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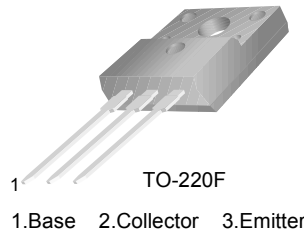
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BDW94CF

PNP Epitaxial Silicon Transistor

Power Linear and Switching Application

- Power Darlington TR
- Complement to BDW93CF Respectively



Absolute Maximum Ratings T_a = 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 | Conditions | Min. | Typ. | Max | Units |
|-----------------------|--|--|--------------------|--------------|------------|--------|
| V _{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

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

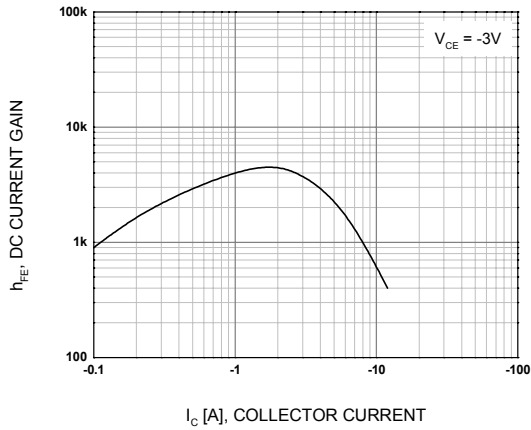


Figure 2. Collector-Emitter Saturation Voltage

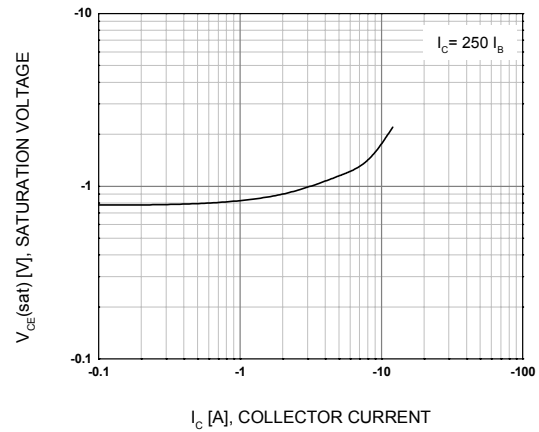


Figure 3. Base-Emitter On Voltage

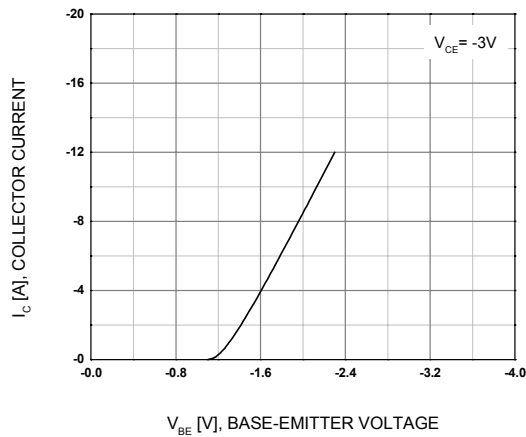
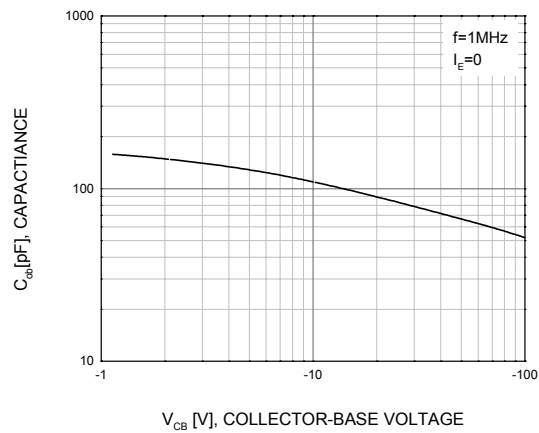
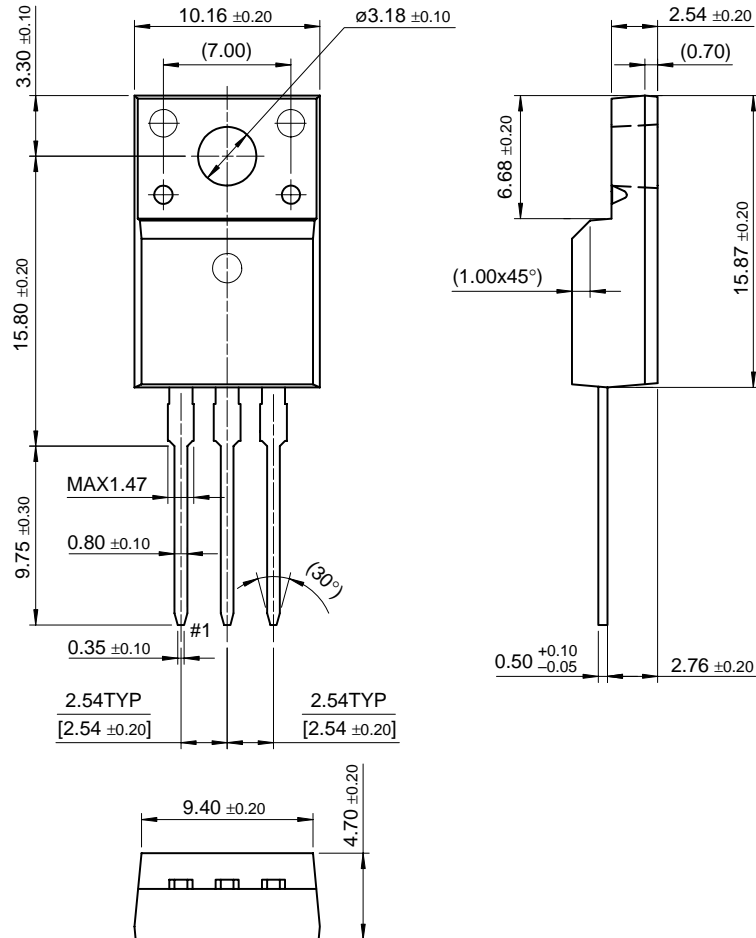


Figure 4. Output Capacitance



Mechanical Dimensions

TO-220F



Dimensions in Millimeters

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