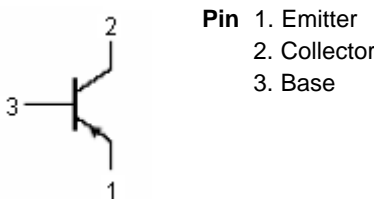


Silicon PNP Power Transistor

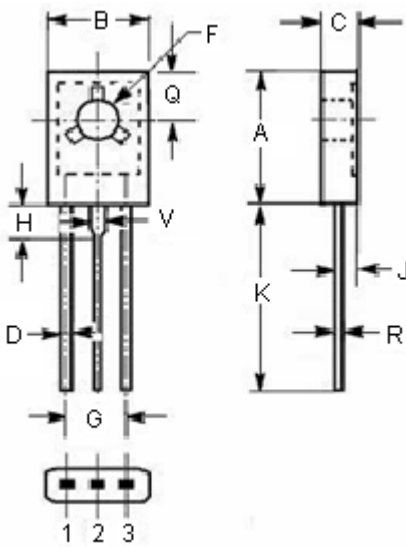


Features:

- DC current gain : $h_{FE} = 40$ (Minimum) at $I_C = -0.15$ A
- Collector - emitter sustaining voltage : $V_{CEO(SUS)} = 80$ V (Minimum)



TO-126



Dimensions	mm	
	Minimum	Maximum
A	10.7	10.9
B	7.7	7.9
C	2.6	2.8
D	0.66	0.86
F	3.1	3.3
G	4.48	4.68
H	2	2.2
J	1.35	1.55
K	16.1	16.3
Q	3.7	3.9
R	0.4	0.6
V	1.17	1.37

Dimensions : Millimetres

Absolute Maximum Ratings ($T_a = 25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - base voltage	-100	V
V_{CEO}	Collector - emitter voltage	-80	V
V_{EBO}	Emitter - base voltage	-5	V



Silicon PNP Power Transistor



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Symbol	Parameter	Value	Unit
I_C	Collector current - continuous	-2	A
I_B	Base current - continuous	-1	A
P_C	Collector power dissipation at $T_C = 25^\circ\text{C}$	25	W
T_J	Junction temperature	150	$^\circ\text{C}$
T_{stg}	Storage temperature range	-55 to 150	$^\circ\text{C}$

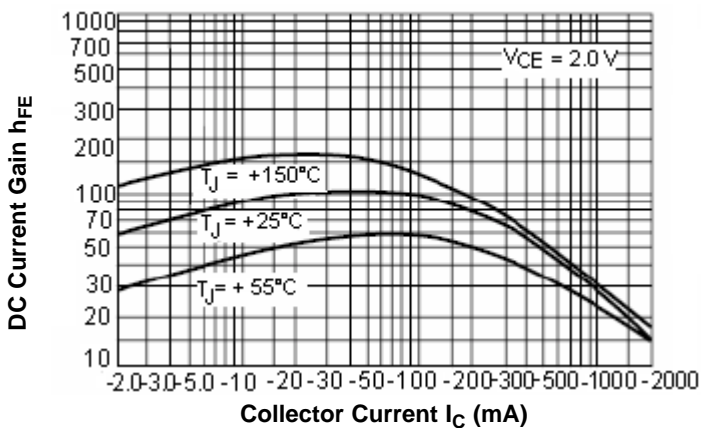
Thermal Characteristics

Symbol	Parameter	Maximum	Unit
$R_{\text{th j-c}}$	Thermal resistance, junction to case	5	$^\circ\text{C/W}$

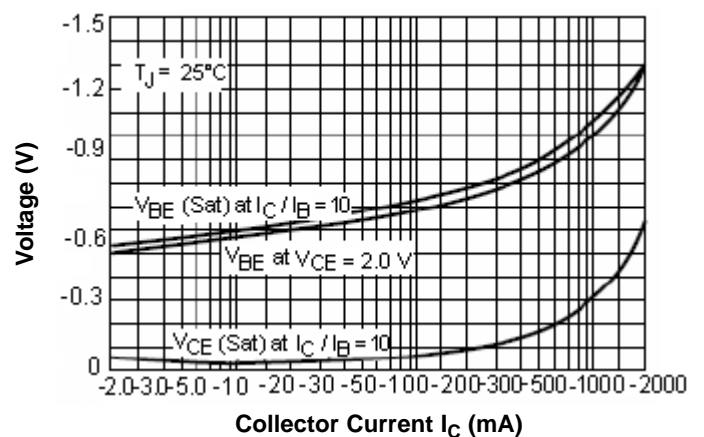
Electrical Characteristics ($T_C = 25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Maximum	Typical	Unit
$V_{\text{CEO (SUS)}}$	Collector - emitter sustaining voltage	$I_C = -100 \text{ mA}; I_B = 0$	-80	-	-	V
$V_{\text{CE (sat)}}$	Collector - emitter saturation voltage	$I_C = -1 \text{ A}; I_B = -0.1 \text{ A}$	-	-0.6	-	V
$V_{\text{BE (on)}}$	Base - emitter on voltage	$I_C = -1 \text{ A}; V_{\text{CE}} = -2 \text{ V}$	-	-1.3	-	V
I_{CBO}	Collector cut off current	$V_{\text{CB}} = -100 \text{ V}; I_E = 0$	-	-100	-	μA
I_{EBO}	Emitter cut off current	$V_{\text{EB}} = -5 \text{ V}; I_C = 0$	-	-1	-	mA
$h_{\text{FE-1}}$	DC current gain	$I_C = -150 \text{ mA}; V_{\text{CE}} = -2 \text{ V}$	40	-	-	-
$h_{\text{FE-2}}$	DC current gain	$I_C = -1 \text{ A}; V_{\text{CE}} = -2 \text{ V}$	25	-	-	-
f_T	Current - gain - bandwidth product	$I_C = -250 \text{ mA}; V_{\text{CE}} = -10 \text{ V}, f_{\text{test}} = 1 \text{ MHz}$	3	-	-	MHz

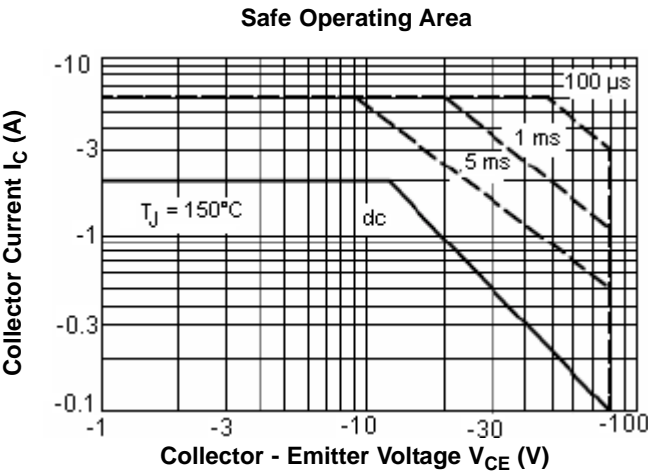
$h_{\text{FE}} - I_C$ Characteristics



"On" Voltages



Silicon PNP Power Transistor



Part Number Table

Description	Part Number
Silicon PNP Power Transistor	BD238

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell 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 is the registered trademark of the Group. © Premier Farnell plc 2011.