

Silicon NPN Power Transistors

2SC4941

DESCRIPTION

- With TO-3PML package
- Switching power transistor
- High breakdown voltage

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

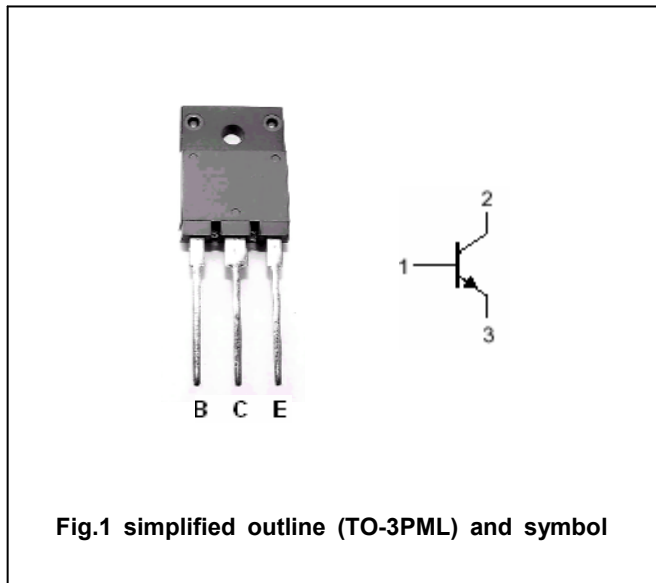


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	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	7	V
I _C	Collector current		6	A
I _{CM}	Collector current-Peak		12	A
I _B	Base current		3	A
I _B	Base current-Peak		6	A
P _T	Total power dissipation	T _C =25°C	65	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{th j-c}	Thermal resistance from junction to case	1.92	°C/W

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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 =0.2A ; I _B =0	800			V
V _{CBO}	Collector-base voltage	I _C =1mA ; I _E =0	1500			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A ; I _B =0.6A			0.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A ; I _B =0.6A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =1200V ; I _E =0			100	μA
I _{CEO}	Collector cut-off current	V _{CE} =RatedV _{CEO} ; I _B =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =RatedV _{EBO} ; I _C =0			100	μA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	15			
h _{FE-2}	DC current gain	I _C =1mA ; V _{CE} =5V	7			
f _T	Transition frequency	I _C =0.6A ; V _{CE} =10V		8		MHz

Switching times

t _{on}	Turn-on time	I _C =3A I _{B1} =0.6A ; I _{B2} =-1.2A V _{BB2} =4V R _L =85Ω			0.5	μs
t _s	Storage time				3.5	μs
t _f	Fall time				0.3	μs

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PACKAGE OUTLINE

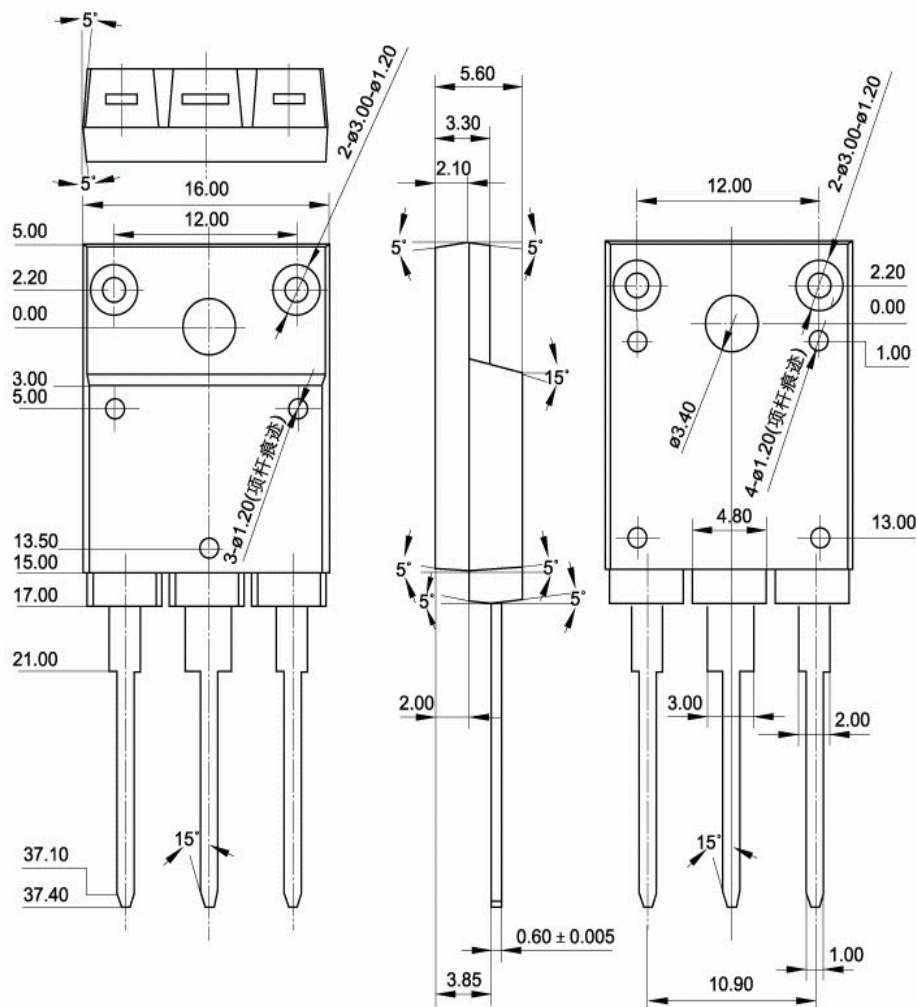


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)