

Silicon PNP Power Transistors

2SA971

DESCRIPTION

- With TO-3 package
- Excellent safe operating area

APPLICATIONS

- For high power audio ,stepping motor and other linear applications
- Relay or solenoid drivers
- DC-DC converters inverters

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

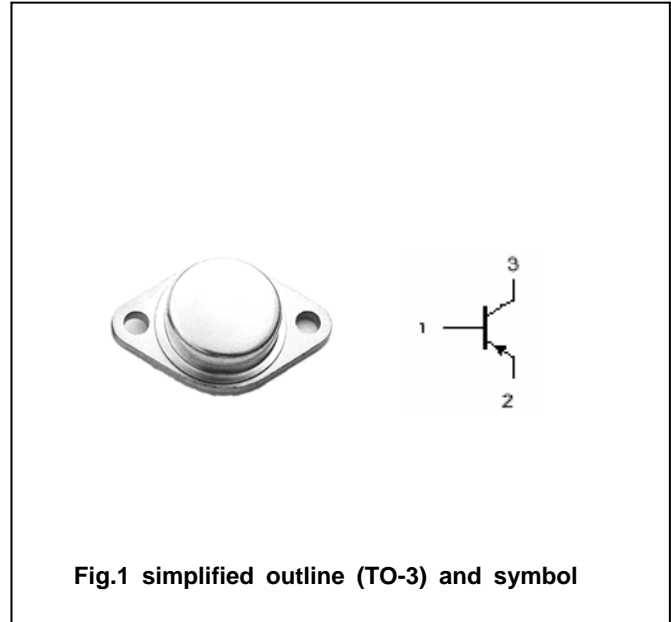


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a = ^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-150	V
V_{CEO}	Collector-emitter voltage	Open base	-150	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current		-15	A
I_B	Base current		-5	A
P_C	Collector power dissipation	$T_c = 25^\circ\text{C}$	150	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	0.98	$^\circ\text{C}/\text{W}$

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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	$I_C=-50\text{mA}$; $I_B=0$	-150			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=-1\text{mA}$; $I_E=0$	-150			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=-1\text{mA}$; $I_C=0$	-6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=-10\text{A}$; $I_B=-1\text{A}$			-3.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=-150\text{V}$; $I_E=0$			-0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=-6\text{V}$; $I_C=0$			-0.1	mA
h_{FE}	DC current gain	$I_C=-5\text{A}$; $V_{CE}=-4\text{V}$	30			
C_{OB}	Collector output capacitance	$I_E=0$; $V_{CB}=-10\text{V}$; $f=1\text{MHz}$		270		pF
f_T	Transition frequency	$I_C=-0.5\text{A}$; $V_{CE}=-10\text{V}$		10		MHz

PACKAGE OUTLINE

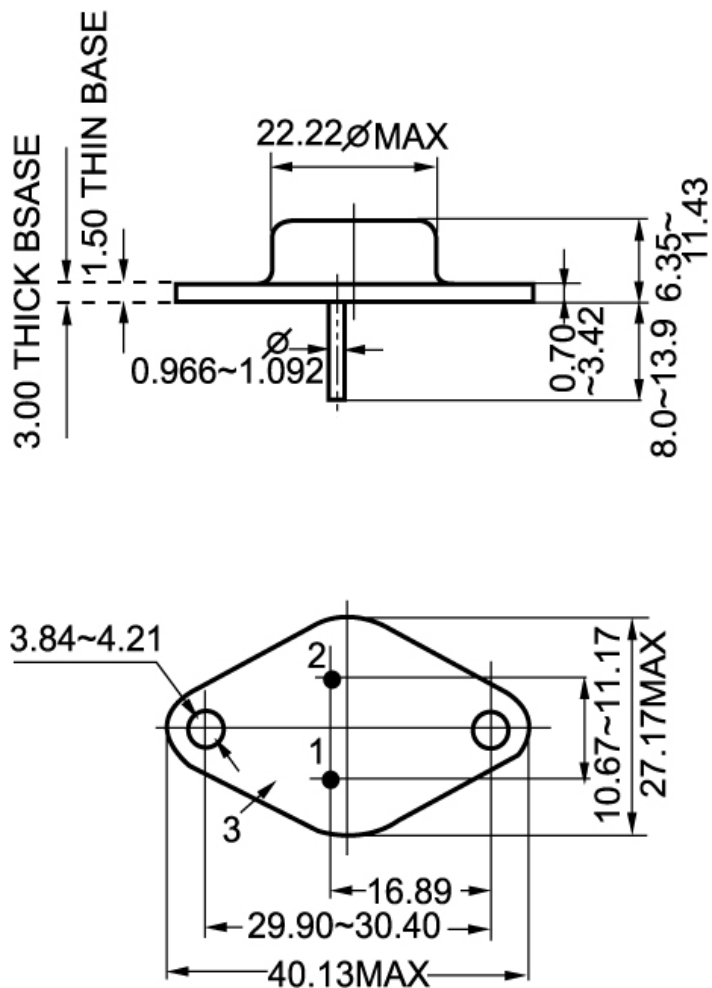


Fig.2 outline dimensions (unindicated tolerance: ±0.1mm)