

DESCRIPTION

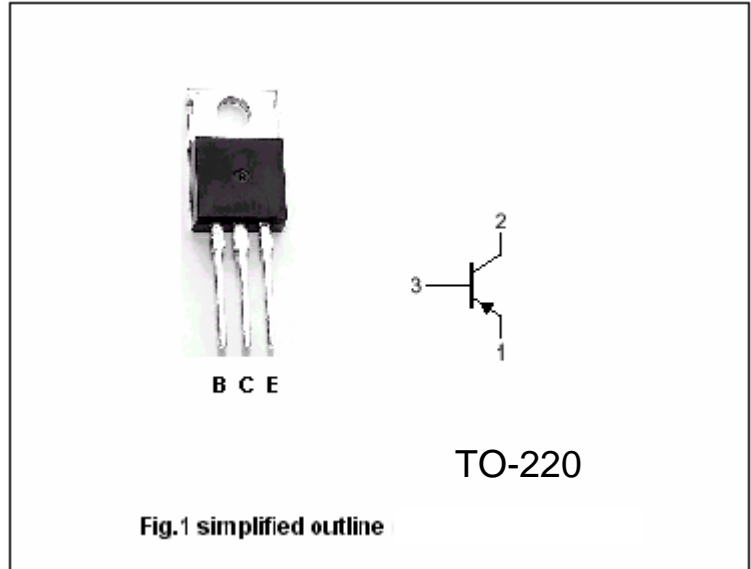
- With TO-220 package
- Complement to type TIP31/31A/31B/31C

APPLICATIONS

- Medium power linear and switching applications

PINNING

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


Absolute maximum ratings(Ta=25)

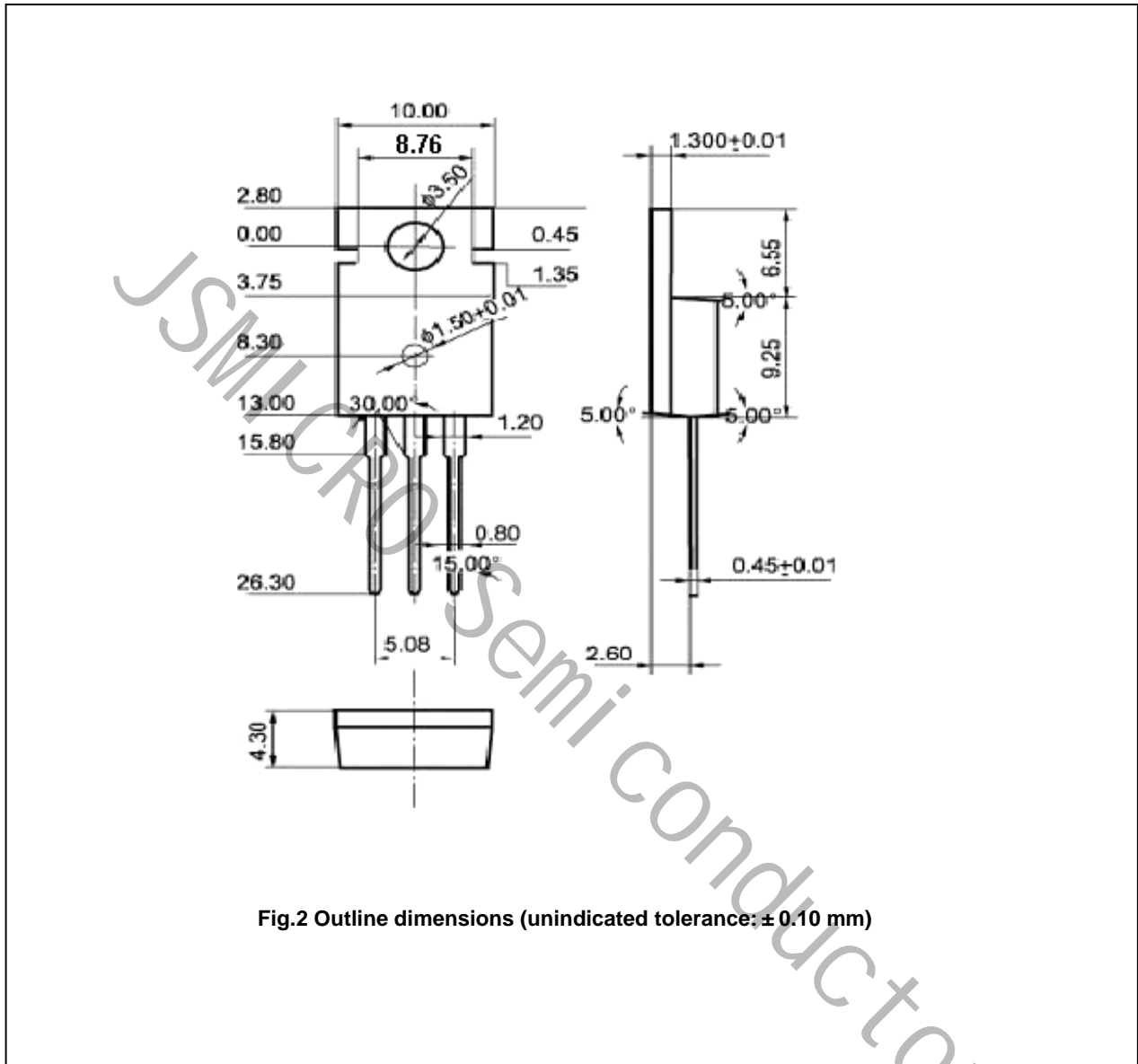
| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | TIP32 | -40 | V |
| | | TIP32A | -60 | |
| | | TIP32B | -80 | |
| | | TIP32C | -100 | |
| V _{CEO} | Collector-emitter voltage | TIP32 | -40 | V |
| | | TIP32A | -60 | |
| | | TIP32B | -80 | |
| | | TIP32C | -100 | |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I _C | Collector current (DC) | | -3 | A |
| I _{CM} | Collector current-Pulse | | -5 | A |
| I _B | Base current | | -1 | A |
| P _C | Collector power dissipation | T _C =25 | 40 | W |
| | | T _a =25 | 2 | |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -65~150 | |

CHARACTERISTICS

 T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT | |
|-----------------------|--------------------------------------|---|---|------|------|------|----|
| V _{CEO(SUS)} | Collector-emitter sustaining voltage | TIP32 | -40 | | | V | |
| | | TIP32A | -60 | | | | |
| | | TIP32B | -80 | | | | |
| | | TIP32C | -100 | | | | |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-3A ; I _B =-0.375A | | | -1.2 | V | |
| V _{BE} | Base-emitter on voltage | I _C =-3A ; V _{CE} =-4V | | | -1.8 | V | |
| I _{CES} | Collector cut-off current | TIP32 | V _{CE} =-40V ; V _{EB} =0 | | | -0.2 | mA |
| | | TIP32A | V _{CE} =-60V ; V _{EB} =0 | | | | |
| | | TIP32B | V _{CE} =-80V ; V _{EB} =0 | | | | |
| | | TIP32C | V _{CE} =-100V ; V _{EB} =0 | | | | |
| I _{CEO} | Collector cut-off current | TIP32/32A | V _{CE} =-30V ; I _B =0 | | | -0.3 | mA |
| | | TIP32B/32C | V _{CE} =-60V ; I _B =0 | | | | |
| I _{EBO} | Emitter cut-off current | V _{EB} =-5V ; I _C =0 | | | -1.0 | mA | |
| h _{FE-1} | DC current gain | I _C =-1A ; V _{CE} =-4V | 25 | | | | |
| h _{FE-2} | DC current gain | I _C =-3A ; V _{CE} =-4V | 10 | | 50 | | |
| f _T | Transiton frequency | I _C =-0.5A ; V _{CE} =-10V | 3 | | | MHz | |

PACKAGE OUTLINE



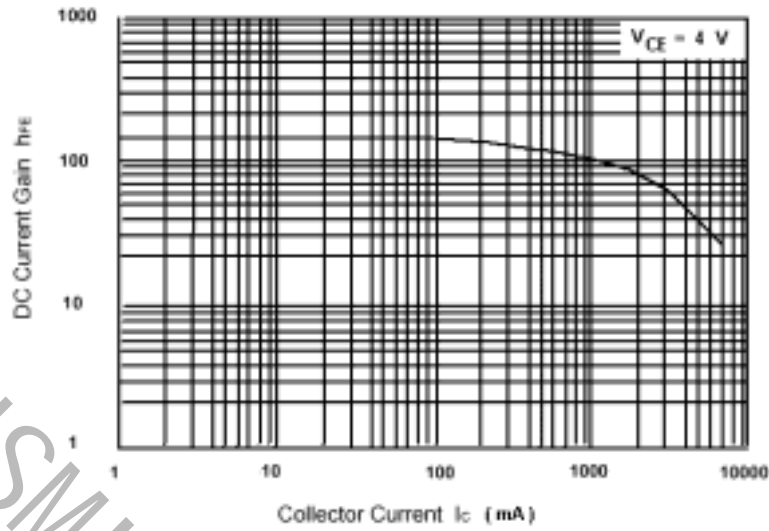


Fig.3 DC current Gain

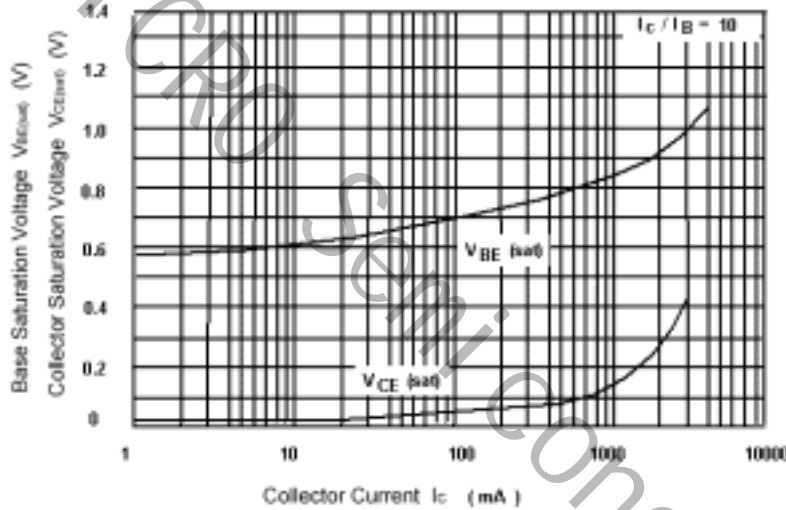


Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

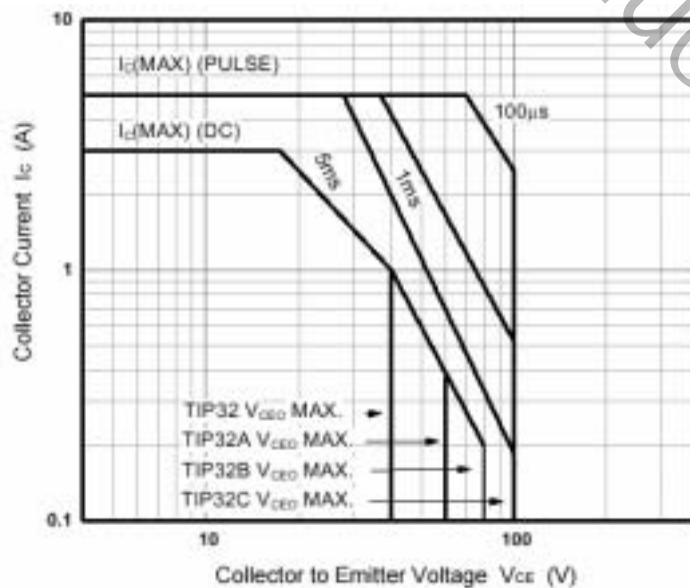


Fig.5 Safe Operating Area

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