

Silicon PNP Power Transistors

2N3196

DESCRIPTION

- With TO-3 package
- Excellent safe operating area
- Low collector saturation voltage

APPLICATIONS

- For medium-speed switching and amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

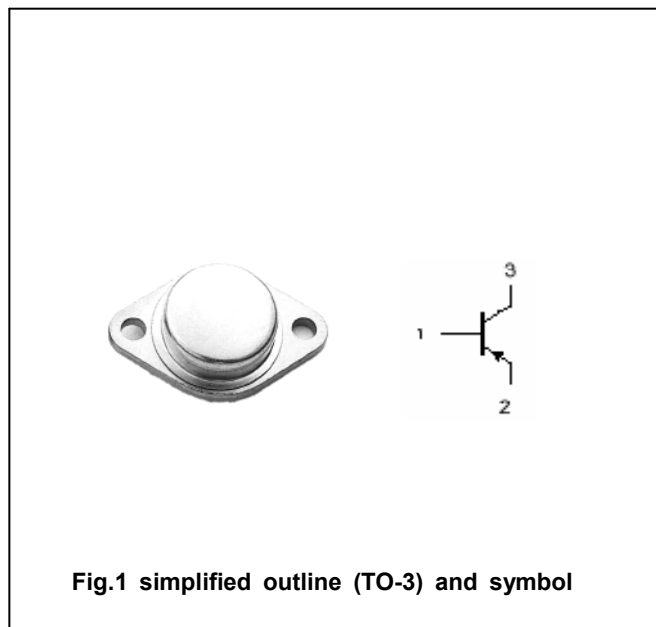


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-60	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-5	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	75	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{(th)jc}$	Thermal resistance junction to case	1.17	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=-0.2A ; I_B=0$	-60			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=-5A ; I_B=-1A$			-1.5	V
$V_{BE(on)}$	Base-emitter on voltage	$I_C=-5A ; V_{CE}=-4V$			-2.0	V
I_{CEO}	Collector cut-off current	$V_{CE}=\text{Rated } V_{CEO} ; I_B=0$			-5.0	mA
I_{CBO}	Collector cut-off current	$V_{CB}=\text{Rated } V_{CBO} ; I_E=0$			-0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=-5V ; I_C=0$			-1.0	mA
h_{FE-1}	DC current gain	$I_C=-0.3A ; V_{CE}=-4V$	30			
h_{FE-2}	DC current gain	$I_C=-3A ; V_{CE}=-4V$	15			

PACKAGE OUTLINE

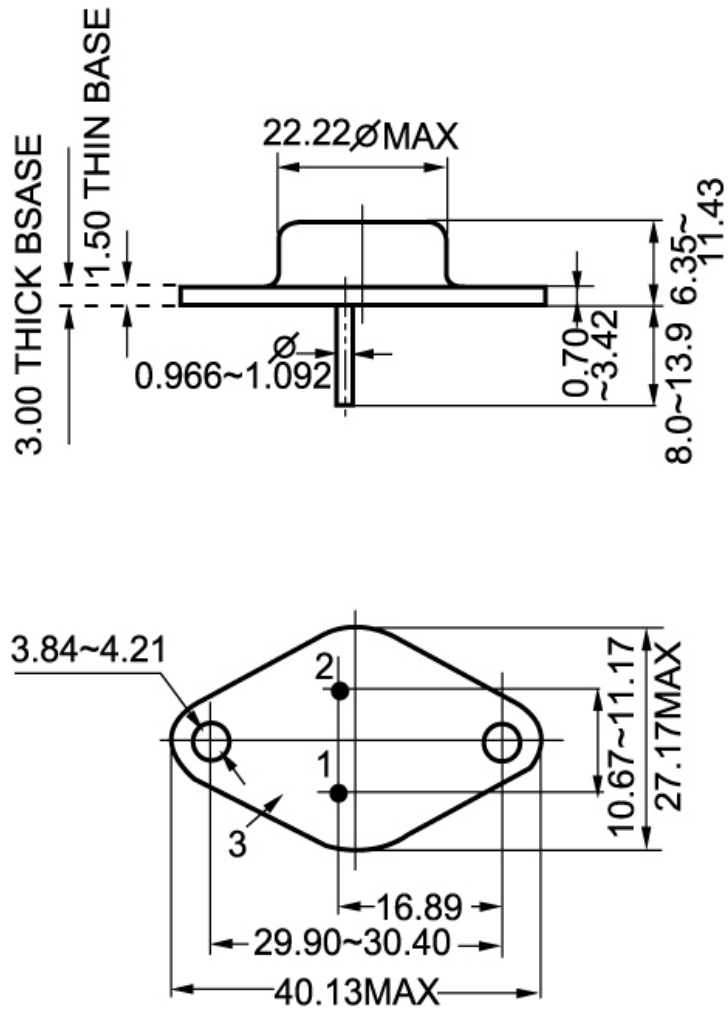


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)