

Silicon PNP Power Transistors

2SA1329

DESCRIPTION

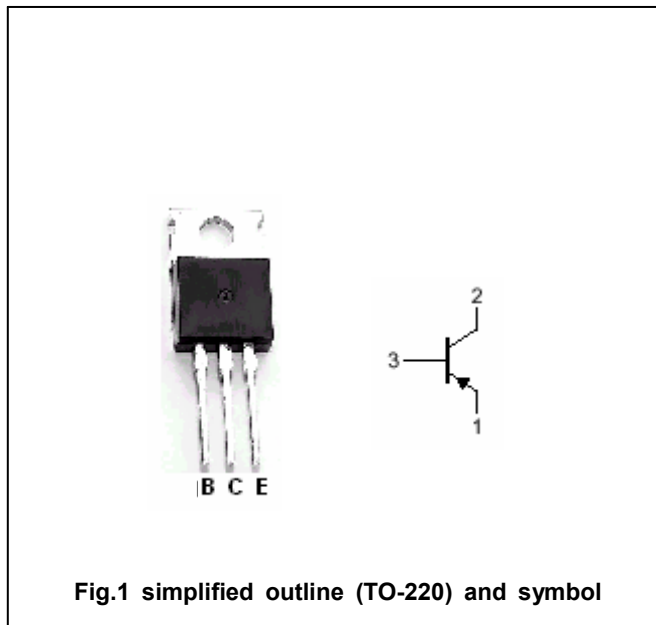
- With TO-220 package
- Complement to type 2SC3346
- Low collector saturation voltage
- High speed switching time

APPLICATIONS

- High current switching 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 | -80 | V |
| V _{CEO} | Collector-emitter voltage | Open base | -80 | V |
| V _{EBO} | Emitter-base voltage | Open collector | -6 | V |
| I _C | Collector current | | -12 | A |
| I _B | Base current | | -2 | A |
| P _C | Collector power dissipation | T _C =25°C | 40 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -55~150 | °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 | $I_C=-50mA, I_B=0$ | -80 | | | V |
| V_{CEsat} | Collector-emitter saturation voltage | $I_C=-6A; I_B=-0.3A$ | | -0.2 | -0.4 | V |
| V_{BEsat} | Base-emitter saturation voltage | $I_C=-6A; I_B=-0.3A$ | | -0.9 | -1.2 | V |
| I_{CBO} | Collector cut-off current | $V_{CB}=-80V; I_E=0$ | | | -10 | μA |
| I_{EBO} | Emitter cut-off current | $V_{EB}=-6V; I_C=0$ | | | -10 | μA |
| h_{FE-1} | DC current gain | $I_C=-1A; V_{CE}=-1V$ | 70 | | 240 | |
| h_{FE-2} | DC current gain | $I_C=-6A; V_{CE}=-1V$ | 40 | | | |
| C_{ob} | Output capacitance | $I_E=0; V_{CB}=-10V; f=1MHz$ | | 400 | | pF |
| f_T | Transition frequency | $I_C=-1A; V_{CE}=-5V$ | | 50 | | MHz |

Switching times

| | | | | | | |
|----------|--------------|------------------------------------------------------|--|-----|--|---------|
| t_{on} | Turn-on time | $I_{B1}=-I_{B2}=-0.3A$ $R_L=5\Omega; V_{CC}=-30V$ | | 0.3 | | μs |
| t_s | Storage time | | | 1.0 | | μs |
| t_f | Fall time | | | 0.5 | | μs |

◆ h_{FE-1} Classifications

| O | Y |
|--------|---------|
| 70-140 | 120-240 |

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PACKAGE OUTLINE

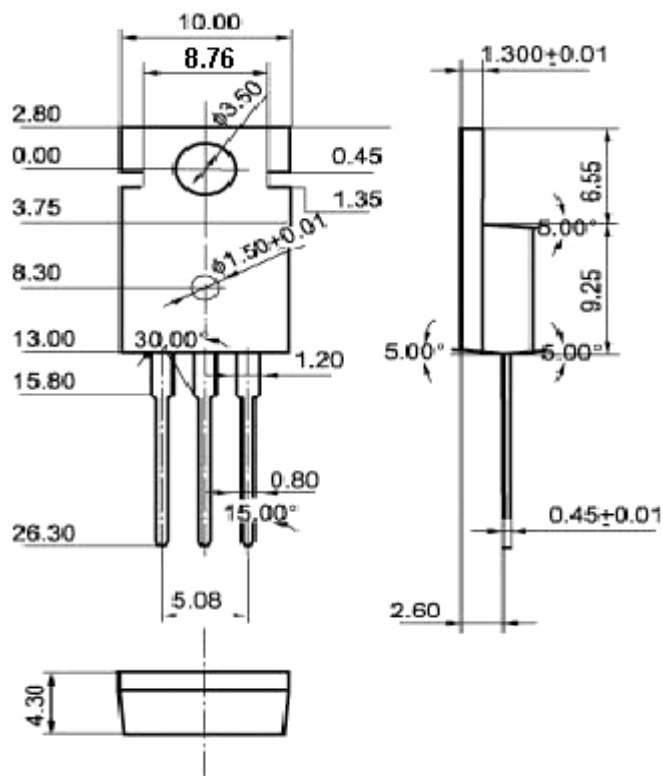


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)

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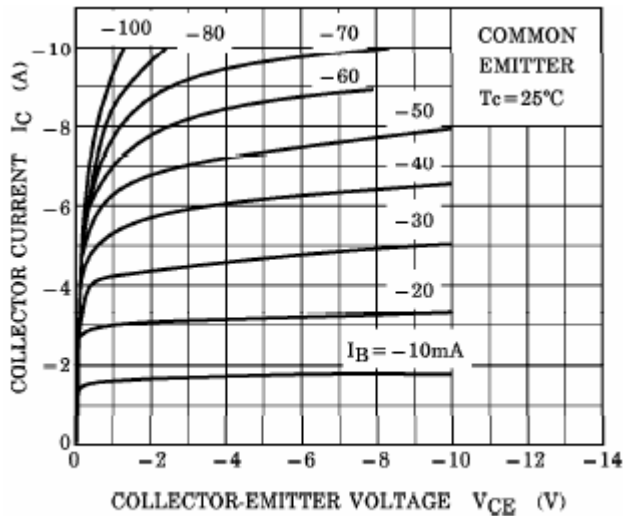


Fig.3 Static Characteristic

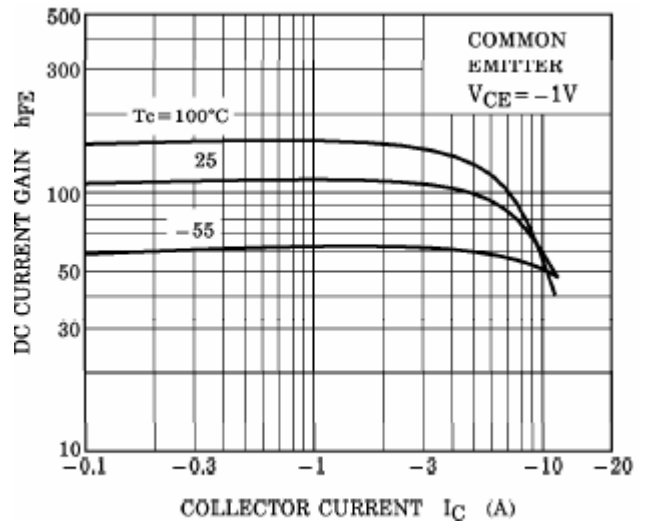


Fig.4 DC current Gain

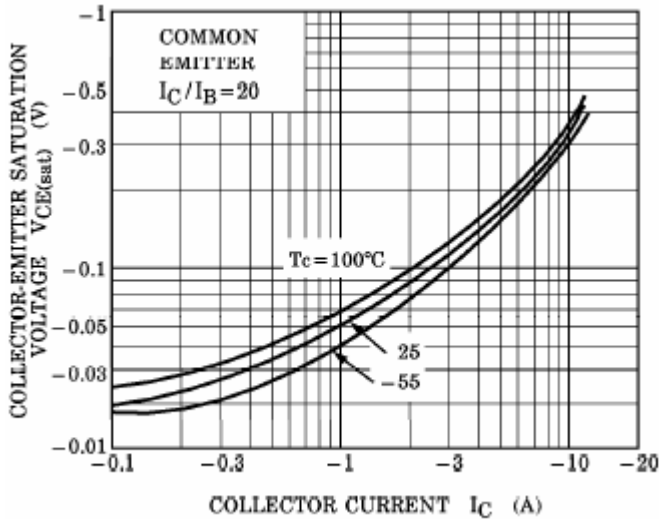


Fig.5 Collector-Emitter Saturation Voltage

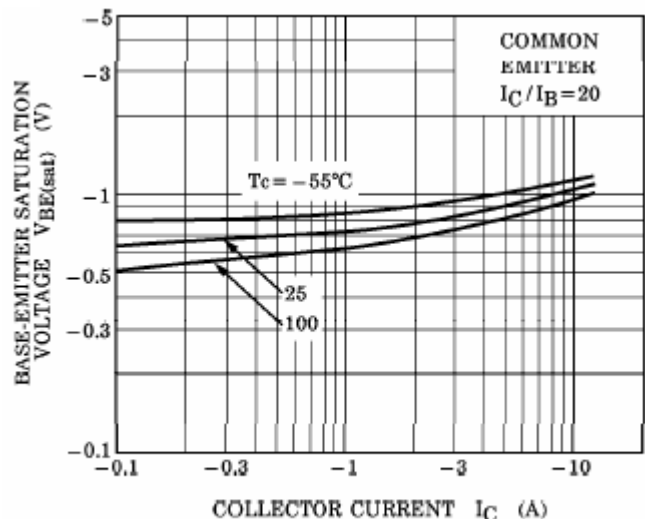


Fig.6 Base-Emitter Saturation Voltage

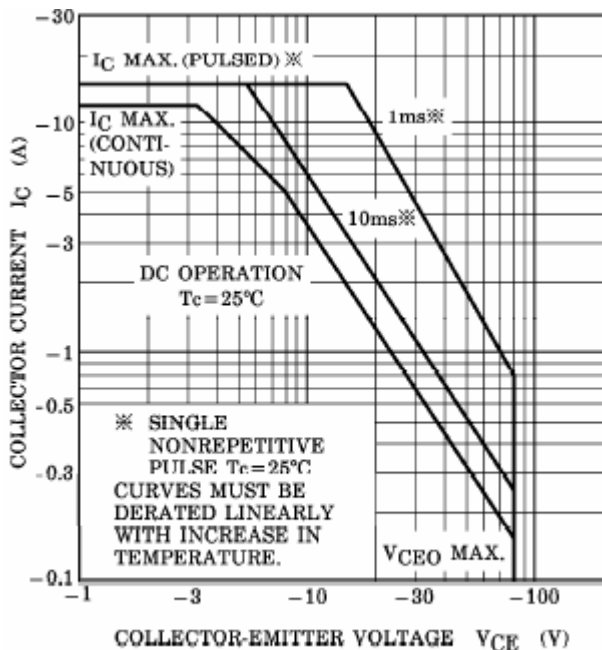


Fig.7 Safe Operating Area