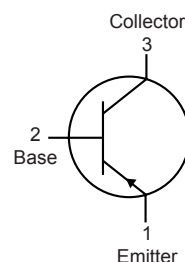


RoHS  
Compliant



NPN



## Description:

Silicon TO-126, PNP Power Transistor for use in power amplifier and switching excellent safe area limits

## Maximum Ratings:

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	40	V
Collector-Emitter Voltage	$V_{CEO}$		
Emitter-Base Voltage	$V_{EBO}$	5	
Continuous Collector Current	$I_C$	4	A
Base Current	$I_B$	1	
Total Device Dissipation ( $T_C = +25^\circ\text{C}$ ) Derate Above $25^\circ\text{C}$	$P_D$	40 320	W mW/ $^\circ\text{C}$
Operating Junction Temperature Range	$T_J$	-65 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$		

# Bipolar Transistor



## Electrical Characteristics ( $T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
-----------	--------	-----------------	------	------	------

### OFF Characteristics

Collector-Emitter Breakdown Voltage (Note 1)	$V_{(BR)CEO}$	$I_C = 0.1A, I_B = 0$	40	-	V
Collector Cut-Off Current	$I_{CEX}$	$V_{CE} = 40V_{EB(off)} = 1.5V$	-	0.1	mA
	$I_{CBO}$	$V_{CB} = 40V, I_E = 0$		1	
	$I_{CEO}$	$V_{CE} = 80V, I_B = 0$			
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			

### ON Characteristics

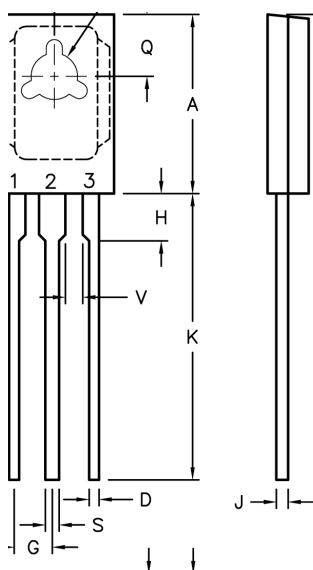
DC Current Gain (Note 1)	$h_{FE}$	$V_{CE} = 2\text{V}, I_C = 1.5\text{A}$	25	100	-
		$V_{CE} = 2\text{V}, I_C = 4\text{A}$	10	-	
Collector - Emitter Saturation Voltage (Note 1)	$V_{CE(sat)}$	$I_C = 1.5\text{A}, I_B = 0.15\text{A}$	-	0.6	V
		$I_C = 4\text{A}, I_B = 1\text{A}$		1.4	
Base - Emitter on Voltage (Note 1)	$V_{BE(on)}$	$I_C = 1.5\text{A}, I_B = 2\text{V}$		1.2	

### Small Signal Characteristics

Current Gain-Bandwidth Product (Note 2)	$f_T$	$V_{CE} = 10\text{V}, I_C = 1\text{A}, f = 1\text{MHz}$	2	-	MHz
---	-------	---	---	---	-----

Note 1 : Pulse Test : Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

Note 2 :  $f_T$  is defined as the frequency at which  $|h_{fe}|$  extrapolates to unity



Dimensions	Min.	Max.
A	10.8	11.05
B	7.49	7.75
C	2.41	2.67
D	0.51	0.66
F	2.92	3.18
G	2.31	2.46
H	1.27	2.41
J	0.38	0.64
K	15.11	16.64
M	3° TYP	
Q	3.76	4.01
R	1.14	1.4
S	0.64	0.89
U	3.68	3.94
V	1.02	-

Dimensions : Millimetres

### Part Number Table

Description	Part Number
Transistor, PNP, 1A, 40V, TO-126	2N5193

**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 2012.