

## Silicon PNP Power Transistors

## 2SB555 2SB556

## DESCRIPTION

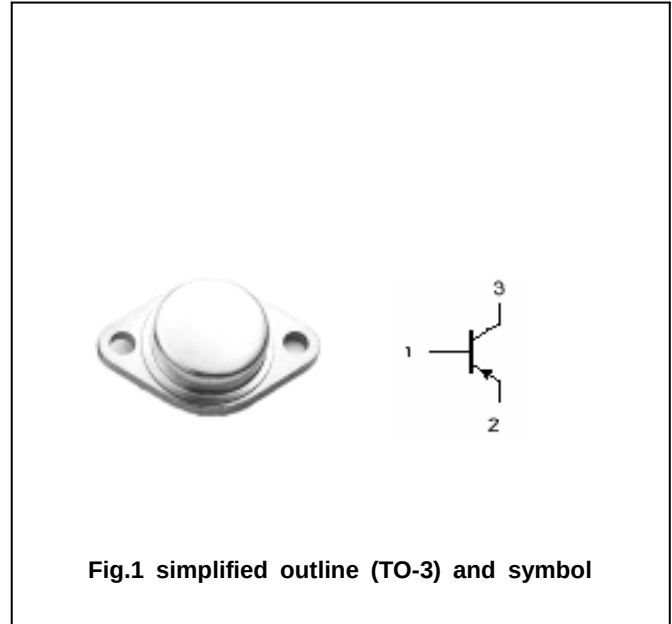
- With TO-3 package
- Complement to type 2SD425/426
- High power dissipation

## APPLICATIONS

- Power amplifier applications
- Recommended for high-power high-fidelity audio frequency amplifier output stage

## PINNING(see Fig.2)

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

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

| SYMBOL    | PARAMETER                   |        | CONDITIONS               | VALUE   | UNIT               |
|-----------|-----------------------------|--------|--------------------------|---------|--------------------|
| $V_{CBO}$ | Collector-base voltage      | 2SB555 | Open emitter             | -140    | V                  |
|           |                             | 2SB556 |                          | -120    |                    |
| $V_{CEO}$ | Collector-emitter voltage   | 2SB555 | Open base                | -140    | V                  |
|           |                             | 2SB556 |                          | -120    |                    |
| $V_{EBO}$ | Emitter-base voltage        |        | Open collector           | -5      | V                  |
| $I_C$     | Collector current           |        |                          | -12     | A                  |
| $I_E$     | Emitter current             |        |                          | 12      | A                  |
| $P_C$     | Collector power dissipation |        | $T_C=25^{\circ}\text{C}$ | 100     | W                  |
| $T_j$     | Junction temperature        |        |                          | 150     | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage temperature         |        |                          | -65~150 | $^{\circ}\text{C}$ |

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## CHARACTERISTICS

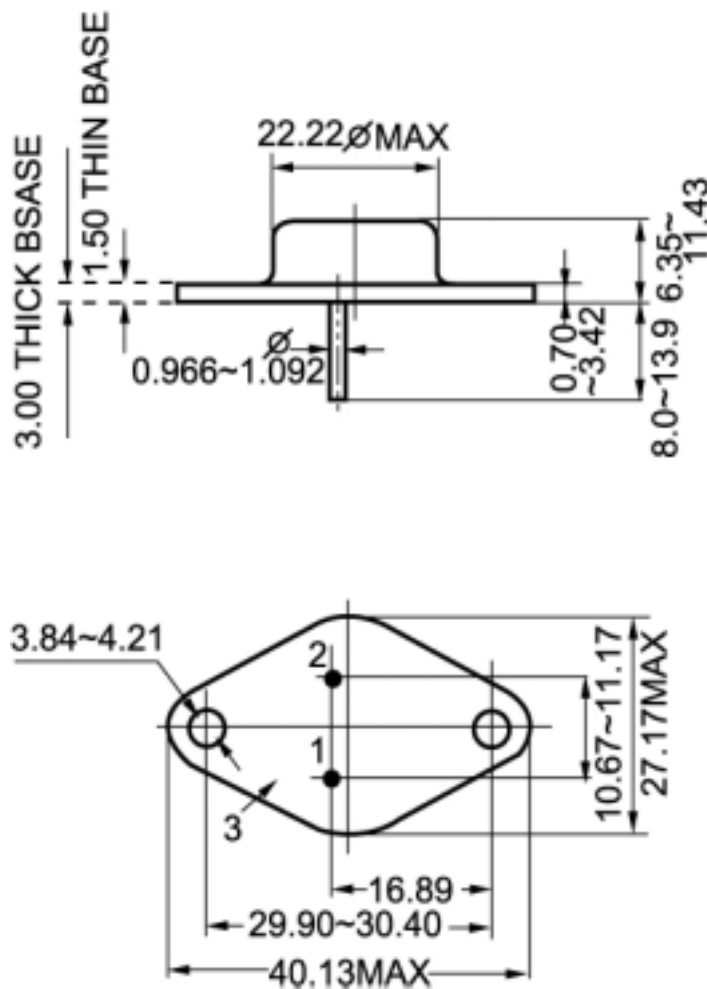
T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL               | PARAMETER                            |        | CONDITIONS                                          | MIN  | TYP. | MAX  | UNIT |
|----------------------|--------------------------------------|--------|-----------------------------------------------------|------|------|------|------|
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | 2SB555 | I <sub>C</sub> =-0.1A ; I <sub>B</sub> =0           | -140 |      |      | V    |
|                      |                                      | 2SB556 |                                                     | -120 |      |      |      |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       |        | I <sub>E</sub> =-10mA ; I <sub>C</sub> =0           | -5   |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | 2SB555 | I <sub>C</sub> =-7A; I <sub>B</sub> =-0.7A          |      |      | -3.0 | V    |
|                      |                                      | 2SB556 | I <sub>C</sub> =-6A; I <sub>B</sub> =-0.6A          |      |      |      |      |
| V <sub>BE</sub>      | Base-emitter on voltage              |        | I <sub>C</sub> =-7A ; V <sub>CE</sub> =-5V          |      |      | -2.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            |        | V <sub>CB</sub> =-50V; I <sub>E</sub> =0            |      |      | -0.1 | mA   |
| I <sub>EBO</sub>     | Emitter cut-off current              |        | V <sub>EB</sub> =-5V; I <sub>C</sub> =0             |      |      | -0.1 | mA   |
| h <sub>FE</sub>      | DC current gain                      |        | I <sub>C</sub> =-2A ; V <sub>CE</sub> =-5V          | 40   |      | 140  |      |
| C <sub>OB</sub>      | Output capacitance                   |        | I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V; f=1.0MHz |      | 330  |      | pF   |
| f <sub>T</sub>       | Transition frequency                 |        | I <sub>C</sub> =-2A ; V <sub>CE</sub> =-5V          |      | 6    |      | MHz  |

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## PACKAGE OUTLINE

Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1\text{mm}$ )