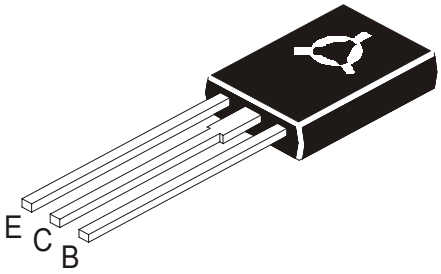
Transys Electronics LIMITED

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 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

ELECTRICAL CHARACTERISTICS (Tc=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Voltage	V_{CEO}*	I_C =50mA, I_B =0			
		BD675/BD675A	45		V
		BD677/BD677A	60		
		BD679/BD679A	80		
		BD681	100		
		BD683	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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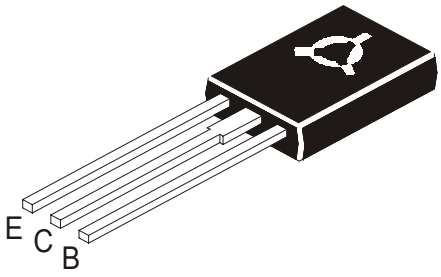

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Saturation voltage					
NON A	$V_{CE(sat)}$*	I_C=1.5A, I_B=6mA		2.5	V
A	$V_{CE(sat)}$*	I_C=2.0A, I_B=8mA		2.8	
Base Emitter On Voltage					
NON A	$V_{BE(on)}$*	I_C=1.5A,V_{CE} =3V		2.5	V
A		I_C=2A,V_{CE} =3V		2.5	
DC Current Gain					
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 $\leq$ 300μs ; Duty cycle $\leq$ 2%.

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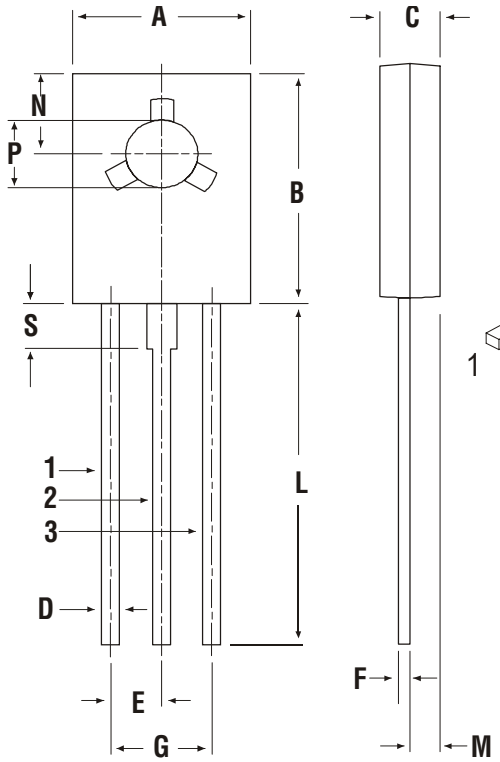
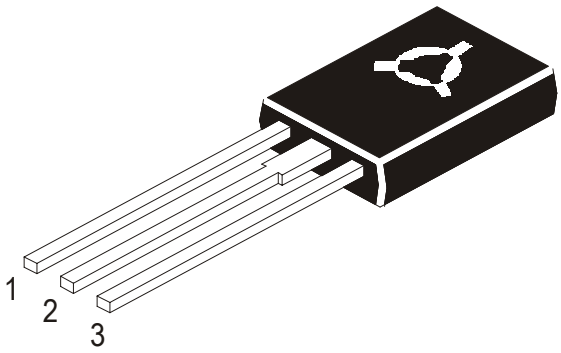
TO-126 (SOT-32) Plastic Package





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