

## Silicon PNP Power Transistors

2SA1044

## DESCRIPTION

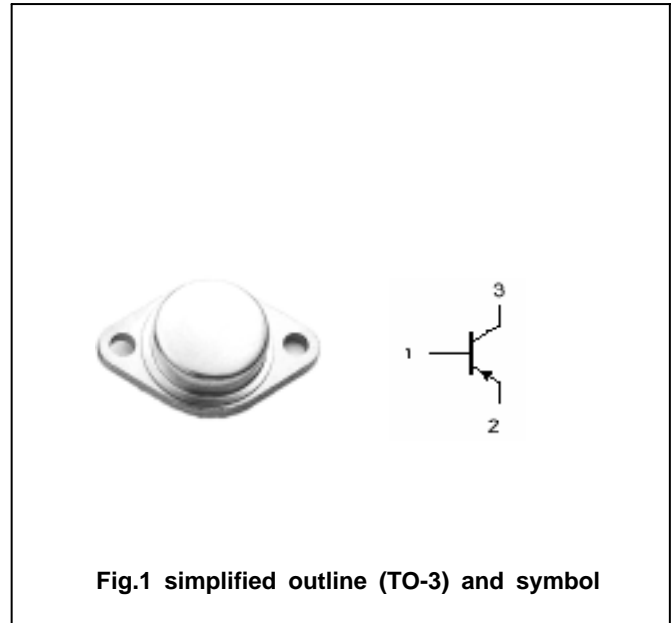
- With TO-3 package
- High transition frequency
- Excellent safe operating area

## APPLICATIONS

- Power switching applications
- High frequency power amplifier
- Switching regulators
- DC-DC converters

## PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

Absolute maximum ratings( $T_a =$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-70	V
$V_{CEO}$	Collector-emitter voltage	Open base	-70	V
$V_{EBO}$	Emitter-base voltage	Open collector	-7	V
$I_C$	Collector current		-30	A
$P_C$	Collector power dissipation	$T_C=25$	150	W
$T_j$	Junction temperature		175	
$T_{stg}$	Storage temperature		-55~200	

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-10mA ; I <sub>B</sub> =0	-70			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =-0.1mA ; I <sub>E</sub> =0	-70			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-0.1mA ; I <sub>C</sub> =0	-7			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-15A; I <sub>B</sub> =-1.5A			-1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-15A; I <sub>B</sub> =-1.5A			-2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-70V; I <sub>E</sub> =0			-50	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-7V; I <sub>C</sub> =0			-50	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-5V	35		200	
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V; f=1.0MHz		700		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-2A ; V <sub>CE</sub> =-10V		60		MHz

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PACKAGE OUTLINE



Fig.2 outline dimensions (unindicated tolerance: ± 0.1mm)