

**Silicon PNP Power Transistors**

**TIP30/30A/30B/30C**

**DESCRIPTION**

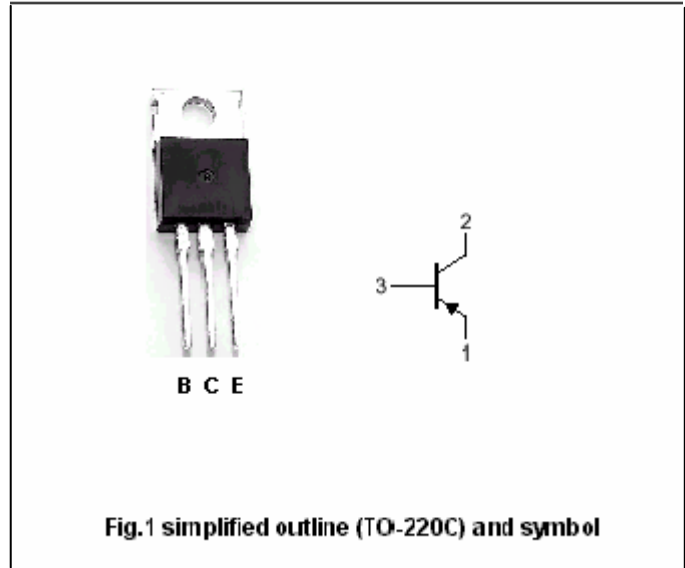
- With TO-220C package
- Complement to type TIP29/29A/29B/29C

**APPLICATIONS**

- For use in general purpose power amplifier and switching applications

**PINNING**

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



**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	TIP30	-40	V
		TIP30A	-60	
		TIP30B	-80	
		TIP30C	-100	
V <sub>CEO</sub>	Collector-emitter voltage	TIP30	-40	V
		TIP30A	-60	
		TIP30B	-80	
		TIP30C	-100	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current (DC)		-1	A
I <sub>CM</sub>	Collector current-Pulse		-3	A
I <sub>B</sub>	Base current		-0.4	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	30	w
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-65~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	TIP30	I <sub>C</sub> =-30mA; I <sub>B</sub> =0	-40			V
		TIP30A		-60			
		TIP30B		-80			
		TIP30C		-100			
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-1A; I <sub>B</sub> =-0.125A			-0.7	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =-1A; V <sub>CE</sub> =-4V			-1.3	V
I <sub>CES</sub>	Collector cut-off current	TIP30	V <sub>CE</sub> =-40V; V <sub>EB</sub> =0			-0.2	mA
		TIP30A	V <sub>CE</sub> =-60V; V <sub>EB</sub> =0				
		TIP30B	V <sub>CE</sub> =-80V; V <sub>EB</sub> =0				
		TIP30C	V <sub>CE</sub> =-100V; V <sub>EB</sub> =0				
I <sub>CEO</sub>	Collector cut-off current	TIP30/30A	V <sub>CE</sub> =-30V; I <sub>B</sub> =0			-0.3	mA
		TIP30B/30C	V <sub>CE</sub> =-60V; I <sub>B</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-1.0	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-0.2A; V <sub>CE</sub> =-4V	40			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-1A; V <sub>CE</sub> =-4V	15		75	
f <sub>T</sub>	Transiton frequency		I <sub>C</sub> =-0.2A; V <sub>CE</sub> =-10V; f=1MHz	3			MHz

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	4.167	/W

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PACKAGE OUTLINE

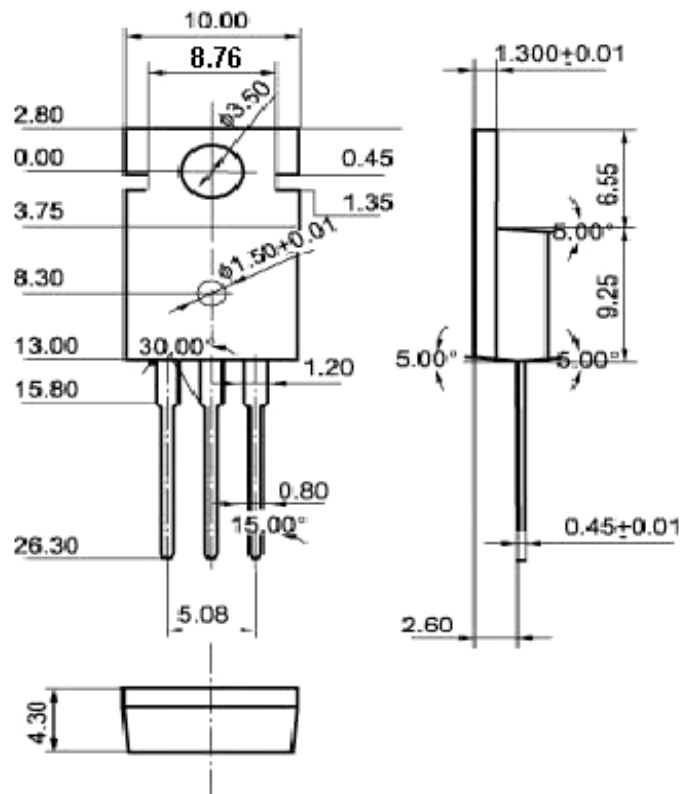


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)