

Silicon NPN Power Transistors

2N3446

DESCRIPTION

- With TO-3 package
- Excellent safe operating area

APPLICATIONS

- Designed for medium-switching and amplifier applications.

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

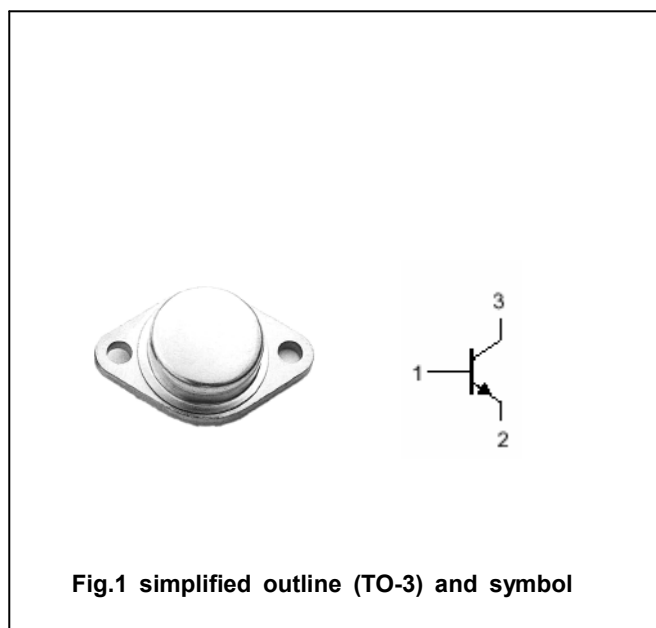


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =30mA ; I _B =0	100			V
V _{CE(sat)-1}	Collector-emitter saturation voltage	I _C =3A; I _B =0.3A			1.2	V
V _{CE(sat)-2}	Collector-emitter saturation voltage	I _C =7A; I _B =1.5A			3.0	V
V _{BE(on)}	Base-emitter on voltage	I _C =3A ; V _{CE} =5V			1.5	V
I _{CEO}	Collector cut-off current	V _{CE} =100V; I _B =0			0.7	mA
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			0.1	mA
h _{FE-1}	DC current gain	I _C =3A ; V _{CE} =5V	20		60	
h _{FE-2}	DC current gain	I _C =7A ; V _{CE} =5V	4			

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PACKAGE OUTLINE

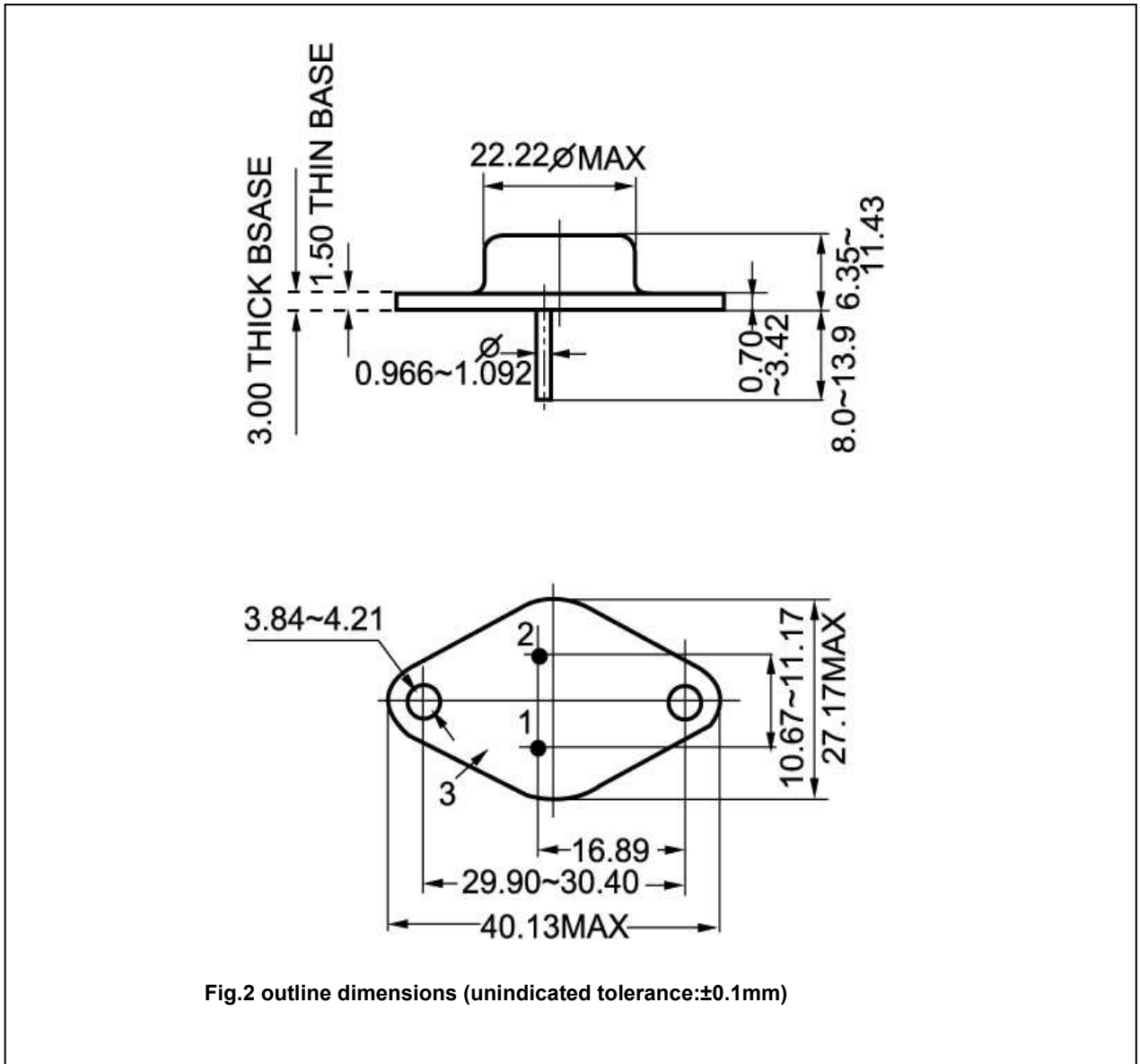


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)