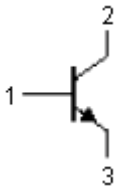
Silicon NPN Power Transistor

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

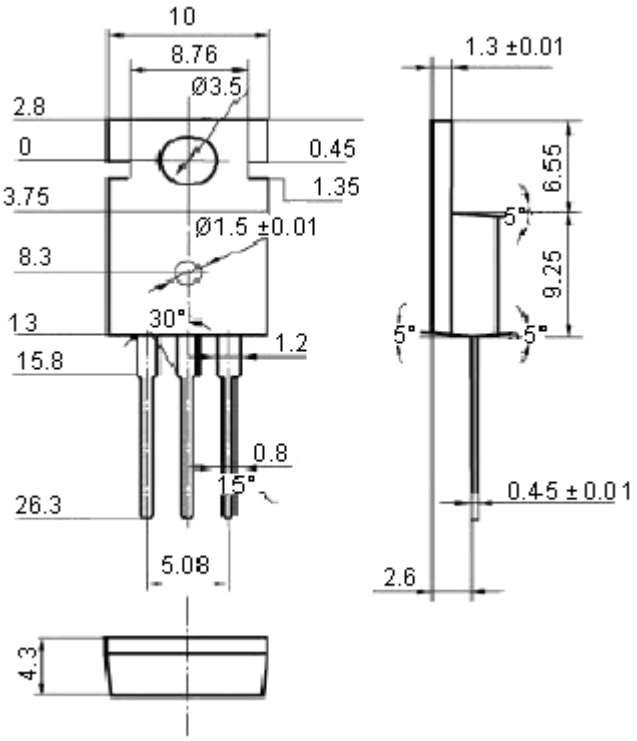
Absolute Maximum Ratings (T_a = 25°C)

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°C	65	W
T_j	Junction temperature	-	150	°C
T_{stg}	Storage temperature	-	-65 to 150	°C

Characteristics (T_j = 25°C Unless Otherwise Specified)

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

Package Outline



Dimensions : Millimetres

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

Part Number Table

Description	Part Number
Silicon NPN Power Transistor	BD243C