

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

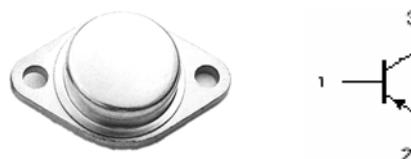


Fig.1 simplified outline (TO-3) and symbol

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	$^\circ\text{C/W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =-50mA ; I _B =0	-150			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-1mA ; I _E =0	-150			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-1mA ; I _C =0	-6			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-10A; I _B =-1A			-3.0	V
I _{CBO}	Collector cut-off current	V _{CB} =-150V; I _E =0			-0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =-6V; I _C =0			-0.1	mA
h _{FE}	DC current gain	I _C =-5A ; V _{CE} =-4V	30			
C _{OB}	Collector output capacitance	I _E =0 ; V _{CB} =-10V; f=1MHz		270		pF
f _T	Transition frequency	I _C =-0.5A ; V _{CE} =-10V		10		MHz

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PACKAGE OUTLINE

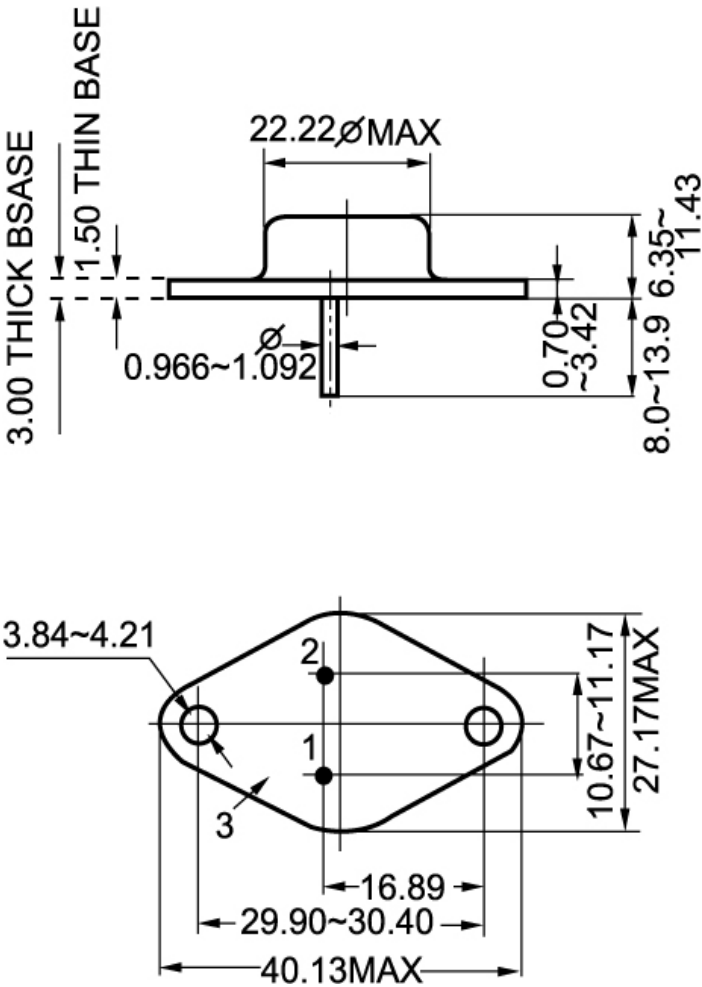


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)