



## TO-92 Plastic-Encapsulate Transistors

### 2SC1008 TRANSISTOR (NPN)

#### FEATURES

Power dissipation

$P_{CM}$ : 0.8 W ( $T_{amb}=25^{\circ}C$ )

Collector current

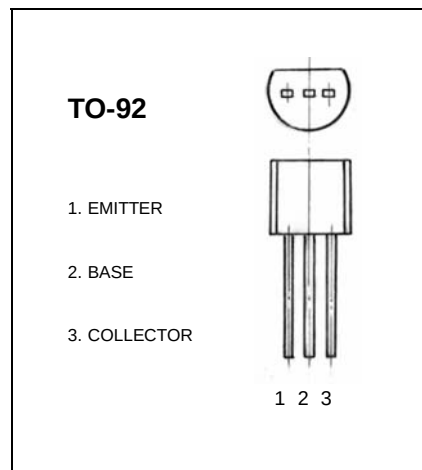
$I_{CM}$ : 0.7 A

Collector-base voltage

$V_{(BR)CBO}$ : 80 V

Operating and storage junction temperature range

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



#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$ unless otherwise specified)

| Parameter                            | Symbol        | Test conditions            | MIN | TYP | MAX | UNIT    |
|--------------------------------------|---------------|----------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = 100\mu A, I_E = 0$  | 80  |     |     | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = 10mA, I_B = 0$      | 60  |     |     | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = 10\mu A, I_C = 0$   | 8   |     |     | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 60V, I_E = 0$    |     |     | 0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 5V, I_C = 0$     |     |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE}$      | $V_{CE} = 2V, I_C = 50mA$  | 40  |     | 400 |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 50mA$  |     |     | 0.4 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = 500mA, I_B = 50mA$  |     |     | 1.1 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = 10V, I_C = 50mA$ | 30  |     |     | MHz     |

#### CLASSIFICATION OF $h_{FE}$

| Rank  | R     | O      | Y       | G       |
|-------|-------|--------|---------|---------|
| Range | 40-80 | 70-140 | 120-240 | 200-400 |