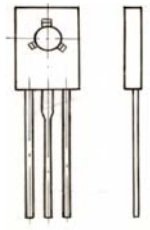
**JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD**

# TO-126 Plastic-Encapsulate Transistors

**D882** TRANSISTOR ( NPN )

**TO-126**



1. EMITTER
2. COLLECTOR
3. BASE

1 2 3

**FEATURES**

Power dissipation

$P_{CM}$ : 1.25 W ( Tamb=25℃ )

**MAXIMUM RATINGS* $T_A$=25℃ unless otherwise noted**

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 40 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 30 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 6 | V |
| $I_C$ | Collector Current -Continuous | 3 | A |
| $P_D$ | Total Device Dissipation | 1.25 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Junction and Storage Temperature | -55-150 | ℃ |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**ELECTRICAL CHARACTERISTICS(Tamb=25℃ unless otherwise specified)**

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V(BR)_{CBO}$ | Ic=100uA ,$I_E$=0 | 40 | | | V |
| **Collector-emitter breakdown voltage** | $V(BR)_{CEO}$ | $I_C$= 10 mA , $I_B$=0 | 30 | | | V |
| **Emitter-base breakdown voltage** | $V(BR)_{EBO}$ | $I_E$= 100 mA ,$I_C$=0 | 6 | | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$=40 V , $I_E$=0 | | | 1 | uA |
| **Collector cut-off current** | $I_{CEO}$ | $V_{CE}$=30 V , $I_B$=0 | | | 10 | uA |
| **Emitter cut-off current** | $I_{EBO}$ | $V_{EB}$=6V , $I_C$=0 | | | 1 | uA |
| **DC current gain** | $h_{FE(1)}$ | $V_{CE}$= 2V, $I_C$= 1A | 60 | | 400 | |
| | $h_{FE(2)}$ | $V_{CE}$=2V, $I_C$= 100mA | 32 | | | |
| **Collector-emitter saturation voltage** | $V_{CE}$(sat) | $I_C$=2A, $I_B$= 0.2A | | | 0.5 | V |
| **Base-emitter saturation voltage** | $V_{BE}$(sat) | $I_C$=2A, $I_B$= 0.2A | | | 1.5 | V |
| **Transition frequency** | $f_T$ | $V_{CE}$=5 V, $I_C$=0.1mA f = 10MHz | 50 | | | MHz |

**CLASSIFICATION OF $hFE_{(1)}$**

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

# Typical Characteristics

# D882