

Silicon NPN Power Transistors

2SD1415A

DESCRIPTION

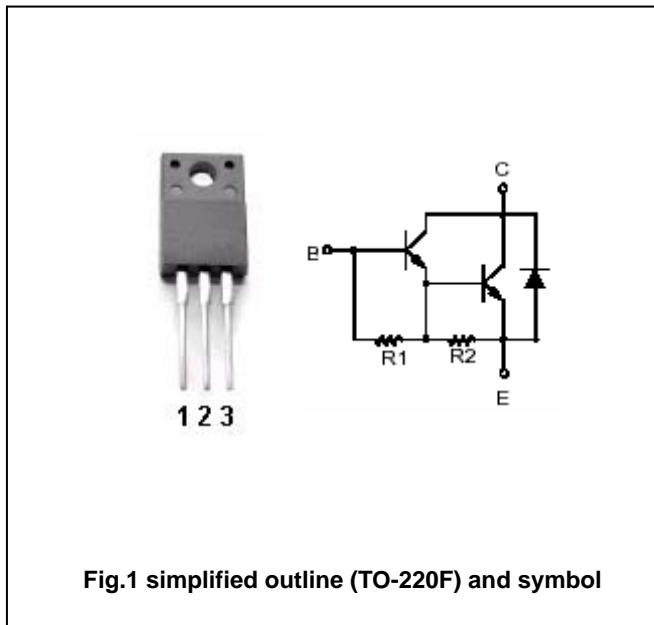
- With TO-220F package
- High DC current gain
- Low saturation voltage
- DARLINGTON

APPLICATIONS

- High power switching applications
- Hammer drive,pulse motor drive 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	100	V
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		7	A
I _{CP}	Collector current peak		10	A
I _B	Base current		0.7	A
P _C	Collector power dissipation	T _C =25°C	25	W
		T _a =25°C	2.0	
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 =50mA; I _B =0	100			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A ; I _B =6mA		0.9	1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A ; I _B =6mA		1.5	2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			100	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			3.0	mA
h _{FE-1}	DC current gain	I _C =3A ; V _{CE} =3V	2000		15000	
h _{FE-2}	DC current gain	I _C =6A ; V _{CE} =3V	1000			

Switching times

t _{on}	Turn-on time	I _{B1} =-I _{B2} =6mA V _{CC} ≈45V ,R _L =15Ω		0.3		μ s
t _{stg}	Storage time			5.1		μ s
t _f	Fall time			0.6		μ s

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PACKAGE OUTLINE

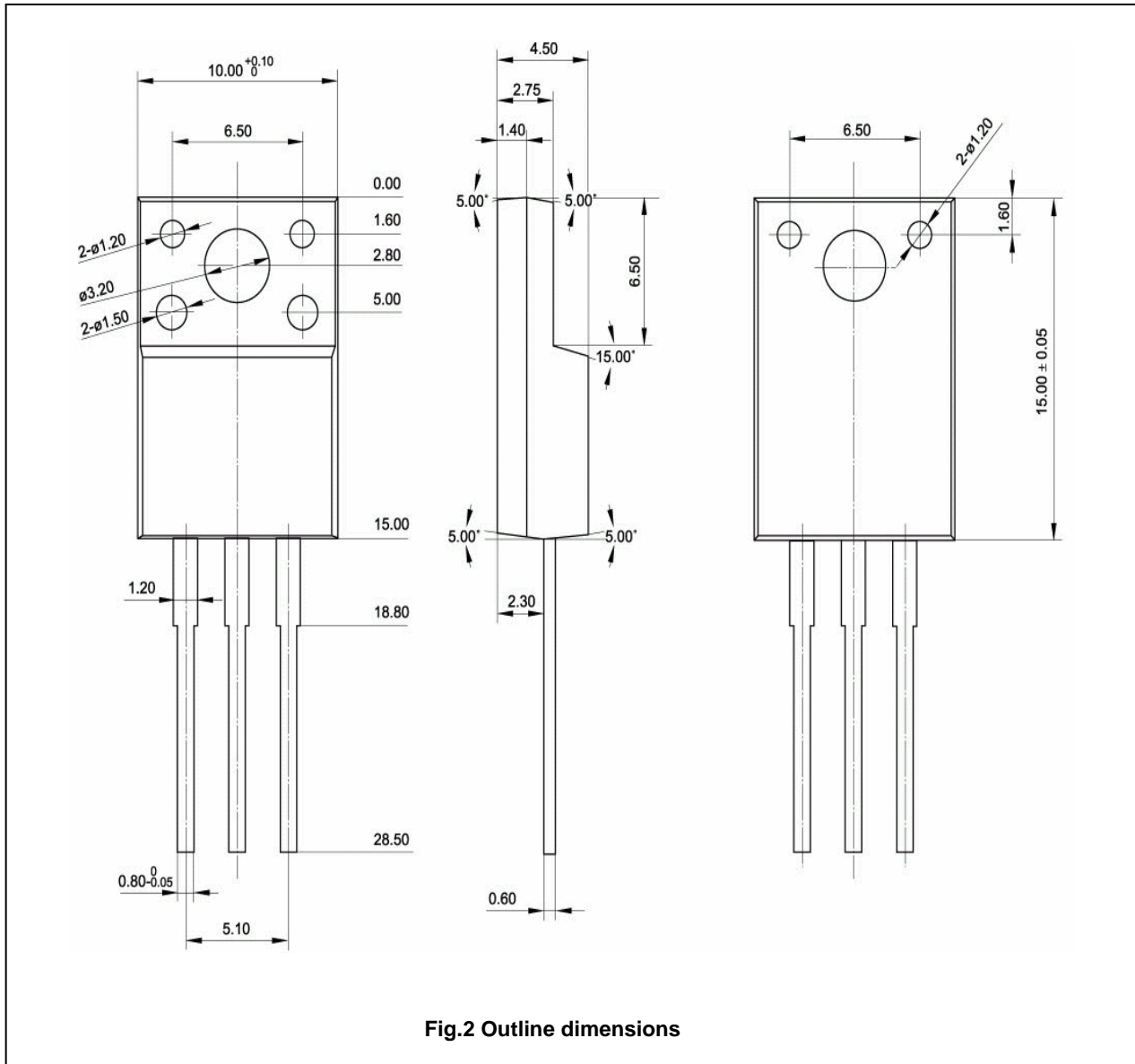


Fig.2 Outline dimensions