

SPTECH Product Specification

SPTECH 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

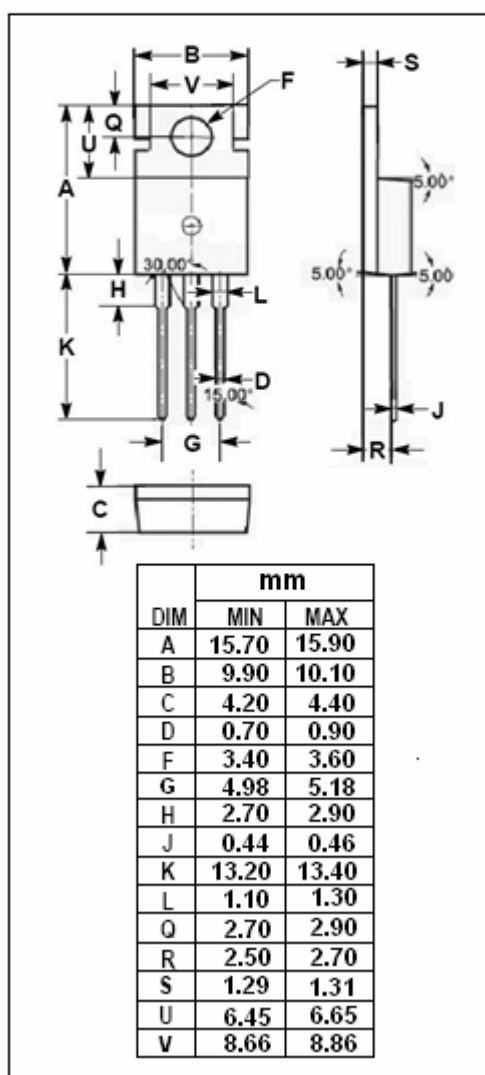
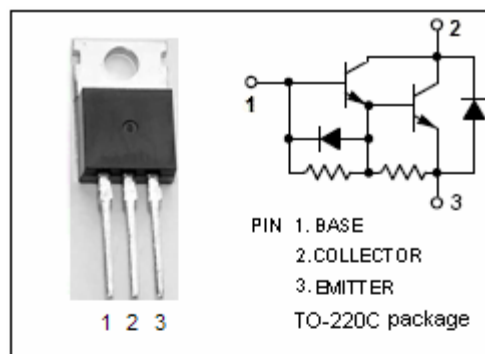
- Designed for use in horizontal deflection circuits in TV's and CRT's.

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	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	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		μS
t_s	Storage Time			0.55		μS
t_f	Fall Time			0.20		μS