

Silicon NPN Power Transistors

BD249/A/B/C

DESCRIPTION

- With TO-3PN package
- Complement to type BD250/A/B/C
- 125 W at 25°C case temperature
- 25 A continuous collector current

PINNING

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

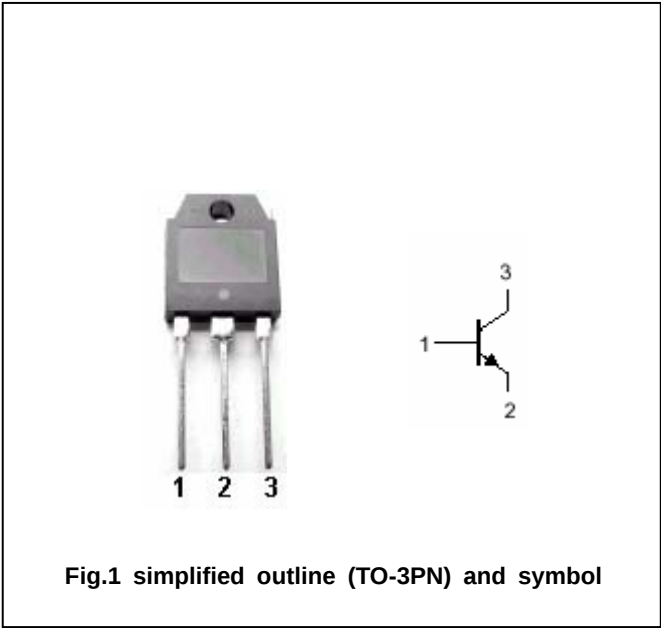


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V _{CEO}	Collector-emitter voltage	BD249	Open base	45	V
		BD249A		60	
		BD249B		80	
		BD249C		100	
V _{CBO}	Collector-base voltage	BD249	Open base	55	V
		BD249A		70	
		BD249B		90	
		BD249C		115	
V _{EBO}	Emitter-base voltage		Open collector	5	V
I _C	Collector current			25	A
I _{CM}	Collector current-peak			40	A
I _B	Base current			5	A
P _C	Collector power dissipation		T _C =25	125	W
T _j	Junction temperature			-65~150	
T _{stg}	Storage temperature			-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{th j-c}	Thermal resistance junction to case	1.0	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	BD249	I _C =30mA ; I _B =0	45			V
		BD249A		60			
		BD249B		80			
		BD249C		100			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =15A ; I _B =1.5A			1.8	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =25A ; I _B =5A			4	V
V _{BE-1}	Base-emitter on voltage		I _C =15A ; V _{CE} =4V			2	V
V _{BE-2}	Base-emitter on voltage		I _C =25A ; V _{CE} =4V			4	V
I _{CEO}	Collector cut-off current	BD249/249A	V _{CE} =30V ; I _B =0			1	mA
		BD249B/249C	V _{CE} =60V ; I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V ; I _C =0			1	mA
h _{FE-1}	DC current gain		I _C =1.5A ; V _{CE} =4V	25			
h _{FE-2}	DC current gain		I _C =15A ; V _{CE} =4V	10			
h _{FE-3}	DC current gain		I _C =25A ; V _{CE} =4V	5			

Switching times

t _{on}	Turn-on time	I _C =1A; I _{B1} =-I _{B2} =0.5A R _L =5Ω		0.3		μs
t _{off}	Turn-off time			0.9		μs

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Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)