

Silicon PNP Power Transistors

2SA1072 2SA1073

DESCRIPTION

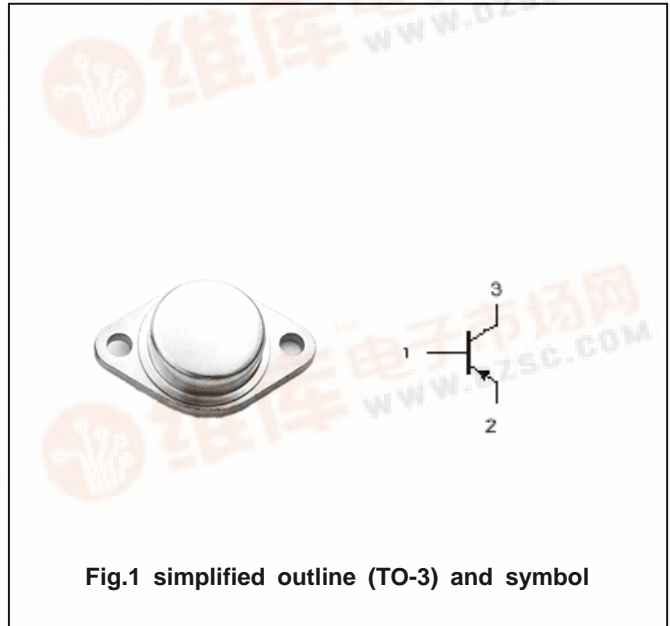
- With TO-3 package
- Complement to type 2SC2522/2523
- Excellent safe operating area
- Fast switching speed

APPLICATIONS

- High frequency power amplifier
- Audio power amplifiers
- Switching regulators
- DC-DC converters

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Absolute maximum ratings(Ta=°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2SA1072	-120	V
		2SA1073	-160	
V <sub>CEO</sub>	Collector-emitter voltage	2SA1072	-120	V
		2SA1073	-160	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-7	V
I <sub>C</sub>	Collector current		-12	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	120	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SA1072	I <sub>C</sub> =-1mA ; R <sub>BE</sub> =∞	-120			V
		2SA1073		-160			
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	2SA1072	I <sub>C</sub> =-50 μ A ; I <sub>E</sub> =0	-120			V
		2SA1073		-160			
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-50 μ A ; I <sub>C</sub> =0	-7			V	
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A ; I <sub>B</sub> =-0.5A		-0.9	-1.8	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-5A ; V <sub>CE</sub> =-5V		-1.25	-1.7	V	
I <sub>CBO</sub>	Collector cut-off current	2SA1072	V <sub>CB</sub> =-120V ; I <sub>E</sub> =0			-50	μ A
		2SA1073		V <sub>CB</sub> =-160V ; I <sub>E</sub> =0			
I <sub>CEO</sub>	Collector cut-off current	2SA1072	V <sub>CE</sub> =-120V ; R <sub>BE</sub> =∞			-1	mA
		2SA1073		V <sub>CE</sub> =-160V ; R <sub>BE</sub> =∞			
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-7V ; I <sub>C</sub> =0			-50	μ A	
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V	60		200		
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-7A ; V <sub>CE</sub> =-5V	40				
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V ; f=1MHz		300		pF	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-10V ; f=10MHz		60		MHz	

## Switching times

t <sub>r</sub>	Rise time	I <sub>C</sub> =-7.5A I <sub>B1</sub> =-I <sub>B2</sub> =-0.75A ; R <sub>L</sub> =4 Ω		0.15		μ s
t <sub>stg</sub>	Storage time			0.50		μ s
t <sub>f</sub>	Fall time			0.11		μ s

PACKAGE OUTLINE

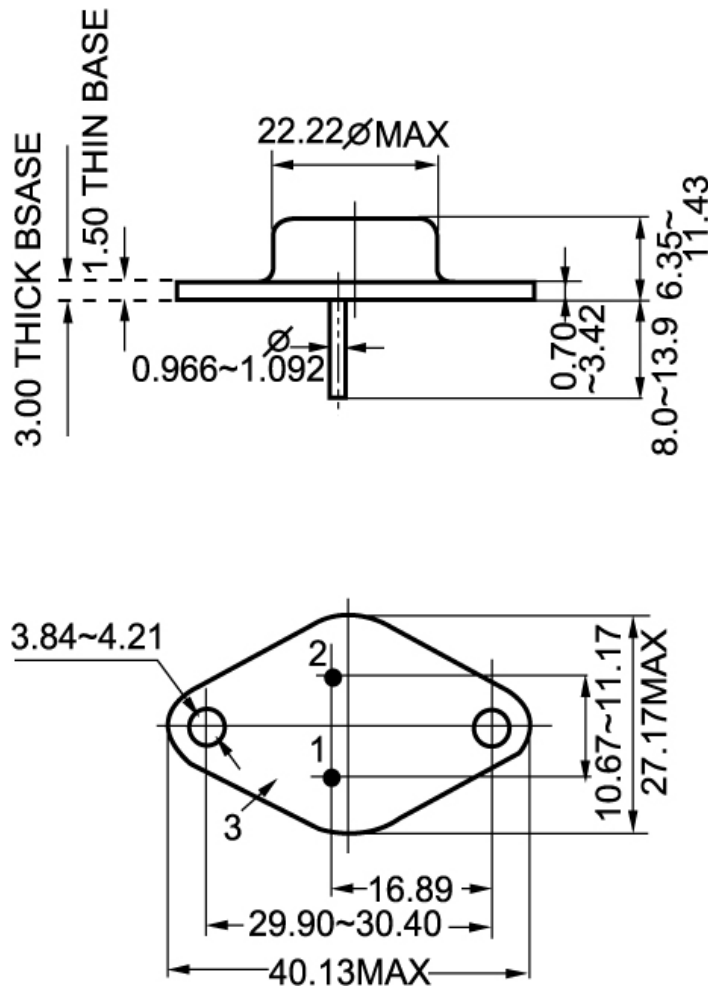


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1$ mm)