



# 1N5624GP thru 1N5627GP

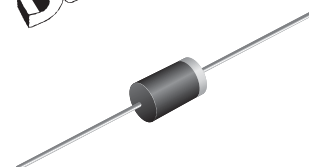
Vishay General Semiconductor

## Glass Passivated Junction Rectifier

### Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
$V_{RRM}$	200 V to 800 V
$I_{FSM}$	125 A
$I_R$	5.0 $\mu$ A
$V_F$	0.95 V
$T_j$ max.	175 °C

**SUPERECTIFIER®**



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

- Superectifier structure for High Reliability application
- Cavity-free glass-passivated junction
- Low forward voltage drop
- Low leakage current
- 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 general purpose rectification of power supplies, inverters, converters and freewheeling diodes application

### Maximum Ratings

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

Parameter	Symbol	1N5624GP	1N5625GP	1N5626GP	1N5627GP	Unit
* Maximum repetitive peak reverse voltage	$V_{RRM}$	200	400	600	800	V
* Maximum DC blocking voltage	$V_{DC}$	200	400	600	800	V
* Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 70$ °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 $T_A = 70$ °C	$I_{R(AV)}$	200				$\mu$ A
* Operating junction and storage temperature range	$T_J, T_{STG}$	- 65 to + 175				°C

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## Electrical Characteristics

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

Parameter	Test condition	Symbol	1N5624GP	1N5625GP	1N5626GP	1N5627GP	Unit
* Maximum instantaneous forward voltage	at 3.0 A <sup>(1)</sup> T <sub>A</sub> = 25 °C T <sub>A</sub> = 70 °C	V <sub>F</sub>	1.0 0.95				V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> = 25 °C T <sub>A</sub> = 150 °C	I <sub>R</sub>	5.0				μA
			300		200		
Typical reverse recovery time	at I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A	t <sub>rr</sub>	3.0				μs
Typical junction capacitance	at 4.0 V, 1 MHz	C <sub>J</sub>	40				pF

Notes:

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

## Thermal Characteristics

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

Parameter	Symbol	1N5624GP	1N5625GP	1N5626GP	1N5627GP	Unit
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	20				$^{\circ}\text{C/W}$

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

\* JEDEC registered values

## Ratings and Characteristics Curves

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

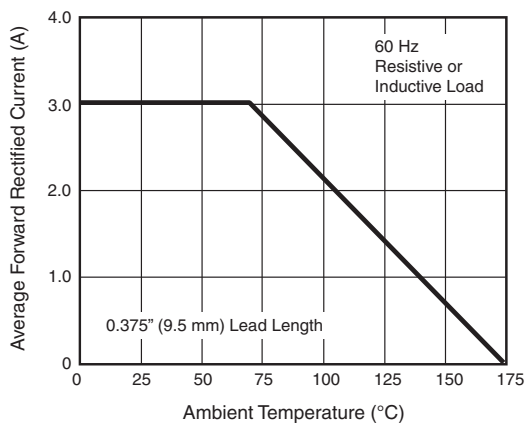


Figure 1. Forward Current Derating Curve

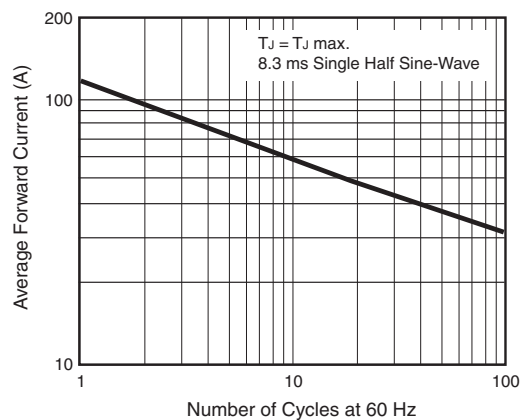


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

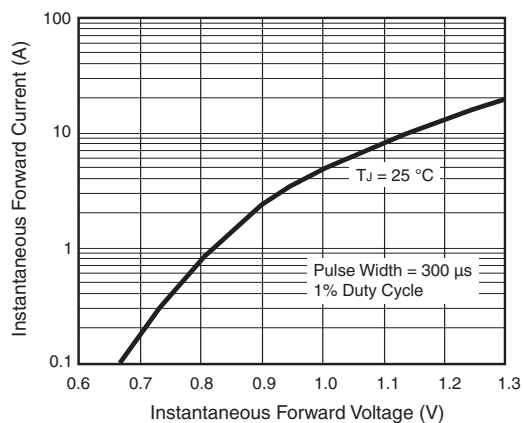


Figure 3. Typical Instantaneous Forward Characteristics

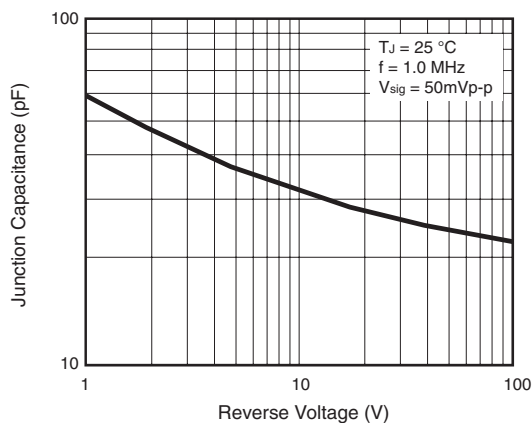


Figure 5. Typical Junction Capacitance

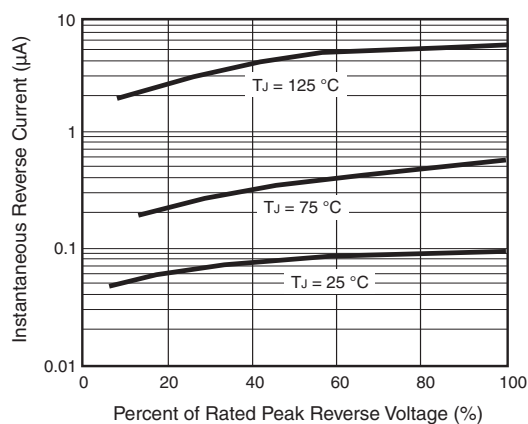
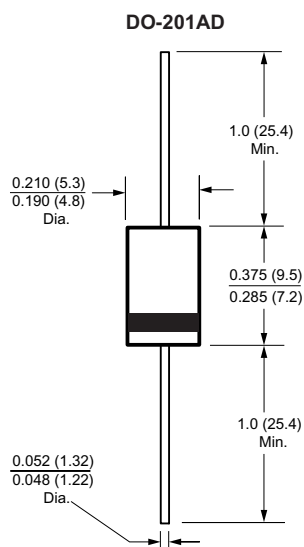


Figure 4. Typical Reverse Characteristics

## Package outline dimensions in inches (millimeters)





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