

Silicon NPN Power Transistors

BD675A/677A/679A/681

DESCRIPTION

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- With TO-126 package
- Complement to type BD676A/678A/680A/682
- DARLINGTON

APPLICATIONS

- For medium power linear and switching applications

PINNING

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

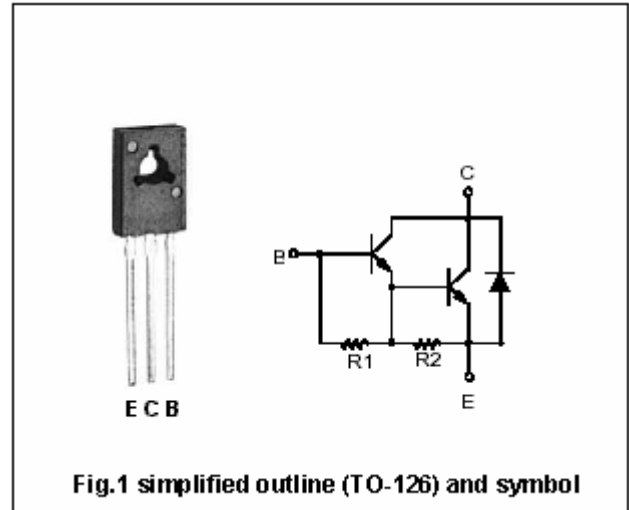


Fig.1 simplified outline (TO-126) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD675A	45	V
		BD677A	60	
		BD679A	80	
		BD681	100	
V_{CEO}	Collector-emitter voltage	BD675A	45	V
		BD677A	60	
		BD679A	80	
		BD681	100	
V_{EBO}	Emitter -base voltage	Open collector	5	V
I_C	Collector current		4	A
I_{CM}	Collector current-Peak		6	A
I_B	Base current		0.1	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	40	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

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SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	BD675A	I _C =50mA; I _B =0	45			V
		BD677A		60			
		BD679A		80			
		BD681		100			
V _{CEsat}	Collector-emitter saturation voltage	BD675A/677A/679A	I _C =2A; I _B =40mA			2.8	V
		BD681	I _C =1.5A; I _B =30mA			2.5	
V _{BE(ON)}	Base-emitter voltage	BD675A/677A/679A	I _C =2A; V _{CE} =3V			2.5	V
		BD681	I _C =1.5A; V _{CE} =3V			2.5	
I _{CBO}	Collector cut-off current	BD675A	V _{CB} =45V; I _E =0			0.2	mA
		BD677A	V _{CB} =60V; I _E =0				
		BD679A	V _{CB} =80V; I _E =0				
		BD681	V _{CB} =100V; I _E =0				
I _{CEO}	Collector cut-off current	BD675A	V _{CE} =45V; V _{BE} =0			0.5	mA
		BD677A	V _{CE} =60V; V _{BE} =0				
		BD679A	V _{CE} =80V; V _{BE} =0				
		BD681	V _{CE} =100V; V _{BE} =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			2	mA
h _{FE}	DC current gain	BD675A/677A/679A	I _C =2A; V _{CE} =3V	750			
		BD681	I _C =1.5A; V _{CE} =3V	750			

PACKAGE OUTLINE

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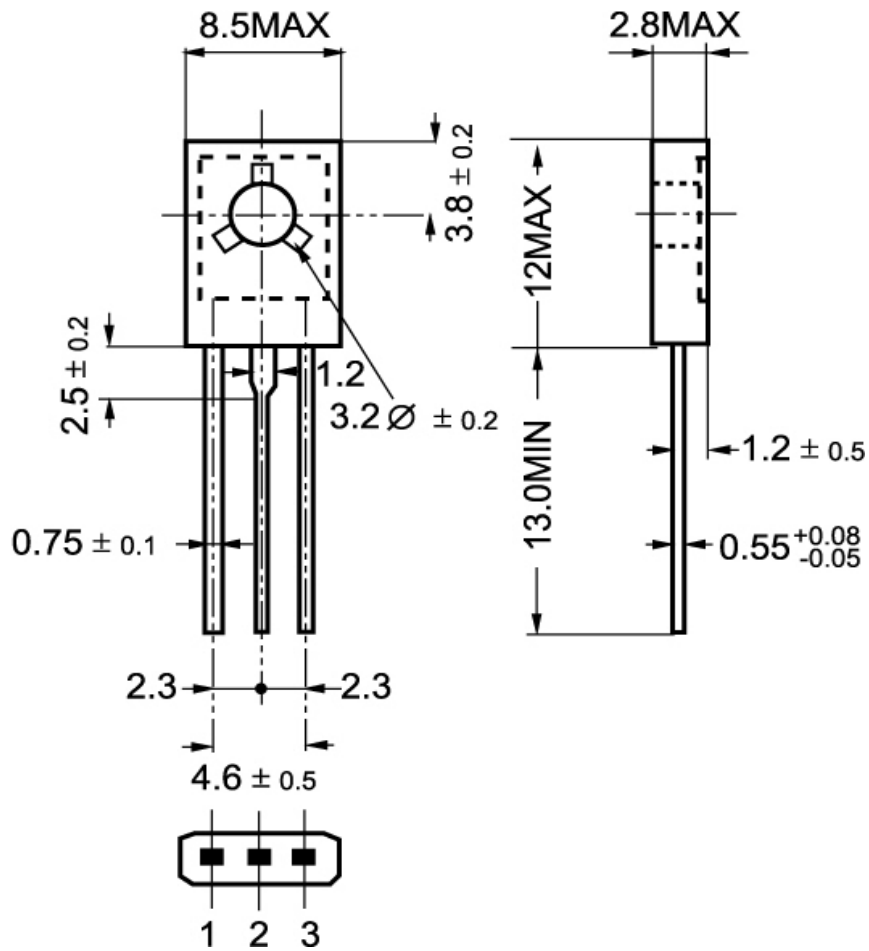


Fig.2 Outline dimensions