

Silicon NPN Power Transistors

TIP29/29A/29B/29C

DESCRIPTION

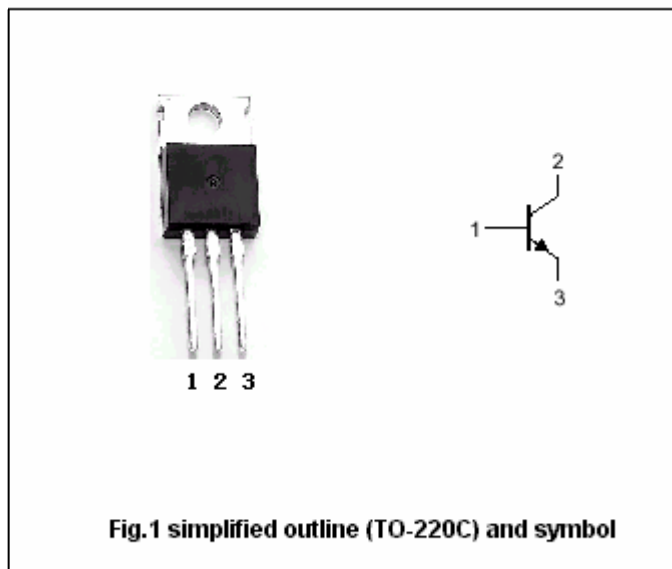
- With TO-220C package
- Complement to type TIP30/30A/30B/30C

APPLICATIONS

- For use in general purpose power amplifier and 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	TIP29	Open emitter	40	V
		TIP29A		60	
		TIP29B		80	
		TIP29C		100	
V_{CEO}	Collector-emitter voltage	TIP29	Open base	40	V
		TIP29A		60	
		TIP29B		80	
		TIP29C		100	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current (DC)			1	A
I_{CM}	Collector current-Pulse			3	A
I_B	Base current			0.4	A
P_C	Collector power dissipation		$T_C=25^{\circ}\text{C}$	30	w
T_j	Junction temperature			-65~150	$^{\circ}\text{C}$
T_{stg}	Storage temperature			-65~150	$^{\circ}\text{C}$

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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	TIP29	I _C =30mA; I _B =0	40			V
		TIP29A		60			
		TIP29B		80			
		TIP29C		100			
V _{CE(sat)}	Collector-emitter saturation voltage		I _C =1A; I _B =0.125A			0.7	V
V _{BE}	Base-emitter on voltage		I _C =1A; V _{CE} =4V			1.3	V
I _{CES}	Collector cut-off current	TIP29	V _{CE} =40V; V _{EB} =0			0.2	mA
		TIP29A	V _{CE} =60V; V _{EB} =0				
		TIP29B	V _{CE} =80V; V _{EB} =0				
		TIP29C	V _{CE} =100V; V _{EB} =0				
I _{CEO}	Collector cut-off current	TIP29/29A	V _{CE} =30V; I _B =0			0.3	mA
		TIP29B/29C	V _{CE} =60V; I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			1.0	mA
h _{FE-1}	DC current gain		I _C =0.2A; V _{CE} =4V	40			
h _{FE-2}	DC current gain		I _C =1A; V _{CE} =4V	15		75	
f _T	Transition frequency		I _C =0.2A; V _{CE} =10V; f=1MHz	3			MHz

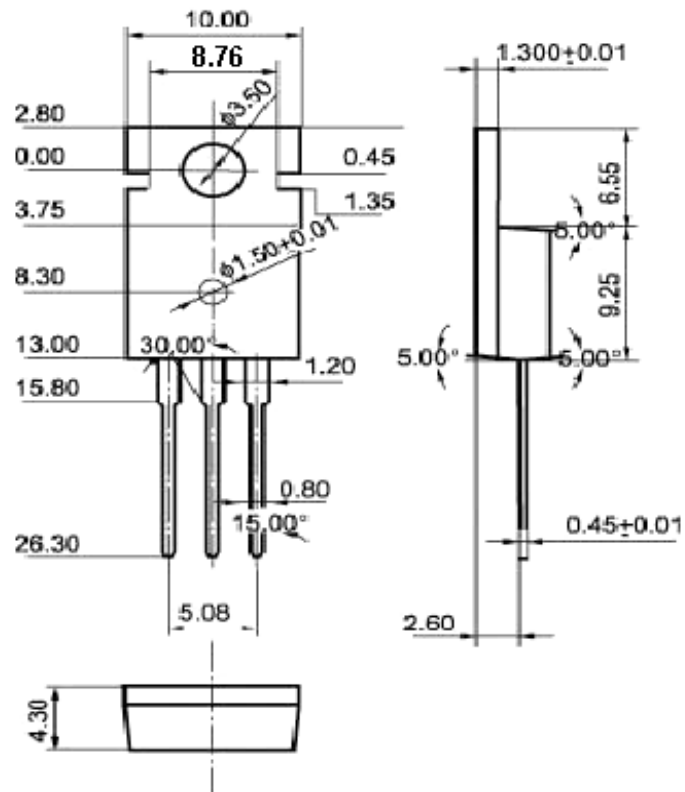
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{th j-c}	Thermal resistance junction to case	4.167	°C/W

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PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)