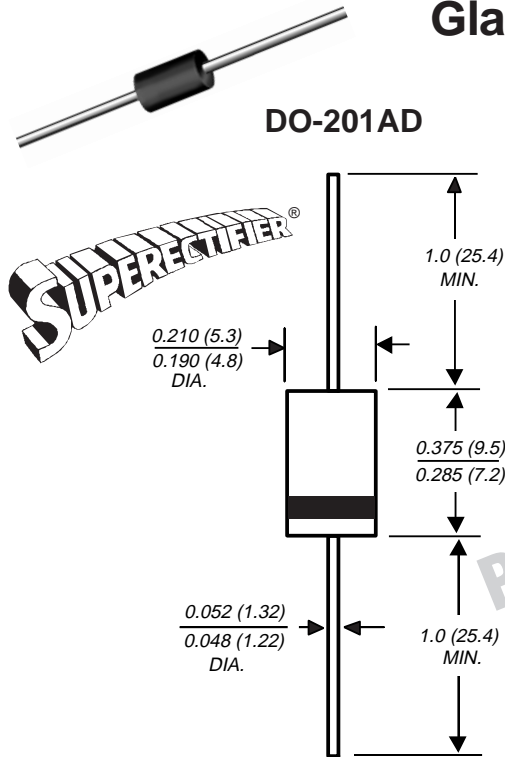


## Glass Passivated Junction Plastic Rectifier

**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

### 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:** 0.04oz., 1.12g

**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 <sub>RRM</sub>	200	400	600	800	1300	V
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	560	910	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	800	1300	V
Maximum average forward rectified current 10mm lead length at T <sub>A</sub> = 55°C	I <sub>F(AV)</sub>	3.0					A
Peak forward surge current 10ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100					A
Maximum full load reverse current, full cycle average 10mm lead length at T <sub>A</sub> = 55°C	I <sub>R(AV)</sub>	100					μA
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub>	20					°C/W
	R <sub>θJL</sub>	10					
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	−65 to +175					°C

## Electrical Characteristics

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

Parameter	Symbol	BY251GP	BY252GP	BY253GP	BY254GP	BY255GP	Unit
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					$\mu\text{A}$
Maximum 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

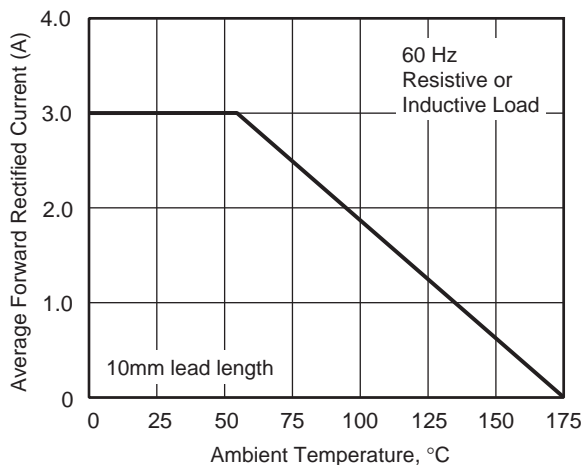
**Note:** (1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted

5/25/00

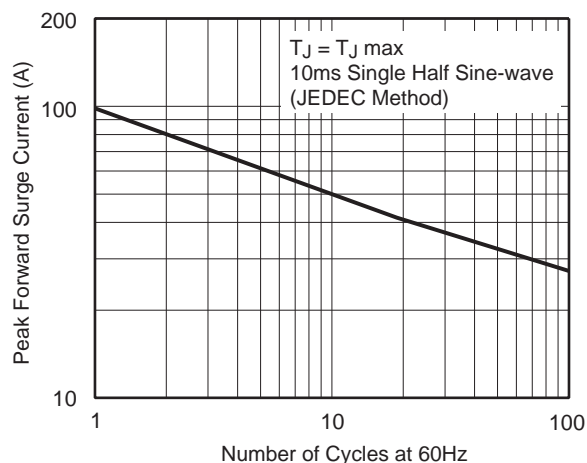
## Glass Passivated Junction Plastic Rectifier

### Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

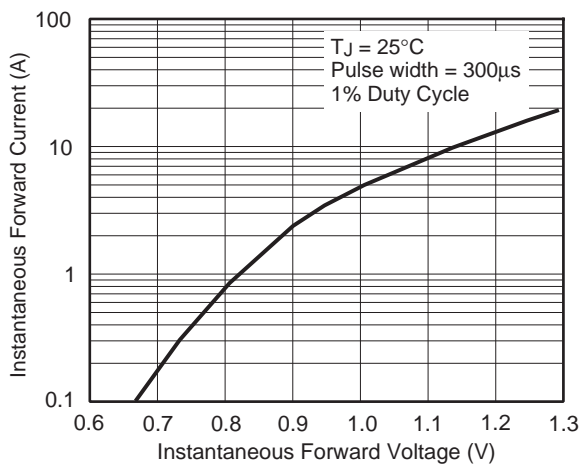
**Fig 1 - Forward Current Derating Curve**



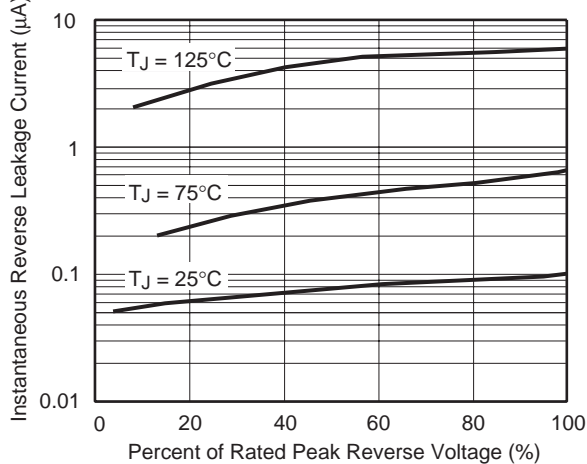
**Fig 2 - Maximum Non-repetitive Peak Forward Surge Current**



**Fig 3 - Typical Instantaneous Forward Characteristics**



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



**Fig 5 - Typical Junction Capacitance**

