

Silicon PNP Darlington Power Transistors

TIP125/126/127

DESCRIPTION

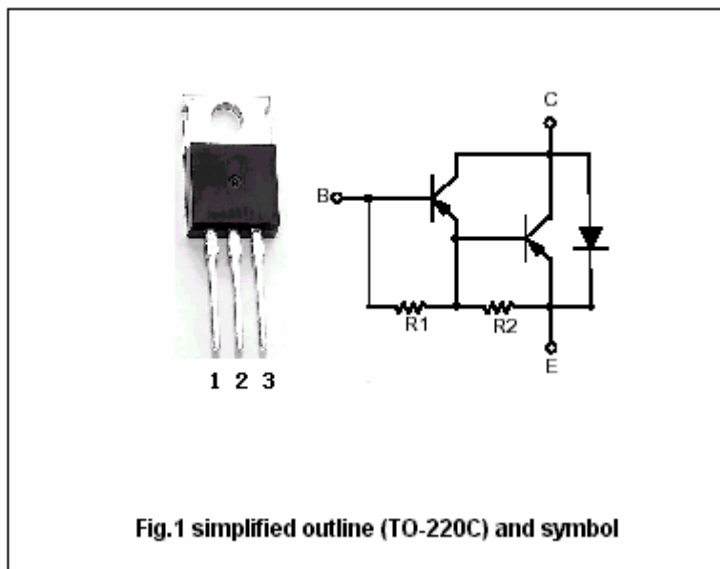
- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type TIP120/121/122

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	Open emitter	-60	V
		TIP126		-80	
		TIP127		-100	
V_{CEO}	Collector-emitter voltage	TIP125	Open base	-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	$T_c=25$		65	W
		$T_a=25$		2	
T_j	Junction temperature			150	
T_{stg}	Storage temperature			-65~150	

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CHARACTERISTICS

Tj=25 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			
$V_{CEsat-1}$	Collector-emitter saturation voltage		$I_C = -3A, I_B = -12mA$			-2.0	V
$V_{CEsat-2}$	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

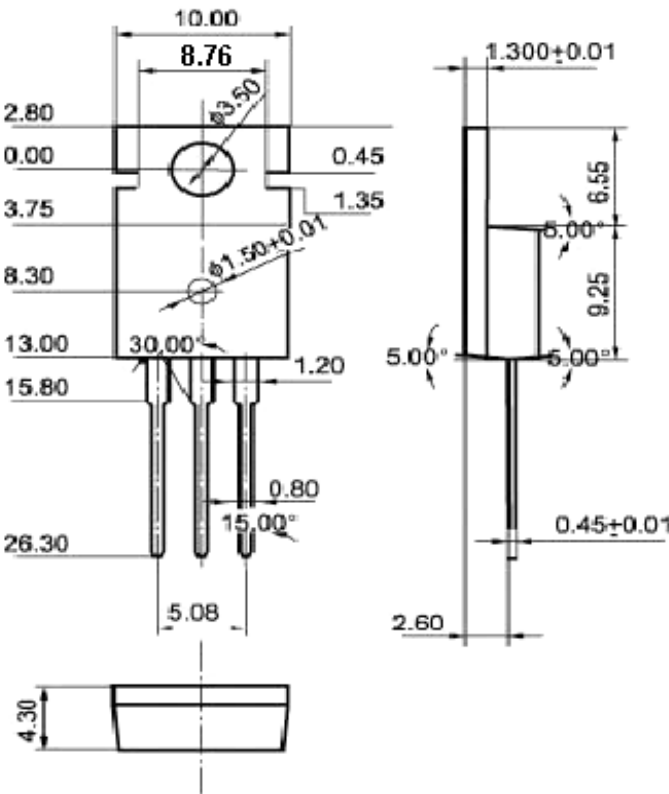


Fig.2 Outline dimensions

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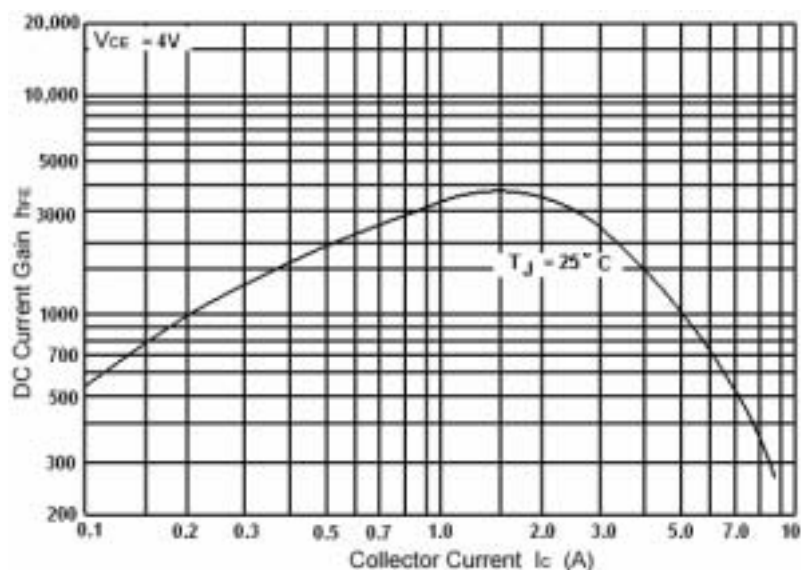


Fig.3 DC current Gain

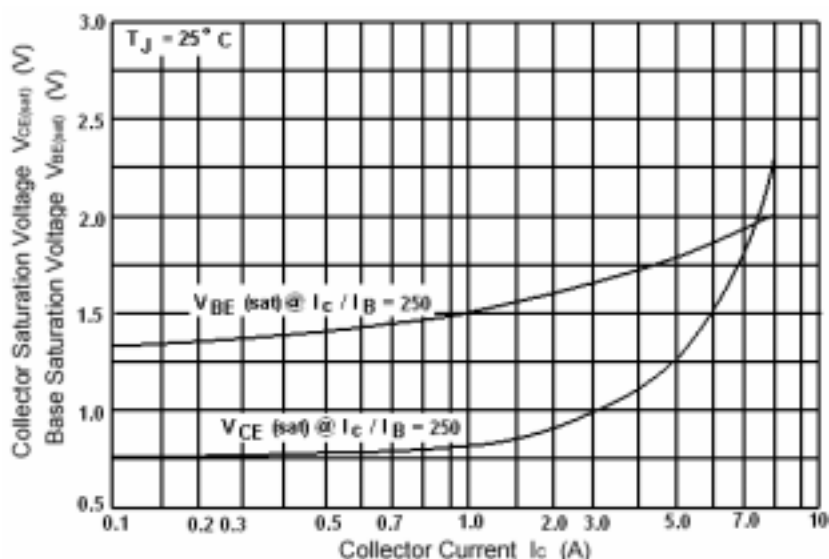
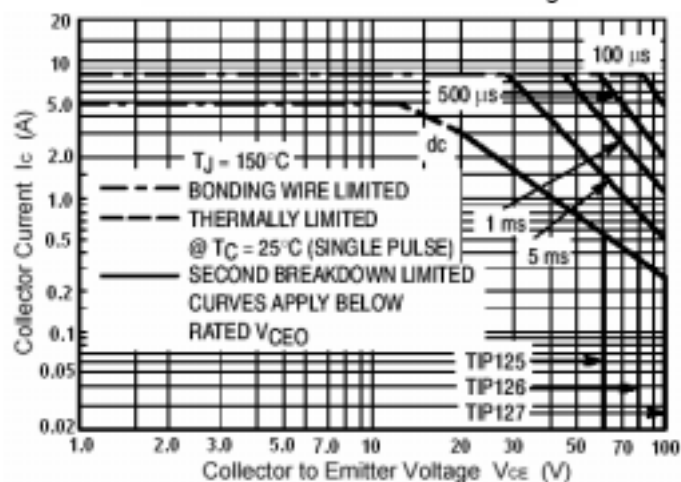
Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

Fig.5 Safe Operating Area