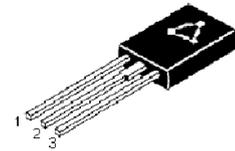


Medium Power Transistor TO-126

multicomp^{PRO}



Pin Configuration:

1. Emitter
2. Collector
3. Base

Feature:

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

Absolute Maximum Ratings

Description	Symbol	BD238	Unit
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	80	
Collector Emitter Voltage ($R_{BE} = 1K$)	V_{CER}	100	
Emitter Base Voltage	V_{EBO}	5	
Collector Current	I_C	2	A
Collector Peak Current	I_{CM}	6	
Power Dissipation at $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	25	W
Power Dissipation at $T_a = 25^\circ C$		1.25 10	W mW/ $^\circ C$
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +150	$^\circ C$

Thermal Characteristics

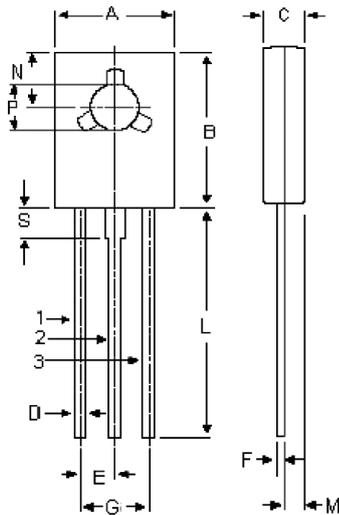
Junction to Case	$R_{th(j-c)}$	100	$^\circ C/W$
Junction to Ambient in Free Air	$R_{th(j-a)}$	4.16	

Medium Power Transistor TO-126

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

Description	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector Cut off Current	I_{CBO}	$V_{CB} = 100\text{V}, I_E = 0$	-	-	100	μA
		$T_C = 150^\circ\text{C}$ $V_{CB} = 100\text{V}, I_E = 0$	-	-	2	mA
Emitter Cut off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	-	1	mA
Collector Emitter Sustaining Voltage	$*V_{CEO(sus)}$	$I_C = 0.1\text{A}, I_B = 0$	80	-	-	V
Collector Emitter Saturation Voltage	$*V_{CEO(sat)}$	$I_C = 1\text{A}, I_B = 0.1\text{A}$	-	-	0.6	
Base Emitter Voltage	$*V_{BE(on)}$	$I_C = 1\text{A}, V_{CE} = 2\text{V}$	-	-	1.3	
DC Current Gain	$*h_{FE}$	$I_C = 150\text{mA}, V_{CE} = 2\text{V}$	40	-	-	-
		$I_C = 1\text{A}, V_{CE} = 2\text{V}$	25	-	-	
Current Gain Bandwidth Product	f_T	$I_C = 250\text{mA}, V_{CE} = 10\text{V}$	3	-	-	MHz
$*h_{FE1}/h_{FE2}$	Matched Pairs	$I_C = 250\text{mA}, V_{CE} = 2\text{V}$	-	1.6	-	-

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



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
Transistor, PNP, TO-126	BD238

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.