

## Silicon PNP Power Transistors

2SB974

## DESCRIPTION

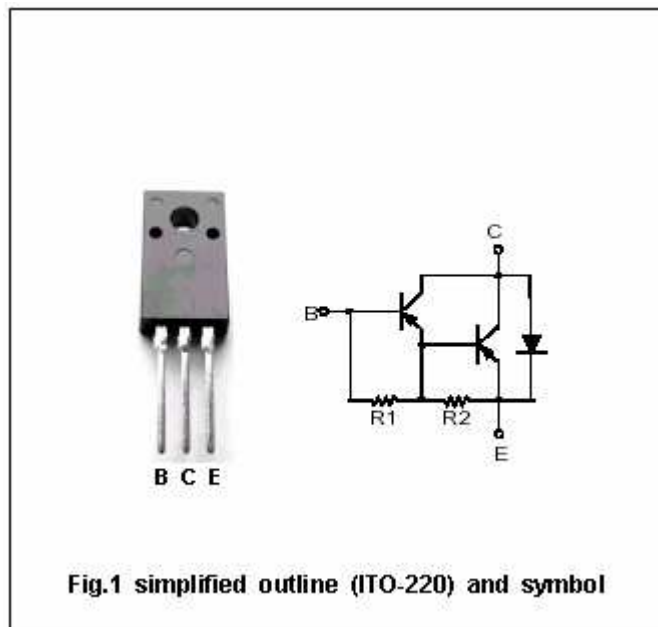
- With ITO-220 package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage

## APPLICATIONS

- Low frequency power amplification
- Low speed power switching applications

## PINNING

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

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

| SYMBOL    | PARAMETER                   | CONDITIONS             | VALUE   | UNIT             |
|-----------|-----------------------------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter           | -100    | V                |
| $V_{CEO}$ | Collector-emitter voltage   | Open base              | -100    | V                |
| $V_{EBO}$ | Emitter-base voltage        | Open collector         | -5      | V                |
| $I_C$     | Collector current           |                        | -5      | A                |
| $P_C$     | Collector power dissipation | $T_C=25^\circ\text{C}$ | 30      | W                |
|           |                             | $T_a=25^\circ\text{C}$ | 1.5     |                  |
| $T_j$     | Junction temperature        |                        | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |                        | -55~150 | $^\circ\text{C}$ |

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL                | PARAMETER                            | CONDITIONS                                 | MIN  | TYP. | MAX   | UNIT |
|-----------------------|--------------------------------------|--------------------------------------------|------|------|-------|------|
| V <sub>CEQ(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =-30mA ; I <sub>B</sub> =0  | -100 |      |       | V    |
| V <sub>(BR)CBO</sub>  | Collector-base breakdown voltage     | I <sub>C</sub> =-1mA ; I <sub>E</sub> =0   | -100 |      |       | V    |
| V <sub>(BR)EBO</sub>  | Emitter-base breakdown voltage       | I <sub>E</sub> =-5mA ; I <sub>C</sub> =0   | -5   |      |       | V    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =-2A; I <sub>B</sub> =-2mA  |      |      | -1.5  | V    |
| V <sub>BEsat</sub>    | Base-emitter saturation voltage      | I <sub>C</sub> =-2A; I <sub>B</sub> =-2mA  |      |      | -2.0  | V    |
| I <sub>CBO</sub>      | Collector cut-off current            | V <sub>CB</sub> =-100V; I <sub>E</sub> =0  |      |      | -1    | μA   |
| I <sub>CEO</sub>      | Collector cut-off current            | V <sub>CE</sub> =-50V; I <sub>B</sub> =0   |      |      | -100  | μA   |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0    |      |      | -5.0  | mA   |
| h <sub>FE</sub>       | DC current gain                      | I <sub>C</sub> =-2A ; V <sub>CE</sub> =-2V | 2000 |      | 20000 |      |