

## Silicon NPN Power Transistors

BD943

## DESCRIPTION

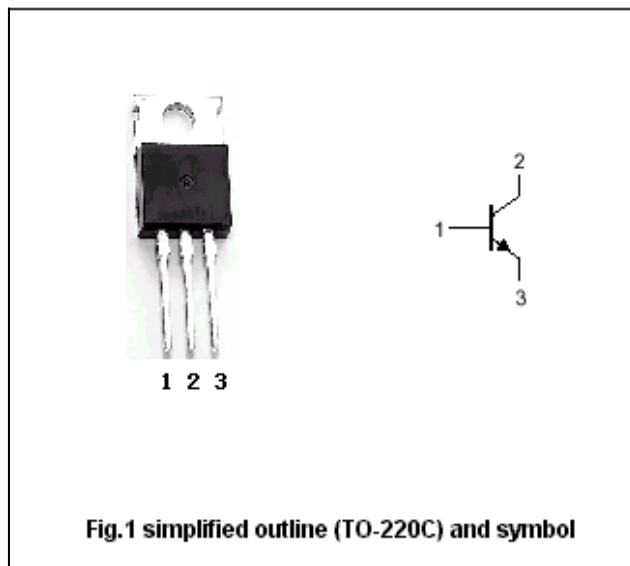
- With TO-220C package
- Low collector saturation voltage
- High current capability

## APPLICATIONS

- For medium power linear and switching applications

## 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	22	V
$V_{CEO}$	Collector-emitter voltage	Open base	22	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		5	A
$P_C$	Collector dissipation	$T_C=25^{\circ}\text{C}$	40	W
$T_j$	Junction temperature		150	$^{\circ}\text{C}$
$T_{stg}$	Storage temperature		-50~150	$^{\circ}\text{C}$

## Silicon NPN Power Transistors

BD943

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}; I_B=0$	22			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\text{mA}; I_C=0$	7			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			0.5	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			1.2	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=22\text{V}; I_E=0$			50	$\mu\text{A}$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=7\text{V}; I_C=0$			50	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_C=0.5\text{A}; V_{CE}=1\text{V}$	85		475	
$f_T$	Transition frequency	$I_C=0.25\text{A}; V_{CE}=10\text{V}$	3			MHz

