

## Silicon PNP Power Transistors

## TIP34/34A/34B/34C

## DESCRIPTION

- With TO-3PN package
- Complement to type TIP33/33A/33B/33C
- DC current gain  $h_{FE}=40(\text{Min})@I_C=1.0\text{A}$

## APPLICATIONS

- Designed for use in general purpose power amplifier and switching applications.

## PINNING

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

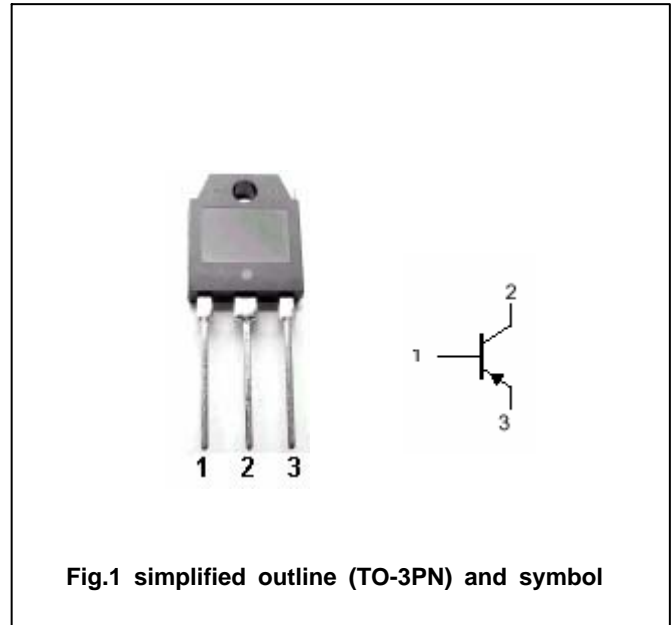


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings( $T_a=$  )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
$V_{CBO}$	Collector-base voltage	Open emitter	TIP34	-40	V
			TIP34A	-60	
			TIP34B	-80	
			TIP34C	-100	
$V_{CEO}$	Collector-emitter voltage	Open base	TIP34	-40	V
			TIP34A	-60	
			TIP34B	-80	
			TIP34C	-100	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V	
$I_C$	Collector current		-10	A	
$I_{CM}$	Collector current-peak		-15	A	
$I_B$	Base current		-3	A	
$P_C$	Collector power dissipation	$T_C=25$	80	W	
$T_j$	Junction temperature		150		
$T_{stg}$	Storage temperature		-65~150		

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.56	/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	TIP34	I <sub>C</sub> =-30mA ; I <sub>B</sub> =0	-40			V
		TIP34A		-60			
		TIP34B		-80			
		TIP34C		-100			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-3A ; I <sub>B</sub> =-0.3A			-1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-10A ; I <sub>B</sub> =-2.5A			-4.0	V
V <sub>BE-1</sub>	Base-emitter on voltage		I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V			-1.6	V
V <sub>BE-2</sub>	Base-emitter on voltage		I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V			-3.0	V
I <sub>CEO</sub>	Collector cut-off current	TIP34/34A	V <sub>CE</sub> =-30V ; I <sub>B</sub> =0			-0.7	mA
		TIP34B/34C	V <sub>CE</sub> =-60V ; I <sub>B</sub> =0				
I <sub>CES</sub>	Collector cut-off current	TIP34	V <sub>CE</sub> =-40V ; V <sub>EB</sub> =0			-0.4	mA
		TIP34A	V <sub>CE</sub> =-60V ; V <sub>EB</sub> =0				
		TIP34B	V <sub>CE</sub> =-80V ; V <sub>EB</sub> =0				
		TIP34C	V <sub>CE</sub> =-100V ; V <sub>EB</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-5V ; I <sub>C</sub> =0			-1.0	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-1A ; V <sub>CE</sub> =-4V	40			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V	20		100	
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V ; f=1MHz	3.0			MHz

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PACKAGE OUTLINE

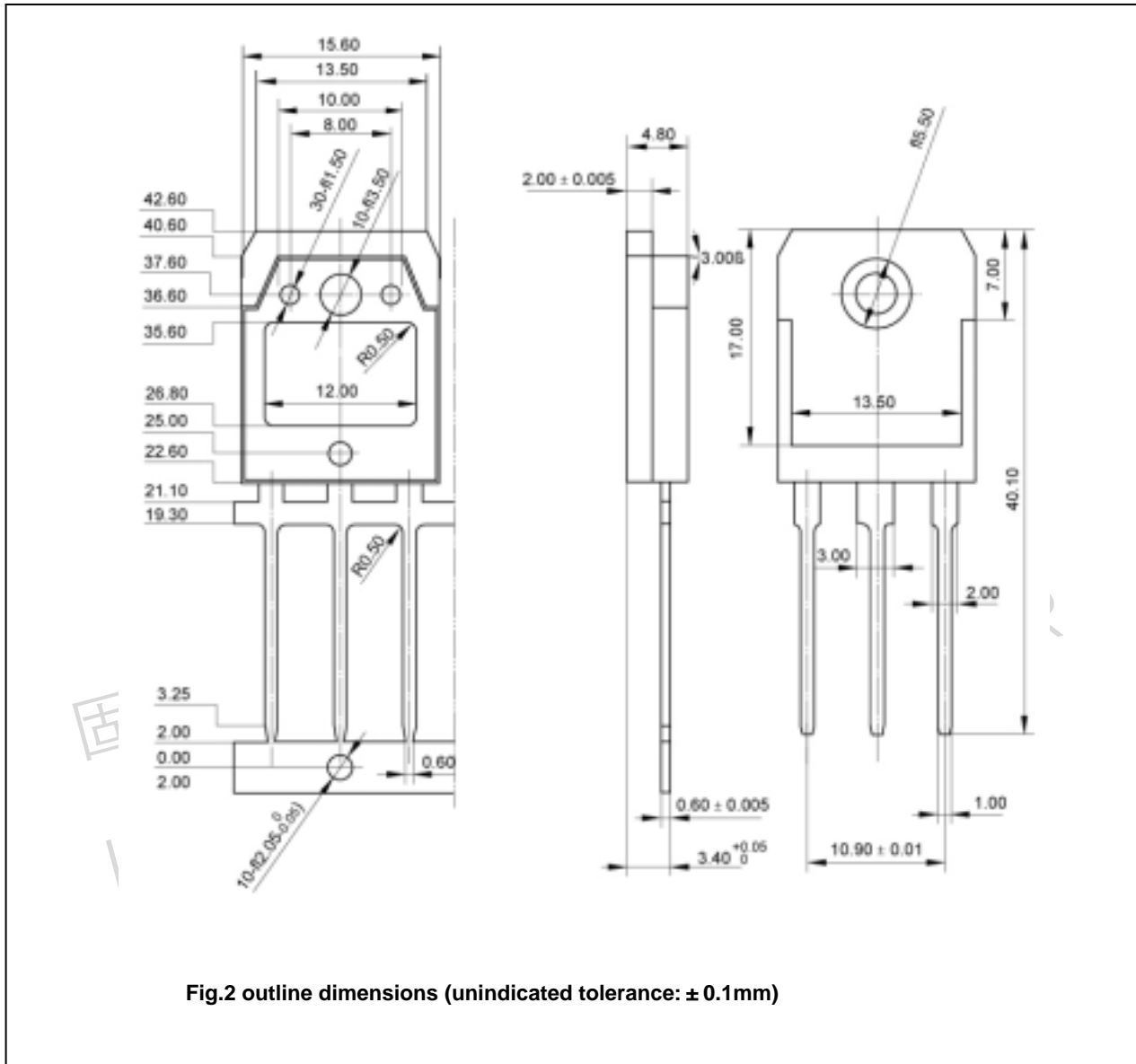


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1\text{mm}$ )