Yixin

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

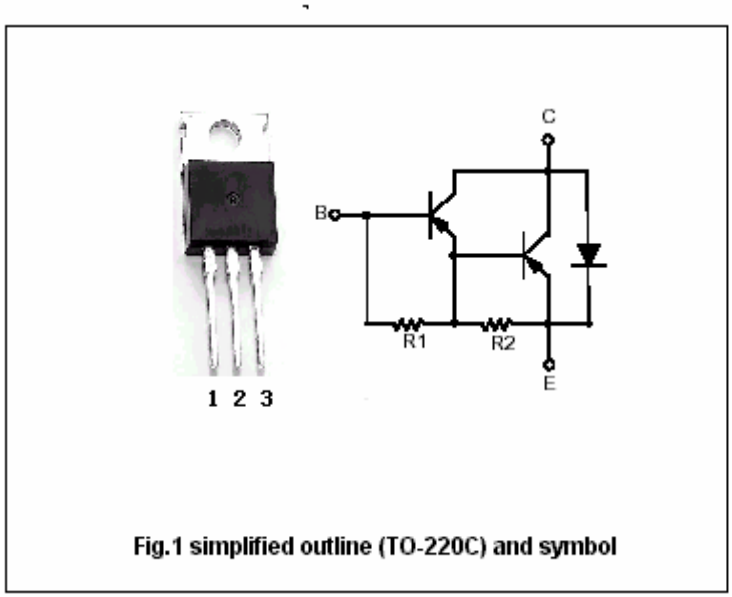

Fig.1 simplified outline (TO-220C) and symbol

ABSOLUTE MAXIMUM RATINGS(Tc=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	TIP135	Open emitter	-60	V
		TIP136		-80	
		TIP137		-100	
V_{CEO}	Collector-emitter voltage	TIP135	Open base	-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
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	1.785	□/W

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	TIP135	I_C=-30mA, I_B=0	-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

PACKAGE OUTLINE

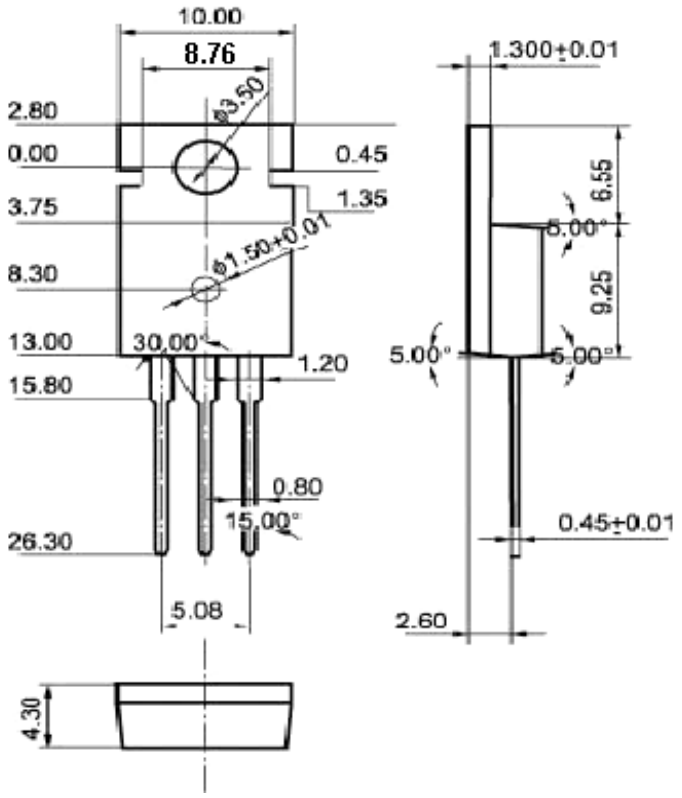

Fig.2 Outline dimensions(unindicated tolerance:±0.1mm)