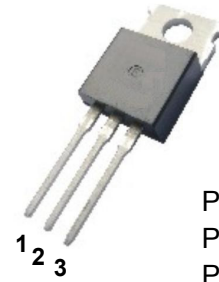


DESCRIPTION

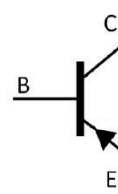
- With TO-220 package
- Complement to type TIP31/31A/31B/31C

APPLICATIONS

- Medium power linear and switching applications



PIN1 : Base
 PIN 2 : Collector
 PIN 3 : Emitter



Absolute maximum ratings(Ta=25)

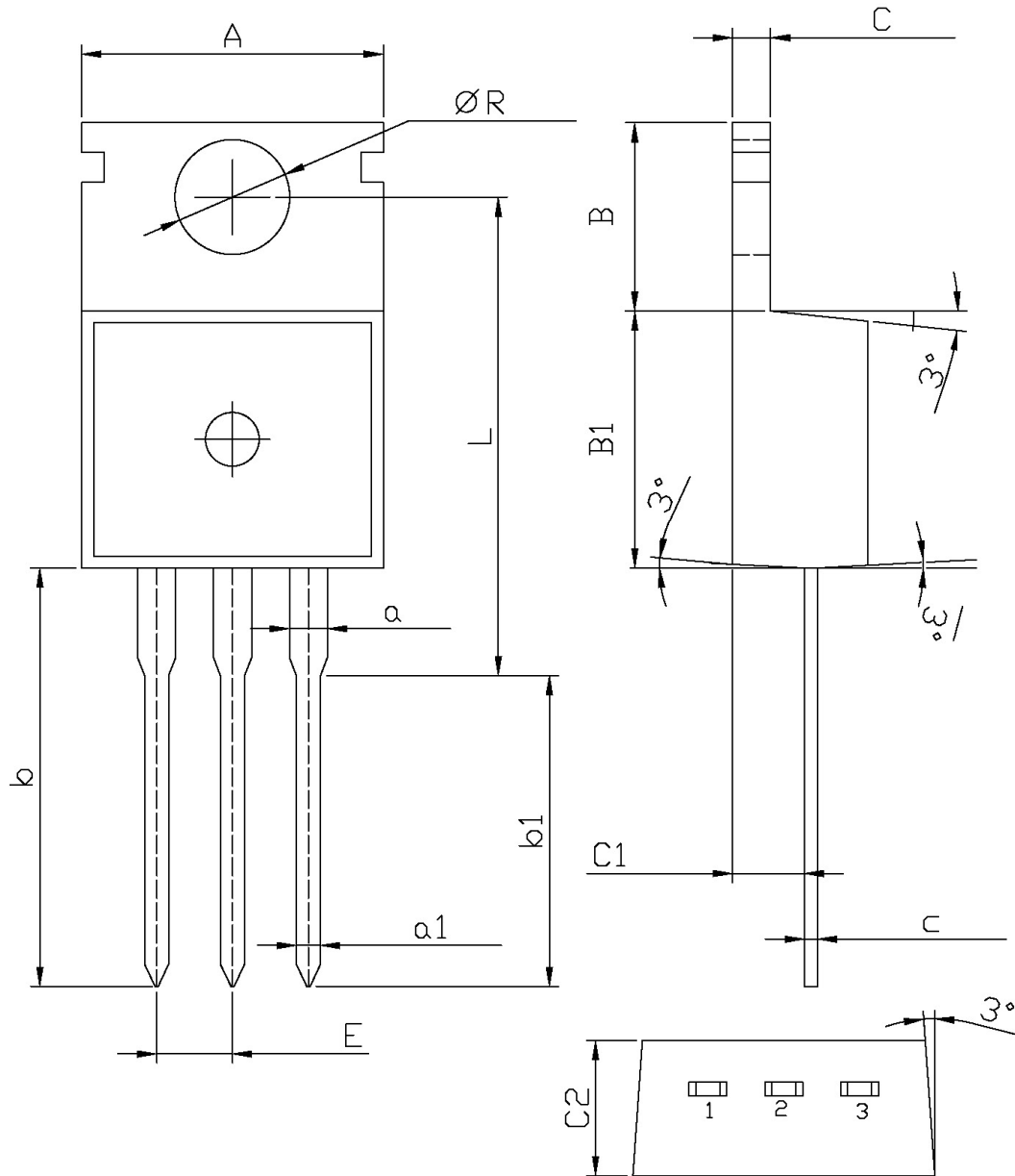
SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	TIP32	-40	V
		TIP32A	-60	
		TIP32B	-80	
		TIP32C	-100	
V _{CEO}	Collector-emitter voltage	TIP32	-40	V
		TIP32A	-60	
		TIP32B	-80	
		TIP32C	-100	
V _{EBO}	Emitter-base voltage	Open collector	-5	V
I _C	Collector current (DC)		-3	A
I _{CM}	Collector current-Pulse		-5	A
I _B	Base current		-1	A
P _C	Collector power dissipation	T _C =25	40	W
		T _a =25	2	
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-65~150	

CHARACTERISTICS

T_j=25 unless otherwise specified

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

PACKAGE OUTLINE



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	9.8	10.2	C	1.2	1.4
R	3.56	3.64	B	6.3	6.7
L	15.7	16.1	B1	9.0	9.4
b	12.6	13.6	C1	2.2	2.6
b1	9.6	10.6	a1	0.7	0.9
a	1.22	1.32	c	0.4	0.6
E	2.34	2.74	C2	4.3	4.7

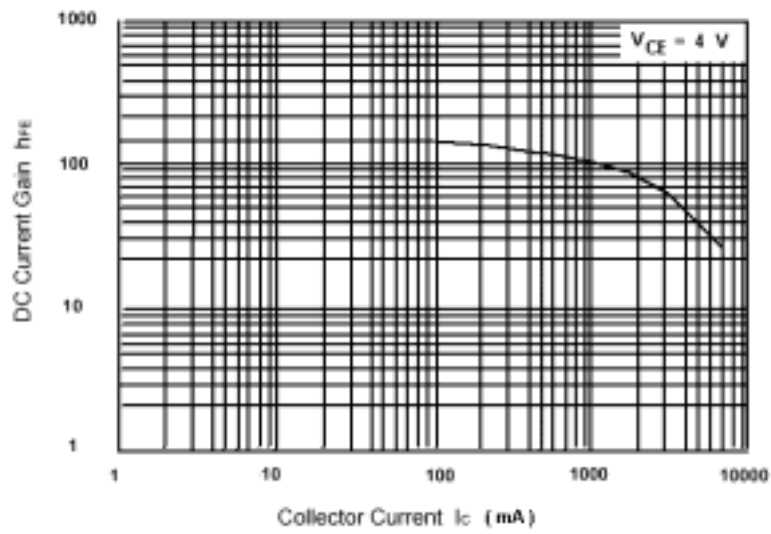
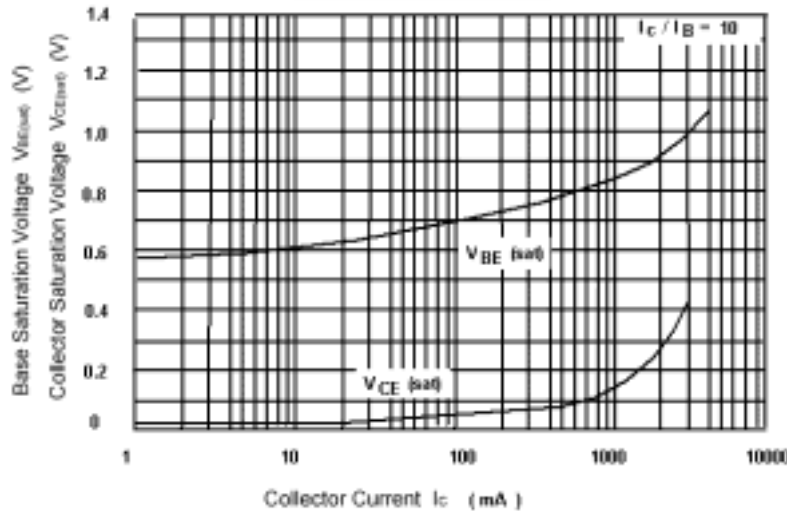


Fig.3 DC current Gain



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

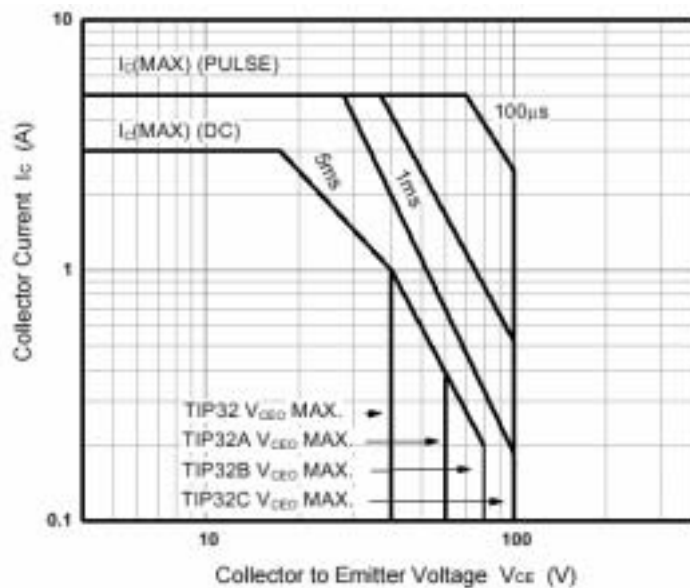


Fig.5 Safe Operating Area