

## Silicon NPN Power Transistors

2SC1431

## DESCRIPTION

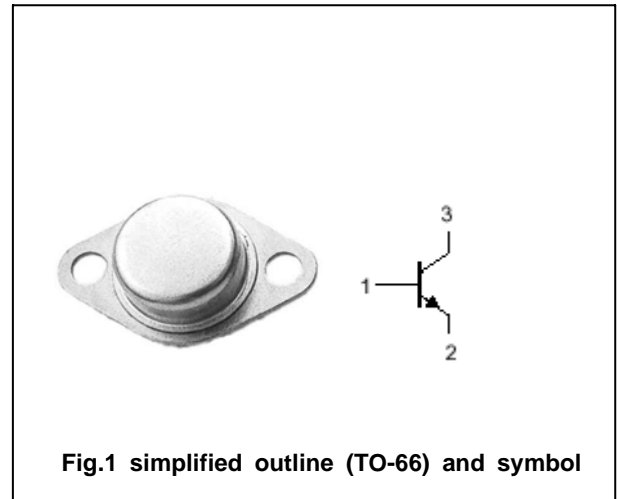
- With TO-66 package
- Excellent safe operating area

## APPLICATIONS

- For use in high frequency power amplifier applications.

## PINNING(see Fig.2)

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	Open emitter	110	V
$V_{CEO}$	Collector-emitter voltage	Open base	110	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		2	A
$P_D$	Total power dissipation	$T_C = 25^\circ\text{C}$	23	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =50mA ; I <sub>B</sub> =0	110			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			1.0	V
V <sub>BE sat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			1.2	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =110V; I <sub>E</sub> =0			10	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			10	μ A
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =0.4A ; V <sub>CE</sub> =2V	50		240	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.4A ; V <sub>CE</sub> =10V	30			MHz

PACKAGE OUTLINE

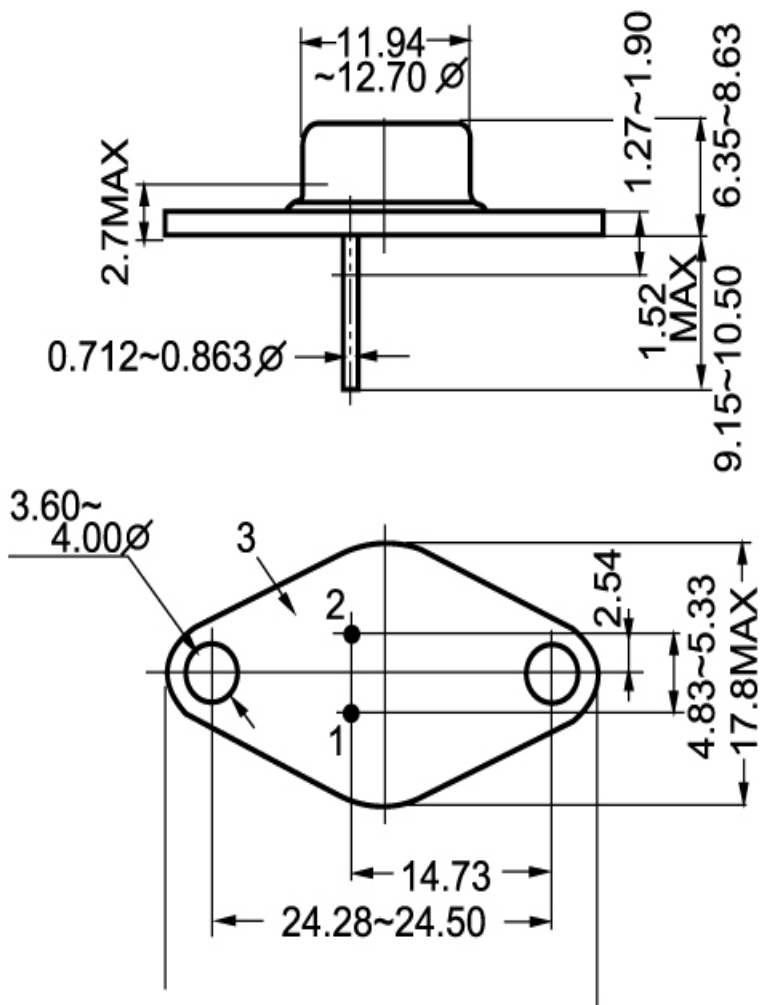


Fig.2 outline dimensions