

Silicon PNP Power Transistors

2SB681

**DESCRIPTION**

- With TO-3 package
- High power dissipation

**APPLICATIONS**

- Power amplifier applications
- Recommended for high-power high-fidelity audio frequency amplifier output stage

**PINNING(see Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

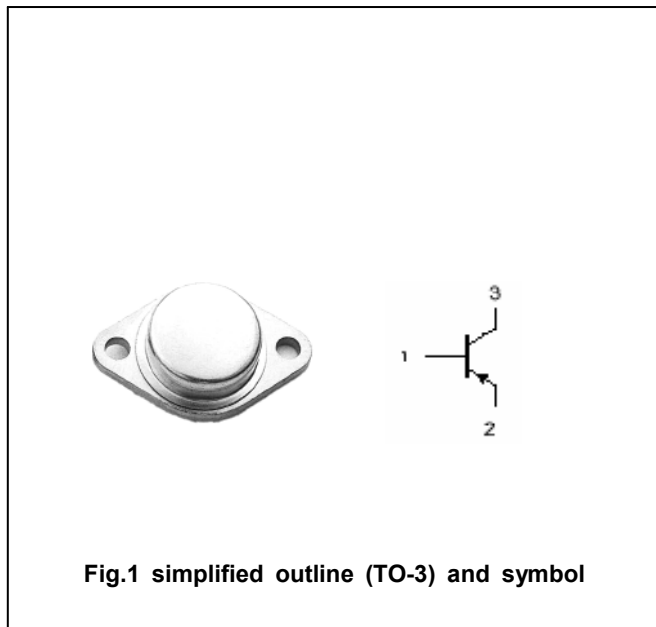


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-150	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-150	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-12	A
I <sub>CM</sub>	Collector current-peak		-20	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25□	100	W
T <sub>j</sub>	Junction temperature		150	□
T <sub>stg</sub>	Storage temperature		-40~150	□

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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> =-30mA ; I <sub>B</sub> =0	-150			V
V <sub>(BR)CBO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-1mA ; I <sub>E</sub> =0	-150			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-1mA ; I <sub>C</sub> =0	-5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-6A; I <sub>B</sub> =-0.6A			-2.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-150V; I <sub>E</sub> =0			-0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-0.1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V	40		140	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-5A ; V <sub>CE</sub> =-5V	20			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V		13		MHz

◆ h<sub>FE-1</sub> Classifications

R	O
40-80	70-140

PACKAGE OUTLINE



Fig.2 outline dimensions (unindicated tolerance:±0.1mm)