

## Silicon NPN Power Transistors

2SD424

## DESCRIPTION

- With TO-3 package
- Complement to type 2SB554
- High power dissipation
- High collector-emitter breakdown voltage  
:  $V_{CEO}=180V(\text{min})$

## APPLICATIONS

- Power amplifier applications

## PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

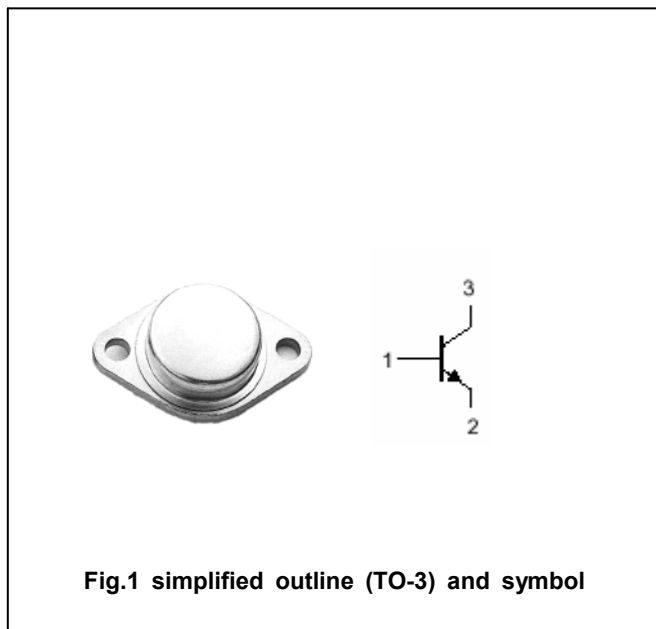


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings( $T_a=\square$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	180	V
$V_{CEO}$	Collector-emitter voltage	Open base	180	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		15	A
$I_B$	Base current		1.5	A
$P_C$	Collector power dissipation	$T_C=25\square$	150	W
$T_j$	Junction temperature		150	$\square$
$T_{stg}$	Storage temperature		-55~150	$\square$

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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	I <sub>C</sub> =0.1A ; I <sub>B</sub> =0	180			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =10mA ; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =1A			3.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =10A ; V <sub>CE</sub> =5V			2.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =90V; I <sub>E</sub> =0			0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			0.1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =5V	40		140	
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1.0MHz		300		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =2A ; V <sub>CE</sub> =5V		5		MHz

◆ h<sub>FE</sub> Classifications

R	O
40-80	70-140

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PACKAGE OUTLINE



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