



Micro Commercial Components



Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# BD434/BD436/BD438

## Features

- 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
--------	-----------	-----	-----	-------

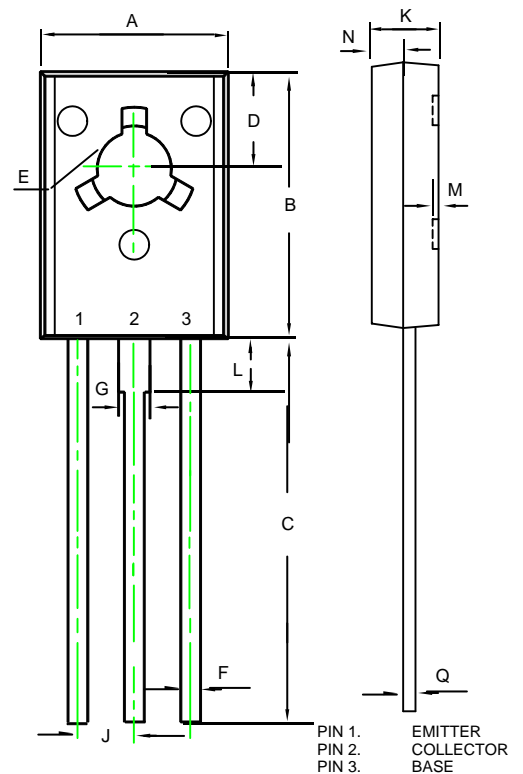
### OFF CHARACTERISTICS

$V_{(BR)CEO}$	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	uAdc
		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	uAdc
		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



Micro Commercial Components

### Ordering Information :

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

**\*\*\*IMPORTANT NOTICE\*\*\***

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.