

**Silicon NPN Power Transistors**

**BD233 BD235 BD237**

**DESCRIPTION**

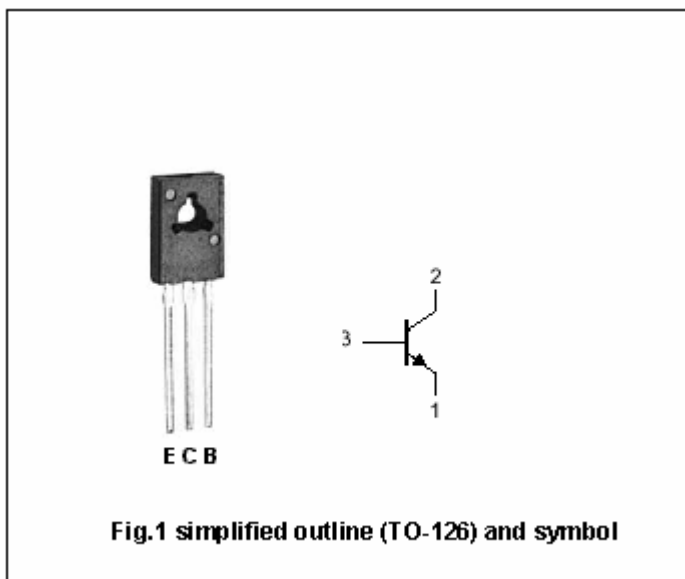
- With TO-126 package
- Complement to type BD234 /236 /238

**APPLICATIONS**

- For medium power linear and switching 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 <sub>CBO</sub>	Collector-base voltage	BD233	45	V
		BD235	60	
		BD237	100	
V <sub>CEO</sub>	Collector-emitter voltage	BD233	45	V
		BD235	60	
		BD237	80	
V <sub>EBO</sub>	Emitter -base voltage	Open collector	5	V
I <sub>C</sub>	Collector current (DC)		2	A
I <sub>CM</sub>	Collector current-Peak		6	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	25	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-65~150	

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			0.6	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =1A; V <sub>CE</sub> =2V			1.3	V
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	BD233	I <sub>C</sub> =0.1A; I <sub>B</sub> =0	45			V
		BD235		60			
		BD237		80			
I <sub>CBO</sub>	Collector cut-off current	BD233	V <sub>CB</sub> =45V; I <sub>E</sub> =0			100	μA
		BD235	V <sub>CB</sub> =60V; I <sub>E</sub> =0				
		BD237	V <sub>CB</sub> =100V; I <sub>E</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =5V; I <sub>C</sub> =0			1	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =150mA; V <sub>CE</sub> =2V	40			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =1A; V <sub>CE</sub> =2V	25			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =250mA; V <sub>CE</sub> =10V	3			MHz

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PACKAGE OUTLINE

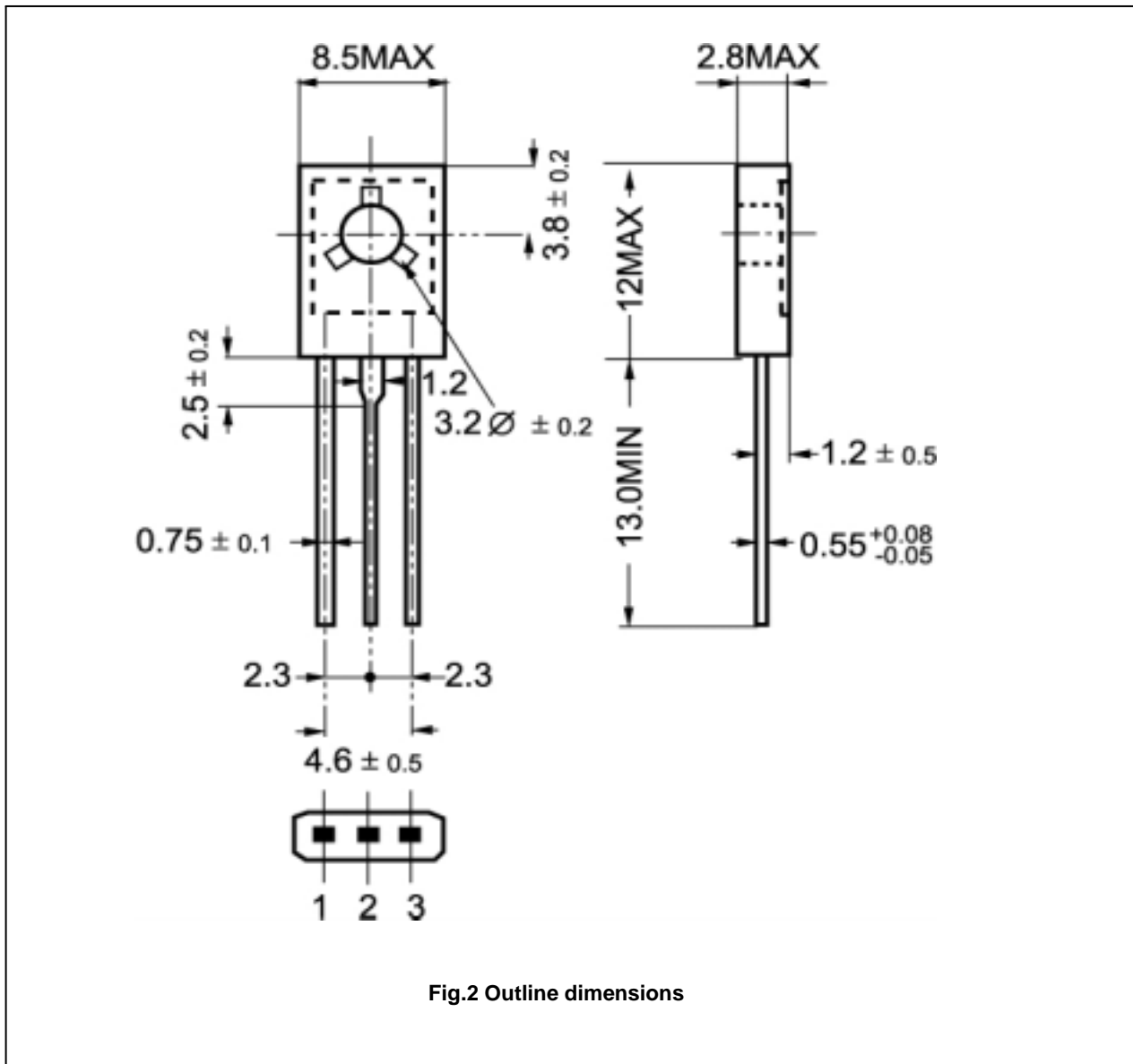


Fig.2 Outline dimensions