

## Silicon PNP Power Transistors

## 2N4901 2N4902 2N4903

## DESCRIPTION

- With TO-3 package
- Complement to type 2N5067,2N5068,2N5069
- Low collector-emitter saturation voltage

## APPLICATIONS

- For general-purpose switching and power amplifier applications.

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

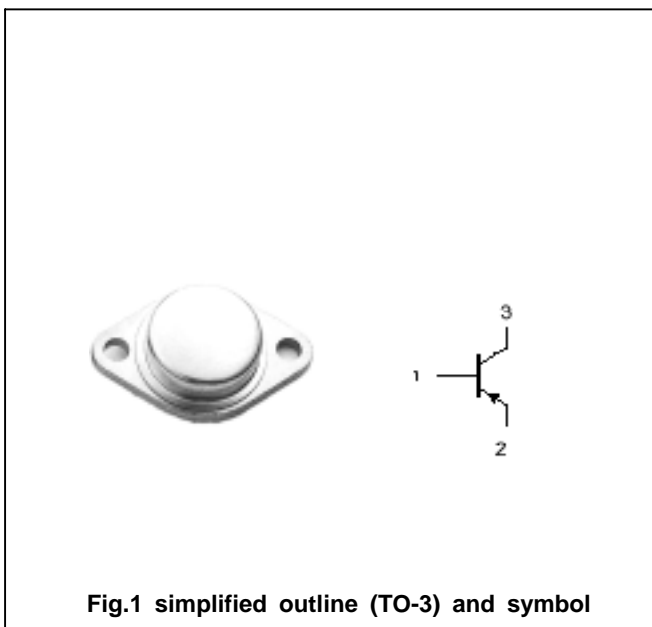


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings( $T_a =$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2N4901	40	V
		2N4902	60	
		2N4903	80	
$V_{CEO}$	Collector-emitter voltage	2N4901	40	V
		2N4902	60	
		2N4903	80	
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		5	A
$I_{CM}$	Collector current-peak		10	A
$I_B$	Base current		1	A
$P_C$	Collector power dissipation	$T_C=25$	87.5	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-65~200	

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	2.0	/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO</sub>	Collector-emitter sustaining voltage	2N4901	40			V
		2N4902	60			
		2N4903	80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			0.4	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =1A			1.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =1A; V <sub>CE</sub> =2V			1.2	V
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =Rated V <sub>CEO</sub> ; I <sub>B</sub> =0			1.0	mA
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =Rated V <sub>CBO</sub> ; I <sub>E</sub> =0			0.1	mA
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> = Rated V <sub>CEO</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150			1.0 2.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			1.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A; V <sub>CE</sub> =2V	20		80	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5A; V <sub>CE</sub> =2V	7			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A; V <sub>CE</sub> =10V	4			MHz

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PACKAGE OUTLINE

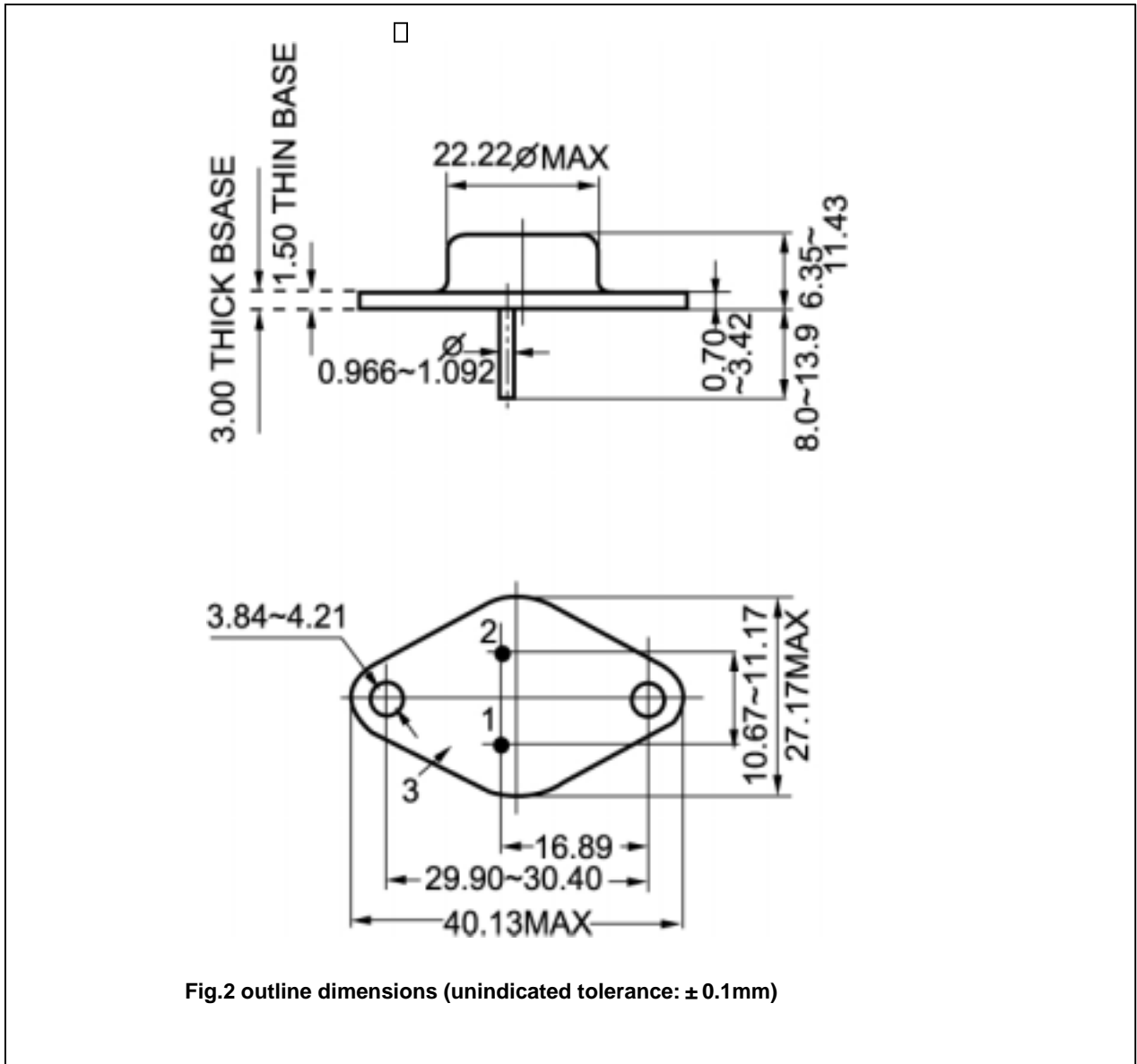


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1\text{mm}$ )