

Silicon NPN Power Transistors

2SC2591 2SC2592

DESCRIPTION

- With TO-220 package
- Complement to type 2SA1111/1112
- Good linearity of h_{FE}
- High V_{CEO}

APPLICATIONS

- For audio frequency, high power amplifiers application

PINNING

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

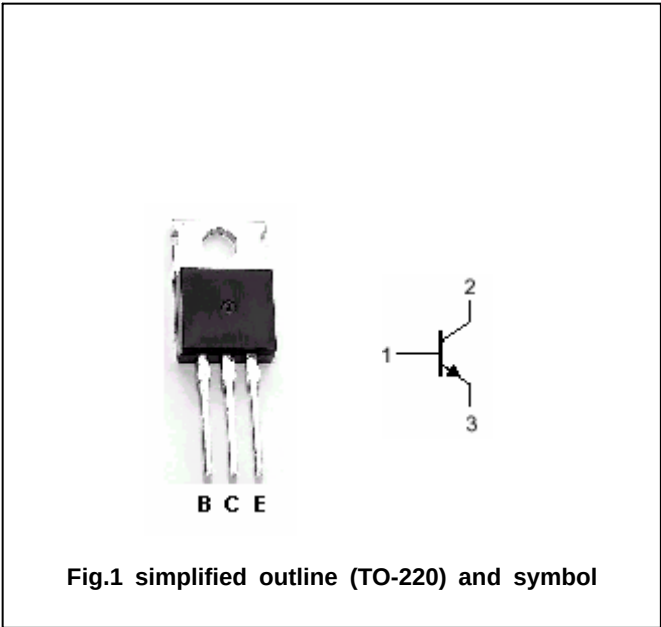


Fig.1 simplified outline (TO-220) and symbol

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SC2591	Open emitter	150	V
		2SC2592		180	
V_{CEO}	Collector-emitter voltage	2SC2591	Open base	150	V
		2SC2592		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	2SC2591	I _C =0.1mA, I _B =0	150			V
		2SC2592		180			
V _{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	90		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		20		pF
f _T	Transition frequency		I _C =50mA; V _{CE} =10V		200		MHz

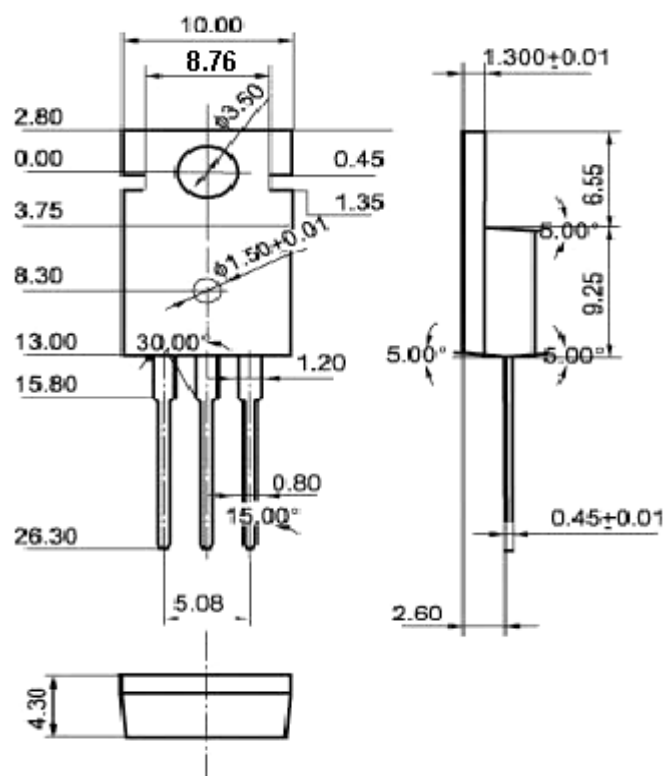
◆ h_{FE-1} Classifications

Q	R	S
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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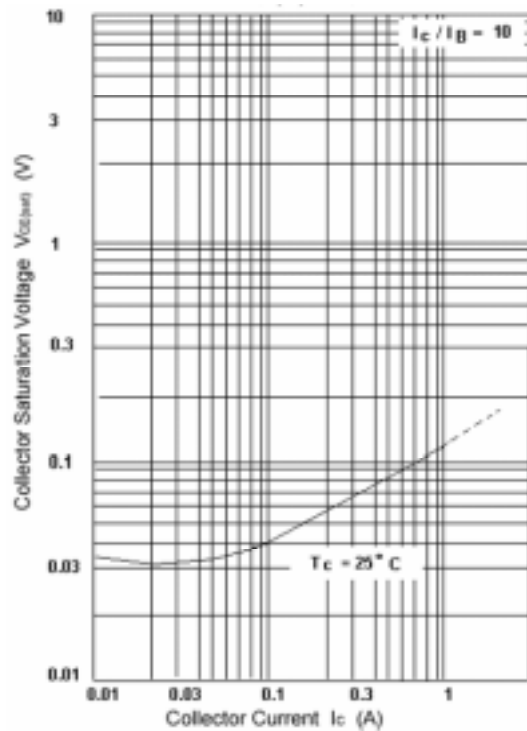


Fig.3 Collector-Emitter Saturation Voltage

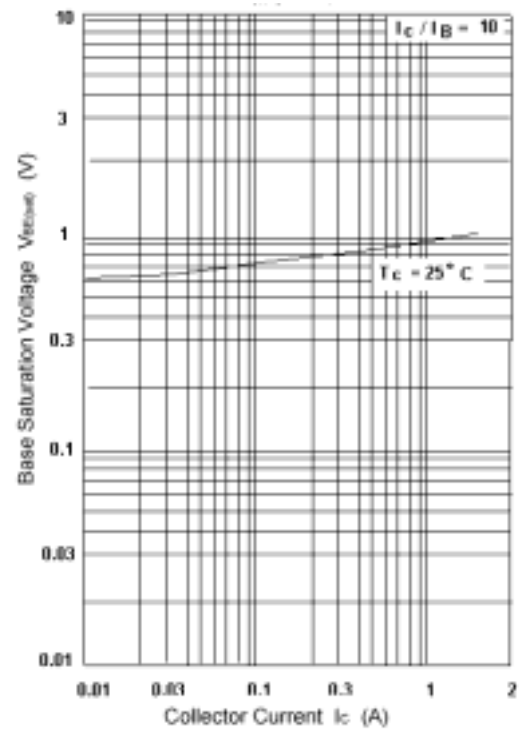


Fig.4 Base-Emitter Saturation Voltage

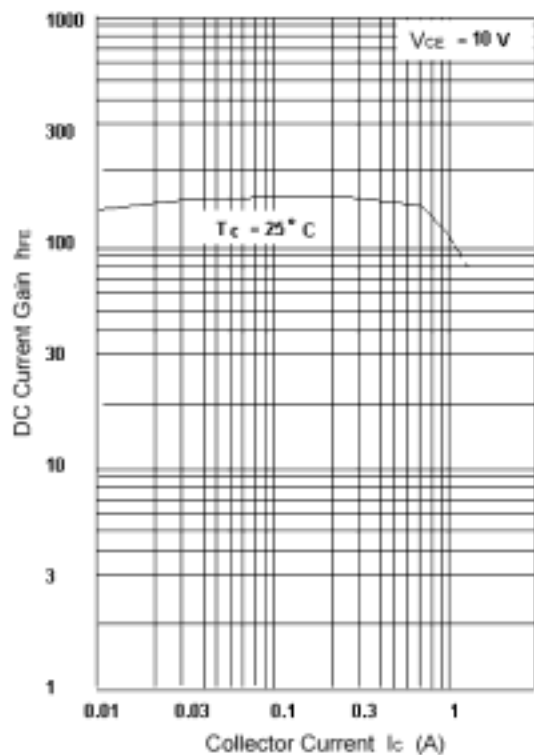


Fig.5 DC current Gain

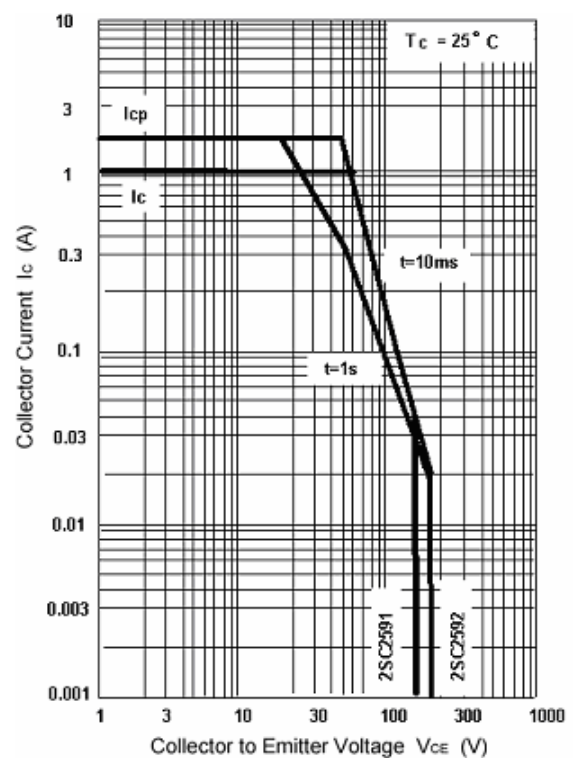


Fig.6 Safe Operating Area