

Silicon PNP Power Transistors

BD250/A/B/C

DESCRIPTION

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- With TO-3PN package
- Complement to type BD249/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

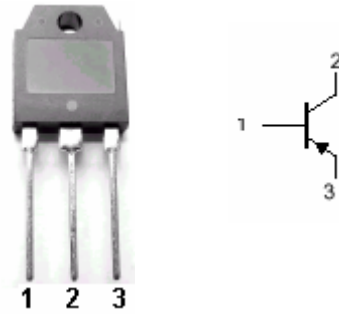


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD246	-55	V
		BD246A	-70	
		BD246B	-90	
		BD246C	-115	
V_{CEO}	Collector-emitter voltage	BD246	-45	V
		BD246A	-60	
		BD246B	-80	
		BD246C	-100	
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	$T_C = 25 \square$	125	W
T_j	Junction temperature		-65~150	\square
T_{stg}	Storage temperature		-65~150	\square

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1	\square/W

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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	BD250	$I_C=-30\text{mA}; I_B=0$	-45			V
		BD250A		-60			
		BD250B		-80			
		BD250C		-100			
$V_{CEsat-1}$	Collector-emitter saturation voltage		$I_C=-15\text{A}; I_B=-1.5\text{A}$			-1.8	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		$I_C=-25\text{A}; I_B=-5\text{A}$			-4.0	V
V_{BE-1}	Base-emitter on voltage		$I_C=-15\text{A}; V_{CE}=-4\text{V}$			-1.6	V
V_{BE-2}	Base-emitter on voltage		$I_C=-25\text{A}; V_{CE}=-4\text{V}$			-3.0	V
I_{CEO}	Collector cut-off current	BD250/250A	$V_{CE}=-30\text{V}; I_B=0$			-1.0	mA
		BD250B/250C	$V_{CE}=-60\text{V}; I_B=0$				
I_{EBO}	Emitter cut-off current		$V_{EB}=-5\text{V}; I_C=0$			-1.0	mA
h_{FE-1}	DC current gain		$I_C=-1.5\text{A}; V_{CE}=-4\text{V}$	25			
h_{FE-2}	DC current gain		$I_C=-15\text{A}; V_{CE}=-4\text{V}$	10			
h_{FE-3}	DC current gain		$I_C=-25\text{A}; V_{CE}=-4\text{V}$	5			
Switching times							
t_{on}	Turn-on time		$I_C=-5\text{A}; I_{B1}=-I_{B2}=-0.5\text{A}; R_L=5\Omega$		0.2		μs
t_{off}	Turn-off time				0.4		μs

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PACKAGE OUTLINE

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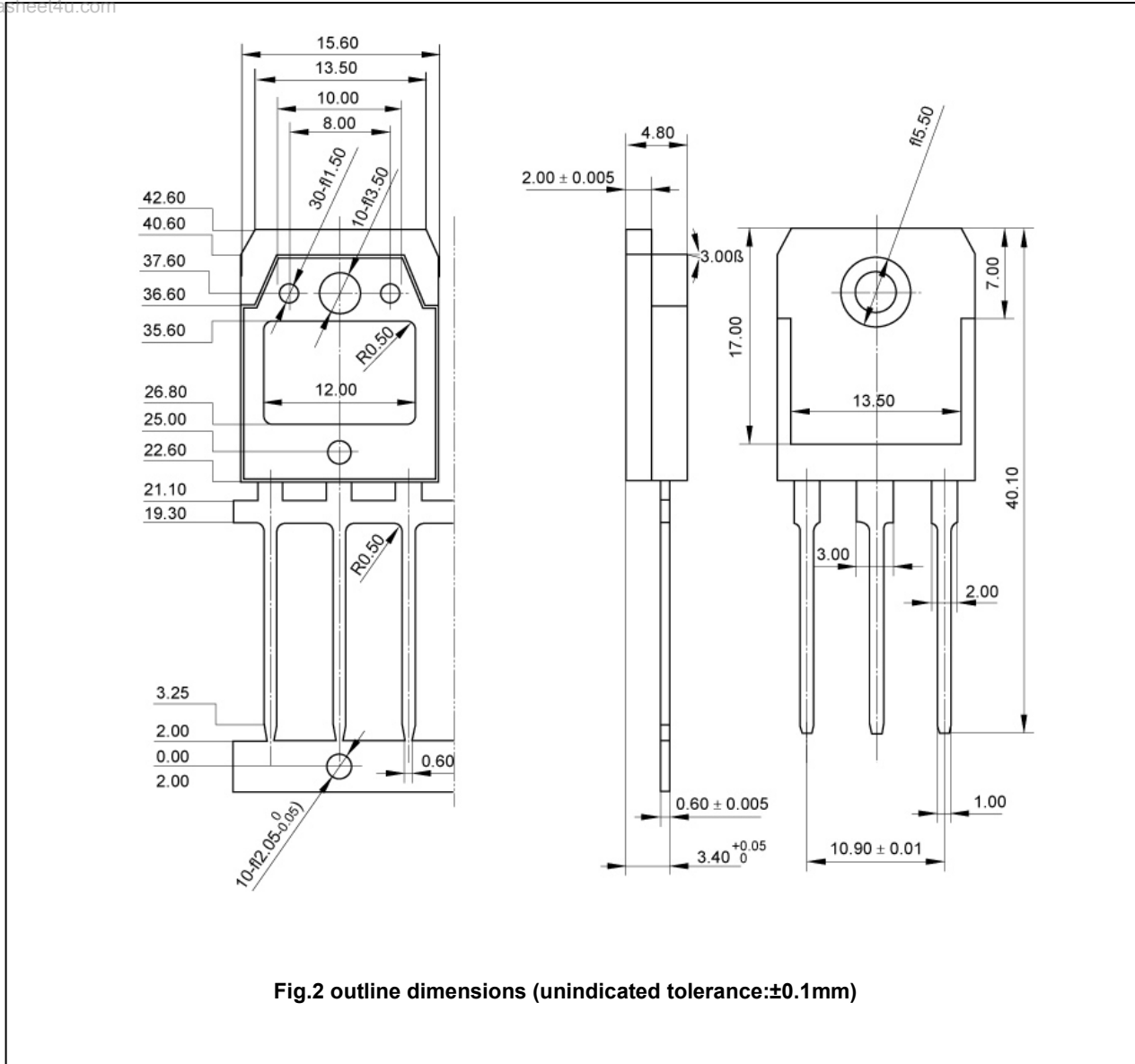


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)