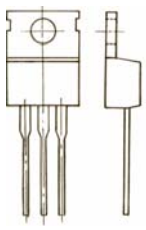
TIP41/41A/41B/41C TRANSISTOR (NPN)

TO-220

1. BASE
2. COLLECTOR
3. EMITTER



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FEATURES

Medium Power Linear Switching Applications

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	TIP41	TIP41A	TIP41B	TIP41C	Units
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
T_J	Junction Temperature	150				℃
T_{stg}	Storage Temperature Range	-55to+150				℃

ELECTRICAL CHARACTERISTICS (Tamb=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
	TIP41A			60		
	TIP41B			80		
	TIP41C			100		
Collector-emitter breakdown voltage	**TIP41**	$V(BR)_{CEO}$	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
	TIP41A		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

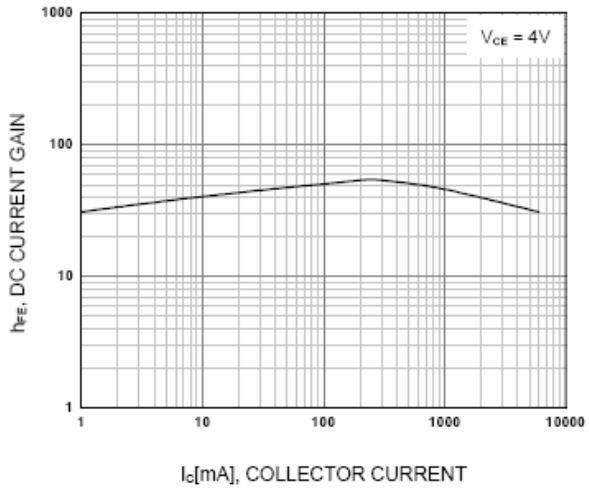

Figure 1. DC current Gain

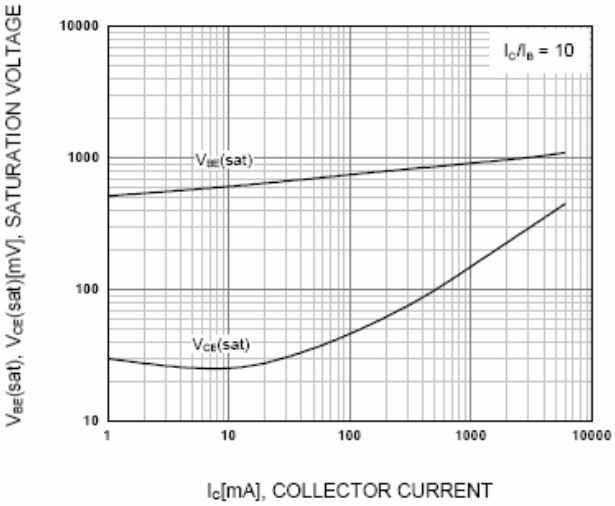

Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

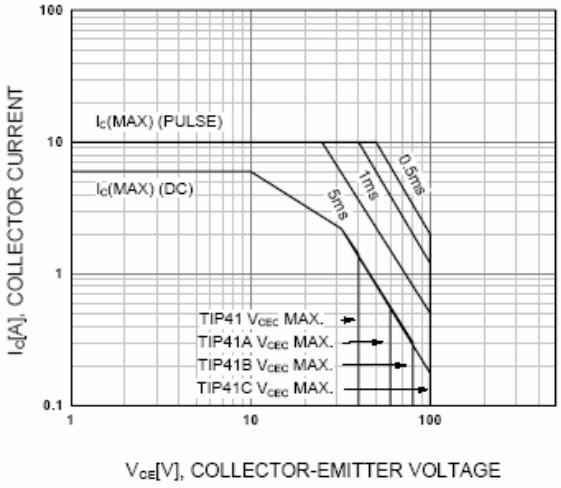

Figure 3. Safe Operating Area

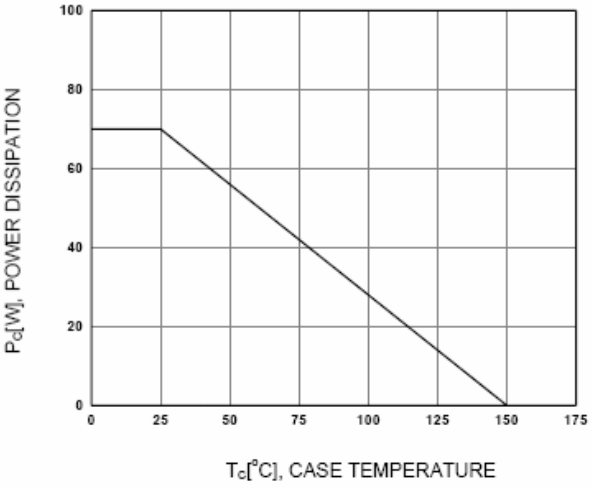

Figure 4. Power Derating