

Silicon NPN Power Transistors

2SD895

DESCRIPTION

- With TO-3PN package
- Complement to type 2SB775
- Wide area of safe operation

APPLICATIONS

- 85V/6A, AF 35W output applications

PINNING

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

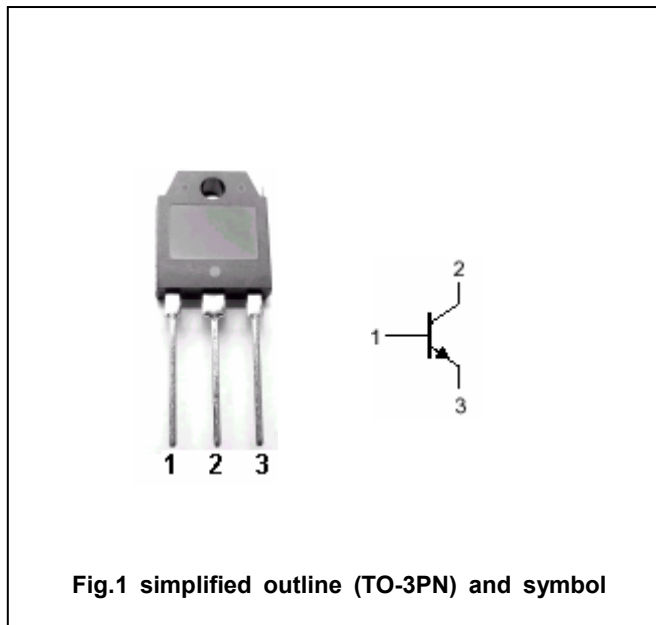


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Tc=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 100 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 85 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 6 | V |
| I _C | Collector current (DC) | | 6 | A |
| I _{CM} | Collector current-peak | | 10 | A |
| P _C | Collector power dissipation | T _C =25°C | 60 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -40~150 | °C |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | I _C =50mA ; R _{BE} =∞ | 85 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =5mA ; I _E =0 | 100 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =5mA ; I _C =0 | 6 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =4A ; I _B =0.4A | | 0.9 | 2.0 | V |
| V _{BE} | Base-emitter on voltage | I _C =1A ; V _{CE} =5V | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =40V I _E =0 | | | 0.1 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =4V ; I _C =0 | | | 0.1 | mA |
| h _{FE-1} | DC current gain | I _C =1A ; V _{CE} =5V | 60 | | 200 | |
| h _{FE-2} | DC current gain | I _C =3A ; V _{CE} =5V | 20 | | | |
| f _T | Transition frequency | I _C =1A ; V _{CE} =5V | | 15 | | MHz |
| C _{OB} | Collector output capacitance | f=1MHz ; V _{CB} =10V | | 160 | | pF |

Switching times

| | | | | | | |
|------------------|--------------|---|--|------|--|----|
| t _{on} | Turn-on time | I _C =1.0A ; I _{B1} =-I _{B2} =0.1A R _L =20Ω | | 0.20 | | μs |
| t _{stg} | Storage time | | | 0.82 | | μs |
| t _f | Fall time | | | 3.88 | | μs |

◆ h_{FE-1} Classifications

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

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PACKAGE OUTLINE

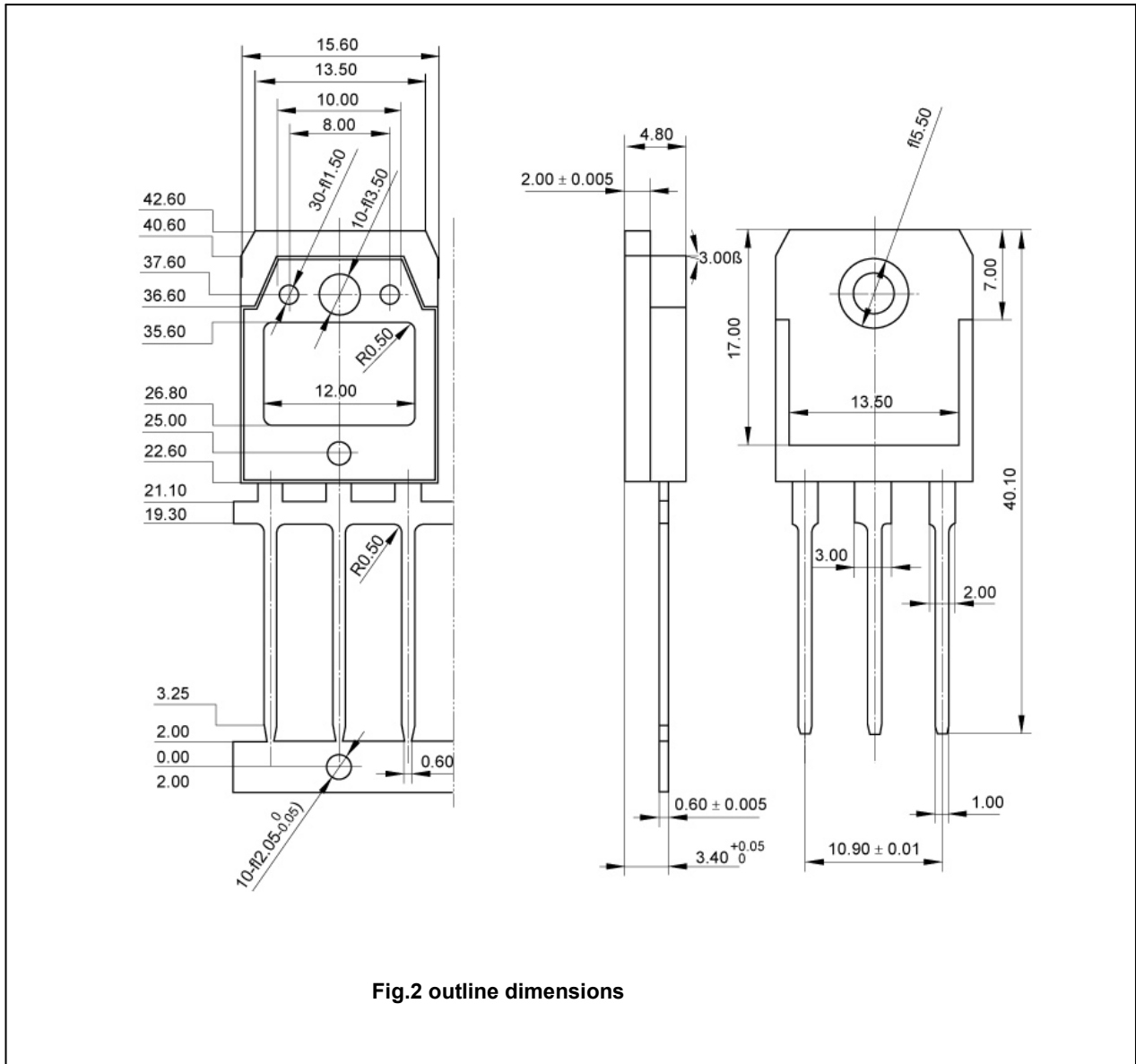


Fig.2 outline dimensions

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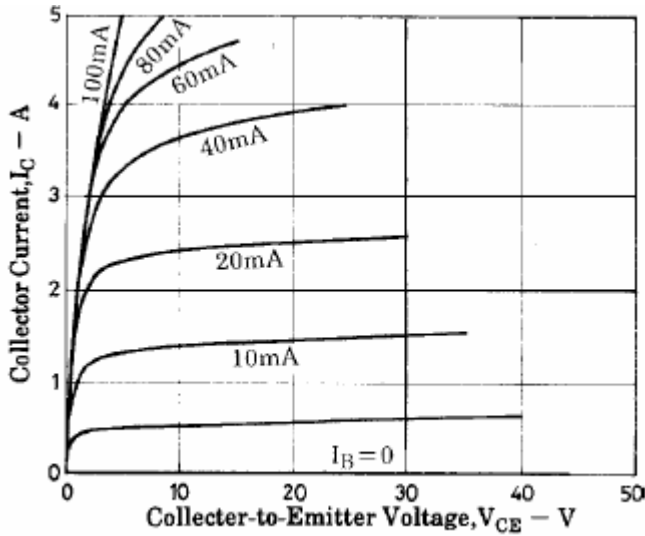


Fig.3 Static Characteristic

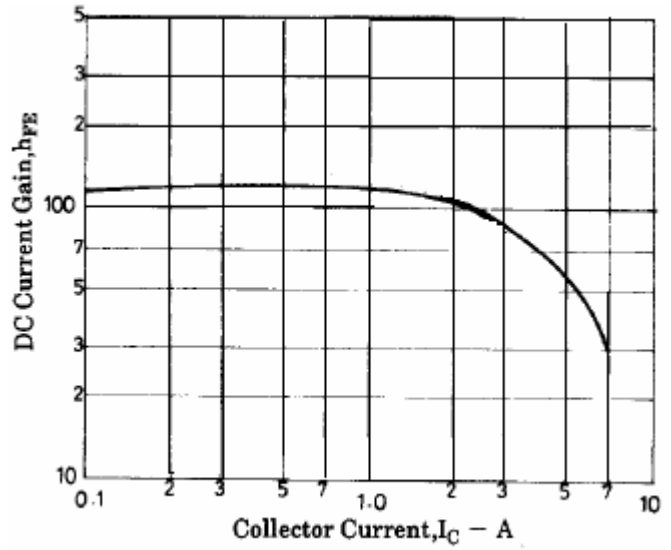


Fig.4 DC current Gain

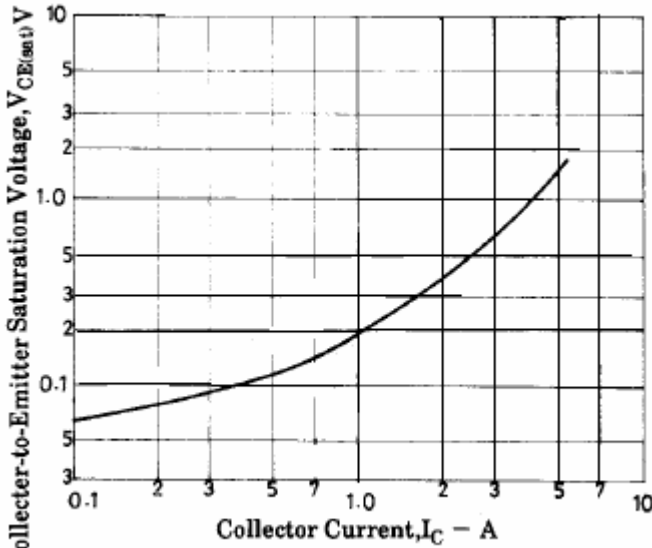


Fig.5 Collector-Emmitter Saturation Voltage

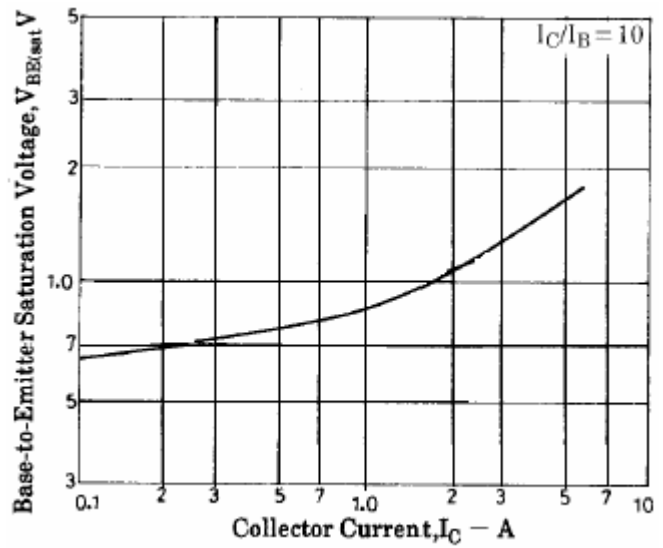


Fig.6 Base-Emmitter Saturation Voltage

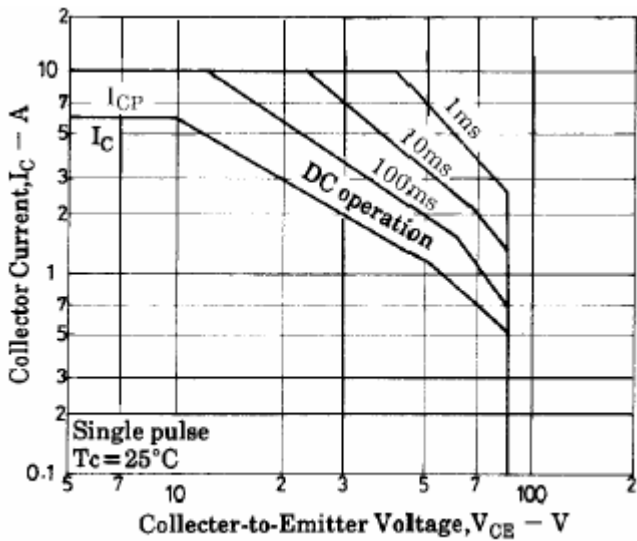


Fig.7 Safe Operating Area