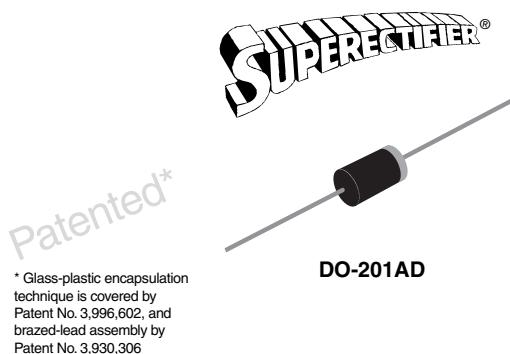


## Glass Passivated Junction Plastic Rectifiers


**DO-201AD**

### FEATURES

- Superectifier structure for high reliability condition
- Cavity-free glass-passivated junction
- Low leakage current, typical  $I_R$  less than  $0.1 \mu A$
- Low forward voltage drop
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder dip  $260^\circ C$ , 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC


**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

For use in high voltage rectification of power supply, inverters, converters, freewheeling diodes and snubber circuit application.

### MECHANICAL DATA

**Case:** DO-201AD, molded epoxy over glass body

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test

**Polarity:** Color band denotes cathode end

### PRIMARY CHARACTERISTICS

|             |                |
|-------------|----------------|
| $I_{F(AV)}$ | 3.0 A          |
| $V_{RRM}$   | 50 V to 1000 V |
| $I_{FSM}$   | 125 A          |
| $I_R$       | $5.0 \mu A$    |
| $V_F$       | 1.2 V, 1.1 V   |
| $T_J$ max.  | $175^\circ C$  |

### MAXIMUM RATINGS ( $T_A = 25^\circ C$ unless otherwise noted)

| PARAMETER                                                                                               | SYMBOL         | GP30A         | GP30B | GP30D | GP30G | GP30J | GP30K | GP30M | UNIT       |
|---------------------------------------------------------------------------------------------------------|----------------|---------------|-------|-------|-------|-------|-------|-------|------------|
| Maximum repetitive peak reverse voltage                                                                 | $V_{RRM}$      | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | V          |
| Maximum RMS voltage                                                                                     | $V_{RMS}$      | 35            | 70    | 140   | 280   | 420   | 560   | 700   | V          |
| Maximum DC blocking voltage                                                                             | $V_{DC}$       | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | V          |
| Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 55^\circ C$             | $I_{F(AV)}$    | 3.0           |       |       |       |       |       |       | A          |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load                      | $I_{FSM}$      | 125           |       |       |       |       |       |       | A          |
| Maximum full load reverse current, full cycle average 0.375" (9.5 mm) lead length at $T_A = 55^\circ C$ | $I_{R(AV)}$    | 100           |       |       |       |       |       |       | $\mu A$    |
| Operating junction and storage temperature range                                                        | $T_J, T_{STG}$ | - 65 to + 175 |       |       |       |       |       |       | $^\circ C$ |

| ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted) |                                                                             |                                                   |                 |            |       |       |       |       |       |       |      |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------|-----------------|------------|-------|-------|-------|-------|-------|-------|------|
| PARAMETER                                                                  | TEST CONDITIONS                                                             |                                                   | SYMBOL          | GP30A      | GP30B | GP30D | GP30G | GP30J | GP30K | GP30M | UNIT |
| Maximum instantaneous forward voltage                                      | 3.0 A                                                                       |                                                   | V <sub>F</sub>  | 1.2        |       | 1.1   |       |       |       |       | V    |
| Maximum reverse current at rated DC blocking voltage                       |                                                                             | T <sub>A</sub> = 25 °C<br>T <sub>A</sub> = 125 °C | I <sub>R</sub>  | 5.0<br>100 |       |       |       |       |       |       | μA   |
| Maximum reverse recovery time                                              | I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 V,<br>I <sub>rr</sub> = 0.25 A |                                                   | t <sub>rr</sub> | 5.0        |       |       |       |       |       |       | μs   |
| Typical junction capacitance                                               | 4.0 V, 1 MHz                                                                |                                                   | C <sub>J</sub>  | 40         |       |       |       |       |       |       | pF   |

| THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted) |                                      |          |       |       |       |       |       |       |      |
|-------------------------------------------------------------------------|--------------------------------------|----------|-------|-------|-------|-------|-------|-------|------|
| PARAMETER                                                               | SYMBOL                               | GP30A    | GP30B | GP30D | GP30G | GP30J | GP30K | GP30M | UNIT |
| Typical thermal resistance <sup>(1)</sup>                               | R <sub>θJA</sub><br>R <sub>θJL</sub> | 20<br>10 |       |       |       |       |       |       | °C/W |

**Note:**

(1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, P.C.B. mounted

| <b>ORDERING INFORMATION</b> (Example) |                 |                        |               |                                  |
|---------------------------------------|-----------------|------------------------|---------------|----------------------------------|
| PREFERRED P/N                         | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE                    |
| GP30J-E3/54                           | 1.28            | 54                     | 1400          | 13" diameter paper tape and reel |
| GP30J-E3/73                           | 1.28            | 73                     | 1000          | Ammo pack packaging              |
| GP30JHE3/54 <sup>(1)</sup>            | 1.28            | 54                     | 1400          | 13" diameter paper tape and reel |
| GP30JHE3/73 <sup>(1)</sup>            | 1.28            | 73                     | 1000          | Ammo pack packaging              |

**Note:**

(1) Automotive grade AEC Q101 qualified

**RATINGS AND CHARACTERISTICS CURVES**

( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

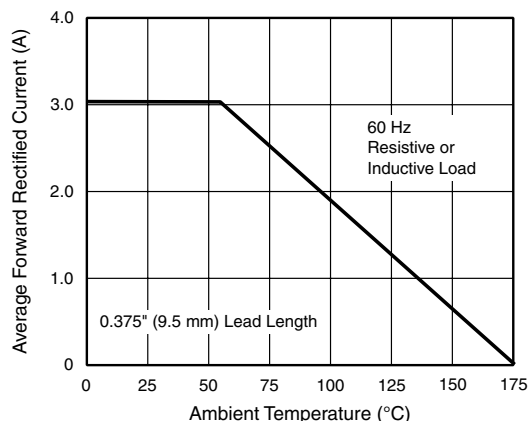


Figure 1. Forward Current Derating Curve

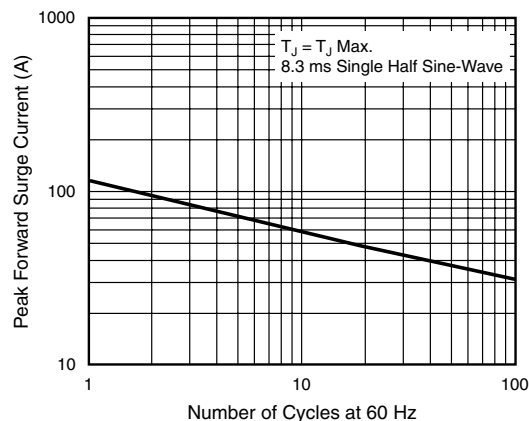


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

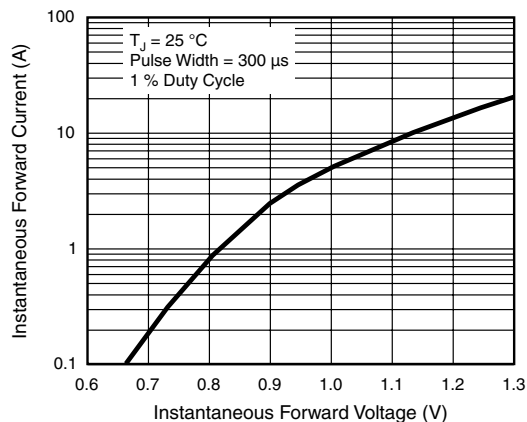


Figure 3. Typical Instantaneous Forward Characteristics

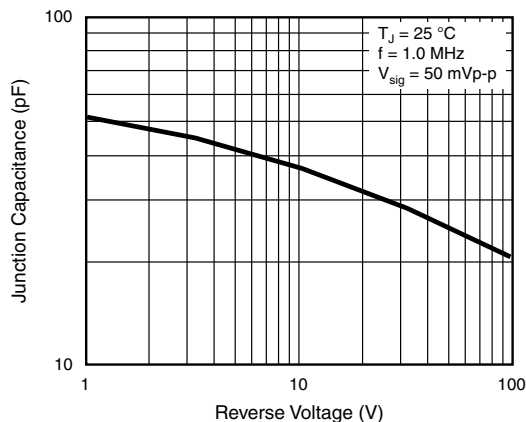


Figure 5. Typical Junction Capacitance

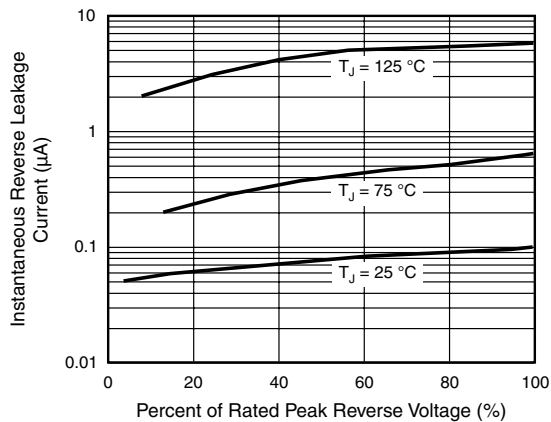
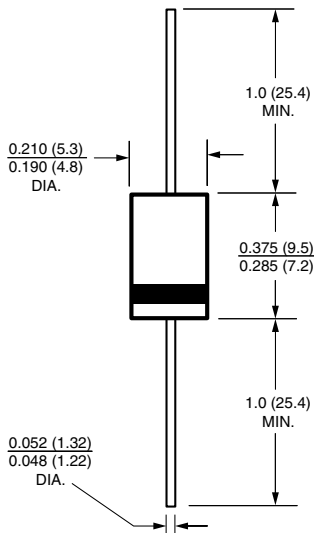


Figure 4. Typical Reverse Characteristics

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

#### DO-201AD





### Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.



**Стандарт  
Электрон  
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

**Наши контакты:**

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331