

## Epitaxial Planar PNP Transistor

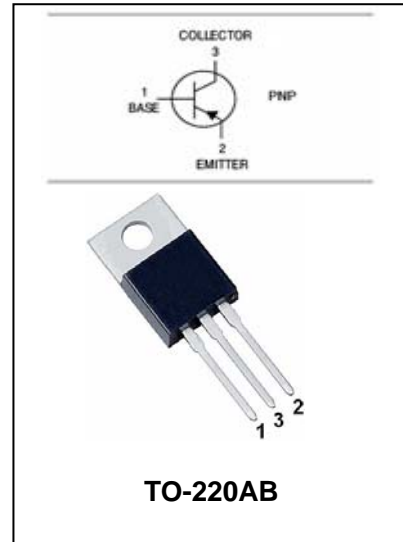
## TIP32/32A/32B/32C

### FEATURES

- Complementary to TIP31/31A/31B/31C.



Lead-free



### MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter		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		-5	V
$I_C$	Collector Current	DC	-3	A
		Pulse	-5	
$I_B$	Base Current		-3	A
$P_C$	Collector Dissipation	$T_a=25^\circ\text{C}$	2	W
$T_j, T_{stg}$	Junction and Storage Temperature		-65 to +150	$^\circ\text{C}$

# Epitaxial Planar PNP Transistor

# TIP32/32A/32B/32C

**ELECTRICAL CHARACTERISTICS** Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-emitter Sustaining Voltage TIP32 TIP32A TIP32B TIP32C	$V_{CEO(SUS)}$	$I_C = -30mA, I_B = 0$	-40 -60 -80 -100			V
Collector Cut-off Current TIP32/32A TIP32B/32C	$I_{CEO}$	$V_{CE} = -30V, I_B = 0$ $V_{CE} = -60V, I_B = 0$			-0.3 -0.3	mA
Collector Cut-off Current TIP32 TIP32A TIP32B TIP32C	$I_{CES}$	$V_{CE} = -40V, V_{EB} = 0$ $V_{CE} = -60V, V_{EB} = 0$ $V_{CE} = -80V, V_{EB} = 0$ $V_{CE} = -100V, V_{EB} = 0$			-200 -200 -200 -200	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-1	mA
DC Current Gain	$h_{FE}$	$V_{CE} = -4V, I_C = -1A$ $V_{CE} = -4V, I_C = -3A$	25 10		50	
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -3A, I_B = -375mA$			-1.2	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$V_{CE} = -4V, I_C = -3A$			-1.8	V
Transition Frequency	$f_T$	$V_{CE} = -10V,$ $I_C = -0.5A$	3			MHz

**TYPICAL CHARACTERISTICS** @  $T_a = 25^\circ C$  unless otherwise specified

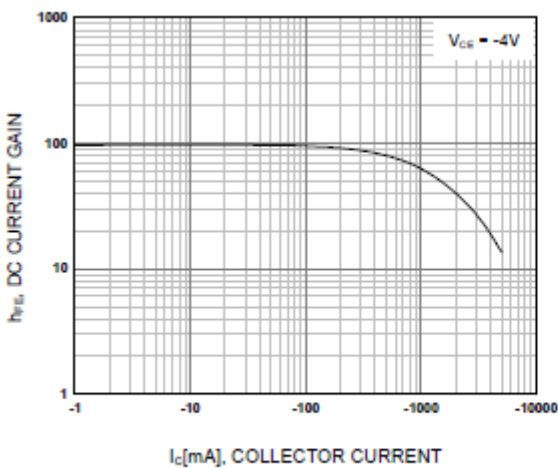


Figure 1. DC current Gain

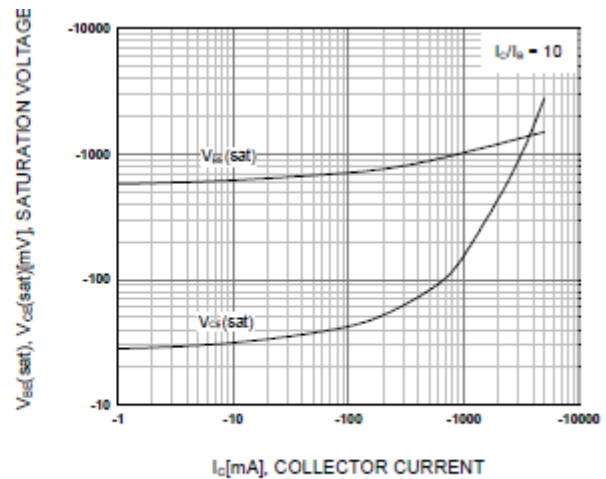


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

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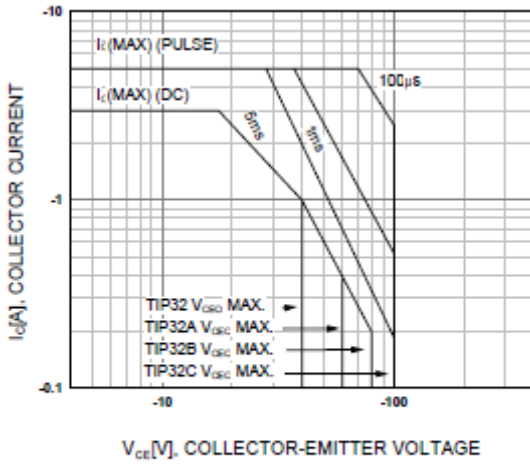


Figure 3. Safe Operating Area

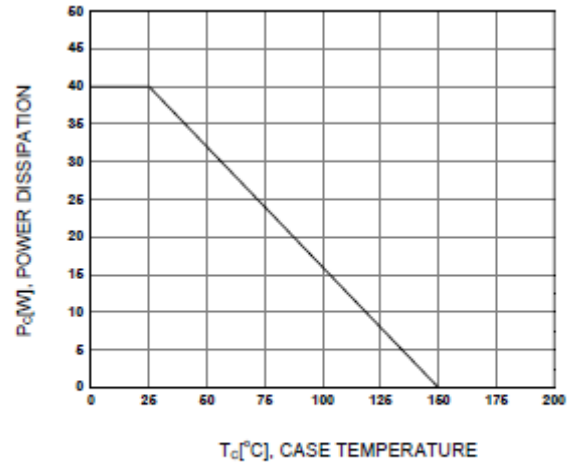


Figure 4. Power Derating

## PACKAGE OUTLINE

Plastic surface mounted package

TO-220AB

