

Silicon NPN Darlington Power Transistors

TIP110/111/112

DESCRIPTION

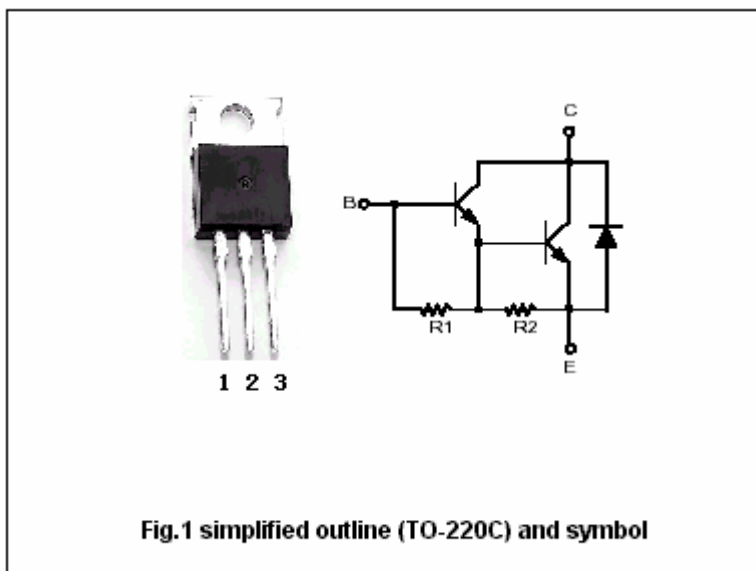
- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type TIP115/116/117

APPLICATIONS

- For industrial use

PINNING

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



Absolute maximum ratings(Tc=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	TIP110	60	V
		TIP111	80	
		TIP112	100	
V _{CEO}	Collector-emitter voltage	TIP110	60	V
		TIP111	80	
		TIP112	100	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current-DC		2	A
I _{CM}	Collector current-Pulse		4	A
I _B	Base current-DC		50	mA
P _C	Collector power dissipation	T _C =25	50	W
		T _a =25	2	
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-65~150	

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CHARACTERISTICS

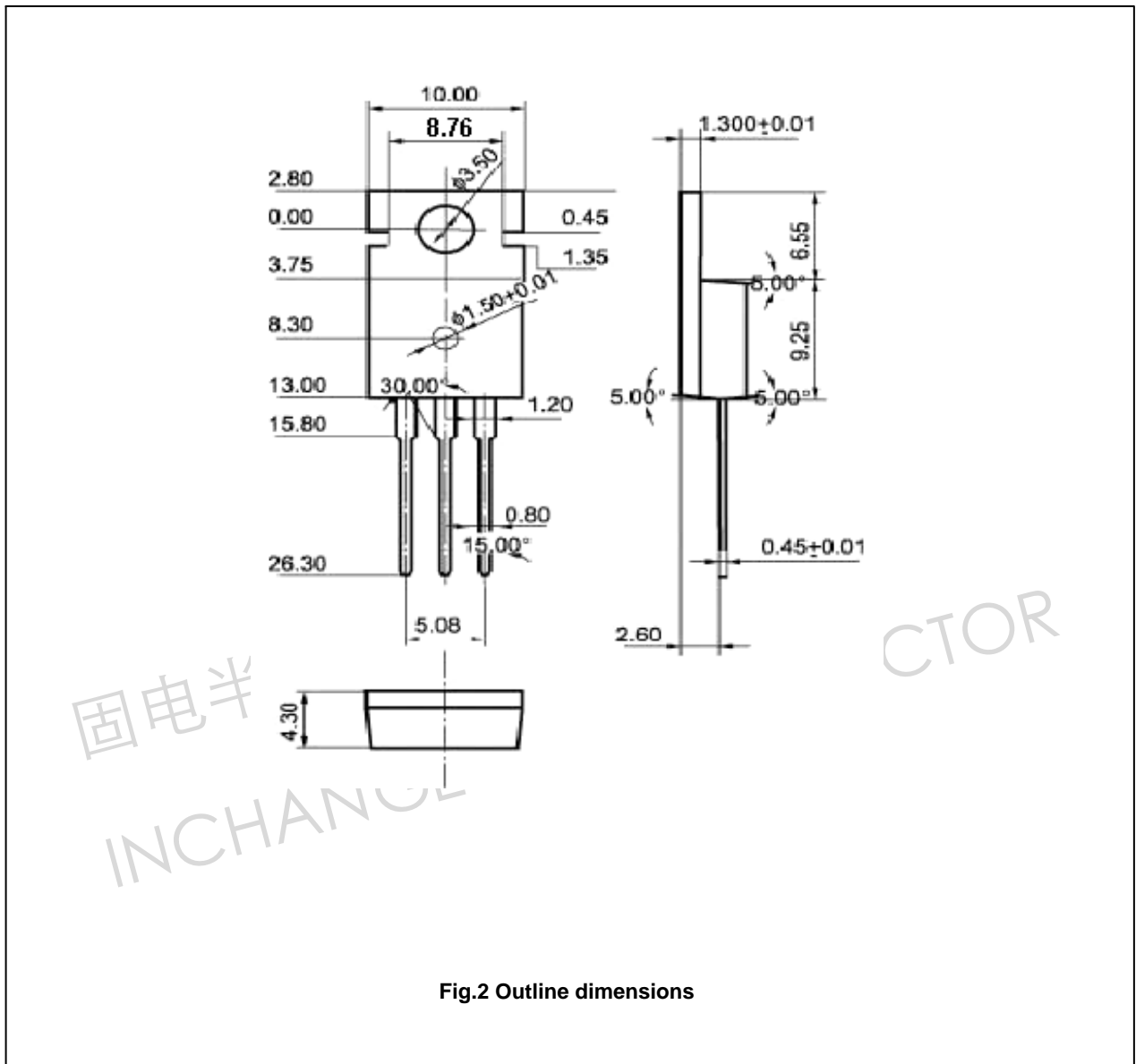
T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CE0(SUS)}	Collector-emitter sustaining voltage	TIP110	I _C =30mA, I _B =0	60			V
		TIP111		80			
		TIP112		100			
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A, I _B =8mA			2.5	V	
V _{BE}	Base-emitter on voltage	I _C =2A ; V _{CE} =4V			2.8	V	
I _{CBO}	Collector cut-off current	TIP110			1	mA	
		TIP111					V _{CB} =60V, I _E =0
		TIP112					V _{CB} =80V, I _E =0
I _{CEO}	Collector cut-off current	TIP110			2	mA	
		TIP111					V _{CE} =30V, I _B =0
		TIP112					V _{CE} =40V, I _B =0
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			2	mA	
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =4V	1000				
h _{FE-2}	DC current gain	I _C =2A ; V _{CE} =4V	500				
C _{ob}	Output capacitance	I _E =0 ; V _{CB} =10V, f=0.1MHz			100	pF	

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PACKAGE OUTLINE



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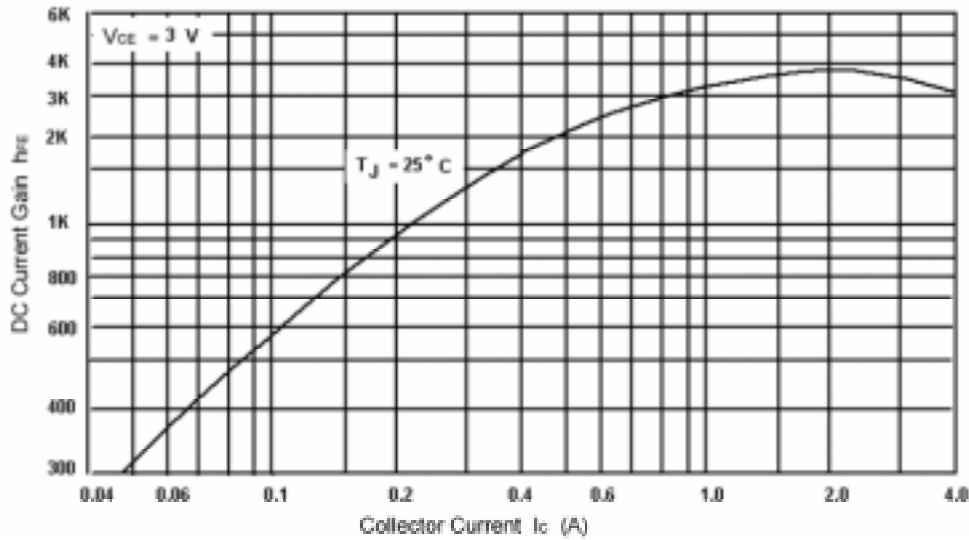


Fig.3 DC current Gain

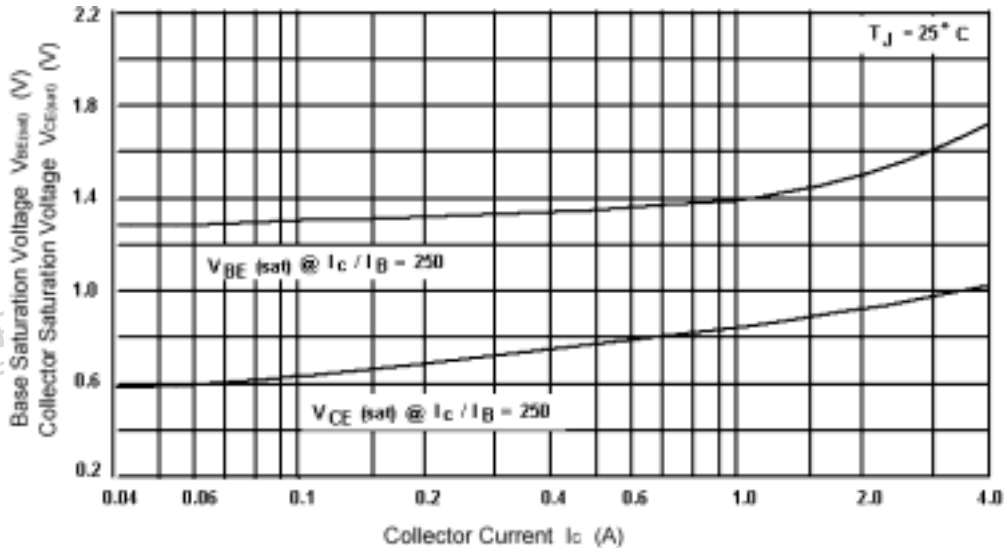


Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

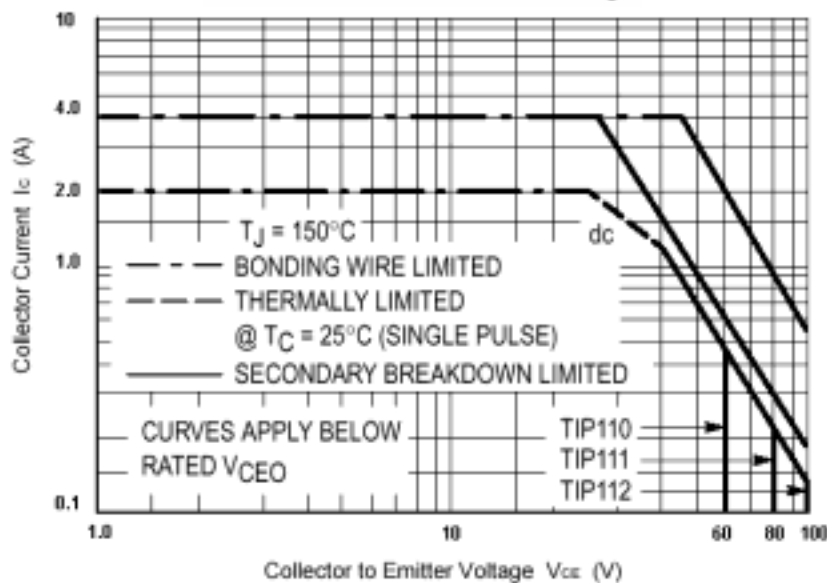


Fig.5 Safe Operating Area