

Silicon PNP Power Transistors

2SA1111 2SA1112

DESCRIPTION

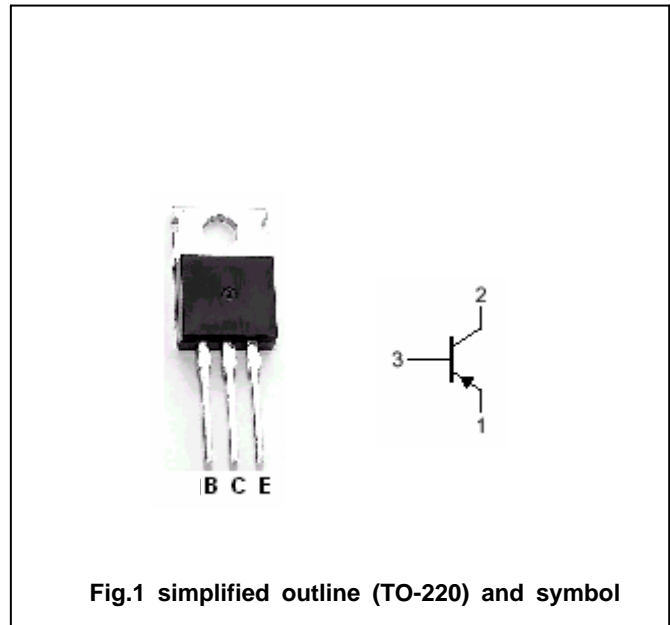
- With TO-220 package
- Complement to type 2SC2591/2592
- Good linearity of h_{FE}
- High V_{CEO}

APPLICATIONS

- For audio frequency, high power amplifiers application

PINNING

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



Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SA1111	-150	V
		2SA1112	-180	
V_{CEO}	Collector-emitter voltage	2SA1111	-150	V
		2SA1112	-180	
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-1	A
I_{CM}	Collector current-peak		-1.5	A
P_C	Collector power dissipation	$T_C=25^\circ C$	20	W
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 _{(BR)CEO}	Collector-emitter breakdown voltage	2SA1111	I _C =-0.1mA, I _B =0	-150			V
		2SA1112		-180			
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-10 μA, I _C =0	-5			V	
V _{CEsat}	Collector-emitter saturation voltage	I _C =-0.5A; I _B =-50mA		-0.5	-2.0	V	
V _{BEsat}	Base-emitter saturation voltage	I _C =-0.5A; I _B =-50mA		-1.0	-2.0	V	
I _{CBO}	Collector cut-off current	V _{CB} =-120V; I _E =0			-1	μA	
I _{EBO}	Emitter cut-off current	V _{EB} =-4V; I _C =0			-1	μA	
h _{FE-1}	DC current gain	I _C =-150mA; V _{CE} =-10V	65		330		
h _{FE-2}	DC current gain	I _C =-500mA; V _{CE} =-5V	50				
C _{OB}	Output capacitance	I _E =0; V _{CB} =-10V; f=1MHz		30		pF	
f _T	Transition frequency	I _C =50mA; V _{CE} =-10V		200		MHz	

◆ h_{FE-1} Classifications

P	Q	R	S
65-110	90-155	130-220	185-330

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PACKAGE OUTLINE

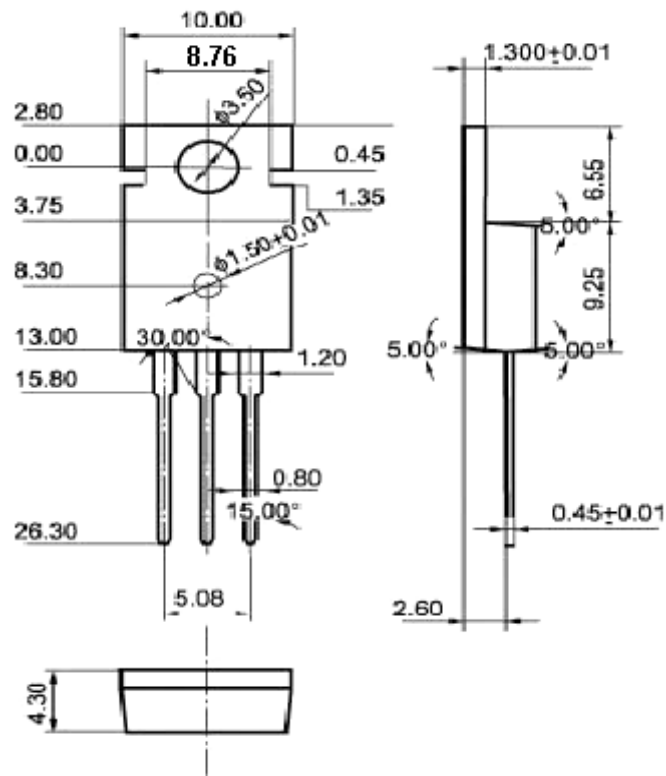


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)

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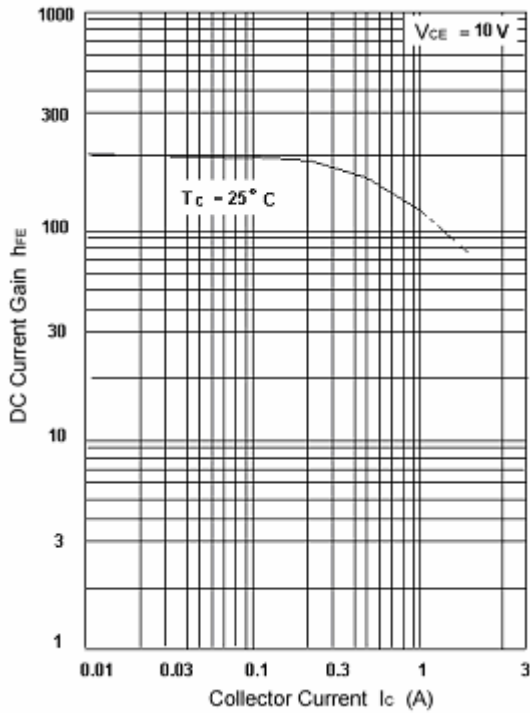


Fig.3 DC current Gain

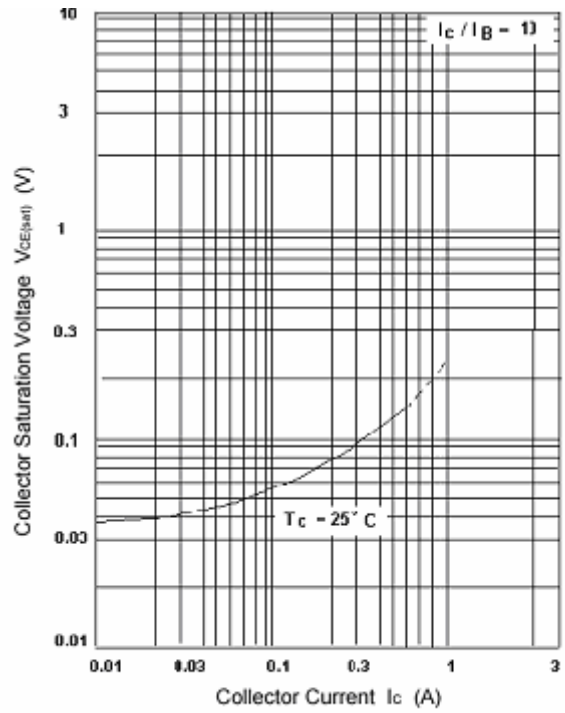


Fig.4 Collector-Emitter Saturation Voltage

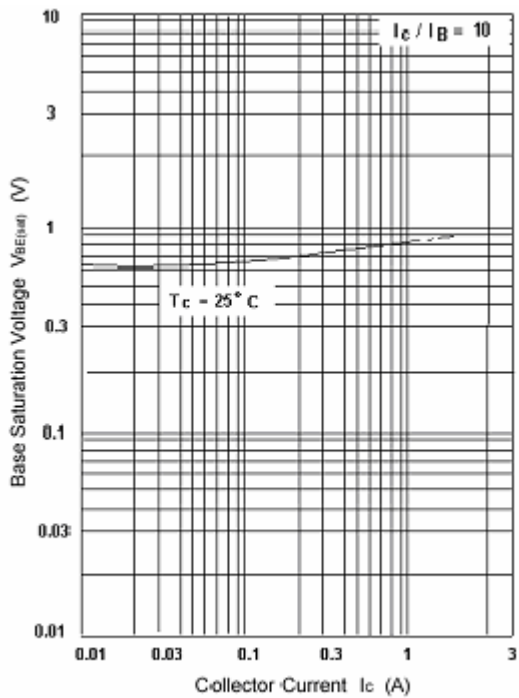


Fig.5 Base-Emitter Saturation Voltage

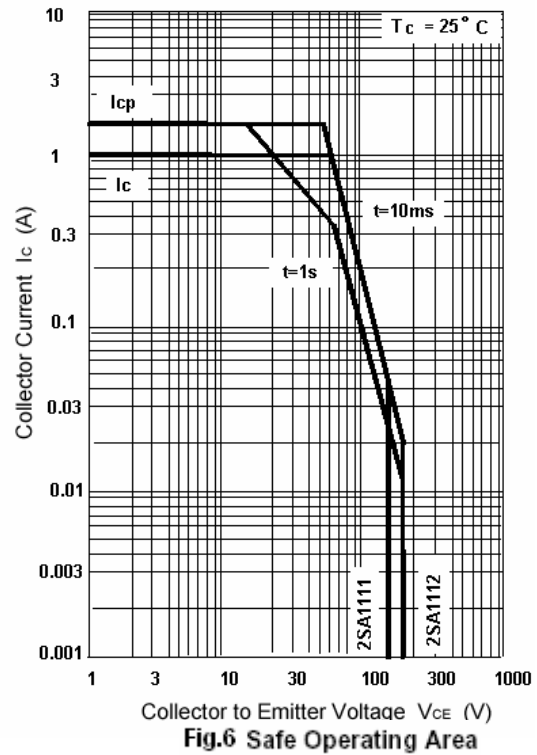


Fig.6 Safe Operating Area