

**Silicon NPN Power Transistors**

**2N6371**

**DESCRIPTION**

- With TO-3 package
- Low collector saturation voltage
- High dissipation capability
- Excellent safe operating area

**APPLICATIONS**

- Series and shunt regulators
- High-fidelity amplifiers
- Power-switching circuits

**PINNING**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

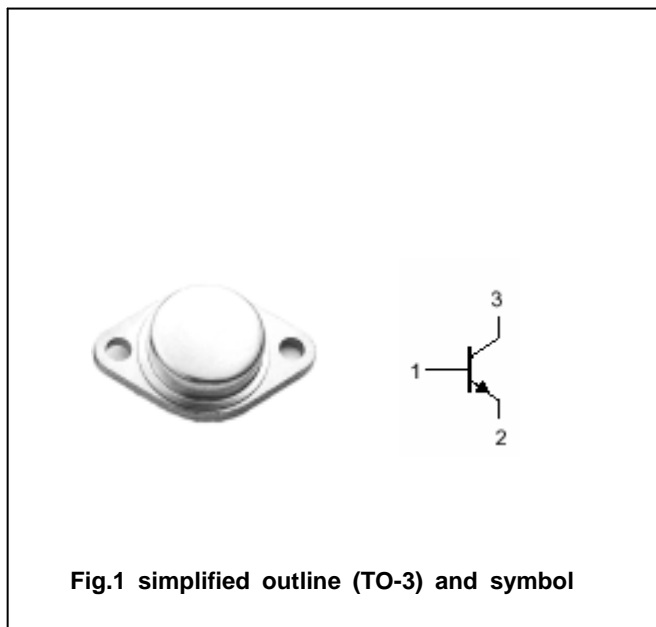


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta= )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	50	V
$V_{CEO}$	Collector-emitter voltage	Open base	40	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		15	A
$I_B$	Base current		7	A
$P_D$	Total Power Dissipation	$T_C=25$	117	W
$T_j$	Junction temperature		200	
$T_{stg}$	Storage temperature		-65~200	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.5	/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	40			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A ; I <sub>B</sub> =0.8A			1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =16A ; I <sub>B</sub> =4A			4.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =16A ; V <sub>CE</sub> =4V			4.0	V
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =25V ; I <sub>B</sub> =0			1.5	mA
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> =45V ; V <sub>BE(off)</sub> =1.5V V <sub>CE</sub> =40V ; V <sub>BE(off)</sub> =1.5V ; T <sub>C</sub> =150			2.0 10.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V ; I <sub>C</sub> =0			10	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =8A ; V <sub>CE</sub> =4V	15		60	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =16A ; V <sub>CE</sub> =4V	4			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =4V		0.8		MHz

PACKAGE OUTLINE

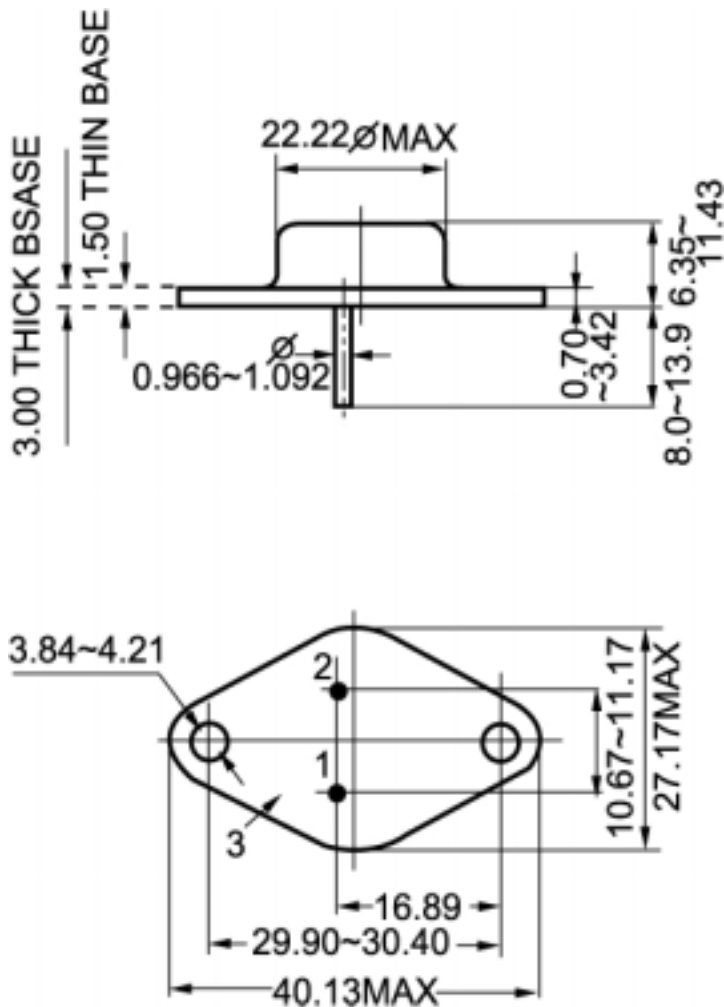


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$ mm)