

Silicon PNP Power Transistors

2SA1469

DESCRIPTION

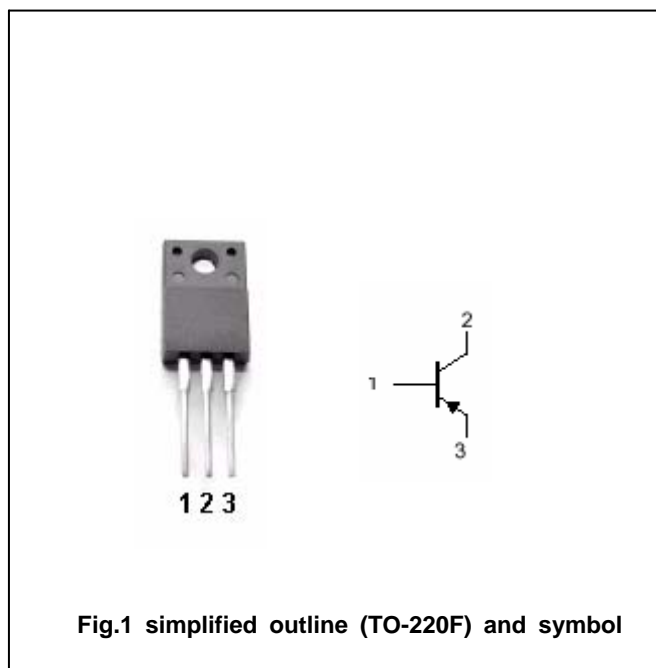
- With TO-220F package
- Complement to type 2SC3746
- Low saturation voltage
- Excellent current dependence of h_{FE}
- Short switching time

APPLICATIONS

- Various inductance of lamp drivers for electrical equipment
- Inverters ,converters
- Power amplification
- Switching regulator ,driver

PINNING

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

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

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|--------------------------|---------|--------------------|
| V_{CBO} | Collector-base voltage | Open emitter | -80 | V |
| V_{CEO} | Collector-emitter voltage | Open base | -60 | V |
| V_{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I_C | Collector current | | -5 | A |
| I_{CM} | Collector current-peak | | -7 | A |
| P_C | Collector power dissipation | $T_a=25^{\circ}\text{C}$ | 2 | W |
| | | $T_C=25^{\circ}\text{C}$ | 20 | |
| T_j | Junction temperature | | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage temperature | | -55~150 | $^{\circ}\text{C}$ |

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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 =-1mA ; R _{BE} =∞ | -60 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =-10mA ; I _E =0 | -80 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =-10mA ; I _C =0 | -5 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-2.5A I _B =-0.125A | | | -0.4 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-40V I _E =0 | | | -0.1 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-4V ; I _C =0 | | | -0.1 | mA |
| h _{FE} | DC current gain | I _C =-1A ; V _{CE} =-2V | 70 | | 280 | |
| f _T | Transition frequency | I _C =-1A ; V _{CE} =-5V | | 100 | | MHz |

Switching times

| | | | | | | |
|-----------------|--------------|--|--|-----|--|----|
| t _{on} | Turn-on time | I _C =-2.0A; I _{B1} =-I _{B2} =-0.1A V _{CC} =20V, R _L =10Ω | | 0.1 | | μs |
| t _s | Storage time | | | 0.5 | | μs |
| t _f | Fall time | | | 0.1 | | μs |

◆ h_{FE} Classifications

| Q | R | S |
|--------|---------|---------|
| 70-140 | 100-200 | 140-280 |

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PACKAGE OUTLINE

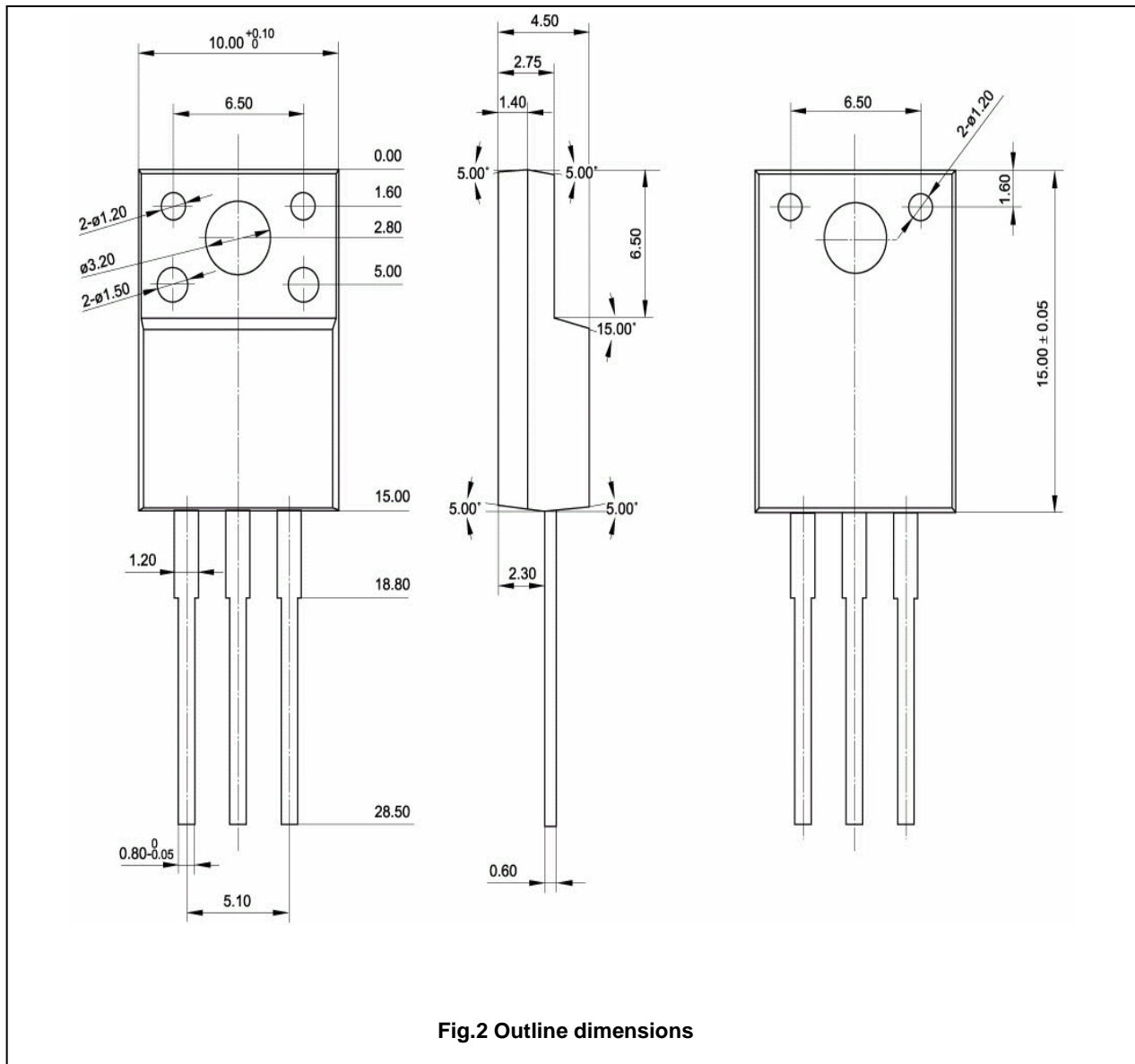


Fig.2 Outline dimensions

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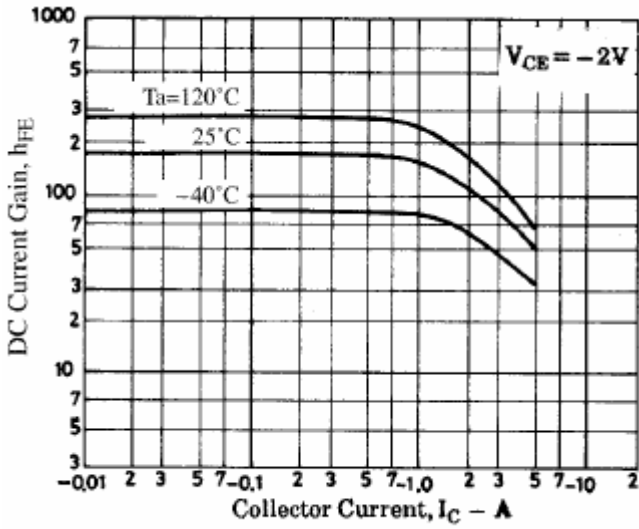


Fig.3 DC current Gain

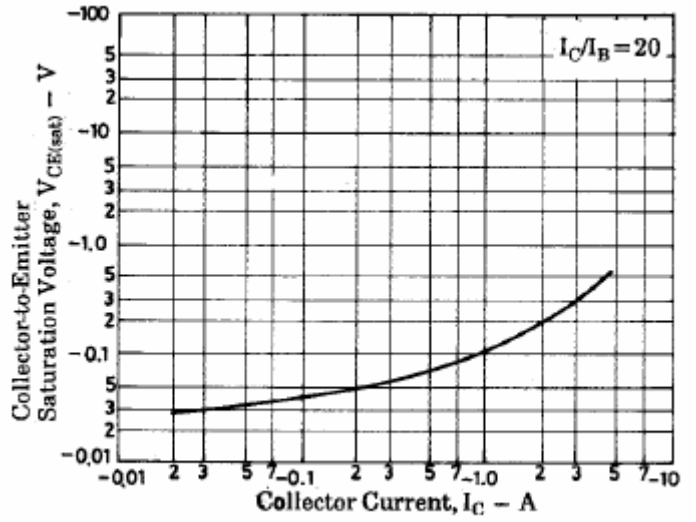


Fig.4 Collector-Emitter Saturation Voltage

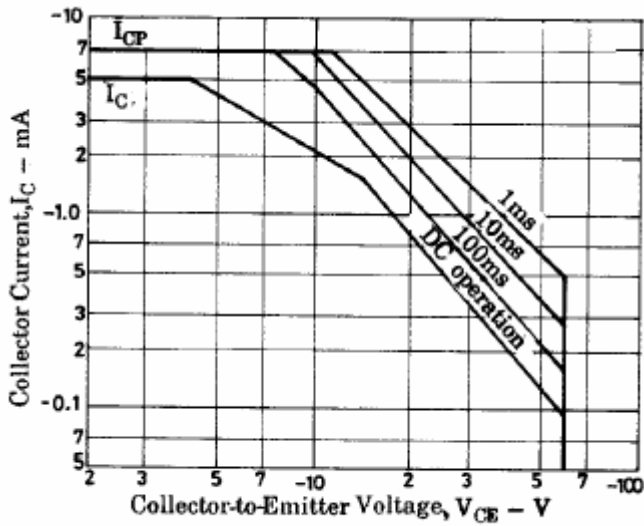


Fig.5 Safe Operating Area