

## Silicon NPN Power Transistors

BU500

**DESCRIPTION**

- With TO-3 package
- Low collector saturation voltage

**APPLICATIONS**

- Designed for use in large screen color deflection circuits.

**PINNING(see fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

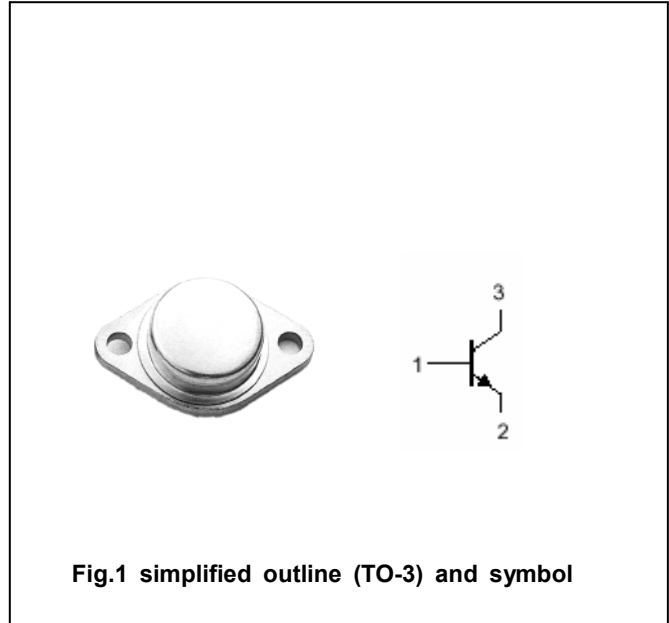


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings (T<sub>c</sub>=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1500	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	700	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		6	A
I <sub>CM</sub>	Collector current-peak		16	A
I <sub>B</sub>	Base current		4	A
P <sub>D</sub>	Total power dissipation	T <sub>c</sub> =25°C	75	W
T <sub>j</sub>	Junction temperature		-65~150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	1.66	°C/W

## Silicon NPN Power Transistors

## BU500

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.5A; I <sub>B</sub> =0; L=10mH	700			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =100mA; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4.5A; I <sub>B</sub> =2A			1.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =4.5A; V <sub>CE</sub> =5V			1.3	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CE</sub> =1000V; V <sub>BE</sub> =-2V			0.02	mA
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =1500V; V <sub>BE</sub> =-2V			1.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =4V; I <sub>C</sub> =0			10	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	8		36	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4.5A ; V <sub>CE</sub> =5V	3.0			

## Switching times

t <sub>s</sub>	Storage time	I <sub>C</sub> =4.5A ; I <sub>B1</sub> =-I <sub>B2</sub> =1.5A V <sub>CC</sub> =100V ;			1.2	μs
t <sub>f</sub>	Fall time				1.0	μs

PACKAGE OUTLINE

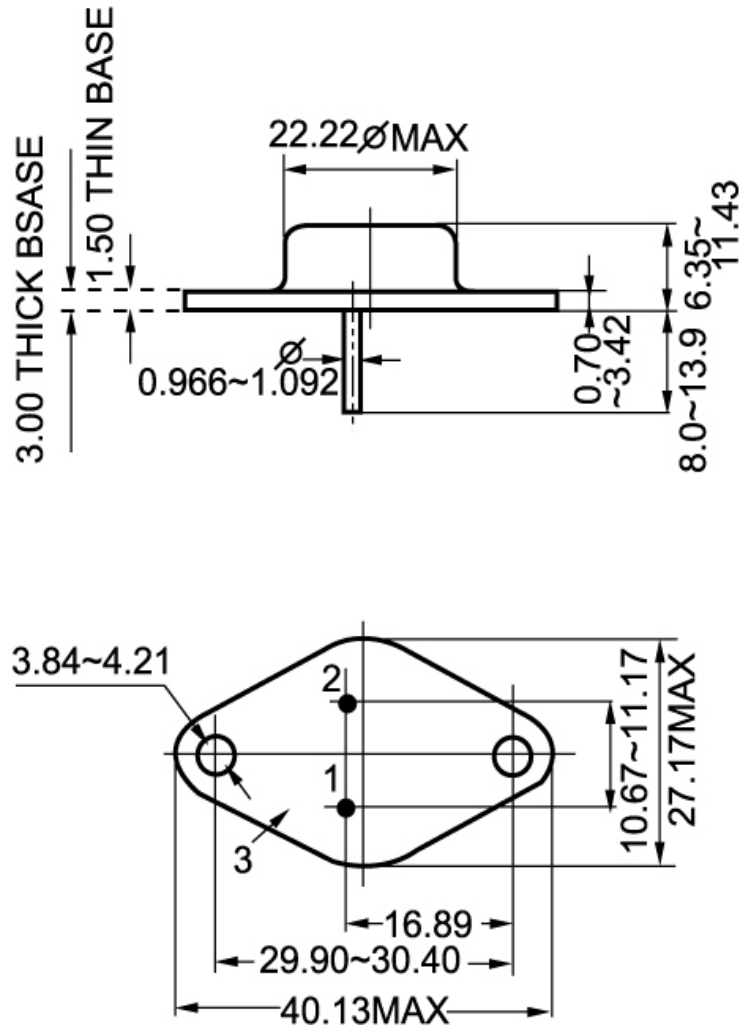


Fig.2 Outline dimensions