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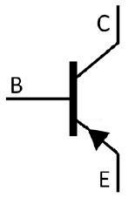
# 2SA1837

Silicon PNP transistor




## Power Amplifier Applications

① Complementary to 2SC4793
② High collector voltage:VCEO=-230V (min)


Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the Absolute maximum ratings.

PIN1：Base
PIN 2：Collector
PIN 3：Emitter

## Absolute Maximum ℃):

| Characteristics | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-base voltage | $V_{CBO}$ | -230 | V |
| Collector-emitter voltage | $V_{CEO}$ | -230 | V |
| Emitter-base voltage | $V_{EBO}$ | -5 | V |
| Collector current | $I_C$ | -1 | A |
| Base current | $I_B$ | -0.2 | A |
| Collector power dissipation (Tc=25℃) | $P_C$ | 50 | W |
| Junction temperature | $T_j$ | 150 | ℃ |
| Storage temperature range | $T_{STG}$ | -55~150 | ℃ |

## Thermal Characteristics

| Symbol | Paramter | Typ | Units |
|---|---|---|---|
| $R_{\theta JC}$ | Junction-to-Case | 3.0 | ℃/W |

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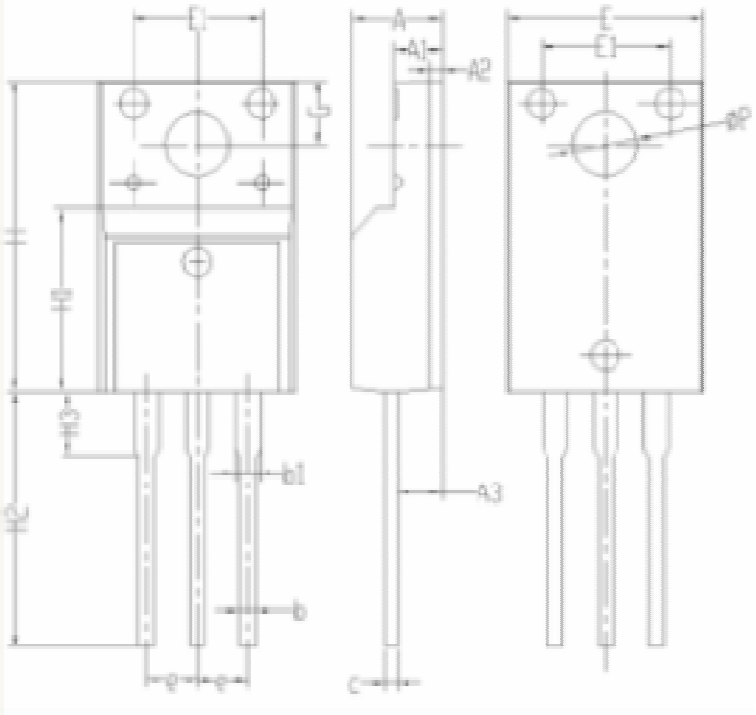
## Electrical Characteristics ℃ ):

| Characteristics | Symbol | Test Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector-Base Cut-off Current | $I_{CBO}$ | $V_{CB}$=-230V,$I_E$=0 | | | -1.0 | uA |
| Emitter-Base Cut-off Current | $I_{EBO}$ | $V_{EB}$=-5V,$I_C$=0 | | | -1.0 | uA |
| Collector-Emitter Breakdown Voltage | $V_{CEO}$ | $I_C$=-1mA | -230 | | | V |
| DC current gain | $h_{FE}$ | $I_C$=-0.1A; $V_{CE}$=-5V | 100 | | 300 | |
| Collector-emitter saturation voltage | $V_{CEsat}$ | $I_C$=-0.5A; $I_B$=-0.05A | | | -0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BEsat}$ | $I_C$=-0.5A,$I_B$=-0.05A | | | -1.4 | V |
| Base-emitter voltage | $V_{BE}$ | $V_{CE}$=-5V;$I_C$=-0.5A | | | -1.5 | V |
| Transition frequency | $f_T$ | $V_{CE}$=-10V;$I_C$=-100mA | | 40 | | MHz |

## Package Information

**TO-220F PACKAGE**




| Symbol | Dimensions（millimeters） | |
|---|---|---|
| | Min | Max |
| A | 4.35 | 4.75 |
| A1 | 2.30 | 2.70 |
| A2 | 0.40 | 0.80 |
| A3 | 2.10 | 2.50 |
| b | 0.60 | 1.00 |
| b1 | 1.00 | 1.40 |
| c | 0.30 | 0.70 |
| e | 2.30 | 2.70 |
| E | 9.80 | 10.2 |
| E1 | 6.30 | 6.70 |
| H | 15.6 | 16.0 |
| H1 | 8.80 | 9.20 |
| H2 | 12.9 | 13.5 |
| H3 | 3.10 | 3.50 |
| G | 3.10 | 3.50 |
| ϕP | 3.10 | 3.50 |