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January 2005

**BDW94/C PNP Epitaxial Silicon Transistor** 

## FAIRCHILD SEMICONDUCTOR®

## BDW94/C **PNP Epitaxial Silicon Transistor**

## **Power Linear and Switching Application**

- Power Darlington TR
- Complement to BDW93 and BDW93C Respectively



1.Base 2.Collector 3.Emitter

### Absolute Maximum Ratings T<sub>a</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage		
020	: BDW94	-45	V
	: BDW94C	-100	V
V <sub>CEO</sub>	Collector-Emitter Voltage		
010	: BDW94	-45	V
	: BDW94C	-100	V
I <sub>C</sub>	Collector Current (DC)	-12	A
I <sub>CP</sub>	Collector Current (Pulse) *	-15	A
I <sub>B</sub>	Base Current	-0.2	A
P <sub>C</sub>	Collector Dissipation ( $T_C = 25^{\circ}C$ )	80	W
Т <sub>Ј</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-65 ~ 150	°C

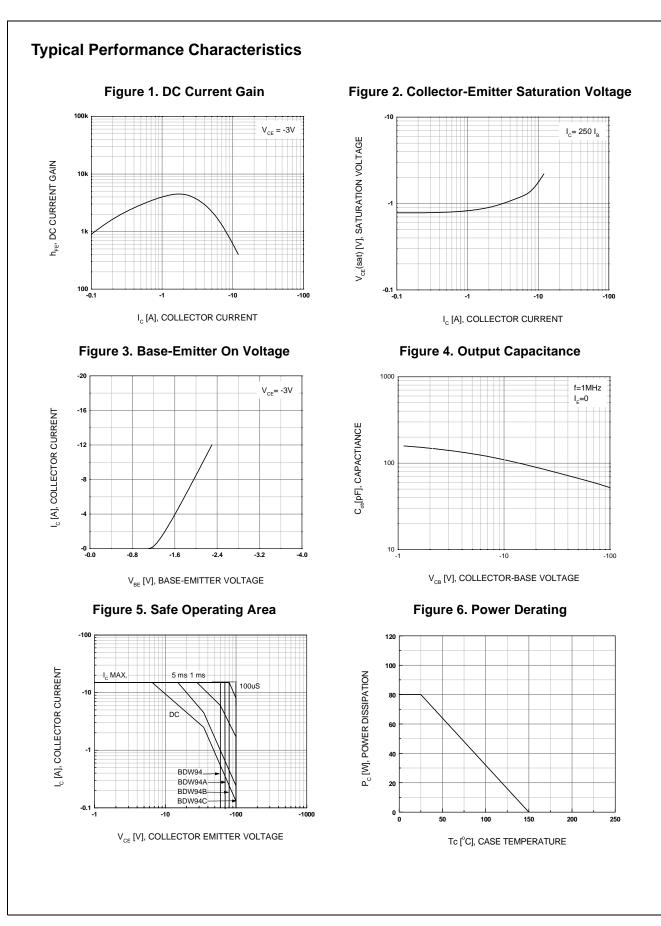
**BDW94/C PNP Epitaxial Silicon Transistor** 

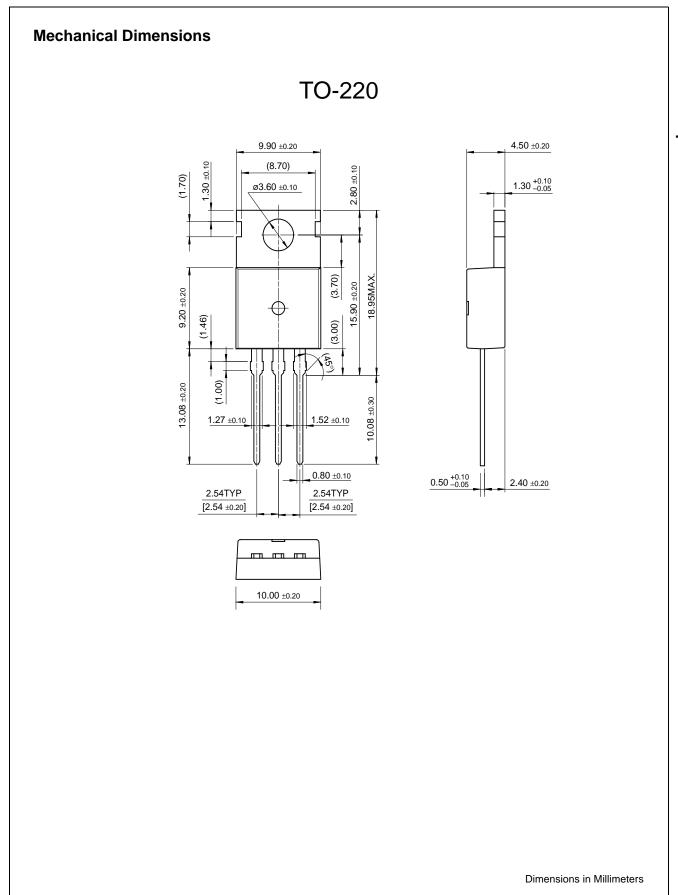
Symbol	Parameter	Conditions	Min.	Тур.	Max	Units
V <sub>CEO(sus)</sub>	Collector-Emitter Sustaining Voltag : BDW94 : BDW94	$I_{\rm C} = -100 {\rm mA},  I_{\rm B} = 0$	-45 -100			V V
I <sub>CBO</sub>	Collector Cut-off Current : BDW94 : BDW94	10B 11, 1E 1			-100 -100	μΑ μΑ
I <sub>CEO</sub>	Collector Cut-off Current : BDW94 : BDW94	- ED , D			-1 -1	mA mA
I <sub>EBO</sub>	Emitter Cut-off Current	$V_{EB} = -5V, I_{C} = 0$			-2	mA
h <sub>FE</sub>	DC Current Gain *	$V_{CE} = -3V, I_C = -3A$ $V_{CE} = -3V, I_C = -5A$ $V_{CE} = -3V, I_C = -10A$	1000 750 100		20000	
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	$e^*$ $I_C = -5A, I_B = -20mA$ $I_C = -10A, I_B = -100mA$			-2 -3	V V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage *	$I_{C} = -5A, I_{B} = -20mA$ $I_{C} = -10A, I_{B} = -100mA$			-2.5 -4	V V
V <sub>F</sub>	Parallel Diode Forward Voltage *	I <sub>F</sub> = -5A I <sub>F</sub> = -10A		-1.3 -1.8	-2 -4	V V

## Electrical Characteristics T<sub>C</sub> = 25°C unless otherwise noted

 $^{\star}$  Pulse Test: PW = 300 $\mu s,$  Duty Cycle = 1.5% Pulsed







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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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