TIP41/41A/41B/41C TRANSISTOR (NPN)


TO-220C

1.BASE
2.COLLECTOR
3.EMITTER

FEATURES

Medium Power Linear Switching Applications

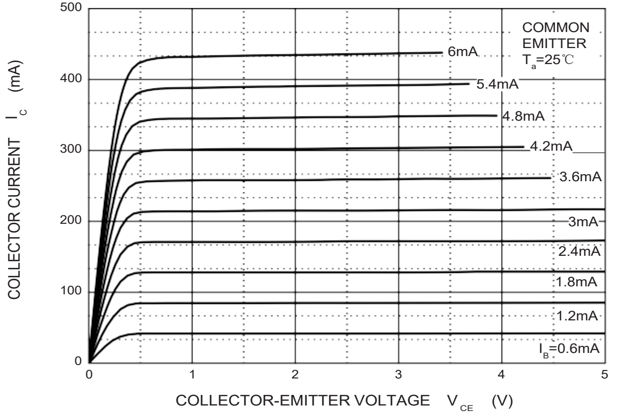
MAXIMUM RATINGS (T$_a$=25℃ unless otherwise noted)

Symbol	Parameter	TIP41	TIP41A	TIP41B	TIP41C	Unit
V_{CBO}	Collector-Base Voltage	40	60	80	100	V
V_{CEO}	Collector-Emitter Voltage	40	60	80	100	V
V_{EBO}	Emitter-Base Voltage	5				V
I_C	Collector Current -Continuous	6				A
P_C	Collector Power Dissipation	2				W
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	62.5				℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150				℃

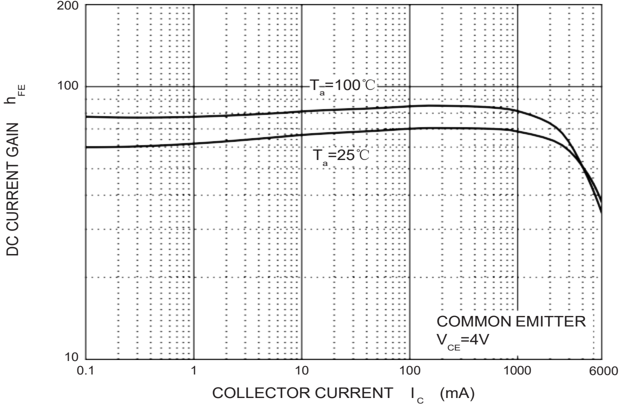
ELECTRICAL CHARACTERISTICS (T$_a$=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	**TIP41**	$V_{(BR)CBO}$	I_C= 1mA, I_E=0	40		V
	TIP4 1A			60		
	TIP41B			80		
	TIP41C			100		
Collector-emitter breakdown voltage	**TIP41**	$V_{CEO(sus)}$	I_C= 30mA, I_B=0	40		V
	TIP41A			60		
	TIP41B			80		
	TIP41C			100		
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E= 1mA, I_C=0	5		V
Collector cut-off current	**TIP41**	I_{CBO}	V_{CB}=40V, I_E=0		0.4	mA
	TIP4 1A		V_{CB}=60V, I_E=0			
	TIP41B		V_{CB}=80V, I_E=0			
	TIP41C		V_{CB}=100V, I_E=0			
Collector cut-off current	**TIP41/41A**	I_{CEO}	V_{CE}= 30V, I_B= 0		0.7	mA
	TIP41B/41C		V_{CE}= 60V, I_B= 0			
Emitter cut-off current		I_{EBO}	V_{EB}=5V, I_C=0		1	mA
DC current gain		$h_{FE(1)}$	V_{CE}= 4V, I_C= 0.3A	30		
		$h_{FE(2)}$	V_{CE}=4 V, I_C= 3A	15	75	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=6A, I_B=0.6A		1.5	V
Base-emitter voltage		$V_{BE(on)}$	V_{CE}= 4V, I_C=6A		2	V
Transition frequency		f_T	V_{CE}=10V , I_C=0.5A f =1MHz	3		MH$_Z$

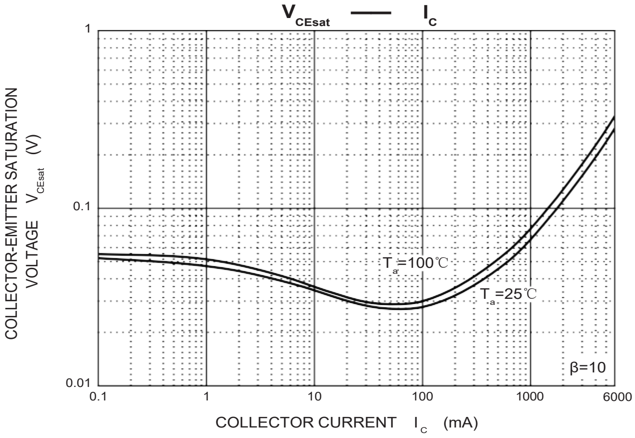
Static Characteristic



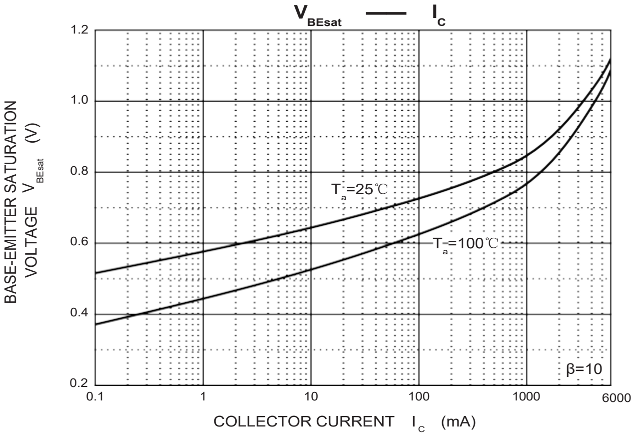
h_{FE} —— I_C



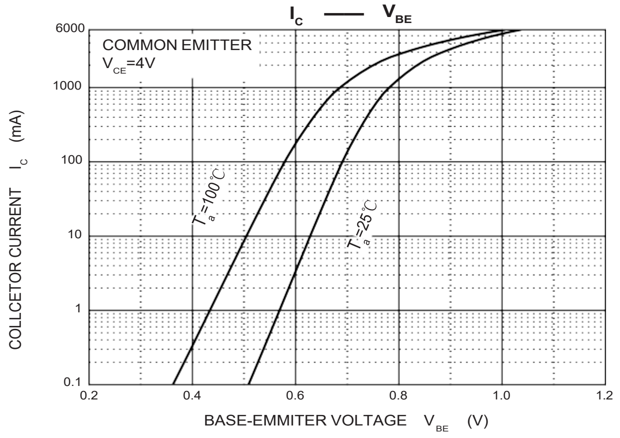
V_{CEsat} —— I_C



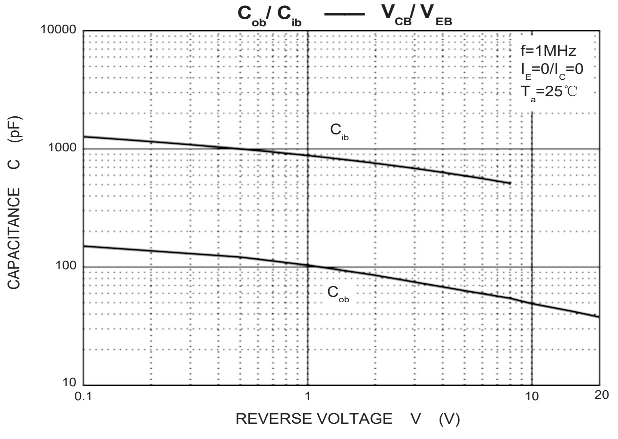
V_{BEsat} —— I_C



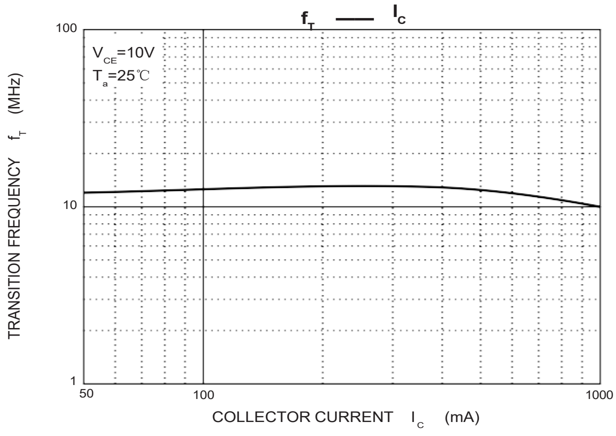
I_C —— V_{BE}



C_{ob}/ C_{ib} —— V_{CB}/ V_{EB}



f_T —— I_C



P_C —— T_a