# Silicon NPN Power Transistors 2SC3842



## DESCRIPTION

·With TO-3PML package
·High voltage ,high speed
·High current capability

## APPLICATIONS

·For use in TV horizontal output and
Power switching applications

**PINNING**

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

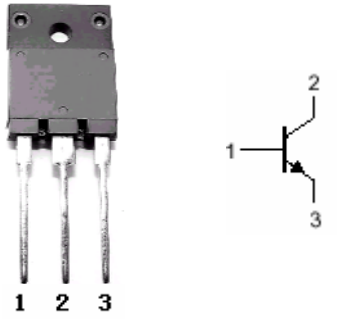


**Fig.1 simplified outline (TO-3PML) and symbol**

**Absolute maximum ratings (Ta=25□)**

| SYMBOL | PARAMETER | CONDITIONS | MAX | UNIT |
|---|---|---|---|---|
| $V_{CBO}$ | Collector-base voltage | Open emitter | 600 | V |
| $V_{CEO}$ | Collector-emitter voltage | Open base | 400 | V |
| $V_{EBO}$ | Emitter-base voltage | Open collector | 6 | V |
| $I_C$ | Collector current | | 10 | A |
| $P_C$ | Collector dissipation | $T_C$=25□ | 70 | W |
| $T_j$ | 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 |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage | $I_C$=5mA ;$I_B$=0 | 400 | | | V |
| $V_{(BR)CBO}$ | Collector-base breakdown voltage | $I_C$=1mA ;$I_E$=0 | 600 | | | V |
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage | $I_E$=1mA ;$I_C$=0 | 6 | | | V |
| $V_{CEsat}$ | Collector-emitter saturation voltage | $I_C$=5A ;$I_B$=1A | | | 1.0 | V |
| $V_{BEsat}$ | Base-emitter saturation voltage | $I_C$=5A ;$I_B$=1A | | | 1.5 | V |
| $I_{CBO}$ | Collector cut-off current | $V_{CB}$=500V ;$I_E$=0 | | | 100 | μA |
| $I_{EBO}$ | Emitter cut-off current | $V_{EB}$=5V; $I_C$=0 | | | 100 | μA |
| $h_{FE}$ | DC current gain | $I_C$=5A ; $V_{CE}$=5V | 10 | | 40 | |
| $f_T$ | Transition frequency | $I_C$=1A ; $V_{CE}$=10V | | 32 | | MHz |
| $C_{OB}$ | Output capacitance | $I_E$=0 ; $V_{CB}$=10V ;f=1MHz | | 100 | | pF |

**PACKAGE OUTLINE**

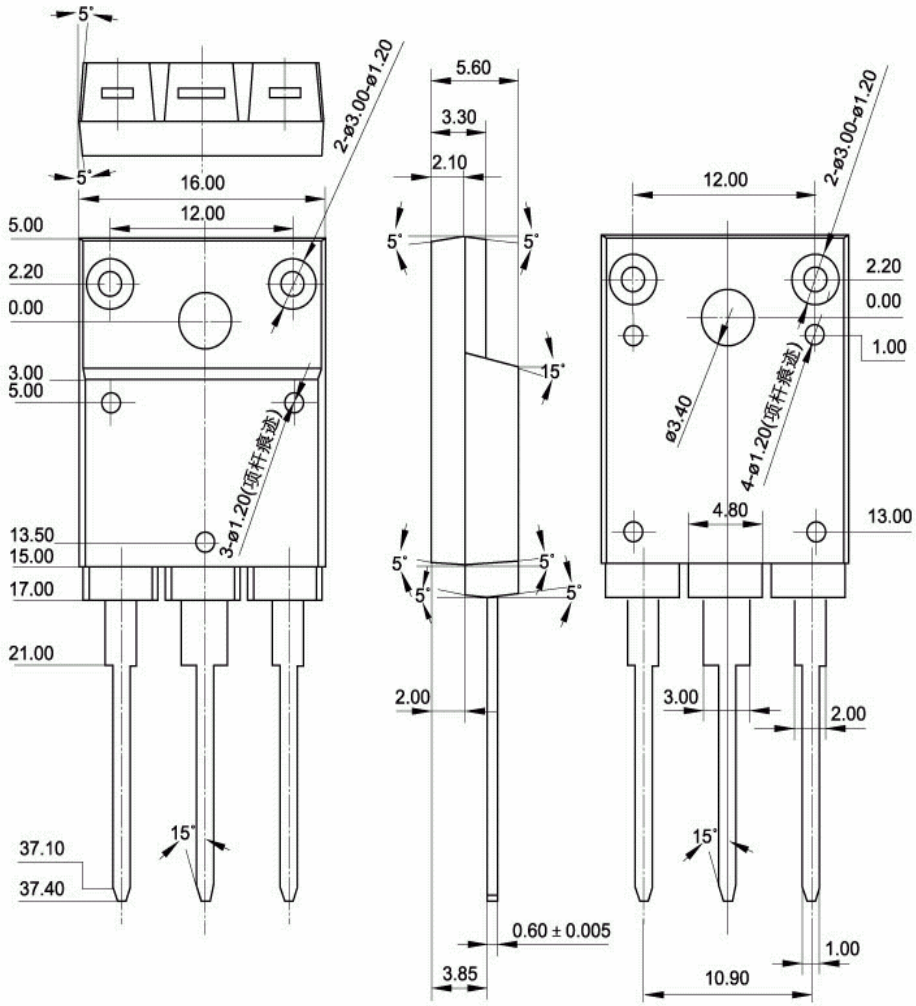


**Fig.2 outline dimensions**