

Silicon NPN Power Transistors

2SD998

DESCRIPTION

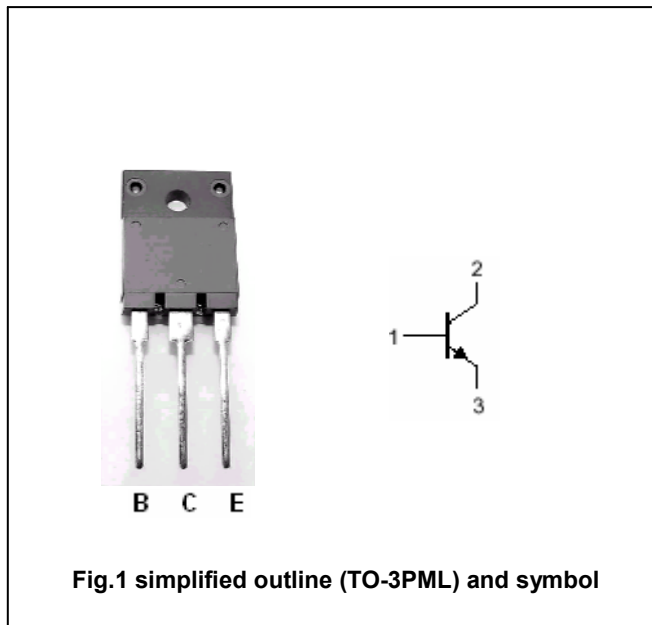
- With TO-3PML package
- Complement to type 2SB778

APPLICATIONS

- High power amplifier applications
- Recommended for 45~50W audio frequency amplifier output stage

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Base |
| 2 | Collector |
| 3 | Emitter |



Absolute maximum ratings (Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|------------------|---------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 120 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 120 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I _C | Collector current | | 10 | A |
| I _B | Base current | | 1.0 | A |
| P _C | Collector dissipation | T _C =25°C | 80 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -55~150 | °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 ; I _B =0 | 120 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =5A; I _B =0.5A | | | 2.5 | V |
| V _{BE} | Base-emitter on voltage | I _C =0.5A; V _{CE} =5V | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =120V; I _E =0 | | | 10 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 10 | μA |
| h _{FE} | DC current gain | I _C =1A ; V _{CE} =5V | 55 | | 160 | |
| f _T | Transition frequency | I _C =1A ; V _{CE} =5V | | 12 | | MHz |
| C _{OB} | Collector output capacitance | f=1MHz; V _{CB} =10V | | 170 | | pF |

◆ h_{FE} Classifications

| R | O |
|--------|--------|
| 55-110 | 80-160 |

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PACKAGE OUTLINE

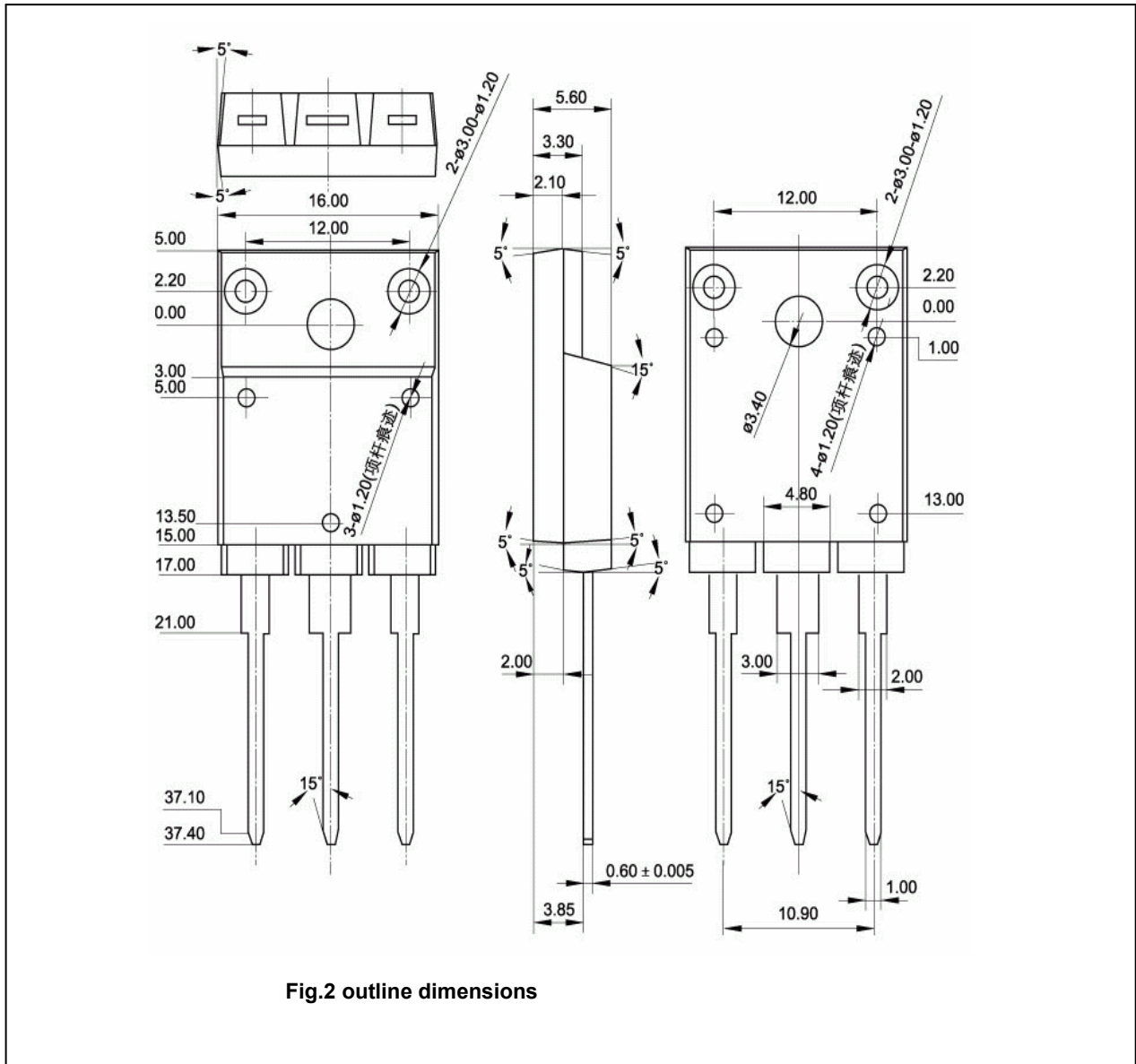


Fig.2 outline dimensions

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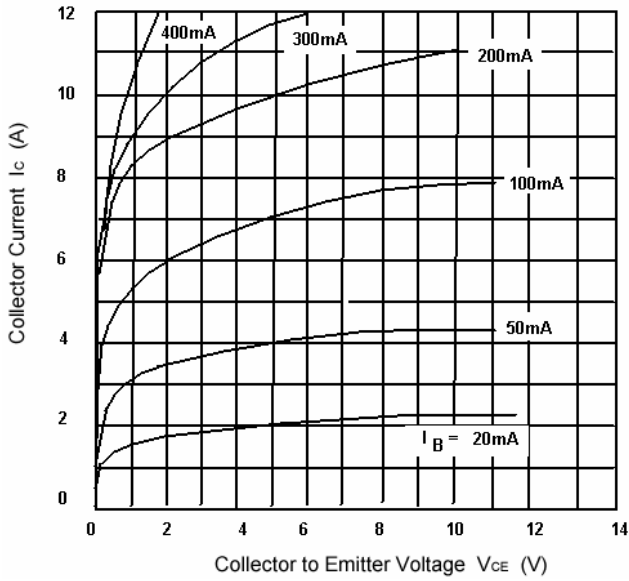


Fig.3 Static Characteristic

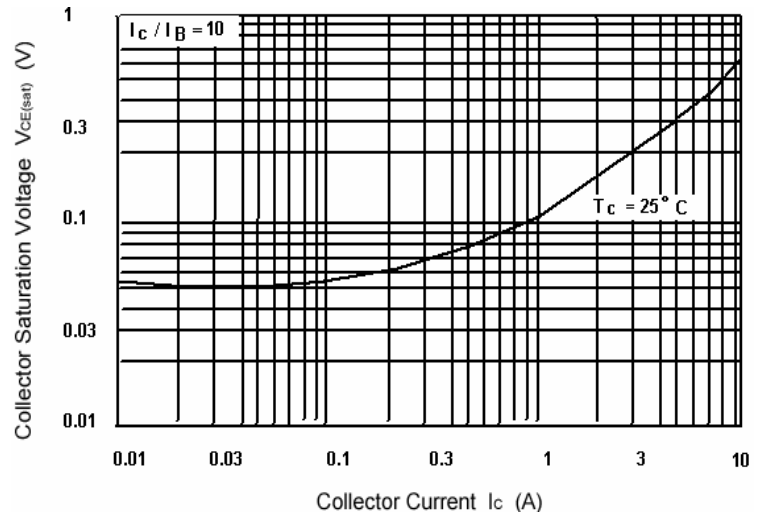


Fig.4 Collector-Emitter Saturation Voltage

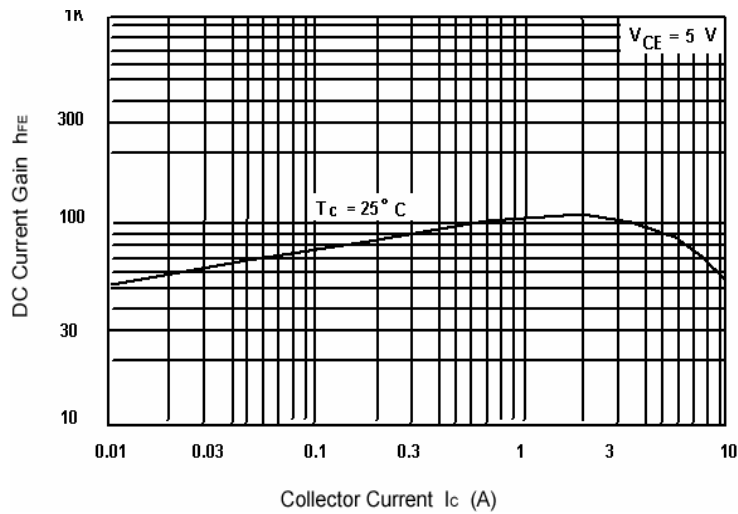


Fig.5 DC current Gain

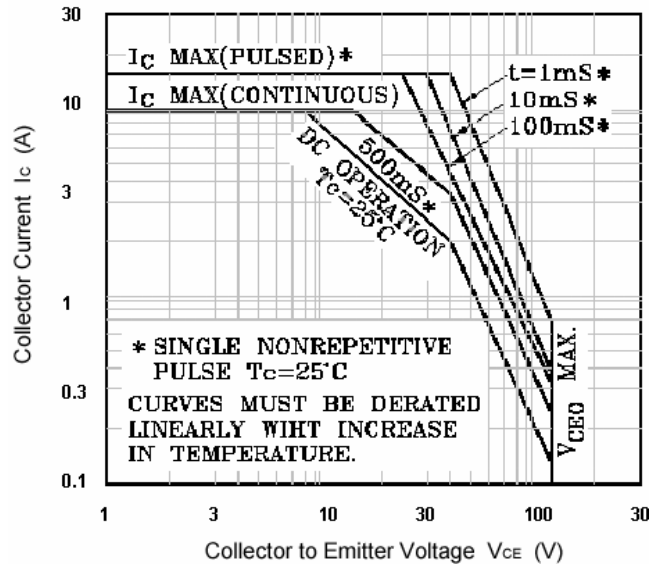


Fig.6 Safe Operating Area