

Silicon NPN Darlington Power Transistors

TIP130/131/132

DESCRIPTION

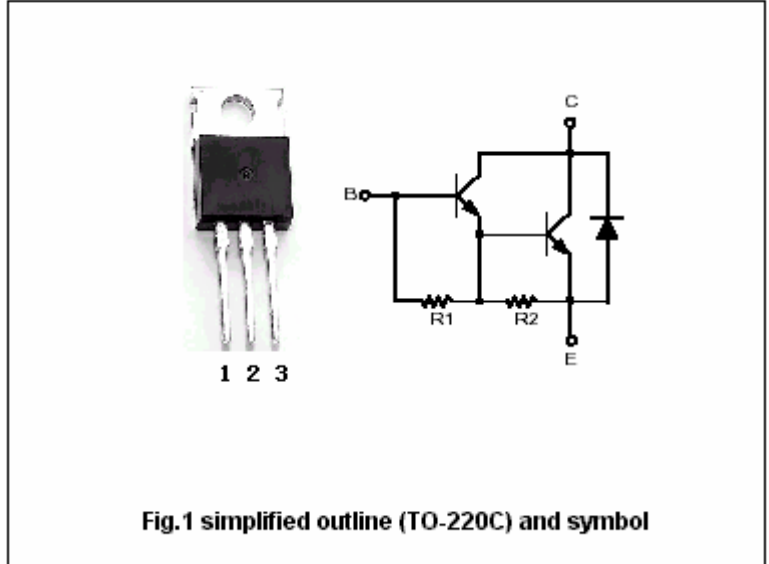
- With TO-220C package
- DARLINGTON
- Collector saturation voltage
- Complement to type TIP135/136/137

APPLICATIONS

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

PINNING

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

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

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	$T_C=25^\circ\text{C}$	70	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.785	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CE(SUS)}	Collector-emitter sustaining voltage	TIP130	I _C =30mA, I _B =0	60			V
		TIP131		80			
		TIP132		100			
V _{CE(sat)-1}	Collector-emitter saturation voltage	I _C =4A, I _B =16mA			2.0	V	
V _{CE(sat)-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			0.2	mA	
		TIP131					V _{CB} =80V, I _E =0
		TIP132					V _{CB} =100V, I _E =0
I _{CEO}	Collector cut-off current	TIP130			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			5.0	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	

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PACKAGE OUTLINE

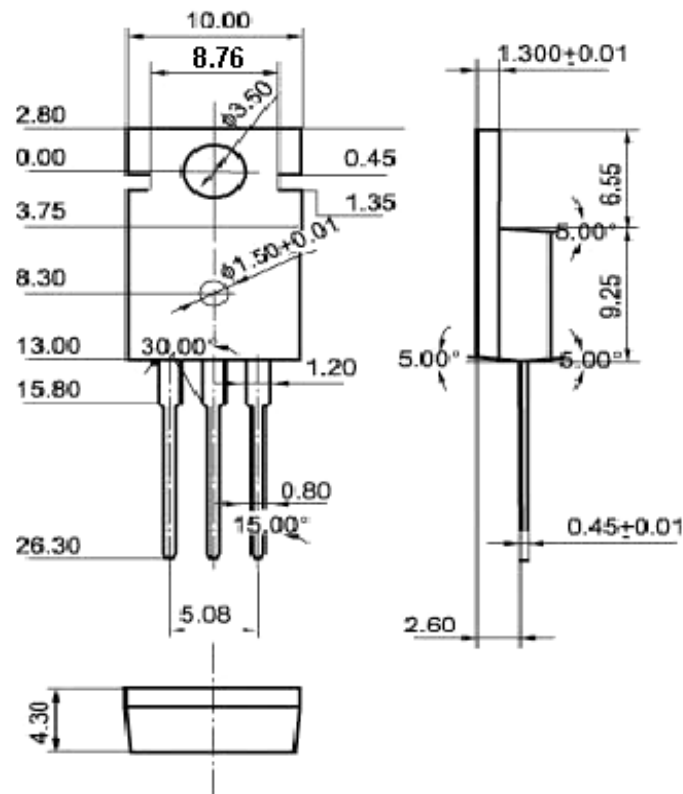


Fig.2 Outline dimensions(unindicated tolerance: ± 0.1 mm)