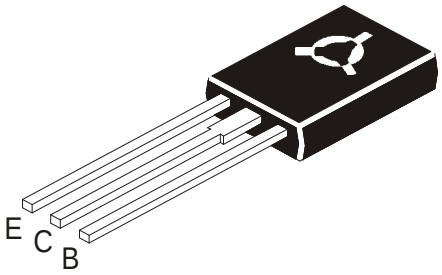
Transys Electronics LIMITED

EPITAXIAL SILICON POWER TRANSISTORS

BD175 BD176
BD177 BD178
BD179 BD180
NPN PNP



TO126
Plastic Package

Intended for use in Medium Power Linear Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	BD175 BD176	BD177 BD178	BD179 BD180	UNIT
Collector -Emitter Voltage	V_{CEO}	45	60	80	V
Collector -Base Voltage	V_{CBO}	45	60	80	V
Emitter Base Voltage	V_{EBO}	5.0			V
Collector Current	I_C	3.0			A
Collector Peak Current	I_{CM}	7.0			A
Power Dissipation @ T_a=25ºC	P_D	1.25			W
Derate above 25ºC		10			mW/ºC
Power Dissipation @ T_c=25ºC	P_D	30			W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150			ºC

THERMAL CHARACTERISTICS

Junction to Ambient in free air	$R_{th\ (j\text{-}a)}$	100	ºC/W
Junction to Case	$R_{th\ (j\text{-}c)}$	4.16	ºC/W

ELECTRICAL CHARACTERISTICS (T_c=25ºC unless specified otherwise)

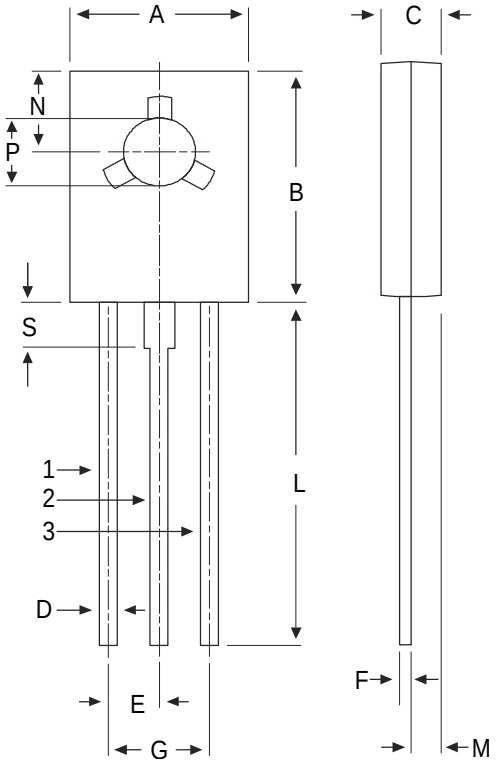
DESCRIPTION	SYMBOL	TEST CONDITION		MIN	MAX	UNIT
Collector Cut off Current	I_{CBO}	V_{CB}=45V, I_E=0	BD175/76		100	µA
		V_{CB}=60V, I_E=0	BD177/78		100	µA
		V_{CB}=80V, I_E=0	BD179/80		100	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0			1.0	mA
Collector Emitter Sustaining Voltage	*$V_{CEO\ (sus)}$	I_C=100mA, I_B=0	BD175/76	45		V
			BD177/78	60		V
			BD179/80	80		V
Collector Emitter Saturation Voltage	*$V_{CE\ (sat)}$	I_C=1A, I_B=0.1A			0.8	V
Base Emitter on Voltage	*$V_{BE\ (on)}$	I_C=1A, V_{CE}=2V			1.3	V
DC Current Gain	*h_{FE}	I_C=150mA, V_{CE}=2V		40		
		I_C=1A, V_{CE}=2V		15		
	*h_{FE} Group	I_C=150mA, V_{CE}=2V	- 6	40	100	
			- 10	63	160	
		Only BD175/76/79	- 16	100	250	
Transition Frequency	f_T	I_C=250mA, V_{CE}=10V		3.0		MHz

***Pulse test:- Pulse width=300ms, Duty cycle=1.5%**

BD175 | **BD176**
BD177 | **BD178**
BD179 | **BD180**
NPN | **PNP**

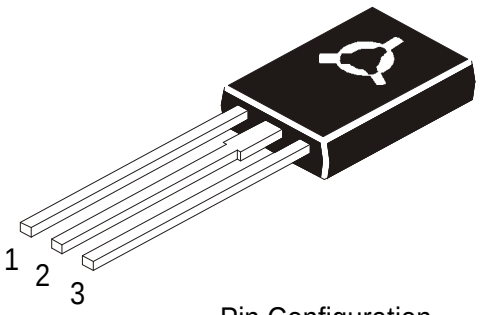
TO126
Plastic Package

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.	

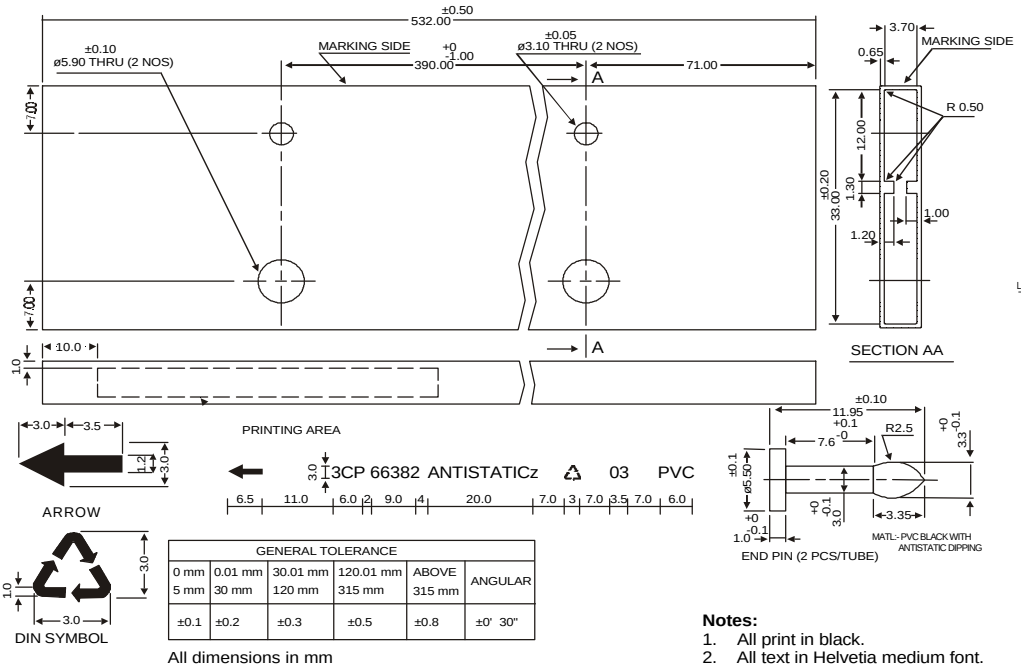
All dimensions in mm.



Pin Configuration

1. Emitter
2. Collector
3. Base

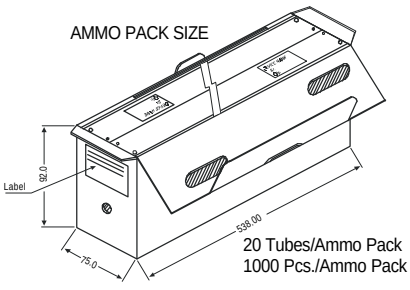
TO-126 TUBE PACKING



GENERAL TOLERANCE					
0 mm 5 mm	0.01 mm 30 mm	30.01 mm 120 mm	120.01 mm 315 mm	ABOVE 315 mm	ANGULAR
±0.1	±0.2	±0.3	±0.5	±0.8	±0° 30"

All dimensions in mm

Notes:
1. All print in black.
2. All text in Helvetia medium font.



20 Tubes/Ammo Pack
1000 Pcs./Ammo Pack

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