

Silicon PNP Power Transistors

BD896/898/900/902

DESCRIPTION

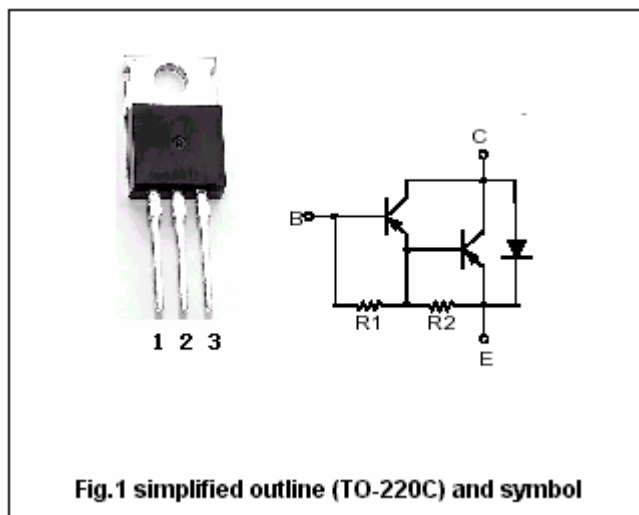
- With TO-220C package
- Complement to type BD895/897/899/901
- DARLINGTON

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

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD896	Open emitter	-45	V
		BD898		-60	
		BD900		-80	
		BD902		-100	
V_{CEO}	Collector-emitter voltage	BD896	Open base	-45	V
		BD898		-60	
		BD900		-80	
		BD902		-100	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current-DC			-8	A
I_B	Base current			-300	mA
P_T	Total power dissipation		$T_C=25^\circ\text{C}$	70	W
			$T_a=25^\circ\text{C}$	2	
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	BD896	$I_C=-100mA, I_B=0$	-45			V
		BD898		-60			
		BD900		-80			
		BD902		-100			
V_{CEsat}	Collector-emitter saturation voltage		$I_C=-3A, I_B=-12mA$			-2.5	V
V_{BE}	Base-emitter on voltage		$I_C=-3A; V_{CE}=-3V$			-2.5	V
I_{CBO}	Collector cut-off current	BD896	$V_{CB}=-45V, I_E=0$ $T_C=100^{\circ}\square$			-0.2 -2.0	mA
		BD898	$V_{CB}=-60V, I_E=0$ $T_C=100^{\circ}\square$			-0.2 -2.0	
		BD900	$V_{CB}=-80V, I_E=0$ $T_C=100^{\circ}\square$			-0.2 -2.0	
		BD902	$V_{CB}=-100V, I_E=0$ $T_C=100^{\circ}\square$			-0.2 -2.0	
I_{CEO}	Collector cut-off current	BD896	$V_{CE}=-30V, I_B=0$			-0.5	mA
		BD898	$V_{CE}=-30V, I_B=0$				
		BD900	$V_{CE}=-40V, I_B=0$				
		BD902	$V_{CE}=-50V, I_B=0$				
I_{EBO}	Emitter cut-off current		$V_{EB}=-5V; I_C=0$			-2	mA
h_{FE}	DC current gain		$I_C=-3A; V_{CE}=-3V$	750			
V_{EC}	Diode forward voltage		$I_E=-8A$			-3.5	V
t_{on}	Turn-on time		$I_C=-3A; I_{B1}=-I_{B2}=-12mA$ $V_{BE}=3.5V; R_L=10\Omega; t_p=20\mu s$		1		μs
t_{off}	Turn-off time				5		μs

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	1.79	°C/W

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PACKAGE OUTLINE

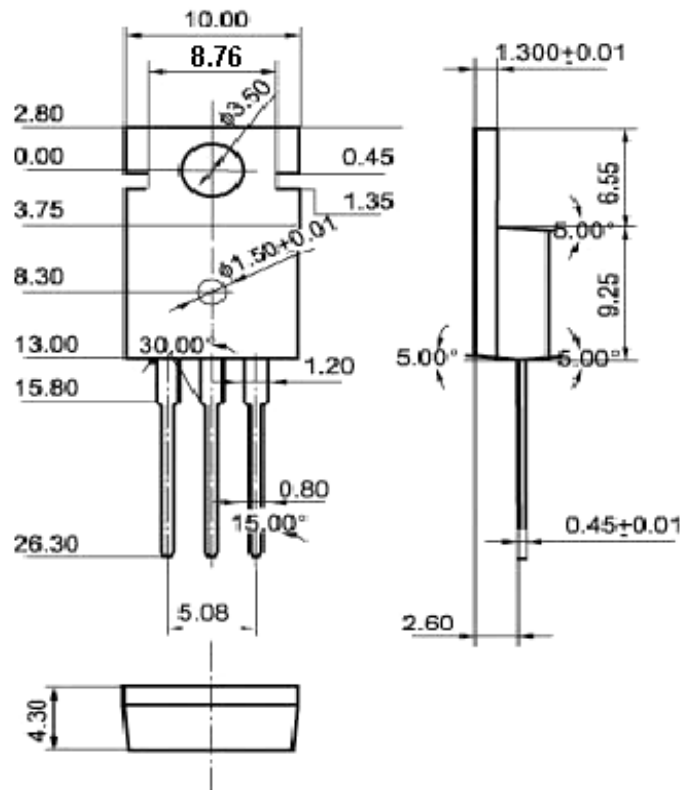
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Fig.2 Outline dimensions