

## Silicon NPN Power Transistors

MJ410

## DESCRIPTION

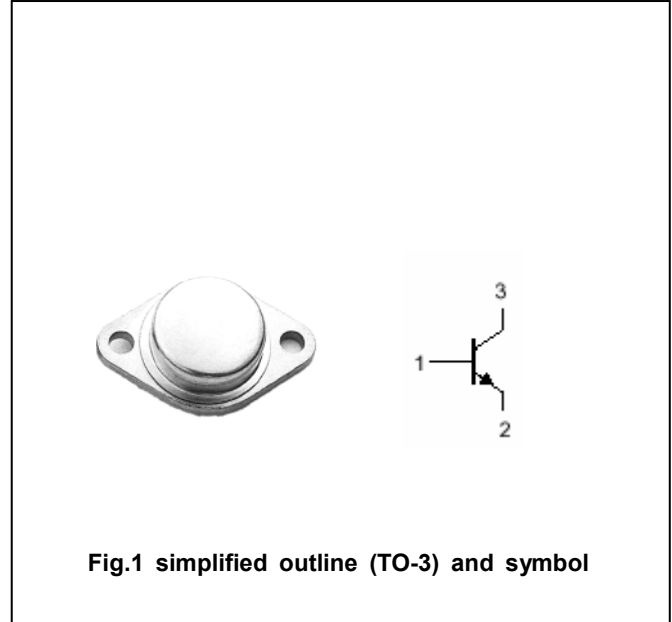
- With TO-3 package
- High collector-emitter voltage
- Low collector saturation voltage

## 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	200	V
$V_{CEO}$	Collector-emitter voltage	Open base	200	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		5	A
$I_{CM}$	Collector current-peak		10	A
$I_B$	Base current		2	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	100	W
$T_j$	Junction temperature		-65~150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	0.75	$^\circ\text{C}/\text{W}$

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.1A ; I <sub>B</sub> =0	200			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			0.8	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =1A; I <sub>B</sub> =0.1A			1.2	V
I <sub>CEX</sub>	Collector cut-off current	V <sub>CB</sub> =100V; V <sub>EB</sub> =-1.5V; T <sub>C</sub> =125°C			0.5	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =200V; I <sub>B</sub> =0			0.25	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			5.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	30		90	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =5V	10			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.2A ; V <sub>CE</sub> =10V; f=1.0MHz	2.5			MHz

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PACKAGE OUTLINE

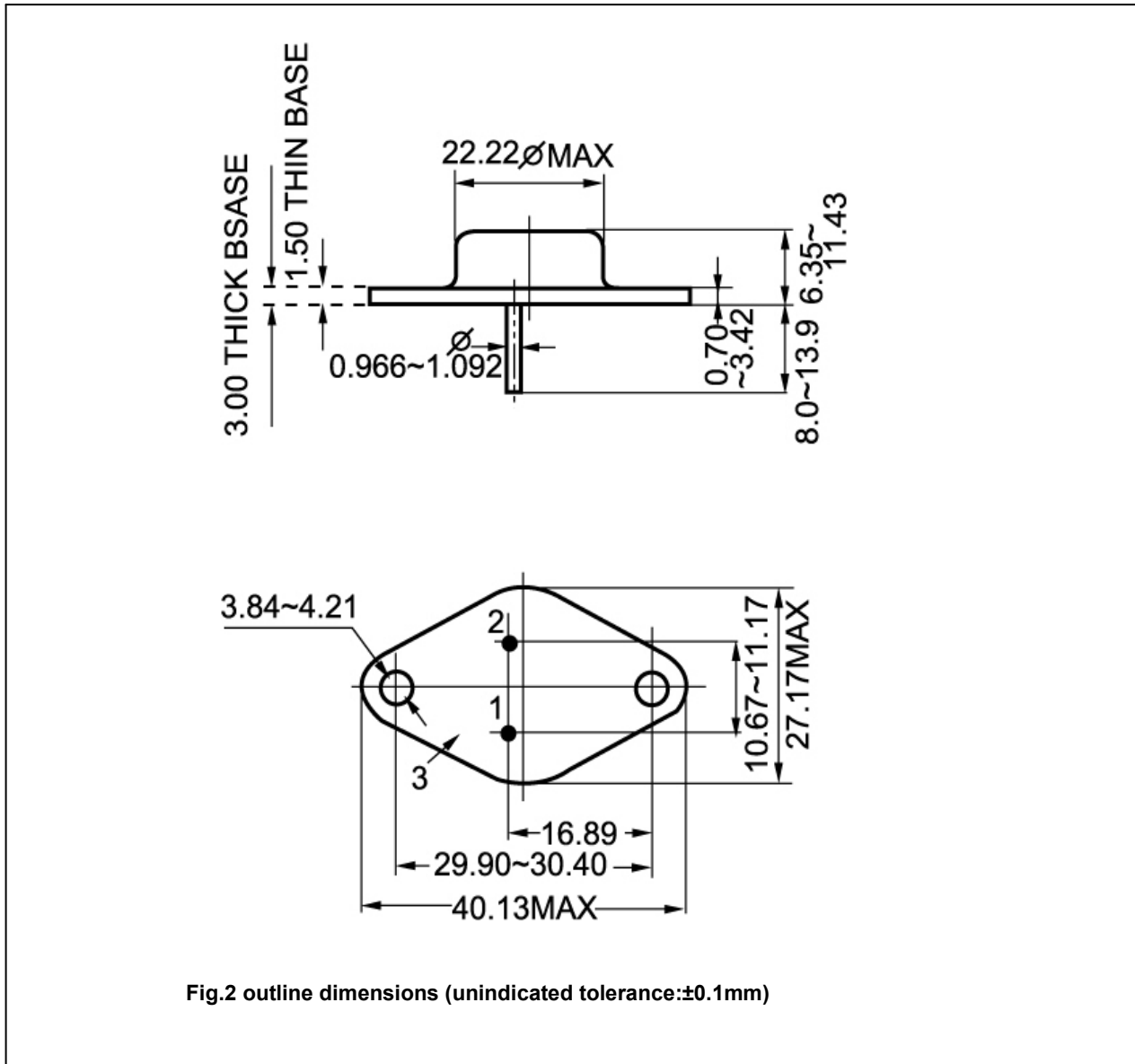


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)