

Silicon NPN Power Transistors

2SD613

DESCRIPTION

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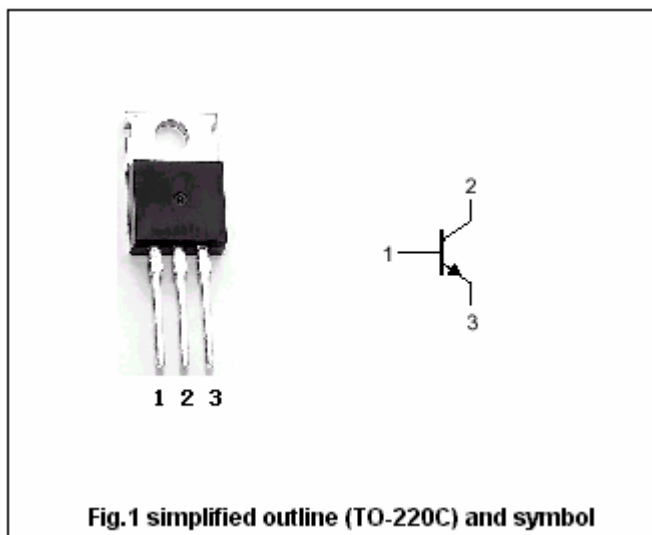
- With TO-220C package
- Complement to type 2SB633
- High breakdown voltage : $V_{CEO}=85V$
- High current 6A

APPLICATIONS

- Recommend for 25-35W high fidelity audio frequency amplifier output stage

PINNING

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



Absolute maximum ratings($T_c=25^\circ$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	85	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		6	A
I_{CM}	Collector current-peak		10	A
P_C	Collector power dissipation	$T_c=25^\circ$	40	W
T_j	Junction temperature		150	$^\circ$
T_{stg}	Storage temperature		-55~150	$^\circ$

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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; R _{BE} =∞	85			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =5mA; I _E =0	100			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =5mA; I _C =0	6			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =4A; I _B =0.4 A			2.0	V
V _{BE}	Base-emitter voltage	I _C =1A; V _{CE} =5V			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =40V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =4V; I _C =0			0.1	mA
h _{FE-1}	DC current gain	I _C =1A; V _{CE} =5V	40		320	
h _{FE-2}	DC current gain	I _C =3A; V _{CE} =5V	20			
f _T	Transition frequency	I _C =1A; V _{CE} =5V		15		MHz
C _{OB}	Output capacitance	I _E =0; V _{CB} =10V; f=1MHz		110		pF

◆ h_{FE-1} classifications

C	D	E	F
40-80	60-120	100-200	160-320

PACKAGE OUTLINE

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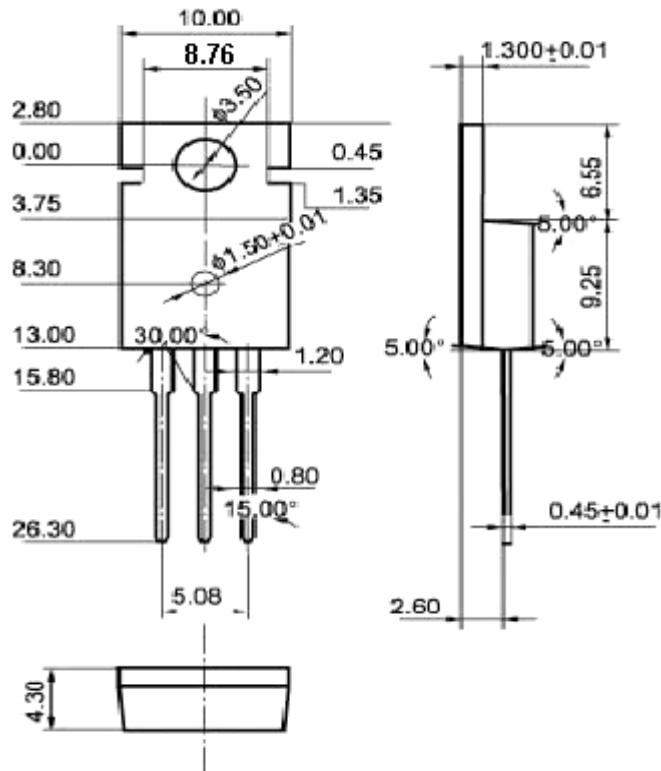


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)