

Silicon NPN Power Transistors

BD543/A/B/C

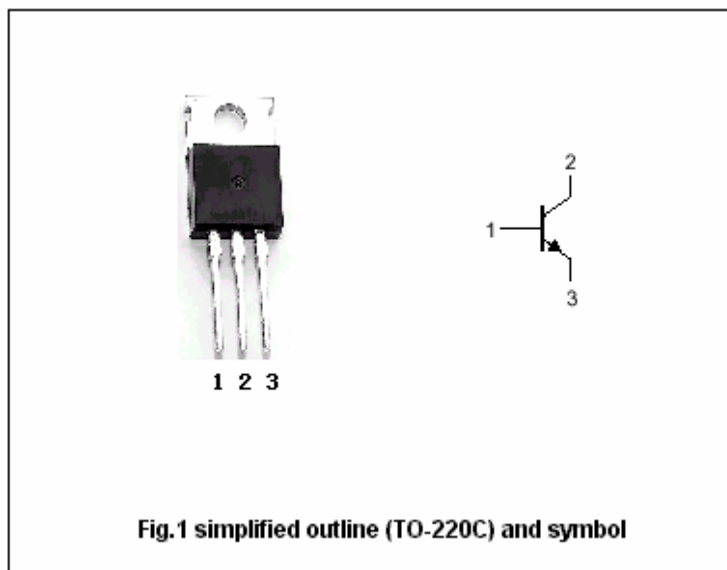
DESCRIPTION

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- With TO-220C package
- Complement to type BD544/A/B/C
- 8 A continuous collector current
- 10 A peak Collector current

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter



Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	BD543	40	V
		BD543A	60	
		BD543B	80	
		BD543C	100	
V _{CEO}	Collector-emitter voltage	BD543	40	V
		BD543A	60	
		BD543B	80	
		BD543C	100	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		8	A
I _{CM}	Collector current-peak		10	A
P _C	Collector power dissipation	T _C =25°C	70	W
T _j	Junction temperature		-65~150	°C
T _{stg}	Storage temperature		-65~150	°C

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CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	BD543	$I_C=30\text{mA}; I_B=0$	40			V
		BD543A		60			
		BD543B		80			
		BD543C		100			
$V_{CEsat-1}$	Collector-emitter saturation voltage		$I_C=3\text{A}; I_B=0.3\text{A}$			0.5	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		$I_C=5\text{A}; I_B=1\text{A}$			0.5	V
$V_{CEsat-3}$	Collector-emitter saturation voltage		$I_C=8\text{A}; I_B=1.6\text{A}$			1	V
V_{BE}	Base-emitter on voltage		$I_C=5\text{A}; V_{CE}=4\text{V}$			1.6	V
I_{CEO}	Collector cut-off current	BD543/543A	$V_{CE}=30\text{V}; I_B=0$			0.7	mA
		BD543B/543C	$V_{CE}=60\text{V}; I_B=0$				
I_{EBO}	Emitter cut-off current		$V_{EB}=5\text{V}; I_C=0$			1	mA
h_{FE-1}	DC current gain		$I_C=1\text{A}; V_{CE}=4\text{V}$	60			
h_{FE-2}	DC current gain		$I_C=3\text{A}; V_{CE}=4\text{V}$	40			
h_{FE-3}	DC current gain		$I_C=5\text{A}; V_{CE}=4\text{V}$	15			
Switching times							
t_{on}	Turn-on time		$I_C=6\text{A}; I_{B1}=-I_{B2}=0.6\text{A}; R_L=5\Omega$		0.6		μs
t_{off}	Turn-off time				1.0		μs

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PACKAGE OUTLINE

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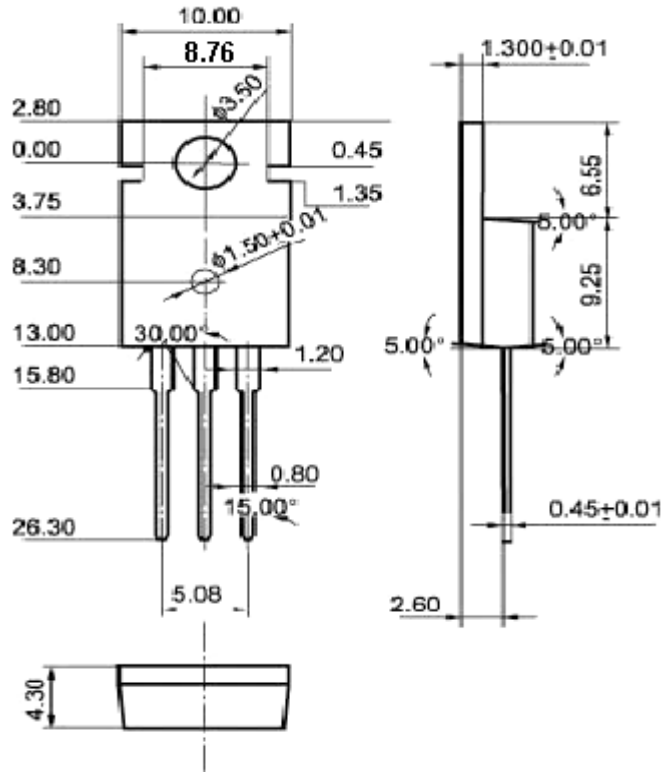


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)