

**SPTECH Silicon NPN Power Transistor**

**BU406**

**DESCRIPTION**

- High Voltage:  $V_{CEV} = 400V(\text{Min})$
- Low Saturation Voltage-  
:  $V_{CE(\text{sat})} = 1.0V(\text{Max}) @ I_C = 5A$

**APPLICATIONS**

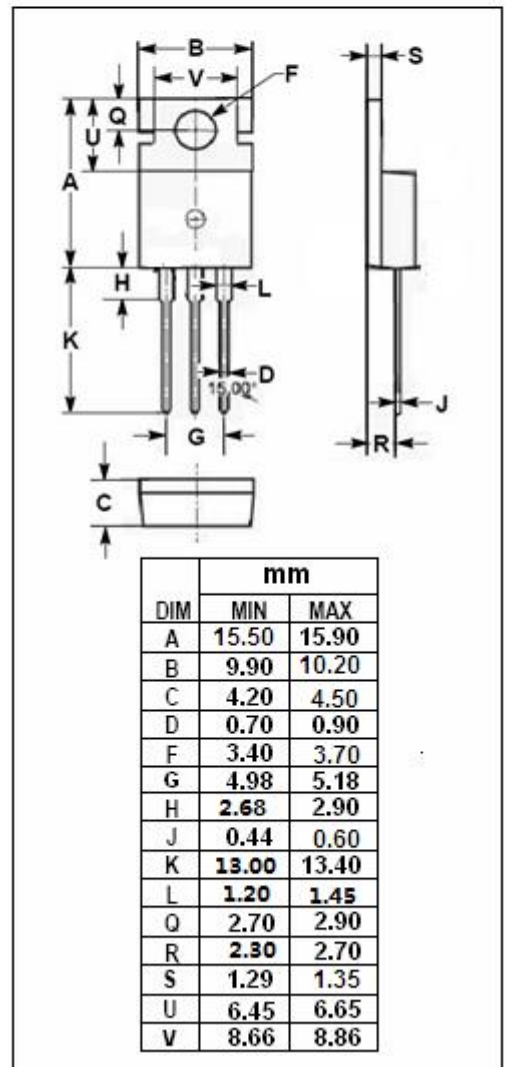
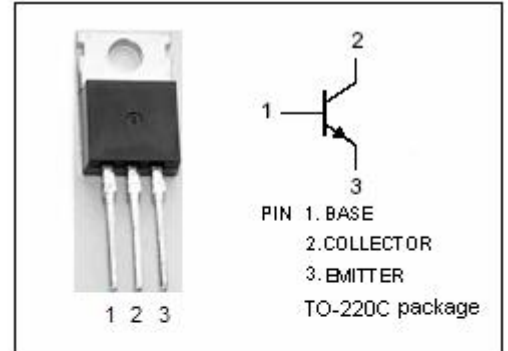
- Designed for use in horizontal deflection output stages of TV's and CRT's

**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	7	A
$I_{CP}$	Collector Current-Peak Repetitive	10	A
$I_{CP}$	Collector Current- Peak (10ms)	15	A
$I_B$	Base Current	4	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	60	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{\text{stg}}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

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



**ELECTRICAL CHARACTERISTICS**

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA ; I <sub>B</sub> = 0	200			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 0.5A			1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 0.5A			1.2	V
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> =0			1.0	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 2A; V <sub>CE</sub> = 5V	40		120	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 10V, f <sub>test</sub> = 20MHz	10			MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1.0MHz		80		pF
t <sub>f</sub>	Fall Time	I <sub>C</sub> = 5A; I <sub>B1</sub> = -I <sub>B2</sub> = 0.5A, L= 150 μ H V <sub>CC</sub> = 40V			0.75	μ s