

Silicon NPN Power Transistors

2N5970

DESCRIPTION

- With TO-3 package
- Low-collector emitter saturation voltage

APPLICATIONS

- Designed for general-purpose power amplifier and switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

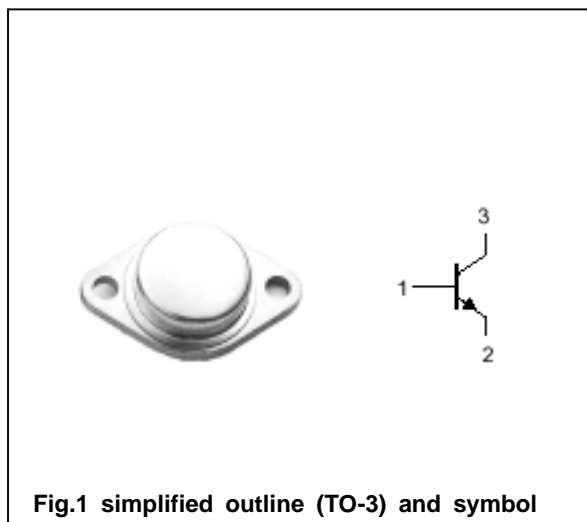


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a =$)

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	5	V
I_C	Collector current		15	A
I_{CM}	Collector current-peak		30	A
I_B	Base current		5	A
P_D	Total Power Dissipation	$T_C=25$	150	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R_{th-j-c}	Thermal resistance junction to case	1.1	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	60			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =7A ; I _B =0.7A			1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =15A ; I _B =3.75A			4.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =15A ; I _B =3.75A			2.5	V
I _{CEO}	Collector cut-off current	V _{CE} =30V ; I _B =0			1.0	mA
I _{CEV}	Collector cut-off current	V _{CE} =80V ; V _{BE(off)} =1.5V T _C =150			0.5 5.0	mA
I _{CBO}	Emitter cut-off current	V _{CB} =80V ; I _E =0			0.5	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V ; I _C =0			1.0	mA
h _{FE-1}	DC current gain	I _C =5A ; V _{CE} =1.5V	20		60	
h _{FE-2}	DC current gain	I _C =15A ; V _{CE} =4V	4			
f _T	Transition frequency	I _C =1A ; V _{CE} =10V	4			MHz

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PACKAGE OUTLINE

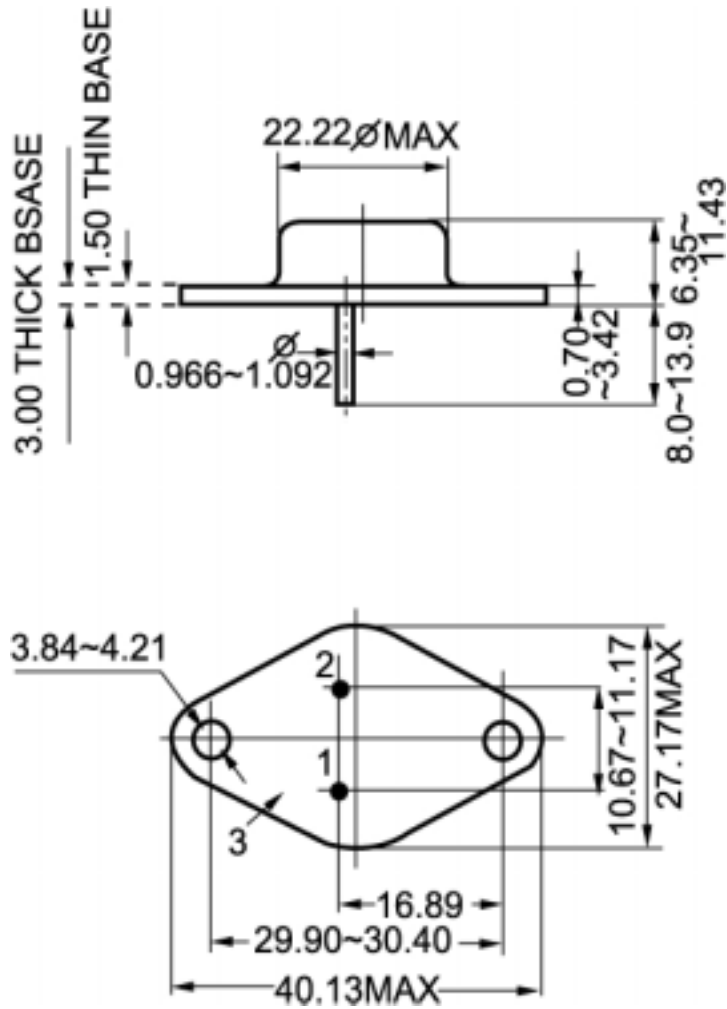


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)