



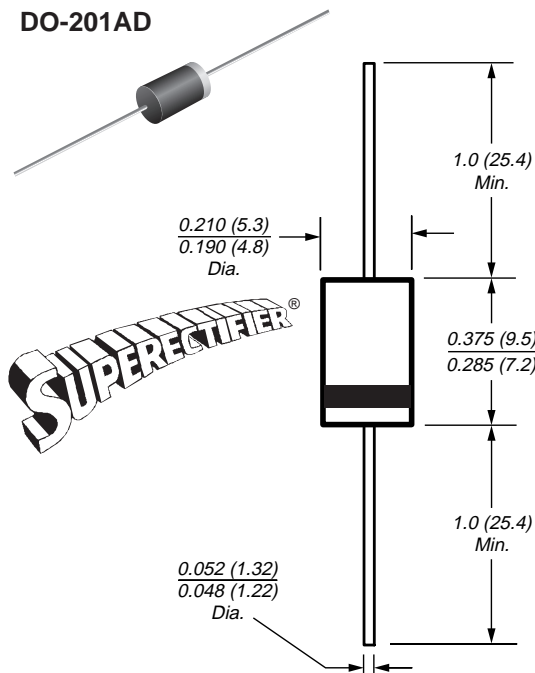
## Glass Passivated Junction Plastic Rectifiers

Reverse Voltage

200 to 1300V

Forward Current 3.0A

DO-201AD



Dimensions in inches and (millimeters)

\*Glass-plastic encapsulation technique is covered by

Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

Patented\*

## Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- 3.0 Ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- Typical  $I_R$  less than  $0.1\mu\text{A}$
- High temperature soldering guaranteed:  $350^\circ\text{C}/10$  seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

## Mechanical Data

**Case:** JEDEC DO-201AD, molded plastic over glass body**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026**Polarity:** Color band denotes cathode end**Mounting Position:** Any**Weight:** 0.04 oz., 1.12 g**Packaging Codes/Options:**

1/Bulk – 1.5K per container, 15K/box

4/1.4K per 13" reel, 5.6K/box

23/1K per ammo mag., 9K/box

Maximum Ratings & Thermal Characteristics Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Parameter	Symbol	BY251GP	BY252GP	BY253GP	BY254GP	BY255GP	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	400	600	800	1300	V
Maximum RMS voltage	$V_{RMS}$	140	280	420	560	910	V
Maximum DC blocking voltage	$V_{DC}$	200	400	600	800	1300	V
Maximum average forward rectified current 10mm lead length at $T_A = 55^\circ\text{C}$	$I_F(AV)$	3.0					A
Peak forward surge current 10ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100					A
Maximum full load reverse current, full cycle average 10mm lead length at $T_A = 55^\circ\text{C}$	$I_R(AV)$	100					$\mu\text{A}$
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	20 10					$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175					$^\circ\text{C}$

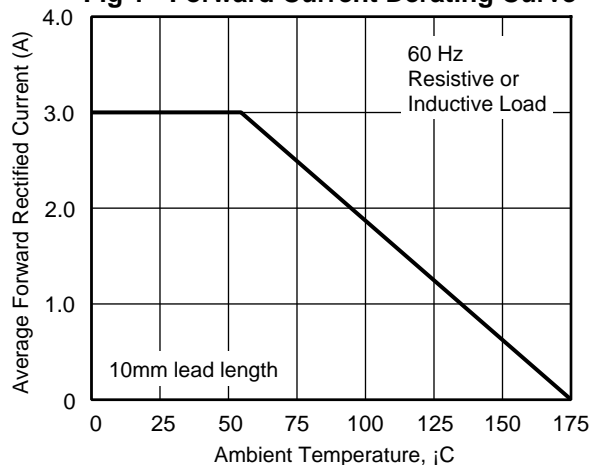
Electrical Characteristics Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 3.0A	$V_F$	1.1	V
Maximum reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$	$I_R$	5.0	$\mu\text{A}$
Typical reverse recovery time $I_F = 0.5\text{A}$ , $I_R = 1.0\text{V}$ , $I_{rr} = 0.25\text{A}$	$t_{rr}$	3.0	$\mu\text{s}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	40	pF

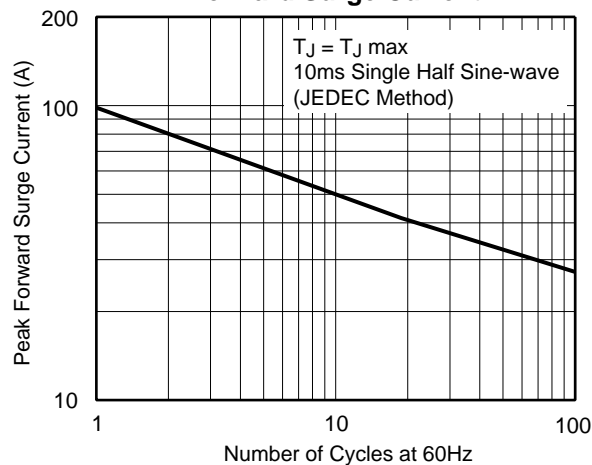
**Note:** (1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

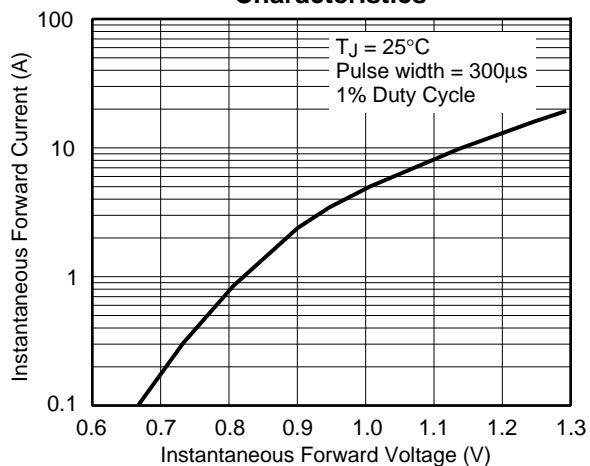
**Fig 1 - Forward Current Derating Curve**



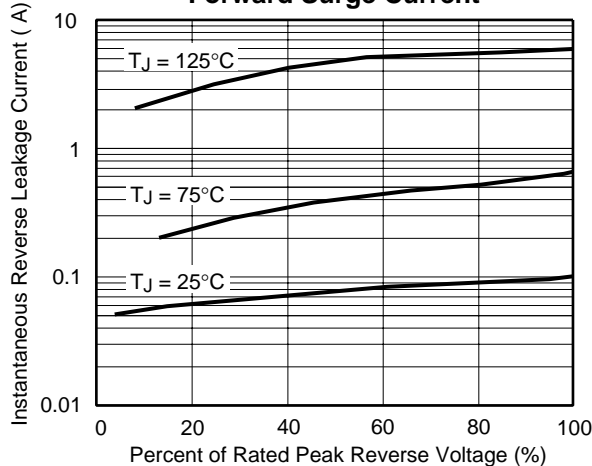
**Fig 2 - Maximum Non-repetitive Peak Forward Surge Current**



**Fig 3 - Typical Instantaneous Forward Characteristics**



**Fig 2 - Maximum Non-repetitive Peak Forward Surge Current**



**Fig 5 - Typical Junction Capacitance**

