

## Silicon PNP Power Transistors

## 2N6312 2N6313 2N6314

## DESCRIPTION

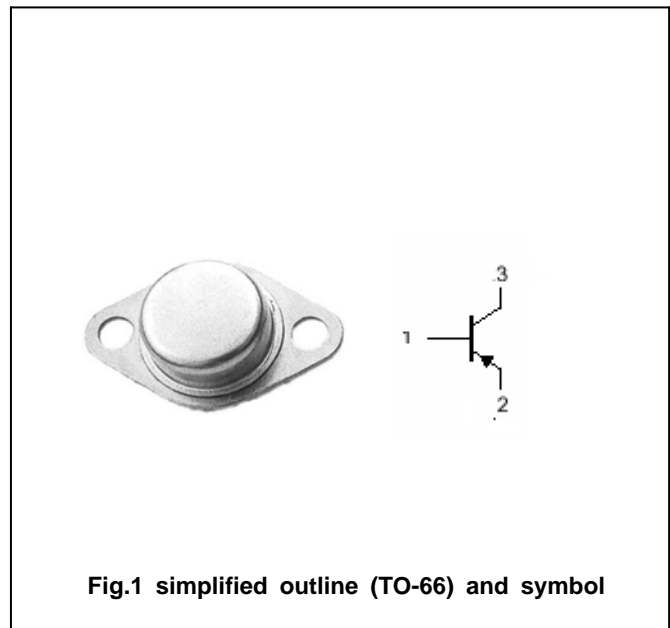
- With TO-66 package
- Low collector saturation voltage
- Low leakage current

## APPLICATIONS

- Designed for general-purpose power amplifier and switching applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2N6312	-40	V
		2N6313	-60	
		2N6314	-80	
$V_{CEO}$	Collector-emitter voltage	2N6312	-40	V
		2N6313	-60	
		2N6314	-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		-2	A
$P_D$	Total Power Dissipation	$T_C = 25^\circ\text{C}$	75	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 junction to case	2.32	$^\circ\text{C}/\text{W}$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	2N6312	I <sub>C</sub> =-0.1A ; I <sub>B</sub> =0	-40			V
		2N6313		-60			
		2N6314		-80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-1.5A; I <sub>B</sub> =-0.15A			-0.7	V	
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A; I <sub>B</sub> =-0.3A			-2.0	V	
V <sub>CEsat-3</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A; I <sub>B</sub> =-1.25A			-4.0	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-1.5A ; V <sub>CE</sub> =-2V			-1.4	V	
I <sub>CEO</sub>	Collector cut-off current	2N6312	V <sub>CE</sub> =-30V; I <sub>B</sub> =0			-1.0	mA
		2N6313		V <sub>CE</sub> =-50V; I <sub>B</sub> =0			
		2N6314		V <sub>CE</sub> =-70V; I <sub>B</sub> =0			
I <sub>CBO</sub>	Collector cut-off current	2N6312	V <sub>CB</sub> =-40V; I <sub>E</sub> =0			-50	μ A
		2N6313		V <sub>CB</sub> =-60V; I <sub>E</sub> =0			
		2N6314		V <sub>CB</sub> =-80V; I <sub>E</sub> =0			
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> =Rated V <sub>CE</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =125°C			-0.1 -1.0	mA	
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-0.5	mA	
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-2V	40				
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-1.5A ; V <sub>CE</sub> =-2V	25		100		
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-2V	10				
h <sub>FE-4</sub>	DC current gain	I <sub>C</sub> =-5A ; V <sub>CE</sub> =-4V	4				
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V; f=1MHz			300	pF	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-10V; f=1.0MHz	4			MHz	

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PACKAGE OUTLINE

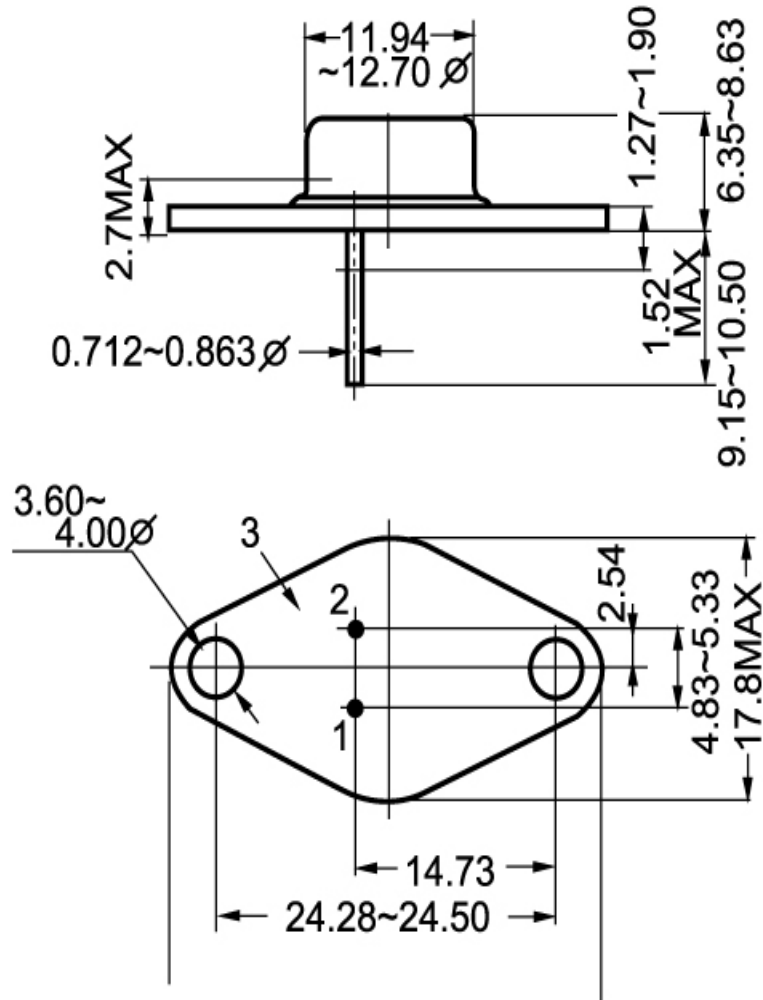


Fig.2 outline dimensions