# Silicon PNP Power Transistors 2SB1274

## DESCRIPTION

- With TO-220F package
- Complement to type 2SD1913
- High reliability.
- High breakdown voltage
- Low saturation voltage.
- Wide area of safe operation

## APPLICATIONS

- 60V/3A low-frequency power amplifier
- General power amplifier applications

## PINNING

| PIN | DESCRIPTION |
|---|---|
| 1 | Emitter |
| 2 | Collector |
| 3 | Base |

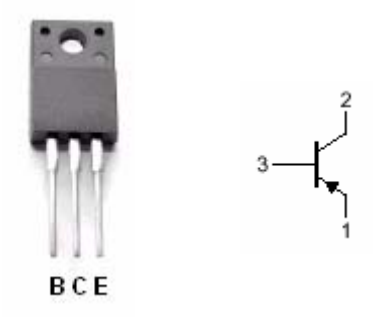


**Fig.1 simplified outline (TO-220F) and symbol**



## Absolute maximum ratings (Ta=25℃)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|
| $V_{CBO}$ | Collector-base voltage | Open emitter | -60 | V |
| $V_{CEO}$ | Collector-emitter voltage | Open base | -60 | V |
| $V_{EBO}$ | Emitter-base voltage | Open collector | -6 | V |
| $I_C$ | Collector current | | -3 | A |
| $I_{CM}$ | Collector current-peak | | -8 | A |
| $P_C$ | Collector dissipation | $T_C$=25℃ | 20 | W |
| | | | 2 | |
| $T_j$ | Junction temperature | | 150 | ℃ |
| $T_{stg}$ | Storage temperature | | -55~150 | ℃ |

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## CHARACTERISTICS

**Tj=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CBO}$ | Collector-base breakdown voltage | $I_C$=-1mA; $I_E$=0 | -60 | | | V |
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage | $I_C$=-5mA; $R_{BE}$=∞ | -60 | | | V |
| $V_{(BR)EBO}$ | Base-emitter breakdown voltage | $I_E$=-1mA; $I_C$=0 | -6 | | | V |
| $V_{CEsat}$ | Collector-emitter saturation voltage | $I_C$=-2A ; $I_B$=-0.2A | | -0.4 | -1.0 | V |
| $V_{BE}$ | Base-emitter voltage | $I_C$=-0.5A ; $V_{CE}$=-5V | | -0.8 | -1.0 | V |
| $I_{CBO}$ | Collector cut-off current | $V_{CB}$=-40V;$I_E$=0 | | | -0.1 | mA |
| $I_{EBO}$ | Emitter cut-off current | $V_{EB}$=-4V;$I_C$=0 | | | -0.1 | mA |
| $h_{FE-1}$ | DC current gain | $I_C$=-0.5A ; $V_{CE}$=-5V | 70 | | 280 | |
| $h_{FE-2}$ | DC current gain | $I_C$=-3A ; $V_{CE}$=-5V | 20 | | | |
| $f_T$ | Transition frequency | $I_C$=-0.5A ; $V_{CE}$=-5V | | 100 | | MHz |
| $C_{OB}$ | Output capacitance | $I_E$=0; $V_{CB}$=-10V;f=1MHz | | 60 | | pF |



◆ **$h_{FE-1}$ classifications**

| Q | R | S |
|---|---|---|
| 70-140 | 100-200 | 140-280 |

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## PACKAGE OUTLINE

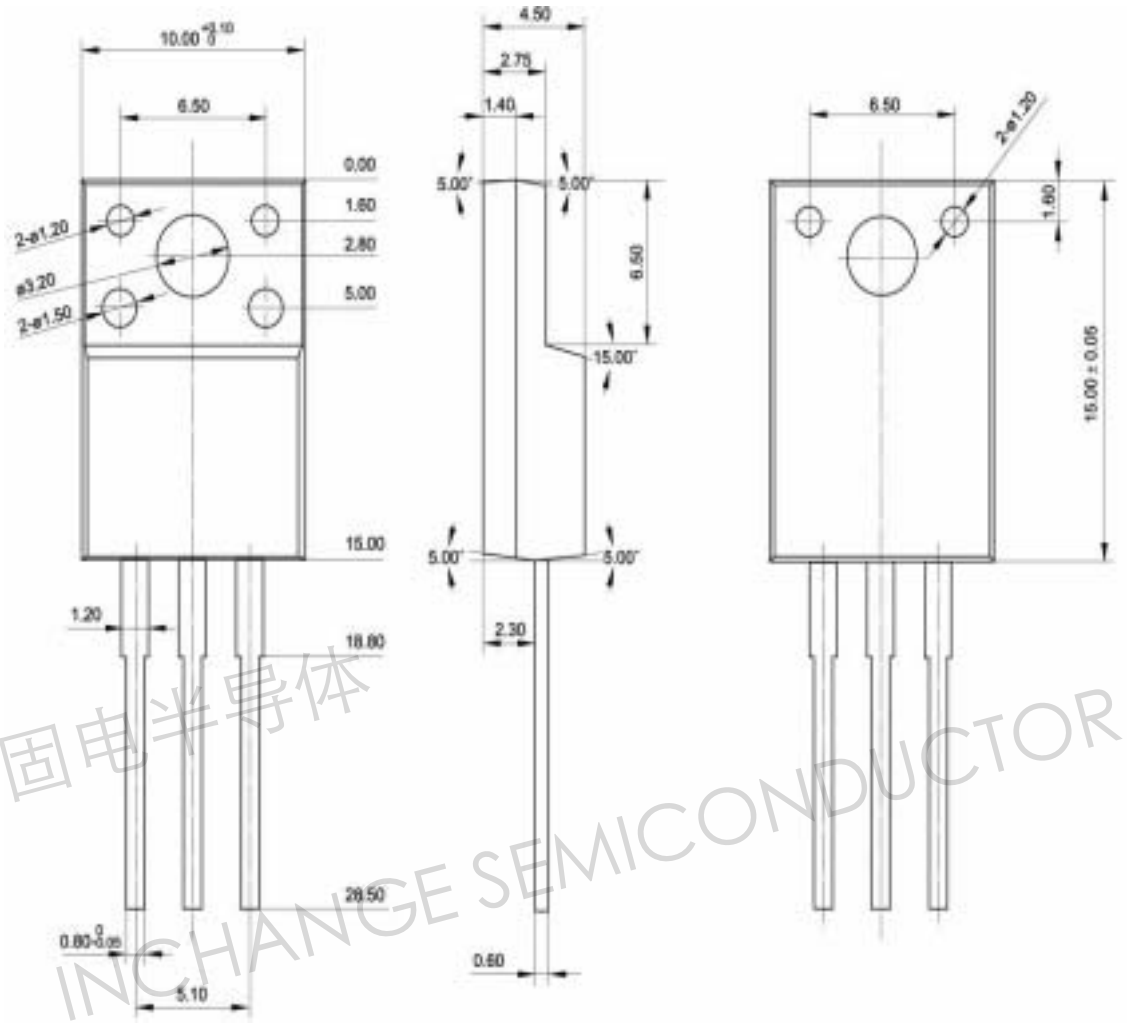


**Fig.2 Outline dimensions**

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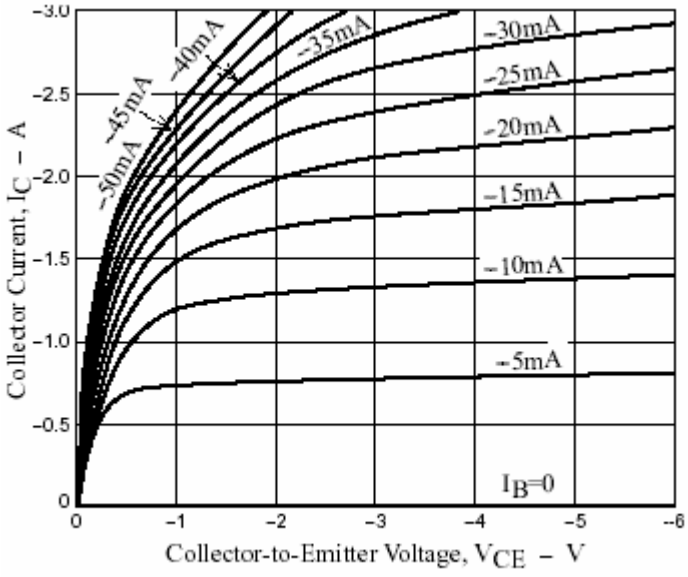


**Fig.3 Static Characteristic**

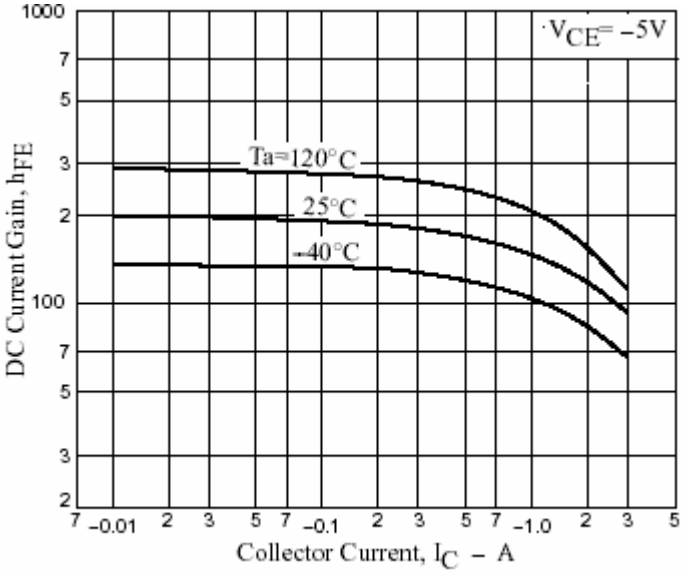


**Fig.4 DC current Gain**

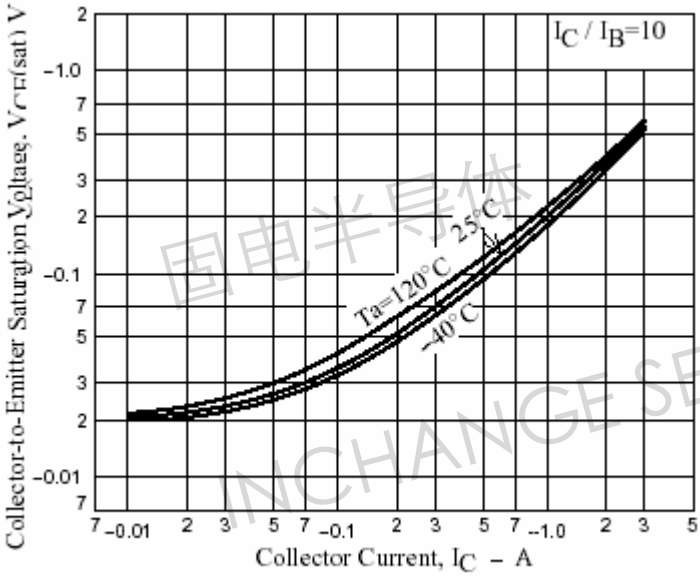


**Fig.5 Collector-Emitter Saturation Voltage**

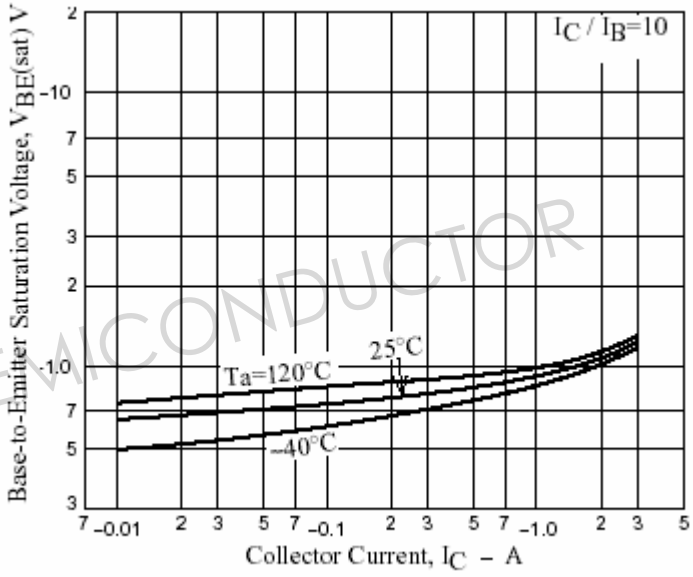


**Fig.6 Base-Emitter Saturation Voltage**

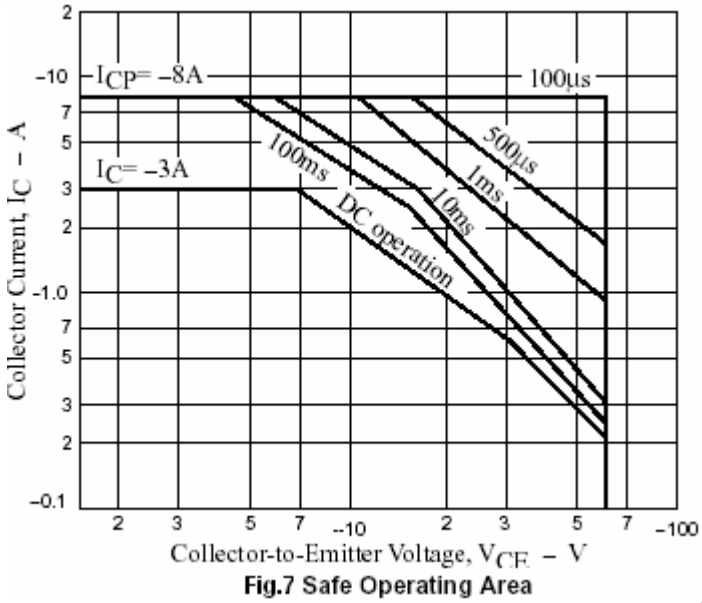


**Fig.7 Safe Operating Area**