

Silicon PNP Darlington Power Transistors

TIP125/126/127

DESCRIPTION

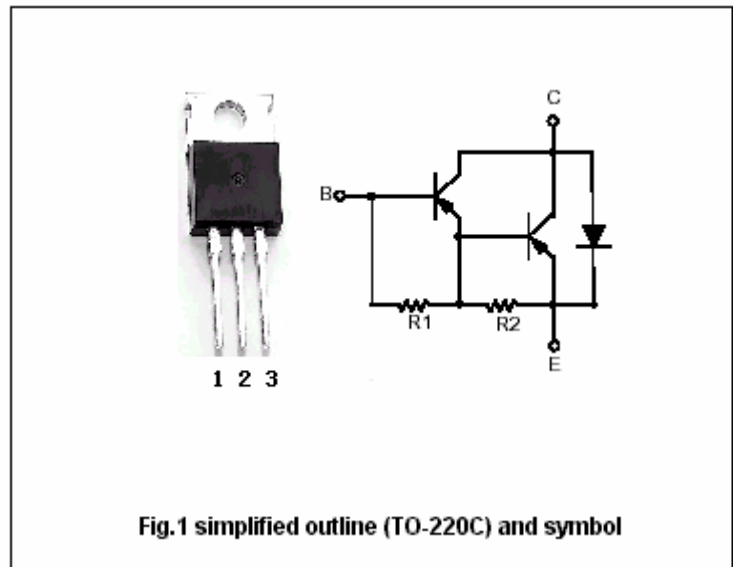
- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type TIP120/121/122

APPLICATIONS

- Designed for general-purpose amplifier and low-speed switching applications

PINNING

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

ABSOLUTE MAXIMUM RATINGS($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	TIP125	-60	V
		TIP126	-80	
		TIP127	-100	
V_{CEO}	Collector-emitter voltage	TIP125	-60	V
		TIP126	-80	
		TIP127	-100	
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current-DC		-5	A
I_{CM}	Collector current-Pulse		-8	A
I_B	Base current-DC		-120	mA
P_C	Collector power dissipation	$T_c=25^\circ\text{C}$	65	W
		$T_a=25^\circ\text{C}$	2	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

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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	TIP125	I _C =-0.1A, I _B =0	-60		V
		TIP126		-80		
		TIP127		-100		
V _{CE(sat)-1}	Collector-emitter saturation voltage	I _C =-3A, I _B =-12mA			-2.0	V
V _{CE(sat)-2}	Collector-emitter saturation voltage	I _C =-5A, I _B =-20mA			-4.0	V
V _{BE}	Base-emitter on voltage	I _C =-3.0A; V _{CE} =-3V			-2.5	V
I _{CBO}	Collector cut-off current	TIP125	V _{CB} =-60V, I _E =0		-0.2	mA
		TIP126		V _{CB} =-80V, I _E =0		
		TIP127		V _{CB} =-100V, I _E =0		
I _{CEO}	Collector cut-off current	TIP125	V _{CE} =-30V, I _B =0		-0.5	mA
		TIP126		V _{CE} =-40V, I _B =0		
		TIP127		V _{CE} =-50V, 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 =-0.5A; V _{CE} =-3V	1000			
h _{FE-2}	DC current gain	I _C =-3.0A; V _{CE} =-3V	1000			
C _{OB}	Output capacitance	I _E =0; V _{CB} =-10V, f=0.1MHz			300	pF

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PACKAGE OUTLINE

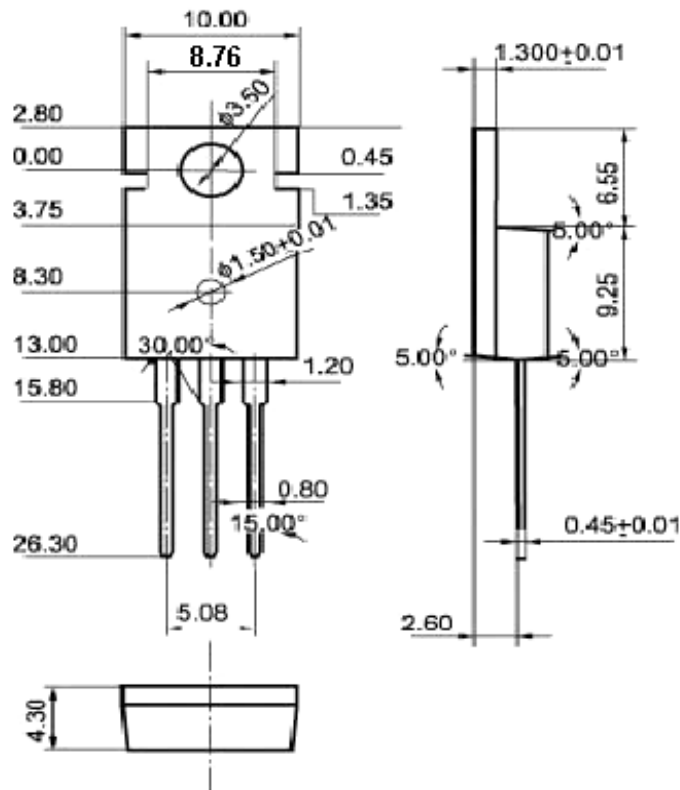


Fig.2 Outline dimensions

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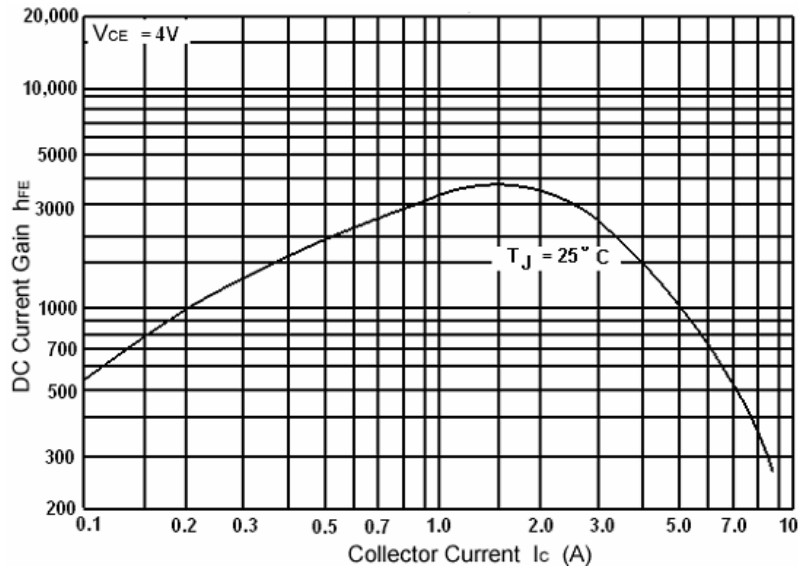


Fig.3 DC current Gain

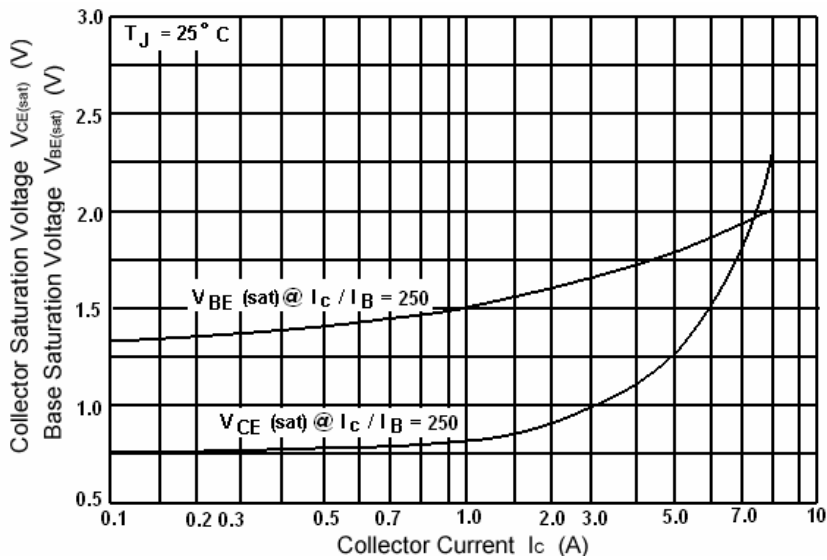


Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

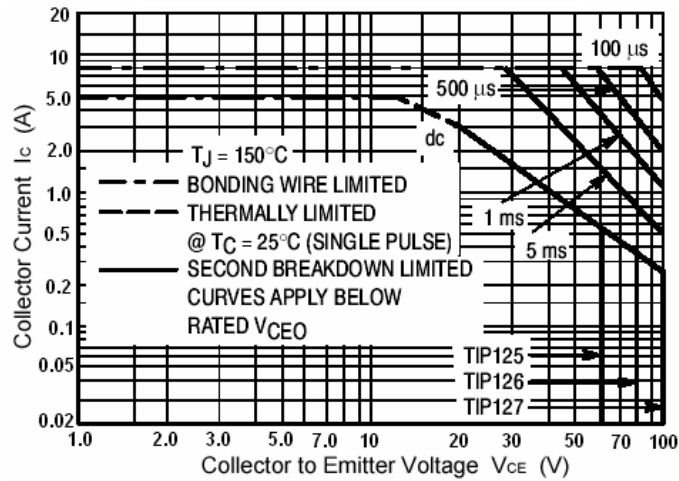


Fig.5 Safe Operating Area