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

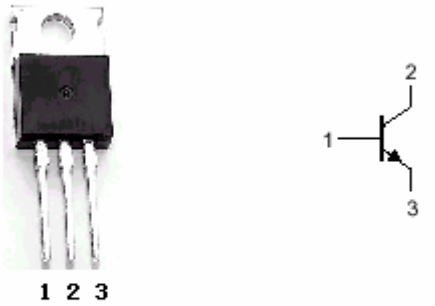

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Tc=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	TIP41	Open emitter	40	V
		TIP41A		60	
		TIP41B		80	
		TIP41C		100	
V_{CEO}	Collector-emitter voltage	TIP41	Open base	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	℃

Silicon NPN Power Transistors TIP41/41A/41B/41C

CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	TIP41	I_C=30mA; I_B=0	40			V
		TIP41A		60			
		TIP41B		80			
		TIP41C		100			
V_{CEsat}	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	Transiton frequency		I_C=0.5A ; V_{CE}=10V	3			MHz

PACKAGE OUTLINE

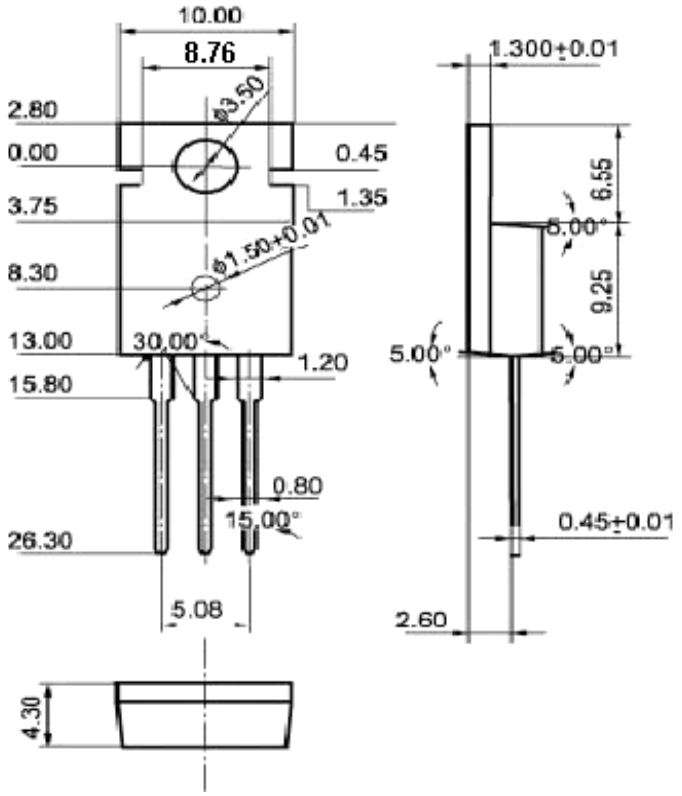

Fig.2 Outline dimensions

Silicon NPN Power Transistors TIP41/41A/41B/41C

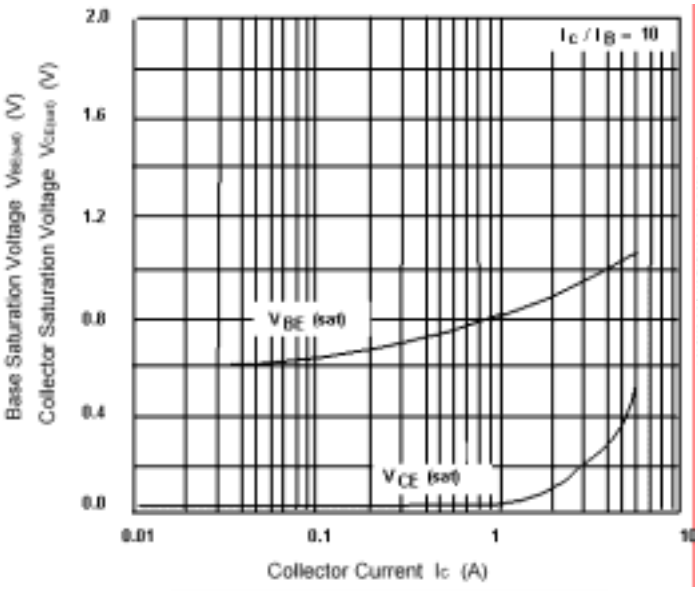

Fig.3 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

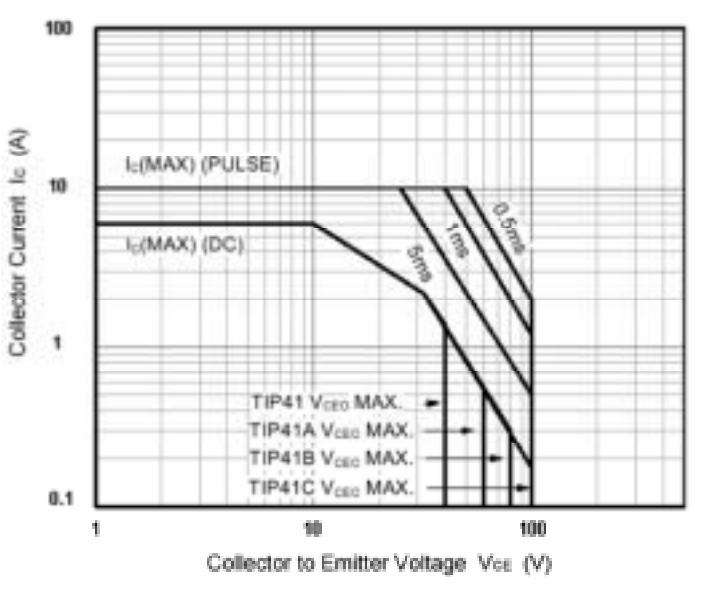

Fig.4 Safe Operating Area

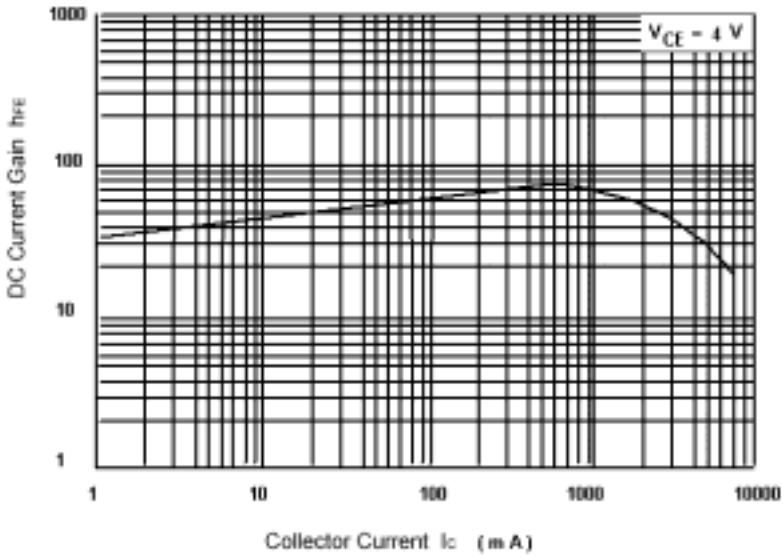

Fig.5 DC current Gain