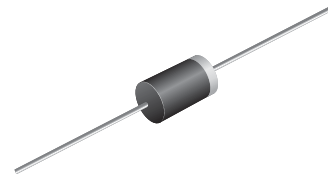




## General Purpose Plastic Rectifier

### Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
$V_{RRM}$	200 V to 1300 V
$I_{FSM}$	150 A
$I_R$	5.0 $\mu$ A
$V_F$	1.1 V
$T_j$ max.	150 °C



DO-201AD

### Features

- Low forward voltage drop
- Low leakage current,  $I_R$  less than 0.1  $\mu$ A
- High forward surge capability
- Solder Dip 260 °C, 40 seconds



### Mechanical Data

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

Epoxy meets UL-94V-0 Flammability rating

**Terminals:** Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

**Polarity:** Color band denotes cathode end

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application.

(Note: These devices are not Q101 qualified. Therefore, the devices specified in this datasheet have not been designed for use in automotive or Hi-Rel applications.)

### Maximum Ratings

( $T_A = 25$  °C unless otherwise noted)

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 10 mm lead length	$I_{F(AV)}$	3.0					A
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	$I_{FSM}$	150					A
Maximum full load reverse current, full cycle average 10 mm lead length	$I_{R(AV)}$	100					$\mu$ A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150					°C

# BY251P thru BY255P



Vishay General Semiconductor

## Electrical Characteristics

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

Parameter	Test condition	Symbol	BY251P	BY252P	BY253P	BY254P	BY255P	Unit
Maximum instantaneous forward voltage	at 3.0 A	$V_F$	1.1					V
Maximum reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$	$I_R$	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 4.0 V, 1 MHz	$C_J$	40					pF

## Thermal Characteristics

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

Parameter	Symbol	BY251P	BY252P	BY253P	BY254P	BY255P	Unit
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	20 10					$^\circ\text{C/W}$

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)

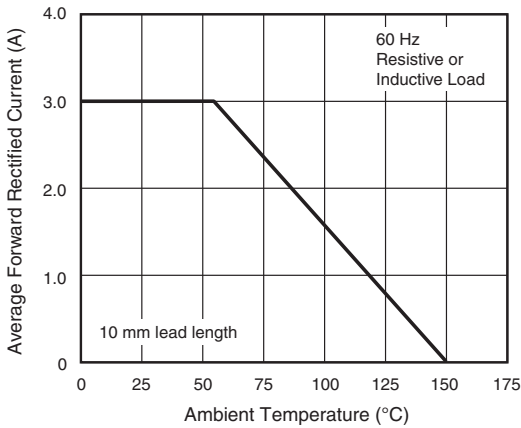


Figure 1. Forward Current Derating Curve

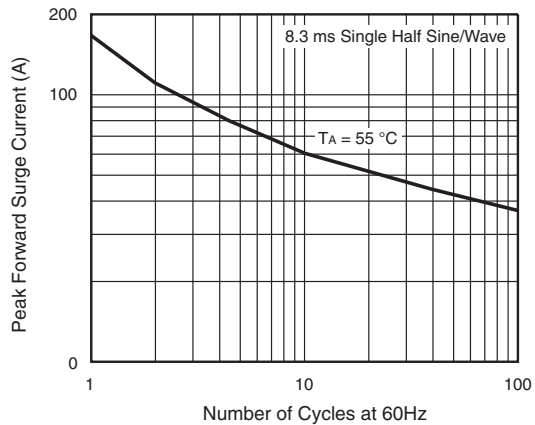


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

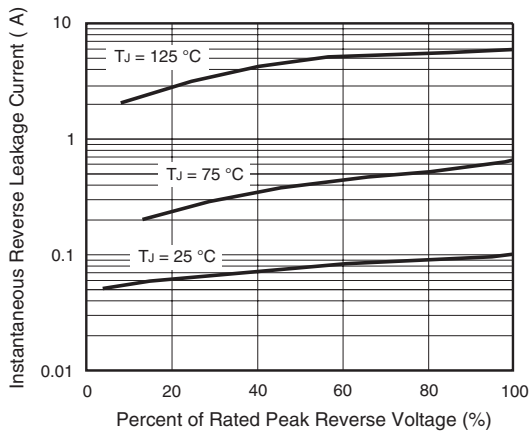


Figure 3. Maximum Non-repetitive Peak Forward Surge Current

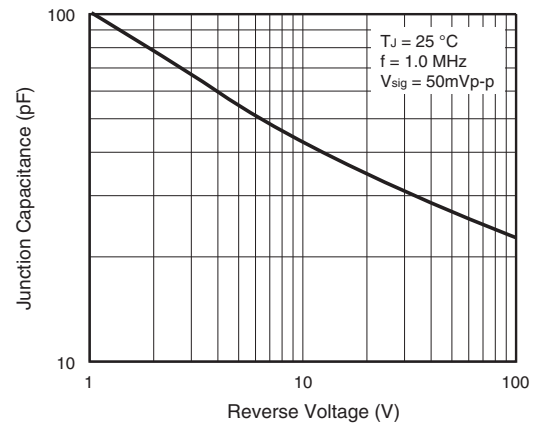


Figure 5. Typical Junction Capacitance

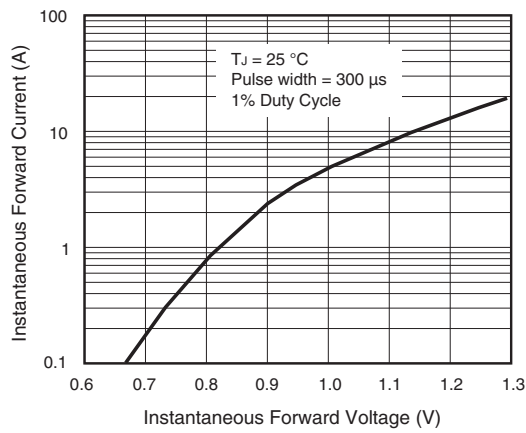
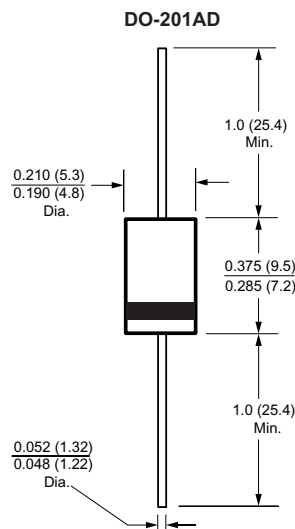


Figure 4. Typical Instantaneous Forward Characteristics

## Package outline dimensions in inches (millimeters)





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