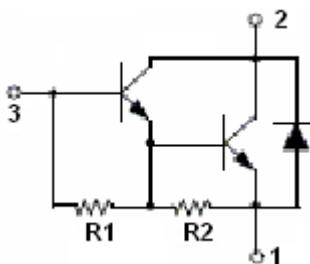


Darlington Power Transistor



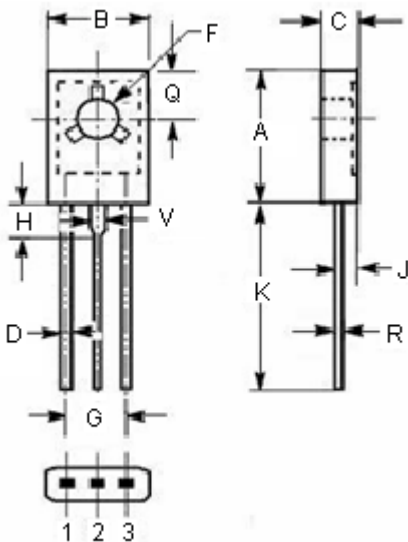
Features:

- Silicon NPN
- Collector - emitter breakdown voltage : $V_{(BR)CEO} = 60\text{ V}$
- DC current gain : $h_{FE} = 750$ (Minimum) at $I_C = 2\text{ A}$



Pin 1. Emitter
2. Collector
3. Base

TO-126



Dimensions	mm	
	Minimum	Maximum
A	10.7	10.9
B	7.7	7.9
C	2.6	2.8
D	0.66	0.86
F	3.1	3.3
G	4.48	4.68
H	2	2.2
J	1.35	1.55
K	16.1	16.3
Q	3.7	3.9
R	0.4	0.6
V	1.17	1.37

Dimensions : Millimetres



Darlington Power Transistor



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - base voltage	60	V
V_{CEO}	Collector - emitter voltage	60	V
V_{EBO}	Emitter - base voltage	5	V
I_C	Collector current - continuous	4	A
I_B	Base current	0.1	A
P_C	Collector power dissipation $T_C = 25^\circ\text{C}$	40	W
T_j	Junction temperature	150	$^\circ\text{C}$
T_{stg}	Storage temperature range	-55 to 150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Maximum	Unit
$R_{th\ j-c}$	Thermal resistance, junction to case	3.13	$^\circ\text{C/W}$

Electrical Characteristics ($T_C = 25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Maximum	Unit
$V_{(BR)\ CEO}$	Collector - emitter breakdown voltage	$I_C = 50\text{ mA}; I_B = 0$	60	-	V
$V_{CE(sat)}$	Collector - emitter saturation voltage	$I_C = 2\text{ A}; I_B = 40\text{ mA}$	-	2.8	V
$V_{BE(on)}$	Base - emitter on voltage	$I_C = 2\text{ A}; V_{CE} = 3\text{ V}$	-	2.5	V
I_{CEO}	Collector cut off current	$V_{CE} = 60\text{ V}; I_B = 0$	-	0.5	mA
I_{CBO}	Collector cut off current	$V_{CB} = 60\text{ V}; I_E = 0$ $V_{CB} = 60\text{ V}; I_E = 0; T_C = 100^\circ\text{C}$	-	0.2 2	mA
I_{EBO}	Emitter cut off current	$V_{EB} = 5\text{ V}; I_C = 0$	-	2	mA
h_{FE}	DC current gain	$I_C = 2\text{ A}; V_{CE} = 3\text{ V}$	750	-	-

Part Number Table

Description	Part Number
Silicon NPN Darlington Power Transistor	BD677A

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