

Use in Medium Power Amplifier and Switching Applications

Absolute Maximum Ratings

Description	Symbol	2N5193	Unit
Collector Base Voltage	V_{CB0}	40	V
Collector Emitter Voltage	V_{CE0}	40	
Emitter Base Voltage	V_{EB0}	5	
Collector Current Continuous	I_C	4	A
Collector Peak Current	I_{CM}	7	
Base Current	I_B	1	
Power Dissipation at $T_c=25^{\circ}\text{C}$	P_D	40	W
Operating and Storage Junction Temperature	T_j, T_{stg}	-65 to +150	$^{\circ}\text{C}$

Thermal Resistance

Description	Symbol	Value	Unit
From Junction to Mounting Base	$R_{th(j-c)}$	3.12	$^{\circ}\text{C/W}$

Electrical Characteristics ($T_c = 25^{\circ}\text{C}$ Unless otherwise specified)

Description	Symbol	Test Condition	Min.	Max.	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB}=\text{rated } V_{CB}$		100	μA
	I_{CEV}	$V_{CE}=\text{rated } V_{CE0}, V_{EB}=1.5\text{V}$		100	μA
	I_{CEO}	$V_{CE}=\text{rated } V_{CE0}$		1	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		1	nA
Collector-Emitter Saturation Voltage	$*V_{CE0(sus)}$	$I_C = 100\text{mA}, I_B = 0$	40		V
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=1.5\text{A}, I_B=0.15\text{A}$		0.6	
		$I_C=4\text{A}, I_B=1\text{A}$		1.2	
Base-Emitter Voltage	$*V_{BE}$	$I_C = 1.5\text{A}, V_{CE} = 2\text{V}$		1.2	

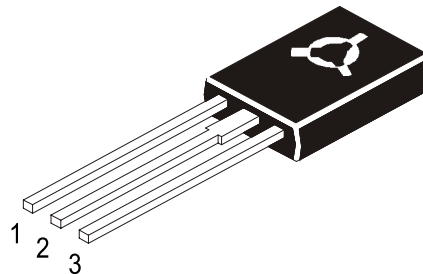
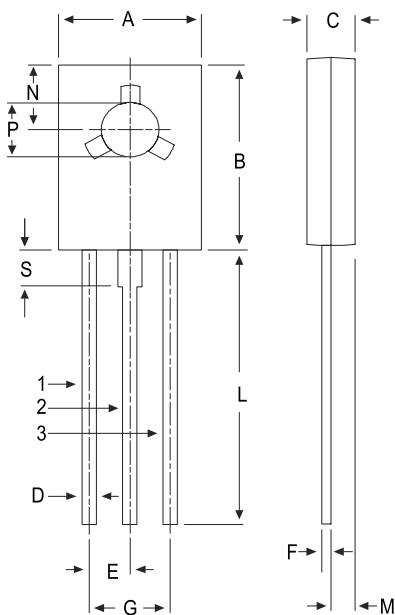
*Pulsed Pulse Duration=300ms, Duty Cycle=1.5%

Electrical Characteristics (Ta=25° C unless specified otherwise)

Description	Symbol	Test Condition	Min.	Max.	Unit
DC Current Gain	*h _{FE}	I _C =4A, V _{CE} =2V	10	80	
Transition Frequency	f _T	I _C =1A, V _{CE} =10V, f=1MHz	2		MHz

*Pulsed Pulse Duration=300ms, Duty Cycle=1.5%

Diagram



Pin Configuration

1. Emitter
2. Collector
3. Base

DIM	MIN	MAX
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 TYP.	
F	0.49	0.75
G	4.5 TYP.	
L	15.7 TYP.	
M	1.27 TYP.	
N	3.75 TYP.	
P	3	3.2
S	2.5 TYP.	

Part Number Table

Description	Part Number
Single Bipolar Transistor, PNP, 40V, 4A, TO-126	2N5193

Dimensions : Millimetres

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
sg.element14.com/b/multicomp-pro