

Silicon PNP Power Transistors

2SB834

DESCRIPTION

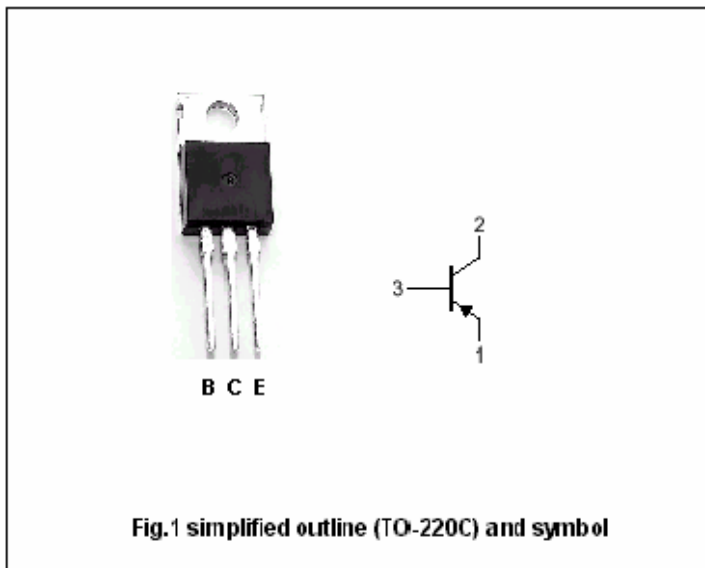
- With TO-220 package
- Low collector saturation voltage
- Complement to type 2SD880

APPLICATIONS

- Audio frequency power amplifier

PINNING

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



Absolute maximum ratings (Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | -60 | V |
| V _{CEO} | Collector-emitter voltage | Open base | -60 | V |
| V _{EBO} | Emitter-base voltage | Open collector | -7 | V |
| I _C | Collector current | | -3 | A |
| I _B | Base current | | -0.5 | A |
| P _C | Collector power dissipation | T _a =25°C | 1.5 | W |
| | | T _C =25°C | 30 | |
| 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 | -60 | | | V |
| V _{BE} | Base-emitter on voltage | I _C =-0.5A; V _{CE} =-5V | | -0.7 | -1.0 | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-3A; I _B =-0.3A | | -0.5 | -1.0 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-60V; I _E =0 | | | -0.1 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-7V; I _C =0 | | | -0.1 | mA |
| h _{FE-1} | DC current gain | I _C =-0.5A; V _{CE} =-5V | 60 | | 200 | |
| h _{FE-2} | DC current gain | I _C =-3A; V _{CE} =-5V | 20 | | | |
| C _{ob} | Collector output capacitance | I _E =0; V _{CB} =-10V; f=1MHz | | 150 | | pF |
| f _T | Transition frequency | I _C =-0.5A; V _{CE} =-5V | | 9 | | MHz |

Switching times

| | | | | | | |
|-----------------|--------------|--|--|-----|--|----|
| t _{on} | Turn-on time | V _{CC} =-30V; R _L =15Ω I _{B1} =-I _{B2} =-0.2A | | 0.4 | | μs |
| t _s | Storage time | | | 1.7 | | μs |
| t _f | Fall time | | | 0.5 | | μs |

◆ h_{FE-1} classifications

| O | Y |
|--------|---------|
| 60-120 | 100-200 |

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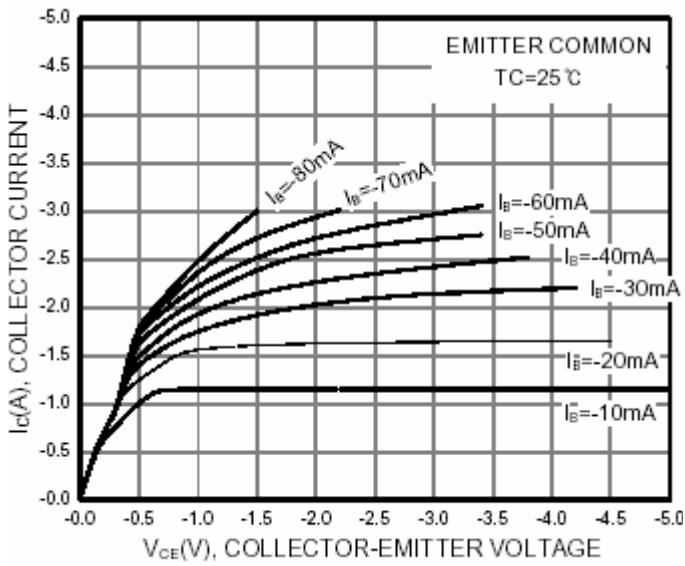


Fig.3 Static Characteristic

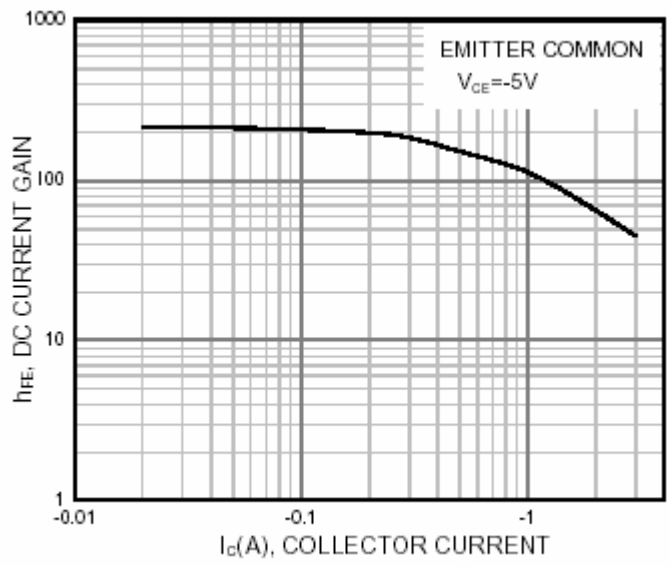


Fig.4 DC current Gain

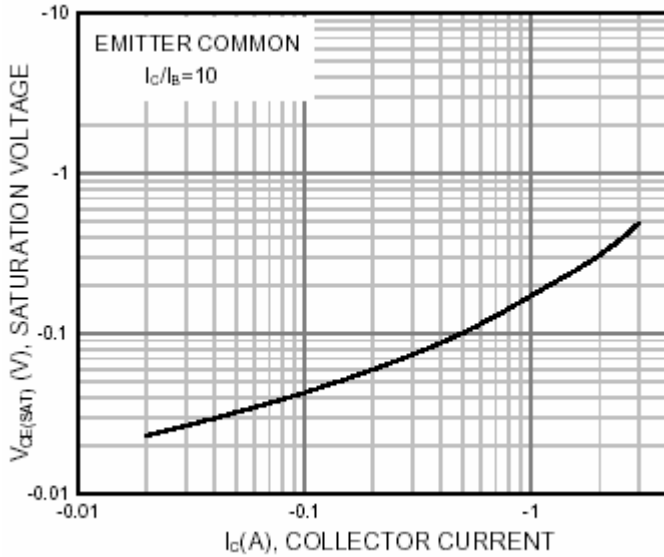


Fig.5 Collector-Emitter Saturation Voltage

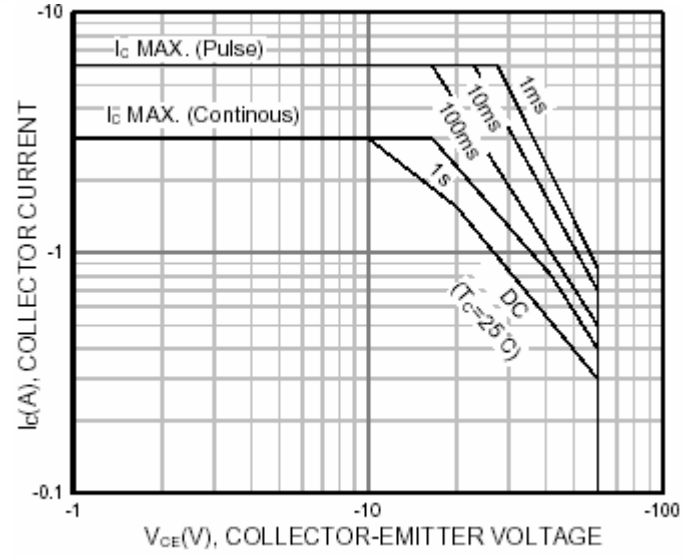


Fig.6 Safe Operating Area

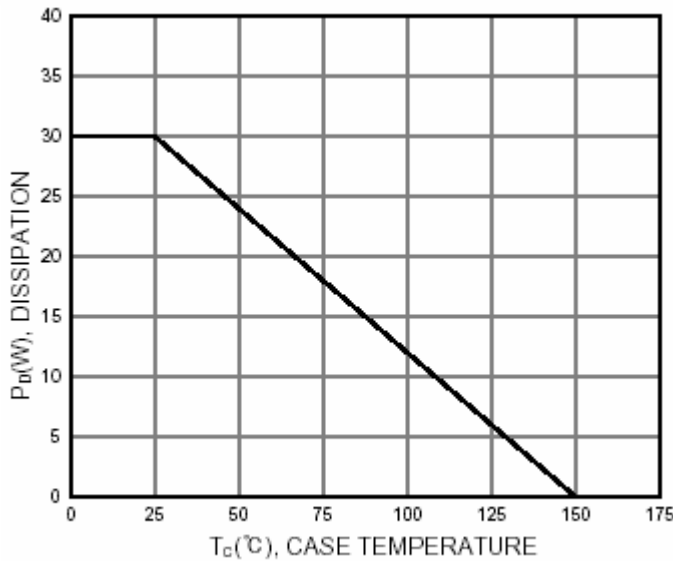


Fig.7 Power Derating