



# THE DATASHEET OF HD02-T



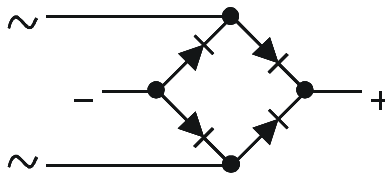
**0.8A SURFACE-MOUNT GLASS PASSIVATED BRIDGE RECTIFIER**

### Features and Benefits

- Glass Passivated Die Construction
- Low-Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Ideally Suited for Automated Assembly
- Miniature Package Saves Space on PC Boards
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact@diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

### Mechanical Data

- Package: MiniDIP
- Package Material: Molded Plastic.  
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Bright Tin. Plated Leads, Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: As Marked on Case
- Marking: Product Type Marking Code, Date Code, & Polarity Markings
- Weight: 0.125 grams (Approximate)



Equivalent Circuit

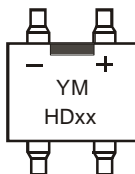
### Ordering Information (Note 3)

Part Number	Package	Packing	
		Qty.	Carrier
HDxx-T	MiniDIP	3k	Tape & Reel, 13-inch

\*xx = Device type, e.g. HD02-T or HD04-T, etc.

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

### Marking Information



HDxx = Product Type Marking Code (ex: HD04)  
 YM = Date Code Marking  
 Y = Last Digit of the Year (ex: 4 = 2024)  
 M = See Month/Code Table Below

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<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	HD01	HD02	HD04	HD06	Unit
Peak Repetitive Reverse Voltage	V <sub>RMM</sub>					
Working Peak Reverse Voltage	V <sub>RWM</sub>	100	200	400	600	V
DC Blocking Voltage	V <sub>DC</sub>					
RMS Reverse Voltage	V <sub>RMS</sub>	70	140	280	420	V
Average Forward Rectified Current (Note 4) @T <sub>A</sub> = +40°C	I <sub>O</sub>	0.8				A
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load	I <sub>FSM</sub>	30				A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Ambient (Note 4)	R <sub>θJA</sub>	75	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Instantaneous Voltage Drop @ 0.4A (Per Element)	V <sub>F</sub>	1.0	V
Peak Reverse Current at Rated @T <sub>A</sub> = +25°C	I <sub>R</sub>	5.0	μA
DC Blocking Voltage (Per Element) @T <sub>A</sub> = +125°C		500	
Typical Total Capacitance (Per Element) (Note 5)	C <sub>T</sub>	10	pF

Notes: 4. Mounted on PC board.  
5. Measured at 1.0MHz and applied reverse voltage of 4.0V.

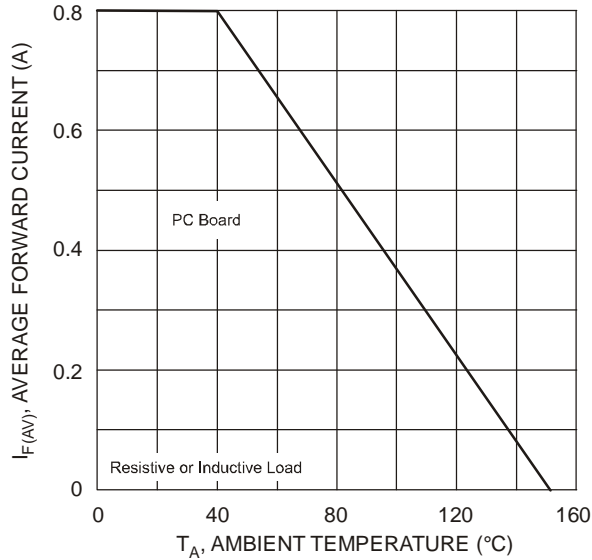


Fig. 1 Output Current Derating Curve

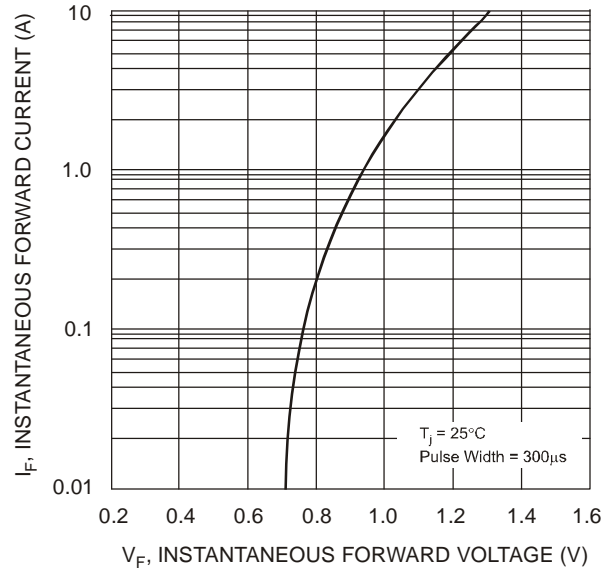


Fig. 2 Typical Forward Characteristics (per element)

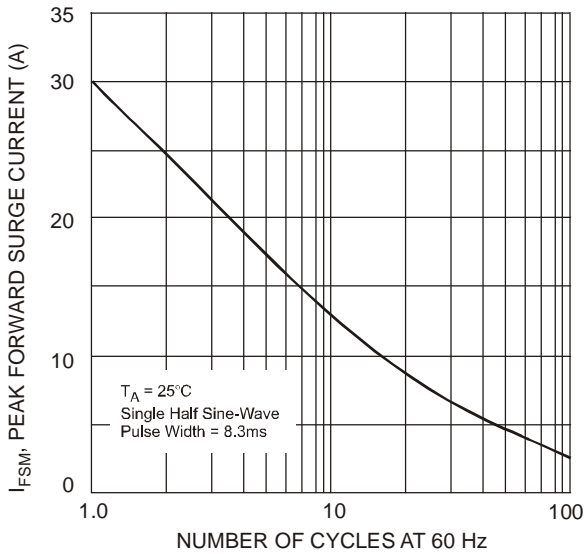


Fig. 3 Maximum Peak Forward Surge Current (per element)

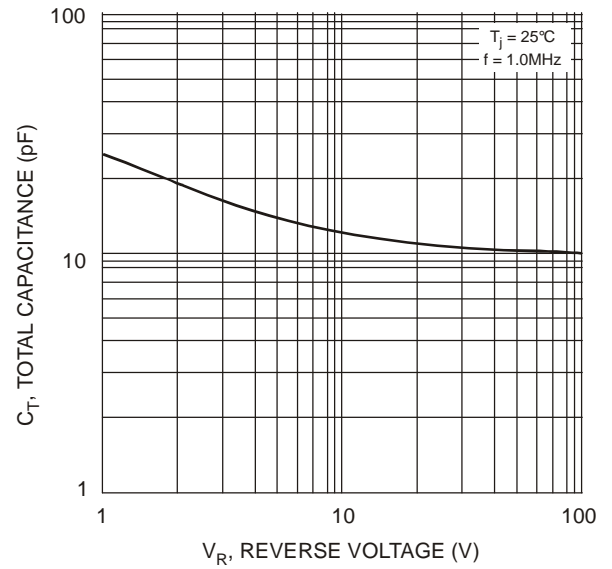


Fig. 4 Typical Total Capacitance (per element)

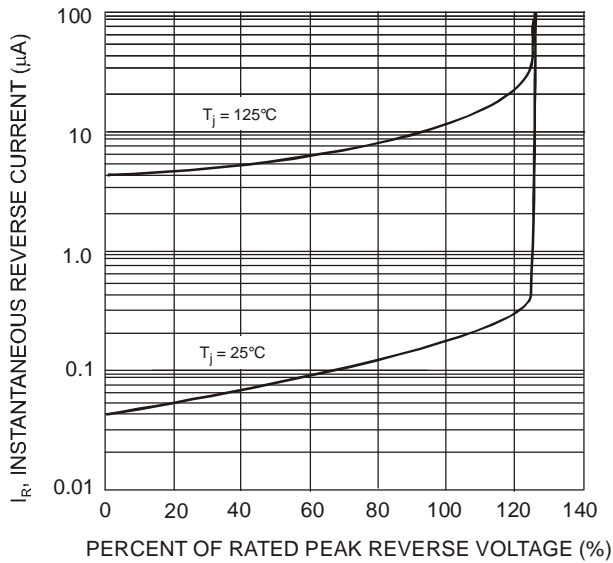
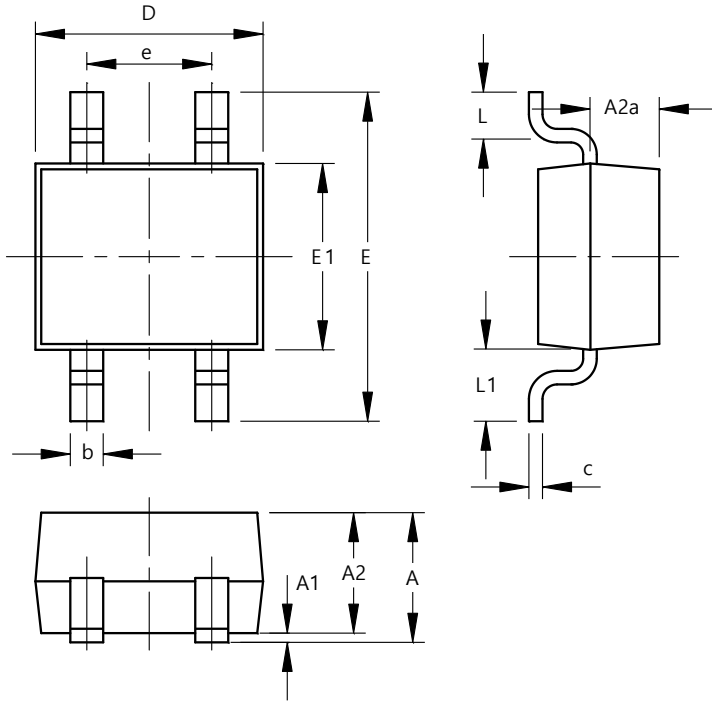


Fig. 5 Typical Reverse Characteristics (per element)

**Package Outline Dimensions**

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

MiniDIP

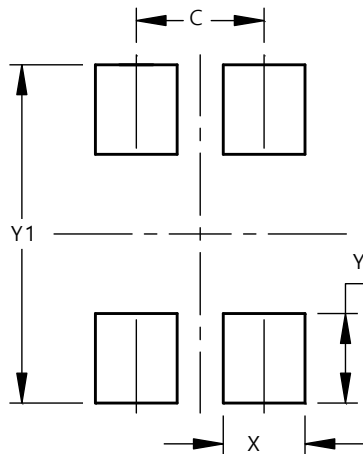


MiniDIP		
Dim	Min	Max
A	--	3.00
A1	--	0.20
A2	2.30	2.70
A2a	1.20	1.60
b	0.50	0.80
c	0.15	0.35
D	4.50	4.90
E	--	7.00
E1	3.60	4.00
e	2.30	2.70
L	0.70	1.10
L1	1.10	2.12
All Dimensions in mm		

**Suggested Pad Layout**

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

MiniDIP



Dimensions	Value (in mm)
C	2.50
X	1.65
Y	1.80
Y1	6.80

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