



SEMICONDUCTOR

**MPSA94**

FORWARD INTERNATIONAL ELECTRONICS LTD.

TECHNICAL DATA

PNP EPITAXIAL SILICON TRANSISTOR

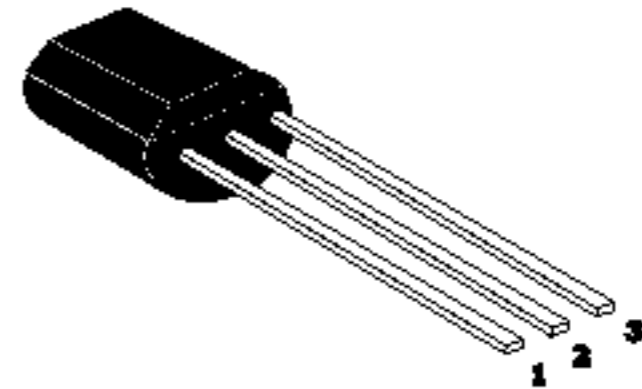
**HIGH VOLTAGE TRANSISTOR**

- \* Complement To MPSA44
- \* High Collector-Emitter Voltage  $V_{ce0} = -400V$
- \* Low Collector-Emitter Saturation Voltage

**ABSOLUTE MAXIMUM RATINGS at  $T_{amb} = 25^{\circ}C$** 

| Characteristic            | Symbol    | Rating  | Unit        |
|---------------------------|-----------|---------|-------------|
| Collector-Base Voltage    | $V_{cbo}$ | -400    | V           |
| Collector-Emitter Voltage | $V_{ceo}$ | -400    | V           |
| Emitter-Base Voltage      | $V_{ebo}$ | -6      | V           |
| Collector Current         | $I_c$     | -300    | mA          |
| Collector Dissipation     | $P_c$     | 625     | mW          |
| Junction Temperature      | $T_j$     | 150     | $^{\circ}C$ |
| Storage Temperature       | $T_{stg}$ | -55~150 | $^{\circ}C$ |

Package: TO-92



| PIN:  | 1 | 2 | 3 |
|-------|---|---|---|
| STYLE |   |   |   |
| NO.1  | E | B | C |

**ELECTRICAL CHARACTERISTICS at  $T_{amb} = 25^{\circ}C$** 

| Characteristic                       | Symbol        | Min  | Typ | Max   | Unit    | Test Conditions                      |
|--------------------------------------|---------------|------|-----|-------|---------|--------------------------------------|
| Collector-Base Breakdown Voltage     | $BV_{cbo}$    | -400 |     |       | V       | $I_c = -100\mu A$ $I_e = 0$          |
| Collector-Emitter Breakdown Voltage  | $BV_{ceo}$    | -400 |     |       | V       | $I_c = -1mA$ $I_b = 0$               |
| Emitter-Base Breakdown Voltage       | $BV_{ebo}$    | -6   |     |       | V       | $I_e = -10\mu A$ $I_c = 0$           |
| Collector Cutoff Current             | $I_{cbo}$     |      |     | -100  | nA      | $V_{cb} = -300V$ $I_e = 0$           |
| Collector Cutoff Current             | $I_{ces}$     |      |     | -1    | $\mu A$ | $V_{ce} = -400V$ $V_{eb} = 0$        |
| Emitter Cutoff Current               | $I_{ebo}$     |      |     | -100  | nA      | $V_{eb} = -4V$ $I_c = 0$             |
| DC Current Gain                      | $H_{fe1}$     | 40   |     |       |         | $V_{ce} = -10V$ $I_c = -1mA$         |
| DC Current Gain                      | $H_{fe2}$     | 50   |     | 300   |         | $V_{ce} = -10V$ $I_c = -10mA$        |
| DC Current Gain                      | $H_{fe3}$     | 45   |     |       |         | $V_{ce} = -10V$ $I_c = -50mA$        |
| DC Current Gain                      | $H_{fe4}$     | 40   |     |       |         | $V_{ce} = -10V$ $I_c = -100mA$       |
| Collector-Emitter Saturation Voltage | $V_{ce(sat)}$ |      |     | -0.5  | V       | $I_c = -10mA$ $I_b = -1mA$           |
| Collector-Emitter Saturation Voltage | $V_{ce(sat)}$ |      |     | -0.75 | V       | $I_c = -50mA$ $I_b = -5mA$           |
| Base-Emitter Saturation Voltage      | $V_{be(sat)}$ |      |     | -0.75 | V       | $I_c = -10mA$ $I_b = -1mA$           |
| Output Capacitance                   | $C_{ob}$      |      | 7   |       | pF      | $V_{cb} = -20V$ $I_e = 0$ $f = 1MHz$ |

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