

**Silicon NPN Power Transistors**

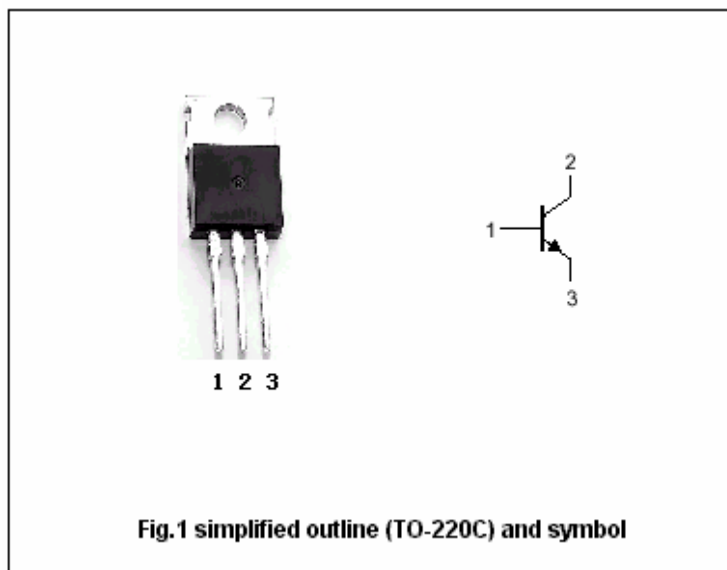
**BD543/A/B/C**

**DESCRIPTION**

- 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



**Fig.1 simplified outline (TO-220C) and symbol**

**Absolute maximum ratings (Ta=25°C)**

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

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	BD543	I <sub>C</sub> =30mA ; I <sub>B</sub> =0	40			V
		BD543A		60			
		BD543B		80			
		BD543C		100			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =3A ; I <sub>B</sub> =0.3A			0.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =5A ; I <sub>B</sub> =1A			0.5	V
V <sub>CEsat-3</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =8A ; I <sub>B</sub> =1.6A			1	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =5A ; V <sub>CE</sub> =4V			1.6	V
I <sub>CEO</sub>	Collector cut-off current	BD543/543A	V <sub>CE</sub> =30V; I <sub>B</sub> =0			0.7	mA
		BD543B/543C	V <sub>CE</sub> =60V; I <sub>B</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =5V; I <sub>C</sub> =0			1	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =1A ; V <sub>CE</sub> =4V	60			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =3A ; V <sub>CE</sub> =4V	40			
h <sub>FE-3</sub>	DC current gain		I <sub>C</sub> =5A ; V <sub>CE</sub> =4V	15			
Switching times							
t <sub>on</sub>	Turn-on time		I <sub>C</sub> =6A; I <sub>B1</sub> =-I <sub>B2</sub> =0.6A R <sub>L</sub> =5Ω		0.6		μs
t <sub>off</sub>	Turn-off time				1.0		μs

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PACKAGE OUTLINE

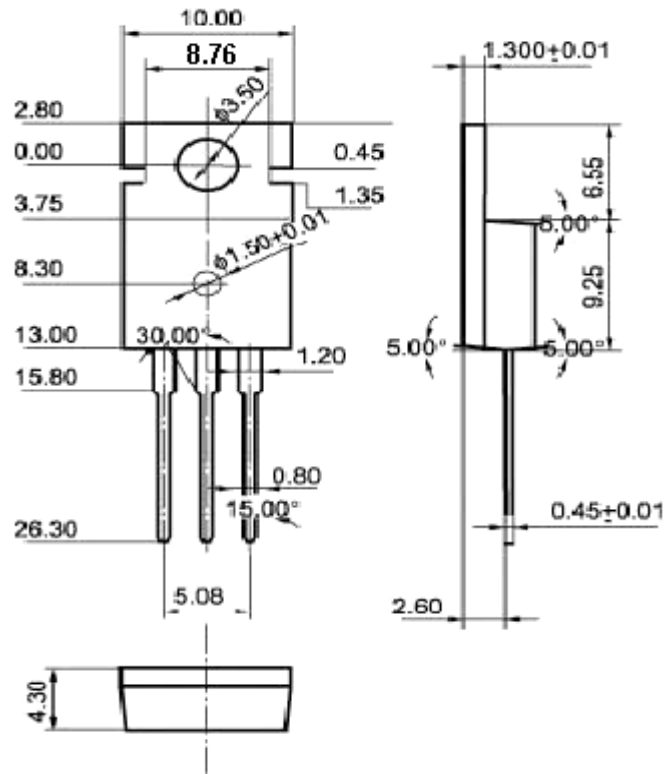


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)