

BD238

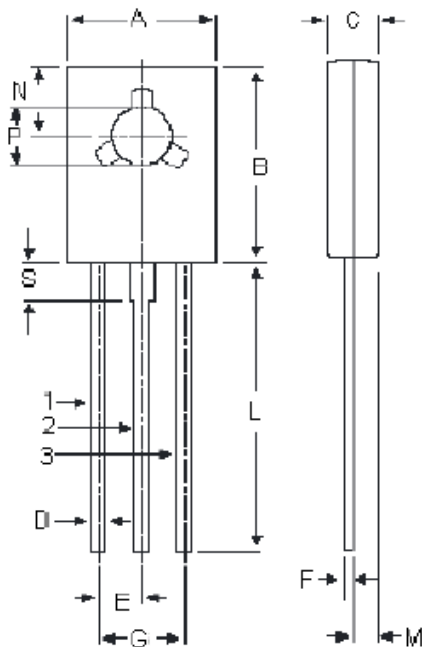
Medium Power Transistors



Features:

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

TO-126 Plastic Package

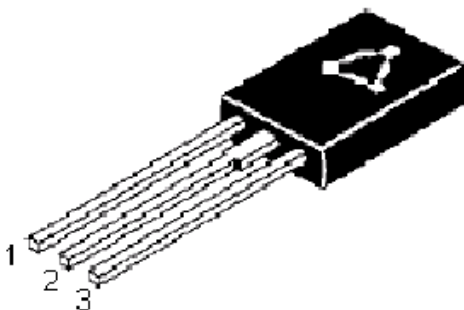


Dimensions	Minimum	Maximum
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 (Typical)	
F	0.49	0.75
G	4.5 (Typical)	
L	15.7 (Typical)	
M	1.27 (Typical)	
N	3.75 (Typical)	
P	3.0	3.2
S	2.5 (Typical)	

Dimensions : Millimetres

Pin Configuration:

1. Emitter
2. Collector
3. Base



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}	5.0	
Collector Current	I_C	2.0	A
Collector Peak Current	I_{CM}	6.0	
Power Dissipation at $T_C = 25^\circ C$ Derate above $25^\circ C$	PD	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	

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

Description	Symbol	Test Condition	Minimum	Typical	Maximum	Unit
Collector Cut off Current	I_{CBO}	$V_{CB} = 100V, I_E = 0$	-	-	100	μA
		$T_C = 150^\circ C$ $V_{CB} = 100V, I_E = 0$	-	-	2.0	mA
Emitter Cut off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	-	1.0	mA
Collector Emitter Sustaining Voltage	$*V_{CEO(sus)}$	$I_C = 0.1A, I_B = 0$	80	-	-	V
Collector Emitter Saturation Voltage	$*V_{CEO(sat)}$	$I_C = 1.0A, I_B = 0.1A$	-	-	0.6	
Base Emitter Voltage	$*V_{BE(on)}$	$I_C = 1.0A, V_{CE} = 2V$	-	-	1.3	
DC Current Gain	$*h_{FE}$	$I_C = 150mA, V_{CE} = 2V$	40	-	-	-
		$I_C = 1.0A, V_{CE} = 2V$	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 = 300 μs , Duty Cycle = 1.5%.

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Specifications

I_C Maximum (A)	V_{CEO} Maximum (V)	h_{FE} Minimum at $I_C = 1A$	P_{tot} at 25°C (W)	Package	Type	Part Number
2	80	25	26	TO-126	PNP	BD238

Notes:

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