

**FEATURES**

High voltage transistor

**MMBTA92 (PNP)**
**MARKING: 2D**
**MAXIMUM RATINGS** (TA=25°C unless otherwise noted)

| Parameter                               | Symbol    | Value       | Unit  |
|---|-----------|-------------|-------|
| Collector-Base Voltage                  | $V_{CBO}$ | 60          | V     |
| Collector-Emitter Voltage               | $V_{CEO}$ | 50          | V     |
| Emitter-Base Voltage                    | $V_{EBO}$ | 5           | V     |
| Collector Current -Continuous           | $I_C$     | 150         | mA    |
| Collector Power Dissipation             | $P_C$     | 0.4         | W     |
| Junction Temperature                    | $T_J$     | 150         | °C    |
| Storage Temperature                     | $T_{stg}$ | -55 to +150 | °C    |
| Thermal Resistance, junction to Ambient | $R_{JA}$  | 410         | °C/mW |


**ELECTRICAL CHARACTERISTICS** (Tamb=25°C unless otherwise specified)

| Parameter                            | Symbol        | Test conditions                             | Min  | Max   | Unit    |
|--------------------------------------|---------------|---|------|-------|---------|
| Collector-base breakdown voltage     | $V_{CBO}$     | $I_C = -100\mu A, I_E = 0$                  | -300 |       | V       |
| Collector-emitter breakdown voltage  | $V_{CEO}$     | $I_C = -1mA, I_B = 0$                       | -300 |       | V       |
| Emitter-base breakdown voltage       | $V_{EBO}$     | $I_E = -100\mu A, I_C = 0$                  | -5   |       | V       |
| Collector cut-off current            | $I_{CB}$      | $V_{CB} = -200V, I_E = 0$                   |      | -0.25 | $\mu A$ |
| Emitter cut-off current              | $I_{EB}$      | $V_{EB} = -5V, I_C = 0$                     |      | -0.1  | $\mu A$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -10V, I_C = -1mA$                 | 60   |       |         |
|                                      | $h_{FE(2)}$   | $V_{CE} = -10V, I_C = -10mA$                | 100  | 200   |         |
|                                      | $h_{FE(3)}$   | $V_{CE} = -10V, I_C = -30mA$                | 60   |       |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -20mA, I_B = -2mA$                   |      | -0.2  | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = -20mA, I_B = -2mA$                   |      | -0.9  | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = -20V, I_C = -10mA$<br>$f = 30MHz$ | 50   |       | MHz     |

MMBTA92 Typical Characteristics

