

Silicon NPN Power Transistors

2SD1877

DESCRIPTION

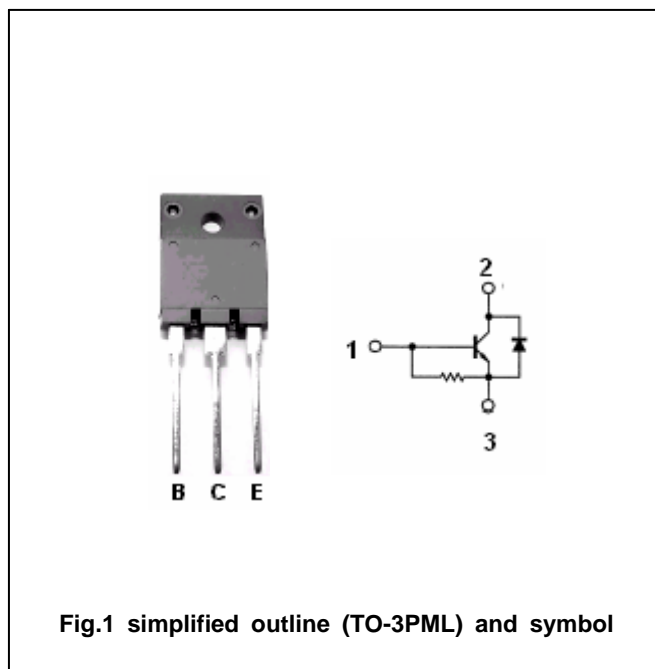
- With TO-3PML package
- High speed
- High breakdown voltage
- High reliability
- Built-in damper diode

APPLICATIONS

- Color TV horizontal deflection output
- Color display horizontal deflection output

PINNING

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

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

| 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 | | 4 | A |
| I_{CM} | Collector current-peak | | 12 | A |
| P_C | Collector power dissipation | | 50 | W |
| 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 _{CEO(SUS)} | Collector-emitter sustaining voltage | I _C =100mA; I _B =0 | 800 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =2.5A; I _B =0.8A | | | 5 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =2.5A; I _B =0.8A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =800V; I _E =0 | | | 10 | μ A |
| I _{CES} | Collector cut-off current | V _{CB} =1500V; R _{BE} =0 | | | 1.0 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =4V; I _C =0 | 40 | | 130 | mA |
| h _{FE-1} | DC current gain | I _C =0.5A; V _{CE} =5V | 8 | | | |
| h _{FE-2} | DC current gain | I _C =2.5A; V _{CE} =5V | 3.5 | | 7 | |
| V _F | Diode forward voltage | I _{EC} =4A | | | 2.0 | V |
| t _f | Fall time | I _C =3A; R _L =50 Ω I _{B1} =0.8A; I _{B2} =-1.6A; V _{CC} =200V | | 0.1 | 0.3 | μ s |

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PACKAGE OUTLINE

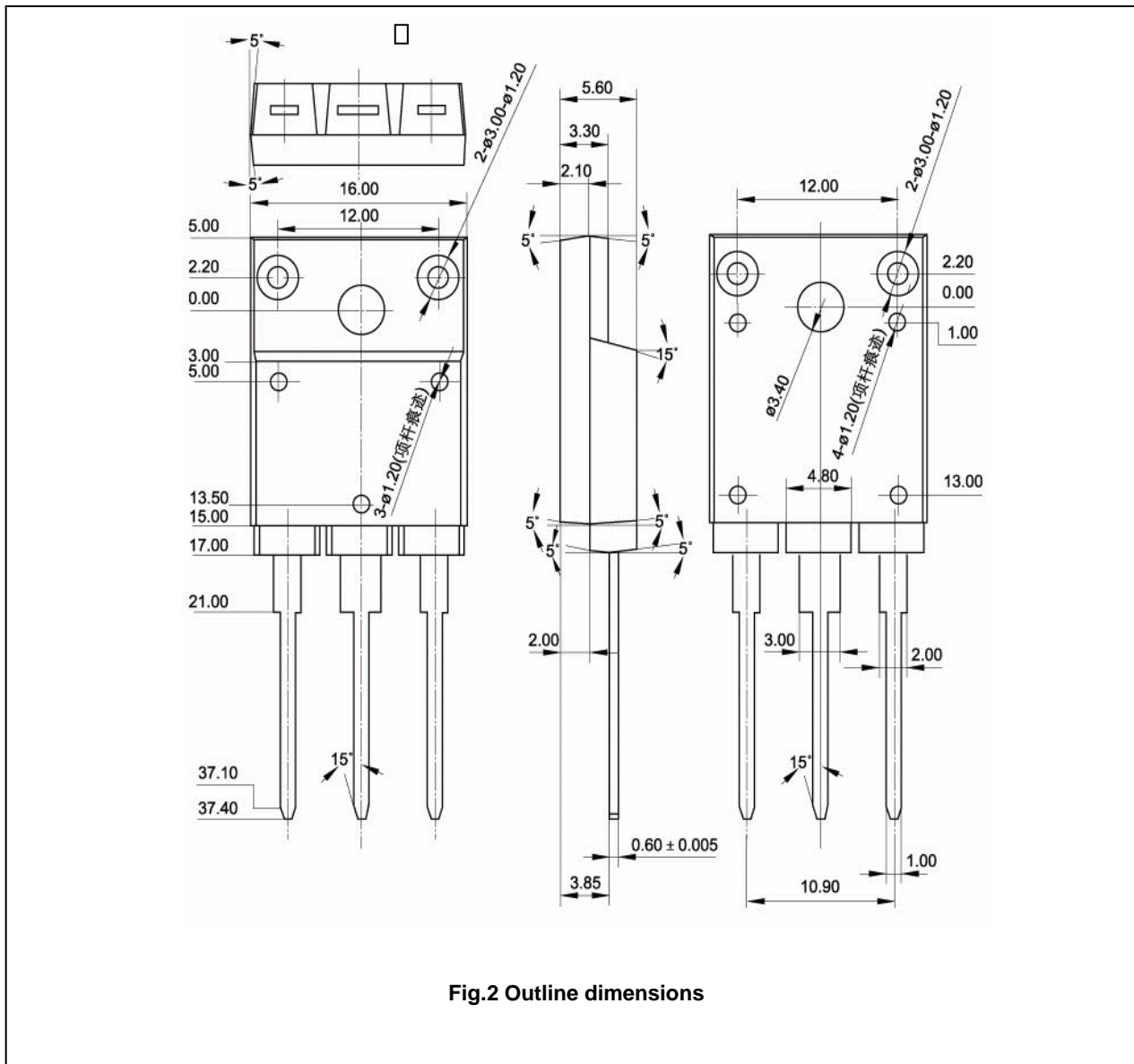


Fig.2 Outline dimensions

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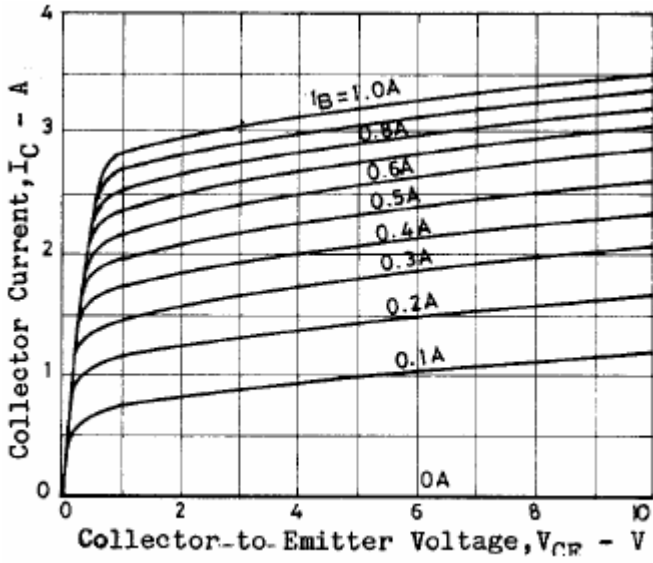


Fig.3 Static Characteristic

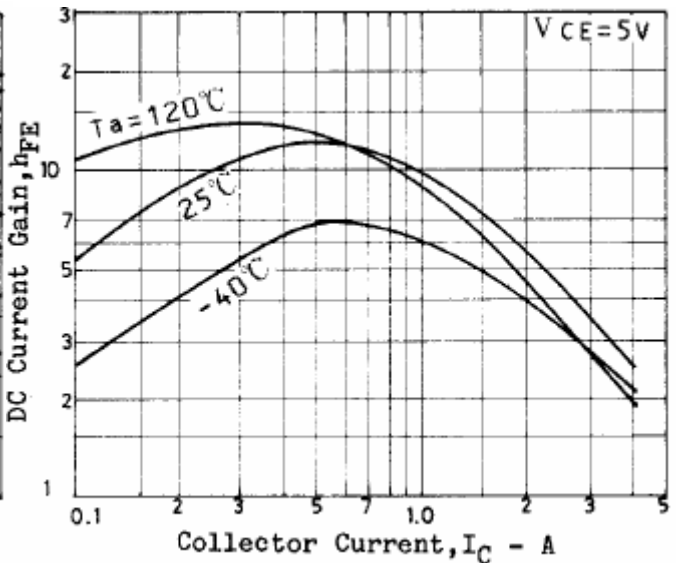


Fig.4 DC current Gain

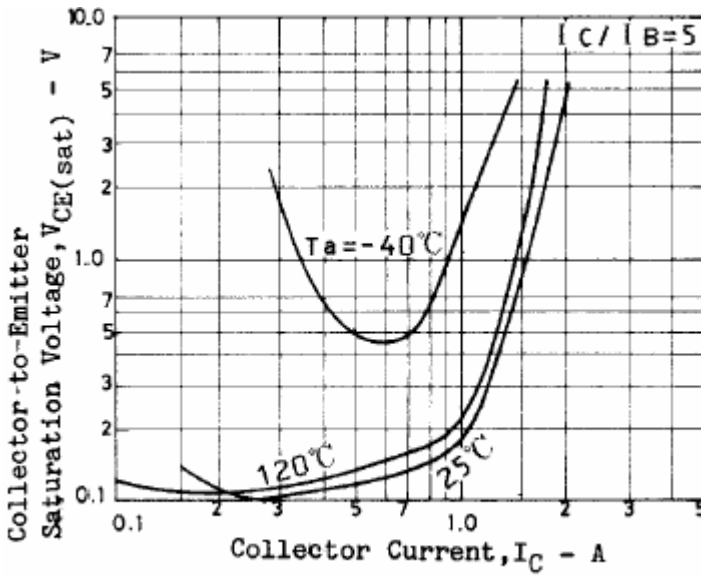


Fig.5 Collector-Emitter Saturation Voltage

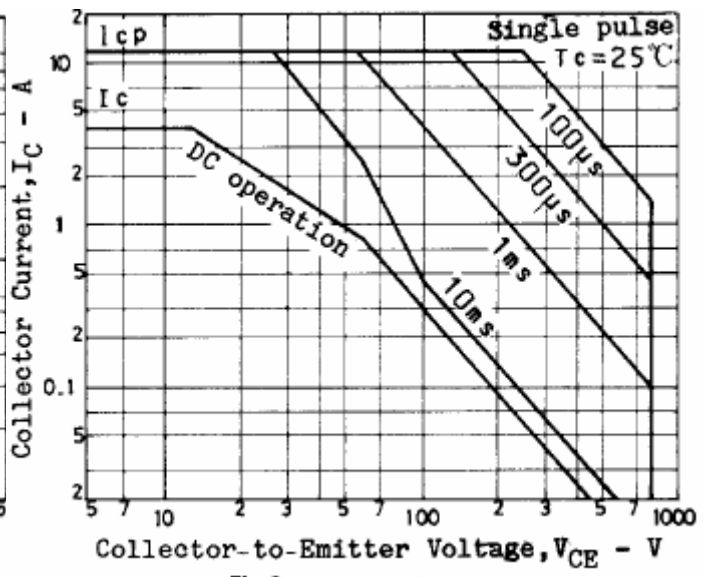


Fig.6 Safe Operating Area