

Silicon NPN Power Transistors

2SC2238 2SC2238A 2SC2238B

DESCRIPTION

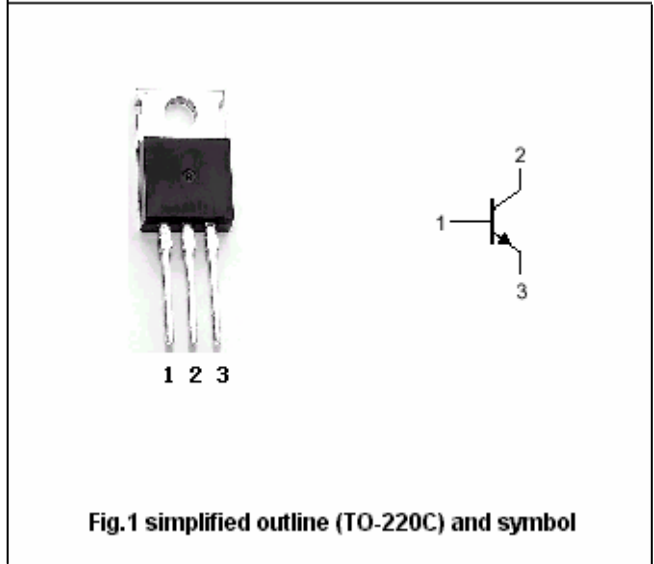
- With TO-220 package
- Complement to type 2SA968
- High breakdown voltage

APPLICATIONS

- Power amplifier applications
- Driver stage amplifier applications

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 | 2SC2238 | 160 | V |
| | | 2SC2238A | 180 | |
| | | 2SC2238B | 200 | |
| V _{CEO} | Collector-emitter voltage | 2SC2238 | 160 | V |
| | | 2SC2238A | 180 | |
| | | 2SC2238B | 200 | |
| V _{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I _C | Collector current | | 1.5 | A |
| I _E | Emitter current | | -1.5 | A |
| P _T | Total power dissipation | T _C =25 | 25 | W |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -55~150 | |

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CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | 2SC2238 | 160 | | | V |
| | | 2SC2238A | 180 | | | |
| | | 2SC2238B | 200 | | | |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =1mA; I _C =0 | 5 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =500mA; I _B =50mA | | | 1.5 | V |
| V _{BE} | Base-emitter on voltage | I _C =500mA; V _{CE} =5V | | | 1.0 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =160V; I _E =0 | | | 1.0 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 1.0 | μA |
| h _{FE} | DC current gain | I _C =100mA; V _{CE} =5V | 70 | | 240 | |
| C _{ob} | Output capacitance | I _E =0; V _{CB} =10V, f=1MHz | | 25 | | pF |
| f _T | Transition frequency | I _C =100mA; V _{CE} =10V | | 100 | | MHz |

◆ h_{FE} Classifications

| O | Y |
|--------|---------|
| 70-140 | 120-240 |

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PACKAGE OUTLINE

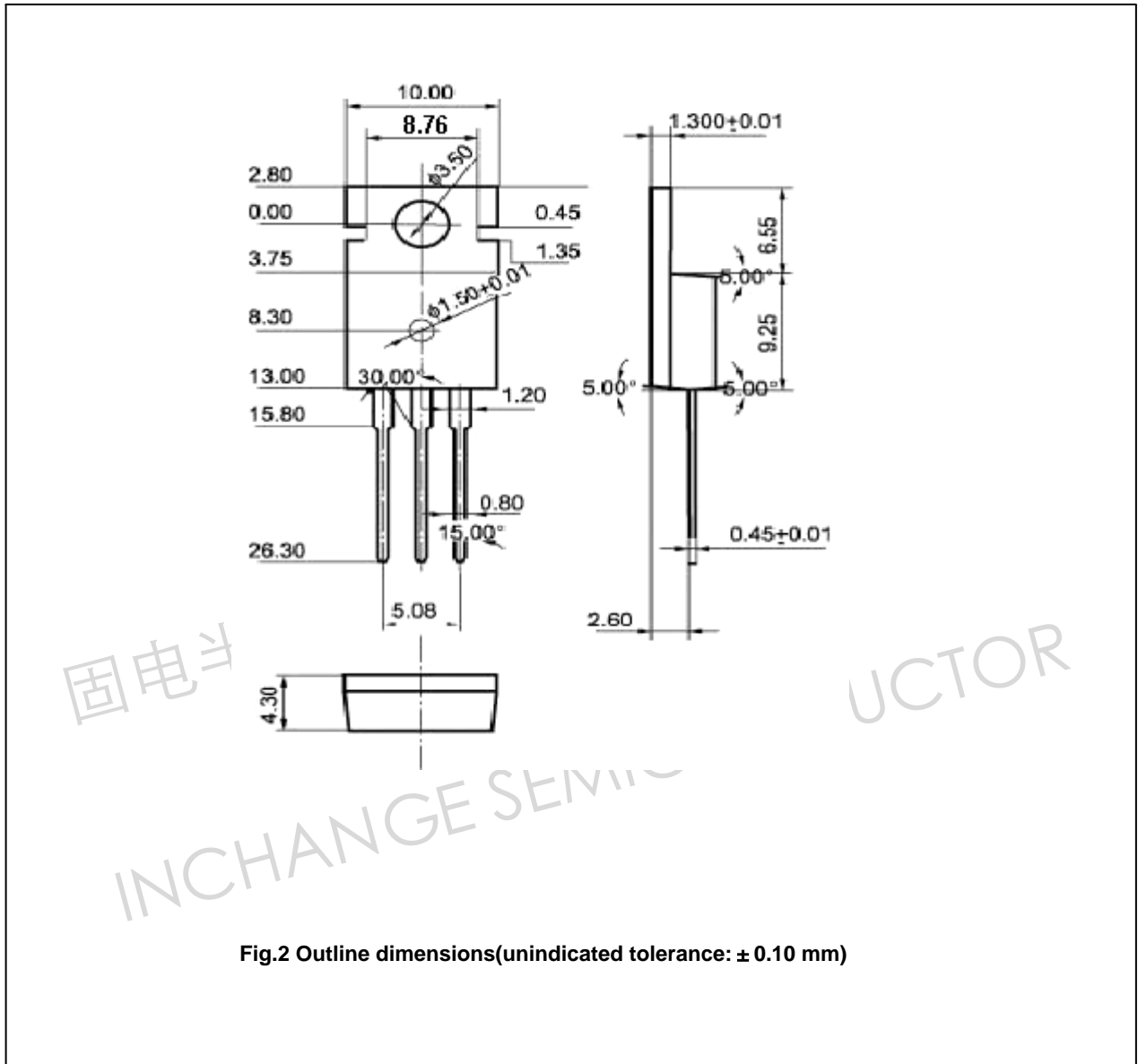


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)