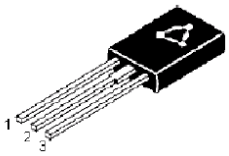
NPN Transistor
TO-126



Pin Configuration:
1. Emitter
2. Collector
3. Base

Feature:

- NPN Plastic Power Transistors
- Medium Power Linear and Switching Applications

Absolute Maximum Ratings

Description	Symbol	-	BD135	Unit
Collector-Base Voltage (Open Emitter)	V_{CBO}	Max.	45	V
Collector Emitter Voltage (Open Base)	V_{CEO}			
Collector Current	I_C		1.5	A
Total Power Dissipation upto T_C = 25°C	P_{tot}		12.5	W
Junction Temperature	T_j		150	°C
Collector-Emitter Saturation Voltage I_C = 0.5A, I_B = 0.05A	$V_{CE\ (Sat)}$		0.5	V
DC Current Gain I_C = 0.15A; V_{CE} = 2V	h_{FE}	Min. Max.	40 250	-

Ratings (at T_a = 25°C unless otherwise specified)

Description	Symbol	-	BD135	Unit
Collector-Base Voltage (Open Emitter)	V_{CBO}	Max.	45	V
Collector Emitter Voltage (Open Base)	V_{CEO}			
Emitter-Base Voltage (Open Collector)	V_{EBO}		5	
Collector Current	I_C		1.5	A
Base Current	I_B		0.5	
Total Power Dissipation up to T_A = 25°C Derate above 25°C	P_{tot}		1.25 10	W mW/°C

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multicomp PRO

Ratings (at T_a = 25°C unless otherwise specified)

Description	Symbol	-	BD135	Unit
Total Power Dissipation up to T_C = 25°C Derate above 25°C	P_{tot}	Max.	12.5 100	W mW/°C
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}	-	-65 to +150	

Thermal Resistance

From Junction to Case	$R_{th\ (j-c)}$	-	10	°C/W
From Junction to Ambient	$R_{th\ (j-a)}$	-	100	

Characteristics (T_{amb} = 25°C unless otherwise specified)

Description	Symbol	-	BD135	Unit
Collector Cut off Current I_E = 0; V_{CB} = 30V I_E = 0; V_{CB} = 30V; T_C = 125°C	I_{CBO}	Max.	0.1 10	µA
Emitter Cut off Current I_C = 0; V_{EB} = 5V	I_{EBO}		10	
Breakdown Voltages I_C = 0.03A; I_B = 0 I_C = 1mA; I_E = 0 I_E = 1mA; I_C = 0	$V_{CEO\ (Sus)}$* V_{CBO} V_{EBO}	Min.	45 45 5	V
Saturation Voltage I_C = 0.5A; I_B = 0.05A	$V_{CE\ (sat)}$*	Max.	0.5	
Base-Emitter On Voltage I_C = 0.5A; V_{CE} = 2V	$V_{BE\ (on)}$*		1	
DC Current Gain I_C = 0.15A; V_{CE} = 2V* I_C = 0.15A; V_{CE} = 2V** I_C = 0.15A; V_{CE} = 2V*	h_{FE}*	Min. Min. Max. Min.	25 40 250 25	-

**** hFE Classification:**

-6	Min.	40
	Max.	100
-10	Min.	63
	Max.	160
-16	Min.	100
	Max.	250
-25	Min.	160
	Max.	400

* Pulse Test: Pulse Width = ≤300µs, Duty Cycle ≤2%.

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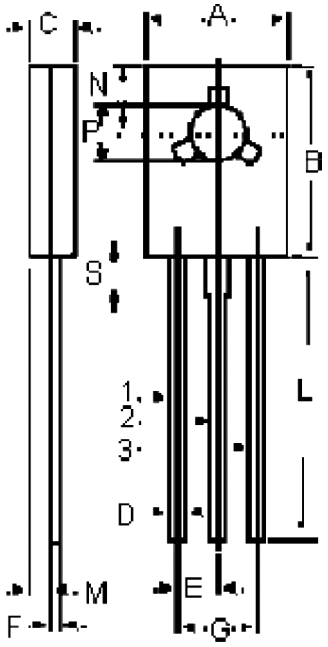

Dimensions	Min.	Max.
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 (Typical)	
F	0.49	0.75
G	4.5 (Typical)	
L	15.7 (Typical)	
M	1.27 (Typical)	
N	3.75 (Typical)	
P	3	3.2
S	2.5 (Typical)	

Dimensions : Millimetres

Pin Configuration:
1. Emitter
2. Collector
3. Base

Part Number Table

Description	Part Number
Transistor, NPN, TO-126	BD135