

Silicon PNP Power Transistors

2SB1069 2SB1069A

**DESCRIPTION**

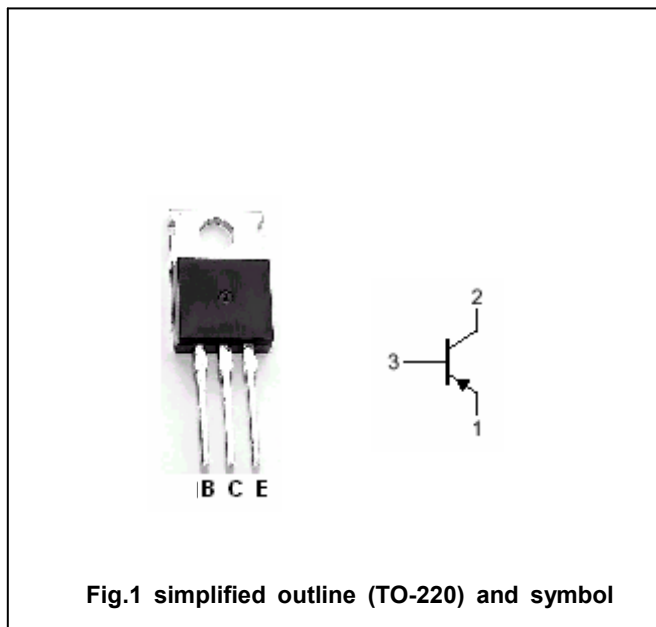
- With TO-220 package
- High speed switching
- Low collector saturation voltage

**APPLICATIONS**

- For low-voltage switching applications

**PINNING**

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



**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2SB1069	-40	V
		2SB1069A	-50	
V <sub>CEO</sub>	Collector-emitter voltage	2SB1069	-20	V
		2SB1069A	-40	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-4	A
I <sub>CM</sub>	Collector current-peak		-8	A
P <sub>C</sub>	Collector power dissipation	T <sub>a</sub> =25°C	1.4	W
		T <sub>C</sub> =25°C	25	
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>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SB1069	-20			V
		2SB1069A	-40			
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2A; I <sub>B</sub> =-0.1A			-0.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-2A; I <sub>B</sub> =-0.1A			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-40V; I <sub>E</sub> =0			-50	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-50	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-0.1A; V <sub>CE</sub> =-2V	45			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-1A; V <sub>CE</sub> =-2V	60		260	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-5V		150		MHz

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-2A; I <sub>B1</sub> =-I <sub>B2</sub> =-0.2A		0.3		μs
t <sub>stg</sub>	Storage time			0.4		μs
t <sub>f</sub>	Fall time			0.1		μs

◆ h<sub>FE-2</sub> classifications

R	Q	P
60-120	90-180	130-260

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PACKAGE OUTLINE



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