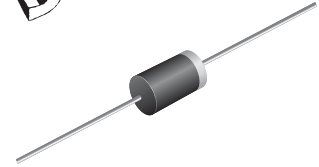


Glass Passivated Junction Plastic Rectifiers

Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
V_{RRM}	50 V to 1000 V
I_{FSM}	125 A
I_R	5.0 μ A
V_F	1.2 V, 1.1 V
T_j max.	175 °C



DO-201AD

Patented*

* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602, and brazed-lead assembly by Patent No. 3,930,306

Features

- Superrectifier structure for High Reliability condition
- Cavity-free glass-passivated junction
- Low leakage current, typical I_R less than 0.1 μ A
- Low forward voltage drop
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder Dip 260 °C, 40 seconds



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-002B and JESD22-B102D

E3 suffix for commercial grade, HE3 suffix for high reliability grade (AEC Q101 qualified)

Polarity: Color band denotes cathode end

Typical Applications

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

Maximum Ratings

($T_A = 25$ °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 $T_A = 55$ °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 $T_A = 55$ °C	$I_{R(AV)}$	100							μ A
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 175							°C

Electrical Characteristics

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

Parameter	Test condition	Symbol	GP30A	GP30B	GP30D	GP30G	GP30J	GP30K	GP30M	Unit
Maximum instantaneous forward voltage	at 3.0 A	V_F	1.2		1.1					V
Maximum reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	I_R	5.0					100		μA
Maximum reverse recovery time	$I_F = 0.5\text{ A}$, $I_R = 1.0\text{ V}$, $I_{rr} = 0.25\text{ A}$	t_{rr}	5.0							μs
Typical junction capacitance	at 4.0 V, 1 MHz	C_J	40							pF

Thermal Characteristics

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

Parameter	Symbol	GP30A	GP30B	GP30D	GP30G	GP30J	GP30K	GP30M	Unit	
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	20								$^\circ\text{C/W}$
	$R_{\theta JL}$	10								

Notes:

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

Ratings and Characteristics Curves

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

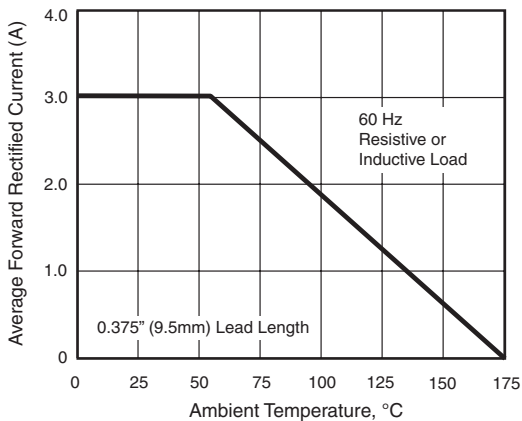


Figure 1. Forward Current Derating Curve

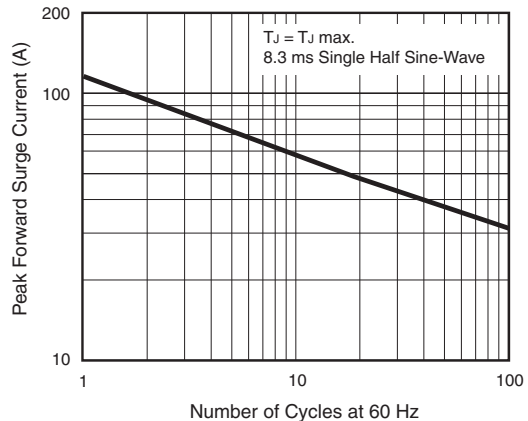


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

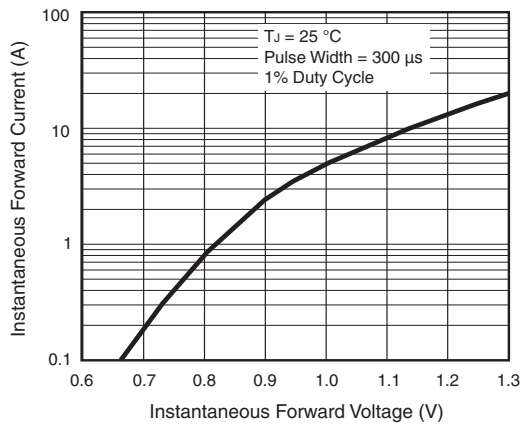


Figure 3. Typical Instantaneous Forward Characteristics

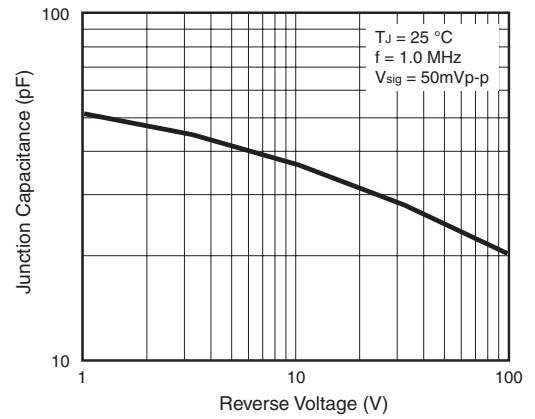


Figure 5. Typical Junction Capacitance

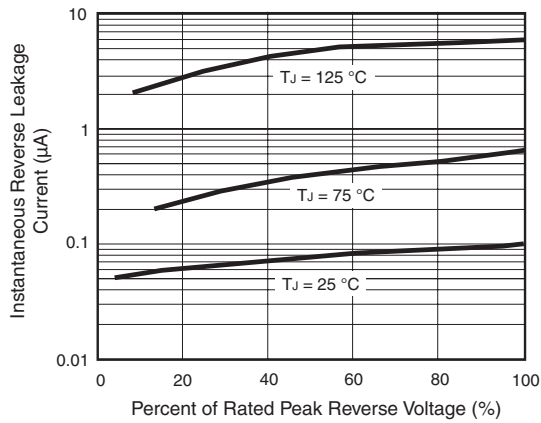
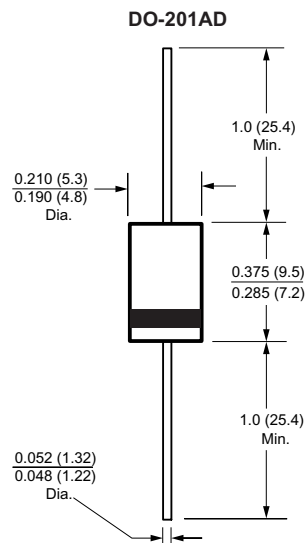


Figure 4. Typical Reverse Characteristics

Package outline dimensions in inches (millimeters)





Notice

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.