

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

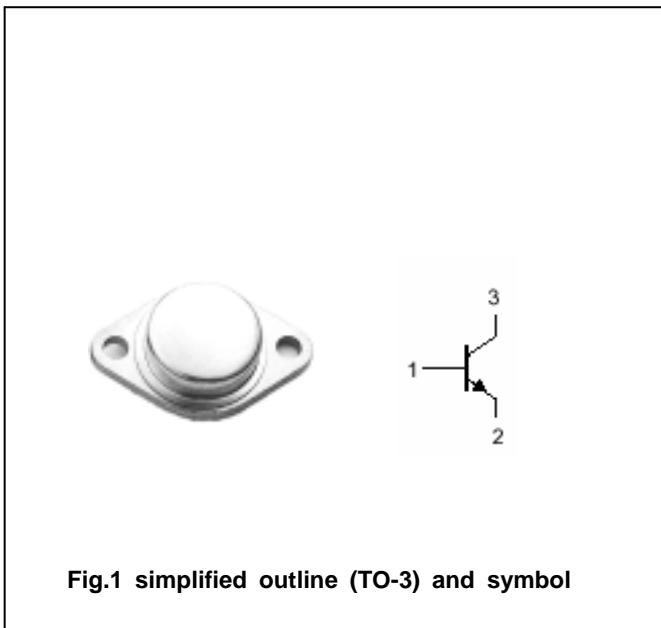


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings (Tc=25 )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1500	V
$V_{CEO}$	Collector-emitter voltage	Open base	700	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		6	A
$I_{CM}$	Collector current-peak		16	A
$I_B$	Base current		4	A
$P_T$	Total power dissipation	$T_c=25$	75	W
$T_j$	Junction temperature		-65~150	
$T_{stg}$	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance junction to case	1.66	/W

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## BU500

## CHARACTERISTICS

T<sub>j</sub>=25 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

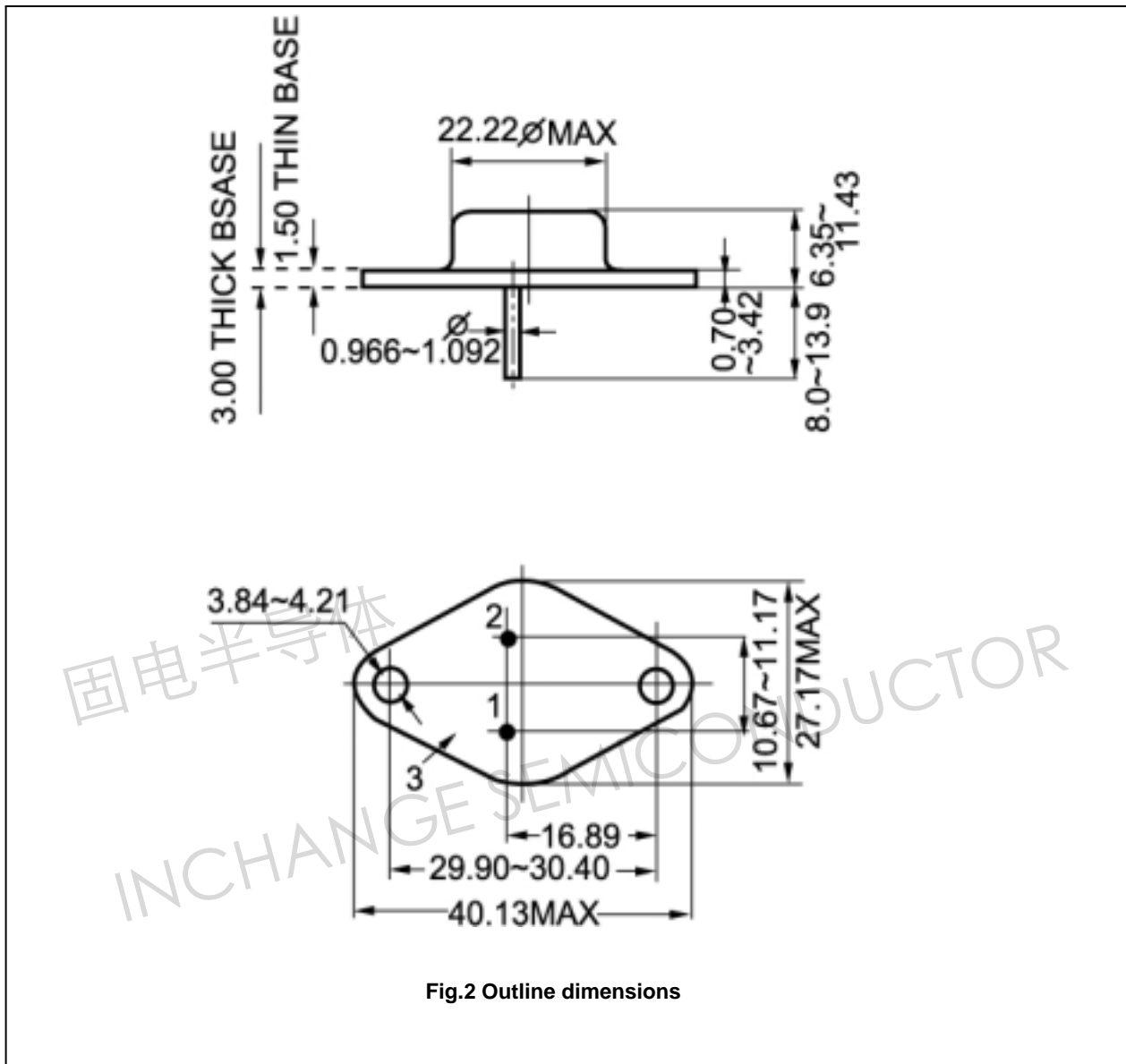


Fig.2 Outline dimensions