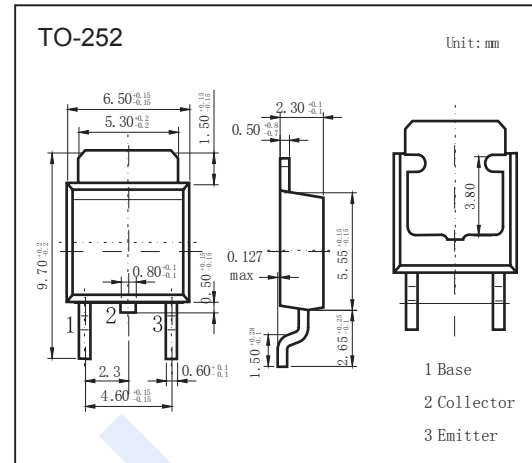


PNP Transistors

TIP42 Series (KIP42 Series)

■ Features

- Medium Power Linear Switching Applications
- Complement to TIP41/41A/41B/41C



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

Parameter	Symbol	TIP42	TIP42A	TIP42B	TIP42C	Unit
Collector - Base Voltage	V _{CBO}	-40	-60	-80	-100	V
Collector - Emitter Voltage	V _{CEO}	-40	-60	-80	-100	
Emitter - Base Voltage	V _{EBO}	-5				
Collector Current - Continuous	I _C	-6				A
Collector Current - Pulse	I _{CP}	-10				
Base Current	I _B	2				
Collector Power Dissipation T _c =25°C	P _C	20				W

PNP Transistors

TIP42 Series (KIP42 Series)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol		Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	TIP42	I _c = -100 μA, I _E =0	-40			V
		TIP42A		-60			
		TIP42B		-80			
		TIP42C		-100			
Collector-emitter sustaining voltage	V _{CE0(SUS)}	TIP42	I _c = -30 mA, I _B =0	-40			
		TIP42A		-60			
		TIP42B		-80			
		TIP42C		-100			
Emitter - base breakdown voltage	V _{EB0}		I _E = -100 μA, I _c =0	-5			
Collector-base cut-off current	I _{CB0}	TIP42	V _{CB} = -40 V, I _E =0			-0.1	μA
		TIP42A	V _{CB} = -60 V, I _E =0				
		TIP42B	V _{CB} = -80 V, I _E =0				
		TIP42C	V _{CB} = -100 V, I _E =0				
Collector- emittercut-off current	I _{CEO}	TIP42/42A	V _{CE} = -30 V, I _E =0			-0.7	mA
		TIP42B/42C	V _{CE} = -60 V, I _E =0				
Collector- emittercut-off current	I _{CES}	TIP42	V _{CE} = -40 V, I _E =0			-400	μA
		TIP42A	V _{CE} = -60 V, I _E =0				
		TIP42B	V _{CE} = -80 V, I _E =0				
		TIP42C	V _{CE} = -100 V, I _E =0				
Emitter cut-off current	I _{EB0}		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

PNP Transistors

TIP42 Series (KIP42 Series)

■ Typical Characteristics

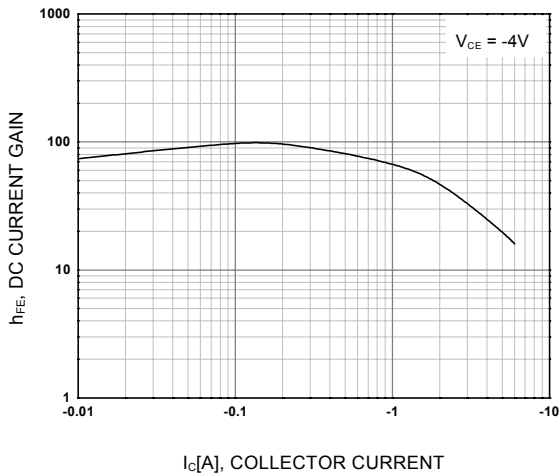


Figure 1. DC current Gain

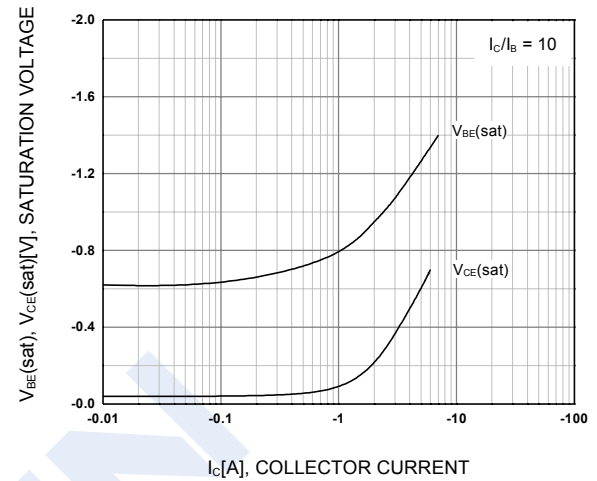


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

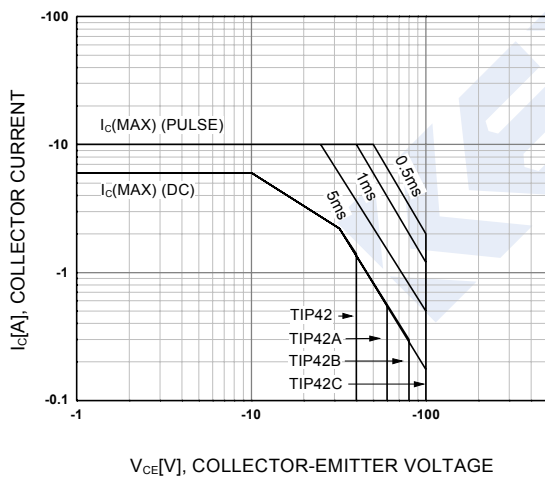


Figure 3. Safe Operating Area

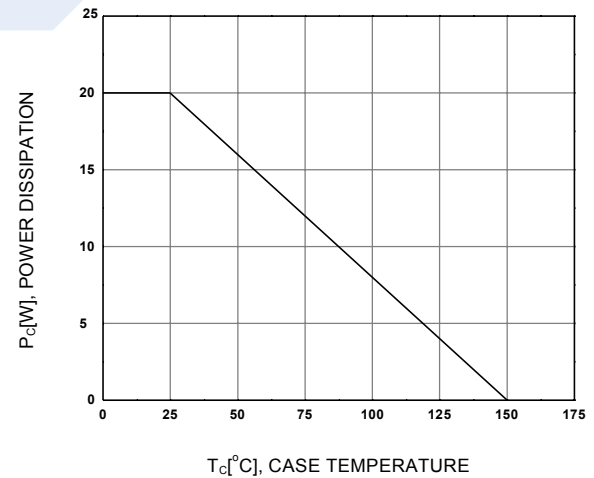


Figure 4. Power derating