



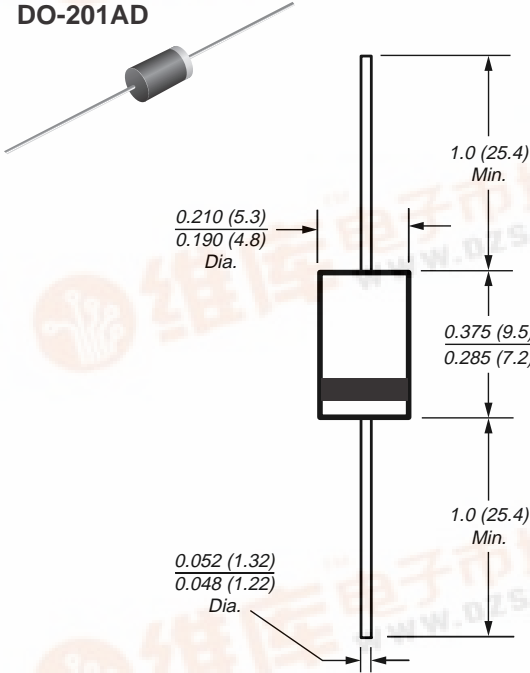
# BY251P thru BY255P

Vishay Semiconductors  
formerly General Semiconductor

## General Purpose Rectifiers

**Reverse Voltage**  
200 to 1300V  
**Forward Current** 3.0A

DO-201AD



Dimensions in inches and (millimeters)

### Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Typical  $I_R$  less than 0.1  $\mu A$
- Construction utilizes void-free molded plastic technique
- 3.0 Ampere operation at  $T_A = 55^\circ C$  with no thermal runaway
- High temperature soldering guaranteed: 250  $^\circ C$ /10 seconds, 0.375" (9.5 mm) lead length 5 lbs. (2.3 kg) tension

### Mechanical Data

**Case:** JEDEC DO-201AD, molded plastic 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

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

Parameter	Symbol	BY251P	BY252P	BY253P	BY254P	BY255P	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 $T_A = 55^\circ C$	$I_{F(AV)}$	3.0					A
Peak forward surge current 10ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150					A
Maximum full load reverse current, full cycle average 10mm lead length at $T_A = 55^\circ C$	$I_{R(AV)}$	100					$\mu A$
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	20 10					$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150					$^\circ C$

### Electrical Characteristics Ratings at 25 $^\circ C$ 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 $T_A = 25^\circ C$	$I_R$	5.0	$\mu A$
Typical reverse recovery time $I_F = 0.5A, I_R = 1.0V, I_{rr} = 0.25A$	$t_{rr}$	3.0	$\mu s$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	40	pF

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

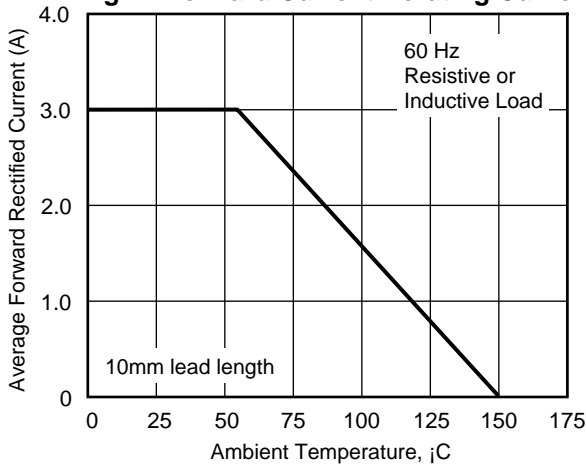
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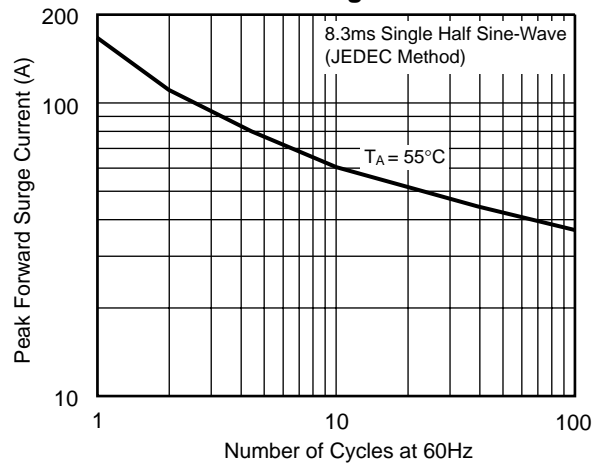
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## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

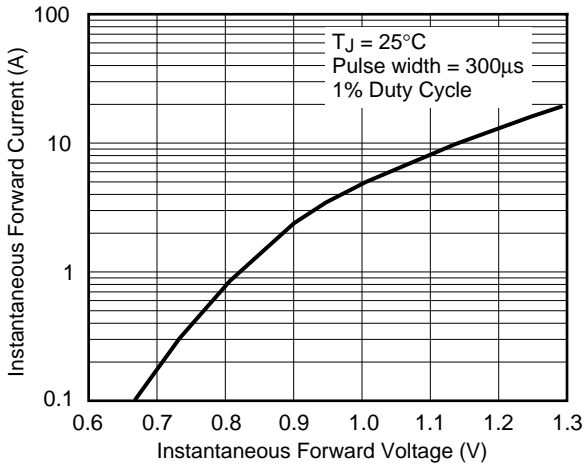
**Fig 1 - Forward Current Derating Curve**



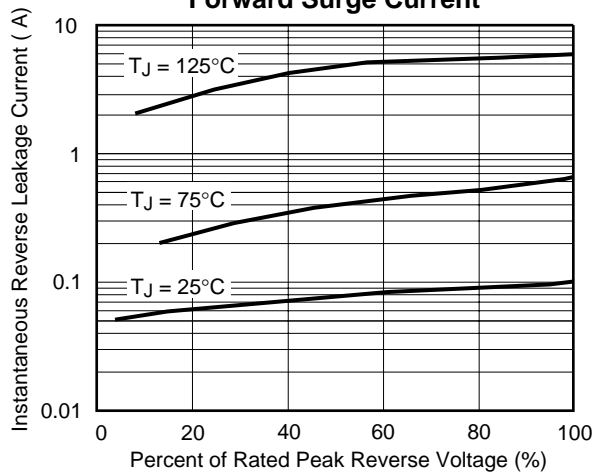
**Fig 2 - Maximum Non-repetitive Peak Forward Surge Current**



**Fig 3 - Typical Instantaneous Forward Characteristics**



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



**Fig 5 - Typical Junction Capacitance**

