

Silicon NPN Power Transistors

BD439 BD441

DESCRIPTION

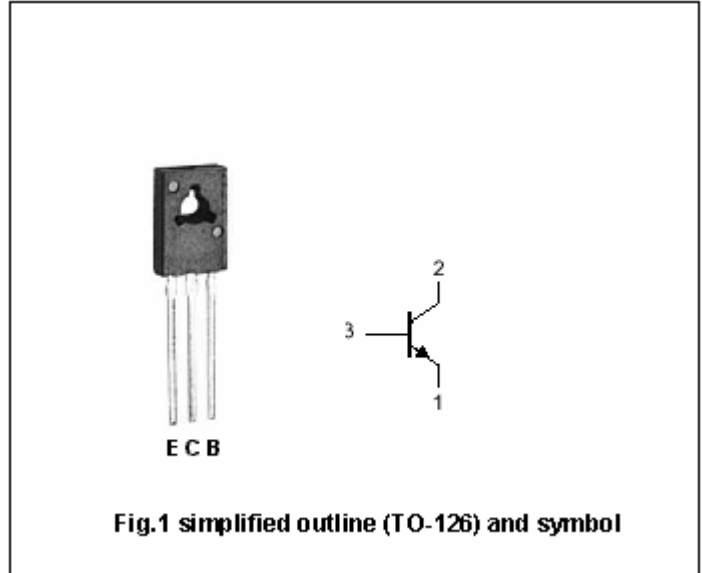
- With TO-126 package
- Complement to type BD440,BD442

APPLICATIONS

- For medium power linear and switching applications

PINNING

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

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD439	60	V
		BD441	80	
V_{CEO}	Collector-emitter voltage	BD439	60	V
		BD441	80	
V_{EBO}	Emitter -base voltage	Open collector	5	V
I_C	Collector current (DC)		4	A
I_{CM}	Collector current-Peak		7	A
I_B	Base current		1	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	36	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A; I _B =0.2A			0.8	V
V _{BE-1}	Base-emitter on voltage	I _C =10mA; V _{CE} =5V		0.58		V
V _{BE-2}	Base-emitter on voltage	I _C =2A; V _{CE} =1V			1.5	V
V _{CEO(SUS)}	Collector-emitter sustaining voltage	BD439	I _C =0.1A; I _B =0	60		V
		BD441		80		
I _{CBO}	Collector cut-off current	BD439	V _{CB} =60V; I _E =0		100	μA
		BD441		V _{CB} =80V; I _E =0		
I _{CES}	Collector cut-off current	BD439	V _{CE} =60V; V _{BE} =0		100	μA
		BD441		V _{CE} =80V; V _{BE} =0		
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	mA
h _{FE-1}	DC current gain	BD439	I _C =10mA; V _{CE} =5V	20	130	
		BD441		15		
h _{FE-2}	DC current gain	I _C =0.5A; V _{CE} =1V	40		140	
h _{FE-3}	DC current gain	BD439	I _C =2A; V _{CE} =1V	25		
		BD441		15		
f _T	Transition frequency	I _C =250mA; V _{CE} =1V	3			MHz

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PACKAGE OUTLINE

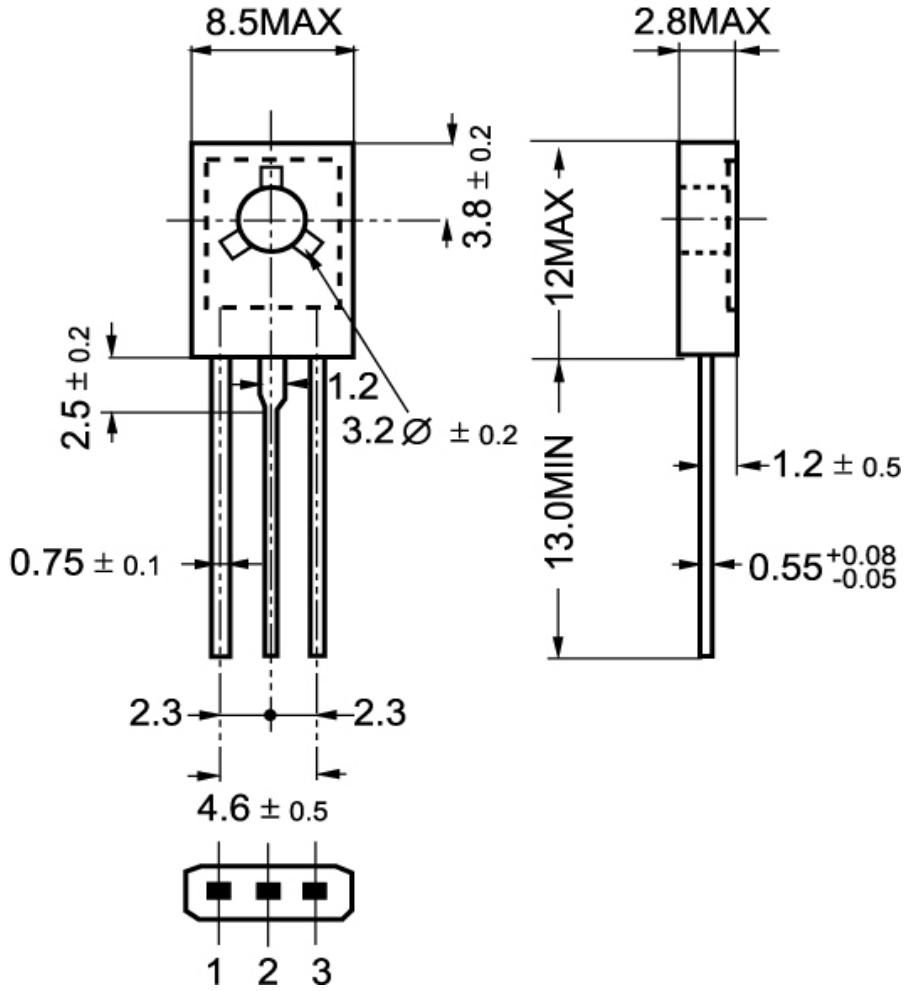


Fig.2 Outline dimensions