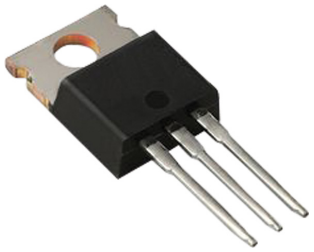
General Purpose Transistor



Description:

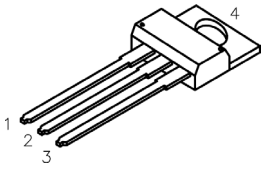
A silicon PNP Darlington transistor in a TO-220 type case designed for general-purpose amplifier and low-speed switching applications.

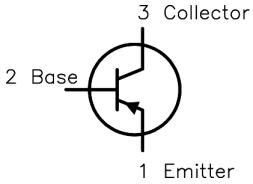
Features:

- High DC Current Gain
- Monolithic Construction with Built-in Base-Emitter Shunt Resistors

RoHS Compliant

PNP





Pin Configuration:
1. Base
2. Collector
3. Emitter
4. Collector

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 Peak	I_C	4 6	A
Total Device Dissipation at T_c = 25°C Derate above 25°C	P_D	50 0.4	W mW/°C
Total Device Dissipation at T_c = 25°C Derate above 25°C	P_D	2 0.016	
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +120	°C
Thermal Resistance, Junction-to-Case	R_{thJC}	2.5	°C/W
Thermal Resistance, Junction-to-Ambient (Note 1)	R_{thJA}	62.5	

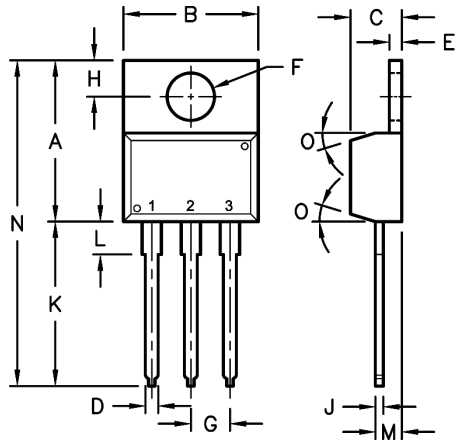
Electrical Characteristics (T_a = 25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
OFF Characteristics					
Collector - Emitter Breakdown Voltage (Note 2)	$V_{(BR)CEO}$	I_C=30mA, I_B=0	80	-	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=80V, I_E=0	-	1	mA
	I_{CEO}	V_{CB}=40V, I_B=0	-	2	
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	2	
ON Characteristics (Note 2)					
DC Current Gain	h_{FE}	V_{CE}=4V, I_C=1A	1,000		-
		V_{CE}=4V, I_C=2A	500		-

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

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2A, I_B=8mA	-	2.5	V
Base-Emitter On Voltage	$V_{BE(on)}$	I_C=2A, V_{CE}=4V	-	2.8	
Dynamic Characteristics					
Output Capacitance	C_{obo}	V_{CB}=10V, I_E=0, f=0.1MHz	-		pF

Note 1. I_C = 1A, L = 100mH, P.R.F = 10Hz, V_{CC} = 20V, R_{BE} = 100Ω.
Note 2. Pulse test: Pulse Width ≦ 300μs, Duty Cycle ≦ 2%.



Dimensions	Min.	Max.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.9
E	1.15	1.4
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.7	14.73
L	2.8	4.07
M	2.03	2.92
N	-	31.24
O	7°	

Dimensions : Millimetres

Pin Configuration:
1. Emitter
2. Base
3. Collector

Part Number Table

Description	Part Number
Transistor, PNP, 2A, 60V, TO-220	TIP116