

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

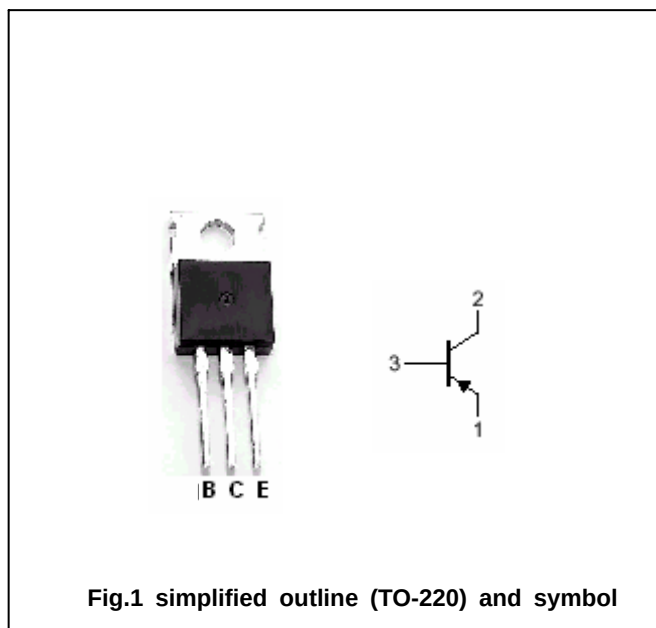


Fig.1 simplified outline (TO-220) and symbol

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SA1006	Open emitter	-180	V
		2SA1006A		-200	
		2SA1006B		-250	
V_{CEO}	Collector-emitter voltage	2SA1006	Open base	-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	$^\circ\text{C}$

Silicon PNP Power Transistors**2SA1006 2SA1006A 2SA1006B****CHARACTERISTICS**T_j=25°C unless otherwise specified

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

◆ **h_{FE-2} Classifications**

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

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PACKAGE OUTLINE

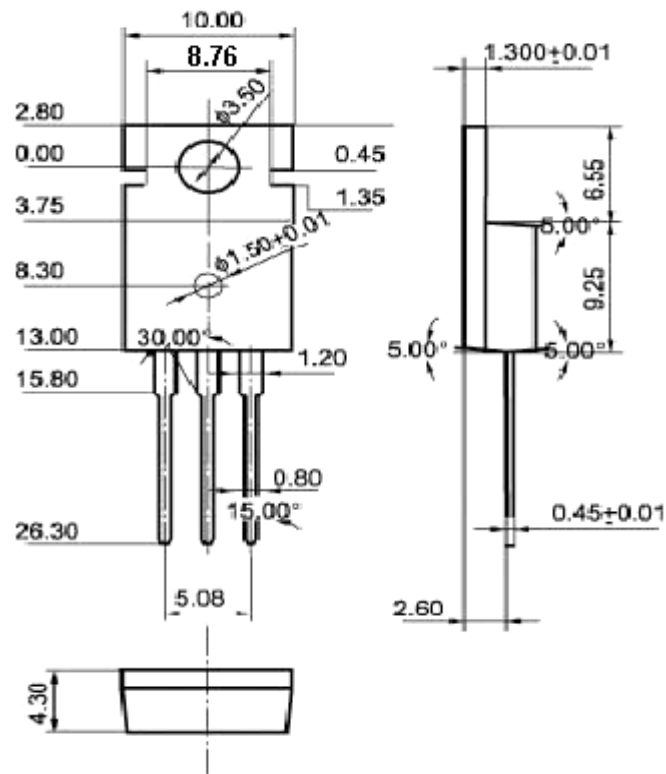


Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)

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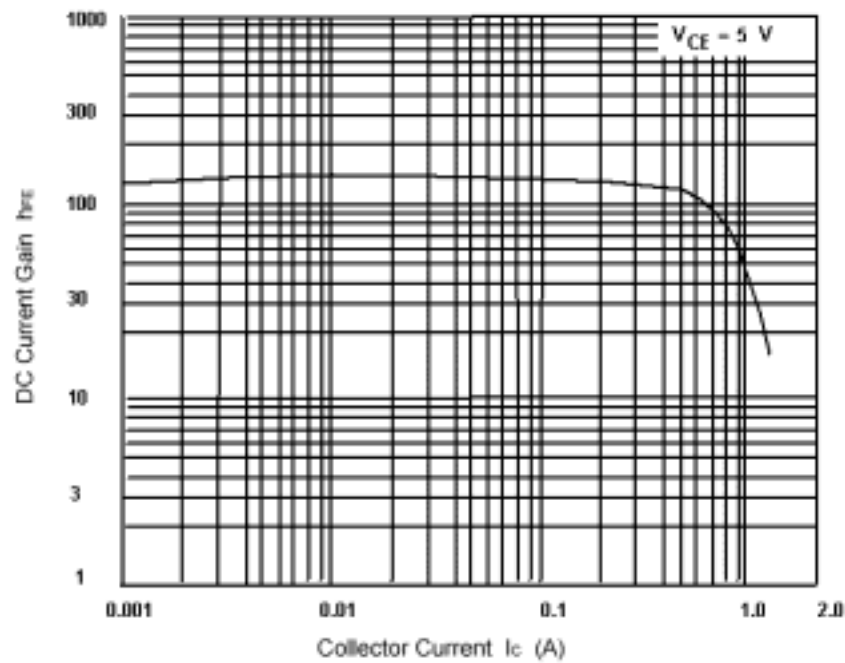


Fig.3 DC current Gain

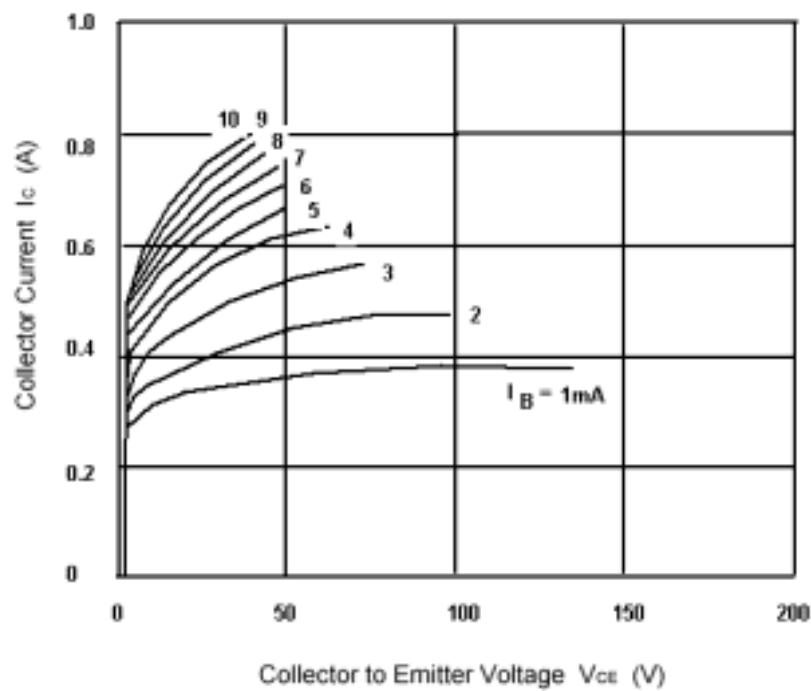


Fig.4 Static Characteristic

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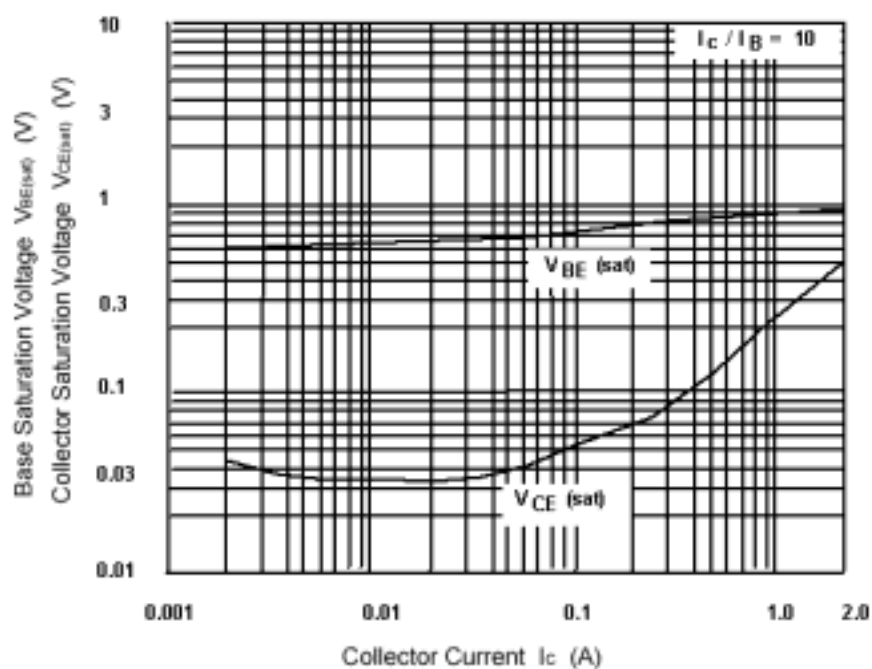


Fig.5 Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

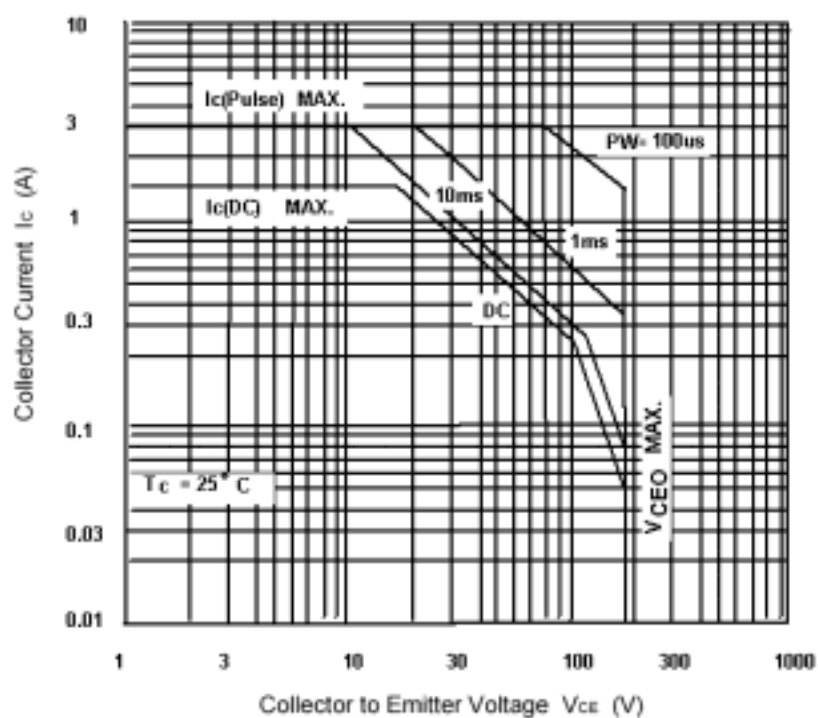


Fig.6 Safe Operating Area