

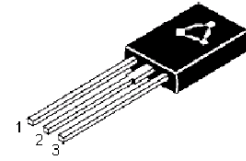
Medium Power Transistor

TO-126



Feature:

- Epitaxial Silicon Power Transistors
- Intended for use in Medium Power Linear Switching Applications



Pin Configuration:

1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings

Description	Symbol	BD179	Unit
Collector-Emitter Voltage	V_{CEO}	80	V
Collector-Base Voltage	V_{CBO}		
Emitter Base Voltage	V_{EBO}	5	
Collector Current	I_C	3	A
Collector Peak Current	I_{CM}	7	
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate above 25°C	P_D	1.25 10	W mW/ $^\circ\text{C}$
Power Dissipation at $T_C = 25^\circ\text{C}$		30	W
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +150	$^\circ\text{C}$

Thermal Characteristics

Junction to Ambient in Free Air	$R_{th(j-a)}$	100	$^\circ\text{C/W}$
Junction to Case	$R_{th(j-c)}$	4.16	

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

Description	Symbol	Test Condition	Min.	Max.	Unit
Collector Cut off Current	I_{CBO}	$V_{CB} = 80\text{V}, I_E = 0$	-		V
Emitter Cut off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-		
Collector Emitter Sustaining Voltage	$*V_{CEO(sus)}$	$I_C = 100\text{mA}, I_B = 0$	80		

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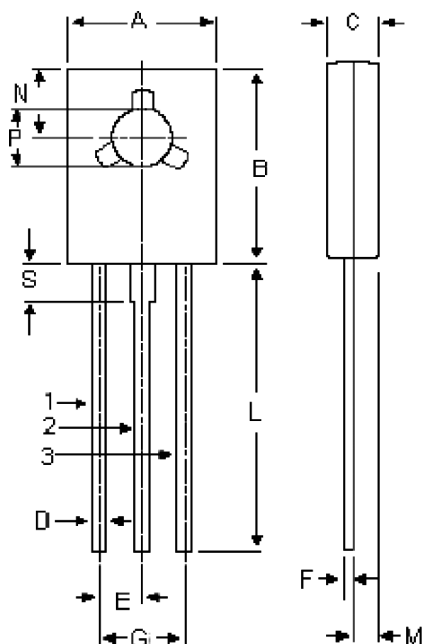
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Electrical Characteristics ($T_C = 25^\circ\text{C}$ unless specified otherwise)

Description	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter Saturation Voltage	$*V_{CEO(sat)}$	$I_C = 1\text{A}, I_B = 0.1\text{A}$	-		A
Base Emitter On Voltage	$*V_{BE(on)}$	$I_C = 1\text{A}, V_{CE} = 2\text{V}$	-		
DC Current Gain	$*h_{FE}$ $*h_{FE \text{ Group}}$	$I_C = 150\text{mA}, V_{CE} = 2\text{V}$	40		W mW/°C
		$I_C = 1\text{A}, V_{CE} = 2\text{V}$	15		
		$I_C = 150\text{mA}, V_{CE} = 2\text{V}$	40	100	
		Only BD179	63	160	
			100	250	
Transition Frequency	f_T	$I_C = 250\text{mA}, V_{CE} = 10\text{V}$	3	-	

*Pulse Test : Pulse Width = 300μs, Duty Cycle = 1.5%.



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

Pin Configuration:

1. Emitter
2. Collector
3. Base

Part Number Table

Description	Part Number
Transistor, NPN, TO-126	BD179

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