# TIP32/32A/32B/32C

### **DESCRIPTION**

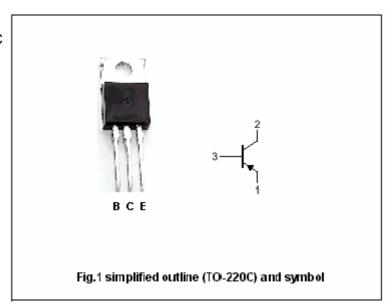
- · With TO-220C package
- · Complement to type TIP31/31A/31B/31C

## **APPLICATIONS**

Medium power linear 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	TIP32		-40		
		TIP32A	Open emitter	-60	V	
		TIP32B		-80		
		TIP32C		-100		
V <sub>CEO</sub>	Collector-emitter voltage	TIP32		-40	V	
		TIP32A	Open base	-60		
		TIP32B		-80		
		TIP32C		-100		
V <sub>EBO</sub>	Emitter-base voltage		Open collector	-5	V	
I <sub>C</sub>	Collector current (DC)			-3	А	
I <sub>CM</sub>	Collector current-Pulse			-5	Α	
I <sub>B</sub>	Base current			-1	Α	
P <sub>C</sub>	Collector power dissipation		T <sub>C</sub> =25	40	W	
			T <sub>a</sub> =25	2		
T <sub>j</sub>	Junction temperature			150		
T <sub>stg</sub>	Storage temperature			-65~150		

# TIP32/32A/32B/32C

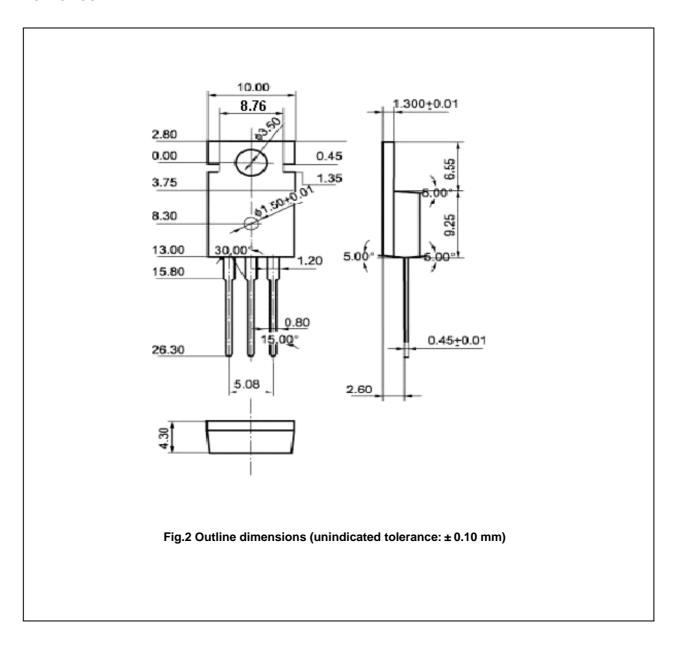
## **CHARACTERISTICS**

Tj=25 unless otherwise specified

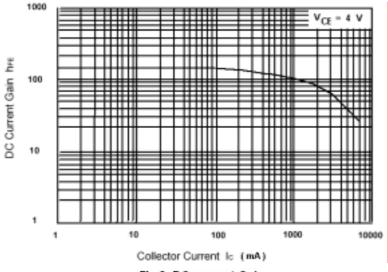
SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	TIP32	- I <sub>C</sub> =-30mA; I <sub>B</sub> =0	-40			
		TIP32A		-60			
		TIP32B		-80			V
		TIP32C		-100			
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-3A ;I <sub>B</sub> =-0.375A			-1.2	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V			-1.8	V
I <sub>CES</sub>	Collector cut-off current	TIP32	V <sub>CE</sub> =-40V; V <sub>EB</sub> =0			-0.2	mA
		TIP32A	V <sub>CE</sub> =-60V; V <sub>EB</sub> =0				
		TIP32B	V <sub>CE</sub> =-80V; V <sub>EB</sub> =0				
		TIP32C	V <sub>CE</sub> =-100V; V <sub>EB</sub> =0				
I <sub>CEO</sub>	Collector cut-off current	TIP32/32A	V <sub>CE</sub> =-30V; I <sub>B</sub> =0			-0.3	mA
		TIP32B/32C	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> =-1A ; V <sub>CE</sub> =-4V	25			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V	10		50	
f <sub>T</sub>	Transiton frequency		I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V	3			MHz

# TIP32/32A/32B/32C

### PACKAGE OUTLINE



# TIP32/32A/32B/32C



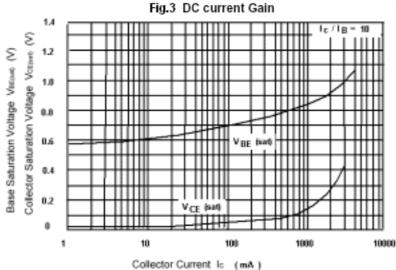


Fig.4 Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

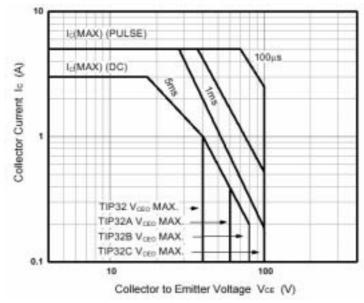


Fig.5 Safe Operating Area