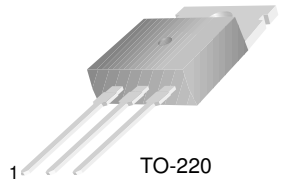
FAIRCHILD SEMICONDUCTOR™

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°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°C)	60	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

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

* Pulsed: pulsed duration = 300μs, duty cycle = 1.5%

Typical Characteristics

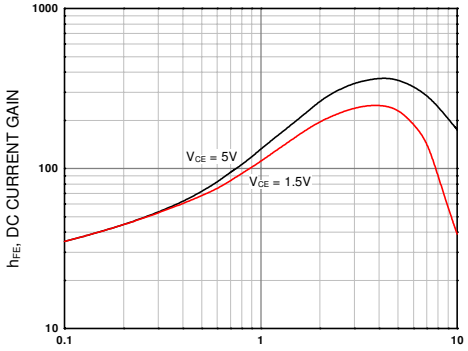


Figure 1. DC current Gain

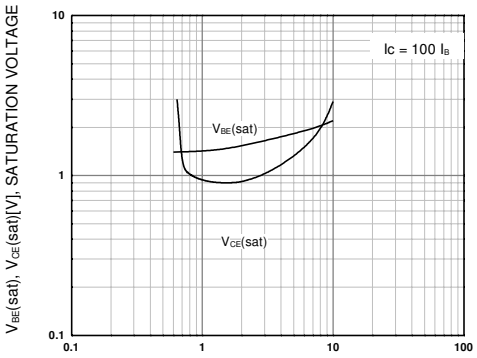


Figure 2. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

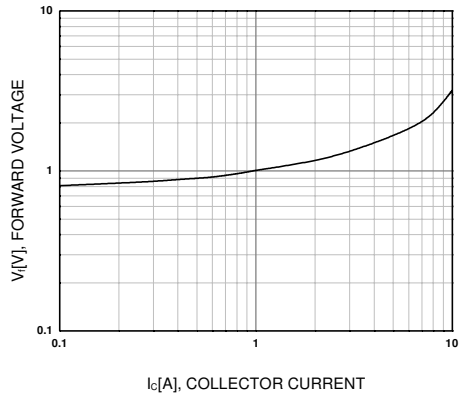


Figure 3. Damper Diode

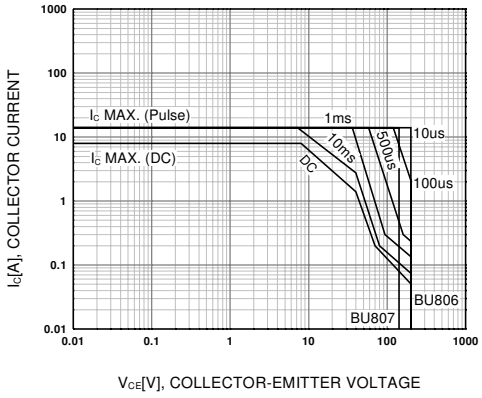


Figure 4. Safe Operating Area

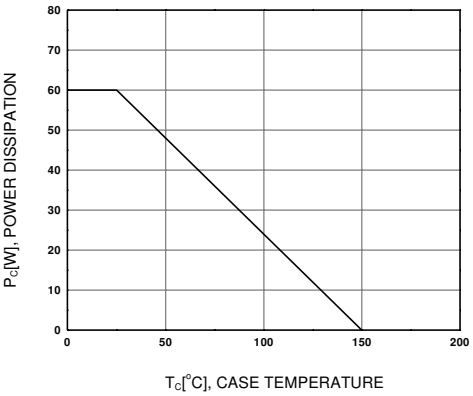


Figure 5. Power Derating

Package Demensions

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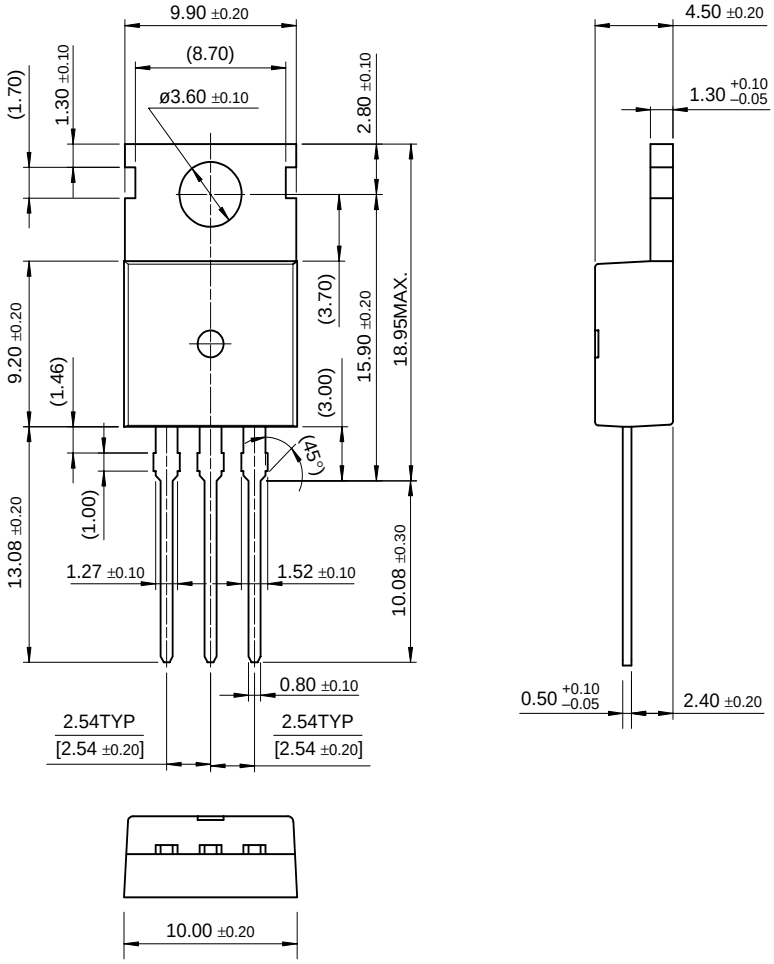

Dimensions in Millimeters

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