

Silicon PNP Power Transistor

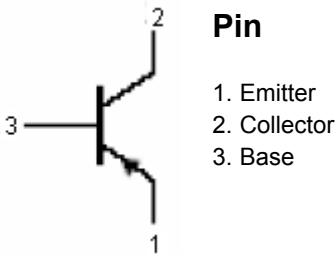


Features:

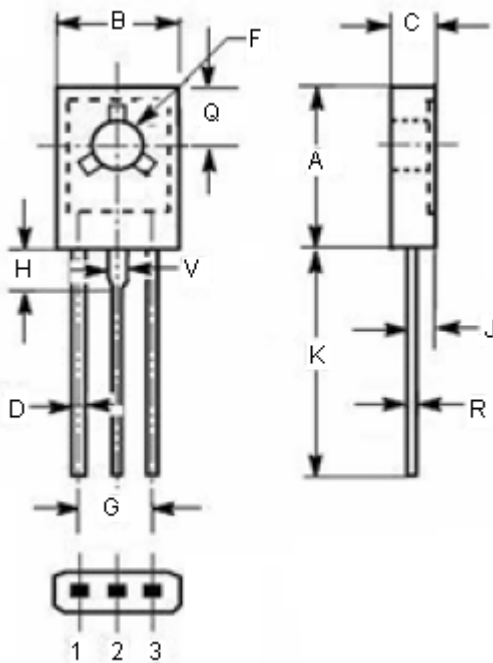
- Collector- emitter sustaining voltage : $V_{CEO(SUS)} = -80\text{ V}$
- DC Current Gain - : $h_{FE} = 30$ (Minimum) at $I_C = -0.5\text{ A}$
 $= 12$ (Minimum) at $I_C = -1.5\text{ A}$

Applications:

Low power audio amplifier
Low current high speed switching applications



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



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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	-7	V
I_C	Collector current - continuous	-3	A
I_{CM}	Collector current - peak	-6	A
I_B	Base current	-1	A
P_C	Collector power dissipation at $T_C = 25^\circ\text{C}$	1.5	W
	Collector power dissipation at $T_C = 25^\circ\text{C}$	12.5	W
T_j	Junction temperature	150	$^\circ\text{C}$
T_{stg}	Storage temperature range	-65 to 150	$^\circ\text{C}$

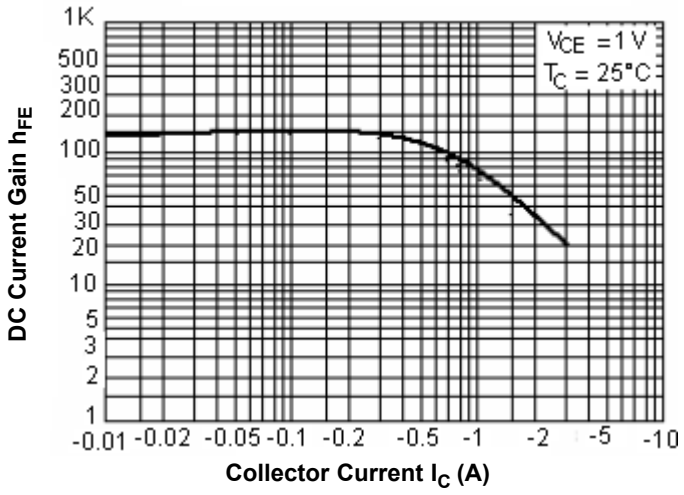
Electrical Characteristics ($T_C = 25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Maximum	Unit
$V_{CEO(SUS)}$	Collector - emitter sustaining voltage	$I_C = -10\text{ mA}$; $I_B = 0$	-80	-	V
$V_{CE(sat)-1}$	Collector - emitter saturation voltage	$I_C = -0.5\text{ A}$; $I_B = -50\text{ mA}$	-	-0.3	V
$V_{CE(sat)-2}$	Collector - emitter saturation voltage	$I_C = -1.5\text{ A}$; $I_B = -0.15\text{ A}$	-	-0.9	V
$V_{CE(sat)-3}$	Collector - emitter saturation voltage	$I_C = -3\text{ A}$; $I_B = -0.6\text{ A}$	-	-1.7	V
$V_{BE(sat)-1}$	Base - emitter saturation voltage	$I_C = -1.5\text{ A}$; $I_B = -0.15\text{ A}$	-	-1.5	V
$V_{BE(sat)-2}$	Base - emitter saturation voltage	$I_C = -3\text{ A}$; $I_B = 0.6\text{ A}$	-	-2	V
$V_{BE(on)}$	Base - emitter on voltage	$V_{CE} = -1\text{ V}$; $I_C = -0.5\text{ A}$	-	-1.2	V
I_{CBO}	Collector cut off current	$V_{CB} = -100\text{ V}$; $I_E = 0$ $V_{CB} = -100\text{ V}$; $I_E = 0$; $T_C = 150^\circ\text{C}$	-	-0.1 -0.1	μA mA
I_{EBO}	Emitter cut off current	$V_{EB} = -7\text{ V}$; $I_C = 0$	-	-0.1	μA
h_{FE-1}	DC current gain	$I_C = 0.1\text{ A}$; $V_{CE} = -1\text{ V}$	50	250	-
h_{FE-2}	DC current gain	$I_C = 0.5\text{ A}$; $V_{CE} = -1\text{ V}$	30	-	-
$-h_{FE-3}$	DC current gain	$I_C = 1.5\text{ A}$; $V_{CE} = -1\text{ V}$	12	-	-
f_T	Current-gain - bandwidth product	$I_C = 0.1\text{ A}$; $V_{CE} = -1\text{ V}$;	50	-	MHz
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = -10\text{ V}$; $f_{test} = 1\text{ MHz}$	-	60	pF

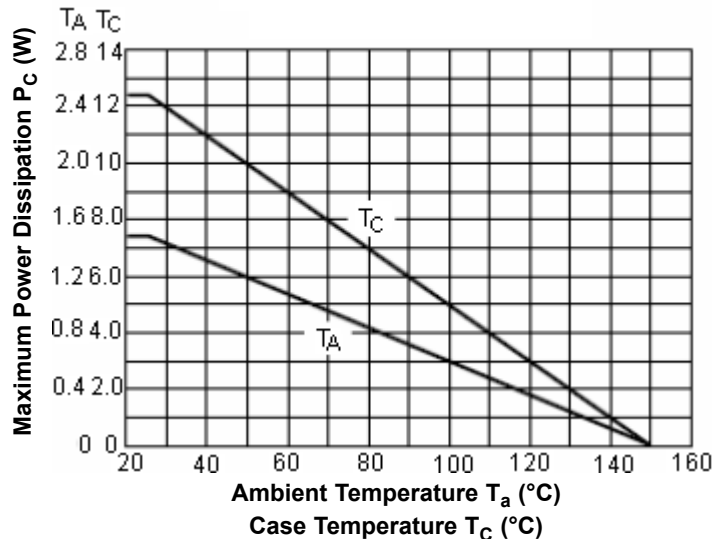
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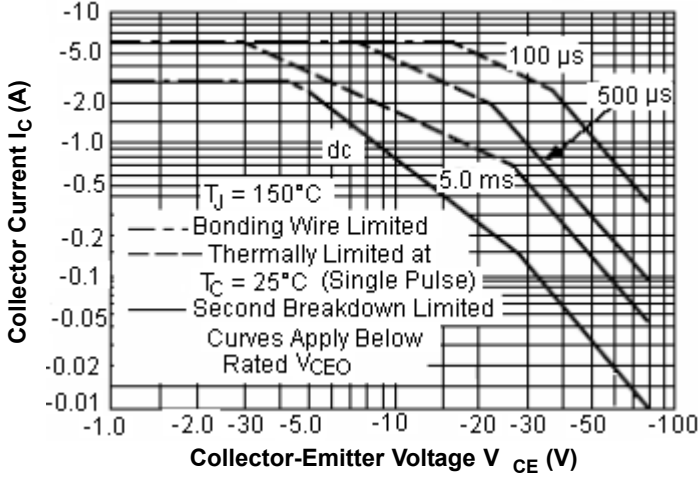
h_{FE} - I_C Characteristics



Power Derating



Safe Operating Area



Part Number Table

Description	Part Number
Silicon PNP Power Transistor	MJE172

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