

**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

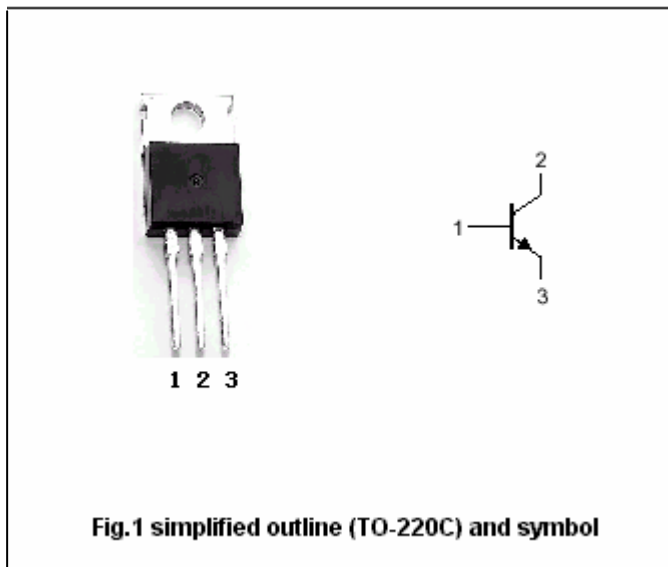


Fig.1 simplified outline (TO-220C) and symbol

**Absolute maximum ratings(Tc=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	TIP41	40	V
		TIP41A	60	
		TIP41B	80	
		TIP41C	100	
V <sub>CEO</sub>	Collector-emitter voltage	TIP41	40	V
		TIP41A	60	
		TIP41B	80	
		TIP41C	100	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current (DC)		6	A
I <sub>CM</sub>	Collector current-Pulse		10	A
I <sub>B</sub>	Base current		2	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	65	W
		T <sub>a</sub> =25	2	
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	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>CEO(SUS)</sub>	Collector-emitter sustaining voltage	TIP41	I <sub>C</sub> =30mA; I <sub>B</sub> =0	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

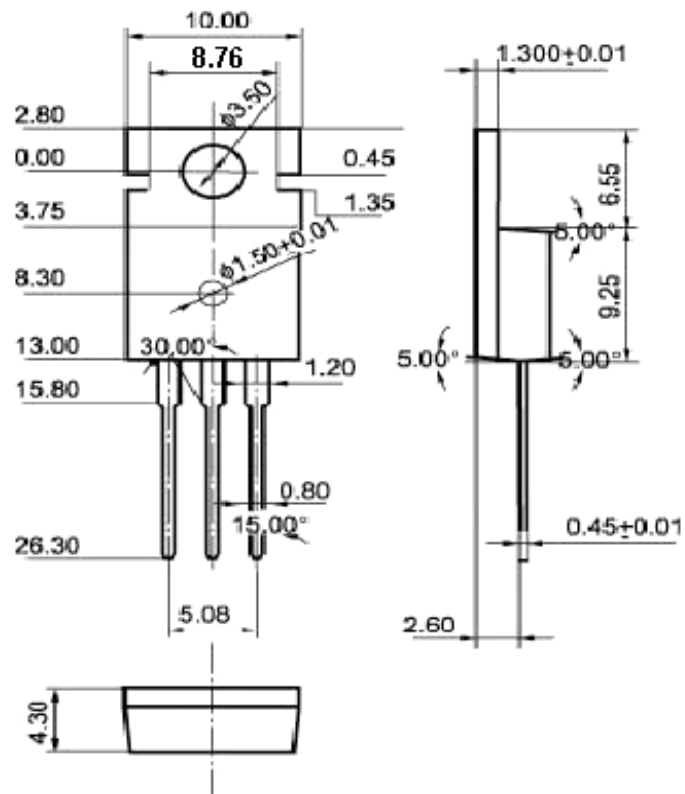


Fig.2 Outline dimensions

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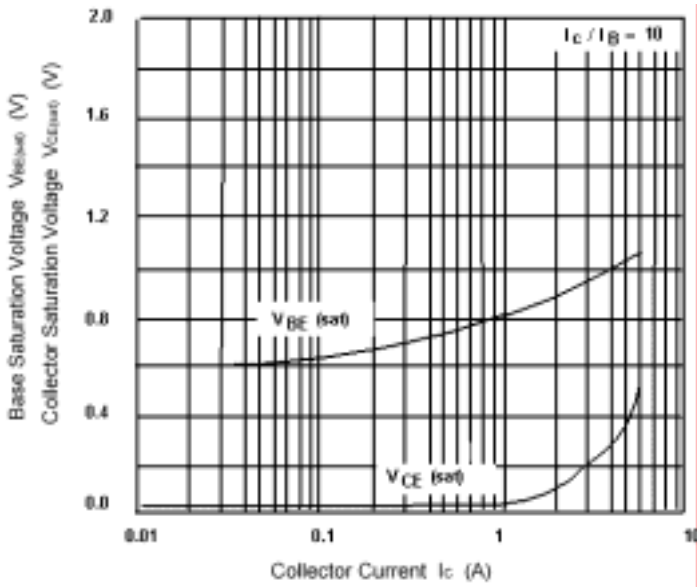


Fig.3 Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

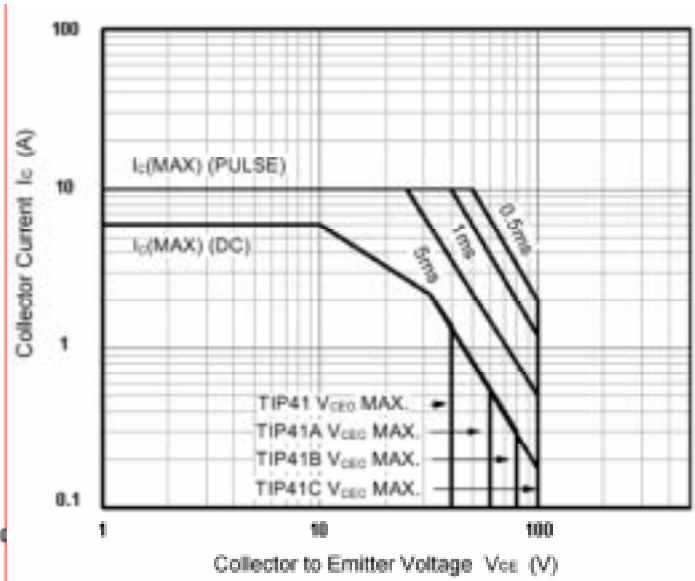


Fig.4 Safe Operating Area

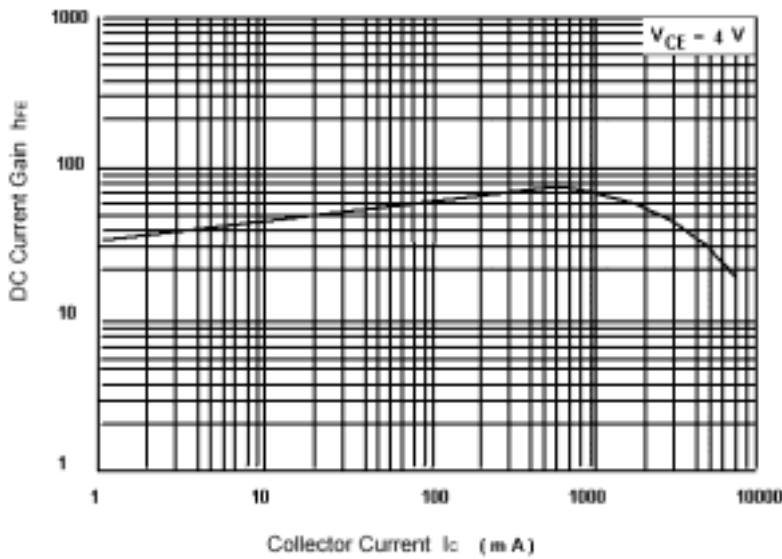


Fig.5 DC current Gain