

## Silicon NPN Power Transistors

2N3232

## DESCRIPTION

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

## APPLICATIONS

- For audio amplifier and power switching

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

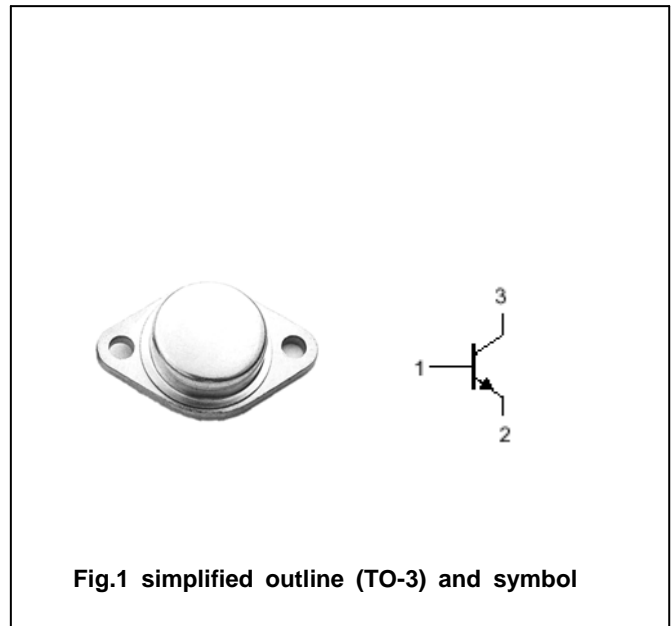


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	80	V
$V_{CEO}$	Collector-emitter voltage	Open base	60	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		7.5	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	115	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
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=30\text{mA}; I_B=0$	60			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=5\text{A}; I_B=0.5\text{A}$			1.0	V
$V_{BE(on)}$	Base-emitter on voltage	$I_C=3\text{A}; V_{CE}=4\text{V}$			1.5	V
$I_{CEO}$	Collector cut-off current	$V_{CE}=40\text{V}; I_B=0$			0.7	mA
$I_{CBO}$	Collector cut-off current	$V_{CB}=80\text{V}; I_E=0$			0.1	mA
$I_{EBO}$	Emitter cut-off current	$V_{EB}=7\text{V}; I_C=0$			0.1	mA
$h_{FE}$	DC current gain	$I_C=5\text{A}; V_{CE}=10\text{V}$	18		55	

PACKAGE OUTLINE

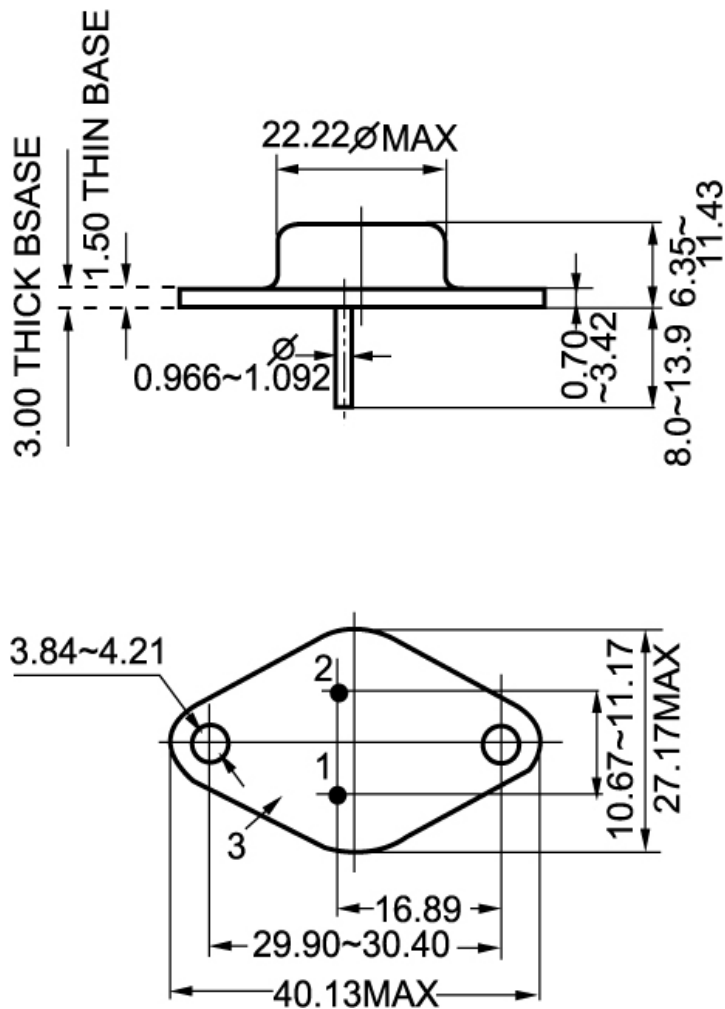


Fig.2 outline dimensions (unindicated tolerance: ±0.1mm)