

Silicon PNP Darlington Power Transistors

TIP135/136/137

DESCRIPTION

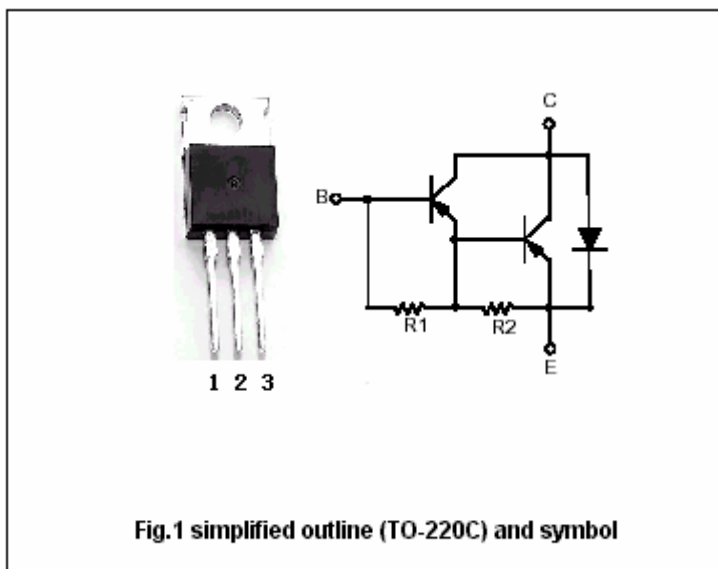
- With TO-220C package
- DARLINGTON
- Collector saturation voltage
- Complement to type TIP130/131/132

APPLICATIONS

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

PINNING

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

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

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		$T_C=25^\circ\text{C}$	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

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	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

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PACKAGE OUTLINE

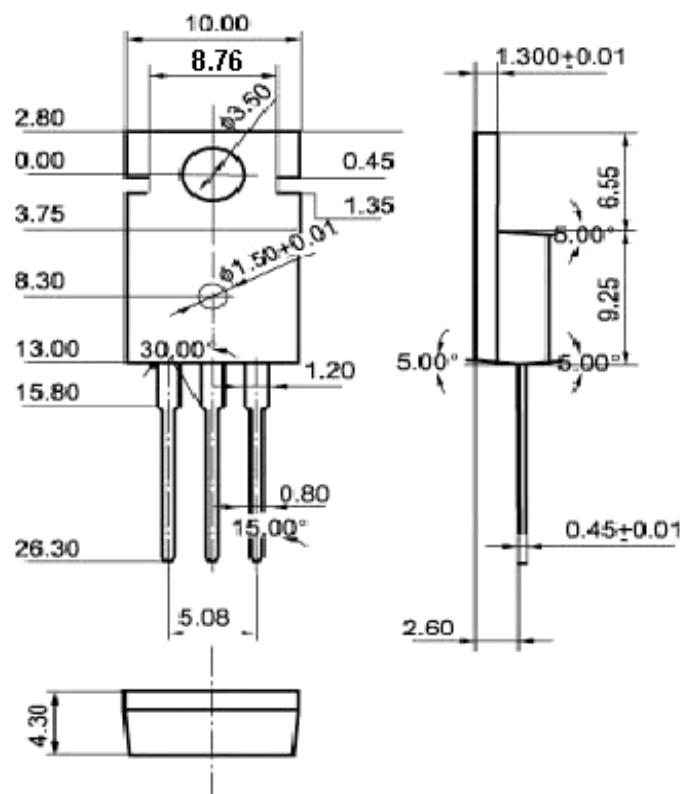


Fig.2 Outline dimensions(unindicated tolerance:±0.1mm)