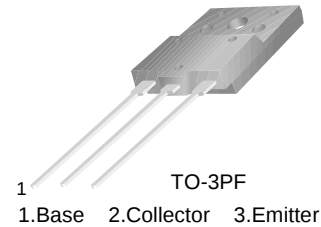


BU508AF

BU508AF

TV Horizontal Output Applications



NPN Triple Diffused Planar Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	5	A
I_{CP}	*Collector Current (Pulse)	15	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	60	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	Test Condition	Min.	Typ.	Max.	Units
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage	$I_C = 100\text{mA}$, $I_B = 0$	700			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 10\text{mA}$, $I_C = 0$	5			V
I_{CES}	Collector Cut-off Current	$V_{CE} = 1500\text{V}$, $V_{BE} = 0$			1	mA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}$, $I_C = 0$			10	mA
h_{FE}	* DC Current Gain	$V_{CE} = 5\text{V}$, $I_C = 4.5\text{A}$	2.25			
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 4.5\text{A}$, $I_B = 2\text{A}$			1	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = 4.5\text{A}$, $I_B = 2\text{A}$			1.5	V

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

Typical Characteristics

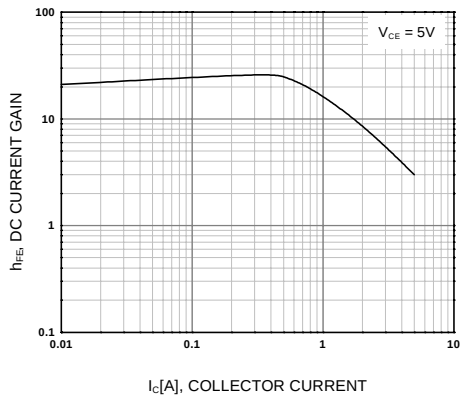


Figure 1. Static Characteristic

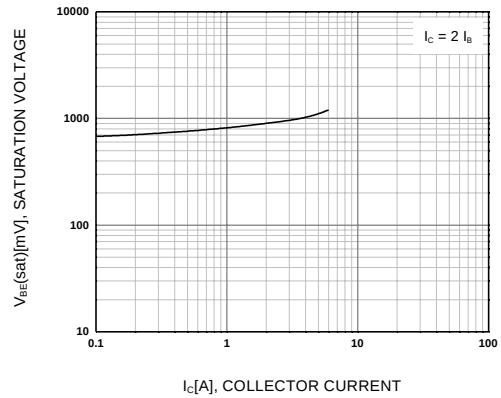


Figure 2. Base-Emitter Saturation Voltage

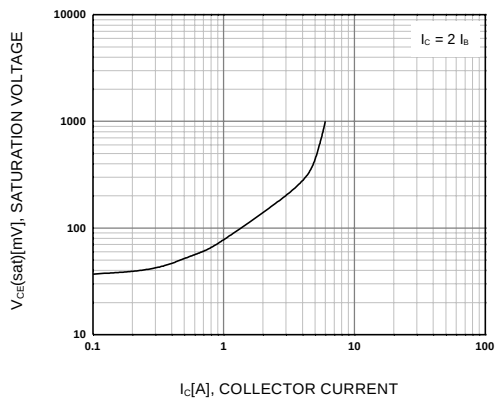


Figure 3. Collector-Emitter Saturation Voltage

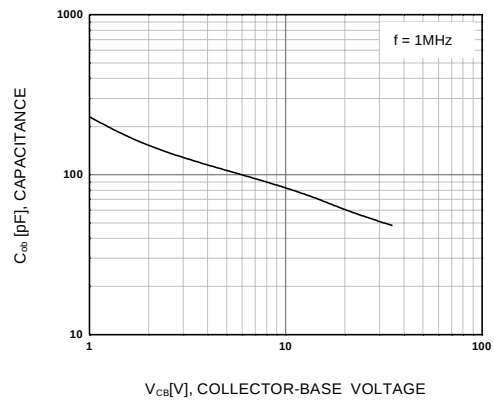


Figure 4. Collector Output Capacitance

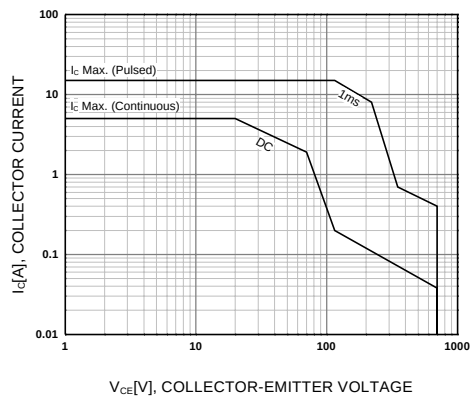


Figure 5. Safe Operating Area

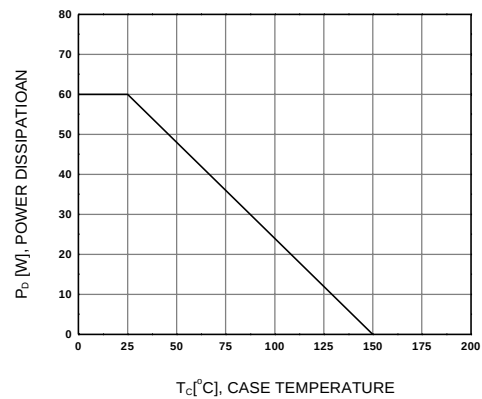


Figure 6. Power Derating

BU508AF

Technical drawing of a mechanical part, showing three views: Front View, Side View, and Top View. All dimensions are in millimeters (mm).

Front View Dimensions:

- Overall Width: 15.50 ± 0.20
- Overall Height: 26.50 ± 0.20
- Top Flange Height: 4.50 ± 0.20
- Central Slot Width: 2.00 ± 0.20
- Slot Depth: 14.50 ± 0.20
- Pin Diameter: $\varnothing 3.60 \pm 0.20$
- Pin Spacing (Center-to-Center): 2.00 ± 0.20
- Pin Length (from slot bottom): 14.80 ± 0.20
- Pin Tip Tolerance: $+0.20 / -0.10$
- Pin Base Tolerance: $+0.20 / -0.10$
- Pin Material/Finish: 5.45TYP [5.45 ± 0.30]

Side View Dimensions:

- Overall Width: 5.50 ± 0.20
- Overall Height: 22.00 ± 0.20
- Top Flange Height: 3.00 ± 0.20
- Chamfer Angle: 10°
- Chamfer Width: 0.85 ± 0.03
- Pin Diameter: $\varnothing 3.60 \pm 0.20$
- Pin Length (from slot bottom): 16.50 ± 0.20
- Pin Tip Tolerance: $+0.20 / -0.10$
- Pin Base Tolerance: $+0.20 / -0.10$
- Pin Material/Finish: 5.45TYP [5.45 ± 0.30]

Top View Dimensions:

- Overall Width: 3.30 ± 0.20
- Overall Height: 2.00 ± 0.20
- Pin Diameter: $\varnothing 3.60 \pm 0.20$
- Pin Length (from slot bottom): 2.50 ± 0.20
- Pin Tip Tolerance: $+0.20 / -0.10$
- Pin Base Tolerance: $+0.20 / -0.10$
- Pin Material/Finish: 5.45TYP [5.45 ± 0.30]

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