

Silicon PNP Power Transistors

2SA1142

**DESCRIPTION**

- With TO-126 package
- Complement to type 2SC2682

**APPLICATIONS**

- Audio frequency power amplifier; high frequency power amplifier applications

**PINNING**

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

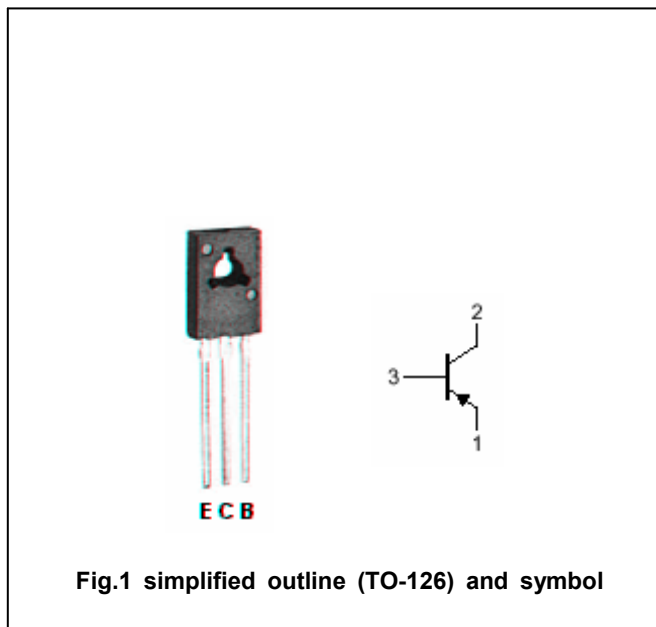


Fig.1 simplified outline (TO-126) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-180	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-180	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-0.1	A
P <sub>C</sub>	Collector power dissipation	T <sub>a</sub> =25°C	1.2	W
		T <sub>C</sub> =25°C	8	
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>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-50mA; I <sub>B</sub> =-5mA		-0.16	-0.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-50mA; I <sub>B</sub> =-5mA		-0.8	-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-180V; I <sub>E</sub> =0			-1	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-3V; I <sub>C</sub> =0			-1	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-1mA; V <sub>CE</sub> =-5V	90	200		
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-10mA; V <sub>CE</sub> =-5V	100	200	320	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-20mA; V <sub>CE</sub> =-10V		180		MHz
C <sub>ob</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1MHz		4.5		pF

◆ h<sub>FE-2</sub> Classifications

O	Y
100-200	160-320

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PACKAGE OUTLINE

