

Silicon NPN Power Transistors

BD131

DESCRIPTION

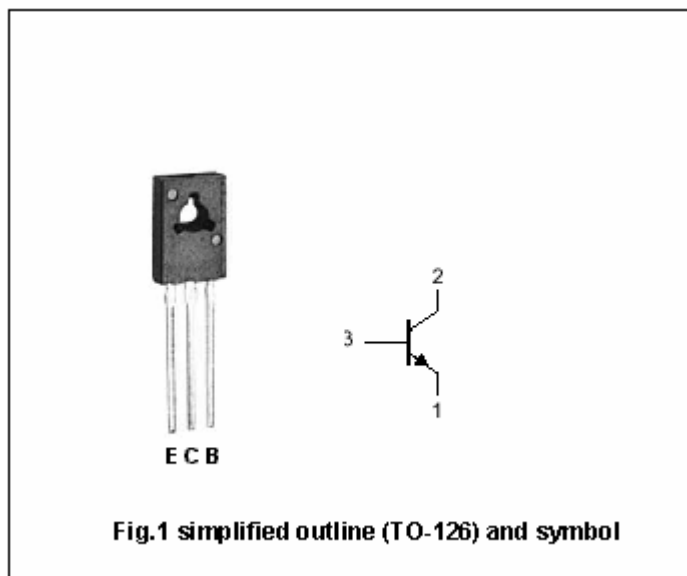
- Complement to type BD132
- With TO-126 package
- High current (Max: 3A)
- Low voltage (Max: 45V)

APPLICATIONS

- For general purpose power applications

PINNING

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



Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	70	V
V _{CEO}	Collector-emitter voltage	Open base	45	V
V _{EBO}	Emitter -base voltage	Open collector	6	V
I _C	Collector current (DC)		3	A
I _{CM}	Collector current-Peak		6	A
I _{BM}	Base current-Peak		0.5	A
P _T	Total power dissipation	T _{mb} ≤60℃	15	W
T _j	Junction temperature		150	℃
T _{stg}	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{th j-a}	Thermal resistance from junction to ambient	100	K/W
R _{th j-mb}	Thermal resistance from junction to mounting base	6	K/W

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

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

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PACKAGE OUTLINE

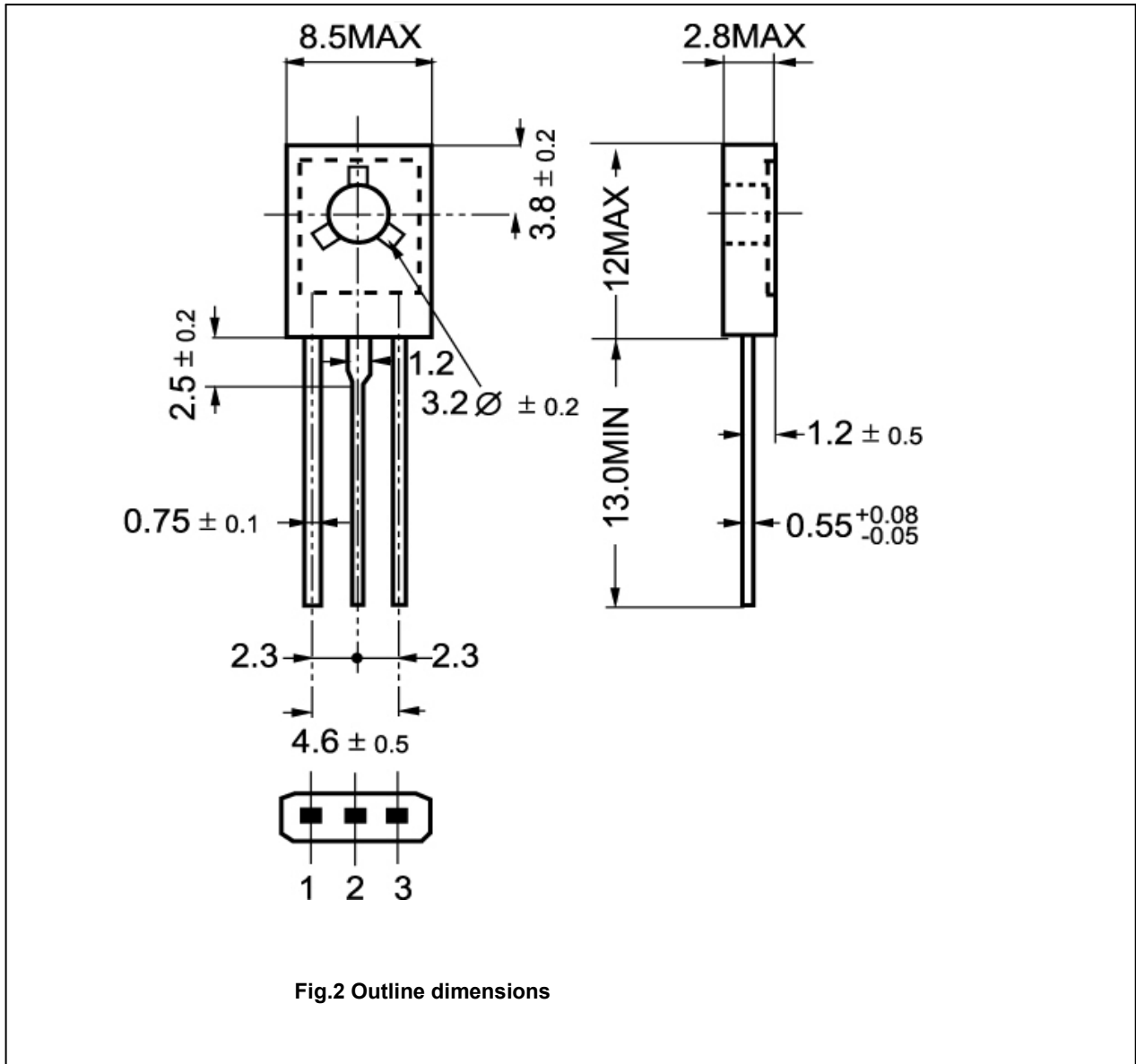


Fig.2 Outline dimensions