

深圳市晶泰源电子有限公司

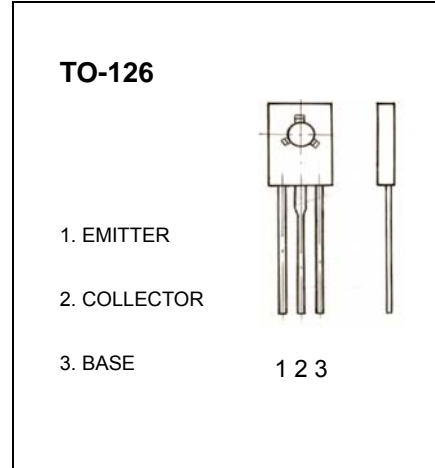
BD433/435/437 TRANSISTOR (NPN)

FEATURES

Amplifier and switching applications

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ 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	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ 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	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=22\text{V}, I_E=0$	BD433			
		$V_{CB}=32\text{V}, I_E=0$	BD435		1	μA
		$V_{CB}=45\text{V}, I_E=0$	BD437			
Collector cut-off current	I_{CEO}	$V_{CE}=22\text{V}, I_E=0$	BD433			
		$V_{CE}=32\text{V}, I_E=0$	BD435		10	μA
		$V_{CE}=45\text{V}, I_E=0$	BD437			
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_E=0$			1	μA
DC current gain	$h_{FE(1)}^{(1)}$	$V_{CE}=1\text{V}, I_C=500\text{mA}$	85			
	$h_{FE(2)}^{(1)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$	BD433/BD435	40		
			BD437	30		
$h_{FE(3)}^{(1)}$	$V_{CE}=1\text{V}, I_C=2\text{A}$	BD433/BD435	50			
		BD437	40			
Collector-emitter saturation voltage	$V_{CE(sat)}^{(1)}$	$I_C=2\text{A}, I_B=0.2\text{A}$			0.5 0.6	V
Base-emitter voltage	$V_{BE}^{(1)}$	$V_{CE}=1\text{V}, I_C=2\text{A}$			1.1 1.2	V
Transition frequency	f_T	$V_{CE}=1\text{V}, I_C=250\text{mA}$	3			MHZ

⁽¹⁾Pulse test.