

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

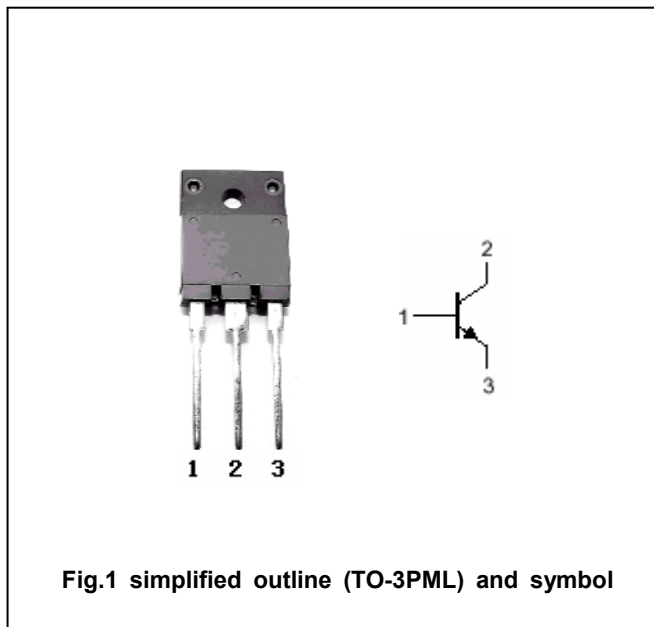


Fig.1 simplified outline (TO-3PML) and symbol

**Absolute maximum ratings (Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	600	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	400	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current		10	A
P <sub>C</sub>	Collector dissipation	T <sub>C</sub> =25°C	70	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =5mA ; I <sub>B</sub> =0	400			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =1mA ; I <sub>E</sub> =0	600			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	6			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =1A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A ; I <sub>B</sub> =1A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =500V ; I <sub>E</sub> =0			100	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V ; I <sub>C</sub> =0			100	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =5V	10		40	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =10V		32		MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V ; f=1MHz		100		pF

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PACKAGE OUTLINE

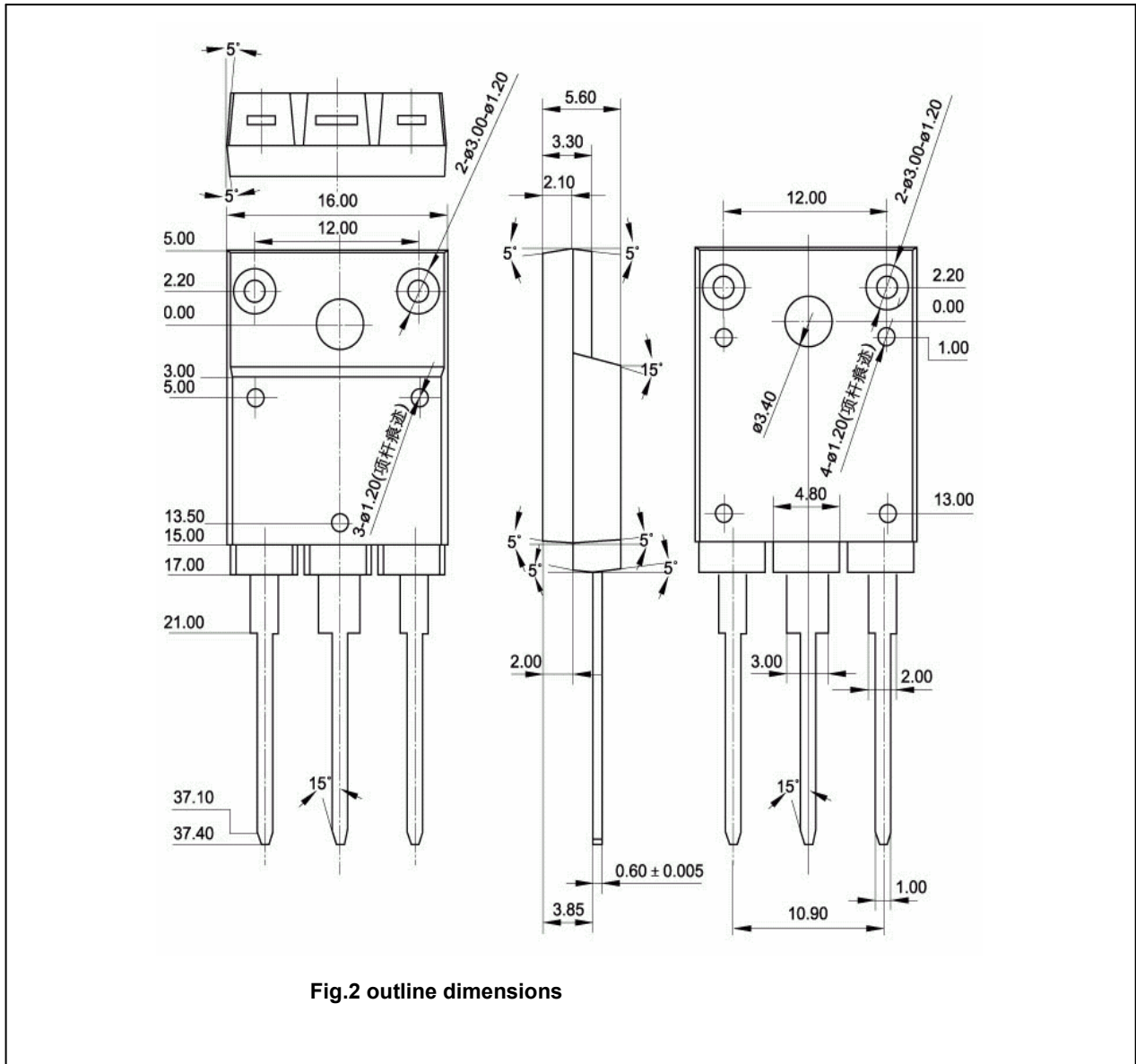


Fig.2 outline dimensions