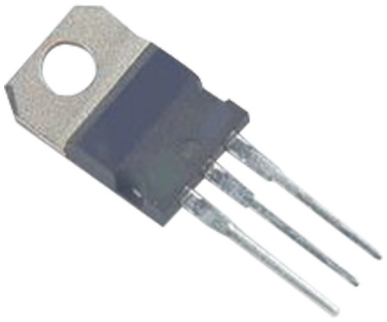
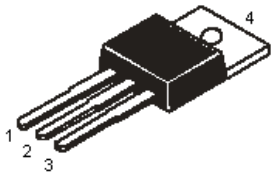
High Power Bipolar Transistor





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°C	P_{tot}		65	W
Junction Temperature	T_j		150	°C
Collector Current Saturation Voltage I_C = 6A, I_B = 1A	$V_{CE\ (Sat)}$		1.5	V
DC Current Gain I_C = 0.3A; V_{CE} = 4V	h_{FE}	Min.	30	

Ratings (at T_a = 25°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}		5	
Collector Current	I_C		6	A
Collector Current (Peak)			10	
Base Current	I_B		2	
Total Power Dissipation upto T_C = 25°C	P_{tot}		65	W
Junction Temperature	T^j		150	°C
Storage Temperature	T_{stg}		-65 to +150	

Absolute Maximum Ratings:

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

Characteristics T_a = 25°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	MHz

* Pulse Test: Pulse Width ≤300µs; Duty Cycle ≤2%.

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

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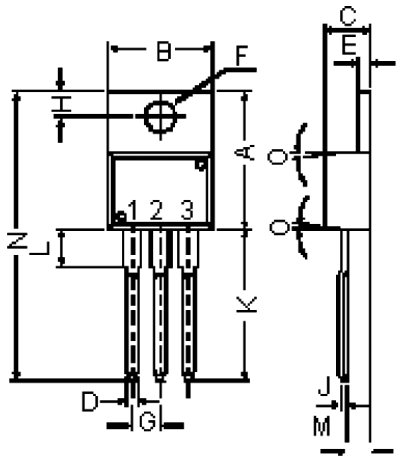

Dimensions	Min.	Max.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.9
E	1.15	1.4
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.7	14.73
L	2.8	4.07
M	2.03	2.92
N	-	31.24
O	7°	

Dimensions : Millimetres

Pin Configuration:

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Part Number Table

Description	Part Number
Transistor, NPN, TO-220	BD243C