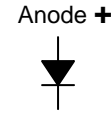
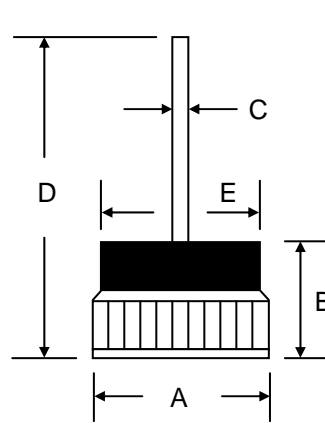


## Features

- Diffused Junction
- Low Leakage
- Low Cost
- High Surge Current Capability
- Typical IR less than 5.0 $\mu$ A

## Mechanical Data

- Case: 13mm Bosch Type Press-Fit
- Terminals: Contact Areas Readily Solderable
- Polarity: Cathode to Case (Reverse Units Are Available Upon Request and Are Designated By A "R" Suffix, i.e. BD5002R or BD5004R)
- Polarity: Red Color Equals Standard, Black Color Equals Reverse Polarity
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 2**



13mm Bosch		
Dim	Min	Max
A	12.80	13.20
B	9.40	—
C	1.25	1.31
D	28.00	—
E	9.90	11.10
All Dimensions in mm		

## Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	BD5000	BD5001	BD5002	BD5003	BD5004	BD5005	BD5006	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								V
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	300	400	500	600	
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	210	280	350	420	V
Average Rectified Output Current @T <sub>C</sub> = 150°C	I <sub>O</sub>	50							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	500							A
Forward Voltage @I <sub>F</sub> = 50A	V <sub>FM</sub>	1.0							V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	5.0 500							$\mu$ A
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	400							pF
Typical Thermal Resistance (Note 2)	R <sub>JC</sub>	1.0							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175							°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal Resistance: Junction to case, single side cooled.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BD5000	13mm Bosch Press-Fit	180 Units/Box
BD5001	13mm Bosch Press-Fit	180 Units/Box
BD5002	13mm Bosch Press-Fit	180 Units/Box
BD5003	13mm Bosch Press-Fit	180 Units/Box
BD5004	13mm Bosch Press-Fit	180 Units/Box
BD5005	13mm Bosch Press-Fit	180 Units/Box
BD5006	13mm Bosch Press-Fit	180 Units/Box

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BD5000-LF.**

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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*We power your everyday.*