

Inchange Semiconductor

Product Specification

Silicon PNP Power Transistors

2SA1111 2SA1112

DESCRIPTION

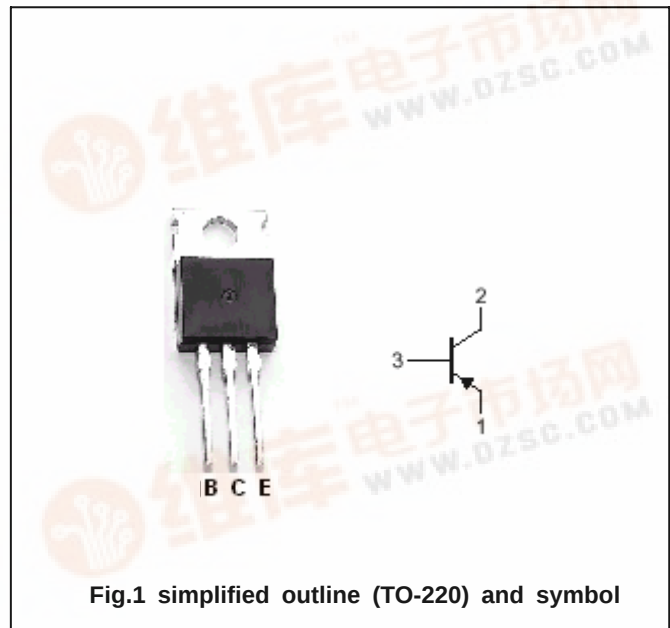
- With TO-220 package
- Complement to type 2SC2591/2592
- Good linearity of h_{FE}
- High V_{CEO}

APPLICATIONS

- For audio frequency, high power amplifiers application

PINNING

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

Absolute maximum ratings($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SA1111	Open emitter	-150	V
		2SA1112		-180	
V_{CEO}	Collector-emitter voltage	2SA1111	Open base	-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		$T_C=25^{\circ}\text{C}$	20	W
T_j	Junction temperature			150	$^{\circ}\text{C}$
T_{stg}	Storage temperature			-55~150	$^{\circ}\text{C}$

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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

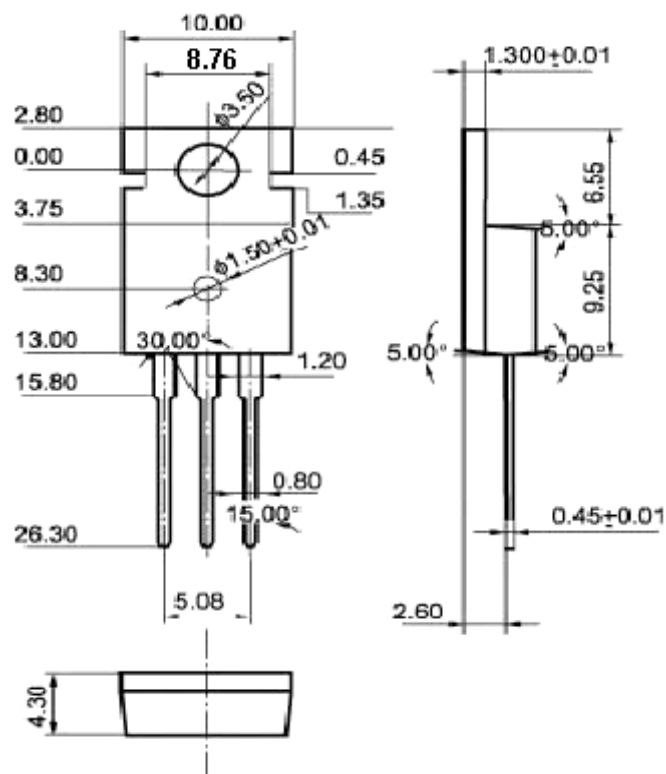
◆ h_{FE-1} Classifications

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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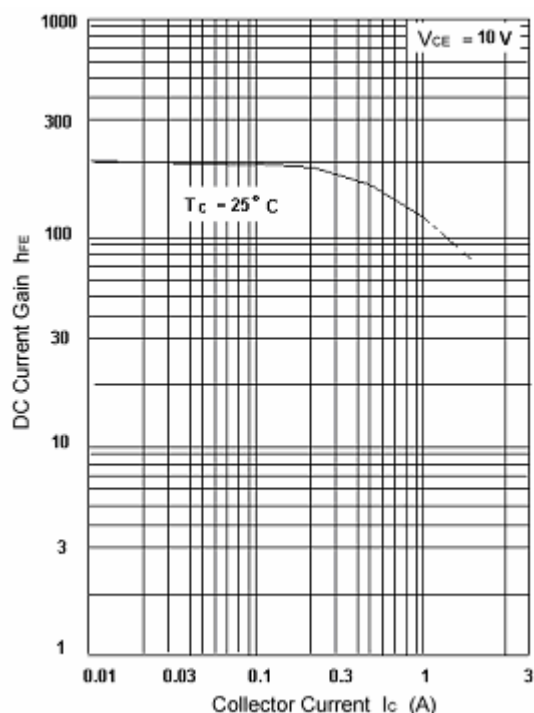


Fig.3 DC current Gain

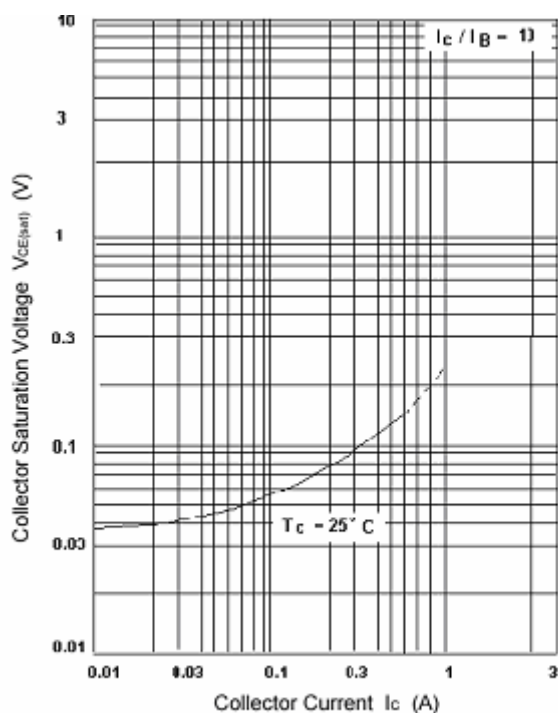


Fig.4 Collector-Emitter Saturation Voltage

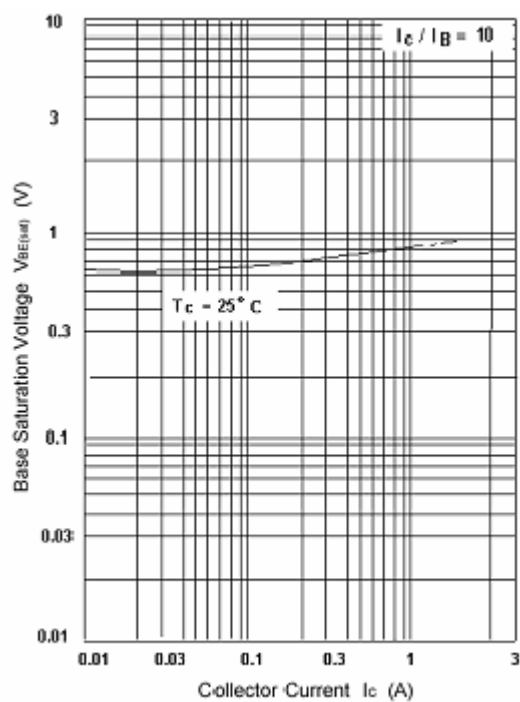


Fig.5 Base-Emitter Saturation Voltage

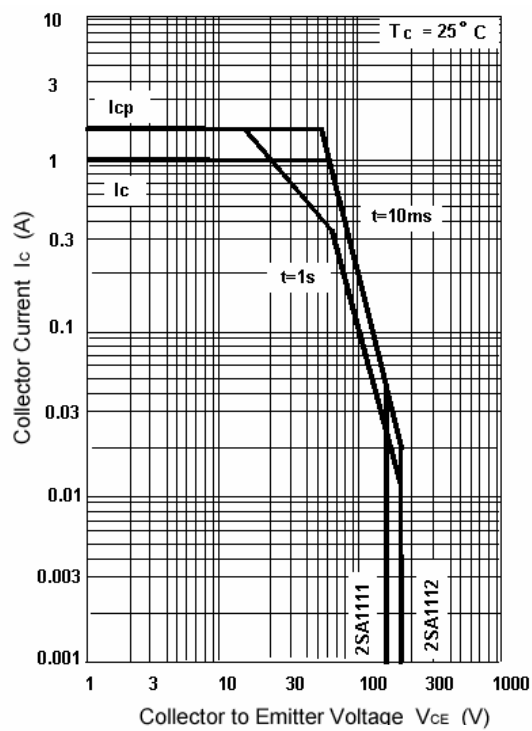


Fig.6 Safe Operating Area