

Silicon NPN Power Transistors

BU500

DESCRIPTION

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- 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 ($T_c=25^\circ\text{C}$)

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_D	Total power dissipation	$T_c=25^\circ\text{C}$	75	W
T_j	Junction temperature		-65~150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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

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CHARACTERISTICS

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.5A; I_B=0; L=10mH$	700			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100mA; I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=4.5A; I_B=2A$			1.0	V
V_{BE}	Base-emitter on voltage	$I_C=4.5A; V_{CE}=5V$			1.3	V
I_{CBO}	Collector cut-off current	$V_{CE}=1000V; V_{BE}=-2V$			0.02	mA
I_{CEX}	Collector cut-off current	$V_{CE}=1500V; V_{BE}=-2V$			1.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V; I_C=0$			10	mA
h_{FE-1}	DC current gain	$I_C=1A; V_{CE}=5V$	8		36	
h_{FE-2}	DC current gain	$I_C=4.5A; V_{CE}=5V$	3.0			

Switching times

t_s	Storage time	$I_C=4.5A; I_{B1}=-I_{B2}=1.5A$ $V_{CC}=100V;$			1.2	μs
t_f	Fall time				1.0	μs

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PACKAGE OUTLINE

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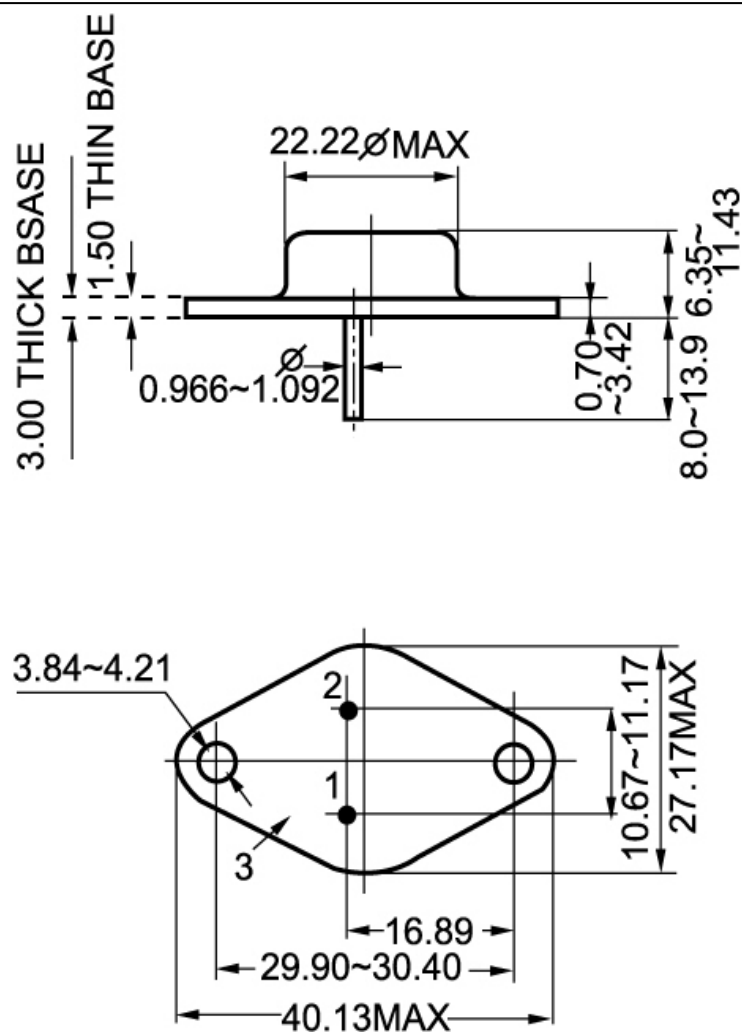


Fig.2 Outline dimensions