

## Silicon NPN Power Transistors

2SD1431

## DESCRIPTION

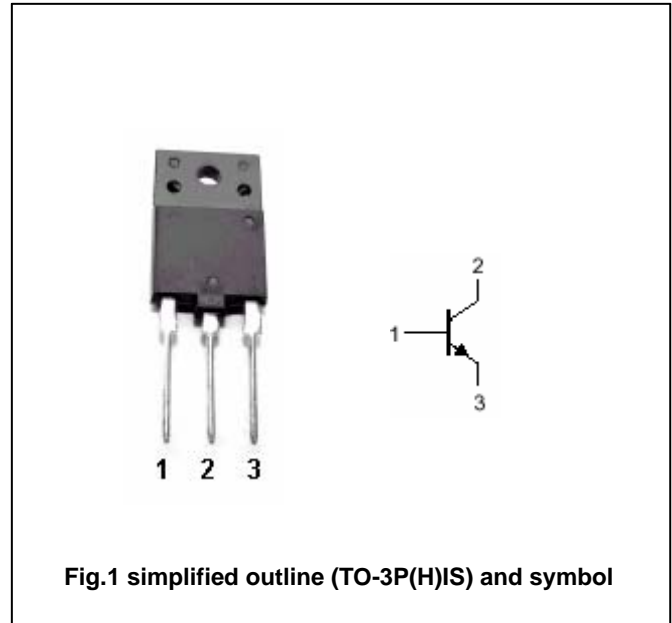
- With TO-3P(H)IS package
- High voltage ,high speed
- Low collector saturation voltage

## APPLICATIONS

- Designed for use in color TV and CRT display horizontal output applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1500	V
$V_{CEO}$	Collector-emitter voltage	Open base	600	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		5	A
$P_D$	Total power dissipation	$T_C=25^\circ\text{C}$	80	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>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =0.8A			5.0	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =0.8A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =500V; 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			1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	8			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =10V		3		MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V;f=1.0MHz		165		pF
t <sub>f</sub>	Fall time	I <sub>C</sub> =4A;I <sub>B1</sub> =0.8A			1.0	μ s

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PACKAGE OUTLINE

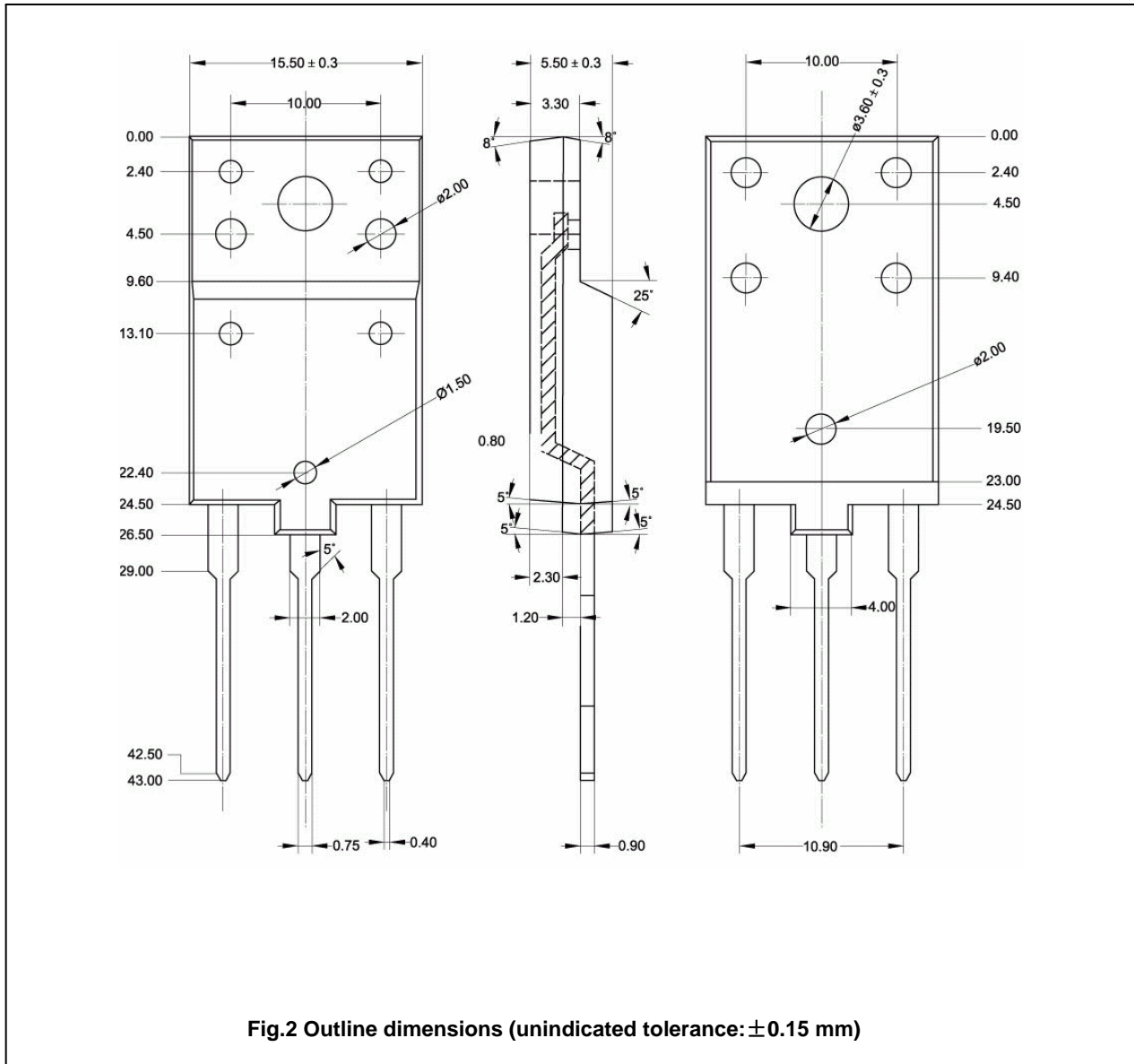


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)