

Silicon NPN Power Transistors

2SD1827

DESCRIPTION

- With TO-220F package
- Complement to type 2SB1225
- High DC current gain.
- Large current capacity and wide ASO.
- Low saturation voltage.
- DARLINGTON

APPLICATIONS

- Suitable for use in control of motor drivers, printer hammer drivers, relay drivers, and constant-voltage regulators.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

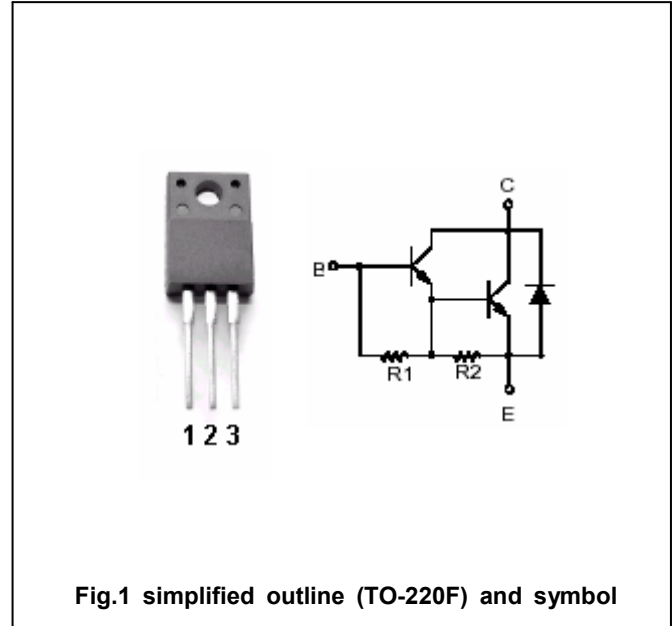


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	70	V
V _{CEO}	Collector-emitter voltage	Open base	60	V
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		10	A
I _{CM}	Collector current-peak		15	A
P _C	Collector dissipation	T _C =25°C	30	W
			2	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

Silicon NPN Power Transistors

2SD1827

CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =5mA; I _E =0	70			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =50mA; R _{BE} =∞	60			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A; I _B =10mA		0.9	1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A; I _B =10mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =40V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			3.0	mA
h _{FE}	DC current gain	I _C =5A; V _{CE} =2V	2000	5000		

Switching times

t _{on}	Turn-on time	I _C =5A; I _{B1} =0.01A -I _{B2} =0.01A V _{CC} =20V, R _L =4Ω		0.6		μs
t _s	Storage time			3.0		μs
t _f	Fall time			1.8		μs

Silicon NPN Power Transistors

2SD1827

PACKAGE OUTLINE

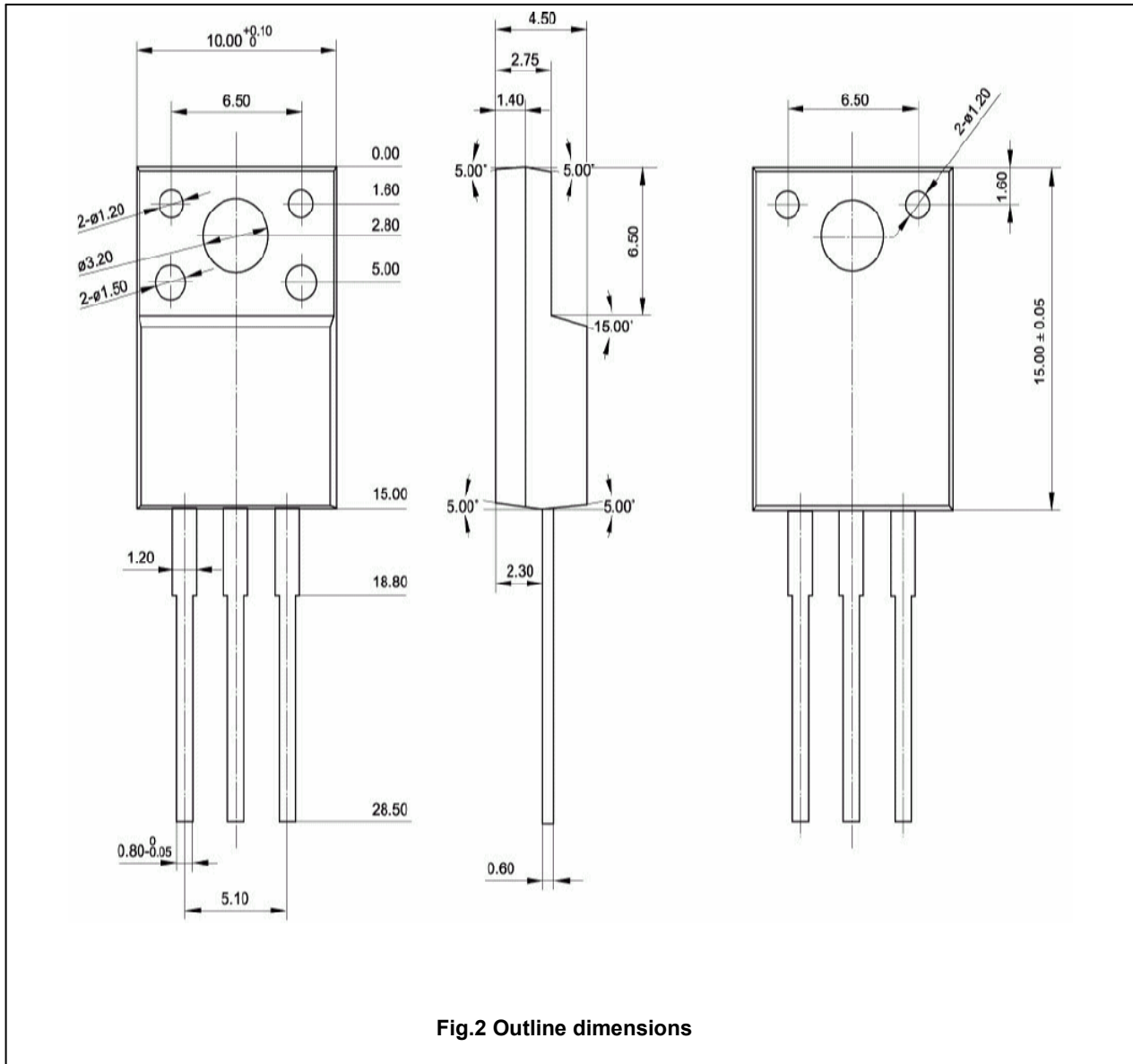


Fig.2 Outline dimensions