

Silicon NPN Power Transistors

2SD1559

DESCRIPTION

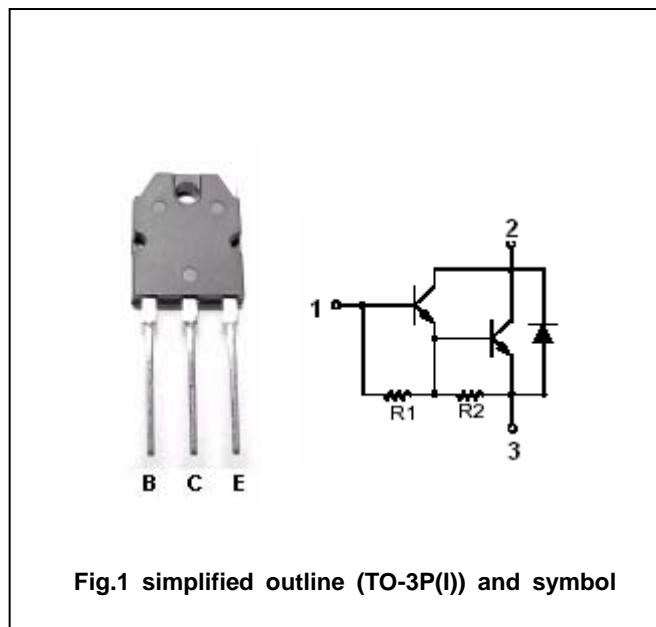
- With TO-3P(I) package
- Complement to type 2SB1079
- DARLINGTON

APPLICATIONS

- For low frequency power amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

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		20	A
I_{CM}	Collector current-peak		30	A
I_B	Base current		3	A
P_C	Collector power dissipation	$T_C=25$	100	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 =25mA, R _{BE} =	100			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =0.1mA, I _E =0	100			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =50mA, I _C =0	7			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =10A; I _B =20mA			2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =20A; I _B =200mA			3.0	V
V _{BE sat-1}	Base-emitter saturation voltage	I _C =10A; I _B =20mA			2.5	V
V _{BE sat-2}	Base-emitter saturation voltage	I _C =20A; I _B =200mA			3.5	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			100	μA
I _{CEO}	Collector cut-off current	V _{CE} =80V; R _{BE} =			1.0	mA
h _{FE}	DC current gain	I _C =10A; V _{CE} =3V	1000		20000	

Switching times

t _{on}	Turn-on time	I _C =10A; I _{B1} =-I _{B2} =20mA		1.0		μs
t _{stg}	Storage time			9.0		μs
t _f	Fall time			3.0		μs

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PACKAGE OUTLINE

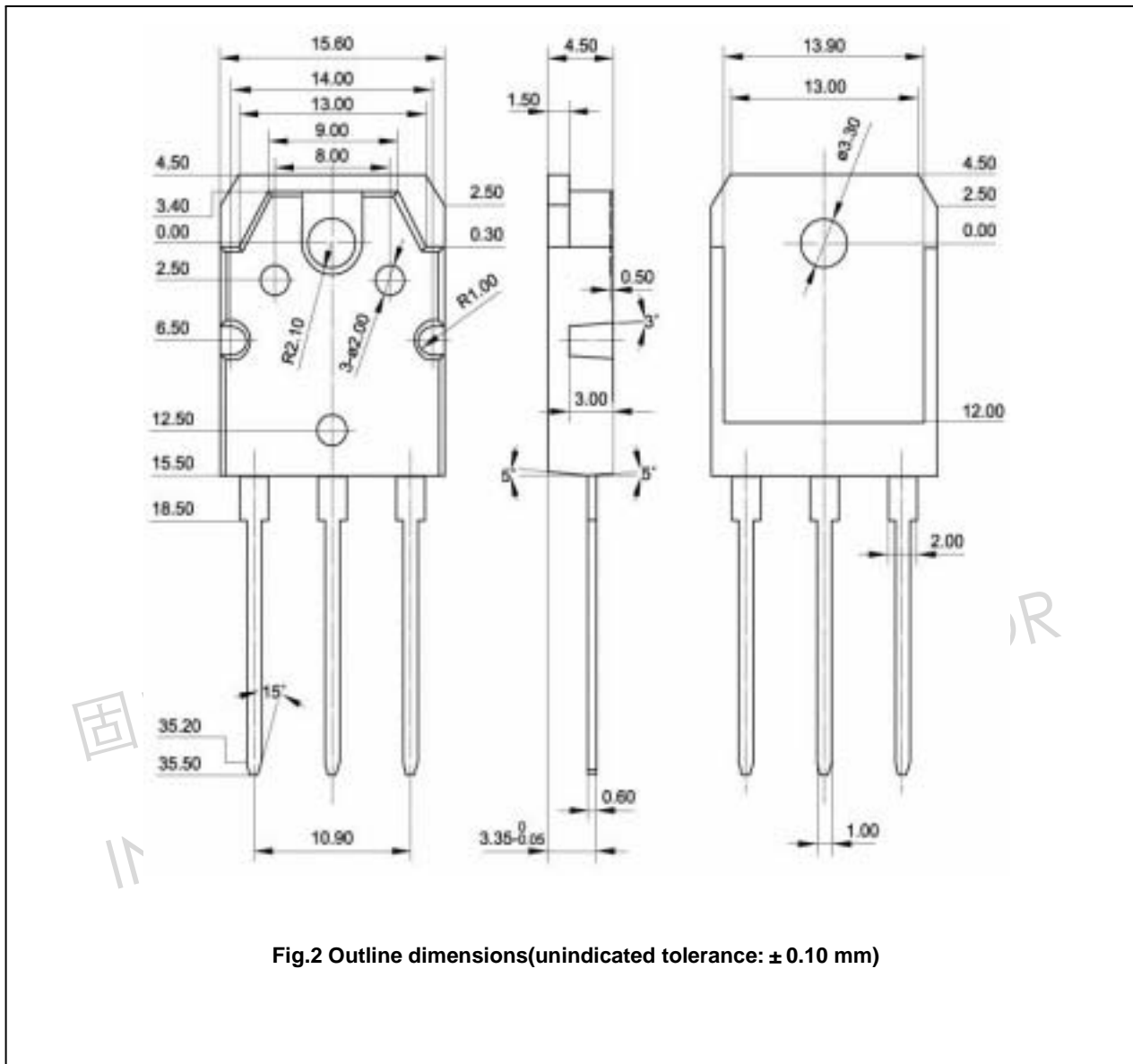


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)