

## Silicon PNP Power Transistors

## BD246/A/B/C

## DESCRIPTION

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- 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

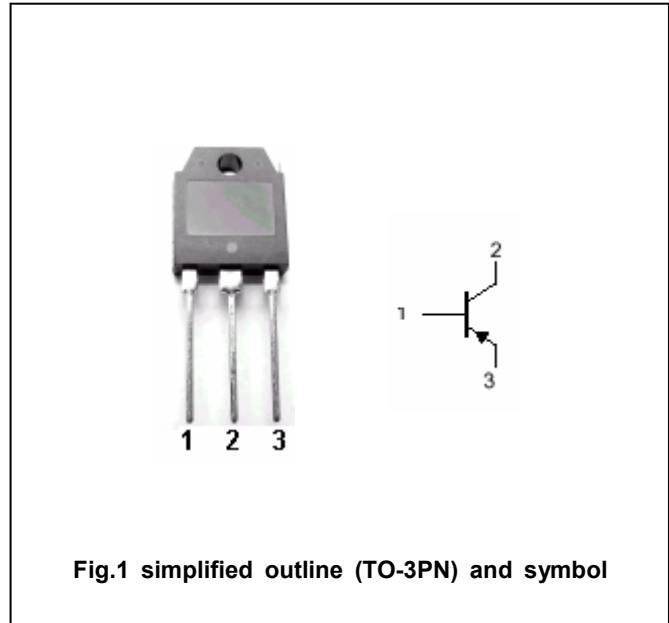


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings( $T_a = \square$ )

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		-10	A
$I_{CM}$	Collector current-peak		-15	A
$I_B$	Base current		-3	A
$P_C$	Collector power dissipation	$T_C = 25 \square$	80	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	1.56	$\square/W$

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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
$V_{CE0}$	Collector-emitter breakdown voltage	BD246	$I_C=30\text{mA}; I_B=0$	-45			V
		BD246A		-60			
		BD246B		-80			
		BD246C		-100			
$V_{CEsat-1}$	Collector-emitter saturation voltage		$I_C=-3\text{A}; I_B=-0.3\text{A}$			-1.0	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		$I_C=-10\text{A}; I_B=-2.5\text{A}$			-4.0	V
$V_{BE-1}$	Base-emitter on voltage		$I_C=-3\text{A}; V_{CE}=-4\text{V}$			-1.6	V
$V_{BE-2}$	Base-emitter on voltage		$I_C=-10\text{A}; V_{CE}=-4\text{V}$			-3.0	V
$I_{CEO}$	Collector cut-off current	BD246/246A	$V_{CE}=-30\text{V}; I_B=0$			-0.7	mA
		BD246B/246C	$V_{CE}=-60\text{V}; I_B=0$				
$I_{EBO}$	Emitter cut-off current		$V_{EB}=-5\text{V}; I_C=0$			-1	mA
$h_{FE-1}$	DC current gain		$I_C=-1\text{A}; V_{CE}=-4\text{V}$	40			
$h_{FE-2}$	DC current gain		$I_C=-3\text{A}; V_{CE}=-4\text{V}$	20			
$h_{FE-3}$	DC current gain		$I_C=-10\text{A}; V_{CE}=-4\text{V}$	4			

## Switching times

$t_{on}$	Turn-on time	$I_C=-1\text{A}; I_{B1}=-I_{B2}=-0.1\text{A}$ $R_L=20\Omega$		0.2		$\mu\text{s}$
$t_{off}$	Turn-off time			0.8		$\mu\text{s}$

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PACKAGE OUTLINE

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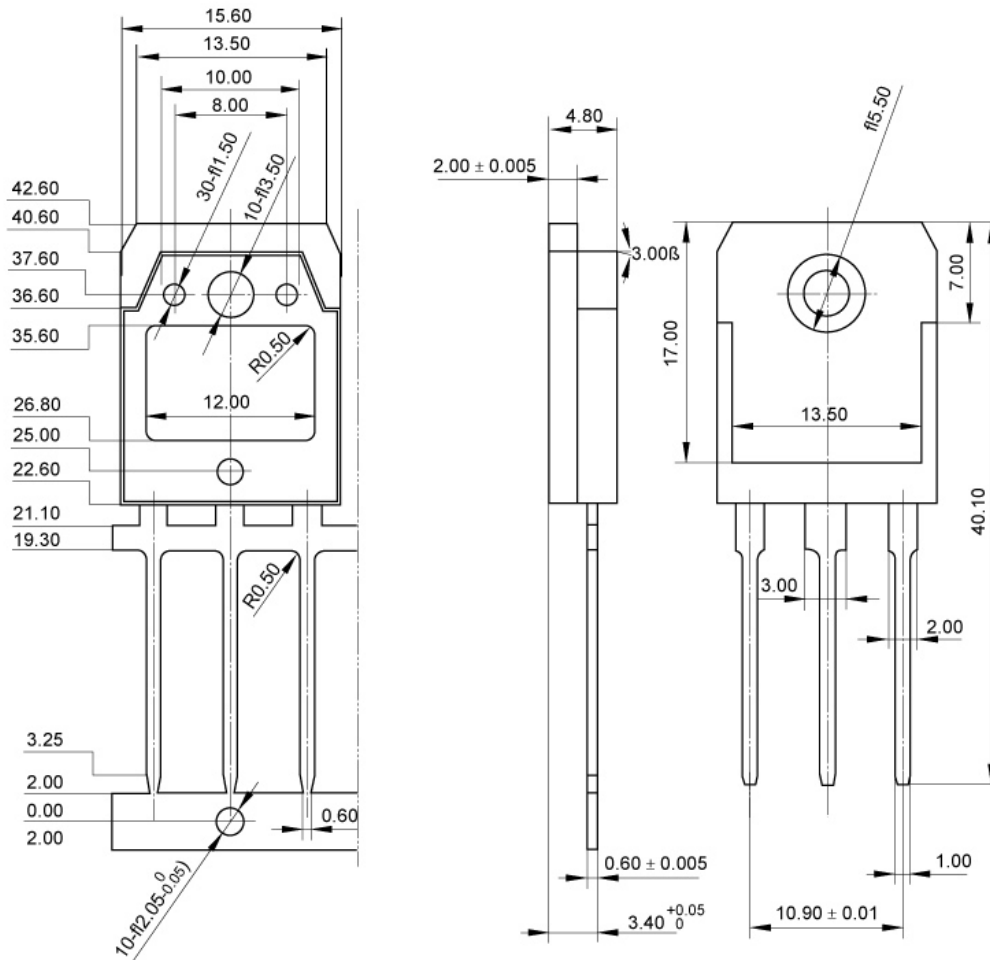


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)