

Silicon NPN Darlington Power Transistors

TIP130/131/132

DESCRIPTION

- With TO-220C package
- DARLINGTON
- Collector saturation voltage
- Complement to type TIP135/136/137

APPLICATIONS

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

PINNING

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

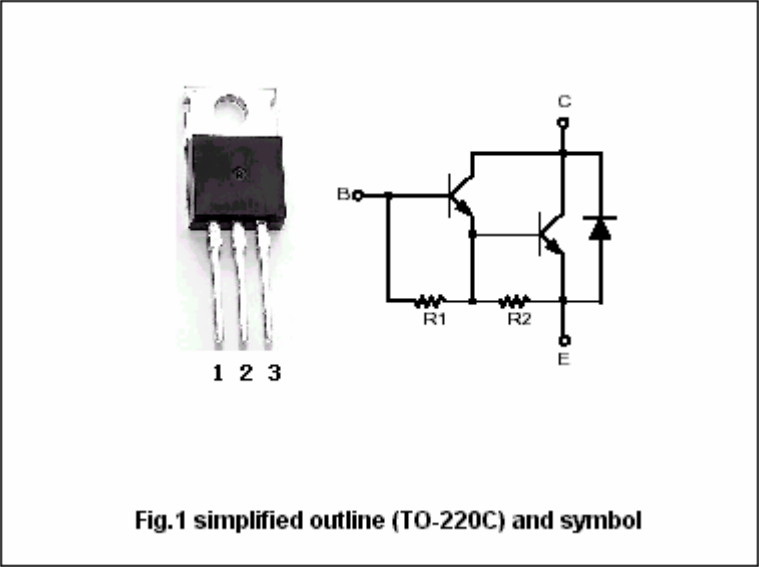


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Tc=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	TIP130	60	V
		TIP131	80	
		TIP132	100	
V _{CEO}	Collector-emitter voltage	TIP130	60	V
		TIP131	80	
		TIP132	100	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current-DC		8	A
I _{CM}	Collector current-peak		12	A
I _B	Base current-DC		0.3	A
P _C	Collector power dissipation	T _C =25	70	W
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{th j-c}	Thermal resistance junction to case	1.785	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	TIP130	I _C =30mA, I _B =0	60			V
		TIP131		80			
		TIP132		100			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =4A, I _B =16mA			2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =6A, I _B =30mA			3.0	V
V _{BE}	Base-emitter on voltage		I _C =4A; V _{CE} =4V			2.5	V
I _{CBO}	Collector cut-off current	TIP130	V _{CB} =60V, I _E =0			0.2	mA
		TIP131	V _{CB} =80V, I _E =0				
		TIP132	V _{CB} =100V, I _E =0				
I _{CEO}	Collector cut-off current	TIP130	V _{CE} =30V, I _B =0			0.5	mA
		TIP131	V _{CE} =40V, I _B =0				
		TIP132	V _{CE} =50V, I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			5	mA
h _{FE-1}	DC current gain		I _C =1A; V _{CE} =4V	500			
h _{FE-2}	DC current gain		I _C =4A; V _{CE} =4V	1000		15000	
C _{ob}	Output capacitance		I _E =0; V _{CB} =10V, f=0.1MHz			250	pF

TIP130/131/132

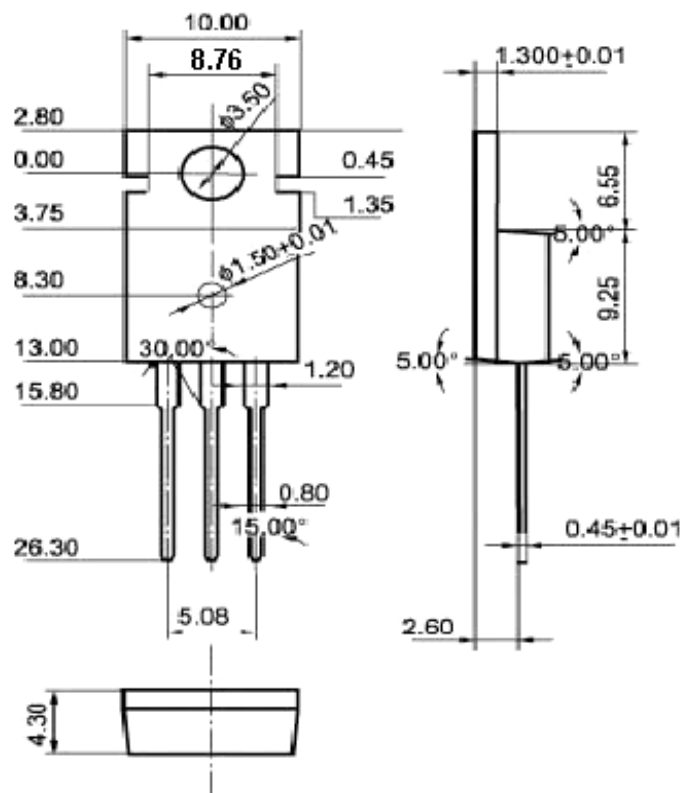


Fig.2 Outline dimensions