
| I_C | Collector Current — Continuous | -300 | mA dc |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 200 | °C/W |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | 83.3 | °C/W |
| P_D | Total Device Dissipation @ $T_A = 25^\circ\text{C}$ | 625 | mW |
| | Derate above 25°C | 5.0 | mW/°C |
| P_D | Total Device Dissipation @ $T_C = 25^\circ\text{C}$ | 1.5 | Watts |
| | Derate above 25°C | 12 | mW/°C |

PNP Silicon High Voltage Transistor

TO-92



| DIMENSIONS | | | | | |
|------------|--------|------|------|------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | .175 | .185 | 4.45 | 4.70 | |
| B | .175 | .185 | 4.46 | 4.70 | |
| C | .500 | --- | 12.7 | --- | |
| D | .016 | .020 | 0.41 | 0.63 | |
| E | .135 | .145 | 3.43 | 3.68 | |
| G | .095 | .105 | 2.42 | 2.67 | |

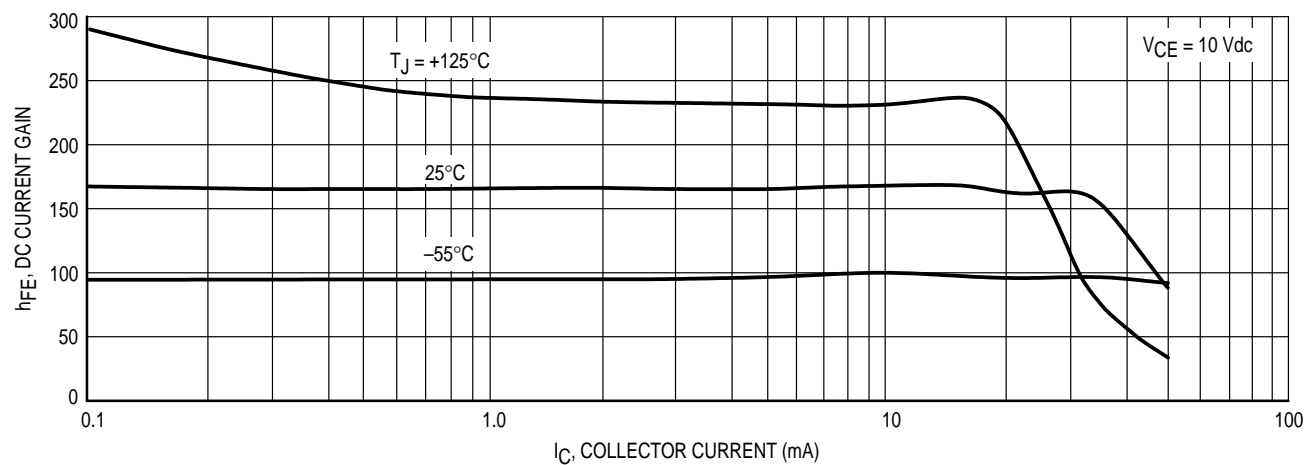


Figure 1. DC Current Gain

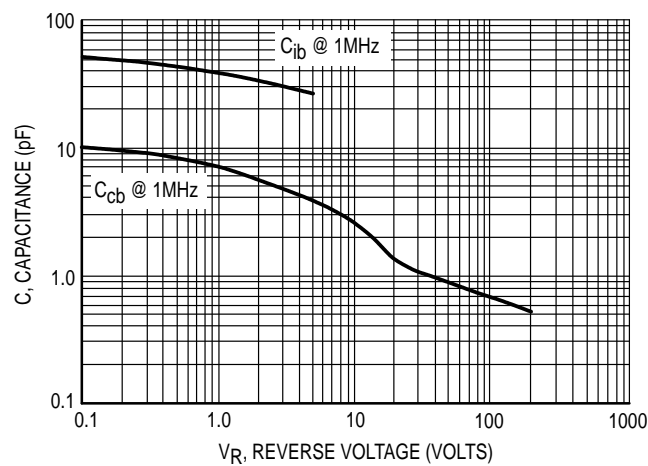


Figure 2. Capacitance

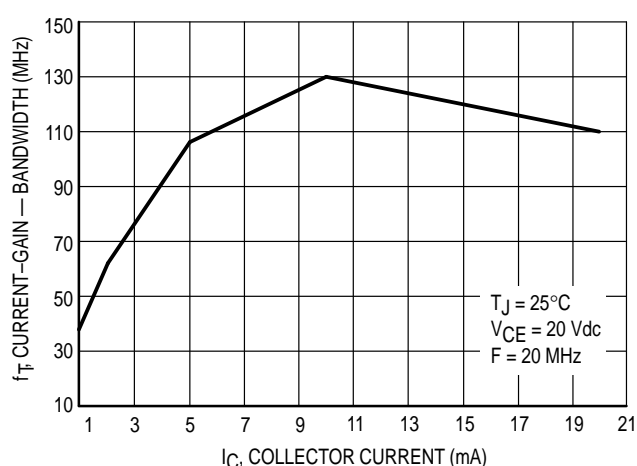


Figure 3. Current-Gain — Bandwidth

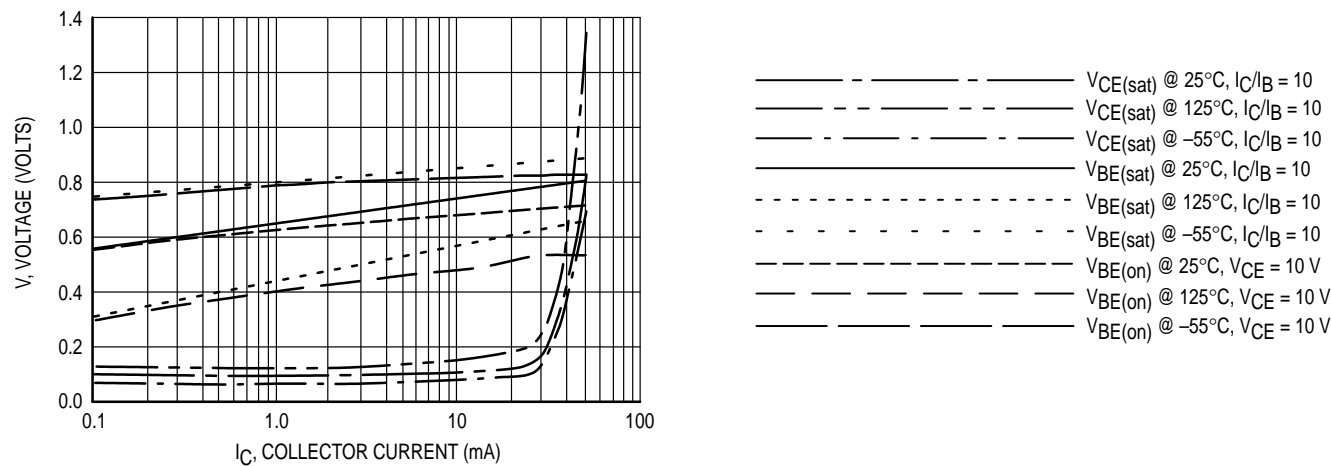


Figure 4. "ON" Voltages