

Silicon PNP Power Transistors

2SB871 2SB871A

DESCRIPTION

- With TO-220C package
- High speed switching
- Low collector saturation voltage

APPLICATIONS

- For low voltage switching applications

PINNING

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

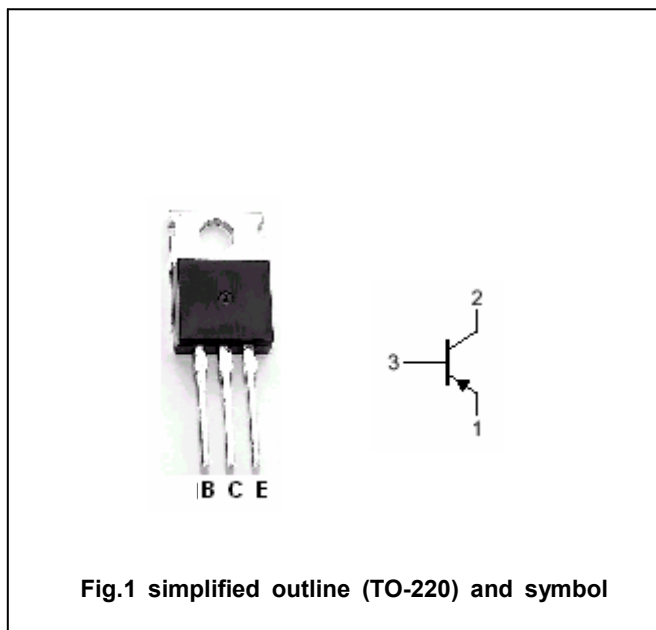


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2SB871	-40	V
		2SB871A	-50	
V _{CEO}	Collector-emitter voltage	2SB871	-20	V
		2SB871A	-40	
V _{EBO}	Emitter-base voltage	Open collector	-5	V
I _C	Collector current		-10	A
I _{CM}	Collector current-Peak		-20	A
P _C	Collector power dissipation	T _C =25°C	40	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-50~150	°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	2SB871	I _C =-10mA; I _B =0	-20			V
		2SB871A		-40			
V _{CEsat}	Collector-emitter saturation voltage		I _C =-10A; I _B =-0.33A			-0.6	V
V _{BEsat}	Base-emitter saturation voltage		I _C =-10A; I _B =-0.33A			-1.5	V
I _{CBO}	Collector cut-off current	2SB871	V _{CB} =-40V; I _E =0			-50	μA
		2SB871A	V _{CB} =-50V; I _E =0				
I _{EBO}	Emitter cut-off current		V _{EB} =-5V; I _C =0			-50	μA
h _{FE-1}	DC current gain		I _C =-0.1A; V _{CE} =-2V	45			
h _{FE-2}	DC current gain		I _C =-3A; V _{CE} =-2V	60		260	
C _{OB}	Output capacitance		I _E =0; V _{CB} =-10V; f=1MHz		400		pF
f _T	Transition frequency		I _C =-0.5A; V _{CE} =-10V		100		MHz

Switching times

t _{on}	Turn-on time	I _C =-3A; I _{B1} =-I _{B2} =-0.1A		0.1		μs
t _{stg}	Storage time			0.5		μs
t _f	Fall time			0.1		μs

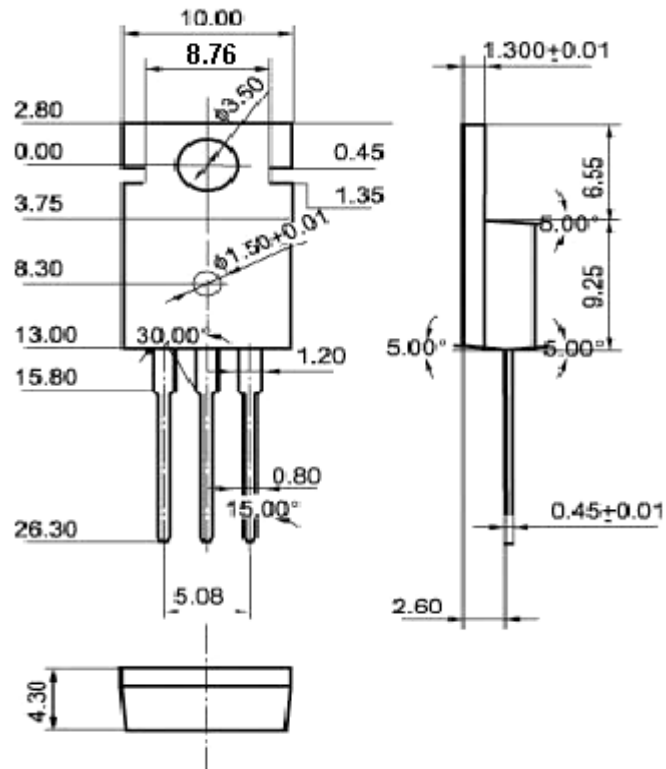
◆ h_{FE-2} Classifications

R	Q	P
60-120	90-180	130-260

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PACKAGE OUTLINE

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