

Silicon PNP Darlington Power Transistors

TIP105/106/107

DESCRIPTION

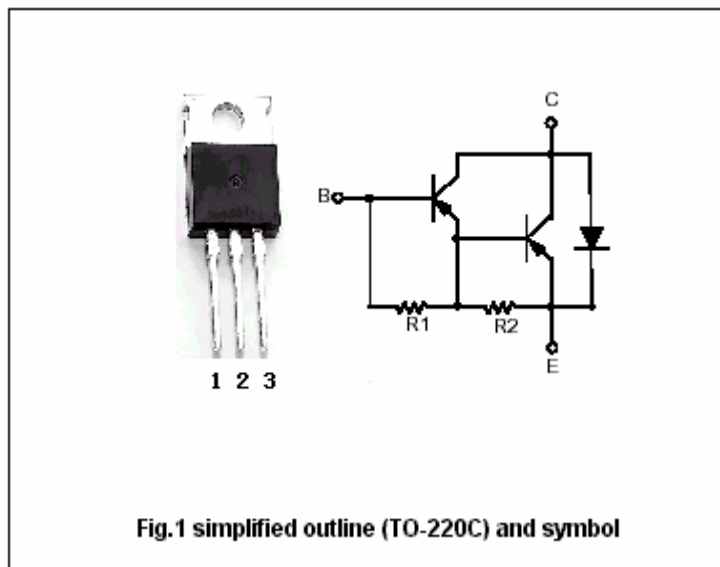
- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type TIP100/101/102

APPLICATIONS

- For industrial use

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	TIP105	Open emitter	-60	V
		TIP106		-80	
		TIP107		-100	
V_{CEO}	Collector-emitter voltage	TIP105	Open base	-60	V
		TIP106		-80	
		TIP107		-100	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current-DC			-8	A
I_{CM}	Collector current-peak			-15	A
I_B	Base current-DC			-1	A
P_C	Collector power dissipation		$T_c=25$	80	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 _{CEQ(SUS)}	Collector-emitter sustaining voltage	TIP105	I _C =-30mA, I _B =0	-60			V
		TIP106		-80			
		TIP107		-100			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =-3A, I _B =-6mA			-2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =-8A, I _B =-80mA			-2.5	V
V _{BE}	Base-emitter on voltage		I _C =-8A; V _{CE} =-4V			-2.8	V
I _{CBO}	Collector cut-off current	TIP105	V _{CB} =-60V, I _E =0			-50	μA
		TIP106	V _{CB} =-80V, I _E =0				
		TIP107	V _{CB} =-100V, I _E =0				
I _{CEO}	Collector cut-off current	TIP105	V _{CE} =-30V, I _B =0			-50	μA
		TIP106	V _{CE} =-40V, I _B =0				
		TIP107	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 =-3A; V _{CE} =-4V	1000		20000	
h _{FE-2}	DC current gain		I _C =-8A; V _{CE} =-4V	200			
C _{ob}	Output capacitance		I _E =0; V _{CB} =-10V, f=0.1MHz			300	pF

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PACKAGE OUTLINE

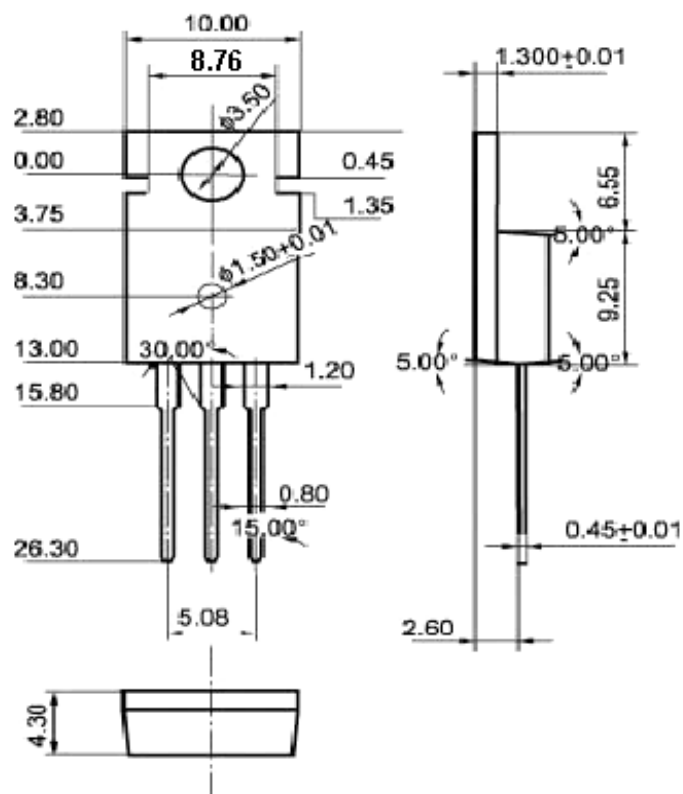


Fig.2 Outline dimensions