

**Silicon NPN Power Transistors**

**BD895/897/899/901**

**DESCRIPTION**

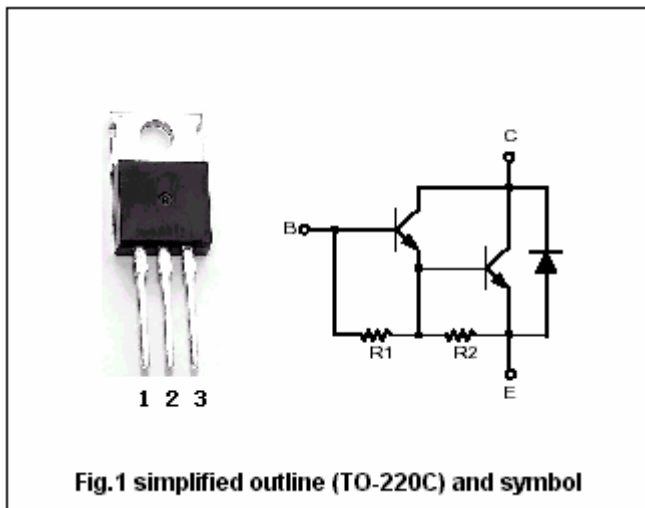
- With TO-220C package
- Complement to type BD896/898/900/902
- DARLINGTON

**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



**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
V <sub>CBO</sub>	Collector-base voltage	Open emitter	BD895	45	V
			BD897	60	
			BD899	80	
			BD901	100	
V <sub>CEO</sub>	Collector-emitter voltage	Open base	BD895	45	V
			BD897	60	
			BD899	80	
			BD901	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°C	70	W	
		T <sub>a</sub> =25°C	2		
T <sub>j</sub>	Junction temperature		150	°C	
T <sub>stg</sub>	Storage temperature		-65~150	°C	

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## BD895/897/899/901

## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	BD895	I <sub>C</sub> =100mA, I <sub>B</sub> =0	45			V
		BD897		60			
		BD899		80			
		BD901		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	BD895	V <sub>CB</sub> =45V, I <sub>E</sub> =0 T <sub>C</sub> =100 °C			0.2 2.0	mA
		BD897	V <sub>CB</sub> =60V, I <sub>E</sub> =0 T <sub>C</sub> =100 °C			0.2 2.0	
		BD899	V <sub>CB</sub> =80V, I <sub>E</sub> =0 T <sub>C</sub> =100 °C			0.2 2.0	
		BD901	V <sub>CB</sub> =100V, I <sub>E</sub> =0 T <sub>C</sub> =100 °C			0.2 2.0	
I <sub>CEO</sub>	Collector cut-off current	BD895	V <sub>CE</sub> =30V, I <sub>B</sub> =0			0.5	mA
		BD897	V <sub>CE</sub> =30V, I <sub>B</sub> =0				
		BD899	V <sub>CE</sub> =40V, I <sub>B</sub> =0				
		BD901	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
t <sub>on</sub>	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
t <sub>off</sub>	Turn-off time				5		μs

## THERMAL CHARACTERISTICS

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

PACKAGE OUTLINE

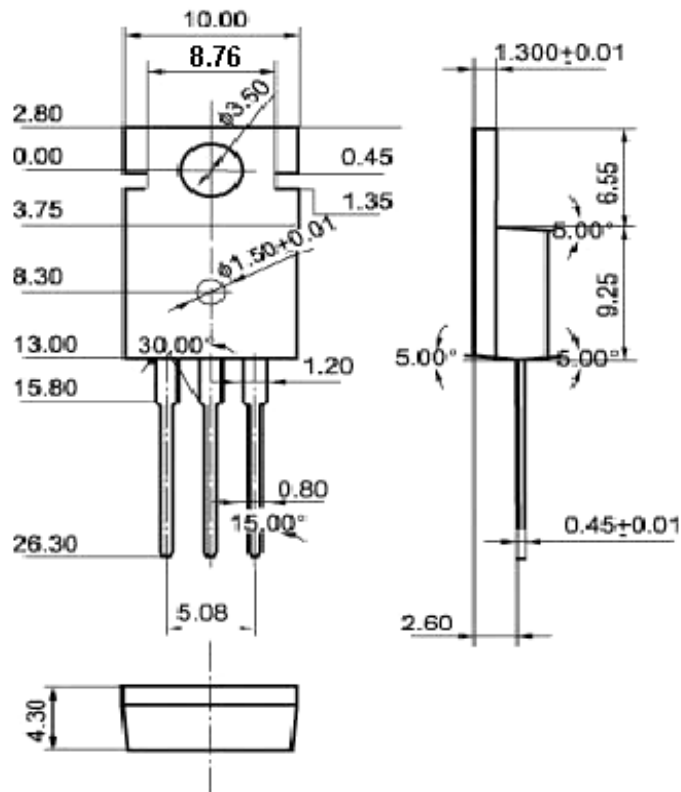


Fig.2 Outline dimensions