

# ANTREX Electronics

Electronic Components Sourcing Information

---

## Product Reference Information

**Part Number:** 8EWF10S

**Manufacturer:** Vishay General Semiconductor - Diodes Division

**Package:** TO-252-3, DPAK (2 Leads + Tab), SC-63

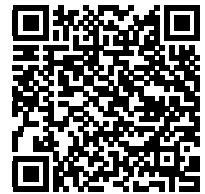
**Availability:** Please confirm with sales

### Product Page:

<https://antrexco.com/product/details/vishay-general-semiconductor-diodes-division/8ewf10s-135810.html>

### Request a Quote:

Submit RFQ for this part



Scan for product page

## Contact Information

Email: [info@antrexco.com](mailto:info@antrexco.com)

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

## Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

### Note:

This PDF includes an ANTREX product reference cover page.

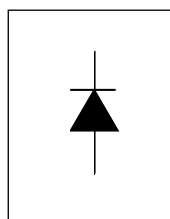
The original manufacturer datasheet follows from the next page.

---

International  
**IOR** Rectifier

**QUIETIR** Series  
**8EWF..S**

**SURFACE MOUNTABLE  
FAST SOFT RECOVERY  
DIODE**



$V_F < 1.3V @ 8A$   
 $t_{rr} = 80ns$   
 $V_{RRM} 1000 \text{ to } 1200V$

#### Description/Features

The 8EWF..S fast soft recovery **QUIETIR** rectifier series has been optimized for combined short reverse recovery time, low forward voltage drop and low leakage current

The glass passivation ensures stable reliable operation in the most severe temperature and power cycling conditions.

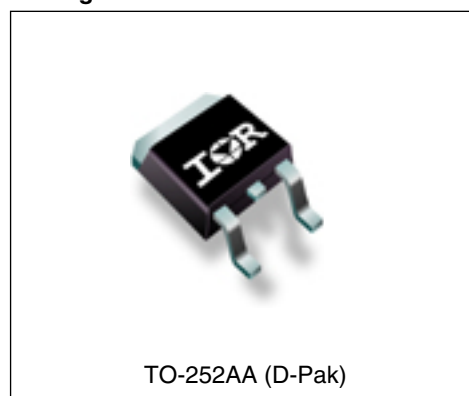
Typical applications are both:

- Output rectification and freewheeling diode in inverters, choppers and converters.
- Input rectifications where severe restrictions on conducted EMI should be met.

#### Major Ratings and Characteristics

| Characteristics                 | 8EWF..S    | Units      |
|---------------------------------|------------|------------|
| $I_{F(AV)}$ Sinusoidal waveform | 8          | A          |
| $V_{RRM}$                       | 1000to1200 | V          |
| $I_{FSM}$                       | 170        | A          |
| $V_F @ 8A, T_J = 25^\circ C$    | 1.3        | V          |
| $t_{rr} @ 1A, 100A/\mu s$       | 80         | ns         |
| $T_J$ range                     | -40to150   | $^\circ C$ |

#### Package Outline



## Voltage Ratings

| Part Number | $V_{RRM}$ , maximum peak reverse voltage<br>V | $V_{RSM}$ , maximum non repetitive peak reverse voltage<br>V | $I_{RRM}$<br>150°C<br>mA |
|-------------|-----------------------------------------------|--------------------------------------------------------------|--------------------------|
| 8EWF10S     | 1000                                          | 1100                                                         | 4                        |
| 8EWF12S     | 1200                                          | 1300                                                         |                          |

## Absolute Maximum Ratings

| Parameters                                                 | 8EWF..S | Units   | Conditions                                                  |
|------------------------------------------------------------|---------|---------|-------------------------------------------------------------|
| $I_{F(AV)}$ Max. Average Forward Current                   | 8       | A       | @ $T_C = 94^\circ\text{C}$ , 180° conduction half sine wave |
| $I_{FSM}$ Max. Peak One Cycle Non-Repetitive Surge Current | 170     | A       | 10ms Sine pulse, rated $V_{RRM}$ applied                    |
|                                                            | 200     |         | 10ms Sine pulse, no voltage reappplied                      |
| $I^2t$ Max. $I^2t$ for fusing                              | 144     | $A^2s$  | 10ms Sine pulse, rated $V_{RRM}$ applied                    |
|                                                            | 200     |         | 10ms Sine pulse, no voltage reappplied                      |
| $I^2\sqrt{t}$ Max. $I^2\sqrt{t}$ for fusing                | 2000    | $A^2/s$ | $t = 0.1$ to 10ms, no voltage reappplied                    |

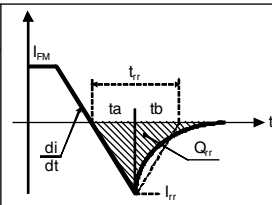
## Electrical Specifications

| Parameters                            | 8EWF..S | Units     | Conditions                     |
|---------------------------------------|---------|-----------|--------------------------------|
| $V_{FM}$ Max. Forward Voltage Drop    | 1.3     | V         | @ 8A, $T_J = 25^\circ\text{C}$ |
| $r_t$ Forward slope resistance        | 25.6    | $m\Omega$ | $T_J = 150^\circ\text{C}$      |
| $V_{F(TO)}$ Threshold voltage         | 0.93    | V         |                                |
| $I_{RM}$ Max. Reverse Leakage Current | 0.1     | mA        | $T_J = 25^\circ\text{C}$       |
|                                       | 4       |           | $T_J = 150^\circ\text{C}$      |

$V_R = \text{rated } V_{RRM}$

## Typical Reverse Recovery Characteristics

| Parameters                        | 8EWF..S | Units   | Conditions                                                      |
|-----------------------------------|---------|---------|-----------------------------------------------------------------|
| $t_{rr}$ Reverse Recovery Time    | 270     | ns      | $I_F @ 8A_{pk}$<br>@ 25A/ $\mu s$<br>@ $T_J = 25^\circ\text{C}$ |
| $I_{rr}$ Reverse Recovery Current | 4.2     | A       |                                                                 |
| $Q_{rr}$ Reverse Recovery Charge  | 1       | $\mu C$ |                                                                 |
| S Typical Snap Factor $tb/ta$     | 0.6     | -       |                                                                 |



## Thermal-Mechanical Specifications

| Parameters                                                           | 8EWF..S          | Units  | Conditions     |
|----------------------------------------------------------------------|------------------|--------|----------------|
| $T_J$ Max. Junction Temperature Range                                | -40 to 150       | °C     |                |
| $T_{stg}$ Max. Storage Temperature Range                             | -40 to 150       | °C     |                |
| Soldering Temperature                                                | 240              | °C     | for 10 seconds |
| $R_{thJC}$ Max. Thermal Resistance Junction to Case                  | 2.5              | °C/W   | DC operation   |
| $R_{thJA}$ Typ. Thermal Resistance Junction to Ambient (PCB Mount)** | 50               | °C/W   |                |
| wt Approximate Weight                                                | 1(0.03)          | g(oz.) |                |
| T Case Style                                                         | TO-252AA (D-Pak) |        |                |

\*\*When mounted on 1" square (650mm<sup>2</sup>) PCB of FR-4 or G-10 material 4 oz (140µm) copper 40°C/W  
For recommended footprint and soldering techniques refer to application note #AN-994

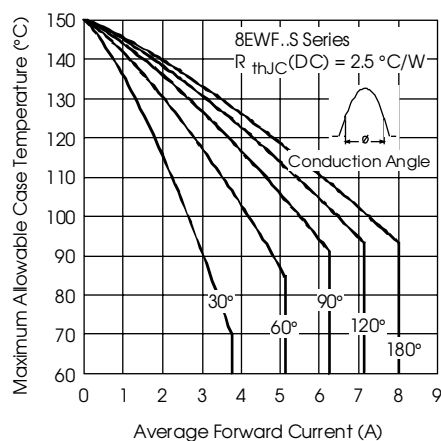


Fig. 1 - Current Rating Characteristics

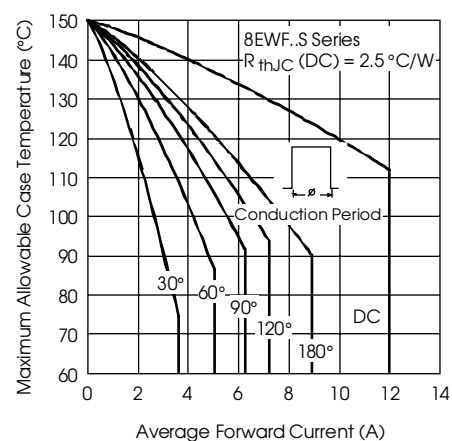


Fig. 2 - Current Rating Characteristics

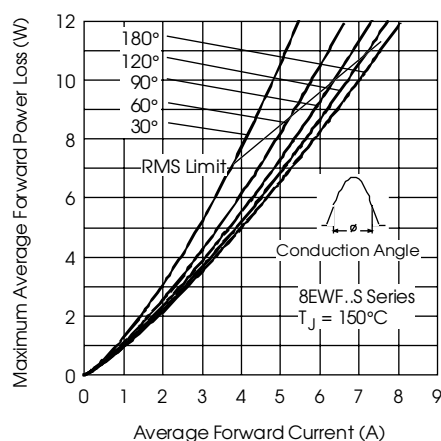


Fig. 3 - Forward Power Loss Characteristics

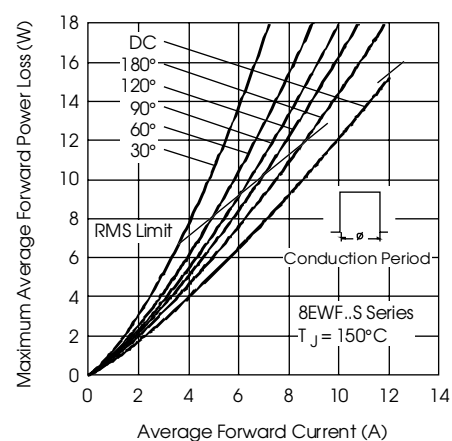


Fig. 4 - Forward Power Loss Characteristics

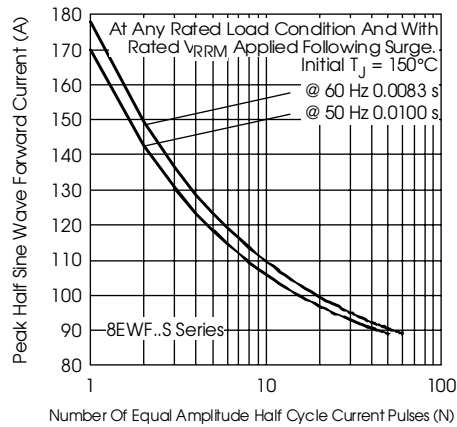


Fig. 5 - Maximum Non-Repetitive Surge Current

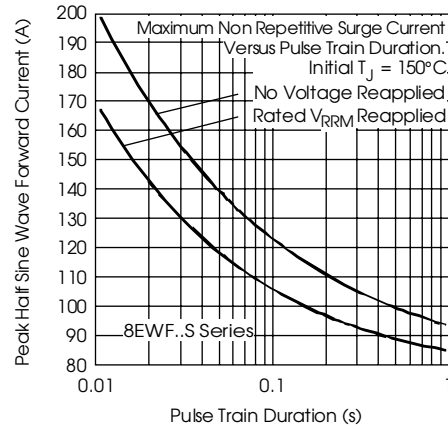


Fig. 6 - Maximum Non-Repetitive Surge Current

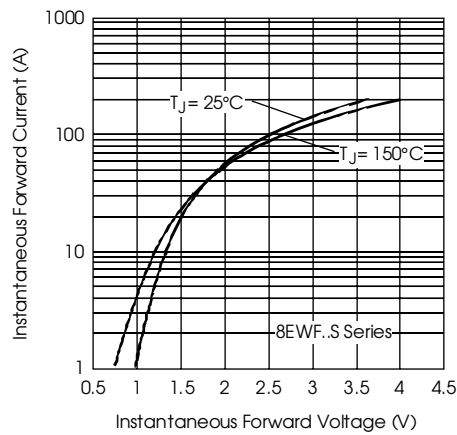


Fig. 7 - Forward Voltage Drop Characteristics

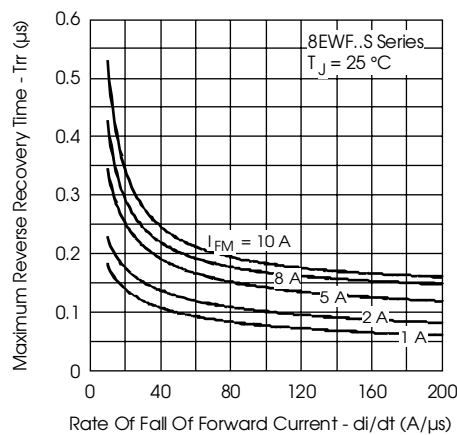


Fig. 8 - Recovery Time Characteristics,  $T_J = 25^\circ\text{C}$

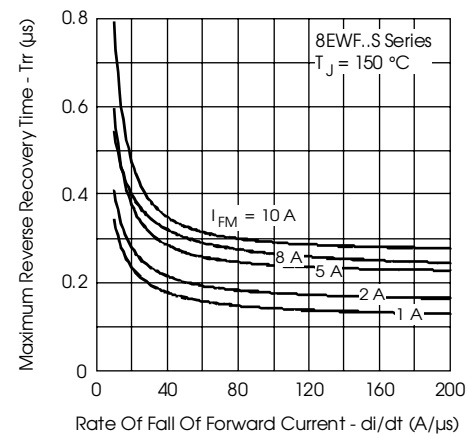


Fig. 9 - Recovery Time Characteristics,  $T_J = 150^\circ\text{C}$

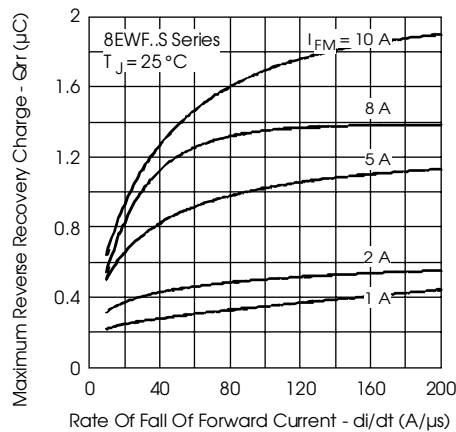


Fig. 10 - Recovery Charge Characteristics,  $T_J = 25^\circ\text{C}$

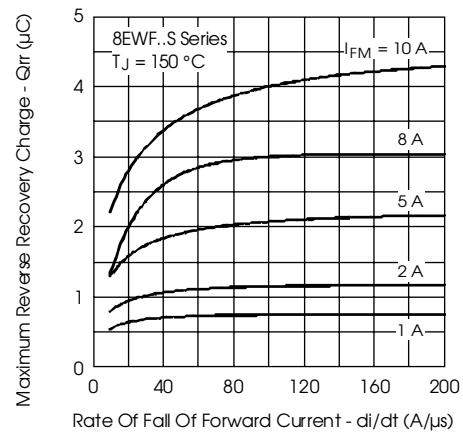


Fig. 11 - Recovery Charge Characteristics,  $T_J = 150^\circ\text{C}$

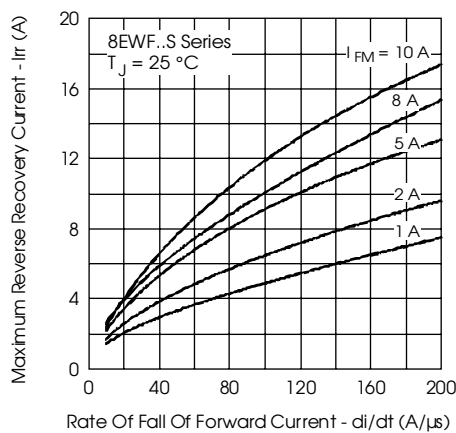


Fig. 12 - Recovery Current Characteristics,  $T_J = 25^\circ\text{C}$

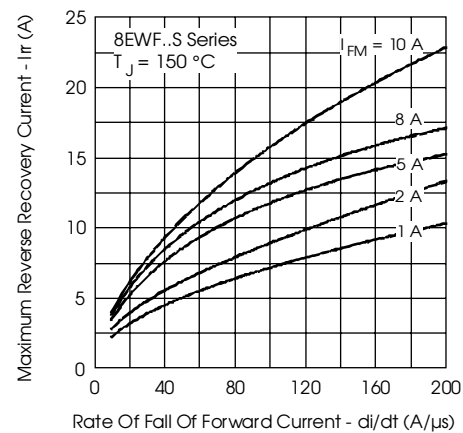


Fig. 13 - Recovery Current Characteristics,  $T_J = 150^\circ\text{C}$

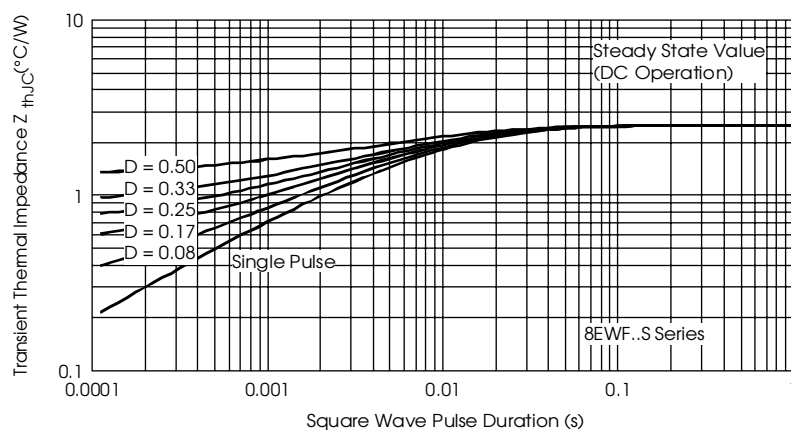
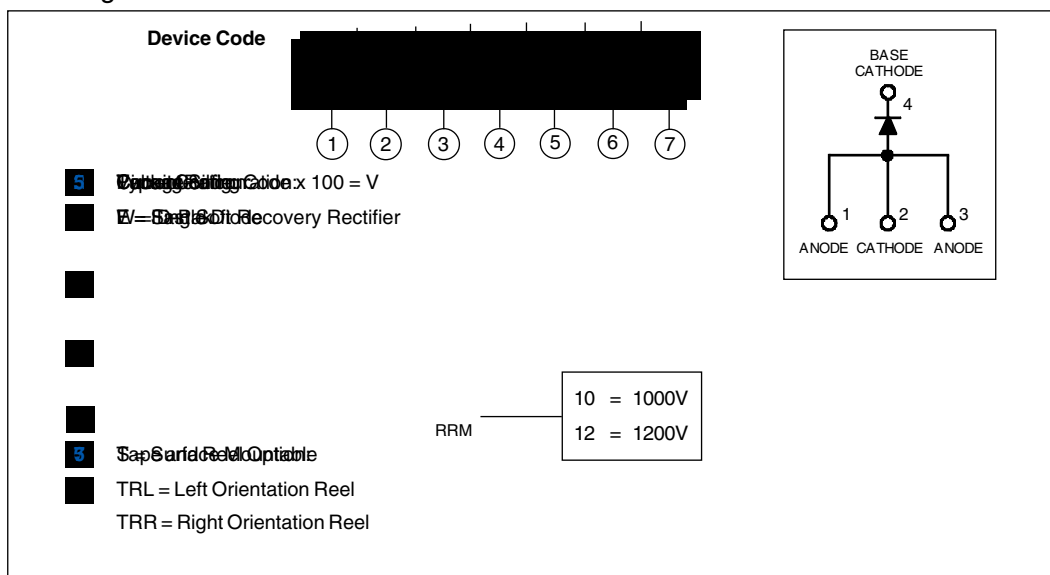
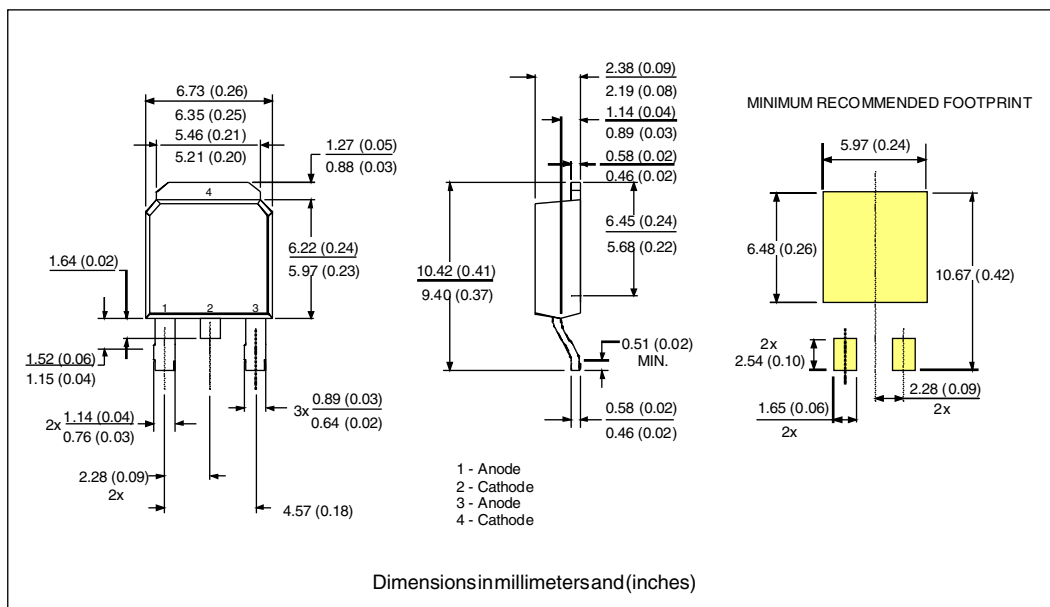


Fig. 14 - Thermal Impedance  $Z_{thJC}$  Characteristics

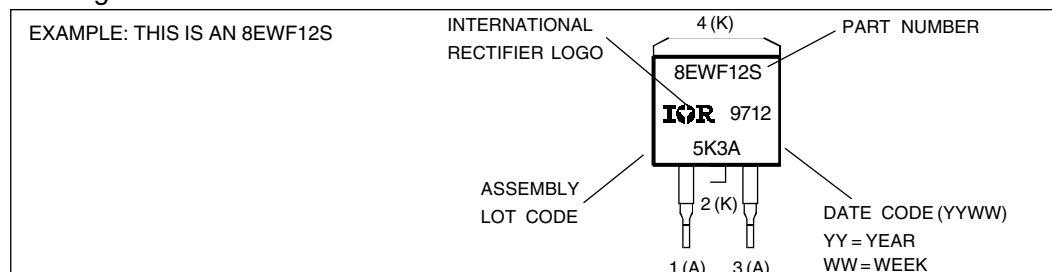
### Ordering Information Table



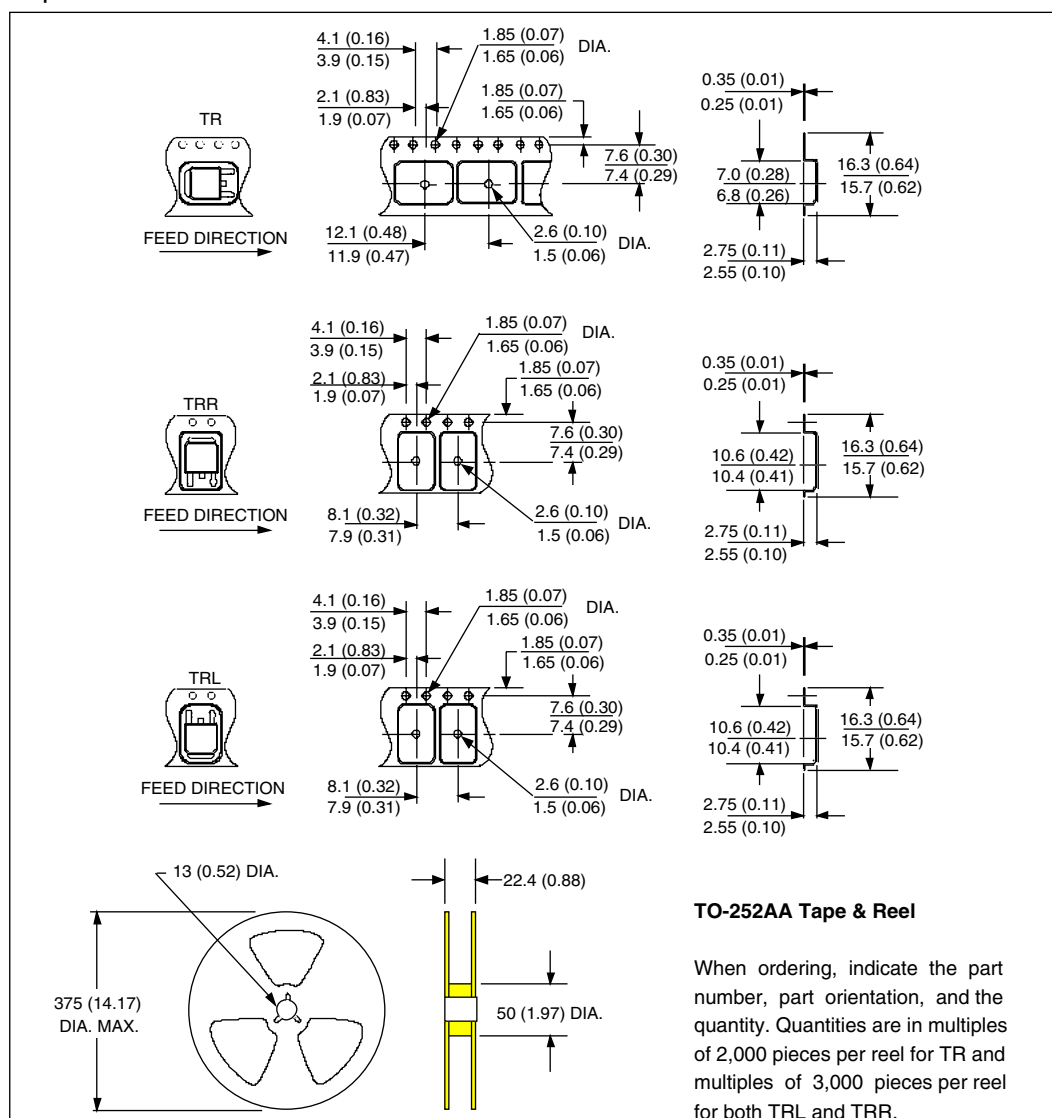
## Outline Table



## Marking Information



## Tape & Reel Information



International  
**IOR** Rectifier

**WORLD HEADQUARTERS:** 233 Kansas St., El Segundo, California 90245 U.S.A. Tel: (310) 322 3331. Fax: (310) 322 3332.  
**EUROPEAN HEADQUARTERS:** Hurst Green, Oxted, Surrey RH8 9BB, U.K. Tel: ++ 44 1883 732020. Fax: ++ 44 1883 733408.  
**IR CANADA:** 15 Lincoln Court, Brampton, Markham, Ontario L6T3Z2. Tel: (905) 453 2200. Fax: (905) 475 8801.  
**IR GERMANY:** Saalburgstrasse 157, 61350 Bad Homburg. Tel: ++ 49 6172 96590. Fax: ++ 49 6172 965933.  
**IR ITALY:** Via Liguria 49, 10071 Borgaro, Torino. Tel: ++ 39 11 4510111. Fax: ++ 39 11 4510220.  
**IR FAR EAST:** K&H Bldg., 2F, 30-4 Nishi-Ikebukuro 3-Chome, Toshima-Ku, Tokyo, Japan 171. Tel: 81 3 3983 0086.  
**IR SOUTHEAST ASIA:** 1 Kim Seng Promenade, Great World City West Tower, 13-11, Singapore 237994. Tel: ++ 65 838 4630.  
**IR TAIWAN:** 16 Fl. Suite D.207, Sec. 2, Tun Haw South Road, Taipei, 10673, Taiwan. Tel: 886 2 2377 9936.

*Data and specifications subject to change without notice.*



### Notice

The products described herein were acquired by Vishay Intertechnology, Inc., as part of its acquisition of International Rectifier's Power Control Systems (PCS) business, which closed in April 2007. Specifications of the products displayed herein are pending review by Vishay and are subject to the terms and conditions shown below.

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.

International Rectifier®, IR®, the IR logo, HEXFET®, HEXSense®, HEXDIP®, DOL®, INTERO®, and POWIRTRAIN® are registered trademarks of International Rectifier Corporation in the U.S. and other countries. All other product names noted herein may be trademarks of their respective owners.