

**TO-126 Plastic-Encapsulate Transistors****BD433/435/437** TRANSISTOR (NPN)**FEATURES**

Power dissipation

 P_{CM} : 1.25 W ($T_{amb}=25^{\circ}C$)

Collector current

 I_{CM} : 4 A

Collector-base voltage

 $V_{(BR)CBO}$: BD433 22 V
BD435 32 V
BD437 45 V

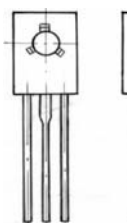
Operating and storage junction temperature range

 T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$ **TO-126**

1. EMITTER

2. COLLECTOR

3. BASE



1 2 3

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	BD433 $I_C=100\mu A, I_E=0$	22			V
		BD435	32			
		BD437	45			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	BD433 $I_C=100mA, I_B=0$	22			V
		BD435	32			
		BD437	45			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	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	$h_{FE(1)}$	$V_{CE}=1V, I_C=500mA$	85			
	$h_{FE(2)}$	$V_{CE}=5V, I_C=10mA$ BD433/BD435	40			
		BD437	30			
	$h_{FE(3)}$	$V_{CE}=1V, I_C=2A$ BD433/BD435	50			
		BD437	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$ BD433/BD435 BD437			0.5 0.6	V
Base-emitter voltage	V_{BE}	$V_{CE}=1V, I_C=2A$ BD433/BD435 BD437			1.1 1.2	V
Transition frequency	f_T	$V_{CE}=1V, I_C=250mA$	3			MHz