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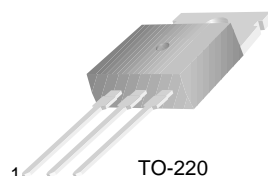
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



## BU806/807

### High Voltage & Fast Switching Darlington Transistor

- Using In Horizontal Output Stages of 110° Crt Video Displays
- BUILT-IN SPEED-UP Diode Between Base and Emitter



TO-220  
 1.Base 2.Collector 3.Emitter

### NPN Epitaxial Silicon Darlington Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage		
	: BU806	400	V
	: BU807	330	V
$V_{CEO}$	Collector-Emitter Voltage		
	: BU806	200	V
	: BU807	150	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current (DC)	8	A
$I_{CP}$	*Collector Current (Pulse)	15	A
$I_B$	Base Current	2	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	- 55 ~150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage				
	: BU806	$I_C = 100\text{mA}, I_B = 0$	200		V
	: BU807		150		V
$I_{CES}$	Collector Cut-off Current				
	: BU806	$V_{CE} = 400\text{V}, V_{BE} = 0$		100	$\mu\text{A}$
	: BU807	$V_{CE} = 330\text{V}, V_{BE} = 0$		100	$\mu\text{A}$
$I_{CEV}$	Collector Cut-off Current				
	: BU806	$V_{CE} = 400\text{V}, V_{BE} = -6\text{V}$		100	$\mu\text{A}$
	: BU807	$V_{CE} = 330\text{V}, V_{BE} = -6\text{V}$		100	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{BE} = 6\text{V}, I_C = 0$		3	mA
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 5\text{A}, I_B = 50\text{mA}$		1.5	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = 5\text{A}, I_B = 50\text{mA}$		2.4	V
$V_F$	* Dampner Diode Forward Voltage	$I_F = 4\text{A}$		2	V

\* Pulsed: pulsed duration = 300 $\mu\text{s}$ , duty cycle = 1.5%

## Typical Characteristics

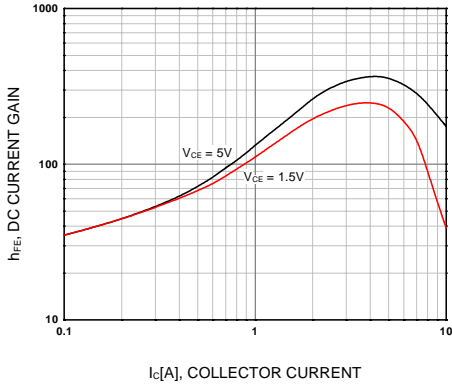


Figure 1. DC current Gain

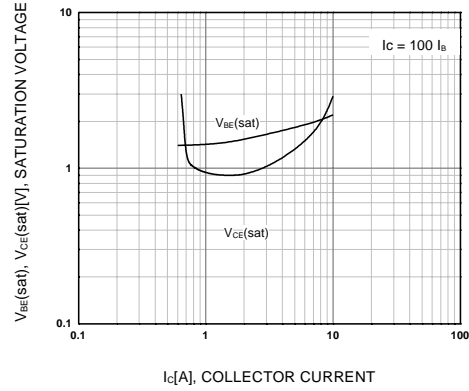


Figure 2. Collector-Emitter Saturation Voltage  
Base-Emitter Saturation Voltage

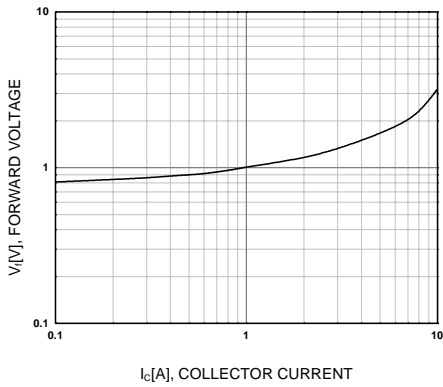


Figure 3. Damper Diode

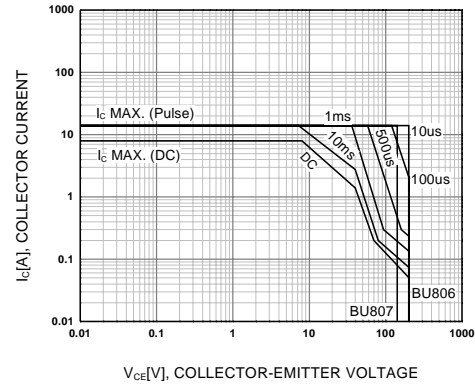


Figure 4. Safe Operating Area

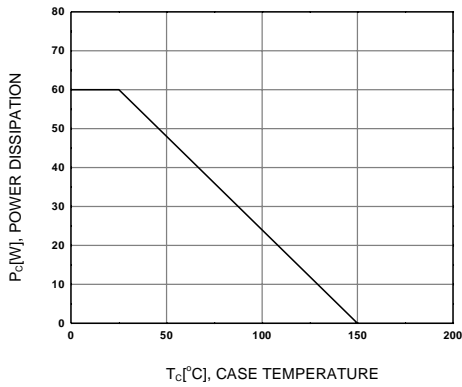
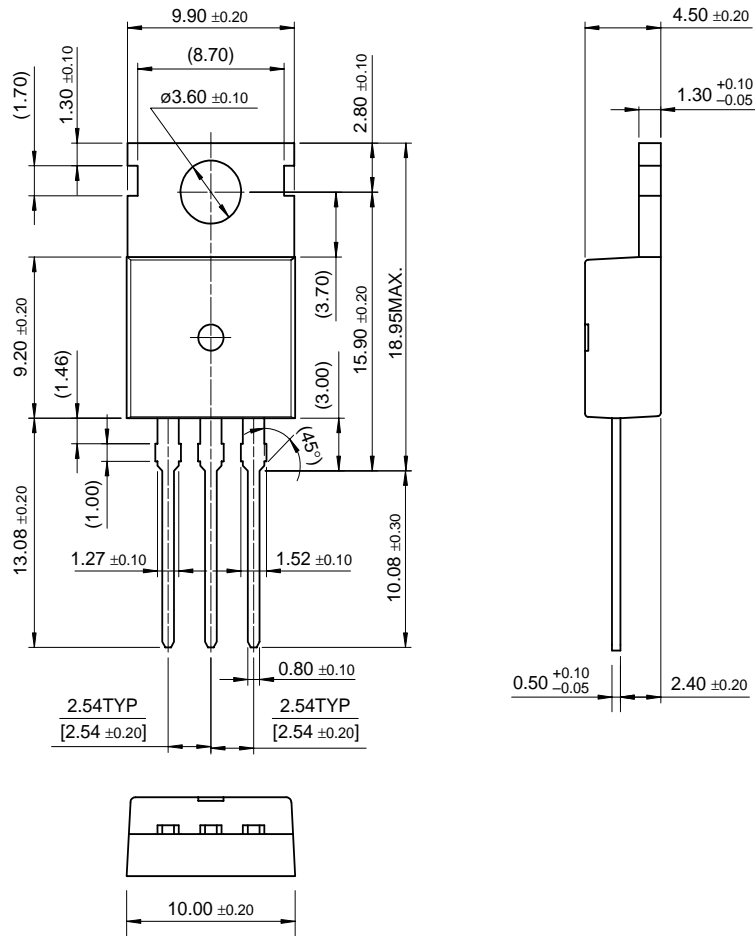


Figure 5. Power Derating

**Package Dimensions**

**TO-220**



Dimensions in Millimeters

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