

Silicon NPN Power Transistors

2SC2344

DESCRIPTION

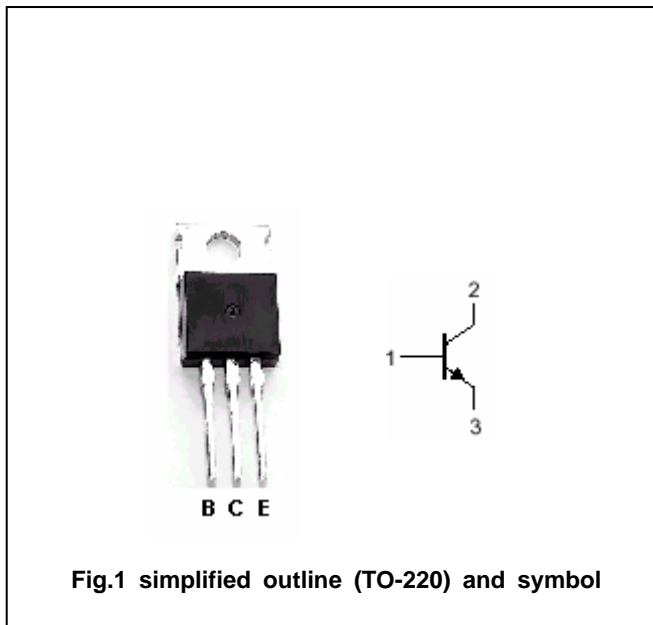
- With TO-220 package
- Complement to type 2SA1011

APPLICATIONS

- High voltage switching
- Audio frequency power amplifier;
- 100W output predriver 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 | Open emitter | 180 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 160 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 6 | V |
| I_C | Collector current | | 1.5 | A |
| I_{CM} | Collector current-Peak | | 3.0 | 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} | Base-emitter breakdown voltage | I _C =10mA, R _{BE} = | 160 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =1mA; I _E =0 | 180 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =1mA; I _C =0 | 6 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =0.5A; I _B =50mA | | 0.3 | | V |
| V _{BE} | Base-emitter voltage | I _C =10mA ; V _{CE} =5V | | 1.5 | | V |
| I _{CBO} | Collector cut-off current | V _{CB} =120V; I _E =0 | | | 10 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =4V; I _C =0 | | | 10 | μ A |
| h _{FE} | DC current gain | I _C =0.3A ; V _{CE} =5V | 60 | | 200 | |
| f _T | Transition frequency | I _C =50mA ; V _{CE} =10V | | 100 | | MHz |
| C _{ob} | Output capacitance | f=1MHz ; V _{CB} =10V | | 23 | | pF |

Switching times resistive load

| | | | | | | |
|-----------------|--------------|---|--|------|--|-----|
| t _{on} | Turn-on time | I _C =0.5A I _{B1} =- I _{B2} =50mA | | 0.15 | | μ s |
| t _s | Storage time | | | 0.81 | | μ s |
| t _f | Fall time | | | 0.48 | | μ s |

◆ **h_{FE} Classifications**

| D | E |
|--------|---------|
| 60-120 | 100-200 |

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PACKAGE OUTLINE

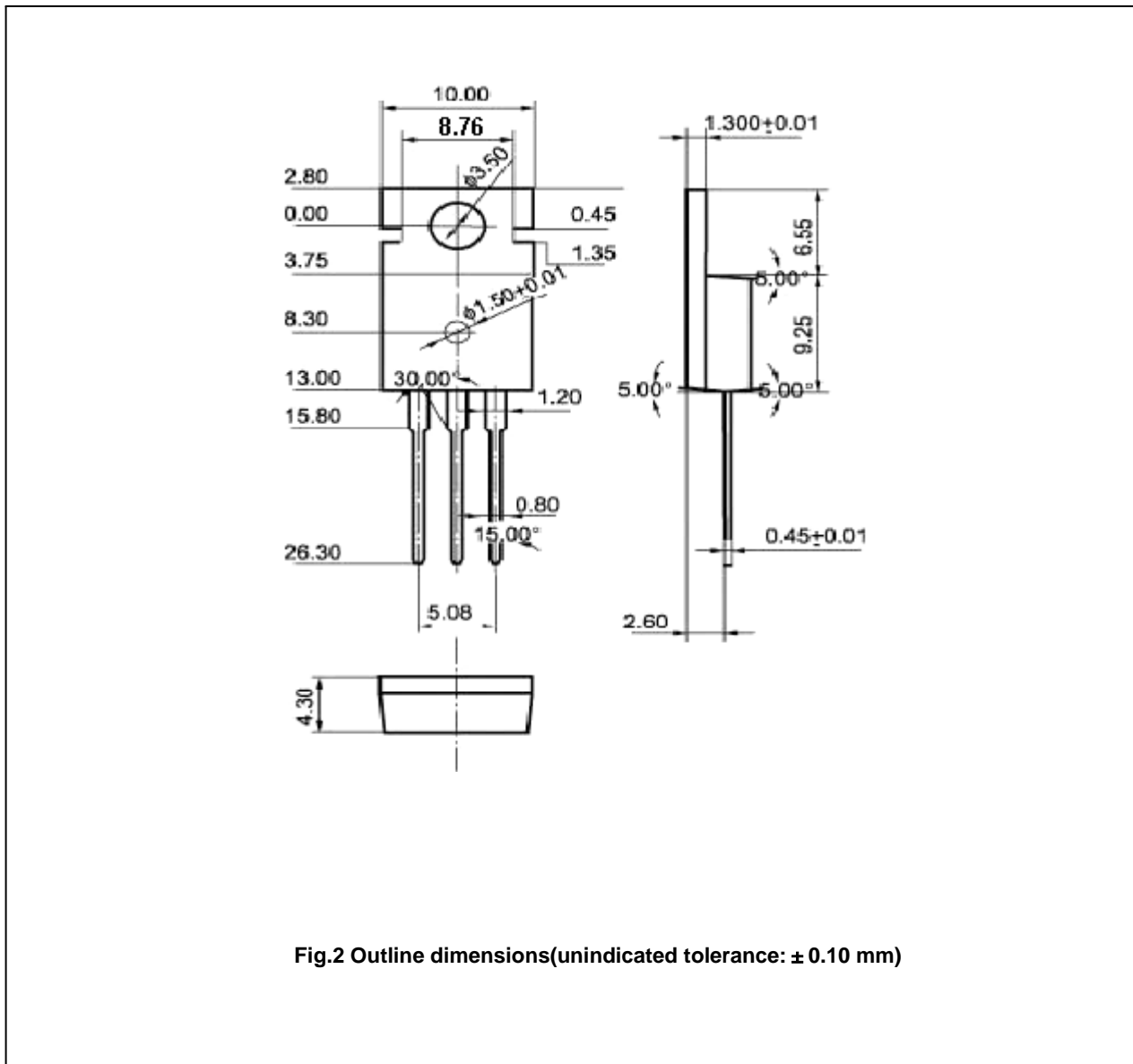


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)

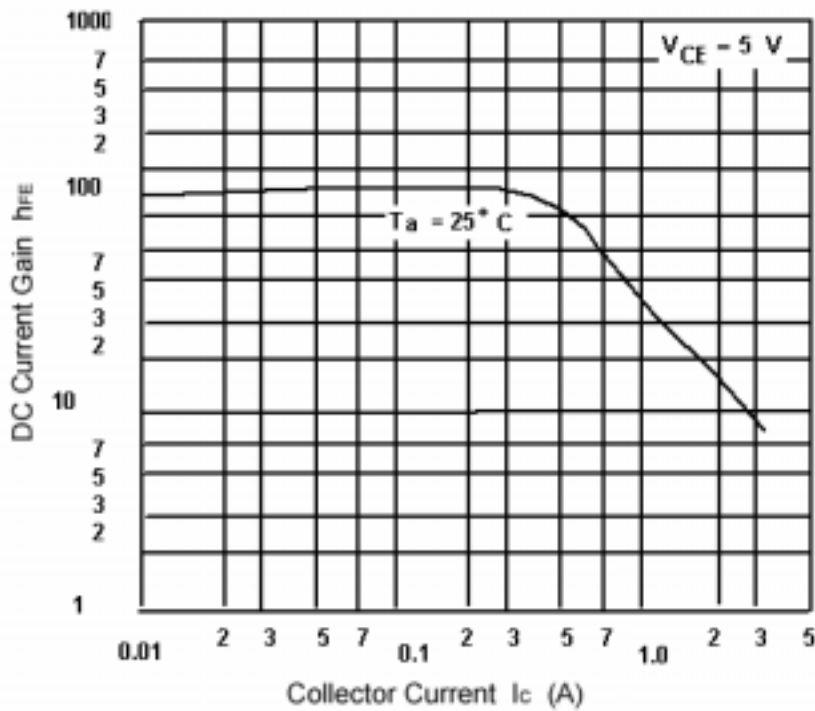


Fig.3 DC current Gain

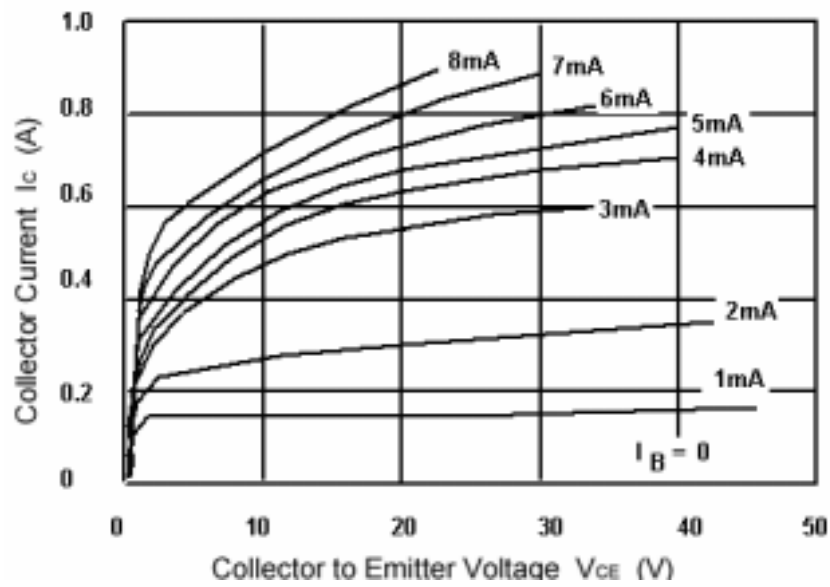


Fig.4 Static Characteristic

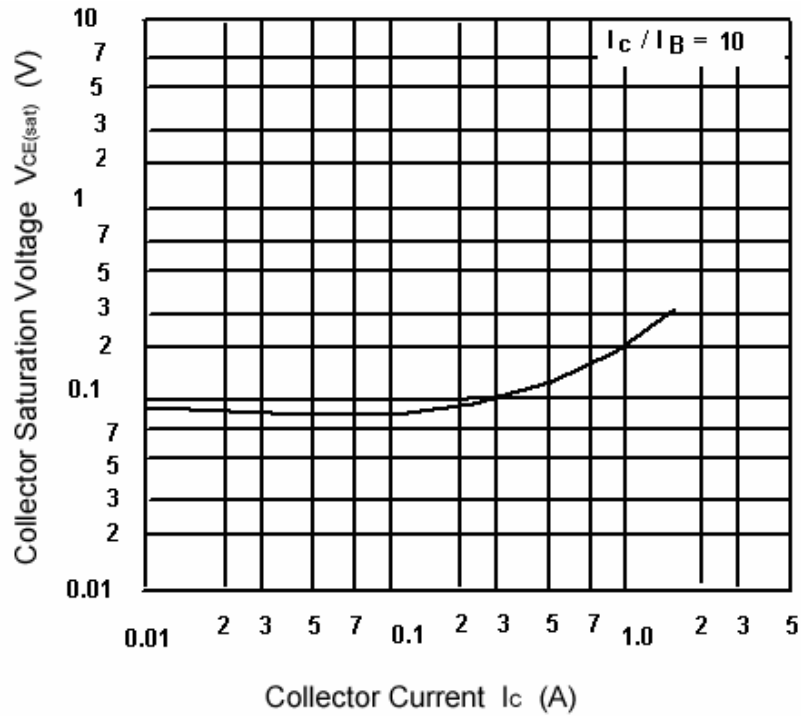


Fig.5 Collector-Emitter Saturation Voltage

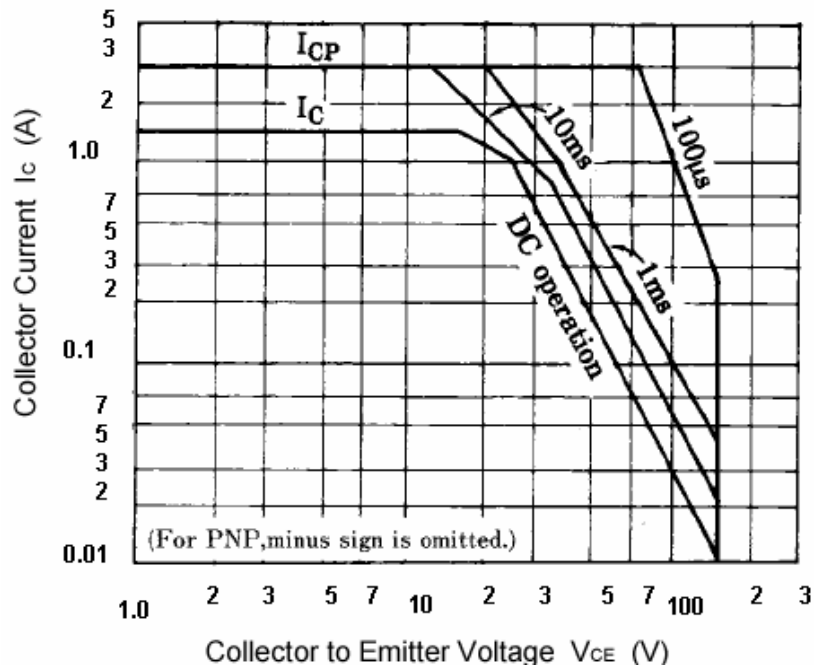


Fig.6 Safe Operating Area