

**Silicon PNP Power Transistors**

**BD246/A/B/C**

**DESCRIPTION**

- With TO-3PN package
- Complement to type BD245/A/B/C

**APPLICATIONS**

- For use in medium power linear and switching applications

**PINNING**

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

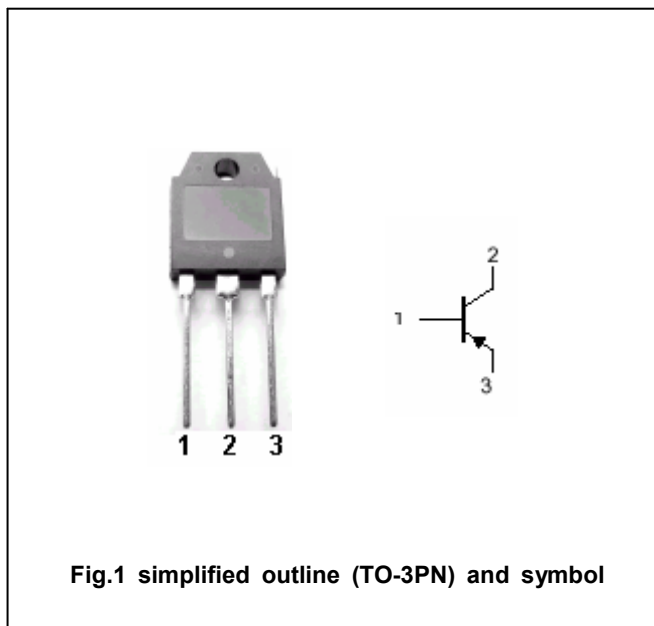


Fig.1 simplified outline (TO-3PN) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
V <sub>CBO</sub>	Collector-base voltage	BD246	-55	V	
		BD246A	-70		
		BD246B	-90		
		BD246C	-115		
V <sub>CEO</sub>	Collector-emitter voltage	Open base	BD246	-45	V
			BD246A	-60	
			BD246B	-80	
			BD246C	-100	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V	
I <sub>C</sub>	Collector current		-10	A	
I <sub>CM</sub>	Collector current-peak		-15	A	
I <sub>B</sub>	Base current		-3	A	
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25□	80	W	
T <sub>j</sub>	Junction temperature		-65~150	□	
T <sub>stg</sub>	Storage temperature		-65~150	□	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	1.56	□/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO</sub>	Collector-emitter breakdown voltage	BD246	I <sub>C</sub> =30mA ; I <sub>B</sub> =0	-45			V
		BD246A		-60			
		BD246B		-80			
		BD246C		-100			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-3A ; I <sub>B</sub> =-0.3A			-1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-10A ; I <sub>B</sub> =-2.5A			-4.0	V
V <sub>BE-1</sub>	Base-emitter on voltage		I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V			-1.6	V
V <sub>BE-2</sub>	Base-emitter on voltage		I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V			-3.0	V
I <sub>CEO</sub>	Collector cut-off current	BD246/246A	V <sub>CE</sub> =-30V ; I <sub>B</sub> =0			-0.7	mA
		BD246B/246C	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	40			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V	20			
h <sub>FE-3</sub>	DC current gain		I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V	4			
Switching times							
t <sub>on</sub>	Turn-on time		I <sub>C</sub> =-1A ; I <sub>B1</sub> =-I <sub>B2</sub> =-0.1A R <sub>L</sub> =20Ω		0.2		μs
t <sub>off</sub>	Turn-off time				0.8		μs

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PACKAGE OUTLINE

