

Silicon NPN Power Transistors

2SC1846

DESCRIPTION

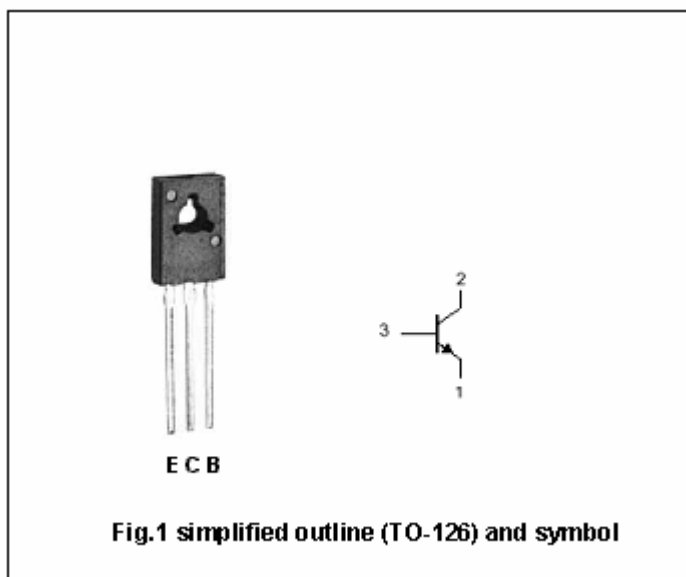
- With TO-126 package
- Complement to type 2SA885
- Low collector saturation

APPLICATIONS

- For medium output power amplification

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 | Open emitter | 45 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 35 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I _C | Collector current (DC) | | 1 | A |
| I _{CM} | Collector current-peak | | 1.5 | A |
| P _C | Collector power dissipation | T _C =25℃ | 1.2 ^{*1} | W |
| | | | 5 ^{*2} | |
| T _j | Junction temperature | | 150 | ℃ |
| T _{stg} | Storage temperature | | -55~150 | ℃ |

Note) *1: Without heat sink

*2: With a 100 × 100 × 2 mm A1 heat sink

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CHARACTERISTICS

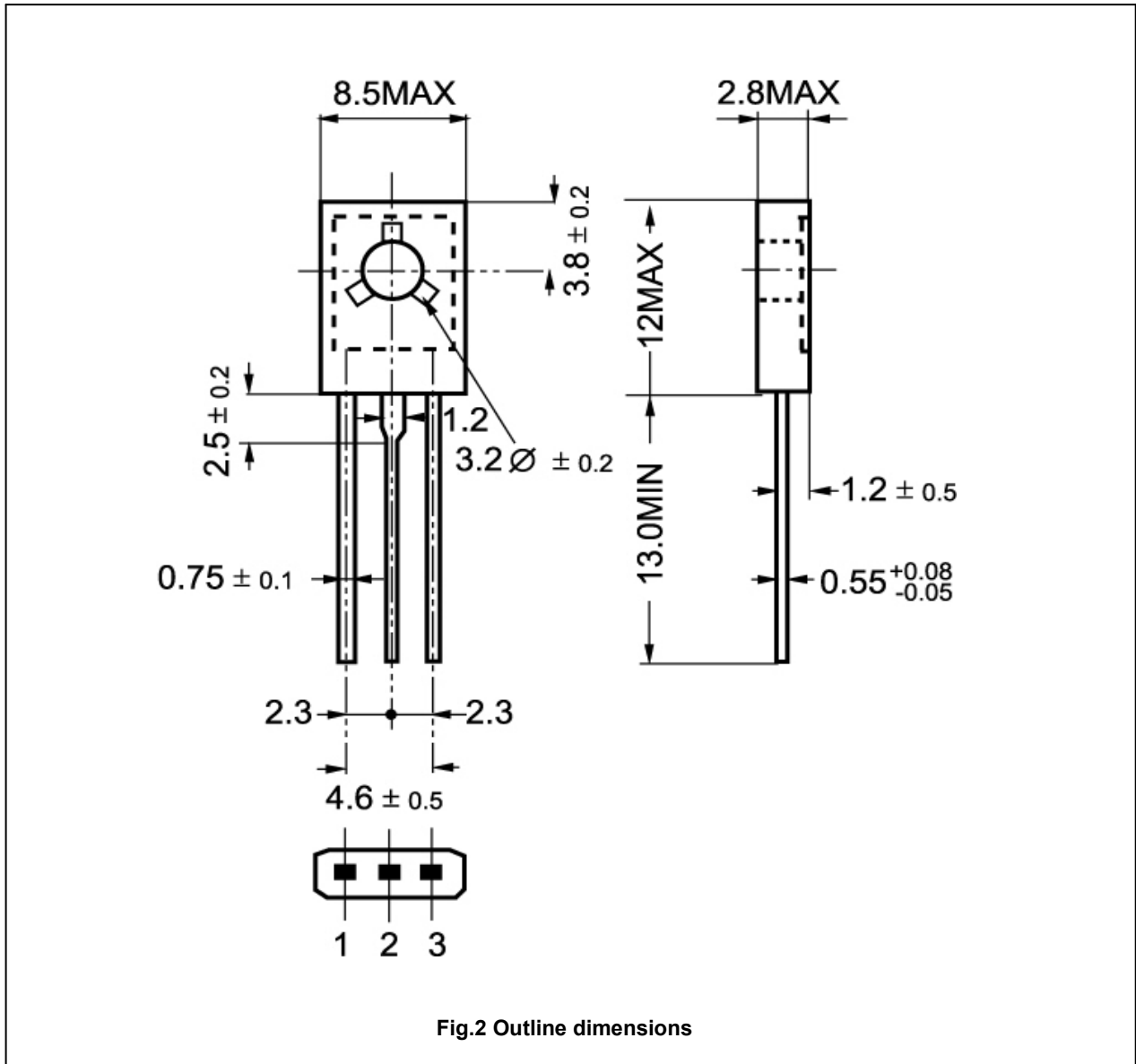
T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | I _C =2mA; I _B =0 | 35 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =1mA ; I _E =0 | 45 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =0.5A ; I _B =50mA | | | 0.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =20V; I _E =0 | | | 0.1 | μA |
| I _{CEO} | Collector cut-off current | V _{CE} =20V; I _B =0 | | | 100 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 10 | μA |
| h _{FE-1} | DC current gain | I _C =0.5A ; V _{CE} =10V | 85 | | 340 | |
| h _{FE-2} | DC current gain | I _C =1A ; V _{CE} =5V | 50 | | | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =10V; f=1MHz | | | 20 | pF |
| f _T | Transition frequency | I _C =50mA ; V _{CB} =10V, f=200MHz | | 200 | | MHz |

◆ h_{FE-1} Classifications

| Q | R | S |
|--------|---------|---------|
| 85-170 | 120-240 | 170-340 |

PACKAGE OUTLINE



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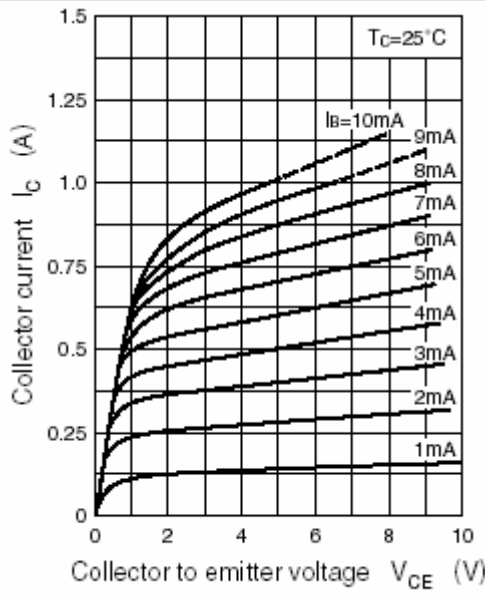


Fig.3 Static Characteristic

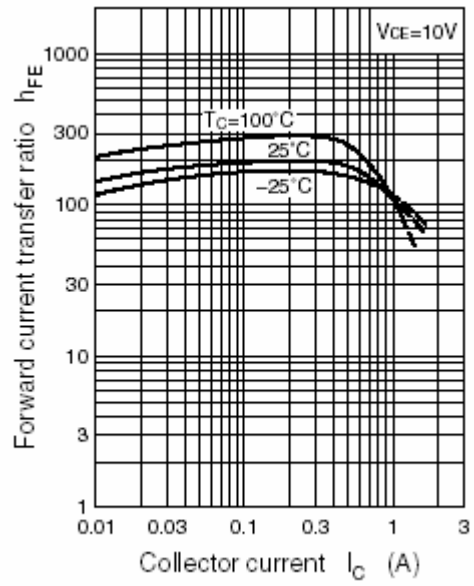


Fig.4 DC current Gain

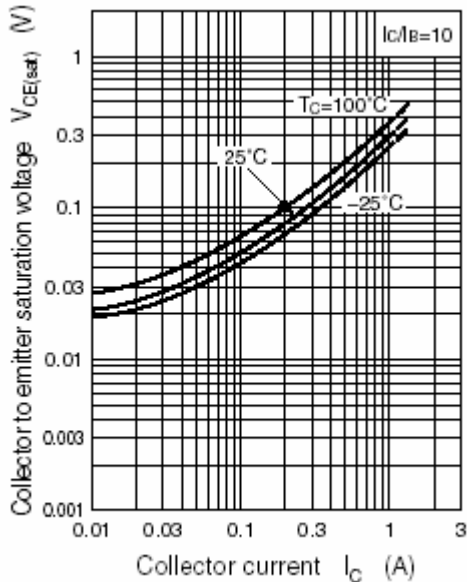


Fig.5 Collector-Emitter Saturation Voltage

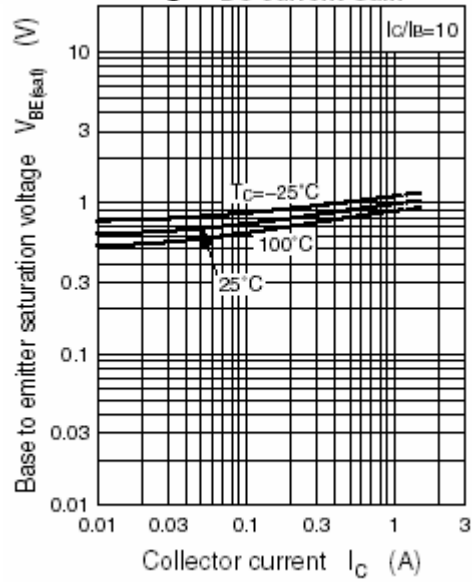


Fig.6 Base-Emitter Saturation Voltage

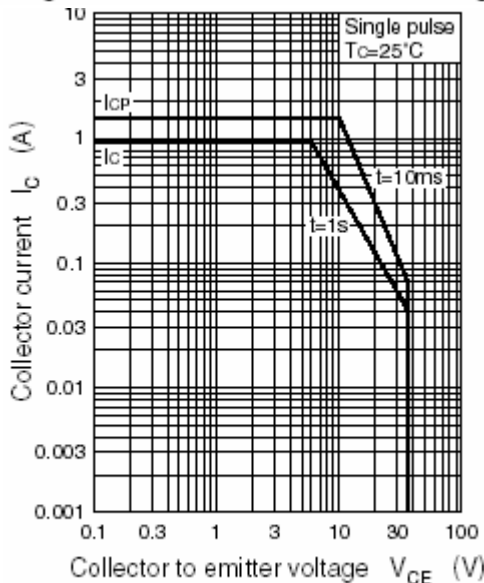


Fig.7 Safe Operating Area