

## Silicon PNP Power Transistors

2SA1329

## DESCRIPTION

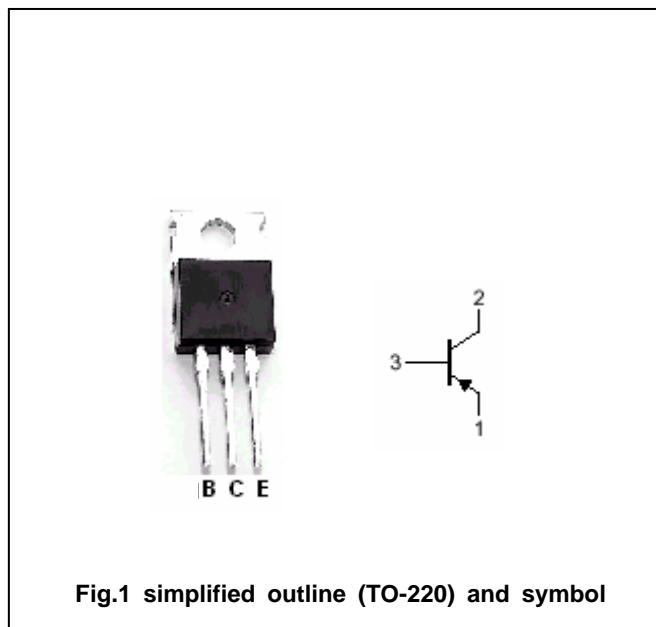
- With TO-220 package
- Complement to type 2SC3346
- Low collector saturation voltage
- High speed switching time

## APPLICATIONS

- High current switching applications

## 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	Open emitter	-80	V
$V_{CEO}$	Collector-emitter voltage	Open base	-80	V
$V_{EBO}$	Emitter-base voltage	Open collector	-6	V
$I_C$	Collector current		-12	A
$I_B$	Base current		-2	A
$P_C$	Collector power dissipation	$T_C=25^{\circ}\text{C}$	40	W
$T_j$	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>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-50mA, I <sub>B</sub> =0	-80			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-6A; I <sub>B</sub> =-0.3A		-0.2	-0.4	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-6A; I <sub>B</sub> =-0.3A		-0.9	-1.2	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-80V; I <sub>E</sub> =0			-10	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-6V; I <sub>C</sub> =0			-10	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-1A; V <sub>CE</sub> =-1V	70		240	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-6A; V <sub>CE</sub> =-1V	40			
C <sub>ob</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1MHz		400		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1A; V <sub>CE</sub> =-5V		50		MHz

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>B1</sub> =- I <sub>B2</sub> =-0.3A R <sub>L</sub> =5Ω; V <sub>CC</sub> =-30V		0.3		μ s
t <sub>s</sub>	Storage time			1.0		μ s
t <sub>f</sub>	Fall time			0.5		μ s

◆ h<sub>FE-1</sub> Classifications

O	Y
70-140	120-240

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PACKAGE OUTLINE



Fig.2 Outline dimensions(unindicated tolerance:  $\pm 0.10$  mm)

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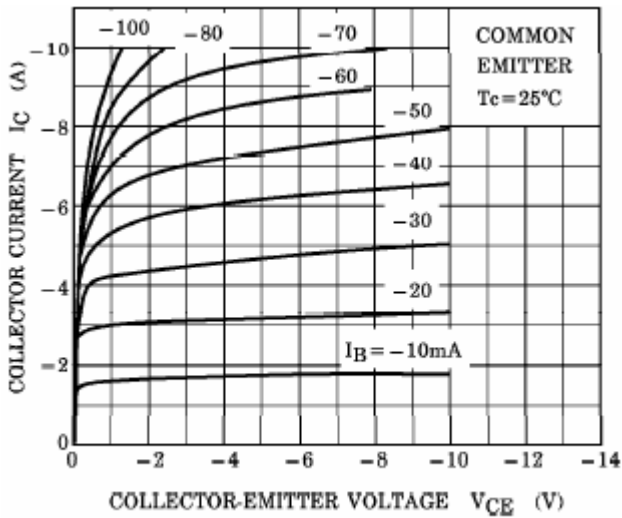


Fig.3 Static Characteristic

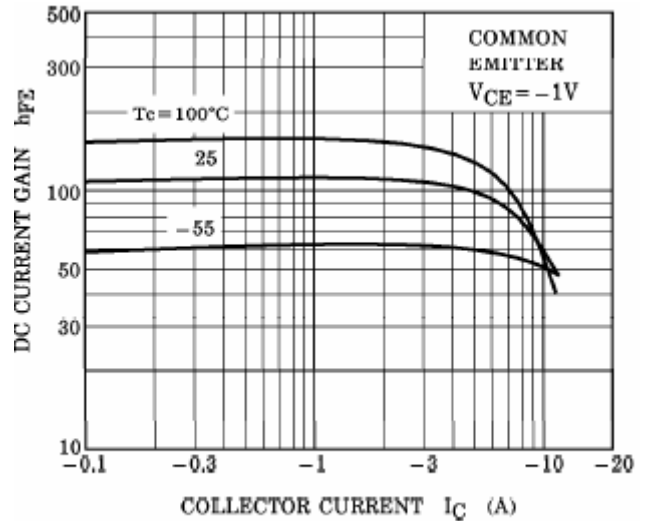


Fig.4 DC current Gain

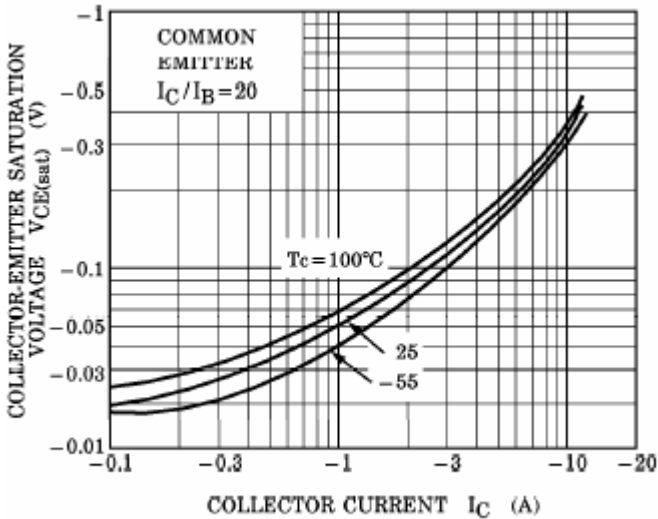


Fig.5 Collector-Emitter Saturation Voltage

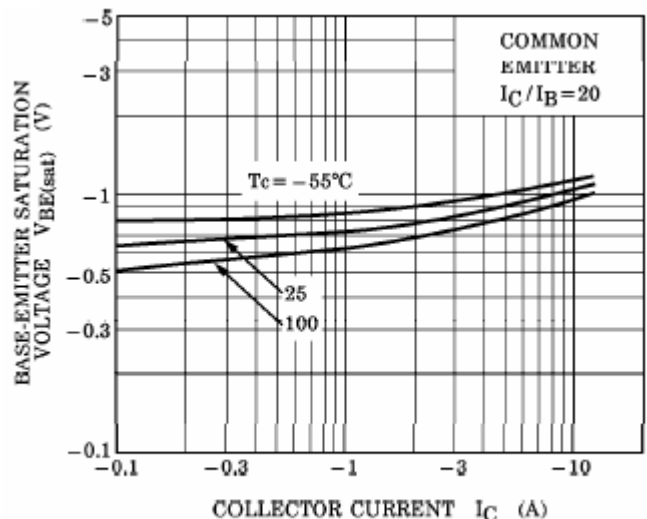


Fig.6 Base-Emitter Saturation Voltage

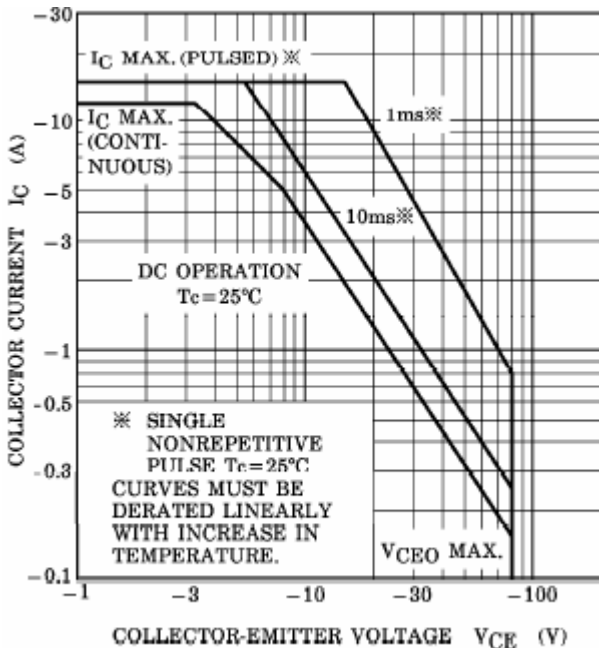


Fig.7 Safe Operating Area