

Medium Power Transistor



Description:

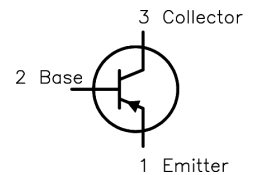
Medium Power Plastic PNP, TO-126, Silicon Transistor.
Designed for driver circuits, switching, and amplifier applications.

Features:

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

**RoHS
Compliant**

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	

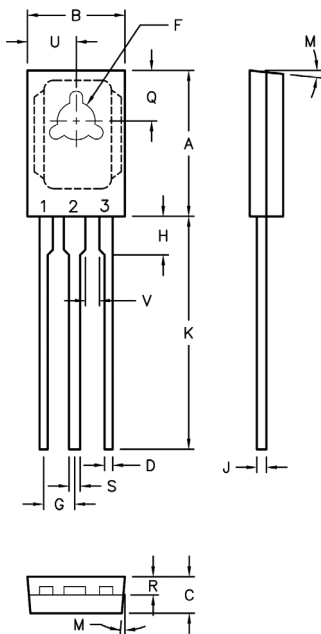
Medium Power Transistor



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

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Small-Signal Characteristics					
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 Ω
		$V_{CE}=10\text{V}$, $I_C=10\text{mA}$, $f=1\text{kHz}$	-	-	
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 μs , 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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