

Silicon NPN Power Transistors

TIP41/41A/41B/41C

DESCRIPTION

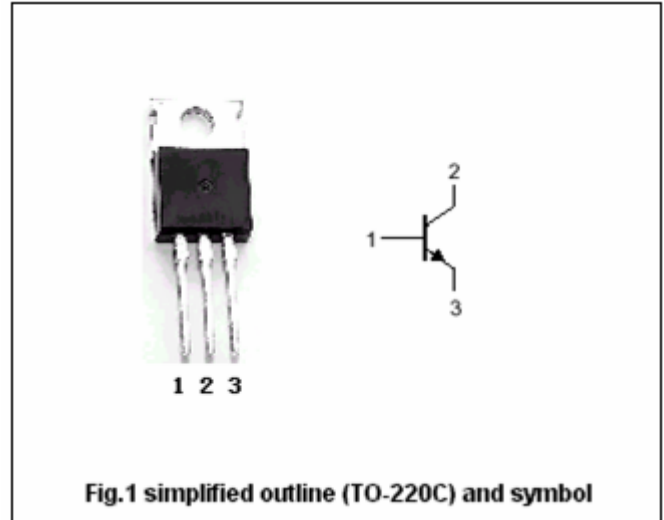
- With TO-220C package
- Complement to type TIP42/42A/42B/42C

APPLICATIONS

- For medium power linear switching applications

PINNING

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

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

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	$T_C=25^\circ\text{C}$	65	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 _{CE(SUS)}	Collector-emitter sustaining voltage	TIP41	40			V	
		TIP41A	60				
		TIP41B	80				
		TIP41C	100				
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =6A; I _B =0.6A			1.5	V	
V _{BE}	Base-emitter on voltage	I _C =6A; V _{CE} =4V			2.0	V	
I _{CES}	Collector cut-off current	TIP41	V _{CE} =40V; V _{EB} =0			0.4	mA
		TIP41A	V _{CE} =60V; V _{EB} =0				
		TIP41B	V _{CE} =80V; V _{EB} =0				
		TIP41C	V _{CE} =100V; V _{EB} =0				
I _{CEO}	Collector cut-off current	TIP41/41A	V _{CE} =30V; I _B =0			0.7	mA
		TIP41B/41C	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 =0.3A; V _{CE} =4V	30				
h _{FE-2}	DC current gain	I _C =3A; V _{CE} =4V	15		75		
f _T	Transition frequency	I _C =0.5A; V _{CE} =10V	3			MHz	

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PACKAGE OUTLINE

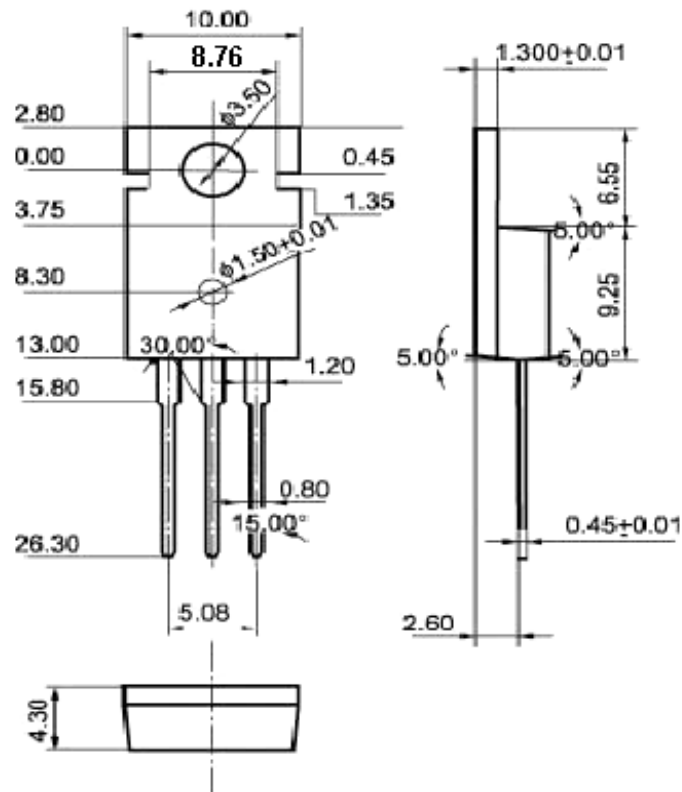
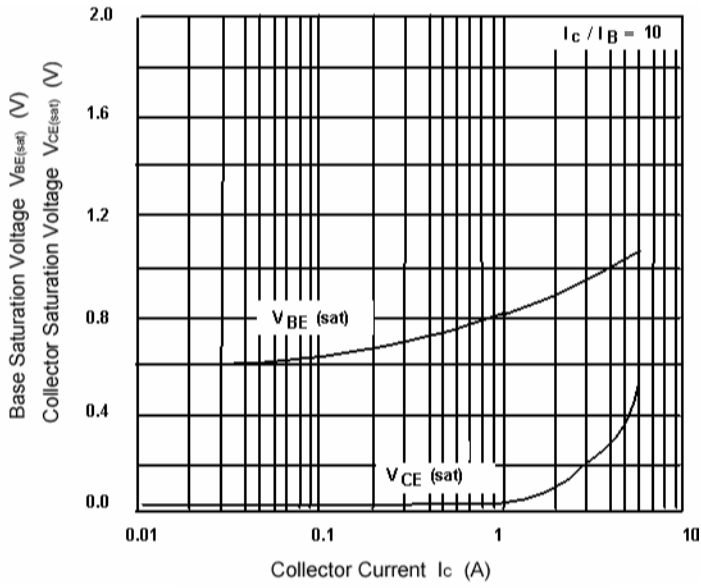


Fig.2 Outline dimensions

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

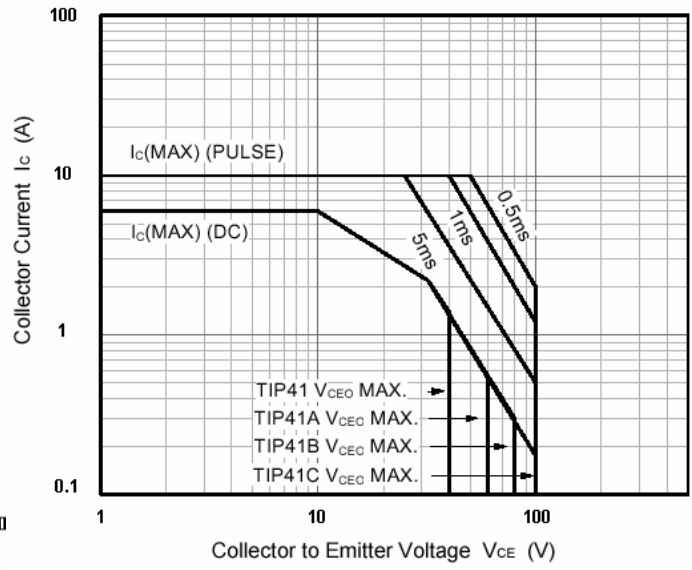


Fig.4 Safe Operating Area

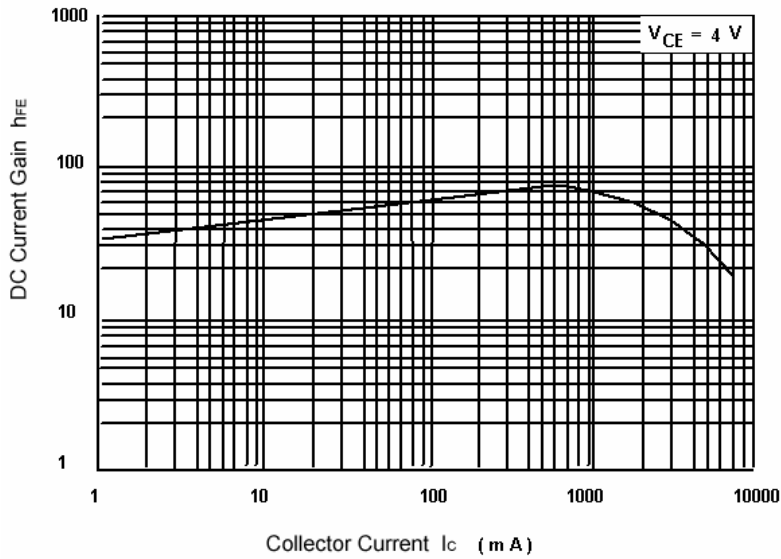


Fig.5 DC current Gain