

**Silicon PNP Power Transistors**

**BD896/898/900/902**

**DESCRIPTION**

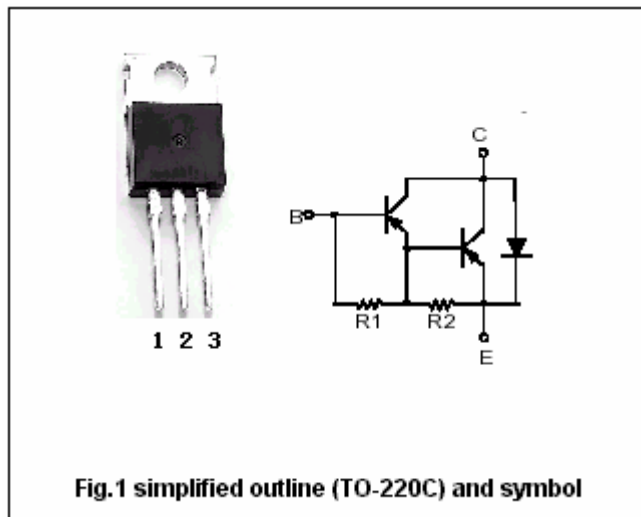
- With TO-220C package
- Complement to type BD895/897/899/901
- DARLINGTON

**APPLICATIONS**

- For use in output stages in audio equipment, general amplifier, and analogue switching applications

**PINNING**

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



**Fig.1 simplified outline (TO-220C) and symbol**

**Absolute maximum ratings(T<sub>a</sub>=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
V <sub>CBO</sub>	Collector-base voltage	Open emitter	BD896	-45	V
			BD898	-60	
			BD900	-80	
			BD902	-100	
V <sub>CEO</sub>	Collector-emitter voltage	Open base	BD896	-45	V
			BD898	-60	
			BD900	-80	
			BD902	-100	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V	
I <sub>C</sub>	Collector current-DC		-8	A	
I <sub>B</sub>	Base current		-300	mA	
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25	70	W	
		T <sub>a</sub> =25	2		
T <sub>j</sub>	Junction temperature		150		
T <sub>stg</sub>	Storage temperature		-65~150		

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	BD896	I <sub>C</sub> =-100mA, I <sub>B</sub> =0	-45			V
		BD898		-60			
		BD900		-80			
		BD902		-100			
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-3A, I <sub>B</sub> =-12mA			-2.5	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =-3A; V <sub>CE</sub> =-3V			-2.5	V
I <sub>CBO</sub>	Collector cut-off current	BD896	V <sub>CB</sub> =-45V, I <sub>E</sub> =0 T <sub>C</sub> =100			-0.2 -2.0	mA
		BD898	V <sub>CB</sub> =-60V, I <sub>E</sub> =0 T <sub>C</sub> =100			-0.2 -2.0	
		BD900	V <sub>CB</sub> =-80V, I <sub>E</sub> =0 T <sub>C</sub> =100			-0.2 -2.0	
		BD902	V <sub>CB</sub> =-100V, I <sub>E</sub> =0 T <sub>C</sub> =100			-0.2 -2.0	
I <sub>CEO</sub>	Collector cut-off current	BD896	V <sub>CE</sub> =-30V, I <sub>B</sub> =0			-0.5	mA
		BD898	V <sub>CE</sub> =-30V, I <sub>B</sub> =0				
		BD900	V <sub>CE</sub> =-40V, I <sub>B</sub> =0				
		BD902	V <sub>CE</sub> =-50V, I <sub>B</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-2	mA
h <sub>FE</sub>	DC current gain		I <sub>C</sub> =-3A; V <sub>CE</sub> =-3V	750			
V <sub>EC</sub>	Diode forward voltage		I <sub>E</sub> =-8A			-3.5	V
ton	Turn-on time		I <sub>C</sub> =-3A; I <sub>B1</sub> =-I <sub>B2</sub> =-12mA V <sub>BE</sub> =3.5V; R <sub>L</sub> =10Ω; t <sub>p</sub> =20μs		1		μs
toff	Turn-off time				5		μs

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	1.79	/W

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PACKAGE OUTLINE

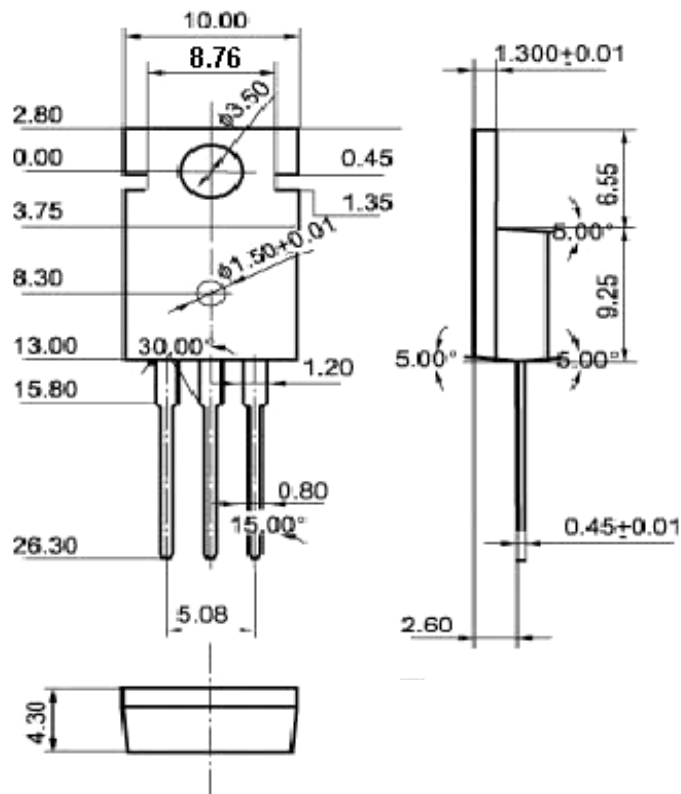


Fig.2 Outline dimensions