

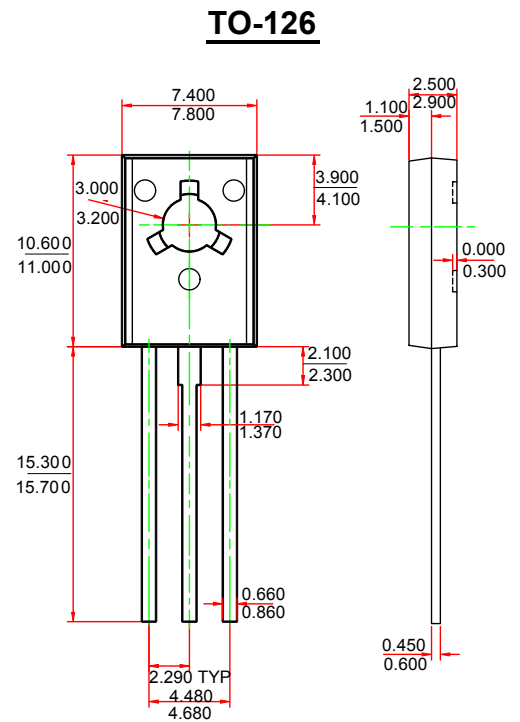
1. EMITTER
2. COLLECTOR
3. BASE

Features

◇ Amplifier and switching applications

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	BD433	22
		BD435	32
		BD437	45
V _{CEO}	Collector-Emitter Voltage	BD433	22
		BD435	32
		BD437	45
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current –Continuous	4	A
P _C	Collector Power Dissipation	1.25	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	BD433	22			V
		BD435	32			
		BD437	45			
Collector-emitter breakdown voltage	V _{CE(SUS)} ⁽¹⁾	BD433	22			V
		BD435	32			
		BD437	45			
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =22V, I _E =0	BD433		1	μA
		V _{CB} =32V, I _E =0	BD435			
		V _{CB} =45V, I _E =0	BD437			
Collector cut-off current	I _{CEO}	V _{CE} =22V, I _E =0	BD433		10	μA
		V _{CE} =32V, I _E =0	BD435			
		V _{CE} =45V, I _E =0	BD437			
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _E =0			1	μA
DC current gain	h _{FE(1)} ⁽¹⁾	V _{CE} =1V, I _C =500mA	85			
	h _{FE(2)} ⁽¹⁾	V _{CE} =5V, I _C =10mA	BD433/BD435	40		
	h _{FE(3)} ⁽¹⁾	V _{CE} =1V, I _C =2A	BD433/BD435	50		
Collector-emitter saturation voltage	V _{CE(sat)} ⁽¹⁾	BD433/BD435			0.5	V
		BD437			0.6	
Base-emitter voltage	V _{BE} ⁽¹⁾	V _{CE} =1V, I _C =2A	BD433/BD435		1.1	V
		BD437			1.2	
Transition frequency	f _T	V _{CE} =1V, I _C =250mA	3			MHZ

⁽¹⁾Pulse test.

Typical Characteristics

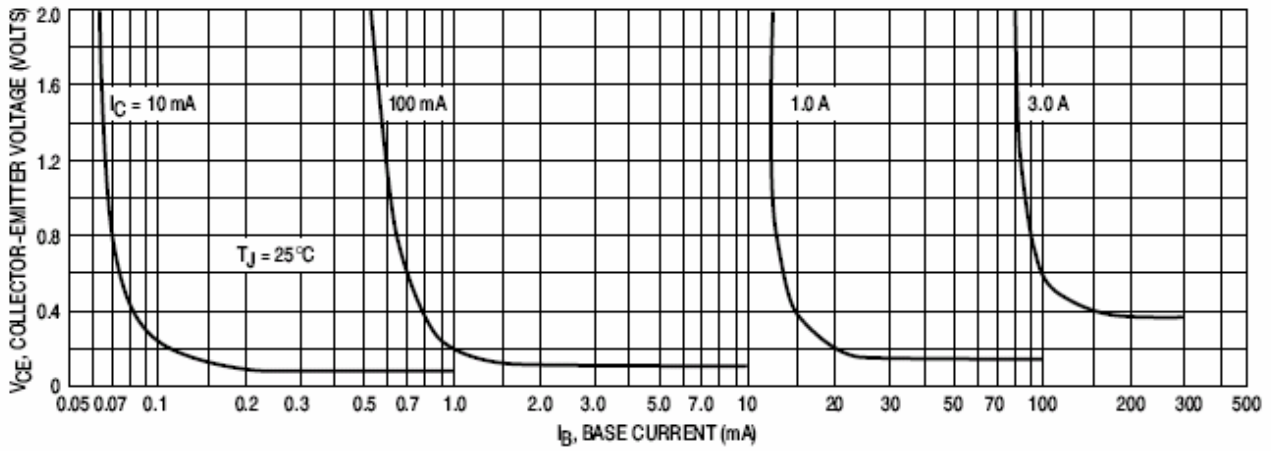


Figure 1. Collector Saturation Region

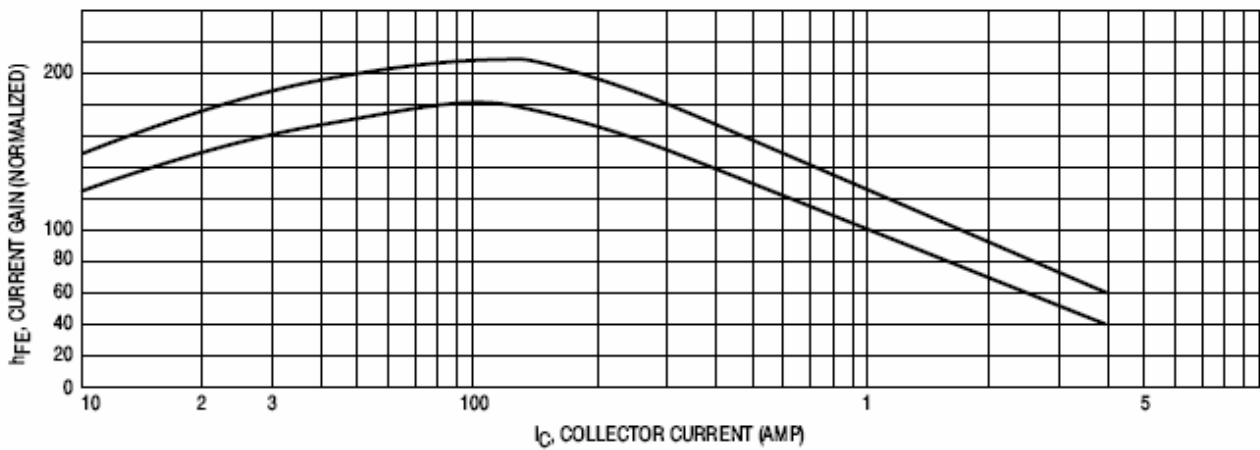


Figure 2. Current Gain

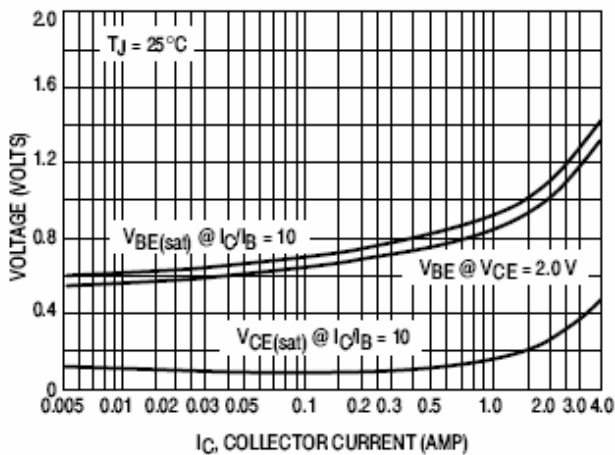


Figure 3. "On" Voltage

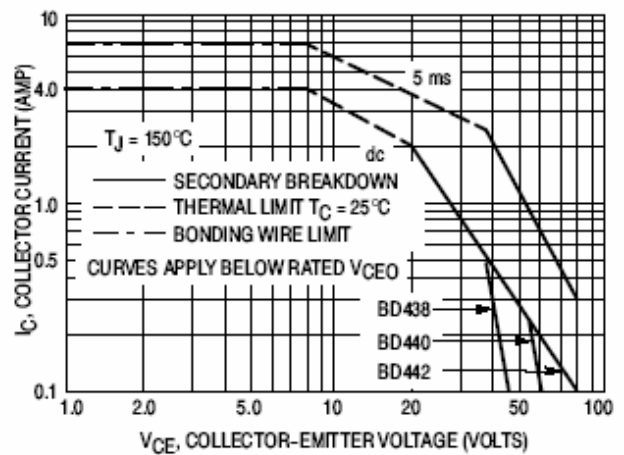


Figure 4. Active Region Safe Operating Area