

Silicon NPN Power Transistors

2SC2275 2SC2275A

DESCRIPTION

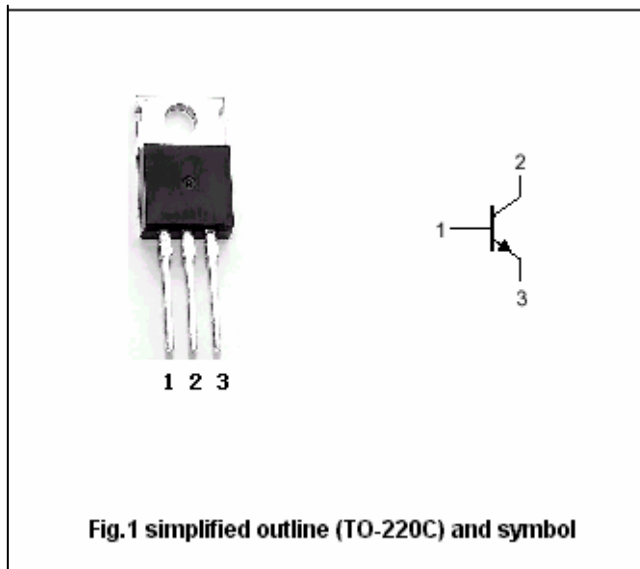
- With TO-220 package
- Complement to type 2SA985/985A
- High breakdown voltage

APPLICATIONS

- For low frequency and high frequency power amplifier applicatons

PINNING

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



Absolute maximum ratings(Ta=25°C)

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | 2SC2275              | 120     | V    |
|                  |                             | 2SC2275A             | 150     |      |
| V <sub>CEO</sub> | Collector-emitter voltage   | 2SC2275              | 120     | V    |
|                  |                             | 2SC2275A             | 150     |      |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | 5       | V    |
| I <sub>C</sub>   | Collector current           |                      | 1.5     | A    |
| I <sub>CM</sub>  | Collector current-peak      |                      | 3.0     | A    |
| I <sub>B</sub>   | Base current                |                      | 0.3     | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 25      | W    |
| T <sub>j</sub>   | Junction temperature        |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature         |                      | -55~150 | °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> =25mA, I <sub>B</sub> =0         | 120 |      |     | V    |
|                      |                                      |   | 150 |      |     |      |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =1A; I <sub>B</sub> =0.1A        |     |      | 2.0 | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =1A; I <sub>B</sub> =0.1A        |     |      | 1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =120V; I <sub>E</sub> =0        |     |      | 1.0 | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =3V; I <sub>C</sub> =0          |     |      | 1.0 | μA   |
| h <sub>FE-1</sub>    | DC current gain                      | I <sub>C</sub> =5mA; V <sub>CE</sub> =5V        | 35  |      |     |      |
| h <sub>FE-2</sub>    | DC current gain                      | I <sub>C</sub> =0.3A; V <sub>CE</sub> =5V       | 60  | 150  | 320 |      |
| C <sub>OB</sub>      | Output capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> =10V, f=1MHz |     | 19   |     | pF   |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =0.2A; V <sub>CE</sub> =5V       |     | 200  |     | MHz  |

◆ h<sub>FE-2</sub> Classifications

| R      | Q       | P       |
|--------|---------|---------|
| 60-120 | 100-200 | 160-320 |

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PACKAGE OUTLINE



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