

Silicon NPN Power Transistors

2SD1589

DESCRIPTION

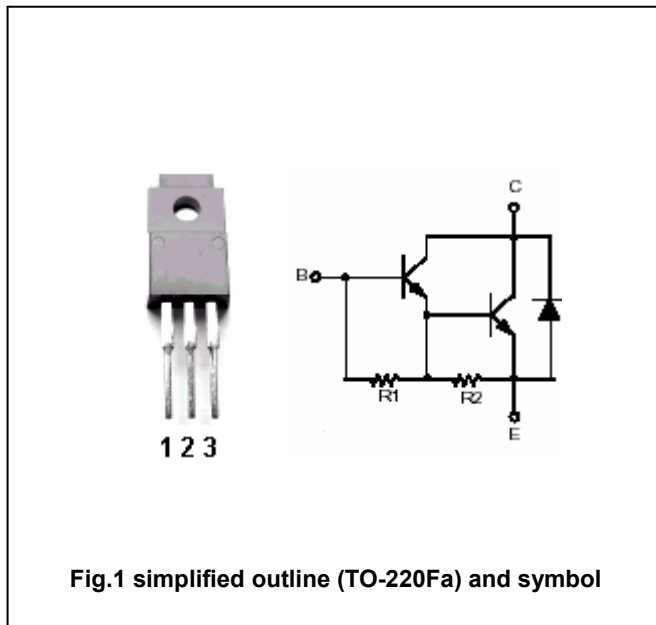
- With TO-220Fa package
- DARLINGTON
- Complement to type 2SB1098
- Low speed switching

APPLICATIONS

- Low frequency power amplifier
- Low speed switching industrial use

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	150	V
V _{CEO}	Collector-emitter voltage	Open base	100	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current (DC)		5	A
I _{CM}	Collector current-Peak		8	A
I _B	Base current (DC)		0.5	A
P _C	Collector power dissipation	T _a =25°C	1.5	W
		T _C =25°C	20	
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 _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A, I _B =0	60			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} =100V; I _E =0			1	μA
h _{FE-1}	DC current gain	I _C =3A; V _{CE} =2V	2000		15000	
h _{FE-2}	DC current gain	I _C =5A; V _{CE} =2V	500			

Switching times

t _{on}	Turn-on time	I _C =3A; I _{B1} =3mA I _{B2} =-3mA; V _{CC} ≈50V R _L =16.7Ω		1.0		μs
t _s	Storage time			3.5		μs
t _f	Fall time			1.2		μs

◆ h_{FE} Classifications

R	O	Y
2000-5000	3000-7000	5000-15000

PACKAGE OUTLINE

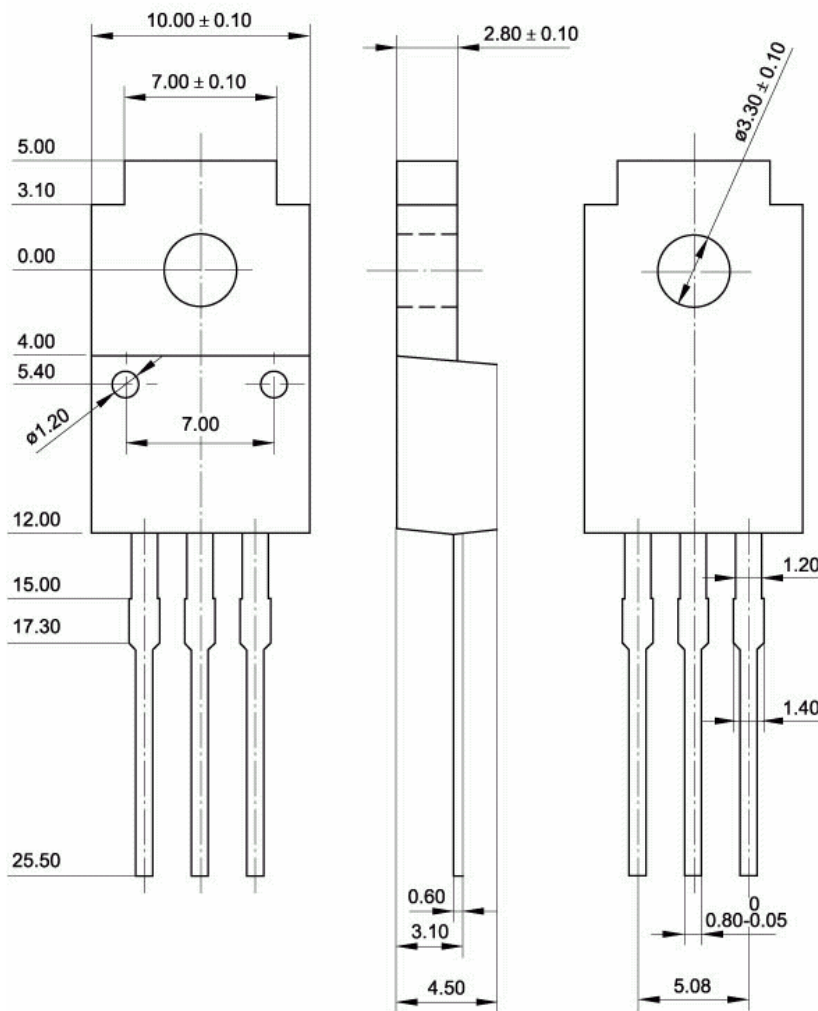


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)