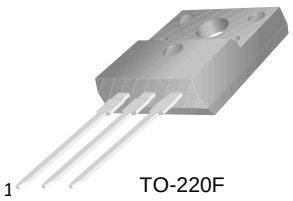
FAIRCHILD SEMICONDUCTOR™

BDW93CF

Hammer Drivers, Audio Amplifiers Applications

- Power Darlington TR
- Complement to BDW94CF respectively



1

TO-220F

1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
I_C	Collector Current (DC)	12	A
I_{CP}	*Collector Current (Pulse)	15	A
I_B	Base Current	0.2	A
P_C	Collector Dissipation (T_C=25°C)	30	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 65 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}(sus)	* Collector-Emitter Sustaining Voltage	I_C = 100mA, I_B = 0	100			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 100V, I_E = 0			100	μA
I_{CEO}	Collector Cut-off Current	V_{CE} = 100V, I_B = 0			1	mA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, I_C = 0			2	mA
h_{FE}	* 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_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = 5A, I_B = 20mA I_C = 10A, I_B = 100mA			2 3	V V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C = 5A, I_B = 20mA I_C = 10A, I_B = 100mA			2.5 4	V V
V_F	* Parallel Diode Forward Voltage	I_F = 5A I_F = 10A		1.3 1.8	2 4	V V

* Pulse Test: PW=300μs, duty Cycle =1.5% Pulsed

Typical characteristics

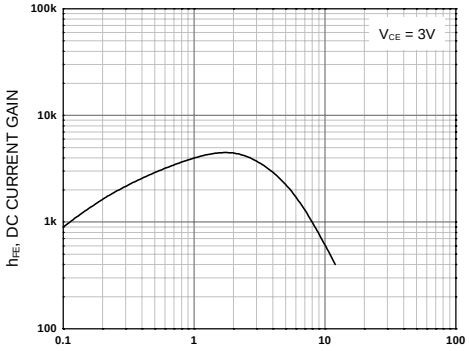


Figure 1. DC Current Gain

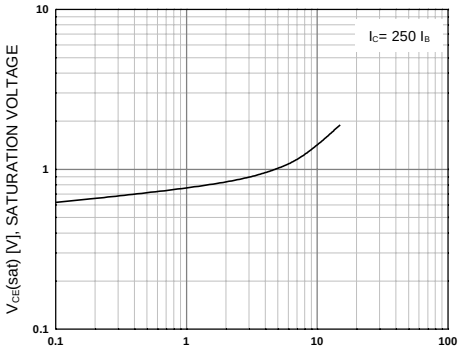


Figure 2. Collector-Emitter Saturation Voltage

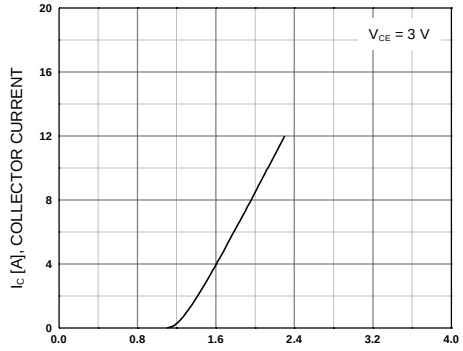


Figure 3. Base-Emitter On Voltage

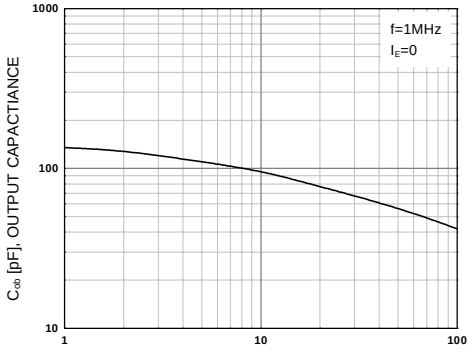


Figure 4. Collector Output Capacitance

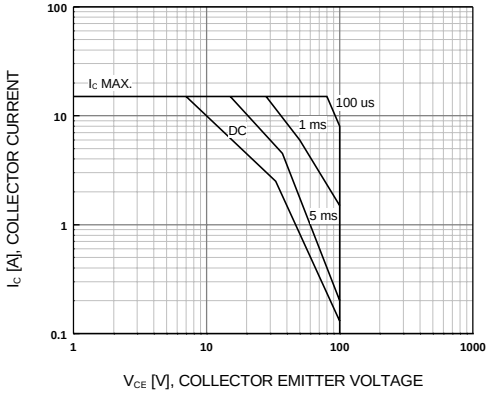


Figure 5. Safe Operating Area

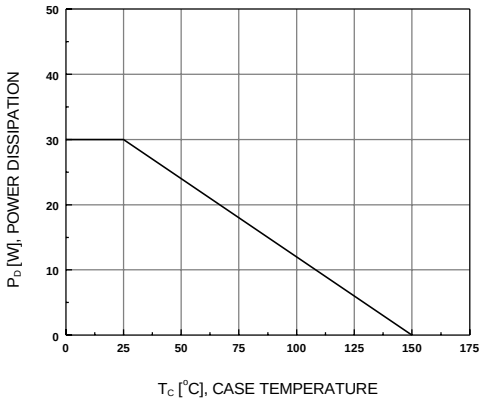
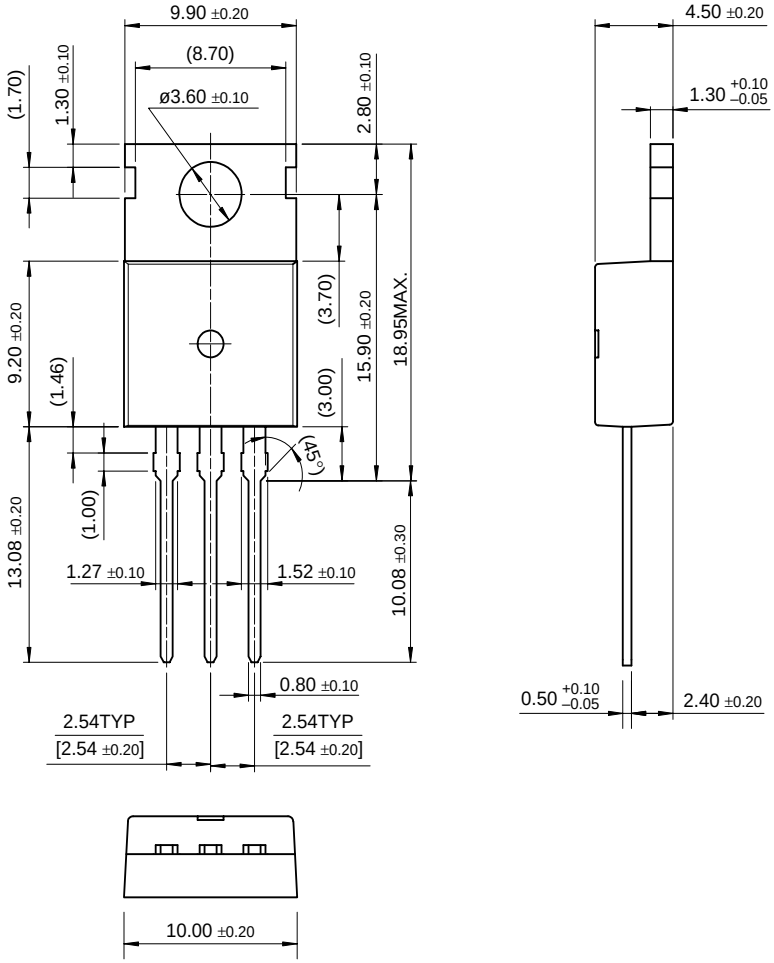


Figure 6. Power Derating

Package Demensions

TO-220



Dimensions in Millimeters

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