

Silicon NPN Power Transistors

2SD2082

DESCRIPTION

- With TO-3PML package
- DARLINGTON
- Complement to type 2SB1382

APPLICATIONS

- Driver for Solenoid, Motor and General Purpose

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

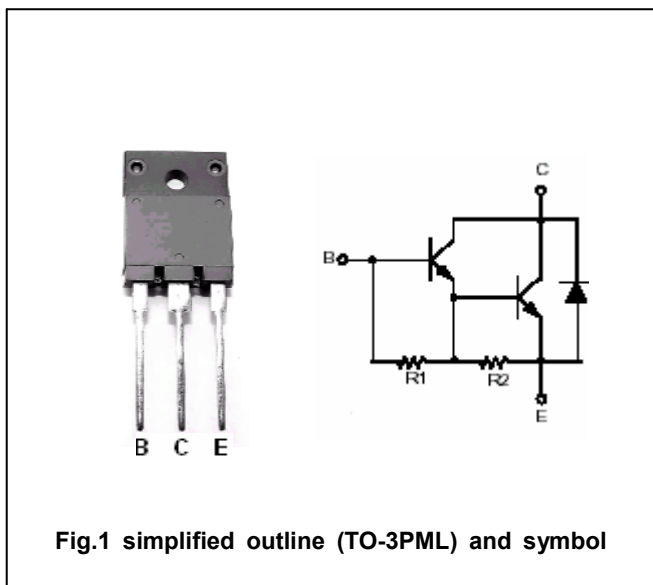


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	120	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	120	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current		16	A
I <sub>CM</sub>	Collector current-peak		26	A
I <sub>B</sub>	Base current		1	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	75	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>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =16m A			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =16m A			2.5	V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA; I <sub>B</sub> =0	120			V
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			10	mA
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =120V; I <sub>E</sub> =0			10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =8 A ; V <sub>CE</sub> =4V	2000			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1 A ; V <sub>CE</sub> =12V		20		MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1MHz		210		pF

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =8A ; I <sub>B1</sub> =-I <sub>B2</sub> =16mA V <sub>CC</sub> =40V , R <sub>L</sub> =5Ω		0.6		μs
t <sub>s</sub>	Storage time			7.0		μs
t <sub>f</sub>	Fall time			1.5		μs

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PACKAGE OUTLINE

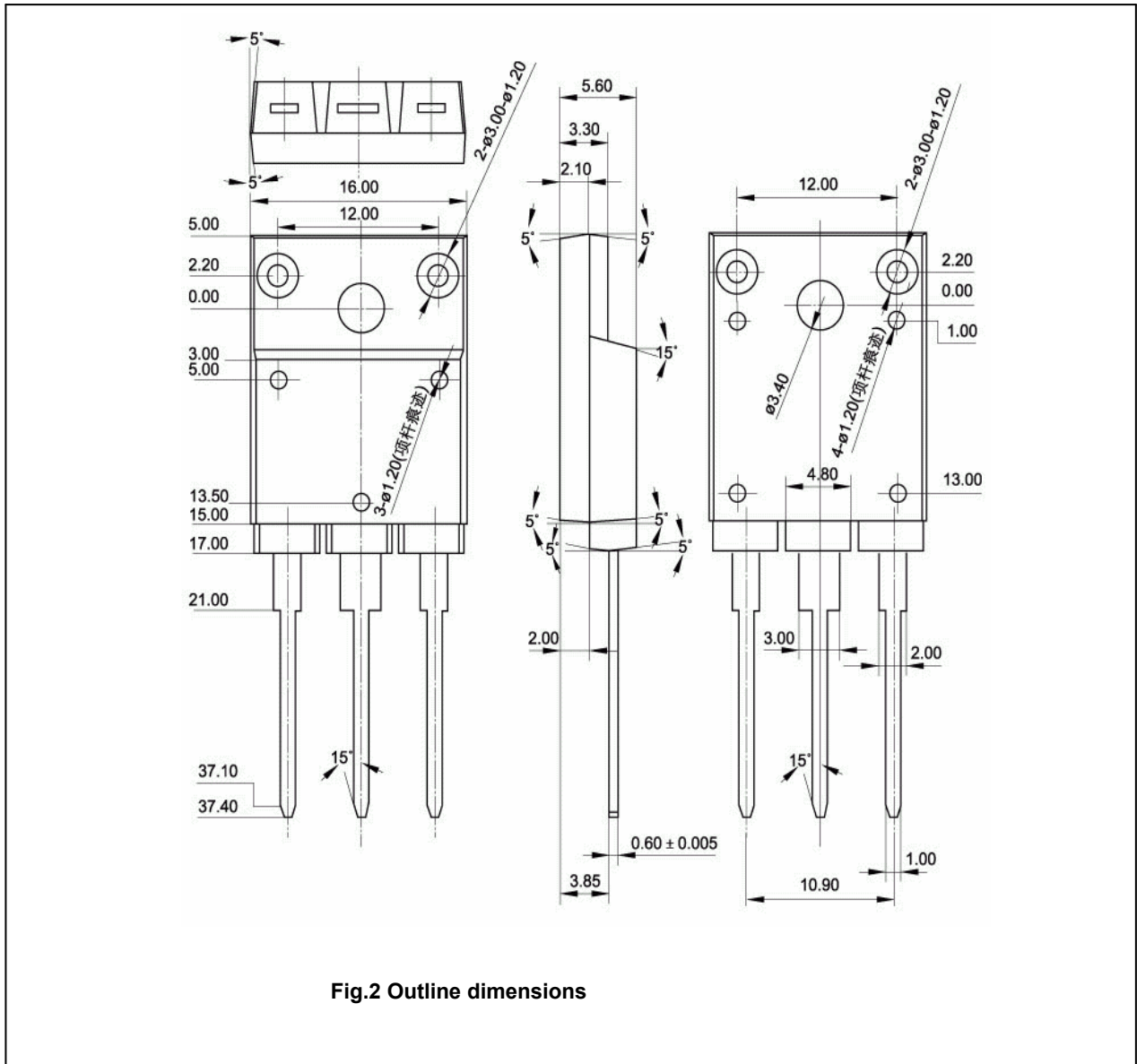


Fig.2 Outline dimensions