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

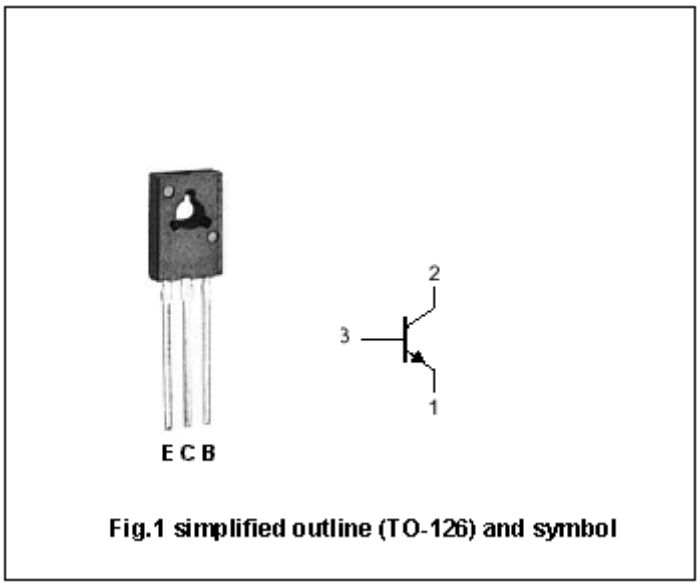


Fig.1 simplified outline (TO-126) and symbol

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	$T_{mb}\leqslant 60℃$	15	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

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

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CHARACTERISTICS

Tj=25℃ 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℃			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

PACKAGE OUTLINE

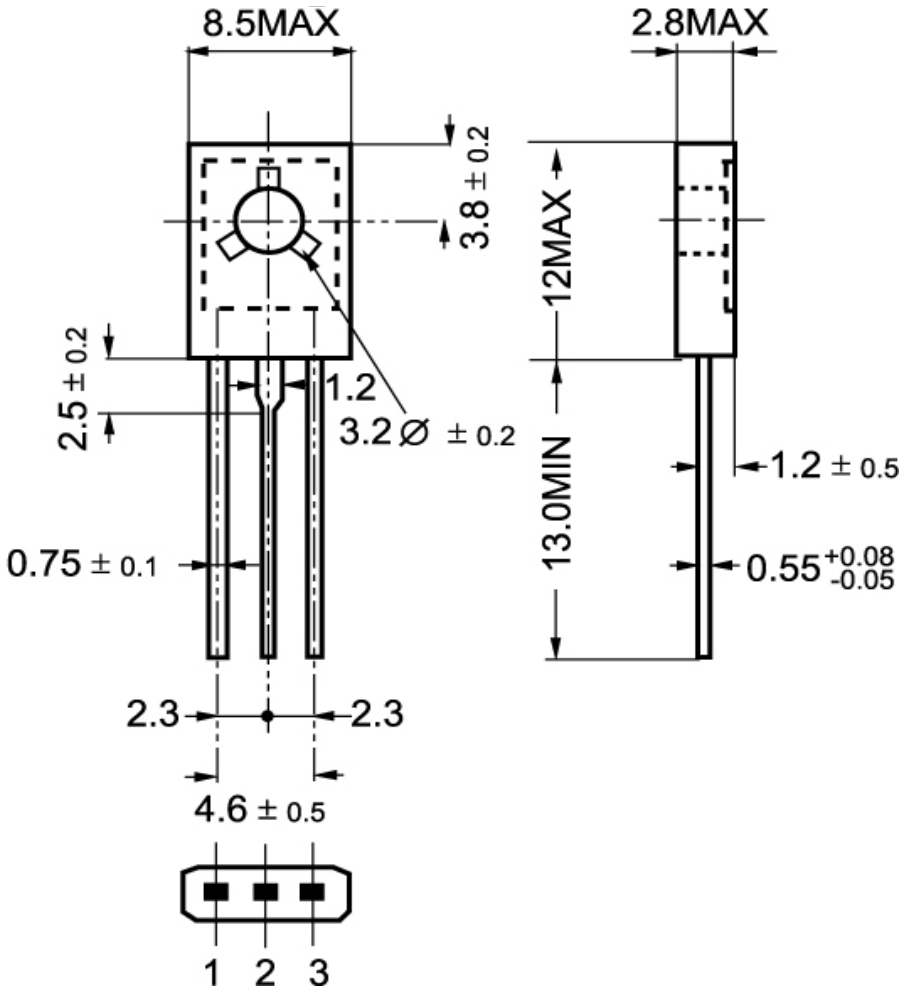


Fig.2 Outline dimensions