

Silicon NPN Power Transistors

2N5629 2N5630

**DESCRIPTION**

- With TO-3 package
- Complement to type 2N6029 2N6030

**APPLICATIONS**

- For high voltage and high power amplifier applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

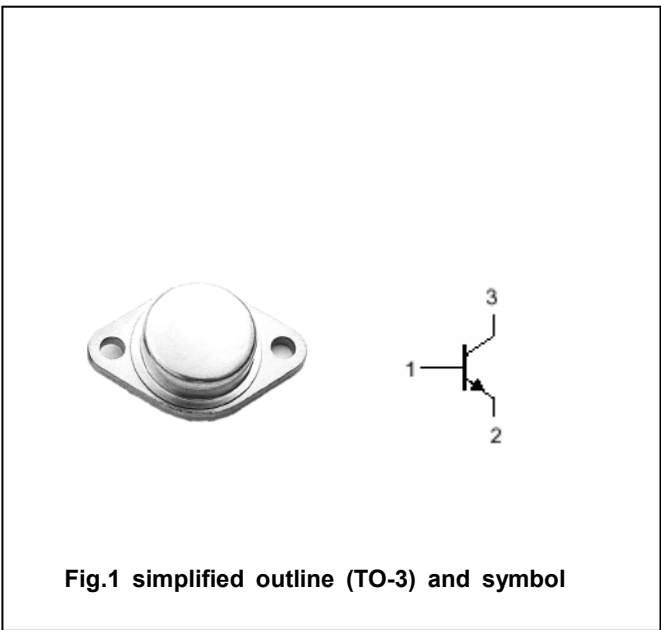


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N5629	100	V
		2N5630	120	
V <sub>CEO</sub>	Collector-emitter voltage	2N5629	100	V
		2N5630	120	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		16	A
I <sub>CM</sub>	Collector current-peak		20	A
I <sub>B</sub>	Base current		5.0	A
P <sub>D</sub>	Total Power Dissipation	T <sub>C</sub> =25□	200	W
T <sub>j</sub>	Junction temperature		200	□
T <sub>stg</sub>	Storage temperature		-65~200	□

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	0.875	□/W

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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	2N5629	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	100			V
		2N5630		120			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =10A; I <sub>B</sub> =1A			1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =16A ; I <sub>B</sub> =4A			2.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =10A; I <sub>B</sub> =1A			1.8	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =8A ; V <sub>CE</sub> =2V			1.5	V
I <sub>CBO</sub>	Collector cut-off current		V <sub>CB</sub> =ratedV <sub>CBO</sub> ; I <sub>E</sub> =0			1.0	mA
I <sub>CEO</sub>	Collector cut-off current	2N5629	V <sub>CE</sub> =50V; I <sub>B</sub> =0			1.0	mA
		2N5630	V <sub>CE</sub> =60V; I <sub>B</sub> =0				
I <sub>CEV</sub>	Collector cut-off current		V <sub>CE</sub> =ratedV <sub>CB</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150°C			1.0 5.0	mA
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =7V; I <sub>C</sub> =0			1.0	mA
h <sub>FE-1</sub>	DC current gain	2N5629	I <sub>C</sub> =8A ; V <sub>CE</sub> =2V	25		100	
		2N5630		20		80	
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =16A ; V <sub>CE</sub> =2V	4			
C <sub>OB</sub>	Output capacitance		I <sub>E</sub> =0 ; V <sub>CB</sub> =10V ; f=0.1MHz			500	pF
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =1A ; V <sub>CE</sub> =20V	1.0			MHz

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PACKAGE OUTLINE

