

## Silicon PNP Power Transistors

2SA1383

## DESCRIPTION

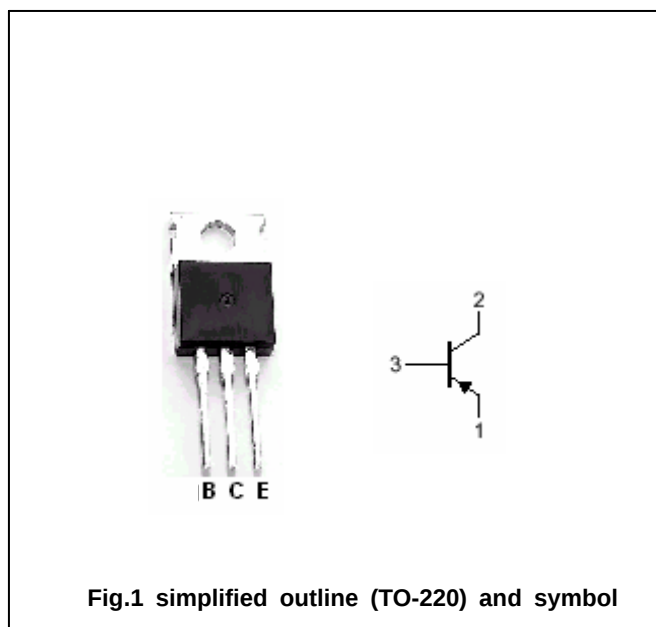
- With TO-220 package
- Complement to type 2SC3514
- High transition frequency

## APPLICATIONS

- Designed for use in audio frequency power amplifier applications

## PINNING

| PIN | DESCRIPTION                          |
|-----|--------------------------------------|
| 1   | Emitter                              |
| 2   | Collector;connected to mounting base |
| 3   | Base                                 |

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

| SYMBOL    | PARAMETER                   | CONDITIONS             | VALUE   | UNIT             |
|-----------|-----------------------------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter           | -180    | V                |
| $V_{CEO}$ | Collector-emitter voltage   | Open base              | -180    | V                |
| $V_{EBO}$ | Emitter-base voltage        | Open collector         | -5      | V                |
| $I_C$     | Collector current           |                        | -0.1    | A                |
| $P_C$     | Collector power dissipation | $T_a=25^\circ\text{C}$ | 1.5     | W                |
|           |                             | $T_C=25^\circ\text{C}$ | 10      |                  |
| $T_j$     | 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>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =-10mA, I <sub>B</sub> =0         | -180 |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-50mA; I <sub>B</sub> =-5mA      |      |      | -0.5 | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =-50mA; I <sub>B</sub> =-5mA      |      |      | -1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-180V; I <sub>E</sub> =0        |      |      | -1.0 | μ A  |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-3V; I <sub>C</sub> =0          |      |      | -1.0 | μ A  |
| h <sub>FE-1</sub>    | DC current gain                      | I <sub>C</sub> =-1mA; V <sub>CE</sub> =-5V       | 90   |      |      |      |
| h <sub>FE-2</sub>    | DC current gain                      | I <sub>C</sub> =-10mA; V <sub>CE</sub> =-5V      | 100  |      | 320  |      |
| C <sub>OB</sub>      | Output capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1MHz |      | 4.5  |      | pF   |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =-20mA; V <sub>CE</sub> =-10V     |      | 180  |      | MHz  |

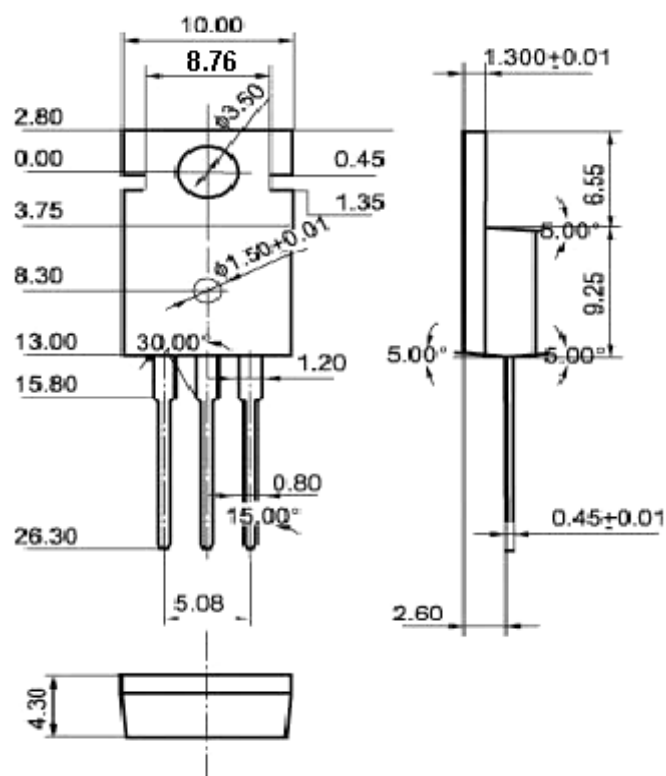
◆ h<sub>FE-2</sub> Classifications

| Q       | P       |
|---------|---------|
| 100-200 | 160-320 |

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## PACKAGE OUTLINE

Fig.2 Outline dimensions(unindicated tolerance:  $\pm 0.10$  mm)