

Silicon PNP Power Transistors

2SA940

DESCRIPTION

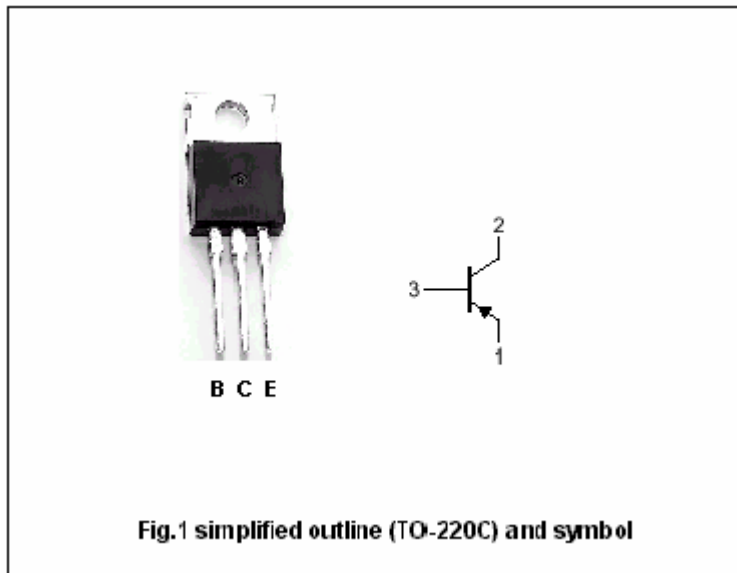
- With TO-220 package
- Complement to type 2SC2073

APPLICATIONS

- Power amplifier applications
- Vertical output applications

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 | -150 | V |
| V _{CEO} | Collector-emitter voltage | Open base | -150 | V |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I _C | Collector current (DC) | | -1.5 | A |
| I _B | Base current | | -0.5 | A |
| P _C | Collector power dissipation | T _a =25°C | 1.5 | W |
| | | T _C =25°C | 25 | |
| 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 _{CEsat} | Collector-emitter saturation voltage | I _C =-0.5A; I _B =-50mA | | | -1.5 | V |
| V _{BE} | Base-emitter on voltage | I _C =-0.5A; V _{CE} =-10V | | -0.75 | -0.85 | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =-1mA; I _E =0 | -150 | | | V |
| V _{(BR)CEO} | Collector-emitter breakdown voltage | I _C =-5mA; I _B =0 | -150 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =-1mA; I _C =0 | -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 =-0.5A; V _{CE} =-10V | 40 | | 140 | |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =-10V; f=1MHz | | 55 | | pF |
| f _T | Transition frequency | I _C =-0.5A; V _{CE} =-10V | | 4 | | MHz |

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PACKAGE OUTLINE

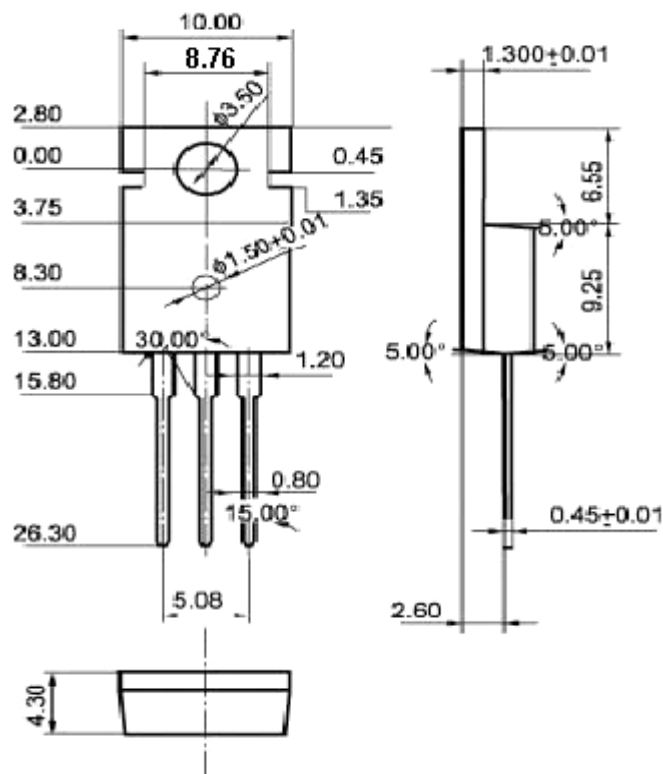


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)

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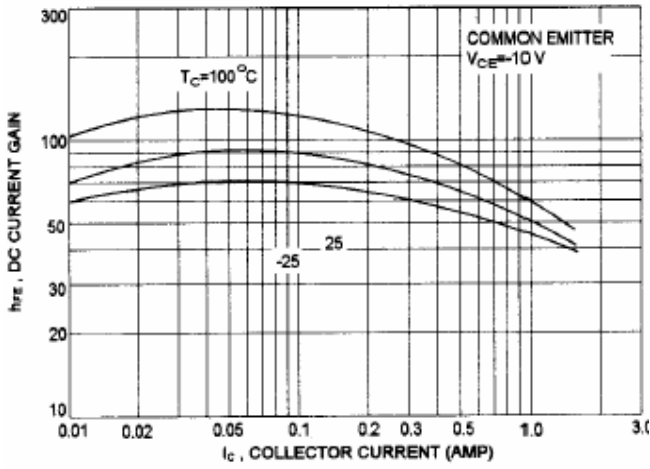


Fig.3 DC current Gain

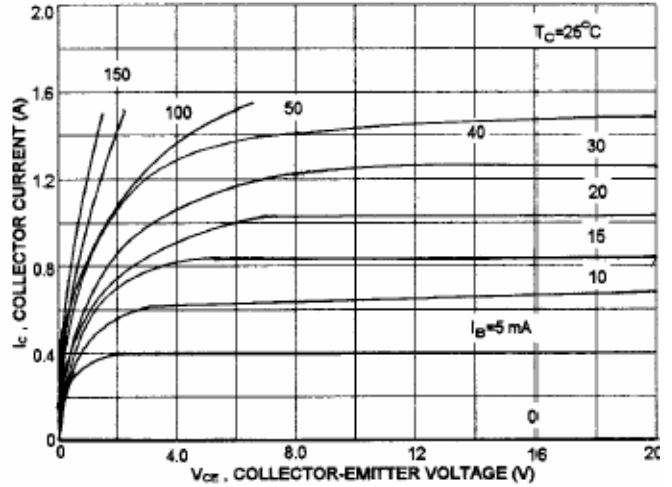


Fig.5 Static Characteristic

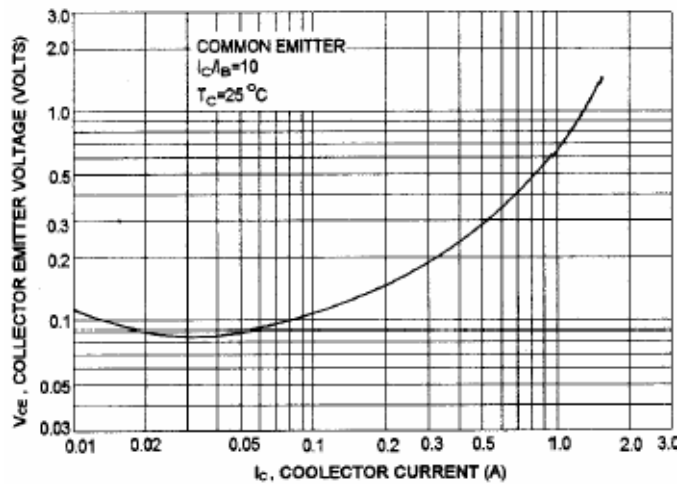


Fig.4 Collector-Emitter Saturation Voltage

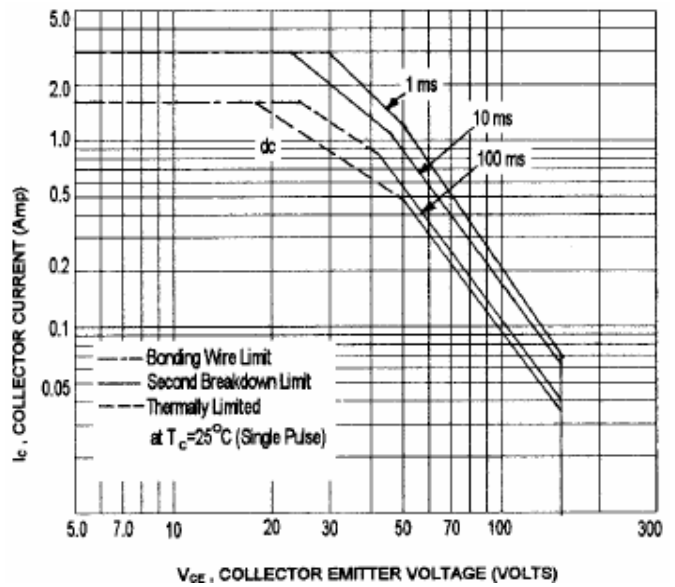


Fig.6 Safe Operating Area