

## Silicon PNP Power Transistors

## 2SA1006 2SA1006A 2SA1006B

## DESCRIPTION

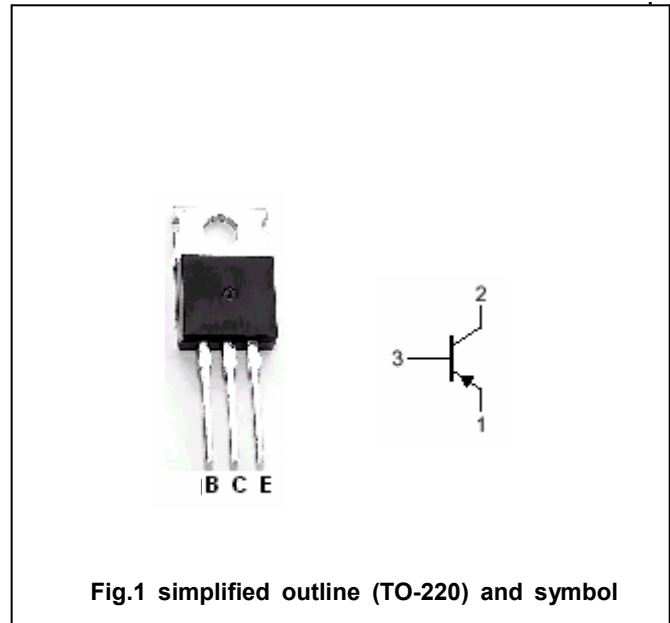
- With TO-220 package
- Complement to type 2SC2336, 2SC2336A, 2SC2336B

## APPLICATIONS

- Audio frequency power amplifier
- High frequency power amplifier

## 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	2SA1006	-180	V
		2SA1006A	-200	
		2SA1006B	-250	
$V_{CEO}$	Collector-emitter voltage	2SA1006	-180	V
		2SA1006A	-200	
		2SA1006B	-250	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-1.5	A
$I_{CM}$	Collector current-Peak		-3.0	A
$P_T$	Total power dissipation	$T_a=25^\circ\text{C}$	1.5	W
		$T_c=25^\circ\text{C}$	25	
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-0.5A; I <sub>B</sub> =-50mA			-1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-0.5A; I <sub>B</sub> =-50mA			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-150V; I <sub>E</sub> =0			-1	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-3V; I <sub>C</sub> =0			-1	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-5mA; V <sub>CE</sub> =-5V	30			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-150mA; V <sub>CE</sub> =-5V	60		320	
C <sub>ob</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =-10V, f=1MHz		45		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-100mA; V <sub>CE</sub> =10V		80		MHz

◆ h<sub>FE-2</sub> Classifications

R	Q	P
60-120	100-200	160-320

PACKAGE OUTLINE



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

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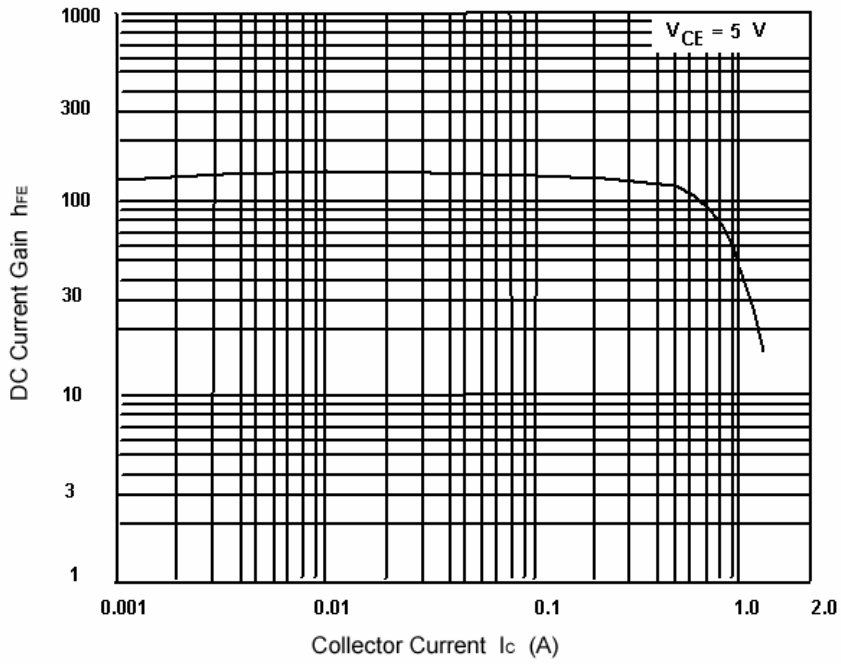


Fig.3 DC current Gain

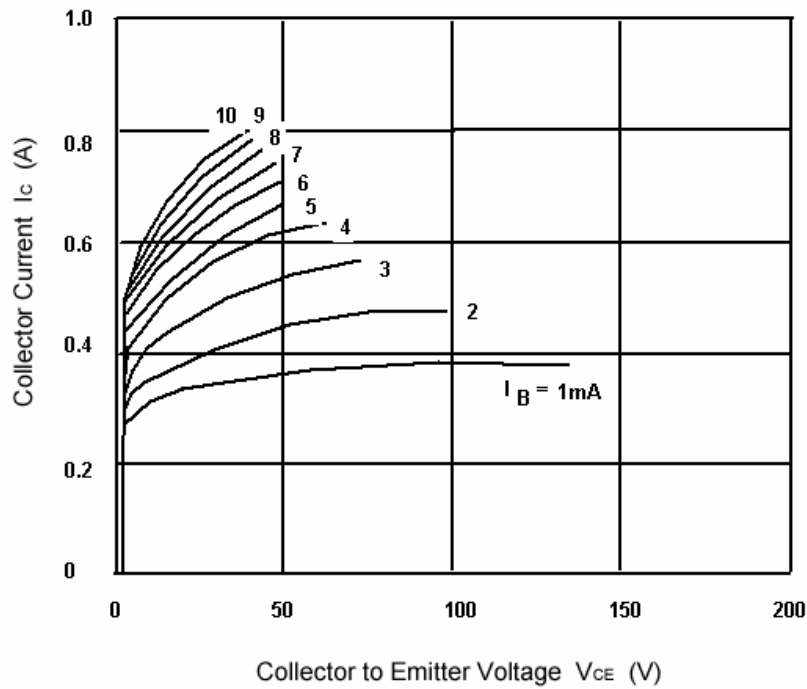


Fig.4 Static Characteristic

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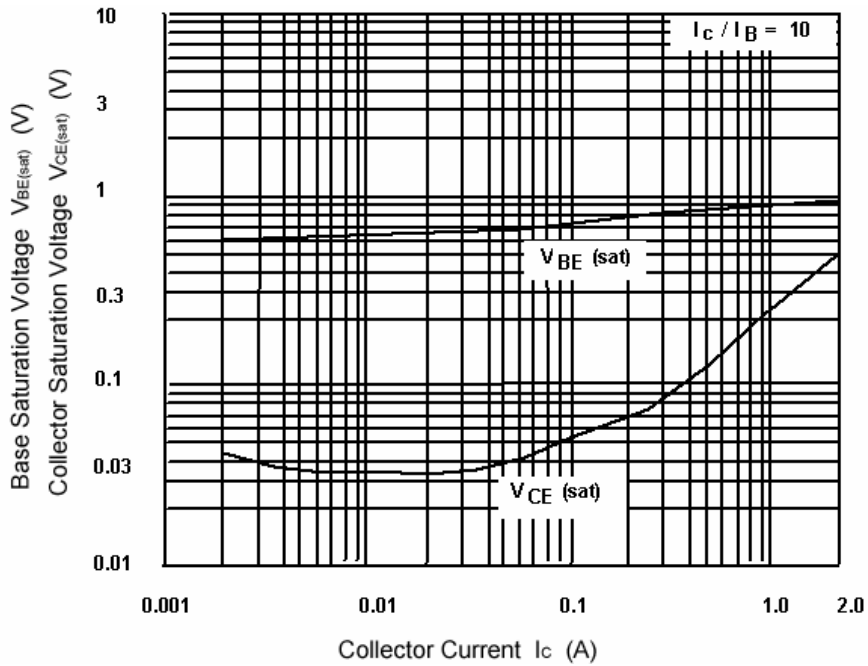


Fig.5 Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

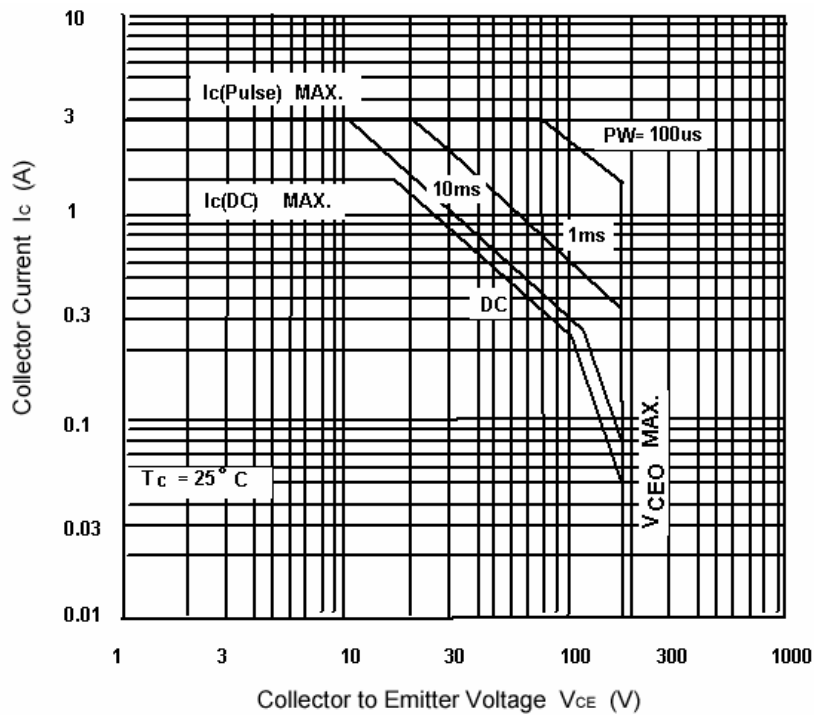


Fig.6 Safe Operating Area