



## TO-92 Plastic-Encapsulate Transistors

### MPS2907 TRANSISTOR (PNP)

#### FEATURES

Power dissipation

$$P_{CM}: 0.625 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

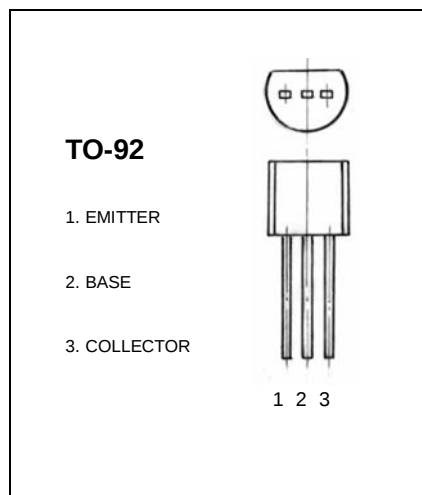
$$I_{CM}: -0.6 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: -60 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^{\circ}\text{C to } +150^{\circ}\text{C}$$



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

| Parameter                            | Symbol        | Test conditions                                                     | MIN | TYP | MAX  | UNIT          |
|--------------------------------------|---------------|---------------------------------------------------------------------|-----|-----|------|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -10\mu\text{A}, I_E = 0$                                     | -60 |     |      | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -10 \text{ mA}, I_B = 0$                                     | -40 |     |      | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -10\mu\text{A}, I_C = 0$                                     | -5  |     |      | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -50\text{V}, I_E = 0$                                     |     |     | -0.1 | $\mu\text{A}$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = -35\text{V}, I_B = 0$                                     |     |     | -0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -3 \text{ V}, I_C = 0$                                    |     |     | -0.1 | $\mu\text{A}$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -10\text{V}, I_C = -150\text{mA}$                         | 100 |     | 300  |               |
|                                      | $h_{FE(2)}$   | $V_{CE} = -10\text{V}, I_C = -1\text{mA}$                           | 60  |     |      |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500 \text{ mA}, I_B = -50 \text{ mA}$                       |     |     | -1   | V             |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = -500\text{mA}, I_B = -50 \text{ mA}$                         |     |     | -2   | V             |
| Transition frequency                 | $f_T$         | $V_{CE} = -20 \text{ V}, I_C = -50\text{mA}$<br>$f = 100\text{MHz}$ | 200 |     |      | MHz           |

#### CLASSIFICATION OF $h_{FE(1)}$

| Rank  | L       | H       |
|-------|---------|---------|
| Range | 100-200 | 200-300 |