

## Silicon NPN Power Transistors

## TIP41/41A/41B/41C

## DESCRIPTION

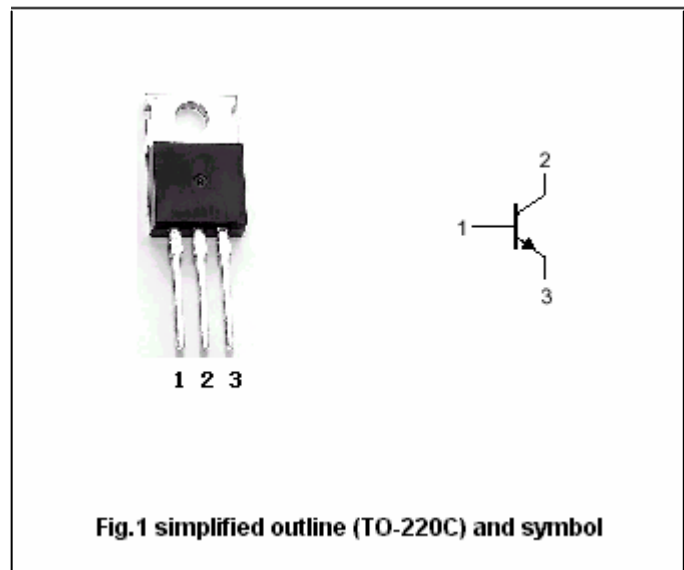
- With TO-220C package
- Complement to type TIP42/42A/42B/42C

## APPLICATIONS

- For medium power linear switching applications

## PINNING

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

Absolute maximum ratings( $T_c=25$  )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	TIP41	40	V
		TIP41A	60	
		TIP41B	80	
		TIP41C	100	
$V_{CEO}$	Collector-emitter voltage	TIP41	40	V
		TIP41A	60	
		TIP41B	80	
		TIP41C	100	
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current (DC)		6	A
$I_{CM}$	Collector current-Pulse		10	A
$I_B$	Base current		2	A
$P_C$	Collector power dissipation	$T_c=25$	65	W
		$T_a=25$	2	
$T_j$	Junction temperature		150	
$T_{stg}$	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>CEQ(SUS)</sub>	Collector-emitter sustaining voltage	TIP41	40			V	
		TIP41A	60				
		TIP41B	80				
		TIP41C	100				
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =6A; I <sub>B</sub> =0.6A			1.5	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =6A; V <sub>CE</sub> =4V			2.0	V	
I <sub>CES</sub>	Collector cut-off current	TIP41	V <sub>CE</sub> =40V; V <sub>EB</sub> =0			0.4	mA
		TIP41A	V <sub>CE</sub> =60V; V <sub>EB</sub> =0				
		TIP41B	V <sub>CE</sub> =80V; V <sub>EB</sub> =0				
		TIP41C	V <sub>CE</sub> =100V; V <sub>EB</sub> =0				
I <sub>CEO</sub>	Collector cut-off current	TIP41/41A	V <sub>CE</sub> =30V; I <sub>B</sub> =0			0.7	mA
		TIP41B/41C	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> =0.3A; V <sub>CE</sub> =4V	30				
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =3A; V <sub>CE</sub> =4V	15		75		
f <sub>T</sub>	Transiton frequency	I <sub>C</sub> =0.5A; V <sub>CE</sub> =10V	3			MHz	

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PACKAGE OUTLINE

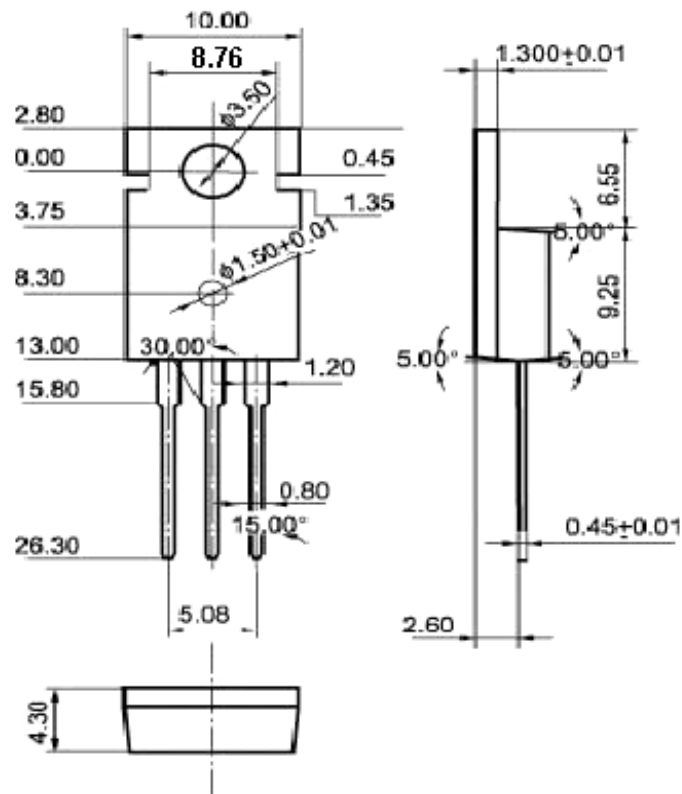


Fig.2 Outline dimensions

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TIP41/41A/41B/41C

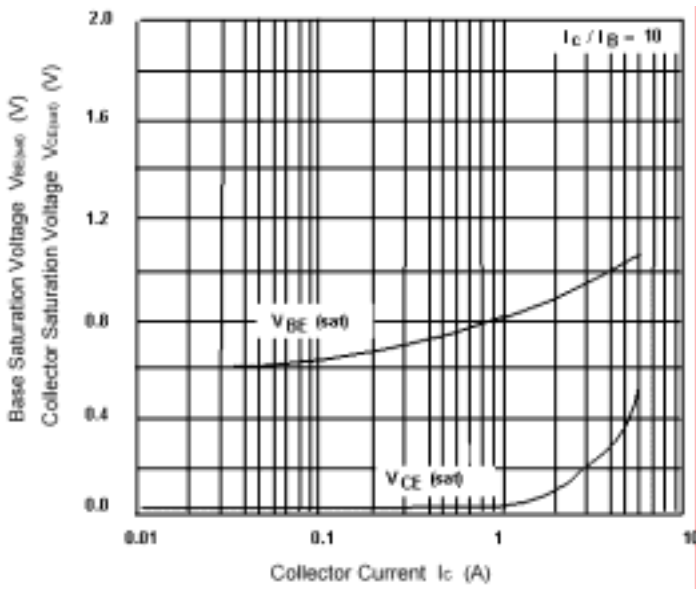


Fig.3 Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

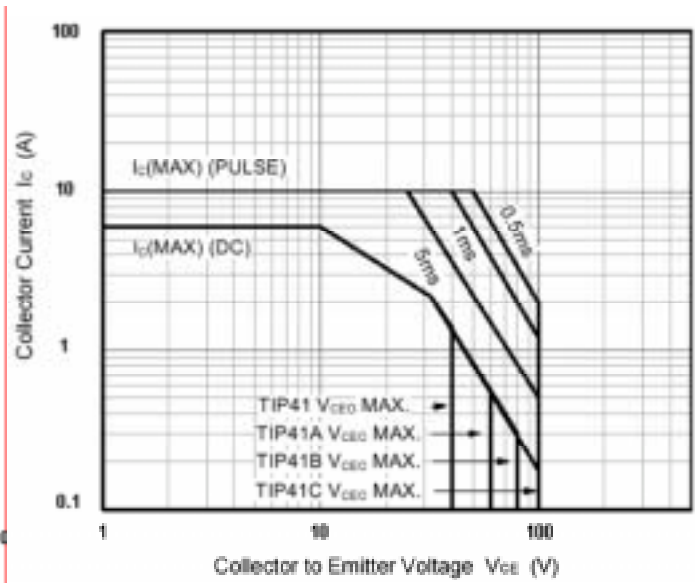


Fig.4 Safe Operating Area

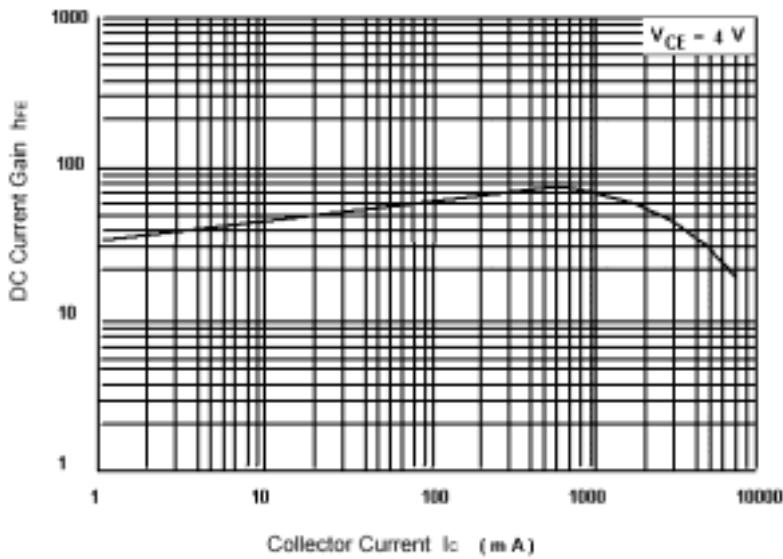


Fig.5 DC current Gain