

Silicon NPN Power Transistors

2SD2079

DESCRIPTION

- With TO-220F package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type 2SB1381

APPLICATIONS

- High power switching applications
- Hammer drive,pulse motor drive applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

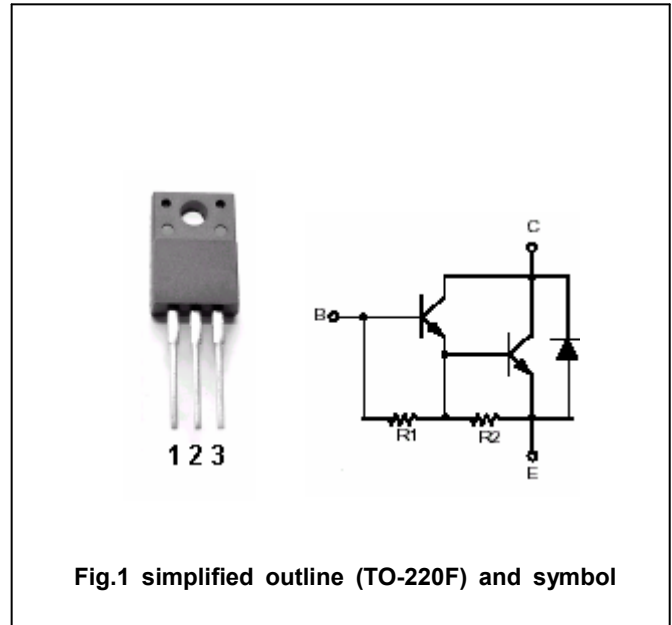


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		8	A
I_B	Base current		0.5	A
P_C	Collector dissipation	$T_a=25^\circ\text{C}$	2	W
		$T_C=25^\circ\text{C}$	30	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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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 =30mA ; I _B =0	100			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =3A ; I _B =6mA			1.5	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =5A ; I _B =20mA			2.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A ; I _B =6mA			2.5	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			2.5	mA
h _{FE-1}	DC current gain	I _C =3A ; V _{CE} =3V	2000		15000	
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =3V	1000			

Switching times

t _{on}	Turn-on time	I _{B1} =-I _{B2} =6mA V _{CC} ≈30V , R _L =10Ω		1.0		μs
t _s	Storage time			4.0		μs
t _f	Fall time			2.5		μs

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PACKAGE OUTLINE

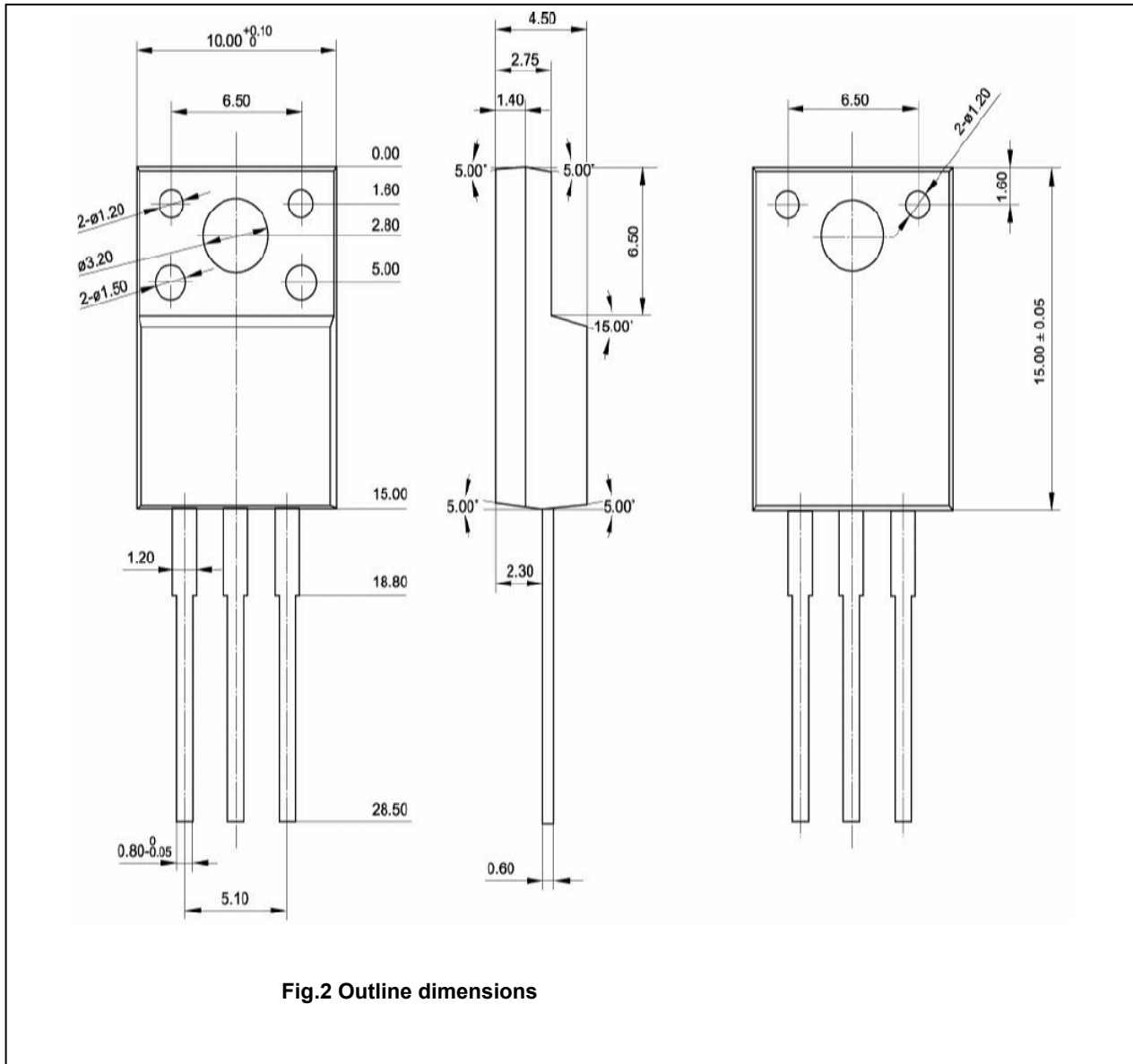


Fig.2 Outline dimensions