

**Silicon NPN Power Transistors**

**BD241/A/B/C**

**DESCRIPTION**

- With TO-220C package
- Complement to type BD242/A/B/C

**APPLICATIONS**

- For medium power linear and switching applications

**PINNING**

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

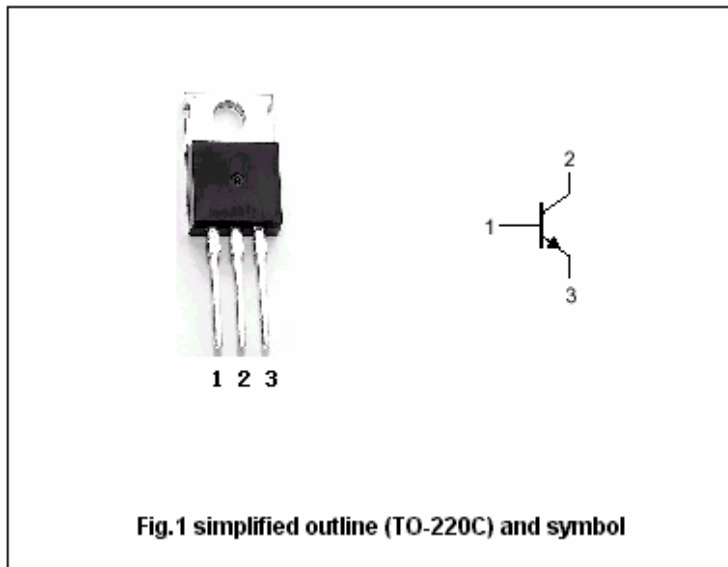


Fig.1 simplified outline (TO-220C) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	BD241	55	V
		BD241A	70	
		BD241B	90	
		BD241C	115	
V <sub>CEO</sub>	Collector-emitter voltage	BD241	45	V
		BD241A	60	
		BD241B	80	
		BD241C	100	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		3	A
I <sub>CM</sub>	Collector current-peak		5	A
I <sub>B</sub>	Base current		1	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	40	W
T <sub>j</sub>	Junction temperature		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>CEO(SUS)</sub>	Collector-emitter sustaining voltage	BD241	I <sub>C</sub> =30mA; I <sub>B</sub> =0	45			V
		BD241A		60			
		BD241B		80			
		BD241C		100			
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =3A; I <sub>B</sub> =0.6 A			1.2	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =3A ; V <sub>CE</sub> =4V			1.8	V
I <sub>CEO</sub>	Collector cut-off current	BD241/A	V <sub>CE</sub> =30V; I <sub>B</sub> =0			0.3	mA
		BD241B/C	V <sub>CE</sub> =60V; I <sub>B</sub> =0				
I <sub>CES</sub>	Collector cut-off current	BD241	V <sub>CE</sub> =45V; V <sub>BE</sub> =0			0.2	mA
		BD241A	V <sub>CE</sub> =60V; V <sub>BE</sub> =0				
		BD241B	V <sub>CE</sub> =80V; V <sub>BE</sub> =0				
		BD241C	V <sub>CE</sub> =100V; V <sub>BE</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	25			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =3A ; V <sub>CE</sub> =4V	10			

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PACKAGE OUTLINE

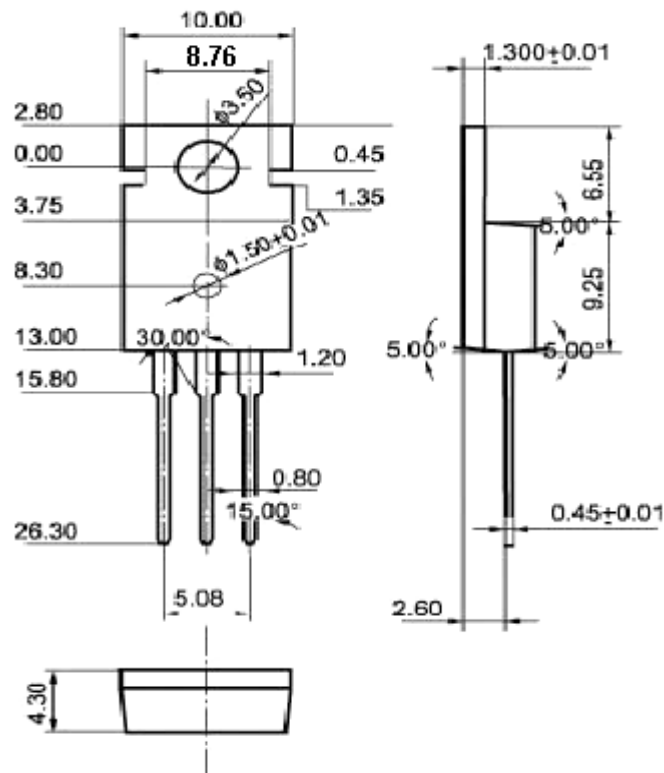


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)