

Silicon NPN Power Transistors

2N3442

DESCRIPTION

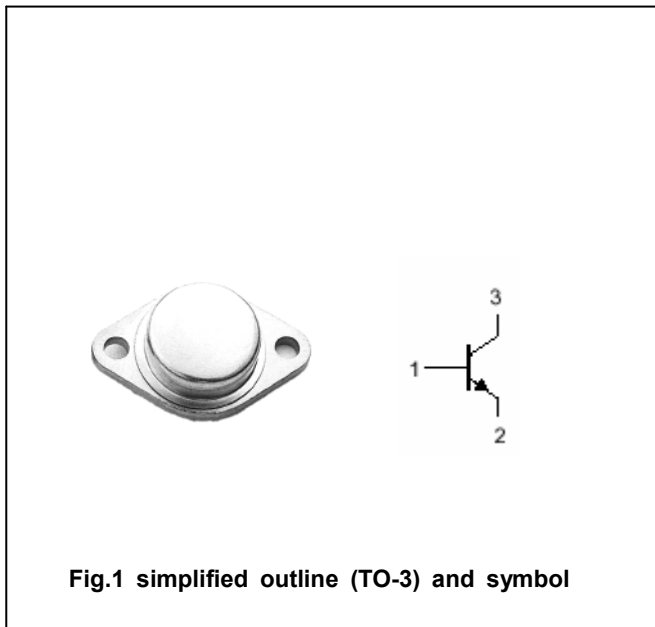
- With TO-3 package
- Excellent safe operating area

APPLICATIONS

- For industrial and commercial equipment including high fidelity audio amplifiers, series and shunt regulators and power switches applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	160	V
V _{CEO}	Collector-emitter voltage	Open base	140	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		10	A
I _{CM}	Collector current-peak		15	A
P _C	Collector power dissipation	T _C =25°C	117	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{(th) jc}	Thermal resistance junction to case	1.5	°C/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A ; I _B =0	140			V
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =10A ; I _B =2A			5.0	V
V _{BE(on)}	Base-emitter on voltage	I _C =10A ; V _{CE} =4V			5.7	V
I _{CEO}	Collector cut-off current	V _{CE} =140V ; I _B =0			200	mA
I _{CEX}	Collector cut-off current	V _{CE} =140V ; V _{BE(off)} =1.5V T _C =150°C			5.0 30	mA
I _{EBO}	Emitter cut-off current	V _{EB} =7V ; I _C =0			5.0	mA
h _{FE-1}	DC current gain	I _C =3A ; V _{CE} =4V	20		70	
h _{FE-2}	DC current gain	I _C =10A ; V _{CE} =4V	7.5			
f _T	Transition frequency	I _C =2.0A ; V _{CE} =4V ; f _t =40kHz	80			kHz

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PACKAGE OUTLINE

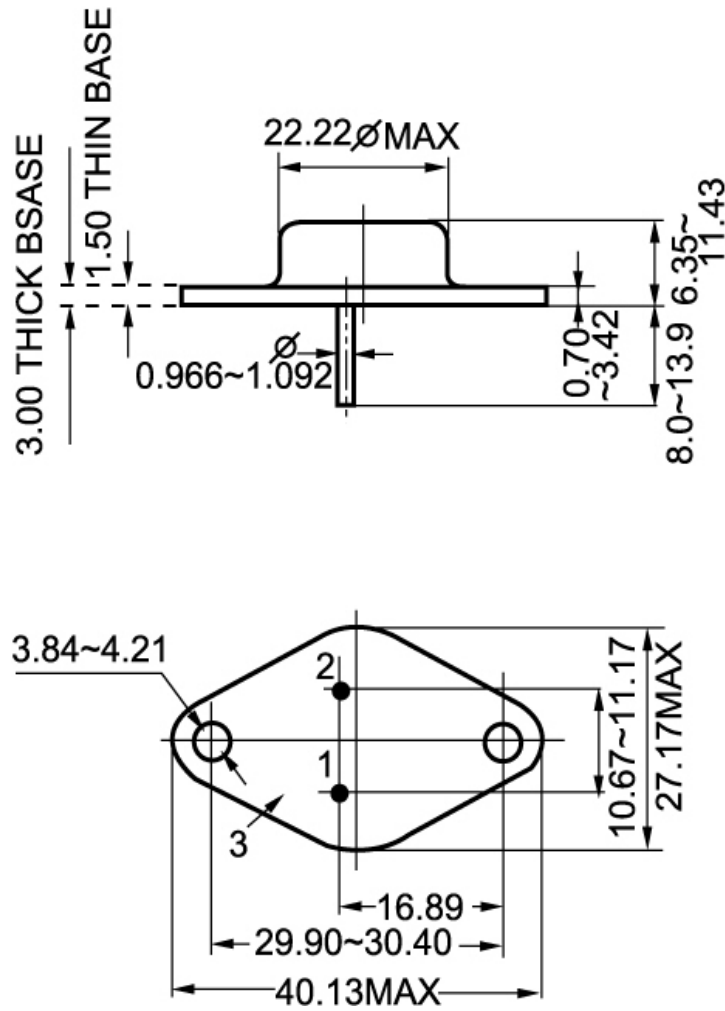


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)