

## Silicon NPN Power Transistors

## BUW36

## DESCRIPTION

- With TO-3 package
- High breakdown voltage

## APPLICATIONS

- For high voltage ,fast switching applications

## PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



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

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	900	V
$V_{CEO}$	Collector-emitter voltage	Open base	450	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		10	A
$I_{CM}$	Collector current-peak		15	A
$I_B$	Base current		5	A
$P_T$	Total power dissipation	$T_C \leq 25^\circ\text{C}$	125	W
$T_j$	Junction temperature		200	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~200	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.4	$^\circ\text{C}/\text{W}$

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## CHARACTERISTICS

T<sub>j</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> =100mA ; I <sub>B</sub> =0	450			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =2.5A			3.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =2.5A			1.8	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =900V ; V <sub>BE</sub> =0 T <sub>C</sub> =125°C			0.1 3.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	15		50	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =5V	8			

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =5A ; I <sub>B1</sub> =- I <sub>B2</sub> =1A V <sub>CC</sub> =250V			0.7	μs
t <sub>s</sub>	Storage time				3.0	μs
t <sub>f</sub>	Fall time				0.8	μs

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PACKAGE OUTLINE

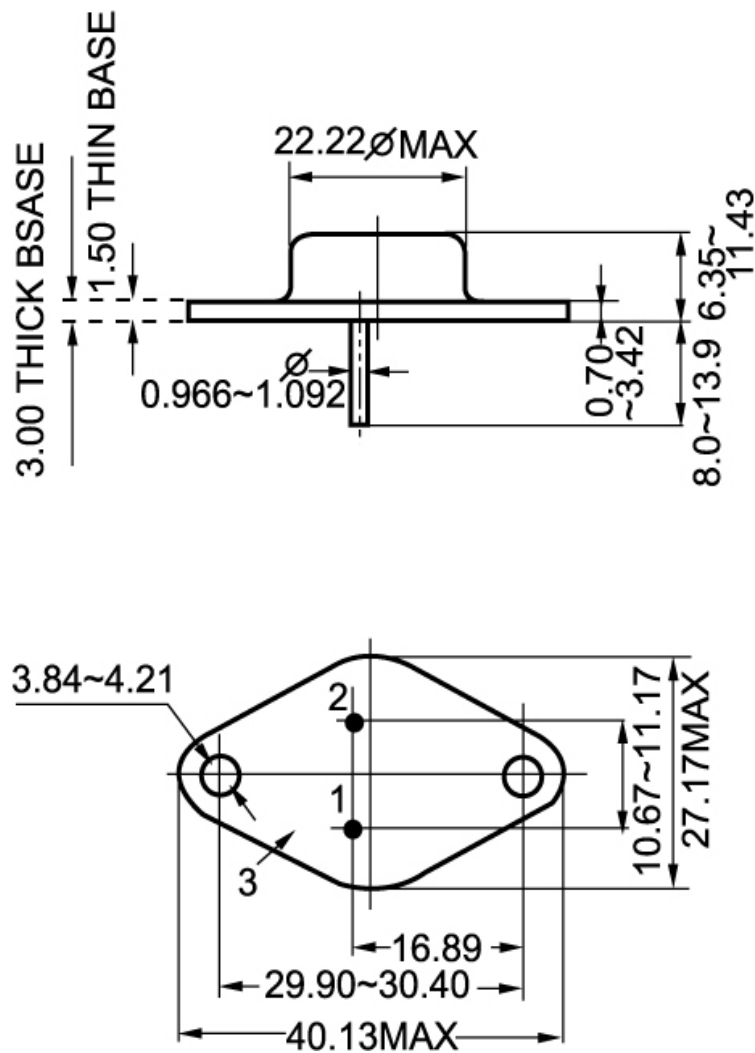


Fig.2 Outline dimensions