

Silicon NPN Power Transistors

MJ413

DESCRIPTION

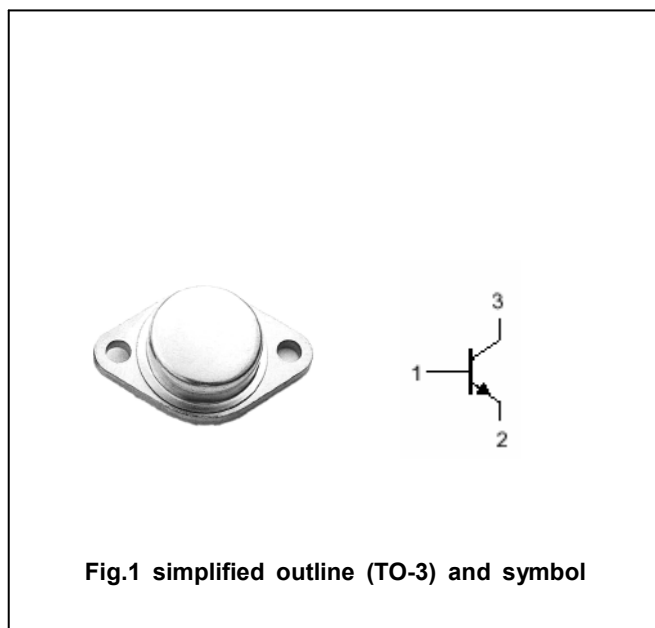
- With TO-3 package
- High voltage

APPLICATIONS

- Designed for medium-to-high voltage
Inverters, converters, regulators and
switching circuits

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	400	V
V_{CEO}	Collector-emitter voltage	Open base	325	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		10	A
I_B	Base current		2	A
P_D	Total power dissipation	$T_C=25^\circ\text{C}$	125	W
T_j	Junction temperature		-65~150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.0	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	325			V
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =0.5A; I _B =50mA			0.8	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =0.5A; I _B =50mA			1.25	V
I _{CEX}	Collector cut-off current	V _{CE} =400V; V _{EB(off)} =1.5V T _C =125°C			0.25 0.5	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			5.0	mA
h _{FE-1}	DC current gain	I _C =0.5A ; V _{CE} =5V	20		80	
h _{FE-2}	DC current gain	I _C =1A ; V _{CE} =5V	15			
f _T	Transition frequency	I _C =0.2A ; V _{CE} =10V; f=1.0MHz	2.5			MHz

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PACKAGE OUTLINE

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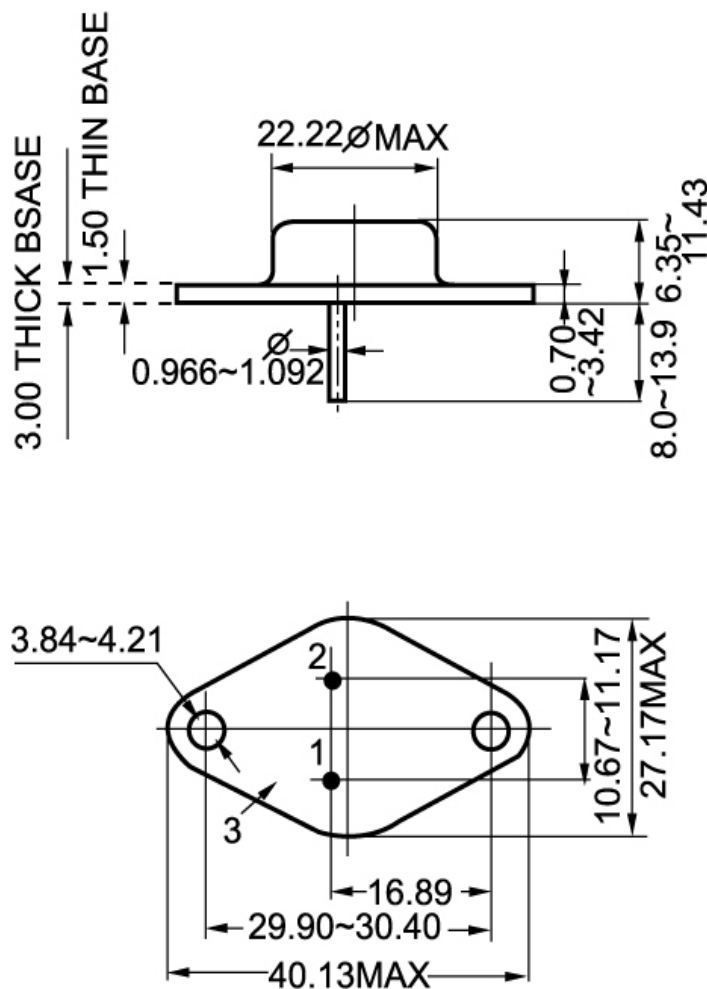


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)