

## Silicon NPN Power Transistors

## 2N6315 2N6316

## DESCRIPTION

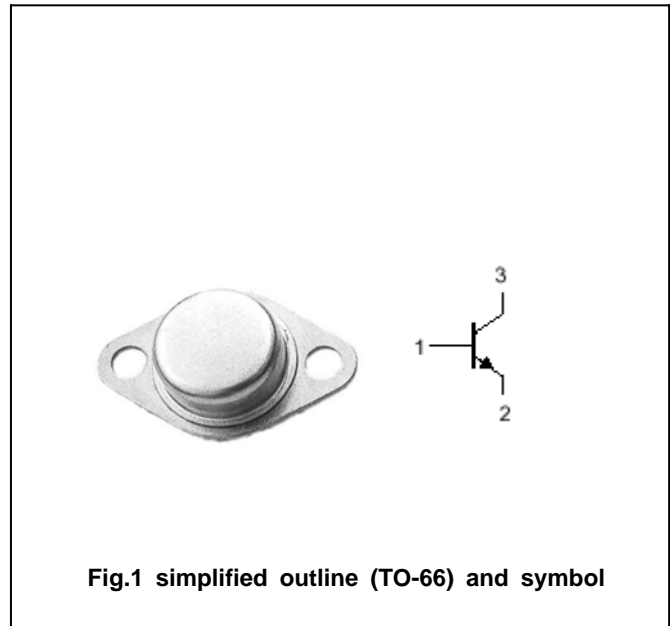
- With TO-66 package
- Low collector saturation voltage
- Complement to type 2N6317/6318

## 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	2N6315	60	V
		2N6316	80	
$V_{CEO}$	Collector-emitter voltage	2N6315	60	V
		2N6316	80	
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		7	A
$I_{CM}$	Collector current-peak		15	A
$I_B$	Base current		2	A
$P_D$	Total Power Dissipation	$T_C = 25^\circ\text{C}$	90	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	1.94	$^\circ\text{C}/\text{W}$

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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	2N6315	I <sub>C</sub> =0.1A ; I <sub>B</sub> =0	60			V
		2N6316		80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =0.4 A			1.0	V	
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =7A; I <sub>B</sub> =1.75A			2.0	V	
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =7A; I <sub>B</sub> =1.75A			2.5	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =4V			1.5	V	
I <sub>CEO</sub>	Collector cut-off current	2N6315	V <sub>CE</sub> =30V; I <sub>B</sub> =0			0.5	mA
		2N6316		V <sub>CE</sub> =40V; I <sub>B</sub> =0			
I <sub>CBO</sub>	Collector cut-off current	2N6315	V <sub>CB</sub> =60V; I <sub>E</sub> =0			0.25	mA
		2N6316		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> =150°C			0.25 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> =0.5A ; V <sub>CE</sub> =4V	35				
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =4V	20		100		
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =7A ; V <sub>CE</sub> =4V	4				
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.25A; V <sub>CE</sub> =10V; f=1.0MHz	4			MHz	

PACKAGE OUTLINE

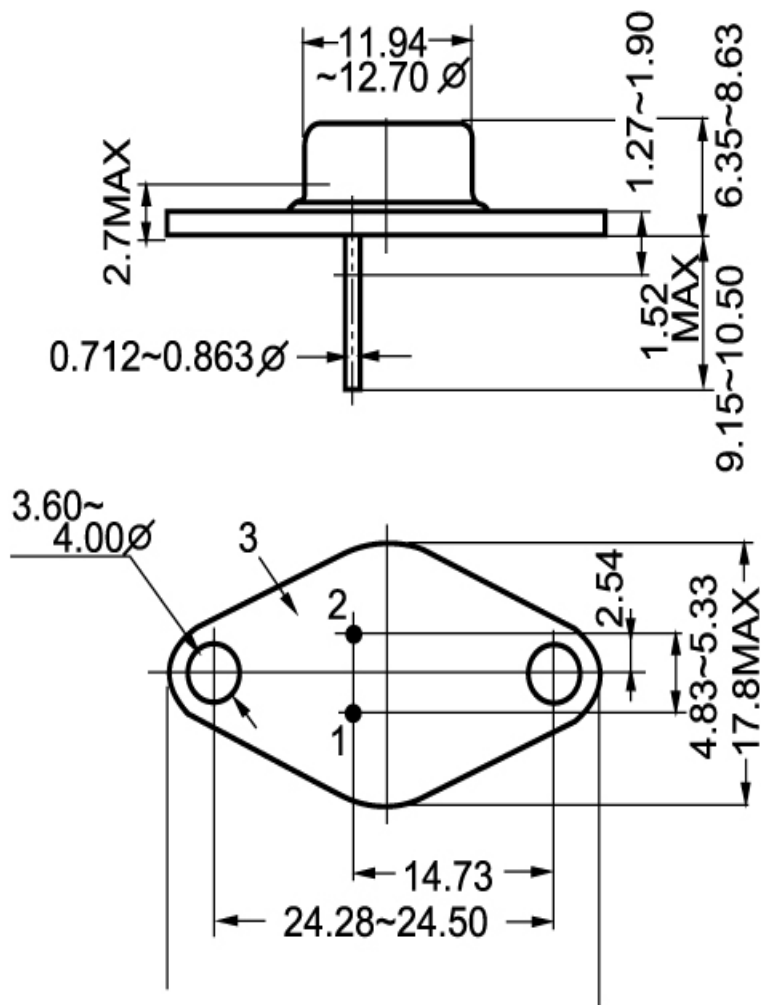


Fig.2 outline dimensions