

Silicon NPN Power Transistors

TIP3055

DESCRIPTION

- With TO-3PN package
- Complement to type TIP2955
- 90 W at 25°C case temperature
- 15 A continuous collector current

APPLICATIONS

- Designed for general-purpose switching and amplifier applications.

PINNING

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

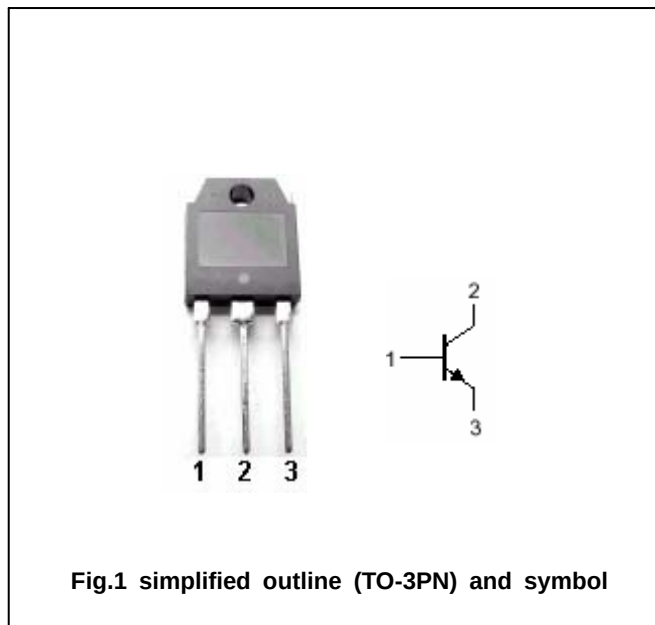


Fig.1 simplified outline (TO-3PN) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		15	A
I_B	Base current		7	A
P_C	Collector power dissipation	$T_C=25^{\circ}\text{C}$	90	W
T_j	Junction temperature		150	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-65~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.39	$^{\circ}\text{C/W}$

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CHARACTERISTICS

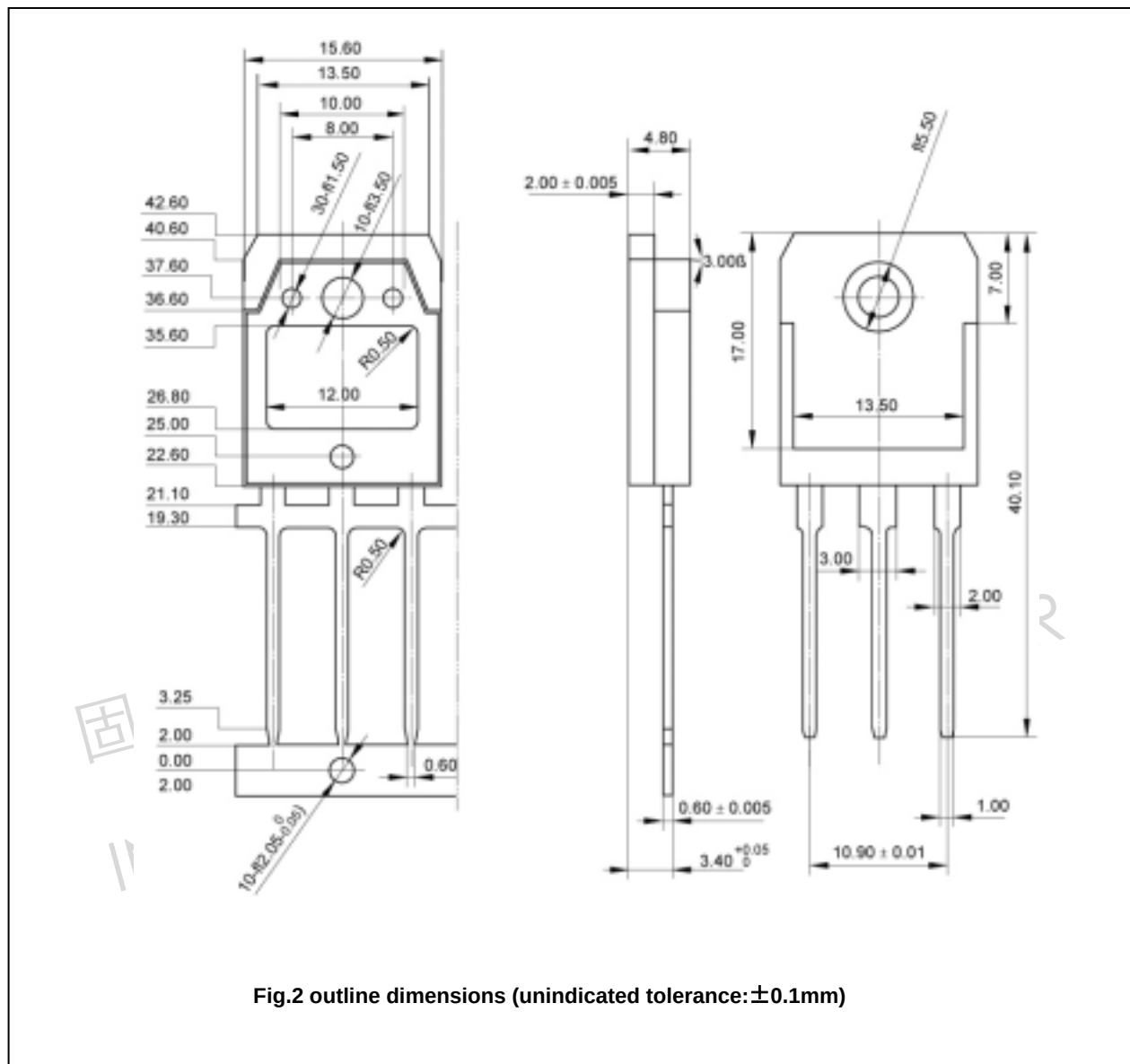
Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=30mA ; I_B=0$	60			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	$I_C=4A ; I_B=0.4A$			1.1	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	$I_C=10A ; I_B=3.3A$			3.0	V
V_{BE}	Base-emitter on voltage	$I_C=4A ; V_{CE}=4V$			1.5	V
I_{CEO}	Collector cut-off current	$V_{CE}=30V ; I_B=0$			0.7	mA
I_{CER}	Collector cut-off current	$V_{CE}=70Vdc ; R_{BE}=100\Omega$			1.0	mA
I_{CEV}	Collector cut-off current	$V_{CE}=100Vdc, V_{BE(off)}=1.5Vdc$			5.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V ; I_C=0$			5.0	mA
h_{FE-1}	DC current gain	$I_C=4A ; V_{CE}=4V$	20		70	
h_{FE-2}	DC current gain	$I_C=10A ; V_{CE}=4V$	5.0			
$I_{S/b}$	Second breakdown collector current With base forward biased	$V_{CE}=30Vdc, t=1.0s,$ Nonrepetitive	3.0			A
f_T	Transition frequency	$I_C=0.5A ; V_{CE}=10V$	2.5			MHz

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PACKAGE OUTLINE



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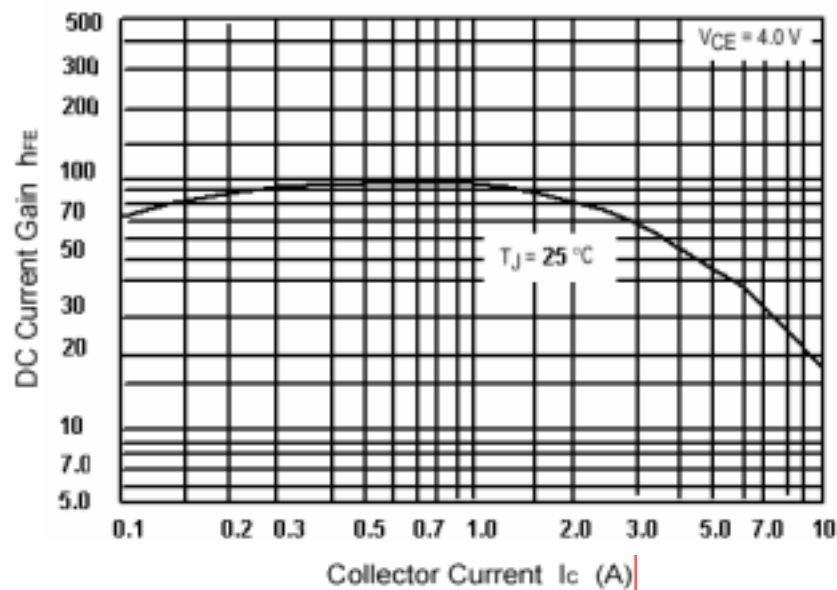


Fig.3 DC current Gain

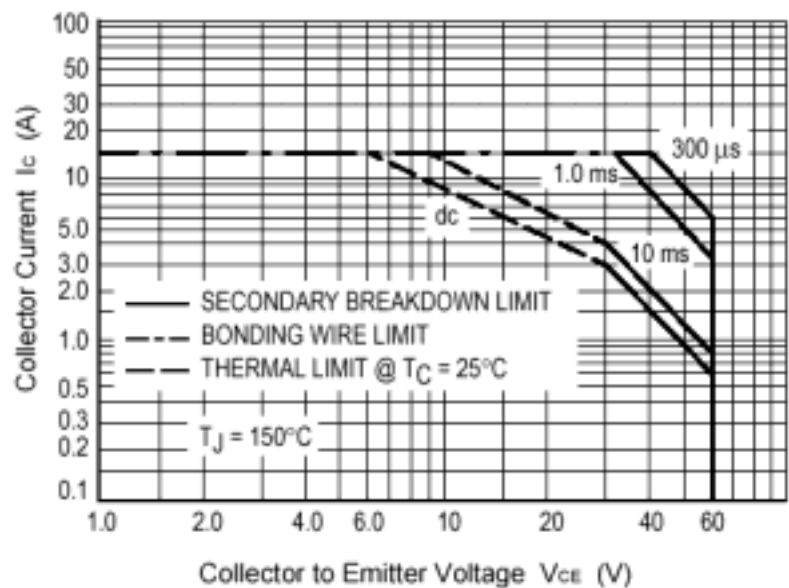


Fig.4 Safe Operating Area