

**MCC**™

Micro Commercial Components



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## Features

- Through Hole Package
- Operating & Storage Temperature: -55°C to +150°C
- Marking : A92
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol                     | Parameter   | Min  | Max   | Units |
|----------------------------|---|------|-------|-------|
| <b>OFF CHARACTERISTICS</b> |   |      |       |       |
| $V_{(BR)CEO}$              | Collector-Emitter Breakdown Voltage*                              | -300 |       | Vdc   |
| $V_{(BR)CBO}$              | Collector-Base Breakdown Voltage<br>( $I_C=-100\mu A$ , $I_E=0$ ) | -300 |       | Vdc   |
| $V_{(BR)EBO}$              | Emitter-Base Breakdown Voltage<br>( $I_E=-10\mu A$ , $I_C=0$ )    | -5.0 |       | Vdc   |
| $I_{EBO}$                  | Emitter Cutoff Current<br>( $V_{EB}=-3.0$ Vdc, $I_C=0$ )          |      | -0.25 | uAdc  |
| $I_{CBO}$                  | Collector Cutoff Current<br>( $V_{CB}=-200$ Vdc, $I_E=0$ )        |      | -0.25 | uAdc  |

### ON CHARACTERISTICS

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

### SMALL-SIGNAL CHARACTERISTICS

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

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

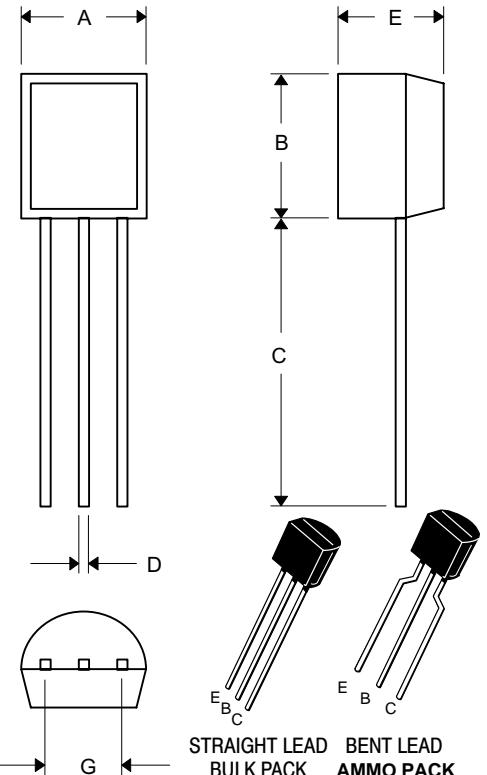
### MAXIMUM RATINGS

| 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       | mAdc           |
| $R_{0JA}$ | Thermal Resistance, Junction to Ambient                                    | 200        | °C/W           |
| $R_{0JC}$ | Thermal Resistance, Junction to Case                                       | 83.3       | °C/W           |
| $PD$      | Total Device Dissipation @ $T_A = 25^\circ C$<br>Derate above $25^\circ C$ | 625<br>5.0 | mW<br>mW/°C    |
| $PD$      | Total Device Dissipation @ $T_C = 25^\circ C$<br>Derate above $25^\circ C$ | 1.5<br>12  | Watts<br>mW/°C |

**MPSA92**

## PNP Silicon High Voltage Transistor

TO-92



STRAIGHT LEAD BENT LEAD  
BULK PACK AMMO PACK

### DIMENSIONS

| DIM | INCHES |      | MM    |      | NOTE          |
|-----|--------|------|-------|------|---------------|
|     | MIN    | MAX  | MIN   | MAX  |               |
| A   | .175   | .185 | 4.45  | 4.70 |               |
| B   | .175   | .185 | 4.45  | 4.70 |               |
| C   | .500   | --   | 12.70 | --   |               |
| D   | .016   | .020 | 0.41  | 0.63 |               |
| E   | .135   | .145 | 3.43  | 3.68 |               |
| F   | .095   | .105 | 2.42  | 2.67 | Straight Lead |
| G   | .173   | .220 | 4.40  | 5.60 | Bent Lead     |

\* For ammo packing detailed specification, click here to visit our website of product packaging for details.

[www.mccsemi.com](http://www.mccsemi.com)

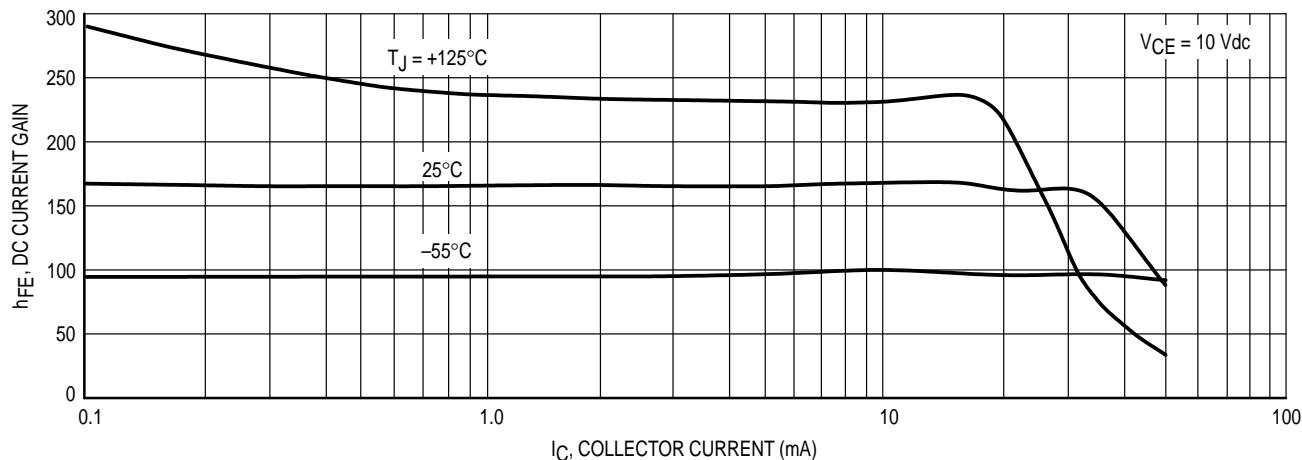


Figure 1. DC Current Gain

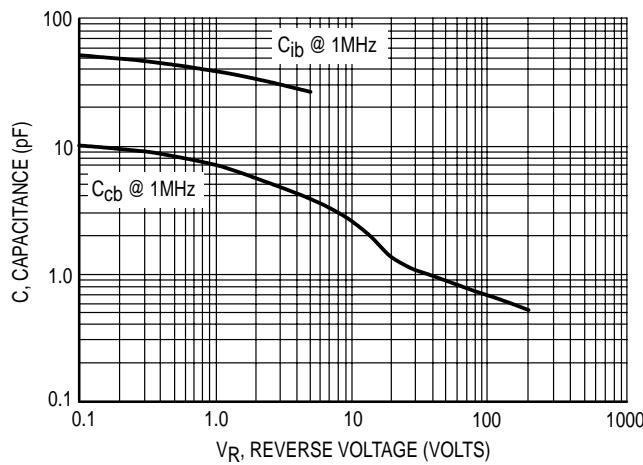


Figure 2. Capacitance

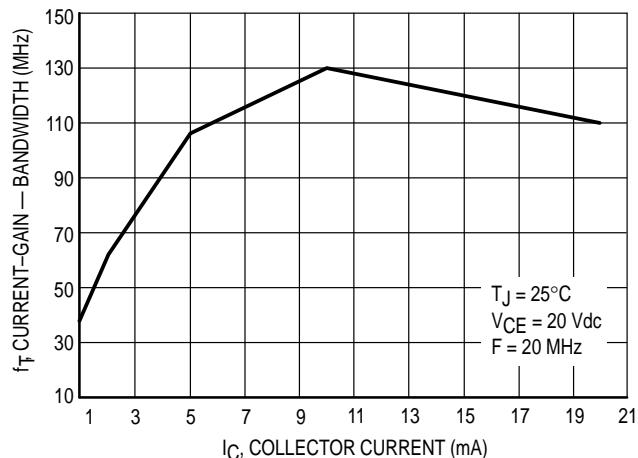


Figure 3. Current-Gain — Bandwidth

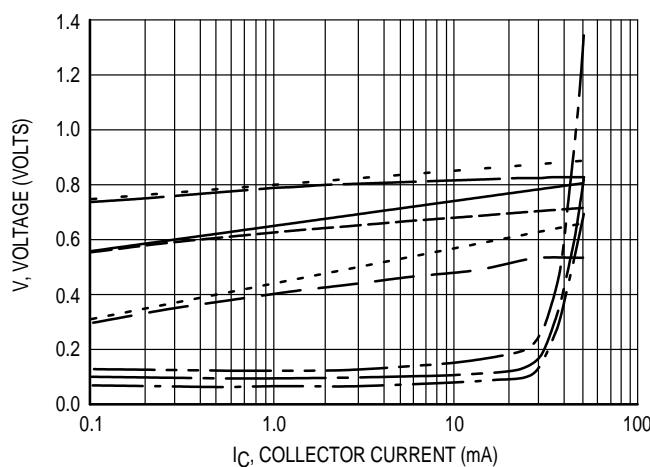


Figure 4. "ON" Voltages

- V<sub>CE(sat)</sub> @ 25°C, I<sub>C</sub>/I<sub>B</sub> = 10
- V<sub>CE(sat)</sub> @ 125°C, I<sub>C</sub>/I<sub>B</sub> = 10
- V<sub>CE(sat)</sub> @ -55°C, I<sub>C</sub>/I<sub>B</sub> = 10
- V<sub>BE(sat)</sub> @ 25°C, I<sub>C</sub>/I<sub>B</sub> = 10
- V<sub>BE(sat)</sub> @ 125°C, I<sub>C</sub>/I<sub>B</sub> = 10
- V<sub>BE(sat)</sub> @ -55°C, I<sub>C</sub>/I<sub>B</sub> = 10
- V<sub>BE(on)</sub> @ 25°C, V<sub>CE</sub> = 10 V
- V<sub>BE(on)</sub> @ 125°C, V<sub>CE</sub> = 10 V
- V<sub>BE(on)</sub> @ -55°C, V<sub>CE</sub> = 10 V

<sup>TM</sup>

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## Ordering Information :

| Device         | Packing                     |
|----------------|-----------------------------|
| Part Number-AP | Ammo Packing: 20Kpcs/Carton |
| Part Number-BP | Bulk: 100Kpcs/Carton        |

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