

Silicon NPN Power Transistors

2SD2015

DESCRIPTION

- With TO-220F package
- DARLINGTON

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

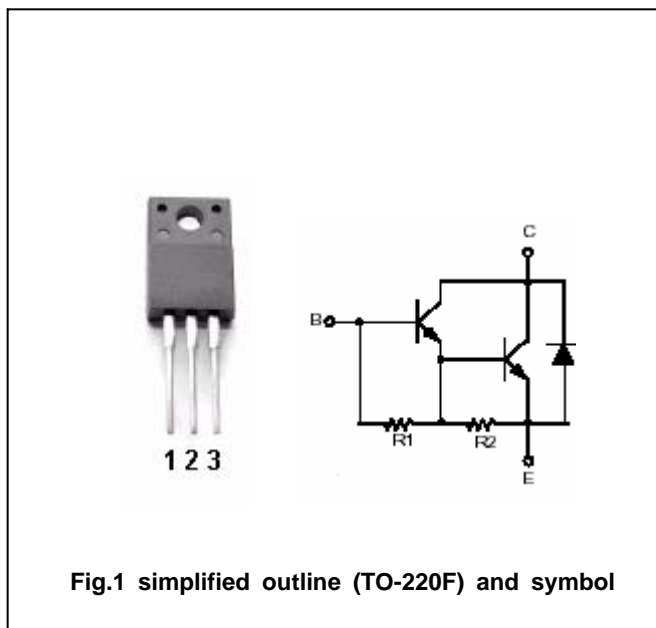


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	120	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	$T_C=25$	25	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA ; I _B =0	120			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A ; I _B =2mA			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2A ; I _B =2mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =150V; 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 =2A ; V _{CE} =2V	2000			
f _T	Transition frequency	I _C =0.1A ; V _{CE} =12V		40		MHz
C _{OB}	Collector output capacitance	f=1MHz; V _{CB} =10V		40		pF
Switching times						
t _{on}	Turn-on time	I _C =2.0A I _{B1} =-I _{B2} =10mA V _{CC} =40V , R _L =20		0.6		μs
t _s	Storage time			5.0		μs
t _f	Fall time			2.0		μs

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PACKAGE OUTLINE

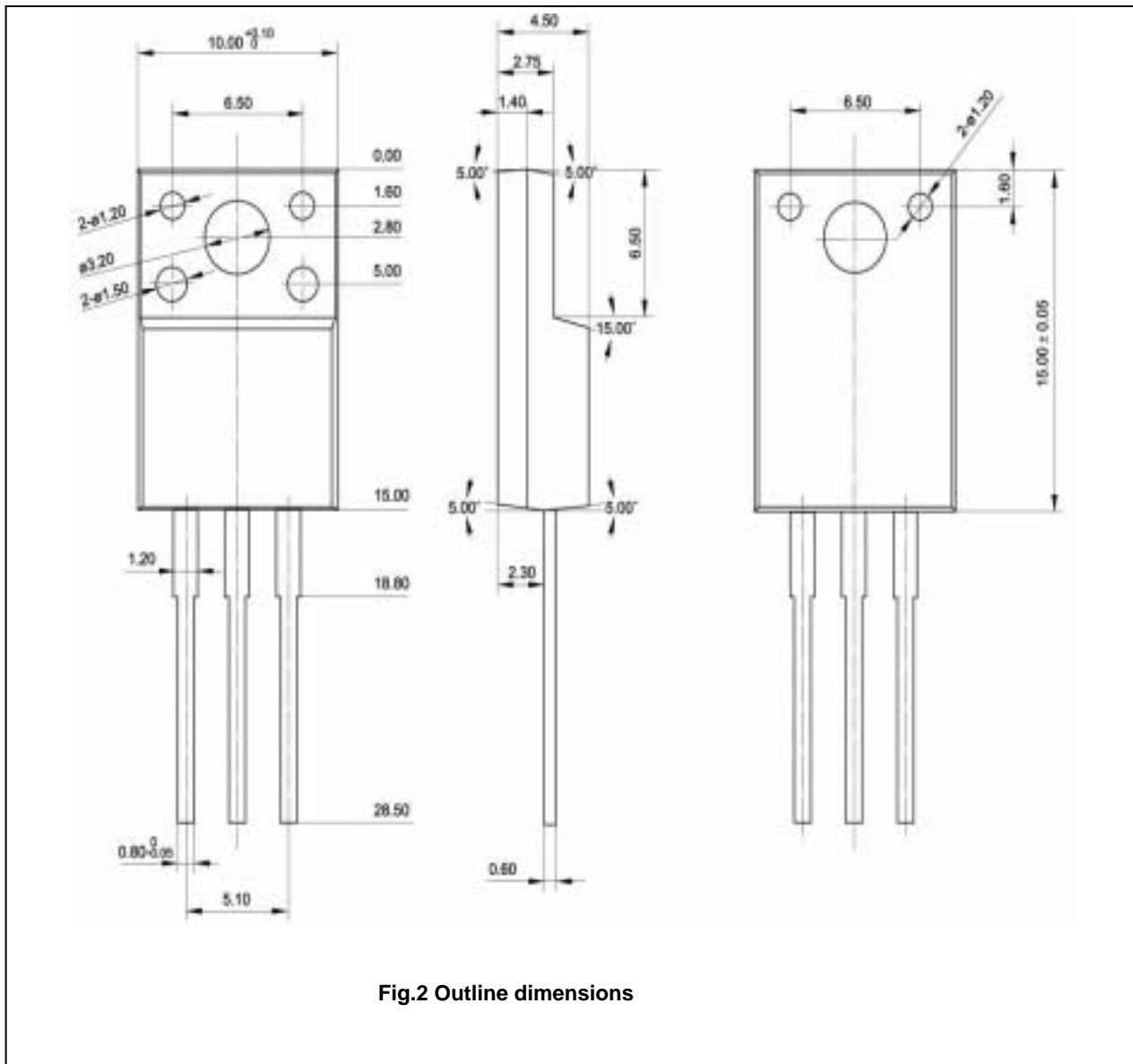


Fig.2 Outline dimensions