

Silicon NPN Power Transistors

2SC2591 2SC2592

DESCRIPTION

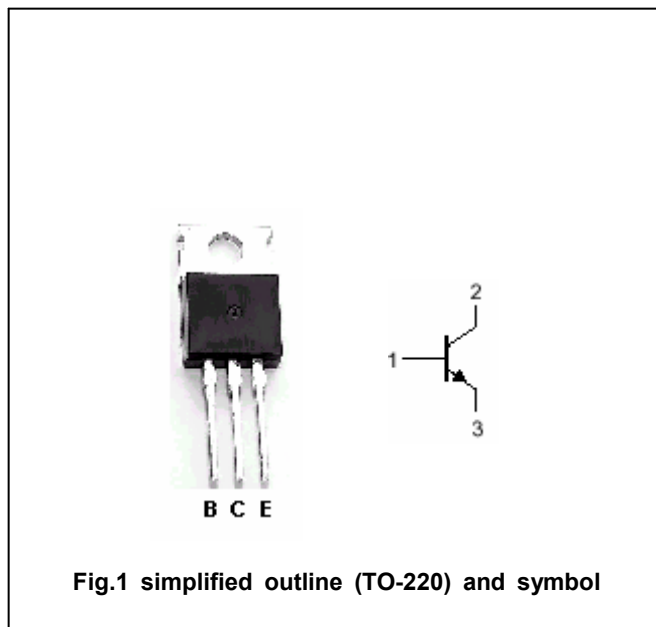
- With TO-220 package
- Complement to type 2SA1111/1112
- Good linearity of h_{FE}
- High V_{CEO}

APPLICATIONS

- For audio frequency, high power amplifiers application

PINNING

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

ABSOLUTE MAXIMUM RATINGS($T_c=25^\circ\text{C}$)

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

Tj=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		$I_E=10\mu A, I_C=0$	5			V
$V_{CE(sat)}$	Collector-emitter saturation voltage		$I_C=0.5A; I_B=50mA$		0.5	2.0	V
$V_{BE(sat)}$	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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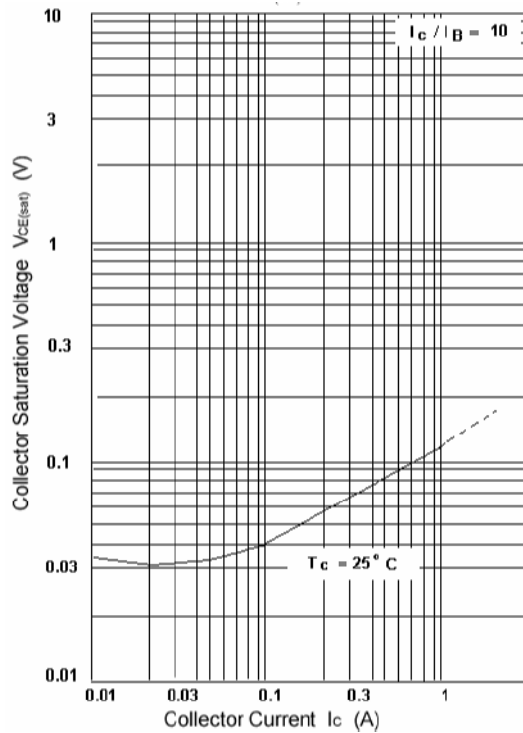


Fig.3 Collector-Emitter Saturation Voltage

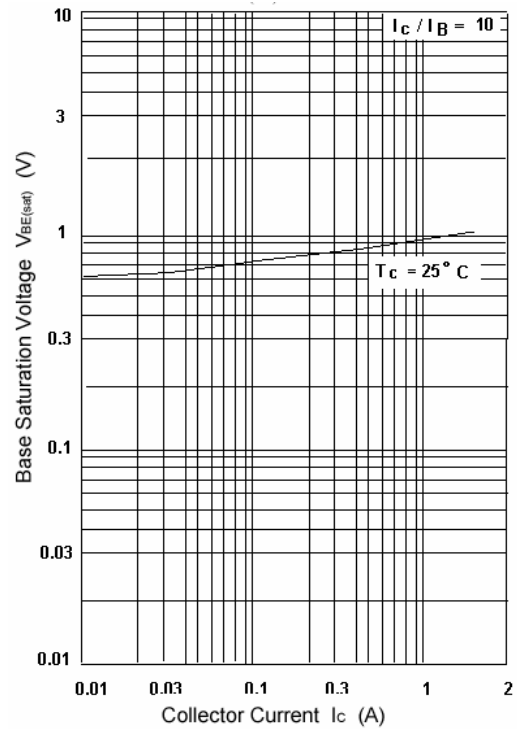


Fig.4 Base-Emitter Saturation Voltage

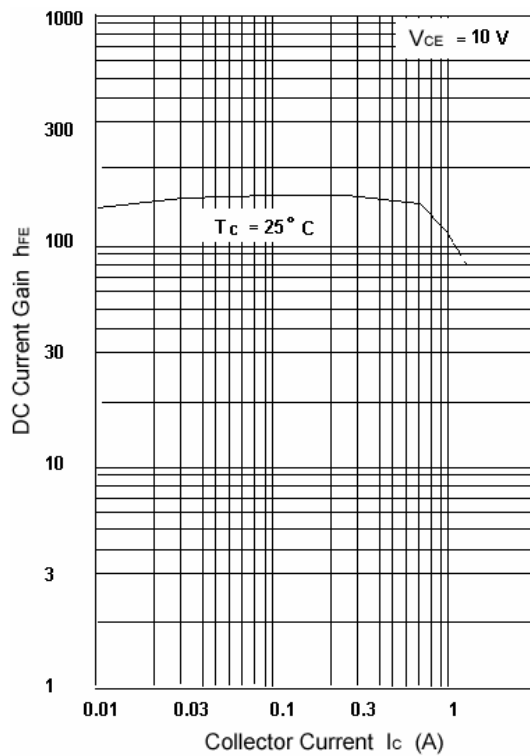


Fig.5 DC current Gain

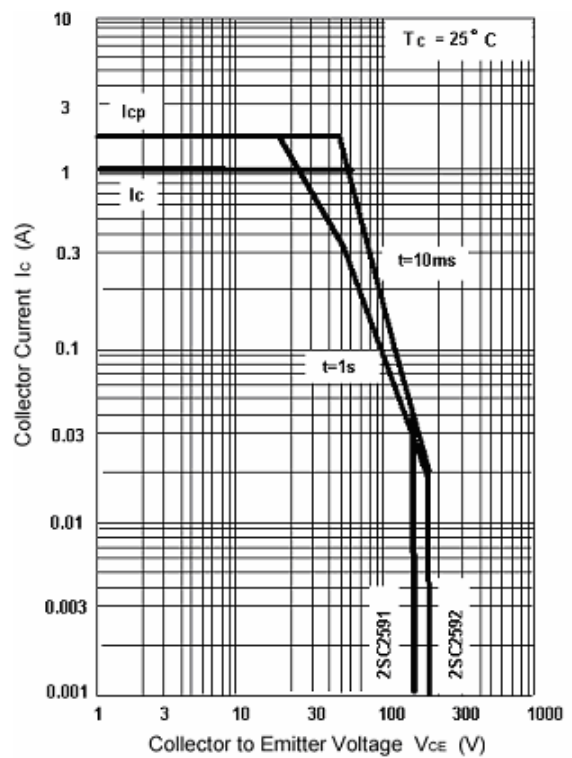


Fig.6 Safe Operating Area