

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

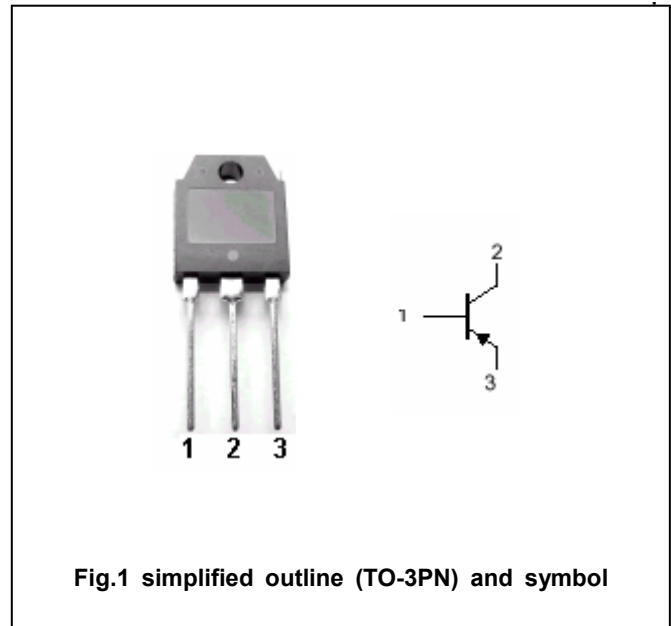


Fig.1 simplified outline (TO-3PN) and symbol

ABSOLUTE MAXIMUM RATINGS ($T_C=\square$)

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	$T_C=25\square$	125	W
T_j	Junction temperature		150	\square
T_{stg}	Storage temperature		-65~150	\square

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.0	\square/W

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

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

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PACKAGE OUTLINE

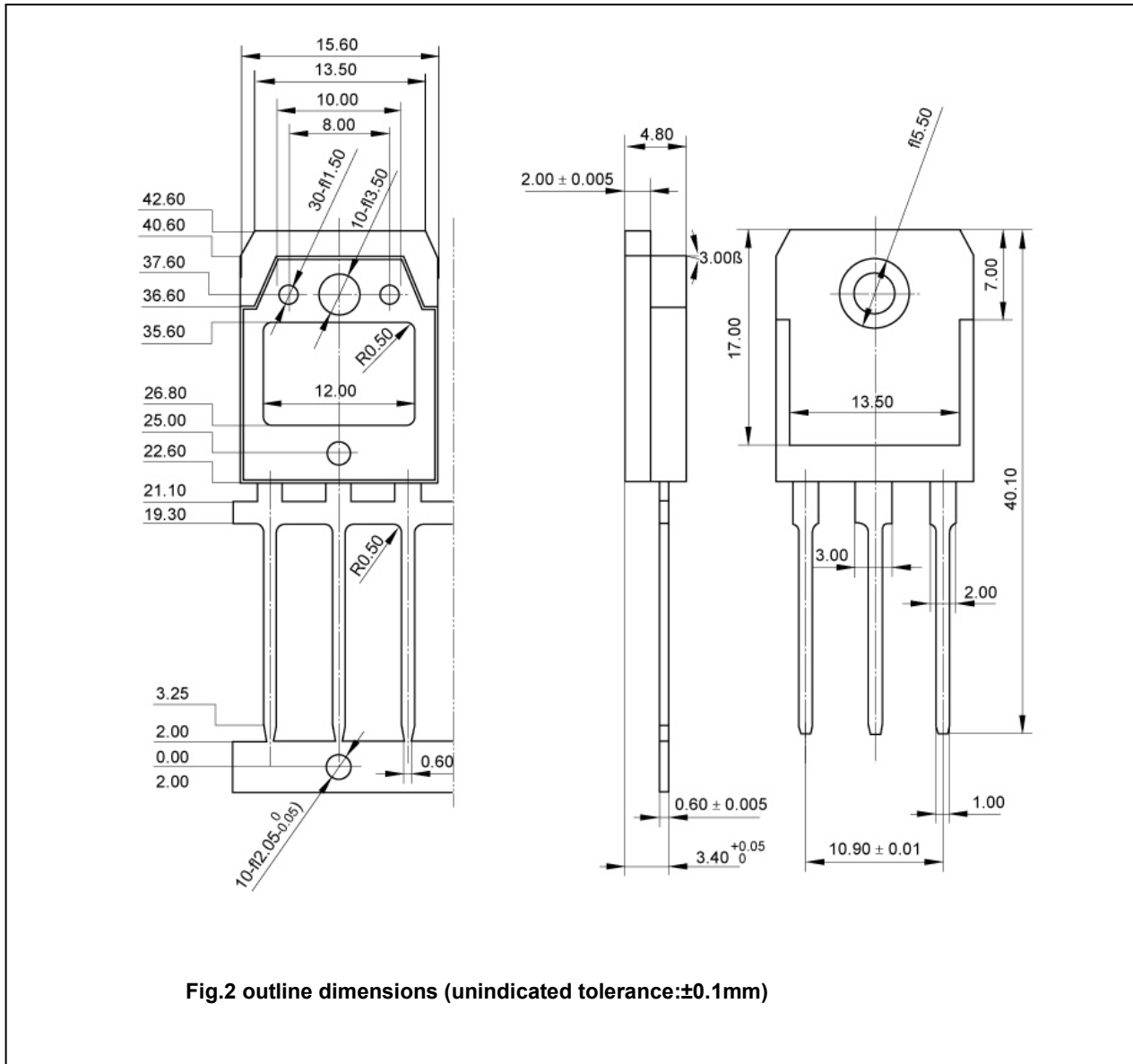


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.1\text{mm}$)

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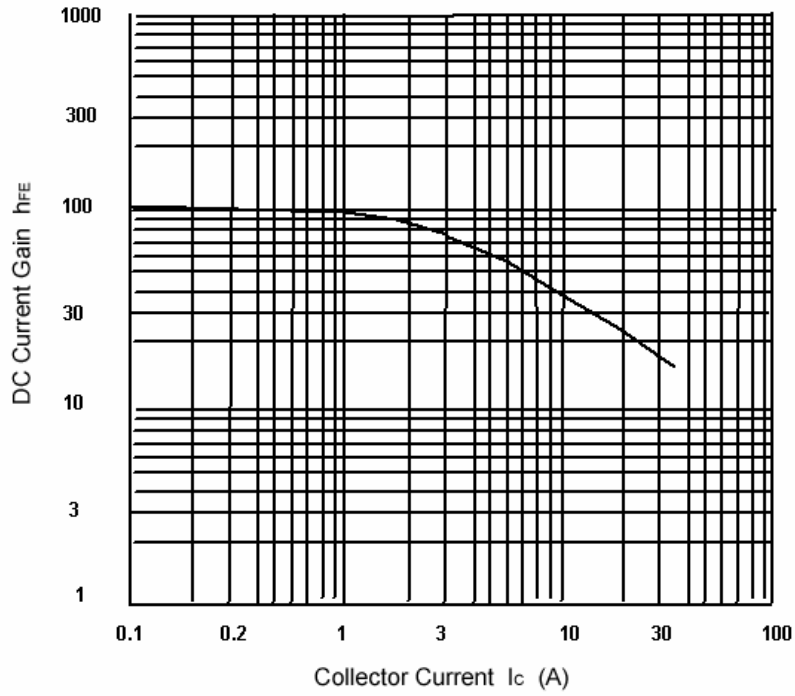


Fig.3 DC current Gain

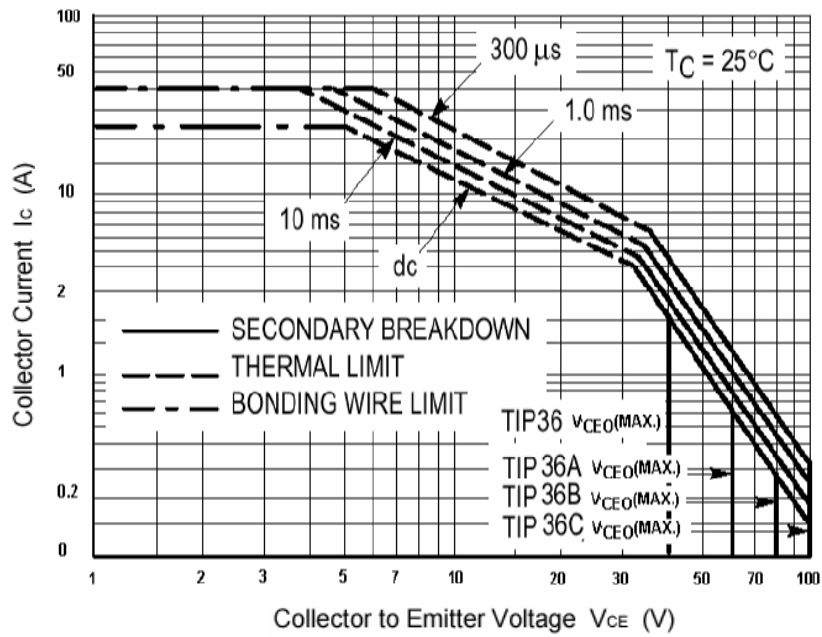


Fig.4 Safe Operating Area