

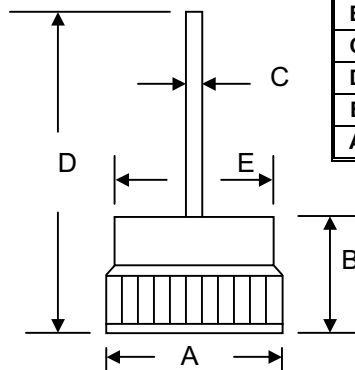
**Data Sheet 2506 Rev.—**

**Features**

- Diffused Junction
- Low Leakage
- Low Cost
- High Surge Current Capability
- Typical IR less than 10 $\mu$ A

**Mechanical Data**

- Case: Copper Case
- Terminals: Contact Areas Readily Solderable
- Polarity: Cathode to Case(Reverse Units Are Available Upon Request and Are Designated By An "R" Suffix, i.e. BD5002R or BD5004R)
- Polarity: Red Color Equals Standard, Black Color Equals Reverse Polarity
- Mounting Position: Any



13mm Bosch		
Dim	Min	Max
A	0.508(12.9)	0.516(13.1)
B	0.303(7.70)	0.319(8.10)
C	0.049(1.25)	0.052(1.31)
D	1.145(29.1)	1.224(31.1)
E	0.437(11.1)	0.453(11.5)
All Dimensions in inch( 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 Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	300	400	500	600	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	210	280	350	420	V
Average Rectified Output Current @T <sub>A</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> = 100A	V <sub>FM</sub>	1.18							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>	10 500							μA
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	300							pF
Typical Thermal Resistance Junction to Case (Note 2)	R <sub>θJC</sub>	1.2							K/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175							°C

**\*Glass passivated forms are available upon request**

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.