

## Silicon PNP Power Transistors

## BDW47

## DESCRIPTION

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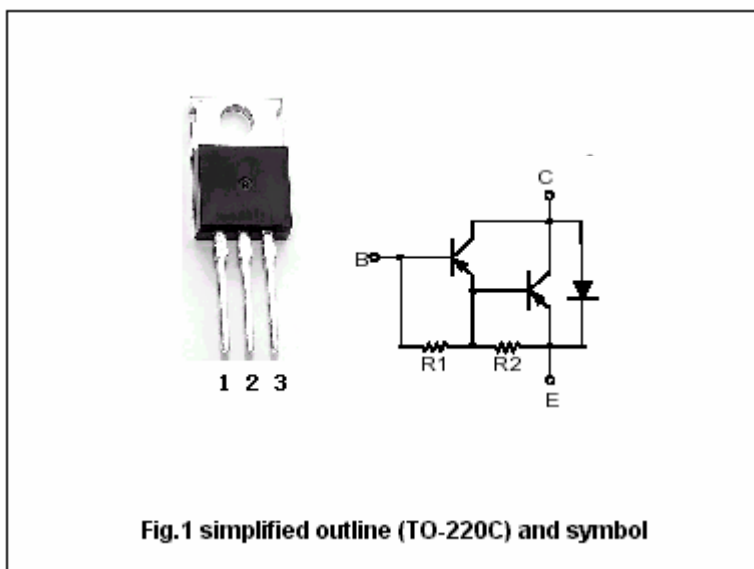
- With TO-220C package
- Complement to type BDW42
- DARLINGTON
- High DC current gain
- Low collector saturation voltage

## APPLICATIONS

- For general purpose and low speed switching applications

## PINNING

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

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-100	V
$V_{CEO}$	Collector-emitter voltage	Open base	-100	V
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current-DC		-15	A
$I_B$	Base current		-0.5	A
$P_D$	Total power dissipation	$T_C=25^\circ\text{C}$	85	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.47	$^\circ\text{C/W}$

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## CHARACTERISTICS

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

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =-30mA, I <sub>B</sub> =0	-100			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A, I <sub>B</sub> =-10mA			-2.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-10A, I <sub>B</sub> =-50mA			-3.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V			-3.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-100V, I <sub>E</sub> =0			-1.0	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =-50V, I <sub>B</sub> =0			-2.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-2.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-5A ; V <sub>CE</sub> =-4V	1000			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V	250			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-3V;f=1MHz	4.0			MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V;f=0.1MHz			300	pF

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## PACKAGE OUTLINE

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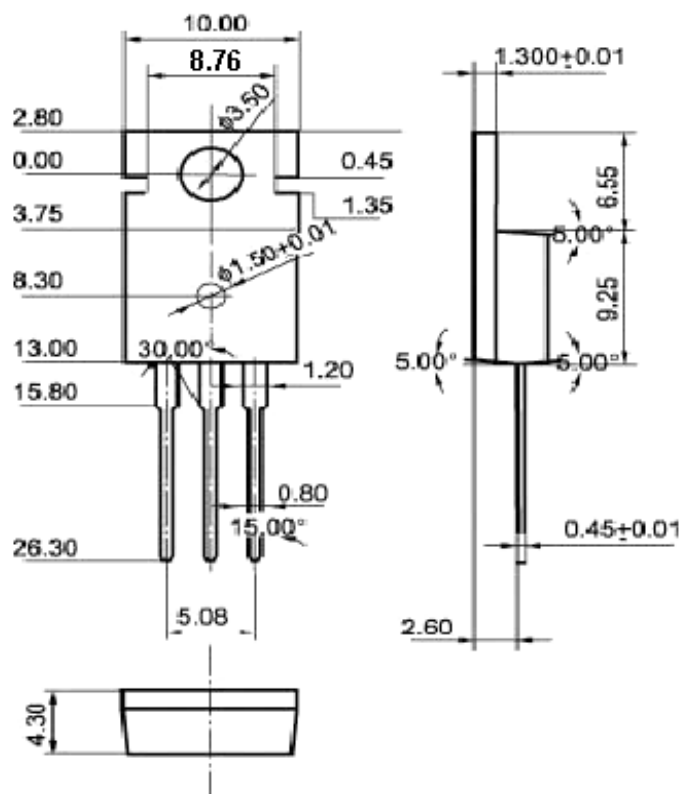


Fig.2 Outline dimensions