

## Silicon NPN Power Transistors

## BD131

## DESCRIPTION

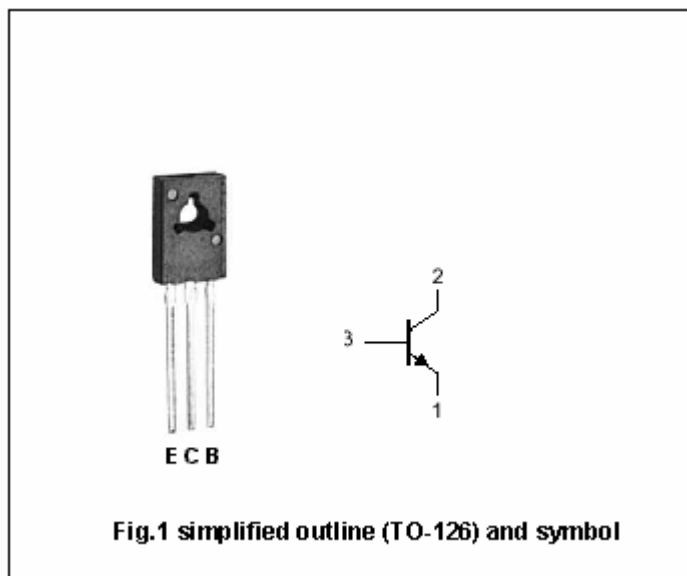
- Complement to type BD132
- With TO-126 package
- High current (Max: 3A)
- Low voltage (Max: 45V)

## APPLICATIONS

- For general purpose power 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>CB0</sub>	Collector-base voltage	Open emitter	70	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	45	V
V <sub>EBO</sub>	Emitter -base voltage	Open collector	6	V
I <sub>C</sub>	Collector current (DC)		3	A
I <sub>CM</sub>	Collector current-Peak		6	A
I <sub>BM</sub>	Base current-Peak		0.5	A
P <sub>T</sub>	Total power dissipation	T <sub>mb</sub> ≤60°C	15	W
T <sub>j</sub>	Junction temperature		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 from junction to ambient	100	K/W
R <sub>th j-mb</sub>	Thermal resistance from junction to mounting base	6	K/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =0.5A; I <sub>B</sub> =50mA			0.3	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A; I <sub>B</sub> =0.2A			0.7	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =0.5A; I <sub>B</sub> =50mA			1.2	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =2A; I <sub>B</sub> =0.2A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =50V; I <sub>E</sub> =0			50	nA
		V <sub>CB</sub> =50V; I <sub>E</sub> =0 T <sub>j</sub> =150 °C			10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			50	nA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =12V	40			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =1V	20			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.25A; V <sub>CE</sub> =5V ;f=100MHz	60			MHz

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PACKAGE OUTLINE

