

## Silicon NPN Power Transistors

2SC1504

## DESCRIPTION

- With TO-66 package
- Continuous collector current- $I_C=2A$
- Power dissipation - $PD=40W$  @ $T_C=25^\circ C$

## APPLICATIONS

- High speed switching and linear amplification
- Switching regulators ,converters

## PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

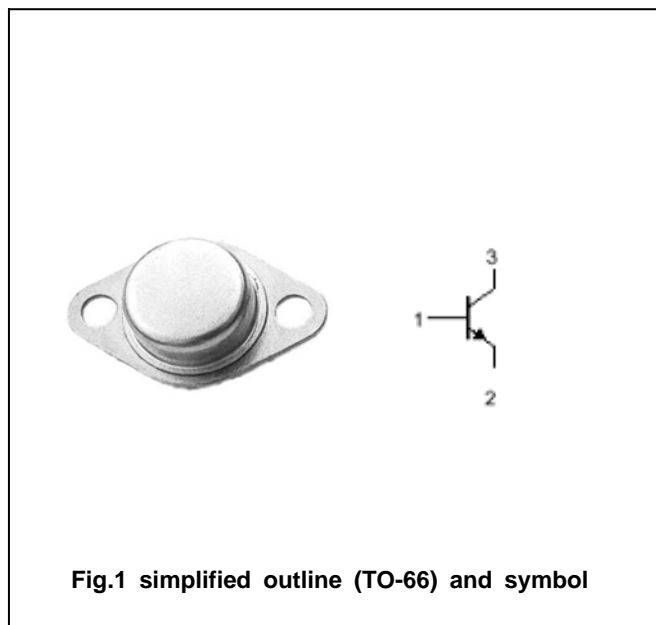


Fig.1 simplified outline (TO-66) and symbol

Absolute maximum ratings( $T_a=25^\circ C$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	400	V
$V_{CEO}$	Collector-emitter voltage	Open base	300	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	$T_C=25^\circ C$	40	W
$T_j$	Junction temperature		200	$^\circ C$
$T_{stg}$	Storage temperature		-65~200	$^\circ C$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	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>CEQ(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	300			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	6			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1A ; I <sub>B</sub> =0.1A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =1A ; I <sub>B</sub> =0.1A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =400V ; I <sub>E</sub> =0			0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V ; I <sub>C</sub> =0			0.1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =4V	20			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =10V		10		MHz

PACKAGE OUTLINE

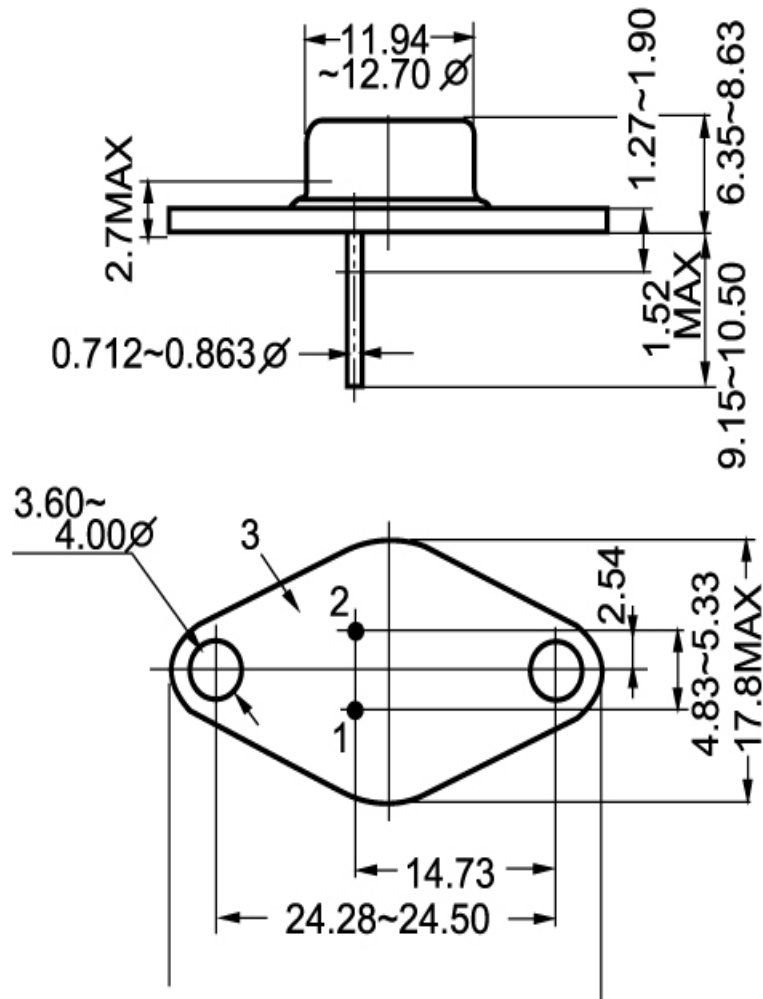


Fig.2 Outline dimensions