

Silicon PNP Power Transistors

2SB1257

DESCRIPTION

- With TO-220F package
- Complement to type 2SD2014
- High DC current gain
- DARLINGTON

APPLICATIONS

- Driver for solenoid ,relay and motor and general purpose

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

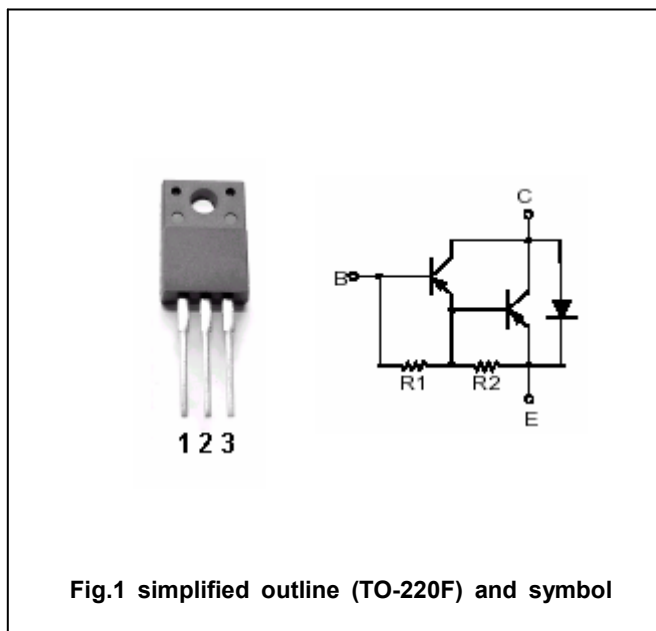


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-60	V
$V_{CEO}$	Collector-emitter voltage	Open base	-60	V
$V_{EBO}$	Emitter-base voltage	Open collector	-6	V
$I_C$	Collector current		-4	A
$I_{CM}$	Collector current-peak		-6	A
$I_B$	Base current		-1	A
$P_C$	Collector dissipation	$T_C=25^\circ C$	25	W
$T_j$	Junction temperature		150	°C
$T_{stg}$	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> =-10mA ; I <sub>B</sub> =0	-60			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A; I <sub>B</sub> =-6mA			-1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-3A; I <sub>B</sub> =-6mA			-2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-60V; I <sub>E</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-6V; I <sub>C</sub> =0			-10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V	2000			
f <sub>T</sub>	Transition frequency	I <sub>E</sub> =0.2A ; V <sub>CE</sub> =-12V		150		MHz
C <sub>OB</sub>	Collector output capacitance	I <sub>E</sub> =0; f=1MHz; V <sub>CB</sub> =-10V		75		pF

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-3A; I <sub>B1</sub> =-I <sub>B2</sub> =-10mA V <sub>CC</sub> =-30V , R <sub>L</sub> =10Ω		0.4		μs
t <sub>s</sub>	Storage time			0.8		μs
t <sub>f</sub>	Fall time			0.6		μs

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PACKAGE OUTLINE

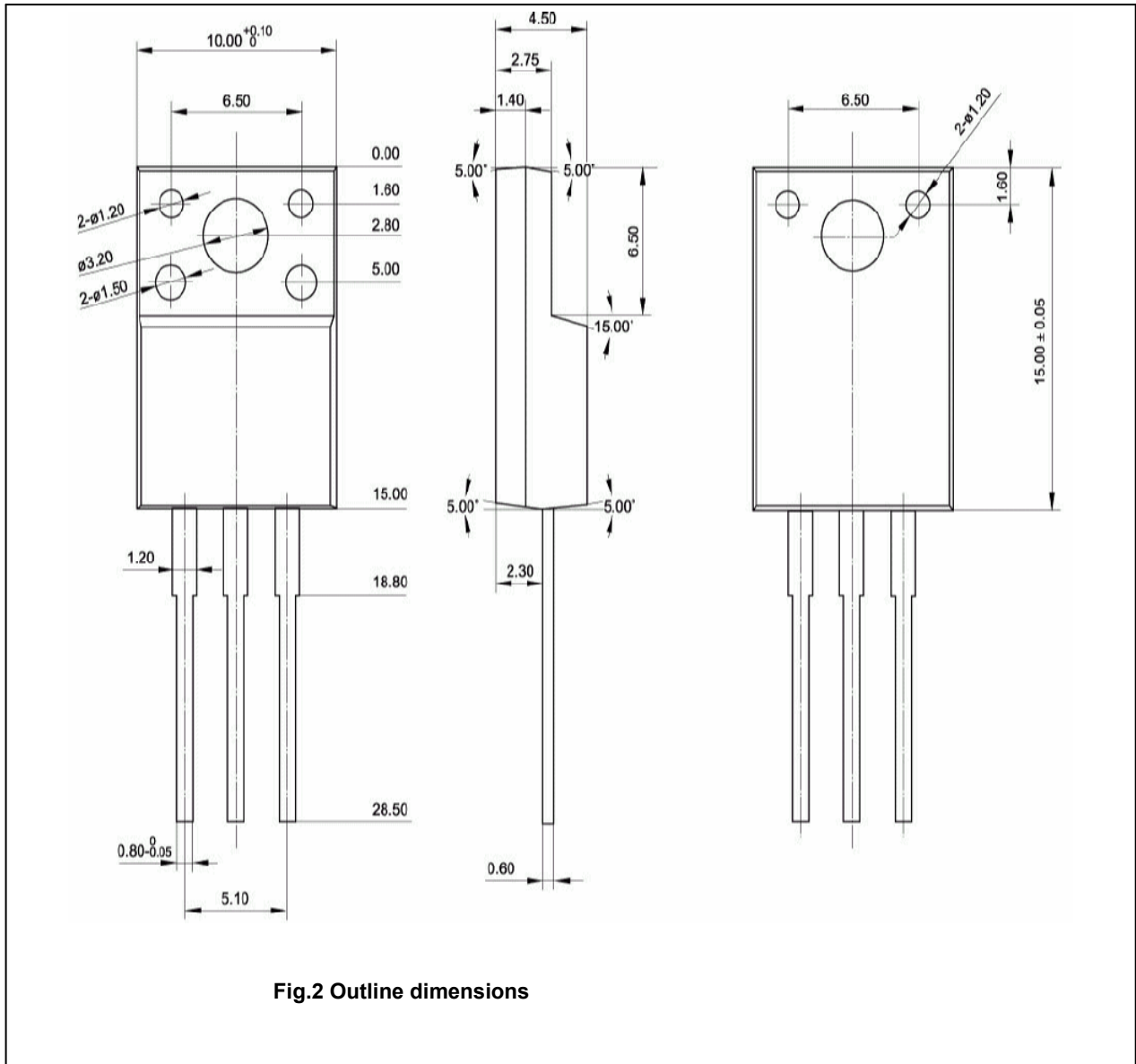


Fig.2 Outline dimensions