

**isc Silicon NPN Darlington Power Transistor**

**BU806**

**DESCRIPTION**

- High Voltage:  $V_{CEV} = 400V(\text{Min})$
- Low Saturation Voltage-  
:  $V_{CE(\text{sat})} = 1.5V(\text{Max}) @ I_C = 5A$

**APPLICATIONS**

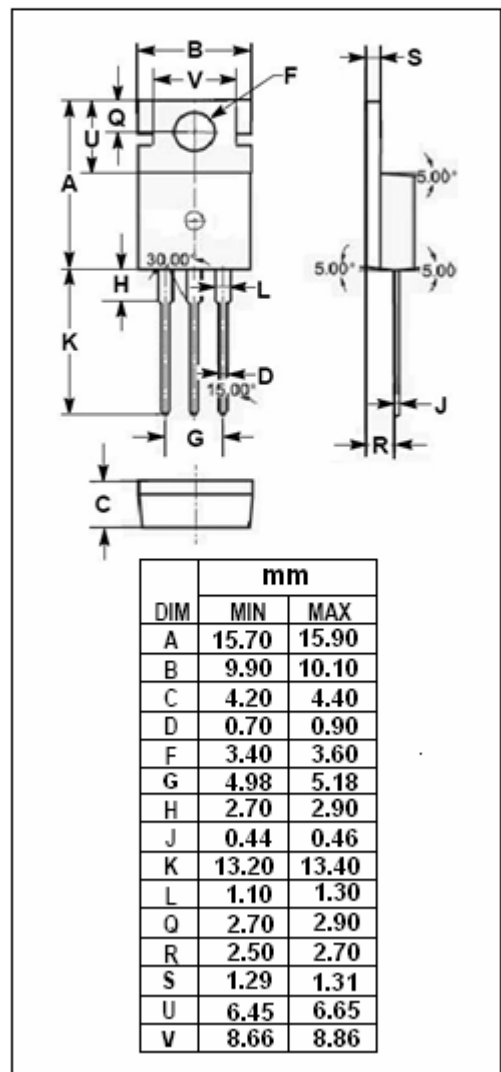
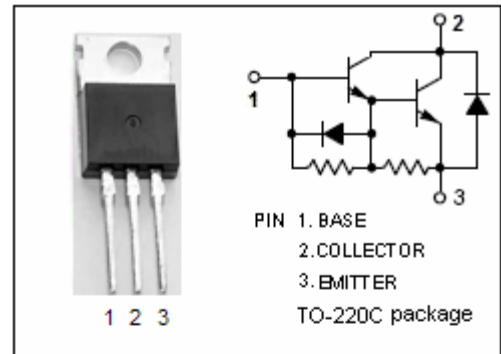
- Designed for use in horizontal deflection circuits in TV's and CRT's.

**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	400	V
$V_{CEV}$	Collector-Emitter Voltage	400	V
$V_{CEO}$	Collector-Emitter Voltage	200	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	8	A
$I_{CM}$	Collector Current-Peak	15	A
$I_B$	Base Current	2	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	60	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.08	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



**isc Silicon NPN Darlington Power Transistor****BU806****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; I_B=0$	200			V
$V_{CE(sat)}$	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
$I_{CES}$	Collector Cutoff Current	$V_{CE}=\text{Rated } V_{CBO}; V_{BE}=0$			0.1	mA
$I_{CEV}$	Collector Cutoff Current	$V_{CE}=\text{Rated } V_{CEV}; V_{BE(off)}=6\text{V}$			0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=6\text{V}; I_C=0$			3.0	mA
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=4\text{A}$			2.0	V

## Switching Times

$t_{on}$	Turn-On Time	$I_C=5\text{A}; I_{B1}=50\text{mA}; I_{B2}=-0.5\text{A}$ $V_{CC}=100\text{V}$		0.35		$\mu\text{s}$
$t_s$	Storage Time			0.55		$\mu\text{s}$
$t_f$	Fall Time			0.20		$\mu\text{s}$