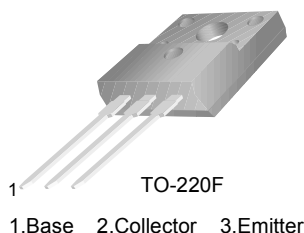


BDW94CF

PNP Epitaxial Silicon Transistor

Power Linear and Switching Application

- Power Darlington TR
- Complement to BDW93CF Respectively



Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ 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 ($T_C = 25^\circ\text{C}$)	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-65 ~ 150	$^\circ\text{C}$

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max	Units
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage	$I_C = -100\text{mA}$, $I_B = 0$	-100			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -100\text{V}$, $I_E = 0$			-100	μA
I_{CEO}	Collector Cut-off Current	$V_{VCE} = -100\text{V}$, $I_B = 0$			-1	mA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -5\text{V}$, $I_C = 0$			-2	mA
h_{FE}	DC Current Gain *	$V_{CE} = -3\text{V}$, $I_C = -3\text{A}$ $V_{CE} = -3\text{V}$, $I_C = -5\text{A}$ $V_{CE} = -3\text{V}$, $I_C = -10\text{A}$	1000 750 100		20000	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage *	$I_C = -5\text{A}$, $I_B = -20\text{mA}$ $I_C = -10\text{A}$, $I_B = -100\text{mA}$			-2 -3	V V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage *	$I_C = -5\text{A}$, $I_B = -20\text{mA}$ $I_C = -10\text{A}$, $I_B = -100\text{mA}$			-2.5 -4	V V
V_F	Parallel Diode Forward Voltage *	$I_F = -5\text{A}$ $I_F = -10\text{A}$		-1.3 -1.8	-2 -4	V V

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

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
BDW94CF	BDW94CF	TO-220F	-	-	50

Typical Performance Characteristics

Figure 1. DC Current Gain

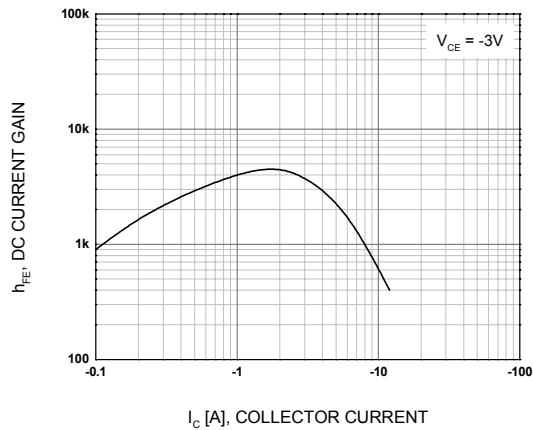


Figure 2. Collector-Emitter Saturation Voltage

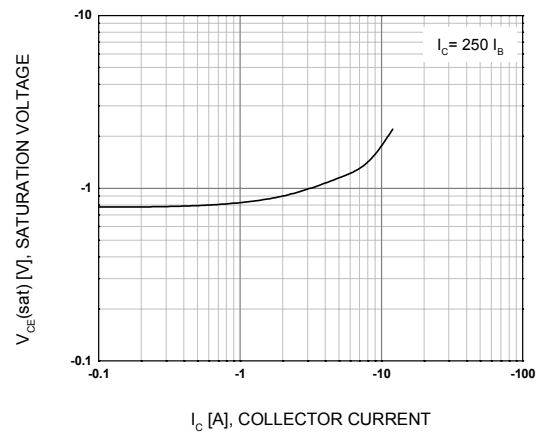


Figure 3. Base-Emitter On Voltage

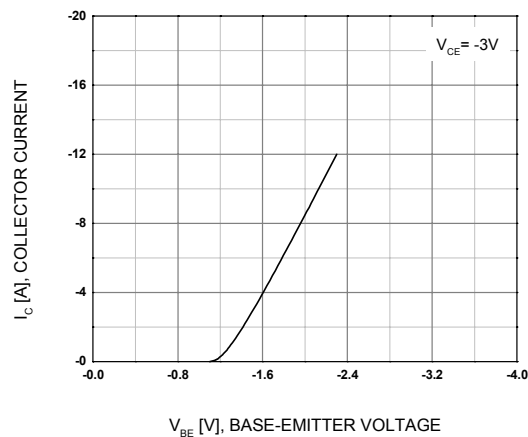
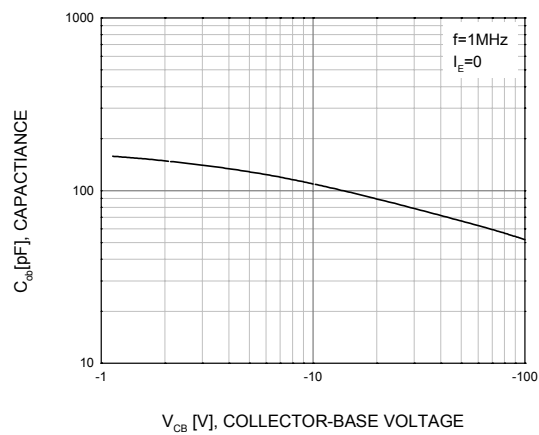
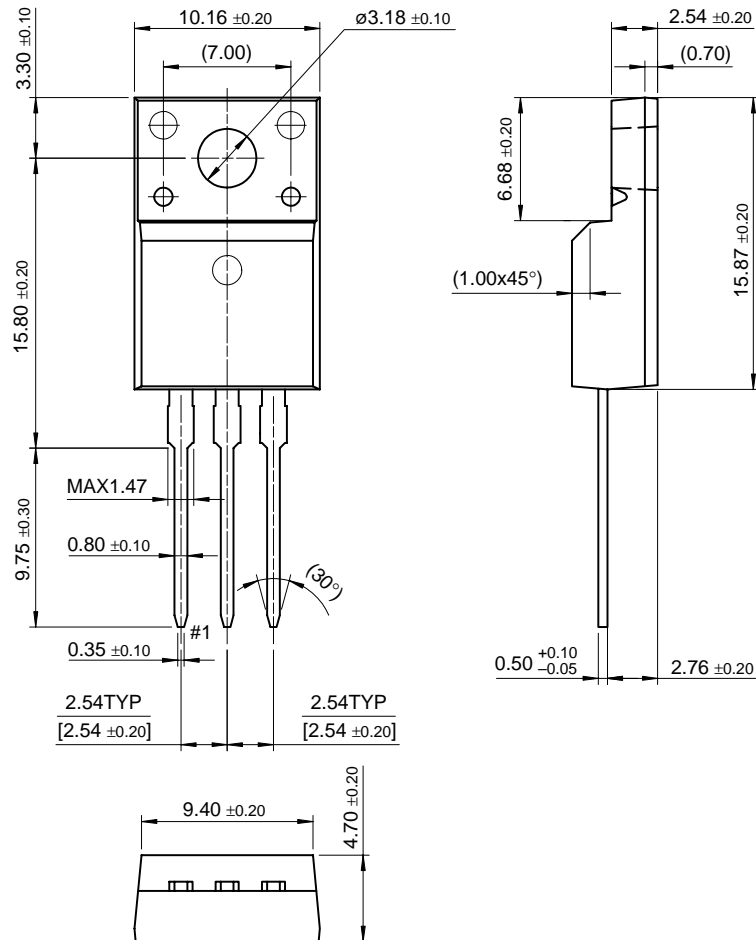


Figure 4. Output Capacitance



Mechanical Dimensions

TO-220F



Dimensions in Millimeters

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