

Silicon PNP Darlington Power Transistors

TIP135/136/137

DESCRIPTION

- With TO-220C package
- DARLINGTON
- Collector saturation voltage
- Complement to type TIP130/131/132

APPLICATIONS

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

PINNING

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

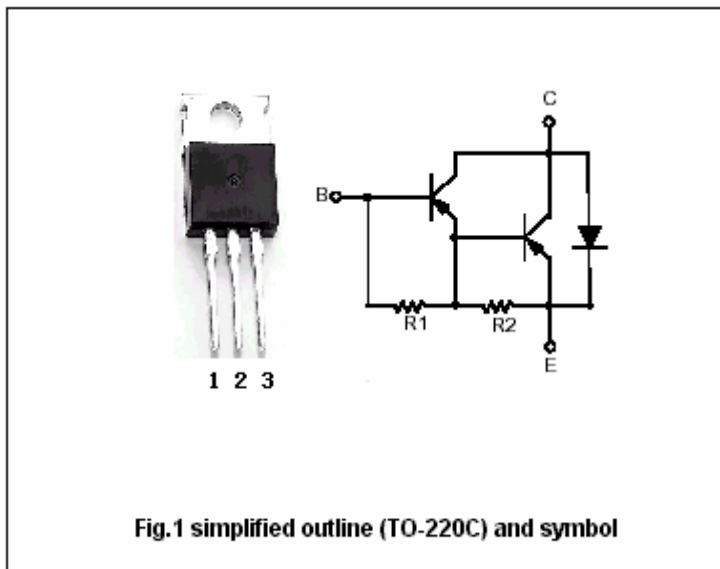


Fig.1 simplified outline (TO-220C) and symbol

ABSOLUTE MAXIMUM RATINGS(T_C=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	TIP135	-60	V
		TIP136	-80	
		TIP137	-100	
V _{CEO}	Collector-emitter voltage	TIP135	-60	V
		TIP136	-80	
		TIP137	-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 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CEO(SUS)}	Collector-emitter sustaining voltage	TIP135	-60			V	
		TIP136	-80				
		TIP137	-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	TIP135	V _{CB} =-60V, I _E =0			-0.2	mA
		TIP136	V _{CB} =-80V, I _E =0				
		TIP137	V _{CB} =-100V, I _E =0				
I _{CEO}	Collector cut-off current	TIP135	V _{CE} =-30V, I _B =0			-0.5	mA
		TIP136	V _{CE} =-40V, I _B =0				
		TIP137	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

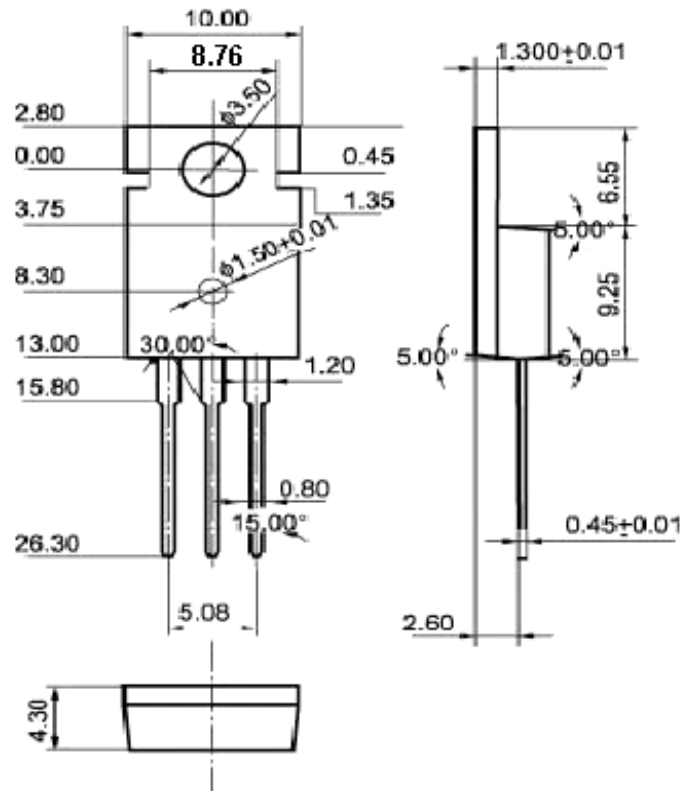


Fig.2 Outline dimensions(unindicated tolerance: $\pm 0.1\text{mm}$)