

Silicon NPN Darlington Power Transistors

TIP100/101/102

DESCRIPTION

- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type TIP105/106/107

APPLICATIONS

- For industrial use

PINNING

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

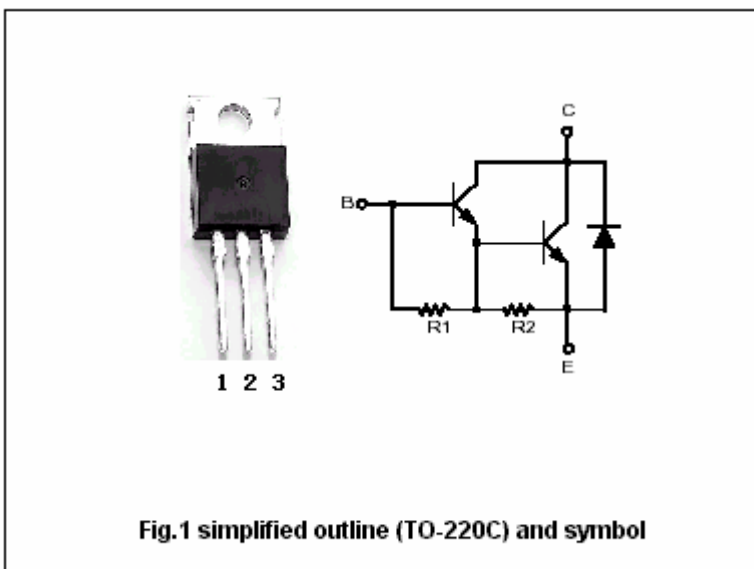


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Tc=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	TIP100	60	V
		TIP101	80	
		TIP102	100	
V _{CEO}	Collector-emitter voltage	TIP100	60	V
		TIP101	80	
		TIP102	100	
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current-DC		8	A
I _{CM}	Collector current-Pulse		15	A
I _B	Base current-DC		1	A
P _C	Collector power dissipation	T _C =25°C	80	W
		T _a =25°C	2	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-65~150	°C

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	TIP100	I _C =30mA, I _B =0	60			V
		TIP101		80			
		TIP102		100			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =3A, I _B =6mA			2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =8A, I _B =80mA			2.5	V
V _{BE}	Base-emitter on voltage		I _C =8A; V _{CE} =4V			2.8	V
I _{CBO}	Collector cut-off current	TIP100	V _{CB} =60V, I _E =0			50	μ A
		TIP101	V _{CB} =80V, I _E =0				
		TIP102	V _{CB} =100V, I _E =0				
I _{CEO}	Collector cut-off current	TIP100	V _{CE} =30V, I _B =0			50	μ A
		TIP101	V _{CE} =40V, I _B =0				
		TIP102	V _{CE} =50V, I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			2	mA
h _{FE-1}	DC current gain		I _C =3A; V _{CE} =4V	1000		20000	
h _{FE-2}	DC current gain		I _C =8A; V _{CE} =4V	200			
C _{ob}	Output capacitance		I _E =0; V _{CB} =10V, f=0.1MHz			200	pF

