



## TO-92 Plastic-Encapsulate Transistors

### 2SC2120 TRANSISTOR (NPN)

#### FEATURE

Power dissipation

$P_{CM}$ : 0.6 W ( $T_{amb}=25^{\circ}C$ )

Collector current

$I_{CM}$ : 0.8 A

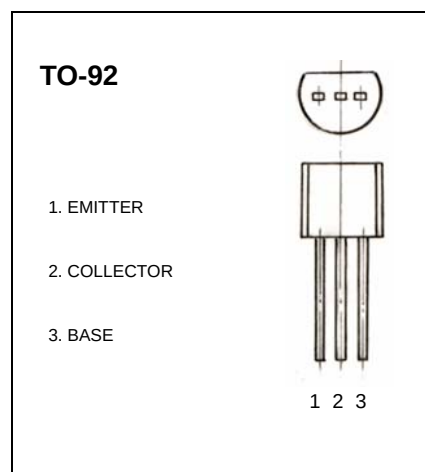
Collector-base voltage

$V_{(BR)CBO}$ : 35 V

Operating and storage junction temperature range

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

$T_J$ :  $150^{\circ}C$



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

| Parameter                            | Symbol        | Test conditions               | MIN | TYP | MAX | UNIT    |
|--------------------------------------|---------------|-------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = 0.1mA$ , $I_E = 0$     | 35  |     |     | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = 10mA$ , $I_B = 0$      | 30  |     |     | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = 0.1mA$ , $I_C = 0$     | 5   |     |     | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 35V$ , $I_E = 0$    |     |     | 0.1 | $\mu A$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = 25V$ , $I_B = 0$    |     |     | 0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 5V$ , $I_C = 0$     |     |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE}$      | $V_{CE} = 1V$ , $I_C = 100mA$ | 100 |     | 320 |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500mA$ , $I_B = 20mA$  |     |     | 0.5 | V       |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE} = 1V$ , $I_C = 10mA$  |     |     | 0.8 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = 5V$ , $I_C = 10mA$  | 100 |     |     | MHz     |

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

| Rank  | O       | Y       |
|-------|---------|---------|
| Range | 100-200 | 160-320 |