

Silicon PNP Power Transistors

2SA1304

DESCRIPTION

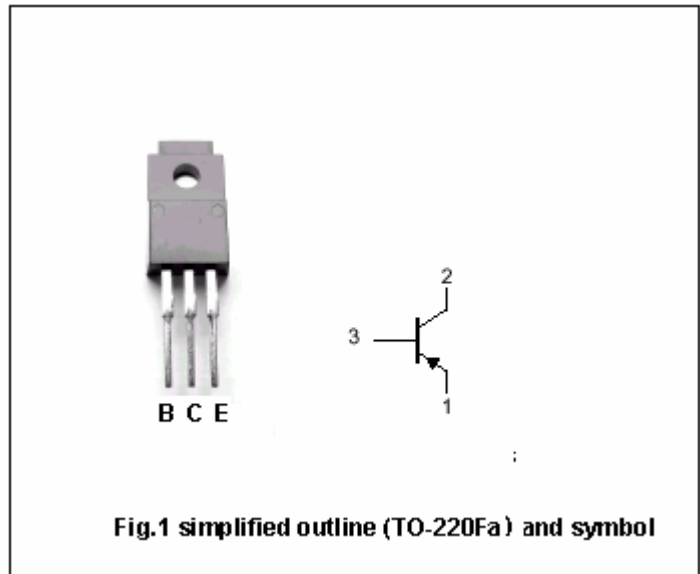
- With TO-220Fa package
- Complement to type 2SC3296
- High breakdown voltage

APPLICATIONS

- Power amplifier applications
- Vertical output applicatios

PINNING

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

Absolute maximum ratings($T_c=25^\circ\text{C}$)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|------------------------|---------|------------------|
| V_{CBO} | Collector-base voltage | Open emitter | -150 | V |
| V_{CEO} | Collector-emitter voltage | Open base | -150 | |
| V_{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I_C | Collector current | | -1.5 | A |
| I_B | Base current | | -0.5 | A |
| P_C | Collector power dissipation | $T_c=25^\circ\text{C}$ | 20 | W |
| | | $T_a=25^\circ\text{C}$ | 2 | |
| T_j | Junction temperature | | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | | -55~150 | $^\circ\text{C}$ |

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CHARACTERISTICS

Tj=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|------------------------------|------|------|-------|---------|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage | $I_C=-10mA, I_B=0$ | -150 | | | V |
| V_{CEsat} | Collector-emitter saturation voltage | $I_C=-500mA; I_B=-50mA$ | | | -1.5 | V |
| V_{BE} | Base-emitter on voltage | $I_C=-500mA; V_{CE}=-10V$ | | | -0.85 | 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 | $I_C=-500mA; V_{CE}=-10V$ | 40 | | 140 | |
| C_{ob} | Output capacitance | $I_E=0; V_{CB}=-10V, f=1MHz$ | | 55 | | pF |
| f_T | Transition frequency | $I_C=-500mA; V_{CE}=-10V$ | | 4 | | MHz |

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PACKAGE OUTLINE

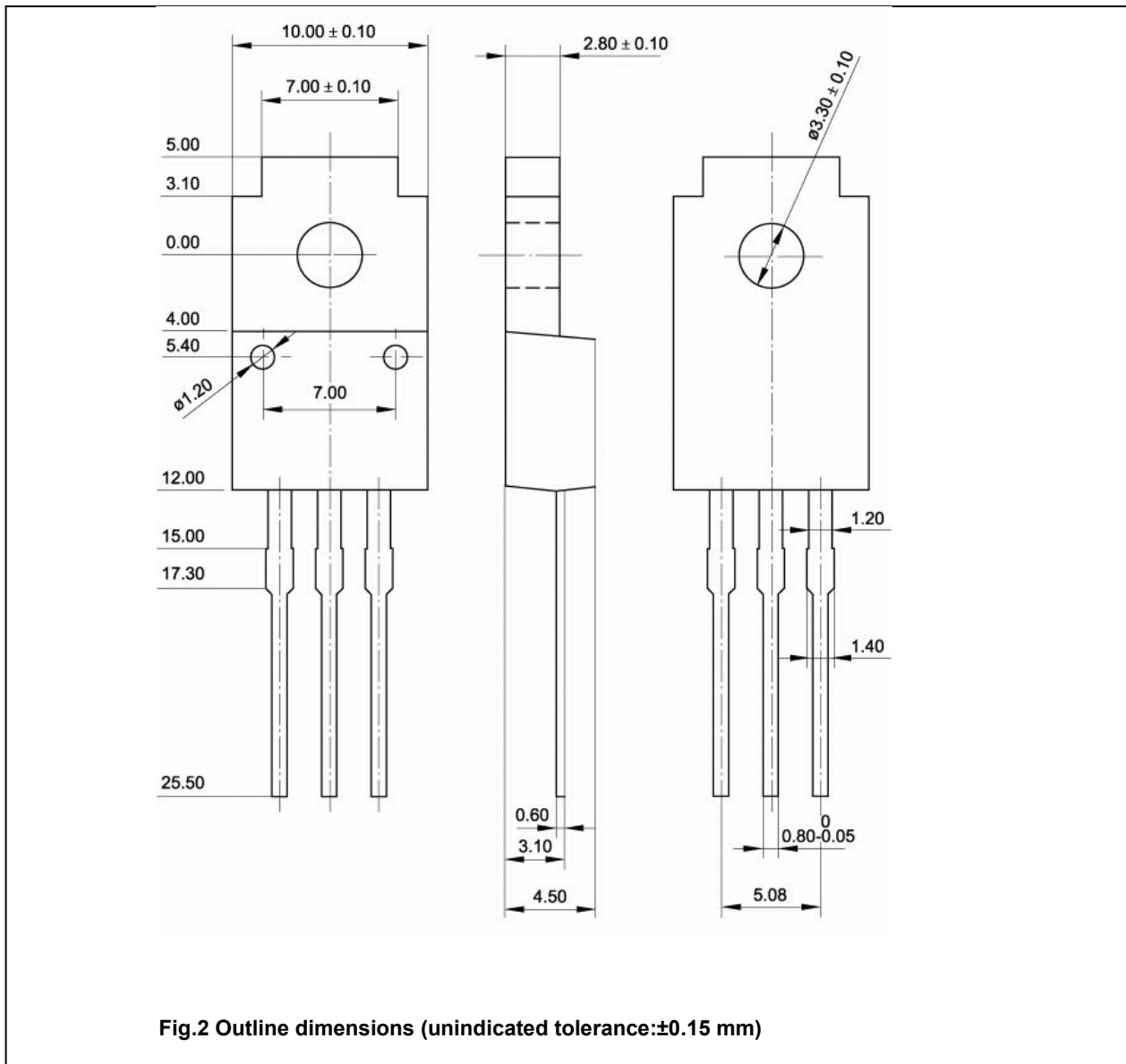


Fig.2 Outline dimensions (unindicated tolerance:±0.15 mm)

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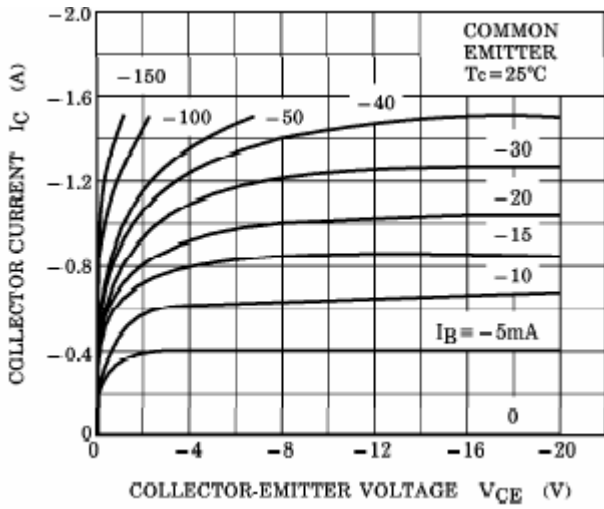


Fig.3 Static Characteristic

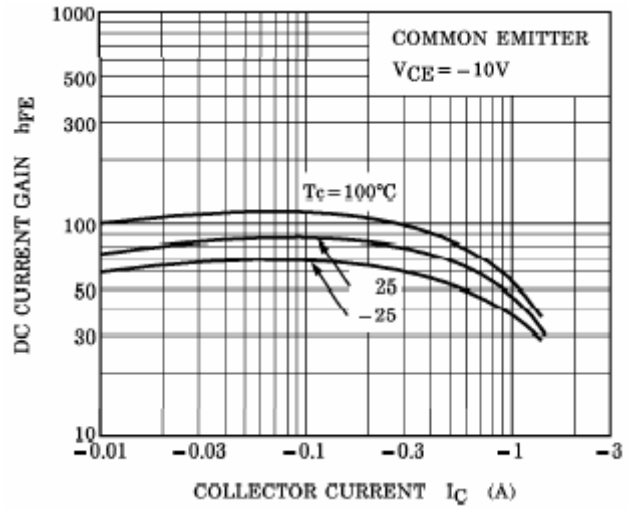


Fig.4 DC current Gain

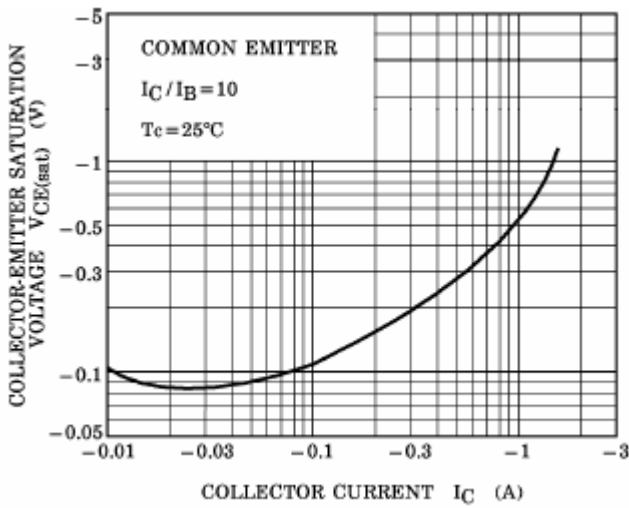


Fig.5 Collector-Emitter Saturation Voltage

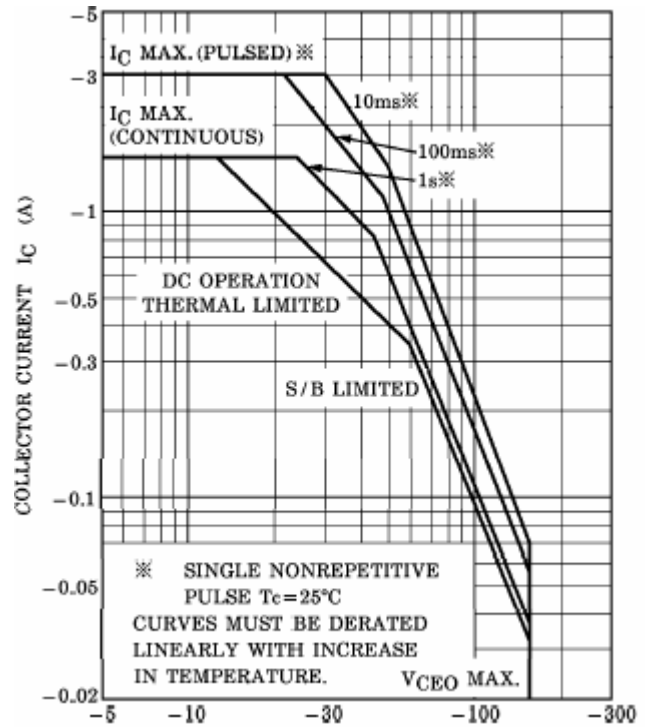


Fig.6 Safe Operating Area