

## 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

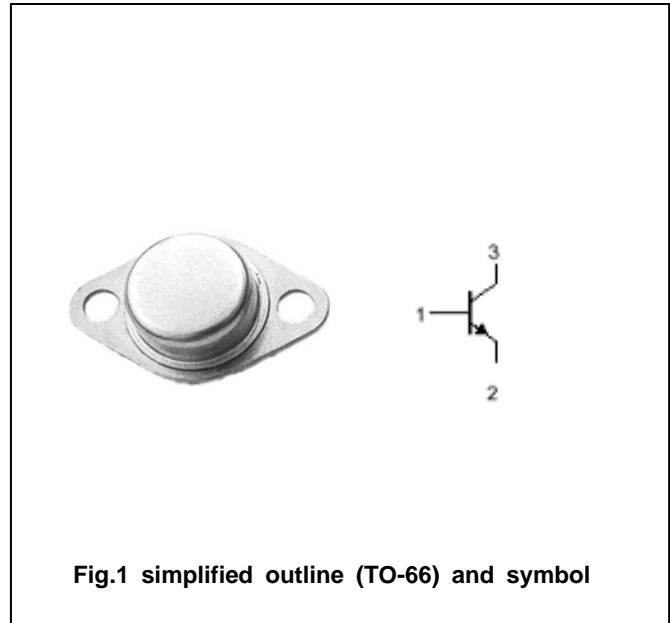


Fig.1 simplified outline (TO-66) and symbol

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

 $T_j=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.2\text{A}; I_B=0$	250			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=1\text{A}; I_B=0.125\text{A}$			0.75	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=1\text{A}; I_B=0.1\text{A}$			1.4	V
$V_{BE(on)}$	Base -emitter on voltage	$I_C=1\text{A}; V_{CE}=10\text{V}$			1.4	V
$I_{CEX}$	Collector cut-off current	$V_{CE}=340\text{V}; V_{BE(off)}=1.5\text{V}$ $V_{CE}=300\text{V}; V_{BE(off)}=1.5\text{V}; T_C=150^{\circ}\text{C}$			1.0 3.0	mA
$I_{CEO}$	Collector cut-off current	$V_{CE}=150\text{V}; I_B=0$			5.0	mA
$I_{EBO}$	Emitter cut-off current	$V_{EB}=6\text{V}; I_C=0$			0.5	mA
$h_{FE-1}$	DC current gain	$I_C=0.1\text{A}; V_{CE}=10\text{V}$	40			
$h_{FE-2}$	DC current gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	8		80	
$h_{FE-3}$	DC current gain	$I_C=1\text{A}; V_{CE}=10\text{V}$	25		100	

PACKAGE OUTLINE

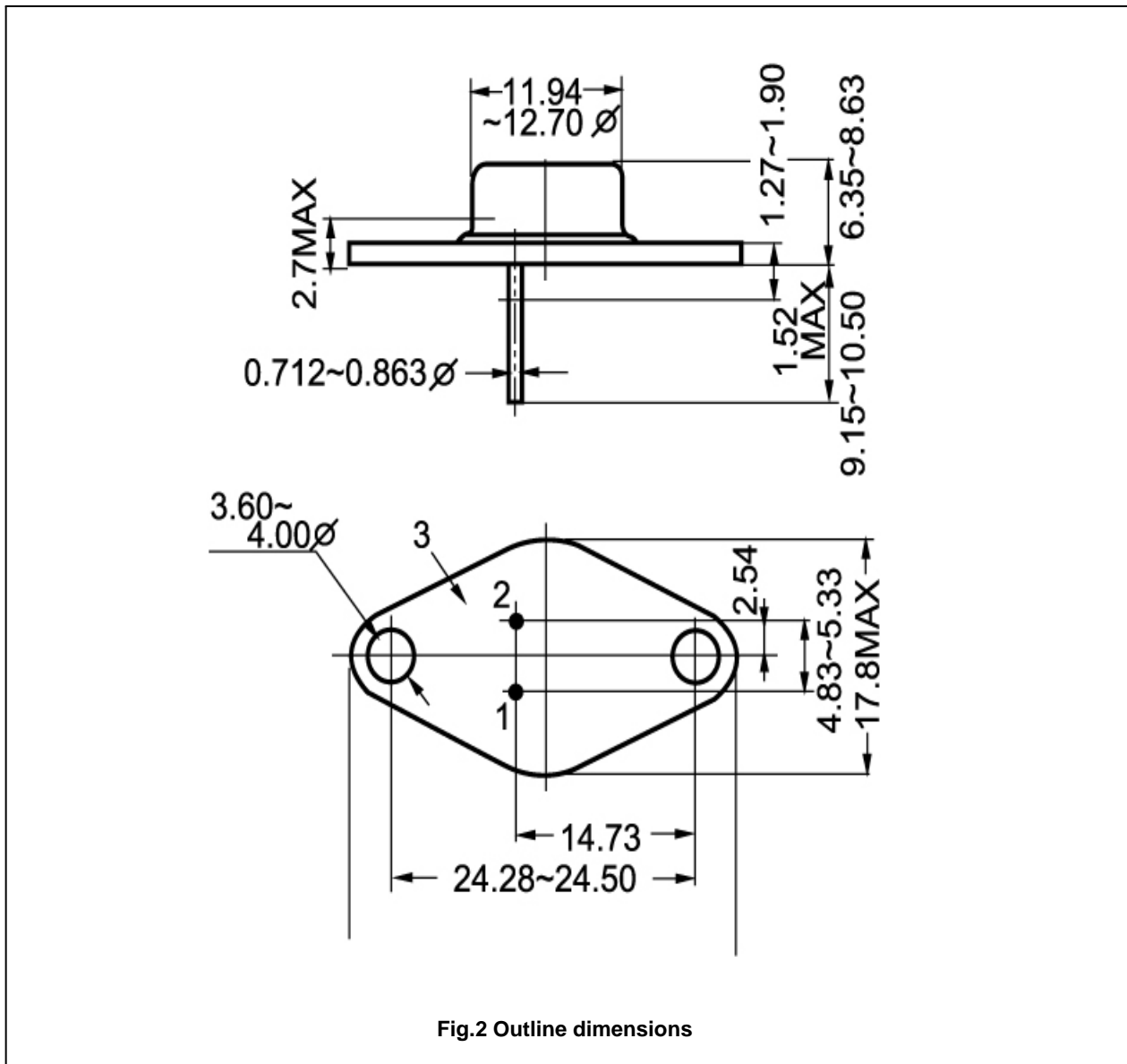


Fig.2 Outline dimensions