

## Silicon PNP Power Transistors

## TIP36/36A/36B/36C

## DESCRIPTION

- With TO-3PN package
- Complement to type TIP35/35A/35B/35C
- DC current gain  $h_{FE}=25(\text{Min})@I_C=-1.5\text{A}$

## 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

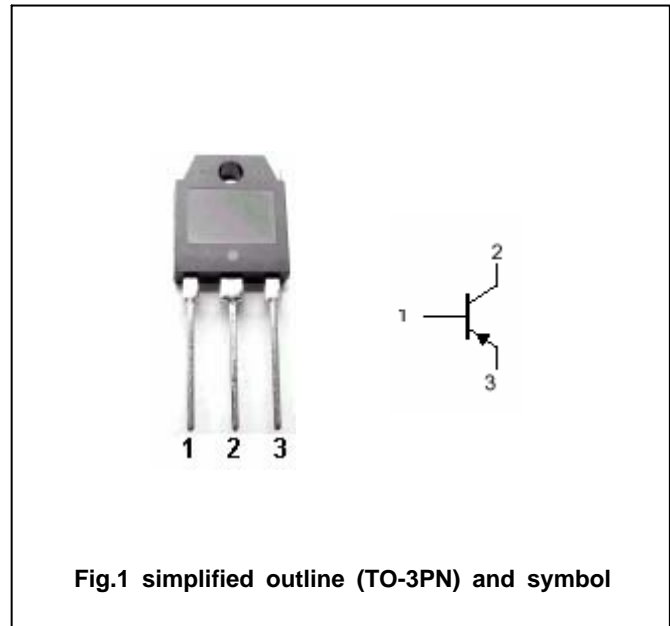


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings( $T_a=$  )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	TIP36	-40	V
		TIP36A	-60	
		TIP36B	-80	
		TIP36C	-100	
$V_{CEO}$	Collector-emitter voltage	TIP36	-40	V
		TIP36A	-60	
		TIP36B	-80	
		TIP36C	-100	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-25	A
$I_{CM}$	Collector current-peak		-40	A
$I_B$	Base current		-5	A
$P_C$	Collector power dissipation	$T_C=25$	125	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	1.0	/W

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## CHARACTERISTICS

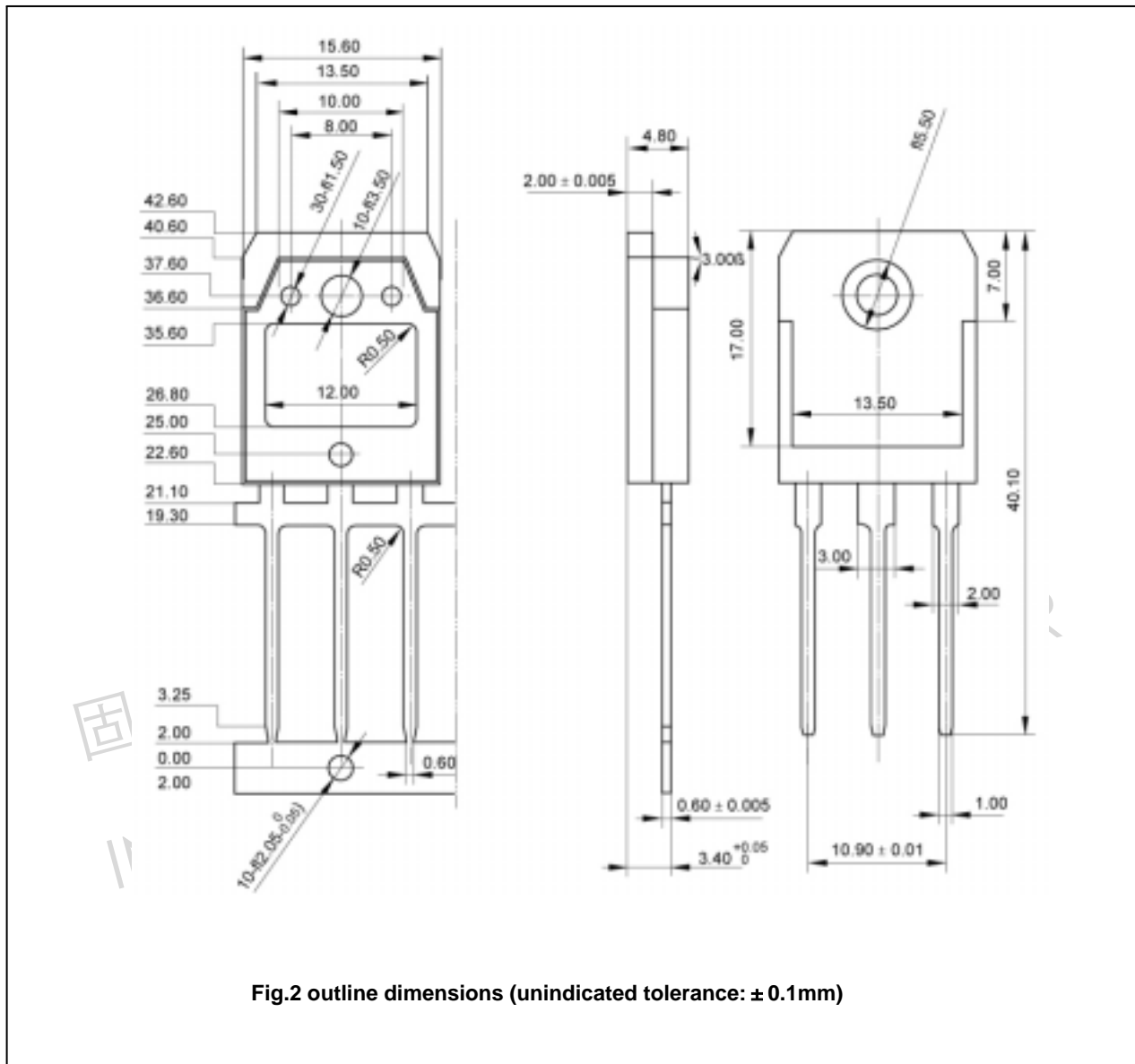
T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	TIP36	I <sub>C</sub> =-30mA ; I <sub>B</sub> =0	-40			V
		TIP36A		-60			
		TIP36B		-80			
		TIP36C		-100			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-15A ; I <sub>B</sub> =-1.5A			-1.8	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-25A ; I <sub>B</sub> =-5A			-4.0	V
V <sub>BE-1</sub>	Base-emitter on voltage		I <sub>C</sub> =-15A ; V <sub>CE</sub> =-4V			-2.0	V
V <sub>BE-2</sub>	Base-emitter on voltage		I <sub>C</sub> =-25A ; V <sub>CE</sub> =-4V			-4.0	V
I <sub>CEO</sub>	Collector cut-off current	TIP36/36A	V <sub>CE</sub> =-30V ; I <sub>B</sub> =0			-1.0	mA
		TIP36B/36C	V <sub>CE</sub> =-60V ; I <sub>B</sub> =0				
I <sub>CES</sub>	Collector cut-off current	TIP36	V <sub>CE</sub> =-40V ; V <sub>EB</sub> =0			-0.7	mA
		TIP36A	V <sub>CE</sub> =-60V ; V <sub>EB</sub> =0				
		TIP36B	V <sub>CE</sub> =-80V ; V <sub>EB</sub> =0				
		TIP36C	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> =-1.5A ; V <sub>CE</sub> =-4V	25			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-15A ; V <sub>CE</sub> =-4V	15		75	
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-1A ; V <sub>CE</sub> =-10V	3			MHz

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PACKAGE OUTLINE



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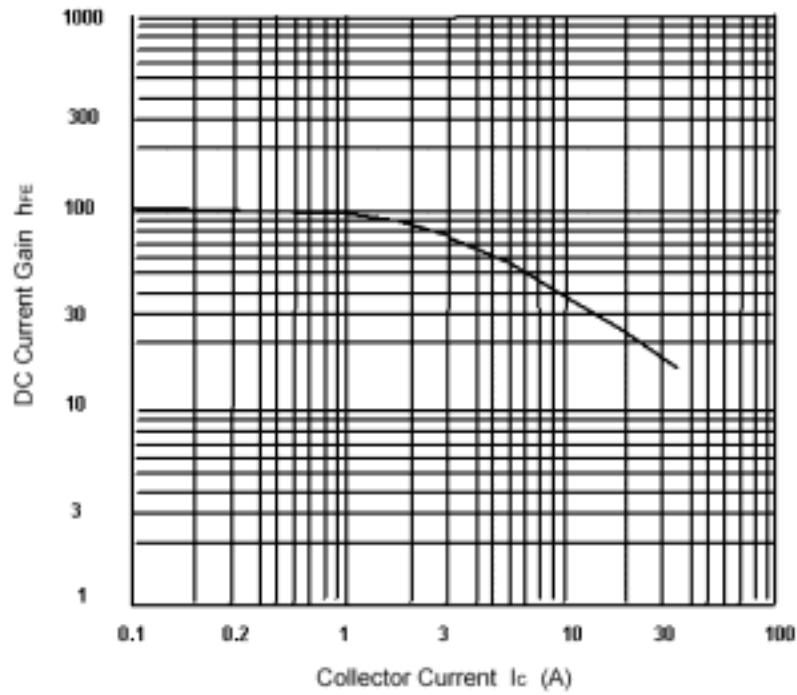


Fig.3 DC current Gain

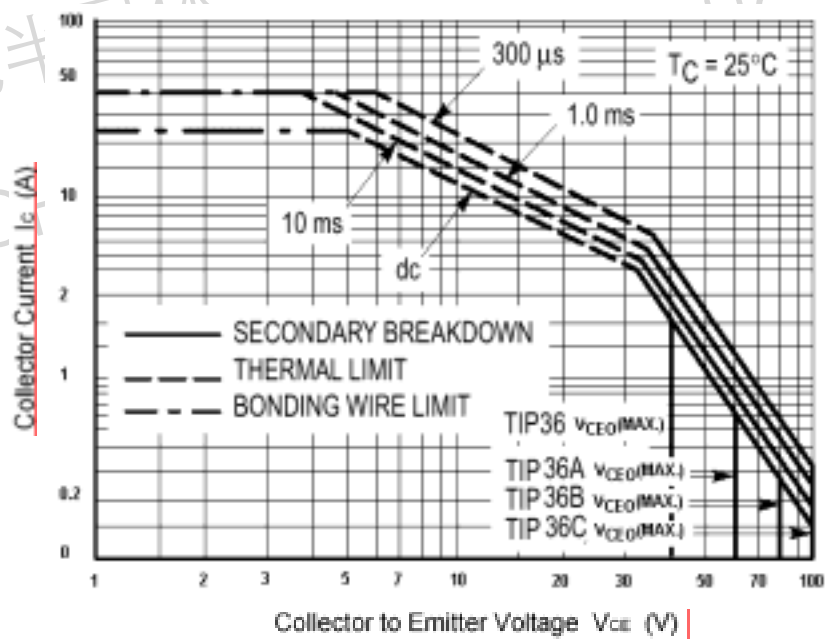


Fig.4 Safe Operating Area