

Pin Configuration:

- 1. Emitter
- 2. Collector
- 3. Base

Feature:

- NPN Plastic Power Darlington Transistors

Absolute Maximum Ratings

Parameter	Symbol	BD677	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}		
Emitter Base Voltage	V_{EBO}		
Collector Current	I_C	4	A
Base Current	I_B	0.1	
Total Power Dissipation at $T_a = 25^\circ\text{C}$ Derate above 25°C	P_D	1.25	W
Total Power Dissipation at $T_c = 25^\circ\text{C}$ Derate above 25°C		10	mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	°C

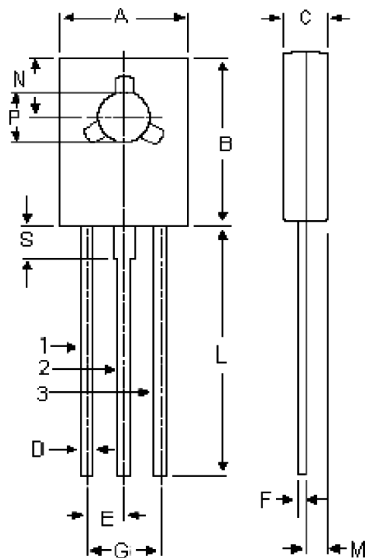
Thermal Resistance

Junction to Case	$R_{th(j-c)}$	3.13	°C/W
Junction to Ambient in Free Air	$R_{th(j-a)}$	100	

Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless specified otherwise)

Parameter	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter Voltage	V_{CEO}^*	$I_C = 50\text{mA}, I_B = 0$	60	-	V
Collector Cut off Current	I_{CEO}	$V_{CE} = \text{Half Rated } V_{CEO}, I_B = 0$ $V_{CB} = \text{Rated } V_{CBO}, I_E = 0$	-	500	μA
	I_{CBO}			2	mA
Emitter Cut off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	2	mA
Collector Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C = 1.5\text{A}, I_B = 6\text{mA}$	-	2.5	V
Base Emitter On Voltage	$V_{EB(on)}^*$	$I_C = 1.5\text{A}, V_{CE} = 3\text{V}$	-		
DC Current Gain	h_{FE}^*	$I_C = 1.5\text{A}, V_{CE} = 3\text{V}$	750	-	-
Small Signal Current Gain	$ h_{fe} $	$I_C = 1.5\text{A}, V_{CE} = 3\text{V}$ $f = 1\text{MHz}$	1	-	-

*Pulse Test : Pulse Width = $\leq 300\mu\text{s}$, Duty Cycle = $\leq 2\%$.



Pin Configuration:

1. Emitter
2. Collector
3. Base

Dimensions	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 (Typical)	
F	0.49	0.75
G	4.5 (Typical)	
L	15.7 (Typical)	
M	1.27 (Typical)	
N	3.75 (Typical)	
P	3	3.2
S	2.5 (Typical)	

Dimensions : Millimetres

Part Number Table

Description	Part Number
Darlington Transistor, TO-126	BD677

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.