

Silicon PNP Power Transistors

TIP32/32A/32B/32C

DESCRIPTION

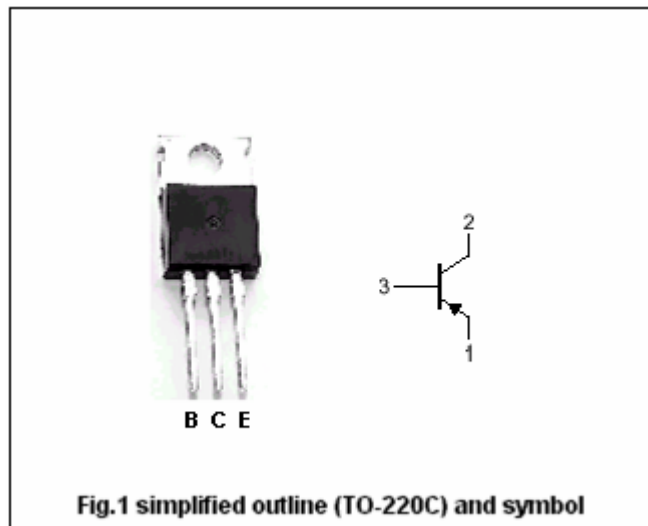
- With TO-220C package
- Complement to type TIP31/31A/31B/31C

APPLICATIONS

- Medium power linear and switching applications

PINNING

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

ABSOLUTE MAXIMUM RATINGS($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	TIP32	Open emitter	-40	V
		TIP32A		-60	
		TIP32B		-80	
		TIP32C		-100	
V_{CEO}	Collector-emitter voltage	TIP32	Open base	-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		$T_c=25^\circ\text{C}$	40	W
			$T_a=25^\circ\text{C}$	2	
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~150	$^\circ\text{C}$

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CHARACTERISTICS

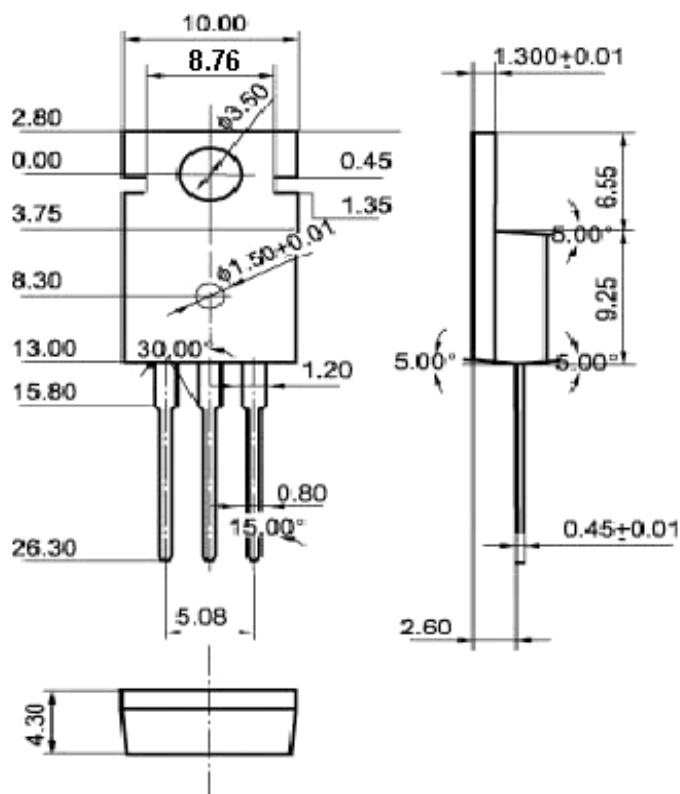
T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	TIP32	I _C =-30mA; I _B =0	-40			V
		TIP32A		-60			
		TIP32B		-80			
		TIP32C		-100			
V _{CE(sat)}	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	Transition frequency		I _C =-0.5A; V _{CE} =-10V	3			MHz

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PACKAGE OUTLINE

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

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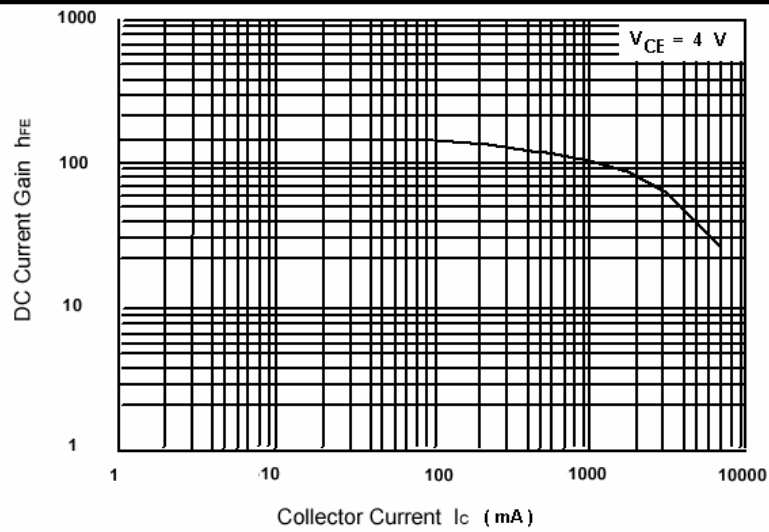


Fig.3 DC current Gain

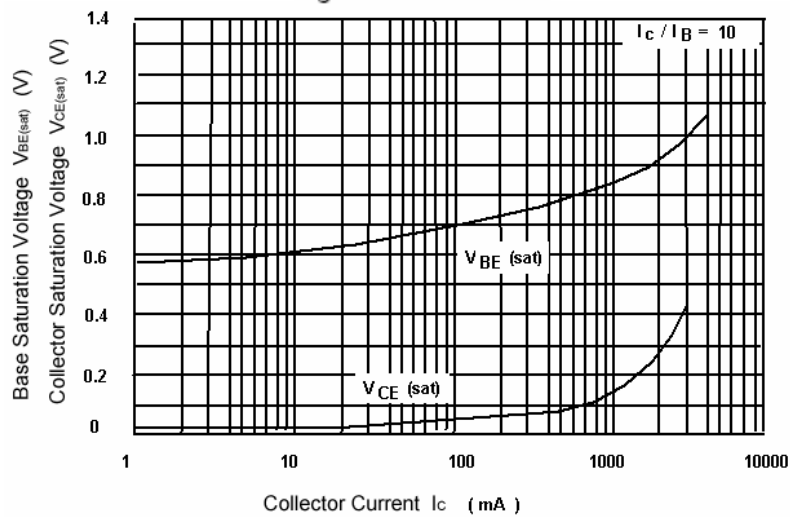
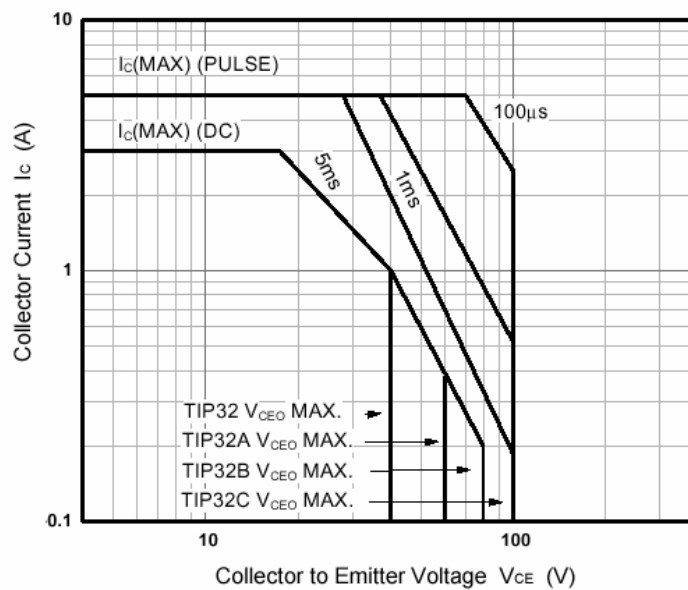
Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

Fig.5 Safe Operating Area