

Silicon NPN Power Transistors

2SD2014

DESCRIPTION

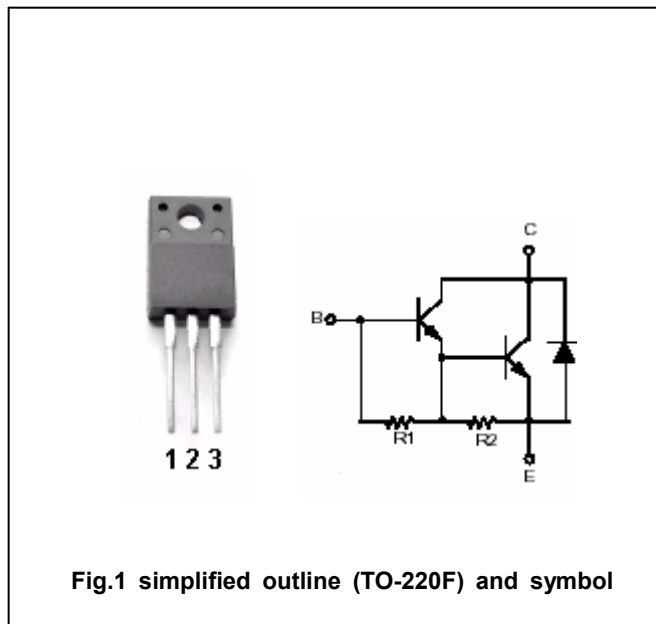
- With TO-220F package
- DARLINGTON
- Complement to type 2SB1257

APPLICATIONS

- Driver for solenoid,relay and motor, series regulator,and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	120	V
V _{CEO}	Collector-emitter voltage	Open base	80	V
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		4	A
I _B	Base current		0.5	A
P _C	Collector dissipation	T _C =25°C	25	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA ; I _B =0	80			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A ; I _B =3mA			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A ; I _B =3mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =120V; I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			10	mA
h _{FE}	DC current gain	I _C =3A ; V _{CE} =2V	2000			
f _T	Transition frequency	I _E =-0.1A ; V _{CE} =12V		75		MHz
C _{OB}	Collector output capacitance	f=1MHz; V _{CB} =10V		45		pF

Switching times

t _{on}	Turn-on time	I _C =3.0A; I _{B1} =-I _{B2} =10mA V _{CC} =30V , R _L =10Ω		1.0		μs
t _s	Storage time			4.0		μs
t _f	Fall time			1.5		μs

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PACKAGE OUTLINE

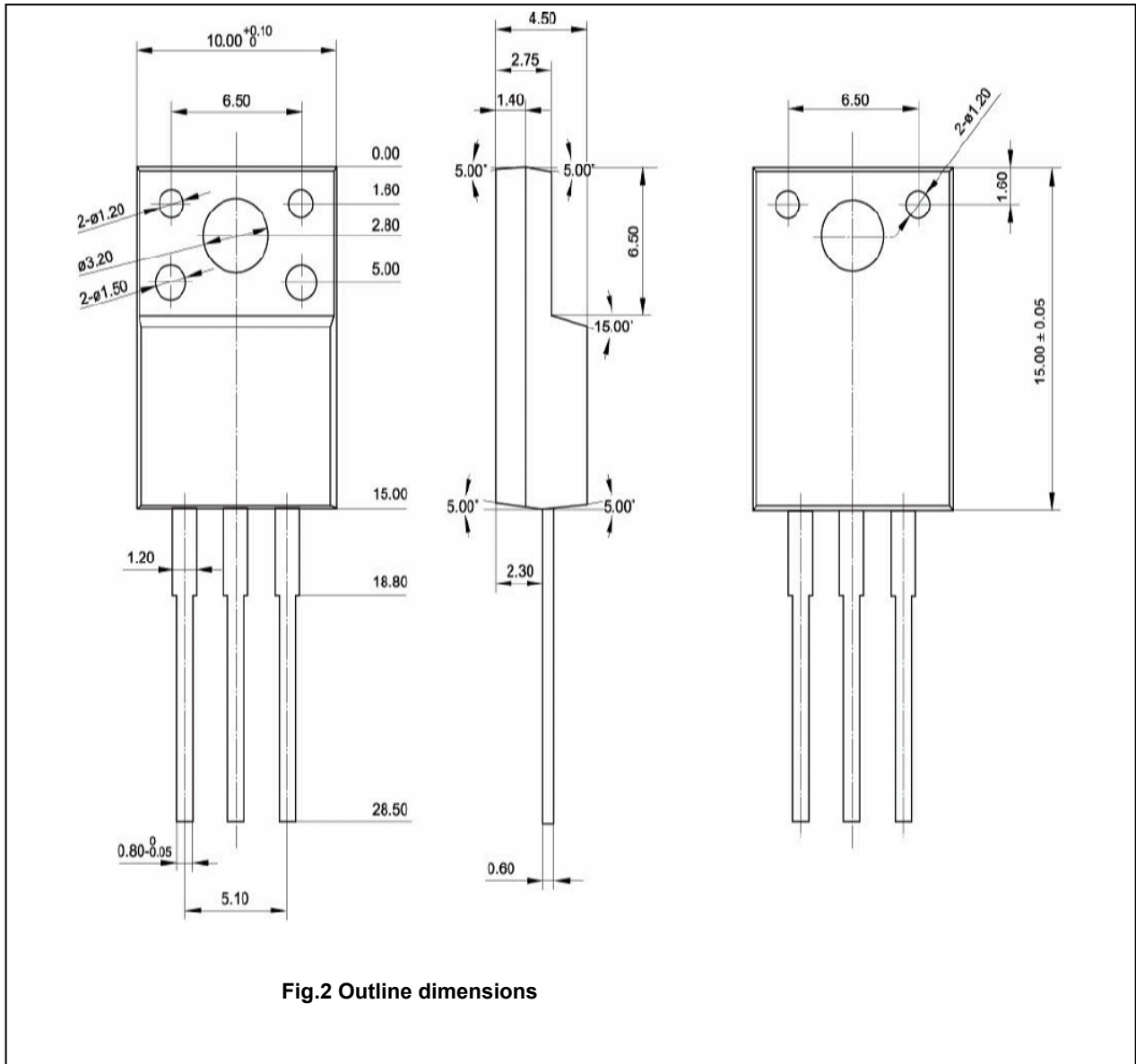


Fig.2 Outline dimensions