

# BD243C

## High Power Bipolar Transistor



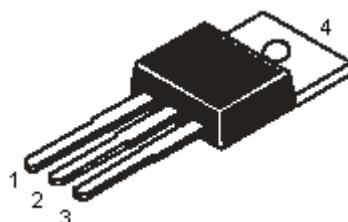
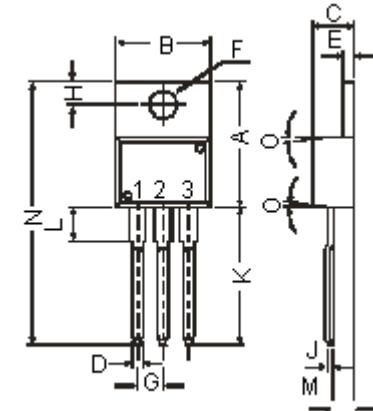
### TO-220, General Purpose



### Features:

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

### TO-220 Plastic Package



Dimensions	Minimum	Maximum
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N	-	31.24
O	7°	

Dimensions : Millimetres

### Pin Configuration:

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

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### Absolute Maximum Ratings

Characteristic	Symbol		BD243C	Unit
Collector-Base Voltage (Open Emitter)	$V_{CBO}$	Maximum	100	V
Collector Emitter Voltage (Open Base)	$V_{CEO}$		6.0	
Collector Current	$I_C$		65	
Total Power Dissipation upto $T_C = 25^\circ\text{C}$	$P_{tot}$		150	
Junction Temperature	$T_j$		1.5	
Collector Current Saturation Voltage $I_C = 6\text{A}, I_B = 1\text{A}$	$V_{CE}(\text{Sat})$		30	
DC Current Gain $I_C = 0.3\text{A}; V_{CE} = 4\text{V}$	$h_{FE}$	Minimum		V

Ratings (at  $T_A = 25^\circ\text{C}$  unless otherwise specified)

### Limiting Values

Collector-Base Voltage (Open Emitter)	$V_{CBO}$	Maximum	100	V	
Collector Emitter Voltage (Open Base)	$V_{CEO}$		5.0		
Emitter-Base Voltage (Open Collector)	$V_{EBO}$		6.0		
Collector Current	$I_C$		10	A	
Collector Current (Peak)			2.0		
Base Current	$I_B$		65	W	
Total Power Dissipation upto $T_C = 25^\circ\text{C}$	$P_{tot}$		150	$^\circ\text{C}$	
Junction Temperature	$T_j$		-65 to +150		
Storage Temperature	$T_{stg}$				

### Thermal Resistance

From Junction to Case	$R_{th(j-c)}$	-	1.92	$^\circ\text{C/W}$
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### Characteristics

$T_{amb} = 25^\circ\text{C}$  unless otherwise specified

Collector Cut off Current $I_B = 0; V_{CE} = 60\text{V}$ $V_{BE} = 0; V_{CE} = V_{CEO}$	$I_{CEO}$ $I_{CES}$	Maximum	0.7 0.4	mA
Emitter Cut off Current $I_C = 0; V_{EB} = 5\text{V}$	$I_{EBO}$		1.0	
Breakdown Voltages $I_C = 30\text{mA}; I_B = 0$ $I_C = 1\text{mA}; I_E = 0$ $I_E = 1\text{mA}; I_C = 0$	$V_{CEO}(\text{Sus})^*$ $V_{CBO}$ $V_{EBO}$	Minimum	100 100 5.0	V
Saturation Voltage $I_C = 6\text{A}; I_B = 1\text{A}$	$V_{CE}(\text{sat})^*$		1.5	
Base Emitter On Voltage $I_C = 6\text{A}; V_{CE} = 4\text{V}$	$V_{BE}(\text{on})^*$	Maximum	2.0	
DC Current Gain $I_C = 0.3\text{A}; V_{CE} = 4\text{V}$ $I_C = 3\text{A}; V_{CE} = 4\text{V}$	$h_{FE}^*$		30 15	



**multicomp**

# BD243C

## High Power Bipolar Transistor



### Characteristics

$T_{amb} = 25^\circ C$  unless otherwise specified

Small Signal Current Gain $I_C = 0.5A; V_{CE} = 10V; f = 1KHz$	$h_{fe}$	Minimum	20	-
Transition Frequency $I_C = 0.5A; V_{CE} = 10V; f = 1MHz$	$f_T (1)$		3	MHz

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

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

### Specifications

$I_C$ (av) Maximum (A)	$V_{CEO}$ Maximum (V)	$h_{FE}$ Minimum at $I_C = 0.3A$	$P_{tot}$ at $25^\circ C$ (W)	Type	Part Number
6	100	30	65	NPN	BD243C



# High Power Bipolar Transistor

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