



Micro Commercial Components



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# BD434/BD436/BD438

## Features

- Halogen free available upon request by adding suffix "-HF"
- Intended for use in medium power near and switching applications
- With TO-126 package
- The complementary NPN type is BD433, BD435, BD437
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Type Number

## Maximum Ratings

Symbol	Rating	Rating	Unit	
$V_{CEO}$	Collector-Emitter Voltage	BD434	-22	
		BD436	-32	
		BD438	-45	
$V_{CBO}$	Collector-Base Voltage	BD434	-22	
		BD436	-32	
		BD438	-45	
$V_{EBO}$	Emitter-Base Voltage	BD434	-5.0	
		BD436		
		BD438		
$I_C$	Collector Current		-4.0	A
$P_C$	Collector power dissipation		1.25	W
$T_J$	Junction Temperature		-55 to +150	°C
$T_{STG}$	Storage Temperature		-55 to +150	°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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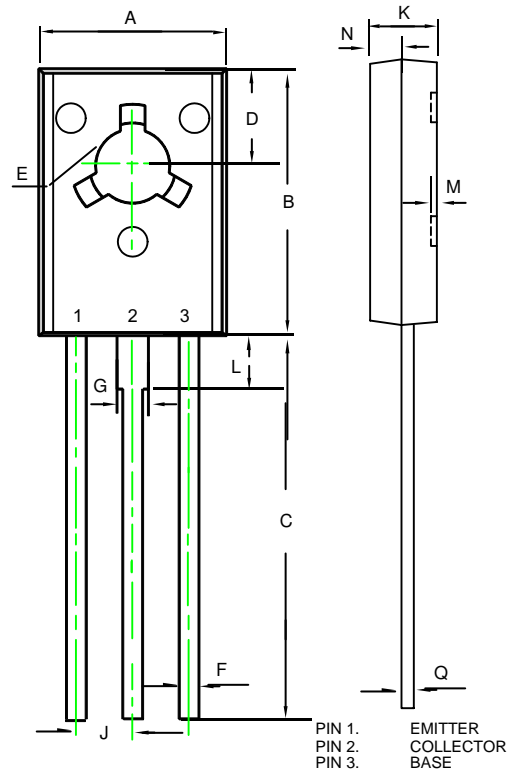
### OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=-10mA$ , $I_E=0$ )	BD434	-22	---	Vdc
		BD436	-32	---	
		BD438	-45	---	
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=-1mA$ , $I_E=0$ )	BD434	-22	---	Vdc
		BD436	-32	---	
		BD438	-45	---	
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=-1mA$ , $I_C=0$ )	-5	---	Vdc	
$I_{CBO}$	Collector-Base Cutoff Current ( $V_{CB}=-22Vdc$ , $I_E=0$ ) ( $V_{CB}=-32Vdc$ , $I_E=0$ ) ( $V_{CB}=-45Vdc$ , $I_E=0$ )	BD434	---	-100	$\mu A$ dc
		BD436			
		BD438			
$I_{CEO}$	Collector-Base Cutoff Current ( $V_{CE}=-22Vdc$ , $I_E=0$ ) ( $V_{CE}=-32Vdc$ , $I_E=0$ ) ( $V_{CE}=-45Vdc$ , $I_E=0$ )	BD434	---	-100	$\mu A$ dc
		BD436			
		BD438			
$I_{EBO}$	Emitter-Base Cutoff Current ( $V_{EB}=-5.0Vdc$ , $I_C=0$ )	---	-1.0	mAdc	

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

## PNP Silicon Power Transistors

### TO-126



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	0.291	0.307	7.40	7.80	
B	0.417	0.433	10.60	11.00	
C	0.602	0.618	15.30	15.70	
D	0.154	0.161	3.90	4.10	
E	0.118	0.126	3.00	3.20	
F	0.026	0.034	0.66	0.86	
G	0.046	0.054	1.17	1.37	
J	0.090TYP		2.290TYP		
K	0.098	0.114	2.50	2.90	
L	0.083	0.091	2.10	2.30	
M	0.000	0.012	0.00	0.30	
N	0.043	0.059	1.10	1.50	
Q	0.018	0.024	0.45	0.60	

## ON CHARACTERISTICS

$h_{FE-1}$	DC Current Gain ( $I_C=-500\text{mA}$ , $V_{CE}=-1.0\text{Vdc}$ )		85	---	---
$h_{FE-2}$	DC Current Gain ( $I_C=-10\text{mA}$ , $V_{CE}=-5.0\text{Vdc}$ )	BD434/BD436 BD438	40 30	---	---
$h_{FE-3}$	DC Current Gain ( $I_C=-2\text{A}$ , $V_{CE}=-1.0\text{Vdc}$ )	BD434/BD436 BD438	50 40	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=-2.0\text{A}$ , $I_B=-0.2\text{A}$ )	BD434/BD436 BD438	-0.5 -0.6	---	Vdc
$V_{BE}$	Base-Emitter Voltage ( $V_{CE}=-1.0\text{Vdc}$ , $I_C=-2.0\text{A}$ )	BD434/BD436 BD438	-1.1 -1.2	---	Vdc
$f_T$	Transition Frequency ( $I_C=-250\text{mA}$ , $V_{CE}=-1.0\text{Vdc}$ )		3.0	---	MHz



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### Ordering Information :

Device	Packing
Part Number-BP	Bulk; 1 Kpcs/Box

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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