

Silicon NPN Power Transistors

2SC5299

DESCRIPTION

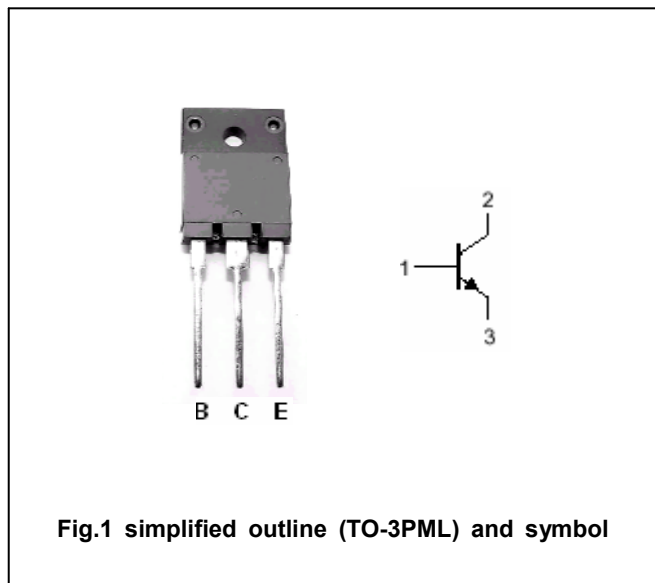
- With TO-3PML package
- High breakdown voltage, high reliability.
- High speed

APPLICATIONS

- Ultrahigh-definition CRT display
- Horizontal deflection output applications

PINNING

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



ABSOLUTE MAXIMUM RATINGS(T_C=25℃)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|---------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 1500 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 800 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 6 | V |
| I _C | Collector current | | 10 | A |
| I _{CM} | Collector current-peak | | 25 | A |
| P _C | Collector power dissipation | T _C =25℃ | 70 | W |
| | | | 3 | |
| T _j | Junction temperature | | 150 | ℃ |
| T _{stg} | Storage temperature | | -55~150 | ℃ |

Silicon NPN Power Transistors

2SC5299

CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|------|-----|------|
| V _{CE(sat)} | Collector-emitter saturation voltage | I _C =8A; I _B =2 A | | | 5.0 | V |
| V _{BE(sat)} | Base-emitter saturation voltage | I _C =8A; I _B =2 A | | | 1.5 | V |
| V _{CEO(SUS)} | Collector-emitter sustaining voltage | I _C =100mA; I _B =0 | 800 | | | V |
| I _{EBO} | Emitter cut-off current | V _{EB} =4V ; I _C =0 | | | 1.0 | mA |
| I _{CBO} | Collector cut-off current | V _{CB} =800V ; I _E =0 | | | 10 | μA |
| I _{CES} | Collector cut-off current | V _{CE} =1500V; R _{BE} =0 | | | 1 | mA |
| h _{FE-1} | DC current gain | I _C =1 A ; V _{CE} =5V | 20 | | 30 | |
| h _{FE-2} | DC current gain | I _C =8A ; V _{CE} =5V | 4 | | 7 | |

Switching times

| | | | | | | |
|------------------|--------------|---|--|-----|-----|----|
| t _{stg} | Storage time | I _C =6A; R _L =33.3Ω I _{B1} =1.2A; I _{B2} =-2.4A V _{CC} =200V | | | 3.0 | μs |
| t _f | Fall time | | | 0.1 | 0.2 | μs |

Silicon NPN Power Transistors

2SC5299

PACKAGE OUTLINE

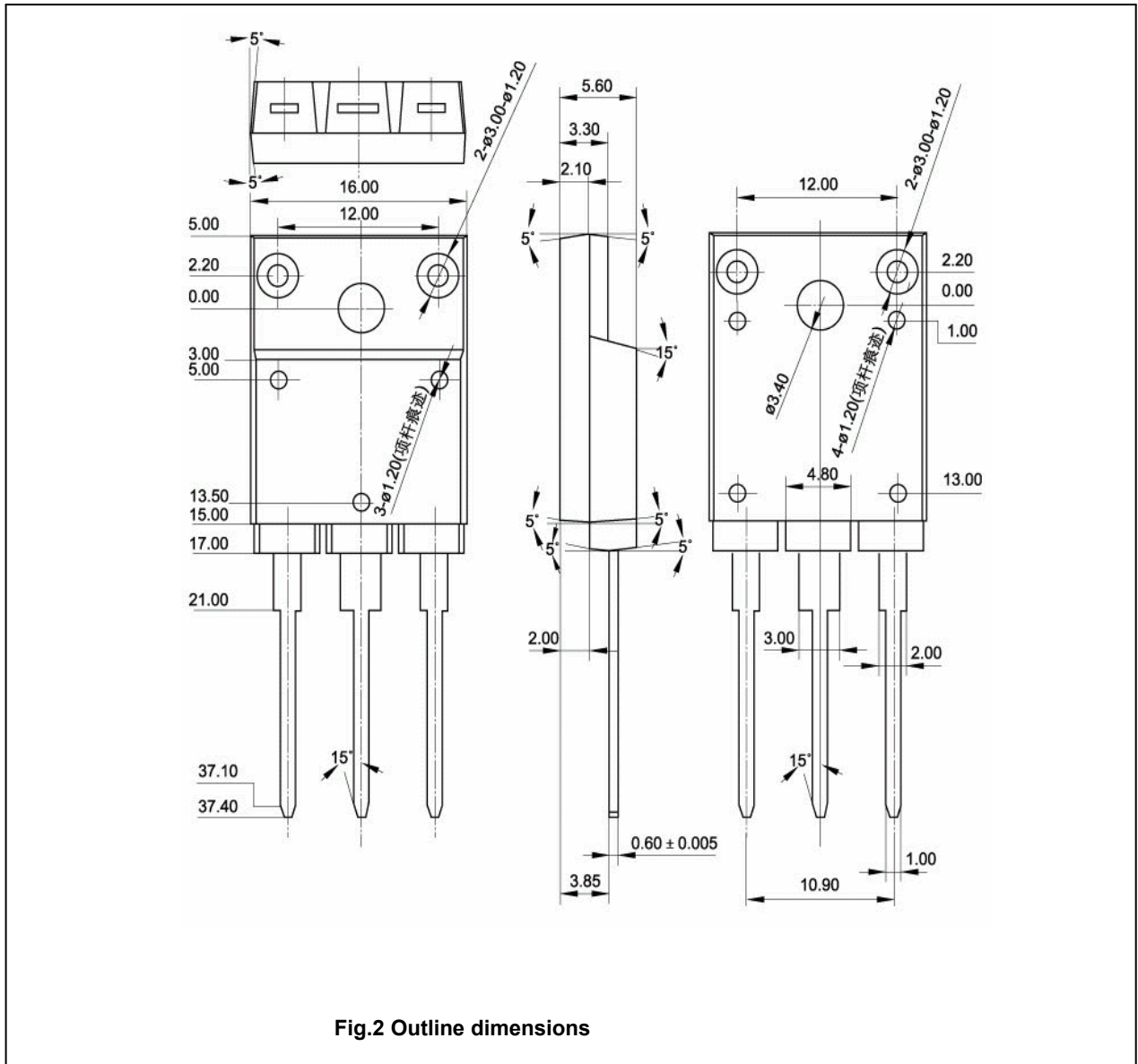


Fig.2 Outline dimensions

Silicon NPN Power Transistors

2SC5299

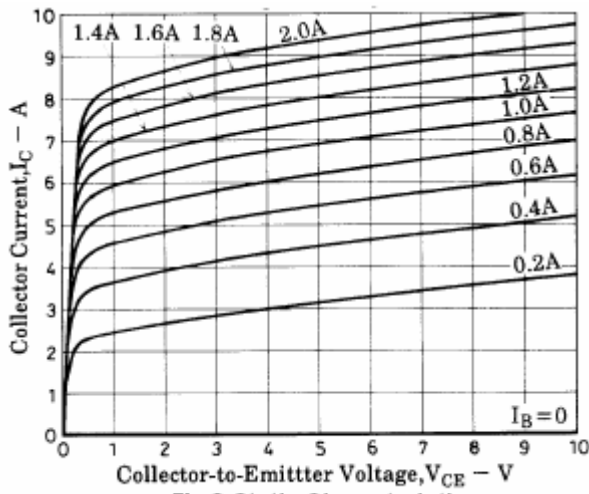


Fig.3 Static Characteristic

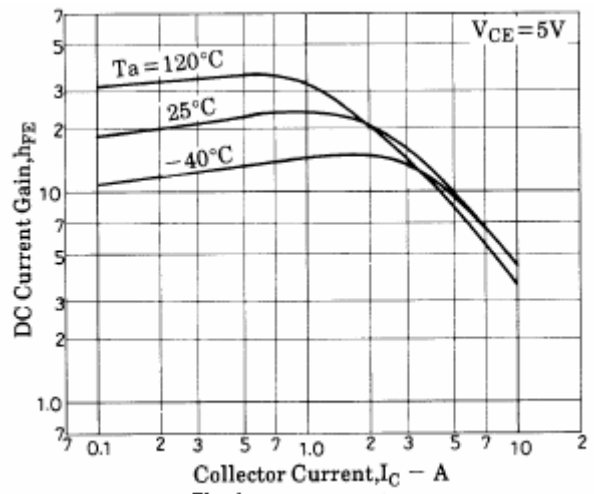


Fig.4 DC current Gain

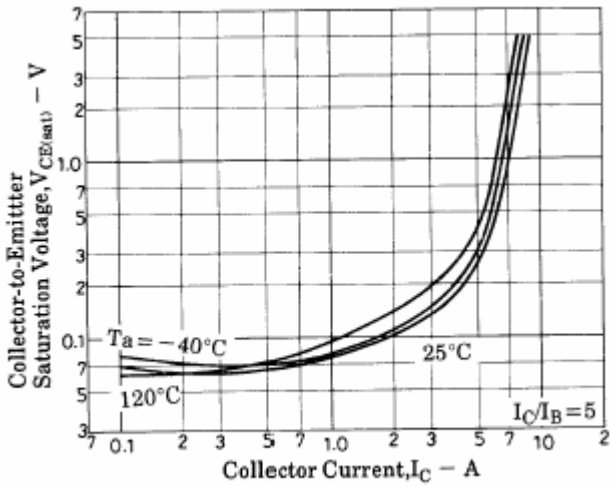


Fig.5 Collector-Emitter Saturation Voltage

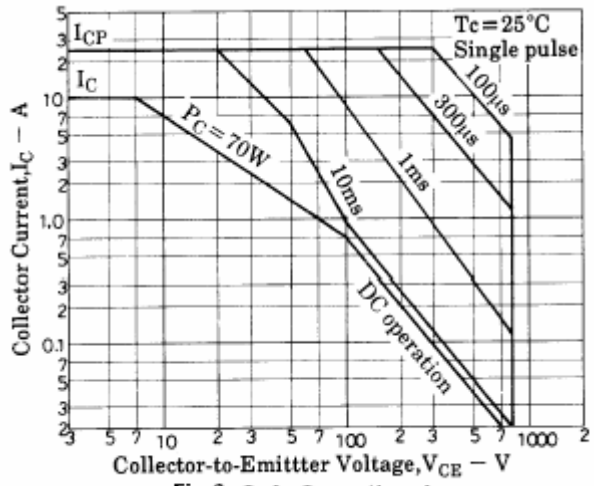


Fig.6 Safe Operating Area