

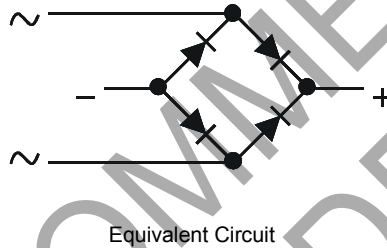


Features and Benefits

- 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-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Mechanical Data

- Case: MiniDIP
- Case Material: Molded Plastic.
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Tin. Plated Leads,
Solderable per MIL-STD-202, Method 208 (3)
- Polarity: As Marked on Case
- Marking: Product Type Marking Code, Date Code, & Polarity Markings
- Weight: 0.125 grams (Approximate)



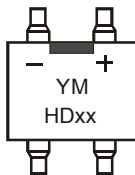
Ordering Information (Note 3)

| Part Number* | Packaging | Shipping |
|--------------|-----------|-------------------------|
| 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
 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_A = +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 _{RMM} | | | | | |
| Working Peak Reverse Voltage | V _{RWM} | 100 | 200 | 400 | 600 | V |
| DC Blocking Voltage | V _{DC} | | | | | |
| RMS Reverse Voltage | V _{RMS} | 70 | 140 | 280 | 420 | V |
| Average Forward Rectified Current (Note 4) @T _A = +40°C | I _O | 0.8 | | | | A |
| Non-Repetitive Peak Forward Surge Current, 8.3ms | I _{FSM} | 30 | | | | A |
| Single Half Sine-Wave Superimposed on Rated Load | | | | | | |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|--|-----------------------------------|-------------|------|
| Typical Thermal Resistance, Junction to Ambient (Note 4) | R _{θJA} | 75 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Value | Unit |
|--|----------------|-------|------|
| Instantaneous Voltage Drop @ 0.4A (Per Element) | V _F | 1.0 | V |
| Peak Reverse Current at Rated @T _A = +25°C | I _R | 5.0 | μA |
| DC Blocking Voltage (Per Element) @T _A = +125°C | | 500 | |
| Typical Total Capacitance (Per Element) (Note 5) | C _T | 10 | pF |

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

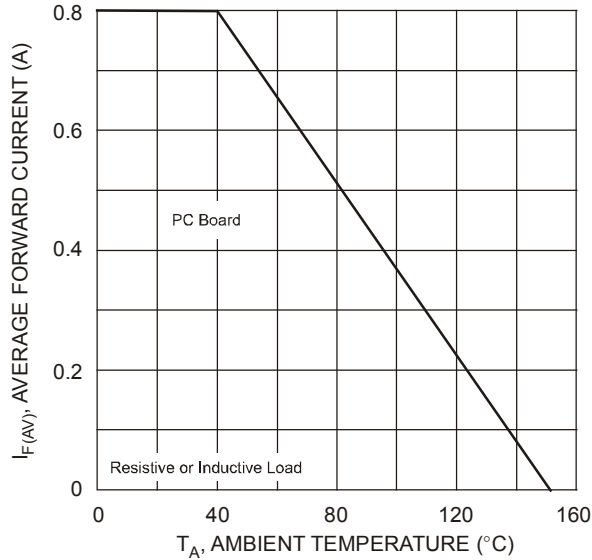


Fig. 1 Output Current Derating Curve

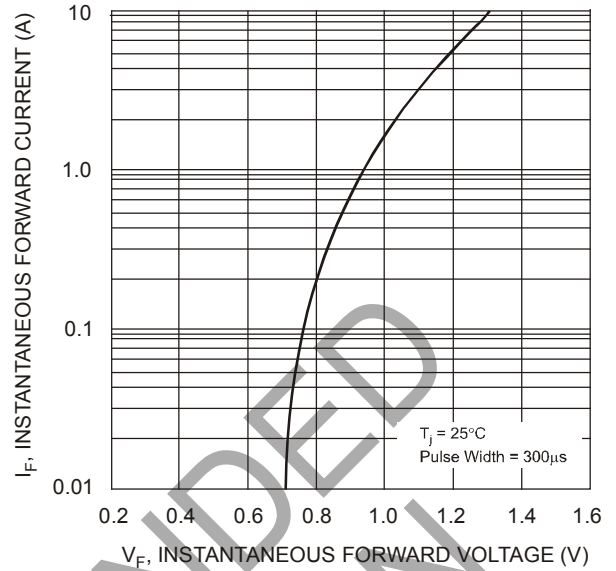


Fig. 2 Typical Forward Characteristics (per element)

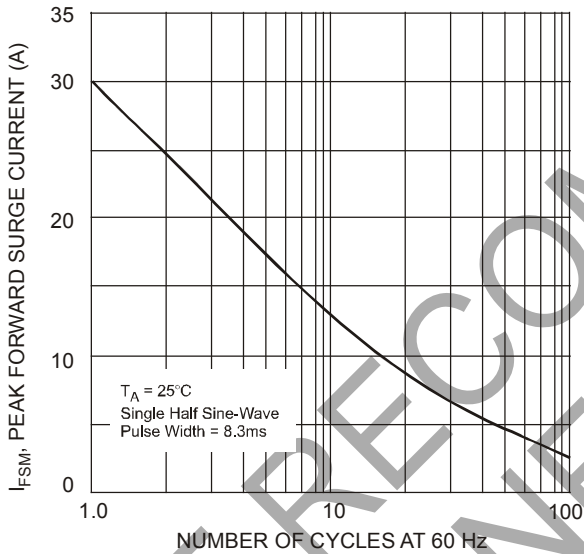


Fig. 3 Maximum Peak Forward Surge Current (per element)

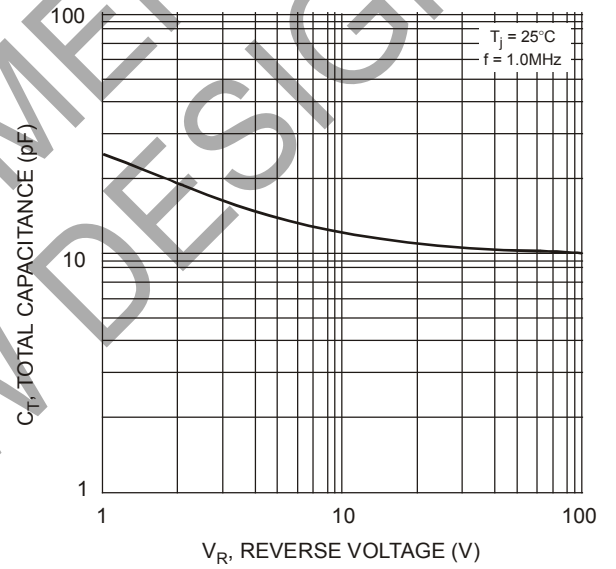


Fig. 4 Typical Total Capacitance (per element)

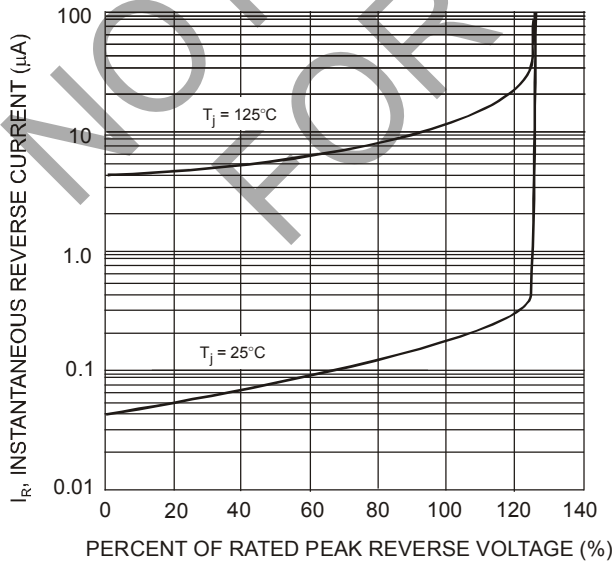
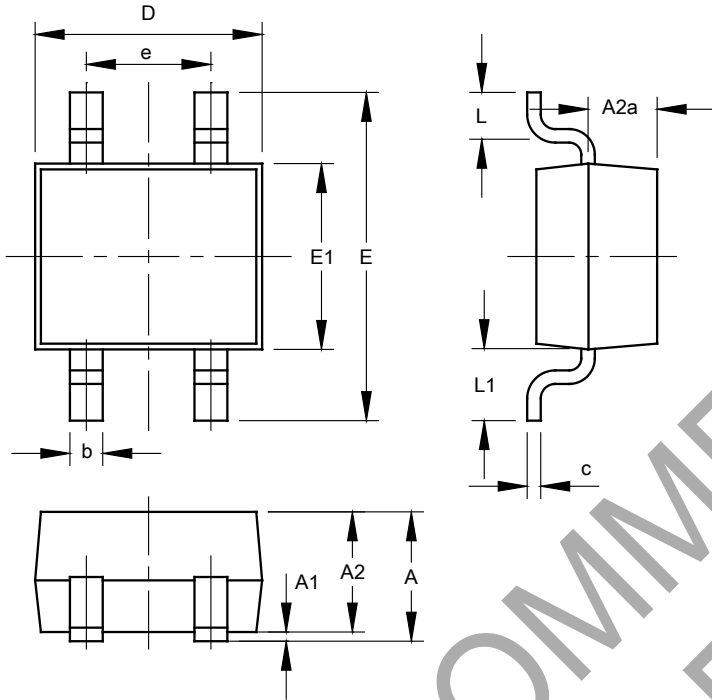


Fig. 5 Typical Reverse Characteristics (per element)

Package Outline Dimensions

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

MiniDIP

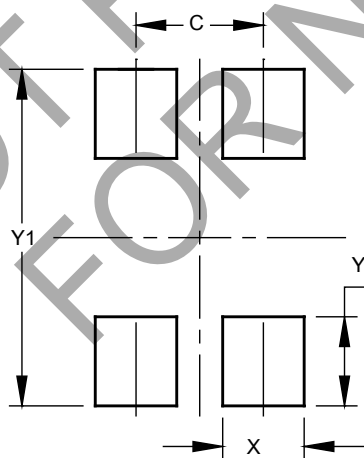


| MiniDIP | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | -- | 3.00 |
| A1 | -- | 0.20 |
| A2 | 2.30 | 2.70 |
| A2a | 1.20 | 1.60 |
| b | 0.50 | 0.80 |
| c | 0.15 | 0.35 |
| D | 4.50 | 4.90 |
| E | -- | 7.00 |
| E1 | 3.60 | 4.00 |
| e | 2.30 | 2.70 |
| L | 0.70 | 1.10 |
| L1 |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