

Silicon NPN Power Transistors

BD433/435/437

DESCRIPTION

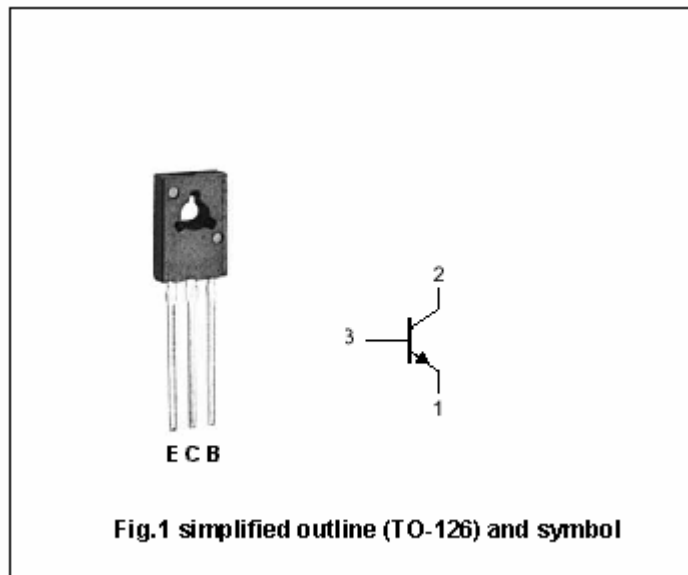
- With TO-126 package
- Complement to type BD434/436/438

APPLICATIONS

- For medium power linear and switching applications

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector;connected to mounting base
3	Base

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD433	22	V
		BD435	32	
		BD437	45	
V_{CEO}	Collector-emitter voltage	BD433	22	V
		BD435	32	
		BD437	45	
V_{EBO}	Emitter -base voltage	Open collector	5	V
I_C	Collector current (DC)		4	A
I_{CM}	Collector current-Peak		7	A
I_B	Base current		1	A
P_C	Collector power dissipation	$T_C=25$	36	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~150	

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEsat}	Collector-emitter saturation voltage	BD433/435	$I_C=2A; I_B=0.2A$		0.2	0.5	V
		BD437				0.6	
V_{BE}	Base-emitter on voltage	BD433/435	$I_C=2A; V_{CE}=1V$			1.1	V
		BD437				1.2	
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BD433	$I_C=0.1A; I_B=0$	22			V
		BD435		32			
		BD437		45			
I_{CES}	Collector cut-off current	BD433	$V_{CB}=22V; I_E=0$			100	μA
		BD435	$V_{CB}=32V; I_E=0$				
		BD437	$V_{CB}=45V; I_E=0$				
I_{CES}	Collector cut-off current	BD433	$V_{CE}=22V; V_{BE}=0$			100	μA
		BD435	$V_{CE}=32V; V_{BE}=0$				
		BD437	$V_{CE}=45V; V_{BE}=0$				
I_{EBO}	Emitter cut-off current		$V_{EB}=5V; I_C=0$			1	mA
h_{FE-1}	DC current gain	BD433/435	$I_C=10mA; V_{CE}=5V$	40		130	
		BD437		30			
h_{FE-2}	DC current gain		$I_C=0.5A; V_{CE}=1V$	85		140	
h_{FE-3}	DC current gain	BD433/435	$I_C=2A; V_{CE}=1V$	50			
		BD437		40			
f_T	Transition frequency		$I_C=250mA; V_{CE}=1V$	3			MHz

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PACKAGE OUTLINE

