# Silicon NPN Power Transistors 2SC3895

## DESCRIPTION

- With TO-3PML package
- High speed
- High breakdown voltage
- High reliability

## APPLICATIONS

- Ultrahigh-definition CRT display horizontal deflection output applications

**PINNING**

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

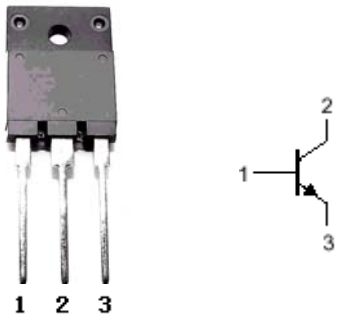



**Fig.1 simplified outline (TO-3PML) and symbol**

**Absolute maximum ratings (Ta=25℃)**

| SYMBOL | PARAMETER | CONDITIONS | MAX | 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 | | 7 | A |
| $I_{CM}$ | Collector current-peak | | 16 | A |
| $P_C$ | Collector dissipation | Ta=25℃ | 3.0 | W |
| | | $T_C$=25℃ | 60 | |
| $T_j$ | Junction temperature | | 150 | ℃ |
| $T_{stg}$ | Storage temperature | | -55~150 | ℃ |

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## CHARACTERISTICS

**Tj=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{CEO(SUS)}$ | Collector-emitter sustaining voltage | $I_C$=0.1A ;$I_B$=0 | 800 | | | V |
| $V_{CEsat}$ | Collector-emitter saturation voltage | $I_C$=5A ;$I_B$=1.2A | | | 5.0 | V |
| $V_{BEsat}$ | Base-emitter saturation voltage | $I_C$=5A ;$I_B$=1.2A | | | 1.5 | V |
| $I_{CBO}$ | Collector cut-off current | $V_{CB}$=800V ;$I_E$=0 | | | 10 | μA |
| $I_{CES}$ | Collector cut-off current | $V_{CE}$=1500V; $R_{BE}$=0 | | | 1.0 | mA |
| $I_{EBO}$ | Emitter cut-off current | $V_{EB}$=4V ;$I_C$=0 | | | 1.0 | mA |
| $h_{FE-1}$ | DC current gain | $I_C$=1A ; $V_{CE}$=5V | 8 | | | |
| $h_{FE-2}$ | DC current gain | $I_C$=5A ; $V_{CE}$=5V | 4 | | 8 | |

Switching times

| | | | | | | |
|---|---|---|---|---|---|---|
| $t_{stg}$ | Storage time | $I_C$=4A ; $V_{CC}$=200V<br>$I_{B1}$=0.8A; $I_{B2}$=1.6A<br>$R_L$=50Ω | | | 3.0 | μs |
| $t_f$ | Fall time | | | 0.1 | 0.2 | μs |

**PACKAGE OUTLINE**

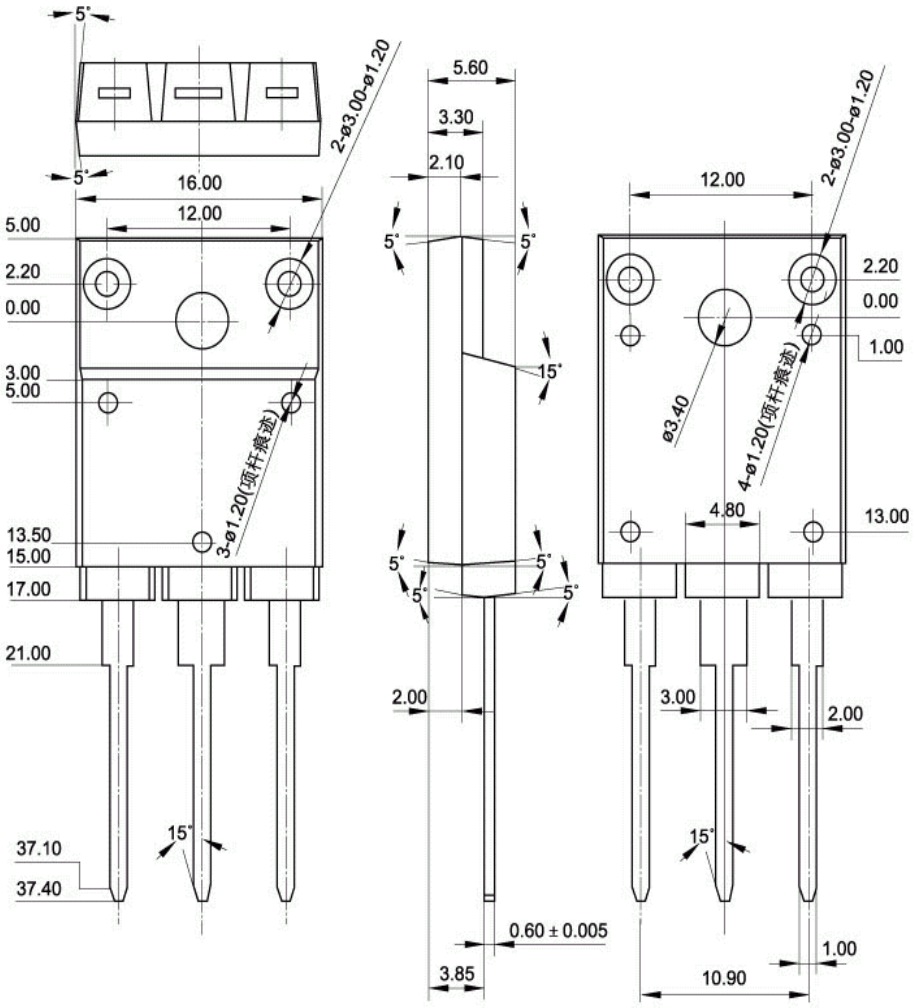



**Fig.2 outline dimensions**

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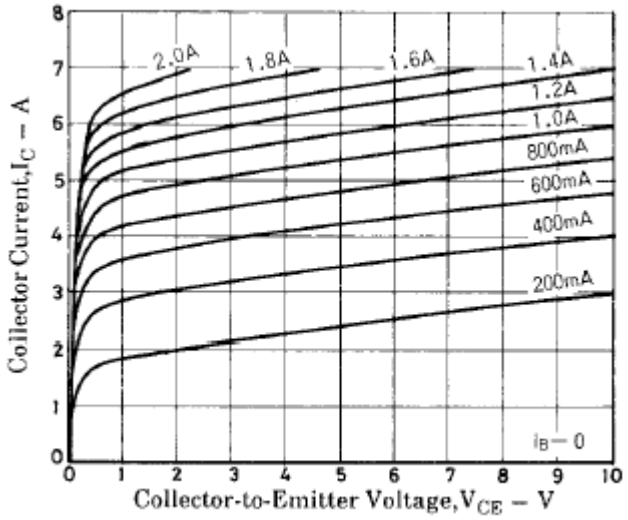



**Fig.3** Static Characteristic

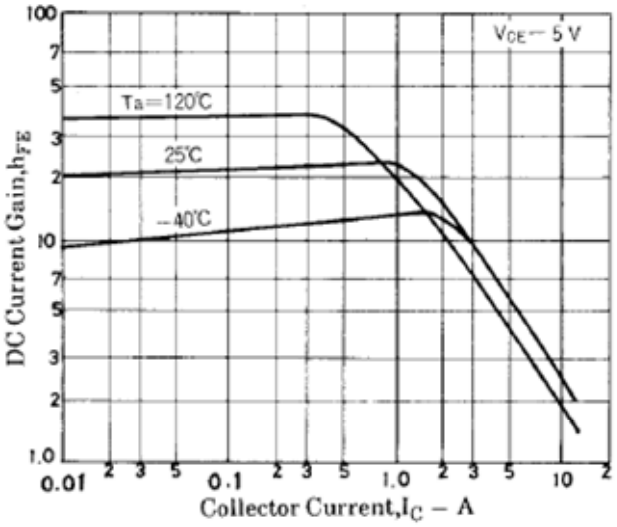



**Fig.4** DC current Gain

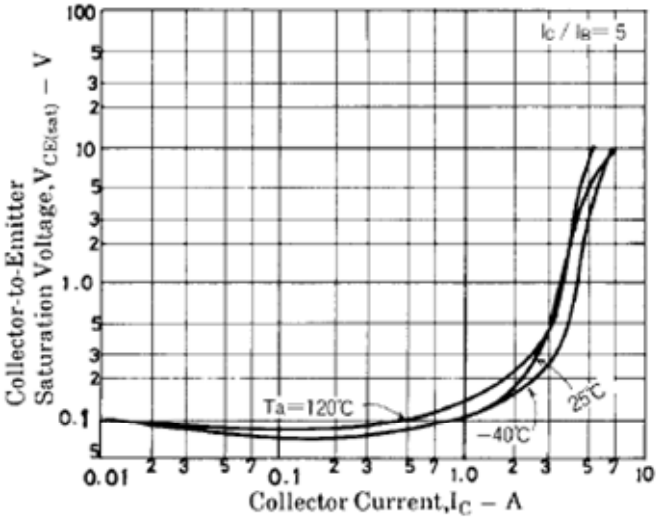



**Fig.5** Collector-Emitter Saturation Voltage

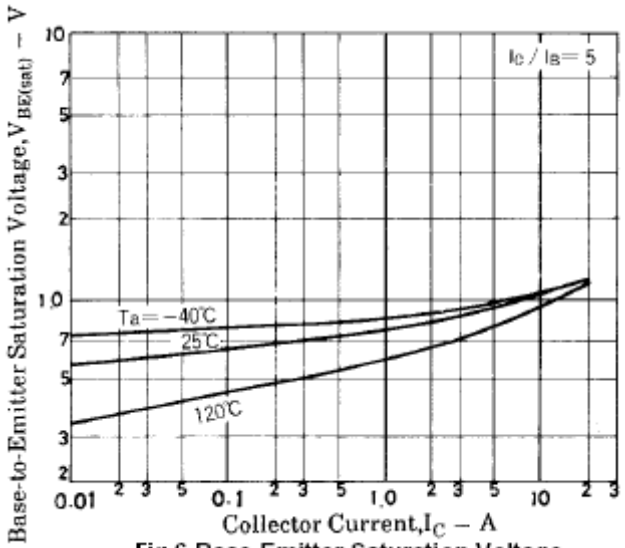



**Fig.6** Base-Emitter Saturation Voltage

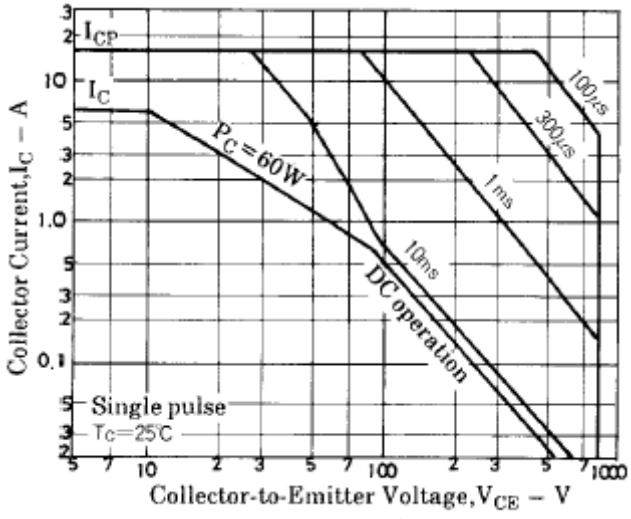



**Fig.7** Safe Operating Area