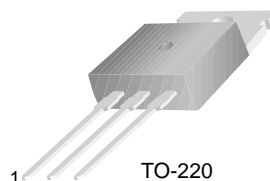


BU806/807

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

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

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

Typical Characteristics

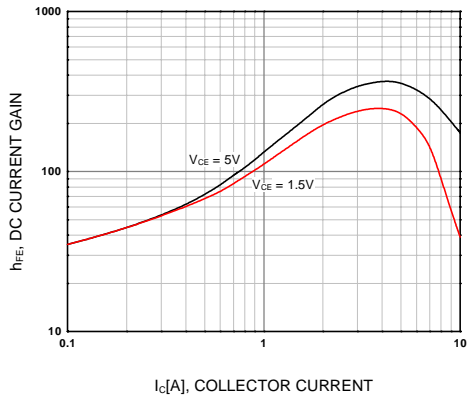


Figure 1. DC current Gain

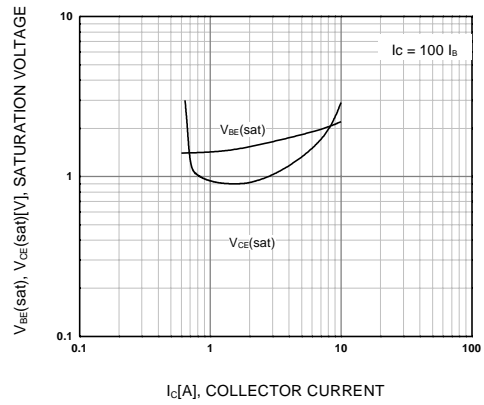


Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

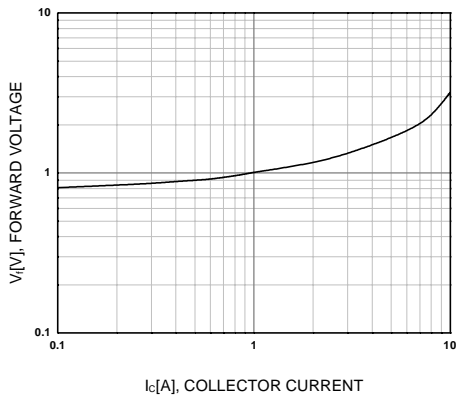


Figure 3. Damper Diode

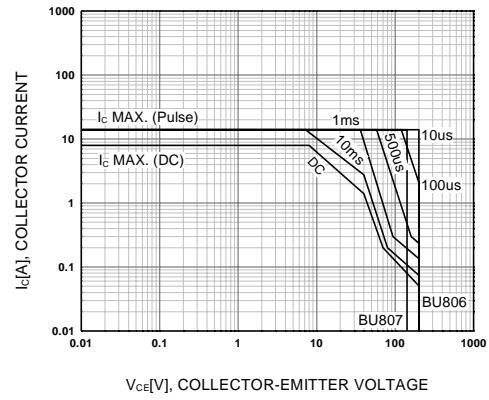


Figure 4. Safe Operating Area

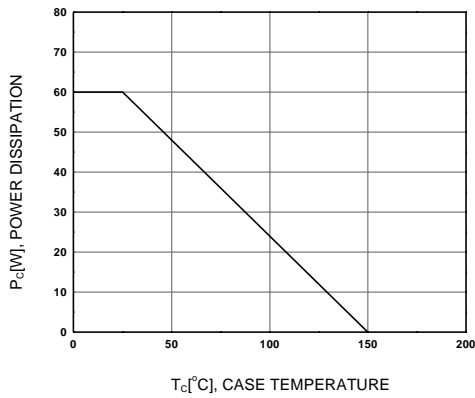


Figure 5. Power Derating

Package Dimensions

BU806/807

TO-220



Dimensions in Millimeters