

## 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



1.Base 2.Collector 3.Emitter

## **NPN Epitaxial Silicon Darlington Transistor**

### Absolute Maximum Ratings T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage		
	: BU806	400	V
	: BU807	330	V
V <sub>CEO</sub>	Collector-Emitter Voltage		
	: BU806	200	V
	: BU807	150	V
$V_{EBO}$	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current (DC)	8	А
I <sub>CP</sub>	*Collector Current (Pulse)	15	А
I <sub>B</sub>	Base Current	2	А
P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> =25°C)	60	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	- 55 ~150	°C

### Electrical Characteristics T<sub>C</sub>=25°C unless otherwise noted

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

 $<sup>^{\</sup>star}$  Pulsed: pulsed duration = 300 $\mu$ s, duty cycle = 1.5%

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## **Typical Characteristics**

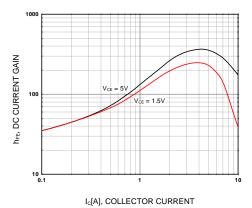


Figure 1. DC current Gain

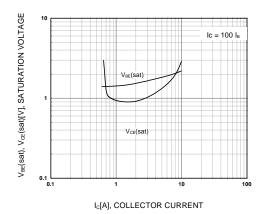


Figure 2. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

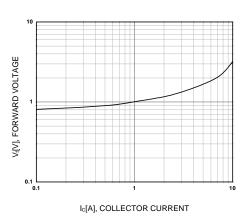


Figure 3. Damper Diode

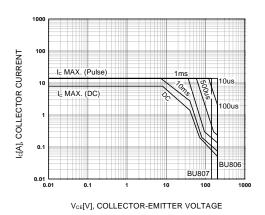


Figure 4. Safe Operating Area

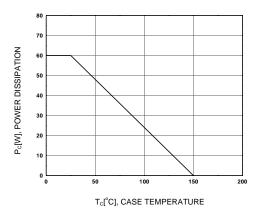
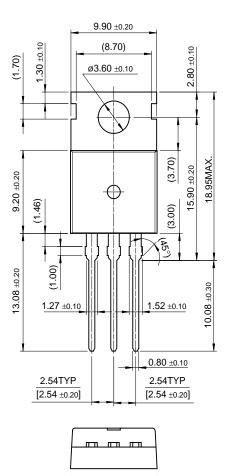


Figure 5. Power Derating

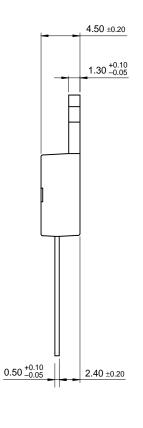
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## **Package Demensions**

## TO-220



10.00 ±0.20



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