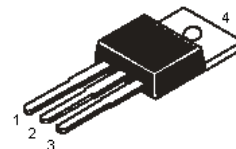
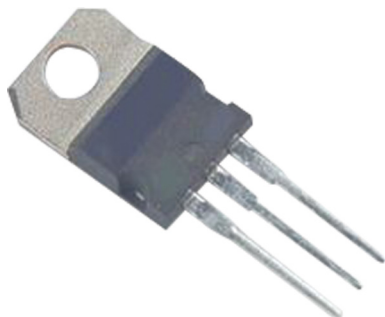


# Power Transistor



## Pin Configuration:

1. Base
2. Collector
3. Emitter
4. Collector

## Feature:

- High power complimentary pairs
- For high quality audio output stages, and general purpose push-pull amplifier configurations
- Silicon epitaxial fabrication power transistors
- High - frequency drivers in audio amplifier

## Absolute Maximum Ratings:

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	250	V
Collector Emitter Voltage	$V_{CEO}$		
Emitter Base Voltage	$V_{EBO}$	5	
Collector Current Continuous	$I_C$	8	A
Peak			
Base Current	$I_B$	2	
Power Dissipation $T_C = 25^\circ\text{C}$	$P^D$	50	W
Derate Above $25^\circ\text{C}$		0.4	
Power Dissipation $T_a = 25^\circ\text{C}$	$P_D$	2	
Derate Above $25^\circ\text{C}$		0.016	W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-65 to +150	$^\circ\text{C}$

## Thermal Resistance

Thermal Ambient	$R_{th(j-a)}$	62.5	$^\circ\text{C/W}$
Junction to Case	$R_{th(j-c)}$	2.5	

# Power Transistor

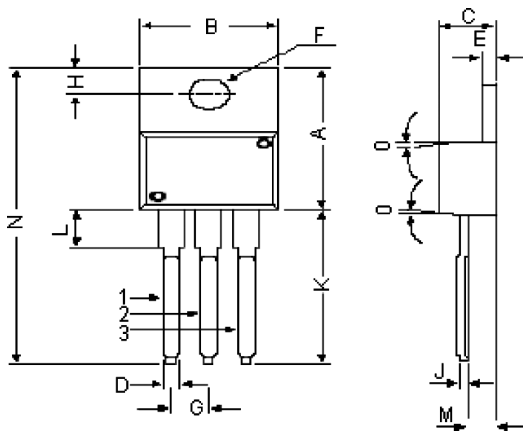


## Electrical Characteristics ( $T_c = 25^\circ\text{C}$ unless specified otherwise):

Parameter	Symbol	Test Condition	Min.	Max.	Unit
Collector Emitter Sustaining Voltage	$V_{\text{CEO (sus)}}^*$	$I_{\text{C}} = 10\text{mA}, I_{\text{B}} = 0$	250	-	V
Collector Cut off Current	$I_{\text{CBO}}$	$V_{\text{CB}} = 150\text{V}, I_{\text{E}} = 0$	-	10	$\mu\text{A}$
Emitter Cut off Current	$I_{\text{EBO}}$	$V_{\text{BE}} = 5\text{V}, I_{\text{C}} = 0$	-		
DC Current Gain	$h_{\text{FE}}^*$	$I_{\text{C}} = 0.5\text{A}, V_{\text{CE}} = 5\text{V}$ $I_{\text{C}} = 1\text{A}, V_{\text{CE}} = 5\text{V}$ $I_{\text{C}} = 2\text{A}, V_{\text{CE}} = 5\text{V}$	50 50 10	-	-
Collector Emitter Saturation Voltage	$V_{\text{CE (sat)}}^*$	$I_{\text{C}} = 1\text{A}, I_{\text{B}} = 0.1\text{A}$	-	0.5	V
Base Emitter On Voltage	$V_{\text{BE (on)}}^*$	$I_{\text{C}} = 1\text{A}, V_{\text{CE}} = 5\text{V}$	-	1.0	
Dynamic Characteristics					
Current Gain-Bandwidth Product	$f_{\text{T}}^{**}$	$I_{\text{C}} = 500\text{mA}, V_{\text{CE}} = 10\text{V}$ $f_{\text{test}} = 1\text{MHz}$	30	-	MHz

\*Pulse Test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

$$**f_T = |h_{fe}| \cdot f_{test}$$



### Pin Configuration:

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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	$7^\circ$	

Dimensions : Millimetres

### Part Number Table

Description	Part Number
Transistor, NPN, TO-220	MJE15032

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