

**Silicon PNP Darlington Power Transistors**

**BD676/BD678/BD680**

**DESCRIPTION**

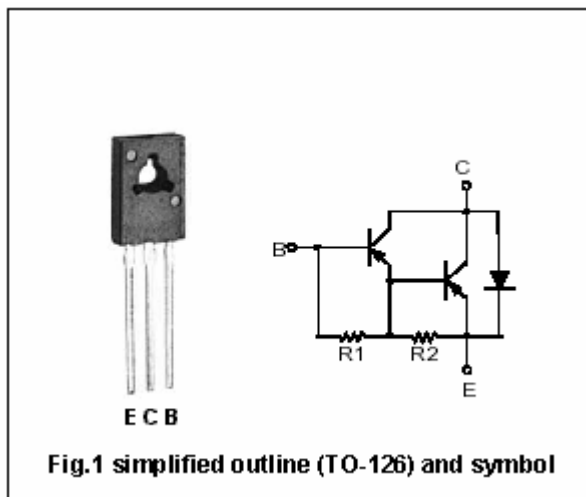
- With TO-126 package
- Complement to type BD675/BD677/BD679
- DARLINGTON
- High DC current gain

**APPLICATIONS**

- For use as output devices in complementary general-purpose amplifier 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>CB0</sub>	Collector-base voltage	BD676	-45	V
		BD678	-60	
		BD680	-80	
V <sub>CEO</sub>	Collector-emitter voltage	BD676	-45	V
		BD678	-60	
		BD680	-80	
V <sub>EBO</sub>	Emitter -base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-4	A
I <sub>B</sub>	Base current		-0.1	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	40	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-55~150	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	3.13	/W

## Silicon PNP Darlington Power Transistors

## BD676/BD678/BD680

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	BD676	-45			V
		BD678	-60			
		BD680	-80			
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	BD676	-45			V
		BD678	-60			
		BD680	-80			
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-5mA; I <sub>C</sub> =0	-5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-1.5A; I <sub>B</sub> =-30mA			-2.5	V
V <sub>BE(on)</sub>	Base-emitter on voltage	I <sub>C</sub> =-1.5A; V <sub>CE</sub> =-3V			-2.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =rated BV <sub>CEO</sub> ; I <sub>E</sub> =0 T <sub>a</sub> =100			-0.2 -2.0	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =1/2rated BV <sub>CEO</sub> ; I <sub>B</sub> =0			-0.5	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-2.0	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-1.5A; V <sub>CE</sub> =-3V	750			

PACKAGE OUTLINE

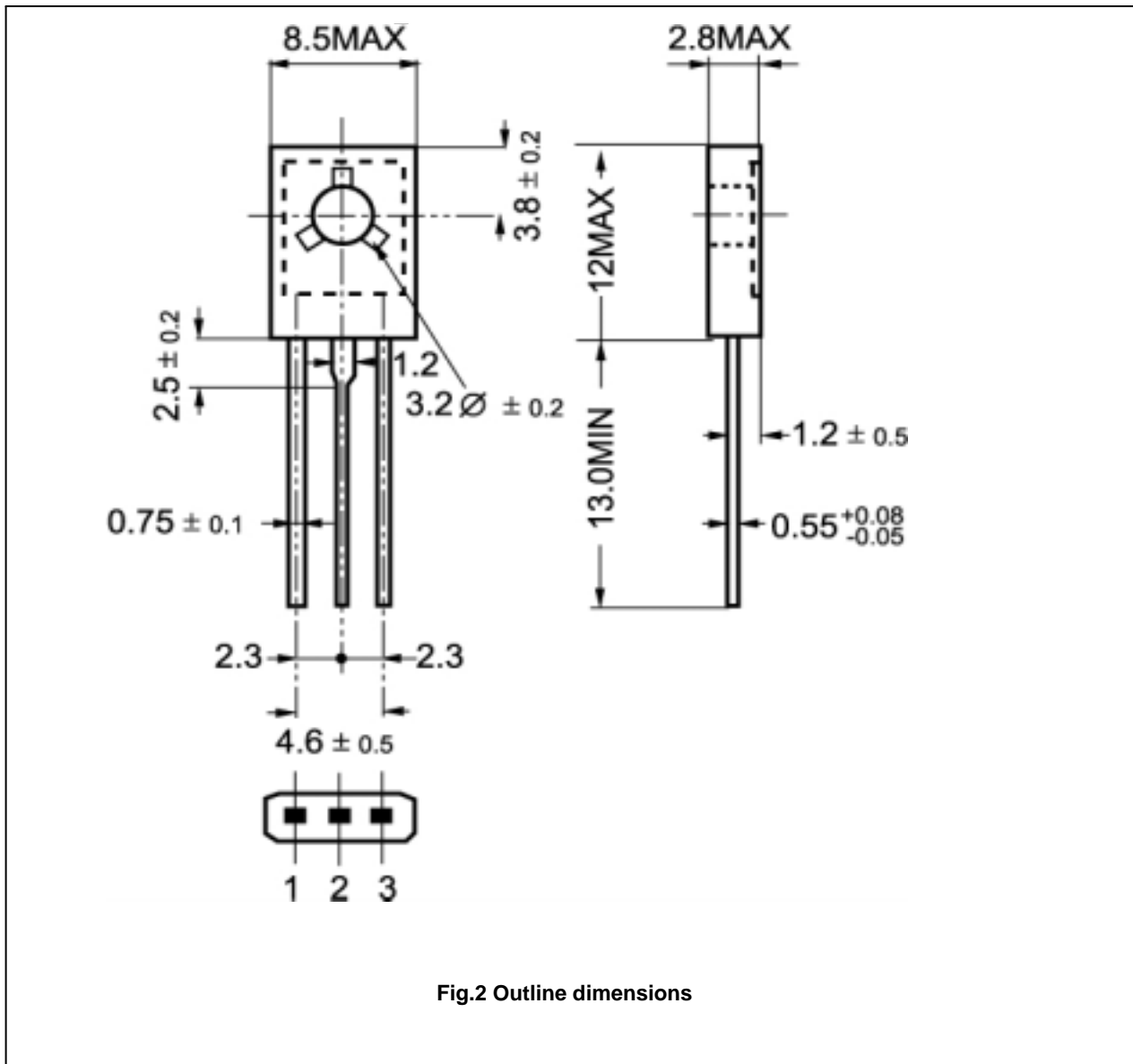


Fig.2 Outline dimensions