

## TO-251-3L Plastic-Encapsulate Transistors

### D882 TRANSISTOR (NPN)

#### FEATURES

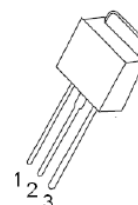
- Power dissipation

#### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

| Symbol           | Parameter                     | Value   | Unit |
|------------------|-------------------------------|---------|------|
| V <sub>CB0</sub> | Collector-Base Voltage        | 40      | V    |
| V <sub>CE0</sub> | Collector-Emitter Voltage     | 30      | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage          | 5       | V    |
| I <sub>C</sub>   | Collector Current -Continuous | 3       | A    |
| P <sub>C</sub>   | Collector Power Dissipation   | 1.25    | W    |
| T <sub>J</sub>   | Junction Temperature          | 150     | °C   |
| T <sub>stg</sub> | Storage Temperature           | -55-150 | °C   |

#### TO-251-3L

1. EMITTER
2. COLLECTOR
3. BASE



#### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

| Parameter                            | Symbol               | Test conditions  | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|--|-----|-----|-----|------|
| Collector-base breakdown voltage     | V(BR) <sub>CBO</sub> | I <sub>C</sub> = 100μA, I <sub>E</sub> =0              | 40  |     |     | V    |
| Collector-emitter breakdown voltage  | V(BR) <sub>CEO</sub> | I <sub>C</sub> = 10mA, I <sub>B</sub> =0               | 30  |     |     | V    |
| Emitter-base breakdown voltage       | V(BR) <sub>EBO</sub> | I <sub>E</sub> = 100μA, I <sub>C</sub> =0              | 5   |     |     | V    |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> = 40 V, I <sub>E</sub> =0              |     |     | 1   | μA   |
| Collector cut-off current            | I <sub>CEO</sub>     | V <sub>CE</sub> = 30 V, I <sub>B</sub> =0              |     |     | 10  | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> = 6 V, I <sub>C</sub> =0               |     |     | 1   | μA   |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> = 2 V, I <sub>C</sub> = 1A             | 60  |     | 400 |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A            |     |     | 0.5 | V    |
| Base-emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A            |     |     | 1.5 | V    |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> = 5V, I <sub>C</sub> =0.1A<br>f =10MHz |     | 90  |     | MHz  |

#### CLASSIFICATION OF h<sub>FE</sub>

| Rank  | R      | O       | Y       | GR      |
|-------|--------|---------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 | 200-400 |