

Silicon NPN Power Transistors

2SD401

DESCRIPTION

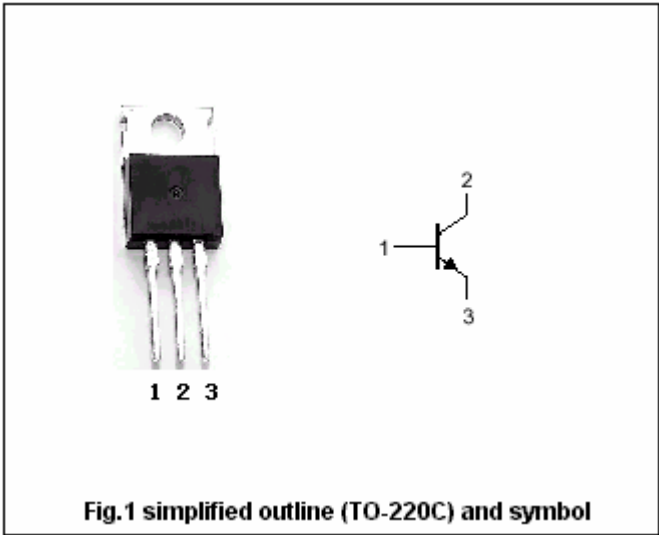
- With TO-220C package
- Complement to type 2SB546
- Collector current  $I_C=2A$
- Collector-base voltage  $V_{CBO}=200V$

APPLICATIONS

- For use in general purpose power amplifier,vertical output application

PINNING

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



Absolute maximum ratings (Ta=25 )

| SYMBOL    | PARAMETER                   | CONDITIONS     | VALUE   | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter   | 200     | V    |
| $V_{CEO}$ | Collector-emitter voltage   | Open base      | 150     | V    |
| $V_{EBO}$ | Emitter-base voltage        | Open collector | 5       | V    |
| $I_C$     | Collector current           |                | 2       | A    |
| $P_C$     | Collector power dissipation | $T_C=25$       | 25      | W    |
| $T_j$     | Junction temperature        |                | 150     |      |
| $T_{stg}$ | Storage temperature         |                | -55~150 |      |

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## CHARACTERISTICS

T<sub>j</sub>=25 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     | 150 |      |     | V    |
| V <sub>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =0.5mA; I <sub>E</sub> =0    | 200 |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =0.5mA; I <sub>B</sub> =0    | 5   |      |     | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =500mA; I <sub>B</sub> =50mA |     |      | 1.0 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =150V; I <sub>E</sub> =0    |     |      | 50  | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0      |     |      | 50  | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =0.4A; V <sub>CE</sub> =10V  | 40  |      | 400 |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =0.4A; V <sub>CE</sub> =10V  |     | 5    |     | MHz  |

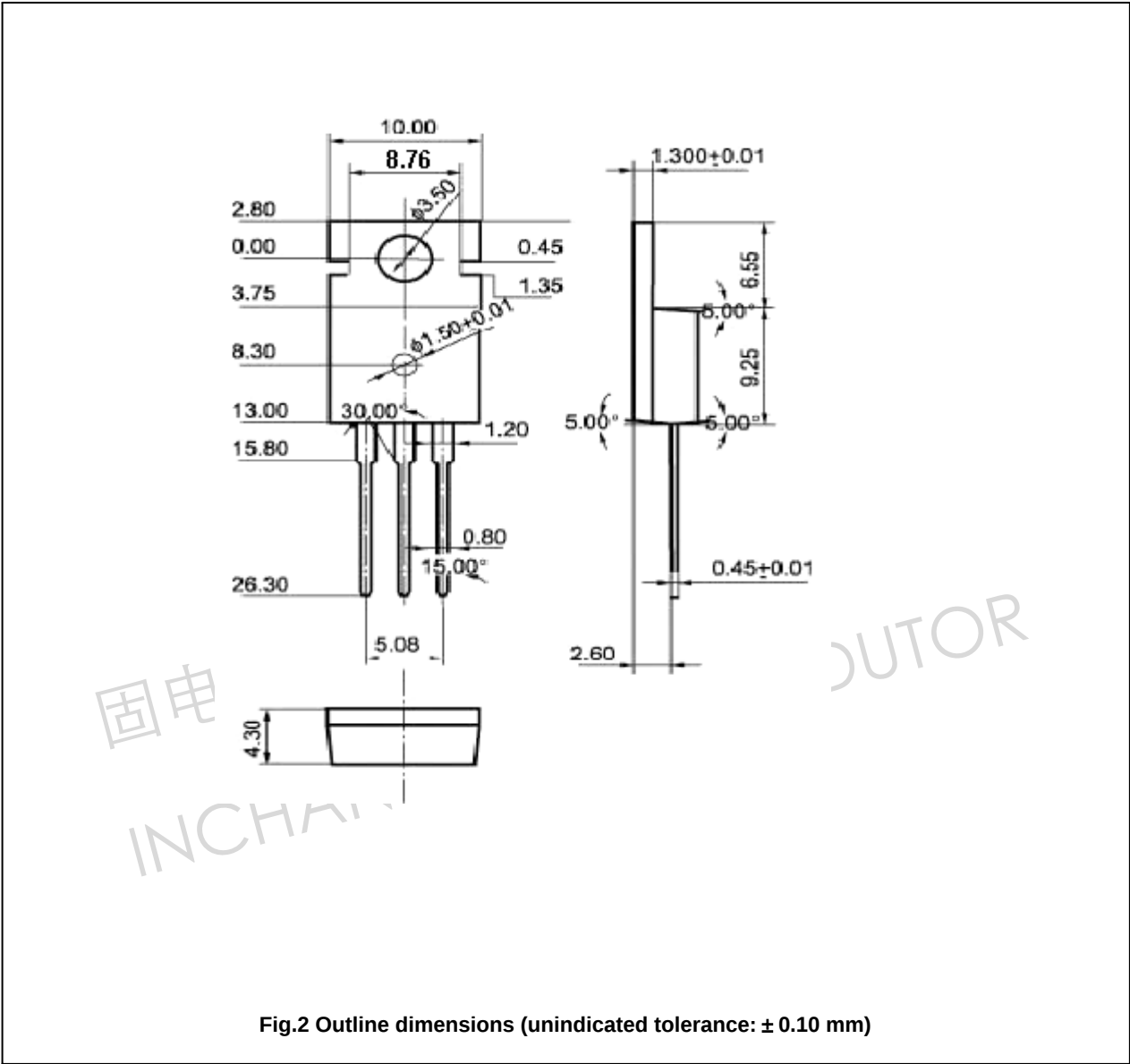
◆ h<sub>FE</sub> classifications

| R     | O      | Y       | G       |
|-------|--------|---------|---------|
| 40-80 | 70-140 | 120-240 | 200-400 |

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PACKAGE OUTLINE



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