

# Medium Power Transistor



## Description:

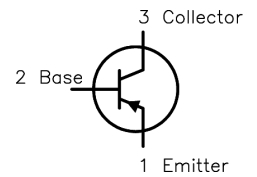
Medium Power Plastic PNP, TO-126, Silicon Transistor.  
Designed for driver circuits, switching, and amplifier applications.

**RoHS  
Compliant**

## Features:

- Low Saturation Voltage:  $V_{CE(sat)} 0.6V$  DC  $I_C = 1A$
- Excellent Power Dissipation Due to Thermopad Construction  
 $P_D = 30 @ T_C = 25^\circ C$

## PNP



## Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	$V_{CEO}$	80	V
Collector-Base Voltage	$V_{CBO}$	80	
Emitter-Base Voltage	$V_{EBO}$	5	
Continuous Collector Current	$I_C$	1	A
Base Current	$I_B$	1	
Total Device Dissipation at $T_C = 25^\circ C$ Derate above $25^\circ C$	$P_D$	30 0.24	W mW/ $^\circ C$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-65 to +150	$^\circ C$

## Electrical Characteristics ( $T_a = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
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### OFF Characteristics

Collector - Emitter Breakdown Voltage (Note 1)	$V_{(BR)CEO}$	$I_C=100mA, I_B=0$	80	-	V
Collector Cut-Off Current	$I_{CEX}$	$V_{CE}=80V, V_{EB(off)}=1.5V$	-	1	mA
	$I_{CEO}$	$V_{CB}=40V, I_B=0$	-	0.5	
	$I_{CBO}$	$V_{EB}=80V, I_E=0$	-	0.1	
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	1	

### ON Characteristics (Note 1)

DC Current Gain	$h_{FE}$	$V_{CE}=1V, I_C=50mA$	40	-	-
		$V_{CE}=1V, I_C=1,500mA$	30	150	-
		$V_{CE}=1V, I_C=1A$	10	-	-
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=100mA$	-	0.6	V
Base-Emitter Saturation Voltage	$V_{BE(on)}$	$I_C=1A, I_B=1V$	-	1.3	
	$V_{BE(sat)}$	$I_C=1A, I_B=100mA$	-	1.3	

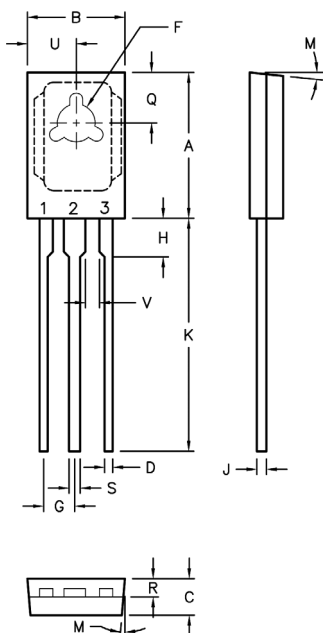
# Medium Power Transistor



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

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
<b>Small-Signal Characteristics</b>					
Current Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=250\text{mA}, f=1\text{kHz}$	3	-	MHz
Output Capacitance	$C_{obo}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$	-	100	pF
Input Capacitance	$h_{fe}$	$V_{CE}=10\text{V}, I_C=1\text{mA}, f=1\text{kHz}$	-	-	k $\Omega$
		$V_{CE}=10\text{V}, I_C=10\text{mA}, f=1\text{kHz}$	-	-	
Small-Signal Current Gain	$h_{fe}$	$V_{CE}=10\text{V}, I_C=250\text{mA}, f=1\text{kHz}$	25	-	-

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



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

### Pin Configuration:

1. Emitter
2. Collector
3. Base

### Part Number Table

Description	Part Number
Transistor, PNP, 1A, 80V, TO-126	2N4920

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