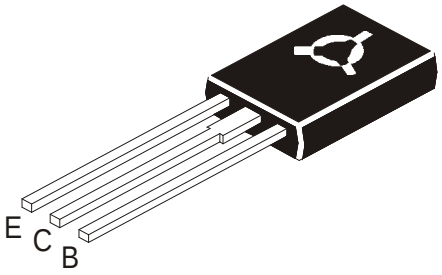
Continental Device India Limited

An ISO/TS16949 and ISO 9001 Certified Company

PNP PLASTIC POWER DARLINGTON TRANSISTORS

BD676, BD676A
BD678, BD678A
BD680, BD680A
BD682, BD684



TO126
Plastic Package

Complementary BD675, 675A, 677, 677A, 679, 679A, 681 & 683

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	BD676 BD676A	678 678A	680 680A	682	684	UNITS
Collector Base Voltage	V_{CBO}	45	60	80	100	120	V
Collector Emitter Voltage	V_{CEO}	45	60	80	100	120	V
Emitter Base Voltage	V_{EBO}	5.0					V
Collector Current	I_C	4.0					A
Base Current	I_B	0.1					A
Total Power Dissipation@ T_a=25°C Derate above 25°C	P_D	1.25 10					W mW/ °C
Total Power Dissipation@ T_c=25°C Derate above 25°C	P_D	40 0.32					W W / °C
Operating & Storage Junction Temperature Range	T_j,T_{stg}	- 55 to + 150					°C

THERMAL RESISTANCE

From Junction to case	$R_{th(j-c)}$	3.13	°C/W
Junction to Ambient in free air	$R_{th\ (j-a)}$	100	°C/W

ELECTRICAL CHARACTERISTICS (Tc=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Voltage	V_{CEO}*	I_C =50mA, I_B =0			
		BD676/BD676A	45		V
		BD678/BD678A	60		
		BD680/BD680A	80		
		BD682	100		
		BD684	120		
Collector-Cut Off Current	I_{CEO}	V_{CE}=half rated V_{CEO},I_B=0		500	µA
	I_{CBO}	V_{CB} =rated V_{CBO}, I_E=0		0.2	mA
	I_{CBO}	V_{CB} =rated V_{CBO}, I_E=0 T_C=100°C		2.0	
Emitter cut Off Current	I_{EBO}	V_{EB} =5V, I_C =0		2.0	mA

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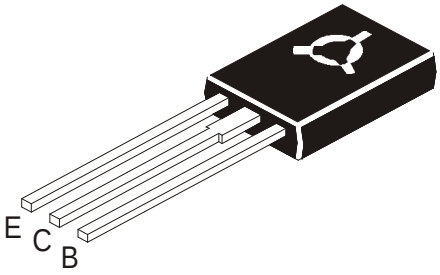


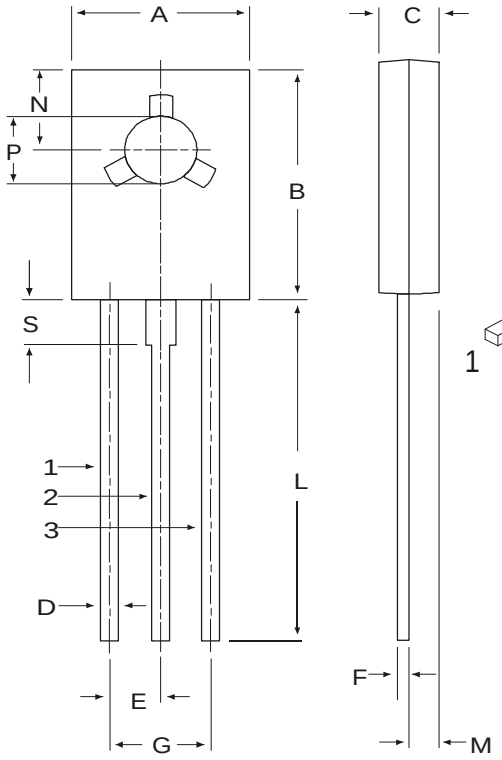
TO126
Plastic Package

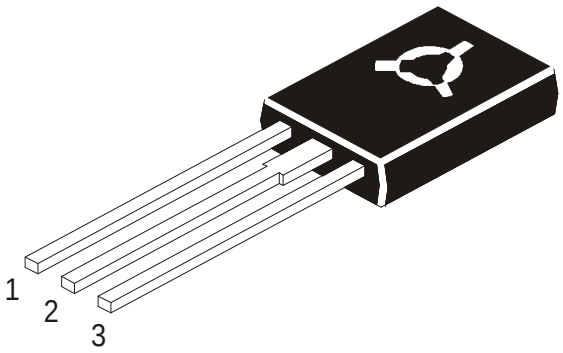
ELECTRICAL CHARACTERISTICS (Tc=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Saturation voltage					
NON A	$V_{CE(sat)}$*	I_C=1.5A, I_B=6mA		2.5	V
A		I_C=2.0A, I_B=8mA		2.8	
Base Emitter On Voltage					
NON A	$V_{BE(on)}$*	I_C=1.5A,V_{CE} =3V		2.5	V
A		I_C=2A,V_{CE} =3V		2.5	
DC Current Gain					
NON A	h_{FE}*	I_C=1.5A,V_{CE}=3V	750		
A		I_C=2A,V_{CE}=3V	750		
Small signal Current Gain	$\|h_{fe}\|$	I_C=1.5A, V_{CE}=3V f=1MHz	1.0		

Pulse test: Pulse Width ≤ 300ms ; Duty cycle ≤ 2%.

TO-126 (SOT-32) Plastic Package





Pin Configuration

1. Emitter
2. Collector
3. Base

DIM	MIN	MAX
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 TYP.	
F	0.49	0.75
G	4.5 TYP.	
L	15.7 TYP.	
M	1.27 TYP.	
N	3.75 TYP.	
P	3.0	3.2
S	2.5 TYP.	

All diminsions in mm.

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-126 Bulk	500 pcs/polybag	340 gm/500 pcs	3" x 7.5" x 7.5"	2K	17" x 15" x 13.5"	32K	31 kgs
TO-126 Tube	50 pcs/tube	73 gm/50 pcs	3" x 3.7" x 21.5"	1K	19" x 19" x 19"	10K	15 kgs

Disclaimer

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