

Silicon NPN Power Transistors

2SD2196

DESCRIPTION

- With TO-3PML package
- High DC current gain
- DARLINGTON

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

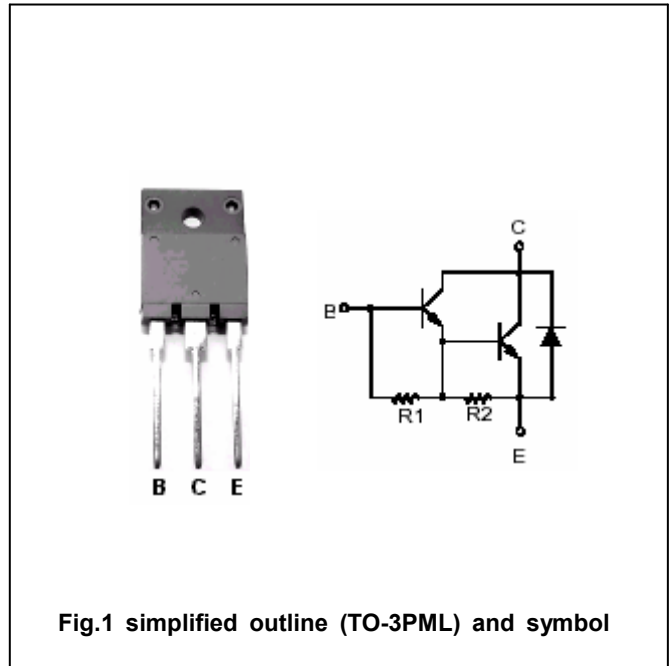


Fig.1 simplified outline (TO-3PML) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	200	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		15	A
I_{CM}	Collector current-peak		22	A
I_B	Base current		1	A
I_{BM}	Base current-peak		2	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	65	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-case}$	Thermal resistance junction case	1.92	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =50mA; I _B =0	200			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =10A; I _B =30mA			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =10A; I _B =30mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =200V; I _E =0			0.1	mA
I _{CEO}	Collector cut-off current	V _{CE} =200V; I _B =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			5	mA
h _{FE}	DC current gain	I _C =10A; V _{CE} =3V	1500		30000	
f _T	Transition frequency	I _C =1.5A; V _{CE} =10V		20		MHz

Switching times

t _{on}	Turn-on time	I _C =10A; R _L =3Ω I _{B1} =I _{B2} =30mA; V _{BB2} =4V			2	μs
t _s	Storage time				12	μs
t _f	Fall time				5	μs

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PACKAGE OUTLINE

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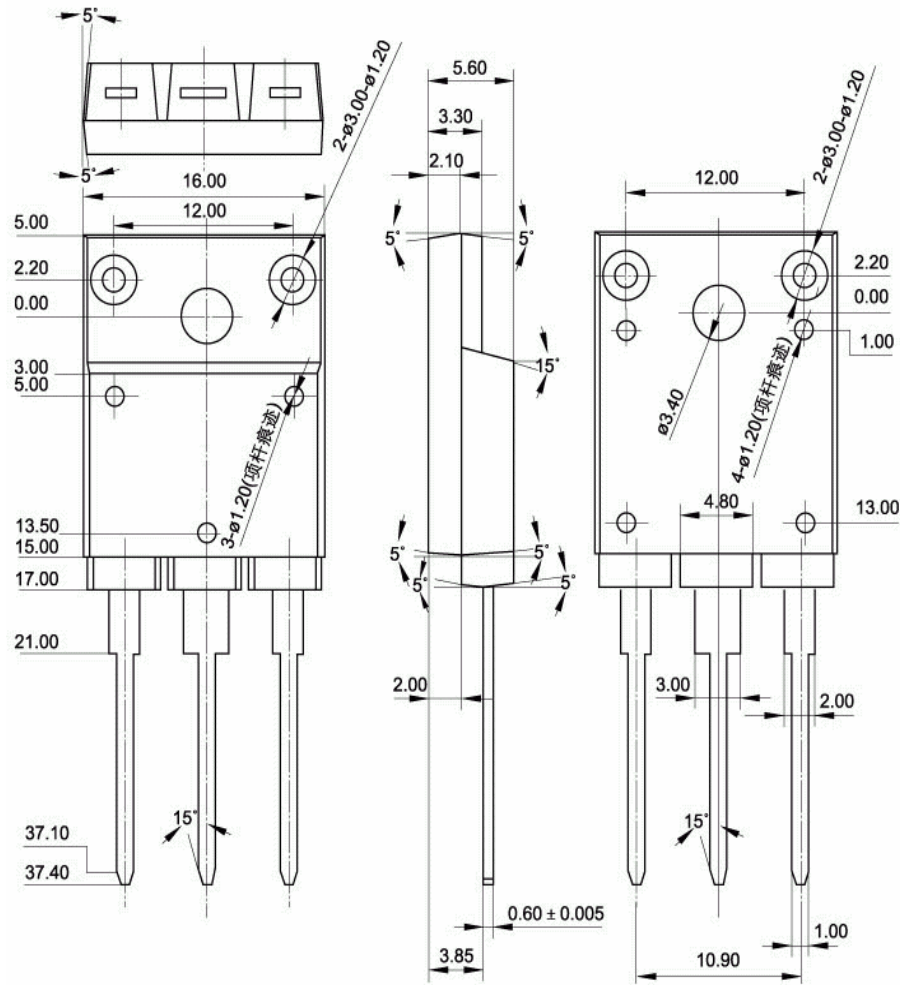


Fig.2 Outline dimensions