Medium Power Transistor

Description:

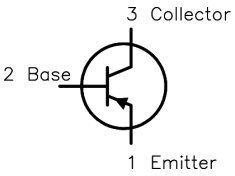
Medium Power Plastic PNP, TO-126, Silicon Transistor.
Designed for driver circuits, switching, and amplifier applications.

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°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°C Derate above 25°C	P_D	30 0.24	W mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +150	°C

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

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
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	

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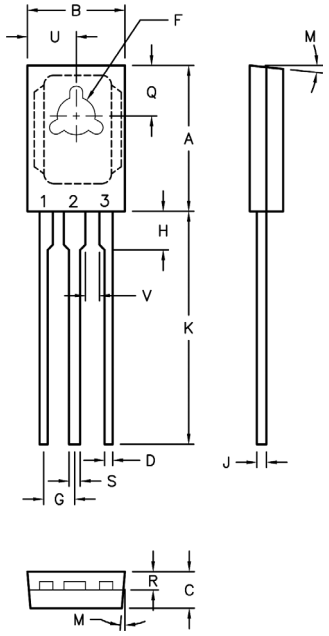
Electrical Characteristics (T_a = 25°C unless otherwise specified)

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

Note 1. Plus Test: Pulse Width = 300μs, Duty Cycle ≦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