

## Silicon PNP Power Transistors

2SA1129

## DESCRIPTION

- With TO-220 package
- Complement to type 2SC2654
- Low collector saturation voltage

## APPLICATIONS

- For low-frequency power amplifiers and mid-speed switching applications

## PINNING

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

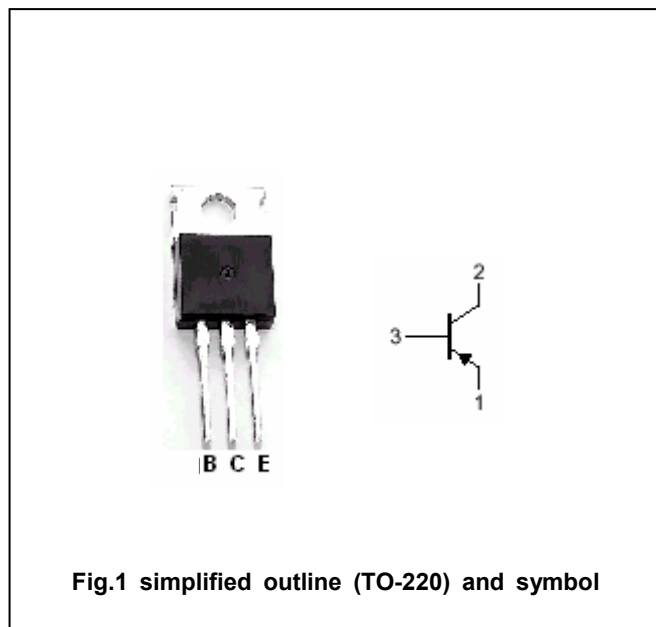


Fig.1 simplified outline (TO-220) and symbol

## Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-30	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-30	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-7	V
I <sub>C</sub>	Collector current (DC)		-7	A
I <sub>CM</sub>	Collector current-peak		-15	A
I <sub>B</sub>	Base current (DC)		-3.5	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	40	W
		T <sub>a</sub> =25°C	1.5	
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE(sat)-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A ; I <sub>B</sub> =-0.1A			-0.3	V
V <sub>CE(sat)-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A ; I <sub>B</sub> =-0.5A			-0.6	V
V <sub>BE(sat)-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-3A ; I <sub>B</sub> =-0.1A			-1.5	V
V <sub>BE(sat)-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-5A ; I <sub>B</sub> =-0.5A			-2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-30V; I <sub>E</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-1V	40		200	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-5A ; V <sub>CE</sub> =-1V	20			

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-5.0A I <sub>B1</sub> =-0.5 A , I <sub>B2</sub> =0.5A V <sub>CC</sub> ≈20V, R <sub>L</sub> =4.0Ω			1.0	μs
t <sub>s</sub>	Storage time				2.5	μs
t <sub>f</sub>	Fall time				1.0	μs

◆ h<sub>FE-1</sub> Classifications

M	L	K
40-80	60-120	100-200

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PACKAGE OUTLINE

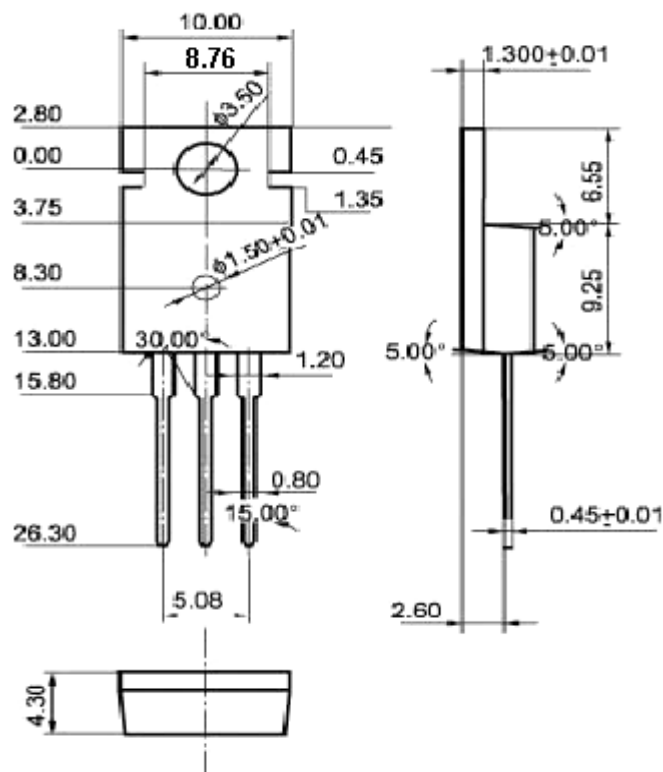


Fig.2 outline dimensions (unindicated tolerance: ±0.10 mm)