

Silicon NPN Power Transistor

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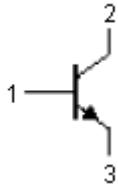


Application:

For medium power linear and switching applications

Fig. 1 Simplified Outline (TO-220C) and Symbol

Pinning



Pin	Description
1	Base
2	Collector; connected to mounting base
3	Emitter

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Symbol	Parameter	Conditions	Value	Unit
V_{CBO}	Collector - base voltage	Open emitter	100	V
V_{CEO}	Collector - emitter voltage	Open base	100	V
V_{EBO}	Emitter - base voltage	Open collector	5	V
I_C	Collector current	-	6	A
I_{CM}	Collector current - peak	-	10	A
I_B	Base current	-	2	A
P_C	Collector power dissipation	$T_C = 25^\circ\text{C}$	65	W
T_j	Junction temperature	-	150	$^\circ\text{C}$
T_{stg}	Storage temperature	-	-65 to 150	$^\circ\text{C}$

Characteristics ($T_j = 25^\circ\text{C}$ Unless Otherwise Specified)

Symbol	Parameter	Conditions	Minimum	Typical	Maximum	Unit
V_{CEO} (SUS)	Collector - emitter sustaining voltage	$I_C = 30 \text{ mA}; I_B = 0$	100	-	-	V
V_{CEsat}	Collector - emitter saturation voltage	$I_C = 6 \text{ A}; I_B = 1 \text{ A}$	-	-	1.5	V
V_{BE}	Base - emitter on voltage	$I_C = 6 \text{ A}; V_{CE} = 4 \text{ V}$	-	-	2	V
I_{CEO}	Collector cut-off current	$V_{CE} = 60 \text{ V}; I_B = 0$	-	-	0.7	mA
I_{CES}	Collector cut-off current	$V_{CE} = 100 \text{ V}; V_{BE} = 0$	-	-	0.4	mA
I_{EBO}	Emitter cut-off current	$V_{EB} = 5 \text{ V}; I_C = 0$	-	-	1	mA
h_{FE-1}	DC current gain	$I_C = 0.3 \text{ A}; V_{CE} = 4 \text{ V}$	30	-	-	-
h_{FE-2}	DC current gain	$I_C = 3 \text{ A}; V_{CE} = 4 \text{ V}$	15	-	-	-

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Package Outline

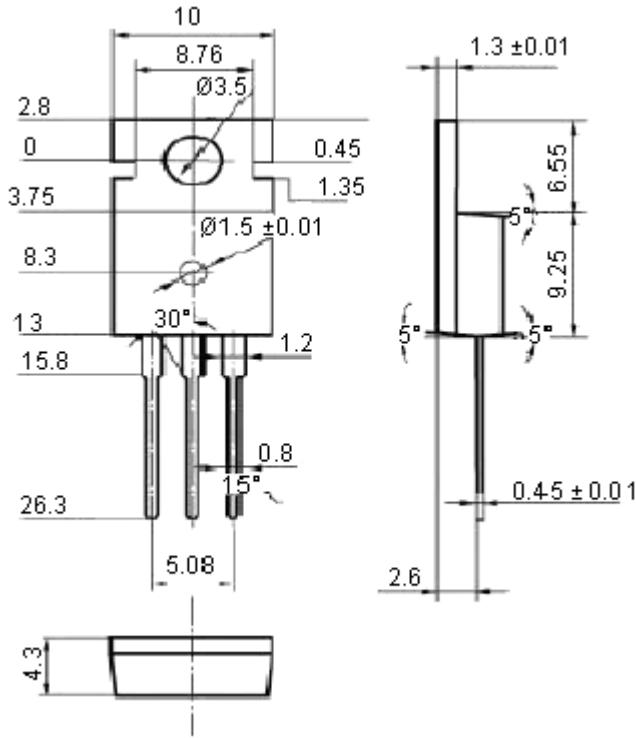


Fig. 2 Outline Dimensions (unindicated tolerance : ± 0.1 mm)

Part Number Table

Description	Part Number
Silicon NPN Power Transistor	BD243C

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