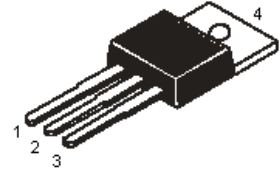
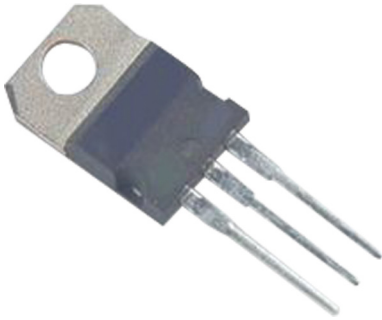


# High Power Bipolar Transistor



**Pin Configuration:**

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

**Feature:**

- NPN plastic power transistors
- General purpose amplifier and switching applications

**Absolute Maximum Ratings:**

Characteristic	Symbol		BD243C	Unit		
Collector-Base Voltage (Open Emitter)	$V_{CBO}$	Max.	100	V		
Collector Emitter Voltage (Open Base)	$V_{CEO}$					
Collector Current	$I_C$				6	A
Total Power Dissipation upto $T_C = 25^\circ\text{C}$	$P_{tot}$				65	W
Junction Temperature	$T_j$				150	$^\circ\text{C}$
Collector Current Saturation Voltage $I_C = 6\text{A}, I_B = 1\text{A}$	$V_{CE(Sat)}$	Min.	30	V		
DC Current Gain $I_C = 0.3\text{A}; V_{CE} = 4\text{V}$	$h_{FE}$					

**Ratings (at  $T_a = 25^\circ\text{C}$  unless otherwise specified) Limiting Values**

Collector-Base Voltage (Open Emitter)	$V_{CBO}$	Max.	100	V
Collector Emitter Voltage (Open Base)	$V_{CEO}$			
Emitter-Base Voltage (Open Collector)	$V_{EBO}$			
Collector Current	$I_C$		6	A
Collector Current (Peak)			10	
Base Current	$I_B$		2	
Total Power Dissipation upto $T_C = 25^\circ\text{C}$	$P_{tot}$		65	W
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-65 to +150	

# High Power Bipolar Transistor

## Absolute Maximum Ratings:

Characteristic	Symbol		BD243C	Unit
<b>Thermal Resistance</b>				
From Junction to Case	$R_{th(j-c)}$	-	1.92	°C/W

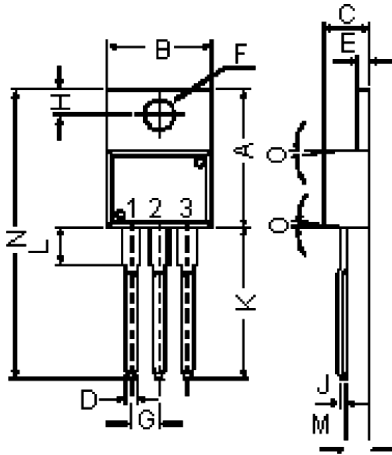
## Characteristics $T_a = 25^\circ\text{C}$ unless otherwise specified

Collector Cut off Current $I_B = 0; V_{CE} = 60V$ $V_{BE} = 0; V_{CE} = V_{CEO}$	$I_{CEO}$ $I_{CES}$	Max.	0.7 0.4	mA
Emitter Cut off Current $I_C = 0; V_{EB} = 5V$	$I_{EBO}$		1	
Breakdown Voltages $I_C = 30mA; I_B = 0$ $I_C = 1mA; I_E = 0$ $I_E = 1mA; I_C = 0$	$V_{CEO(Sus)}^*$ $V_{CBO}$ $V_{EBO}$	Min.	100 100 5	V
Saturation Voltage $I_C = 6A; I_B = 1A$	$V_{CE(sat)}^*$	Max.	1.5	
Base Emitter On Voltage $I_C = 6A; V_{CE} = 4V$	$V_{BE(on)}^*$		2	
DC Current Gain $I_C = 0.3A; V_{CE} = 4V$ $I_C = 3A; V_{CE} = 4V$	$h_{FE}^*$	Min.	30 15	-
Small Signal Current Gain $I_C = 0.5A; V_{CE} = 10V; f = 1kHz$	$h_{fe}$		20	
Transition Frequency $I_C = 0.5A; V_{CE} = 10V; f = 1MHz$	$f_T(1)$		3	

\* Pulse Test: Pulse Width  $\leq 300\mu s$ ; Duty Cycle  $\leq 2\%$ .

(1)  $f_T = |h_{fe}| \cdot f_{test}$

# High Power Bipolar Transistor



**Pin Configuration:**

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

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

**Part Number Table**

Description	Part Number
Transistor, NPN, TO-220	BD243C

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