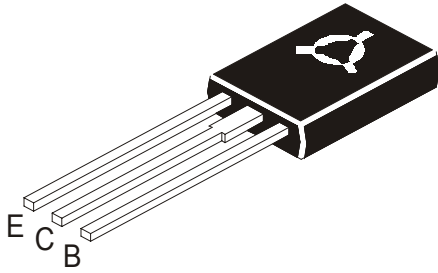




NPN PLASTIC POWER DARLINGTON TRANSISTORS



**BD675, BD675A
BD677, BD677A
BD679, BD679A
BD681, BD683**

**TO126
Plastic Package**

Complementary BD676, 676A, 678, 678A, 680, 680A, 682 & 684

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	BD675 BD675A	677 677A	679 679A	681	683	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					V
Collector Current	I_C	4					A
Base Current	I_B	0.1					A
Total Power Dissipation@ Tc=25 °C	P_D	40					W
Derate above 25°C		0.32					W / °C
Operating & Storage Junction Temperature Range	T_j, T_{stg}	- 55 to + 150					°C

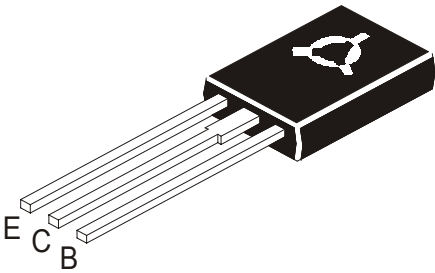
THERMAL RESISTANCE

From Junction to case	$R_{th(j-c)}$	3.13		°C/W
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ELECTRICAL CHARACTERISTICS (Tc=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Voltage	V_{CEO}^*	$I_C = 50mA, I_B = 0$ BD675/BD675A BD677/BD677A BD679/BD679A BD681 BD683	45 60 80 100 120		V
Collector-Cut off Current	I_{CEO} I_{CBO}	$V_{CE} = \text{half rated } V_{CEO}, I_B = 0$ $V_{CB} = \text{rated } V_{CBO}, I_E = 0$		500 0.2	μA mA
	I_{CBO}	$V_{CB} = \text{rated } V_{CBO}, I_E = 0$ $T_C = 100^\circ C$		2.0	
Emitter cut off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$		2.0	mA

NPN PLASTIC POWER DARLINGTON TRANSISTORS



BD675, BD675A
BD677, BD677A
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TO126
Plastic Package

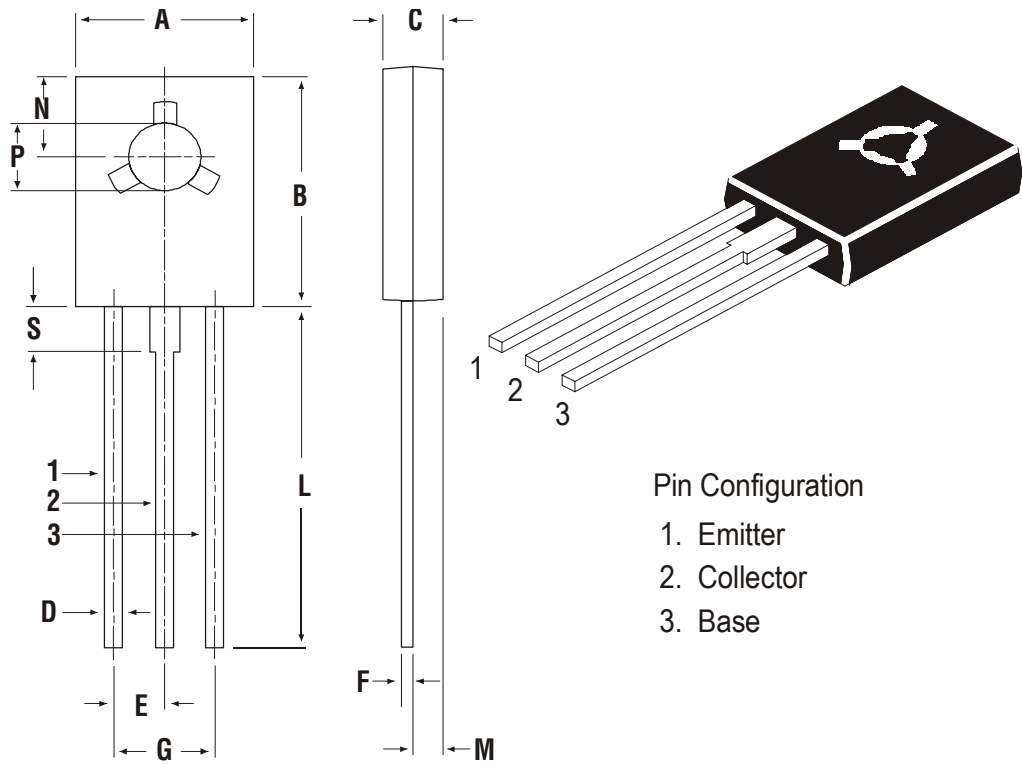
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Saturation voltage	NON A	$V_{CE(sat)}^*$ $I_C=1.5A, I_B=6mA$		2.5	V
	A	$V_{CE(sat)}^*$ $I_C=2.0A, I_B=8mA$		2.8	
Base Emitter On Voltage	NON A	$V_{BE(on)}^*$ $I_C=1.5A, V_{CE}=3V$		2.5	V
	A	$V_{BE(on)}^*$ $I_C=2A, V_{CE}=3V$		2.5	
DC Current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

Pulse test: Pulse Width $\leq 300\mu s$; Duty cycle $\leq 2\%$.

BD675, BD675A
BD677, BD677A
BD679, BD679A
BD681, BD683

TO126
Plastic Package

TO-126 (SOT-32) Plastic Package



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