

Silicon NPN Power Transistors

2SC3043

DESCRIPTION

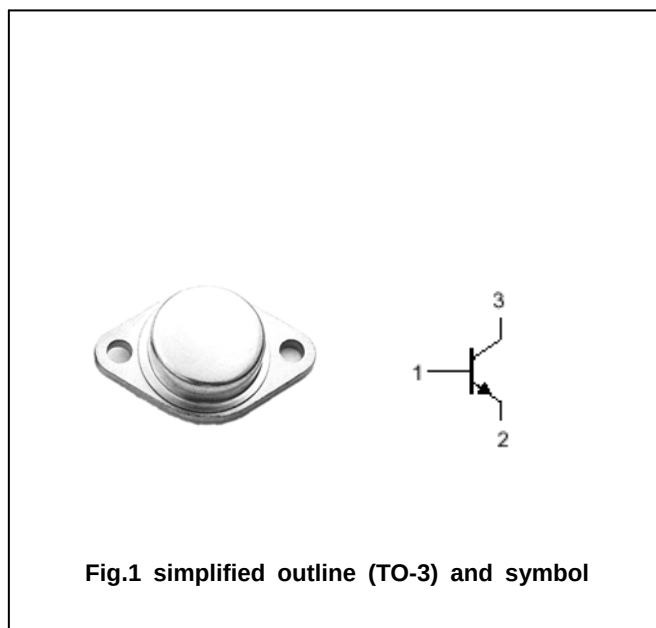
- With TO-3 package
- Fast switching speed
- Wide area of safe operation
- High breakdown voltage

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	$PW \leq 300 \mu s, \text{Duty cycle} \leq 10\%$	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	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V ; I_C=0$			10	μA
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

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PACKAGE OUTLINE

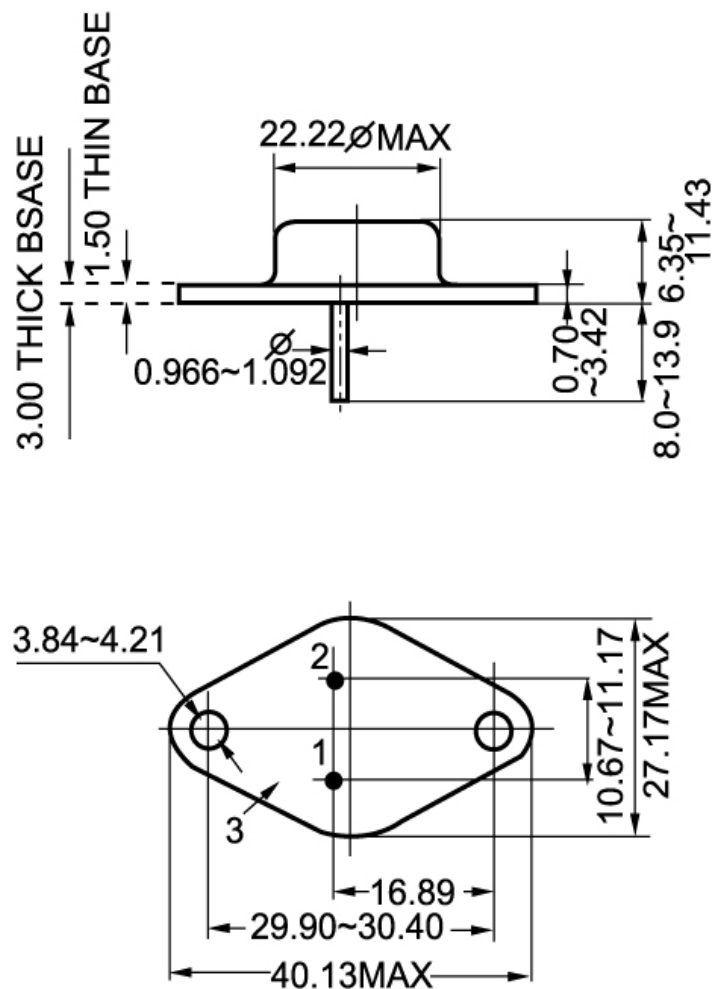


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)