

## Silicon NPN Power Transistors

2N3584

## DESCRIPTION

- With TO-66 package
- Continuous collector current- $I_C=2A$
- Power dissipation - $P_D=35W @T_C=25^\circ C$
- $V_{CE(SAT)}=0.75V(Max)@I_C=1A;I_B=0.125A$

## APPLICATIONS

- High speed switching and linear amplification
- High-voltage operational amplifiers
- Switching regulators ,converters
- Deflection stages and high fidelity amplifiers

## PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

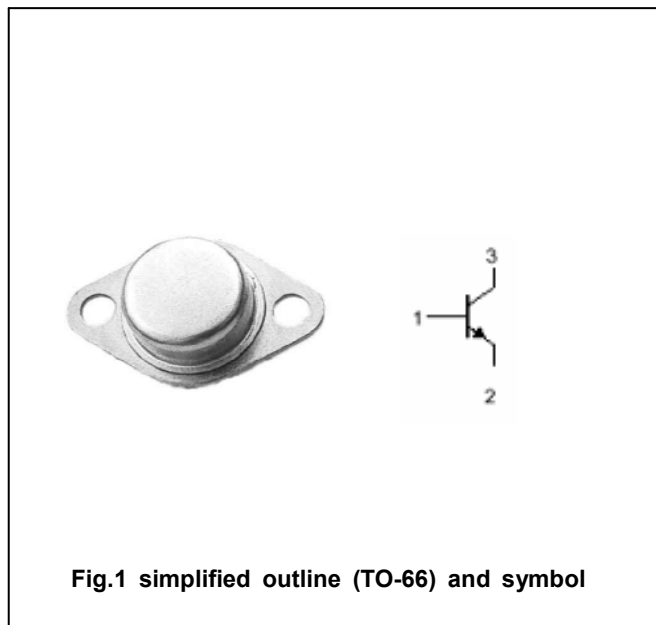


Fig.1 simplified outline (TO-66) and symbol

ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	375	V
$V_{CEO}$	Collector-emitter voltage	Open base	250	V
$V_{EBO}$	Emitter-base voltage	Open collector	6	V
$I_C$	Collector current		2	A
$I_{CM}$	Collector current-Peak		5	A
$I_B$	Base current		1	A
$P_T$	Total power dissipation	$T_C=25^\circ C$	35	W
$T_j$	Junction temperature		200	$^\circ C$
$T_{stg}$	Storage temperature		-65~200	$^\circ C$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{(th)jc}$	Thermal resistance junction to case	5.0	$^\circ C/W$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	250			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1A; I <sub>B</sub> =0.125A			0.75	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =1A ; I <sub>B</sub> =0.1A			1.4	V
V <sub>BE(on)</sub>	Base -emitter on voltage	I <sub>C</sub> =1A ; V <sub>CE</sub> =10V			1.4	V
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =340V; V <sub>BE(off)</sub> =1.5V V <sub>CE</sub> =300V; V <sub>BE(off)</sub> =1.5V ; T <sub>C</sub> =150 °C			1.0 3.0	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =150V; I <sub>B</sub> =0			5.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			0.5	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =10V	40			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =2V	8		80	
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =10V	25		100	

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PACKAGE OUTLINE



Fig.2 Outline dimensions