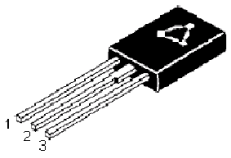
Medium Power Transistor
TO-126

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°C Derate above 25°C	P_D	25	W
Power Dissipation at T_a = 25°C		1.25 10	W mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +150	°C

Thermal Characteristics

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

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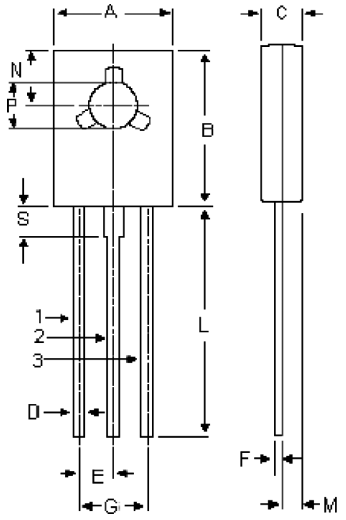
Electrical Characteristics (T_C = 25°C unless specified otherwise)

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

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



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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

Part Number Table

Description	Part Number
Transistor, PNP, TO-126	BD238