

## Silicon PNP Power Transistors

## BD190

## DESCRIPTION

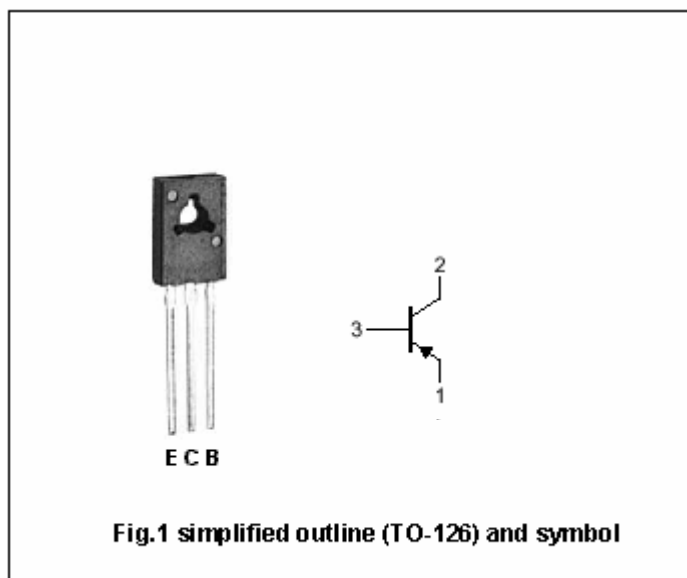
- With TO-126 package
- High current
- Complement to type BD189

## APPLICATIONS

- For use in 5 to 10 watt audio amplifiers utilizing complementary or quasi complementary circuits.

## 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	Open emitter	-70	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-60	V
V <sub>EBO</sub>	Emitter -base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current (DC)		-4	A
I <sub>B</sub>	Base current		-2	A
P <sub>t</sub>	Total power dissipation	T <sub>mb</sub> ≤70°C	40	W
T <sub>j</sub>	Junction temperature		-65~150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-a</sub>	Thermal resistance, junction to case	3.12	°C/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(SUS)CEO</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =-0.1A; I <sub>B</sub> =0	-60			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2.0A; I <sub>B</sub> =-0.2A			-1.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-2A; V <sub>CE</sub> =-2V			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-70V; 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			-1.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-2V	40			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-2A; V <sub>CE</sub> =-2V	15			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1.0A; V <sub>CE</sub> =-10V; f=1.0MHz	2.0			MHz

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PACKAGE OUTLINE

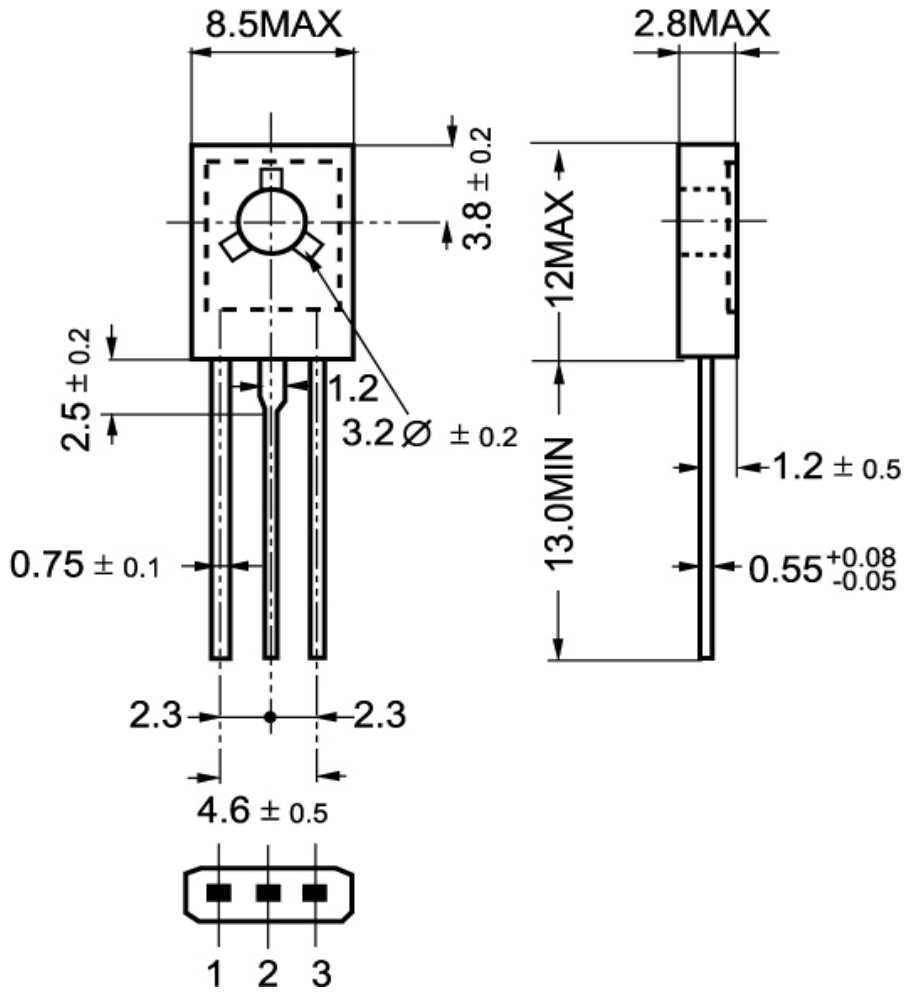


Fig.2 Outline dimensions