

**Silicon NPN Power Transistors**

**2SC2429**

**DESCRIPTION**

- With TO-3 package
- High voltage ,high speed
- Wide area of safe operation

**APPLICATIONS**

- High speed switching
- Converters and inverters

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

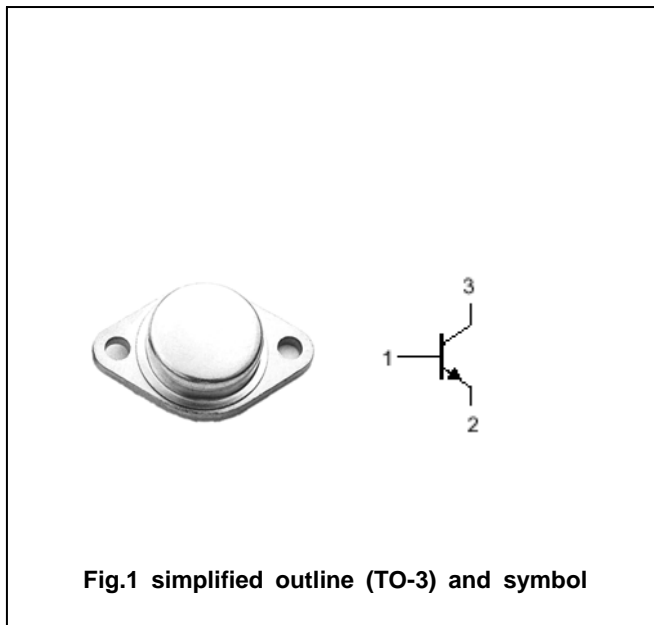


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=°C)**

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	450	V
$V_{CEO}$	Collector-emitter voltage	Open base	400	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		15	A
$I_{CM}$	Collector current-Peak		20	A
$I_B$	Base current		5	A
$P_T$	Total power dissipation	$T_C=25^\circ C$	150	W
$T_j$	Junction temperature		175	°C
$T_{stg}$	Storage temperature		-65~175	°C

## Silicon NPN Power Transistors

## 2SC2429

## 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	I <sub>C</sub> =1A ; R <sub>BE</sub> =∞	400			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	7			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =2A		0.45	1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =2A		1.2	2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =450V; I <sub>E</sub> =0			0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			0.1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =10A ; V <sub>CE</sub> =5V	10	15	40	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =2A ; V <sub>CE</sub> =10V,f=10MHz		35		MHz
C <sub>OB</sub>	Collector output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V;f=1MHz		230		pF

## Switching times

t <sub>r</sub>	Rise time	V <sub>CC</sub> =150V,I <sub>C</sub> =10A I <sub>B1</sub> =-I <sub>B2</sub> =2A		0.15	0.5	μs
t <sub>stg</sub>	Storage time			1.20	2.5	μs
t <sub>f</sub>	Fall time			0.10	0.3	μs

Silicon NPN Power Transistors

2SC2429

PACKAGE OUTLINE

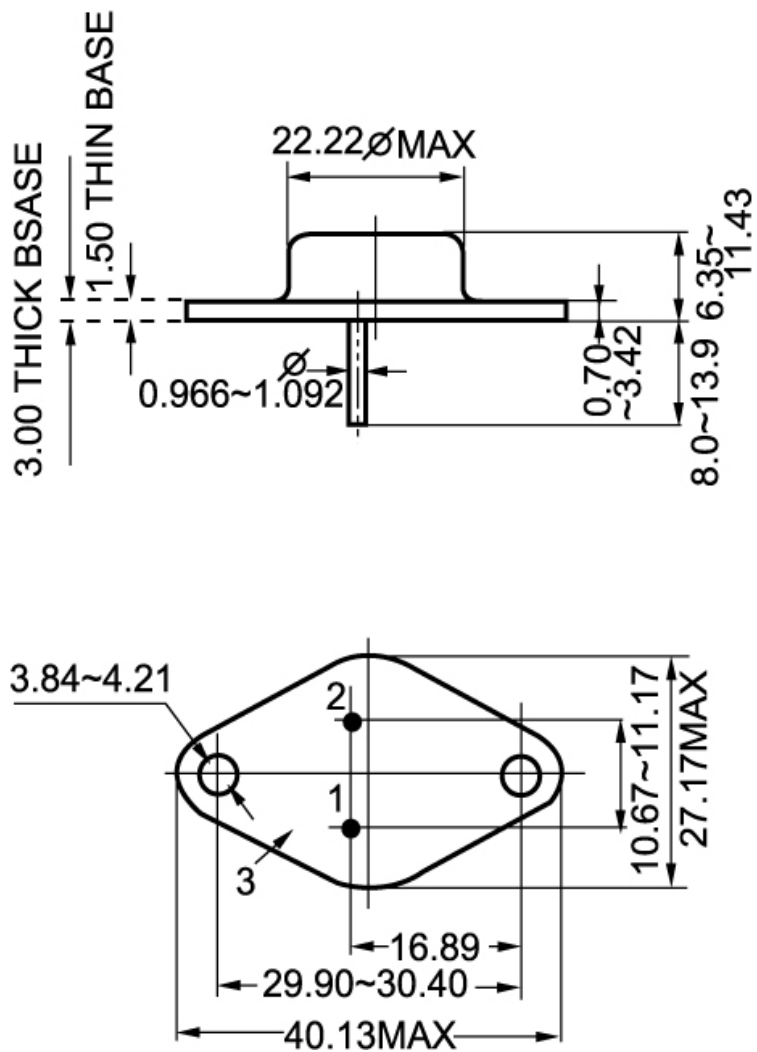


Fig.2 Outline dimensions