

NPN Silicon Planar Epitaxial Transistor

80V_{CEO}, 1A I_c

multicomp PRO

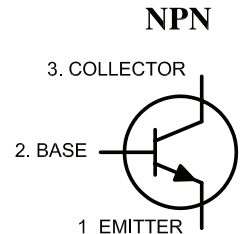
**RoHS
Compliant**

Absolute Maximum Ratings



TO-18

Description	Symbol	Value	Unit
Collector Base Voltage	V _{CB0}	140	V
Collector Emitter Voltage	V _{CEO}	80	V
Emitter Base Voltage	V _{EB0}	7	V
Collector Current	I _c	1	A
Power Dissipation at T _A = 25°C Derate above 25°C	P _D	500 2.85	W mW/°C
Power Dissipation at T _c = 25°C Derate above 25°C	P _D	1.8 10.6	W mW/°C
Operating and Storage Junction Temperature Range	T _j , T _{stg}	-65 to +200	°C
Thermal Resistance			
Junction to Case	R _{th(j-c)}	70	°C/W
Junction to Ambient	R _{th(j-a)}	245	°C/W



Electrical Characteristics: (T_A = +25°C Unless otherwise specified)

Description	Symbol	Test Conditions	Min.	Max.	Unit
Collector Cut off Current	I _{CB0}	V _{CB} = 90V, I _E = 0 V _{CB} = 90V, I _E = 0	-	10 10	nA μA
Emitter Cut off Current	I _{EB0}	V _{EB} = 5V, I _C = 0	-	10	nA
Collector Base Voltage	V _{CB0}	I _c = 100μA, I _E = -0	140	-	V
Collector Emitter Voltage	V _{CEO} *	I _c = 30mA, I _B = 0	80	-	V
Emitter Base Voltage	V _{EB0}	I _E = 100uA, I _c = -0	7	-	V
Collector Emitter (Sat) Voltage	V _{CE(Sat)} *	I _c = 150mA, I _B = 15mA I _c = 500mA, I _B = 50mA	-	0.2 0.5	V V
Base Emitter (Sat) Voltage	V _{BE(Sat)} *	I _c = 150mA, I _B = 15mA	-	1.1	V

Description	Symbol	Test Conditions	Value	Unit
DC Current Gain	h _{FE} *	I _c = 0.1mA, V _{CE} = 10V	>50	-
		I _c = 10mA, V _{CE} = 10V	>90	
		I _c = 150mA, V _{CE} = 10V	100-300	
		I _c = 500mA, V _{CE} = 10V	>50	
		I _c = 1A, V _{CE} = 10V	>15	
		T _c = -55°C, I _c = 150mA, V _{CE} = 10V	>40	

NPN Silicon Planar Epitaxial Transistor

80V_{CE0}, 1A I_c

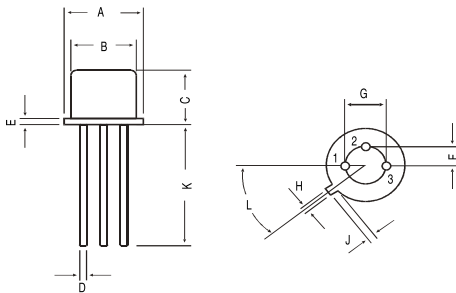


Dynamic Characteristics

Description	Symbol	Test Conditions	Value	Unit
Small Signal Current Gain	h _{FE}	I _c = 1mA, V _{CE} = 5V f = 1kHz	80-400	-
Transition Frequency	f _t	V _{CE} = 10V, I _c = 50mA, f = 20MHz	100-400	MHz
Input Capacitance	C _{ibo}		<60	pF
Output Capacitance	C _{obo}	V _{CB} = 10V, f = 1MHz	<12	pF
Collector Base Time Constant	r _{bb'} c _{b'} c		15-400	ps

*Pulse Test: Pulse Width = 300µs, Duty Cycle = 1%

TO-18 Metal Can Package



Dim.	Min.	Max.
A	5.24	5.84
B	4.52	4.97
C	4.31	5.33
D	0.40	0.53
E	-	0.76
F	-	1.27

Dim.	Min.	Max.
G	-	2.97
H	0.91	1.17
J	0.71	1.21
K	12.7	-
L	45 Deg.	

Dimensions : Millimetres

Part Number Table

Description	Part Number
NPN Silicon Planar Epitaxial Transistor, 80V, 1A, TO-18	MP001171

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.

Newark.com/multicomp-pro
 Farnell.com/multicomp-pro
 Element14.com/multicomp-pro

