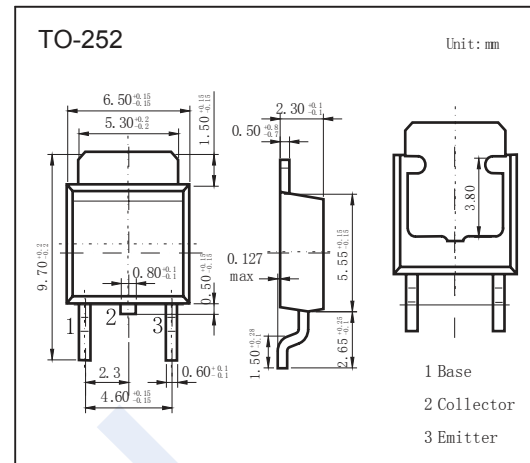


NPN Transistors

TIP41 Series (KIP41 Series)

■ Features

- Medium Power Linear Switching Applications
- Complement to TIP42/42A/42B/42C



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	TIP41	TIP41A	TIP41B	TIP41C	Unit
Collector - Base Voltage	V_{CB0}	40	60	80	100	V
Collector - Emitter Voltage	V_{CE0}	40	60	80	100	
Emitter - Base Voltage	V_{EB0}	5				A
Collector Current - Continuous	I_C	6				
Collector Current - Pulse	I_{CP}	10				
Base Current	I_B	2				W
Collector Power Dissipation $T_c=25^\circ\text{C}$ $T_a=25^\circ\text{C}$	P_C	20				
Junction Temperature	T_J	150				$^\circ\text{C}$
Storage Temperature range	T_{stg}	-65 to 150				

NPN Transistors

TIP41 Series (KIP41 Series)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Collector- base breakdown voltage	V _{CB0}	TIP41	I _C = 100 μA, I _E =0	40			V
		TIP41A		60			
		TIP41B		80			
		TIP41C		100			
Collector-emitter sustaining voltage	V _{CEO(SUS)}	TIP41	I _C = 30 mA, I _B =0	40			V
		TIP41A		60			
		TIP41B		80			
		TIP41C		100			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C =0	5				
Collector-base cut-off current	I _{CBO}	TIP41	V _{CB} = 40 V, I _E =0			0.1	μA
		TIP41A	V _{CB} = 60 V, I _E =0				
		TIP41B	V _{CB} = 80 V, I _E =0				
		TIP41C	V _{CB} = 100 V, I _E =0				
Collector- emittercut-off current	I _{CEO}	TIP41/41A	V _{CE} = 30 V, I _E =0			0.7	mA
		TIP41B/41C	V _{CE} = 60 V, I _E =0				
Collector- emittercut-off current	I _{CES}	TIP41	V _{CE} = 40 V, I _E =0			400	μA
		TIP41A	V _{CE} = 60 V, I _E =0				
		TIP41B	V _{CE} = 80 V, I _E =0				
		TIP41C	V _{CE} = 100 V, I _E =0				
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C =0			1	mA	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 6 A, I _B =-600mA			1.5	V	
Base - emitter saturation voltage	V _{BE(sat)}	V _{CE} = 4V, I _C = 6 A			2		
DC current gain	h _{FE(1)}	V _{CE} = 4V, I _C = 300 mA	30				
	h _{FE(2)}	V _{CE} = 4V, I _C = 3 A	15		75		
Transition frequency	f _T	V _{CE} = 10V, I _C = 500mA	3			MHz	

NPN Transistors TIP41 Series (KIP41 Series)

■ Typical Characteristics

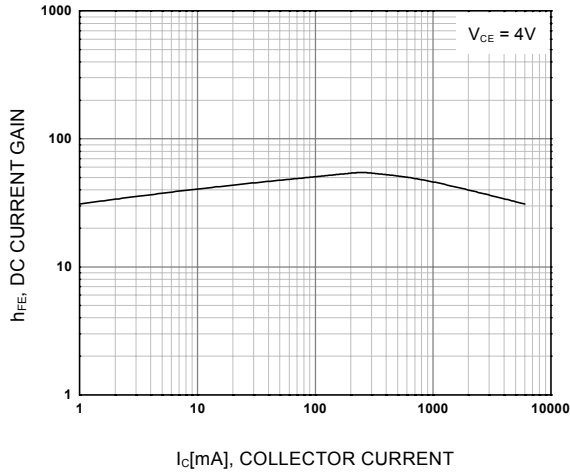


Figure 1. DC current Gain

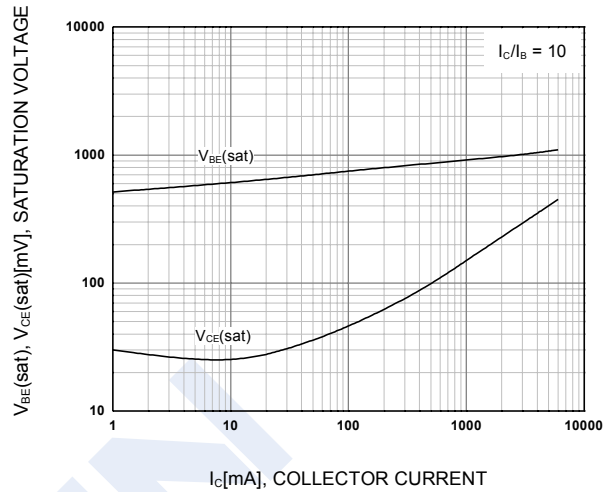


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

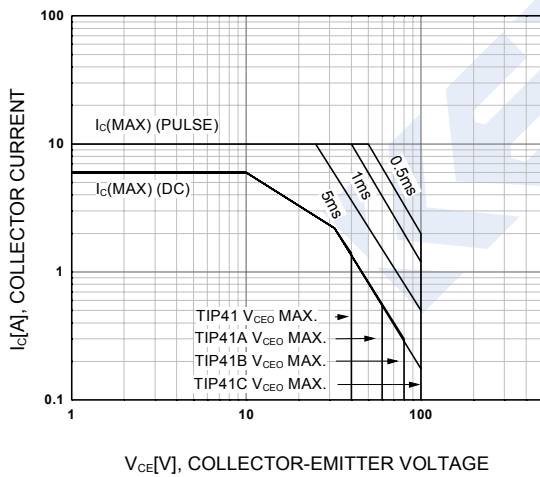


Figure 3. Safe Operating Area

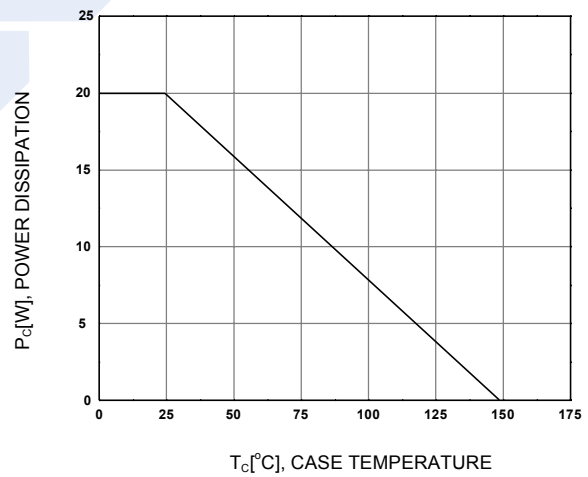


Figure 4. Power Derating