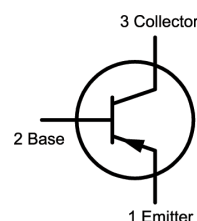
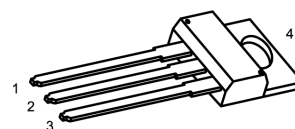
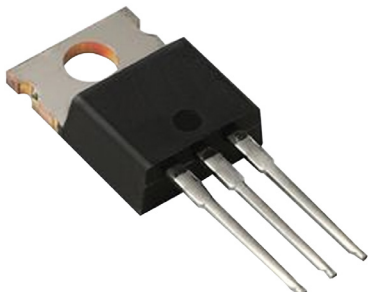


Transistor

General Purpose

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RoHS
Compliant



Pin Configuration:

1. Emitter
2. Base
3. Collector

Description:

A Silicon epitaxial PNP Darlington transistor in a TO-220 type Case designed for general-purpose amplifier and Low speed switching circuits.

Features:

- High DC Current Gain
- Collector-Emitter Sustaining Voltage $V_{CEO(SUS)}=100V$ Min.
- Monolithic Construction With Built-in Base-Emitter Shunt Resistors

Maximum Ratings:

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	80	V
Collector-Base Voltage	V_{CB}		
Emitter-Base Voltage	V_{EB}		
Collector Current -Continuous -Peak	I_C	8 16	A
Base Current	I_B	120	mA
Total Device Dissipation $-(T_C = +25^\circ C)$, Derate Above $25^\circ C$	P_D	75	W
Total Device Dissipation $-(T_A = +25^\circ C)$, Derate Above $25^\circ C$		0.6	
Operating Junction Temperature Range	T_J	-65 to +150	$^\circ C$
Storage Temperature Range,	T_{stg}		
Thermal Resistance, Junction-to-Case,	R_{thJC}	1.67	$^\circ C/W$
Thermal Resistance, Junction-to-Ambient,	R_{thJA}	57	

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Transistor

General Purpose

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

Parameter	Symbol	Test Conditions	Min	Max	Unit
Collector-Emitter Saturation Voltage	$V_{CEO(SUS)}$	$I_C = 100\text{mA}, I_B = 0$, Note 1	80	-	V
Collector Cutoff Current	I_{CEO}	$V_{CE} = 80\text{V}, I_B = 0$	-	20	μA
	I_{CEX}	$V_{CE} = 80\text{V}, V_{BE(off)} = -1.5\text{V}$		200	
		$V_{CE} = 80\text{V}, V_{BE(off)} = -1.5\text{V}, T_C = +150^\circ\text{C}$			
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$		2	mA

On Characteristics

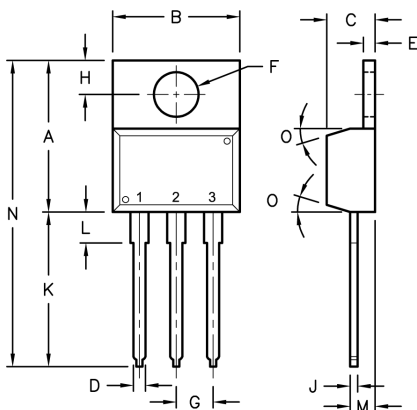
DC Current Gain	h_{FE}	$V_{CE} = 4\text{V}, I_C = 4\text{A}$	1,000	20,000	-
		$V_{CE} = 4\text{V}, I_C = 8\text{A}$	100	-	
Collector-Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C = 4\text{A}, I_B = 16\text{mA}$	-	2	V
		$I_C = 8\text{A}, I_B = 80\text{mA}$		4	
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = 4\text{V}, I_C = 4\text{A}$		2.8	

Dynamic Characteristics

Small-Signal Current Gain	h_{fe}	$V_{CE} = 5\text{V}, I_C = 1\text{A}, f = 1\text{MHz}$	4	-	-
	h_{fe}	$V_{CE} = 4\text{V}, I_C = 3\text{A}, f = 1\text{kHz}$	300		
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = .1\text{MHz}$	-	300	μF

Note:

- Pulse Width = 300 μs , Duty Cycle $\leq 2\%$



Pin Configuration:

- Emitter
- Base
- Collector

Dimension	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

Part Number Table

Description	Part Number
Transistor, PNP, 8A, 80V, TO-220	2N6124

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