

## Silicon NPN Power Transistors

2SC3043

## DESCRIPTION

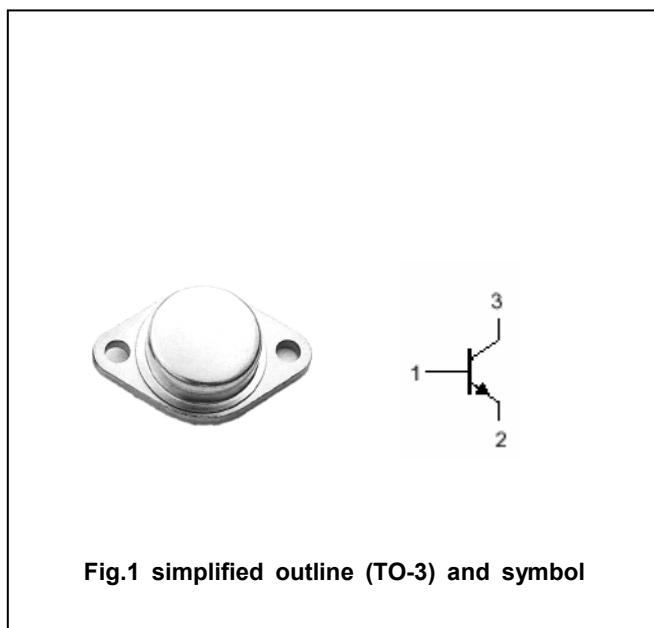
- With TO-3 package
- Fast switching speed
- Wide area of safe operation
- High breakdown voltage

## APPLICATIONS

- For switching regulator applications

## 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	500	V
$V_{CEO}$	Collector-emitter voltage	Open base	400	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		12	A
$I_{CP}$	Collector current-pulse	$PW \leq 300\mu\text{s}, \text{Duty cycle} \leq 10\%$	25	A
$I_B$	Base current		4	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	120	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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## CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA ; R_{BE}=\infty$	400			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1mA ; I_E=0$	500			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA ; I_C=0$	7			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=8A ; I_B=1.6A$			1.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=8A ; I_B=1.6A$			1.5	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=400V ; I_E=0$			10	$\mu A$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5V ; I_C=0$			10	$\mu A$
$h_{FE-1}$	DC current gain	$I_C=1.6A ; V_{CE}=5V$	15			
$h_{FE-2}$	DC current gain	$I_C=8A ; V_{CE}=5V$	8			
$f_T$	Transition frequency	$I_C=1.6A ; V_{CE}=10V$		20		MHz
$C_{ob}$	Output capacitance	$I_E=0 ; V_{CB}=10V, f=1MHz$		160		pF

PACKAGE OUTLINE

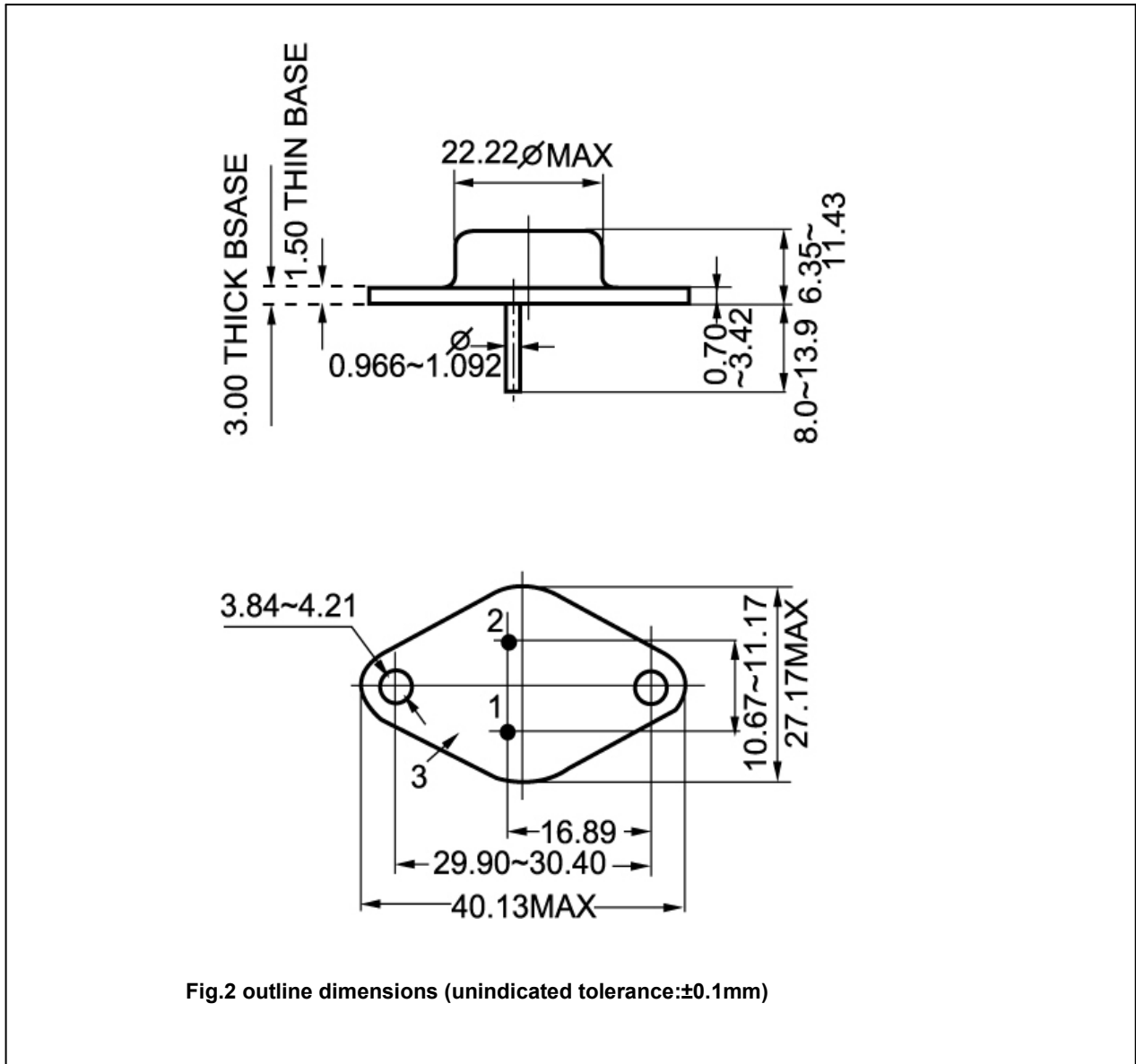


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)