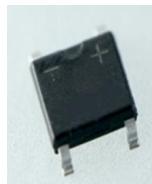


Product Summary (@T_A = +25°C)

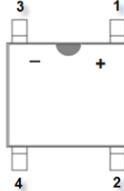
V _{RRM} (V)	I _o (A)	V _F (V)	I _R (μA)
1000	1.5	1.1	5

Description and Applications

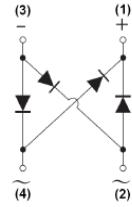
Suitable for AC to DC bridge full wave rectification for SMPS, LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.



Top View



Pin Diagram



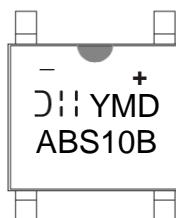
Internal Schematic

Ordering Information (Note 4)

Part Number	Compliance	Case	Packaging
ABS10B-13	Commercial	SOPA-4	5,000/Tape & Reel

Notes:

1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information

ABS10B = Product Type Marking Code

DII = Manufacturers' Code Marking

YMD = Date Code Marking

Y = Last Digit of Year (ex: 7 = 2017)

M = See Month/Code Table Below

D = Day 1 to 9 = 1 to 9; Day 10 to 31 = A to V

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Maximum Ratings (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}	1000	V
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_R(\text{RMS})$	700	V
Average Rectified Output Current (Note 6) @ $T_A = +40^\circ\text{C}$	I_O	1.5	A
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	50	A
I^2t Rating for Fusing (1ms < t < 8.3ms)	I^2t	10.4	A^2s

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Ambient (Note 6) (Per Element)	$R_{\theta JA}$	62.5	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance, Junction to Lead (Per Element)	$R_{\theta JL}$	25	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

 Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	1,000	—	—	V	$I_R = 5\mu\text{A}$
Forward Voltage (Per Element)	V_F	—	—	1.1	V	$I_F = 1.5\text{A}, T_A = +25^\circ\text{C}$
Leakage Current (Note 7) (Per Element)	I_R	—	—	5 500	μA	$V_R = 1,000\text{V}, T_A = +25^\circ\text{C}$ $V_R = 1,000\text{V}, T_A = +125^\circ\text{C}$
Total Capacitance (Per Element)	C_T	—	17	—	pF	$V_R = 4\text{V}, f = 1.0\text{MHz}$

Notes: 5. Device mounted on FR-4 substrate, 1" * 1", 2oz, single-sided, PC boards with 0.15" * 0.26" copper pad.

6. Device mounted on FR-4 substrate, 1" * 1", 2oz, single-sided, PC boards with 0.56" * 0.73" copper pad.

7. Short duration pulse test used to minimize self-heating effect.

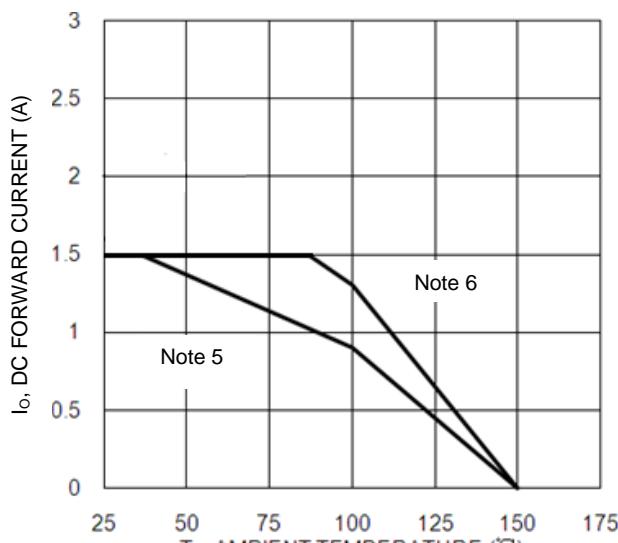


Figure 1. DC Forward Current Derating

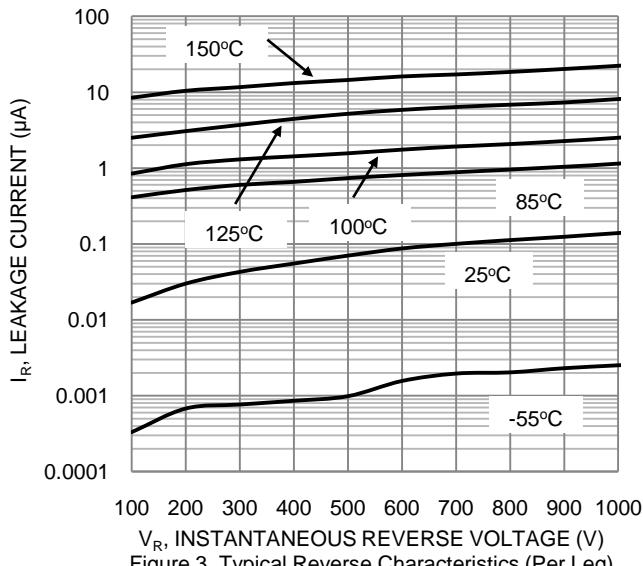


Figure 3. Typical Reverse Characteristics (Per Leg)

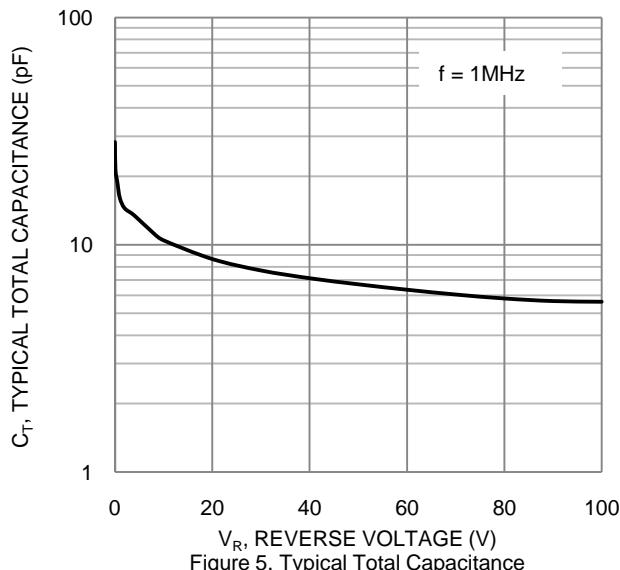


Figure 5. Typical Total Capacitance

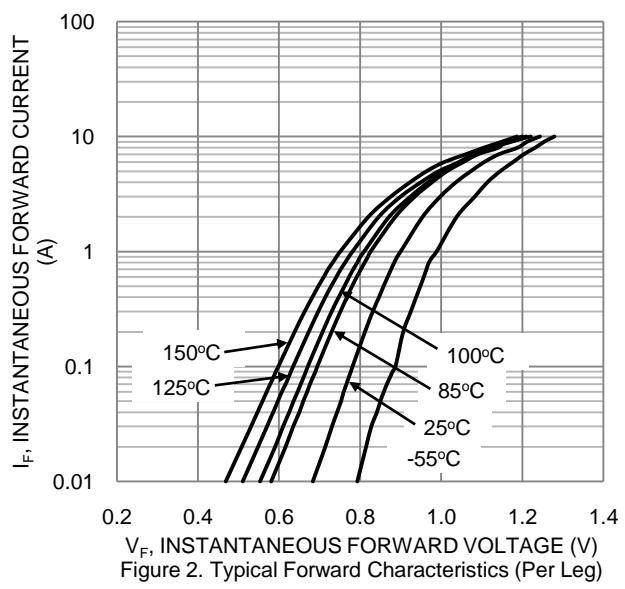


Figure 2. Typical Forward Characteristics (Per Leg)

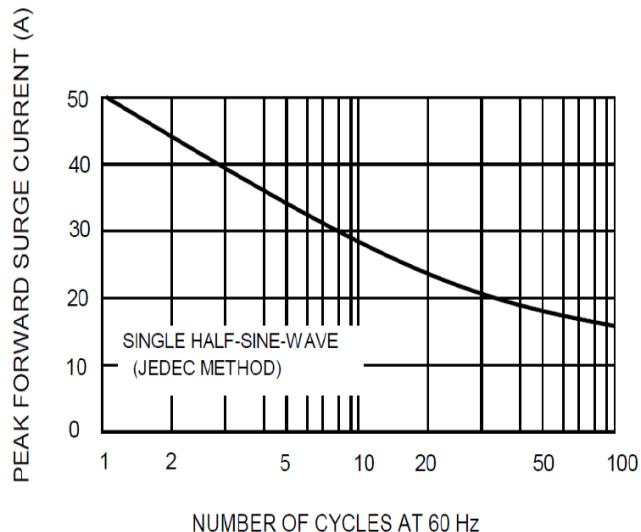
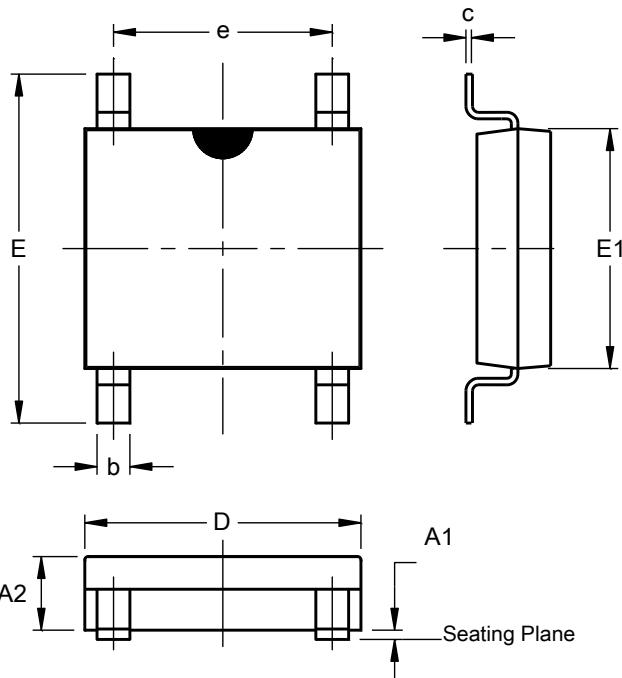


Figure 4. Maximum Non-Repetitive Surge Current

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOPA-4



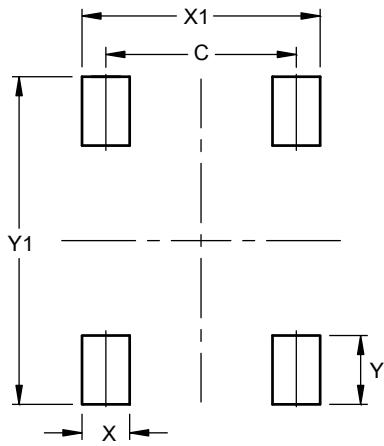
SOPA-4			
Dim	Min	Max	Typ
A1	--	0.20	--
A2	1.20	1.50	--
b	0.50	0.70	--
c	0.15	0.25	--
D	4.80	5.30	--
E	6.00	6.80	--
E1	4.20	4.60	--
e	3.80	4.20	--

All Dimensions in mm

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOPA-4



Dimensions	Value (in mm)
C	4.00
X	1.00
X1	5.00
Y	1.45
Y1	6.90

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