

## Silicon NPN Power Transistors

2SC4687

## DESCRIPTION

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

## APPLICATIONS

- For switching regulator applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

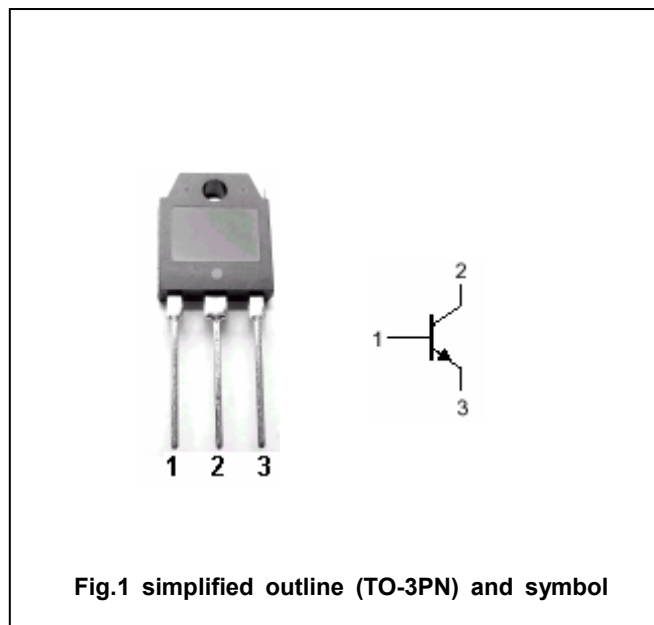


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )

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		7	A
$I_{CM}$	Collector current-peak		14	A
$I_B$	Base current		3	A
$P_C$	Collector power dissipation	$T_a=25^\circ\text{C}$	2.5	W
		$T_C=25^\circ\text{C}$	60	
$T_j$	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	$I_C=5mA ; I_B=0$	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
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=3A ; I_B=0.6A$			1.0	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=3A ; I_B=0.6A$			1.5	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=500V ; I_E=0$			100	$\mu A$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=7V ; I_C=0$			100	$\mu A$
$h_{FE-1}$	DC current gain	$I_C=0.1A ; V_{CE}=5V$	15			
$h_{FE-2}$	DC current gain	$I_C=3A ; V_{CE}=5V$	8			
$f_T$	Transition frequency	$I_C=0.5A ; V_{CE}=10V$		30		MHz

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PACKAGE OUTLINE

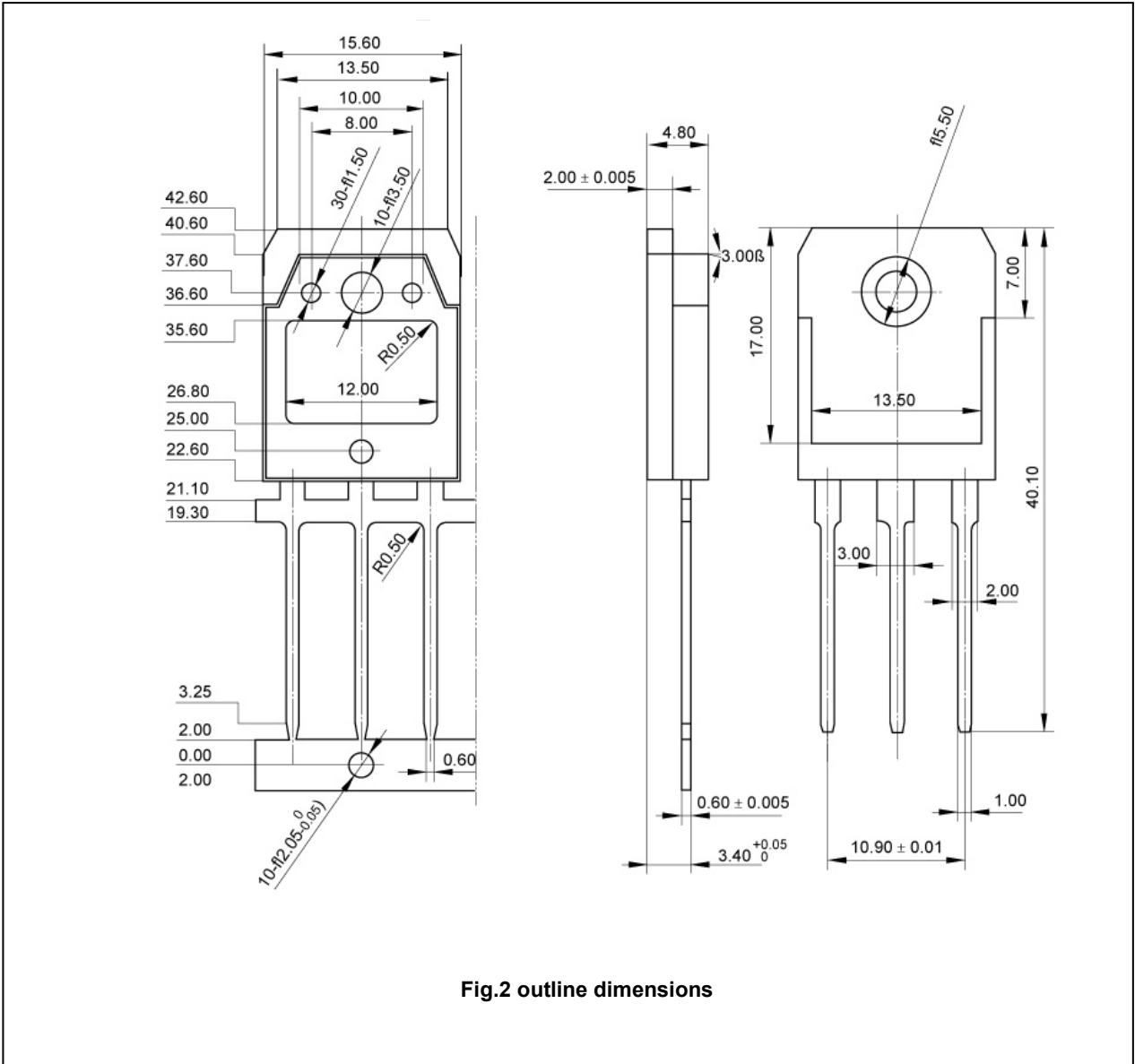


Fig.2 outline dimensions